N2A - Navigator Nautical Almanac
daily tables

from 01/JAN/2028 to 30/DEC/2028

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G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
1 0	100 11.2	142 08.9	S18 05.7	159 57.0	S21 39.7	282 09.3	N 2 13.8	79 45.1	N 5 51.7
1	115 13.7	157 08.3	S18 04.8	174 57.4	S21 39.3	297 11.7	N 2 13.8	94 47.5	N 5 51.7
2	130 16.2	172 07.7	S18 03.8	189 57.8	S21 39.0	312 14.1	N 2 13.8	109 50.0	N 5 51.7
3	145 18.6	187 07.1	S18 02.9	204 58.2	S21 38.6	327 16.5	N 2 13.7	124 52.4	N 5 51.7
4	160 21.1	202 06.5	S18 02.0	219 58.6	S21 38.2	342 18.8	N 2 13.7	139 54.8	N 5 51.8
S 5	175 23.6	217 05.9	S18 01.0	234 59.0	S21 37.8	357 21.2	N 2 13.7	154 57.3	N 5 51.8
A T 6	190 26.0	232 05.3	S18 00.1	249 59.4	S21 37.4	12 23.6	N 2 13.7	169 59.7	N 5 51.8
U 7	205 28.5	247 04.7	S17 59.2	264 59.8	S21 37.0	27 26.0	N 2 13.6	185 02.1	N 5 51.8
R 8	220 30.9	262 04.1	S17 58.2	280 00.2	S21 36.6	42 28.4	N 2 13.6	200 04.6	N 5 51.9
D 9	235 33.4	277 03.5	S17 57.3	295 00.6	S21 36.2	57 30.7	N 2 13.6	215 07.0	N 5 51.9
A 10	250 35.9	292 02.9	S17 56.4	310 01.0	S21 35.8	72 33.1	N 2 13.6	230 09.4	N 5 51.9
Y 11	265 38.3	307 02.3	S17 55.4	325 01.4	S21 35.4	87 35.5	N 2 13.6	245 11.9	N 5 51.9
12	280 40.8	322 01.7	S17 54.5	340 01.8	S21 35.0	102 37.9	N 2 13.5	260 14.3	N 5 52.0
13	295 43.3	337 01.1	S17 53.6	355 02.2	S21 34.6	117 40.3	N 2 13.5	275 16.7	N 5 52.0
14	310 45.7	352 00.5	S17 52.6	10 02.6	S21 34.2	132 42.6	N 2 13.5	290 19.2	N 5 52.0
15	325 48.2	6 60.0	S17 51.7	25 03.0	S21 33.8	147 45.0	N 2 13.5	305 21.6	N 5 52.0
16	340 50.7	21 59.4	S17 50.7	40 03.4	S21 33.4	162 47.4	N 2 13.4	320 24.0	N 5 52.1
17	355 53.1	36 58.8	S17 49.8	55 03.9	S21 33.1	177 49.8	N 2 13.4	335 26.5	N 5 52.1
18	10 55.6	51 58.2	S17 48.9	70 04.3	S21 32.7	192 52.2	N 2 13.4	350 28.9	N 5 52.1
19	25 58.1	66 57.6	S17 47.9	85 04.7	S21 32.3	207 54.5	N 2 13.4	5 31.3	N 5 52.1
20	41 00.5	81 57.0	S17 47.0	100 05.1	S21 31.9	222 56.9	N 2 13.3	20 33.8	N 5 52.2
21	56 03.0	96 56.4	S17 46.0	115 05.5	S21 31.5	237 59.3	N 2 13.3	35 36.2	N 5 52.2
22	71 05.4	111 55.8	S17 45.1	130 05.9	S21 31.1	253 01.7	N 2 13.3	50 38.6	N 5 52.2
23	86 07.9	126 55.2	S17 44.1	145 06.3	S21 30.7	268 04.1	N 2 13.3	65 41.0	N 5 52.2
2 0	101 10.4	141 54.7	S17 43.2	160 06.7	S21 30.3	283 06.5	N 2 13.3	80 43.5	N 5 52.3
1	116 12.8	156 54.1	S17 42.2	175 07.1	S21 29.9	298 08.8	N 2 13.2	95 45.9	N 5 52.3
2	131 15.3	171 53.5	S17 41.3	190 07.5	S21 29.5	313 11.2	N 2 13.2	110 48.3	N 5 52.3
3	146 17.8	186 52.9	S17 40.3	205 07.9	S21 29.1	328 13.6	N 2 13.2	125 50.8	N 5 52.3
4	161 20.2	201 52.3	S17 39.4	220 08.3	S21 28.7	343 16.0	N 2 13.2	140 53.2	N 5 52.4
S 5	176 22.7	216 51.7	S17 38.4	235 08.7	S21 28.3	358 18.4	N 2 13.1	155 55.6	N 5 52.4
U N 6	191 25.2	231 51.1	S17 37.5	250 09.1	S21 27.9	13 20.8	N 2 13.1	170 58.1	N 5 52.4
D 7	206 27.6	246 50.6	S17 36.5	265 09.5	S21 27.5	28 23.2	N 2 13.1	186 00.5	N 5 52.5
A 8	221 30.1	261 50.0	S17 35.6	280 09.9	S21 27.0	43 25.5	N 2 13.1	201 02.9	N 5 52.5
Y 9	236 32.5	276 49.4	S17 34.6	295 10.3	S21 26.6	58 27.9	N 2 13.1	216 05.3	N 5 52.5
10	251 35.0	291 48.8	S17 33.7	310 10.7	S21 26.2	73 30.3	N 2 13.0	231 07.8	N 5 52.5
11	266 37.5	306 48.2	S17 32.7	325 11.2	S21 25.8	88 32.7	N 2 13.0	246 10.2	N 5 52.6
12	281 39.9	321 47.7	S17 31.7	340 11.6	S21 25.4	103 35.1	N 2 13.0	261 12.6	N 5 52.6
13	296 42.4	336 47.1	S17 30.8	355 12.0	S21 25.0	118 37.5	N 2 13.0	276 15.1	N 5 52.6
14	311 44.9	351 46.5	S17 29.8	10 12.4	S21 24.6	133 39.9	N 2 13.0	291 17.5	N 5 52.6
15	326 47.3	6 45.9	S17 28.9	25 12.8	S21 24.2	148 42.3	N 2 12.9	306 19.9	N 5 52.7
16	341 49.8	21 45.4	S17 27.9	40 13.2	S21 23.8	163 44.6	N 2 12.9	321 22.3	N 5 52.7
17	356 52.3	36 44.8	S17 26.9	55 13.6	S21 23.4	178 47.0	N 2 12.9	336 24.8	N 5 52.7
18	11 54.7	51 44.2	S17 26.0	70 14.0	S21 23.0	193 49.4	N 2 12.9	351 27.2	N 5 52.8
19	26 57.2	66 43.6	S17 25.0	85 14.4	S21 22.6	208 51.8	N 2 12.9	6 29.6	N 5 52.8
20	41 59.7	81 43.1	S17 24.1	100 14.8	S21 22.2	223 54.2	N 2 12.8	21 32.0	N 5 52.8
21	57 02.1	96 42.5	S17 23.1	115 15.2	S21 21.8	238 56.6	N 2 12.8	36 34.5	N 5 52.8
22	72 04.6	111 41.9	S17 22.1	130 15.6	S21 21.4	253 59.0	N 2 12.8	51 36.9	N 5 52.9
23	87 07.0	126 41.3	S17 21.2	145 16.0	S21 21.0	269 01.4	N 2 12.8	66 39.3	N 5 52.9
3 0	102 09.5	141 40.8	S17 20.2	160 16.5	S21 20.5	284 03.8	N 2 12.8	81 41.7	N 5 52.9
1	117 12.0	156 40.2	S17 19.2	175 16.9	S21 20.1	299 06.2	N 2 12.7	96 44.2	N 5 52.9
2	132 14.4	171 39.6	S17 18.3	190 17.3	S21 19.7	314 08.5	N 2 12.7	111 46.6	N 5 53.0
3	147 16.9	186 39.1	S17 17.3	205 17.7	S21 19.3	329 10.9	N 2 12.7	126 49.0	N 5 53.0
4	162 19.4	201 38.5	S17 16.3	220 18.1	S21 18.9	344 13.3	N 2 12.7	141 51.5	N 5 53.0
M 5	177 21.8	216 37.9	S17 15.3	235 18.5	S21 18.5	359 15.7	N 2 12.7	156 53.9	N 5 53.1
O N 6	192 24.3	231 37.3	S17 14.4	250 18.9	S21 18.1	14 18.1	N 2 12.7	171 56.3	N 5 53.1
D 7	207 26.8	246 36.8	S17 13.4	265 19.3	S21 17.7	29 20.5	N 2 12.6	186 58.7	N 5 53.1
A 8	222 29.2	261 36.2	S17 12.4	280 19.7	S21 17.2	44 22.9	N 2 12.6	202 01.2	N 5 53.1
Y 9	237 31.7	276 35.7	S17 11.5	295 20.1	S21 16.8	59 25.3	N 2 12.6	217 03.6	N 5 53.2
10	252 34.2	291 35.1	S17 10.5	310 20.5	S21 16.4	74 27.7	N 2 12.6	232 06.0	N 5 53.2
11	267 36.6	306 34.5	S17 09.5	325 21.0	S21 16.0	89 30.1	N 2 12.6	247 08.4	N 5 53.2
12	282 39.1	321 34.0	S17 08.5	340 21.4	S21 15.6	104 32.5	N 2 12.6	262 10.8	N 5 53.3
13	297 41.5	336 33.4	S17 07.6	355 21.8	S21 15.2	119 34.9	N 2 12.5	277 13.3	N 5 53.3
14	312 44.0	351 32.8	S17 06.6	10 22.2	S21 14.8	134 37.3	N 2 12.5	292 15.7	N 5 53.3
15	327 46.5	6 32.3	S17 05.6	25 22.6	S21 14.3	149 39.7	N 2 12.5	307 18.1	N 5 53.3
16	342 48.9	21 31.7	S17 04.6	40 23.0	S21 13.9	164 42.1	N 2 12.5	322 20.5	N 5 53.4
17	357 51.4	36 31.1	S17 03.6	55 23.4	S21 13.5	179 44.5	N 2 12.5	337 23.0	N 5 53.4
18	12 53.9	51 30.6	S17 02.7	70 23.8	S21 13.1	194 46.9	N 2 12.4	352 25.4	N 5 53.4
19	27 56.3	66 30.0	S17 01.7	85 24.2	S21 12.7	209 49.3	N 2 12.4	7 27.8	N 5 53.5
20	42 58.8	81 29.5	S17 00.7	100 24.7	S21 12.3	224 51.7	N 2 12.4	22 30.2	N 5 53.5
21	58 01.3	96 28.9	S16 59.7	115 25.1	S21 11.8	239 54.1	N 2 12.4	37 32.7	N 5 53.5
22	73 03.7	111 28.4	S16 58.7	130 25.5	S21 11.4	254 56.5	N 2 12.4	52 35.1	N 5 53.6
23	88 06.2	126 27.8	S16 57.7	145 25.9	S21 11.0	269 58.8	N 2 12.4	67 37.5	N 5 53.6
		v -0.6	d 1.0	v 0.4	d 0.4	v 2.4	d 0.0	v 2.4	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
1 0	179 13.5	S23 03.3	132 59.9	16.0	S11 00.6	12.2	54.1	Acamar	315 09.7	S40 11.7
1	194 13.2	S23 03.1	147 35.0	16.1	S10 48.4	12.2	54.1	Achernar	335 18.2	S57 05.9
2	209 12.9	S23 02.9	162 10.1	16.1	S10 36.1	12.3	54.1	Acrux	172 57.2	S63 15.0
3	224 12.6	S23 02.7	176 45.3	16.2	S10 23.8	12.3	54.1	Adhara	255 03.5	S29 00.6
4	239 12.3	S23 02.5	191 20.4	16.2	S10 11.5	12.3	54.1	Albireo	67 02.4	N28 01.1
S 5	254 12.0	S23 02.3	205 55.7	16.2	S 9 59.1	12.4	54.1			
A								Aldebaran	290 36.5	N16 34.0
T 6	269 11.7	S23 02.1	220 30.9	16.3	S 9 46.7	12.4	54.1	Alioth	166 10.9	N55 48.1
U 7	284 11.4	S23 01.9	235 06.2	16.3	S 9 34.3	12.4	54.1	Alkaid	152 50.3	N49 10.1
R 8	299 11.1	S23 01.7	249 41.6	16.3	S 9 21.8	12.5	54.1	Al Na-ir	27 30.1	S46 49.6
D 9	314 10.8	S23 01.5	264 17.0	16.4	S 9 09.3	12.5	54.1	Alnilam	275 34.9	S 1 11.1
A 10	329 10.5	S23 01.3	278 52.4	16.4	S 8 56.8	12.5	54.1			
Y 11	344 10.2	S23 01.1	293 27.8	16.4	S 8 44.2	12.6	54.1	Alphard	217 45.0	S 8 46.9
								Alphecca	126 01.9	N26 37.0
12	359 09.9	S23 00.9	308 03.3	16.5	S 8 31.6	12.6	54.1	Alpheratz	357 32.3	N29 15.0
13	14 09.6	S23 00.7	322 38.8	16.5	S 8 19.0	12.6	54.1	Altair	61 57.9	N 8 56.6
14	29 09.3	S23 00.5	337 14.3	16.5	S 8 06.3	12.7	54.1	Ankaa	353 04.8	S42 09.4
15	44 09.0	S23 00.3	351 49.9	16.6	S 7 53.6	12.7	54.1			
16	59 08.8	S23 00.1	6 25.4	16.6	S 7 40.9	12.7	54.1	Antares	112 13.1	S26 29.6
17	74 08.5	S22 59.9	21 01.0	16.6	S 7 28.2	12.7	54.1	Arcturus	145 45.8	N19 02.0
								Atria	107 05.7	S69 04.5
18	89 08.2	S22 59.7	35 36.7	16.6	S 7 15.4	12.8	54.1	Avior	234 13.1	S59 35.9
19	104 07.9	S22 59.4	50 12.3	16.7	S 7 02.6	12.8	54.1	Bellatrix	278 19.9	N 6 22.5
20	119 07.6	S22 59.2	64 48.0	16.7	S 6 49.7	12.8	54.1			
21	134 07.3	S22 59.0	79 23.7	16.7	S 6 36.9	12.9	54.1	Betelgeuse	270 49.1	N 7 24.7
22	149 07.0	S22 58.8	93 59.5	16.7	S 6 24.0	12.9	54.1	Canopus	263 50.7	S52 42.7
23	164 06.7	S22 58.6	108 35.2	16.7	S 6 11.1	12.9	54.1	Capella	280 17.8	N46 01.6
								Castor	245 53.5	N31 49.5
2 0	179 06.4	S22 58.4	123 11.0	16.8	S 5 58.2	12.9	54.1	Deneb	49 24.5	N45 23.0
1	194 06.1	S22 58.2	137 46.8	16.8	S 5 45.2	12.9	54.1			
2	209 05.8	S22 58.0	152 22.6	16.8	S 5 32.3	13.0	54.1	Denebola	182 22.4	N14 24.7
3	224 05.5	S22 57.8	166 58.4	16.8	S 5 19.3	13.0	54.1	Diphda	348 44.9	S17 50.0
4	239 05.2	S22 57.5	181 34.2	16.8	S 5 06.3	13.0	54.1	Dubhe	193 37.7	N61 35.6
S 5	254 04.9	S22 57.3	196 10.1	16.8	S 4 53.2	13.0	54.1	Elnath	277 58.4	N28 37.8
U								Eltanin	90 41.6	N51 29.0
N 6	269 04.6	S22 57.1	210 45.9	16.9	S 4 40.2	13.1	54.1			
D 7	284 04.3	S22 56.9	225 21.8	16.9	S 4 27.1	13.1	54.1	Enif	33 36.6	N10 00.3
A 8	299 04.0	S22 56.7	239 57.7	16.9	S 4 14.0	13.1	54.2	Fomalhaut	15 12.0	S29 28.5
Y 9	314 03.7	S22 56.5	254 33.6	16.9	S 4 00.9	13.1	54.2	Gacrux	171 48.8	S57 16.0
10	329 03.5	S22 56.2	269 09.5	16.9	S 3 47.8	13.1	54.2	Gienah	175 41.0	S17 41.8
11	344 03.2	S22 56.0	283 45.4	16.9	S 3 34.6	13.1	54.2	Hadar	148 32.8	S60 30.3
12	359 02.9	S22 55.8	298 21.3	16.9	S 3 21.5	13.2	54.2	Hamal	327 48.3	N23 35.9
13	14 02.6	S22 55.6	312 57.3	16.9	S 3 08.3	13.2	54.2	Kaus Austr.	83 29.7	S34 22.3
14	29 02.3	S22 55.4	327 33.2	16.9	S 2 55.1	13.2	54.2	Kochab	137 20.8	N74 02.0
15	44 02.0	S22 55.1	342 09.1	16.9	S 2 41.9	13.2	54.2	Markab	13 27.6	N15 21.5
16	59 01.7	S22 54.9	356 45.1	16.9	S 2 28.7	13.2	54.2	Menkar	314 03.4	N 4 12.0
17	74 01.4	S22 54.7	11 21.0	16.9	S 2 15.5	13.2	54.2			
								Menkent	147 54.9	S36 30.4
18	89 01.1	S22 54.5	25 56.9	16.9	S 2 02.2	13.2	54.2	Miaplacidus	221 36.8	S69 49.8
19	104 00.8	S22 54.2	40 32.9	16.9	S 1 49.0	13.2	54.3	Mirfak	308 24.4	N49 57.9
20	119 00.5	S22 54.0	55 08.8	16.9	S 1 35.7	13.3	54.3	Nunki	75 45.1	S26 15.7
21	134 00.2	S22 53.8	69 44.8	16.9	S 1 22.5	13.3	54.3	Peacock	53 02.4	S56 38.8
22	148 60.0	S22 53.5	84 20.7	16.9	S 1 09.2	13.3	54.3			
23	163 59.7	S22 53.3	98 56.6	16.9	S 0 55.9	13.3	54.3	Polaris	315 22.4	N89 22.7
								Pollux	243 13.9	N27 57.4
3 0	178 59.4	S22 53.1	113 32.5	16.9	S 0 42.6	13.3	54.3	Procyon	244 47.9	N 5 09.1
1	193 59.1	S22 52.9	128 08.5	16.9	S 0 29.3	13.3	54.3	Rasalhague	95 56.6	N12 32.4
2	208 58.8	S22 52.6	142 44.4	16.9	S 0 16.0	13.3	54.3	Regulus	207 31.6	N11 49.6
3	223 58.5	S22 52.4	157 20.3	16.9	S 0 02.7	13.3	54.3			
4	238 58.2	S22 52.2	171 56.2	16.9	N 0 10.7	13.3	54.4	Rigel	281 01.2	S 8 10.2
M 5	253 57.9	S22 51.9	186 32.0	16.9	N 0 24.0	13.3	54.4	Rigil Kent	139 37.4	S60 56.9
O								Sabik	102 00.3	S15 45.6
N 6	268 57.6	S22 51.7	201 07.9	16.9	N 0 37.3	13.3	54.4	Schedar	349 28.2	N56 41.8
D 7	283 57.3	S22 51.4	215 43.7	16.8	N 0 50.6	13.3	54.4	Shaula	96 07.4	S37 07.4
A 8	298 57.1	S22 51.2	230 19.6	16.8	N 1 04.0	13.3	54.4			
Y 9	313 56.8	S22 51.0	244 55.4	16.8	N 1 17.3	13.3	54.4	Sirius	258 23.7	S16 45.3
10	328 56.5	S22 50.7	259 31.2	16.8	N 1 30.7	13.3	54.4	Spica	158 19.8	S11 18.5
11	343 56.2	S22 50.5	274 07.0	16.8	N 1 44.0	13.3	54.5	Suhail	222 44.1	S43 32.7
								Vega	80 32.0	N38 48.6
12	358 55.9	S22 50.3	288 42.7	16.8	N 1 57.3	13.3	54.5	Zuben-ubi	136 54.4	S16 09.5
13	13 55.6	S22 50.0	303 18.5	16.7	N 2 10.7	13.3	54.5			
14	28 55.3	S22 49.8	317 54.2	16.7	N 2 24.0	13.3	54.5			
15	43 55.0	S22 49.5	332 29.9	16.7	N 2 37.4	13.3	54.5			
16	58 54.7	S22 49.3	347 05.6	16.7	N 2 50.7	13.3	54.5			
17	73 54.5	S22 49.0	1 41.2	16.7	N 3 04.0	13.3	54.5			
18	88 54.2	S22 48.8	16 16.9	16.6	N 3 17.4	13.3	54.6			
19	103 53.9	S22 48.6	30 52.5	16.6	N 3 30.7	13.3	54.6			
20	118 53.6	S22 48.3	45 28.0	16.6	N 3 44.0	13.3	54.6			
21	133 53.3	S22 48.1	60 03.6	16.5	N 3 57.3	13.3	54.6			
22	148 53.0	S22 47.8	74 39.1	16.5	N 4 10.6	13.3	54.6			
23	163 52.7	S22 47.6	89 14.6	16.5	N 4 23.9	13.3	54.6			
	S.D. 16.3	d 0.2	S.D. 14.7		14.8		14.8			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
4	0	103 08.6	141 27.2	S16 56.7	160 26.3	S21 10.6	285 01.2	N 2 12.4	82 39.9	N 5 53.6
	1	118 11.1	156 26.7	S16 55.8	175 26.7	S21 10.2	300 03.6	N 2 12.3	97 42.3	N 5 53.6
	2	133 13.6	171 26.1	S16 54.8	190 27.1	S21 09.7	315 06.0	N 2 12.3	112 44.8	N 5 53.7
	3	148 16.0	186 25.6	S16 53.8	205 27.5	S21 09.3	330 08.4	N 2 12.3	127 47.2	N 5 53.7
	4	163 18.5	201 25.0	S16 52.8	220 28.0	S21 08.9	345 10.8	N 2 12.3	142 49.6	N 5 53.7
T	5	178 21.0	216 24.5	S16 51.8	235 28.4	S21 08.5	0 13.2	N 2 12.3	157 52.0	N 5 53.8
U										
E	6	193 23.4	231 23.9	S16 50.8	250 28.8	S21 08.1	15 15.6	N 2 12.3	172 54.4	N 5 53.8
S	7	208 25.9	246 23.4	S16 49.8	265 29.2	S21 07.6	30 18.0	N 2 12.2	187 56.9	N 5 53.8
D	8	223 28.4	261 22.8	S16 48.8	280 29.6	S21 07.2	45 20.4	N 2 12.2	202 59.3	N 5 53.9
A	9	238 30.8	276 22.3	S16 47.8	295 30.0	S21 06.8	60 22.8	N 2 12.2	218 01.7	N 5 53.9
Y	10	253 33.3	291 21.7	S16 46.8	310 30.4	S21 06.4	75 25.2	N 2 12.2	233 04.1	N 5 53.9
	11	268 35.8	306 21.2	S16 45.9	325 30.8	S21 05.9	90 27.6	N 2 12.2	248 06.5	N 5 53.9
	12	283 38.2	321 20.6	S16 44.9	340 31.3	S21 05.5	105 30.1	N 2 12.2	263 09.0	N 5 54.0
	13	298 40.7	336 20.1	S16 43.9	355 31.7	S21 05.1	120 32.5	N 2 12.2	278 11.4	N 5 54.0
	14	313 43.1	351 19.5	S16 42.9	10 32.1	S21 04.7	135 34.9	N 2 12.1	293 13.8	N 5 54.0
	15	328 45.6	6 19.0	S16 41.9	25 32.5	S21 04.2	150 37.3	N 2 12.1	308 16.2	N 5 54.1
	16	343 48.1	21 18.4	S16 40.9	40 32.9	S21 03.8	165 39.7	N 2 12.1	323 18.6	N 5 54.1
	17	358 50.5	36 17.9	S16 39.9	55 33.3	S21 03.4	180 42.1	N 2 12.1	338 21.1	N 5 54.1
	18	13 53.0	51 17.3	S16 38.9	70 33.7	S21 03.0	195 44.5	N 2 12.1	353 23.5	N 5 54.2
	19	28 55.5	66 16.8	S16 37.9	85 34.2	S21 02.5	210 46.9	N 2 12.1	8 25.9	N 5 54.2
	20	43 57.9	81 16.3	S16 36.9	100 34.6	S21 02.1	225 49.3	N 2 12.1	23 28.3	N 5 54.2
	21	59 00.4	96 15.7	S16 35.9	115 35.0	S21 01.7	240 51.7	N 2 12.1	38 30.7	N 5 54.3
	22	74 02.9	111 15.2	S16 34.9	130 35.4	S21 01.2	255 54.1	N 2 12.0	53 33.1	N 5 54.3
	23	89 05.3	126 14.6	S16 33.9	145 35.8	S21 00.8	270 56.5	N 2 12.0	68 35.6	N 5 54.3
5	0	104 07.8	141 14.1	S16 32.9	160 36.2	S21 00.4	285 58.9	N 2 12.0	83 38.0	N 5 54.3
	1	119 10.3	156 13.5	S16 31.8	175 36.7	S20 60.0	301 01.3	N 2 12.0	98 40.4	N 5 54.4
	2	134 12.7	171 13.0	S16 30.8	190 37.1	S20 59.5	316 03.7	N 2 12.0	113 42.8	N 5 54.4
	3	149 15.2	186 12.5	S16 29.8	205 37.5	S20 59.1	331 06.1	N 2 12.0	128 45.2	N 5 54.4
	4	164 17.6	201 11.9	S16 28.8	220 37.9	S20 58.7	346 08.5	N 2 12.0	143 47.7	N 5 54.5
W	5	179 20.1	216 11.4	S16 27.8	235 38.3	S20 58.2	1 10.9	N 2 12.0	158 50.1	N 5 54.5
E										
D	6	194 22.6	231 10.9	S16 26.8	250 38.7	S20 57.8	16 13.3	N 2 11.9	173 52.5	N 5 54.5
N	7	209 25.0	246 10.3	S16 25.8	265 39.1	S20 57.4	31 15.7	N 2 11.9	188 54.9	N 5 54.6
E	8	224 27.5	261 09.8	S16 24.8	280 39.6	S20 56.9	46 18.2	N 2 11.9	203 57.3	N 5 54.6
S	9	239 30.0	276 09.3	S16 23.8	295 40.0	S20 56.5	61 20.6	N 2 11.9	218 59.7	N 5 54.6
D	10	254 32.4	291 08.7	S16 22.8	310 40.4	S20 56.1	76 23.0	N 2 11.9	234 02.1	N 5 54.7
A	11	269 34.9	306 08.2	S16 21.8	325 40.8	S20 55.6	91 25.4	N 2 11.9	249 04.6	N 5 54.7
Y										
	12	284 37.4	321 07.6	S16 20.7	340 41.2	S20 55.2	106 27.8	N 2 11.9	264 07.0	N 5 54.7
	13	299 39.8	336 07.1	S16 19.7	355 41.7	S20 54.8	121 30.2	N 2 11.9	279 09.4	N 5 54.8
	14	314 42.3	351 06.6	S16 18.7	10 42.1	S20 54.3	136 32.6	N 2 11.9	294 11.8	N 5 54.8
	15	329 44.7	6 06.1	S16 17.7	25 42.5	S20 53.9	151 35.0	N 2 11.8	309 14.2	N 5 54.8
	16	344 47.2	21 05.5	S16 16.7	40 42.9	S20 53.5	166 37.4	N 2 11.8	324 16.6	N 5 54.9
	17	359 49.7	36 05.0	S16 15.7	55 43.3	S20 53.0	181 39.8	N 2 11.8	339 19.1	N 5 54.9
	18	14 52.1	51 04.5	S16 14.6	70 43.7	S20 52.6	196 42.3	N 2 11.8	354 21.5	N 5 54.9
	19	29 54.6	66 03.9	S16 13.6	85 44.2	S20 52.1	211 44.7	N 2 11.8	9 23.9	N 5 55.0
	20	44 57.1	81 03.4	S16 12.6	100 44.6	S20 51.7	226 47.1	N 2 11.8	24 26.3	N 5 55.0
	21	59 59.5	96 02.9	S16 11.6	115 45.0	S20 51.3	241 49.5	N 2 11.8	39 28.7	N 5 55.0
	22	75 02.0	111 02.4	S16 10.6	130 45.4	S20 50.8	256 51.9	N 2 11.8	54 31.1	N 5 55.1
	23	90 04.5	126 01.8	S16 09.5	145 45.8	S20 50.4	271 54.3	N 2 11.8	69 33.5	N 5 55.1
6	0	105 06.9	141 01.3	S16 08.5	160 46.3	S20 50.0	286 56.7	N 2 11.8	84 35.9	N 5 55.1
	1	120 09.4	156 00.8	S16 07.5	175 46.7	S20 49.5	301 59.1	N 2 11.7	99 38.4	N 5 55.2
	2	135 11.9	171 00.3	S16 06.5	190 47.1	S20 49.1	317 01.6	N 2 11.7	114 40.8	N 5 55.2
	3	150 14.3	185 59.7	S16 05.5	205 47.5	S20 48.6	332 04.0	N 2 11.7	129 43.2	N 5 55.2
	4	165 16.8	200 59.2	S16 04.4	220 47.9	S20 48.2	347 06.4	N 2 11.7	144 45.6	N 5 55.3
T	5	180 19.2	215 58.7	S16 03.4	235 48.4	S20 47.7	2 08.8	N 2 11.7	159 48.0	N 5 55.3
H										
U	6	195 21.7	230 58.2	S16 02.4	250 48.8	S20 47.3	17 11.2	N 2 11.7	174 50.4	N 5 55.3
R	7	210 24.2	245 57.6	S16 01.4	265 49.2	S20 46.9	32 13.6	N 2 11.7	189 52.8	N 5 55.4
S	8	225 26.6	260 57.1	S16 00.3	280 49.6	S20 46.4	47 16.0	N 2 11.7	204 55.2	N 5 55.4
D	9	240 29.1	275 56.6	S15 59.3	295 50.0	S20 46.0	62 18.5	N 2 11.7	219 57.7	N 5 55.4
A	10	255 31.6	290 56.1	S15 58.3	310 50.5	S20 45.5	77 20.9	N 2 11.7	235 00.1	N 5 55.5
Y	11	270 34.0	305 55.6	S15 57.2	325 50.9	S20 45.1	92 23.3	N 2 11.7	250 02.5	N 5 55.5
	12	285 36.5	320 55.0	S15 56.2	340 51.3	S20 44.6	107 25.7	N 2 11.6	265 04.9	N 5 55.5
	13	300 39.0	335 54.5	S15 55.2	355 51.7	S20 44.2	122 28.1	N 2 11.6	280 07.3	N 5 55.6
	14	315 41.4	350 54.0	S15 54.1	10 52.1	S20 43.8	137 30.5	N 2 11.6	295 09.7	N 5 55.6
	15	330 43.9	5 53.5	S15 53.1	25 52.6	S20 43.3	152 33.0	N 2 11.6	310 12.1	N 5 55.6
	16	345 46.4	20 53.0	S15 52.1	40 53.0	S20 42.9	167 35.4	N 2 11.6	325 14.5	N 5 55.7
	17	0 48.8	35 52.5	S15 51.0	55 53.4	S20 42.4	182 37.8	N 2 11.6	340 16.9	N 5 55.7
	18	15 51.3	50 51.9	S15 50.0	70 53.8	S20 42.0	197 40.2	N 2 11.6	355 19.4	N 5 55.7
	19	30 53.7	65 51.4	S15 49.0	85 54.2	S20 41.5	212 42.6	N 2 11.6	10 21.8	N 5 55.8
	20	45 56.2	80 50.9	S15 47.9	100 54.7	S20 41.1	227 45.0	N 2 11.6	25 24.2	N 5 55.8
	21	60 58.7	95 50.4	S15 46.9	115 55.1	S20 40.6	242 47.5	N 2 11.6	40 26.6	N 5 55.8
	22	76 01.1	110 49.9	S15 45.9	130 55.5	S20 40.2	257 49.9	N 2 11.6	55 29.0	N 5 55.9
	23	91 03.6	125 49.4	S15 44.8	145 55.9	S20 39.7	272 52.3	N 2 11.6	70 31.4	N 5 55.9
			v -0.5	d 1.0	v 0.4	d 0.4	v 2.4	d 0.0	v 2.4	d 0.0

G.M.T d h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
4 0	178 52.4	S22 47.3	103 50.0	16.4	N 4 37.2	13.3	54.7
1	193 52.2	S22 47.1	118 25.4	16.4	N 4 50.5	13.3	54.7
2	208 51.9	S22 46.8	133 00.8	16.4	N 5 03.8	13.3	54.7
3	223 51.6	S22 46.6	147 36.1	16.3	N 5 17.1	13.3	54.7
4	238 51.3	S22 46.3	162 11.4	16.3	N 5 30.3	13.3	54.7
T 5	253 51.0	S22 46.1	176 46.7	16.3	N 5 43.6	13.2	54.8
U							
E 6	268 50.7	S22 45.8	191 21.9	16.2	N 5 56.8	13.2	54.8
S 7	283 50.4	S22 45.5	205 57.1	16.2	N 6 10.0	13.2	54.8
D 8	298 50.2	S22 45.3	220 32.2	16.1	N 6 23.2	13.2	54.8
A 9	313 49.9	S22 45.0	235 07.3	16.1	N 6 36.4	13.2	54.8
Y 10	328 49.6	S22 44.8	249 42.4	16.0	N 6 49.6	13.2	54.9
11	343 49.3	S22 44.5	264 17.4	16.0	N 7 02.7	13.2	54.9
12	358 49.0	S22 44.3	278 52.3	16.0	N 7 15.9	13.1	54.9
13	13 48.7	S22 44.0	293 27.2	15.9	N 7 29.0	13.1	54.9
14	28 48.4	S22 43.7	308 02.1	15.9	N 7 42.1	13.1	55.0
15	43 48.2	S22 43.5	322 36.9	15.8	N 7 55.2	13.1	55.0
16	58 47.9	S22 43.2	337 11.6	15.8	N 8 08.3	13.1	55.0
17	73 47.6	S22 43.0	351 46.3	15.7	N 8 21.3	13.0	55.0
18	88 47.3	S22 42.7	6 21.0	15.6	N 8 34.4	13.0	55.1
19	103 47.0	S22 42.4	20 55.6	15.6	N 8 47.4	13.0	55.1
20	118 46.7	S22 42.2	35 30.1	15.5	N 9 00.3	13.0	55.1
21	133 46.5	S22 41.9	50 04.6	15.5	N 9 13.3	13.0	55.1
22	148 46.2	S22 41.6	64 39.0	15.4	N 9 26.2	12.9	55.1
23	163 45.9	S22 41.4	79 13.4	15.4	N 9 39.1	12.9	55.2
5 0	178 45.6	S22 41.1	93 47.7	15.3	N 9 52.0	12.9	55.2
1	193 45.3	S22 40.8	108 21.9	15.2	N10 04.9	12.9	55.2
2	208 45.1	S22 40.5	122 56.1	15.2	N10 17.7	12.8	55.2
3	223 44.8	S22 40.3	137 30.2	15.1	N10 30.5	12.8	55.3
4	238 44.5	S22 40.0	152 04.2	15.0	N10 43.3	12.8	55.3
W 5	253 44.2	S22 39.7	166 38.2	15.0	N10 56.0	12.7	55.3
E							
D 6	268 43.9	S22 39.5	181 12.1	14.9	N11 08.7	12.7	55.4
N 7	283 43.6	S22 39.2	195 45.9	14.8	N11 21.4	12.7	55.4
E 8	298 43.4	S22 38.9	210 19.7	14.8	N11 34.0	12.6	55.4
S 9	313 43.1	S22 38.6	224 53.3	14.7	N11 46.6	12.6	55.4
D 10	328 42.8	S22 38.4	239 27.0	14.6	N11 59.2	12.6	55.5
A 11	343 42.5	S22 38.1	254 00.5	14.5	N12 11.7	12.5	55.5
Y							
12	358 42.2	S22 37.8	268 34.0	14.5	N12 24.2	12.5	55.5
13	13 42.0	S22 37.5	283 07.4	14.4	N12 36.7	12.5	55.6
14	28 41.7	S22 37.3	297 40.7	14.3	N12 49.1	12.4	55.6
15	43 41.4	S22 37.0	312 13.9	14.2	N13 01.5	12.4	55.6
16	58 41.1	S22 36.7	326 47.0	14.1	N13 13.8	12.3	55.6
17	73 40.8	S22 36.4	341 20.1	14.1	N13 26.1	12.3	55.7
18	88 40.6	S22 36.1	355 53.1	14.0	N13 38.4	12.3	55.7
19	103 40.3	S22 35.8	10 26.0	13.9	N13 50.6	12.2	55.7
20	118 40.0	S22 35.6	24 58.8	13.8	N14 02.7	12.2	55.8
21	133 39.7	S22 35.3	39 31.5	13.7	N14 14.8	12.1	55.8
22	148 39.5	S22 35.0	54 04.2	13.6	N14 26.9	12.1	55.8
23	163 39.2	S22 34.7	68 36.7	13.6	N14 38.9	12.0	55.9
6 0	178 38.9	S22 34.4	83 09.2	13.5	N14 50.9	12.0	55.9
1	193 38.6	S22 34.1	97 41.6	13.4	N15 02.8	11.9	55.9
2	208 38.3	S22 33.8	112 13.9	13.3	N15 14.7	11.9	56.0
3	223 38.1	S22 33.6	126 46.1	13.2	N15 26.5	11.8	56.0
4	238 37.8	S22 33.3	141 18.2	13.1	N15 38.2	11.8	56.0
T 5	253 37.5	S22 33.0	155 50.2	13.0	N15 49.9	11.7	56.0
H							
U 6	268 37.2	S22 32.7	170 22.1	12.9	N16 01.6	11.6	56.1
R 7	283 37.0	S22 32.4	184 53.9	12.8	N16 13.2	11.6	56.1
S 8	298 36.7	S22 32.1	199 25.6	12.7	N16 24.7	11.5	56.1
D 9	313 36.4	S22 31.8	213 57.2	12.6	N16 36.2	11.5	56.2
A 10	328 36.1	S22 31.5	228 28.7	12.5	N16 47.6	11.4	56.2
Y 11	343 35.9	S22 31.2	243 00.1	12.4	N16 58.9	11.3	56.3
12	358 35.6	S22 30.9	257 31.4	12.3	N17 10.2	11.3	56.3
13	13 35.3	S22 30.6	272 02.6	12.2	N17 21.4	11.2	56.3
14	28 35.0	S22 30.3	286 33.7	12.1	N17 32.5	11.1	56.4
15	43 34.8	S22 30.0	301 04.7	12.0	N17 43.6	11.1	56.4
16	58 34.5	S22 29.7	315 35.6	11.9	N17 54.6	11.0	56.4
17	73 34.2	S22 29.4	330 06.4	11.8	N18 05.6	10.9	56.5
18	88 33.9	S22 29.1	344 37.1	11.7	N18 16.4	10.9	56.5
19	103 33.7	S22 28.8	359 07.7	11.6	N18 27.2	10.8	56.5
20	118 33.4	S22 28.5	13 38.1	11.5	N18 37.9	10.7	56.6
21	133 33.1	S22 28.2	28 08.5	11.4	N18 48.6	10.6	56.6
22	148 32.8	S22 27.9	42 38.7	11.2	N18 59.1	10.6	56.6
23	163 32.6	S22 27.6	57 08.9	11.1	N19 09.6	10.5	56.7
	S.D. 16.3	d 0.3	S.D. 15.0		15.1		15.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.3	S57 05.9
Acrux	172 57.2	S63 15.0
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.8	N55 48.1
Alkaid	152 50.2	N49 10.0
Al Na-ir	27 30.1	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.9	N26 37.0
Alpheratz	357 32.3	N29 15.0
Altair	61 57.9	N 8 56.6
Ankaa	353 04.8	S42 09.4
Antares	112 13.1	S26 29.6
Arcturus	145 45.8	N19 02.0
Atria	107 05.7	S69 04.5
Avior	234 13.0	S59 35.9
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.7
Capella	280 17.8	N46 01.6
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 23.0
Denebola	182 22.3	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.7	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.6	N51 29.0
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.8	S57 16.0
Gienah	175 41.0	S17 41.9
Hadar	148 32.7	S60 30.3
Hamal	327 48.3	N23 35.9
Kaus Austr.	83 29.7	S34 22.3
Kochab	137 20.8	N74 02.0
Markab	13 27.6	N15 21.5
Menkar	314 03.4	N 4 12.0
Menkent	147 54.8	S36 30.4
Miaplacidus	221 36.8	S69 49.8
Mirfak	308 24.4	N49 57.9
Nunki	75 45.1	S26 15.7
Peacock	53 02.4	S56 38.8
Polaris	315 23.4	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.3	S60 56.9
Sabik	102 00.3	S15 45.6
Schedar	349 28.2	N56 41.8
Shaula	96 07.4	S37 07.4
Sirius	258 23.7	S16 45.3
Spica	158 19.7	S11 18.5
Suhail	222 44.1	S43 32.7
Vega	80 32.0	N38 48.5
Zuben-ubi	136 54.4	S16 09.5

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
7	0	106 06.1	140 48.9	S15 43.8		160 56.4	S20 39.3		287 54.7	N 2 11.6		85 33.8	N 5 55.9	
	1	121 08.5	155 48.4	S15 42.7		175 56.8	S20 38.8		302 57.1	N 2 11.6		100 36.2	N 5 56.0	
	2	136 11.0	170 47.9	S15 41.7		190 57.2	S20 38.4		317 59.6	N 2 11.6		115 38.6	N 5 56.0	
	3	151 13.5	185 47.3	S15 40.7		205 57.6	S20 37.9		333 02.0	N 2 11.5		130 41.0	N 5 56.0	
	4	166 15.9	200 46.8	S15 39.6		220 58.1	S20 37.5		348 04.4	N 2 11.5		145 43.4	N 5 56.1	
F	5	181 18.4	215 46.3	S15 38.6		235 58.5	S20 37.0		3 06.8	N 2 11.5		160 45.8	N 5 56.1	
R														
I	6	196 20.8	230 45.8	S15 37.5		250 58.9	S20 36.6		18 09.3	N 2 11.5		175 48.3	N 5 56.1	
D	7	211 23.3	245 45.3	S15 36.5		265 59.3	S20 36.1		33 11.7	N 2 11.5		190 50.7	N 5 56.2	
A	8	226 25.8	260 44.8	S15 35.4		280 59.8	S20 35.7		48 14.1	N 2 11.5		205 53.1	N 5 56.2	
Y	9	241 28.2	275 44.3	S15 34.4		296 00.2	S20 35.2		63 16.5	N 2 11.5		220 55.5	N 5 56.3	
	10	256 30.7	290 43.8	S15 33.3		311 00.6	S20 34.8		78 18.9	N 2 11.5		235 57.9	N 5 56.3	
	11	271 33.2	305 43.3	S15 32.3		326 01.0	S20 34.3		93 21.4	N 2 11.5		251 00.3	N 5 56.3	
	12	286 35.6	320 42.8	S15 31.2		341 01.4	S20 33.9		108 23.8	N 2 11.5		266 02.7	N 5 56.4	
	13	301 38.1	335 42.3	S15 30.2		356 01.9	S20 33.4		123 26.2	N 2 11.5		281 05.1	N 5 56.4	
	14	316 40.6	350 41.8	S15 29.1		11 02.3	S20 33.0		138 28.6	N 2 11.5		296 07.5	N 5 56.4	
	15	331 43.0	5 41.3	S15 28.1		26 02.7	S20 32.5		153 31.1	N 2 11.5		311 09.9	N 5 56.5	
	16	346 45.5	20 40.8	S15 27.0		41 03.1	S20 32.0		168 33.5	N 2 11.5		326 12.3	N 5 56.5	
	17	1 48.0	35 40.3	S15 26.0		56 03.6	S20 31.6		183 35.9	N 2 11.5		341 14.7	N 5 56.5	
	18	16 50.4	50 39.8	S15 24.9		71 04.0	S20 31.1		198 38.3	N 2 11.5		356 17.1	N 5 56.6	
	19	31 52.9	65 39.3	S15 23.9		86 04.4	S20 30.7		213 40.8	N 2 11.5		11 19.5	N 5 56.6	
	20	46 55.3	80 38.8	S15 22.8		101 04.9	S20 30.2		228 43.2	N 2 11.5		26 21.9	N 5 56.7	
	21	61 57.8	95 38.3	S15 21.8		116 05.3	S20 29.8		243 45.6	N 2 11.5		41 24.4	N 5 56.7	
	22	77 00.3	110 37.8	S15 20.7		131 05.7	S20 29.3		258 48.0	N 2 11.5		56 26.8	N 5 56.7	
	23	92 02.7	125 37.3	S15 19.7		146 06.1	S20 28.8		273 50.5	N 2 11.5		71 29.2	N 5 56.8	
8	0	107 05.2	140 36.8	S15 18.6		161 06.6	S20 28.4		288 52.9	N 2 11.5		86 31.6	N 5 56.8	
	1	122 07.7	155 36.3	S15 17.6		176 07.0	S20 27.9		303 55.3	N 2 11.4		101 34.0	N 5 56.8	
	2	137 10.1	170 35.8	S15 16.5		191 07.4	S20 27.5		318 57.8	N 2 11.4		116 36.4	N 5 56.9	
	3	152 12.6	185 35.3	S15 15.4		206 07.8	S20 27.0		334 00.2	N 2 11.4		131 38.8	N 5 56.9	
	4	167 15.1	200 34.8	S15 14.4		221 08.3	S20 26.5		349 02.6	N 2 11.4		146 41.2	N 5 56.9	
S	5	182 17.5	215 34.3	S15 13.3		236 08.7	S20 26.1		4 05.0	N 2 11.4		161 43.6	N 5 57.0	
A														
T	6	197 20.0	230 33.9	S15 12.3		251 09.1	S20 25.6		19 07.5	N 2 11.4		176 46.0	N 5 57.0	
U	7	212 22.5	245 33.4	S15 11.2		266 09.6	S20 25.2		34 09.9	N 2 11.4		191 48.4	N 5 57.1	
R	8	227 24.9	260 32.9	S15 10.1		281 10.0	S20 24.7		49 12.3	N 2 11.4		206 50.8	N 5 57.1	
D	9	242 27.4	275 32.4	S15 09.1		296 10.4	S20 24.2		64 14.8	N 2 11.4		221 53.2	N 5 57.1	
A	10	257 29.8	290 31.9	S15 08.0		311 10.8	S20 23.8		79 17.2	N 2 11.4		236 55.6	N 5 57.2	
Y	11	272 32.3	305 31.4	S15 07.0		326 11.3	S20 23.3		94 19.6	N 2 11.4		251 58.0	N 5 57.2	
	12	287 34.8	320 30.9	S15 05.9		341 11.7	S20 22.9		109 22.1	N 2 11.4		267 00.4	N 5 57.2	
	13	302 37.2	335 30.4	S15 04.8		356 12.1	S20 22.4		124 24.5	N 2 11.4		282 02.8	N 5 57.3	
	14	317 39.7	350 29.9	S15 03.8		11 12.6	S20 21.9		139 26.9	N 2 11.4		297 05.2	N 5 57.3	
	15	332 42.2	5 29.5	S15 02.7		26 13.0	S20 21.5		154 29.3	N 2 11.4		312 07.6	N 5 57.4	
	16	347 44.6	20 29.0	S15 01.6		41 13.4	S20 21.0		169 31.8	N 2 11.4		327 10.0	N 5 57.4	
	17	2 47.1	35 28.5	S15 00.6		56 13.8	S20 20.5		184 34.2	N 2 11.4		342 12.4	N 5 57.4	
	18	17 49.6	50 28.0	S14 59.5		71 14.3	S20 20.1		199 36.6	N 2 11.4		357 14.8	N 5 57.5	
	19	32 52.0	65 27.5	S14 58.4		86 14.7	S20 19.6		214 39.1	N 2 11.4		12 17.2	N 5 57.5	
	20	47 54.5	80 27.0	S14 57.4		101 15.1	S20 19.1		229 41.5	N 2 11.4		27 19.6	N 5 57.5	
	21	62 57.0	95 26.6	S14 56.3		116 15.6	S20 18.7		244 43.9	N 2 11.4		42 22.0	N 5 57.6	
	22	77 59.4	110 26.1	S14 55.2		131 16.0	S20 18.2		259 46.4	N 2 11.4		57 24.4	N 5 57.6	
	23	93 01.9	125 25.6	S14 54.1		146 16.4	S20 17.7		274 48.8	N 2 11.4		72 26.8	N 5 57.7	
9	0	108 04.3	140 25.1	S14 53.1		161 16.8	S20 17.3		289 51.3	N 2 11.4		87 29.2	N 5 57.7	
	1	123 06.8	155 24.6	S14 52.0		176 17.3	S20 16.8		304 53.7	N 2 11.4		102 31.6	N 5 57.7	
	2	138 09.3	170 24.2	S14 50.9		191 17.7	S20 16.3		319 56.1	N 2 11.4		117 34.0	N 5 57.8	
	3	153 11.7	185 23.7	S14 49.8		206 18.1	S20 15.9		334 58.6	N 2 11.4		132 36.4	N 5 57.8	
	4	168 14.2	200 23.2	S14 48.8		221 18.6	S20 15.4		350 01.0	N 2 11.4		147 38.8	N 5 57.8	
S	5	183 16.7	215 22.7	S14 47.7		236 19.0	S20 14.9		5 03.4	N 2 11.4		162 41.2	N 5 57.9	
U														
N	6	198 19.1	230 22.2	S14 46.6		251 19.4	S20 14.4		20 05.9	N 2 11.4		177 43.6	N 5 57.9	
D	7	213 21.6	245 21.8	S14 45.5		266 19.9	S20 14.0		35 08.3	N 2 11.4		192 46.0	N 5 58.0	
A	8	228 24.1	260 21.3	S14 44.5		281 20.3	S20 13.5		50 10.7	N 2 11.4		207 48.4	N 5 58.0	
Y	9	243 26.5	275 20.8	S14 43.4		296 20.7	S20 13.0		65 13.2	N 2 11.4		222 50.8	N 5 58.0	
	10	258 29.0	290 20.3	S14 42.3		311 21.2	S20 12.6		80 15.6	N 2 11.4		237 53.2	N 5 58.1	
	11	273 31.4	305 19.9	S14 41.2		326 21.6	S20 12.1		95 18.1	N 2 11.4		252 55.6	N 5 58.1	
	12	288 33.9	320 19.4	S14 40.1		341 22.0	S20 11.6		110 20.5	N 2 11.4		267 58.0	N 5 58.2	
	13	303 36.4	335 18.9	S14 39.1		356 22.5	S20 11.1		125 22.9	N 2 11.4		283 00.4	N 5 58.2	
	14	318 38.8	350 18.4	S14 38.0		11 22.9	S20 10.7		140 25.4	N 2 11.4		298 02.8	N 5 58.2	
	15	333 41.3	5 18.0	S14 36.9		26 23.3	S20 10.2		155 27.8	N 2 11.4		313 05.2	N 5 58.3	
	16	348 43.8	20 17.5	S14 35.8		41 23.8	S20 09.7		170 30.2	N 2 11.4		328 07.6	N 5 58.3	
	17	3 46.2	35 17.0	S14 34.7		56 24.2	S20 09.2		185 32.7	N 2 11.4		343 10.0	N 5 58.3	
	18	18 48.7	50 16.6	S14 33.7		71 24.6	S20 08.8		200 35.1	N 2 11.4		358 12.4	N 5 58.4	
	19	33 51.2	65 16.1	S14 32.6		86 25.1	S20 08.3		215 37.6	N 2 11.4		13 14.8	N 5 58.4	
	20	48 53.6	80 15.6	S14 31.5		101 25.5	S20 07.8		230 40.0	N 2 11.4		28 17.2	N 5 58.5	
	21	63 56.1	95 15.2	S14 30.4		116 25.9	S20 07.3		245 42.4	N 2 11.4		43 19.6	N 5 58.5	
	22	78 58.6	110 14.7	S14 29.3		131 26.4	S20 06.9		260 44.9	N 2 11.4		58 22.0	N 5 58.5	
	23	94 01.0	125 14.2	S14 28.2		146 26.8	S20 06.4		275 47.3	N 2 11.5		73 24.4	N 5 58.6	
			v -0.5	d 1.1		v 0.4	d 0.5		v 2.4	d 0.0		v 2.4	d 0.0	

G.M.T		SUN				MOON					
d	h	GHA ° '		Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '
7	0	178	32.3	S22	27.3	71	38.9	11.0	N19	20.0	10.4	56.7
	1	193	32.0	S22	27.0	86	08.8	10.9	N19	30.3	10.3	56.7
	2	208	31.8	S22	26.7	100	38.6	10.8	N19	40.6	10.2	56.8
	3	223	31.5	S22	26.4	115	08.2	10.7	N19	50.7	10.2	56.8
	4	238	31.2	S22	26.1	129	37.8	10.6	N20	00.8	10.1	56.9
F	5	253	30.9	S22	25.8	144	07.3	10.4	N20	10.7	10.0	56.9
R												
I	6	268	30.7	S22	25.5	158	36.6	10.3	N20	20.6	9.9	56.9
D	7	283	30.4	S22	25.1	173	05.8	10.2	N20	30.4	9.8	57.0
A	8	298	30.1	S22	24.8	187	34.9	10.1	N20	40.1	9.7	57.0
Y	9	313	29.9	S22	24.5	202	03.9	10.0	N20	49.7	9.6	57.0
	10	328	29.6	S22	24.2	216	32.7	9.9	N20	59.3	9.5	57.1
	11	343	29.3	S22	23.9	231	01.5	9.7	N21	08.7	9.4	57.1
	12	358	29.0	S22	23.6	245	30.1	9.6	N21	18.0	9.3	57.2
	13	13	28.8	S22	23.3	259	58.6	9.5	N21	27.2	9.2	57.2
	14	28	28.5	S22	22.9	274	27.0	9.4	N21	36.3	9.1	57.2
	15	43	28.2	S22	22.6	288	55.3	9.3	N21	45.3	9.0	57.3
	16	58	28.0	S22	22.3	303	23.4	9.1	N21	54.3	8.9	57.3
	17	73	27.7	S22	22.0	317	51.4	9.0	N22	03.1	8.8	57.4
	18	88	27.4	S22	21.7	332	19.3	8.9	N22	11.8	8.7	57.4
	19	103	27.2	S22	21.4	346	47.1	8.8	N22	20.3	8.6	57.4
	20	118	26.9	S22	21.0	1	14.8	8.7	N22	28.8	8.5	57.5
	21	133	26.6	S22	20.7	15	42.3	8.5	N22	37.2	8.4	57.5
	22	148	26.4	S22	20.4	30	09.7	8.4	N22	45.4	8.2	57.6
	23	163	26.1	S22	20.1	44	37.0	8.3	N22	53.6	8.1	57.6
8	0	178	25.8	S22	19.7	59	04.2	8.2	N23	01.6	8.0	57.6
	1	193	25.6	S22	19.4	73	31.3	8.1	N23	09.5	7.9	57.7
	2	208	25.3	S22	19.1	87	58.2	7.9	N23	17.2	7.8	57.7
	3	223	25.0	S22	18.8	102	25.0	7.8	N23	24.9	7.7	57.8
	4	238	24.8	S22	18.4	116	51.7	7.7	N23	32.4	7.5	57.8
S	5	253	24.5	S22	18.1	131	18.3	7.6	N23	39.8	7.4	57.8
A												
T	6	268	24.2	S22	17.8	145	44.8	7.5	N23	47.1	7.3	57.9
U	7	283	24.0	S22	17.5	160	11.1	7.3	N23	54.2	7.1	57.9
R	8	298	23.7	S22	17.1	174	37.3	7.2	N24	01.2	7.0	58.0
D	9	313	23.4	S22	16.8	189	03.4	7.1	N24	08.1	6.9	58.0
A	10	328	23.2	S22	16.5	203	29.4	7.0	N24	14.9	6.7	58.0
Y	11	343	22.9	S22	16.1	217	55.3	6.9	N24	21.5	6.6	58.1
	12	358	22.6	S22	15.8	232	21.0	6.8	N24	28.0	6.5	58.1
	13	13	22.4	S22	15.5	246	46.7	6.6	N24	34.3	6.3	58.2
	14	28	22.1	S22	15.1	261	12.2	6.5	N24	40.5	6.2	58.2
	15	43	21.8	S22	14.8	275	37.6	6.4	N24	46.5	6.1	58.2
	16	58	21.6	S22	14.5	290	02.9	6.3	N24	52.4	5.9	58.3
	17	73	21.3	S22	14.1	304	28.1	6.2	N24	58.2	5.8	58.3
	18	88	21.0	S22	13.8	318	53.1	6.1	N25	03.8	5.6	58.3
	19	103	20.8	S22	13.4	333	18.1	6.0	N25	09.3	5.5	58.4
	20	118	20.5	S22	13.1	347	42.9	5.8	N25	14.6	5.3	58.4
	21	133	20.3	S22	12.8	2	07.7	5.7	N25	19.8	5.2	58.5
	22	148	20.0	S22	12.4	16	32.3	5.6	N25	24.8	5.0	58.5
	23	163	19.7	S22	12.1	30	56.8	5.5	N25	29.6	4.9	58.5
9	0	178	19.5	S22	11.7	45	21.3	5.4	N25	34.3	4.7	58.6
	1	193	19.2	S22	11.4	59	45.6	5.3	N25	38.9	4.5	58.6
	2	208	18.9	S22	11.1	74	09.8	5.2	N25	43.2	4.4	58.7
	3	223	18.7	S22	10.7	88	33.9	5.1	N25	47.5	4.2	58.7
	4	238	18.4	S22	10.4	102	57.9	5.0	N25	51.5	4.1	58.7
S	5	253	18.2	S22	10.0	117	21.9	4.9	N25	55.4	3.9	58.8
U												
N	6	268	17.9	S22	09.7	131	45.7	4.8	N25	59.1	3.7	58.8
D	7	283	17.6	S22	09.3	146	09.4	4.7	N26	02.7	3.6	58.9
A	8	298	17.4	S22	09.0	160	33.1	4.6	N26	06.1	3.4	58.9
Y	9	313	17.1	S22	08.6	174	56.6	4.6	N26	09.3	3.2	58.9
	10	328	16.9	S22	08.3	189	20.1	4.5	N26	12.4	3.1	59.0
	11	343	16.6	S22	07.9	203	43.5	4.4	N26	15.3	2.9	59.0
	12	358	16.3	S22	07.6	218	06.7	4.3	N26	18.0	2.7	59.1
	13	13	16.1	S22	07.2	232	30.0	4.2	N26	20.5	2.5	59.1
	14	28	15.8	S22	06.9	246	53.1	4.1	N26	22.9	2.4	59.1
	15	43	15.6	S22	06.5	261	16.1	4.0	N26	25.1	2.2	59.2
	16	58	15.3	S22	06.2	275	39.1	4.0	N26	27.1	2.0	59.2
	17	73	15.0	S22	05.8	290	02.0	3.9	N26	28.9	1.8	59.2
	18	88	14.8	S22	05.5	304	24.8	3.8	N26	30.5	1.6	59.3
	19	103	14.5	S22	05.1	318	47.6	3.8	N26	32.0	1.5	59.3
	20	118	14.3	S22	04.7	333	10.3	3.7	N26	33.3	1.3	59.3
	21	133	14.0	S22	04.4	347	32.9	3.6	N26	34.4	1.1	59.4
	22	148	13.8	S22	04.0	1	55.4	3.6	N26	35.3	0.9	59.4
	23	163	13.5	S22	03.7	16	17.9	3.5	N26	36.1	0.7	59.5
		S.D. 16.3		d 0.3		S.D.	15.6		15.8		16.1	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.3	S57 05.9
Acrux	172 57.2	S63 15.0
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.8	N55 48.1
Alkaid	152 50.2	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.9	N26 37.0
Alpheratz	357 32.3	N29 15.0
Altair	61 57.9	N 8 56.6
Ankaa	353 04.8	S42 09.4
Antares	112 13.1	S26 29.6
Arcturus	145 45.8	N19 02.0
Atria	107 05.7	S69 04.5
Avior	234 13.0	S59 35.9
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.7
Capella	280 17.8	N46 01.6
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 23.0
Denebola	182 22.3	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.7	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.6	N51 29.0
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.8	S57 16.0
Gienah	175 41.0	S17 41.9
Hadar	148 32.7	S60 30.3
Hamal	327 48.3	N23 35.9
Kaus Austr.	83 29.7	S34 22.3
Kochab	137 20.7	N74 02.0
Markab	13 27.6	N15 21.5
Menkar	314 03.4	N 4 12.0
Menkent	147 54.8	S36 30.4
Miaplacidus	221 36.7	S69 49.8
Mirfak	308 24.4	N49 57.9
Nunki	75 45.1	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 24.3	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.6	N12 32.3
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.3	S60 56.9
Sabik	102 00.3	S15 45.6
Schedar	349 28.2	N56 41.8
Shaula	96 07.4	S37 07.4
Sirius	258 23.7	S16 45.3
Spica	158 19.7	S11 18.5
Suhail	222 44.0	S43 32.7
Vega	80 32.0	N38 48.5
Zuben-ubi	136 54.4	S16 09.5

G.M.T	ARIES	VENUS		MARS		JUPITER		SATURN	
d h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
	° '	° '	° '	° '	° '	° '	° '	° '	° '
10 0	109 03.5	140 13.8	S14 27.1	161 27.2	S20 05.9	290 49.8	N 2 11.5	88 26.8	N 5 58.6
1	124 05.9	155 13.3	S14 26.0	176 27.7	S20 05.4	305 52.2	N 2 11.5	103 29.2	N 5 58.7
2	139 08.4	170 12.8	S14 25.0	191 28.1	S20 05.0	320 54.7	N 2 11.5	118 31.6	N 5 58.7
3	154 10.9	185 12.4	S14 23.9	206 28.5	S20 04.5	335 57.1	N 2 11.5	133 34.0	N 5 58.7
4	169 13.3	200 11.9	S14 22.8	221 29.0	S20 04.0	350 59.5	N 2 11.5	148 36.4	N 5 58.8
M 5	184 15.8	215 11.4	S14 21.7	236 29.4	S20 03.5	6 02.0	N 2 11.5	163 38.8	N 5 58.8
O									
N 6	199 18.3	230 11.0	S14 20.6	251 29.8	S20 03.0	21 04.4	N 2 11.5	178 41.2	N 5 58.9
D 7	214 20.7	245 10.5	S14 19.5	266 30.3	S20 02.6	36 06.9	N 2 11.5	193 43.5	N 5 58.9
A 8	229 23.2	260 10.1	S14 18.4	281 30.7	S20 02.1	51 09.3	N 2 11.5	208 45.9	N 5 58.9
Y 9	244 25.7	275 09.6	S14 17.3	296 31.2	S20 01.6	66 11.8	N 2 11.5	223 48.3	N 5 59.0
10	259 28.1	290 09.1	S14 16.2	311 31.6	S20 01.1	81 14.2	N 2 11.5	238 50.7	N 5 59.0
11	274 30.6	305 08.7	S14 15.1	326 32.0	S20 00.6	96 16.7	N 2 11.5	253 53.1	N 5 59.1
12	289 33.1	320 08.2	S14 14.0	341 32.5	S20 00.2	111 19.1	N 2 11.5	268 55.5	N 5 59.1
13	304 35.5	335 07.8	S14 12.9	356 32.9	S19 59.7	126 21.5	N 2 11.5	283 57.9	N 5 59.1
14	319 38.0	350 07.3	S14 11.8	11 33.3	S19 59.2	141 24.0	N 2 11.5	299 00.3	N 5 59.2
15	334 40.4	5 06.8	S14 10.7	26 33.8	S19 58.7	156 26.4	N 2 11.5	314 02.7	N 5 59.2
16	349 42.9	20 06.4	S14 09.6	41 34.2	S19 58.2	171 28.9	N 2 11.5	329 05.1	N 5 59.3
17	4 45.4	35 05.9	S14 08.5	56 34.6	S19 57.7	186 31.3	N 2 11.5	344 07.5	N 5 59.3
18	19 47.8	50 05.5	S14 07.4	71 35.1	S19 57.3	201 33.8	N 2 11.5	359 09.9	N 5 59.4
19	34 50.3	65 05.0	S14 06.3	86 35.5	S19 56.8	216 36.2	N 2 11.5	14 12.3	N 5 59.4
20	49 52.8	80 04.6	S14 05.2	101 36.0	S19 56.3	231 38.7	N 2 11.5	29 14.7	N 5 59.4
21	64 55.2	95 04.1	S14 04.1	116 36.4	S19 55.8	246 41.1	N 2 11.5	44 17.1	N 5 59.5
22	79 57.7	110 03.7	S14 03.0	131 36.8	S19 55.3	261 43.6	N 2 11.6	59 19.5	N 5 59.5
23	95 00.2	125 03.2	S14 01.9	146 37.3	S19 54.8	276 46.0	N 2 11.6	74 21.8	N 5 59.6
11 0	110 02.6	140 02.8	S14 00.8	161 37.7	S19 54.3	291 48.5	N 2 11.6	89 24.2	N 5 59.6
1	125 05.1	155 02.3	S13 59.7	176 38.2	S19 53.9	306 50.9	N 2 11.6	104 26.6	N 5 59.6
2	140 07.6	170 01.9	S13 58.6	191 38.6	S19 53.4	321 53.4	N 2 11.6	119 29.0	N 5 59.7
3	155 10.0	185 01.4	S13 57.5	206 39.0	S19 52.9	336 55.8	N 2 11.6	134 31.4	N 5 59.7
4	170 12.5	200 01.0	S13 56.4	221 39.5	S19 52.4	351 58.3	N 2 11.6	149 33.8	N 5 59.8
T 5	185 14.9	215 00.5	S13 55.3	236 39.9	S19 51.9	7 00.7	N 2 11.6	164 36.2	N 5 59.8
U									
E 6	200 17.4	230 00.1	S13 54.2	251 40.3	S19 51.4	22 03.2	N 2 11.6	179 38.6	N 5 59.8
S 7	215 19.9	244 59.6	S13 53.1	266 40.8	S19 50.9	37 05.6	N 2 11.6	194 41.0	N 5 59.9
D 8	230 22.3	259 59.2	S13 52.0	281 41.2	S19 50.4	52 08.1	N 2 11.6	209 43.4	N 5 59.9
A 9	245 24.8	274 58.7	S13 50.9	296 41.7	S19 49.9	67 10.5	N 2 11.6	224 45.8	N 5 60.0
Y 10	260 27.3	289 58.3	S13 49.8	311 42.1	S19 49.5	82 13.0	N 2 11.6	239 48.1	N 6 00.0
11	275 29.7	304 57.8	S13 48.7	326 42.5	S19 49.0	97 15.4	N 2 11.6	254 50.5	N 6 00.1
12	290 32.2	319 57.4	S13 47.5	341 43.0	S19 48.5	112 17.9	N 2 11.7	269 52.9	N 6 00.1
13	305 34.7	334 57.0	S13 46.4	356 43.4	S19 48.0	127 20.3	N 2 11.7	284 55.3	N 6 00.1
14	320 37.1	349 56.5	S13 45.3	11 43.9	S19 47.5	142 22.8	N 2 11.7	299 57.7	N 6 00.2
15	335 39.6	4 56.1	S13 44.2	26 44.3	S19 47.0	157 25.3	N 2 11.7	315 00.1	N 6 00.2
16	350 42.1	19 55.6	S13 43.1	41 44.8	S19 46.5	172 27.7	N 2 11.7	330 02.5	N 6 00.3
17	5 44.5	34 55.2	S13 42.0	56 45.2	S19 46.0	187 30.2	N 2 11.7	345 04.9	N 6 00.3
18	20 47.0	49 54.7	S13 40.9	71 45.6	S19 45.5	202 32.6	N 2 11.7	0 07.3	N 6 00.4
19	35 49.4	64 54.3	S13 39.8	86 46.1	S19 45.0	217 35.1	N 2 11.7	15 09.7	N 6 00.4
20	50 51.9	79 53.9	S13 38.6	101 46.5	S19 44.5	232 37.5	N 2 11.7	30 12.0	N 6 00.4
21	65 54.4	94 53.4	S13 37.5	116 47.0	S19 44.0	247 40.0	N 2 11.7	45 14.4	N 6 00.5
22	80 56.8	109 53.0	S13 36.4	131 47.4	S19 43.5	262 42.4	N 2 11.7	60 16.8	N 6 00.5
23	95 59.3	124 52.6	S13 35.3	146 47.8	S19 43.0	277 44.9	N 2 11.7	75 19.2	N 6 00.6
12 0	111 01.8	139 52.1	S13 34.2	161 48.3	S19 42.6	292 47.4	N 2 11.8	90 21.6	N 6 00.6
1	126 04.2	154 51.7	S13 33.1	176 48.7	S19 42.1	307 49.8	N 2 11.8	105 24.0	N 6 00.7
2	141 06.7	169 51.2	S13 31.9	191 49.2	S19 41.6	322 52.3	N 2 11.8	120 26.4	N 6 00.7
3	156 09.2	184 50.8	S13 30.8	206 49.6	S19 41.1	337 54.7	N 2 11.8	135 28.8	N 6 00.7
4	171 11.6	199 50.4	S13 29.7	221 50.1	S19 40.6	352 57.2	N 2 11.8	150 31.1	N 6 00.8
W 5	186 14.1	214 49.9	S13 28.6	236 50.5	S19 40.1	7 59.6	N 2 11.8	165 33.5	N 6 00.8
E									
D 6	201 16.6	229 49.5	S13 27.5	251 50.9	S19 39.6	23 02.1	N 2 11.8	180 35.9	N 6 00.9
N 7	216 19.0	244 49.1	S13 26.3	266 51.4	S19 39.1	38 04.6	N 2 11.8	195 38.3	N 6 00.9
E 8	231 21.5	259 48.6	S13 25.2	281 51.8	S19 38.6	53 07.0	N 2 11.8	210 40.7	N 6 01.0
S 9	246 23.9	274 48.2	S13 24.1	296 52.3	S19 38.1	68 09.5	N 2 11.8	225 43.1	N 6 01.0
D 10	261 26.4	289 47.8	S13 23.0	311 52.7	S19 37.6	83 11.9	N 2 11.9	240 45.5	N 6 01.0
A 11	276 28.9	304 47.3	S13 21.8	326 53.2	S19 37.1	98 14.4	N 2 11.9	255 47.9	N 6 01.1
Y									
12	291 31.3	319 46.9	S13 20.7	341 53.6	S19 36.6	113 16.9	N 2 11.9	270 50.2	N 6 01.1
13	306 33.8	334 46.5	S13 19.6	356 54.1	S19 36.1	128 19.3	N 2 11.9	285 52.6	N 6 01.2
14	321 36.3	349 46.1	S13 18.5	11 54.5	S19 35.6	143 21.8	N 2 11.9	300 55.0	N 6 01.2
15	336 38.7	4 45.6	S13 17.3	26 54.9	S19 35.1	158 24.2	N 2 11.9	315 57.4	N 6 01.3
16	351 41.2	19 45.2	S13 16.2	41 55.4	S19 34.6	173 26.7	N 2 11.9	330 59.8	N 6 01.3
17	6 43.7	34 44.8	S13 15.1	56 55.8	S19 34.1	188 29.2	N 2 11.9	346 02.2	N 6 01.4
18	21 46.1	49 44.4	S13 14.0	71 56.3	S19 33.6	203 31.6	N 2 12.0	1 04.6	N 6 01.4
19	36 48.6	64 43.9	S13 12.8	86 56.7	S19 33.1	218 34.1	N 2 12.0	16 06.9	N 6 01.4
20	51 51.0	79 43.5	S13 11.7	101 57.2	S19 32.6	233 36.6	N 2 12.0	31 09.3	N 6 01.5
21	66 53.5	94 43.1	S13 10.6	116 57.6	S19 32.1	248 39.0	N 2 12.0	46 11.7	N 6 01.5
22	81 56.0	109 42.7	S13 09.4	131 58.1	S19 31.6	263 41.5	N 2 12.0	61 14.1	N 6 01.6
23	96 58.4	124 42.2	S13 08.3	146 58.5	S19 31.0	278 43.9	N 2 12.0	76 16.5	N 6 01.6
		v -0.4	d 1.1	v 0.4	d 0.5	v 2.5	d 0.0	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
10	0	178 13.3	S22 03.3	30 40.4	3.4	N26 36.6	0.5	59.5
	1	193 13.0	S22 03.0	45 02.8	3.4	N26 37.0	0.4	59.5
	2	208 12.7	S22 02.6	59 25.1	3.3	N26 37.1	0.2	59.6
	3	223 12.5	S22 02.2	73 47.4	3.3	N26 37.1	0.0	59.6
	4	238 12.2	S22 01.9	88 09.6	3.2	N26 36.9	0.2	59.6
M	5	253 12.0	S22 01.5	102 31.8	3.2	N26 36.5	0.4	59.7
O								
N	6	268 11.7	S22 01.1	116 53.9	3.1	N26 36.0	0.6	59.7
D	7	283 11.5	S22 00.8	131 16.0	3.1	N26 35.2	0.8	59.7
A	8	298 11.2	S22 00.4	145 38.1	3.1	N26 34.2	1.0	59.8
Y	9	313 11.0	S22 00.0	160 00.1	3.0	N26 33.1	1.2	59.8
	10	328 10.7	S21 59.7	174 22.1	3.0	N26 31.7	1.3	59.8
	11	343 10.4	S21 59.3	188 44.1	3.0	N26 30.2	1.5	59.9
	12	358 10.2	S21 58.9	203 06.0	2.9	N26 28.5	1.7	59.9
	13	13 09.9	S21 58.6	217 28.0	2.9	N26 26.5	1.9	59.9
	14	28 09.7	S21 58.2	231 49.8	2.9	N26 24.4	2.1	60.0
	15	43 09.4	S21 57.8	246 11.7	2.9	N26 22.1	2.3	60.0
	16	58 09.2	S21 57.5	260 33.6	2.9	N26 19.6	2.5	60.0
	17	73 08.9	S21 57.1	274 55.4	2.8	N26 16.9	2.7	60.1
	18	88 08.7	S21 56.7	289 17.3	2.8	N26 14.0	2.9	60.1
	19	103 08.4	S21 56.3	303 39.1	2.8	N26 10.9	3.1	60.1
	20	118 08.2	S21 56.0	318 00.9	2.8	N26 07.6	3.3	60.1
	21	133 07.9	S21 55.6	332 22.7	2.8	N26 04.2	3.5	60.2
	22	148 07.7	S21 55.2	346 44.6	2.8	N26 00.5	3.7	60.2
	23	163 07.4	S21 54.8	1 06.4	2.8	N25 56.7	3.9	60.2
11	0	178 07.2	S21 54.5	15 28.2	2.8	N25 52.6	4.1	60.3
	1	193 06.9	S21 54.1	29 50.1	2.8	N25 48.4	4.2	60.3
	2	208 06.7	S21 53.7	44 11.9	2.9	N25 43.9	4.4	60.3
	3	223 06.4	S21 53.3	58 33.8	2.9	N25 39.3	4.6	60.3
	4	238 06.2	S21 52.9	72 55.7	2.9	N25 34.5	4.8	60.4
T	5	253 05.9	S21 52.6	87 17.6	2.9	N25 29.5	5.0	60.4
U								
E	6	268 05.7	S21 52.2	101 39.5	2.9	N25 24.3	5.2	60.4
S	7	283 05.4	S21 51.8	116 01.4	2.9	N25 18.9	5.4	60.4
D	8	298 05.2	S21 51.4	130 23.4	3.0	N25 13.3	5.6	60.5
A	9	313 04.9	S21 51.0	144 45.4	3.0	N25 07.5	5.8	60.5
Y	10	328 04.7	S21 50.6	159 07.4	3.0	N25 01.6	6.0	60.5
	11	343 04.4	S21 50.2	173 29.5	3.1	N24 55.4	6.1	60.5
	12	358 04.2	S21 49.9	187 51.6	3.1	N24 49.1	6.3	60.6
	13	13 03.9	S21 49.5	202 13.7	3.1	N24 42.6	6.5	60.6
	14	28 03.7	S21 49.1	216 35.9	3.2	N24 35.9	6.7	60.6
	15	43 03.4	S21 48.7	230 58.1	3.2	N24 29.0	6.9	60.6
	16	58 03.2	S21 48.3	245 20.4	3.3	N24 21.9	7.1	60.6
	17	73 03.0	S21 47.9	259 42.7	3.3	N24 14.7	7.2	60.7
	18	88 02.7	S21 47.5	274 05.1	3.4	N24 07.3	7.4	60.7
	19	103 02.5	S21 47.1	288 27.5	3.4	N23 59.6	7.6	60.7
	20	118 02.2	S21 46.7	302 50.0	3.5	N23 51.9	7.8	60.7
	21	133 02.0	S21 46.4	317 12.5	3.5	N23 43.9	8.0	60.7
	22	148 01.7	S21 46.0	331 35.1	3.6	N23 35.8	8.1	60.8
	23	163 01.5	S21 45.6	345 57.7	3.6	N23 27.4	8.3	60.8
12	0	178 01.2	S21 45.2	0 20.4	3.7	N23 19.0	8.5	60.8
	1	193 01.0	S21 44.8	14 43.2	3.8	N23 10.3	8.7	60.8
	2	208 00.8	S21 44.4	29 06.0	3.8	N23 01.5	8.8	60.8
	3	223 00.5	S21 44.0	43 28.9	3.9	N22 52.5	9.0	60.8
	4	238 00.3	S21 43.6	57 51.9	4.0	N22 43.3	9.2	60.9
W	5	253 00.0	S21 43.2	72 14.9	4.0	N22 34.0	9.3	60.9
E								
D	6	267 59.8	S21 42.8	86 38.1	4.1	N22 24.5	9.5	60.9
N	7	282 59.5	S21 42.4	101 01.2	4.2	N22 14.8	9.7	60.9
E	8	297 59.3	S21 42.0	115 24.5	4.3	N22 05.0	9.8	60.9
S	9	312 59.1	S21 41.6	129 47.8	4.3	N21 55.0	10.0	60.9
D	10	327 58.8	S21 41.2	144 11.2	4.4	N21 44.9	10.1	60.9
A	11	342 58.6	S21 40.8	158 34.7	4.5	N21 34.6	10.3	61.0
Y								
	12	357 58.3	S21 40.4	172 58.3	4.6	N21 24.2	10.4	61.0
	13	12 58.1	S21 40.0	187 21.9	4.6	N21 13.6	10.6	61.0
	14	27 57.8	S21 39.6	201 45.6	4.7	N21 02.8	10.8	61.0
	15	42 57.6	S21 39.1	216 09.5	4.8	N20 51.9	10.9	61.0
	16	57 57.4	S21 38.7	230 33.3	4.9	N20 40.9	11.0	61.0
	17	72 57.1	S21 38.3	244 57.3	5.0	N20 29.7	11.2	61.0
	18	87 56.9	S21 37.9	259 21.4	5.1	N20 18.3	11.3	61.0
	19	102 56.6	S21 37.5	273 45.5	5.1	N20 06.8	11.5	61.0
	20	117 56.4	S21 37.1	288 09.7	5.2	N19 55.2	11.6	61.0
	21	132 56.2	S21 36.7	302 34.1	5.3	N19 43.5	11.8	61.0
	22	147 55.9	S21 36.3	316 58.5	5.4	N19 31.6	11.9	61.0
	23	162 55.7	S21 35.9	331 23.0	5.5	N19 19.5	12.0	61.1
		S.D. 16.3	d 0.4	S.D. 16.3		16.5		16.6

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.3	S57 05.9
Acrux	172 57.1	S63 15.0
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.8	N55 48.1
Alkaid	152 50.2	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.9	N26 37.0
Alpheratz	357 32.3	N29 15.0
Altair	61 57.9	N 8 56.6
Ankaa	353 04.8	S42 09.4
Antares	112 13.1	S26 29.6
Arcturus	145 45.7	N19 02.0
Atria	107 05.6	S69 04.5
Avior	234 13.0	S59 36.0
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.7
Capella	280 17.8	N46 01.6
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.3	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.6	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.6	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.7	S57 16.1
Gienah	175 40.9	S17 41.9
Hadar	148 32.6	S60 30.3
Hamal	327 48.3	N23 35.9
Kaus Austr.	83 29.7	S34 22.3
Kochab	137 20.7	N74 02.0
Markab	13 27.6	N15 21.5
Menkar	314 03.4	N 4 12.0
Menkent	147 54.8	S36 30.4
Miaplacidus	221 36.7	S69 49.9
Mirfak	308 24.4	N49 57.9
Nunki	75 45.1	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 25.3	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.6	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.2	S60 56.9
Sabik	102 00.2	S15 45.6
Schedar	349 28.2	N56 41.8
Shaula	96 07.4	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.7	S11 18.5
Suhail	222 44.0	S43 32.7
Vega	80 32.0	N38 48.5
Zuben-ubi	136 54.3	S16 09.5

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
13 0	112 00.9	139 41.8	S13 07.2	161 59.0	S19 30.5	293 46.4	N 2 12.0	91 18.9	N 6 01.7
1	127 03.4	154 41.4	S13 06.0	176 59.4	S19 30.0	308 48.9	N 2 12.0	106 21.2	N 6 01.7
2	142 05.8	169 41.0	S13 04.9	191 59.9	S19 29.5	323 51.3	N 2 12.1	121 23.6	N 6 01.8
3	157 08.3	184 40.5	S13 03.8	207 00.3	S19 29.0	338 53.8	N 2 12.1	136 26.0	N 6 01.8
4	172 10.8	199 40.1	S13 02.6	222 00.8	S19 28.5	353 56.3	N 2 12.1	151 28.4	N 6 01.8
T 5	187 13.2	214 39.7	S13 01.5	237 01.2	S19 28.0	8 58.7	N 2 12.1	166 30.8	N 6 01.9
H U 6	202 15.7	229 39.3	S13 00.4	252 01.6	S19 27.5	24 01.2	N 2 12.1	181 33.2	N 6 01.9
R 7	217 18.2	244 38.9	S12 59.2	267 02.1	S19 27.0	39 03.7	N 2 12.1	196 35.5	N 6 02.0
S 8	232 20.6	259 38.4	S12 58.1	282 02.5	S19 26.5	54 06.1	N 2 12.1	211 37.9	N 6 02.0
D 9	247 23.1	274 38.0	S12 57.0	297 03.0	S19 26.0	69 08.6	N 2 12.1	226 40.3	N 6 02.1
A 10	262 25.5	289 37.6	S12 55.8	312 03.4	S19 25.5	84 11.1	N 2 12.2	241 42.7	N 6 02.1
Y 11	277 28.0	304 37.2	S12 54.7	327 03.9	S19 25.0	99 13.5	N 2 12.2	256 45.1	N 6 02.2
12	292 30.5	319 36.8	S12 53.6	342 04.3	S19 24.5	114 16.0	N 2 12.2	271 47.4	N 6 02.2
13	307 32.9	334 36.4	S12 52.4	357 04.8	S19 24.0	129 18.5	N 2 12.2	286 49.8	N 6 02.2
14	322 35.4	349 35.9	S12 51.3	12 05.2	S19 23.4	144 20.9	N 2 12.2	301 52.2	N 6 02.3
15	337 37.9	4 35.5	S12 50.1	27 05.7	S19 22.9	159 23.4	N 2 12.2	316 54.6	N 6 02.3
16	352 40.3	19 35.1	S12 49.0	42 06.1	S19 22.4	174 25.9	N 2 12.2	331 57.0	N 6 02.4
17	7 42.8	34 34.7	S12 47.9	57 06.6	S19 21.9	189 28.3	N 2 12.3	346 59.4	N 6 02.4
18	22 45.3	49 34.3	S12 46.7	72 07.0	S19 21.4	204 30.8	N 2 12.3	2 01.7	N 6 02.5
19	37 47.7	64 33.9	S12 45.6	87 07.5	S19 20.9	219 33.3	N 2 12.3	17 04.1	N 6 02.5
20	52 50.2	79 33.5	S12 44.4	102 07.9	S19 20.4	234 35.8	N 2 12.3	32 06.5	N 6 02.6
21	67 52.7	94 33.1	S12 43.3	117 08.4	S19 19.9	249 38.2	N 2 12.3	47 08.9	N 6 02.6
22	82 55.1	109 32.6	S12 42.1	132 08.8	S19 19.3	264 40.7	N 2 12.3	62 11.3	N 6 02.7
23	97 57.6	124 32.2	S12 41.0	147 09.3	S19 18.8	279 43.2	N 2 12.4	77 13.6	N 6 02.7
14 0	113 00.0	139 31.8	S12 39.9	162 09.7	S19 18.3	294 45.6	N 2 12.4	92 16.0	N 6 02.8
1	128 02.5	154 31.4	S12 38.7	177 10.2	S19 17.8	309 48.1	N 2 12.4	107 18.4	N 6 02.8
2	143 05.0	169 31.0	S12 37.6	192 10.6	S19 17.3	324 50.6	N 2 12.4	122 20.8	N 6 02.8
3	158 07.4	184 30.6	S12 36.4	207 11.1	S19 16.8	339 53.1	N 2 12.4	137 23.2	N 6 02.9
4	173 09.9	199 30.2	S12 35.3	222 11.5	S19 16.3	354 55.5	N 2 12.4	152 25.5	N 6 02.9
F 5	188 12.4	214 29.8	S12 34.1	237 12.0	S19 15.8	9 58.0	N 2 12.4	167 27.9	N 6 03.0
R I 6	203 14.8	229 29.4	S12 33.0	252 12.4	S19 15.2	25 00.5	N 2 12.5	182 30.3	N 6 03.0
D 7	218 17.3	244 29.0	S12 31.8	267 12.9	S19 14.7	40 02.9	N 2 12.5	197 32.7	N 6 03.1
A 8	233 19.8	259 28.6	S12 30.7	282 13.3	S19 14.2	55 05.4	N 2 12.5	212 35.0	N 6 03.1
Y 9	248 22.2	274 28.2	S12 29.5	297 13.8	S19 13.7	70 07.9	N 2 12.5	227 37.4	N 6 03.2
10	263 24.7	289 27.8	S12 28.4	312 14.3	S19 13.2	85 10.4	N 2 12.5	242 39.8	N 6 03.2
11	278 27.2	304 27.4	S12 27.2	327 14.7	S19 12.7	100 12.8	N 2 12.6	257 42.2	N 6 03.3
12	293 29.6	319 27.0	S12 26.1	342 15.2	S19 12.1	115 15.3	N 2 12.6	272 44.6	N 6 03.3
13	308 32.1	334 26.6	S12 24.9	357 15.6	S19 11.6	130 17.8	N 2 12.6	287 46.9	N 6 03.4
14	323 34.5	349 26.2	S12 23.8	12 16.1	S19 11.1	145 20.3	N 2 12.6	302 49.3	N 6 03.4
15	338 37.0	4 25.8	S12 22.6	27 16.5	S19 10.6	160 22.7	N 2 12.6	317 51.7	N 6 03.5
16	353 39.5	19 25.4	S12 21.5	42 17.0	S19 10.1	175 25.2	N 2 12.6	332 54.1	N 6 03.5
17	8 41.9	34 25.0	S12 20.3	57 17.4	S19 09.5	190 27.7	N 2 12.7	347 56.4	N 6 03.5
18	23 44.4	49 24.6	S12 19.1	72 17.9	S19 09.0	205 30.2	N 2 12.7	2 58.8	N 6 03.6
19	38 46.9	64 24.2	S12 18.0	87 18.3	S19 08.5	220 32.7	N 2 12.7	18 01.2	N 6 03.6
20	53 49.3	79 23.8	S12 16.8	102 18.8	S19 08.0	235 35.1	N 2 12.7	33 03.6	N 6 03.7
21	68 51.8	94 23.4	S12 15.7	117 19.2	S19 07.5	250 37.6	N 2 12.7	48 06.0	N 6 03.7
22	83 54.3	109 23.0	S12 14.5	132 19.7	S19 06.9	265 40.1	N 2 12.7	63 08.3	N 6 03.8
23	98 56.7	124 22.6	S12 13.4	147 20.2	S19 06.4	280 42.6	N 2 12.8	78 10.7	N 6 03.8
15 0	113 59.2	139 22.2	S12 12.2	162 20.6	S19 05.9	295 45.0	N 2 12.8	93 13.1	N 6 03.9
1	129 01.7	154 21.8	S12 11.0	177 21.1	S19 05.4	310 47.5	N 2 12.8	108 15.5	N 6 03.9
2	144 04.1	169 21.4	S12 09.9	192 21.5	S19 04.8	325 50.0	N 2 12.8	123 17.8	N 6 04.0
3	159 06.6	184 21.0	S12 08.7	207 22.0	S19 04.3	340 52.5	N 2 12.8	138 20.2	N 6 04.0
4	174 09.0	199 20.6	S12 07.6	222 22.4	S19 03.8	355 55.0	N 2 12.9	153 22.6	N 6 04.1
S 5	189 11.5	214 20.2	S12 06.4	237 22.9	S19 03.3	10 57.4	N 2 12.9	168 25.0	N 6 04.1
A T 6	204 14.0	229 19.8	S12 05.2	252 23.3	S19 02.7	25 59.9	N 2 12.9	183 27.3	N 6 04.2
U 7	219 16.4	244 19.4	S12 04.1	267 23.8	S19 02.2	41 02.4	N 2 12.9	198 29.7	N 6 04.2
R 8	234 18.9	259 19.0	S12 02.9	282 24.3	S19 01.7	56 04.9	N 2 12.9	213 32.1	N 6 04.3
D 9	249 21.4	274 18.7	S12 01.8	297 24.7	S19 01.2	71 07.4	N 2 13.0	228 34.5	N 6 04.3
A 10	264 23.8	289 18.3	S12 00.6	312 25.2	S19 00.6	86 09.8	N 2 13.0	243 36.8	N 6 04.4
Y 11	279 26.3	304 17.9	S11 59.4	327 25.6	S19 00.1	101 12.3	N 2 13.0	258 39.2	N 6 04.4
12	294 28.8	319 17.5	S11 58.3	342 26.1	S18 59.6	116 14.8	N 2 13.0	273 41.6	N 6 04.5
13	309 31.2	334 17.1	S11 57.1	357 26.5	S18 59.1	131 17.3	N 2 13.0	288 43.9	N 6 04.5
14	324 33.7	349 16.7	S11 55.9	12 27.0	S18 58.5	146 19.8	N 2 13.1	303 46.3	N 6 04.6
15	339 36.1	4 16.3	S11 54.8	27 27.5	S18 58.0	161 22.3	N 2 13.1	318 48.7	N 6 04.6
16	354 38.6	19 15.9	S11 53.6	42 27.9	S18 57.5	176 24.7	N 2 13.1	333 51.1	N 6 04.6
17	9 41.1	34 15.5	S11 52.4	57 28.4	S18 57.0	191 27.2	N 2 13.1	348 53.4	N 6 04.7
18	24 43.5	49 15.2	S11 51.3	72 28.8	S18 56.4	206 29.7	N 2 13.2	3 55.8	N 6 04.7
19	39 46.0	64 14.8	S11 50.1	87 29.3	S18 55.9	221 32.2	N 2 13.2	18 58.2	N 6 04.8
20	54 48.5	79 14.4	S11 48.9	102 29.7	S18 55.4	236 34.7	N 2 13.2	34 00.6	N 6 04.8
21	69 50.9	94 14.0	S11 47.8	117 30.2	S18 54.8	251 37.2	N 2 13.2	49 02.9	N 6 04.9
22	84 53.4	109 13.6	S11 46.6	132 30.7	S18 54.3	266 39.7	N 2 13.2	64 05.3	N 6 04.9
23	99 55.9	124 13.2	S11 45.4	147 31.1	S18 53.8	281 42.1	N 2 13.3	79 07.7	N 6 05.0
		v -0.4	d 1.2	v 0.5	d 0.5	v 2.5	d 0.0	v 2.4	d 0.0

G.M.T		SUN		MOON					
d	h	GHA	Dec	GHA	v	Dec	d	HP
		° '	° '	° '	'	° '	'	'
13	0	177 55.5	S21 35.5	345 47.6	5.6	N19 07.4	12.2	61.1
	1	192 55.2	S21 35.0	0 12.2	5.7	N18 55.1	12.3	61.1
	2	207 55.0	S21 34.6	14 37.0	5.8	N18 42.7	12.4	61.1
	3	222 54.7	S21 34.2	29 01.8	5.9	N18 30.1	12.5	61.1
	4	237 54.5	S21 33.8	43 26.8	5.9	N18 17.5	12.7	61.1
T	5	252 54.3	S21 33.4	57 51.8	6.0	N18 04.7	12.8	61.1
H								
U	6	267 54.0	S21 33.0	72 16.9	6.1	N17 51.7	12.9	61.1
R	7	282 53.8	S21 32.5	86 42.1	6.2	N17 38.7	13.0	61.1
S	8	297 53.6	S21 32.1	101 07.5	6.3	N17 25.6	13.1	61.1
D	9	312 53.3	S21 31.7	115 32.9	6.4	N17 12.3	13.3	61.1
A	10	327 53.1	S21 31.3	129 58.3	6.5	N16 58.9	13.4	61.1
Y	11	342 52.9	S21 30.9	144 23.9	6.6	N16 45.5	13.5	61.1
	12	357 52.6	S21 30.4	158 49.6	6.7	N16 31.9	13.6	61.1
	13	12 52.4	S21 30.0	173 15.3	6.8	N16 18.2	13.7	61.1
	14	27 52.2	S21 29.6	187 41.2	6.9	N16 04.4	13.8	61.1
	15	42 51.9	S21 29.2	202 07.1	6.9	N15 50.5	13.9	61.1
	16	57 51.7	S21 28.8	216 33.2	7.0	N15 36.5	14.0	61.1
	17	72 51.5	S21 28.3	230 59.3	7.1	N15 22.4	14.1	61.0
	18	87 51.2	S21 27.9	245 25.5	7.2	N15 08.2	14.2	61.0
	19	102 51.0	S21 27.5	259 51.8	7.3	N14 53.9	14.3	61.0
	20	117 50.8	S21 27.0	274 18.2	7.4	N14 39.5	14.4	61.0
	21	132 50.5	S21 26.6	288 44.7	7.5	N14 25.0	14.5	61.0
	22	147 50.3	S21 26.2	303 11.3	7.6	N14 10.5	14.6	61.0
	23	162 50.1	S21 25.8	317 37.9	7.7	N13 55.9	14.6	61.0
14	0	177 49.8	S21 25.3	332 04.7	7.7	N13 41.1	14.7	61.0
	1	192 49.6	S21 24.9	346 31.5	7.8	N13 26.3	14.8	61.0
	2	207 49.4	S21 24.5	0 58.4	7.9	N13 11.5	14.9	61.0
	3	222 49.1	S21 24.0	15 25.4	8.0	N12 56.5	15.0	61.0
	4	237 48.9	S21 23.6	29 52.5	8.1	N12 41.5	15.0	61.0
F	5	252 48.7	S21 23.2	44 19.7	8.2	N12 26.4	15.1	61.0
R								
I	6	267 48.4	S21 22.7	58 46.9	8.3	N12 11.2	15.2	60.9
D	7	282 48.2	S21 22.3	73 14.3	8.3	N11 56.0	15.2	60.9
A	8	297 48.0	S21 21.9	87 41.7	8.4	N11 40.7	15.3	60.9
Y	9	312 47.8	S21 21.4	102 09.2	8.5	N11 25.3	15.4	60.9
	10	327 47.5	S21 21.0	116 36.7	8.6	N11 09.9	15.4	60.9
	11	342 47.3	S21 20.6	131 04.4	8.7	N10 54.4	15.5	60.9
	12	357 47.1	S21 20.1	145 32.1	8.7	N10 38.9	15.5	60.9
	13	12 46.8	S21 19.7	159 60.0	8.8	N10 23.3	15.6	60.9
	14	27 46.6	S21 19.2	174 27.9	8.9	N10 07.6	15.7	60.8
	15	42 46.4	S21 18.8	188 55.8	9.0	N 9 51.9	15.7	60.8
	16	57 46.2	S21 18.4	203 23.9	9.0	N 9 36.2	15.8	60.8
	17	72 45.9	S21 17.9	217 52.0	9.1	N 9 20.4	15.8	60.8
	18	87 45.7	S21 17.5	232 20.2	9.2	N 9 04.5	15.8	60.8
	19	102 45.5	S21 17.0	246 48.4	9.3	N 8 48.6	15.9	60.8
	20	117 45.3	S21 16.6	261 16.8	9.3	N 8 32.7	15.9	60.7
	21	132 45.0	S21 16.1	275 45.2	9.4	N 8 16.7	16.0	60.7
	22	147 44.8	S21 15.7	290 13.6	9.5	N 8 00.7	16.0	60.7
	23	162 44.6	S21 15.2	304 42.2	9.5	N 7 44.7	16.0	60.7
15	0	177 44.4	S21 14.8	319 10.8	9.6	N 7 28.6	16.1	60.7
	1	192 44.1	S21 14.3	333 39.5	9.7	N 7 12.5	16.1	60.6
	2	207 43.9	S21 13.9	348 08.2	9.7	N 6 56.4	16.1	60.6
	3	222 43.7	S21 13.4	2 37.0	9.8	N 6 40.2	16.2	60.6
	4	237 43.5	S21 13.0	17 05.9	9.9	N 6 24.0	16.2	60.6
S	5	252 43.2	S21 12.5	31 34.8	9.9	N 6 07.8	16.2	60.6
A								
T	6	267 43.0	S21 12.1	46 03.8	10.0	N 5 51.6	16.2	60.5
U	7	282 42.8	S21 11.6	60 32.8	10.0	N 5 35.3	16.3	60.5
R	8	297 42.6	S21 11.2	75 01.9	10.1	N 5 19.1	16.3	60.5
D	9	312 42.3	S21 10.7	89 31.1	10.2	N 5 02.8	16.3	60.5
A	10	327 42.1	S21 10.3	104 00.3	10.2	N 4 46.5	16.3	60.4
Y	11	342 41.9	S21 09.8	118 29.6	10.3	N 4 30.1	16.3	60.4
	12	357 41.7	S21 09.4	132 58.9	10.3	N 4 13.8	16.3	60.4
	13	12 41.5	S21 08.9	147 28.3	10.4	N 3 57.5	16.3	60.4
	14	27 41.2	S21 08.5	161 57.7	10.4	N 3 41.1	16.3	60.4
	15	42 41.0	S21 08.0	176 27.2	10.5	N 3 24.8	16.4	60.3
	16	57 40.8	S21 07.5	190 56.7	10.5	N 3 08.4	16.4	60.3
	17	72 40.6	S21 07.1	205 26.3	10.6	N 2 52.1	16.4	60.3
	18	87 40.4	S21 06.6	219 55.9	10.6	N 2 35.7	16.4	60.3
	19	102 40.1	S21 06.2	234 25.5	10.7	N 2 19.3	16.4	60.2
	20	117 39.9	S21 05.7	248 55.2	10.7	N 2 03.0	16.4	60.2
	21	132 39.7	S21 05.2	263 25.0	10.7	N 1 46.6	16.4	60.2
	22	147 39.5	S21 04.8	277 54.8	10.8	N 1 30.3	16.3	60.1
	23	162 39.3	S21 04.3	292 24.6	10.8	N 1 14.0	16.3	60.1
		S.D. 16.3	d 0.4	S.D. 16.6		16.6		16.5

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.3	S57 05.9
Acrux	172 57.1	S63 15.1
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.7	N55 48.1
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.8	N26 37.0
Alpheratz	357 32.3	N29 15.0
Altair	61 57.9	N 8 56.5
Ankaa	353 04.8	S42 09.4
Antares	112 13.1	S26 29.6
Arcturus	145 45.7	N19 01.9
Atria	107 05.6	S69 04.5
Avior	234 13.0	S59 36.0
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.7
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.3	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.6	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.5	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.7	S57 16.1
Gienah	175 40.9	S17 41.9
Hadar	148 32.6	S60 30.3
Hamal	327 48.3	N23 35.9
Kaus Austr.	83 29.6	S34 22.3
Kochab	137 20.6	N74 02.0
Markab	13 27.6	N15 21.5
Menkar	314 03.4	N 4 12.0
Menkent	147 54.7	S36 30.4
Miaplacidus	221 36.7	S69 49.9
Mirfak	308 24.4	N49 57.9
Nunki	75 45.1	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 26.4	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.6	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.2	S60 56.9
Sabik	102 00.2	S15 45.6
Schedar	349 28.3	N56 41.8
Shaula	96 07.3	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.7	S11 18.5
Suhail	222 44.0	S43 32.8
Vega	80 32.0	N38 48.5
Zuben-ubi	136 54.3	S16 09.5

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
16	0	114 58.3	139 12.9	S11 44.3	162 31.6	S18 53.2	296 44.6	N 2 13.3	94 10.0	N 6 05.0
	1	130 00.8	154 12.5	S11 43.1	177 32.0	S18 52.7	311 47.1	N 2 13.3	109 12.4	N 6 05.1
	2	145 03.3	169 12.1	S11 41.9	192 32.5	S18 52.2	326 49.6	N 2 13.3	124 14.8	N 6 05.1
	3	160 05.7	184 11.7	S11 40.7	207 33.0	S18 51.7	341 52.1	N 2 13.4	139 17.2	N 6 05.2
	4	175 08.2	199 11.3	S11 39.6	222 33.4	S18 51.1	356 54.6	N 2 13.4	154 19.5	N 6 05.2
S	5	190 10.6	214 11.0	S11 38.4	237 33.9	S18 50.6	11 57.1	N 2 13.4	169 21.9	N 6 05.3
U										
N	6	205 13.1	229 10.6	S11 37.2	252 34.3	S18 50.1	26 59.5	N 2 13.4	184 24.3	N 6 05.3
D	7	220 15.6	244 10.2	S11 36.1	267 34.8	S18 49.5	42 02.0	N 2 13.4	199 26.6	N 6 05.4
A	8	235 18.0	259 09.8	S11 34.9	282 35.3	S18 49.0	57 04.5	N 2 13.5	214 29.0	N 6 05.4
Y	9	250 20.5	274 09.4	S11 33.7	297 35.7	S18 48.5	72 07.0	N 2 13.5	229 31.4	N 6 05.5
	10	265 23.0	289 09.1	S11 32.5	312 36.2	S18 47.9	87 09.5	N 2 13.5	244 33.8	N 6 05.5
	11	280 25.4	304 08.7	S11 31.4	327 36.6	S18 47.4	102 12.0	N 2 13.5	259 36.1	N 6 05.6
	12	295 27.9	319 08.3	S11 30.2	342 37.1	S18 46.8	117 14.5	N 2 13.6	274 38.5	N 6 05.6
	13	310 30.4	334 07.9	S11 29.0	357 37.6	S18 46.3	132 17.0	N 2 13.6	289 40.9	N 6 05.7
	14	325 32.8	349 07.6	S11 27.8	12 38.0	S18 45.8	147 19.5	N 2 13.6	304 43.2	N 6 05.7
	15	340 35.3	4 07.2	S11 26.6	27 38.5	S18 45.2	162 22.0	N 2 13.6	319 45.6	N 6 05.8
	16	355 37.8	19 06.8	S11 25.5	42 39.0	S18 44.7	177 24.4	N 2 13.7	334 48.0	N 6 05.8
	17	10 40.2	34 06.4	S11 24.3	57 39.4	S18 44.2	192 26.9	N 2 13.7	349 50.3	N 6 05.9
	18	25 42.7	49 06.1	S11 23.1	72 39.9	S18 43.6	207 29.4	N 2 13.7	4 52.7	N 6 05.9
	19	40 45.1	64 05.7	S11 21.9	87 40.3	S18 43.1	222 31.9	N 2 13.7	19 55.1	N 6 06.0
	20	55 47.6	79 05.3	S11 20.7	102 40.8	S18 42.6	237 34.4	N 2 13.8	34 57.4	N 6 06.0
	21	70 50.1	94 05.0	S11 19.6	117 41.3	S18 42.0	252 36.9	N 2 13.8	49 59.8	N 6 06.1
	22	85 52.5	109 04.6	S11 18.4	132 41.7	S18 41.5	267 39.4	N 2 13.8	65 02.2	N 6 06.1
	23	100 55.0	124 04.2	S11 17.2	147 42.2	S18 40.9	282 41.9	N 2 13.8	80 04.5	N 6 06.2
17	0	115 57.5	139 03.9	S11 16.0	162 42.7	S18 40.4	297 44.4	N 2 13.9	95 06.9	N 6 06.2
	1	130 59.9	154 03.5	S11 14.8	177 43.1	S18 39.9	312 46.9	N 2 13.9	110 09.3	N 6 06.3
	2	146 02.4	169 03.1	S11 13.7	192 43.6	S18 39.3	327 49.4	N 2 13.9	125 11.6	N 6 06.3
	3	161 04.9	184 02.7	S11 12.5	207 44.0	S18 38.8	342 51.9	N 2 13.9	140 14.0	N 6 06.4
	4	176 07.3	199 02.4	S11 11.3	222 44.5	S18 38.2	357 54.4	N 2 14.0	155 16.4	N 6 06.4
M	5	191 09.8	214 02.0	S11 10.1	237 45.0	S18 37.7	12 56.9	N 2 14.0	170 18.7	N 6 06.5
O										
N	6	206 12.2	229 01.7	S11 08.9	252 45.4	S18 37.2	27 59.4	N 2 14.0	185 21.1	N 6 06.5
D	7	221 14.7	244 01.3	S11 07.7	267 45.9	S18 36.6	43 01.8	N 2 14.0	200 23.5	N 6 06.6
A	8	236 17.2	259 00.9	S11 06.5	282 46.4	S18 36.1	58 04.3	N 2 14.1	215 25.8	N 6 06.6
Y	9	251 19.6	274 00.6	S11 05.4	297 46.8	S18 35.5	73 06.8	N 2 14.1	230 28.2	N 6 06.7
	10	266 22.1	289 00.2	S11 04.2	312 47.3	S18 35.0	88 09.3	N 2 14.1	245 30.6	N 6 06.8
	11	281 24.6	303 59.8	S11 03.0	327 47.8	S18 34.4	103 11.8	N 2 14.1	260 32.9	N 6 06.8
	12	296 27.0	318 59.5	S11 01.8	342 48.2	S18 33.9	118 14.3	N 2 14.2	275 35.3	N 6 06.9
	13	311 29.5	333 59.1	S11 00.6	357 48.7	S18 33.4	133 16.8	N 2 14.2	290 37.7	N 6 06.9
	14	326 32.0	348 58.7	S10 59.4	12 49.2	S18 32.8	148 19.3	N 2 14.2	305 40.0	N 6 07.0
	15	341 34.4	3 58.4	S10 58.2	27 49.6	S18 32.3	163 21.8	N 2 14.3	320 42.4	N 6 07.0
	16	356 36.9	18 58.0	S10 57.0	42 50.1	S18 31.7	178 24.3	N 2 14.3	335 44.8	N 6 07.1
	17	11 39.4	33 57.7	S10 55.9	57 50.6	S18 31.2	193 26.8	N 2 14.3	350 47.1	N 6 07.1
	18	26 41.8	48 57.3	S10 54.7	72 51.0	S18 30.6	208 29.3	N 2 14.3	5 49.5	N 6 07.2
	19	41 44.3	63 56.9	S10 53.5	87 51.5	S18 30.1	223 31.8	N 2 14.4	20 51.9	N 6 07.2
	20	56 46.7	78 56.6	S10 52.3	102 52.0	S18 29.5	238 34.3	N 2 14.4	35 54.2	N 6 07.3
	21	71 49.2	93 56.2	S10 51.1	117 52.4	S18 29.0	253 36.8	N 2 14.4	50 56.6	N 6 07.3
	22	86 51.7	108 55.9	S10 49.9	132 52.9	S18 28.4	268 39.3	N 2 14.4	65 59.0	N 6 07.4
	23	101 54.1	123 55.5	S10 48.7	147 53.4	S18 27.9	283 41.8	N 2 14.5	81 01.3	N 6 07.4
18	0	116 56.6	138 55.2	S10 47.5	162 53.8	S18 27.3	298 44.3	N 2 14.5	96 03.7	N 6 07.5
	1	131 59.1	153 54.8	S10 46.3	177 54.3	S18 26.8	313 46.8	N 2 14.5	111 06.0	N 6 07.5
	2	147 01.5	168 54.4	S10 45.1	192 54.8	S18 26.2	328 49.3	N 2 14.6	126 08.4	N 6 07.6
	3	162 04.0	183 54.1	S10 43.9	207 55.2	S18 25.7	343 51.8	N 2 14.6	141 10.8	N 6 07.6
	4	177 06.5	198 53.7	S10 42.7	222 55.7	S18 25.2	358 54.3	N 2 14.6	156 13.1	N 6 07.7
T	5	192 08.9	213 53.4	S10 41.5	237 56.2	S18 24.6	13 56.8	N 2 14.6	171 15.5	N 6 07.7
U										
E	6	207 11.4	228 53.0	S10 40.3	252 56.6	S18 24.1	28 59.3	N 2 14.7	186 17.9	N 6 07.8
S	7	222 13.8	243 52.7	S10 39.1	267 57.1	S18 23.5	44 01.8	N 2 14.7	201 20.2	N 6 07.8
D	8	237 16.3	258 52.3	S10 37.9	282 57.6	S18 22.9	59 04.3	N 2 14.7	216 22.6	N 6 07.9
A	9	252 18.8	273 52.0	S10 36.7	297 58.0	S18 22.4	74 06.8	N 2 14.8	231 25.0	N 6 08.0
Y	10	267 21.2	288 51.6	S10 35.5	312 58.5	S18 21.8	89 09.3	N 2 14.8	246 27.3	N 6 08.0
	11	282 23.7	303 51.3	S10 34.3	327 59.0	S18 21.3	104 11.9	N 2 14.8	261 29.7	N 6 08.1
	12	297 26.2	318 50.9	S10 33.1	342 59.5	S18 20.7	119 14.4	N 2 14.9	276 32.0	N 6 08.1
	13	312 28.6	333 50.6	S10 31.9	357 59.9	S18 20.2	134 16.9	N 2 14.9	291 34.4	N 6 08.2
	14	327 31.1	348 50.2	S10 30.8	13 00.4	S18 19.6	149 19.4	N 2 14.9	306 36.8	N 6 08.2
	15	342 33.6	3 49.9	S10 29.5	28 00.9	S18 19.1	164 21.9	N 2 14.9	321 39.1	N 6 08.3
	16	357 36.0	18 49.5	S10 28.3	43 01.3	S18 18.5	179 24.4	N 2 15.0	336 41.5	N 6 08.3
	17	12 38.5	33 49.2	S10 27.1	58 01.8	S18 18.0	194 26.9	N 2 15.0	351 43.8	N 6 08.4
	18	27 41.0	48 48.8	S10 25.9	73 02.3	S18 17.4	209 29.4	N 2 15.0	6 46.2	N 6 08.4
	19	42 43.4	63 48.5	S10 24.7	88 02.8	S18 16.9	224 31.9	N 2 15.1	21 48.6	N 6 08.5
	20	57 45.9	78 48.1	S10 23.5	103 03.2	S18 16.3	239 34.4	N 2 15.1	36 50.9	N 6 08.5
	21	72 48.3	93 47.8	S10 22.3	118 03.7	S18 15.8	254 36.9	N 2 15.1	51 53.3	N 6 08.6
	22	87 50.8	108 47.4	S10 21.1	133 04.2	S18 15.2	269 39.4	N 2 15.2	66 55.6	N 6 08.6
	23	102 53.3	123 47.1	S10 19.9	148 04.6	S18 14.6	284 41.9	N 2 15.2	81 58.0	N 6 08.7
			v -0.4	d 1.2	v 0.5	d 0.5	v 2.5	d 0.0	v 2.4	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
16	0	177 39.0	S21 03.8	306 54.5	10.9	N 0 57.6	16.3	60.1
	1	192 38.8	S21 03.4	321 24.4	10.9	N 0 41.3	16.3	60.1
	2	207 38.6	S21 02.9	335 54.3	10.9	N 0 25.0	16.3	60.0
	3	222 38.4	S21 02.4	350 24.3	11.0	N 0 08.7	16.3	60.0
	4	237 38.2	S21 02.0	4 54.3	11.0	S 0 07.6	16.3	60.0
S	5	252 38.0	S21 01.5	19 24.3	11.0	S 0 23.8	16.3	60.0
U								
N	6	267 37.7	S21 01.0	33 54.4	11.1	S 0 40.1	16.2	59.9
D	7	282 37.5	S21 00.6	48 24.5	11.1	S 0 56.3	16.2	59.9
A	8	297 37.3	S21 00.1	62 54.6	11.1	S 1 12.5	16.2	59.9
Y	9	312 37.1	S20 59.6	77 24.8	11.2	S 1 28.6	16.2	59.8
	10	327 36.9	S20 59.2	91 55.0	11.2	S 1 44.8	16.1	59.8
	11	342 36.7	S20 58.7	106 25.2	11.2	S 2 00.9	16.1	59.8
	12	357 36.4	S20 58.2	120 55.4	11.2	S 2 17.0	16.1	59.7
	13	12 36.2	S20 57.7	135 25.6	11.3	S 2 33.1	16.1	59.7
	14	27 36.0	S20 57.3	149 55.9	11.3	S 2 49.1	16.0	59.7
	15	42 35.8	S20 56.8	164 26.2	11.3	S 3 05.1	16.0	59.7
	16	57 35.6	S20 56.3	178 56.5	11.3	S 3 21.1	16.0	59.6
	17	72 35.4	S20 55.8	193 26.9	11.3	S 3 37.0	15.9	59.6
	18	87 35.2	S20 55.4	207 57.2	11.3	S 3 52.9	15.9	59.6
	19	102 34.9	S20 54.9	222 27.6	11.4	S 4 08.8	15.9	59.5
	20	117 34.7	S20 54.4	236 57.9	11.4	S 4 24.6	15.8	59.5
	21	132 34.5	S20 53.9	251 28.3	11.4	S 4 40.4	15.8	59.5
	22	147 34.3	S20 53.5	265 58.7	11.4	S 4 56.1	15.7	59.4
	23	162 34.1	S20 53.0	280 29.2	11.4	S 5 11.8	15.7	59.4
17	0	177 33.9	S20 52.5	294 59.6	11.4	S 5 27.5	15.7	59.4
	1	192 33.7	S20 52.0	309 30.0	11.4	S 5 43.1	15.6	59.3
	2	207 33.5	S20 51.5	324 00.4	11.4	S 5 58.6	15.6	59.3
	3	222 33.3	S20 51.0	338 30.9	11.4	S 6 14.1	15.5	59.3
	4	237 33.0	S20 50.6	353 01.3	11.4	S 6 29.6	15.5	59.2
M	5	252 32.8	S20 50.1	7 31.8	11.5	S 6 45.0	15.4	59.2
O								
N	6	267 32.6	S20 49.6	22 02.2	11.5	S 7 00.3	15.4	59.2
D	7	282 32.4	S20 49.1	36 32.7	11.5	S 7 15.6	15.3	59.2
A	8	297 32.2	S20 48.6	51 03.2	11.5	S 7 30.9	15.2	59.1
Y	9	312 32.0	S20 48.1	65 33.6	11.5	S 7 46.1	15.2	59.1
	10	327 31.8	S20 47.6	80 04.1	11.5	S 8 01.2	15.1	59.1
	11	342 31.6	S20 47.2	94 34.5	11.5	S 8 16.3	15.1	59.0
	12	357 31.4	S20 46.7	109 05.0	11.4	S 8 31.3	15.0	59.0
	13	12 31.2	S20 46.2	123 35.4	11.4	S 8 46.3	15.0	59.0
	14	27 31.0	S20 45.7	138 05.9	11.4	S 9 01.1	14.9	58.9
	15	42 30.8	S20 45.2	152 36.3	11.4	S 9 16.0	14.8	58.9
	16	57 30.5	S20 44.7	167 06.7	11.4	S 9 30.7	14.8	58.9
	17	72 30.3	S20 44.2	181 37.1	11.4	S 9 45.4	14.7	58.8
	18	87 30.1	S20 43.7	196 07.5	11.4	S10 00.1	14.6	58.8
	19	102 29.9	S20 43.2	210 37.9	11.4	S10 14.6	14.6	58.8
	20	117 29.7	S20 42.7	225 08.3	11.4	S10 29.1	14.5	58.7
	21	132 29.5	S20 42.2	239 38.7	11.4	S10 43.5	14.4	58.7
	22	147 29.3	S20 41.7	254 09.1	11.4	S10 57.9	14.4	58.7
	23	162 29.1	S20 41.2	268 39.4	11.3	S11 12.2	14.3	58.6
18	0	177 28.9	S20 40.7	283 09.7	11.3	S11 26.4	14.2	58.6
	1	192 28.7	S20 40.2	297 40.0	11.3	S11 40.5	14.1	58.6
	2	207 28.5	S20 39.7	312 10.3	11.3	S11 54.6	14.1	58.5
	3	222 28.3	S20 39.2	326 40.6	11.3	S12 08.5	14.0	58.5
	4	237 28.1	S20 38.7	341 10.9	11.3	S12 22.4	13.9	58.5
T	5	252 27.9	S20 38.2	355 41.1	11.2	S12 36.2	13.8	58.4
U								
E	6	267 27.7	S20 37.7	10 11.3	11.2	S12 50.0	13.7	58.4
S	7	282 27.5	S20 37.2	24 41.5	11.2	S13 03.6	13.7	58.4
D	8	297 27.3	S20 36.7	39 11.7	11.2	S13 17.2	13.6	58.3
A	9	312 27.1	S20 36.2	53 41.9	11.2	S13 30.7	13.5	58.3
Y	10	327 26.9	S20 35.7	68 12.0	11.1	S13 44.1	13.4	58.3
	11	342 26.7	S20 35.2	82 42.1	11.1	S13 57.4	13.3	58.2
	12	357 26.5	S20 34.7	97 12.2	11.1	S14 10.7	13.2	58.2
	13	12 26.3	S20 34.2	111 42.2	11.1	S14 23.8	13.1	58.2
	14	27 26.1	S20 33.7	126 12.3	11.0	S14 36.9	13.1	58.1
	15	42 25.9	S20 33.2	140 42.3	11.0	S14 49.8	13.0	58.1
	16	57 25.7	S20 32.7	155 12.2	11.0	S15 02.7	12.9	58.1
	17	72 25.5	S20 32.2	169 42.2	10.9	S15 15.5	12.8	58.0
	18	87 25.3	S20 31.7	184 12.1	10.9	S15 28.2	12.7	58.0
	19	102 25.1	S20 31.2	198 42.0	10.9	S15 40.8	12.6	58.0
	20	117 24.9	S20 30.6	213 11.9	10.9	S15 53.3	12.5	57.9
	21	132 24.7	S20 30.1	227 41.7	10.8	S16 05.7	12.4	57.9
	22	147 24.5	S20 29.6	242 11.5	10.8	S16 18.0	12.3	57.9
	23	162 24.3	S20 29.1	256 41.3	10.8	S16 30.2	12.2	57.8
		S.D. 16.3	d 0.5	S.D.	16.3	16.1	15.9	

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.4	S57 05.9
Acrux	172 57.0	S63 15.1
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.7	N55 48.1
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 45.0	S 8 47.0
Alphecca	126 01.8	N26 37.0
Alpheratz	357 32.3	N29 14.9
Altair	61 57.9	N 8 56.5
Ankaa	353 04.8	S42 09.4
Antares	112 13.0	S26 29.6
Arcturus	145 45.7	N19 01.9
Atria	107 05.5	S69 04.5
Avior	234 13.0	S59 36.0
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.8
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.2	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.5	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.5	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.7	S57 16.1
Gienah	175 40.9	S17 41.9
Hadar	148 32.6	S60 30.3
Hamal	327 48.3	N23 35.9
Kaus Austr.	83 29.6	S34 22.3
Kochab	137 20.5	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.4	N 4 12.0
Menkent	147 54.7	S36 30.4
Miaplacidus	221 36.7	S69 49.9
Mirfak	308 24.5	N49 57.9
Nunki	75 45.0	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 27.7	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.6	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.1	S60 56.9
Sabik	102 00.2	S15 45.6
Schedar	349 28.3	N56 41.8
Shaula	96 07.3	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.6	S11 18.5
Suhail	222 44.0	S43 32.8
Vega	80 31.9	N38 48.5
Zuben-ubi	136 54.3	S16 09.5

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
19	0	117 55.7	138 46.8	S10 18.7	163 05.1	S18 14.1	299 44.4	N 2 15.2	97 00.4	N 6 08.8
	1	132 58.2	153 46.4	S10 17.5	178 05.6	S18 13.5	314 46.9	N 2 15.3	112 02.7	N 6 08.8
	2	148 00.7	168 46.1	S10 16.3	193 06.1	S18 13.0	329 49.5	N 2 15.3	127 05.1	N 6 08.9
	3	163 03.1	183 45.7	S10 15.1	208 06.5	S18 12.4	344 52.0	N 2 15.3	142 07.4	N 6 08.9
	4	178 05.6	198 45.4	S10 13.9	223 07.0	S18 11.9	359 54.5	N 2 15.4	157 09.8	N 6 09.0
W	5	193 08.1	213 45.0	S10 12.7	238 07.5	S18 11.3	14 57.0	N 2 15.4	172 12.2	N 6 09.0
E										
D	6	208 10.5	228 44.7	S10 11.5	253 07.9	S18 10.7	29 59.5	N 2 15.4	187 14.5	N 6 09.1
N	7	223 13.0	243 44.4	S10 10.3	268 08.4	S18 10.2	45 02.0	N 2 15.5	202 16.9	N 6 09.1
E	8	238 15.5	258 44.0	S10 09.1	283 08.9	S18 09.6	60 04.5	N 2 15.5	217 19.2	N 6 09.2
S	9	253 17.9	273 43.7	S10 07.9	298 09.4	S18 09.1	75 07.0	N 2 15.5	232 21.6	N 6 09.2
D	10	268 20.4	288 43.3	S10 06.7	313 09.8	S18 08.5	90 09.5	N 2 15.5	247 23.9	N 6 09.3
A	11	283 22.8	303 43.0	S10 05.4	328 10.3	S18 08.0	105 12.0	N 2 15.6	262 26.3	N 6 09.3
Y										
	12	298 25.3	318 42.7	S10 04.2	343 10.8	S18 07.4	120 14.6	N 2 15.6	277 28.7	N 6 09.4
	13	313 27.8	333 42.3	S10 03.0	358 11.3	S18 06.8	135 17.1	N 2 15.6	292 31.0	N 6 09.5
	14	328 30.2	348 42.0	S10 01.8	13 11.7	S18 06.3	150 19.6	N 2 15.7	307 33.4	N 6 09.5
	15	343 32.7	3 41.7	S10 00.6	28 12.2	S18 05.7	165 22.1	N 2 15.7	322 35.7	N 6 09.6
	16	358 35.2	18 41.3	S 9 59.4	43 12.7	S18 05.1	180 24.6	N 2 15.8	337 38.1	N 6 09.6
	17	13 37.6	33 41.0	S 9 58.2	58 13.2	S18 04.6	195 27.1	N 2 15.8	352 40.4	N 6 09.7
	18	28 40.1	48 40.6	S 9 57.0	73 13.6	S18 04.0	210 29.6	N 2 15.8	7 42.8	N 6 09.7
	19	43 42.6	63 40.3	S 9 55.8	88 14.1	S18 03.5	225 32.2	N 2 15.9	22 45.2	N 6 09.8
	20	58 45.0	78 40.0	S 9 54.5	103 14.6	S18 02.9	240 34.7	N 2 15.9	37 47.5	N 6 09.8
	21	73 47.5	93 39.6	S 9 53.3	118 15.1	S18 02.3	255 37.2	N 2 15.9	52 49.9	N 6 09.9
	22	88 49.9	108 39.3	S 9 52.1	133 15.5	S18 01.8	270 39.7	N 2 16.0	67 52.2	N 6 10.0
	23	103 52.4	123 39.0	S 9 50.9	148 16.0	S18 01.2	285 42.2	N 2 16.0	82 54.6	N 6 10.0
20	0	118 54.9	138 38.6	S 9 49.7	163 16.5	S18 00.6	300 44.7	N 2 16.0	97 56.9	N 6 10.1
	1	133 57.3	153 38.3	S 9 48.5	178 17.0	S18 00.1	315 47.2	N 2 16.1	112 59.3	N 6 10.1
	2	148 59.8	168 38.0	S 9 47.3	193 17.4	S17 59.5	330 49.8	N 2 16.1	128 01.7	N 6 10.2
	3	164 02.3	183 37.7	S 9 46.0	208 17.9	S17 58.9	345 52.3	N 2 16.1	143 04.0	N 6 10.2
	4	179 04.7	198 37.3	S 9 44.8	223 18.4	S17 58.4	0 54.8	N 2 16.2	158 06.4	N 6 10.3
T	5	194 07.2	213 37.0	S 9 43.6	238 18.9	S17 57.8	15 57.3	N 2 16.2	173 08.7	N 6 10.3
H										
U	6	209 09.7	228 36.7	S 9 42.4	253 19.4	S17 57.2	30 59.8	N 2 16.2	188 11.1	N 6 10.4
R	7	224 12.1	243 36.3	S 9 41.2	268 19.8	S17 56.7	46 02.3	N 2 16.3	203 13.4	N 6 10.4
S	8	239 14.6	258 36.0	S 9 40.0	283 20.3	S17 56.1	61 04.9	N 2 16.3	218 15.8	N 6 10.5
D	9	254 17.1	273 35.7	S 9 38.7	298 20.8	S17 55.5	76 07.4	N 2 16.3	233 18.1	N 6 10.6
A	10	269 19.5	288 35.4	S 9 37.5	313 21.3	S17 55.0	91 09.9	N 2 16.4	248 20.5	N 6 10.6
Y	11	284 22.0	303 35.0	S 9 36.3	328 21.7	S17 54.4	106 12.4	N 2 16.4	263 22.8	N 6 10.7
	12	299 24.4	318 34.7	S 9 35.1	343 22.2	S17 53.8	121 14.9	N 2 16.5	278 25.2	N 6 10.7
	13	314 26.9	333 34.4	S 9 33.9	358 22.7	S17 53.3	136 17.5	N 2 16.5	293 27.5	N 6 10.8
	14	329 29.4	348 34.1	S 9 32.6	13 23.2	S17 52.7	151 20.0	N 2 16.5	308 29.9	N 6 10.8
	15	344 31.8	3 33.7	S 9 31.4	28 23.7	S17 52.1	166 22.5	N 2 16.6	323 32.3	N 6 10.9
	16	359 34.3	18 33.4	S 9 30.2	43 24.1	S17 51.6	181 25.0	N 2 16.6	338 34.6	N 6 11.0
	17	14 36.8	33 33.1	S 9 29.0	58 24.6	S17 51.0	196 27.5	N 2 16.6	353 37.0	N 6 11.0
	18	29 39.2	48 32.8	S 9 27.8	73 25.1	S17 50.4	211 30.1	N 2 16.7	8 39.3	N 6 11.1
	19	44 41.7	63 32.4	S 9 26.5	88 25.6	S17 49.9	226 32.6	N 2 16.7	23 41.7	N 6 11.1
	20	59 44.2	78 32.1	S 9 25.3	103 26.1	S17 49.3	241 35.1	N 2 16.7	38 44.0	N 6 11.2
	21	74 46.6	93 31.8	S 9 24.1	118 26.5	S17 48.7	256 37.6	N 2 16.8	53 46.4	N 6 11.2
	22	89 49.1	108 31.5	S 9 22.9	133 27.0	S17 48.1	271 40.1	N 2 16.8	68 48.7	N 6 11.3
	23	104 51.6	123 31.2	S 9 21.6	148 27.5	S17 47.6	286 42.7	N 2 16.9	83 51.1	N 6 11.4
21	0	119 54.0	138 30.8	S 9 20.4	163 28.0	S17 47.0	301 45.2	N 2 16.9	98 53.4	N 6 11.4
	1	134 56.5	153 30.5	S 9 19.2	178 28.5	S17 46.4	316 47.7	N 2 16.9	113 55.8	N 6 11.5
	2	149 58.9	168 30.2	S 9 18.0	193 28.9	S17 45.8	331 50.2	N 2 17.0	128 58.1	N 6 11.5
	3	165 01.4	183 29.9	S 9 16.7	208 29.4	S17 45.3	346 52.8	N 2 17.0	144 00.5	N 6 11.6
	4	180 03.9	198 29.6	S 9 15.5	223 29.9	S17 44.7	1 55.3	N 2 17.1	159 02.8	N 6 11.6
F	5	195 06.3	213 29.2	S 9 14.3	238 30.4	S17 44.1	16 57.8	N 2 17.1	174 05.2	N 6 11.7
R										
I	6	210 08.8	228 28.9	S 9 13.1	253 30.9	S17 43.6	32 00.3	N 2 17.1	189 07.5	N 6 11.7
D	7	225 11.3	243 28.6	S 9 11.8	268 31.3	S17 43.0	47 02.9	N 2 17.2	204 09.9	N 6 11.8
A	8	240 13.7	258 28.3	S 9 10.6	283 31.8	S17 42.4	62 05.4	N 2 17.2	219 12.2	N 6 11.9
Y	9	255 16.2	273 28.0	S 9 09.4	298 32.3	S17 41.8	77 07.9	N 2 17.2	234 14.6	N 6 11.9
	10	270 18.7	288 27.7	S 9 08.1	313 32.8	S17 41.3	92 10.4	N 2 17.3	249 16.9	N 6 12.0
	11	285 21.1	303 27.3	S 9 06.9	328 33.3	S17 40.7	107 13.0	N 2 17.3	264 19.3	N 6 12.0
	12	300 23.6	318 27.0	S 9 05.7	343 33.8	S17 40.1	122 15.5	N 2 17.4	279 21.6	N 6 12.1
	13	315 26.0	333 26.7	S 9 04.5	358 34.2	S17 39.5	137 18.0	N 2 17.4	294 24.0	N 6 12.2
	14	330 28.5	348 26.4	S 9 03.2	13 34.7	S17 38.9	152 20.5	N 2 17.4	309 26.3	N 6 12.2
	15	345 31.0	3 26.1	S 9 02.0	28 35.2	S17 38.4	167 23.1	N 2 17.5	324 28.7	N 6 12.3
	16	0 33.4	18 25.8	S 9 00.8	43 35.7	S17 37.8	182 25.6	N 2 17.5	339 31.0	N 6 12.3
	17	15 35.9	33 25.5	S 8 59.5	58 36.2	S17 37.2	197 28.1	N 2 17.6	354 33.4	N 6 12.4
	18	30 38.4	48 25.1	S 8 58.3	73 36.7	S17 36.6	212 30.7	N 2 17.6	9 35.7	N 6 12.4
	19	45 40.8	63 24.8	S 8 57.1	88 37.1	S17 36.1	227 33.2	N 2 17.6	24 38.1	N 6 12.5
	20	60 43.3	78 24.5	S 8 55.8	103 37.6	S17 35.5	242 35.7	N 2 17.7	39 40.4	N 6 12.6
	21	75 45.8	93 24.2	S 8 54.6	118 38.1	S17 34.9	257 38.2	N 2 17.7	54 42.8	N 6 12.6
	22	90 48.2	108 23.9	S 8 53.4	133 38.6	S17 34.3	272 40.8	N 2 17.8	69 45.1	N 6 12.7
	23	105 50.7	123 23.6	S 8 52.1	148 39.1	S17 33.7	287 43.3	N 2 17.8	84 47.5	N 6 12.7
			v -0.3	d 1.2	v 0.5	d 0.6	v 2.5	d 0.0	v 2.4	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
19	0	177 24.1	S20 28.6	271 11.0	10.7	S16 42.3	12.1	57.8
	1	192 23.9	S20 28.1	285 40.7	10.7	S16 54.4	12.0	57.8
	2	207 23.7	S20 27.6	300 10.4	10.7	S17 06.3	11.9	57.7
	3	222 23.5	S20 27.0	314 40.0	10.6	S17 18.1	11.8	57.7
	4	237 23.3	S20 26.5	329 09.6	10.6	S17 29.8	11.7	57.7
W	5	252 23.1	S20 26.0	343 39.2	10.6	S17 41.4	11.6	57.6
E								
D	6	267 22.9	S20 25.5	358 08.7	10.5	S17 52.9	11.5	57.6
N	7	282 22.7	S20 25.0	12 38.2	10.5	S18 04.3	11.4	57.6
E	8	297 22.5	S20 24.5	27 07.6	10.5	S18 15.6	11.3	57.5
S	9	312 22.3	S20 23.9	41 37.1	10.4	S18 26.8	11.2	57.5
D	10	327 22.1	S20 23.4	56 06.5	10.4	S18 37.9	11.1	57.5
A	11	342 22.0	S20 22.9	70 35.8	10.4	S18 48.9	11.0	57.4
Y								
	12	357 21.8	S20 22.4	85 05.1	10.3	S18 59.7	10.9	57.4
	13	12 21.6	S20 21.9	99 34.4	10.3	S19 10.5	10.8	57.4
	14	27 21.4	S20 21.3	114 03.7	10.2	S19 21.1	10.6	57.3
	15	42 21.2	S20 20.8	128 32.9	10.2	S19 31.7	10.5	57.3
	16	57 21.0	S20 20.3	143 02.0	10.2	S19 42.1	10.4	57.3
	17	72 20.8	S20 19.8	157 31.2	10.1	S19 52.4	10.3	57.3
	18	87 20.6	S20 19.2	172 00.3	10.1	S20 02.6	10.2	57.2
	19	102 20.4	S20 18.7	186 29.3	10.1	S20 12.7	10.1	57.2
	20	117 20.2	S20 18.2	200 58.4	10.0	S20 22.6	10.0	57.2
	21	132 20.0	S20 17.6	215 27.4	10.0	S20 32.5	9.8	57.1
	22	147 19.8	S20 17.1	229 56.3	9.9	S20 42.2	9.7	57.1
	23	162 19.7	S20 16.6	244 25.2	9.9	S20 51.8	9.6	57.1
20	0	177 19.5	S20 16.1	258 54.1	9.9	S21 01.3	9.5	57.0
	1	192 19.3	S20 15.5	273 22.9	9.8	S21 10.7	9.4	57.0
	2	207 19.1	S20 15.0	287 51.7	9.8	S21 19.9	9.3	57.0
	3	222 18.9	S20 14.5	302 20.5	9.8	S21 29.1	9.1	57.0
	4	237 18.7	S20 13.9	316 49.2	9.7	S21 38.1	9.0	56.9
T	5	252 18.5	S20 13.4	331 17.9	9.7	S21 47.0	8.9	56.9
H								
U	6	267 18.3	S20 12.9	345 46.6	9.7	S21 55.7	8.8	56.9
R	7	282 18.1	S20 12.3	0 15.2	9.6	S22 04.4	8.6	56.8
S	8	297 18.0	S20 11.8	14 43.8	9.6	S22 12.9	8.5	56.8
D	9	312 17.8	S20 11.3	29 12.3	9.5	S22 21.3	8.4	56.8
A	10	327 17.6	S20 10.7	43 40.8	9.5	S22 29.5	8.3	56.8
Y	11	342 17.4	S20 10.2	58 09.3	9.5	S22 37.7	8.1	56.7
	12	357 17.2	S20 09.6	72 37.7	9.4	S22 45.7	8.0	56.7
	13	12 17.0	S20 09.1	87 06.1	9.4	S22 53.6	7.9	56.7
	14	27 16.8	S20 08.6	101 34.5	9.4	S23 01.3	7.8	56.6
	15	42 16.7	S20 08.0	116 02.9	9.3	S23 08.9	7.6	56.6
	16	57 16.5	S20 07.5	130 31.2	9.3	S23 16.4	7.5	56.6
	17	72 16.3	S20 06.9	144 59.4	9.3	S23 23.8	7.4	56.6
	18	87 16.1	S20 06.4	159 27.7	9.2	S23 31.0	7.2	56.5
	19	102 15.9	S20 05.9	173 55.9	9.2	S23 38.2	7.1	56.5
	20	117 15.7	S20 05.3	188 24.1	9.2	S23 45.1	7.0	56.5
	21	132 15.6	S20 04.8	202 52.2	9.2	S23 52.0	6.8	56.4
	22	147 15.4	S20 04.2	217 20.4	9.1	S23 58.7	6.7	56.4
	23	162 15.2	S20 03.7	231 48.5	9.1	S24 05.2	6.6	56.4
21	0	177 15.0	S20 03.1	246 16.5	9.1	S24 11.7	6.4	56.4
	1	192 14.8	S20 02.6	260 44.6	9.0	S24 18.0	6.3	56.3
	2	207 14.6	S20 02.0	275 12.6	9.0	S24 24.2	6.2	56.3
	3	222 14.5	S20 01.5	289 40.6	9.0	S24 30.2	6.0	56.3
	4	237 14.3	S20 01.0	304 08.5	9.0	S24 36.1	5.9	56.3
F	5	252 14.1	S20 00.4	318 36.5	8.9	S24 41.9	5.8	56.2
R								
I	6	267 13.9	S19 59.9	333 04.4	8.9	S24 47.5	5.6	56.2
D	7	282 13.7	S19 59.3	347 32.3	8.9	S24 53.0	5.5	56.2
A	8	297 13.6	S19 58.8	2 00.1	8.9	S24 58.3	5.4	56.2
Y	9	312 13.4	S19 58.2	16 28.0	8.8	S25 03.5	5.2	56.1
	10	327 13.2	S19 57.6	30 55.8	8.8	S25 08.6	5.1	56.1
	11	342 13.0	S19 57.1	45 23.6	8.8	S25 13.6	4.9	56.1
	12	357 12.8	S19 56.5	59 51.4	8.8	S25 18.4	4.8	56.1
	13	12 12.7	S19 56.0	74 19.2	8.8	S25 23.0	4.7	56.0
	14	27 12.5	S19 55.4	88 47.0	8.8	S25 27.5	4.5	56.0
	15	42 12.3	S19 54.9	103 14.7	8.7	S25 31.9	4.4	56.0
	16	57 12.1	S19 54.3	117 42.4	8.7	S25 36.2	4.2	56.0
	17	72 12.0	S19 53.8	132 10.1	8.7	S25 40.3	4.1	55.9
	18	87 11.8	S19 53.2	146 37.8	8.7	S25 44.2	4.0	55.9
	19	102 11.6	S19 52.6	161 05.5	8.7	S25 48.1	3.8	55.9
	20	117 11.4	S19 52.1	175 33.2	8.7	S25 51.7	3.7	55.9
	21	132 11.3	S19 51.5	190 00.9	8.7	S25 55.3	3.5	55.8
	22	147 11.1	S19 51.0	204 28.5	8.7	S25 58.7	3.4	55.8
	23	162 10.9	S19 50.4	218 56.2	8.7	S26 01.9	3.3	55.8
		S.D. 16.3	d 0.5	S.D. 15.6		15.4		15.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.7
Achernar	335 18.4	S57 05.9
Acrux	172 57.0	S63 15.1
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.1
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.8	N26 37.0
Alpheratz	357 32.3	N29 14.9
Altair	61 57.9	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 13.0	S26 29.6
Arcturus	145 45.7	N19 01.9
Atria	107 05.5	S69 04.5
Avior	234 13.0	S59 36.0
Bellatrix	278 19.9	N 6 22.5
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.7	S52 42.8
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.2	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.5	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.5	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.6	S57 16.1
Gienah	175 40.9	S17 41.9
Hadar	148 32.5	S60 30.3
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.6	S34 22.3
Kochab	137 20.5	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.4	N 4 12.0
Menkent	147 54.7	S36 30.4
Miaplacidus	221 36.7	S69 49.9
Mirfak	308 24.5	N49 57.9
Nunki	75 45.0	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 28.8	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.5	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.2
Rigil Kent	139 37.1	S60 56.9
Sabik	102 00.2	S15 45.6
Schedar	349 28.3	N56 41.8
Shaula	96 07.3	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.6	S11 18.6
Suhail	222 44.0	S43 32.8
Vega	80 31.9	N38 48.5
Zuben-ubi	136 54.3	S16 09.5

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
22	0	120 53.2	138 23.3	S 8	50.9	163 39.6	S17	33.2	302 45.8	N 2	17.8	99 49.8	N 6	12.8
	1	135 55.6	153 23.0	S 8	49.7	178 40.1	S17	32.6	317 48.4	N 2	17.9	114 52.2	N 6	12.8
	2	150 58.1	168 22.7	S 8	48.4	193 40.5	S17	32.0	332 50.9	N 2	17.9	129 54.5	N 6	12.9
	3	166 00.5	183 22.4	S 8	47.2	208 41.0	S17	31.4	347 53.4	N 2	18.0	144 56.9	N 6	13.0
	4	181 03.0	198 22.1	S 8	46.0	223 41.5	S17	30.8	2 56.0	N 2	18.0	159 59.2	N 6	13.0
S	5	196 05.5	213 21.8	S 8	44.7	238 42.0	S17	30.3	17 58.5	N 2	18.1	175 01.6	N 6	13.1
A														
T	6	211 07.9	228 21.4	S 8	43.5	253 42.5	S17	29.7	33 01.0	N 2	18.1	190 03.9	N 6	13.1
U	7	226 10.4	243 21.1	S 8	42.3	268 43.0	S17	29.1	48 03.6	N 2	18.1	205 06.2	N 6	13.2
R	8	241 12.9	258 20.8	S 8	41.0	283 43.5	S17	28.5	63 06.1	N 2	18.2	220 08.6	N 6	13.3
D	9	256 15.3	273 20.5	S 8	39.8	298 43.9	S17	27.9	78 08.6	N 2	18.2	235 10.9	N 6	13.3
A	10	271 17.8	288 20.2	S 8	38.6	313 44.4	S17	27.3	93 11.2	N 2	18.3	250 13.3	N 6	13.4
Y	11	286 20.3	303 19.9	S 8	37.3	328 44.9	S17	26.8	108 13.7	N 2	18.3	265 15.6	N 6	13.4
	12	301 22.7	318 19.6	S 8	36.1	343 45.4	S17	26.2	123 16.2	N 2	18.4	280 18.0	N 6	13.5
	13	316 25.2	333 19.3	S 8	34.8	358 45.9	S17	25.6	138 18.8	N 2	18.4	295 20.3	N 6	13.6
	14	331 27.7	348 19.0	S 8	33.6	13 46.4	S17	25.0	153 21.3	N 2	18.4	310 22.7	N 6	13.6
	15	346 30.1	3 18.7	S 8	32.4	28 46.9	S17	24.4	168 23.8	N 2	18.5	325 25.0	N 6	13.7
	16	1 32.6	18 18.4	S 8	31.1	43 47.3	S17	23.8	183 26.4	N 2	18.5	340 27.4	N 6	13.7
	17	16 35.0	33 18.1	S 8	29.9	58 47.8	S17	23.2	198 28.9	N 2	18.6	355 29.7	N 6	13.8
	18	31 37.5	48 17.8	S 8	28.6	73 48.3	S17	22.7	213 31.4	N 2	18.6	10 32.0	N 6	13.8
	19	46 40.0	63 17.5	S 8	27.4	88 48.8	S17	22.1	228 34.0	N 2	18.7	25 34.4	N 6	13.9
	20	61 42.4	78 17.2	S 8	26.2	103 49.3	S17	21.5	243 36.5	N 2	18.7	40 36.7	N 6	14.0
	21	76 44.9	93 16.9	S 8	24.9	118 49.8	S17	20.9	258 39.0	N 2	18.7	55 39.1	N 6	14.0
	22	91 47.4	108 16.6	S 8	23.7	133 50.3	S17	20.3	273 41.6	N 2	18.8	70 41.4	N 6	14.1
	23	106 49.8	123 16.3	S 8	22.4	148 50.8	S17	19.7	288 44.1	N 2	18.8	85 43.8	N 6	14.1
23	0	121 52.3	138 16.0	S 8	21.2	163 51.3	S17	19.1	303 46.7	N 2	18.9	100 46.1	N 6	14.2
	1	136 54.8	153 15.7	S 8	20.0	178 51.7	S17	18.5	318 49.2	N 2	18.9	115 48.5	N 6	14.3
	2	151 57.2	168 15.4	S 8	18.7	193 52.2	S17	18.0	333 51.7	N 2	19.0	130 50.8	N 6	14.3
	3	166 59.7	183 15.1	S 8	17.5	208 52.7	S17	17.4	348 54.3	N 2	19.0	145 53.1	N 6	14.4
	4	182 02.2	198 14.8	S 8	16.2	223 53.2	S17	16.8	3 56.8	N 2	19.0	160 55.5	N 6	14.4
S	5	197 04.6	213 14.5	S 8	15.0	238 53.7	S17	16.2	18 59.4	N 2	19.1	175 57.8	N 6	14.5
U														
N	6	212 07.1	228 14.2	S 8	13.7	253 54.2	S17	15.6	34 01.9	N 2	19.1	191 00.2	N 6	14.6
D	7	227 09.5	243 14.0	S 8	12.5	268 54.7	S17	15.0	49 04.4	N 2	19.2	206 02.5	N 6	14.6
A	8	242 12.0	258 13.7	S 8	11.2	283 55.2	S17	14.4	64 07.0	N 2	19.2	221 04.9	N 6	14.7
Y	9	257 14.5	273 13.4	S 8	10.0	298 55.7	S17	13.8	79 09.5	N 2	19.3	236 07.2	N 6	14.7
	10	272 16.9	288 13.1	S 8	08.8	313 56.2	S17	13.2	94 12.1	N 2	19.3	251 09.5	N 6	14.8
	11	287 19.4	303 12.8	S 8	07.5	328 56.7	S17	12.6	109 14.6	N 2	19.4	266 11.9	N 6	14.9
	12	302 21.9	318 12.5	S 8	06.3	343 57.1	S17	12.1	124 17.1	N 2	19.4	281 14.2	N 6	14.9
	13	317 24.3	333 12.2	S 8	05.0	358 57.6	S17	11.5	139 19.7	N 2	19.5	296 16.6	N 6	15.0
	14	332 26.8	348 11.9	S 8	03.8	13 58.1	S17	10.9	154 22.2	N 2	19.5	311 18.9	N 6	15.0
	15	347 29.3	3 11.6	S 8	02.5	28 58.6	S17	10.3	169 24.8	N 2	19.5	326 21.2	N 6	15.1
	16	2 31.7	18 11.3	S 8	01.3	43 59.1	S17	09.7	184 27.3	N 2	19.6	341 23.6	N 6	15.2
	17	17 34.2	33 11.0	S 8	00.0	58 59.6	S17	09.1	199 29.8	N 2	19.6	356 25.9	N 6	15.2
	18	32 36.7	48 10.7	S 7	58.8	74 00.1	S17	08.5	214 32.4	N 2	19.7	11 28.3	N 6	15.3
	19	47 39.1	63 10.5	S 7	57.5	89 00.6	S17	07.9	229 34.9	N 2	19.7	26 30.6	N 6	15.4
	20	62 41.6	78 10.2	S 7	56.3	104 01.1	S17	07.3	244 37.5	N 2	19.8	41 33.0	N 6	15.4
	21	77 44.0	93 09.9	S 7	55.0	119 01.6	S17	06.7	259 40.0	N 2	19.8	56 35.3	N 6	15.5
	22	92 46.5	108 09.6	S 7	53.8	134 02.1	S17	06.1	274 42.6	N 2	19.9	71 37.6	N 6	15.5
	23	107 49.0	123 09.3	S 7	52.5	149 02.6	S17	05.5	289 45.1	N 2	19.9	86 40.0	N 6	15.6
24	0	122 51.4	138 09.0	S 7	51.3	164 03.1	S17	04.9	304 47.7	N 2	20.0	101 42.3	N 6	15.7
	1	137 53.9	153 08.7	S 7	50.0	179 03.6	S17	04.3	319 50.2	N 2	20.0	116 44.7	N 6	15.7
	2	152 56.4	168 08.4	S 7	48.8	194 04.0	S17	03.7	334 52.7	N 2	20.1	131 47.0	N 6	15.8
	3	167 58.8	183 08.2	S 7	47.5	209 04.5	S17	03.1	349 55.3	N 2	20.1	146 49.3	N 6	15.8
	4	183 01.3	198 07.9	S 7	46.3	224 05.0	S17	02.5	4 57.8	N 2	20.2	161 51.7	N 6	15.9
M	5	198 03.8	213 07.6	S 7	45.0	239 05.5	S17	01.9	20 00.4	N 2	20.2	176 54.0	N 6	16.0
O														
N	6	213 06.2	228 07.3	S 7	43.8	254 06.0	S17	01.3	35 02.9	N 2	20.3	191 56.4	N 6	16.0
D	7	228 08.7	243 07.0	S 7	42.5	269 06.5	S17	00.7	50 05.5	N 2	20.3	206 58.7	N 6	16.1
A	8	243 11.2	258 06.7	S 7	41.3	284 07.0	S17	00.1	65 08.0	N 2	20.4	222 01.0	N 6	16.1
Y	9	258 13.6	273 06.5	S 7	40.0	299 07.5	S16	59.5	80 10.6	N 2	20.4	237 03.4	N 6	16.2
	10	273 16.1	288 06.2	S 7	38.8	314 08.0	S16	59.0	95 13.1	N 2	20.4	252 05.7	N 6	16.3
	11	288 18.5	303 05.9	S 7	37.5	329 08.5	S16	58.4	110 15.7	N 2	20.5	267 08.0	N 6	16.3
	12	303 21.0	318 05.6	S 7	36.2	344 09.0	S16	57.8	125 18.2	N 2	20.5	282 10.4	N 6	16.4
	13	318 23.5	333 05.3	S 7	35.0	359 09.5	S16	57.2	140 20.8	N 2	20.6	297 12.7	N 6	16.5
	14	333 25.9	348 05.1	S 7	33.7	14 10.0	S16	56.6	155 23.3	N 2	20.6	312 15.1	N 6	16.5
	15	348 28.4	3 04.8	S 7	32.5	29 10.5	S16	56.0	170 25.9	N 2	20.7	327 17.4	N 6	16.6
	16	3 30.9	18 04.5	S 7	31.2	44 11.0	S16	55.4	185 28.4	N 2	20.7	342 19.7	N 6	16.6
	17	18 33.3	33 04.2	S 7	30.0	59 11.5	S16	54.7	200 31.0	N 2	20.8	357 22.1	N 6	16.7
	18	33 35.8	48 03.9	S 7	28.7	74 12.0	S16	54.1	215 33.5	N 2	20.8	12 24.4	N 6	16.8
	19	48 38.3	63 03.7	S 7	27.5	89 12.5	S16	53.5	230 36.1	N 2	20.9	27 26.7	N 6	16.8
	20	63 40.7	78 03.4	S 7	26.2	104 13.0	S16	52.9	245 38.6	N 2	20.9	42 29.1	N 6	16.9
	21	78 43.2	93 03.1	S 7	24.9	119 13.5	S16	52.3	260 41.2	N 2	21.0	57 31.4	N 6	17.0
	22	93 45.6	108 02.8	S 7	23.7	134 14.0	S16	51.7	275 43.7	N 2	21.0	72 33.8	N 6	17.0
	23	108 48.1	123 02.5	S 7	22.4	149 14.5	S16	51.1	290 46.3	N 2	21.1	87 36.1	N 6	17.1
			v -0.3	d	1.2	v 0.5	d	0.6	v 2.5	d	0.0	v 2.3	d	0.1

G.M.T		SUN				MOON					
d	h	GHA		Dec		GHA		v	Dec	d	HP
		°	'	°	'	°	'	'	° '	'	'
22	0	177	10.7	S19	49.8	233	23.8	8.6	S26 05.1	3.1	55.8
	1	192	10.6	S19	49.3	247	51.5	8.6	S26 08.0	3.0	55.8
	2	207	10.4	S19	48.7	262	19.1	8.6	S26 10.9	2.8	55.7
	3	222	10.2	S19	48.2	276	46.8	8.6	S26 13.6	2.7	55.7
	4	237	10.0	S19	47.6	291	14.4	8.6	S26 16.1	2.6	55.7
S	5	252	09.9	S19	47.0	305	42.0	8.6	S26 18.5	2.4	55.7
A											
T	6	267	09.7	S19	46.5	320	09.7	8.6	S26 20.8	2.3	55.6
U	7	282	09.5	S19	45.9	334	37.3	8.6	S26 22.9	2.1	55.6
R	8	297	09.4	S19	45.3	349	05.0	8.6	S26 24.9	2.0	55.6
D	9	312	09.2	S19	44.8	3	32.6	8.6	S26 26.7	1.8	55.6
A	10	327	09.0	S19	44.2	18	00.3	8.7	S26 28.4	1.7	55.6
Y	11	342	08.8	S19	43.6	32	27.9	8.7	S26 30.0	1.6	55.5
	12	357	08.7	S19	43.1	46	55.6	8.7	S26 31.4	1.4	55.5
	13	12	08.5	S19	42.5	61	23.3	8.7	S26 32.7	1.3	55.5
	14	27	08.3	S19	41.9	75	50.9	8.7	S26 33.8	1.1	55.5
	15	42	08.2	S19	41.3	90	18.6	8.7	S26 34.8	1.0	55.5
	16	57	08.0	S19	40.8	104	46.4	8.7	S26 35.7	0.9	55.4
	17	72	07.8	S19	40.2	119	14.1	8.7	S26 36.4	0.7	55.4
	18	87	07.7	S19	39.6	133	41.8	8.7	S26 36.9	0.6	55.4
	19	102	07.5	S19	39.1	148	09.6	8.8	S26 37.4	0.4	55.4
	20	117	07.3	S19	38.5	162	37.4	8.8	S26 37.6	0.3	55.4
	21	132	07.1	S19	37.9	177	05.2	8.8	S26 37.8	0.1	55.3
	22	147	07.0	S19	37.3	191	33.0	8.8	S26 37.8	0.0	55.3
	23	162	06.8	S19	36.8	206	00.8	8.8	S26 37.7	0.1	55.3
23	0	177	06.6	S19	36.2	220	28.7	8.9	S26 37.4	0.3	55.3
	1	192	06.5	S19	35.6	234	56.6	8.9	S26 37.0	0.4	55.3
	2	207	06.3	S19	35.0	249	24.5	8.9	S26 36.4	0.6	55.2
	3	222	06.2	S19	34.4	263	52.4	8.9	S26 35.7	0.7	55.2
	4	237	06.0	S19	33.9	278	20.4	9.0	S26 34.9	0.8	55.2
S	5	252	05.8	S19	33.3	292	48.4	9.0	S26 33.9	1.0	55.2
U											
N	6	267	05.7	S19	32.7	307	16.4	9.0	S26 32.8	1.1	55.2
D	7	282	05.5	S19	32.1	321	44.5	9.1	S26 31.6	1.2	55.1
A	8	297	05.3	S19	31.5	336	12.6	9.1	S26 30.2	1.4	55.1
Y	9	312	05.2	S19	31.0	350	40.7	9.1	S26 28.7	1.5	55.1
	10	327	05.0	S19	30.4	5	08.9	9.2	S26 27.1	1.6	55.1
	11	342	04.8	S19	29.8	19	37.1	9.2	S26 25.3	1.8	55.1
	12	357	04.7	S19	29.2	34	05.3	9.2	S26 23.4	1.9	55.1
	13	12	04.5	S19	28.6	48	33.6	9.3	S26 21.3	2.1	55.0
	14	27	04.4	S19	28.0	63	01.9	9.3	S26 19.1	2.2	55.0
	15	42	04.2	S19	27.5	77	30.2	9.4	S26 16.8	2.3	55.0
	16	57	04.0	S19	26.9	91	58.6	9.4	S26 14.4	2.5	55.0
	17	72	03.9	S19	26.3	106	27.0	9.4	S26 11.8	2.6	55.0
	18	87	03.7	S19	25.7	120	55.5	9.5	S26 09.0	2.7	55.0
	19	102	03.5	S19	25.1	135	24.0	9.5	S26 06.2	2.8	54.9
	20	117	03.4	S19	24.5	149	52.6	9.6	S26 03.2	3.0	54.9
	21	132	03.2	S19	23.9	164	21.2	9.6	S26 00.1	3.1	54.9
	22	147	03.1	S19	23.3	178	49.9	9.7	S25 56.9	3.2	54.9
	23	162	02.9	S19	22.7	193	18.6	9.7	S25 53.5	3.4	54.9
24	0	177	02.8	S19	22.1	207	47.4	9.8	S25 50.0	3.5	54.9
	1	192	02.6	S19	21.6	222	16.2	9.8	S25 46.4	3.6	54.8
	2	207	02.4	S19	21.0	236	45.0	9.9	S25 42.6	3.8	54.8
	3	222	02.3	S19	20.4	251	13.9	9.9	S25 38.7	3.9	54.8
	4	237	02.1	S19	19.8	265	42.9	10.0	S25 34.7	4.0	54.8
M	5	252	02.0	S19	19.2	280	11.9	10.0	S25 30.6	4.1	54.8
O											
N	6	267	01.8	S19	18.6	294	41.0	10.1	S25 26.4	4.3	54.8
D	7	282	01.7	S19	18.0	309	10.1	10.1	S25 22.0	4.4	54.8
A	8	297	01.5	S19	17.4	323	39.3	10.2	S25 17.5	4.5	54.7
Y	9	312	01.3	S19	16.8	338	08.6	10.2	S25 12.9	4.6	54.7
	10	327	01.2	S19	16.2	352	37.9	10.3	S25 08.1	4.7	54.7
	11	342	01.0	S19	15.6	7	07.2	10.4	S25 03.3	4.9	54.7
	12	357	00.9	S19	15.0	21	36.6	10.4	S24 58.3	5.0	54.7
	13	12	00.7	S19	14.4	36	06.1	10.5	S24 53.2	5.1	54.7
	14	27	00.6	S19	13.8	50	35.7	10.5	S24 48.0	5.2	54.7
	15	42	00.4	S19	13.2	65	05.3	10.6	S24 42.6	5.3	54.6
	16	57	00.3	S19	12.6	79	34.9	10.7	S24 37.2	5.5	54.6
	17	72	00.1	S19	12.0	94	04.7	10.7	S24 31.6	5.6	54.6
	18	86	60.0	S19	11.4	108	34.4	10.8	S24 25.9	5.7	54.6
	19	101	59.8	S19	10.8	123	04.3	10.9	S24 20.1	5.8	54.6
	20	116	59.7	S19	10.2	137	34.2	10.9	S24 14.2	5.9	54.6
	21	131	59.5	S19	09.6	152	04.2	11.0	S24 08.2	6.0	54.6
	22	146	59.4	S19	09.0	166	34.2	11.0	S24 02.0	6.1	54.5
	23	161	59.2	S19	08.4	181	04.3	11.1	S23 55.8	6.2	54.5
		S.D.	16.3	d	0.6	S.D.		15.0	15.0	14.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.8	S40 11.7
Achernar	335 18.4	S57 05.9
Acrux	172 56.9	S63 15.1
Adhara	255 03.5	S29 00.7
Albireo	67 02.4	N28 01.1
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.1
Alkaid	152 50.0	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.8	N26 36.9
Alpheratz	357 32.3	N29 14.9
Altair	61 57.8	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 13.0	S26 29.6
Arcturus	145 45.6	N19 01.9
Atria	107 05.4	S69 04.5
Avior	234 13.0	S59 36.0
Bellatrix	278 19.9	N 6 22.4
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.8	S52 42.8
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.2	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.5	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.5	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.6	S57 16.1
Gienah	175 40.8	S17 41.9
Hadar	148 32.5	S60 30.3
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.6	S34 22.2
Kochab	137 20.4	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.4	N 4 12.0
Menkent	147 54.7	S36 30.5
Miaplacidus	221 36.7	S69 49.9
Mirfak	308 24.5	N49 57.9
Nunki	75 45.0	S26 15.7
Peacock	53 02.4	S56 38.7
Polaris	315 29.7	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.1
Rasalhague	95 56.5	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.3
Rigil Kent	139 37.0	S60 56.9
Sabik	102 00.2	S15 45.6
Schedar	349 28.3	N56 41.8
Shaula	96 07.3	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.6	S11 18.6
Suhail	222 44.0	S43 32.8
Vega	80 31.9	N38 48.4
Zuben-ubi	136 54.2	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
25	0	123 50.6	138 02.3	S 7	21.2	164 15.0	S16	50.5	305 48.8	N 2	21.1	102 38.4	N 6	17.1
	1	138 53.0	153 02.0	S 7	19.9	179 15.5	S16	49.9	320 51.4	N 2	21.2	117 40.8	N 6	17.2
	2	153 55.5	168 01.7	S 7	18.6	194 16.0	S16	49.3	335 53.9	N 2	21.2	132 43.1	N 6	17.3
	3	168 58.0	183 01.4	S 7	17.4	209 16.5	S16	48.7	350 56.5	N 2	21.3	147 45.4	N 6	17.3
	4	184 00.4	198 01.2	S 7	16.1	224 17.0	S16	48.1	5 59.0	N 2	21.3	162 47.8	N 6	17.4
T	5	199 02.9	213 00.9	S 7	14.9	239 17.5	S16	47.5	21 01.6	N 2	21.4	177 50.1	N 6	17.5
U														
E	6	214 05.4	228 00.6	S 7	13.6	254 18.0	S16	46.9	36 04.1	N 2	21.4	192 52.4	N 6	17.5
S	7	229 07.8	243 00.4	S 7	12.4	269 18.5	S16	46.3	51 06.7	N 2	21.5	207 54.8	N 6	17.6
D	8	244 10.3	258 00.1	S 7	11.1	284 19.0	S16	45.7	66 09.3	N 2	21.5	222 57.1	N 6	17.6
A	9	259 12.8	272 59.8	S 7	09.8	299 19.5	S16	45.1	81 11.8	N 2	21.6	237 59.4	N 6	17.7
Y	10	274 15.2	287 59.5	S 7	08.6	314 20.0	S16	44.5	96 14.4	N 2	21.7	253 01.8	N 6	17.8
	11	289 17.7	302 59.3	S 7	07.3	329 20.5	S16	43.9	111 16.9	N 2	21.7	268 04.1	N 6	17.8
	12	304 20.1	317 59.0	S 7	06.0	344 21.0	S16	43.3	126 19.5	N 2	21.8	283 06.4	N 6	17.9
	13	319 22.6	332 58.7	S 7	04.8	359 21.5	S16	42.7	141 22.0	N 2	21.8	298 08.8	N 6	18.0
	14	334 25.1	347 58.5	S 7	03.5	14 22.0	S16	42.1	156 24.6	N 2	21.9	313 11.1	N 6	18.0
	15	349 27.5	2 58.2	S 7	02.3	29 22.5	S16	41.4	171 27.1	N 2	21.9	328 13.4	N 6	18.1
	16	4 30.0	17 57.9	S 7	01.0	44 23.0	S16	40.8	186 29.7	N 2	22.0	343 15.8	N 6	18.2
	17	19 32.5	32 57.6	S 6	59.7	59 23.5	S16	40.2	201 32.3	N 2	22.0	358 18.1	N 6	18.2
	18	34 34.9	47 57.4	S 6	58.5	74 24.0	S16	39.6	216 34.8	N 2	22.1	13 20.4	N 6	18.3
	19	49 37.4	62 57.1	S 6	57.2	89 24.5	S16	39.0	231 37.4	N 2	22.1	28 22.8	N 6	18.3
	20	64 39.9	77 56.8	S 6	55.9	104 25.0	S16	38.4	246 39.9	N 2	22.2	43 25.1	N 6	18.4
	21	79 42.3	92 56.6	S 6	54.7	119 25.5	S16	37.8	261 42.5	N 2	22.2	58 27.4	N 6	18.5
	22	94 44.8	107 56.3	S 6	53.4	134 26.0	S16	37.2	276 45.1	N 2	22.3	73 29.8	N 6	18.5
	23	109 47.3	122 56.0	S 6	52.1	149 26.5	S16	36.6	291 47.6	N 2	22.3	88 32.1	N 6	18.6
26	0	124 49.7	137 55.8	S 6	50.9	164 27.0	S16	36.0	306 50.2	N 2	22.4	103 34.4	N 6	18.7
	1	139 52.2	152 55.5	S 6	49.6	179 27.5	S16	35.4	321 52.7	N 2	22.4	118 36.8	N 6	18.7
	2	154 54.6	167 55.2	S 6	48.4	194 28.0	S16	34.7	336 55.3	N 2	22.5	133 39.1	N 6	18.8
	3	169 57.1	182 55.0	S 6	47.1	209 28.5	S16	34.1	351 57.9	N 2	22.5	148 41.4	N 6	18.9
	4	184 59.6	197 54.7	S 6	45.8	224 29.0	S16	33.5	7 00.4	N 2	22.6	163 43.8	N 6	18.9
W	5	200 02.0	212 54.5	S 6	44.6	239 29.5	S16	32.9	22 03.0	N 2	22.7	178 46.1	N 6	19.0
E														
D	6	215 04.5	227 54.2	S 6	43.3	254 30.0	S16	32.3	37 05.5	N 2	22.7	193 48.4	N 6	19.1
N	7	230 07.0	242 53.9	S 6	42.0	269 30.5	S16	31.7	52 08.1	N 2	22.8	208 50.8	N 6	19.1
E	8	245 09.4	257 53.7	S 6	40.8	284 31.0	S16	31.1	67 10.7	N 2	22.8	223 53.1	N 6	19.2
S	9	260 11.9	272 53.4	S 6	39.5	299 31.5	S16	30.5	82 13.2	N 2	22.9	238 55.4	N 6	19.2
D	10	275 14.4	287 53.1	S 6	38.2	314 32.0	S16	29.8	97 15.8	N 2	22.9	253 57.8	N 6	19.3
A	11	290 16.8	302 52.9	S 6	36.9	329 32.5	S16	29.2	112 18.3	N 2	23.0	269 00.1	N 6	19.4
Y														
	12	305 19.3	317 52.6	S 6	35.7	344 33.0	S16	28.6	127 20.9	N 2	23.0	284 02.4	N 6	19.4
	13	320 21.8	332 52.4	S 6	34.4	359 33.5	S16	28.0	142 23.5	N 2	23.1	299 04.8	N 6	19.5
	14	335 24.2	347 52.1	S 6	33.1	14 34.0	S16	27.4	157 26.0	N 2	23.1	314 07.1	N 6	19.6
	15	350 26.7	2 51.8	S 6	31.9	29 34.5	S16	26.8	172 28.6	N 2	23.2	329 09.4	N 6	19.6
	16	5 29.1	17 51.6	S 6	30.6	44 35.1	S16	26.2	187 31.2	N 2	23.3	344 11.7	N 6	19.7
	17	20 31.6	32 51.3	S 6	29.3	59 35.6	S16	25.5	202 33.7	N 2	23.3	359 14.1	N 6	19.8
	18	35 34.1	47 51.1	S 6	28.1	74 36.1	S16	24.9	217 36.3	N 2	23.4	14 16.4	N 6	19.8
	19	50 36.5	62 50.8	S 6	26.8	89 36.6	S16	24.3	232 38.9	N 2	23.4	29 18.7	N 6	19.9
	20	65 39.0	77 50.6	S 6	25.5	104 37.1	S16	23.7	247 41.4	N 2	23.5	44 21.1	N 6	20.0
	21	80 41.5	92 50.3	S 6	24.2	119 37.6	S16	23.1	262 44.0	N 2	23.5	59 23.4	N 6	20.0
	22	95 43.9	107 50.0	S 6	23.0	134 38.1	S16	22.5	277 46.6	N 2	23.6	74 25.7	N 6	20.1
	23	110 46.4	122 49.8	S 6	21.7	149 38.6	S16	21.8	292 49.1	N 2	23.6	89 28.0	N 6	20.2
27	0	125 48.9	137 49.5	S 6	20.4	164 39.1	S16	21.2	307 51.7	N 2	23.7	104 30.4	N 6	20.2
	1	140 51.3	152 49.3	S 6	19.2	179 39.6	S16	20.6	322 54.3	N 2	23.8	119 32.7	N 6	20.3
	2	155 53.8	167 49.0	S 6	17.9	194 40.1	S16	20.0	337 56.8	N 2	23.8	134 35.0	N 6	20.4
	3	170 56.3	182 48.8	S 6	16.6	209 40.6	S16	19.4	352 59.4	N 2	23.9	149 37.4	N 6	20.4
	4	185 58.7	197 48.5	S 6	15.3	224 41.1	S16	18.8	8 02.0	N 2	23.9	164 39.7	N 6	20.5
T	5	201 01.2	212 48.3	S 6	14.1	239 41.6	S16	18.1	23 04.5	N 2	24.0	179 42.0	N 6	20.5
H														
U	6	216 03.6	227 48.0	S 6	12.8	254 42.2	S16	17.5	38 07.1	N 2	24.0	194 44.3	N 6	20.6
R	7	231 06.1	242 47.7	S 6	11.5	269 42.7	S16	16.9	53 09.7	N 2	24.1	209 46.7	N 6	20.7
S	8	246 08.6	257 47.5	S 6	10.3	284 43.2	S16	16.3	68 12.2	N 2	24.2	224 49.0	N 6	20.7
D	9	261 11.0	272 47.2	S 6	09.0	299 43.7	S16	15.7	83 14.8	N 2	24.2	239 51.3	N 6	20.8
A	10	276 13.5	287 47.0	S 6	07.7	314 44.2	S16	15.0	98 17.4	N 2	24.3	254 53.7	N 6	20.9
Y	11	291 16.0	302 46.7	S 6	06.4	329 44.7	S16	14.4	113 19.9	N 2	24.3	269 56.0	N 6	20.9
	12	306 18.4	317 46.5	S 6	05.2	344 45.2	S16	13.8	128 22.5	N 2	24.4	284 58.3	N 6	21.0
	13	321 20.9	332 46.2	S 6	03.9	359 45.7	S16	13.2	143 25.1	N 2	24.4	300 00.6	N 6	21.1
	14	336 23.4	347 46.0	S 6	02.6	14 46.2	S16	12.5	158 27.6	N 2	24.5	315 03.0	N 6	21.1
	15	351 25.8	2 45.7	S 6	01.3	29 46.7	S16	11.9	173 30.2	N 2	24.6	330 05.3	N 6	21.2
	16	6 28.3	17 45.5	S 6	00.1	44 47.2	S16	11.3	188 32.8	N 2	24.6	345 07.6	N 6	21.3
	17	21 30.7	32 45.2	S 5	58.8	59 47.8	S16	10.7	203 35.4	N 2	24.7	0 09.9	N 6	21.3
	18	36 33.2	47 45.0	S 5	57.5	74 48.3	S16	10.1	218 37.9	N 2	24.7	15 12.3	N 6	21.4
	19	51 35.7	62 44.7	S 5	56.2	89 48.8	S16	09.4	233 40.5	N 2	24.8	30 14.6	N 6	21.5
	20	66 38.1	77 44.5	S 5	54.9	104 49.3	S16	08.8	248 43.1	N 2	24.9	45 16.9	N 6	21.5
	21	81 40.6	92 44.3	S 5	53.7	119 49.8	S16	08.2	263 45.7	N 2	24.9	60 19.2	N 6	21.6
	22	96 43.1	107 44.0	S 5	52.4	134 50.3	S16	07.6	278 48.2	N 2	25.0	75 21.6	N 6	21.7
	23	111 45.5	122 43.8	S 5	51.1	149 50.8	S16	06.9	293 50.8	N 2	25.0	90 23.9	N 6	21.7
			v -0.3	d	1.3	v 0.5	d	0.6	v 2.6	d	0.1	v 2.3	d	0.1

G.M.T		SUN		MOON					
d	h	GHA	Dec	GHA	v	Dec	d	HP
		° '	° '	° '	'	° '	'	'
25	0	176 59.1	S19 07.8	195 34.5	11.2	S23 49.4	6.4	54.5
	1	191 58.9	S19 07.2	210 04.8	11.2	S23 43.0	6.5	54.5
	2	206 58.8	S19 06.5	224 35.1	11.3	S23 36.4	6.6	54.5
	3	221 58.6	S19 05.9	239 05.4	11.4	S23 29.7	6.7	54.5
	4	236 58.5	S19 05.3	253 35.9	11.4	S23 22.9	6.8	54.5
T	5	251 58.3	S19 04.7	268 06.4	11.5	S23 16.0	6.9	54.5
U								
E	6	266 58.2	S19 04.1	282 37.0	11.6	S23 09.0	7.0	54.5
S	7	281 58.0	S19 03.5	297 07.6	11.6	S23 01.9	7.1	54.4
D	8	296 57.9	S19 02.9	311 38.3	11.7	S22 54.7	7.2	54.4
A	9	311 57.7	S19 02.3	326 09.1	11.8	S22 47.4	7.3	54.4
Y	10	326 57.6	S19 01.7	340 39.9	11.8	S22 40.0	7.4	54.4
	11	341 57.4	S19 01.0	355 10.9	11.9	S22 32.5	7.5	54.4
	12	356 57.3	S19 00.4	9 41.9	12.0	S22 24.8	7.6	54.4
	13	11 57.1	S18 59.8	24 12.9	12.1	S22 17.1	7.7	54.4
	14	26 57.0	S18 59.2	38 44.0	12.1	S22 09.3	7.8	54.4
	15	41 56.8	S18 58.6	53 15.2	12.2	S22 01.4	7.9	54.4
	16	56 56.7	S18 58.0	67 46.5	12.3	S21 53.4	8.0	54.3
	17	71 56.5	S18 57.4	82 17.8	12.3	S21 45.3	8.1	54.3
	18	86 56.4	S18 56.7	96 49.2	12.4	S21 37.1	8.2	54.3
	19	101 56.3	S18 56.1	111 20.7	12.5	S21 28.8	8.3	54.3
	20	116 56.1	S18 55.5	125 52.2	12.5	S21 20.5	8.4	54.3
	21	131 56.0	S18 54.9	140 23.9	12.6	S21 12.0	8.5	54.3
	22	146 55.8	S18 54.3	154 55.5	12.7	S21 03.4	8.6	54.3
	23	161 55.7	S18 53.6	169 27.3	12.8	S20 54.8	8.6	54.3
26	0	176 55.5	S18 53.0	183 59.1	12.8	S20 46.1	8.7	54.3
	1	191 55.4	S18 52.4	198 31.0	12.9	S20 37.2	8.8	54.3
	2	206 55.3	S18 51.8	213 03.0	13.0	S20 28.3	8.9	54.2
	3	221 55.1	S18 51.2	227 35.0	13.0	S20 19.3	9.0	54.2
	4	236 55.0	S18 50.5	242 07.1	13.1	S20 10.3	9.1	54.2
W	5	251 54.8	S18 49.9	256 39.2	13.2	S20 01.1	9.2	54.2
E								
D	6	266 54.7	S18 49.3	271 11.5	13.2	S19 51.8	9.2	54.2
N	7	281 54.6	S18 48.7	285 43.8	13.3	S19 42.5	9.3	54.2
E	8	296 54.4	S18 48.0	300 16.1	13.4	S19 33.1	9.4	54.2
S	9	311 54.3	S18 47.4	314 48.6	13.4	S19 23.6	9.5	54.2
D	10	326 54.1	S18 46.8	329 21.1	13.5	S19 14.1	9.6	54.2
A	11	341 54.0	S18 46.1	343 53.6	13.6	S19 04.4	9.6	54.2
Y								
	12	356 53.9	S18 45.5	358 26.3	13.6	S18 54.7	9.7	54.2
	13	11 53.7	S18 44.9	12 59.0	13.7	S18 44.9	9.8	54.2
	14	26 53.6	S18 44.3	27 31.7	13.8	S18 35.0	9.9	54.1
	15	41 53.5	S18 43.6	42 04.6	13.8	S18 25.1	10.0	54.1
	16	56 53.3	S18 43.0	56 37.5	13.9	S18 15.0	10.0	54.1
	17	71 53.2	S18 42.4	71 10.4	14.0	S18 04.9	10.1	54.1
	18	86 53.0	S18 41.7	85 43.5	14.0	S17 54.8	10.2	54.1
	19	101 52.9	S18 41.1	100 16.6	14.1	S17 44.5	10.2	54.1
	20	116 52.8	S18 40.5	114 49.7	14.2	S17 34.2	10.3	54.1
	21	131 52.6	S18 39.8	129 22.9	14.2	S17 23.8	10.4	54.1
	22	146 52.5	S18 39.2	143 56.2	14.3	S17 13.4	10.4	54.1
	23	161 52.4	S18 38.6	158 29.5	14.3	S17 02.9	10.5	54.1
27	0	176 52.2	S18 37.9	173 03.0	14.4	S16 52.3	10.6	54.1
	1	191 52.1	S18 37.3	187 36.4	14.5	S16 41.6	10.6	54.1
	2	206 52.0	S18 36.7	202 09.9	14.5	S16 30.9	10.7	54.1
	3	221 51.8	S18 36.0	216 43.5	14.6	S16 20.2	10.8	54.1
	4	236 51.7	S18 35.4	231 17.2	14.6	S16 09.3	10.8	54.1
T	5	251 51.6	S18 34.7	245 50.9	14.7	S15 58.4	10.9	54.1
H								
U	6	266 51.4	S18 34.1	260 24.6	14.8	S15 47.5	11.0	54.0
R	7	281 51.3	S18 33.5	274 58.5	14.8	S15 36.4	11.0	54.0
S	8	296 51.2	S18 32.8	289 32.3	14.9	S15 25.4	11.1	54.0
D	9	311 51.0	S18 32.2	304 06.3	14.9	S15 14.2	11.1	54.0
A	10	326 50.9	S18 31.5	318 40.3	15.0	S15 03.0	11.2	54.0
Y	11	341 50.8	S18 30.9	333 14.3	15.0	S14 51.8	11.3	54.0
	12	356 50.7	S18 30.3	347 48.4	15.1	S14 40.5	11.3	54.0
	13	11 50.5	S18 29.6	2 22.6	15.2	S14 29.1	11.4	54.0
	14	26 50.4	S18 29.0	16 56.8	15.2	S14 17.7	11.4	54.0
	15	41 50.3	S18 28.3	31 31.1	15.3	S14 06.2	11.5	54.0
	16	56 50.1	S18 27.7	46 05.4	15.3	S13 54.7	11.5	54.0
	17	71 50.0	S18 27.0	60 39.7	15.4	S13 43.1	11.6	54.0
	18	86 49.9	S18 26.4	75 14.2	15.4	S13 31.5	11.6	54.0
	19	101 49.8	S18 25.8	89 48.6	15.5	S13 19.8	11.7	54.0
	20	116 49.6	S18 25.1	104 23.1	15.5	S13 08.1	11.7	54.0
	21	131 49.5	S18 24.5	118 57.7	15.6	S12 56.3	11.8	54.0
	22	146 49.4	S18 23.8	133 32.3	15.6	S12 44.5	11.8	54.0
	23	161 49.3	S18 23.2	148 07.0	15.7	S12 32.6	11.9	54.0
		S.D. 16.2	d 0.6	S.D. 14.8		14.8		14.7

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.8	S40 11.7
Achernar	335 18.4	S57 05.9
Acrux	172 56.9	S63 15.1
Adhara	255 03.5	S29 00.8
Albireo	67 02.4	N28 01.0
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.1
Alkaid	152 50.0	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.7	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.8	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 13.0	S26 29.6
Arcturus	145 45.6	N19 01.9
Atria	107 05.3	S69 04.5
Avior	234 13.0	S59 36.1
Bellatrix	278 19.9	N 6 22.4
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.8	S52 42.8
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.9
Denebola	182 22.2	N14 24.7
Diphda	348 44.9	S17 50.0
Dubhe	193 37.4	N61 35.6
Elnath	277 58.4	N28 37.8
Eltanin	90 41.5	N51 28.9
Enif	33 36.6	N10 00.3
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.5	S57 16.1
Gienah	175 40.8	S17 41.9
Hadar	148 32.4	S60 30.3
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.6	S34 22.2
Kochab	137 20.3	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.4	N 4 12.0
Menkent	147 54.6	S36 30.5
Miaplacidus	221 36.6	S69 50.0
Mirfak	308 24.5	N49 57.9
Nunki	75 45.0	S26 15.7
Peacock	53 02.3	S56 38.7
Polaris	315 30.9	N89 22.7
Pollux	243 13.8	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.5	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.2	S 8 10.3
Rigil Kent	139 37.0	S60 56.9
Sabik	102 00.1	S15 45.6
Schedar	349 28.3	N56 41.8
Shaula	96 07.3	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.6	S11 18.6
Suhail	222 44.0	S43 32.8
Vega	80 31.9	N38 48.4
Zuben-ubi	136 54.2	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
28	0	126 48.0	137 43.5	S 5	49.8	164 51.3	S16	06.3	308 53.4	N 2	25.1	105 26.2	N 6	21.8
	1	141 50.5	152 43.3	S 5	48.6	179 51.8	S16	05.7	323 55.9	N 2	25.2	120 28.5	N 6	21.9
	2	156 52.9	167 43.0	S 5	47.3	194 52.4	S16	05.1	338 58.5	N 2	25.2	135 30.9	N 6	21.9
	3	171 55.4	182 42.8	S 5	46.0	209 52.9	S16	04.4	354 01.1	N 2	25.3	150 33.2	N 6	22.0
	4	186 57.9	197 42.5	S 5	44.7	224 53.4	S16	03.8	9 03.7	N 2	25.3	165 35.5	N 6	22.1
F	5	202 00.3	212 42.3	S 5	43.4	239 53.9	S16	03.2	24 06.2	N 2	25.4	180 37.8	N 6	22.1
R														
I	6	217 02.8	227 42.0	S 5	42.2	254 54.4	S16	02.6	39 08.8	N 2	25.5	195 40.2	N 6	22.2
D	7	232 05.2	242 41.8	S 5	40.9	269 54.9	S16	01.9	54 11.4	N 2	25.5	210 42.5	N 6	22.3
A	8	247 07.7	257 41.6	S 5	39.6	284 55.4	S16	01.3	69 14.0	N 2	25.6	225 44.8	N 6	22.3
Y	9	262 10.2	272 41.3	S 5	38.3	299 56.0	S16	00.7	84 16.5	N 2	25.6	240 47.1	N 6	22.4
	10	277 12.6	287 41.1	S 5	37.0	314 56.5	S16	00.0	99 19.1	N 2	25.7	255 49.5	N 6	22.5
	11	292 15.1	302 40.8	S 5	35.8	329 57.0	S15	59.4	114 21.7	N 2	25.8	270 51.8	N 6	22.5
	12	307 17.6	317 40.6	S 5	34.5	344 57.5	S15	58.8	129 24.3	N 2	25.8	285 54.1	N 6	22.6
	13	322 20.0	332 40.3	S 5	33.2	359 58.0	S15	58.2	144 26.9	N 2	25.9	300 56.4	N 6	22.7
	14	337 22.5	347 40.1	S 5	31.9	14 58.5	S15	57.5	159 29.4	N 2	25.9	315 58.7	N 6	22.7
	15	352 25.0	2 39.9	S 5	30.6	29 59.0	S15	56.9	174 32.0	N 2	26.0	331 01.1	N 6	22.8
	16	7 27.4	17 39.6	S 5	29.4	44 59.6	S15	56.3	189 34.6	N 2	26.1	346 03.4	N 6	22.9
	17	22 29.9	32 39.4	S 5	28.1	60 00.1	S15	55.6	204 37.2	N 2	26.1	1 05.7	N 6	23.0
	18	37 32.4	47 39.2	S 5	26.8	75 00.6	S15	55.0	219 39.8	N 2	26.2	16 08.0	N 6	23.0
	19	52 34.8	62 38.9	S 5	25.5	90 01.1	S15	54.4	234 42.3	N 2	26.2	31 10.4	N 6	23.1
	20	67 37.3	77 38.7	S 5	24.2	105 01.6	S15	53.8	249 44.9	N 2	26.3	46 12.7	N 6	23.2
	21	82 39.7	92 38.4	S 5	23.0	120 02.1	S15	53.1	264 47.5	N 2	26.4	61 15.0	N 6	23.2
	22	97 42.2	107 38.2	S 5	21.7	135 02.6	S15	52.5	279 50.1	N 2	26.4	76 17.3	N 6	23.3
	23	112 44.7	122 38.0	S 5	20.4	150 03.2	S15	51.9	294 52.6	N 2	26.5	91 19.6	N 6	23.4
29	0	127 47.1	137 37.7	S 5	19.1	165 03.7	S15	51.2	309 55.2	N 2	26.6	106 22.0	N 6	23.4
	1	142 49.6	152 37.5	S 5	17.8	180 04.2	S15	50.6	324 57.8	N 2	26.6	121 24.3	N 6	23.5
	2	157 52.1	167 37.3	S 5	16.5	195 04.7	S15	50.0	340 00.4	N 2	26.7	136 26.6	N 6	23.6
	3	172 54.5	182 37.0	S 5	15.3	210 05.2	S15	49.3	355 03.0	N 2	26.7	151 28.9	N 6	23.6
	4	187 57.0	197 36.8	S 5	14.0	225 05.7	S15	48.7	10 05.6	N 2	26.8	166 31.2	N 6	23.7
S	5	202 59.5	212 36.5	S 5	12.7	240 06.3	S15	48.1	25 08.1	N 2	26.9	181 33.6	N 6	23.8
A														
T	6	218 01.9	227 36.3	S 5	11.4	255 06.8	S15	47.4	40 10.7	N 2	26.9	196 35.9	N 6	23.8
U	7	233 04.4	242 36.1	S 5	10.1	270 07.3	S15	46.8	55 13.3	N 2	27.0	211 38.2	N 6	23.9
R	8	248 06.8	257 35.8	S 5	08.8	285 07.8	S15	46.2	70 15.9	N 2	27.1	226 40.5	N 6	24.0
D	9	263 09.3	272 35.6	S 5	07.5	300 08.3	S15	45.5	85 18.5	N 2	27.1	241 42.8	N 6	24.0
A	10	278 11.8	287 35.4	S 5	06.3	315 08.9	S15	44.9	100 21.1	N 2	27.2	256 45.2	N 6	24.1
Y	11	293 14.2	302 35.1	S 5	05.0	330 09.4	S15	44.3	115 23.6	N 2	27.2	271 47.5	N 6	24.2
	12	308 16.7	317 34.9	S 5	03.7	345 09.9	S15	43.6	130 26.2	N 2	27.3	286 49.8	N 6	24.2
	13	323 19.2	332 34.7	S 5	02.4	0 10.4	S15	43.0	145 28.8	N 2	27.4	301 52.1	N 6	24.3
	14	338 21.6	347 34.5	S 5	01.1	15 10.9	S15	42.4	160 31.4	N 2	27.4	316 54.4	N 6	24.4
	15	353 24.1	2 34.2	S 4	59.8	30 11.4	S15	41.7	175 34.0	N 2	27.5	331 56.8	N 6	24.5
	16	8 26.6	17 34.0	S 4	58.5	45 12.0	S15	41.1	190 36.6	N 2	27.6	346 59.1	N 6	24.5
	17	23 29.0	32 33.8	S 4	57.3	60 12.5	S15	40.5	205 39.1	N 2	27.6	2 01.4	N 6	24.6
	18	38 31.5	47 33.5	S 4	56.0	75 13.0	S15	39.8	220 41.7	N 2	27.7	17 03.7	N 6	24.7
	19	53 34.0	62 33.3	S 4	54.7	90 13.5	S15	39.2	235 44.3	N 2	27.8	32 06.0	N 6	24.7
	20	68 36.4	77 33.1	S 4	53.4	105 14.0	S15	38.5	250 46.9	N 2	27.8	47 08.4	N 6	24.8
	21	83 38.9	92 32.8	S 4	52.1	120 14.6	S15	37.9	265 49.5	N 2	27.9	62 10.7	N 6	24.9
	22	98 41.3	107 32.6	S 4	50.8	135 15.1	S15	37.3	280 52.1	N 2	28.0	77 13.0	N 6	24.9
	23	113 43.8	122 32.4	S 4	49.5	150 15.6	S15	36.6	295 54.7	N 2	28.0	92 15.3	N 6	25.0
30	0	128 46.3	137 32.2	S 4	48.2	165 16.1	S15	36.0	310 57.3	N 2	28.1	107 17.6	N 6	25.1
	1	143 48.7	152 31.9	S 4	47.0	180 16.6	S15	35.4	325 59.8	N 2	28.1	122 19.9	N 6	25.1
	2	158 51.2	167 31.7	S 4	45.7	195 17.2	S15	34.7	341 02.4	N 2	28.2	137 22.3	N 6	25.2
	3	173 53.7	182 31.5	S 4	44.4	210 17.7	S15	34.1	356 05.0	N 2	28.3	152 24.6	N 6	25.3
	4	188 56.1	197 31.3	S 4	43.1	225 18.2	S15	33.4	11 07.6	N 2	28.3	167 26.9	N 6	25.4
S	5	203 58.6	212 31.0	S 4	41.8	240 18.7	S15	32.8	26 10.2	N 2	28.4	182 29.2	N 6	25.4
U														
N	6	219 01.1	227 30.8	S 4	40.5	255 19.3	S15	32.2	41 12.8	N 2	28.5	197 31.5	N 6	25.5
D	7	234 03.5	242 30.6	S 4	39.2	270 19.8	S15	31.5	56 15.4	N 2	28.5	212 33.8	N 6	25.6
A	8	249 06.0	257 30.4	S 4	37.9	285 20.3	S15	30.9	71 18.0	N 2	28.6	227 36.2	N 6	25.6
Y	9	264 08.5	272 30.1	S 4	36.6	300 20.8	S15	30.2	86 20.6	N 2	28.7	242 38.5	N 6	25.7
	10	279 10.9	287 29.9	S 4	35.4	315 21.3	S15	29.6	101 23.1	N 2	28.7	257 40.8	N 6	25.8
	11	294 13.4	302 29.7	S 4	34.1	330 21.9	S15	29.0	116 25.7	N 2	28.8	272 43.1	N 6	25.8
	12	309 15.8	317 29.5	S 4	32.8	345 22.4	S15	28.3	131 28.3	N 2	28.9	287 45.4	N 6	25.9
	13	324 18.3	332 29.2	S 4	31.5	0 22.9	S15	27.7	146 30.9	N 2	28.9	302 47.7	N 6	26.0
	14	339 20.8	347 29.0	S 4	30.2	15 23.4	S15	27.0	161 33.5	N 2	29.0	317 50.1	N 6	26.1
	15	354 23.2	2 28.8	S 4	28.9	30 24.0	S15	26.4	176 36.1	N 2	29.1	332 52.4	N 6	26.1
	16	9 25.7	17 28.6	S 4	27.6	45 24.5	S15	25.7	191 38.7	N 2	29.1	347 54.7	N 6	26.2
	17	24 28.2	32 28.3	S 4	26.3	60 25.0	S15	25.1	206 41.3	N 2	29.2	2 57.0	N 6	26.3
	18	39 30.6	47 28.1	S 4	25.0	75 25.5	S15	24.5	221 43.9	N 2	29.3	17 59.3	N 6	26.3
	19	54 33.1	62 27.9	S 4	23.7	90 26.1	S15	23.8	236 46.5	N 2	29.3	33 01.6	N 6	26.4
	20	69 35.6	77 27.7	S 4	22.4	105 26.6	S15	23.2	251 49.1	N 2	29.4	48 03.9	N 6	26.5
	21	84 38.0	92 27.5	S 4	21.1	120 27.1	S15	22.5	266 51.7	N 2	29.5	63 06.3	N 6	26.5
	22	99 40.5	107 27.2	S 4	19.9	135 27.6	S15	21.9	281 54.3	N 2	29.5	78 08.6	N 6	26.6
	23	114 42.9	122 27.0	S 4	18.6	150 28.2	S15	21.2	296 56.9	N 2	29.6	93 10.9	N 6	26.7
			v -0.2	d	1.3	v 0.5	d	0.6	v 2.6	d	0.1	v 2.3	d	0.1

G.M.T		SUN				MOON					
d	h	GHA		Dec		GHA		v	Dec		d	HP
		°	'	°	'	°	'	'	°	'	'	'
28	0	176	49.1	S18	22.5	162	41.7	15.7	S12	20.7	11.9	54.0
	1	191	49.0	S18	21.9	177	16.4	15.8	S12	08.7	12.0	54.0
	2	206	48.9	S18	21.2	191	51.2	15.8	S11	56.7	12.0	54.0
	3	221	48.8	S18	20.6	206	26.1	15.8	S11	44.7	12.0	54.0
	4	236	48.6	S18	19.9	221	01.0	15.9	S11	32.6	12.1	54.0
F	5	251	48.5	S18	19.3	235	35.9	15.9	S11	20.5	12.1	54.0
R												
I	6	266	48.4	S18	18.6	250	10.9	16.0	S11	08.3	12.2	54.0
D	7	281	48.3	S18	17.9	264	45.9	16.0	S10	56.1	12.2	54.0
A	8	296	48.1	S18	17.3	279	21.0	16.1	S10	43.8	12.3	54.0
Y	9	311	48.0	S18	16.6	293	56.0	16.1	S10	31.5	12.3	54.0
	10	326	47.9	S18	16.0	308	31.2	16.1	S10	19.2	12.3	54.0
	11	341	47.8	S18	15.3	323	06.4	16.2	S10	06.8	12.4	54.0
	12	356	47.7	S18	14.7	337	41.6	16.2	S 9	54.4	12.4	54.0
	13	11	47.5	S18	14.0	352	16.8	16.2	S 9	42.0	12.4	54.0
	14	26	47.4	S18	13.4	6	52.1	16.3	S 9	29.5	12.5	54.0
	15	41	47.3	S18	12.7	21	27.4	16.3	S 9	17.0	12.5	54.0
	16	56	47.2	S18	12.0	36	02.8	16.4	S 9	04.5	12.5	54.0
	17	71	47.1	S18	11.4	50	38.1	16.4	S 8	51.9	12.6	54.0
	18	86	46.9	S18	10.7	65	13.6	16.4	S 8	39.3	12.6	54.0
	19	101	46.8	S18	10.1	79	49.0	16.4	S 8	26.7	12.6	54.0
	20	116	46.7	S18	09.4	94	24.5	16.5	S 8	14.0	12.7	54.0
	21	131	46.6	S18	08.7	108	60.0	16.5	S 8	01.3	12.7	54.0
	22	146	46.5	S18	08.1	123	35.5	16.5	S 7	48.6	12.7	54.0
	23	161	46.3	S18	07.4	138	11.1	16.6	S 7	35.8	12.8	54.0
29	0	176	46.2	S18	06.8	152	46.7	16.6	S 7	23.1	12.8	54.0
	1	191	46.1	S18	06.1	167	22.3	16.6	S 7	10.3	12.8	54.0
	2	206	46.0	S18	05.4	181	58.0	16.6	S 6	57.4	12.8	54.0
	3	221	45.9	S18	04.8	196	33.6	16.7	S 6	44.6	12.9	54.0
	4	236	45.8	S18	04.1	211	09.3	16.7	S 6	31.7	12.9	54.0
S	5	251	45.7	S18	03.4	225	45.0	16.7	S 6	18.8	12.9	54.0
A												
T	6	266	45.5	S18	02.8	240	20.8	16.7	S 6	05.9	12.9	54.0
U	7	281	45.4	S18	02.1	254	56.5	16.8	S 5	52.9	12.9	54.0
R	8	296	45.3	S18	01.4	269	32.3	16.8	S 5	39.9	13.0	54.0
D	9	311	45.2	S18	00.8	284	08.1	16.8	S 5	27.0	13.0	54.0
A	10	326	45.1	S18	00.1	298	43.9	16.8	S 5	13.9	13.0	54.0
Y	11	341	45.0	S17	59.4	313	19.8	16.8	S 5	00.9	13.0	54.0
	12	356	44.9	S17	58.8	327	55.6	16.9	S 4	47.9	13.0	54.0
	13	11	44.7	S17	58.1	342	31.5	16.9	S 4	34.8	13.1	54.0
	14	26	44.6	S17	57.4	357	07.4	16.9	S 4	21.7	13.1	54.0
	15	41	44.5	S17	56.7	11	43.2	16.9	S 4	08.6	13.1	54.0
	16	56	44.4	S17	56.1	26	19.2	16.9	S 3	55.5	13.1	54.0
	17	71	44.3	S17	55.4	40	55.1	16.9	S 3	42.4	13.1	54.0
	18	86	44.2	S17	54.7	55	31.0	16.9	S 3	29.2	13.1	54.0
	19	101	44.1	S17	54.1	70	06.9	16.9	S 3	16.1	13.2	54.0
	20	116	44.0	S17	53.4	84	42.9	16.9	S 3	02.9	13.2	54.0
	21	131	43.9	S17	52.7	99	18.8	17.0	S 2	49.7	13.2	54.0
	22	146	43.7	S17	52.0	113	54.8	17.0	S 2	36.5	13.2	54.0
	23	161	43.6	S17	51.4	128	30.8	17.0	S 2	23.3	13.2	54.0
30	0	176	43.5	S17	50.7	143	06.8	17.0	S 2	10.1	13.2	54.1
	1	191	43.4	S17	50.0	157	42.7	17.0	S 1	56.9	13.2	54.1
	2	206	43.3	S17	49.3	172	18.7	17.0	S 1	43.6	13.2	54.1
	3	221	43.2	S17	48.6	186	54.7	17.0	S 1	30.4	13.2	54.1
	4	236	43.1	S17	48.0	201	30.7	17.0	S 1	17.2	13.2	54.1
S	5	251	43.0	S17	47.3	216	06.7	17.0	S 1	03.9	13.3	54.1
U												
N	6	266	42.9	S17	46.6	230	42.7	17.0	S 0	50.6	13.3	54.1
D	7	281	42.8	S17	45.9	245	18.6	17.0	S 0	37.4	13.3	54.1
A	8	296	42.7	S17	45.2	259	54.6	17.0	S 0	24.1	13.3	54.1
Y	9	311	42.6	S17	44.6	274	30.6	17.0	S 0	10.8	13.3	54.1
	10	326	42.5	S17	43.9	289	06.6	17.0	N 0	02.5	13.3	54.1
	11	341	42.4	S17	43.2	303	42.5	17.0	N 0	15.7	13.3	54.1
	12	356	42.3	S17	42.5	318	18.5	17.0	N 0	29.0	13.3	54.1
	13	11	42.2	S17	41.8	332	54.4	17.0	N 0	42.3	13.3	54.1
	14	26	42.1	S17	41.1	347	30.4	16.9	N 0	55.6	13.3	54.2
	15	41	42.0	S17	40.5	2	06.3	16.9	N 1	08.9	13.3	54.2
	16	56	41.8	S17	39.8	16	42.2	16.9	N 1	22.2	13.3	54.2
	17	71	41.7	S17	39.1	31	18.2	16.9	N 1	35.4	13.3	54.2
	18	86	41.6	S17	38.4	45	54.1	16.9	N 1	48.7	13.3	54.2
	19	101	41.5	S17	37.7	60	29.9	16.9	N 2	02.0	13.3	54.2
	20	116	41.4	S17	37.0	75	05.8	16.9	N 2	15.3	13.3	54.2
	21	131	41.3	S17	36.3	89	41.7	16.9	N 2	28.5	13.3	54.2
	22	146	41.2	S17	35.7	104	17.5	16.8	N 2	41.8	13.3	54.2
	23	161	41.1	S17	35.0	118	53.3	16.8	N 2	55.1	13.3	54.2
		S.D. 16.2		d 0.7		S.D.	14.7		14.7		14.8	

STARS				
Name	SHA		Dec	
	°	'	°	'
Acamar	315	09.8	S40	11.7
Achernar	335	18.5	S57	05.9
Acrux	172	56.9	S63	15.1
Adhara	255	03.5	S29	00.8
Albireo	67	02.4	N28	01.0
Aldebaran	290	36.5	N16	34.0
Alioth	166	10.5	N55	48.1
Alkaid	152	50.0	N49	10.0
Al Na-ir	27	30.2	S46	49.6
Alnilam	275	34.9	S 1	11.1
Alphard	217	44.9	S 8	47.0
Alphecca	126	01.7	N26	36.9
Alpheratz	357	32.4	N29	14.9
Altair	61	57.8	N 8	56.5
Ankaa	353	04.9	S42	09.4
Antares	112	12.9	S26	29.6
Arcturus	145	45.6	N19	01.9
Atria	107	05.3	S69	04.5
Avior	234	13.0	S59	36.1
Bellatrix	278	19.9	N 6	22.4
Betelgeuse	270	49.1	N 7	24.7
Canopus	263	50.8	S52	42.8
Capella	280	17.8	N46	01.7
Castor	245	53.5	N31	49.5
Deneb	49	24.5	N45	22.8
Denebola	182	22.2	N14	24.7
Diphda	348	44.9	S17	50.0
Dubhe	193	37.4	N61	35.6
Elnath	277	58.4	N28	37.9
Eltanin	90	41.5	N51	28.8
Enif	33	36.6	N10	00.3
Fomalhaut	15	12.0	S29	28.5
Gacrux	171	48.5	S57	16.1
Gienah	175	40.8	S17	41.9
Hadar	148	32.4	S60	30.3
Hamal	327	48.4	N23	35.9
Kaus Austr.	83	29.5	S34	22.2
Kochab	137	20.3	N74	02.0
Markab	13	27.6	N15	21.4
Menkar	314	03.4	N 4	12.0
Menkent	147	54.6	S36	30.5
Miaplacidus	221	36.6	S69	50.0
Mirfak	308	24.5	N49	57.9
Nunki	75	45.0	S26	15.7
Peacock	53	02.3	S56	38.7
Polaris	315	32.2	N89	22.7
Pollux	243	13.8	N27	57.4
Procyon	244	47.9	N 5	09.0
Rasalhague	95	56.5	N12	32.3
Regulus	207	31.4	N11	49.6
Rigel	281	01.2	S 8	10.3
Rigil Kent	139	37.0	S60	56.9
Sabik	102	00.1	S15	45.6
Schedar	349	28.4	N56	41.8
Shaula	96	07.2	S37	07.4
Sirius	258	23.7	S16	45.4
Spica	158	19.5	S11	18.6
Suhail	222	44.0	S43	32.8
Vega	80	31.9	N38	48.4
Zuben-ubi	136	54.2	S16	09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
31	0	129 45.4	137 26.8	S 4	17.3	165 28.7	S15	20.6	311 59.4	N 2	29.7	108 13.2	N 6	26.8
	1	144 47.9	152 26.6	S 4	16.0	180 29.2	S15	19.9	327 02.0	N 2	29.8	123 15.5	N 6	26.8
	2	159 50.3	167 26.4	S 4	14.7	195 29.7	S15	19.3	342 04.6	N 2	29.8	138 17.8	N 6	26.9
	3	174 52.8	182 26.2	S 4	13.4	210 30.3	S15	18.7	357 07.2	N 2	29.9	153 20.1	N 6	27.0
	4	189 55.3	197 25.9	S 4	12.1	225 30.8	S15	18.0	12 09.8	N 2	30.0	168 22.4	N 6	27.0
M	5	204 57.7	212 25.7	S 4	10.8	240 31.3	S15	17.4	27 12.4	N 2	30.0	183 24.8	N 6	27.1
O														
N	6	220 00.2	227 25.5	S 4	09.5	255 31.8	S15	16.7	42 15.0	N 2	30.1	198 27.1	N 6	27.2
D	7	235 02.7	242 25.3	S 4	08.2	270 32.4	S15	16.1	57 17.6	N 2	30.2	213 29.4	N 6	27.3
A	8	250 05.1	257 25.1	S 4	06.9	285 32.9	S15	15.4	72 20.2	N 2	30.2	228 31.7	N 6	27.3
Y	9	265 07.6	272 24.9	S 4	05.6	300 33.4	S15	14.8	87 22.8	N 2	30.3	243 34.0	N 6	27.4
	10	280 10.1	287 24.6	S 4	04.3	315 33.9	S15	14.1	102 25.4	N 2	30.4	258 36.3	N 6	27.5
	11	295 12.5	302 24.4	S 4	03.0	330 34.5	S15	13.5	117 28.0	N 2	30.4	273 38.6	N 6	27.5
	12	310 15.0	317 24.2	S 4	01.7	345 35.0	S15	12.8	132 30.6	N 2	30.5	288 40.9	N 6	27.6
	13	325 17.4	332 24.0	S 4	00.5	0 35.5	S15	12.2	147 33.2	N 2	30.6	303 43.3	N 6	27.7
	14	340 19.9	347 23.8	S 3	59.2	15 36.1	S15	11.5	162 35.8	N 2	30.6	318 45.6	N 6	27.8
	15	355 22.4	2 23.6	S 3	57.9	30 36.6	S15	10.9	177 38.4	N 2	30.7	333 47.9	N 6	27.8
	16	10 24.8	17 23.4	S 3	56.6	45 37.1	S15	10.2	192 41.0	N 2	30.8	348 50.2	N 6	27.9
	17	25 27.3	32 23.1	S 3	55.3	60 37.6	S15	09.6	207 43.6	N 2	30.9	3 52.5	N 6	28.0
	18	40 29.8	47 22.9	S 3	54.0	75 38.2	S15	08.9	222 46.2	N 2	30.9	18 54.8	N 6	28.0
	19	55 32.2	62 22.7	S 3	52.7	90 38.7	S15	08.3	237 48.8	N 2	31.0	33 57.1	N 6	28.1
	20	70 34.7	77 22.5	S 3	51.4	105 39.2	S15	07.6	252 51.4	N 2	31.1	48 59.4	N 6	28.2
	21	85 37.2	92 22.3	S 3	50.1	120 39.8	S15	07.0	267 54.0	N 2	31.1	64 01.8	N 6	28.3
	22	100 39.6	107 22.1	S 3	48.8	135 40.3	S15	06.3	282 56.6	N 2	31.2	79 04.1	N 6	28.3
	23	115 42.1	122 21.9	S 3	47.5	150 40.8	S15	05.7	297 59.2	N 2	31.3	94 06.4	N 6	28.4
1	0	130 44.5	137 21.7	S 3	46.2	165 41.4	S15	05.0	313 01.8	N 2	31.4	109 08.7	N 6	28.5
	1	145 47.0	152 21.5	S 3	44.9	180 41.9	S15	04.4	328 04.4	N 2	31.4	124 11.0	N 6	28.5
	2	160 49.5	167 21.2	S 3	43.6	195 42.4	S15	03.7	343 07.0	N 2	31.5	139 13.3	N 6	28.6
	3	175 51.9	182 21.0	S 3	42.3	210 42.9	S15	03.1	358 09.6	N 2	31.6	154 15.6	N 6	28.7
	4	190 54.4	197 20.8	S 3	41.0	225 43.5	S15	02.4	13 12.2	N 2	31.6	169 17.9	N 6	28.8
T	5	205 56.9	212 20.6	S 3	39.7	240 44.0	S15	01.8	28 14.8	N 2	31.7	184 20.2	N 6	28.8
U														
E	6	220 59.3	227 20.4	S 3	38.4	255 44.5	S15	01.1	43 17.4	N 2	31.8	199 22.5	N 6	28.9
S	7	236 01.8	242 20.2	S 3	37.1	270 45.1	S15	00.5	58 20.0	N 2	31.9	214 24.8	N 6	29.0
D	8	251 04.3	257 20.0	S 3	35.8	285 45.6	S14	59.8	73 22.6	N 2	31.9	229 27.2	N 6	29.1
A	9	266 06.7	272 19.8	S 3	34.5	300 46.1	S14	59.2	88 25.2	N 2	32.0	244 29.5	N 6	29.1
Y	10	281 09.2	287 19.6	S 3	33.2	315 46.7	S14	58.5	103 27.8	N 2	32.1	259 31.8	N 6	29.2
	11	296 11.7	302 19.4	S 3	31.9	330 47.2	S14	57.8	118 30.4	N 2	32.1	274 34.1	N 6	29.3
	12	311 14.1	317 19.2	S 3	30.6	345 47.7	S14	57.2	133 33.0	N 2	32.2	289 36.4	N 6	29.3
	13	326 16.6	332 19.0	S 3	29.3	0 48.3	S14	56.5	148 35.6	N 2	32.3	304 38.7	N 6	29.4
	14	341 19.0	347 18.8	S 3	28.0	15 48.8	S14	55.9	163 38.3	N 2	32.4	319 41.0	N 6	29.5
	15	356 21.5	2 18.6	S 3	26.7	30 49.3	S14	55.2	178 40.9	N 2	32.4	334 43.3	N 6	29.6
	16	11 24.0	17 18.3	S 3	25.4	45 49.9	S14	54.6	193 43.5	N 2	32.5	349 45.6	N 6	29.6
	17	26 26.4	32 18.1	S 3	24.1	60 50.4	S14	53.9	208 46.1	N 2	32.6	4 47.9	N 6	29.7
	18	41 28.9	47 17.9	S 3	22.8	75 50.9	S14	53.3	223 48.7	N 2	32.6	19 50.2	N 6	29.8
	19	56 31.4	62 17.7	S 3	21.5	90 51.5	S14	52.6	238 51.3	N 2	32.7	34 52.5	N 6	29.9
	20	71 33.8	77 17.5	S 3	20.2	105 52.0	S14	51.9	253 53.9	N 2	32.8	49 54.9	N 6	29.9
	21	86 36.3	92 17.3	S 3	18.9	120 52.5	S14	51.3	268 56.5	N 2	32.9	64 57.2	N 6	30.0
	22	101 38.8	107 17.1	S 3	17.6	135 53.1	S14	50.6	283 59.1	N 2	32.9	79 59.5	N 6	30.1
	23	116 41.2	122 16.9	S 3	16.3	150 53.6	S14	50.0	299 01.7	N 2	33.0	95 01.8	N 6	30.1
2	0	131 43.7	137 16.7	S 3	15.0	165 54.1	S14	49.3	314 04.3	N 2	33.1	110 04.1	N 6	30.2
	1	146 46.2	152 16.5	S 3	13.7	180 54.7	S14	48.7	329 06.9	N 2	33.2	125 06.4	N 6	30.3
	2	161 48.6	167 16.3	S 3	12.4	195 55.2	S14	48.0	344 09.5	N 2	33.2	140 08.7	N 6	30.4
	3	176 51.1	182 16.1	S 3	11.1	210 55.7	S14	47.3	359 12.1	N 2	33.3	155 11.0	N 6	30.4
	4	191 53.5	197 15.9	S 3	09.8	225 56.3	S14	46.7	14 14.8	N 2	33.4	170 13.3	N 6	30.5
W	5	206 56.0	212 15.7	S 3	08.5	240 56.8	S14	46.0	29 17.4	N 2	33.5	185 15.6	N 6	30.6
E														
D	6	221 58.5	227 15.5	S 3	07.2	255 57.3	S14	45.4	44 20.0	N 2	33.5	200 17.9	N 6	30.7
N	7	237 00.9	242 15.3	S 3	05.9	270 57.9	S14	44.7	59 22.6	N 2	33.6	215 20.2	N 6	30.7
E	8	252 03.4	257 15.1	S 3	04.6	285 58.4	S14	44.0	74 25.2	N 2	33.7	230 22.5	N 6	30.8
S	9	267 05.9	272 14.9	S 3	03.3	300 58.9	S14	43.4	89 27.8	N 2	33.8	245 24.8	N 6	30.9
D	10	282 08.3	287 14.7	S 3	02.0	315 59.5	S14	42.7	104 30.4	N 2	33.8	260 27.1	N 6	31.0
A	11	297 10.8	302 14.5	S 3	00.7	331 00.0	S14	42.1	119 33.0	N 2	33.9	275 29.4	N 6	31.0
Y														
	12	312 13.3	317 14.3	S 2	59.4	346 00.6	S14	41.4	134 35.6	N 2	34.0	290 31.7	N 6	31.1
	13	327 15.7	332 14.1	S 2	58.1	1 01.1	S14	40.7	149 38.2	N 2	34.1	305 34.1	N 6	31.2
	14	342 18.2	347 13.9	S 2	56.8	16 01.6	S14	40.1	164 40.9	N 2	34.1	320 36.4	N 6	31.2
	15	357 20.6	2 13.7	S 2	55.5	31 02.2	S14	39.4	179 43.5	N 2	34.2	335 38.7	N 6	31.3
	16	12 23.1	17 13.5	S 2	54.2	46 02.7	S14	38.8	194 46.1	N 2	34.3	350 41.0	N 6	31.4
	17	27 25.6	32 13.3	S 2	52.9	61 03.2	S14	38.1	209 48.7	N 2	34.4	5 43.3	N 6	31.5
	18	42 28.0	47 13.1	S 2	51.6	76 03.8	S14	37.4	224 51.3	N 2	34.4	20 45.6	N 6	31.5
	19	57 30.5	62 12.9	S 2	50.3	91 04.3	S14	36.8	239 53.9	N 2	34.5	35 47.9	N 6	31.6
	20	72 33.0	77 12.7	S 2	49.0	106 04.9	S14	36.1	254 56.5	N 2	34.6	50 50.2	N 6	31.7
	21	87 35.4	92 12.6	S 2	47.7	121 05.4	S14	35.4	269 59.2	N 2	34.7	65 52.5	N 6	31.8
	22	102 37.9	107 12.4	S 2	46.4	136 05.9	S14	34.8	285 01.8	N 2	34.7	80 54.8	N 6	31.8
	23	117 40.4	122 12.2	S 2	45.1	151 06.5	S14	34.1	300 04.4	N 2	34.8	95 57.1	N 6	31.9
			v -0.2	d	1.3	v 0.5	d	0.7	v 2.6	d	0.1	v 2.3	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
31	0	176 41.0	S17 34.3	133 29.1	16.8	N 3 08.3	13.3	54.3
	1	191 40.9	S17 33.6	148 04.9	16.8	N 3 21.6	13.2	54.3
	2	206 40.8	S17 32.9	162 40.7	16.8	N 3 34.8	13.2	54.3
	3	221 40.7	S17 32.2	177 16.4	16.7	N 3 48.0	13.2	54.3
	4	236 40.6	S17 31.5	191 52.1	16.7	N 4 01.2	13.2	54.3
M	5	251 40.5	S17 30.8	206 27.8	16.7	N 4 14.5	13.2	54.3
O								
N	6	266 40.4	S17 30.1	221 03.5	16.7	N 4 27.7	13.2	54.3
D	7	281 40.4	S17 29.4	235 39.1	16.6	N 4 40.8	13.2	54.3
A	8	296 40.3	S17 28.7	250 14.7	16.6	N 4 54.0	13.2	54.4
Y	9	311 40.2	S17 28.0	264 50.3	16.6	N 5 07.2	13.2	54.4
	10	326 40.1	S17 27.4	279 25.9	16.6	N 5 20.3	13.1	54.4
	11	341 40.0	S17 26.7	294 01.4	16.5	N 5 33.5	13.1	54.4
	12	356 39.9	S17 26.0	308 36.9	16.5	N 5 46.6	13.1	54.4
	13	11 39.8	S17 25.3	323 12.3	16.5	N 5 59.7	13.1	54.4
	14	26 39.7	S17 24.6	337 47.8	16.4	N 6 12.8	13.1	54.4
	15	41 39.6	S17 23.9	352 23.2	16.4	N 6 25.9	13.1	54.5
	16	56 39.5	S17 23.2	6 58.5	16.4	N 6 38.9	13.1	54.5
	17	71 39.4	S17 22.5	21 33.8	16.3	N 6 51.9	13.0	54.5
	18	86 39.3	S17 21.8	36 09.1	16.3	N 7 05.0	13.0	54.5
	19	101 39.2	S17 21.1	50 44.4	16.2	N 7 18.0	13.0	54.5
	20	116 39.1	S17 20.4	65 19.6	16.2	N 7 30.9	13.0	54.5
	21	131 39.0	S17 19.7	79 54.7	16.2	N 7 43.9	13.0	54.5
	22	146 38.9	S17 19.0	94 29.9	16.1	N 7 56.8	12.9	54.6
	23	161 38.8	S17 18.3	109 04.9	16.1	N 8 09.7	12.9	54.6
1	0	176 38.8	S17 17.6	123 40.0	16.0	N 8 22.6	12.9	54.6
	1	191 38.7	S17 16.9	138 15.0	16.0	N 8 35.5	12.9	54.6
	2	206 38.6	S17 16.2	152 49.9	15.9	N 8 48.3	12.8	54.6
	3	221 38.5	S17 15.5	167 24.8	15.9	N 9 01.1	12.8	54.7
	4	236 38.4	S17 14.8	181 59.6	15.8	N 9 13.9	12.8	54.7
T	5	251 38.3	S17 14.0	196 34.4	15.8	N 9 26.6	12.8	54.7
U								
E	6	266 38.2	S17 13.3	211 09.2	15.7	N 9 39.4	12.7	54.7
S	7	281 38.1	S17 12.6	225 43.9	15.7	N 9 52.1	12.7	54.7
D	8	296 38.0	S17 11.9	240 18.5	15.6	N10 04.7	12.7	54.7
A	9	311 38.0	S17 11.2	254 53.1	15.6	N10 17.4	12.6	54.8
Y	10	326 37.9	S17 10.5	269 27.7	15.5	N10 30.0	12.6	54.8
	11	341 37.8	S17 09.8	284 02.1	15.5	N10 42.5	12.6	54.8
	12	356 37.7	S17 09.1	298 36.6	15.4	N10 55.1	12.5	54.8
	13	11 37.6	S17 08.4	313 10.9	15.4	N11 07.6	12.5	54.8
	14	26 37.5	S17 07.7	327 45.2	15.3	N11 20.0	12.5	54.9
	15	41 37.4	S17 07.0	342 19.5	15.2	N11 32.5	12.4	54.9
	16	56 37.3	S17 06.3	356 53.7	15.2	N11 44.8	12.4	54.9
	17	71 37.3	S17 05.5	11 27.8	15.1	N11 57.2	12.4	54.9
	18	86 37.2	S17 04.8	26 01.8	15.1	N12 09.5	12.3	54.9
	19	101 37.1	S17 04.1	40 35.8	15.0	N12 21.8	12.3	55.0
	20	116 37.0	S17 03.4	55 09.8	14.9	N12 34.0	12.2	55.0
	21	131 36.9	S17 02.7	69 43.6	14.9	N12 46.2	12.2	55.0
	22	146 36.8	S17 02.0	84 17.4	14.8	N12 58.4	12.2	55.0
	23	161 36.8	S17 01.3	98 51.1	14.7	N13 10.5	12.1	55.1
2	0	176 36.7	S17 00.6	113 24.8	14.7	N13 22.5	12.1	55.1
	1	191 36.6	S16 59.8	127 58.4	14.6	N13 34.6	12.0	55.1
	2	206 36.5	S16 59.1	142 31.9	14.5	N13 46.5	12.0	55.1
	3	221 36.4	S16 58.4	157 05.3	14.4	N13 58.5	11.9	55.2
	4	236 36.4	S16 57.7	171 38.7	14.4	N14 10.3	11.9	55.2
W	5	251 36.3	S16 57.0	186 12.0	14.3	N14 22.2	11.8	55.2
E								
D	6	266 36.2	S16 56.3	200 45.2	14.2	N14 34.0	11.8	55.2
N	7	281 36.1	S16 55.5	215 18.3	14.1	N14 45.7	11.7	55.3
E	8	296 36.0	S16 54.8	229 51.4	14.1	N14 57.4	11.7	55.3
S	9	311 36.0	S16 54.1	244 24.4	14.0	N15 09.0	11.6	55.3
D	10	326 35.9	S16 53.4	258 57.3	13.9	N15 20.6	11.6	55.3
A	11	341 35.8	S16 52.7	273 30.1	13.8	N15 32.1	11.5	55.4
Y								
	12	356 35.7	S16 51.9	288 02.8	13.7	N15 43.5	11.5	55.4
	13	11 35.6	S16 51.2	302 35.5	13.7	N15 54.9	11.4	55.4
	14	26 35.6	S16 50.5	317 08.1	13.6	N16 06.3	11.3	55.4
	15	41 35.5	S16 49.8	331 40.6	13.5	N16 17.6	11.3	55.5
	16	56 35.4	S16 49.0	346 13.0	13.4	N16 28.8	11.2	55.5
	17	71 35.3	S16 48.3	0 45.3	13.3	N16 40.0	11.2	55.5
	18	86 35.3	S16 47.6	15 17.5	13.2	N16 51.1	11.1	55.5
	19	101 35.2	S16 46.9	29 49.7	13.1	N17 02.1	11.0	55.6
	20	116 35.1	S16 46.1	44 21.7	13.1	N17 13.1	11.0	55.6
	21	131 35.0	S16 45.4	58 53.7	13.0	N17 24.0	10.9	55.6
	22	146 35.0	S16 44.7	73 25.5	12.9	N17 34.8	10.8	55.7
	23	161 34.9	S16 44.0	87 57.3	12.8	N17 45.6	10.8	55.7
		S.D. 16.2	d 0.7	S.D. 14.8	14.9	15.1		

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.8	S40 11.7
Achernar	335 18.5	S57 05.9
Acrux	172 56.8	S63 15.1
Adhara	255 03.5	S29 00.8
Albireo	67 02.4	N28 01.0
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.5	N55 48.1
Alkaid	152 49.9	N49 10.0
Al Na-ir	27 30.2	S46 49.6
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.7	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.8	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 12.9	S26 29.6
Arcturus	145 45.6	N19 01.9
Atria	107 05.2	S69 04.5
Avior	234 13.0	S59 36.1
Bellatrix	278 19.9	N 6 22.4
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.8	S52 42.8
Capella	280 17.8	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.8
Denebola	182 22.1	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.4	N61 35.6
Elnath	277 58.4	N28 37.9
Eltanin	90 41.4	N51 28.8
Enif	33 36.6	N10 00.2
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.5	S57 16.1
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.3
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.5	S34 22.2
Kochab	137 20.2	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.4	N 4 12.0
Menkent	147 54.6	S36 30.5
Miaplacidus	221 36.6	S69 50.0
Mirfak	308 24.5	N49 57.9
Nunki	75 45.0	S26 15.7
Peacock	53 02.3	S56 38.6
Polaris	315 33.4	N89 22.7
Pollux	243 13.8	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.5	N12 32.3
Regulus	207 31.4	N11 49.6
Rigel	281 01.2	S 8 10.3
Rigil Kent	139 36.9	S60 56.9
Sabik	102 00.1	S15 45.6
Schedar	349 28.4	N56 41.7
Shaula	96 07.2	S37 07.4
Sirius	258 23.7	S16 45.4
Spica	158 19.5	S11 18.6
Suhail	222 44.0	S43 32.9
Vega	80 31.9	N38 48.4
Zuben-ubi	136 54.2	S16 09.6

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
3	0	132 42.8	137 12.0	S 2 43.8	166 07.0	S14 33.5	315 07.0	N 2 34.9	110 59.4	N 6 32.0
	1	147 45.3	152 11.8	S 2 42.5	181 07.6	S14 32.8	330 09.6	N 2 35.0	126 01.7	N 6 32.1
	2	162 47.8	167 11.6	S 2 41.2	196 08.1	S14 32.1	345 12.2	N 2 35.0	141 04.0	N 6 32.1
	3	177 50.2	182 11.4	S 2 39.9	211 08.6	S14 31.5	0 14.8	N 2 35.1	156 06.3	N 6 32.2
	4	192 52.7	197 11.2	S 2 38.6	226 09.2	S14 30.8	15 17.5	N 2 35.2	171 08.6	N 6 32.3
T	5	207 55.1	212 11.0	S 2 37.3	241 09.7	S14 30.1	30 20.1	N 2 35.3	186 10.9	N 6 32.4
H										
U	6	222 57.6	227 10.8	S 2 36.0	256 10.2	S14 29.5	45 22.7	N 2 35.3	201 13.2	N 6 32.4
R	7	238 00.1	242 10.6	S 2 34.7	271 10.8	S14 28.8	60 25.3	N 2 35.4	216 15.5	N 6 32.5
S	8	253 02.5	257 10.4	S 2 33.4	286 11.3	S14 28.1	75 27.9	N 2 35.5	231 17.8	N 6 32.6
D	9	268 05.0	272 10.2	S 2 32.1	301 11.9	S14 27.5	90 30.5	N 2 35.6	246 20.1	N 6 32.7
A	10	283 07.5	287 10.0	S 2 30.8	316 12.4	S14 26.8	105 33.2	N 2 35.7	261 22.4	N 6 32.7
Y	11	298 09.9	302 09.9	S 2 29.5	331 13.0	S14 26.1	120 35.8	N 2 35.7	276 24.7	N 6 32.8
	12	313 12.4	317 09.7	S 2 28.2	346 13.5	S14 25.5	135 38.4	N 2 35.8	291 27.0	N 6 32.9
	13	328 14.9	332 09.5	S 2 26.9	1 14.0	S14 24.8	150 41.0	N 2 35.9	306 29.3	N 6 33.0
	14	343 17.3	347 09.3	S 2 25.6	16 14.6	S14 24.1	165 43.6	N 2 36.0	321 31.6	N 6 33.0
	15	358 19.8	2 09.1	S 2 24.3	31 15.1	S14 23.5	180 46.3	N 2 36.0	336 33.9	N 6 33.1
	16	13 22.3	17 08.9	S 2 23.0	46 15.7	S14 22.8	195 48.9	N 2 36.1	351 36.2	N 6 33.2
	17	28 24.7	32 08.7	S 2 21.6	61 16.2	S14 22.1	210 51.5	N 2 36.2	6 38.5	N 6 33.3
	18	43 27.2	47 08.5	S 2 20.3	76 16.7	S14 21.5	225 54.1	N 2 36.3	21 40.8	N 6 33.3
	19	58 29.6	62 08.3	S 2 19.0	91 17.3	S14 20.8	240 56.7	N 2 36.4	36 43.1	N 6 33.4
	20	73 32.1	77 08.2	S 2 17.7	106 17.8	S14 20.1	255 59.3	N 2 36.4	51 45.4	N 6 33.5
	21	88 34.6	92 08.0	S 2 16.4	121 18.4	S14 19.5	271 02.0	N 2 36.5	66 47.7	N 6 33.6
	22	103 37.0	107 07.8	S 2 15.1	136 18.9	S14 18.8	286 04.6	N 2 36.6	81 50.0	N 6 33.6
	23	118 39.5	122 07.6	S 2 13.8	151 19.5	S14 18.1	301 07.2	N 2 36.7	96 52.3	N 6 33.7
4	0	133 42.0	137 07.4	S 2 12.5	166 20.0	S14 17.4	316 09.8	N 2 36.8	111 54.6	N 6 33.8
	1	148 44.4	152 07.2	S 2 11.2	181 20.5	S14 16.8	331 12.5	N 2 36.8	126 56.9	N 6 33.9
	2	163 46.9	167 07.0	S 2 09.9	196 21.1	S14 16.1	346 15.1	N 2 36.9	141 59.2	N 6 33.9
	3	178 49.4	182 06.8	S 2 08.6	211 21.6	S14 15.4	1 17.7	N 2 37.0	157 01.5	N 6 34.0
	4	193 51.8	197 06.7	S 2 07.3	226 22.2	S14 14.8	16 20.3	N 2 37.1	172 03.8	N 6 34.1
F	5	208 54.3	212 06.5	S 2 06.0	241 22.7	S14 14.1	31 22.9	N 2 37.2	187 06.1	N 6 34.2
R										
I	6	223 56.7	227 06.3	S 2 04.7	256 23.3	S14 13.4	46 25.6	N 2 37.2	202 08.4	N 6 34.3
D	7	238 59.2	242 06.1	S 2 03.4	271 23.8	S14 12.7	61 28.2	N 2 37.3	217 10.7	N 6 34.3
A	8	254 01.7	257 05.9	S 2 02.1	286 24.4	S14 12.1	76 30.8	N 2 37.4	232 13.0	N 6 34.4
Y	9	269 04.1	272 05.7	S 2 00.8	301 24.9	S14 11.4	91 33.4	N 2 37.5	247 15.3	N 6 34.5
	10	284 06.6	287 05.6	S 1 59.5	316 25.5	S14 10.7	106 36.1	N 2 37.6	262 17.6	N 6 34.6
	11	299 09.1	302 05.4	S 1 58.2	331 26.0	S14 10.1	121 38.7	N 2 37.6	277 19.9	N 6 34.6
	12	314 11.5	317 05.2	S 1 56.8	346 26.5	S14 09.4	136 41.3	N 2 37.7	292 22.2	N 6 34.7
	13	329 14.0	332 05.0	S 1 55.5	1 27.1	S14 08.7	151 43.9	N 2 37.8	307 24.5	N 6 34.8
	14	344 16.5	347 04.8	S 1 54.2	16 27.6	S14 08.0	166 46.6	N 2 37.9	322 26.8	N 6 34.9
	15	359 18.9	2 04.6	S 1 52.9	31 28.2	S14 07.4	181 49.2	N 2 38.0	337 29.1	N 6 34.9
	16	14 21.4	17 04.5	S 1 51.6	46 28.7	S14 06.7	196 51.8	N 2 38.0	352 31.4	N 6 35.0
	17	29 23.9	32 04.3	S 1 50.3	61 29.3	S14 06.0	211 54.4	N 2 38.1	7 33.7	N 6 35.1
	18	44 26.3	47 04.1	S 1 49.0	76 29.8	S14 05.3	226 57.1	N 2 38.2	22 36.0	N 6 35.2
	19	59 28.8	62 03.9	S 1 47.7	91 30.4	S14 04.7	241 59.7	N 2 38.3	37 38.3	N 6 35.2
	20	74 31.2	77 03.7	S 1 46.4	106 30.9	S14 04.0	257 02.3	N 2 38.4	52 40.6	N 6 35.3
	21	89 33.7	92 03.6	S 1 45.1	121 31.5	S14 03.3	272 04.9	N 2 38.4	67 42.9	N 6 35.4
	22	104 36.2	107 03.4	S 1 43.8	136 32.0	S14 02.6	287 07.6	N 2 38.5	82 45.2	N 6 35.5
	23	119 38.6	122 03.2	S 1 42.5	151 32.6	S14 02.0	302 10.2	N 2 38.6	97 47.5	N 6 35.6
5	0	134 41.1	137 03.0	S 1 41.2	166 33.1	S14 01.3	317 12.8	N 2 38.7	112 49.8	N 6 35.6
	1	149 43.6	152 02.8	S 1 39.9	181 33.7	S14 00.6	332 15.5	N 2 38.8	127 52.1	N 6 35.7
	2	164 46.0	167 02.7	S 1 38.6	196 34.2	S13 59.9	347 18.1	N 2 38.8	142 54.4	N 6 35.8
	3	179 48.5	182 02.5	S 1 37.2	211 34.8	S13 59.3	2 20.7	N 2 38.9	157 56.7	N 6 35.9
	4	194 51.0	197 02.3	S 1 35.9	226 35.3	S13 58.6	17 23.3	N 2 39.0	172 59.0	N 6 35.9
S	5	209 53.4	212 02.1	S 1 34.6	241 35.8	S13 57.9	32 26.0	N 2 39.1	188 01.3	N 6 36.0
A										
T	6	224 55.9	227 01.9	S 1 33.3	256 36.4	S13 57.2	47 28.6	N 2 39.2	203 03.6	N 6 36.1
U	7	239 58.4	242 01.8	S 1 32.0	271 36.9	S13 56.6	62 31.2	N 2 39.3	218 05.8	N 6 36.2
R	8	255 00.8	257 01.6	S 1 30.7	286 37.5	S13 55.9	77 33.9	N 2 39.3	233 08.1	N 6 36.2
D	9	270 03.3	272 01.4	S 1 29.4	301 38.0	S13 55.2	92 36.5	N 2 39.4	248 10.4	N 6 36.3
A	10	285 05.7	287 01.2	S 1 28.1	316 38.6	S13 54.5	107 39.1	N 2 39.5	263 12.7	N 6 36.4
Y	11	300 08.2	302 01.1	S 1 26.8	331 39.1	S13 53.8	122 41.7	N 2 39.6	278 15.0	N 6 36.5
	12	315 10.7	317 00.9	S 1 25.5	346 39.7	S13 53.2	137 44.4	N 2 39.7	293 17.3	N 6 36.6
	13	330 13.1	332 00.7	S 1 24.2	1 40.2	S13 52.5	152 47.0	N 2 39.8	308 19.6	N 6 36.6
	14	345 15.6	347 00.5	S 1 22.9	16 40.8	S13 51.8	167 49.6	N 2 39.8	323 21.9	N 6 36.7
	15	0 18.1	2 00.4	S 1 21.6	31 41.3	S13 51.1	182 52.3	N 2 39.9	338 24.2	N 6 36.8
	16	15 20.5	17 00.2	S 1 20.3	46 41.9	S13 50.4	197 54.9	N 2 40.0	353 26.5	N 6 36.9
	17	30 23.0	32 00.0	S 1 18.9	61 42.5	S13 49.8	212 57.5	N 2 40.1	8 28.8	N 6 36.9
	18	45 25.5	46 59.8	S 1 17.6	76 43.0	S13 49.1	228 00.2	N 2 40.2	23 31.1	N 6 37.0
	19	60 27.9	61 59.7	S 1 16.3	91 43.6	S13 48.4	243 02.8	N 2 40.3	38 33.4	N 6 37.1
	20	75 30.4	76 59.5	S 1 15.0	106 44.1	S13 47.7	258 05.4	N 2 40.3	53 35.7	N 6 37.2
	21	90 32.9	91 59.3	S 1 13.7	121 44.7	S13 47.0	273 08.1	N 2 40.4	68 38.0	N 6 37.3
	22	105 35.3	106 59.1	S 1 12.4	136 45.2	S13 46.4	288 10.7	N 2 40.5	83 40.3	N 6 37.3
	23	120 37.8	121 59.0	S 1 11.1	151 45.8	S13 45.7	303 13.3	N 2 40.6	98 42.6	N 6 37.4
			v -0.2	d 1.3	v 0.5	d 0.7	v 2.6	d 0.1	v 2.3	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
3 0	176 34.8	S16 43.2	102 29.0	12.7	N17 56.3	10.7	55.7	Acamar	315 09.8	S40 11.7
1	191 34.7	S16 42.5	117 00.6	12.6	N18 06.9	10.6	55.7	Achernar	335 18.5	S57 05.9
2	206 34.7	S16 41.8	131 32.1	12.5	N18 17.5	10.6	55.8	Acrux	172 56.8	S63 15.2
3	221 34.6	S16 41.1	146 03.5	12.4	N18 28.0	10.5	55.8	Adhara	255 03.5	S29 00.8
4	236 34.5	S16 40.3	160 34.8	12.3	N18 38.4	10.4	55.8	Albireo	67 02.4	N28 01.0
T 5	251 34.4	S16 39.6	175 06.0	12.2	N18 48.8	10.3	55.9			
H								Aldebaran	290 36.6	N16 34.0
U 6	266 34.4	S16 38.9	189 37.1	12.1	N18 59.0	10.3	55.9	Alioth	166 10.5	N55 48.1
R 7	281 34.3	S16 38.1	204 08.1	12.0	N19 09.2	10.2	55.9	Alkaid	152 49.9	N49 10.0
S 8	296 34.2	S16 37.4	218 39.1	11.9	N19 19.3	10.1	56.0	Al Na-ir	27 30.2	S46 49.5
D 9	311 34.2	S16 36.7	233 09.9	11.8	N19 29.4	10.0	56.0	Alnilam	275 34.9	S 1 11.1
A 10	326 34.1	S16 35.9	247 40.6	11.7	N19 39.3	10.0	56.0			
Y 11	341 34.0	S16 35.2	262 11.2	11.6	N19 49.2	9.9	56.1	Alphard	217 44.9	S 8 47.0
								Alphecca	126 01.7	N26 36.9
12	356 34.0	S16 34.5	276 41.7	11.5	N19 59.0	9.8	56.1	Alpheratz	357 32.4	N29 14.9
13	11 33.9	S16 33.7	291 12.1	11.4	N20 08.7	9.7	56.1	Altair	61 57.8	N 8 56.5
14	26 33.8	S16 33.0	305 42.4	11.3	N20 18.3	9.6	56.1	Ankaa	353 04.9	S42 09.4
15	41 33.7	S16 32.3	320 12.6	11.2	N20 27.8	9.5	56.2			
16	56 33.7	S16 31.5	334 42.7	11.1	N20 37.3	9.4	56.2	Antares	112 12.9	S26 29.6
17	71 33.6	S16 30.8	349 12.7	11.0	N20 46.6	9.4	56.2	Arcturus	145 45.6	N19 01.9
								Atria	107 05.2	S69 04.5
18	86 33.5	S16 30.1	3 42.6	10.9	N20 55.9	9.3	56.3	Avior	234 13.0	S59 36.1
19	101 33.5	S16 29.3	18 12.4	10.8	N21 05.1	9.2	56.3	Bellatrix	278 20.0	N 6 22.4
20	116 33.4	S16 28.6	32 42.1	10.7	N21 14.1	9.1	56.3			
21	131 33.3	S16 27.9	47 11.6	10.6	N21 23.1	9.0	56.4	Betelgeuse	270 49.1	N 7 24.7
22	146 33.3	S16 27.1	61 41.1	10.5	N21 32.0	8.9	56.4	Canopus	263 50.8	S52 42.9
23	161 33.2	S16 26.4	76 10.5	10.4	N21 40.8	8.8	56.5	Capella	280 17.9	N46 01.7
								Castor	245 53.5	N31 49.5
4 0	176 33.2	S16 25.6	90 39.7	10.2	N21 49.5	8.7	56.5	Deneb	49 24.5	N45 22.8
1	191 33.1	S16 24.9	105 08.8	10.1	N21 58.0	8.6	56.5			
2	206 33.0	S16 24.2	119 37.9	10.0	N22 06.5	8.5	56.6	Denebola	182 22.1	N14 24.6
3	221 33.0	S16 23.4	134 06.8	9.9	N22 14.9	8.4	56.6	Diphda	348 45.0	S17 50.0
4	236 32.9	S16 22.7	148 35.6	9.8	N22 23.2	8.3	56.6	Dubhe	193 37.4	N61 35.6
F 5	251 32.8	S16 21.9	163 04.3	9.7	N22 31.4	8.2	56.7	Elnath	277 58.5	N28 37.9
R								Eltanin	90 41.4	N51 28.8
I 6	266 32.8	S16 21.2	177 32.9	9.6	N22 39.4	8.1	56.7			
D 7	281 32.7	S16 20.4	192 01.4	9.5	N22 47.4	8.0	56.7	Enif	33 36.6	N10 00.2
A 8	296 32.6	S16 19.7	206 29.8	9.4	N22 55.2	7.8	56.8	Fomalhaut	15 12.0	S29 28.5
Y 9	311 32.6	S16 19.0	220 58.0	9.3	N23 03.0	7.7	56.8	Gacrux	171 48.4	S57 16.2
10	326 32.5	S16 18.2	235 26.2	9.2	N23 10.6	7.6	56.8	Gienah	175 40.8	S17 42.0
11	341 32.5	S16 17.5	249 54.2	9.0	N23 18.1	7.5	56.9	Hadar	148 32.3	S60 30.3
12	356 32.4	S16 16.7	264 22.2	8.9	N23 25.5	7.4	56.9	Hamal	327 48.4	N23 35.9
13	11 32.3	S16 16.0	278 50.0	8.8	N23 32.7	7.3	57.0	Kaus Austr.	83 29.5	S34 22.2
14	26 32.3	S16 15.2	293 17.7	8.7	N23 39.9	7.2	57.0	Kochab	137 20.2	N74 02.0
15	41 32.2	S16 14.5	307 45.3	8.6	N23 46.9	7.0	57.0	Markab	13 27.6	N15 21.4
16	56 32.2	S16 13.7	322 12.8	8.5	N23 53.8	6.9	57.1	Menkar	314 03.5	N 4 12.0
17	71 32.1	S16 13.0	336 40.2	8.4	N24 00.6	6.8	57.1			
								Menkent	147 54.5	S36 30.5
18	86 32.0	S16 12.2	351 07.5	8.3	N24 07.3	6.7	57.1	Miaplacidus	221 36.6	S69 50.0
19	101 32.0	S16 11.5	5 34.6	8.2	N24 13.8	6.5	57.2	Mirfak	308 24.6	N49 57.9
20	116 31.9	S16 10.7	20 01.7	8.1	N24 20.3	6.4	57.2	Nunki	75 44.9	S26 15.6
21	131 31.9	S16 10.0	34 28.7	8.0	N24 26.5	6.3	57.3	Peacock	53 02.3	S56 38.6
22	146 31.8	S16 09.2	48 55.5	7.8	N24 32.7	6.2	57.3			
23	161 31.8	S16 08.5	63 22.2	7.7	N24 38.7	6.0	57.3	Polaris	315 34.4	N89 22.7
								Pollux	243 13.8	N27 57.4
5 0	176 31.7	S16 07.7	77 48.9	7.6	N24 44.6	5.9	57.4	Procyon	244 47.9	N 5 09.0
1	191 31.6	S16 07.0	92 15.4	7.5	N24 50.4	5.8	57.4	Rasalhague	95 56.4	N12 32.3
2	206 31.6	S16 06.2	106 41.8	7.4	N24 56.0	5.6	57.5	Regulus	207 31.4	N11 49.6
3	221 31.5	S16 05.5	121 08.1	7.3	N25 01.5	5.5	57.5			
4	236 31.5	S16 04.7	135 34.4	7.2	N25 06.8	5.3	57.5	Rigel	281 01.2	S 8 10.3
S 5	251 31.4	S16 04.0	150 00.5	7.1	N25 12.0	5.2	57.6	Rigil Kent	139 36.9	S60 56.9
A								Sabik	102 00.1	S15 45.6
T 6	266 31.4	S16 03.2	164 26.5	7.0	N25 17.1	5.1	57.6	Schedar	349 28.4	N56 41.7
U 7	281 31.3	S16 02.5	178 52.4	6.9	N25 22.0	4.9	57.6	Shaula	96 07.2	S37 07.4
R 8	296 31.3	S16 01.7	193 18.2	6.8	N25 26.8	4.8	57.7			
D 9	311 31.2	S16 01.0	207 43.9	6.7	N25 31.4	4.6	57.7	Sirius	258 23.7	S16 45.4
A 10	326 31.2	S16 00.2	222 09.5	6.6	N25 35.9	4.5	57.8	Spica	158 19.5	S11 18.6
Y 11	341 31.1	S15 59.5	236 35.0	6.5	N25 40.2	4.3	57.8	Suhail	222 44.0	S43 32.9
								Vega	80 31.8	N38 48.4
12	356 31.0	S15 58.7	251 00.4	6.4	N25 44.4	4.2	57.8	Zuben-ubi	136 54.1	S16 09.6
13	11 31.0	S15 57.9	265 25.7	6.3	N25 48.5	4.0	57.9			
14	26 30.9	S15 57.2	279 50.9	6.2	N25 52.4	3.9	57.9			
15	41 30.9	S15 56.4	294 16.0	6.1	N25 56.1	3.7	58.0			
16	56 30.8	S15 55.7	308 41.0	6.0	N25 59.7	3.6	58.0			
17	71 30.8	S15 54.9	323 06.0	5.9	N26 03.1	3.4	58.1			
18	86 30.7	S15 54.2	337 30.8	5.8	N26 06.4	3.3	58.1			
19	101 30.7	S15 53.4	351 55.6	5.8	N26 09.5	3.1	58.1			
20	116 30.6	S15 52.6	6 20.2	5.7	N26 12.4	2.9	58.2			
21	131 30.6	S15 51.9	20 44.8	5.6	N26 15.2	2.8	58.2			
22	146 30.5	S15 51.1	35 09.3	5.5	N26 17.8	2.6	58.3			
23	161 30.5	S15 50.3	49 33.7	5.4	N26 20.3	2.5	58.3			
	S.D. 16.2	d 0.7	S.D.	15.3	15.5		15.8			

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA		Dec	GHA		Dec	GHA		Dec	GHA		Dec
		° '	° '		° '	° '		° '	° '		° '	° '		° '
6	0	135 40.2	136 58.8	S	1 09.8	166 46.3	S	13 45.0	318 16.0	N	2 40.7	113 44.8	N	6 37.5
	1	150 42.7	151 58.6	S	1 08.5	181 46.9	S	13 44.3	333 18.6	N	2 40.8	128 47.1	N	6 37.6
	2	165 45.2	166 58.5	S	1 07.2	196 47.4	S	13 43.6	348 21.2	N	2 40.8	143 49.4	N	6 37.7
	3	180 47.6	181 58.3	S	1 05.9	211 48.0	S	13 43.0	3 23.9	N	2 40.9	158 51.7	N	6 37.7
	4	195 50.1	196 58.1	S	1 04.6	226 48.5	S	13 42.3	18 26.5	N	2 41.0	173 54.0	N	6 37.8
S	5	210 52.6	211 57.9	S	1 03.2	241 49.1	S	13 41.6	33 29.1	N	2 41.1	188 56.3	N	6 37.9
U														
N	6	225 55.0	226 57.8	S	1 01.9	256 49.6	S	13 40.9	48 31.8	N	2 41.2	203 58.6	N	6 38.0
D	7	240 57.5	241 57.6	S	1 00.6	271 50.2	S	13 40.2	63 34.4	N	2 41.3	219 00.9	N	6 38.0
A	8	255 60.0	256 57.4	S	0 59.3	286 50.7	S	13 39.5	78 37.1	N	2 41.4	234 03.2	N	6 38.1
Y	9	271 02.4	271 57.3	S	0 58.0	301 51.3	S	13 38.9	93 39.7	N	2 41.4	249 05.5	N	6 38.2
	10	286 04.9	286 57.1	S	0 56.7	316 51.9	S	13 38.2	108 42.3	N	2 41.5	264 07.8	N	6 38.3
	11	301 07.4	301 56.9	S	0 55.4	331 52.4	S	13 37.5	123 45.0	N	2 41.6	279 10.1	N	6 38.4
	12	316 09.8	316 56.8	S	0 54.1	346 53.0	S	13 36.8	138 47.6	N	2 41.7	294 12.4	N	6 38.4
	13	331 12.3	331 56.6	S	0 52.8	1 53.5	S	13 36.1	153 50.2	N	2 41.8	309 14.6	N	6 38.5
	14	346 14.7	346 56.4	S	0 51.5	16 54.1	S	13 35.4	168 52.9	N	2 41.9	324 16.9	N	6 38.6
	15	1 17.2	1 56.3	S	0 50.2	31 54.6	S	13 34.7	183 55.5	N	2 42.0	339 19.2	N	6 38.7
	16	16 19.7	16 56.1	S	0 48.8	46 55.2	S	13 34.1	198 58.2	N	2 42.0	354 21.5	N	6 38.8
	17	31 22.1	31 55.9	S	0 47.5	61 55.7	S	13 33.4	214 00.8	N	2 42.1	9 23.8	N	6 38.8
	18	46 24.6	46 55.8	S	0 46.2	76 56.3	S	13 32.7	229 03.4	N	2 42.2	24 26.1	N	6 38.9
	19	61 27.1	61 55.6	S	0 44.9	91 56.8	S	13 32.0	244 06.1	N	2 42.3	39 28.4	N	6 39.0
	20	76 29.5	76 55.4	S	0 43.6	106 57.4	S	13 31.3	259 08.7	N	2 42.4	54 30.7	N	6 39.1
	21	91 32.0	91 55.3	S	0 42.3	121 58.0	S	13 30.6	274 11.3	N	2 42.5	69 33.0	N	6 39.1
	22	106 34.5	106 55.1	S	0 41.0	136 58.5	S	13 29.9	289 14.0	N	2 42.6	84 35.3	N	6 39.2
	23	121 36.9	121 54.9	S	0 39.7	151 59.1	S	13 29.3	304 16.6	N	2 42.6	99 37.5	N	6 39.3
7	0	136 39.4	136 54.8	S	0 38.4	166 59.6	S	13 28.6	319 19.3	N	2 42.7	114 39.8	N	6 39.4
	1	151 41.8	151 54.6	S	0 37.1	182 00.2	S	13 27.9	334 21.9	N	2 42.8	129 42.1	N	6 39.5
	2	166 44.3	166 54.4	S	0 35.8	197 00.7	S	13 27.2	349 24.6	N	2 42.9	144 44.4	N	6 39.5
	3	181 46.8	181 54.3	S	0 34.5	212 01.3	S	13 26.5	4 27.2	N	2 43.0	159 46.7	N	6 39.6
	4	196 49.2	196 54.1	S	0 33.1	227 01.9	S	13 25.8	19 29.8	N	2 43.1	174 49.0	N	6 39.7
M	5	211 51.7	211 53.9	S	0 31.8	242 02.4	S	13 25.1	34 32.5	N	2 43.2	189 51.3	N	6 39.8
O														
N	6	226 54.2	226 53.8	S	0 30.5	257 03.0	S	13 24.4	49 35.1	N	2 43.3	204 53.6	N	6 39.9
D	7	241 56.6	241 53.6	S	0 29.2	272 03.5	S	13 23.8	64 37.8	N	2 43.3	219 55.9	N	6 39.9
A	8	256 59.1	256 53.4	S	0 27.9	287 04.1	S	13 23.1	79 40.4	N	2 43.4	234 58.1	N	6 40.0
Y	9	272 01.6	271 53.3	S	0 26.6	302 04.7	S	13 22.4	94 43.0	N	2 43.5	250 00.4	N	6 40.1
	10	287 04.0	286 53.1	S	0 25.3	317 05.2	S	13 21.7	109 45.7	N	2 43.6	265 02.7	N	6 40.2
	11	302 06.5	301 53.0	S	0 24.0	332 05.8	S	13 21.0	124 48.3	N	2 43.7	280 05.0	N	6 40.3
	12	317 09.0	316 52.8	S	0 22.7	347 06.3	S	13 20.3	139 51.0	N	2 43.8	295 07.3	N	6 40.3
	13	332 11.4	331 52.6	S	0 21.4	2 06.9	S	13 19.6	154 53.6	N	2 43.9	310 09.6	N	6 40.4
	14	347 13.9	346 52.5	S	0 20.0	17 07.4	S	13 18.9	169 56.3	N	2 44.0	325 11.9	N	6 40.5
	15	2 16.3	1 52.3	S	0 18.7	32 08.0	S	13 18.2	184 58.9	N	2 44.0	340 14.2	N	6 40.6
	16	17 18.8	16 52.1	S	0 17.4	47 08.6	S	13 17.5	200 01.5	N	2 44.1	355 16.4	N	6 40.7
	17	32 21.3	31 52.0	S	0 16.1	62 09.1	S	13 16.9	215 04.2	N	2 44.2	10 18.7	N	6 40.7
	18	47 23.7	46 51.8	S	0 14.8	77 09.7	S	13 16.2	230 06.8	N	2 44.3	25 21.0	N	6 40.8
	19	62 26.2	61 51.7	S	0 13.5	92 10.2	S	13 15.5	245 09.5	N	2 44.4	40 23.3	N	6 40.9
	20	77 28.7	76 51.5	S	0 12.2	107 10.8	S	13 14.8	260 12.1	N	2 44.5	55 25.6	N	6 41.0
	21	92 31.1	91 51.3	S	0 10.9	122 11.4	S	13 14.1	275 14.8	N	2 44.6	70 27.9	N	6 41.1
	22	107 33.6	106 51.2	S	0 09.6	137 11.9	S	13 13.4	290 17.4	N	2 44.7	85 30.2	N	6 41.1
	23	122 36.1	121 51.0	S	0 08.3	152 12.5	S	13 12.7	305 20.1	N	2 44.8	100 32.5	N	6 41.2
8	0	137 38.5	136 50.9	S	0 07.0	167 13.1	S	13 12.0	320 22.7	N	2 44.8	115 34.7	N	6 41.3
	1	152 41.0	151 50.7	S	0 05.6	182 13.6	S	13 11.3	335 25.4	N	2 44.9	130 37.0	N	6 41.4
	2	167 43.5	166 50.6	S	0 04.3	197 14.2	S	13 10.6	350 28.0	N	2 45.0	145 39.3	N	6 41.5
	3	182 45.9	181 50.4	S	0 03.0	212 14.7	S	13 09.9	5 30.7	N	2 45.1	160 41.6	N	6 41.5
	4	197 48.4	196 50.2	S	0 01.7	227 15.3	S	13 09.2	20 33.3	N	2 45.2	175 43.9	N	6 41.6
T	5	212 50.8	211 50.1	S	0 00.4	242 15.9	S	13 08.5	35 36.0	N	2 45.3	190 46.2	N	6 41.7
U														
E	6	227 53.3	226 49.9	N	0 00.9	257 16.4	S	13 07.9	50 38.6	N	2 45.4	205 48.5	N	6 41.8
S	7	242 55.8	241 49.8	N	0 02.2	272 17.0	S	13 07.2	65 41.2	N	2 45.5	220 50.7	N	6 41.9
D	8	257 58.2	256 49.6	N	0 03.5	287 17.5	S	13 06.5	80 43.9	N	2 45.6	235 53.0	N	6 42.0
A	9	273 00.7	271 49.4	N	0 04.8	302 18.1	S	13 05.8	95 46.5	N	2 45.6	250 55.3	N	6 42.0
Y	10	288 03.2	286 49.3	N	0 06.1	317 18.7	S	13 05.1	110 49.2	N	2 45.7	265 57.6	N	6 42.1
	11	303 05.6	301 49.1	N	0 07.4	332 19.2	S	13 04.4	125 51.8	N	2 45.8	280 59.9	N	6 42.2
	12	318 08.1	316 49.0	N	0 08.8	347 19.8	S	13 03.7	140 54.5	N	2 45.9	296 02.2	N	6 42.3
	13	333 10.6	331 48.8	N	0 10.1	2 20.4	S	13 03.0	155 57.1	N	2 46.0	311 04.5	N	6 42.4
	14	348 13.0	346 48.7	N	0 11.4	17 20.9	S	13 02.3	170 59.8	N	2 46.1	326 06.7	N	6 42.4
	15	3 15.5	1 48.5	N	0 12.7	32 21.5	S	13 01.6	186 02.4	N	2 46.2	341 09.0	N	6 42.5
	16	18 18.0	16 48.4	N	0 14.0	47 22.1	S	13 00.9	201 05.1	N	2 46.3	356 11.3	N	6 42.6
	17	33 20.4	31 48.2	N	0 15.3	62 22.6	S	13 00.2	216 07.7	N	2 46.4	11 13.6	N	6 42.7
	18	48 22.9	46 48.0	N	0 16.6	77 23.2	S	12 59.5	231 10.4	N	2 46.5	26 15.9	N	6 42.8
	19	63 25.3	61 47.9	N	0 17.9	92 23.8	S	12 58.8	246 13.0	N	2 46.6	41 18.2	N	6 42.8
	20	78 27.8	76 47.7	N	0 19.2	107 24.3	S	12 58.1	261 15.7	N	2 46.6	56 20.4	N	6 42.9
	21	93 30.3	91 47.6	N	0 20.5	122 24.9	S	12 57.4	276 18.3	N	2 46.7	71 22.7	N	6 43.0
	22	108 32.7	106 47.4	N	0 21.8	137 25.4	S	12 56.7	291 21.0	N	2 46.8	86 25.0	N	6 43.1
	23	123 35.2	121 47.3	N	0 23.2	152 26.0	S	12 56.0	306 23.7	N	2 46.9	101 27.3	N	6 43.2
			v -0.2		d 1.3	v 0.6		d 0.7	v 2.6		d 0.1	v 2.3		d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	v '	MOON Dec ° '	d '	HP '
6	0	176 30.5	S15 49.6	63 58.1	5.3	N26 22.6	2.3	58.3
	1	191 30.4	S15 48.8	78 22.3	5.3	N26 24.7	2.1	58.4
	2	206 30.4	S15 48.1	92 46.5	5.2	N26 26.7	2.0	58.4
	3	221 30.3	S15 47.3	107 10.6	5.1	N26 28.5	1.8	58.5
	4	236 30.3	S15 46.5	121 34.6	5.0	N26 30.1	1.6	58.5
S	5	251 30.2	S15 45.8	135 58.6	4.9	N26 31.6	1.5	58.5
U								
N	6	266 30.2	S15 45.0	150 22.4	4.9	N26 32.8	1.3	58.6
D	7	281 30.1	S15 44.2	164 46.2	4.8	N26 34.0	1.1	58.6
A	8	296 30.1	S15 43.5	179 10.0	4.7	N26 34.9	0.9	58.7
Y	9	311 30.0	S15 42.7	193 33.6	4.7	N26 35.7	0.8	58.7
	10	326 30.0	S15 41.9	207 57.3	4.6	N26 36.3	0.6	58.7
	11	341 29.9	S15 41.2	222 20.8	4.5	N26 36.7	0.4	58.8
	12	356 29.9	S15 40.4	236 44.3	4.5	N26 36.9	0.2	58.8
	13	11 29.9	S15 39.6	251 07.7	4.4	N26 37.0	0.1	58.9
	14	26 29.8	S15 38.9	265 31.1	4.4	N26 36.9	0.1	58.9
	15	41 29.8	S15 38.1	279 54.4	4.3	N26 36.6	0.3	58.9
	16	56 29.7	S15 37.3	294 17.6	4.3	N26 36.1	0.5	59.0
	17	71 29.7	S15 36.6	308 40.9	4.2	N26 35.5	0.6	59.0
	18	86 29.7	S15 35.8	323 04.0	4.2	N26 34.6	0.8	59.1
	19	101 29.6	S15 35.0	337 27.1	4.1	N26 33.6	1.0	59.1
	20	116 29.6	S15 34.2	351 50.2	4.1	N26 32.4	1.2	59.1
	21	131 29.5	S15 33.5	6 13.2	4.0	N26 31.1	1.4	59.2
	22	146 29.5	S15 32.7	20 36.2	4.0	N26 29.5	1.6	59.2
	23	161 29.5	S15 31.9	34 59.2	4.0	N26 27.8	1.7	59.3
7	0	176 29.4	S15 31.2	49 22.1	3.9	N26 25.8	1.9	59.3
	1	191 29.4	S15 30.4	63 45.0	3.9	N26 23.7	2.1	59.3
	2	206 29.3	S15 29.6	78 07.9	3.9	N26 21.4	2.3	59.4
	3	221 29.3	S15 28.8	92 30.7	3.8	N26 19.0	2.5	59.4
	4	236 29.3	S15 28.1	106 53.5	3.8	N26 16.3	2.7	59.5
M	5	251 29.2	S15 27.3	121 16.3	3.8	N26 13.4	2.9	59.5
O								
N	6	266 29.2	S15 26.5	135 39.0	3.8	N26 10.4	3.0	59.5
D	7	281 29.1	S15 25.7	150 01.8	3.7	N26 07.2	3.2	59.6
A	8	296 29.1	S15 24.9	164 24.5	3.7	N26 03.8	3.4	59.6
Y	9	311 29.1	S15 24.2	178 47.2	3.7	N26 00.2	3.6	59.7
	10	326 29.0	S15 23.4	193 09.9	3.7	N25 56.4	3.8	59.7
	11	341 29.0	S15 22.6	207 32.6	3.7	N25 52.4	4.0	59.7
	12	356 29.0	S15 21.8	221 55.3	3.7	N25 48.3	4.2	59.8
	13	11 28.9	S15 21.1	236 18.0	3.7	N25 43.9	4.3	59.8
	14	26 28.9	S15 20.3	250 40.6	3.7	N25 39.4	4.5	59.8
	15	41 28.9	S15 19.5	265 03.3	3.7	N25 34.7	4.7	59.9
	16	56 28.8	S15 18.7	279 26.0	3.7	N25 29.8	4.9	59.9
	17	71 28.8	S15 17.9	293 48.7	3.7	N25 24.7	5.1	60.0
	18	86 28.8	S15 17.2	308 11.3	3.7	N25 19.5	5.3	60.0
	19	101 28.7	S15 16.4	322 34.0	3.7	N25 14.0	5.5	60.0
	20	116 28.7	S15 15.6	336 56.7	3.7	N25 08.4	5.6	60.1
	21	131 28.7	S15 14.8	351 19.4	3.7	N25 02.6	5.8	60.1
	22	146 28.6	S15 14.0	5 42.2	3.7	N24 56.6	6.0	60.1
	23	161 28.6	S15 13.2	20 04.9	3.7	N24 50.4	6.2	60.2
8	0	176 28.6	S15 12.5	34 27.7	3.8	N24 44.0	6.4	60.2
	1	191 28.5	S15 11.7	48 50.5	3.8	N24 37.5	6.5	60.2
	2	206 28.5	S15 10.9	63 13.3	3.8	N24 30.7	6.7	60.3
	3	221 28.5	S15 10.1	77 36.1	3.8	N24 23.8	6.9	60.3
	4	236 28.5	S15 09.3	91 59.0	3.9	N24 16.7	7.1	60.3
T	5	251 28.4	S15 08.5	106 21.8	3.9	N24 09.5	7.3	60.4
U								
E	6	266 28.4	S15 07.7	120 44.8	3.9	N24 02.0	7.4	60.4
S	7	281 28.4	S15 07.0	135 07.7	3.9	N23 54.4	7.6	60.4
D	8	296 28.3	S15 06.2	149 30.7	4.0	N23 46.6	7.8	60.5
A	9	311 28.3	S15 05.4	163 53.7	4.0	N23 38.6	8.0	60.5
Y	10	326 28.3	S15 04.6	178 16.8	4.1	N23 30.4	8.2	60.5
	11	341 28.3	S15 03.8	192 39.9	4.1	N23 22.1	8.3	60.6
	12	356 28.2	S15 03.0	207 03.0	4.1	N23 13.6	8.5	60.6
	13	11 28.2	S15 02.2	221 26.2	4.2	N23 04.9	8.7	60.6
	14	26 28.2	S15 01.4	235 49.4	4.2	N22 56.1	8.8	60.6
	15	41 28.2	S15 00.6	250 12.7	4.3	N22 47.1	9.0	60.7
	16	56 28.1	S14 59.9	264 36.0	4.3	N22 37.9	9.2	60.7
	17	71 28.1	S14 59.1	278 59.4	4.4	N22 28.6	9.3	60.7
	18	86 28.1	S14 58.3	293 22.8	4.4	N22 19.1	9.5	60.8
	19	101 28.1	S14 57.5	307 46.3	4.5	N22 09.4	9.7	60.8
	20	116 28.0	S14 56.7	322 09.8	4.5	N21 59.5	9.8	60.8
	21	131 28.0	S14 55.9	336 33.4	4.6	N21 49.5	10.0	60.8
	22	146 28.0	S14 55.1	350 57.0	4.6	N21 39.4	10.2	60.9
	23	161 28.0	S14 54.3	5 20.7	4.7	N21 29.0	10.3	60.9
		S.D. 16.2	d 0.8	S.D. 16.0		16.3		16.5

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.8	S40 11.7
Achernar	335 18.5	S57 05.9
Acrux	172 56.7	S63 15.2
Adhara	255 03.5	S29 00.8
Albireo	67 02.3	N28 01.0
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.4	N55 48.1
Alkaid	152 49.9	N49 10.0
Al Na-ir	27 30.2	S46 49.5
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.6	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.8	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 12.9	S26 29.6
Arcturus	145 45.5	N19 01.9
Atria	107 05.1	S69 04.5
Avior	234 13.0	S59 36.1
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.8	S52 42.9
Capella	280 17.9	N46 01.7
Castor	245 53.4	N31 49.5
Deneb	49 24.5	N45 22.8
Denebola	182 22.1	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.3	N61 35.6
Elnath	277 58.5	N28 37.9
Eltanin	90 41.4	N51 28.8
Enif	33 36.6	N10 00.2
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.4	S57 16.2
Gienah	175 40.7	S17 42.0
Hadar	148 32.2	S60 30.4
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.5	S34 22.2
Kochab	137 20.1	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.5	S36 30.5
Miaplacidus	221 36.6	S69 50.0
Mirfak	308 24.6	N49 57.9
Nunki	75 44.9	S26 15.6
Peacock	53 02.3	S56 38.6
Polaris	315 35.5	N89 22.7
Pollux	243 13.8	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.4	N12 32.3
Regulus	207 31.4	N11 49.6
Rigel	281 01.2	S 8 10.3
Rigil Kent	139 36.8	S60 56.9
Sabik	102 00.1	S15 45.6
Schedar	349 28.4	N56 41.7
Shaula	96 07.2	S37 07.4
Sirius	258 23.7	S16 45.5
Spica	158 19.5	S11 18.6
Suhail	222 43.9	S43 32.9
Vega	80 31.8	N38 48.4
Zuben-ubi	136 54.1	S16 09.6

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
9	0	138 37.7	136 47.1	N 0 24.5	167 26.6	S12 55.3	321 26.3	N 2 47.0	116 29.6	N 6 43.3
	1	153 40.1	151 47.0	N 0 25.8	182 27.1	S12 54.6	336 29.0	N 2 47.1	131 31.9	N 6 43.3
	2	168 42.6	166 46.8	N 0 27.1	197 27.7	S12 53.9	351 31.6	N 2 47.2	146 34.1	N 6 43.4
	3	183 45.1	181 46.7	N 0 28.4	212 28.3	S12 53.2	6 34.3	N 2 47.3	161 36.4	N 6 43.5
	4	198 47.5	196 46.5	N 0 29.7	227 28.8	S12 52.5	21 36.9	N 2 47.4	176 38.7	N 6 43.6
W	5	213 50.0	211 46.4	N 0 31.0	242 29.4	S12 51.8	36 39.6	N 2 47.5	191 41.0	N 6 43.7
E										
D	6	228 52.5	226 46.2	N 0 32.3	257 30.0	S12 51.1	51 42.2	N 2 47.6	206 43.3	N 6 43.7
N	7	243 54.9	241 46.1	N 0 33.6	272 30.5	S12 50.4	66 44.9	N 2 47.7	221 45.6	N 6 43.8
E	8	258 57.4	256 45.9	N 0 34.9	287 31.1	S12 49.7	81 47.5	N 2 47.8	236 47.8	N 6 43.9
S	9	273 59.8	271 45.8	N 0 36.3	302 31.7	S12 49.0	96 50.2	N 2 47.8	251 50.1	N 6 44.0
D	10	289 02.3	286 45.6	N 0 37.6	317 32.2	S12 48.3	111 52.8	N 2 47.9	266 52.4	N 6 44.1
A	11	304 04.8	301 45.5	N 0 38.9	332 32.8	S12 47.6	126 55.5	N 2 48.0	281 54.7	N 6 44.2
Y										
	12	319 07.2	316 45.3	N 0 40.2	347 33.4	S12 46.9	141 58.2	N 2 48.1	296 57.0	N 6 44.2
	13	334 09.7	331 45.2	N 0 41.5	2 33.9	S12 46.2	157 00.8	N 2 48.2	311 59.2	N 6 44.3
	14	349 12.2	346 45.0	N 0 42.8	17 34.5	S12 45.5	172 03.5	N 2 48.3	327 01.5	N 6 44.4
	15	4 14.6	1 44.9	N 0 44.1	32 35.1	S12 44.8	187 06.1	N 2 48.4	342 03.8	N 6 44.5
	16	19 17.1	16 44.7	N 0 45.4	47 35.7	S12 44.1	202 08.8	N 2 48.5	357 06.1	N 6 44.6
	17	34 19.6	31 44.6	N 0 46.7	62 36.2	S12 43.4	217 11.4	N 2 48.6	12 08.4	N 6 44.6
	18	49 22.0	46 44.4	N 0 48.0	77 36.8	S12 42.7	232 14.1	N 2 48.7	27 10.6	N 6 44.7
	19	64 24.5	61 44.3	N 0 49.3	92 37.4	S12 42.0	247 16.8	N 2 48.8	42 12.9	N 6 44.8
	20	79 26.9	76 44.1	N 0 50.6	107 37.9	S12 41.3	262 19.4	N 2 48.9	57 15.2	N 6 44.9
	21	94 29.4	91 44.0	N 0 52.0	122 38.5	S12 40.6	277 22.1	N 2 49.0	72 17.5	N 6 45.0
	22	109 31.9	106 43.8	N 0 53.3	137 39.1	S12 39.9	292 24.7	N 2 49.1	87 19.8	N 6 45.1
	23	124 34.3	121 43.7	N 0 54.6	152 39.6	S12 39.2	307 27.4	N 2 49.2	102 22.0	N 6 45.1
10	0	139 36.8	136 43.5	N 0 55.9	167 40.2	S12 38.5	322 30.0	N 2 49.2	117 24.3	N 6 45.2
	1	154 39.3	151 43.4	N 0 57.2	182 40.8	S12 37.8	337 32.7	N 2 49.3	132 26.6	N 6 45.3
	2	169 41.7	166 43.2	N 0 58.5	197 41.3	S12 37.1	352 35.4	N 2 49.4	147 28.9	N 6 45.4
	3	184 44.2	181 43.1	N 0 59.8	212 41.9	S12 36.4	7 38.0	N 2 49.5	162 31.2	N 6 45.5
	4	199 46.7	196 42.9	N 1 01.1	227 42.5	S12 35.7	22 40.7	N 2 49.6	177 33.4	N 6 45.6
T	5	214 49.1	211 42.8	N 1 02.4	242 43.1	S12 35.0	37 43.3	N 2 49.7	192 35.7	N 6 45.6
H										
U	6	229 51.6	226 42.7	N 1 03.7	257 43.6	S12 34.3	52 46.0	N 2 49.8	207 38.0	N 6 45.7
R	7	244 54.1	241 42.5	N 1 05.0	272 44.2	S12 33.6	67 48.7	N 2 49.9	222 40.3	N 6 45.8
S	8	259 56.5	256 42.4	N 1 06.3	287 44.8	S12 32.9	82 51.3	N 2 50.0	237 42.6	N 6 45.9
D	9	274 59.0	271 42.2	N 1 07.7	302 45.3	S12 32.2	97 54.0	N 2 50.1	252 44.8	N 6 46.0
A	10	290 01.4	286 42.1	N 1 09.0	317 45.9	S12 31.5	112 56.6	N 2 50.2	267 47.1	N 6 46.1
Y	11	305 03.9	301 41.9	N 1 10.3	332 46.5	S12 30.8	127 59.3	N 2 50.3	282 49.4	N 6 46.1
	12	320 06.4	316 41.8	N 1 11.6	347 47.1	S12 30.1	143 02.0	N 2 50.4	297 51.7	N 6 46.2
	13	335 08.8	331 41.6	N 1 12.9	2 47.6	S12 29.4	158 04.6	N 2 50.5	312 54.0	N 6 46.3
	14	350 11.3	346 41.5	N 1 14.2	17 48.2	S12 28.7	173 07.3	N 2 50.6	327 56.2	N 6 46.4
	15	5 13.8	1 41.4	N 1 15.5	32 48.8	S12 27.9	188 09.9	N 2 50.7	342 58.5	N 6 46.5
	16	20 16.2	16 41.2	N 1 16.8	47 49.4	S12 27.2	203 12.6	N 2 50.8	358 00.8	N 6 46.6
	17	35 18.7	31 41.1	N 1 18.1	62 49.9	S12 26.5	218 15.3	N 2 50.9	13 03.1	N 6 46.6
	18	50 21.2	46 40.9	N 1 19.4	77 50.5	S12 25.8	233 17.9	N 2 51.0	28 05.3	N 6 46.7
	19	65 23.6	61 40.8	N 1 20.7	92 51.1	S12 25.1	248 20.6	N 2 51.1	43 07.6	N 6 46.8
	20	80 26.1	76 40.6	N 1 22.0	107 51.6	S12 24.4	263 23.3	N 2 51.1	58 09.9	N 6 46.9
	21	95 28.6	91 40.5	N 1 23.4	122 52.2	S12 23.7	278 25.9	N 2 51.2	73 12.2	N 6 47.0
	22	110 31.0	106 40.4	N 1 24.7	137 52.8	S12 23.0	293 28.6	N 2 51.3	88 14.4	N 6 47.1
	23	125 33.5	121 40.2	N 1 26.0	152 53.4	S12 22.3	308 31.3	N 2 51.4	103 16.7	N 6 47.1
11	0	140 35.9	136 40.1	N 1 27.3	167 53.9	S12 21.6	323 33.9	N 2 51.5	118 19.0	N 6 47.2
	1	155 38.4	151 39.9	N 1 28.6	182 54.5	S12 20.9	338 36.6	N 2 51.6	133 21.3	N 6 47.3
	2	170 40.9	166 39.8	N 1 29.9	197 55.1	S12 20.2	353 39.2	N 2 51.7	148 23.6	N 6 47.4
	3	185 43.3	181 39.7	N 1 31.2	212 55.7	S12 19.5	8 41.9	N 2 51.8	163 25.8	N 6 47.5
	4	200 45.8	196 39.5	N 1 32.5	227 56.2	S12 18.7	23 44.6	N 2 51.9	178 28.1	N 6 47.6
F	5	215 48.3	211 39.4	N 1 33.8	242 56.8	S12 18.0	38 47.2	N 2 52.0	193 30.4	N 6 47.6
R										
I	6	230 50.7	226 39.2	N 1 35.1	257 57.4	S12 17.3	53 49.9	N 2 52.1	208 32.7	N 6 47.7
D	7	245 53.2	241 39.1	N 1 36.4	272 58.0	S12 16.6	68 52.6	N 2 52.2	223 34.9	N 6 47.8
A	8	260 55.7	256 39.0	N 1 37.7	287 58.5	S12 15.9	83 55.2	N 2 52.3	238 37.2	N 6 47.9
Y	9	275 58.1	271 38.8	N 1 39.0	302 59.1	S12 15.2	98 57.9	N 2 52.4	253 39.5	N 6 48.0
	10	291 00.6	286 38.7	N 1 40.3	317 59.7	S12 14.5	114 00.6	N 2 52.5	268 41.8	N 6 48.1
	11	306 03.0	301 38.5	N 1 41.7	333 00.3	S12 13.8	129 03.2	N 2 52.6	283 44.0	N 6 48.1
	12	321 05.5	316 38.4	N 1 43.0	348 00.8	S12 13.1	144 05.9	N 2 52.7	298 46.3	N 6 48.2
	13	336 08.0	331 38.3	N 1 44.3	3 01.4	S12 12.4	159 08.6	N 2 52.8	313 48.6	N 6 48.3
	14	351 10.4	346 38.1	N 1 45.6	18 02.0	S12 11.6	174 11.2	N 2 52.9	328 50.9	N 6 48.4
	15	6 12.9	1 38.0	N 1 46.9	33 02.6	S12 10.9	189 13.9	N 2 53.0	343 53.1	N 6 48.5
	16	21 15.4	16 37.8	N 1 48.2	48 03.1	S12 10.2	204 16.6	N 2 53.1	358 55.4	N 6 48.6
	17	36 17.8	31 37.7	N 1 49.5	63 03.7	S12 09.5	219 19.2	N 2 53.2	13 57.7	N 6 48.7
	18	51 20.3	46 37.6	N 1 50.8	78 04.3	S12 08.8	234 21.9	N 2 53.3	28 60.0	N 6 48.7
	19	66 22.8	61 37.4	N 1 52.1	93 04.9	S12 08.1	249 24.6	N 2 53.4	44 02.2	N 6 48.8
	20	81 25.2	76 37.3	N 1 53.4	108 05.5	S12 07.4	264 27.3	N 2 53.5	59 04.5	N 6 48.9
	21	96 27.7	91 37.2	N 1 54.7	123 06.0	S12 06.7	279 29.9	N 2 53.6	74 06.8	N 6 49.0
	22	111 30.2	106 37.0	N 1 56.0	138 06.6	S12 06.0	294 32.6	N 2 53.7	89 09.1	N 6 49.1
	23	126 32.6	121 36.9	N 1 57.3	153 07.2	S12 05.2	309 35.3	N 2 53.8	104 11.3	N 6 49.2
			v -0.1	d 1.3	v 0.6	d 0.7	v 2.7	d 0.1	v 2.3	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
9 0	176 27.9	S14 53.5	19 44.4	4.8	N21 18.6	10.5	60.9	Acamar	315 09.9	S40 11.7
1	191 27.9	S14 52.7	34 08.3	4.8	N21 07.9	10.6	60.9	Achernar	335 18.6	S57 05.8
2	206 27.9	S14 51.9	48 32.1	4.9	N20 57.1	10.8	61.0	Acrux	172 56.7	S63 15.2
3	221 27.9	S14 51.1	62 56.1	4.9	N20 46.2	10.9	61.0	Adhara	255 03.5	S29 00.8
4	236 27.9	S14 50.3	77 20.1	5.0	N20 35.1	11.1	61.0	Albireo	67 02.3	N28 01.0
W 5	251 27.8	S14 49.5	91 44.1	5.1	N20 23.8	11.2	61.0			
E								Aldebaran	290 36.6	N16 33.9
D 6	266 27.8	S14 48.7	106 08.2	5.1	N20 12.5	11.4	61.1	Alioth	166 10.4	N55 48.1
N 7	281 27.8	S14 47.9	120 32.4	5.2	N20 00.9	11.5	61.1	Alkaid	152 49.8	N49 10.0
E 8	296 27.8	S14 47.1	134 56.7	5.3	N19 49.2	11.7	61.1	Al Na-ir	27 30.2	S46 49.5
S 9	311 27.8	S14 46.3	149 21.0	5.3	N19 37.4	11.8	61.1	Alnilam	275 34.9	S 1 11.1
D 10	326 27.7	S14 45.5	163 45.4	5.4	N19 25.4	12.0	61.1			
A 11	341 27.7	S14 44.7	178 09.8	5.5	N19 13.3	12.1	61.2	Alphard	217 44.9	S 8 47.0
Y								Alphecca	126 01.6	N26 36.9
12	356 27.7	S14 43.9	192 34.3	5.5	N19 01.1	12.3	61.2	Alpheratz	357 32.4	N29 14.9
13	11 27.7	S14 43.1	206 58.9	5.6	N18 48.7	12.4	61.2	Altair	61 57.8	N 8 56.5
14	26 27.7	S14 42.3	221 23.6	5.7	N18 36.1	12.5	61.2	Ankaa	353 04.9	S42 09.4
15	41 27.6	S14 41.5	235 48.3	5.7	N18 23.5	12.7	61.2			
16	56 27.6	S14 40.7	250 13.1	5.8	N18 10.7	12.8	61.2	Antares	112 12.8	S26 29.6
17	71 27.6	S14 39.9	264 38.0	5.9	N17 57.8	12.9	61.3	Arcturus	145 45.5	N19 01.9
								Atria	107 05.1	S69 04.5
18	86 27.6	S14 39.1	279 02.9	5.9	N17 44.7	13.0	61.3	Avior	234 13.0	S59 36.2
19	101 27.6	S14 38.3	293 27.9	6.0	N17 31.6	13.2	61.3	Bellatrix	278 20.0	N 6 22.4
20	116 27.6	S14 37.5	307 53.0	6.1	N17 18.3	13.3	61.3			
21	131 27.5	S14 36.7	322 18.2	6.2	N17 04.9	13.4	61.3	Betelgeuse	270 49.1	N 7 24.7
22	146 27.5	S14 35.9	336 43.4	6.2	N16 51.3	13.5	61.3	Canopus	263 50.8	S52 42.9
23	161 27.5	S14 35.1	351 08.7	6.3	N16 37.7	13.7	61.3	Capella	280 17.9	N46 01.7
								Castor	245 53.4	N31 49.5
10 0	176 27.5	S14 34.3	5 34.1	6.4	N16 23.9	13.8	61.4	Deneb	49 24.5	N45 22.8
1	191 27.5	S14 33.5	19 59.5	6.4	N16 10.0	13.9	61.4			
2	206 27.5	S14 32.7	34 25.1	6.5	N15 56.0	14.0	61.4	Denebola	182 22.1	N14 24.6
3	221 27.5	S14 31.9	48 50.6	6.6	N15 41.9	14.1	61.4	Diphda	348 45.0	S17 50.0
4	236 27.5	S14 31.1	63 16.3	6.7	N15 27.7	14.2	61.4	Dubhe	193 37.3	N61 35.6
T 5	251 27.4	S14 30.3	77 42.0	6.7	N15 13.4	14.3	61.4	Elnath	277 58.5	N28 37.9
H								Eltanin	90 41.4	N51 28.8
U 6	266 27.4	S14 29.5	92 07.9	6.8	N14 59.0	14.4	61.4			
R 7	281 27.4	S14 28.7	106 33.7	6.9	N14 44.5	14.5	61.4	Enif	33 36.6	N10 00.2
S 8	296 27.4	S14 27.8	120 59.7	7.0	N14 29.9	14.6	61.4	Fomalhaut	15 12.0	S29 28.5
D 9	311 27.4	S14 27.0	135 25.7	7.0	N14 15.2	14.7	61.4	Gacrux	171 48.4	S57 16.2
A 10	326 27.4	S14 26.2	149 51.8	7.1	N14 00.3	14.8	61.4	Gienah	175 40.7	S17 42.0
Y 11	341 27.4	S14 25.4	164 18.0	7.2	N13 45.4	14.9	61.5	Hadar	148 32.2	S60 30.4
12	356 27.4	S14 24.6	178 44.2	7.2	N13 30.4	15.0	61.5	Hamal	327 48.4	N23 35.9
13	11 27.4	S14 23.8	193 10.5	7.3	N13 15.4	15.1	61.5	Kaus Austr.	83 29.4	S34 22.2
14	26 27.3	S14 23.0	207 36.9	7.4	N13 00.2	15.2	61.5	Kochab	137 20.0	N74 02.0
15	41 27.3	S14 22.2	222 03.3	7.4	N12 44.9	15.3	61.5	Markab	13 27.6	N15 21.4
16	56 27.3	S14 21.4	236 29.9	7.5	N12 29.6	15.3	61.5	Menkar	314 03.5	N 4 12.0
17	71 27.3	S14 20.6	250 56.4	7.6	N12 14.2	15.4	61.5			
								Menkent	147 54.5	S36 30.5
18	86 27.3	S14 19.7	265 23.1	7.7	N11 58.7	15.5	61.5	Miaplacidus	221 36.6	S69 50.1
19	101 27.3	S14 18.9	279 49.8	7.7	N11 43.1	15.6	61.5	Mirfak	308 24.6	N49 57.9
20	116 27.3	S14 18.1	294 16.6	7.8	N11 27.5	15.6	61.5	Nunki	75 44.9	S26 15.6
21	131 27.3	S14 17.3	308 43.4	7.9	N11 11.8	15.7	61.5	Peacock	53 02.2	S56 38.6
22	146 27.3	S14 16.5	323 10.4	7.9	N10 56.0	15.8	61.5			
23	161 27.3	S14 15.7	337 37.3	8.0	N10 40.1	15.9	61.5	Polaris	315 36.7	N89 22.7
								Pollux	243 13.8	N27 57.4
11 0	176 27.3	S14 14.9	352 04.4	8.0	N10 24.2	15.9	61.5	Procyon	244 47.8	N 5 09.0
1	191 27.3	S14 14.0	6 31.5	8.1	N10 08.2	16.0	61.5	Rasalhague	95 56.4	N12 32.2
2	206 27.3	S14 13.2	20 58.7	8.2	N 9 52.2	16.0	61.5	Regulus	207 31.4	N11 49.6
3	221 27.2	S14 12.4	35 25.9	8.2	N 9 36.1	16.1	61.5			
4	236 27.2	S14 11.6	49 53.2	8.3	N 9 19.9	16.2	61.5	Rigel	281 01.2	S 8 10.3
F 5	251 27.2	S14 10.8	64 20.6	8.4	N 9 03.7	16.2	61.5	Rigil Kent	139 36.8	S60 56.9
R								Sabik	102 00.0	S15 45.6
I 6	266 27.2	S14 10.0	78 48.0	8.4	N 8 47.4	16.3	61.4	Schedar	349 28.4	N56 41.7
D 7	281 27.2	S14 09.1	93 15.5	8.5	N 8 31.1	16.3	61.4	Shaula	96 07.1	S37 07.4
A 8	296 27.2	S14 08.3	107 43.0	8.5	N 8 14.8	16.4	61.4			
Y 9	311 27.2	S14 07.5	122 10.6	8.6	N 7 58.4	16.4	61.4	Sirius	258 23.7	S16 45.5
10	326 27.2	S14 06.7	136 38.2	8.6	N 7 41.9	16.5	61.4	Spica	158 19.5	S11 18.6
11	341 27.2	S14 05.9	151 05.9	8.7	N 7 25.4	16.5	61.4	Suhail	222 43.9	S43 32.9
								Vega	80 31.8	N38 48.4
12	356 27.2	S14 05.0	165 33.7	8.8	N 7 08.9	16.5	61.4	Zuben-ubi	136 54.1	S16 09.6
13	11 27.2	S14 04.2	180 01.5	8.8	N 6 52.3	16.6	61.4			
14	26 27.2	S14 03.4	194 29.4	8.9	N 6 35.7	16.6	61.4			
15	41 27.2	S14 02.6	208 57.3	8.9	N 6 19.1	16.6	61.4			
16	56 27.2	S14 01.8	223 25.3	9.0	N 6 02.4	16.7	61.4			
17	71 27.2	S14 00.9	237 53.3	9.0	N 5 45.7	16.7	61.3			
18	86 27.2	S14 00.1	252 21.3	9.1	N 5 29.0	16.7	61.3			
19	101 27.2	S13 59.3	266 49.5	9.1	N 5 12.2	16.7	61.3			
20	116 27.2	S13 58.5	281 17.6	9.2	N 4 55.4	16.8	61.3			
21	131 27.2	S13 57.6	295 45.8	9.2	N 4 38.7	16.8	61.3			
22	146 27.2	S13 56.8	310 14.1	9.3	N 4 21.8	16.8	61.3			
23	161 27.2	S13 56.0	324 42.4	9.3	N 4 05.0	16.8	61.3			
	S.D. 16.2	d 0.8	S.D.	16.7	16.7	16.7				

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
12	0	141 35.1	136 36.7	N 1 58.6	168 07.8	S12 04.5	324 37.9	N 2 53.9	119 13.6	N 6 49.2
	1	156 37.5	151 36.6	N 1 59.9	183 08.3	S12 03.8	339 40.6	N 2 54.0	134 15.9	N 6 49.3
	2	171 40.0	166 36.5	N 2 01.2	198 08.9	S12 03.1	354 43.3	N 2 54.1	149 18.1	N 6 49.4
	3	186 42.5	181 36.3	N 2 02.6	213 09.5	S12 02.4	9 45.9	N 2 54.2	164 20.4	N 6 49.5
	4	201 44.9	196 36.2	N 2 03.9	228 10.1	S12 01.7	24 48.6	N 2 54.3	179 22.7	N 6 49.6
S	5	216 47.4	211 36.1	N 2 05.2	243 10.7	S12 01.0	39 51.3	N 2 54.4	194 25.0	N 6 49.7
A										
T	6	231 49.9	226 35.9	N 2 06.5	258 11.2	S12 00.2	54 54.0	N 2 54.5	209 27.2	N 6 49.8
U	7	246 52.3	241 35.8	N 2 07.8	273 11.8	S11 59.5	69 56.6	N 2 54.6	224 29.5	N 6 49.8
R	8	261 54.8	256 35.7	N 2 09.1	288 12.4	S11 58.8	84 59.3	N 2 54.7	239 31.8	N 6 49.9
D	9	276 57.3	271 35.5	N 2 10.4	303 13.0	S11 58.1	100 02.0	N 2 54.8	254 34.1	N 6 50.0
A	10	291 59.7	286 35.4	N 2 11.7	318 13.6	S11 57.4	115 04.6	N 2 54.9	269 36.3	N 6 50.1
Y	11	307 02.2	301 35.3	N 2 13.0	333 14.1	S11 56.7	130 07.3	N 2 55.0	284 38.6	N 6 50.2
	12	322 04.7	316 35.1	N 2 14.3	348 14.7	S11 56.0	145 10.0	N 2 55.1	299 40.9	N 6 50.3
	13	337 07.1	331 35.0	N 2 15.6	3 15.3	S11 55.2	160 12.7	N 2 55.2	314 43.1	N 6 50.4
	14	352 09.6	346 34.9	N 2 16.9	18 15.9	S11 54.5	175 15.3	N 2 55.3	329 45.4	N 6 50.4
	15	7 12.0	1 34.7	N 2 18.2	33 16.5	S11 53.8	190 18.0	N 2 55.4	344 47.7	N 6 50.5
	16	22 14.5	16 34.6	N 2 19.5	48 17.0	S11 53.1	205 20.7	N 2 55.5	359 50.0	N 6 50.6
	17	37 17.0	31 34.5	N 2 20.8	63 17.6	S11 52.4	220 23.4	N 2 55.6	14 52.2	N 6 50.7
	18	52 19.4	46 34.3	N 2 22.1	78 18.2	S11 51.7	235 26.0	N 2 55.7	29 54.5	N 6 50.8
	19	67 21.9	61 34.2	N 2 23.4	93 18.8	S11 50.9	250 28.7	N 2 55.8	44 56.8	N 6 50.9
	20	82 24.4	76 34.1	N 2 24.7	108 19.4	S11 50.2	265 31.4	N 2 55.9	59 59.0	N 6 51.0
	21	97 26.8	91 33.9	N 2 26.0	123 20.0	S11 49.5	280 34.1	N 2 56.0	75 01.3	N 6 51.0
	22	112 29.3	106 33.8	N 2 27.3	138 20.5	S11 48.8	295 36.7	N 2 56.1	90 03.6	N 6 51.1
	23	127 31.8	121 33.7	N 2 28.6	153 21.1	S11 48.1	310 39.4	N 2 56.2	105 05.9	N 6 51.2
13	0	142 34.2	136 33.5	N 2 30.0	168 21.7	S11 47.4	325 42.1	N 2 56.3	120 08.1	N 6 51.3
	1	157 36.7	151 33.4	N 2 31.3	183 22.3	S11 46.6	340 44.8	N 2 56.4	135 10.4	N 6 51.4
	2	172 39.1	166 33.3	N 2 32.6	198 22.9	S11 45.9	355 47.4	N 2 56.5	150 12.7	N 6 51.5
	3	187 41.6	181 33.1	N 2 33.9	213 23.4	S11 45.2	10 50.1	N 2 56.6	165 14.9	N 6 51.6
	4	202 44.1	196 33.0	N 2 35.2	228 24.0	S11 44.5	25 52.8	N 2 56.7	180 17.2	N 6 51.6
S	5	217 46.5	211 32.9	N 2 36.5	243 24.6	S11 43.8	40 55.5	N 2 56.8	195 19.5	N 6 51.7
U										
N	6	232 49.0	226 32.8	N 2 37.8	258 25.2	S11 43.1	55 58.1	N 2 56.9	210 21.7	N 6 51.8
D	7	247 51.5	241 32.6	N 2 39.1	273 25.8	S11 42.3	71 00.8	N 2 57.0	225 24.0	N 6 51.9
A	8	262 53.9	256 32.5	N 2 40.4	288 26.4	S11 41.6	86 03.5	N 2 57.1	240 26.3	N 6 52.0
Y	9	277 56.4	271 32.4	N 2 41.7	303 26.9	S11 40.9	101 06.2	N 2 57.2	255 28.6	N 6 52.1
	10	292 58.9	286 32.2	N 2 43.0	318 27.5	S11 40.2	116 08.9	N 2 57.3	270 30.8	N 6 52.2
	11	308 01.3	301 32.1	N 2 44.3	333 28.1	S11 39.5	131 11.5	N 2 57.4	285 33.1	N 6 52.2
	12	323 03.8	316 32.0	N 2 45.6	348 28.7	S11 38.7	146 14.2	N 2 57.5	300 35.4	N 6 52.3
	13	338 06.3	331 31.9	N 2 46.9	3 29.3	S11 38.0	161 16.9	N 2 57.6	315 37.6	N 6 52.4
	14	353 08.7	346 31.7	N 2 48.2	18 29.9	S11 37.3	176 19.6	N 2 57.7	330 39.9	N 6 52.5
	15	8 11.2	1 31.6	N 2 49.5	33 30.5	S11 36.6	191 22.2	N 2 57.8	345 42.2	N 6 52.6
	16	23 13.6	16 31.5	N 2 50.8	48 31.0	S11 35.9	206 24.9	N 2 57.9	0 44.4	N 6 52.7
	17	38 16.1	31 31.3	N 2 52.1	63 31.6	S11 35.1	221 27.6	N 2 58.0	15 46.7	N 6 52.8
	18	53 18.6	46 31.2	N 2 53.4	78 32.2	S11 34.4	236 30.3	N 2 58.1	30 49.0	N 6 52.9
	19	68 21.0	61 31.1	N 2 54.7	93 32.8	S11 33.7	251 33.0	N 2 58.2	45 51.2	N 6 52.9
	20	83 23.5	76 31.0	N 2 56.0	108 33.4	S11 33.0	266 35.6	N 2 58.3	60 53.5	N 6 53.0
	21	98 26.0	91 30.8	N 2 57.3	123 34.0	S11 32.2	281 38.3	N 2 58.4	75 55.8	N 6 53.1
	22	113 28.4	106 30.7	N 2 58.6	138 34.6	S11 31.5	296 41.0	N 2 58.5	90 58.0	N 6 53.2
	23	128 30.9	121 30.6	N 2 59.9	153 35.1	S11 30.8	311 43.7	N 2 58.6	106 00.3	N 6 53.3
14	0	143 33.4	136 30.4	N 3 01.2	168 35.7	S11 30.1	326 46.4	N 2 58.7	121 02.6	N 6 53.4
	1	158 35.8	151 30.3	N 3 02.5	183 36.3	S11 29.4	341 49.0	N 2 58.8	136 04.8	N 6 53.5
	2	173 38.3	166 30.2	N 3 03.8	198 36.9	S11 28.6	356 51.7	N 2 58.9	151 07.1	N 6 53.5
	3	188 40.7	181 30.1	N 3 05.1	213 37.5	S11 27.9	11 54.4	N 2 59.0	166 09.4	N 6 53.6
	4	203 43.2	196 29.9	N 3 06.4	228 38.1	S11 27.2	26 57.1	N 2 59.1	181 11.6	N 6 53.7
M	5	218 45.7	211 29.8	N 3 07.7	243 38.7	S11 26.5	41 59.8	N 2 59.2	196 13.9	N 6 53.8
O										
N	6	233 48.1	226 29.7	N 3 09.0	258 39.2	S11 25.7	57 02.5	N 2 59.3	211 16.2	N 6 53.9
D	7	248 50.6	241 29.6	N 3 10.3	273 39.8	S11 25.0	72 05.1	N 2 59.4	226 18.4	N 6 54.0
A	8	263 53.1	256 29.4	N 3 11.6	288 40.4	S11 24.3	87 07.8	N 2 59.6	241 20.7	N 6 54.1
Y	9	278 55.5	271 29.3	N 3 12.9	303 41.0	S11 23.6	102 10.5	N 2 59.7	256 23.0	N 6 54.2
	10	293 58.0	286 29.2	N 3 14.2	318 41.6	S11 22.8	117 13.2	N 2 59.8	271 25.2	N 6 54.2
	11	309 00.5	301 29.1	N 3 15.5	333 42.2	S11 22.1	132 15.9	N 2 59.9	286 27.5	N 6 54.3
	12	324 02.9	316 28.9	N 3 16.8	348 42.8	S11 21.4	147 18.6	N 2 60.0	301 29.8	N 6 54.4
	13	339 05.4	331 28.8	N 3 18.1	3 43.4	S11 20.7	162 21.2	N 3 00.1	316 32.0	N 6 54.5
	14	354 07.9	346 28.7	N 3 19.4	18 44.0	S11 20.0	177 23.9	N 3 00.2	331 34.3	N 6 54.6
	15	9 10.3	1 28.6	N 3 20.7	33 44.5	S11 19.2	192 26.6	N 3 00.3	346 36.6	N 6 54.7
	16	24 12.8	16 28.4	N 3 22.0	48 45.1	S11 18.5	207 29.3	N 3 00.4	1 38.8	N 6 54.8
	17	39 15.2	31 28.3	N 3 23.3	63 45.7	S11 17.8	222 32.0	N 3 00.5	16 41.1	N 6 54.9
	18	54 17.7	46 28.2	N 3 24.6	78 46.3	S11 17.0	237 34.7	N 3 00.6	31 43.4	N 6 54.9
	19	69 20.2	61 28.1	N 3 25.9	93 46.9	S11 16.3	252 37.3	N 3 00.7	46 45.6	N 6 55.0
	20	84 22.6	76 28.0	N 3 27.2	108 47.5	S11 15.6	267 40.0	N 3 00.8	61 47.9	N 6 55.1
	21	99 25.1	91 27.8	N 3 28.5	123 48.1	S11 14.9	282 42.7	N 3 00.9	76 50.2	N 6 55.2
	22	114 27.6	106 27.7	N 3 29.8	138 48.7	S11 14.1	297 45.4	N 3 01.0	91 52.4	N 6 55.3
	23	129 30.0	121 27.6	N 3 31.1	153 49.3	S11 13.4	312 48.1	N 3 01.1	106 54.7	N 6 55.4
			v -0.1	d 1.3	v 0.6	d 0.7	v 2.7	d 0.1	v 2.3	d 0.1

G.M.T		SUN			MOON					
d	h	GHA ° '	Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '
12	0	176 27.2	S13	55.2	339 10.7	9.3	N 3 48.2	16.8	61.2
	1	191 27.2	S13	54.4	353 39.1	9.4	N 3 31.3	16.9	61.2
	2	206 27.2	S13	53.5	8 07.5	9.4	N 3 14.5	16.9	61.2
	3	221 27.2	S13	52.7	22 36.0	9.5	N 2 57.6	16.9	61.2
	4	236 27.2	S13	51.9	37 04.5	9.5	N 2 40.7	16.9	61.2
S	5	251 27.2	S13	51.0	51 33.0	9.5	N 2 23.8	16.9	61.2
A									
T	6	266 27.2	S13	50.2	66 01.6	9.6	N 2 06.9	16.9	61.1
U	7	281 27.2	S13	49.4	80 30.2	9.6	N 1 50.0	16.9	61.1
R	8	296 27.2	S13	48.6	94 58.9	9.6	N 1 33.2	16.9	61.1
D	9	311 27.2	S13	47.7	109 27.5	9.7	N 1 16.3	16.9	61.1
A	10	326 27.3	S13	46.9	123 56.3	9.7	N 0 59.4	16.9	61.1
Y	11	341 27.3	S13	46.1	138 25.0	9.7	N 0 42.5	16.9	61.0
	12	356 27.3	S13	45.2	152 53.8	9.8	N 0 25.7	16.9	61.0
	13	11 27.3	S13	44.4	167 22.6	9.8	N 0 08.8	16.9	61.0
	14	26 27.3	S13	43.6	181 51.4	9.8	S 0 08.0	16.8	61.0
	15	41 27.3	S13	42.8	196 20.3	9.9	S 0 24.9	16.8	60.9
	16	56 27.3	S13	41.9	210 49.2	9.9	S 0 41.7	16.8	60.9
	17	71 27.3	S13	41.1	225 18.1	9.9	S 0 58.4	16.8	60.9
	18	86 27.3	S13	40.3	239 47.0	9.9	S 1 15.2	16.8	60.9
	19	101 27.3	S13	39.4	254 16.0	10.0	S 1 32.0	16.7	60.8
	20	116 27.3	S13	38.6	268 44.9	10.0	S 1 48.7	16.7	60.8
	21	131 27.3	S13	37.8	283 13.9	10.0	S 2 05.4	16.7	60.8
	22	146 27.3	S13	36.9	297 43.0	10.0	S 2 22.0	16.7	60.8
	23	161 27.3	S13	36.1	312 12.0	10.0	S 2 38.7	16.6	60.7
13	0	176 27.4	S13	35.3	326 41.1	10.1	S 2 55.3	16.6	60.7
	1	191 27.4	S13	34.4	341 10.1	10.1	S 3 11.9	16.6	60.7
	2	206 27.4	S13	33.6	355 39.2	10.1	S 3 28.4	16.5	60.6
	3	221 27.4	S13	32.8	10 08.3	10.1	S 3 44.9	16.5	60.6
	4	236 27.4	S13	31.9	24 37.4	10.1	S 4 01.4	16.5	60.6
S	5	251 27.4	S13	31.1	39 06.6	10.1	S 4 17.8	16.4	60.6
U									
N	6	266 27.4	S13	30.2	53 35.7	10.1	S 4 34.2	16.4	60.5
D	7	281 27.4	S13	29.4	68 04.8	10.1	S 4 50.5	16.3	60.5
A	8	296 27.4	S13	28.6	82 34.0	10.2	S 5 06.8	16.3	60.5
Y	9	311 27.5	S13	27.7	97 03.2	10.2	S 5 23.1	16.2	60.4
	10	326 27.5	S13	26.9	111 32.3	10.2	S 5 39.3	16.2	60.4
	11	341 27.5	S13	26.1	126 01.5	10.2	S 5 55.4	16.2	60.4
	12	356 27.5	S13	25.2	140 30.7	10.2	S 6 11.5	16.1	60.3
	13	11 27.5	S13	24.4	154 59.9	10.2	S 6 27.5	16.0	60.3
	14	26 27.5	S13	23.5	169 29.1	10.2	S 6 43.5	16.0	60.3
	15	41 27.5	S13	22.7	183 58.3	10.2	S 6 59.5	15.9	60.2
	16	56 27.6	S13	21.9	198 27.5	10.2	S 7 15.4	15.9	60.2
	17	71 27.6	S13	21.0	212 56.7	10.2	S 7 31.2	15.8	60.2
	18	86 27.6	S13	20.2	227 25.8	10.2	S 7 46.9	15.8	60.1
	19	101 27.6	S13	19.3	241 55.0	10.2	S 8 02.6	15.7	60.1
	20	116 27.6	S13	18.5	256 24.2	10.2	S 8 18.3	15.6	60.1
	21	131 27.6	S13	17.7	270 53.4	10.2	S 8 33.8	15.6	60.0
	22	146 27.7	S13	16.8	285 22.6	10.2	S 8 49.3	15.5	60.0
	23	161 27.7	S13	16.0	299 51.8	10.2	S 9 04.8	15.4	60.0
14	0	176 27.7	S13	15.1	314 20.9	10.2	S 9 20.1	15.4	59.9
	1	191 27.7	S13	14.3	328 50.1	10.2	S 9 35.4	15.3	59.9
	2	206 27.7	S13	13.4	343 19.3	10.2	S 9 50.6	15.2	59.9
	3	221 27.7	S13	12.6	357 48.4	10.1	S10 05.8	15.1	59.8
	4	236 27.8	S13	11.7	12 17.5	10.1	S10 20.8	15.1	59.8
M	5	251 27.8	S13	10.9	26 46.7	10.1	S10 35.8	15.0	59.8
O									
N	6	266 27.8	S13	10.1	41 15.8	10.1	S10 50.7	14.9	59.7
D	7	281 27.8	S13	09.2	55 44.9	10.1	S11 05.6	14.8	59.7
A	8	296 27.8	S13	08.4	70 14.0	10.1	S11 20.3	14.8	59.6
Y	9	311 27.9	S13	07.5	84 43.1	10.1	S11 35.0	14.7	59.6
	10	326 27.9	S13	06.7	99 12.1	10.1	S11 49.6	14.6	59.6
	11	341 27.9	S13	05.8	113 41.2	10.0	S12 04.1	14.5	59.5
	12	356 27.9	S13	05.0	128 10.2	10.0	S12 18.5	14.4	59.5
	13	11 27.9	S13	04.1	142 39.2	10.0	S12 32.9	14.3	59.5
	14	26 28.0	S13	03.3	157 08.2	10.0	S12 47.1	14.2	59.4
	15	41 28.0	S13	02.4	171 37.2	10.0	S13 01.3	14.2	59.4
	16	56 28.0	S13	01.6	186 06.2	10.0	S13 15.3	14.1	59.3
	17	71 28.0	S13	00.7	200 35.1	9.9	S13 29.3	14.0	59.3
	18	86 28.0	S12	59.9	215 04.0	9.9	S13 43.2	13.9	59.3
	19	101 28.1	S12	59.0	229 32.9	9.9	S13 56.9	13.8	59.2
	20	116 28.1	S12	58.2	244 01.8	9.9	S14 10.6	13.7	59.2
	21	131 28.1	S12	57.3	258 30.7	9.9	S14 24.2	13.6	59.2
	22	146 28.1	S12	56.5	272 59.5	9.8	S14 37.7	13.5	59.1
	23	161 28.2	S12	55.6	287 28.4	9.8	S14 51.1	13.4	59.1
		S.D. 16.2	d	0.8	S.D.	16.6	16.4		16.2

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.9	S40 11.7
Achernar	335 18.6	S57 05.8
Acrux	172 56.7	S63 15.2
Adhara	255 03.5	S29 00.8
Albireo	67 02.3	N28 01.0
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.4	N55 48.1
Alkaid	152 49.8	N49 10.0
Al Na-ir	27 30.2	S46 49.5
Alnilam	275 34.9	S 1 11.1
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.6	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.8	N 8 56.5
Ankaa	353 04.9	S42 09.4
Antares	112 12.8	S26 29.6
Arcturus	145 45.5	N19 01.9
Atria	107 05.0	S69 04.5
Avior	234 13.0	S59 36.2
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.1	N 7 24.7
Canopus	263 50.9	S52 42.9
Capella	280 17.9	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.8
Denebola	182 22.1	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.3	N61 35.6
Elnath	277 58.5	N28 37.9
Eltanin	90 41.3	N51 28.8
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.5
Gacrux	171 48.4	S57 16.2
Gienah	175 40.7	S17 42.0
Hadar	148 32.2	S60 30.4
Hamal	327 48.4	N23 35.9
Kaus Austr.	83 29.4	S34 22.2
Kochab	137 19.9	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.5	S36 30.5
Miaplacidus	221 36.6	S69 50.1
Mirfak	308 24.6	N49 57.9
Nunki	75 44.9	S26 15.6
Peacock	53 02.2	S56 38.6
Polaris	315 38.0	N89 22.7
Pollux	243 13.8	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.4	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.3	S 8 10.3
Rigil Kent	139 36.7	S60 56.9
Sabik	102 00.0	S15 45.6
Schedar	349 28.4	N56 41.7
Shaula	96 07.1	S37 07.4
Sirius	258 23.7	S16 45.5
Spica	158 19.4	S11 18.6
Suhail	222 43.9	S43 32.9
Vega	80 31.8	N38 48.4
Zuben-ubi	136 54.1	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
15	0	144 32.5	136 27.5	N 3	32.4	168 49.8	S11	12.7	327 50.8	N 3	01.2	121 57.0	N 6	55.5
	1	159 35.0	151 27.3	N 3	33.7	183 50.4	S11	12.0	342 53.5	N 3	01.3	136 59.2	N 6	55.6
	2	174 37.4	166 27.2	N 3	35.0	198 51.0	S11	11.2	357 56.1	N 3	01.4	152 01.5	N 6	55.6
	3	189 39.9	181 27.1	N 3	36.3	213 51.6	S11	10.5	12 58.8	N 3	01.5	167 03.7	N 6	55.7
	4	204 42.3	196 27.0	N 3	37.6	228 52.2	S11	09.8	28 01.5	N 3	01.6	182 06.0	N 6	55.8
T	5	219 44.8	211 26.9	N 3	38.9	243 52.8	S11	09.1	43 04.2	N 3	01.7	197 08.3	N 6	55.9
U														
E	6	234 47.3	226 26.7	N 3	40.2	258 53.4	S11	08.3	58 06.9	N 3	01.9	212 10.5	N 6	56.0
S	7	249 49.7	241 26.6	N 3	41.5	273 54.0	S11	07.6	73 09.6	N 3	02.0	227 12.8	N 6	56.1
D	8	264 52.2	256 26.5	N 3	42.8	288 54.6	S11	06.9	88 12.3	N 3	02.1	242 15.1	N 6	56.2
A	9	279 54.7	271 26.4	N 3	44.1	303 55.2	S11	06.1	103 15.0	N 3	02.2	257 17.3	N 6	56.3
Y	10	294 57.1	286 26.2	N 3	45.4	318 55.8	S11	05.4	118 17.7	N 3	02.3	272 19.6	N 6	56.4
	11	309 59.6	301 26.1	N 3	46.7	333 56.4	S11	04.7	133 20.3	N 3	02.4	287 21.9	N 6	56.4
	12	325 02.1	316 26.0	N 3	48.0	348 56.9	S11	04.0	148 23.0	N 3	02.5	302 24.1	N 6	56.5
	13	340 04.5	331 25.9	N 3	49.3	3 57.5	S11	03.2	163 25.7	N 3	02.6	317 26.4	N 6	56.6
	14	355 07.0	346 25.8	N 3	50.6	18 58.1	S11	02.5	178 28.4	N 3	02.7	332 28.6	N 6	56.7
	15	10 09.5	1 25.6	N 3	51.9	33 58.7	S11	01.8	193 31.1	N 3	02.8	347 30.9	N 6	56.8
	16	25 11.9	16 25.5	N 3	53.2	48 59.3	S11	01.0	208 33.8	N 3	02.9	2 33.2	N 6	56.9
	17	40 14.4	31 25.4	N 3	54.5	63 59.9	S11	00.3	223 36.5	N 3	03.0	17 35.4	N 6	57.0
	18	55 16.8	46 25.3	N 3	55.8	79 00.5	S10	59.6	238 39.2	N 3	03.1	32 37.7	N 6	57.1
	19	70 19.3	61 25.2	N 3	57.1	94 01.1	S10	58.9	253 41.9	N 3	03.2	47 40.0	N 6	57.2
	20	85 21.8	76 25.1	N 3	58.4	109 01.7	S10	58.1	268 44.6	N 3	03.3	62 42.2	N 6	57.2
	21	100 24.2	91 24.9	N 3	59.6	124 02.3	S10	57.4	283 47.2	N 3	03.5	77 44.5	N 6	57.3
	22	115 26.7	106 24.8	N 4	00.9	139 02.9	S10	56.7	298 49.9	N 3	03.6	92 46.7	N 6	57.4
	23	130 29.2	121 24.7	N 4	02.2	154 03.5	S10	55.9	313 52.6	N 3	03.7	107 49.0	N 6	57.5
16	0	145 31.6	136 24.6	N 4	03.5	169 04.1	S10	55.2	328 55.3	N 3	03.8	122 51.3	N 6	57.6
	1	160 34.1	151 24.5	N 4	04.8	184 04.7	S10	54.5	343 58.0	N 3	03.9	137 53.5	N 6	57.7
	2	175 36.6	166 24.3	N 4	06.1	199 05.3	S10	53.7	359 00.7	N 3	04.0	152 55.8	N 6	57.8
	3	190 39.0	181 24.2	N 4	07.4	214 05.8	S10	53.0	14 03.4	N 3	04.1	167 58.0	N 6	57.9
	4	205 41.5	196 24.1	N 4	08.7	229 06.4	S10	52.3	29 06.1	N 3	04.2	183 00.3	N 6	58.0
W	5	220 44.0	211 24.0	N 4	10.0	244 07.0	S10	51.5	44 08.8	N 3	04.3	198 02.6	N 6	58.0
E														
D	6	235 46.4	226 23.9	N 4	11.3	259 07.6	S10	50.8	59 11.5	N 3	04.4	213 04.8	N 6	58.1
N	7	250 48.9	241 23.8	N 4	12.6	274 08.2	S10	50.1	74 14.2	N 3	04.5	228 07.1	N 6	58.2
E	8	265 51.3	256 23.6	N 4	13.9	289 08.8	S10	49.3	89 16.9	N 3	04.6	243 09.4	N 6	58.3
S	9	280 53.8	271 23.5	N 4	15.2	304 09.4	S10	48.6	104 19.5	N 3	04.7	258 11.6	N 6	58.4
D	10	295 56.3	286 23.4	N 4	16.5	319 10.0	S10	47.9	119 22.2	N 3	04.8	273 13.9	N 6	58.5
A	11	310 58.7	301 23.3	N 4	17.8	334 10.6	S10	47.1	134 24.9	N 3	05.0	288 16.1	N 6	58.6
Y														
	12	326 01.2	316 23.2	N 4	19.1	349 11.2	S10	46.4	149 27.6	N 3	05.1	303 18.4	N 6	58.7
	13	341 03.7	331 23.1	N 4	20.4	4 11.8	S10	45.7	164 30.3	N 3	05.2	318 20.7	N 6	58.8
	14	356 06.1	346 22.9	N 4	21.6	19 12.4	S10	44.9	179 33.0	N 3	05.3	333 22.9	N 6	58.8
	15	11 08.6	1 22.8	N 4	22.9	34 13.0	S10	44.2	194 35.7	N 3	05.4	348 25.2	N 6	58.9
	16	26 11.1	16 22.7	N 4	24.2	49 13.6	S10	43.5	209 38.4	N 3	05.5	3 27.4	N 6	59.0
	17	41 13.5	31 22.6	N 4	25.5	64 14.2	S10	42.7	224 41.1	N 3	05.6	18 29.7	N 6	59.1
	18	56 16.0	46 22.5	N 4	26.8	79 14.8	S10	42.0	239 43.8	N 3	05.7	33 31.9	N 6	59.2
	19	71 18.4	61 22.4	N 4	28.1	94 15.4	S10	41.3	254 46.5	N 3	05.8	48 34.2	N 6	59.3
	20	86 20.9	76 22.2	N 4	29.4	109 16.0	S10	40.5	269 49.2	N 3	05.9	63 36.5	N 6	59.4
	21	101 23.4	91 22.1	N 4	30.7	124 16.6	S10	39.8	284 51.9	N 3	06.0	78 38.7	N 6	59.5
	22	116 25.8	106 22.0	N 4	32.0	139 17.2	S10	39.1	299 54.6	N 3	06.2	93 41.0	N 6	59.6
	23	131 28.3	121 21.9	N 4	33.3	154 17.8	S10	38.3	314 57.3	N 3	06.3	108 43.2	N 6	59.7
17	0	146 30.8	136 21.8	N 4	34.6	169 18.4	S10	37.6	329 60.0	N 3	06.4	123 45.5	N 6	59.7
	1	161 33.2	151 21.7	N 4	35.9	184 19.0	S10	36.9	345 02.7	N 3	06.5	138 47.8	N 6	59.8
	2	176 35.7	166 21.6	N 4	37.1	199 19.6	S10	36.1	0 05.4	N 3	06.6	153 50.0	N 6	59.9
	3	191 38.2	181 21.4	N 4	38.4	214 20.2	S10	35.4	15 08.1	N 3	06.7	168 52.3	N 7	00.0
	4	206 40.6	196 21.3	N 4	39.7	229 20.8	S10	34.7	30 10.8	N 3	06.8	183 54.5	N 7	00.1
T	5	221 43.1	211 21.2	N 4	41.0	244 21.4	S10	33.9	45 13.5	N 3	06.9	198 56.8	N 7	00.2
H														
U	6	236 45.6	226 21.1	N 4	42.3	259 22.0	S10	33.2	60 16.2	N 3	07.0	213 59.0	N 7	00.3
R	7	251 48.0	241 21.0	N 4	43.6	274 22.6	S10	32.4	75 18.9	N 3	07.1	229 01.3	N 7	00.4
S	8	266 50.5	256 20.9	N 4	44.9	289 23.2	S10	31.7	90 21.6	N 3	07.2	244 03.6	N 7	00.5
D	9	281 52.9	271 20.8	N 4	46.2	304 23.8	S10	31.0	105 24.3	N 3	07.4	259 05.8	N 7	00.6
A	10	296 55.4	286 20.6	N 4	47.5	319 24.4	S10	30.2	120 27.0	N 3	07.5	274 08.1	N 7	00.6
Y	11	311 57.9	301 20.5	N 4	48.8	334 25.0	S10	29.5	135 29.7	N 3	07.6	289 10.3	N 7	00.7
	12	327 00.3	316 20.4	N 4	50.0	349 25.6	S10	28.8	150 32.4	N 3	07.7	304 12.6	N 7	00.8
	13	342 02.8	331 20.3	N 4	51.3	4 26.2	S10	28.0	165 35.1	N 3	07.8	319 14.8	N 7	00.9
	14	357 05.3	346 20.2	N 4	52.6	19 26.8	S10	27.3	180 37.8	N 3	07.9	334 17.1	N 7	01.0
	15	12 07.7	1 20.1	N 4	53.9	34 27.4	S10	26.5	195 40.4	N 3	08.0	349 19.4	N 7	01.1
	16	27 10.2	16 20.0	N 4	55.2	49 28.0	S10	25.8	210 43.1	N 3	08.1	4 21.6	N 7	01.2
	17	42 12.7	31 19.9	N 4	56.5	64 28.6	S10	25.1	225 45.8	N 3	08.2	19 23.9	N 7	01.3
	18	57 15.1	46 19.7	N 4	57.8	79 29.2	S10	24.3	240 48.6	N 3	08.3	34 26.1	N 7	01.4
	19	72 17.6	61 19.6	N 4	59.1	94 29.8	S10	23.6	255 51.3	N 3	08.5	49 28.4	N 7	01.5
	20	87 20.1	76 19.5	N 5	00.4	109 30.4	S10	22.9	270 54.0	N 3	08.6	64 30.6	N 7	01.5
	21	102 22.5	91 19.4	N 5	01.6	124 31.0	S10	22.1	285 56.7	N 3	08.7	79 32.9	N 7	01.6
	22	117 25.0	106 19.3	N 5	02.9	139 31.6	S10	21.4	300 59.4	N 3	08.8	94 35.2	N 7	01.7
	23	132 27.4	121 19.2	N 5	04.2	154 32.2	S10	20.6	316 02.1	N 3	08.9	109 37.4	N 7	01.8
			v -0.1	d	1.3	v 0.6	d	0.7	v 2.7	d	0.1	v 2.3	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
15	0	176 28.2	S12 54.8	301 57.2	9.8	S15 04.4	13.3	59.0
	1	191 28.2	S12 53.9	316 25.9	9.8	S15 17.6	13.2	59.0
	2	206 28.2	S12 53.1	330 54.7	9.8	S15 30.7	13.1	59.0
	3	221 28.3	S12 52.2	345 23.4	9.7	S15 43.7	13.0	58.9
	4	236 28.3	S12 51.4	359 52.1	9.7	S15 56.5	12.9	58.9
T	5	251 28.3	S12 50.5	14 20.8	9.7	S16 09.3	12.8	58.8
U								
E	6	266 28.3	S12 49.6	28 49.5	9.7	S16 22.0	12.7	58.8
S	7	281 28.4	S12 48.8	43 18.1	9.6	S16 34.6	12.6	58.8
D	8	296 28.4	S12 47.9	57 46.7	9.6	S16 47.0	12.5	58.7
A	9	311 28.4	S12 47.1	72 15.3	9.6	S16 59.3	12.3	58.7
Y	10	326 28.5	S12 46.2	86 43.8	9.6	S17 11.6	12.2	58.6
	11	341 28.5	S12 45.4	101 12.3	9.5	S17 23.7	12.1	58.6
	12	356 28.5	S12 44.5	115 40.8	9.5	S17 35.7	12.0	58.6
	13	11 28.5	S12 43.7	130 09.3	9.5	S17 47.6	11.9	58.5
	14	26 28.6	S12 42.8	144 37.8	9.4	S17 59.4	11.8	58.5
	15	41 28.6	S12 41.9	159 06.2	9.4	S18 11.0	11.7	58.4
	16	56 28.6	S12 41.1	173 34.6	9.4	S18 22.6	11.5	58.4
	17	71 28.7	S12 40.2	188 02.9	9.4	S18 34.0	11.4	58.4
	18	86 28.7	S12 39.4	202 31.3	9.3	S18 45.3	11.3	58.3
	19	101 28.7	S12 38.5	216 59.6	9.3	S18 56.5	11.2	58.3
	20	116 28.8	S12 37.6	231 27.8	9.3	S19 07.6	11.1	58.2
	21	131 28.8	S12 36.8	245 56.1	9.2	S19 18.5	11.0	58.2
	22	146 28.8	S12 35.9	260 24.3	9.2	S19 29.4	10.8	58.2
	23	161 28.8	S12 35.1	274 52.5	9.2	S19 40.1	10.7	58.1
16	0	176 28.9	S12 34.2	289 20.7	9.2	S19 50.7	10.6	58.1
	1	191 28.9	S12 33.3	303 48.8	9.1	S20 01.1	10.5	58.0
	2	206 28.9	S12 32.5	318 16.9	9.1	S20 11.5	10.3	58.0
	3	221 29.0	S12 31.6	332 45.0	9.1	S20 21.7	10.2	58.0
	4	236 29.0	S12 30.8	347 13.0	9.1	S20 31.7	10.1	57.9
W	5	251 29.0	S12 29.9	1 41.1	9.0	S20 41.7	10.0	57.9
E								
D	6	266 29.1	S12 29.0	16 09.1	9.0	S20 51.5	9.8	57.9
N	7	281 29.1	S12 28.2	30 37.0	9.0	S21 01.2	9.7	57.8
E	8	296 29.1	S12 27.3	45 05.0	8.9	S21 10.8	9.6	57.8
S	9	311 29.2	S12 26.4	59 32.9	8.9	S21 20.2	9.4	57.7
D	10	326 29.2	S12 25.6	74 00.8	8.9	S21 29.5	9.3	57.7
A	11	341 29.3	S12 24.7	88 28.7	8.9	S21 38.7	9.2	57.7
Y								
	12	356 29.3	S12 23.8	102 56.5	8.8	S21 47.8	9.0	57.6
	13	11 29.3	S12 23.0	117 24.3	8.8	S21 56.7	8.9	57.6
	14	26 29.4	S12 22.1	131 52.1	8.8	S22 05.5	8.8	57.5
	15	41 29.4	S12 21.2	146 19.9	8.8	S22 14.1	8.6	57.5
	16	56 29.4	S12 20.4	160 47.6	8.7	S22 22.6	8.5	57.5
	17	71 29.5	S12 19.5	175 15.3	8.7	S22 31.0	8.4	57.4
	18	86 29.5	S12 18.6	189 43.0	8.7	S22 39.2	8.2	57.4
	19	101 29.5	S12 17.8	204 10.7	8.7	S22 47.3	8.1	57.4
	20	116 29.6	S12 16.9	218 38.3	8.6	S22 55.3	8.0	57.3
	21	131 29.6	S12 16.0	233 06.0	8.6	S23 03.1	7.8	57.3
	22	146 29.7	S12 15.2	247 33.6	8.6	S23 10.8	7.7	57.2
	23	161 29.7	S12 14.3	262 01.1	8.6	S23 18.4	7.6	57.2
17	0	176 29.7	S12 13.4	276 28.7	8.6	S23 25.8	7.4	57.2
	1	191 29.8	S12 12.6	290 56.3	8.5	S23 33.1	7.3	57.1
	2	206 29.8	S12 11.7	305 23.8	8.5	S23 40.2	7.1	57.1
	3	221 29.9	S12 10.8	319 51.3	8.5	S23 47.2	7.0	57.1
	4	236 29.9	S12 10.0	334 18.8	8.5	S23 54.1	6.9	57.0
T	5	251 29.9	S12 09.1	348 46.3	8.5	S24 00.8	6.7	57.0
H								
U	6	266 30.0	S12 08.2	3 13.7	8.5	S24 07.4	6.6	57.0
R	7	281 30.0	S12 07.3	17 41.2	8.4	S24 13.8	6.4	56.9
S	8	296 30.1	S12 06.5	32 08.6	8.4	S24 20.1	6.3	56.9
D	9	311 30.1	S12 05.6	46 36.0	8.4	S24 26.3	6.2	56.8
A	10	326 30.2	S12 04.7	61 03.4	8.4	S24 32.3	6.0	56.8
Y	11	341 30.2	S12 03.8	75 30.8	8.4	S24 38.2	5.9	56.8
	12	356 30.2	S12 03.0	89 58.2	8.4	S24 43.9	5.7	56.7
	13	11 30.3	S12 02.1	104 25.5	8.4	S24 49.5	5.6	56.7
	14	26 30.3	S12 01.2	118 52.9	8.4	S24 54.9	5.4	56.7
	15	41 30.4	S12 00.3	133 20.2	8.3	S25 00.2	5.3	56.6
	16	56 30.4	S11 59.5	147 47.6	8.3	S25 05.4	5.2	56.6
	17	71 30.5	S11 58.6	162 14.9	8.3	S25 10.4	5.0	56.6
	18	86 30.5	S11 57.7	176 42.2	8.3	S25 15.2	4.9	56.5
	19	101 30.5	S11 56.8	191 09.5	8.3	S25 20.0	4.7	56.5
	20	116 30.6	S11 56.0	205 36.9	8.3	S25 24.5	4.6	56.5
	21	131 30.6	S11 55.1	220 04.2	8.3	S25 29.0	4.4	56.4
	22	146 30.7	S11 54.2	234 31.5	8.3	S25 33.3	4.3	56.4
	23	161 30.7	S11 53.3	248 58.8	8.3	S25 37.4	4.1	56.4
		S.D. 16.2	d 0.9	S.D. 16.0		15.7		15.5

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.9	S40 11.7
Achernar	335 18.6	S57 05.8
Acrux	172 56.7	S63 15.2
Adhara	255 03.6	S29 00.8
Albireo	67 02.3	N28 01.0
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.3	N55 48.1
Alkaid	152 49.8	N49 10.0
Al Na-ir	27 30.2	S46 49.5
Alnilam	275 34.9	S 1 11.2
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.6	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.7	N 8 56.5
Ankaa	353 05.0	S42 09.4
Antares	112 12.8	S26 29.6
Arcturus	145 45.5	N19 01.9
Atria	107 05.0	S69 04.5
Avior	234 13.0	S59 36.2
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.1	N 7 24.6
Canopus	263 50.9	S52 42.9
Capella	280 17.9	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.8
Denebola	182 22.1	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.3	N61 35.7
Elnath	277 58.5	N28 37.9
Eltanin	90 41.3	N51 28.8
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.3	S57 16.2
Gienah	175 40.7	S17 42.0
Hadar	148 32.1	S60 30.4
Hamal	327 48.5	N23 35.9
Kaus Austr.	83 29.4	S34 22.2
Kochab	137 19.9	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.4	S36 30.5
Miaplacidus	221 36.7	S69 50.1
Mirfak	308 24.6	N49 57.9
Nunki	75 44.9	S26 15.6
Peacock	53 02.2	S56 38.6
Polaris	315 39.1	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.4	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.3	S 8 10.3
Rigil Kent	139 36.7	S60 56.9
Sabik	101 60.0	S15 45.6
Schedar	349 28.5	N56 41.7
Shaula	96 07.1	S37 07.4
Sirius	258 23.7	S16 45.5
Spica	158 19.4	S11 18.6
Suhail	222 43.9	S43 32.9
Vega	80 31.8	N38 48.3
Zuben-ubi	136 54.0	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
18	0	147 29.9	136 19.1	N 5	05.5	169 32.8	S10	19.9	331 04.8	N 3	09.0	124 39.7	N 7	01.9
	1	162 32.4	151 19.0	N 5	06.8	184 33.4	S10	19.2	346 07.5	N 3	09.1	139 41.9	N 7	02.0
	2	177 34.8	166 18.9	N 5	08.1	199 34.0	S10	18.4	1 10.2	N 3	09.2	154 44.2	N 7	02.1
	3	192 37.3	181 18.7	N 5	09.4	214 34.6	S10	17.7	16 12.9	N 3	09.3	169 46.4	N 7	02.2
	4	207 39.8	196 18.6	N 5	10.6	229 35.2	S10	16.9	31 15.6	N 3	09.5	184 48.7	N 7	02.3
F	5	222 42.2	211 18.5	N 5	11.9	244 35.8	S10	16.2	46 18.3	N 3	09.6	199 50.9	N 7	02.4
R														
I	6	237 44.7	226 18.4	N 5	13.2	259 36.4	S10	15.5	61 21.0	N 3	09.7	214 53.2	N 7	02.5
D	7	252 47.2	241 18.3	N 5	14.5	274 37.0	S10	14.7	76 23.7	N 3	09.8	229 55.4	N 7	02.5
A	8	267 49.6	256 18.2	N 5	15.8	289 37.6	S10	14.0	91 26.4	N 3	09.9	244 57.7	N 7	02.6
Y	9	282 52.1	271 18.1	N 5	17.1	304 38.2	S10	13.2	106 29.1	N 3	10.0	259 60.0	N 7	02.7
	10	297 54.5	286 18.0	N 5	18.4	319 38.8	S10	12.5	121 31.8	N 3	10.1	275 02.2	N 7	02.8
	11	312 57.0	301 17.9	N 5	19.6	334 39.4	S10	11.8	136 34.5	N 3	10.2	290 04.5	N 7	02.9
	12	327 59.5	316 17.8	N 5	20.9	349 40.0	S10	11.0	151 37.2	N 3	10.4	305 06.7	N 7	03.0
	13	343 01.9	331 17.6	N 5	22.2	4 40.6	S10	10.3	166 39.9	N 3	10.5	320 09.0	N 7	03.1
	14	358 04.4	346 17.5	N 5	23.5	19 41.2	S10	09.5	181 42.6	N 3	10.6	335 11.2	N 7	03.2
	15	13 06.9	1 17.4	N 5	24.8	34 41.8	S10	08.8	196 45.3	N 3	10.7	350 13.5	N 7	03.3
	16	28 09.3	16 17.3	N 5	26.1	49 42.4	S10	08.1	211 48.0	N 3	10.8	5 15.7	N 7	03.4
	17	43 11.8	31 17.2	N 5	27.4	64 43.0	S10	07.3	226 50.7	N 3	10.9	20 18.0	N 7	03.5
	18	58 14.3	46 17.1	N 5	28.6	79 43.6	S10	06.6	241 53.4	N 3	11.0	35 20.2	N 7	03.6
	19	73 16.7	61 17.0	N 5	29.9	94 44.2	S10	05.8	256 56.1	N 3	11.1	50 22.5	N 7	03.6
	20	88 19.2	76 16.9	N 5	31.2	109 44.8	S10	05.1	271 58.8	N 3	11.2	65 24.7	N 7	03.7
	21	103 21.7	91 16.8	N 5	32.5	124 45.4	S10	04.3	287 01.5	N 3	11.4	80 27.0	N 7	03.8
	22	118 24.1	106 16.7	N 5	33.8	139 46.0	S10	03.6	302 04.2	N 3	11.5	95 29.3	N 7	03.9
	23	133 26.6	121 16.6	N 5	35.0	154 46.7	S10	02.9	317 06.9	N 3	11.6	110 31.5	N 7	04.0
19	0	148 29.0	136 16.5	N 5	36.3	169 47.3	S10	02.1	332 09.7	N 3	11.7	125 33.8	N 7	04.1
	1	163 31.5	151 16.3	N 5	37.6	184 47.9	S10	01.4	347 12.4	N 3	11.8	140 36.0	N 7	04.2
	2	178 34.0	166 16.2	N 5	38.9	199 48.5	S10	00.6	2 15.1	N 3	11.9	155 38.3	N 7	04.3
	3	193 36.4	181 16.1	N 5	40.2	214 49.1	S 9	59.9	17 17.8	N 3	12.0	170 40.5	N 7	04.4
	4	208 38.9	196 16.0	N 5	41.5	229 49.7	S 9	59.1	32 20.5	N 3	12.2	185 42.8	N 7	04.5
S	5	223 41.4	211 15.9	N 5	42.7	244 50.3	S 9	58.4	47 23.2	N 3	12.3	200 45.0	N 7	04.6
A														
T	6	238 43.8	226 15.8	N 5	44.0	259 50.9	S 9	57.6	62 25.9	N 3	12.4	215 47.3	N 7	04.7
U	7	253 46.3	241 15.7	N 5	45.3	274 51.5	S 9	56.9	77 28.6	N 3	12.5	230 49.5	N 7	04.7
R	8	268 48.8	256 15.6	N 5	46.6	289 52.1	S 9	56.2	92 31.3	N 3	12.6	245 51.8	N 7	04.8
D	9	283 51.2	271 15.5	N 5	47.9	304 52.7	S 9	55.4	107 34.0	N 3	12.7	260 54.0	N 7	04.9
A	10	298 53.7	286 15.4	N 5	49.1	319 53.3	S 9	54.7	122 36.7	N 3	12.8	275 56.3	N 7	05.0
Y	11	313 56.2	301 15.3	N 5	50.4	334 53.9	S 9	53.9	137 39.4	N 3	12.9	290 58.5	N 7	05.1
	12	328 58.6	316 15.2	N 5	51.7	349 54.5	S 9	53.2	152 42.1	N 3	13.1	306 00.8	N 7	05.2
	13	344 01.1	331 15.1	N 5	53.0	4 55.1	S 9	52.4	167 44.9	N 3	13.2	321 03.0	N 7	05.3
	14	359 03.5	346 15.0	N 5	54.3	19 55.7	S 9	51.7	182 47.6	N 3	13.3	336 05.3	N 7	05.4
	15	14 06.0	1 14.8	N 5	55.5	34 56.4	S 9	50.9	197 50.3	N 3	13.4	351 07.5	N 7	05.5
	16	29 08.5	16 14.7	N 5	56.8	49 57.0	S 9	50.2	212 53.0	N 3	13.5	6 09.8	N 7	05.6
	17	44 10.9	31 14.6	N 5	58.1	64 57.6	S 9	49.5	227 55.7	N 3	13.6	21 12.0	N 7	05.7
	18	59 13.4	46 14.5	N 5	59.4	79 58.2	S 9	48.7	242 58.4	N 3	13.7	36 14.3	N 7	05.8
	19	74 15.9	61 14.4	N 6	00.7	94 58.8	S 9	48.0	258 01.1	N 3	13.9	51 16.5	N 7	05.9
	20	89 18.3	76 14.3	N 6	01.9	109 59.4	S 9	47.2	273 03.8	N 3	14.0	66 18.8	N 7	06.0
	21	104 20.8	91 14.2	N 6	03.2	125 00.0	S 9	46.5	288 06.5	N 3	14.1	81 21.0	N 7	06.0
	22	119 23.3	106 14.1	N 6	04.5	140 00.6	S 9	45.7	303 09.2	N 3	14.2	96 23.3	N 7	06.1
	23	134 25.7	121 14.0	N 6	05.8	155 01.2	S 9	45.0	318 12.0	N 3	14.3	111 25.5	N 7	06.2
20	0	149 28.2	136 13.9	N 6	07.0	170 01.8	S 9	44.2	333 14.7	N 3	14.4	126 27.8	N 7	06.3
	1	164 30.7	151 13.8	N 6	08.3	185 02.4	S 9	43.5	348 17.4	N 3	14.5	141 30.0	N 7	06.4
	2	179 33.1	166 13.7	N 6	09.6	200 03.1	S 9	42.7	3 20.1	N 3	14.7	156 32.3	N 7	06.5
	3	194 35.6	181 13.6	N 6	10.9	215 03.7	S 9	42.0	18 22.8	N 3	14.8	171 34.5	N 7	06.6
	4	209 38.0	196 13.5	N 6	12.1	230 04.3	S 9	41.2	33 25.5	N 3	14.9	186 36.8	N 7	06.7
S	5	224 40.5	211 13.4	N 6	13.4	245 04.9	S 9	40.5	48 28.2	N 3	15.0	201 39.0	N 7	06.8
U														
N	6	239 43.0	226 13.3	N 6	14.7	260 05.5	S 9	39.7	63 30.9	N 3	15.1	216 41.3	N 7	06.9
D	7	254 45.4	241 13.2	N 6	16.0	275 06.1	S 9	39.0	78 33.6	N 3	15.2	231 43.5	N 7	07.0
A	8	269 47.9	256 13.1	N 6	17.2	290 06.7	S 9	38.2	93 36.4	N 3	15.3	246 45.8	N 7	07.1
Y	9	284 50.4	271 13.0	N 6	18.5	305 07.3	S 9	37.5	108 39.1	N 3	15.5	261 48.0	N 7	07.2
	10	299 52.8	286 12.9	N 6	19.8	320 07.9	S 9	36.7	123 41.8	N 3	15.6	276 50.3	N 7	07.3
	11	314 55.3	301 12.8	N 6	21.1	335 08.5	S 9	36.0	138 44.5	N 3	15.7	291 52.5	N 7	07.3
	12	329 57.8	316 12.7	N 6	22.3	350 09.2	S 9	35.3	153 47.2	N 3	15.8	306 54.8	N 7	07.4
	13	345 00.2	331 12.5	N 6	23.6	5 09.8	S 9	34.5	168 49.9	N 3	15.9	321 57.0	N 7	07.5
	14	0 02.7	346 12.4	N 6	24.9	20 10.4	S 9	33.8	183 52.6	N 3	16.0	336 59.3	N 7	07.6
	15	15 05.2	1 12.3	N 6	26.2	35 11.0	S 9	33.0	198 55.3	N 3	16.2	352 01.5	N 7	07.7
	16	30 07.6	16 12.2	N 6	27.4	50 11.6	S 9	32.3	213 58.1	N 3	16.3	7 03.8	N 7	07.8
	17	45 10.1	31 12.1	N 6	28.7	65 12.2	S 9	31.5	229 00.8	N 3	16.4	22 06.0	N 7	07.9
	18	60 12.5	46 12.0	N 6	30.0	80 12.8	S 9	30.8	244 03.5	N 3	16.5	37 08.3	N 7	08.0
	19	75 15.0	61 11.9	N 6	31.3	95 13.4	S 9	30.0	259 06.2	N 3	16.6	52 10.5	N 7	08.1
	20	90 17.5	76 11.8	N 6	32.5	110 14.0	S 9	29.3	274 08.9	N 3	16.7	67 12.8	N 7	08.2
	21	105 19.9	91 11.7	N 6	33.8	125 14.7	S 9	28.5	289 11.6	N 3	16.9	82 15.0	N 7	08.3
	22	120 22.4	106 11.6	N 6	35.1	140 15.3	S 9	27.8	304 14.3	N 3	17.0	97 17.2	N 7	08.4
	23	135 24.9	121 11.5	N 6	36.3	155 15.9	S 9	27.0	319 17.1	N 3	17.1	112 19.5	N 7	08.5
			v -0.1	d	1.3	v 0.6	d	0.7	v 2.7	d	0.1	v 2.3	d	0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
18	0	176 30.8	S11 52.5		263 26.1	8.3	S25 41.4	4.0	56.3
	1	191 30.8	S11 51.6		277 53.4	8.3	S25 45.3	3.9	56.3
	2	206 30.9	S11 50.7		292 20.7	8.3	S25 49.0	3.7	56.3
	3	221 30.9	S11 49.8		306 48.1	8.3	S25 52.5	3.6	56.2
	4	236 31.0	S11 48.9		321 15.4	8.3	S25 56.0	3.4	56.2
F	5	251 31.0	S11 48.1		335 42.7	8.3	S25 59.2	3.3	56.2
R									
I	6	266 31.1	S11 47.2		350 10.0	8.3	S26 02.4	3.1	56.2
D	7	281 31.1	S11 46.3		4 37.4	8.3	S26 05.3	3.0	56.1
A	8	296 31.2	S11 45.4		19 04.7	8.3	S26 08.2	2.8	56.1
Y	9	311 31.2	S11 44.5		33 32.1	8.4	S26 10.9	2.7	56.1
	10	326 31.3	S11 43.7		47 59.4	8.4	S26 13.4	2.6	56.0
	11	341 31.3	S11 42.8		62 26.8	8.4	S26 15.8	2.4	56.0
	12	356 31.4	S11 41.9		76 54.2	8.4	S26 18.1	2.3	56.0
	13	11 31.4	S11 41.0		91 21.6	8.4	S26 20.2	2.1	55.9
	14	26 31.5	S11 40.1		105 49.0	8.4	S26 22.2	2.0	55.9
	15	41 31.5	S11 39.3		120 16.5	8.4	S26 24.0	1.8	55.9
	16	56 31.6	S11 38.4		134 43.9	8.5	S26 25.7	1.7	55.9
	17	71 31.6	S11 37.5		149 11.4	8.5	S26 27.3	1.5	55.8
	18	86 31.7	S11 36.6		163 38.9	8.5	S26 28.7	1.4	55.8
	19	101 31.7	S11 35.7		178 06.4	8.5	S26 29.9	1.3	55.8
	20	116 31.8	S11 34.8		192 33.9	8.5	S26 31.0	1.1	55.7
	21	131 31.8	S11 34.0		207 01.5	8.6	S26 32.0	1.0	55.7
	22	146 31.9	S11 33.1		221 29.1	8.6	S26 32.8	0.8	55.7
	23	161 31.9	S11 32.2		235 56.7	8.6	S26 33.5	0.7	55.7
19	0	176 32.0	S11 31.3		250 24.3	8.6	S26 34.0	0.5	55.6
	1	191 32.0	S11 30.4		264 51.9	8.7	S26 34.4	0.4	55.6
	2	206 32.1	S11 29.5		279 19.6	8.7	S26 34.7	0.3	55.6
	3	221 32.1	S11 28.6		293 47.3	8.7	S26 34.8	0.1	55.5
	4	236 32.2	S11 27.8		308 15.1	8.7	S26 34.8	0.0	55.5
S	5	251 32.2	S11 26.9		322 42.9	8.8	S26 34.7	0.2	55.5
A									
T	6	266 32.3	S11 26.0		337 10.7	8.8	S26 34.4	0.3	55.5
U	7	281 32.4	S11 25.1		351 38.5	8.8	S26 33.9	0.4	55.4
R	8	296 32.4	S11 24.2		6 06.4	8.9	S26 33.3	0.6	55.4
D	9	311 32.5	S11 23.3		20 34.3	8.9	S26 32.6	0.7	55.4
A	10	326 32.5	S11 22.4		35 02.2	8.9	S26 31.8	0.9	55.4
Y	11	341 32.6	S11 21.5		49 30.2	9.0	S26 30.8	1.0	55.3
	12	356 32.6	S11 20.7		63 58.3	9.0	S26 29.6	1.1	55.3
	13	11 32.7	S11 19.8		78 26.3	9.1	S26 28.4	1.3	55.3
	14	26 32.8	S11 18.9		92 54.4	9.1	S26 27.0	1.4	55.3
	15	41 32.8	S11 18.0		107 22.6	9.1	S26 25.4	1.5	55.3
	16	56 32.9	S11 17.1		121 50.8	9.2	S26 23.8	1.7	55.2
	17	71 32.9	S11 16.2		136 19.0	9.2	S26 22.0	1.8	55.2
	18	86 33.0	S11 15.3		150 47.3	9.3	S26 20.0	1.9	55.2
	19	101 33.0	S11 14.4		165 15.6	9.3	S26 18.0	2.1	55.2
	20	116 33.1	S11 13.5		179 44.0	9.4	S26 15.7	2.2	55.1
	21	131 33.2	S11 12.6		194 12.4	9.4	S26 13.4	2.3	55.1
	22	146 33.2	S11 11.7		208 40.8	9.5	S26 10.9	2.5	55.1
	23	161 33.3	S11 10.9		223 09.4	9.5	S26 08.3	2.6	55.1
20	0	176 33.3	S11 10.0		237 37.9	9.6	S26 05.6	2.7	55.0
	1	191 33.4	S11 09.1		252 06.5	9.6	S26 02.7	2.9	55.0
	2	206 33.5	S11 08.2		266 35.2	9.7	S25 59.8	3.0	55.0
	3	221 33.5	S11 07.3		281 03.9	9.7	S25 56.6	3.1	55.0
	4	236 33.6	S11 06.4		295 32.7	9.8	S25 53.4	3.2	55.0
S	5	251 33.7	S11 05.5		310 01.5	9.8	S25 50.0	3.4	54.9
U									
N	6	266 33.7	S11 04.6		324 30.4	9.9	S25 46.5	3.5	54.9
D	7	281 33.8	S11 03.7		338 59.3	9.9	S25 42.9	3.6	54.9
A	8	296 33.8	S11 02.8		353 28.3	10.0	S25 39.1	3.8	54.9
Y	9	311 33.9	S11 01.9		7 57.4	10.0	S25 35.3	3.9	54.9
	10	326 34.0	S11 01.0		22 26.5	10.1	S25 31.3	4.0	54.8
	11	341 34.0	S11 00.1		36 55.6	10.2	S25 27.1	4.1	54.8
	12	356 34.1	S10 59.2		51 24.9	10.2	S25 22.9	4.2	54.8
	13	11 34.2	S10 58.3		65 54.2	10.3	S25 18.5	4.4	54.8
	14	26 34.2	S10 57.4		80 23.5	10.3	S25 14.1	4.5	54.8
	15	41 34.3	S10 56.5		94 52.9	10.4	S25 09.4	4.6	54.8
	16	56 34.3	S10 55.6		109 22.4	10.5	S25 04.7	4.7	54.7
	17	71 34.4	S10 54.7		123 51.9	10.5	S24 59.9	4.8	54.7
	18	86 34.5	S10 53.8		138 21.5	10.6	S24 54.9	5.0	54.7
	19	101 34.5	S10 52.9		152 51.1	10.6	S24 49.8	5.1	54.7
	20	116 34.6	S10 52.0		167 20.8	10.7	S24 44.6	5.2	54.7
	21	131 34.7	S10 51.1		181 50.6	10.8	S24 39.3	5.3	54.6
	22	146 34.7	S10 50.2		196 20.4	10.8	S24 33.9	5.4	54.6
	23	161 34.8	S10 49.3		210 50.3	10.9	S24 28.4	5.5	54.6
		S.D. 16.2	d 0.9		S.D. 15.3		15.1	14.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.9	S40 11.7
Achernar	335 18.6	S57 05.8
Acrux	172 56.6	S63 15.2
Adhara	255 03.6	S29 00.8
Albireo	67 02.3	N28 01.0
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.3	N55 48.1
Alkaid	152 49.8	N49 10.0
Al Na-ir	27 30.1	S46 49.5
Alnilam	275 35.0	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.5	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.7	N 8 56.5
Ankaa	353 05.0	S42 09.3
Antares	112 12.7	S26 29.6
Arcturus	145 45.4	N19 01.9
Atria	107 04.9	S69 04.4
Avior	234 13.0	S59 36.2
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.1	N 7 24.6
Canopus	263 50.9	S52 42.9
Capella	280 17.9	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.5	N45 22.8
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.2	N61 35.7
Elnath	277 58.5	N28 37.9
Eltanin	90 41.3	N51 28.8
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.3	S57 16.2
Gienah	175 40.7	S17 42.0
Hadar	148 32.1	S60 30.4
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.4	S34 22.2
Kochab	137 19.8	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.4	S36 30.5
Miaplacidus	221 36.7	S69 50.1
Mirfak	308 24.6	N49 57.9
Nunki	75 44.8	S26 15.6
Peacock	53 02.2	S56 38.6
Polaris	315 40.0	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.3	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.3	S 8 10.3
Rigil Kent	139 36.7	S60 56.9
Sabik	101 60.0	S15 45.6
Schedar	349 28.5	N56 41.7
Shaula	96 07.0	S37 07.4
Sirius	258 23.7	S16 45.5
Spica	158 19.4	S11 18.6
Suhail	222 43.9	S43 33.0
Vega	80 31.7	N38 48.3
Zuben-ubi	136 54.0	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
21	0	150 27.3	136 11.4	N 6	37.6	170 16.5	S 9	26.3	334 19.8	N 3	17.2	127 21.7	N 7	08.6
	1	165 29.8	151 11.3	N 6	38.9	185 17.1	S 9	25.5	349 22.5	N 3	17.3	142 24.0	N 7	08.7
	2	180 32.3	166 11.2	N 6	40.2	200 17.7	S 9	24.8	4 25.2	N 3	17.4	157 26.2	N 7	08.7
	3	195 34.7	181 11.1	N 6	41.4	215 18.3	S 9	24.0	19 27.9	N 3	17.5	172 28.5	N 7	08.8
	4	210 37.2	196 11.0	N 6	42.7	230 18.9	S 9	23.3	34 30.6	N 3	17.7	187 30.7	N 7	08.9
M	5	225 39.6	211 10.9	N 6	44.0	245 19.6	S 9	22.5	49 33.4	N 3	17.8	202 33.0	N 7	09.0
O														
N	6	240 42.1	226 10.8	N 6	45.2	260 20.2	S 9	21.7	64 36.1	N 3	17.9	217 35.2	N 7	09.1
D	7	255 44.6	241 10.7	N 6	46.5	275 20.8	S 9	21.0	79 38.8	N 3	18.0	232 37.5	N 7	09.2
A	8	270 47.0	256 10.6	N 6	47.8	290 21.4	S 9	20.2	94 41.5	N 3	18.1	247 39.7	N 7	09.3
Y	9	285 49.5	271 10.5	N 6	49.0	305 22.0	S 9	19.5	109 44.2	N 3	18.2	262 42.0	N 7	09.4
	10	300 52.0	286 10.4	N 6	50.3	320 22.6	S 9	18.7	124 46.9	N 3	18.4	277 44.2	N 7	09.5
	11	315 54.4	301 10.3	N 6	51.6	335 23.2	S 9	18.0	139 49.7	N 3	18.5	292 46.5	N 7	09.6
	12	330 56.9	316 10.2	N 6	52.8	350 23.9	S 9	17.2	154 52.4	N 3	18.6	307 48.7	N 7	09.7
	13	345 59.4	331 10.1	N 6	54.1	5 24.5	S 9	16.5	169 55.1	N 3	18.7	322 50.9	N 7	09.8
	14	1 01.8	346 10.0	N 6	55.4	20 25.1	S 9	15.7	184 57.8	N 3	18.8	337 53.2	N 7	09.9
	15	16 04.3	1 09.9	N 6	56.7	35 25.7	S 9	15.0	200 00.5	N 3	19.0	352 55.4	N 7	10.0
	16	31 06.8	16 09.8	N 6	57.9	50 26.3	S 9	14.2	215 03.2	N 3	19.1	7 57.7	N 7	10.1
	17	46 09.2	31 09.7	N 6	59.2	65 26.9	S 9	13.5	230 06.0	N 3	19.2	22 59.9	N 7	10.2
	18	61 11.7	46 09.6	N 7	00.5	80 27.5	S 9	12.7	245 08.7	N 3	19.3	38 02.2	N 7	10.3
	19	76 14.1	61 09.5	N 7	01.7	95 28.2	S 9	12.0	260 11.4	N 3	19.4	53 04.4	N 7	10.3
	20	91 16.6	76 09.4	N 7	03.0	110 28.8	S 9	11.2	275 14.1	N 3	19.5	68 06.7	N 7	10.4
	21	106 19.1	91 09.3	N 7	04.3	125 29.4	S 9	10.5	290 16.8	N 3	19.7	83 08.9	N 7	10.5
	22	121 21.5	106 09.2	N 7	05.5	140 30.0	S 9	09.7	305 19.6	N 3	19.8	98 11.1	N 7	10.6
	23	136 24.0	121 09.1	N 7	06.8	155 30.6	S 9	09.0	320 22.3	N 3	19.9	113 13.4	N 7	10.7
22	0	151 26.5	136 09.0	N 7	08.0	170 31.2	S 9	08.2	335 25.0	N 3	20.0	128 15.6	N 7	10.8
	1	166 28.9	151 08.9	N 7	09.3	185 31.9	S 9	07.4	350 27.7	N 3	20.1	143 17.9	N 7	10.9
	2	181 31.4	166 08.8	N 7	10.6	200 32.5	S 9	06.7	5 30.4	N 3	20.2	158 20.1	N 7	11.0
	3	196 33.9	181 08.7	N 7	11.8	215 33.1	S 9	05.9	20 33.2	N 3	20.4	173 22.4	N 7	11.1
	4	211 36.3	196 08.6	N 7	13.1	230 33.7	S 9	05.2	35 35.9	N 3	20.5	188 24.6	N 7	11.2
T	5	226 38.8	211 08.5	N 7	14.4	245 34.3	S 9	04.4	50 38.6	N 3	20.6	203 26.9	N 7	11.3
U														
E	6	241 41.3	226 08.4	N 7	15.6	260 34.9	S 9	03.7	65 41.3	N 3	20.7	218 29.1	N 7	11.4
S	7	256 43.7	241 08.3	N 7	16.9	275 35.6	S 9	02.9	80 44.0	N 3	20.8	233 31.3	N 7	11.5
D	8	271 46.2	256 08.2	N 7	18.2	290 36.2	S 9	02.2	95 46.8	N 3	21.0	248 33.6	N 7	11.6
A	9	286 48.6	271 08.1	N 7	19.4	305 36.8	S 9	01.4	110 49.5	N 3	21.1	263 35.8	N 7	11.7
Y	10	301 51.1	286 08.0	N 7	20.7	320 37.4	S 9	00.7	125 52.2	N 3	21.2	278 38.1	N 7	11.8
	11	316 53.6	301 07.9	N 7	21.9	335 38.0	S 8	59.9	140 54.9	N 3	21.3	293 40.3	N 7	11.9
	12	331 56.0	316 07.8	N 7	23.2	350 38.6	S 8	59.1	155 57.7	N 3	21.4	308 42.6	N 7	12.0
	13	346 58.5	331 07.7	N 7	24.5	5 39.3	S 8	58.4	171 00.4	N 3	21.5	323 44.8	N 7	12.1
	14	2 01.0	346 07.6	N 7	25.7	20 39.9	S 8	57.6	186 03.1	N 3	21.7	338 47.0	N 7	12.1
	15	17 03.4	1 07.5	N 7	27.0	35 40.5	S 8	56.9	201 05.8	N 3	21.8	353 49.3	N 7	12.2
	16	32 05.9	16 07.4	N 7	28.3	50 41.1	S 8	56.1	216 08.5	N 3	21.9	8 51.5	N 7	12.3
	17	47 08.4	31 07.3	N 7	29.5	65 41.7	S 8	55.4	231 11.3	N 3	22.0	23 53.8	N 7	12.4
	18	62 10.8	46 07.2	N 7	30.8	80 42.4	S 8	54.6	246 14.0	N 3	22.1	38 56.0	N 7	12.5
	19	77 13.3	61 07.1	N 7	32.0	95 43.0	S 8	53.8	261 16.7	N 3	22.3	53 58.3	N 7	12.6
	20	92 15.8	76 07.0	N 7	33.3	110 43.6	S 8	53.1	276 19.4	N 3	22.4	69 00.5	N 7	12.7
	21	107 18.2	91 06.9	N 7	34.6	125 44.2	S 8	52.3	291 22.2	N 3	22.5	84 02.7	N 7	12.8
	22	122 20.7	106 06.8	N 7	35.8	140 44.8	S 8	51.6	306 24.9	N 3	22.6	99 05.0	N 7	12.9
	23	137 23.1	121 06.7	N 7	37.1	155 45.5	S 8	50.8	321 27.6	N 3	22.7	114 07.2	N 7	13.0
23	0	152 25.6	136 06.7	N 7	38.3	170 46.1	S 8	50.1	336 30.3	N 3	22.9	129 09.5	N 7	13.1
	1	167 28.1	151 06.6	N 7	39.6	185 46.7	S 8	49.3	351 33.0	N 3	23.0	144 11.7	N 7	13.2
	2	182 30.5	166 06.5	N 7	40.8	200 47.3	S 8	48.5	6 35.8	N 3	23.1	159 13.9	N 7	13.3
	3	197 33.0	181 06.4	N 7	42.1	215 47.9	S 8	47.8	21 38.5	N 3	23.2	174 16.2	N 7	13.4
	4	212 35.5	196 06.3	N 7	43.4	230 48.6	S 8	47.0	36 41.2	N 3	23.3	189 18.4	N 7	13.5
W	5	227 37.9	211 06.2	N 7	44.6	245 49.2	S 8	46.3	51 43.9	N 3	23.5	204 20.7	N 7	13.6
E														
D	6	242 40.4	226 06.1	N 7	45.9	260 49.8	S 8	45.5	66 46.7	N 3	23.6	219 22.9	N 7	13.7
N	7	257 42.9	241 06.0	N 7	47.1	275 50.4	S 8	44.8	81 49.4	N 3	23.7	234 25.2	N 7	13.8
E	8	272 45.3	256 05.9	N 7	48.4	290 51.0	S 8	44.0	96 52.1	N 3	23.8	249 27.4	N 7	13.9
S	9	287 47.8	271 05.8	N 7	49.6	305 51.7	S 8	43.2	111 54.8	N 3	23.9	264 29.6	N 7	14.0
D	10	302 50.2	286 05.7	N 7	50.9	320 52.3	S 8	42.5	126 57.6	N 3	24.1	279 31.9	N 7	14.1
A	11	317 52.7	301 05.6	N 7	52.1	335 52.9	S 8	41.7	142 00.3	N 3	24.2	294 34.1	N 7	14.2
Y														
	12	332 55.2	316 05.5	N 7	53.4	350 53.5	S 8	41.0	157 03.0	N 3	24.3	309 36.4	N 7	14.2
	13	347 57.6	331 05.4	N 7	54.7	5 54.1	S 8	40.2	172 05.7	N 3	24.4	324 38.6	N 7	14.3
	14	3 00.1	346 05.3	N 7	55.9	20 54.8	S 8	39.4	187 08.5	N 3	24.5	339 40.8	N 7	14.4
	15	18 02.6	1 05.2	N 7	57.2	35 55.4	S 8	38.7	202 11.2	N 3	24.7	354 43.1	N 7	14.5
	16	33 05.0	16 05.1	N 7	58.4	50 56.0	S 8	37.9	217 13.9	N 3	24.8	9 45.3	N 7	14.6
	17	48 07.5	31 05.0	N 7	59.7	65 56.6	S 8	37.2	232 16.7	N 3	24.9	24 47.6	N 7	14.7
	18	63 10.0	46 04.9	N 8	00.9	80 57.3	S 8	36.4	247 19.4	N 3	25.0	39 49.8	N 7	14.8
	19	78 12.4	61 04.8	N 8	02.2	95 57.9	S 8	35.6	262 22.1	N 3	25.1	54 52.0	N 7	14.9
	20	93 14.9	76 04.7	N 8	03.4	110 58.5	S 8	34.9	277 24.8	N 3	25.3	69 54.3	N 7	15.0
	21	108 17.4	91 04.6	N 8	04.7	125 59.1	S 8	34.1	292 27.6	N 3	25.4	84 56.5	N 7	15.1
	22	123 19.8	106 04.5	N 8	05.9	140 59.7	S 8	33.4	307 30.3	N 3	25.5	99 58.7	N 7	15.2
	23	138 22.3	121 04.5	N 8	07.2	156 00.4	S 8	32.6	322 33.0	N 3	25.6	115 01.0	N 7	15.3
			v -0.1	d	1.3	v 0.6	d	0.8	v 2.7	d	0.1	v 2.2	d	0.1

G.M.T		SUN			MOON						STARS		
d	h	GHA	Dec		GHA	v	Dec	d	HP		Name	SHA	Dec
		° '	° '		° '	'	° '	'	'			° '	° '
21	0	176 34.9	S10 48.4		225 20.3	11.0	S24 22.7	5.7	54.6		Acamar	315 09.9	S40 11.7
	1	191 34.9	S10 47.5		239 50.3	11.0	S24 16.9	5.8	54.6		Achernar	335 18.7	S57 05.8
	2	206 35.0	S10 46.6		254 20.4	11.1	S24 11.1	5.9	54.6		Acrux	172 56.6	S63 15.3
	3	221 35.1	S10 45.7		268 50.6	11.2	S24 05.1	6.0	54.6		Adhara	255 03.6	S29 00.9
	4	236 35.1	S10 44.8		283 20.8	11.2	S23 59.0	6.1	54.5		Albireo	67 02.3	N28 01.0
M	5	251 35.2	S10 43.9		297 51.1	11.3	S23 52.8	6.2	54.5				
O											Aldebaran	290 36.6	N16 33.9
N	6	266 35.3	S10 43.0		312 21.5	11.4	S23 46.5	6.3	54.5		Alioth	166 10.3	N55 48.1
D	7	281 35.4	S10 42.1		326 51.9	11.4	S23 40.0	6.4	54.5		Alkaid	152 49.7	N49 10.0
A	8	296 35.4	S10 41.2		341 22.4	11.5	S23 33.5	6.5	54.5		Al Na-ir	27 30.1	S46 49.5
Y	9	311 35.5	S10 40.3		355 53.0	11.6	S23 26.9	6.6	54.5		Alnilam	275 35.0	S 1 11.2
	10	326 35.6	S10 39.4		10 23.6	11.6	S23 20.1	6.7	54.4				
	11	341 35.6	S10 38.5		24 54.3	11.7	S23 13.3	6.8	54.4		Alphard	217 44.9	S 8 47.1
											Alphecca	126 01.5	N26 36.9
	12	356 35.7	S10 37.6		39 25.1	11.8	S23 06.4	6.9	54.4		Alpheratz	357 32.4	N29 14.9
	13	11 35.8	S10 36.7		53 55.9	11.8	S22 59.3	7.0	54.4		Altair	61 57.7	N 8 56.5
	14	26 35.8	S10 35.8		68 26.8	11.9	S22 52.2	7.1	54.4		Ankaa	353 05.0	S42 09.3
	15	41 35.9	S10 34.9		82 57.8	12.0	S22 44.9	7.2	54.4				
	16	56 36.0	S10 34.0		97 28.8	12.0	S22 37.6	7.3	54.4		Antares	112 12.7	S26 29.7
	17	71 36.1	S10 33.1		111 59.9	12.1	S22 30.1	7.4	54.4		Arcturus	145 45.4	N19 01.9
											Atria	107 04.8	S69 04.5
	18	86 36.1	S10 32.2		126 31.1	12.2	S22 22.6	7.5	54.3		Avior	234 13.1	S59 36.2
	19	101 36.2	S10 31.3		141 02.3	12.2	S22 14.9	7.6	54.3		Bellatrix	278 20.0	N 6 22.4
	20	116 36.3	S10 30.4		155 33.6	12.3	S22 07.2	7.7	54.3				
	21	131 36.3	S10 29.5		170 05.0	12.4	S21 59.4	7.8	54.3		Betelgeuse	270 49.1	N 7 24.6
	22	146 36.4	S10 28.6		184 36.5	12.4	S21 51.4	7.9	54.3		Canopus	263 50.9	S52 42.9
	23	161 36.5	S10 27.7		199 08.0	12.5	S21 43.4	8.0	54.3		Capella	280 17.9	N46 01.7
											Castor	245 53.5	N31 49.5
22	0	176 36.6	S10 26.8		213 39.6	12.6	S21 35.3	8.1	54.3		Deneb	49 24.4	N45 22.7
	1	191 36.6	S10 25.8		228 11.2	12.6	S21 27.1	8.2	54.3				
	2	206 36.7	S10 24.9		242 42.9	12.7	S21 18.8	8.3	54.3		Denebola	182 22.0	N14 24.6
	3	221 36.8	S10 24.0		257 14.7	12.8	S21 10.4	8.4	54.2		Diphda	348 45.0	S17 50.0
	4	236 36.9	S10 23.1		271 46.6	12.9	S21 01.9	8.5	54.2		Dubhe	193 37.2	N61 35.7
T	5	251 36.9	S10 22.2		286 18.5	12.9	S20 53.4	8.6	54.2		Elnath	277 58.5	N28 37.9
U											Eltanin	90 41.2	N51 28.8
E	6	266 37.0	S10 21.3		300 50.5	13.0	S20 44.7	8.7	54.2				
S	7	281 37.1	S10 20.4		315 22.5	13.1	S20 36.0	8.7	54.2		Enif	33 36.5	N10 00.2
D	8	296 37.2	S10 19.5		329 54.7	13.1	S20 27.1	8.8	54.2		Fomalhaut	15 12.0	S29 28.4
A	9	311 37.2	S10 18.6		344 26.8	13.2	S20 18.2	8.9	54.2		Gacrux	171 48.3	S57 16.3
Y	10	326 37.3	S10 17.7		358 59.1	13.3	S20 09.2	9.0	54.2		Gienah	175 40.6	S17 42.0
	11	341 37.4	S10 16.8		13 31.4	13.3	S20 00.2	9.1	54.2		Hadar	148 32.0	S60 30.4
	12	356 37.5	S10 15.8		28 03.8	13.4	S19 51.0	9.2	54.2		Hamal	327 48.5	N23 35.8
	13	11 37.6	S10 14.9		42 36.2	13.4	S19 41.8	9.2	54.1		Kaus Austr.	83 29.3	S34 22.2
	14	26 37.6	S10 14.0		57 08.8	13.5	S19 32.4	9.3	54.1		Kochab	137 19.8	N74 02.0
	15	41 37.7	S10 13.1		71 41.3	13.6	S19 23.0	9.4	54.1		Markab	13 27.6	N15 21.4
	16	56 37.8	S10 12.2		86 14.0	13.6	S19 13.5	9.5	54.1		Menkar	314 03.5	N 4 12.0
	17	71 37.9	S10 11.3		100 46.7	13.7	S19 04.0	9.6	54.1				
											Menkent	147 54.4	S36 30.6
	18	86 37.9	S10 10.4		115 19.5	13.8	S18 54.4	9.6	54.1		Miaplacidus	221 36.7	S69 50.1
	19	101 38.0	S10 09.5		129 52.3	13.8	S18 44.6	9.7	54.1		Mirfak	308 24.7	N49 57.9
	20	116 38.1	S10 08.6		144 25.2	13.9	S18 34.9	9.8	54.1		Nunki	75 44.8	S26 15.6
	21	131 38.2	S10 07.6		158 58.1	14.0	S18 25.0	9.9	54.1		Peacock	53 02.2	S56 38.5
	22	146 38.3	S10 06.7		173 31.2	14.0	S18 15.1	9.9	54.1				
	23	161 38.3	S10 05.8		188 04.2	14.1	S18 05.0	10.0	54.1		Polaris	315 41.0	N89 22.7
											Pollux	243 13.9	N27 57.4
23	0	176 38.4	S10 04.9		202 37.4	14.1	S17 55.0	10.1	54.1		Procyon	244 47.9	N 5 09.0
	1	191 38.5	S10 04.0		217 10.6	14.2	S17 44.8	10.2	54.1		Rasalhague	95 56.3	N12 32.2
	2	206 38.6	S10 03.1		231 43.9	14.3	S17 34.6	10.2	54.1		Regulus	207 31.4	N11 49.6
	3	221 38.7	S10 02.2		246 17.2	14.3	S17 24.3	10.3	54.0				
	4	236 38.7	S10 01.2		260 50.6	14.4	S17 13.9	10.4	54.0		Rigel	281 01.3	S 8 10.3
W	5	251 38.8	S10 00.3		275 24.0	14.4	S17 03.5	10.4	54.0		Rigil Kent	139 36.6	S60 56.9
E											Sabik	101 59.9	S15 45.6
D	6	266 38.9	S 9 59.4		289 57.5	14.5	S16 53.0	10.5	54.0		Schedar	349 28.5	N56 41.7
N	7	281 39.0	S 9 58.5		304 31.1	14.6	S16 42.5	10.6	54.0		Shaula	96 07.0	S37 07.4
E	8	296 39.1	S 9 57.6		319 04.7	14.6	S16 31.8	10.6	54.0				
S	9	311 39.2	S 9 56.7		333 38.3	14.7	S16 21.1	10.7	54.0		Sirius	258 23.8	S16 45.5
D	10	326 39.2	S 9 55.8		348 12.1	14.7	S16 10.4	10.8	54.0		Spica	158 19.4	S11 18.7
A	11	341 39.3	S 9 54.8		2 45.9	14.8	S15 59.6	10.8	54.0		Suhail	222 43.9	S43 33.0
Y											Vega	80 31.7	N38 48.3
	12	356 39.4	S 9 53.9		17 19.7	14.8	S15 48.7	10.9	54.0		Zuben-ubi	136 54.0	S16 09.6
	13	11 39.5	S 9 53.0		31 53.6	14.9	S15 37.8	10.9	54.0				
	14	26 39.6	S 9 52.1		46 27.5	14.9	S15 26.8	11.0	54.0				
	15	41 39.7	S 9 51.2		61 01.5	15.0	S15 15.7	11.1	54.0				
	16	56 39.7	S 9 50.2		75 35.6	15.1	S15 04.6	11.1	54.0				
	17	71 39.8	S 9 49.3		90 09.7	15.1	S14 53.4	11.2	54.0				
	18	86 39.9	S 9 48.4		104 43.8	15.2	S14 42.2	11.2	54.0				
	19	101 40.0	S 9 47.5		119 18.0	15.2	S14 30.9	11.3	54.0				
	20	116 40.1	S 9 46.6		133 52.3	15.3	S14 19.5	11.3	54.0				
	21	131 40.2	S 9 45.7		148 26.6	15.3	S14 08.1	11.4	54.0				
	22	146 40.2	S 9 44.7		163 01.0	15.4	S13 56.7	11.5	54.0				
	23	161 40.3	S 9 43.8		177 35.4	15.4	S13 45.2	11.5	54.0				
		S.D. 16.2	d 0.9		S.D. 14.8		14.8		14.7				

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
24	0	153 24.7	136 04.4	N 8 08.4	171 01.0	S 8 31.8	337 35.7	N 3 25.7	130 03.2	N 7 15.4
	1	168 27.2	151 04.3	N 8 09.7	186 01.6	S 8 31.1	352 38.5	N 3 25.9	145 05.5	N 7 15.5
	2	183 29.7	166 04.2	N 8 10.9	201 02.2	S 8 30.3	7 41.2	N 3 26.0	160 07.7	N 7 15.6
	3	198 32.1	181 04.1	N 8 12.2	216 02.9	S 8 29.6	22 43.9	N 3 26.1	175 09.9	N 7 15.7
	4	213 34.6	196 04.0	N 8 13.4	231 03.5	S 8 28.8	37 46.7	N 3 26.2	190 12.2	N 7 15.8
THU	5	228 37.1	211 03.9	N 8 14.7	246 04.1	S 8 28.0	52 49.4	N 3 26.3	205 14.4	N 7 15.9
	6	243 39.5	226 03.8	N 8 15.9	261 04.7	S 8 27.3	67 52.1	N 3 26.5	220 16.7	N 7 16.0
	7	258 42.0	241 03.7	N 8 17.2	276 05.4	S 8 26.5	82 54.8	N 3 26.6	235 18.9	N 7 16.1
	8	273 44.5	256 03.6	N 8 18.4	291 06.0	S 8 25.8	97 57.6	N 3 26.7	250 21.1	N 7 16.2
	9	288 46.9	271 03.5	N 8 19.7	306 06.6	S 8 25.0	113 00.3	N 3 26.8	265 23.4	N 7 16.3
	10	303 49.4	286 03.4	N 8 20.9	321 07.2	S 8 24.2	128 03.0	N 3 26.9	280 25.6	N 7 16.4
	11	318 51.9	301 03.3	N 8 22.2	336 07.9	S 8 23.5	143 05.8	N 3 27.1	295 27.8	N 7 16.5
	12	333 54.3	316 03.2	N 8 23.4	351 08.5	S 8 22.7	158 08.5	N 3 27.2	310 30.1	N 7 16.6
	13	348 56.8	331 03.1	N 8 24.7	6 09.1	S 8 22.0	173 11.2	N 3 27.3	325 32.3	N 7 16.7
	14	3 59.2	346 03.0	N 8 25.9	21 09.7	S 8 21.2	188 13.9	N 3 27.4	340 34.6	N 7 16.8
	15	19 01.7	1 03.0	N 8 27.2	36 10.4	S 8 20.4	203 16.7	N 3 27.6	355 36.8	N 7 16.8
	16	34 04.2	16 02.9	N 8 28.4	51 11.0	S 8 19.7	218 19.4	N 3 27.7	10 39.0	N 7 16.9
	17	49 06.6	31 02.8	N 8 29.7	66 11.6	S 8 18.9	233 22.1	N 3 27.8	25 41.3	N 7 17.0
	18	64 09.1	46 02.7	N 8 30.9	81 12.2	S 8 18.1	248 24.9	N 3 27.9	40 43.5	N 7 17.1
	19	79 11.6	61 02.6	N 8 32.2	96 12.9	S 8 17.4	263 27.6	N 3 28.0	55 45.7	N 7 17.2
	20	94 14.0	76 02.5	N 8 33.4	111 13.5	S 8 16.6	278 30.3	N 3 28.2	70 48.0	N 7 17.3
	21	109 16.5	91 02.4	N 8 34.6	126 14.1	S 8 15.9	293 33.1	N 3 28.3	85 50.2	N 7 17.4
	22	124 19.0	106 02.3	N 8 35.9	141 14.7	S 8 15.1	308 35.8	N 3 28.4	100 52.5	N 7 17.5
	23	139 21.4	121 02.2	N 8 37.1	156 15.4	S 8 14.3	323 38.5	N 3 28.5	115 54.7	N 7 17.6
25	0	154 23.9	136 02.1	N 8 38.4	171 16.0	S 8 13.6	338 41.3	N 3 28.7	130 56.9	N 7 17.7
	1	169 26.3	151 02.0	N 8 39.6	186 16.6	S 8 12.8	353 44.0	N 3 28.8	145 59.2	N 7 17.8
	2	184 28.8	166 01.9	N 8 40.9	201 17.2	S 8 12.0	8 46.7	N 3 28.9	161 01.4	N 7 17.9
	3	199 31.3	181 01.8	N 8 42.1	216 17.9	S 8 11.3	23 49.4	N 3 29.0	176 03.6	N 7 18.0
	4	214 33.7	196 01.7	N 8 43.3	231 18.5	S 8 10.5	38 52.2	N 3 29.1	191 05.9	N 7 18.1
FRI	5	229 36.2	211 01.7	N 8 44.6	246 19.1	S 8 09.7	53 54.9	N 3 29.3	206 08.1	N 7 18.2
	6	244 38.7	226 01.6	N 8 45.8	261 19.7	S 8 09.0	68 57.6	N 3 29.4	221 10.3	N 7 18.3
	7	259 41.1	241 01.5	N 8 47.1	276 20.4	S 8 08.2	84 00.4	N 3 29.5	236 12.6	N 7 18.4
	8	274 43.6	256 01.4	N 8 48.3	291 21.0	S 8 07.5	99 03.1	N 3 29.6	251 14.8	N 7 18.5
	9	289 46.1	271 01.3	N 8 49.6	306 21.6	S 8 06.7	114 05.8	N 3 29.8	266 17.0	N 7 18.6
	10	304 48.5	286 01.2	N 8 50.8	321 22.3	S 8 05.9	129 08.6	N 3 29.9	281 19.3	N 7 18.7
	11	319 51.0	301 01.1	N 8 52.0	336 22.9	S 8 05.2	144 11.3	N 3 30.0	296 21.5	N 7 18.8
	12	334 53.5	316 01.0	N 8 53.3	351 23.5	S 8 04.4	159 14.0	N 3 30.1	311 23.8	N 7 18.9
	13	349 55.9	331 00.9	N 8 54.5	6 24.1	S 8 03.6	174 16.8	N 3 30.2	326 26.0	N 7 19.0
	14	4 58.4	346 00.8	N 8 55.8	21 24.8	S 8 02.9	189 19.5	N 3 30.4	341 28.2	N 7 19.1
	15	20 00.8	1 00.7	N 8 57.0	36 25.4	S 8 02.1	204 22.2	N 3 30.5	356 30.5	N 7 19.2
	16	35 03.3	16 00.7	N 8 58.2	51 26.0	S 8 01.3	219 25.0	N 3 30.6	11 32.7	N 7 19.3
	17	50 05.8	31 00.6	N 8 59.5	66 26.7	S 8 00.6	234 27.7	N 3 30.7	26 34.9	N 7 19.4
	18	65 08.2	46 00.5	N 9 00.7	81 27.3	S 7 59.8	249 30.4	N 3 30.9	41 37.2	N 7 19.5
	19	80 10.7	61 00.4	N 9 01.9	96 27.9	S 7 59.0	264 33.2	N 3 31.0	56 39.4	N 7 19.6
	20	95 13.2	76 00.3	N 9 03.2	111 28.5	S 7 58.3	279 35.9	N 3 31.1	71 41.6	N 7 19.7
	21	110 15.6	91 00.2	N 9 04.4	126 29.2	S 7 57.5	294 38.6	N 3 31.2	86 43.9	N 7 19.8
	22	125 18.1	106 00.1	N 9 05.7	141 29.8	S 7 56.7	309 41.4	N 3 31.4	101 46.1	N 7 19.9
	23	140 20.6	121 00.0	N 9 06.9	156 30.4	S 7 56.0	324 44.1	N 3 31.5	116 48.3	N 7 20.0
26	0	155 23.0	135 59.9	N 9 08.1	171 31.1	S 7 55.2	339 46.8	N 3 31.6	131 50.6	N 7 20.1
	1	170 25.5	150 59.8	N 9 09.4	186 31.7	S 7 54.4	354 49.6	N 3 31.7	146 52.8	N 7 20.2
	2	185 28.0	165 59.7	N 9 10.6	201 32.3	S 7 53.7	9 52.3	N 3 31.8	161 55.0	N 7 20.3
	3	200 30.4	180 59.7	N 9 11.8	216 32.9	S 7 52.9	24 55.1	N 3 32.0	176 57.3	N 7 20.4
	4	215 32.9	195 59.6	N 9 13.1	231 33.6	S 7 52.1	39 57.8	N 3 32.1	191 59.5	N 7 20.5
SAT	5	230 35.3	210 59.5	N 9 14.3	246 34.2	S 7 51.4	55 00.5	N 3 32.2	207 01.7	N 7 20.5
	6	245 37.8	225 59.4	N 9 15.5	261 34.8	S 7 50.6	70 03.3	N 3 32.3	222 04.0	N 7 20.6
	7	260 40.3	240 59.3	N 9 16.8	276 35.5	S 7 49.8	85 06.0	N 3 32.5	237 06.2	N 7 20.7
	8	275 42.7	255 59.2	N 9 18.0	291 36.1	S 7 49.1	100 08.7	N 3 32.6	252 08.4	N 7 20.8
	9	290 45.2	270 59.1	N 9 19.2	306 36.7	S 7 48.3	115 11.5	N 3 32.7	267 10.7	N 7 20.9
	10	305 47.7	285 59.0	N 9 20.5	321 37.4	S 7 47.5	130 14.2	N 3 32.8	282 12.9	N 7 21.0
	11	320 50.1	300 58.9	N 9 21.7	336 38.0	S 7 46.8	145 16.9	N 3 33.0	297 15.1	N 7 21.1
	12	335 52.6	315 58.9	N 9 22.9	351 38.6	S 7 46.0	160 19.7	N 3 33.1	312 17.4	N 7 21.2
	13	350 55.1	330 58.8	N 9 24.2	6 39.3	S 7 45.2	175 22.4	N 3 33.2	327 19.6	N 7 21.3
	14	5 57.5	345 58.7	N 9 25.4	21 39.9	S 7 44.5	190 25.1	N 3 33.3	342 21.8	N 7 21.4
	15	20 60.0	0 58.6	N 9 26.6	36 40.5	S 7 43.7	205 27.9	N 3 33.5	357 24.1	N 7 21.5
	16	36 02.4	15 58.5	N 9 27.8	51 41.2	S 7 42.9	220 30.6	N 3 33.6	12 26.3	N 7 21.6
	17	51 04.9	30 58.4	N 9 29.1	66 41.8	S 7 42.2	235 33.4	N 3 33.7	27 28.5	N 7 21.7
	18	66 07.4	45 58.3	N 9 30.3	81 42.4	S 7 41.4	250 36.1	N 3 33.8	42 30.8	N 7 21.8
	19	81 09.8	60 58.2	N 9 31.5	96 43.0	S 7 40.6	265 38.8	N 3 33.9	57 33.0	N 7 21.9
	20	96 12.3	75 58.1	N 9 32.8	111 43.7	S 7 39.9	280 41.6	N 3 34.1	72 35.2	N 7 22.0
	21	111 14.8	90 58.1	N 9 34.0	126 44.3	S 7 39.1	295 44.3	N 3 34.2	87 37.4	N 7 22.1
	22	126 17.2	105 58.0	N 9 35.2	141 44.9	S 7 38.3	310 47.0	N 3 34.3	102 39.7	N 7 22.2
	23	141 19.7	120 57.9	N 9 36.4	156 45.6	S 7 37.6	325 49.8	N 3 34.4	117 41.9	N 7 22.3
			v -0.1	d 1.2	v 0.6	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T d h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
24 0	176 40.4	S 9 42.9	192 09.8	15.4	S13 33.6	11.6	54.0
1	191 40.5	S 9 42.0	206 44.3	15.5	S13 22.0	11.6	54.0
2	206 40.6	S 9 41.1	221 18.8	15.5	S13 10.4	11.7	53.9
3	221 40.7	S 9 40.1	235 53.4	15.6	S12 58.7	11.7	53.9
4	236 40.8	S 9 39.2	250 28.1	15.6	S12 46.9	11.8	53.9
T 5	251 40.9	S 9 38.3	265 02.7	15.7	S12 35.1	11.8	53.9
H							
U 6	266 40.9	S 9 37.4	279 37.5	15.7	S12 23.2	11.9	53.9
R 7	281 41.0	S 9 36.4	294 12.2	15.8	S12 11.4	11.9	53.9
S 8	296 41.1	S 9 35.5	308 47.0	15.8	S11 59.4	11.9	53.9
D 9	311 41.2	S 9 34.6	323 21.9	15.8	S11 47.4	12.0	53.9
A 10	326 41.3	S 9 33.7	337 56.8	15.9	S11 35.4	12.0	53.9
Y 11	341 41.4	S 9 32.8	352 31.7	15.9	S11 23.3	12.1	53.9
12	356 41.5	S 9 31.8	7 06.6	16.0	S11 11.2	12.1	53.9
13	11 41.6	S 9 30.9	21 41.6	16.0	S10 59.0	12.2	53.9
14	26 41.7	S 9 30.0	36 16.7	16.0	S10 46.8	12.2	53.9
15	41 41.7	S 9 29.1	50 51.8	16.1	S10 34.6	12.2	53.9
16	56 41.8	S 9 28.1	65 26.9	16.1	S10 22.3	12.3	53.9
17	71 41.9	S 9 27.2	80 02.0	16.1	S10 10.0	12.3	53.9
18	86 42.0	S 9 26.3	94 37.2	16.2	S 9 57.6	12.4	53.9
19	101 42.1	S 9 25.4	109 12.4	16.2	S 9 45.2	12.4	53.9
20	116 42.2	S 9 24.4	123 47.6	16.2	S 9 32.8	12.4	53.9
21	131 42.3	S 9 23.5	138 22.9	16.3	S 9 20.4	12.5	53.9
22	146 42.4	S 9 22.6	152 58.2	16.3	S 9 07.9	12.5	53.9
23	161 42.5	S 9 21.7	167 33.6	16.3	S 8 55.3	12.5	53.9
25 0	176 42.6	S 9 20.7	182 08.9	16.4	S 8 42.8	12.6	53.9
1	191 42.7	S 9 19.8	196 44.3	16.4	S 8 30.2	12.6	53.9
2	206 42.8	S 9 18.9	211 19.8	16.4	S 8 17.5	12.6	53.9
3	221 42.9	S 9 18.0	225 55.2	16.5	S 8 04.9	12.7	53.9
4	236 42.9	S 9 17.0	240 30.7	16.5	S 7 52.2	12.7	53.9
F 5	251 43.0	S 9 16.1	255 06.2	16.5	S 7 39.5	12.7	53.9
R							
I 6	266 43.1	S 9 15.2	269 41.7	16.5	S 7 26.7	12.7	53.9
D 7	281 43.2	S 9 14.3	284 17.3	16.6	S 7 13.9	12.8	53.9
A 8	296 43.3	S 9 13.3	298 52.8	16.6	S 7 01.1	12.8	54.0
Y 9	311 43.4	S 9 12.4	313 28.4	16.6	S 6 48.3	12.8	54.0
10	326 43.5	S 9 11.5	328 04.1	16.6	S 6 35.4	12.9	54.0
11	341 43.6	S 9 10.5	342 39.7	16.6	S 6 22.5	12.9	54.0
12	356 43.7	S 9 09.6	357 15.4	16.7	S 6 09.6	12.9	54.0
13	11 43.8	S 9 08.7	11 51.0	16.7	S 5 56.7	12.9	54.0
14	26 43.9	S 9 07.8	26 26.7	16.7	S 5 43.8	13.0	54.0
15	41 44.0	S 9 06.8	41 02.4	16.7	S 5 30.8	13.0	54.0
16	56 44.1	S 9 05.9	55 38.2	16.7	S 5 17.8	13.0	54.0
17	71 44.2	S 9 05.0	70 13.9	16.7	S 5 04.8	13.0	54.0
18	86 44.3	S 9 04.0	84 49.7	16.8	S 4 51.7	13.0	54.0
19	101 44.4	S 9 03.1	99 25.4	16.8	S 4 38.7	13.1	54.0
20	116 44.5	S 9 02.2	114 01.2	16.8	S 4 25.6	13.1	54.0
21	131 44.6	S 9 01.2	128 37.0	16.8	S 4 12.5	13.1	54.0
22	146 44.7	S 9 00.3	143 12.8	16.8	S 3 59.4	13.1	54.0
23	161 44.8	S 8 59.4	157 48.6	16.8	S 3 46.3	13.1	54.0
26 0	176 44.9	S 8 58.4	172 24.5	16.8	S 3 33.2	13.1	54.0
1	191 45.0	S 8 57.5	187 00.3	16.8	S 3 20.0	13.2	54.0
2	206 45.1	S 8 56.6	201 36.1	16.8	S 3 06.8	13.2	54.0
3	221 45.2	S 8 55.7	216 12.0	16.8	S 2 53.7	13.2	54.0
4	236 45.3	S 8 54.7	230 47.8	16.9	S 2 40.5	13.2	54.0
S 5	251 45.4	S 8 53.8	245 23.7	16.9	S 2 27.3	13.2	54.0
A							
T 6	266 45.5	S 8 52.9	259 59.6	16.9	S 2 14.1	13.2	54.0
U 7	281 45.6	S 8 51.9	274 35.4	16.9	S 2 00.8	13.2	54.0
R 8	296 45.7	S 8 51.0	289 11.3	16.9	S 1 47.6	13.2	54.0
D 9	311 45.8	S 8 50.1	303 47.2	16.9	S 1 34.4	13.2	54.1
A 10	326 45.9	S 8 49.1	318 23.0	16.9	S 1 21.1	13.3	54.1
Y 11	341 46.0	S 8 48.2	332 58.9	16.9	S 1 07.8	13.3	54.1
12	356 46.1	S 8 47.3	347 34.8	16.9	S 0 54.6	13.3	54.1
13	11 46.2	S 8 46.3	2 10.7	16.9	S 0 41.3	13.3	54.1
14	26 46.3	S 8 45.4	16 46.5	16.9	S 0 28.0	13.3	54.1
15	41 46.4	S 8 44.4	31 22.4	16.9	S 0 14.8	13.3	54.1
16	56 46.5	S 8 43.5	45 58.2	16.9	S 0 01.5	13.3	54.1
17	71 46.6	S 8 42.6	60 34.1	16.8	N 0 11.8	13.3	54.1
18	86 46.7	S 8 41.6	75 09.9	16.8	N 0 25.1	13.3	54.1
19	101 46.8	S 8 40.7	89 45.8	16.8	N 0 38.4	13.3	54.1
20	116 46.9	S 8 39.8	104 21.6	16.8	N 0 51.7	13.3	54.1
21	131 47.0	S 8 38.8	118 57.4	16.8	N 1 05.0	13.3	54.1
22	146 47.1	S 8 37.9	133 33.2	16.8	N 1 18.2	13.3	54.1
23	161 47.2	S 8 37.0	148 09.0	16.8	N 1 31.5	13.3	54.2
	S.D. 16.2	d 0.9	S.D. 14.7		14.7		14.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.9	S40 11.7
Achernar	335 18.7	S57 05.8
Acrux	172 56.6	S63 15.3
Adhara	255 03.6	S29 00.9
Albireo	67 02.2	N28 00.9
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.3	N55 48.1
Alkaid	152 49.7	N49 10.0
Al Na-ir	27 30.1	S46 49.5
Alnilam	275 35.0	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.5	N26 36.9
Alpheratz	357 32.4	N29 14.9
Altair	61 57.7	N 8 56.5
Ankaa	353 05.0	S42 09.3
Antares	112 12.7	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.8	S69 04.5
Avior	234 13.1	S59 36.2
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.2	N 7 24.6
Canopus	263 50.9	S52 42.9
Capella	280 18.0	N46 01.7
Castor	245 53.5	N31 49.5
Deneb	49 24.4	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.2	N61 35.7
Elnath	277 58.5	N28 37.9
Eltanin	90 41.2	N51 28.7
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.3	S57 16.3
Gienah	175 40.6	S17 42.0
Hadar	148 32.0	S60 30.4
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.3	S34 22.2
Kochab	137 19.7	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.4	S36 30.6
Miaplacidus	221 36.7	S69 50.1
Mirfak	308 24.7	N49 57.9
Nunki	75 44.8	S26 15.6
Peacock	53 02.1	S56 38.5
Polaris	315 42.2	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.3	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.3	S 8 10.3
Rigil Kent	139 36.6	S60 57.0
Sabik	101 59.9	S15 45.6
Schedar	349 28.5	N56 41.7
Shaula	96 07.0	S37 07.4
Sirius	258 23.8	S16 45.5
Spica	158 19.4	S11 18.7
Suhail	222 44.0	S43 33.0
Vega	80 31.7	N38 48.3
Zuben-ubi	136 54.0	S16 09.6

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
27	0	156 22.2	135 57.8	N 9 37.7	171 46.2	S 7 36.8	340 52.5	N 3 34.6	132 44.1	N 7 22.4
	1	171 24.6	150 57.7	N 9 38.9	186 46.8	S 7 36.0	355 55.3	N 3 34.7	147 46.4	N 7 22.5
	2	186 27.1	165 57.6	N 9 40.1	201 47.5	S 7 35.2	10 58.0	N 3 34.8	162 48.6	N 7 22.6
	3	201 29.6	180 57.5	N 9 41.4	216 48.1	S 7 34.5	26 00.7	N 3 34.9	177 50.8	N 7 22.7
	4	216 32.0	195 57.4	N 9 42.6	231 48.7	S 7 33.7	41 03.5	N 3 35.1	192 53.1	N 7 22.8
S	5	231 34.5	210 57.4	N 9 43.8	246 49.4	S 7 32.9	56 06.2	N 3 35.2	207 55.3	N 7 22.9
U										
N	6	246 36.9	225 57.3	N 9 45.0	261 50.0	S 7 32.2	71 09.0	N 3 35.3	222 57.5	N 7 23.0
D	7	261 39.4	240 57.2	N 9 46.3	276 50.6	S 7 31.4	86 11.7	N 3 35.4	237 59.8	N 7 23.1
A	8	276 41.9	255 57.1	N 9 47.5	291 51.3	S 7 30.6	101 14.4	N 3 35.6	253 02.0	N 7 23.2
Y	9	291 44.3	270 57.0	N 9 48.7	306 51.9	S 7 29.9	116 17.2	N 3 35.7	268 04.2	N 7 23.3
	10	306 46.8	285 56.9	N 9 49.9	321 52.5	S 7 29.1	131 19.9	N 3 35.8	283 06.4	N 7 23.4
	11	321 49.3	300 56.8	N 9 51.2	336 53.2	S 7 28.3	146 22.7	N 3 35.9	298 08.7	N 7 23.5
	12	336 51.7	315 56.7	N 9 52.4	351 53.8	S 7 27.6	161 25.4	N 3 36.1	313 10.9	N 7 23.6
	13	351 54.2	330 56.7	N 9 53.6	6 54.5	S 7 26.8	176 28.1	N 3 36.2	328 13.1	N 7 23.7
	14	6 56.7	345 56.6	N 9 54.8	21 55.1	S 7 26.0	191 30.9	N 3 36.3	343 15.4	N 7 23.8
	15	21 59.1	0 56.5	N 9 56.0	36 55.7	S 7 25.2	206 33.6	N 3 36.4	358 17.6	N 7 23.9
	16	37 01.6	15 56.4	N 9 57.3	51 56.4	S 7 24.5	221 36.4	N 3 36.6	13 19.8	N 7 24.0
	17	52 04.0	30 56.3	N 9 58.5	66 57.0	S 7 23.7	236 39.1	N 3 36.7	28 22.1	N 7 24.1
	18	67 06.5	45 56.2	N 9 59.7	81 57.6	S 7 22.9	251 41.8	N 3 36.8	43 24.3	N 7 24.2
	19	82 09.0	60 56.1	N10 00.9	96 58.3	S 7 22.2	266 44.6	N 3 36.9	58 26.5	N 7 24.3
	20	97 11.4	75 56.0	N10 02.1	111 58.9	S 7 21.4	281 47.3	N 3 37.1	73 28.7	N 7 24.4
	21	112 13.9	90 56.0	N10 03.4	126 59.5	S 7 20.6	296 50.1	N 3 37.2	88 31.0	N 7 24.5
	22	127 16.4	105 55.9	N10 04.6	142 00.2	S 7 19.8	311 52.8	N 3 37.3	103 33.2	N 7 24.6
	23	142 18.8	120 55.8	N10 05.8	157 00.8	S 7 19.1	326 55.5	N 3 37.4	118 35.4	N 7 24.7
28	0	157 21.3	135 55.7	N10 07.0	172 01.4	S 7 18.3	341 58.3	N 3 37.6	133 37.7	N 7 24.8
	1	172 23.8	150 55.6	N10 08.2	187 02.1	S 7 17.5	357 01.0	N 3 37.7	148 39.9	N 7 24.9
	2	187 26.2	165 55.5	N10 09.5	202 02.7	S 7 16.8	12 03.8	N 3 37.8	163 42.1	N 7 25.0
	3	202 28.7	180 55.4	N10 10.7	217 03.3	S 7 16.0	27 06.5	N 3 37.9	178 44.3	N 7 25.1
	4	217 31.2	195 55.4	N10 11.9	232 04.0	S 7 15.2	42 09.2	N 3 38.1	193 46.6	N 7 25.2
M	5	232 33.6	210 55.3	N10 13.1	247 04.6	S 7 14.4	57 12.0	N 3 38.2	208 48.8	N 7 25.3
O										
N	6	247 36.1	225 55.2	N10 14.3	262 05.3	S 7 13.7	72 14.7	N 3 38.3	223 51.0	N 7 25.4
D	7	262 38.5	240 55.1	N10 15.5	277 05.9	S 7 12.9	87 17.5	N 3 38.5	238 53.3	N 7 25.5
A	8	277 41.0	255 55.0	N10 16.7	292 06.5	S 7 12.1	102 20.2	N 3 38.6	253 55.5	N 7 25.6
Y	9	292 43.5	270 54.9	N10 18.0	307 07.2	S 7 11.4	117 23.0	N 3 38.7	268 57.7	N 7 25.7
	10	307 45.9	285 54.8	N10 19.2	322 07.8	S 7 10.6	132 25.7	N 3 38.8	283 59.9	N 7 25.8
	11	322 48.4	300 54.8	N10 20.4	337 08.4	S 7 09.8	147 28.4	N 3 39.0	299 02.2	N 7 25.9
	12	337 50.9	315 54.7	N10 21.6	352 09.1	S 7 09.0	162 31.2	N 3 39.1	314 04.4	N 7 26.0
	13	352 53.3	330 54.6	N10 22.8	7 09.7	S 7 08.3	177 33.9	N 3 39.2	329 06.6	N 7 26.1
	14	7 55.8	345 54.5	N10 24.0	22 10.4	S 7 07.5	192 36.7	N 3 39.3	344 08.8	N 7 26.2
	15	22 58.3	0 54.4	N10 25.2	37 11.0	S 7 06.7	207 39.4	N 3 39.5	359 11.1	N 7 26.3
	16	38 00.7	15 54.3	N10 26.5	52 11.6	S 7 05.9	222 42.2	N 3 39.6	14 13.3	N 7 26.4
	17	53 03.2	30 54.2	N10 27.7	67 12.3	S 7 05.2	237 44.9	N 3 39.7	29 15.5	N 7 26.5
	18	68 05.7	45 54.2	N10 28.9	82 12.9	S 7 04.4	252 47.6	N 3 39.8	44 17.8	N 7 26.6
	19	83 08.1	60 54.1	N10 30.1	97 13.6	S 7 03.6	267 50.4	N 3 40.0	59 20.0	N 7 26.7
	20	98 10.6	75 54.0	N10 31.3	112 14.2	S 7 02.9	282 53.1	N 3 40.1	74 22.2	N 7 26.8
	21	113 13.0	90 53.9	N10 32.5	127 14.8	S 7 02.1	297 55.9	N 3 40.2	89 24.4	N 7 26.9
	22	128 15.5	105 53.8	N10 33.7	142 15.5	S 7 01.3	312 58.6	N 3 40.3	104 26.7	N 7 27.0
	23	143 18.0	120 53.7	N10 34.9	157 16.1	S 7 00.5	328 01.4	N 3 40.5	119 28.9	N 7 27.1
29	0	158 20.4	135 53.7	N10 36.1	172 16.7	S 6 59.8	343 04.1	N 3 40.6	134 31.1	N 7 27.2
	1	173 22.9	150 53.6	N10 37.3	187 17.4	S 6 59.0	358 06.8	N 3 40.7	149 33.3	N 7 27.3
	2	188 25.4	165 53.5	N10 38.6	202 18.0	S 6 58.2	13 09.6	N 3 40.8	164 35.6	N 7 27.4
	3	203 27.8	180 53.4	N10 39.8	217 18.7	S 6 57.4	28 12.3	N 3 41.0	179 37.8	N 7 27.5
	4	218 30.3	195 53.3	N10 41.0	232 19.3	S 6 56.7	43 15.1	N 3 41.1	194 40.0	N 7 27.6
T	5	233 32.8	210 53.2	N10 42.2	247 19.9	S 6 55.9	58 17.8	N 3 41.2	209 42.2	N 7 27.7
U										
E	6	248 35.2	225 53.2	N10 43.4	262 20.6	S 6 55.1	73 20.6	N 3 41.4	224 44.5	N 7 27.8
S	7	263 37.7	240 53.1	N10 44.6	277 21.2	S 6 54.3	88 23.3	N 3 41.5	239 46.7	N 7 27.9
D	8	278 40.1	255 53.0	N10 45.8	292 21.9	S 6 53.6	103 26.1	N 3 41.6	254 48.9	N 7 28.0
A	9	293 42.6	270 52.9	N10 47.0	307 22.5	S 6 52.8	118 28.8	N 3 41.7	269 51.1	N 7 28.1
Y	10	308 45.1	285 52.8	N10 48.2	322 23.1	S 6 52.0	133 31.6	N 3 41.9	284 53.4	N 7 28.2
	11	323 47.5	300 52.7	N10 49.4	337 23.8	S 6 51.2	148 34.3	N 3 42.0	299 55.6	N 7 28.3
	12	338 50.0	315 52.7	N10 50.6	352 24.4	S 6 50.5	163 37.0	N 3 42.1	314 57.8	N 7 28.4
	13	353 52.5	330 52.6	N10 51.8	7 25.1	S 6 49.7	178 39.8	N 3 42.2	330 00.0	N 7 28.5
	14	8 54.9	345 52.5	N10 53.0	22 25.7	S 6 48.9	193 42.5	N 3 42.4	345 02.3	N 7 28.6
	15	23 57.4	0 52.4	N10 54.2	37 26.3	S 6 48.1	208 45.3	N 3 42.5	0 04.5	N 7 28.7
	16	38 59.9	15 52.3	N10 55.4	52 27.0	S 6 47.4	223 48.0	N 3 42.6	15 06.7	N 7 28.8
	17	54 02.3	30 52.2	N10 56.6	67 27.6	S 6 46.6	238 50.8	N 3 42.7	30 08.9	N 7 28.9
	18	69 04.8	45 52.2	N10 57.8	82 28.3	S 6 45.8	253 53.5	N 3 42.9	45 11.2	N 7 29.0
	19	84 07.3	60 52.1	N10 59.0	97 28.9	S 6 45.0	268 56.3	N 3 43.0	60 13.4	N 7 29.1
	20	99 09.7	75 52.0	N11 00.2	112 29.6	S 6 44.3	283 59.0	N 3 43.1	75 15.6	N 7 29.2
	21	114 12.2	90 51.9	N11 01.4	127 30.2	S 6 43.5	299 01.8	N 3 43.3	90 17.8	N 7 29.3
	22	129 14.6	105 51.8	N11 02.6	142 30.8	S 6 42.7	314 04.5	N 3 43.4	105 20.1	N 7 29.4
	23	144 17.1	120 51.7	N11 03.8	157 31.5	S 6 41.9	329 07.3	N 3 43.5	120 22.3	N 7 29.5
			v -0.1	d 1.2	v 0.6	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA ° '	Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '
27	0	176 47.3	S 8 36.0		162 44.8	16.8	N 1 44.8	13.3	54.2
	1	191 47.4	S 8 35.1		177 20.6	16.8	N 1 58.1	13.3	54.2
	2	206 47.5	S 8 34.1		191 56.3	16.8	N 2 11.4	13.3	54.2
	3	221 47.6	S 8 33.2		206 32.1	16.7	N 2 24.6	13.3	54.2
	4	236 47.7	S 8 32.3		221 07.8	16.7	N 2 37.9	13.3	54.2
S	5	251 47.8	S 8 31.3		235 43.5	16.7	N 2 51.2	13.3	54.2
U									
N	6	266 47.9	S 8 30.4		250 19.2	16.7	N 3 04.4	13.3	54.2
D	7	281 48.1	S 8 29.5		264 54.9	16.7	N 3 17.7	13.2	54.2
A	8	296 48.2	S 8 28.5		279 30.5	16.7	N 3 30.9	13.2	54.2
Y	9	311 48.3	S 8 27.6		294 06.1	16.6	N 3 44.1	13.2	54.2
	10	326 48.4	S 8 26.6		308 41.7	16.6	N 3 57.3	13.2	54.3
	11	341 48.5	S 8 25.7		323 17.3	16.6	N 4 10.6	13.2	54.3
	12	356 48.6	S 8 24.8		337 52.9	16.6	N 4 23.7	13.2	54.3
	13	11 48.7	S 8 23.8		352 28.4	16.5	N 4 36.9	13.2	54.3
	14	26 48.8	S 8 22.9		7 04.0	16.5	N 4 50.1	13.2	54.3
	15	41 48.9	S 8 21.9		21 39.4	16.5	N 5 03.3	13.2	54.3
	16	56 49.0	S 8 21.0		36 14.9	16.5	N 5 16.4	13.1	54.3
	17	71 49.1	S 8 20.1		50 50.3	16.4	N 5 29.5	13.1	54.3
	18	86 49.2	S 8 19.1		65 25.7	16.4	N 5 42.6	13.1	54.3
	19	101 49.4	S 8 18.2		80 01.1	16.4	N 5 55.7	13.1	54.3
	20	116 49.5	S 8 17.2		94 36.5	16.3	N 6 08.8	13.1	54.4
	21	131 49.6	S 8 16.3		109 11.8	16.3	N 6 21.9	13.1	54.4
	22	146 49.7	S 8 15.4		123 47.1	16.3	N 6 34.9	13.0	54.4
	23	161 49.8	S 8 14.4		138 22.3	16.2	N 6 47.9	13.0	54.4
28	0	176 49.9	S 8 13.5		152 57.5	16.2	N 7 00.9	13.0	54.4
	1	191 50.0	S 8 12.5		167 32.7	16.2	N 7 13.9	13.0	54.4
	2	206 50.1	S 8 11.6		182 07.8	16.1	N 7 26.8	13.0	54.4
	3	221 50.2	S 8 10.6		196 42.9	16.1	N 7 39.8	12.9	54.4
	4	236 50.3	S 8 09.7		211 18.0	16.1	N 7 52.7	12.9	54.5
M	5	251 50.5	S 8 08.8		225 53.0	16.0	N 8 05.5	12.9	54.5
O									
N	6	266 50.6	S 8 07.8		240 28.0	16.0	N 8 18.4	12.9	54.5
D	7	281 50.7	S 8 06.9		255 03.0	15.9	N 8 31.2	12.8	54.5
A	8	296 50.8	S 8 05.9		269 37.9	15.9	N 8 44.0	12.8	54.5
Y	9	311 50.9	S 8 05.0		284 12.7	15.9	N 8 56.8	12.8	54.5
	10	326 51.0	S 8 04.0		298 47.6	15.8	N 9 09.5	12.7	54.5
	11	341 51.1	S 8 03.1		313 22.3	15.8	N 9 22.2	12.7	54.5
	12	356 51.2	S 8 02.1		327 57.1	15.7	N 9 34.9	12.7	54.6
	13	11 51.4	S 8 01.2		342 31.7	15.7	N 9 47.6	12.6	54.6
	14	26 51.5	S 8 00.3		357 06.4	15.6	N10 00.2	12.6	54.6
	15	41 51.6	S 7 59.3		11 41.0	15.6	N10 12.8	12.6	54.6
	16	56 51.7	S 7 58.4		26 15.5	15.5	N10 25.3	12.5	54.6
	17	71 51.8	S 7 57.4		40 50.0	15.5	N10 37.8	12.5	54.6
	18	86 51.9	S 7 56.5		55 24.4	15.4	N10 50.3	12.5	54.6
	19	101 52.0	S 7 55.5		69 58.8	15.4	N11 02.8	12.4	54.7
	20	116 52.2	S 7 54.6		84 33.1	15.3	N11 15.2	12.4	54.7
	21	131 52.3	S 7 53.6		99 07.4	15.3	N11 27.5	12.4	54.7
	22	146 52.4	S 7 52.7		113 41.6	15.2	N11 39.9	12.3	54.7
	23	161 52.5	S 7 51.7		128 15.8	15.2	N11 52.1	12.3	54.7
29	0	176 52.6	S 7 50.8		142 49.9	15.1	N12 04.4	12.2	54.7
	1	191 52.7	S 7 49.8		157 23.9	15.1	N12 16.6	12.2	54.8
	2	206 52.8	S 7 48.9		171 57.9	15.0	N12 28.7	12.2	54.8
	3	221 53.0	S 7 48.0		186 31.9	14.9	N12 40.9	12.1	54.8
	4	236 53.1	S 7 47.0		201 05.7	14.9	N12 52.9	12.1	54.8
T	5	251 53.2	S 7 46.1		215 39.6	14.8	N13 05.0	12.0	54.8
U									
E	6	266 53.3	S 7 45.1		230 13.3	14.8	N13 16.9	12.0	54.8
S	7	281 53.4	S 7 44.2		244 47.0	14.7	N13 28.9	11.9	54.9
D	8	296 53.6	S 7 43.2		259 20.6	14.6	N13 40.8	11.9	54.9
A	9	311 53.7	S 7 42.3		273 54.2	14.6	N13 52.6	11.8	54.9
Y	10	326 53.8	S 7 41.3		288 27.7	14.5	N14 04.4	11.8	54.9
	11	341 53.9	S 7 40.4		303 01.1	14.4	N14 16.1	11.7	54.9
	12	356 54.0	S 7 39.4		317 34.5	14.4	N14 27.8	11.7	54.9
	13	11 54.1	S 7 38.5		332 07.7	14.3	N14 39.4	11.6	55.0
	14	26 54.3	S 7 37.5		346 41.0	14.2	N14 51.0	11.6	55.0
	15	41 54.4	S 7 36.6		1 14.1	14.2	N15 02.5	11.5	55.0
	16	56 54.5	S 7 35.6		15 47.2	14.1	N15 14.0	11.5	55.0
	17	71 54.6	S 7 34.7		30 20.2	14.0	N15 25.4	11.4	55.0
	18	86 54.7	S 7 33.7		44 53.2	13.9	N15 36.7	11.3	55.1
	19	101 54.9	S 7 32.8		59 26.0	13.9	N15 48.0	11.3	55.1
	20	116 55.0	S 7 31.8		73 58.8	13.8	N15 59.2	11.2	55.1
	21	131 55.1	S 7 30.9		88 31.6	13.7	N16 10.4	11.2	55.1
	22	146 55.2	S 7 29.9		103 04.2	13.6	N16 21.5	11.1	55.1
	23	161 55.3	S 7 29.0		117 36.8	13.6	N16 32.5	11.0	55.2
		S.D. 16.1	d 0.9		S.D. 14.8		14.9		15.0

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.7
Achernar	335 18.7	S57 05.8
Acrux	172 56.6	S63 15.3
Adhara	255 03.6	S29 00.9
Albireo	67 02.2	N28 00.9
Aldebaran	290 36.6	N16 33.9
Alioth	166 10.2	N55 48.1
Alkaid	152 49.7	N49 10.0
Al Na-ir	27 30.1	S46 49.4
Alnilam	275 35.0	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.5	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.7	N 8 56.5
Ankaa	353 05.0	S42 09.3
Antares	112 12.7	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.7	S69 04.5
Avior	234 13.1	S59 36.2
Bellatrix	278 20.0	N 6 22.4
Betelgeuse	270 49.2	N 7 24.6
Canopus	263 51.0	S52 42.9
Capella	280 18.0	N46 01.7
Castor	245 53.5	N31 49.6
Deneb	49 24.4	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.2	N61 35.7
Elnath	277 58.5	N28 37.9
Eltanin	90 41.2	N51 28.7
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.2	S57 16.3
Gienah	175 40.6	S17 42.1
Hadar	148 32.0	S60 30.4
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.3	S34 22.2
Kochab	137 19.6	N74 02.0
Markab	13 27.6	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.3	S36 30.6
Miaplacidus	221 36.7	S69 50.2
Mirfak	308 24.7	N49 57.9
Nunki	75 44.8	S26 15.6
Peacock	53 02.1	S56 38.5
Polaris	315 43.3	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.3	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.3	S 8 10.3
Rigil Kent	139 36.5	S60 57.0
Sabik	101 59.9	S15 45.6
Schedar	349 28.5	N56 41.7
Shaula	96 07.0	S37 07.4
Sirius	258 23.8	S16 45.5
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 33.0
Vega	80 31.7	N38 48.3
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
1	0	159 19.6	135 51.7	N11 05.0	172 32.1	S 6 41.2	344 10.0	N 3 43.6	135 24.5	N 7 29.6
	1	174 22.0	150 51.6	N11 06.2	187 32.8	S 6 40.4	359 12.7	N 3 43.8	150 26.7	N 7 29.7
	2	189 24.5	165 51.5	N11 07.4	202 33.4	S 6 39.6	14 15.5	N 3 43.9	165 29.0	N 7 29.8
	3	204 27.0	180 51.4	N11 08.6	217 34.0	S 6 38.8	29 18.2	N 3 44.0	180 31.2	N 7 29.9
	4	219 29.4	195 51.3	N11 09.8	232 34.7	S 6 38.1	44 21.0	N 3 44.1	195 33.4	N 7 30.0
W	5	234 31.9	210 51.3	N11 11.0	247 35.3	S 6 37.3	59 23.7	N 3 44.3	210 35.6	N 7 30.1
E										
D	6	249 34.4	225 51.2	N11 12.2	262 36.0	S 6 36.5	74 26.5	N 3 44.4	225 37.8	N 7 30.2
N	7	264 36.8	240 51.1	N11 13.4	277 36.6	S 6 35.7	89 29.2	N 3 44.5	240 40.1	N 7 30.3
E	8	279 39.3	255 51.0	N11 14.6	292 37.3	S 6 34.9	104 32.0	N 3 44.7	255 42.3	N 7 30.4
S	9	294 41.7	270 50.9	N11 15.8	307 37.9	S 6 34.2	119 34.7	N 3 44.8	270 44.5	N 7 30.5
D	10	309 44.2	285 50.8	N11 17.0	322 38.6	S 6 33.4	134 37.5	N 3 44.9	285 46.7	N 7 30.6
A	11	324 46.7	300 50.8	N11 18.2	337 39.2	S 6 32.6	149 40.2	N 3 45.0	300 49.0	N 7 30.7
Y										
	12	339 49.1	315 50.7	N11 19.4	352 39.8	S 6 31.8	164 43.0	N 3 45.2	315 51.2	N 7 30.8
	13	354 51.6	330 50.6	N11 20.6	7 40.5	S 6 31.1	179 45.7	N 3 45.3	330 53.4	N 7 30.9
	14	9 54.1	345 50.5	N11 21.8	22 41.1	S 6 30.3	194 48.5	N 3 45.4	345 55.6	N 7 31.0
	15	24 56.5	0 50.4	N11 23.0	37 41.8	S 6 29.5	209 51.2	N 3 45.6	0 57.9	N 7 31.1
	16	39 59.0	15 50.4	N11 24.1	52 42.4	S 6 28.7	224 54.0	N 3 45.7	16 00.1	N 7 31.2
	17	55 01.5	30 50.3	N11 25.3	67 43.1	S 6 28.0	239 56.7	N 3 45.8	31 02.3	N 7 31.3
	18	70 03.9	45 50.2	N11 26.5	82 43.7	S 6 27.2	254 59.5	N 3 45.9	46 04.5	N 7 31.4
	19	85 06.4	60 50.1	N11 27.7	97 44.3	S 6 26.4	270 02.2	N 3 46.1	61 06.7	N 7 31.5
	20	100 08.9	75 50.0	N11 28.9	112 45.0	S 6 25.6	285 05.0	N 3 46.2	76 09.0	N 7 31.6
	21	115 11.3	90 50.0	N11 30.1	127 45.6	S 6 24.8	300 07.7	N 3 46.3	91 11.2	N 7 31.7
	22	130 13.8	105 49.9	N11 31.3	142 46.3	S 6 24.1	315 10.5	N 3 46.4	106 13.4	N 7 31.8
	23	145 16.2	120 49.8	N11 32.5	157 46.9	S 6 23.3	330 13.2	N 3 46.6	121 15.6	N 7 31.9
2	0	160 18.7	135 49.7	N11 33.7	172 47.6	S 6 22.5	345 16.0	N 3 46.7	136 17.9	N 7 32.0
	1	175 21.2	150 49.6	N11 34.9	187 48.2	S 6 21.7	0 18.7	N 3 46.8	151 20.1	N 7 32.1
	2	190 23.6	165 49.6	N11 36.0	202 48.9	S 6 20.9	15 21.5	N 3 47.0	166 22.3	N 7 32.2
	3	205 26.1	180 49.5	N11 37.2	217 49.5	S 6 20.2	30 24.2	N 3 47.1	181 24.5	N 7 32.3
	4	220 28.6	195 49.4	N11 38.4	232 50.2	S 6 19.4	45 27.0	N 3 47.2	196 26.7	N 7 32.4
T	5	235 31.0	210 49.3	N11 39.6	247 50.8	S 6 18.6	60 29.7	N 3 47.3	211 29.0	N 7 32.5
H										
U	6	250 33.5	225 49.2	N11 40.8	262 51.4	S 6 17.8	75 32.5	N 3 47.5	226 31.2	N 7 32.6
R	7	265 36.0	240 49.2	N11 42.0	277 52.1	S 6 17.1	90 35.2	N 3 47.6	241 33.4	N 7 32.7
S	8	280 38.4	255 49.1	N11 43.2	292 52.7	S 6 16.3	105 38.0	N 3 47.7	256 35.6	N 7 32.8
D	9	295 40.9	270 49.0	N11 44.3	307 53.4	S 6 15.5	120 40.7	N 3 47.9	271 37.8	N 7 32.9
A	10	310 43.4	285 48.9	N11 45.5	322 54.0	S 6 14.7	135 43.5	N 3 48.0	286 40.1	N 7 33.0
Y	11	325 45.8	300 48.8	N11 46.7	337 54.7	S 6 13.9	150 46.2	N 3 48.1	301 42.3	N 7 33.1
	12	340 48.3	315 48.8	N11 47.9	352 55.3	S 6 13.2	165 49.0	N 3 48.2	316 44.5	N 7 33.2
	13	355 50.7	330 48.7	N11 49.1	7 56.0	S 6 12.4	180 51.7	N 3 48.4	331 46.7	N 7 33.3
	14	10 53.2	345 48.6	N11 50.3	22 56.6	S 6 11.6	195 54.5	N 3 48.5	346 48.9	N 7 33.4
	15	25 55.7	0 48.5	N11 51.4	37 57.3	S 6 10.8	210 57.2	N 3 48.6	1 51.2	N 7 33.5
	16	40 58.1	15 48.4	N11 52.6	52 57.9	S 6 10.0	225 60.0	N 3 48.8	16 53.4	N 7 33.6
	17	56 00.6	30 48.4	N11 53.8	67 58.6	S 6 09.3	241 02.7	N 3 48.9	31 55.6	N 7 33.7
	18	71 03.1	45 48.3	N11 55.0	82 59.2	S 6 08.5	256 05.5	N 3 49.0	46 57.8	N 7 33.9
	19	86 05.5	60 48.2	N11 56.2	97 59.9	S 6 07.7	271 08.2	N 3 49.1	62 00.0	N 7 34.0
	20	101 08.0	75 48.1	N11 57.3	113 00.5	S 6 06.9	286 11.0	N 3 49.3	77 02.3	N 7 34.1
	21	116 10.5	90 48.0	N11 58.5	128 01.2	S 6 06.1	301 13.7	N 3 49.4	92 04.5	N 7 34.2
	22	131 12.9	105 48.0	N11 59.7	143 01.8	S 6 05.4	316 16.5	N 3 49.5	107 06.7	N 7 34.3
	23	146 15.4	120 47.9	N12 00.9	158 02.4	S 6 04.6	331 19.2	N 3 49.7	122 08.9	N 7 34.4
3	0	161 17.8	135 47.8	N12 02.1	173 03.1	S 6 03.8	346 22.0	N 3 49.8	137 11.1	N 7 34.5
	1	176 20.3	150 47.7	N12 03.2	188 03.7	S 6 03.0	1 24.7	N 3 49.9	152 13.4	N 7 34.6
	2	191 22.8	165 47.7	N12 04.4	203 04.4	S 6 02.2	16 27.5	N 3 50.0	167 15.6	N 7 34.7
	3	206 25.2	180 47.6	N12 05.6	218 05.0	S 6 01.5	31 30.2	N 3 50.2	182 17.8	N 7 34.8
	4	221 27.7	195 47.5	N12 06.8	233 05.7	S 6 00.7	46 33.0	N 3 50.3	197 20.0	N 7 34.9
F	5	236 30.2	210 47.4	N12 07.9	248 06.3	S 5 59.9	61 35.7	N 3 50.4	212 22.2	N 7 35.0
R										
I	6	251 32.6	225 47.3	N12 09.1	263 07.0	S 5 59.1	76 38.5	N 3 50.6	227 24.5	N 7 35.1
D	7	266 35.1	240 47.3	N12 10.3	278 07.6	S 5 58.3	91 41.2	N 3 50.7	242 26.7	N 7 35.2
A	8	281 37.6	255 47.2	N12 11.5	293 08.3	S 5 57.6	106 44.0	N 3 50.8	257 28.9	N 7 35.3
Y	9	296 40.0	270 47.1	N12 12.6	308 08.9	S 5 56.8	121 46.7	N 3 50.9	272 31.1	N 7 35.4
	10	311 42.5	285 47.0	N12 13.8	323 09.6	S 5 56.0	136 49.5	N 3 51.1	287 33.3	N 7 35.5
	11	326 45.0	300 47.0	N12 15.0	338 10.2	S 5 55.2	151 52.2	N 3 51.2	302 35.5	N 7 35.6
	12	341 47.4	315 46.9	N12 16.2	353 10.9	S 5 54.4	166 55.0	N 3 51.3	317 37.8	N 7 35.7
	13	356 49.9	330 46.8	N12 17.3	8 11.5	S 5 53.7	181 57.7	N 3 51.5	332 40.0	N 7 35.8
	14	11 52.3	345 46.7	N12 18.5	23 12.2	S 5 52.9	197 00.5	N 3 51.6	347 42.2	N 7 35.9
	15	26 54.8	0 46.6	N12 19.7	38 12.8	S 5 52.1	212 03.3	N 3 51.7	2 44.4	N 7 36.0
	16	41 57.3	15 46.6	N12 20.8	53 13.5	S 5 51.3	227 06.0	N 3 51.8	17 46.6	N 7 36.1
	17	56 59.7	30 46.5	N12 22.0	68 14.1	S 5 50.5	242 08.8	N 3 52.0	32 48.8	N 7 36.2
	18	72 02.2	45 46.4	N12 23.2	83 14.8	S 5 49.8	257 11.5	N 3 52.1	47 51.1	N 7 36.3
	19	87 04.7	60 46.3	N12 24.4	98 15.4	S 5 49.0	272 14.3	N 3 52.2	62 53.3	N 7 36.4
	20	102 07.1	75 46.3	N12 25.5	113 16.1	S 5 48.2	287 17.0	N 3 52.4	77 55.5	N 7 36.5
	21	117 09.6	90 46.2	N12 26.7	128 16.7	S 5 47.4	302 19.8	N 3 52.5	92 57.7	N 7 36.6
	22	132 12.1	105 46.1	N12 27.9	143 17.4	S 5 46.6	317 22.5	N 3 52.6	107 59.9	N 7 36.7
	23	147 14.5	120 46.0	N12 29.0	158 18.0	S 5 45.8	332 25.3	N 3 52.7	123 02.2	N 7 36.8
			v -0.1	d 1.2	v 0.6	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
1 0	176 55.5	S 7 28.0	132 09.3	13.5	N16 43.5	11.0	55.2	Acamar	315 10.0	S40 11.7
1	191 55.6	S 7 27.1	146 41.7	13.4	N16 54.4	10.9	55.2	Achernar	335 18.7	S57 05.8
2	206 55.7	S 7 26.1	161 14.0	13.3	N17 05.3	10.8	55.2	Acrux	172 56.5	S63 15.3
3	221 55.8	S 7 25.2	175 46.3	13.3	N17 16.0	10.8	55.2	Adhara	255 03.6	S29 00.9
4	236 56.0	S 7 24.2	190 18.5	13.2	N17 26.7	10.7	55.3	Albireo	67 02.2	N28 00.9
W 5	251 56.1	S 7 23.3	204 50.6	13.1	N17 37.4	10.6	55.3			
E								Aldebaran	290 36.7	N16 33.9
D 6	266 56.2	S 7 22.3	219 22.6	13.0	N17 48.0	10.6	55.3	Alioth	166 10.2	N55 48.1
N 7	281 56.3	S 7 21.3	233 54.5	12.9	N17 58.5	10.5	55.3	Alkaid	152 49.7	N49 10.0
E 8	296 56.4	S 7 20.4	248 26.4	12.9	N18 08.9	10.4	55.4	Al Na-ir	27 30.1	S46 49.4
S 9	311 56.6	S 7 19.4	262 58.1	12.8	N18 19.2	10.4	55.4	Alnilam	275 35.0	S 1 11.2
D 10	326 56.7	S 7 18.5	277 29.8	12.7	N18 29.5	10.3	55.4			
A 11	341 56.8	S 7 17.5	292 01.4	12.6	N18 39.7	10.2	55.4	Alphard	217 44.9	S 8 47.1
Y								Alphecca	126 01.5	N26 36.9
12	356 56.9	S 7 16.6	306 33.0	12.5	N18 49.8	10.1	55.4	Alpheratz	357 32.4	N29 14.8
13	11 57.1	S 7 15.6	321 04.4	12.4	N18 59.9	10.0	55.5	Altair	61 57.7	N 8 56.5
14	26 57.2	S 7 14.7	335 35.7	12.3	N19 09.8	10.0	55.5	Ankaa	353 05.0	S42 09.3
15	41 57.3	S 7 13.7	350 07.0	12.3	N19 19.7	9.9	55.5			
16	56 57.4	S 7 12.8	4 38.2	12.2	N19 29.5	9.8	55.5	Antares	112 12.6	S26 29.7
17	71 57.6	S 7 11.8	19 09.3	12.1	N19 39.3	9.7	55.6	Arcturus	145 45.4	N19 01.9
								Atria	107 04.6	S69 04.5
18	86 57.7	S 7 10.9	33 40.3	12.0	N19 48.9	9.6	55.6	Avior	234 13.1	S59 36.3
19	101 57.8	S 7 09.9	48 11.2	11.9	N19 58.5	9.6	55.6	Bellatrix	278 20.0	N 6 22.4
20	116 57.9	S 7 08.9	62 42.0	11.8	N20 07.9	9.5	55.6			
21	131 58.1	S 7 08.0	77 12.7	11.7	N20 17.3	9.4	55.7	Betelgeuse	270 49.2	N 7 24.6
22	146 58.2	S 7 07.0	91 43.4	11.6	N20 26.6	9.3	55.7	Canopus	263 51.0	S52 42.9
23	161 58.3	S 7 06.1	106 13.9	11.6	N20 35.8	9.2	55.7	Capella	280 18.0	N46 01.7
								Castor	245 53.5	N31 49.6
2 0	176 58.4	S 7 05.1	120 44.4	11.5	N20 44.9	9.1	55.7	Deneb	49 24.4	N45 22.7
1	191 58.6	S 7 04.2	135 14.8	11.4	N20 53.9	9.0	55.8			
2	206 58.7	S 7 03.2	149 45.1	11.3	N21 02.9	8.9	55.8	Denebola	182 22.0	N14 24.6
3	221 58.8	S 7 02.3	164 15.3	11.2	N21 11.7	8.8	55.8	Diphda	348 45.0	S17 50.0
4	236 59.0	S 7 01.3	178 45.4	11.1	N21 20.5	8.7	55.8	Dubhe	193 37.2	N61 35.7
T 5	251 59.1	S 7 00.3	193 15.4	11.0	N21 29.1	8.6	55.9	Elnath	277 58.6	N28 37.9
H								Eltanin	90 41.2	N51 28.7
U 6	266 59.2	S 6 59.4	207 45.3	10.9	N21 37.6	8.5	55.9			
R 7	281 59.3	S 6 58.4	222 15.1	10.8	N21 46.1	8.4	55.9	Enif	33 36.5	N10 00.2
S 8	296 59.5	S 6 57.5	236 44.8	10.7	N21 54.4	8.3	55.9	Fomalhaut	15 12.0	S29 28.4
D 9	311 59.6	S 6 56.5	251 14.5	10.6	N22 02.7	8.2	56.0	Gacrux	171 48.2	S57 16.3
A 10	326 59.7	S 6 55.6	265 44.0	10.5	N22 10.8	8.1	56.0	Gienah	175 40.6	S17 42.1
Y 11	341 59.9	S 6 54.6	280 13.5	10.4	N22 18.9	8.0	56.0	Hadar	148 31.9	S60 30.4
12	356 60.0	S 6 53.6	294 42.8	10.4	N22 26.8	7.9	56.0	Hamal	327 48.5	N23 35.8
13	12 00.1	S 6 52.7	309 12.1	10.3	N22 34.7	7.8	56.1	Kaus Austr.	83 29.3	S34 22.2
14	27 00.2	S 6 51.7	323 41.2	10.2	N22 42.4	7.7	56.1	Kochab	137 19.6	N74 02.0
15	42 00.4	S 6 50.8	338 10.3	10.1	N22 50.0	7.6	56.1	Markab	13 27.6	N15 21.4
16	57 00.5	S 6 49.8	352 39.3	10.0	N22 57.5	7.5	56.2	Menkar	314 03.6	N 4 12.0
17	72 00.6	S 6 48.8	7 08.2	9.9	N23 04.9	7.4	56.2			
								Menkent	147 54.3	S36 30.6
18	87 00.8	S 6 47.9	21 37.0	9.8	N23 12.2	7.3	56.2	Miaplacidus	221 36.7	S69 50.2
19	102 00.9	S 6 46.9	36 05.7	9.7	N23 19.4	7.2	56.2	Mirfak	308 24.7	N49 57.9
20	117 01.0	S 6 46.0	50 34.3	9.6	N23 26.4	7.1	56.3	Nunki	75 44.7	S26 15.6
21	132 01.2	S 6 45.0	65 02.8	9.5	N23 33.4	6.9	56.3	Peacock	53 02.1	S56 38.5
22	147 01.3	S 6 44.0	79 31.2	9.4	N23 40.2	6.8	56.3			
23	162 01.4	S 6 43.1	93 59.5	9.3	N23 46.9	6.7	56.4	Polaris	315 44.1	N89 22.7
								Pollux	243 13.9	N27 57.4
3 0	177 01.6	S 6 42.1	108 27.8	9.2	N23 53.5	6.6	56.4	Procyon	244 47.9	N 5 09.0
1	192 01.7	S 6 41.2	122 55.9	9.1	N23 60.0	6.5	56.4	Rasalhague	95 56.3	N12 32.2
2	207 01.8	S 6 40.2	137 24.0	9.1	N24 06.3	6.4	56.5	Regulus	207 31.4	N11 49.6
3	222 01.9	S 6 39.2	151 51.9	9.0	N24 12.6	6.2	56.5			
4	237 02.1	S 6 38.3	166 19.8	8.9	N24 18.7	6.1	56.5	Rigel	281 01.3	S 8 10.3
F 5	252 02.2	S 6 37.3	180 47.6	8.8	N24 24.7	6.0	56.5	Rigil Kent	139 36.5	S60 57.0
R								Sabik	101 59.9	S15 45.6
I 6	267 02.3	S 6 36.4	195 15.3	8.7	N24 30.5	5.9	56.6	Schedar	349 28.5	N56 41.6
D 7	282 02.5	S 6 35.4	209 42.9	8.6	N24 36.2	5.7	56.6	Shaula	96 06.9	S37 07.4
A 8	297 02.6	S 6 34.4	224 10.4	8.5	N24 41.8	5.6	56.6			
Y 9	312 02.7	S 6 33.5	238 37.8	8.4	N24 47.3	5.5	56.7	Sirius	258 23.8	S16 45.5
10	327 02.9	S 6 32.5	253 05.1	8.3	N24 52.6	5.3	56.7	Spica	158 19.3	S11 18.7
11	342 03.0	S 6 31.6	267 32.4	8.2	N24 57.9	5.2	56.7	Suhail	222 44.0	S43 33.0
								Vega	80 31.7	N38 48.3
12	357 03.1	S 6 30.6	281 59.5	8.2	N25 02.9	5.1	56.8	Zuben-ubi	136 53.9	S16 09.7
13	12 03.3	S 6 29.6	296 26.6	8.1	N25 07.9	4.9	56.8			
14	27 03.4	S 6 28.7	310 53.6	8.0	N25 12.7	4.8	56.8			
15	42 03.6	S 6 27.7	325 20.5	7.9	N25 17.3	4.7	56.9			
16	57 03.7	S 6 26.8	339 47.3	7.8	N25 21.9	4.5	56.9			
17	72 03.8	S 6 25.8	354 14.0	7.7	N25 26.3	4.4	56.9			
18	87 04.0	S 6 24.8	8 40.6	7.6	N25 30.5	4.3	57.0			
19	102 04.1	S 6 23.9	23 07.2	7.6	N25 34.6	4.1	57.0			
20	117 04.2	S 6 22.9	37 33.7	7.5	N25 38.6	4.0	57.0			
21	132 04.4	S 6 21.9	52 00.1	7.4	N25 42.4	3.8	57.1			
22	147 04.5	S 6 21.0	66 26.4	7.3	N25 46.1	3.7	57.1			
23	162 04.6	S 6 20.0	80 52.6	7.2	N25 49.7	3.5	57.1			
	S.D. 16.1	d 1.0	S.D.	15.1	15.3		15.5			

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
4 0	162 17.0	135 46.0	N12 30.2	173 18.7	S 5 45.1	347 28.0	N 3 52.9	138 04.4	N 7 36.9
1	177 19.5	150 45.9	N12 31.4	188 19.3	S 5 44.3	2 30.8	N 3 53.0	153 06.6	N 7 37.0
2	192 21.9	165 45.8	N12 32.5	203 20.0	S 5 43.5	17 33.5	N 3 53.1	168 08.8	N 7 37.1
3	207 24.4	180 45.7	N12 33.7	218 20.6	S 5 42.7	32 36.3	N 3 53.3	183 11.0	N 7 37.2
4	222 26.8	195 45.7	N12 34.9	233 21.3	S 5 41.9	47 39.0	N 3 53.4	198 13.2	N 7 37.3
S 5	237 29.3	210 45.6	N12 36.0	248 21.9	S 5 41.2	62 41.8	N 3 53.5	213 15.5	N 7 37.4
A T 6	252 31.8	225 45.5	N12 37.2	263 22.6	S 5 40.4	77 44.6	N 3 53.7	228 17.7	N 7 37.5
U 7	267 34.2	240 45.4	N12 38.3	278 23.2	S 5 39.6	92 47.3	N 3 53.8	243 19.9	N 7 37.6
R 8	282 36.7	255 45.4	N12 39.5	293 23.9	S 5 38.8	107 50.1	N 3 53.9	258 22.1	N 7 37.7
D 9	297 39.2	270 45.3	N12 40.7	308 24.5	S 5 38.0	122 52.8	N 3 54.0	273 24.3	N 7 37.8
A 10	312 41.6	285 45.2	N12 41.8	323 25.2	S 5 37.2	137 55.6	N 3 54.2	288 26.5	N 7 37.9
Y 11	327 44.1	300 45.1	N12 43.0	338 25.9	S 5 36.5	152 58.3	N 3 54.3	303 28.8	N 7 38.1
12	342 46.6	315 45.1	N12 44.2	353 26.5	S 5 35.7	168 01.1	N 3 54.4	318 31.0	N 7 38.2
13	357 49.0	330 45.0	N12 45.3	8 27.2	S 5 34.9	183 03.8	N 3 54.6	333 33.2	N 7 38.3
14	12 51.5	345 44.9	N12 46.5	23 27.8	S 5 34.1	198 06.6	N 3 54.7	348 35.4	N 7 38.4
15	27 53.9	0 44.8	N12 47.6	38 28.5	S 5 33.3	213 09.3	N 3 54.8	3 37.6	N 7 38.5
16	42 56.4	15 44.8	N12 48.8	53 29.1	S 5 32.5	228 12.1	N 3 54.9	18 39.8	N 7 38.6
17	57 58.9	30 44.7	N12 50.0	68 29.8	S 5 31.8	243 14.9	N 3 55.1	33 42.0	N 7 38.7
18	73 01.3	45 44.6	N12 51.1	83 30.4	S 5 31.0	258 17.6	N 3 55.2	48 44.3	N 7 38.8
19	88 03.8	60 44.5	N12 52.3	98 31.1	S 5 30.2	273 20.4	N 3 55.3	63 46.5	N 7 38.9
20	103 06.3	75 44.5	N12 53.4	113 31.7	S 5 29.4	288 23.1	N 3 55.5	78 48.7	N 7 39.0
21	118 08.7	90 44.4	N12 54.6	128 32.4	S 5 28.6	303 25.9	N 3 55.6	93 50.9	N 7 39.1
22	133 11.2	105 44.3	N12 55.7	143 33.0	S 5 27.8	318 28.6	N 3 55.7	108 53.1	N 7 39.2
23	148 13.7	120 44.2	N12 56.9	158 33.7	S 5 27.1	333 31.4	N 3 55.9	123 55.3	N 7 39.3
5 0	163 16.1	135 44.2	N12 58.0	173 34.3	S 5 26.3	348 34.1	N 3 56.0	138 57.6	N 7 39.4
1	178 18.6	150 44.1	N12 59.2	188 35.0	S 5 25.5	3 36.9	N 3 56.1	153 59.8	N 7 39.5
2	193 21.1	165 44.0	N13 00.4	203 35.7	S 5 24.7	18 39.7	N 3 56.2	169 02.0	N 7 39.6
3	208 23.5	180 43.9	N13 01.5	218 36.3	S 5 23.9	33 42.4	N 3 56.4	184 04.2	N 7 39.7
4	223 26.0	195 43.9	N13 02.7	233 37.0	S 5 23.1	48 45.2	N 3 56.5	199 06.4	N 7 39.8
S 5	238 28.4	210 43.8	N13 03.8	248 37.6	S 5 22.4	63 47.9	N 3 56.6	214 08.6	N 7 39.9
U N 6	253 30.9	225 43.7	N13 05.0	263 38.3	S 5 21.6	78 50.7	N 3 56.8	229 10.8	N 7 40.0
D 7	268 33.4	240 43.6	N13 06.1	278 38.9	S 5 20.8	93 53.4	N 3 56.9	244 13.1	N 7 40.1
A 8	283 35.8	255 43.6	N13 07.3	293 39.6	S 5 20.0	108 56.2	N 3 57.0	259 15.3	N 7 40.2
Y 9	298 38.3	270 43.5	N13 08.4	308 40.2	S 5 19.2	123 58.9	N 3 57.2	274 17.5	N 7 40.3
10	313 40.8	285 43.4	N13 09.6	323 40.9	S 5 18.4	139 01.7	N 3 57.3	289 19.7	N 7 40.4
11	328 43.2	300 43.4	N13 10.7	338 41.5	S 5 17.7	154 04.5	N 3 57.4	304 21.9	N 7 40.5
12	343 45.7	315 43.3	N13 11.9	353 42.2	S 5 16.9	169 07.2	N 3 57.5	319 24.1	N 7 40.6
13	358 48.2	330 43.2	N13 13.0	8 42.9	S 5 16.1	184 10.0	N 3 57.7	334 26.3	N 7 40.7
14	13 50.6	345 43.1	N13 14.2	23 43.5	S 5 15.3	199 12.7	N 3 57.8	349 28.5	N 7 40.8
15	28 53.1	0 43.1	N13 15.3	38 44.2	S 5 14.5	214 15.5	N 3 57.9	4 30.8	N 7 40.9
16	43 55.6	15 43.0	N13 16.5	53 44.8	S 5 13.7	229 18.2	N 3 58.1	19 33.0	N 7 41.1
17	58 58.0	30 42.9	N13 17.6	68 45.5	S 5 12.9	244 21.0	N 3 58.2	34 35.2	N 7 41.2
18	74 00.5	45 42.8	N13 18.7	83 46.1	S 5 12.2	259 23.8	N 3 58.3	49 37.4	N 7 41.3
19	89 02.9	60 42.8	N13 19.9	98 46.8	S 5 11.4	274 26.5	N 3 58.5	64 39.6	N 7 41.4
20	104 05.4	75 42.7	N13 21.0	113 47.4	S 5 10.6	289 29.3	N 3 58.6	79 41.8	N 7 41.5
21	119 07.9	90 42.6	N13 22.2	128 48.1	S 5 09.8	304 32.0	N 3 58.7	94 44.0	N 7 41.6
22	134 10.3	105 42.6	N13 23.3	143 48.8	S 5 09.0	319 34.8	N 3 58.8	109 46.3	N 7 41.7
23	149 12.8	120 42.5	N13 24.5	158 49.4	S 5 08.2	334 37.5	N 3 59.0	124 48.5	N 7 41.8
6 0	164 15.3	135 42.4	N13 25.6	173 50.1	S 5 07.5	349 40.3	N 3 59.1	139 50.7	N 7 41.9
1	179 17.7	150 42.3	N13 26.8	188 50.7	S 5 06.7	4 43.1	N 3 59.2	154 52.9	N 7 42.0
2	194 20.2	165 42.3	N13 27.9	203 51.4	S 5 05.9	19 45.8	N 3 59.4	169 55.1	N 7 42.1
3	209 22.7	180 42.2	N13 29.0	218 52.0	S 5 05.1	34 48.6	N 3 59.5	184 57.3	N 7 42.2
4	224 25.1	195 42.1	N13 30.2	233 52.7	S 5 04.3	49 51.3	N 3 59.6	199 59.5	N 7 42.3
M 5	239 27.6	210 42.1	N13 31.3	248 53.4	S 5 03.5	64 54.1	N 3 59.8	215 01.7	N 7 42.4
O N 6	254 30.1	225 42.0	N13 32.5	263 54.0	S 5 02.7	79 56.8	N 3 59.9	230 04.0	N 7 42.5
D 7	269 32.5	240 41.9	N13 33.6	278 54.7	S 5 02.0	94 59.6	N 4 00.0	245 06.2	N 7 42.6
A 8	284 35.0	255 41.8	N13 34.7	293 55.3	S 5 01.2	110 02.4	N 4 00.1	260 08.4	N 7 42.7
Y 9	299 37.4	270 41.8	N13 35.9	308 56.0	S 5 00.4	125 05.1	N 4 00.3	275 10.6	N 7 42.8
10	314 39.9	285 41.7	N13 37.0	323 56.6	S 4 59.6	140 07.9	N 4 00.4	290 12.8	N 7 42.9
11	329 42.4	300 41.6	N13 38.2	338 57.3	S 4 58.8	155 10.6	N 4 00.5	305 15.0	N 7 43.0
12	344 44.8	315 41.6	N13 39.3	353 58.0	S 4 58.0	170 13.4	N 4 00.7	320 17.2	N 7 43.1
13	359 47.3	330 41.5	N13 40.4	8 58.6	S 4 57.2	185 16.1	N 4 00.8	335 19.4	N 7 43.2
14	14 49.8	345 41.4	N13 41.6	23 59.3	S 4 56.5	200 18.9	N 4 00.9	350 21.6	N 7 43.3
15	29 52.2	0 41.4	N13 42.7	38 59.9	S 4 55.7	215 21.7	N 4 01.1	5 23.9	N 7 43.4
16	44 54.7	15 41.3	N13 43.8	54 00.6	S 4 54.9	230 24.4	N 4 01.2	20 26.1	N 7 43.5
17	59 57.2	30 41.2	N13 45.0	69 01.2	S 4 54.1	245 27.2	N 4 01.3	35 28.3	N 7 43.7
18	74 59.6	45 41.1	N13 46.1	84 01.9	S 4 53.3	260 29.9	N 4 01.4	50 30.5	N 7 43.8
19	90 02.1	60 41.1	N13 47.2	99 02.6	S 4 52.5	275 32.7	N 4 01.6	65 32.7	N 7 43.9
20	105 04.6	75 41.0	N13 48.4	114 03.2	S 4 51.7	290 35.5	N 4 01.7	80 34.9	N 7 44.0
21	120 07.0	90 40.9	N13 49.5	129 03.9	S 4 51.0	305 38.2	N 4 01.8	95 37.1	N 7 44.1
22	135 09.5	105 40.9	N13 50.6	144 04.5	S 4 50.2	320 41.0	N 4 02.0	110 39.3	N 7 44.2
23	150 11.9	120 40.8	N13 51.8	159 05.2	S 4 49.4	335 43.7	N 4 02.1	125 41.5	N 7 44.3
		v -0.1	d 1.1	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
4 0	177 04.8	S 6 19.0	95 18.8	7.2	N25 53.1	3.4	57.2	Acamar	315 10.0	S40 11.7
1	192 04.9	S 6 18.1	109 44.9	7.1	N25 56.3	3.2	57.2	Achernar	335 18.7	S57 05.8
2	207 05.1	S 6 17.1	124 10.9	7.0	N25 59.4	3.1	57.2	Acrux	172 56.5	S63 15.3
3	222 05.2	S 6 16.2	138 36.8	6.9	N26 02.3	2.9	57.3	Adhara	255 03.6	S29 00.9
4	237 05.3	S 6 15.2	153 02.7	6.9	N26 05.1	2.8	57.3	Albireo	67 02.2	N28 00.9
S 5	252 05.5	S 6 14.2	167 28.5	6.8	N26 07.8	2.6	57.3			
A								Aldebaran	290 36.7	N16 33.9
T 6	267 05.6	S 6 13.3	181 54.2	6.7	N26 10.3	2.5	57.4	Alioth	166 10.2	N55 48.1
U 7	282 05.7	S 6 12.3	196 19.9	6.7	N26 12.6	2.3	57.4	Alkaid	152 49.6	N49 10.0
R 8	297 05.9	S 6 11.3	210 45.5	6.6	N26 14.8	2.2	57.4	Al Na-ir	27 30.1	S46 49.4
D 9	312 06.0	S 6 10.4	225 11.0	6.5	N26 16.9	2.0	57.5	Alnilam	275 35.0	S 1 11.2
A 10	327 06.2	S 6 09.4	239 36.4	6.5	N26 18.7	1.9	57.5			
Y 11	342 06.3	S 6 08.4	254 01.8	6.4	N26 20.5	1.7	57.5	Alphard	217 44.9	S 8 47.1
								Alphecca	126 01.4	N26 36.9
12	357 06.4	S 6 07.5	268 27.1	6.3	N26 22.0	1.6	57.6	Alpheratz	357 32.4	N29 14.8
13	12 06.6	S 6 06.5	282 52.4	6.3	N26 23.4	1.4	57.6	Altair	61 57.6	N 8 56.4
14	27 06.7	S 6 05.5	297 17.6	6.2	N26 24.7	1.2	57.6	Ankaa	353 05.0	S42 09.3
15	42 06.9	S 6 04.6	311 42.8	6.1	N26 25.8	1.1	57.7			
16	57 07.0	S 6 03.6	326 07.8	6.1	N26 26.7	0.9	57.7	Antares	112 12.6	S26 29.7
17	72 07.1	S 6 02.6	340 32.9	6.0	N26 27.5	0.8	57.7	Arcturus	145 45.3	N19 01.8
								Atria	107 04.6	S69 04.5
18	87 07.3	S 6 01.7	354 57.9	6.0	N26 28.1	0.6	57.8	Avior	234 13.1	S59 36.3
19	102 07.4	S 6 00.7	9 22.8	5.9	N26 28.5	0.4	57.8	Bellatrix	278 20.1	N 6 22.4
20	117 07.6	S 5 59.7	23 47.7	5.9	N26 28.8	0.3	57.9			
21	132 07.7	S 5 58.8	38 12.5	5.8	N26 28.9	0.1	57.9	Betelgeuse	270 49.2	N 7 24.6
22	147 07.8	S 5 57.8	52 37.3	5.8	N26 28.9	0.0	57.9	Canopus	263 51.0	S52 42.9
23	162 08.0	S 5 56.8	67 02.0	5.7	N26 28.7	0.2	58.0	Capella	280 18.0	N46 01.7
								Castor	245 53.5	N31 49.6
5 0	177 08.1	S 5 55.9	81 26.7	5.7	N26 28.3	0.4	58.0	Deneb	49 24.4	N45 22.7
1	192 08.3	S 5 54.9	95 51.3	5.6	N26 27.7	0.5	58.0			
2	207 08.4	S 5 53.9	110 15.9	5.6	N26 27.0	0.7	58.1	Denebola	182 22.0	N14 24.6
3	222 08.5	S 5 53.0	124 40.5	5.6	N26 26.2	0.9	58.1	Diphda	348 45.0	S17 50.0
4	237 08.7	S 5 52.0	139 05.0	5.5	N26 25.1	1.0	58.1	Dubhe	193 37.2	N61 35.7
S 5	252 08.8	S 5 51.0	153 29.5	5.5	N26 23.9	1.2	58.2	Elnath	277 58.6	N28 37.9
U								Eltanin	90 41.1	N51 28.7
N 6	267 09.0	S 5 50.1	167 54.0	5.5	N26 22.5	1.4	58.2			
D 7	282 09.1	S 5 49.1	182 18.4	5.4	N26 21.0	1.6	58.3	Enif	33 36.5	N10 00.2
A 8	297 09.3	S 5 48.1	196 42.8	5.4	N26 19.2	1.7	58.3	Fomalhaut	15 12.0	S29 28.4
Y 9	312 09.4	S 5 47.2	211 07.1	5.4	N26 17.3	1.9	58.3	Gacrux	171 48.2	S57 16.3
10	327 09.5	S 5 46.2	225 31.5	5.3	N26 15.3	2.1	58.4	Gienah	175 40.6	S17 42.1
11	342 09.7	S 5 45.2	239 55.8	5.3	N26 13.0	2.2	58.4	Hadar	148 31.9	S60 30.5
12	357 09.8	S 5 44.3	254 20.1	5.3	N26 10.6	2.4	58.4	Hamal	327 48.5	N23 35.8
13	12 10.0	S 5 43.3	268 44.3	5.3	N26 08.1	2.6	58.5	Kaus Austr.	83 29.2	S34 22.2
14	27 10.1	S 5 42.3	283 08.6	5.2	N26 05.3	2.7	58.5	Kochab	137 19.5	N74 02.0
15	42 10.3	S 5 41.4	297 32.8	5.2	N26 02.4	2.9	58.5	Markab	13 27.6	N15 21.4
16	57 10.4	S 5 40.4	311 57.0	5.2	N25 59.3	3.1	58.6	Menkar	314 03.6	N 4 12.0
17	72 10.5	S 5 39.4	326 21.2	5.2	N25 56.0	3.3	58.6			
								Menkent	147 54.3	S36 30.6
18	87 10.7	S 5 38.5	340 45.4	5.2	N25 52.6	3.4	58.7	Miaplacidus	221 36.8	S69 50.2
19	102 10.8	S 5 37.5	355 09.5	5.2	N25 49.0	3.6	58.7	Mirfak	308 24.7	N49 57.9
20	117 11.0	S 5 36.5	9 33.7	5.2	N25 45.2	3.8	58.7	Nunki	75 44.7	S26 15.6
21	132 11.1	S 5 35.5	23 57.8	5.1	N25 41.3	4.0	58.8	Peacock	53 02.1	S56 38.5
22	147 11.3	S 5 34.6	38 22.0	5.1	N25 37.1	4.1	58.8			
23	162 11.4	S 5 33.6	52 46.1	5.1	N25 32.8	4.3	58.8	Polaris	315 44.9	N89 22.7
								Pollux	243 13.9	N27 57.4
6 0	177 11.6	S 5 32.6	67 10.2	5.1	N25 28.4	4.5	58.9	Procyon	244 47.9	N 5 09.0
1	192 11.7	S 5 31.7	81 34.4	5.1	N25 23.7	4.6	58.9	Rasalhague	95 56.2	N12 32.2
2	207 11.9	S 5 30.7	95 58.5	5.1	N25 18.9	4.8	59.0	Regulus	207 31.4	N11 49.6
3	222 12.0	S 5 29.7	110 22.6	5.1	N25 13.9	5.0	59.0			
4	237 12.2	S 5 28.8	124 46.8	5.1	N25 08.8	5.2	59.0	Rigel	281 01.3	S 8 10.3
M 5	252 12.3	S 5 27.8	139 10.9	5.1	N25 03.5	5.3	59.1	Rigil Kent	139 36.5	S60 57.0
O								Sabik	101 59.8	S15 45.6
N 6	267 12.4	S 5 26.8	153 35.1	5.2	N24 58.0	5.5	59.1	Schedar	349 28.5	N56 41.6
D 7	282 12.6	S 5 25.8	167 59.2	5.2	N24 52.3	5.7	59.1	Shaula	96 06.9	S37 07.4
A 8	297 12.7	S 5 24.9	182 23.4	5.2	N24 46.5	5.8	59.2			
Y 9	312 12.9	S 5 23.9	196 47.6	5.2	N24 40.5	6.0	59.2	Sirius	258 23.8	S16 45.5
10	327 13.0	S 5 22.9	211 11.8	5.2	N24 34.3	6.2	59.2	Spica	158 19.3	S11 18.7
11	342 13.2	S 5 22.0	225 36.0	5.2	N24 27.9	6.3	59.3	Suhail	222 44.0	S43 33.0
								Vega	80 31.6	N38 48.3
12	357 13.3	S 5 21.0	240 00.2	5.2	N24 21.4	6.5	59.3	Zuben-ubi	136 53.9	S16 09.7
13	12 13.5	S 5 20.0	254 24.4	5.2	N24 14.7	6.7	59.4			
14	27 13.6	S 5 19.0	268 48.7	5.3	N24 07.9	6.8	59.4			
15	42 13.8	S 5 18.1	283 13.0	5.3	N24 00.9	7.0	59.4			
16	57 13.9	S 5 17.1	297 37.3	5.3	N23 53.7	7.2	59.5			
17	72 14.1	S 5 16.1	312 01.6	5.3	N23 46.4	7.3	59.5			
18	87 14.2	S 5 15.2	326 26.0	5.4	N23 38.8	7.5	59.5			
19	102 14.4	S 5 14.2	340 50.4	5.4	N23 31.2	7.7	59.6			
20	117 14.5	S 5 13.2	355 14.8	5.4	N23 23.3	7.8	59.6			
21	132 14.7	S 5 12.2	9 39.2	5.4	N23 15.3	8.0	59.6			
22	147 14.8	S 5 11.3	24 03.7	5.5	N23 07.2	8.2	59.7			
23	162 15.0	S 5 10.3	38 28.2	5.5	N22 58.8	8.3	59.7			
	S.D. 16.1	d 1.0	S.D. 15.7		15.9		16.2			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
7	0	165 14.4	135 40.7	N13 52.9	174 05.9	S 4 48.6	350 46.5	N 4 02.2	140 43.8	N 7 44.4
	1	180 16.9	150 40.7	N13 54.0	189 06.5	S 4 47.8	5 49.2	N 4 02.4	155 46.0	N 7 44.5
	2	195 19.3	165 40.6	N13 55.1	204 07.2	S 4 47.0	20 52.0	N 4 02.5	170 48.2	N 7 44.6
	3	210 21.8	180 40.5	N13 56.3	219 07.8	S 4 46.2	35 54.8	N 4 02.6	185 50.4	N 7 44.7
	4	225 24.3	195 40.5	N13 57.4	234 08.5	S 4 45.4	50 57.5	N 4 02.8	200 52.6	N 7 44.8
T	5	240 26.7	210 40.4	N13 58.5	249 09.2	S 4 44.7	66 00.3	N 4 02.9	215 54.8	N 7 44.9
U										
E	6	255 29.2	225 40.3	N13 59.7	264 09.8	S 4 43.9	81 03.0	N 4 03.0	230 57.0	N 7 45.0
S	7	270 31.7	240 40.2	N14 00.8	279 10.5	S 4 43.1	96 05.8	N 4 03.1	245 59.2	N 7 45.1
D	8	285 34.1	255 40.2	N14 01.9	294 11.1	S 4 42.3	111 08.6	N 4 03.3	261 01.4	N 7 45.2
A	9	300 36.6	270 40.1	N14 03.0	309 11.8	S 4 41.5	126 11.3	N 4 03.4	276 03.6	N 7 45.3
Y	10	315 39.0	285 40.0	N14 04.2	324 12.4	S 4 40.7	141 14.1	N 4 03.5	291 05.9	N 7 45.4
	11	330 41.5	300 40.0	N14 05.3	339 13.1	S 4 39.9	156 16.8	N 4 03.7	306 08.1	N 7 45.5
	12	345 44.0	315 39.9	N14 06.4	354 13.8	S 4 39.2	171 19.6	N 4 03.8	321 10.3	N 7 45.6
	13	0 46.4	330 39.8	N14 07.5	9 14.4	S 4 38.4	186 22.4	N 4 03.9	336 12.5	N 7 45.7
	14	15 48.9	345 39.8	N14 08.7	24 15.1	S 4 37.6	201 25.1	N 4 04.1	351 14.7	N 7 45.9
	15	30 51.4	0 39.7	N14 09.8	39 15.8	S 4 36.8	216 27.9	N 4 04.2	6 16.9	N 7 46.0
	16	45 53.8	15 39.6	N14 10.9	54 16.4	S 4 36.0	231 30.6	N 4 04.3	21 19.1	N 7 46.1
	17	60 56.3	30 39.6	N14 12.0	69 17.1	S 4 35.2	246 33.4	N 4 04.4	36 21.3	N 7 46.2
	18	75 58.8	45 39.5	N14 13.1	84 17.7	S 4 34.4	261 36.2	N 4 04.6	51 23.5	N 7 46.3
	19	91 01.2	60 39.4	N14 14.3	99 18.4	S 4 33.6	276 38.9	N 4 04.7	66 25.7	N 7 46.4
	20	106 03.7	75 39.4	N14 15.4	114 19.1	S 4 32.9	291 41.7	N 4 04.8	81 27.9	N 7 46.5
	21	121 06.2	90 39.3	N14 16.5	129 19.7	S 4 32.1	306 44.4	N 4 05.0	96 30.2	N 7 46.6
	22	136 08.6	105 39.2	N14 17.6	144 20.4	S 4 31.3	321 47.2	N 4 05.1	111 32.4	N 7 46.7
	23	151 11.1	120 39.2	N14 18.7	159 21.0	S 4 30.5	336 50.0	N 4 05.2	126 34.6	N 7 46.8
8	0	166 13.5	135 39.1	N14 19.9	174 21.7	S 4 29.7	351 52.7	N 4 05.4	141 36.8	N 7 46.9
	1	181 16.0	150 39.0	N14 21.0	189 22.4	S 4 28.9	6 55.5	N 4 05.5	156 39.0	N 7 47.0
	2	196 18.5	165 39.0	N14 22.1	204 23.0	S 4 28.1	21 58.2	N 4 05.6	171 41.2	N 7 47.1
	3	211 20.9	180 38.9	N14 23.2	219 23.7	S 4 27.3	37 01.0	N 4 05.8	186 43.4	N 7 47.2
	4	226 23.4	195 38.8	N14 24.3	234 24.3	S 4 26.6	52 03.8	N 4 05.9	201 45.6	N 7 47.3
W	5	241 25.9	210 38.8	N14 25.4	249 25.0	S 4 25.8	67 06.5	N 4 06.0	216 47.8	N 7 47.4
E										
D	6	256 28.3	225 38.7	N14 26.5	264 25.7	S 4 25.0	82 09.3	N 4 06.1	231 50.0	N 7 47.5
N	7	271 30.8	240 38.6	N14 27.7	279 26.3	S 4 24.2	97 12.0	N 4 06.3	246 52.2	N 7 47.6
E	8	286 33.3	255 38.6	N14 28.8	294 27.0	S 4 23.4	112 14.8	N 4 06.4	261 54.4	N 7 47.7
S	9	301 35.7	270 38.5	N14 29.9	309 27.7	S 4 22.6	127 17.6	N 4 06.5	276 56.7	N 7 47.8
D	10	316 38.2	285 38.4	N14 31.0	324 28.3	S 4 21.8	142 20.3	N 4 06.7	291 58.9	N 7 48.0
A	11	331 40.7	300 38.4	N14 32.1	339 29.0	S 4 21.0	157 23.1	N 4 06.8	307 01.1	N 7 48.1
Y										
	12	346 43.1	315 38.3	N14 33.2	354 29.6	S 4 20.2	172 25.8	N 4 06.9	322 03.3	N 7 48.2
	13	1 45.6	330 38.2	N14 34.3	9 30.3	S 4 19.5	187 28.6	N 4 07.1	337 05.5	N 7 48.3
	14	16 48.0	345 38.2	N14 35.4	24 31.0	S 4 18.7	202 31.4	N 4 07.2	352 07.7	N 7 48.4
	15	31 50.5	0 38.1	N14 36.6	39 31.6	S 4 17.9	217 34.1	N 4 07.3	7 09.9	N 7 48.5
	16	46 53.0	15 38.0	N14 37.7	54 32.3	S 4 17.1	232 36.9	N 4 07.5	22 12.1	N 7 48.6
	17	61 55.4	30 38.0	N14 38.8	69 33.0	S 4 16.3	247 39.6	N 4 07.6	37 14.3	N 7 48.7
	18	76 57.9	45 37.9	N14 39.9	84 33.6	S 4 15.5	262 42.4	N 4 07.7	52 16.5	N 7 48.8
	19	92 00.4	60 37.9	N14 41.0	99 34.3	S 4 14.7	277 45.2	N 4 07.8	67 18.7	N 7 48.9
	20	107 02.8	75 37.8	N14 42.1	114 35.0	S 4 13.9	292 47.9	N 4 08.0	82 20.9	N 7 49.0
	21	122 05.3	90 37.7	N14 43.2	129 35.6	S 4 13.2	307 50.7	N 4 08.1	97 23.1	N 7 49.1
	22	137 07.8	105 37.7	N14 44.3	144 36.3	S 4 12.4	322 53.4	N 4 08.2	112 25.3	N 7 49.2
	23	152 10.2	120 37.6	N14 45.4	159 36.9	S 4 11.6	337 56.2	N 4 08.4	127 27.6	N 7 49.3
9	0	167 12.7	135 37.5	N14 46.5	174 37.6	S 4 10.8	352 59.0	N 4 08.5	142 29.8	N 7 49.4
	1	182 15.1	150 37.5	N14 47.6	189 38.3	S 4 10.0	8 01.7	N 4 08.6	157 32.0	N 7 49.5
	2	197 17.6	165 37.4	N14 48.7	204 38.9	S 4 09.2	23 04.5	N 4 08.8	172 34.2	N 7 49.6
	3	212 20.1	180 37.3	N14 49.8	219 39.6	S 4 08.4	38 07.2	N 4 08.9	187 36.4	N 7 49.7
	4	227 22.5	195 37.3	N14 50.9	234 40.3	S 4 07.6	53 10.0	N 4 09.0	202 38.6	N 7 49.9
T	5	242 25.0	210 37.2	N14 52.0	249 40.9	S 4 06.8	68 12.8	N 4 09.2	217 40.8	N 7 50.0
H										
U	6	257 27.5	225 37.2	N14 53.1	264 41.6	S 4 06.1	83 15.5	N 4 09.3	232 43.0	N 7 50.1
R	7	272 29.9	240 37.1	N14 54.2	279 42.3	S 4 05.3	98 18.3	N 4 09.4	247 45.2	N 7 50.2
S	8	287 32.4	255 37.0	N14 55.3	294 42.9	S 4 04.5	113 21.1	N 4 09.5	262 47.4	N 7 50.3
D	9	302 34.9	270 37.0	N14 56.4	309 43.6	S 4 03.7	128 23.8	N 4 09.7	277 49.6	N 7 50.4
A	10	317 37.3	285 36.9	N14 57.5	324 44.3	S 4 02.9	143 26.6	N 4 09.8	292 51.8	N 7 50.5
Y	11	332 39.8	300 36.8	N14 58.6	339 44.9	S 4 02.1	158 29.3	N 4 09.9	307 54.0	N 7 50.6
	12	347 42.3	315 36.8	N14 59.7	354 45.6	S 4 01.3	173 32.1	N 4 10.1	322 56.2	N 7 50.7
	13	2 44.7	330 36.7	N15 00.8	9 46.2	S 4 00.5	188 34.9	N 4 10.2	337 58.4	N 7 50.8
	14	17 47.2	345 36.7	N15 01.9	24 46.9	S 3 59.7	203 37.6	N 4 10.3	353 00.6	N 7 50.9
	15	32 49.6	0 36.6	N15 03.0	39 47.6	S 3 58.9	218 40.4	N 4 10.5	8 02.9	N 7 51.0
	16	47 52.1	15 36.5	N15 04.1	54 48.2	S 3 58.2	233 43.1	N 4 10.6	23 05.1	N 7 51.1
	17	62 54.6	30 36.5	N15 05.2	69 48.9	S 3 57.4	248 45.9	N 4 10.7	38 07.3	N 7 51.2
	18	77 57.0	45 36.4	N15 06.3	84 49.6	S 3 56.6	263 48.7	N 4 10.9	53 09.5	N 7 51.3
	19	92 59.5	60 36.3	N15 07.4	99 50.2	S 3 55.8	278 51.4	N 4 11.0	68 11.7	N 7 51.4
	20	108 02.0	75 36.3	N15 08.5	114 50.9	S 3 55.0	293 54.2	N 4 11.1	83 13.9	N 7 51.5
	21	123 04.4	90 36.2	N15 09.6	129 51.6	S 3 54.2	308 56.9	N 4 11.2	98 16.1	N 7 51.7
	22	138 06.9	105 36.2	N15 10.7	144 52.2	S 3 53.4	323 59.7	N 4 11.4	113 18.3	N 7 51.8
	23	153 09.4	120 36.1	N15 11.7	159 52.9	S 3 52.6	339 02.5	N 4 11.5	128 20.5	N 7 51.9
			v -0.1	d 1.1	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
7 0	177 15.1	S 5 09.3	52 52.7	5.5	N22 50.3	8.5	59.7	Acamar	315 10.0	S40 11.7
1	192 15.3	S 5 08.3	67 17.3	5.6	N22 41.7	8.6	59.8	Achernar	335 18.7	S57 05.8
2	207 15.4	S 5 07.4	81 41.9	5.6	N22 32.9	8.8	59.8	Acrux	172 56.5	S63 15.3
3	222 15.6	S 5 06.4	96 06.5	5.6	N22 23.9	9.0	59.8	Adhara	255 03.6	S29 00.9
4	237 15.7	S 5 05.4	110 31.2	5.7	N22 14.8	9.1	59.9	Albireo	67 02.2	N28 00.9
T 5	252 15.9	S 5 04.4	124 55.9	5.7	N22 05.5	9.3	59.9			
U								Aldebaran	290 36.7	N16 33.9
E 6	267 16.0	S 5 03.5	139 20.6	5.8	N21 56.1	9.4	59.9	Alioth	166 10.2	N55 48.2
S 7	282 16.2	S 5 02.5	153 45.4	5.8	N21 46.5	9.6	60.0	Alkaid	152 49.6	N49 10.0
D 8	297 16.3	S 5 01.5	168 10.3	5.8	N21 36.8	9.7	60.0	Al Na-ir	27 30.1	S46 49.4
A 9	312 16.5	S 5 00.6	182 35.1	5.9	N21 26.9	9.9	60.0	Alnilam	275 35.0	S 1 11.2
Y 10	327 16.6	S 4 59.6	197 00.1	5.9	N21 16.8	10.0	60.1			
11	342 16.8	S 4 58.6	211 25.0	6.0	N21 06.6	10.2	60.1	Alphard	217 44.9	S 8 47.1
								Alphecca	126 01.4	N26 36.9
12	357 16.9	S 4 57.6	225 50.0	6.0	N20 56.3	10.3	60.1	Alpheratz	357 32.4	N29 14.8
13	12 17.1	S 4 56.7	240 15.1	6.0	N20 45.8	10.5	60.2	Altair	61 57.6	N 8 56.4
14	27 17.2	S 4 55.7	254 40.2	6.1	N20 35.2	10.6	60.2	Ankaa	353 05.0	S42 09.3
15	42 17.4	S 4 54.7	269 05.3	6.1	N20 24.4	10.8	60.2			
16	57 17.6	S 4 53.7	283 30.5	6.2	N20 13.5	10.9	60.2	Antares	112 12.6	S26 29.7
17	72 17.7	S 4 52.8	297 55.7	6.2	N20 02.4	11.1	60.3	Arcturus	145 45.3	N19 01.8
								Atria	107 04.5	S69 04.5
18	87 17.9	S 4 51.8	312 21.0	6.3	N19 51.2	11.2	60.3	Avior	234 13.2	S59 36.3
19	102 18.0	S 4 50.8	326 46.3	6.3	N19 39.8	11.3	60.3	Bellatrix	278 20.1	N 6 22.4
20	117 18.2	S 4 49.8	341 11.7	6.4	N19 28.4	11.5	60.4			
21	132 18.3	S 4 48.9	355 37.1	6.4	N19 16.7	11.6	60.4	Betelgeuse	270 49.2	N 7 24.6
22	147 18.5	S 4 47.9	10 02.6	6.5	N19 05.0	11.8	60.4	Canopus	263 51.0	S52 43.0
23	162 18.6	S 4 46.9	24 28.2	6.5	N18 53.1	11.9	60.5	Capella	280 18.0	N46 01.7
								Castor	245 53.5	N31 49.6
8 0	177 18.8	S 4 45.9	38 53.7	6.6	N18 41.1	12.0	60.5	Deneb	49 24.4	N45 22.7
1	192 18.9	S 4 45.0	53 19.4	6.6	N18 28.9	12.2	60.5			
2	207 19.1	S 4 44.0	67 45.1	6.7	N18 16.6	12.3	60.5	Denebola	182 22.0	N14 24.6
3	222 19.2	S 4 43.0	82 10.8	6.7	N18 04.2	12.4	60.6	Diphda	348 45.0	S17 50.0
4	237 19.4	S 4 42.0	96 36.6	6.8	N17 51.6	12.5	60.6	Dubhe	193 37.2	N61 35.7
W 5	252 19.6	S 4 41.1	111 02.4	6.8	N17 39.0	12.7	60.6	Elnath	277 58.6	N28 37.9
E								Eltanin	90 41.1	N51 28.7
D 6	267 19.7	S 4 40.1	125 28.3	6.9	N17 26.2	12.8	60.6			
N 7	282 19.9	S 4 39.1	139 54.3	6.9	N17 13.3	12.9	60.7	Enif	33 36.5	N10 00.2
E 8	297 20.0	S 4 38.1	154 20.3	7.0	N17 00.2	13.0	60.7	Fomalhaut	15 12.0	S29 28.4
S 9	312 20.2	S 4 37.1	168 46.3	7.1	N16 47.1	13.2	60.7	Gacrux	171 48.2	S57 16.3
D 10	327 20.3	S 4 36.2	183 12.4	7.1	N16 33.8	13.3	60.7	Gienah	175 40.6	S17 42.1
A 11	342 20.5	S 4 35.2	197 38.6	7.2	N16 20.4	13.4	60.8	Hadar	148 31.9	S60 30.5
Y										
12	357 20.7	S 4 34.2	212 04.8	7.2	N16 06.9	13.5	60.8	Hamal	327 48.5	N23 35.8
13	12 20.8	S 4 33.2	226 31.0	7.3	N15 53.3	13.6	60.8	Kaus Austr.	83 29.2	S34 22.2
14	27 21.0	S 4 32.3	240 57.4	7.3	N15 39.5	13.7	60.8	Kochab	137 19.5	N74 02.0
15	42 21.1	S 4 31.3	255 23.7	7.4	N15 25.7	13.8	60.9	Markab	13 27.6	N15 21.4
16	57 21.3	S 4 30.3	269 50.1	7.4	N15 11.8	13.9	60.9	Menkar	314 03.6	N 4 12.0
17	72 21.4	S 4 29.3	284 16.6	7.5	N14 57.7	14.1	60.9			
								Menkent	147 54.3	S36 30.6
18	87 21.6	S 4 28.4	298 43.1	7.5	N14 43.6	14.2	60.9	Miaplacidus	221 36.8	S69 50.2
19	102 21.8	S 4 27.4	313 09.7	7.6	N14 29.3	14.3	60.9	Mirfak	308 24.8	N49 57.9
20	117 21.9	S 4 26.4	327 36.3	7.6	N14 14.9	14.4	61.0	Nunki	75 44.7	S26 15.6
21	132 22.1	S 4 25.4	342 03.0	7.7	N14 00.5	14.5	61.0	Peacock	53 02.0	S56 38.5
22	147 22.2	S 4 24.4	356 29.7	7.7	N13 45.9	14.6	61.0			
23	162 22.4	S 4 23.5	10 56.5	7.8	N13 31.3	14.6	61.0	Polaris	315 45.9	N89 22.7
								Pollux	243 13.9	N27 57.4
9 0	177 22.5	S 4 22.5	25 23.3	7.8	N13 16.5	14.7	61.0	Procyon	244 47.9	N 5 09.0
1	192 22.7	S 4 21.5	39 50.2	7.9	N13 01.7	14.8	61.0	Rasalhague	95 56.2	N12 32.2
2	207 22.9	S 4 20.5	54 17.1	7.9	N12 46.8	14.9	61.1	Regulus	207 31.4	N11 49.6
3	222 23.0	S 4 19.5	68 44.1	8.0	N12 31.8	15.0	61.1			
4	237 23.2	S 4 18.6	83 11.1	8.0	N12 16.7	15.1	61.1	Rigel	281 01.4	S 8 10.3
T 5	252 23.3	S 4 17.6	97 38.2	8.1	N12 01.5	15.2	61.1	Rigil Kent	139 36.4	S60 57.0
H								Sabik	101 59.8	S15 45.7
U 6	267 23.5	S 4 16.6	112 05.3	8.1	N11 46.2	15.3	61.1	Schedar	349 28.5	N56 41.6
R 7	282 23.7	S 4 15.6	126 32.5	8.2	N11 30.9	15.3	61.1	Shaula	96 06.9	S37 07.4
S 8	297 23.8	S 4 14.7	140 59.7	8.2	N11 15.5	15.4	61.2			
D 9	312 24.0	S 4 13.7	155 26.9	8.3	N10 60.0	15.5	61.2	Sirius	258 23.8	S16 45.5
A 10	327 24.1	S 4 12.7	169 54.2	8.3	N10 44.4	15.6	61.2	Spica	158 19.3	S11 18.7
Y 11	342 24.3	S 4 11.7	184 21.6	8.3	N10 28.7	15.6	61.2	Suhail	222 44.0	S43 33.0
								Vega	80 31.6	N38 48.3
12	357 24.5	S 4 10.7	198 49.0	8.4	N10 13.0	15.7	61.2	Zuben-ubi	136 53.9	S16 09.7
13	12 24.6	S 4 09.8	213 16.4	8.4	N 9 57.2	15.8	61.2			
14	27 24.8	S 4 08.8	227 43.9	8.5	N 9 41.4	15.9	61.2			
15	42 24.9	S 4 07.8	242 11.4	8.5	N 9 25.5	15.9	61.2			
16	57 25.1	S 4 06.8	256 38.9	8.6	N 9 09.5	16.0	61.2			
17	72 25.3	S 4 05.8	271 06.5	8.6	N 8 53.4	16.0	61.3			
18	87 25.4	S 4 04.9	285 34.2	8.6	N 8 37.3	16.1	61.3			
19	102 25.6	S 4 03.9	300 01.8	8.7	N 8 21.2	16.2	61.3			
20	117 25.7	S 4 02.9	314 29.6	8.7	N 8 05.0	16.2	61.3			
21	132 25.9	S 4 01.9	328 57.3	8.7	N 7 48.7	16.3	61.3			
22	147 26.1	S 4 00.9	343 25.1	8.8	N 7 32.4	16.3	61.3			
23	162 26.2	S 3 60.0	357 52.9	8.8	N 7 16.0	16.4	61.3			
	S.D. 16.1	d 1.0	S.D.	16.4	16.6	16.7				

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
10	0	168 11.8	135 36.0	N15 12.8	174 53.6	S 3 51.8	354 05.2	N 4 11.6	143 22.7	N 7 52.0
	1	183 14.3	150 36.0	N15 13.9	189 54.2	S 3 51.1	9 08.0	N 4 11.8	158 24.9	N 7 52.1
	2	198 16.8	165 35.9	N15 15.0	204 54.9	S 3 50.3	24 10.8	N 4 11.9	173 27.1	N 7 52.2
	3	213 19.2	180 35.9	N15 16.1	219 55.6	S 3 49.5	39 13.5	N 4 12.0	188 29.3	N 7 52.3
	4	228 21.7	195 35.8	N15 17.2	234 56.2	S 3 48.7	54 16.3	N 4 12.2	203 31.5	N 7 52.4
F	5	243 24.1	210 35.7	N15 18.3	249 56.9	S 3 47.9	69 19.0	N 4 12.3	218 33.7	N 7 52.5
R										
I	6	258 26.6	225 35.7	N15 19.4	264 57.6	S 3 47.1	84 21.8	N 4 12.4	233 35.9	N 7 52.6
D	7	273 29.1	240 35.6	N15 20.5	279 58.2	S 3 46.3	99 24.6	N 4 12.5	248 38.1	N 7 52.7
A	8	288 31.5	255 35.6	N15 21.5	294 58.9	S 3 45.5	114 27.3	N 4 12.7	263 40.3	N 7 52.8
Y	9	303 34.0	270 35.5	N15 22.6	309 59.6	S 3 44.7	129 30.1	N 4 12.8	278 42.5	N 7 52.9
	10	318 36.5	285 35.4	N15 23.7	325 00.2	S 3 43.9	144 32.9	N 4 12.9	293 44.7	N 7 53.0
	11	333 38.9	300 35.4	N15 24.8	340 00.9	S 3 43.2	159 35.6	N 4 13.1	308 46.9	N 7 53.1
	12	348 41.4	315 35.3	N15 25.9	355 01.6	S 3 42.4	174 38.4	N 4 13.2	323 49.1	N 7 53.2
	13	3 43.9	330 35.3	N15 27.0	10 02.2	S 3 41.6	189 41.1	N 4 13.3	338 51.3	N 7 53.3
	14	18 46.3	345 35.2	N15 28.0	25 02.9	S 3 40.8	204 43.9	N 4 13.5	353 53.6	N 7 53.5
	15	33 48.8	0 35.1	N15 29.1	40 03.6	S 3 40.0	219 46.7	N 4 13.6	8 55.8	N 7 53.6
	16	48 51.2	15 35.1	N15 30.2	55 04.2	S 3 39.2	234 49.4	N 4 13.7	23 58.0	N 7 53.7
	17	63 53.7	30 35.0	N15 31.3	70 04.9	S 3 38.4	249 52.2	N 4 13.9	39 00.2	N 7 53.8
	18	78 56.2	45 35.0	N15 32.4	85 05.6	S 3 37.6	264 55.0	N 4 14.0	54 02.4	N 7 53.9
	19	93 58.6	60 34.9	N15 33.4	100 06.2	S 3 36.8	279 57.7	N 4 14.1	69 04.6	N 7 54.0
	20	109 01.1	75 34.8	N15 34.5	115 06.9	S 3 36.0	295 00.5	N 4 14.2	84 06.8	N 7 54.1
	21	124 03.6	90 34.8	N15 35.6	130 07.6	S 3 35.2	310 03.2	N 4 14.4	99 09.0	N 7 54.2
	22	139 06.0	105 34.7	N15 36.7	145 08.3	S 3 34.5	325 06.0	N 4 14.5	114 11.2	N 7 54.3
	23	154 08.5	120 34.7	N15 37.8	160 08.9	S 3 33.7	340 08.8	N 4 14.6	129 13.4	N 7 54.4
11	0	169 11.0	135 34.6	N15 38.8	175 09.6	S 3 32.9	355 11.5	N 4 14.8	144 15.6	N 7 54.5
	1	184 13.4	150 34.6	N15 39.9	190 10.3	S 3 32.1	10 14.3	N 4 14.9	159 17.8	N 7 54.6
	2	199 15.9	165 34.5	N15 41.0	205 10.9	S 3 31.3	25 17.0	N 4 15.0	174 20.0	N 7 54.7
	3	214 18.4	180 34.4	N15 42.1	220 11.6	S 3 30.5	40 19.8	N 4 15.2	189 22.2	N 7 54.8
	4	229 20.8	195 34.4	N15 43.1	235 12.3	S 3 29.7	55 22.6	N 4 15.3	204 24.4	N 7 54.9
S	5	244 23.3	210 34.3	N15 44.2	250 12.9	S 3 28.9	70 25.3	N 4 15.4	219 26.6	N 7 55.1
A										
T	6	259 25.7	225 34.3	N15 45.3	265 13.6	S 3 28.1	85 28.1	N 4 15.6	234 28.8	N 7 55.2
U	7	274 28.2	240 34.2	N15 46.3	280 14.3	S 3 27.3	100 30.9	N 4 15.7	249 31.0	N 7 55.3
R	8	289 30.7	255 34.2	N15 47.4	295 14.9	S 3 26.6	115 33.6	N 4 15.8	264 33.2	N 7 55.4
D	9	304 33.1	270 34.1	N15 48.5	310 15.6	S 3 25.8	130 36.4	N 4 15.9	279 35.4	N 7 55.5
A	10	319 35.6	285 34.0	N15 49.6	325 16.3	S 3 25.0	145 39.1	N 4 16.1	294 37.6	N 7 55.6
Y	11	334 38.1	300 34.0	N15 50.6	340 16.9	S 3 24.2	160 41.9	N 4 16.2	309 39.8	N 7 55.7
	12	349 40.5	315 33.9	N15 51.7	355 17.6	S 3 23.4	175 44.7	N 4 16.3	324 42.0	N 7 55.8
	13	4 43.0	330 33.9	N15 52.8	10 18.3	S 3 22.6	190 47.4	N 4 16.5	339 44.2	N 7 55.9
	14	19 45.5	345 33.8	N15 53.8	25 19.0	S 3 21.8	205 50.2	N 4 16.6	354 46.4	N 7 56.0
	15	34 47.9	0 33.8	N15 54.9	40 19.6	S 3 21.0	220 53.0	N 4 16.7	9 48.6	N 7 56.1
	16	49 50.4	15 33.7	N15 56.0	55 20.3	S 3 20.2	235 55.7	N 4 16.9	24 50.8	N 7 56.2
	17	64 52.8	30 33.7	N15 57.0	70 21.0	S 3 19.4	250 58.5	N 4 17.0	39 53.0	N 7 56.3
	18	79 55.3	45 33.6	N15 58.1	85 21.6	S 3 18.6	266 01.2	N 4 17.1	54 55.2	N 7 56.4
	19	94 57.8	60 33.5	N15 59.2	100 22.3	S 3 17.9	281 04.0	N 4 17.3	69 57.4	N 7 56.5
	20	110 00.2	75 33.5	N16 00.2	115 23.0	S 3 17.1	296 06.8	N 4 17.4	84 59.6	N 7 56.7
	21	125 02.7	90 33.4	N16 01.3	130 23.6	S 3 16.3	311 09.5	N 4 17.5	100 01.8	N 7 56.8
	22	140 05.2	105 33.4	N16 02.4	145 24.3	S 3 15.5	326 12.3	N 4 17.6	115 04.0	N 7 56.9
	23	155 07.6	120 33.3	N16 03.4	160 25.0	S 3 14.7	341 15.1	N 4 17.8	130 06.2	N 7 57.0
12	0	170 10.1	135 33.3	N16 04.5	175 25.7	S 3 13.9	356 17.8	N 4 17.9	145 08.4	N 7 57.1
	1	185 12.6	150 33.2	N16 05.5	190 26.3	S 3 13.1	11 20.6	N 4 18.0	160 10.6	N 7 57.2
	2	200 15.0	165 33.2	N16 06.6	205 27.0	S 3 12.3	26 23.4	N 4 18.2	175 12.8	N 7 57.3
	3	215 17.5	180 33.1	N16 07.7	220 27.7	S 3 11.5	41 26.1	N 4 18.3	190 15.0	N 7 57.4
	4	230 20.0	195 33.1	N16 08.7	235 28.3	S 3 10.7	56 28.9	N 4 18.4	205 17.2	N 7 57.5
S	5	245 22.4	210 33.0	N16 09.8	250 29.0	S 3 09.9	71 31.6	N 4 18.6	220 19.4	N 7 57.6
U										
N	6	260 24.9	225 32.9	N16 10.8	265 29.7	S 3 09.1	86 34.4	N 4 18.7	235 21.6	N 7 57.7
D	7	275 27.3	240 32.9	N16 11.9	280 30.4	S 3 08.4	101 37.2	N 4 18.8	250 23.8	N 7 57.8
A	8	290 29.8	255 32.8	N16 12.9	295 31.0	S 3 07.6	116 39.9	N 4 19.0	265 26.0	N 7 57.9
Y	9	305 32.3	270 32.8	N16 14.0	310 31.7	S 3 06.8	131 42.7	N 4 19.1	280 28.2	N 7 58.0
	10	320 34.7	285 32.7	N16 15.1	325 32.4	S 3 06.0	146 45.5	N 4 19.2	295 30.4	N 7 58.2
	11	335 37.2	300 32.7	N16 16.1	340 33.0	S 3 05.2	161 48.2	N 4 19.3	310 32.6	N 7 58.3
	12	350 39.7	315 32.6	N16 17.2	355 33.7	S 3 04.4	176 51.0	N 4 19.5	325 34.8	N 7 58.4
	13	5 42.1	330 32.6	N16 18.2	10 34.4	S 3 03.6	191 53.7	N 4 19.6	340 37.0	N 7 58.5
	14	20 44.6	345 32.5	N16 19.3	25 35.1	S 3 02.8	206 56.5	N 4 19.7	355 39.2	N 7 58.6
	15	35 47.1	0 32.5	N16 20.3	40 35.7	S 3 02.0	221 59.3	N 4 19.9	10 41.4	N 7 58.7
	16	50 49.5	15 32.4	N16 21.4	55 36.4	S 3 01.2	237 02.0	N 4 20.0	25 43.6	N 7 58.8
	17	65 52.0	30 32.4	N16 22.4	70 37.1	S 3 00.4	252 04.8	N 4 20.1	40 45.8	N 7 58.9
	18	80 54.5	45 32.3	N16 23.5	85 37.7	S 2 59.6	267 07.6	N 4 20.3	55 48.0	N 7 59.0
	19	95 56.9	60 32.3	N16 24.5	100 38.4	S 2 58.9	282 10.3	N 4 20.4	70 50.2	N 7 59.1
	20	110 59.4	75 32.2	N16 25.6	115 39.1	S 2 58.1	297 13.1	N 4 20.5	85 52.4	N 7 59.2
	21	126 01.8	90 32.2	N16 26.6	130 39.8	S 2 57.3	312 15.8	N 4 20.6	100 54.6	N 7 59.3
	22	141 04.3	105 32.1	N16 27.7	145 40.4	S 2 56.5	327 18.6	N 4 20.8	115 56.8	N 7 59.4
	23	156 06.8	120 32.1	N16 28.7	160 41.1	S 2 55.7	342 21.4	N 4 20.9	130 59.0	N 7 59.6
			v -0.1	d 1.1	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec		d	HP
		° '	° '		° '	'	° '		'	'
10	0	177 26.4	S 3 59.0		12 20.8	8.9	N 6 59.6		16.4	61.3
	1	192 26.5	S 3 58.0		26 48.7	8.9	N 6 43.2		16.5	61.3
	2	207 26.7	S 3 57.0		41 16.6	8.9	N 6 26.7		16.5	61.3
	3	222 26.9	S 3 56.0		55 44.5	9.0	N 6 10.1		16.5	61.3
	4	237 27.0	S 3 55.1		70 12.5	9.0	N 5 53.6		16.6	61.3
F	5	252 27.2	S 3 54.1		84 40.5	9.0	N 5 36.9		16.6	61.3
R										
I	6	267 27.4	S 3 53.1		99 08.6	9.0	N 5 20.3		16.6	61.3
D	7	282 27.5	S 3 52.1		113 36.7	9.1	N 5 03.6		16.7	61.3
A	8	297 27.7	S 3 51.1		128 04.8	9.1	N 4 46.9		16.7	61.3
Y	9	312 27.8	S 3 50.2		142 32.9	9.1	N 4 30.2		16.7	61.3
	10	327 28.0	S 3 49.2		157 01.0	9.2	N 4 13.4		16.8	61.3
	11	342 28.2	S 3 48.2		171 29.2	9.2	N 3 56.6		16.8	61.3
	12	357 28.3	S 3 47.2		185 57.4	9.2	N 3 39.8		16.8	61.3
	13	12 28.5	S 3 46.2		200 25.7	9.2	N 3 23.0		16.8	61.3
	14	27 28.7	S 3 45.3		214 53.9	9.3	N 3 06.1		16.9	61.3
	15	42 28.8	S 3 44.3		229 22.2	9.3	N 2 49.2		16.9	61.3
	16	57 29.0	S 3 43.3		243 50.5	9.3	N 2 32.3		16.9	61.3
	17	72 29.2	S 3 42.3		258 18.8	9.3	N 2 15.5		16.9	61.3
	18	87 29.3	S 3 41.3		272 47.1	9.3	N 1 58.5		16.9	61.3
	19	102 29.5	S 3 40.3		287 15.5	9.3	N 1 41.6		16.9	61.3
	20	117 29.7	S 3 39.4		301 43.8	9.4	N 1 24.7		16.9	61.3
	21	132 29.8	S 3 38.4		316 12.2	9.4	N 1 07.8		16.9	61.3
	22	147 30.0	S 3 37.4		330 40.6	9.4	N 0 50.9		16.9	61.3
	23	162 30.1	S 3 36.4		345 09.0	9.4	N 0 33.9		16.9	61.3
11	0	177 30.3	S 3 35.4		359 37.4	9.4	N 0 17.0		16.9	61.2
	1	192 30.5	S 3 34.5		14 05.9	9.4	N 0 00.1		16.9	61.2
	2	207 30.6	S 3 33.5		28 34.3	9.4	S 0 16.8		16.9	61.2
	3	222 30.8	S 3 32.5		43 02.7	9.5	S 0 33.7		16.9	61.2
	4	237 31.0	S 3 31.5		57 31.2	9.5	S 0 50.6		16.9	61.2
S	5	252 31.1	S 3 30.5		71 59.7	9.5	S 1 07.5		16.9	61.2
A										
T	6	267 31.3	S 3 29.5		86 28.1	9.5	S 1 24.4		16.9	61.2
U	7	282 31.5	S 3 28.6		100 56.6	9.5	S 1 41.3		16.9	61.2
R	8	297 31.6	S 3 27.6		115 25.1	9.5	S 1 58.1		16.8	61.2
D	9	312 31.8	S 3 26.6		129 53.6	9.5	S 2 14.9		16.8	61.1
A	10	327 32.0	S 3 25.6		144 22.1	9.5	S 2 31.7		16.8	61.1
Y	11	342 32.1	S 3 24.6		158 50.6	9.5	S 2 48.5		16.8	61.1
	12	357 32.3	S 3 23.6		173 19.1	9.5	S 3 05.3		16.8	61.1
	13	12 32.5	S 3 22.7		187 47.6	9.5	S 3 22.0		16.7	61.1
	14	27 32.6	S 3 21.7		202 16.1	9.5	S 3 38.7		16.7	61.1
	15	42 32.8	S 3 20.7		216 44.6	9.5	S 3 55.3		16.7	61.0
	16	57 33.0	S 3 19.7		231 13.1	9.5	S 4 12.0		16.6	61.0
	17	72 33.1	S 3 18.7		245 41.5	9.5	S 4 28.6		16.6	61.0
	18	87 33.3	S 3 17.7		260 10.0	9.5	S 4 45.1		16.6	61.0
	19	102 33.5	S 3 16.8		274 38.5	9.5	S 5 01.7		16.5	61.0
	20	117 33.6	S 3 15.8		289 07.0	9.5	S 5 18.1		16.5	61.0
	21	132 33.8	S 3 14.8		303 35.4	9.5	S 5 34.6		16.4	60.9
	22	147 34.0	S 3 13.8		318 03.9	9.5	S 5 51.0		16.4	60.9
	23	162 34.1	S 3 12.8		332 32.3	9.4	S 6 07.3		16.3	60.9
12	0	177 34.3	S 3 11.8		347 00.8	9.4	S 6 23.6		16.3	60.9
	1	192 34.5	S 3 10.9		1 29.2	9.4	S 6 39.9		16.2	60.9
	2	207 34.7	S 3 09.9		15 57.6	9.4	S 6 56.1		16.2	60.8
	3	222 34.8	S 3 08.9		30 26.0	9.4	S 7 12.2		16.1	60.8
	4	237 35.0	S 3 07.9		44 54.4	9.4	S 7 28.3		16.1	60.8
S	5	252 35.2	S 3 06.9		59 22.8	9.4	S 7 44.3		16.0	60.8
U										
N	6	267 35.3	S 3 05.9		73 51.1	9.4	S 8 00.3		16.0	60.7
D	7	282 35.5	S 3 05.0		88 19.5	9.3	S 8 16.2		15.9	60.7
A	8	297 35.7	S 3 04.0		102 47.8	9.3	S 8 32.1		15.9	60.7
Y	9	312 35.8	S 3 03.0		117 16.1	9.3	S 8 47.8		15.8	60.7
	10	327 36.0	S 3 02.0		131 44.4	9.3	S 9 03.6		15.7	60.6
	11	342 36.2	S 3 01.0		146 12.7	9.3	S 9 19.2		15.7	60.6
	12	357 36.3	S 3 00.0		160 40.9	9.3	S 9 34.8		15.6	60.6
	13	12 36.5	S 2 59.1		175 09.2	9.2	S 9 50.3		15.5	60.5
	14	27 36.7	S 2 58.1		189 37.4	9.2	S10 05.8		15.4	60.5
	15	42 36.9	S 2 57.1		204 05.6	9.2	S10 21.1		15.4	60.5
	16	57 37.0	S 2 56.1		218 33.8	9.2	S10 36.4		15.3	60.5
	17	72 37.2	S 2 55.1		233 01.9	9.2	S10 51.6		15.2	60.4
	18	87 37.4	S 2 54.1		247 30.0	9.1	S11 06.8		15.1	60.4
	19	102 37.5	S 2 53.1		261 58.2	9.1	S11 21.8		15.1	60.4
	20	117 37.7	S 2 52.2		276 26.2	9.1	S11 36.8		15.0	60.3
	21	132 37.9	S 2 51.2		290 54.3	9.1	S11 51.7		14.9	60.3
	22	147 38.0	S 2 50.2		305 22.3	9.0	S12 06.5		14.8	60.3
	23	162 38.2	S 2 49.2		319 50.3	9.0	S12 21.2		14.7	60.3
		S.D. 16.1	d 1.0		S.D. 16.7		16.6		16.5	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.0	S40 11.7
Achernar	335 18.8	S57 05.7
Acrux	172 56.5	S63 15.4
Adhara	255 03.7	S29 00.9
Albireo	67 02.1	N28 00.9
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.2	N55 48.2
Alkaid	152 49.6	N49 10.0
Al Na-ir	27 30.1	S46 49.4
Alnilam	275 35.0	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.4	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.6	N 8 56.4
Ankaa	353 05.0	S42 09.3
Antares	112 12.6	S26 29.7
Arcturus	145 45.3	N19 01.8
Atria	107 04.5	S69 04.5
Avior	234 13.2	S59 36.3
Bellatrix	278 20.1	N 6 22.4
Betelgeuse	270 49.2	N 7 24.6
Canopus	263 51.1	S52 43.0
Capella	280 18.1	N46 01.7
Castor	245 53.5	N31 49.6
Deneb	49 24.3	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.2	N61 35.8
Elnath	277 58.6	N28 37.9
Eltanin	90 41.1	N51 28.7
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.2	S57 16.4
Gienah	175 40.6	S17 42.1
Hadar	148 31.9	S60 30.5
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.2	S34 22.2
Kochab	137 19.4	N74 02.0
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.3	S36 30.6
Miaplacidus	221 36.8	S69 50.2
Mirfak	308 24.8	N49 57.8
Nunki	75 44.7	S26 15.6
Peacock	53 02.0	S56 38.5
Polaris	315 46.9	N89 22.7
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.2	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.4	S 8 10.3
Rigil Kent	139 36.4	S60 57.0
Sabik	101 59.8	S15 45.7
Schedar	349 28.5	N56 41.6
Shaula	96 06.8	S37 07.4
Sirius	258 23.8	S16 45.5
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 33.1
Vega	80 31.6	N38 48.3
Zuben-ubi	136 53.9	S16 09.7

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
13	0	171 09.2	135 32.0	N16	29.8	175 41.8	S 2	54.9	357 24.1	N 4	21.0	146 01.2	N 7	59.7
	1	186 11.7	150 32.0	N16	30.8	190 42.5	S 2	54.1	12 26.9	N 4	21.2	161 03.4	N 7	59.8
	2	201 14.2	165 31.9	N16	31.9	205 43.1	S 2	53.3	27 29.7	N 4	21.3	176 05.6	N 7	59.9
	3	216 16.6	180 31.9	N16	32.9	220 43.8	S 2	52.5	42 32.4	N 4	21.4	191 07.8	N 7	60.0
	4	231 19.1	195 31.8	N16	34.0	235 44.5	S 2	51.7	57 35.2	N 4	21.6	206 10.0	N 8	00.1
M	5	246 21.6	210 31.8	N16	35.0	250 45.1	S 2	50.9	72 37.9	N 4	21.7	221 12.2	N 8	00.2
O														
N	6	261 24.0	225 31.7	N16	36.0	265 45.8	S 2	50.1	87 40.7	N 4	21.8	236 14.4	N 8	00.3
D	7	276 26.5	240 31.7	N16	37.1	280 46.5	S 2	49.3	102 43.5	N 4	21.9	251 16.6	N 8	00.4
A	8	291 28.9	255 31.6	N16	38.1	295 47.2	S 2	48.6	117 46.2	N 4	22.1	266 18.8	N 8	00.5
Y	9	306 31.4	270 31.6	N16	39.2	310 47.8	S 2	47.8	132 49.0	N 4	22.2	281 21.0	N 8	00.6
	10	321 33.9	285 31.5	N16	40.2	325 48.5	S 2	47.0	147 51.8	N 4	22.3	296 23.2	N 8	00.7
	11	336 36.3	300 31.5	N16	41.2	340 49.2	S 2	46.2	162 54.5	N 4	22.5	311 25.4	N 8	00.8
	12	351 38.8	315 31.4	N16	42.3	355 49.9	S 2	45.4	177 57.3	N 4	22.6	326 27.6	N 8	00.9
	13	6 41.3	330 31.4	N16	43.3	10 50.5	S 2	44.6	193 00.1	N 4	22.7	341 29.8	N 8	01.1
	14	21 43.7	345 31.3	N16	44.4	25 51.2	S 2	43.8	208 02.8	N 4	22.9	356 32.0	N 8	01.2
	15	36 46.2	0 31.3	N16	45.4	40 51.9	S 2	43.0	223 05.6	N 4	23.0	11 34.2	N 8	01.3
	16	51 48.7	15 31.2	N16	46.4	55 52.6	S 2	42.2	238 08.3	N 4	23.1	26 36.4	N 8	01.4
	17	66 51.1	30 31.2	N16	47.5	70 53.2	S 2	41.4	253 11.1	N 4	23.2	41 38.6	N 8	01.5
	18	81 53.6	45 31.1	N16	48.5	85 53.9	S 2	40.6	268 13.9	N 4	23.4	56 40.8	N 8	01.6
	19	96 56.1	60 31.1	N16	49.5	100 54.6	S 2	39.8	283 16.6	N 4	23.5	71 43.0	N 8	01.7
	20	111 58.5	75 31.0	N16	50.6	115 55.2	S 2	39.0	298 19.4	N 4	23.6	86 45.2	N 8	01.8
	21	127 01.0	90 31.0	N16	51.6	130 55.9	S 2	38.3	313 22.2	N 4	23.8	101 47.4	N 8	01.9
	22	142 03.4	105 30.9	N16	52.6	145 56.6	S 2	37.5	328 24.9	N 4	23.9	116 49.6	N 8	02.0
	23	157 05.9	120 30.9	N16	53.7	160 57.3	S 2	36.7	343 27.7	N 4	24.0	131 51.8	N 8	02.1
14	0	172 08.4	135 30.8	N16	54.7	175 57.9	S 2	35.9	358 30.4	N 4	24.2	146 54.0	N 8	02.2
	1	187 10.8	150 30.8	N16	55.7	190 58.6	S 2	35.1	13 33.2	N 4	24.3	161 56.2	N 8	02.4
	2	202 13.3	165 30.7	N16	56.8	205 59.3	S 2	34.3	28 36.0	N 4	24.4	176 58.4	N 8	02.5
	3	217 15.8	180 30.7	N16	57.8	220 60.0	S 2	33.5	43 38.7	N 4	24.5	192 00.6	N 8	02.6
	4	232 18.2	195 30.6	N16	58.8	236 00.6	S 2	32.7	58 41.5	N 4	24.7	207 02.8	N 8	02.7
T	5	247 20.7	210 30.6	N16	59.9	251 01.3	S 2	31.9	73 44.3	N 4	24.8	222 04.9	N 8	02.8
U														
E	6	262 23.2	225 30.6	N17	00.9	266 02.0	S 2	31.1	88 47.0	N 4	24.9	237 07.1	N 8	02.9
S	7	277 25.6	240 30.5	N17	01.9	281 02.7	S 2	30.3	103 49.8	N 4	25.1	252 09.3	N 8	03.0
D	8	292 28.1	255 30.5	N17	02.9	296 03.3	S 2	29.5	118 52.5	N 4	25.2	267 11.5	N 8	03.1
A	9	307 30.5	270 30.4	N17	04.0	311 04.0	S 2	28.7	133 55.3	N 4	25.3	282 13.7	N 8	03.2
Y	10	322 33.0	285 30.4	N17	05.0	326 04.7	S 2	28.0	148 58.1	N 4	25.5	297 15.9	N 8	03.3
	11	337 35.5	300 30.3	N17	06.0	341 05.4	S 2	27.2	164 00.8	N 4	25.6	312 18.1	N 8	03.4
	12	352 37.9	315 30.3	N17	07.0	356 06.0	S 2	26.4	179 03.6	N 4	25.7	327 20.3	N 8	03.5
	13	7 40.4	330 30.2	N17	08.1	11 06.7	S 2	25.6	194 06.4	N 4	25.8	342 22.5	N 8	03.6
	14	22 42.9	345 30.2	N17	09.1	26 07.4	S 2	24.8	209 09.1	N 4	26.0	357 24.7	N 8	03.8
	15	37 45.3	0 30.1	N17	10.1	41 08.1	S 2	24.0	224 11.9	N 4	26.1	12 26.9	N 8	03.9
	16	52 47.8	15 30.1	N17	11.1	56 08.7	S 2	23.2	239 14.7	N 4	26.2	27 29.1	N 8	04.0
	17	67 50.3	30 30.1	N17	12.1	71 09.4	S 2	22.4	254 17.4	N 4	26.4	42 31.3	N 8	04.1
	18	82 52.7	45 30.0	N17	13.2	86 10.1	S 2	21.6	269 20.2	N 4	26.5	57 33.5	N 8	04.2
	19	97 55.2	60 30.0	N17	14.2	101 10.8	S 2	20.8	284 22.9	N 4	26.6	72 35.7	N 8	04.3
	20	112 57.7	75 29.9	N17	15.2	116 11.4	S 2	20.0	299 25.7	N 4	26.8	87 37.9	N 8	04.4
	21	128 00.1	90 29.9	N17	16.2	131 12.1	S 2	19.2	314 28.5	N 4	26.9	102 40.1	N 8	04.5
	22	143 02.6	105 29.8	N17	17.2	146 12.8	S 2	18.4	329 31.2	N 4	27.0	117 42.3	N 8	04.6
	23	158 05.0	120 29.8	N17	18.3	161 13.5	S 2	17.6	344 34.0	N 4	27.1	132 44.5	N 8	04.7
15	0	173 07.5	135 29.8	N17	19.3	176 14.2	S 2	16.9	359 36.8	N 4	27.3	147 46.7	N 8	04.8
	1	188 10.0	150 29.7	N17	20.3	191 14.8	S 2	16.1	14 39.5	N 4	27.4	162 48.9	N 8	04.9
	2	203 12.4	165 29.7	N17	21.3	206 15.5	S 2	15.3	29 42.3	N 4	27.5	177 51.1	N 8	05.1
	3	218 14.9	180 29.6	N17	22.3	221 16.2	S 2	14.5	44 45.0	N 4	27.7	192 53.3	N 8	05.2
	4	233 17.4	195 29.6	N17	23.3	236 16.9	S 2	13.7	59 47.8	N 4	27.8	207 55.5	N 8	05.3
W	5	248 19.8	210 29.5	N17	24.3	251 17.5	S 2	12.9	74 50.6	N 4	27.9	222 57.6	N 8	05.4
E														
D	6	263 22.3	225 29.5	N17	25.4	266 18.2	S 2	12.1	89 53.3	N 4	28.0	237 59.8	N 8	05.5
N	7	278 24.8	240 29.5	N17	26.4	281 18.9	S 2	11.3	104 56.1	N 4	28.2	253 02.0	N 8	05.6
E	8	293 27.2	255 29.4	N17	27.4	296 19.6	S 2	10.5	119 58.9	N 4	28.3	268 04.2	N 8	05.7
S	9	308 29.7	270 29.4	N17	28.4	311 20.2	S 2	09.7	135 01.6	N 4	28.4	283 06.4	N 8	05.8
D	10	323 32.1	285 29.3	N17	29.4	326 20.9	S 2	08.9	150 04.4	N 4	28.6	298 08.6	N 8	05.9
A	11	338 34.6	300 29.3	N17	30.4	341 21.6	S 2	08.1	165 07.1	N 4	28.7	313 10.8	N 8	06.0
Y														
	12	353 37.1	315 29.2	N17	31.4	356 22.3	S 2	07.3	180 09.9	N 4	28.8	328 13.0	N 8	06.1
	13	8 39.5	330 29.2	N17	32.4	11 22.9	S 2	06.5	195 12.7	N 4	29.0	343 15.2	N 8	06.2
	14	23 42.0	345 29.2	N17	33.4	26 23.6	S 2	05.8	210 15.4	N 4	29.1	358 17.4	N 8	06.4
	15	38 44.5	0 29.1	N17	34.4	41 24.3	S 2	05.0	225 18.2	N 4	29.2	13 19.6	N 8	06.5
	16	53 46.9	15 29.1	N17	35.4	56 25.0	S 2	04.2	240 21.0	N 4	29.3	28 21.8	N 8	06.6
	17	68 49.4	30 29.0	N17	36.4	71 25.7	S 2	03.4	255 23.7	N 4	29.5	43 24.0	N 8	06.7
	18	83 51.9	45 29.0	N17	37.5	86 26.3	S 2	02.6	270 26.5	N 4	29.6	58 26.2	N 8	06.8
	19	98 54.3	60 29.0	N17	38.5	101 27.0	S 2	01.8	285 29.2	N 4	29.7	73 28.4	N 8	06.9
	20	113 56.8	75 28.9	N17	39.5	116 27.7	S 2	01.0	300 32.0	N 4	29.9	88 30.6	N 8	07.0
	21	128 59.3	90 28.9	N17	40.5	131 28.4	S 2	00.2	315 34.8	N 4	30.0	103 32.8	N 8	07.1
	22	144 01.7	105 28.9	N17	41.5	146 29.0	S 1	59.4	330 37.5	N 4	30.1	118 35.0	N 8	07.2
	23	159 04.2	120 28.8	N17	42.5	161 29.7	S 1	58.6	345 40.3	N 4	30.2	133 37.1	N 8	07.3
			v 0.0	d	1.0	v 0.7	d	0.8	v 2.8	d	0.1	v 2.2	d	0.1

G.M.T		SUN				MOON					
d	h	GHA ° '		Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '
13	0	177	38.4	S 2	48.2	334	18.3	9.0	S12 35.8	14.6	60.2
	1	192	38.6	S 2	47.2	348	46.2	9.0	S12 50.3	14.5	60.2
	2	207	38.7	S 2	46.2	3	14.2	8.9	S13 04.8	14.4	60.2
	3	222	38.9	S 2	45.3	17	42.1	8.9	S13 19.1	14.3	60.1
	4	237	39.1	S 2	44.3	32	09.9	8.9	S13 33.4	14.3	60.1
M	5	252	39.2	S 2	43.3	46	37.8	8.8	S13 47.5	14.2	60.1
O											
N	6	267	39.4	S 2	42.3	61	05.6	8.8	S14 01.6	14.1	60.0
D	7	282	39.6	S 2	41.3	75	33.4	8.8	S14 15.5	14.0	60.0
A	8	297	39.8	S 2	40.3	90	01.1	8.8	S14 29.4	13.9	60.0
Y	9	312	39.9	S 2	39.3	104	28.8	8.7	S14 43.2	13.8	59.9
	10	327	40.1	S 2	38.4	118	56.5	8.7	S14 56.8	13.7	59.9
	11	342	40.3	S 2	37.4	133	24.2	8.7	S15 10.4	13.5	59.8
	12	357	40.5	S 2	36.4	147	51.8	8.6	S15 23.8	13.4	59.8
	13	12	40.6	S 2	35.4	162	19.4	8.6	S15 37.1	13.3	59.8
	14	27	40.8	S 2	34.4	176	47.0	8.6	S15 50.4	13.2	59.7
	15	42	41.0	S 2	33.4	191	14.5	8.5	S16 03.5	13.1	59.7
	16	57	41.1	S 2	32.4	205	42.0	8.5	S16 16.5	13.0	59.7
	17	72	41.3	S 2	31.5	220	09.5	8.5	S16 29.4	12.9	59.6
	18	87	41.5	S 2	30.5	234	36.9	8.4	S16 42.2	12.8	59.6
	19	102	41.7	S 2	29.5	249	04.3	8.4	S16 54.8	12.7	59.6
	20	117	41.8	S 2	28.5	263	31.7	8.4	S17 07.4	12.5	59.5
	21	132	42.0	S 2	27.5	277	59.1	8.3	S17 19.8	12.4	59.5
	22	147	42.2	S 2	26.5	292	26.4	8.3	S17 32.1	12.3	59.4
	23	162	42.4	S 2	25.5	306	53.7	8.3	S17 44.3	12.2	59.4
14	0	177	42.5	S 2	24.6	321	20.9	8.2	S17 56.4	12.1	59.4
	1	192	42.7	S 2	23.6	335	48.1	8.2	S18 08.3	11.9	59.3
	2	207	42.9	S 2	22.6	350	15.3	8.2	S18 20.1	11.8	59.3
	3	222	43.0	S 2	21.6	4	42.5	8.2	S18 31.8	11.7	59.3
	4	237	43.2	S 2	20.6	19	09.6	8.1	S18 43.4	11.6	59.2
T	5	252	43.4	S 2	19.6	33	36.7	8.1	S18 54.8	11.4	59.2
U											
E	6	267	43.6	S 2	18.6	48	03.7	8.1	S19 06.1	11.3	59.1
S	7	282	43.7	S 2	17.7	62	30.8	8.0	S19 17.3	11.2	59.1
D	8	297	43.9	S 2	16.7	76	57.8	8.0	S19 28.4	11.1	59.1
A	9	312	44.1	S 2	15.7	91	24.7	8.0	S19 39.3	10.9	59.0
Y	10	327	44.3	S 2	14.7	105	51.7	7.9	S19 50.1	10.8	59.0
	11	342	44.4	S 2	13.7	120	18.6	7.9	S20 00.8	10.7	58.9
	12	357	44.6	S 2	12.7	134	45.5	7.9	S20 11.3	10.5	58.9
	13	12	44.8	S 2	11.7	149	12.3	7.9	S20 21.7	10.4	58.9
	14	27	45.0	S 2	10.7	163	39.1	7.8	S20 32.0	10.3	58.8
	15	42	45.1	S 2	09.8	178	05.9	7.8	S20 42.1	10.1	58.8
	16	57	45.3	S 2	08.8	192	32.7	7.8	S20 52.1	10.0	58.7
	17	72	45.5	S 2	07.8	206	59.4	7.7	S21 01.9	9.8	58.7
	18	87	45.7	S 2	06.8	221	26.2	7.7	S21 11.6	9.7	58.7
	19	102	45.8	S 2	05.8	235	52.9	7.7	S21 21.2	9.6	58.6
	20	117	46.0	S 2	04.8	250	19.5	7.7	S21 30.6	9.4	58.6
	21	132	46.2	S 2	03.8	264	46.2	7.6	S21 39.9	9.3	58.5
	22	147	46.4	S 2	02.8	279	12.8	7.6	S21 49.0	9.1	58.5
	23	162	46.6	S 2	01.9	293	39.4	7.6	S21 58.0	9.0	58.5
15	0	177	46.7	S 2	00.9	308	05.9	7.6	S22 06.9	8.9	58.4
	1	192	46.9	S 1	59.9	322	32.5	7.5	S22 15.6	8.7	58.4
	2	207	47.1	S 1	58.9	336	59.0	7.5	S22 24.2	8.6	58.3
	3	222	47.3	S 1	57.9	351	25.5	7.5	S22 32.6	8.4	58.3
	4	237	47.4	S 1	56.9	5	52.0	7.5	S22 40.9	8.3	58.2
W	5	252	47.6	S 1	55.9	20	18.5	7.5	S22 49.0	8.1	58.2
E											
D	6	267	47.8	S 1	54.9	34	44.9	7.4	S22 57.0	8.0	58.2
N	7	282	48.0	S 1	54.0	49	11.3	7.4	S23 04.9	7.8	58.1
E	8	297	48.1	S 1	53.0	63	37.8	7.4	S23 12.5	7.7	58.1
S	9	312	48.3	S 1	52.0	78	04.1	7.4	S23 20.1	7.5	58.0
D	10	327	48.5	S 1	51.0	92	30.5	7.4	S23 27.5	7.4	58.0
A	11	342	48.7	S 1	50.0	106	56.9	7.4	S23 34.7	7.2	58.0
Y											
	12	357	48.8	S 1	49.0	121	23.3	7.4	S23 41.8	7.1	57.9
	13	12	49.0	S 1	48.0	135	49.6	7.3	S23 48.8	6.9	57.9
	14	27	49.2	S 1	47.0	150	15.9	7.3	S23 55.6	6.8	57.8
	15	42	49.4	S 1	46.1	164	42.3	7.3	S24 02.2	6.6	57.8
	16	57	49.6	S 1	45.1	179	08.6	7.3	S24 08.7	6.5	57.8
	17	72	49.7	S 1	44.1	193	34.9	7.3	S24 15.0	6.3	57.7
	18	87	49.9	S 1	43.1	208	01.2	7.3	S24 21.2	6.2	57.7
	19	102	50.1	S 1	42.1	222	27.5	7.3	S24 27.3	6.0	57.6
	20	117	50.3	S 1	41.1	236	53.8	7.3	S24 33.2	5.9	57.6
	21	132	50.4	S 1	40.1	251	20.1	7.3	S24 38.9	5.7	57.6
	22	147	50.6	S 1	39.1	265	46.3	7.3	S24 44.5	5.6	57.5
	23	162	50.8	S 1	38.2	280	12.6	7.3	S24 49.9	5.4	57.5
		S.D. 16.1		d	1.0	S.D.	16.3		16.0		15.8

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.7
Achernar	335 18.8	S57 05.7
Acrux	172 56.5	S63 15.4
Adhara	255 03.7	S29 00.9
Albireo	67 02.1	N28 00.9
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.2	N55 48.2
Alkaid	152 49.6	N49 10.0
Al Na-ir	27 30.1	S46 49.4
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.4	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.6	N 8 56.4
Ankaa	353 05.0	S42 09.3
Antares	112 12.5	S26 29.7
Arcturus	145 45.3	N19 01.9
Atria	107 04.4	S69 04.5
Avior	234 13.2	S59 36.3
Bellatrix	278 20.1	N 6 22.4
Betelgeuse	270 49.2	N 7 24.6
Canopus	263 51.1	S52 43.0
Capella	280 18.1	N46 01.7
Castor	245 53.5	N31 49.6
Deneb	49 24.3	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 50.0
Dubhe	193 37.2	N61 35.8
Elnath	277 58.6	N28 37.9
Eltanin	90 41.0	N51 28.7
Enif	33 36.5	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.2	S57 16.4
Gienah	175 40.6	S17 42.1
Hadar	148 31.8	S60 30.5
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.2	S34 22.2
Kochab	137 19.4	N74 02.0
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.2	S36 30.6
Miaplacidus	221 36.8	S69 50.2
Mirfak	308 24.8	N49 57.8
Nunki	75 44.7	S26 15.6
Peacock	53 02.0	S56 38.5
Polaris	315 47.7	N89 22.6
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.2	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.4	S 8 10.3
Rigil Kent	139 36.4	S60 57.0
Sabik	101 59.8	S15 45.7
Schedar	349 28.6	N56 41.6
Shaula	96 06.8	S37 07.4
Sirius	258 23.8	S16 45.5
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 33.1
Vega	80 31.6	N38 48.3
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
16	0	174 06.6	135 28.8	N17 43.5	176 30.4	S 1 57.8	0 43.1	N 4 30.4	148 39.3	N 8 07.4
	1	189 09.1	150 28.7	N17 44.5	191 31.1	S 1 57.0	15 45.8	N 4 30.5	163 41.5	N 8 07.6
	2	204 11.6	165 28.7	N17 45.5	206 31.8	S 1 56.2	30 48.6	N 4 30.6	178 43.7	N 8 07.7
	3	219 14.0	180 28.7	N17 46.5	221 32.4	S 1 55.4	45 51.3	N 4 30.8	193 45.9	N 8 07.8
	4	234 16.5	195 28.6	N17 47.5	236 33.1	S 1 54.7	60 54.1	N 4 30.9	208 48.1	N 8 07.9
T	5	249 19.0	210 28.6	N17 48.5	251 33.8	S 1 53.9	75 56.9	N 4 31.0	223 50.3	N 8 08.0
H										
U	6	264 21.4	225 28.5	N17 49.5	266 34.5	S 1 53.1	90 59.6	N 4 31.1	238 52.5	N 8 08.1
R	7	279 23.9	240 28.5	N17 50.4	281 35.2	S 1 52.3	106 02.4	N 4 31.3	253 54.7	N 8 08.2
S	8	294 26.4	255 28.5	N17 51.4	296 35.8	S 1 51.5	121 05.2	N 4 31.4	268 56.9	N 8 08.3
D	9	309 28.8	270 28.4	N17 52.4	311 36.5	S 1 50.7	136 07.9	N 4 31.5	283 59.1	N 8 08.4
A	10	324 31.3	285 28.4	N17 53.4	326 37.2	S 1 49.9	151 10.7	N 4 31.7	299 01.3	N 8 08.5
Y	11	339 33.8	300 28.4	N17 54.4	341 37.9	S 1 49.1	166 13.4	N 4 31.8	314 03.5	N 8 08.6
	12	354 36.2	315 28.3	N17 55.4	356 38.5	S 1 48.3	181 16.2	N 4 31.9	329 05.7	N 8 08.8
	13	9 38.7	330 28.3	N17 56.4	11 39.2	S 1 47.5	196 19.0	N 4 32.0	344 07.8	N 8 08.9
	14	24 41.1	345 28.3	N17 57.4	26 39.9	S 1 46.7	211 21.7	N 4 32.2	359 10.0	N 8 09.0
	15	39 43.6	0 28.2	N17 58.4	41 40.6	S 1 45.9	226 24.5	N 4 32.3	14 12.2	N 8 09.1
	16	54 46.1	15 28.2	N17 59.4	56 41.3	S 1 45.1	241 27.3	N 4 32.4	29 14.4	N 8 09.2
	17	69 48.5	30 28.1	N18 00.4	71 41.9	S 1 44.3	256 30.0	N 4 32.6	44 16.6	N 8 09.3
	18	84 51.0	45 28.1	N18 01.4	86 42.6	S 1 43.6	271 32.8	N 4 32.7	59 18.8	N 8 09.4
	19	99 53.5	60 28.1	N18 02.3	101 43.3	S 1 42.8	286 35.5	N 4 32.8	74 21.0	N 8 09.5
	20	114 55.9	75 28.0	N18 03.3	116 44.0	S 1 42.0	301 38.3	N 4 32.9	89 23.2	N 8 09.6
	21	129 58.4	90 28.0	N18 04.3	131 44.7	S 1 41.2	316 41.1	N 4 33.1	104 25.4	N 8 09.7
	22	145 00.9	105 28.0	N18 05.3	146 45.3	S 1 40.4	331 43.8	N 4 33.2	119 27.6	N 8 09.8
	23	160 03.3	120 27.9	N18 06.3	161 46.0	S 1 39.6	346 46.6	N 4 33.3	134 29.8	N 8 10.0
17	0	175 05.8	135 27.9	N18 07.3	176 46.7	S 1 38.8	1 49.3	N 4 33.5	149 32.0	N 8 10.1
	1	190 08.2	150 27.9	N18 08.2	191 47.4	S 1 38.0	16 52.1	N 4 33.6	164 34.2	N 8 10.2
	2	205 10.7	165 27.8	N18 09.2	206 48.1	S 1 37.2	31 54.9	N 4 33.7	179 36.3	N 8 10.3
	3	220 13.2	180 27.8	N18 10.2	221 48.7	S 1 36.4	46 57.6	N 4 33.8	194 38.5	N 8 10.4
	4	235 15.6	195 27.8	N18 11.2	236 49.4	S 1 35.6	62 00.4	N 4 34.0	209 40.7	N 8 10.5
F	5	250 18.1	210 27.7	N18 12.2	251 50.1	S 1 34.8	77 03.2	N 4 34.1	224 42.9	N 8 10.6
R										
I	6	265 20.6	225 27.7	N18 13.2	266 50.8	S 1 34.0	92 05.9	N 4 34.2	239 45.1	N 8 10.7
D	7	280 23.0	240 27.7	N18 14.1	281 51.5	S 1 33.2	107 08.7	N 4 34.4	254 47.3	N 8 10.8
A	8	295 25.5	255 27.6	N18 15.1	296 52.1	S 1 32.4	122 11.4	N 4 34.5	269 49.5	N 8 10.9
Y	9	310 28.0	270 27.6	N18 16.1	311 52.8	S 1 31.7	137 14.2	N 4 34.6	284 51.7	N 8 11.0
	10	325 30.4	285 27.6	N18 17.1	326 53.5	S 1 30.9	152 17.0	N 4 34.7	299 53.9	N 8 11.2
	11	340 32.9	300 27.5	N18 18.0	341 54.2	S 1 30.1	167 19.7	N 4 34.9	314 56.1	N 8 11.3
	12	355 35.4	315 27.5	N18 19.0	356 54.9	S 1 29.3	182 22.5	N 4 35.0	329 58.3	N 8 11.4
	13	10 37.8	330 27.5	N18 20.0	11 55.5	S 1 28.5	197 25.2	N 4 35.1	345 00.5	N 8 11.5
	14	25 40.3	345 27.5	N18 21.0	26 56.2	S 1 27.7	212 28.0	N 4 35.3	0 02.6	N 8 11.6
	15	40 42.7	0 27.4	N18 21.9	41 56.9	S 1 26.9	227 30.8	N 4 35.4	15 04.8	N 8 11.7
	16	55 45.2	15 27.4	N18 22.9	56 57.6	S 1 26.1	242 33.5	N 4 35.5	30 07.0	N 8 11.8
	17	70 47.7	30 27.4	N18 23.9	71 58.3	S 1 25.3	257 36.3	N 4 35.6	45 09.2	N 8 11.9
	18	85 50.1	45 27.3	N18 24.9	86 58.9	S 1 24.5	272 39.1	N 4 35.8	60 11.4	N 8 12.0
	19	100 52.6	60 27.3	N18 25.8	101 59.6	S 1 23.7	287 41.8	N 4 35.9	75 13.6	N 8 12.1
	20	115 55.1	75 27.3	N18 26.8	117 00.3	S 1 22.9	302 44.6	N 4 36.0	90 15.8	N 8 12.2
	21	130 57.5	90 27.2	N18 27.8	132 01.0	S 1 22.1	317 47.3	N 4 36.2	105 18.0	N 8 12.4
	22	145 60.0	105 27.2	N18 28.7	147 01.7	S 1 21.3	332 50.1	N 4 36.3	120 20.2	N 8 12.5
	23	161 02.5	120 27.2	N18 29.7	162 02.3	S 1 20.5	347 52.9	N 4 36.4	135 22.4	N 8 12.6
18	0	176 04.9	135 27.2	N18 30.7	177 03.0	S 1 19.8	2 55.6	N 4 36.5	150 24.5	N 8 12.7
	1	191 07.4	150 27.1	N18 31.6	192 03.7	S 1 19.0	17 58.4	N 4 36.7	165 26.7	N 8 12.8
	2	206 09.9	165 27.1	N18 32.6	207 04.4	S 1 18.2	33 01.1	N 4 36.8	180 28.9	N 8 12.9
	3	221 12.3	180 27.1	N18 33.6	222 05.1	S 1 17.4	48 03.9	N 4 36.9	195 31.1	N 8 13.0
	4	236 14.8	195 27.0	N18 34.5	237 05.7	S 1 16.6	63 06.7	N 4 37.0	210 33.3	N 8 13.1
S	5	251 17.2	210 27.0	N18 35.5	252 06.4	S 1 15.8	78 09.4	N 4 37.2	225 35.5	N 8 13.2
A										
T	6	266 19.7	225 27.0	N18 36.5	267 07.1	S 1 15.0	93 12.2	N 4 37.3	240 37.7	N 8 13.3
U	7	281 22.2	240 27.0	N18 37.4	282 07.8	S 1 14.2	108 14.9	N 4 37.4	255 39.9	N 8 13.5
R	8	296 24.6	255 26.9	N18 38.4	297 08.5	S 1 13.4	123 17.7	N 4 37.6	270 42.1	N 8 13.6
D	9	311 27.1	270 26.9	N18 39.3	312 09.2	S 1 12.6	138 20.5	N 4 37.7	285 44.3	N 8 13.7
A	10	326 29.6	285 26.9	N18 40.3	327 09.8	S 1 11.8	153 23.2	N 4 37.8	300 46.4	N 8 13.8
Y	11	341 32.0	300 26.9	N18 41.3	342 10.5	S 1 11.0	168 26.0	N 4 37.9	315 48.6	N 8 13.9
	12	356 34.5	315 26.8	N18 42.2	357 11.2	S 1 10.2	183 28.7	N 4 38.1	330 50.8	N 8 14.0
	13	11 37.0	330 26.8	N18 43.2	12 11.9	S 1 09.4	198 31.5	N 4 38.2	345 53.0	N 8 14.1
	14	26 39.4	345 26.8	N18 44.1	27 12.6	S 1 08.7	213 34.3	N 4 38.3	0 55.2	N 8 14.2
	15	41 41.9	0 26.7	N18 45.1	42 13.2	S 1 07.9	228 37.0	N 4 38.4	15 57.4	N 8 14.3
	16	56 44.4	15 26.7	N18 46.1	57 13.9	S 1 07.1	243 39.8	N 4 38.6	30 59.6	N 8 14.4
	17	71 46.8	30 26.7	N18 47.0	72 14.6	S 1 06.3	258 42.5	N 4 38.7	46 01.8	N 8 14.6
	18	86 49.3	45 26.7	N18 48.0	87 15.3	S 1 05.5	273 45.3	N 4 38.8	61 04.0	N 8 14.7
	19	101 51.7	60 26.7	N18 48.9	102 16.0	S 1 04.7	288 48.1	N 4 39.0	76 06.2	N 8 14.8
	20	116 54.2	75 26.6	N18 49.9	117 16.7	S 1 03.9	303 50.8	N 4 39.1	91 08.3	N 8 14.9
	21	131 56.7	90 26.6	N18 50.8	132 17.3	S 1 03.1	318 53.6	N 4 39.2	106 10.5	N 8 15.0
	22	146 59.1	105 26.6	N18 51.8	147 18.0	S 1 02.3	333 56.3	N 4 39.3	121 12.7	N 8 15.1
	23	162 01.6	120 26.6	N18 52.7	162 18.7	S 1 01.5	348 59.1	N 4 39.5	136 14.9	N 8 15.2
			v 0.0	d 1.0	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
16	0	177 51.0	S 1 37.2		294 38.9	7.3	S24 55.2	5.3	57.4
	1	192 51.2	S 1 36.2		309 05.2	7.3	S25 00.3	5.1	57.4
	2	207 51.3	S 1 35.2		323 31.5	7.3	S25 05.3	5.0	57.4
	3	222 51.5	S 1 34.2		337 57.8	7.3	S25 10.1	4.8	57.3
	4	237 51.7	S 1 33.2		352 24.1	7.3	S25 14.7	4.7	57.3
T	5	252 51.9	S 1 32.2		6 50.4	7.3	S25 19.2	4.5	57.2
H									
U	6	267 52.0	S 1 31.2		21 16.7	7.3	S25 23.6	4.4	57.2
R	7	282 52.2	S 1 30.2		35 43.0	7.3	S25 27.8	4.2	57.2
S	8	297 52.4	S 1 29.3		50 09.3	7.3	S25 31.8	4.0	57.1
D	9	312 52.6	S 1 28.3		64 35.7	7.3	S25 35.7	3.9	57.1
A	10	327 52.8	S 1 27.3		79 02.0	7.3	S25 39.5	3.7	57.1
Y	11	342 52.9	S 1 26.3		93 28.4	7.4	S25 43.1	3.6	57.0
	12	357 53.1	S 1 25.3		107 54.7	7.4	S25 46.5	3.4	57.0
	13	12 53.3	S 1 24.3		122 21.1	7.4	S25 49.8	3.3	56.9
	14	27 53.5	S 1 23.3		136 47.5	7.4	S25 52.9	3.1	56.9
	15	42 53.7	S 1 22.3		151 14.0	7.4	S25 55.9	3.0	56.9
	16	57 53.8	S 1 21.4		165 40.4	7.4	S25 58.7	2.8	56.8
	17	72 54.0	S 1 20.4		180 06.9	7.5	S26 01.4	2.7	56.8
	18	87 54.2	S 1 19.4		194 33.4	7.5	S26 03.9	2.5	56.8
	19	102 54.4	S 1 18.4		208 59.9	7.5	S26 06.3	2.4	56.7
	20	117 54.6	S 1 17.4		223 26.4	7.5	S26 08.5	2.2	56.7
	21	132 54.7	S 1 16.4		237 53.0	7.6	S26 10.6	2.1	56.6
	22	147 54.9	S 1 15.4		252 19.6	7.6	S26 12.5	1.9	56.6
	23	162 55.1	S 1 14.4		266 46.2	7.6	S26 14.2	1.8	56.6
17	0	177 55.3	S 1 13.4		281 12.8	7.6	S26 15.8	1.6	56.5
	1	192 55.5	S 1 12.5		295 39.5	7.7	S26 17.3	1.5	56.5
	2	207 55.6	S 1 11.5		310 06.2	7.7	S26 18.6	1.3	56.5
	3	222 55.8	S 1 10.5		324 33.0	7.7	S26 19.8	1.2	56.4
	4	237 56.0	S 1 09.5		338 59.7	7.8	S26 20.8	1.0	56.4
F	5	252 56.2	S 1 08.5		353 26.6	7.8	S26 21.7	0.9	56.4
R									
I	6	267 56.4	S 1 07.5		7 53.4	7.8	S26 22.4	0.7	56.3
D	7	282 56.5	S 1 06.5		22 20.3	7.9	S26 22.9	0.6	56.3
A	8	297 56.7	S 1 05.5		36 47.2	7.9	S26 23.4	0.4	56.3
Y	9	312 56.9	S 1 04.5		51 14.2	8.0	S26 23.6	0.3	56.2
	10	327 57.1	S 1 03.6		65 41.2	8.0	S26 23.8	0.1	56.2
	11	342 57.3	S 1 02.6		80 08.2	8.1	S26 23.8	0.0	56.2
	12	357 57.4	S 1 01.6		94 35.3	8.1	S26 23.6	0.2	56.1
	13	12 57.6	S 1 00.6		109 02.5	8.1	S26 23.3	0.3	56.1
	14	27 57.8	S 0 59.6		123 29.7	8.2	S26 22.8	0.4	56.1
	15	42 58.0	S 0 58.6		137 56.9	8.2	S26 22.3	0.6	56.0
	16	57 58.2	S 0 57.6		152 24.2	8.3	S26 21.5	0.7	56.0
	17	72 58.3	S 0 56.6		166 51.5	8.3	S26 20.6	0.9	56.0
	18	87 58.5	S 0 55.6		181 18.9	8.4	S26 19.6	1.0	55.9
	19	102 58.7	S 0 54.7		195 46.3	8.4	S26 18.5	1.2	55.9
	20	117 58.9	S 0 53.7		210 13.8	8.5	S26 17.2	1.3	55.9
	21	132 59.1	S 0 52.7		224 41.3	8.5	S26 15.7	1.4	55.8
	22	147 59.3	S 0 51.7		239 08.9	8.6	S26 14.1	1.6	55.8
	23	162 59.4	S 0 50.7		253 36.6	8.6	S26 12.4	1.7	55.8
18	0	177 59.6	S 0 49.7		268 04.3	8.7	S26 10.6	1.9	55.7
	1	192 59.8	S 0 48.7		282 32.0	8.8	S26 08.6	2.0	55.7
	2	207 60.0	S 0 47.7		296 59.9	8.8	S26 06.5	2.1	55.7
	3	223 00.2	S 0 46.7		311 27.7	8.9	S26 04.2	2.3	55.7
	4	238 00.3	S 0 45.8		325 55.7	8.9	S26 01.8	2.4	55.6
S	5	253 00.5	S 0 44.8		340 23.7	9.0	S25 59.3	2.5	55.6
A									
T	6	268 00.7	S 0 43.8		354 51.7	9.1	S25 56.6	2.7	55.6
U	7	283 00.9	S 0 42.8		9 19.8	9.1	S25 53.8	2.8	55.5
R	8	298 01.1	S 0 41.8		23 48.0	9.2	S25 50.9	2.9	55.5
D	9	313 01.3	S 0 40.8		38 16.3	9.2	S25 47.8	3.1	55.5
A	10	328 01.4	S 0 39.8		52 44.6	9.3	S25 44.6	3.2	55.4
Y	11	343 01.6	S 0 38.8		67 12.9	9.4	S25 41.3	3.3	55.4
	12	358 01.8	S 0 37.8		81 41.4	9.4	S25 37.9	3.4	55.4
	13	13 02.0	S 0 36.9		96 09.9	9.5	S25 34.3	3.6	55.4
	14	28 02.2	S 0 35.9		110 38.4	9.6	S25 30.6	3.7	55.3
	15	43 02.4	S 0 34.9		125 07.1	9.6	S25 26.8	3.8	55.3
	16	58 02.5	S 0 33.9		139 35.8	9.7	S25 22.8	4.0	55.3
	17	73 02.7	S 0 32.9		154 04.6	9.8	S25 18.7	4.1	55.3
	18	88 02.9	S 0 31.9		168 33.4	9.8	S25 14.5	4.2	55.2
	19	103 03.1	S 0 30.9		183 02.3	9.9	S25 10.2	4.3	55.2
	20	118 03.3	S 0 29.9		197 31.3	10.0	S25 05.8	4.4	55.2
	21	133 03.4	S 0 29.0		212 00.4	10.1	S25 01.2	4.6	55.2
	22	148 03.6	S 0 28.0		226 29.5	10.1	S24 56.5	4.7	55.1
	23	163 03.8	S 0 27.0		240 58.7	10.2	S24 51.7	4.8	55.1
		S.D. 16.1	d 1.0		S.D. 15.5		15.3	15.1	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.1	S40 11.7
Achernar	335 18.8	S57 05.7
Acrux	172 56.5	S63 15.4
Adhara	255 03.7	S29 00.9
Albireo	67 02.1	N28 00.9
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.1	N55 48.2
Alkaid	152 49.6	N49 10.0
Al Na-ir	27 30.0	S46 49.4
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.3	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.6	N 8 56.4
Ankaa	353 05.0	S42 09.2
Antares	112 12.5	S26 29.7
Arcturus	145 45.3	N19 01.9
Atria	107 04.3	S69 04.5
Avior	234 13.2	S59 36.3
Bellatrix	278 20.1	N 6 22.4
Betelgeuse	270 49.2	N 7 24.6
Canopus	263 51.1	S52 43.0
Capella	280 18.1	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.3	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.8
Elnath	277 58.6	N28 37.9
Eltanin	90 41.0	N51 28.7
Enif	33 36.4	N10 00.2
Fomalhaut	15 12.0	S29 28.4
Gacrux	171 48.1	S57 16.4
Gienah	175 40.6	S17 42.1
Hadar	148 31.8	S60 30.5
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.1	S34 22.2
Kochab	137 19.3	N74 02.0
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.2	S36 30.6
Miaplacidus	221 36.9	S69 50.3
Mirfak	308 24.8	N49 57.8
Nunki	75 44.6	S26 15.6
Peacock	53 01.9	S56 38.5
Polaris	315 48.2	N89 22.6
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.1	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.4	S 8 10.3
Rigil Kent	139 36.3	S60 57.0
Sabik	101 59.7	S15 45.7
Schedar	349 28.5	N56 41.6
Shaula	96 06.8	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 33.1
Vega	80 31.5	N38 48.3
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
19	0	177 04.1	135 26.5	N18 53.7	177 19.4	S 1 00.7	4 01.9	N 4 39.6	151 17.1	N 8 15.3
	1	192 06.5	150 26.5	N18 54.6	192 20.1	S 0 59.9	19 04.6	N 4 39.7	166 19.3	N 8 15.4
	2	207 09.0	165 26.5	N18 55.6	207 20.7	S 0 59.1	34 07.4	N 4 39.8	181 21.5	N 8 15.5
	3	222 11.5	180 26.5	N18 56.5	222 21.4	S 0 58.3	49 10.1	N 4 40.0	196 23.7	N 8 15.6
	4	237 13.9	195 26.4	N18 57.5	237 22.1	S 0 57.6	64 12.9	N 4 40.1	211 25.8	N 8 15.8
S	5	252 16.4	210 26.4	N18 58.4	252 22.8	S 0 56.8	79 15.7	N 4 40.2	226 28.0	N 8 15.9
U										
N	6	267 18.8	225 26.4	N18 59.4	267 23.5	S 0 56.0	94 18.4	N 4 40.4	241 30.2	N 8 16.0
D	7	282 21.3	240 26.4	N19 00.3	282 24.2	S 0 55.2	109 21.2	N 4 40.5	256 32.4	N 8 16.1
A	8	297 23.8	255 26.4	N19 01.3	297 24.8	S 0 54.4	124 23.9	N 4 40.6	271 34.6	N 8 16.2
Y	9	312 26.2	270 26.3	N19 02.2	312 25.5	S 0 53.6	139 26.7	N 4 40.7	286 36.8	N 8 16.3
	10	327 28.7	285 26.3	N19 03.1	327 26.2	S 0 52.8	154 29.5	N 4 40.9	301 39.0	N 8 16.4
	11	342 31.2	300 26.3	N19 04.1	342 26.9	S 0 52.0	169 32.2	N 4 41.0	316 41.2	N 8 16.5
	12	357 33.6	315 26.3	N19 05.0	357 27.6	S 0 51.2	184 35.0	N 4 41.1	331 43.4	N 8 16.6
	13	12 36.1	330 26.3	N19 06.0	12 28.3	S 0 50.4	199 37.7	N 4 41.2	346 45.5	N 8 16.7
	14	27 38.6	345 26.2	N19 06.9	27 28.9	S 0 49.6	214 40.5	N 4 41.4	1 47.7	N 8 16.9
	15	42 41.0	0 26.2	N19 07.9	42 29.6	S 0 48.8	229 43.3	N 4 41.5	16 49.9	N 8 17.0
	16	57 43.5	15 26.2	N19 08.8	57 30.3	S 0 48.0	244 46.0	N 4 41.6	31 52.1	N 8 17.1
	17	72 46.0	30 26.2	N19 09.7	72 31.0	S 0 47.2	259 48.8	N 4 41.7	46 54.3	N 8 17.2
	18	87 48.4	45 26.2	N19 10.7	87 31.7	S 0 46.5	274 51.5	N 4 41.9	61 56.5	N 8 17.3
	19	102 50.9	60 26.1	N19 11.6	102 32.4	S 0 45.7	289 54.3	N 4 42.0	76 58.7	N 8 17.4
	20	117 53.3	75 26.1	N19 12.5	117 33.0	S 0 44.9	304 57.1	N 4 42.1	92 00.9	N 8 17.5
	21	132 55.8	90 26.1	N19 13.5	132 33.7	S 0 44.1	319 59.8	N 4 42.2	107 03.0	N 8 17.6
	22	147 58.3	105 26.1	N19 14.4	147 34.4	S 0 43.3	335 02.6	N 4 42.4	122 05.2	N 8 17.7
	23	163 00.7	120 26.1	N19 15.3	162 35.1	S 0 42.5	350 05.3	N 4 42.5	137 07.4	N 8 17.9
20	0	178 03.2	135 26.1	N19 16.3	177 35.8	S 0 41.7	5 08.1	N 4 42.6	152 09.6	N 8 18.0
	1	193 05.7	150 26.0	N19 17.2	192 36.5	S 0 40.9	20 10.8	N 4 42.8	167 11.8	N 8 18.1
	2	208 08.1	165 26.0	N19 18.1	207 37.1	S 0 40.1	35 13.6	N 4 42.9	182 14.0	N 8 18.2
	3	223 10.6	180 26.0	N19 19.1	222 37.8	S 0 39.3	50 16.4	N 4 43.0	197 16.2	N 8 18.3
	4	238 13.1	195 26.0	N19 20.0	237 38.5	S 0 38.5	65 19.1	N 4 43.1	212 18.4	N 8 18.4
M	5	253 15.5	210 26.0	N19 20.9	252 39.2	S 0 37.7	80 21.9	N 4 43.3	227 20.5	N 8 18.5
O										
N	6	268 18.0	225 26.0	N19 21.9	267 39.9	S 0 36.9	95 24.6	N 4 43.4	242 22.7	N 8 18.6
D	7	283 20.5	240 25.9	N19 22.8	282 40.6	S 0 36.1	110 27.4	N 4 43.5	257 24.9	N 8 18.7
A	8	298 22.9	255 25.9	N19 23.7	297 41.3	S 0 35.4	125 30.2	N 4 43.6	272 27.1	N 8 18.8
Y	9	313 25.4	270 25.9	N19 24.6	312 41.9	S 0 34.6	140 32.9	N 4 43.8	287 29.3	N 8 19.0
	10	328 27.8	285 25.9	N19 25.6	327 42.6	S 0 33.8	155 35.7	N 4 43.9	302 31.5	N 8 19.1
	11	343 30.3	300 25.9	N19 26.5	342 43.3	S 0 33.0	170 38.4	N 4 44.0	317 33.7	N 8 19.2
	12	358 32.8	315 25.9	N19 27.4	357 44.0	S 0 32.2	185 41.2	N 4 44.1	332 35.8	N 8 19.3
	13	13 35.2	330 25.9	N19 28.3	12 44.7	S 0 31.4	200 43.9	N 4 44.3	347 38.0	N 8 19.4
	14	28 37.7	345 25.8	N19 29.3	27 45.4	S 0 30.6	215 46.7	N 4 44.4	2 40.2	N 8 19.5
	15	43 40.2	0 25.8	N19 30.2	42 46.0	S 0 29.8	230 49.5	N 4 44.5	17 42.4	N 8 19.6
	16	58 42.6	15 25.8	N19 31.1	57 46.7	S 0 29.0	245 52.2	N 4 44.6	32 44.6	N 8 19.7
	17	73 45.1	30 25.8	N19 32.0	72 47.4	S 0 28.2	260 55.0	N 4 44.8	47 46.8	N 8 19.8
	18	88 47.6	45 25.8	N19 33.0	87 48.1	S 0 27.4	275 57.7	N 4 44.9	62 49.0	N 8 19.9
	19	103 50.0	60 25.8	N19 33.9	102 48.8	S 0 26.6	291 00.5	N 4 45.0	77 51.1	N 8 20.1
	20	118 52.5	75 25.8	N19 34.8	117 49.5	S 0 25.8	306 03.3	N 4 45.1	92 53.3	N 8 20.2
	21	133 55.0	90 25.8	N19 35.7	132 50.2	S 0 25.1	321 06.0	N 4 45.3	107 55.5	N 8 20.3
	22	148 57.4	105 25.8	N19 36.6	147 50.8	S 0 24.3	336 08.8	N 4 45.4	122 57.7	N 8 20.4
	23	163 59.9	120 25.7	N19 37.5	162 51.5	S 0 23.5	351 11.5	N 4 45.5	137 59.9	N 8 20.5
21	0	179 02.3	135 25.7	N19 38.5	177 52.2	S 0 22.7	6 14.3	N 4 45.6	153 02.1	N 8 20.6
	1	194 04.8	150 25.7	N19 39.4	192 52.9	S 0 21.9	21 17.0	N 4 45.8	168 04.3	N 8 20.7
	2	209 07.3	165 25.7	N19 40.3	207 53.6	S 0 21.1	36 19.8	N 4 45.9	183 06.4	N 8 20.8
	3	224 09.7	180 25.7	N19 41.2	222 54.3	S 0 20.3	51 22.6	N 4 46.0	198 08.6	N 8 20.9
	4	239 12.2	195 25.7	N19 42.1	237 54.9	S 0 19.5	66 25.3	N 4 46.1	213 10.8	N 8 21.1
T	5	254 14.7	210 25.7	N19 43.0	252 55.6	S 0 18.7	81 28.1	N 4 46.3	228 13.0	N 8 21.2
U										
E	6	269 17.1	225 25.7	N19 43.9	267 56.3	S 0 17.9	96 30.8	N 4 46.4	243 15.2	N 8 21.3
S	7	284 19.6	240 25.7	N19 44.8	282 57.0	S 0 17.1	111 33.6	N 4 46.5	258 17.4	N 8 21.4
D	8	299 22.1	255 25.7	N19 45.8	297 57.7	S 0 16.3	126 36.3	N 4 46.6	273 19.6	N 8 21.5
A	9	314 24.5	270 25.7	N19 46.7	312 58.4	S 0 15.6	141 39.1	N 4 46.8	288 21.7	N 8 21.6
Y	10	329 27.0	285 25.6	N19 47.6	327 59.1	S 0 14.8	156 41.8	N 4 46.9	303 23.9	N 8 21.7
	11	344 29.4	300 25.6	N19 48.5	342 59.7	S 0 14.0	171 44.6	N 4 47.0	318 26.1	N 8 21.8
	12	359 31.9	315 25.6	N19 49.4	358 00.4	S 0 13.2	186 47.4	N 4 47.1	333 28.3	N 8 21.9
	13	14 34.4	330 25.6	N19 50.3	13 01.1	S 0 12.4	201 50.1	N 4 47.3	348 30.5	N 8 22.0
	14	29 36.8	345 25.6	N19 51.2	28 01.8	S 0 11.6	216 52.9	N 4 47.4	3 32.7	N 8 22.2
	15	44 39.3	0 25.6	N19 52.1	43 02.5	S 0 10.8	231 55.6	N 4 47.5	18 34.9	N 8 22.3
	16	59 41.8	15 25.6	N19 53.0	58 03.2	S 0 10.0	246 58.4	N 4 47.6	33 37.0	N 8 22.4
	17	74 44.2	30 25.6	N19 53.9	73 03.9	S 0 09.2	262 01.1	N 4 47.8	48 39.2	N 8 22.5
	18	89 46.7	45 25.6	N19 54.8	88 04.5	S 0 08.4	277 03.9	N 4 47.9	63 41.4	N 8 22.6
	19	104 49.2	60 25.6	N19 55.7	103 05.2	S 0 07.6	292 06.7	N 4 48.0	78 43.6	N 8 22.7
	20	119 51.6	75 25.6	N19 56.6	118 05.9	S 0 06.8	307 09.4	N 4 48.1	93 45.8	N 8 22.8
	21	134 54.1	90 25.6	N19 57.5	133 06.6	S 0 06.1	322 12.2	N 4 48.3	108 48.0	N 8 22.9
	22	149 56.6	105 25.6	N19 58.4	148 07.3	S 0 05.3	337 14.9	N 4 48.4	123 50.1	N 8 23.0
	23	164 59.0	120 25.6	N19 59.3	163 08.0	S 0 04.5	352 17.7	N 4 48.5	138 52.3	N 8 23.2
			v 0.0	d 0.9	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
19	0	178 04.0	S 0 26.0	255 28.0	10.3	S24 46.8	4.9	55.1
	1	193 04.2	S 0 25.0	269 57.3	10.3	S24 41.7	5.0	55.1
	2	208 04.4	S 0 24.0	284 26.7	10.4	S24 36.6	5.2	55.0
	3	223 04.5	S 0 23.0	298 56.2	10.5	S24 31.3	5.3	55.0
	4	238 04.7	S 0 22.0	313 25.8	10.6	S24 25.9	5.4	55.0
S	5	253 04.9	S 0 21.0	327 55.4	10.6	S24 20.4	5.5	55.0
U								
N	6	268 05.1	S 0 20.1	342 25.1	10.7	S24 14.8	5.6	54.9
D	7	283 05.3	S 0 19.1	356 54.9	10.8	S24 09.1	5.7	54.9
A	8	298 05.5	S 0 18.1	11 24.7	10.9	S24 03.2	5.8	54.9
Y	9	313 05.6	S 0 17.1	25 54.7	10.9	S23 57.3	5.9	54.9
	10	328 05.8	S 0 16.1	40 24.7	11.0	S23 51.2	6.1	54.9
	11	343 06.0	S 0 15.1	54 54.7	11.1	S23 45.1	6.2	54.8
	12	358 06.2	S 0 14.1	69 24.9	11.2	S23 38.8	6.3	54.8
	13	13 06.4	S 0 13.1	83 55.1	11.2	S23 32.4	6.4	54.8
	14	28 06.6	S 0 12.1	98 25.4	11.3	S23 25.9	6.5	54.8
	15	43 06.8	S 0 11.2	112 55.8	11.4	S23 19.3	6.6	54.8
	16	58 06.9	S 0 10.2	127 26.2	11.5	S23 12.6	6.7	54.7
	17	73 07.1	S 0 09.2	141 56.8	11.5	S23 05.8	6.8	54.7
	18	88 07.3	S 0 08.2	156 27.4	11.6	S22 58.9	6.9	54.7
	19	103 07.5	S 0 07.2	170 58.1	11.7	S22 51.9	7.0	54.7
	20	118 07.7	S 0 06.2	185 28.8	11.8	S22 44.8	7.1	54.7
	21	133 07.9	S 0 05.2	199 59.6	11.8	S22 37.6	7.2	54.6
	22	148 08.0	S 0 04.2	214 30.5	11.9	S22 30.3	7.3	54.6
	23	163 08.2	S 0 03.2	229 01.5	12.0	S22 22.9	7.4	54.6
20	0	178 08.4	S 0 02.3	243 32.6	12.1	S22 15.4	7.5	54.6
	1	193 08.6	S 0 01.3	258 03.7	12.1	S22 07.8	7.6	54.6
	2	208 08.8	S 0 00.3	272 34.9	12.2	S22 00.1	7.7	54.6
	3	223 09.0	N 0 00.7	287 06.2	12.3	S21 52.4	7.8	54.5
	4	238 09.1	N 0 01.7	301 37.5	12.3	S21 44.5	7.9	54.5
M	5	253 09.3	N 0 02.7	316 08.9	12.4	S21 36.5	8.0	54.5
O								
N	6	268 09.5	N 0 03.7	330 40.4	12.5	S21 28.5	8.1	54.5
D	7	283 09.7	N 0 04.7	345 12.0	12.6	S21 20.3	8.1	54.5
A	8	298 09.9	N 0 05.6	359 43.6	12.6	S21 12.1	8.2	54.5
Y	9	313 10.1	N 0 06.6	14 15.3	12.7	S21 03.8	8.3	54.4
	10	328 10.3	N 0 07.6	28 47.1	12.8	S20 55.3	8.4	54.4
	11	343 10.4	N 0 08.6	43 19.0	12.9	S20 46.8	8.5	54.4
	12	358 10.6	N 0 09.6	57 50.9	12.9	S20 38.3	8.6	54.4
	13	13 10.8	N 0 10.6	72 22.9	13.0	S20 29.6	8.7	54.4
	14	28 11.0	N 0 11.6	86 55.0	13.1	S20 20.8	8.8	54.4
	15	43 11.2	N 0 12.6	101 27.1	13.1	S20 12.0	8.8	54.4
	16	58 11.4	N 0 13.6	115 59.3	13.2	S20 03.1	8.9	54.3
	17	73 11.6	N 0 14.5	130 31.6	13.3	S19 54.1	9.0	54.3
	18	88 11.7	N 0 15.5	145 04.0	13.4	S19 45.0	9.1	54.3
	19	103 11.9	N 0 16.5	159 36.4	13.4	S19 35.8	9.2	54.3
	20	118 12.1	N 0 17.5	174 08.9	13.5	S19 26.6	9.2	54.3
	21	133 12.3	N 0 18.5	188 41.4	13.6	S19 17.2	9.3	54.3
	22	148 12.5	N 0 19.5	203 14.0	13.6	S19 07.8	9.4	54.3
	23	163 12.7	N 0 20.5	217 46.7	13.7	S18 58.4	9.5	54.3
21	0	178 12.9	N 0 21.5	232 19.5	13.8	S18 48.8	9.6	54.2
	1	193 13.0	N 0 22.4	246 52.3	13.8	S18 39.2	9.6	54.2
	2	208 13.2	N 0 23.4	261 25.2	13.9	S18 29.5	9.7	54.2
	3	223 13.4	N 0 24.4	275 58.2	14.0	S18 19.7	9.8	54.2
	4	238 13.6	N 0 25.4	290 31.2	14.0	S18 09.9	9.8	54.2
T	5	253 13.8	N 0 26.4	305 04.3	14.1	S17 59.9	9.9	54.2
U								
E	6	268 14.0	N 0 27.4	319 37.4	14.1	S17 50.0	10.0	54.2
S	7	283 14.1	N 0 28.4	334 10.6	14.2	S17 39.9	10.1	54.2
D	8	298 14.3	N 0 29.4	348 43.9	14.3	S17 29.8	10.1	54.2
A	9	313 14.5	N 0 30.3	3 17.2	14.3	S17 19.6	10.2	54.2
Y	10	328 14.7	N 0 31.3	17 50.6	14.4	S17 09.3	10.3	54.1
	11	343 14.9	N 0 32.3	32 24.0	14.5	S16 59.0	10.3	54.1
	12	358 15.1	N 0 33.3	46 57.6	14.5	S16 48.6	10.4	54.1
	13	13 15.3	N 0 34.3	61 31.1	14.6	S16 38.1	10.5	54.1
	14	28 15.5	N 0 35.3	76 04.8	14.6	S16 27.6	10.5	54.1
	15	43 15.6	N 0 36.3	90 38.4	14.7	S16 17.0	10.6	54.1
	16	58 15.8	N 0 37.3	105 12.2	14.7	S16 06.4	10.7	54.1
	17	73 16.0	N 0 38.2	119 46.0	14.8	S15 55.7	10.7	54.1
	18	88 16.2	N 0 39.2	134 19.8	14.9	S15 44.9	10.8	54.1
	19	103 16.4	N 0 40.2	148 53.7	14.9	S15 34.0	10.8	54.1
	20	118 16.6	N 0 41.2	163 27.7	15.0	S15 23.2	10.9	54.1
	21	133 16.8	N 0 42.2	178 01.7	15.0	S15 12.2	11.0	54.1
	22	148 16.9	N 0 43.2	192 35.8	15.1	S15 01.2	11.0	54.1
	23	163 17.1	N 0 44.2	207 09.9	15.1	S14 50.1	11.1	54.1
		S.D. 16.1	d 1.0	S.D. 14.9		14.8		14.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.7
Achernar	335 18.8	S57 05.7
Acrux	172 56.4	S63 15.4
Adhara	255 03.7	S29 00.9
Albireo	67 02.1	N28 00.9
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.1	N55 48.2
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 30.0	S46 49.3
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.3	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.5	N 8 56.4
Ankaa	353 05.0	S42 09.2
Antares	112 12.5	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 04.3	S69 04.5
Avior	234 13.3	S59 36.3
Bellatrix	278 20.1	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.2	S52 43.0
Capella	280 18.1	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.3	N45 22.7
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.8
Elnath	277 58.6	N28 37.9
Eltanin	90 41.0	N51 28.7
Enif	33 36.4	N10 00.2
Fomalhaut	15 12.0	S29 28.3
Gacrux	171 48.1	S57 16.4
Gienah	175 40.6	S17 42.1
Hadar	148 31.8	S60 30.5
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 29.1	S34 22.2
Kochab	137 19.3	N74 02.0
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.2	S36 30.7
Miaplacidus	221 36.9	S69 50.3
Mirfak	308 24.8	N49 57.8
Nunki	75 44.6	S26 15.6
Peacock	53 01.9	S56 38.4
Polaris	315 48.8	N89 22.6
Pollux	243 13.9	N27 57.4
Procyon	244 47.9	N 5 09.0
Rasalhague	95 56.1	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.4	S 8 10.3
Rigil Kent	139 36.3	S60 57.1
Sabik	101 59.7	S15 45.7
Schedar	349 28.5	N56 41.6
Shaula	96 06.8	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.0	S43 33.1
Vega	80 31.5	N38 48.3
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
22	0	180 01.5	135 25.6	N20 00.2	178 08.7	S 0 03.7	7 20.4	N 4 48.6	153 54.5	N 8 23.3
	1	195 03.9	150 25.6	N20 01.1	193 09.4	S 0 02.9	22 23.2	N 4 48.7	168 56.7	N 8 23.4
	2	210 06.4	165 25.6	N20 02.0	208 10.0	S 0 02.1	37 25.9	N 4 48.9	183 58.9	N 8 23.5
	3	225 08.9	180 25.6	N20 02.9	223 10.7	S 0 01.3	52 28.7	N 4 49.0	199 01.1	N 8 23.6
	4	240 11.3	195 25.6	N20 03.8	238 11.4	S 0 00.5	67 31.5	N 4 49.1	214 03.2	N 8 23.7
W	5	255 13.8	210 25.6	N20 04.7	253 12.1	N 0 00.3	82 34.2	N 4 49.2	229 05.4	N 8 23.8
E										
D	6	270 16.3	225 25.6	N20 05.6	268 12.8	N 0 01.1	97 37.0	N 4 49.4	244 07.6	N 8 23.9
N	7	285 18.7	240 25.6	N20 06.5	283 13.5	N 0 01.9	112 39.7	N 4 49.5	259 09.8	N 8 24.0
E	8	300 21.2	255 25.6	N20 07.4	298 14.2	N 0 02.7	127 42.5	N 4 49.6	274 12.0	N 8 24.2
S	9	315 23.7	270 25.6	N20 08.3	313 14.8	N 0 03.4	142 45.2	N 4 49.7	289 14.2	N 8 24.3
D	10	330 26.1	285 25.6	N20 09.1	328 15.5	N 0 04.2	157 48.0	N 4 49.9	304 16.4	N 8 24.4
A	11	345 28.6	300 25.6	N20 10.0	343 16.2	N 0 05.0	172 50.7	N 4 50.0	319 18.5	N 8 24.5
Y										
	12	0 31.1	315 25.6	N20 10.9	358 16.9	N 0 05.8	187 53.5	N 4 50.1	334 20.7	N 8 24.6
	13	15 33.5	330 25.6	N20 11.8	13 17.6	N 0 06.6	202 56.2	N 4 50.2	349 22.9	N 8 24.7
	14	30 36.0	345 25.6	N20 12.7	28 18.3	N 0 07.4	217 59.0	N 4 50.4	4 25.1	N 8 24.8
	15	45 38.4	0 25.6	N20 13.6	43 19.0	N 0 08.2	233 01.8	N 4 50.5	19 27.3	N 8 24.9
	16	60 40.9	15 25.6	N20 14.5	58 19.7	N 0 09.0	248 04.5	N 4 50.6	34 29.5	N 8 25.0
	17	75 43.4	30 25.6	N20 15.4	73 20.3	N 0 09.8	263 07.3	N 4 50.7	49 31.6	N 8 25.2
	18	90 45.8	45 25.6	N20 16.2	88 21.0	N 0 10.6	278 10.0	N 4 50.9	64 33.8	N 8 25.3
	19	105 48.3	60 25.6	N20 17.1	103 21.7	N 0 11.4	293 12.8	N 4 51.0	79 36.0	N 8 25.4
	20	120 50.8	75 25.6	N20 18.0	118 22.4	N 0 12.1	308 15.5	N 4 51.1	94 38.2	N 8 25.5
	21	135 53.2	90 25.6	N20 18.9	133 23.1	N 0 12.9	323 18.3	N 4 51.2	109 40.4	N 8 25.6
	22	150 55.7	105 25.6	N20 19.8	148 23.8	N 0 13.7	338 21.0	N 4 51.3	124 42.5	N 8 25.7
	23	165 58.2	120 25.6	N20 20.6	163 24.5	N 0 14.5	353 23.8	N 4 51.5	139 44.7	N 8 25.8
23	0	181 00.6	135 25.6	N20 21.5	178 25.2	N 0 15.3	8 26.5	N 4 51.6	154 46.9	N 8 25.9
	1	196 03.1	150 25.6	N20 22.4	193 25.8	N 0 16.1	23 29.3	N 4 51.7	169 49.1	N 8 26.0
	2	211 05.5	165 25.6	N20 23.3	208 26.5	N 0 16.9	38 32.0	N 4 51.8	184 51.3	N 8 26.2
	3	226 08.0	180 25.6	N20 24.2	223 27.2	N 0 17.7	53 34.8	N 4 52.0	199 53.5	N 8 26.3
	4	241 10.5	195 25.6	N20 25.0	238 27.9	N 0 18.5	68 37.6	N 4 52.1	214 55.6	N 8 26.4
T	5	256 12.9	210 25.6	N20 25.9	253 28.6	N 0 19.3	83 40.3	N 4 52.2	229 57.8	N 8 26.5
H										
U	6	271 15.4	225 25.6	N20 26.8	268 29.3	N 0 20.1	98 43.1	N 4 52.3	245 00.0	N 8 26.6
R	7	286 17.9	240 25.6	N20 27.7	283 30.0	N 0 20.8	113 45.8	N 4 52.4	260 02.2	N 8 26.7
S	8	301 20.3	255 25.7	N20 28.5	298 30.7	N 0 21.6	128 48.6	N 4 52.6	275 04.4	N 8 26.8
D	9	316 22.8	270 25.7	N20 29.4	313 31.3	N 0 22.4	143 51.3	N 4 52.7	290 06.6	N 8 26.9
A	10	331 25.3	285 25.7	N20 30.3	328 32.0	N 0 23.2	158 54.1	N 4 52.8	305 08.7	N 8 27.0
Y	11	346 27.7	300 25.7	N20 31.1	343 32.7	N 0 24.0	173 56.8	N 4 52.9	320 10.9	N 8 27.2
	12	1 30.2	315 25.7	N20 32.0	358 33.4	N 0 24.8	188 59.6	N 4 53.1	335 13.1	N 8 27.3
	13	16 32.7	330 25.7	N20 32.9	13 34.1	N 0 25.6	204 02.3	N 4 53.2	350 15.3	N 8 27.4
	14	31 35.1	345 25.7	N20 33.8	28 34.8	N 0 26.4	219 05.1	N 4 53.3	5 17.5	N 8 27.5
	15	46 37.6	0 25.7	N20 34.6	43 35.5	N 0 27.2	234 07.8	N 4 53.4	20 19.6	N 8 27.6
	16	61 40.0	15 25.7	N20 35.5	58 36.2	N 0 28.0	249 10.6	N 4 53.5	35 21.8	N 8 27.7
	17	76 42.5	30 25.7	N20 36.4	73 36.8	N 0 28.8	264 13.3	N 4 53.7	50 24.0	N 8 27.8
	18	91 45.0	45 25.7	N20 37.2	88 37.5	N 0 29.5	279 16.1	N 4 53.8	65 26.2	N 8 27.9
	19	106 47.4	60 25.8	N20 38.1	103 38.2	N 0 30.3	294 18.8	N 4 53.9	80 28.4	N 8 28.0
	20	121 49.9	75 25.8	N20 39.0	118 38.9	N 0 31.1	309 21.6	N 4 54.0	95 30.6	N 8 28.2
	21	136 52.4	90 25.8	N20 39.8	133 39.6	N 0 31.9	324 24.3	N 4 54.2	110 32.7	N 8 28.3
	22	151 54.8	105 25.8	N20 40.7	148 40.3	N 0 32.7	339 27.1	N 4 54.3	125 34.9	N 8 28.4
	23	166 57.3	120 25.8	N20 41.5	163 41.0	N 0 33.5	354 29.9	N 4 54.4	140 37.1	N 8 28.5
24	0	181 59.8	135 25.8	N20 42.4	178 41.7	N 0 34.3	9 32.6	N 4 54.5	155 39.3	N 8 28.6
	1	197 02.2	150 25.8	N20 43.3	193 42.4	N 0 35.1	24 35.4	N 4 54.6	170 41.5	N 8 28.7
	2	212 04.7	165 25.9	N20 44.1	208 43.0	N 0 35.9	39 38.1	N 4 54.8	185 43.6	N 8 28.8
	3	227 07.2	180 25.9	N20 45.0	223 43.7	N 0 36.7	54 40.9	N 4 54.9	200 45.8	N 8 28.9
	4	242 09.6	195 25.9	N20 45.8	238 44.4	N 0 37.4	69 43.6	N 4 55.0	215 48.0	N 8 29.0
F	5	257 12.1	210 25.9	N20 46.7	253 45.1	N 0 38.2	84 46.4	N 4 55.1	230 50.2	N 8 29.2
R										
I	6	272 14.5	225 25.9	N20 47.6	268 45.8	N 0 39.0	99 49.1	N 4 55.3	245 52.4	N 8 29.3
D	7	287 17.0	240 25.9	N20 48.4	283 46.5	N 0 39.8	114 51.9	N 4 55.4	260 54.6	N 8 29.4
A	8	302 19.5	255 25.9	N20 49.3	298 47.2	N 0 40.6	129 54.6	N 4 55.5	275 56.7	N 8 29.5
Y	9	317 21.9	270 26.0	N20 50.1	313 47.9	N 0 41.4	144 57.4	N 4 55.6	290 58.9	N 8 29.6
	10	332 24.4	285 26.0	N20 51.0	328 48.6	N 0 42.2	160 00.1	N 4 55.7	306 01.1	N 8 29.7
	11	347 26.9	300 26.0	N20 51.8	343 49.2	N 0 43.0	175 02.9	N 4 55.9	321 03.3	N 8 29.8
	12	2 29.3	315 26.0	N20 52.7	358 49.9	N 0 43.8	190 05.6	N 4 56.0	336 05.5	N 8 29.9
	13	17 31.8	330 26.0	N20 53.5	13 50.6	N 0 44.5	205 08.4	N 4 56.1	351 07.6	N 8 30.0
	14	32 34.3	345 26.1	N20 54.4	28 51.3	N 0 45.3	220 11.1	N 4 56.2	6 09.8	N 8 30.2
	15	47 36.7	0 26.1	N20 55.2	43 52.0	N 0 46.1	235 13.9	N 4 56.3	21 12.0	N 8 30.3
	16	62 39.2	15 26.1	N20 56.1	58 52.7	N 0 46.9	250 16.6	N 4 56.5	36 14.2	N 8 30.4
	17	77 41.6	30 26.1	N20 56.9	73 53.4	N 0 47.7	265 19.4	N 4 56.6	51 16.4	N 8 30.5
	18	92 44.1	45 26.1	N20 57.8	88 54.1	N 0 48.5	280 22.1	N 4 56.7	66 18.5	N 8 30.6
	19	107 46.6	60 26.2	N20 58.6	103 54.8	N 0 49.3	295 24.9	N 4 56.8	81 20.7	N 8 30.7
	20	122 49.0	75 26.2	N20 59.5	118 55.4	N 0 50.1	310 27.6	N 4 56.9	96 22.9	N 8 30.8
	21	137 51.5	90 26.2	N21 00.3	133 56.1	N 0 50.9	325 30.4	N 4 57.1	111 25.1	N 8 30.9
	22	152 54.0	105 26.2	N21 01.1	148 56.8	N 0 51.7	340 33.1	N 4 57.2	126 27.3	N 8 31.1
	23	167 56.4	120 26.2	N21 02.0	163 57.5	N 0 52.4	355 35.9	N 4 57.3	141 29.4	N 8 31.2
			v 0.0	d 0.9	v 0.7	d 0.8	v 2.8	d 0.1	v 2.2	d 0.1

G.M.T		SUN				MOON						STARS		
d	h	GHA		Dec		GHA	v		Dec	d	HP	Name	SHA	Dec
		° '		° '		° '	'		° '	'	'		° '	° '
22	0	178 17.3	N	0	45.2	221 44.1	15.2	S14	39.0	11.1	54.1	Acamar	315 10.1	S40 11.7
	1	193 17.5	N	0	46.1	236 18.3	15.2	S14	27.8	11.2	54.0	Achernar	335 18.8	S57 05.7
	2	208 17.7	N	0	47.1	250 52.6	15.3	S14	16.6	11.2	54.0	Acrux	172 56.4	S63 15.4
	3	223 17.9	N	0	48.1	265 26.9	15.3	S14	05.3	11.3	54.0	Adhara	255 03.7	S29 00.9
	4	238 18.1	N	0	49.1	280 01.3	15.4	S13	54.0	11.3	54.0	Albireo	67 02.0	N28 00.9
W	5	253 18.2	N	0	50.1	294 35.7	15.4	S13	42.6	11.4	54.0			
E												Aldebaran	290 36.7	N16 33.9
D	6	268 18.4	N	0	51.1	309 10.2	15.5	S13	31.1	11.4	54.0	Alioth	166 10.1	N55 48.2
N	7	283 18.6	N	0	52.1	323 44.7	15.5	S13	19.6	11.5	54.0	Alkaid	152 49.5	N49 10.1
E	8	298 18.8	N	0	53.0	338 19.2	15.6	S13	08.1	11.5	54.0	Al Na-ir	27 30.0	S46 49.3
S	9	313 19.0	N	0	54.0	352 53.8	15.6	S12	56.5	11.6	54.0	Alnilam	275 35.1	S 1 11.2
D	10	328 19.2	N	0	55.0	7 28.5	15.6	S12	44.9	11.6	54.0			
A	11	343 19.4	N	0	56.0	22 03.2	15.7	S12	33.2	11.7	54.0	Alphard	217 44.9	S 8 47.1
Y												Alphecca	126 01.3	N26 36.9
	12	358 19.6	N	0	57.0	36 37.9	15.7	S12	21.4	11.7	54.0	Alpheratz	357 32.4	N29 14.8
	13	13 19.7	N	0	58.0	51 12.7	15.8	S12	09.6	11.8	54.0	Altair	61 57.5	N 8 56.4
	14	28 19.9	N	0	59.0	65 47.5	15.8	S11	57.8	11.8	54.0	Ankaa	353 05.0	S42 09.2
	15	43 20.1	N	0	60.0	80 22.3	15.9	S11	45.9	11.9	54.0			
	16	58 20.3	N	1	00.9	94 57.2	15.9	S11	34.0	11.9	54.0	Antares	112 12.5	S26 29.7
	17	73 20.5	N	1	01.9	109 32.2	15.9	S11	22.1	12.0	54.0	Arcturus	145 45.2	N19 01.9
												Atria	107 04.2	S69 04.5
	18	88 20.7	N	1	02.9	124 07.1	16.0	S11	10.1	12.0	54.0	Avior	234 13.3	S59 36.3
	19	103 20.9	N	1	03.9	138 42.1	16.0	S10	58.0	12.0	54.0	Bellatrix	278 20.1	N 6 22.4
	20	118 21.0	N	1	04.9	153 17.2	16.0	S10	45.9	12.1	54.0			
	21	133 21.2	N	1	05.9	167 52.2	16.1	S10	33.8	12.1	54.0	Betelgeuse	270 49.3	N 7 24.6
	22	148 21.4	N	1	06.9	182 27.4	16.1	S10	21.6	12.2	54.0	Canopus	263 51.2	S52 43.0
	23	163 21.6	N	1	07.8	197 02.5	16.1	S10	09.4	12.2	54.0	Capella	280 18.1	N46 01.7
												Castor	245 53.6	N31 49.6
23	0	178 21.8	N	1	08.8	211 37.7	16.2	S 9	57.2	12.2	54.0	Deneb	49 24.2	N45 22.6
	1	193 22.0	N	1	09.8	226 12.9	16.2	S 9	44.9	12.3	54.0			
	2	208 22.2	N	1	10.8	240 48.1	16.2	S 9	32.6	12.3	54.0	Denebola	182 21.9	N14 24.6
	3	223 22.4	N	1	11.8	255 23.4	16.3	S 9	20.2	12.4	54.0	Diphda	348 45.0	S17 49.9
	4	238 22.5	N	1	12.8	269 58.7	16.3	S 9	07.8	12.4	54.0	Dubhe	193 37.2	N61 35.8
T	5	253 22.7	N	1	13.8	284 34.0	16.3	S 8	55.4	12.4	54.0	Elnath	277 58.7	N28 37.9
H												Eltanin	90 40.9	N51 28.7
U	6	268 22.9	N	1	14.7	299 09.3	16.4	S 8	42.9	12.5	54.0			
R	7	283 23.1	N	1	15.7	313 44.7	16.4	S 8	30.4	12.5	54.0	Enif	33 36.4	N10 00.2
S	8	298 23.3	N	1	16.7	328 20.1	16.4	S 8	17.9	12.5	54.0	Fomalhaut	15 12.0	S29 28.3
D	9	313 23.5	N	1	17.7	342 55.6	16.4	S 8	05.3	12.6	54.0	Gacrux	171 48.1	S57 16.4
A	10	328 23.7	N	1	18.7	357 31.0	16.5	S 7	52.7	12.6	54.0	Gienah	175 40.5	S17 42.1
Y	11	343 23.9	N	1	19.7	12 06.5	16.5	S 7	40.1	12.6	54.0	Hadar	148 31.7	S60 30.6
	12	358 24.0	N	1	20.6	26 42.0	16.5	S 7	27.5	12.7	54.0	Hamal	327 48.5	N23 35.8
	13	13 24.2	N	1	21.6	41 17.5	16.5	S 7	14.8	12.7	54.0	Kaus Austr.	83 29.1	S34 22.2
	14	28 24.4	N	1	22.6	55 53.0	16.5	S 7	02.1	12.7	54.0	Kochab	137 19.2	N74 02.0
	15	43 24.6	N	1	23.6	70 28.6	16.6	S 6	49.4	12.7	54.0	Markab	13 27.6	N15 21.3
	16	58 24.8	N	1	24.6	85 04.2	16.6	S 6	36.6	12.8	54.0	Menkar	314 03.6	N 4 12.0
	17	73 25.0	N	1	25.6	99 39.8	16.6	S 6	23.8	12.8	54.0			
												Menkent	147 54.2	S36 30.7
	18	88 25.2	N	1	26.6	114 15.4	16.6	S 6	11.0	12.8	54.0	Miaplacidus	221 36.9	S69 50.3
	19	103 25.3	N	1	27.5	128 51.0	16.6	S 5	58.2	12.8	54.0	Mirfak	308 24.8	N49 57.8
	20	118 25.5	N	1	28.5	143 26.6	16.6	S 5	45.3	12.9	54.0	Nunki	75 44.6	S26 15.6
	21	133 25.7	N	1	29.5	158 02.3	16.7	S 5	32.4	12.9	54.0	Peacock	53 01.9	S56 38.4
	22	148 25.9	N	1	30.5	172 38.0	16.7	S 5	19.5	12.9	54.0			
	23	163 26.1	N	1	31.5	187 13.7	16.7	S 5	06.6	12.9	54.0	Polaris	315 49.6	N89 22.6
												Pollux	243 14.0	N27 57.4
24	0	178 26.3	N	1	32.5	201 49.3	16.7	S 4	53.6	13.0	54.1	Procyon	244 48.0	N 5 09.0
	1	193 26.5	N	1	33.5	216 25.1	16.7	S 4	40.6	13.0	54.1	Rasalhague	95 56.1	N12 32.2
	2	208 26.7	N	1	34.4	231 00.8	16.7	S 4	27.6	13.0	54.1	Regulus	207 31.4	N11 49.6
	3	223 26.8	N	1	35.4	245 36.5	16.7	S 4	14.6	13.0	54.1			
	4	238 27.0	N	1	36.4	260 12.2	16.7	S 4	01.6	13.0	54.1	Rigel	281 01.4	S 8 10.3
F	5	253 27.2	N	1	37.4	274 48.0	16.7	S 3	48.6	13.0	54.1	Rigil Kent	139 36.3	S60 57.1
R												Sabik	101 59.7	S15 45.7
I	6	268 27.4	N	1	38.4	289 23.7	16.7	S 3	35.5	13.1	54.1	Schedar	349 28.5	N56 41.6
D	7	283 27.6	N	1	39.4	303 59.5	16.8	S 3	22.4	13.1	54.1	Shaula	96 06.7	S37 07.4
A	8	298 27.8	N	1	40.3	318 35.2	16.8	S 3	09.3	13.1	54.1			
Y	9	313 28.0	N	1	41.3	333 11.0	16.8	S 2	56.2	13.1	54.1	Sirius	258 23.9	S16 45.5
	10	328 28.2	N	1	42.3	347 46.7	16.8	S 2	43.1	13.1	54.1	Spica	158 19.2	S11 18.7
	11	343 28.3	N	1	43.3	2 22.5	16.8	S 2	30.0	13.1	54.1	Suhail	222 44.0	S43 33.1
												Vega	80 31.5	N38 48.3
	12	358 28.5	N	1	44.3	16 58.3	16.8	S 2	16.8	13.1	54.1	Zuben-ubi	136 53.8	S16 09.7
	13	13 28.7	N	1	45.3	31 34.0	16.8	S 2	03.6	13.2	54.1			
	14	28 28.9	N	1	46.2	46 09.8	16.8	S 1	50.5	13.2	54.1			
	15	43 29.1	N	1	47.2	60 45.6	16.8	S 1	37.3	13.2	54.1			
	16	58 29.3	N	1	48.2	75 21.3	16.8	S 1	24.1	13.2	54.1			
	17	73 29.5	N	1	49.2	89 57.1	16.8	S 1	10.9	13.2	54.2			
	18	88 29.7	N	1	50.2	104 32.8	16.8	S 0	57.7	13.2	54.2			
	19	103 29.9	N	1	51.2	119 08.6	16.7	S 0	44.5	13.2	54.2			
	20	118 30.0	N	1	52.1	133 44.3	16.7	S 0	31.2	13.2	54.2			
	21	133 30.2	N	1	53.1	148 20.0	16.7	S 0	18.0	13.2	54.2			
	22	148 30.4	N	1	54.1	162 55.8	16.7	S 0	04.8	13.2	54.2			
	23	163 30.6	N	1	55.1	177 31.5	16.7	N 0	08.5	13.2	54.2			
		S.D. 16.0		d	1.0	S.D.	14.7		14.7		14.7			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
25	0	182 58.9	135 26.3	N21 02.8	178 58.2	N 0 53.2	10 38.6	N 4 57.4	156 31.6	N 8 31.3
	1	198 01.4	150 26.3	N21 03.7	193 58.9	N 0 54.0	25 41.4	N 4 57.5	171 33.8	N 8 31.4
	2	213 03.8	165 26.3	N21 04.5	208 59.6	N 0 54.8	40 44.1	N 4 57.7	186 36.0	N 8 31.5
	3	228 06.3	180 26.3	N21 05.4	224 00.3	N 0 55.6	55 46.9	N 4 57.8	201 38.2	N 8 31.6
	4	243 08.8	195 26.4	N21 06.2	239 01.0	N 0 56.4	70 49.6	N 4 57.9	216 40.3	N 8 31.7
S	5	258 11.2	210 26.4	N21 07.0	254 01.6	N 0 57.2	85 52.4	N 4 58.0	231 42.5	N 8 31.8
A										
T	6	273 13.7	225 26.4	N21 07.9	269 02.3	N 0 58.0	100 55.1	N 4 58.1	246 44.7	N 8 31.9
U	7	288 16.1	240 26.4	N21 08.7	284 03.0	N 0 58.7	115 57.8	N 4 58.3	261 46.9	N 8 32.1
R	8	303 18.6	255 26.5	N21 09.5	299 03.7	N 0 59.5	131 00.6	N 4 58.4	276 49.1	N 8 32.2
D	9	318 21.1	270 26.5	N21 10.4	314 04.4	N 1 00.3	146 03.3	N 4 58.5	291 51.2	N 8 32.3
A	10	333 23.5	285 26.5	N21 11.2	329 05.1	N 1 01.1	161 06.1	N 4 58.6	306 53.4	N 8 32.4
Y	11	348 26.0	300 26.5	N21 12.0	344 05.8	N 1 01.9	176 08.8	N 4 58.7	321 55.6	N 8 32.5
	12	3 28.5	315 26.6	N21 12.9	359 06.5	N 1 02.7	191 11.6	N 4 58.9	336 57.8	N 8 32.6
	13	18 30.9	330 26.6	N21 13.7	14 07.2	N 1 03.5	206 14.3	N 4 59.0	351 60.0	N 8 32.7
	14	33 33.4	345 26.6	N21 14.5	29 07.9	N 1 04.3	221 17.1	N 4 59.1	7 02.1	N 8 32.8
	15	48 35.9	0 26.7	N21 15.4	44 08.5	N 1 05.1	236 19.8	N 4 59.2	22 04.3	N 8 32.9
	16	63 38.3	15 26.7	N21 16.2	59 09.2	N 1 05.8	251 22.6	N 4 59.3	37 06.5	N 8 33.1
	17	78 40.8	30 26.7	N21 17.0	74 09.9	N 1 06.6	266 25.3	N 4 59.5	52 08.7	N 8 33.2
	18	93 43.2	45 26.8	N21 17.9	89 10.6	N 1 07.4	281 28.1	N 4 59.6	67 10.9	N 8 33.3
	19	108 45.7	60 26.8	N21 18.7	104 11.3	N 1 08.2	296 30.8	N 4 59.7	82 13.0	N 8 33.4
	20	123 48.2	75 26.8	N21 19.5	119 12.0	N 1 09.0	311 33.6	N 4 59.8	97 15.2	N 8 33.5
	21	138 50.6	90 26.8	N21 20.3	134 12.7	N 1 09.8	326 36.3	N 4 59.9	112 17.4	N 8 33.6
	22	153 53.1	105 26.9	N21 21.2	149 13.4	N 1 10.6	341 39.1	N 5 00.1	127 19.6	N 8 33.7
	23	168 55.6	120 26.9	N21 22.0	164 14.1	N 1 11.4	356 41.8	N 5 00.2	142 21.7	N 8 33.8
26	0	183 58.0	135 26.9	N21 22.8	179 14.8	N 1 12.1	11 44.6	N 5 00.3	157 23.9	N 8 34.0
	1	199 00.5	150 27.0	N21 23.6	194 15.4	N 1 12.9	26 47.3	N 5 00.4	172 26.1	N 8 34.1
	2	214 03.0	165 27.0	N21 24.4	209 16.1	N 1 13.7	41 50.1	N 5 00.5	187 28.3	N 8 34.2
	3	229 05.4	180 27.0	N21 25.3	224 16.8	N 1 14.5	56 52.8	N 5 00.7	202 30.5	N 8 34.3
	4	244 07.9	195 27.1	N21 26.1	239 17.5	N 1 15.3	71 55.5	N 5 00.8	217 32.6	N 8 34.4
S	5	259 10.4	210 27.1	N21 26.9	254 18.2	N 1 16.1	86 58.3	N 5 00.9	232 34.8	N 8 34.5
U										
N	6	274 12.8	225 27.2	N21 27.7	269 18.9	N 1 16.9	102 01.0	N 5 01.0	247 37.0	N 8 34.6
D	7	289 15.3	240 27.2	N21 28.5	284 19.6	N 1 17.7	117 03.8	N 5 01.1	262 39.2	N 8 34.7
A	8	304 17.7	255 27.2	N21 29.4	299 20.3	N 1 18.4	132 06.5	N 5 01.2	277 41.4	N 8 34.8
Y	9	319 20.2	270 27.3	N21 30.2	314 21.0	N 1 19.2	147 09.3	N 5 01.4	292 43.5	N 8 35.0
	10	334 22.7	285 27.3	N21 31.0	329 21.7	N 1 20.0	162 12.0	N 5 01.5	307 45.7	N 8 35.1
	11	349 25.1	300 27.3	N21 31.8	344 22.4	N 1 20.8	177 14.8	N 5 01.6	322 47.9	N 8 35.2
	12	4 27.6	315 27.4	N21 32.6	359 23.0	N 1 21.6	192 17.5	N 5 01.7	337 50.1	N 8 35.3
	13	19 30.1	330 27.4	N21 33.4	14 23.7	N 1 22.4	207 20.3	N 5 01.8	352 52.2	N 8 35.4
	14	34 32.5	345 27.5	N21 34.2	29 24.4	N 1 23.2	222 23.0	N 5 02.0	7 54.4	N 8 35.5
	15	49 35.0	0 27.5	N21 35.1	44 25.1	N 1 24.0	237 25.7	N 5 02.1	22 56.6	N 8 35.6
	16	64 37.5	15 27.5	N21 35.9	59 25.8	N 1 24.7	252 28.5	N 5 02.2	37 58.8	N 8 35.7
	17	79 39.9	30 27.6	N21 36.7	74 26.5	N 1 25.5	267 31.2	N 5 02.3	53 01.0	N 8 35.9
	18	94 42.4	45 27.6	N21 37.5	89 27.2	N 1 26.3	282 34.0	N 5 02.4	68 03.1	N 8 36.0
	19	109 44.8	60 27.7	N21 38.3	104 27.9	N 1 27.1	297 36.7	N 5 02.5	83 05.3	N 8 36.1
	20	124 47.3	75 27.7	N21 39.1	119 28.6	N 1 27.9	312 39.5	N 5 02.7	98 07.5	N 8 36.2
	21	139 49.8	90 27.7	N21 39.9	134 29.3	N 1 28.7	327 42.2	N 5 02.8	113 09.7	N 8 36.3
	22	154 52.2	105 27.8	N21 40.7	149 30.0	N 1 29.5	342 45.0	N 5 02.9	128 11.8	N 8 36.4
	23	169 54.7	120 27.8	N21 41.5	164 30.6	N 1 30.3	357 47.7	N 5 03.0	143 14.0	N 8 36.5
27	0	184 57.2	135 27.9	N21 42.3	179 31.3	N 1 31.0	12 50.4	N 5 03.1	158 16.2	N 8 36.6
	1	199 59.6	150 27.9	N21 43.1	194 32.0	N 1 31.8	27 53.2	N 5 03.2	173 18.4	N 8 36.7
	2	215 02.1	165 28.0	N21 43.9	209 32.7	N 1 32.6	42 55.9	N 5 03.4	188 20.6	N 8 36.9
	3	230 04.6	180 28.0	N21 44.7	224 33.4	N 1 33.4	57 58.7	N 5 03.5	203 22.7	N 8 37.0
	4	245 07.0	195 28.1	N21 45.5	239 34.1	N 1 34.2	73 01.4	N 5 03.6	218 24.9	N 8 37.1
M	5	260 09.5	210 28.1	N21 46.3	254 34.8	N 1 35.0	88 04.2	N 5 03.7	233 27.1	N 8 37.2
O										
N	6	275 12.0	225 28.2	N21 47.1	269 35.5	N 1 35.8	103 06.9	N 5 03.8	248 29.3	N 8 37.3
D	7	290 14.4	240 28.2	N21 47.9	284 36.2	N 1 36.5	118 09.6	N 5 04.0	263 31.4	N 8 37.4
A	8	305 16.9	255 28.2	N21 48.7	299 36.9	N 1 37.3	133 12.4	N 5 04.1	278 33.6	N 8 37.5
Y	9	320 19.3	270 28.3	N21 49.5	314 37.6	N 1 38.1	148 15.1	N 5 04.2	293 35.8	N 8 37.6
	10	335 21.8	285 28.3	N21 50.3	329 38.2	N 1 38.9	163 17.9	N 5 04.3	308 38.0	N 8 37.8
	11	350 24.3	300 28.4	N21 51.1	344 38.9	N 1 39.7	178 20.6	N 5 04.4	323 40.1	N 8 37.9
	12	5 26.7	315 28.4	N21 51.9	359 39.6	N 1 40.5	193 23.4	N 5 04.5	338 42.3	N 8 38.0
	13	20 29.2	330 28.5	N21 52.7	14 40.3	N 1 41.3	208 26.1	N 5 04.7	353 44.5	N 8 38.1
	14	35 31.7	345 28.5	N21 53.5	29 41.0	N 1 42.0	223 28.8	N 5 04.8	8 46.7	N 8 38.2
	15	50 34.1	0 28.6	N21 54.3	44 41.7	N 1 42.8	238 31.6	N 5 04.9	23 48.9	N 8 38.3
	16	65 36.6	15 28.7	N21 55.1	59 42.4	N 1 43.6	253 34.3	N 5 05.0	38 51.0	N 8 38.4
	17	80 39.1	30 28.7	N21 55.9	74 43.1	N 1 44.4	268 37.1	N 5 05.1	53 53.2	N 8 38.5
	18	95 41.5	45 28.8	N21 56.6	89 43.8	N 1 45.2	283 39.8	N 5 05.2	68 55.4	N 8 38.7
	19	110 44.0	60 28.8	N21 57.4	104 44.5	N 1 46.0	298 42.6	N 5 05.3	83 57.6	N 8 38.8
	20	125 46.5	75 28.9	N21 58.2	119 45.2	N 1 46.8	313 45.3	N 5 05.5	98 59.7	N 8 38.9
	21	140 48.9	90 28.9	N21 59.0	134 45.9	N 1 47.5	328 48.0	N 5 05.6	114 01.9	N 8 39.0
	22	155 51.4	105 29.0	N21 59.8	149 46.5	N 1 48.3	343 50.8	N 5 05.7	129 04.1	N 8 39.1
	23	170 53.8	120 29.0	N22 00.6	164 47.2	N 1 49.1	358 53.5	N 5 05.8	144 06.3	N 8 39.2
			v 0.0	d 0.8	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T		SUN		MOON					
d	h	GHA	Dec	GHA	v	Dec	d	HP
		° '	° '	° '	'	° '	'	'
25	0	178 30.8	N 1 56.1	192 07.2	16.7	N 0 21.7	13.2	54.2
	1	193 31.0	N 1 57.1	206 42.9	16.7	N 0 35.0	13.2	54.2
	2	208 31.2	N 1 58.0	221 18.5	16.7	N 0 48.2	13.2	54.2
	3	223 31.4	N 1 59.0	235 54.2	16.7	N 1 01.5	13.2	54.2
	4	238 31.5	N 2 00.0	250 29.9	16.7	N 1 14.7	13.3	54.2
S	5	253 31.7	N 2 01.0	265 05.5	16.6	N 1 28.0	13.3	54.3
A								
T	6	268 31.9	N 2 02.0	279 41.1	16.6	N 1 41.2	13.2	54.3
U	7	283 32.1	N 2 02.9	294 16.7	16.6	N 1 54.5	13.2	54.3
R	8	298 32.3	N 2 03.9	308 52.3	16.6	N 2 07.7	13.2	54.3
D	9	313 32.5	N 2 04.9	323 27.9	16.6	N 2 20.9	13.2	54.3
A	10	328 32.7	N 2 05.9	338 03.5	16.6	N 2 34.2	13.2	54.3
Y	11	343 32.9	N 2 06.9	352 39.0	16.5	N 2 47.4	13.2	54.3
	12	358 33.0	N 2 07.9	7 14.5	16.5	N 3 00.6	13.2	54.3
	13	13 33.2	N 2 08.8	21 50.0	16.5	N 3 13.9	13.2	54.3
	14	28 33.4	N 2 09.8	36 25.5	16.5	N 3 27.1	13.2	54.3
	15	43 33.6	N 2 10.8	51 00.9	16.4	N 3 40.3	13.2	54.4
	16	58 33.8	N 2 11.8	65 36.3	16.4	N 3 53.5	13.2	54.4
	17	73 34.0	N 2 12.8	80 11.7	16.4	N 4 06.7	13.2	54.4
	18	88 34.2	N 2 13.7	94 47.1	16.4	N 4 19.9	13.2	54.4
	19	103 34.4	N 2 14.7	109 22.4	16.3	N 4 33.0	13.2	54.4
	20	118 34.5	N 2 15.7	123 57.8	16.3	N 4 46.2	13.2	54.4
	21	133 34.7	N 2 16.7	138 33.0	16.3	N 4 59.3	13.1	54.4
	22	148 34.9	N 2 17.7	153 08.3	16.3	N 5 12.5	13.1	54.4
	23	163 35.1	N 2 18.7	167 43.5	16.2	N 5 25.6	13.1	54.4
26	0	178 35.3	N 2 19.6	182 18.7	16.2	N 5 38.7	13.1	54.5
	1	193 35.5	N 2 20.6	196 53.9	16.2	N 5 51.8	13.1	54.5
	2	208 35.7	N 2 21.6	211 29.0	16.1	N 6 04.8	13.1	54.5
	3	223 35.9	N 2 22.6	226 04.1	16.1	N 6 17.9	13.1	54.5
	4	238 36.0	N 2 23.6	240 39.1	16.1	N 6 30.9	13.0	54.5
S	5	253 36.2	N 2 24.5	255 14.2	16.0	N 6 43.9	13.0	54.5
U								
N	6	268 36.4	N 2 25.5	269 49.2	16.0	N 6 56.9	13.0	54.5
D	7	283 36.6	N 2 26.5	284 24.1	15.9	N 7 09.9	13.0	54.5
A	8	298 36.8	N 2 27.5	298 59.0	15.9	N 7 22.8	13.0	54.6
Y	9	313 37.0	N 2 28.5	313 33.9	15.9	N 7 35.8	12.9	54.6
	10	328 37.2	N 2 29.4	328 08.7	15.8	N 7 48.7	12.9	54.6
	11	343 37.4	N 2 30.4	342 43.5	15.8	N 8 01.5	12.9	54.6
	12	358 37.5	N 2 31.4	357 18.2	15.7	N 8 14.4	12.9	54.6
	13	13 37.7	N 2 32.4	11 52.9	15.7	N 8 27.2	12.8	54.6
	14	28 37.9	N 2 33.4	26 27.6	15.7	N 8 40.0	12.8	54.6
	15	43 38.1	N 2 34.3	41 02.2	15.6	N 8 52.8	12.8	54.6
	16	58 38.3	N 2 35.3	55 36.8	15.6	N 9 05.6	12.7	54.7
	17	73 38.5	N 2 36.3	70 11.3	15.5	N 9 18.3	12.7	54.7
	18	88 38.7	N 2 37.3	84 45.8	15.5	N 9 30.9	12.7	54.7
	19	103 38.9	N 2 38.3	99 20.2	15.4	N 9 43.6	12.7	54.7
	20	118 39.1	N 2 39.2	113 54.6	15.4	N 9 56.2	12.6	54.7
	21	133 39.2	N 2 40.2	128 28.9	15.3	N10 08.8	12.6	54.7
	22	148 39.4	N 2 41.2	143 03.2	15.3	N10 21.4	12.6	54.7
	23	163 39.6	N 2 42.2	157 37.4	15.2	N10 33.9	12.5	54.8
27	0	178 39.8	N 2 43.1	172 11.5	15.2	N10 46.4	12.5	54.8
	1	193 40.0	N 2 44.1	186 45.7	15.1	N10 58.8	12.4	54.8
	2	208 40.2	N 2 45.1	201 19.7	15.1	N11 11.2	12.4	54.8
	3	223 40.4	N 2 46.1	215 53.7	15.0	N11 23.6	12.4	54.8
	4	238 40.6	N 2 47.1	230 27.7	15.0	N11 35.9	12.3	54.8
M	5	253 40.7	N 2 48.0	245 01.6	14.9	N11 48.2	12.3	54.8
O								
N	6	268 40.9	N 2 49.0	259 35.4	14.8	N12 00.4	12.2	54.9
D	7	283 41.1	N 2 50.0	274 09.2	14.8	N12 12.6	12.2	54.9
A	8	298 41.3	N 2 51.0	288 42.9	14.7	N12 24.8	12.2	54.9
Y	9	313 41.5	N 2 52.0	303 16.6	14.7	N12 36.9	12.1	54.9
	10	328 41.7	N 2 52.9	317 50.2	14.6	N12 49.0	12.1	54.9
	11	343 41.9	N 2 53.9	332 23.7	14.5	N13 01.0	12.0	54.9
	12	358 42.1	N 2 54.9	346 57.2	14.5	N13 13.0	12.0	54.9
	13	13 42.2	N 2 55.9	1 30.6	14.4	N13 24.9	11.9	55.0
	14	28 42.4	N 2 56.8	16 04.0	14.4	N13 36.8	11.9	55.0
	15	43 42.6	N 2 57.8	30 37.2	14.3	N13 48.6	11.8	55.0
	16	58 42.8	N 2 58.8	45 10.5	14.2	N14 00.4	11.8	55.0
	17	73 43.0	N 2 59.8	59 43.6	14.2	N14 12.1	11.7	55.0
	18	88 43.2	N 3 00.7	74 16.7	14.1	N14 23.8	11.7	55.0
	19	103 43.4	N 3 01.7	88 49.7	14.0	N14 35.4	11.6	55.1
	20	118 43.6	N 3 02.7	103 22.7	14.0	N14 46.9	11.6	55.1
	21	133 43.7	N 3 03.7	117 55.6	13.9	N14 58.4	11.5	55.1
	22	148 43.9	N 3 04.7	132 28.4	13.8	N15 09.9	11.4	55.1
	23	163 44.1	N 3 05.6	147 01.1	13.7	N15 21.3	11.4	55.1
		S.D. 16.0	d 1.0	S.D. 14.8	14.9	15.0		

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.1	S40 11.7
Achernar	335 18.8	S57 05.7
Acrux	172 56.4	S63 15.4
Adhara	255 03.7	S29 00.9
Albireo	67 02.0	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.2
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 30.0	S46 49.3
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.3	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.5	N 8 56.4
Ankaa	353 05.0	S42 09.2
Antares	112 12.4	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 04.2	S69 04.5
Avior	234 13.3	S59 36.4
Bellatrix	278 20.1	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.2	S52 43.0
Capella	280 18.1	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.2	N45 22.6
Denebola	182 21.9	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.8
Elnath	277 58.7	N28 37.9
Eltanin	90 40.9	N51 28.7
Enif	33 36.4	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.4
Gienah	175 40.5	S17 42.1
Hadar	148 31.7	S60 30.6
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 29.1	S34 22.2
Kochab	137 19.2	N74 02.1
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.2	S36 30.7
Miaplacidus	221 37.0	S69 50.3
Mirfak	308 24.9	N49 57.8
Nunki	75 44.6	S26 15.6
Peacock	53 01.8	S56 38.4
Polaris	315 50.3	N89 22.6
Pollux	243 14.0	N27 57.4
Procyon	244 48.0	N 5 09.0
Rasalhague	95 56.1	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.4	S 8 10.3
Rigil Kent	139 36.3	S60 57.1
Sabik	101 59.7	S15 45.7
Schedar	349 28.6	N56 41.5
Shaula	96 06.7	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.1	S43 33.1
Vega	80 31.5	N38 48.3
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
28	0	185 56.3	135 29.1	N22 01.4	179 47.9	N 1 49.9	13 56.3	N 5 05.9	159 08.4	N 8 39.3
	1	200 58.8	150 29.1	N22 02.1	194 48.6	N 1 50.7	28 59.0	N 5 06.0	174 10.6	N 8 39.4
	2	216 01.2	165 29.2	N22 02.9	209 49.3	N 1 51.5	44 01.7	N 5 06.2	189 12.8	N 8 39.5
	3	231 03.7	180 29.3	N22 03.7	224 50.0	N 1 52.3	59 04.5	N 5 06.3	204 15.0	N 8 39.7
	4	246 06.2	195 29.3	N22 04.5	239 50.7	N 1 53.0	74 07.2	N 5 06.4	219 17.1	N 8 39.8
T	5	261 08.6	210 29.4	N22 05.3	254 51.4	N 1 53.8	89 10.0	N 5 06.5	234 19.3	N 8 39.9
U										
E	6	276 11.1	225 29.4	N22 06.0	269 52.1	N 1 54.6	104 12.7	N 5 06.6	249 21.5	N 8 40.0
S	7	291 13.6	240 29.5	N22 06.8	284 52.8	N 1 55.4	119 15.4	N 5 06.7	264 23.7	N 8 40.1
D	8	306 16.0	255 29.6	N22 07.6	299 53.5	N 1 56.2	134 18.2	N 5 06.9	279 25.9	N 8 40.2
A	9	321 18.5	270 29.6	N22 08.4	314 54.2	N 1 57.0	149 20.9	N 5 07.0	294 28.0	N 8 40.3
Y	10	336 20.9	285 29.7	N22 09.2	329 54.9	N 1 57.7	164 23.7	N 5 07.1	309 30.2	N 8 40.4
	11	351 23.4	300 29.7	N22 09.9	344 55.5	N 1 58.5	179 26.4	N 5 07.2	324 32.4	N 8 40.6
	12	6 25.9	315 29.8	N22 10.7	359 56.2	N 1 59.3	194 29.1	N 5 07.3	339 34.6	N 8 40.7
	13	21 28.3	330 29.9	N22 11.5	14 56.9	N 2 00.1	209 31.9	N 5 07.4	354 36.7	N 8 40.8
	14	36 30.8	345 29.9	N22 12.3	29 57.6	N 2 00.9	224 34.6	N 5 07.5	9 38.9	N 8 40.9
	15	51 33.3	0 30.0	N22 13.0	44 58.3	N 2 01.7	239 37.4	N 5 07.7	24 41.1	N 8 41.0
	16	66 35.7	15 30.1	N22 13.8	59 59.0	N 2 02.5	254 40.1	N 5 07.8	39 43.3	N 8 41.1
	17	81 38.2	30 30.1	N22 14.6	74 59.7	N 2 03.2	269 42.8	N 5 07.9	54 45.4	N 8 41.2
	18	96 40.7	45 30.2	N22 15.3	90 00.4	N 2 04.0	284 45.6	N 5 08.0	69 47.6	N 8 41.3
	19	111 43.1	60 30.3	N22 16.1	105 01.1	N 2 04.8	299 48.3	N 5 08.1	84 49.8	N 8 41.5
	20	126 45.6	75 30.3	N22 16.9	120 01.8	N 2 05.6	314 51.1	N 5 08.2	99 52.0	N 8 41.6
	21	141 48.1	90 30.4	N22 17.6	135 02.5	N 2 06.4	329 53.8	N 5 08.3	114 54.1	N 8 41.7
	22	156 50.5	105 30.5	N22 18.4	150 03.2	N 2 07.2	344 56.5	N 5 08.5	129 56.3	N 8 41.8
	23	171 53.0	120 30.5	N22 19.2	165 03.9	N 2 07.9	359 59.3	N 5 08.6	144 58.5	N 8 41.9
29	0	186 55.4	135 30.6	N22 19.9	180 04.5	N 2 08.7	15 02.0	N 5 08.7	160 00.7	N 8 42.0
	1	201 57.9	150 30.7	N22 20.7	195 05.2	N 2 09.5	30 04.7	N 5 08.8	175 02.8	N 8 42.1
	2	217 00.4	165 30.7	N22 21.5	210 05.9	N 2 10.3	45 07.5	N 5 08.9	190 05.0	N 8 42.2
	3	232 02.8	180 30.8	N22 22.2	225 06.6	N 2 11.1	60 10.2	N 5 09.0	205 07.2	N 8 42.4
	4	247 05.3	195 30.9	N22 23.0	240 07.3	N 2 11.9	75 13.0	N 5 09.1	220 09.4	N 8 42.5
W	5	262 07.8	210 31.0	N22 23.7	255 08.0	N 2 12.6	90 15.7	N 5 09.3	235 11.5	N 8 42.6
E										
D	6	277 10.2	225 31.0	N22 24.5	270 08.7	N 2 13.4	105 18.4	N 5 09.4	250 13.7	N 8 42.7
N	7	292 12.7	240 31.1	N22 25.3	285 09.4	N 2 14.2	120 21.2	N 5 09.5	265 15.9	N 8 42.8
E	8	307 15.2	255 31.2	N22 26.0	300 10.1	N 2 15.0	135 23.9	N 5 09.6	280 18.1	N 8 42.9
S	9	322 17.6	270 31.3	N22 26.8	315 10.8	N 2 15.8	150 26.6	N 5 09.7	295 20.2	N 8 43.0
D	10	337 20.1	285 31.3	N22 27.5	330 11.5	N 2 16.6	165 29.4	N 5 09.8	310 22.4	N 8 43.1
A	11	352 22.5	300 31.4	N22 28.3	345 12.2	N 2 17.3	180 32.1	N 5 09.9	325 24.6	N 8 43.2
Y										
	12	7 25.0	315 31.5	N22 29.0	0 12.9	N 2 18.1	195 34.9	N 5 10.1	340 26.8	N 8 43.4
	13	22 27.5	330 31.6	N22 29.8	15 13.6	N 2 18.9	210 37.6	N 5 10.2	355 28.9	N 8 43.5
	14	37 29.9	345 31.6	N22 30.5	30 14.2	N 2 19.7	225 40.3	N 5 10.3	10 31.1	N 8 43.6
	15	52 32.4	0 31.7	N22 31.3	45 14.9	N 2 20.5	240 43.1	N 5 10.4	25 33.3	N 8 43.7
	16	67 34.9	15 31.8	N22 32.0	60 15.6	N 2 21.3	255 45.8	N 5 10.5	40 35.5	N 8 43.8
	17	82 37.3	30 31.9	N22 32.8	75 16.3	N 2 22.0	270 48.5	N 5 10.6	55 37.6	N 8 43.9
	18	97 39.8	45 32.0	N22 33.5	90 17.0	N 2 22.8	285 51.3	N 5 10.7	70 39.8	N 8 44.0
	19	112 42.3	60 32.0	N22 34.3	105 17.7	N 2 23.6	300 54.0	N 5 10.8	85 42.0	N 8 44.1
	20	127 44.7	75 32.1	N22 35.0	120 18.4	N 2 24.4	315 56.7	N 5 11.0	100 44.2	N 8 44.3
	21	142 47.2	90 32.2	N22 35.8	135 19.1	N 2 25.2	330 59.5	N 5 11.1	115 46.3	N 8 44.4
	22	157 49.7	105 32.3	N22 36.5	150 19.8	N 2 25.9	346 02.2	N 5 11.2	130 48.5	N 8 44.5
	23	172 52.1	120 32.4	N22 37.3	165 20.5	N 2 26.7	1 04.9	N 5 11.3	145 50.7	N 8 44.6
30	0	187 54.6	135 32.4	N22 38.0	180 21.2	N 2 27.5	16 07.7	N 5 11.4	160 52.8	N 8 44.7
	1	202 57.0	150 32.5	N22 38.8	195 21.9	N 2 28.3	31 10.4	N 5 11.5	175 55.0	N 8 44.8
	2	217 59.5	165 32.6	N22 39.5	210 22.6	N 2 29.1	46 13.1	N 5 11.6	190 57.2	N 8 44.9
	3	233 02.0	180 32.7	N22 40.2	225 23.3	N 2 29.9	61 15.9	N 5 11.7	205 59.4	N 8 45.0
	4	248 04.4	195 32.8	N22 41.0	240 23.9	N 2 30.6	76 18.6	N 5 11.9	221 01.5	N 8 45.2
T	5	263 06.9	210 32.9	N22 41.7	255 24.6	N 2 31.4	91 21.3	N 5 12.0	236 03.7	N 8 45.3
H										
U	6	278 09.4	225 33.0	N22 42.5	270 25.3	N 2 32.2	106 24.1	N 5 12.1	251 05.9	N 8 45.4
R	7	293 11.8	240 33.0	N22 43.2	285 26.0	N 2 33.0	121 26.8	N 5 12.2	266 08.1	N 8 45.5
S	8	308 14.3	255 33.1	N22 43.9	300 26.7	N 2 33.8	136 29.5	N 5 12.3	281 10.2	N 8 45.6
D	9	323 16.8	270 33.2	N22 44.7	315 27.4	N 2 34.5	151 32.3	N 5 12.4	296 12.4	N 8 45.7
A	10	338 19.2	285 33.3	N22 45.4	330 28.1	N 2 35.3	166 35.0	N 5 12.5	311 14.6	N 8 45.8
Y	11	353 21.7	300 33.4	N22 46.2	345 28.8	N 2 36.1	181 37.7	N 5 12.6	326 16.8	N 8 45.9
	12	8 24.2	315 33.5	N22 46.9	0 29.5	N 2 36.9	196 40.5	N 5 12.7	341 18.9	N 8 46.1
	13	23 26.6	330 33.6	N22 47.6	15 30.2	N 2 37.7	211 43.2	N 5 12.9	356 21.1	N 8 46.2
	14	38 29.1	345 33.7	N22 48.4	30 30.9	N 2 38.5	226 45.9	N 5 13.0	11 23.3	N 8 46.3
	15	53 31.5	0 33.8	N22 49.1	45 31.6	N 2 39.2	241 48.7	N 5 13.1	26 25.5	N 8 46.4
	16	68 34.0	15 33.9	N22 49.8	60 32.3	N 2 40.0	256 51.4	N 5 13.2	41 27.6	N 8 46.5
	17	83 36.5	30 34.0	N22 50.5	75 33.0	N 2 40.8	271 54.1	N 5 13.3	56 29.8	N 8 46.6
	18	98 38.9	45 34.1	N22 51.3	90 33.7	N 2 41.6	286 56.9	N 5 13.4	71 32.0	N 8 46.7
	19	113 41.4	60 34.1	N22 52.0	105 34.4	N 2 42.4	301 59.6	N 5 13.5	86 34.1	N 8 46.8
	20	128 43.9	75 34.2	N22 52.7	120 35.0	N 2 43.1	317 02.3	N 5 13.6	101 36.3	N 8 47.0
	21	143 46.3	90 34.3	N22 53.5	135 35.7	N 2 43.9	332 05.1	N 5 13.7	116 38.5	N 8 47.1
	22	158 48.8	105 34.4	N22 54.2	150 36.4	N 2 44.7	347 07.8	N 5 13.9	131 40.7	N 8 47.2
	23	173 51.3	120 34.5	N22 54.9	165 37.1	N 2 45.5	2 10.5	N 5 14.0	146 42.8	N 8 47.3
			v 0.1	d 0.8	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
28	0	178 44.3	N 3 06.6	161 33.8	13.7	N15 32.6	11.3	55.1
	1	193 44.5	N 3 07.6	176 06.4	13.6	N15 43.8	11.3	55.2
	2	208 44.7	N 3 08.6	190 38.9	13.5	N15 55.0	11.2	55.2
	3	223 44.9	N 3 09.5	205 11.4	13.5	N16 06.2	11.1	55.2
	4	238 45.1	N 3 10.5	219 43.8	13.4	N16 17.3	11.1	55.2
T	5	253 45.2	N 3 11.5	234 16.1	13.3	N16 28.3	11.0	55.2
U								
E	6	268 45.4	N 3 12.5	248 48.3	13.2	N16 39.2	10.9	55.2
S	7	283 45.6	N 3 13.4	263 20.5	13.2	N16 50.1	10.9	55.3
D	8	298 45.8	N 3 14.4	277 52.6	13.1	N17 00.9	10.8	55.3
A	9	313 46.0	N 3 15.4	292 24.6	13.0	N17 11.6	10.7	55.3
Y	10	328 46.2	N 3 16.4	306 56.5	12.9	N17 22.3	10.7	55.3
	11	343 46.4	N 3 17.3	321 28.4	12.9	N17 32.9	10.6	55.3
	12	358 46.6	N 3 18.3	336 00.2	12.8	N17 43.4	10.5	55.4
	13	13 46.7	N 3 19.3	350 31.9	12.7	N17 53.9	10.4	55.4
	14	28 46.9	N 3 20.3	5 03.5	12.6	N18 04.2	10.4	55.4
	15	43 47.1	N 3 21.2	19 35.0	12.5	N18 14.5	10.3	55.4
	16	58 47.3	N 3 22.2	34 06.5	12.5	N18 24.8	10.2	55.4
	17	73 47.5	N 3 23.2	48 37.9	12.4	N18 34.9	10.1	55.4
	18	88 47.7	N 3 24.2	63 09.2	12.3	N18 45.0	10.1	55.5
	19	103 47.9	N 3 25.1	77 40.4	12.2	N18 54.9	10.0	55.5
	20	118 48.1	N 3 26.1	92 11.6	12.1	N19 04.8	9.9	55.5
	21	133 48.2	N 3 27.1	106 42.6	12.1	N19 14.7	9.8	55.5
	22	148 48.4	N 3 28.1	121 13.6	12.0	N19 24.4	9.7	55.5
	23	163 48.6	N 3 29.0	135 44.5	11.9	N19 34.0	9.6	55.6
29	0	178 48.8	N 3 30.0	150 15.3	11.8	N19 43.6	9.6	55.6
	1	193 49.0	N 3 31.0	164 46.0	11.7	N19 53.1	9.5	55.6
	2	208 49.2	N 3 32.0	179 16.7	11.6	N20 02.5	9.4	55.6
	3	223 49.4	N 3 32.9	193 47.3	11.6	N20 11.8	9.3	55.6
	4	238 49.6	N 3 33.9	208 17.7	11.5	N20 21.0	9.2	55.7
W	5	253 49.7	N 3 34.9	222 48.1	11.4	N20 30.1	9.1	55.7
E								
D	6	268 49.9	N 3 35.8	237 18.4	11.3	N20 39.1	9.0	55.7
N	7	283 50.1	N 3 36.8	251 48.7	11.2	N20 48.0	8.9	55.7
E	8	298 50.3	N 3 37.8	266 18.8	11.1	N20 56.9	8.8	55.7
S	9	313 50.5	N 3 38.8	280 48.9	11.1	N21 05.6	8.7	55.8
D	10	328 50.7	N 3 39.7	295 18.9	11.0	N21 14.2	8.6	55.8
A	11	343 50.9	N 3 40.7	309 48.8	10.9	N21 22.8	8.5	55.8
Y								
	12	358 51.0	N 3 41.7	324 18.6	10.8	N21 31.2	8.4	55.8
	13	13 51.2	N 3 42.7	338 48.3	10.7	N21 39.6	8.3	55.8
	14	28 51.4	N 3 43.6	353 17.9	10.6	N21 47.8	8.2	55.9
	15	43 51.6	N 3 44.6	7 47.5	10.6	N21 55.9	8.1	55.9
	16	58 51.8	N 3 45.6	22 17.0	10.5	N22 04.0	8.0	55.9
	17	73 52.0	N 3 46.5	36 46.3	10.4	N22 11.9	7.9	55.9
	18	88 52.2	N 3 47.5	51 15.6	10.3	N22 19.7	7.8	55.9
	19	103 52.4	N 3 48.5	65 44.9	10.2	N22 27.4	7.7	56.0
	20	118 52.5	N 3 49.5	80 14.0	10.1	N22 35.0	7.6	56.0
	21	133 52.7	N 3 50.4	94 43.0	10.0	N22 42.5	7.5	56.0
	22	148 52.9	N 3 51.4	109 12.0	10.0	N22 49.9	7.4	56.0
	23	163 53.1	N 3 52.4	123 40.9	9.9	N22 57.2	7.3	56.1
30	0	178 53.3	N 3 53.3	138 09.7	9.8	N23 04.3	7.2	56.1
	1	193 53.5	N 3 54.3	152 38.4	9.7	N23 11.4	7.0	56.1
	2	208 53.7	N 3 55.3	167 07.0	9.6	N23 18.3	6.9	56.1
	3	223 53.8	N 3 56.2	181 35.6	9.6	N23 25.1	6.8	56.1
	4	238 54.0	N 3 57.2	196 04.0	9.5	N23 31.8	6.7	56.2
T	5	253 54.2	N 3 58.2	210 32.4	9.4	N23 38.4	6.6	56.2
H								
U	6	268 54.4	N 3 59.2	225 00.7	9.3	N23 44.8	6.5	56.2
R	7	283 54.6	N 4 00.1	239 29.0	9.2	N23 51.1	6.3	56.2
S	8	298 54.8	N 4 01.1	253 57.1	9.1	N23 57.3	6.2	56.3
D	9	313 55.0	N 4 02.1	268 25.2	9.1	N24 03.4	6.1	56.3
A	10	328 55.1	N 4 03.0	282 53.2	9.0	N24 09.4	6.0	56.3
Y	11	343 55.3	N 4 04.0	297 21.1	8.9	N24 15.2	5.8	56.3
	12	358 55.5	N 4 05.0	311 48.9	8.8	N24 20.9	5.7	56.3
	13	13 55.7	N 4 05.9	326 16.7	8.8	N24 26.5	5.6	56.4
	14	28 55.9	N 4 06.9	340 44.3	8.7	N24 32.0	5.5	56.4
	15	43 56.1	N 4 07.9	355 11.9	8.6	N24 37.3	5.3	56.4
	16	58 56.3	N 4 08.8	9 39.5	8.5	N24 42.5	5.2	56.4
	17	73 56.5	N 4 09.8	24 06.9	8.5	N24 47.5	5.1	56.5
	18	88 56.6	N 4 10.8	38 34.3	8.4	N24 52.5	4.9	56.5
	19	103 56.8	N 4 11.8	53 01.6	8.3	N24 57.3	4.8	56.5
	20	118 57.0	N 4 12.7	67 28.8	8.2	N25 01.9	4.7	56.5
	21	133 57.2	N 4 13.7	81 56.0	8.2	N25 06.4	4.5	56.6
	22	148 57.4	N 4 14.7	96 23.1	8.1	N25 10.8	4.4	56.6
	23	163 57.6	N 4 15.6	110 50.1	8.0	N25 15.1	4.3	56.6
		S.D. 16.0	d 1.0	S.D.	15.1	15.2	15.4	

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.6
Acrux	172 56.4	S63 15.5
Adhara	255 03.8	S29 00.9
Albireo	67 02.0	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.2
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 30.0	S46 49.3
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.3	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.5	N 8 56.4
Ankaa	353 05.0	S42 09.2
Antares	112 12.4	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 04.1	S69 04.5
Avior	234 13.3	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.2	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.2	N45 22.6
Denebola	182 22.0	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.8
Elnath	277 58.7	N28 37.8
Eltanin	90 40.9	N51 28.7
Enif	33 36.4	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.1
Hadar	148 31.7	S60 30.6
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 29.0	S34 22.2
Kochab	137 19.2	N74 02.1
Markab	13 27.6	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.2	S36 30.7
Miaplacidus	221 37.0	S69 50.3
Mirfak	308 24.9	N49 57.8
Nunki	75 44.5	S26 15.6
Peacock	53 01.8	S56 38.4
Polaris	315 50.7	N89 22.6
Pollux	243 14.0	N27 57.4
Procyon	244 48.0	N 5 09.0
Rasalhague	95 56.1	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.2	S60 57.1
Sabik	101 59.7	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.7	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.1	S43 33.1
Vega	80 31.4	N38 48.3
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
31	0	188 53.7	135 34.6	N22 55.6	180 37.8	N 2 46.3	17 13.3	N 5 14.1	161 45.0	N 8 47.4
	1	203 56.2	150 34.7	N22 56.4	195 38.5	N 2 47.0	32 16.0	N 5 14.2	176 47.2	N 8 47.5
	2	218 58.7	165 34.8	N22 57.1	210 39.2	N 2 47.8	47 18.7	N 5 14.3	191 49.4	N 8 47.6
	3	234 01.1	180 34.9	N22 57.8	225 39.9	N 2 48.6	62 21.5	N 5 14.4	206 51.5	N 8 47.7
	4	249 03.6	195 35.0	N22 58.5	240 40.6	N 2 49.4	77 24.2	N 5 14.5	221 53.7	N 8 47.9
F	5	264 06.0	210 35.1	N22 59.2	255 41.3	N 2 50.2	92 26.9	N 5 14.6	236 55.9	N 8 48.0
R										
I	6	279 08.5	225 35.2	N22 60.0	270 42.0	N 2 50.9	107 29.6	N 5 14.7	251 58.1	N 8 48.1
D	7	294 11.0	240 35.3	N23 00.7	285 42.7	N 2 51.7	122 32.4	N 5 14.9	267 00.2	N 8 48.2
A	8	309 13.4	255 35.5	N23 01.4	300 43.4	N 2 52.5	137 35.1	N 5 15.0	282 02.4	N 8 48.3
Y	9	324 15.9	270 35.6	N23 02.1	315 44.1	N 2 53.3	152 37.8	N 5 15.1	297 04.6	N 8 48.4
	10	339 18.4	285 35.7	N23 02.8	330 44.8	N 2 54.1	167 40.6	N 5 15.2	312 06.7	N 8 48.5
	11	354 20.8	300 35.8	N23 03.5	345 45.5	N 2 54.8	182 43.3	N 5 15.3	327 08.9	N 8 48.6
	12	9 23.3	315 35.9	N23 04.2	0 46.1	N 2 55.6	197 46.0	N 5 15.4	342 11.1	N 8 48.8
	13	24 25.8	330 36.0	N23 05.0	15 46.8	N 2 56.4	212 48.8	N 5 15.5	357 13.3	N 8 48.9
	14	39 28.2	345 36.1	N23 05.7	30 47.5	N 2 57.2	227 51.5	N 5 15.6	12 15.4	N 8 49.0
	15	54 30.7	0 36.2	N23 06.4	45 48.2	N 2 58.0	242 54.2	N 5 15.7	27 17.6	N 8 49.1
	16	69 33.1	15 36.3	N23 07.1	60 48.9	N 2 58.7	257 56.9	N 5 15.8	42 19.8	N 8 49.2
	17	84 35.6	30 36.4	N23 07.8	75 49.6	N 2 59.5	272 59.7	N 5 15.9	57 21.9	N 8 49.3
	18	99 38.1	45 36.5	N23 08.5	90 50.3	N 3 00.3	288 02.4	N 5 16.1	72 24.1	N 8 49.4
	19	114 40.5	60 36.6	N23 09.2	105 51.0	N 3 01.1	303 05.1	N 5 16.2	87 26.3	N 8 49.5
	20	129 43.0	75 36.8	N23 09.9	120 51.7	N 3 01.8	318 07.8	N 5 16.3	102 28.5	N 8 49.7
	21	144 45.5	90 36.9	N23 10.6	135 52.4	N 3 02.6	333 10.6	N 5 16.4	117 30.6	N 8 49.8
	22	159 47.9	105 37.0	N23 11.3	150 53.1	N 3 03.4	348 13.3	N 5 16.5	132 32.8	N 8 49.9
	23	174 50.4	120 37.1	N23 12.0	165 53.8	N 3 04.2	3 16.0	N 5 16.6	147 35.0	N 8 50.0
1	0	189 52.9	135 37.2	N23 12.7	180 54.5	N 3 05.0	18 18.8	N 5 16.7	162 37.2	N 8 50.1
	1	204 55.3	150 37.3	N23 13.4	195 55.2	N 3 05.7	33 21.5	N 5 16.8	177 39.3	N 8 50.2
	2	219 57.8	165 37.4	N23 14.2	210 55.9	N 3 06.5	48 24.2	N 5 16.9	192 41.5	N 8 50.3
	3	235 00.3	180 37.6	N23 14.9	225 56.6	N 3 07.3	63 26.9	N 5 17.0	207 43.7	N 8 50.4
	4	250 02.7	195 37.7	N23 15.6	240 57.3	N 3 08.1	78 29.7	N 5 17.1	222 45.8	N 8 50.6
S	5	265 05.2	210 37.8	N23 16.3	255 57.9	N 3 08.9	93 32.4	N 5 17.3	237 48.0	N 8 50.7
A										
T	6	280 07.6	225 37.9	N23 16.9	270 58.6	N 3 09.6	108 35.1	N 5 17.4	252 50.2	N 8 50.8
U	7	295 10.1	240 38.0	N23 17.6	285 59.3	N 3 10.4	123 37.8	N 5 17.5	267 52.4	N 8 50.9
R	8	310 12.6	255 38.2	N23 18.3	301 00.0	N 3 11.2	138 40.6	N 5 17.6	282 54.5	N 8 51.0
D	9	325 15.0	270 38.3	N23 19.0	316 00.7	N 3 12.0	153 43.3	N 5 17.7	297 56.7	N 8 51.1
A	10	340 17.5	285 38.4	N23 19.7	331 01.4	N 3 12.7	168 46.0	N 5 17.8	312 58.9	N 8 51.2
Y	11	355 20.0	300 38.5	N23 20.4	346 02.1	N 3 13.5	183 48.8	N 5 17.9	328 01.0	N 8 51.3
	12	10 22.4	315 38.7	N23 21.1	1 02.8	N 3 14.3	198 51.5	N 5 18.0	343 03.2	N 8 51.5
	13	25 24.9	330 38.8	N23 21.8	16 03.5	N 3 15.1	213 54.2	N 5 18.1	358 05.4	N 8 51.6
	14	40 27.4	345 38.9	N23 22.5	31 04.2	N 3 15.8	228 56.9	N 5 18.2	13 07.6	N 8 51.7
	15	55 29.8	0 39.0	N23 23.2	46 04.9	N 3 16.6	243 59.7	N 5 18.3	28 09.7	N 8 51.8
	16	70 32.3	15 39.2	N23 23.9	61 05.6	N 3 17.4	259 02.4	N 5 18.4	43 11.9	N 8 51.9
	17	85 34.8	30 39.3	N23 24.6	76 06.3	N 3 18.2	274 05.1	N 5 18.5	58 14.1	N 8 52.0
	18	100 37.2	45 39.4	N23 25.3	91 07.0	N 3 19.0	289 07.8	N 5 18.7	73 16.2	N 8 52.1
	19	115 39.7	60 39.5	N23 25.9	106 07.7	N 3 19.7	304 10.5	N 5 18.8	88 18.4	N 8 52.2
	20	130 42.1	75 39.7	N23 26.6	121 08.4	N 3 20.5	319 13.3	N 5 18.9	103 20.6	N 8 52.4
	21	145 44.6	90 39.8	N23 27.3	136 09.1	N 3 21.3	334 16.0	N 5 19.0	118 22.8	N 8 52.5
	22	160 47.1	105 39.9	N23 28.0	151 09.8	N 3 22.1	349 18.7	N 5 19.1	133 24.9	N 8 52.6
	23	175 49.5	120 40.1	N23 28.7	166 10.5	N 3 22.8	4 21.4	N 5 19.2	148 27.1	N 8 52.7
2	0	190 52.0	135 40.2	N23 29.4	181 11.1	N 3 23.6	19 24.2	N 5 19.3	163 29.3	N 8 52.8
	1	205 54.5	150 40.3	N23 30.1	196 11.8	N 3 24.4	34 26.9	N 5 19.4	178 31.4	N 8 52.9
	2	220 56.9	165 40.5	N23 30.7	211 12.5	N 3 25.2	49 29.6	N 5 19.5	193 33.6	N 8 53.0
	3	235 59.4	180 40.6	N23 31.4	226 13.2	N 3 25.9	64 32.3	N 5 19.6	208 35.8	N 8 53.1
	4	251 01.9	195 40.7	N23 32.1	241 13.9	N 3 26.7	79 35.1	N 5 19.7	223 38.0	N 8 53.3
S	5	266 04.3	210 40.9	N23 32.8	256 14.6	N 3 27.5	94 37.8	N 5 19.8	238 40.1	N 8 53.4
U										
N	6	281 06.8	225 41.0	N23 33.4	271 15.3	N 3 28.3	109 40.5	N 5 19.9	253 42.3	N 8 53.5
D	7	296 09.3	240 41.2	N23 34.1	286 16.0	N 3 29.0	124 43.2	N 5 20.0	268 44.5	N 8 53.6
A	8	311 11.7	255 41.3	N23 34.8	301 16.7	N 3 29.8	139 46.0	N 5 20.1	283 46.6	N 8 53.7
Y	9	326 14.2	270 41.4	N23 35.5	316 17.4	N 3 30.6	154 48.7	N 5 20.3	298 48.8	N 8 53.8
	10	341 16.6	285 41.6	N23 36.1	331 18.1	N 3 31.4	169 51.4	N 5 20.4	313 51.0	N 8 53.9
	11	356 19.1	300 41.7	N23 36.8	346 18.8	N 3 32.1	184 54.1	N 5 20.5	328 53.2	N 8 54.1
	12	11 21.6	315 41.9	N23 37.5	1 19.5	N 3 32.9	199 56.8	N 5 20.6	343 55.3	N 8 54.2
	13	26 24.0	330 42.0	N23 38.2	16 20.2	N 3 33.7	214 59.6	N 5 20.7	358 57.5	N 8 54.3
	14	41 26.5	345 42.1	N23 38.8	31 20.9	N 3 34.5	230 02.3	N 5 20.8	13 59.7	N 8 54.4
	15	56 29.0	0 42.3	N23 39.5	46 21.6	N 3 35.2	245 05.0	N 5 20.9	29 01.8	N 8 54.5
	16	71 31.4	15 42.4	N23 40.2	61 22.3	N 3 36.0	260 07.7	N 5 21.0	44 04.0	N 8 54.6
	17	86 33.9	30 42.6	N23 40.8	76 23.0	N 3 36.8	275 10.4	N 5 21.1	59 06.2	N 8 54.7
	18	101 36.4	45 42.7	N23 41.5	91 23.7	N 3 37.6	290 13.2	N 5 21.2	74 08.3	N 8 54.8
	19	116 38.8	60 42.9	N23 42.2	106 24.3	N 3 38.3	305 15.9	N 5 21.3	89 10.5	N 8 55.0
	20	131 41.3	75 43.0	N23 42.8	121 25.0	N 3 39.1	320 18.6	N 5 21.4	104 12.7	N 8 55.1
	21	146 43.7	90 43.2	N23 43.5	136 25.7	N 3 39.9	335 21.3	N 5 21.5	119 14.9	N 8 55.2
	22	161 46.2	105 43.3	N23 44.2	151 26.4	N 3 40.7	350 24.0	N 5 21.6	134 17.0	N 8 55.3
	23	176 48.7	120 43.5	N23 44.8	166 27.1	N 3 41.4	5 26.8	N 5 21.7	149 19.2	N 8 55.4
			v 0.1	d 0.7	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
31	0	178 57.8	N 4	16.6	125 17.0	8.0	N25 19.2	4.1	56.6
	1	193 57.9	N 4	17.6	139 43.9	7.9	N25 23.2	4.0	56.7
	2	208 58.1	N 4	18.5	154 10.7	7.8	N25 27.0	3.8	56.7
	3	223 58.3	N 4	19.5	168 37.5	7.8	N25 30.7	3.7	56.7
	4	238 58.5	N 4	20.5	183 04.2	7.7	N25 34.2	3.6	56.7
F	5	253 58.7	N 4	21.4	197 30.8	7.6	N25 37.7	3.4	56.8
R									
I	6	268 58.9	N 4	22.4	211 57.4	7.6	N25 40.9	3.3	56.8
D	7	283 59.1	N 4	23.4	226 23.9	7.5	N25 44.0	3.1	56.8
A	8	298 59.2	N 4	24.3	240 50.3	7.4	N25 47.0	3.0	56.8
Y	9	313 59.4	N 4	25.3	255 16.7	7.4	N25 49.8	2.8	56.9
	10	328 59.6	N 4	26.3	269 43.0	7.3	N25 52.5	2.7	56.9
	11	343 59.8	N 4	27.2	284 09.3	7.3	N25 55.1	2.5	56.9
	12	358 60.0	N 4	28.2	298 35.5	7.2	N25 57.4	2.4	56.9
	13	14 00.2	N 4	29.2	313 01.7	7.2	N25 59.7	2.2	57.0
	14	29 00.3	N 4	30.1	327 27.8	7.1	N26 01.8	2.1	57.0
	15	44 00.5	N 4	31.1	341 53.8	7.1	N26 03.7	1.9	57.0
	16	59 00.7	N 4	32.1	356 19.9	7.0	N26 05.5	1.8	57.0
	17	74 00.9	N 4	33.0	10 45.8	7.0	N26 07.1	1.6	57.1
	18	89 01.1	N 4	34.0	25 11.7	6.9	N26 08.6	1.5	57.1
	19	104 01.3	N 4	34.9	39 37.6	6.9	N26 10.0	1.3	57.1
	20	119 01.5	N 4	35.9	54 03.4	6.8	N26 11.1	1.2	57.1
	21	134 01.6	N 4	36.9	68 29.2	6.8	N26 12.1	1.0	57.2
	22	149 01.8	N 4	37.8	82 54.9	6.7	N26 13.0	0.9	57.2
	23	164 02.0	N 4	38.8	97 20.6	6.7	N26 13.7	0.7	57.2
1	0	179 02.2	N 4	39.8	111 46.3	6.7	N26 14.3	0.6	57.2
	1	194 02.4	N 4	40.7	126 11.9	6.6	N26 14.7	0.4	57.3
	2	209 02.6	N 4	41.7	140 37.5	6.6	N26 14.9	0.2	57.3
	3	224 02.8	N 4	42.7	155 03.0	6.6	N26 15.0	0.1	57.3
	4	239 02.9	N 4	43.6	169 28.6	6.5	N26 15.0	0.1	57.3
S	5	254 03.1	N 4	44.6	183 54.0	6.5	N26 14.7	0.2	57.4
A									
T	6	269 03.3	N 4	45.6	198 19.5	6.5	N26 14.3	0.4	57.4
U	7	284 03.5	N 4	46.5	212 44.9	6.4	N26 13.8	0.5	57.4
R	8	299 03.7	N 4	47.5	227 10.3	6.4	N26 13.1	0.7	57.5
D	9	314 03.9	N 4	48.4	241 35.7	6.4	N26 12.2	0.9	57.5
A	10	329 04.0	N 4	49.4	256 01.1	6.4	N26 11.2	1.0	57.5
Y	11	344 04.2	N 4	50.4	270 26.4	6.3	N26 10.0	1.2	57.5
	12	359 04.4	N 4	51.3	284 51.7	6.3	N26 08.7	1.3	57.6
	13	14 04.6	N 4	52.3	299 17.0	6.3	N26 07.2	1.5	57.6
	14	29 04.8	N 4	53.3	313 42.3	6.3	N26 05.5	1.7	57.6
	15	44 05.0	N 4	54.2	328 07.6	6.3	N26 03.7	1.8	57.6
	16	59 05.2	N 4	55.2	342 32.8	6.2	N26 01.7	2.0	57.7
	17	74 05.3	N 4	56.1	356 58.0	6.2	N25 59.6	2.1	57.7
	18	89 05.5	N 4	57.1	11 23.3	6.2	N25 57.3	2.3	57.7
	19	104 05.7	N 4	58.1	25 48.5	6.2	N25 54.8	2.5	57.8
	20	119 05.9	N 4	59.0	40 13.7	6.2	N25 52.2	2.6	57.8
	21	134 06.1	N 4	60.0	54 38.9	6.2	N25 49.4	2.8	57.8
	22	149 06.3	N 5	00.9	69 04.1	6.2	N25 46.4	3.0	57.8
	23	164 06.4	N 5	01.9	83 29.3	6.2	N25 43.3	3.1	57.9
2	0	179 06.6	N 5	02.9	97 54.5	6.2	N25 40.0	3.3	57.9
	1	194 06.8	N 5	03.8	112 19.7	6.2	N25 36.6	3.4	57.9
	2	209 07.0	N 5	04.8	126 44.9	6.2	N25 33.0	3.6	58.0
	3	224 07.2	N 5	05.7	141 10.1	6.2	N25 29.2	3.8	58.0
	4	239 07.4	N 5	06.7	155 35.3	6.2	N25 25.3	3.9	58.0
S	5	254 07.5	N 5	07.7	170 00.5	6.2	N25 21.3	4.1	58.0
U									
N	6	269 07.7	N 5	08.6	184 25.7	6.2	N25 17.0	4.2	58.1
D	7	284 07.9	N 5	09.6	198 50.9	6.2	N25 12.6	4.4	58.1
A	8	299 08.1	N 5	10.5	213 16.2	6.2	N25 08.1	4.6	58.1
Y	9	314 08.3	N 5	11.5	227 41.4	6.2	N25 03.3	4.7	58.2
	10	329 08.5	N 5	12.5	242 06.7	6.3	N24 58.5	4.9	58.2
	11	344 08.6	N 5	13.4	256 31.9	6.3	N24 53.4	5.0	58.2
	12	359 08.8	N 5	14.4	270 57.2	6.3	N24 48.2	5.2	58.2
	13	14 09.0	N 5	15.3	285 22.5	6.3	N24 42.9	5.4	58.3
	14	29 09.2	N 5	16.3	299 47.8	6.3	N24 37.4	5.5	58.3
	15	44 09.4	N 5	17.2	314 13.2	6.3	N24 31.7	5.7	58.3
	16	59 09.6	N 5	18.2	328 38.5	6.4	N24 25.9	5.8	58.4
	17	74 09.7	N 5	19.2	343 03.9	6.4	N24 19.9	6.0	58.4
	18	89 09.9	N 5	20.1	357 29.3	6.4	N24 13.8	6.1	58.4
	19	104 10.1	N 5	21.1	11 54.8	6.4	N24 07.5	6.3	58.4
	20	119 10.3	N 5	22.0	26 20.2	6.5	N24 01.0	6.4	58.5
	21	134 10.5	N 5	23.0	40 45.7	6.5	N23 54.4	6.6	58.5
	22	149 10.7	N 5	23.9	55 11.2	6.5	N23 47.7	6.8	58.5
	23	164 10.8	N 5	24.9	69 36.8	6.5	N23 40.8	6.9	58.6
		S.D. 16.0	d	1.0	S.D.	15.5	15.7		15.9

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.6
Acrux	172 56.4	S63 15.5
Adhara	255 03.8	S29 00.9
Albireo	67 02.0	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 29.9	S46 49.3
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.2	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.5	N 8 56.4
Ankaa	353 05.0	S42 09.2
Antares	112 12.4	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 04.1	S69 04.5
Avior	234 13.4	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.3	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.2	N45 22.6
Denebola	182 21.9	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.8
Elnath	277 58.7	N28 37.8
Eltanin	90 40.9	N51 28.7
Enif	33 36.4	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.1
Hadar	148 31.7	S60 30.6
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 29.0	S34 22.2
Kochab	137 19.1	N74 02.1
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.7
Miaplacidus	221 37.0	S69 50.3
Mirfak	308 24.9	N49 57.8
Nunki	75 44.5	S26 15.6
Peacock	53 01.8	S56 38.4
Polaris	315 51.0	N89 22.6
Pollux	243 14.0	N27 57.4
Procyon	244 48.0	N 5 09.0
Rasalhague	95 56.0	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.2	S60 57.1
Sabik	101 59.6	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.6	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.1	S43 33.1
Vega	80 31.4	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T	ARIES	VENUS		MARS		JUPITER		SATURN	
d h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
3 0	191 51.1	135 43.6	N23 45.5	181 27.8	N 3 42.2	20 29.5	N 5 21.8	164 21.4	N 8 55.5
1	206 53.6	150 43.8	N23 46.2	196 28.5	N 3 43.0	35 32.2	N 5 21.9	179 23.5	N 8 55.6
2	221 56.1	165 43.9	N23 46.8	211 29.2	N 3 43.8	50 34.9	N 5 22.0	194 25.7	N 8 55.7
3	236 58.5	180 44.1	N23 47.5	226 29.9	N 3 44.5	65 37.6	N 5 22.1	209 27.9	N 8 55.9
4	252 01.0	195 44.3	N23 48.1	241 30.6	N 3 45.3	80 40.4	N 5 22.3	224 30.0	N 8 56.0
M 5	267 03.5	210 44.4	N23 48.8	256 31.3	N 3 46.1	95 43.1	N 5 22.4	239 32.2	N 8 56.1
O									
N 6	282 05.9	225 44.6	N23 49.4	271 32.0	N 3 46.9	110 45.8	N 5 22.5	254 34.4	N 8 56.2
D 7	297 08.4	240 44.7	N23 50.1	286 32.7	N 3 47.6	125 48.5	N 5 22.6	269 36.6	N 8 56.3
A 8	312 10.9	255 44.9	N23 50.8	301 33.4	N 3 48.4	140 51.2	N 5 22.7	284 38.7	N 8 56.4
Y 9	327 13.3	270 45.0	N23 51.4	316 34.1	N 3 49.2	155 54.0	N 5 22.8	299 40.9	N 8 56.5
10	342 15.8	285 45.2	N23 52.1	331 34.8	N 3 50.0	170 56.7	N 5 22.9	314 43.1	N 8 56.6
11	357 18.2	300 45.4	N23 52.7	346 35.5	N 3 50.7	185 59.4	N 5 23.0	329 45.2	N 8 56.8
12	12 20.7	315 45.5	N23 53.4	1 36.2	N 3 51.5	201 02.1	N 5 23.1	344 47.4	N 8 56.9
13	27 23.2	330 45.7	N23 54.0	16 36.9	N 3 52.3	216 04.8	N 5 23.2	359 49.6	N 8 57.0
14	42 25.6	345 45.9	N23 54.7	31 37.6	N 3 53.0	231 07.5	N 5 23.3	14 51.7	N 8 57.1
15	57 28.1	0 46.0	N23 55.3	46 38.2	N 3 53.8	246 10.3	N 5 23.4	29 53.9	N 8 57.2
16	72 30.6	15 46.2	N23 56.0	61 38.9	N 3 54.6	261 13.0	N 5 23.5	44 56.1	N 8 57.3
17	87 33.0	30 46.4	N23 56.6	76 39.6	N 3 55.4	276 15.7	N 5 23.6	59 58.3	N 8 57.4
18	102 35.5	45 46.5	N23 57.3	91 40.3	N 3 56.1	291 18.4	N 5 23.7	75 00.4	N 8 57.5
19	117 38.0	60 46.7	N23 57.9	106 41.0	N 3 56.9	306 21.1	N 5 23.8	90 02.6	N 8 57.7
20	132 40.4	75 46.9	N23 58.5	121 41.7	N 3 57.7	321 23.8	N 5 23.9	105 04.8	N 8 57.8
21	147 42.9	90 47.0	N23 59.2	136 42.4	N 3 58.5	336 26.6	N 5 24.0	120 06.9	N 8 57.9
22	162 45.4	105 47.2	N23 59.8	151 43.1	N 3 59.2	351 29.3	N 5 24.1	135 09.1	N 8 58.0
23	177 47.8	120 47.4	N24 00.5	166 43.8	N 3 60.0	6 32.0	N 5 24.2	150 11.3	N 8 58.1
4 0	192 50.3	135 47.5	N24 01.1	181 44.5	N 4 00.8	21 34.7	N 5 24.3	165 13.4	N 8 58.2
1	207 52.7	150 47.7	N24 01.8	196 45.2	N 4 01.5	36 37.4	N 5 24.4	180 15.6	N 8 58.3
2	222 55.2	165 47.9	N24 02.4	211 45.9	N 4 02.3	51 40.1	N 5 24.5	195 17.8	N 8 58.4
3	237 57.7	180 48.1	N24 03.0	226 46.6	N 4 03.1	66 42.8	N 5 24.6	210 19.9	N 8 58.6
4	253 00.1	195 48.2	N24 03.7	241 47.3	N 4 03.9	81 45.6	N 5 24.7	225 22.1	N 8 58.7
T 5	268 02.6	210 48.4	N24 04.3	256 48.0	N 4 04.6	96 48.3	N 5 24.8	240 24.3	N 8 58.8
U									
E 6	283 05.1	225 48.6	N24 04.9	271 48.7	N 4 05.4	111 51.0	N 5 24.9	255 26.5	N 8 58.9
S 7	298 07.5	240 48.8	N24 05.6	286 49.4	N 4 06.2	126 53.7	N 5 25.0	270 28.6	N 8 59.0
D 8	313 10.0	255 49.0	N24 06.2	301 50.1	N 4 06.9	141 56.4	N 5 25.1	285 30.8	N 8 59.1
A 9	328 12.5	270 49.1	N24 06.8	316 50.8	N 4 07.7	156 59.1	N 5 25.2	300 33.0	N 8 59.2
Y 10	343 14.9	285 49.3	N24 07.5	331 51.5	N 4 08.5	172 01.8	N 5 25.3	315 35.1	N 8 59.3
11	358 17.4	300 49.5	N24 08.1	346 52.2	N 4 09.3	187 04.6	N 5 25.4	330 37.3	N 8 59.5
12	13 19.8	315 49.7	N24 08.7	1 52.9	N 4 10.0	202 07.3	N 5 25.5	345 39.5	N 8 59.6
13	28 22.3	330 49.9	N24 09.4	16 53.5	N 4 10.8	217 10.0	N 5 25.7	0 41.6	N 8 59.7
14	43 24.8	345 50.1	N24 10.0	31 54.2	N 4 11.6	232 12.7	N 5 25.8	15 43.8	N 8 59.8
15	58 27.2	0 50.2	N24 10.6	46 54.9	N 4 12.3	247 15.4	N 5 25.9	30 46.0	N 8 59.9
16	73 29.7	15 50.4	N24 11.2	61 55.6	N 4 13.1	262 18.1	N 5 26.0	45 48.1	N 9 00.0
17	88 32.2	30 50.6	N24 11.9	76 56.3	N 4 13.9	277 20.8	N 5 26.1	60 50.3	N 9 00.1
18	103 34.6	45 50.8	N24 12.5	91 57.0	N 4 14.6	292 23.5	N 5 26.2	75 52.5	N 9 00.2
19	118 37.1	60 51.0	N24 13.1	106 57.7	N 4 15.4	307 26.3	N 5 26.3	90 54.7	N 9 00.4
20	133 39.6	75 51.2	N24 13.7	121 58.4	N 4 16.2	322 29.0	N 5 26.4	105 56.8	N 9 00.5
21	148 42.0	90 51.4	N24 14.4	136 59.1	N 4 17.0	337 31.7	N 5 26.5	120 59.0	N 9 00.6
22	163 44.5	105 51.6	N24 15.0	151 59.8	N 4 17.7	352 34.4	N 5 26.6	136 01.2	N 9 00.7
23	178 47.0	120 51.8	N24 15.6	167 00.5	N 4 18.5	7 37.1	N 5 26.7	151 03.3	N 9 00.8
5 0	193 49.4	135 52.0	N24 16.2	182 01.2	N 4 19.3	22 39.8	N 5 26.8	166 05.5	N 9 00.9
1	208 51.9	150 52.2	N24 16.8	197 01.9	N 4 20.0	37 42.5	N 5 26.9	181 07.7	N 9 01.0
2	223 54.3	165 52.4	N24 17.5	212 02.6	N 4 20.8	52 45.2	N 5 27.0	196 09.8	N 9 01.1
3	238 56.8	180 52.6	N24 18.1	227 03.3	N 4 21.6	67 47.9	N 5 27.1	211 12.0	N 9 01.3
4	253 59.3	195 52.8	N24 18.7	242 04.0	N 4 22.3	82 50.7	N 5 27.2	226 14.2	N 9 01.4
W 5	269 01.7	210 53.0	N24 19.3	257 04.7	N 4 23.1	97 53.4	N 5 27.3	241 16.3	N 9 01.5
E									
D 6	284 04.2	225 53.2	N24 19.9	272 05.4	N 4 23.9	112 56.1	N 5 27.4	256 18.5	N 9 01.6
N 7	299 06.7	240 53.4	N24 20.5	287 06.1	N 4 24.6	127 58.8	N 5 27.5	271 20.7	N 9 01.7
E 8	314 09.1	255 53.6	N24 21.1	302 06.8	N 4 25.4	143 01.5	N 5 27.6	286 22.8	N 9 01.8
S 9	329 11.6	270 53.8	N24 21.8	317 07.5	N 4 26.2	158 04.2	N 5 27.7	301 25.0	N 9 01.9
D 10	344 14.1	285 54.0	N24 22.4	332 08.2	N 4 27.0	173 06.9	N 5 27.8	316 27.2	N 9 02.1
A 11	359 16.5	300 54.2	N24 23.0	347 08.8	N 4 27.7	188 09.6	N 5 27.9	331 29.3	N 9 02.2
Y									
12	14 19.0	315 54.4	N24 23.6	2 09.5	N 4 28.5	203 12.3	N 5 28.0	346 31.5	N 9 02.3
13	29 21.5	330 54.6	N24 24.2	17 10.2	N 4 29.3	218 15.0	N 5 28.1	1 33.7	N 9 02.4
14	44 23.9	345 54.8	N24 24.8	32 10.9	N 4 30.0	233 17.7	N 5 28.2	16 35.9	N 9 02.5
15	59 26.4	0 55.0	N24 25.4	47 11.6	N 4 30.8	248 20.5	N 5 28.3	31 38.0	N 9 02.6
16	74 28.8	15 55.2	N24 26.0	62 12.3	N 4 31.6	263 23.2	N 5 28.4	46 40.2	N 9 02.7
17	89 31.3	30 55.4	N24 26.6	77 13.0	N 4 32.3	278 25.9	N 5 28.5	61 42.4	N 9 02.8
18	104 33.8	45 55.6	N24 27.2	92 13.7	N 4 33.1	293 28.6	N 5 28.6	76 44.5	N 9 03.0
19	119 36.2	60 55.9	N24 27.8	107 14.4	N 4 33.9	308 31.3	N 5 28.7	91 46.7	N 9 03.1
20	134 38.7	75 56.1	N24 28.4	122 15.1	N 4 34.6	323 34.0	N 5 28.8	106 48.9	N 9 03.2
21	149 41.2	90 56.3	N24 29.0	137 15.8	N 4 35.4	338 36.7	N 5 28.9	121 51.0	N 9 03.3
22	164 43.6	105 56.5	N24 29.6	152 16.5	N 4 36.2	353 39.4	N 5 29.0	136 53.2	N 9 03.4
23	179 46.1	120 56.7	N24 30.2	167 17.2	N 4 36.9	8 42.1	N 5 29.1	151 55.4	N 9 03.5
		v 0.2	d 0.6	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
3 0	179 11.0	N 5 25.9	84 02.3	6.6	N23 33.7	7.1	58.6
1	194 11.2	N 5 26.8	98 27.9	6.6	N23 26.5	7.2	58.6
2	209 11.4	N 5 27.8	112 53.6	6.6	N23 19.2	7.4	58.6
3	224 11.6	N 5 28.7	127 19.2	6.7	N23 11.6	7.5	58.7
4	239 11.7	N 5 29.7	141 44.9	6.7	N23 04.0	7.7	58.7
M 5	254 11.9	N 5 30.6	156 10.7	6.7	N22 56.2	7.8	58.7
O							
N 6	269 12.1	N 5 31.6	170 36.4	6.8	N22 48.2	8.0	58.8
D 7	284 12.3	N 5 32.5	185 02.2	6.8	N22 40.1	8.1	58.8
A 8	299 12.5	N 5 33.5	199 28.1	6.8	N22 31.8	8.3	58.8
Y 9	314 12.7	N 5 34.5	213 54.0	6.9	N22 23.4	8.4	58.8
10	329 12.8	N 5 35.4	228 19.9	6.9	N22 14.9	8.5	58.9
11	344 13.0	N 5 36.4	242 45.8	7.0	N22 06.2	8.7	58.9
12	359 13.2	N 5 37.3	257 11.8	7.0	N21 57.4	8.8	58.9
13	14 13.4	N 5 38.3	271 37.9	7.0	N21 48.4	9.0	58.9
14	29 13.6	N 5 39.2	286 04.0	7.1	N21 39.3	9.1	59.0
15	44 13.7	N 5 40.2	300 30.1	7.1	N21 30.0	9.3	59.0
16	59 13.9	N 5 41.1	314 56.2	7.2	N21 20.6	9.4	59.0
17	74 14.1	N 5 42.1	329 22.5	7.2	N21 11.1	9.5	59.1
18	89 14.3	N 5 43.0	343 48.7	7.3	N21 01.4	9.7	59.1
19	104 14.5	N 5 44.0	358 15.0	7.3	N20 51.6	9.8	59.1
20	119 14.7	N 5 45.0	12 41.3	7.3	N20 41.6	9.9	59.1
21	134 14.8	N 5 45.9	27 07.7	7.4	N20 31.6	10.1	59.2
22	149 15.0	N 5 46.9	41 34.2	7.4	N20 21.3	10.2	59.2
23	164 15.2	N 5 47.8	56 00.6	7.5	N20 11.0	10.3	59.2
4 0	179 15.4	N 5 48.8	70 27.1	7.5	N20 00.5	10.5	59.2
1	194 15.6	N 5 49.7	84 53.7	7.6	N19 49.9	10.6	59.3
2	209 15.7	N 5 50.7	99 20.3	7.6	N19 39.2	10.7	59.3
3	224 15.9	N 5 51.6	113 47.0	7.7	N19 28.3	10.9	59.3
4	239 16.1	N 5 52.6	128 13.7	7.7	N19 17.3	11.0	59.4
T 5	254 16.3	N 5 53.5	142 40.4	7.8	N19 06.2	11.1	59.4
U							
E 6	269 16.5	N 5 54.5	157 07.2	7.8	N18 54.9	11.2	59.4
S 7	284 16.6	N 5 55.4	171 34.1	7.8	N18 43.5	11.4	59.4
D 8	299 16.8	N 5 56.4	186 01.0	7.9	N18 32.1	11.5	59.5
A 9	314 17.0	N 5 57.3	200 27.9	7.9	N18 20.4	11.6	59.5
Y 10	329 17.2	N 5 58.3	214 54.9	8.0	N18 08.7	11.7	59.5
11	344 17.4	N 5 59.2	229 22.0	8.0	N17 56.8	11.9	59.5
12	359 17.5	N 6 00.2	243 49.0	8.1	N17 44.9	12.0	59.6
13	14 17.7	N 6 01.1	258 16.2	8.1	N17 32.8	12.1	59.6
14	29 17.9	N 6 02.1	272 43.4	8.2	N17 20.6	12.2	59.6
15	44 18.1	N 6 03.0	287 10.6	8.2	N17 08.3	12.3	59.6
16	59 18.3	N 6 04.0	301 37.9	8.3	N16 55.8	12.4	59.7
17	74 18.4	N 6 04.9	316 05.2	8.3	N16 43.3	12.5	59.7
18	89 18.6	N 6 05.9	330 32.5	8.4	N16 30.6	12.7	59.7
19	104 18.8	N 6 06.8	344 59.9	8.4	N16 17.9	12.8	59.7
20	119 19.0	N 6 07.8	359 27.4	8.5	N16 05.0	12.9	59.8
21	134 19.2	N 6 08.7	13 54.9	8.5	N15 52.0	13.0	59.8
22	149 19.3	N 6 09.7	28 22.5	8.5	N15 39.0	13.1	59.8
23	164 19.5	N 6 10.6	42 50.0	8.6	N15 25.8	13.2	59.8
5 0	179 19.7	N 6 11.6	57 17.7	8.6	N15 12.5	13.3	59.9
1	194 19.9	N 6 12.5	71 45.4	8.7	N14 59.1	13.4	59.9
2	209 20.1	N 6 13.5	86 13.1	8.7	N14 45.6	13.5	59.9
3	224 20.2	N 6 14.4	100 40.9	8.8	N14 32.1	13.6	59.9
4	239 20.4	N 6 15.3	115 08.7	8.8	N14 18.4	13.7	59.9
W 5	254 20.6	N 6 16.3	129 36.5	8.9	N14 04.6	13.8	60.0
E							
D 6	269 20.8	N 6 17.2	144 04.4	8.9	N13 50.8	13.9	60.0
N 7	284 21.0	N 6 18.2	158 32.4	8.9	N13 36.8	14.0	60.0
E 8	299 21.1	N 6 19.1	173 00.3	9.0	N13 22.8	14.0	60.0
S 9	314 21.3	N 6 20.1	187 28.4	9.0	N13 08.6	14.1	60.1
D 10	329 21.5	N 6 21.0	201 56.4	9.1	N12 54.4	14.2	60.1
A 11	344 21.7	N 6 22.0	216 24.5	9.1	N12 40.1	14.3	60.1
Y							
12	359 21.9	N 6 22.9	230 52.7	9.1	N12 25.7	14.4	60.1
13	14 22.0	N 6 23.9	245 20.8	9.2	N12 11.3	14.5	60.1
14	29 22.2	N 6 24.8	259 49.0	9.2	N11 56.7	14.5	60.2
15	44 22.4	N 6 25.8	274 17.3	9.2	N11 42.1	14.6	60.2
16	59 22.6	N 6 26.7	288 45.6	9.3	N11 27.4	14.7	60.2
17	74 22.7	N 6 27.6	303 13.9	9.3	N11 12.6	14.8	60.2
18	89 22.9	N 6 28.6	317 42.3	9.4	N10 57.7	14.9	60.2
19	104 23.1	N 6 29.5	332 10.6	9.4	N10 42.8	14.9	60.2
20	119 23.3	N 6 30.5	346 39.1	9.4	N10 27.8	15.0	60.3
21	134 23.5	N 6 31.4	1 07.5	9.5	N10 12.7	15.1	60.3
22	149 23.6	N 6 32.4	15 36.0	9.5	N 9 57.6	15.1	60.3
23	164 23.8	N 6 33.3	30 04.5	9.5	N 9 42.4	15.2	60.3
	S.D. 16.0	d 0.9	S.D. 16.1		16.2		16.4

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.6
Acrux	172 56.4	S63 15.5
Adhara	255 03.8	S29 00.9
Albireo	67 02.0	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 29.9	S46 49.3
Alnilam	275 35.1	S 1 11.2
Alphard	217 44.9	S 8 47.1
Alphecca	126 01.2	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.4	N 8 56.4
Ankaa	353 05.0	S42 09.1
Antares	112 12.4	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 04.0	S69 04.5
Avior	234 13.4	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.3	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.6	N31 49.6
Deneb	49 24.1	N45 22.6
Denebola	182 21.9	N14 24.6
Diphda	348 45.0	S17 49.9
Dubhe	193 37.2	N61 35.9
Elnath	277 58.7	N28 37.8
Eltanin	90 40.8	N51 28.7
Enif	33 36.3	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.1
Hadar	148 31.7	S60 30.6
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 29.0	S34 22.2
Kochab	137 19.1	N74 02.1
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.7
Miaplacidus	221 37.1	S69 50.3
Mirfak	308 24.9	N49 57.8
Nunki	75 44.5	S26 15.6
Peacock	53 01.7	S56 38.4
Polaris	315 51.4	N89 22.5
Pollux	243 14.0	N27 57.4
Procyon	244 48.0	N 5 09.0
Rasalhague	95 56.0	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.2	S60 57.1
Sabik	101 59.6	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.6	S37 07.4
Sirius	258 23.9	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.1	S43 33.1
Vega	80 31.4	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
6 0	194 48.6	135 56.9	N24 30.8	182 17.9	N 4 37.7	23 44.8	N 5 29.1	166 57.5	N 9 03.6
1	209 51.0	150 57.2	N24 31.4	197 18.6	N 4 38.5	38 47.5	N 5 29.2	181 59.7	N 9 03.7
2	224 53.5	165 57.4	N24 32.0	212 19.3	N 4 39.2	53 50.2	N 5 29.3	197 01.9	N 9 03.9
3	239 55.9	180 57.6	N24 32.6	227 20.0	N 4 40.0	68 52.9	N 5 29.4	212 04.0	N 9 04.0
4	254 58.4	195 57.8	N24 33.2	242 20.7	N 4 40.8	83 55.6	N 5 29.5	227 06.2	N 9 04.1
T 5	270 00.9	210 58.0	N24 33.8	257 21.4	N 4 41.5	98 58.3	N 5 29.6	242 08.4	N 9 04.2
H									
U 6	285 03.3	225 58.3	N24 34.4	272 22.1	N 4 42.3	114 01.1	N 5 29.7	257 10.5	N 9 04.3
R 7	300 05.8	240 58.5	N24 35.0	287 22.8	N 4 43.1	129 03.8	N 5 29.8	272 12.7	N 9 04.4
S 8	315 08.3	255 58.7	N24 35.6	302 23.5	N 4 43.8	144 06.5	N 5 29.9	287 14.9	N 9 04.5
D 9	330 10.7	270 58.9	N24 36.2	317 24.2	N 4 44.6	159 09.2	N 5 30.0	302 17.0	N 9 04.6
A 10	345 13.2	285 59.2	N24 36.8	332 24.8	N 4 45.4	174 11.9	N 5 30.1	317 19.2	N 9 04.8
Y 11	0 15.7	300 59.4	N24 37.3	347 25.5	N 4 46.1	189 14.6	N 5 30.2	332 21.4	N 9 04.9
12	15 18.1	315 59.6	N24 37.9	2 26.2	N 4 46.9	204 17.3	N 5 30.3	347 23.5	N 9 05.0
13	30 20.6	330 59.9	N24 38.5	17 26.9	N 4 47.7	219 20.0	N 5 30.4	2 25.7	N 9 05.1
14	45 23.1	346 00.1	N24 39.1	32 27.6	N 4 48.4	234 22.7	N 5 30.5	17 27.9	N 9 05.2
15	60 25.5	1 00.3	N24 39.7	47 28.3	N 4 49.2	249 25.4	N 5 30.6	32 30.0	N 9 05.3
16	75 28.0	16 00.6	N24 40.3	62 29.0	N 4 50.0	264 28.1	N 5 30.7	47 32.2	N 9 05.4
17	90 30.4	31 00.8	N24 40.9	77 29.7	N 4 50.7	279 30.8	N 5 30.8	62 34.4	N 9 05.5
18	105 32.9	46 01.0	N24 41.4	92 30.4	N 4 51.5	294 33.5	N 5 30.9	77 36.5	N 9 05.7
19	120 35.4	61 01.3	N24 42.0	107 31.1	N 4 52.2	309 36.2	N 5 31.0	92 38.7	N 9 05.8
20	135 37.8	76 01.5	N24 42.6	122 31.8	N 4 53.0	324 38.9	N 5 31.1	107 40.9	N 9 05.9
21	150 40.3	91 01.8	N24 43.2	137 32.5	N 4 53.8	339 41.6	N 5 31.2	122 43.0	N 9 06.0
22	165 42.8	106 02.0	N24 43.8	152 33.2	N 4 54.5	354 44.3	N 5 31.3	137 45.2	N 9 06.1
23	180 45.2	121 02.2	N24 44.3	167 33.9	N 4 55.3	9 47.0	N 5 31.4	152 47.4	N 9 06.2
7 0	195 47.7	136 02.5	N24 44.9	182 34.6	N 4 56.1	24 49.7	N 5 31.5	167 49.5	N 9 06.3
1	210 50.2	151 02.7	N24 45.5	197 35.3	N 4 56.8	39 52.4	N 5 31.6	182 51.7	N 9 06.4
2	225 52.6	166 03.0	N24 46.1	212 36.0	N 4 57.6	54 55.1	N 5 31.7	197 53.9	N 9 06.6
3	240 55.1	181 03.2	N24 46.6	227 36.7	N 4 58.4	69 57.8	N 5 31.8	212 56.1	N 9 06.7
4	255 57.6	196 03.5	N24 47.2	242 37.4	N 4 59.1	85 00.5	N 5 31.9	227 58.2	N 9 06.8
F 5	271 00.0	211 03.7	N24 47.8	257 38.1	N 4 59.9	100 03.2	N 5 32.0	243 00.4	N 9 06.9
R									
I 6	286 02.5	226 04.0	N24 48.4	272 38.8	N 5 00.7	115 05.9	N 5 32.1	258 02.6	N 9 07.0
D 7	301 04.9	241 04.2	N24 48.9	287 39.5	N 5 01.4	130 08.6	N 5 32.2	273 04.7	N 9 07.1
A 8	316 07.4	256 04.5	N24 49.5	302 40.1	N 5 02.2	145 11.3	N 5 32.2	288 06.9	N 9 07.2
Y 9	331 09.9	271 04.7	N24 50.1	317 40.8	N 5 02.9	160 14.0	N 5 32.3	303 09.1	N 9 07.3
10	346 12.3	286 05.0	N24 50.6	332 41.5	N 5 03.7	175 16.7	N 5 32.4	318 11.2	N 9 07.5
11	1 14.8	301 05.2	N24 51.2	347 42.2	N 5 04.5	190 19.4	N 5 32.5	333 13.4	N 9 07.6
12	16 17.3	316 05.5	N24 51.8	2 42.9	N 5 05.2	205 22.1	N 5 32.6	348 15.6	N 9 07.7
13	31 19.7	331 05.7	N24 52.3	17 43.6	N 5 06.0	220 24.8	N 5 32.7	3 17.7	N 9 07.8
14	46 22.2	346 06.0	N24 52.9	32 44.3	N 5 06.8	235 27.5	N 5 32.8	18 19.9	N 9 07.9
15	61 24.7	1 06.3	N24 53.5	47 45.0	N 5 07.5	250 30.2	N 5 32.9	33 22.1	N 9 08.0
16	76 27.1	16 06.5	N24 54.0	62 45.7	N 5 08.3	265 32.9	N 5 33.0	48 24.2	N 9 08.1
17	91 29.6	31 06.8	N24 54.6	77 46.4	N 5 09.0	280 35.6	N 5 33.1	63 26.4	N 9 08.2
18	106 32.0	46 07.0	N24 55.1	92 47.1	N 5 09.8	295 38.3	N 5 33.2	78 28.6	N 9 08.4
19	121 34.5	61 07.3	N24 55.7	107 47.8	N 5 10.6	310 41.0	N 5 33.3	93 30.7	N 9 08.5
20	136 37.0	76 07.6	N24 56.3	122 48.5	N 5 11.3	325 43.7	N 5 33.4	108 32.9	N 9 08.6
21	151 39.4	91 07.8	N24 56.8	137 49.2	N 5 12.1	340 46.4	N 5 33.5	123 35.1	N 9 08.7
22	166 41.9	106 08.1	N24 57.4	152 49.9	N 5 12.9	355 49.1	N 5 33.6	138 37.2	N 9 08.8
23	181 44.4	121 08.4	N24 57.9	167 50.6	N 5 13.6	10 51.8	N 5 33.7	153 39.4	N 9 08.9
8 0	196 46.8	136 08.6	N24 58.5	182 51.3	N 5 14.4	25 54.5	N 5 33.8	168 41.6	N 9 09.0
1	211 49.3	151 08.9	N24 59.0	197 52.0	N 5 15.1	40 57.2	N 5 33.9	183 43.7	N 9 09.1
2	226 51.8	166 09.2	N24 59.6	212 52.7	N 5 15.9	55 59.9	N 5 33.9	198 45.9	N 9 09.3
3	241 54.2	181 09.5	N25 00.1	227 53.4	N 5 16.7	71 02.6	N 5 34.0	213 48.0	N 9 09.4
4	256 56.7	196 09.7	N25 00.7	242 54.1	N 5 17.4	86 05.3	N 5 34.1	228 50.2	N 9 09.5
S 5	271 59.2	211 10.0	N25 01.3	257 54.8	N 5 18.2	101 08.0	N 5 34.2	243 52.4	N 9 09.6
A									
T 6	287 01.6	226 10.3	N25 01.8	272 55.4	N 5 18.9	116 10.7	N 5 34.3	258 54.5	N 9 09.7
U 7	302 04.1	241 10.6	N25 02.4	287 56.1	N 5 19.7	131 13.4	N 5 34.4	273 56.7	N 9 09.8
R 8	317 06.5	256 10.8	N25 02.9	302 56.8	N 5 20.5	146 16.1	N 5 34.5	288 58.9	N 9 09.9
D 9	332 09.0	271 11.1	N25 03.4	317 57.5	N 5 21.2	161 18.8	N 5 34.6	304 01.0	N 9 10.0
A 10	347 11.5	286 11.4	N25 04.0	332 58.2	N 5 22.0	176 21.5	N 5 34.7	319 03.2	N 9 10.2
Y 11	2 13.9	301 11.7	N25 04.5	347 58.9	N 5 22.7	191 24.2	N 5 34.8	334 05.4	N 9 10.3
12	17 16.4	316 12.0	N25 05.1	2 59.6	N 5 23.5	206 26.8	N 5 34.9	349 07.5	N 9 10.4
13	32 18.9	331 12.3	N25 05.6	18 00.3	N 5 24.3	221 29.5	N 5 35.0	4 09.7	N 9 10.5
14	47 21.3	346 12.5	N25 06.2	33 01.0	N 5 25.0	236 32.2	N 5 35.1	19 11.9	N 9 10.6
15	62 23.8	1 12.8	N25 06.7	48 01.7	N 5 25.8	251 34.9	N 5 35.2	34 14.0	N 9 10.7
16	77 26.3	16 13.1	N25 07.3	63 02.4	N 5 26.5	266 37.6	N 5 35.3	49 16.2	N 9 10.8
17	92 28.7	31 13.4	N25 07.8	78 03.1	N 5 27.3	281 40.3	N 5 35.3	64 18.4	N 9 11.0
18	107 31.2	46 13.7	N25 08.3	93 03.8	N 5 28.1	296 43.0	N 5 35.4	79 20.5	N 9 11.1
19	122 33.6	61 14.0	N25 08.9	108 04.5	N 5 28.8	311 45.7	N 5 35.5	94 22.7	N 9 11.2
20	137 36.1	76 14.3	N25 09.4	123 05.2	N 5 29.6	326 48.4	N 5 35.6	109 24.9	N 9 11.3
21	152 38.6	91 14.6	N25 09.9	138 05.9	N 5 30.3	341 51.1	N 5 35.7	124 27.0	N 9 11.4
22	167 41.0	106 14.9	N25 10.5	153 06.6	N 5 31.1	356 53.8	N 5 35.8	139 29.2	N 9 11.5
23	182 43.5	121 15.2	N25 11.0	168 07.3	N 5 31.9	11 56.5	N 5 35.9	154 31.4	N 9 11.6
		v 0.3	d 0.6	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '	Name	SHA ° '	Dec ° '
6 0	179 24.0	N 6 34.2	44 33.1	9.5	N 9 27.1	15.3	60.3	Acamar	315 10.1	S40 11.6
1	194 24.2	N 6 35.2	59 01.6	9.6	N 9 11.8	15.3	60.4	Achernar	335 18.8	S57 05.6
2	209 24.3	N 6 36.1	73 30.3	9.6	N 8 56.4	15.4	60.4	Acrux	172 56.4	S63 15.5
3	224 24.5	N 6 37.1	87 58.9	9.6	N 8 40.9	15.5	60.4	Adhara	255 03.8	S29 00.9
4	239 24.7	N 6 38.0	102 27.5	9.7	N 8 25.4	15.5	60.4	Albireo	67 01.9	N28 00.9
T 5	254 24.9	N 6 39.0	116 56.2	9.7	N 8 09.9	15.6	60.4			
H								Aldebaran	290 36.8	N16 33.9
U 6	269 25.0	N 6 39.9	131 24.9	9.7	N 7 54.2	15.6	60.4	Alioth	166 10.1	N55 48.3
R 7	284 25.2	N 6 40.8	145 53.7	9.7	N 7 38.6	15.7	60.4	Alkaid	152 49.5	N49 10.1
S 8	299 25.4	N 6 41.8	160 22.4	9.8	N 7 22.8	15.7	60.5	Al Na-ir	27 29.9	S46 49.3
D 9	314 25.6	N 6 42.7	174 51.2	9.8	N 7 07.0	15.8	60.5	Alnilam	275 35.1	S 1 11.2
A 10	329 25.8	N 6 43.7	189 20.0	9.8	N 6 51.2	15.8	60.5			
Y 11	344 25.9	N 6 44.6	203 48.8	9.8	N 6 35.3	15.9	60.5	Alphard	217 44.9	S 8 47.1
								Alphecca	126 01.2	N26 36.9
12	359 26.1	N 6 45.6	218 17.7	9.8	N 6 19.4	15.9	60.5	Alpheratz	357 32.4	N29 14.8
13	14 26.3	N 6 46.5	232 46.5	9.9	N 6 03.4	16.0	60.5	Altair	61 57.4	N 8 56.5
14	29 26.5	N 6 47.4	247 15.4	9.9	N 5 47.4	16.0	60.5	Ankaa	353 05.0	S42 09.1
15	44 26.6	N 6 48.4	261 44.3	9.9	N 5 31.4	16.0	60.5			
16	59 26.8	N 6 49.3	276 13.2	9.9	N 5 15.3	16.1	60.6	Antares	112 12.4	S26 29.7
17	74 27.0	N 6 50.3	290 42.1	9.9	N 4 59.2	16.1	60.6	Arcturus	145 45.2	N19 01.9
								Atria	107 04.0	S69 04.5
18	89 27.2	N 6 51.2	305 11.1	9.9	N 4 43.0	16.2	60.6	Avior	234 13.4	S59 36.4
19	104 27.3	N 6 52.1	319 40.0	10.0	N 4 26.9	16.2	60.6	Bellatrix	278 20.2	N 6 22.4
20	119 27.5	N 6 53.1	334 09.0	10.0	N 4 10.6	16.2	60.6			
21	134 27.7	N 6 54.0	348 38.0	10.0	N 3 54.4	16.2	60.6	Betelgeuse	270 49.3	N 7 24.6
22	149 27.9	N 6 54.9	3 06.9	10.0	N 3 38.1	16.3	60.6	Canopus	263 51.3	S52 43.0
23	164 28.0	N 6 55.9	17 35.9	10.0	N 3 21.8	16.3	60.6	Capella	280 18.2	N46 01.7
								Castor	245 53.7	N31 49.6
7 0	179 28.2	N 6 56.8	32 04.9	10.0	N 3 05.5	16.3	60.6	Deneb	49 24.1	N45 22.6
1	194 28.4	N 6 57.8	46 33.9	10.0	N 2 49.1	16.3	60.6			
2	209 28.6	N 6 58.7	61 03.0	10.0	N 2 32.8	16.4	60.6	Denebola	182 21.9	N14 24.7
3	224 28.7	N 6 59.6	75 32.0	10.0	N 2 16.4	16.4	60.6	Diphda	348 45.0	S17 49.9
4	239 28.9	N 7 00.6	90 01.0	10.0	N 1 60.0	16.4	60.6	Dubhe	193 37.2	N61 35.9
F 5	254 29.1	N 7 01.5	104 30.0	10.0	N 1 43.6	16.4	60.7	Elnath	277 58.7	N28 37.8
R								Eltanin	90 40.8	N51 28.7
I 6	269 29.3	N 7 02.4	118 59.0	10.0	N 1 27.1	16.4	60.7			
D 7	284 29.4	N 7 03.4	133 28.1	10.0	N 1 10.7	16.4	60.7	Enif	33 36.3	N10 00.2
A 8	299 29.6	N 7 04.3	147 57.1	10.0	N 0 54.3	16.5	60.7	Fomalhaut	15 11.9	S29 28.3
Y 9	314 29.8	N 7 05.3	162 26.1	10.0	N 0 37.8	16.5	60.7	Gacrux	171 48.1	S57 16.5
10	329 30.0	N 7 06.2	176 55.2	10.0	N 0 21.3	16.5	60.7	Gienah	175 40.5	S17 42.2
11	344 30.1	N 7 07.1	191 24.2	10.0	N 0 04.9	16.5	60.7	Hadar	148 31.6	S60 30.6
12	359 30.3	N 7 08.1	205 53.2	10.0	S 0 11.6	16.5	60.7	Hamal	327 48.6	N23 35.8
13	14 30.5	N 7 09.0	220 22.2	10.0	S 0 28.1	16.5	60.7	Kaus Austr.	83 28.9	S34 22.2
14	29 30.7	N 7 09.9	234 51.2	10.0	S 0 44.5	16.5	60.7	Kochab	137 19.1	N74 02.1
15	44 30.8	N 7 10.9	249 20.2	10.0	S 1 01.0	16.5	60.7	Markab	13 27.5	N15 21.3
16	59 31.0	N 7 11.8	263 49.2	10.0	S 1 17.5	16.5	60.7	Menkar	314 03.6	N 4 12.0
17	74 31.2	N 7 12.7	278 18.2	10.0	S 1 33.9	16.5	60.7			
								Menkent	147 54.1	S36 30.7
18	89 31.4	N 7 13.7	292 47.1	10.0	S 1 50.4	16.4	60.7	Miaplacidus	221 37.1	S69 50.3
19	104 31.5	N 7 14.6	307 16.1	10.0	S 2 06.8	16.4	60.7	Mirfak	308 24.9	N49 57.8
20	119 31.7	N 7 15.5	321 45.1	9.9	S 2 23.2	16.4	60.7	Nunki	75 44.4	S26 15.6
21	134 31.9	N 7 16.5	336 14.0	9.9	S 2 39.6	16.4	60.7	Peacock	53 01.7	S56 38.4
22	149 32.1	N 7 17.4	350 42.9	9.9	S 2 56.0	16.4	60.7			
23	164 32.2	N 7 18.3	5 11.8	9.9	S 3 12.4	16.4	60.7	Polaris	315 51.8	N89 22.5
								Pollux	243 14.0	N27 57.4
8 0	179 32.4	N 7 19.3	19 40.7	9.9	S 3 28.8	16.4	60.7	Procyon	244 48.0	N 5 09.0
1	194 32.6	N 7 20.2	34 09.6	9.9	S 3 45.1	16.3	60.7	Rasalhague	95 56.0	N12 32.2
2	209 32.7	N 7 21.1	48 38.4	9.9	S 4 01.4	16.3	60.7	Regulus	207 31.4	N11 49.6
3	224 32.9	N 7 22.1	63 07.3	9.8	S 4 17.7	16.3	60.7			
4	239 33.1	N 7 23.0	77 36.1	9.8	S 4 33.9	16.3	60.6	Rigel	281 01.5	S 8 10.3
S 5	254 33.3	N 7 23.9	92 04.9	9.8	S 4 50.2	16.2	60.6	Rigil Kent	139 36.2	S60 57.1
A								Sabik	101 59.6	S15 45.7
T 6	269 33.4	N 7 24.9	106 33.6	9.8	S 5 06.4	16.2	60.6	Schedar	349 28.5	N56 41.5
U 7	284 33.6	N 7 25.8	121 02.4	9.8	S 5 22.5	16.2	60.6	Shaula	96 06.6	S37 07.4
R 8	299 33.8	N 7 26.7	135 31.1	9.7	S 5 38.7	16.1	60.6			
D 9	314 34.0	N 7 27.7	149 59.8	9.7	S 5 54.8	16.1	60.6	Sirius	258 24.0	S16 45.5
A 10	329 34.1	N 7 28.6	164 28.5	9.7	S 6 10.8	16.1	60.6	Spica	158 19.2	S11 18.7
Y 11	344 34.3	N 7 29.5	178 57.2	9.7	S 6 26.8	16.0	60.6	Suhail	222 44.1	S43 33.1
								Vega	80 31.4	N38 48.3
12	359 34.5	N 7 30.5	193 25.8	9.6	S 6 42.8	16.0	60.6	Zuben-ubi	136 53.7	S16 09.7
13	14 34.6	N 7 31.4	207 54.4	9.6	S 6 58.7	15.9	60.6			
14	29 34.8	N 7 32.3	222 23.0	9.6	S 7 14.6	15.9	60.6			
15	44 35.0	N 7 33.3	236 51.5	9.5	S 7 30.5	15.8	60.6			
16	59 35.2	N 7 34.2	251 20.0	9.5	S 7 46.3	15.8	60.5			
17	74 35.3	N 7 35.1	265 48.5	9.5	S 8 02.0	15.7	60.5			
18	89 35.5	N 7 36.0	280 16.9	9.4	S 8 17.7	15.7	60.5			
19	104 35.7	N 7 37.0	294 45.3	9.4	S 8 33.3	15.6	60.5			
20	119 35.8	N 7 37.9	309 13.7	9.4	S 8 48.9	15.6	60.5			
21	134 36.0	N 7 38.8	323 42.1	9.3	S 9 04.4	15.5	60.5			
22	149 36.2	N 7 39.8	338 10.4	9.3	S 9 19.9	15.5	60.5			
23	164 36.4	N 7 40.7	352 38.7	9.3	S 9 35.3	15.4	60.5			
	S.D. 16.0	d 0.9	S.D.	16.5	16.5	16.5				

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
9	0	197 46.0	136 15.5	N25 11.5	183 08.0	N 5 32.6	26 59.2	N 5 36.0	169 33.5	N 9 11.7
	1	212 48.4	151 15.8	N25 12.1	198 08.7	N 5 33.4	42 01.9	N 5 36.1	184 35.7	N 9 11.9
	2	227 50.9	166 16.1	N25 12.6	213 09.4	N 5 34.1	57 04.6	N 5 36.2	199 37.9	N 9 12.0
	3	242 53.4	181 16.4	N25 13.1	228 10.1	N 5 34.9	72 07.2	N 5 36.3	214 40.0	N 9 12.1
	4	257 55.8	196 16.7	N25 13.7	243 10.7	N 5 35.7	87 09.9	N 5 36.4	229 42.2	N 9 12.2
S	5	272 58.3	211 17.0	N25 14.2	258 11.4	N 5 36.4	102 12.6	N 5 36.4	244 44.4	N 9 12.3
U										
N	6	288 00.8	226 17.3	N25 14.7	273 12.1	N 5 37.2	117 15.3	N 5 36.5	259 46.5	N 9 12.4
D	7	303 03.2	241 17.6	N25 15.3	288 12.8	N 5 37.9	132 18.0	N 5 36.6	274 48.7	N 9 12.5
A	8	318 05.7	256 17.9	N25 15.8	303 13.5	N 5 38.7	147 20.7	N 5 36.7	289 50.9	N 9 12.6
Y	9	333 08.1	271 18.2	N25 16.3	318 14.2	N 5 39.4	162 23.4	N 5 36.8	304 53.0	N 9 12.8
	10	348 10.6	286 18.5	N25 16.8	333 14.9	N 5 40.2	177 26.1	N 5 36.9	319 55.2	N 9 12.9
	11	3 13.1	301 18.8	N25 17.4	348 15.6	N 5 41.0	192 28.8	N 5 37.0	334 57.4	N 9 13.0
	12	18 15.5	316 19.1	N25 17.9	3 16.3	N 5 41.7	207 31.5	N 5 37.1	349 59.5	N 9 13.1
	13	33 18.0	331 19.5	N25 18.4	18 17.0	N 5 42.5	222 34.1	N 5 37.2	5 01.7	N 9 13.2
	14	48 20.5	346 19.8	N25 18.9	33 17.7	N 5 43.2	237 36.8	N 5 37.3	20 03.9	N 9 13.3
	15	63 22.9	1 20.1	N25 19.4	48 18.4	N 5 44.0	252 39.5	N 5 37.3	35 06.0	N 9 13.4
	16	78 25.4	16 20.4	N25 20.0	63 19.1	N 5 44.7	267 42.2	N 5 37.4	50 08.2	N 9 13.5
	17	93 27.9	31 20.7	N25 20.5	78 19.8	N 5 45.5	282 44.9	N 5 37.5	65 10.3	N 9 13.7
	18	108 30.3	46 21.0	N25 21.0	93 20.5	N 5 46.3	297 47.6	N 5 37.6	80 12.5	N 9 13.8
	19	123 32.8	61 21.4	N25 21.5	108 21.2	N 5 47.0	312 50.3	N 5 37.7	95 14.7	N 9 13.9
	20	138 35.3	76 21.7	N25 22.0	123 21.9	N 5 47.8	327 53.0	N 5 37.8	110 16.8	N 9 14.0
	21	153 37.7	91 22.0	N25 22.5	138 22.6	N 5 48.5	342 55.7	N 5 37.9	125 19.0	N 9 14.1
	22	168 40.2	106 22.3	N25 23.1	153 23.3	N 5 49.3	357 58.3	N 5 38.0	140 21.2	N 9 14.2
	23	183 42.6	121 22.7	N25 23.6	168 24.0	N 5 50.0	13 01.0	N 5 38.1	155 23.3	N 9 14.3
10	0	198 45.1	136 23.0	N25 24.1	183 24.6	N 5 50.8	28 03.7	N 5 38.2	170 25.5	N 9 14.4
	1	213 47.6	151 23.3	N25 24.6	198 25.3	N 5 51.5	43 06.4	N 5 38.2	185 27.7	N 9 14.6
	2	228 50.0	166 23.7	N25 25.1	213 26.0	N 5 52.3	58 09.1	N 5 38.3	200 29.8	N 9 14.7
	3	243 52.5	181 24.0	N25 25.6	228 26.7	N 5 53.1	73 11.8	N 5 38.4	215 32.0	N 9 14.8
	4	258 55.0	196 24.3	N25 26.1	243 27.4	N 5 53.8	88 14.5	N 5 38.5	230 34.2	N 9 14.9
M	5	273 57.4	211 24.7	N25 26.6	258 28.1	N 5 54.6	103 17.1	N 5 38.6	245 36.3	N 9 15.0
O										
N	6	288 59.9	226 25.0	N25 27.1	273 28.8	N 5 55.3	118 19.8	N 5 38.7	260 38.5	N 9 15.1
D	7	304 02.4	241 25.3	N25 27.6	288 29.5	N 5 56.1	133 22.5	N 5 38.8	275 40.7	N 9 15.2
A	8	319 04.8	256 25.7	N25 28.1	303 30.2	N 5 56.8	148 25.2	N 5 38.9	290 42.8	N 9 15.3
Y	9	334 07.3	271 26.0	N25 28.6	318 30.9	N 5 57.6	163 27.9	N 5 39.0	305 45.0	N 9 15.5
	10	349 09.7	286 26.3	N25 29.1	333 31.6	N 5 58.3	178 30.6	N 5 39.0	320 47.2	N 9 15.6
	11	4 12.2	301 26.7	N25 29.7	348 32.3	N 5 59.1	193 33.3	N 5 39.1	335 49.3	N 9 15.7
	12	19 14.7	316 27.0	N25 30.2	3 33.0	N 5 59.8	208 35.9	N 5 39.2	350 51.5	N 9 15.8
	13	34 17.1	331 27.4	N25 30.7	18 33.7	N 6 00.6	223 38.6	N 5 39.3	5 53.6	N 9 15.9
	14	49 19.6	346 27.7	N25 31.2	33 34.4	N 6 01.4	238 41.3	N 5 39.4	20 55.8	N 9 16.0
	15	64 22.1	1 28.1	N25 31.6	48 35.1	N 6 02.1	253 44.0	N 5 39.5	35 58.0	N 9 16.1
	16	79 24.5	16 28.4	N25 32.1	63 35.8	N 6 02.9	268 46.7	N 5 39.6	51 00.1	N 9 16.2
	17	94 27.0	31 28.8	N25 32.6	78 36.5	N 6 03.6	283 49.4	N 5 39.7	66 02.3	N 9 16.3
	18	109 29.5	46 29.1	N25 33.1	93 37.2	N 6 04.4	298 52.0	N 5 39.7	81 04.5	N 9 16.5
	19	124 31.9	61 29.5	N25 33.6	108 37.9	N 6 05.1	313 54.7	N 5 39.8	96 06.6	N 9 16.6
	20	139 34.4	76 29.8	N25 34.1	123 38.5	N 6 05.9	328 57.4	N 5 39.9	111 08.8	N 9 16.7
	21	154 36.9	91 30.2	N25 34.6	138 39.2	N 6 06.6	344 00.1	N 5 40.0	126 11.0	N 9 16.8
	22	169 39.3	106 30.5	N25 35.1	153 39.9	N 6 07.4	359 02.8	N 5 40.1	141 13.1	N 9 16.9
	23	184 41.8	121 30.9	N25 35.6	168 40.6	N 6 08.1	14 05.5	N 5 40.2	156 15.3	N 9 17.0
11	0	199 44.2	136 31.3	N25 36.1	183 41.3	N 6 08.9	29 08.1	N 5 40.3	171 17.5	N 9 17.1
	1	214 46.7	151 31.6	N25 36.6	198 42.0	N 6 09.6	44 10.8	N 5 40.4	186 19.6	N 9 17.2
	2	229 49.2	166 32.0	N25 37.1	213 42.7	N 6 10.4	59 13.5	N 5 40.4	201 21.8	N 9 17.4
	3	244 51.6	181 32.3	N25 37.6	228 43.4	N 6 11.1	74 16.2	N 5 40.5	216 24.0	N 9 17.5
	4	259 54.1	196 32.7	N25 38.0	243 44.1	N 6 11.9	89 18.9	N 5 40.6	231 26.1	N 9 17.6
T	5	274 56.6	211 33.1	N25 38.5	258 44.8	N 6 12.7	104 21.5	N 5 40.7	246 28.3	N 9 17.7
U										
E	6	289 59.0	226 33.4	N25 39.0	273 45.5	N 6 13.4	119 24.2	N 5 40.8	261 30.4	N 9 17.8
S	7	305 01.5	241 33.8	N25 39.5	288 46.2	N 6 14.2	134 26.9	N 5 40.9	276 32.6	N 9 17.9
D	8	320 04.0	256 34.2	N25 40.0	303 46.9	N 6 14.9	149 29.6	N 5 41.0	291 34.8	N 9 18.0
A	9	335 06.4	271 34.5	N25 40.5	318 47.6	N 6 15.7	164 32.3	N 5 41.0	306 36.9	N 9 18.1
Y	10	350 08.9	286 34.9	N25 40.9	333 48.3	N 6 16.4	179 35.0	N 5 41.1	321 39.1	N 9 18.3
	11	5 11.3	301 35.3	N25 41.4	348 49.0	N 6 17.2	194 37.6	N 5 41.2	336 41.3	N 9 18.4
	12	20 13.8	316 35.7	N25 41.9	3 49.7	N 6 17.9	209 40.3	N 5 41.3	351 43.4	N 9 18.5
	13	35 16.3	331 36.0	N25 42.4	18 50.4	N 6 18.7	224 43.0	N 5 41.4	6 45.6	N 9 18.6
	14	50 18.7	346 36.4	N25 42.9	33 51.0	N 6 19.4	239 45.7	N 5 41.5	21 47.8	N 9 18.7
	15	65 21.2	1 36.8	N25 43.3	48 51.7	N 6 20.2	254 48.3	N 5 41.6	36 49.9	N 9 18.8
	16	80 23.7	16 37.2	N25 43.8	63 52.4	N 6 20.9	269 51.0	N 5 41.6	51 52.1	N 9 18.9
	17	95 26.1	31 37.6	N25 44.3	78 53.1	N 6 21.7	284 53.7	N 5 41.7	66 54.3	N 9 19.0
	18	110 28.6	46 38.0	N25 44.8	93 53.8	N 6 22.4	299 56.4	N 5 41.8	81 56.4	N 9 19.2
	19	125 31.1	61 38.3	N25 45.2	108 54.5	N 6 23.2	314 59.1	N 5 41.9	96 58.6	N 9 19.3
	20	140 33.5	76 38.7	N25 45.7	123 55.2	N 6 23.9	330 01.7	N 5 42.0	112 00.7	N 9 19.4
	21	155 36.0	91 39.1	N25 46.2	138 55.9	N 6 24.7	345 04.4	N 5 42.1	127 02.9	N 9 19.5
	22	170 38.5	106 39.5	N25 46.6	153 56.6	N 6 25.4	0 07.1	N 5 42.1	142 05.1	N 9 19.6
	23	185 40.9	121 39.9	N25 47.1	168 57.3	N 6 26.2	15 09.8	N 5 42.2	157 07.2	N 9 19.7
			v 0.3	d 0.5	v 0.7	d 0.8	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
9	0	179 36.5	N 7 41.6	7 06.9	9.2	S 9 50.6	15.3	60.4
	1	194 36.7	N 7 42.5	21 35.1	9.2	S10 05.9	15.3	60.4
	2	209 36.9	N 7 43.5	36 03.3	9.2	S10 21.1	15.2	60.4
	3	224 37.0	N 7 44.4	50 31.4	9.1	S10 36.2	15.1	60.4
	4	239 37.2	N 7 45.3	64 59.5	9.1	S10 51.3	15.1	60.4
S	5	254 37.4	N 7 46.2	79 27.6	9.1	S11 06.2	15.0	60.4
U								
N	6	269 37.5	N 7 47.2	93 55.6	9.0	S11 21.2	14.9	60.3
D	7	284 37.7	N 7 48.1	108 23.5	9.0	S11 36.0	14.8	60.3
A	8	299 37.9	N 7 49.0	122 51.5	8.9	S11 50.8	14.8	60.3
Y	9	314 38.0	N 7 50.0	137 19.4	8.9	S12 05.4	14.7	60.3
	10	329 38.2	N 7 50.9	151 47.2	8.8	S12 20.0	14.6	60.3
	11	344 38.4	N 7 51.8	166 15.0	8.8	S12 34.6	14.5	60.3
	12	359 38.6	N 7 52.7	180 42.8	8.8	S12 49.0	14.4	60.2
	13	14 38.7	N 7 53.7	195 10.5	8.7	S13 03.4	14.3	60.2
	14	29 38.9	N 7 54.6	209 38.2	8.7	S13 17.6	14.3	60.2
	15	44 39.1	N 7 55.5	224 05.8	8.6	S13 31.8	14.2	60.2
	16	59 39.2	N 7 56.4	238 33.4	8.6	S13 45.9	14.1	60.1
	17	74 39.4	N 7 57.4	253 01.0	8.5	S13 59.9	14.0	60.1
	18	89 39.6	N 7 58.3	267 28.5	8.5	S14 13.7	13.9	60.1
	19	104 39.7	N 7 59.2	281 55.9	8.5	S14 27.5	13.8	60.1
	20	119 39.9	N 8 00.1	296 23.3	8.4	S14 41.3	13.7	60.1
	21	134 40.1	N 8 01.0	310 50.7	8.4	S14 54.9	13.6	60.0
	22	149 40.2	N 8 02.0	325 18.0	8.3	S15 08.4	13.5	60.0
	23	164 40.4	N 8 02.9	339 45.3	8.3	S15 21.8	13.4	60.0
10	0	179 40.6	N 8 03.8	354 12.5	8.2	S15 35.1	13.3	60.0
	1	194 40.7	N 8 04.7	8 39.7	8.2	S15 48.2	13.2	59.9
	2	209 40.9	N 8 05.7	23 06.8	8.1	S16 01.3	13.1	59.9
	3	224 41.1	N 8 06.6	37 33.9	8.1	S16 14.3	13.0	59.9
	4	239 41.2	N 8 07.5	52 01.0	8.0	S16 27.2	12.9	59.9
M	5	254 41.4	N 8 08.4	66 27.9	8.0	S16 39.9	12.8	59.8
O								
N	6	269 41.6	N 8 09.3	80 54.9	8.0	S16 52.6	12.6	59.8
D	7	284 41.7	N 8 10.3	95 21.8	7.9	S17 05.1	12.5	59.8
A	8	299 41.9	N 8 11.2	109 48.7	7.9	S17 17.5	12.4	59.8
Y	9	314 42.1	N 8 12.1	124 15.5	7.8	S17 29.8	12.3	59.7
	10	329 42.2	N 8 13.0	138 42.2	7.8	S17 42.0	12.2	59.7
	11	344 42.4	N 8 13.9	153 09.0	7.7	S17 54.0	12.1	59.7
	12	359 42.6	N 8 14.9	167 35.6	7.7	S18 06.0	11.9	59.6
	13	14 42.7	N 8 15.8	182 02.3	7.6	S18 17.8	11.8	59.6
	14	29 42.9	N 8 16.7	196 28.9	7.6	S18 29.5	11.7	59.6
	15	44 43.1	N 8 17.6	210 55.4	7.5	S18 41.0	11.6	59.5
	16	59 43.2	N 8 18.5	225 21.9	7.5	S18 52.5	11.4	59.5
	17	74 43.4	N 8 19.5	239 48.4	7.5	S19 03.8	11.3	59.5
	18	89 43.6	N 8 20.4	254 14.8	7.4	S19 15.0	11.2	59.5
	19	104 43.7	N 8 21.3	268 41.1	7.4	S19 26.0	11.1	59.4
	20	119 43.9	N 8 22.2	283 07.5	7.3	S19 36.9	10.9	59.4
	21	134 44.1	N 8 23.1	297 33.7	7.3	S19 47.7	10.8	59.4
	22	149 44.2	N 8 24.0	311 60.0	7.2	S19 58.4	10.7	59.3
	23	164 44.4	N 8 25.0	326 26.2	7.2	S20 08.9	10.5	59.3
11	0	179 44.6	N 8 25.9	340 52.3	7.2	S20 19.3	10.4	59.3
	1	194 44.7	N 8 26.8	355 18.5	7.1	S20 29.5	10.2	59.2
	2	209 44.9	N 8 27.7	9 44.6	7.1	S20 39.6	10.1	59.2
	3	224 45.1	N 8 28.6	24 10.6	7.0	S20 49.6	10.0	59.2
	4	239 45.2	N 8 29.5	38 36.6	7.0	S20 59.4	9.8	59.1
T	5	254 45.4	N 8 30.5	53 02.6	7.0	S21 09.1	9.7	59.1
U								
E	6	269 45.5	N 8 31.4	67 28.5	6.9	S21 18.7	9.5	59.1
S	7	284 45.7	N 8 32.3	81 54.4	6.9	S21 28.1	9.4	59.0
D	8	299 45.9	N 8 33.2	96 20.3	6.9	S21 37.3	9.3	59.0
A	9	314 46.0	N 8 34.1	110 46.1	6.8	S21 46.4	9.1	59.0
Y	10	329 46.2	N 8 35.0	125 11.9	6.8	S21 55.4	9.0	58.9
	11	344 46.4	N 8 35.9	139 37.7	6.8	S22 04.2	8.8	58.9
	12	359 46.5	N 8 36.9	154 03.4	6.7	S22 12.9	8.7	58.9
	13	14 46.7	N 8 37.8	168 29.1	6.7	S22 21.4	8.5	58.8
	14	29 46.9	N 8 38.7	182 54.8	6.7	S22 29.8	8.4	58.8
	15	44 47.0	N 8 39.6	197 20.5	6.7	S22 38.0	8.2	58.8
	16	59 47.2	N 8 40.5	211 46.1	6.6	S22 46.1	8.1	58.7
	17	74 47.3	N 8 41.4	226 11.7	6.6	S22 54.0	7.9	58.7
	18	89 47.5	N 8 42.3	240 37.3	6.6	S23 01.8	7.8	58.7
	19	104 47.7	N 8 43.3	255 02.8	6.6	S23 09.4	7.6	58.6
	20	119 47.8	N 8 44.2	269 28.3	6.5	S23 16.9	7.5	58.6
	21	134 48.0	N 8 45.1	283 53.9	6.5	S23 24.2	7.3	58.5
	22	149 48.2	N 8 46.0	298 19.3	6.5	S23 31.3	7.2	58.5
	23	164 48.3	N 8 46.9	312 44.8	6.5	S23 38.3	7.0	58.5
		S.D. 16.0	d 0.9	S.D. 16.4		16.2		16.0

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.6
Acrux	172 56.4	S63 15.5
Adhara	255 03.8	S29 00.9
Albireo	67 01.9	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.1
Al Na-ir	27 29.9	S46 49.3
Alnilam	275 35.2	S 1 11.2
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.2	N26 36.9
Alpheratz	357 32.4	N29 14.8
Altair	61 57.4	N 8 56.5
Ankaa	353 05.0	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 03.9	S69 04.5
Avior	234 13.5	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.3	N 7 24.6
Canopus	263 51.3	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.7	N31 49.6
Deneb	49 24.1	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.9
Dubhe	193 37.3	N61 35.9
Elnath	277 58.7	N28 37.8
Eltanin	90 40.8	N51 28.8
Enif	33 36.3	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.6
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 28.9	S34 22.2
Kochab	137 19.1	N74 02.1
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.7
Miaplacidus	221 37.2	S69 50.4
Mirfak	308 24.9	N49 57.8
Nunki	75 44.4	S26 15.6
Peacock	53 01.7	S56 38.4
Polaris	315 52.1	N89 22.5
Pollux	243 14.0	N27 57.4
Procyon	244 48.0	N 5 09.0
Rasalhague	95 56.0	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.1	S60 57.2
Sabik	101 59.6	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.6	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.1	S43 33.2
Vega	80 31.3	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
12	0	200 43.4	136 40.3	N25 47.6	183 58.0	N 6 26.9	30 12.4	N 5 42.3	172 09.4	N 9 19.8
	1	215 45.8	151 40.7	N25 48.1	198 58.7	N 6 27.7	45 15.1	N 5 42.4	187 11.6	N 9 19.9
	2	230 48.3	166 41.1	N25 48.5	213 59.4	N 6 28.4	60 17.8	N 5 42.5	202 13.7	N 9 20.1
	3	245 50.8	181 41.5	N25 49.0	229 00.1	N 6 29.2	75 20.5	N 5 42.6	217 15.9	N 9 20.2
	4	260 53.2	196 41.9	N25 49.4	244 00.8	N 6 29.9	90 23.1	N 5 42.7	232 18.1	N 9 20.3
W	5	275 55.7	211 42.3	N25 49.9	259 01.5	N 6 30.7	105 25.8	N 5 42.7	247 20.2	N 9 20.4
E										
D	6	290 58.2	226 42.7	N25 50.4	274 02.2	N 6 31.4	120 28.5	N 5 42.8	262 22.4	N 9 20.5
N	7	306 00.6	241 43.1	N25 50.8	289 02.8	N 6 32.2	135 31.2	N 5 42.9	277 24.5	N 9 20.6
E	8	321 03.1	256 43.5	N25 51.3	304 03.5	N 6 32.9	150 33.8	N 5 43.0	292 26.7	N 9 20.7
S	9	336 05.6	271 43.9	N25 51.8	319 04.2	N 6 33.7	165 36.5	N 5 43.1	307 28.9	N 9 20.8
D	10	351 08.0	286 44.3	N25 52.2	334 04.9	N 6 34.4	180 39.2	N 5 43.2	322 31.0	N 9 21.0
A	11	6 10.5	301 44.7	N25 52.7	349 05.6	N 6 35.1	195 41.9	N 5 43.2	337 33.2	N 9 21.1
Y										
	12	21 13.0	316 45.1	N25 53.1	4 06.3	N 6 35.9	210 44.5	N 5 43.3	352 35.4	N 9 21.2
	13	36 15.4	331 45.5	N25 53.6	19 07.0	N 6 36.6	225 47.2	N 5 43.4	7 37.5	N 9 21.3
	14	51 17.9	346 45.9	N25 54.0	34 07.7	N 6 37.4	240 49.9	N 5 43.5	22 39.7	N 9 21.4
	15	66 20.3	1 46.4	N25 54.5	49 08.4	N 6 38.1	255 52.6	N 5 43.6	37 41.9	N 9 21.5
	16	81 22.8	16 46.8	N25 55.0	64 09.1	N 6 38.9	270 55.2	N 5 43.6	52 44.0	N 9 21.6
	17	96 25.3	31 47.2	N25 55.4	79 09.8	N 6 39.6	285 57.9	N 5 43.7	67 46.2	N 9 21.7
	18	111 27.7	46 47.6	N25 55.9	94 10.5	N 6 40.4	301 00.6	N 5 43.8	82 48.4	N 9 21.9
	19	126 30.2	61 48.0	N25 56.3	109 11.2	N 6 41.1	316 03.3	N 5 43.9	97 50.5	N 9 22.0
	20	141 32.7	76 48.4	N25 56.8	124 11.9	N 6 41.9	331 05.9	N 5 44.0	112 52.7	N 9 22.1
	21	156 35.1	91 48.9	N25 57.2	139 12.6	N 6 42.6	346 08.6	N 5 44.1	127 54.8	N 9 22.2
	22	171 37.6	106 49.3	N25 57.7	154 13.3	N 6 43.4	1 11.3	N 5 44.1	142 57.0	N 9 22.3
	23	186 40.1	121 49.7	N25 58.1	169 13.9	N 6 44.1	16 13.9	N 5 44.2	157 59.2	N 9 22.4
13	0	201 42.5	136 50.2	N25 58.6	184 14.6	N 6 44.9	31 16.6	N 5 44.3	173 01.3	N 9 22.5
	1	216 45.0	151 50.6	N25 59.0	199 15.3	N 6 45.6	46 19.3	N 5 44.4	188 03.5	N 9 22.6
	2	231 47.4	166 51.0	N25 59.4	214 16.0	N 6 46.4	61 22.0	N 5 44.5	203 05.7	N 9 22.8
	3	246 49.9	181 51.4	N25 59.9	229 16.7	N 6 47.1	76 24.6	N 5 44.5	218 07.8	N 9 22.9
	4	261 52.4	196 51.9	N26 00.3	244 17.4	N 6 47.8	91 27.3	N 5 44.6	233 10.0	N 9 23.0
T	5	276 54.8	211 52.3	N26 00.8	259 18.1	N 6 48.6	106 30.0	N 5 44.7	248 12.1	N 9 23.1
H										
U	6	291 57.3	226 52.8	N26 01.2	274 18.8	N 6 49.3	121 32.6	N 5 44.8	263 14.3	N 9 23.2
R	7	306 59.8	241 53.2	N26 01.7	289 19.5	N 6 50.1	136 35.3	N 5 44.9	278 16.5	N 9 23.3
S	8	322 02.2	256 53.6	N26 02.1	304 20.2	N 6 50.8	151 38.0	N 5 45.0	293 18.6	N 9 23.4
D	9	337 04.7	271 54.1	N26 02.5	319 20.9	N 6 51.6	166 40.6	N 5 45.0	308 20.8	N 9 23.5
A	10	352 07.2	286 54.5	N26 03.0	334 21.6	N 6 52.3	181 43.3	N 5 45.1	323 23.0	N 9 23.6
Y	11	7 09.6	301 55.0	N26 03.4	349 22.3	N 6 53.1	196 46.0	N 5 45.2	338 25.1	N 9 23.8
	12	22 12.1	316 55.4	N26 03.8	4 23.0	N 6 53.8	211 48.7	N 5 45.3	353 27.3	N 9 23.9
	13	37 14.6	331 55.9	N26 04.3	19 23.7	N 6 54.6	226 51.3	N 5 45.4	8 29.5	N 9 24.0
	14	52 17.0	346 56.3	N26 04.7	34 24.4	N 6 55.3	241 54.0	N 5 45.4	23 31.6	N 9 24.1
	15	67 19.5	1 56.8	N26 05.1	49 25.0	N 6 56.0	256 56.7	N 5 45.5	38 33.8	N 9 24.2
	16	82 21.9	16 57.2	N26 05.6	64 25.7	N 6 56.8	271 59.3	N 5 45.6	53 35.9	N 9 24.3
	17	97 24.4	31 57.7	N26 06.0	79 26.4	N 6 57.5	287 02.0	N 5 45.7	68 38.1	N 9 24.4
	18	112 26.9	46 58.1	N26 06.4	94 27.1	N 6 58.3	302 04.7	N 5 45.8	83 40.3	N 9 24.5
	19	127 29.3	61 58.6	N26 06.9	109 27.8	N 6 59.0	317 07.3	N 5 45.8	98 42.4	N 9 24.7
	20	142 31.8	76 59.0	N26 07.3	124 28.5	N 6 59.8	332 10.0	N 5 45.9	113 44.6	N 9 24.8
	21	157 34.3	91 59.5	N26 07.7	139 29.2	N 7 00.5	347 12.7	N 5 46.0	128 46.8	N 9 24.9
	22	172 36.7	106 60.0	N26 08.1	154 29.9	N 7 01.2	2 15.3	N 5 46.1	143 48.9	N 9 25.0
	23	187 39.2	122 00.4	N26 08.6	169 30.6	N 7 02.0	17 18.0	N 5 46.2	158 51.1	N 9 25.1
14	0	202 41.7	137 00.9	N26 09.0	184 31.3	N 7 02.7	32 20.7	N 5 46.2	173 53.3	N 9 25.2
	1	217 44.1	152 01.3	N26 09.4	199 32.0	N 7 03.5	47 23.3	N 5 46.3	188 55.4	N 9 25.3
	2	232 46.6	167 01.8	N26 09.8	214 32.7	N 7 04.2	62 26.0	N 5 46.4	203 57.6	N 9 25.4
	3	247 49.1	182 02.3	N26 10.3	229 33.4	N 7 05.0	77 28.7	N 5 46.5	218 59.7	N 9 25.6
	4	262 51.5	197 02.8	N26 10.7	244 34.1	N 7 05.7	92 31.3	N 5 46.5	234 01.9	N 9 25.7
F	5	277 54.0	212 03.2	N26 11.1	259 34.7	N 7 06.4	107 34.0	N 5 46.6	249 04.1	N 9 25.8
R										
I	6	292 56.4	227 03.7	N26 11.5	274 35.4	N 7 07.2	122 36.6	N 5 46.7	264 06.2	N 9 25.9
D	7	307 58.9	242 04.2	N26 11.9	289 36.1	N 7 07.9	137 39.3	N 5 46.8	279 08.4	N 9 26.0
A	8	323 01.4	257 04.7	N26 12.4	304 36.8	N 7 08.7	152 42.0	N 5 46.9	294 10.6	N 9 26.1
Y	9	338 03.8	272 05.1	N26 12.8	319 37.5	N 7 09.4	167 44.6	N 5 46.9	309 12.7	N 9 26.2
	10	353 06.3	287 05.6	N26 13.2	334 38.2	N 7 10.2	182 47.3	N 5 47.0	324 14.9	N 9 26.3
	11	8 08.8	302 06.1	N26 13.6	349 38.9	N 7 10.9	197 50.0	N 5 47.1	339 17.0	N 9 26.5
	12	23 11.2	317 06.6	N26 14.0	4 39.6	N 7 11.6	212 52.6	N 5 47.2	354 19.2	N 9 26.6
	13	38 13.7	332 07.1	N26 14.4	19 40.3	N 7 12.4	227 55.3	N 5 47.3	9 21.4	N 9 26.7
	14	53 16.2	347 07.6	N26 14.9	34 41.0	N 7 13.1	242 58.0	N 5 47.3	24 23.5	N 9 26.8
	15	68 18.6	2 08.0	N26 15.3	49 41.7	N 7 13.9	258 00.6	N 5 47.4	39 25.7	N 9 26.9
	16	83 21.1	17 08.5	N26 15.7	64 42.4	N 7 14.6	273 03.3	N 5 47.5	54 27.9	N 9 27.0
	17	98 23.5	32 09.0	N26 16.1	79 43.1	N 7 15.3	288 05.9	N 5 47.6	69 30.0	N 9 27.1
	18	113 26.0	47 09.5	N26 16.5	94 43.8	N 7 16.1	303 08.6	N 5 47.6	84 32.2	N 9 27.2
	19	128 28.5	62 10.0	N26 16.9	109 44.4	N 7 16.8	318 11.3	N 5 47.7	99 34.3	N 9 27.3
	20	143 30.9	77 10.5	N26 17.3	124 45.1	N 7 17.6	333 13.9	N 5 47.8	114 36.5	N 9 27.5
	21	158 33.4	92 11.0	N26 17.7	139 45.8	N 7 18.3	348 16.6	N 5 47.9	129 38.7	N 9 27.6
	22	173 35.9	107 11.5	N26 18.1	154 46.5	N 7 19.0	3 19.2	N 5 47.9	144 40.8	N 9 27.7
	23	188 38.3	122 12.0	N26 18.5	169 47.2	N 7 19.8	18 21.9	N 5 48.0	159 43.0	N 9 27.8
			v 0.4	d 0.4	v 0.7	d 0.7	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
12	0	179 48.5	N 8 47.8	327 10.3	6.5	S23 45.2	6.8	58.4
	1	194 48.6	N 8 48.7	341 35.7	6.4	S23 51.9	6.7	58.4
	2	209 48.8	N 8 49.6	356 01.1	6.4	S23 58.4	6.5	58.4
	3	224 49.0	N 8 50.5	10 26.6	6.4	S24 04.8	6.4	58.3
	4	239 49.1	N 8 51.4	24 52.0	6.4	S24 11.0	6.2	58.3
W	5	254 49.3	N 8 52.4	39 17.4	6.4	S24 17.0	6.1	58.3
E								
D	6	269 49.4	N 8 53.3	53 42.7	6.4	S24 22.9	5.9	58.2
N	7	284 49.6	N 8 54.2	68 08.1	6.4	S24 28.7	5.7	58.2
E	8	299 49.8	N 8 55.1	82 33.5	6.4	S24 34.3	5.6	58.1
S	9	314 49.9	N 8 56.0	96 58.9	6.4	S24 39.7	5.4	58.1
D	10	329 50.1	N 8 56.9	111 24.2	6.4	S24 44.9	5.3	58.1
A	11	344 50.2	N 8 57.8	125 49.6	6.4	S24 50.0	5.1	58.0
Y								
	12	359 50.4	N 8 58.7	140 15.0	6.4	S24 55.0	4.9	58.0
	13	14 50.6	N 8 59.6	154 40.3	6.4	S24 59.8	4.8	58.0
	14	29 50.7	N 9 00.5	169 05.7	6.4	S25 04.4	4.6	57.9
	15	44 50.9	N 9 01.4	183 31.1	6.4	S25 08.9	4.5	57.9
	16	59 51.0	N 9 02.3	197 56.4	6.4	S25 13.2	4.3	57.8
	17	74 51.2	N 9 03.3	212 21.8	6.4	S25 17.3	4.1	57.8
	18	89 51.4	N 9 04.2	226 47.2	6.4	S25 21.3	4.0	57.8
	19	104 51.5	N 9 05.1	241 12.6	6.4	S25 25.1	3.8	57.7
	20	119 51.7	N 9 06.0	255 38.0	6.4	S25 28.8	3.7	57.7
	21	134 51.8	N 9 06.9	270 03.5	6.4	S25 32.3	3.5	57.7
	22	149 52.0	N 9 07.8	284 28.9	6.4	S25 35.6	3.3	57.6
	23	164 52.1	N 9 08.7	298 54.4	6.5	S25 38.8	3.2	57.6
13	0	179 52.3	N 9 09.6	313 19.9	6.5	S25 41.8	3.0	57.5
	1	194 52.5	N 9 10.5	327 45.4	6.5	S25 44.7	2.9	57.5
	2	209 52.6	N 9 11.4	342 10.9	6.5	S25 47.4	2.7	57.5
	3	224 52.8	N 9 12.3	356 36.5	6.6	S25 49.9	2.5	57.4
	4	239 52.9	N 9 13.2	11 02.0	6.6	S25 52.3	2.4	57.4
T	5	254 53.1	N 9 14.1	25 27.6	6.6	S25 54.6	2.2	57.4
H								
U	6	269 53.3	N 9 15.0	39 53.3	6.6	S25 56.6	2.1	57.3
R	7	284 53.4	N 9 15.9	54 18.9	6.7	S25 58.5	1.9	57.3
S	8	299 53.6	N 9 16.8	68 44.6	6.7	S26 00.3	1.8	57.3
D	9	314 53.7	N 9 17.7	83 10.3	6.7	S26 01.9	1.6	57.2
A	10	329 53.9	N 9 18.6	97 36.1	6.8	S26 03.3	1.4	57.2
Y	11	344 54.0	N 9 19.5	112 01.9	6.8	S26 04.6	1.3	57.1
	12	359 54.2	N 9 20.4	126 27.7	6.8	S26 05.7	1.1	57.1
	13	14 54.3	N 9 21.3	140 53.6	6.9	S26 06.7	1.0	57.1
	14	29 54.5	N 9 22.2	155 19.5	6.9	S26 07.5	0.8	57.0
	15	44 54.7	N 9 23.1	169 45.5	7.0	S26 08.2	0.7	57.0
	16	59 54.8	N 9 24.0	184 11.4	7.0	S26 08.7	0.5	57.0
	17	74 55.0	N 9 24.9	198 37.5	7.0	S26 09.0	0.4	56.9
	18	89 55.1	N 9 25.8	213 03.6	7.1	S26 09.2	0.2	56.9
	19	104 55.3	N 9 26.7	227 29.7	7.1	S26 09.3	0.0	56.9
	20	119 55.4	N 9 27.6	241 55.9	7.2	S26 09.2	0.1	56.8
	21	134 55.6	N 9 28.5	256 22.1	7.2	S26 08.9	0.3	56.8
	22	149 55.7	N 9 29.4	270 48.4	7.3	S26 08.5	0.4	56.7
	23	164 55.9	N 9 30.3	285 14.7	7.3	S26 07.9	0.6	56.7
14	0	179 56.1	N 9 31.2	299 41.1	7.4	S26 07.2	0.7	56.7
	1	194 56.2	N 9 32.1	314 07.6	7.4	S26 06.4	0.9	56.6
	2	209 56.4	N 9 33.0	328 34.1	7.5	S26 05.4	1.0	56.6
	3	224 56.5	N 9 33.9	343 00.6	7.6	S26 04.2	1.2	56.6
	4	239 56.7	N 9 34.8	357 27.2	7.6	S26 02.9	1.3	56.5
F	5	254 56.8	N 9 35.7	11 53.9	7.7	S26 01.5	1.4	56.5
R								
I	6	269 57.0	N 9 36.6	26 20.7	7.7	S25 59.9	1.6	56.5
D	7	284 57.1	N 9 37.5	40 47.5	7.8	S25 58.2	1.7	56.4
A	8	299 57.3	N 9 38.4	55 14.3	7.9	S25 56.3	1.9	56.4
Y	9	314 57.4	N 9 39.3	69 41.3	7.9	S25 54.3	2.0	56.4
	10	329 57.6	N 9 40.2	84 08.3	8.0	S25 52.1	2.2	56.3
	11	344 57.7	N 9 41.1	98 35.3	8.1	S25 49.8	2.3	56.3
	12	359 57.9	N 9 42.0	113 02.5	8.1	S25 47.4	2.4	56.3
	13	14 58.0	N 9 42.9	127 29.7	8.2	S25 44.8	2.6	56.2
	14	29 58.2	N 9 43.8	141 56.9	8.3	S25 42.1	2.7	56.2
	15	44 58.3	N 9 44.7	156 24.3	8.3	S25 39.2	2.9	56.2
	16	59 58.5	N 9 45.6	170 51.7	8.4	S25 36.2	3.0	56.1
	17	74 58.7	N 9 46.5	185 19.2	8.5	S25 33.1	3.1	56.1
	18	89 58.8	N 9 47.3	199 46.7	8.6	S25 29.8	3.3	56.1
	19	104 59.0	N 9 48.2	214 14.3	8.6	S25 26.4	3.4	56.0
	20	119 59.1	N 9 49.1	228 42.1	8.7	S25 22.9	3.5	56.0
	21	134 59.3	N 9 50.0	243 09.8	8.8	S25 19.2	3.7	56.0
	22	149 59.4	N 9 50.9	257 37.7	8.9	S25 15.4	3.8	55.9
	23	164 59.6	N 9 51.8	272 05.6	8.9	S25 11.5	3.9	55.9
		S.D. 15.9	d 0.9	S.D. 15.8		15.6		15.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.6
Acrux	172 56.4	S63 15.5
Adhara	255 03.8	S29 00.9
Albireo	67 01.9	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.8	S46 49.2
Alnilam	275 35.2	S 1 11.2
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.2	N26 36.9
Alpheratz	357 32.3	N29 14.7
Altair	61 57.4	N 8 56.5
Ankaa	353 04.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 03.9	S69 04.5
Avior	234 13.5	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.4	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.7	N31 49.6
Deneb	49 24.1	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.9
Dubhe	193 37.3	N61 35.9
Elnath	277 58.7	N28 37.8
Eltanin	90 40.7	N51 28.8
Enif	33 36.3	N10 00.2
Fomalhaut	15 11.9	S29 28.3
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.6	N23 35.8
Kaus Austr.	83 28.9	S34 22.2
Kochab	137 19.0	N74 02.1
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.7
Miaplacidus	221 37.2	S69 50.4
Mirfak	308 24.9	N49 57.8
Nunki	75 44.4	S26 15.6
Peacock	53 01.6	S56 38.4
Polaris	315 52.1	N89 22.5
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.9	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.1	S60 57.2
Sabik	101 59.5	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.5	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.3	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
15	0	203 40.8	137 12.5	N26 18.9	184 47.9	N 7 20.5	33 24.6	N 5 48.1	174 45.2	N 9 27.9
	1	218 43.3	152 13.0	N26 19.3	199 48.6	N 7 21.3	48 27.2	N 5 48.2	189 47.3	N 9 28.0
	2	233 45.7	167 13.5	N26 19.7	214 49.3	N 7 22.0	63 29.9	N 5 48.3	204 49.5	N 9 28.1
	3	248 48.2	182 14.0	N26 20.1	229 50.0	N 7 22.7	78 32.5	N 5 48.3	219 51.6	N 9 28.2
	4	263 50.7	197 14.6	N26 20.5	244 50.7	N 7 23.5	93 35.2	N 5 48.4	234 53.8	N 9 28.4
S	5	278 53.1	212 15.1	N26 20.9	259 51.4	N 7 24.2	108 37.9	N 5 48.5	249 56.0	N 9 28.5
A										
T	6	293 55.6	227 15.6	N26 21.3	274 52.1	N 7 24.9	123 40.5	N 5 48.6	264 58.1	N 9 28.6
U	7	308 58.0	242 16.1	N26 21.7	289 52.8	N 7 25.7	138 43.2	N 5 48.6	280 00.3	N 9 28.7
R	8	324 00.5	257 16.6	N26 22.1	304 53.4	N 7 26.4	153 45.8	N 5 48.7	295 02.5	N 9 28.8
D	9	339 03.0	272 17.1	N26 22.5	319 54.1	N 7 27.2	168 48.5	N 5 48.8	310 04.6	N 9 28.9
A	10	354 05.4	287 17.7	N26 22.9	334 54.8	N 7 27.9	183 51.2	N 5 48.9	325 06.8	N 9 29.0
Y	11	9 07.9	302 18.2	N26 23.3	349 55.5	N 7 28.6	198 53.8	N 5 48.9	340 08.9	N 9 29.1
	12	24 10.4	317 18.7	N26 23.7	4 56.2	N 7 29.4	213 56.5	N 5 49.0	355 11.1	N 9 29.3
	13	39 12.8	332 19.2	N26 24.1	19 56.9	N 7 30.1	228 59.1	N 5 49.1	10 13.3	N 9 29.4
	14	54 15.3	347 19.8	N26 24.5	34 57.6	N 7 30.9	244 01.8	N 5 49.2	25 15.4	N 9 29.5
	15	69 17.8	2 20.3	N26 24.9	49 58.3	N 7 31.6	259 04.4	N 5 49.2	40 17.6	N 9 29.6
	16	84 20.2	17 20.8	N26 25.2	64 59.0	N 7 32.3	274 07.1	N 5 49.3	55 19.8	N 9 29.7
	17	99 22.7	32 21.4	N26 25.6	79 59.7	N 7 33.1	289 09.8	N 5 49.4	70 21.9	N 9 29.8
	18	114 25.2	47 21.9	N26 26.0	95 00.4	N 7 33.8	304 12.4	N 5 49.5	85 24.1	N 9 29.9
	19	129 27.6	62 22.4	N26 26.4	110 01.1	N 7 34.5	319 15.1	N 5 49.5	100 26.2	N 9 30.0
	20	144 30.1	77 23.0	N26 26.8	125 01.7	N 7 35.3	334 17.7	N 5 49.6	115 28.4	N 9 30.1
	21	159 32.5	92 23.5	N26 27.2	140 02.4	N 7 36.0	349 20.4	N 5 49.7	130 30.6	N 9 30.3
	22	174 35.0	107 24.0	N26 27.6	155 03.1	N 7 36.7	4 23.0	N 5 49.8	145 32.7	N 9 30.4
	23	189 37.5	122 24.6	N26 27.9	170 03.8	N 7 37.5	19 25.7	N 5 49.8	160 34.9	N 9 30.5
16	0	204 39.9	137 25.1	N26 28.3	185 04.5	N 7 38.2	34 28.3	N 5 49.9	175 37.1	N 9 30.6
	1	219 42.4	152 25.7	N26 28.7	200 05.2	N 7 39.0	49 31.0	N 5 50.0	190 39.2	N 9 30.7
	2	234 44.9	167 26.2	N26 29.1	215 05.9	N 7 39.7	64 33.6	N 5 50.1	205 41.4	N 9 30.8
	3	249 47.3	182 26.8	N26 29.5	230 06.6	N 7 40.4	79 36.3	N 5 50.1	220 43.5	N 9 30.9
	4	264 49.8	197 27.3	N26 29.8	245 07.3	N 7 41.2	94 39.0	N 5 50.2	235 45.7	N 9 31.0
S	5	279 52.3	212 27.9	N26 30.2	260 08.0	N 7 41.9	109 41.6	N 5 50.3	250 47.9	N 9 31.2
U										
N	6	294 54.7	227 28.4	N26 30.6	275 08.7	N 7 42.6	124 44.3	N 5 50.3	265 50.0	N 9 31.3
D	7	309 57.2	242 29.0	N26 31.0	290 09.4	N 7 43.4	139 46.9	N 5 50.4	280 52.2	N 9 31.4
A	8	324 59.7	257 29.6	N26 31.3	305 10.0	N 7 44.1	154 49.6	N 5 50.5	295 54.4	N 9 31.5
Y	9	340 02.1	272 30.1	N26 31.7	320 10.7	N 7 44.8	169 52.2	N 5 50.6	310 56.5	N 9 31.6
	10	355 04.6	287 30.7	N26 32.1	335 11.4	N 7 45.6	184 54.9	N 5 50.6	325 58.7	N 9 31.7
	11	10 07.0	302 31.2	N26 32.5	350 12.1	N 7 46.3	199 57.5	N 5 50.7	341 00.8	N 9 31.8
	12	25 09.5	317 31.8	N26 32.8	5 12.8	N 7 47.0	215 00.2	N 5 50.8	356 03.0	N 9 31.9
	13	40 12.0	332 32.4	N26 33.2	20 13.5	N 7 47.8	230 02.8	N 5 50.9	11 05.2	N 9 32.0
	14	55 14.4	347 33.0	N26 33.6	35 14.2	N 7 48.5	245 05.5	N 5 50.9	26 07.3	N 9 32.2
	15	70 16.9	2 33.5	N26 33.9	50 14.9	N 7 49.2	260 08.1	N 5 51.0	41 09.5	N 9 32.3
	16	85 19.4	17 34.1	N26 34.3	65 15.6	N 7 50.0	275 10.8	N 5 51.1	56 11.7	N 9 32.4
	17	100 21.8	32 34.7	N26 34.7	80 16.3	N 7 50.7	290 13.4	N 5 51.1	71 13.8	N 9 32.5
	18	115 24.3	47 35.2	N26 35.0	95 17.0	N 7 51.4	305 16.1	N 5 51.2	86 16.0	N 9 32.6
	19	130 26.8	62 35.8	N26 35.4	110 17.6	N 7 52.2	320 18.7	N 5 51.3	101 18.1	N 9 32.7
	20	145 29.2	77 36.4	N26 35.8	125 18.3	N 7 52.9	335 21.4	N 5 51.4	116 20.3	N 9 32.8
	21	160 31.7	92 37.0	N26 36.1	140 19.0	N 7 53.6	350 24.0	N 5 51.4	131 22.5	N 9 32.9
	22	175 34.2	107 37.6	N26 36.5	155 19.7	N 7 54.4	5 26.7	N 5 51.5	146 24.6	N 9 33.1
	23	190 36.6	122 38.2	N26 36.8	170 20.4	N 7 55.1	20 29.3	N 5 51.6	161 26.8	N 9 33.2
17	0	205 39.1	137 38.8	N26 37.2	185 21.1	N 7 55.8	35 32.0	N 5 51.6	176 28.9	N 9 33.3
	1	220 41.5	152 39.3	N26 37.6	200 21.8	N 7 56.6	50 34.6	N 5 51.7	191 31.1	N 9 33.4
	2	235 44.0	167 39.9	N26 37.9	215 22.5	N 7 57.3	65 37.3	N 5 51.8	206 33.3	N 9 33.5
	3	250 46.5	182 40.5	N26 38.3	230 23.2	N 7 58.0	80 39.9	N 5 51.9	221 35.4	N 9 33.6
	4	265 48.9	197 41.1	N26 38.6	245 23.9	N 7 58.8	95 42.6	N 5 51.9	236 37.6	N 9 33.7
M	5	280 51.4	212 41.7	N26 39.0	260 24.5	N 7 59.5	110 45.2	N 5 52.0	251 39.8	N 9 33.8
O										
N	6	295 53.9	227 42.3	N26 39.3	275 25.2	N 8 00.2	125 47.9	N 5 52.1	266 41.9	N 9 33.9
D	7	310 56.3	242 42.9	N26 39.7	290 25.9	N 8 00.9	140 50.5	N 5 52.1	281 44.1	N 9 34.1
A	8	325 58.8	257 43.5	N26 40.0	305 26.6	N 8 01.7	155 53.2	N 5 52.2	296 46.2	N 9 34.2
Y	9	341 01.3	272 44.1	N26 40.4	320 27.3	N 8 02.4	170 55.8	N 5 52.3	311 48.4	N 9 34.3
	10	356 03.7	287 44.7	N26 40.7	335 28.0	N 8 03.1	185 58.4	N 5 52.4	326 50.6	N 9 34.4
	11	11 06.2	302 45.4	N26 41.1	350 28.7	N 8 03.9	201 01.1	N 5 52.4	341 52.7	N 9 34.5
	12	26 08.6	317 46.0	N26 41.4	5 29.4	N 8 04.6	216 03.7	N 5 52.5	356 54.9	N 9 34.6
	13	41 11.1	332 46.6	N26 41.8	20 30.1	N 8 05.3	231 06.4	N 5 52.6	11 57.1	N 9 34.7
	14	56 13.6	347 47.2	N26 42.1	35 30.8	N 8 06.1	246 09.0	N 5 52.6	26 59.2	N 9 34.8
	15	71 16.0	2 47.8	N26 42.5	50 31.5	N 8 06.8	261 11.7	N 5 52.7	42 01.4	N 9 34.9
	16	86 18.5	17 48.4	N26 42.8	65 32.1	N 8 07.5	276 14.3	N 5 52.8	57 03.5	N 9 35.1
	17	101 21.0	32 49.0	N26 43.2	80 32.8	N 8 08.2	291 17.0	N 5 52.8	72 05.7	N 9 35.2
	18	116 23.4	47 49.7	N26 43.5	95 33.5	N 8 09.0	306 19.6	N 5 52.9	87 07.9	N 9 35.3
	19	131 25.9	62 50.3	N26 43.8	110 34.2	N 8 09.7	321 22.2	N 5 53.0	102 10.0	N 9 35.4
	20	146 28.4	77 50.9	N26 44.2	125 34.9	N 8 10.4	336 24.9	N 5 53.0	117 12.2	N 9 35.5
	21	161 30.8	92 51.5	N26 44.5	140 35.6	N 8 11.2	351 27.5	N 5 53.1	132 14.3	N 9 35.6
	22	176 33.3	107 52.2	N26 44.9	155 36.3	N 8 11.9	6 30.2	N 5 53.2	147 16.5	N 9 35.7
	23	191 35.8	122 52.8	N26 45.2	170 37.0	N 8 12.6	21 32.8	N 5 53.3	162 18.7	N 9 35.8
			v 0.6	d 0.4	v 0.7	d 0.7	v 2.7	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
15	0	179 59.7	N 9 52.7	286 33.6	9.0	S25 07.5	4.0	55.9
	1	194 59.9	N 9 53.6	301 01.7	9.1	S25 03.3	4.2	55.8
	2	210 00.0	N 9 54.5	315 29.9	9.2	S24 59.0	4.3	55.8
	3	225 00.2	N 9 55.4	329 58.2	9.3	S24 54.6	4.4	55.8
	4	240 00.3	N 9 56.3	344 26.5	9.3	S24 50.0	4.6	55.8
S	5	255 00.5	N 9 57.2	358 54.9	9.4	S24 45.3	4.7	55.7
A								
T	6	270 00.6	N 9 58.0	13 23.4	9.5	S24 40.5	4.8	55.7
U	7	285 00.8	N 9 58.9	27 52.0	9.6	S24 35.6	4.9	55.7
R	8	300 00.9	N 9 59.8	42 20.6	9.7	S24 30.6	5.0	55.6
D	9	315 01.1	N10 00.7	56 49.4	9.7	S24 25.4	5.2	55.6
A	10	330 01.2	N10 01.6	71 18.2	9.8	S24 20.1	5.3	55.6
Y	11	345 01.4	N10 02.5	85 47.1	9.9	S24 14.7	5.4	55.6
	12	0 01.5	N10 03.4	100 16.1	10.0	S24 09.2	5.5	55.5
	13	15 01.7	N10 04.3	114 45.1	10.1	S24 03.6	5.6	55.5
	14	30 01.8	N10 05.2	129 14.3	10.2	S23 57.8	5.7	55.5
	15	45 02.0	N10 06.0	143 43.5	10.2	S23 52.0	5.9	55.4
	16	60 02.1	N10 06.9	158 12.8	10.3	S23 46.0	6.0	55.4
	17	75 02.2	N10 07.8	172 42.3	10.4	S23 39.9	6.1	55.4
	18	90 02.4	N10 08.7	187 11.7	10.5	S23 33.7	6.2	55.4
	19	105 02.5	N10 09.6	201 41.3	10.6	S23 27.4	6.3	55.3
	20	120 02.7	N10 10.5	216 11.0	10.7	S23 21.0	6.4	55.3
	21	135 02.8	N10 11.4	230 40.7	10.7	S23 14.5	6.5	55.3
	22	150 03.0	N10 12.2	245 10.6	10.8	S23 07.8	6.6	55.3
	23	165 03.1	N10 13.1	259 40.5	10.9	S23 01.1	6.7	55.2
16	0	180 03.3	N10 14.0	274 10.5	11.0	S22 54.3	6.8	55.2
	1	195 03.4	N10 14.9	288 40.6	11.1	S22 47.3	6.9	55.2
	2	210 03.6	N10 15.8	303 10.7	11.2	S22 40.3	7.0	55.2
	3	225 03.7	N10 16.7	317 41.0	11.3	S22 33.1	7.1	55.1
	4	240 03.9	N10 17.6	332 11.3	11.3	S22 25.9	7.2	55.1
S	5	255 04.0	N10 18.4	346 41.8	11.4	S22 18.6	7.3	55.1
U								
N	6	270 04.2	N10 19.3	1 12.3	11.5	S22 11.1	7.4	55.1
D	7	285 04.3	N10 20.2	15 42.9	11.6	S22 03.6	7.5	55.0
A	8	300 04.4	N10 21.1	30 13.5	11.7	S21 55.9	7.6	55.0
Y	9	315 04.6	N10 22.0	44 44.3	11.8	S21 48.2	7.7	55.0
	10	330 04.7	N10 22.8	59 15.1	11.8	S21 40.4	7.8	55.0
	11	345 04.9	N10 23.7	73 46.1	11.9	S21 32.5	7.9	55.0
	12	0 05.0	N10 24.6	88 17.1	12.0	S21 24.5	8.0	54.9
	13	15 05.2	N10 25.5	102 48.2	12.1	S21 16.4	8.1	54.9
	14	30 05.3	N10 26.4	117 19.3	12.2	S21 08.2	8.2	54.9
	15	45 05.5	N10 27.3	131 50.6	12.3	S20 59.9	8.3	54.9
	16	60 05.6	N10 28.1	146 21.9	12.3	S20 51.5	8.4	54.8
	17	75 05.7	N10 29.0	160 53.4	12.4	S20 43.1	8.5	54.8
	18	90 05.9	N10 29.9	175 24.9	12.5	S20 34.5	8.5	54.8
	19	105 06.0	N10 30.8	189 56.4	12.6	S20 25.9	8.6	54.8
	20	120 06.2	N10 31.7	204 28.1	12.7	S20 17.2	8.7	54.8
	21	135 06.3	N10 32.5	218 59.8	12.7	S20 08.4	8.8	54.7
	22	150 06.5	N10 33.4	233 31.6	12.8	S19 59.5	8.9	54.7
	23	165 06.6	N10 34.3	248 03.5	12.9	S19 50.5	9.0	54.7
17	0	180 06.7	N10 35.2	262 35.5	13.0	S19 41.5	9.0	54.7
	1	195 06.9	N10 36.0	277 07.6	13.1	S19 32.4	9.1	54.7
	2	210 07.0	N10 36.9	291 39.7	13.1	S19 23.2	9.2	54.7
	3	225 07.2	N10 37.8	306 11.9	13.2	S19 13.9	9.3	54.6
	4	240 07.3	N10 38.7	320 44.2	13.3	S19 04.6	9.4	54.6
M	5	255 07.5	N10 39.5	335 16.5	13.4	S18 55.1	9.4	54.6
O								
N	6	270 07.6	N10 40.4	349 49.0	13.4	S18 45.6	9.5	54.6
D	7	285 07.7	N10 41.3	4 21.5	13.5	S18 36.0	9.6	54.6
A	8	300 07.9	N10 42.2	18 54.1	13.6	S18 26.4	9.7	54.6
Y	9	315 08.0	N10 43.1	33 26.7	13.7	S18 16.7	9.7	54.5
	10	330 08.2	N10 43.9	47 59.4	13.7	S18 06.9	9.8	54.5
	11	345 08.3	N10 44.8	62 32.2	13.8	S17 57.0	9.9	54.5
	12	0 08.4	N10 45.7	77 05.1	13.9	S17 47.1	9.9	54.5
	13	15 08.6	N10 46.5	91 38.0	13.9	S17 37.1	10.0	54.5
	14	30 08.7	N10 47.4	106 11.0	14.0	S17 27.0	10.1	54.5
	15	45 08.9	N10 48.3	120 44.1	14.1	S17 16.9	10.1	54.5
	16	60 09.0	N10 49.2	135 17.2	14.1	S17 06.7	10.2	54.4
	17	75 09.1	N10 50.0	149 50.5	14.2	S16 56.4	10.3	54.4
	18	90 09.3	N10 50.9	164 23.7	14.3	S16 46.0	10.3	54.4
	19	105 09.4	N10 51.8	178 57.1	14.3	S16 35.7	10.4	54.4
	20	120 09.6	N10 52.7	193 30.5	14.4	S16 25.2	10.5	54.4
	21	135 09.7	N10 53.5	208 03.9	14.5	S16 14.7	10.5	54.4
	22	150 09.8	N10 54.4	222 37.5	14.5	S16 04.1	10.6	54.4
	23	165 10.0	N10 55.3	237 11.1	14.6	S15 53.4	10.6	54.4
		S.D. 15.9	d 0.9	S.D. 15.1		15.0	14.8	

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.6
Achernar	335 18.8	S57 05.5
Acrux	172 56.4	S63 15.6
Adhara	255 03.8	S29 00.9
Albireo	67 01.9	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.8	S46 49.2
Alnilam	275 35.2	S 1 11.2
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.2	N26 36.9
Alpheratz	357 32.3	N29 14.7
Altair	61 57.3	N 8 56.5
Ankaa	353 04.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.2	N19 01.9
Atria	107 03.8	S69 04.5
Avior	234 13.5	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.4	S52 43.0
Capella	280 18.2	N46 01.7
Castor	245 53.7	N31 49.6
Deneb	49 24.0	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.9
Dubhe	193 37.3	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.7	N51 28.8
Enif	33 36.3	N10 00.2
Fomalhaut	15 11.8	S29 28.2
Gacrux	171 48.1	S57 16.5
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.9	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.7
Miaplacidus	221 37.2	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.4	S26 15.6
Peacock	53 01.6	S56 38.4
Polaris	315 52.1	N89 22.5
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.9	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.1	S60 57.2
Sabik	101 59.5	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.5	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.3	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
18	0	206 38.2	137 53.4	N26 45.5	185 37.7	N 8 13.3	36 35.5	N 5 53.3	177 20.8	N 9 35.9
	1	221 40.7	152 54.1	N26 45.9	200 38.4	N 8 14.1	51 38.1	N 5 53.4	192 23.0	N 9 36.1
	2	236 43.1	167 54.7	N26 46.2	215 39.0	N 8 14.8	66 40.7	N 5 53.5	207 25.2	N 9 36.2
	3	251 45.6	182 55.4	N26 46.5	230 39.7	N 8 15.5	81 43.4	N 5 53.5	222 27.3	N 9 36.3
	4	266 48.1	197 56.0	N26 46.9	245 40.4	N 8 16.3	96 46.0	N 5 53.6	237 29.5	N 9 36.4
T	5	281 50.5	212 56.6	N26 47.2	260 41.1	N 8 17.0	111 48.7	N 5 53.7	252 31.6	N 9 36.5
U										
E	6	296 53.0	227 57.3	N26 47.5	275 41.8	N 8 17.7	126 51.3	N 5 53.7	267 33.8	N 9 36.6
S	7	311 55.5	242 57.9	N26 47.9	290 42.5	N 8 18.4	141 54.0	N 5 53.8	282 36.0	N 9 36.7
D	8	326 57.9	257 58.6	N26 48.2	305 43.2	N 8 19.2	156 56.6	N 5 53.9	297 38.1	N 9 36.8
A	9	342 00.4	272 59.2	N26 48.5	320 43.9	N 8 19.9	171 59.2	N 5 53.9	312 40.3	N 9 37.0
Y	10	357 02.9	287 59.9	N26 48.9	335 44.6	N 8 20.6	187 01.9	N 5 54.0	327 42.4	N 9 37.1
	11	12 05.3	303 00.5	N26 49.2	350 45.2	N 8 21.3	202 04.5	N 5 54.1	342 44.6	N 9 37.2
	12	27 07.8	318 01.2	N26 49.5	5 45.9	N 8 22.1	217 07.2	N 5 54.1	357 46.8	N 9 37.3
	13	42 10.3	333 01.9	N26 49.8	20 46.6	N 8 22.8	232 09.8	N 5 54.2	12 48.9	N 9 37.4
	14	57 12.7	348 02.5	N26 50.2	35 47.3	N 8 23.5	247 12.4	N 5 54.3	27 51.1	N 9 37.5
	15	72 15.2	3 03.2	N26 50.5	50 48.0	N 8 24.3	262 15.1	N 5 54.3	42 53.3	N 9 37.6
	16	87 17.6	18 03.9	N26 50.8	65 48.7	N 8 25.0	277 17.7	N 5 54.4	57 55.4	N 9 37.7
	17	102 20.1	33 04.5	N26 51.1	80 49.4	N 8 25.7	292 20.4	N 5 54.5	72 57.6	N 9 37.8
	18	117 22.6	48 05.2	N26 51.5	95 50.1	N 8 26.4	307 23.0	N 5 54.5	87 59.7	N 9 38.0
	19	132 25.0	63 05.9	N26 51.8	110 50.8	N 8 27.2	322 25.6	N 5 54.6	103 01.9	N 9 38.1
	20	147 27.5	78 06.5	N26 52.1	125 51.4	N 8 27.9	337 28.3	N 5 54.7	118 04.1	N 9 38.2
	21	162 30.0	93 07.2	N26 52.4	140 52.1	N 8 28.6	352 30.9	N 5 54.7	133 06.2	N 9 38.3
	22	177 32.4	108 07.9	N26 52.7	155 52.8	N 8 29.3	7 33.5	N 5 54.8	148 08.4	N 9 38.4
	23	192 34.9	123 08.6	N26 53.0	170 53.5	N 8 30.1	22 36.2	N 5 54.9	163 10.5	N 9 38.5
19	0	207 37.4	138 09.3	N26 53.4	185 54.2	N 8 30.8	37 38.8	N 5 54.9	178 12.7	N 9 38.6
	1	222 39.8	153 09.9	N26 53.7	200 54.9	N 8 31.5	52 41.4	N 5 55.0	193 14.9	N 9 38.7
	2	237 42.3	168 10.6	N26 54.0	215 55.6	N 8 32.2	67 44.1	N 5 55.1	208 17.0	N 9 38.8
	3	252 44.7	183 11.3	N26 54.3	230 56.3	N 8 32.9	82 46.7	N 5 55.1	223 19.2	N 9 39.0
	4	267 47.2	198 12.0	N26 54.6	245 57.0	N 8 33.7	97 49.4	N 5 55.2	238 21.4	N 9 39.1
W	5	282 49.7	213 12.7	N26 54.9	260 57.6	N 8 34.4	112 52.0	N 5 55.3	253 23.5	N 9 39.2
E										
D	6	297 52.1	228 13.4	N26 55.2	275 58.3	N 8 35.1	127 54.6	N 5 55.3	268 25.7	N 9 39.3
N	7	312 54.6	243 14.1	N26 55.5	290 59.0	N 8 35.8	142 57.3	N 5 55.4	283 27.8	N 9 39.4
E	8	327 57.1	258 14.8	N26 55.9	305 59.7	N 8 36.6	157 59.9	N 5 55.5	298 30.0	N 9 39.5
S	9	342 59.5	273 15.5	N26 56.2	321 00.4	N 8 37.3	173 02.5	N 5 55.5	313 32.2	N 9 39.6
D	10	358 02.0	288 16.2	N26 56.5	336 01.1	N 8 38.0	188 05.2	N 5 55.6	328 34.3	N 9 39.7
A	11	13 04.5	303 16.9	N26 56.8	351 01.8	N 8 38.7	203 07.8	N 5 55.6	343 36.5	N 9 39.8
Y										
	12	28 06.9	318 17.6	N26 57.1	6 02.5	N 8 39.5	218 10.4	N 5 55.7	358 38.6	N 9 40.0
	13	43 09.4	333 18.3	N26 57.4	21 03.2	N 8 40.2	233 13.1	N 5 55.8	13 40.8	N 9 40.1
	14	58 11.9	348 19.0	N26 57.7	36 03.8	N 8 40.9	248 15.7	N 5 55.8	28 43.0	N 9 40.2
	15	73 14.3	3 19.7	N26 58.0	51 04.5	N 8 41.6	263 18.3	N 5 55.9	43 45.1	N 9 40.3
	16	88 16.8	18 20.4	N26 58.3	66 05.2	N 8 42.3	278 21.0	N 5 56.0	58 47.3	N 9 40.4
	17	103 19.2	33 21.2	N26 58.6	81 05.9	N 8 43.1	293 23.6	N 5 56.0	73 49.4	N 9 40.5
	18	118 21.7	48 21.9	N26 58.9	96 06.6	N 8 43.8	308 26.2	N 5 56.1	88 51.6	N 9 40.6
	19	133 24.2	63 22.6	N26 59.2	111 07.3	N 8 44.5	323 28.9	N 5 56.2	103 53.8	N 9 40.7
	20	148 26.6	78 23.3	N26 59.5	126 08.0	N 8 45.2	338 31.5	N 5 56.2	118 55.9	N 9 40.8
	21	163 29.1	93 24.1	N26 59.8	141 08.7	N 8 45.9	353 34.1	N 5 56.3	133 58.1	N 9 41.0
	22	178 31.6	108 24.8	N27 00.1	156 09.3	N 8 46.7	8 36.8	N 5 56.3	149 00.3	N 9 41.1
	23	193 34.0	123 25.5	N27 00.4	171 10.0	N 8 47.4	23 39.4	N 5 56.4	164 02.4	N 9 41.2
20	0	208 36.5	138 26.2	N27 00.7	186 10.7	N 8 48.1	38 42.0	N 5 56.5	179 04.6	N 9 41.3
	1	223 39.0	153 27.0	N27 01.0	201 11.4	N 8 48.8	53 44.6	N 5 56.5	194 06.7	N 9 41.4
	2	238 41.4	168 27.7	N27 01.2	216 12.1	N 8 49.5	68 47.3	N 5 56.6	209 08.9	N 9 41.5
	3	253 43.9	183 28.5	N27 01.5	231 12.8	N 8 50.3	83 49.9	N 5 56.7	224 11.1	N 9 41.6
	4	268 46.4	198 29.2	N27 01.8	246 13.5	N 8 51.0	98 52.5	N 5 56.7	239 13.2	N 9 41.7
T	5	283 48.8	213 29.9	N27 02.1	261 14.2	N 8 51.7	113 55.2	N 5 56.8	254 15.4	N 9 41.8
H										
U	6	298 51.3	228 30.7	N27 02.4	276 14.9	N 8 52.4	128 57.8	N 5 56.8	269 17.5	N 9 42.0
R	7	313 53.7	243 31.4	N27 02.7	291 15.5	N 8 53.1	144 00.4	N 5 56.9	284 19.7	N 9 42.1
S	8	328 56.2	258 32.2	N27 03.0	306 16.2	N 8 53.9	159 03.0	N 5 57.0	299 21.9	N 9 42.2
D	9	343 58.7	273 32.9	N27 03.3	321 16.9	N 8 54.6	174 05.7	N 5 57.0	314 24.0	N 9 42.3
A	10	359 01.1	288 33.7	N27 03.5	336 17.6	N 8 55.3	189 08.3	N 5 57.1	329 26.2	N 9 42.4
Y	11	14 03.6	303 34.4	N27 03.8	351 18.3	N 8 56.0	204 10.9	N 5 57.2	344 28.4	N 9 42.5
	12	29 06.1	318 35.2	N27 04.1	6 19.0	N 8 56.7	219 13.6	N 5 57.2	359 30.5	N 9 42.6
	13	44 08.5	333 36.0	N27 04.4	21 19.7	N 8 57.5	234 16.2	N 5 57.3	14 32.7	N 9 42.7
	14	59 11.0	348 36.7	N27 04.7	36 20.4	N 8 58.2	249 18.8	N 5 57.3	29 34.8	N 9 42.8
	15	74 13.5	3 37.5	N27 05.0	51 21.0	N 8 58.9	264 21.4	N 5 57.4	44 37.0	N 9 42.9
	16	89 15.9	18 38.3	N27 05.2	66 21.7	N 8 59.6	279 24.1	N 5 57.5	59 39.2	N 9 43.1
	17	104 18.4	33 39.0	N27 05.5	81 22.4	N 9 00.3	294 26.7	N 5 57.5	74 41.3	N 9 43.2
	18	119 20.8	48 39.8	N27 05.8	96 23.1	N 9 01.0	309 29.3	N 5 57.6	89 43.5	N 9 43.3
	19	134 23.3	63 40.6	N27 06.1	111 23.8	N 9 01.8	324 31.9	N 5 57.6	104 45.6	N 9 43.4
	20	149 25.8	78 41.4	N27 06.3	126 24.5	N 9 02.5	339 34.6	N 5 57.7	119 47.8	N 9 43.5
	21	164 28.2	93 42.1	N27 06.6	141 25.2	N 9 03.2	354 37.2	N 5 57.8	134 50.0	N 9 43.6
	22	179 30.7	108 42.9	N27 06.9	156 25.8	N 9 03.9	9 39.8	N 5 57.8	149 52.1	N 9 43.7
	23	194 33.2	123 43.7	N27 07.2	171 26.5	N 9 04.6	24 42.4	N 5 57.9	164 54.3	N 9 43.8
			v 0.7	d 0.3	v 0.7	d 0.7	v 2.6	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
18	0	180 10.1	N10 56.1	251 44.7	14.7	S15 42.7	10.7	54.3
	1	195 10.2	N10 57.0	266 18.4	14.7	S15 32.0	10.8	54.3
	2	210 10.4	N10 57.9	280 52.2	14.8	S15 21.1	10.8	54.3
	3	225 10.5	N10 58.7	295 26.1	14.8	S15 10.3	10.9	54.3
	4	240 10.7	N10 59.6	309 60.0	14.9	S14 59.3	10.9	54.3
T	5	255 10.8	N11 00.5	324 33.9	15.0	S14 48.3	11.0	54.3
U								
E	6	270 10.9	N11 01.4	339 07.9	15.0	S14 37.3	11.0	54.3
S	7	285 11.1	N11 02.2	353 42.0	15.1	S14 26.2	11.1	54.3
D	8	300 11.2	N11 03.1	8 16.1	15.1	S14 15.0	11.2	54.3
A	9	315 11.3	N11 04.0	22 50.3	15.2	S14 03.8	11.2	54.3
Y	10	330 11.5	N11 04.8	37 24.5	15.2	S13 52.6	11.3	54.2
	11	345 11.6	N11 05.7	51 58.8	15.3	S13 41.3	11.3	54.2
	12	0 11.8	N11 06.6	66 33.1	15.3	S13 29.9	11.4	54.2
	13	15 11.9	N11 07.4	81 07.5	15.4	S13 18.5	11.4	54.2
	14	30 12.0	N11 08.3	95 41.9	15.4	S13 07.1	11.5	54.2
	15	45 12.2	N11 09.2	110 16.4	15.5	S12 55.6	11.5	54.2
	16	60 12.3	N11 10.0	124 51.0	15.5	S12 44.0	11.6	54.2
	17	75 12.4	N11 10.9	139 25.5	15.6	S12 32.4	11.6	54.2
	18	90 12.6	N11 11.8	154 00.2	15.6	S12 20.8	11.6	54.2
	19	105 12.7	N11 12.6	168 34.8	15.7	S12 09.1	11.7	54.2
	20	120 12.8	N11 13.5	183 09.6	15.7	S11 57.3	11.7	54.2
	21	135 13.0	N11 14.3	197 44.3	15.8	S11 45.6	11.8	54.2
	22	150 13.1	N11 15.2	212 19.1	15.8	S11 33.7	11.8	54.2
	23	165 13.2	N11 16.1	226 54.0	15.8	S11 21.9	11.9	54.2
19	0	180 13.4	N11 16.9	241 28.8	15.9	S11 10.0	11.9	54.2
	1	195 13.5	N11 17.8	256 03.8	15.9	S10 58.0	11.9	54.2
	2	210 13.6	N11 18.7	270 38.7	16.0	S10 46.0	12.0	54.2
	3	225 13.8	N11 19.5	285 13.7	16.0	S10 34.0	12.0	54.1
	4	240 13.9	N11 20.4	299 48.8	16.0	S10 22.0	12.1	54.1
W	5	255 14.0	N11 21.2	314 23.9	16.1	S10 09.9	12.1	54.1
E								
D	6	270 14.2	N11 22.1	328 59.0	16.1	S 9 57.7	12.1	54.1
N	7	285 14.3	N11 23.0	343 34.1	16.1	S 9 45.6	12.2	54.1
E	8	300 14.4	N11 23.8	358 09.3	16.2	S 9 33.3	12.2	54.1
S	9	315 14.6	N11 24.7	12 44.5	16.2	S 9 21.1	12.2	54.1
D	10	330 14.7	N11 25.5	27 19.7	16.2	S 9 08.8	12.3	54.1
A	11	345 14.8	N11 26.4	41 55.0	16.3	S 8 56.5	12.3	54.1
Y								
	12	0 15.0	N11 27.3	56 30.3	16.3	S 8 44.2	12.3	54.1
	13	15 15.1	N11 28.1	71 05.6	16.3	S 8 31.8	12.4	54.1
	14	30 15.2	N11 29.0	85 41.0	16.4	S 8 19.4	12.4	54.1
	15	45 15.4	N11 29.8	100 16.4	16.4	S 8 06.9	12.4	54.1
	16	60 15.5	N11 30.7	114 51.8	16.4	S 7 54.5	12.5	54.1
	17	75 15.6	N11 31.6	129 27.2	16.4	S 7 41.9	12.5	54.1
	18	90 15.8	N11 32.4	144 02.7	16.5	S 7 29.4	12.5	54.1
	19	105 15.9	N11 33.3	158 38.2	16.5	S 7 16.9	12.6	54.1
	20	120 16.0	N11 34.1	173 13.7	16.5	S 7 04.3	12.6	54.1
	21	135 16.1	N11 35.0	187 49.2	16.5	S 6 51.7	12.6	54.1
	22	150 16.3	N11 35.8	202 24.8	16.5	S 6 39.0	12.6	54.1
	23	165 16.4	N11 36.7	217 00.3	16.6	S 6 26.3	12.7	54.1
20	0	180 16.5	N11 37.5	231 35.9	16.6	S 6 13.7	12.7	54.1
	1	195 16.7	N11 38.4	246 11.5	16.6	S 6 00.9	12.7	54.1
	2	210 16.8	N11 39.3	260 47.1	16.6	S 5 48.2	12.7	54.1
	3	225 16.9	N11 40.1	275 22.8	16.6	S 5 35.4	12.8	54.1
	4	240 17.0	N11 41.0	289 58.4	16.6	S 5 22.6	12.8	54.1
T	5	255 17.2	N11 41.8	304 34.1	16.7	S 5 09.8	12.8	54.2
H								
U	6	270 17.3	N11 42.7	319 09.7	16.7	S 4 57.0	12.8	54.2
R	7	285 17.4	N11 43.5	333 45.4	16.7	S 4 44.1	12.9	54.2
S	8	300 17.6	N11 44.4	348 21.1	16.7	S 4 31.3	12.9	54.2
D	9	315 17.7	N11 45.2	2 56.8	16.7	S 4 18.4	12.9	54.2
A	10	330 17.8	N11 46.1	17 32.5	16.7	S 4 05.5	12.9	54.2
Y	11	345 17.9	N11 46.9	32 08.2	16.7	S 3 52.6	12.9	54.2
	12	0 18.1	N11 47.8	46 44.0	16.7	S 3 39.6	12.9	54.2
	13	15 18.2	N11 48.6	61 19.7	16.7	S 3 26.6	13.0	54.2
	14	30 18.3	N11 49.5	75 55.4	16.7	S 3 13.7	13.0	54.2
	15	45 18.4	N11 50.3	90 31.2	16.7	S 3 00.7	13.0	54.2
	16	60 18.6	N11 51.2	105 06.9	16.7	S 2 47.7	13.0	54.2
	17	75 18.7	N11 52.0	119 42.6	16.7	S 2 34.7	13.0	54.2
	18	90 18.8	N11 52.9	134 18.4	16.7	S 2 21.6	13.0	54.2
	19	105 19.0	N11 53.7	148 54.1	16.7	S 2 08.6	13.0	54.2
	20	120 19.1	N11 54.6	163 29.9	16.7	S 1 55.5	13.1	54.2
	21	135 19.2	N11 55.4	178 05.6	16.7	S 1 42.4	13.1	54.2
	22	150 19.3	N11 56.3	192 41.3	16.7	S 1 29.4	13.1	54.2
	23	165 19.5	N11 57.1	207 17.1	16.7	S 1 16.3	13.1	54.3
		S.D. 15.9	d 0.9	S.D. 14.8	14.7	14.8		

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.2	S40 11.6
Achernar	335 18.8	S57 05.5
Acrux	172 56.4	S63 15.6
Adhara	255 03.9	S29 00.9
Albireo	67 01.8	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.3
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.8	S46 49.2
Alnilam	275 35.2	S 1 11.2
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.2	N26 37.0
Alpheratz	357 32.3	N29 14.7
Altair	61 57.3	N 8 56.5
Ankaa	353 04.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.1	N19 01.9
Atria	107 03.8	S69 04.6
Avior	234 13.5	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.4	S52 42.9
Capella	280 18.3	N46 01.7
Castor	245 53.7	N31 49.6
Deneb	49 24.0	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.8
Dubhe	193 37.3	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.7	N51 28.8
Enif	33 36.2	N10 00.2
Fomalhaut	15 11.8	S29 28.2
Gacrux	171 48.1	S57 16.6
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.8	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.5	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.8
Miaplacidus	221 37.3	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.3	S26 15.6
Peacock	53 01.5	S56 38.4
Polaris	315 52.3	N89 22.5
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.9	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.1	S60 57.2
Sabik	101 59.5	S15 45.7
Schedar	349 28.5	N56 41.5
Shaula	96 06.5	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.2	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
21	0	209 35.6	138 44.5	N27 07.4	186 27.2	N 9 05.3	39 45.1	N 5 58.0	179 56.4	N 9 43.9
	1	224 38.1	153 45.3	N27 07.7	201 27.9	N 9 06.1	54 47.7	N 5 58.0	194 58.6	N 9 44.1
	2	239 40.6	168 46.1	N27 08.0	216 28.6	N 9 06.8	69 50.3	N 5 58.1	210 00.8	N 9 44.2
	3	254 43.0	183 46.8	N27 08.2	231 29.3	N 9 07.5	84 52.9	N 5 58.1	225 02.9	N 9 44.3
	4	269 45.5	198 47.6	N27 08.5	246 30.0	N 9 08.2	99 55.6	N 5 58.2	240 05.1	N 9 44.4
F	5	284 48.0	213 48.4	N27 08.8	261 30.7	N 9 08.9	114 58.2	N 5 58.2	255 07.3	N 9 44.5
R										
I	6	299 50.4	228 49.2	N27 09.0	276 31.3	N 9 09.6	130 00.8	N 5 58.3	270 09.4	N 9 44.6
D	7	314 52.9	243 50.0	N27 09.3	291 32.0	N 9 10.3	145 03.4	N 5 58.4	285 11.6	N 9 44.7
A	8	329 55.3	258 50.8	N27 09.6	306 32.7	N 9 11.1	160 06.0	N 5 58.4	300 13.7	N 9 44.8
Y	9	344 57.8	273 51.6	N27 09.8	321 33.4	N 9 11.8	175 08.7	N 5 58.5	315 15.9	N 9 44.9
	10	0 00.3	288 52.5	N27 10.1	336 34.1	N 9 12.5	190 11.3	N 5 58.5	330 18.1	N 9 45.1
	11	15 02.7	303 53.3	N27 10.4	351 34.8	N 9 13.2	205 13.9	N 5 58.6	345 20.2	N 9 45.2
	12	30 05.2	318 54.1	N27 10.6	6 35.5	N 9 13.9	220 16.5	N 5 58.7	0 22.4	N 9 45.3
	13	45 07.7	333 54.9	N27 10.9	21 36.1	N 9 14.6	235 19.2	N 5 58.7	15 24.5	N 9 45.4
	14	60 10.1	348 55.7	N27 11.1	36 36.8	N 9 15.3	250 21.8	N 5 58.8	30 26.7	N 9 45.5
	15	75 12.6	3 56.5	N27 11.4	51 37.5	N 9 16.1	265 24.4	N 5 58.8	45 28.9	N 9 45.6
	16	90 15.1	18 57.3	N27 11.6	66 38.2	N 9 16.8	280 27.0	N 5 58.9	60 31.0	N 9 45.7
	17	105 17.5	33 58.2	N27 11.9	81 38.9	N 9 17.5	295 29.6	N 5 59.0	75 33.2	N 9 45.8
	18	120 20.0	48 59.0	N27 12.2	96 39.6	N 9 18.2	310 32.3	N 5 59.0	90 35.3	N 9 45.9
	19	135 22.5	63 59.8	N27 12.4	111 40.3	N 9 18.9	325 34.9	N 5 59.1	105 37.5	N 9 46.0
	20	150 24.9	79 00.7	N27 12.7	126 40.9	N 9 19.6	340 37.5	N 5 59.1	120 39.7	N 9 46.2
	21	165 27.4	94 01.5	N27 12.9	141 41.6	N 9 20.3	355 40.1	N 5 59.2	135 41.8	N 9 46.3
	22	180 29.8	109 02.3	N27 13.2	156 42.3	N 9 21.0	10 42.7	N 5 59.2	150 44.0	N 9 46.4
	23	195 32.3	124 03.2	N27 13.4	171 43.0	N 9 21.8	25 45.3	N 5 59.3	165 46.1	N 9 46.5
22	0	210 34.8	139 04.0	N27 13.7	186 43.7	N 9 22.5	40 48.0	N 5 59.4	180 48.3	N 9 46.6
	1	225 37.2	154 04.8	N27 13.9	201 44.4	N 9 23.2	55 50.6	N 5 59.4	195 50.5	N 9 46.7
	2	240 39.7	169 05.7	N27 14.2	216 45.1	N 9 23.9	70 53.2	N 5 59.5	210 52.6	N 9 46.8
	3	255 42.2	184 06.5	N27 14.4	231 45.7	N 9 24.6	85 55.8	N 5 59.5	225 54.8	N 9 46.9
	4	270 44.6	199 07.4	N27 14.7	246 46.4	N 9 25.3	100 58.4	N 5 59.6	240 57.0	N 9 47.0
S	5	285 47.1	214 08.2	N27 14.9	261 47.1	N 9 26.0	116 01.0	N 5 59.6	255 59.1	N 9 47.2
A										
T	6	300 49.6	229 09.1	N27 15.1	276 47.8	N 9 26.7	131 03.7	N 5 59.7	271 01.3	N 9 47.3
U	7	315 52.0	244 10.0	N27 15.4	291 48.5	N 9 27.4	146 06.3	N 5 59.8	286 03.4	N 9 47.4
R	8	330 54.5	259 10.8	N27 15.6	306 49.2	N 9 28.2	161 08.9	N 5 59.8	301 05.6	N 9 47.5
D	9	345 56.9	274 11.7	N27 15.9	321 49.9	N 9 28.9	176 11.5	N 5 59.9	316 07.8	N 9 47.6
A	10	0 59.4	289 12.5	N27 16.1	336 50.5	N 9 29.6	191 14.1	N 5 59.9	331 09.9	N 9 47.7
Y	11	16 01.9	304 13.4	N27 16.4	351 51.2	N 9 30.3	206 16.7	N 5 60.0	346 12.1	N 9 47.8
	12	31 04.3	319 14.3	N27 16.6	6 51.9	N 9 31.0	221 19.4	N 6 00.0	1 14.2	N 9 47.9
	13	46 06.8	334 15.2	N27 16.8	21 52.6	N 9 31.7	236 22.0	N 6 00.1	16 16.4	N 9 48.0
	14	61 09.3	349 16.0	N27 17.1	36 53.3	N 9 32.4	251 24.6	N 6 00.1	31 18.6	N 9 48.1
	15	76 11.7	4 16.9	N27 17.3	51 54.0	N 9 33.1	266 27.2	N 6 00.2	46 20.7	N 9 48.3
	16	91 14.2	19 17.8	N27 17.5	66 54.7	N 9 33.8	281 29.8	N 6 00.3	61 22.9	N 9 48.4
	17	106 16.7	34 18.7	N27 17.8	81 55.3	N 9 34.5	296 32.4	N 6 00.3	76 25.0	N 9 48.5
	18	121 19.1	49 19.5	N27 18.0	96 56.0	N 9 35.2	311 35.0	N 6 00.4	91 27.2	N 9 48.6
	19	136 21.6	64 20.4	N27 18.2	111 56.7	N 9 35.9	326 37.7	N 6 00.4	106 29.4	N 9 48.7
	20	151 24.1	79 21.3	N27 18.5	126 57.4	N 9 36.7	341 40.3	N 6 00.5	121 31.5	N 9 48.8
	21	166 26.5	94 22.2	N27 18.7	141 58.1	N 9 37.4	356 42.9	N 6 00.5	136 33.7	N 9 48.9
	22	181 29.0	109 23.1	N27 18.9	156 58.8	N 9 38.1	11 45.5	N 6 00.6	151 35.9	N 9 49.0
	23	196 31.4	124 24.0	N27 19.2	171 59.4	N 9 38.8	26 48.1	N 6 00.6	166 38.0	N 9 49.1
23	0	211 33.9	139 24.9	N27 19.4	187 00.1	N 9 39.5	41 50.7	N 6 00.7	181 40.2	N 9 49.2
	1	226 36.4	154 25.8	N27 19.6	202 00.8	N 9 40.2	56 53.3	N 6 00.8	196 42.3	N 9 49.4
	2	241 38.8	169 26.7	N27 19.8	217 01.5	N 9 40.9	71 55.9	N 6 00.8	211 44.5	N 9 49.5
	3	256 41.3	184 27.6	N27 20.1	232 02.2	N 9 41.6	86 58.5	N 6 00.9	226 46.7	N 9 49.6
	4	271 43.8	199 28.5	N27 20.3	247 02.9	N 9 42.3	102 01.2	N 6 00.9	241 48.8	N 9 49.7
S	5	286 46.2	214 29.4	N27 20.5	262 03.5	N 9 43.0	117 03.8	N 6 01.0	256 51.0	N 9 49.8
U										
N	6	301 48.7	229 30.3	N27 20.7	277 04.2	N 9 43.7	132 06.4	N 6 01.0	271 53.1	N 9 49.9
D	7	316 51.2	244 31.3	N27 21.0	292 04.9	N 9 44.4	147 09.0	N 6 01.1	286 55.3	N 9 50.0
A	8	331 53.6	259 32.2	N27 21.2	307 05.6	N 9 45.1	162 11.6	N 6 01.1	301 57.5	N 9 50.1
Y	9	346 56.1	274 33.1	N27 21.4	322 06.3	N 9 45.8	177 14.2	N 6 01.2	316 59.6	N 9 50.2
	10	1 58.5	289 34.0	N27 21.6	337 07.0	N 9 46.5	192 16.8	N 6 01.2	332 01.8	N 9 50.3
	11	17 01.0	304 34.9	N27 21.8	352 07.7	N 9 47.3	207 19.4	N 6 01.3	347 03.9	N 9 50.5
	12	32 03.5	319 35.9	N27 22.0	7 08.3	N 9 48.0	222 22.0	N 6 01.3	2 06.1	N 9 50.6
	13	47 05.9	334 36.8	N27 22.3	22 09.0	N 9 48.7	237 24.6	N 6 01.4	17 08.3	N 9 50.7
	14	62 08.4	349 37.7	N27 22.5	37 09.7	N 9 49.4	252 27.2	N 6 01.4	32 10.4	N 9 50.8
	15	77 10.9	4 38.7	N27 22.7	52 10.4	N 9 50.1	267 29.8	N 6 01.5	47 12.6	N 9 50.9
	16	92 13.3	19 39.6	N27 22.9	67 11.1	N 9 50.8	282 32.5	N 6 01.6	62 14.7	N 9 51.0
	17	107 15.8	34 40.6	N27 23.1	82 11.8	N 9 51.5	297 35.1	N 6 01.6	77 16.9	N 9 51.1
	18	122 18.3	49 41.5	N27 23.3	97 12.4	N 9 52.2	312 37.7	N 6 01.7	92 19.1	N 9 51.2
	19	137 20.7	64 42.4	N27 23.5	112 13.1	N 9 52.9	327 40.3	N 6 01.7	107 21.2	N 9 51.3
	20	152 23.2	79 43.4	N27 23.7	127 13.8	N 9 53.6	342 42.9	N 6 01.8	122 23.4	N 9 51.4
	21	167 25.7	94 44.3	N27 24.0	142 14.5	N 9 54.3	357 45.5	N 6 01.8	137 25.5	N 9 51.6
	22	182 28.1	109 45.3	N27 24.2	157 15.2	N 9 55.0	12 48.1	N 6 01.9	152 27.7	N 9 51.7
	23	197 30.6	124 46.3	N27 24.4	172 15.9	N 9 55.7	27 50.7	N 6 01.9	167 29.9	N 9 51.8
			v 0.9	d 0.2	v 0.7	d 0.7	v 2.6	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
21	0	180 19.6	N11 58.0	221 52.8	16.7	S 1 03.2	13.1	54.3
	1	195 19.7	N11 58.8	236 28.5	16.7	S 0 50.1	13.1	54.3
	2	210 19.8	N11 59.7	251 04.2	16.7	S 0 37.0	13.1	54.3
	3	225 19.9	N12 00.5	265 39.9	16.7	S 0 23.8	13.1	54.3
	4	240 20.1	N12 01.3	280 15.6	16.7	S 0 10.7	13.1	54.3
F	5	255 20.2	N12 02.2	294 51.3	16.7	N 0 02.4	13.1	54.3
R								
I	6	270 20.3	N12 03.0	309 26.9	16.7	N 0 15.6	13.1	54.3
D	7	285 20.4	N12 03.9	324 02.6	16.7	N 0 28.7	13.1	54.3
A	8	300 20.6	N12 04.7	338 38.2	16.6	N 0 41.9	13.1	54.3
Y	9	315 20.7	N12 05.6	353 13.9	16.6	N 0 55.0	13.2	54.3
	10	330 20.8	N12 06.4	7 49.5	16.6	N 1 08.2	13.2	54.4
	11	345 20.9	N12 07.3	22 25.1	16.6	N 1 21.3	13.2	54.4
	12	0 21.1	N12 08.1	37 00.7	16.6	N 1 34.5	13.2	54.4
	13	15 21.2	N12 08.9	51 36.2	16.6	N 1 47.6	13.2	54.4
	14	30 21.3	N12 09.8	66 11.8	16.5	N 2 00.8	13.2	54.4
	15	45 21.4	N12 10.6	80 47.3	16.5	N 2 13.9	13.2	54.4
	16	60 21.5	N12 11.5	95 22.8	16.5	N 2 27.1	13.2	54.4
	17	75 21.7	N12 12.3	109 58.3	16.5	N 2 40.2	13.1	54.4
	18	90 21.8	N12 13.1	124 33.7	16.5	N 2 53.4	13.1	54.4
	19	105 21.9	N12 14.0	139 09.1	16.4	N 3 06.5	13.1	54.4
	20	120 22.0	N12 14.8	153 44.6	16.4	N 3 19.6	13.1	54.5
	21	135 22.1	N12 15.7	168 19.9	16.4	N 3 32.8	13.1	54.5
	22	150 22.3	N12 16.5	182 55.3	16.4	N 3 45.9	13.1	54.5
	23	165 22.4	N12 17.3	197 30.6	16.3	N 3 59.0	13.1	54.5
22	0	180 22.5	N12 18.2	212 05.9	16.3	N 4 12.1	13.1	54.5
	1	195 22.6	N12 19.0	226 41.2	16.3	N 4 25.2	13.1	54.5
	2	210 22.7	N12 19.9	241 16.4	16.2	N 4 38.3	13.1	54.5
	3	225 22.9	N12 20.7	255 51.6	16.2	N 4 51.4	13.1	54.5
	4	240 23.0	N12 21.5	270 26.8	16.2	N 5 04.4	13.1	54.6
S	5	255 23.1	N12 22.4	285 01.9	16.1	N 5 17.5	13.1	54.6
A								
T	6	270 23.2	N12 23.2	299 37.0	16.1	N 5 30.5	13.0	54.6
U	7	285 23.3	N12 24.0	314 12.1	16.1	N 5 43.6	13.0	54.6
R	8	300 23.5	N12 24.9	328 47.1	16.0	N 5 56.6	13.0	54.6
D	9	315 23.6	N12 25.7	343 22.1	16.0	N 6 09.6	13.0	54.6
A	10	330 23.7	N12 26.6	357 57.1	16.0	N 6 22.5	13.0	54.6
Y	11	345 23.8	N12 27.4	12 32.0	15.9	N 6 35.5	13.0	54.7
	12	0 23.9	N12 28.2	27 06.8	15.9	N 6 48.4	12.9	54.7
	13	15 24.0	N12 29.1	41 41.7	15.8	N 7 01.4	12.9	54.7
	14	30 24.2	N12 29.9	56 16.5	15.8	N 7 14.3	12.9	54.7
	15	45 24.3	N12 30.7	70 51.2	15.7	N 7 27.2	12.9	54.7
	16	60 24.4	N12 31.6	85 25.9	15.7	N 7 40.0	12.9	54.7
	17	75 24.5	N12 32.4	100 00.6	15.7	N 7 52.9	12.8	54.7
	18	90 24.6	N12 33.2	114 35.2	15.6	N 8 05.7	12.8	54.8
	19	105 24.7	N12 34.1	129 09.7	15.6	N 8 18.5	12.8	54.8
	20	120 24.9	N12 34.9	143 44.2	15.5	N 8 31.3	12.8	54.8
	21	135 25.0	N12 35.7	158 18.7	15.5	N 8 44.0	12.7	54.8
	22	150 25.1	N12 36.5	172 53.1	15.4	N 8 56.7	12.7	54.8
	23	165 25.2	N12 37.4	187 27.5	15.4	N 9 09.4	12.7	54.8
23	0	180 25.3	N12 38.2	202 01.8	15.3	N 9 22.1	12.7	54.9
	1	195 25.4	N12 39.0	216 36.1	15.3	N 9 34.7	12.6	54.9
	2	210 25.6	N12 39.9	231 10.3	15.2	N 9 47.3	12.6	54.9
	3	225 25.7	N12 40.7	245 44.4	15.2	N 9 59.9	12.6	54.9
	4	240 25.8	N12 41.5	260 18.5	15.1	N10 12.4	12.5	54.9
S	5	255 25.9	N12 42.4	274 52.6	15.0	N10 24.9	12.5	54.9
U								
N	6	270 26.0	N12 43.2	289 26.5	15.0	N10 37.4	12.5	55.0
D	7	285 26.1	N12 44.0	304 00.5	14.9	N10 49.8	12.4	55.0
A	8	300 26.2	N12 44.8	318 34.3	14.9	N11 02.2	12.4	55.0
Y	9	315 26.4	N12 45.7	333 08.1	14.8	N11 14.6	12.4	55.0
	10	330 26.5	N12 46.5	347 41.9	14.7	N11 26.9	12.3	55.0
	11	345 26.6	N12 47.3	2 15.6	14.7	N11 39.2	12.3	55.0
	12	0 26.7	N12 48.1	16 49.2	14.6	N11 51.5	12.2	55.1
	13	15 26.8	N12 49.0	31 22.8	14.6	N12 03.7	12.2	55.1
	14	30 26.9	N12 49.8	45 56.3	14.5	N12 15.8	12.2	55.1
	15	45 27.0	N12 50.6	60 29.7	14.4	N12 27.9	12.1	55.1
	16	60 27.1	N12 51.4	75 03.1	14.4	N12 40.0	12.1	55.1
	17	75 27.2	N12 52.3	89 36.4	14.3	N12 52.1	12.0	55.1
	18	90 27.4	N12 53.1	104 09.6	14.2	N13 04.0	12.0	55.2
	19	105 27.5	N12 53.9	118 42.8	14.2	N13 16.0	11.9	55.2
	20	120 27.6	N12 54.7	133 15.9	14.1	N13 27.9	11.9	55.2
	21	135 27.7	N12 55.6	147 48.9	14.0	N13 39.7	11.8	55.2
	22	150 27.8	N12 56.4	162 21.9	14.0	N13 51.5	11.8	55.2
	23	165 27.9	N12 57.2	176 54.8	13.9	N14 03.3	11.7	55.3
		S.D. 15.9	d 0.8	S.D. 14.8		14.9		15.0

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.2	S40 11.5
Achernar	335 18.8	S57 05.5
Acrux	172 56.4	S63 15.6
Adhara	255 03.9	S29 00.9
Albireo	67 01.8	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.4
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.8	S46 49.2
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.3	N29 14.7
Altair	61 57.3	N 8 56.5
Ankaa	353 04.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.1	N19 01.9
Atria	107 03.7	S69 04.6
Avior	234 13.6	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.4	S52 42.9
Capella	280 18.3	N46 01.7
Castor	245 53.7	N31 49.6
Deneb	49 24.0	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.8
Dubhe	193 37.3	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.7	N51 28.8
Enif	33 36.2	N10 00.2
Fomalhaut	15 11.8	S29 28.2
Gacrux	171 48.1	S57 16.6
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.8	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.4	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.8
Miaplacidus	221 37.3	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.3	S26 15.6
Peacock	53 01.5	S56 38.4
Polaris	315 52.4	N89 22.5
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.9	N12 32.2
Regulus	207 31.4	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.1	S60 57.2
Sabik	101 59.5	S15 45.7
Schedar	349 28.4	N56 41.4
Shaula	96 06.5	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.2	N38 48.3
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
24	0	212 33.0	139 47.2	N27 24.6	187 16.5	N 9 56.4	42 53.3	N 6 02.0	182 32.0	N 9 51.9
	1	227 35.5	154 48.2	N27 24.8	202 17.2	N 9 57.1	57 55.9	N 6 02.0	197 34.2	N 9 52.0
	2	242 38.0	169 49.1	N27 25.0	217 17.9	N 9 57.8	72 58.5	N 6 02.1	212 36.4	N 9 52.1
	3	257 40.4	184 50.1	N27 25.2	232 18.6	N 9 58.5	88 01.1	N 6 02.1	227 38.5	N 9 52.2
	4	272 42.9	199 51.1	N27 25.4	247 19.3	N 9 59.2	103 03.7	N 6 02.2	242 40.7	N 9 52.3
M	5	287 45.4	214 52.1	N27 25.6	262 20.0	N 9 59.9	118 06.3	N 6 02.2	257 42.8	N 9 52.4
O										
N	6	302 47.8	229 53.0	N27 25.8	277 20.6	N10 00.6	133 08.9	N 6 02.3	272 45.0	N 9 52.5
D	7	317 50.3	244 54.0	N27 26.0	292 21.3	N10 01.3	148 11.5	N 6 02.3	287 47.2	N 9 52.7
A	8	332 52.8	259 55.0	N27 26.2	307 22.0	N10 02.0	163 14.1	N 6 02.4	302 49.3	N 9 52.8
Y	9	347 55.2	274 56.0	N27 26.4	322 22.7	N10 02.7	178 16.7	N 6 02.4	317 51.5	N 9 52.9
	10	2 57.7	289 57.0	N27 26.6	337 23.4	N10 03.4	193 19.3	N 6 02.5	332 53.6	N 9 53.0
	11	18 00.1	304 57.9	N27 26.8	352 24.1	N10 04.1	208 21.9	N 6 02.5	347 55.8	N 9 53.1
	12	33 02.6	319 58.9	N27 27.0	7 24.7	N10 04.8	223 24.5	N 6 02.6	2 58.0	N 9 53.2
	13	48 05.1	334 59.9	N27 27.2	22 25.4	N10 05.5	238 27.1	N 6 02.6	18 00.1	N 9 53.3
	14	63 07.5	350 00.9	N27 27.4	37 26.1	N10 06.2	253 29.7	N 6 02.7	33 02.3	N 9 53.4
	15	78 10.0	5 01.9	N27 27.5	52 26.8	N10 06.9	268 32.3	N 6 02.7	48 04.4	N 9 53.5
	16	93 12.5	20 02.9	N27 27.7	67 27.5	N10 07.6	283 34.9	N 6 02.8	63 06.6	N 9 53.6
	17	108 14.9	35 03.9	N27 27.9	82 28.1	N10 08.3	298 37.5	N 6 02.8	78 08.8	N 9 53.7
	18	123 17.4	50 04.9	N27 28.1	97 28.8	N10 09.0	313 40.1	N 6 02.9	93 10.9	N 9 53.9
	19	138 19.9	65 05.9	N27 28.3	112 29.5	N10 09.7	328 42.7	N 6 02.9	108 13.1	N 9 54.0
	20	153 22.3	80 07.0	N27 28.5	127 30.2	N10 10.4	343 45.3	N 6 03.0	123 15.2	N 9 54.1
	21	168 24.8	95 08.0	N27 28.7	142 30.9	N10 11.1	358 47.9	N 6 03.0	138 17.4	N 9 54.2
	22	183 27.3	110 09.0	N27 28.9	157 31.6	N10 11.8	13 50.5	N 6 03.1	153 19.6	N 9 54.3
	23	198 29.7	125 10.0	N27 29.0	172 32.2	N10 12.5	28 53.1	N 6 03.1	168 21.7	N 9 54.4
25	0	213 32.2	140 11.0	N27 29.2	187 32.9	N10 13.2	43 55.7	N 6 03.2	183 23.9	N 9 54.5
	1	228 34.6	155 12.1	N27 29.4	202 33.6	N10 13.9	58 58.3	N 6 03.2	198 26.1	N 9 54.6
	2	243 37.1	170 13.1	N27 29.6	217 34.3	N10 14.6	74 00.9	N 6 03.3	213 28.2	N 9 54.7
	3	258 39.6	185 14.1	N27 29.8	232 35.0	N10 15.3	89 03.5	N 6 03.3	228 30.4	N 9 54.8
	4	273 42.0	200 15.2	N27 30.0	247 35.7	N10 16.0	104 06.1	N 6 03.4	243 32.5	N 9 55.0
T	5	288 44.5	215 16.2	N27 30.1	262 36.3	N10 16.7	119 08.7	N 6 03.4	258 34.7	N 9 55.1
U										
E	6	303 47.0	230 17.2	N27 30.3	277 37.0	N10 17.4	134 11.3	N 6 03.5	273 36.9	N 9 55.2
S	7	318 49.4	245 18.3	N27 30.5	292 37.7	N10 18.1	149 13.9	N 6 03.5	288 39.0	N 9 55.3
D	8	333 51.9	260 19.3	N27 30.7	307 38.4	N10 18.8	164 16.5	N 6 03.5	303 41.2	N 9 55.4
A	9	348 54.4	275 20.4	N27 30.8	322 39.1	N10 19.5	179 19.1	N 6 03.6	318 43.3	N 9 55.5
Y	10	3 56.8	290 21.4	N27 31.0	337 39.7	N10 20.2	194 21.7	N 6 03.6	333 45.5	N 9 55.6
	11	18 59.3	305 22.5	N27 31.2	352 40.4	N10 20.9	209 24.3	N 6 03.7	348 47.7	N 9 55.7
	12	34 01.8	320 23.5	N27 31.4	7 41.1	N10 21.6	224 26.9	N 6 03.7	3 49.8	N 9 55.8
	13	49 04.2	335 24.6	N27 31.5	22 41.8	N10 22.3	239 29.5	N 6 03.8	18 52.0	N 9 55.9
	14	64 06.7	350 25.6	N27 31.7	37 42.5	N10 23.0	254 32.1	N 6 03.8	33 54.1	N 9 56.0
	15	79 09.1	5 26.7	N27 31.9	52 43.1	N10 23.7	269 34.7	N 6 03.9	48 56.3	N 9 56.2
	16	94 11.6	20 27.8	N27 32.0	67 43.8	N10 24.4	284 37.3	N 6 03.9	63 58.5	N 9 56.3
	17	109 14.1	35 28.8	N27 32.2	82 44.5	N10 25.0	299 39.9	N 6 04.0	79 00.6	N 9 56.4
	18	124 16.5	50 29.9	N27 32.4	97 45.2	N10 25.7	314 42.5	N 6 04.0	94 02.8	N 9 56.5
	19	139 19.0	65 31.0	N27 32.5	112 45.9	N10 26.4	329 45.0	N 6 04.1	109 04.9	N 9 56.6
	20	154 21.5	80 32.1	N27 32.7	127 46.6	N10 27.1	344 47.6	N 6 04.1	124 07.1	N 9 56.7
	21	169 23.9	95 33.2	N27 32.9	142 47.2	N10 27.8	359 50.2	N 6 04.2	139 09.3	N 9 56.8
	22	184 26.4	110 34.2	N27 33.0	157 47.9	N10 28.5	14 52.8	N 6 04.2	154 11.4	N 9 56.9
	23	199 28.9	125 35.3	N27 33.2	172 48.6	N10 29.2	29 55.4	N 6 04.2	169 13.6	N 9 57.0
26	0	214 31.3	140 36.4	N27 33.4	187 49.3	N10 29.9	44 58.0	N 6 04.3	184 15.8	N 9 57.1
	1	229 33.8	155 37.5	N27 33.5	202 50.0	N10 30.6	60 00.6	N 6 04.3	199 17.9	N 9 57.2
	2	244 36.2	170 38.6	N27 33.7	217 50.6	N10 31.3	75 03.2	N 6 04.4	214 20.1	N 9 57.4
	3	259 38.7	185 39.7	N27 33.8	232 51.3	N10 32.0	90 05.8	N 6 04.4	229 22.2	N 9 57.5
	4	274 41.2	200 40.8	N27 34.0	247 52.0	N10 32.7	105 08.4	N 6 04.5	244 24.4	N 9 57.6
W	5	289 43.6	215 41.9	N27 34.1	262 52.7	N10 33.4	120 11.0	N 6 04.5	259 26.6	N 9 57.7
E										
D	6	304 46.1	230 43.0	N27 34.3	277 53.4	N10 34.1	135 13.6	N 6 04.6	274 28.7	N 9 57.8
N	7	319 48.6	245 44.1	N27 34.5	292 54.0	N10 34.8	150 16.1	N 6 04.6	289 30.9	N 9 57.9
E	8	334 51.0	260 45.2	N27 34.6	307 54.7	N10 35.4	165 18.7	N 6 04.7	304 33.0	N 9 58.0
S	9	349 53.5	275 46.3	N27 34.8	322 55.4	N10 36.1	180 21.3	N 6 04.7	319 35.2	N 9 58.1
D	10	4 56.0	290 47.5	N27 34.9	337 56.1	N10 36.8	195 23.9	N 6 04.7	334 37.4	N 9 58.2
A	11	19 58.4	305 48.6	N27 35.1	352 56.8	N10 37.5	210 26.5	N 6 04.8	349 39.5	N 9 58.3
Y										
	12	35 00.9	320 49.7	N27 35.2	7 57.4	N10 38.2	225 29.1	N 6 04.8	4 41.7	N 9 58.4
	13	50 03.4	335 50.8	N27 35.4	22 58.1	N10 38.9	240 31.7	N 6 04.9	19 43.8	N 9 58.6
	14	65 05.8	350 52.0	N27 35.5	37 58.8	N10 39.6	255 34.3	N 6 04.9	34 46.0	N 9 58.7
	15	80 08.3	5 53.1	N27 35.7	52 59.5	N10 40.3	270 36.8	N 6 05.0	49 48.2	N 9 58.8
	16	95 10.7	20 54.2	N27 35.8	68 00.2	N10 41.0	285 39.4	N 6 05.0	64 50.3	N 9 58.9
	17	110 13.2	35 55.4	N27 36.0	83 00.8	N10 41.7	300 42.0	N 6 05.0	79 52.5	N 9 59.0
	18	125 15.7	50 56.5	N27 36.1	98 01.5	N10 42.3	315 44.6	N 6 05.1	94 54.7	N 9 59.1
	19	140 18.1	65 57.7	N27 36.2	113 02.2	N10 43.0	330 47.2	N 6 05.1	109 56.8	N 9 59.2
	20	155 20.6	80 58.8	N27 36.4	128 02.9	N10 43.7	345 49.8	N 6 05.2	124 59.0	N 9 59.3
	21	170 23.1	95 60.0	N27 36.5	143 03.6	N10 44.4	0 52.4	N 6 05.2	140 01.1	N 9 59.4
	22	185 25.5	111 01.1	N27 36.7	158 04.2	N10 45.1	15 55.0	N 6 05.3	155 03.3	N 9 59.5
	23	200 28.0	126 02.3	N27 36.8	173 04.9	N10 45.8	30 57.5	N 6 05.3	170 05.5	N 9 59.6
			v 1.1	d 0.2	v 0.7	d 0.7	v 2.6	d 0.0	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP	
		° '	° '		° '	'	° '	'	'	
24	0	180 28.0	N12 58.0		191 27.6	13.8	N14 14.9	11.7	55.3	
	1	195 28.1	N12 58.8		206 00.3	13.7	N14 26.6	11.6	55.3	
	2	210 28.2	N12 59.7		220 33.0	13.7	N14 38.2	11.6	55.3	
	3	225 28.4	N13 00.5		235 05.6	13.6	N14 49.7	11.5	55.3	
	4	240 28.5	N13 01.3		249 38.1	13.5	N15 01.2	11.5	55.3	
M	5	255 28.6	N13 02.1		264 10.6	13.5	N15 12.6	11.4	55.4	
O										
N	6	270 28.7	N13 02.9		278 43.0	13.4	N15 23.9	11.4	55.4	
D	7	285 28.8	N13 03.8		293 15.3	13.3	N15 35.2	11.3	55.4	
A	8	300 28.9	N13 04.6		307 47.5	13.2	N15 46.4	11.2	55.4	
Y	9	315 29.0	N13 05.4		322 19.6	13.1	N15 57.6	11.2	55.4	
	10	330 29.1	N13 06.2		336 51.7	13.1	N16 08.7	11.1	55.5	
	11	345 29.2	N13 07.0		351 23.7	13.0	N16 19.8	11.0	55.5	
	12	0 29.3	N13 07.8		5 55.6	12.9	N16 30.7	11.0	55.5	
	13	15 29.4	N13 08.7		20 27.4	12.8	N16 41.6	10.9	55.5	
	14	30 29.5	N13 09.5		34 59.2	12.8	N16 52.5	10.8	55.5	
	15	45 29.6	N13 10.3		49 30.8	12.7	N17 03.2	10.8	55.6	
	16	60 29.8	N13 11.1		64 02.4	12.6	N17 13.9	10.7	55.6	
	17	75 29.9	N13 11.9		78 33.9	12.5	N17 24.6	10.6	55.6	
	18	90 30.0	N13 12.7		93 05.4	12.4	N17 35.1	10.6	55.6	
	19	105 30.1	N13 13.6		107 36.7	12.3	N17 45.6	10.5	55.6	
	20	120 30.2	N13 14.4		122 08.0	12.3	N17 56.0	10.4	55.7	
	21	135 30.3	N13 15.2		136 39.1	12.2	N18 06.4	10.3	55.7	
	22	150 30.4	N13 16.0		151 10.2	12.1	N18 16.6	10.3	55.7	
	23	165 30.5	N13 16.8		165 41.2	12.0	N18 26.8	10.2	55.7	
25	0	180 30.6	N13 17.6		180 12.2	11.9	N18 36.9	10.1	55.7	
	1	195 30.7	N13 18.4		194 43.0	11.8	N18 46.9	10.0	55.8	
	2	210 30.8	N13 19.2		209 13.8	11.8	N18 56.8	9.9	55.8	
	3	225 30.9	N13 20.1		223 44.4	11.7	N19 06.7	9.8	55.8	
	4	240 31.0	N13 20.9		238 15.0	11.6	N19 16.4	9.8	55.8	
T	5	255 31.1	N13 21.7		252 45.5	11.5	N19 26.1	9.7	55.8	
U										
E	6	270 31.2	N13 22.5		267 15.9	11.4	N19 35.7	9.6	55.9	
S	7	285 31.3	N13 23.3		281 46.2	11.3	N19 45.2	9.5	55.9	
D	8	300 31.4	N13 24.1		296 16.5	11.2	N19 54.6	9.4	55.9	
A	9	315 31.5	N13 24.9		310 46.6	11.1	N20 03.9	9.3	55.9	
Y	10	330 31.6	N13 25.7		325 16.7	11.1	N20 13.2	9.2	55.9	
	11	345 31.7	N13 26.5		339 46.7	11.0	N20 22.3	9.1	56.0	
	12	0 31.8	N13 27.3		354 16.5	10.9	N20 31.4	9.0	56.0	
	13	15 31.9	N13 28.1		8 46.3	10.8	N20 40.3	8.9	56.0	
	14	30 32.0	N13 28.9		23 16.1	10.7	N20 49.2	8.9	56.0	
	15	45 32.2	N13 29.8		37 45.7	10.6	N20 57.9	8.8	56.0	
	16	60 32.3	N13 30.6		52 15.2	10.5	N21 06.6	8.7	56.1	
	17	75 32.4	N13 31.4		66 44.7	10.5	N21 15.1	8.6	56.1	
	18	90 32.5	N13 32.2		81 14.0	10.4	N21 23.6	8.5	56.1	
	19	105 32.6	N13 33.0		95 43.3	10.3	N21 31.9	8.3	56.1	
	20	120 32.7	N13 33.8		110 12.5	10.2	N21 40.2	8.2	56.1	
	21	135 32.8	N13 34.6		124 41.6	10.1	N21 48.3	8.1	56.2	
	22	150 32.9	N13 35.4		139 10.6	10.0	N21 56.3	8.0	56.2	
	23	165 33.0	N13 36.2		153 39.6	9.9	N22 04.3	7.9	56.2	
26	0	180 33.1	N13 37.0		168 08.4	9.8	N22 12.1	7.8	56.2	
	1	195 33.2	N13 37.8		182 37.2	9.8	N22 19.8	7.7	56.3	
	2	210 33.3	N13 38.6		197 05.8	9.7	N22 27.4	7.6	56.3	
	3	225 33.4	N13 39.4		211 34.4	9.6	N22 34.8	7.5	56.3	
	4	240 33.5	N13 40.2		226 02.9	9.5	N22 42.2	7.4	56.3	
W	5	255 33.6	N13 41.0		240 31.3	9.4	N22 49.5	7.3	56.3	
E										
D	6	270 33.7	N13 41.8		254 59.7	9.3	N22 56.6	7.1	56.4	
N	7	285 33.8	N13 42.6		269 27.9	9.3	N23 03.6	7.0	56.4	
E	8	300 33.8	N13 43.4		283 56.1	9.2	N23 10.5	6.9	56.4	
S	9	315 33.9	N13 44.2		298 24.2	9.1	N23 17.3	6.8	56.4	
D	10	330 34.0	N13 45.0		312 52.2	9.0	N23 24.0	6.7	56.4	
A	11	345 34.1	N13 45.8		327 20.1	8.9	N23 30.5	6.5	56.5	
Y										
	12	0 34.2	N13 46.6		341 48.0	8.8	N23 36.9	6.4	56.5	
	13	15 34.3	N13 47.4		356 15.7	8.8	N23 43.2	6.3	56.5	
	14	30 34.4	N13 48.2		10 43.4	8.7	N23 49.4	6.2	56.5	
	15	45 34.5	N13 49.0		25 11.0	8.6	N23 55.4	6.0	56.5	
	16	60 34.6	N13 49.8		39 38.5	8.5	N24 01.3	5.9	56.6	
	17	75 34.7	N13 50.6		54 06.0	8.5	N24 07.1	5.8	56.6	
	18	90 34.8	N13 51.4		68 33.4	8.4	N24 12.7	5.7	56.6	
	19	105 34.9	N13 52.2		83 00.7	8.3	N24 18.3	5.5	56.6	
	20	120 35.0	N13 53.0		97 27.9	8.2	N24 23.6	5.4	56.6	
	21	135 35.1	N13 53.8		111 55.0	8.2	N24 28.9	5.3	56.7	
	22	150 35.2	N13 54.6		126 22.1	8.1	N24 34.0	5.1	56.7	
	23	165 35.3	N13 55.4		140 49.1	8.0	N24 39.0	5.0	56.7	
		S.D. 15.9	d 0.8		S.D. 15.1		15.3		15.4	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.2	S40 11.5
Achernar	335 18.8	S57 05.5
Acrux	172 56.4	S63 15.6
Adhara	255 03.9	S29 00.9
Albireo	67 01.8	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.4
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.7	S46 49.2
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.3	N29 14.7
Altair	61 57.3	N 8 56.5
Ankaa	353 04.9	S42 09.0
Antares	112 12.2	S26 29.7
Arcturus	145 45.1	N19 01.9
Atria	107 03.7	S69 04.6
Avior	234 13.6	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.5	S52 42.9
Capella	280 18.3	N46 01.6
Castor	245 53.7	N31 49.6
Deneb	49 24.0	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 45.0	S17 49.8
Dubhe	193 37.4	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.6	N51 28.8
Enif	33 36.2	N10 00.2
Fomalhaut	15 11.8	S29 28.2
Gacrux	171 48.1	S57 16.6
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.8	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.4	N15 21.3
Menkar	314 03.6	N 4 12.0
Menkent	147 54.1	S36 30.8
Miaplacidus	221 37.4	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.3	S26 15.6
Peacock	53 01.5	S56 38.4
Polaris	315 52.2	N89 22.4
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.9	N12 32.2
Regulus	207 31.5	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.0	S60 57.2
Sabik	101 59.5	S15 45.7
Schedar	349 28.4	N56 41.4
Shaula	96 06.4	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.2	N38 48.3
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
27	0	215 30.5	141 03.4	N27 36.9	188 05.6	N10 46.5	46 00.1	N 6 05.3	185 07.6	N 9 59.8
	1	230 32.9	156 04.6	N27 37.1	203 06.3	N10 47.2	61 02.7	N 6 05.4	200 09.8	N 9 59.9
	2	245 35.4	171 05.8	N27 37.2	218 07.0	N10 47.9	76 05.3	N 6 05.4	215 11.9	N 9 60.0
	3	260 37.9	186 06.9	N27 37.4	233 07.6	N10 48.5	91 07.9	N 6 05.5	230 14.1	N10 00.1
	4	275 40.3	201 08.1	N27 37.5	248 08.3	N10 49.2	106 10.5	N 6 05.5	245 16.3	N10 00.2
T	5	290 42.8	216 09.3	N27 37.6	263 09.0	N10 49.9	121 13.0	N 6 05.6	260 18.4	N10 00.3
H U	6	305 45.2	231 10.4	N27 37.8	278 09.7	N10 50.6	136 15.6	N 6 05.6	275 20.6	N10 00.4
R	7	320 47.7	246 11.6	N27 37.9	293 10.4	N10 51.3	151 18.2	N 6 05.6	290 22.7	N10 00.5
S	8	335 50.2	261 12.8	N27 38.0	308 11.0	N10 52.0	166 20.8	N 6 05.7	305 24.9	N10 00.6
D	9	350 52.6	276 14.0	N27 38.2	323 11.7	N10 52.7	181 23.4	N 6 05.7	320 27.1	N10 00.7
A	10	5 55.1	291 15.2	N27 38.3	338 12.4	N10 53.4	196 26.0	N 6 05.8	335 29.2	N10 00.8
Y	11	20 57.6	306 16.4	N27 38.4	353 13.1	N10 54.0	211 28.5	N 6 05.8	350 31.4	N10 01.0
	12	36 00.0	321 17.6	N27 38.5	8 13.7	N10 54.7	226 31.1	N 6 05.9	5 33.6	N10 01.1
	13	51 02.5	336 18.8	N27 38.7	23 14.4	N10 55.4	241 33.7	N 6 05.9	20 35.7	N10 01.2
	14	66 05.0	351 20.0	N27 38.8	38 15.1	N10 56.1	256 36.3	N 6 05.9	35 37.9	N10 01.3
	15	81 07.4	6 21.2	N27 38.9	53 15.8	N10 56.8	271 38.9	N 6 06.0	50 40.0	N10 01.4
	16	96 09.9	21 22.4	N27 39.0	68 16.5	N10 57.5	286 41.4	N 6 06.0	65 42.2	N10 01.5
	17	111 12.4	36 23.6	N27 39.2	83 17.1	N10 58.2	301 44.0	N 6 06.1	80 44.4	N10 01.6
	18	126 14.8	51 24.8	N27 39.3	98 17.8	N10 58.8	316 46.6	N 6 06.1	95 46.5	N10 01.7
	19	141 17.3	66 26.0	N27 39.4	113 18.5	N10 59.5	331 49.2	N 6 06.1	110 48.7	N10 01.8
	20	156 19.7	81 27.2	N27 39.5	128 19.2	N11 00.2	346 51.8	N 6 06.2	125 50.8	N10 01.9
	21	171 22.2	96 28.5	N27 39.7	143 19.9	N11 00.9	1 54.3	N 6 06.2	140 53.0	N10 02.0
	22	186 24.7	111 29.7	N27 39.8	158 20.5	N11 01.6	16 56.9	N 6 06.3	155 55.2	N10 02.1
	23	201 27.1	126 30.9	N27 39.9	173 21.2	N11 02.3	31 59.5	N 6 06.3	170 57.3	N10 02.3
28	0	216 29.6	141 32.2	N27 40.0	188 21.9	N11 02.9	47 02.1	N 6 06.3	185 59.5	N10 02.4
	1	231 32.1	156 33.4	N27 40.1	203 22.6	N11 03.6	62 04.7	N 6 06.4	201 01.6	N10 02.5
	2	246 34.5	171 34.6	N27 40.2	218 23.2	N11 04.3	77 07.2	N 6 06.4	216 03.8	N10 02.6
	3	261 37.0	186 35.9	N27 40.3	233 23.9	N11 05.0	92 09.8	N 6 06.5	231 06.0	N10 02.7
	4	276 39.5	201 37.1	N27 40.5	248 24.6	N11 05.7	107 12.4	N 6 06.5	246 08.1	N10 02.8
F	5	291 41.9	216 38.4	N27 40.6	263 25.3	N11 06.4	122 15.0	N 6 06.5	261 10.3	N10 02.9
R I	6	306 44.4	231 39.6	N27 40.7	278 26.0	N11 07.0	137 17.5	N 6 06.6	276 12.5	N10 03.0
D	7	321 46.8	246 40.9	N27 40.8	293 26.6	N11 07.7	152 20.1	N 6 06.6	291 14.6	N10 03.1
A	8	336 49.3	261 42.1	N27 40.9	308 27.3	N11 08.4	167 22.7	N 6 06.6	306 16.8	N10 03.2
Y	9	351 51.8	276 43.4	N27 41.0	323 28.0	N11 09.1	182 25.3	N 6 06.7	321 18.9	N10 03.3
	10	6 54.2	291 44.6	N27 41.1	338 28.7	N11 09.8	197 27.8	N 6 06.7	336 21.1	N10 03.4
	11	21 56.7	306 45.9	N27 41.2	353 29.3	N11 10.4	212 30.4	N 6 06.8	351 23.3	N10 03.6
	12	36 59.2	321 47.2	N27 41.3	8 30.0	N11 11.1	227 33.0	N 6 06.8	6 25.4	N10 03.7
	13	52 01.6	336 48.5	N27 41.4	23 30.7	N11 11.8	242 35.6	N 6 06.8	21 27.6	N10 03.8
	14	67 04.1	351 49.7	N27 41.5	38 31.4	N11 12.5	257 38.1	N 6 06.9	36 29.7	N10 03.9
	15	82 06.6	6 51.0	N27 41.6	53 32.1	N11 13.2	272 40.7	N 6 06.9	51 31.9	N10 04.0
	16	97 09.0	21 52.3	N27 41.7	68 32.7	N11 13.8	287 43.3	N 6 06.9	66 34.1	N10 04.1
	17	112 11.5	36 53.6	N27 41.8	83 33.4	N11 14.5	302 45.9	N 6 07.0	81 36.2	N10 04.2
	18	127 14.0	51 54.9	N27 41.9	98 34.1	N11 15.2	317 48.4	N 6 07.0	96 38.4	N10 04.3
	19	142 16.4	66 56.2	N27 42.0	113 34.8	N11 15.9	332 51.0	N 6 07.1	111 40.6	N10 04.4
	20	157 18.9	81 57.4	N27 42.1	128 35.4	N11 16.6	347 53.6	N 6 07.1	126 42.7	N10 04.5
	21	172 21.3	96 58.7	N27 42.2	143 36.1	N11 17.2	2 56.1	N 6 07.1	141 44.9	N10 04.6
	22	187 23.8	112 00.0	N27 42.3	158 36.8	N11 17.9	17 58.7	N 6 07.2	156 47.0	N10 04.7
	23	202 26.3	127 01.4	N27 42.4	173 37.5	N11 18.6	33 01.3	N 6 07.2	171 49.2	N10 04.9
29	0	217 28.7	142 02.7	N27 42.5	188 38.1	N11 19.3	48 03.9	N 6 07.2	186 51.4	N10 05.0
	1	232 31.2	157 04.0	N27 42.6	203 38.8	N11 20.0	63 06.4	N 6 07.3	201 53.5	N10 05.1
	2	247 33.7	172 05.3	N27 42.7	218 39.5	N11 20.6	78 09.0	N 6 07.3	216 55.7	N10 05.2
	3	262 36.1	187 06.6	N27 42.8	233 40.2	N11 21.3	93 11.6	N 6 07.4	231 57.8	N10 05.3
	4	277 38.6	202 07.9	N27 42.9	248 40.9	N11 22.0	108 14.1	N 6 07.4	247 00.0	N10 05.4
S	5	292 41.1	217 09.2	N27 43.0	263 41.5	N11 22.7	123 16.7	N 6 07.4	262 02.2	N10 05.5
A T	6	307 43.5	232 10.6	N27 43.1	278 42.2	N11 23.3	138 19.3	N 6 07.5	277 04.3	N10 05.6
U	7	322 46.0	247 11.9	N27 43.2	293 42.9	N11 24.0	153 21.9	N 6 07.5	292 06.5	N10 05.7
R	8	337 48.5	262 13.2	N27 43.2	308 43.6	N11 24.7	168 24.4	N 6 07.5	307 08.7	N10 05.8
D	9	352 50.9	277 14.6	N27 43.3	323 44.2	N11 25.4	183 27.0	N 6 07.6	322 10.8	N10 05.9
A	10	7 53.4	292 15.9	N27 43.4	338 44.9	N11 26.1	198 29.6	N 6 07.6	337 13.0	N10 06.0
Y	11	22 55.8	307 17.3	N27 43.5	353 45.6	N11 26.7	213 32.1	N 6 07.6	352 15.1	N10 06.1
	12	37 58.3	322 18.6	N27 43.6	8 46.3	N11 27.4	228 34.7	N 6 07.7	7 17.3	N10 06.3
	13	53 00.8	337 20.0	N27 43.7	23 46.9	N11 28.1	243 37.3	N 6 07.7	22 19.5	N10 06.4
	14	68 03.2	352 21.3	N27 43.7	38 47.6	N11 28.8	258 39.8	N 6 07.7	37 21.6	N10 06.5
	15	83 05.7	7 22.7	N27 43.8	53 48.3	N11 29.4	273 42.4	N 6 07.8	52 23.8	N10 06.6
	16	98 08.2	22 24.0	N27 43.9	68 49.0	N11 30.1	288 45.0	N 6 07.8	67 25.9	N10 06.7
	17	113 10.6	37 25.4	N27 44.0	83 49.6	N11 30.8	303 47.5	N 6 07.8	82 28.1	N10 06.8
	18	128 13.1	52 26.8	N27 44.1	98 50.3	N11 31.5	318 50.1	N 6 07.9	97 30.3	N10 06.9
	19	143 15.6	67 28.1	N27 44.1	113 51.0	N11 32.1	333 52.7	N 6 07.9	112 32.4	N10 07.0
	20	158 18.0	82 29.5	N27 44.2	128 51.7	N11 32.8	348 55.2	N 6 08.0	127 34.6	N10 07.1
	21	173 20.5	97 30.9	N27 44.3	143 52.3	N11 33.5	3 57.8	N 6 08.0	142 36.8	N10 07.2
	22	188 23.0	112 32.3	N27 44.4	158 53.0	N11 34.2	19 00.4	N 6 08.0	157 38.9	N10 07.3
	23	203 25.4	127 33.6	N27 44.4	173 53.7	N11 34.8	34 02.9	N 6 08.1	172 41.1	N10 07.4
			v 1.3	d 0.1	v 0.7	d 0.7	v 2.6	d 0.0	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
27	0	180 35.4	N13 56.2	155 16.1	7.9	N24 43.9	4.9	56.7
	1	195 35.5	N13 56.9	169 42.9	7.9	N24 48.6	4.7	56.8
	2	210 35.6	N13 57.7	184 09.7	7.8	N24 53.1	4.6	56.8
	3	225 35.7	N13 58.5	198 36.5	7.7	N24 57.6	4.4	56.8
	4	240 35.8	N13 59.3	213 03.1	7.7	N25 01.9	4.3	56.8
T	5	255 35.9	N14 00.1	227 29.7	7.6	N25 06.0	4.2	56.8
H								
U	6	270 36.0	N14 00.9	241 56.3	7.5	N25 10.0	4.0	56.9
R	7	285 36.0	N14 01.7	256 22.7	7.5	N25 13.9	3.9	56.9
S	8	300 36.1	N14 02.5	270 49.1	7.4	N25 17.6	3.7	56.9
D	9	315 36.2	N14 03.3	285 15.5	7.4	N25 21.2	3.6	56.9
A	10	330 36.3	N14 04.1	299 41.8	7.3	N25 24.7	3.4	56.9
Y	11	345 36.4	N14 04.9	314 08.0	7.2	N25 28.0	3.3	57.0
	12	0 36.5	N14 05.6	328 34.2	7.2	N25 31.1	3.1	57.0
	13	15 36.6	N14 06.4	343 00.3	7.1	N25 34.1	3.0	57.0
	14	30 36.7	N14 07.2	357 26.4	7.1	N25 37.0	2.9	57.0
	15	45 36.8	N14 08.0	11 52.4	7.0	N25 39.7	2.7	57.0
	16	60 36.9	N14 08.8	26 18.4	7.0	N25 42.2	2.6	57.1
	17	75 37.0	N14 09.6	40 44.3	6.9	N25 44.6	2.4	57.1
	18	90 37.1	N14 10.4	55 10.2	6.9	N25 46.9	2.3	57.1
	19	105 37.1	N14 11.2	69 36.0	6.8	N25 49.0	2.1	57.1
	20	120 37.2	N14 11.9	84 01.8	6.8	N25 50.9	1.9	57.1
	21	135 37.3	N14 12.7	98 27.5	6.7	N25 52.7	1.8	57.2
	22	150 37.4	N14 13.5	112 53.2	6.7	N25 54.3	1.6	57.2
	23	165 37.5	N14 14.3	127 18.8	6.7	N25 55.8	1.5	57.2
28	0	180 37.6	N14 15.1	141 44.5	6.6	N25 57.2	1.3	57.2
	1	195 37.7	N14 15.9	156 10.0	6.6	N25 58.3	1.2	57.2
	2	210 37.8	N14 16.6	170 35.6	6.5	N25 59.4	1.0	57.3
	3	225 37.9	N14 17.4	185 01.1	6.5	N26 00.2	0.9	57.3
	4	240 38.0	N14 18.2	199 26.6	6.5	N26 00.9	0.7	57.3
F	5	255 38.0	N14 19.0	213 52.0	6.4	N26 01.5	0.6	57.3
R								
I	6	270 38.1	N14 19.8	228 17.4	6.4	N26 01.9	0.4	57.4
D	7	285 38.2	N14 20.6	242 42.8	6.4	N26 02.1	0.2	57.4
A	8	300 38.3	N14 21.3	257 08.2	6.4	N26 02.2	0.1	57.4
Y	9	315 38.4	N14 22.1	271 33.5	6.3	N26 02.1	0.1	57.4
	10	330 38.5	N14 22.9	285 58.9	6.3	N26 01.9	0.2	57.4
	11	345 38.6	N14 23.7	300 24.2	6.3	N26 01.5	0.4	57.5
	12	0 38.7	N14 24.4	314 49.4	6.3	N26 00.9	0.6	57.5
	13	15 38.7	N14 25.2	329 14.7	6.3	N26 00.2	0.7	57.5
	14	30 38.8	N14 26.0	343 40.0	6.3	N25 59.3	0.9	57.5
	15	45 38.9	N14 26.8	358 05.2	6.2	N25 58.3	1.0	57.5
	16	60 39.0	N14 27.6	12 30.4	6.2	N25 57.1	1.2	57.6
	17	75 39.1	N14 28.3	26 55.6	6.2	N25 55.7	1.4	57.6
	18	90 39.2	N14 29.1	41 20.8	6.2	N25 54.2	1.5	57.6
	19	105 39.3	N14 29.9	55 46.0	6.2	N25 52.5	1.7	57.6
	20	120 39.3	N14 30.7	70 11.2	6.2	N25 50.7	1.8	57.6
	21	135 39.4	N14 31.4	84 36.4	6.2	N25 48.7	2.0	57.7
	22	150 39.5	N14 32.2	99 01.6	6.2	N25 46.6	2.2	57.7
	23	165 39.6	N14 33.0	113 26.8	6.2	N25 44.2	2.3	57.7
29	0	180 39.7	N14 33.8	127 52.0	6.2	N25 41.8	2.5	57.7
	1	195 39.8	N14 34.5	142 17.2	6.2	N25 39.1	2.6	57.7
	2	210 39.8	N14 35.3	156 42.4	6.2	N25 36.3	2.8	57.8
	3	225 39.9	N14 36.1	171 07.6	6.2	N25 33.4	3.0	57.8
	4	240 40.0	N14 36.9	185 32.8	6.2	N25 30.3	3.1	57.8
S	5	255 40.1	N14 37.6	199 58.1	6.2	N25 27.0	3.3	57.8
A								
T	6	270 40.2	N14 38.4	214 23.3	6.2	N25 23.6	3.4	57.8
U	7	285 40.3	N14 39.2	228 48.6	6.3	N25 20.0	3.6	57.9
R	8	300 40.3	N14 39.9	243 13.8	6.3	N25 16.2	3.7	57.9
D	9	315 40.4	N14 40.7	257 39.1	6.3	N25 12.3	3.9	57.9
A	10	330 40.5	N14 41.5	272 04.4	6.3	N25 08.3	4.1	57.9
Y	11	345 40.6	N14 42.2	286 29.7	6.3	N25 04.0	4.2	57.9
	12	0 40.7	N14 43.0	300 55.1	6.3	N24 59.7	4.4	58.0
	13	15 40.8	N14 43.8	315 20.4	6.4	N24 55.1	4.5	58.0
	14	30 40.8	N14 44.6	329 45.8	6.4	N24 50.4	4.7	58.0
	15	45 40.9	N14 45.3	344 11.2	6.4	N24 45.6	4.8	58.0
	16	60 41.0	N14 46.1	358 36.7	6.4	N24 40.6	5.0	58.0
	17	75 41.1	N14 46.9	13 02.2	6.5	N24 35.5	5.2	58.1
	18	90 41.2	N14 47.6	27 27.6	6.5	N24 30.1	5.3	58.1
	19	105 41.2	N14 48.4	41 53.2	6.5	N24 24.7	5.5	58.1
	20	120 41.3	N14 49.2	56 18.7	6.6	N24 19.1	5.6	58.1
	21	135 41.4	N14 49.9	70 44.3	6.6	N24 13.3	5.8	58.1
	22	150 41.5	N14 50.7	85 10.0	6.6	N24 07.4	5.9	58.1
	23	165 41.6	N14 51.4	99 35.6	6.7	N24 01.3	6.1	58.2
		S.D. 15.9	d 0.8	S.D. 15.5		15.7		15.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.2	S40 11.5
Achernar	335 18.8	S57 05.5
Acrux	172 56.4	S63 15.6
Adhara	255 03.9	S29 00.9
Albireo	67 01.8	N28 00.9
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.4
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.7	S46 49.2
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.3	N29 14.7
Altair	61 57.3	N 8 56.5
Ankaa	353 04.9	S42 09.0
Antares	112 12.2	S26 29.7
Arcturus	145 45.1	N19 01.9
Atria	107 03.6	S69 04.6
Avior	234 13.6	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.5	S52 42.9
Capella	280 18.3	N46 01.6
Castor	245 53.7	N31 49.6
Deneb	49 23.9	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 44.9	S17 49.8
Dubhe	193 37.4	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.6	N51 28.8
Enif	33 36.2	N10 00.2
Fomalhaut	15 11.8	S29 28.2
Gacrux	171 48.1	S57 16.6
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.8	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.4	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.4	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.3	S26 15.6
Peacock	53 01.4	S56 38.3
Polaris	315 51.9	N89 22.4
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.8	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.0	S60 57.2
Sabik	101 59.4	S15 45.7
Schedar	349 28.4	N56 41.4
Shaula	96 06.4	S37 07.4
Sirius	258 24.0	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.2	S43 33.2
Vega	80 31.2	N38 48.3
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
30	0	218 27.9	142 35.0	N27 44.5	188 54.4	N11 35.5	49 05.5	N 6 08.1	187 43.2	N10 07.5
	1	233 30.3	157 36.4	N27 44.6	203 55.0	N11 36.2	64 08.1	N 6 08.1	202 45.4	N10 07.7
	2	248 32.8	172 37.8	N27 44.6	218 55.7	N11 36.8	79 10.6	N 6 08.2	217 47.6	N10 07.8
	3	263 35.3	187 39.2	N27 44.7	233 56.4	N11 37.5	94 13.2	N 6 08.2	232 49.7	N10 07.9
	4	278 37.7	202 40.6	N27 44.8	248 57.1	N11 38.2	109 15.7	N 6 08.2	247 51.9	N10 08.0
S	5	293 40.2	217 42.0	N27 44.9	263 57.7	N11 38.9	124 18.3	N 6 08.3	262 54.0	N10 08.1
U										
N	6	308 42.7	232 43.4	N27 44.9	278 58.4	N11 39.5	139 20.9	N 6 08.3	277 56.2	N10 08.2
D	7	323 45.1	247 44.8	N27 45.0	293 59.1	N11 40.2	154 23.4	N 6 08.3	292 58.4	N10 08.3
A	8	338 47.6	262 46.2	N27 45.0	308 59.8	N11 40.9	169 26.0	N 6 08.3	308 00.5	N10 08.4
Y	9	353 50.1	277 47.7	N27 45.1	324 00.4	N11 41.5	184 28.6	N 6 08.4	323 02.7	N10 08.5
	10	8 52.5	292 49.1	N27 45.2	339 01.1	N11 42.2	199 31.1	N 6 08.4	338 04.9	N10 08.6
	11	23 55.0	307 50.5	N27 45.2	354 01.8	N11 42.9	214 33.7	N 6 08.4	353 07.0	N10 08.7
	12	38 57.5	322 51.9	N27 45.3	9 02.5	N11 43.6	229 36.2	N 6 08.5	8 09.2	N10 08.8
	13	53 59.9	337 53.4	N27 45.4	24 03.1	N11 44.2	244 38.8	N 6 08.5	23 11.3	N10 08.9
	14	69 02.4	352 54.8	N27 45.4	39 03.8	N11 44.9	259 41.4	N 6 08.5	38 13.5	N10 09.1
	15	84 04.8	7 56.2	N27 45.5	54 04.5	N11 45.6	274 43.9	N 6 08.6	53 15.7	N10 09.2
	16	99 07.3	22 57.7	N27 45.5	69 05.2	N11 46.2	289 46.5	N 6 08.6	68 17.8	N10 09.3
	17	114 09.8	37 59.1	N27 45.6	84 05.8	N11 46.9	304 49.0	N 6 08.6	83 20.0	N10 09.4
	18	129 12.2	53 00.6	N27 45.6	99 06.5	N11 47.6	319 51.6	N 6 08.7	98 22.2	N10 09.5
	19	144 14.7	68 02.0	N27 45.7	114 07.2	N11 48.2	334 54.2	N 6 08.7	113 24.3	N10 09.6
	20	159 17.2	83 03.5	N27 45.7	129 07.9	N11 48.9	349 56.7	N 6 08.7	128 26.5	N10 09.7
	21	174 19.6	98 04.9	N27 45.8	144 08.5	N11 49.6	4 59.3	N 6 08.8	143 28.6	N10 09.8
	22	189 22.1	113 06.4	N27 45.8	159 09.2	N11 50.3	20 01.8	N 6 08.8	158 30.8	N10 09.9
	23	204 24.6	128 07.9	N27 45.9	174 09.9	N11 50.9	35 04.4	N 6 08.8	173 33.0	N10 10.0
1	0	219 27.0	143 09.3	N27 45.9	189 10.6	N11 51.6	50 06.9	N 6 08.9	188 35.1	N10 10.1
	1	234 29.5	158 10.8	N27 46.0	204 11.2	N11 52.3	65 09.5	N 6 08.9	203 37.3	N10 10.2
	2	249 31.9	173 12.3	N27 46.0	219 11.9	N11 52.9	80 12.1	N 6 08.9	218 39.4	N10 10.3
	3	264 34.4	188 13.8	N27 46.1	234 12.6	N11 53.6	95 14.6	N 6 08.9	233 41.6	N10 10.5
	4	279 36.9	203 15.2	N27 46.1	249 13.3	N11 54.3	110 17.2	N 6 09.0	248 43.8	N10 10.6
M	5	294 39.3	218 16.7	N27 46.2	264 13.9	N11 54.9	125 19.7	N 6 09.0	263 45.9	N10 10.7
O										
N	6	309 41.8	233 18.2	N27 46.2	279 14.6	N11 55.6	140 22.3	N 6 09.0	278 48.1	N10 10.8
D	7	324 44.3	248 19.7	N27 46.3	294 15.3	N11 56.3	155 24.8	N 6 09.1	293 50.3	N10 10.9
A	8	339 46.7	263 21.2	N27 46.3	309 16.0	N11 56.9	170 27.4	N 6 09.1	308 52.4	N10 11.0
Y	9	354 49.2	278 22.7	N27 46.3	324 16.6	N11 57.6	185 30.0	N 6 09.1	323 54.6	N10 11.1
	10	9 51.7	293 24.2	N27 46.4	339 17.3	N11 58.3	200 32.5	N 6 09.2	338 56.7	N10 11.2
	11	24 54.1	308 25.7	N27 46.4	354 18.0	N11 58.9	215 35.1	N 6 09.2	353 58.9	N10 11.3
	12	39 56.6	323 27.2	N27 46.5	9 18.6	N11 59.6	230 37.6	N 6 09.2	9 01.1	N10 11.4
	13	54 59.1	338 28.7	N27 46.5	24 19.3	N12 00.3	245 40.2	N 6 09.2	24 03.2	N10 11.5
	14	70 01.5	353 30.3	N27 46.5	39 20.0	N12 00.9	260 42.7	N 6 09.3	39 05.4	N10 11.6
	15	85 04.0	8 31.8	N27 46.6	54 20.7	N12 01.6	275 45.3	N 6 09.3	54 07.6	N10 11.7
	16	100 06.4	23 33.3	N27 46.6	69 21.3	N12 02.2	290 47.8	N 6 09.3	69 09.7	N10 11.8
	17	115 08.9	38 34.8	N27 46.6	84 22.0	N12 02.9	305 50.4	N 6 09.4	84 11.9	N10 12.0
	18	130 11.4	53 36.4	N27 46.7	99 22.7	N12 03.6	320 52.9	N 6 09.4	99 14.0	N10 12.1
	19	145 13.8	68 37.9	N27 46.7	114 23.4	N12 04.2	335 55.5	N 6 09.4	114 16.2	N10 12.2
	20	160 16.3	83 39.5	N27 46.7	129 24.0	N12 04.9	350 58.0	N 6 09.4	129 18.4	N10 12.3
	21	175 18.8	98 41.0	N27 46.7	144 24.7	N12 05.6	6 00.6	N 6 09.5	144 20.5	N10 12.4
	22	190 21.2	113 42.5	N27 46.8	159 25.4	N12 06.2	21 03.1	N 6 09.5	159 22.7	N10 12.5
	23	205 23.7	128 44.1	N27 46.8	174 26.0	N12 06.9	36 05.7	N 6 09.5	174 24.9	N10 12.6
2	0	220 26.2	143 45.6	N27 46.8	189 26.7	N12 07.6	51 08.2	N 6 09.5	189 27.0	N10 12.7
	1	235 28.6	158 47.2	N27 46.8	204 27.4	N12 08.2	66 10.8	N 6 09.6	204 29.2	N10 12.8
	2	250 31.1	173 48.8	N27 46.9	219 28.1	N12 08.9	81 13.3	N 6 09.6	219 31.3	N10 12.9
	3	265 33.6	188 50.3	N27 46.9	234 28.7	N12 09.5	96 15.9	N 6 09.6	234 33.5	N10 13.0
	4	280 36.0	203 51.9	N27 46.9	249 29.4	N12 10.2	111 18.4	N 6 09.7	249 35.7	N10 13.1
T	5	295 38.5	218 53.5	N27 46.9	264 30.1	N12 10.9	126 21.0	N 6 09.7	264 37.8	N10 13.2
U										
E	6	310 40.9	233 55.1	N27 47.0	279 30.8	N12 11.5	141 23.5	N 6 09.7	279 40.0	N10 13.3
S	7	325 43.4	248 56.6	N27 47.0	294 31.4	N12 12.2	156 26.1	N 6 09.7	294 42.2	N10 13.4
D	8	340 45.9	263 58.2	N27 47.0	309 32.1	N12 12.8	171 28.6	N 6 09.8	309 44.3	N10 13.6
A	9	355 48.3	278 59.8	N27 47.0	324 32.8	N12 13.5	186 31.2	N 6 09.8	324 46.5	N10 13.7
Y	10	10 50.8	294 01.4	N27 47.0	339 33.4	N12 14.2	201 33.7	N 6 09.8	339 48.6	N10 13.8
	11	25 53.3	309 03.0	N27 47.0	354 34.1	N12 14.8	216 36.3	N 6 09.8	354 50.8	N10 13.9
	12	40 55.7	324 04.6	N27 47.1	9 34.8	N12 15.5	231 38.8	N 6 09.9	9 53.0	N10 14.0
	13	55 58.2	339 06.2	N27 47.1	24 35.5	N12 16.1	246 41.4	N 6 09.9	24 55.1	N10 14.1
	14	71 00.7	354 07.8	N27 47.1	39 36.1	N12 16.8	261 43.9	N 6 09.9	39 57.3	N10 14.2
	15	86 03.1	9 09.4	N27 47.1	54 36.8	N12 17.5	276 46.5	N 6 09.9	54 59.5	N10 14.3
	16	101 05.6	24 11.0	N27 47.1	69 37.5	N12 18.1	291 49.0	N 6 10.0	70 01.6	N10 14.4
	17	116 08.1	39 12.6	N27 47.1	84 38.1	N12 18.8	306 51.6	N 6 10.0	85 03.8	N10 14.5
	18	131 10.5	54 14.3	N27 47.1	99 38.8	N12 19.4	321 54.1	N 6 10.0	100 05.9	N10 14.6
	19	146 13.0	69 15.9	N27 47.1	114 39.5	N12 20.1	336 56.6	N 6 10.0	115 08.1	N10 14.7
	20	161 15.4	84 17.5	N27 47.1	129 40.2	N12 20.8	351 59.2	N 6 10.1	130 10.3	N10 14.8
	21	176 17.9	99 19.1	N27 47.1	144 40.8	N12 21.4	7 01.7	N 6 10.1	145 12.4	N10 14.9
	22	191 20.4	114 20.8	N27 47.1	159 41.5	N12 22.1	22 04.3	N 6 10.1	160 14.6	N10 15.0
	23	206 22.8	129 22.4	N27 47.1	174 42.2	N12 22.7	37 06.8	N 6 10.1	175 16.8	N10 15.2
			v 1.5	d 0.0	v 0.7	d 0.7	v 2.6	d 0.0	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
30	0	180 41.6	N14 52.2	114 01.3	6.7	N23 55.1	6.2	58.2
	1	195 41.7	N14 53.0	128 27.1	6.7	N23 48.7	6.4	58.2
	2	210 41.8	N14 53.7	142 52.8	6.8	N23 42.2	6.5	58.2
	3	225 41.9	N14 54.5	157 18.6	6.8	N23 35.5	6.7	58.2
	4	240 42.0	N14 55.3	171 44.5	6.9	N23 28.7	6.8	58.3
S	5	255 42.0	N14 56.0	186 10.4	6.9	N23 21.8	7.0	58.3
U								
N	6	270 42.1	N14 56.8	200 36.3	6.9	N23 14.7	7.1	58.3
D	7	285 42.2	N14 57.5	215 02.3	7.0	N23 07.4	7.2	58.3
A	8	300 42.3	N14 58.3	229 28.4	7.0	N23 00.0	7.4	58.3
Y	9	315 42.3	N14 59.1	243 54.4	7.1	N22 52.5	7.5	58.4
	10	330 42.4	N14 59.8	258 20.5	7.1	N22 44.8	7.7	58.4
	11	345 42.5	N15 00.6	272 46.7	7.2	N22 37.0	7.8	58.4
	12	0 42.6	N15 01.3	287 12.9	7.2	N22 29.0	8.0	58.4
	13	15 42.6	N15 02.1	301 39.2	7.3	N22 20.9	8.1	58.4
	14	30 42.7	N15 02.9	316 05.5	7.3	N22 12.7	8.2	58.5
	15	45 42.8	N15 03.6	330 31.9	7.4	N22 04.3	8.4	58.5
	16	60 42.9	N15 04.4	344 58.3	7.4	N21 55.8	8.5	58.5
	17	75 42.9	N15 05.1	359 24.8	7.5	N21 47.1	8.7	58.5
	18	90 43.0	N15 05.9	13 51.3	7.5	N21 38.4	8.8	58.5
	19	105 43.1	N15 06.6	28 17.8	7.6	N21 29.4	8.9	58.5
	20	120 43.2	N15 07.4	42 44.5	7.6	N21 20.4	9.1	58.6
	21	135 43.2	N15 08.1	57 11.2	7.7	N21 11.2	9.2	58.6
	22	150 43.3	N15 08.9	71 37.9	7.7	N21 01.9	9.3	58.6
	23	165 43.4	N15 09.7	86 04.7	7.8	N20 52.4	9.4	58.6
1	0	180 43.5	N15 10.4	100 31.5	7.8	N20 42.9	9.6	58.6
	1	195 43.5	N15 11.2	114 58.4	7.9	N20 33.2	9.7	58.7
	2	210 43.6	N15 11.9	129 25.4	8.0	N20 23.3	9.8	58.7
	3	225 43.7	N15 12.7	143 52.4	8.0	N20 13.4	10.0	58.7
	4	240 43.8	N15 13.4	158 19.4	8.1	N20 03.3	10.1	58.7
M	5	255 43.8	N15 14.2	172 46.5	8.1	N19 53.1	10.2	58.7
O								
N	6	270 43.9	N15 14.9	187 13.7	8.2	N19 42.8	10.3	58.7
D	7	285 44.0	N15 15.7	201 40.9	8.2	N19 32.3	10.4	58.8
A	8	300 44.0	N15 16.4	216 08.2	8.3	N19 21.8	10.6	58.8
Y	9	315 44.1	N15 17.2	230 35.6	8.3	N19 11.1	10.7	58.8
	10	330 44.2	N15 17.9	245 03.0	8.4	N19 00.3	10.8	58.8
	11	345 44.3	N15 18.7	259 30.4	8.5	N18 49.4	10.9	58.8
	12	0 44.3	N15 19.4	273 57.9	8.5	N18 38.3	11.0	58.8
	13	15 44.4	N15 20.2	288 25.5	8.6	N18 27.2	11.1	58.9
	14	30 44.5	N15 20.9	302 53.1	8.6	N18 15.9	11.3	58.9
	15	45 44.5	N15 21.7	317 20.8	8.7	N18 04.6	11.4	58.9
	16	60 44.6	N15 22.4	331 48.6	8.7	N17 53.1	11.5	58.9
	17	75 44.7	N15 23.1	346 16.3	8.8	N17 41.5	11.6	58.9
	18	90 44.7	N15 23.9	0 44.2	8.8	N17 29.8	11.7	58.9
	19	105 44.8	N15 24.6	15 12.1	8.9	N17 18.0	11.8	59.0
	20	120 44.9	N15 25.4	29 40.1	9.0	N17 06.1	11.9	59.0
	21	135 45.0	N15 26.1	44 08.1	9.0	N16 54.1	12.0	59.0
	22	150 45.0	N15 26.9	58 36.1	9.1	N16 42.0	12.1	59.0
	23	165 45.1	N15 27.6	73 04.3	9.1	N16 29.8	12.2	59.0
2	0	180 45.2	N15 28.4	87 32.4	9.2	N16 17.5	12.3	59.0
	1	195 45.2	N15 29.1	102 00.7	9.2	N16 05.0	12.4	59.1
	2	210 45.3	N15 29.8	116 29.0	9.3	N15 52.5	12.5	59.1
	3	225 45.4	N15 30.6	130 57.3	9.3	N15 39.9	12.6	59.1
	4	240 45.4	N15 31.3	145 25.7	9.4	N15 27.2	12.7	59.1
T	5	255 45.5	N15 32.1	159 54.1	9.4	N15 14.4	12.8	59.1
U								
E	6	270 45.6	N15 32.8	174 22.6	9.5	N15 01.6	12.9	59.1
S	7	285 45.6	N15 33.5	188 51.2	9.5	N14 48.6	13.0	59.2
D	8	300 45.7	N15 34.3	203 19.7	9.6	N14 35.5	13.1	59.2
A	9	315 45.8	N15 35.0	217 48.4	9.6	N14 22.4	13.2	59.2
Y	10	330 45.8	N15 35.8	232 17.1	9.7	N14 09.1	13.2	59.2
	11	345 45.9	N15 36.5	246 45.8	9.7	N13 55.8	13.3	59.2
	12	0 46.0	N15 37.2	261 14.6	9.8	N13 42.4	13.4	59.2
	13	15 46.0	N15 38.0	275 43.4	9.8	N13 28.9	13.5	59.2
	14	30 46.1	N15 38.7	290 12.3	9.9	N13 15.3	13.6	59.3
	15	45 46.2	N15 39.4	304 41.2	9.9	N13 01.7	13.7	59.3
	16	60 46.2	N15 40.2	319 10.2	10.0	N12 47.9	13.7	59.3
	17	75 46.3	N15 40.9	333 39.2	10.0	N12 34.1	13.8	59.3
	18	90 46.3	N15 41.6	348 08.3	10.1	N12 20.2	13.9	59.3
	19	105 46.4	N15 42.4	2 37.4	10.1	N12 06.3	14.0	59.3
	20	120 46.5	N15 43.1	17 06.5	10.1	N11 52.2	14.0	59.3
	21	135 46.5	N15 43.8	31 35.7	10.2	N11 38.1	14.1	59.4
	22	150 46.6	N15 44.6	46 04.9	10.2	N11 24.0	14.2	59.4
	23	165 46.7	N15 45.3	60 34.2	10.3	N11 09.7	14.2	59.4
		S.D. 15.9	d 0.7	S.D. 15.9		16.0		16.1

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.2	S40 11.5
Achernar	335 18.8	S57 05.5
Acrux	172 56.5	S63 15.6
Adhara	255 03.9	S29 00.9
Albireo	67 01.7	N28 01.0
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.1	N55 48.4
Alkaid	152 49.5	N49 10.2
Al Na-ir	27 29.7	S46 49.2
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.0	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.2	N29 14.7
Altair	61 57.2	N 8 56.5
Ankaa	353 04.9	S42 09.0
Antares	112 12.2	S26 29.7
Arcturus	145 45.1	N19 01.9
Atria	107 03.6	S69 04.6
Avior	234 13.7	S59 36.4
Bellatrix	278 20.2	N 6 22.4
Betelgeuse	270 49.4	N 7 24.6
Canopus	263 51.5	S52 42.9
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.9	N45 22.6
Denebola	182 22.0	N14 24.7
Diphda	348 44.9	S17 49.8
Dubhe	193 37.4	N61 35.9
Elnath	277 58.8	N28 37.8
Eltanin	90 40.6	N51 28.8
Enif	33 36.2	N10 00.2
Fomalhaut	15 11.7	S29 28.2
Gacrux	171 48.1	S57 16.6
Gienah	175 40.5	S17 42.2
Hadar	148 31.6	S60 30.7
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 19.0	N74 02.2
Markab	13 27.4	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.5	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.2	S26 15.6
Peacock	53 01.4	S56 38.3
Polaris	315 51.6	N89 22.4
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.8	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.5	S 8 10.3
Rigil Kent	139 36.0	S60 57.2
Sabik	101 59.4	S15 45.7
Schedar	349 28.4	N56 41.4
Shaula	96 06.4	S37 07.4
Sirius	258 24.1	S16 45.5
Spica	158 19.2	S11 18.8
Suhail	222 44.3	S43 33.2
Vega	80 31.2	N38 48.4
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
3	0	221 25.3	144 24.1	N27 47.1	189 42.8	N12 23.4	52 09.4	N 6 10.2	190 18.9	N10 15.3
	1	236 27.8	159 25.7	N27 47.1	204 43.5	N12 24.0	67 11.9	N 6 10.2	205 21.1	N10 15.4
	2	251 30.2	174 27.4	N27 47.1	219 44.2	N12 24.7	82 14.5	N 6 10.2	220 23.2	N10 15.5
	3	266 32.7	189 29.0	N27 47.1	234 44.9	N12 25.4	97 17.0	N 6 10.2	235 25.4	N10 15.6
	4	281 35.2	204 30.7	N27 47.1	249 45.5	N12 26.0	112 19.5	N 6 10.3	250 27.6	N10 15.7
W	5	296 37.6	219 32.3	N27 47.1	264 46.2	N12 26.7	127 22.1	N 6 10.3	265 29.7	N10 15.8
E										
D	6	311 40.1	234 34.0	N27 47.1	279 46.9	N12 27.3	142 24.6	N 6 10.3	280 31.9	N10 15.9
N	7	326 42.5	249 35.7	N27 47.1	294 47.5	N12 28.0	157 27.2	N 6 10.3	295 34.1	N10 16.0
E	8	341 45.0	264 37.3	N27 47.1	309 48.2	N12 28.6	172 29.7	N 6 10.4	310 36.2	N10 16.1
S	9	356 47.5	279 39.0	N27 47.1	324 48.9	N12 29.3	187 32.2	N 6 10.4	325 38.4	N10 16.2
D	10	11 49.9	294 40.7	N27 47.1	339 49.5	N12 29.9	202 34.8	N 6 10.4	340 40.5	N10 16.3
A	11	26 52.4	309 42.4	N27 47.1	354 50.2	N12 30.6	217 37.3	N 6 10.4	355 42.7	N10 16.4
Y										
	12	41 54.9	324 44.1	N27 47.1	9 50.9	N12 31.3	232 39.9	N 6 10.5	10 44.9	N10 16.5
	13	56 57.3	339 45.8	N27 47.1	24 51.6	N12 31.9	247 42.4	N 6 10.5	25 47.0	N10 16.6
	14	71 59.8	354 47.5	N27 47.1	39 52.2	N12 32.6	262 44.9	N 6 10.5	40 49.2	N10 16.7
	15	87 02.3	9 49.2	N27 47.1	54 52.9	N12 33.2	277 47.5	N 6 10.5	55 51.4	N10 16.8
	16	102 04.7	24 50.9	N27 47.0	69 53.6	N12 33.9	292 50.0	N 6 10.5	70 53.5	N10 17.0
	17	117 07.2	39 52.6	N27 47.0	84 54.2	N12 34.5	307 52.6	N 6 10.6	85 55.7	N10 17.1
	18	132 09.7	54 54.3	N27 47.0	99 54.9	N12 35.2	322 55.1	N 6 10.6	100 57.9	N10 17.2
	19	147 12.1	69 56.0	N27 47.0	114 55.6	N12 35.8	337 57.6	N 6 10.6	116 00.0	N10 17.3
	20	162 14.6	84 57.7	N27 47.0	129 56.2	N12 36.5	353 00.2	N 6 10.6	131 02.2	N10 17.4
	21	177 17.0	99 59.4	N27 47.0	144 56.9	N12 37.1	8 02.7	N 6 10.7	146 04.3	N10 17.5
	22	192 19.5	115 01.2	N27 46.9	159 57.6	N12 37.8	23 05.3	N 6 10.7	161 06.5	N10 17.6
	23	207 22.0	130 02.9	N27 46.9	174 58.3	N12 38.4	38 07.8	N 6 10.7	176 08.7	N10 17.7
4	0	222 24.4	145 04.6	N27 46.9	189 58.9	N12 39.1	53 10.3	N 6 10.7	191 10.8	N10 17.8
	1	237 26.9	160 06.4	N27 46.9	204 59.6	N12 39.7	68 12.9	N 6 10.7	206 13.0	N10 17.9
	2	252 29.4	175 08.1	N27 46.9	220 00.3	N12 40.4	83 15.4	N 6 10.8	221 15.2	N10 18.0
	3	267 31.8	190 09.9	N27 46.8	235 00.9	N12 41.0	98 17.9	N 6 10.8	236 17.3	N10 18.1
	4	282 34.3	205 11.6	N27 46.8	250 01.6	N12 41.7	113 20.5	N 6 10.8	251 19.5	N10 18.2
T	5	297 36.8	220 13.4	N27 46.8	265 02.3	N12 42.3	128 23.0	N 6 10.8	266 21.7	N10 18.3
H										
U	6	312 39.2	235 15.1	N27 46.8	280 02.9	N12 43.0	143 25.5	N 6 10.8	281 23.8	N10 18.4
R	7	327 41.7	250 16.9	N27 46.7	295 03.6	N12 43.6	158 28.1	N 6 10.9	296 26.0	N10 18.5
S	8	342 44.1	265 18.6	N27 46.7	310 04.3	N12 44.3	173 30.6	N 6 10.9	311 28.1	N10 18.7
D	9	357 46.6	280 20.4	N27 46.7	325 04.9	N12 44.9	188 33.1	N 6 10.9	326 30.3	N10 18.8
A	10	12 49.1	295 22.2	N27 46.6	340 05.6	N12 45.6	203 35.7	N 6 10.9	341 32.5	N10 18.9
Y	11	27 51.5	310 24.0	N27 46.6	355 06.3	N12 46.2	218 38.2	N 6 10.9	356 34.6	N10 19.0
	12	42 54.0	325 25.7	N27 46.6	10 07.0	N12 46.9	233 40.7	N 6 11.0	11 36.8	N10 19.1
	13	57 56.5	340 27.5	N27 46.5	25 07.6	N12 47.5	248 43.3	N 6 11.0	26 39.0	N10 19.2
	14	72 58.9	355 29.3	N27 46.5	40 08.3	N12 48.2	263 45.8	N 6 11.0	41 41.1	N10 19.3
	15	88 01.4	10 31.1	N27 46.5	55 09.0	N12 48.8	278 48.3	N 6 11.0	56 43.3	N10 19.4
	16	103 03.9	25 32.9	N27 46.4	70 09.6	N12 49.5	293 50.9	N 6 11.0	71 45.4	N10 19.5
	17	118 06.3	40 34.7	N27 46.4	85 10.3	N12 50.1	308 53.4	N 6 11.1	86 47.6	N10 19.6
	18	133 08.8	55 36.5	N27 46.3	100 11.0	N12 50.8	323 55.9	N 6 11.1	101 49.8	N10 19.7
	19	148 11.3	70 38.3	N27 46.3	115 11.6	N12 51.4	338 58.5	N 6 11.1	116 51.9	N10 19.8
	20	163 13.7	85 40.1	N27 46.3	130 12.3	N12 52.1	354 01.0	N 6 11.1	131 54.1	N10 19.9
	21	178 16.2	100 42.0	N27 46.2	145 13.0	N12 52.7	9 03.5	N 6 11.1	146 56.3	N10 20.0
	22	193 18.6	115 43.8	N27 46.2	160 13.6	N12 53.4	24 06.1	N 6 11.2	161 58.4	N10 20.1
	23	208 21.1	130 45.6	N27 46.1	175 14.3	N12 54.0	39 08.6	N 6 11.2	177 00.6	N10 20.2
5	0	223 23.6	145 47.4	N27 46.1	190 15.0	N12 54.7	54 11.1	N 6 11.2	192 02.8	N10 20.3
	1	238 26.0	160 49.3	N27 46.0	205 15.6	N12 55.3	69 13.6	N 6 11.2	207 04.9	N10 20.4
	2	253 28.5	175 51.1	N27 46.0	220 16.3	N12 55.9	84 16.2	N 6 11.2	222 07.1	N10 20.6
	3	268 31.0	190 52.9	N27 45.9	235 17.0	N12 56.6	99 18.7	N 6 11.3	237 09.2	N10 20.7
	4	283 33.4	205 54.8	N27 45.9	250 17.6	N12 57.2	114 21.2	N 6 11.3	252 11.4	N10 20.8
F	5	298 35.9	220 56.6	N27 45.8	265 18.3	N12 57.9	129 23.8	N 6 11.3	267 13.6	N10 20.9
R										
I	6	313 38.4	235 58.5	N27 45.8	280 19.0	N12 58.5	144 26.3	N 6 11.3	282 15.7	N10 21.0
D	7	328 40.8	251 00.3	N27 45.7	295 19.6	N12 59.2	159 28.8	N 6 11.3	297 17.9	N10 21.1
A	8	343 43.3	266 02.2	N27 45.7	310 20.3	N12 59.8	174 31.3	N 6 11.3	312 20.1	N10 21.2
Y	9	358 45.8	281 04.1	N27 45.6	325 21.0	N13 00.5	189 33.9	N 6 11.4	327 22.2	N10 21.3
	10	13 48.2	296 05.9	N27 45.6	340 21.6	N13 01.1	204 36.4	N 6 11.4	342 24.4	N10 21.4
	11	28 50.7	311 07.8	N27 45.5	355 22.3	N13 01.7	219 38.9	N 6 11.4	357 26.6	N10 21.5
	12	43 53.1	326 09.7	N27 45.5	10 23.0	N13 02.4	234 41.5	N 6 11.4	12 28.7	N10 21.6
	13	58 55.6	341 11.6	N27 45.4	25 23.6	N13 03.0	249 44.0	N 6 11.4	27 30.9	N10 21.7
	14	73 58.1	356 13.5	N27 45.3	40 24.3	N13 03.7	264 46.5	N 6 11.4	42 33.1	N10 21.8
	15	89 00.5	11 15.3	N27 45.3	55 25.0	N13 04.3	279 49.0	N 6 11.5	57 35.2	N10 21.9
	16	104 03.0	26 17.2	N27 45.2	70 25.6	N13 05.0	294 51.6	N 6 11.5	72 37.4	N10 22.0
	17	119 05.5	41 19.1	N27 45.2	85 26.3	N13 05.6	309 54.1	N 6 11.5	87 39.5	N10 22.1
	18	134 07.9	56 21.0	N27 45.1	100 27.0	N13 06.2	324 56.6	N 6 11.5	102 41.7	N10 22.2
	19	149 10.4	71 22.9	N27 45.0	115 27.6	N13 06.9	339 59.1	N 6 11.5	117 43.9	N10 22.3
	20	164 12.9	86 24.9	N27 45.0	130 28.3	N13 07.5	355 01.7	N 6 11.5	132 46.0	N10 22.4
	21	179 15.3	101 26.8	N27 44.9	145 29.0	N13 08.2	10 04.2	N 6 11.6	147 48.2	N10 22.5
	22	194 17.8	116 28.7	N27 44.8	160 29.6	N13 08.8	25 06.7	N 6 11.6	162 50.4	N10 22.7
	23	209 20.2	131 30.6	N27 44.8	175 30.3	N13 09.4	40 09.2	N 6 11.6	177 52.5	N10 22.8
			v 1.8	d 0.0	v 0.7	d 0.6	v 2.5	d 0.0	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
3 0	180 46.7	N15 46.0	75 03.5	10.3	N10 55.4	14.3	59.4	Acamar	315 10.2	S40 11.5
1	195 46.8	N15 46.8	89 32.8	10.3	N10 41.0	14.4	59.4	Achernar	335 18.8	S57 05.4
2	210 46.9	N15 47.5	104 02.2	10.4	N10 26.6	14.4	59.4	Acrux	172 56.5	S63 15.6
3	225 46.9	N15 48.2	118 31.6	10.4	N10 12.1	14.5	59.4	Adhara	255 03.9	S29 00.9
4	240 47.0	N15 49.0	133 01.1	10.4	N 9 57.5	14.6	59.5	Albireo	67 01.7	N28 01.0
W 5	255 47.0	N15 49.7	147 30.6	10.5	N 9 42.9	14.6	59.5			
E								Aldebaran	290 36.8	N16 33.9
D 6	270 47.1	N15 50.4	162 00.1	10.5	N 9 28.2	14.7	59.5	Alioth	166 10.1	N55 48.4
N 7	285 47.2	N15 51.1	176 29.6	10.5	N 9 13.5	14.7	59.5	Alkaid	152 49.5	N49 10.2
E 8	300 47.2	N15 51.9	190 59.2	10.6	N 8 58.7	14.8	59.5	Al Na-ir	27 29.6	S46 49.2
S 9	315 47.3	N15 52.6	205 28.8	10.6	N 8 43.8	14.9	59.5	Alnilam	275 35.2	S 1 11.1
D 10	330 47.3	N15 53.3	219 58.5	10.6	N 8 28.9	14.9	59.5			
A 11	345 47.4	N15 54.1	234 28.1	10.7	N 8 13.9	15.0	59.5	Alphard	217 45.0	S 8 47.1
Y								Alphecca	126 01.1	N26 37.0
12	0 47.5	N15 54.8	248 57.8	10.7	N 7 58.9	15.0	59.5	Alpheratz	357 32.2	N29 14.7
13	15 47.5	N15 55.5	263 27.5	10.7	N 7 43.9	15.1	59.6	Altair	61 57.2	N 8 56.5
14	30 47.6	N15 56.2	277 57.3	10.7	N 7 28.8	15.1	59.6	Ankaa	353 04.8	S42 09.0
15	45 47.6	N15 57.0	292 27.1	10.8	N 7 13.6	15.2	59.6			
16	60 47.7	N15 57.7	306 56.9	10.8	N 6 58.4	15.2	59.6	Antares	112 12.2	S26 29.7
17	75 47.8	N15 58.4	321 26.7	10.8	N 6 43.2	15.2	59.6	Arcturus	145 45.1	N19 01.9
								Atria	107 03.6	S69 04.6
18	90 47.8	N15 59.1	335 56.5	10.8	N 6 27.9	15.3	59.6	Avior	234 13.7	S59 36.4
19	105 47.9	N15 59.9	350 26.4	10.9	N 6 12.5	15.3	59.6	Bellatrix	278 20.3	N 6 22.4
20	120 47.9	N16 00.6	4 56.2	10.9	N 5 57.2	15.4	59.6			
21	135 48.0	N16 01.3	19 26.1	10.9	N 5 41.8	15.4	59.6	Betelgeuse	270 49.4	N 7 24.6
22	150 48.1	N16 02.0	33 56.1	10.9	N 5 26.3	15.4	59.6	Canopus	263 51.5	S52 42.9
23	165 48.1	N16 02.7	48 26.0	10.9	N 5 10.9	15.5	59.7	Capella	280 18.3	N46 01.6
								Castor	245 53.8	N31 49.6
4 0	180 48.2	N16 03.5	62 55.9	10.9	N 4 55.4	15.5	59.7	Deneb	49 23.9	N45 22.7
1	195 48.2	N16 04.2	77 25.9	11.0	N 4 39.8	15.5	59.7			
2	210 48.3	N16 04.9	91 55.9	11.0	N 4 24.3	15.6	59.7	Denebola	182 22.0	N14 24.7
3	225 48.3	N16 05.6	106 25.8	11.0	N 4 08.7	15.6	59.7	Diphda	348 44.9	S17 49.8
4	240 48.4	N16 06.3	120 55.8	11.0	N 3 53.1	15.6	59.7	Dubhe	193 37.4	N61 36.0
T 5	255 48.4	N16 07.1	135 25.8	11.0	N 3 37.4	15.6	59.7	Elnath	277 58.8	N28 37.8
H								Eltanin	90 40.6	N51 28.8
U 6	270 48.5	N16 07.8	149 55.8	11.0	N 3 21.7	15.7	59.7			
R 7	285 48.6	N16 08.5	164 25.9	11.0	N 3 06.0	15.7	59.7	Enif	33 36.1	N10 00.2
S 8	300 48.6	N16 09.2	178 55.9	11.0	N 2 50.3	15.7	59.7	Fomalhaut	15 11.7	S29 28.2
D 9	315 48.7	N16 09.9	193 25.9	11.0	N 2 34.6	15.7	59.7	Gacrux	171 48.1	S57 16.6
A 10	330 48.7	N16 10.6	207 55.9	11.0	N 2 18.8	15.8	59.7	Gienah	175 40.5	S17 42.2
Y 11	345 48.8	N16 11.4	222 26.0	11.0	N 2 03.1	15.8	59.7	Hadar	148 31.6	S60 30.8
12	0 48.8	N16 12.1	236 56.0	11.0	N 1 47.3	15.8	59.8	Hamal	327 48.5	N23 35.8
13	15 48.9	N16 12.8	251 26.1	11.0	N 1 31.5	15.8	59.8	Kaus Austr.	83 28.7	S34 22.2
14	30 48.9	N16 13.5	265 56.1	11.0	N 1 15.7	15.8	59.8	Kochab	137 19.0	N74 02.3
15	45 49.0	N16 14.2	280 26.1	11.0	N 0 59.9	15.8	59.8	Markab	13 27.4	N15 21.4
16	60 49.0	N16 14.9	294 56.2	11.0	N 0 44.0	15.8	59.8	Menkar	314 03.6	N 4 12.0
17	75 49.1	N16 15.6	309 26.2	11.0	N 0 28.2	15.8	59.8			
								Menkent	147 54.0	S36 30.8
18	90 49.2	N16 16.4	323 56.2	11.0	N 0 12.3	15.8	59.8	Miaplacidus	221 37.5	S69 50.4
19	105 49.2	N16 17.1	338 26.2	11.0	S 0 03.5	15.8	59.8	Mirfak	308 24.9	N49 57.7
20	120 49.3	N16 17.8	352 56.3	11.0	S 0 19.3	15.8	59.8	Nunki	75 44.2	S26 15.6
21	135 49.3	N16 18.5	7 26.3	11.0	S 0 35.2	15.9	59.8	Peacock	53 01.3	S56 38.3
22	150 49.4	N16 19.2	21 56.2	11.0	S 0 51.1	15.9	59.8			
23	165 49.4	N16 19.9	36 26.2	11.0	S 1 06.9	15.8	59.8	Polaris	315 51.5	N89 22.4
								Pollux	243 14.1	N27 57.4
5 0	180 49.5	N16 20.6	50 56.2	11.0	S 1 22.7	15.8	59.8	Procyon	244 48.1	N 5 09.0
1	195 49.5	N16 21.3	65 26.2	11.0	S 1 38.6	15.8	59.8	Rasalhague	95 55.8	N12 32.3
2	210 49.6	N16 22.0	79 56.1	10.9	S 1 54.4	15.8	59.8	Regulus	207 31.5	N11 49.6
3	225 49.6	N16 22.7	94 26.0	10.9	S 2 10.2	15.8	59.8			
4	240 49.7	N16 23.5	108 55.9	10.9	S 2 26.1	15.8	59.8	Rigel	281 01.6	S 8 10.3
F 5	255 49.7	N16 24.2	123 25.8	10.9	S 2 41.9	15.8	59.8	Rigil Kent	139 36.0	S60 57.3
R								Sabik	101 59.4	S15 45.7
I 6	270 49.8	N16 24.9	137 55.7	10.9	S 2 57.7	15.8	59.8	Schedar	349 28.4	N56 41.4
D 7	285 49.8	N16 25.6	152 25.6	10.9	S 3 13.4	15.8	59.8	Shaula	96 06.4	S37 07.4
A 8	300 49.9	N16 26.3	166 55.4	10.8	S 3 29.2	15.8	59.8			
Y 9	315 49.9	N16 27.0	181 25.2	10.8	S 3 44.9	15.7	59.8	Sirius	258 24.1	S16 45.5
10	330 50.0	N16 27.7	195 55.0	10.8	S 4 00.7	15.7	59.8	Spica	158 19.2	S11 18.8
11	345 50.0	N16 28.4	210 24.8	10.8	S 4 16.4	15.7	59.8	Suhail	222 44.3	S43 33.2
								Vega	80 31.1	N38 48.4
12	0 50.1	N16 29.1	224 54.5	10.7	S 4 32.1	15.7	59.8	Zuben-ubi	136 53.6	S16 09.7
13	15 50.1	N16 29.8	239 24.3	10.7	S 4 47.7	15.7	59.8			
14	30 50.2	N16 30.5	253 54.0	10.7	S 5 03.3	15.6	59.8			
15	45 50.2	N16 31.2	268 23.6	10.7	S 5 18.9	15.6	59.8			
16	60 50.3	N16 31.9	282 53.3	10.6	S 5 34.5	15.6	59.8			
17	75 50.3	N16 32.6	297 22.9	10.6	S 5 50.1	15.5	59.8			
18	90 50.4	N16 33.3	311 52.4	10.6	S 6 05.6	15.5	59.8			
19	105 50.4	N16 34.0	326 22.0	10.5	S 6 21.1	15.5	59.8			
20	120 50.4	N16 34.7	340 51.5	10.5	S 6 36.5	15.4	59.8			
21	135 50.5	N16 35.4	355 21.0	10.5	S 6 51.9	15.4	59.8			
22	150 50.5	N16 36.1	9 50.4	10.4	S 7 07.3	15.4	59.8			
23	165 50.6	N16 36.8	24 19.8	10.4	S 7 22.6	15.3	59.8			
	S.D. 15.9	d 0.7	S.D. 16.2		16.3		16.3			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
6	0	224 22.7	146 32.5	N27 44.7	190 31.0	N13 10.1	55 11.7	N 6 11.6	192 54.7	N10 22.9
	1	239 25.2	161 34.5	N27 44.6	205 31.6	N13 10.7	70 14.3	N 6 11.6	207 56.9	N10 23.0
	2	254 27.6	176 36.4	N27 44.5	220 32.3	N13 11.4	85 16.8	N 6 11.6	222 59.0	N10 23.1
	3	269 30.1	191 38.3	N27 44.5	235 33.0	N13 12.0	100 19.3	N 6 11.7	238 01.2	N10 23.2
	4	284 32.6	206 40.3	N27 44.4	250 33.6	N13 12.6	115 21.8	N 6 11.7	253 03.4	N10 23.3
S	5	299 35.0	221 42.2	N27 44.3	265 34.3	N13 13.3	130 24.4	N 6 11.7	268 05.5	N10 23.4
A										
T	6	314 37.5	236 44.2	N27 44.2	280 35.0	N13 13.9	145 26.9	N 6 11.7	283 07.7	N10 23.5
U	7	329 40.0	251 46.1	N27 44.2	295 35.6	N13 14.6	160 29.4	N 6 11.7	298 09.8	N10 23.6
R	8	344 42.4	266 48.1	N27 44.1	310 36.3	N13 15.2	175 31.9	N 6 11.7	313 12.0	N10 23.7
D	9	359 44.9	281 50.1	N27 44.0	325 37.0	N13 15.8	190 34.4	N 6 11.7	328 14.2	N10 23.8
A	10	14 47.4	296 52.0	N27 43.9	340 37.6	N13 16.5	205 37.0	N 6 11.8	343 16.3	N10 23.9
Y	11	29 49.8	311 54.0	N27 43.8	355 38.3	N13 17.1	220 39.5	N 6 11.8	358 18.5	N10 24.0
	12	44 52.3	326 56.0	N27 43.8	10 39.0	N13 17.7	235 42.0	N 6 11.8	13 20.7	N10 24.1
	13	59 54.7	341 58.0	N27 43.7	25 39.6	N13 18.4	250 44.5	N 6 11.8	28 22.8	N10 24.2
	14	74 57.2	356 59.9	N27 43.6	40 40.3	N13 19.0	265 47.0	N 6 11.8	43 25.0	N10 24.3
	15	89 59.7	12 01.9	N27 43.5	55 41.0	N13 19.7	280 49.6	N 6 11.8	58 27.2	N10 24.4
	16	105 02.1	27 03.9	N27 43.4	70 41.6	N13 20.3	295 52.1	N 6 11.8	73 29.3	N10 24.5
	17	120 04.6	42 05.9	N27 43.3	85 42.3	N13 20.9	310 54.6	N 6 11.8	88 31.5	N10 24.6
	18	135 07.1	57 07.9	N27 43.2	100 43.0	N13 21.6	325 57.1	N 6 11.9	103 33.7	N10 24.7
	19	150 09.5	72 09.9	N27 43.1	115 43.6	N13 22.2	340 59.6	N 6 11.9	118 35.8	N10 24.9
	20	165 12.0	87 11.9	N27 43.1	130 44.3	N13 22.8	356 02.1	N 6 11.9	133 38.0	N10 25.0
	21	180 14.5	102 14.0	N27 43.0	145 45.0	N13 23.5	11 04.7	N 6 11.9	148 40.1	N10 25.1
	22	195 16.9	117 16.0	N27 42.9	160 45.6	N13 24.1	26 07.2	N 6 11.9	163 42.3	N10 25.2
	23	210 19.4	132 18.0	N27 42.8	175 46.3	N13 24.7	41 09.7	N 6 11.9	178 44.5	N10 25.3
7	0	225 21.8	147 20.0	N27 42.7	190 46.9	N13 25.4	56 12.2	N 6 11.9	193 46.6	N10 25.4
	1	240 24.3	162 22.0	N27 42.6	205 47.6	N13 26.0	71 14.7	N 6 12.0	208 48.8	N10 25.5
	2	255 26.8	177 24.1	N27 42.5	220 48.3	N13 26.6	86 17.2	N 6 12.0	223 51.0	N10 25.6
	3	270 29.2	192 26.1	N27 42.4	235 48.9	N13 27.3	101 19.7	N 6 12.0	238 53.1	N10 25.7
	4	285 31.7	207 28.2	N27 42.3	250 49.6	N13 27.9	116 22.3	N 6 12.0	253 55.3	N10 25.8
S	5	300 34.2	222 30.2	N27 42.2	265 50.3	N13 28.5	131 24.8	N 6 12.0	268 57.5	N10 25.9
U										
N	6	315 36.6	237 32.3	N27 42.1	280 50.9	N13 29.2	146 27.3	N 6 12.0	283 59.6	N10 26.0
D	7	330 39.1	252 34.3	N27 42.0	295 51.6	N13 29.8	161 29.8	N 6 12.0	299 01.8	N10 26.1
A	8	345 41.6	267 36.4	N27 41.9	310 52.3	N13 30.4	176 32.3	N 6 12.0	314 04.0	N10 26.2
Y	9	0 44.0	282 38.4	N27 41.8	325 52.9	N13 31.1	191 34.8	N 6 12.0	329 06.1	N10 26.3
	10	15 46.5	297 40.5	N27 41.7	340 53.6	N13 31.7	206 37.3	N 6 12.1	344 08.3	N10 26.4
	11	30 49.0	312 42.6	N27 41.6	355 54.3	N13 32.3	221 39.9	N 6 12.1	359 10.5	N10 26.5
	12	45 51.4	327 44.7	N27 41.5	10 54.9	N13 33.0	236 42.4	N 6 12.1	14 12.6	N10 26.6
	13	60 53.9	342 46.7	N27 41.3	25 55.6	N13 33.6	251 44.9	N 6 12.1	29 14.8	N10 26.7
	14	75 56.3	357 48.8	N27 41.2	40 56.2	N13 34.2	266 47.4	N 6 12.1	44 17.0	N10 26.8
	15	90 58.8	12 50.9	N27 41.1	55 56.9	N13 34.9	281 49.9	N 6 12.1	59 19.1	N10 26.9
	16	106 01.3	27 53.0	N27 41.0	70 57.6	N13 35.5	296 52.4	N 6 12.1	74 21.3	N10 27.0
	17	121 03.7	42 55.1	N27 40.9	85 58.2	N13 36.1	311 54.9	N 6 12.1	89 23.4	N10 27.1
	18	136 06.2	57 57.2	N27 40.8	100 58.9	N13 36.7	326 57.4	N 6 12.1	104 25.6	N10 27.3
	19	151 08.7	72 59.3	N27 40.7	115 59.6	N13 37.4	341 59.9	N 6 12.2	119 27.8	N10 27.4
	20	166 11.1	88 01.4	N27 40.5	131 00.2	N13 38.0	357 02.5	N 6 12.2	134 29.9	N10 27.5
	21	181 13.6	103 03.6	N27 40.4	146 00.9	N13 38.6	12 05.0	N 6 12.2	149 32.1	N10 27.6
	22	196 16.1	118 05.7	N27 40.3	161 01.5	N13 39.3	27 07.5	N 6 12.2	164 34.3	N10 27.7
	23	211 18.5	133 07.8	N27 40.2	176 02.2	N13 39.9	42 10.0	N 6 12.2	179 36.4	N10 27.8
8	0	226 21.0	148 09.9	N27 40.1	191 02.9	N13 40.5	57 12.5	N 6 12.2	194 38.6	N10 27.9
	1	241 23.5	163 12.1	N27 39.9	206 03.5	N13 41.1	72 15.0	N 6 12.2	209 40.8	N10 28.0
	2	256 25.9	178 14.2	N27 39.8	221 04.2	N13 41.8	87 17.5	N 6 12.2	224 42.9	N10 28.1
	3	271 28.4	193 16.3	N27 39.7	236 04.9	N13 42.4	102 20.0	N 6 12.2	239 45.1	N10 28.2
	4	286 30.8	208 18.5	N27 39.6	251 05.5	N13 43.0	117 22.5	N 6 12.2	254 47.3	N10 28.3
M	5	301 33.3	223 20.6	N27 39.5	266 06.2	N13 43.7	132 25.0	N 6 12.2	269 49.4	N10 28.4
O										
N	6	316 35.8	238 22.8	N27 39.3	281 06.8	N13 44.3	147 27.5	N 6 12.3	284 51.6	N10 28.5
D	7	331 38.2	253 25.0	N27 39.2	296 07.5	N13 44.9	162 30.0	N 6 12.3	299 53.8	N10 28.6
A	8	346 40.7	268 27.1	N27 39.1	311 08.2	N13 45.5	177 32.5	N 6 12.3	314 55.9	N10 28.7
Y	9	1 43.2	283 29.3	N27 38.9	326 08.8	N13 46.2	192 35.1	N 6 12.3	329 58.1	N10 28.8
	10	16 45.6	298 31.5	N27 38.8	341 09.5	N13 46.8	207 37.6	N 6 12.3	345 00.3	N10 28.9
	11	31 48.1	313 33.6	N27 38.7	356 10.2	N13 47.4	222 40.1	N 6 12.3	0 02.4	N10 29.0
	12	46 50.6	328 35.8	N27 38.5	11 10.8	N13 48.0	237 42.6	N 6 12.3	15 04.6	N10 29.1
	13	61 53.0	343 38.0	N27 38.4	26 11.5	N13 48.7	252 45.1	N 6 12.3	30 06.8	N10 29.2
	14	76 55.5	358 40.2	N27 38.3	41 12.1	N13 49.3	267 47.6	N 6 12.3	45 08.9	N10 29.3
	15	91 57.9	13 42.4	N27 38.1	56 12.8	N13 49.9	282 50.1	N 6 12.3	60 11.1	N10 29.4
	16	107 00.4	28 44.6	N27 38.0	71 13.5	N13 50.5	297 52.6	N 6 12.3	75 13.3	N10 29.5
	17	122 02.9	43 46.8	N27 37.8	86 14.1	N13 51.2	312 55.1	N 6 12.3	90 15.4	N10 29.6
	18	137 05.3	58 49.0	N27 37.7	101 14.8	N13 51.8	327 57.6	N 6 12.3	105 17.6	N10 29.7
	19	152 07.8	73 51.2	N27 37.6	116 15.5	N13 52.4	343 00.1	N 6 12.4	120 19.8	N10 29.8
	20	167 10.3	88 53.4	N27 37.4	131 16.1	N13 53.0	358 02.6	N 6 12.4	135 21.9	N10 29.9
	21	182 12.7	103 55.6	N27 37.3	146 16.8	N13 53.7	13 05.1	N 6 12.4	150 24.1	N10 30.1
	22	197 15.2	118 57.9	N27 37.1	161 17.4	N13 54.3	28 07.6	N 6 12.4	165 26.2	N10 30.2
	23	212 17.7	134 00.1	N27 37.0	176 18.1	N13 54.9	43 10.1	N 6 12.4	180 28.4	N10 30.3
			v 2.1	d 0.1	v 0.7	d 0.6	v 2.5	d 0.0	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
6 0	180 50.6	N16 37.5	38 49.2	10.4	S 7 37.9	15.3	59.8	Acamar	315 10.2	S40 11.5
1	195 50.7	N16 38.2	53 18.5	10.3	S 7 53.2	15.2	59.8	Achernar	335 18.8	S57 05.4
2	210 50.7	N16 38.9	67 47.8	10.3	S 8 08.4	15.2	59.8	Acrux	172 56.5	S63 15.7
3	225 50.8	N16 39.6	82 17.1	10.3	S 8 23.5	15.2	59.8	Adhara	255 03.9	S29 00.9
4	240 50.8	N16 40.3	96 46.3	10.2	S 8 38.6	15.1	59.8	Albireo	67 01.7	N28 01.0
S 5	255 50.9	N16 41.0	111 15.5	10.2	S 8 53.7	15.1	59.8			
A								Aldebaran	290 36.8	N16 33.9
T 6	270 50.9	N16 41.7	125 44.6	10.1	S 9 08.7	15.0	59.8	Alioth	166 10.2	N55 48.4
U 7	285 50.9	N16 42.4	140 13.7	10.1	S 9 23.6	15.0	59.8	Alkaid	152 49.5	N49 10.3
R 8	300 51.0	N16 43.1	154 42.8	10.1	S 9 38.5	14.9	59.8	Al Na-ir	27 29.6	S46 49.2
D 9	315 51.0	N16 43.8	169 11.8	10.0	S 9 53.4	14.8	59.7	Alnilam	275 35.2	S 1 11.1
A 10	330 51.1	N16 44.5	183 40.7	10.0	S10 08.1	14.8	59.7			
Y 11	345 51.1	N16 45.2	198 09.7	9.9	S10 22.9	14.7	59.7	Alphard	217 45.0	S 8 47.1
								Alphecca	126 01.1	N26 37.0
12	0 51.2	N16 45.8	212 38.5	9.9	S10 37.5	14.7	59.7	Alpheratz	357 32.2	N29 14.7
13	15 51.2	N16 46.5	227 07.4	9.8	S10 52.1	14.6	59.7	Altair	61 57.2	N 8 56.5
14	30 51.2	N16 47.2	241 36.1	9.8	S11 06.7	14.5	59.7	Ankaa	353 04.8	S42 09.0
15	45 51.3	N16 47.9	256 04.9	9.7	S11 21.1	14.5	59.7			
16	60 51.3	N16 48.6	270 33.5	9.7	S11 35.5	14.4	59.7	Antares	112 12.2	S26 29.7
17	75 51.4	N16 49.3	285 02.2	9.6	S11 49.9	14.3	59.7	Arcturus	145 45.1	N19 02.0
								Atria	107 03.5	S69 04.6
18	90 51.4	N16 50.0	299 30.7	9.6	S12 04.1	14.3	59.7	Avior	234 13.7	S59 36.4
19	105 51.5	N16 50.7	313 59.3	9.5	S12 18.3	14.2	59.7	Bellatrix	278 20.3	N 6 22.4
20	120 51.5	N16 51.4	328 27.7	9.5	S12 32.4	14.1	59.7			
21	135 51.5	N16 52.1	342 56.2	9.4	S12 46.5	14.0	59.6	Betelgeuse	270 49.4	N 7 24.7
22	150 51.6	N16 52.7	357 24.5	9.4	S13 00.4	14.0	59.6	Canopus	263 51.5	S52 42.9
23	165 51.6	N16 53.4	11 52.8	9.3	S13 14.3	13.9	59.6	Capella	280 18.3	N46 01.6
								Castor	245 53.8	N31 49.6
7 0	180 51.7	N16 54.1	26 21.1	9.3	S13 28.1	13.8	59.6	Deneb	49 23.8	N45 22.7
1	195 51.7	N16 54.8	40 49.3	9.2	S13 41.8	13.7	59.6			
2	210 51.7	N16 55.5	55 17.5	9.2	S13 55.4	13.6	59.6	Denebola	182 22.0	N14 24.7
3	225 51.8	N16 56.2	69 45.6	9.1	S14 09.0	13.5	59.6	Diphda	348 44.9	S17 49.8
4	240 51.8	N16 56.9	84 13.6	9.0	S14 22.5	13.5	59.6	Dubhe	193 37.5	N61 36.0
S 5	255 51.9	N16 57.5	98 41.6	9.0	S14 35.8	13.4	59.5	Elnath	277 58.8	N28 37.8
U								Eltanin	90 40.5	N51 28.8
N 6	270 51.9	N16 58.2	113 09.5	8.9	S14 49.1	13.3	59.5			
D 7	285 51.9	N16 58.9	127 37.4	8.9	S15 02.3	13.2	59.5	Enif	33 36.1	N10 00.2
A 8	300 52.0	N16 59.6	142 05.2	8.8	S15 15.4	13.1	59.5	Fomalhaut	15 11.7	S29 28.2
Y 9	315 52.0	N17 00.3	156 33.0	8.8	S15 28.4	13.0	59.5	Gacrux	171 48.1	S57 16.6
10	330 52.0	N17 00.9	171 00.7	8.7	S15 41.3	12.9	59.5	Gienah	175 40.6	S17 42.2
11	345 52.1	N17 01.6	185 28.3	8.6	S15 54.1	12.8	59.5	Hadar	148 31.6	S60 30.8
12	0 52.1	N17 02.3	199 55.9	8.6	S16 06.8	12.7	59.4	Hamal	327 48.5	N23 35.8
13	15 52.2	N17 03.0	214 23.5	8.5	S16 19.4	12.6	59.4	Kaus Austr.	83 28.7	S34 22.2
14	30 52.2	N17 03.7	228 50.9	8.5	S16 31.9	12.5	59.4	Kochab	137 19.0	N74 02.3
15	45 52.2	N17 04.3	243 18.4	8.4	S16 44.3	12.4	59.4	Markab	13 27.3	N15 21.4
16	60 52.3	N17 05.0	257 45.7	8.4	S16 56.6	12.3	59.4	Menkar	314 03.6	N 4 12.0
17	75 52.3	N17 05.7	272 13.0	8.3	S17 08.8	12.2	59.4			
								Menkent	147 54.0	S36 30.8
18	90 52.3	N17 06.4	286 40.3	8.2	S17 20.9	12.1	59.3	Miaplacidus	221 37.5	S69 50.4
19	105 52.4	N17 07.1	301 07.4	8.2	S17 32.9	12.0	59.3	Mirfak	308 24.9	N49 57.7
20	120 52.4	N17 07.7	315 34.6	8.1	S17 44.7	11.9	59.3	Nunki	75 44.2	S26 15.6
21	135 52.4	N17 08.4	330 01.6	8.1	S17 56.5	11.7	59.3	Peacock	53 01.3	S56 38.3
22	150 52.5	N17 09.1	344 28.7	8.0	S18 08.1	11.6	59.3			
23	165 52.5	N17 09.8	358 55.6	8.0	S18 19.6	11.5	59.3	Polaris	315 51.1	N89 22.4
								Pollux	243 14.2	N27 57.4
8 0	180 52.5	N17 10.4	13 22.5	7.9	S18 31.0	11.4	59.2	Procyon	244 48.1	N 5 09.0
1	195 52.6	N17 11.1	27 49.4	7.8	S18 42.3	11.3	59.2	Rasalhague	95 55.8	N12 32.3
2	210 52.6	N17 11.8	42 16.1	7.8	S18 53.5	11.2	59.2	Regulus	207 31.5	N11 49.6
3	225 52.6	N17 12.5	56 42.9	7.7	S19 04.5	11.0	59.2			
4	240 52.7	N17 13.1	71 09.5	7.7	S19 15.4	10.9	59.2	Rigel	281 01.6	S 8 10.2
M 5	255 52.7	N17 13.8	85 36.2	7.6	S19 26.2	10.8	59.1	Rigil Kent	139 36.0	S60 57.3
O								Sabik	101 59.4	S15 45.7
N 6	270 52.7	N17 14.5	100 02.7	7.6	S19 36.9	10.7	59.1	Schedar	349 28.3	N56 41.4
D 7	285 52.8	N17 15.1	114 29.2	7.5	S19 47.5	10.5	59.1	Shaula	96 06.4	S37 07.4
A 8	300 52.8	N17 15.8	128 55.7	7.5	S19 57.9	10.4	59.1			
Y 9	315 52.8	N17 16.5	143 22.1	7.4	S20 08.2	10.3	59.1	Sirius	258 24.1	S16 45.5
10	330 52.9	N17 17.2	157 48.4	7.3	S20 18.3	10.2	59.0	Spica	158 19.2	S11 18.7
11	345 52.9	N17 17.8	172 14.7	7.3	S20 28.3	10.0	59.0	Suhail	222 44.3	S43 33.2
								Vega	80 31.1	N38 48.4
12	0 52.9	N17 18.5	186 41.0	7.2	S20 38.2	9.9	59.0	Zuben-ubi	136 53.6	S16 09.7
13	15 53.0	N17 19.2	201 07.2	7.2	S20 48.0	9.8	59.0			
14	30 53.0	N17 19.8	215 33.3	7.1	S20 57.6	9.6	58.9			
15	45 53.0	N17 20.5	229 59.4	7.1	S21 07.1	9.5	58.9			
16	60 53.1	N17 21.2	244 25.5	7.0	S21 16.4	9.4	58.9			
17	75 53.1	N17 21.8	258 51.5	7.0	S21 25.7	9.2	58.9			
18	90 53.1	N17 22.5	273 17.4	7.0	S21 34.7	9.1	58.8			
19	105 53.1	N17 23.2	287 43.3	6.9	S21 43.7	8.9	58.8			
20	120 53.2	N17 23.8	302 09.2	6.9	S21 52.5	8.8	58.8			
21	135 53.2	N17 24.5	316 35.0	6.8	S22 01.1	8.6	58.8			
22	150 53.2	N17 25.2	331 00.8	6.8	S22 09.6	8.5	58.7			
23	165 53.3	N17 25.8	345 26.5	6.7	S22 18.0	8.4	58.7			
	S.D. 15.8	d 0.7	S.D.	16.3	16.2	16.1				

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
9	0	227 20.1	149 02.3	N27 36.8	191 18.8	N13 55.5	58 12.6	N 6 12.4	195 30.6	N10 30.4
	1	242 22.6	164 04.6	N27 36.7	206 19.4	N13 56.1	73 15.1	N 6 12.4	210 32.7	N10 30.5
	2	257 25.1	179 06.8	N27 36.5	221 20.1	N13 56.8	88 17.6	N 6 12.4	225 34.9	N10 30.6
	3	272 27.5	194 09.1	N27 36.4	236 20.7	N13 57.4	103 20.1	N 6 12.4	240 37.1	N10 30.7
	4	287 30.0	209 11.3	N27 36.2	251 21.4	N13 58.0	118 22.6	N 6 12.4	255 39.2	N10 30.8
T	5	302 32.4	224 13.6	N27 36.1	266 22.1	N13 58.6	133 25.1	N 6 12.4	270 41.4	N10 30.9
U										
E	6	317 34.9	239 15.8	N27 35.9	281 22.7	N13 59.3	148 27.6	N 6 12.4	285 43.6	N10 31.0
S	7	332 37.4	254 18.1	N27 35.8	296 23.4	N13 59.9	163 30.1	N 6 12.4	300 45.7	N10 31.1
D	8	347 39.8	269 20.4	N27 35.6	311 24.0	N14 00.5	178 32.6	N 6 12.4	315 47.9	N10 31.2
A	9	2 42.3	284 22.6	N27 35.5	326 24.7	N14 01.1	193 35.1	N 6 12.4	330 50.1	N10 31.3
Y	10	17 44.8	299 24.9	N27 35.3	341 25.4	N14 01.7	208 37.6	N 6 12.4	345 52.2	N10 31.4
	11	32 47.2	314 27.2	N27 35.1	356 26.0	N14 02.4	223 40.1	N 6 12.4	0 54.4	N10 31.5
	12	47 49.7	329 29.5	N27 35.0	11 26.7	N14 03.0	238 42.6	N 6 12.5	15 56.6	N10 31.6
	13	62 52.2	344 31.8	N27 34.8	26 27.3	N14 03.6	253 45.1	N 6 12.5	30 58.7	N10 31.7
	14	77 54.6	359 34.1	N27 34.7	41 28.0	N14 04.2	268 47.6	N 6 12.5	46 00.9	N10 31.8
	15	92 57.1	14 36.4	N27 34.5	56 28.7	N14 04.8	283 50.1	N 6 12.5	61 03.1	N10 31.9
	16	107 59.6	29 38.7	N27 34.3	71 29.3	N14 05.4	298 52.6	N 6 12.5	76 05.2	N10 32.0
	17	123 02.0	44 41.0	N27 34.2	86 30.0	N14 06.1	313 55.1	N 6 12.5	91 07.4	N10 32.1
	18	138 04.5	59 43.3	N27 34.0	101 30.6	N14 06.7	328 57.6	N 6 12.5	106 09.6	N10 32.2
	19	153 06.9	74 45.6	N27 33.8	116 31.3	N14 07.3	344 00.1	N 6 12.5	121 11.7	N10 32.3
	20	168 09.4	89 47.9	N27 33.7	131 32.0	N14 07.9	359 02.6	N 6 12.5	136 13.9	N10 32.4
	21	183 11.9	104 50.2	N27 33.5	146 32.6	N14 08.5	14 05.1	N 6 12.5	151 16.1	N10 32.5
	22	198 14.3	119 52.6	N27 33.3	161 33.3	N14 09.2	29 07.6	N 6 12.5	166 18.2	N10 32.6
	23	213 16.8	134 54.9	N27 33.1	176 33.9	N14 09.8	44 10.1	N 6 12.5	181 20.4	N10 32.7
10	0	228 19.3	149 57.3	N27 33.0	191 34.6	N14 10.4	59 12.6	N 6 12.5	196 22.6	N10 32.8
	1	243 21.7	164 59.6	N27 32.8	206 35.3	N14 11.0	74 15.1	N 6 12.5	211 24.7	N10 32.9
	2	258 24.2	180 02.0	N27 32.6	221 35.9	N14 11.6	89 17.6	N 6 12.5	226 26.9	N10 33.0
	3	273 26.7	195 04.3	N27 32.4	236 36.6	N14 12.2	104 20.0	N 6 12.5	241 29.1	N10 33.1
	4	288 29.1	210 06.7	N27 32.3	251 37.2	N14 12.8	119 22.5	N 6 12.5	256 31.2	N10 33.2
W	5	303 31.6	225 09.0	N27 32.1	266 37.9	N14 13.5	134 25.0	N 6 12.5	271 33.4	N10 33.4
E										
D	6	318 34.1	240 11.4	N27 31.9	281 38.5	N14 14.1	149 27.5	N 6 12.5	286 35.6	N10 33.5
N	7	333 36.5	255 13.8	N27 31.7	296 39.2	N14 14.7	164 30.0	N 6 12.5	301 37.7	N10 33.6
E	8	348 39.0	270 16.1	N27 31.5	311 39.9	N14 15.3	179 32.5	N 6 12.5	316 39.9	N10 33.7
S	9	3 41.4	285 18.5	N27 31.4	326 40.5	N14 15.9	194 35.0	N 6 12.5	331 42.1	N10 33.8
D	10	18 43.9	300 20.9	N27 31.2	341 41.2	N14 16.5	209 37.5	N 6 12.5	346 44.2	N10 33.9
A	11	33 46.4	315 23.3	N27 31.0	356 41.8	N14 17.1	224 40.0	N 6 12.5	1 46.4	N10 34.0
Y										
	12	48 48.8	330 25.7	N27 30.8	11 42.5	N14 17.8	239 42.5	N 6 12.5	16 48.6	N10 34.1
	13	63 51.3	345 28.1	N27 30.6	26 43.2	N14 18.4	254 45.0	N 6 12.5	31 50.7	N10 34.2
	14	78 53.8	0 30.5	N27 30.4	41 43.8	N14 19.0	269 47.5	N 6 12.5	46 52.9	N10 34.3
	15	93 56.2	15 32.9	N27 30.2	56 44.5	N14 19.6	284 49.9	N 6 12.5	61 55.1	N10 34.4
	16	108 58.7	30 35.3	N27 30.0	71 45.1	N14 20.2	299 52.4	N 6 12.5	76 57.2	N10 34.5
	17	124 01.2	45 37.7	N27 29.8	86 45.8	N14 20.8	314 54.9	N 6 12.5	91 59.4	N10 34.6
	18	139 03.6	60 40.1	N27 29.6	101 46.4	N14 21.4	329 57.4	N 6 12.5	107 01.6	N10 34.7
	19	154 06.1	75 42.6	N27 29.4	116 47.1	N14 22.0	344 59.9	N 6 12.5	122 03.7	N10 34.8
	20	169 08.5	90 45.0	N27 29.2	131 47.8	N14 22.7	0 02.4	N 6 12.5	137 05.9	N10 34.9
	21	184 11.0	105 47.4	N27 29.1	146 48.4	N14 23.3	15 04.9	N 6 12.5	152 08.1	N10 35.0
	22	199 13.5	120 49.9	N27 28.9	161 49.1	N14 23.9	30 07.4	N 6 12.5	167 10.2	N10 35.1
	23	214 15.9	135 52.3	N27 28.7	176 49.7	N14 24.5	45 09.9	N 6 12.5	182 12.4	N10 35.2
11	0	229 18.4	150 54.8	N27 28.4	191 50.4	N14 25.1	60 12.3	N 6 12.5	197 14.6	N10 35.3
	1	244 20.9	165 57.2	N27 28.2	206 51.0	N14 25.7	75 14.8	N 6 12.5	212 16.7	N10 35.4
	2	259 23.3	180 59.7	N27 28.0	221 51.7	N14 26.3	90 17.3	N 6 12.5	227 18.9	N10 35.5
	3	274 25.8	196 02.1	N27 27.8	236 52.4	N14 26.9	105 19.8	N 6 12.5	242 21.1	N10 35.6
	4	289 28.3	211 04.6	N27 27.6	251 53.0	N14 27.5	120 22.3	N 6 12.5	257 23.3	N10 35.7
T	5	304 30.7	226 07.1	N27 27.4	266 53.7	N14 28.1	135 24.8	N 6 12.5	272 25.4	N10 35.8
H										
U	6	319 33.2	241 09.5	N27 27.2	281 54.3	N14 28.8	150 27.3	N 6 12.5	287 27.6	N10 35.9
R	7	334 35.7	256 12.0	N27 27.0	296 55.0	N14 29.4	165 29.8	N 6 12.5	302 29.8	N10 36.0
S	8	349 38.1	271 14.5	N27 26.8	311 55.6	N14 30.0	180 32.2	N 6 12.5	317 31.9	N10 36.1
D	9	4 40.6	286 17.0	N27 26.6	326 56.3	N14 30.6	195 34.7	N 6 12.5	332 34.1	N10 36.2
A	10	19 43.0	301 19.5	N27 26.4	341 57.0	N14 31.2	210 37.2	N 6 12.5	347 36.3	N10 36.3
Y	11	34 45.5	316 22.0	N27 26.2	356 57.6	N14 31.8	225 39.7	N 6 12.5	2 38.4	N10 36.4
	12	49 48.0	331 24.5	N27 25.9	11 58.3	N14 32.4	240 42.2	N 6 12.5	17 40.6	N10 36.5
	13	64 50.4	346 27.0	N27 25.7	26 58.9	N14 33.0	255 44.7	N 6 12.5	32 42.8	N10 36.6
	14	79 52.9	1 29.5	N27 25.5	41 59.6	N14 33.6	270 47.1	N 6 12.5	47 44.9	N10 36.7
	15	94 55.4	16 32.0	N27 25.3	57 00.2	N14 34.2	285 49.6	N 6 12.5	62 47.1	N10 36.8
	16	109 57.8	31 34.5	N27 25.1	72 00.9	N14 34.8	300 52.1	N 6 12.5	77 49.3	N10 36.9
	17	125 00.3	46 37.1	N27 24.8	87 01.6	N14 35.4	315 54.6	N 6 12.5	92 51.4	N10 37.0
	18	140 02.8	61 39.6	N27 24.6	102 02.2	N14 36.0	330 57.1	N 6 12.5	107 53.6	N10 37.1
	19	155 05.2	76 42.1	N27 24.4	117 02.9	N14 36.6	345 59.6	N 6 12.5	122 55.8	N10 37.2
	20	170 07.7	91 44.7	N27 24.2	132 03.5	N14 37.2	1 02.0	N 6 12.5	137 57.9	N10 37.3
	21	185 10.2	106 47.2	N27 23.9	147 04.2	N14 37.8	16 04.5	N 6 12.5	153 00.1	N10 37.4
	22	200 12.6	121 49.8	N27 23.7	162 04.8	N14 38.5	31 07.0	N 6 12.5	168 02.3	N10 37.5
	23	215 15.1	136 52.3	N27 23.5	177 05.5	N14 39.1	46 09.5	N 6 12.5	183 04.4	N10 37.6
			v 2.4	d 0.2	v 0.7	d 0.6	v 2.5	d 0.0	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
9	0	180 53.3	N17 26.5	359 52.2	6.7	S22 26.2	8.2	58.7
	1	195 53.3	N17 27.1	14 17.8	6.6	S22 34.3	8.1	58.7
	2	210 53.3	N17 27.8	28 43.4	6.6	S22 42.2	7.9	58.6
	3	225 53.4	N17 28.5	43 09.0	6.6	S22 49.9	7.8	58.6
	4	240 53.4	N17 29.1	57 34.5	6.5	S22 57.6	7.6	58.6
T	5	255 53.4	N17 29.8	72 00.0	6.5	S23 05.0	7.5	58.6
U								
E	6	270 53.5	N17 30.4	86 25.5	6.5	S23 12.4	7.3	58.5
S	7	285 53.5	N17 31.1	100 50.9	6.4	S23 19.5	7.2	58.5
D	8	300 53.5	N17 31.8	115 16.4	6.4	S23 26.6	7.0	58.5
A	9	315 53.5	N17 32.4	129 41.7	6.4	S23 33.4	6.9	58.5
Y	10	330 53.6	N17 33.1	144 07.1	6.3	S23 40.1	6.7	58.4
	11	345 53.6	N17 33.7	158 32.4	6.3	S23 46.7	6.6	58.4
	12	0 53.6	N17 34.4	172 57.7	6.3	S23 53.1	6.4	58.4
	13	15 53.6	N17 35.0	187 22.9	6.3	S23 59.3	6.2	58.3
	14	30 53.7	N17 35.7	201 48.2	6.2	S24 05.4	6.1	58.3
	15	45 53.7	N17 36.4	216 13.4	6.2	S24 11.4	5.9	58.3
	16	60 53.7	N17 37.0	230 38.6	6.2	S24 17.2	5.8	58.3
	17	75 53.7	N17 37.7	245 03.8	6.2	S24 22.8	5.6	58.2
	18	90 53.8	N17 38.3	259 28.9	6.2	S24 28.2	5.5	58.2
	19	105 53.8	N17 39.0	273 54.1	6.1	S24 33.5	5.3	58.2
	20	120 53.8	N17 39.6	288 19.2	6.1	S24 38.7	5.1	58.1
	21	135 53.8	N17 40.3	302 44.4	6.1	S24 43.7	5.0	58.1
	22	150 53.8	N17 40.9	317 09.5	6.1	S24 48.5	4.8	58.1
	23	165 53.9	N17 41.6	331 34.6	6.1	S24 53.2	4.7	58.1
10	0	180 53.9	N17 42.2	345 59.7	6.1	S24 57.7	4.5	58.0
	1	195 53.9	N17 42.9	0 24.8	6.1	S25 02.0	4.3	58.0
	2	210 53.9	N17 43.5	14 49.9	6.1	S25 06.2	4.2	58.0
	3	225 54.0	N17 44.2	29 14.9	6.1	S25 10.2	4.0	57.9
	4	240 54.0	N17 44.8	43 40.0	6.1	S25 14.1	3.9	57.9
W	5	255 54.0	N17 45.5	58 05.1	6.1	S25 17.8	3.7	57.9
E								
D	6	270 54.0	N17 46.1	72 30.2	6.1	S25 21.3	3.5	57.9
N	7	285 54.0	N17 46.8	86 55.3	6.1	S25 24.7	3.4	57.8
E	8	300 54.1	N17 47.4	101 20.4	6.1	S25 27.9	3.2	57.8
S	9	315 54.1	N17 48.1	115 45.5	6.1	S25 31.0	3.1	57.8
D	10	330 54.1	N17 48.7	130 10.6	6.1	S25 33.9	2.9	57.7
A	11	345 54.1	N17 49.3	144 35.8	6.1	S25 36.6	2.7	57.7
Y								
	12	0 54.1	N17 50.0	159 00.9	6.1	S25 39.2	2.6	57.7
	13	15 54.2	N17 50.6	173 26.1	6.2	S25 41.6	2.4	57.6
	14	30 54.2	N17 51.3	187 51.3	6.2	S25 43.8	2.3	57.6
	15	45 54.2	N17 51.9	202 16.5	6.2	S25 45.9	2.1	57.6
	16	60 54.2	N17 52.6	216 41.7	6.2	S25 47.9	1.9	57.5
	17	75 54.2	N17 53.2	231 07.0	6.2	S25 49.6	1.8	57.5
	18	90 54.3	N17 53.8	245 32.2	6.3	S25 51.2	1.6	57.5
	19	105 54.3	N17 54.5	259 57.5	6.3	S25 52.7	1.4	57.5
	20	120 54.3	N17 55.1	274 22.9	6.3	S25 54.0	1.3	57.4
	21	135 54.3	N17 55.8	288 48.2	6.4	S25 55.1	1.1	57.4
	22	150 54.3	N17 56.4	303 13.6	6.4	S25 56.1	1.0	57.4
	23	165 54.3	N17 57.0	317 39.0	6.4	S25 56.9	0.8	57.3
11	0	180 54.4	N17 57.7	332 04.5	6.5	S25 57.5	0.7	57.3
	1	195 54.4	N17 58.3	346 30.0	6.5	S25 58.0	0.5	57.3
	2	210 54.4	N17 58.9	0 55.5	6.5	S25 58.4	0.3	57.2
	3	225 54.4	N17 59.6	15 21.1	6.6	S25 58.6	0.2	57.2
	4	240 54.4	N18 00.2	29 46.7	6.6	S25 58.6	0.0	57.2
T	5	255 54.4	N18 00.9	44 12.3	6.7	S25 58.5	0.1	57.1
H								
U	6	270 54.4	N18 01.5	58 38.1	6.7	S25 58.2	0.3	57.1
R	7	285 54.5	N18 02.1	73 03.8	6.8	S25 57.7	0.4	57.1
S	8	300 54.5	N18 02.8	87 29.6	6.8	S25 57.1	0.6	57.0
D	9	315 54.5	N18 03.4	101 55.4	6.8	S25 56.4	0.7	57.0
A	10	330 54.5	N18 04.0	116 21.3	6.9	S25 55.5	0.9	57.0
Y	11	345 54.5	N18 04.7	130 47.3	7.0	S25 54.4	1.1	56.9
	12	0 54.5	N18 05.3	145 13.3	7.0	S25 53.2	1.2	56.9
	13	15 54.5	N18 05.9	159 39.4	7.1	S25 51.9	1.4	56.9
	14	30 54.6	N18 06.6	174 05.5	7.1	S25 50.4	1.5	56.9
	15	45 54.6	N18 07.2	188 31.7	7.2	S25 48.7	1.7	56.8
	16	60 54.6	N18 07.8	202 57.9	7.2	S25 46.9	1.8	56.8
	17	75 54.6	N18 08.4	217 24.2	7.3	S25 45.0	1.9	56.8
	18	90 54.6	N18 09.1	231 50.6	7.4	S25 42.9	2.1	56.7
	19	105 54.6	N18 09.7	246 17.0	7.4	S25 40.7	2.2	56.7
	20	120 54.6	N18 10.3	260 43.5	7.5	S25 38.3	2.4	56.7
	21	135 54.6	N18 10.9	275 10.1	7.6	S25 35.7	2.5	56.6
	22	150 54.6	N18 11.6	289 36.7	7.6	S25 33.1	2.7	56.6
	23	165 54.7	N18 12.2	304 03.4	7.7	S25 30.3	2.8	56.6
		S.D. 15.8	d 0.6	S.D. 15.9		15.7		15.5

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.5
Achernar	335 18.8	S57 05.4
Acrux	172 56.5	S63 15.7
Adhara	255 04.0	S29 00.9
Albireo	67 01.7	N28 01.0
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.2	N55 48.4
Alkaid	152 49.5	N49 10.3
Al Na-ir	27 29.6	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.2	N29 14.7
Altair	61 57.2	N 8 56.5
Ankaa	353 04.8	S42 09.0
Antares	112 12.2	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.5	S69 04.6
Avior	234 13.8	S59 36.4
Bellatrix	278 20.3	N 6 22.4
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.9
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.8	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.9	S17 49.8
Dubhe	193 37.5	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.5	N51 28.9
Enif	33 36.1	N10 00.3
Fomalhaut	15 11.7	S29 28.2
Gacrux	171 48.2	S57 16.6
Gienah	175 40.6	S17 42.2
Hadar	148 31.5	S60 30.8
Hamal	327 48.5	N23 35.8
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 19.0	N74 02.3
Markab	13 27.3	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.6	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.2	S26 15.6
Peacock	53 01.3	S56 38.3
Polaris	315 50.6	N89 22.4
Pollux	243 14.2	N27 57.4
Procyon	244 48.1	N 5 09.0
Rasalhague	95 55.8	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.6	S 8 10.2
Rigil Kent	139 36.0	S60 57.3
Sabik	101 59.4	S15 45.6
Schedar	349 28.3	N56 41.4
Shaula	96 06.3	S37 07.4
Sirius	258 24.1	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.3	S43 33.2
Vega	80 31.1	N38 48.4
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
12	0	230 17.5	151 54.9	N27 23.3	192 06.1	N14 39.7	61 12.0	N 6 12.5	198 06.6	N10 37.8
	1	245 20.0	166 57.4	N27 23.0	207 06.8	N14 40.3	76 14.4	N 6 12.5	213 08.8	N10 37.9
	2	260 22.5	182 00.0	N27 22.8	222 07.5	N14 40.9	91 16.9	N 6 12.5	228 10.9	N10 38.0
	3	275 24.9	197 02.6	N27 22.6	237 08.1	N14 41.5	106 19.4	N 6 12.5	243 13.1	N10 38.1
	4	290 27.4	212 05.2	N27 22.3	252 08.8	N14 42.1	121 21.9	N 6 12.5	258 15.3	N10 38.2
F	5	305 29.9	227 07.7	N27 22.1	267 09.4	N14 42.7	136 24.4	N 6 12.5	273 17.4	N10 38.3
R										
I	6	320 32.3	242 10.3	N27 21.9	282 10.1	N14 43.3	151 26.8	N 6 12.5	288 19.6	N10 38.4
D	7	335 34.8	257 12.9	N27 21.6	297 10.7	N14 43.9	166 29.3	N 6 12.5	303 21.8	N10 38.5
A	8	350 37.3	272 15.5	N27 21.4	312 11.4	N14 44.5	181 31.8	N 6 12.5	318 24.0	N10 38.6
Y	9	5 39.7	287 18.1	N27 21.1	327 12.0	N14 45.1	196 34.3	N 6 12.5	333 26.1	N10 38.7
	10	20 42.2	302 20.7	N27 20.9	342 12.7	N14 45.7	211 36.8	N 6 12.5	348 28.3	N10 38.8
	11	35 44.7	317 23.3	N27 20.7	357 13.3	N14 46.3	226 39.2	N 6 12.5	3 30.5	N10 38.9
	12	50 47.1	332 25.9	N27 20.4	12 14.0	N14 46.9	241 41.7	N 6 12.5	18 32.6	N10 39.0
	13	65 49.6	347 28.5	N27 20.2	27 14.7	N14 47.5	256 44.2	N 6 12.5	33 34.8	N10 39.1
	14	80 52.0	2 31.2	N27 19.9	42 15.3	N14 48.1	271 46.7	N 6 12.5	48 37.0	N10 39.2
	15	95 54.5	17 33.8	N27 19.7	57 16.0	N14 48.7	286 49.1	N 6 12.5	63 39.1	N10 39.3
	16	110 57.0	32 36.4	N27 19.4	72 16.6	N14 49.3	301 51.6	N 6 12.5	78 41.3	N10 39.4
	17	125 59.4	47 39.1	N27 19.2	87 17.3	N14 49.9	316 54.1	N 6 12.5	93 43.5	N10 39.5
	18	141 01.9	62 41.7	N27 18.9	102 17.9	N14 50.5	331 56.6	N 6 12.4	108 45.6	N10 39.6
	19	156 04.4	77 44.3	N27 18.7	117 18.6	N14 51.1	346 59.0	N 6 12.4	123 47.8	N10 39.7
	20	171 06.8	92 47.0	N27 18.4	132 19.2	N14 51.7	2 01.5	N 6 12.4	138 50.0	N10 39.8
	21	186 09.3	107 49.6	N27 18.2	147 19.9	N14 52.3	17 04.0	N 6 12.4	153 52.1	N10 39.9
	22	201 11.8	122 52.3	N27 17.9	162 20.5	N14 52.9	32 06.5	N 6 12.4	168 54.3	N10 40.0
	23	216 14.2	137 55.0	N27 17.6	177 21.2	N14 53.5	47 08.9	N 6 12.4	183 56.5	N10 40.1
13	0	231 16.7	152 57.6	N27 17.4	192 21.8	N14 54.1	62 11.4	N 6 12.4	198 58.7	N10 40.2
	1	246 19.2	168 00.3	N27 17.1	207 22.5	N14 54.7	77 13.9	N 6 12.4	214 00.8	N10 40.3
	2	261 21.6	183 03.0	N27 16.9	222 23.2	N14 55.3	92 16.4	N 6 12.4	229 03.0	N10 40.4
	3	276 24.1	198 05.7	N27 16.6	237 23.8	N14 55.9	107 18.8	N 6 12.4	244 05.2	N10 40.5
	4	291 26.5	213 08.3	N27 16.3	252 24.5	N14 56.5	122 21.3	N 6 12.4	259 07.3	N10 40.6
S	5	306 29.0	228 11.0	N27 16.1	267 25.1	N14 57.1	137 23.8	N 6 12.4	274 09.5	N10 40.7
A										
T	6	321 31.5	243 13.7	N27 15.8	282 25.8	N14 57.7	152 26.2	N 6 12.4	289 11.7	N10 40.8
U	7	336 33.9	258 16.4	N27 15.5	297 26.4	N14 58.2	167 28.7	N 6 12.4	304 13.8	N10 40.9
R	8	351 36.4	273 19.1	N27 15.3	312 27.1	N14 58.8	182 31.2	N 6 12.4	319 16.0	N10 41.0
D	9	6 38.9	288 21.8	N27 15.0	327 27.7	N14 59.4	197 33.7	N 6 12.4	334 18.2	N10 41.1
A	10	21 41.3	303 24.6	N27 14.7	342 28.4	N15 00.0	212 36.1	N 6 12.4	349 20.3	N10 41.2
Y	11	36 43.8	318 27.3	N27 14.5	357 29.0	N15 00.6	227 38.6	N 6 12.3	4 22.5	N10 41.3
	12	51 46.3	333 30.0	N27 14.2	12 29.7	N15 01.2	242 41.1	N 6 12.3	19 24.7	N10 41.4
	13	66 48.7	348 32.7	N27 13.9	27 30.3	N15 01.8	257 43.5	N 6 12.3	34 26.8	N10 41.5
	14	81 51.2	3 35.5	N27 13.6	42 31.0	N15 02.4	272 46.0	N 6 12.3	49 29.0	N10 41.6
	15	96 53.6	18 38.2	N27 13.4	57 31.6	N15 03.0	287 48.5	N 6 12.3	64 31.2	N10 41.7
	16	111 56.1	33 40.9	N27 13.1	72 32.3	N15 03.6	302 50.9	N 6 12.3	79 33.4	N10 41.8
	17	126 58.6	48 43.7	N27 12.8	87 32.9	N15 04.2	317 53.4	N 6 12.3	94 35.5	N10 41.9
	18	142 01.0	63 46.4	N27 12.5	102 33.6	N15 04.8	332 55.9	N 6 12.3	109 37.7	N10 42.0
	19	157 03.5	78 49.2	N27 12.2	117 34.2	N15 05.4	347 58.4	N 6 12.3	124 39.9	N10 42.1
	20	172 06.0	93 51.9	N27 11.9	132 34.9	N15 06.0	3 00.8	N 6 12.3	139 42.0	N10 42.2
	21	187 08.4	108 54.7	N27 11.7	147 35.5	N15 06.6	18 03.3	N 6 12.3	154 44.2	N10 42.3
	22	202 10.9	123 57.5	N27 11.4	162 36.2	N15 07.2	33 05.8	N 6 12.3	169 46.4	N10 42.4
	23	217 13.4	139 00.2	N27 11.1	177 36.8	N15 07.7	48 08.2	N 6 12.3	184 48.5	N10 42.5
14	0	232 15.8	154 03.0	N27 10.8	192 37.5	N15 08.3	63 10.7	N 6 12.2	199 50.7	N10 42.6
	1	247 18.3	169 05.8	N27 10.5	207 38.2	N15 08.9	78 13.2	N 6 12.2	214 52.9	N10 42.7
	2	262 20.8	184 08.6	N27 10.2	222 38.8	N15 09.5	93 15.6	N 6 12.2	229 55.1	N10 42.8
	3	277 23.2	199 11.4	N27 09.9	237 39.5	N15 10.1	108 18.1	N 6 12.2	244 57.2	N10 42.9
	4	292 25.7	214 14.2	N27 09.6	252 40.1	N15 10.7	123 20.6	N 6 12.2	259 59.4	N10 43.0
S	5	307 28.1	229 17.0	N27 09.3	267 40.8	N15 11.3	138 23.0	N 6 12.2	275 01.6	N10 43.1
U										
N	6	322 30.6	244 19.8	N27 09.0	282 41.4	N15 11.9	153 25.5	N 6 12.2	290 03.7	N10 43.2
D	7	337 33.1	259 22.6	N27 08.7	297 42.1	N15 12.5	168 27.9	N 6 12.2	305 05.9	N10 43.3
A	8	352 35.5	274 25.4	N27 08.4	312 42.7	N15 13.1	183 30.4	N 6 12.2	320 08.1	N10 43.4
Y	9	7 38.0	289 28.2	N27 08.1	327 43.4	N15 13.6	198 32.9	N 6 12.2	335 10.2	N10 43.5
	10	22 40.5	304 31.1	N27 07.8	342 44.0	N15 14.2	213 35.3	N 6 12.1	350 12.4	N10 43.6
	11	37 42.9	319 33.9	N27 07.5	357 44.7	N15 14.8	228 37.8	N 6 12.1	5 14.6	N10 43.7
	12	52 45.4	334 36.7	N27 07.2	12 45.3	N15 15.4	243 40.3	N 6 12.1	20 16.8	N10 43.8
	13	67 47.9	349 39.6	N27 06.9	27 46.0	N15 16.0	258 42.7	N 6 12.1	35 18.9	N10 43.9
	14	82 50.3	4 42.4	N27 06.6	42 46.6	N15 16.6	273 45.2	N 6 12.1	50 21.1	N10 44.0
	15	97 52.8	19 45.2	N27 06.3	57 47.3	N15 17.2	288 47.7	N 6 12.1	65 23.3	N10 44.1
	16	112 55.3	34 48.1	N27 06.0	72 47.9	N15 17.8	303 50.1	N 6 12.1	80 25.4	N10 44.2
	17	127 57.7	49 50.9	N27 05.7	87 48.6	N15 18.3	318 52.6	N 6 12.1	95 27.6	N10 44.3
	18	143 00.2	64 53.8	N27 05.4	102 49.2	N15 18.9	333 55.0	N 6 12.1	110 29.8	N10 44.4
	19	158 02.6	79 56.7	N27 05.1	117 49.9	N15 19.5	348 57.5	N 6 12.1	125 31.9	N10 44.5
	20	173 05.1	94 59.5	N27 04.8	132 50.5	N15 20.1	3 60.0	N 6 12.0	140 34.1	N10 44.6
	21	188 07.6	110 02.4	N27 04.4	147 51.2	N15 20.7	19 02.4	N 6 12.0	155 36.3	N10 44.7
	22	203 10.0	125 05.3	N27 04.1	162 51.8	N15 21.3	34 04.9	N 6 12.0	170 38.5	N10 44.8
	23	218 12.5	140 08.2	N27 03.8	177 52.5	N15 21.9	49 07.3	N 6 12.0	185 40.6	N10 44.9
			v 2.7	d 0.3	v 0.7	d 0.6	v 2.5	d 0.0	v 2.2	d 0.1

G.M.T		SUN				MOON							
d	h	GHA		Dec		GHA		v	Dec		d	HP	
		°	'	°	'	°	'	'	°	'	'	'	
12	0	180	54.7	N18	12.8	318	30.2	7.8	S25	27.3	3.0	56.5	
	1	195	54.7	N18	13.5	332	57.0	7.8	S25	24.2	3.1	56.5	
	2	210	54.7	N18	14.1	347	23.9	7.9	S25	21.0	3.2	56.5	
	3	225	54.7	N18	14.7	1	50.9	8.0	S25	17.6	3.4	56.5	
	4	240	54.7	N18	15.3	16	18.0	8.1	S25	14.1	3.5	56.4	
F	5	255	54.7	N18	15.9	30	45.1	8.1	S25	10.4	3.6	56.4	
R													
I	6	270	54.7	N18	16.6	45	12.3	8.2	S25	06.7	3.8	56.4	
D	7	285	54.7	N18	17.2	59	39.6	8.3	S25	02.7	3.9	56.3	
A	8	300	54.7	N18	17.8	74	07.0	8.4	S24	58.7	4.0	56.3	
Y	9	315	54.7	N18	18.4	88	34.4	8.4	S24	54.5	4.2	56.3	
	10	330	54.8	N18	19.1	103	02.0	8.5	S24	50.2	4.3	56.2	
	11	345	54.8	N18	19.7	117	29.6	8.6	S24	45.8	4.4	56.2	
	12	0	54.8	N18	20.3	131	57.3	8.7	S24	41.2	4.6	56.2	
	13	15	54.8	N18	20.9	146	25.0	8.8	S24	36.5	4.7	56.2	
	14	30	54.8	N18	21.5	160	52.9	8.9	S24	31.7	4.8	56.1	
	15	45	54.8	N18	22.1	175	20.8	8.9	S24	26.7	5.0	56.1	
	16	60	54.8	N18	22.8	189	48.9	9.0	S24	21.6	5.1	56.1	
	17	75	54.8	N18	23.4	204	17.0	9.1	S24	16.4	5.2	56.0	
	18	90	54.8	N18	24.0	218	45.2	9.2	S24	11.1	5.3	56.0	
	19	105	54.8	N18	24.6	233	13.4	9.3	S24	05.6	5.4	56.0	
	20	120	54.8	N18	25.2	247	41.8	9.4	S24	00.1	5.6	55.9	
	21	135	54.8	N18	25.8	262	10.3	9.5	S23	54.4	5.7	55.9	
	22	150	54.8	N18	26.4	276	38.8	9.5	S23	48.6	5.8	55.9	
	23	165	54.8	N18	27.1	291	07.4	9.6	S23	42.7	5.9	55.9	
13	0	180	54.8	N18	27.7	305	36.2	9.7	S23	36.6	6.0	55.8	
	1	195	54.8	N18	28.3	320	05.0	9.8	S23	30.5	6.2	55.8	
	2	210	54.8	N18	28.9	334	33.9	9.9	S23	24.2	6.3	55.8	
	3	225	54.8	N18	29.5	349	02.9	10.0	S23	17.8	6.4	55.8	
	4	240	54.8	N18	30.1	3	31.9	10.1	S23	11.3	6.5	55.7	
S	5	255	54.9	N18	30.7	18	01.1	10.2	S23	04.7	6.6	55.7	
A													
T	6	270	54.9	N18	31.3	32	30.3	10.3	S22	58.0	6.7	55.7	
U	7	285	54.9	N18	31.9	46	59.7	10.3	S22	51.2	6.8	55.6	
R	8	300	54.9	N18	32.6	61	29.1	10.4	S22	44.3	6.9	55.6	
D	9	315	54.9	N18	33.2	75	58.6	10.5	S22	37.2	7.0	55.6	
A	10	330	54.9	N18	33.8	90	28.3	10.6	S22	30.1	7.1	55.6	
Y	11	345	54.9	N18	34.4	104	58.0	10.7	S22	22.8	7.2	55.5	
	12	0	54.9	N18	35.0	119	27.8	10.8	S22	15.5	7.3	55.5	
	13	15	54.9	N18	35.6	133	57.6	10.9	S22	08.1	7.4	55.5	
	14	30	54.9	N18	36.2	148	27.6	11.0	S22	00.5	7.5	55.5	
	15	45	54.9	N18	36.8	162	57.7	11.1	S21	52.9	7.6	55.4	
	16	60	54.9	N18	37.4	177	27.8	11.2	S21	45.1	7.7	55.4	
	17	75	54.9	N18	38.0	191	58.1	11.2	S21	37.3	7.8	55.4	
	18	90	54.9	N18	38.6	206	28.4	11.3	S21	29.4	7.9	55.4	
	19	105	54.9	N18	39.2	220	58.8	11.4	S21	21.3	8.0	55.3	
	20	120	54.9	N18	39.8	235	29.4	11.5	S21	13.2	8.1	55.3	
	21	135	54.9	N18	40.4	249	60.0	11.6	S21	05.0	8.2	55.3	
	22	150	54.9	N18	41.0	264	30.6	11.7	S20	56.7	8.3	55.3	
	23	165	54.9	N18	41.6	279	01.4	11.8	S20	48.3	8.4	55.2	
14	0	180	54.9	N18	42.2	293	32.3	11.9	S20	39.8	8.5	55.2	
	1	195	54.9	N18	42.8	308	03.2	12.0	S20	31.2	8.6	55.2	
	2	210	54.9	N18	43.4	322	34.3	12.0	S20	22.6	8.7	55.2	
	3	225	54.8	N18	44.0	337	05.4	12.1	S20	13.8	8.7	55.2	
	4	240	54.8	N18	44.6	351	36.6	12.2	S20	05.0	8.8	55.1	
S	5	255	54.8	N18	45.2	6	07.9	12.3	S19	56.1	8.9	55.1	
U													
N	6	270	54.8	N18	45.8	20	39.3	12.4	S19	47.1	9.0	55.1	
D	7	285	54.8	N18	46.4	35	10.8	12.5	S19	38.0	9.1	55.1	
A	8	300	54.8	N18	47.0	49	42.3	12.6	S19	28.8	9.2	55.0	
Y	9	315	54.8	N18	47.6	64	14.0	12.6	S19	19.6	9.2	55.0	
	10	330	54.8	N18	48.2	78	45.7	12.7	S19	10.3	9.3	55.0	
	11	345	54.8	N18	48.8	93	17.5	12.8	S19	00.9	9.4	55.0	
	12	0	54.8	N18	49.4	107	49.4	12.9	S18	51.4	9.5	55.0	
	13	15	54.8	N18	50.0	122	21.4	13.0	S18	41.8	9.5	54.9	
	14	30	54.8	N18	50.5	136	53.4	13.1	S18	32.2	9.6	54.9	
	15	45	54.8	N18	51.1	151	25.6	13.1	S18	22.5	9.7	54.9	
	16	60	54.8	N18	51.7	165	57.8	13.2	S18	12.7	9.8	54.9	
	17	75	54.8	N18	52.3	180	30.1	13.3	S18	02.9	9.8	54.9	
	18	90	54.8	N18	52.9	195	02.4	13.4	S17	53.0	9.9	54.8	
	19	105	54.8	N18	53.5	209	34.9	13.4	S17	43.0	10.0	54.8	
	20	120	54.8	N18	54.1	224	07.4	13.5	S17	33.0	10.1	54.8	
	21	135	54.8	N18	54.7	238	40.0	13.6	S17	22.8	10.1	54.8	
	22	150	54.7	N18	55.3	253	12.7	13.7	S17	12.6	10.2	54.8	
	23	165	54.7	N18	55.8	267	45.4	13.8	S17	02.4	10.3	54.8	
		S.D. 15.8		d	0.6	S.D.		15.3		15.1		15.0	

STARS				
Name	SHA		Dec	
	°	'	°	'
Acamar	315	10.1	S40	11.4
Achernar	335	18.7	S57	05.4
Acrux	172	56.5	S63	15.7
Adhara	255	04.0	S29	00.9
Albireo	67	01.7	N28	01.0
Aldebaran	290	36.8	N16	33.9
Alioth	166	10.2	N55	48.4
Alkaid	152	49.5	N49	10.3
Al Na-ir	27	29.6	S46	49.1
Alnilam	275	35.2	S 1	11.1
Alphard	217	45.1	S 8	47.1
Alphecca	126	01.1	N26	37.0
Alpheratz	357	32.2	N29	14.7
Altair	61	57.1	N 8	56.5
Ankaa	353	04.8	S42	09.0
Antares	112	12.1	S26	29.7
Arcturus	145	45.1	N19	02.0
Atria	107	03.5	S69	04.6
Avior	234	13.8	S59	36.4
Bellatrix	278	20.3	N 6	22.4
Betelgeuse	270	49.4	N 7	24.7
Canopus	263	51.6	S52	42.9
Capella	280	18.3	N46	01.6
Castor	245	53.8	N31	49.6
Deneb	49	23.8	N45	22.7
Denebola	182	22.0	N14	24.7
Diphda	348	44.9	S17	49.8
Dubhe	193	37.5	N61	36.0
Elnath	277	58.8	N28	37.8
Eltanin	90	40.5	N51	28.9
Enif	33	36.1	N10	00.3
Fomalhaut	15	11.6	S29	28.1
Gacrux	171	48.2	S57	16.7
Gienah	175	40.6	S17	42.2
Hadar	148	31.5	S60	30.8
Hamal	327	48.5	N23	35.8
Kaus Austr.	83	28.6	S34	22.2
Kochab	137	19.0	N74	02.3
Markab	13	27.3	N15	21.4
Menkar	314	03.6	N 4	12.0
Menkent	147	54.0	S36	30.8
Miaplacidus	221	37.6	S69	50.4
Mirfak	308	24.9	N49	57.7
Nunki	75	44.2	S26	15.6
Peacock	53	01.2	S56	38.3
Polaris	315	50.0	N89	22.3
Pollux	243	14.2	N27	57.4
Procyon	244	48.1	N 5	09.0
Rasalhague	95	55.8	N12	32.3
Regulus	207	31.5	N11	49.6
Rigel	281	01.6	S 8	10.2
Rigil Kent	139	36.0	S60	57.3
Sabik	101	59.4	S15	45.6
Schedar	349	28.3	N56	41.4
Shaula	96	06.3	S37	07.4
Sirius	258	24.1	S16	45.5
Spica	158	19.2	S11	18.7
Suhail	222	44.3	S43	33.2
Vega	80	31.1	N38	48.4
Zuben-ubi	136	53.6	S16	09.7

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
15	0	233 15.0	155 11.1	N27	03.5	192 53.1	N15	22.4	64 09.8	N 6	12.0	200 42.8	N10	45.0
	1	248 17.4	170 14.0	N27	03.2	207 53.8	N15	23.0	79 12.3	N 6	12.0	215 45.0	N10	45.1
	2	263 19.9	185 16.9	N27	02.9	222 54.4	N15	23.6	94 14.7	N 6	12.0	230 47.1	N10	45.2
	3	278 22.4	200 19.8	N27	02.5	237 55.1	N15	24.2	109 17.2	N 6	12.0	245 49.3	N10	45.3
	4	293 24.8	215 22.7	N27	02.2	252 55.7	N15	24.8	124 19.6	N 6	11.9	260 51.5	N10	45.4
M	5	308 27.3	230 25.6	N27	01.9	267 56.4	N15	25.4	139 22.1	N 6	11.9	275 53.7	N10	45.5
O														
N	6	323 29.8	245 28.5	N27	01.6	282 57.0	N15	25.9	154 24.6	N 6	11.9	290 55.8	N10	45.6
D	7	338 32.2	260 31.4	N27	01.2	297 57.7	N15	26.5	169 27.0	N 6	11.9	305 58.0	N10	45.7
A	8	353 34.7	275 34.3	N27	00.9	312 58.3	N15	27.1	184 29.5	N 6	11.9	321 00.2	N10	45.8
Y	9	8 37.1	290 37.3	N27	00.6	327 59.0	N15	27.7	199 31.9	N 6	11.9	336 02.3	N10	45.9
	10	23 39.6	305 40.2	N27	00.2	342 59.6	N15	28.3	214 34.4	N 6	11.9	351 04.5	N10	46.0
	11	38 42.1	320 43.1	N26	59.9	358 00.2	N15	28.8	229 36.8	N 6	11.9	6 06.7	N10	46.1
	12	53 44.5	335 46.1	N26	59.6	13 00.9	N15	29.4	244 39.3	N 6	11.8	21 08.8	N10	46.2
	13	68 47.0	350 49.0	N26	59.2	28 01.5	N15	30.0	259 41.7	N 6	11.8	36 11.0	N10	46.3
	14	83 49.5	5 52.0	N26	58.9	43 02.2	N15	30.6	274 44.2	N 6	11.8	51 13.2	N10	46.4
	15	98 51.9	20 54.9	N26	58.6	58 02.8	N15	31.2	289 46.7	N 6	11.8	66 15.4	N10	46.5
	16	113 54.4	35 57.9	N26	58.2	73 03.5	N15	31.8	304 49.1	N 6	11.8	81 17.5	N10	46.6
	17	128 56.9	51 00.9	N26	57.9	88 04.1	N15	32.3	319 51.6	N 6	11.8	96 19.7	N10	46.7
	18	143 59.3	66 03.8	N26	57.5	103 04.8	N15	32.9	334 54.0	N 6	11.8	111 21.9	N10	46.8
	19	159 01.8	81 06.8	N26	57.2	118 05.4	N15	33.5	349 56.5	N 6	11.8	126 24.0	N10	46.9
	20	174 04.2	96 09.8	N26	56.8	133 06.1	N15	34.1	4 58.9	N 6	11.7	141 26.2	N10	47.0
	21	189 06.7	111 12.8	N26	56.5	148 06.7	N15	34.6	20 01.4	N 6	11.7	156 28.4	N10	47.1
	22	204 09.2	126 15.8	N26	56.2	163 07.4	N15	35.2	35 03.8	N 6	11.7	171 30.6	N10	47.2
	23	219 11.6	141 18.8	N26	55.8	178 08.0	N15	35.8	50 06.3	N 6	11.7	186 32.7	N10	47.3
16	0	234 14.1	156 21.8	N26	55.5	193 08.7	N15	36.4	65 08.7	N 6	11.7	201 34.9	N10	47.4
	1	249 16.6	171 24.8	N26	55.1	208 09.3	N15	37.0	80 11.2	N 6	11.7	216 37.1	N10	47.5
	2	264 19.0	186 27.8	N26	54.8	223 10.0	N15	37.5	95 13.6	N 6	11.7	231 39.2	N10	47.6
	3	279 21.5	201 30.8	N26	54.4	238 10.6	N15	38.1	110 16.1	N 6	11.6	246 41.4	N10	47.7
	4	294 24.0	216 33.8	N26	54.0	253 11.3	N15	38.7	125 18.6	N 6	11.6	261 43.6	N10	47.8
T	5	309 26.4	231 36.8	N26	53.7	268 11.9	N15	39.3	140 21.0	N 6	11.6	276 45.8	N10	47.9
U														
E	6	324 28.9	246 39.8	N26	53.3	283 12.6	N15	39.8	155 23.5	N 6	11.6	291 47.9	N10	48.0
S	7	339 31.4	261 42.9	N26	53.0	298 13.2	N15	40.4	170 25.9	N 6	11.6	306 50.1	N10	48.1
D	8	354 33.8	276 45.9	N26	52.6	313 13.8	N15	41.0	185 28.4	N 6	11.6	321 52.3	N10	48.2
A	9	9 36.3	291 48.9	N26	52.2	328 14.5	N15	41.6	200 30.8	N 6	11.5	336 54.5	N10	48.3
Y	10	24 38.7	306 52.0	N26	51.9	343 15.1	N15	42.1	215 33.3	N 6	11.5	351 56.6	N10	48.4
	11	39 41.2	321 55.0	N26	51.5	358 15.8	N15	42.7	230 35.7	N 6	11.5	6 58.8	N10	48.5
	12	54 43.7	336 58.1	N26	51.2	13 16.4	N15	43.3	245 38.2	N 6	11.5	22 01.0	N10	48.6
	13	69 46.1	352 01.1	N26	50.8	28 17.1	N15	43.9	260 40.6	N 6	11.5	37 03.1	N10	48.7
	14	84 48.6	7 04.2	N26	50.4	43 17.7	N15	44.4	275 43.1	N 6	11.5	52 05.3	N10	48.8
	15	99 51.1	22 07.3	N26	50.0	58 18.4	N15	45.0	290 45.5	N 6	11.4	67 07.5	N10	48.9
	16	114 53.5	37 10.3	N26	49.7	73 19.0	N15	45.6	305 47.9	N 6	11.4	82 09.7	N10	49.0
	17	129 56.0	52 13.4	N26	49.3	88 19.7	N15	46.2	320 50.4	N 6	11.4	97 11.8	N10	49.1
	18	144 58.5	67 16.5	N26	48.9	103 20.3	N15	46.7	335 52.8	N 6	11.4	112 14.0	N10	49.2
	19	160 00.9	82 19.6	N26	48.6	118 21.0	N15	47.3	350 55.3	N 6	11.4	127 16.2	N10	49.3
	20	175 03.4	97 22.7	N26	48.2	133 21.6	N15	47.9	5 57.7	N 6	11.4	142 18.3	N10	49.4
	21	190 05.9	112 25.7	N26	47.8	148 22.2	N15	48.5	21 00.2	N 6	11.3	157 20.5	N10	49.5
	22	205 08.3	127 28.8	N26	47.4	163 22.9	N15	49.0	36 02.6	N 6	11.3	172 22.7	N10	49.6
	23	220 10.8	142 31.9	N26	47.0	178 23.5	N15	49.6	51 05.1	N 6	11.3	187 24.9	N10	49.7
17	0	235 13.2	157 35.0	N26	46.7	193 24.2	N15	50.2	66 07.5	N 6	11.3	202 27.0	N10	49.8
	1	250 15.7	172 38.2	N26	46.3	208 24.8	N15	50.7	81 10.0	N 6	11.3	217 29.2	N10	49.9
	2	265 18.2	187 41.3	N26	45.9	223 25.5	N15	51.3	96 12.4	N 6	11.3	232 31.4	N10	50.0
	3	280 20.6	202 44.4	N26	45.5	238 26.1	N15	51.9	111 14.9	N 6	11.2	247 33.6	N10	50.1
	4	295 23.1	217 47.5	N26	45.1	253 26.8	N15	52.5	126 17.3	N 6	11.2	262 35.7	N10	50.2
W	5	310 25.6	232 50.6	N26	44.7	268 27.4	N15	53.0	141 19.7	N 6	11.2	277 37.9	N10	50.3
E														
D	6	325 28.0	247 53.8	N26	44.3	283 28.1	N15	53.6	156 22.2	N 6	11.2	292 40.1	N10	50.4
N	7	340 30.5	262 56.9	N26	43.9	298 28.7	N15	54.2	171 24.6	N 6	11.2	307 42.2	N10	50.5
E	8	355 33.0	278 00.1	N26	43.6	313 29.3	N15	54.7	186 27.1	N 6	11.2	322 44.4	N10	50.6
S	9	10 35.4	293 03.2	N26	43.2	328 30.0	N15	55.3	201 29.5	N 6	11.1	337 46.6	N10	50.7
D	10	25 37.9	308 06.3	N26	42.8	343 30.6	N15	55.9	216 32.0	N 6	11.1	352 48.8	N10	50.8
A	11	40 40.4	323 09.5	N26	42.4	358 31.3	N15	56.4	231 34.4	N 6	11.1	7 50.9	N10	50.9
Y														
	12	55 42.8	338 12.7	N26	42.0	13 31.9	N15	57.0	246 36.8	N 6	11.1	22 53.1	N10	51.0
	13	70 45.3	353 15.8	N26	41.6	28 32.6	N15	57.6	261 39.3	N 6	11.1	37 55.3	N10	51.1
	14	85 47.7	8 19.0	N26	41.2	43 33.2	N15	58.1	276 41.7	N 6	11.0	52 57.5	N10	51.2
	15	100 50.2	23 22.2	N26	40.8	58 33.9	N15	58.7	291 44.2	N 6	11.0	67 59.6	N10	51.3
	16	115 52.7	38 25.3	N26	40.4	73 34.5	N15	59.3	306 46.6	N 6	11.0	83 01.8	N10	51.4
	17	130 55.1	53 28.5	N26	40.0	88 35.1	N15	59.8	321 49.1	N 6	11.0	98 04.0	N10	51.5
	18	145 57.6	68 31.7	N26	39.6	103 35.8	N16	00.4	336 51.5	N 6	11.0	113 06.1	N10	51.6
	19	161 00.1	83 34.9	N26	39.2	118 36.4	N16	01.0	351 53.9	N 6	10.9	128 08.3	N10	51.7
	20	176 02.5	98 38.1	N26	38.7	133 37.1	N16	01.5	6 56.4	N 6	10.9	143 10.5	N10	51.8
	21	191 05.0	113 41.3	N26	38.3	148 37.7	N16	02.1	21 58.8	N 6	10.9	158 12.7	N10	51.9
	22	206 07.5	128 44.5	N26	37.9	163 38.4	N16	02.7	37 01.3	N 6	10.9	173 14.8	N10	52.0
	23	221 09.9	143 47.7	N26	37.5	178 39.0	N16	03.2	52 03.7	N 6	10.9	188 17.0	N10	52.1
			v 3.1	d	0.4	v 0.6	d	0.6	v 2.4	d	0.0	v 2.2	d	0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
15	0	180 54.7	N18	56.4	282 18.3	13.8	S16 52.1	10.3	54.7
	1	195 54.7	N18	57.0	296 51.2	13.9	S16 41.7	10.4	54.7
	2	210 54.7	N18	57.6	311 24.2	14.0	S16 31.3	10.4	54.7
	3	225 54.7	N18	58.2	325 57.2	14.0	S16 20.8	10.5	54.7
	4	240 54.7	N18	58.8	340 30.3	14.1	S16 10.2	10.6	54.7
M	5	255 54.7	N18	59.4	355 03.5	14.2	S15 59.6	10.6	54.7
O									
N	6	270 54.7	N18	59.9	9 36.8	14.3	S15 48.9	10.7	54.6
D	7	285 54.7	N19	00.5	24 10.1	14.3	S15 38.1	10.7	54.6
A	8	300 54.7	N19	01.1	38 43.5	14.4	S15 27.3	10.8	54.6
Y	9	315 54.6	N19	01.7	53 17.0	14.5	S15 16.5	10.9	54.6
	10	330 54.6	N19	02.3	67 50.5	14.5	S15 05.6	10.9	54.6
	11	345 54.6	N19	02.8	82 24.1	14.6	S14 54.6	11.0	54.6
	12	0 54.6	N19	03.4	96 57.8	14.7	S14 43.6	11.0	54.6
	13	15 54.6	N19	04.0	111 31.5	14.7	S14 32.5	11.1	54.5
	14	30 54.6	N19	04.6	126 05.3	14.8	S14 21.4	11.1	54.5
	15	45 54.6	N19	05.2	140 39.1	14.9	S14 10.2	11.2	54.5
	16	60 54.6	N19	05.7	155 13.0	14.9	S13 58.9	11.2	54.5
	17	75 54.6	N19	06.3	169 47.0	15.0	S13 47.7	11.3	54.5
	18	90 54.5	N19	06.9	184 21.0	15.0	S13 36.3	11.3	54.5
	19	105 54.5	N19	07.5	198 55.1	15.1	S13 24.9	11.4	54.5
	20	120 54.5	N19	08.0	213 29.3	15.1	S13 13.5	11.4	54.5
	21	135 54.5	N19	08.6	228 03.5	15.2	S13 02.0	11.5	54.4
	22	150 54.5	N19	09.2	242 37.7	15.3	S12 50.5	11.5	54.4
	23	165 54.5	N19	09.8	257 12.1	15.3	S12 39.0	11.6	54.4
16	0	180 54.5	N19	10.3	271 46.4	15.4	S12 27.3	11.6	54.4
	1	195 54.4	N19	10.9	286 20.9	15.4	S12 15.7	11.7	54.4
	2	210 54.4	N19	11.5	300 55.3	15.5	S12 04.0	11.7	54.4
	3	225 54.4	N19	12.1	315 29.8	15.5	S11 52.3	11.7	54.4
	4	240 54.4	N19	12.6	330 04.4	15.6	S11 40.5	11.8	54.4
T	5	255 54.4	N19	13.2	344 39.0	15.6	S11 28.6	11.8	54.4
U									
E	6	270 54.4	N19	13.8	359 13.7	15.7	S11 16.8	11.9	54.4
S	7	285 54.4	N19	14.3	13 48.4	15.7	S11 04.9	11.9	54.3
D	8	300 54.3	N19	14.9	28 23.2	15.8	S10 52.9	11.9	54.3
A	9	315 54.3	N19	15.5	42 58.0	15.8	S10 41.0	12.0	54.3
Y	10	330 54.3	N19	16.0	57 32.9	15.9	S10 29.0	12.0	54.3
	11	345 54.3	N19	16.6	72 07.8	15.9	S10 16.9	12.1	54.3
	12	0 54.3	N19	17.2	86 42.7	15.9	S10 04.8	12.1	54.3
	13	15 54.3	N19	17.7	101 17.7	16.0	S 9 52.7	12.1	54.3
	14	30 54.2	N19	18.3	115 52.7	16.0	S 9 40.5	12.2	54.3
	15	45 54.2	N19	18.9	130 27.8	16.1	S 9 28.3	12.2	54.3
	16	60 54.2	N19	19.4	145 02.9	16.1	S 9 16.1	12.2	54.3
	17	75 54.2	N19	20.0	159 38.0	16.1	S 9 03.9	12.3	54.3
	18	90 54.2	N19	20.5	174 13.2	16.2	S 8 51.6	12.3	54.3
	19	105 54.1	N19	21.1	188 48.4	16.2	S 8 39.3	12.3	54.3
	20	120 54.1	N19	21.7	203 23.6	16.2	S 8 26.9	12.3	54.3
	21	135 54.1	N19	22.2	217 58.9	16.3	S 8 14.5	12.4	54.3
	22	150 54.1	N19	22.8	232 34.2	16.3	S 8 02.1	12.4	54.3
	23	165 54.1	N19	23.4	247 09.5	16.3	S 7 49.7	12.4	54.3
17	0	180 54.0	N19	23.9	261 44.9	16.4	S 7 37.2	12.5	54.3
	1	195 54.0	N19	24.5	276 20.3	16.4	S 7 24.7	12.5	54.2
	2	210 54.0	N19	25.0	290 55.7	16.4	S 7 12.2	12.5	54.2
	3	225 54.0	N19	25.6	305 31.1	16.4	S 6 59.7	12.5	54.2
	4	240 54.0	N19	26.1	320 06.6	16.5	S 6 47.1	12.6	54.2
W	5	255 53.9	N19	26.7	334 42.1	16.5	S 6 34.5	12.6	54.2
E									
D	6	270 53.9	N19	27.3	349 17.6	16.5	S 6 21.9	12.6	54.2
N	7	285 53.9	N19	27.8	3 53.2	16.5	S 6 09.3	12.6	54.2
E	8	300 53.9	N19	28.4	18 28.7	16.6	S 5 56.6	12.7	54.2
S	9	315 53.9	N19	28.9	33 04.3	16.6	S 5 43.9	12.7	54.2
D	10	330 53.8	N19	29.5	47 39.9	16.6	S 5 31.2	12.7	54.2
A	11	345 53.8	N19	30.0	62 15.5	16.6	S 5 18.5	12.7	54.2
Y									
	12	0 53.8	N19	30.6	76 51.2	16.6	S 5 05.8	12.7	54.2
	13	15 53.8	N19	31.1	91 26.8	16.7	S 4 53.0	12.8	54.2
	14	30 53.7	N19	31.7	106 02.5	16.7	S 4 40.2	12.8	54.2
	15	45 53.7	N19	32.2	120 38.2	16.7	S 4 27.4	12.8	54.2
	16	60 53.7	N19	32.8	135 13.9	16.7	S 4 14.6	12.8	54.2
	17	75 53.7	N19	33.3	149 49.6	16.7	S 4 01.8	12.8	54.2
	18	90 53.6	N19	33.9	164 25.3	16.7	S 3 48.9	12.8	54.2
	19	105 53.6	N19	34.4	179 01.1	16.7	S 3 36.1	12.9	54.3
	20	120 53.6	N19	35.0	193 36.8	16.7	S 3 23.2	12.9	54.3
	21	135 53.6	N19	35.5	208 12.5	16.7	S 3 10.3	12.9	54.3
	22	150 53.5	N19	36.1	222 48.3	16.8	S 2 57.4	12.9	54.3
	23	165 53.5	N19	36.6	237 24.1	16.8	S 2 44.5	12.9	54.3
		S.D. 15.8	d	0.6	S.D.	14.9	14.8		14.8

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.1	S40 11.4
Achernar	335 18.7	S57 05.4
Acrux	172 56.5	S63 15.7
Adhara	255 04.0	S29 00.9
Albireo	67 01.6	N28 01.0
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.2	N55 48.5
Alkaid	152 49.5	N49 10.3
Al Na-ir	27 29.5	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.0
Alpheratz	357 32.1	N29 14.8
Altair	61 57.1	N 8 56.5
Ankaa	353 04.8	S42 08.9
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.4	S69 04.7
Avior	234 13.8	S59 36.4
Bellatrix	278 20.3	N 6 22.4
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.9
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.8	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.8	S17 49.7
Dubhe	193 37.5	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.5	N51 28.9
Enif	33 36.0	N10 00.3
Fomalhaut	15 11.6	S29 28.1
Gacrux	171 48.2	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.5	S60 30.8
Hamal	327 48.4	N23 35.8
Kaus Austr.	83 28.6	S34 22.2
Kochab	137 19.0	N74 02.3
Markab	13 27.3	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.7	S69 50.4
Mirfak	308 24.9	N49 57.7
Nunki	75 44.1	S26 15.6
Peacock	53 01.2	S56 38.3
Polaris	315 49.5	N89 22.3
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.6	S 8 10.2
Rigil Kent	139 36.0	S60 57.3
Sabik	101 59.3	S15 45.6
Schedar	349 28.2	N56 41.4
Shaula	96 06.3	S37 07.4
Sirius	258 24.1	S16 45.5
Spica	158 19.2	S11 18.8
Suhail	222 44.3	S43 33.2
Vega	80 31.0	N38 48.4
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
18	0	236 12.4	158 50.9	N26 37.1	193 39.7	N16 03.8	67 06.1	N 6 10.8	203 19.2	N10 52.2
	1	251 14.8	173 54.1	N26 36.7	208 40.3	N16 04.4	82 08.6	N 6 10.8	218 21.4	N10 52.2
	2	266 17.3	188 57.3	N26 36.3	223 40.9	N16 04.9	97 11.0	N 6 10.8	233 23.5	N10 52.3
	3	281 19.8	204 00.6	N26 35.8	238 41.6	N16 05.5	112 13.4	N 6 10.8	248 25.7	N10 52.4
	4	296 22.2	219 03.8	N26 35.4	253 42.2	N16 06.0	127 15.9	N 6 10.8	263 27.9	N10 52.5
T	5	311 24.7	234 07.0	N26 35.0	268 42.9	N16 06.6	142 18.3	N 6 10.7	278 30.1	N10 52.6
H										
U	6	326 27.2	249 10.3	N26 34.6	283 43.5	N16 07.2	157 20.8	N 6 10.7	293 32.2	N10 52.7
R	7	341 29.6	264 13.5	N26 34.2	298 44.2	N16 07.7	172 23.2	N 6 10.7	308 34.4	N10 52.8
S	8	356 32.1	279 16.8	N26 33.7	313 44.8	N16 08.3	187 25.6	N 6 10.7	323 36.6	N10 52.9
D	9	11 34.6	294 20.0	N26 33.3	328 45.4	N16 08.9	202 28.1	N 6 10.6	338 38.7	N10 53.0
A	10	26 37.0	309 23.3	N26 32.9	343 46.1	N16 09.4	217 30.5	N 6 10.6	353 40.9	N10 53.1
Y	11	41 39.5	324 26.5	N26 32.4	358 46.7	N16 10.0	232 32.9	N 6 10.6	8 43.1	N10 53.2
	12	56 42.0	339 29.8	N26 32.0	13 47.4	N16 10.5	247 35.4	N 6 10.6	23 45.3	N10 53.3
	13	71 44.4	354 33.1	N26 31.6	28 48.0	N16 11.1	262 37.8	N 6 10.6	38 47.4	N10 53.4
	14	86 46.9	9 36.3	N26 31.2	43 48.7	N16 11.7	277 40.2	N 6 10.5	53 49.6	N10 53.5
	15	101 49.3	24 39.6	N26 30.7	58 49.3	N16 12.2	292 42.7	N 6 10.5	68 51.8	N10 53.6
	16	116 51.8	39 42.9	N26 30.3	73 49.9	N16 12.8	307 45.1	N 6 10.5	83 54.0	N10 53.7
	17	131 54.3	54 46.2	N26 29.8	88 50.6	N16 13.3	322 47.5	N 6 10.5	98 56.1	N10 53.8
	18	146 56.7	69 49.5	N26 29.4	103 51.2	N16 13.9	337 50.0	N 6 10.4	113 58.3	N10 53.9
	19	161 59.2	84 52.8	N26 29.0	118 51.9	N16 14.5	352 52.4	N 6 10.4	129 00.5	N10 54.0
	20	177 01.7	99 56.1	N26 28.5	133 52.5	N16 15.0	7 54.8	N 6 10.4	144 02.7	N10 54.1
	21	192 04.1	114 59.4	N26 28.1	148 53.1	N16 15.6	22 57.3	N 6 10.4	159 04.8	N10 54.2
	22	207 06.6	130 02.7	N26 27.6	163 53.8	N16 16.1	37 59.7	N 6 10.4	174 07.0	N10 54.3
	23	222 09.1	145 06.0	N26 27.2	178 54.4	N16 16.7	53 02.1	N 6 10.3	189 09.2	N10 54.4
19	0	237 11.5	160 09.3	N26 26.7	193 55.1	N16 17.3	68 04.6	N 6 10.3	204 11.4	N10 54.5
	1	252 14.0	175 12.6	N26 26.3	208 55.7	N16 17.8	83 07.0	N 6 10.3	219 13.5	N10 54.6
	2	267 16.4	190 15.9	N26 25.9	223 56.4	N16 18.4	98 09.4	N 6 10.3	234 15.7	N10 54.7
	3	282 18.9	205 19.3	N26 25.4	238 57.0	N16 18.9	113 11.9	N 6 10.2	249 17.9	N10 54.8
	4	297 21.4	220 22.6	N26 24.9	253 57.6	N16 19.5	128 14.3	N 6 10.2	264 20.1	N10 54.9
F	5	312 23.8	235 25.9	N26 24.5	268 58.3	N16 20.0	143 16.7	N 6 10.2	279 22.2	N10 55.0
R										
I	6	327 26.3	250 29.3	N26 24.0	283 58.9	N16 20.6	158 19.2	N 6 10.2	294 24.4	N10 55.1
D	7	342 28.8	265 32.6	N26 23.6	298 59.6	N16 21.1	173 21.6	N 6 10.1	309 26.6	N10 55.2
A	8	357 31.2	280 36.0	N26 23.1	314 00.2	N16 21.7	188 24.0	N 6 10.1	324 28.8	N10 55.3
Y	9	12 33.7	295 39.3	N26 22.7	329 00.8	N16 22.3	203 26.4	N 6 10.1	339 30.9	N10 55.4
	10	27 36.2	310 42.7	N26 22.2	344 01.5	N16 22.8	218 28.9	N 6 10.1	354 33.1	N10 55.5
	11	42 38.6	325 46.0	N26 21.7	359 02.1	N16 23.4	233 31.3	N 6 10.0	9 35.3	N10 55.6
	12	57 41.1	340 49.4	N26 21.3	14 02.8	N16 23.9	248 33.7	N 6 10.0	24 37.5	N10 55.7
	13	72 43.6	355 52.8	N26 20.8	29 03.4	N16 24.5	263 36.2	N 6 10.0	39 39.6	N10 55.8
	14	87 46.0	10 56.1	N26 20.4	44 04.0	N16 25.0	278 38.6	N 6 10.0	54 41.8	N10 55.9
	15	102 48.5	25 59.5	N26 19.9	59 04.7	N16 25.6	293 41.0	N 6 09.9	69 44.0	N10 56.0
	16	117 50.9	41 02.9	N26 19.4	74 05.3	N16 26.1	308 43.4	N 6 09.9	84 46.2	N10 56.1
	17	132 53.4	56 06.3	N26 18.9	89 06.0	N16 26.7	323 45.9	N 6 09.9	99 48.3	N10 56.2
	18	147 55.9	71 09.7	N26 18.5	104 06.6	N16 27.2	338 48.3	N 6 09.9	114 50.5	N10 56.2
	19	162 58.3	86 13.1	N26 18.0	119 07.2	N16 27.8	353 50.7	N 6 09.8	129 52.7	N10 56.3
	20	178 00.8	101 16.5	N26 17.5	134 07.9	N16 28.3	8 53.1	N 6 09.8	144 54.9	N10 56.4
	21	193 03.3	116 19.9	N26 17.1	149 08.5	N16 28.9	23 55.6	N 6 09.8	159 57.0	N10 56.5
	22	208 05.7	131 23.3	N26 16.6	164 09.2	N16 29.4	38 58.0	N 6 09.8	174 59.2	N10 56.6
	23	223 08.2	146 26.7	N26 16.1	179 09.8	N16 30.0	54 00.4	N 6 09.7	190 01.4	N10 56.7
20	0	238 10.7	161 30.1	N26 15.6	194 10.4	N16 30.5	69 02.8	N 6 09.7	205 03.6	N10 56.8
	1	253 13.1	176 33.5	N26 15.1	209 11.1	N16 31.1	84 05.3	N 6 09.7	220 05.7	N10 56.9
	2	268 15.6	191 37.0	N26 14.7	224 11.7	N16 31.6	99 07.7	N 6 09.7	235 07.9	N10 57.0
	3	283 18.1	206 40.4	N26 14.2	239 12.4	N16 32.2	114 10.1	N 6 09.6	250 10.1	N10 57.1
	4	298 20.5	221 43.8	N26 13.7	254 13.0	N16 32.7	129 12.5	N 6 09.6	265 12.3	N10 57.2
S	5	313 23.0	236 47.2	N26 13.2	269 13.6	N16 33.3	144 15.0	N 6 09.6	280 14.4	N10 57.3
A										
T	6	328 25.4	251 50.7	N26 12.7	284 14.3	N16 33.8	159 17.4	N 6 09.6	295 16.6	N10 57.4
U	7	343 27.9	266 54.1	N26 12.2	299 14.9	N16 34.4	174 19.8	N 6 09.5	310 18.8	N10 57.5
R	8	358 30.4	281 57.6	N26 11.7	314 15.6	N16 34.9	189 22.2	N 6 09.5	325 21.0	N10 57.6
D	9	13 32.8	297 01.0	N26 11.2	329 16.2	N16 35.5	204 24.7	N 6 09.5	340 23.1	N10 57.7
A	10	28 35.3	312 04.5	N26 10.7	344 16.8	N16 36.0	219 27.1	N 6 09.4	355 25.3	N10 57.8
Y	11	43 37.8	327 07.9	N26 10.2	359 17.5	N16 36.6	234 29.5	N 6 09.4	10 27.5	N10 57.9
	12	58 40.2	342 11.4	N26 09.8	14 18.1	N16 37.1	249 31.9	N 6 09.4	25 29.7	N10 58.0
	13	73 42.7	357 14.9	N26 09.3	29 18.7	N16 37.7	264 34.3	N 6 09.4	40 31.8	N10 58.1
	14	88 45.2	12 18.3	N26 08.8	44 19.4	N16 38.2	279 36.8	N 6 09.3	55 34.0	N10 58.2
	15	103 47.6	27 21.8	N26 08.3	59 20.0	N16 38.8	294 39.2	N 6 09.3	70 36.2	N10 58.3
	16	118 50.1	42 25.3	N26 07.8	74 20.7	N16 39.3	309 41.6	N 6 09.3	85 38.4	N10 58.4
	17	133 52.5	57 28.8	N26 07.3	89 21.3	N16 39.9	324 44.0	N 6 09.2	100 40.6	N10 58.5
	18	148 55.0	72 32.3	N26 06.7	104 21.9	N16 40.4	339 46.4	N 6 09.2	115 42.7	N10 58.6
	19	163 57.5	87 35.8	N26 06.2	119 22.6	N16 40.9	354 48.9	N 6 09.2	130 44.9	N10 58.7
	20	178 59.9	102 39.3	N26 05.7	134 23.2	N16 41.5	9 51.3	N 6 09.2	145 47.1	N10 58.8
	21	194 02.4	117 42.8	N26 05.2	149 23.9	N16 42.0	24 53.7	N 6 09.1	160 49.3	N10 58.9
	22	209 04.9	132 46.3	N26 04.7	164 24.5	N16 42.6	39 56.1	N 6 09.1	175 51.4	N10 59.0
	23	224 07.3	147 49.8	N26 04.2	179 25.1	N16 43.1	54 58.5	N 6 09.1	190 53.6	N10 59.0
			v 3.4	d 0.5	v 0.6	d 0.6	v 2.4	d 0.0	v 2.2	d 0.1

G.M.T		SUN				MOON						
d	h	GHA		Dec		GHA		v	Dec		d	HP
		°	'	°	'	°	'	'	°	'	'	'
18	0	180	53.5	N19	37.2	251	59.8	16.8	S 2	31.6	12.9	54.3
	1	195	53.5	N19	37.7	266	35.6	16.8	S 2	18.6	12.9	54.3
	2	210	53.4	N19	38.3	281	11.4	16.8	S 2	05.7	13.0	54.3
	3	225	53.4	N19	38.8	295	47.1	16.8	S 1	52.7	13.0	54.3
	4	240	53.4	N19	39.3	310	22.9	16.8	S 1	39.7	13.0	54.3
T	5	255	53.4	N19	39.9	324	58.7	16.8	S 1	26.8	13.0	54.3
H												
U	6	270	53.3	N19	40.4	339	34.4	16.8	S 1	13.8	13.0	54.3
R	7	285	53.3	N19	41.0	354	10.2	16.8	S 1	00.8	13.0	54.3
S	8	300	53.3	N19	41.5	8	46.0	16.8	S 0	47.8	13.0	54.3
D	9	315	53.2	N19	42.0	23	21.7	16.8	S 0	34.7	13.0	54.3
A	10	330	53.2	N19	42.6	37	57.5	16.8	S 0	21.7	13.0	54.3
Y	11	345	53.2	N19	43.1	52	33.2	16.7	S 0	08.7	13.0	54.3
	12	0	53.2	N19	43.7	67	09.0	16.7	N 0	04.3	13.0	54.3
	13	15	53.1	N19	44.2	81	44.7	16.7	N 0	17.4	13.0	54.3
	14	30	53.1	N19	44.7	96	20.4	16.7	N 0	30.4	13.0	54.4
	15	45	53.1	N19	45.3	110	56.1	16.7	N 0	43.4	13.0	54.4
	16	60	53.0	N19	45.8	125	31.8	16.7	N 0	56.5	13.0	54.4
	17	75	53.0	N19	46.3	140	07.5	16.7	N 1	09.5	13.0	54.4
	18	90	53.0	N19	46.9	154	43.1	16.7	N 1	22.6	13.0	54.4
	19	105	53.0	N19	47.4	169	18.8	16.6	N 1	35.6	13.0	54.4
	20	120	52.9	N19	47.9	183	54.4	16.6	N 1	48.6	13.0	54.4
	21	135	52.9	N19	48.5	198	30.0	16.6	N 2	01.7	13.0	54.4
	22	150	52.9	N19	49.0	213	05.6	16.6	N 2	14.7	13.0	54.4
	23	165	52.8	N19	49.5	227	41.2	16.6	N 2	27.8	13.0	54.4
19	0	180	52.8	N19	50.1	242	16.8	16.6	N 2	40.8	13.0	54.4
	1	195	52.8	N19	50.6	256	52.3	16.5	N 2	53.8	13.0	54.5
	2	210	52.7	N19	51.1	271	27.8	16.5	N 3	06.8	13.0	54.5
	3	225	52.7	N19	51.7	286	03.3	16.5	N 3	19.9	13.0	54.5
	4	240	52.7	N19	52.2	300	38.7	16.5	N 3	32.9	13.0	54.5
F	5	255	52.6	N19	52.7	315	14.2	16.4	N 3	45.9	13.0	54.5
R												
I	6	270	52.6	N19	53.3	329	49.6	16.4	N 3	58.9	13.0	54.5
D	7	285	52.6	N19	53.8	344	25.0	16.4	N 4	11.9	13.0	54.5
A	8	300	52.5	N19	54.3	359	00.3	16.3	N 4	24.9	13.0	54.5
Y	9	315	52.5	N19	54.8	13	35.6	16.3	N 4	37.8	13.0	54.6
	10	330	52.5	N19	55.4	28	10.9	16.3	N 4	50.8	13.0	54.6
	11	345	52.4	N19	55.9	42	46.2	16.3	N 5	03.7	13.0	54.6
	12	0	52.4	N19	56.4	57	21.4	16.2	N 5	16.7	12.9	54.6
	13	15	52.4	N19	56.9	71	56.6	16.2	N 5	29.6	12.9	54.6
	14	30	52.3	N19	57.5	86	31.7	16.1	N 5	42.5	12.9	54.6
	15	45	52.3	N19	58.0	101	06.8	16.1	N 5	55.4	12.9	54.6
	16	60	52.2	N19	58.5	115	41.9	16.1	N 6	08.3	12.9	54.7
	17	75	52.2	N19	59.0	130	16.9	16.0	N 6	21.2	12.9	54.7
	18	90	52.2	N19	59.5	144	51.9	16.0	N 6	34.0	12.9	54.7
	19	105	52.1	N20	00.1	159	26.9	16.0	N 6	46.9	12.8	54.7
	20	120	52.1	N20	00.6	174	01.8	15.9	N 6	59.7	12.8	54.7
	21	135	52.1	N20	01.1	188	36.6	15.9	N 7	12.5	12.8	54.7
	22	150	52.0	N20	01.6	203	11.5	15.8	N 7	25.3	12.8	54.7
	23	165	52.0	N20	02.1	217	46.2	15.8	N 7	38.0	12.8	54.8
20	0	180	52.0	N20	02.7	232	21.0	15.7	N 7	50.8	12.7	54.8
	1	195	51.9	N20	03.2	246	55.7	15.7	N 8	03.5	12.7	54.8
	2	210	51.9	N20	03.7	261	30.3	15.6	N 8	16.2	12.7	54.8
	3	225	51.8	N20	04.2	276	04.9	15.6	N 8	28.8	12.7	54.8
	4	240	51.8	N20	04.7	290	39.4	15.5	N 8	41.5	12.6	54.8
S	5	255	51.8	N20	05.2	305	13.9	15.5	N 8	54.1	12.6	54.9
A												
T	6	270	51.7	N20	05.7	319	48.3	15.4	N 9	06.7	12.6	54.9
U	7	285	51.7	N20	06.3	334	22.7	15.4	N 9	19.3	12.6	54.9
R	8	300	51.6	N20	06.8	348	57.0	15.3	N 9	31.8	12.5	54.9
D	9	315	51.6	N20	07.3	3	31.3	15.3	N 9	44.3	12.5	54.9
A	10	330	51.6	N20	07.8	18	05.5	15.2	N 9	56.8	12.5	54.9
Y	11	345	51.5	N20	08.3	32	39.7	15.2	N10	09.3	12.5	55.0
	12	0	51.5	N20	08.8	47	13.8	15.1	N10	21.7	12.4	55.0
	13	15	51.4	N20	09.3	61	47.8	15.0	N10	34.1	12.4	55.0
	14	30	51.4	N20	09.8	76	21.8	15.0	N10	46.4	12.4	55.0
	15	45	51.4	N20	10.3	90	55.7	14.9	N10	58.7	12.3	55.0
	16	60	51.3	N20	10.9	105	29.5	14.9	N11	11.0	12.3	55.1
	17	75	51.3	N20	11.4	120	03.3	14.8	N11	23.3	12.3	55.1
	18	90	51.2	N20	11.9	134	37.0	14.7	N11	35.5	12.2	55.1
	19	105	51.2	N20	12.4	149	10.7	14.7	N11	47.7	12.2	55.1
	20	120	51.1	N20	12.9	163	44.3	14.6	N11	59.8	12.1	55.1
	21	135	51.1	N20	13.4	178	17.8	14.5	N12	11.9	12.1	55.2
	22	150	51.1	N20	13.9	192	51.3	14.5	N12	24.0	12.1	55.2
	23	165	51.0	N20	14.4	207	24.7	14.4	N12	36.0	12.0	55.2
		S.D. 15.8		d 0.5		S.D.	14.8		14.9		15.0	

STARS				
Name	SHA		Dec	
	°	'	°	'
Acamar	315	10.1	S40	11.4
Achernar	335	18.7	S57	05.3
Acrux	172	56.5	S63	15.7
Adhara	255	04.0	S29	00.8
Albireo	67	01.6	N28	01.0
Aldebaran	290	36.8	N16	33.9
Alioth	166	10.2	N55	48.5
Alkaid	152	49.5	N49	10.3
Al Na-ir	27	29.5	S46	49.1
Alnilam	275	35.2	S 1	11.1
Alphard	217	45.1	S 8	47.1
Alphecca	126	01.1	N26	37.1
Alpheratz	357	32.1	N29	14.8
Altair	61	57.1	N 8	56.5
Ankaa	353	04.7	S42	08.9
Antares	112	12.1	S26	29.7
Arcturus	145	45.1	N19	02.0
Atria	107	03.4	S69	04.7
Avior	234	13.8	S59	36.4
Bellatrix	278	20.3	N 6	22.4
Betelgeuse	270	49.4	N 7	24.7
Canopus	263	51.6	S52	42.9
Capella	280	18.3	N46	01.6
Castor	245	53.8	N31	49.6
Deneb	49	23.7	N45	22.7
Denebola	182	22.0	N14	24.7
Diphda	348	44.8	S17	49.7
Dubhe	193	37.5	N61	36.0
Elnath	277	58.8	N28	37.8
Eltanin	90	40.5	N51	28.9
Enif	33	36.0	N10	00.3
Fomalhaut	15	11.6	S29	28.1
Gacrux	171	48.2	S57	16.7
Gienah	175	40.6	S17	42.2
Hadar	148	31.5	S60	30.8
Hamal	327	48.4	N23	35.8
Kaus Austr.	83	28.6	S34	22.2
Kochab	137	19.0	N74	02.3
Markab	13	27.3	N15	21.4
Menkar	314	03.6	N 4	12.0
Menkent	147	54.0	S36	30.8
Miaplacidus	221	37.7	S69	50.4
Mirfak	308	24.9	N49	57.7
Nunki	75	44.1	S26	15.6
Peacock	53	01.2	S56	38.3
Polaris	315	49.0	N89	22.3
Pollux	243	14.2	N27	57.4
Procyon	244	48.2	N 5	09.0
Rasalhague	95	55.7	N12	32.3
Regulus	207	31.5	N11	49.6
Rigel	281	01.6	S 8	10.2
Rigil Kent	139	36.0	S60	57.3
Sabik	101	59.3	S15	45.6
Schedar	349	28.2	N56	41.4
Shaula	96	06.3	S37	07.4
Sirius	258	24.1	S16	45.5
Spica	158	19.2	S11	18.7
Suhail	222	44.4	S43	33.2
Vega	80	31.0	N38	48.4
Zuben-ubi	136	53.6	S16	09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
21	0	239 09.8	162 53.3	N26 03.7	194 25.8	N16 43.7	70 01.0	N 6 09.0	205 55.8	N10 59.1
	1	254 12.3	177 56.8	N26 03.2	209 26.4	N16 44.2	85 03.4	N 6 09.0	220 58.0	N10 59.2
	2	269 14.7	193 00.3	N26 02.7	224 27.0	N16 44.8	100 05.8	N 6 09.0	236 00.1	N10 59.3
	3	284 17.2	208 03.8	N26 02.1	239 27.7	N16 45.3	115 08.2	N 6 09.0	251 02.3	N10 59.4
	4	299 19.7	223 07.4	N26 01.6	254 28.3	N16 45.8	130 10.6	N 6 08.9	266 04.5	N10 59.5
S	5	314 22.1	238 10.9	N26 01.1	269 28.9	N16 46.4	145 13.0	N 6 08.9	281 06.7	N10 59.6
U										
N	6	329 24.6	253 14.4	N26 00.6	284 29.6	N16 46.9	160 15.5	N 6 08.9	296 08.8	N10 59.7
D	7	344 27.0	268 18.0	N26 00.1	299 30.2	N16 47.5	175 17.9	N 6 08.8	311 11.0	N10 59.8
A	8	359 29.5	283 21.5	N25 59.5	314 30.9	N16 48.0	190 20.3	N 6 08.8	326 13.2	N10 59.9
Y	9	14 32.0	298 25.0	N25 59.0	329 31.5	N16 48.5	205 22.7	N 6 08.8	341 15.4	N11 00.0
	10	29 34.4	313 28.6	N25 58.5	344 32.1	N16 49.1	220 25.1	N 6 08.7	356 17.6	N11 00.1
	11	44 36.9	328 32.1	N25 58.0	359 32.8	N16 49.6	235 27.5	N 6 08.7	11 19.7	N11 00.2
	12	59 39.4	343 35.7	N25 57.4	14 33.4	N16 50.2	250 29.9	N 6 08.7	26 21.9	N11 00.3
	13	74 41.8	358 39.3	N25 56.9	29 34.0	N16 50.7	265 32.4	N 6 08.6	41 24.1	N11 00.4
	14	89 44.3	13 42.8	N25 56.4	44 34.7	N16 51.2	280 34.8	N 6 08.6	56 26.3	N11 00.5
	15	104 46.8	28 46.4	N25 55.8	59 35.3	N16 51.8	295 37.2	N 6 08.6	71 28.4	N11 00.6
	16	119 49.2	43 50.0	N25 55.3	74 36.0	N16 52.3	310 39.6	N 6 08.6	86 30.6	N11 00.7
	17	134 51.7	58 53.5	N25 54.8	89 36.6	N16 52.9	325 42.0	N 6 08.5	101 32.8	N11 00.8
	18	149 54.2	73 57.1	N25 54.2	104 37.2	N16 53.4	340 44.4	N 6 08.5	116 35.0	N11 00.9
	19	164 56.6	89 00.7	N25 53.7	119 37.9	N16 53.9	355 46.8	N 6 08.5	131 37.2	N11 01.0
	20	179 59.1	104 04.3	N25 53.2	134 38.5	N16 54.5	10 49.3	N 6 08.4	146 39.3	N11 01.1
	21	195 01.5	119 07.9	N25 52.6	149 39.1	N16 55.0	25 51.7	N 6 08.4	161 41.5	N11 01.2
	22	210 04.0	134 11.5	N25 52.1	164 39.8	N16 55.6	40 54.1	N 6 08.4	176 43.7	N11 01.2
	23	225 06.5	149 15.1	N25 51.5	179 40.4	N16 56.1	55 56.5	N 6 08.3	191 45.9	N11 01.3
22	0	240 08.9	164 18.7	N25 51.0	194 41.0	N16 56.6	70 58.9	N 6 08.3	206 48.0	N11 01.4
	1	255 11.4	179 22.3	N25 50.4	209 41.7	N16 57.2	86 01.3	N 6 08.3	221 50.2	N11 01.5
	2	270 13.9	194 25.9	N25 49.9	224 42.3	N16 57.7	101 03.7	N 6 08.2	236 52.4	N11 01.6
	3	285 16.3	209 29.5	N25 49.3	239 42.9	N16 58.2	116 06.1	N 6 08.2	251 54.6	N11 01.7
	4	300 18.8	224 33.1	N25 48.8	254 43.6	N16 58.8	131 08.5	N 6 08.2	266 56.8	N11 01.8
M	5	315 21.3	239 36.7	N25 48.2	269 44.2	N16 59.3	146 10.9	N 6 08.1	281 58.9	N11 01.9
O										
N	6	330 23.7	254 40.4	N25 47.7	284 44.8	N16 59.8	161 13.4	N 6 08.1	297 01.1	N11 02.0
D	7	345 26.2	269 44.0	N25 47.1	299 45.5	N17 00.4	176 15.8	N 6 08.1	312 03.3	N11 02.1
A	8	0 28.6	284 47.6	N25 46.6	314 46.1	N17 00.9	191 18.2	N 6 08.0	327 05.5	N11 02.2
Y	9	15 31.1	299 51.2	N25 46.0	329 46.8	N17 01.4	206 20.6	N 6 08.0	342 07.6	N11 02.3
	10	30 33.6	314 54.9	N25 45.4	344 47.4	N17 02.0	221 23.0	N 6 08.0	357 09.8	N11 02.4
	11	45 36.0	329 58.5	N25 44.9	359 48.0	N17 02.5	236 25.4	N 6 07.9	12 12.0	N11 02.5
	12	60 38.5	345 02.2	N25 44.3	14 48.7	N17 03.0	251 27.8	N 6 07.9	27 14.2	N11 02.6
	13	75 41.0	0 05.8	N25 43.8	29 49.3	N17 03.6	266 30.2	N 6 07.9	42 16.4	N11 02.7
	14	90 43.4	15 09.5	N25 43.2	44 49.9	N17 04.1	281 32.6	N 6 07.8	57 18.5	N11 02.8
	15	105 45.9	30 13.1	N25 42.6	59 50.6	N17 04.6	296 35.0	N 6 07.8	72 20.7	N11 02.9
	16	120 48.4	45 16.8	N25 42.1	74 51.2	N17 05.2	311 37.4	N 6 07.8	87 22.9	N11 03.0
	17	135 50.8	60 20.4	N25 41.5	89 51.8	N17 05.7	326 39.8	N 6 07.7	102 25.1	N11 03.1
	18	150 53.3	75 24.1	N25 40.9	104 52.5	N17 06.2	341 42.2	N 6 07.7	117 27.3	N11 03.2
	19	165 55.8	90 27.8	N25 40.4	119 53.1	N17 06.8	356 44.7	N 6 07.7	132 29.4	N11 03.2
	20	180 58.2	105 31.4	N25 39.8	134 53.7	N17 07.3	11 47.1	N 6 07.6	147 31.6	N11 03.3
	21	196 00.7	120 35.1	N25 39.2	149 54.4	N17 07.8	26 49.5	N 6 07.6	162 33.8	N11 03.4
	22	211 03.1	135 38.8	N25 38.6	164 55.0	N17 08.3	41 51.9	N 6 07.6	177 36.0	N11 03.5
	23	226 05.6	150 42.5	N25 38.1	179 55.6	N17 08.9	56 54.3	N 6 07.5	192 38.1	N11 03.6
23	0	241 08.1	165 46.2	N25 37.5	194 56.3	N17 09.4	71 56.7	N 6 07.5	207 40.3	N11 03.7
	1	256 10.5	180 49.9	N25 36.9	209 56.9	N17 09.9	86 59.1	N 6 07.5	222 42.5	N11 03.8
	2	271 13.0	195 53.5	N25 36.3	224 57.5	N17 10.5	102 01.5	N 6 07.4	237 44.7	N11 03.9
	3	286 15.5	210 57.2	N25 35.7	239 58.2	N17 11.0	117 03.9	N 6 07.4	252 46.9	N11 04.0
	4	301 17.9	226 00.9	N25 35.2	254 58.8	N17 11.5	132 06.3	N 6 07.3	267 49.0	N11 04.1
T	5	316 20.4	241 04.6	N25 34.6	269 59.4	N17 12.0	147 08.7	N 6 07.3	282 51.2	N11 04.2
U										
E	6	331 22.9	256 08.4	N25 34.0	285 00.1	N17 12.6	162 11.1	N 6 07.3	297 53.4	N11 04.3
S	7	346 25.3	271 12.1	N25 33.4	300 00.7	N17 13.1	177 13.5	N 6 07.2	312 55.6	N11 04.4
D	8	1 27.8	286 15.8	N25 32.8	315 01.3	N17 13.6	192 15.9	N 6 07.2	327 57.8	N11 04.5
A	9	16 30.3	301 19.5	N25 32.2	330 02.0	N17 14.2	207 18.3	N 6 07.2	342 59.9	N11 04.6
Y	10	31 32.7	316 23.2	N25 31.6	345 02.6	N17 14.7	222 20.7	N 6 07.1	358 02.1	N11 04.7
	11	46 35.2	331 26.9	N25 31.0	0 03.2	N17 15.2	237 23.1	N 6 07.1	13 04.3	N11 04.8
	12	61 37.6	346 30.7	N25 30.4	15 03.9	N17 15.7	252 25.5	N 6 07.1	28 06.5	N11 04.9
	13	76 40.1	1 34.4	N25 29.8	30 04.5	N17 16.3	267 27.9	N 6 07.0	43 08.7	N11 04.9
	14	91 42.6	16 38.1	N25 29.3	45 05.1	N17 16.8	282 30.3	N 6 07.0	58 10.8	N11 05.0
	15	106 45.0	31 41.8	N25 28.7	60 05.8	N17 17.3	297 32.7	N 6 06.9	73 13.0	N11 05.1
	16	121 47.5	46 45.6	N25 28.1	75 06.4	N17 17.8	312 35.1	N 6 06.9	88 15.2	N11 05.2
	17	136 50.0	61 49.3	N25 27.5	90 07.0	N17 18.4	327 37.5	N 6 06.9	103 17.4	N11 05.3
	18	151 52.4	76 53.1	N25 26.9	105 07.7	N17 18.9	342 39.9	N 6 06.8	118 19.6	N11 05.4
	19	166 54.9	91 56.8	N25 26.2	120 08.3	N17 19.4	357 42.3	N 6 06.8	133 21.7	N11 05.5
	20	181 57.4	107 00.6	N25 25.6	135 08.9	N17 19.9	12 44.7	N 6 06.8	148 23.9	N11 05.6
	21	196 59.8	122 04.3	N25 25.0	150 09.6	N17 20.4	27 47.1	N 6 06.7	163 26.1	N11 05.7
	22	212 02.3	137 08.1	N25 24.4	165 10.2	N17 21.0	42 49.5	N 6 06.7	178 28.3	N11 05.8
	23	227 04.7	152 11.8	N25 23.8	180 10.8	N17 21.5	57 51.9	N 6 06.6	193 30.5	N11 05.9
			v 3.6	d 0.6	v 0.6	d 0.5	v 2.4	d 0.0	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
21	0	180 51.0	N20 14.9	221 58.0	14.3	N12 48.0	12.0	55.2
	1	195 50.9	N20 15.4	236 31.2	14.2	N12 59.9	11.9	55.2
	2	210 50.9	N20 15.9	251 04.4	14.2	N13 11.8	11.9	55.3
	3	225 50.8	N20 16.4	265 37.5	14.1	N13 23.6	11.8	55.3
	4	240 50.8	N20 16.9	280 10.6	14.0	N13 35.4	11.8	55.3
S	5	255 50.8	N20 17.4	294 43.5	14.0	N13 47.1	11.7	55.3
U								
N	6	270 50.7	N20 17.9	309 16.4	13.9	N13 58.8	11.7	55.4
D	7	285 50.7	N20 18.4	323 49.2	13.8	N14 10.5	11.6	55.4
A	8	300 50.6	N20 18.9	338 21.9	13.7	N14 22.1	11.6	55.4
Y	9	315 50.6	N20 19.4	352 54.6	13.7	N14 33.6	11.5	55.4
	10	330 50.5	N20 19.9	7 27.2	13.6	N14 45.1	11.5	55.4
	11	345 50.5	N20 20.4	21 59.7	13.5	N14 56.5	11.4	55.5
	12	0 50.4	N20 20.9	36 32.1	13.4	N15 07.9	11.4	55.5
	13	15 50.4	N20 21.4	51 04.4	13.3	N15 19.2	11.3	55.5
	14	30 50.3	N20 21.9	65 36.7	13.3	N15 30.5	11.3	55.5
	15	45 50.3	N20 22.4	80 08.8	13.2	N15 41.7	11.2	55.6
	16	60 50.2	N20 22.9	94 40.9	13.1	N15 52.8	11.1	55.6
	17	75 50.2	N20 23.3	109 12.9	13.0	N16 03.9	11.1	55.6
	18	90 50.2	N20 23.8	123 44.8	12.9	N16 14.9	11.0	55.6
	19	105 50.1	N20 24.3	138 16.7	12.8	N16 25.9	11.0	55.6
	20	120 50.1	N20 24.8	152 48.4	12.7	N16 36.8	10.9	55.7
	21	135 50.0	N20 25.3	167 20.1	12.7	N16 47.6	10.8	55.7
	22	150 50.0	N20 25.8	181 51.7	12.6	N16 58.4	10.8	55.7
	23	165 49.9	N20 26.3	196 23.2	12.5	N17 09.1	10.7	55.7
22	0	180 49.9	N20 26.8	210 54.6	12.4	N17 19.7	10.6	55.8
	1	195 49.8	N20 27.3	225 25.9	12.3	N17 30.3	10.6	55.8
	2	210 49.8	N20 27.8	239 57.1	12.2	N17 40.7	10.5	55.8
	3	225 49.7	N20 28.2	254 28.2	12.1	N17 51.1	10.4	55.8
	4	240 49.7	N20 28.7	268 59.3	12.0	N18 01.5	10.3	55.9
M	5	255 49.6	N20 29.2	283 30.2	12.0	N18 11.7	10.3	55.9
O								
N	6	270 49.6	N20 29.7	298 01.1	11.9	N18 21.9	10.2	55.9
D	7	285 49.5	N20 30.2	312 31.8	11.8	N18 32.0	10.1	55.9
A	8	300 49.5	N20 30.7	327 02.5	11.7	N18 42.0	10.0	56.0
Y	9	315 49.4	N20 31.1	341 33.1	11.6	N18 52.0	9.9	56.0
	10	330 49.4	N20 31.6	356 03.6	11.5	N19 01.9	9.9	56.0
	11	345 49.3	N20 32.1	10 34.0	11.4	N19 11.6	9.8	56.0
	12	0 49.3	N20 32.6	25 04.3	11.3	N19 21.3	9.7	56.1
	13	15 49.2	N20 33.1	39 34.5	11.2	N19 30.9	9.6	56.1
	14	30 49.1	N20 33.6	54 04.6	11.1	N19 40.5	9.5	56.1
	15	45 49.1	N20 34.0	68 34.6	11.0	N19 49.9	9.4	56.1
	16	60 49.0	N20 34.5	83 04.6	10.9	N19 59.2	9.3	56.2
	17	75 49.0	N20 35.0	97 34.4	10.8	N20 08.5	9.3	56.2
	18	90 48.9	N20 35.5	112 04.1	10.7	N20 17.7	9.2	56.2
	19	105 48.9	N20 35.9	126 33.8	10.6	N20 26.7	9.1	56.2
	20	120 48.8	N20 36.4	141 03.3	10.5	N20 35.7	9.0	56.3
	21	135 48.8	N20 36.9	155 32.8	10.5	N20 44.6	8.9	56.3
	22	150 48.7	N20 37.4	170 02.1	10.4	N20 53.4	8.8	56.3
	23	165 48.7	N20 37.8	184 31.4	10.3	N21 02.0	8.7	56.3
23	0	180 48.6	N20 38.3	199 00.6	10.2	N21 10.6	8.6	56.4
	1	195 48.6	N20 38.8	213 29.6	10.1	N21 19.1	8.5	56.4
	2	210 48.5	N20 39.3	227 58.6	10.0	N21 27.5	8.4	56.4
	3	225 48.4	N20 39.7	242 27.5	9.9	N21 35.8	8.3	56.4
	4	240 48.4	N20 40.2	256 56.2	9.8	N21 43.9	8.2	56.5
T	5	255 48.3	N20 40.7	271 24.9	9.7	N21 52.0	8.1	56.5
U								
E	6	270 48.3	N20 41.1	285 53.5	9.6	N21 59.9	8.0	56.5
S	7	285 48.2	N20 41.6	300 22.0	9.5	N22 07.8	7.8	56.5
D	8	300 48.2	N20 42.1	314 50.4	9.4	N22 15.5	7.7	56.6
A	9	315 48.1	N20 42.6	329 18.7	9.3	N22 23.1	7.6	56.6
Y	10	330 48.1	N20 43.0	343 46.9	9.2	N22 30.7	7.5	56.6
	11	345 48.0	N20 43.5	358 15.1	9.1	N22 38.0	7.4	56.6
	12	0 47.9	N20 44.0	12 43.1	9.0	N22 45.3	7.3	56.7
	13	15 47.9	N20 44.4	27 11.0	8.9	N22 52.5	7.2	56.7
	14	30 47.8	N20 44.9	41 38.9	8.8	N22 59.5	7.0	56.7
	15	45 47.8	N20 45.3	56 06.6	8.8	N23 06.5	6.9	56.7
	16	60 47.7	N20 45.8	70 34.3	8.7	N23 13.3	6.8	56.8
	17	75 47.7	N20 46.3	85 01.9	8.6	N23 19.9	6.7	56.8
	18	90 47.6	N20 46.7	99 29.3	8.5	N23 26.5	6.6	56.8
	19	105 47.5	N20 47.2	113 56.7	8.4	N23 32.9	6.4	56.8
	20	120 47.5	N20 47.7	128 24.0	8.3	N23 39.2	6.3	56.9
	21	135 47.4	N20 48.1	142 51.2	8.2	N23 45.4	6.2	56.9
	22	150 47.4	N20 48.6	157 18.4	8.1	N23 51.5	6.1	56.9
	23	165 47.3	N20 49.0	171 45.4	8.0	N23 57.4	5.9	56.9
		S.D. 15.8	d 0.5	S.D. 15.1		15.3		15.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.4
Achernar	335 18.7	S57 05.3
Acrux	172 56.6	S63 15.7
Adhara	255 04.0	S29 00.8
Albireo	67 01.6	N28 01.0
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.2	N55 48.5
Alkaid	152 49.5	N49 10.3
Al Na-ir	27 29.5	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 32.1	N29 14.8
Altair	61 57.1	N 8 56.6
Ankaa	353 04.7	S42 08.9
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.4	S69 04.7
Avior	234 13.9	S59 36.4
Bellatrix	278 20.3	N 6 22.4
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.8
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.7	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.8	S17 49.7
Dubhe	193 37.6	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 28.9
Enif	33 36.0	N10 00.3
Fomalhaut	15 11.6	S29 28.1
Gacrux	171 48.2	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.8
Hamal	327 48.4	N23 35.8
Kaus Austr.	83 28.6	S34 22.2
Kochab	137 19.1	N74 02.3
Markab	13 27.2	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.8	S69 50.4
Mirfak	308 24.8	N49 57.6
Nunki	75 44.1	S26 15.6
Peacock	53 01.1	S56 38.3
Polaris	315 48.3	N89 22.3
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.6	S 8 10.2
Rigil Kent	139 36.0	S60 57.3
Sabik	101 59.3	S15 45.6
Schedar	349 28.2	N56 41.4
Shaula	96 06.3	S37 07.4
Sirius	258 24.1	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.4	S43 33.2
Vega	80 31.0	N38 48.4
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
24	0	242 07.2	167 15.6	N25 23.2	195 11.4	N17 22.0	72 54.3	N 6 06.6	208 32.6	N11 06.0
	1	257 09.7	182 19.4	N25 22.6	210 12.1	N17 22.5	87 56.7	N 6 06.6	223 34.8	N11 06.1
	2	272 12.1	197 23.1	N25 22.0	225 12.7	N17 23.1	102 59.1	N 6 06.5	238 37.0	N11 06.2
	3	287 14.6	212 26.9	N25 21.4	240 13.3	N17 23.6	118 01.5	N 6 06.5	253 39.2	N11 06.3
	4	302 17.1	227 30.7	N25 20.8	255 14.0	N17 24.1	133 03.9	N 6 06.5	268 41.4	N11 06.4
W	5	317 19.5	242 34.5	N25 20.1	270 14.6	N17 24.6	148 06.3	N 6 06.4	283 43.5	N11 06.5
E										
D	6	332 22.0	257 38.3	N25 19.5	285 15.2	N17 25.1	163 08.7	N 6 06.4	298 45.7	N11 06.5
N	7	347 24.5	272 42.0	N25 18.9	300 15.9	N17 25.7	178 11.1	N 6 06.3	313 47.9	N11 06.6
E	8	2 26.9	287 45.8	N25 18.3	315 16.5	N17 26.2	193 13.5	N 6 06.3	328 50.1	N11 06.7
S	9	17 29.4	302 49.6	N25 17.7	330 17.1	N17 26.7	208 15.9	N 6 06.3	343 52.3	N11 06.8
D	10	32 31.9	317 53.4	N25 17.0	345 17.8	N17 27.2	223 18.2	N 6 06.2	358 54.4	N11 06.9
A	11	47 34.3	332 57.2	N25 16.4	0 18.4	N17 27.7	238 20.6	N 6 06.2	13 56.6	N11 07.0
Y										
	12	62 36.8	348 01.0	N25 15.8	15 19.0	N17 28.3	253 23.0	N 6 06.1	28 58.8	N11 07.1
	13	77 39.2	3 04.8	N25 15.2	30 19.7	N17 28.8	268 25.4	N 6 06.1	44 01.0	N11 07.2
	14	92 41.7	18 08.6	N25 14.5	45 20.3	N17 29.3	283 27.8	N 6 06.1	59 03.2	N11 07.3
	15	107 44.2	33 12.4	N25 13.9	60 20.9	N17 29.8	298 30.2	N 6 06.0	74 05.4	N11 07.4
	16	122 46.6	48 16.2	N25 13.3	75 21.5	N17 30.3	313 32.6	N 6 06.0	89 07.5	N11 07.5
	17	137 49.1	63 20.1	N25 12.7	90 22.2	N17 30.8	328 35.0	N 6 05.9	104 09.7	N11 07.6
	18	152 51.6	78 23.9	N25 12.0	105 22.8	N17 31.4	343 37.4	N 6 05.9	119 11.9	N11 07.7
	19	167 54.0	93 27.7	N25 11.4	120 23.4	N17 31.9	358 39.8	N 6 05.9	134 14.1	N11 07.8
	20	182 56.5	108 31.5	N25 10.8	135 24.1	N17 32.4	13 42.2	N 6 05.8	149 16.3	N11 07.9
	21	197 59.0	123 35.3	N25 10.1	150 24.7	N17 32.9	28 44.6	N 6 05.8	164 18.4	N11 08.0
	22	213 01.4	138 39.2	N25 09.5	165 25.3	N17 33.4	43 47.0	N 6 05.7	179 20.6	N11 08.0
	23	228 03.9	153 43.0	N25 08.8	180 26.0	N17 33.9	58 49.3	N 6 05.7	194 22.8	N11 08.1
25	0	243 06.4	168 46.8	N25 08.2	195 26.6	N17 34.4	73 51.7	N 6 05.7	209 25.0	N11 08.2
	1	258 08.8	183 50.7	N25 07.6	210 27.2	N17 35.0	88 54.1	N 6 05.6	224 27.2	N11 08.3
	2	273 11.3	198 54.5	N25 06.9	225 27.8	N17 35.5	103 56.5	N 6 05.6	239 29.4	N11 08.4
	3	288 13.7	213 58.3	N25 06.3	240 28.5	N17 36.0	118 58.9	N 6 05.5	254 31.5	N11 08.5
	4	303 16.2	229 02.2	N25 05.6	255 29.1	N17 36.5	134 01.3	N 6 05.5	269 33.7	N11 08.6
T	5	318 18.7	244 06.0	N25 05.0	270 29.7	N17 37.0	149 03.7	N 6 05.5	284 35.9	N11 08.7
H										
U	6	333 21.1	259 09.9	N25 04.3	285 30.4	N17 37.5	164 06.1	N 6 05.4	299 38.1	N11 08.8
R	7	348 23.6	274 13.7	N25 03.7	300 31.0	N17 38.0	179 08.5	N 6 05.4	314 40.3	N11 08.9
S	8	3 26.1	289 17.6	N25 03.0	315 31.6	N17 38.6	194 10.9	N 6 05.3	329 42.4	N11 09.0
D	9	18 28.5	304 21.5	N25 02.4	330 32.2	N17 39.1	209 13.2	N 6 05.3	344 44.6	N11 09.1
A	10	33 31.0	319 25.3	N25 01.7	345 32.9	N17 39.6	224 15.6	N 6 05.2	359 46.8	N11 09.2
Y	11	48 33.5	334 29.2	N25 01.1	0 33.5	N17 40.1	239 18.0	N 6 05.2	14 49.0	N11 09.3
	12	63 35.9	349 33.1	N25 00.4	15 34.1	N17 40.6	254 20.4	N 6 05.2	29 51.2	N11 09.3
	13	78 38.4	4 36.9	N24 59.8	30 34.8	N17 41.1	269 22.8	N 6 05.1	44 53.4	N11 09.4
	14	93 40.9	19 40.8	N24 59.1	45 35.4	N17 41.6	284 25.2	N 6 05.1	59 55.5	N11 09.5
	15	108 43.3	34 44.7	N24 58.4	60 36.0	N17 42.1	299 27.6	N 6 05.0	74 57.7	N11 09.6
	16	123 45.8	49 48.5	N24 57.8	75 36.6	N17 42.6	314 29.9	N 6 05.0	89 59.9	N11 09.7
	17	138 48.2	64 52.4	N24 57.1	90 37.3	N17 43.1	329 32.3	N 6 04.9	105 02.1	N11 09.8
	18	153 50.7	79 56.3	N24 56.5	105 37.9	N17 43.7	344 34.7	N 6 04.9	120 04.3	N11 09.9
	19	168 53.2	95 00.2	N24 55.8	120 38.5	N17 44.2	359 37.1	N 6 04.9	135 06.4	N11 10.0
	20	183 55.6	110 04.1	N24 55.1	135 39.2	N17 44.7	14 39.5	N 6 04.8	150 08.6	N11 10.1
	21	198 58.1	125 08.0	N24 54.5	150 39.8	N17 45.2	29 41.9	N 6 04.8	165 10.8	N11 10.2
	22	214 00.6	140 11.9	N24 53.8	165 40.4	N17 45.7	44 44.3	N 6 04.7	180 13.0	N11 10.3
	23	229 03.0	155 15.7	N24 53.1	180 41.0	N17 46.2	59 46.6	N 6 04.7	195 15.2	N11 10.4
26	0	244 05.5	170 19.6	N24 52.5	195 41.7	N17 46.7	74 49.0	N 6 04.6	210 17.4	N11 10.5
	1	259 08.0	185 23.5	N24 51.8	210 42.3	N17 47.2	89 51.4	N 6 04.6	225 19.5	N11 10.6
	2	274 10.4	200 27.4	N24 51.1	225 42.9	N17 47.7	104 53.8	N 6 04.6	240 21.7	N11 10.6
	3	289 12.9	215 31.3	N24 50.4	240 43.6	N17 48.2	119 56.2	N 6 04.5	255 23.9	N11 10.7
	4	304 15.4	230 35.3	N24 49.8	255 44.2	N17 48.7	134 58.6	N 6 04.5	270 26.1	N11 10.8
F	5	319 17.8	245 39.2	N24 49.1	270 44.8	N17 49.2	150 00.9	N 6 04.4	285 28.3	N11 10.9
R										
I	6	334 20.3	260 43.1	N24 48.4	285 45.4	N17 49.7	165 03.3	N 6 04.4	300 30.5	N11 11.0
D	7	349 22.7	275 47.0	N24 47.7	300 46.1	N17 50.2	180 05.7	N 6 04.3	315 32.6	N11 11.1
A	8	4 25.2	290 50.9	N24 47.1	315 46.7	N17 50.7	195 08.1	N 6 04.3	330 34.8	N11 11.2
Y	9	19 27.7	305 54.8	N24 46.4	330 47.3	N17 51.3	210 10.5	N 6 04.2	345 37.0	N11 11.3
	10	34 30.1	320 58.7	N24 45.7	345 48.0	N17 51.8	225 12.8	N 6 04.2	0 39.2	N11 11.4
	11	49 32.6	336 02.7	N24 45.0	0 48.6	N17 52.3	240 15.2	N 6 04.1	15 41.4	N11 11.5
	12	64 35.1	351 06.6	N24 44.3	15 49.2	N17 52.8	255 17.6	N 6 04.1	30 43.6	N11 11.6
	13	79 37.5	6 10.5	N24 43.7	30 49.8	N17 53.3	270 20.0	N 6 04.1	45 45.7	N11 11.7
	14	94 40.0	21 14.4	N24 43.0	45 50.5	N17 53.8	285 22.4	N 6 04.0	60 47.9	N11 11.8
	15	109 42.5	36 18.4	N24 42.3	60 51.1	N17 54.3	300 24.7	N 6 04.0	75 50.1	N11 11.8
	16	124 44.9	51 22.3	N24 41.6	75 51.7	N17 54.8	315 27.1	N 6 03.9	90 52.3	N11 11.9
	17	139 47.4	66 26.2	N24 40.9	90 52.3	N17 55.3	330 29.5	N 6 03.9	105 54.5	N11 12.0
	18	154 49.9	81 30.2	N24 40.2	105 53.0	N17 55.8	345 31.9	N 6 03.8	120 56.7	N11 12.1
	19	169 52.3	96 34.1	N24 39.5	120 53.6	N17 56.3	0 34.3	N 6 03.8	135 58.9	N11 12.2
	20	184 54.8	111 38.1	N24 38.8	135 54.2	N17 56.8	15 36.6	N 6 03.7	151 01.0	N11 12.3
	21	199 57.2	126 42.0	N24 38.1	150 54.8	N17 57.3	30 39.0	N 6 03.7	166 03.2	N11 12.4
	22	214 59.7	141 45.9	N24 37.4	165 55.5	N17 57.8	45 41.4	N 6 03.6	181 05.4	N11 12.5
	23	230 02.2	156 49.9	N24 36.7	180 56.1	N17 58.3	60 43.8	N 6 03.6	196 07.6	N11 12.6
			v 3.9	d 0.7	v 0.6	d 0.5	v 2.4	d 0.0	v 2.2	d 0.1

G.M.T		SUN		MOON				
d	h	GHA	Dec	GHA	v	Dec	d	HP
		° '	° '	° '	'	° '	'	'
24	0	180 47.2	N20 49.5	186 12.4	8.0	N24 03.2	5.8	57.0
	1	195 47.2	N20 50.0	200 39.2	7.9	N24 08.8	5.7	57.0
	2	210 47.1	N20 50.4	215 06.0	7.8	N24 14.4	5.5	57.0
	3	225 47.1	N20 50.9	229 32.7	7.7	N24 19.8	5.4	57.0
	4	240 47.0	N20 51.3	243 59.4	7.6	N24 25.0	5.3	57.1
W	5	255 46.9	N20 51.8	258 25.9	7.5	N24 30.1	5.1	57.1
E								
D	6	270 46.9	N20 52.2	272 52.4	7.5	N24 35.1	5.0	57.1
N	7	285 46.8	N20 52.7	287 18.7	7.4	N24 40.0	4.8	57.1
E	8	300 46.7	N20 53.1	301 45.1	7.3	N24 44.7	4.7	57.2
S	9	315 46.7	N20 53.6	316 11.3	7.2	N24 49.2	4.6	57.2
D	10	330 46.6	N20 54.1	330 37.4	7.2	N24 53.6	4.4	57.2
A	11	345 46.6	N20 54.5	345 03.5	7.1	N24 57.9	4.3	57.2
Y								
	12	0 46.5	N20 55.0	359 29.5	7.0	N25 02.0	4.1	57.3
	13	15 46.4	N20 55.4	13 55.5	6.9	N25 06.0	4.0	57.3
	14	30 46.4	N20 55.9	28 21.4	6.9	N25 09.9	3.8	57.3
	15	45 46.3	N20 56.3	42 47.2	6.8	N25 13.6	3.7	57.3
	16	60 46.2	N20 56.8	57 12.9	6.7	N25 17.1	3.5	57.4
	17	75 46.2	N20 57.2	71 38.6	6.7	N25 20.5	3.4	57.4
	18	90 46.1	N20 57.6	86 04.2	6.6	N25 23.7	3.2	57.4
	19	105 46.1	N20 58.1	100 29.7	6.5	N25 26.8	3.1	57.4
	20	120 46.0	N20 58.5	114 55.2	6.5	N25 29.8	2.9	57.5
	21	135 45.9	N20 59.0	129 20.6	6.4	N25 32.6	2.8	57.5
	22	150 45.9	N20 59.4	143 46.0	6.4	N25 35.2	2.6	57.5
	23	165 45.8	N20 59.9	158 11.3	6.3	N25 37.7	2.5	57.5
25	0	180 45.7	N21 00.3	172 36.6	6.3	N25 40.0	2.3	57.5
	1	195 45.7	N21 00.8	187 01.8	6.2	N25 42.2	2.2	57.6
	2	210 45.6	N21 01.2	201 26.9	6.2	N25 44.2	2.0	57.6
	3	225 45.5	N21 01.6	215 52.0	6.1	N25 46.0	1.9	57.6
	4	240 45.5	N21 02.1	230 17.1	6.1	N25 47.7	1.7	57.6
T	5	255 45.4	N21 02.5	244 42.1	6.0	N25 49.3	1.5	57.7
H								
U	6	270 45.3	N21 03.0	259 07.1	6.0	N25 50.6	1.4	57.7
R	7	285 45.3	N21 03.4	273 32.0	5.9	N25 51.9	1.2	57.7
S	8	300 45.2	N21 03.8	287 56.9	5.9	N25 52.9	1.1	57.7
D	9	315 45.1	N21 04.3	302 21.7	5.8	N25 53.8	0.9	57.7
A	10	330 45.1	N21 04.7	316 46.5	5.8	N25 54.5	0.7	57.8
Y	11	345 45.0	N21 05.2	331 11.3	5.8	N25 55.1	0.6	57.8
	12	0 44.9	N21 05.6	345 36.1	5.7	N25 55.5	0.4	57.8
	13	15 44.9	N21 06.0	0 00.8	5.7	N25 55.8	0.2	57.8
	14	30 44.8	N21 06.5	14 25.5	5.7	N25 55.9	0.1	57.9
	15	45 44.7	N21 06.9	28 50.1	5.7	N25 55.8	0.1	57.9
	16	60 44.7	N21 07.3	43 14.8	5.6	N25 55.5	0.2	57.9
	17	75 44.6	N21 07.8	57 39.4	5.6	N25 55.1	0.4	57.9
	18	90 44.5	N21 08.2	72 04.0	5.6	N25 54.5	0.6	57.9
	19	105 44.5	N21 08.6	86 28.5	5.6	N25 53.8	0.7	58.0
	20	120 44.4	N21 09.1	100 53.1	5.6	N25 52.9	0.9	58.0
	21	135 44.3	N21 09.5	115 17.6	5.5	N25 51.8	1.1	58.0
	22	150 44.2	N21 09.9	129 42.2	5.5	N25 50.6	1.2	58.0
	23	165 44.2	N21 10.4	144 06.7	5.5	N25 49.2	1.4	58.0
26	0	180 44.1	N21 10.8	158 31.2	5.5	N25 47.6	1.6	58.1
	1	195 44.0	N21 11.2	172 55.7	5.5	N25 45.9	1.7	58.1
	2	210 44.0	N21 11.6	187 20.2	5.5	N25 44.0	1.9	58.1
	3	225 43.9	N21 12.1	201 44.7	5.5	N25 42.0	2.1	58.1
	4	240 43.8	N21 12.5	216 09.2	5.5	N25 39.7	2.2	58.1
F	5	255 43.8	N21 12.9	230 33.7	5.5	N25 37.3	2.4	58.2
R								
I	6	270 43.7	N21 13.3	244 58.2	5.5	N25 34.8	2.6	58.2
D	7	285 43.6	N21 13.8	259 22.7	5.5	N25 32.1	2.7	58.2
A	8	300 43.5	N21 14.2	273 47.2	5.5	N25 29.2	2.9	58.2
Y	9	315 43.5	N21 14.6	288 11.7	5.5	N25 26.1	3.1	58.2
	10	330 43.4	N21 15.0	302 36.3	5.5	N25 22.9	3.2	58.3
	11	345 43.3	N21 15.5	317 00.8	5.5	N25 19.5	3.4	58.3
	12	0 43.3	N21 15.9	331 25.4	5.6	N25 16.0	3.5	58.3
	13	15 43.2	N21 16.3	345 50.0	5.6	N25 12.3	3.7	58.3
	14	30 43.1	N21 16.7	0 14.6	5.6	N25 08.4	3.9	58.3
	15	45 43.0	N21 17.1	14 39.2	5.6	N25 04.4	4.0	58.3
	16	60 43.0	N21 17.6	29 03.8	5.6	N25 00.2	4.2	58.4
	17	75 42.9	N21 18.0	43 28.5	5.7	N24 55.8	4.4	58.4
	18	90 42.8	N21 18.4	57 53.1	5.7	N24 51.3	4.5	58.4
	19	105 42.7	N21 18.8	72 17.9	5.7	N24 46.6	4.7	58.4
	20	120 42.7	N21 19.2	86 42.6	5.7	N24 41.8	4.8	58.4
	21	135 42.6	N21 19.6	101 07.4	5.8	N24 36.8	5.0	58.5
	22	150 42.5	N21 20.0	115 32.2	5.8	N24 31.6	5.2	58.5
	23	165 42.4	N21 20.5	129 57.0	5.8	N24 26.3	5.3	58.5
		S.D. 15.8	d 0.4	S.D.	15.6	15.8	15.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.1	S40 11.4
Achernar	335 18.7	S57 05.3
Acrux	172 56.6	S63 15.7
Adhara	255 04.0	S29 00.8
Albireo	67 01.6	N28 01.0
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.2	N55 48.5
Alkaid	152 49.5	N49 10.3
Al Na-ir	27 29.4	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 32.1	N29 14.8
Altair	61 57.1	N 8 56.6
Ankaa	353 04.7	S42 08.9
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.3	S69 04.7
Avior	234 13.9	S59 36.4
Bellatrix	278 20.3	N 6 22.4
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.8
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.7	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.8	S17 49.7
Dubhe	193 37.6	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 28.9
Enif	33 36.0	N10 00.3
Fomalhaut	15 11.6	S29 28.1
Gacrux	171 48.2	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.5	S60 30.8
Hamal	327 48.4	N23 35.8
Kaus Austr.	83 28.5	S34 22.2
Kochab	137 19.1	N74 02.4
Markab	13 27.2	N15 21.4
Menkar	314 03.6	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.8	S69 50.4
Mirfak	308 24.8	N49 57.6
Nunki	75 44.1	S26 15.6
Peacock	53 01.1	S56 38.3
Polaris	315 47.4	N89 22.3
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.3
Regulus	207 31.5	N11 49.6
Rigel	281 01.6	S 8 10.2
Rigil Kent	139 36.0	S60 57.3
Sabik	101 59.3	S15 45.6
Schedar	349 28.1	N56 41.4
Shaula	96 06.2	S37 07.4
Sirius	258 24.1	S16 45.5
Spica	158 19.2	S11 18.7
Suhail	222 44.4	S43 33.2
Vega	80 31.0	N38 48.5
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
27	0	245 04.6	171 53.8	N24 36.1	195 56.7	N17 58.8	75 46.1	N 6 03.6	211 09.8	N11 12.7
	1	260 07.1	186 57.8	N24 35.4	210 57.3	N17 59.3	90 48.5	N 6 03.5	226 12.0	N11 12.8
	2	275 09.6	202 01.8	N24 34.7	225 58.0	N17 59.8	105 50.9	N 6 03.5	241 14.1	N11 12.9
	3	290 12.0	217 05.7	N24 34.0	240 58.6	N18 00.3	120 53.3	N 6 03.4	256 16.3	N11 12.9
	4	305 14.5	232 09.7	N24 33.3	255 59.2	N18 00.8	135 55.7	N 6 03.4	271 18.5	N11 13.0
S	5	320 17.0	247 13.6	N24 32.5	270 59.9	N18 01.3	150 58.0	N 6 03.3	286 20.7	N11 13.1
A T	6	335 19.4	262 17.6	N24 31.8	286 00.5	N18 01.8	166 00.4	N 6 03.3	301 22.9	N11 13.2
U	7	350 21.9	277 21.6	N24 31.1	301 01.1	N18 02.3	181 02.8	N 6 03.2	316 25.1	N11 13.3
R	8	5 24.3	292 25.5	N24 30.4	316 01.7	N18 02.8	196 05.2	N 6 03.2	331 27.3	N11 13.4
D	9	20 26.8	307 29.5	N24 29.7	331 02.4	N18 03.3	211 07.5	N 6 03.1	346 29.4	N11 13.5
A	10	35 29.3	322 33.5	N24 29.0	346 03.0	N18 03.8	226 09.9	N 6 03.1	1 31.6	N11 13.6
Y	11	50 31.7	337 37.4	N24 28.3	1 03.6	N18 04.3	241 12.3	N 6 03.0	16 33.8	N11 13.7
	12	65 34.2	352 41.4	N24 27.6	16 04.2	N18 04.7	256 14.6	N 6 03.0	31 36.0	N11 13.8
	13	80 36.7	7 45.4	N24 26.9	31 04.9	N18 05.2	271 17.0	N 6 02.9	46 38.2	N11 13.9
	14	95 39.1	22 49.4	N24 26.2	46 05.5	N18 05.7	286 19.4	N 6 02.9	61 40.4	N11 13.9
	15	110 41.6	37 53.3	N24 25.5	61 06.1	N18 06.2	301 21.8	N 6 02.8	76 42.5	N11 14.0
	16	125 44.1	52 57.3	N24 24.8	76 06.7	N18 06.7	316 24.1	N 6 02.8	91 44.7	N11 14.1
	17	140 46.5	68 01.3	N24 24.0	91 07.4	N18 07.2	331 26.5	N 6 02.7	106 46.9	N11 14.2
	18	155 49.0	83 05.3	N24 23.3	106 08.0	N18 07.7	346 28.9	N 6 02.7	121 49.1	N11 14.3
	19	170 51.5	98 09.3	N24 22.6	121 08.6	N18 08.2	1 31.3	N 6 02.6	136 51.3	N11 14.4
	20	185 53.9	113 13.3	N24 21.9	136 09.2	N18 08.7	16 33.6	N 6 02.6	151 53.5	N11 14.5
	21	200 56.4	128 17.2	N24 21.2	151 09.9	N18 09.2	31 36.0	N 6 02.5	166 55.7	N11 14.6
	22	215 58.8	143 21.2	N24 20.4	166 10.5	N18 09.7	46 38.4	N 6 02.5	181 57.8	N11 14.7
	23	231 01.3	158 25.2	N24 19.7	181 11.1	N18 10.2	61 40.7	N 6 02.4	197 00.0	N11 14.8
28	0	246 03.8	173 29.2	N24 19.0	196 11.7	N18 10.7	76 43.1	N 6 02.4	212 02.2	N11 14.9
	1	261 06.2	188 33.2	N24 18.3	211 12.4	N18 11.2	91 45.5	N 6 02.3	227 04.4	N11 15.0
	2	276 08.7	203 37.2	N24 17.6	226 13.0	N18 11.7	106 47.8	N 6 02.3	242 06.6	N11 15.0
	3	291 11.2	218 41.2	N24 16.8	241 13.6	N18 12.1	121 50.2	N 6 02.2	257 08.8	N11 15.1
	4	306 13.6	233 45.2	N24 16.1	256 14.2	N18 12.6	136 52.6	N 6 02.2	272 11.0	N11 15.2
S	5	321 16.1	248 49.2	N24 15.4	271 14.8	N18 13.1	151 55.0	N 6 02.1	287 13.2	N11 15.3
U N	6	336 18.6	263 53.2	N24 14.6	286 15.5	N18 13.6	166 57.3	N 6 02.1	302 15.3	N11 15.4
D	7	351 21.0	278 57.2	N24 13.9	301 16.1	N18 14.1	181 59.7	N 6 02.0	317 17.5	N11 15.5
A	8	6 23.5	294 01.2	N24 13.2	316 16.7	N18 14.6	197 02.1	N 6 02.0	332 19.7	N11 15.6
Y	9	21 26.0	309 05.2	N24 12.5	331 17.3	N18 15.1	212 04.4	N 6 01.9	347 21.9	N11 15.7
	10	36 28.4	324 09.3	N24 11.7	346 18.0	N18 15.6	227 06.8	N 6 01.9	2 24.1	N11 15.8
	11	51 30.9	339 13.3	N24 11.0	1 18.6	N18 16.1	242 09.2	N 6 01.8	17 26.3	N11 15.9
	12	66 33.3	354 17.3	N24 10.3	16 19.2	N18 16.6	257 11.5	N 6 01.8	32 28.5	N11 15.9
	13	81 35.8	9 21.3	N24 09.5	31 19.8	N18 17.0	272 13.9	N 6 01.7	47 30.6	N11 16.0
	14	96 38.3	24 25.3	N24 08.8	46 20.5	N18 17.5	287 16.3	N 6 01.7	62 32.8	N11 16.1
	15	111 40.7	39 29.3	N24 08.0	61 21.1	N18 18.0	302 18.6	N 6 01.6	77 35.0	N11 16.2
	16	126 43.2	54 33.3	N24 07.3	76 21.7	N18 18.5	317 21.0	N 6 01.6	92 37.2	N11 16.3
	17	141 45.7	69 37.4	N24 06.6	91 22.3	N18 19.0	332 23.4	N 6 01.5	107 39.4	N11 16.4
	18	156 48.1	84 41.4	N24 05.8	106 23.0	N18 19.5	347 25.7	N 6 01.5	122 41.6	N11 16.5
	19	171 50.6	99 45.4	N24 05.1	121 23.6	N18 20.0	2 28.1	N 6 01.4	137 43.8	N11 16.6
	20	186 53.1	114 49.4	N24 04.3	136 24.2	N18 20.4	17 30.5	N 6 01.4	152 46.0	N11 16.7
	21	201 55.5	129 53.5	N24 03.6	151 24.8	N18 20.9	32 32.8	N 6 01.3	167 48.1	N11 16.8
	22	216 58.0	144 57.5	N24 02.9	166 25.4	N18 21.4	47 35.2	N 6 01.3	182 50.3	N11 16.9
	23	232 00.5	160 01.5	N24 02.1	181 26.1	N18 21.9	62 37.5	N 6 01.2	197 52.5	N11 16.9
29	0	247 02.9	175 05.5	N24 01.4	196 26.7	N18 22.4	77 39.9	N 6 01.2	212 54.7	N11 17.0
	1	262 05.4	190 09.6	N24 00.6	211 27.3	N18 22.9	92 42.3	N 6 01.1	227 56.9	N11 17.1
	2	277 07.8	205 13.6	N23 59.9	226 27.9	N18 23.4	107 44.6	N 6 01.1	242 59.1	N11 17.2
	3	292 10.3	220 17.6	N23 59.1	241 28.6	N18 23.8	122 47.0	N 6 01.0	258 01.3	N11 17.3
	4	307 12.8	235 21.7	N23 58.4	256 29.2	N18 24.3	137 49.4	N 6 01.0	273 03.5	N11 17.4
M	5	322 15.2	250 25.7	N23 57.6	271 29.8	N18 24.8	152 51.7	N 6 00.9	288 05.6	N11 17.5
O N	6	337 17.7	265 29.7	N23 56.9	286 30.4	N18 25.3	167 54.1	N 6 00.9	303 07.8	N11 17.6
D	7	352 20.2	280 33.8	N23 56.1	301 31.0	N18 25.8	182 56.4	N 6 00.8	318 10.0	N11 17.7
A	8	7 22.6	295 37.8	N23 55.4	316 31.7	N18 26.2	197 58.8	N 6 00.8	333 12.2	N11 17.8
Y	9	22 25.1	310 41.9	N23 54.6	331 32.3	N18 26.7	213 01.2	N 6 00.7	348 14.4	N11 17.8
	10	37 27.6	325 45.9	N23 53.9	346 32.9	N18 27.2	228 03.5	N 6 00.6	3 16.6	N11 17.9
	11	52 30.0	340 49.9	N23 53.1	1 33.5	N18 27.7	243 05.9	N 6 00.6	18 18.8	N11 18.0
	12	67 32.5	355 54.0	N23 52.4	16 34.2	N18 28.2	258 08.3	N 6 00.5	33 21.0	N11 18.1
	13	82 35.0	10 58.0	N23 51.6	31 34.8	N18 28.7	273 10.6	N 6 00.5	48 23.1	N11 18.2
	14	97 37.4	26 02.1	N23 50.8	46 35.4	N18 29.1	288 13.0	N 6 00.4	63 25.3	N11 18.3
	15	112 39.9	41 06.1	N23 50.1	61 36.0	N18 29.6	303 15.3	N 6 00.4	78 27.5	N11 18.4
	16	127 42.3	56 10.2	N23 49.3	76 36.6	N18 30.1	318 17.7	N 6 00.3	93 29.7	N11 18.5
	17	142 44.8	71 14.2	N23 48.6	91 37.3	N18 30.6	333 20.0	N 6 00.3	108 31.9	N11 18.6
	18	157 47.3	86 18.2	N23 47.8	106 37.9	N18 31.0	348 22.4	N 6 00.2	123 34.1	N11 18.7
	19	172 49.7	101 22.3	N23 47.0	121 38.5	N18 31.5	3 24.8	N 6 00.2	138 36.3	N11 18.7
	20	187 52.2	116 26.3	N23 46.3	136 39.1	N18 32.0	18 27.1	N 6 00.1	153 38.5	N11 18.8
	21	202 54.7	131 30.4	N23 45.5	151 39.8	N18 32.5	33 29.5	N 6 00.1	168 40.7	N11 18.9
	22	217 57.1	146 34.4	N23 44.8	166 40.4	N18 33.0	48 31.8	N 5 60.0	183 42.8	N11 19.0
	23	232 59.6	161 38.5	N23 44.0	181 41.0	N18 33.4	63 34.2	N 5 59.9	198 45.0	N11 19.1
			v 4.0	d 0.7	v 0.6	d 0.5	v 2.4	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA ° '	Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '	
27	0	180 42.4	N21 20.9		144 21.9	5.9	N24 20.8	5.5	58.5	
	1	195 42.3	N21 21.3		158 46.8	5.9	N24 15.2	5.6	58.5	
	2	210 42.2	N21 21.7		173 11.7	5.9	N24 09.4	5.8	58.5	
	3	225 42.1	N21 22.1		187 36.7	6.0	N24 03.4	5.9	58.5	
	4	240 42.1	N21 22.5		202 01.7	6.0	N23 57.3	6.1	58.6	
S	5	255 42.0	N21 22.9		216 26.8	6.1	N23 51.1	6.3	58.6	
A										
T	6	270 41.9	N21 23.3		230 51.9	6.1	N23 44.7	6.4	58.6	
U	7	285 41.8	N21 23.8		245 17.1	6.2	N23 38.1	6.6	58.6	
R	8	300 41.8	N21 24.2		259 42.3	6.2	N23 31.4	6.7	58.6	
D	9	315 41.7	N21 24.6		274 07.5	6.3	N23 24.5	6.9	58.6	
A	10	330 41.6	N21 25.0		288 32.9	6.3	N23 17.5	7.0	58.7	
Y	11	345 41.5	N21 25.4		302 58.2	6.4	N23 10.3	7.2	58.7	
	12	0 41.5	N21 25.8		317 23.6	6.4	N23 03.0	7.3	58.7	
	13	15 41.4	N21 26.2		331 49.1	6.5	N22 55.6	7.5	58.7	
	14	30 41.3	N21 26.6		346 14.6	6.5	N22 48.0	7.6	58.7	
	15	45 41.2	N21 27.0		0 40.1	6.6	N22 40.2	7.7	58.7	
	16	60 41.1	N21 27.4		15 05.8	6.6	N22 32.3	7.9	58.7	
	17	75 41.1	N21 27.8		29 31.4	6.7	N22 24.3	8.0	58.8	
	18	90 41.0	N21 28.2		43 57.2	6.7	N22 16.1	8.2	58.8	
	19	105 40.9	N21 28.6		58 23.0	6.8	N22 07.8	8.3	58.8	
	20	120 40.8	N21 29.0		72 48.8	6.9	N21 59.3	8.5	58.8	
	21	135 40.7	N21 29.4		87 14.7	6.9	N21 50.7	8.6	58.8	
	22	150 40.7	N21 29.8		101 40.7	7.0	N21 42.0	8.7	58.8	
	23	165 40.6	N21 30.2		116 06.7	7.0	N21 33.1	8.9	58.8	
28	0	180 40.5	N21 30.6		130 32.8	7.1	N21 24.1	9.0	58.8	
	1	195 40.4	N21 31.0		144 59.0	7.2	N21 15.0	9.1	58.9	
	2	210 40.4	N21 31.4		159 25.2	7.2	N21 05.7	9.3	58.9	
	3	225 40.3	N21 31.8		173 51.5	7.3	N20 56.3	9.4	58.9	
	4	240 40.2	N21 32.2		188 17.9	7.4	N20 46.8	9.5	58.9	
S	5	255 40.1	N21 32.6		202 44.3	7.4	N20 37.1	9.7	58.9	
U										
N	6	270 40.0	N21 33.0		217 10.8	7.5	N20 27.3	9.8	58.9	
D	7	285 39.9	N21 33.4		231 37.3	7.5	N20 17.4	9.9	58.9	
A	8	300 39.9	N21 33.8		246 03.9	7.6	N20 07.4	10.0	58.9	
Y	9	315 39.8	N21 34.2		260 30.6	7.7	N19 57.2	10.2	58.9	
	10	330 39.7	N21 34.5		274 57.3	7.7	N19 46.9	10.3	59.0	
	11	345 39.6	N21 34.9		289 24.2	7.8	N19 36.5	10.4	59.0	
	12	0 39.5	N21 35.3		303 51.0	7.9	N19 26.0	10.5	59.0	
	13	15 39.5	N21 35.7		318 18.0	8.0	N19 15.3	10.6	59.0	
	14	30 39.4	N21 36.1		332 45.0	8.0	N19 04.6	10.8	59.0	
	15	45 39.3	N21 36.5		347 12.1	8.1	N18 53.7	10.9	59.0	
	16	60 39.2	N21 36.9		1 39.3	8.2	N18 42.7	11.0	59.0	
	17	75 39.1	N21 37.3		16 06.5	8.2	N18 31.6	11.1	59.0	
	18	90 39.0	N21 37.6		30 33.8	8.3	N18 20.4	11.2	59.0	
	19	105 39.0	N21 38.0		45 01.1	8.4	N18 09.0	11.3	59.0	
	20	120 38.9	N21 38.4		59 28.5	8.4	N17 57.6	11.4	59.1	
	21	135 38.8	N21 38.8		73 56.0	8.5	N17 46.0	11.5	59.1	
	22	150 38.7	N21 39.2		88 23.6	8.6	N17 34.4	11.7	59.1	
	23	165 38.6	N21 39.6		102 51.2	8.6	N17 22.6	11.8	59.1	
29	0	180 38.5	N21 40.0		117 18.9	8.7	N17 10.8	11.9	59.1	
	1	195 38.5	N21 40.3		131 46.7	8.8	N16 58.8	12.0	59.1	
	2	210 38.4	N21 40.7		146 14.5	8.8	N16 46.8	12.1	59.1	
	3	225 38.3	N21 41.1		160 42.4	8.9	N16 34.6	12.2	59.1	
	4	240 38.2	N21 41.5		175 10.4	9.0	N16 22.3	12.3	59.1	
M	5	255 38.1	N21 41.9		189 38.4	9.0	N16 10.0	12.4	59.1	
O										
N	6	270 38.0	N21 42.2		204 06.5	9.1	N15 57.5	12.4	59.1	
D	7	285 38.0	N21 42.6		218 34.7	9.2	N15 45.0	12.5	59.1	
A	8	300 37.9	N21 43.0		233 02.9	9.2	N15 32.4	12.6	59.1	
Y	9	315 37.8	N21 43.4		247 31.2	9.3	N15 19.7	12.7	59.2	
	10	330 37.7	N21 43.7		261 59.5	9.4	N15 06.8	12.8	59.2	
	11	345 37.6	N21 44.1		276 27.9	9.4	N14 53.9	12.9	59.2	
	12	0 37.5	N21 44.5		290 56.4	9.5	N14 41.0	13.0	59.2	
	13	15 37.4	N21 44.9		305 24.9	9.5	N14 27.9	13.1	59.2	
	14	30 37.4	N21 45.2		319 53.5	9.6	N14 14.7	13.2	59.2	
	15	45 37.3	N21 45.6		334 22.2	9.7	N14 01.5	13.2	59.2	
	16	60 37.2	N21 46.0		348 50.9	9.7	N13 48.2	13.3	59.2	
	17	75 37.1	N21 46.3		3 19.7	9.8	N13 34.8	13.4	59.2	
	18	90 37.0	N21 46.7		17 48.5	9.8	N13 21.3	13.5	59.2	
	19	105 36.9	N21 47.1		32 17.4	9.9	N13 07.8	13.5	59.2	
	20	120 36.8	N21 47.5		46 46.4	10.0	N12 54.2	13.6	59.2	
	21	135 36.7	N21 47.8		61 15.4	10.0	N12 40.5	13.7	59.2	
	22	150 36.7	N21 48.2		75 44.5	10.1	N12 26.7	13.8	59.2	
	23	165 36.6	N21 48.6		90 13.6	10.1	N12 12.9	13.8	59.2	
		S.D. 15.8	d 0.4		S.D. 16.0		16.1		16.1	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.4
Achernar	335 18.6	S57 05.3
Acrux	172 56.6	S63 15.7
Adhara	255 04.0	S29 00.8
Albireo	67 01.5	N28 01.1
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.3	N55 48.5
Alkaid	152 49.5	N49 10.3
Al Na-ir	27 29.4	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 32.0	N29 14.8
Altair	61 57.0	N 8 56.6
Ankaa	353 04.7	S42 08.9
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.3	S69 04.7
Avior	234 13.9	S59 36.4
Bellatrix	278 20.3	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.8
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.6	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.8	S17 49.7
Dubhe	193 37.6	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 29.0
Enif	33 35.9	N10 00.3
Fomalhaut	15 11.5	S29 28.1
Gacrux	171 48.2	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.4	N23 35.8
Kaus Austr.	83 28.5	S34 22.2
Kochab	137 19.1	N74 02.4
Markab	13 27.2	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.0	S36 30.8
Miaplacidus	221 37.8	S69 50.4
Mirfak	308 24.8	N49 57.6
Nunki	75 44.0	S26 15.6
Peacock	53 01.0	S56 38.3
Polaris	315 46.6	N89 22.3
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.3
Regulus	207 31.6	N11 49.6
Rigel	281 01.6	S 8 10.2
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.3	S15 45.6
Schedar	349 28.1	N56 41.4
Shaula	96 06.2	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.4	S43 33.2
Vega	80 31.0	N38 48.5
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
30	0	248 02.1	176 42.6	N23 43.2	196 41.6	N18 33.9	78 36.6	N 5 59.9	213 47.2	N11 19.2
	1	263 04.5	191 46.6	N23 42.5	211 42.2	N18 34.4	93 38.9	N 5 59.8	228 49.4	N11 19.3
	2	278 07.0	206 50.7	N23 41.7	226 42.9	N18 34.9	108 41.3	N 5 59.8	243 51.6	N11 19.4
	3	293 09.4	221 54.7	N23 40.9	241 43.5	N18 35.3	123 43.6	N 5 59.7	258 53.8	N11 19.5
	4	308 11.9	236 58.8	N23 40.2	256 44.1	N18 35.8	138 46.0	N 5 59.7	273 56.0	N11 19.5
T	5	323 14.4	252 02.8	N23 39.4	271 44.7	N18 36.3	153 48.3	N 5 59.6	288 58.2	N11 19.6
U										
E	6	338 16.8	267 06.9	N23 38.6	286 45.3	N18 36.8	168 50.7	N 5 59.6	304 00.4	N11 19.7
S	7	353 19.3	282 10.9	N23 37.8	301 46.0	N18 37.2	183 53.0	N 5 59.5	319 02.5	N11 19.8
D	8	8 21.8	297 15.0	N23 37.1	316 46.6	N18 37.7	198 55.4	N 5 59.4	334 04.7	N11 19.9
A	9	23 24.2	312 19.1	N23 36.3	331 47.2	N18 38.2	213 57.8	N 5 59.4	349 06.9	N11 20.0
Y	10	38 26.7	327 23.1	N23 35.5	346 47.8	N18 38.7	229 00.1	N 5 59.3	4 09.1	N11 20.1
	11	53 29.2	342 27.2	N23 34.8	1 48.4	N18 39.1	244 02.5	N 5 59.3	19 11.3	N11 20.2
	12	68 31.6	357 31.2	N23 34.0	16 49.1	N18 39.6	259 04.8	N 5 59.2	34 13.5	N11 20.3
	13	83 34.1	12 35.3	N23 33.2	31 49.7	N18 40.1	274 07.2	N 5 59.2	49 15.7	N11 20.3
	14	98 36.6	27 39.4	N23 32.4	46 50.3	N18 40.5	289 09.5	N 5 59.1	64 17.9	N11 20.4
	15	113 39.0	42 43.4	N23 31.7	61 50.9	N18 41.0	304 11.9	N 5 59.0	79 20.1	N11 20.5
	16	128 41.5	57 47.5	N23 30.9	76 51.5	N18 41.5	319 14.2	N 5 59.0	94 22.3	N11 20.6
	17	143 43.9	72 51.6	N23 30.1	91 52.2	N18 42.0	334 16.6	N 5 58.9	109 24.4	N11 20.7
	18	158 46.4	87 55.6	N23 29.3	106 52.8	N18 42.4	349 18.9	N 5 58.9	124 26.6	N11 20.8
	19	173 48.9	102 59.7	N23 28.5	121 53.4	N18 42.9	4 21.3	N 5 58.8	139 28.8	N11 20.9
	20	188 51.3	118 03.8	N23 27.8	136 54.0	N18 43.4	19 23.6	N 5 58.8	154 31.0	N11 21.0
	21	203 53.8	133 07.8	N23 27.0	151 54.6	N18 43.8	34 26.0	N 5 58.7	169 33.2	N11 21.1
	22	218 56.3	148 11.9	N23 26.2	166 55.3	N18 44.3	49 28.3	N 5 58.6	184 35.4	N11 21.1
	23	233 58.7	163 15.9	N23 25.4	181 55.9	N18 44.8	64 30.7	N 5 58.6	199 37.6	N11 21.2
31	0	249 01.2	178 20.0	N23 24.6	196 56.5	N18 45.3	79 33.0	N 5 58.5	214 39.8	N11 21.3
	1	264 03.7	193 24.1	N23 23.9	211 57.1	N18 45.7	94 35.4	N 5 58.5	229 42.0	N11 21.4
	2	279 06.1	208 28.1	N23 23.1	226 57.7	N18 46.2	109 37.7	N 5 58.4	244 44.2	N11 21.5
	3	294 08.6	223 32.2	N23 22.3	241 58.4	N18 46.7	124 40.1	N 5 58.4	259 46.4	N11 21.6
	4	309 11.1	238 36.3	N23 21.5	256 59.0	N18 47.1	139 42.4	N 5 58.3	274 48.5	N11 21.7
W	5	324 13.5	253 40.4	N23 20.7	271 59.6	N18 47.6	154 44.8	N 5 58.2	289 50.7	N11 21.8
E										
D	6	339 16.0	268 44.4	N23 19.9	287 00.2	N18 48.1	169 47.1	N 5 58.2	304 52.9	N11 21.9
N	7	354 18.4	283 48.5	N23 19.1	302 00.8	N18 48.5	184 49.5	N 5 58.1	319 55.1	N11 21.9
E	8	9 20.9	298 52.6	N23 18.4	317 01.4	N18 49.0	199 51.8	N 5 58.1	334 57.3	N11 22.0
S	9	24 23.4	313 56.6	N23 17.6	332 02.1	N18 49.5	214 54.2	N 5 58.0	349 59.5	N11 22.1
D	10	39 25.8	329 00.7	N23 16.8	347 02.7	N18 49.9	229 56.5	N 5 57.9	5 01.7	N11 22.2
A	11	54 28.3	344 04.8	N23 16.0	2 03.3	N18 50.4	244 58.9	N 5 57.9	20 03.9	N11 22.3
Y										
	12	69 30.8	359 08.8	N23 15.2	17 03.9	N18 50.9	260 01.2	N 5 57.8	35 06.1	N11 22.4
	13	84 33.2	14 12.9	N23 14.4	32 04.5	N18 51.3	275 03.6	N 5 57.8	50 08.3	N11 22.5
	14	99 35.7	29 17.0	N23 13.6	47 05.2	N18 51.8	290 05.9	N 5 57.7	65 10.5	N11 22.6
	15	114 38.2	44 21.0	N23 12.8	62 05.8	N18 52.2	305 08.3	N 5 57.7	80 12.6	N11 22.6
	16	129 40.6	59 25.1	N23 12.0	77 06.4	N18 52.7	320 10.6	N 5 57.6	95 14.8	N11 22.7
	17	144 43.1	74 29.2	N23 11.2	92 07.0	N18 53.2	335 13.0	N 5 57.5	110 17.0	N11 22.8
	18	159 45.5	89 33.3	N23 10.4	107 07.6	N18 53.6	350 15.3	N 5 57.5	125 19.2	N11 22.9
	19	174 48.0	104 37.3	N23 09.7	122 08.2	N18 54.1	5 17.6	N 5 57.4	140 21.4	N11 23.0
	20	189 50.5	119 41.4	N23 08.9	137 08.9	N18 54.6	20 20.0	N 5 57.4	155 23.6	N11 23.1
	21	204 52.9	134 45.5	N23 08.1	152 09.5	N18 55.0	35 22.3	N 5 57.3	170 25.8	N11 23.2
	22	219 55.4	149 49.5	N23 07.3	167 10.1	N18 55.5	50 24.7	N 5 57.2	185 28.0	N11 23.3
	23	234 57.9	164 53.6	N23 06.5	182 10.7	N18 55.9	65 27.0	N 5 57.2	200 30.2	N11 23.3
1	0	250 00.3	179 57.7	N23 05.7	197 11.3	N18 56.4	80 29.4	N 5 57.1	215 32.4	N11 23.4
	1	265 02.8	195 01.7	N23 04.9	212 12.0	N18 56.9	95 31.7	N 5 57.1	230 34.6	N11 23.5
	2	280 05.3	210 05.8	N23 04.1	227 12.6	N18 57.3	110 34.1	N 5 57.0	245 36.8	N11 23.6
	3	295 07.7	225 09.9	N23 03.3	242 13.2	N18 57.8	125 36.4	N 5 56.9	260 39.0	N11 23.7
	4	310 10.2	240 13.9	N23 02.5	257 13.8	N18 58.2	140 38.7	N 5 56.9	275 41.1	N11 23.8
T	5	325 12.7	255 18.0	N23 01.7	272 14.4	N18 58.7	155 41.1	N 5 56.8	290 43.3	N11 23.9
H										
U	6	340 15.1	270 22.1	N23 00.9	287 15.0	N18 59.2	170 43.4	N 5 56.7	305 45.5	N11 24.0
R	7	355 17.6	285 26.1	N23 00.1	302 15.7	N18 59.6	185 45.8	N 5 56.7	320 47.7	N11 24.0
S	8	10 20.0	300 30.2	N22 59.3	317 16.3	N19 00.1	200 48.1	N 5 56.6	335 49.9	N11 24.1
D	9	25 22.5	315 34.3	N22 58.5	332 16.9	N19 00.5	215 50.5	N 5 56.6	350 52.1	N11 24.2
A	10	40 25.0	330 38.4	N22 57.7	347 17.5	N19 01.0	230 52.8	N 5 56.5	5 54.3	N11 24.3
Y	11	55 27.4	345 42.4	N22 56.9	2 18.1	N19 01.5	245 55.1	N 5 56.4	20 56.5	N11 24.4
	12	70 29.9	0 46.5	N22 56.1	17 18.7	N19 01.9	260 57.5	N 5 56.4	35 58.7	N11 24.5
	13	85 32.4	15 50.6	N22 55.3	32 19.4	N19 02.4	275 59.8	N 5 56.3	51 00.9	N11 24.6
	14	100 34.8	30 54.6	N22 54.5	47 20.0	N19 02.8	291 02.2	N 5 56.3	66 03.1	N11 24.7
	15	115 37.3	45 58.7	N22 53.7	62 20.6	N19 03.3	306 04.5	N 5 56.2	81 05.3	N11 24.7
	16	130 39.8	61 02.8	N22 52.9	77 21.2	N19 03.7	321 06.8	N 5 56.1	96 07.5	N11 24.8
	17	145 42.2	76 06.8	N22 52.1	92 21.8	N19 04.2	336 09.2	N 5 56.1	111 09.7	N11 24.9
	18	160 44.7	91 10.9	N22 51.3	107 22.4	N19 04.6	351 11.5	N 5 56.0	126 11.8	N11 25.0
	19	175 47.2	106 14.9	N22 50.5	122 23.1	N19 05.1	6 13.9	N 5 55.9	141 14.0	N11 25.1
	20	190 49.6	121 19.0	N22 49.7	137 23.7	N19 05.6	21 16.2	N 5 55.9	156 16.2	N11 25.2
	21	205 52.1	136 23.1	N22 48.9	152 24.3	N19 06.0	36 18.5	N 5 55.8	171 18.4	N11 25.3
	22	220 54.5	151 27.1	N22 48.1	167 24.9	N19 06.5	51 20.9	N 5 55.8	186 20.6	N11 25.4
	23	235 57.0	166 31.2	N22 47.3	182 25.5	N19 06.9	66 23.2	N 5 55.7	201 22.8	N11 25.4
			v 4.1	d 0.8	v 0.6	d 0.5	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
30	0	180 36.5	N21 48.9	104 42.8	10.2	N11 59.0	13.9	59.2
	1	195 36.4	N21 49.3	119 12.0	10.2	N11 45.0	14.0	59.2
	2	210 36.3	N21 49.7	133 41.3	10.3	N11 31.0	14.0	59.2
	3	225 36.2	N21 50.0	148 10.6	10.3	N11 16.9	14.1	59.2
	4	240 36.1	N21 50.4	162 40.0	10.4	N11 02.7	14.2	59.3
T	5	255 36.0	N21 50.7	177 09.5	10.4	N10 48.5	14.2	59.3
U								
E	6	270 35.9	N21 51.1	191 39.0	10.5	N10 34.2	14.3	59.3
S	7	285 35.9	N21 51.5	206 08.5	10.5	N10 19.9	14.3	59.3
D	8	300 35.8	N21 51.8	220 38.1	10.6	N10 05.5	14.4	59.3
A	9	315 35.7	N21 52.2	235 07.7	10.6	N 9 51.0	14.5	59.3
Y	10	330 35.6	N21 52.6	249 37.4	10.7	N 9 36.5	14.5	59.3
	11	345 35.5	N21 52.9	264 07.1	10.7	N 9 22.0	14.6	59.3
	12	0 35.4	N21 53.3	278 36.9	10.8	N 9 07.3	14.6	59.3
	13	15 35.3	N21 53.6	293 06.7	10.8	N 8 52.7	14.7	59.3
	14	30 35.2	N21 54.0	307 36.5	10.8	N 8 38.0	14.7	59.3
	15	45 35.1	N21 54.3	322 06.4	10.9	N 8 23.2	14.8	59.3
	16	60 35.0	N21 54.7	336 36.3	10.9	N 8 08.4	14.8	59.3
	17	75 35.0	N21 55.1	351 06.3	11.0	N 7 53.6	14.8	59.3
	18	90 34.9	N21 55.4	5 36.3	11.0	N 7 38.7	14.9	59.3
	19	105 34.8	N21 55.8	20 06.3	11.0	N 7 23.8	14.9	59.3
	20	120 34.7	N21 56.1	34 36.4	11.1	N 7 08.8	15.0	59.3
	21	135 34.6	N21 56.5	49 06.5	11.1	N 6 53.8	15.0	59.3
	22	150 34.5	N21 56.8	63 36.7	11.1	N 6 38.8	15.0	59.3
	23	165 34.4	N21 57.2	78 06.9	11.2	N 6 23.7	15.1	59.3
31	0	180 34.3	N21 57.5	92 37.1	11.2	N 6 08.6	15.1	59.3
	1	195 34.2	N21 57.9	107 07.3	11.2	N 5 53.4	15.1	59.3
	2	210 34.1	N21 58.2	121 37.6	11.3	N 5 38.3	15.2	59.3
	3	225 34.0	N21 58.6	136 07.9	11.3	N 5 23.0	15.2	59.3
	4	240 33.9	N21 58.9	150 38.2	11.3	N 5 07.8	15.2	59.3
W	5	255 33.8	N21 59.3	165 08.5	11.3	N 4 52.6	15.3	59.3
E								
D	6	270 33.7	N21 59.6	179 38.9	11.4	N 4 37.3	15.3	59.3
N	7	285 33.7	N21 60.0	194 09.3	11.4	N 4 22.0	15.3	59.3
E	8	300 33.6	N22 00.3	208 39.7	11.4	N 4 06.6	15.3	59.3
S	9	315 33.5	N22 00.6	223 10.1	11.4	N 3 51.3	15.4	59.3
D	10	330 33.4	N22 01.0	237 40.6	11.5	N 3 35.9	15.4	59.3
A	11	345 33.3	N22 01.3	252 11.1	11.5	N 3 20.5	15.4	59.3
Y								
	12	0 33.2	N22 01.7	266 41.5	11.5	N 3 05.1	15.4	59.3
	13	15 33.1	N22 02.0	281 12.0	11.5	N 2 49.7	15.4	59.3
	14	30 33.0	N22 02.4	295 42.6	11.5	N 2 34.2	15.4	59.3
	15	45 32.9	N22 02.7	310 13.1	11.5	N 2 18.8	15.5	59.3
	16	60 32.8	N22 03.0	324 43.7	11.5	N 2 03.3	15.5	59.3
	17	75 32.7	N22 03.4	339 14.2	11.6	N 1 47.9	15.5	59.3
	18	90 32.6	N22 03.7	353 44.8	11.6	N 1 32.4	15.5	59.3
	19	105 32.5	N22 04.1	8 15.4	11.6	N 1 16.9	15.5	59.3
	20	120 32.4	N22 04.4	22 45.9	11.6	N 1 01.4	15.5	59.3
	21	135 32.3	N22 04.7	37 16.5	11.6	N 0 45.9	15.5	59.3
	22	150 32.2	N22 05.1	51 47.1	11.6	N 0 30.4	15.5	59.3
	23	165 32.1	N22 05.4	66 17.7	11.6	N 0 14.9	15.5	59.3
1	0	180 32.0	N22 05.7	80 48.3	11.6	S 0 00.6	15.5	59.3
	1	195 31.9	N22 06.1	95 19.0	11.6	S 0 16.1	15.5	59.3
	2	210 31.8	N22 06.4	109 49.6	11.6	S 0 31.6	15.5	59.3
	3	225 31.8	N22 06.7	124 20.2	11.6	S 0 47.1	15.5	59.3
	4	240 31.7	N22 07.1	138 50.8	11.6	S 1 02.6	15.5	59.3
T	5	255 31.6	N22 07.4	153 21.4	11.6	S 1 18.1	15.5	59.3
H								
U	6	270 31.5	N22 07.7	167 52.0	11.6	S 1 33.6	15.5	59.3
R	7	285 31.4	N22 08.1	182 22.6	11.6	S 1 49.0	15.5	59.3
S	8	300 31.3	N22 08.4	196 53.2	11.6	S 2 04.5	15.5	59.3
D	9	315 31.2	N22 08.7	211 23.7	11.6	S 2 19.9	15.4	59.3
A	10	330 31.1	N22 09.0	225 54.3	11.6	S 2 35.4	15.4	59.2
Y	11	345 31.0	N22 09.4	240 24.9	11.6	S 2 50.8	15.4	59.2
	12	0 30.9	N22 09.7	254 55.4	11.6	S 3 06.2	15.4	59.2
	13	15 30.8	N22 10.0	269 26.0	11.5	S 3 21.5	15.4	59.2
	14	30 30.7	N22 10.3	283 56.5	11.5	S 3 36.9	15.4	59.2
	15	45 30.6	N22 10.7	298 27.0	11.5	S 3 52.3	15.3	59.2
	16	60 30.5	N22 11.0	312 57.5	11.5	S 4 07.6	15.3	59.2
	17	75 30.4	N22 11.3	327 28.0	11.5	S 4 22.9	15.3	59.2
	18	90 30.3	N22 11.6	341 58.4	11.5	S 4 38.1	15.3	59.2
	19	105 30.2	N22 12.0	356 28.9	11.4	S 4 53.4	15.2	59.2
	20	120 30.1	N22 12.3	10 59.3	11.4	S 5 08.6	15.2	59.2
	21	135 30.0	N22 12.6	25 29.7	11.4	S 5 23.8	15.2	59.2
	22	150 29.9	N22 12.9	40 00.1	11.4	S 5 39.0	15.2	59.2
	23	165 29.8	N22 13.2	54 30.4	11.4	S 5 54.1	15.1	59.2
		S.D. 15.8	d 0.3	S.D. 16.2		16.2	16.1	

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.1	S40 11.3
Achernar	335 18.6	S57 05.3
Acrux	172 56.6	S63 15.7
Adhara	255 04.0	S29 00.8
Albireo	67 01.5	N28 01.1
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.3	N55 48.5
Alkaid	152 49.5	N49 10.4
Al Na-ir	27 29.4	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 32.0	N29 14.8
Altair	61 57.0	N 8 56.6
Ankaa	353 04.6	S42 08.9
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.3	S69 04.7
Avior	234 13.9	S59 36.4
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.6	S52 42.8
Capella	280 18.3	N46 01.6
Castor	245 53.8	N31 49.6
Deneb	49 23.6	N45 22.7
Denebola	182 22.0	N14 24.7
Diphda	348 44.7	S17 49.7
Dubhe	193 37.6	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 29.0
Enif	33 35.9	N10 00.3
Fomalhaut	15 11.5	S29 28.1
Gacrux	171 48.2	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.4	N23 35.8
Kaus Austr.	83 28.5	S34 22.2
Kochab	137 19.1	N74 02.4
Markab	13 27.2	N15 21.4
Menkar	314 03.5	N 4 12.0
Menkent	147 54.0	S36 30.9
Miaplacidus	221 37.9	S69 50.4
Mirfak	308 24.8	N49 57.6
Nunki	75 44.0	S26 15.6
Peacock	53 01.0	S56 38.3
Polaris	315 45.9	N89 22.3
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.2
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.3	S15 45.6
Schedar	349 28.1	N56 41.4
Shaula	96 06.2	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.4	S43 33.2
Vega	80 31.0	N38 48.5
Zuben-ubi	136 53.6	S16 09.7

G.M.T	ARIES	VENUS		MARS		JUPITER		SATURN	
d h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
2 0	250 59.5	181 35.3	N22 46.4	197 26.1	N19 07.4	81 25.5	N 5 55.6	216 25.0	N11 25.5
1	266 01.9	196 39.3	N22 45.6	212 26.8	N19 07.8	96 27.9	N 5 55.6	231 27.2	N11 25.6
2	281 04.4	211 43.4	N22 44.8	227 27.4	N19 08.3	111 30.2	N 5 55.5	246 29.4	N11 25.7
3	296 06.9	226 47.4	N22 44.0	242 28.0	N19 08.7	126 32.6	N 5 55.4	261 31.6	N11 25.8
4	311 09.3	241 51.5	N22 43.2	257 28.6	N19 09.2	141 34.9	N 5 55.4	276 33.8	N11 25.9
F 5	326 11.8	256 55.6	N22 42.4	272 29.2	N19 09.6	156 37.2	N 5 55.3	291 36.0	N11 26.0
R									
I 6	341 14.3	271 59.6	N22 41.6	287 29.8	N19 10.1	171 39.6	N 5 55.2	306 38.2	N11 26.0
D 7	356 16.7	287 03.7	N22 40.8	302 30.4	N19 10.5	186 41.9	N 5 55.2	321 40.4	N11 26.1
A 8	11 19.2	302 07.7	N22 40.0	317 31.1	N19 11.0	201 44.2	N 5 55.1	336 42.6	N11 26.2
Y 9	26 21.6	317 11.8	N22 39.2	332 31.7	N19 11.4	216 46.6	N 5 55.1	351 44.8	N11 26.3
10	41 24.1	332 15.8	N22 38.4	347 32.3	N19 11.9	231 48.9	N 5 55.0	6 47.0	N11 26.4
11	56 26.6	347 19.9	N22 37.6	2 32.9	N19 12.3	246 51.2	N 5 54.9	21 49.1	N11 26.5
12	71 29.0	2 23.9	N22 36.8	17 33.5	N19 12.8	261 53.6	N 5 54.9	36 51.3	N11 26.6
13	86 31.5	17 28.0	N22 35.9	32 34.1	N19 13.2	276 55.9	N 5 54.8	51 53.5	N11 26.7
14	101 34.0	32 32.0	N22 35.1	47 34.8	N19 13.7	291 58.2	N 5 54.7	66 55.7	N11 26.7
15	116 36.4	47 36.1	N22 34.3	62 35.4	N19 14.1	307 00.6	N 5 54.7	81 57.9	N11 26.8
16	131 38.9	62 40.2	N22 33.5	77 36.0	N19 14.6	322 02.9	N 5 54.6	97 00.1	N11 26.9
17	146 41.4	77 44.2	N22 32.7	92 36.6	N19 15.0	337 05.2	N 5 54.5	112 02.3	N11 27.0
18	161 43.8	92 48.2	N22 31.9	107 37.2	N19 15.5	352 07.6	N 5 54.5	127 04.5	N11 27.1
19	176 46.3	107 52.3	N22 31.1	122 37.8	N19 15.9	7 09.9	N 5 54.4	142 06.7	N11 27.2
20	191 48.8	122 56.3	N22 30.3	137 38.4	N19 16.4	22 12.2	N 5 54.3	157 08.9	N11 27.3
21	206 51.2	138 00.4	N22 29.5	152 39.1	N19 16.8	37 14.6	N 5 54.3	172 11.1	N11 27.3
22	221 53.7	153 04.4	N22 28.7	167 39.7	N19 17.2	52 16.9	N 5 54.2	187 13.3	N11 27.4
23	236 56.1	168 08.5	N22 27.8	182 40.3	N19 17.7	67 19.2	N 5 54.1	202 15.5	N11 27.5
3 0	251 58.6	183 12.5	N22 27.0	197 40.9	N19 18.1	82 21.6	N 5 54.1	217 17.7	N11 27.6
1	267 01.1	198 16.6	N22 26.2	212 41.5	N19 18.6	97 23.9	N 5 54.0	232 19.9	N11 27.7
2	282 03.5	213 20.6	N22 25.4	227 42.1	N19 19.0	112 26.2	N 5 53.9	247 22.1	N11 27.8
3	297 06.0	228 24.6	N22 24.6	242 42.7	N19 19.5	127 28.6	N 5 53.9	262 24.3	N11 27.9
4	312 08.5	243 28.7	N22 23.8	257 43.4	N19 19.9	142 30.9	N 5 53.8	277 26.5	N11 27.9
S 5	327 10.9	258 32.7	N22 23.0	272 44.0	N19 20.4	157 33.2	N 5 53.7	292 28.7	N11 28.0
A									
T 6	342 13.4	273 36.8	N22 22.2	287 44.6	N19 20.8	172 35.5	N 5 53.7	307 30.9	N11 28.1
U 7	357 15.9	288 40.8	N22 21.3	302 45.2	N19 21.2	187 37.9	N 5 53.6	322 33.1	N11 28.2
R 8	12 18.3	303 44.8	N22 20.5	317 45.8	N19 21.7	202 40.2	N 5 53.5	337 35.3	N11 28.3
D 9	27 20.8	318 48.9	N22 19.7	332 46.4	N19 22.1	217 42.5	N 5 53.5	352 37.4	N11 28.4
A 10	42 23.3	333 52.9	N22 18.9	347 47.0	N19 22.6	232 44.9	N 5 53.4	7 39.6	N11 28.5
Y 11	57 25.7	348 56.9	N22 18.1	2 47.7	N19 23.0	247 47.2	N 5 53.3	22 41.8	N11 28.5
12	72 28.2	4 01.0	N22 17.3	17 48.3	N19 23.5	262 49.5	N 5 53.3	37 44.0	N11 28.6
13	87 30.6	19 05.0	N22 16.5	32 48.9	N19 23.9	277 51.8	N 5 53.2	52 46.2	N11 28.7
14	102 33.1	34 09.0	N22 15.7	47 49.5	N19 24.3	292 54.2	N 5 53.1	67 48.4	N11 28.8
15	117 35.6	49 13.0	N22 14.8	62 50.1	N19 24.8	307 56.5	N 5 53.1	82 50.6	N11 28.9
16	132 38.0	64 17.1	N22 14.0	77 50.7	N19 25.2	322 58.8	N 5 53.0	97 52.8	N11 29.0
17	147 40.5	79 21.1	N22 13.2	92 51.3	N19 25.7	338 01.1	N 5 52.9	112 55.0	N11 29.1
18	162 43.0	94 25.1	N22 12.4	107 52.0	N19 26.1	353 03.5	N 5 52.9	127 57.2	N11 29.1
19	177 45.4	109 29.1	N22 11.6	122 52.6	N19 26.5	8 05.8	N 5 52.8	142 59.4	N11 29.2
20	192 47.9	124 33.1	N22 10.8	137 53.2	N19 27.0	23 08.1	N 5 52.7	158 01.6	N11 29.3
21	207 50.4	139 37.2	N22 10.0	152 53.8	N19 27.4	38 10.5	N 5 52.7	173 03.8	N11 29.4
22	222 52.8	154 41.2	N22 09.2	167 54.4	N19 27.8	53 12.8	N 5 52.6	188 06.0	N11 29.5
23	237 55.3	169 45.2	N22 08.3	182 55.0	N19 28.3	68 15.1	N 5 52.5	203 08.2	N11 29.6
4 0	252 57.7	184 49.2	N22 07.5	197 55.6	N19 28.7	83 17.4	N 5 52.5	218 10.4	N11 29.7
1	268 00.2	199 53.2	N22 06.7	212 56.2	N19 29.2	98 19.8	N 5 52.4	233 12.6	N11 29.7
2	283 02.7	214 57.2	N22 05.9	227 56.9	N19 29.6	113 22.1	N 5 52.3	248 14.8	N11 29.8
3	298 05.1	230 01.2	N22 05.1	242 57.5	N19 30.0	128 24.4	N 5 52.3	263 17.0	N11 29.9
4	313 07.6	245 05.3	N22 04.3	257 58.1	N19 30.5	143 26.7	N 5 52.2	278 19.2	N11 30.0
S 5	328 10.1	260 09.3	N22 03.5	272 58.7	N19 30.9	158 29.0	N 5 52.1	293 21.4	N11 30.1
U									
N 6	343 12.5	275 13.3	N22 02.6	287 59.3	N19 31.3	173 31.4	N 5 52.0	308 23.6	N11 30.2
D 7	358 15.0	290 17.3	N22 01.8	302 59.9	N19 31.8	188 33.7	N 5 52.0	323 25.8	N11 30.2
A 8	13 17.5	305 21.3	N22 01.0	318 00.5	N19 32.2	203 36.0	N 5 51.9	338 28.0	N11 30.3
Y 9	28 19.9	320 25.3	N22 00.2	333 01.1	N19 32.6	218 38.3	N 5 51.8	353 30.2	N11 30.4
10	43 22.4	335 29.3	N21 59.4	348 01.8	N19 33.1	233 40.7	N 5 51.8	8 32.4	N11 30.5
11	58 24.9	350 33.3	N21 58.6	3 02.4	N19 33.5	248 43.0	N 5 51.7	23 34.6	N11 30.6
12	73 27.3	5 37.3	N21 57.8	18 03.0	N19 33.9	263 45.3	N 5 51.6	38 36.8	N11 30.7
13	88 29.8	20 41.3	N21 57.0	33 03.6	N19 34.4	278 47.6	N 5 51.6	53 39.0	N11 30.8
14	103 32.2	35 45.3	N21 56.1	48 04.2	N19 34.8	293 49.9	N 5 51.5	68 41.2	N11 30.8
15	118 34.7	50 49.2	N21 55.3	63 04.8	N19 35.2	308 52.3	N 5 51.4	83 43.4	N11 30.9
16	133 37.2	65 53.2	N21 54.5	78 05.4	N19 35.7	323 54.6	N 5 51.4	98 45.6	N11 31.0
17	148 39.6	80 57.2	N21 53.7	93 06.0	N19 36.1	338 56.9	N 5 51.3	113 47.8	N11 31.1
18	163 42.1	96 01.2	N21 52.9	108 06.6	N19 36.5	353 59.2	N 5 51.2	128 50.0	N11 31.2
19	178 44.6	111 05.2	N21 52.1	123 07.3	N19 37.0	9 01.5	N 5 51.1	143 52.2	N11 31.3
20	193 47.0	126 09.2	N21 51.3	138 07.9	N19 37.4	24 03.9	N 5 51.1	158 54.4	N11 31.3
21	208 49.5	141 13.2	N21 50.5	153 08.5	N19 37.8	39 06.2	N 5 51.0	173 56.6	N11 31.4
22	223 52.0	156 17.1	N21 49.7	168 09.1	N19 38.2	54 08.5	N 5 50.9	188 58.8	N11 31.5
23	238 54.4	171 21.1	N21 48.8	183 09.7	N19 38.7	69 10.8	N 5 50.9	204 01.0	N11 31.6
		v 4.0	d 0.8	v 0.6	d 0.4	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
2 0	180 29.7	N22 13.6	69 00.8	11.3	S 6 09.2	15.1	59.2	Acamar	315 10.1	S40 11.3
1	195 29.6	N22 13.9	83 31.1	11.3	S 6 24.2	15.1	59.2	Achernar	335 18.6	S57 05.3
2	210 29.5	N22 14.2	98 01.4	11.3	S 6 39.3	15.0	59.2	Acrux	172 56.6	S63 15.7
3	225 29.4	N22 14.5	112 31.6	11.3	S 6 54.2	15.0	59.2	Adhara	255 04.0	S29 00.8
4	240 29.3	N22 14.8	127 01.8	11.2	S 7 09.2	14.9	59.2	Albireo	67 01.5	N28 01.1
F 5	255 29.2	N22 15.1	141 32.0	11.2	S 7 24.1	14.9	59.1			
R								Aldebaran	290 36.8	N16 33.9
I 6	270 29.1	N22 15.5	156 02.2	11.2	S 7 39.0	14.9	59.1	Alioth	166 10.3	N55 48.5
D 7	285 29.0	N22 15.8	170 32.3	11.1	S 7 53.8	14.8	59.1	Alkaid	152 49.5	N49 10.4
A 8	300 28.9	N22 16.1	185 02.4	11.1	S 8 08.6	14.8	59.1	Al Na-ir	27 29.3	S46 49.1
Y 9	315 28.8	N22 16.4	199 32.5	11.1	S 8 23.3	14.7	59.1	Alnilam	275 35.2	S 1 11.1
10	330 28.7	N22 16.7	214 02.5	11.0	S 8 38.0	14.7	59.1			
11	345 28.6	N22 17.0	228 32.5	11.0	S 8 52.6	14.6	59.1	Alphard	217 45.1	S 8 47.1
								Alphecca	126 01.1	N26 37.1
12	0 28.5	N22 17.3	243 02.5	11.0	S 9 07.2	14.6	59.1	Alpheratz	357 32.0	N29 14.8
13	15 28.4	N22 17.6	257 32.4	10.9	S 9 21.7	14.5	59.1	Altair	61 57.0	N 8 56.6
14	30 28.3	N22 17.9	272 02.3	10.9	S 9 36.2	14.5	59.1	Ankaa	353 04.6	S42 08.9
15	45 28.2	N22 18.2	286 32.1	10.8	S 9 50.7	14.4	59.1			
16	60 28.1	N22 18.6	301 01.9	10.8	S10 05.0	14.4	59.1	Antares	112 12.1	S26 29.7
17	75 28.0	N22 18.9	315 31.7	10.8	S10 19.4	14.3	59.1	Arcturus	145 45.1	N19 02.0
								Atria	107 03.3	S69 04.7
18	90 27.9	N22 19.2	330 01.4	10.7	S10 33.6	14.3	59.0	Avior	234 13.9	S59 36.4
19	105 27.8	N22 19.5	344 31.1	10.7	S10 47.8	14.2	59.0	Bellatrix	278 20.2	N 6 22.5
20	120 27.7	N22 19.8	359 00.7	10.6	S11 01.9	14.1	59.0			
21	135 27.5	N22 20.1	13 30.3	10.6	S11 16.0	14.1	59.0	Betelgeuse	270 49.4	N 7 24.7
22	150 27.4	N22 20.4	27 59.8	10.5	S11 30.0	14.0	59.0	Canopus	263 51.7	S52 42.8
23	165 27.3	N22 20.7	42 29.3	10.5	S11 44.0	13.9	59.0	Capella	280 18.3	N46 01.6
								Castor	245 53.8	N31 49.6
3 0	180 27.2	N22 21.0	56 58.8	10.4	S11 57.9	13.9	59.0	Deneb	49 23.6	N45 22.8
1	195 27.1	N22 21.3	71 28.2	10.4	S12 11.7	13.8	59.0			
2	210 27.0	N22 21.6	85 57.5	10.4	S12 25.4	13.7	59.0	Denebola	182 22.1	N14 24.7
3	225 26.9	N22 21.9	100 26.8	10.3	S12 39.1	13.7	59.0	Diphda	348 44.7	S17 49.7
4	240 26.8	N22 22.2	114 56.1	10.3	S12 52.7	13.6	58.9	Dubhe	193 37.7	N61 36.0
S 5	255 26.7	N22 22.5	129 25.3	10.2	S13 06.2	13.5	58.9	Elnath	277 58.8	N28 37.8
A								Eltanin	90 40.4	N51 29.0
T 6	270 26.6	N22 22.8	143 54.4	10.2	S13 19.6	13.4	58.9			
U 7	285 26.5	N22 23.1	158 23.5	10.1	S13 33.0	13.4	58.9	Enif	33 35.9	N10 00.3
R 8	300 26.4	N22 23.4	172 52.6	10.0	S13 46.3	13.3	58.9	Fomalhaut	15 11.5	S29 28.1
D 9	315 26.3	N22 23.7	187 21.6	10.0	S13 59.5	13.2	58.9	Gacrux	171 48.3	S57 16.7
A 10	330 26.2	N22 24.0	201 50.5	9.9	S14 12.7	13.1	58.9	Gienah	175 40.6	S17 42.2
Y 11	345 26.1	N22 24.3	216 19.4	9.9	S14 25.7	13.1	58.9	Hadar	148 31.6	S60 30.9
12	0 26.0	N22 24.6	230 48.2	9.8	S14 38.7	13.0	58.9	Hamal	327 48.3	N23 35.8
13	15 25.9	N22 24.9	245 17.0	9.8	S14 51.6	12.9	58.8	Kaus Austr.	83 28.5	S34 22.2
14	30 25.8	N22 25.1	259 45.7	9.7	S15 04.4	12.8	58.8	Kochab	137 19.2	N74 02.4
15	45 25.7	N22 25.4	274 14.4	9.7	S15 17.1	12.7	58.8	Markab	13 27.1	N15 21.4
16	60 25.6	N22 25.7	288 43.0	9.6	S15 29.7	12.6	58.8	Menkar	314 03.5	N 4 12.1
17	75 25.5	N22 26.0	303 11.6	9.6	S15 42.2	12.5	58.8			
								Menkent	147 54.0	S36 30.9
18	90 25.3	N22 26.3	317 40.1	9.5	S15 54.6	12.4	58.8	Miaplacidus	221 37.9	S69 50.4
19	105 25.2	N22 26.6	332 08.5	9.4	S16 07.0	12.3	58.8	Mirfak	308 24.8	N49 57.6
20	120 25.1	N22 26.9	346 36.9	9.4	S16 19.2	12.2	58.8	Nunki	75 44.0	S26 15.6
21	135 25.0	N22 27.2	1 05.2	9.3	S16 31.4	12.2	58.7	Peacock	53 01.0	S56 38.3
22	150 24.9	N22 27.5	15 33.5	9.3	S16 43.4	12.1	58.7			
23	165 24.8	N22 27.8	30 01.7	9.2	S16 55.4	12.0	58.7	Polaris	315 45.1	N89 22.3
								Pollux	243 14.2	N27 57.4
4 0	180 24.7	N22 28.0	44 29.8	9.1	S17 07.3	11.9	58.7	Procyon	244 48.2	N 5 09.0
1	195 24.6	N22 28.3	58 57.9	9.1	S17 19.0	11.8	58.7	Rasalhague	95 55.7	N12 32.4
2	210 24.5	N22 28.6	73 25.9	9.0	S17 30.7	11.7	58.7	Regulus	207 31.6	N11 49.6
3	225 24.4	N22 28.9	87 53.9	9.0	S17 42.2	11.5	58.7			
4	240 24.3	N22 29.2	102 21.8	8.9	S17 53.7	11.4	58.6	Rigel	281 01.5	S 8 10.2
S 5	255 24.2	N22 29.5	116 49.7	8.8	S18 05.0	11.3	58.6	Rigil Kent	139 36.0	S60 57.4
U								Sabik	101 59.3	S15 45.6
N 6	270 24.1	N22 29.7	131 17.4	8.8	S18 16.2	11.2	58.6	Schedar	349 28.0	N56 41.4
D 7	285 24.0	N22 30.0	145 45.2	8.7	S18 27.3	11.1	58.6	Shaula	96 06.2	S37 07.4
A 8	300 23.8	N22 30.3	160 12.8	8.7	S18 38.3	11.0	58.6			
Y 9	315 23.7	N22 30.6	174 40.5	8.6	S18 49.2	10.9	58.6	Sirius	258 24.1	S16 45.4
10	330 23.6	N22 30.9	189 08.0	8.6	S19 00.0	10.8	58.6	Spica	158 19.2	S11 18.7
11	345 23.5	N22 31.1	203 35.5	8.5	S19 10.7	10.7	58.5	Suhail	222 44.4	S43 33.1
								Vega	80 30.9	N38 48.5
12	0 23.4	N22 31.4	218 02.9	8.4	S19 21.2	10.6	58.5	Zuben-ubi	136 53.6	S16 09.7
13	15 23.3	N22 31.7	232 30.3	8.4	S19 31.7	10.4	58.5			
14	30 23.2	N22 32.0	246 57.6	8.3	S19 42.0	10.3	58.5			
15	45 23.1	N22 32.2	261 24.9	8.3	S19 52.2	10.2	58.5			
16	60 23.0	N22 32.5	275 52.1	8.2	S20 02.3	10.1	58.5			
17	75 22.9	N22 32.8	290 19.2	8.1	S20 12.2	10.0	58.4			
18	90 22.8	N22 33.1	304 46.3	8.1	S20 22.1	9.8	58.4			
19	105 22.6	N22 33.3	319 13.3	8.0	S20 31.8	9.7	58.4			
20	120 22.5	N22 33.6	333 40.3	8.0	S20 41.3	9.6	58.4			
21	135 22.4	N22 33.9	348 07.2	7.9	S20 50.8	9.5	58.4			
22	150 22.3	N22 34.2	2 34.1	7.9	S21 00.1	9.3	58.4			
23	165 22.2	N22 34.4	17 00.9	7.8	S21 09.3	9.2	58.3			
	S.D. 15.8	d 0.3	S.D.	16.1	16.0		15.9			

G.M.T	ARIES	VENUS		MARS		JUPITER		SATURN	
d h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
	° '	° '	° '	° '	° '	° '	° '	° '	° '
5 0	253 56.9	186 25.1	N21 48.0	198 10.3	N19 39.1	84 13.1	N 5 50.8	219 03.2	N11 31.7
1	268 59.4	201 29.1	N21 47.2	213 10.9	N19 39.5	99 15.5	N 5 50.7	234 05.4	N11 31.8
2	284 01.8	216 33.0	N21 46.4	228 11.5	N19 40.0	114 17.8	N 5 50.6	249 07.6	N11 31.9
3	299 04.3	231 37.0	N21 45.6	243 12.1	N19 40.4	129 20.1	N 5 50.6	264 09.8	N11 31.9
4	314 06.7	246 41.0	N21 44.8	258 12.8	N19 40.8	144 22.4	N 5 50.5	279 12.0	N11 32.0
M 5	329 09.2	261 44.9	N21 44.0	273 13.4	N19 41.2	159 24.7	N 5 50.4	294 14.2	N11 32.1
O									
N 6	344 11.7	276 48.9	N21 43.2	288 14.0	N19 41.7	174 27.1	N 5 50.4	309 16.4	N11 32.2
D 7	359 14.1	291 52.9	N21 42.4	303 14.6	N19 42.1	189 29.4	N 5 50.3	324 18.6	N11 32.3
A 8	14 16.6	306 56.8	N21 41.6	318 15.2	N19 42.5	204 31.7	N 5 50.2	339 20.8	N11 32.4
Y 9	29 19.1	322 00.8	N21 40.7	333 15.8	N19 42.9	219 34.0	N 5 50.1	354 23.0	N11 32.4
10	44 21.5	337 04.7	N21 39.9	348 16.4	N19 43.4	234 36.3	N 5 50.1	9 25.2	N11 32.5
11	59 24.0	352 08.7	N21 39.1	3 17.0	N19 43.8	249 38.6	N 5 50.0	24 27.4	N11 32.6
12	74 26.5	7 12.6	N21 38.3	18 17.6	N19 44.2	264 40.9	N 5 49.9	39 29.6	N11 32.7
13	89 28.9	22 16.6	N21 37.5	33 18.3	N19 44.6	279 43.3	N 5 49.9	54 31.8	N11 32.8
14	104 31.4	37 20.5	N21 36.7	48 18.9	N19 45.1	294 45.6	N 5 49.8	69 34.0	N11 32.9
15	119 33.8	52 24.5	N21 35.9	63 19.5	N19 45.5	309 47.9	N 5 49.7	84 36.2	N11 32.9
16	134 36.3	67 28.4	N21 35.1	78 20.1	N19 45.9	324 50.2	N 5 49.6	99 38.4	N11 33.0
17	149 38.8	82 32.4	N21 34.3	93 20.7	N19 46.3	339 52.5	N 5 49.6	114 40.6	N11 33.1
18	164 41.2	97 36.3	N21 33.5	108 21.3	N19 46.8	354 54.8	N 5 49.5	129 42.8	N11 33.2
19	179 43.7	112 40.2	N21 32.7	123 21.9	N19 47.2	9 57.1	N 5 49.4	144 45.0	N11 33.3
20	194 46.2	127 44.2	N21 31.9	138 22.5	N19 47.6	24 59.5	N 5 49.3	159 47.2	N11 33.4
21	209 48.6	142 48.1	N21 31.1	153 23.1	N19 48.0	40 01.8	N 5 49.3	174 49.4	N11 33.4
22	224 51.1	157 52.0	N21 30.3	168 23.7	N19 48.5	55 04.1	N 5 49.2	189 51.6	N11 33.5
23	239 53.6	172 56.0	N21 29.5	183 24.4	N19 48.9	70 06.4	N 5 49.1	204 53.8	N11 33.6
6 0	254 56.0	187 59.9	N21 28.7	198 25.0	N19 49.3	85 08.7	N 5 49.0	219 56.0	N11 33.7
1	269 58.5	203 03.8	N21 27.8	213 25.6	N19 49.7	100 11.0	N 5 49.0	234 58.2	N11 33.8
2	285 01.0	218 07.7	N21 27.0	228 26.2	N19 50.1	115 13.3	N 5 48.9	250 00.4	N11 33.9
3	300 03.4	233 11.7	N21 26.2	243 26.8	N19 50.6	130 15.6	N 5 48.8	265 02.6	N11 33.9
4	315 05.9	248 15.6	N21 25.4	258 27.4	N19 51.0	145 18.0	N 5 48.7	280 04.8	N11 34.0
T 5	330 08.3	263 19.5	N21 24.6	273 28.0	N19 51.4	160 20.3	N 5 48.7	295 07.0	N11 34.1
U									
E 6	345 10.8	278 23.4	N21 23.8	288 28.6	N19 51.8	175 22.6	N 5 48.6	310 09.2	N11 34.2
S 7	0 13.3	293 27.3	N21 23.0	303 29.2	N19 52.2	190 24.9	N 5 48.5	325 11.4	N11 34.3
D 8	15 15.7	308 31.2	N21 22.2	318 29.8	N19 52.7	205 27.2	N 5 48.5	340 13.6	N11 34.4
A 9	30 18.2	323 35.1	N21 21.4	333 30.4	N19 53.1	220 29.5	N 5 48.4	355 15.8	N11 34.4
Y 10	45 20.7	338 39.0	N21 20.6	348 31.1	N19 53.5	235 31.8	N 5 48.3	10 18.0	N11 34.5
11	60 23.1	353 42.9	N21 19.8	3 31.7	N19 53.9	250 34.1	N 5 48.2	25 20.2	N11 34.6
12	75 25.6	8 46.8	N21 19.0	18 32.3	N19 54.3	265 36.4	N 5 48.2	40 22.4	N11 34.7
13	90 28.1	23 50.7	N21 18.2	33 32.9	N19 54.7	280 38.7	N 5 48.1	55 24.6	N11 34.8
14	105 30.5	38 54.6	N21 17.4	48 33.5	N19 55.2	295 41.1	N 5 48.0	70 26.8	N11 34.9
15	120 33.0	53 58.5	N21 16.6	63 34.1	N19 55.6	310 43.4	N 5 47.9	85 29.0	N11 34.9
16	135 35.5	69 02.4	N21 15.8	78 34.7	N19 56.0	325 45.7	N 5 47.9	100 31.2	N11 35.0
17	150 37.9	84 06.3	N21 15.0	93 35.3	N19 56.4	340 48.0	N 5 47.8	115 33.4	N11 35.1
18	165 40.4	99 10.2	N21 14.2	108 35.9	N19 56.8	355 50.3	N 5 47.7	130 35.6	N11 35.2
19	180 42.8	114 14.1	N21 13.4	123 36.5	N19 57.2	10 52.6	N 5 47.6	145 37.8	N11 35.3
20	195 45.3	129 18.0	N21 12.7	138 37.1	N19 57.6	25 54.9	N 5 47.5	160 40.0	N11 35.4
21	210 47.8	144 21.8	N21 11.9	153 37.8	N19 58.1	40 57.2	N 5 47.5	175 42.2	N11 35.4
22	225 50.2	159 25.7	N21 11.1	168 38.4	N19 58.5	55 59.5	N 5 47.4	190 44.4	N11 35.5
23	240 52.7	174 29.6	N21 10.3	183 39.0	N19 58.9	71 01.8	N 5 47.3	205 46.6	N11 35.6
7 0	255 55.2	189 33.5	N21 09.5	198 39.6	N19 59.3	86 04.1	N 5 47.2	220 48.8	N11 35.7
1	270 57.6	204 37.3	N21 08.7	213 40.2	N19 59.7	101 06.4	N 5 47.2	235 51.0	N11 35.8
2	286 00.1	219 41.2	N21 07.9	228 40.8	N20 00.1	116 08.7	N 5 47.1	250 53.2	N11 35.9
3	301 02.6	234 45.0	N21 07.1	243 41.4	N20 00.5	131 11.0	N 5 47.0	265 55.4	N11 35.9
4	316 05.0	249 48.9	N21 06.3	258 42.0	N20 00.9	146 13.4	N 5 46.9	280 57.6	N11 36.0
W 5	331 07.5	264 52.8	N21 05.5	273 42.6	N20 01.4	161 15.7	N 5 46.9	295 59.8	N11 36.1
E									
D 6	346 10.0	279 56.6	N21 04.7	288 43.2	N20 01.8	176 18.0	N 5 46.8	311 02.0	N11 36.2
N 7	1 12.4	295 00.5	N21 03.9	303 43.8	N20 02.2	191 20.3	N 5 46.7	326 04.2	N11 36.3
E 8	16 14.9	310 04.3	N21 03.1	318 44.4	N20 02.6	206 22.6	N 5 46.6	341 06.4	N11 36.3
S 9	31 17.3	325 08.2	N21 02.4	333 45.0	N20 03.0	221 24.9	N 5 46.6	356 08.6	N11 36.4
D 10	46 19.8	340 12.0	N21 01.6	348 45.7	N20 03.4	236 27.2	N 5 46.5	11 10.8	N11 36.5
A 11	61 22.3	355 15.8	N21 00.8	3 46.3	N20 03.8	251 29.5	N 5 46.4	26 13.0	N11 36.6
Y									
12	76 24.7	10 19.7	N20 60.0	18 46.9	N20 04.2	266 31.8	N 5 46.3	41 15.2	N11 36.7
13	91 27.2	25 23.5	N20 59.2	33 47.5	N20 04.6	281 34.1	N 5 46.2	56 17.4	N11 36.8
14	106 29.7	40 27.4	N20 58.4	48 48.1	N20 05.0	296 36.4	N 5 46.2	71 19.7	N11 36.8
15	121 32.1	55 31.2	N20 57.6	63 48.7	N20 05.4	311 38.7	N 5 46.1	86 21.9	N11 36.9
16	136 34.6	70 35.0	N20 56.9	78 49.3	N20 05.9	326 41.0	N 5 46.0	101 24.1	N11 37.0
17	151 37.1	85 38.8	N20 56.1	93 49.9	N20 06.3	341 43.3	N 5 45.9	116 26.3	N11 37.1
18	166 39.5	100 42.7	N20 55.3	108 50.5	N20 06.7	356 45.6	N 5 45.9	131 28.5	N11 37.2
19	181 42.0	115 46.5	N20 54.5	123 51.1	N20 07.1	11 47.9	N 5 45.8	146 30.7	N11 37.2
20	196 44.4	130 50.3	N20 53.7	138 51.7	N20 07.5	26 50.2	N 5 45.7	161 32.9	N11 37.3
21	211 46.9	145 54.1	N20 52.9	153 52.3	N20 07.9	41 52.5	N 5 45.6	176 35.1	N11 37.4
22	226 49.4	160 57.9	N20 52.2	168 52.9	N20 08.3	56 54.8	N 5 45.5	191 37.3	N11 37.5
23	241 51.8	176 01.7	N20 51.4	183 53.5	N20 08.7	71 57.1	N 5 45.5	206 39.5	N11 37.6
		v 3.9	d 0.8	v 0.6	d 0.4	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
5	0	180 22.1	N22 34.7	31 27.6	7.8	S21 18.4	9.1	58.3
	1	195 22.0	N22 35.0	45 54.3	7.7	S21 27.3	8.9	58.3
	2	210 21.9	N22 35.2	60 21.0	7.6	S21 36.1	8.8	58.3
	3	225 21.8	N22 35.5	74 47.6	7.6	S21 44.8	8.7	58.3
	4	240 21.7	N22 35.8	89 14.1	7.5	S21 53.4	8.5	58.3
M	5	255 21.5	N22 36.0	103 40.6	7.5	S22 01.8	8.4	58.2
O								
N	6	270 21.4	N22 36.3	118 07.0	7.4	S22 10.0	8.3	58.2
D	7	285 21.3	N22 36.6	132 33.4	7.4	S22 18.2	8.1	58.2
A	8	300 21.2	N22 36.8	146 59.8	7.3	S22 26.2	8.0	58.2
Y	9	315 21.1	N22 37.1	161 26.1	7.3	S22 34.0	7.9	58.2
	10	330 21.0	N22 37.3	175 52.3	7.2	S22 41.7	7.7	58.1
	11	345 20.9	N22 37.6	190 18.5	7.2	S22 49.3	7.6	58.1
	12	0 20.8	N22 37.9	204 44.7	7.2	S22 56.7	7.4	58.1
	13	15 20.6	N22 38.1	219 10.8	7.1	S23 04.0	7.3	58.1
	14	30 20.5	N22 38.4	233 36.9	7.1	S23 11.2	7.1	58.1
	15	45 20.4	N22 38.6	248 02.9	7.0	S23 18.2	7.0	58.0
	16	60 20.3	N22 38.9	262 28.9	7.0	S23 25.0	6.9	58.0
	17	75 20.2	N22 39.2	276 54.8	7.0	S23 31.7	6.7	58.0
	18	90 20.1	N22 39.4	291 20.8	6.9	S23 38.3	6.6	58.0
	19	105 20.0	N22 39.7	305 46.6	6.9	S23 44.7	6.4	58.0
	20	120 19.9	N22 39.9	320 12.5	6.8	S23 51.0	6.3	57.9
	21	135 19.7	N22 40.2	334 38.3	6.8	S23 57.1	6.1	57.9
	22	150 19.6	N22 40.4	349 04.1	6.8	S24 03.1	6.0	57.9
	23	165 19.5	N22 40.7	3 29.8	6.7	S24 08.9	5.8	57.9
6	0	180 19.4	N22 40.9	17 55.5	6.7	S24 14.6	5.7	57.9
	1	195 19.3	N22 41.2	32 21.2	6.7	S24 20.1	5.5	57.8
	2	210 19.2	N22 41.5	46 46.9	6.7	S24 25.4	5.4	57.8
	3	225 19.1	N22 41.7	61 12.5	6.6	S24 30.7	5.2	57.8
	4	240 19.0	N22 42.0	75 38.1	6.6	S24 35.7	5.1	57.8
T	5	255 18.8	N22 42.2	90 03.7	6.6	S24 40.6	4.9	57.7
U								
E	6	270 18.7	N22 42.4	104 29.3	6.6	S24 45.4	4.8	57.7
S	7	285 18.6	N22 42.7	118 54.8	6.5	S24 50.0	4.6	57.7
D	8	300 18.5	N22 42.9	133 20.4	6.5	S24 54.4	4.4	57.7
A	9	315 18.4	N22 43.2	147 45.9	6.5	S24 58.7	4.3	57.7
Y	10	330 18.3	N22 43.4	162 11.4	6.5	S25 02.8	4.1	57.6
	11	345 18.1	N22 43.7	176 36.9	6.5	S25 06.8	4.0	57.6
	12	0 18.0	N22 43.9	191 02.3	6.5	S25 10.6	3.8	57.6
	13	15 17.9	N22 44.2	205 27.8	6.5	S25 14.3	3.7	57.6
	14	30 17.8	N22 44.4	219 53.3	6.5	S25 17.8	3.5	57.5
	15	45 17.7	N22 44.7	234 18.7	6.5	S25 21.2	3.4	57.5
	16	60 17.6	N22 44.9	248 44.1	6.4	S25 24.4	3.2	57.5
	17	75 17.5	N22 45.1	263 09.6	6.4	S25 27.4	3.0	57.5
	18	90 17.3	N22 45.4	277 35.0	6.4	S25 30.3	2.9	57.5
	19	105 17.2	N22 45.6	292 00.5	6.4	S25 33.0	2.7	57.4
	20	120 17.1	N22 45.9	306 25.9	6.4	S25 35.6	2.6	57.4
	21	135 17.0	N22 46.1	320 51.4	6.4	S25 38.0	2.4	57.4
	22	150 16.9	N22 46.3	335 16.8	6.5	S25 40.2	2.3	57.4
	23	165 16.8	N22 46.6	349 42.3	6.5	S25 42.3	2.1	57.3
7	0	180 16.6	N22 46.8	4 07.8	6.5	S25 44.3	1.9	57.3
	1	195 16.5	N22 47.0	18 33.2	6.5	S25 46.0	1.8	57.3
	2	210 16.4	N22 47.3	32 58.7	6.5	S25 47.7	1.6	57.3
	3	225 16.3	N22 47.5	47 24.2	6.5	S25 49.1	1.5	57.2
	4	240 16.2	N22 47.7	61 49.8	6.5	S25 50.4	1.3	57.2
W	5	255 16.1	N22 48.0	76 15.3	6.5	S25 51.6	1.1	57.2
E								
D	6	270 15.9	N22 48.2	90 40.9	6.6	S25 52.6	1.0	57.2
N	7	285 15.8	N22 48.4	105 06.5	6.6	S25 53.4	0.8	57.1
E	8	300 15.7	N22 48.7	119 32.1	6.6	S25 54.1	0.7	57.1
S	9	315 15.6	N22 48.9	133 57.7	6.6	S25 54.6	0.5	57.1
D	10	330 15.5	N22 49.1	148 23.4	6.7	S25 55.0	0.4	57.1
A	11	345 15.4	N22 49.4	162 49.1	6.7	S25 55.2	0.2	57.0
Y								
	12	0 15.2	N22 49.6	177 14.8	6.7	S25 55.3	0.1	57.0
	13	15 15.1	N22 49.8	191 40.5	6.8	S25 55.2	0.1	57.0
	14	30 15.0	N22 50.0	206 06.3	6.8	S25 54.9	0.3	57.0
	15	45 14.9	N22 50.3	220 32.2	6.8	S25 54.5	0.4	56.9
	16	60 14.8	N22 50.5	234 58.0	6.9	S25 54.0	0.6	56.9
	17	75 14.6	N22 50.7	249 23.9	6.9	S25 53.2	0.7	56.9
	18	90 14.5	N22 50.9	263 49.9	6.9	S25 52.4	0.9	56.9
	19	105 14.4	N22 51.2	278 15.8	7.0	S25 51.4	1.0	56.8
	20	120 14.3	N22 51.4	292 41.9	7.0	S25 50.2	1.2	56.8
	21	135 14.2	N22 51.6	307 07.9	7.1	S25 48.9	1.3	56.8
	22	150 14.0	N22 51.8	321 34.1	7.1	S25 47.4	1.5	56.8
	23	165 13.9	N22 52.0	336 00.2	7.2	S25 45.8	1.6	56.7
		S.D. 15.8	d 0.2	S.D. 15.8		15.7		15.5

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.3
Achernar	335 18.6	S57 05.3
Acrux	172 56.7	S63 15.7
Adhara	255 04.0	S29 00.8
Albireo	67 01.5	N28 01.1
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.3	N55 48.5
Alkaid	152 49.5	N49 10.4
Al Na-ir	27 29.3	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 32.0	N29 14.8
Altair	61 57.0	N 8 56.6
Ankaa	353 04.6	S42 08.8
Antares	112 12.1	S26 29.7
Arcturus	145 45.1	N19 02.0
Atria	107 03.3	S69 04.7
Avior	234 14.0	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.8
Capella	280 18.3	N46 01.5
Castor	245 53.8	N31 49.6
Deneb	49 23.6	N45 22.8
Denebola	182 22.1	N14 24.7
Diphda	348 44.7	S17 49.7
Dubhe	193 37.7	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 29.0
Enif	33 35.9	N10 00.3
Fomalhaut	15 11.4	S29 28.1
Gacrux	171 48.3	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.3	N23 35.8
Kaus Austr.	83 28.5	S34 22.2
Kochab	137 19.2	N74 02.4
Markab	13 27.1	N15 21.4
Menkar	314 03.5	N 4 12.1
Menkent	147 54.0	S36 30.9
Miaplacidus	221 38.0	S69 50.4
Mirfak	308 24.7	N49 57.6
Nunki	75 44.0	S26 15.5
Peacock	53 00.9	S56 38.3
Polaris	315 44.1	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.7	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.2
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.3	S15 45.6
Schedar	349 28.0	N56 41.4
Shaula	96 06.2	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.4	S43 33.1
Vega	80 30.9	N38 48.5
Zuben-ubi	136 53.6	S16 09.7

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
8 0	256 54.3	191 05.5	N20 50.6	198 54.2	N20 09.1	86 59.4	N 5 45.4	221 41.7	N11 37.7
1	271 56.8	206 09.3	N20 49.8	213 54.8	N20 09.5	102 01.7	N 5 45.3	236 43.9	N11 37.7
2	286 59.2	221 13.1	N20 49.1	228 55.4	N20 09.9	117 04.0	N 5 45.2	251 46.1	N11 37.8
3	302 01.7	236 16.9	N20 48.3	243 56.0	N20 10.3	132 06.3	N 5 45.1	266 48.3	N11 37.9
4	317 04.2	251 20.7	N20 47.5	258 56.6	N20 10.7	147 08.6	N 5 45.1	281 50.5	N11 38.0
T 5	332 06.6	266 24.5	N20 46.7	273 57.2	N20 11.1	162 10.9	N 5 45.0	296 52.7	N11 38.1
H U 6	347 09.1	281 28.3	N20 45.9	288 57.8	N20 11.5	177 13.2	N 5 44.9	311 54.9	N11 38.1
R 7	2 11.6	296 32.1	N20 45.2	303 58.4	N20 11.9	192 15.5	N 5 44.8	326 57.1	N11 38.2
S 8	17 14.0	311 35.9	N20 44.4	318 59.0	N20 12.3	207 17.8	N 5 44.7	341 59.3	N11 38.3
D 9	32 16.5	326 39.6	N20 43.6	333 59.6	N20 12.7	222 20.1	N 5 44.7	357 01.5	N11 38.4
A 10	47 18.9	341 43.4	N20 42.9	349 00.2	N20 13.1	237 22.4	N 5 44.6	12 03.7	N11 38.5
Y 11	62 21.4	356 47.2	N20 42.1	4 00.8	N20 13.5	252 24.7	N 5 44.5	27 06.0	N11 38.6
12	77 23.9	11 51.0	N20 41.3	19 01.4	N20 13.9	267 27.0	N 5 44.4	42 08.2	N11 38.6
13	92 26.3	26 54.7	N20 40.5	34 02.0	N20 14.3	282 29.3	N 5 44.3	57 10.4	N11 38.7
14	107 28.8	41 58.5	N20 39.8	49 02.6	N20 14.7	297 31.6	N 5 44.3	72 12.6	N11 38.8
15	122 31.3	57 02.2	N20 39.0	64 03.2	N20 15.1	312 33.9	N 5 44.2	87 14.8	N11 38.9
16	137 33.7	72 06.0	N20 38.2	79 03.8	N20 15.5	327 36.2	N 5 44.1	102 17.0	N11 39.0
17	152 36.2	87 09.8	N20 37.5	94 04.5	N20 15.9	342 38.5	N 5 44.0	117 19.2	N11 39.0
18	167 38.7	102 13.5	N20 36.7	109 05.1	N20 16.3	357 40.8	N 5 43.9	132 21.4	N11 39.1
19	182 41.1	117 17.3	N20 35.9	124 05.7	N20 16.7	12 43.1	N 5 43.9	147 23.6	N11 39.2
20	197 43.6	132 21.0	N20 35.2	139 06.3	N20 17.1	27 45.4	N 5 43.8	162 25.8	N11 39.3
21	212 46.1	147 24.7	N20 34.4	154 06.9	N20 17.5	42 47.6	N 5 43.7	177 28.0	N11 39.4
22	227 48.5	162 28.5	N20 33.7	169 07.5	N20 17.9	57 49.9	N 5 43.6	192 30.2	N11 39.4
23	242 51.0	177 32.2	N20 32.9	184 08.1	N20 18.3	72 52.2	N 5 43.5	207 32.4	N11 39.5
9 0	257 53.4	192 36.0	N20 32.1	199 08.7	N20 18.7	87 54.5	N 5 43.5	222 34.6	N11 39.6
1	272 55.9	207 39.7	N20 31.4	214 09.3	N20 19.1	102 56.8	N 5 43.4	237 36.8	N11 39.7
2	287 58.4	222 43.4	N20 30.6	229 09.9	N20 19.5	117 59.1	N 5 43.3	252 39.0	N11 39.8
3	303 00.8	237 47.1	N20 29.9	244 10.5	N20 19.9	133 01.4	N 5 43.2	267 41.3	N11 39.8
4	318 03.3	252 50.9	N20 29.1	259 11.1	N20 20.3	148 03.7	N 5 43.1	282 43.5	N11 39.9
F 5	333 05.8	267 54.6	N20 28.3	274 11.7	N20 20.7	163 06.0	N 5 43.0	297 45.7	N11 40.0
R I 6	348 08.2	282 58.3	N20 27.6	289 12.3	N20 21.1	178 08.3	N 5 43.0	312 47.9	N11 40.1
D 7	3 10.7	298 02.0	N20 26.8	304 12.9	N20 21.5	193 10.6	N 5 42.9	327 50.1	N11 40.2
A 8	18 13.2	313 05.7	N20 26.1	319 13.5	N20 21.9	208 12.9	N 5 42.8	342 52.3	N11 40.2
Y 9	33 15.6	328 09.4	N20 25.3	334 14.1	N20 22.2	223 15.2	N 5 42.7	357 54.5	N11 40.3
10	48 18.1	343 13.1	N20 24.6	349 14.7	N20 22.6	238 17.5	N 5 42.6	12 56.7	N11 40.4
11	63 20.6	358 16.8	N20 23.8	4 15.3	N20 23.0	253 19.7	N 5 42.6	27 58.9	N11 40.5
12	78 23.0	13 20.5	N20 23.1	19 15.9	N20 23.4	268 22.0	N 5 42.5	43 01.1	N11 40.6
13	93 25.5	28 24.2	N20 22.3	34 16.6	N20 23.8	283 24.3	N 5 42.4	58 03.3	N11 40.6
14	108 27.9	43 27.9	N20 21.6	49 17.2	N20 24.2	298 26.6	N 5 42.3	73 05.5	N11 40.7
15	123 30.4	58 31.6	N20 20.8	64 17.8	N20 24.6	313 28.9	N 5 42.2	88 07.7	N11 40.8
16	138 32.9	73 35.2	N20 20.1	79 18.4	N20 25.0	328 31.2	N 5 42.1	103 10.0	N11 40.9
17	153 35.3	88 38.9	N20 19.3	94 19.0	N20 25.4	343 33.5	N 5 42.1	118 12.2	N11 41.0
18	168 37.8	103 42.6	N20 18.6	109 19.6	N20 25.8	358 35.8	N 5 42.0	133 14.4	N11 41.0
19	183 40.3	118 46.3	N20 17.9	124 20.2	N20 26.2	13 38.1	N 5 41.9	148 16.6	N11 41.1
20	198 42.7	133 49.9	N20 17.1	139 20.8	N20 26.5	28 40.4	N 5 41.8	163 18.8	N11 41.2
21	213 45.2	148 53.6	N20 16.4	154 21.4	N20 26.9	43 42.6	N 5 41.7	178 21.0	N11 41.3
22	228 47.7	163 57.2	N20 15.6	169 22.0	N20 27.3	58 44.9	N 5 41.6	193 23.2	N11 41.4
23	243 50.1	179 00.9	N20 14.9	184 22.6	N20 27.7	73 47.2	N 5 41.6	208 25.4	N11 41.4
10 0	258 52.6	194 04.6	N20 14.1	199 23.2	N20 28.1	88 49.5	N 5 41.5	223 27.6	N11 41.5
1	273 55.1	209 08.2	N20 13.4	214 23.8	N20 28.5	103 51.8	N 5 41.4	238 29.8	N11 41.6
2	288 57.5	224 11.9	N20 12.7	229 24.4	N20 28.9	118 54.1	N 5 41.3	253 32.0	N11 41.7
3	303 60.0	239 15.5	N20 11.9	244 25.0	N20 29.3	133 56.4	N 5 41.2	268 34.2	N11 41.8
4	319 02.4	254 19.1	N20 11.2	259 25.6	N20 29.7	148 58.7	N 5 41.1	283 36.5	N11 41.8
S 5	334 04.9	269 22.8	N20 10.5	274 26.2	N20 30.0	164 01.0	N 5 41.0	298 38.7	N11 41.9
A T 6	349 07.4	284 26.4	N20 09.7	289 26.8	N20 30.4	179 03.2	N 5 41.0	313 40.9	N11 42.0
U 7	4 09.8	299 30.0	N20 09.0	304 27.4	N20 30.8	194 05.5	N 5 40.9	328 43.1	N11 42.1
R 8	19 12.3	314 33.7	N20 08.3	319 28.0	N20 31.2	209 07.8	N 5 40.8	343 45.3	N11 42.2
D 9	34 14.8	329 37.3	N20 07.5	334 28.6	N20 31.6	224 10.1	N 5 40.7	358 47.5	N11 42.2
A 10	49 17.2	344 40.9	N20 06.8	349 29.2	N20 32.0	239 12.4	N 5 40.6	13 49.7	N11 42.3
Y 11	64 19.7	359 44.5	N20 06.1	4 29.8	N20 32.3	254 14.7	N 5 40.5	28 51.9	N11 42.4
12	79 22.2	14 48.1	N20 05.4	19 30.4	N20 32.7	269 17.0	N 5 40.5	43 54.1	N11 42.5
13	94 24.6	29 51.7	N20 04.6	34 31.0	N20 33.1	284 19.2	N 5 40.4	58 56.3	N11 42.6
14	109 27.1	44 55.4	N20 03.9	49 31.6	N20 33.5	299 21.5	N 5 40.3	73 58.5	N11 42.6
15	124 29.6	59 59.0	N20 03.2	64 32.2	N20 33.9	314 23.8	N 5 40.2	89 00.8	N11 42.7
16	139 32.0	75 02.6	N20 02.5	79 32.8	N20 34.3	329 26.1	N 5 40.1	104 03.0	N11 42.8
17	154 34.5	90 06.1	N20 01.7	94 33.5	N20 34.6	344 28.4	N 5 40.0	119 05.2	N11 42.9
18	169 36.9	105 09.7	N20 01.0	109 34.1	N20 35.0	359 30.7	N 5 39.9	134 07.4	N11 43.0
19	184 39.4	120 13.3	N20 00.3	124 34.7	N20 35.4	14 32.9	N 5 39.9	149 09.6	N11 43.0
20	199 41.9	135 16.9	N19 59.6	139 35.3	N20 35.8	29 35.2	N 5 39.8	164 11.8	N11 43.1
21	214 44.3	150 20.5	N19 58.9	154 35.9	N20 36.2	44 37.5	N 5 39.7	179 14.0	N11 43.2
22	229 46.8	165 24.1	N19 58.2	169 36.5	N20 36.5	59 39.8	N 5 39.6	194 16.2	N11 43.3
23	244 49.3	180 27.6	N19 57.4	184 37.1	N20 36.9	74 42.1	N 5 39.5	209 18.4	N11 43.4
		v 3.7	d 0.7	v 0.6	d 0.4	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
8	0	180 13.8	N22 52.3	350 26.4	7.2	S25 44.1	1.8	56.7
	1	195 13.7	N22 52.5	4 52.7	7.3	S25 42.1	1.9	56.7
	2	210 13.6	N22 52.7	19 19.0	7.3	S25 40.1	2.1	56.7
	3	225 13.5	N22 52.9	33 45.4	7.4	S25 37.9	2.2	56.6
	4	240 13.3	N22 53.1	48 11.9	7.4	S25 35.5	2.3	56.6
T	5	255 13.2	N22 53.4	62 38.3	7.5	S25 33.0	2.5	56.6
H								
U	6	270 13.1	N22 53.6	77 04.9	7.5	S25 30.4	2.6	56.6
R	7	285 13.0	N22 53.8	91 31.5	7.6	S25 27.6	2.8	56.5
S	8	300 12.9	N22 54.0	105 58.2	7.7	S25 24.7	2.9	56.5
D	9	315 12.7	N22 54.2	120 24.9	7.7	S25 21.6	3.1	56.5
A	10	330 12.6	N22 54.4	134 51.7	7.8	S25 18.4	3.2	56.5
Y	11	345 12.5	N22 54.6	149 18.6	7.9	S25 15.1	3.3	56.4
	12	0 12.4	N22 54.8	163 45.5	7.9	S25 11.6	3.5	56.4
	13	15 12.2	N22 55.1	178 12.5	8.0	S25 08.0	3.6	56.4
	14	30 12.1	N22 55.3	192 39.6	8.1	S25 04.2	3.8	56.4
	15	45 12.0	N22 55.5	207 06.7	8.1	S25 00.3	3.9	56.3
	16	60 11.9	N22 55.7	221 33.9	8.2	S24 56.3	4.0	56.3
	17	75 11.8	N22 55.9	236 01.2	8.3	S24 52.1	4.2	56.3
	18	90 11.6	N22 56.1	250 28.5	8.4	S24 47.8	4.3	56.3
	19	105 11.5	N22 56.3	264 56.0	8.4	S24 43.4	4.4	56.2
	20	120 11.4	N22 56.5	279 23.5	8.5	S24 38.8	4.6	56.2
	21	135 11.3	N22 56.7	293 51.0	8.6	S24 34.1	4.7	56.2
	22	150 11.2	N22 56.9	308 18.7	8.7	S24 29.3	4.8	56.2
	23	165 11.0	N22 57.1	322 46.4	8.7	S24 24.3	5.0	56.1
9	0	180 10.9	N22 57.3	337 14.2	8.8	S24 19.2	5.1	56.1
	1	195 10.8	N22 57.5	351 42.1	8.9	S24 14.0	5.2	56.1
	2	210 10.7	N22 57.7	6 10.1	9.0	S24 08.7	5.3	56.1
	3	225 10.5	N22 57.9	20 38.2	9.1	S24 03.3	5.5	56.0
	4	240 10.4	N22 58.1	35 06.3	9.1	S23 57.7	5.6	56.0
F	5	255 10.3	N22 58.3	49 34.5	9.2	S23 52.0	5.7	56.0
R								
I	6	270 10.2	N22 58.5	64 02.8	9.3	S23 46.2	5.8	56.0
D	7	285 10.1	N22 58.7	78 31.2	9.4	S23 40.2	5.9	55.9
A	8	300 09.9	N22 58.9	92 59.6	9.5	S23 34.1	6.1	55.9
Y	9	315 09.8	N22 59.1	107 28.2	9.5	S23 28.0	6.2	55.9
	10	330 09.7	N22 59.3	121 56.8	9.6	S23 21.7	6.3	55.9
	11	345 09.6	N22 59.5	136 25.5	9.7	S23 15.3	6.4	55.9
	12	0 09.4	N22 59.7	150 54.3	9.8	S23 08.7	6.5	55.8
	13	15 09.3	N22 59.9	165 23.2	9.9	S23 02.1	6.6	55.8
	14	30 09.2	N23 00.1	179 52.2	10.0	S22 55.4	6.7	55.8
	15	45 09.1	N23 00.3	194 21.3	10.1	S22 48.5	6.9	55.8
	16	60 08.9	N23 00.5	208 50.4	10.2	S22 41.5	7.0	55.7
	17	75 08.8	N23 00.7	223 19.7	10.2	S22 34.5	7.1	55.7
	18	90 08.7	N23 00.9	237 49.0	10.3	S22 27.3	7.2	55.7
	19	105 08.6	N23 01.0	252 18.4	10.4	S22 20.0	7.3	55.7
	20	120 08.5	N23 01.2	266 47.9	10.5	S22 12.6	7.4	55.6
	21	135 08.3	N23 01.4	281 17.5	10.6	S22 05.1	7.5	55.6
	22	150 08.2	N23 01.6	295 47.2	10.7	S21 57.5	7.6	55.6
	23	165 08.1	N23 01.8	310 17.0	10.8	S21 49.8	7.7	55.6
10	0	180 08.0	N23 02.0	324 46.8	10.9	S21 42.0	7.8	55.5
	1	195 07.8	N23 02.2	339 16.8	10.9	S21 34.1	7.9	55.5
	2	210 07.7	N23 02.4	353 46.8	11.0	S21 26.1	8.0	55.5
	3	225 07.6	N23 02.5	8 16.9	11.1	S21 18.0	8.1	55.5
	4	240 07.5	N23 02.7	22 47.1	11.2	S21 09.8	8.2	55.5
S	5	255 07.3	N23 02.9	37 17.4	11.3	S21 01.5	8.3	55.4
A								
T	6	270 07.2	N23 03.1	51 47.8	11.4	S20 53.1	8.4	55.4
U	7	285 07.1	N23 03.3	66 18.3	11.5	S20 44.7	8.5	55.4
R	8	300 07.0	N23 03.4	80 48.8	11.6	S20 36.1	8.6	55.4
D	9	315 06.8	N23 03.6	95 19.5	11.6	S20 27.4	8.7	55.3
A	10	330 06.7	N23 03.8	109 50.2	11.7	S20 18.7	8.7	55.3
Y	11	345 06.6	N23 04.0	124 21.0	11.8	S20 09.9	8.8	55.3
	12	0 06.5	N23 04.2	138 51.9	11.9	S20 00.9	8.9	55.3
	13	15 06.3	N23 04.3	153 22.9	12.0	S19 51.9	9.0	55.3
	14	30 06.2	N23 04.5	167 54.0	12.1	S19 42.9	9.1	55.2
	15	45 06.1	N23 04.7	182 25.2	12.2	S19 33.7	9.2	55.2
	16	60 05.9	N23 04.9	196 56.5	12.3	S19 24.4	9.3	55.2
	17	75 05.8	N23 05.0	211 27.8	12.3	S19 15.1	9.3	55.2
	18	90 05.7	N23 05.2	225 59.2	12.4	S19 05.7	9.4	55.2
	19	105 05.6	N23 05.4	240 30.7	12.5	S18 56.2	9.5	55.1
	20	120 05.4	N23 05.6	255 02.3	12.6	S18 46.6	9.6	55.1
	21	135 05.3	N23 05.7	269 34.0	12.7	S18 37.0	9.6	55.1
	22	150 05.2	N23 05.9	284 05.8	12.8	S18 27.2	9.7	55.1
	23	165 05.1	N23 06.1	298 37.6	12.8	S18 17.5	9.8	55.1
		S.D. 15.8	d 0.2	S.D. 15.4		15.2		15.1

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.3
Achernar	335 18.5	S57 05.2
Acrux	172 56.7	S63 15.8
Adhara	255 04.0	S29 00.8
Albireo	67 01.5	N28 01.1
Aldebaran	290 36.8	N16 33.9
Alioth	166 10.3	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.3	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.1
Alpheratz	357 31.9	N29 14.8
Altair	61 57.0	N 8 56.6
Ankaa	353 04.6	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.1	N19 02.0
Atria	107 03.2	S69 04.8
Avior	234 14.0	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.8
Capella	280 18.3	N46 01.5
Castor	245 53.8	N31 49.6
Deneb	49 23.5	N45 22.8
Denebola	182 22.1	N14 24.7
Diphda	348 44.7	S17 49.7
Dubhe	193 37.7	N61 36.0
Elnath	277 58.8	N28 37.8
Eltanin	90 40.4	N51 29.0
Enif	33 35.9	N10 00.4
Fomalhaut	15 11.4	S29 28.0
Gacrux	171 48.3	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.3	N23 35.8
Kaus Austr.	83 28.5	S34 22.2
Kochab	137 19.2	N74 02.4
Markab	13 27.1	N15 21.5
Menkar	314 03.5	N 4 12.1
Menkent	147 54.0	S36 30.9
Miaplacidus	221 38.0	S69 50.4
Mirfak	308 24.7	N49 57.6
Nunki	75 44.0	S26 15.5
Peacock	53 00.9	S56 38.3
Polaris	315 43.0	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.2
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 28.0	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.5
Zuben-ubi	136 53.6	S16 09.7

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
11 0	259 51.7	195 31.2	N19 56.7	199 37.7	N20 37.3	89 44.4	N 5 39.4	224 20.7	N11 43.4
1	274 54.2	210 34.8	N19 56.0	214 38.3	N20 37.7	104 46.6	N 5 39.3	239 22.9	N11 43.5
2	289 56.7	225 38.3	N19 55.3	229 38.9	N20 38.1	119 48.9	N 5 39.3	254 25.1	N11 43.6
3	304 59.1	240 41.9	N19 54.6	244 39.5	N20 38.4	134 51.2	N 5 39.2	269 27.3	N11 43.7
4	320 01.6	255 45.5	N19 53.9	259 40.1	N20 38.8	149 53.5	N 5 39.1	284 29.5	N11 43.7
S 5	335 04.1	270 49.0	N19 53.2	274 40.7	N20 39.2	164 55.8	N 5 39.0	299 31.7	N11 43.8
U									
N 6	350 06.5	285 52.6	N19 52.5	289 41.3	N20 39.6	179 58.0	N 5 38.9	314 33.9	N11 43.9
D 7	5 09.0	300 56.1	N19 51.8	304 41.9	N20 40.0	195 00.3	N 5 38.8	329 36.1	N11 44.0
A 8	20 11.4	315 59.6	N19 51.1	319 42.5	N20 40.3	210 02.6	N 5 38.7	344 38.3	N11 44.1
Y 9	35 13.9	331 03.2	N19 50.4	334 43.1	N20 40.7	225 04.9	N 5 38.6	359 40.5	N11 44.1
10	50 16.4	346 06.7	N19 49.6	349 43.7	N20 41.1	240 07.2	N 5 38.6	14 42.8	N11 44.2
11	65 18.8	1 10.2	N19 48.9	4 44.3	N20 41.5	255 09.4	N 5 38.5	29 45.0	N11 44.3
12	80 21.3	16 13.8	N19 48.2	19 44.9	N20 41.8	270 11.7	N 5 38.4	44 47.2	N11 44.4
13	95 23.8	31 17.3	N19 47.5	34 45.5	N20 42.2	285 14.0	N 5 38.3	59 49.4	N11 44.5
14	110 26.2	46 20.8	N19 46.9	49 46.1	N20 42.6	300 16.3	N 5 38.2	74 51.6	N11 44.5
15	125 28.7	61 24.3	N19 46.2	64 46.7	N20 43.0	315 18.6	N 5 38.1	89 53.8	N11 44.6
16	140 31.2	76 27.8	N19 45.5	79 47.3	N20 43.3	330 20.8	N 5 38.0	104 56.0	N11 44.7
17	155 33.6	91 31.3	N19 44.8	94 47.9	N20 43.7	345 23.1	N 5 37.9	119 58.2	N11 44.8
18	170 36.1	106 34.8	N19 44.1	109 48.5	N20 44.1	0 25.4	N 5 37.9	135 00.5	N11 44.8
19	185 38.5	121 38.3	N19 43.4	124 49.1	N20 44.4	15 27.7	N 5 37.8	150 02.7	N11 44.9
20	200 41.0	136 41.8	N19 42.7	139 49.7	N20 44.8	30 29.9	N 5 37.7	165 04.9	N11 45.0
21	215 43.5	151 45.3	N19 42.0	154 50.3	N20 45.2	45 32.2	N 5 37.6	180 07.1	N11 45.1
22	230 45.9	166 48.8	N19 41.3	169 50.9	N20 45.6	60 34.5	N 5 37.5	195 09.3	N11 45.2
23	245 48.4	181 52.3	N19 40.6	184 51.5	N20 45.9	75 36.8	N 5 37.4	210 11.5	N11 45.2
12 0	260 50.9	196 55.8	N19 39.9	199 52.1	N20 46.3	90 39.1	N 5 37.3	225 13.7	N11 45.3
1	275 53.3	211 59.3	N19 39.3	214 52.7	N20 46.7	105 41.3	N 5 37.2	240 15.9	N11 45.4
2	290 55.8	227 02.7	N19 38.6	229 53.3	N20 47.0	120 43.6	N 5 37.1	255 18.2	N11 45.5
3	305 58.3	242 06.2	N19 37.9	244 53.9	N20 47.4	135 45.9	N 5 37.1	270 20.4	N11 45.5
4	321 00.7	257 09.7	N19 37.2	259 54.5	N20 47.8	150 48.2	N 5 37.0	285 22.6	N11 45.6
M 5	336 03.2	272 13.1	N19 36.5	274 55.1	N20 48.2	165 50.4	N 5 36.9	300 24.8	N11 45.7
O									
N 6	351 05.7	287 16.6	N19 35.8	289 55.7	N20 48.5	180 52.7	N 5 36.8	315 27.0	N11 45.8
D 7	6 08.1	302 20.0	N19 35.2	304 56.3	N20 48.9	195 55.0	N 5 36.7	330 29.2	N11 45.9
A 8	21 10.6	317 23.5	N19 34.5	319 56.9	N20 49.3	210 57.3	N 5 36.6	345 31.4	N11 45.9
Y 9	36 13.0	332 26.9	N19 33.8	334 57.5	N20 49.6	225 59.5	N 5 36.5	0 33.6	N11 46.0
10	51 15.5	347 30.4	N19 33.1	349 58.1	N20 50.0	241 01.8	N 5 36.4	15 35.9	N11 46.1
11	66 18.0	2 33.8	N19 32.5	4 58.7	N20 50.4	256 04.1	N 5 36.3	30 38.1	N11 46.2
12	81 20.4	17 37.3	N19 31.8	19 59.3	N20 50.7	271 06.3	N 5 36.2	45 40.3	N11 46.2
13	96 22.9	32 40.7	N19 31.1	34 59.9	N20 51.1	286 08.6	N 5 36.2	60 42.5	N11 46.3
14	111 25.4	47 44.1	N19 30.5	50 00.5	N20 51.5	301 10.9	N 5 36.1	75 44.7	N11 46.4
15	126 27.8	62 47.5	N19 29.8	65 01.1	N20 51.8	316 13.2	N 5 36.0	90 46.9	N11 46.5
16	141 30.3	77 51.0	N19 29.1	80 01.7	N20 52.2	331 15.4	N 5 35.9	105 49.1	N11 46.6
17	156 32.8	92 54.4	N19 28.5	95 02.3	N20 52.6	346 17.7	N 5 35.8	120 51.4	N11 46.6
18	171 35.2	107 57.8	N19 27.8	110 02.9	N20 52.9	1 20.0	N 5 35.7	135 53.6	N11 46.7
19	186 37.7	123 01.2	N19 27.1	125 03.5	N20 53.3	16 22.3	N 5 35.6	150 55.8	N11 46.8
20	201 40.2	138 04.6	N19 26.5	140 04.1	N20 53.7	31 24.5	N 5 35.5	165 58.0	N11 46.9
21	216 42.6	153 08.0	N19 25.8	155 04.7	N20 54.0	46 26.8	N 5 35.4	181 00.2	N11 46.9
22	231 45.1	168 11.4	N19 25.2	170 05.3	N20 54.4	61 29.1	N 5 35.3	196 02.4	N11 47.0
23	246 47.5	183 14.8	N19 24.5	185 05.9	N20 54.7	76 31.3	N 5 35.2	211 04.6	N11 47.1
13 0	261 50.0	198 18.2	N19 23.8	200 06.5	N20 55.1	91 33.6	N 5 35.2	226 06.9	N11 47.2
1	276 52.5	213 21.6	N19 23.2	215 07.1	N20 55.5	106 35.9	N 5 35.1	241 09.1	N11 47.3
2	291 54.9	228 24.9	N19 22.5	230 07.7	N20 55.8	121 38.2	N 5 35.0	256 11.3	N11 47.3
3	306 57.4	243 28.3	N19 21.9	245 08.3	N20 56.2	136 40.4	N 5 34.9	271 13.5	N11 47.4
4	321 59.9	258 31.7	N19 21.2	260 08.9	N20 56.6	151 42.7	N 5 34.8	286 15.7	N11 47.5
T 5	337 02.3	273 35.0	N19 20.6	275 09.5	N20 56.9	166 45.0	N 5 34.7	301 17.9	N11 47.6
U									
E 6	352 04.8	288 38.4	N19 19.9	290 10.1	N20 57.3	181 47.2	N 5 34.6	316 20.2	N11 47.6
S 7	7 07.3	303 41.8	N19 19.3	305 10.7	N20 57.6	196 49.5	N 5 34.5	331 22.4	N11 47.7
D 8	22 09.7	318 45.1	N19 18.7	320 11.3	N20 58.0	211 51.8	N 5 34.4	346 24.6	N11 47.8
A 9	37 12.2	333 48.5	N19 18.0	335 11.9	N20 58.4	226 54.0	N 5 34.3	1 26.8	N11 47.9
Y 10	52 14.7	348 51.8	N19 17.4	350 12.5	N20 58.7	241 56.3	N 5 34.2	16 29.0	N11 47.9
11	67 17.1	3 55.2	N19 16.7	5 13.1	N20 59.1	256 58.6	N 5 34.1	31 31.2	N11 48.0
12	82 19.6	18 58.5	N19 16.1	20 13.7	N20 59.4	272 00.8	N 5 34.1	46 33.4	N11 48.1
13	97 22.0	34 01.9	N19 15.4	35 14.3	N20 59.8	287 03.1	N 5 34.0	61 35.7	N11 48.2
14	112 24.5	49 05.2	N19 14.8	50 14.9	N21 00.1	302 05.4	N 5 33.9	76 37.9	N11 48.2
15	127 27.0	64 08.5	N19 14.2	65 15.5	N21 00.5	317 07.6	N 5 33.8	91 40.1	N11 48.3
16	142 29.4	79 11.8	N19 13.5	80 16.1	N21 00.9	332 09.9	N 5 33.7	106 42.3	N11 48.4
17	157 31.9	94 15.2	N19 12.9	95 16.7	N21 01.2	347 12.2	N 5 33.6	121 44.5	N11 48.5
18	172 34.4	109 18.5	N19 12.3	110 17.3	N21 01.6	2 14.4	N 5 33.5	136 46.7	N11 48.6
19	187 36.8	124 21.8	N19 11.6	125 17.9	N21 01.9	17 16.7	N 5 33.4	151 49.0	N11 48.6
20	202 39.3	139 25.1	N19 11.0	140 18.5	N21 02.3	32 19.0	N 5 33.3	166 51.2	N11 48.7
21	217 41.8	154 28.4	N19 10.4	155 19.1	N21 02.6	47 21.2	N 5 33.2	181 53.4	N11 48.8
22	232 44.2	169 31.7	N19 09.8	170 19.7	N21 03.0	62 23.5	N 5 33.1	196 55.6	N11 48.9
23	247 46.7	184 35.0	N19 09.1	185 20.3	N21 03.3	77 25.8	N 5 33.0	211 57.8	N11 48.9
		v 3.4	d 0.7	v 0.6	d 0.4	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
11	0	180 04.9	N23 06.2	313 09.5	12.9	S18 07.6	9.9	55.0
	1	195 04.8	N23 06.4	327 41.5	13.0	S17 57.6	9.9	55.0
	2	210 04.7	N23 06.6	342 13.6	13.1	S17 47.6	10.0	55.0
	3	225 04.6	N23 06.7	356 45.8	13.2	S17 37.5	10.1	55.0
	4	240 04.4	N23 06.9	11 18.0	13.2	S17 27.4	10.2	55.0
S	5	255 04.3	N23 07.1	25 50.3	13.3	S17 17.2	10.2	54.9
U								
N	6	270 04.2	N23 07.2	40 22.7	13.4	S17 06.9	10.3	54.9
D	7	285 04.0	N23 07.4	54 55.2	13.5	S16 56.5	10.4	54.9
A	8	300 03.9	N23 07.6	69 27.8	13.6	S16 46.1	10.4	54.9
Y	9	315 03.8	N23 07.7	84 00.4	13.6	S16 35.6	10.5	54.9
	10	330 03.7	N23 07.9	98 33.1	13.7	S16 25.1	10.5	54.9
	11	345 03.5	N23 08.0	113 05.9	13.8	S16 14.4	10.6	54.8
	12	0 03.4	N23 08.2	127 38.8	13.9	S16 03.8	10.7	54.8
	13	15 03.3	N23 08.4	142 11.7	13.9	S15 53.0	10.7	54.8
	14	30 03.2	N23 08.5	156 44.7	14.0	S15 42.3	10.8	54.8
	15	45 03.0	N23 08.7	171 17.8	14.1	S15 31.4	10.9	54.8
	16	60 02.9	N23 08.8	185 50.9	14.2	S15 20.5	10.9	54.8
	17	75 02.8	N23 09.0	200 24.2	14.2	S15 09.5	11.0	54.7
	18	90 02.6	N23 09.2	214 57.5	14.3	S14 58.5	11.0	54.7
	19	105 02.5	N23 09.3	229 30.8	14.4	S14 47.4	11.1	54.7
	20	120 02.4	N23 09.5	244 04.2	14.4	S14 36.3	11.1	54.7
	21	135 02.3	N23 09.6	258 37.7	14.5	S14 25.1	11.2	54.7
	22	150 02.1	N23 09.8	273 11.3	14.6	S14 13.9	11.2	54.7
	23	165 02.0	N23 09.9	287 44.9	14.6	S14 02.6	11.3	54.7
12	0	180 01.9	N23 10.1	302 18.6	14.7	S13 51.3	11.3	54.6
	1	195 01.7	N23 10.2	316 52.4	14.8	S13 39.9	11.4	54.6
	2	210 01.6	N23 10.4	331 26.2	14.8	S13 28.5	11.4	54.6
	3	225 01.5	N23 10.5	346 00.1	14.9	S13 17.0	11.5	54.6
	4	240 01.4	N23 10.7	0 34.0	14.9	S13 05.5	11.5	54.6
M	5	255 01.2	N23 10.8	15 08.0	15.0	S12 53.9	11.6	54.6
O								
N	6	270 01.1	N23 11.0	29 42.1	15.1	S12 42.3	11.6	54.6
D	7	285 01.0	N23 11.1	44 16.2	15.1	S12 30.6	11.7	54.5
A	8	300 00.8	N23 11.3	58 50.4	15.2	S12 18.9	11.7	54.5
Y	9	315 00.7	N23 11.4	73 24.6	15.2	S12 07.2	11.7	54.5
	10	330 00.6	N23 11.6	87 58.9	15.3	S11 55.4	11.8	54.5
	11	345 00.4	N23 11.7	102 33.3	15.3	S11 43.6	11.8	54.5
	12	0 00.3	N23 11.9	117 07.7	15.4	S11 31.7	11.9	54.5
	13	15 00.2	N23 12.0	131 42.1	15.5	S11 19.8	11.9	54.5
	14	30 00.1	N23 12.1	146 16.6	15.5	S11 07.8	11.9	54.5
	15	44 59.9	N23 12.3	160 51.2	15.6	S10 55.9	12.0	54.4
	16	59 59.8	N23 12.4	175 25.8	15.6	S10 43.8	12.0	54.4
	17	74 59.7	N23 12.6	190 00.5	15.7	S10 31.8	12.1	54.4
	18	89 59.5	N23 12.7	204 35.2	15.7	S10 19.7	12.1	54.4
	19	104 59.4	N23 12.8	219 09.9	15.8	S10 07.6	12.1	54.4
	20	119 59.3	N23 13.0	233 44.7	15.8	S 9 55.4	12.2	54.4
	21	134 59.1	N23 13.1	248 19.6	15.8	S 9 43.2	12.2	54.4
	22	149 59.0	N23 13.2	262 54.5	15.9	S 9 31.0	12.2	54.4
	23	164 58.9	N23 13.4	277 29.4	15.9	S 9 18.8	12.3	54.4
13	0	179 58.8	N23 13.5	292 04.4	16.0	S 9 06.5	12.3	54.4
	1	194 58.6	N23 13.7	306 39.4	16.0	S 8 54.2	12.3	54.4
	2	209 58.5	N23 13.8	321 14.5	16.1	S 8 41.8	12.3	54.3
	3	224 58.4	N23 13.9	335 49.6	16.1	S 8 29.4	12.4	54.3
	4	239 58.2	N23 14.1	350 24.7	16.1	S 8 17.0	12.4	54.3
T	5	254 58.1	N23 14.2	4 59.9	16.2	S 8 04.6	12.4	54.3
U								
E	6	269 58.0	N23 14.3	19 35.1	16.2	S 7 52.2	12.5	54.3
S	7	284 57.8	N23 14.4	34 10.4	16.2	S 7 39.7	12.5	54.3
D	8	299 57.7	N23 14.6	48 45.6	16.3	S 7 27.2	12.5	54.3
A	9	314 57.6	N23 14.7	63 21.0	16.3	S 7 14.7	12.5	54.3
Y	10	329 57.4	N23 14.8	77 56.3	16.3	S 7 02.1	12.6	54.3
	11	344 57.3	N23 15.0	92 31.7	16.4	S 6 49.5	12.6	54.3
	12	359 57.2	N23 15.1	107 07.1	16.4	S 6 36.9	12.6	54.3
	13	14 57.0	N23 15.2	121 42.5	16.4	S 6 24.3	12.6	54.3
	14	29 56.9	N23 15.3	136 18.0	16.5	S 6 11.7	12.6	54.3
	15	44 56.8	N23 15.5	150 53.5	16.5	S 5 59.0	12.7	54.3
	16	59 56.7	N23 15.6	165 29.0	16.5	S 5 46.3	12.7	54.3
	17	74 56.5	N23 15.7	180 04.6	16.5	S 5 33.6	12.7	54.3
	18	89 56.4	N23 15.8	194 40.1	16.6	S 5 20.9	12.7	54.3
	19	104 56.3	N23 16.0	209 15.7	16.6	S 5 08.2	12.7	54.3
	20	119 56.1	N23 16.1	223 51.3	16.6	S 4 55.4	12.7	54.3
	21	134 56.0	N23 16.2	238 27.0	16.6	S 4 42.7	12.8	54.3
	22	149 55.9	N23 16.3	253 02.6	16.7	S 4 29.9	12.8	54.3
	23	164 55.7	N23 16.4	267 38.3	16.7	S 4 17.1	12.8	54.3
		S.D. 15.8	d 0.1	S.D. 14.9		14.8		14.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.3
Achernar	335 18.5	S57 05.2
Acrux	172 56.7	S63 15.8
Adhara	255 04.0	S29 00.8
Albireo	67 01.5	N28 01.1
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.3	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.2	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.9	N29 14.8
Altair	61 56.9	N 8 56.6
Ankaa	353 04.5	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.1	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.0	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.6
Deneb	49 23.5	N45 22.8
Denebola	182 22.1	N14 24.7
Diphda	348 44.6	S17 49.6
Dubhe	193 37.7	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.4	N51 29.0
Enif	33 35.8	N10 00.4
Fomalhaut	15 11.4	S29 28.0
Gacrux	171 48.3	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.3	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.3	N74 02.4
Markab	13 27.1	N15 21.5
Menkar	314 03.5	N 4 12.1
Menkent	147 54.0	S36 30.9
Miaplacidus	221 38.0	S69 50.4
Mirfak	308 24.7	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.9	S56 38.3
Polaris	315 42.0	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.2
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 27.9	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
14	0	262 49.1	199 38.3	N19 08.5	200 20.9	N21 03.7	92 28.0	N 5 32.9	227 00.0	N11 49.0
	1	277 51.6	214 41.6	N19 07.9	215 21.5	N21 04.1	107 30.3	N 5 32.8	242 02.3	N11 49.1
	2	292 54.1	229 44.9	N19 07.3	230 22.1	N21 04.4	122 32.6	N 5 32.7	257 04.5	N11 49.2
	3	307 56.5	244 48.1	N19 06.7	245 22.7	N21 04.8	137 34.8	N 5 32.7	272 06.7	N11 49.2
	4	322 59.0	259 51.4	N19 06.0	260 23.3	N21 05.1	152 37.1	N 5 32.6	287 08.9	N11 49.3
W	5	338 01.5	274 54.7	N19 05.4	275 23.9	N21 05.5	167 39.3	N 5 32.5	302 11.1	N11 49.4
E										
D	6	353 03.9	289 58.0	N19 04.8	290 24.5	N21 05.8	182 41.6	N 5 32.4	317 13.3	N11 49.5
N	7	8 06.4	305 01.2	N19 04.2	305 25.1	N21 06.2	197 43.9	N 5 32.3	332 15.6	N11 49.5
E	8	23 08.9	320 04.5	N19 03.6	320 25.7	N21 06.5	212 46.1	N 5 32.2	347 17.8	N11 49.6
S	9	38 11.3	335 07.7	N19 03.0	335 26.3	N21 06.9	227 48.4	N 5 32.1	2 20.0	N11 49.7
D	10	53 13.8	350 11.0	N19 02.4	350 26.9	N21 07.2	242 50.7	N 5 32.0	17 22.2	N11 49.8
A	11	68 16.3	5 14.2	N19 01.8	5 27.5	N21 07.6	257 52.9	N 5 31.9	32 24.4	N11 49.8
Y										
	12	83 18.7	20 17.5	N19 01.2	20 28.1	N21 07.9	272 55.2	N 5 31.8	47 26.7	N11 49.9
	13	98 21.2	35 20.7	N19 00.5	35 28.7	N21 08.3	287 57.4	N 5 31.7	62 28.9	N11 50.0
	14	113 23.6	50 24.0	N18 59.9	50 29.3	N21 08.6	302 59.7	N 5 31.6	77 31.1	N11 50.1
	15	128 26.1	65 27.2	N18 59.3	65 29.9	N21 09.0	318 02.0	N 5 31.5	92 33.3	N11 50.1
	16	143 28.6	80 30.4	N18 58.7	80 30.5	N21 09.3	333 04.2	N 5 31.4	107 35.5	N11 50.2
	17	158 31.0	95 33.6	N18 58.1	95 31.1	N21 09.7	348 06.5	N 5 31.3	122 37.7	N11 50.3
	18	173 33.5	110 36.9	N18 57.5	110 31.7	N21 10.0	3 08.8	N 5 31.2	137 40.0	N11 50.4
	19	188 36.0	125 40.1	N18 56.9	125 32.3	N21 10.4	18 11.0	N 5 31.1	152 42.2	N11 50.4
	20	203 38.4	140 43.3	N18 56.4	140 32.9	N21 10.7	33 13.3	N 5 31.0	167 44.4	N11 50.5
	21	218 40.9	155 46.5	N18 55.8	155 33.5	N21 11.1	48 15.5	N 5 30.9	182 46.6	N11 50.6
	22	233 43.4	170 49.7	N18 55.2	170 34.1	N21 11.4	63 17.8	N 5 30.9	197 48.8	N11 50.7
	23	248 45.8	185 52.9	N18 54.6	185 34.6	N21 11.7	78 20.1	N 5 30.8	212 51.1	N11 50.7
15	0	263 48.3	200 56.1	N18 54.0	200 35.2	N21 12.1	93 22.3	N 5 30.7	227 53.3	N11 50.8
	1	278 50.8	215 59.3	N18 53.4	215 35.8	N21 12.4	108 24.6	N 5 30.6	242 55.5	N11 50.9
	2	293 53.2	231 02.5	N18 52.8	230 36.4	N21 12.8	123 26.8	N 5 30.5	257 57.7	N11 51.0
	3	308 55.7	246 05.6	N18 52.2	245 37.0	N21 13.1	138 29.1	N 5 30.4	272 59.9	N11 51.0
	4	323 58.1	261 08.8	N18 51.6	260 37.6	N21 13.5	153 31.3	N 5 30.3	288 02.2	N11 51.1
T	5	339 00.6	276 12.0	N18 51.1	275 38.2	N21 13.8	168 33.6	N 5 30.2	303 04.4	N11 51.2
H										
U	6	354 03.1	291 15.2	N18 50.5	290 38.8	N21 14.2	183 35.9	N 5 30.1	318 06.6	N11 51.3
R	7	9 05.5	306 18.3	N18 49.9	305 39.4	N21 14.5	198 38.1	N 5 30.0	333 08.8	N11 51.3
S	8	24 08.0	321 21.5	N18 49.3	320 40.0	N21 14.8	213 40.4	N 5 29.9	348 11.0	N11 51.4
D	9	39 10.5	336 24.7	N18 48.8	335 40.6	N21 15.2	228 42.6	N 5 29.8	3 13.3	N11 51.5
A	10	54 12.9	351 27.8	N18 48.2	350 41.2	N21 15.5	243 44.9	N 5 29.7	18 15.5	N11 51.6
Y	11	69 15.4	6 31.0	N18 47.6	5 41.8	N21 15.9	258 47.1	N 5 29.6	33 17.7	N11 51.6
	12	84 17.9	21 34.1	N18 47.0	20 42.4	N21 16.2	273 49.4	N 5 29.5	48 19.9	N11 51.7
	13	99 20.3	36 37.2	N18 46.5	35 43.0	N21 16.6	288 51.7	N 5 29.4	63 22.1	N11 51.8
	14	114 22.8	51 40.4	N18 45.9	50 43.6	N21 16.9	303 53.9	N 5 29.3	78 24.4	N11 51.9
	15	129 25.2	66 43.5	N18 45.3	65 44.2	N21 17.2	318 56.2	N 5 29.2	93 26.6	N11 51.9
	16	144 27.7	81 46.6	N18 44.8	80 44.8	N21 17.6	333 58.4	N 5 29.1	108 28.8	N11 52.0
	17	159 30.2	96 49.8	N18 44.2	95 45.4	N21 17.9	349 00.7	N 5 29.0	123 31.0	N11 52.1
	18	174 32.6	111 52.9	N18 43.6	110 46.0	N21 18.3	4 02.9	N 5 28.9	138 33.2	N11 52.2
	19	189 35.1	126 56.0	N18 43.1	125 46.6	N21 18.6	19 05.2	N 5 28.8	153 35.5	N11 52.2
	20	204 37.6	141 59.1	N18 42.5	140 47.2	N21 18.9	34 07.4	N 5 28.7	168 37.7	N11 52.3
	21	219 40.0	157 02.2	N18 42.0	155 47.8	N21 19.3	49 09.7	N 5 28.6	183 39.9	N11 52.4
	22	234 42.5	172 05.3	N18 41.4	170 48.4	N21 19.6	64 11.9	N 5 28.5	198 42.1	N11 52.5
	23	249 45.0	187 08.4	N18 40.9	185 49.0	N21 19.9	79 14.2	N 5 28.4	213 44.3	N11 52.5
16	0	264 47.4	202 11.5	N18 40.3	200 49.6	N21 20.3	94 16.5	N 5 28.3	228 46.6	N11 52.6
	1	279 49.9	217 14.6	N18 39.8	215 50.2	N21 20.6	109 18.7	N 5 28.2	243 48.8	N11 52.7
	2	294 52.4	232 17.7	N18 39.2	230 50.8	N21 21.0	124 21.0	N 5 28.1	258 51.0	N11 52.8
	3	309 54.8	247 20.8	N18 38.7	245 51.4	N21 21.3	139 23.2	N 5 28.0	273 53.2	N11 52.8
	4	324 57.3	262 23.9	N18 38.1	260 52.0	N21 21.6	154 25.5	N 5 27.9	288 55.5	N11 52.9
F	5	339 59.7	277 26.9	N18 37.6	275 52.5	N21 22.0	169 27.7	N 5 27.8	303 57.7	N11 53.0
R										
I	6	355 02.2	292 30.0	N18 37.0	290 53.1	N21 22.3	184 30.0	N 5 27.7	318 59.9	N11 53.1
D	7	10 04.7	307 33.1	N18 36.5	305 53.7	N21 22.6	199 32.2	N 5 27.6	334 02.1	N11 53.1
A	8	25 07.1	322 36.1	N18 35.9	320 54.3	N21 23.0	214 34.5	N 5 27.5	349 04.3	N11 53.2
Y	9	40 09.6	337 39.2	N18 35.4	335 54.9	N21 23.3	229 36.7	N 5 27.4	4 06.6	N11 53.3
	10	55 12.1	352 42.2	N18 34.9	350 55.5	N21 23.6	244 39.0	N 5 27.3	19 08.8	N11 53.3
	11	70 14.5	7 45.3	N18 34.3	5 56.1	N21 24.0	259 41.2	N 5 27.2	34 11.0	N11 53.4
	12	85 17.0	22 48.3	N18 33.8	20 56.7	N21 24.3	274 43.5	N 5 27.1	49 13.2	N11 53.5
	13	100 19.5	37 51.4	N18 33.3	35 57.3	N21 24.6	289 45.7	N 5 27.0	64 15.5	N11 53.6
	14	115 21.9	52 54.4	N18 32.7	50 57.9	N21 25.0	304 48.0	N 5 26.9	79 17.7	N11 53.6
	15	130 24.4	67 57.4	N18 32.2	65 58.5	N21 25.3	319 50.2	N 5 26.8	94 19.9	N11 53.7
	16	145 26.9	83 00.5	N18 31.7	80 59.1	N21 25.6	334 52.5	N 5 26.7	109 22.1	N11 53.8
	17	160 29.3	98 03.5	N18 31.1	95 59.7	N21 25.9	349 54.7	N 5 26.6	124 24.3	N11 53.9
	18	175 31.8	113 06.5	N18 30.6	111 00.3	N21 26.3	4 57.0	N 5 26.5	139 26.6	N11 53.9
	19	190 34.2	128 09.5	N18 30.1	126 00.9	N21 26.6	19 59.2	N 5 26.4	154 28.8	N11 54.0
	20	205 36.7	143 12.5	N18 29.6	141 01.5	N21 26.9	35 01.5	N 5 26.3	169 31.0	N11 54.1
	21	220 39.2	158 15.5	N18 29.0	156 02.1	N21 27.3	50 03.7	N 5 26.2	184 33.2	N11 54.2
	22	235 41.6	173 18.5	N18 28.5	171 02.7	N21 27.6	65 06.0	N 5 26.1	199 35.5	N11 54.2
	23	250 44.1	188 21.5	N18 28.0	186 03.3	N21 27.9	80 08.2	N 5 26.0	214 37.7	N11 54.3
			v 3.1	d 0.6	v 0.6	d 0.3	v 2.3	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
14	0	179 55.6	N23	16.5	282 14.0	16.7	S 4 04.3	12.8	54.2
	1	194 55.5	N23	16.7	296 49.7	16.7	S 3 51.5	12.8	54.2
	2	209 55.3	N23	16.8	311 25.4	16.7	S 3 38.6	12.8	54.2
	3	224 55.2	N23	16.9	326 01.2	16.7	S 3 25.8	12.8	54.2
	4	239 55.1	N23	17.0	340 36.9	16.8	S 3 12.9	12.9	54.2
W	5	254 54.9	N23	17.1	355 12.7	16.8	S 3 00.0	12.9	54.2
E									
D	6	269 54.8	N23	17.2	9 48.5	16.8	S 2 47.2	12.9	54.2
N	7	284 54.7	N23	17.4	24 24.2	16.8	S 2 34.3	12.9	54.2
E	8	299 54.5	N23	17.5	39 00.0	16.8	S 2 21.4	12.9	54.2
S	9	314 54.4	N23	17.6	53 35.8	16.8	S 2 08.5	12.9	54.2
D	10	329 54.3	N23	17.7	68 11.7	16.8	S 1 55.5	12.9	54.2
A	11	344 54.1	N23	17.8	82 47.5	16.8	S 1 42.6	12.9	54.3
Y									
	12	359 54.0	N23	17.9	97 23.3	16.8	S 1 29.7	12.9	54.3
	13	14 53.9	N23	18.0	111 59.1	16.8	S 1 16.7	12.9	54.3
	14	29 53.7	N23	18.1	126 34.9	16.8	S 1 03.8	12.9	54.3
	15	44 53.6	N23	18.2	141 10.8	16.8	S 0 50.8	12.9	54.3
	16	59 53.5	N23	18.3	155 46.6	16.8	S 0 37.9	13.0	54.3
	17	74 53.3	N23	18.4	170 22.4	16.8	S 0 24.9	13.0	54.3
	18	89 53.2	N23	18.5	184 58.3	16.8	S 0 12.0	13.0	54.3
	19	104 53.1	N23	18.7	199 34.1	16.8	N 0 01.0	13.0	54.3
	20	119 52.9	N23	18.8	214 09.9	16.8	N 0 14.0	13.0	54.3
	21	134 52.8	N23	18.9	228 45.7	16.8	N 0 26.9	13.0	54.3
	22	149 52.7	N23	19.0	243 21.5	16.8	N 0 39.9	13.0	54.3
	23	164 52.5	N23	19.1	257 57.3	16.8	N 0 52.9	13.0	54.3
15	0	179 52.4	N23	19.2	272 33.1	16.8	N 1 05.8	13.0	54.3
	1	194 52.3	N23	19.3	287 08.9	16.8	N 1 18.8	13.0	54.3
	2	209 52.1	N23	19.4	301 44.7	16.8	N 1 31.8	13.0	54.3
	3	224 52.0	N23	19.5	316 20.4	16.8	N 1 44.7	13.0	54.3
	4	239 51.9	N23	19.6	330 56.2	16.7	N 1 57.7	13.0	54.3
T	5	254 51.7	N23	19.7	345 31.9	16.7	N 2 10.6	13.0	54.3
H									
U	6	269 51.6	N23	19.8	0 07.6	16.7	N 2 23.6	12.9	54.3
R	7	284 51.5	N23	19.8	14 43.3	16.7	N 2 36.5	12.9	54.3
S	8	299 51.3	N23	19.9	29 19.0	16.7	N 2 49.5	12.9	54.4
D	9	314 51.2	N23	20.0	43 54.7	16.7	N 3 02.4	12.9	54.4
A	10	329 51.1	N23	20.1	58 30.4	16.7	N 3 15.3	12.9	54.4
Y	11	344 50.9	N23	20.2	73 06.0	16.6	N 3 28.2	12.9	54.4
	12	359 50.8	N23	20.3	87 41.6	16.6	N 3 41.1	12.9	54.4
	13	14 50.7	N23	20.4	102 17.2	16.6	N 3 54.0	12.9	54.4
	14	29 50.5	N23	20.5	116 52.8	16.6	N 4 06.9	12.9	54.4
	15	44 50.4	N23	20.6	131 28.3	16.5	N 4 19.8	12.9	54.4
	16	59 50.3	N23	20.7	146 03.8	16.5	N 4 32.7	12.9	54.4
	17	74 50.1	N23	20.8	160 39.3	16.5	N 4 45.5	12.9	54.4
	18	89 50.0	N23	20.9	175 14.7	16.5	N 4 58.4	12.8	54.5
	19	104 49.9	N23	20.9	189 50.2	16.4	N 5 11.2	12.8	54.5
	20	119 49.7	N23	21.0	204 25.6	16.4	N 5 24.0	12.8	54.5
	21	134 49.6	N23	21.1	219 00.9	16.4	N 5 36.8	12.8	54.5
	22	149 49.4	N23	21.2	233 36.3	16.3	N 5 49.6	12.8	54.5
	23	164 49.3	N23	21.3	248 11.6	16.3	N 6 02.4	12.8	54.5
16	0	179 49.2	N23	21.4	262 46.8	16.3	N 6 15.2	12.8	54.5
	1	194 49.0	N23	21.5	277 22.1	16.2	N 6 27.9	12.7	54.5
	2	209 48.9	N23	21.5	291 57.3	16.2	N 6 40.6	12.7	54.6
	3	224 48.8	N23	21.6	306 32.4	16.2	N 6 53.3	12.7	54.6
	4	239 48.6	N23	21.7	321 07.6	16.1	N 7 06.0	12.7	54.6
F	5	254 48.5	N23	21.8	335 42.6	16.1	N 7 18.7	12.7	54.6
R									
I	6	269 48.4	N23	21.9	350 17.7	16.0	N 7 31.3	12.6	54.6
D	7	284 48.2	N23	21.9	4 52.7	16.0	N 7 43.9	12.6	54.6
A	8	299 48.1	N23	22.0	19 27.6	16.0	N 7 56.6	12.6	54.6
Y	9	314 48.0	N23	22.1	34 02.5	15.9	N 8 09.1	12.6	54.7
	10	329 47.8	N23	22.2	48 37.4	15.9	N 8 21.7	12.6	54.7
	11	344 47.7	N23	22.2	63 12.2	15.8	N 8 34.2	12.5	54.7
	12	359 47.6	N23	22.3	77 47.0	15.8	N 8 46.7	12.5	54.7
	13	14 47.4	N23	22.4	92 21.7	15.7	N 8 59.2	12.5	54.7
	14	29 47.3	N23	22.5	106 56.4	15.7	N 9 11.7	12.5	54.7
	15	44 47.1	N23	22.5	121 31.0	15.6	N 9 24.1	12.4	54.7
	16	59 47.0	N23	22.6	136 05.5	15.6	N 9 36.5	12.4	54.8
	17	74 46.9	N23	22.7	150 40.1	15.5	N 9 48.9	12.4	54.8
	18	89 46.7	N23	22.8	165 14.5	15.5	N10 01.2	12.3	54.8
	19	104 46.6	N23	22.8	179 48.9	15.4	N10 13.5	12.3	54.8
	20	119 46.5	N23	22.9	194 23.3	15.3	N10 25.8	12.3	54.8
	21	134 46.3	N23	23.0	208 57.6	15.3	N10 38.0	12.2	54.9
	22	149 46.2	N23	23.0	223 31.8	15.2	N10 50.2	12.2	54.9
	23	164 46.1	N23	23.1	238 06.0	15.2	N11 02.4	12.2	54.9
		S.D. 15.7	d	0.1	S.D.	14.8	14.8	14.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.0	S40 11.3
Achernar	335 18.5	S57 05.2
Acrux	172 56.7	S63 15.8
Adhara	255 04.0	S29 00.8
Albireo	67 01.4	N28 01.1
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.4	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.2	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.1	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.9	N29 14.8
Altair	61 56.9	N 8 56.6
Ankaa	353 04.5	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.1	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.0	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.6
Deneb	49 23.5	N45 22.8
Denebola	182 22.1	N14 24.8
Diphda	348 44.6	S17 49.6
Dubhe	193 37.8	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.4	N51 29.1
Enif	33 35.8	N10 00.4
Fomalhaut	15 11.4	S29 28.0
Gacrux	171 48.3	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.3	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.3	N74 02.5
Markab	13 27.0	N15 21.5
Menkar	314 03.5	N 4 12.1
Menkent	147 54.0	S36 30.9
Miaplacidus	221 38.1	S69 50.4
Mirfak	308 24.7	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.8	S56 38.3
Polaris	315 41.1	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.0
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.1
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 27.9	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
17	0	265 46.6	203 24.5	N18 27.5	201 03.9	N21 28.3	95 10.5	N 5 25.9	229 39.9	N11 54.4
	1	280 49.0	218 27.5	N18 27.0	216 04.5	N21 28.6	110 12.7	N 5 25.8	244 42.1	N11 54.4
	2	295 51.5	233 30.5	N18 26.5	231 05.1	N21 28.9	125 15.0	N 5 25.7	259 44.4	N11 54.5
	3	310 54.0	248 33.5	N18 25.9	246 05.6	N21 29.2	140 17.2	N 5 25.6	274 46.6	N11 54.6
	4	325 56.4	263 36.5	N18 25.4	261 06.2	N21 29.6	155 19.4	N 5 25.5	289 48.8	N11 54.7
S	5	340 58.9	278 39.5	N18 24.9	276 06.8	N21 29.9	170 21.7	N 5 25.4	304 51.0	N11 54.7
A										
T	6	356 01.3	293 42.4	N18 24.4	291 07.4	N21 30.2	185 23.9	N 5 25.3	319 53.3	N11 54.8
U	7	11 03.8	308 45.4	N18 23.9	306 08.0	N21 30.5	200 26.2	N 5 25.2	334 55.5	N11 54.9
R	8	26 06.3	323 48.3	N18 23.4	321 08.6	N21 30.9	215 28.4	N 5 25.1	349 57.7	N11 55.0
D	9	41 08.7	338 51.3	N18 22.9	336 09.2	N21 31.2	230 30.7	N 5 25.0	4 59.9	N11 55.0
A	10	56 11.2	353 54.3	N18 22.4	351 09.8	N21 31.5	245 32.9	N 5 24.9	20 02.2	N11 55.1
Y	11	71 13.7	8 57.2	N18 21.9	6 10.4	N21 31.8	260 35.2	N 5 24.8	35 04.4	N11 55.2
	12	86 16.1	24 00.1	N18 21.4	21 11.0	N21 32.2	275 37.4	N 5 24.7	50 06.6	N11 55.2
	13	101 18.6	39 03.1	N18 20.9	36 11.6	N21 32.5	290 39.7	N 5 24.6	65 08.8	N11 55.3
	14	116 21.1	54 06.0	N18 20.4	51 12.2	N21 32.8	305 41.9	N 5 24.5	80 11.1	N11 55.4
	15	131 23.5	69 09.0	N18 19.9	66 12.8	N21 33.1	320 44.1	N 5 24.4	95 13.3	N11 55.5
	16	146 26.0	84 11.9	N18 19.4	81 13.4	N21 33.5	335 46.4	N 5 24.3	110 15.5	N11 55.5
	17	161 28.5	99 14.8	N18 18.9	96 14.0	N21 33.8	350 48.6	N 5 24.2	125 17.7	N11 55.6
	18	176 30.9	114 17.7	N18 18.5	111 14.6	N21 34.1	5 50.9	N 5 24.1	140 20.0	N11 55.7
	19	191 33.4	129 20.6	N18 18.0	126 15.2	N21 34.4	20 53.1	N 5 24.0	155 22.2	N11 55.8
	20	206 35.8	144 23.5	N18 17.5	141 15.8	N21 34.7	35 55.4	N 5 23.9	170 24.4	N11 55.8
	21	221 38.3	159 26.5	N18 17.0	156 16.4	N21 35.1	50 57.6	N 5 23.8	185 26.6	N11 55.9
	22	236 40.8	174 29.4	N18 16.5	171 16.9	N21 35.4	65 59.9	N 5 23.7	200 28.9	N11 56.0
	23	251 43.2	189 32.3	N18 16.0	186 17.5	N21 35.7	81 02.1	N 5 23.6	215 31.1	N11 56.0
18	0	266 45.7	204 35.1	N18 15.6	201 18.1	N21 36.0	96 04.3	N 5 23.5	230 33.3	N11 56.1
	1	281 48.2	219 38.0	N18 15.1	216 18.7	N21 36.3	111 06.6	N 5 23.4	245 35.5	N11 56.2
	2	296 50.6	234 40.9	N18 14.6	231 19.3	N21 36.7	126 08.8	N 5 23.3	260 37.8	N11 56.3
	3	311 53.1	249 43.8	N18 14.1	246 19.9	N21 37.0	141 11.1	N 5 23.2	275 40.0	N11 56.3
	4	326 55.6	264 46.7	N18 13.7	261 20.5	N21 37.3	156 13.3	N 5 23.1	290 42.2	N11 56.4
S	5	341 58.0	279 49.6	N18 13.2	276 21.1	N21 37.6	171 15.5	N 5 23.0	305 44.4	N11 56.5
U										
N	6	357 00.5	294 52.4	N18 12.7	291 21.7	N21 37.9	186 17.8	N 5 22.9	320 46.7	N11 56.5
D	7	12 03.0	309 55.3	N18 12.3	306 22.3	N21 38.2	201 20.0	N 5 22.8	335 48.9	N11 56.6
A	8	27 05.4	324 58.1	N18 11.8	321 22.9	N21 38.6	216 22.3	N 5 22.7	350 51.1	N11 56.7
Y	9	42 07.9	340 01.0	N18 11.3	336 23.5	N21 38.9	231 24.5	N 5 22.5	5 53.3	N11 56.8
	10	57 10.3	355 03.9	N18 10.9	351 24.1	N21 39.2	246 26.7	N 5 22.4	20 55.6	N11 56.8
	11	72 12.8	10 06.7	N18 10.4	6 24.7	N21 39.5	261 29.0	N 5 22.3	35 57.8	N11 56.9
	12	87 15.3	25 09.5	N18 09.9	21 25.3	N21 39.8	276 31.2	N 5 22.2	51 00.0	N11 57.0
	13	102 17.7	40 12.4	N18 09.5	36 25.9	N21 40.1	291 33.5	N 5 22.1	66 02.3	N11 57.0
	14	117 20.2	55 15.2	N18 09.0	51 26.5	N21 40.5	306 35.7	N 5 22.0	81 04.5	N11 57.1
	15	132 22.7	70 18.1	N18 08.6	66 27.0	N21 40.8	321 37.9	N 5 21.9	96 06.7	N11 57.2
	16	147 25.1	85 20.9	N18 08.1	81 27.6	N21 41.1	336 40.2	N 5 21.8	111 08.9	N11 57.3
	17	162 27.6	100 23.7	N18 07.7	96 28.2	N21 41.4	351 42.4	N 5 21.7	126 11.2	N11 57.3
	18	177 30.1	115 26.5	N18 07.2	111 28.8	N21 41.7	6 44.7	N 5 21.6	141 13.4	N11 57.4
	19	192 32.5	130 29.3	N18 06.8	126 29.4	N21 42.0	21 46.9	N 5 21.5	156 15.6	N11 57.5
	20	207 35.0	145 32.1	N18 06.3	141 30.0	N21 42.3	36 49.1	N 5 21.4	171 17.8	N11 57.5
	21	222 37.4	160 34.9	N18 05.9	156 30.6	N21 42.6	51 51.4	N 5 21.3	186 20.1	N11 57.6
	22	237 39.9	175 37.7	N18 05.4	171 31.2	N21 43.0	66 53.6	N 5 21.2	201 22.3	N11 57.7
	23	252 42.4	190 40.5	N18 05.0	186 31.8	N21 43.3	81 55.8	N 5 21.1	216 24.5	N11 57.8
19	0	267 44.8	205 43.3	N18 04.6	201 32.4	N21 43.6	96 58.1	N 5 21.0	231 26.8	N11 57.8
	1	282 47.3	220 46.1	N18 04.1	216 33.0	N21 43.9	112 00.3	N 5 20.9	246 29.0	N11 57.9
	2	297 49.8	235 48.9	N18 03.7	231 33.6	N21 44.2	127 02.5	N 5 20.8	261 31.2	N11 58.0
	3	312 52.2	250 51.7	N18 03.2	246 34.2	N21 44.5	142 04.8	N 5 20.7	276 33.4	N11 58.0
	4	327 54.7	265 54.5	N18 02.8	261 34.8	N21 44.8	157 07.0	N 5 20.6	291 35.7	N11 58.1
M	5	342 57.2	280 57.2	N18 02.4	276 35.4	N21 45.1	172 09.3	N 5 20.4	306 37.9	N11 58.2
O										
N	6	357 59.6	296 00.0	N18 01.9	291 35.9	N21 45.4	187 11.5	N 5 20.3	321 40.1	N11 58.3
D	7	13 02.1	311 02.8	N18 01.5	306 36.5	N21 45.7	202 13.7	N 5 20.2	336 42.4	N11 58.3
A	8	28 04.6	326 05.5	N18 01.1	321 37.1	N21 46.1	217 16.0	N 5 20.1	351 44.6	N11 58.4
Y	9	43 07.0	341 08.3	N18 00.7	336 37.7	N21 46.4	232 18.2	N 5 20.0	6 46.8	N11 58.5
	10	58 09.5	356 11.0	N18 00.2	351 38.3	N21 46.7	247 20.4	N 5 19.9	21 49.0	N11 58.5
	11	73 11.9	11 13.8	N17 59.8	6 38.9	N21 47.0	262 22.7	N 5 19.8	36 51.3	N11 58.6
	12	88 14.4	26 16.5	N17 59.4	21 39.5	N21 47.3	277 24.9	N 5 19.7	51 53.5	N11 58.7
	13	103 16.9	41 19.3	N17 59.0	36 40.1	N21 47.6	292 27.1	N 5 19.6	66 55.7	N11 58.8
	14	118 19.3	56 22.0	N17 58.6	51 40.7	N21 47.9	307 29.4	N 5 19.5	81 58.0	N11 58.8
	15	133 21.8	71 24.7	N17 58.1	66 41.3	N21 48.2	322 31.6	N 5 19.4	97 00.2	N11 58.9
	16	148 24.3	86 27.5	N17 57.7	81 41.9	N21 48.5	337 33.8	N 5 19.3	112 02.4	N11 59.0
	17	163 26.7	101 30.2	N17 57.3	96 42.5	N21 48.8	352 36.1	N 5 19.2	127 04.7	N11 59.0
	18	178 29.2	116 32.9	N17 56.9	111 43.1	N21 49.1	7 38.3	N 5 19.1	142 06.9	N11 59.1
	19	193 31.7	131 35.6	N17 56.5	126 43.7	N21 49.4	22 40.5	N 5 19.0	157 09.1	N11 59.2
	20	208 34.1	146 38.3	N17 56.1	141 44.2	N21 49.7	37 42.8	N 5 18.8	172 11.3	N11 59.2
	21	223 36.6	161 41.0	N17 55.7	156 44.8	N21 50.0	52 45.0	N 5 18.7	187 13.6	N11 59.3
	22	238 39.1	176 43.7	N17 55.3	171 45.4	N21 50.3	67 47.2	N 5 18.6	202 15.8	N11 59.4
	23	253 41.5	191 46.4	N17 54.9	186 46.0	N21 50.6	82 49.5	N 5 18.5	217 18.0	N11 59.5
			v 2.8	d 0.5	v 0.6	d 0.3	v 2.2	d 0.1	v 2.2	d 0.1

G.M.T		SUN				MOON						
d	h	GHA ° '	Dec ° '			GHA ° '	v '	Dec ° '	d '	HP '		
17	0	179 45.9	N23	23.2		252 40.1	15.1	N11 14.6	12.1	54.9		
	1	194 45.8	N23	23.2		267 14.1	15.1	N11 26.7	12.1	54.9		
	2	209 45.7	N23	23.3		281 48.1	15.0	N11 38.7	12.1	55.0		
	3	224 45.5	N23	23.4		296 22.0	14.9	N11 50.8	12.0	55.0		
	4	239 45.4	N23	23.4		310 55.9	14.9	N12 02.8	12.0	55.0		
S	5	254 45.2	N23	23.5		325 29.7	14.8	N12 14.7	12.0	55.0		
A												
T	6	269 45.1	N23	23.5		340 03.4	14.7	N12 26.6	11.9	55.0		
U	7	284 45.0	N23	23.6		354 37.1	14.7	N12 38.5	11.9	55.1		
R	8	299 44.8	N23	23.7		9 10.7	14.6	N12 50.3	11.8	55.1		
D	9	314 44.7	N23	23.7		23 44.2	14.5	N13 02.1	11.8	55.1		
A	10	329 44.6	N23	23.8		38 17.6	14.5	N13 13.9	11.7	55.1		
Y	11	344 44.4	N23	23.8		52 51.0	14.4	N13 25.6	11.7	55.1		
	12	359 44.3	N23	23.9		67 24.3	14.3	N13 37.2	11.7	55.2		
	13	14 44.2	N23	24.0		81 57.6	14.2	N13 48.9	11.6	55.2		
	14	29 44.0	N23	24.0		96 30.7	14.2	N14 00.4	11.6	55.2		
	15	44 43.9	N23	24.1		111 03.8	14.1	N14 11.9	11.5	55.2		
	16	59 43.8	N23	24.1		125 36.8	14.0	N14 23.4	11.5	55.3		
	17	74 43.6	N23	24.2		140 09.8	13.9	N14 34.8	11.4	55.3		
	18	89 43.5	N23	24.2		154 42.6	13.9	N14 46.2	11.4	55.3		
	19	104 43.3	N23	24.3		169 15.4	13.8	N14 57.5	11.3	55.3		
	20	119 43.2	N23	24.3		183 48.1	13.7	N15 08.7	11.3	55.4		
	21	134 43.1	N23	24.4		198 20.7	13.6	N15 19.9	11.2	55.4		
	22	149 42.9	N23	24.4		212 53.2	13.5	N15 31.1	11.1	55.4		
	23	164 42.8	N23	24.5		227 25.7	13.4	N15 42.2	11.1	55.4		
18	0	179 42.7	N23	24.5		241 58.0	13.4	N15 53.2	11.0	55.4		
	1	194 42.5	N23	24.6		256 30.3	13.3	N16 04.2	11.0	55.5		
	2	209 42.4	N23	24.6		271 02.5	13.2	N16 15.1	10.9	55.5		
	3	224 42.2	N23	24.7		285 34.6	13.1	N16 25.9	10.9	55.5		
	4	239 42.1	N23	24.7		300 06.6	13.0	N16 36.7	10.8	55.6		
S	5	254 42.0	N23	24.8		314 38.6	12.9	N16 47.4	10.7	55.6		
U												
N	6	269 41.8	N23	24.8		329 10.4	12.8	N16 58.1	10.7	55.6		
D	7	284 41.7	N23	24.9		343 42.2	12.8	N17 08.7	10.6	55.6		
A	8	299 41.6	N23	24.9		358 13.8	12.7	N17 19.2	10.5	55.7		
Y	9	314 41.4	N23	24.9		12 45.4	12.6	N17 29.7	10.5	55.7		
	10	329 41.3	N23	25.0		27 16.9	12.5	N17 40.1	10.4	55.7		
	11	344 41.2	N23	25.0		41 48.3	12.4	N17 50.4	10.3	55.7		
	12	359 41.0	N23	25.1		56 19.6	12.3	N18 00.7	10.2	55.8		
	13	14 40.9	N23	25.1		70 50.8	12.2	N18 10.8	10.2	55.8		
	14	29 40.7	N23	25.2		85 21.9	12.1	N18 20.9	10.1	55.8		
	15	44 40.6	N23	25.2		99 52.9	12.0	N18 31.0	10.0	55.8		
	16	59 40.5	N23	25.2		114 23.9	11.9	N18 40.9	10.0	55.9		
	17	74 40.3	N23	25.3		128 54.7	11.8	N18 50.8	9.9	55.9		
	18	89 40.2	N23	25.3		143 25.4	11.7	N19 00.6	9.8	55.9		
	19	104 40.1	N23	25.3		157 56.1	11.6	N19 10.3	9.7	56.0		
	20	119 39.9	N23	25.4		172 26.6	11.5	N19 19.9	9.6	56.0		
	21	134 39.8	N23	25.4		186 57.0	11.4	N19 29.5	9.6	56.0		
	22	149 39.6	N23	25.4		201 27.4	11.3	N19 38.9	9.5	56.0		
	23	164 39.5	N23	25.5		215 57.6	11.2	N19 48.3	9.4	56.1		
19	0	179 39.4	N23	25.5		230 27.8	11.1	N19 57.6	9.3	56.1		
	1	194 39.2	N23	25.5		244 57.8	11.0	N20 06.8	9.2	56.1		
	2	209 39.1	N23	25.6		259 27.8	10.9	N20 16.0	9.1	56.2		
	3	224 39.0	N23	25.6		273 57.6	10.8	N20 25.0	9.0	56.2		
	4	239 38.8	N23	25.6		288 27.4	10.7	N20 33.9	8.9	56.2		
M	5	254 38.7	N23	25.7		302 57.0	10.6	N20 42.8	8.8	56.2		
O												
N	6	269 38.6	N23	25.7		317 26.5	10.5	N20 51.5	8.8	56.3		
D	7	284 38.4	N23	25.7		331 56.0	10.4	N21 00.2	8.7	56.3		
A	8	299 38.3	N23	25.7		346 25.3	10.3	N21 08.7	8.6	56.3		
Y	9	314 38.1	N23	25.8		0 54.6	10.2	N21 17.2	8.5	56.4		
	10	329 38.0	N23	25.8		15 23.7	10.1	N21 25.6	8.4	56.4		
	11	344 37.9	N23	25.8		29 52.7	10.0	N21 33.8	8.3	56.4		
	12	359 37.7	N23	25.8		44 21.7	9.9	N21 42.0	8.2	56.5		
	13	14 37.6	N23	25.9		58 50.5	9.8	N21 50.0	8.1	56.5		
	14	29 37.5	N23	25.9		73 19.2	9.7	N21 58.0	8.0	56.5		
	15	44 37.3	N23	25.9		87 47.9	9.6	N22 05.8	7.8	56.6		
	16	59 37.2	N23	25.9		102 16.4	9.5	N22 13.6	7.7	56.6		
	17	74 37.0	N23	25.9		116 44.8	9.4	N22 21.2	7.6	56.6		
	18	89 36.9	N23	26.0		131 13.1	9.3	N22 28.7	7.5	56.6		
	19	104 36.8	N23	26.0		145 41.3	9.2	N22 36.1	7.4	56.7		
	20	119 36.6	N23	26.0		160 09.5	9.1	N22 43.4	7.3	56.7		
	21	134 36.5	N23	26.0		174 37.5	9.0	N22 50.6	7.2	56.7		
	22	149 36.4	N23	26.0		189 05.4	8.9	N22 57.7	7.1	56.8		
	23	164 36.2	N23	26.0		203 33.2	8.8	N23 04.6	6.9	56.8		
		S.D. 15.7	d	0.0		S.D. 15.0		15.2		15.4		

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 10.0	S40 11.2
Achernar	335 18.5	S57 05.2
Acrux	172 56.8	S63 15.8
Adhara	255 04.0	S29 00.7
Albireo	67 01.4	N28 01.1
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.4	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.2	S46 49.1
Alnilam	275 35.2	S 1 11.1
Alphard	217 45.2	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.9	N29 14.8
Altair	61 56.9	N 8 56.7
Ankaa	353 04.5	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.0	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.5	N45 22.8
Denebola	182 22.1	N14 24.8
Diphda	348 44.6	S17 49.6
Dubhe	193 37.8	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.4	N51 29.1
Enif	33 35.8	N10 00.4
Fomalhaut	15 11.3	S29 28.0
Gacrux	171 48.3	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.2	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.3	N74 02.5
Markab	13 27.0	N15 21.5
Menkar	314 03.4	N 4 12.1
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.1	S69 50.4
Mirfak	308 24.6	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.8	S56 38.3
Polaris	315 40.0	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.1
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.1
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 27.9	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
20	0	268 44.0	206 49.1	N17 54.5	201 46.6	N21 50.9	97 51.7	N 5 18.4	232 20.3	N11 59.5
	1	283 46.4	221 51.8	N17 54.1	216 47.2	N21 51.2	112 53.9	N 5 18.3	247 22.5	N11 59.6
	2	298 48.9	236 54.5	N17 53.7	231 47.8	N21 51.5	127 56.1	N 5 18.2	262 24.7	N11 59.7
	3	313 51.4	251 57.2	N17 53.3	246 48.4	N21 51.8	142 58.4	N 5 18.1	277 27.0	N11 59.7
	4	328 53.8	266 59.9	N17 52.9	261 49.0	N21 52.1	158 00.6	N 5 18.0	292 29.2	N11 59.8
T	5	343 56.3	282 02.5	N17 52.5	276 49.6	N21 52.4	173 02.8	N 5 17.9	307 31.4	N11 59.9
U										
E	6	358 58.8	297 05.2	N17 52.1	291 50.2	N21 52.7	188 05.1	N 5 17.8	322 33.7	N11 59.9
S	7	14 01.2	312 07.9	N17 51.7	306 50.8	N21 53.0	203 07.3	N 5 17.7	337 35.9	N12 00.0
D	8	29 03.7	327 10.5	N17 51.3	321 51.4	N21 53.3	218 09.5	N 5 17.5	352 38.1	N12 00.1
A	9	44 06.2	342 13.2	N17 50.9	336 52.0	N21 53.6	233 11.8	N 5 17.4	7 40.4	N12 00.2
Y	10	59 08.6	357 15.8	N17 50.5	351 52.5	N21 53.9	248 14.0	N 5 17.3	22 42.6	N12 00.2
	11	74 11.1	12 18.5	N17 50.1	6 53.1	N21 54.2	263 16.2	N 5 17.2	37 44.8	N12 00.3
	12	89 13.6	27 21.1	N17 49.8	21 53.7	N21 54.5	278 18.4	N 5 17.1	52 47.0	N12 00.4
	13	104 16.0	42 23.8	N17 49.4	36 54.3	N21 54.8	293 20.7	N 5 17.0	67 49.3	N12 00.4
	14	119 18.5	57 26.4	N17 49.0	51 54.9	N21 55.1	308 22.9	N 5 16.9	82 51.5	N12 00.5
	15	134 20.9	72 29.0	N17 48.6	66 55.5	N21 55.4	323 25.1	N 5 16.8	97 53.7	N12 00.6
	16	149 23.4	87 31.6	N17 48.2	81 56.1	N21 55.7	338 27.4	N 5 16.7	112 56.0	N12 00.6
	17	164 25.9	102 34.3	N17 47.9	96 56.7	N21 56.0	353 29.6	N 5 16.6	127 58.2	N12 00.7
	18	179 28.3	117 36.9	N17 47.5	111 57.3	N21 56.3	8 31.8	N 5 16.5	143 00.4	N12 00.8
	19	194 30.8	132 39.5	N17 47.1	126 57.9	N21 56.6	23 34.0	N 5 16.3	158 02.7	N12 00.8
	20	209 33.3	147 42.1	N17 46.7	141 58.5	N21 56.9	38 36.3	N 5 16.2	173 04.9	N12 00.9
	21	224 35.7	162 44.7	N17 46.4	156 59.1	N21 57.2	53 38.5	N 5 16.1	188 07.1	N12 01.0
	22	239 38.2	177 47.3	N17 46.0	171 59.6	N21 57.5	68 40.7	N 5 16.0	203 09.4	N12 01.1
	23	254 40.7	192 49.9	N17 45.6	187 00.2	N21 57.8	83 42.9	N 5 15.9	218 11.6	N12 01.1
21	0	269 43.1	207 52.5	N17 45.3	202 00.8	N21 58.1	98 45.2	N 5 15.8	233 13.8	N12 01.2
	1	284 45.6	222 55.1	N17 44.9	217 01.4	N21 58.4	113 47.4	N 5 15.7	248 16.1	N12 01.3
	2	299 48.1	237 57.7	N17 44.6	232 02.0	N21 58.7	128 49.6	N 5 15.6	263 18.3	N12 01.3
	3	314 50.5	253 00.3	N17 44.2	247 02.6	N21 59.0	143 51.8	N 5 15.5	278 20.5	N12 01.4
	4	329 53.0	268 02.9	N17 43.8	262 03.2	N21 59.2	158 54.1	N 5 15.4	293 22.8	N12 01.5
W	5	344 55.4	283 05.4	N17 43.5	277 03.8	N21 59.5	173 56.3	N 5 15.2	308 25.0	N12 01.5
E										
D	6	359 57.9	298 08.0	N17 43.1	292 04.4	N21 59.8	188 58.5	N 5 15.1	323 27.2	N12 01.6
N	7	15 00.4	313 10.6	N17 42.8	307 05.0	N22 00.1	204 00.7	N 5 15.0	338 29.5	N12 01.7
E	8	30 02.8	328 13.1	N17 42.4	322 05.6	N22 00.4	219 03.0	N 5 14.9	353 31.7	N12 01.7
S	9	45 05.3	343 15.7	N17 42.1	337 06.2	N22 00.7	234 05.2	N 5 14.8	8 33.9	N12 01.8
D	10	60 07.8	358 18.2	N17 41.7	352 06.8	N22 01.0	249 07.4	N 5 14.7	23 36.2	N12 01.9
A	11	75 10.2	13 20.8	N17 41.4	7 07.3	N22 01.3	264 09.6	N 5 14.6	38 38.4	N12 01.9
Y										
	12	90 12.7	28 23.3	N17 41.0	22 07.9	N22 01.6	279 11.9	N 5 14.5	53 40.6	N12 02.0
	13	105 15.2	43 25.9	N17 40.7	37 08.5	N22 01.9	294 14.1	N 5 14.4	68 42.9	N12 02.1
	14	120 17.6	58 28.4	N17 40.3	52 09.1	N22 02.1	309 16.3	N 5 14.2	83 45.1	N12 02.2
	15	135 20.1	73 30.9	N17 40.0	67 09.7	N22 02.4	324 18.5	N 5 14.1	98 47.4	N12 02.2
	16	150 22.5	88 33.5	N17 39.7	82 10.3	N22 02.7	339 20.7	N 5 14.0	113 49.6	N12 02.3
	17	165 25.0	103 36.0	N17 39.3	97 10.9	N22 03.0	354 23.0	N 5 13.9	128 51.8	N12 02.4
	18	180 27.5	118 38.5	N17 39.0	112 11.5	N22 03.3	9 25.2	N 5 13.8	143 54.1	N12 02.4
	19	195 29.9	133 41.0	N17 38.7	127 12.1	N22 03.6	24 27.4	N 5 13.7	158 56.3	N12 02.5
	20	210 32.4	148 43.5	N17 38.3	142 12.7	N22 03.9	39 29.6	N 5 13.6	173 58.5	N12 02.6
	21	225 34.9	163 46.1	N17 38.0	157 13.3	N22 04.1	54 31.9	N 5 13.5	189 00.8	N12 02.6
	22	240 37.3	178 48.6	N17 37.7	172 13.8	N22 04.4	69 34.1	N 5 13.3	204 03.0	N12 02.7
	23	255 39.8	193 51.1	N17 37.3	187 14.4	N22 04.7	84 36.3	N 5 13.2	219 05.2	N12 02.8
22	0	270 42.3	208 53.6	N17 37.0	202 15.0	N22 05.0	99 38.5	N 5 13.1	234 07.5	N12 02.8
	1	285 44.7	223 56.0	N17 36.7	217 15.6	N22 05.3	114 40.7	N 5 13.0	249 09.7	N12 02.9
	2	300 47.2	238 58.5	N17 36.4	232 16.2	N22 05.6	129 43.0	N 5 12.9	264 11.9	N12 03.0
	3	315 49.7	254 01.0	N17 36.0	247 16.8	N22 05.9	144 45.2	N 5 12.8	279 14.2	N12 03.0
	4	330 52.1	269 03.5	N17 35.7	262 17.4	N22 06.1	159 47.4	N 5 12.7	294 16.4	N12 03.1
T	5	345 54.6	284 06.0	N17 35.4	277 18.0	N22 06.4	174 49.6	N 5 12.6	309 18.7	N12 03.2
H										
U	6	0 57.0	299 08.5	N17 35.1	292 18.6	N22 06.7	189 51.8	N 5 12.4	324 20.9	N12 03.2
R	7	15 59.5	314 10.9	N17 34.8	307 19.2	N22 07.0	204 54.0	N 5 12.3	339 23.1	N12 03.3
S	8	31 02.0	329 13.4	N17 34.5	322 19.8	N22 07.3	219 56.3	N 5 12.2	354 25.4	N12 03.4
D	9	46 04.4	344 15.8	N17 34.2	337 20.4	N22 07.5	234 58.5	N 5 12.1	9 27.6	N12 03.4
A	10	61 06.9	359 18.3	N17 33.8	352 20.9	N22 07.8	250 00.7	N 5 12.0	24 29.8	N12 03.5
Y	11	76 09.4	14 20.8	N17 33.5	7 21.5	N22 08.1	265 02.9	N 5 11.9	39 32.1	N12 03.6
	12	91 11.8	29 23.2	N17 33.2	22 22.1	N22 08.4	280 05.1	N 5 11.8	54 34.3	N12 03.6
	13	106 14.3	44 25.6	N17 32.9	37 22.7	N22 08.7	295 07.4	N 5 11.7	69 36.5	N12 03.7
	14	121 16.8	59 28.1	N17 32.6	52 23.3	N22 08.9	310 09.6	N 5 11.5	84 38.8	N12 03.8
	15	136 19.2	74 30.5	N17 32.3	67 23.9	N22 09.2	325 11.8	N 5 11.4	99 41.0	N12 03.8
	16	151 21.7	89 33.0	N17 32.0	82 24.5	N22 09.5	340 14.0	N 5 11.3	114 43.3	N12 03.9
	17	166 24.2	104 35.4	N17 31.7	97 25.1	N22 09.8	355 16.2	N 5 11.2	129 45.5	N12 04.0
	18	181 26.6	119 37.8	N17 31.4	112 25.7	N22 10.1	10 18.4	N 5 11.1	144 47.7	N12 04.0
	19	196 29.1	134 40.2	N17 31.1	127 26.3	N22 10.3	25 20.7	N 5 11.0	159 50.0	N12 04.1
	20	211 31.5	149 42.6	N17 30.8	142 26.9	N22 10.6	40 22.9	N 5 10.9	174 52.2	N12 04.2
	21	226 34.0	164 45.1	N17 30.5	157 27.4	N22 10.9	55 25.1	N 5 10.7	189 54.4	N12 04.2
	22	241 36.5	179 47.5	N17 30.2	172 28.0	N22 11.2	70 27.3	N 5 10.6	204 56.7	N12 04.3
	23	256 38.9	194 49.9	N17 29.9	187 28.6	N22 11.4	85 29.5	N 5 10.5	219 58.9	N12 04.4
			v 2.5	d 0.3	v 0.6	d 0.3	v 2.2	d 0.1	v 2.2	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP	
		° '	° '		° '	'	° '	'	'	
20	0	179 36.1	N23	26.1	218 00.9	8.7	N23 11.4	6.8	56.8	
	1	194 35.9	N23	26.1	232 28.6	8.6	N23 18.1	6.7	56.9	
	2	209 35.8	N23	26.1	246 56.1	8.5	N23 24.7	6.6	56.9	
	3	224 35.7	N23	26.1	261 23.5	8.4	N23 31.2	6.5	56.9	
	4	239 35.5	N23	26.1	275 50.8	8.3	N23 37.5	6.3	57.0	
T	5	254 35.4	N23	26.1	290 18.1	8.2	N23 43.7	6.2	57.0	
U										
E	6	269 35.3	N23	26.1	304 45.2	8.1	N23 49.8	6.1	57.0	
S	7	284 35.1	N23	26.1	319 12.2	8.0	N23 55.8	6.0	57.0	
D	8	299 35.0	N23	26.1	333 39.2	7.9	N24 01.6	5.8	57.1	
A	9	314 34.9	N23	26.2	348 06.0	7.8	N24 07.3	5.7	57.1	
Y	10	329 34.7	N23	26.2	2 32.7	7.7	N24 12.9	5.6	57.1	
	11	344 34.6	N23	26.2	16 59.4	7.7	N24 18.3	5.4	57.2	
	12	359 34.4	N23	26.2	31 26.0	7.6	N24 23.6	5.3	57.2	
	13	14 34.3	N23	26.2	45 52.4	7.5	N24 28.8	5.2	57.2	
	14	29 34.2	N23	26.2	60 18.8	7.4	N24 33.8	5.0	57.3	
	15	44 34.0	N23	26.2	74 45.1	7.3	N24 38.7	4.9	57.3	
	16	59 33.9	N23	26.2	89 11.3	7.2	N24 43.5	4.8	57.3	
	17	74 33.8	N23	26.2	103 37.4	7.1	N24 48.1	4.6	57.4	
	18	89 33.6	N23	26.2	118 03.5	7.0	N24 52.6	4.5	57.4	
	19	104 33.5	N23	26.2	132 29.4	6.9	N24 56.9	4.3	57.4	
	20	119 33.3	N23	26.2	146 55.3	6.9	N25 01.1	4.2	57.5	
	21	134 33.2	N23	26.2	161 21.0	6.8	N25 05.1	4.0	57.5	
	22	149 33.1	N23	26.2	175 46.7	6.7	N25 09.0	3.9	57.5	
	23	164 32.9	N23	26.2	190 12.3	6.6	N25 12.8	3.7	57.6	
21	0	179 32.8	N23	26.2	204 37.9	6.5	N25 16.4	3.6	57.6	
	1	194 32.7	N23	26.2	219 03.3	6.5	N25 19.8	3.4	57.6	
	2	209 32.5	N23	26.2	233 28.7	6.4	N25 23.1	3.3	57.6	
	3	224 32.4	N23	26.2	247 54.0	6.3	N25 26.3	3.1	57.7	
	4	239 32.2	N23	26.2	262 19.3	6.2	N25 29.3	3.0	57.7	
W	5	254 32.1	N23	26.2	276 44.4	6.2	N25 32.1	2.8	57.7	
E										
D	6	269 32.0	N23	26.2	291 09.5	6.1	N25 34.8	2.7	57.8	
N	7	284 31.8	N23	26.2	305 34.5	6.0	N25 37.3	2.5	57.8	
E	8	299 31.7	N23	26.1	319 59.5	6.0	N25 39.7	2.4	57.8	
S	9	314 31.6	N23	26.1	334 24.4	5.9	N25 41.9	2.2	57.9	
D	10	329 31.4	N23	26.1	348 49.2	5.8	N25 43.9	2.1	57.9	
A	11	344 31.3	N23	26.1	3 14.0	5.8	N25 45.8	1.9	57.9	
Y										
	12	359 31.2	N23	26.1	17 38.7	5.7	N25 47.6	1.7	57.9	
	13	14 31.0	N23	26.1	32 03.3	5.6	N25 49.2	1.6	58.0	
	14	29 30.9	N23	26.1	46 27.9	5.6	N25 50.6	1.4	58.0	
	15	44 30.7	N23	26.1	60 52.5	5.5	N25 51.8	1.2	58.0	
	16	59 30.6	N23	26.0	75 17.0	5.5	N25 52.9	1.1	58.1	
	17	74 30.5	N23	26.0	89 41.4	5.4	N25 53.8	0.9	58.1	
	18	89 30.3	N23	26.0	104 05.8	5.4	N25 54.6	0.8	58.1	
	19	104 30.2	N23	26.0	118 30.1	5.3	N25 55.2	0.6	58.2	
	20	119 30.1	N23	26.0	132 54.4	5.3	N25 55.6	0.4	58.2	
	21	134 29.9	N23	26.0	147 18.7	5.3	N25 55.9	0.3	58.2	
	22	149 29.8	N23	25.9	161 42.9	5.2	N25 55.9	0.1	58.2	
	23	164 29.7	N23	25.9	176 07.1	5.2	N25 55.9	0.1	58.3	
22	0	179 29.5	N23	25.9	190 31.2	5.1	N25 55.6	0.2	58.3	
	1	194 29.4	N23	25.9	204 55.3	5.1	N25 55.2	0.4	58.3	
	2	209 29.2	N23	25.9	219 19.4	5.1	N25 54.6	0.6	58.4	
	3	224 29.1	N23	25.8	233 43.4	5.0	N25 53.9	0.8	58.4	
	4	239 29.0	N23	25.8	248 07.4	5.0	N25 53.0	0.9	58.4	
T	5	254 28.8	N23	25.8	262 31.4	5.0	N25 51.9	1.1	58.4	
H										
U	6	269 28.7	N23	25.8	276 55.4	5.0	N25 50.6	1.3	58.5	
R	7	284 28.6	N23	25.8	291 19.3	4.9	N25 49.2	1.4	58.5	
S	8	299 28.4	N23	25.7	305 43.2	4.9	N25 47.6	1.6	58.5	
D	9	314 28.3	N23	25.7	320 07.1	4.9	N25 45.8	1.8	58.5	
A	10	329 28.2	N23	25.7	334 31.0	4.9	N25 43.9	1.9	58.6	
Y	11	344 28.0	N23	25.6	348 54.9	4.9	N25 41.7	2.1	58.6	
	12	359 27.9	N23	25.6	3 18.7	4.9	N25 39.4	2.3	58.6	
	13	14 27.7	N23	25.6	17 42.6	4.9	N25 37.0	2.5	58.6	
	14	29 27.6	N23	25.6	32 06.4	4.8	N25 34.4	2.6	58.7	
	15	44 27.5	N23	25.5	46 30.3	4.8	N25 31.6	2.8	58.7	
	16	59 27.3	N23	25.5	60 54.1	4.8	N25 28.6	3.0	58.7	
	17	74 27.2	N23	25.5	75 17.9	4.8	N25 25.4	3.1	58.8	
	18	89 27.1	N23	25.4	89 41.8	4.8	N25 22.1	3.3	58.8	
	19	104 26.9	N23	25.4	104 05.6	4.8	N25 18.6	3.5	58.8	
	20	119 26.8	N23	25.4	118 29.5	4.8	N25 15.0	3.7	58.8	
	21	134 26.7	N23	25.3	132 53.3	4.9	N25 11.1	3.8	58.8	
	22	149 26.5	N23	25.3	147 17.2	4.9	N25 07.1	4.0	58.9	
	23	164 26.4	N23	25.3	161 41.1	4.9	N25 03.0	4.2	58.9	
		S.D. 15.7	d	0.0	S.D.	15.6	15.8		16.0	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 10.0	S40 11.2
Achernar	335 18.4	S57 05.2
Acrux	172 56.8	S63 15.8
Adhara	255 04.0	S29 00.7
Albireo	67 01.4	N28 01.2
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.4	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.2	S46 49.1
Alnilam	275 35.2	S 1 11.0
Alphard	217 45.2	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.8	N29 14.8
Altair	61 56.9	N 8 56.7
Ankaa	353 04.5	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.1	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.5	N45 22.8
Denebola	182 22.1	N14 24.8
Diphda	348 44.6	S17 49.6
Dubhe	193 37.8	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.3	N51 29.1
Enif	33 35.8	N10 00.4
Fomalhaut	15 11.3	S29 28.0
Gacrux	171 48.4	S57 16.7
Gienah	175 40.6	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.2	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.4	N74 02.5
Markab	13 27.0	N15 21.5
Menkar	314 03.4	N 4 12.1
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.1	S69 50.4
Mirfak	308 24.6	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.8	S56 38.3
Polaris	315 38.8	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.1
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.1
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 27.8	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
23	0	271 41.4	209 52.3	N17 29.7	202 29.2	N22 11.7	100 31.7	N 5 10.4	235 01.2	N12 04.4
	1	286 43.9	224 54.7	N17 29.4	217 29.8	N22 12.0	115 34.0	N 5 10.3	250 03.4	N12 04.5
	2	301 46.3	239 57.1	N17 29.1	232 30.4	N22 12.3	130 36.2	N 5 10.2	265 05.6	N12 04.6
	3	316 48.8	254 59.5	N17 28.8	247 31.0	N22 12.5	145 38.4	N 5 10.1	280 07.9	N12 04.7
	4	331 51.3	270 01.8	N17 28.5	262 31.6	N22 12.8	160 40.6	N 5 09.9	295 10.1	N12 04.7
F	5	346 53.7	285 04.2	N17 28.2	277 32.2	N22 13.1	175 42.8	N 5 09.8	310 12.4	N12 04.8
R										
I	6	1 56.2	300 06.6	N17 28.0	292 32.8	N22 13.4	190 45.0	N 5 09.7	325 14.6	N12 04.9
D	7	16 58.7	315 09.0	N17 27.7	307 33.4	N22 13.6	205 47.2	N 5 09.6	340 16.8	N12 04.9
A	8	32 01.1	330 11.3	N17 27.4	322 33.9	N22 13.9	220 49.4	N 5 09.5	355 19.1	N12 05.0
Y	9	47 03.6	345 13.7	N17 27.1	337 34.5	N22 14.2	235 51.7	N 5 09.4	10 21.3	N12 05.0
	10	62 06.0	0 16.1	N17 26.8	352 35.1	N22 14.5	250 53.9	N 5 09.2	25 23.6	N12 05.1
	11	77 08.5	15 18.4	N17 26.6	7 35.7	N22 14.7	265 56.1	N 5 09.1	40 25.8	N12 05.2
	12	92 11.0	30 20.8	N17 26.3	22 36.3	N22 15.0	280 58.3	N 5 09.0	55 28.0	N12 05.2
	13	107 13.4	45 23.1	N17 26.0	37 36.9	N22 15.3	296 00.5	N 5 08.9	70 30.3	N12 05.3
	14	122 15.9	60 25.5	N17 25.8	52 37.5	N22 15.5	311 02.7	N 5 08.8	85 32.5	N12 05.4
	15	137 18.4	75 27.8	N17 25.5	67 38.1	N22 15.8	326 04.9	N 5 08.7	100 34.8	N12 05.4
	16	152 20.8	90 30.1	N17 25.2	82 38.7	N22 16.1	341 07.1	N 5 08.6	115 37.0	N12 05.5
	17	167 23.3	105 32.5	N17 25.0	97 39.3	N22 16.4	356 09.4	N 5 08.4	130 39.2	N12 05.6
	18	182 25.8	120 34.8	N17 24.7	112 39.9	N22 16.6	11 11.6	N 5 08.3	145 41.5	N12 05.6
	19	197 28.2	135 37.1	N17 24.5	127 40.4	N22 16.9	26 13.8	N 5 08.2	160 43.7	N12 05.7
	20	212 30.7	150 39.5	N17 24.2	142 41.0	N22 17.2	41 16.0	N 5 08.1	175 46.0	N12 05.8
	21	227 33.2	165 41.8	N17 23.9	157 41.6	N22 17.4	56 18.2	N 5 08.0	190 48.2	N12 05.8
	22	242 35.6	180 44.1	N17 23.7	172 42.2	N22 17.7	71 20.4	N 5 07.9	205 50.4	N12 05.9
	23	257 38.1	195 46.4	N17 23.4	187 42.8	N22 18.0	86 22.6	N 5 07.7	220 52.7	N12 06.0
24	0	272 40.5	210 48.7	N17 23.2	202 43.4	N22 18.2	101 24.8	N 5 07.6	235 54.9	N12 06.0
	1	287 43.0	225 51.0	N17 22.9	217 44.0	N22 18.5	116 27.0	N 5 07.5	250 57.2	N12 06.1
	2	302 45.5	240 53.3	N17 22.7	232 44.6	N22 18.8	131 29.3	N 5 07.4	265 59.4	N12 06.2
	3	317 47.9	255 55.6	N17 22.4	247 45.2	N22 19.0	146 31.5	N 5 07.3	281 01.6	N12 06.2
	4	332 50.4	270 57.9	N17 22.2	262 45.8	N22 19.3	161 33.7	N 5 07.2	296 03.9	N12 06.3
S	5	347 52.9	286 00.2	N17 21.9	277 46.4	N22 19.6	176 35.9	N 5 07.0	311 06.1	N12 06.4
A										
T	6	2 55.3	301 02.5	N17 21.7	292 46.9	N22 19.8	191 38.1	N 5 06.9	326 08.4	N12 06.4
U	7	17 57.8	316 04.7	N17 21.5	307 47.5	N22 20.1	206 40.3	N 5 06.8	341 10.6	N12 06.5
R	8	33 00.3	331 07.0	N17 21.2	322 48.1	N22 20.4	221 42.5	N 5 06.7	356 12.8	N12 06.6
D	9	48 02.7	346 09.3	N17 21.0	337 48.7	N22 20.6	236 44.7	N 5 06.6	11 15.1	N12 06.6
A	10	63 05.2	1 11.6	N17 20.7	352 49.3	N22 20.9	251 46.9	N 5 06.4	26 17.3	N12 06.7
Y	11	78 07.7	16 13.8	N17 20.5	7 49.9	N22 21.1	266 49.1	N 5 06.3	41 19.6	N12 06.8
	12	93 10.1	31 16.1	N17 20.3	22 50.5	N22 21.4	281 51.3	N 5 06.2	56 21.8	N12 06.8
	13	108 12.6	46 18.3	N17 20.0	37 51.1	N22 21.7	296 53.5	N 5 06.1	71 24.1	N12 06.9
	14	123 15.0	61 20.6	N17 19.8	52 51.7	N22 21.9	311 55.7	N 5 06.0	86 26.3	N12 07.0
	15	138 17.5	76 22.8	N17 19.6	67 52.3	N22 22.2	326 58.0	N 5 05.9	101 28.5	N12 07.0
	16	153 20.0	91 25.1	N17 19.3	82 52.8	N22 22.4	342 00.2	N 5 05.7	116 30.8	N12 07.1
	17	168 22.4	106 27.3	N17 19.1	97 53.4	N22 22.7	357 02.4	N 5 05.6	131 33.0	N12 07.2
	18	183 24.9	121 29.6	N17 18.9	112 54.0	N22 23.0	12 04.6	N 5 05.5	146 35.3	N12 07.2
	19	198 27.4	136 31.8	N17 18.7	127 54.6	N22 23.2	27 06.8	N 5 05.4	161 37.5	N12 07.3
	20	213 29.8	151 34.0	N17 18.4	142 55.2	N22 23.5	42 09.0	N 5 05.3	176 39.8	N12 07.3
	21	228 32.3	166 36.3	N17 18.2	157 55.8	N22 23.7	57 11.2	N 5 05.1	191 42.0	N12 07.4
	22	243 34.8	181 38.5	N17 18.0	172 56.4	N22 24.0	72 13.4	N 5 05.0	206 44.2	N12 07.5
	23	258 37.2	196 40.7	N17 17.8	187 57.0	N22 24.3	87 15.6	N 5 04.9	221 46.5	N12 07.5
25	0	273 39.7	211 42.9	N17 17.6	202 57.6	N22 24.5	102 17.8	N 5 04.8	236 48.7	N12 07.6
	1	288 42.2	226 45.1	N17 17.4	217 58.2	N22 24.8	117 20.0	N 5 04.7	251 51.0	N12 07.7
	2	303 44.6	241 47.3	N17 17.1	232 58.7	N22 25.0	132 22.2	N 5 04.6	266 53.2	N12 07.7
	3	318 47.1	256 49.5	N17 16.9	247 59.3	N22 25.3	147 24.4	N 5 04.4	281 55.5	N12 07.8
	4	333 49.5	271 51.7	N17 16.7	262 59.9	N22 25.6	162 26.6	N 5 04.3	296 57.7	N12 07.9
S	5	348 52.0	286 53.9	N17 16.5	278 00.5	N22 25.8	177 28.8	N 5 04.2	311 60.0	N12 07.9
U										
N	6	3 54.5	301 56.1	N17 16.3	293 01.1	N22 26.1	192 31.0	N 5 04.1	327 02.2	N12 08.0
D	7	18 56.9	316 58.3	N17 16.1	308 01.7	N22 26.3	207 33.2	N 5 04.0	342 04.4	N12 08.1
A	8	33 59.4	332 00.5	N17 15.9	323 02.3	N22 26.6	222 35.4	N 5 03.8	357 06.7	N12 08.1
Y	9	49 01.9	347 02.7	N17 15.7	338 02.9	N22 26.8	237 37.6	N 5 03.7	12 08.9	N12 08.2
	10	64 04.3	2 04.8	N17 15.5	353 03.5	N22 27.1	252 39.8	N 5 03.6	27 11.2	N12 08.3
	11	79 06.8	17 07.0	N17 15.3	8 04.1	N22 27.3	267 42.0	N 5 03.5	42 13.4	N12 08.3
	12	94 09.3	32 09.2	N17 15.1	23 04.6	N22 27.6	282 44.2	N 5 03.4	57 15.7	N12 08.4
	13	109 11.7	47 11.4	N17 14.9	38 05.2	N22 27.8	297 46.4	N 5 03.2	72 17.9	N12 08.4
	14	124 14.2	62 13.5	N17 14.7	53 05.8	N22 28.1	312 48.6	N 5 03.1	87 20.2	N12 08.5
	15	139 16.6	77 15.7	N17 14.5	68 06.4	N22 28.3	327 50.8	N 5 03.0	102 22.4	N12 08.6
	16	154 19.1	92 17.8	N17 14.3	83 07.0	N22 28.6	342 53.1	N 5 02.9	117 24.6	N12 08.6
	17	169 21.6	107 20.0	N17 14.1	98 07.6	N22 28.9	357 55.3	N 5 02.8	132 26.9	N12 08.7
	18	184 24.0	122 22.1	N17 13.9	113 08.2	N22 29.1	12 57.5	N 5 02.6	147 29.1	N12 08.8
	19	199 26.5	137 24.3	N17 13.7	128 08.8	N22 29.4	27 59.7	N 5 02.5	162 31.4	N12 08.8
	20	214 29.0	152 26.4	N17 13.6	143 09.4	N22 29.6	43 01.9	N 5 02.4	177 33.6	N12 08.9
	21	229 31.4	167 28.5	N17 13.4	158 10.0	N22 29.9	58 04.1	N 5 02.3	192 35.9	N12 09.0
	22	244 33.9	182 30.7	N17 13.2	173 10.6	N22 30.1	73 06.3	N 5 02.2	207 38.1	N12 09.0
	23	259 36.4	197 32.8	N17 13.0	188 11.1	N22 30.4	88 08.5	N 5 02.0	222 40.4	N12 09.1
			v 2.3	d 0.2	v 0.6	d 0.3	v 2.2	d 0.1	v 2.2	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	v '	MOON Dec ° '	d '	HP '
23	0	179 26.2	N23 25.2	176 05.0	4.9	N24 58.6	4.3	58.9
	1	194 26.1	N23 25.2	190 28.9	4.9	N24 54.1	4.5	58.9
	2	209 26.0	N23 25.1	204 52.8	4.9	N24 49.4	4.7	59.0
	3	224 25.8	N23 25.1	219 16.8	4.9	N24 44.6	4.8	59.0
	4	239 25.7	N23 25.1	233 40.7	5.0	N24 39.6	5.0	59.0
F	5	254 25.6	N23 25.0	248 04.7	5.0	N24 34.4	5.2	59.0
R								
I	6	269 25.4	N23 25.0	262 28.7	5.0	N24 29.1	5.3	59.1
D	7	284 25.3	N23 24.9	276 52.8	5.0	N24 23.5	5.5	59.1
A	8	299 25.2	N23 24.9	291 16.9	5.1	N24 17.9	5.7	59.1
Y	9	314 25.0	N23 24.9	305 41.0	5.1	N24 12.0	5.8	59.1
	10	329 24.9	N23 24.8	320 05.1	5.1	N24 06.0	6.0	59.1
	11	344 24.8	N23 24.8	334 29.3	5.2	N23 59.8	6.2	59.2
	12	359 24.6	N23 24.7	348 53.5	5.2	N23 53.5	6.3	59.2
	13	14 24.5	N23 24.7	3 17.8	5.3	N23 47.0	6.5	59.2
	14	29 24.3	N23 24.6	17 42.0	5.3	N23 40.4	6.7	59.2
	15	44 24.2	N23 24.6	32 06.4	5.3	N23 33.5	6.8	59.2
	16	59 24.1	N23 24.5	46 30.8	5.4	N23 26.6	7.0	59.3
	17	74 23.9	N23 24.5	60 55.2	5.4	N23 19.4	7.1	59.3
	18	89 23.8	N23 24.4	75 19.6	5.5	N23 12.1	7.3	59.3
	19	104 23.7	N23 24.4	89 44.2	5.5	N23 04.7	7.4	59.3
	20	119 23.5	N23 24.3	104 08.7	5.6	N22 57.1	7.6	59.3
	21	134 23.4	N23 24.3	118 33.3	5.6	N22 49.3	7.8	59.3
	22	149 23.3	N23 24.2	132 58.0	5.7	N22 41.4	7.9	59.4
	23	164 23.1	N23 24.2	147 22.7	5.7	N22 33.4	8.1	59.4
24	0	179 23.0	N23 24.1	161 47.5	5.8	N22 25.1	8.2	59.4
	1	194 22.9	N23 24.1	176 12.3	5.8	N22 16.8	8.4	59.4
	2	209 22.7	N23 24.0	190 37.2	5.9	N22 08.3	8.5	59.4
	3	224 22.6	N23 23.9	205 02.1	5.9	N21 59.6	8.7	59.4
	4	239 22.5	N23 23.9	219 27.1	6.0	N21 50.8	8.8	59.5
S	5	254 22.3	N23 23.8	233 52.2	6.1	N21 41.8	9.0	59.5
A								
T	6	269 22.2	N23 23.8	248 17.3	6.1	N21 32.8	9.1	59.5
U	7	284 22.1	N23 23.7	262 42.5	6.2	N21 23.5	9.2	59.5
R	8	299 21.9	N23 23.7	277 07.8	6.2	N21 14.1	9.4	59.5
D	9	314 21.8	N23 23.6	291 33.1	6.3	N21 04.6	9.5	59.5
A	10	329 21.7	N23 23.5	305 58.4	6.4	N20 55.0	9.7	59.5
Y	11	344 21.5	N23 23.5	320 23.9	6.4	N20 45.2	9.8	59.6
	12	359 21.4	N23 23.4	334 49.4	6.5	N20 35.2	9.9	59.6
	13	14 21.3	N23 23.3	349 15.0	6.6	N20 25.2	10.1	59.6
	14	29 21.1	N23 23.3	3 40.6	6.6	N20 15.0	10.2	59.6
	15	44 21.0	N23 23.2	18 06.3	6.7	N20 04.6	10.3	59.6
	16	59 20.9	N23 23.2	32 32.1	6.8	N19 54.2	10.5	59.6
	17	74 20.7	N23 23.1	46 57.9	6.8	N19 43.6	10.6	59.6
	18	89 20.6	N23 23.0	61 23.9	6.9	N19 32.9	10.7	59.6
	19	104 20.4	N23 23.0	75 49.9	7.0	N19 22.0	10.8	59.7
	20	119 20.3	N23 22.9	90 15.9	7.1	N19 11.1	11.0	59.7
	21	134 20.2	N23 22.8	104 42.0	7.1	N18 60.0	11.1	59.7
	22	149 20.0	N23 22.7	119 08.2	7.2	N18 48.8	11.2	59.7
	23	164 19.9	N23 22.7	133 34.5	7.3	N18 37.4	11.3	59.7
25	0	179 19.8	N23 22.6	148 00.9	7.3	N18 26.0	11.4	59.7
	1	194 19.6	N23 22.5	162 27.3	7.4	N18 14.4	11.6	59.7
	2	209 19.5	N23 22.5	176 53.8	7.5	N18 02.8	11.7	59.7
	3	224 19.4	N23 22.4	191 20.3	7.6	N17 51.0	11.8	59.7
	4	239 19.2	N23 22.3	205 47.0	7.6	N17 39.1	11.9	59.7
S	5	254 19.1	N23 22.2	220 13.7	7.7	N17 27.1	12.0	59.7
U								
N	6	269 19.0	N23 22.2	234 40.4	7.8	N17 14.9	12.1	59.7
D	7	284 18.8	N23 22.1	249 07.3	7.9	N17 02.7	12.2	59.8
A	8	299 18.7	N23 22.0	263 34.2	7.9	N16 50.4	12.3	59.8
Y	9	314 18.6	N23 21.9	278 01.2	8.0	N16 37.9	12.4	59.8
	10	329 18.5	N23 21.8	292 28.3	8.1	N16 25.4	12.5	59.8
	11	344 18.3	N23 21.8	306 55.4	8.1	N16 12.8	12.6	59.8
	12	359 18.2	N23 21.7	321 22.6	8.2	N16 00.0	12.7	59.8
	13	14 18.1	N23 21.6	335 49.9	8.3	N15 47.2	12.8	59.8
	14	29 17.9	N23 21.5	350 17.3	8.4	N15 34.3	12.9	59.8
	15	44 17.8	N23 21.4	4 44.7	8.4	N15 21.2	13.0	59.8
	16	59 17.7	N23 21.4	19 12.2	8.5	N15 08.1	13.1	59.8
	17	74 17.5	N23 21.3	33 39.7	8.6	N14 54.9	13.2	59.8
	18	89 17.4	N23 21.2	48 07.4	8.6	N14 41.6	13.3	59.8
	19	104 17.3	N23 21.1	62 35.1	8.7	N14 28.2	13.4	59.8
	20	119 17.1	N23 21.0	77 02.9	8.8	N14 14.8	13.5	59.8
	21	134 17.0	N23 20.9	91 30.7	8.8	N14 01.2	13.6	59.8
	22	149 16.9	N23 20.9	105 58.6	8.9	N13 47.6	13.6	59.8
	23	164 16.7	N23 20.8	120 26.6	9.0	N13 33.9	13.7	59.8
		S.D. 15.7	d 0.1	S.D. 16.1		16.2		16.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.9	S40 11.2
Achernar	335 18.4	S57 05.2
Acrux	172 56.8	S63 15.8
Adhara	255 04.0	S29 00.7
Albireo	67 01.4	N28 01.2
Aldebaran	290 36.7	N16 33.9
Alioth	166 10.4	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.1	S46 49.0
Alnilam	275 35.2	S 1 11.0
Alphard	217 45.2	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.8	N29 14.8
Altair	61 56.9	N 8 56.7
Ankaa	353 04.4	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.1	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.4	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.4	N45 22.9
Denebola	182 22.1	N14 24.8
Diphda	348 44.5	S17 49.6
Dubhe	193 37.8	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.3	N51 29.1
Enif	33 35.7	N10 00.4
Fomalhaut	15 11.3	S29 28.0
Gacrux	171 48.4	S57 16.7
Gienah	175 40.7	S17 42.2
Hadar	148 31.6	S60 30.9
Hamal	327 48.2	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.4	N74 02.5
Markab	13 27.0	N15 21.5
Menkar	314 03.4	N 4 12.1
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.2	S69 50.3
Mirfak	308 24.6	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.7	S56 38.3
Polaris	315 37.6	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.1
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.1
Rigil Kent	139 36.0	S60 57.4
Sabik	101 59.2	S15 45.6
Schedar	349 27.8	N56 41.4
Shaula	96 06.1	S37 07.4
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
26	0	274 38.8	212 34.9	N17 12.8	203 11.7	N22 30.6	103 10.7	N 5 01.9	237 42.6	N12 09.1
	1	289 41.3	227 37.1	N17 12.6	218 12.3	N22 30.9	118 12.9	N 5 01.8	252 44.9	N12 09.2
	2	304 43.8	242 39.2	N17 12.5	233 12.9	N22 31.1	133 15.1	N 5 01.7	267 47.1	N12 09.3
	3	319 46.2	257 41.3	N17 12.3	248 13.5	N22 31.3	148 17.3	N 5 01.5	282 49.4	N12 09.3
	4	334 48.7	272 43.4	N17 12.1	263 14.1	N22 31.6	163 19.5	N 5 01.4	297 51.6	N12 09.4
M	5	349 51.1	287 45.5	N17 11.9	278 14.7	N22 31.8	178 21.6	N 5 01.3	312 53.8	N12 09.5
O										
N	6	4 53.6	302 47.6	N17 11.8	293 15.3	N22 32.1	193 23.8	N 5 01.2	327 56.1	N12 09.5
D	7	19 56.1	317 49.7	N17 11.6	308 15.9	N22 32.3	208 26.0	N 5 01.1	342 58.3	N12 09.6
A	8	34 58.5	332 51.8	N17 11.4	323 16.5	N22 32.6	223 28.2	N 5 00.9	358 00.6	N12 09.7
Y	9	50 01.0	347 53.9	N17 11.2	338 17.0	N22 32.8	238 30.4	N 5 00.8	13 02.8	N12 09.7
	10	65 03.5	2 56.0	N17 11.1	353 17.6	N22 33.1	253 32.6	N 5 00.7	28 05.1	N12 09.8
	11	80 05.9	17 58.1	N17 10.9	8 18.2	N22 33.3	268 34.8	N 5 00.6	43 07.3	N12 09.8
	12	95 08.4	33 00.1	N17 10.7	23 18.8	N22 33.6	283 37.0	N 5 00.5	58 09.6	N12 09.9
	13	110 10.9	48 02.2	N17 10.6	38 19.4	N22 33.8	298 39.2	N 5 00.3	73 11.8	N12 10.0
	14	125 13.3	63 04.3	N17 10.4	53 20.0	N22 34.1	313 41.4	N 5 00.2	88 14.1	N12 10.0
	15	140 15.8	78 06.4	N17 10.3	68 20.6	N22 34.3	328 43.6	N 5 00.1	103 16.3	N12 10.1
	16	155 18.3	93 08.4	N17 10.1	83 21.2	N22 34.5	343 45.8	N 4 60.0	118 18.6	N12 10.2
	17	170 20.7	108 10.5	N17 09.9	98 21.8	N22 34.8	358 48.0	N 4 59.8	133 20.8	N12 10.2
	18	185 23.2	123 12.5	N17 09.8	113 22.4	N22 35.0	13 50.2	N 4 59.7	148 23.1	N12 10.3
	19	200 25.6	138 14.6	N17 09.6	128 22.9	N22 35.3	28 52.4	N 4 59.6	163 25.3	N12 10.3
	20	215 28.1	153 16.7	N17 09.5	143 23.5	N22 35.5	43 54.6	N 4 59.5	178 27.6	N12 10.4
	21	230 30.6	168 18.7	N17 09.3	158 24.1	N22 35.7	58 56.8	N 4 59.3	193 29.8	N12 10.5
	22	245 33.0	183 20.7	N17 09.2	173 24.7	N22 36.0	73 59.0	N 4 59.2	208 32.1	N12 10.5
	23	260 35.5	198 22.8	N17 09.0	188 25.3	N22 36.2	89 01.2	N 4 59.1	223 34.3	N12 10.6
27	0	275 38.0	213 24.8	N17 08.9	203 25.9	N22 36.5	104 03.4	N 4 59.0	238 36.6	N12 10.7
	1	290 40.4	228 26.9	N17 08.7	218 26.5	N22 36.7	119 05.6	N 4 58.9	253 38.8	N12 10.7
	2	305 42.9	243 28.9	N17 08.6	233 27.1	N22 36.9	134 07.8	N 4 58.7	268 41.1	N12 10.8
	3	320 45.4	258 30.9	N17 08.4	248 27.7	N22 37.2	149 10.0	N 4 58.6	283 43.3	N12 10.8
	4	335 47.8	273 32.9	N17 08.3	263 28.3	N22 37.4	164 12.2	N 4 58.5	298 45.6	N12 10.9
T	5	350 50.3	288 34.9	N17 08.2	278 28.8	N22 37.7	179 14.4	N 4 58.4	313 47.8	N12 11.0
U										
E	6	5 52.7	303 37.0	N17 08.0	293 29.4	N22 37.9	194 16.5	N 4 58.2	328 50.1	N12 11.0
S	7	20 55.2	318 39.0	N17 07.9	308 30.0	N22 38.1	209 18.7	N 4 58.1	343 52.3	N12 11.1
D	8	35 57.7	333 41.0	N17 07.7	323 30.6	N22 38.4	224 20.9	N 4 58.0	358 54.6	N12 11.2
A	9	51 00.1	348 43.0	N17 07.6	338 31.2	N22 38.6	239 23.1	N 4 57.9	13 56.8	N12 11.2
Y	10	66 02.6	3 45.0	N17 07.5	353 31.8	N22 38.8	254 25.3	N 4 57.7	28 59.1	N12 11.3
	11	81 05.1	18 47.0	N17 07.3	8 32.4	N22 39.1	269 27.5	N 4 57.6	44 01.3	N12 11.3
	12	96 07.5	33 49.0	N17 07.2	23 33.0	N22 39.3	284 29.7	N 4 57.5	59 03.6	N12 11.4
	13	111 10.0	48 51.0	N17 07.1	38 33.6	N22 39.6	299 31.9	N 4 57.4	74 05.8	N12 11.5
	14	126 12.5	63 53.0	N17 07.0	53 34.2	N22 39.8	314 34.1	N 4 57.2	89 08.1	N12 11.5
	15	141 14.9	78 54.9	N17 06.8	68 34.7	N22 40.0	329 36.3	N 4 57.1	104 10.3	N12 11.6
	16	156 17.4	93 56.9	N17 06.7	83 35.3	N22 40.3	344 38.5	N 4 57.0	119 12.6	N12 11.7
	17	171 19.9	108 58.9	N17 06.6	98 35.9	N22 40.5	359 40.7	N 4 56.9	134 14.8	N12 11.7
	18	186 22.3	124 00.9	N17 06.5	113 36.5	N22 40.7	14 42.9	N 4 56.7	149 17.1	N12 11.8
	19	201 24.8	139 02.8	N17 06.3	128 37.1	N22 41.0	29 45.0	N 4 56.6	164 19.3	N12 11.8
	20	216 27.2	154 04.8	N17 06.2	143 37.7	N22 41.2	44 47.2	N 4 56.5	179 21.6	N12 11.9
	21	231 29.7	169 06.8	N17 06.1	158 38.3	N22 41.4	59 49.4	N 4 56.4	194 23.8	N12 12.0
	22	246 32.2	184 08.7	N17 06.0	173 38.9	N22 41.7	74 51.6	N 4 56.2	209 26.1	N12 12.0
	23	261 34.6	199 10.7	N17 05.9	188 39.5	N22 41.9	89 53.8	N 4 56.1	224 28.3	N12 12.1
28	0	276 37.1	214 12.6	N17 05.7	203 40.1	N22 42.1	104 56.0	N 4 56.0	239 30.6	N12 12.1
	1	291 39.6	229 14.6	N17 05.6	218 40.6	N22 42.4	119 58.2	N 4 55.9	254 32.8	N12 12.2
	2	306 42.0	244 16.5	N17 05.5	233 41.2	N22 42.6	135 00.4	N 4 55.7	269 35.1	N12 12.3
	3	321 44.5	259 18.5	N17 05.4	248 41.8	N22 42.8	150 02.6	N 4 55.6	284 37.3	N12 12.3
	4	336 47.0	274 20.4	N17 05.3	263 42.4	N22 43.0	165 04.7	N 4 55.5	299 39.6	N12 12.4
W	5	351 49.4	289 22.3	N17 05.2	278 43.0	N22 43.3	180 06.9	N 4 55.4	314 41.8	N12 12.5
E										
D	6	6 51.9	304 24.3	N17 05.1	293 43.6	N22 43.5	195 09.1	N 4 55.2	329 44.1	N12 12.5
N	7	21 54.4	319 26.2	N17 05.0	308 44.2	N22 43.7	210 11.3	N 4 55.1	344 46.3	N12 12.6
E	8	36 56.8	334 28.1	N17 04.9	323 44.8	N22 44.0	225 13.5	N 4 55.0	359 48.6	N12 12.6
S	9	51 59.3	349 30.0	N17 04.8	338 45.4	N22 44.2	240 15.7	N 4 54.9	14 50.8	N12 12.7
D	10	67 01.7	4 32.0	N17 04.7	353 46.0	N22 44.4	255 17.9	N 4 54.7	29 53.1	N12 12.8
A	11	82 04.2	19 33.9	N17 04.6	8 46.5	N22 44.6	270 20.1	N 4 54.6	44 55.4	N12 12.8
Y										
	12	97 06.7	34 35.8	N17 04.5	23 47.1	N22 44.9	285 22.3	N 4 54.5	59 57.6	N12 12.9
	13	112 09.1	49 37.7	N17 04.4	38 47.7	N22 45.1	300 24.4	N 4 54.4	74 59.9	N12 12.9
	14	127 11.6	64 39.6	N17 04.3	53 48.3	N22 45.3	315 26.6	N 4 54.2	90 02.1	N12 13.0
	15	142 14.1	79 41.5	N17 04.2	68 48.9	N22 45.5	330 28.8	N 4 54.1	105 04.4	N12 13.1
	16	157 16.5	94 43.4	N17 04.1	83 49.5	N22 45.8	345 31.0	N 4 54.0	120 06.6	N12 13.1
	17	172 19.0	109 45.3	N17 04.0	98 50.1	N22 46.0	0 33.2	N 4 53.9	135 08.9	N12 13.2
	18	187 21.5	124 47.2	N17 03.9	113 50.7	N22 46.2	15 35.4	N 4 53.7	150 11.1	N12 13.2
	19	202 23.9	139 49.0	N17 03.8	128 51.3	N22 46.4	30 37.6	N 4 53.6	165 13.4	N12 13.3
	20	217 26.4	154 50.9	N17 03.7	143 51.9	N22 46.7	45 39.7	N 4 53.5	180 15.6	N12 13.4
	21	232 28.8	169 52.8	N17 03.6	158 52.4	N22 46.9	60 41.9	N 4 53.3	195 17.9	N12 13.4
	22	247 31.3	184 54.7	N17 03.5	173 53.0	N22 47.1	75 44.1	N 4 53.2	210 20.1	N12 13.5
	23	262 33.8	199 56.5	N17 03.5	188 53.6	N22 47.3	90 46.3	N 4 53.1	225 22.4	N12 13.5
			v 2.0	d 0.1	v 0.6	d 0.2	v 2.2	d 0.1	v 2.3	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
26	0	179 16.6	N23 20.7		134 54.7	9.0	N13 20.1	13.8	59.8
	1	194 16.5	N23 20.6		149 22.8	9.1	N13 06.2	13.9	59.8
	2	209 16.3	N23 20.5		163 50.9	9.2	N12 52.3	13.9	59.8
	3	224 16.2	N23 20.4		178 19.2	9.2	N12 38.2	14.0	59.8
	4	239 16.1	N23 20.3		192 47.5	9.3	N12 24.2	14.1	59.8
M	5	254 15.9	N23 20.2		207 15.9	9.4	N12 10.0	14.2	59.8
O									
N	6	269 15.8	N23 20.1		221 44.3	9.4	N11 55.8	14.2	59.8
D	7	284 15.7	N23 20.0		236 12.8	9.5	N11 41.5	14.3	59.8
A	8	299 15.5	N23 19.9		250 41.4	9.6	N11 27.1	14.4	59.8
Y	9	314 15.4	N23 19.8		265 10.0	9.6	N11 12.7	14.4	59.8
	10	329 15.3	N23 19.8		279 38.7	9.7	N10 58.2	14.5	59.8
	11	344 15.2	N23 19.7		294 07.4	9.7	N10 43.7	14.5	59.8
	12	359 15.0	N23 19.6		308 36.2	9.8	N10 29.1	14.6	59.8
	13	14 14.9	N23 19.5		323 05.1	9.9	N10 14.4	14.7	59.8
	14	29 14.8	N23 19.4		337 34.0	9.9	N 9 59.7	14.7	59.8
	15	44 14.6	N23 19.3		352 03.0	10.0	N 9 44.9	14.8	59.8
	16	59 14.5	N23 19.2		6 32.0	10.0	N 9 30.1	14.8	59.8
	17	74 14.4	N23 19.1		21 01.1	10.1	N 9 15.2	14.9	59.8
	18	89 14.2	N23 19.0		35 30.2	10.1	N 9 00.3	14.9	59.8
	19	104 14.1	N23 18.9		49 59.4	10.2	N 8 45.3	15.0	59.8
	20	119 14.0	N23 18.8		64 28.6	10.2	N 8 30.3	15.0	59.8
	21	134 13.8	N23 18.7		78 57.9	10.3	N 8 15.3	15.1	59.8
	22	149 13.7	N23 18.5		93 27.3	10.3	N 8 00.2	15.1	59.8
	23	164 13.6	N23 18.4		107 56.6	10.4	N 7 45.0	15.1	59.8
27	0	179 13.5	N23 18.3		122 26.1	10.4	N 7 29.8	15.2	59.8
	1	194 13.3	N23 18.2		136 55.6	10.5	N 7 14.6	15.2	59.8
	2	209 13.2	N23 18.1		151 25.1	10.5	N 6 59.4	15.3	59.8
	3	224 13.1	N23 18.0		165 54.7	10.6	N 6 44.1	15.3	59.8
	4	239 12.9	N23 17.9		180 24.3	10.6	N 6 28.8	15.3	59.7
T	5	254 12.8	N23 17.8		194 53.9	10.7	N 6 13.4	15.3	59.7
U									
E	6	269 12.7	N23 17.7		209 23.6	10.7	N 5 58.0	15.4	59.7
S	7	284 12.6	N23 17.6		223 53.4	10.7	N 5 42.6	15.4	59.7
D	8	299 12.4	N23 17.5		238 23.1	10.8	N 5 27.2	15.4	59.7
A	9	314 12.3	N23 17.4		252 53.0	10.8	N 5 11.7	15.5	59.7
Y	10	329 12.2	N23 17.2		267 22.8	10.9	N 4 56.3	15.5	59.7
	11	344 12.0	N23 17.1		281 52.7	10.9	N 4 40.8	15.5	59.7
	12	359 11.9	N23 17.0		296 22.6	10.9	N 4 25.2	15.5	59.7
	13	14 11.8	N23 16.9		310 52.6	11.0	N 4 09.7	15.5	59.7
	14	29 11.6	N23 16.8		325 22.6	11.0	N 3 54.1	15.6	59.7
	15	44 11.5	N23 16.7		339 52.6	11.0	N 3 38.6	15.6	59.7
	16	59 11.4	N23 16.6		354 22.6	11.0	N 3 23.0	15.6	59.7
	17	74 11.3	N23 16.4		8 52.7	11.1	N 3 07.4	15.6	59.6
	18	89 11.1	N23 16.3		23 22.8	11.1	N 2 51.8	15.6	59.6
	19	104 11.0	N23 16.2		37 52.9	11.1	N 2 36.1	15.6	59.6
	20	119 10.9	N23 16.1		52 23.1	11.2	N 2 20.5	15.6	59.6
	21	134 10.8	N23 16.0		66 53.3	11.2	N 2 04.9	15.6	59.6
	22	149 10.6	N23 15.8		81 23.5	11.2	N 1 49.2	15.6	59.6
	23	164 10.5	N23 15.7		95 53.7	11.2	N 1 33.6	15.6	59.6
28	0	179 10.4	N23 15.6		110 23.9	11.2	N 1 17.9	15.6	59.6
	1	194 10.2	N23 15.5		124 54.2	11.3	N 1 02.3	15.6	59.6
	2	209 10.1	N23 15.3		139 24.5	11.3	N 0 46.6	15.6	59.6
	3	224 10.0	N23 15.2		153 54.8	11.3	N 0 31.0	15.6	59.5
	4	239 09.9	N23 15.1		168 25.1	11.3	N 0 15.4	15.6	59.5
W	5	254 09.7	N23 15.0		182 55.5	11.3	S 0 00.3	15.6	59.5
E									
D	6	269 09.6	N23 14.8		197 25.8	11.3	S 0 15.9	15.6	59.5
N	7	284 09.5	N23 14.7		211 56.2	11.4	S 0 31.5	15.6	59.5
E	8	299 09.3	N23 14.6		226 26.5	11.4	S 0 47.1	15.6	59.5
S	9	314 09.2	N23 14.5		240 56.9	11.4	S 1 02.7	15.6	59.5
D	10	329 09.1	N23 14.3		255 27.3	11.4	S 1 18.3	15.6	59.5
A	11	344 09.0	N23 14.2		269 57.7	11.4	S 1 33.9	15.6	59.4
Y									
	12	359 08.8	N23 14.1		284 28.1	11.4	S 1 49.5	15.6	59.4
	13	14 08.7	N23 13.9		298 58.5	11.4	S 2 05.0	15.5	59.4
	14	29 08.6	N23 13.8		313 28.9	11.4	S 2 20.5	15.5	59.4
	15	44 08.5	N23 13.7		327 59.4	11.4	S 2 36.0	15.5	59.4
	16	59 08.3	N23 13.5		342 29.8	11.4	S 2 51.5	15.5	59.4
	17	74 08.2	N23 13.4		357 00.2	11.4	S 3 07.0	15.5	59.4
	18	89 08.1	N23 13.3		11 30.6	11.4	S 3 22.4	15.4	59.4
	19	104 08.0	N23 13.1		26 01.0	11.4	S 3 37.8	15.4	59.3
	20	119 07.8	N23 13.0		40 31.4	11.4	S 3 53.2	15.4	59.3
	21	134 07.7	N23 12.9		55 01.9	11.4	S 4 08.6	15.4	59.3
	22	149 07.6	N23 12.7		69 32.3	11.4	S 4 23.9	15.3	59.3
	23	164 07.5	N23 12.6		84 02.7	11.4	S 4 39.2	15.3	59.3
		S.D. 15.7	d 0.1		S.D. 16.3		16.3		16.2

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.9	S40 11.2
Achernar	335 18.3	S57 05.2
Acrux	172 56.8	S63 15.8
Adhara	255 04.0	S29 00.7
Albireo	67 01.4	N28 01.2
Aldebaran	290 36.7	N16 34.0
Alioth	166 10.4	N55 48.5
Alkaid	152 49.6	N49 10.4
Al Na-ir	27 29.1	S46 49.0
Alnilam	275 35.2	S 1 11.0
Alphard	217 45.2	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.8	N29 14.8
Altair	61 56.9	N 8 56.7
Ankaa	353 04.4	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.2	S69 04.8
Avior	234 14.1	S59 36.3
Bellatrix	278 20.2	N 6 22.5
Betelgeuse	270 49.3	N 7 24.7
Canopus	263 51.7	S52 42.7
Capella	280 18.2	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.4	N45 22.9
Denebola	182 22.1	N14 24.8
Diphda	348 44.5	S17 49.6
Dubhe	193 37.9	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.3	N51 29.1
Enif	33 35.7	N10 00.4
Fomalhaut	15 11.3	S29 28.0
Gacrux	171 48.4	S57 16.7
Gienah	175 40.7	S17 42.2
Hadar	148 31.7	S60 30.9
Hamal	327 48.2	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.5	N74 02.5
Markab	13 26.9	N15 21.5
Menkar	314 03.4	N 4 12.1
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.2	S69 50.3
Mirfak	308 24.6	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.7	S56 38.4
Polaris	315 36.5	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.1
Rasalhague	95 55.6	N12 32.4
Regulus	207 31.6	N11 49.6
Rigel	281 01.5	S 8 10.1
Rigil Kent	139 36.1	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.7	N56 41.4
Shaula	96 06.1	S37 07.5
Sirius	258 24.1	S16 45.4
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.9	N38 48.6
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
29	0	277 36.2	214 58.4	N17 03.4	203 54.2	N22 47.6	105 48.5	N 4 53.0	240 24.7	N12 13.6
	1	292 38.7	230 00.3	N17 03.3	218 54.8	N22 47.8	120 50.7	N 4 52.8	255 26.9	N12 13.7
	2	307 41.2	245 02.1	N17 03.2	233 55.4	N22 48.0	135 52.9	N 4 52.7	270 29.2	N12 13.7
	3	322 43.6	260 04.0	N17 03.1	248 56.0	N22 48.2	150 55.0	N 4 52.6	285 31.4	N12 13.8
	4	337 46.1	275 05.9	N17 03.0	263 56.6	N22 48.4	165 57.2	N 4 52.5	300 33.7	N12 13.8
T	5	352 48.6	290 07.7	N17 03.0	278 57.2	N22 48.7	180 59.4	N 4 52.3	315 35.9	N12 13.9
H U	6	7 51.0	305 09.6	N17 02.9	293 57.8	N22 48.9	196 01.6	N 4 52.2	330 38.2	N12 14.0
R	7	22 53.5	320 11.4	N17 02.8	308 58.4	N22 49.1	211 03.8	N 4 52.1	345 40.4	N12 14.0
S	8	37 56.0	335 13.2	N17 02.7	323 58.9	N22 49.3	226 06.0	N 4 51.9	0 42.7	N12 14.1
D	9	52 58.4	350 15.1	N17 02.7	338 59.5	N22 49.5	241 08.1	N 4 51.8	15 45.0	N12 14.1
A	10	68 00.9	5 16.9	N17 02.6	354 00.1	N22 49.8	256 10.3	N 4 51.7	30 47.2	N12 14.2
Y	11	83 03.3	20 18.7	N17 02.5	9 00.7	N22 50.0	271 12.5	N 4 51.6	45 49.5	N12 14.3
	12	98 05.8	35 20.6	N17 02.5	24 01.3	N22 50.2	286 14.7	N 4 51.4	60 51.7	N12 14.3
	13	113 08.3	50 22.4	N17 02.4	39 01.9	N22 50.4	301 16.9	N 4 51.3	75 54.0	N12 14.4
	14	128 10.7	65 24.2	N17 02.3	54 02.5	N22 50.6	316 19.0	N 4 51.2	90 56.2	N12 14.4
	15	143 13.2	80 26.0	N17 02.3	69 03.1	N22 50.8	331 21.2	N 4 51.0	105 58.5	N12 14.5
	16	158 15.7	95 27.8	N17 02.2	84 03.7	N22 51.1	346 23.4	N 4 50.9	121 00.7	N12 14.6
	17	173 18.1	110 29.7	N17 02.1	99 04.3	N22 51.3	1 25.6	N 4 50.8	136 03.0	N12 14.6
	18	188 20.6	125 31.5	N17 02.1	114 04.8	N22 51.5	16 27.8	N 4 50.7	151 05.3	N12 14.7
	19	203 23.1	140 33.3	N17 02.0	129 05.4	N22 51.7	31 30.0	N 4 50.5	166 07.5	N12 14.7
	20	218 25.5	155 35.1	N17 02.0	144 06.0	N22 51.9	46 32.1	N 4 50.4	181 09.8	N12 14.8
	21	233 28.0	170 36.9	N17 01.9	159 06.6	N22 52.1	61 34.3	N 4 50.3	196 12.0	N12 14.9
	22	248 30.5	185 38.7	N17 01.8	174 07.2	N22 52.4	76 36.5	N 4 50.1	211 14.3	N12 14.9
	23	263 32.9	200 40.4	N17 01.8	189 07.8	N22 52.6	91 38.7	N 4 50.0	226 16.5	N12 15.0
30	0	278 35.4	215 42.2	N17 01.7	204 08.4	N22 52.8	106 40.9	N 4 49.9	241 18.8	N12 15.0
	1	293 37.8	230 44.0	N17 01.7	219 09.0	N22 53.0	121 43.0	N 4 49.8	256 21.1	N12 15.1
	2	308 40.3	245 45.8	N17 01.6	234 09.6	N22 53.2	136 45.2	N 4 49.6	271 23.3	N12 15.2
	3	323 42.8	260 47.6	N17 01.6	249 10.2	N22 53.4	151 47.4	N 4 49.5	286 25.6	N12 15.2
	4	338 45.2	275 49.3	N17 01.5	264 10.7	N22 53.6	166 49.6	N 4 49.4	301 27.8	N12 15.3
F	5	353 47.7	290 51.1	N17 01.5	279 11.3	N22 53.8	181 51.8	N 4 49.2	316 30.1	N12 15.3
R I	6	8 50.2	305 52.9	N17 01.4	294 11.9	N22 54.1	196 53.9	N 4 49.1	331 32.3	N12 15.4
D	7	23 52.6	320 54.6	N17 01.4	309 12.5	N22 54.3	211 56.1	N 4 49.0	346 34.6	N12 15.5
A	8	38 55.1	335 56.4	N17 01.3	324 13.1	N22 54.5	226 58.3	N 4 48.9	1 36.9	N12 15.5
Y	9	53 57.6	350 58.2	N17 01.3	339 13.7	N22 54.7	242 00.5	N 4 48.7	16 39.1	N12 15.6
	10	69 00.0	5 59.9	N17 01.3	354 14.3	N22 54.9	257 02.6	N 4 48.6	31 41.4	N12 15.6
	11	84 02.5	21 01.7	N17 01.2	9 14.9	N22 55.1	272 04.8	N 4 48.5	46 43.6	N12 15.7
	12	99 04.9	36 03.4	N17 01.2	24 15.5	N22 55.3	287 07.0	N 4 48.3	61 45.9	N12 15.7
	13	114 07.4	51 05.2	N17 01.1	39 16.1	N22 55.5	302 09.2	N 4 48.2	76 48.2	N12 15.8
	14	129 09.9	66 06.9	N17 01.1	54 16.7	N22 55.7	317 11.4	N 4 48.1	91 50.4	N12 15.9
	15	144 12.3	81 08.6	N17 01.1	69 17.2	N22 55.9	332 13.5	N 4 47.9	106 52.7	N12 15.9
	16	159 14.8	96 10.4	N17 01.0	84 17.8	N22 56.1	347 15.7	N 4 47.8	121 54.9	N12 16.0
	17	174 17.3	111 12.1	N17 01.0	99 18.4	N22 56.3	2 17.9	N 4 47.7	136 57.2	N12 16.0
	18	189 19.7	126 13.8	N17 01.0	114 19.0	N22 56.6	17 20.1	N 4 47.5	151 59.5	N12 16.1
	19	204 22.2	141 15.6	N17 00.9	129 19.6	N22 56.8	32 22.2	N 4 47.4	167 01.7	N12 16.2
	20	219 24.7	156 17.3	N17 00.9	144 20.2	N22 57.0	47 24.4	N 4 47.3	182 04.0	N12 16.2
	21	234 27.1	171 19.0	N17 00.9	159 20.8	N22 57.2	62 26.6	N 4 47.2	197 06.2	N12 16.3
	22	249 29.6	186 20.7	N17 00.8	174 21.4	N22 57.4	77 28.8	N 4 47.0	212 08.5	N12 16.3
	23	264 32.1	201 22.4	N17 00.8	189 22.0	N22 57.6	92 30.9	N 4 46.9	227 10.8	N12 16.4
1	0	279 34.5	216 24.1	N17 00.8	204 22.6	N22 57.8	107 33.1	N 4 46.8	242 13.0	N12 16.4
	1	294 37.0	231 25.8	N17 00.8	219 23.2	N22 58.0	122 35.3	N 4 46.6	257 15.3	N12 16.5
	2	309 39.4	246 27.5	N17 00.7	234 23.7	N22 58.2	137 37.5	N 4 46.5	272 17.5	N12 16.6
	3	324 41.9	261 29.2	N17 00.7	249 24.3	N22 58.4	152 39.6	N 4 46.4	287 19.8	N12 16.6
	4	339 44.4	276 30.9	N17 00.7	264 24.9	N22 58.6	167 41.8	N 4 46.2	302 22.1	N12 16.7
S	5	354 46.8	291 32.6	N17 00.7	279 25.5	N22 58.8	182 44.0	N 4 46.1	317 24.3	N12 16.7
A T	6	9 49.3	306 34.3	N17 00.7	294 26.1	N22 59.0	197 46.2	N 4 46.0	332 26.6	N12 16.8
U	7	24 51.8	321 36.0	N17 00.7	309 26.7	N22 59.2	212 48.3	N 4 45.8	347 28.8	N12 16.8
R	8	39 54.2	336 37.7	N17 00.6	324 27.3	N22 59.4	227 50.5	N 4 45.7	2 31.1	N12 16.9
D	9	54 56.7	351 39.4	N17 00.6	339 27.9	N22 59.6	242 52.7	N 4 45.6	17 33.4	N12 17.0
A	10	69 59.2	6 41.0	N17 00.6	354 28.5	N22 59.8	257 54.9	N 4 45.4	32 35.6	N12 17.0
Y	11	85 01.6	21 42.7	N17 00.6	9 29.1	N23 00.0	272 57.0	N 4 45.3	47 37.9	N12 17.1
	12	100 04.1	36 44.4	N17 00.6	24 29.6	N23 00.2	287 59.2	N 4 45.2	62 40.2	N12 17.1
	13	115 06.6	51 46.0	N17 00.6	39 30.2	N23 00.4	303 01.4	N 4 45.0	77 42.4	N12 17.2
	14	130 09.0	66 47.7	N17 00.6	54 30.8	N23 00.6	318 03.5	N 4 44.9	92 44.7	N12 17.3
	15	145 11.5	81 49.4	N17 00.6	69 31.4	N23 00.8	333 05.7	N 4 44.8	107 46.9	N12 17.3
	16	160 13.9	96 51.0	N17 00.5	84 32.0	N23 01.0	348 07.9	N 4 44.6	122 49.2	N12 17.4
	17	175 16.4	111 52.7	N17 00.5	99 32.6	N23 01.2	3 10.1	N 4 44.5	137 51.5	N12 17.4
	18	190 18.9	126 54.3	N17 00.5	114 33.2	N23 01.4	18 12.2	N 4 44.4	152 53.7	N12 17.5
	19	205 21.3	141 56.0	N17 00.5	129 33.8	N23 01.6	33 14.4	N 4 44.3	167 56.0	N12 17.5
	20	220 23.8	156 57.6	N17 00.5	144 34.4	N23 01.8	48 16.6	N 4 44.1	182 58.3	N12 17.6
	21	235 26.3	171 59.3	N17 00.5	159 35.0	N23 02.0	63 18.8	N 4 44.0	198 00.5	N12 17.7
	22	250 28.7	187 00.9	N17 00.5	174 35.6	N23 02.2	78 20.9	N 4 43.9	213 02.8	N12 17.7
	23	265 31.2	202 02.5	N17 00.5	189 36.1	N23 02.4	93 23.1	N 4 43.7	228 05.0	N12 17.8
			v 1.7	d 0.0	v 0.6	d 0.2	v 2.2	d 0.1	v 2.3	d 0.1

G.M.T	SUN		MOON					STARS		
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '	Name	SHA ° '	Dec ° '
29 0	179 07.3	N23 12.4	98 33.1	11.4	S 4 54.5	15.3	59.3	Acamar	315 09.9	S40 11.2
1	194 07.2	N23 12.3	113 03.4	11.4	S 5 09.7	15.2	59.3	Achernar	335 18.3	S57 05.1
2	209 07.1	N23 12.2	127 33.8	11.4	S 5 24.9	15.2	59.2	Acrux	172 56.8	S63 15.8
3	224 07.0	N23 12.0	142 04.2	11.4	S 5 40.1	15.2	59.2	Adhara	255 04.0	S29 00.7
4	239 06.8	N23 11.9	156 34.5	11.4	S 5 55.2	15.1	59.2	Albireo	67 01.4	N28 01.2
T 5	254 06.7	N23 11.7	171 04.9	11.3	S 6 10.3	15.1	59.2			
H								Aldebaran	290 36.7	N16 34.0
U 6	269 06.6	N23 11.6	185 35.2	11.3	S 6 25.3	15.0	59.2	Alioth	166 10.5	N55 48.5
R 7	284 06.5	N23 11.4	200 05.5	11.3	S 6 40.3	15.0	59.2	Alkaid	152 49.7	N49 10.4
S 8	299 06.3	N23 11.3	214 35.8	11.3	S 6 55.3	15.0	59.2	Al Na-ir	27 29.1	S46 49.0
D 9	314 06.2	N23 11.1	229 06.1	11.3	S 7 10.2	14.9	59.1	Alnilam	275 35.1	S 1 11.0
A 10	329 06.1	N23 11.0	243 36.4	11.3	S 7 25.1	14.9	59.1			
Y 11	344 06.0	N23 10.9	258 06.6	11.2	S 7 39.9	14.8	59.1	Alphard	217 45.2	S 8 47.1
								Alphecca	126 01.1	N26 37.2
12	359 05.8	N23 10.7	272 36.8	11.2	S 7 54.7	14.8	59.1	Alpheratz	357 31.8	N29 14.9
13	14 05.7	N23 10.6	287 07.0	11.2	S 8 09.4	14.7	59.1	Altair	61 56.9	N 8 56.7
14	29 05.6	N23 10.4	301 37.2	11.2	S 8 24.1	14.7	59.1	Ankaa	353 04.4	S42 08.8
15	44 05.5	N23 10.3	316 07.4	11.2	S 8 38.8	14.6	59.0			
16	59 05.3	N23 10.1	330 37.5	11.1	S 8 53.3	14.6	59.0	Antares	112 12.0	S26 29.8
17	74 05.2	N23 10.0	345 07.6	11.1	S 9 07.8	14.5	59.0	Arcturus	145 45.2	N19 02.1
								Atria	107 03.2	S69 04.8
18	89 05.1	N23 09.8	359 37.7	11.1	S 9 22.3	14.5	59.0	Avior	234 14.1	S59 36.3
19	104 05.0	N23 09.7	14 07.7	11.1	S 9 36.7	14.4	59.0	Bellatrix	278 20.2	N 6 22.5
20	119 04.8	N23 09.5	28 37.8	11.0	S 9 51.1	14.4	59.0			
21	134 04.7	N23 09.3	43 07.8	11.0	S10 05.4	14.3	58.9	Betelgeuse	270 49.3	N 7 24.7
22	149 04.6	N23 09.2	57 37.7	11.0	S10 19.6	14.2	58.9	Canopus	263 51.7	S52 42.7
23	164 04.5	N23 09.0	72 07.7	10.9	S10 33.8	14.2	58.9	Capella	280 18.1	N46 01.5
								Castor	245 53.8	N31 49.5
30 0	179 04.4	N23 08.9	86 37.6	10.9	S10 47.9	14.1	58.9	Deneb	49 23.4	N45 22.9
1	194 04.2	N23 08.7	101 07.4	10.9	S11 01.9	14.0	58.9			
2	209 04.1	N23 08.6	115 37.3	10.8	S11 15.9	14.0	58.9	Denebola	182 22.1	N14 24.8
3	224 04.0	N23 08.4	130 07.1	10.8	S11 29.8	13.9	58.8	Diphda	348 44.5	S17 49.6
4	239 03.9	N23 08.2	144 36.9	10.8	S11 43.6	13.8	58.8	Dubhe	193 37.9	N61 36.0
F 5	254 03.7	N23 08.1	159 06.6	10.7	S11 57.4	13.8	58.8	Elnath	277 58.7	N28 37.8
R								Eltanin	90 40.3	N51 29.1
I 6	269 03.6	N23 07.9	173 36.3	10.7	S12 11.1	13.7	58.8			
D 7	284 03.5	N23 07.8	188 05.9	10.7	S12 24.7	13.6	58.8	Enif	33 35.7	N10 00.4
A 8	299 03.4	N23 07.6	202 35.6	10.6	S12 38.3	13.6	58.8	Fomalhaut	15 11.2	S29 28.0
Y 9	314 03.3	N23 07.4	217 05.1	10.6	S12 51.8	13.5	58.7	Gacrux	171 48.4	S57 16.7
10	329 03.1	N23 07.3	231 34.7	10.5	S13 05.2	13.4	58.7	Gienah	175 40.7	S17 42.2
11	344 03.0	N23 07.1	246 04.2	10.5	S13 18.5	13.3	58.7	Hadar	148 31.7	S60 30.9
12	359 02.9	N23 06.9	260 33.7	10.5	S13 31.7	13.2	58.7	Hamal	327 48.1	N23 35.8
13	14 02.8	N23 06.8	275 03.1	10.4	S13 44.9	13.2	58.7	Kaus Austr.	83 28.4	S34 22.2
14	29 02.7	N23 06.6	289 32.4	10.4	S13 58.0	13.1	58.6	Kochab	137 19.5	N74 02.5
15	44 02.5	N23 06.4	304 01.8	10.3	S14 11.0	13.0	58.6	Markab	13 26.9	N15 21.5
16	59 02.4	N23 06.3	318 31.1	10.3	S14 23.9	12.9	58.6	Menkar	314 03.4	N 4 12.1
17	74 02.3	N23 06.1	333 00.3	10.2	S14 36.7	12.8	58.6			
								Menkent	147 54.1	S36 30.9
18	89 02.2	N23 05.9	347 29.5	10.2	S14 49.5	12.7	58.6	Miaplacidus	221 38.2	S69 50.3
19	104 02.0	N23 05.8	1 58.7	10.2	S15 02.1	12.7	58.6	Mirfak	308 24.5	N49 57.6
20	119 01.9	N23 05.6	16 27.8	10.1	S15 14.7	12.6	58.5	Nunki	75 43.9	S26 15.5
21	134 01.8	N23 05.4	30 56.8	10.1	S15 27.2	12.5	58.5	Peacock	53 00.7	S56 38.4
22	149 01.7	N23 05.3	45 25.8	10.0	S15 39.6	12.4	58.5			
23	164 01.6	N23 05.1	59 54.8	10.0	S15 51.9	12.3	58.5	Polaris	315 35.4	N89 22.2
								Pollux	243 14.2	N27 57.4
1 0	179 01.4	N23 04.9	74 23.7	9.9	S16 04.1	12.2	58.5	Procyon	244 48.2	N 5 09.1
1	194 01.3	N23 04.7	88 52.6	9.9	S16 16.2	12.1	58.4	Rasalhague	95 55.6	N12 32.5
2	209 01.2	N23 04.6	103 21.4	9.8	S16 28.2	12.0	58.4	Regulus	207 31.6	N11 49.6
3	224 01.1	N23 04.4	117 50.2	9.8	S16 40.1	11.9	58.4			
4	239 01.0	N23 04.2	132 18.9	9.7	S16 51.9	11.8	58.4	Rigel	281 01.5	S 8 10.1
S 5	254 00.9	N23 04.0	146 47.6	9.7	S17 03.7	11.7	58.4	Rigil Kent	139 36.1	S60 57.5
A								Sabik	101 59.2	S15 45.6
T 6	269 00.7	N23 03.9	161 16.2	9.6	S17 15.3	11.6	58.4	Schedar	349 27.7	N56 41.4
U 7	284 00.6	N23 03.7	175 44.8	9.6	S17 26.8	11.5	58.3	Shaula	96 06.1	S37 07.5
R 8	299 00.5	N23 03.5	190 13.3	9.5	S17 38.2	11.4	58.3			
D 9	314 00.4	N23 03.3	204 41.7	9.5	S17 49.5	11.3	58.3	Sirius	258 24.1	S16 45.3
A 10	329 00.3	N23 03.1	219 10.2	9.4	S18 00.7	11.2	58.3	Spica	158 19.2	S11 18.7
Y 11	344 00.1	N23 03.0	233 38.5	9.4	S18 11.9	11.1	58.3	Suhail	222 44.5	S43 33.1
								Vega	80 30.9	N38 48.6
12	359 00.0	N23 02.8	248 06.8	9.3	S18 22.8	11.0	58.2	Zuben-ubi	136 53.6	S16 09.7
13	13 59.9	N23 02.6	262 35.1	9.3	S18 33.7	10.9	58.2			
14	28 59.8	N23 02.4	277 03.3	9.2	S18 44.5	10.8	58.2			
15	43 59.7	N23 02.2	291 31.5	9.2	S18 55.2	10.7	58.2			
16	58 59.5	N23 02.0	305 59.6	9.1	S19 05.7	10.6	58.2			
17	73 59.4	N23 01.9	320 27.6	9.1	S19 16.2	10.4	58.1			
18	88 59.3	N23 01.7	334 55.6	9.0	S19 26.5	10.3	58.1			
19	103 59.2	N23 01.5	349 23.6	9.0	S19 36.7	10.2	58.1			
20	118 59.1	N23 01.3	3 51.5	8.9	S19 46.8	10.1	58.1			
21	133 59.0	N23 01.1	18 19.3	8.8	S19 56.8	10.0	58.1			
22	148 58.8	N23 00.9	32 47.1	8.8	S20 06.7	9.9	58.0			
23	163 58.7	N23 00.7	47 14.9	8.7	S20 16.4	9.7	58.0			
	S.D. 15.7	d 0.2	S.D.	16.1	16.0	15.9				

G.M.T	ARIES	VENUS		MARS		JUPITER		SATURN	
d h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
2 0	280 33.7	217 04.2	N17 00.5	204 36.7	N23 02.6	108 25.3	N 4 43.6	243 07.3	N12 17.8
1	295 36.1	232 05.8	N17 00.5	219 37.3	N23 02.8	123 27.4	N 4 43.5	258 09.6	N12 17.9
2	310 38.6	247 07.4	N17 00.5	234 37.9	N23 03.0	138 29.6	N 4 43.3	273 11.8	N12 17.9
3	325 41.0	262 09.0	N17 00.5	249 38.5	N23 03.2	153 31.8	N 4 43.2	288 14.1	N12 18.0
4	340 43.5	277 10.7	N17 00.6	264 39.1	N23 03.4	168 33.9	N 4 43.1	303 16.4	N12 18.0
S 5	355 46.0	292 12.3	N17 00.6	279 39.7	N23 03.6	183 36.1	N 4 42.9	318 18.6	N12 18.1
U									
N 6	10 48.4	307 13.9	N17 00.6	294 40.3	N23 03.7	198 38.3	N 4 42.8	333 20.9	N12 18.2
D 7	25 50.9	322 15.5	N17 00.6	309 40.9	N23 03.9	213 40.5	N 4 42.7	348 23.2	N12 18.2
A 8	40 53.4	337 17.1	N17 00.6	324 41.5	N23 04.1	228 42.6	N 4 42.5	3 25.4	N12 18.3
Y 9	55 55.8	352 18.7	N17 00.6	339 42.1	N23 04.3	243 44.8	N 4 42.4	18 27.7	N12 18.3
10	70 58.3	7 20.3	N17 00.6	354 42.7	N23 04.5	258 47.0	N 4 42.2	33 29.9	N12 18.4
11	86 00.8	22 21.9	N17 00.6	9 43.2	N23 04.7	273 49.1	N 4 42.1	48 32.2	N12 18.4
12	101 03.2	37 23.5	N17 00.6	24 43.8	N23 04.9	288 51.3	N 4 42.0	63 34.5	N12 18.5
13	116 05.7	52 25.1	N17 00.7	39 44.4	N23 05.1	303 53.5	N 4 41.8	78 36.7	N12 18.6
14	131 08.2	67 26.7	N17 00.7	54 45.0	N23 05.3	318 55.6	N 4 41.7	93 39.0	N12 18.6
15	146 10.6	82 28.3	N17 00.7	69 45.6	N23 05.5	333 57.8	N 4 41.6	108 41.3	N12 18.7
16	161 13.1	97 29.8	N17 00.7	84 46.2	N23 05.7	348 60.0	N 4 41.4	123 43.5	N12 18.7
17	176 15.5	112 31.4	N17 00.7	99 46.8	N23 05.8	4 02.1	N 4 41.3	138 45.8	N12 18.8
18	191 18.0	127 33.0	N17 00.8	114 47.4	N23 06.0	19 04.3	N 4 41.2	153 48.1	N12 18.8
19	206 20.5	142 34.6	N17 00.8	129 48.0	N23 06.2	34 06.5	N 4 41.0	168 50.3	N12 18.9
20	221 22.9	157 36.1	N17 00.8	144 48.6	N23 06.4	49 08.6	N 4 40.9	183 52.6	N12 19.0
21	236 25.4	172 37.7	N17 00.8	159 49.2	N23 06.6	64 10.8	N 4 40.8	198 54.9	N12 19.0
22	251 27.9	187 39.3	N17 00.9	174 49.7	N23 06.8	79 13.0	N 4 40.6	213 57.1	N12 19.1
23	266 30.3	202 40.8	N17 00.9	189 50.3	N23 07.0	94 15.1	N 4 40.5	228 59.4	N12 19.1
3 0	281 32.8	217 42.4	N17 00.9	204 50.9	N23 07.2	109 17.3	N 4 40.4	244 01.7	N12 19.2
1	296 35.3	232 43.9	N17 00.9	219 51.5	N23 07.3	124 19.5	N 4 40.2	259 03.9	N12 19.2
2	311 37.7	247 45.5	N17 01.0	234 52.1	N23 07.5	139 21.6	N 4 40.1	274 06.2	N12 19.3
3	326 40.2	262 47.0	N17 01.0	249 52.7	N23 07.7	154 23.8	N 4 40.0	289 08.5	N12 19.3
4	341 42.7	277 48.6	N17 01.0	264 53.3	N23 07.9	169 26.0	N 4 39.8	304 10.7	N12 19.4
M 5	356 45.1	292 50.1	N17 01.1	279 53.9	N23 08.1	184 28.1	N 4 39.7	319 13.0	N12 19.5
O									
N 6	11 47.6	307 51.7	N17 01.1	294 54.5	N23 08.3	199 30.3	N 4 39.6	334 15.3	N12 19.5
D 7	26 50.0	322 53.2	N17 01.1	309 55.1	N23 08.5	214 32.5	N 4 39.4	349 17.5	N12 19.6
A 8	41 52.5	337 54.7	N17 01.2	324 55.7	N23 08.6	229 34.6	N 4 39.3	4 19.8	N12 19.6
Y 9	56 55.0	352 56.3	N17 01.2	339 56.3	N23 08.8	244 36.8	N 4 39.1	19 22.1	N12 19.7
10	71 57.4	7 57.8	N17 01.2	354 56.8	N23 09.0	259 39.0	N 4 39.0	34 24.3	N12 19.7
11	86 59.9	22 59.3	N17 01.3	9 57.4	N23 09.2	274 41.1	N 4 38.9	49 26.6	N12 19.8
12	102 02.4	38 00.8	N17 01.3	24 58.0	N23 09.4	289 43.3	N 4 38.7	64 28.9	N12 19.8
13	117 04.8	53 02.3	N17 01.4	39 58.6	N23 09.5	304 45.4	N 4 38.6	79 31.1	N12 19.9
14	132 07.3	68 03.9	N17 01.4	54 59.2	N23 09.7	319 47.6	N 4 38.5	94 33.4	N12 19.9
15	147 09.8	83 05.4	N17 01.5	69 59.8	N23 09.9	334 49.8	N 4 38.3	109 35.7	N12 20.0
16	162 12.2	98 06.9	N17 01.5	85 00.4	N23 10.1	349 51.9	N 4 38.2	124 37.9	N12 20.1
17	177 14.7	113 08.4	N17 01.5	100 01.0	N23 10.3	4 54.1	N 4 38.1	139 40.2	N12 20.1
18	192 17.2	128 09.9	N17 01.6	115 01.6	N23 10.4	19 56.3	N 4 37.9	154 42.5	N12 20.2
19	207 19.6	143 11.4	N17 01.6	130 02.2	N23 10.6	34 58.4	N 4 37.8	169 44.7	N12 20.2
20	222 22.1	158 12.9	N17 01.7	145 02.8	N23 10.8	50 00.6	N 4 37.6	184 47.0	N12 20.3
21	237 24.5	173 14.4	N17 01.7	160 03.4	N23 11.0	65 02.7	N 4 37.5	199 49.3	N12 20.3
22	252 27.0	188 15.9	N17 01.8	175 03.9	N23 11.2	80 04.9	N 4 37.4	214 51.6	N12 20.4
23	267 29.5	203 17.4	N17 01.8	190 04.5	N23 11.3	95 07.1	N 4 37.2	229 53.8	N12 20.4
4 0	282 31.9	218 18.8	N17 01.9	205 05.1	N23 11.5	110 09.2	N 4 37.1	244 56.1	N12 20.5
1	297 34.4	233 20.3	N17 01.9	220 05.7	N23 11.7	125 11.4	N 4 37.0	259 58.4	N12 20.6
2	312 36.9	248 21.8	N17 02.0	235 06.3	N23 11.9	140 13.6	N 4 36.8	275 00.6	N12 20.6
3	327 39.3	263 23.3	N17 02.1	250 06.9	N23 12.1	155 15.7	N 4 36.7	290 02.9	N12 20.7
4	342 41.8	278 24.8	N17 02.1	265 07.5	N23 12.2	170 17.9	N 4 36.5	305 05.2	N12 20.7
T 5	357 44.3	293 26.2	N17 02.2	280 08.1	N23 12.4	185 20.0	N 4 36.4	320 07.4	N12 20.8
U									
E 6	12 46.7	308 27.7	N17 02.2	295 08.7	N23 12.6	200 22.2	N 4 36.3	335 09.7	N12 20.8
S 7	27 49.2	323 29.2	N17 02.3	310 09.3	N23 12.8	215 24.4	N 4 36.1	350 12.0	N12 20.9
D 8	42 51.6	338 30.6	N17 02.3	325 09.9	N23 12.9	230 26.5	N 4 36.0	5 14.2	N12 20.9
A 9	57 54.1	353 32.1	N17 02.4	340 10.5	N23 13.1	245 28.7	N 4 35.9	20 16.5	N12 21.0
Y 10	72 56.6	8 33.5	N17 02.5	355 11.1	N23 13.3	260 30.8	N 4 35.7	35 18.8	N12 21.0
11	87 59.0	23 35.0	N17 02.5	10 11.6	N23 13.4	275 33.0	N 4 35.6	50 21.1	N12 21.1
12	103 01.5	38 36.4	N17 02.6	25 12.2	N23 13.6	290 35.2	N 4 35.4	65 23.3	N12 21.1
13	118 04.0	53 37.9	N17 02.7	40 12.8	N23 13.8	305 37.3	N 4 35.3	80 25.6	N12 21.2
14	133 06.4	68 39.3	N17 02.7	55 13.4	N23 14.0	320 39.5	N 4 35.2	95 27.9	N12 21.3
15	148 08.9	83 40.8	N17 02.8	70 14.0	N23 14.1	335 41.6	N 4 35.0	110 30.1	N12 21.3
16	163 11.4	98 42.2	N17 02.9	85 14.6	N23 14.3	350 43.8	N 4 34.9	125 32.4	N12 21.4
17	178 13.8	113 43.6	N17 02.9	100 15.2	N23 14.5	5 45.9	N 4 34.8	140 34.7	N12 21.4
18	193 16.3	128 45.1	N17 03.0	115 15.8	N23 14.7	20 48.1	N 4 34.6	155 37.0	N12 21.5
19	208 18.8	143 46.5	N17 03.1	130 16.4	N23 14.8	35 50.3	N 4 34.5	170 39.2	N12 21.5
20	223 21.2	158 47.9	N17 03.1	145 17.0	N23 15.0	50 52.4	N 4 34.3	185 41.5	N12 21.6
21	238 23.7	173 49.3	N17 03.2	160 17.6	N23 15.2	65 54.6	N 4 34.2	200 43.8	N12 21.6
22	253 26.1	188 50.8	N17 03.3	175 18.2	N23 15.3	80 56.7	N 4 34.1	215 46.0	N12 21.7
23	268 28.6	203 52.2	N17 03.4	190 18.8	N23 15.5	95 58.9	N 4 33.9	230 48.3	N12 21.7
		v 1.5	d 0.0	v 0.6	d 0.2	v 2.2	d 0.1	v 2.3	d 0.1

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
2 0	178 58.6	N23 00.5	61 42.6	8.7	S20 26.0	9.6	58.0
1	193 58.5	N23 00.4	76 10.2	8.6	S20 35.5	9.5	58.0
2	208 58.4	N23 00.2	90 37.8	8.6	S20 44.9	9.4	58.0
3	223 58.3	N22 60.0	105 05.3	8.5	S20 54.2	9.3	57.9
4	238 58.1	N22 59.8	119 32.8	8.5	S21 03.3	9.1	57.9
S 5	253 58.0	N22 59.6	134 00.3	8.4	S21 12.3	9.0	57.9
U							
N 6	268 57.9	N22 59.4	148 27.7	8.4	S21 21.2	8.9	57.9
D 7	283 57.8	N22 59.2	162 55.0	8.3	S21 29.9	8.8	57.9
A 8	298 57.7	N22 59.0	177 22.3	8.3	S21 38.6	8.6	57.8
Y 9	313 57.6	N22 58.8	191 49.5	8.2	S21 47.1	8.5	57.8
10	328 57.5	N22 58.6	206 16.7	8.2	S21 55.4	8.4	57.8
11	343 57.3	N22 58.4	220 43.9	8.2	S22 03.7	8.2	57.8
12	358 57.2	N22 58.2	235 11.0	8.1	S22 11.8	8.1	57.8
13	13 57.1	N22 58.0	249 38.1	8.1	S22 19.7	8.0	57.7
14	28 57.0	N22 57.8	264 05.1	8.0	S22 27.6	7.8	57.7
15	43 56.9	N22 57.6	278 32.1	8.0	S22 35.3	7.7	57.7
16	58 56.8	N22 57.4	292 59.0	7.9	S22 42.9	7.6	57.7
17	73 56.6	N22 57.2	307 25.9	7.9	S22 50.3	7.4	57.7
18	88 56.5	N22 57.0	321 52.7	7.8	S22 57.6	7.3	57.6
19	103 56.4	N22 56.8	336 19.5	7.8	S23 04.8	7.2	57.6
20	118 56.3	N22 56.6	350 46.3	7.8	S23 11.8	7.0	57.6
21	133 56.2	N22 56.4	5 13.0	7.7	S23 18.7	6.9	57.6
22	148 56.1	N22 56.2	19 39.7	7.7	S23 25.4	6.7	57.6
23	163 56.0	N22 56.0	34 06.3	7.6	S23 32.0	6.6	57.5
3 0	178 55.8	N22 55.8	48 33.0	7.6	S23 38.5	6.5	57.5
1	193 55.7	N22 55.6	62 59.5	7.6	S23 44.8	6.3	57.5
2	208 55.6	N22 55.4	77 26.1	7.5	S23 51.0	6.2	57.5
3	223 55.5	N22 55.2	91 52.6	7.5	S23 57.0	6.0	57.5
4	238 55.4	N22 54.9	106 19.0	7.5	S24 02.9	5.9	57.4
M 5	253 55.3	N22 54.7	120 45.5	7.4	S24 08.7	5.7	57.4
O							
N 6	268 55.2	N22 54.5	135 11.9	7.4	S24 14.3	5.6	57.4
D 7	283 55.1	N22 54.3	149 38.3	7.4	S24 19.7	5.5	57.4
A 8	298 54.9	N22 54.1	164 04.6	7.4	S24 25.0	5.3	57.4
Y 9	313 54.8	N22 53.9	178 31.0	7.3	S24 30.2	5.2	57.3
10	328 54.7	N22 53.7	192 57.3	7.3	S24 35.2	5.0	57.3
11	343 54.6	N22 53.5	207 23.5	7.3	S24 40.1	4.9	57.3
12	358 54.5	N22 53.2	221 49.8	7.3	S24 44.8	4.7	57.3
13	13 54.4	N22 53.0	236 16.0	7.2	S24 49.4	4.6	57.3
14	28 54.3	N22 52.8	250 42.2	7.2	S24 53.8	4.4	57.2
15	43 54.2	N22 52.6	265 08.4	7.2	S24 58.1	4.3	57.2
16	58 54.1	N22 52.4	279 34.6	7.2	S25 02.2	4.1	57.2
17	73 53.9	N22 52.2	294 00.8	7.2	S25 06.2	4.0	57.2
18	88 53.8	N22 51.9	308 26.9	7.1	S25 10.1	3.8	57.2
19	103 53.7	N22 51.7	322 53.0	7.1	S25 13.7	3.7	57.1
20	118 53.6	N22 51.5	337 19.2	7.1	S25 17.3	3.5	57.1
21	133 53.5	N22 51.3	351 45.3	7.1	S25 20.6	3.4	57.1
22	148 53.4	N22 51.1	6 11.4	7.1	S25 23.9	3.2	57.1
23	163 53.3	N22 50.8	20 37.5	7.1	S25 26.9	3.1	57.0
4 0	178 53.2	N22 50.6	35 03.5	7.1	S25 29.9	2.9	57.0
1	193 53.1	N22 50.4	49 29.6	7.1	S25 32.6	2.8	57.0
2	208 52.9	N22 50.2	63 55.7	7.1	S25 35.3	2.6	57.0
3	223 52.8	N22 49.9	78 21.8	7.1	S25 37.7	2.5	57.0
4	238 52.7	N22 49.7	92 47.8	7.1	S25 40.1	2.3	56.9
T 5	253 52.6	N22 49.5	107 13.9	7.1	S25 42.2	2.2	56.9
U							
E 6	268 52.5	N22 49.3	121 40.0	7.1	S25 44.2	2.0	56.9
S 7	283 52.4	N22 49.0	136 06.1	7.1	S25 46.1	1.9	56.9
D 8	298 52.3	N22 48.8	150 32.2	7.1	S25 47.8	1.7	56.9
A 9	313 52.2	N22 48.6	164 58.3	7.1	S25 49.4	1.6	56.8
Y 10	328 52.1	N22 48.3	179 24.4	7.1	S25 50.8	1.4	56.8
11	343 52.0	N22 48.1	193 50.5	7.1	S25 52.0	1.3	56.8
12	358 51.9	N22 47.9	208 16.6	7.1	S25 53.2	1.1	56.8
13	13 51.8	N22 47.6	222 42.7	7.1	S25 54.1	1.0	56.8
14	28 51.6	N22 47.4	237 08.9	7.2	S25 54.9	0.8	56.7
15	43 51.5	N22 47.2	251 35.1	7.2	S25 55.6	0.7	56.7
16	58 51.4	N22 46.9	266 01.3	7.2	S25 56.1	0.5	56.7
17	73 51.3	N22 46.7	280 27.5	7.2	S25 56.4	0.3	56.7
18	88 51.2	N22 46.5	294 53.7	7.2	S25 56.6	0.2	56.7
19	103 51.1	N22 46.2	309 20.0	7.3	S25 56.6	0.0	56.6
20	118 51.0	N22 46.0	323 46.3	7.3	S25 56.5	0.1	56.6
21	133 50.9	N22 45.8	338 12.6	7.3	S25 56.3	0.3	56.6
22	148 50.8	N22 45.5	352 38.9	7.3	S25 55.9	0.4	56.6
23	163 50.7	N22 45.3	7 05.3	7.4	S25 55.3	0.5	56.5
	S.D. 15.7	d 0.2	S.D. 15.7		15.6		15.5

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.9	S40 11.2
Achernar	335 18.3	S57 05.1
Acrux	172 56.9	S63 15.8
Adhara	255 04.0	S29 00.7
Albireo	67 01.4	N28 01.2
Aldebaran	290 36.6	N16 34.0
Alioth	166 10.5	N55 48.5
Alkaid	152 49.7	N49 10.4
Al Na-ir	27 29.0	S46 49.0
Alnilam	275 35.1	S 1 11.0
Alphard	217 45.2	S 8 47.1
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.7	N29 14.9
Altair	61 56.8	N 8 56.7
Ankaa	353 04.3	S42 08.8
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.2	S69 04.9
Avior	234 14.1	S59 36.2
Bellatrix	278 20.1	N 6 22.5
Betelgeuse	270 49.3	N 7 24.7
Canopus	263 51.7	S52 42.6
Capella	280 18.1	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.4	N45 22.9
Denebola	182 22.1	N14 24.8
Diphda	348 44.5	S17 49.6
Dubhe	193 37.9	N61 36.0
Elnath	277 58.7	N28 37.8
Eltanin	90 40.3	N51 29.2
Enif	33 35.7	N10 00.4
Fomalhaut	15 11.2	S29 28.0
Gacrux	171 48.4	S57 16.7
Gienah	175 40.7	S17 42.2
Hadar	148 31.7	S60 30.9
Hamal	327 48.1	N23 35.8
Kaus Austr.	83 28.4	S34 22.2
Kochab	137 19.6	N74 02.5
Markab	13 26.9	N15 21.5
Menkar	314 03.3	N 4 12.1
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.2	S69 50.3
Mirfak	308 24.5	N49 57.6
Nunki	75 43.9	S26 15.5
Peacock	53 00.7	S56 38.4
Polaris	315 34.1	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.2	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.4	S 8 10.1
Rigil Kent	139 36.1	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.7	N56 41.4
Shaula	96 06.1	S37 07.5
Sirius	258 24.1	S16 45.3
Spica	158 19.2	S11 18.7
Suhail	222 44.5	S43 33.1
Vega	80 30.8	N38 48.7
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
5	0	283 31.1	218 53.6	N17 03.4	205 19.3	N23 15.7	111 01.0	N 4 33.8	245 50.6	N12 21.8
	1	298 33.5	233 55.0	N17 03.5	220 19.9	N23 15.8	126 03.2	N 4 33.6	260 52.9	N12 21.8
	2	313 36.0	248 56.4	N17 03.6	235 20.5	N23 16.0	141 05.4	N 4 33.5	275 55.1	N12 21.9
	3	328 38.5	263 57.8	N17 03.7	250 21.1	N23 16.2	156 07.5	N 4 33.4	290 57.4	N12 22.0
	4	343 40.9	278 59.2	N17 03.7	265 21.7	N23 16.3	171 09.7	N 4 33.2	305 59.7	N12 22.0
W	5	358 43.4	294 00.6	N17 03.8	280 22.3	N23 16.5	186 11.8	N 4 33.1	321 02.0	N12 22.1
E										
D	6	13 45.9	309 02.0	N17 03.9	295 22.9	N23 16.7	201 14.0	N 4 32.9	336 04.2	N12 22.1
N	7	28 48.3	324 03.4	N17 04.0	310 23.5	N23 16.8	216 16.1	N 4 32.8	351 06.5	N12 22.2
E	8	43 50.8	339 04.8	N17 04.1	325 24.1	N23 17.0	231 18.3	N 4 32.7	6 08.8	N12 22.2
S	9	58 53.3	354 06.2	N17 04.2	340 24.7	N23 17.2	246 20.5	N 4 32.5	21 11.0	N12 22.3
D	10	73 55.7	9 07.6	N17 04.2	355 25.3	N23 17.3	261 22.6	N 4 32.4	36 13.3	N12 22.3
A	11	88 58.2	24 09.0	N17 04.3	10 25.9	N23 17.5	276 24.8	N 4 32.2	51 15.6	N12 22.4
Y										
	12	104 00.6	39 10.4	N17 04.4	25 26.5	N23 17.7	291 26.9	N 4 32.1	66 17.9	N12 22.4
	13	119 03.1	54 11.7	N17 04.5	40 27.0	N23 17.8	306 29.1	N 4 32.0	81 20.1	N12 22.5
	14	134 05.6	69 13.1	N17 04.6	55 27.6	N23 18.0	321 31.2	N 4 31.8	96 22.4	N12 22.5
	15	149 08.0	84 14.5	N17 04.7	70 28.2	N23 18.2	336 33.4	N 4 31.7	111 24.7	N12 22.6
	16	164 10.5	99 15.8	N17 04.8	85 28.8	N23 18.3	351 35.5	N 4 31.5	126 27.0	N12 22.6
	17	179 13.0	114 17.2	N17 04.9	100 29.4	N23 18.5	6 37.7	N 4 31.4	141 29.2	N12 22.7
	18	194 15.4	129 18.6	N17 05.0	115 30.0	N23 18.6	21 39.8	N 4 31.3	156 31.5	N12 22.7
	19	209 17.9	144 19.9	N17 05.0	130 30.6	N23 18.8	36 42.0	N 4 31.1	171 33.8	N12 22.8
	20	224 20.4	159 21.3	N17 05.1	145 31.2	N23 19.0	51 44.1	N 4 31.0	186 36.1	N12 22.9
	21	239 22.8	174 22.6	N17 05.2	160 31.8	N23 19.1	66 46.3	N 4 30.8	201 38.3	N12 22.9
	22	254 25.3	189 24.0	N17 05.3	175 32.4	N23 19.3	81 48.5	N 4 30.7	216 40.6	N12 23.0
	23	269 27.8	204 25.3	N17 05.4	190 33.0	N23 19.4	96 50.6	N 4 30.6	231 42.9	N12 23.0
6	0	284 30.2	219 26.7	N17 05.5	205 33.6	N23 19.6	111 52.8	N 4 30.4	246 45.2	N12 23.1
	1	299 32.7	234 28.0	N17 05.6	220 34.2	N23 19.8	126 54.9	N 4 30.3	261 47.4	N12 23.1
	2	314 35.1	249 29.4	N17 05.7	235 34.8	N23 19.9	141 57.1	N 4 30.1	276 49.7	N12 23.2
	3	329 37.6	264 30.7	N17 05.8	250 35.4	N23 20.1	156 59.2	N 4 30.0	291 52.0	N12 23.2
	4	344 40.1	279 32.1	N17 05.9	265 35.9	N23 20.2	172 01.4	N 4 29.9	306 54.3	N12 23.3
T	5	359 42.5	294 33.4	N17 06.0	280 36.5	N23 20.4	187 03.5	N 4 29.7	321 56.5	N12 23.3
H										
U	6	14 45.0	309 34.7	N17 06.1	295 37.1	N23 20.6	202 05.7	N 4 29.6	336 58.8	N12 23.4
R	7	29 47.5	324 36.0	N17 06.2	310 37.7	N23 20.7	217 07.8	N 4 29.4	352 01.1	N12 23.4
S	8	44 49.9	339 37.4	N17 06.3	325 38.3	N23 20.9	232 10.0	N 4 29.3	7 03.4	N12 23.5
D	9	59 52.4	354 38.7	N17 06.4	340 38.9	N23 21.0	247 12.1	N 4 29.1	22 05.6	N12 23.5
A	10	74 54.9	9 40.0	N17 06.5	355 39.5	N23 21.2	262 14.3	N 4 29.0	37 07.9	N12 23.6
Y	11	89 57.3	24 41.3	N17 06.6	10 40.1	N23 21.3	277 16.4	N 4 28.9	52 10.2	N12 23.6
	12	104 59.8	39 42.6	N17 06.8	25 40.7	N23 21.5	292 18.6	N 4 28.7	67 12.5	N12 23.7
	13	120 02.3	54 44.0	N17 06.9	40 41.3	N23 21.6	307 20.7	N 4 28.6	82 14.8	N12 23.7
	14	135 04.7	69 45.3	N17 07.0	55 41.9	N23 21.8	322 22.9	N 4 28.4	97 17.0	N12 23.8
	15	150 07.2	84 46.6	N17 07.1	70 42.5	N23 21.9	337 25.0	N 4 28.3	112 19.3	N12 23.8
	16	165 09.6	99 47.9	N17 07.2	85 43.1	N23 22.1	352 27.2	N 4 28.2	127 21.6	N12 23.9
	17	180 12.1	114 49.2	N17 07.3	100 43.7	N23 22.3	7 29.3	N 4 28.0	142 23.9	N12 23.9
	18	195 14.6	129 50.5	N17 07.4	115 44.3	N23 22.4	22 31.5	N 4 27.9	157 26.1	N12 24.0
	19	210 17.0	144 51.8	N17 07.5	130 44.8	N23 22.6	37 33.6	N 4 27.7	172 28.4	N12 24.0
	20	225 19.5	159 53.0	N17 07.6	145 45.4	N23 22.7	52 35.8	N 4 27.6	187 30.7	N12 24.1
	21	240 22.0	174 54.3	N17 07.8	160 46.0	N23 22.9	67 37.9	N 4 27.4	202 33.0	N12 24.2
	22	255 24.4	189 55.6	N17 07.9	175 46.6	N23 23.0	82 40.1	N 4 27.3	217 35.3	N12 24.2
	23	270 26.9	204 56.9	N17 08.0	190 47.2	N23 23.2	97 42.2	N 4 27.2	232 37.5	N12 24.3
7	0	285 29.4	219 58.2	N17 08.1	205 47.8	N23 23.3	112 44.4	N 4 27.0	247 39.8	N12 24.3
	1	300 31.8	234 59.5	N17 08.2	220 48.4	N23 23.5	127 46.5	N 4 26.9	262 42.1	N12 24.4
	2	315 34.3	250 00.7	N17 08.3	235 49.0	N23 23.6	142 48.7	N 4 26.7	277 44.4	N12 24.4
	3	330 36.8	265 02.0	N17 08.5	250 49.6	N23 23.8	157 50.8	N 4 26.6	292 46.7	N12 24.5
	4	345 39.2	280 03.3	N17 08.6	265 50.2	N23 23.9	172 53.0	N 4 26.4	307 48.9	N12 24.5
F	5	0 41.7	295 04.6	N17 08.7	280 50.8	N23 24.1	187 55.1	N 4 26.3	322 51.2	N12 24.6
R										
I	6	15 44.1	310 05.8	N17 08.8	295 51.4	N23 24.2	202 57.3	N 4 26.2	337 53.5	N12 24.6
D	7	30 46.6	325 07.1	N17 09.0	310 52.0	N23 24.4	217 59.4	N 4 26.0	352 55.8	N12 24.7
A	8	45 49.1	340 08.3	N17 09.1	325 52.6	N23 24.5	233 01.5	N 4 25.9	7 58.0	N12 24.7
Y	9	60 51.5	355 09.6	N17 09.2	340 53.2	N23 24.7	248 03.7	N 4 25.7	23 00.3	N12 24.8
	10	75 54.0	10 10.8	N17 09.3	355 53.8	N23 24.8	263 05.8	N 4 25.6	38 02.6	N12 24.8
	11	90 56.5	25 12.1	N17 09.5	10 54.4	N23 25.0	278 08.0	N 4 25.4	53 04.9	N12 24.9
	12	105 58.9	40 13.3	N17 09.6	25 54.9	N23 25.1	293 10.1	N 4 25.3	68 07.2	N12 24.9
	13	121 01.4	55 14.6	N17 09.7	40 55.5	N23 25.2	308 12.3	N 4 25.2	83 09.4	N12 25.0
	14	136 03.9	70 15.8	N17 09.8	55 56.1	N23 25.4	323 14.4	N 4 25.0	98 11.7	N12 25.0
	15	151 06.3	85 17.1	N17 10.0	70 56.7	N23 25.5	338 16.6	N 4 24.9	113 14.0	N12 25.1
	16	166 08.8	100 18.3	N17 10.1	85 57.3	N23 25.7	353 18.7	N 4 24.7	128 16.3	N12 25.1
	17	181 11.2	115 19.6	N17 10.2	100 57.9	N23 25.8	8 20.9	N 4 24.6	143 18.6	N12 25.2
	18	196 13.7	130 20.8	N17 10.4	115 58.5	N23 26.0	23 23.0	N 4 24.4	158 20.8	N12 25.2
	19	211 16.2	145 22.0	N17 10.5	130 59.1	N23 26.1	38 25.1	N 4 24.3	173 23.1	N12 25.3
	20	226 18.6	160 23.2	N17 10.6	145 59.7	N23 26.3	53 27.3	N 4 24.1	188 25.4	N12 25.3
	21	241 21.1	175 24.5	N17 10.8	161 00.3	N23 26.4	68 29.4	N 4 24.0	203 27.7	N12 25.4
	22	256 23.6	190 25.7	N17 10.9	176 00.9	N23 26.5	83 31.6	N 4 23.9	218 30.0	N12 25.4
	23	271 26.0	205 26.9	N17 11.0	191 01.5	N23 26.7	98 33.7	N 4 23.7	233 32.3	N12 25.5
			v 1.3	d 0.1	v 0.6	d 0.2	v 2.2	d 0.1	v 2.3	d 0.1

G.M.T		SUN				MOON					
d	h	GHA		Dec		GHA		v	Dec	d	HP
		°	'	°	'	°	'	'	° '	'	'
5	0	178	50.6	N22	45.0	21	31.7	7.4	S25 54.6	0.7	56.5
	1	193	50.5	N22	44.8	35	58.1	7.4	S25 53.8	0.8	56.5
	2	208	50.4	N22	44.6	50	24.6	7.5	S25 52.8	1.0	56.5
	3	223	50.3	N22	44.3	64	51.1	7.5	S25 51.7	1.1	56.5
	4	238	50.1	N22	44.1	79	17.6	7.5	S25 50.4	1.3	56.4
W	5	253	50.0	N22	43.8	93	44.2	7.6	S25 48.9	1.4	56.4
E											
D	6	268	49.9	N22	43.6	108	10.8	7.6	S25 47.4	1.6	56.4
N	7	283	49.8	N22	43.3	122	37.5	7.7	S25 45.6	1.7	56.4
E	8	298	49.7	N22	43.1	137	04.2	7.7	S25 43.8	1.9	56.4
S	9	313	49.6	N22	42.9	151	30.9	7.7	S25 41.8	2.0	56.3
D	10	328	49.5	N22	42.6	165	57.7	7.8	S25 39.6	2.2	56.3
A	11	343	49.4	N22	42.4	180	24.5	7.8	S25 37.3	2.3	56.3
Y											
	12	358	49.3	N22	42.1	194	51.4	7.9	S25 34.9	2.4	56.3
	13	13	49.2	N22	41.9	209	18.4	7.9	S25 32.3	2.6	56.3
	14	28	49.1	N22	41.6	223	45.3	8.0	S25 29.5	2.7	56.2
	15	43	49.0	N22	41.4	238	12.4	8.0	S25 26.7	2.9	56.2
	16	58	48.9	N22	41.1	252	39.5	8.1	S25 23.7	3.0	56.2
	17	73	48.8	N22	40.9	267	06.6	8.1	S25 20.5	3.1	56.2
	18	88	48.7	N22	40.6	281	33.8	8.2	S25 17.3	3.3	56.2
	19	103	48.6	N22	40.4	296	01.1	8.3	S25 13.8	3.4	56.1
	20	118	48.5	N22	40.1	310	28.4	8.3	S25 10.3	3.6	56.1
	21	133	48.4	N22	39.9	324	55.8	8.4	S25 06.6	3.7	56.1
	22	148	48.3	N22	39.6	339	23.2	8.4	S25 02.8	3.8	56.1
	23	163	48.2	N22	39.3	353	50.7	8.5	S24 58.8	4.0	56.0
6	0	178	48.1	N22	39.1	8	18.3	8.6	S24 54.7	4.1	56.0
	1	193	48.0	N22	38.8	22	45.9	8.6	S24 50.5	4.2	56.0
	2	208	47.9	N22	38.6	37	13.6	8.7	S24 46.1	4.4	56.0
	3	223	47.8	N22	38.3	51	41.4	8.8	S24 41.7	4.5	56.0
	4	238	47.7	N22	38.1	66	09.2	8.8	S24 37.0	4.6	55.9
T	5	253	47.6	N22	37.8	80	37.1	8.9	S24 32.3	4.7	55.9
H											
U	6	268	47.5	N22	37.5	95	05.1	9.0	S24 27.4	4.9	55.9
R	7	283	47.3	N22	37.3	109	33.1	9.0	S24 22.4	5.0	55.9
S	8	298	47.2	N22	37.0	124	01.2	9.1	S24 17.3	5.1	55.9
D	9	313	47.1	N22	36.8	138	29.4	9.2	S24 12.1	5.2	55.8
A	10	328	47.0	N22	36.5	152	57.7	9.2	S24 06.7	5.4	55.8
Y	11	343	46.9	N22	36.2	167	26.0	9.3	S24 01.2	5.5	55.8
	12	358	46.8	N22	36.0	181	54.4	9.4	S23 55.6	5.6	55.8
	13	13	46.7	N22	35.7	196	22.8	9.5	S23 49.8	5.7	55.8
	14	28	46.6	N22	35.4	210	51.4	9.5	S23 44.0	5.9	55.7
	15	43	46.5	N22	35.2	225	20.0	9.6	S23 38.0	6.0	55.7
	16	58	46.4	N22	34.9	239	48.7	9.7	S23 31.9	6.1	55.7
	17	73	46.3	N22	34.6	254	17.5	9.8	S23 25.7	6.2	55.7
	18	88	46.2	N22	34.4	268	46.3	9.8	S23 19.4	6.3	55.7
	19	103	46.1	N22	34.1	283	15.2	9.9	S23 12.9	6.4	55.6
	20	118	46.0	N22	33.8	297	44.2	10.0	S23 06.4	6.6	55.6
	21	133	45.9	N22	33.6	312	13.3	10.1	S22 59.7	6.7	55.6
	22	148	45.8	N22	33.3	326	42.5	10.2	S22 52.9	6.8	55.6
	23	163	45.7	N22	33.0	341	11.7	10.2	S22 46.0	6.9	55.6
7	0	178	45.6	N22	32.7	355	41.1	10.3	S22 39.0	7.0	55.5
	1	193	45.5	N22	32.5	10	10.5	10.4	S22 31.9	7.1	55.5
	2	208	45.5	N22	32.2	24	39.9	10.5	S22 24.7	7.2	55.5
	3	223	45.4	N22	31.9	39	09.5	10.6	S22 17.4	7.3	55.5
	4	238	45.3	N22	31.6	53	39.2	10.6	S22 10.0	7.4	55.5
F	5	253	45.2	N22	31.4	68	08.9	10.7	S22 02.4	7.5	55.4
R											
I	6	268	45.1	N22	31.1	82	38.7	10.8	S21 54.8	7.6	55.4
D	7	283	45.0	N22	30.8	97	08.6	10.9	S21 47.1	7.7	55.4
A	8	298	44.9	N22	30.5	111	38.6	11.0	S21 39.2	7.8	55.4
Y	9	313	44.8	N22	30.3	126	08.6	11.1	S21 31.3	7.9	55.4
	10	328	44.7	N22	30.0	140	38.7	11.1	S21 23.2	8.0	55.4
	11	343	44.6	N22	29.7	155	09.0	11.2	S21 15.1	8.1	55.3
	12	358	44.5	N22	29.4	169	39.3	11.3	S21 06.9	8.2	55.3
	13	13	44.4	N22	29.1	184	09.6	11.4	S20 58.6	8.3	55.3
	14	28	44.3	N22	28.9	198	40.1	11.5	S20 50.1	8.4	55.3
	15	43	44.2	N22	28.6	213	10.7	11.5	S20 41.6	8.5	55.3
	16	58	44.1	N22	28.3	227	41.3	11.6	S20 33.0	8.6	55.2
	17	73	44.0	N22	28.0	242	12.0	11.7	S20 24.3	8.7	55.2
	18	88	43.9	N22	27.7	256	42.8	11.8	S20 15.6	8.8	55.2
	19	103	43.8	N22	27.4	271	13.7	11.9	S20 06.7	8.9	55.2
	20	118	43.7	N22	27.2	285	44.6	12.0	S19 57.7	9.0	55.2
	21	133	43.6	N22	26.9	300	15.7	12.0	S19 48.7	9.0	55.2
	22	148	43.5	N22	26.6	314	46.8	12.1	S19 39.6	9.1	55.1
	23	163	43.4	N22	26.3	329	18.0	12.2	S19 30.3	9.2	55.1
		S.D. 15.7		d 0.3		S.D.	15.3		15.2	15.1	

STARS				
Name	SHA		Dec	
	°	'	°	'
Acamar	315	09.8	S40	11.2
Achernar	335	18.2	S57	05.1
Acrux	172	56.9	S63	15.8
Adhara	255	04.0	S29	00.7
Albireo	67	01.4	N28	01.2
Aldebaran	290	36.6	N16	34.0
Alioth	166	10.5	N55	48.5
Alkaid	152	49.7	N49	10.4
Al Na-ir	27	29.0	S46	49.0
Alnilam	275	35.1	S 1	11.0
Alphard	217	45.2	S 8	47.1
Alphecca	126	01.1	N26	37.2
Alpheratz	357	31.7	N29	14.9
Altair	61	56.8	N 8	56.7
Ankaa	353	04.3	S42	08.7
Antares	112	12.0	S26	29.8
Arcturus	145	45.2	N19	02.1
Atria	107	03.2	S69	04.9
Avior	234	14.1	S59	36.2
Bellatrix	278	20.1	N 6	22.5
Betelgeuse	270	49.3	N 7	24.7
Canopus	263	51.6	S52	42.6
Capella	280	18.1	N46	01.5
Castor	245	53.8	N31	49.5
Deneb	49	23.4	N45	22.9
Denebola	182	22.1	N14	24.8
Diphda	348	44.5	S17	49.6
Dubhe	193	37.9	N61	36.0
Elnath	277	58.6	N28	37.8
Eltanin	90	40.3	N51	29.2
Enif	33	35.7	N10	00.5
Fomalhaut	15	11.2	S29	28.0
Gacrux	171	48.5	S57	16.7
Gienah	175	40.7	S17	42.2
Hadar	148	31.7	S60	30.9
Hamal	327	48.1	N23	35.8
Kaus Austr.	83	28.3	S34	22.2
Kochab	137	19.6	N74	02.5
Markab	13	26.9	N15	21.6
Menkar	314	03.3	N 4	12.1
Menkent	147	54.1	S36	30.9
Miaplacidus	221	38.3	S69	50.3
Mirfak	308	24.5	N49	57.6
Nunki	75	43.8	S26	15.5
Peacock	53	00.6	S56	38.4
Polaris	315	32.7	N89	22.2
Pollux	243	14.2	N27	57.4
Procyon	244	48.2	N 5	09.1
Rasalhague	95	55.6	N12	32.5
Regulus	207	31.6	N11	49.6
Rigel	281	01.4	S 8	10.1
Rigil Kent	139	36.1	S60	57.5
Sabik	101	59.2	S15	45.6
Schedar	349	27.6	N56	41.4
Shaula	96	06.1	S37	07.5
Sirius	258	24.1	S16	45.3
Spica	158	19.2	S11	18.7
Suhail	222	44.5	S43	33.1
Vega	80	30.8	N38	48.7
Zuben-ubi	136	53.6	S16	09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
8	0	286 28.5	220 28.1	N17 11.2	206 02.1	N23 26.8	113 35.9	N 4 23.6	248 34.5	N12 25.5
	1	301 31.0	235 29.3	N17 11.3	221 02.7	N23 27.0	128 38.0	N 4 23.4	263 36.8	N12 25.6
	2	316 33.4	250 30.6	N17 11.4	236 03.3	N23 27.1	143 40.2	N 4 23.3	278 39.1	N12 25.6
	3	331 35.9	265 31.8	N17 11.6	251 03.9	N23 27.2	158 42.3	N 4 23.1	293 41.4	N12 25.7
	4	346 38.4	280 33.0	N17 11.7	266 04.5	N23 27.4	173 44.4	N 4 23.0	308 43.7	N12 25.7
S	5	1 40.8	295 34.2	N17 11.8	281 05.1	N23 27.5	188 46.6	N 4 22.8	323 45.9	N12 25.8
A										
T	6	16 43.3	310 35.4	N17 12.0	296 05.7	N23 27.7	203 48.7	N 4 22.7	338 48.2	N12 25.8
U	7	31 45.7	325 36.6	N17 12.1	311 06.2	N23 27.8	218 50.9	N 4 22.6	353 50.5	N12 25.9
R	8	46 48.2	340 37.8	N17 12.3	326 06.8	N23 27.9	233 53.0	N 4 22.4	8 52.8	N12 25.9
D	9	61 50.7	355 39.0	N17 12.4	341 07.4	N23 28.1	248 55.2	N 4 22.3	23 55.1	N12 26.0
A	10	76 53.1	10 40.1	N17 12.6	356 08.0	N23 28.2	263 57.3	N 4 22.1	38 57.4	N12 26.0
Y	11	91 55.6	25 41.3	N17 12.7	11 08.6	N23 28.4	278 59.4	N 4 22.0	53 59.6	N12 26.1
	12	106 58.1	40 42.5	N17 12.8	26 09.2	N23 28.5	294 01.6	N 4 21.8	69 01.9	N12 26.1
	13	122 00.5	55 43.7	N17 13.0	41 09.8	N23 28.6	309 03.7	N 4 21.7	84 04.2	N12 26.2
	14	137 03.0	70 44.9	N17 13.1	56 10.4	N23 28.8	324 05.9	N 4 21.5	99 06.5	N12 26.2
	15	152 05.5	85 46.1	N17 13.3	71 11.0	N23 28.9	339 08.0	N 4 21.4	114 08.8	N12 26.3
	16	167 07.9	100 47.2	N17 13.4	86 11.6	N23 29.0	354 10.1	N 4 21.2	129 11.1	N12 26.3
	17	182 10.4	115 48.4	N17 13.6	101 12.2	N23 29.2	9 12.3	N 4 21.1	144 13.3	N12 26.4
	18	197 12.9	130 49.6	N17 13.7	116 12.8	N23 29.3	24 14.4	N 4 21.0	159 15.6	N12 26.4
	19	212 15.3	145 50.8	N17 13.9	131 13.4	N23 29.4	39 16.6	N 4 20.8	174 17.9	N12 26.5
	20	227 17.8	160 51.9	N17 14.0	146 14.0	N23 29.6	54 18.7	N 4 20.7	189 20.2	N12 26.5
	21	242 20.2	175 53.1	N17 14.2	161 14.6	N23 29.7	69 20.9	N 4 20.5	204 22.5	N12 26.6
	22	257 22.7	190 54.2	N17 14.3	176 15.2	N23 29.8	84 23.0	N 4 20.4	219 24.8	N12 26.6
	23	272 25.2	205 55.4	N17 14.5	191 15.8	N23 30.0	99 25.1	N 4 20.2	234 27.1	N12 26.7
9	0	287 27.6	220 56.6	N17 14.6	206 16.4	N23 30.1	114 27.3	N 4 20.1	249 29.3	N12 26.7
	1	302 30.1	235 57.7	N17 14.8	221 17.0	N23 30.2	129 29.4	N 4 19.9	264 31.6	N12 26.8
	2	317 32.6	250 58.9	N17 14.9	236 17.6	N23 30.4	144 31.6	N 4 19.8	279 33.9	N12 26.8
	3	332 35.0	266 00.0	N17 15.1	251 18.2	N23 30.5	159 33.7	N 4 19.6	294 36.2	N12 26.9
	4	347 37.5	281 01.1	N17 15.3	266 18.7	N23 30.6	174 35.8	N 4 19.5	309 38.5	N12 26.9
S	5	2 40.0	296 02.3	N17 15.4	281 19.3	N23 30.8	189 38.0	N 4 19.3	324 40.8	N12 26.9
U										
N	6	17 42.4	311 03.4	N17 15.6	296 19.9	N23 30.9	204 40.1	N 4 19.2	339 43.0	N12 27.0
D	7	32 44.9	326 04.6	N17 15.7	311 20.5	N23 31.0	219 42.2	N 4 19.1	354 45.3	N12 27.0
A	8	47 47.4	341 05.7	N17 15.9	326 21.1	N23 31.2	234 44.4	N 4 18.9	9 47.6	N12 27.1
Y	9	62 49.8	356 06.8	N17 16.0	341 21.7	N23 31.3	249 46.5	N 4 18.8	24 49.9	N12 27.1
	10	77 52.3	11 08.0	N17 16.2	356 22.3	N23 31.4	264 48.7	N 4 18.6	39 52.2	N12 27.2
	11	92 54.7	26 09.1	N17 16.4	11 22.9	N23 31.5	279 50.8	N 4 18.5	54 54.5	N12 27.2
	12	107 57.2	41 10.2	N17 16.5	26 23.5	N23 31.7	294 52.9	N 4 18.3	69 56.8	N12 27.3
	13	122 59.7	56 11.3	N17 16.7	41 24.1	N23 31.8	309 55.1	N 4 18.2	84 59.1	N12 27.3
	14	138 02.1	71 12.5	N17 16.9	56 24.7	N23 31.9	324 57.2	N 4 18.0	100 01.3	N12 27.4
	15	153 04.6	86 13.6	N17 17.0	71 25.3	N23 32.1	339 59.3	N 4 17.9	115 03.6	N12 27.4
	16	168 07.1	101 14.7	N17 17.2	86 25.9	N23 32.2	355 01.5	N 4 17.7	130 05.9	N12 27.5
	17	183 09.5	116 15.8	N17 17.3	101 26.5	N23 32.3	10 03.6	N 4 17.6	145 08.2	N12 27.5
	18	198 12.0	131 16.9	N17 17.5	116 27.1	N23 32.4	25 05.8	N 4 17.4	160 10.5	N12 27.6
	19	213 14.5	146 18.0	N17 17.7	131 27.7	N23 32.6	40 07.9	N 4 17.3	175 12.8	N12 27.6
	20	228 16.9	161 19.1	N17 17.8	146 28.3	N23 32.7	55 10.0	N 4 17.1	190 15.1	N12 27.7
	21	243 19.4	176 20.2	N17 18.0	161 28.9	N23 32.8	70 12.2	N 4 17.0	205 17.3	N12 27.7
	22	258 21.9	191 21.3	N17 18.2	176 29.5	N23 32.9	85 14.3	N 4 16.8	220 19.6	N12 27.8
	23	273 24.3	206 22.4	N17 18.3	191 30.1	N23 33.1	100 16.4	N 4 16.7	235 21.9	N12 27.8
10	0	288 26.8	221 23.5	N17 18.5	206 30.7	N23 33.2	115 18.6	N 4 16.5	250 24.2	N12 27.9
	1	303 29.2	236 24.6	N17 18.7	221 31.3	N23 33.3	130 20.7	N 4 16.4	265 26.5	N12 27.9
	2	318 31.7	251 25.7	N17 18.9	236 31.9	N23 33.4	145 22.8	N 4 16.3	280 28.8	N12 28.0
	3	333 34.2	266 26.8	N17 19.0	251 32.5	N23 33.6	160 25.0	N 4 16.1	295 31.1	N12 28.0
	4	348 36.6	281 27.9	N17 19.2	266 33.1	N23 33.7	175 27.1	N 4 16.0	310 33.4	N12 28.1
M	5	3 39.1	296 29.0	N17 19.4	281 33.7	N23 33.8	190 29.2	N 4 15.8	325 35.7	N12 28.1
O										
N	6	18 41.6	311 30.0	N17 19.5	296 34.3	N23 33.9	205 31.4	N 4 15.7	340 37.9	N12 28.1
D	7	33 44.0	326 31.1	N17 19.7	311 34.9	N23 34.0	220 33.5	N 4 15.5	355 40.2	N12 28.2
A	8	48 46.5	341 32.2	N17 19.9	326 35.4	N23 34.2	235 35.6	N 4 15.4	10 42.5	N12 28.2
Y	9	63 49.0	356 33.3	N17 20.1	341 36.0	N23 34.3	250 37.8	N 4 15.2	25 44.8	N12 28.3
	10	78 51.4	11 34.3	N17 20.2	356 36.6	N23 34.4	265 39.9	N 4 15.1	40 47.1	N12 28.3
	11	93 53.9	26 35.4	N17 20.4	11 37.2	N23 34.5	280 42.1	N 4 14.9	55 49.4	N12 28.4
	12	108 56.3	41 36.5	N17 20.6	26 37.8	N23 34.6	295 44.2	N 4 14.8	70 51.7	N12 28.4
	13	123 58.8	56 37.5	N17 20.8	41 38.4	N23 34.8	310 46.3	N 4 14.6	85 54.0	N12 28.5
	14	139 01.3	71 38.6	N17 20.9	56 39.0	N23 34.9	325 48.5	N 4 14.5	100 56.3	N12 28.5
	15	154 03.7	86 39.7	N17 21.1	71 39.6	N23 35.0	340 50.6	N 4 14.3	115 58.6	N12 28.6
	16	169 06.2	101 40.7	N17 21.3	86 40.2	N23 35.1	355 52.7	N 4 14.2	131 00.8	N12 28.6
	17	184 08.7	116 41.8	N17 21.5	101 40.8	N23 35.2	10 54.8	N 4 14.0	146 03.1	N12 28.7
	18	199 11.1	131 42.8	N17 21.7	116 41.4	N23 35.3	25 57.0	N 4 13.9	161 05.4	N12 28.7
	19	214 13.6	146 43.9	N17 21.8	131 42.0	N23 35.5	40 59.1	N 4 13.7	176 07.7	N12 28.8
	20	229 16.1	161 44.9	N17 22.0	146 42.6	N23 35.6	56 01.2	N 4 13.6	191 10.0	N12 28.8
	21	244 18.5	176 46.0	N17 22.2	161 43.2	N23 35.7	71 03.4	N 4 13.4	206 12.3	N12 28.8
	22	259 21.0	191 47.0	N17 22.4	176 43.8	N23 35.8	86 05.5	N 4 13.3	221 14.6	N12 28.9
	23	274 23.5	206 48.0	N17 22.6	191 44.4	N23 35.9	101 07.6	N 4 13.1	236 16.9	N12 28.9
			v 1.1	d 0.2	v 0.6	d 0.1	v 2.1	d 0.1	v 2.3	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '	Name	SHA ° '	Dec ° '
8 0	178 43.3	N22 26.0	343 49.3	12.3	S19 21.0	9.3	55.1	Acamar	315 09.8	S40 11.1
1	193 43.2	N22 25.7	358 20.6	12.4	S19 11.7	9.4	55.1	Achernar	335 18.2	S57 05.1
2	208 43.1	N22 25.4	12 52.1	12.4	S19 02.2	9.5	55.1	Acrux	172 56.9	S63 15.8
3	223 43.0	N22 25.1	27 23.6	12.5	S18 52.7	9.5	55.0	Adhara	255 04.0	S29 00.7
4	238 42.9	N22 24.8	41 55.2	12.6	S18 43.0	9.6	55.0	Albireo	67 01.3	N28 01.3
S 5	253 42.9	N22 24.5	56 26.9	12.7	S18 33.3	9.7	55.0			
A								Aldebaran	290 36.6	N16 34.0
T 6	268 42.8	N22 24.3	70 58.6	12.8	S18 23.6	9.8	55.0	Alioth	166 10.5	N55 48.5
U 7	283 42.7	N22 24.0	85 30.5	12.8	S18 13.7	9.8	55.0	Alkaid	152 49.7	N49 10.4
R 8	298 42.6	N22 23.7	100 02.4	12.9	S18 03.8	9.9	55.0	Al Na-ir	27 29.0	S46 49.0
D 9	313 42.5	N22 23.4	114 34.4	13.0	S17 53.8	10.0	54.9	Alnilam	275 35.1	S 1 11.0
A 10	328 42.4	N22 23.1	129 06.4	13.1	S17 43.7	10.1	54.9			
Y 11	343 42.3	N22 22.8	143 38.6	13.1	S17 33.6	10.1	54.9	Alphard	217 45.2	S 8 47.0
								Alphecca	126 01.1	N26 37.2
12	358 42.2	N22 22.5	158 10.8	13.2	S17 23.4	10.2	54.9	Alpheratz	357 31.7	N29 14.9
13	13 42.1	N22 22.2	172 43.1	13.3	S17 13.1	10.3	54.9	Altair	61 56.8	N 8 56.7
14	28 42.0	N22 21.9	187 15.5	13.4	S17 02.8	10.3	54.9	Ankaa	353 04.3	S42 08.7
15	43 41.9	N22 21.6	201 47.9	13.5	S16 52.4	10.4	54.8			
16	58 41.8	N22 21.3	216 20.5	13.5	S16 41.9	10.5	54.8	Antares	112 12.0	S26 29.8
17	73 41.7	N22 21.0	230 53.1	13.6	S16 31.3	10.5	54.8	Arcturus	145 45.2	N19 02.1
								Atria	107 03.2	S69 04.9
18	88 41.7	N22 20.7	245 25.7	13.7	S16 20.7	10.6	54.8	Avior	234 14.1	S59 36.2
19	103 41.6	N22 20.4	259 58.5	13.7	S16 10.0	10.7	54.8	Bellatrix	278 20.1	N 6 22.5
20	118 41.5	N22 20.1	274 31.3	13.8	S15 59.3	10.7	54.8			
21	133 41.4	N22 19.8	289 04.2	13.9	S15 48.5	10.8	54.8	Betelgeuse	270 49.3	N 7 24.7
22	148 41.3	N22 19.5	303 37.2	14.0	S15 37.7	10.9	54.7	Canopus	263 51.6	S52 42.6
23	163 41.2	N22 19.2	318 10.2	14.0	S15 26.8	10.9	54.7	Capella	280 18.1	N46 01.5
								Castor	245 53.8	N31 49.5
9 0	178 41.1	N22 18.9	332 43.3	14.1	S15 15.8	11.0	54.7	Deneb	49 23.4	N45 22.9
1	193 41.0	N22 18.6	347 16.4	14.2	S15 04.8	11.0	54.7			
2	208 40.9	N22 18.3	1 49.7	14.2	S14 53.7	11.1	54.7	Denebola	182 22.1	N14 24.8
3	223 40.8	N22 18.0	16 23.0	14.3	S14 42.5	11.1	54.7	Diphda	348 44.4	S17 49.5
4	238 40.7	N22 17.7	30 56.3	14.4	S14 31.3	11.2	54.7	Dubhe	193 37.9	N61 35.9
S 5	253 40.7	N22 17.3	45 29.8	14.4	S14 20.1	11.2	54.6	Elnath	277 58.6	N28 37.8
U								Eltanin	90 40.4	N51 29.2
N 6	268 40.6	N22 17.0	60 03.3	14.5	S14 08.8	11.3	54.6			
D 7	283 40.5	N22 16.7	74 36.8	14.6	S13 57.4	11.4	54.6	Enif	33 35.6	N10 00.5
A 8	298 40.4	N22 16.4	89 10.5	14.6	S13 46.0	11.4	54.6	Fomalhaut	15 11.2	S29 28.0
Y 9	313 40.3	N22 16.1	103 44.2	14.7	S13 34.6	11.5	54.6	Gacrux	171 48.5	S57 16.7
10	328 40.2	N22 15.8	118 17.9	14.8	S13 23.1	11.5	54.6	Gienah	175 40.7	S17 42.2
11	343 40.1	N22 15.5	132 51.7	14.8	S13 11.5	11.5	54.6	Hadar	148 31.7	S60 31.0
12	358 40.0	N22 15.2	147 25.6	14.9	S12 59.9	11.6	54.5	Hamal	327 48.1	N23 35.9
13	13 39.9	N22 14.9	161 59.5	14.9	S12 48.3	11.6	54.5	Kaus Austr.	83 28.3	S34 22.2
14	28 39.9	N22 14.5	176 33.5	15.0	S12 36.6	11.7	54.5	Kochab	137 19.7	N74 02.5
15	43 39.8	N22 14.2	191 07.6	15.1	S12 24.9	11.7	54.5	Markab	13 26.8	N15 21.6
16	58 39.7	N22 13.9	205 41.7	15.1	S12 13.1	11.8	54.5	Menkar	314 03.3	N 4 12.2
17	73 39.6	N22 13.6	220 15.9	15.2	S12 01.3	11.8	54.5			
								Menkent	147 54.1	S36 30.9
18	88 39.5	N22 13.3	234 50.1	15.2	S11 49.5	11.9	54.5	Miaplacidus	221 38.3	S69 50.3
19	103 39.4	N22 13.0	249 24.4	15.3	S11 37.6	11.9	54.5	Mirfak	308 24.4	N49 57.6
20	118 39.3	N22 12.6	263 58.7	15.3	S11 25.6	11.9	54.5	Nunki	75 43.8	S26 15.5
21	133 39.2	N22 12.3	278 33.1	15.4	S11 13.7	12.0	54.4	Peacock	53 00.6	S56 38.4
22	148 39.2	N22 12.0	293 07.5	15.4	S11 01.6	12.0	54.4			
23	163 39.1	N22 11.7	307 42.0	15.5	S10 49.6	12.0	54.4	Polaris	315 31.5	N89 22.2
								Pollux	243 14.2	N27 57.4
10 0	178 39.0	N22 11.4	322 16.6	15.5	S10 37.5	12.1	54.4	Procyon	244 48.2	N 5 09.1
1	193 38.9	N22 11.0	336 51.1	15.6	S10 25.4	12.1	54.4	Rasalhague	95 55.6	N12 32.5
2	208 38.8	N22 10.7	351 25.8	15.6	S10 13.2	12.2	54.4	Regulus	207 31.6	N11 49.6
3	223 38.7	N22 10.4	6 00.5	15.7	S10 01.1	12.2	54.4			
4	238 38.6	N22 10.1	20 35.2	15.7	S 9 48.8	12.2	54.4	Rigel	281 01.4	S 8 10.1
M 5	253 38.6	N22 09.8	35 10.0	15.8	S 9 36.6	12.3	54.4	Rigil Kent	139 36.1	S60 57.5
O								Sabik	101 59.2	S15 45.6
N 6	268 38.5	N22 09.4	49 44.8	15.8	S 9 24.3	12.3	54.3	Schedar	349 27.6	N56 41.4
D 7	283 38.4	N22 09.1	64 19.7	15.9	S 9 12.0	12.3	54.3	Shaula	96 06.1	S37 07.5
A 8	298 38.3	N22 08.8	78 54.6	15.9	S 8 59.6	12.3	54.3			
Y 9	313 38.2	N22 08.5	93 29.6	16.0	S 8 47.3	12.4	54.3	Sirius	258 24.1	S16 45.3
10	328 38.1	N22 08.1	108 04.6	16.0	S 8 34.9	12.4	54.3	Spica	158 19.2	S11 18.7
11	343 38.1	N22 07.8	122 39.6	16.0	S 8 22.4	12.4	54.3	Suhail	222 44.5	S43 33.0
								Vega	80 30.8	N38 48.7
12	358 38.0	N22 07.5	137 14.7	16.1	S 8 10.0	12.5	54.3	Zuben-ubi	136 53.6	S16 09.7
13	13 37.9	N22 07.1	151 49.8	16.1	S 7 57.5	12.5	54.3			
14	28 37.8	N22 06.8	166 25.0	16.2	S 7 45.0	12.5	54.3			
15	43 37.7	N22 06.5	181 00.1	16.2	S 7 32.5	12.5	54.3			
16	58 37.6	N22 06.1	195 35.4	16.2	S 7 19.9	12.6	54.3			
17	73 37.5	N22 05.8	210 10.6	16.3	S 7 07.3	12.6	54.3			
18	88 37.5	N22 05.5	224 45.9	16.3	S 6 54.7	12.6	54.2			
19	103 37.4	N22 05.1	239 21.3	16.3	S 6 42.1	12.6	54.2			
20	118 37.3	N22 04.8	253 56.6	16.4	S 6 29.5	12.6	54.2			
21	133 37.2	N22 04.5	268 32.0	16.4	S 6 16.8	12.7	54.2			
22	148 37.1	N22 04.1	283 07.5	16.4	S 6 04.1	12.7	54.2			
23	163 37.1	N22 03.8	297 42.9	16.5	S 5 51.4	12.7	54.2			
	S.D. 15.7	d 0.3	S.D.	15.0	14.9	14.8				

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
11	0	289 25.9	221 49.1	N17 22.8	206 45.0	N23 36.0	116 09.8	N 4 13.0	251 19.2	N12 29.0
	1	304 28.4	236 50.1	N17 22.9	221 45.6	N23 36.2	131 11.9	N 4 12.8	266 21.5	N12 29.0
	2	319 30.8	251 51.1	N17 23.1	236 46.2	N23 36.3	146 14.0	N 4 12.7	281 23.8	N12 29.1
	3	334 33.3	266 52.2	N17 23.3	251 46.8	N23 36.4	161 16.2	N 4 12.5	296 26.0	N12 29.1
	4	349 35.8	281 53.2	N17 23.5	266 47.4	N23 36.5	176 18.3	N 4 12.4	311 28.3	N12 29.2
T	5	4 38.2	296 54.2	N17 23.7	281 48.0	N23 36.6	191 20.4	N 4 12.2	326 30.6	N12 29.2
U										
E	6	19 40.7	311 55.2	N17 23.9	296 48.6	N23 36.7	206 22.6	N 4 12.1	341 32.9	N12 29.3
S	7	34 43.2	326 56.3	N17 24.1	311 49.2	N23 36.8	221 24.7	N 4 11.9	356 35.2	N12 29.3
D	8	49 45.6	341 57.3	N17 24.2	326 49.8	N23 36.9	236 26.8	N 4 11.8	11 37.5	N12 29.4
A	9	64 48.1	356 58.3	N17 24.4	341 50.4	N23 37.1	251 28.9	N 4 11.6	26 39.8	N12 29.4
Y	10	79 50.6	11 59.3	N17 24.6	356 51.0	N23 37.2	266 31.1	N 4 11.5	41 42.1	N12 29.4
	11	94 53.0	27 00.3	N17 24.8	11 51.6	N23 37.3	281 33.2	N 4 11.3	56 44.4	N12 29.5
	12	109 55.5	42 01.3	N17 25.0	26 52.2	N23 37.4	296 35.3	N 4 11.2	71 46.7	N12 29.5
	13	124 58.0	57 02.3	N17 25.2	41 52.8	N23 37.5	311 37.5	N 4 11.0	86 49.0	N12 29.6
	14	140 00.4	72 03.3	N17 25.4	56 53.4	N23 37.6	326 39.6	N 4 10.9	101 51.3	N12 29.6
	15	155 02.9	87 04.3	N17 25.6	71 54.0	N23 37.7	341 41.7	N 4 10.7	116 53.6	N12 29.7
	16	170 05.3	102 05.3	N17 25.8	86 54.6	N23 37.8	356 43.9	N 4 10.6	131 55.8	N12 29.7
	17	185 07.8	117 06.3	N17 26.0	101 55.2	N23 37.9	11 46.0	N 4 10.4	146 58.1	N12 29.8
	18	200 10.3	132 07.3	N17 26.2	116 55.8	N23 38.0	26 48.1	N 4 10.3	162 00.4	N12 29.8
	19	215 12.7	147 08.3	N17 26.4	131 56.4	N23 38.2	41 50.2	N 4 10.1	177 02.7	N12 29.9
	20	230 15.2	162 09.3	N17 26.5	146 57.0	N23 38.3	56 52.4	N 4 10.0	192 05.0	N12 29.9
	21	245 17.7	177 10.3	N17 26.7	161 57.6	N23 38.4	71 54.5	N 4 09.8	207 07.3	N12 30.0
	22	260 20.1	192 11.3	N17 26.9	176 58.2	N23 38.5	86 56.6	N 4 09.7	222 09.6	N12 30.0
	23	275 22.6	207 12.3	N17 27.1	191 58.8	N23 38.6	101 58.7	N 4 09.5	237 11.9	N12 30.0
12	0	290 25.1	222 13.3	N17 27.3	206 59.4	N23 38.7	117 00.9	N 4 09.4	252 14.2	N12 30.1
	1	305 27.5	237 14.2	N17 27.5	221 60.0	N23 38.8	132 03.0	N 4 09.2	267 16.5	N12 30.1
	2	320 30.0	252 15.2	N17 27.7	237 00.6	N23 38.9	147 05.1	N 4 09.1	282 18.8	N12 30.2
	3	335 32.4	267 16.2	N17 27.9	252 01.2	N23 39.0	162 07.3	N 4 08.9	297 21.1	N12 30.2
	4	350 34.9	282 17.2	N17 28.1	267 01.8	N23 39.1	177 09.4	N 4 08.7	312 23.4	N12 30.3
W	5	5 37.4	297 18.1	N17 28.3	282 02.4	N23 39.2	192 11.5	N 4 08.6	327 25.7	N12 30.3
E										
D	6	20 39.8	312 19.1	N17 28.5	297 03.0	N23 39.3	207 13.6	N 4 08.4	342 28.0	N12 30.4
N	7	35 42.3	327 20.1	N17 28.7	312 03.6	N23 39.4	222 15.8	N 4 08.3	357 30.3	N12 30.4
E	8	50 44.8	342 21.0	N17 28.9	327 04.2	N23 39.5	237 17.9	N 4 08.1	12 32.6	N12 30.4
S	9	65 47.2	357 22.0	N17 29.1	342 04.8	N23 39.6	252 20.0	N 4 08.0	27 34.9	N12 30.5
D	10	80 49.7	12 22.9	N17 29.3	357 05.4	N23 39.7	267 22.1	N 4 07.8	42 37.2	N12 30.5
A	11	95 52.2	27 23.9	N17 29.5	12 06.0	N23 39.8	282 24.3	N 4 07.7	57 39.4	N12 30.6
Y										
	12	110 54.6	42 24.8	N17 29.7	27 06.6	N23 39.9	297 26.4	N 4 07.5	72 41.7	N12 30.6
	13	125 57.1	57 25.8	N17 29.9	42 07.2	N23 40.0	312 28.5	N 4 07.4	87 44.0	N12 30.7
	14	140 59.6	72 26.8	N17 30.1	57 07.8	N23 40.1	327 30.6	N 4 07.2	102 46.3	N12 30.7
	15	156 02.0	87 27.7	N17 30.3	72 08.4	N23 40.2	342 32.8	N 4 07.1	117 48.6	N12 30.8
	16	171 04.5	102 28.6	N17 30.5	87 09.0	N23 40.3	357 34.9	N 4 06.9	132 50.9	N12 30.8
	17	186 06.9	117 29.6	N17 30.7	102 09.6	N23 40.4	12 37.0	N 4 06.8	147 53.2	N12 30.8
	18	201 09.4	132 30.5	N17 31.0	117 10.2	N23 40.5	27 39.1	N 4 06.6	162 55.5	N12 30.9
	19	216 11.9	147 31.5	N17 31.2	132 10.8	N23 40.6	42 41.3	N 4 06.5	177 57.8	N12 30.9
	20	231 14.3	162 32.4	N17 31.4	147 11.4	N23 40.7	57 43.4	N 4 06.3	193 00.1	N12 31.0
	21	246 16.8	177 33.3	N17 31.6	162 12.0	N23 40.8	72 45.5	N 4 06.2	208 02.4	N12 31.0
	22	261 19.3	192 34.3	N17 31.8	177 12.6	N23 40.9	87 47.6	N 4 06.0	223 04.7	N12 31.1
	23	276 21.7	207 35.2	N17 32.0	192 13.2	N23 41.0	102 49.8	N 4 05.9	238 07.0	N12 31.1
13	0	291 24.2	222 36.1	N17 32.2	207 13.8	N23 41.1	117 51.9	N 4 05.7	253 09.3	N12 31.2
	1	306 26.7	237 37.0	N17 32.4	222 14.4	N23 41.2	132 54.0	N 4 05.5	268 11.6	N12 31.2
	2	321 29.1	252 38.0	N17 32.6	237 15.0	N23 41.3	147 56.1	N 4 05.4	283 13.9	N12 31.2
	3	336 31.6	267 38.9	N17 32.8	252 15.6	N23 41.4	162 58.2	N 4 05.2	298 16.2	N12 31.3
	4	351 34.1	282 39.8	N17 33.0	267 16.2	N23 41.5	178 00.4	N 4 05.1	313 18.5	N12 31.3
T	5	6 36.5	297 40.7	N17 33.2	282 16.8	N23 41.6	193 02.5	N 4 04.9	328 20.8	N12 31.4
H										
U	6	21 39.0	312 41.6	N17 33.5	297 17.4	N23 41.7	208 04.6	N 4 04.8	343 23.1	N12 31.4
R	7	36 41.4	327 42.5	N17 33.7	312 18.0	N23 41.8	223 06.7	N 4 04.6	358 25.4	N12 31.5
S	8	51 43.9	342 43.5	N17 33.9	327 18.6	N23 41.9	238 08.9	N 4 04.5	13 27.7	N12 31.5
D	9	66 46.4	357 44.4	N17 34.1	342 19.2	N23 42.0	253 11.0	N 4 04.3	28 30.0	N12 31.5
A	10	81 48.8	12 45.3	N17 34.3	357 19.8	N23 42.1	268 13.1	N 4 04.2	43 32.3	N12 31.6
Y	11	96 51.3	27 46.2	N17 34.5	12 20.4	N23 42.2	283 15.2	N 4 04.0	58 34.6	N12 31.6
	12	111 53.8	42 47.1	N17 34.7	27 21.0	N23 42.3	298 17.3	N 4 03.9	73 36.9	N12 31.7
	13	126 56.2	57 48.0	N17 34.9	42 21.6	N23 42.3	313 19.5	N 4 03.7	88 39.2	N12 31.7
	14	141 58.7	72 48.9	N17 35.2	57 22.2	N23 42.4	328 21.6	N 4 03.5	103 41.5	N12 31.8
	15	157 01.2	87 49.8	N17 35.4	72 22.8	N23 42.5	343 23.7	N 4 03.4	118 43.8	N12 31.8
	16	172 03.6	102 50.6	N17 35.6	87 23.4	N23 42.6	358 25.8	N 4 03.2	133 46.1	N12 31.9
	17	187 06.1	117 51.5	N17 35.8	102 24.0	N23 42.7	13 27.9	N 4 03.1	148 48.4	N12 31.9
	18	202 08.5	132 52.4	N17 36.0	117 24.6	N23 42.8	28 30.1	N 4 02.9	163 50.7	N12 31.9
	19	217 11.0	147 53.3	N17 36.2	132 25.2	N23 42.9	43 32.2	N 4 02.8	178 53.0	N12 32.0
	20	232 13.5	162 54.2	N17 36.5	147 25.8	N23 43.0	58 34.3	N 4 02.6	193 55.3	N12 32.0
	21	247 15.9	177 55.1	N17 36.7	162 26.4	N23 43.1	73 36.4	N 4 02.5	208 57.6	N12 32.1
	22	262 18.4	192 55.9	N17 36.9	177 27.0	N23 43.2	88 38.5	N 4 02.3	223 59.9	N12 32.1
	23	277 20.9	207 56.8	N17 37.1	192 27.6	N23 43.2	103 40.7	N 4 02.2	239 02.2	N12 32.2
			v 1.0	d 0.2	v 0.6	d 0.1	v 2.1	d 0.2	v 2.3	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
11 0	178 37.0	N22 03.5	312 18.4	16.5	S 5 38.7	12.7	54.2	Acamar	315 09.8	S40 11.1
1	193 36.9	N22 03.1	326 53.9	16.5	S 5 26.0	12.7	54.2	Achernar	335 18.2	S57 05.1
2	208 36.8	N22 02.8	341 29.5	16.5	S 5 13.2	12.8	54.2	Acrux	172 56.9	S63 15.8
3	223 36.7	N22 02.5	356 05.0	16.6	S 5 00.5	12.8	54.2	Adhara	255 04.0	S29 00.6
4	238 36.6	N22 02.1	10 40.6	16.6	S 4 47.7	12.8	54.2	Albireo	67 01.3	N28 01.3
T 5	253 36.6	N22 01.8	25 16.2	16.6	S 4 34.9	12.8	54.2			
U								Aldebaran	290 36.6	N16 34.0
E 6	268 36.5	N22 01.4	39 51.9	16.6	S 4 22.1	12.8	54.2	Alioth	166 10.6	N55 48.5
S 7	283 36.4	N22 01.1	54 27.5	16.7	S 4 09.3	12.8	54.2	Alkaid	152 49.7	N49 10.4
D 8	298 36.3	N22 00.8	69 03.2	16.7	S 3 56.4	12.8	54.2	Al Na-ir	27 28.9	S46 49.0
A 9	313 36.2	N22 00.4	83 38.9	16.7	S 3 43.6	12.8	54.2	Alnilam	275 35.1	S 1 11.0
Y 10	328 36.2	N22 00.1	98 14.6	16.7	S 3 30.7	12.9	54.2			
11	343 36.1	N21 59.7	112 50.3	16.7	S 3 17.8	12.9	54.2	Alphard	217 45.2	S 8 47.0
								Alphecca	126 01.1	N26 37.2
12	358 36.0	N21 59.4	127 26.1	16.7	S 3 05.0	12.9	54.2	Alpheratz	357 31.7	N29 14.9
13	13 35.9	N21 59.0	142 01.8	16.8	S 2 52.1	12.9	54.2	Altair	61 56.8	N 8 56.7
14	28 35.8	N21 58.7	156 37.6	16.8	S 2 39.2	12.9	54.2	Ankaa	353 04.2	S42 08.7
15	43 35.8	N21 58.3	171 13.4	16.8	S 2 26.3	12.9	54.2			
16	58 35.7	N21 58.0	185 49.2	16.8	S 2 13.4	12.9	54.2	Antares	112 12.0	S26 29.8
17	73 35.6	N21 57.7	200 25.0	16.8	S 2 00.5	12.9	54.2	Arcturus	145 45.2	N19 02.1
								Atria	107 03.2	S69 04.9
18	88 35.5	N21 57.3	215 00.9	16.8	S 1 47.6	12.9	54.2	Avior	234 14.1	S59 36.2
19	103 35.5	N21 57.0	229 36.7	16.8	S 1 34.6	12.9	54.2	Bellatrix	278 20.1	N 6 22.5
20	118 35.4	N21 56.6	244 12.5	16.8	S 1 21.7	12.9	54.1			
21	133 35.3	N21 56.3	258 48.4	16.9	S 1 08.8	12.9	54.1	Betelgeuse	270 49.3	N 7 24.7
22	148 35.2	N21 55.9	273 24.3	16.9	S 0 55.8	12.9	54.1	Canopus	263 51.6	S52 42.6
23	163 35.1	N21 55.6	288 00.1	16.9	S 0 42.9	12.9	54.1	Capella	280 18.1	N46 01.5
								Castor	245 53.8	N31 49.5
12 0	178 35.1	N21 55.2	302 36.0	16.9	S 0 30.0	12.9	54.1	Deneb	49 23.3	N45 23.0
1	193 35.0	N21 54.8	317 11.9	16.9	S 0 17.0	12.9	54.1			
2	208 34.9	N21 54.5	331 47.7	16.9	S 0 04.1	12.9	54.2	Denebola	182 22.2	N14 24.8
3	223 34.8	N21 54.1	346 23.6	16.9	N 0 08.9	12.9	54.2	Diphda	348 44.4	S17 49.5
4	238 34.8	N21 53.8	0 59.5	16.9	N 0 21.8	12.9	54.2	Dubhe	193 38.0	N61 35.9
W 5	253 34.7	N21 53.4	15 35.4	16.9	N 0 34.7	12.9	54.2	Elnath	277 58.6	N28 37.8
E								Eltanin	90 40.4	N51 29.2
D 6	268 34.6	N21 53.1	30 11.2	16.9	N 0 47.7	12.9	54.2			
N 7	283 34.5	N21 52.7	44 47.1	16.9	N 1 00.6	12.9	54.2	Enif	33 35.6	N10 00.5
E 8	298 34.5	N21 52.4	59 23.0	16.9	N 1 13.5	12.9	54.2	Fomalhaut	15 11.1	S29 28.0
S 9	313 34.4	N21 52.0	73 58.8	16.9	N 1 26.5	12.9	54.2	Gacrux	171 48.5	S57 16.7
D 10	328 34.3	N21 51.6	88 34.7	16.9	N 1 39.4	12.9	54.2	Gienah	175 40.7	S17 42.2
A 11	343 34.2	N21 51.3	103 10.6	16.8	N 1 52.3	12.9	54.2	Hadar	148 31.8	S60 31.0
Y										
12	358 34.2	N21 50.9	117 46.4	16.8	N 2 05.2	12.9	54.2	Hamal	327 48.0	N23 35.9
13	13 34.1	N21 50.6	132 22.2	16.8	N 2 18.1	12.9	54.2	Kaus Austr.	83 28.3	S34 22.2
14	28 34.0	N21 50.2	146 58.1	16.8	N 2 31.0	12.9	54.2	Kochab	137 19.7	N74 02.5
15	43 33.9	N21 49.8	161 33.9	16.8	N 2 43.9	12.9	54.2	Markab	13 26.8	N15 21.6
16	58 33.9	N21 49.5	176 09.7	16.8	N 2 56.8	12.9	54.2	Menkar	314 03.3	N 4 12.2
17	73 33.8	N21 49.1	190 45.4	16.8	N 3 09.6	12.9	54.2			
								Menkent	147 54.1	S36 30.9
18	88 33.7	N21 48.8	205 21.2	16.8	N 3 22.5	12.9	54.2	Miaplacidus	221 38.3	S69 50.3
19	103 33.6	N21 48.4	219 57.0	16.8	N 3 35.4	12.8	54.2	Mirfak	308 24.4	N49 57.6
20	118 33.6	N21 48.0	234 32.7	16.7	N 3 48.2	12.8	54.2	Nunki	75 43.8	S26 15.5
21	133 33.5	N21 47.7	249 08.4	16.7	N 4 01.0	12.8	54.2	Peacock	53 00.6	S56 38.4
22	148 33.4	N21 47.3	263 44.1	16.7	N 4 13.8	12.8	54.2			
23	163 33.4	N21 46.9	278 19.8	16.7	N 4 26.6	12.8	54.2	Polaris	315 30.4	N89 22.2
								Pollux	243 14.2	N27 57.4
13 0	178 33.3	N21 46.6	292 55.5	16.7	N 4 39.4	12.8	54.2	Procyon	244 48.1	N 5 09.1
1	193 33.2	N21 46.2	307 31.1	16.6	N 4 52.2	12.8	54.2	Rasalhague	95 55.6	N12 32.5
2	208 33.1	N21 45.8	322 06.8	16.6	N 5 04.9	12.8	54.3	Regulus	207 31.6	N11 49.6
3	223 33.1	N21 45.4	336 42.4	16.6	N 5 17.7	12.7	54.3			
4	238 33.0	N21 45.1	351 17.9	16.6	N 5 30.4	12.7	54.3	Rigel	281 01.4	S 8 10.1
T 5	253 32.9	N21 44.7	5 53.5	16.5	N 5 43.1	12.7	54.3	Rigil Kent	139 36.2	S60 57.5
H								Sabik	101 59.2	S15 45.6
U 6	268 32.8	N21 44.3	20 29.0	16.5	N 5 55.8	12.7	54.3	Schedar	349 27.6	N56 41.5
R 7	283 32.8	N21 44.0	35 04.5	16.5	N 6 08.5	12.7	54.3	Shaula	96 06.1	S37 07.5
S 8	298 32.7	N21 43.6	49 39.9	16.5	N 6 21.1	12.7	54.3			
D 9	313 32.6	N21 43.2	64 15.4	16.4	N 6 33.8	12.6	54.3	Sirius	258 24.1	S16 45.3
A 10	328 32.6	N21 42.8	78 50.8	16.4	N 6 46.4	12.6	54.3	Spica	158 19.2	S11 18.7
Y 11	343 32.5	N21 42.5	93 26.2	16.4	N 6 59.0	12.6	54.3	Suhail	222 44.5	S43 33.0
								Vega	80 30.8	N38 48.7
12	358 32.4	N21 42.1	108 01.5	16.3	N 7 11.6	12.6	54.3	Zuben-ubi	136 53.6	S16 09.7
13	13 32.4	N21 41.7	122 36.8	16.3	N 7 24.1	12.5	54.4			
14	28 32.3	N21 41.3	137 12.1	16.3	N 7 36.6	12.5	54.4			
15	43 32.2	N21 41.0	151 47.3	16.2	N 7 49.1	12.5	54.4			
16	58 32.2	N21 40.6	166 22.5	16.2	N 8 01.6	12.5	54.4			
17	73 32.1	N21 40.2	180 57.6	16.2	N 8 14.1	12.5	54.4			
18	88 32.0	N21 39.8	195 32.7	16.1	N 8 26.5	12.4	54.4			
19	103 31.9	N21 39.4	210 07.8	16.1	N 8 38.9	12.4	54.4			
20	118 31.9	N21 39.1	224 42.9	16.0	N 8 51.3	12.4	54.4			
21	133 31.8	N21 38.7	239 17.8	16.0	N 9 03.6	12.3	54.4			
22	148 31.7	N21 38.3	253 52.8	15.9	N 9 15.9	12.3	54.5			
23	163 31.7	N21 37.9	268 27.7	15.9	N 9 28.2	12.3	54.5			
	S.D. 15.7	d 0.4	S.D.	14.8	14.8	14.8				

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
14	0	292 23.3	222 57.7	N17 37.3	207 28.2	N23 43.3	118 42.8	N 4 02.0	254 04.5	N12 32.2
	1	307 25.8	237 58.6	N17 37.5	222 28.8	N23 43.4	133 44.9	N 4 01.8	269 06.8	N12 32.2
	2	322 28.3	252 59.4	N17 37.8	237 29.4	N23 43.5	148 47.0	N 4 01.7	284 09.1	N12 32.3
	3	337 30.7	268 00.3	N17 38.0	252 30.0	N23 43.6	163 49.1	N 4 01.5	299 11.4	N12 32.3
	4	352 33.2	283 01.2	N17 38.2	267 30.6	N23 43.7	178 51.3	N 4 01.4	314 13.7	N12 32.4
F	5	7 35.7	298 02.0	N17 38.4	282 31.2	N23 43.8	193 53.4	N 4 01.2	329 16.0	N12 32.4
R										
I	6	22 38.1	313 02.9	N17 38.6	297 31.8	N23 43.9	208 55.5	N 4 01.1	344 18.3	N12 32.4
D	7	37 40.6	328 03.8	N17 38.9	312 32.4	N23 43.9	223 57.6	N 4 00.9	359 20.6	N12 32.5
A	8	52 43.0	343 04.6	N17 39.1	327 33.0	N23 44.0	238 59.7	N 4 00.8	14 22.9	N12 32.5
Y	9	67 45.5	358 05.5	N17 39.3	342 33.6	N23 44.1	254 01.9	N 4 00.6	29 25.2	N12 32.6
	10	82 48.0	13 06.3	N17 39.5	357 34.2	N23 44.2	269 04.0	N 4 00.4	44 27.5	N12 32.6
	11	97 50.4	28 07.2	N17 39.8	12 34.8	N23 44.3	284 06.1	N 4 00.3	59 29.8	N12 32.7
	12	112 52.9	43 08.0	N17 40.0	27 35.4	N23 44.4	299 08.2	N 4 00.1	74 32.1	N12 32.7
	13	127 55.4	58 08.9	N17 40.2	42 36.0	N23 44.4	314 10.3	N 3 60.0	89 34.4	N12 32.7
	14	142 57.8	73 09.7	N17 40.4	57 36.6	N23 44.5	329 12.4	N 3 59.8	104 36.7	N12 32.8
	15	158 00.3	88 10.6	N17 40.7	72 37.2	N23 44.6	344 14.6	N 3 59.7	119 39.0	N12 32.8
	16	173 02.8	103 11.4	N17 40.9	87 37.8	N23 44.7	359 16.7	N 3 59.5	134 41.3	N12 32.9
	17	188 05.2	118 12.2	N17 41.1	102 38.4	N23 44.8	14 18.8	N 3 59.4	149 43.6	N12 32.9
	18	203 07.7	133 13.1	N17 41.3	117 39.0	N23 44.9	29 20.9	N 3 59.2	164 46.0	N12 33.0
	19	218 10.2	148 13.9	N17 41.6	132 39.6	N23 44.9	44 23.0	N 3 59.0	179 48.3	N12 33.0
	20	233 12.6	163 14.7	N17 41.8	147 40.2	N23 45.0	59 25.1	N 3 58.9	194 50.6	N12 33.0
	21	248 15.1	178 15.6	N17 42.0	162 40.8	N23 45.1	74 27.3	N 3 58.7	209 52.9	N12 33.1
	22	263 17.5	193 16.4	N17 42.2	177 41.4	N23 45.2	89 29.4	N 3 58.6	224 55.2	N12 33.1
	23	278 20.0	208 17.2	N17 42.5	192 42.0	N23 45.3	104 31.5	N 3 58.4	239 57.5	N12 33.2
15	0	293 22.5	223 18.0	N17 42.7	207 42.6	N23 45.3	119 33.6	N 3 58.3	254 59.8	N12 33.2
	1	308 24.9	238 18.9	N17 42.9	222 43.2	N23 45.4	134 35.7	N 3 58.1	270 02.1	N12 33.2
	2	323 27.4	253 19.7	N17 43.2	237 43.8	N23 45.5	149 37.8	N 3 58.0	285 04.4	N12 33.3
	3	338 29.9	268 20.5	N17 43.4	252 44.4	N23 45.6	164 39.9	N 3 57.8	300 06.7	N12 33.3
	4	353 32.3	283 21.3	N17 43.6	267 45.0	N23 45.7	179 42.1	N 3 57.6	315 09.0	N12 33.4
S	5	8 34.8	298 22.1	N17 43.8	282 45.6	N23 45.7	194 44.2	N 3 57.5	330 11.3	N12 33.4
A										
T	6	23 37.3	313 22.9	N17 44.1	297 46.2	N23 45.8	209 46.3	N 3 57.3	345 13.6	N12 33.5
U	7	38 39.7	328 23.7	N17 44.3	312 46.8	N23 45.9	224 48.4	N 3 57.2	0 15.9	N12 33.5
R	8	53 42.2	343 24.5	N17 44.5	327 47.5	N23 46.0	239 50.5	N 3 57.0	15 18.2	N12 33.5
D	9	68 44.6	358 25.3	N17 44.8	342 48.1	N23 46.0	254 52.6	N 3 56.9	30 20.5	N12 33.6
A	10	83 47.1	13 26.2	N17 45.0	357 48.7	N23 46.1	269 54.7	N 3 56.7	45 22.8	N12 33.6
Y	11	98 49.6	28 27.0	N17 45.2	12 49.3	N23 46.2	284 56.9	N 3 56.5	60 25.1	N12 33.7
	12	113 52.0	43 27.8	N17 45.5	27 49.9	N23 46.3	299 59.0	N 3 56.4	75 27.4	N12 33.7
	13	128 54.5	58 28.5	N17 45.7	42 50.5	N23 46.3	315 01.1	N 3 56.2	90 29.8	N12 33.7
	14	143 57.0	73 29.3	N17 45.9	57 51.1	N23 46.4	330 03.2	N 3 56.1	105 32.1	N12 33.8
	15	158 59.4	88 30.1	N17 46.2	72 51.7	N23 46.5	345 05.3	N 3 55.9	120 34.4	N12 33.8
	16	174 01.9	103 30.9	N17 46.4	87 52.3	N23 46.6	0 07.4	N 3 55.7	135 36.7	N12 33.9
	17	189 04.4	118 31.7	N17 46.6	102 52.9	N23 46.6	15 09.5	N 3 55.6	150 39.0	N12 33.9
	18	204 06.8	133 32.5	N17 46.9	117 53.5	N23 46.7	30 11.6	N 3 55.4	165 41.3	N12 33.9
	19	219 09.3	148 33.3	N17 47.1	132 54.1	N23 46.8	45 13.8	N 3 55.3	180 43.6	N12 34.0
	20	234 11.8	163 34.1	N17 47.3	147 54.7	N23 46.8	60 15.9	N 3 55.1	195 45.9	N12 34.0
	21	249 14.2	178 34.8	N17 47.6	162 55.3	N23 46.9	75 18.0	N 3 55.0	210 48.2	N12 34.1
	22	264 16.7	193 35.6	N17 47.8	177 55.9	N23 47.0	90 20.1	N 3 54.8	225 50.5	N12 34.1
	23	279 19.1	208 36.4	N17 48.0	192 56.5	N23 47.1	105 22.2	N 3 54.6	240 52.8	N12 34.1
16	0	294 21.6	223 37.2	N17 48.3	207 57.1	N23 47.1	120 24.3	N 3 54.5	255 55.1	N12 34.2
	1	309 24.1	238 37.9	N17 48.5	222 57.7	N23 47.2	135 26.4	N 3 54.3	270 57.4	N12 34.2
	2	324 26.5	253 38.7	N17 48.7	237 58.3	N23 47.3	150 28.5	N 3 54.2	285 59.8	N12 34.3
	3	339 29.0	268 39.5	N17 49.0	252 58.9	N23 47.3	165 30.7	N 3 54.0	301 02.1	N12 34.3
	4	354 31.5	283 40.2	N17 49.2	267 59.5	N23 47.4	180 32.8	N 3 53.9	316 04.4	N12 34.3
S	5	9 33.9	298 41.0	N17 49.5	283 00.1	N23 47.5	195 34.9	N 3 53.7	331 06.7	N12 34.4
U										
N	6	24 36.4	313 41.8	N17 49.7	298 00.7	N23 47.5	210 37.0	N 3 53.5	346 09.0	N12 34.4
D	7	39 38.9	328 42.5	N17 49.9	313 01.3	N23 47.6	225 39.1	N 3 53.4	1 11.3	N12 34.5
A	8	54 41.3	343 43.3	N17 50.2	328 02.0	N23 47.7	240 41.2	N 3 53.2	16 13.6	N12 34.5
Y	9	69 43.8	358 44.0	N17 50.4	343 02.6	N23 47.7	255 43.3	N 3 53.1	31 15.9	N12 34.5
	10	84 46.3	13 44.8	N17 50.6	358 03.2	N23 47.8	270 45.4	N 3 52.9	46 18.2	N12 34.6
	11	99 48.7	28 45.6	N17 50.9	13 03.8	N23 47.9	285 47.5	N 3 52.7	61 20.5	N12 34.6
	12	114 51.2	43 46.3	N17 51.1	28 04.4	N23 47.9	300 49.6	N 3 52.6	76 22.8	N12 34.7
	13	129 53.6	58 47.1	N17 51.4	43 05.0	N23 48.0	315 51.8	N 3 52.4	91 25.2	N12 34.7
	14	144 56.1	73 47.8	N17 51.6	58 05.6	N23 48.1	330 53.9	N 3 52.3	106 27.5	N12 34.7
	15	159 58.6	88 48.5	N17 51.8	73 06.2	N23 48.1	345 56.0	N 3 52.1	121 29.8	N12 34.8
	16	175 01.0	103 49.3	N17 52.1	88 06.8	N23 48.2	0 58.1	N 3 51.9	136 32.1	N12 34.8
	17	190 03.5	118 50.0	N17 52.3	103 07.4	N23 48.3	16 00.2	N 3 51.8	151 34.4	N12 34.9
	18	205 06.0	133 50.8	N17 52.6	118 08.0	N23 48.3	31 02.3	N 3 51.6	166 36.7	N12 34.9
	19	220 08.4	148 51.5	N17 52.8	133 08.6	N23 48.4	46 04.4	N 3 51.5	181 39.0	N12 34.9
	20	235 10.9	163 52.2	N17 53.0	148 09.2	N23 48.5	61 06.5	N 3 51.3	196 41.3	N12 35.0
	21	250 13.4	178 53.0	N17 53.3	163 09.8	N23 48.5	76 08.6	N 3 51.1	211 43.6	N12 35.0
	22	265 15.8	193 53.7	N17 53.5	178 10.4	N23 48.6	91 10.7	N 3 51.0	226 46.0	N12 35.1
	23	280 18.3	208 54.4	N17 53.8	193 11.0	N23 48.6	106 12.8	N 3 50.8	241 48.3	N12 35.1
			v 0.8	d 0.2	v 0.6	d 0.1	v 2.1	d 0.2	v 2.3	d 0.0

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
14	0	178 31.6	N21	37.5	283 02.5	15.9	N 9 40.5	12.3	54.5
	1	193 31.5	N21	37.1	297 37.4	15.8	N 9 52.7	12.2	54.5
	2	208 31.5	N21	36.8	312 12.1	15.8	N10 04.9	12.2	54.5
	3	223 31.4	N21	36.4	326 46.8	15.7	N10 17.1	12.2	54.5
	4	238 31.3	N21	36.0	341 21.5	15.7	N10 29.2	12.1	54.5
F	5	253 31.3	N21	35.6	355 56.1	15.6	N10 41.3	12.1	54.6
R									
I	6	268 31.2	N21	35.2	10 30.7	15.6	N10 53.3	12.1	54.6
D	7	283 31.1	N21	34.8	25 05.2	15.5	N11 05.4	12.0	54.6
A	8	298 31.1	N21	34.4	39 39.6	15.5	N11 17.4	12.0	54.6
Y	9	313 31.0	N21	34.1	54 14.0	15.4	N11 29.3	12.0	54.6
	10	328 30.9	N21	33.7	68 48.3	15.3	N11 41.2	11.9	54.6
	11	343 30.9	N21	33.3	83 22.6	15.3	N11 53.1	11.9	54.7
	12	358 30.8	N21	32.9	97 56.9	15.2	N12 04.9	11.8	54.7
	13	13 30.7	N21	32.5	112 31.0	15.2	N12 16.7	11.8	54.7
	14	28 30.7	N21	32.1	127 05.1	15.1	N12 28.5	11.8	54.7
	15	43 30.6	N21	31.7	141 39.2	15.0	N12 40.2	11.7	54.7
	16	58 30.6	N21	31.3	156 13.1	15.0	N12 51.9	11.7	54.7
	17	73 30.5	N21	30.9	170 47.1	14.9	N13 03.5	11.6	54.8
	18	88 30.4	N21	30.5	185 20.9	14.9	N13 15.1	11.6	54.8
	19	103 30.4	N21	30.1	199 54.7	14.8	N13 26.6	11.5	54.8
	20	118 30.3	N21	29.7	214 28.4	14.7	N13 38.1	11.5	54.8
	21	133 30.2	N21	29.3	229 02.1	14.7	N13 49.6	11.4	54.8
	22	148 30.2	N21	28.9	243 35.7	14.6	N14 00.9	11.4	54.9
	23	163 30.1	N21	28.5	258 09.2	14.5	N14 12.3	11.3	54.9
15	0	178 30.0	N21	28.1	272 42.6	14.4	N14 23.6	11.3	54.9
	1	193 30.0	N21	27.7	287 16.0	14.4	N14 34.8	11.2	54.9
	2	208 29.9	N21	27.3	301 49.3	14.3	N14 46.0	11.2	54.9
	3	223 29.9	N21	26.9	316 22.5	14.2	N14 57.2	11.1	55.0
	4	238 29.8	N21	26.5	330 55.7	14.2	N15 08.3	11.1	55.0
S	5	253 29.7	N21	26.1	345 28.8	14.1	N15 19.3	11.0	55.0
A									
T	6	268 29.7	N21	25.7	0 01.8	14.0	N15 30.3	11.0	55.0
U	7	283 29.6	N21	25.3	14 34.7	13.9	N15 41.2	10.9	55.1
R	8	298 29.6	N21	24.9	29 07.6	13.9	N15 52.1	10.9	55.1
D	9	313 29.5	N21	24.5	43 40.3	13.8	N16 02.9	10.8	55.1
A	10	328 29.4	N21	24.1	58 13.0	13.7	N16 13.6	10.8	55.1
Y	11	343 29.4	N21	23.7	72 45.6	13.6	N16 24.3	10.7	55.2
	12	358 29.3	N21	23.3	87 18.2	13.5	N16 35.0	10.6	55.2
	13	13 29.3	N21	22.9	101 50.6	13.5	N16 45.5	10.6	55.2
	14	28 29.2	N21	22.5	116 23.0	13.4	N16 56.0	10.5	55.2
	15	43 29.1	N21	22.1	130 55.3	13.3	N17 06.5	10.4	55.2
	16	58 29.1	N21	21.7	145 27.5	13.2	N17 16.9	10.4	55.3
	17	73 29.0	N21	21.3	159 59.6	13.1	N17 27.2	10.3	55.3
	18	88 29.0	N21	20.9	174 31.6	13.0	N17 37.4	10.2	55.3
	19	103 28.9	N21	20.4	189 03.6	12.9	N17 47.6	10.2	55.4
	20	118 28.8	N21	20.0	203 35.4	12.9	N17 57.7	10.1	55.4
	21	133 28.8	N21	19.6	218 07.2	12.8	N18 07.7	10.0	55.4
	22	148 28.7	N21	19.2	232 38.9	12.7	N18 17.7	10.0	55.4
	23	163 28.7	N21	18.8	247 10.4	12.6	N18 27.6	9.9	55.5
16	0	178 28.6	N21	18.4	261 41.9	12.5	N18 37.4	9.8	55.5
	1	193 28.6	N21	18.0	276 13.4	12.4	N18 47.1	9.7	55.5
	2	208 28.5	N21	17.6	290 44.7	12.3	N18 56.8	9.7	55.5
	3	223 28.4	N21	17.1	305 15.9	12.2	N19 06.4	9.6	55.6
	4	238 28.4	N21	16.7	319 47.0	12.1	N19 15.9	9.5	55.6
S	5	253 28.3	N21	16.3	334 18.1	12.0	N19 25.3	9.4	55.6
U									
N	6	268 28.3	N21	15.9	348 49.0	11.9	N19 34.7	9.4	55.7
D	7	283 28.2	N21	15.5	3 19.8	11.8	N19 44.0	9.3	55.7
A	8	298 28.2	N21	15.0	17 50.6	11.8	N19 53.2	9.2	55.7
Y	9	313 28.1	N21	14.6	32 21.3	11.7	N20 02.3	9.1	55.7
	10	328 28.1	N21	14.2	46 51.8	11.6	N20 11.3	9.0	55.8
	11	343 28.0	N21	13.8	61 22.3	11.5	N20 20.2	8.9	55.8
	12	358 27.9	N21	13.4	75 52.6	11.4	N20 29.1	8.8	55.8
	13	13 27.9	N21	12.9	90 22.9	11.3	N20 37.8	8.8	55.9
	14	28 27.8	N21	12.5	104 53.1	11.2	N20 46.5	8.7	55.9
	15	43 27.8	N21	12.1	119 23.1	11.1	N20 55.1	8.6	55.9
	16	58 27.7	N21	11.7	133 53.1	11.0	N21 03.5	8.5	55.9
	17	73 27.7	N21	11.3	148 23.0	10.9	N21 11.9	8.4	56.0
	18	88 27.6	N21	10.8	162 52.8	10.8	N21 20.2	8.3	56.0
	19	103 27.6	N21	10.4	177 22.4	10.7	N21 28.4	8.2	56.0
	20	118 27.5	N21	10.0	191 52.0	10.6	N21 36.5	8.1	56.1
	21	133 27.5	N21	09.5	206 21.5	10.5	N21 44.5	8.0	56.1
	22	148 27.4	N21	09.1	220 50.9	10.4	N21 52.4	7.9	56.1
	23	163 27.4	N21	08.7	235 20.1	10.3	N22 00.2	7.8	56.2
		S.D. 15.7	d	0.4	S.D.	14.9	15.0		15.2

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.8	S40 11.1
Achernar	335 18.1	S57 05.1
Acrux	172 57.0	S63 15.8
Adhara	255 04.0	S29 00.6
Albireo	67 01.3	N28 01.3
Aldebaran	290 36.6	N16 34.0
Alioth	166 10.6	N55 48.5
Alkaid	152 49.8	N49 10.5
Al Na-ir	27 28.9	S46 49.1
Alnilam	275 35.1	S 1 11.0
Alphard	217 45.2	S 8 47.0
Alphecca	126 01.1	N26 37.2
Alpheratz	357 31.6	N29 14.9
Altair	61 56.8	N 8 56.7
Ankaa	353 04.2	S42 08.7
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.3	S69 04.9
Avior	234 14.1	S59 36.2
Bellatrix	278 20.1	N 6 22.5
Betelgeuse	270 49.3	N 7 24.7
Canopus	263 51.6	S52 42.6
Capella	280 18.0	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.3	N45 23.0
Denebola	182 22.2	N14 24.8
Diphda	348 44.4	S17 49.5
Dubhe	193 38.0	N61 35.9
Elnath	277 58.6	N28 37.8
Eltanin	90 40.4	N51 29.2
Enif	33 35.6	N10 00.5
Fomalhaut	15 11.1	S29 28.0
Gacrux	171 48.5	S57 16.7
Gienah	175 40.7	S17 42.2
Hadar	148 31.8	S60 31.0
Hamal	327 48.0	N23 35.9
Kaus Austr.	83 28.3	S34 22.2
Kochab	137 19.8	N74 02.5
Markab	13 26.8	N15 21.6
Menkar	314 03.2	N 4 12.2
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.3	S69 50.3
Mirfak	308 24.4	N49 57.6
Nunki	75 43.8	S26 15.5
Peacock	53 00.6	S56 38.4
Polaris	315 29.1	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.4	S 8 10.1
Rigil Kent	139 36.2	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.5	N56 41.5
Shaula	96 06.1	S37 07.5
Sirius	258 24.0	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 33.0
Vega	80 30.8	N38 48.7
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
17	0	295 20.7	223 55.2	N17 54.0	208 11.6	N23 48.7	121 14.9	N 3 50.7	256 50.6	N12 35.1
	1	310 23.2	238 55.9	N17 54.3	223 12.3	N23 48.8	136 17.1	N 3 50.5	271 52.9	N12 35.2
	2	325 25.7	253 56.6	N17 54.5	238 12.9	N23 48.8	151 19.2	N 3 50.3	286 55.2	N12 35.2
	3	340 28.1	268 57.3	N17 54.7	253 13.5	N23 48.9	166 21.3	N 3 50.2	301 57.5	N12 35.3
	4	355 30.6	283 58.0	N17 55.0	268 14.1	N23 48.9	181 23.4	N 3 50.0	316 59.8	N12 35.3
M	5	10 33.1	298 58.8	N17 55.2	283 14.7	N23 49.0	196 25.5	N 3 49.9	332 02.1	N12 35.3
O										
N	6	25 35.5	313 59.5	N17 55.5	298 15.3	N23 49.1	211 27.6	N 3 49.7	347 04.4	N12 35.4
D	7	40 38.0	329 00.2	N17 55.7	313 15.9	N23 49.1	226 29.7	N 3 49.5	2 06.8	N12 35.4
A	8	55 40.5	344 00.9	N17 56.0	328 16.5	N23 49.2	241 31.8	N 3 49.4	17 09.1	N12 35.4
Y	9	70 42.9	359 01.6	N17 56.2	343 17.1	N23 49.2	256 33.9	N 3 49.2	32 11.4	N12 35.5
	10	85 45.4	14 02.3	N17 56.5	358 17.7	N23 49.3	271 36.0	N 3 49.1	47 13.7	N12 35.5
	11	100 47.9	29 03.0	N17 56.7	13 18.3	N23 49.4	286 38.1	N 3 48.9	62 16.0	N12 35.6
	12	115 50.3	44 03.7	N17 56.9	28 18.9	N23 49.4	301 40.2	N 3 48.7	77 18.3	N12 35.6
	13	130 52.8	59 04.4	N17 57.2	43 19.5	N23 49.5	316 42.3	N 3 48.6	92 20.6	N12 35.6
	14	145 55.2	74 05.1	N17 57.4	58 20.1	N23 49.5	331 44.4	N 3 48.4	107 23.0	N12 35.7
	15	160 57.7	89 05.8	N17 57.7	73 20.7	N23 49.6	346 46.5	N 3 48.3	122 25.3	N12 35.7
	16	176 00.2	104 06.5	N17 57.9	88 21.4	N23 49.6	1 48.6	N 3 48.1	137 27.6	N12 35.8
	17	191 02.6	119 07.2	N17 58.2	103 22.0	N23 49.7	16 50.8	N 3 47.9	152 29.9	N12 35.8
	18	206 05.1	134 07.9	N17 58.4	118 22.6	N23 49.8	31 52.9	N 3 47.8	167 32.2	N12 35.8
	19	221 07.6	149 08.6	N17 58.7	133 23.2	N23 49.8	46 55.0	N 3 47.6	182 34.5	N12 35.9
	20	236 10.0	164 09.3	N17 58.9	148 23.8	N23 49.9	61 57.1	N 3 47.5	197 36.8	N12 35.9
	21	251 12.5	179 10.0	N17 59.2	163 24.4	N23 49.9	76 59.2	N 3 47.3	212 39.2	N12 35.9
	22	266 15.0	194 10.6	N17 59.4	178 25.0	N23 50.0	92 01.3	N 3 47.1	227 41.5	N12 36.0
	23	281 17.4	209 11.3	N17 59.7	193 25.6	N23 50.0	107 03.4	N 3 47.0	242 43.8	N12 36.0
18	0	296 19.9	224 12.0	N17 59.9	208 26.2	N23 50.1	122 05.5	N 3 46.8	257 46.1	N12 36.1
	1	311 22.4	239 12.7	N18 00.2	223 26.8	N23 50.1	137 07.6	N 3 46.7	272 48.4	N12 36.1
	2	326 24.8	254 13.4	N18 00.4	238 27.4	N23 50.2	152 09.7	N 3 46.5	287 50.7	N12 36.1
	3	341 27.3	269 14.0	N18 00.7	253 28.0	N23 50.2	167 11.8	N 3 46.3	302 53.0	N12 36.2
	4	356 29.7	284 14.7	N18 00.9	268 28.6	N23 50.3	182 13.9	N 3 46.2	317 55.4	N12 36.2
T	5	11 32.2	299 15.4	N18 01.2	283 29.3	N23 50.3	197 16.0	N 3 46.0	332 57.7	N12 36.2
U										
E	6	26 34.7	314 16.0	N18 01.4	298 29.9	N23 50.4	212 18.1	N 3 45.8	347 60.0	N12 36.3
S	7	41 37.1	329 16.7	N18 01.7	313 30.5	N23 50.4	227 20.2	N 3 45.7	3 02.3	N12 36.3
D	8	56 39.6	344 17.4	N18 01.9	328 31.1	N23 50.5	242 22.3	N 3 45.5	18 04.6	N12 36.4
A	9	71 42.1	359 18.0	N18 02.2	343 31.7	N23 50.5	257 24.4	N 3 45.4	33 06.9	N12 36.4
Y	10	86 44.5	14 18.7	N18 02.4	358 32.3	N23 50.6	272 26.5	N 3 45.2	48 09.3	N12 36.4
	11	101 47.0	29 19.4	N18 02.7	13 32.9	N23 50.6	287 28.6	N 3 45.0	63 11.6	N12 36.5
	12	116 49.5	44 20.0	N18 02.9	28 33.5	N23 50.7	302 30.7	N 3 44.9	78 13.9	N12 36.5
	13	131 51.9	59 20.7	N18 03.2	43 34.1	N23 50.7	317 32.8	N 3 44.7	93 16.2	N12 36.5
	14	146 54.4	74 21.3	N18 03.4	58 34.7	N23 50.8	332 34.9	N 3 44.5	108 18.5	N12 36.6
	15	161 56.9	89 22.0	N18 03.7	73 35.3	N23 50.8	347 37.0	N 3 44.4	123 20.8	N12 36.6
	16	176 59.3	104 22.6	N18 03.9	88 36.0	N23 50.9	2 39.1	N 3 44.2	138 23.2	N12 36.7
	17	192 01.8	119 23.3	N18 04.2	103 36.6	N23 50.9	17 41.2	N 3 44.1	153 25.5	N12 36.7
	18	207 04.2	134 23.9	N18 04.4	118 37.2	N23 51.0	32 43.3	N 3 43.9	168 27.8	N12 36.7
	19	222 06.7	149 24.6	N18 04.7	133 37.8	N23 51.0	47 45.4	N 3 43.7	183 30.1	N12 36.8
	20	237 09.2	164 25.2	N18 04.9	148 38.4	N23 51.0	62 47.5	N 3 43.6	198 32.4	N12 36.8
	21	252 11.6	179 25.9	N18 05.2	163 39.0	N23 51.1	77 49.6	N 3 43.4	213 34.8	N12 36.8
	22	267 14.1	194 26.5	N18 05.4	178 39.6	N23 51.1	92 51.7	N 3 43.2	228 37.1	N12 36.9
	23	282 16.6	209 27.1	N18 05.7	193 40.2	N23 51.2	107 53.8	N 3 43.1	243 39.4	N12 36.9
19	0	297 19.0	224 27.8	N18 05.9	208 40.8	N23 51.2	122 55.9	N 3 42.9	258 41.7	N12 36.9
	1	312 21.5	239 28.4	N18 06.2	223 41.4	N23 51.3	137 58.0	N 3 42.8	273 44.0	N12 37.0
	2	327 24.0	254 29.0	N18 06.4	238 42.1	N23 51.3	153 00.1	N 3 42.6	288 46.3	N12 37.0
	3	342 26.4	269 29.7	N18 06.7	253 42.7	N23 51.4	168 02.2	N 3 42.4	303 48.7	N12 37.1
	4	357 28.9	284 30.3	N18 06.9	268 43.3	N23 51.4	183 04.3	N 3 42.3	318 51.0	N12 37.1
W	5	12 31.4	299 30.9	N18 07.2	283 43.9	N23 51.4	198 06.4	N 3 42.1	333 53.3	N12 37.1
E										
D	6	27 33.8	314 31.6	N18 07.4	298 44.5	N23 51.5	213 08.5	N 3 41.9	348 55.6	N12 37.2
N	7	42 36.3	329 32.2	N18 07.7	313 45.1	N23 51.5	228 10.6	N 3 41.8	3 57.9	N12 37.2
E	8	57 38.7	344 32.8	N18 08.0	328 45.7	N23 51.6	243 12.7	N 3 41.6	19 00.3	N12 37.2
S	9	72 41.2	359 33.4	N18 08.2	343 46.3	N23 51.6	258 14.8	N 3 41.4	34 02.6	N12 37.3
D	10	87 43.7	14 34.0	N18 08.5	358 46.9	N23 51.6	273 16.9	N 3 41.3	49 04.9	N12 37.3
A	11	102 46.1	29 34.6	N18 08.7	13 47.5	N23 51.7	288 19.0	N 3 41.1	64 07.2	N12 37.3
Y										
	12	117 48.6	44 35.3	N18 09.0	28 48.2	N23 51.7	303 21.1	N 3 41.0	79 09.5	N12 37.4
	13	132 51.1	59 35.9	N18 09.2	43 48.8	N23 51.8	318 23.2	N 3 40.8	94 11.9	N12 37.4
	14	147 53.5	74 36.5	N18 09.5	58 49.4	N23 51.8	333 25.3	N 3 40.6	109 14.2	N12 37.4
	15	162 56.0	89 37.1	N18 09.7	73 50.0	N23 51.8	348 27.4	N 3 40.5	124 16.5	N12 37.5
	16	177 58.5	104 37.7	N18 10.0	88 50.6	N23 51.9	3 29.5	N 3 40.3	139 18.8	N12 37.5
	17	193 00.9	119 38.3	N18 10.2	103 51.2	N23 51.9	18 31.6	N 3 40.1	154 21.2	N12 37.6
	18	208 03.4	134 38.9	N18 10.5	118 51.8	N23 52.0	33 33.7	N 3 40.0	169 23.5	N12 37.6
	19	223 05.8	149 39.5	N18 10.8	133 52.4	N23 52.0	48 35.8	N 3 39.8	184 25.8	N12 37.6
	20	238 08.3	164 40.1	N18 11.0	148 53.0	N23 52.0	63 37.9	N 3 39.6	199 28.1	N12 37.7
	21	253 10.8	179 40.7	N18 11.3	163 53.7	N23 52.1	78 40.0	N 3 39.5	214 30.4	N12 37.7
	22	268 13.2	194 41.3	N18 11.5	178 54.3	N23 52.1	93 42.1	N 3 39.3	229 32.8	N12 37.7
	23	283 15.7	209 41.9	N18 11.8	193 54.9	N23 52.1	108 44.2	N 3 39.2	244 35.1	N12 37.8
			v 0.7	d 0.3	v 0.6	d 0.0	v 2.1	d 0.2	v 2.3	d 0.0

G.M.T		SUN		MOON				
d	h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
17	0	178 27.3	N21 08.3	249 49.3	10.2	N22 07.9	7.7	56.2
	1	193 27.3	N21 07.8	264 18.4	10.1	N22 15.5	7.6	56.2
	2	208 27.2	N21 07.4	278 47.3	10.0	N22 23.0	7.5	56.3
	3	223 27.2	N21 07.0	293 16.2	9.9	N22 30.4	7.4	56.3
	4	238 27.1	N21 06.5	307 45.0	9.8	N22 37.7	7.3	56.3
M	5	253 27.1	N21 06.1	322 13.7	9.7	N22 44.9	7.2	56.4
O								
N	6	268 27.0	N21 05.7	336 42.2	9.6	N22 51.9	7.1	56.4
D	7	283 27.0	N21 05.2	351 10.7	9.5	N22 58.9	6.9	56.4
A	8	298 26.9	N21 04.8	5 39.0	9.4	N23 05.7	6.8	56.5
Y	9	313 26.9	N21 04.4	20 07.3	9.3	N23 12.4	6.7	56.5
	10	328 26.8	N21 03.9	34 35.5	9.2	N23 19.0	6.6	56.5
	11	343 26.8	N21 03.5	49 03.5	9.1	N23 25.5	6.5	56.6
	12	358 26.7	N21 03.1	63 31.5	9.0	N23 31.9	6.4	56.6
	13	13 26.7	N21 02.6	77 59.4	8.9	N23 38.2	6.3	56.6
	14	28 26.6	N21 02.2	92 27.1	8.8	N23 44.3	6.1	56.7
	15	43 26.6	N21 01.8	106 54.8	8.7	N23 50.3	6.0	56.7
	16	58 26.5	N21 01.3	121 22.4	8.6	N23 56.2	5.9	56.7
	17	73 26.5	N21 00.9	135 49.8	8.5	N24 02.0	5.8	56.8
	18	88 26.4	N21 00.4	150 17.2	8.4	N24 07.6	5.6	56.8
	19	103 26.4	N20 60.0	164 44.5	8.3	N24 13.1	5.5	56.8
	20	118 26.3	N20 59.6	179 11.6	8.2	N24 18.5	5.4	56.9
	21	133 26.3	N20 59.1	193 38.7	8.1	N24 23.8	5.3	56.9
	22	148 26.2	N20 58.7	208 05.7	8.0	N24 28.9	5.1	57.0
	23	163 26.2	N20 58.2	222 32.6	7.9	N24 33.9	5.0	57.0
18	0	178 26.1	N20 57.8	236 59.4	7.8	N24 38.8	4.9	57.0
	1	193 26.1	N20 57.3	251 26.1	7.7	N24 43.5	4.7	57.1
	2	208 26.0	N20 56.9	265 52.7	7.6	N24 48.1	4.6	57.1
	3	223 26.0	N20 56.4	280 19.2	7.5	N24 52.5	4.5	57.1
	4	238 25.9	N20 56.0	294 45.7	7.4	N24 56.8	4.3	57.2
T	5	253 25.9	N20 55.6	309 12.0	7.3	N25 01.0	4.2	57.2
U								
E	6	268 25.9	N20 55.1	323 38.3	7.3	N25 05.1	4.0	57.2
S	7	283 25.8	N20 54.7	338 04.4	7.2	N25 09.0	3.9	57.3
D	8	298 25.8	N20 54.2	352 30.5	7.1	N25 12.7	3.8	57.3
A	9	313 25.7	N20 53.8	6 56.5	7.0	N25 16.3	3.6	57.4
Y	10	328 25.7	N20 53.3	21 22.4	6.9	N25 19.8	3.5	57.4
	11	343 25.6	N20 52.9	35 48.2	6.8	N25 23.1	3.3	57.4
	12	358 25.6	N20 52.4	50 13.9	6.7	N25 26.3	3.2	57.5
	13	13 25.5	N20 52.0	64 39.6	6.7	N25 29.3	3.0	57.5
	14	28 25.5	N20 51.5	79 05.2	6.6	N25 32.2	2.9	57.5
	15	43 25.5	N20 51.1	93 30.7	6.5	N25 34.9	2.7	57.6
	16	58 25.4	N20 50.6	107 56.1	6.4	N25 37.5	2.6	57.6
	17	73 25.4	N20 50.1	122 21.5	6.3	N25 39.9	2.4	57.6
	18	88 25.3	N20 49.7	136 46.7	6.3	N25 42.2	2.3	57.7
	19	103 25.3	N20 49.2	151 11.9	6.2	N25 44.3	2.1	57.7
	20	118 25.2	N20 48.8	165 37.0	6.1	N25 46.2	2.0	57.8
	21	133 25.2	N20 48.3	180 02.1	6.1	N25 48.0	1.8	57.8
	22	148 25.2	N20 47.9	194 27.1	6.0	N25 49.7	1.6	57.8
	23	163 25.1	N20 47.4	208 52.0	5.9	N25 51.1	1.5	57.9
19	0	178 25.1	N20 46.9	223 16.9	5.9	N25 52.5	1.3	57.9
	1	193 25.0	N20 46.5	237 41.7	5.8	N25 53.6	1.2	57.9
	2	208 25.0	N20 46.0	252 06.4	5.7	N25 54.6	1.0	58.0
	3	223 25.0	N20 45.6	266 31.1	5.7	N25 55.5	0.8	58.0
	4	238 24.9	N20 45.1	280 55.7	5.6	N25 56.2	0.7	58.1
W	5	253 24.9	N20 44.6	295 20.2	5.6	N25 56.7	0.5	58.1
E								
D	6	268 24.8	N20 44.2	309 44.7	5.5	N25 57.0	0.4	58.1
N	7	283 24.8	N20 43.7	324 09.2	5.4	N25 57.2	0.2	58.2
E	8	298 24.8	N20 43.3	338 33.6	5.4	N25 57.2	0.0	58.2
S	9	313 24.7	N20 42.8	352 57.9	5.3	N25 57.1	0.1	58.2
D	10	328 24.7	N20 42.3	7 22.2	5.3	N25 56.8	0.3	58.3
A	11	343 24.6	N20 41.9	21 46.4	5.2	N25 56.3	0.5	58.3
Y								
	12	358 24.6	N20 41.4	36 10.7	5.2	N25 55.6	0.6	58.3
	13	13 24.6	N20 40.9	50 34.8	5.2	N25 54.8	0.8	58.4
	14	28 24.5	N20 40.5	64 58.9	5.1	N25 53.8	1.0	58.4
	15	43 24.5	N20 40.0	79 23.0	5.1	N25 52.7	1.2	58.5
	16	58 24.5	N20 39.5	93 47.1	5.0	N25 51.4	1.3	58.5
	17	73 24.4	N20 39.1	108 11.1	5.0	N25 49.9	1.5	58.5
	18	88 24.4	N20 38.6	122 35.1	5.0	N25 48.2	1.7	58.6
	19	103 24.3	N20 38.1	136 59.0	5.0	N25 46.4	1.8	58.6
	20	118 24.3	N20 37.6	151 23.0	4.9	N25 44.4	2.0	58.6
	21	133 24.3	N20 37.2	165 46.9	4.9	N25 42.2	2.2	58.7
	22	148 24.2	N20 36.7	180 10.7	4.9	N25 39.8	2.4	58.7
	23	163 24.2	N20 36.2	194 34.6	4.9	N25 37.3	2.5	58.7
		S.D. 15.7	d 0.5	S.D.	15.4	15.7	15.9	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.1
Achernar	335 18.1	S57 05.1
Acrux	172 57.0	S63 15.8
Adhara	255 04.0	S29 00.6
Albireo	67 01.3	N28 01.3
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.5
Alkaid	152 49.8	N49 10.5
Al Na-ir	27 28.9	S46 49.1
Alnilam	275 35.1	S 1 11.0
Alphard	217 45.2	S 8 47.0
Alphecca	126 01.1	N26 37.3
Alpheratz	357 31.6	N29 14.9
Altair	61 56.8	N 8 56.8
Ankaa	353 04.2	S42 08.7
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.3	S69 04.9
Avior	234 14.1	S59 36.2
Bellatrix	278 20.1	N 6 22.5
Betelgeuse	270 49.3	N 7 24.7
Canopus	263 51.6	S52 42.6
Capella	280 18.0	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.3	N45 23.0
Denebola	182 22.2	N14 24.8
Diphda	348 44.4	S17 49.5
Dubhe	193 38.0	N61 35.9
Elnath	277 58.6	N28 37.8
Eltanin	90 40.4	N51 29.2
Enif	33 35.6	N10 00.5
Fomalhaut	15 11.1	S29 28.0
Gacrux	171 48.5	S57 16.7
Gienah	175 40.7	S17 42.1
Hadar	148 31.8	S60 31.0
Hamal	327 48.0	N23 35.9
Kaus Austr.	83 28.3	S34 22.2
Kochab	137 19.8	N74 02.5
Markab	13 26.8	N15 21.6
Menkar	314 03.2	N 4 12.2
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.3	S69 50.2
Mirfak	308 24.3	N49 57.6
Nunki	75 43.8	S26 15.5
Peacock	53 00.6	S56 38.4
Polaris	315 27.7	N89 22.2
Pollux	243 14.2	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.4	S 8 10.0
Rigil Kent	139 36.2	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.5	N56 41.5
Shaula	96 06.1	S37 07.5
Sirius	258 24.0	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 33.0
Vega	80 30.8	N38 48.7
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
20	0	298 18.2	224 42.5	N18 12.0	208 55.5	N23 52.2	123 46.3	N 3 39.0	259 37.4	N12 37.8
	1	313 20.6	239 43.1	N18 12.3	223 56.1	N23 52.2	138 48.4	N 3 38.8	274 39.7	N12 37.8
	2	328 23.1	254 43.7	N18 12.5	238 56.7	N23 52.2	153 50.5	N 3 38.7	289 42.1	N12 37.9
	3	343 25.6	269 44.3	N18 12.8	253 57.3	N23 52.3	168 52.6	N 3 38.5	304 44.4	N12 37.9
	4	358 28.0	284 44.8	N18 13.1	268 57.9	N23 52.3	183 54.7	N 3 38.3	319 46.7	N12 37.9
THU	5	13 30.5	299 45.4	N18 13.3	283 58.6	N23 52.3	198 56.8	N 3 38.2	334 49.0	N12 38.0
RSDAY	6	28 33.0	314 46.0	N18 13.6	298 59.2	N23 52.4	213 58.9	N 3 38.0	349 51.3	N12 38.0
	7	43 35.4	329 46.6	N18 13.8	313 59.8	N23 52.4	229 01.0	N 3 37.8	4 53.7	N12 38.0
	8	58 37.9	344 47.2	N18 14.1	329 00.4	N23 52.4	244 03.1	N 3 37.7	19 56.0	N12 38.1
	9	73 40.3	359 47.7	N18 14.3	344 01.0	N23 52.5	259 05.2	N 3 37.5	34 58.3	N12 38.1
	10	88 42.8	14 48.3	N18 14.6	359 01.6	N23 52.5	274 07.2	N 3 37.3	50 00.6	N12 38.2
	11	103 45.3	29 48.9	N18 14.9	14 02.2	N23 52.5	289 09.3	N 3 37.2	65 03.0	N12 38.2
	12	118 47.7	44 49.5	N18 15.1	29 02.8	N23 52.6	304 11.4	N 3 37.0	80 05.3	N12 38.2
	13	133 50.2	59 50.0	N18 15.4	44 03.5	N23 52.6	319 13.5	N 3 36.8	95 07.6	N12 38.3
	14	148 52.7	74 50.6	N18 15.6	59 04.1	N23 52.6	334 15.6	N 3 36.7	110 09.9	N12 38.3
	15	163 55.1	89 51.2	N18 15.9	74 04.7	N23 52.7	349 17.7	N 3 36.5	125 12.3	N12 38.3
	16	178 57.6	104 51.7	N18 16.1	89 05.3	N23 52.7	4 19.8	N 3 36.3	140 14.6	N12 38.4
	17	194 00.1	119 52.3	N18 16.4	104 05.9	N23 52.7	19 21.9	N 3 36.2	155 16.9	N12 38.4
	18	209 02.5	134 52.9	N18 16.7	119 06.5	N23 52.7	34 24.0	N 3 36.0	170 19.2	N12 38.4
	19	224 05.0	149 53.4	N18 16.9	134 07.1	N23 52.8	49 26.1	N 3 35.8	185 21.6	N12 38.5
	20	239 07.5	164 54.0	N18 17.2	149 07.8	N23 52.8	64 28.2	N 3 35.7	200 23.9	N12 38.5
	21	254 09.9	179 54.5	N18 17.4	164 08.4	N23 52.8	79 30.3	N 3 35.5	215 26.2	N12 38.5
	22	269 12.4	194 55.1	N18 17.7	179 09.0	N23 52.9	94 32.4	N 3 35.4	230 28.5	N12 38.6
	23	284 14.8	209 55.6	N18 17.9	194 09.6	N23 52.9	109 34.5	N 3 35.2	245 30.9	N12 38.6
21	0	299 17.3	224 56.2	N18 18.2	209 10.2	N23 52.9	124 36.6	N 3 35.0	260 33.2	N12 38.6
	1	314 19.8	239 56.7	N18 18.5	224 10.8	N23 52.9	139 38.7	N 3 34.9	275 35.5	N12 38.7
	2	329 22.2	254 57.3	N18 18.7	239 11.4	N23 53.0	154 40.7	N 3 34.7	290 37.8	N12 38.7
	3	344 24.7	269 57.8	N18 19.0	254 12.1	N23 53.0	169 42.8	N 3 34.5	305 40.2	N12 38.7
	4	359 27.2	284 58.4	N18 19.2	269 12.7	N23 53.0	184 44.9	N 3 34.4	320 42.5	N12 38.8
FRIDAY	5	14 29.6	299 58.9	N18 19.5	284 13.3	N23 53.0	199 47.0	N 3 34.2	335 44.8	N12 38.8
	6	29 32.1	314 59.5	N18 19.8	299 13.9	N23 53.1	214 49.1	N 3 34.0	350 47.2	N12 38.8
	7	44 34.6	330 00.0	N18 20.0	314 14.5	N23 53.1	229 51.2	N 3 33.9	5 49.5	N12 38.9
	8	59 37.0	345 00.5	N18 20.3	329 15.1	N23 53.1	244 53.3	N 3 33.7	20 51.8	N12 38.9
	9	74 39.5	0 01.1	N18 20.5	344 15.7	N23 53.1	259 55.4	N 3 33.5	35 54.1	N12 38.9
	10	89 42.0	15 01.6	N18 20.8	359 16.4	N23 53.2	274 57.5	N 3 33.4	50 56.5	N12 39.0
	11	104 44.4	30 02.1	N18 21.0	14 17.0	N23 53.2	289 59.6	N 3 33.2	65 58.8	N12 39.0
	12	119 46.9	45 02.7	N18 21.3	29 17.6	N23 53.2	305 01.7	N 3 33.0	81 01.1	N12 39.0
	13	134 49.3	60 03.2	N18 21.6	44 18.2	N23 53.2	320 03.8	N 3 32.9	96 03.4	N12 39.1
	14	149 51.8	75 03.7	N18 21.8	59 18.8	N23 53.2	335 05.8	N 3 32.7	111 05.8	N12 39.1
	15	164 54.3	90 04.3	N18 22.1	74 19.4	N23 53.3	350 07.9	N 3 32.5	126 08.1	N12 39.1
	16	179 56.7	105 04.8	N18 22.3	89 20.0	N23 53.3	5 10.0	N 3 32.4	141 10.4	N12 39.2
	17	194 59.2	120 05.3	N18 22.6	104 20.7	N23 53.3	20 12.1	N 3 32.2	156 12.8	N12 39.2
	18	210 01.7	135 05.8	N18 22.9	119 21.3	N23 53.3	35 14.2	N 3 32.0	171 15.1	N12 39.2
	19	225 04.1	150 06.3	N18 23.1	134 21.9	N23 53.3	50 16.3	N 3 31.9	186 17.4	N12 39.3
	20	240 06.6	165 06.9	N18 23.4	149 22.5	N23 53.4	65 18.4	N 3 31.7	201 19.7	N12 39.3
	21	255 09.1	180 07.4	N18 23.6	164 23.1	N23 53.4	80 20.5	N 3 31.5	216 22.1	N12 39.3
	22	270 11.5	195 07.9	N18 23.9	179 23.7	N23 53.4	95 22.6	N 3 31.3	231 24.4	N12 39.4
	23	285 14.0	210 08.4	N18 24.2	194 24.4	N23 53.4	110 24.7	N 3 31.2	246 26.7	N12 39.4
22	0	300 16.5	225 08.9	N18 24.4	209 25.0	N23 53.4	125 26.7	N 3 31.0	261 29.1	N12 39.4
	1	315 18.9	240 09.4	N18 24.7	224 25.6	N23 53.5	140 28.8	N 3 30.8	276 31.4	N12 39.5
	2	330 21.4	255 09.9	N18 24.9	239 26.2	N23 53.5	155 30.9	N 3 30.7	291 33.7	N12 39.5
	3	345 23.8	270 10.4	N18 25.2	254 26.8	N23 53.5	170 33.0	N 3 30.5	306 36.1	N12 39.5
	4	0 26.3	285 10.9	N18 25.5	269 27.4	N23 53.5	185 35.1	N 3 30.3	321 38.4	N12 39.6
SATURDAY	5	15 28.8	300 11.4	N18 25.7	284 28.1	N23 53.5	200 37.2	N 3 30.2	336 40.7	N12 39.6
	6	30 31.2	315 11.9	N18 26.0	299 28.7	N23 53.5	215 39.3	N 3 30.0	351 43.0	N12 39.6
	7	45 33.7	330 12.4	N18 26.2	314 29.3	N23 53.6	230 41.4	N 3 29.8	6 45.4	N12 39.7
	8	60 36.2	345 12.9	N18 26.5	329 29.9	N23 53.6	245 43.5	N 3 29.7	21 47.7	N12 39.7
	9	75 38.6	0 13.4	N18 26.8	344 30.5	N23 53.6	260 45.5	N 3 29.5	36 50.0	N12 39.7
	10	90 41.1	15 13.9	N18 27.0	359 31.1	N23 53.6	275 47.6	N 3 29.3	51 52.4	N12 39.8
	11	105 43.6	30 14.4	N18 27.3	14 31.8	N23 53.6	290 49.7	N 3 29.2	66 54.7	N12 39.8
	12	120 46.0	45 14.9	N18 27.5	29 32.4	N23 53.6	305 51.8	N 3 29.0	81 57.0	N12 39.8
	13	135 48.5	60 15.4	N18 27.8	44 33.0	N23 53.6	320 53.9	N 3 28.8	96 59.4	N12 39.9
	14	150 51.0	75 15.9	N18 28.1	59 33.6	N23 53.6	335 56.0	N 3 28.7	112 01.7	N12 39.9
	15	165 53.4	90 16.4	N18 28.3	74 34.2	N23 53.7	350 58.1	N 3 28.5	127 04.0	N12 39.9
	16	180 55.9	105 16.9	N18 28.6	89 34.9	N23 53.7	6 00.2	N 3 28.3	142 06.4	N12 39.9
	17	195 58.3	120 17.4	N18 28.8	104 35.5	N23 53.7	21 02.2	N 3 28.2	157 08.7	N12 40.0
	18	211 00.8	135 17.8	N18 29.1	119 36.1	N23 53.7	36 04.3	N 3 28.0	172 11.0	N12 40.0
	19	226 03.3	150 18.3	N18 29.3	134 36.7	N23 53.7	51 06.4	N 3 27.8	187 13.4	N12 40.0
	20	241 05.7	165 18.8	N18 29.6	149 37.3	N23 53.7	66 08.5	N 3 27.7	202 15.7	N12 40.1
	21	256 08.2	180 19.3	N18 29.9	164 37.9	N23 53.7	81 10.6	N 3 27.5	217 18.0	N12 40.1
	22	271 10.7	195 19.7	N18 30.1	179 38.6	N23 53.7	96 12.7	N 3 27.3	232 20.4	N12 40.1
	23	286 13.1	210 20.2	N18 30.4	194 39.2	N23 53.7	111 14.8	N 3 27.1	247 22.7	N12 40.2
			v 0.5	d 0.3	v 0.6	d 0.0	v 2.1	d 0.2	v 2.3	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	v '	MOON Dec ° '	d '	HP '
20	0	178 24.2	N20 35.8	208 58.4	4.8	N25 34.6	2.7	58.8
	1	193 24.1	N20 35.3	223 22.2	4.8	N25 31.7	2.9	58.8
	2	208 24.1	N20 34.8	237 46.0	4.8	N25 28.7	3.0	58.8
	3	223 24.1	N20 34.3	252 09.8	4.8	N25 25.5	3.2	58.9
	4	238 24.0	N20 33.9	266 33.6	4.8	N25 22.1	3.4	58.9
T	5	253 24.0	N20 33.4	280 57.3	4.8	N25 18.5	3.6	58.9
H								
U	6	268 24.0	N20 32.9	295 21.1	4.8	N25 14.8	3.7	59.0
R	7	283 23.9	N20 32.4	309 44.9	4.8	N25 10.9	3.9	59.0
S	8	298 23.9	N20 32.0	324 08.6	4.7	N25 06.8	4.1	59.0
D	9	313 23.9	N20 31.5	338 32.3	4.7	N25 02.5	4.3	59.1
A	10	328 23.8	N20 31.0	352 56.1	4.7	N24 58.1	4.4	59.1
Y	11	343 23.8	N20 30.5	7 19.8	4.7	N24 53.5	4.6	59.1
	12	358 23.8	N20 30.0	21 43.6	4.8	N24 48.8	4.8	59.2
	13	13 23.7	N20 29.6	36 07.4	4.8	N24 43.8	4.9	59.2
	14	28 23.7	N20 29.1	50 31.1	4.8	N24 38.7	5.1	59.2
	15	43 23.7	N20 28.6	64 54.9	4.8	N24 33.4	5.3	59.3
	16	58 23.6	N20 28.1	79 18.7	4.8	N24 28.0	5.5	59.3
	17	73 23.6	N20 27.6	93 42.5	4.8	N24 22.4	5.6	59.3
	18	88 23.6	N20 27.1	108 06.3	4.8	N24 16.6	5.8	59.4
	19	103 23.5	N20 26.7	122 30.1	4.8	N24 10.6	6.0	59.4
	20	118 23.5	N20 26.2	136 54.0	4.9	N24 04.5	6.1	59.4
	21	133 23.5	N20 25.7	151 17.9	4.9	N23 58.2	6.3	59.5
	22	148 23.5	N20 25.2	165 41.8	4.9	N23 51.7	6.5	59.5
	23	163 23.4	N20 24.7	180 05.7	4.9	N23 45.1	6.6	59.5
21	0	178 23.4	N20 24.2	194 29.7	5.0	N23 38.3	6.8	59.5
	1	193 23.4	N20 23.7	208 53.6	5.0	N23 31.3	7.0	59.6
	2	208 23.3	N20 23.3	223 17.7	5.0	N23 24.2	7.1	59.6
	3	223 23.3	N20 22.8	237 41.7	5.0	N23 16.9	7.3	59.6
	4	238 23.3	N20 22.3	252 05.8	5.1	N23 09.5	7.5	59.7
F	5	253 23.3	N20 21.8	266 29.9	5.1	N23 01.8	7.6	59.7
R								
I	6	268 23.2	N20 21.3	280 54.0	5.1	N22 54.1	7.8	59.7
D	7	283 23.2	N20 20.8	295 18.2	5.2	N22 46.1	7.9	59.7
A	8	298 23.2	N20 20.3	309 42.4	5.2	N22 38.0	8.1	59.8
Y	9	313 23.1	N20 19.8	324 06.7	5.3	N22 29.8	8.3	59.8
	10	328 23.1	N20 19.3	338 31.0	5.3	N22 21.4	8.4	59.8
	11	343 23.1	N20 18.8	352 55.4	5.4	N22 12.8	8.6	59.8
	12	358 23.1	N20 18.3	7 19.8	5.4	N22 04.1	8.7	59.9
	13	13 23.0	N20 17.8	21 44.2	5.4	N21 55.2	8.9	59.9
	14	28 23.0	N20 17.3	36 08.7	5.5	N21 46.2	9.0	59.9
	15	43 23.0	N20 16.8	50 33.2	5.5	N21 37.0	9.2	59.9
	16	58 23.0	N20 16.3	64 57.8	5.6	N21 27.6	9.3	60.0
	17	73 22.9	N20 15.9	79 22.5	5.6	N21 18.2	9.5	60.0
	18	88 22.9	N20 15.4	93 47.2	5.7	N21 08.5	9.6	60.0
	19	103 22.9	N20 14.9	108 11.9	5.7	N20 58.7	9.8	60.0
	20	118 22.9	N20 14.4	122 36.7	5.8	N20 48.8	9.9	60.1
	21	133 22.8	N20 13.9	137 01.5	5.9	N20 38.8	10.1	60.1
	22	148 22.8	N20 13.4	151 26.5	5.9	N20 28.5	10.2	60.1
	23	163 22.8	N20 12.9	165 51.4	6.0	N20 18.2	10.4	60.1
22	0	178 22.8	N20 12.4	180 16.4	6.0	N20 07.7	10.5	60.1
	1	193 22.7	N20 11.9	194 41.5	6.1	N19 57.1	10.6	60.2
	2	208 22.7	N20 11.3	209 06.7	6.1	N19 46.3	10.8	60.2
	3	223 22.7	N20 10.8	223 31.9	6.2	N19 35.4	10.9	60.2
	4	238 22.7	N20 10.3	237 57.1	6.3	N19 24.3	11.0	60.2
S	5	253 22.6	N20 09.8	252 22.4	6.3	N19 13.2	11.2	60.2
A								
T	6	268 22.6	N20 09.3	266 47.8	6.4	N19 01.9	11.3	60.3
U	7	283 22.6	N20 08.8	281 13.3	6.4	N18 50.4	11.4	60.3
R	8	298 22.6	N20 08.3	295 38.8	6.5	N18 38.9	11.6	60.3
D	9	313 22.6	N20 07.8	310 04.3	6.6	N18 27.2	11.7	60.3
A	10	328 22.5	N20 07.3	324 30.0	6.6	N18 15.4	11.8	60.3
Y	11	343 22.5	N20 06.8	338 55.7	6.7	N18 03.4	11.9	60.3
	12	358 22.5	N20 06.3	353 21.4	6.8	N17 51.4	12.1	60.4
	13	13 22.5	N20 05.8	7 47.3	6.8	N17 39.2	12.2	60.4
	14	28 22.5	N20 05.3	22 13.1	6.9	N17 26.9	12.3	60.4
	15	43 22.4	N20 04.8	36 39.1	7.0	N17 14.5	12.4	60.4
	16	58 22.4	N20 04.2	51 05.1	7.0	N17 02.0	12.5	60.4
	17	73 22.4	N20 03.7	65 31.2	7.1	N16 49.3	12.6	60.4
	18	88 22.4	N20 03.2	79 57.4	7.2	N16 36.6	12.8	60.5
	19	103 22.4	N20 02.7	94 23.6	7.2	N16 23.7	12.9	60.5
	20	118 22.3	N20 02.2	108 49.9	7.3	N16 10.7	13.0	60.5
	21	133 22.3	N20 01.7	123 16.2	7.4	N15 57.6	13.1	60.5
	22	148 22.3	N20 01.2	137 42.6	7.4	N15 44.4	13.2	60.5
	23	163 22.3	N20 00.7	152 09.1	7.5	N15 31.2	13.3	60.5
		S.D. 15.7	d 0.5	S.D. 16.1		16.3		16.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.1
Achernar	335 18.1	S57 05.1
Acrux	172 57.0	S63 15.8
Adhara	255 03.9	S29 00.6
Albireo	67 01.3	N28 01.3
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.5
Alkaid	152 49.8	N49 10.5
Al Na-ir	27 28.9	S46 49.1
Alnilam	275 35.0	S 1 11.0
Alphard	217 45.2	S 8 47.0
Alphecca	126 01.1	N26 37.3
Alpheratz	357 31.6	N29 14.9
Altair	61 56.8	N 8 56.8
Ankaa	353 04.2	S42 08.7
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.3	S69 04.9
Avior	234 14.1	S59 36.2
Bellatrix	278 20.0	N 6 22.5
Betelgeuse	270 49.2	N 7 24.7
Canopus	263 51.6	S52 42.5
Capella	280 18.0	N46 01.5
Castor	245 53.8	N31 49.5
Deneb	49 23.3	N45 23.0
Denebola	182 22.2	N14 24.8
Diphda	348 44.3	S17 49.5
Dubhe	193 38.0	N61 35.9
Elnath	277 58.5	N28 37.8
Eltanin	90 40.4	N51 29.2
Enif	33 35.6	N10 00.5
Fomalhaut	15 11.1	S29 28.0
Gacrux	171 48.5	S57 16.7
Gienah	175 40.7	S17 42.1
Hadar	148 31.8	S60 31.0
Hamal	327 47.9	N23 35.9
Kaus Austr.	83 28.3	S34 22.2
Kochab	137 19.9	N74 02.5
Markab	13 26.8	N15 21.6
Menkar	314 03.2	N 4 12.2
Menkent	147 54.1	S36 30.9
Miaplacidus	221 38.3	S69 50.2
Mirfak	308 24.3	N49 57.6
Nunki	75 43.8	S26 15.5
Peacock	53 00.5	S56 38.4
Polaris	315 26.4	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.3	S 8 10.0
Rigil Kent	139 36.2	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.4	N56 41.5
Shaula	96 06.1	S37 07.5
Sirius	258 24.0	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 33.0
Vega	80 30.8	N38 48.8
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
23	0	301 15.6	225 20.7	N18 30.6	209 39.8	N23 53.8	126 16.9	N 3 27.0	262 25.0	N12 40.2
	1	316 18.1	240 21.2	N18 30.9	224 40.4	N23 53.8	141 18.9	N 3 26.8	277 27.4	N12 40.2
	2	331 20.5	255 21.6	N18 31.2	239 41.0	N23 53.8	156 21.0	N 3 26.6	292 29.7	N12 40.3
	3	346 23.0	270 22.1	N18 31.4	254 41.7	N23 53.8	171 23.1	N 3 26.5	307 32.0	N12 40.3
	4	1 25.4	285 22.6	N18 31.7	269 42.3	N23 53.8	186 25.2	N 3 26.3	322 34.4	N12 40.3
S	5	16 27.9	300 23.0	N18 31.9	284 42.9	N23 53.8	201 27.3	N 3 26.1	337 36.7	N12 40.4
U										
N	6	31 30.4	315 23.5	N18 32.2	299 43.5	N23 53.8	216 29.4	N 3 26.0	352 39.0	N12 40.4
D	7	46 32.8	330 23.9	N18 32.5	314 44.1	N23 53.8	231 31.4	N 3 25.8	7 41.4	N12 40.4
A	8	61 35.3	345 24.4	N18 32.7	329 44.8	N23 53.8	246 33.5	N 3 25.6	22 43.7	N12 40.5
Y	9	76 37.8	0 24.9	N18 33.0	344 45.4	N23 53.8	261 35.6	N 3 25.5	37 46.0	N12 40.5
	10	91 40.2	15 25.3	N18 33.2	359 46.0	N23 53.8	276 37.7	N 3 25.3	52 48.4	N12 40.5
	11	106 42.7	30 25.8	N18 33.5	14 46.6	N23 53.8	291 39.8	N 3 25.1	67 50.7	N12 40.5
	12	121 45.2	45 26.2	N18 33.8	29 47.2	N23 53.8	306 41.9	N 3 24.9	82 53.0	N12 40.6
	13	136 47.6	60 26.7	N18 34.0	44 47.9	N23 53.8	321 44.0	N 3 24.8	97 55.4	N12 40.6
	14	151 50.1	75 27.1	N18 34.3	59 48.5	N23 53.8	336 46.0	N 3 24.6	112 57.7	N12 40.6
	15	166 52.6	90 27.6	N18 34.5	74 49.1	N23 53.9	351 48.1	N 3 24.4	128 00.1	N12 40.7
	16	181 55.0	105 28.0	N18 34.8	89 49.7	N23 53.9	6 50.2	N 3 24.3	143 02.4	N12 40.7
	17	196 57.5	120 28.5	N18 35.1	104 50.3	N23 53.9	21 52.3	N 3 24.1	158 04.7	N12 40.7
	18	211 59.9	135 28.9	N18 35.3	119 51.0	N23 53.9	36 54.4	N 3 23.9	173 07.1	N12 40.8
	19	227 02.4	150 29.4	N18 35.6	134 51.6	N23 53.9	51 56.5	N 3 23.8	188 09.4	N12 40.8
	20	242 04.9	165 29.8	N18 35.8	149 52.2	N23 53.9	66 58.5	N 3 23.6	203 11.7	N12 40.8
	21	257 07.3	180 30.2	N18 36.1	164 52.8	N23 53.9	82 00.6	N 3 23.4	218 14.1	N12 40.8
	22	272 09.8	195 30.7	N18 36.4	179 53.4	N23 53.9	97 02.7	N 3 23.2	233 16.4	N12 40.9
	23	287 12.3	210 31.1	N18 36.6	194 54.1	N23 53.9	112 04.8	N 3 23.1	248 18.7	N12 40.9
24	0	302 14.7	225 31.5	N18 36.9	209 54.7	N23 53.9	127 06.9	N 3 22.9	263 21.1	N12 40.9
	1	317 17.2	240 32.0	N18 37.1	224 55.3	N23 53.9	142 09.0	N 3 22.7	278 23.4	N12 41.0
	2	332 19.7	255 32.4	N18 37.4	239 55.9	N23 53.9	157 11.0	N 3 22.6	293 25.8	N12 41.0
	3	347 22.1	270 32.8	N18 37.6	254 56.6	N23 53.9	172 13.1	N 3 22.4	308 28.1	N12 41.0
	4	2 24.6	285 33.3	N18 37.9	269 57.2	N23 53.9	187 15.2	N 3 22.2	323 30.4	N12 41.1
M	5	17 27.1	300 33.7	N18 38.2	284 57.8	N23 53.9	202 17.3	N 3 22.0	338 32.8	N12 41.1
O										
N	6	32 29.5	315 34.1	N18 38.4	299 58.4	N23 53.9	217 19.4	N 3 21.9	353 35.1	N12 41.1
D	7	47 32.0	330 34.5	N18 38.7	314 59.0	N23 53.9	232 21.4	N 3 21.7	8 37.4	N12 41.1
A	8	62 34.4	345 35.0	N18 38.9	329 59.7	N23 53.9	247 23.5	N 3 21.5	23 39.8	N12 41.2
Y	9	77 36.9	0 35.4	N18 39.2	345 00.3	N23 53.9	262 25.6	N 3 21.4	38 42.1	N12 41.2
	10	92 39.4	15 35.8	N18 39.5	0 00.9	N23 53.9	277 27.7	N 3 21.2	53 44.5	N12 41.2
	11	107 41.8	30 36.2	N18 39.7	15 01.5	N23 53.9	292 29.8	N 3 21.0	68 46.8	N12 41.3
	12	122 44.3	45 36.6	N18 40.0	30 02.2	N23 53.8	307 31.8	N 3 20.9	83 49.1	N12 41.3
	13	137 46.8	60 37.0	N18 40.2	45 02.8	N23 53.8	322 33.9	N 3 20.7	98 51.5	N12 41.3
	14	152 49.2	75 37.5	N18 40.5	60 03.4	N23 53.8	337 36.0	N 3 20.5	113 53.8	N12 41.4
	15	167 51.7	90 37.9	N18 40.7	75 04.0	N23 53.8	352 38.1	N 3 20.3	128 56.2	N12 41.4
	16	182 54.2	105 38.3	N18 41.0	90 04.6	N23 53.8	7 40.2	N 3 20.2	143 58.5	N12 41.4
	17	197 56.6	120 38.7	N18 41.3	105 05.3	N23 53.8	22 42.3	N 3 20.0	159 00.8	N12 41.4
	18	212 59.1	135 39.1	N18 41.5	120 05.9	N23 53.8	37 44.3	N 3 19.8	174 03.2	N12 41.5
	19	228 01.5	150 39.5	N18 41.8	135 06.5	N23 53.8	52 46.4	N 3 19.7	189 05.5	N12 41.5
	20	243 04.0	165 39.9	N18 42.0	150 07.1	N23 53.8	67 48.5	N 3 19.5	204 07.9	N12 41.5
	21	258 06.5	180 40.3	N18 42.3	165 07.8	N23 53.8	82 50.6	N 3 19.3	219 10.2	N12 41.6
	22	273 08.9	195 40.7	N18 42.5	180 08.4	N23 53.8	97 52.6	N 3 19.1	234 12.5	N12 41.6
	23	288 11.4	210 41.1	N18 42.8	195 09.0	N23 53.8	112 54.7	N 3 19.0	249 14.9	N12 41.6
25	0	303 13.9	225 41.5	N18 43.1	210 09.6	N23 53.8	127 56.8	N 3 18.8	264 17.2	N12 41.6
	1	318 16.3	240 41.9	N18 43.3	225 10.3	N23 53.8	142 58.9	N 3 18.6	279 19.6	N12 41.7
	2	333 18.8	255 42.3	N18 43.6	240 10.9	N23 53.8	158 01.0	N 3 18.4	294 21.9	N12 41.7
	3	348 21.3	270 42.7	N18 43.8	255 11.5	N23 53.7	173 03.0	N 3 18.3	309 24.3	N12 41.7
	4	3 23.7	285 43.1	N18 44.1	270 12.1	N23 53.7	188 05.1	N 3 18.1	324 26.6	N12 41.8
T	5	18 26.2	300 43.5	N18 44.3	285 12.8	N23 53.7	203 07.2	N 3 17.9	339 28.9	N12 41.8
U										
E	6	33 28.7	315 43.9	N18 44.6	300 13.4	N23 53.7	218 09.3	N 3 17.8	354 31.3	N12 41.8
S	7	48 31.1	330 44.2	N18 44.9	315 14.0	N23 53.7	233 11.4	N 3 17.6	9 33.6	N12 41.8
D	8	63 33.6	345 44.6	N18 45.1	330 14.6	N23 53.7	248 13.4	N 3 17.4	24 36.0	N12 41.9
A	9	78 36.0	0 45.0	N18 45.4	345 15.3	N23 53.7	263 15.5	N 3 17.2	39 38.3	N12 41.9
Y	10	93 38.5	15 45.4	N18 45.6	0 15.9	N23 53.7	278 17.6	N 3 17.1	54 40.6	N12 41.9
	11	108 41.0	30 45.8	N18 45.9	15 16.5	N23 53.7	293 19.7	N 3 16.9	69 43.0	N12 42.0
	12	123 43.4	45 46.2	N18 46.1	30 17.1	N23 53.7	308 21.7	N 3 16.7	84 45.3	N12 42.0
	13	138 45.9	60 46.5	N18 46.4	45 17.8	N23 53.6	323 23.8	N 3 16.6	99 47.7	N12 42.0
	14	153 48.4	75 46.9	N18 46.6	60 18.4	N23 53.6	338 25.9	N 3 16.4	114 50.0	N12 42.0
	15	168 50.8	90 47.3	N18 46.9	75 19.0	N23 53.6	353 28.0	N 3 16.2	129 52.4	N12 42.1
	16	183 53.3	105 47.7	N18 47.2	90 19.6	N23 53.6	8 30.1	N 3 16.0	144 54.7	N12 42.1
	17	198 55.8	120 48.0	N18 47.4	105 20.3	N23 53.6	23 32.1	N 3 15.9	159 57.1	N12 42.1
	18	213 58.2	135 48.4	N18 47.7	120 20.9	N23 53.6	38 34.2	N 3 15.7	174 59.4	N12 42.2
	19	229 00.7	150 48.8	N18 47.9	135 21.5	N23 53.6	53 36.3	N 3 15.5	190 01.7	N12 42.2
	20	244 03.2	165 49.1	N18 48.2	150 22.1	N23 53.5	68 38.4	N 3 15.3	205 04.1	N12 42.2
	21	259 05.6	180 49.5	N18 48.4	165 22.8	N23 53.5	83 40.4	N 3 15.2	220 06.4	N12 42.2
	22	274 08.1	195 49.9	N18 48.7	180 23.4	N23 53.5	98 42.5	N 3 15.0	235 08.8	N12 42.3
	23	289 10.5	210 50.2	N18 48.9	195 24.0	N23 53.5	113 44.6	N 3 14.8	250 11.1	N12 42.3
			v 0.4	d 0.3	v 0.6	d 0.0	v 2.1	d 0.2	v 2.3	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
23	0	178 22.3	N20 00.1	166 35.7	7.5	N15 17.8	13.4	60.5
	1	193 22.3	N19 59.6	181 02.3	7.6	N15 04.3	13.5	60.5
	2	208 22.2	N19 59.1	195 29.0	7.7	N14 50.7	13.6	60.5
	3	223 22.2	N19 58.6	209 55.7	7.7	N14 37.0	13.7	60.5
	4	238 22.2	N19 58.1	224 22.5	7.8	N14 23.2	13.8	60.6
S	5	253 22.2	N19 57.6	238 49.4	7.9	N14 09.4	13.9	60.6
U								
N	6	268 22.2	N19 57.0	253 16.3	7.9	N13 55.4	14.0	60.6
D	7	283 22.2	N19 56.5	267 43.3	8.0	N13 41.4	14.0	60.6
A	8	298 22.1	N19 56.0	282 10.4	8.1	N13 27.2	14.1	60.6
Y	9	313 22.1	N19 55.5	296 37.5	8.1	N13 13.0	14.2	60.6
	10	328 22.1	N19 55.0	311 04.7	8.2	N12 58.7	14.3	60.6
	11	343 22.1	N19 54.4	325 32.0	8.3	N12 44.3	14.4	60.6
	12	358 22.1	N19 53.9	339 59.3	8.3	N12 29.9	14.5	60.6
	13	13 22.1	N19 53.4	354 26.7	8.4	N12 15.3	14.5	60.6
	14	28 22.1	N19 52.9	8 54.1	8.4	N12 00.7	14.6	60.6
	15	43 22.0	N19 52.3	23 21.6	8.5	N11 46.0	14.7	60.6
	16	58 22.0	N19 51.8	37 49.2	8.6	N11 31.3	14.8	60.6
	17	73 22.0	N19 51.3	52 16.8	8.6	N11 16.4	14.8	60.6
	18	88 22.0	N19 50.8	66 44.5	8.7	N11 01.5	14.9	60.6
	19	103 22.0	N19 50.2	81 12.2	8.7	N10 46.6	15.0	60.6
	20	118 22.0	N19 49.7	95 40.0	8.8	N10 31.5	15.0	60.6
	21	133 22.0	N19 49.2	110 07.8	8.9	N10 16.4	15.1	60.6
	22	148 22.0	N19 48.7	124 35.7	8.9	N10 01.3	15.2	60.6
	23	163 21.9	N19 48.1	139 03.7	9.0	N 9 46.1	15.2	60.6
24	0	178 21.9	N19 47.6	153 31.7	9.0	N 9 30.8	15.3	60.6
	1	193 21.9	N19 47.1	167 59.8	9.1	N 9 15.5	15.3	60.6
	2	208 21.9	N19 46.5	182 27.9	9.1	N 9 00.1	15.4	60.6
	3	223 21.9	N19 46.0	196 56.1	9.2	N 8 44.7	15.4	60.6
	4	238 21.9	N19 45.5	211 24.3	9.2	N 8 29.2	15.5	60.6
M	5	253 21.9	N19 44.9	225 52.6	9.3	N 8 13.7	15.5	60.6
O								
N	6	268 21.9	N19 44.4	240 20.9	9.3	N 7 58.1	15.6	60.6
D	7	283 21.9	N19 43.9	254 49.3	9.4	N 7 42.5	15.6	60.6
A	8	298 21.8	N19 43.3	269 17.7	9.4	N 7 26.9	15.7	60.6
Y	9	313 21.8	N19 42.8	283 46.2	9.5	N 7 11.2	15.7	60.6
	10	328 21.8	N19 42.3	298 14.7	9.5	N 6 55.4	15.7	60.6
	11	343 21.8	N19 41.7	312 43.3	9.6	N 6 39.7	15.8	60.6
	12	358 21.8	N19 41.2	327 11.9	9.6	N 6 23.9	15.8	60.6
	13	13 21.8	N19 40.7	341 40.6	9.7	N 6 08.0	15.8	60.6
	14	28 21.8	N19 40.1	356 09.3	9.7	N 5 52.2	15.9	60.6
	15	43 21.8	N19 39.6	10 38.0	9.7	N 5 36.3	15.9	60.6
	16	58 21.8	N19 39.0	25 06.8	9.8	N 5 20.3	15.9	60.6
	17	73 21.8	N19 38.5	39 35.6	9.8	N 5 04.4	15.9	60.6
	18	88 21.8	N19 38.0	54 04.5	9.9	N 4 48.4	16.0	60.5
	19	103 21.8	N19 37.4	68 33.4	9.9	N 4 32.4	16.0	60.5
	20	118 21.8	N19 36.9	83 02.3	9.9	N 4 16.4	16.0	60.5
	21	133 21.8	N19 36.3	97 31.3	10.0	N 4 00.4	16.0	60.5
	22	148 21.7	N19 35.8	112 00.3	10.0	N 3 44.3	16.0	60.5
	23	163 21.7	N19 35.3	126 29.3	10.0	N 3 28.3	16.1	60.5
25	0	178 21.7	N19 34.7	140 58.4	10.1	N 3 12.2	16.1	60.5
	1	193 21.7	N19 34.2	155 27.5	10.1	N 2 56.1	16.1	60.5
	2	208 21.7	N19 33.6	169 56.6	10.1	N 2 40.0	16.1	60.5
	3	223 21.7	N19 33.1	184 25.8	10.2	N 2 23.9	16.1	60.5
	4	238 21.7	N19 32.5	198 55.0	10.2	N 2 07.8	16.1	60.4
T	5	253 21.7	N19 32.0	213 24.2	10.2	N 1 51.7	16.1	60.4
U								
E	6	268 21.7	N19 31.5	227 53.4	10.2	N 1 35.6	16.1	60.4
S	7	283 21.7	N19 30.9	242 22.7	10.3	N 1 19.4	16.1	60.4
D	8	298 21.7	N19 30.4	256 52.0	10.3	N 1 03.3	16.1	60.4
A	9	313 21.7	N19 29.8	271 21.3	10.3	N 0 47.2	16.1	60.4
Y	10	328 21.7	N19 29.3	285 50.7	10.3	N 0 31.1	16.1	60.4
	11	343 21.7	N19 28.7	300 20.0	10.4	N 0 15.0	16.1	60.3
	12	358 21.7	N19 28.2	314 49.4	10.4	S 0 01.1	16.1	60.3
	13	13 21.7	N19 27.6	329 18.8	10.4	S 0 17.2	16.1	60.3
	14	28 21.7	N19 27.1	343 48.2	10.4	S 0 33.3	16.1	60.3
	15	43 21.7	N19 26.5	358 17.7	10.4	S 0 49.3	16.1	60.3
	16	58 21.7	N19 26.0	12 47.1	10.5	S 1 05.4	16.0	60.3
	17	73 21.7	N19 25.4	27 16.6	10.5	S 1 21.4	16.0	60.3
	18	88 21.7	N19 24.9	41 46.1	10.5	S 1 37.4	16.0	60.2
	19	103 21.7	N19 24.3	56 15.6	10.5	S 1 53.4	16.0	60.2
	20	118 21.7	N19 23.7	70 45.1	10.5	S 2 09.4	16.0	60.2
	21	133 21.7	N19 23.2	85 14.6	10.5	S 2 25.3	16.0	60.2
	22	148 21.7	N19 22.6	99 44.1	10.5	S 2 41.3	15.9	60.2
	23	163 21.7	N19 22.1	114 13.6	10.5	S 2 57.2	15.9	60.1
		S.D. 15.7	d 0.5	S.D. 16.5		16.5		16.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.7	S40 11.1
Achernar	335 18.0	S57 05.1
Acrux	172 57.0	S63 15.7
Adhara	255 03.9	S29 00.6
Albireo	67 01.3	N28 01.3
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.6	N55 48.5
Alkaid	152 49.8	N49 10.4
Al Na-ir	27 28.9	S46 49.1
Alnilam	275 35.0	S 1 11.0
Alphard	217 45.2	S 8 47.0
Alphecca	126 01.1	N26 37.3
Alpheratz	357 31.6	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.1	S42 08.7
Antares	112 12.0	S26 29.8
Arcturus	145 45.2	N19 02.1
Atria	107 03.3	S69 04.9
Avior	234 14.1	S59 36.1
Bellatrix	278 20.0	N 6 22.6
Betelgeuse	270 49.2	N 7 24.8
Canopus	263 51.6	S52 42.5
Capella	280 17.9	N46 01.5
Castor	245 53.7	N31 49.5
Deneb	49 23.3	N45 23.0
Denebola	182 22.2	N14 24.8
Diphda	348 44.3	S17 49.5
Dubhe	193 38.0	N61 35.9
Elnath	277 58.5	N28 37.8
Eltanin	90 40.4	N51 29.3
Enif	33 35.6	N10 00.5
Fomalhaut	15 11.0	S29 28.0
Gacrux	171 48.6	S57 16.7
Gienah	175 40.7	S17 42.1
Hadar	148 31.8	S60 31.0
Hamal	327 47.9	N23 35.9
Kaus Austr.	83 28.3	S34 22.2
Kochab	137 20.0	N74 02.5
Markab	13 26.7	N15 21.6
Menkar	314 03.2	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.2
Mirfak	308 24.3	N49 57.6
Nunki	75 43.8	S26 15.5
Peacock	53 00.5	S56 38.4
Polaris	315 25.2	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.3	S 8 10.0
Rigil Kent	139 36.2	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.4	N56 41.5
Shaula	96 06.1	S37 07.5
Sirius	258 24.0	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 33.0
Vega	80 30.8	N38 48.8
Zuben-ubi	136 53.6	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
26	0	304 13.0	225 50.6	N18 49.2	210 24.6	N23 53.5	128 46.7	N 3 14.7	265 13.5	N12 42.3
	1	319 15.5	240 51.0	N18 49.4	225 25.3	N23 53.5	143 48.7	N 3 14.5	280 15.8	N12 42.3
	2	334 17.9	255 51.3	N18 49.7	240 25.9	N23 53.4	158 50.8	N 3 14.3	295 18.2	N12 42.4
	3	349 20.4	270 51.7	N18 50.0	255 26.5	N23 53.4	173 52.9	N 3 14.1	310 20.5	N12 42.4
	4	4 22.9	285 52.0	N18 50.2	270 27.2	N23 53.4	188 55.0	N 3 14.0	325 22.8	N12 42.4
W	5	19 25.3	300 52.4	N18 50.5	285 27.8	N23 53.4	203 57.0	N 3 13.8	340 25.2	N12 42.5
E										
D	6	34 27.8	315 52.7	N18 50.7	300 28.4	N23 53.4	218 59.1	N 3 13.6	355 27.5	N12 42.5
N	7	49 30.3	330 53.1	N18 51.0	315 29.0	N23 53.4	234 01.2	N 3 13.4	10 29.9	N12 42.5
E	8	64 32.7	345 53.4	N18 51.2	330 29.7	N23 53.3	249 03.3	N 3 13.3	25 32.2	N12 42.5
S	9	79 35.2	0 53.8	N18 51.5	345 30.3	N23 53.3	264 05.3	N 3 13.1	40 34.6	N12 42.6
D	10	94 37.6	15 54.1	N18 51.7	0 30.9	N23 53.3	279 07.4	N 3 12.9	55 36.9	N12 42.6
A	11	109 40.1	30 54.5	N18 52.0	15 31.5	N23 53.3	294 09.5	N 3 12.7	70 39.3	N12 42.6
Y										
	12	124 42.6	45 54.8	N18 52.2	30 32.2	N23 53.3	309 11.6	N 3 12.6	85 41.6	N12 42.6
	13	139 45.0	60 55.2	N18 52.5	45 32.8	N23 53.2	324 13.6	N 3 12.4	100 44.0	N12 42.7
	14	154 47.5	75 55.5	N18 52.7	60 33.4	N23 53.2	339 15.7	N 3 12.2	115 46.3	N12 42.7
	15	169 50.0	90 55.9	N18 53.0	75 34.1	N23 53.2	354 17.8	N 3 12.0	130 48.7	N12 42.7
	16	184 52.4	105 56.2	N18 53.2	90 34.7	N23 53.2	9 19.9	N 3 11.9	145 51.0	N12 42.7
	17	199 54.9	120 56.5	N18 53.5	105 35.3	N23 53.1	24 21.9	N 3 11.7	160 53.4	N12 42.8
	18	214 57.4	135 56.9	N18 53.7	120 35.9	N23 53.1	39 24.0	N 3 11.5	175 55.7	N12 42.8
	19	229 59.8	150 57.2	N18 54.0	135 36.6	N23 53.1	54 26.1	N 3 11.4	190 58.0	N12 42.8
	20	245 02.3	165 57.5	N18 54.2	150 37.2	N23 53.1	69 28.2	N 3 11.2	206 00.4	N12 42.9
	21	260 04.8	180 57.9	N18 54.5	165 37.8	N23 53.0	84 30.2	N 3 11.0	221 02.7	N12 42.9
	22	275 07.2	195 58.2	N18 54.8	180 38.5	N23 53.0	99 32.3	N 3 10.8	236 05.1	N12 42.9
	23	290 09.7	210 58.5	N18 55.0	195 39.1	N23 53.0	114 34.4	N 3 10.7	251 07.4	N12 42.9
27	0	305 12.1	225 58.9	N18 55.3	210 39.7	N23 53.0	129 36.4	N 3 10.5	266 09.8	N12 43.0
	1	320 14.6	240 59.2	N18 55.5	225 40.4	N23 52.9	144 38.5	N 3 10.3	281 12.1	N12 43.0
	2	335 17.1	255 59.5	N18 55.8	240 41.0	N23 52.9	159 40.6	N 3 10.1	296 14.5	N12 43.0
	3	350 19.5	270 59.8	N18 56.0	255 41.6	N23 52.9	174 42.7	N 3 10.0	311 16.8	N12 43.0
	4	5 22.0	286 00.2	N18 56.3	270 42.2	N23 52.9	189 44.7	N 3 09.8	326 19.2	N12 43.1
T	5	20 24.5	301 00.5	N18 56.5	285 42.9	N23 52.8	204 46.8	N 3 09.6	341 21.5	N12 43.1
H										
U	6	35 26.9	316 00.8	N18 56.8	300 43.5	N23 52.8	219 48.9	N 3 09.4	356 23.9	N12 43.1
R	7	50 29.4	331 01.1	N18 57.0	315 44.1	N23 52.8	234 50.9	N 3 09.3	11 26.2	N12 43.1
S	8	65 31.9	346 01.4	N18 57.3	330 44.8	N23 52.8	249 53.0	N 3 09.1	26 28.6	N12 43.2
D	9	80 34.3	1 01.7	N18 57.5	345 45.4	N23 52.7	264 55.1	N 3 08.9	41 30.9	N12 43.2
A	10	95 36.8	16 02.1	N18 57.8	0 46.0	N23 52.7	279 57.2	N 3 08.7	56 33.3	N12 43.2
Y	11	110 39.2	31 02.4	N18 58.0	15 46.7	N23 52.7	294 59.2	N 3 08.6	71 35.6	N12 43.2
	12	125 41.7	46 02.7	N18 58.2	30 47.3	N23 52.6	310 01.3	N 3 08.4	86 38.0	N12 43.3
	13	140 44.2	61 03.0	N18 58.5	45 47.9	N23 52.6	325 03.4	N 3 08.2	101 40.3	N12 43.3
	14	155 46.6	76 03.3	N18 58.7	60 48.6	N23 52.6	340 05.4	N 3 08.0	116 42.7	N12 43.3
	15	170 49.1	91 03.6	N18 59.0	75 49.2	N23 52.6	355 07.5	N 3 07.9	131 45.0	N12 43.3
	16	185 51.6	106 03.9	N18 59.2	90 49.8	N23 52.5	10 09.6	N 3 07.7	146 47.4	N12 43.4
	17	200 54.0	121 04.2	N18 59.5	105 50.4	N23 52.5	25 11.7	N 3 07.5	161 49.7	N12 43.4
	18	215 56.5	136 04.5	N18 59.7	120 51.1	N23 52.5	40 13.7	N 3 07.3	176 52.1	N12 43.4
	19	230 59.0	151 04.8	N18 60.0	135 51.7	N23 52.4	55 15.8	N 3 07.2	191 54.4	N12 43.4
	20	246 01.4	166 05.1	N19 00.2	150 52.3	N23 52.4	70 17.9	N 3 07.0	206 56.8	N12 43.5
	21	261 03.9	181 05.4	N19 00.5	165 53.0	N23 52.4	85 19.9	N 3 06.8	221 59.2	N12 43.5
	22	276 06.4	196 05.7	N19 00.7	180 53.6	N23 52.3	100 22.0	N 3 06.6	237 01.5	N12 43.5
	23	291 08.8	211 06.0	N19 01.0	195 54.2	N23 52.3	115 24.1	N 3 06.4	252 03.9	N12 43.5
28	0	306 11.3	226 06.3	N19 01.2	210 54.9	N23 52.3	130 26.1	N 3 06.3	267 06.2	N12 43.6
	1	321 13.7	241 06.6	N19 01.5	225 55.5	N23 52.2	145 28.2	N 3 06.1	282 08.6	N12 43.6
	2	336 16.2	256 06.9	N19 01.7	240 56.1	N23 52.2	160 30.3	N 3 05.9	297 10.9	N12 43.6
	3	351 18.7	271 07.2	N19 02.0	255 56.8	N23 52.2	175 32.4	N 3 05.7	312 13.3	N12 43.6
	4	6 21.1	286 07.5	N19 02.2	270 57.4	N23 52.1	190 34.4	N 3 05.6	327 15.6	N12 43.7
F	5	21 23.6	301 07.7	N19 02.4	285 58.0	N23 52.1	205 36.5	N 3 05.4	342 18.0	N12 43.7
R										
I	6	36 26.1	316 08.0	N19 02.7	300 58.7	N23 52.1	220 38.6	N 3 05.2	357 20.3	N12 43.7
D	7	51 28.5	331 08.3	N19 02.9	315 59.3	N23 52.0	235 40.6	N 3 05.0	12 22.7	N12 43.7
A	8	66 31.0	346 08.6	N19 03.2	330 59.9	N23 52.0	250 42.7	N 3 04.9	27 25.0	N12 43.8
Y	9	81 33.5	1 08.9	N19 03.4	346 00.6	N23 52.0	265 44.8	N 3 04.7	42 27.4	N12 43.8
	10	96 35.9	16 09.2	N19 03.7	1 01.2	N23 51.9	280 46.8	N 3 04.5	57 29.7	N12 43.8
	11	111 38.4	31 09.4	N19 03.9	16 01.8	N23 51.9	295 48.9	N 3 04.3	72 32.1	N12 43.8
	12	126 40.9	46 09.7	N19 04.2	31 02.5	N23 51.8	310 51.0	N 3 04.2	87 34.5	N12 43.9
	13	141 43.3	61 10.0	N19 04.4	46 03.1	N23 51.8	325 53.0	N 3 04.0	102 36.8	N12 43.9
	14	156 45.8	76 10.3	N19 04.6	61 03.7	N23 51.8	340 55.1	N 3 03.8	117 39.2	N12 43.9
	15	171 48.2	91 10.5	N19 04.9	76 04.4	N23 51.7	355 57.2	N 3 03.6	132 41.5	N12 43.9
	16	186 50.7	106 10.8	N19 05.1	91 05.0	N23 51.7	10 59.2	N 3 03.5	147 43.9	N12 44.0
	17	201 53.2	121 11.1	N19 05.4	106 05.6	N23 51.6	26 01.3	N 3 03.3	162 46.2	N12 44.0
	18	216 55.6	136 11.4	N19 05.6	121 06.3	N23 51.6	41 03.4	N 3 03.1	177 48.6	N12 44.0
	19	231 58.1	151 11.6	N19 05.9	136 06.9	N23 51.6	56 05.4	N 3 02.9	192 50.9	N12 44.0
	20	247 00.6	166 11.9	N19 06.1	151 07.5	N23 51.5	71 07.5	N 3 02.7	207 53.3	N12 44.1
	21	262 03.0	181 12.2	N19 06.3	166 08.2	N23 51.5	86 09.6	N 3 02.6	222 55.7	N12 44.1
	22	277 05.5	196 12.4	N19 06.6	181 08.8	N23 51.4	101 11.6	N 3 02.4	237 58.0	N12 44.1
	23	292 08.0	211 12.7	N19 06.8	196 09.5	N23 51.4	116 13.7	N 3 02.2	253 00.4	N12 44.1
			v 0.3	d 0.2	v 0.6	d 0.0	v 2.1	d 0.2	v 2.4	d 0.0

G.M.T		SUN				MOON						STARS		
d	h	GHA ° '		Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '		Name	SHA ° '	Dec ° '
26	0	178	21.7	N19	21.5	128	43.2	10.5	S 3	13.0	15.9	60.1	Acamar	315 09.7 S40 11.1
	1	193	21.7	N19	21.0	143	12.7	10.5	S 3	28.9	15.8	60.1	Achernar	335 18.0 S57 05.1
	2	208	21.7	N19	20.4	157	42.2	10.5	S 3	44.7	15.8	60.1	Acrux	172 57.1 S63 15.7
	3	223	21.7	N19	19.8	172	11.8	10.6	S 4	00.5	15.8	60.1	Adhara	255 03.9 S29 00.6
	4	238	21.7	N19	19.3	186	41.3	10.6	S 4	16.2	15.8	60.0	Albireo	67 01.3 N28 01.3
W	5	253	21.7	N19	18.7	201	10.9	10.6	S 4	32.0	15.7	60.0		
E													Aldebaran	290 36.5 N16 34.0
D	6	268	21.7	N19	18.2	215	40.5	10.6	S 4	47.6	15.7	60.0	Alioth	166 10.7 N55 48.5
N	7	283	21.7	N19	17.6	230	10.0	10.6	S 5	03.3	15.6	60.0	Alkaid	152 49.8 N49 10.4
E	8	298	21.7	N19	17.1	244	39.6	10.6	S 5	18.9	15.6	60.0	Al Na-ir	27 28.8 S46 49.1
S	9	313	21.7	N19	16.5	259	09.1	10.6	S 5	34.4	15.6	59.9	Alnilam	275 35.0 S 1 11.0
D	10	328	21.7	N19	15.9	273	38.7	10.5	S 5	50.0	15.5	59.9		
A	11	343	21.7	N19	15.4	288	08.2	10.5	S 6	05.4	15.5	59.9	Alphard	217 45.2 S 8 47.0
Y													Alphecca	126 01.2 N26 37.3
	12	358	21.7	N19	14.8	302	37.7	10.5	S 6	20.9	15.4	59.9	Alpheratz	357 31.5 N29 15.0
	13	13	21.7	N19	14.2	317	07.3	10.5	S 6	36.2	15.4	59.9	Altair	61 56.8 N 8 56.8
	14	28	21.7	N19	13.7	331	36.8	10.5	S 6	51.6	15.3	59.8	Ankaa	353 04.1 S42 08.7
	15	43	21.7	N19	13.1	346	06.3	10.5	S 7	06.9	15.3	59.8		
	16	58	21.8	N19	12.5	0	35.8	10.5	S 7	22.1	15.2	59.8	Antares	112 12.1 S26 29.8
	17	73	21.8	N19	12.0	15	05.3	10.5	S 7	37.3	15.2	59.8	Arcturus	145 45.3 N19 02.1
													Atria	107 03.3 S69 04.9
	18	88	21.8	N19	11.4	29	34.8	10.5	S 7	52.4	15.1	59.7	Avior	234 14.1 S59 36.1
	19	103	21.8	N19	10.8	44	04.3	10.5	S 8	07.5	15.1	59.7	Bellatrix	278 20.0 N 6 22.6
	20	118	21.8	N19	10.3	58	33.7	10.5	S 8	22.5	15.0	59.7		
	21	133	21.8	N19	09.7	73	03.2	10.4	S 8	37.4	15.0	59.7	Betelgeuse	270 49.2 N 7 24.8
	22	148	21.8	N19	09.1	87	32.6	10.4	S 8	52.3	14.9	59.6	Canopus	263 51.6 S52 42.5
	23	163	21.8	N19	08.6	102	02.0	10.4	S 9	07.2	14.8	59.6	Capella	280 17.9 N46 01.5
													Castor	245 53.7 N31 49.5
27	0	178	21.8	N19	08.0	116	31.4	10.4	S 9	21.9	14.8	59.6	Deneb	49 23.3 N45 23.0
	1	193	21.8	N19	07.4	131	00.8	10.4	S 9	36.7	14.7	59.6		
	2	208	21.8	N19	06.9	145	30.1	10.4	S 9	51.3	14.6	59.6	Denebola	182 22.2 N14 24.8
	3	223	21.8	N19	06.3	159	59.5	10.3	S10	05.9	14.6	59.5	Diphda	348 44.3 S17 49.5
	4	238	21.8	N19	05.7	174	28.8	10.3	S10	20.4	14.5	59.5	Dubhe	193 38.0 N61 35.9
T	5	253	21.9	N19	05.1	188	58.1	10.3	S10	34.8	14.4	59.5	Elnath	277 58.5 N28 37.8
H													Eltanin	90 40.4 N51 29.3
U	6	268	21.9	N19	04.6	203	27.4	10.3	S10	49.2	14.4	59.5		
R	7	283	21.9	N19	04.0	217	56.6	10.3	S11	03.5	14.3	59.4	Enif	33 35.6 N10 00.5
S	8	298	21.9	N19	03.4	232	25.8	10.2	S11	17.7	14.2	59.4	Fomalhaut	15 11.0 S29 28.0
D	9	313	21.9	N19	02.9	246	55.0	10.2	S11	31.8	14.1	59.4	Gacrux	171 48.6 S57 16.7
A	10	328	21.9	N19	02.3	261	24.2	10.2	S11	45.9	14.1	59.3	Gienah	175 40.7 S17 42.1
Y	11	343	21.9	N19	01.7	275	53.4	10.1	S11	59.9	14.0	59.3	Hadar	148 31.9 S60 31.0
	12	358	21.9	N19	01.1	290	22.5	10.1	S12	13.8	13.9	59.3	Hamal	327 47.9 N23 35.9
	13	13	21.9	N19	00.6	304	51.6	10.1	S12	27.7	13.8	59.3	Kaus Austr.	83 28.3 S34 22.3
	14	28	21.9	N18	60.0	319	20.6	10.1	S12	41.4	13.8	59.2	Kochab	137 20.0 N74 02.5
	15	43	22.0	N18	59.4	333	49.7	10.0	S12	55.1	13.7	59.2	Markab	13 26.7 N15 21.6
	16	58	22.0	N18	58.8	348	18.7	10.0	S13	08.7	13.6	59.2	Menkar	314 03.1 N 4 12.2
	17	73	22.0	N18	58.2	2	47.7	10.0	S13	22.2	13.5	59.2		
													Menkent	147 54.2 S36 30.9
	18	88	22.0	N18	57.7	17	16.6	9.9	S13	35.6	13.4	59.1	Miaplacidus	221 38.4 S69 50.2
	19	103	22.0	N18	57.1	31	45.5	9.9	S13	48.9	13.3	59.1	Mirfak	308 24.2 N49 57.6
	20	118	22.0	N18	56.5	46	14.4	9.9	S14	02.2	13.2	59.1	Nunki	75 43.8 S26 15.5
	21	133	22.0	N18	55.9	60	43.3	9.9	S14	15.3	13.2	59.1	Peacock	53 00.5 S56 38.4
	22	148	22.1	N18	55.3	75	12.1	9.8	S14	28.4	13.1	59.0		
	23	163	22.1	N18	54.8	89	40.9	9.8	S14	41.3	13.0	59.0	Polaris	315 24.0 N89 22.2
													Pollux	243 14.1 N27 57.4
28	0	178	22.1	N18	54.2	104	09.6	9.7	S14	54.2	12.9	59.0	Procyon	244 48.1 N 5 09.1
	1	193	22.1	N18	53.6	118	38.3	9.7	S15	07.0	12.8	58.9	Rasalhague	95 55.6 N12 32.5
	2	208	22.1	N18	53.0	133	07.0	9.7	S15	19.7	12.7	58.9	Regulus	207 31.6 N11 49.6
	3	223	22.1	N18	52.4	147	35.6	9.6	S15	32.3	12.6	58.9		
	4	238	22.1	N18	51.8	162	04.3	9.6	S15	44.8	12.5	58.9	Rigel	281 01.3 S 8 10.0
F	5	253	22.2	N18	51.3	176	32.8	9.6	S15	57.2	12.4	58.8	Rigil Kent	139 36.3 S60 57.5
R													Sabik	101 59.2 S15 45.6
I	6	268	22.2	N18	50.7	191	01.4	9.5	S16	09.5	12.3	58.8	Schedar	349 27.4 N56 41.5
D	7	283	22.2	N18	50.1	205	29.9	9.5	S16	21.6	12.2	58.8	Shaula	96 06.1 S37 07.5
A	8	298	22.2	N18	49.5	219	58.3	9.5	S16	33.7	12.1	58.8		
Y	9	313	22.2	N18	48.9	234	26.7	9.4	S16	45.7	12.0	58.7	Sirius	258 24.0 S16 45.3
	10	328	22.2	N18	48.3	248	55.1	9.4	S16	57.6	11.9	58.7	Spica	158 19.3 S11 18.7
	11	343	22.3	N18	47.7	263	23.5	9.3	S17	09.4	11.8	58.7	Suhail	222 44.6 S43 33.0
													Vega	80 30.9 N38 48.8
	12	358	22.3	N18	47.1	277	51.8	9.3	S17	21.0	11.7	58.6	Zuben-ubi	136 53.7 S16 09.7
	13	13	22.3	N18	46.6	292	20.0	9.3	S17	32.6	11.6	58.6		
	14	28	22.3	N18	46.0	306	48.2	9.2	S17	44.0	11.4	58.6		
	15	43	22.3	N18	45.4	321	16.4	9.2	S17	55.4	11.3	58.6		
	16	58	22.3	N18	44.8	335	44.6	9.1	S18	06.6	11.2	58.5		
	17	73	22.4	N18	44.2	350	12.7	9.1	S18	17.7	11.1	58.5		
	18	88	22.4	N18	43.6	4	40.7	9.1	S18	28.7	11.0	58.5		
	19	103	22.4	N18	43.0	19	08.8	9.0	S18	39.6	10.9	58.4		
	20	118	22.4	N18	42.4	33	36.7	9.0	S18	50.4	10.8	58.4		
	21	133	22.4	N18	41.8	48	04.7	8.9	S19	01.1	10.7	58.4		
	22	148	22.5	N18	41.2	62	32.6	8.9	S19	11.6	10.5	58.4		
	23	163	22.5	N18	40.6	77	00.5	8.9	S19	22.0	10.4	58.3		
		S.D.	15.8	d	0.6	S.D.	16.3		16.2		16.0			

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
29	0	307 10.4	226 13.0	N19 07.1	211 10.1	N23 51.4	131 15.8	N 3 02.0	268 02.7	N12 44.2
	1	322 12.9	241 13.2	N19 07.3	226 10.7	N23 51.3	146 17.8	N 3 01.9	283 05.1	N12 44.2
	2	337 15.3	256 13.5	N19 07.5	241 11.4	N23 51.3	161 19.9	N 3 01.7	298 07.4	N12 44.2
	3	352 17.8	271 13.7	N19 07.8	256 12.0	N23 51.2	176 22.0	N 3 01.5	313 09.8	N12 44.2
	4	7 20.3	286 14.0	N19 08.0	271 12.6	N23 51.2	191 24.0	N 3 01.3	328 12.2	N12 44.2
S	5	22 22.7	301 14.2	N19 08.3	286 13.3	N23 51.1	206 26.1	N 3 01.1	343 14.5	N12 44.3
A										
T	6	37 25.2	316 14.5	N19 08.5	301 13.9	N23 51.1	221 28.2	N 3 01.0	358 16.9	N12 44.3
U	7	52 27.7	331 14.7	N19 08.7	316 14.5	N23 51.1	236 30.2	N 3 00.8	13 19.2	N12 44.3
R	8	67 30.1	346 15.0	N19 09.0	331 15.2	N23 51.0	251 32.3	N 3 00.6	28 21.6	N12 44.3
D	9	82 32.6	1 15.2	N19 09.2	346 15.8	N23 51.0	266 34.4	N 3 00.4	43 23.9	N12 44.4
A	10	97 35.1	16 15.5	N19 09.5	1 16.5	N23 50.9	281 36.4	N 3 00.3	58 26.3	N12 44.4
Y	11	112 37.5	31 15.7	N19 09.7	16 17.1	N23 50.9	296 38.5	N 3 00.1	73 28.7	N12 44.4
	12	127 40.0	46 16.0	N19 09.9	31 17.7	N23 50.8	311 40.6	N 2 59.9	88 31.0	N12 44.4
	13	142 42.5	61 16.2	N19 10.2	46 18.4	N23 50.8	326 42.6	N 2 59.7	103 33.4	N12 44.5
	14	157 44.9	76 16.5	N19 10.4	61 19.0	N23 50.7	341 44.7	N 2 59.5	118 35.7	N12 44.5
	15	172 47.4	91 16.7	N19 10.7	76 19.6	N23 50.7	356 46.8	N 2 59.4	133 38.1	N12 44.5
	16	187 49.8	106 17.0	N19 10.9	91 20.3	N23 50.6	11 48.8	N 2 59.2	148 40.5	N12 44.5
	17	202 52.3	121 17.2	N19 11.1	106 20.9	N23 50.6	26 50.9	N 2 59.0	163 42.8	N12 44.5
	18	217 54.8	136 17.4	N19 11.4	121 21.6	N23 50.5	41 52.9	N 2 58.8	178 45.2	N12 44.6
	19	232 57.2	151 17.7	N19 11.6	136 22.2	N23 50.5	56 55.0	N 2 58.7	193 47.5	N12 44.6
	20	247 59.7	166 17.9	N19 11.8	151 22.8	N23 50.5	71 57.1	N 2 58.5	208 49.9	N12 44.6
	21	263 02.2	181 18.1	N19 12.1	166 23.5	N23 50.4	86 59.1	N 2 58.3	223 52.2	N12 44.6
	22	278 04.6	196 18.4	N19 12.3	181 24.1	N23 50.4	102 01.2	N 2 58.1	238 54.6	N12 44.7
	23	293 07.1	211 18.6	N19 12.5	196 24.7	N23 50.3	117 03.3	N 2 57.9	253 57.0	N12 44.7
30	0	308 09.6	226 18.8	N19 12.8	211 25.4	N23 50.3	132 05.3	N 2 57.8	268 59.3	N12 44.7
	1	323 12.0	241 19.1	N19 13.0	226 26.0	N23 50.2	147 07.4	N 2 57.6	284 01.7	N12 44.7
	2	338 14.5	256 19.3	N19 13.2	241 26.7	N23 50.2	162 09.5	N 2 57.4	299 04.1	N12 44.7
	3	353 17.0	271 19.5	N19 13.5	256 27.3	N23 50.1	177 11.5	N 2 57.2	314 06.4	N12 44.8
	4	8 19.4	286 19.7	N19 13.7	271 27.9	N23 50.0	192 13.6	N 2 57.1	329 08.8	N12 44.8
S	5	23 21.9	301 20.0	N19 13.9	286 28.6	N23 50.0	207 15.6	N 2 56.9	344 11.1	N12 44.8
U										
N	6	38 24.3	316 20.2	N19 14.2	301 29.2	N23 49.9	222 17.7	N 2 56.7	359 13.5	N12 44.8
D	7	53 26.8	331 20.4	N19 14.4	316 29.9	N23 49.9	237 19.8	N 2 56.5	14 15.9	N12 44.9
A	8	68 29.3	346 20.6	N19 14.6	331 30.5	N23 49.8	252 21.8	N 2 56.3	29 18.2	N12 44.9
Y	9	83 31.7	1 20.8	N19 14.9	346 31.1	N23 49.8	267 23.9	N 2 56.2	44 20.6	N12 44.9
	10	98 34.2	16 21.1	N19 15.1	1 31.8	N23 49.7	282 26.0	N 2 56.0	59 22.9	N12 44.9
	11	113 36.7	31 21.3	N19 15.3	16 32.4	N23 49.7	297 28.0	N 2 55.8	74 25.3	N12 44.9
	12	128 39.1	46 21.5	N19 15.6	31 33.1	N23 49.6	312 30.1	N 2 55.6	89 27.7	N12 45.0
	13	143 41.6	61 21.7	N19 15.8	46 33.7	N23 49.6	327 32.1	N 2 55.4	104 30.0	N12 45.0
	14	158 44.1	76 21.9	N19 16.0	61 34.3	N23 49.5	342 34.2	N 2 55.3	119 32.4	N12 45.0
	15	173 46.5	91 22.1	N19 16.3	76 35.0	N23 49.5	357 36.3	N 2 55.1	134 34.8	N12 45.0
	16	188 49.0	106 22.3	N19 16.5	91 35.6	N23 49.4	12 38.3	N 2 54.9	149 37.1	N12 45.0
	17	203 51.4	121 22.6	N19 16.7	106 36.3	N23 49.3	27 40.4	N 2 54.7	164 39.5	N12 45.1
	18	218 53.9	136 22.8	N19 17.0	121 36.9	N23 49.3	42 42.4	N 2 54.5	179 41.8	N12 45.1
	19	233 56.4	151 23.0	N19 17.2	136 37.5	N23 49.2	57 44.5	N 2 54.4	194 44.2	N12 45.1
	20	248 58.8	166 23.2	N19 17.4	151 38.2	N23 49.2	72 46.6	N 2 54.2	209 46.6	N12 45.1
	21	264 01.3	181 23.4	N19 17.6	166 38.8	N23 49.1	87 48.6	N 2 54.0	224 48.9	N12 45.2
	22	279 03.8	196 23.6	N19 17.9	181 39.5	N23 49.1	102 50.7	N 2 53.8	239 51.3	N12 45.2
	23	294 06.2	211 23.8	N19 18.1	196 40.1	N23 49.0	117 52.7	N 2 53.6	254 53.7	N12 45.2
31	0	309 08.7	226 24.0	N19 18.3	211 40.8	N23 48.9	132 54.8	N 2 53.5	269 56.0	N12 45.2
	1	324 11.2	241 24.2	N19 18.6	226 41.4	N23 48.9	147 56.9	N 2 53.3	284 58.4	N12 45.2
	2	339 13.6	256 24.4	N19 18.8	241 42.0	N23 48.8	162 58.9	N 2 53.1	300 00.8	N12 45.3
	3	354 16.1	271 24.6	N19 19.0	256 42.7	N23 48.8	178 01.0	N 2 52.9	315 03.1	N12 45.3
	4	9 18.6	286 24.8	N19 19.2	271 43.3	N23 48.7	193 03.1	N 2 52.7	330 05.5	N12 45.3
M	5	24 21.0	301 25.0	N19 19.5	286 44.0	N23 48.6	208 05.1	N 2 52.6	345 07.9	N12 45.3
O										
N	6	39 23.5	316 25.1	N19 19.7	301 44.6	N23 48.6	223 07.2	N 2 52.4	0 10.2	N12 45.3
D	7	54 25.9	331 25.3	N19 19.9	316 45.2	N23 48.5	238 09.2	N 2 52.2	15 12.6	N12 45.4
A	8	69 28.4	346 25.5	N19 20.1	331 45.9	N23 48.5	253 11.3	N 2 52.0	30 15.0	N12 45.4
Y	9	84 30.9	1 25.7	N19 20.4	346 46.5	N23 48.4	268 13.3	N 2 51.8	45 17.3	N12 45.4
	10	99 33.3	16 25.9	N19 20.6	1 47.2	N23 48.3	283 15.4	N 2 51.7	60 19.7	N12 45.4
	11	114 35.8	31 26.1	N19 20.8	16 47.8	N23 48.3	298 17.5	N 2 51.5	75 22.1	N12 45.4
	12	129 38.3	46 26.3	N19 21.0	31 48.5	N23 48.2	313 19.5	N 2 51.3	90 24.4	N12 45.5
	13	144 40.7	61 26.5	N19 21.3	46 49.1	N23 48.2	328 21.6	N 2 51.1	105 26.8	N12 45.5
	14	159 43.2	76 26.6	N19 21.5	61 49.8	N23 48.1	343 23.6	N 2 50.9	120 29.2	N12 45.5
	15	174 45.7	91 26.8	N19 21.7	76 50.4	N23 48.0	358 25.7	N 2 50.8	135 31.5	N12 45.5
	16	189 48.1	106 27.0	N19 21.9	91 51.0	N23 48.0	13 27.8	N 2 50.6	150 33.9	N12 45.5
	17	204 50.6	121 27.2	N19 22.2	106 51.7	N23 47.9	28 29.8	N 2 50.4	165 36.3	N12 45.6
	18	219 53.1	136 27.3	N19 22.4	121 52.3	N23 47.8	43 31.9	N 2 50.2	180 38.6	N12 45.6
	19	234 55.5	151 27.5	N19 22.6	136 53.0	N23 47.8	58 33.9	N 2 50.0	195 41.0	N12 45.6
	20	249 58.0	166 27.7	N19 22.8	151 53.6	N23 47.7	73 36.0	N 2 49.9	210 43.4	N12 45.6
	21	265 00.4	181 27.9	N19 23.0	166 54.3	N23 47.6	88 38.0	N 2 49.7	225 45.7	N12 45.6
	22	280 02.9	196 28.0	N19 23.3	181 54.9	N23 47.6	103 40.1	N 2 49.5	240 48.1	N12 45.7
	23	295 05.4	211 28.2	N19 23.5	196 55.6	N23 47.5	118 42.2	N 2 49.3	255 50.5	N12 45.7
			v 0.2	d 0.2	v 0.6	d 0.1	v 2.1	d 0.2	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
29	0	178 22.5	N18 40.0	91 28.3	8.8	S19 32.3	10.3	58.3
	1	193 22.5	N18 39.4	105 56.1	8.8	S19 42.5	10.2	58.3
	2	208 22.5	N18 38.8	120 23.8	8.7	S19 52.6	10.1	58.2
	3	223 22.6	N18 38.2	134 51.5	8.7	S20 02.5	9.9	58.2
	4	238 22.6	N18 37.6	149 19.2	8.7	S20 12.3	9.8	58.2
S	5	253 22.6	N18 37.0	163 46.8	8.6	S20 22.0	9.7	58.2
A								
T	6	268 22.6	N18 36.4	178 14.4	8.6	S20 31.6	9.6	58.1
U	7	283 22.7	N18 35.8	192 41.9	8.5	S20 41.0	9.4	58.1
R	8	298 22.7	N18 35.2	207 09.4	8.5	S20 50.4	9.3	58.1
D	9	313 22.7	N18 34.6	221 36.9	8.5	S20 59.5	9.2	58.1
A	10	328 22.7	N18 34.0	236 04.3	8.4	S21 08.6	9.1	58.0
Y	11	343 22.8	N18 33.4	250 31.7	8.4	S21 17.5	8.9	58.0
	12	358 22.8	N18 32.8	264 59.1	8.4	S21 26.4	8.8	58.0
	13	13 22.8	N18 32.2	279 26.4	8.3	S21 35.0	8.7	57.9
	14	28 22.8	N18 31.6	293 53.7	8.3	S21 43.6	8.5	57.9
	15	43 22.8	N18 31.0	308 20.9	8.2	S21 52.0	8.4	57.9
	16	58 22.9	N18 30.4	322 48.1	8.2	S22 00.3	8.3	57.9
	17	73 22.9	N18 29.8	337 15.3	8.2	S22 08.4	8.1	57.8
	18	88 22.9	N18 29.2	351 42.4	8.1	S22 16.4	8.0	57.8
	19	103 23.0	N18 28.6	6 09.5	8.1	S22 24.3	7.9	57.8
	20	118 23.0	N18 28.0	20 36.6	8.1	S22 32.0	7.7	57.7
	21	133 23.0	N18 27.4	35 03.6	8.0	S22 39.6	7.6	57.7
	22	148 23.0	N18 26.8	49 30.6	8.0	S22 47.1	7.5	57.7
	23	163 23.1	N18 26.2	63 57.6	8.0	S22 54.5	7.3	57.7
30	0	178 23.1	N18 25.6	78 24.5	7.9	S23 01.6	7.2	57.6
	1	193 23.1	N18 25.0	92 51.4	7.9	S23 08.7	7.1	57.6
	2	208 23.1	N18 24.4	107 18.3	7.9	S23 15.6	6.9	57.6
	3	223 23.2	N18 23.8	121 45.2	7.9	S23 22.4	6.8	57.6
	4	238 23.2	N18 23.1	136 12.0	7.8	S23 29.0	6.6	57.5
S	5	253 23.2	N18 22.5	150 38.8	7.8	S23 35.5	6.5	57.5
U								
N	6	268 23.3	N18 21.9	165 05.6	7.8	S23 41.9	6.4	57.5
D	7	283 23.3	N18 21.3	179 32.3	7.7	S23 48.1	6.2	57.4
A	8	298 23.3	N18 20.7	193 59.0	7.7	S23 54.1	6.1	57.4
Y	9	313 23.3	N18 20.1	208 25.7	7.7	S24 00.1	5.9	57.4
	10	328 23.4	N18 19.5	222 52.4	7.7	S24 05.9	5.8	57.4
	11	343 23.4	N18 18.9	237 19.0	7.7	S24 11.5	5.6	57.3
	12	358 23.4	N18 18.2	251 45.7	7.6	S24 17.0	5.5	57.3
	13	13 23.5	N18 17.6	266 12.3	7.6	S24 22.3	5.3	57.3
	14	28 23.5	N18 17.0	280 38.9	7.6	S24 27.5	5.2	57.3
	15	43 23.5	N18 16.4	295 05.5	7.6	S24 32.6	5.1	57.2
	16	58 23.6	N18 15.8	309 32.0	7.6	S24 37.5	4.9	57.2
	17	73 23.6	N18 15.2	323 58.6	7.5	S24 42.3	4.8	57.2
	18	88 23.6	N18 14.6	338 25.1	7.5	S24 46.9	4.6	57.2
	19	103 23.7	N18 13.9	352 51.6	7.5	S24 51.4	4.5	57.1
	20	118 23.7	N18 13.3	7 18.1	7.5	S24 55.7	4.3	57.1
	21	133 23.7	N18 12.7	21 44.6	7.5	S24 59.9	4.2	57.1
	22	148 23.8	N18 12.1	36 11.1	7.5	S25 03.9	4.0	57.1
	23	163 23.8	N18 11.5	50 37.5	7.5	S25 07.8	3.9	57.0
31	0	178 23.8	N18 10.8	65 04.0	7.5	S25 11.5	3.7	57.0
	1	193 23.9	N18 10.2	79 30.5	7.5	S25 15.1	3.6	57.0
	2	208 23.9	N18 09.6	93 56.9	7.5	S25 18.5	3.4	57.0
	3	223 23.9	N18 09.0	108 23.4	7.5	S25 21.8	3.3	56.9
	4	238 24.0	N18 08.4	122 49.8	7.4	S25 25.0	3.1	56.9
M	5	253 24.0	N18 07.7	137 16.3	7.4	S25 28.0	3.0	56.9
O								
N	6	268 24.0	N18 07.1	151 42.7	7.4	S25 30.8	2.8	56.8
D	7	283 24.1	N18 06.5	166 09.2	7.5	S25 33.5	2.7	56.8
A	8	298 24.1	N18 05.9	180 35.6	7.5	S25 36.0	2.5	56.8
Y	9	313 24.1	N18 05.2	195 02.1	7.5	S25 38.4	2.4	56.8
	10	328 24.2	N18 04.6	209 28.6	7.5	S25 40.7	2.2	56.8
	11	343 24.2	N18 04.0	223 55.0	7.5	S25 42.8	2.1	56.7
	12	358 24.3	N18 03.4	238 21.5	7.5	S25 44.7	1.9	56.7
	13	13 24.3	N18 02.7	252 48.0	7.5	S25 46.5	1.8	56.7
	14	28 24.3	N18 02.1	267 14.5	7.5	S25 48.2	1.7	56.7
	15	43 24.4	N18 01.5	281 41.0	7.5	S25 49.7	1.5	56.6
	16	58 24.4	N18 00.8	296 07.5	7.5	S25 51.0	1.4	56.6
	17	73 24.4	N18 00.2	310 34.1	7.5	S25 52.2	1.2	56.6
	18	88 24.5	N17 59.6	325 00.6	7.6	S25 53.3	1.1	56.6
	19	103 24.5	N17 59.0	339 27.2	7.6	S25 54.2	0.9	56.5
	20	118 24.6	N17 58.3	353 53.8	7.6	S25 55.0	0.8	56.5
	21	133 24.6	N17 57.7	8 20.4	7.6	S25 55.6	0.6	56.5
	22	148 24.6	N17 57.1	22 47.0	7.6	S25 56.1	0.5	56.5
	23	163 24.7	N17 56.4	37 13.7	7.7	S25 56.4	0.3	56.4
		S.D. 15.8	d 0.6	S.D. 15.8		15.6	15.4	

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.6	S40 11.1
Achernar	335 18.0	S57 05.1
Acrux	172 57.1	S63 15.7
Adhara	255 03.9	S29 00.6
Albireo	67 01.3	N28 01.3
Aldebaran	290 36.5	N16 34.0
Alioth	166 10.7	N55 48.5
Alkaid	152 49.8	N49 10.4
Al Na-ir	27 28.8	S46 49.1
Alnilam	275 35.0	S 1 11.0
Alphard	217 45.2	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.5	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.1	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.4	S69 04.9
Avior	234 14.1	S59 36.1
Bellatrix	278 20.0	N 6 22.6
Betelgeuse	270 49.2	N 7 24.8
Canopus	263 51.5	S52 42.5
Capella	280 17.9	N46 01.5
Castor	245 53.7	N31 49.5
Deneb	49 23.3	N45 23.1
Denebola	182 22.2	N14 24.8
Diphda	348 44.3	S17 49.5
Dubhe	193 38.0	N61 35.9
Elnath	277 58.5	N28 37.8
Eltanin	90 40.4	N51 29.3
Enif	33 35.5	N10 00.5
Fomalhaut	15 11.0	S29 28.0
Gacrux	171 48.6	S57 16.7
Gienah	175 40.7	S17 42.1
Hadar	148 31.9	S60 31.0
Hamal	327 47.9	N23 35.9
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.1	N74 02.5
Markab	13 26.7	N15 21.7
Menkar	314 03.1	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.2
Mirfak	308 24.2	N49 57.6
Nunki	75 43.8	S26 15.5
Peacock	53 00.5	S56 38.4
Polaris	315 22.6	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.5
Regulus	207 31.6	N11 49.6
Rigel	281 01.3	S 8 10.0
Rigil Kent	139 36.3	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.3	N56 41.5
Shaula	96 06.1	S37 07.5
Sirius	258 24.0	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.6	S43 32.9
Vega	80 30.9	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
1	0	310 07.8	226 28.4	N19 23.7	211 56.2	N23 47.4	133 44.2	N 2 49.1	270 52.8	N12 45.7
	1	325 10.3	241 28.6	N19 23.9	226 56.8	N23 47.4	148 46.3	N 2 49.0	285 55.2	N12 45.7
	2	340 12.8	256 28.7	N19 24.1	241 57.5	N23 47.3	163 48.3	N 2 48.8	300 57.6	N12 45.7
	3	355 15.2	271 28.9	N19 24.4	256 58.1	N23 47.2	178 50.4	N 2 48.6	315 59.9	N12 45.8
	4	10 17.7	286 29.1	N19 24.6	271 58.8	N23 47.2	193 52.4	N 2 48.4	331 02.3	N12 45.8
T	5	25 20.2	301 29.2	N19 24.8	286 59.4	N23 47.1	208 54.5	N 2 48.2	346 04.7	N12 45.8
U										
E	6	40 22.6	316 29.4	N19 25.0	302 00.1	N23 47.0	223 56.6	N 2 48.1	1 07.0	N12 45.8
S	7	55 25.1	331 29.5	N19 25.2	317 00.7	N23 47.0	238 58.6	N 2 47.9	16 09.4	N12 45.8
D	8	70 27.6	346 29.7	N19 25.5	332 01.4	N23 46.9	254 00.7	N 2 47.7	31 11.8	N12 45.9
A	9	85 30.0	1 29.9	N19 25.7	347 02.0	N23 46.8	269 02.7	N 2 47.5	46 14.2	N12 45.9
Y	10	100 32.5	16 30.0	N19 25.9	2 02.7	N23 46.8	284 04.8	N 2 47.3	61 16.5	N12 45.9
	11	115 34.9	31 30.2	N19 26.1	17 03.3	N23 46.7	299 06.8	N 2 47.1	76 18.9	N12 45.9
	12	130 37.4	46 30.3	N19 26.3	32 03.9	N23 46.6	314 08.9	N 2 47.0	91 21.3	N12 45.9
	13	145 39.9	61 30.5	N19 26.5	47 04.6	N23 46.5	329 11.0	N 2 46.8	106 23.6	N12 46.0
	14	160 42.3	76 30.6	N19 26.8	62 05.2	N23 46.5	344 13.0	N 2 46.6	121 26.0	N12 46.0
	15	175 44.8	91 30.8	N19 27.0	77 05.9	N23 46.4	359 15.1	N 2 46.4	136 28.4	N12 46.0
	16	190 47.3	106 30.9	N19 27.2	92 06.5	N23 46.3	14 17.1	N 2 46.2	151 30.7	N12 46.0
	17	205 49.7	121 31.1	N19 27.4	107 07.2	N23 46.3	29 19.2	N 2 46.1	166 33.1	N12 46.0
	18	220 52.2	136 31.2	N19 27.6	122 07.8	N23 46.2	44 21.2	N 2 45.9	181 35.5	N12 46.0
	19	235 54.7	151 31.4	N19 27.8	137 08.5	N23 46.1	59 23.3	N 2 45.7	196 37.9	N12 46.1
	20	250 57.1	166 31.5	N19 28.0	152 09.1	N23 46.0	74 25.3	N 2 45.5	211 40.2	N12 46.1
	21	265 59.6	181 31.7	N19 28.3	167 09.8	N23 46.0	89 27.4	N 2 45.3	226 42.6	N12 46.1
	22	281 02.0	196 31.8	N19 28.5	182 10.4	N23 45.9	104 29.5	N 2 45.1	241 45.0	N12 46.1
	23	296 04.5	211 31.9	N19 28.7	197 11.1	N23 45.8	119 31.5	N 2 45.0	256 47.3	N12 46.1
2	0	311 07.0	226 32.1	N19 28.9	212 11.7	N23 45.7	134 33.6	N 2 44.8	271 49.7	N12 46.2
	1	326 09.4	241 32.2	N19 29.1	227 12.4	N23 45.7	149 35.6	N 2 44.6	286 52.1	N12 46.2
	2	341 11.9	256 32.4	N19 29.3	242 13.0	N23 45.6	164 37.7	N 2 44.4	301 54.5	N12 46.2
	3	356 14.4	271 32.5	N19 29.5	257 13.7	N23 45.5	179 39.7	N 2 44.2	316 56.8	N12 46.2
	4	11 16.8	286 32.6	N19 29.7	272 14.3	N23 45.4	194 41.8	N 2 44.0	331 59.2	N12 46.2
W	5	26 19.3	301 32.8	N19 29.9	287 15.0	N23 45.4	209 43.8	N 2 43.9	347 01.6	N12 46.2
E										
D	6	41 21.8	316 32.9	N19 30.2	302 15.6	N23 45.3	224 45.9	N 2 43.7	2 04.0	N12 46.3
N	7	56 24.2	331 33.0	N19 30.4	317 16.3	N23 45.2	239 47.9	N 2 43.5	17 06.3	N12 46.3
E	8	71 26.7	346 33.2	N19 30.6	332 16.9	N23 45.1	254 50.0	N 2 43.3	32 08.7	N12 46.3
S	9	86 29.2	1 33.3	N19 30.8	347 17.6	N23 45.0	269 52.0	N 2 43.1	47 11.1	N12 46.3
D	10	101 31.6	16 33.4	N19 31.0	2 18.2	N23 45.0	284 54.1	N 2 43.0	62 13.5	N12 46.3
A	11	116 34.1	31 33.6	N19 31.2	17 18.9	N23 44.9	299 56.2	N 2 42.8	77 15.8	N12 46.4
Y										
	12	131 36.5	46 33.7	N19 31.4	32 19.5	N23 44.8	314 58.2	N 2 42.6	92 18.2	N12 46.4
	13	146 39.0	61 33.8	N19 31.6	47 20.2	N23 44.7	330 00.3	N 2 42.4	107 20.6	N12 46.4
	14	161 41.5	76 33.9	N19 31.8	62 20.8	N23 44.7	345 02.3	N 2 42.2	122 23.0	N12 46.4
	15	176 43.9	91 34.1	N19 32.0	77 21.5	N23 44.6	0 04.4	N 2 42.0	137 25.3	N12 46.4
	16	191 46.4	106 34.2	N19 32.2	92 22.1	N23 44.5	15 06.4	N 2 41.9	152 27.7	N12 46.4
	17	206 48.9	121 34.3	N19 32.4	107 22.8	N23 44.4	30 08.5	N 2 41.7	167 30.1	N12 46.5
	18	221 51.3	136 34.4	N19 32.6	122 23.4	N23 44.3	45 10.5	N 2 41.5	182 32.5	N12 46.5
	19	236 53.8	151 34.5	N19 32.8	137 24.1	N23 44.2	60 12.6	N 2 41.3	197 34.8	N12 46.5
	20	251 56.3	166 34.7	N19 33.1	152 24.7	N23 44.2	75 14.6	N 2 41.1	212 37.2	N12 46.5
	21	266 58.7	181 34.8	N19 33.3	167 25.4	N23 44.1	90 16.7	N 2 40.9	227 39.6	N12 46.5
	22	282 01.2	196 34.9	N19 33.5	182 26.0	N23 44.0	105 18.7	N 2 40.8	242 42.0	N12 46.5
	23	297 03.7	211 35.0	N19 33.7	197 26.7	N23 43.9	120 20.8	N 2 40.6	257 44.3	N12 46.6
3	0	312 06.1	226 35.1	N19 33.9	212 27.3	N23 43.8	135 22.8	N 2 40.4	272 46.7	N12 46.6
	1	327 08.6	241 35.2	N19 34.1	227 28.0	N23 43.8	150 24.9	N 2 40.2	287 49.1	N12 46.6
	2	342 11.0	256 35.3	N19 34.3	242 28.6	N23 43.7	165 26.9	N 2 40.0	302 51.5	N12 46.6
	3	357 13.5	271 35.4	N19 34.5	257 29.3	N23 43.6	180 29.0	N 2 39.8	317 53.8	N12 46.6
	4	12 16.0	286 35.5	N19 34.7	272 29.9	N23 43.5	195 31.0	N 2 39.7	332 56.2	N12 46.6
T	5	27 18.4	301 35.7	N19 34.9	287 30.6	N23 43.4	210 33.1	N 2 39.5	347 58.6	N12 46.7
H										
U	6	42 20.9	316 35.8	N19 35.1	302 31.2	N23 43.3	225 35.1	N 2 39.3	3 01.0	N12 46.7
R	7	57 23.4	331 35.9	N19 35.3	317 31.9	N23 43.2	240 37.2	N 2 39.1	18 03.4	N12 46.7
S	8	72 25.8	346 36.0	N19 35.5	332 32.5	N23 43.2	255 39.2	N 2 38.9	33 05.7	N12 46.7
D	9	87 28.3	1 36.1	N19 35.7	347 33.2	N23 43.1	270 41.3	N 2 38.7	48 08.1	N12 46.7
A	10	102 30.8	16 36.2	N19 35.9	2 33.8	N23 43.0	285 43.3	N 2 38.6	63 10.5	N12 46.7
Y	11	117 33.2	31 36.3	N19 36.1	17 34.5	N23 42.9	300 45.4	N 2 38.4	78 12.9	N12 46.8
	12	132 35.7	46 36.4	N19 36.3	32 35.2	N23 42.8	315 47.4	N 2 38.2	93 15.2	N12 46.8
	13	147 38.2	61 36.5	N19 36.5	47 35.8	N23 42.7	330 49.5	N 2 38.0	108 17.6	N12 46.8
	14	162 40.6	76 36.6	N19 36.7	62 36.5	N23 42.6	345 51.5	N 2 37.8	123 20.0	N12 46.8
	15	177 43.1	91 36.7	N19 36.9	77 37.1	N23 42.6	0 53.6	N 2 37.6	138 22.4	N12 46.8
	16	192 45.5	106 36.8	N19 37.1	92 37.8	N23 42.5	15 55.6	N 2 37.5	153 24.8	N12 46.8
	17	207 48.0	121 36.8	N19 37.3	107 38.4	N23 42.4	30 57.7	N 2 37.3	168 27.1	N12 46.9
	18	222 50.5	136 36.9	N19 37.4	122 39.1	N23 42.3	45 59.7	N 2 37.1	183 29.5	N12 46.9
	19	237 52.9	151 37.0	N19 37.6	137 39.7	N23 42.2	61 01.8	N 2 36.9	198 31.9	N12 46.9
	20	252 55.4	166 37.1	N19 37.8	152 40.4	N23 42.1	76 03.8	N 2 36.7	213 34.3	N12 46.9
	21	267 57.9	181 37.2	N19 38.0	167 41.0	N23 42.0	91 05.9	N 2 36.5	228 36.7	N12 46.9
	22	283 00.3	196 37.3	N19 38.2	182 41.7	N23 41.9	106 07.9	N 2 36.3	243 39.0	N12 46.9
	23	298 02.8	211 37.4	N19 38.4	197 42.4	N23 41.8	121 10.0	N 2 36.2	258 41.4	N12 47.0
			v 0.1	d 0.2	v 0.7	d 0.1	v 2.1	d 0.2	v 2.4	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
1 0	178 24.7	N17 55.8	51 40.4	7.7	S25 56.6	0.2	56.4	Acamar	315 09.6	S40 11.1
1	193 24.8	N17 55.2	66 07.1	7.7	S25 56.6	0.0	56.4	Achernar	335 17.9	S57 05.1
2	208 24.8	N17 54.5	80 33.8	7.7	S25 56.5	0.1	56.4	Acrux	172 57.1	S63 15.7
3	223 24.8	N17 53.9	95 00.6	7.8	S25 56.2	0.3	56.3	Adhara	255 03.9	S29 00.6
4	238 24.9	N17 53.3	109 27.4	7.8	S25 55.8	0.4	56.3	Albireo	67 01.3	N28 01.4
T 5	253 24.9	N17 52.6	123 54.2	7.8	S25 55.2	0.6	56.3			
U								Aldebaran	290 36.4	N16 34.0
E 6	268 25.0	N17 52.0	138 21.1	7.9	S25 54.6	0.7	56.3	Alioth	166 10.7	N55 48.5
S 7	283 25.0	N17 51.4	152 48.0	7.9	S25 53.7	0.8	56.3	Alkaid	152 49.9	N49 10.4
D 8	298 25.1	N17 50.7	167 14.9	7.9	S25 52.7	1.0	56.2	Al Na-ir	27 28.8	S46 49.1
A 9	313 25.1	N17 50.1	181 41.8	8.0	S25 51.6	1.1	56.2	Alnilam	275 35.0	S 1 10.9
Y 10	328 25.1	N17 49.4	196 08.8	8.0	S25 50.3	1.3	56.2			
11	343 25.2	N17 48.8	210 35.9	8.0	S25 48.9	1.4	56.2	Alphard	217 45.2	S 8 47.0
								Alphecca	126 01.2	N26 37.3
12	358 25.2	N17 48.2	225 03.0	8.1	S25 47.4	1.6	56.1	Alpheratz	357 31.5	N29 15.0
13	13 25.3	N17 47.5	239 30.1	8.1	S25 45.7	1.7	56.1	Altair	61 56.8	N 8 56.8
14	28 25.3	N17 46.9	253 57.2	8.2	S25 43.8	1.8	56.1	Ankaa	353 04.1	S42 08.7
15	43 25.4	N17 46.2	268 24.4	8.2	S25 41.8	2.0	56.1			
16	58 25.4	N17 45.6	282 51.7	8.3	S25 39.7	2.1	56.1	Antares	112 12.1	S26 29.8
17	73 25.4	N17 45.0	297 19.0	8.3	S25 37.5	2.3	56.0	Arcturus	145 45.3	N19 02.1
								Atria	107 03.4	S69 04.9
18	88 25.5	N17 44.3	311 46.3	8.3	S25 35.1	2.4	56.0	Avior	234 14.1	S59 36.1
19	103 25.5	N17 43.7	326 13.7	8.4	S25 32.5	2.5	56.0	Bellatrix	278 20.0	N 6 22.6
20	118 25.6	N17 43.0	340 41.2	8.4	S25 29.9	2.7	56.0			
21	133 25.6	N17 42.4	355 08.7	8.5	S25 27.1	2.8	55.9	Betelgeuse	270 49.2	N 7 24.8
22	148 25.7	N17 41.8	9 36.2	8.5	S25 24.1	2.9	55.9	Canopus	263 51.5	S52 42.5
23	163 25.7	N17 41.1	24 03.8	8.6	S25 21.0	3.1	55.9	Capella	280 17.9	N46 01.5
								Castor	245 53.7	N31 49.5
2 0	178 25.8	N17 40.5	38 31.4	8.7	S25 17.8	3.2	55.9	Deneb	49 23.3	N45 23.1
1	193 25.8	N17 39.8	52 59.1	8.7	S25 14.5	3.3	55.9			
2	208 25.9	N17 39.2	67 26.9	8.8	S25 11.0	3.5	55.8	Denebola	182 22.2	N14 24.8
3	223 25.9	N17 38.5	81 54.7	8.8	S25 07.4	3.6	55.8	Diphda	348 44.2	S17 49.5
4	238 26.0	N17 37.9	96 22.6	8.9	S25 03.7	3.7	55.8	Dubhe	193 38.1	N61 35.9
W 5	253 26.0	N17 37.2	110 50.5	8.9	S24 59.8	3.9	55.8	Elnath	277 58.4	N28 37.8
E								Eltanin	90 40.4	N51 29.3
D 6	268 26.1	N17 36.6	125 18.5	9.0	S24 55.8	4.0	55.8			
N 7	283 26.1	N17 35.9	139 46.6	9.1	S24 51.6	4.1	55.7	Enif	33 35.5	N10 00.6
E 8	298 26.2	N17 35.3	154 14.7	9.1	S24 47.4	4.3	55.7	Fomalhaut	15 11.0	S29 28.0
S 9	313 26.2	N17 34.6	168 42.9	9.2	S24 43.0	4.4	55.7	Gacrux	171 48.6	S57 16.7
D 10	328 26.3	N17 34.0	183 11.1	9.2	S24 38.5	4.5	55.7	Gienah	175 40.7	S17 42.1
A 11	343 26.3	N17 33.3	197 39.4	9.3	S24 33.8	4.6	55.7	Hadar	148 31.9	S60 30.9
Y										
12	358 26.4	N17 32.7	212 07.8	9.4	S24 29.1	4.8	55.6	Hamal	327 47.8	N23 35.9
13	13 26.4	N17 32.0	226 36.2	9.4	S24 24.2	4.9	55.6	Kaus Austr.	83 28.3	S34 22.3
14	28 26.5	N17 31.4	241 04.7	9.5	S24 19.2	5.0	55.6	Kochab	137 20.1	N74 02.5
15	43 26.5	N17 30.7	255 33.3	9.6	S24 14.0	5.1	55.6	Markab	13 26.7	N15 21.7
16	58 26.6	N17 30.1	270 01.9	9.6	S24 08.8	5.3	55.6	Menkar	314 03.1	N 4 12.2
17	73 26.6	N17 29.4	284 30.6	9.7	S24 03.4	5.4	55.5			
								Menkent	147 54.2	S36 30.9
18	88 26.7	N17 28.8	298 59.4	9.8	S23 57.9	5.5	55.5	Miaplacidus	221 38.4	S69 50.2
19	103 26.7	N17 28.1	313 28.2	9.8	S23 52.3	5.6	55.5	Mirfak	308 24.2	N49 57.6
20	118 26.8	N17 27.5	327 57.1	9.9	S23 46.6	5.7	55.5	Nunki	75 43.8	S26 15.5
21	133 26.8	N17 26.8	342 26.1	10.0	S23 40.7	5.8	55.5	Peacock	53 00.5	S56 38.4
22	148 26.9	N17 26.2	356 55.1	10.0	S23 34.8	6.0	55.4			
23	163 26.9	N17 25.5	11 24.3	10.1	S23 28.7	6.1	55.4	Polaris	315 21.2	N89 22.2
								Pollux	243 14.1	N27 57.4
3 0	178 27.0	N17 24.8	25 53.5	10.2	S23 22.5	6.2	55.4	Procyon	244 48.1	N 5 09.1
1	193 27.0	N17 24.2	40 22.7	10.3	S23 16.2	6.3	55.4	Rasalhague	95 55.6	N12 32.5
2	208 27.1	N17 23.5	54 52.1	10.3	S23 09.8	6.4	55.4	Regulus	207 31.6	N11 49.6
3	223 27.1	N17 22.9	69 21.5	10.4	S23 03.2	6.5	55.4			
4	238 27.2	N17 22.2	83 50.9	10.5	S22 56.6	6.6	55.3	Rigel	281 01.3	S 8 10.0
T 5	253 27.2	N17 21.6	98 20.5	10.6	S22 49.8	6.8	55.3	Rigil Kent	139 36.3	S60 57.5
H								Sabik	101 59.2	S15 45.6
U 6	268 27.3	N17 20.9	112 50.1	10.6	S22 43.0	6.9	55.3	Schedar	349 27.3	N56 41.5
R 7	283 27.4	N17 20.2	127 19.8	10.7	S22 36.0	7.0	55.3	Shaula	96 06.1	S37 07.5
S 8	298 27.4	N17 19.6	141 49.6	10.8	S22 28.9	7.1	55.3			
D 9	313 27.5	N17 18.9	156 19.5	10.9	S22 21.8	7.2	55.2	Sirius	258 24.0	S16 45.2
A 10	328 27.5	N17 18.3	170 49.4	10.9	S22 14.5	7.3	55.2	Spica	158 19.3	S11 18.7
Y 11	343 27.6	N17 17.6	185 19.4	11.0	S22 07.1	7.4	55.2	Suhail	222 44.5	S43 32.9
								Vega	80 30.9	N38 48.8
12	358 27.6	N17 16.9	199 49.5	11.1	S21 59.6	7.5	55.2	Zuben-ubi	136 53.7	S16 09.7
13	13 27.7	N17 16.3	214 19.7	11.2	S21 52.0	7.6	55.2			
14	28 27.7	N17 15.6	228 49.9	11.2	S21 44.3	7.7	55.2			
15	43 27.8	N17 14.9	243 20.2	11.3	S21 36.5	7.8	55.1			
16	58 27.9	N17 14.3	257 50.6	11.4	S21 28.6	7.9	55.1			
17	73 27.9	N17 13.6	272 21.1	11.5	S21 20.7	8.0	55.1			
18	88 28.0	N17 12.9	286 51.6	11.5	S21 12.6	8.1	55.1			
19	103 28.0	N17 12.3	301 22.2	11.6	S21 04.4	8.2	55.1			
20	118 28.1	N17 11.6	315 52.9	11.7	S20 56.1	8.3	55.1			
21	133 28.2	N17 10.9	330 23.7	11.8	S20 47.8	8.4	55.0			
22	148 28.2	N17 10.3	344 54.5	11.8	S20 39.3	8.5	55.0			
23	163 28.3	N17 09.6	359 25.4	11.9	S20 30.8	8.5	55.0			
	S.D. 15.8	d 0.7	S.D.	15.3	15.2		15.0			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
4	0	313 05.3	226 37.5	N19 38.6	212 43.0	N23 41.7	136 12.0	N 2 36.0	273 43.8	N12 47.0
	1	328 07.7	241 37.5	N19 38.8	227 43.7	N23 41.7	151 14.1	N 2 35.8	288 46.2	N12 47.0
	2	343 10.2	256 37.6	N19 39.0	242 44.3	N23 41.6	166 16.1	N 2 35.6	303 48.6	N12 47.0
	3	358 12.7	271 37.7	N19 39.2	257 45.0	N23 41.5	181 18.2	N 2 35.4	318 50.9	N12 47.0
	4	13 15.1	286 37.8	N19 39.4	272 45.6	N23 41.4	196 20.2	N 2 35.2	333 53.3	N12 47.0
F	5	28 17.6	301 37.9	N19 39.6	287 46.3	N23 41.3	211 22.3	N 2 35.1	348 55.7	N12 47.0
R										
I	6	43 20.0	316 37.9	N19 39.8	302 46.9	N23 41.2	226 24.3	N 2 34.9	3 58.1	N12 47.1
D	7	58 22.5	331 38.0	N19 40.0	317 47.6	N23 41.1	241 26.4	N 2 34.7	19 00.5	N12 47.1
A	8	73 25.0	346 38.1	N19 40.1	332 48.3	N23 41.0	256 28.4	N 2 34.5	34 02.8	N12 47.1
Y	9	88 27.4	1 38.2	N19 40.3	347 48.9	N23 40.9	271 30.5	N 2 34.3	49 05.2	N12 47.1
	10	103 29.9	16 38.3	N19 40.5	2 49.6	N23 40.8	286 32.5	N 2 34.1	64 07.6	N12 47.1
	11	118 32.4	31 38.3	N19 40.7	17 50.2	N23 40.7	301 34.6	N 2 33.9	79 10.0	N12 47.1
	12	133 34.8	46 38.4	N19 40.9	32 50.9	N23 40.6	316 36.6	N 2 33.8	94 12.4	N12 47.2
	13	148 37.3	61 38.5	N19 41.1	47 51.5	N23 40.5	331 38.7	N 2 33.6	109 14.8	N12 47.2
	14	163 39.8	76 38.5	N19 41.3	62 52.2	N23 40.4	346 40.7	N 2 33.4	124 17.1	N12 47.2
	15	178 42.2	91 38.6	N19 41.5	77 52.9	N23 40.3	1 42.8	N 2 33.2	139 19.5	N12 47.2
	16	193 44.7	106 38.7	N19 41.6	92 53.5	N23 40.2	16 44.8	N 2 33.0	154 21.9	N12 47.2
	17	208 47.2	121 38.7	N19 41.8	107 54.2	N23 40.1	31 46.9	N 2 32.8	169 24.3	N12 47.2
	18	223 49.6	136 38.8	N19 42.0	122 54.8	N23 40.1	46 48.9	N 2 32.6	184 26.7	N12 47.2
	19	238 52.1	151 38.9	N19 42.2	137 55.5	N23 40.0	61 50.9	N 2 32.5	199 29.1	N12 47.3
	20	253 54.5	166 38.9	N19 42.4	152 56.1	N23 39.9	76 53.0	N 2 32.3	214 31.4	N12 47.3
	21	268 57.0	181 39.0	N19 42.6	167 56.8	N23 39.8	91 55.0	N 2 32.1	229 33.8	N12 47.3
	22	283 59.5	196 39.0	N19 42.7	182 57.5	N23 39.7	106 57.1	N 2 31.9	244 36.2	N12 47.3
	23	299 01.9	211 39.1	N19 42.9	197 58.1	N23 39.6	121 59.1	N 2 31.7	259 38.6	N12 47.3
5	0	314 04.4	226 39.2	N19 43.1	212 58.8	N23 39.5	137 01.2	N 2 31.5	274 41.0	N12 47.3
	1	329 06.9	241 39.2	N19 43.3	227 59.4	N23 39.4	152 03.2	N 2 31.3	289 43.4	N12 47.3
	2	344 09.3	256 39.3	N19 43.5	243 00.1	N23 39.3	167 05.3	N 2 31.2	304 45.7	N12 47.4
	3	359 11.8	271 39.3	N19 43.7	258 00.8	N23 39.2	182 07.3	N 2 31.0	319 48.1	N12 47.4
	4	14 14.3	286 39.4	N19 43.8	273 01.4	N23 39.1	197 09.4	N 2 30.8	334 50.5	N12 47.4
S	5	29 16.7	301 39.4	N19 44.0	288 02.1	N23 39.0	212 11.4	N 2 30.6	349 52.9	N12 47.4
A										
T	6	44 19.2	316 39.5	N19 44.2	303 02.7	N23 38.9	227 13.5	N 2 30.4	4 55.3	N12 47.4
U	7	59 21.6	331 39.5	N19 44.4	318 03.4	N23 38.8	242 15.5	N 2 30.2	19 57.7	N12 47.4
R	8	74 24.1	346 39.6	N19 44.6	333 04.1	N23 38.7	257 17.5	N 2 30.0	35 00.1	N12 47.4
D	9	89 26.6	1 39.6	N19 44.7	348 04.7	N23 38.6	272 19.6	N 2 29.9	50 02.4	N12 47.5
A	10	104 29.0	16 39.7	N19 44.9	3 05.4	N23 38.5	287 21.6	N 2 29.7	65 04.8	N12 47.5
Y	11	119 31.5	31 39.7	N19 45.1	18 06.0	N23 38.3	302 23.7	N 2 29.5	80 07.2	N12 47.5
	12	134 34.0	46 39.8	N19 45.3	33 06.7	N23 38.2	317 25.7	N 2 29.3	95 09.6	N12 47.5
	13	149 36.4	61 39.8	N19 45.4	48 07.4	N23 38.1	332 27.8	N 2 29.1	110 12.0	N12 47.5
	14	164 38.9	76 39.9	N19 45.6	63 08.0	N23 38.0	347 29.8	N 2 28.9	125 14.4	N12 47.5
	15	179 41.4	91 39.9	N19 45.8	78 08.7	N23 37.9	2 31.9	N 2 28.7	140 16.8	N12 47.5
	16	194 43.8	106 40.0	N19 46.0	93 09.3	N23 37.8	17 33.9	N 2 28.6	155 19.2	N12 47.6
	17	209 46.3	121 40.0	N19 46.1	108 10.0	N23 37.7	32 35.9	N 2 28.4	170 21.5	N12 47.6
	18	224 48.8	136 40.0	N19 46.3	123 10.7	N23 37.6	47 38.0	N 2 28.2	185 23.9	N12 47.6
	19	239 51.2	151 40.1	N19 46.5	138 11.3	N23 37.5	62 40.0	N 2 28.0	200 26.3	N12 47.6
	20	254 53.7	166 40.1	N19 46.7	153 12.0	N23 37.4	77 42.1	N 2 27.8	215 28.7	N12 47.6
	21	269 56.1	181 40.1	N19 46.8	168 12.6	N23 37.3	92 44.1	N 2 27.6	230 31.1	N12 47.6
	22	284 58.6	196 40.2	N19 47.0	183 13.3	N23 37.2	107 46.2	N 2 27.4	245 33.5	N12 47.6
	23	300 01.1	211 40.2	N19 47.2	198 14.0	N23 37.1	122 48.2	N 2 27.3	260 35.9	N12 47.6
6	0	315 03.5	226 40.2	N19 47.3	213 14.6	N23 37.0	137 50.3	N 2 27.1	275 38.3	N12 47.7
	1	330 06.0	241 40.3	N19 47.5	228 15.3	N23 36.9	152 52.3	N 2 26.9	290 40.6	N12 47.7
	2	345 08.5	256 40.3	N19 47.7	243 16.0	N23 36.8	167 54.3	N 2 26.7	305 43.0	N12 47.7
	3	0 10.9	271 40.3	N19 47.9	258 16.6	N23 36.7	182 56.4	N 2 26.5	320 45.4	N12 47.7
	4	15 13.4	286 40.4	N19 48.0	273 17.3	N23 36.6	197 58.4	N 2 26.3	335 47.8	N12 47.7
S	5	30 15.9	301 40.4	N19 48.2	288 17.9	N23 36.4	213 00.5	N 2 26.1	350 50.2	N12 47.7
U										
N	6	45 18.3	316 40.4	N19 48.4	303 18.6	N23 36.3	228 02.5	N 2 25.9	5 52.6	N12 47.7
D	7	60 20.8	331 40.4	N19 48.5	318 19.3	N23 36.2	243 04.6	N 2 25.8	20 55.0	N12 47.7
A	8	75 23.3	346 40.5	N19 48.7	333 19.9	N23 36.1	258 06.6	N 2 25.6	35 57.4	N12 47.8
Y	9	90 25.7	1 40.5	N19 48.9	348 20.6	N23 36.0	273 08.6	N 2 25.4	50 59.8	N12 47.8
	10	105 28.2	16 40.5	N19 49.0	3 21.3	N23 35.9	288 10.7	N 2 25.2	66 02.2	N12 47.8
	11	120 30.6	31 40.5	N19 49.2	18 21.9	N23 35.8	303 12.7	N 2 25.0	81 04.5	N12 47.8
	12	135 33.1	46 40.6	N19 49.4	33 22.6	N23 35.7	318 14.8	N 2 24.8	96 06.9	N12 47.8
	13	150 35.6	61 40.6	N19 49.5	48 23.3	N23 35.6	333 16.8	N 2 24.6	111 09.3	N12 47.8
	14	165 38.0	76 40.6	N19 49.7	63 23.9	N23 35.5	348 18.9	N 2 24.4	126 11.7	N12 47.8
	15	180 40.5	91 40.6	N19 49.9	78 24.6	N23 35.3	3 20.9	N 2 24.3	141 14.1	N12 47.8
	16	195 43.0	106 40.6	N19 50.0	93 25.2	N23 35.2	18 22.9	N 2 24.1	156 16.5	N12 47.9
	17	210 45.4	121 40.6	N19 50.2	108 25.9	N23 35.1	33 25.0	N 2 23.9	171 18.9	N12 47.9
	18	225 47.9	136 40.7	N19 50.3	123 26.6	N23 35.0	48 27.0	N 2 23.7	186 21.3	N12 47.9
	19	240 50.4	151 40.7	N19 50.5	138 27.2	N23 34.9	63 29.1	N 2 23.5	201 23.7	N12 47.9
	20	255 52.8	166 40.7	N19 50.7	153 27.9	N23 34.8	78 31.1	N 2 23.3	216 26.1	N12 47.9
	21	270 55.3	181 40.7	N19 50.8	168 28.6	N23 34.7	93 33.1	N 2 23.1	231 28.5	N12 47.9
	22	285 57.7	196 40.7	N19 51.0	183 29.2	N23 34.5	108 35.2	N 2 22.9	246 30.9	N12 47.9
	23	301 00.2	211 40.7	N19 51.1	198 29.9	N23 34.4	123 37.2	N 2 22.8	261 33.2	N12 47.9
			v 0.0	d 0.2	v 0.7	d 0.1	v 2.0	d 0.2	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
4	0	178 28.3	N17 08.9	13 56.4	12.0	S20 22.1	8.6	55.0
	1	193 28.4	N17 08.3	28 27.5	12.1	S20 13.4	8.7	55.0
	2	208 28.5	N17 07.6	42 58.6	12.1	S20 04.6	8.8	55.0
	3	223 28.5	N17 06.9	57 29.9	12.2	S19 55.7	8.9	54.9
	4	238 28.6	N17 06.3	72 01.2	12.3	S19 46.7	9.0	54.9
F	5	253 28.6	N17 05.6	86 32.5	12.4	S19 37.7	9.1	54.9
R								
I	6	268 28.7	N17 04.9	101 04.0	12.4	S19 28.5	9.2	54.9
D	7	283 28.8	N17 04.3	115 35.5	12.5	S19 19.3	9.2	54.9
A	8	298 28.8	N17 03.6	130 07.1	12.6	S19 10.0	9.3	54.9
Y	9	313 28.9	N17 02.9	144 38.8	12.7	S19 00.6	9.4	54.9
	10	328 28.9	N17 02.2	159 10.5	12.7	S18 51.1	9.5	54.8
	11	343 29.0	N17 01.6	173 42.4	12.8	S18 41.5	9.6	54.8
	12	358 29.1	N17 00.9	188 14.2	12.9	S18 31.9	9.6	54.8
	13	13 29.1	N17 00.2	202 46.2	13.0	S18 22.2	9.7	54.8
	14	28 29.2	N16 59.5	217 18.3	13.0	S18 12.4	9.8	54.8
	15	43 29.3	N16 58.9	231 50.4	13.1	S18 02.5	9.9	54.8
	16	58 29.3	N16 58.2	246 22.6	13.2	S17 52.6	9.9	54.8
	17	73 29.4	N16 57.5	260 54.8	13.3	S17 42.6	10.0	54.7
	18	88 29.5	N16 56.8	275 27.1	13.3	S17 32.5	10.1	54.7
	19	103 29.5	N16 56.2	289 59.5	13.4	S17 22.4	10.1	54.7
	20	118 29.6	N16 55.5	304 32.0	13.5	S17 12.1	10.2	54.7
	21	133 29.6	N16 54.8	319 04.5	13.5	S17 01.9	10.3	54.7
	22	148 29.7	N16 54.1	333 37.2	13.6	S16 51.5	10.4	54.7
	23	163 29.8	N16 53.4	348 09.8	13.7	S16 41.1	10.4	54.7
5	0	178 29.8	N16 52.8	2 42.6	13.7	S16 30.6	10.5	54.6
	1	193 29.9	N16 52.1	17 15.4	13.8	S16 20.0	10.6	54.6
	2	208 30.0	N16 51.4	31 48.3	13.9	S16 09.4	10.6	54.6
	3	223 30.0	N16 50.7	46 21.2	13.9	S15 58.7	10.7	54.6
	4	238 30.1	N16 50.0	60 54.2	14.0	S15 48.0	10.7	54.6
S	5	253 30.2	N16 49.4	75 27.3	14.1	S15 37.2	10.8	54.6
A								
T	6	268 30.2	N16 48.7	90 00.5	14.1	S15 26.3	10.9	54.6
U	7	283 30.3	N16 48.0	104 33.7	14.2	S15 15.4	10.9	54.6
R	8	298 30.4	N16 47.3	119 07.0	14.3	S15 04.4	11.0	54.5
D	9	313 30.4	N16 46.6	133 40.3	14.3	S14 53.4	11.0	54.5
A	10	328 30.5	N16 45.9	148 13.7	14.4	S14 42.3	11.1	54.5
Y	11	343 30.6	N16 45.3	162 47.2	14.5	S14 31.2	11.1	54.5
	12	358 30.7	N16 44.6	177 20.7	14.5	S14 20.0	11.2	54.5
	13	13 30.7	N16 43.9	191 54.3	14.6	S14 08.7	11.3	54.5
	14	28 30.8	N16 43.2	206 27.9	14.6	S13 57.4	11.3	54.5
	15	43 30.9	N16 42.5	221 01.6	14.7	S13 46.1	11.4	54.5
	16	58 30.9	N16 41.8	235 35.4	14.8	S13 34.6	11.4	54.4
	17	73 31.0	N16 41.1	250 09.2	14.8	S13 23.2	11.5	54.4
	18	88 31.1	N16 40.5	264 43.1	14.9	S13 11.7	11.5	54.4
	19	103 31.1	N16 39.8	279 17.0	14.9	S13 00.1	11.6	54.4
	20	118 31.2	N16 39.1	293 51.0	15.0	S12 48.5	11.6	54.4
	21	133 31.3	N16 38.4	308 25.1	15.0	S12 36.9	11.6	54.4
	22	148 31.4	N16 37.7	322 59.2	15.1	S12 25.2	11.7	54.4
	23	163 31.4	N16 37.0	337 33.3	15.2	S12 13.5	11.7	54.4
6	0	178 31.5	N16 36.3	352 07.5	15.2	S12 01.7	11.8	54.4
	1	193 31.6	N16 35.6	6 41.8	15.3	S11 49.9	11.8	54.3
	2	208 31.6	N16 34.9	21 16.1	15.3	S11 38.0	11.9	54.3
	3	223 31.7	N16 34.2	35 50.5	15.4	S11 26.1	11.9	54.3
	4	238 31.8	N16 33.6	50 24.9	15.4	S11 14.1	11.9	54.3
S	5	253 31.9	N16 32.9	64 59.4	15.5	S11 02.2	12.0	54.3
U								
N	6	268 31.9	N16 32.2	79 33.9	15.5	S10 50.1	12.0	54.3
D	7	283 32.0	N16 31.5	94 08.5	15.6	S10 38.1	12.1	54.3
A	8	298 32.1	N16 30.8	108 43.1	15.6	S10 26.0	12.1	54.3
Y	9	313 32.2	N16 30.1	123 17.7	15.7	S10 13.9	12.1	54.3
	10	328 32.2	N16 29.4	137 52.4	15.7	S10 01.7	12.2	54.3
	11	343 32.3	N16 28.7	152 27.2	15.7	S 9 49.5	12.2	54.3
	12	358 32.4	N16 28.0	167 02.0	15.8	S 9 37.3	12.2	54.2
	13	13 32.5	N16 27.3	181 36.8	15.8	S 9 25.0	12.3	54.2
	14	28 32.5	N16 26.6	196 11.7	15.9	S 9 12.7	12.3	54.2
	15	43 32.6	N16 25.9	210 46.6	15.9	S 9 00.4	12.3	54.2
	16	58 32.7	N16 25.2	225 21.5	16.0	S 8 48.0	12.4	54.2
	17	73 32.8	N16 24.5	239 56.5	16.0	S 8 35.7	12.4	54.2
	18	88 32.8	N16 23.8	254 31.6	16.0	S 8 23.3	12.4	54.2
	19	103 32.9	N16 23.1	269 06.7	16.1	S 8 10.8	12.4	54.2
	20	118 33.0	N16 22.4	283 41.8	16.1	S 7 58.3	12.5	54.2
	21	133 33.1	N16 21.7	298 16.9	16.1	S 7 45.9	12.5	54.2
	22	148 33.2	N16 21.0	312 52.1	16.2	S 7 33.3	12.5	54.2
	23	163 33.2	N16 20.3	327 27.3	16.2	S 7 20.8	12.5	54.2
		S.D. 15.8	d 0.7	S.D. 14.9		14.8		14.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.6	S40 11.1
Achernar	335 17.9	S57 05.1
Acrux	172 57.1	S63 15.7
Adhara	255 03.9	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.4	N16 34.0
Alioth	166 10.7	N55 48.5
Alkaid	152 49.9	N49 10.4
Al Na-ir	27 28.8	S46 49.1
Alnilam	275 34.9	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.5	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.0	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.4	S69 05.0
Avior	234 14.1	S59 36.1
Bellatrix	278 19.9	N 6 22.6
Betelgeuse	270 49.1	N 7 24.8
Canopus	263 51.5	S52 42.5
Capella	280 17.8	N46 01.5
Castor	245 53.7	N31 49.5
Deneb	49 23.3	N45 23.1
Denebola	182 22.2	N14 24.8
Diphda	348 44.2	S17 49.5
Dubhe	193 38.1	N61 35.9
Elnath	277 58.4	N28 37.8
Eltanin	90 40.4	N51 29.3
Enif	33 35.5	N10 00.6
Fomalhaut	15 11.0	S29 28.0
Gacrux	171 48.6	S57 16.7
Gienah	175 40.8	S17 42.1
Hadar	148 31.9	S60 30.9
Hamal	327 47.8	N23 35.9
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.2	N74 02.5
Markab	13 26.7	N15 21.7
Menkar	314 03.1	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.2
Mirfak	308 24.1	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 19.9	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.0
Rigil Kent	139 36.3	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.3	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
7	0	316 02.7	226 40.7	N19	51.3	213 30.6	N23	34.3	138 39.3	N 2	22.6	276 35.6	N12	48.0
	1	331 05.1	241 40.7	N19	51.5	228 31.2	N23	34.2	153 41.3	N 2	22.4	291 38.0	N12	48.0
	2	346 07.6	256 40.7	N19	51.6	243 31.9	N23	34.1	168 43.3	N 2	22.2	306 40.4	N12	48.0
	3	1 10.1	271 40.7	N19	51.8	258 32.6	N23	34.0	183 45.4	N 2	22.0	321 42.8	N12	48.0
	4	16 12.5	286 40.7	N19	51.9	273 33.2	N23	33.9	198 47.4	N 2	21.8	336 45.2	N12	48.0
M	5	31 15.0	301 40.7	N19	52.1	288 33.9	N23	33.7	213 49.5	N 2	21.6	351 47.6	N12	48.0
O														
N	6	46 17.5	316 40.7	N19	52.2	303 34.6	N23	33.6	228 51.5	N 2	21.4	6 50.0	N12	48.0
D	7	61 19.9	331 40.7	N19	52.4	318 35.2	N23	33.5	243 53.5	N 2	21.3	21 52.4	N12	48.0
A	8	76 22.4	346 40.7	N19	52.6	333 35.9	N23	33.4	258 55.6	N 2	21.1	36 54.8	N12	48.0
Y	9	91 24.9	1 40.7	N19	52.7	348 36.6	N23	33.3	273 57.6	N 2	20.9	51 57.2	N12	48.1
	10	106 27.3	16 40.7	N19	52.9	3 37.2	N23	33.1	288 59.7	N 2	20.7	66 59.6	N12	48.1
	11	121 29.8	31 40.7	N19	53.0	18 37.9	N23	33.0	304 01.7	N 2	20.5	82 02.0	N12	48.1
	12	136 32.2	46 40.7	N19	53.2	33 38.6	N23	32.9	319 03.7	N 2	20.3	97 04.4	N12	48.1
	13	151 34.7	61 40.7	N19	53.3	48 39.2	N23	32.8	334 05.8	N 2	20.1	112 06.8	N12	48.1
	14	166 37.2	76 40.7	N19	53.5	63 39.9	N23	32.7	349 07.8	N 2	19.9	127 09.2	N12	48.1
	15	181 39.6	91 40.7	N19	53.6	78 40.6	N23	32.6	4 09.9	N 2	19.7	142 11.6	N12	48.1
	16	196 42.1	106 40.7	N19	53.8	93 41.2	N23	32.4	19 11.9	N 2	19.6	157 13.9	N12	48.1
	17	211 44.6	121 40.7	N19	53.9	108 41.9	N23	32.3	34 13.9	N 2	19.4	172 16.3	N12	48.1
	18	226 47.0	136 40.7	N19	54.1	123 42.6	N23	32.2	49 16.0	N 2	19.2	187 18.7	N12	48.2
	19	241 49.5	151 40.7	N19	54.2	138 43.3	N23	32.1	64 18.0	N 2	19.0	202 21.1	N12	48.2
	20	256 52.0	166 40.7	N19	54.4	153 43.9	N23	31.9	79 20.1	N 2	18.8	217 23.5	N12	48.2
	21	271 54.4	181 40.6	N19	54.5	168 44.6	N23	31.8	94 22.1	N 2	18.6	232 25.9	N12	48.2
	22	286 56.9	196 40.6	N19	54.7	183 45.3	N23	31.7	109 24.1	N 2	18.4	247 28.3	N12	48.2
	23	301 59.4	211 40.6	N19	54.8	198 45.9	N23	31.6	124 26.2	N 2	18.2	262 30.7	N12	48.2
8	0	317 01.8	226 40.6	N19	55.0	213 46.6	N23	31.5	139 28.2	N 2	18.1	277 33.1	N12	48.2
	1	332 04.3	241 40.6	N19	55.1	228 47.3	N23	31.3	154 30.2	N 2	17.9	292 35.5	N12	48.2
	2	347 06.7	256 40.6	N19	55.3	243 47.9	N23	31.2	169 32.3	N 2	17.7	307 37.9	N12	48.2
	3	2 09.2	271 40.5	N19	55.4	258 48.6	N23	31.1	184 34.3	N 2	17.5	322 40.3	N12	48.2
	4	17 11.7	286 40.5	N19	55.5	273 49.3	N23	31.0	199 36.4	N 2	17.3	337 42.7	N12	48.3
T	5	32 14.1	301 40.5	N19	55.7	288 50.0	N23	30.8	214 38.4	N 2	17.1	352 45.1	N12	48.3
U														
E	6	47 16.6	316 40.5	N19	55.8	303 50.6	N23	30.7	229 40.4	N 2	16.9	7 47.5	N12	48.3
S	7	62 19.1	331 40.5	N19	56.0	318 51.3	N23	30.6	244 42.5	N 2	16.7	22 49.9	N12	48.3
D	8	77 21.5	346 40.4	N19	56.1	333 52.0	N23	30.5	259 44.5	N 2	16.5	37 52.3	N12	48.3
A	9	92 24.0	1 40.4	N19	56.3	348 52.6	N23	30.3	274 46.6	N 2	16.3	52 54.7	N12	48.3
Y	10	107 26.5	16 40.4	N19	56.4	3 53.3	N23	30.2	289 48.6	N 2	16.2	67 57.1	N12	48.3
	11	122 28.9	31 40.4	N19	56.5	18 54.0	N23	30.1	304 50.6	N 2	16.0	82 59.5	N12	48.3
	12	137 31.4	46 40.3	N19	56.7	33 54.6	N23	30.0	319 52.7	N 2	15.8	98 01.9	N12	48.3
	13	152 33.8	61 40.3	N19	56.8	48 55.3	N23	29.8	334 54.7	N 2	15.6	113 04.3	N12	48.3
	14	167 36.3	76 40.3	N19	57.0	63 56.0	N23	29.7	349 56.7	N 2	15.4	128 06.7	N12	48.4
	15	182 38.8	91 40.2	N19	57.1	78 56.7	N23	29.6	4 58.8	N 2	15.2	143 09.1	N12	48.4
	16	197 41.2	106 40.2	N19	57.2	93 57.3	N23	29.4	20 00.8	N 2	15.0	158 11.5	N12	48.4
	17	212 43.7	121 40.2	N19	57.4	108 58.0	N23	29.3	35 02.8	N 2	14.8	173 13.9	N12	48.4
	18	227 46.2	136 40.1	N19	57.5	123 58.7	N23	29.2	50 04.9	N 2	14.6	188 16.3	N12	48.4
	19	242 48.6	151 40.1	N19	57.6	138 59.4	N23	29.1	65 06.9	N 2	14.5	203 18.7	N12	48.4
	20	257 51.1	166 40.1	N19	57.8	154 00.0	N23	28.9	80 09.0	N 2	14.3	218 21.1	N12	48.4
	21	272 53.6	181 40.0	N19	57.9	169 00.7	N23	28.8	95 11.0	N 2	14.1	233 23.5	N12	48.4
	22	287 56.0	196 40.0	N19	58.0	184 01.4	N23	28.7	110 13.0	N 2	13.9	248 25.9	N12	48.4
	23	302 58.5	211 39.9	N19	58.2	199 02.0	N23	28.5	125 15.1	N 2	13.7	263 28.3	N12	48.4
9	0	318 01.0	226 39.9	N19	58.3	214 02.7	N23	28.4	140 17.1	N 2	13.5	278 30.7	N12	48.4
	1	333 03.4	241 39.9	N19	58.4	229 03.4	N23	28.3	155 19.1	N 2	13.3	293 33.1	N12	48.5
	2	348 05.9	256 39.8	N19	58.6	244 04.1	N23	28.2	170 21.2	N 2	13.1	308 35.5	N12	48.5
	3	3 08.3	271 39.8	N19	58.7	259 04.7	N23	28.0	185 23.2	N 2	12.9	323 37.9	N12	48.5
	4	18 10.8	286 39.7	N19	58.8	274 05.4	N23	27.9	200 25.2	N 2	12.7	338 40.3	N12	48.5
W	5	33 13.3	301 39.7	N19	59.0	289 06.1	N23	27.8	215 27.3	N 2	12.6	353 42.7	N12	48.5
E														
D	6	48 15.7	316 39.7	N19	59.1	304 06.8	N23	27.6	230 29.3	N 2	12.4	8 45.1	N12	48.5
N	7	63 18.2	331 39.6	N19	59.2	319 07.4	N23	27.5	245 31.3	N 2	12.2	23 47.5	N12	48.5
E	8	78 20.7	346 39.6	N19	59.4	334 08.1	N23	27.4	260 33.4	N 2	12.0	38 49.9	N12	48.5
S	9	93 23.1	1 39.5	N19	59.5	349 08.8	N23	27.2	275 35.4	N 2	11.8	53 52.3	N12	48.5
D	10	108 25.6	16 39.5	N19	59.6	4 09.5	N23	27.1	290 37.4	N 2	11.6	68 54.7	N12	48.5
A	11	123 28.1	31 39.4	N19	59.7	19 10.1	N23	27.0	305 39.5	N 2	11.4	83 57.1	N12	48.5
Y														
	12	138 30.5	46 39.4	N19	59.9	34 10.8	N23	26.8	320 41.5	N 2	11.2	98 59.5	N12	48.6
	13	153 33.0	61 39.3	N19	60.0	49 11.5	N23	26.7	335 43.6	N 2	11.0	114 01.9	N12	48.6
	14	168 35.5	76 39.3	N20	00.1	64 12.2	N23	26.6	350 45.6	N 2	10.8	129 04.3	N12	48.6
	15	183 37.9	91 39.2	N20	00.2	79 12.8	N23	26.4	5 47.6	N 2	10.7	144 06.7	N12	48.6
	16	198 40.4	106 39.1	N20	00.4	94 13.5	N23	26.3	20 49.7	N 2	10.5	159 09.1	N12	48.6
	17	213 42.8	121 39.1	N20	00.5	109 14.2	N23	26.1	35 51.7	N 2	10.3	174 11.5	N12	48.6
	18	228 45.3	136 39.0	N20	00.6	124 14.9	N23	26.0	50 53.7	N 2	10.1	189 13.9	N12	48.6
	19	243 47.8	151 39.0	N20	00.7	139 15.5	N23	25.9	65 55.8	N 2	09.9	204 16.3	N12	48.6
	20	258 50.2	166 38.9	N20	00.9	154 16.2	N23	25.7	80 57.8	N 2	09.7	219 18.8	N12	48.6
	21	273 52.7	181 38.9	N20	01.0	169 16.9	N23	25.6	95 59.8	N 2	09.5	234 21.2	N12	48.6
	22	288 55.2	196 38.8	N20	01.1	184 17.6	N23	25.5	111 01.9	N 2	09.3	249 23.6	N12	48.6
	23	303 57.6	211 38.7	N20	01.2	199 18.3	N23	25.3	126 03.9	N 2	09.1	264 26.0	N12	48.6
			v 0.0	d	0.1	v 0.7	d	0.1	v 2.0	d	0.2	v 2.4	d	0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
7	0	178 33.3	N16 19.6	342 02.6	16.3	S 7 08.2	12.6	54.2
	1	193 33.4	N16 18.9	356 37.8	16.3	S 6 55.7	12.6	54.1
	2	208 33.5	N16 18.2	11 13.2	16.3	S 6 43.0	12.6	54.1
	3	223 33.5	N16 17.5	25 48.5	16.3	S 6 30.4	12.6	54.1
	4	238 33.6	N16 16.8	40 23.9	16.4	S 6 17.8	12.6	54.1
M	5	253 33.7	N16 16.1	54 59.3	16.4	S 6 05.1	12.7	54.1
O								
N	6	268 33.8	N16 15.4	69 34.7	16.4	S 5 52.4	12.7	54.1
D	7	283 33.9	N16 14.7	84 10.2	16.5	S 5 39.7	12.7	54.1
A	8	298 33.9	N16 14.0	98 45.7	16.5	S 5 27.0	12.7	54.1
Y	9	313 34.0	N16 13.3	113 21.2	16.5	S 5 14.2	12.7	54.1
	10	328 34.1	N16 12.6	127 56.7	16.5	S 5 01.5	12.8	54.1
	11	343 34.2	N16 11.9	142 32.3	16.6	S 4 48.7	12.8	54.1
	12	358 34.3	N16 11.1	157 07.9	16.6	S 4 35.9	12.8	54.1
	13	13 34.3	N16 10.4	171 43.5	16.6	S 4 23.1	12.8	54.1
	14	28 34.4	N16 09.7	186 19.1	16.6	S 4 10.3	12.8	54.1
	15	43 34.5	N16 09.0	200 54.8	16.7	S 3 57.5	12.8	54.1
	16	58 34.6	N16 08.3	215 30.5	16.7	S 3 44.7	12.8	54.1
	17	73 34.7	N16 07.6	230 06.2	16.7	S 3 31.8	12.8	54.1
	18	88 34.8	N16 06.9	244 41.9	16.7	S 3 19.0	12.9	54.1
	19	103 34.8	N16 06.2	259 17.6	16.7	S 3 06.1	12.9	54.1
	20	118 34.9	N16 05.5	273 53.3	16.7	S 2 53.2	12.9	54.1
	21	133 35.0	N16 04.8	288 29.1	16.8	S 2 40.4	12.9	54.0
	22	148 35.1	N16 04.0	303 04.9	16.8	S 2 27.5	12.9	54.0
	23	163 35.2	N16 03.3	317 40.7	16.8	S 2 14.6	12.9	54.0
8	0	178 35.3	N16 02.6	332 16.5	16.8	S 2 01.7	12.9	54.0
	1	193 35.3	N16 01.9	346 52.3	16.8	S 1 48.8	12.9	54.0
	2	208 35.4	N16 01.2	1 28.1	16.8	S 1 35.9	12.9	54.0
	3	223 35.5	N16 00.5	16 03.9	16.8	S 1 23.0	12.9	54.0
	4	238 35.6	N15 59.8	30 39.8	16.8	S 1 10.0	12.9	54.0
T	5	253 35.7	N15 59.1	45 15.6	16.8	S 0 57.1	12.9	54.0
U								
E	6	268 35.8	N15 58.3	59 51.5	16.9	S 0 44.2	12.9	54.0
S	7	283 35.9	N15 57.6	74 27.3	16.9	S 0 31.3	12.9	54.0
D	8	298 35.9	N15 56.9	89 03.2	16.9	S 0 18.4	12.9	54.0
A	9	313 36.0	N15 56.2	103 39.0	16.9	S 0 05.4	12.9	54.0
Y	10	328 36.1	N15 55.5	118 14.9	16.9	N 0 07.5	12.9	54.0
	11	343 36.2	N15 54.8	132 50.8	16.9	N 0 20.4	12.9	54.0
	12	358 36.3	N15 54.0	147 26.7	16.9	N 0 33.3	12.9	54.0
	13	13 36.4	N15 53.3	162 02.5	16.9	N 0 46.2	12.9	54.0
	14	28 36.5	N15 52.6	176 38.4	16.9	N 0 59.1	12.9	54.0
	15	43 36.6	N15 51.9	191 14.3	16.9	N 1 12.0	12.9	54.0
	16	58 36.6	N15 51.2	205 50.1	16.9	N 1 24.9	12.9	54.0
	17	73 36.7	N15 50.4	220 26.0	16.9	N 1 37.8	12.9	54.0
	18	88 36.8	N15 49.7	235 01.9	16.9	N 1 50.7	12.9	54.0
	19	103 36.9	N15 49.0	249 37.7	16.9	N 2 03.6	12.9	54.0
	20	118 37.0	N15 48.3	264 13.6	16.8	N 2 16.5	12.9	54.0
	21	133 37.1	N15 47.6	278 49.4	16.8	N 2 29.3	12.9	54.0
	22	148 37.2	N15 46.8	293 25.3	16.8	N 2 42.2	12.9	54.0
	23	163 37.3	N15 46.1	308 01.1	16.8	N 2 55.0	12.8	54.0
9	0	178 37.4	N15 45.4	322 36.9	16.8	N 3 07.8	12.8	54.0
	1	193 37.4	N15 44.7	337 12.7	16.8	N 3 20.7	12.8	54.0
	2	208 37.5	N15 43.9	351 48.5	16.8	N 3 33.5	12.8	54.0
	3	223 37.6	N15 43.2	6 24.3	16.8	N 3 46.3	12.8	54.0
	4	238 37.7	N15 42.5	21 00.0	16.8	N 3 59.0	12.8	54.0
W	5	253 37.8	N15 41.8	35 35.8	16.8	N 4 11.8	12.8	54.0
E								
D	6	268 37.9	N15 41.0	50 11.5	16.7	N 4 24.6	12.8	54.1
N	7	283 38.0	N15 40.3	64 47.2	16.7	N 4 37.3	12.7	54.1
E	8	298 38.1	N15 39.6	79 22.9	16.7	N 4 50.0	12.7	54.1
S	9	313 38.2	N15 38.9	93 58.6	16.7	N 5 02.7	12.7	54.1
D	10	328 38.3	N15 38.1	108 34.3	16.7	N 5 15.4	12.7	54.1
A	11	343 38.4	N15 37.4	123 09.9	16.6	N 5 28.1	12.7	54.1
Y								
	12	358 38.5	N15 36.7	137 45.5	16.6	N 5 40.7	12.6	54.1
	13	13 38.6	N15 35.9	152 21.1	16.6	N 5 53.4	12.6	54.1
	14	28 38.6	N15 35.2	166 56.7	16.6	N 6 06.0	12.6	54.1
	15	43 38.7	N15 34.5	181 32.3	16.6	N 6 18.6	12.6	54.1
	16	58 38.8	N15 33.8	196 07.8	16.5	N 6 31.1	12.6	54.1
	17	73 38.9	N15 33.0	210 43.3	16.5	N 6 43.7	12.5	54.1
	18	88 39.0	N15 32.3	225 18.8	16.5	N 6 56.2	12.5	54.1
	19	103 39.1	N15 31.6	239 54.2	16.4	N 7 08.7	12.5	54.1
	20	118 39.2	N15 30.8	254 29.6	16.4	N 7 21.2	12.5	54.1
	21	133 39.3	N15 30.1	269 05.0	16.4	N 7 33.6	12.4	54.1
	22	148 39.4	N15 29.4	283 40.4	16.4	N 7 46.0	12.4	54.1
	23	163 39.5	N15 28.6	298 15.7	16.3	N 7 58.4	12.4	54.1
		S.D. 15.8	d 0.7	S.D. 14.7		14.7		14.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.5	S40 11.1
Achernar	335 17.9	S57 05.1
Acrux	172 57.2	S63 15.7
Adhara	255 03.9	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.4	N16 34.0
Alioth	166 10.7	N55 48.5
Alkaid	152 49.9	N49 10.4
Al Na-ir	27 28.8	S46 49.1
Alnilam	275 34.9	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.5	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.0	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.4	S69 05.0
Avior	234 14.1	S59 36.1
Bellatrix	278 19.9	N 6 22.6
Betelgeuse	270 49.1	N 7 24.8
Canopus	263 51.5	S52 42.5
Capella	280 17.8	N46 01.5
Castor	245 53.7	N31 49.5
Deneb	49 23.3	N45 23.1
Denebola	182 22.2	N14 24.8
Diphda	348 44.2	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.4	N28 37.8
Eltanin	90 40.5	N51 29.3
Enif	33 35.5	N10 00.6
Fomalhaut	15 11.0	S29 28.0
Gacrux	171 48.7	S57 16.7
Gienah	175 40.8	S17 42.1
Hadar	148 32.0	S60 30.9
Hamal	327 47.8	N23 35.9
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.2	N74 02.5
Markab	13 26.7	N15 21.7
Menkar	314 03.1	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 24.1	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 18.8	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.1	N 5 09.1
Rasalhague	95 55.6	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.0
Rigil Kent	139 36.4	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.3	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
10 0	319 00.1	226 38.7	N20 01.3	214 18.9	N23 25.2	141 05.9	N 2 08.9	279 28.4	N12 48.6
1	334 02.6	241 38.6	N20 01.5	229 19.6	N23 25.0	156 08.0	N 2 08.7	294 30.8	N12 48.7
2	349 05.0	256 38.5	N20 01.6	244 20.3	N23 24.9	171 10.0	N 2 08.6	309 33.2	N12 48.7
3	4 07.5	271 38.5	N20 01.7	259 21.0	N23 24.8	186 12.0	N 2 08.4	324 35.6	N12 48.7
4	19 09.9	286 38.4	N20 01.8	274 21.6	N23 24.6	201 14.1	N 2 08.2	339 38.0	N12 48.7
T 5	34 12.4	301 38.3	N20 01.9	289 22.3	N23 24.5	216 16.1	N 2 08.0	354 40.4	N12 48.7
H									
U 6	49 14.9	316 38.3	N20 02.0	304 23.0	N23 24.3	231 18.1	N 2 07.8	9 42.8	N12 48.7
R 7	64 17.3	331 38.2	N20 02.2	319 23.7	N23 24.2	246 20.2	N 2 07.6	24 45.2	N12 48.7
S 8	79 19.8	346 38.1	N20 02.3	334 24.4	N23 24.1	261 22.2	N 2 07.4	39 47.6	N12 48.7
D 9	94 22.3	1 38.1	N20 02.4	349 25.0	N23 23.9	276 24.2	N 2 07.2	54 50.0	N12 48.7
A 10	109 24.7	16 38.0	N20 02.5	4 25.7	N23 23.8	291 26.2	N 2 07.0	69 52.4	N12 48.7
Y 11	124 27.2	31 37.9	N20 02.6	19 26.4	N23 23.6	306 28.3	N 2 06.8	84 54.8	N12 48.7
12	139 29.7	46 37.8	N20 02.7	34 27.1	N23 23.5	321 30.3	N 2 06.6	99 57.2	N12 48.7
13	154 32.1	61 37.8	N20 02.8	49 27.8	N23 23.4	336 32.3	N 2 06.4	114 59.7	N12 48.7
14	169 34.6	76 37.7	N20 03.0	64 28.4	N23 23.2	351 34.4	N 2 06.3	130 02.1	N12 48.7
15	184 37.1	91 37.6	N20 03.1	79 29.1	N23 23.1	6 36.4	N 2 06.1	145 04.5	N12 48.8
16	199 39.5	106 37.5	N20 03.2	94 29.8	N23 22.9	21 38.4	N 2 05.9	160 06.9	N12 48.8
17	214 42.0	121 37.5	N20 03.3	109 30.5	N23 22.8	36 40.5	N 2 05.7	175 09.3	N12 48.8
18	229 44.4	136 37.4	N20 03.4	124 31.2	N23 22.6	51 42.5	N 2 05.5	190 11.7	N12 48.8
19	244 46.9	151 37.3	N20 03.5	139 31.8	N23 22.5	66 44.5	N 2 05.3	205 14.1	N12 48.8
20	259 49.4	166 37.2	N20 03.6	154 32.5	N23 22.3	81 46.6	N 2 05.1	220 16.5	N12 48.8
21	274 51.8	181 37.1	N20 03.7	169 33.2	N23 22.2	96 48.6	N 2 04.9	235 18.9	N12 48.8
22	289 54.3	196 37.1	N20 03.8	184 33.9	N23 22.1	111 50.6	N 2 04.7	250 21.3	N12 48.8
23	304 56.8	211 37.0	N20 03.9	199 34.6	N23 21.9	126 52.7	N 2 04.5	265 23.7	N12 48.8
11 0	319 59.2	226 36.9	N20 04.0	214 35.2	N23 21.8	141 54.7	N 2 04.3	280 26.1	N12 48.8
1	335 01.7	241 36.8	N20 04.1	229 35.9	N23 21.6	156 56.7	N 2 04.1	295 28.6	N12 48.8
2	350 04.2	256 36.7	N20 04.2	244 36.6	N23 21.5	171 58.7	N 2 04.0	310 31.0	N12 48.8
3	5 06.6	271 36.6	N20 04.3	259 37.3	N23 21.3	187 00.8	N 2 03.8	325 33.4	N12 48.8
4	20 09.1	286 36.6	N20 04.4	274 38.0	N23 21.2	202 02.8	N 2 03.6	340 35.8	N12 48.8
F 5	35 11.5	301 36.5	N20 04.6	289 38.6	N23 21.0	217 04.8	N 2 03.4	355 38.2	N12 48.8
R									
I 6	50 14.0	316 36.4	N20 04.7	304 39.3	N23 20.9	232 06.9	N 2 03.2	10 40.6	N12 48.8
D 7	65 16.5	331 36.3	N20 04.8	319 40.0	N23 20.7	247 08.9	N 2 03.0	25 43.0	N12 48.9
A 8	80 18.9	346 36.2	N20 04.9	334 40.7	N23 20.6	262 10.9	N 2 02.8	40 45.4	N12 48.9
Y 9	95 21.4	1 36.1	N20 05.0	349 41.4	N23 20.4	277 13.0	N 2 02.6	55 47.8	N12 48.9
10	110 23.9	16 36.0	N20 05.1	4 42.1	N23 20.3	292 15.0	N 2 02.4	70 50.3	N12 48.9
11	125 26.3	31 35.9	N20 05.2	19 42.7	N23 20.1	307 17.0	N 2 02.2	85 52.7	N12 48.9
12	140 28.8	46 35.8	N20 05.2	34 43.4	N23 20.0	322 19.0	N 2 02.0	100 55.1	N12 48.9
13	155 31.3	61 35.7	N20 05.3	49 44.1	N23 19.8	337 21.1	N 2 01.8	115 57.5	N12 48.9
14	170 33.7	76 35.6	N20 05.4	64 44.8	N23 19.7	352 23.1	N 2 01.6	130 59.9	N12 48.9
15	185 36.2	91 35.5	N20 05.5	79 45.5	N23 19.5	7 25.1	N 2 01.5	146 02.3	N12 48.9
16	200 38.7	106 35.4	N20 05.6	94 46.2	N23 19.4	22 27.2	N 2 01.3	161 04.7	N12 48.9
17	215 41.1	121 35.3	N20 05.7	109 46.8	N23 19.2	37 29.2	N 2 01.1	176 07.1	N12 48.9
18	230 43.6	136 35.2	N20 05.8	124 47.5	N23 19.1	52 31.2	N 2 00.9	191 09.5	N12 48.9
19	245 46.0	151 35.1	N20 05.9	139 48.2	N23 18.9	67 33.3	N 2 00.7	206 12.0	N12 48.9
20	260 48.5	166 35.0	N20 06.0	154 48.9	N23 18.8	82 35.3	N 2 00.5	221 14.4	N12 48.9
21	275 51.0	181 34.9	N20 06.1	169 49.6	N23 18.6	97 37.3	N 2 00.3	236 16.8	N12 48.9
22	290 53.4	196 34.8	N20 06.2	184 50.3	N23 18.5	112 39.3	N 2 00.1	251 19.2	N12 48.9
23	305 55.9	211 34.7	N20 06.3	199 50.9	N23 18.3	127 41.4	N 1 59.9	266 21.6	N12 48.9
12 0	320 58.4	226 34.6	N20 06.4	214 51.6	N23 18.2	142 43.4	N 1 59.7	281 24.0	N12 48.9
1	336 00.8	241 34.5	N20 06.5	229 52.3	N23 18.0	157 45.4	N 1 59.5	296 26.4	N12 49.0
2	351 03.3	256 34.4	N20 06.6	244 53.0	N23 17.9	172 47.5	N 1 59.3	311 28.9	N12 49.0
3	6 05.8	271 34.3	N20 06.6	259 53.7	N23 17.7	187 49.5	N 1 59.1	326 31.3	N12 49.0
4	21 08.2	286 34.2	N20 06.7	274 54.4	N23 17.5	202 51.5	N 1 58.9	341 33.7	N12 49.0
S 5	36 10.7	301 34.1	N20 06.8	289 55.1	N23 17.4	217 53.5	N 1 58.8	356 36.1	N12 49.0
A									
T 6	51 13.2	316 34.0	N20 06.9	304 55.7	N23 17.2	232 55.6	N 1 58.6	11 38.5	N12 49.0
U 7	66 15.6	331 33.9	N20 07.0	319 56.4	N23 17.1	247 57.6	N 1 58.4	26 40.9	N12 49.0
R 8	81 18.1	346 33.7	N20 07.1	334 57.1	N23 16.9	262 59.6	N 1 58.2	41 43.3	N12 49.0
D 9	96 20.5	1 33.6	N20 07.2	349 57.8	N23 16.8	278 01.6	N 1 58.0	56 45.8	N12 49.0
A 10	111 23.0	16 33.5	N20 07.2	4 58.5	N23 16.6	293 03.7	N 1 57.8	71 48.2	N12 49.0
Y 11	126 25.5	31 33.4	N20 07.3	19 59.2	N23 16.5	308 05.7	N 1 57.6	86 50.6	N12 49.0
12	141 27.9	46 33.3	N20 07.4	34 59.9	N23 16.3	323 07.7	N 1 57.4	101 53.0	N12 49.0
13	156 30.4	61 33.2	N20 07.5	50 00.6	N23 16.1	338 09.8	N 1 57.2	116 55.4	N12 49.0
14	171 32.9	76 33.1	N20 07.6	65 01.2	N23 16.0	353 11.8	N 1 57.0	131 57.8	N12 49.0
15	186 35.3	91 32.9	N20 07.7	80 01.9	N23 15.8	8 13.8	N 1 56.8	147 00.3	N12 49.0
16	201 37.8	106 32.8	N20 07.7	95 02.6	N23 15.7	23 15.8	N 1 56.6	162 02.7	N12 49.0
17	216 40.3	121 32.7	N20 07.8	110 03.3	N23 15.5	38 17.9	N 1 56.4	177 05.1	N12 49.0
18	231 42.7	136 32.6	N20 07.9	125 04.0	N23 15.3	53 19.9	N 1 56.2	192 07.5	N12 49.0
19	246 45.2	151 32.5	N20 08.0	140 04.7	N23 15.2	68 21.9	N 1 56.0	207 09.9	N12 49.0
20	261 47.6	166 32.3	N20 08.0	155 05.4	N23 15.0	83 23.9	N 1 55.9	222 12.3	N12 49.0
21	276 50.1	181 32.2	N20 08.1	170 06.1	N23 14.9	98 26.0	N 1 55.7	237 14.8	N12 49.0
22	291 52.6	196 32.1	N20 08.2	185 06.8	N23 14.7	113 28.0	N 1 55.5	252 17.2	N12 49.0
23	306 55.0	211 32.0	N20 08.3	200 07.4	N23 14.5	128 30.0	N 1 55.3	267 19.6	N12 49.0
		v -0.1	d 0.1	v 0.7	d 0.2	v 2.0	d 0.2	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
10	0	178 39.6	N15 27.9	312 51.0	16.3	N 8 10.8	12.4	54.2
	1	193 39.7	N15 27.2	327 26.2	16.3	N 8 23.2	12.3	54.2
	2	208 39.8	N15 26.4	342 01.5	16.2	N 8 35.5	12.3	54.2
	3	223 39.9	N15 25.7	356 36.6	16.2	N 8 47.8	12.3	54.2
	4	238 40.0	N15 25.0	11 11.8	16.1	N 9 00.0	12.3	54.2
T	5	253 40.1	N15 24.2	25 46.9	16.1	N 9 12.2	12.2	54.2
H								
U	6	268 40.2	N15 23.5	40 22.0	16.1	N 9 24.4	12.2	54.2
R	7	283 40.3	N15 22.7	54 57.0	16.0	N 9 36.6	12.2	54.2
S	8	298 40.4	N15 22.0	69 32.0	16.0	N 9 48.7	12.1	54.2
D	9	313 40.5	N15 21.3	84 06.9	16.0	N10 00.8	12.1	54.2
A	10	328 40.6	N15 20.5	98 41.9	15.9	N10 12.9	12.1	54.2
Y	11	343 40.7	N15 19.8	113 16.7	15.9	N10 24.9	12.0	54.3
	12	358 40.8	N15 19.1	127 51.5	15.8	N10 36.9	12.0	54.3
	13	13 40.9	N15 18.3	142 26.3	15.8	N10 48.8	12.0	54.3
	14	28 41.0	N15 17.6	157 01.1	15.7	N11 00.8	11.9	54.3
	15	43 41.1	N15 16.8	171 35.7	15.7	N11 12.6	11.9	54.3
	16	58 41.2	N15 16.1	186 10.4	15.6	N11 24.5	11.8	54.3
	17	73 41.3	N15 15.4	200 45.0	15.6	N11 36.3	11.8	54.3
	18	88 41.4	N15 14.6	215 19.5	15.5	N11 48.0	11.8	54.3
	19	103 41.5	N15 13.9	229 54.0	15.5	N11 59.7	11.7	54.4
	20	118 41.6	N15 13.1	244 28.4	15.4	N12 11.4	11.7	54.4
	21	133 41.7	N15 12.4	259 02.8	15.4	N12 23.1	11.6	54.4
	22	148 41.8	N15 11.6	273 37.1	15.3	N12 34.6	11.6	54.4
	23	163 41.9	N15 10.9	288 11.4	15.3	N12 46.2	11.5	54.4
11	0	178 42.0	N15 10.2	302 45.6	15.2	N12 57.7	11.5	54.4
	1	193 42.1	N15 09.4	317 19.8	15.2	N13 09.1	11.5	54.4
	2	208 42.2	N15 08.7	331 53.9	15.1	N13 20.6	11.4	54.4
	3	223 42.3	N15 07.9	346 27.9	15.0	N13 31.9	11.4	54.5
	4	238 42.4	N15 07.2	1 01.9	15.0	N13 43.2	11.3	54.5
F	5	253 42.5	N15 06.4	15 35.9	14.9	N13 54.5	11.3	54.5
R								
I	6	268 42.6	N15 05.7	30 09.7	14.9	N14 05.7	11.2	54.5
D	7	283 42.7	N15 04.9	44 43.5	14.8	N14 16.9	11.2	54.5
A	8	298 42.8	N15 04.2	59 17.3	14.7	N14 28.0	11.1	54.5
Y	9	313 42.9	N15 03.4	73 51.0	14.7	N14 39.0	11.1	54.6
	10	328 43.0	N15 02.7	88 24.6	14.6	N14 50.0	11.0	54.6
	11	343 43.1	N15 01.9	102 58.1	14.6	N15 01.0	11.0	54.6
	12	358 43.2	N15 01.2	117 31.6	14.5	N15 11.9	10.9	54.6
	13	13 43.3	N15 00.4	132 05.1	14.4	N15 22.7	10.8	54.6
	14	28 43.4	N14 59.7	146 38.4	14.4	N15 33.5	10.8	54.6
	15	43 43.5	N14 58.9	161 11.7	14.3	N15 44.2	10.7	54.7
	16	58 43.6	N14 58.2	175 44.9	14.2	N15 54.9	10.7	54.7
	17	73 43.7	N14 57.4	190 18.1	14.1	N16 05.5	10.6	54.7
	18	88 43.9	N14 56.7	204 51.1	14.1	N16 16.1	10.5	54.7
	19	103 44.0	N14 55.9	219 24.1	14.0	N16 26.6	10.5	54.7
	20	118 44.1	N14 55.2	233 57.1	13.9	N16 37.0	10.4	54.8
	21	133 44.2	N14 54.4	248 29.9	13.9	N16 47.3	10.4	54.8
	22	148 44.3	N14 53.7	263 02.7	13.8	N16 57.6	10.3	54.8
	23	163 44.4	N14 52.9	277 35.4	13.7	N17 07.9	10.2	54.8
12	0	178 44.5	N14 52.2	292 08.1	13.6	N17 18.0	10.2	54.8
	1	193 44.6	N14 51.4	306 40.6	13.6	N17 28.1	10.1	54.9
	2	208 44.7	N14 50.7	321 13.1	13.5	N17 38.2	10.0	54.9
	3	223 44.8	N14 49.9	335 45.5	13.4	N17 48.1	10.0	54.9
	4	238 44.9	N14 49.1	350 17.9	13.3	N17 58.0	9.9	54.9
S	5	253 45.0	N14 48.4	4 50.1	13.3	N18 07.9	9.8	54.9
A								
T	6	268 45.1	N14 47.6	19 22.3	13.2	N18 17.6	9.8	55.0
U	7	283 45.3	N14 46.9	33 54.4	13.1	N18 27.3	9.7	55.0
R	8	298 45.4	N14 46.1	48 26.4	13.0	N18 36.9	9.6	55.0
D	9	313 45.5	N14 45.4	62 58.3	12.9	N18 46.5	9.5	55.0
A	10	328 45.6	N14 44.6	77 30.2	12.8	N18 55.9	9.5	55.1
Y	11	343 45.7	N14 43.8	92 01.9	12.8	N19 05.3	9.4	55.1
	12	358 45.8	N14 43.1	106 33.6	12.7	N19 14.6	9.3	55.1
	13	13 45.9	N14 42.3	121 05.2	12.6	N19 23.8	9.2	55.1
	14	28 46.0	N14 41.6	135 36.7	12.5	N19 33.0	9.1	55.1
	15	43 46.1	N14 40.8	150 08.2	12.4	N19 42.0	9.1	55.2
	16	58 46.2	N14 40.0	164 39.5	12.3	N19 51.0	9.0	55.2
	17	73 46.4	N14 39.3	179 10.8	12.3	N19 59.9	8.9	55.2
	18	88 46.5	N14 38.5	193 41.9	12.2	N20 08.8	8.8	55.2
	19	103 46.6	N14 37.8	208 13.0	12.1	N20 17.5	8.7	55.3
	20	118 46.7	N14 37.0	222 44.0	12.0	N20 26.1	8.7	55.3
	21	133 46.8	N14 36.2	237 14.9	11.9	N20 34.7	8.6	55.3
	22	148 46.9	N14 35.5	251 45.7	11.8	N20 43.2	8.5	55.4
	23	163 47.0	N14 34.7	266 16.5	11.7	N20 51.6	8.4	55.4
		S.D. 15.8	d 0.7	S.D. 14.8		14.9		15.0

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.5	S40 11.1
Achernar	335 17.8	S57 05.1
Acrux	172 57.2	S63 15.7
Adhara	255 03.8	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.4	N16 34.0
Alioth	166 10.7	N55 48.5
Alkaid	152 49.9	N49 10.4
Al Na-ir	27 28.8	S46 49.1
Alnilam	275 34.9	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.4	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.0	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.5	S69 05.0
Avior	234 14.1	S59 36.0
Bellatrix	278 19.9	N 6 22.6
Betelgeuse	270 49.1	N 7 24.8
Canopus	263 51.5	S52 42.4
Capella	280 17.8	N46 01.5
Castor	245 53.7	N31 49.5
Deneb	49 23.3	N45 23.1
Denebola	182 22.2	N14 24.8
Diphda	348 44.2	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.4	N28 37.8
Eltanin	90 40.5	N51 29.3
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.7	S57 16.7
Gienah	175 40.8	S17 42.1
Hadar	148 32.0	S60 30.9
Hamal	327 47.8	N23 35.9
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.3	N74 02.5
Markab	13 26.7	N15 21.7
Menkar	314 03.0	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 24.1	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 17.6	N89 22.2
Pollux	243 14.1	N27 57.4
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.6	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.0
Rigil Kent	139 36.4	S60 57.5
Sabik	101 59.2	S15 45.6
Schedar	349 27.2	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
13	0	321 57.5	226 31.8	N20 08.4	215 08.1	N23 14.4	143 32.0	N 1 55.1	282 22.0	N12 49.0
	1	336 60.0	241 31.7	N20 08.4	230 08.8	N23 14.2	158 34.1	N 1 54.9	297 24.4	N12 49.1
	2	352 02.4	256 31.6	N20 08.5	245 09.5	N23 14.1	173 36.1	N 1 54.7	312 26.8	N12 49.1
	3	7 04.9	271 31.5	N20 08.6	260 10.2	N23 13.9	188 38.1	N 1 54.5	327 29.3	N12 49.1
	4	22 07.4	286 31.3	N20 08.6	275 10.9	N23 13.7	203 40.1	N 1 54.3	342 31.7	N12 49.1
S	5	37 09.8	301 31.2	N20 08.7	290 11.6	N23 13.6	218 42.2	N 1 54.1	357 34.1	N12 49.1
U										
N	6	52 12.3	316 31.1	N20 08.8	305 12.3	N23 13.4	233 44.2	N 1 53.9	12 36.5	N12 49.1
D	7	67 14.8	331 30.9	N20 08.9	320 13.0	N23 13.2	248 46.2	N 1 53.7	27 38.9	N12 49.1
A	8	82 17.2	346 30.8	N20 08.9	335 13.6	N23 13.1	263 48.2	N 1 53.5	42 41.4	N12 49.1
Y	9	97 19.7	1 30.7	N20 09.0	350 14.3	N23 12.9	278 50.3	N 1 53.3	57 43.8	N12 49.1
	10	112 22.1	16 30.5	N20 09.1	5 15.0	N23 12.7	293 52.3	N 1 53.1	72 46.2	N12 49.1
	11	127 24.6	31 30.4	N20 09.1	20 15.7	N23 12.6	308 54.3	N 1 52.9	87 48.6	N12 49.1
	12	142 27.1	46 30.3	N20 09.2	35 16.4	N23 12.4	323 56.3	N 1 52.7	102 51.0	N12 49.1
	13	157 29.5	61 30.1	N20 09.3	50 17.1	N23 12.3	338 58.4	N 1 52.6	117 53.5	N12 49.1
	14	172 32.0	76 30.0	N20 09.3	65 17.8	N23 12.1	354 00.4	N 1 52.4	132 55.9	N12 49.1
	15	187 34.5	91 29.9	N20 09.4	80 18.5	N23 11.9	9 02.4	N 1 52.2	147 58.3	N12 49.1
	16	202 36.9	106 29.7	N20 09.5	95 19.2	N23 11.8	24 04.4	N 1 52.0	163 00.7	N12 49.1
	17	217 39.4	121 29.6	N20 09.5	110 19.9	N23 11.6	39 06.5	N 1 51.8	178 03.1	N12 49.1
	18	232 41.9	136 29.4	N20 09.6	125 20.6	N23 11.4	54 08.5	N 1 51.6	193 05.6	N12 49.1
	19	247 44.3	151 29.3	N20 09.7	140 21.3	N23 11.3	69 10.5	N 1 51.4	208 08.0	N12 49.1
	20	262 46.8	166 29.2	N20 09.7	155 22.0	N23 11.1	84 12.5	N 1 51.2	223 10.4	N12 49.1
	21	277 49.3	181 29.0	N20 09.8	170 22.6	N23 10.9	99 14.6	N 1 51.0	238 12.8	N12 49.1
	22	292 51.7	196 28.9	N20 09.8	185 23.3	N23 10.8	114 16.6	N 1 50.8	253 15.2	N12 49.1
	23	307 54.2	211 28.7	N20 09.9	200 24.0	N23 10.6	129 18.6	N 1 50.6	268 17.7	N12 49.1
14	0	322 56.6	226 28.6	N20 10.0	215 24.7	N23 10.4	144 20.6	N 1 50.4	283 20.1	N12 49.1
	1	337 59.1	241 28.4	N20 10.0	230 25.4	N23 10.2	159 22.7	N 1 50.2	298 22.5	N12 49.1
	2	353 01.6	256 28.3	N20 10.1	245 26.1	N23 10.1	174 24.7	N 1 50.0	313 24.9	N12 49.1
	3	8 04.0	271 28.1	N20 10.1	260 26.8	N23 09.9	189 26.7	N 1 49.8	328 27.4	N12 49.1
	4	23 06.5	286 28.0	N20 10.2	275 27.5	N23 09.7	204 28.7	N 1 49.6	343 29.8	N12 49.1
M	5	38 09.0	301 27.8	N20 10.2	290 28.2	N23 09.6	219 30.8	N 1 49.4	358 32.2	N12 49.1
O										
N	6	53 11.4	316 27.7	N20 10.3	305 28.9	N23 09.4	234 32.8	N 1 49.2	13 34.6	N12 49.1
D	7	68 13.9	331 27.5	N20 10.3	320 29.6	N23 09.2	249 34.8	N 1 49.0	28 37.0	N12 49.1
A	8	83 16.4	346 27.4	N20 10.4	335 30.3	N23 09.1	264 36.8	N 1 48.8	43 39.5	N12 49.1
Y	9	98 18.8	1 27.2	N20 10.5	350 31.0	N23 08.9	279 38.8	N 1 48.7	58 41.9	N12 49.1
	10	113 21.3	16 27.1	N20 10.5	5 31.7	N23 08.7	294 40.9	N 1 48.5	73 44.3	N12 49.1
	11	128 23.7	31 26.9	N20 10.6	20 32.4	N23 08.5	309 42.9	N 1 48.3	88 46.7	N12 49.1
	12	143 26.2	46 26.8	N20 10.6	35 33.1	N23 08.4	324 44.9	N 1 48.1	103 49.2	N12 49.1
	13	158 28.7	61 26.6	N20 10.7	50 33.8	N23 08.2	339 46.9	N 1 47.9	118 51.6	N12 49.1
	14	173 31.1	76 26.5	N20 10.7	65 34.4	N23 08.0	354 49.0	N 1 47.7	133 54.0	N12 49.1
	15	188 33.6	91 26.3	N20 10.8	80 35.1	N23 07.8	9 51.0	N 1 47.5	148 56.4	N12 49.1
	16	203 36.1	106 26.2	N20 10.8	95 35.8	N23 07.7	24 53.0	N 1 47.3	163 58.9	N12 49.1
	17	218 38.5	121 26.0	N20 10.9	110 36.5	N23 07.5	39 55.0	N 1 47.1	179 01.3	N12 49.1
	18	233 41.0	136 25.8	N20 10.9	125 37.2	N23 07.3	54 57.0	N 1 46.9	194 03.7	N12 49.1
	19	248 43.5	151 25.7	N20 10.9	140 37.9	N23 07.2	69 59.1	N 1 46.7	209 06.1	N12 49.1
	20	263 45.9	166 25.5	N20 11.0	155 38.6	N23 07.0	85 01.1	N 1 46.5	224 08.6	N12 49.2
	21	278 48.4	181 25.4	N20 11.0	170 39.3	N23 06.8	100 03.1	N 1 46.3	239 11.0	N12 49.2
	22	293 50.9	196 25.2	N20 11.1	185 40.0	N23 06.6	115 05.1	N 1 46.1	254 13.4	N12 49.2
	23	308 53.3	211 25.0	N20 11.1	200 40.7	N23 06.5	130 07.2	N 1 45.9	269 15.8	N12 49.2
15	0	323 55.8	226 24.9	N20 11.2	215 41.4	N23 06.3	145 09.2	N 1 45.7	284 18.3	N12 49.2
	1	338 58.2	241 24.7	N20 11.2	230 42.1	N23 06.1	160 11.2	N 1 45.5	299 20.7	N12 49.2
	2	354 00.7	256 24.5	N20 11.3	245 42.8	N23 05.9	175 13.2	N 1 45.3	314 23.1	N12 49.2
	3	9 03.2	271 24.4	N20 11.3	260 43.5	N23 05.7	190 15.2	N 1 45.1	329 25.6	N12 49.2
	4	24 05.6	286 24.2	N20 11.3	275 44.2	N23 05.6	205 17.3	N 1 44.9	344 28.0	N12 49.2
T	5	39 08.1	301 24.0	N20 11.4	290 44.9	N23 05.4	220 19.3	N 1 44.7	359 30.4	N12 49.2
U										
E	6	54 10.6	316 23.9	N20 11.4	305 45.6	N23 05.2	235 21.3	N 1 44.5	14 32.8	N12 49.2
S	7	69 13.0	331 23.7	N20 11.4	320 46.3	N23 05.0	250 23.3	N 1 44.3	29 35.3	N12 49.2
D	8	84 15.5	346 23.5	N20 11.5	335 47.0	N23 04.9	265 25.3	N 1 44.2	44 37.7	N12 49.2
A	9	99 18.0	1 23.4	N20 11.5	350 47.7	N23 04.7	280 27.4	N 1 44.0	59 40.1	N12 49.2
Y	10	114 20.4	16 23.2	N20 11.6	5 48.4	N23 04.5	295 29.4	N 1 43.8	74 42.5	N12 49.2
	11	129 22.9	31 23.0	N20 11.6	20 49.1	N23 04.3	310 31.4	N 1 43.6	89 45.0	N12 49.2
	12	144 25.4	46 22.9	N20 11.6	35 49.8	N23 04.1	325 33.4	N 1 43.4	104 47.4	N12 49.2
	13	159 27.8	61 22.7	N20 11.7	50 50.5	N23 04.0	340 35.4	N 1 43.2	119 49.8	N12 49.2
	14	174 30.3	76 22.5	N20 11.7	65 51.2	N23 03.8	355 37.5	N 1 43.0	134 52.3	N12 49.2
	15	189 32.7	91 22.3	N20 11.7	80 51.9	N23 03.6	10 39.5	N 1 42.8	149 54.7	N12 49.2
	16	204 35.2	106 22.2	N20 11.8	95 52.6	N23 03.4	25 41.5	N 1 42.6	164 57.1	N12 49.2
	17	219 37.7	121 22.0	N20 11.8	110 53.3	N23 03.2	40 43.5	N 1 42.4	179 59.5	N12 49.2
	18	234 40.1	136 21.8	N20 11.8	125 54.0	N23 03.1	55 45.5	N 1 42.2	195 02.0	N12 49.2
	19	249 42.6	151 21.6	N20 11.9	140 54.7	N23 02.9	70 47.6	N 1 42.0	210 04.4	N12 49.2
	20	264 45.1	166 21.4	N20 11.9	155 55.4	N23 02.7	85 49.6	N 1 41.8	225 06.8	N12 49.2
	21	279 47.5	181 21.3	N20 11.9	170 56.1	N23 02.5	100 51.6	N 1 41.6	240 09.3	N12 49.2
	22	294 50.0	196 21.1	N20 11.9	185 56.8	N23 02.3	115 53.6	N 1 41.4	255 11.7	N12 49.2
	23	309 52.5	211 20.9	N20 12.0	200 57.5	N23 02.1	130 55.6	N 1 41.2	270 14.1	N12 49.2
			v -0.2	d 0.1	v 0.7	d 0.2	v 2.0	d 0.2	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
13	0	178 47.1	N14 33.9	280 47.1	11.6	N20 59.9	8.3	55.4
	1	193 47.3	N14 33.2	295 17.7	11.6	N21 08.1	8.2	55.4
	2	208 47.4	N14 32.4	309 48.1	11.5	N21 16.2	8.1	55.5
	3	223 47.5	N14 31.7	324 18.5	11.4	N21 24.2	8.0	55.5
	4	238 47.6	N14 30.9	338 48.8	11.3	N21 32.1	7.9	55.5
S	5	253 47.7	N14 30.1	353 19.0	11.2	N21 40.0	7.8	55.5
U								
N	6	268 47.8	N14 29.4	7 49.1	11.1	N21 47.7	7.7	55.6
D	7	283 47.9	N14 28.6	22 19.1	11.0	N21 55.3	7.6	55.6
A	8	298 48.1	N14 27.8	36 49.0	10.9	N22 02.9	7.5	55.6
Y	9	313 48.2	N14 27.1	51 18.9	10.8	N22 10.3	7.4	55.7
	10	328 48.3	N14 26.3	65 48.6	10.7	N22 17.7	7.3	55.7
	11	343 48.4	N14 25.5	80 18.3	10.6	N22 24.9	7.2	55.7
	12	358 48.5	N14 24.7	94 47.8	10.6	N22 32.0	7.1	55.7
	13	13 48.6	N14 24.0	109 17.3	10.5	N22 39.1	7.0	55.8
	14	28 48.8	N14 23.2	123 46.7	10.4	N22 46.0	6.9	55.8
	15	43 48.9	N14 22.4	138 15.9	10.3	N22 52.8	6.8	55.8
	16	58 49.0	N14 21.7	152 45.1	10.2	N22 59.5	6.7	55.9
	17	73 49.1	N14 20.9	167 14.2	10.1	N23 06.1	6.6	55.9
	18	88 49.2	N14 20.1	181 43.2	10.0	N23 12.6	6.5	55.9
	19	103 49.3	N14 19.4	196 12.1	9.9	N23 19.0	6.4	56.0
	20	118 49.5	N14 18.6	210 41.0	9.8	N23 25.2	6.3	56.0
	21	133 49.6	N14 17.8	225 09.7	9.7	N23 31.4	6.2	56.0
	22	148 49.7	N14 17.0	239 38.3	9.6	N23 37.4	6.0	56.1
	23	163 49.8	N14 16.3	254 06.9	9.5	N23 43.4	5.9	56.1
14	0	178 49.9	N14 15.5	268 35.3	9.5	N23 49.2	5.8	56.1
	1	193 50.0	N14 14.7	283 03.7	9.4	N23 54.9	5.7	56.2
	2	208 50.2	N14 13.9	297 32.0	9.3	N24 00.4	5.6	56.2
	3	223 50.3	N14 13.2	312 00.2	9.2	N24 05.9	5.5	56.2
	4	238 50.4	N14 12.4	326 28.3	9.1	N24 11.2	5.3	56.3
M	5	253 50.5	N14 11.6	340 56.3	9.0	N24 16.4	5.2	56.3
O								
N	6	268 50.6	N14 10.8	355 24.2	8.9	N24 21.5	5.1	56.3
D	7	283 50.8	N14 10.1	9 52.0	8.8	N24 26.5	5.0	56.4
A	8	298 50.9	N14 09.3	24 19.7	8.7	N24 31.3	4.8	56.4
Y	9	313 51.0	N14 08.5	38 47.4	8.7	N24 36.0	4.7	56.4
	10	328 51.1	N14 07.7	53 15.0	8.6	N24 40.6	4.6	56.5
	11	343 51.2	N14 07.0	67 42.4	8.5	N24 45.1	4.5	56.5
	12	358 51.4	N14 06.2	82 09.8	8.4	N24 49.4	4.3	56.5
	13	13 51.5	N14 05.4	96 37.2	8.3	N24 53.6	4.2	56.6
	14	28 51.6	N14 04.6	111 04.4	8.2	N24 57.6	4.1	56.6
	15	43 51.7	N14 03.8	125 31.5	8.1	N25 01.6	3.9	56.6
	16	58 51.9	N14 03.1	139 58.6	8.1	N25 05.3	3.8	56.7
	17	73 52.0	N14 02.3	154 25.6	8.0	N25 09.0	3.7	56.7
	18	88 52.1	N14 01.5	168 52.4	7.9	N25 12.5	3.5	56.7
	19	103 52.2	N14 00.7	183 19.3	7.8	N25 15.9	3.4	56.8
	20	118 52.3	N13 59.9	197 46.0	7.7	N25 19.1	3.2	56.8
	21	133 52.5	N13 59.2	212 12.7	7.7	N25 22.2	3.1	56.9
	22	148 52.6	N13 58.4	226 39.2	7.6	N25 25.2	3.0	56.9
	23	163 52.7	N13 57.6	241 05.7	7.5	N25 28.0	2.8	56.9
15	0	178 52.8	N13 56.8	255 32.2	7.4	N25 30.7	2.7	57.0
	1	193 53.0	N13 56.0	269 58.5	7.3	N25 33.2	2.5	57.0
	2	208 53.1	N13 55.2	284 24.8	7.3	N25 35.6	2.4	57.0
	3	223 53.2	N13 54.5	298 51.0	7.2	N25 37.9	2.2	57.1
	4	238 53.3	N13 53.7	313 17.1	7.1	N25 40.0	2.1	57.1
T	5	253 53.5	N13 52.9	327 43.2	7.1	N25 41.9	2.0	57.2
U								
E	6	268 53.6	N13 52.1	342 09.2	7.0	N25 43.7	1.8	57.2
S	7	283 53.7	N13 51.3	356 35.1	6.9	N25 45.4	1.7	57.2
D	8	298 53.8	N13 50.5	11 00.9	6.9	N25 46.9	1.5	57.3
A	9	313 54.0	N13 49.7	25 26.7	6.8	N25 48.2	1.4	57.3
Y	10	328 54.1	N13 49.0	39 52.5	6.7	N25 49.4	1.2	57.3
	11	343 54.2	N13 48.2	54 18.1	6.7	N25 50.5	1.0	57.4
	12	358 54.3	N13 47.4	68 43.7	6.6	N25 51.4	0.9	57.4
	13	13 54.5	N13 46.6	83 09.3	6.5	N25 52.1	0.7	57.5
	14	28 54.6	N13 45.8	97 34.8	6.5	N25 52.7	0.6	57.5
	15	43 54.7	N13 45.0	112 00.2	6.4	N25 53.2	0.4	57.5
	16	58 54.9	N13 44.2	126 25.5	6.4	N25 53.4	0.3	57.6
	17	73 55.0	N13 43.4	140 50.9	6.3	N25 53.5	0.1	57.6
	18	88 55.1	N13 42.6	155 16.1	6.3	N25 53.5	0.0	57.7
	19	103 55.2	N13 41.9	169 41.3	6.2	N25 53.3	0.2	57.7
	20	118 55.4	N13 41.1	184 06.5	6.2	N25 52.9	0.4	57.7
	21	133 55.5	N13 40.3	198 31.6	6.1	N25 52.4	0.5	57.8
	22	148 55.6	N13 39.5	212 56.7	6.1	N25 51.8	0.7	57.8
	23	163 55.8	N13 38.7	227 21.7	6.0	N25 50.9	0.8	57.9
		S.D. 15.8	d 0.8	S.D. 15.2		15.4		15.6

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.5	S40 11.1
Achernar	335 17.8	S57 05.1
Acrux	172 57.2	S63 15.7
Adhara	255 03.8	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.3	N16 34.0
Alioth	166 10.8	N55 48.5
Alkaid	152 49.9	N49 10.4
Al Na-ir	27 28.8	S46 49.1
Alnilam	275 34.9	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.4	N29 15.0
Altair	61 56.8	N 8 56.8
Ankaa	353 04.0	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.5	S69 05.0
Avior	234 14.1	S59 36.0
Bellatrix	278 19.9	N 6 22.6
Betelgeuse	270 49.1	N 7 24.8
Canopus	263 51.4	S52 42.4
Capella	280 17.7	N46 01.4
Castor	245 53.6	N31 49.5
Deneb	49 23.3	N45 23.1
Denebola	182 22.2	N14 24.8
Diphda	348 44.2	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.4	N28 37.8
Eltanin	90 40.5	N51 29.3
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.7	S57 16.7
Gienah	175 40.8	S17 42.1
Hadar	148 32.0	S60 30.9
Hamal	327 47.8	N23 36.0
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.4	N74 02.5
Markab	13 26.6	N15 21.7
Menkar	314 03.0	N 4 12.2
Menkent	147 54.2	S36 30.9
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 24.0	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 16.2	N89 22.2
Pollux	243 14.0	N27 57.3
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.0
Rigil Kent	139 36.4	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.2	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.9
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
16	0	324 54.9	226 20.7	N20 12.0	215 58.2	N23 02.0	145 57.7	N 1 41.0	285 16.6	N12 49.2
	1	339 57.4	241 20.5	N20 12.0	230 58.9	N23 01.8	160 59.7	N 1 40.8	300 19.0	N12 49.2
	2	354 59.9	256 20.4	N20 12.0	245 59.6	N23 01.6	176 01.7	N 1 40.6	315 21.4	N12 49.2
	3	10 02.3	271 20.2	N20 12.1	261 00.3	N23 01.4	191 03.7	N 1 40.4	330 23.9	N12 49.2
	4	25 04.8	286 20.0	N20 12.1	276 01.0	N23 01.2	206 05.7	N 1 40.2	345 26.3	N12 49.2
W	5	40 07.2	301 19.8	N20 12.1	291 01.7	N23 01.0	221 07.8	N 1 40.0	0 28.7	N12 49.2
E										
D	6	55 09.7	316 19.6	N20 12.1	306 02.4	N23 00.9	236 09.8	N 1 39.8	15 31.1	N12 49.2
N	7	70 12.2	331 19.4	N20 12.2	321 03.1	N23 00.7	251 11.8	N 1 39.6	30 33.6	N12 49.2
E	8	85 14.6	346 19.3	N20 12.2	336 03.8	N23 00.5	266 13.8	N 1 39.4	45 36.0	N12 49.2
S	9	100 17.1	1 19.1	N20 12.2	351 04.5	N23 00.3	281 15.8	N 1 39.2	60 38.4	N12 49.2
D	10	115 19.6	16 18.9	N20 12.2	6 05.2	N23 00.1	296 17.8	N 1 39.0	75 40.9	N12 49.2
A	11	130 22.0	31 18.7	N20 12.2	21 05.9	N22 59.9	311 19.9	N 1 38.8	90 43.3	N12 49.2
Y										
	12	145 24.5	46 18.5	N20 12.2	36 06.7	N22 59.7	326 21.9	N 1 38.6	105 45.7	N12 49.2
	13	160 27.0	61 18.3	N20 12.3	51 07.4	N22 59.5	341 23.9	N 1 38.4	120 48.2	N12 49.1
	14	175 29.4	76 18.1	N20 12.3	66 08.1	N22 59.4	356 25.9	N 1 38.2	135 50.6	N12 49.1
	15	190 31.9	91 17.9	N20 12.3	81 08.8	N22 59.2	11 27.9	N 1 38.1	150 53.0	N12 49.1
	16	205 34.4	106 17.7	N20 12.3	96 09.5	N22 59.0	26 29.9	N 1 37.9	165 55.5	N12 49.1
	17	220 36.8	121 17.5	N20 12.3	111 10.2	N22 58.8	41 32.0	N 1 37.7	180 57.9	N12 49.1
	18	235 39.3	136 17.3	N20 12.3	126 10.9	N22 58.6	56 34.0	N 1 37.5	196 00.3	N12 49.1
	19	250 41.7	151 17.1	N20 12.3	141 11.6	N22 58.4	71 36.0	N 1 37.3	211 02.8	N12 49.1
	20	265 44.2	166 17.0	N20 12.4	156 12.3	N22 58.2	86 38.0	N 1 37.1	226 05.2	N12 49.1
	21	280 46.7	181 16.8	N20 12.4	171 13.0	N22 58.0	101 40.0	N 1 36.9	241 07.6	N12 49.1
	22	295 49.1	196 16.6	N20 12.4	186 13.7	N22 57.8	116 42.1	N 1 36.7	256 10.1	N12 49.1
	23	310 51.6	211 16.4	N20 12.4	201 14.4	N22 57.7	131 44.1	N 1 36.5	271 12.5	N12 49.1
17	0	325 54.1	226 16.2	N20 12.4	216 15.1	N22 57.5	146 46.1	N 1 36.3	286 15.0	N12 49.1
	1	340 56.5	241 16.0	N20 12.4	231 15.8	N22 57.3	161 48.1	N 1 36.1	301 17.4	N12 49.1
	2	355 59.0	256 15.8	N20 12.4	246 16.5	N22 57.1	176 50.1	N 1 35.9	316 19.8	N12 49.1
	3	11 01.5	271 15.6	N20 12.4	261 17.2	N22 56.9	191 52.1	N 1 35.7	331 22.3	N12 49.1
	4	26 03.9	286 15.4	N20 12.4	276 17.9	N22 56.7	206 54.2	N 1 35.5	346 24.7	N12 49.1
T	5	41 06.4	301 15.2	N20 12.4	291 18.7	N22 56.5	221 56.2	N 1 35.3	1 27.1	N12 49.1
H										
U	6	56 08.8	316 15.0	N20 12.4	306 19.4	N22 56.3	236 58.2	N 1 35.1	16 29.6	N12 49.1
R	7	71 11.3	331 14.8	N20 12.4	321 20.1	N22 56.1	252 00.2	N 1 34.9	31 32.0	N12 49.1
S	8	86 13.8	346 14.6	N20 12.4	336 20.8	N22 55.9	267 02.2	N 1 34.7	46 34.4	N12 49.1
D	9	101 16.2	1 14.3	N20 12.4	351 21.5	N22 55.7	282 04.2	N 1 34.5	61 36.9	N12 49.1
A	10	116 18.7	16 14.1	N20 12.4	6 22.2	N22 55.5	297 06.3	N 1 34.3	76 39.3	N12 49.1
Y	11	131 21.2	31 13.9	N20 12.5	21 22.9	N22 55.3	312 08.3	N 1 34.1	91 41.7	N12 49.1
	12	146 23.6	46 13.7	N20 12.5	36 23.6	N22 55.2	327 10.3	N 1 33.9	106 44.2	N12 49.1
	13	161 26.1	61 13.5	N20 12.5	51 24.3	N22 55.0	342 12.3	N 1 33.7	121 46.6	N12 49.1
	14	176 28.6	76 13.3	N20 12.4	66 25.0	N22 54.8	357 14.3	N 1 33.5	136 49.1	N12 49.1
	15	191 31.0	91 13.1	N20 12.4	81 25.7	N22 54.6	12 16.3	N 1 33.3	151 51.5	N12 49.1
	16	206 33.5	106 12.9	N20 12.4	96 26.4	N22 54.4	27 18.3	N 1 33.1	166 53.9	N12 49.1
	17	221 36.0	121 12.7	N20 12.4	111 27.2	N22 54.2	42 20.4	N 1 32.9	181 56.4	N12 49.1
	18	236 38.4	136 12.5	N20 12.4	126 27.9	N22 54.0	57 22.4	N 1 32.7	196 58.8	N12 49.1
	19	251 40.9	151 12.3	N20 12.4	141 28.6	N22 53.8	72 24.4	N 1 32.5	212 01.2	N12 49.1
	20	266 43.3	166 12.1	N20 12.4	156 29.3	N22 53.6	87 26.4	N 1 32.3	227 03.7	N12 49.1
	21	281 45.8	181 11.8	N20 12.4	171 30.0	N22 53.4	102 28.4	N 1 32.1	242 06.1	N12 49.1
	22	296 48.3	196 11.6	N20 12.4	186 30.7	N22 53.2	117 30.4	N 1 31.9	257 08.6	N12 49.1
	23	311 50.7	211 11.4	N20 12.4	201 31.4	N22 53.0	132 32.4	N 1 31.7	272 11.0	N12 49.1
18	0	326 53.2	226 11.2	N20 12.4	216 32.1	N22 52.8	147 34.5	N 1 31.5	287 13.4	N12 49.1
	1	341 55.7	241 11.0	N20 12.4	231 32.8	N22 52.6	162 36.5	N 1 31.3	302 15.9	N12 49.1
	2	356 58.1	256 10.8	N20 12.4	246 33.5	N22 52.4	177 38.5	N 1 31.1	317 18.3	N12 49.1
	3	12 00.6	271 10.6	N20 12.4	261 34.3	N22 52.2	192 40.5	N 1 30.9	332 20.8	N12 49.1
	4	27 03.1	286 10.3	N20 12.4	276 35.0	N22 52.0	207 42.5	N 1 30.7	347 23.2	N12 49.1
F	5	42 05.5	301 10.1	N20 12.3	291 35.7	N22 51.8	222 44.5	N 1 30.5	2 25.6	N12 49.1
R										
I	6	57 08.0	316 09.9	N20 12.3	306 36.4	N22 51.6	237 46.6	N 1 30.3	17 28.1	N12 49.1
D	7	72 10.5	331 09.7	N20 12.3	321 37.1	N22 51.4	252 48.6	N 1 30.1	32 30.5	N12 49.1
A	8	87 12.9	346 09.5	N20 12.3	336 37.8	N22 51.2	267 50.6	N 1 29.9	47 33.0	N12 49.0
Y	9	102 15.4	1 09.2	N20 12.3	351 38.5	N22 51.0	282 52.6	N 1 29.7	62 35.4	N12 49.0
	10	117 17.8	16 09.0	N20 12.3	6 39.2	N22 50.8	297 54.6	N 1 29.5	77 37.8	N12 49.0
	11	132 20.3	31 08.8	N20 12.3	21 40.0	N22 50.6	312 56.6	N 1 29.3	92 40.3	N12 49.0
	12	147 22.8	46 08.6	N20 12.2	36 40.7	N22 50.4	327 58.6	N 1 29.1	107 42.7	N12 49.0
	13	162 25.2	61 08.4	N20 12.2	51 41.4	N22 50.2	343 00.6	N 1 28.9	122 45.2	N12 49.0
	14	177 27.7	76 08.1	N20 12.2	66 42.1	N22 50.0	358 02.7	N 1 28.7	137 47.6	N12 49.0
	15	192 30.2	91 07.9	N20 12.2	81 42.8	N22 49.8	13 04.7	N 1 28.5	152 50.1	N12 49.0
	16	207 32.6	106 07.7	N20 12.2	96 43.5	N22 49.6	28 06.7	N 1 28.3	167 52.5	N12 49.0
	17	222 35.1	121 07.5	N20 12.1	111 44.2	N22 49.4	43 08.7	N 1 28.1	182 54.9	N12 49.0
	18	237 37.6	136 07.2	N20 12.1	126 45.0	N22 49.2	58 10.7	N 1 27.9	197 57.4	N12 49.0
	19	252 40.0	151 07.0	N20 12.1	141 45.7	N22 49.0	73 12.7	N 1 27.7	212 59.8	N12 49.0
	20	267 42.5	166 06.8	N20 12.1	156 46.4	N22 48.8	88 14.7	N 1 27.5	228 02.3	N12 49.0
	21	282 45.0	181 06.5	N20 12.0	171 47.1	N22 48.6	103 16.8	N 1 27.3	243 04.7	N12 49.0
	22	297 47.4	196 06.3	N20 12.0	186 47.8	N22 48.4	118 18.8	N 1 27.1	258 07.2	N12 49.0
	23	312 49.9	211 06.1	N20 12.0	201 48.5	N22 48.2	133 20.8	N 1 26.9	273 09.6	N12 49.0
			v -0.2	d 0.0	v 0.7	d 0.2	v 2.0	d 0.2	v 2.4	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	v '	MOON Dec ° '	d '	HP '
16	0	178 55.9	N13 37.9	241 46.6	6.0	N25 49.9	1.0	57.9
	1	193 56.0	N13 37.1	256 11.6	5.9	N25 48.7	1.2	57.9
	2	208 56.1	N13 36.3	270 36.5	5.9	N25 47.4	1.3	58.0
	3	223 56.3	N13 35.5	285 01.3	5.8	N25 45.9	1.5	58.0
	4	238 56.4	N13 34.7	299 26.1	5.8	N25 44.3	1.7	58.1
W	5	253 56.5	N13 33.9	313 50.9	5.8	N25 42.5	1.8	58.1
E								
D	6	268 56.7	N13 33.1	328 15.6	5.7	N25 40.5	2.0	58.1
N	7	283 56.8	N13 32.3	342 40.3	5.7	N25 38.3	2.1	58.2
E	8	298 56.9	N13 31.5	357 05.0	5.7	N25 36.0	2.3	58.2
S	9	313 57.1	N13 30.7	11 29.7	5.6	N25 33.6	2.5	58.3
D	10	328 57.2	N13 30.0	25 54.3	5.6	N25 30.9	2.6	58.3
A	11	343 57.3	N13 29.2	40 18.9	5.6	N25 28.1	2.8	58.3
Y								
	12	358 57.4	N13 28.4	54 43.5	5.6	N25 25.1	3.0	58.4
	13	13 57.6	N13 27.6	69 08.0	5.5	N25 22.0	3.1	58.4
	14	28 57.7	N13 26.8	83 32.5	5.5	N25 18.7	3.3	58.5
	15	43 57.8	N13 26.0	97 57.0	5.5	N25 15.2	3.5	58.5
	16	58 58.0	N13 25.2	112 21.5	5.5	N25 11.6	3.6	58.5
	17	73 58.1	N13 24.4	126 46.0	5.5	N25 07.8	3.8	58.6
	18	88 58.2	N13 23.6	141 10.5	5.5	N25 03.8	4.0	58.6
	19	103 58.4	N13 22.8	155 34.9	5.5	N24 59.7	4.1	58.7
	20	118 58.5	N13 22.0	169 59.4	5.4	N24 55.4	4.3	58.7
	21	133 58.6	N13 21.2	184 23.8	5.4	N24 50.9	4.5	58.7
	22	148 58.8	N13 20.4	198 48.2	5.4	N24 46.3	4.6	58.8
	23	163 58.9	N13 19.6	213 12.6	5.4	N24 41.5	4.8	58.8
17	0	178 59.0	N13 18.8	227 37.1	5.4	N24 36.5	5.0	58.9
	1	193 59.2	N13 18.0	242 01.5	5.4	N24 31.3	5.1	58.9
	2	208 59.3	N13 17.2	256 25.9	5.4	N24 26.0	5.3	58.9
	3	223 59.5	N13 16.4	270 50.3	5.4	N24 20.6	5.5	59.0
	4	238 59.6	N13 15.6	285 14.7	5.4	N24 14.9	5.6	59.0
T	5	253 59.7	N13 14.8	299 39.1	5.4	N24 09.1	5.8	59.0
H								
U	6	268 59.9	N13 14.0	314 03.6	5.4	N24 03.2	6.0	59.1
R	7	283 60.0	N13 13.1	328 28.0	5.4	N23 57.0	6.1	59.1
S	8	299 00.1	N13 12.3	342 52.4	5.4	N23 50.7	6.3	59.2
D	9	314 00.3	N13 11.5	357 16.9	5.5	N23 44.3	6.5	59.2
A	10	329 00.4	N13 10.7	11 41.4	5.5	N23 37.7	6.6	59.2
Y	11	344 00.5	N13 09.9	26 05.8	5.5	N23 30.9	6.8	59.3
	12	359 00.7	N13 09.1	40 30.3	5.5	N23 23.9	6.9	59.3
	13	14 00.8	N13 08.3	54 54.8	5.5	N23 16.8	7.1	59.4
	14	29 01.0	N13 07.5	69 19.4	5.5	N23 09.5	7.3	59.4
	15	44 01.1	N13 06.7	83 43.9	5.5	N23 02.1	7.4	59.4
	16	59 01.2	N13 05.9	98 08.5	5.6	N22 54.5	7.6	59.5
	17	74 01.4	N13 05.1	112 33.1	5.6	N22 46.7	7.8	59.5
	18	89 01.5	N13 04.3	126 57.7	5.6	N22 38.8	7.9	59.5
	19	104 01.6	N13 03.5	141 22.3	5.6	N22 30.8	8.1	59.6
	20	119 01.8	N13 02.7	155 47.0	5.7	N22 22.5	8.2	59.6
	21	134 01.9	N13 01.9	170 11.7	5.7	N22 14.1	8.4	59.6
	22	149 02.1	N13 01.0	184 36.4	5.7	N22 05.6	8.5	59.7
	23	164 02.2	N13 00.2	199 01.1	5.7	N21 56.9	8.7	59.7
18	0	179 02.3	N12 59.4	213 25.9	5.8	N21 48.1	8.8	59.8
	1	194 02.5	N12 58.6	227 50.7	5.8	N21 39.1	9.0	59.8
	2	209 02.6	N12 57.8	242 15.6	5.8	N21 29.9	9.2	59.8
	3	224 02.8	N12 57.0	256 40.4	5.9	N21 20.6	9.3	59.9
	4	239 02.9	N12 56.2	271 05.4	5.9	N21 11.1	9.5	59.9
F	5	254 03.0	N12 55.4	285 30.3	5.9	N21 01.5	9.6	59.9
R								
I	6	269 03.2	N12 54.6	299 55.3	6.0	N20 51.8	9.8	60.0
D	7	284 03.3	N12 53.8	314 20.3	6.0	N20 41.9	9.9	60.0
A	8	299 03.5	N12 52.9	328 45.4	6.1	N20 31.8	10.0	60.0
Y	9	314 03.6	N12 52.1	343 10.5	6.1	N20 21.6	10.2	60.1
	10	329 03.7	N12 51.3	357 35.6	6.1	N20 11.3	10.3	60.1
	11	344 03.9	N12 50.5	12 00.8	6.2	N20 00.8	10.5	60.1
	12	359 04.0	N12 49.7	26 26.0	6.2	N19 50.2	10.6	60.1
	13	14 04.2	N12 48.9	40 51.3	6.3	N19 39.4	10.8	60.2
	14	29 04.3	N12 48.1	55 16.6	6.3	N19 28.5	10.9	60.2
	15	44 04.5	N12 47.2	69 41.9	6.4	N19 17.5	11.0	60.2
	16	59 04.6	N12 46.4	84 07.3	6.4	N19 06.3	11.2	60.3
	17	74 04.7	N12 45.6	98 32.8	6.4	N18 55.0	11.3	60.3
	18	89 04.9	N12 44.8	112 58.3	6.5	N18 43.6	11.4	60.3
	19	104 05.0	N12 44.0	127 23.8	6.5	N18 32.0	11.6	60.4
	20	119 05.2	N12 43.2	141 49.4	6.6	N18 20.3	11.7	60.4
	21	134 05.3	N12 42.3	156 15.0	6.6	N18 08.5	11.8	60.4
	22	149 05.5	N12 41.5	170 40.7	6.7	N17 56.5	12.0	60.4
	23	164 05.6	N12 40.7	185 06.4	6.7	N17 44.4	12.1	60.5
		S.D. 15.8	d 0.8	S.D. 15.9		16.2		16.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.5	S40 11.0
Achernar	335 17.8	S57 05.1
Acrux	172 57.2	S63 15.7
Adhara	255 03.8	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.3	N16 34.0
Alioth	166 10.8	N55 48.5
Alkaid	152 49.9	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.9	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.2	N26 37.3
Alpheratz	357 31.4	N29 15.1
Altair	61 56.8	N 8 56.8
Ankaa	353 03.9	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.5	S69 05.0
Avior	234 14.1	S59 36.0
Bellatrix	278 19.9	N 6 22.6
Betelgeuse	270 49.1	N 7 24.8
Canopus	263 51.4	S52 42.4
Capella	280 17.7	N46 01.4
Castor	245 53.6	N31 49.5
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.8
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.3	N28 37.8
Eltanin	90 40.5	N51 29.3
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.7	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.0	S60 30.9
Hamal	327 47.7	N23 36.0
Kaus Austr.	83 28.3	S34 22.3
Kochab	137 20.4	N74 02.5
Markab	13 26.6	N15 21.7
Menkar	314 03.0	N 4 12.3
Menkent	147 54.3	S36 30.9
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 24.0	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 14.9	N89 22.2
Pollux	243 14.0	N27 57.3
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.2	S 8 10.0
Rigil Kent	139 36.4	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.2	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.9
Zuben-ubi	136 53.7	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
19	0	327 52.3	226 05.9	N20 12.0	216 49.2	N22 48.0	148 22.8	N 1 26.7	288 12.0	N12 49.0
	1	342 54.8	241 05.6	N20 11.9	231 50.0	N22 47.8	163 24.8	N 1 26.5	303 14.5	N12 49.0
	2	357 57.3	256 05.4	N20 11.9	246 50.7	N22 47.6	178 26.8	N 1 26.3	318 16.9	N12 49.0
	3	12 59.7	271 05.2	N20 11.9	261 51.4	N22 47.3	193 28.8	N 1 26.1	333 19.4	N12 49.0
	4	28 02.2	286 04.9	N20 11.9	276 52.1	N22 47.1	208 30.8	N 1 25.9	348 21.8	N12 49.0
S	5	43 04.7	301 04.7	N20 11.8	291 52.8	N22 46.9	223 32.9	N 1 25.7	3 24.3	N12 49.0
A										
T	6	58 07.1	316 04.5	N20 11.8	306 53.5	N22 46.7	238 34.9	N 1 25.5	18 26.7	N12 49.0
U	7	73 09.6	331 04.2	N20 11.8	321 54.3	N22 46.5	253 36.9	N 1 25.3	33 29.2	N12 49.0
R	8	88 12.1	346 04.0	N20 11.7	336 55.0	N22 46.3	268 38.9	N 1 25.2	48 31.6	N12 48.9
D	9	103 14.5	1 03.8	N20 11.7	351 55.7	N22 46.1	283 40.9	N 1 25.0	63 34.0	N12 48.9
A	10	118 17.0	16 03.5	N20 11.7	6 56.4	N22 45.9	298 42.9	N 1 24.8	78 36.5	N12 48.9
Y	11	133 19.4	31 03.3	N20 11.6	21 57.1	N22 45.7	313 44.9	N 1 24.6	93 38.9	N12 48.9
	12	148 21.9	46 03.0	N20 11.6	36 57.8	N22 45.5	328 46.9	N 1 24.4	108 41.4	N12 48.9
	13	163 24.4	61 02.8	N20 11.6	51 58.6	N22 45.3	343 48.9	N 1 24.2	123 43.8	N12 48.9
	14	178 26.8	76 02.6	N20 11.5	66 59.3	N22 45.1	358 51.0	N 1 24.0	138 46.3	N12 48.9
	15	193 29.3	91 02.3	N20 11.5	81 60.0	N22 44.9	13 53.0	N 1 23.8	153 48.7	N12 48.9
	16	208 31.8	106 02.1	N20 11.4	97 00.7	N22 44.6	28 55.0	N 1 23.6	168 51.2	N12 48.9
	17	223 34.2	121 01.8	N20 11.4	112 01.4	N22 44.4	43 57.0	N 1 23.4	183 53.6	N12 48.9
	18	238 36.7	136 01.6	N20 11.4	127 02.2	N22 44.2	58 59.0	N 1 23.2	198 56.1	N12 48.9
	19	253 39.2	151 01.4	N20 11.3	142 02.9	N22 44.0	74 01.0	N 1 23.0	213 58.5	N12 48.9
	20	268 41.6	166 01.1	N20 11.3	157 03.6	N22 43.8	89 03.0	N 1 22.8	229 01.0	N12 48.9
	21	283 44.1	181 00.9	N20 11.2	172 04.3	N22 43.6	104 05.0	N 1 22.6	244 03.4	N12 48.9
	22	298 46.6	196 00.6	N20 11.2	187 05.0	N22 43.4	119 07.0	N 1 22.4	259 05.8	N12 48.9
	23	313 49.0	211 00.4	N20 11.1	202 05.8	N22 43.2	134 09.1	N 1 22.2	274 08.3	N12 48.9
20	0	328 51.5	226 00.1	N20 11.1	217 06.5	N22 43.0	149 11.1	N 1 22.0	289 10.7	N12 48.9
	1	343 53.9	240 59.9	N20 11.1	232 07.2	N22 42.7	164 13.1	N 1 21.8	304 13.2	N12 48.9
	2	358 56.4	255 59.7	N20 11.0	247 07.9	N22 42.5	179 15.1	N 1 21.6	319 15.6	N12 48.8
	3	13 58.9	270 59.4	N20 11.0	262 08.6	N22 42.3	194 17.1	N 1 21.4	334 18.1	N12 48.8
	4	29 01.3	285 59.2	N20 10.9	277 09.4	N22 42.1	209 19.1	N 1 21.2	349 20.5	N12 48.8
S	5	44 03.8	300 58.9	N20 10.9	292 10.1	N22 41.9	224 21.1	N 1 21.0	4 23.0	N12 48.8
U										
N	6	59 06.3	315 58.7	N20 10.8	307 10.8	N22 41.7	239 23.1	N 1 20.8	19 25.4	N12 48.8
D	7	74 08.7	330 58.4	N20 10.8	322 11.5	N22 41.5	254 25.1	N 1 20.6	34 27.9	N12 48.8
A	8	89 11.2	345 58.2	N20 10.7	337 12.2	N22 41.3	269 27.2	N 1 20.4	49 30.3	N12 48.8
Y	9	104 13.7	0 57.9	N20 10.7	352 13.0	N22 41.0	284 29.2	N 1 20.2	64 32.8	N12 48.8
	10	119 16.1	15 57.7	N20 10.6	7 13.7	N22 40.8	299 31.2	N 1 19.9	79 35.2	N12 48.8
	11	134 18.6	30 57.4	N20 10.6	22 14.4	N22 40.6	314 33.2	N 1 19.7	94 37.7	N12 48.8
	12	149 21.1	45 57.2	N20 10.5	37 15.1	N22 40.4	329 35.2	N 1 19.5	109 40.1	N12 48.8
	13	164 23.5	60 56.9	N20 10.5	52 15.9	N22 40.2	344 37.2	N 1 19.3	124 42.6	N12 48.8
	14	179 26.0	75 56.7	N20 10.4	67 16.6	N22 40.0	359 39.2	N 1 19.1	139 45.0	N12 48.8
	15	194 28.4	90 56.4	N20 10.3	82 17.3	N22 39.7	14 41.2	N 1 18.9	154 47.5	N12 48.8
	16	209 30.9	105 56.2	N20 10.3	97 18.0	N22 39.5	29 43.2	N 1 18.7	169 49.9	N12 48.8
	17	224 33.4	120 55.9	N20 10.2	112 18.7	N22 39.3	44 45.2	N 1 18.5	184 52.4	N12 48.8
	18	239 35.8	135 55.6	N20 10.2	127 19.5	N22 39.1	59 47.2	N 1 18.3	199 54.8	N12 48.7
	19	254 38.3	150 55.4	N20 10.1	142 20.2	N22 38.9	74 49.3	N 1 18.1	214 57.3	N12 48.7
	20	269 40.8	165 55.1	N20 10.0	157 20.9	N22 38.7	89 51.3	N 1 17.9	229 59.7	N12 48.7
	21	284 43.2	180 54.9	N20 10.0	172 21.6	N22 38.4	104 53.3	N 1 17.7	245 02.2	N12 48.7
	22	299 45.7	195 54.6	N20 09.9	187 22.4	N22 38.2	119 55.3	N 1 17.5	260 04.6	N12 48.7
	23	314 48.2	210 54.4	N20 09.9	202 23.1	N22 38.0	134 57.3	N 1 17.3	275 07.1	N12 48.7
21	0	329 50.6	225 54.1	N20 09.8	217 23.8	N22 37.8	149 59.3	N 1 17.1	290 09.6	N12 48.7
	1	344 53.1	240 53.8	N20 09.7	232 24.5	N22 37.6	165 01.3	N 1 16.9	305 12.0	N12 48.7
	2	359 55.5	255 53.6	N20 09.7	247 25.3	N22 37.4	180 03.3	N 1 16.7	320 14.5	N12 48.7
	3	14 58.0	270 53.3	N20 09.6	262 26.0	N22 37.1	195 05.3	N 1 16.5	335 16.9	N12 48.7
	4	30 00.5	285 53.1	N20 09.5	277 26.7	N22 36.9	210 07.3	N 1 16.3	350 19.4	N12 48.7
M	5	45 02.9	300 52.8	N20 09.5	292 27.4	N22 36.7	225 09.3	N 1 16.1	5 21.8	N12 48.7
O										
N	6	60 05.4	315 52.5	N20 09.4	307 28.2	N22 36.5	240 11.3	N 1 15.9	20 24.3	N12 48.7
D	7	75 07.9	330 52.3	N20 09.3	322 28.9	N22 36.2	255 13.4	N 1 15.7	35 26.7	N12 48.7
A	8	90 10.3	345 52.0	N20 09.3	337 29.6	N22 36.0	270 15.4	N 1 15.5	50 29.2	N12 48.6
Y	9	105 12.8	0 51.7	N20 09.2	352 30.3	N22 35.8	285 17.4	N 1 15.3	65 31.6	N12 48.6
	10	120 15.3	15 51.5	N20 09.1	7 31.1	N22 35.6	300 19.4	N 1 15.1	80 34.1	N12 48.6
	11	135 17.7	30 51.2	N20 09.1	22 31.8	N22 35.4	315 21.4	N 1 14.9	95 36.5	N12 48.6
	12	150 20.2	45 51.0	N20 09.0	37 32.5	N22 35.1	330 23.4	N 1 14.7	110 39.0	N12 48.6
	13	165 22.7	60 50.7	N20 08.9	52 33.3	N22 34.9	345 25.4	N 1 14.5	125 41.4	N12 48.6
	14	180 25.1	75 50.4	N20 08.8	67 34.0	N22 34.7	0 27.4	N 1 14.3	140 43.9	N12 48.6
	15	195 27.6	90 50.2	N20 08.8	82 34.7	N22 34.5	15 29.4	N 1 14.1	155 46.4	N12 48.6
	16	210 30.0	105 49.9	N20 08.7	97 35.4	N22 34.2	30 31.4	N 1 13.9	170 48.8	N12 48.6
	17	225 32.5	120 49.6	N20 08.6	112 36.2	N22 34.0	45 33.4	N 1 13.7	185 51.3	N12 48.6
	18	240 35.0	135 49.3	N20 08.5	127 36.9	N22 33.8	60 35.4	N 1 13.5	200 53.7	N12 48.6
	19	255 37.4	150 49.1	N20 08.4	142 37.6	N22 33.6	75 37.4	N 1 13.3	215 56.2	N12 48.6
	20	270 39.9	165 48.8	N20 08.4	157 38.4	N22 33.4	90 39.5	N 1 13.1	230 58.6	N12 48.5
	21	285 42.4	180 48.5	N20 08.3	172 39.1	N22 33.1	105 41.5	N 1 12.9	246 01.1	N12 48.5
	22	300 44.8	195 48.3	N20 08.2	187 39.8	N22 32.9	120 43.5	N 1 12.7	261 03.5	N12 48.5
	23	315 47.3	210 48.0	N20 08.1	202 40.5	N22 32.7	135 45.5	N 1 12.5	276 06.0	N12 48.5
			v -0.3	d 0.1	v 0.7	d 0.2	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
19	0	179 05.8	N12 39.9	199 32.2	6.8	N17 32.2	12.2	60.5
	1	194 05.9	N12 39.1	213 58.0	6.8	N17 19.9	12.3	60.5
	2	209 06.0	N12 38.2	228 23.8	6.9	N17 07.4	12.5	60.6
	3	224 06.2	N12 37.4	242 49.8	6.9	N16 54.8	12.6	60.6
	4	239 06.3	N12 36.6	257 15.7	7.0	N16 42.1	12.7	60.6
S	5	254 06.5	N12 35.8	271 41.7	7.0	N16 29.3	12.8	60.6
A								
T	6	269 06.6	N12 35.0	286 07.8	7.1	N16 16.4	12.9	60.7
U	7	284 06.8	N12 34.1	300 33.9	7.1	N16 03.3	13.0	60.7
R	8	299 06.9	N12 33.3	315 00.1	7.2	N15 50.2	13.2	60.7
D	9	314 07.1	N12 32.5	329 26.3	7.2	N15 36.9	13.3	60.7
A	10	329 07.2	N12 31.7	343 52.5	7.3	N15 23.5	13.4	60.7
Y	11	344 07.4	N12 30.9	358 18.9	7.3	N15 10.0	13.5	60.8
	12	359 07.5	N12 30.0	12 45.2	7.4	N14 56.4	13.6	60.8
	13	14 07.6	N12 29.2	27 11.6	7.4	N14 42.7	13.7	60.8
	14	29 07.8	N12 28.4	41 38.1	7.5	N14 28.9	13.8	60.8
	15	44 07.9	N12 27.6	56 04.6	7.5	N14 15.0	13.9	60.9
	16	59 08.1	N12 26.7	70 31.2	7.6	N14 01.0	14.0	60.9
	17	74 08.2	N12 25.9	84 57.8	7.6	N13 47.0	14.1	60.9
	18	89 08.4	N12 25.1	99 24.4	7.7	N13 32.8	14.2	60.9
	19	104 08.5	N12 24.3	113 51.1	7.7	N13 18.5	14.3	60.9
	20	119 08.7	N12 23.4	128 17.9	7.8	N13 04.1	14.4	60.9
	21	134 08.8	N12 22.6	142 44.7	7.8	N12 49.6	14.5	61.0
	22	149 09.0	N12 21.8	157 11.5	7.9	N12 35.1	14.6	61.0
	23	164 09.1	N12 21.0	171 38.4	7.9	N12 20.4	14.6	61.0
20	0	179 09.3	N12 20.1	186 05.4	7.9	N12 05.7	14.7	61.0
	1	194 09.4	N12 19.3	200 32.4	8.0	N11 50.9	14.8	61.0
	2	209 09.6	N12 18.5	214 59.4	8.0	N11 36.0	14.9	61.0
	3	224 09.7	N12 17.7	229 26.5	8.1	N11 21.0	15.0	61.1
	4	239 09.9	N12 16.8	243 53.6	8.1	N11 06.0	15.0	61.1
S	5	254 10.0	N12 16.0	258 20.8	8.2	N10 50.9	15.1	61.1
U								
N	6	269 10.2	N12 15.2	272 48.0	8.2	N10 35.7	15.2	61.1
D	7	284 10.3	N12 14.3	287 15.3	8.3	N10 20.4	15.3	61.1
A	8	299 10.5	N12 13.5	301 42.6	8.3	N10 05.1	15.3	61.1
Y	9	314 10.6	N12 12.7	316 09.9	8.3	N 9 49.7	15.4	61.1
	10	329 10.8	N12 11.9	330 37.3	8.4	N 9 34.2	15.5	61.1
	11	344 10.9	N12 11.0	345 04.8	8.4	N 9 18.7	15.5	61.2
	12	359 11.1	N12 10.2	359 32.2	8.5	N 9 03.1	15.6	61.2
	13	14 11.2	N12 09.4	13 59.7	8.5	N 8 47.4	15.7	61.2
	14	29 11.4	N12 08.5	28 27.3	8.6	N 8 31.7	15.7	61.2
	15	44 11.5	N12 07.7	42 54.9	8.6	N 8 16.0	15.8	61.2
	16	59 11.7	N12 06.9	57 22.5	8.6	N 8 00.2	15.8	61.2
	17	74 11.9	N12 06.0	71 50.2	8.7	N 7 44.3	15.9	61.2
	18	89 12.0	N12 05.2	86 17.9	8.7	N 7 28.4	15.9	61.2
	19	104 12.2	N12 04.4	100 45.6	8.7	N 7 12.4	16.0	61.2
	20	119 12.3	N12 03.5	115 13.4	8.8	N 6 56.4	16.0	61.2
	21	134 12.5	N12 02.7	129 41.2	8.8	N 6 40.3	16.1	61.2
	22	149 12.6	N12 01.9	144 09.0	8.8	N 6 24.2	16.1	61.2
	23	164 12.8	N12 01.0	158 36.9	8.9	N 6 08.1	16.1	61.2
21	0	179 12.9	N12 00.2	173 04.8	8.9	N 5 51.9	16.2	61.2
	1	194 13.1	N11 59.4	187 32.8	8.9	N 5 35.7	16.2	61.2
	2	209 13.2	N11 58.5	202 00.7	9.0	N 5 19.5	16.2	61.2
	3	224 13.4	N11 57.7	216 28.7	9.0	N 5 03.2	16.3	61.2
	4	239 13.6	N11 56.9	230 56.8	9.0	N 4 46.9	16.3	61.2
M	5	254 13.7	N11 56.0	245 24.8	9.1	N 4 30.5	16.3	61.2
O								
N	6	269 13.9	N11 55.2	259 52.9	9.1	N 4 14.2	16.4	61.2
D	7	284 14.0	N11 54.3	274 21.0	9.1	N 3 57.8	16.4	61.2
A	8	299 14.2	N11 53.5	288 49.1	9.1	N 3 41.4	16.4	61.2
Y	9	314 14.3	N11 52.7	303 17.3	9.2	N 3 24.9	16.4	61.2
	10	329 14.5	N11 51.8	317 45.5	9.2	N 3 08.5	16.4	61.2
	11	344 14.6	N11 51.0	332 13.7	9.2	N 2 52.0	16.5	61.2
	12	359 14.8	N11 50.2	346 41.9	9.2	N 2 35.5	16.5	61.2
	13	14 15.0	N11 49.3	1 10.1	9.2	N 2 19.1	16.5	61.2
	14	29 15.1	N11 48.5	15 38.4	9.3	N 2 02.6	16.5	61.2
	15	44 15.3	N11 47.6	30 06.7	9.3	N 1 46.0	16.5	61.2
	16	59 15.4	N11 46.8	44 35.0	9.3	N 1 29.5	16.5	61.2
	17	74 15.6	N11 46.0	59 03.3	9.3	N 1 13.0	16.5	61.2
	18	89 15.7	N11 45.1	73 31.7	9.3	N 0 56.5	16.5	61.2
	19	104 15.9	N11 44.3	88 00.0	9.4	N 0 40.0	16.5	61.2
	20	119 16.1	N11 43.4	102 28.4	9.4	N 0 23.4	16.5	61.2
	21	134 16.2	N11 42.6	116 56.8	9.4	N 0 06.9	16.5	61.2
	22	149 16.4	N11 41.8	131 25.1	9.4	S 0 09.6	16.5	61.1
	23	164 16.5	N11 40.9	145 53.5	9.4	S 0 26.1	16.5	61.1
		S.D. 15.8	d 0.8	S.D. 16.6		16.7	16.7	

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.4	S40 11.0
Achernar	335 17.7	S57 05.1
Acrux	172 57.2	S63 15.7
Adhara	255 03.8	S29 00.5
Albireo	67 01.3	N28 01.4
Aldebaran	290 36.3	N16 34.0
Alioth	166 10.8	N55 48.5
Alkaid	152 50.0	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.8	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.3	N26 37.3
Alpheratz	357 31.4	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.9	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.3	N19 02.1
Atria	107 03.6	S69 05.0
Avior	234 14.0	S59 36.0
Bellatrix	278 19.8	N 6 22.6
Betelgeuse	270 49.0	N 7 24.8
Canopus	263 51.4	S52 42.4
Capella	280 17.7	N46 01.4
Castor	245 53.6	N31 49.5
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.8
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.3	N28 37.8
Eltanin	90 40.5	N51 29.4
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.7	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.1	S60 30.9
Hamal	327 47.7	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.5	N74 02.5
Markab	13 26.6	N15 21.7
Menkar	314 03.0	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 24.0	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 13.7	N89 22.2
Pollux	243 14.0	N27 57.3
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.1	S 8 10.0
Rigil Kent	139 36.5	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.1	N56 41.6
Shaula	96 06.1	S37 07.5
Sirius	258 23.9	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.5	S43 32.9
Vega	80 30.9	N38 48.9
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
22	0	330 49.8	225 47.7	N20 08.0	217 41.3	N22 32.5	150 47.5	N 1 12.3	291 08.5	N12 48.5
	1	345 52.2	240 47.4	N20 08.0	232 42.0	N22 32.2	165 49.5	N 1 12.1	306 10.9	N12 48.5
	2	0 54.7	255 47.2	N20 07.9	247 42.7	N22 32.0	180 51.5	N 1 11.9	321 13.4	N12 48.5
	3	15 57.1	270 46.9	N20 07.8	262 43.5	N22 31.8	195 53.5	N 1 11.7	336 15.8	N12 48.5
	4	30 59.6	285 46.6	N20 07.7	277 44.2	N22 31.5	210 55.5	N 1 11.5	351 18.3	N12 48.5
T	5	46 02.1	300 46.4	N20 07.6	292 44.9	N22 31.3	225 57.5	N 1 11.3	6 20.7	N12 48.5
U										
E	6	61 04.5	315 46.1	N20 07.5	307 45.7	N22 31.1	240 59.5	N 1 11.1	21 23.2	N12 48.5
S	7	76 07.0	330 45.8	N20 07.4	322 46.4	N22 30.9	256 01.5	N 1 10.9	36 25.7	N12 48.5
D	8	91 09.5	345 45.5	N20 07.4	337 47.1	N22 30.6	271 03.5	N 1 10.7	51 28.1	N12 48.4
A	9	106 11.9	0 45.3	N20 07.3	352 47.8	N22 30.4	286 05.5	N 1 10.5	66 30.6	N12 48.4
Y	10	121 14.4	15 45.0	N20 07.2	7 48.6	N22 30.2	301 07.5	N 1 10.3	81 33.0	N12 48.4
	11	136 16.9	30 44.7	N20 07.1	22 49.3	N22 30.0	316 09.5	N 1 10.1	96 35.5	N12 48.4
	12	151 19.3	45 44.4	N20 07.0	37 50.0	N22 29.7	331 11.6	N 1 09.9	111 38.0	N12 48.4
	13	166 21.8	60 44.1	N20 06.9	52 50.8	N22 29.5	346 13.6	N 1 09.7	126 40.4	N12 48.4
	14	181 24.3	75 43.9	N20 06.8	67 51.5	N22 29.3	1 15.6	N 1 09.5	141 42.9	N12 48.4
	15	196 26.7	90 43.6	N20 06.7	82 52.2	N22 29.0	16 17.6	N 1 09.3	156 45.3	N12 48.4
	16	211 29.2	105 43.3	N20 06.6	97 53.0	N22 28.8	31 19.6	N 1 09.1	171 47.8	N12 48.4
	17	226 31.6	120 43.0	N20 06.5	112 53.7	N22 28.6	46 21.6	N 1 08.9	186 50.3	N12 48.4
	18	241 34.1	135 42.7	N20 06.4	127 54.4	N22 28.3	61 23.6	N 1 08.7	201 52.7	N12 48.4
	19	256 36.6	150 42.5	N20 06.3	142 55.2	N22 28.1	76 25.6	N 1 08.5	216 55.2	N12 48.3
	20	271 39.0	165 42.2	N20 06.2	157 55.9	N22 27.9	91 27.6	N 1 08.3	231 57.6	N12 48.3
	21	286 41.5	180 41.9	N20 06.1	172 56.6	N22 27.6	106 29.6	N 1 08.1	247 00.1	N12 48.3
	22	301 44.0	195 41.6	N20 06.0	187 57.4	N22 27.4	121 31.6	N 1 07.9	262 02.6	N12 48.3
	23	316 46.4	210 41.3	N20 05.9	202 58.1	N22 27.2	136 33.6	N 1 07.7	277 05.0	N12 48.3
23	0	331 48.9	225 41.0	N20 05.8	217 58.8	N22 27.0	151 35.6	N 1 07.5	292 07.5	N12 48.3
	1	346 51.4	240 40.8	N20 05.7	232 59.6	N22 26.7	166 37.6	N 1 07.3	307 09.9	N12 48.3
	2	1 53.8	255 40.5	N20 05.6	248 00.3	N22 26.5	181 39.6	N 1 07.1	322 12.4	N12 48.3
	3	16 56.3	270 40.2	N20 05.5	263 01.0	N22 26.3	196 41.6	N 1 06.9	337 14.9	N12 48.3
	4	31 58.8	285 39.9	N20 05.4	278 01.8	N22 26.0	211 43.6	N 1 06.7	352 17.3	N12 48.3
W	5	47 01.2	300 39.6	N20 05.3	293 02.5	N22 25.8	226 45.6	N 1 06.5	7 19.8	N12 48.2
E										
D	6	62 03.7	315 39.3	N20 05.2	308 03.3	N22 25.6	241 47.6	N 1 06.2	22 22.2	N12 48.2
N	7	77 06.1	330 39.0	N20 05.1	323 04.0	N22 25.3	256 49.6	N 1 06.0	37 24.7	N12 48.2
E	8	92 08.6	345 38.7	N20 05.0	338 04.7	N22 25.1	271 51.6	N 1 05.8	52 27.2	N12 48.2
S	9	107 11.1	0 38.5	N20 04.9	353 05.5	N22 24.8	286 53.7	N 1 05.6	67 29.6	N12 48.2
D	10	122 13.5	15 38.2	N20 04.8	8 06.2	N22 24.6	301 55.7	N 1 05.4	82 32.1	N12 48.2
A	11	137 16.0	30 37.9	N20 04.7	23 06.9	N22 24.4	316 57.7	N 1 05.2	97 34.6	N12 48.2
Y										
	12	152 18.5	45 37.6	N20 04.6	38 07.7	N22 24.1	331 59.7	N 1 05.0	112 37.0	N12 48.2
	13	167 20.9	60 37.3	N20 04.4	53 08.4	N22 23.9	347 01.7	N 1 04.8	127 39.5	N12 48.2
	14	182 23.4	75 37.0	N20 04.3	68 09.1	N22 23.7	2 03.7	N 1 04.6	142 42.0	N12 48.2
	15	197 25.9	90 36.7	N20 04.2	83 09.9	N22 23.4	17 05.7	N 1 04.4	157 44.4	N12 48.1
	16	212 28.3	105 36.4	N20 04.1	98 10.6	N22 23.2	32 07.7	N 1 04.2	172 46.9	N12 48.1
	17	227 30.8	120 36.1	N20 04.0	113 11.4	N22 23.0	47 09.7	N 1 04.0	187 49.3	N12 48.1
	18	242 33.2	135 35.8	N20 03.9	128 12.1	N22 22.7	62 11.7	N 1 03.8	202 51.8	N12 48.1
	19	257 35.7	150 35.5	N20 03.8	143 12.8	N22 22.5	77 13.7	N 1 03.6	217 54.3	N12 48.1
	20	272 38.2	165 35.2	N20 03.6	158 13.6	N22 22.2	92 15.7	N 1 03.4	232 56.7	N12 48.1
	21	287 40.6	180 34.9	N20 03.5	173 14.3	N22 22.0	107 17.7	N 1 03.2	247 59.2	N12 48.1
	22	302 43.1	195 34.7	N20 03.4	188 15.1	N22 21.8	122 19.7	N 1 03.0	263 01.7	N12 48.1
	23	317 45.6	210 34.4	N20 03.3	203 15.8	N22 21.5	137 21.7	N 1 02.8	278 04.1	N12 48.1
24	0	332 48.0	225 34.1	N20 03.2	218 16.5	N22 21.3	152 23.7	N 1 02.6	293 06.6	N12 48.0
	1	347 50.5	240 33.8	N20 03.0	233 17.3	N22 21.1	167 25.7	N 1 02.4	308 09.1	N12 48.0
	2	2 53.0	255 33.5	N20 02.9	248 18.0	N22 20.8	182 27.7	N 1 02.2	323 11.5	N12 48.0
	3	17 55.4	270 33.2	N20 02.8	263 18.8	N22 20.6	197 29.7	N 1 02.0	338 14.0	N12 48.0
	4	32 57.9	285 32.9	N20 02.7	278 19.5	N22 20.3	212 31.7	N 1 01.8	353 16.5	N12 48.0
T	5	48 00.4	300 32.6	N20 02.5	293 20.2	N22 20.1	227 33.7	N 1 01.6	8 18.9	N12 48.0
H										
U	6	63 02.8	315 32.3	N20 02.4	308 21.0	N22 19.9	242 35.7	N 1 01.4	23 21.4	N12 48.0
R	7	78 05.3	330 32.0	N20 02.3	323 21.7	N22 19.6	257 37.7	N 1 01.2	38 23.9	N12 48.0
S	8	93 07.7	345 31.7	N20 02.2	338 22.5	N22 19.4	272 39.7	N 1 01.0	53 26.3	N12 48.0
D	9	108 10.2	0 31.4	N20 02.0	353 23.2	N22 19.1	287 41.7	N 1 00.8	68 28.8	N12 47.9
A	10	123 12.7	15 31.1	N20 01.9	8 23.9	N22 18.9	302 43.7	N 1 00.6	83 31.3	N12 47.9
Y	11	138 15.1	30 30.8	N20 01.8	23 24.7	N22 18.6	317 45.7	N 1 00.4	98 33.7	N12 47.9
	12	153 17.6	45 30.5	N20 01.7	38 25.4	N22 18.4	332 47.7	N 1 00.2	113 36.2	N12 47.9
	13	168 20.1	60 30.2	N20 01.5	53 26.2	N22 18.2	347 49.7	N 0 60.0	128 38.7	N12 47.9
	14	183 22.5	75 29.9	N20 01.4	68 26.9	N22 17.9	2 51.7	N 0 59.8	143 41.1	N12 47.9
	15	198 25.0	90 29.6	N20 01.3	83 27.6	N22 17.7	17 53.7	N 0 59.5	158 43.6	N12 47.9
	16	213 27.5	105 29.3	N20 01.1	98 28.4	N22 17.4	32 55.7	N 0 59.3	173 46.1	N12 47.9
	17	228 29.9	120 28.9	N20 01.0	113 29.1	N22 17.2	47 57.7	N 0 59.1	188 48.5	N12 47.8
	18	243 32.4	135 28.6	N20 00.9	128 29.9	N22 16.9	62 59.7	N 0 58.9	203 51.0	N12 47.8
	19	258 34.8	150 28.3	N20 00.7	143 30.6	N22 16.7	78 01.7	N 0 58.7	218 53.5	N12 47.8
	20	273 37.3	165 28.0	N20 00.6	158 31.4	N22 16.5	93 03.7	N 0 58.5	233 55.9	N12 47.8
	21	288 39.8	180 27.7	N20 00.4	173 32.1	N22 16.2	108 05.7	N 0 58.3	248 58.4	N12 47.8
	22	303 42.2	195 27.4	N20 00.3	188 32.9	N22 16.0	123 07.8	N 0 58.1	264 00.9	N12 47.8
	23	318 44.7	210 27.1	N20 00.2	203 33.6	N22 15.7	138 09.8	N 0 57.9	279 03.3	N12 47.8
			v -0.3	d 0.1	v 0.7	d 0.2	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
22	0	179 16.7	N11 40.1	160 22.0	9.4	S 0 42.6	16.5	61.1
	1	194 16.9	N11 39.2	174 50.4	9.4	S 0 59.1	16.5	61.1
	2	209 17.0	N11 38.4	189 18.8	9.4	S 1 15.6	16.5	61.1
	3	224 17.2	N11 37.5	203 47.3	9.4	S 1 32.0	16.5	61.1
	4	239 17.3	N11 36.7	218 15.7	9.4	S 1 48.5	16.4	61.1
T	5	254 17.5	N11 35.9	232 44.1	9.5	S 2 04.9	16.4	61.1
U								
E	6	269 17.7	N11 35.0	247 12.6	9.5	S 2 21.3	16.4	61.1
S	7	284 17.8	N11 34.2	261 41.1	9.5	S 2 37.7	16.4	61.0
D	8	299 18.0	N11 33.3	276 09.5	9.5	S 2 54.0	16.4	61.0
A	9	314 18.1	N11 32.5	290 38.0	9.5	S 3 10.4	16.3	61.0
Y	10	329 18.3	N11 31.6	305 06.4	9.5	S 3 26.7	16.3	61.0
	11	344 18.5	N11 30.8	319 34.9	9.5	S 3 42.9	16.3	61.0
	12	359 18.6	N11 29.9	334 03.4	9.5	S 3 59.2	16.2	61.0
	13	14 18.8	N11 29.1	348 31.8	9.5	S 4 15.4	16.2	60.9
	14	29 18.9	N11 28.2	3 00.3	9.5	S 4 31.6	16.2	60.9
	15	44 19.1	N11 27.4	17 28.8	9.5	S 4 47.7	16.1	60.9
	16	59 19.3	N11 26.5	31 57.2	9.5	S 5 03.8	16.1	60.9
	17	74 19.4	N11 25.7	46 25.6	9.4	S 5 19.8	16.1	60.9
	18	89 19.6	N11 24.9	60 54.1	9.4	S 5 35.9	16.0	60.9
	19	104 19.8	N11 24.0	75 22.5	9.4	S 5 51.8	16.0	60.8
	20	119 19.9	N11 23.2	89 50.9	9.4	S 6 07.8	15.9	60.8
	21	134 20.1	N11 22.3	104 19.4	9.4	S 6 23.6	15.9	60.8
	22	149 20.2	N11 21.5	118 47.8	9.4	S 6 39.5	15.8	60.8
	23	164 20.4	N11 20.6	133 16.1	9.4	S 6 55.2	15.8	60.8
23	0	179 20.6	N11 19.8	147 44.5	9.4	S 7 11.0	15.7	60.7
	1	194 20.7	N11 18.9	162 12.9	9.4	S 7 26.6	15.7	60.7
	2	209 20.9	N11 18.1	176 41.3	9.4	S 7 42.2	15.6	60.7
	3	224 21.1	N11 17.2	191 09.6	9.3	S 7 57.8	15.6	60.7
	4	239 21.2	N11 16.4	205 37.9	9.3	S 8 13.3	15.5	60.6
W	5	254 21.4	N11 15.5	220 06.2	9.3	S 8 28.7	15.4	60.6
E								
D	6	269 21.6	N11 14.7	234 34.5	9.3	S 8 44.1	15.4	60.6
N	7	284 21.7	N11 13.8	249 02.8	9.3	S 8 59.4	15.3	60.6
E	8	299 21.9	N11 12.9	263 31.1	9.3	S 9 14.6	15.2	60.5
S	9	314 22.1	N11 12.1	277 59.3	9.2	S 9 29.8	15.2	60.5
D	10	329 22.2	N11 11.2	292 27.5	9.2	S 9 44.9	15.1	60.5
A	11	344 22.4	N11 10.4	306 55.7	9.2	S 9 60.0	15.0	60.5
Y								
	12	359 22.6	N11 09.5	321 23.9	9.2	S10 14.9	15.0	60.4
	13	14 22.7	N11 08.7	335 52.1	9.2	S10 29.8	14.9	60.4
	14	29 22.9	N11 07.8	350 20.2	9.1	S10 44.6	14.8	60.4
	15	44 23.1	N11 07.0	4 48.3	9.1	S10 59.3	14.7	60.4
	16	59 23.2	N11 06.1	19 16.4	9.1	S11 14.0	14.7	60.3
	17	74 23.4	N11 05.3	33 44.5	9.1	S11 28.6	14.6	60.3
	18	89 23.6	N11 04.4	48 12.5	9.0	S11 43.1	14.5	60.3
	19	104 23.7	N11 03.6	62 40.5	9.0	S11 57.5	14.4	60.2
	20	119 23.9	N11 02.7	77 08.5	9.0	S12 11.8	14.3	60.2
	21	134 24.1	N11 01.8	91 36.5	9.0	S12 26.0	14.2	60.2
	22	149 24.2	N11 01.0	106 04.4	8.9	S12 40.2	14.1	60.2
	23	164 24.4	N11 00.1	120 32.3	8.9	S12 54.2	14.1	60.1
24	0	179 24.6	N10 59.3	135 00.2	8.9	S13 08.2	14.0	60.1
	1	194 24.7	N10 58.4	149 28.1	8.9	S13 22.1	13.9	60.1
	2	209 24.9	N10 57.6	163 55.9	8.8	S13 35.9	13.8	60.0
	3	224 25.1	N10 56.7	178 23.7	8.8	S13 49.5	13.7	60.0
	4	239 25.2	N10 55.8	192 51.5	8.8	S14 03.1	13.6	60.0
T	5	254 25.4	N10 55.0	207 19.2	8.7	S14 16.6	13.5	59.9
H								
U	6	269 25.6	N10 54.1	221 46.9	8.7	S14 30.0	13.4	59.9
R	7	284 25.7	N10 53.3	236 14.6	8.7	S14 43.3	13.3	59.9
S	8	299 25.9	N10 52.4	250 42.2	8.6	S14 56.5	13.2	59.8
D	9	314 26.1	N10 51.5	265 09.8	8.6	S15 09.6	13.1	59.8
A	10	329 26.3	N10 50.7	279 37.4	8.6	S15 22.6	13.0	59.8
Y	11	344 26.4	N10 49.8	294 05.0	8.5	S15 35.5	12.9	59.8
	12	359 26.6	N10 49.0	308 32.5	8.5	S15 48.2	12.8	59.7
	13	14 26.8	N10 48.1	322 60.0	8.5	S16 00.9	12.7	59.7
	14	29 26.9	N10 47.2	337 27.4	8.5	S16 13.5	12.6	59.7
	15	44 27.1	N10 46.4	351 54.8	8.4	S16 25.9	12.4	59.6
	16	59 27.3	N10 45.5	6 22.2	8.4	S16 38.2	12.3	59.6
	17	74 27.5	N10 44.6	20 49.6	8.4	S16 50.5	12.2	59.6
	18	89 27.6	N10 43.8	35 16.9	8.3	S17 02.6	12.1	59.5
	19	104 27.8	N10 42.9	49 44.2	8.3	S17 14.5	12.0	59.5
	20	119 28.0	N10 42.1	64 11.4	8.3	S17 26.4	11.9	59.4
	21	134 28.1	N10 41.2	78 38.6	8.2	S17 38.2	11.8	59.4
	22	149 28.3	N10 40.3	93 05.8	8.2	S17 49.8	11.6	59.4
	23	164 28.5	N10 39.5	107 33.0	8.2	S18 01.3	11.5	59.3
		S.D. 15.8	d 0.9	S.D. 16.6		16.5		16.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.4	S40 11.0
Achernar	335 17.7	S57 05.1
Acrux	172 57.3	S63 15.7
Adhara	255 03.8	S29 00.5
Albireo	67 01.4	N28 01.4
Aldebaran	290 36.3	N16 34.0
Alioth	166 10.8	N55 48.4
Alkaid	152 50.0	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.8	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.3	N26 37.3
Alpheratz	357 31.4	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.9	S42 08.7
Antares	112 12.1	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.6	S69 05.0
Avior	234 14.0	S59 36.0
Bellatrix	278 19.8	N 6 22.6
Betelgeuse	270 49.0	N 7 24.8
Canopus	263 51.4	S52 42.4
Capella	280 17.7	N46 01.4
Castor	245 53.6	N31 49.5
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.8
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.3	N28 37.8
Eltanin	90 40.6	N51 29.4
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.7	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.1	S60 30.9
Hamal	327 47.7	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.5	N74 02.5
Markab	13 26.6	N15 21.7
Menkar	314 02.9	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.4	S69 50.1
Mirfak	308 23.9	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 12.7	N89 22.3
Pollux	243 14.0	N27 57.3
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.1	S 8 10.0
Rigil Kent	139 36.5	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.1	N56 41.6
Shaula	96 06.2	S37 07.5
Sirius	258 23.8	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.5	S43 32.8
Vega	80 30.9	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
25	0	333 47.2	225 26.8	N20 00.0	218 34.3	N22 15.5	153 11.8	N 0 57.7	294 05.8	N12 47.8
	1	348 49.6	240 26.5	N19 59.9	233 35.1	N22 15.2	168 13.8	N 0 57.5	309 08.3	N12 47.7
	2	3 52.1	255 26.2	N19 59.7	248 35.8	N22 15.0	183 15.8	N 0 57.3	324 10.8	N12 47.7
	3	18 54.6	270 25.9	N19 59.6	263 36.6	N22 14.7	198 17.8	N 0 57.1	339 13.2	N12 47.7
	4	33 57.0	285 25.6	N19 59.5	278 37.3	N22 14.5	213 19.8	N 0 56.9	354 15.7	N12 47.7
F	5	48 59.5	300 25.3	N19 59.3	293 38.1	N22 14.2	228 21.8	N 0 56.7	9 18.2	N12 47.7
R										
I	6	64 02.0	315 24.9	N19 59.2	308 38.8	N22 14.0	243 23.8	N 0 56.5	24 20.6	N12 47.7
D	7	79 04.4	330 24.6	N19 59.0	323 39.6	N22 13.7	258 25.8	N 0 56.3	39 23.1	N12 47.7
A	8	94 06.9	345 24.3	N19 58.9	338 40.3	N22 13.5	273 27.8	N 0 56.1	54 25.6	N12 47.7
Y	9	109 09.3	0 24.0	N19 58.7	353 41.0	N22 13.2	288 29.8	N 0 55.9	69 28.1	N12 47.6
	10	124 11.8	15 23.7	N19 58.6	8 41.8	N22 13.0	303 31.8	N 0 55.7	84 30.5	N12 47.6
	11	139 14.3	30 23.4	N19 58.4	23 42.5	N22 12.7	318 33.8	N 0 55.5	99 33.0	N12 47.6
	12	154 16.7	45 23.1	N19 58.3	38 43.3	N22 12.5	333 35.8	N 0 55.3	114 35.5	N12 47.6
	13	169 19.2	60 22.8	N19 58.1	53 44.0	N22 12.3	348 37.8	N 0 55.1	129 37.9	N12 47.6
	14	184 21.7	75 22.4	N19 58.0	68 44.8	N22 12.0	3 39.8	N 0 54.9	144 40.4	N12 47.6
	15	199 24.1	90 22.1	N19 57.8	83 45.5	N22 11.8	18 41.8	N 0 54.7	159 42.9	N12 47.6
	16	214 26.6	105 21.8	N19 57.7	98 46.3	N22 11.5	33 43.8	N 0 54.5	174 45.4	N12 47.5
	17	229 29.1	120 21.5	N19 57.5	113 47.0	N22 11.3	48 45.8	N 0 54.2	189 47.8	N12 47.5
	18	244 31.5	135 21.2	N19 57.4	128 47.8	N22 11.0	63 47.8	N 0 54.0	204 50.3	N12 47.5
	19	259 34.0	150 20.9	N19 57.2	143 48.5	N22 10.8	78 49.8	N 0 53.8	219 52.8	N12 47.5
	20	274 36.5	165 20.6	N19 57.0	158 49.3	N22 10.5	93 51.8	N 0 53.6	234 55.3	N12 47.5
	21	289 38.9	180 20.2	N19 56.9	173 50.0	N22 10.2	108 53.8	N 0 53.4	249 57.7	N12 47.5
	22	304 41.4	195 19.9	N19 56.7	188 50.8	N22 10.0	123 55.8	N 0 53.2	265 00.2	N12 47.5
	23	319 43.8	210 19.6	N19 56.6	203 51.5	N22 09.7	138 57.8	N 0 53.0	280 02.7	N12 47.5
26	0	334 46.3	225 19.3	N19 56.4	218 52.3	N22 09.5	153 59.8	N 0 52.8	295 05.1	N12 47.4
	1	349 48.8	240 19.0	N19 56.2	233 53.0	N22 09.2	169 01.8	N 0 52.6	310 07.6	N12 47.4
	2	4 51.2	255 18.6	N19 56.1	248 53.8	N22 09.0	184 03.8	N 0 52.4	325 10.1	N12 47.4
	3	19 53.7	270 18.3	N19 55.9	263 54.5	N22 08.7	199 05.8	N 0 52.2	340 12.6	N12 47.4
	4	34 56.2	285 18.0	N19 55.8	278 55.3	N22 08.5	214 07.8	N 0 52.0	355 15.0	N12 47.4
S	5	49 58.6	300 17.7	N19 55.6	293 56.0	N22 08.2	229 09.8	N 0 51.8	10 17.5	N12 47.4
A										
T	6	65 01.1	315 17.4	N19 55.4	308 56.8	N22 08.0	244 11.8	N 0 51.6	25 20.0	N12 47.4
U	7	80 03.6	330 17.0	N19 55.3	323 57.5	N22 07.7	259 13.8	N 0 51.4	40 22.5	N12 47.3
R	8	95 06.0	345 16.7	N19 55.1	338 58.3	N22 07.5	274 15.8	N 0 51.2	55 24.9	N12 47.3
D	9	110 08.5	0 16.4	N19 54.9	353 59.0	N22 07.2	289 17.7	N 0 51.0	70 27.4	N12 47.3
A	10	125 10.9	15 16.1	N19 54.8	8 59.8	N22 07.0	304 19.7	N 0 50.8	85 29.9	N12 47.3
Y	11	140 13.4	30 15.8	N19 54.6	24 00.5	N22 06.7	319 21.7	N 0 50.6	100 32.4	N12 47.3
	12	155 15.9	45 15.4	N19 54.4	39 01.3	N22 06.4	334 23.7	N 0 50.4	115 34.8	N12 47.3
	13	170 18.3	60 15.1	N19 54.3	54 02.0	N22 06.2	349 25.7	N 0 50.2	130 37.3	N12 47.3
	14	185 20.8	75 14.8	N19 54.1	69 02.8	N22 05.9	4 27.7	N 0 50.0	145 39.8	N12 47.2
	15	200 23.3	90 14.5	N19 53.9	84 03.5	N22 05.7	19 29.7	N 0 49.8	160 42.3	N12 47.2
	16	215 25.7	105 14.1	N19 53.7	99 04.3	N22 05.4	34 31.7	N 0 49.5	175 44.8	N12 47.2
	17	230 28.2	120 13.8	N19 53.6	114 05.0	N22 05.2	49 33.7	N 0 49.3	190 47.2	N12 47.2
	18	245 30.7	135 13.5	N19 53.4	129 05.8	N22 04.9	64 35.7	N 0 49.1	205 49.7	N12 47.2
	19	260 33.1	150 13.2	N19 53.2	144 06.5	N22 04.6	79 37.7	N 0 48.9	220 52.2	N12 47.2
	20	275 35.6	165 12.8	N19 53.0	159 07.3	N22 04.4	94 39.7	N 0 48.7	235 54.7	N12 47.2
	21	290 38.1	180 12.5	N19 52.9	174 08.1	N22 04.1	109 41.7	N 0 48.5	250 57.1	N12 47.1
	22	305 40.5	195 12.2	N19 52.7	189 08.8	N22 03.9	124 43.7	N 0 48.3	265 59.6	N12 47.1
	23	320 43.0	210 11.8	N19 52.5	204 09.6	N22 03.6	139 45.7	N 0 48.1	281 02.1	N12 47.1
27	0	335 45.4	225 11.5	N19 52.3	219 10.3	N22 03.4	154 47.7	N 0 47.9	296 04.6	N12 47.1
	1	350 47.9	240 11.2	N19 52.1	234 11.1	N22 03.1	169 49.7	N 0 47.7	311 07.1	N12 47.1
	2	5 50.4	255 10.9	N19 52.0	249 11.8	N22 02.8	184 51.7	N 0 47.5	326 09.5	N12 47.1
	3	20 52.8	270 10.5	N19 51.8	264 12.6	N22 02.6	199 53.7	N 0 47.3	341 12.0	N12 47.0
	4	35 55.3	285 10.2	N19 51.6	279 13.3	N22 02.3	214 55.7	N 0 47.1	356 14.5	N12 47.0
S	5	50 57.8	300 09.9	N19 51.4	294 14.1	N22 02.1	229 57.7	N 0 46.9	11 17.0	N12 47.0
U										
N	6	66 00.2	315 09.5	N19 51.2	309 14.9	N22 01.8	244 59.7	N 0 46.7	26 19.4	N12 47.0
D	7	81 02.7	330 09.2	N19 51.0	324 15.6	N22 01.5	260 01.7	N 0 46.5	41 21.9	N12 47.0
A	8	96 05.2	345 08.9	N19 50.8	339 16.4	N22 01.3	275 03.7	N 0 46.3	56 24.4	N12 47.0
Y	9	111 07.6	0 08.5	N19 50.7	354 17.1	N22 01.0	290 05.7	N 0 46.1	71 26.9	N12 47.0
	10	126 10.1	15 08.2	N19 50.5	9 17.9	N22 00.8	305 07.7	N 0 45.9	86 29.4	N12 46.9
	11	141 12.6	30 07.9	N19 50.3	24 18.6	N22 00.5	320 09.7	N 0 45.6	101 31.8	N12 46.9
	12	156 15.0	45 07.5	N19 50.1	39 19.4	N22 00.2	335 11.7	N 0 45.4	116 34.3	N12 46.9
	13	171 17.5	60 07.2	N19 49.9	54 20.1	N21 60.0	350 13.7	N 0 45.2	131 36.8	N12 46.9
	14	186 19.9	75 06.9	N19 49.7	69 20.9	N21 59.7	5 15.7	N 0 45.0	146 39.3	N12 46.9
	15	201 22.4	90 06.5	N19 49.5	84 21.7	N21 59.4	20 17.7	N 0 44.8	161 41.8	N12 46.9
	16	216 24.9	105 06.2	N19 49.3	99 22.4	N21 59.2	35 19.7	N 0 44.6	176 44.3	N12 46.8
	17	231 27.3	120 05.9	N19 49.1	114 23.2	N21 58.9	50 21.7	N 0 44.4	191 46.7	N12 46.8
	18	246 29.8	135 05.5	N19 48.9	129 23.9	N21 58.7	65 23.7	N 0 44.2	206 49.2	N12 46.8
	19	261 32.3	150 05.2	N19 48.7	144 24.7	N21 58.4	80 25.7	N 0 44.0	221 51.7	N12 46.8
	20	276 34.7	165 04.9	N19 48.5	159 25.5	N21 58.1	95 27.7	N 0 43.8	236 54.2	N12 46.8
	21	291 37.2	180 04.5	N19 48.3	174 26.2	N21 57.9	110 29.7	N 0 43.6	251 56.7	N12 46.8
	22	306 39.7	195 04.2	N19 48.1	189 27.0	N21 57.6	125 31.7	N 0 43.4	266 59.1	N12 46.7
	23	321 42.1	210 03.9	N19 47.9	204 27.7	N21 57.3	140 33.7	N 0 43.2	282 01.6	N12 46.7
			v -0.3	d 0.2	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
25 0	179 28.7	N10 38.6	122 00.1	8.1	S18 12.7	11.4	59.3
1	194 28.8	N10 37.7	136 27.2	8.1	S18 24.0	11.3	59.3
2	209 29.0	N10 36.9	150 54.2	8.1	S18 35.2	11.2	59.2
3	224 29.2	N10 36.0	165 21.3	8.0	S18 46.2	11.0	59.2
4	239 29.4	N10 35.1	179 48.2	8.0	S18 57.1	10.9	59.2
F 5	254 29.5	N10 34.3	194 15.2	8.0	S19 07.9	10.8	59.1
R							
I 6	269 29.7	N10 33.4	208 42.1	7.9	S19 18.5	10.6	59.1
D 7	284 29.9	N10 32.5	223 09.0	7.9	S19 29.0	10.5	59.1
A 8	299 30.1	N10 31.7	237 35.9	7.9	S19 39.4	10.4	59.0
Y 9	314 30.2	N10 30.8	252 02.7	7.8	S19 49.7	10.3	59.0
10	329 30.4	N10 29.9	266 29.5	7.8	S19 59.8	10.1	59.0
11	344 30.6	N10 29.1	280 56.2	7.8	S20 09.8	10.0	58.9
12	359 30.7	N10 28.2	295 23.0	7.7	S20 19.7	9.9	58.9
13	14 30.9	N10 27.3	309 49.7	7.7	S20 29.4	9.7	58.9
14	29 31.1	N10 26.5	324 16.3	7.7	S20 39.0	9.6	58.8
15	44 31.3	N10 25.6	338 43.0	7.6	S20 48.5	9.5	58.8
16	59 31.5	N10 24.7	353 09.6	7.6	S20 57.8	9.3	58.7
17	74 31.6	N10 23.9	7 36.2	7.6	S21 07.0	9.2	58.7
18	89 31.8	N10 23.0	22 02.7	7.6	S21 16.0	9.1	58.7
19	104 32.0	N10 22.1	36 29.2	7.5	S21 24.9	8.9	58.6
20	119 32.2	N10 21.3	50 55.7	7.5	S21 33.7	8.8	58.6
21	134 32.3	N10 20.4	65 22.2	7.5	S21 42.4	8.6	58.6
22	149 32.5	N10 19.5	79 48.6	7.4	S21 50.8	8.5	58.5
23	164 32.7	N10 18.6	94 15.1	7.4	S21 59.2	8.4	58.5
26 0	179 32.9	N10 17.8	108 41.5	7.4	S22 07.4	8.2	58.5
1	194 33.0	N10 16.9	123 07.8	7.4	S22 15.5	8.1	58.4
2	209 33.2	N10 16.0	137 34.2	7.3	S22 23.4	7.9	58.4
3	224 33.4	N10 15.2	152 00.5	7.3	S22 31.2	7.8	58.4
4	239 33.6	N10 14.3	166 26.8	7.3	S22 38.8	7.6	58.3
S 5	254 33.8	N10 13.4	180 53.1	7.3	S22 46.3	7.5	58.3
A							
T 6	269 33.9	N10 12.5	195 19.4	7.3	S22 53.7	7.3	58.2
U 7	284 34.1	N10 11.7	209 45.6	7.2	S23 00.9	7.2	58.2
R 8	299 34.3	N10 10.8	224 11.8	7.2	S23 07.9	7.1	58.2
D 9	314 34.5	N10 09.9	238 38.0	7.2	S23 14.8	6.9	58.1
A 10	329 34.6	N10 09.0	253 04.2	7.2	S23 21.6	6.8	58.1
Y 11	344 34.8	N10 08.2	267 30.4	7.2	S23 28.2	6.6	58.1
12	359 35.0	N10 07.3	281 56.6	7.2	S23 34.7	6.5	58.0
13	14 35.2	N10 06.4	296 22.7	7.1	S23 41.0	6.3	58.0
14	29 35.4	N10 05.5	310 48.9	7.1	S23 47.2	6.2	58.0
15	44 35.5	N10 04.7	325 15.0	7.1	S23 53.2	6.0	57.9
16	59 35.7	N10 03.8	339 41.1	7.1	S23 59.1	5.9	57.9
17	74 35.9	N10 02.9	354 07.2	7.1	S24 04.8	5.7	57.9
18	89 36.1	N10 02.0	8 33.3	7.1	S24 10.3	5.6	57.8
19	104 36.3	N10 01.2	22 59.4	7.1	S24 15.8	5.4	57.8
20	119 36.4	N10 00.3	37 25.5	7.1	S24 21.0	5.3	57.7
21	134 36.6	N 9 59.4	51 51.5	7.1	S24 26.1	5.1	57.7
22	149 36.8	N 9 58.5	66 17.6	7.1	S24 31.1	5.0	57.7
23	164 37.0	N 9 57.7	80 43.7	7.1	S24 35.9	4.8	57.6
27 0	179 37.2	N 9 56.8	95 09.7	7.1	S24 40.6	4.7	57.6
1	194 37.3	N 9 55.9	109 35.8	7.1	S24 45.1	4.5	57.6
2	209 37.5	N 9 55.0	124 01.9	7.1	S24 49.5	4.4	57.5
3	224 37.7	N 9 54.1	138 27.9	7.1	S24 53.7	4.2	57.5
4	239 37.9	N 9 53.3	152 54.0	7.1	S24 57.7	4.1	57.5
S 5	254 38.1	N 9 52.4	167 20.1	7.1	S25 01.6	3.9	57.4
U							
N 6	269 38.3	N 9 51.5	181 46.2	7.1	S25 05.4	3.8	57.4
D 7	284 38.4	N 9 50.6	196 12.2	7.1	S25 09.0	3.6	57.4
A 8	299 38.6	N 9 49.8	210 38.3	7.1	S25 12.4	3.4	57.3
Y 9	314 38.8	N 9 48.9	225 04.4	7.1	S25 15.7	3.3	57.3
10	329 39.0	N 9 48.0	239 30.6	7.1	S25 18.9	3.1	57.3
11	344 39.2	N 9 47.1	253 56.7	7.1	S25 21.8	3.0	57.2
12	359 39.4	N 9 46.2	268 22.8	7.1	S25 24.7	2.8	57.2
13	14 39.5	N 9 45.3	282 49.0	7.1	S25 27.4	2.7	57.2
14	29 39.7	N 9 44.5	297 15.1	7.2	S25 29.9	2.5	57.1
15	44 39.9	N 9 43.6	311 41.3	7.2	S25 32.3	2.4	57.1
16	59 40.1	N 9 42.7	326 07.5	7.2	S25 34.5	2.2	57.1
17	74 40.3	N 9 41.8	340 33.7	7.2	S25 36.6	2.1	57.0
18	89 40.5	N 9 40.9	354 60.0	7.2	S25 38.5	1.9	57.0
19	104 40.6	N 9 40.1	9 26.2	7.3	S25 40.3	1.8	57.0
20	119 40.8	N 9 39.2	23 52.5	7.3	S25 41.9	1.6	56.9
21	134 41.0	N 9 38.3	38 18.8	7.3	S25 43.4	1.5	56.9
22	149 41.2	N 9 37.4	52 45.1	7.3	S25 44.7	1.3	56.9
23	164 41.4	N 9 36.5	67 11.5	7.4	S25 45.9	1.2	56.8
	S.D. 15.8	d 0.9	S.D. 16.0		15.8		15.6

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.4	S40 11.0
Achernar	335 17.7	S57 05.1
Acrux	172 57.3	S63 15.6
Adhara	255 03.8	S29 00.5
Albireo	67 01.4	N28 01.4
Aldebaran	290 36.2	N16 34.0
Alioth	166 10.8	N55 48.4
Alkaid	152 50.0	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.8	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.3	N26 37.3
Alpheratz	357 31.4	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.9	S42 08.7
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.6	S69 05.0
Avior	234 14.0	S59 36.0
Bellatrix	278 19.8	N 6 22.6
Betelgeuse	270 49.0	N 7 24.8
Canopus	263 51.3	S52 42.4
Capella	280 17.6	N46 01.4
Castor	245 53.6	N31 49.5
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.8
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.8
Elnath	277 58.3	N28 37.8
Eltanin	90 40.6	N51 29.4
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.1	S60 30.9
Hamal	327 47.7	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.6	N74 02.5
Markab	13 26.6	N15 21.7
Menkar	314 02.9	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.3	S69 50.1
Mirfak	308 23.9	N49 57.6
Nunki	75 43.8	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 11.4	N89 22.3
Pollux	243 14.0	N27 57.3
Procyon	244 48.0	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.1	S 8 10.0
Rigil Kent	139 36.5	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.1	N56 41.7
Shaula	96 06.2	S37 07.5
Sirius	258 23.8	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.5	S43 32.8
Vega	80 31.0	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
28	0	336 44.6	225 03.5	N19 47.7	219 28.5	N21 57.1	155 35.6	N 0 43.0	297 04.1	N12 46.7
	1	351 47.0	240 03.2	N19 47.5	234 29.3	N21 56.8	170 37.6	N 0 42.8	312 06.6	N12 46.7
	2	6 49.5	255 02.8	N19 47.3	249 30.0	N21 56.5	185 39.6	N 0 42.6	327 09.1	N12 46.7
	3	21 52.0	270 02.5	N19 47.1	264 30.8	N21 56.3	200 41.6	N 0 42.4	342 11.6	N12 46.7
	4	36 54.4	285 02.2	N19 46.9	279 31.5	N21 56.0	215 43.6	N 0 42.2	357 14.0	N12 46.6
M	5	51 56.9	300 01.8	N19 46.7	294 32.3	N21 55.7	230 45.6	N 0 41.9	12 16.5	N12 46.6
O										
N	6	66 59.4	315 01.5	N19 46.5	309 33.1	N21 55.5	245 47.6	N 0 41.7	27 19.0	N12 46.6
D	7	82 01.8	330 01.1	N19 46.3	324 33.8	N21 55.2	260 49.6	N 0 41.5	42 21.5	N12 46.6
A	8	97 04.3	345 00.8	N19 46.1	339 34.6	N21 54.9	275 51.6	N 0 41.3	57 24.0	N12 46.6
Y	9	112 06.8	0 00.5	N19 45.9	354 35.3	N21 54.7	290 53.6	N 0 41.1	72 26.5	N12 46.6
	10	127 09.2	15 00.1	N19 45.7	9 36.1	N21 54.4	305 55.6	N 0 40.9	87 28.9	N12 46.5
	11	142 11.7	29 59.8	N19 45.5	24 36.9	N21 54.1	320 57.6	N 0 40.7	102 31.4	N12 46.5
	12	157 14.2	44 59.4	N19 45.3	39 37.6	N21 53.9	335 59.6	N 0 40.5	117 33.9	N12 46.5
	13	172 16.6	59 59.1	N19 45.1	54 38.4	N21 53.6	351 01.6	N 0 40.3	132 36.4	N12 46.5
	14	187 19.1	74 58.8	N19 44.8	69 39.1	N21 53.3	6 03.6	N 0 40.1	147 38.9	N12 46.5
	15	202 21.5	89 58.4	N19 44.6	84 39.9	N21 53.1	21 05.6	N 0 39.9	162 41.4	N12 46.5
	16	217 24.0	104 58.1	N19 44.4	99 40.7	N21 52.8	36 07.6	N 0 39.7	177 43.9	N12 46.4
	17	232 26.5	119 57.7	N19 44.2	114 41.4	N21 52.5	51 09.6	N 0 39.5	192 46.3	N12 46.4
	18	247 28.9	134 57.4	N19 44.0	129 42.2	N21 52.3	66 11.6	N 0 39.3	207 48.8	N12 46.4
	19	262 31.4	149 57.0	N19 43.8	144 43.0	N21 52.0	81 13.6	N 0 39.1	222 51.3	N12 46.4
	20	277 33.9	164 56.7	N19 43.5	159 43.7	N21 51.7	96 15.6	N 0 38.9	237 53.8	N12 46.4
	21	292 36.3	179 56.3	N19 43.3	174 44.5	N21 51.4	111 17.6	N 0 38.7	252 56.3	N12 46.4
	22	307 38.8	194 56.0	N19 43.1	189 45.3	N21 51.2	126 19.5	N 0 38.4	267 58.8	N12 46.3
	23	322 41.3	209 55.7	N19 42.9	204 46.0	N21 50.9	141 21.5	N 0 38.2	283 01.3	N12 46.3
29	0	337 43.7	224 55.3	N19 42.7	219 46.8	N21 50.6	156 23.5	N 0 38.0	298 03.7	N12 46.3
	1	352 46.2	239 55.0	N19 42.4	234 47.6	N21 50.4	171 25.5	N 0 37.8	313 06.2	N12 46.3
	2	7 48.7	254 54.6	N19 42.2	249 48.3	N21 50.1	186 27.5	N 0 37.6	328 08.7	N12 46.3
	3	22 51.1	269 54.3	N19 42.0	264 49.1	N21 49.8	201 29.5	N 0 37.4	343 11.2	N12 46.3
	4	37 53.6	284 53.9	N19 41.8	279 49.8	N21 49.5	216 31.5	N 0 37.2	358 13.7	N12 46.2
T	5	52 56.0	299 53.6	N19 41.6	294 50.6	N21 49.3	231 33.5	N 0 37.0	13 16.2	N12 46.2
U										
E	6	67 58.5	314 53.2	N19 41.3	309 51.4	N21 49.0	246 35.5	N 0 36.8	28 18.7	N12 46.2
S	7	83 01.0	329 52.9	N19 41.1	324 52.1	N21 48.7	261 37.5	N 0 36.6	43 21.2	N12 46.2
D	8	98 03.4	344 52.5	N19 40.9	339 52.9	N21 48.5	276 39.5	N 0 36.4	58 23.6	N12 46.2
A	9	113 05.9	359 52.2	N19 40.6	354 53.7	N21 48.2	291 41.5	N 0 36.2	73 26.1	N12 46.1
Y	10	128 08.4	14 51.8	N19 40.4	9 54.4	N21 47.9	306 43.5	N 0 36.0	88 28.6	N12 46.1
	11	143 10.8	29 51.5	N19 40.2	24 55.2	N21 47.6	321 45.5	N 0 35.8	103 31.1	N12 46.1
	12	158 13.3	44 51.1	N19 40.0	39 56.0	N21 47.4	336 47.5	N 0 35.6	118 33.6	N12 46.1
	13	173 15.8	59 50.8	N19 39.7	54 56.7	N21 47.1	351 49.5	N 0 35.4	133 36.1	N12 46.1
	14	188 18.2	74 50.4	N19 39.5	69 57.5	N21 46.8	6 51.5	N 0 35.1	148 38.6	N12 46.1
	15	203 20.7	89 50.1	N19 39.3	84 58.3	N21 46.5	21 53.4	N 0 34.9	163 41.1	N12 46.0
	16	218 23.2	104 49.7	N19 39.0	99 59.0	N21 46.3	36 55.4	N 0 34.7	178 43.6	N12 46.0
	17	233 25.6	119 49.4	N19 38.8	114 59.8	N21 46.0	51 57.4	N 0 34.5	193 46.0	N12 46.0
	18	248 28.1	134 49.0	N19 38.5	130 00.6	N21 45.7	66 59.4	N 0 34.3	208 48.5	N12 46.0
	19	263 30.5	149 48.7	N19 38.3	145 01.4	N21 45.4	82 01.4	N 0 34.1	223 51.0	N12 46.0
	20	278 33.0	164 48.3	N19 38.1	160 02.1	N21 45.2	97 03.4	N 0 33.9	238 53.5	N12 45.9
	21	293 35.5	179 47.9	N19 37.8	175 02.9	N21 44.9	112 05.4	N 0 33.7	253 56.0	N12 45.9
	22	308 37.9	194 47.6	N19 37.6	190 03.7	N21 44.6	127 07.4	N 0 33.5	268 58.5	N12 45.9
	23	323 40.4	209 47.2	N19 37.4	205 04.4	N21 44.3	142 09.4	N 0 33.3	284 01.0	N12 45.9
30	0	338 42.9	224 46.9	N19 37.1	220 05.2	N21 44.0	157 11.4	N 0 33.1	299 03.5	N12 45.9
	1	353 45.3	239 46.5	N19 36.9	235 06.0	N21 43.8	172 13.4	N 0 32.9	314 06.0	N12 45.8
	2	8 47.8	254 46.2	N19 36.6	250 06.7	N21 43.5	187 15.4	N 0 32.7	329 08.5	N12 45.8
	3	23 50.3	269 45.8	N19 36.4	265 07.5	N21 43.2	202 17.4	N 0 32.5	344 11.0	N12 45.8
	4	38 52.7	284 45.5	N19 36.1	280 08.3	N21 42.9	217 19.4	N 0 32.3	359 13.5	N12 45.8
W	5	53 55.2	299 45.1	N19 35.9	295 09.1	N21 42.7	232 21.3	N 0 32.0	14 15.9	N12 45.8
E										
D	6	68 57.6	314 44.7	N19 35.6	310 09.8	N21 42.4	247 23.3	N 0 31.8	29 18.4	N12 45.8
N	7	84 00.1	329 44.4	N19 35.4	325 10.6	N21 42.1	262 25.3	N 0 31.6	44 20.9	N12 45.7
E	8	99 02.6	344 44.0	N19 35.1	340 11.4	N21 41.8	277 27.3	N 0 31.4	59 23.4	N12 45.7
S	9	114 05.0	359 43.7	N19 34.9	355 12.1	N21 41.5	292 29.3	N 0 31.2	74 25.9	N12 45.7
D	10	129 07.5	14 43.3	N19 34.6	10 12.9	N21 41.3	307 31.3	N 0 31.0	89 28.4	N12 45.7
A	11	144 10.0	29 43.0	N19 34.4	25 13.7	N21 41.0	322 33.3	N 0 30.8	104 30.9	N12 45.7
Y										
	12	159 12.4	44 42.6	N19 34.1	40 14.5	N21 40.7	337 35.3	N 0 30.6	119 33.4	N12 45.6
	13	174 14.9	59 42.2	N19 33.9	55 15.2	N21 40.4	352 37.3	N 0 30.4	134 35.9	N12 45.6
	14	189 17.4	74 41.9	N19 33.6	70 16.0	N21 40.1	7 39.3	N 0 30.2	149 38.4	N12 45.6
	15	204 19.8	89 41.5	N19 33.4	85 16.8	N21 39.9	22 41.3	N 0 30.0	164 40.9	N12 45.6
	16	219 22.3	104 41.2	N19 33.1	100 17.5	N21 39.6	37 43.3	N 0 29.8	179 43.4	N12 45.6
	17	234 24.8	119 40.8	N19 32.9	115 18.3	N21 39.3	52 45.3	N 0 29.6	194 45.9	N12 45.5
	18	249 27.2	134 40.4	N19 32.6	130 19.1	N21 39.0	67 47.2	N 0 29.4	209 48.4	N12 45.5
	19	264 29.7	149 40.1	N19 32.4	145 19.9	N21 38.7	82 49.2	N 0 29.1	224 50.9	N12 45.5
	20	279 32.1	164 39.7	N19 32.1	160 20.6	N21 38.4	97 51.2	N 0 28.9	239 53.3	N12 45.5
	21	294 34.6	179 39.4	N19 31.8	175 21.4	N21 38.2	112 53.2	N 0 28.7	254 55.8	N12 45.5
	22	309 37.1	194 39.0	N19 31.6	190 22.2	N21 37.9	127 55.2	N 0 28.5	269 58.3	N12 45.4
	23	324 39.5	209 38.6	N19 31.3	205 23.0	N21 37.6	142 57.2	N 0 28.3	285 00.8	N12 45.4
			v -0.4	d 0.2	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	Dec ° '	MOON GHA ° '	v '	Dec ° '	d '	HP '
28	0	179 41.6	N 9 35.6	81 37.9	7.4	S25 46.9	1.0	56.8
	1	194 41.8	N 9 34.8	96 04.3	7.4	S25 47.8	0.9	56.8
	2	209 41.9	N 9 33.9	110 30.8	7.4	S25 48.6	0.7	56.8
	3	224 42.1	N 9 33.0	124 57.2	7.5	S25 49.1	0.6	56.7
	4	239 42.3	N 9 32.1	139 23.7	7.5	S25 49.6	0.4	56.7
M	5	254 42.5	N 9 31.2	153 50.3	7.5	S25 49.9	0.3	56.7
O								
N	6	269 42.7	N 9 30.3	168 16.9	7.6	S25 50.0	0.1	56.6
D	7	284 42.9	N 9 29.4	182 43.5	7.6	S25 50.0	0.0	56.6
A	8	299 43.1	N 9 28.6	197 10.1	7.7	S25 49.8	0.2	56.6
Y	9	314 43.2	N 9 27.7	211 36.8	7.7	S25 49.5	0.3	56.5
	10	329 43.4	N 9 26.8	226 03.6	7.7	S25 49.1	0.4	56.5
	11	344 43.6	N 9 25.9	240 30.4	7.8	S25 48.5	0.6	56.5
	12	359 43.8	N 9 25.0	254 57.2	7.8	S25 47.8	0.7	56.4
	13	14 44.0	N 9 24.1	269 24.0	7.9	S25 46.9	0.9	56.4
	14	29 44.2	N 9 23.2	283 50.9	7.9	S25 45.9	1.0	56.4
	15	44 44.4	N 9 22.3	298 17.9	8.0	S25 44.7	1.2	56.4
	16	59 44.6	N 9 21.5	312 44.9	8.0	S25 43.4	1.3	56.3
	17	74 44.7	N 9 20.6	327 11.9	8.0	S25 41.9	1.4	56.3
	18	89 44.9	N 9 19.7	341 39.0	8.1	S25 40.4	1.6	56.3
	19	104 45.1	N 9 18.8	356 06.2	8.1	S25 38.6	1.7	56.2
	20	119 45.3	N 9 17.9	10 33.4	8.2	S25 36.8	1.9	56.2
	21	134 45.5	N 9 17.0	25 00.6	8.3	S25 34.8	2.0	56.2
	22	149 45.7	N 9 16.1	39 27.9	8.3	S25 32.6	2.1	56.2
	23	164 45.9	N 9 15.2	53 55.3	8.4	S25 30.3	2.3	56.1
29	0	179 46.1	N 9 14.3	68 22.7	8.4	S25 27.9	2.4	56.1
	1	194 46.3	N 9 13.4	82 50.2	8.5	S25 25.4	2.6	56.1
	2	209 46.4	N 9 12.6	97 17.7	8.5	S25 22.7	2.7	56.1
	3	224 46.6	N 9 11.7	111 45.3	8.6	S25 19.8	2.8	56.0
	4	239 46.8	N 9 10.8	126 12.9	8.6	S25 16.9	3.0	56.0
T	5	254 47.0	N 9 09.9	140 40.7	8.7	S25 13.8	3.1	56.0
U								
E	6	269 47.2	N 9 09.0	155 08.4	8.8	S25 10.6	3.2	55.9
S	7	284 47.4	N 9 08.1	169 36.2	8.8	S25 07.2	3.4	55.9
D	8	299 47.6	N 9 07.2	184 04.1	8.9	S25 03.7	3.5	55.9
A	9	314 47.8	N 9 06.3	198 32.1	9.0	S25 00.1	3.6	55.9
Y	10	329 48.0	N 9 05.4	213 00.1	9.0	S24 56.4	3.7	55.8
	11	344 48.2	N 9 04.5	227 28.2	9.1	S24 52.5	3.9	55.8
	12	359 48.3	N 9 03.6	241 56.3	9.1	S24 48.5	4.0	55.8
	13	14 48.5	N 9 02.7	256 24.5	9.2	S24 44.3	4.1	55.8
	14	29 48.7	N 9 01.8	270 52.8	9.3	S24 40.1	4.3	55.7
	15	44 48.9	N 9 01.0	285 21.2	9.3	S24 35.7	4.4	55.7
	16	59 49.1	N 9 00.1	299 49.6	9.4	S24 31.2	4.5	55.7
	17	74 49.3	N 8 59.2	314 18.1	9.5	S24 26.6	4.6	55.7
	18	89 49.5	N 8 58.3	328 46.6	9.6	S24 21.8	4.7	55.6
	19	104 49.7	N 8 57.4	343 15.2	9.6	S24 17.0	4.9	55.6
	20	119 49.9	N 8 56.5	357 43.9	9.7	S24 12.0	5.0	55.6
	21	134 50.1	N 8 55.6	12 12.7	9.8	S24 06.9	5.1	55.6
	22	149 50.3	N 8 54.7	26 41.5	9.8	S24 01.6	5.2	55.5
	23	164 50.5	N 8 53.8	41 10.4	9.9	S23 56.3	5.3	55.5
30	0	179 50.7	N 8 52.9	55 39.4	10.0	S23 50.8	5.5	55.5
	1	194 50.8	N 8 52.0	70 08.5	10.1	S23 45.2	5.6	55.5
	2	209 51.0	N 8 51.1	84 37.6	10.1	S23 39.5	5.7	55.5
	3	224 51.2	N 8 50.2	99 06.8	10.2	S23 33.7	5.8	55.4
	4	239 51.4	N 8 49.3	113 36.1	10.3	S23 27.8	5.9	55.4
W	5	254 51.6	N 8 48.4	128 05.4	10.3	S23 21.8	6.0	55.4
E								
D	6	269 51.8	N 8 47.5	142 34.8	10.4	S23 15.6	6.1	55.4
N	7	284 52.0	N 8 46.6	157 04.3	10.5	S23 09.4	6.3	55.3
E	8	299 52.2	N 8 45.7	171 33.9	10.6	S23 03.0	6.4	55.3
S	9	314 52.4	N 8 44.8	186 03.5	10.6	S22 56.5	6.5	55.3
D	10	329 52.6	N 8 43.9	200 33.3	10.7	S22 49.9	6.6	55.3
A	11	344 52.8	N 8 43.0	215 03.1	10.8	S22 43.3	6.7	55.3
Y								
	12	359 53.0	N 8 42.1	229 32.9	10.9	S22 36.5	6.8	55.2
	13	14 53.2	N 8 41.2	244 02.9	10.9	S22 29.6	6.9	55.2
	14	29 53.4	N 8 40.3	258 32.9	11.0	S22 22.6	7.0	55.2
	15	44 53.6	N 8 39.4	273 03.0	11.1	S22 15.5	7.1	55.2
	16	59 53.8	N 8 38.5	287 33.2	11.2	S22 08.2	7.2	55.2
	17	74 54.0	N 8 37.6	302 03.4	11.2	S22 00.9	7.3	55.1
	18	89 54.1	N 8 36.7	316 33.7	11.3	S21 53.5	7.4	55.1
	19	104 54.3	N 8 35.8	331 04.1	11.4	S21 46.0	7.5	55.1
	20	119 54.5	N 8 34.9	345 34.6	11.5	S21 38.4	7.6	55.1
	21	134 54.7	N 8 34.0	0 05.2	11.6	S21 30.7	7.7	55.1
	22	149 54.9	N 8 33.1	14 35.8	11.6	S21 22.9	7.8	55.0
	23	164 55.1	N 8 32.2	29 06.5	11.7	S21 15.0	7.9	55.0
		S.D. 15.8	d 0.9	S.D. 15.4		15.2		15.1

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.4	S40 11.0
Achernar	335 17.7	S57 05.1
Acrux	172 57.3	S63 15.6
Adhara	255 03.7	S29 00.5
Albireo	67 01.4	N28 01.5
Aldebaran	290 36.2	N16 34.0
Alioth	166 10.8	N55 48.4
Alkaid	152 50.0	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.8	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.3	N26 37.3
Alpheratz	357 31.3	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.9	S42 08.7
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.7	S69 05.0
Avior	234 14.0	S59 36.0
Bellatrix	278 19.8	N 6 22.6
Betelgeuse	270 49.0	N 7 24.8
Canopus	263 51.3	S52 42.4
Capella	280 17.6	N46 01.4
Castor	245 53.5	N31 49.4
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.7
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.7
Elnath	277 58.2	N28 37.8
Eltanin	90 40.6	N51 29.4
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.1	S60 30.9
Hamal	327 47.6	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.7	N74 02.5
Markab	13 26.6	N15 21.8
Menkar	314 02.9	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.3	S69 50.0
Mirfak	308 23.9	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 10.1	N89 22.3
Pollux	243 13.9	N27 57.3
Procyon	244 47.9	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.1	S 8 10.0
Rigil Kent	139 36.5	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.1	N56 41.7
Shaula	96 06.2	S37 07.5
Sirius	258 23.8	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.5	S43 32.8
Vega	80 31.0	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
31	0	339 42.0	224 38.3	N19 31.1	220 23.7	N21 37.3	157 59.2	N 0 28.1	300 03.3	N12 45.4
	1	354 44.5	239 37.9	N19 30.8	235 24.5	N21 37.0	173 01.2	N 0 27.9	315 05.8	N12 45.4
	2	9 46.9	254 37.5	N19 30.5	250 25.3	N21 36.7	188 03.2	N 0 27.7	330 08.3	N12 45.4
	3	24 49.4	269 37.2	N19 30.3	265 26.1	N21 36.5	203 05.2	N 0 27.5	345 10.8	N12 45.3
	4	39 51.9	284 36.8	N19 30.0	280 26.8	N21 36.2	218 07.2	N 0 27.3	0 13.3	N12 45.3
T	5	54 54.3	299 36.5	N19 29.7	295 27.6	N21 35.9	233 09.2	N 0 27.1	15 15.8	N12 45.3
H										
U	6	69 56.8	314 36.1	N19 29.5	310 28.4	N21 35.6	248 11.1	N 0 26.9	30 18.3	N12 45.3
R	7	84 59.3	329 35.7	N19 29.2	325 29.2	N21 35.3	263 13.1	N 0 26.7	45 20.8	N12 45.3
S	8	100 01.7	344 35.4	N19 28.9	340 29.9	N21 35.0	278 15.1	N 0 26.5	60 23.3	N12 45.2
D	9	115 04.2	359 35.0	N19 28.7	355 30.7	N21 34.7	293 17.1	N 0 26.2	75 25.8	N12 45.2
A	10	130 06.6	14 34.6	N19 28.4	10 31.5	N21 34.5	308 19.1	N 0 26.0	90 28.3	N12 45.2
Y	11	145 09.1	29 34.3	N19 28.1	25 32.3	N21 34.2	323 21.1	N 0 25.8	105 30.8	N12 45.2
	12	160 11.6	44 33.9	N19 27.8	40 33.1	N21 33.9	338 23.1	N 0 25.6	120 33.3	N12 45.2
	13	175 14.0	59 33.5	N19 27.6	55 33.8	N21 33.6	353 25.1	N 0 25.4	135 35.8	N12 45.1
	14	190 16.5	74 33.2	N19 27.3	70 34.6	N21 33.3	8 27.1	N 0 25.2	150 38.3	N12 45.1
	15	205 19.0	89 32.8	N19 27.0	85 35.4	N21 33.0	23 29.1	N 0 25.0	165 40.8	N12 45.1
	16	220 21.4	104 32.4	N19 26.7	100 36.2	N21 32.7	38 31.1	N 0 24.8	180 43.3	N12 45.1
	17	235 23.9	119 32.1	N19 26.5	115 36.9	N21 32.5	53 33.0	N 0 24.6	195 45.8	N12 45.0
	18	250 26.4	134 31.7	N19 26.2	130 37.7	N21 32.2	68 35.0	N 0 24.4	210 48.3	N12 45.0
	19	265 28.8	149 31.3	N19 25.9	145 38.5	N21 31.9	83 37.0	N 0 24.2	225 50.8	N12 45.0
	20	280 31.3	164 31.0	N19 25.6	160 39.3	N21 31.6	98 39.0	N 0 24.0	240 53.3	N12 45.0
	21	295 33.8	179 30.6	N19 25.4	175 40.1	N21 31.3	113 41.0	N 0 23.8	255 55.8	N12 45.0
	22	310 36.2	194 30.2	N19 25.1	190 40.8	N21 31.0	128 43.0	N 0 23.5	270 58.3	N12 44.9
	23	325 38.7	209 29.8	N19 24.8	205 41.6	N21 30.7	143 45.0	N 0 23.3	286 00.8	N12 44.9
1	0	340 41.1	224 29.5	N19 24.5	220 42.4	N21 30.4	158 47.0	N 0 23.1	301 03.3	N12 44.9
	1	355 43.6	239 29.1	N19 24.2	235 43.2	N21 30.1	173 49.0	N 0 22.9	316 05.8	N12 44.9
	2	10 46.1	254 28.7	N19 23.9	250 44.0	N21 29.8	188 51.0	N 0 22.7	331 08.3	N12 44.9
	3	25 48.5	269 28.4	N19 23.7	265 44.7	N21 29.6	203 52.9	N 0 22.5	346 10.8	N12 44.8
	4	40 51.0	284 28.0	N19 23.4	280 45.5	N21 29.3	218 54.9	N 0 22.3	1 13.3	N12 44.8
F	5	55 53.5	299 27.6	N19 23.1	295 46.3	N21 29.0	233 56.9	N 0 22.1	16 15.8	N12 44.8
R										
I	6	70 55.9	314 27.3	N19 22.8	310 47.1	N21 28.7	248 58.9	N 0 21.9	31 18.3	N12 44.8
D	7	85 58.4	329 26.9	N19 22.5	325 47.9	N21 28.4	264 00.9	N 0 21.7	46 20.8	N12 44.7
A	8	101 00.9	344 26.5	N19 22.2	340 48.7	N21 28.1	279 02.9	N 0 21.5	61 23.3	N12 44.7
Y	9	116 03.3	359 26.1	N19 21.9	355 49.4	N21 27.8	294 04.9	N 0 21.3	76 25.8	N12 44.7
	10	131 05.8	14 25.8	N19 21.6	10 50.2	N21 27.5	309 06.9	N 0 21.1	91 28.3	N12 44.7
	11	146 08.2	29 25.4	N19 21.3	25 51.0	N21 27.2	324 08.9	N 0 20.8	106 30.8	N12 44.7
	12	161 10.7	44 25.0	N19 21.0	40 51.8	N21 26.9	339 10.9	N 0 20.6	121 33.3	N12 44.6
	13	176 13.2	59 24.6	N19 20.7	55 52.6	N21 26.6	354 12.8	N 0 20.4	136 35.8	N12 44.6
	14	191 15.6	74 24.3	N19 20.5	70 53.4	N21 26.3	9 14.8	N 0 20.2	151 38.3	N12 44.6
	15	206 18.1	89 23.9	N19 20.2	85 54.1	N21 26.1	24 16.8	N 0 20.0	166 40.8	N12 44.6
	16	221 20.6	104 23.5	N19 19.9	100 54.9	N21 25.8	39 18.8	N 0 19.8	181 43.3	N12 44.5
	17	236 23.0	119 23.1	N19 19.6	115 55.7	N21 25.5	54 20.8	N 0 19.6	196 45.8	N12 44.5
	18	251 25.5	134 22.8	N19 19.3	130 56.5	N21 25.2	69 22.8	N 0 19.4	211 48.3	N12 44.5
	19	266 28.0	149 22.4	N19 19.0	145 57.3	N21 24.9	84 24.8	N 0 19.2	226 50.8	N12 44.5
	20	281 30.4	164 22.0	N19 18.7	160 58.1	N21 24.6	99 26.8	N 0 19.0	241 53.3	N12 44.5
	21	296 32.9	179 21.6	N19 18.4	175 58.8	N21 24.3	114 28.8	N 0 18.8	256 55.8	N12 44.4
	22	311 35.4	194 21.3	N19 18.1	190 59.6	N21 24.0	129 30.7	N 0 18.6	271 58.3	N12 44.4
	23	326 37.8	209 20.9	N19 17.8	206 00.4	N21 23.7	144 32.7	N 0 18.3	287 00.8	N12 44.4
2	0	341 40.3	224 20.5	N19 17.5	221 01.2	N21 23.4	159 34.7	N 0 18.1	302 03.3	N12 44.4
	1	356 42.7	239 20.1	N19 17.1	236 02.0	N21 23.1	174 36.7	N 0 17.9	317 05.8	N12 44.3
	2	11 45.2	254 19.8	N19 16.8	251 02.8	N21 22.8	189 38.7	N 0 17.7	332 08.3	N12 44.3
	3	26 47.7	269 19.4	N19 16.5	266 03.6	N21 22.5	204 40.7	N 0 17.5	347 10.8	N12 44.3
	4	41 50.1	284 19.0	N19 16.2	281 04.3	N21 22.2	219 42.7	N 0 17.3	2 13.3	N12 44.3
S	5	56 52.6	299 18.6	N19 15.9	296 05.1	N21 21.9	234 44.7	N 0 17.1	17 15.8	N12 44.3
A										
T	6	71 55.1	314 18.3	N19 15.6	311 05.9	N21 21.6	249 46.7	N 0 16.9	32 18.3	N12 44.2
U	7	86 57.5	329 17.9	N19 15.3	326 06.7	N21 21.3	264 48.6	N 0 16.7	47 20.8	N12 44.2
R	8	101 60.0	344 17.5	N19 15.0	341 07.5	N21 21.0	279 50.6	N 0 16.5	62 23.4	N12 44.2
D	9	117 02.5	359 17.1	N19 14.7	356 08.3	N21 20.7	294 52.6	N 0 16.3	77 25.9	N12 44.2
A	10	132 04.9	14 16.7	N19 14.4	11 09.1	N21 20.4	309 54.6	N 0 16.1	92 28.4	N12 44.1
Y	11	147 07.4	29 16.4	N19 14.1	26 09.8	N21 20.1	324 56.6	N 0 15.8	107 30.9	N12 44.1
	12	162 09.9	44 16.0	N19 13.7	41 10.6	N21 19.8	339 58.6	N 0 15.6	122 33.4	N12 44.1
	13	177 12.3	59 15.6	N19 13.4	56 11.4	N21 19.5	355 00.6	N 0 15.4	137 35.9	N12 44.1
	14	192 14.8	74 15.2	N19 13.1	71 12.2	N21 19.2	10 02.6	N 0 15.2	152 38.4	N12 44.0
	15	207 17.2	89 14.8	N19 12.8	86 13.0	N21 18.9	25 04.5	N 0 15.0	167 40.9	N12 44.0
	16	222 19.7	104 14.5	N19 12.5	101 13.8	N21 18.6	40 06.5	N 0 14.8	182 43.4	N12 44.0
	17	237 22.2	119 14.1	N19 12.2	116 14.6	N21 18.3	55 08.5	N 0 14.6	197 45.9	N12 44.0
	18	252 24.6	134 13.7	N19 11.8	131 15.4	N21 18.0	70 10.5	N 0 14.4	212 48.4	N12 43.9
	19	267 27.1	149 13.3	N19 11.5	146 16.2	N21 17.7	85 12.5	N 0 14.2	227 50.9	N12 43.9
	20	282 29.6	164 12.9	N19 11.2	161 16.9	N21 17.4	100 14.5	N 0 14.0	242 53.4	N12 43.9
	21	297 32.0	179 12.6	N19 10.9	176 17.7	N21 17.1	115 16.5	N 0 13.8	257 55.9	N12 43.9
	22	312 34.5	194 12.2	N19 10.5	191 18.5	N21 16.8	130 18.5	N 0 13.6	272 58.4	N12 43.9
	23	327 37.0	209 11.8	N19 10.2	206 19.3	N21 16.5	145 20.4	N 0 13.3	288 01.0	N12 43.8
			v -0.4	d 0.3	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
31	0	179 55.3	N 8 31.3	43 37.3	11.8	S21 07.0	8.0	55.0
	1	194 55.5	N 8 30.4	58 08.1	11.9	S20 59.0	8.1	55.0
	2	209 55.7	N 8 29.5	72 39.1	11.9	S20 50.8	8.2	55.0
	3	224 55.9	N 8 28.6	87 10.1	12.0	S20 42.5	8.3	54.9
	4	239 56.1	N 8 27.7	101 41.2	12.1	S20 34.2	8.4	54.9
T	5	254 56.3	N 8 26.8	116 12.3	12.2	S20 25.7	8.4	54.9
H								
U	6	269 56.5	N 8 25.9	130 43.6	12.2	S20 17.2	8.5	54.9
R	7	284 56.7	N 8 25.0	145 14.9	12.3	S20 08.6	8.6	54.9
S	8	299 56.9	N 8 24.1	159 46.3	12.4	S19 59.9	8.7	54.9
D	9	314 57.1	N 8 23.2	174 17.7	12.5	S19 51.1	8.8	54.8
A	10	329 57.3	N 8 22.3	188 49.2	12.5	S19 42.2	8.9	54.8
Y	11	344 57.5	N 8 21.4	203 20.8	12.6	S19 33.3	9.0	54.8
	12	359 57.7	N 8 20.5	217 52.5	12.7	S19 24.2	9.0	54.8
	13	14 57.9	N 8 19.6	232 24.3	12.8	S19 15.1	9.1	54.8
	14	29 58.1	N 8 18.7	246 56.1	12.8	S19 05.9	9.2	54.8
	15	44 58.3	N 8 17.8	261 28.0	12.9	S18 56.7	9.3	54.7
	16	59 58.5	N 8 16.9	275 60.0	13.0	S18 47.3	9.4	54.7
	17	74 58.7	N 8 15.9	290 32.0	13.0	S18 37.9	9.4	54.7
	18	89 58.9	N 8 15.0	305 04.1	13.1	S18 28.4	9.5	54.7
	19	104 59.1	N 8 14.1	319 36.3	13.2	S18 18.8	9.6	54.7
	20	119 59.3	N 8 13.2	334 08.6	13.3	S18 09.1	9.7	54.7
	21	134 59.5	N 8 12.3	348 40.9	13.3	S17 59.4	9.7	54.7
	22	149 59.7	N 8 11.4	3 13.3	13.4	S17 49.6	9.8	54.6
	23	164 59.9	N 8 10.5	17 45.7	13.5	S17 39.7	9.9	54.6
1	0	180 00.1	N 8 09.6	32 18.3	13.5	S17 29.7	9.9	54.6
	1	195 00.3	N 8 08.7	46 50.9	13.6	S17 19.7	10.0	54.6
	2	210 00.5	N 8 07.8	61 23.5	13.7	S17 09.6	10.1	54.6
	3	225 00.7	N 8 06.9	75 56.3	13.7	S16 59.5	10.2	54.6
	4	240 00.9	N 8 06.0	90 29.1	13.8	S16 49.3	10.2	54.6
F	5	255 01.1	N 8 05.1	105 01.9	13.9	S16 39.0	10.3	54.5
R								
I	6	270 01.3	N 8 04.1	119 34.9	13.9	S16 28.6	10.4	54.5
D	7	285 01.5	N 8 03.2	134 07.8	14.0	S16 18.2	10.4	54.5
A	8	300 01.7	N 8 02.3	148 40.9	14.1	S16 07.7	10.5	54.5
Y	9	315 01.9	N 8 01.4	163 14.0	14.1	S15 57.2	10.5	54.5
	10	330 02.1	N 8 00.5	177 47.2	14.2	S15 46.6	10.6	54.5
	11	345 02.3	N 7 59.6	192 20.5	14.2	S15 35.9	10.7	54.5
	12	0 02.5	N 7 58.7	206 53.8	14.3	S15 25.2	10.7	54.4
	13	15 02.7	N 7 57.8	221 27.2	14.4	S15 14.4	10.8	54.4
	14	30 02.9	N 7 56.9	236 00.6	14.4	S15 03.6	10.8	54.4
	15	45 03.1	N 7 56.0	250 34.1	14.5	S14 52.7	10.9	54.4
	16	60 03.3	N 7 55.0	265 07.6	14.6	S14 41.7	11.0	54.4
	17	75 03.5	N 7 54.1	279 41.2	14.6	S14 30.7	11.0	54.4
	18	90 03.7	N 7 53.2	294 14.9	14.7	S14 19.6	11.1	54.4
	19	105 03.9	N 7 52.3	308 48.6	14.7	S14 08.5	11.1	54.4
	20	120 04.1	N 7 51.4	323 22.4	14.8	S13 57.3	11.2	54.4
	21	135 04.3	N 7 50.5	337 56.3	14.8	S13 46.1	11.2	54.3
	22	150 04.5	N 7 49.6	352 30.2	14.9	S13 34.9	11.3	54.3
	23	165 04.7	N 7 48.7	7 04.1	15.0	S13 23.5	11.3	54.3
2	0	180 04.9	N 7 47.7	21 38.1	15.0	S13 12.2	11.4	54.3
	1	195 05.1	N 7 46.8	36 12.2	15.1	S13 00.7	11.4	54.3
	2	210 05.3	N 7 45.9	50 46.3	15.1	S12 49.3	11.5	54.3
	3	225 05.5	N 7 45.0	65 20.5	15.2	S12 37.8	11.5	54.3
	4	240 05.7	N 7 44.1	79 54.7	15.2	S12 26.2	11.6	54.3
S	5	255 05.9	N 7 43.2	94 28.9	15.3	S12 14.6	11.6	54.3
A								
T	6	270 06.1	N 7 42.3	109 03.2	15.3	S12 02.9	11.6	54.2
U	7	285 06.3	N 7 41.4	123 37.6	15.4	S11 51.2	11.7	54.2
R	8	300 06.5	N 7 40.4	138 12.0	15.4	S11 39.5	11.7	54.2
D	9	315 06.7	N 7 39.5	152 46.5	15.5	S11 27.7	11.8	54.2
A	10	330 06.9	N 7 38.6	167 21.0	15.5	S11 15.9	11.8	54.2
Y	11	345 07.1	N 7 37.7	181 55.5	15.6	S11 04.1	11.9	54.2
	12	0 07.3	N 7 36.8	196 30.1	15.6	S10 52.2	11.9	54.2
	13	15 07.6	N 7 35.9	211 04.8	15.6	S10 40.2	11.9	54.2
	14	30 07.8	N 7 34.9	225 39.5	15.7	S10 28.3	12.0	54.2
	15	45 08.0	N 7 34.0	240 14.2	15.7	S10 16.2	12.0	54.2
	16	60 08.2	N 7 33.1	254 49.0	15.8	S10 04.2	12.0	54.2
	17	75 08.4	N 7 32.2	269 23.8	15.8	S 9 52.1	12.1	54.2
	18	90 08.6	N 7 31.3	283 58.6	15.9	S 9 40.0	12.1	54.1
	19	105 08.8	N 7 30.4	298 33.5	15.9	S 9 27.9	12.1	54.1
	20	120 09.0	N 7 29.4	313 08.5	15.9	S 9 15.7	12.2	54.1
	21	135 09.2	N 7 28.5	327 43.4	16.0	S 9 03.5	12.2	54.1
	22	150 09.4	N 7 27.6	342 18.4	16.0	S 8 51.2	12.2	54.1
	23	165 09.6	N 7 26.7	356 53.5	16.0	S 8 39.0	12.3	54.1
		S.D. 15.9	d 0.9	S.D. 14.9		14.8		14.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.3	S40 11.0
Achernar	335 17.6	S57 05.1
Acrux	172 57.3	S63 15.6
Adhara	255 03.7	S29 00.5
Albireo	67 01.4	N28 01.5
Aldebaran	290 36.2	N16 34.0
Alioth	166 10.8	N55 48.4
Alkaid	152 50.0	N49 10.4
Al Na-ir	27 28.7	S46 49.1
Alnilam	275 34.8	S 1 10.9
Alphard	217 45.1	S 8 47.0
Alphecca	126 01.3	N26 37.3
Alpheratz	357 31.3	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.9	S42 08.7
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.7	S69 05.0
Avior	234 14.0	S59 36.0
Bellatrix	278 19.7	N 6 22.6
Betelgeuse	270 49.0	N 7 24.8
Canopus	263 51.3	S52 42.4
Capella	280 17.6	N46 01.4
Castor	245 53.5	N31 49.4
Deneb	49 23.3	N45 23.2
Denebola	182 22.2	N14 24.7
Diphda	348 44.1	S17 49.5
Dubhe	193 38.1	N61 35.7
Elnath	277 58.2	N28 37.8
Eltanin	90 40.6	N51 29.4
Enif	33 35.5	N10 00.6
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.1	S60 30.9
Hamal	327 47.6	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.7	N74 02.5
Markab	13 26.6	N15 21.8
Menkar	314 02.9	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.3	S69 50.0
Mirfak	308 23.8	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.5	S56 38.5
Polaris	315 09.0	N89 22.3
Pollux	243 13.9	N27 57.3
Procyon	244 47.9	N 5 09.1
Rasalhague	95 55.7	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.1	S 8 09.9
Rigil Kent	139 36.6	S60 57.5
Sabik	101 59.3	S15 45.6
Schedar	349 27.0	N56 41.7
Shaula	96 06.2	S37 07.5
Sirius	258 23.8	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.5	S43 32.8
Vega	80 31.0	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
3	0	342 39.4	224 11.4	N19 09.9	221 20.1	N21 16.2	160 22.4	N 0 13.1	303 03.5	N12 43.8
	1	357 41.9	239 11.0	N19 09.6	236 20.9	N21 15.9	175 24.4	N 0 12.9	318 06.0	N12 43.8
	2	12 44.3	254 10.6	N19 09.2	251 21.7	N21 15.6	190 26.4	N 0 12.7	333 08.5	N12 43.8
	3	27 46.8	269 10.3	N19 08.9	266 22.5	N21 15.3	205 28.4	N 0 12.5	348 11.0	N12 43.7
	4	42 49.3	284 09.9	N19 08.6	281 23.3	N21 15.0	220 30.4	N 0 12.3	3 13.5	N12 43.7
S	5	57 51.7	299 09.5	N19 08.3	296 24.1	N21 14.7	235 32.4	N 0 12.1	18 16.0	N12 43.7
U										
N	6	72 54.2	314 09.1	N19 07.9	311 24.9	N21 14.4	250 34.4	N 0 11.9	33 18.5	N12 43.7
D	7	87 56.7	329 08.7	N19 07.6	326 25.6	N21 14.1	265 36.3	N 0 11.7	48 21.0	N12 43.6
A	8	102 59.1	344 08.3	N19 07.3	341 26.4	N21 13.8	280 38.3	N 0 11.5	63 23.5	N12 43.6
Y	9	118 01.6	359 08.0	N19 06.9	356 27.2	N21 13.5	295 40.3	N 0 11.3	78 26.0	N12 43.6
	10	133 04.1	14 07.6	N19 06.6	11 28.0	N21 13.2	310 42.3	N 0 11.0	93 28.6	N12 43.6
	11	148 06.5	29 07.2	N19 06.3	26 28.8	N21 12.9	325 44.3	N 0 10.8	108 31.1	N12 43.5
	12	163 09.0	44 06.8	N19 05.9	41 29.6	N21 12.6	340 46.3	N 0 10.6	123 33.6	N12 43.5
	13	178 11.5	59 06.4	N19 05.6	56 30.4	N21 12.3	355 48.3	N 0 10.4	138 36.1	N12 43.5
	14	193 13.9	74 06.0	N19 05.3	71 31.2	N21 12.0	10 50.3	N 0 10.2	153 38.6	N12 43.5
	15	208 16.4	89 05.6	N19 04.9	86 32.0	N21 11.7	25 52.2	N 0 10.0	168 41.1	N12 43.4
	16	223 18.8	104 05.3	N19 04.6	101 32.8	N21 11.4	40 54.2	N 0 09.8	183 43.6	N12 43.4
	17	238 21.3	119 04.9	N19 04.2	116 33.6	N21 11.1	55 56.2	N 0 09.6	198 46.1	N12 43.4
	18	253 23.8	134 04.5	N19 03.9	131 34.4	N21 10.8	70 58.2	N 0 09.4	213 48.6	N12 43.4
	19	268 26.2	149 04.1	N19 03.6	146 35.2	N21 10.5	86 00.2	N 0 09.2	228 51.2	N12 43.3
	20	283 28.7	164 03.7	N19 03.2	161 36.0	N21 10.2	101 02.2	N 0 09.0	243 53.7	N12 43.3
	21	298 31.2	179 03.3	N19 02.9	176 36.8	N21 09.9	116 04.2	N 0 08.7	258 56.2	N12 43.3
	22	313 33.6	194 02.9	N19 02.5	191 37.6	N21 09.5	131 06.1	N 0 08.5	273 58.7	N12 43.3
	23	328 36.1	209 02.5	N19 02.2	206 38.4	N21 09.2	146 08.1	N 0 08.3	289 01.2	N12 43.2
4	0	343 38.6	224 02.2	N19 01.8	221 39.1	N21 08.9	161 10.1	N 0 08.1	304 03.7	N12 43.2
	1	358 41.0	239 01.8	N19 01.5	236 39.9	N21 08.6	176 12.1	N 0 07.9	319 06.2	N12 43.2
	2	13 43.5	254 01.4	N19 01.1	251 40.7	N21 08.3	191 14.1	N 0 07.7	334 08.7	N12 43.2
	3	28 46.0	269 01.0	N19 00.8	266 41.5	N21 08.0	206 16.1	N 0 07.5	349 11.3	N12 43.1
	4	43 48.4	284 00.6	N19 00.4	281 42.3	N21 07.7	221 18.1	N 0 07.3	4 13.8	N12 43.1
M	5	58 50.9	299 00.2	N19 00.1	296 43.1	N21 07.4	236 20.0	N 0 07.1	19 16.3	N12 43.1
O										
N	6	73 53.3	313 59.8	N18 59.7	311 43.9	N21 07.1	251 22.0	N 0 06.9	34 18.8	N12 43.1
D	7	88 55.8	328 59.4	N18 59.4	326 44.7	N21 06.8	266 24.0	N 0 06.7	49 21.3	N12 43.0
A	8	103 58.3	343 59.0	N18 59.0	341 45.5	N21 06.5	281 26.0	N 0 06.4	64 23.8	N12 43.0
Y	9	119 00.7	358 58.7	N18 58.7	356 46.3	N21 06.2	296 28.0	N 0 06.2	79 26.3	N12 43.0
	10	134 03.2	13 58.3	N18 58.3	11 47.1	N21 05.8	311 30.0	N 0 06.0	94 28.8	N12 43.0
	11	149 05.7	28 57.9	N18 58.0	26 47.9	N21 05.5	326 32.0	N 0 05.8	109 31.4	N12 42.9
	12	164 08.1	43 57.5	N18 57.6	41 48.7	N21 05.2	341 33.9	N 0 05.6	124 33.9	N12 42.9
	13	179 10.6	58 57.1	N18 57.3	56 49.5	N21 04.9	356 35.9	N 0 05.4	139 36.4	N12 42.9
	14	194 13.1	73 56.7	N18 56.9	71 50.3	N21 04.6	11 37.9	N 0 05.2	154 38.9	N12 42.9
	15	209 15.5	88 56.3	N18 56.5	86 51.1	N21 04.3	26 39.9	N 0 05.0	169 41.4	N12 42.8
	16	224 18.0	103 55.9	N18 56.2	101 51.9	N21 04.0	41 41.9	N 0 04.8	184 43.9	N12 42.8
	17	239 20.4	118 55.5	N18 55.8	116 52.7	N21 03.7	56 43.9	N 0 04.6	199 46.5	N12 42.8
	18	254 22.9	133 55.1	N18 55.5	131 53.5	N21 03.4	71 45.9	N 0 04.4	214 49.0	N12 42.7
	19	269 25.4	148 54.7	N18 55.1	146 54.3	N21 03.1	86 47.8	N 0 04.1	229 51.5	N12 42.7
	20	284 27.8	163 54.4	N18 54.7	161 55.1	N21 02.7	101 49.8	N 0 03.9	244 54.0	N12 42.7
	21	299 30.3	178 54.0	N18 54.4	176 55.9	N21 02.4	116 51.8	N 0 03.7	259 56.5	N12 42.7
	22	314 32.8	193 53.6	N18 54.0	191 56.7	N21 02.1	131 53.8	N 0 03.5	274 59.0	N12 42.6
	23	329 35.2	208 53.2	N18 53.6	206 57.5	N21 01.8	146 55.8	N 0 03.3	290 01.5	N12 42.6
5	0	344 37.7	223 52.8	N18 53.3	221 58.3	N21 01.5	161 57.8	N 0 03.1	305 04.1	N12 42.6
	1	359 40.2	238 52.4	N18 52.9	236 59.1	N21 01.2	176 59.7	N 0 02.9	320 06.6	N12 42.6
	2	14 42.6	253 52.0	N18 52.5	251 59.9	N21 00.9	192 01.7	N 0 02.7	335 09.1	N12 42.5
	3	29 45.1	268 51.6	N18 52.2	267 00.7	N21 00.5	207 03.7	N 0 02.5	350 11.6	N12 42.5
	4	44 47.6	283 51.2	N18 51.8	282 01.5	N21 00.2	222 05.7	N 0 02.3	5 14.1	N12 42.5
T	5	59 50.0	298 50.8	N18 51.4	297 02.3	N20 59.9	237 07.7	N 0 02.0	20 16.6	N12 42.5
U										
E	6	74 52.5	313 50.4	N18 51.1	312 03.1	N20 59.6	252 09.7	N 0 01.8	35 19.2	N12 42.4
S	7	89 54.9	328 50.0	N18 50.7	327 03.9	N20 59.3	267 11.7	N 0 01.6	50 21.7	N12 42.4
D	8	104 57.4	343 49.6	N18 50.3	342 04.7	N20 59.0	282 13.6	N 0 01.4	65 24.2	N12 42.4
A	9	119 59.9	358 49.2	N18 49.9	357 05.5	N20 58.7	297 15.6	N 0 01.2	80 26.7	N12 42.4
Y	10	135 02.3	13 48.8	N18 49.6	12 06.3	N20 58.3	312 17.6	N 0 01.0	95 29.2	N12 42.3
	11	150 04.8	28 48.4	N18 49.2	27 07.1	N20 58.0	327 19.6	N 0 00.8	110 31.8	N12 42.3
	12	165 07.3	43 48.0	N18 48.8	42 07.9	N20 57.7	342 21.6	N 0 00.6	125 34.3	N12 42.3
	13	180 09.7	58 47.6	N18 48.4	57 08.7	N20 57.4	357 23.6	N 0 00.4	140 36.8	N12 42.2
	14	195 12.2	73 47.3	N18 48.0	72 09.5	N20 57.1	12 25.5	N 0 00.2	155 39.3	N12 42.2
	15	210 14.7	88 46.9	N18 47.7	87 10.4	N20 56.8	27 27.5	S 0 00.1	170 41.8	N12 42.2
	16	225 17.1	103 46.5	N18 47.3	102 11.2	N20 56.4	42 29.5	S 0 00.3	185 44.4	N12 42.2
	17	240 19.6	118 46.1	N18 46.9	117 12.0	N20 56.1	57 31.5	S 0 00.5	200 46.9	N12 42.1
	18	255 22.0	133 45.7	N18 46.5	132 12.8	N20 55.8	72 33.5	S 0 00.7	215 49.4	N12 42.1
	19	270 24.5	148 45.3	N18 46.1	147 13.6	N20 55.5	87 35.5	S 0 00.9	230 51.9	N12 42.1
	20	285 27.0	163 44.9	N18 45.7	162 14.4	N20 55.2	102 37.4	S 0 01.1	245 54.4	N12 42.1
	21	300 29.4	178 44.5	N18 45.4	177 15.2	N20 54.9	117 39.4	S 0 01.3	260 57.0	N12 42.0
	22	315 31.9	193 44.1	N18 45.0	192 16.0	N20 54.5	132 41.4	S 0 01.5	275 59.5	N12 42.0
	23	330 34.4	208 43.7	N18 44.6	207 16.8	N20 54.2	147 43.4	S 0 01.7	291 02.0	N12 42.0
			v -0.4	d 0.4	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
3 0	180 09.8	N 7 25.8	11 28.5	16.1	S 8 26.7	12.3	54.1	Acamar	315 09.3	S40 11.0
1	195 10.0	N 7 24.9	26 03.7	16.1	S 8 14.3	12.3	54.1	Achernar	335 17.6	S57 05.1
2	210 10.2	N 7 23.9	40 38.8	16.1	S 8 02.0	12.4	54.1	Acrux	172 57.3	S63 15.6
3	225 10.4	N 7 23.0	55 14.0	16.2	S 7 49.6	12.4	54.1	Adhara	255 03.7	S29 00.5
4	240 10.6	N 7 22.1	69 49.2	16.2	S 7 37.2	12.4	54.1	Albireo	67 01.4	N28 01.5
S 5	255 10.8	N 7 21.2	84 24.5	16.2	S 7 24.7	12.4	54.1			
U								Aldebaran	290 36.2	N16 34.1
N 6	270 11.0	N 7 20.3	98 59.7	16.3	S 7 12.3	12.5	54.1	Alioth	166 10.9	N55 48.4
D 7	285 11.2	N 7 19.3	113 35.0	16.3	S 6 59.8	12.5	54.1	Alkaid	152 50.0	N49 10.4
A 8	300 11.5	N 7 18.4	128 10.4	16.3	S 6 47.3	12.5	54.1	Al Na-ir	27 28.7	S46 49.2
Y 9	315 11.7	N 7 17.5	142 45.7	16.4	S 6 34.7	12.5	54.0	Alnilam	275 34.7	S 1 10.9
10	330 11.9	N 7 16.6	157 21.1	16.4	S 6 22.2	12.6	54.0			
11	345 12.1	N 7 15.7	171 56.5	16.4	S 6 09.6	12.6	54.0	Alphard	217 45.1	S 8 47.0
								Alphecca	126 01.3	N26 37.3
12	0 12.3	N 7 14.7	186 32.0	16.4	S 5 57.0	12.6	54.0	Alpheratz	357 31.3	N29 15.1
13	15 12.5	N 7 13.8	201 07.5	16.5	S 5 44.4	12.6	54.0	Altair	61 56.8	N 8 56.9
14	30 12.7	N 7 12.9	215 42.9	16.5	S 5 31.8	12.6	54.0	Ankaa	353 03.8	S42 08.8
15	45 12.9	N 7 12.0	230 18.5	16.5	S 5 19.1	12.7	54.0			
16	60 13.1	N 7 11.1	244 54.0	16.5	S 5 06.5	12.7	54.0	Antares	112 12.2	S26 29.8
17	75 13.3	N 7 10.1	259 29.6	16.6	S 4 53.8	12.7	54.0	Arcturus	145 45.4	N19 02.1
								Atria	107 03.7	S69 05.0
18	90 13.5	N 7 09.2	274 05.1	16.6	S 4 41.1	12.7	54.0	Avior	234 13.9	S59 35.9
19	105 13.7	N 7 08.3	288 40.7	16.6	S 4 28.4	12.7	54.0	Bellatrix	278 19.7	N 6 22.6
20	120 13.9	N 7 07.4	303 16.4	16.6	S 4 15.6	12.7	54.0			
21	135 14.1	N 7 06.5	317 52.0	16.6	S 4 02.9	12.7	54.0	Betelgeuse	270 48.9	N 7 24.8
22	150 14.4	N 7 05.5	332 27.7	16.7	S 3 50.1	12.8	54.0	Canopus	263 51.3	S52 42.4
23	165 14.6	N 7 04.6	347 03.3	16.7	S 3 37.4	12.8	54.0	Capella	280 17.5	N46 01.5
								Castor	245 53.5	N31 49.4
4 0	180 14.8	N 7 03.7	1 39.0	16.7	S 3 24.6	12.8	54.0	Deneb	49 23.3	N45 23.2
1	195 15.0	N 7 02.8	16 14.7	16.7	S 3 11.8	12.8	54.0			
2	210 15.2	N 7 01.8	30 50.4	16.7	S 2 59.0	12.8	54.0	Denebola	182 22.2	N14 24.7
3	225 15.4	N 7 00.9	45 26.2	16.7	S 2 46.2	12.8	54.0	Diphda	348 44.0	S17 49.5
4	240 15.6	N 6 60.0	60 01.9	16.7	S 2 33.4	12.8	54.0	Dubhe	193 38.1	N61 35.7
M 5	255 15.8	N 6 59.1	74 37.7	16.8	S 2 20.5	12.8	54.0	Elnath	277 58.2	N28 37.8
O								Eltanin	90 40.7	N51 29.4
N 6	270 16.0	N 6 58.1	89 13.4	16.8	S 2 07.7	12.8	54.0			
D 7	285 16.2	N 6 57.2	103 49.2	16.8	S 1 54.9	12.8	54.0	Enif	33 35.5	N10 00.6
A 8	300 16.4	N 6 56.3	118 25.0	16.8	S 1 42.0	12.8	54.0	Fomalhaut	15 10.9	S29 28.0
Y 9	315 16.6	N 6 55.4	133 00.8	16.8	S 1 29.2	12.8	54.0	Gacrux	171 48.8	S57 16.6
10	330 16.9	N 6 54.4	147 36.6	16.8	S 1 16.3	12.9	54.0	Gienah	175 40.8	S17 42.1
11	345 17.1	N 6 53.5	162 12.4	16.8	S 1 03.5	12.9	54.0	Hadar	148 32.2	S60 30.9
12	0 17.3	N 6 52.6	176 48.2	16.8	S 0 50.6	12.9	54.0	Hamal	327 47.6	N23 36.0
13	15 17.5	N 6 51.7	191 24.0	16.8	S 0 37.7	12.9	54.0	Kaus Austr.	83 28.4	S34 22.3
14	30 17.7	N 6 50.7	205 59.8	16.8	S 0 24.9	12.9	54.0	Kochab	137 20.8	N74 02.5
15	45 17.9	N 6 49.8	220 35.6	16.8	S 0 12.0	12.9	54.0	Markab	13 26.6	N15 21.8
16	60 18.1	N 6 48.9	235 11.4	16.8	N 0 00.8	12.9	54.0	Menkar	314 02.9	N 4 12.3
17	75 18.3	N 6 48.0	249 47.3	16.8	N 0 13.7	12.9	54.0			
								Menkent	147 54.3	S36 30.8
18	90 18.5	N 6 47.0	264 23.1	16.8	N 0 26.6	12.9	54.0	Miaplacidus	221 38.3	S69 50.0
19	105 18.7	N 6 46.1	278 58.9	16.8	N 0 39.4	12.9	54.0	Mirfak	308 23.8	N49 57.7
20	120 19.0	N 6 45.2	293 34.7	16.8	N 0 52.3	12.9	54.0	Nunki	75 43.9	S26 15.6
21	135 19.2	N 6 44.3	308 10.5	16.8	N 1 05.1	12.8	54.0	Peacock	53 00.5	S56 38.6
22	150 19.4	N 6 43.3	322 46.4	16.8	N 1 18.0	12.8	54.0			
23	165 19.6	N 6 42.4	337 22.2	16.8	N 1 30.8	12.8	54.0	Polaris	315 08.1	N89 22.3
								Pollux	243 13.9	N27 57.3
5 0	180 19.8	N 6 41.5	351 58.0	16.8	N 1 43.6	12.8	54.0	Procyon	244 47.9	N 5 09.1
1	195 20.0	N 6 40.5	6 33.8	16.8	N 1 56.5	12.8	54.0	Rasalhague	95 55.7	N12 32.6
2	210 20.2	N 6 39.6	21 09.6	16.8	N 2 09.3	12.8	54.0	Regulus	207 31.6	N11 49.6
3	225 20.4	N 6 38.7	35 45.3	16.8	N 2 22.1	12.8	54.0			
4	240 20.6	N 6 37.8	50 21.1	16.8	N 2 34.9	12.8	54.0	Rigel	281 01.0	S 8 09.9
T 5	255 20.8	N 6 36.8	64 56.9	16.8	N 2 47.7	12.8	54.0	Rigil Kent	139 36.6	S60 57.4
U								Sabik	101 59.3	S15 45.6
E 6	270 21.1	N 6 35.9	79 32.6	16.8	N 3 00.5	12.8	54.0	Schedar	349 27.0	N56 41.7
S 7	285 21.3	N 6 35.0	94 08.4	16.7	N 3 13.3	12.8	54.0	Shaula	96 06.2	S37 07.5
D 8	300 21.5	N 6 34.1	108 44.1	16.7	N 3 26.0	12.8	54.0			
A 9	315 21.7	N 6 33.1	123 19.8	16.7	N 3 38.8	12.7	54.0	Sirius	258 23.8	S16 45.2
Y 10	330 21.9	N 6 32.2	137 55.6	16.7	N 3 51.5	12.7	54.0	Spica	158 19.4	S11 18.7
11	345 22.1	N 6 31.3	152 31.2	16.7	N 4 04.2	12.7	54.0	Suhail	222 44.5	S43 32.8
								Vega	80 31.0	N38 48.9
12	0 22.3	N 6 30.3	167 06.9	16.7	N 4 16.9	12.7	54.0	Zuben-ubi	136 53.8	S16 09.7
13	15 22.5	N 6 29.4	181 42.6	16.7	N 4 29.6	12.7	54.0			
14	30 22.7	N 6 28.5	196 18.2	16.6	N 4 42.3	12.7	54.0			
15	45 23.0	N 6 27.5	210 53.8	16.6	N 4 55.0	12.7	54.0			
16	60 23.2	N 6 26.6	225 29.5	16.6	N 5 07.6	12.6	54.0			
17	75 23.4	N 6 25.7	240 05.0	16.6	N 5 20.2	12.6	54.0			
18	90 23.6	N 6 24.7	254 40.6	16.6	N 5 32.8	12.6	54.0			
19	105 23.8	N 6 23.8	269 16.2	16.5	N 5 45.4	12.6	54.0			
20	120 24.0	N 6 22.9	283 51.7	16.5	N 5 58.0	12.6	54.0			
21	135 24.2	N 6 22.0	298 27.2	16.5	N 6 10.5	12.5	54.0			
22	150 24.4	N 6 21.0	313 02.7	16.5	N 6 23.0	12.5	54.0			
23	165 24.7	N 6 20.1	327 38.1	16.5	N 6 35.5	12.5	54.0			
	S.D. 15.9	d 0.9	S.D. 14.7		14.7		14.7			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
6	0	345 36.8	223 43.3	N18 44.2	222 17.6	N20 53.9	162 45.4	S 0 01.9	306 04.5	N12 41.9
	1	0 39.3	238 42.9	N18 43.8	237 18.4	N20 53.6	177 47.4	S 0 02.2	321 07.0	N12 41.9
	2	15 41.8	253 42.5	N18 43.4	252 19.2	N20 53.3	192 49.3	S 0 02.4	336 09.6	N12 41.9
	3	30 44.2	268 42.1	N18 43.0	267 20.0	N20 53.0	207 51.3	S 0 02.6	351 12.1	N12 41.9
	4	45 46.7	283 41.7	N18 42.6	282 20.8	N20 52.6	222 53.3	S 0 02.8	6 14.6	N12 41.8
W	5	60 49.2	298 41.3	N18 42.2	297 21.6	N20 52.3	237 55.3	S 0 03.0	21 17.1	N12 41.8
E										
D	6	75 51.6	313 40.9	N18 41.9	312 22.4	N20 52.0	252 57.3	S 0 03.2	36 19.6	N12 41.8
N	7	90 54.1	328 40.5	N18 41.5	327 23.2	N20 51.7	267 59.3	S 0 03.4	51 22.2	N12 41.7
E	8	105 56.5	343 40.1	N18 41.1	342 24.1	N20 51.4	283 01.2	S 0 03.6	66 24.7	N12 41.7
S	9	120 59.0	358 39.7	N18 40.7	357 24.9	N20 51.0	298 03.2	S 0 03.8	81 27.2	N12 41.7
D	10	136 01.5	13 39.3	N18 40.3	12 25.7	N20 50.7	313 05.2	S 0 04.0	96 29.7	N12 41.7
A	11	151 03.9	28 38.9	N18 39.9	27 26.5	N20 50.4	328 07.2	S 0 04.3	111 32.2	N12 41.6
Y										
	12	166 06.4	43 38.5	N18 39.5	42 27.3	N20 50.1	343 09.2	S 0 04.5	126 34.8	N12 41.6
	13	181 08.9	58 38.1	N18 39.1	57 28.1	N20 49.7	358 11.2	S 0 04.7	141 37.3	N12 41.6
	14	196 11.3	73 37.7	N18 38.7	72 28.9	N20 49.4	13 13.1	S 0 04.9	156 39.8	N12 41.5
	15	211 13.8	88 37.3	N18 38.3	87 29.7	N20 49.1	28 15.1	S 0 05.1	171 42.3	N12 41.5
	16	226 16.3	103 36.9	N18 37.9	102 30.5	N20 48.8	43 17.1	S 0 05.3	186 44.9	N12 41.5
	17	241 18.7	118 36.5	N18 37.5	117 31.3	N20 48.5	58 19.1	S 0 05.5	201 47.4	N12 41.5
	18	256 21.2	133 36.1	N18 37.1	132 32.2	N20 48.1	73 21.1	S 0 05.7	216 49.9	N12 41.4
	19	271 23.6	148 35.7	N18 36.7	147 33.0	N20 47.8	88 23.1	S 0 05.9	231 52.4	N12 41.4
	20	286 26.1	163 35.3	N18 36.3	162 33.8	N20 47.5	103 25.0	S 0 06.1	246 55.0	N12 41.4
	21	301 28.6	178 34.9	N18 35.8	177 34.6	N20 47.2	118 27.0	S 0 06.4	261 57.5	N12 41.3
	22	316 31.0	193 34.5	N18 35.4	192 35.4	N20 46.8	133 29.0	S 0 06.6	277 00.0	N12 41.3
	23	331 33.5	208 34.1	N18 35.0	207 36.2	N20 46.5	148 31.0	S 0 06.8	292 02.5	N12 41.3
7	0	346 36.0	223 33.7	N18 34.6	222 37.0	N20 46.2	163 33.0	S 0 07.0	307 05.1	N12 41.3
	1	1 38.4	238 33.3	N18 34.2	237 37.8	N20 45.9	178 34.9	S 0 07.2	322 07.6	N12 41.2
	2	16 40.9	253 32.9	N18 33.8	252 38.6	N20 45.5	193 36.9	S 0 07.4	337 10.1	N12 41.2
	3	31 43.4	268 32.5	N18 33.4	267 39.5	N20 45.2	208 38.9	S 0 07.6	352 12.6	N12 41.2
	4	46 45.8	283 32.1	N18 33.0	282 40.3	N20 44.9	223 40.9	S 0 07.8	7 15.2	N12 41.1
T	5	61 48.3	298 31.7	N18 32.6	297 41.1	N20 44.6	238 42.9	S 0 08.0	22 17.7	N12 41.1
H										
U	6	76 50.8	313 31.3	N18 32.1	312 41.9	N20 44.2	253 44.9	S 0 08.2	37 20.2	N12 41.1
R	7	91 53.2	328 30.9	N18 31.7	327 42.7	N20 43.9	268 46.8	S 0 08.5	52 22.7	N12 41.1
S	8	106 55.7	343 30.5	N18 31.3	342 43.5	N20 43.6	283 48.8	S 0 08.7	67 25.3	N12 41.0
D	9	121 58.1	358 30.1	N18 30.9	357 44.3	N20 43.3	298 50.8	S 0 08.9	82 27.8	N12 41.0
A	10	137 00.6	13 29.7	N18 30.5	12 45.1	N20 42.9	313 52.8	S 0 09.1	97 30.3	N12 41.0
Y	11	152 03.1	28 29.3	N18 30.1	27 46.0	N20 42.6	328 54.8	S 0 09.3	112 32.8	N12 40.9
	12	167 05.5	43 28.9	N18 29.6	42 46.8	N20 42.3	343 56.8	S 0 09.5	127 35.4	N12 40.9
	13	182 08.0	58 28.5	N18 29.2	57 47.6	N20 42.0	358 58.7	S 0 09.7	142 37.9	N12 40.9
	14	197 10.5	73 28.0	N18 28.8	72 48.4	N20 41.6	14 00.7	S 0 09.9	157 40.4	N12 40.8
	15	212 12.9	88 27.6	N18 28.4	87 49.2	N20 41.3	29 02.7	S 0 10.1	172 43.0	N12 40.8
	16	227 15.4	103 27.2	N18 28.0	102 50.0	N20 41.0	44 04.7	S 0 10.4	187 45.5	N12 40.8
	17	242 17.9	118 26.8	N18 27.5	117 50.8	N20 40.6	59 06.7	S 0 10.6	202 48.0	N12 40.8
	18	257 20.3	133 26.4	N18 27.1	132 51.7	N20 40.3	74 08.6	S 0 10.8	217 50.5	N12 40.7
	19	272 22.8	148 26.0	N18 26.7	147 52.5	N20 40.0	89 10.6	S 0 11.0	232 53.1	N12 40.7
	20	287 25.3	163 25.6	N18 26.3	162 53.3	N20 39.7	104 12.6	S 0 11.2	247 55.6	N12 40.7
	21	302 27.7	178 25.2	N18 25.8	177 54.1	N20 39.3	119 14.6	S 0 11.4	262 58.1	N12 40.6
	22	317 30.2	193 24.8	N18 25.4	192 54.9	N20 39.0	134 16.6	S 0 11.6	278 00.6	N12 40.6
	23	332 32.6	208 24.4	N18 25.0	207 55.7	N20 38.7	149 18.5	S 0 11.8	293 03.2	N12 40.6
8	0	347 35.1	223 24.0	N18 24.5	222 56.6	N20 38.3	164 20.5	S 0 12.0	308 05.7	N12 40.5
	1	2 37.6	238 23.6	N18 24.1	237 57.4	N20 38.0	179 22.5	S 0 12.3	323 08.2	N12 40.5
	2	17 40.0	253 23.2	N18 23.7	252 58.2	N20 37.7	194 24.5	S 0 12.5	338 10.8	N12 40.5
	3	32 42.5	268 22.8	N18 23.2	267 59.0	N20 37.4	209 26.5	S 0 12.7	353 13.3	N12 40.5
	4	47 45.0	283 22.4	N18 22.8	282 59.8	N20 37.0	224 28.5	S 0 12.9	8 15.8	N12 40.4
F	5	62 47.4	298 22.0	N18 22.4	298 00.6	N20 36.7	239 30.4	S 0 13.1	23 18.4	N12 40.4
R										
I	6	77 49.9	313 21.6	N18 21.9	313 01.5	N20 36.4	254 32.4	S 0 13.3	38 20.9	N12 40.4
D	7	92 52.4	328 21.2	N18 21.5	328 02.3	N20 36.0	269 34.4	S 0 13.5	53 23.4	N12 40.3
A	8	107 54.8	343 20.8	N18 21.1	343 03.1	N20 35.7	284 36.4	S 0 13.7	68 25.9	N12 40.3
Y	9	122 57.3	358 20.3	N18 20.6	358 03.9	N20 35.4	299 38.4	S 0 13.9	83 28.5	N12 40.3
	10	137 59.7	13 19.9	N18 20.2	13 04.7	N20 35.0	314 40.3	S 0 14.1	98 31.0	N12 40.2
	11	153 02.2	28 19.5	N18 19.7	28 05.6	N20 34.7	329 42.3	S 0 14.4	113 33.5	N12 40.2
	12	168 04.7	43 19.1	N18 19.3	43 06.4	N20 34.4	344 44.3	S 0 14.6	128 36.1	N12 40.2
	13	183 07.1	58 18.7	N18 18.9	58 07.2	N20 34.0	359 46.3	S 0 14.8	143 38.6	N12 40.2
	14	198 09.6	73 18.3	N18 18.4	73 08.0	N20 33.7	14 48.3	S 0 15.0	158 41.1	N12 40.1
	15	213 12.1	88 17.9	N18 18.0	88 08.8	N20 33.4	29 50.2	S 0 15.2	173 43.7	N12 40.1
	16	228 14.5	103 17.5	N18 17.5	103 09.7	N20 33.0	44 52.2	S 0 15.4	188 46.2	N12 40.1
	17	243 17.0	118 17.1	N18 17.1	118 10.5	N20 32.7	59 54.2	S 0 15.6	203 48.7	N12 40.0
	18	258 19.5	133 16.7	N18 16.6	133 11.3	N20 32.4	74 56.2	S 0 15.8	218 51.3	N12 40.0
	19	273 21.9	148 16.3	N18 16.2	148 12.1	N20 32.0	89 58.2	S 0 16.0	233 53.8	N12 40.0
	20	288 24.4	163 15.9	N18 15.7	163 12.9	N20 31.7	105 00.1	S 0 16.3	248 56.3	N12 39.9
	21	303 26.9	178 15.5	N18 15.3	178 13.8	N20 31.4	120 02.1	S 0 16.5	263 58.9	N12 39.9
	22	318 29.3	193 15.1	N18 14.8	193 14.6	N20 31.0	135 04.1	S 0 16.7	279 01.4	N12 39.9
	23	333 31.8	208 14.6	N18 14.4	208 15.4	N20 30.7	150 06.1	S 0 16.9	294 03.9	N12 39.8
			v -0.4	d 0.4	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T	SUN		MOON					STARS		
d h	GHA	Dec	GHA	v	Dec	d	HP	Name	SHA	Dec
	° '	° '	° '	'	° '	'	'		° '	° '
6 0	180 24.9	N 6 19.2	342 13.5	16.4	N 6 48.0	12.5	54.0	Acamar	315 09.3	S40 11.0
1	195 25.1	N 6 18.2	356 48.9	16.4	N 7 00.5	12.5	54.0	Achernar	335 17.6	S57 05.1
2	210 25.3	N 6 17.3	11 24.3	16.4	N 7 12.9	12.4	54.0	Acrux	172 57.3	S63 15.6
3	225 25.5	N 6 16.4	25 59.6	16.3	N 7 25.3	12.4	54.0	Adhara	255 03.7	S29 00.5
4	240 25.7	N 6 15.4	40 34.9	16.3	N 7 37.7	12.4	54.0	Albireo	67 01.4	N28 01.5
W 5	255 25.9	N 6 14.5	55 10.2	16.3	N 7 50.0	12.3	54.0			
E								Aldebaran	290 36.1	N16 34.1
D 6	270 26.1	N 6 13.6	69 45.5	16.3	N 8 02.3	12.3	54.0	Alioth	166 10.9	N55 48.4
N 7	285 26.4	N 6 12.6	84 20.7	16.2	N 8 14.6	12.3	54.1	Alkaid	152 50.1	N49 10.4
E 8	300 26.6	N 6 11.7	98 55.9	16.2	N 8 26.9	12.3	54.1	Al Na-ir	27 28.7	S46 49.2
S 9	315 26.8	N 6 10.8	113 31.1	16.2	N 8 39.1	12.2	54.1	Alnilam	275 34.7	S 1 10.9
D 10	330 27.0	N 6 09.8	128 06.2	16.1	N 8 51.3	12.2	54.1			
A 11	345 27.2	N 6 08.9	142 41.3	16.1	N 9 03.5	12.2	54.1	Alphard	217 45.1	S 8 46.9
Y								Alphecca	126 01.3	N26 37.3
12	0 27.4	N 6 08.0	157 16.3	16.1	N 9 15.7	12.1	54.1	Alpheratz	357 31.3	N29 15.1
13	15 27.6	N 6 07.0	171 51.3	16.0	N 9 27.8	12.1	54.1	Altair	61 56.8	N 8 56.9
14	30 27.9	N 6 06.1	186 26.3	16.0	N 9 39.8	12.1	54.1	Ankaa	353 03.8	S42 08.8
15	45 28.1	N 6 05.2	201 01.2	15.9	N 9 51.9	12.0	54.1			
16	60 28.3	N 6 04.2	215 36.1	15.9	N10 03.9	12.0	54.1	Antares	112 12.2	S26 29.8
17	75 28.5	N 6 03.3	230 11.0	15.9	N10 15.8	12.0	54.1	Arcturus	145 45.4	N19 02.1
								Atria	107 03.8	S69 05.0
18	90 28.7	N 6 02.4	244 45.8	15.8	N10 27.8	11.9	54.1	Avior	234 13.9	S59 35.9
19	105 28.9	N 6 01.4	259 20.6	15.8	N10 39.7	11.9	54.1	Bellatrix	278 19.7	N 6 22.6
20	120 29.1	N 6 00.5	273 55.3	15.7	N10 51.5	11.9	54.1			
21	135 29.4	N 5 59.5	288 30.0	15.7	N11 03.3	11.8	54.2	Betelgeuse	270 48.9	N 7 24.8
22	150 29.6	N 5 58.6	303 04.7	15.6	N11 15.1	11.8	54.2	Canopus	263 51.2	S52 42.4
23	165 29.8	N 5 57.7	317 39.3	15.6	N11 26.9	11.7	54.2	Capella	280 17.5	N46 01.5
								Castor	245 53.5	N31 49.4
7 0	180 30.0	N 5 56.7	332 13.8	15.6	N11 38.5	11.7	54.2	Deneb	49 23.3	N45 23.3
1	195 30.2	N 5 55.8	346 48.4	15.5	N11 50.2	11.7	54.2			
2	210 30.4	N 5 54.9	1 22.8	15.5	N12 01.8	11.6	54.2	Denebola	182 22.2	N14 24.7
3	225 30.6	N 5 53.9	15 57.2	15.4	N12 13.4	11.6	54.2	Diphda	348 44.0	S17 49.5
4	240 30.9	N 5 53.0	30 31.6	15.4	N12 24.9	11.5	54.2	Dubhe	193 38.1	N61 35.7
T 5	255 31.1	N 5 52.1	45 05.9	15.3	N12 36.4	11.5	54.2	Elnath	277 58.2	N28 37.8
H								Eltanin	90 40.7	N51 29.4
U 6	270 31.3	N 5 51.1	59 40.2	15.3	N12 47.8	11.4	54.2			
R 7	285 31.5	N 5 50.2	74 14.4	15.2	N12 59.2	11.4	54.2	Enif	33 35.5	N10 00.6
S 8	300 31.7	N 5 49.2	88 48.6	15.2	N13 10.5	11.3	54.3	Fomalhaut	15 10.9	S29 28.0
D 9	315 31.9	N 5 48.3	103 22.7	15.1	N13 21.8	11.3	54.3	Gacrux	171 48.8	S57 16.6
A 10	330 32.1	N 5 47.4	117 56.8	15.1	N13 33.0	11.2	54.3	Gienah	175 40.8	S17 42.1
Y 11	345 32.4	N 5 46.4	132 30.8	15.0	N13 44.2	11.2	54.3	Hadar	148 32.2	S60 30.9
12	0 32.6	N 5 45.5	147 04.7	15.0	N13 55.4	11.1	54.3	Hamal	327 47.6	N23 36.0
13	15 32.8	N 5 44.5	161 38.6	14.9	N14 06.5	11.1	54.3	Kaus Austr.	83 28.4	S34 22.3
14	30 33.0	N 5 43.6	176 12.5	14.8	N14 17.5	11.0	54.3	Kochab	137 20.8	N74 02.5
15	45 33.2	N 5 42.7	190 46.2	14.8	N14 28.5	11.0	54.3	Markab	13 26.6	N15 21.8
16	60 33.4	N 5 41.7	205 20.0	14.7	N14 39.4	10.9	54.3	Menkar	314 02.8	N 4 12.3
17	75 33.7	N 5 40.8	219 53.6	14.7	N14 50.3	10.9	54.4			
								Menkent	147 54.3	S36 30.8
18	90 33.9	N 5 39.9	234 27.2	14.6	N15 01.1	10.8	54.4	Miaplacidus	221 38.3	S69 50.0
19	105 34.1	N 5 38.9	249 00.8	14.6	N15 11.8	10.8	54.4	Mirfak	308 23.8	N49 57.7
20	120 34.3	N 5 38.0	263 34.3	14.5	N15 22.5	10.7	54.4	Nunki	75 43.9	S26 15.6
21	135 34.5	N 5 37.0	278 07.7	14.4	N15 33.2	10.6	54.4	Peacock	53 00.5	S56 38.6
22	150 34.7	N 5 36.1	292 41.1	14.4	N15 43.7	10.6	54.4			
23	165 35.0	N 5 35.2	307 14.4	14.3	N15 54.3	10.5	54.4	Polaris	315 07.0	N89 22.3
								Pollux	243 13.9	N27 57.3
8 0	180 35.2	N 5 34.2	321 47.6	14.2	N16 04.7	10.5	54.5	Procyon	244 47.9	N 5 09.1
1	195 35.4	N 5 33.3	336 20.8	14.2	N16 15.1	10.4	54.5	Rasalhague	95 55.8	N12 32.6
2	210 35.6	N 5 32.3	350 53.9	14.1	N16 25.4	10.3	54.5	Regulus	207 31.6	N11 49.6
3	225 35.8	N 5 31.4	5 27.0	14.0	N16 35.7	10.3	54.5			
4	240 36.0	N 5 30.5	19 60.0	14.0	N16 45.9	10.2	54.5	Rigel	281 01.0	S 8 09.9
F 5	255 36.3	N 5 29.5	34 32.9	13.9	N16 56.0	10.1	54.5	Rigil Kent	139 36.6	S60 57.4
R								Sabik	101 59.3	S15 45.6
I 6	270 36.5	N 5 28.6	49 05.7	13.9	N17 06.1	10.1	54.5	Schedar	349 27.0	N56 41.7
D 7	285 36.7	N 5 27.6	63 38.5	13.8	N17 16.1	10.0	54.6	Shaula	96 06.2	S37 07.5
A 8	300 36.9	N 5 26.7	78 11.2	13.7	N17 26.1	9.9	54.6			
Y 9	315 37.1	N 5 25.7	92 43.9	13.6	N17 35.9	9.9	54.6	Sirius	258 23.8	S16 45.2
10	330 37.3	N 5 24.8	107 16.4	13.6	N17 45.7	9.8	54.6	Spica	158 19.4	S11 18.7
11	345 37.6	N 5 23.9	121 49.0	13.5	N17 55.5	9.7	54.6	Suhail	222 44.4	S43 32.8
								Vega	80 31.0	N38 48.9
12	0 37.8	N 5 22.9	136 21.4	13.4	N18 05.1	9.7	54.6	Zuben-ubi	136 53.8	S16 09.7
13	15 38.0	N 5 22.0	150 53.8	13.4	N18 14.7	9.6	54.7			
14	30 38.2	N 5 21.0	165 26.1	13.3	N18 24.2	9.5	54.7			
15	45 38.4	N 5 20.1	179 58.3	13.2	N18 33.6	9.4	54.7			
16	60 38.6	N 5 19.1	194 30.4	13.2	N18 43.0	9.4	54.7			
17	75 38.9	N 5 18.2	209 02.5	13.1	N18 52.3	9.3	54.7			
18	90 39.1	N 5 17.3	223 34.5	13.0	N19 01.5	9.2	54.7			
19	105 39.3	N 5 16.3	238 06.5	12.9	N19 10.6	9.1	54.8			
20	120 39.5	N 5 15.4	252 38.3	12.9	N19 19.6	9.0	54.8			
21	135 39.7	N 5 14.4	267 10.1	12.8	N19 28.6	9.0	54.8			
22	150 39.9	N 5 13.5	281 41.8	12.7	N19 37.5	8.9	54.8			
23	165 40.2	N 5 12.5	296 13.5	12.6	N19 46.3	8.8	54.8			
	S.D. 15.9	d 0.9	S.D. 14.7		14.8		14.9			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
9	0	348 34.2	223 14.2	N18 13.9	223 16.2	N20 30.4	165 08.1	S 0 17.1	309 06.5	N12 39.8
	1	3 36.7	238 13.8	N18 13.5	238 17.0	N20 30.0	180 10.0	S 0 17.3	324 09.0	N12 39.8
	2	18 39.2	253 13.4	N18 13.0	253 17.9	N20 29.7	195 12.0	S 0 17.5	339 11.5	N12 39.7
	3	33 41.6	268 13.0	N18 12.6	268 18.7	N20 29.4	210 14.0	S 0 17.7	354 14.1	N12 39.7
	4	48 44.1	283 12.6	N18 12.1	283 19.5	N20 29.0	225 16.0	S 0 17.9	9 16.6	N12 39.7
S	5	63 46.6	298 12.2	N18 11.7	298 20.3	N20 28.7	240 18.0	S 0 18.2	24 19.1	N12 39.7
A										
T	6	78 49.0	313 11.8	N18 11.2	313 21.2	N20 28.4	255 19.9	S 0 18.4	39 21.7	N12 39.6
U	7	93 51.5	328 11.4	N18 10.8	328 22.0	N20 28.0	270 21.9	S 0 18.6	54 24.2	N12 39.6
R	8	108 54.0	343 11.0	N18 10.3	343 22.8	N20 27.7	285 23.9	S 0 18.8	69 26.7	N12 39.6
D	9	123 56.4	358 10.6	N18 09.8	358 23.6	N20 27.3	300 25.9	S 0 19.0	84 29.3	N12 39.5
A	10	138 58.9	13 10.1	N18 09.4	13 24.5	N20 27.0	315 27.9	S 0 19.2	99 31.8	N12 39.5
Y	11	154 01.3	28 09.7	N18 08.9	28 25.3	N20 26.7	330 29.8	S 0 19.4	114 34.3	N12 39.5
	12	169 03.8	43 09.3	N18 08.5	43 26.1	N20 26.3	345 31.8	S 0 19.6	129 36.9	N12 39.4
	13	184 06.3	58 08.9	N18 08.0	58 26.9	N20 26.0	0 33.8	S 0 19.8	144 39.4	N12 39.4
	14	199 08.7	73 08.5	N18 07.5	73 27.8	N20 25.7	15 35.8	S 0 20.1	159 41.9	N12 39.4
	15	214 11.2	88 08.1	N18 07.1	88 28.6	N20 25.3	30 37.8	S 0 20.3	174 44.5	N12 39.3
	16	229 13.7	103 07.7	N18 06.6	103 29.4	N20 25.0	45 39.7	S 0 20.5	189 47.0	N12 39.3
	17	244 16.1	118 07.3	N18 06.1	118 30.2	N20 24.6	60 41.7	S 0 20.7	204 49.5	N12 39.3
	18	259 18.6	133 06.9	N18 05.7	133 31.1	N20 24.3	75 43.7	S 0 20.9	219 52.1	N12 39.2
	19	274 21.1	148 06.5	N18 05.2	148 31.9	N20 24.0	90 45.7	S 0 21.1	234 54.6	N12 39.2
	20	289 23.5	163 06.0	N18 04.7	163 32.7	N20 23.6	105 47.6	S 0 21.3	249 57.1	N12 39.2
	21	304 26.0	178 05.6	N18 04.3	178 33.5	N20 23.3	120 49.6	S 0 21.5	264 59.7	N12 39.1
	22	319 28.5	193 05.2	N18 03.8	193 34.4	N20 22.9	135 51.6	S 0 21.8	280 02.2	N12 39.1
	23	334 30.9	208 04.8	N18 03.3	208 35.2	N20 22.6	150 53.6	S 0 22.0	295 04.8	N12 39.1
10	0	349 33.4	223 04.4	N18 02.8	223 36.0	N20 22.3	165 55.6	S 0 22.2	310 07.3	N12 39.0
	1	4 35.8	238 04.0	N18 02.4	238 36.9	N20 21.9	180 57.5	S 0 22.4	325 09.8	N12 39.0
	2	19 38.3	253 03.6	N18 01.9	253 37.7	N20 21.6	195 59.5	S 0 22.6	340 12.4	N12 39.0
	3	34 40.8	268 03.2	N18 01.4	268 38.5	N20 21.2	211 01.5	S 0 22.8	355 14.9	N12 38.9
	4	49 43.2	283 02.8	N18 01.0	283 39.3	N20 20.9	226 03.5	S 0 23.0	10 17.4	N12 38.9
S	5	64 45.7	298 02.3	N18 00.5	298 40.2	N20 20.6	241 05.5	S 0 23.2	25 20.0	N12 38.9
U										
N	6	79 48.2	313 01.9	N17 60.0	313 41.0	N20 20.2	256 07.4	S 0 23.4	40 22.5	N12 38.8
D	7	94 50.6	328 01.5	N17 59.5	328 41.8	N20 19.9	271 09.4	S 0 23.7	55 25.1	N12 38.8
A	8	109 53.1	343 01.1	N17 59.0	343 42.7	N20 19.5	286 11.4	S 0 23.9	70 27.6	N12 38.8
Y	9	124 55.6	358 00.7	N17 58.6	358 43.5	N20 19.2	301 13.4	S 0 24.1	85 30.1	N12 38.7
	10	139 58.0	13 00.3	N17 58.1	13 44.3	N20 18.8	316 15.3	S 0 24.3	100 32.7	N12 38.7
	11	155 00.5	27 59.9	N17 57.6	28 45.1	N20 18.5	331 17.3	S 0 24.5	115 35.2	N12 38.7
	12	170 03.0	42 59.5	N17 57.1	43 46.0	N20 18.2	346 19.3	S 0 24.7	130 37.8	N12 38.6
	13	185 05.4	57 59.1	N17 56.6	58 46.8	N20 17.8	1 21.3	S 0 24.9	145 40.3	N12 38.6
	14	200 07.9	72 58.6	N17 56.1	73 47.6	N20 17.5	16 23.3	S 0 25.1	160 42.8	N12 38.6
	15	215 10.3	87 58.2	N17 55.7	88 48.5	N20 17.1	31 25.2	S 0 25.3	175 45.4	N12 38.5
	16	230 12.8	102 57.8	N17 55.2	103 49.3	N20 16.8	46 27.2	S 0 25.6	190 47.9	N12 38.5
	17	245 15.3	117 57.4	N17 54.7	118 50.1	N20 16.4	61 29.2	S 0 25.8	205 50.5	N12 38.5
	18	260 17.7	132 57.0	N17 54.2	133 51.0	N20 16.1	76 31.2	S 0 26.0	220 53.0	N12 38.4
	19	275 20.2	147 56.6	N17 53.7	148 51.8	N20 15.8	91 33.2	S 0 26.2	235 55.5	N12 38.4
	20	290 22.7	162 56.2	N17 53.2	163 52.6	N20 15.4	106 35.1	S 0 26.4	250 58.1	N12 38.4
	21	305 25.1	177 55.7	N17 52.7	178 53.5	N20 15.1	121 37.1	S 0 26.6	266 00.6	N12 38.3
	22	320 27.6	192 55.3	N17 52.2	193 54.3	N20 14.7	136 39.1	S 0 26.8	281 03.2	N12 38.3
	23	335 30.1	207 54.9	N17 51.7	208 55.1	N20 14.4	151 41.1	S 0 27.0	296 05.7	N12 38.3
11	0	350 32.5	222 54.5	N17 51.3	223 55.9	N20 14.0	166 43.0	S 0 27.3	311 08.2	N12 38.2
	1	5 35.0	237 54.1	N17 50.8	238 56.8	N20 13.7	181 45.0	S 0 27.5	326 10.8	N12 38.2
	2	20 37.5	252 53.7	N17 50.3	253 57.6	N20 13.3	196 47.0	S 0 27.7	341 13.3	N12 38.2
	3	35 39.9	267 53.3	N17 49.8	268 58.4	N20 13.0	211 49.0	S 0 27.9	356 15.9	N12 38.1
	4	50 42.4	282 52.9	N17 49.3	283 59.3	N20 12.6	226 51.0	S 0 28.1	11 18.4	N12 38.1
M	5	65 44.8	297 52.4	N17 48.8	299 00.1	N20 12.3	241 52.9	S 0 28.3	26 20.9	N12 38.1
O										
N	6	80 47.3	312 52.0	N17 48.3	314 01.0	N20 12.0	256 54.9	S 0 28.5	41 23.5	N12 38.0
D	7	95 49.8	327 51.6	N17 47.8	329 01.8	N20 11.6	271 56.9	S 0 28.7	56 26.0	N12 38.0
A	8	110 52.2	342 51.2	N17 47.3	344 02.6	N20 11.3	286 58.9	S 0 29.0	71 28.6	N12 38.0
Y	9	125 54.7	357 50.8	N17 46.8	359 03.5	N20 10.9	302 00.8	S 0 29.2	86 31.1	N12 37.9
	10	140 57.2	12 50.4	N17 46.3	14 04.3	N20 10.6	317 02.8	S 0 29.4	101 33.7	N12 37.9
	11	155 59.6	27 50.0	N17 45.8	29 05.1	N20 10.2	332 04.8	S 0 29.6	116 36.2	N12 37.9
	12	171 02.1	42 49.5	N17 45.3	44 06.0	N20 09.9	347 06.8	S 0 29.8	131 38.7	N12 37.8
	13	186 04.6	57 49.1	N17 44.8	59 06.8	N20 09.5	2 08.7	S 0 30.0	146 41.3	N12 37.8
	14	201 07.0	72 48.7	N17 44.3	74 07.6	N20 09.2	17 10.7	S 0 30.2	161 43.8	N12 37.8
	15	216 09.5	87 48.3	N17 43.8	89 08.5	N20 08.8	32 12.7	S 0 30.4	176 46.4	N12 37.7
	16	231 11.9	102 47.9	N17 43.2	104 09.3	N20 08.5	47 14.7	S 0 30.6	191 48.9	N12 37.7
	17	246 14.4	117 47.5	N17 42.7	119 10.1	N20 08.1	62 16.7	S 0 30.9	206 51.5	N12 37.7
	18	261 16.9	132 47.1	N17 42.2	134 11.0	N20 07.8	77 18.6	S 0 31.1	221 54.0	N12 37.6
	19	276 19.3	147 46.6	N17 41.7	149 11.8	N20 07.4	92 20.6	S 0 31.3	236 56.6	N12 37.6
	20	291 21.8	162 46.2	N17 41.2	164 12.7	N20 07.1	107 22.6	S 0 31.5	251 59.1	N12 37.6
	21	306 24.3	177 45.8	N17 40.7	179 13.5	N20 06.7	122 24.6	S 0 31.7	267 01.6	N12 37.5
	22	321 26.7	192 45.4	N17 40.2	194 14.3	N20 06.4	137 26.5	S 0 31.9	282 04.2	N12 37.5
	23	336 29.2	207 45.0	N17 39.7	209 15.2	N20 06.0	152 28.5	S 0 32.1	297 06.7	N12 37.5
			v -0.4	d 0.5	v 0.8	d 0.3	v 2.0	d 0.2	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
9	0	180 40.4	N 5 11.6	310 45.0	12.6	N19 55.0	8.7	54.8
	1	195 40.6	N 5 10.7	325 16.5	12.5	N20 03.6	8.6	54.9
	2	210 40.8	N 5 09.7	339 47.9	12.4	N20 12.2	8.5	54.9
	3	225 41.0	N 5 08.8	354 19.2	12.3	N20 20.7	8.5	54.9
	4	240 41.3	N 5 07.8	8 50.5	12.3	N20 29.0	8.4	54.9
S	5	255 41.5	N 5 06.9	23 21.7	12.2	N20 37.3	8.3	54.9
A								
T	6	270 41.7	N 5 05.9	37 52.8	12.1	N20 45.5	8.2	55.0
U	7	285 41.9	N 5 05.0	52 23.8	12.0	N20 53.6	8.1	55.0
R	8	300 42.1	N 5 04.0	66 54.8	11.9	N21 01.7	8.0	55.0
D	9	315 42.3	N 5 03.1	81 25.6	11.9	N21 09.6	7.9	55.0
A	10	330 42.6	N 5 02.1	95 56.4	11.8	N21 17.4	7.8	55.1
Y	11	345 42.8	N 5 01.2	110 27.1	11.7	N21 25.2	7.7	55.1
	12	0 43.0	N 5 00.3	124 57.8	11.6	N21 32.8	7.6	55.1
	13	15 43.2	N 4 59.3	139 28.3	11.6	N21 40.4	7.6	55.1
	14	30 43.4	N 4 58.4	153 58.8	11.5	N21 47.8	7.5	55.1
	15	45 43.7	N 4 57.4	168 29.2	11.4	N21 55.2	7.4	55.2
	16	60 43.9	N 4 56.5	182 59.5	11.3	N22 02.4	7.3	55.2
	17	75 44.1	N 4 55.5	197 29.7	11.2	N22 09.6	7.2	55.2
	18	90 44.3	N 4 54.6	211 59.9	11.2	N22 16.6	7.1	55.2
	19	105 44.5	N 4 53.6	226 30.0	11.1	N22 23.6	7.0	55.3
	20	120 44.7	N 4 52.7	240 60.0	11.0	N22 30.5	6.9	55.3
	21	135 45.0	N 4 51.7	255 29.9	10.9	N22 37.2	6.8	55.3
	22	150 45.2	N 4 50.8	269 59.7	10.8	N22 43.9	6.6	55.3
	23	165 45.4	N 4 49.8	284 29.5	10.8	N22 50.4	6.5	55.3
10	0	180 45.6	N 4 48.9	298 59.2	10.7	N22 56.8	6.4	55.4
	1	195 45.8	N 4 47.9	313 28.8	10.6	N23 03.2	6.3	55.4
	2	210 46.1	N 4 47.0	327 58.3	10.5	N23 09.4	6.2	55.4
	3	225 46.3	N 4 46.0	342 27.8	10.4	N23 15.5	6.1	55.4
	4	240 46.5	N 4 45.1	356 57.1	10.4	N23 21.5	6.0	55.5
S	5	255 46.7	N 4 44.1	11 26.4	10.3	N23 27.4	5.9	55.5
U								
N	6	270 46.9	N 4 43.2	25 55.6	10.2	N23 33.1	5.8	55.5
D	7	285 47.2	N 4 42.2	40 24.8	10.1	N23 38.8	5.7	55.6
A	8	300 47.4	N 4 41.3	54 53.8	10.1	N23 44.4	5.5	55.6
Y	9	315 47.6	N 4 40.3	69 22.8	10.0	N23 49.8	5.4	55.6
	10	330 47.8	N 4 39.4	83 51.7	9.9	N23 55.1	5.3	55.6
	11	345 48.0	N 4 38.5	98 20.5	9.8	N24 00.3	5.2	55.7
	12	0 48.3	N 4 37.5	112 49.3	9.8	N24 05.4	5.1	55.7
	13	15 48.5	N 4 36.6	127 18.0	9.7	N24 10.4	5.0	55.7
	14	30 48.7	N 4 35.6	141 46.6	9.6	N24 15.2	4.8	55.7
	15	45 48.9	N 4 34.7	156 15.1	9.5	N24 19.9	4.7	55.8
	16	60 49.1	N 4 33.7	170 43.6	9.5	N24 24.5	4.6	55.8
	17	75 49.4	N 4 32.8	185 11.9	9.4	N24 29.0	4.5	55.8
	18	90 49.6	N 4 31.8	199 40.2	9.3	N24 33.4	4.4	55.9
	19	105 49.8	N 4 30.8	214 08.5	9.2	N24 37.6	4.2	55.9
	20	120 50.0	N 4 29.9	228 36.6	9.2	N24 41.7	4.1	55.9
	21	135 50.2	N 4 28.9	243 04.7	9.1	N24 45.7	4.0	55.9
	22	150 50.5	N 4 28.0	257 32.7	9.0	N24 49.5	3.9	56.0
	23	165 50.7	N 4 27.0	272 00.7	8.9	N24 53.3	3.7	56.0
11	0	180 50.9	N 4 26.1	286 28.6	8.9	N24 56.8	3.6	56.0
	1	195 51.1	N 4 25.1	300 56.4	8.8	N25 00.3	3.5	56.1
	2	210 51.3	N 4 24.2	315 24.1	8.7	N25 03.6	3.3	56.1
	3	225 51.6	N 4 23.2	329 51.8	8.7	N25 06.9	3.2	56.1
	4	240 51.8	N 4 22.3	344 19.4	8.6	N25 09.9	3.1	56.2
M	5	255 52.0	N 4 21.3	358 46.9	8.5	N25 12.9	2.9	56.2
O								
N	6	270 52.2	N 4 20.4	13 14.4	8.5	N25 15.7	2.8	56.2
D	7	285 52.4	N 4 19.4	27 41.8	8.4	N25 18.3	2.7	56.2
A	8	300 52.7	N 4 18.5	42 09.2	8.3	N25 20.9	2.5	56.3
Y	9	315 52.9	N 4 17.5	56 36.4	8.3	N25 23.3	2.4	56.3
	10	330 53.1	N 4 16.6	71 03.7	8.2	N25 25.5	2.3	56.3
	11	345 53.3	N 4 15.6	85 30.8	8.2	N25 27.7	2.1	56.4
	12	0 53.5	N 4 14.7	99 57.9	8.1	N25 29.6	2.0	56.4
	13	15 53.8	N 4 13.7	114 25.0	8.0	N25 31.5	1.8	56.4
	14	30 54.0	N 4 12.8	128 51.9	8.0	N25 33.2	1.7	56.5
	15	45 54.2	N 4 11.8	143 18.9	7.9	N25 34.7	1.6	56.5
	16	60 54.4	N 4 10.9	157 45.7	7.9	N25 36.2	1.4	56.5
	17	75 54.6	N 4 09.9	172 12.6	7.8	N25 37.4	1.3	56.6
	18	90 54.9	N 4 08.9	186 39.3	7.8	N25 38.6	1.1	56.6
	19	105 55.1	N 4 08.0	201 06.0	7.7	N25 39.6	1.0	56.6
	20	120 55.3	N 4 07.0	215 32.7	7.7	N25 40.4	0.8	56.7
	21	135 55.5	N 4 06.1	229 59.3	7.6	N25 41.1	0.7	56.7
	22	150 55.8	N 4 05.1	244 25.9	7.6	N25 41.7	0.6	56.7
	23	165 56.0	N 4 04.2	258 52.4	7.5	N25 42.1	0.4	56.8
		S.D. 15.9	d 0.9	S.D. 15.0		15.2		15.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.3	S40 11.1
Achernar	335 17.6	S57 05.1
Acrux	172 57.3	S63 15.6
Adhara	255 03.7	S29 00.5
Albireo	67 01.4	N28 01.5
Aldebaran	290 36.1	N16 34.1
Alioth	166 10.9	N55 48.4
Alkaid	152 50.1	N49 10.4
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.7	S 1 10.9
Alphard	217 45.1	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.1
Altair	61 56.8	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.8	S69 05.0
Avior	234 13.9	S59 35.9
Bellatrix	278 19.7	N 6 22.6
Betelgeuse	270 48.9	N 7 24.8
Canopus	263 51.2	S52 42.4
Capella	280 17.5	N46 01.4
Castor	245 53.5	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.1	N61 35.7
Elnath	277 58.1	N28 37.8
Eltanin	90 40.7	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.6
Gienah	175 40.8	S17 42.1
Hadar	148 32.2	S60 30.9
Hamal	327 47.6	N23 36.0
Kaus Austr.	83 28.4	S34 22.3
Kochab	137 20.9	N74 02.5
Markab	13 26.6	N15 21.8
Menkar	314 02.8	N 4 12.3
Menkent	147 54.3	S36 30.8
Miaplacidus	221 38.2	S69 50.0
Mirfak	308 23.7	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 05.9	N89 22.3
Pollux	243 13.9	N27 57.3
Procyon	244 47.9	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.6	N11 49.6
Rigel	281 01.0	S 8 09.9
Rigil Kent	139 36.6	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 27.0	N56 41.7
Shaula	96 06.2	S37 07.5
Sirius	258 23.7	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.4	S43 32.8
Vega	80 31.0	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
12	0	351 31.7	222 44.6	N17 39.2	224 16.0	N20 05.7	167 30.5	S 0 32.3	312 09.3	N12 37.4
	1	6 34.1	237 44.2	N17 38.6	239 16.8	N20 05.3	182 32.5	S 0 32.6	327 11.8	N12 37.4
	2	21 36.6	252 43.7	N17 38.1	254 17.7	N20 05.0	197 34.5	S 0 32.8	342 14.4	N12 37.4
	3	36 39.1	267 43.3	N17 37.6	269 18.5	N20 04.6	212 36.4	S 0 33.0	357 16.9	N12 37.3
	4	51 41.5	282 42.9	N17 37.1	284 19.4	N20 04.3	227 38.4	S 0 33.2	12 19.5	N12 37.3
T	5	66 44.0	297 42.5	N17 36.6	299 20.2	N20 03.9	242 40.4	S 0 33.4	27 22.0	N12 37.2
U										
E	6	81 46.4	312 42.1	N17 36.1	314 21.0	N20 03.6	257 42.4	S 0 33.6	42 24.6	N12 37.2
S	7	96 48.9	327 41.7	N17 35.5	329 21.9	N20 03.2	272 44.3	S 0 33.8	57 27.1	N12 37.2
D	8	111 51.4	342 41.3	N17 35.0	344 22.7	N20 02.9	287 46.3	S 0 34.0	72 29.6	N12 37.1
A	9	126 53.8	357 40.8	N17 34.5	359 23.6	N20 02.5	302 48.3	S 0 34.3	87 32.2	N12 37.1
Y	10	141 56.3	12 40.4	N17 34.0	14 24.4	N20 02.2	317 50.3	S 0 34.5	102 34.7	N12 37.1
	11	156 58.8	27 40.0	N17 33.4	29 25.2	N20 01.8	332 52.2	S 0 34.7	117 37.3	N12 37.0
	12	172 01.2	42 39.6	N17 32.9	44 26.1	N20 01.5	347 54.2	S 0 34.9	132 39.8	N12 37.0
	13	187 03.7	57 39.2	N17 32.4	59 26.9	N20 01.1	2 56.2	S 0 35.1	147 42.4	N12 37.0
	14	202 06.2	72 38.8	N17 31.9	74 27.8	N20 00.7	17 58.2	S 0 35.3	162 44.9	N12 36.9
	15	217 08.6	87 38.3	N17 31.3	89 28.6	N20 00.4	33 00.1	S 0 35.5	177 47.5	N12 36.9
	16	232 11.1	102 37.9	N17 30.8	104 29.4	N20 00.0	48 02.1	S 0 35.7	192 50.0	N12 36.9
	17	247 13.6	117 37.5	N17 30.3	119 30.3	N19 59.7	63 04.1	S 0 35.9	207 52.6	N12 36.8
	18	262 16.0	132 37.1	N17 29.8	134 31.1	N19 59.3	78 06.1	S 0 36.2	222 55.1	N12 36.8
	19	277 18.5	147 36.7	N17 29.2	149 32.0	N19 59.0	93 08.0	S 0 36.4	237 57.7	N12 36.8
	20	292 20.9	162 36.3	N17 28.7	164 32.8	N19 58.6	108 10.0	S 0 36.6	253 00.2	N12 36.7
	21	307 23.4	177 35.8	N17 28.2	179 33.7	N19 58.3	123 12.0	S 0 36.8	268 02.8	N12 36.7
	22	322 25.9	192 35.4	N17 27.6	194 34.5	N19 57.9	138 14.0	S 0 37.0	283 05.3	N12 36.6
	23	337 28.3	207 35.0	N17 27.1	209 35.3	N19 57.6	153 16.0	S 0 37.2	298 07.9	N12 36.6
13	0	352 30.8	222 34.6	N17 26.6	224 36.2	N19 57.2	168 17.9	S 0 37.4	313 10.4	N12 36.6
	1	7 33.3	237 34.2	N17 26.0	239 37.0	N19 56.8	183 19.9	S 0 37.6	328 13.0	N12 36.5
	2	22 35.7	252 33.8	N17 25.5	254 37.9	N19 56.5	198 21.9	S 0 37.9	343 15.5	N12 36.5
	3	37 38.2	267 33.4	N17 25.0	269 38.7	N19 56.1	213 23.9	S 0 38.1	358 18.1	N12 36.5
	4	52 40.7	282 32.9	N17 24.4	284 39.6	N19 55.8	228 25.8	S 0 38.3	13 20.6	N12 36.4
W	5	67 43.1	297 32.5	N17 23.9	299 40.4	N19 55.4	243 27.8	S 0 38.5	28 23.2	N12 36.4
E										
D	6	82 45.6	312 32.1	N17 23.3	314 41.3	N19 55.1	258 29.8	S 0 38.7	43 25.7	N12 36.4
N	7	97 48.1	327 31.7	N17 22.8	329 42.1	N19 54.7	273 31.8	S 0 38.9	58 28.3	N12 36.3
E	8	112 50.5	342 31.3	N17 22.3	344 42.9	N19 54.4	288 33.7	S 0 39.1	73 30.8	N12 36.3
S	9	127 53.0	357 30.9	N17 21.7	359 43.8	N19 54.0	303 35.7	S 0 39.3	88 33.4	N12 36.2
D	10	142 55.4	12 30.4	N17 21.2	14 44.6	N19 53.6	318 37.7	S 0 39.6	103 35.9	N12 36.2
A	11	157 57.9	27 30.0	N17 20.6	29 45.5	N19 53.3	333 39.7	S 0 39.8	118 38.5	N12 36.2
Y										
	12	173 00.4	42 29.6	N17 20.1	44 46.3	N19 52.9	348 41.6	S 0 40.0	133 41.0	N12 36.1
	13	188 02.8	57 29.2	N17 19.5	59 47.2	N19 52.6	3 43.6	S 0 40.2	148 43.6	N12 36.1
	14	203 05.3	72 28.8	N17 19.0	74 48.0	N19 52.2	18 45.6	S 0 40.4	163 46.1	N12 36.1
	15	218 07.8	87 28.4	N17 18.4	89 48.9	N19 51.8	33 47.6	S 0 40.6	178 48.7	N12 36.0
	16	233 10.2	102 27.9	N17 17.9	104 49.7	N19 51.5	48 49.5	S 0 40.8	193 51.2	N12 36.0
	17	248 12.7	117 27.5	N17 17.3	119 50.6	N19 51.1	63 51.5	S 0 41.0	208 53.8	N12 36.0
	18	263 15.2	132 27.1	N17 16.8	134 51.4	N19 50.8	78 53.5	S 0 41.3	223 56.3	N12 35.9
	19	278 17.6	147 26.7	N17 16.2	149 52.3	N19 50.4	93 55.5	S 0 41.5	238 58.9	N12 35.9
	20	293 20.1	162 26.3	N17 15.7	164 53.1	N19 50.1	108 57.4	S 0 41.7	254 01.4	N12 35.8
	21	308 22.5	177 25.9	N17 15.1	179 54.0	N19 49.7	123 59.4	S 0 41.9	269 04.0	N12 35.8
	22	323 25.0	192 25.4	N17 14.6	194 54.8	N19 49.3	139 01.4	S 0 42.1	284 06.5	N12 35.8
	23	338 27.5	207 25.0	N17 14.0	209 55.7	N19 49.0	154 03.4	S 0 42.3	299 09.1	N12 35.7
14	0	353 29.9	222 24.6	N17 13.5	224 56.5	N19 48.6	169 05.3	S 0 42.5	314 11.6	N12 35.7
	1	8 32.4	237 24.2	N17 12.9	239 57.3	N19 48.2	184 07.3	S 0 42.7	329 14.2	N12 35.7
	2	23 34.9	252 23.8	N17 12.4	254 58.2	N19 47.9	199 09.3	S 0 43.0	344 16.7	N12 35.6
	3	38 37.3	267 23.4	N17 11.8	269 59.0	N19 47.5	214 11.3	S 0 43.2	359 19.3	N12 35.6
	4	53 39.8	282 22.9	N17 11.3	284 59.9	N19 47.2	229 13.2	S 0 43.4	14 21.9	N12 35.5
T	5	68 42.3	297 22.5	N17 10.7	300 00.7	N19 46.8	244 15.2	S 0 43.6	29 24.4	N12 35.5
H										
U	6	83 44.7	312 22.1	N17 10.1	315 01.6	N19 46.4	259 17.2	S 0 43.8	44 27.0	N12 35.5
R	7	98 47.2	327 21.7	N17 09.6	330 02.4	N19 46.1	274 19.2	S 0 44.0	59 29.5	N12 35.4
S	8	113 49.7	342 21.3	N17 09.0	345 03.3	N19 45.7	289 21.1	S 0 44.2	74 32.1	N12 35.4
D	9	128 52.1	357 20.8	N17 08.4	0 04.2	N19 45.4	304 23.1	S 0 44.4	89 34.6	N12 35.4
A	10	143 54.6	12 20.4	N17 07.9	15 05.0	N19 45.0	319 25.1	S 0 44.7	104 37.2	N12 35.3
Y	11	158 57.0	27 20.0	N17 07.3	30 05.9	N19 44.6	334 27.1	S 0 44.9	119 39.7	N12 35.3
	12	173 59.5	42 19.6	N17 06.8	45 06.7	N19 44.3	349 29.0	S 0 45.1	134 42.3	N12 35.2
	13	189 02.0	57 19.2	N17 06.2	60 07.6	N19 43.9	4 31.0	S 0 45.3	149 44.8	N12 35.2
	14	204 04.4	72 18.8	N17 05.6	75 08.4	N19 43.5	19 33.0	S 0 45.5	164 47.4	N12 35.2
	15	219 06.9	87 18.3	N17 05.1	90 09.3	N19 43.2	34 35.0	S 0 45.7	179 50.0	N12 35.1
	16	234 09.4	102 17.9	N17 04.5	105 10.1	N19 42.8	49 36.9	S 0 45.9	194 52.5	N12 35.1
	17	249 11.8	117 17.5	N17 03.9	120 11.0	N19 42.5	64 38.9	S 0 46.2	209 55.1	N12 35.1
	18	264 14.3	132 17.1	N17 03.3	135 11.8	N19 42.1	79 40.9	S 0 46.4	224 57.6	N12 35.0
	19	279 16.8	147 16.7	N17 02.8	150 12.7	N19 41.7	94 42.9	S 0 46.6	240 00.2	N12 35.0
	20	294 19.2	162 16.3	N17 02.2	165 13.5	N19 41.4	109 44.8	S 0 46.8	255 02.7	N12 34.9
	21	309 21.7	177 15.8	N17 01.6	180 14.4	N19 41.0	124 46.8	S 0 47.0	270 05.3	N12 34.9
	22	324 24.2	192 15.4	N17 01.1	195 15.2	N19 40.6	139 48.8	S 0 47.2	285 07.9	N12 34.9
	23	339 26.6	207 15.0	N17 00.5	210 16.1	N19 40.3	154 50.7	S 0 47.4	300 10.4	N12 34.8
			v -0.4	d 0.5	v 0.8	d 0.4	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
12	0	180 56.2	N 4 03.2	273 18.8	7.5	N25 42.4	0.3	56.8
	1	195 56.4	N 4 02.3	287 45.3	7.4	N25 42.5	0.1	56.8
	2	210 56.6	N 4 01.3	302 11.6	7.4	N25 42.5	0.0	56.9
	3	225 56.9	N 4 00.4	316 38.0	7.3	N25 42.3	0.2	56.9
	4	240 57.1	N 3 59.4	331 04.2	7.3	N25 42.0	0.3	56.9
T	5	255 57.3	N 3 58.4	345 30.5	7.2	N25 41.5	0.5	57.0
U								
E	6	270 57.5	N 3 57.5	359 56.7	7.2	N25 40.8	0.6	57.0
S	7	285 57.7	N 3 56.5	14 22.9	7.2	N25 40.1	0.8	57.1
D	8	300 58.0	N 3 55.6	28 49.0	7.1	N25 39.1	0.9	57.1
A	9	315 58.2	N 3 54.6	43 15.1	7.1	N25 38.1	1.1	57.1
Y	10	330 58.4	N 3 53.7	57 41.2	7.1	N25 36.8	1.2	57.2
	11	345 58.6	N 3 52.7	72 07.2	7.0	N25 35.5	1.4	57.2
	12	0 58.9	N 3 51.8	86 33.2	7.0	N25 33.9	1.5	57.2
	13	15 59.1	N 3 50.8	100 59.1	7.0	N25 32.2	1.7	57.3
	14	30 59.3	N 3 49.8	115 25.1	6.9	N25 30.4	1.8	57.3
	15	45 59.5	N 3 48.9	129 51.0	6.9	N25 28.4	2.0	57.3
	16	60 59.7	N 3 47.9	144 16.9	6.9	N25 26.3	2.1	57.4
	17	75 60.0	N 3 47.0	158 42.7	6.9	N25 23.9	2.3	57.4
	18	91 00.2	N 3 46.0	173 08.5	6.8	N25 21.5	2.5	57.5
	19	106 00.4	N 3 45.1	187 34.4	6.8	N25 18.9	2.6	57.5
	20	121 00.6	N 3 44.1	202 00.1	6.8	N25 16.1	2.8	57.5
	21	136 00.8	N 3 43.1	216 25.9	6.8	N25 13.2	2.9	57.6
	22	151 01.1	N 3 42.2	230 51.7	6.7	N25 10.1	3.1	57.6
	23	166 01.3	N 3 41.2	245 17.4	6.7	N25 06.9	3.2	57.6
13	0	181 01.5	N 3 40.3	259 43.1	6.7	N25 03.5	3.4	57.7
	1	196 01.7	N 3 39.3	274 08.8	6.7	N24 60.0	3.5	57.7
	2	211 02.0	N 3 38.4	288 34.5	6.7	N24 56.3	3.7	57.8
	3	226 02.2	N 3 37.4	303 00.1	6.7	N24 52.4	3.9	57.8
	4	241 02.4	N 3 36.4	317 25.8	6.7	N24 48.4	4.0	57.8
W	5	256 02.6	N 3 35.5	331 51.5	6.7	N24 44.2	4.2	57.9
E								
D	6	271 02.8	N 3 34.5	346 17.1	6.6	N24 39.9	4.3	57.9
N	7	286 03.1	N 3 33.6	0 42.7	6.6	N24 35.5	4.5	58.0
E	8	301 03.3	N 3 32.6	15 08.4	6.6	N24 30.8	4.6	58.0
S	9	316 03.5	N 3 31.7	29 34.0	6.6	N24 26.0	4.8	58.0
D	10	331 03.7	N 3 30.7	43 59.6	6.6	N24 21.1	4.9	58.1
A	11	346 04.0	N 3 29.7	58 25.2	6.6	N24 16.0	5.1	58.1
Y								
	12	1 04.2	N 3 28.8	72 50.9	6.6	N24 10.8	5.3	58.1
	13	16 04.4	N 3 27.8	87 16.5	6.6	N24 05.4	5.4	58.2
	14	31 04.6	N 3 26.9	101 42.1	6.6	N23 59.8	5.6	58.2
	15	46 04.8	N 3 25.9	116 07.7	6.6	N23 54.1	5.7	58.3
	16	61 05.1	N 3 24.9	130 33.3	6.6	N23 48.2	5.9	58.3
	17	76 05.3	N 3 24.0	144 59.0	6.6	N23 42.2	6.0	58.3
	18	91 05.5	N 3 23.0	159 24.6	6.6	N23 36.0	6.2	58.4
	19	106 05.7	N 3 22.1	173 50.3	6.6	N23 29.7	6.3	58.4
	20	121 06.0	N 3 21.1	188 15.9	6.7	N23 23.2	6.5	58.5
	21	136 06.2	N 3 20.1	202 41.6	6.7	N23 16.6	6.6	58.5
	22	151 06.4	N 3 19.2	217 07.3	6.7	N23 09.8	6.8	58.5
	23	166 06.6	N 3 18.2	231 32.9	6.7	N23 02.8	6.9	58.6
14	0	181 06.8	N 3 17.3	245 58.6	6.7	N22 55.8	7.1	58.6
	1	196 07.1	N 3 16.3	260 24.4	6.7	N22 48.5	7.2	58.7
	2	211 07.3	N 3 15.3	274 50.1	6.7	N22 41.1	7.4	58.7
	3	226 07.5	N 3 14.4	289 15.8	6.7	N22 33.6	7.5	58.7
	4	241 07.7	N 3 13.4	303 41.6	6.8	N22 25.9	7.7	58.8
T	5	256 08.0	N 3 12.5	318 07.4	6.8	N22 18.1	7.8	58.8
H								
U	6	271 08.2	N 3 11.5	332 33.2	6.8	N22 10.1	8.0	58.9
R	7	286 08.4	N 3 10.5	346 59.0	6.8	N22 01.9	8.1	58.9
S	8	301 08.6	N 3 09.6	1 24.8	6.8	N21 53.6	8.3	58.9
D	9	316 08.8	N 3 08.6	15 50.7	6.9	N21 45.2	8.4	59.0
A	10	331 09.1	N 3 07.7	30 16.5	6.9	N21 36.6	8.6	59.0
Y	11	346 09.3	N 3 06.7	44 42.4	6.9	N21 27.9	8.7	59.0
	12	1 09.5	N 3 05.7	59 08.4	6.9	N21 19.1	8.9	59.1
	13	16 09.7	N 3 04.8	73 34.3	6.9	N21 10.1	9.0	59.1
	14	31 10.0	N 3 03.8	88 00.3	7.0	N21 00.9	9.1	59.2
	15	46 10.2	N 3 02.8	102 26.3	7.0	N20 51.6	9.3	59.2
	16	61 10.4	N 3 01.9	116 52.3	7.0	N20 42.2	9.4	59.2
	17	76 10.6	N 3 00.9	131 18.4	7.1	N20 32.6	9.6	59.3
	18	91 10.8	N 2 60.0	145 44.4	7.1	N20 22.9	9.7	59.3
	19	106 11.1	N 2 59.0	160 10.5	7.1	N20 13.1	9.9	59.4
	20	121 11.3	N 2 58.0	174 36.7	7.1	N20 03.1	10.0	59.4
	21	136 11.5	N 2 57.1	189 02.8	7.2	N19 52.9	10.1	59.4
	22	151 11.7	N 2 56.1	203 29.0	7.2	N19 42.7	10.3	59.5
	23	166 12.0	N 2 55.2	217 55.3	7.2	N19 32.3	10.4	59.5
		S.D. 15.9	d 1.0	S.D.	15.6	15.8	16.1	

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.3	S40 11.1
Achernar	335 17.5	S57 05.1
Acrux	172 57.3	S63 15.6
Adhara	255 03.6	S29 00.5
Albireo	67 01.4	N28 01.5
Aldebaran	290 36.1	N16 34.1
Alioth	166 10.9	N55 48.4
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.7	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.8	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.9	S69 05.0
Avior	234 13.9	S59 35.9
Bellatrix	278 19.7	N 6 22.6
Betelgeuse	270 48.9	N 7 24.8
Canopus	263 51.2	S52 42.4
Capella	280 17.4	N46 01.5
Castor	245 53.4	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.1	N61 35.7
Elnath	277 58.1	N28 37.8
Eltanin	90 40.7	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.1
Hadar	148 32.2	S60 30.9
Hamal	327 47.5	N23 36.0
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 20.9	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.8	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.2	S69 50.0
Mirfak	308 23.7	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 04.8	N89 22.3
Pollux	243 13.8	N27 57.3
Procyon	244 47.9	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 01.0	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 27.0	N56 41.7
Shaula	96 06.3	S37 07.5
Sirius	258 23.7	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.4	S43 32.8
Vega	80 31.0	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
15	0	354 29.1	222 14.6	N16 59.9	225 16.9	N19 39.9	169 52.7	S 0 47.6	315 13.0	N12 34.8
	1	9 31.5	237 14.2	N16 59.3	240 17.8	N19 39.5	184 54.7	S 0 47.9	330 15.5	N12 34.7
	2	24 34.0	252 13.8	N16 58.8	255 18.7	N19 39.2	199 56.7	S 0 48.1	345 18.1	N12 34.7
	3	39 36.5	267 13.3	N16 58.2	270 19.5	N19 38.8	214 58.6	S 0 48.3	0 20.6	N12 34.7
	4	54 38.9	282 12.9	N16 57.6	285 20.4	N19 38.4	230 00.6	S 0 48.5	15 23.2	N12 34.6
F	5	69 41.4	297 12.5	N16 57.0	300 21.2	N19 38.1	245 02.6	S 0 48.7	30 25.8	N12 34.6
R										
I	6	84 43.9	312 12.1	N16 56.4	315 22.1	N19 37.7	260 04.6	S 0 48.9	45 28.3	N12 34.6
D	7	99 46.3	327 11.7	N16 55.9	330 22.9	N19 37.3	275 06.5	S 0 49.1	60 30.9	N12 34.5
A	8	114 48.8	342 11.3	N16 55.3	345 23.8	N19 37.0	290 08.5	S 0 49.3	75 33.4	N12 34.5
Y	9	129 51.3	357 10.8	N16 54.7	0 24.6	N19 36.6	305 10.5	S 0 49.6	90 36.0	N12 34.4
	10	144 53.7	12 10.4	N16 54.1	15 25.5	N19 36.2	320 12.5	S 0 49.8	105 38.5	N12 34.4
	11	159 56.2	27 10.0	N16 53.5	30 26.4	N19 35.9	335 14.4	S 0 50.0	120 41.1	N12 34.4
	12	174 58.6	42 09.6	N16 52.9	45 27.2	N19 35.5	350 16.4	S 0 50.2	135 43.7	N12 34.3
	13	190 01.1	57 09.2	N16 52.4	60 28.1	N19 35.1	5 18.4	S 0 50.4	150 46.2	N12 34.3
	14	205 03.6	72 08.7	N16 51.8	75 28.9	N19 34.8	20 20.4	S 0 50.6	165 48.8	N12 34.2
	15	220 06.0	87 08.3	N16 51.2	90 29.8	N19 34.4	35 22.3	S 0 50.8	180 51.3	N12 34.2
	16	235 08.5	102 07.9	N16 50.6	105 30.6	N19 34.0	50 24.3	S 0 51.0	195 53.9	N12 34.2
	17	250 11.0	117 07.5	N16 50.0	120 31.5	N19 33.7	65 26.3	S 0 51.3	210 56.5	N12 34.1
	18	265 13.4	132 07.1	N16 49.4	135 32.4	N19 33.3	80 28.2	S 0 51.5	225 59.0	N12 34.1
	19	280 15.9	147 06.7	N16 48.8	150 33.2	N19 32.9	95 30.2	S 0 51.7	241 01.6	N12 34.0
	20	295 18.4	162 06.2	N16 48.2	165 34.1	N19 32.6	110 32.2	S 0 51.9	256 04.1	N12 34.0
	21	310 20.8	177 05.8	N16 47.6	180 34.9	N19 32.2	125 34.2	S 0 52.1	271 06.7	N12 34.0
	22	325 23.3	192 05.4	N16 47.0	195 35.8	N19 31.8	140 36.1	S 0 52.3	286 09.3	N12 33.9
	23	340 25.8	207 05.0	N16 46.4	210 36.7	N19 31.4	155 38.1	S 0 52.5	301 11.8	N12 33.9
16	0	355 28.2	222 04.6	N16 45.8	225 37.5	N19 31.1	170 40.1	S 0 52.8	316 14.4	N12 33.9
	1	10 30.7	237 04.2	N16 45.3	240 38.4	N19 30.7	185 42.1	S 0 53.0	331 16.9	N12 33.8
	2	25 33.1	252 03.7	N16 44.7	255 39.2	N19 30.3	200 44.0	S 0 53.2	346 19.5	N12 33.8
	3	40 35.6	267 03.3	N16 44.1	270 40.1	N19 30.0	215 46.0	S 0 53.4	1 22.1	N12 33.7
	4	55 38.1	282 02.9	N16 43.5	285 41.0	N19 29.6	230 48.0	S 0 53.6	16 24.6	N12 33.7
S	5	70 40.5	297 02.5	N16 42.9	300 41.8	N19 29.2	245 50.0	S 0 53.8	31 27.2	N12 33.7
A										
T	6	85 43.0	312 02.1	N16 42.3	315 42.7	N19 28.9	260 51.9	S 0 54.0	46 29.8	N12 33.6
U	7	100 45.5	327 01.7	N16 41.7	330 43.5	N19 28.5	275 53.9	S 0 54.2	61 32.3	N12 33.6
R	8	115 47.9	342 01.2	N16 41.1	345 44.4	N19 28.1	290 55.9	S 0 54.5	76 34.9	N12 33.5
D	9	130 50.4	357 00.8	N16 40.5	0 45.3	N19 27.7	305 57.8	S 0 54.7	91 37.4	N12 33.5
A	10	145 52.9	12 00.4	N16 39.8	15 46.1	N19 27.4	320 59.8	S 0 54.9	106 40.0	N12 33.5
Y	11	160 55.3	26 60.0	N16 39.2	30 47.0	N19 27.0	336 01.8	S 0 55.1	121 42.6	N12 33.4
	12	175 57.8	41 59.6	N16 38.6	45 47.9	N19 26.6	351 03.8	S 0 55.3	136 45.1	N12 33.4
	13	191 00.3	56 59.1	N16 38.0	60 48.7	N19 26.3	6 05.7	S 0 55.5	151 47.7	N12 33.3
	14	206 02.7	71 58.7	N16 37.4	75 49.6	N19 25.9	21 07.7	S 0 55.7	166 50.3	N12 33.3
	15	221 05.2	86 58.3	N16 36.8	90 50.5	N19 25.5	36 09.7	S 0 55.9	181 52.8	N12 33.3
	16	236 07.6	101 57.9	N16 36.2	105 51.3	N19 25.1	51 11.7	S 0 56.2	196 55.4	N12 33.2
	17	251 10.1	116 57.5	N16 35.6	120 52.2	N19 24.8	66 13.6	S 0 56.4	211 57.9	N12 33.2
	18	266 12.6	131 57.1	N16 35.0	135 53.0	N19 24.4	81 15.6	S 0 56.6	227 00.5	N12 33.1
	19	281 15.0	146 56.6	N16 34.4	150 53.9	N19 24.0	96 17.6	S 0 56.8	242 03.1	N12 33.1
	20	296 17.5	161 56.2	N16 33.8	165 54.8	N19 23.6	111 19.5	S 0 57.0	257 05.6	N12 33.1
	21	311 20.0	176 55.8	N16 33.2	180 55.6	N19 23.3	126 21.5	S 0 57.2	272 08.2	N12 33.0
	22	326 22.4	191 55.4	N16 32.5	195 56.5	N19 22.9	141 23.5	S 0 57.4	287 10.8	N12 33.0
	23	341 24.9	206 55.0	N16 31.9	210 57.4	N19 22.5	156 25.5	S 0 57.7	302 13.3	N12 32.9
17	0	356 27.4	221 54.6	N16 31.3	225 58.2	N19 22.1	171 27.4	S 0 57.9	317 15.9	N12 32.9
	1	11 29.8	236 54.1	N16 30.7	240 59.1	N19 21.8	186 29.4	S 0 58.1	332 18.5	N12 32.9
	2	26 32.3	251 53.7	N16 30.1	255 60.0	N19 21.4	201 31.4	S 0 58.3	347 21.0	N12 32.8
	3	41 34.7	266 53.3	N16 29.5	271 00.8	N19 21.0	216 33.3	S 0 58.5	2 23.6	N12 32.8
	4	56 37.2	281 52.9	N16 28.8	286 01.7	N19 20.6	231 35.3	S 0 58.7	17 26.2	N12 32.7
S	5	71 39.7	296 52.5	N16 28.2	301 02.6	N19 20.3	246 37.3	S 0 58.9	32 28.7	N12 32.7
U										
N	6	86 42.1	311 52.1	N16 27.6	316 03.4	N19 19.9	261 39.3	S 0 59.1	47 31.3	N12 32.6
D	7	101 44.6	326 51.6	N16 27.0	331 04.3	N19 19.5	276 41.2	S 0 59.4	62 33.9	N12 32.6
A	8	116 47.1	341 51.2	N16 26.4	346 05.2	N19 19.1	291 43.2	S 0 59.6	77 36.4	N12 32.6
Y	9	131 49.5	356 50.8	N16 25.7	1 06.0	N19 18.8	306 45.2	S 0 59.8	92 39.0	N12 32.5
	10	146 52.0	11 50.4	N16 25.1	16 06.9	N19 18.4	321 47.2	S 0 60.0	107 41.6	N12 32.5
	11	161 54.5	26 50.0	N16 24.5	31 07.8	N19 18.0	336 49.1	S 1 00.2	122 44.1	N12 32.4
	12	176 56.9	41 49.6	N16 23.9	46 08.6	N19 17.6	351 51.1	S 1 00.4	137 46.7	N12 32.4
	13	191 59.4	56 49.1	N16 23.2	61 09.5	N19 17.3	6 53.1	S 1 00.6	152 49.3	N12 32.4
	14	207 01.9	71 48.7	N16 22.6	76 10.4	N19 16.9	21 55.0	S 1 00.8	167 51.8	N12 32.3
	15	222 04.3	86 48.3	N16 22.0	91 11.2	N19 16.5	36 57.0	S 1 01.1	182 54.4	N12 32.3
	16	237 06.8	101 47.9	N16 21.4	106 12.1	N19 16.1	51 59.0	S 1 01.3	197 57.0	N12 32.2
	17	252 09.2	116 47.5	N16 20.7	121 13.0	N19 15.7	67 01.0	S 1 01.5	212 59.5	N12 32.2
	18	267 11.7	131 47.1	N16 20.1	136 13.9	N19 15.4	82 02.9	S 1 01.7	228 02.1	N12 32.2
	19	282 14.2	146 46.6	N16 19.5	151 14.7	N19 15.0	97 04.9	S 1 01.9	243 04.7	N12 32.1
	20	297 16.6	161 46.2	N16 18.8	166 15.6	N19 14.6	112 06.9	S 1 02.1	258 07.2	N12 32.1
	21	312 19.1	176 45.8	N16 18.2	181 16.5	N19 14.2	127 08.8	S 1 02.3	273 09.8	N12 32.0
	22	327 21.6	191 45.4	N16 17.6	196 17.3	N19 13.9	142 10.8	S 1 02.6	288 12.4	N12 32.0
	23	342 24.0	206 45.0	N16 16.9	211 18.2	N19 13.5	157 12.8	S 1 02.8	303 14.9	N12 31.9
			v -0.4	d 0.6	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
15	0	181 12.2	N 2 54.2		232 21.5	7.3	N19 21.8	10.5	59.5
	1	196 12.4	N 2 53.2		246 47.8	7.3	N19 11.1	10.7	59.6
	2	211 12.6	N 2 52.3		261 14.1	7.3	N19 00.3	10.8	59.6
	3	226 12.8	N 2 51.3		275 40.5	7.3	N18 49.4	10.9	59.6
	4	241 13.1	N 2 50.3		290 06.8	7.4	N18 38.3	11.1	59.7
F	5	256 13.3	N 2 49.4		304 33.3	7.4	N18 27.1	11.2	59.7
R									
I	6	271 13.5	N 2 48.4		318 59.7	7.4	N18 15.8	11.3	59.8
D	7	286 13.7	N 2 47.4		333 26.2	7.5	N18 04.4	11.4	59.8
A	8	301 14.0	N 2 46.5		347 52.7	7.5	N17 52.8	11.6	59.8
Y	9	316 14.2	N 2 45.5		2 19.2	7.5	N17 41.1	11.7	59.9
	10	331 14.4	N 2 44.6		16 45.8	7.6	N17 29.3	11.8	59.9
	11	346 14.6	N 2 43.6		31 12.4	7.6	N17 17.4	11.9	59.9
	12	1 14.8	N 2 42.6		45 39.1	7.6	N17 05.4	12.1	60.0
	13	16 15.1	N 2 41.7		60 05.7	7.7	N16 53.2	12.2	60.0
	14	31 15.3	N 2 40.7		74 32.5	7.7	N16 40.9	12.3	60.0
	15	46 15.5	N 2 39.7		88 59.2	7.7	N16 28.5	12.4	60.1
	16	61 15.7	N 2 38.8		103 26.0	7.8	N16 16.0	12.5	60.1
	17	76 16.0	N 2 37.8		117 52.8	7.8	N16 03.3	12.6	60.1
	18	91 16.2	N 2 36.8		132 19.6	7.8	N15 50.6	12.7	60.2
	19	106 16.4	N 2 35.9		146 46.5	7.9	N15 37.7	12.9	60.2
	20	121 16.6	N 2 34.9		161 13.4	7.9	N15 24.8	13.0	60.2
	21	136 16.9	N 2 34.0		175 40.4	7.9	N15 11.7	13.1	60.3
	22	151 17.1	N 2 33.0		190 07.4	8.0	N14 58.5	13.2	60.3
	23	166 17.3	N 2 32.0		204 34.4	8.0	N14 45.2	13.3	60.3
16	0	181 17.5	N 2 31.1		219 01.4	8.0	N14 31.8	13.4	60.4
	1	196 17.7	N 2 30.1		233 28.5	8.1	N14 18.3	13.5	60.4
	2	211 18.0	N 2 29.1		247 55.6	8.1	N14 04.7	13.6	60.4
	3	226 18.2	N 2 28.2		262 22.7	8.1	N13 51.0	13.7	60.5
	4	241 18.4	N 2 27.2		276 49.9	8.2	N13 37.2	13.8	60.5
S	5	256 18.6	N 2 26.2		291 17.1	8.2	N13 23.3	13.9	60.5
A									
T	6	271 18.9	N 2 25.3		305 44.4	8.2	N13 09.3	14.0	60.5
U	7	286 19.1	N 2 24.3		320 11.6	8.3	N12 55.2	14.1	60.6
R	8	301 19.3	N 2 23.3		334 38.9	8.3	N12 41.1	14.2	60.6
D	9	316 19.5	N 2 22.4		349 06.3	8.3	N12 26.8	14.3	60.6
A	10	331 19.7	N 2 21.4		3 33.6	8.4	N12 12.4	14.4	60.7
Y	11	346 20.0	N 2 20.4		18 01.0	8.4	N11 58.0	14.4	60.7
	12	1 20.2	N 2 19.5		32 28.5	8.4	N11 43.5	14.5	60.7
	13	16 20.4	N 2 18.5		46 55.9	8.4	N11 28.8	14.6	60.7
	14	31 20.6	N 2 17.5		61 23.4	8.5	N11 14.1	14.7	60.8
	15	46 20.9	N 2 16.6		75 50.9	8.5	N10 59.4	14.8	60.8
	16	61 21.1	N 2 15.6		90 18.4	8.5	N10 44.5	14.9	60.8
	17	76 21.3	N 2 14.6		104 46.0	8.6	N10 29.6	14.9	60.8
	18	91 21.5	N 2 13.7		119 13.6	8.6	N10 14.6	15.0	60.9
	19	106 21.7	N 2 12.7		133 41.2	8.6	N 9 59.5	15.1	60.9
	20	121 22.0	N 2 11.7		148 08.8	8.6	N 9 44.3	15.2	60.9
	21	136 22.2	N 2 10.8		162 36.5	8.7	N 9 29.1	15.2	60.9
	22	151 22.4	N 2 09.8		177 04.1	8.7	N 9 13.8	15.3	61.0
	23	166 22.6	N 2 08.8		191 31.9	8.7	N 8 58.4	15.4	61.0
17	0	181 22.9	N 2 07.9		205 59.6	8.7	N 8 43.0	15.4	61.0
	1	196 23.1	N 2 06.9		220 27.3	8.8	N 8 27.5	15.5	61.0
	2	211 23.3	N 2 05.9		234 55.1	8.8	N 8 11.9	15.6	61.0
	3	226 23.5	N 2 05.0		249 22.9	8.8	N 7 56.3	15.6	61.1
	4	241 23.8	N 2 04.0		263 50.7	8.8	N 7 40.7	15.7	61.1
S	5	256 24.0	N 2 03.0		278 18.5	8.8	N 7 24.9	15.7	61.1
U									
N	6	271 24.2	N 2 02.1		292 46.4	8.8	N 7 09.1	15.8	61.1
D	7	286 24.4	N 2 01.1		307 14.3	8.9	N 6 53.3	15.8	61.1
A	8	301 24.6	N 2 00.1		321 42.1	8.9	N 6 37.4	15.9	61.1
Y	9	316 24.9	N 1 59.2		336 10.0	8.9	N 6 21.5	15.9	61.2
	10	331 25.1	N 1 58.2		350 38.0	8.9	N 6 05.5	16.0	61.2
	11	346 25.3	N 1 57.2		5 05.9	8.9	N 5 49.4	16.0	61.2
	12	1 25.5	N 1 56.3		19 33.8	8.9	N 5 33.4	16.1	61.2
	13	16 25.8	N 1 55.3		34 01.8	9.0	N 5 17.3	16.1	61.2
	14	31 26.0	N 1 54.3		48 29.8	9.0	N 5 01.1	16.2	61.2
	15	46 26.2	N 1 53.4		62 57.7	9.0	N 4 44.9	16.2	61.3
	16	61 26.4	N 1 52.4		77 25.7	9.0	N 4 28.7	16.2	61.3
	17	76 26.6	N 1 51.4		91 53.7	9.0	N 4 12.4	16.3	61.3
	18	91 26.9	N 1 50.5		106 21.7	9.0	N 3 56.1	16.3	61.3
	19	106 27.1	N 1 49.5		120 49.8	9.0	N 3 39.8	16.3	61.3
	20	121 27.3	N 1 48.5		135 17.8	9.0	N 3 23.4	16.4	61.3
	21	136 27.5	N 1 47.6		149 45.8	9.0	N 3 07.1	16.4	61.3
	22	151 27.8	N 1 46.6		164 13.8	9.0	N 2 50.7	16.4	61.3
	23	166 28.0	N 1 45.6		178 41.9	9.0	N 2 34.2	16.4	61.3
		S.D. 15.9	d 1.0		S.D. 16.3		16.5		16.7

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.2	S40 11.1
Achernar	335 17.5	S57 05.2
Acrux	172 57.3	S63 15.6
Adhara	255 03.6	S29 00.4
Albireo	67 01.4	N28 01.5
Aldebaran	290 36.1	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.6	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.8	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.2	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.9	S69 05.0
Avior	234 13.8	S59 35.9
Bellatrix	278 19.6	N 6 22.6
Betelgeuse	270 48.8	N 7 24.8
Canopus	263 51.1	S52 42.4
Capella	280 17.4	N46 01.5
Castor	245 53.4	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.1	N28 37.8
Eltanin	90 40.8	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.8	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.1
Hadar	148 32.2	S60 30.8
Hamal	327 47.5	N23 36.0
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.0	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.8	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.2	S69 50.0
Mirfak	308 23.7	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 03.9	N89 22.4
Pollux	243 13.8	N27 57.3
Procyon	244 47.8	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.9	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 27.0	N56 41.8
Shaula	96 06.3	S37 07.5
Sirius	258 23.7	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.4	S43 32.8
Vega	80 31.1	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
18	0	357 26.5	221 44.6	N16 16.3	226 19.1	N19 13.1	172 14.8	S 1 03.0	318 17.5	N12 31.9
	1	12 29.0	236 44.1	N16 15.7	241 19.9	N19 12.7	187 16.7	S 1 03.2	333 20.1	N12 31.9
	2	27 31.4	251 43.7	N16 15.0	256 20.8	N19 12.3	202 18.7	S 1 03.4	348 22.6	N12 31.8
	3	42 33.9	266 43.3	N16 14.4	271 21.7	N19 12.0	217 20.7	S 1 03.6	3 25.2	N12 31.8
	4	57 36.3	281 42.9	N16 13.8	286 22.6	N19 11.6	232 22.6	S 1 03.8	18 27.8	N12 31.7
M	5	72 38.8	296 42.5	N16 13.1	301 23.4	N19 11.2	247 24.6	S 1 04.0	33 30.3	N12 31.7
O										
N	6	87 41.3	311 42.1	N16 12.5	316 24.3	N19 10.8	262 26.6	S 1 04.3	48 32.9	N12 31.7
D	7	102 43.7	326 41.6	N16 11.8	331 25.2	N19 10.4	277 28.6	S 1 04.5	63 35.5	N12 31.6
A	8	117 46.2	341 41.2	N16 11.2	346 26.1	N19 10.1	292 30.5	S 1 04.7	78 38.1	N12 31.6
Y	9	132 48.7	356 40.8	N16 10.5	1 26.9	N19 09.7	307 32.5	S 1 04.9	93 40.6	N12 31.5
	10	147 51.1	11 40.4	N16 09.9	16 27.8	N19 09.3	322 34.5	S 1 05.1	108 43.2	N12 31.5
	11	162 53.6	26 40.0	N16 09.3	31 28.7	N19 08.9	337 36.4	S 1 05.3	123 45.8	N12 31.4
	12	177 56.1	41 39.6	N16 08.6	46 29.6	N19 08.5	352 38.4	S 1 05.5	138 48.3	N12 31.4
	13	192 58.5	56 39.2	N16 08.0	61 30.4	N19 08.2	7 40.4	S 1 05.8	153 50.9	N12 31.4
	14	208 01.0	71 38.7	N16 07.3	76 31.3	N19 07.8	22 42.4	S 1 06.0	168 53.5	N12 31.3
	15	223 03.5	86 38.3	N16 06.7	91 32.2	N19 07.4	37 44.3	S 1 06.2	183 56.0	N12 31.3
	16	238 05.9	101 37.9	N16 06.0	106 33.1	N19 07.0	52 46.3	S 1 06.4	198 58.6	N12 31.2
	17	253 08.4	116 37.5	N16 05.4	121 33.9	N19 06.6	67 48.3	S 1 06.6	214 01.2	N12 31.2
	18	268 10.8	131 37.1	N16 04.7	136 34.8	N19 06.2	82 50.2	S 1 06.8	229 03.8	N12 31.2
	19	283 13.3	146 36.7	N16 04.1	151 35.7	N19 05.9	97 52.2	S 1 07.0	244 06.3	N12 31.1
	20	298 15.8	161 36.2	N16 03.4	166 36.6	N19 05.5	112 54.2	S 1 07.2	259 08.9	N12 31.1
	21	313 18.2	176 35.8	N16 02.8	181 37.4	N19 05.1	127 56.2	S 1 07.5	274 11.5	N12 31.0
	22	328 20.7	191 35.4	N16 02.1	196 38.3	N19 04.7	142 58.1	S 1 07.7	289 14.0	N12 31.0
	23	343 23.2	206 35.0	N16 01.5	211 39.2	N19 04.3	158 00.1	S 1 07.9	304 16.6	N12 30.9
19	0	358 25.6	221 34.6	N16 00.8	226 40.1	N19 03.9	173 02.1	S 1 08.1	319 19.2	N12 30.9
	1	13 28.1	236 34.2	N16 00.2	241 40.9	N19 03.6	188 04.0	S 1 08.3	334 21.8	N12 30.9
	2	28 30.6	251 33.8	N15 59.5	256 41.8	N19 03.2	203 06.0	S 1 08.5	349 24.3	N12 30.8
	3	43 33.0	266 33.3	N15 58.8	271 42.7	N19 02.8	218 08.0	S 1 08.7	4 26.9	N12 30.8
	4	58 35.5	281 32.9	N15 58.2	286 43.6	N19 02.4	233 10.0	S 1 09.0	19 29.5	N12 30.7
T	5	73 38.0	296 32.5	N15 57.5	301 44.4	N19 02.0	248 11.9	S 1 09.2	34 32.1	N12 30.7
U										
E	6	88 40.4	311 32.1	N15 56.9	316 45.3	N19 01.6	263 13.9	S 1 09.4	49 34.6	N12 30.6
S	7	103 42.9	326 31.7	N15 56.2	331 46.2	N19 01.3	278 15.9	S 1 09.6	64 37.2	N12 30.6
D	8	118 45.3	341 31.3	N15 55.6	346 47.1	N19 00.9	293 17.8	S 1 09.8	79 39.8	N12 30.6
A	9	133 47.8	356 30.8	N15 54.9	1 48.0	N19 00.5	308 19.8	S 1 10.0	94 42.4	N12 30.5
Y	10	148 50.3	11 30.4	N15 54.2	16 48.8	N19 00.1	323 21.8	S 1 10.2	109 44.9	N12 30.5
	11	163 52.7	26 30.0	N15 53.6	31 49.7	N18 59.7	338 23.7	S 1 10.4	124 47.5	N12 30.4
	12	178 55.2	41 29.6	N15 52.9	46 50.6	N18 59.3	353 25.7	S 1 10.7	139 50.1	N12 30.4
	13	193 57.7	56 29.2	N15 52.2	61 51.5	N18 58.9	8 27.7	S 1 10.9	154 52.6	N12 30.3
	14	209 00.1	71 28.8	N15 51.6	76 52.4	N18 58.6	23 29.7	S 1 11.1	169 55.2	N12 30.3
	15	224 02.6	86 28.4	N15 50.9	91 53.2	N18 58.2	38 31.6	S 1 11.3	184 57.8	N12 30.3
	16	239 05.1	101 27.9	N15 50.2	106 54.1	N18 57.8	53 33.6	S 1 11.5	200 00.4	N12 30.2
	17	254 07.5	116 27.5	N15 49.6	121 55.0	N18 57.4	68 35.6	S 1 11.7	215 02.9	N12 30.2
	18	269 10.0	131 27.1	N15 48.9	136 55.9	N18 57.0	83 37.5	S 1 11.9	230 05.5	N12 30.1
	19	284 12.4	146 26.7	N15 48.2	151 56.8	N18 56.6	98 39.5	S 1 12.2	245 08.1	N12 30.1
	20	299 14.9	161 26.3	N15 47.6	166 57.6	N18 56.2	113 41.5	S 1 12.4	260 10.7	N12 30.0
	21	314 17.4	176 25.9	N15 46.9	181 58.5	N18 55.9	128 43.5	S 1 12.6	275 13.2	N12 30.0
	22	329 19.8	191 25.5	N15 46.2	196 59.4	N18 55.5	143 45.4	S 1 12.8	290 15.8	N12 29.9
	23	344 22.3	206 25.0	N15 45.5	212 00.3	N18 55.1	158 47.4	S 1 13.0	305 18.4	N12 29.9
20	0	359 24.8	221 24.6	N15 44.9	227 01.2	N18 54.7	173 49.4	S 1 13.2	320 21.0	N12 29.9
	1	14 27.2	236 24.2	N15 44.2	242 02.1	N18 54.3	188 51.3	S 1 13.4	335 23.5	N12 29.8
	2	29 29.7	251 23.8	N15 43.5	257 02.9	N18 53.9	203 53.3	S 1 13.7	350 26.1	N12 29.8
	3	44 32.2	266 23.4	N15 42.8	272 03.8	N18 53.5	218 55.3	S 1 13.9	5 28.7	N12 29.7
	4	59 34.6	281 23.0	N15 42.2	287 04.7	N18 53.1	233 57.2	S 1 14.1	20 31.3	N12 29.7
W	5	74 37.1	296 22.6	N15 41.5	302 05.6	N18 52.8	248 59.2	S 1 14.3	35 33.9	N12 29.6
E										
D	6	89 39.6	311 22.2	N15 40.8	317 06.5	N18 52.4	264 01.2	S 1 14.5	50 36.4	N12 29.6
N	7	104 42.0	326 21.7	N15 40.1	332 07.4	N18 52.0	279 03.2	S 1 14.7	65 39.0	N12 29.6
E	8	119 44.5	341 21.3	N15 39.5	347 08.2	N18 51.6	294 05.1	S 1 14.9	80 41.6	N12 29.5
S	9	134 46.9	356 20.9	N15 38.8	2 09.1	N18 51.2	309 07.1	S 1 15.1	95 44.2	N12 29.5
D	10	149 49.4	11 20.5	N15 38.1	17 10.0	N18 50.8	324 09.1	S 1 15.4	110 46.7	N12 29.4
A	11	164 51.9	26 20.1	N15 37.4	32 10.9	N18 50.4	339 11.0	S 1 15.6	125 49.3	N12 29.4
Y										
	12	179 54.3	41 19.7	N15 36.7	47 11.8	N18 50.0	354 13.0	S 1 15.8	140 51.9	N12 29.3
	13	194 56.8	56 19.3	N15 36.0	62 12.7	N18 49.6	9 15.0	S 1 16.0	155 54.5	N12 29.3
	14	209 59.3	71 18.8	N15 35.4	77 13.6	N18 49.2	24 16.9	S 1 16.2	170 57.1	N12 29.2
	15	225 01.7	86 18.4	N15 34.7	92 14.4	N18 48.9	39 18.9	S 1 16.4	185 59.6	N12 29.2
	16	240 04.2	101 18.0	N15 34.0	107 15.3	N18 48.5	54 20.9	S 1 16.6	201 02.2	N12 29.2
	17	255 06.7	116 17.6	N15 33.3	122 16.2	N18 48.1	69 22.9	S 1 16.9	216 04.8	N12 29.1
	18	270 09.1	131 17.2	N15 32.6	137 17.1	N18 47.7	84 24.8	S 1 17.1	231 07.4	N12 29.1
	19	285 11.6	146 16.8	N15 31.9	152 18.0	N18 47.3	99 26.8	S 1 17.3	246 09.9	N12 29.0
	20	300 14.0	161 16.4	N15 31.2	167 18.9	N18 46.9	114 28.8	S 1 17.5	261 12.5	N12 29.0
	21	315 16.5	176 16.0	N15 30.5	182 19.8	N18 46.5	129 30.7	S 1 17.7	276 15.1	N12 28.9
	22	330 19.0	191 15.5	N15 29.8	197 20.7	N18 46.1	144 32.7	S 1 17.9	291 17.7	N12 28.9
	23	345 21.4	206 15.1	N15 29.2	212 21.5	N18 45.7	159 34.7	S 1 18.1	306 20.3	N12 28.8
			v -0.4	d 0.7	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
18	0	181 28.2	N 1 44.7	193 09.9	9.0	N 2 17.8	16.4	61.4
	1	196 28.4	N 1 43.7	207 38.0	9.0	N 2 01.3	16.5	61.4
	2	211 28.6	N 1 42.7	222 06.0	9.0	N 1 44.8	16.5	61.4
	3	226 28.9	N 1 41.7	236 34.1	9.0	N 1 28.3	16.5	61.4
	4	241 29.1	N 1 40.8	251 02.1	9.0	N 1 11.8	16.5	61.4
M	5	256 29.3	N 1 39.8	265 30.2	9.0	N 0 55.3	16.5	61.4
O								
N	6	271 29.5	N 1 38.8	279 58.2	9.0	N 0 38.8	16.5	61.4
D	7	286 29.8	N 1 37.9	294 26.3	9.0	N 0 22.2	16.5	61.4
A	8	301 30.0	N 1 36.9	308 54.3	9.0	N 0 05.7	16.5	61.4
Y	9	316 30.2	N 1 35.9	323 22.3	9.0	S 0 10.8	16.5	61.4
	10	331 30.4	N 1 35.0	337 50.4	9.0	S 0 27.4	16.5	61.4
	11	346 30.6	N 1 34.0	352 18.4	9.0	S 0 43.9	16.5	61.4
	12	1 30.9	N 1 33.0	6 46.4	9.0	S 1 00.5	16.5	61.4
	13	16 31.1	N 1 32.1	21 14.4	9.0	S 1 17.0	16.5	61.4
	14	31 31.3	N 1 31.1	35 42.4	9.0	S 1 33.5	16.5	61.4
	15	46 31.5	N 1 30.1	50 10.4	9.0	S 1 50.0	16.5	61.4
	16	61 31.8	N 1 29.1	64 38.4	9.0	S 2 06.5	16.5	61.4
	17	76 32.0	N 1 28.2	79 06.4	9.0	S 2 23.0	16.5	61.4
	18	91 32.2	N 1 27.2	93 34.3	9.0	S 2 39.5	16.5	61.4
	19	106 32.4	N 1 26.2	108 02.3	8.9	S 2 55.9	16.5	61.4
	20	121 32.6	N 1 25.3	122 30.2	8.9	S 3 12.4	16.4	61.4
	21	136 32.9	N 1 24.3	136 58.1	8.9	S 3 28.8	16.4	61.4
	22	151 33.1	N 1 23.3	151 26.0	8.9	S 3 45.2	16.4	61.4
	23	166 33.3	N 1 22.4	165 53.9	8.9	S 4 01.5	16.4	61.4
19	0	181 33.5	N 1 21.4	180 21.8	8.9	S 4 17.9	16.3	61.4
	1	196 33.7	N 1 20.4	194 49.6	8.8	S 4 34.2	16.3	61.4
	2	211 34.0	N 1 19.4	209 17.5	8.8	S 4 50.5	16.3	61.4
	3	226 34.2	N 1 18.5	223 45.3	8.8	S 5 06.7	16.2	61.4
	4	241 34.4	N 1 17.5	238 13.1	8.8	S 5 22.9	16.2	61.4
T	5	256 34.6	N 1 16.5	252 40.8	8.8	S 5 39.1	16.2	61.4
U								
E	6	271 34.9	N 1 15.6	267 08.6	8.7	S 5 55.2	16.1	61.3
S	7	286 35.1	N 1 14.6	281 36.3	8.7	S 6 11.3	16.1	61.3
D	8	301 35.3	N 1 13.6	296 04.0	8.7	S 6 27.4	16.0	61.3
A	9	316 35.5	N 1 12.7	310 31.7	8.7	S 6 43.4	16.0	61.3
Y	10	331 35.7	N 1 11.7	324 59.3	8.7	S 6 59.3	16.0	61.3
	11	346 36.0	N 1 10.7	339 27.0	8.6	S 7 15.2	15.9	61.3
	12	1 36.2	N 1 09.7	353 54.6	8.6	S 7 31.1	15.9	61.3
	13	16 36.4	N 1 08.8	8 22.1	8.6	S 7 46.9	15.8	61.3
	14	31 36.6	N 1 07.8	22 49.7	8.5	S 8 02.6	15.7	61.2
	15	46 36.9	N 1 06.8	37 17.2	8.5	S 8 18.3	15.7	61.2
	16	61 37.1	N 1 05.9	51 44.7	8.5	S 8 33.9	15.6	61.2
	17	76 37.3	N 1 04.9	66 12.1	8.5	S 8 49.5	15.6	61.2
	18	91 37.5	N 1 03.9	80 39.5	8.4	S 9 05.0	15.5	61.2
	19	106 37.7	N 1 02.9	95 06.9	8.4	S 9 20.4	15.4	61.2
	20	121 38.0	N 1 02.0	109 34.3	8.4	S 9 35.8	15.4	61.2
	21	136 38.2	N 1 01.0	124 01.6	8.3	S 9 51.1	15.3	61.1
	22	151 38.4	N 1 00.0	138 28.9	8.3	S10 06.4	15.2	61.1
	23	166 38.6	N 0 59.1	152 56.2	8.3	S10 21.5	15.2	61.1
20	0	181 38.8	N 0 58.1	167 23.4	8.2	S10 36.6	15.1	61.1
	1	196 39.1	N 0 57.1	181 50.6	8.2	S10 51.6	15.0	61.1
	2	211 39.3	N 0 56.1	196 17.8	8.2	S11 06.6	14.9	61.0
	3	226 39.5	N 0 55.2	210 44.9	8.1	S11 21.4	14.9	61.0
	4	241 39.7	N 0 54.2	225 12.0	8.1	S11 36.2	14.8	61.0
W	5	256 39.9	N 0 53.2	239 39.0	8.0	S11 50.9	14.7	61.0
E								
D	6	271 40.2	N 0 52.3	254 06.0	8.0	S12 05.5	14.6	61.0
N	7	286 40.4	N 0 51.3	268 33.0	8.0	S12 20.0	14.5	60.9
E	8	301 40.6	N 0 50.3	282 59.9	7.9	S12 34.4	14.4	60.9
S	9	316 40.8	N 0 49.3	297 26.8	7.9	S12 48.8	14.3	60.9
D	10	331 41.1	N 0 48.4	311 53.7	7.9	S13 03.0	14.3	60.9
A	11	346 41.3	N 0 47.4	326 20.5	7.8	S13 17.2	14.2	60.8
Y								
	12	1 41.5	N 0 46.4	340 47.3	7.8	S13 31.3	14.1	60.8
	13	16 41.7	N 0 45.5	355 14.0	7.7	S13 45.2	14.0	60.8
	14	31 41.9	N 0 44.5	9 40.7	7.7	S13 59.1	13.9	60.8
	15	46 42.2	N 0 43.5	24 07.4	7.7	S14 12.9	13.8	60.7
	16	61 42.4	N 0 42.5	38 34.0	7.6	S14 26.5	13.7	60.7
	17	76 42.6	N 0 41.6	53 00.6	7.6	S14 40.1	13.6	60.7
	18	91 42.8	N 0 40.6	67 27.2	7.5	S14 53.5	13.5	60.7
	19	106 43.0	N 0 39.6	81 53.7	7.5	S15 06.9	13.4	60.6
	20	121 43.3	N 0 38.7	96 20.1	7.5	S15 20.1	13.2	60.6
	21	136 43.5	N 0 37.7	110 46.6	7.4	S15 33.3	13.1	60.6
	22	151 43.7	N 0 36.7	125 12.9	7.4	S15 46.3	13.0	60.6
	23	166 43.9	N 0 35.7	139 39.3	7.3	S15 59.2	12.9	60.5
		S.D. 15.9	d 1.0	S.D. 16.7		16.7		16.6

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.2	S40 11.1
Achernar	335 17.5	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.6	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 36.1	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.6	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.8	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.8
Arcturus	145 45.4	N19 02.1
Atria	107 03.9	S69 05.0
Avior	234 13.8	S59 35.9
Bellatrix	278 19.6	N 6 22.6
Betelgeuse	270 48.8	N 7 24.8
Canopus	263 51.1	S52 42.3
Capella	280 17.4	N46 01.5
Castor	245 53.4	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.1	N28 37.8
Eltanin	90 40.8	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.2	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.0	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.8	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.1	S69 49.9
Mirfak	308 23.6	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 03.1	N89 22.4
Pollux	243 13.8	N27 57.3
Procyon	244 47.8	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.9	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 27.0	N56 41.8
Shaula	96 06.3	S37 07.5
Sirius	258 23.7	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.4	S43 32.8
Vega	80 31.1	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
21	0	0 23.9	221 14.7	N15 28.5	227 22.4	N18 45.3	174 36.6	S 1 18.3	321 22.8	N12 28.8
	1	15 26.4	236 14.3	N15 27.8	242 23.3	N18 44.9	189 38.6	S 1 18.6	336 25.4	N12 28.8
	2	30 28.8	251 13.9	N15 27.1	257 24.2	N18 44.6	204 40.6	S 1 18.8	351 28.0	N12 28.7
	3	45 31.3	266 13.5	N15 26.4	272 25.1	N18 44.2	219 42.6	S 1 19.0	6 30.6	N12 28.7
	4	60 33.8	281 13.1	N15 25.7	287 26.0	N18 43.8	234 44.5	S 1 19.2	21 33.2	N12 28.6
T	5	75 36.2	296 12.7	N15 25.0	302 26.9	N18 43.4	249 46.5	S 1 19.4	36 35.7	N12 28.6
H										
U	6	90 38.7	311 12.3	N15 24.3	317 27.8	N18 43.0	264 48.5	S 1 19.6	51 38.3	N12 28.5
R	7	105 41.2	326 11.8	N15 23.6	332 28.6	N18 42.6	279 50.4	S 1 19.8	66 40.9	N12 28.5
S	8	120 43.6	341 11.4	N15 22.9	347 29.5	N18 42.2	294 52.4	S 1 20.1	81 43.5	N12 28.4
D	9	135 46.1	356 11.0	N15 22.2	2 30.4	N18 41.8	309 54.4	S 1 20.3	96 46.1	N12 28.4
A	10	150 48.5	11 10.6	N15 21.5	17 31.3	N18 41.4	324 56.3	S 1 20.5	111 48.6	N12 28.3
Y	11	165 51.0	26 10.2	N15 20.8	32 32.2	N18 41.0	339 58.3	S 1 20.7	126 51.2	N12 28.3
	12	180 53.5	41 09.8	N15 20.1	47 33.1	N18 40.6	355 00.3	S 1 20.9	141 53.8	N12 28.3
	13	195 55.9	56 09.4	N15 19.4	62 34.0	N18 40.2	10 02.2	S 1 21.1	156 56.4	N12 28.2
	14	210 58.4	71 09.0	N15 18.7	77 34.9	N18 39.8	25 04.2	S 1 21.3	171 59.0	N12 28.2
	15	226 00.9	86 08.5	N15 18.0	92 35.8	N18 39.4	40 06.2	S 1 21.6	187 01.6	N12 28.1
	16	241 03.3	101 08.1	N15 17.3	107 36.7	N18 39.0	55 08.2	S 1 21.8	202 04.1	N12 28.1
	17	256 05.8	116 07.7	N15 16.6	122 37.6	N18 38.6	70 10.1	S 1 22.0	217 06.7	N12 28.0
	18	271 08.3	131 07.3	N15 15.9	137 38.5	N18 38.3	85 12.1	S 1 22.2	232 09.3	N12 28.0
	19	286 10.7	146 06.9	N15 15.2	152 39.3	N18 37.9	100 14.1	S 1 22.4	247 11.9	N12 27.9
	20	301 13.2	161 06.5	N15 14.4	167 40.2	N18 37.5	115 16.0	S 1 22.6	262 14.5	N12 27.9
	21	316 15.7	176 06.1	N15 13.7	182 41.1	N18 37.1	130 18.0	S 1 22.8	277 17.1	N12 27.8
	22	331 18.1	191 05.7	N15 13.0	197 42.0	N18 36.7	145 20.0	S 1 23.0	292 19.6	N12 27.8
	23	346 20.6	206 05.3	N15 12.3	212 42.9	N18 36.3	160 21.9	S 1 23.3	307 22.2	N12 27.8
22	0	1 23.0	221 04.9	N15 11.6	227 43.8	N18 35.9	175 23.9	S 1 23.5	322 24.8	N12 27.7
	1	16 25.5	236 04.4	N15 10.9	242 44.7	N18 35.5	190 25.9	S 1 23.7	337 27.4	N12 27.7
	2	31 28.0	251 04.0	N15 10.2	257 45.6	N18 35.1	205 27.8	S 1 23.9	352 30.0	N12 27.6
	3	46 30.4	266 03.6	N15 09.5	272 46.5	N18 34.7	220 29.8	S 1 24.1	7 32.5	N12 27.6
	4	61 32.9	281 03.2	N15 08.8	287 47.4	N18 34.3	235 31.8	S 1 24.3	22 35.1	N12 27.5
F	5	76 35.4	296 02.8	N15 08.0	302 48.3	N18 33.9	250 33.8	S 1 24.5	37 37.7	N12 27.5
R										
I	6	91 37.8	311 02.4	N15 07.3	317 49.2	N18 33.5	265 35.7	S 1 24.8	52 40.3	N12 27.4
D	7	106 40.3	326 02.0	N15 06.6	332 50.1	N18 33.1	280 37.7	S 1 25.0	67 42.9	N12 27.4
A	8	121 42.8	341 01.6	N15 05.9	347 51.0	N18 32.7	295 39.7	S 1 25.2	82 45.5	N12 27.3
Y	9	136 45.2	356 01.2	N15 05.2	2 51.9	N18 32.3	310 41.6	S 1 25.4	97 48.1	N12 27.3
	10	151 47.7	11 00.8	N15 04.4	17 52.8	N18 31.9	325 43.6	S 1 25.6	112 50.6	N12 27.3
	11	166 50.1	26 00.3	N15 03.7	32 53.7	N18 31.5	340 45.6	S 1 25.8	127 53.2	N12 27.2
	12	181 52.6	40 59.9	N15 03.0	47 54.6	N18 31.1	355 47.5	S 1 26.0	142 55.8	N12 27.2
	13	196 55.1	55 59.5	N15 02.3	62 55.5	N18 30.7	10 49.5	S 1 26.3	157 58.4	N12 27.1
	14	211 57.5	70 59.1	N15 01.6	77 56.4	N18 30.3	25 51.5	S 1 26.5	173 01.0	N12 27.1
	15	227 00.0	85 58.7	N15 00.8	92 57.3	N18 29.9	40 53.4	S 1 26.7	188 03.6	N12 27.0
	16	242 02.5	100 58.3	N15 00.1	107 58.1	N18 29.5	55 55.4	S 1 26.9	203 06.1	N12 27.0
	17	257 04.9	115 57.9	N14 59.4	122 59.0	N18 29.1	70 57.4	S 1 27.1	218 08.7	N12 26.9
	18	272 07.4	130 57.5	N14 58.7	137 59.9	N18 28.7	85 59.4	S 1 27.3	233 11.3	N12 26.9
	19	287 09.9	145 57.1	N14 57.9	153 00.8	N18 28.3	101 01.3	S 1 27.5	248 13.9	N12 26.8
	20	302 12.3	160 56.7	N14 57.2	168 01.7	N18 27.9	116 03.3	S 1 27.7	263 16.5	N12 26.8
	21	317 14.8	175 56.3	N14 56.5	183 02.6	N18 27.5	131 05.3	S 1 28.0	278 19.1	N12 26.7
	22	332 17.3	190 55.8	N14 55.8	198 03.5	N18 27.1	146 07.2	S 1 28.2	293 21.7	N12 26.7
	23	347 19.7	205 55.4	N14 55.0	213 04.4	N18 26.7	161 09.2	S 1 28.4	308 24.3	N12 26.6
23	0	2 22.2	220 55.0	N14 54.3	228 05.3	N18 26.3	176 11.2	S 1 28.6	323 26.8	N12 26.6
	1	17 24.6	235 54.6	N14 53.6	243 06.2	N18 25.9	191 13.1	S 1 28.8	338 29.4	N12 26.6
	2	32 27.1	250 54.2	N14 52.8	258 07.1	N18 25.5	206 15.1	S 1 29.0	353 32.0	N12 26.5
	3	47 29.6	265 53.8	N14 52.1	273 08.0	N18 25.1	221 17.1	S 1 29.2	8 34.6	N12 26.5
	4	62 32.0	280 53.4	N14 51.4	288 08.9	N18 24.7	236 19.0	S 1 29.5	23 37.2	N12 26.4
S	5	77 34.5	295 53.0	N14 50.6	303 09.8	N18 24.3	251 21.0	S 1 29.7	38 39.8	N12 26.4
A										
T	6	92 37.0	310 52.6	N14 49.9	318 10.7	N18 23.9	266 23.0	S 1 29.9	53 42.4	N12 26.3
U	7	107 39.4	325 52.2	N14 49.2	333 11.6	N18 23.5	281 24.9	S 1 30.1	68 44.9	N12 26.3
R	8	122 41.9	340 51.8	N14 48.4	348 12.5	N18 23.1	296 26.9	S 1 30.3	83 47.5	N12 26.2
D	9	137 44.4	355 51.4	N14 47.7	3 13.4	N18 22.7	311 28.9	S 1 30.5	98 50.1	N12 26.2
A	10	152 46.8	10 51.0	N14 47.0	18 14.3	N18 22.3	326 30.9	S 1 30.7	113 52.7	N12 26.1
Y	11	167 49.3	25 50.5	N14 46.2	33 15.2	N18 21.9	341 32.8	S 1 30.9	128 55.3	N12 26.1
	12	182 51.7	40 50.1	N14 45.5	48 16.2	N18 21.5	356 34.8	S 1 31.2	143 57.9	N12 26.0
	13	197 54.2	55 49.7	N14 44.7	63 17.1	N18 21.1	11 36.8	S 1 31.4	159 00.5	N12 26.0
	14	212 56.7	70 49.3	N14 44.0	78 18.0	N18 20.7	26 38.7	S 1 31.6	174 03.1	N12 25.9
	15	227 59.1	85 48.9	N14 43.3	93 18.9	N18 20.3	41 40.7	S 1 31.8	189 05.7	N12 25.9
	16	243 01.6	100 48.5	N14 42.5	108 19.8	N18 19.9	56 42.7	S 1 32.0	204 08.2	N12 25.9
	17	258 04.1	115 48.1	N14 41.8	123 20.7	N18 19.5	71 44.6	S 1 32.2	219 10.8	N12 25.8
	18	273 06.5	130 47.7	N14 41.0	138 21.6	N18 19.1	86 46.6	S 1 32.4	234 13.4	N12 25.8
	19	288 09.0	145 47.3	N14 40.3	153 22.5	N18 18.7	101 48.6	S 1 32.7	249 16.0	N12 25.7
	20	303 11.5	160 46.9	N14 39.5	168 23.4	N18 18.3	116 50.5	S 1 32.9	264 18.6	N12 25.7
	21	318 13.9	175 46.5	N14 38.8	183 24.3	N18 17.9	131 52.5	S 1 33.1	279 21.2	N12 25.6
	22	333 16.4	190 46.1	N14 38.1	198 25.2	N18 17.5	146 54.5	S 1 33.3	294 23.8	N12 25.6
	23	348 18.9	205 45.7	N14 37.3	213 26.1	N18 17.1	161 56.4	S 1 33.5	309 26.4	N12 25.5
			v -0.4	d 0.7	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
21	0	181 44.1	N 0 34.8	154 05.6	7.3	S16 12.0	12.8	60.5
	1	196 44.4	N 0 33.8	168 31.9	7.3	S16 24.7	12.7	60.5
	2	211 44.6	N 0 32.8	182 58.1	7.2	S16 37.2	12.6	60.4
	3	226 44.8	N 0 31.9	197 24.3	7.2	S16 49.7	12.4	60.4
	4	241 45.0	N 0 30.9	211 50.4	7.1	S17 02.0	12.3	60.4
T	5	256 45.2	N 0 29.9	226 16.5	7.1	S17 14.2	12.2	60.3
H								
U	6	271 45.5	N 0 28.9	240 42.6	7.1	S17 26.3	12.1	60.3
R	7	286 45.7	N 0 28.0	255 08.6	7.0	S17 38.2	12.0	60.3
S	8	301 45.9	N 0 27.0	269 34.6	7.0	S17 50.1	11.8	60.2
D	9	316 46.1	N 0 26.0	284 00.5	6.9	S18 01.8	11.7	60.2
A	10	331 46.3	N 0 25.0	298 26.4	6.9	S18 13.3	11.6	60.2
Y	11	346 46.6	N 0 24.1	312 52.3	6.9	S18 24.8	11.4	60.1
	12	1 46.8	N 0 23.1	327 18.1	6.8	S18 36.1	11.3	60.1
	13	16 47.0	N 0 22.1	341 43.9	6.8	S18 47.3	11.2	60.1
	14	31 47.2	N 0 21.2	356 09.7	6.8	S18 58.3	11.0	60.0
	15	46 47.4	N 0 20.2	10 35.4	6.7	S19 09.2	10.9	60.0
	16	61 47.7	N 0 19.2	25 01.1	6.7	S19 20.0	10.8	60.0
	17	76 47.9	N 0 18.2	39 26.8	6.7	S19 30.7	10.6	59.9
	18	91 48.1	N 0 17.3	53 52.4	6.6	S19 41.2	10.5	59.9
	19	106 48.3	N 0 16.3	68 18.0	6.6	S19 51.5	10.4	59.9
	20	121 48.5	N 0 15.3	82 43.5	6.6	S20 01.8	10.2	59.8
	21	136 48.8	N 0 14.3	97 09.0	6.5	S20 11.9	10.1	59.8
	22	151 49.0	N 0 13.4	111 34.5	6.5	S20 21.8	9.9	59.8
	23	166 49.2	N 0 12.4	125 60.0	6.5	S20 31.6	9.8	59.7
22	0	181 49.4	N 0 11.4	140 25.4	6.4	S20 41.3	9.7	59.7
	1	196 49.6	N 0 10.5	154 50.8	6.4	S20 50.8	9.5	59.6
	2	211 49.9	N 0 09.5	169 16.2	6.4	S21 00.1	9.4	59.6
	3	226 50.1	N 0 08.5	183 41.5	6.3	S21 09.4	9.2	59.6
	4	241 50.3	N 0 07.5	198 06.8	6.3	S21 18.4	9.1	59.5
F	5	256 50.5	N 0 06.6	212 32.1	6.3	S21 27.3	8.9	59.5
R								
I	6	271 50.7	N 0 05.6	226 57.4	6.3	S21 36.1	8.8	59.5
D	7	286 51.0	N 0 04.6	241 22.6	6.2	S21 44.7	8.6	59.4
A	8	301 51.2	N 0 03.6	255 47.8	6.2	S21 53.2	8.5	59.4
Y	9	316 51.4	N 0 02.7	270 13.0	6.2	S22 01.5	8.3	59.3
	10	331 51.6	N 0 01.7	284 38.2	6.2	S22 09.7	8.2	59.3
	11	346 51.8	N 0 00.7	299 03.3	6.1	S22 17.7	8.0	59.3
	12	1 52.1	S 0 00.3	313 28.4	6.1	S22 25.6	7.9	59.2
	13	16 52.3	S 0 01.2	327 53.6	6.1	S22 33.3	7.7	59.2
	14	31 52.5	S 0 02.2	342 18.7	6.1	S22 40.9	7.6	59.2
	15	46 52.7	S 0 03.2	356 43.7	6.1	S22 48.3	7.4	59.1
	16	61 52.9	S 0 04.1	11 08.8	6.1	S22 55.5	7.2	59.1
	17	76 53.2	S 0 05.1	25 33.8	6.0	S23 02.6	7.1	59.0
	18	91 53.4	S 0 06.1	39 58.9	6.0	S23 09.5	6.9	59.0
	19	106 53.6	S 0 07.1	54 23.9	6.0	S23 16.3	6.8	59.0
	20	121 53.8	S 0 08.0	68 48.9	6.0	S23 22.9	6.6	58.9
	21	136 54.0	S 0 09.0	83 13.9	6.0	S23 29.4	6.5	58.9
	22	151 54.2	S 0 10.0	97 38.9	6.0	S23 35.7	6.3	58.8
	23	166 54.5	S 0 11.0	112 03.9	6.0	S23 41.8	6.1	58.8
23	0	181 54.7	S 0 11.9	126 28.9	6.0	S23 47.8	6.0	58.8
	1	196 54.9	S 0 12.9	140 53.9	6.0	S23 53.6	5.8	58.7
	2	211 55.1	S 0 13.9	155 18.9	6.0	S23 59.3	5.7	58.7
	3	226 55.3	S 0 14.8	169 43.8	6.0	S24 04.8	5.5	58.6
	4	241 55.6	S 0 15.8	184 08.8	6.0	S24 10.1	5.3	58.6
S	5	256 55.8	S 0 16.8	198 33.8	6.0	S24 15.3	5.2	58.6
A								
T	6	271 56.0	S 0 17.8	212 58.8	6.0	S24 20.3	5.0	58.5
U	7	286 56.2	S 0 18.7	227 23.8	6.0	S24 25.2	4.9	58.5
R	8	301 56.4	S 0 19.7	241 48.8	6.0	S24 29.9	4.7	58.4
D	9	316 56.6	S 0 20.7	256 13.8	6.0	S24 34.4	4.5	58.4
A	10	331 56.9	S 0 21.7	270 38.8	6.0	S24 38.8	4.4	58.4
Y	11	346 57.1	S 0 22.6	285 03.8	6.0	S24 43.0	4.2	58.3
	12	1 57.3	S 0 23.6	299 28.9	6.0	S24 47.1	4.1	58.3
	13	16 57.5	S 0 24.6	313 53.9	6.1	S24 51.0	3.9	58.2
	14	31 57.7	S 0 25.6	328 19.0	6.1	S24 54.7	3.7	58.2
	15	46 58.0	S 0 26.5	342 44.1	6.1	S24 58.3	3.6	58.2
	16	61 58.2	S 0 27.5	357 09.2	6.1	S25 01.7	3.4	58.1
	17	76 58.4	S 0 28.5	11 34.3	6.1	S25 04.9	3.3	58.1
	18	91 58.6	S 0 29.5	25 59.4	6.1	S25 08.0	3.1	58.0
	19	106 58.8	S 0 30.4	40 24.6	6.2	S25 11.0	2.9	58.0
	20	121 59.0	S 0 31.4	54 49.8	6.2	S25 13.7	2.8	58.0
	21	136 59.3	S 0 32.4	69 15.0	6.2	S25 16.4	2.6	57.9
	22	151 59.5	S 0 33.3	83 40.3	6.2	S25 18.8	2.5	57.9
	23	166 59.7	S 0 34.3	98 05.5	6.3	S25 21.1	2.3	57.8
		S.D. 15.9	d 1.0	S.D. 16.4		16.1		15.9

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.2	S40 11.1
Achernar	335 17.5	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.6	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 36.0	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.6	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.7
Arcturus	145 45.4	N19 02.1
Atria	107 04.0	S69 05.0
Avior	234 13.8	S59 35.9
Bellatrix	278 19.6	N 6 22.6
Betelgeuse	270 48.8	N 7 24.8
Canopus	263 51.1	S52 42.3
Capella	280 17.3	N46 01.5
Castor	245 53.4	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.0	N28 37.8
Eltanin	90 40.8	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.1	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.1	S69 49.9
Mirfak	308 23.6	N49 57.7
Nunki	75 43.9	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 02.2	N89 22.4
Pollux	243 13.8	N27 57.3
Procyon	244 47.8	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.9	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 26.9	N56 41.8
Shaula	96 06.3	S37 07.5
Sirius	258 23.6	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.4	S43 32.7
Vega	80 31.1	N38 48.9
Zuben-ubi	136 53.9	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
24	0	3 21.3	220 45.3	N14 36.6	228 27.0	N18 16.7	176 58.4	S 1 33.7	324 29.0	N12 25.5
	1	18 23.8	235 44.9	N14 35.8	243 27.9	N18 16.3	192 00.4	S 1 33.9	339 31.6	N12 25.4
	2	33 26.2	250 44.4	N14 35.1	258 28.8	N18 15.9	207 02.3	S 1 34.2	354 34.1	N12 25.4
	3	48 28.7	265 44.0	N14 34.3	273 29.7	N18 15.5	222 04.3	S 1 34.4	9 36.7	N12 25.3
	4	63 31.2	280 43.6	N14 33.6	288 30.6	N18 15.1	237 06.3	S 1 34.6	24 39.3	N12 25.3
S	5	78 33.6	295 43.2	N14 32.8	303 31.5	N18 14.6	252 08.2	S 1 34.8	39 41.9	N12 25.2
U										
N	6	93 36.1	310 42.8	N14 32.1	318 32.4	N18 14.2	267 10.2	S 1 35.0	54 44.5	N12 25.2
D	7	108 38.6	325 42.4	N14 31.3	333 33.3	N18 13.8	282 12.2	S 1 35.2	69 47.1	N12 25.1
A	8	123 41.0	340 42.0	N14 30.5	348 34.2	N18 13.4	297 14.2	S 1 35.4	84 49.7	N12 25.1
Y	9	138 43.5	355 41.6	N14 29.8	3 35.2	N18 13.0	312 16.1	S 1 35.6	99 52.3	N12 25.0
	10	153 46.0	10 41.2	N14 29.0	18 36.1	N18 12.6	327 18.1	S 1 35.9	114 54.9	N12 25.0
	11	168 48.4	25 40.8	N14 28.3	33 37.0	N18 12.2	342 20.1	S 1 36.1	129 57.5	N12 24.9
	12	183 50.9	40 40.4	N14 27.5	48 37.9	N18 11.8	357 22.0	S 1 36.3	145 00.1	N12 24.9
	13	198 53.4	55 40.0	N14 26.8	63 38.8	N18 11.4	12 24.0	S 1 36.5	160 02.6	N12 24.8
	14	213 55.8	70 39.6	N14 26.0	78 39.7	N18 11.0	27 26.0	S 1 36.7	175 05.2	N12 24.8
	15	228 58.3	85 39.2	N14 25.2	93 40.6	N18 10.6	42 27.9	S 1 36.9	190 07.8	N12 24.8
	16	244 00.7	100 38.8	N14 24.5	108 41.5	N18 10.2	57 29.9	S 1 37.1	205 10.4	N12 24.7
	17	259 03.2	115 38.4	N14 23.7	123 42.4	N18 09.8	72 31.9	S 1 37.4	220 13.0	N12 24.7
	18	274 05.7	130 38.0	N14 23.0	138 43.3	N18 09.4	87 33.8	S 1 37.6	235 15.6	N12 24.6
	19	289 08.1	145 37.6	N14 22.2	153 44.2	N18 09.0	102 35.8	S 1 37.8	250 18.2	N12 24.6
	20	304 10.6	160 37.2	N14 21.4	168 45.2	N18 08.6	117 37.8	S 1 38.0	265 20.8	N12 24.5
	21	319 13.1	175 36.8	N14 20.7	183 46.1	N18 08.1	132 39.7	S 1 38.2	280 23.4	N12 24.5
	22	334 15.5	190 36.4	N14 19.9	198 47.0	N18 07.7	147 41.7	S 1 38.4	295 26.0	N12 24.4
	23	349 18.0	205 35.9	N14 19.1	213 47.9	N18 07.3	162 43.7	S 1 38.6	310 28.6	N12 24.4
25	0	4 20.5	220 35.5	N14 18.4	228 48.8	N18 06.9	177 45.6	S 1 38.9	325 31.2	N12 24.3
	1	19 22.9	235 35.1	N14 17.6	243 49.7	N18 06.5	192 47.6	S 1 39.1	340 33.8	N12 24.3
	2	34 25.4	250 34.7	N14 16.8	258 50.6	N18 06.1	207 49.6	S 1 39.3	355 36.4	N12 24.2
	3	49 27.9	265 34.3	N14 16.1	273 51.5	N18 05.7	222 51.5	S 1 39.5	10 38.9	N12 24.2
	4	64 30.3	280 33.9	N14 15.3	288 52.4	N18 05.3	237 53.5	S 1 39.7	25 41.5	N12 24.1
M	5	79 32.8	295 33.5	N14 14.5	303 53.4	N18 04.9	252 55.5	S 1 39.9	40 44.1	N12 24.1
O										
N	6	94 35.2	310 33.1	N14 13.8	318 54.3	N18 04.5	267 57.4	S 1 40.1	55 46.7	N12 24.0
D	7	109 37.7	325 32.7	N14 13.0	333 55.2	N18 04.1	282 59.4	S 1 40.3	70 49.3	N12 24.0
A	8	124 40.2	340 32.3	N14 12.2	348 56.1	N18 03.7	298 01.4	S 1 40.6	85 51.9	N12 23.9
Y	9	139 42.6	355 31.9	N14 11.5	3 57.0	N18 03.2	313 03.4	S 1 40.8	100 54.5	N12 23.9
	10	154 45.1	10 31.5	N14 10.7	18 57.9	N18 02.8	328 05.3	S 1 41.0	115 57.1	N12 23.8
	11	169 47.6	25 31.1	N14 09.9	33 58.8	N18 02.4	343 07.3	S 1 41.2	130 59.7	N12 23.8
	12	184 50.0	40 30.7	N14 09.1	48 59.7	N18 02.0	358 09.3	S 1 41.4	146 02.3	N12 23.7
	13	199 52.5	55 30.3	N14 08.4	64 00.7	N18 01.6	13 11.2	S 1 41.6	161 04.9	N12 23.7
	14	214 55.0	70 29.9	N14 07.6	79 01.6	N18 01.2	28 13.2	S 1 41.8	176 07.5	N12 23.6
	15	229 57.4	85 29.5	N14 06.8	94 02.5	N18 00.8	43 15.2	S 1 42.1	191 10.1	N12 23.6
	16	244 59.9	100 29.1	N14 06.0	109 03.4	N18 00.4	58 17.1	S 1 42.3	206 12.7	N12 23.5
	17	260 02.3	115 28.7	N14 05.2	124 04.3	N17 60.0	73 19.1	S 1 42.5	221 15.3	N12 23.5
	18	275 04.8	130 28.3	N14 04.5	139 05.2	N17 59.6	88 21.1	S 1 42.7	236 17.9	N12 23.4
	19	290 07.3	145 27.9	N14 03.7	154 06.1	N17 59.1	103 23.0	S 1 42.9	251 20.5	N12 23.4
	20	305 09.7	160 27.5	N14 02.9	169 07.1	N17 58.7	118 25.0	S 1 43.1	266 23.1	N12 23.3
	21	320 12.2	175 27.1	N14 02.1	184 08.0	N17 58.3	133 27.0	S 1 43.3	281 25.7	N12 23.3
	22	335 14.7	190 26.7	N14 01.3	199 08.9	N17 57.9	148 28.9	S 1 43.6	296 28.3	N12 23.2
	23	350 17.1	205 26.3	N14 00.6	214 09.8	N17 57.5	163 30.9	S 1 43.8	311 30.9	N12 23.2
26	0	5 19.6	220 25.9	N13 59.8	229 10.7	N17 57.1	178 32.9	S 1 44.0	326 33.5	N12 23.1
	1	20 22.1	235 25.5	N13 59.0	244 11.6	N17 56.7	193 34.8	S 1 44.2	341 36.0	N12 23.1
	2	35 24.5	250 25.1	N13 58.2	259 12.6	N17 56.3	208 36.8	S 1 44.4	356 38.6	N12 23.0
	3	50 27.0	265 24.7	N13 57.4	274 13.5	N17 55.9	223 38.8	S 1 44.6	11 41.2	N12 23.0
	4	65 29.5	280 24.3	N13 56.6	289 14.4	N17 55.4	238 40.7	S 1 44.8	26 43.8	N12 22.9
T	5	80 31.9	295 23.9	N13 55.8	304 15.3	N17 55.0	253 42.7	S 1 45.0	41 46.4	N12 22.9
U										
E	6	95 34.4	310 23.5	N13 55.1	319 16.2	N17 54.6	268 44.7	S 1 45.3	56 49.0	N12 22.8
S	7	110 36.8	325 23.1	N13 54.3	334 17.2	N17 54.2	283 46.6	S 1 45.5	71 51.6	N12 22.8
D	8	125 39.3	340 22.7	N13 53.5	349 18.1	N17 53.8	298 48.6	S 1 45.7	86 54.2	N12 22.7
A	9	140 41.8	355 22.3	N13 52.7	4 19.0	N17 53.4	313 50.6	S 1 45.9	101 56.8	N12 22.7
Y	10	155 44.2	10 21.9	N13 51.9	19 19.9	N17 53.0	328 52.5	S 1 46.1	116 59.4	N12 22.6
	11	170 46.7	25 21.5	N13 51.1	34 20.8	N17 52.5	343 54.5	S 1 46.3	132 02.0	N12 22.6
	12	185 49.2	40 21.1	N13 50.3	49 21.7	N17 52.1	358 56.5	S 1 46.5	147 04.6	N12 22.5
	13	200 51.6	55 20.7	N13 49.5	64 22.7	N17 51.7	13 58.4	S 1 46.8	162 07.2	N12 22.5
	14	215 54.1	70 20.3	N13 48.7	79 23.6	N17 51.3	29 00.4	S 1 47.0	177 09.8	N12 22.4
	15	230 56.6	85 19.9	N13 47.9	94 24.5	N17 50.9	44 02.4	S 1 47.2	192 12.4	N12 22.4
	16	245 59.0	100 19.5	N13 47.1	109 25.4	N17 50.5	59 04.3	S 1 47.4	207 15.0	N12 22.3
	17	261 01.5	115 19.1	N13 46.3	124 26.3	N17 50.1	74 06.3	S 1 47.6	222 17.6	N12 22.3
	18	276 04.0	130 18.7	N13 45.5	139 27.3	N17 49.7	89 08.3	S 1 47.8	237 20.2	N12 22.2
	19	291 06.4	145 18.3	N13 44.8	154 28.2	N17 49.2	104 10.2	S 1 48.0	252 22.8	N12 22.2
	20	306 08.9	160 17.9	N13 44.0	169 29.1	N17 48.8	119 12.2	S 1 48.2	267 25.4	N12 22.1
	21	321 11.3	175 17.5	N13 43.2	184 30.0	N17 48.4	134 14.2	S 1 48.5	282 28.0	N12 22.1
	22	336 13.8	190 17.1	N13 42.4	199 31.0	N17 48.0	149 16.1	S 1 48.7	297 30.6	N12 22.0
	23	351 16.3	205 16.7	N13 41.6	214 31.9	N17 47.6	164 18.1	S 1 48.9	312 33.2	N12 22.0
			v -0.4	d 0.8	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	Dec ° '	MOON GHA ° '	v '	Dec ° '	d '	HP '
24	0	181 59.9	S 0 35.3	112 30.8	6.3	S25 23.2	2.1	57.8
	1	197 00.1	S 0 36.3	126 56.2	6.3	S25 25.2	2.0	57.8
	2	212 00.3	S 0 37.2	141 21.5	6.4	S25 27.0	1.8	57.7
	3	227 00.6	S 0 38.2	155 46.9	6.4	S25 28.7	1.7	57.7
	4	242 00.8	S 0 39.2	170 12.3	6.4	S25 30.2	1.5	57.6
S	5	257 01.0	S 0 40.2	184 37.8	6.5	S25 31.5	1.3	57.6
U								
N	6	272 01.2	S 0 41.1	199 03.3	6.5	S25 32.7	1.2	57.6
D	7	287 01.4	S 0 42.1	213 28.9	6.5	S25 33.8	1.0	57.5
A	8	302 01.6	S 0 43.1	227 54.5	6.6	S25 34.7	0.9	57.5
Y	9	317 01.9	S 0 44.1	242 20.1	6.6	S25 35.4	0.7	57.5
	10	332 02.1	S 0 45.0	256 45.8	6.7	S25 35.9	0.6	57.4
	11	347 02.3	S 0 46.0	271 11.5	6.7	S25 36.4	0.4	57.4
	12	2 02.5	S 0 47.0	285 37.3	6.8	S25 36.6	0.3	57.3
	13	17 02.7	S 0 48.0	300 03.1	6.8	S25 36.7	0.1	57.3
	14	32 02.9	S 0 48.9	314 28.9	6.9	S25 36.7	0.0	57.3
	15	47 03.2	S 0 49.9	328 54.9	6.9	S25 36.5	0.2	57.2
	16	62 03.4	S 0 50.9	343 20.8	7.0	S25 36.1	0.3	57.2
	17	77 03.6	S 0 51.8	357 46.8	7.0	S25 35.6	0.5	57.1
	18	92 03.8	S 0 52.8	12 12.9	7.1	S25 35.0	0.6	57.1
	19	107 04.0	S 0 53.8	26 39.0	7.1	S25 34.2	0.8	57.1
	20	122 04.2	S 0 54.8	41 05.2	7.2	S25 33.3	0.9	57.0
	21	137 04.5	S 0 55.7	55 31.5	7.2	S25 32.2	1.1	57.0
	22	152 04.7	S 0 56.7	69 57.8	7.3	S25 30.9	1.2	57.0
	23	167 04.9	S 0 57.7	84 24.2	7.4	S25 29.6	1.4	56.9
25	0	182 05.1	S 0 58.7	98 50.6	7.4	S25 28.0	1.5	56.9
	1	197 05.3	S 0 59.6	113 17.1	7.5	S25 26.4	1.7	56.9
	2	212 05.5	S 1 00.6	127 43.6	7.6	S25 24.5	1.8	56.8
	3	227 05.7	S 1 01.6	142 10.2	7.6	S25 22.6	2.0	56.8
	4	242 06.0	S 1 02.6	156 36.9	7.7	S25 20.5	2.1	56.7
M	5	257 06.2	S 1 03.5	171 03.7	7.7	S25 18.2	2.2	56.7
O								
N	6	272 06.4	S 1 04.5	185 30.5	7.8	S25 15.9	2.4	56.7
D	7	287 06.6	S 1 05.5	199 57.4	7.9	S25 13.3	2.5	56.6
A	8	302 06.8	S 1 06.4	214 24.3	8.0	S25 10.7	2.7	56.6
Y	9	317 07.0	S 1 07.4	228 51.4	8.0	S25 07.9	2.8	56.6
	10	332 07.3	S 1 08.4	243 18.4	8.1	S25 04.9	2.9	56.5
	11	347 07.5	S 1 09.4	257 45.6	8.2	S25 01.9	3.1	56.5
	12	2 07.7	S 1 10.3	272 12.9	8.2	S24 58.7	3.2	56.5
	13	17 07.9	S 1 11.3	286 40.2	8.3	S24 55.3	3.3	56.4
	14	32 08.1	S 1 12.3	301 07.6	8.4	S24 51.9	3.5	56.4
	15	47 08.3	S 1 13.3	315 35.0	8.5	S24 48.3	3.6	56.4
	16	62 08.5	S 1 14.2	330 02.6	8.5	S24 44.5	3.7	56.3
	17	77 08.8	S 1 15.2	344 30.2	8.6	S24 40.7	3.9	56.3
	18	92 09.0	S 1 16.2	358 57.9	8.7	S24 36.7	4.0	56.3
	19	107 09.2	S 1 17.2	13 25.6	8.8	S24 32.5	4.1	56.2
	20	122 09.4	S 1 18.1	27 53.5	8.8	S24 28.3	4.2	56.2
	21	137 09.6	S 1 19.1	42 21.4	8.9	S24 23.9	4.4	56.2
	22	152 09.8	S 1 20.1	56 49.4	9.0	S24 19.4	4.5	56.1
	23	167 10.0	S 1 21.1	71 17.5	9.1	S24 14.8	4.6	56.1
26	0	182 10.3	S 1 22.0	85 45.7	9.2	S24 10.0	4.7	56.1
	1	197 10.5	S 1 23.0	100 13.9	9.2	S24 05.2	4.9	56.0
	2	212 10.7	S 1 24.0	114 42.3	9.3	S24 00.2	5.0	56.0
	3	227 10.9	S 1 24.9	129 10.7	9.4	S23 55.1	5.1	56.0
	4	242 11.1	S 1 25.9	143 39.2	9.5	S23 49.8	5.2	56.0
T	5	257 11.3	S 1 26.9	158 07.7	9.6	S23 44.5	5.3	55.9
U								
E	6	272 11.5	S 1 27.9	172 36.4	9.7	S23 39.0	5.5	55.9
S	7	287 11.8	S 1 28.8	187 05.1	9.7	S23 33.4	5.6	55.9
D	8	302 12.0	S 1 29.8	201 34.0	9.8	S23 27.7	5.7	55.8
A	9	317 12.2	S 1 30.8	216 02.9	9.9	S23 21.9	5.8	55.8
Y	10	332 12.4	S 1 31.8	230 31.9	10.0	S23 16.0	5.9	55.8
	11	347 12.6	S 1 32.7	245 00.9	10.1	S23 10.0	6.0	55.7
	12	2 12.8	S 1 33.7	259 30.1	10.2	S23 03.8	6.1	55.7
	13	17 13.0	S 1 34.7	273 59.3	10.2	S22 57.6	6.3	55.7
	14	32 13.2	S 1 35.7	288 28.7	10.3	S22 51.2	6.4	55.7
	15	47 13.5	S 1 36.6	302 58.1	10.4	S22 44.7	6.5	55.6
	16	62 13.7	S 1 37.6	317 27.6	10.5	S22 38.2	6.6	55.6
	17	77 13.9	S 1 38.6	331 57.1	10.6	S22 31.5	6.7	55.6
	18	92 14.1	S 1 39.5	346 26.8	10.7	S22 24.7	6.8	55.5
	19	107 14.3	S 1 40.5	0 56.6	10.7	S22 17.8	6.9	55.5
	20	122 14.5	S 1 41.5	15 26.4	10.8	S22 10.8	7.0	55.5
	21	137 14.7	S 1 42.5	29 56.3	10.9	S22 03.7	7.1	55.5
	22	152 14.9	S 1 43.4	44 26.3	11.0	S21 56.5	7.2	55.4
	23	167 15.2	S 1 44.4	58 56.4	11.1	S21 49.2	7.3	55.4
		S.D. 16.0	d 1.0	S.D. 15.6		15.4		15.2

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.2	S40 11.1
Achernar	335 17.5	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.5	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 36.0	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.6	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.1
Atria	107 04.0	S69 05.0
Avior	234 13.8	S59 35.9
Bellatrix	278 19.6	N 6 22.6
Betelgeuse	270 48.8	N 7 24.8
Canopus	263 51.0	S52 42.3
Capella	280 17.3	N46 01.5
Castor	245 53.3	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.0	N28 37.8
Eltanin	90 40.8	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.1	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.1	S69 49.9
Mirfak	308 23.6	N49 57.7
Nunki	75 44.0	S26 15.6
Peacock	53 00.6	S56 38.6
Polaris	315 01.2	N89 22.4
Pollux	243 13.8	N27 57.3
Procyon	244 47.8	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.9	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 26.9	N56 41.8
Shaula	96 06.3	S37 07.5
Sirius	258 23.6	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.3	S43 32.7
Vega	80 31.1	N38 48.9
Zuben-ubi	136 53.9	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
27	0	6 18.7	220 16.3	N13 40.8	229 32.8	N17 47.2	179 20.1	S 1 49.1	327 35.8	N12 21.9
	1	21 21.2	235 15.9	N13 40.0	244 33.7	N17 46.7	194 22.1	S 1 49.3	342 38.4	N12 21.9
	2	36 23.7	250 15.5	N13 39.2	259 34.6	N17 46.3	209 24.0	S 1 49.5	357 41.0	N12 21.8
	3	51 26.1	265 15.1	N13 38.3	274 35.6	N17 45.9	224 26.0	S 1 49.7	12 43.6	N12 21.8
	4	66 28.6	280 14.7	N13 37.5	289 36.5	N17 45.5	239 28.0	S 1 50.0	27 46.2	N12 21.7
W	5	81 31.1	295 14.3	N13 36.7	304 37.4	N17 45.1	254 29.9	S 1 50.2	42 48.8	N12 21.7
E										
D	6	96 33.5	310 13.9	N13 35.9	319 38.3	N17 44.7	269 31.9	S 1 50.4	57 51.4	N12 21.6
N	7	111 36.0	325 13.5	N13 35.1	334 39.3	N17 44.3	284 33.9	S 1 50.6	72 54.0	N12 21.6
E	8	126 38.5	340 13.1	N13 34.3	349 40.2	N17 43.8	299 35.8	S 1 50.8	87 56.6	N12 21.5
S	9	141 40.9	355 12.7	N13 33.5	4 41.1	N17 43.4	314 37.8	S 1 51.0	102 59.2	N12 21.5
D	10	156 43.4	10 12.3	N13 32.7	19 42.0	N17 43.0	329 39.8	S 1 51.2	118 01.8	N12 21.4
A	11	171 45.8	25 11.9	N13 31.9	34 43.0	N17 42.6	344 41.7	S 1 51.4	133 04.4	N12 21.4
Y										
	12	186 48.3	40 11.5	N13 31.1	49 43.9	N17 42.2	359 43.7	S 1 51.7	148 07.0	N12 21.3
	13	201 50.8	55 11.1	N13 30.3	64 44.8	N17 41.7	14 45.7	S 1 51.9	163 09.6	N12 21.3
	14	216 53.2	70 10.7	N13 29.5	79 45.7	N17 41.3	29 47.6	S 1 52.1	178 12.2	N12 21.2
	15	231 55.7	85 10.3	N13 28.7	94 46.7	N17 40.9	44 49.6	S 1 52.3	193 14.8	N12 21.2
	16	246 58.2	100 09.9	N13 27.8	109 47.6	N17 40.5	59 51.6	S 1 52.5	208 17.4	N12 21.1
	17	262 00.6	115 09.5	N13 27.0	124 48.5	N17 40.1	74 53.5	S 1 52.7	223 20.0	N12 21.1
	18	277 03.1	130 09.2	N13 26.2	139 49.4	N17 39.7	89 55.5	S 1 52.9	238 22.6	N12 21.0
	19	292 05.6	145 08.8	N13 25.4	154 50.4	N17 39.2	104 57.5	S 1 53.2	253 25.2	N12 21.0
	20	307 08.0	160 08.4	N13 24.6	169 51.3	N17 38.8	119 59.4	S 1 53.4	268 27.8	N12 20.9
	21	322 10.5	175 08.0	N13 23.8	184 52.2	N17 38.4	135 01.4	S 1 53.6	283 30.4	N12 20.9
	22	337 12.9	190 07.6	N13 23.0	199 53.1	N17 38.0	150 03.4	S 1 53.8	298 33.0	N12 20.8
	23	352 15.4	205 07.2	N13 22.1	214 54.1	N17 37.6	165 05.3	S 1 54.0	313 35.6	N12 20.8
28	0	7 17.9	220 06.8	N13 21.3	229 55.0	N17 37.2	180 07.3	S 1 54.2	328 38.3	N12 20.7
	1	22 20.3	235 06.4	N13 20.5	244 55.9	N17 36.7	195 09.3	S 1 54.4	343 40.9	N12 20.7
	2	37 22.8	250 06.0	N13 19.7	259 56.9	N17 36.3	210 11.2	S 1 54.6	358 43.5	N12 20.6
	3	52 25.3	265 05.6	N13 18.9	274 57.8	N17 35.9	225 13.2	S 1 54.9	13 46.1	N12 20.6
	4	67 27.7	280 05.2	N13 18.0	289 58.7	N17 35.5	240 15.2	S 1 55.1	28 48.7	N12 20.5
T	5	82 30.2	295 04.8	N13 17.2	304 59.6	N17 35.1	255 17.1	S 1 55.3	43 51.3	N12 20.5
H										
U	6	97 32.7	310 04.4	N13 16.4	320 00.6	N17 34.6	270 19.1	S 1 55.5	58 53.9	N12 20.4
R	7	112 35.1	325 04.0	N13 15.6	335 01.5	N17 34.2	285 21.1	S 1 55.7	73 56.5	N12 20.4
S	8	127 37.6	340 03.6	N13 14.8	350 02.4	N17 33.8	300 23.0	S 1 55.9	88 59.1	N12 20.3
D	9	142 40.1	355 03.2	N13 13.9	5 03.4	N17 33.4	315 25.0	S 1 56.1	104 01.7	N12 20.3
A	10	157 42.5	10 02.8	N13 13.1	20 04.3	N17 33.0	330 27.0	S 1 56.4	119 04.3	N12 20.2
Y	11	172 45.0	25 02.4	N13 12.3	35 05.2	N17 32.5	345 28.9	S 1 56.6	134 06.9	N12 20.2
	12	187 47.4	40 02.0	N13 11.5	50 06.2	N17 32.1	0 30.9	S 1 56.8	149 09.5	N12 20.1
	13	202 49.9	55 01.6	N13 10.6	65 07.1	N17 31.7	15 32.9	S 1 57.0	164 12.1	N12 20.1
	14	217 52.4	70 01.2	N13 09.8	80 08.0	N17 31.3	30 34.8	S 1 57.2	179 14.7	N12 20.0
	15	232 54.8	85 00.9	N13 09.0	95 09.0	N17 30.8	45 36.8	S 1 57.4	194 17.3	N12 20.0
	16	247 57.3	100 00.5	N13 08.1	110 09.9	N17 30.4	60 38.8	S 1 57.6	209 19.9	N12 19.9
	17	262 59.8	115 00.1	N13 07.3	125 10.8	N17 30.0	75 40.7	S 1 57.8	224 22.5	N12 19.9
	18	278 02.2	129 59.7	N13 06.5	140 11.7	N17 29.6	90 42.7	S 1 58.1	239 25.1	N12 19.8
	19	293 04.7	144 59.3	N13 05.7	155 12.7	N17 29.2	105 44.7	S 1 58.3	254 27.7	N12 19.7
	20	308 07.2	159 58.9	N13 04.8	170 13.6	N17 28.7	120 46.6	S 1 58.5	269 30.3	N12 19.7
	21	323 09.6	174 58.5	N13 04.0	185 14.5	N17 28.3	135 48.6	S 1 58.7	284 32.9	N12 19.6
	22	338 12.1	189 58.1	N13 03.2	200 15.5	N17 27.9	150 50.6	S 1 58.9	299 35.6	N12 19.6
	23	353 14.6	204 57.7	N13 02.3	215 16.4	N17 27.5	165 52.5	S 1 59.1	314 38.2	N12 19.5
29	0	8 17.0	219 57.3	N13 01.5	230 17.3	N17 27.1	180 54.5	S 1 59.3	329 40.8	N12 19.5
	1	23 19.5	234 56.9	N13 00.6	245 18.3	N17 26.6	195 56.5	S 1 59.6	344 43.4	N12 19.4
	2	38 21.9	249 56.5	N12 59.8	260 19.2	N17 26.2	210 58.4	S 1 59.8	359 46.0	N12 19.4
	3	53 24.4	264 56.1	N12 59.0	275 20.1	N17 25.8	226 00.4	S 1 60.0	14 48.6	N12 19.3
	4	68 26.9	279 55.7	N12 58.1	290 21.1	N17 25.4	241 02.4	S 2 00.2	29 51.2	N12 19.3
F	5	83 29.3	294 55.4	N12 57.3	305 22.0	N17 24.9	256 04.3	S 2 00.4	44 53.8	N12 19.2
R										
I	6	98 31.8	309 55.0	N12 56.5	320 23.0	N17 24.5	271 06.3	S 2 00.6	59 56.4	N12 19.2
D	7	113 34.3	324 54.6	N12 55.6	335 23.9	N17 24.1	286 08.3	S 2 00.8	74 59.0	N12 19.1
A	8	128 36.7	339 54.2	N12 54.8	350 24.8	N17 23.7	301 10.2	S 2 01.0	90 01.6	N12 19.1
Y	9	143 39.2	354 53.8	N12 53.9	5 25.8	N17 23.2	316 12.2	S 2 01.3	105 04.2	N12 19.0
	10	158 41.7	9 53.4	N12 53.1	20 26.7	N17 22.8	331 14.2	S 2 01.5	120 06.8	N12 19.0
	11	173 44.1	24 53.0	N12 52.3	35 27.6	N17 22.4	346 16.1	S 2 01.7	135 09.4	N12 18.9
	12	188 46.6	39 52.6	N12 51.4	50 28.6	N17 22.0	1 18.1	S 2 01.9	150 12.1	N12 18.9
	13	203 49.0	54 52.2	N12 50.6	65 29.5	N17 21.5	16 20.1	S 2 02.1	165 14.7	N12 18.8
	14	218 51.5	69 51.8	N12 49.7	80 30.4	N17 21.1	31 22.0	S 2 02.3	180 17.3	N12 18.8
	15	233 54.0	84 51.4	N12 48.9	95 31.4	N17 20.7	46 24.0	S 2 02.5	195 19.9	N12 18.7
	16	248 56.4	99 51.0	N12 48.0	110 32.3	N17 20.3	61 26.0	S 2 02.8	210 22.5	N12 18.7
	17	263 58.9	114 50.7	N12 47.2	125 33.3	N17 19.9	76 27.9	S 2 03.0	225 25.1	N12 18.6
	18	279 01.4	129 50.3	N12 46.3	140 34.2	N17 19.4	91 29.9	S 2 03.2	240 27.7	N12 18.5
	19	294 03.8	144 49.9	N12 45.5	155 35.1	N17 19.0	106 31.9	S 2 03.4	255 30.3	N12 18.5
	20	309 06.3	159 49.5	N12 44.7	170 36.1	N17 18.6	121 33.8	S 2 03.6	270 32.9	N12 18.4
	21	324 08.8	174 49.1	N12 43.8	185 37.0	N17 18.2	136 35.8	S 2 03.8	285 35.5	N12 18.4
	22	339 11.2	189 48.7	N12 43.0	200 37.9	N17 17.7	151 37.8	S 2 04.0	300 38.1	N12 18.3
	23	354 13.7	204 48.3	N12 42.1	215 38.9	N17 17.3	166 39.7	S 2 04.2	315 40.7	N12 18.3
			v -0.4	d 0.8	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
27	0	182 15.4	S 1 45.4		73 26.6	11.2	S21 41.8	7.4	55.4
	1	197 15.6	S 1 46.4		87 56.8	11.3	S21 34.3	7.5	55.4
	2	212 15.8	S 1 47.3		102 27.2	11.3	S21 26.7	7.6	55.3
	3	227 16.0	S 1 48.3		116 57.6	11.4	S21 19.0	7.7	55.3
	4	242 16.2	S 1 49.3		131 28.1	11.5	S21 11.3	7.8	55.3
W	5	257 16.4	S 1 50.2		145 58.7	11.6	S21 03.4	7.9	55.3
E									
D	6	272 16.6	S 1 51.2		160 29.4	11.7	S20 55.4	8.0	55.2
N	7	287 16.9	S 1 52.2		175 00.1	11.8	S20 47.4	8.1	55.2
E	8	302 17.1	S 1 53.2		189 31.0	11.8	S20 39.2	8.1	55.2
S	9	317 17.3	S 1 54.1		204 01.9	11.9	S20 31.0	8.2	55.2
D	10	332 17.5	S 1 55.1		218 32.9	12.0	S20 22.7	8.3	55.1
A	11	347 17.7	S 1 56.1		233 04.0	12.1	S20 14.3	8.4	55.1
Y									
	12	2 17.9	S 1 57.1		247 35.1	12.2	S20 05.8	8.5	55.1
	13	17 18.1	S 1 58.0		262 06.4	12.2	S19 57.2	8.6	55.1
	14	32 18.3	S 1 59.0		276 37.7	12.3	S19 48.5	8.7	55.1
	15	47 18.5	S 1 60.0		291 09.1	12.4	S19 39.8	8.7	55.0
	16	62 18.7	S 2 00.9		305 40.6	12.5	S19 31.0	8.8	55.0
	17	77 19.0	S 2 01.9		320 12.1	12.6	S19 22.1	8.9	55.0
	18	92 19.2	S 2 02.9		334 43.8	12.6	S19 13.1	9.0	55.0
	19	107 19.4	S 2 03.9		349 15.5	12.7	S19 04.0	9.1	54.9
	20	122 19.6	S 2 04.8		3 47.3	12.8	S18 54.8	9.1	54.9
	21	137 19.8	S 2 05.8		18 19.2	12.9	S18 45.6	9.2	54.9
	22	152 20.0	S 2 06.8		32 51.1	13.0	S18 36.3	9.3	54.9
	23	167 20.2	S 2 07.7		47 23.2	13.0	S18 26.9	9.4	54.9
28	0	182 20.4	S 2 08.7		61 55.3	13.1	S18 17.5	9.4	54.8
	1	197 20.6	S 2 09.7		76 27.4	13.2	S18 08.0	9.5	54.8
	2	212 20.9	S 2 10.7		90 59.7	13.3	S17 58.4	9.6	54.8
	3	227 21.1	S 2 11.6		105 32.0	13.3	S17 48.7	9.7	54.8
	4	242 21.3	S 2 12.6		120 04.4	13.4	S17 39.0	9.7	54.8
T	5	257 21.5	S 2 13.6		134 36.9	13.5	S17 29.2	9.8	54.7
H									
U	6	272 21.7	S 2 14.6		149 09.4	13.5	S17 19.3	9.9	54.7
R	7	287 21.9	S 2 15.5		163 42.0	13.6	S17 09.3	9.9	54.7
S	8	302 22.1	S 2 16.5		178 14.7	13.7	S16 59.3	10.0	54.7
D	9	317 22.3	S 2 17.5		192 47.5	13.8	S16 49.3	10.1	54.7
A	10	332 22.5	S 2 18.4		207 20.3	13.8	S16 39.1	10.1	54.7
Y	11	347 22.7	S 2 19.4		221 53.2	13.9	S16 28.9	10.2	54.6
	12	2 22.9	S 2 20.4		236 26.2	14.0	S16 18.6	10.3	54.6
	13	17 23.2	S 2 21.4		250 59.2	14.0	S16 08.3	10.3	54.6
	14	32 23.4	S 2 22.3		265 32.3	14.1	S15 57.9	10.4	54.6
	15	47 23.6	S 2 23.3		280 05.5	14.2	S15 47.5	10.5	54.6
	16	62 23.8	S 2 24.3		294 38.7	14.2	S15 37.0	10.5	54.6
	17	77 24.0	S 2 25.2		309 12.0	14.3	S15 26.4	10.6	54.5
	18	92 24.2	S 2 26.2		323 45.3	14.4	S15 15.8	10.6	54.5
	19	107 24.4	S 2 27.2		338 18.8	14.4	S15 05.1	10.7	54.5
	20	122 24.6	S 2 28.2		352 52.2	14.5	S14 54.3	10.7	54.5
	21	137 24.8	S 2 29.1		7 25.8	14.5	S14 43.5	10.8	54.5
	22	152 25.0	S 2 30.1		21 59.4	14.6	S14 32.7	10.9	54.5
	23	167 25.2	S 2 31.1		36 33.1	14.7	S14 21.8	10.9	54.5
29	0	182 25.4	S 2 32.0		51 06.8	14.7	S14 10.8	11.0	54.4
	1	197 25.6	S 2 33.0		65 40.6	14.8	S13 59.8	11.0	54.4
	2	212 25.9	S 2 34.0		80 14.4	14.8	S13 48.7	11.1	54.4
	3	227 26.1	S 2 35.0		94 48.3	14.9	S13 37.6	11.1	54.4
	4	242 26.3	S 2 35.9		109 22.3	15.0	S13 26.5	11.2	54.4
F	5	257 26.5	S 2 36.9		123 56.3	15.0	S13 15.3	11.2	54.4
R									
I	6	272 26.7	S 2 37.9		138 30.3	15.1	S13 04.0	11.3	54.4
D	7	287 26.9	S 2 38.8		153 04.5	15.1	S12 52.7	11.3	54.3
A	8	302 27.1	S 2 39.8		167 38.6	15.2	S12 41.4	11.4	54.3
Y	9	317 27.3	S 2 40.8		182 12.8	15.2	S12 30.0	11.4	54.3
	10	332 27.5	S 2 41.7		196 47.1	15.3	S12 18.5	11.4	54.3
	11	347 27.7	S 2 42.7		211 21.4	15.3	S12 07.0	11.5	54.3
	12	2 27.9	S 2 43.7		225 55.8	15.4	S11 55.5	11.5	54.3
	13	17 28.1	S 2 44.7		240 30.2	15.4	S11 43.9	11.6	54.3
	14	32 28.3	S 2 45.6		255 04.7	15.5	S11 32.3	11.6	54.3
	15	47 28.5	S 2 46.6		269 39.2	15.5	S11 20.7	11.7	54.3
	16	62 28.7	S 2 47.6		284 13.8	15.6	S11 09.0	11.7	54.2
	17	77 29.0	S 2 48.5		298 48.4	15.6	S10 57.2	11.7	54.2
	18	92 29.2	S 2 49.5		313 23.1	15.7	S10 45.5	11.8	54.2
	19	107 29.4	S 2 50.5		327 57.8	15.7	S10 33.7	11.8	54.2
	20	122 29.6	S 2 51.5		342 32.5	15.7	S10 21.8	11.8	54.2
	21	137 29.8	S 2 52.4		357 07.3	15.8	S10 09.9	11.9	54.2
	22	152 30.0	S 2 53.4		11 42.1	15.8	S 9 58.0	11.9	54.2
	23	167 30.2	S 2 54.4		26 17.0	15.9	S 9 46.1	11.9	54.2
		S.D. 16.0	d 1.0		S.D. 15.0		14.9	14.8	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.2	S40 11.1
Achernar	335 17.4	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.5	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 36.0	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.6	S 1 10.9
Alphard	217 45.0	S 8 46.9
Alphecca	126 01.4	N26 37.3
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.1
Atria	107 04.0	S69 05.0
Avior	234 13.7	S59 35.9
Bellatrix	278 19.5	N 6 22.6
Betelgeuse	270 48.8	N 7 24.8
Canopus	263 51.0	S52 42.3
Capella	280 17.3	N46 01.5
Castor	245 53.3	N31 49.4
Deneb	49 23.4	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.0	N28 37.8
Eltanin	90 40.9	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.2	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.0	S69 49.9
Mirfak	308 23.6	N49 57.7
Nunki	75 44.0	S26 15.6
Peacock	53 00.7	S56 38.6
Polaris	315 00.4	N89 22.4
Pollux	243 13.7	N27 57.3
Procyon	244 47.8	N 5 09.1
Rasalhague	95 55.8	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.9	S 8 09.9
Rigil Kent	139 36.7	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 26.9	N56 41.8
Shaula	96 06.3	S37 07.5
Sirius	258 23.6	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.3	S43 32.7
Vega	80 31.1	N38 48.9
Zuben-ubi	136 53.9	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
30	0	9 16.2	219 47.9	N12 41.3	230 39.8	N17 16.9	181 41.7	S 2 04.5	330 43.4	N12 18.2
	1	24 18.6	234 47.5	N12 40.4	245 40.8	N17 16.4	196 43.7	S 2 04.7	345 46.0	N12 18.2
	2	39 21.1	249 47.1	N12 39.5	260 41.7	N17 16.0	211 45.6	S 2 04.9	0 48.6	N12 18.1
	3	54 23.5	264 46.8	N12 38.7	275 42.6	N17 15.6	226 47.6	S 2 05.1	15 51.2	N12 18.1
	4	69 26.0	279 46.4	N12 37.8	290 43.6	N17 15.2	241 49.6	S 2 05.3	30 53.8	N12 18.0
S	5	84 28.5	294 46.0	N12 37.0	305 44.5	N17 14.7	256 51.5	S 2 05.5	45 56.4	N12 18.0
A										
T	6	99 30.9	309 45.6	N12 36.1	320 45.5	N17 14.3	271 53.5	S 2 05.7	60 59.0	N12 17.9
U	7	114 33.4	324 45.2	N12 35.3	335 46.4	N17 13.9	286 55.5	S 2 05.9	76 01.6	N12 17.9
R	8	129 35.9	339 44.8	N12 34.4	350 47.3	N17 13.5	301 57.4	S 2 06.2	91 04.2	N12 17.8
D	9	144 38.3	354 44.4	N12 33.6	5 48.3	N17 13.0	316 59.4	S 2 06.4	106 06.8	N12 17.8
A	10	159 40.8	9 44.0	N12 32.7	20 49.2	N17 12.6	332 01.4	S 2 06.6	121 09.5	N12 17.7
Y	11	174 43.3	24 43.6	N12 31.8	35 50.2	N17 12.2	347 03.3	S 2 06.8	136 12.1	N12 17.6
	12	189 45.7	39 43.3	N12 31.0	50 51.1	N17 11.8	2 05.3	S 2 07.0	151 14.7	N12 17.6
	13	204 48.2	54 42.9	N12 30.1	65 52.1	N17 11.3	17 07.3	S 2 07.2	166 17.3	N12 17.5
	14	219 50.7	69 42.5	N12 29.3	80 53.0	N17 10.9	32 09.2	S 2 07.4	181 19.9	N12 17.5
	15	234 53.1	84 42.1	N12 28.4	95 53.9	N17 10.5	47 11.2	S 2 07.6	196 22.5	N12 17.4
	16	249 55.6	99 41.7	N12 27.5	110 54.9	N17 10.0	62 13.2	S 2 07.9	211 25.1	N12 17.4
	17	264 58.0	114 41.3	N12 26.7	125 55.8	N17 09.6	77 15.1	S 2 08.1	226 27.7	N12 17.3
	18	280 00.5	129 40.9	N12 25.8	140 56.8	N17 09.2	92 17.1	S 2 08.3	241 30.3	N12 17.3
	19	295 03.0	144 40.5	N12 25.0	155 57.7	N17 08.8	107 19.1	S 2 08.5	256 33.0	N12 17.2
	20	310 05.4	159 40.2	N12 24.1	170 58.7	N17 08.3	122 21.0	S 2 08.7	271 35.6	N12 17.2
	21	325 07.9	174 39.8	N12 23.2	185 59.6	N17 07.9	137 23.0	S 2 08.9	286 38.2	N12 17.1
	22	340 10.4	189 39.4	N12 22.4	201 00.5	N17 07.5	152 25.0	S 2 09.1	301 40.8	N12 17.1
	23	355 12.8	204 39.0	N12 21.5	216 01.5	N17 07.0	167 26.9	S 2 09.4	316 43.4	N12 17.0
1	0	10 15.3	219 38.6	N12 20.6	231 02.4	N17 06.6	182 28.9	S 2 09.6	331 46.0	N12 17.0
	1	25 17.8	234 38.2	N12 19.8	246 03.4	N17 06.2	197 30.9	S 2 09.8	346 48.6	N12 16.9
	2	40 20.2	249 37.8	N12 18.9	261 04.3	N17 05.8	212 32.8	S 2 10.0	1 51.2	N12 16.8
	3	55 22.7	264 37.4	N12 18.0	276 05.3	N17 05.3	227 34.8	S 2 10.2	16 53.9	N12 16.8
	4	70 25.1	279 37.1	N12 17.2	291 06.2	N17 04.9	242 36.8	S 2 10.4	31 56.5	N12 16.7
S	5	85 27.6	294 36.7	N12 16.3	306 07.2	N17 04.5	257 38.7	S 2 10.6	46 59.1	N12 16.7
U										
N	6	100 30.1	309 36.3	N12 15.4	321 08.1	N17 04.0	272 40.7	S 2 10.8	62 01.7	N12 16.6
D	7	115 32.5	324 35.9	N12 14.5	336 09.1	N17 03.6	287 42.7	S 2 11.1	77 04.3	N12 16.6
A	8	130 35.0	339 35.5	N12 13.7	351 10.0	N17 03.2	302 44.6	S 2 11.3	92 06.9	N12 16.5
Y	9	145 37.5	354 35.1	N12 12.8	6 10.9	N17 02.7	317 46.6	S 2 11.5	107 09.5	N12 16.5
	10	160 39.9	9 34.7	N12 11.9	21 11.9	N17 02.3	332 48.6	S 2 11.7	122 12.1	N12 16.4
	11	175 42.4	24 34.4	N12 11.0	36 12.8	N17 01.9	347 50.5	S 2 11.9	137 14.8	N12 16.4
	12	190 44.9	39 34.0	N12 10.2	51 13.8	N17 01.5	2 52.5	S 2 12.1	152 17.4	N12 16.3
	13	205 47.3	54 33.6	N12 09.3	66 14.7	N17 01.0	17 54.5	S 2 12.3	167 20.0	N12 16.3
	14	220 49.8	69 33.2	N12 08.4	81 15.7	N17 00.6	32 56.4	S 2 12.5	182 22.6	N12 16.2
	15	235 52.3	84 32.8	N12 07.5	96 16.6	N17 00.2	47 58.4	S 2 12.8	197 25.2	N12 16.1
	16	250 54.7	99 32.4	N12 06.7	111 17.6	N16 59.7	63 00.4	S 2 13.0	212 27.8	N12 16.1
	17	265 57.2	114 32.0	N12 05.8	126 18.5	N16 59.3	78 02.3	S 2 13.2	227 30.4	N12 16.0
	18	280 59.6	129 31.7	N12 04.9	141 19.5	N16 58.9	93 04.3	S 2 13.4	242 33.1	N12 16.0
	19	296 02.1	144 31.3	N12 04.0	156 20.4	N16 58.4	108 06.3	S 2 13.6	257 35.7	N12 15.9
	20	311 04.6	159 30.9	N12 03.2	171 21.4	N16 58.0	123 08.2	S 2 13.8	272 38.3	N12 15.9
	21	326 07.0	174 30.5	N12 02.3	186 22.3	N16 57.6	138 10.2	S 2 14.0	287 40.9	N12 15.8
	22	341 09.5	189 30.1	N12 01.4	201 23.3	N16 57.1	153 12.2	S 2 14.2	302 43.5	N12 15.8
	23	356 12.0	204 29.7	N12 00.5	216 24.2	N16 56.7	168 14.1	S 2 14.5	317 46.1	N12 15.7
2	0	11 14.4	219 29.3	N11 59.6	231 25.2	N16 56.3	183 16.1	S 2 14.7	332 48.7	N12 15.7
	1	26 16.9	234 29.0	N11 58.7	246 26.1	N16 55.8	198 18.1	S 2 14.9	347 51.4	N12 15.6
	2	41 19.4	249 28.6	N11 57.9	261 27.1	N16 55.4	213 20.0	S 2 15.1	2 54.0	N12 15.5
	3	56 21.8	264 28.2	N11 57.0	276 28.0	N16 55.0	228 22.0	S 2 15.3	17 56.6	N12 15.5
	4	71 24.3	279 27.8	N11 56.1	291 29.0	N16 54.5	243 24.0	S 2 15.5	32 59.2	N12 15.4
M	5	86 26.7	294 27.4	N11 55.2	306 29.9	N16 54.1	258 25.9	S 2 15.7	48 01.8	N12 15.4
O										
N	6	101 29.2	309 27.0	N11 54.3	321 30.9	N16 53.7	273 27.9	S 2 15.9	63 04.4	N12 15.3
D	7	116 31.7	324 26.7	N11 53.4	336 31.8	N16 53.2	288 29.9	S 2 16.2	78 07.1	N12 15.3
A	8	131 34.1	339 26.3	N11 52.5	351 32.8	N16 52.8	303 31.8	S 2 16.4	93 09.7	N12 15.2
Y	9	146 36.6	354 25.9	N11 51.7	6 33.7	N16 52.4	318 33.8	S 2 16.6	108 12.3	N12 15.2
	10	161 39.1	9 25.5	N11 50.8	21 34.7	N16 51.9	333 35.8	S 2 16.8	123 14.9	N12 15.1
	11	176 41.5	24 25.1	N11 49.9	36 35.6	N16 51.5	348 37.7	S 2 17.0	138 17.5	N12 15.1
	12	191 44.0	39 24.7	N11 49.0	51 36.6	N16 51.1	3 39.7	S 2 17.2	153 20.1	N12 15.0
	13	206 46.5	54 24.4	N11 48.1	66 37.6	N16 50.6	18 41.7	S 2 17.4	168 22.8	N12 14.9
	14	221 48.9	69 24.0	N11 47.2	81 38.5	N16 50.2	33 43.6	S 2 17.6	183 25.4	N12 14.9
	15	236 51.4	84 23.6	N11 46.3	96 39.5	N16 49.8	48 45.6	S 2 17.9	198 28.0	N12 14.8
	16	251 53.9	99 23.2	N11 45.4	111 40.4	N16 49.3	63 47.6	S 2 18.1	213 30.6	N12 14.8
	17	266 56.3	114 22.8	N11 44.5	126 41.4	N16 48.9	78 49.5	S 2 18.3	228 33.2	N12 14.7
	18	281 58.8	129 22.5	N11 43.6	141 42.3	N16 48.5	93 51.5	S 2 18.5	243 35.8	N12 14.7
	19	297 01.2	144 22.1	N11 42.7	156 43.3	N16 48.0	108 53.5	S 2 18.7	258 38.5	N12 14.6
	20	312 03.7	159 21.7	N11 41.8	171 44.2	N16 47.6	123 55.4	S 2 18.9	273 41.1	N12 14.6
	21	327 06.2	174 21.3	N11 40.9	186 45.2	N16 47.2	138 57.4	S 2 19.1	288 43.7	N12 14.5
	22	342 08.6	189 20.9	N11 40.0	201 46.1	N16 46.7	153 59.4	S 2 19.3	303 46.3	N12 14.5
	23	357 11.1	204 20.5	N11 39.1	216 47.1	N16 46.3	169 01.3	S 2 19.6	318 48.9	N12 14.4
			v -0.4	d 0.9	v 0.9	d 0.4	v 2.0	d 0.2	v 2.6	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
30	0	182 30.4	S 2 55.3	40 51.9	15.9	S 9 34.1	12.0	54.2
	1	197 30.6	S 2 56.3	55 26.8	15.9	S 9 22.1	12.0	54.2
	2	212 30.8	S 2 57.3	70 01.8	16.0	S 9 10.0	12.0	54.1
	3	227 31.0	S 2 58.2	84 36.8	16.0	S 8 58.0	12.1	54.1
	4	242 31.2	S 2 59.2	99 11.9	16.1	S 8 45.8	12.1	54.1
S	5	257 31.4	S 3 00.2	113 47.0	16.1	S 8 33.7	12.1	54.1
A								
T	6	272 31.6	S 3 01.2	128 22.1	16.1	S 8 21.5	12.2	54.1
U	7	287 31.8	S 3 02.1	142 57.3	16.2	S 8 09.3	12.2	54.1
R	8	302 32.0	S 3 03.1	157 32.5	16.2	S 7 57.1	12.2	54.1
D	9	317 32.2	S 3 04.1	172 07.7	16.2	S 7 44.9	12.3	54.1
A	10	332 32.4	S 3 05.0	186 43.0	16.3	S 7 32.6	12.3	54.1
Y	11	347 32.6	S 3 06.0	201 18.2	16.3	S 7 20.3	12.3	54.1
	12	2 32.8	S 3 07.0	215 53.6	16.3	S 7 07.9	12.3	54.1
	13	17 33.0	S 3 07.9	230 28.9	16.3	S 6 55.6	12.4	54.1
	14	32 33.2	S 3 08.9	245 04.3	16.4	S 6 43.2	12.4	54.1
	15	47 33.4	S 3 09.9	259 39.7	16.4	S 6 30.8	12.4	54.1
	16	62 33.7	S 3 10.8	274 15.1	16.4	S 6 18.4	12.4	54.1
	17	77 33.9	S 3 11.8	288 50.5	16.4	S 6 05.9	12.4	54.0
	18	92 34.1	S 3 12.8	303 26.0	16.5	S 5 53.5	12.5	54.0
	19	107 34.3	S 3 13.8	318 01.5	16.5	S 5 41.0	12.5	54.0
	20	122 34.5	S 3 14.7	332 37.0	16.5	S 5 28.5	12.5	54.0
	21	137 34.7	S 3 15.7	347 12.5	16.5	S 5 16.0	12.5	54.0
	22	152 34.9	S 3 16.7	1 48.1	16.6	S 5 03.4	12.5	54.0
	23	167 35.1	S 3 17.6	16 23.7	16.6	S 4 50.9	12.6	54.0
1	0	182 35.3	S 3 18.6	30 59.3	16.6	S 4 38.3	12.6	54.0
	1	197 35.5	S 3 19.6	45 34.9	16.6	S 4 25.7	12.6	54.0
	2	212 35.7	S 3 20.5	60 10.5	16.6	S 4 13.1	12.6	54.0
	3	227 35.9	S 3 21.5	74 46.1	16.6	S 4 00.5	12.6	54.0
	4	242 36.1	S 3 22.5	89 21.8	16.7	S 3 47.8	12.6	54.0
S	5	257 36.3	S 3 23.4	103 57.5	16.7	S 3 35.2	12.6	54.0
U								
N	6	272 36.5	S 3 24.4	118 33.2	16.7	S 3 22.5	12.7	54.0
D	7	287 36.7	S 3 25.4	133 08.9	16.7	S 3 09.9	12.7	54.0
A	8	302 36.9	S 3 26.3	147 44.6	16.7	S 2 57.2	12.7	54.0
Y	9	317 37.1	S 3 27.3	162 20.3	16.7	S 2 44.5	12.7	54.0
	10	332 37.3	S 3 28.3	176 56.0	16.7	S 2 31.8	12.7	54.0
	11	347 37.5	S 3 29.2	191 31.8	16.7	S 2 19.1	12.7	54.0
	12	2 37.7	S 3 30.2	206 07.5	16.7	S 2 06.4	12.7	54.0
	13	17 37.9	S 3 31.2	220 43.3	16.8	S 1 53.6	12.7	54.0
	14	32 38.1	S 3 32.1	235 19.0	16.8	S 1 40.9	12.7	54.0
	15	47 38.3	S 3 33.1	249 54.8	16.8	S 1 28.2	12.7	54.0
	16	62 38.5	S 3 34.1	264 30.6	16.8	S 1 15.4	12.7	54.0
	17	77 38.7	S 3 35.1	279 06.3	16.8	S 1 02.7	12.7	54.0
	18	92 38.9	S 3 36.0	293 42.1	16.8	S 0 49.9	12.7	54.0
	19	107 39.1	S 3 37.0	308 17.9	16.8	S 0 37.2	12.8	54.0
	20	122 39.3	S 3 38.0	322 53.7	16.8	S 0 24.4	12.8	54.0
	21	137 39.5	S 3 38.9	337 29.4	16.8	S 0 11.7	12.8	54.0
	22	152 39.7	S 3 39.9	352 05.2	16.8	N 0 01.1	12.8	54.0
	23	167 39.9	S 3 40.9	6 41.0	16.8	N 0 13.9	12.8	54.0
2	0	182 40.1	S 3 41.8	21 16.8	16.8	N 0 26.6	12.8	54.0
	1	197 40.3	S 3 42.8	35 52.5	16.8	N 0 39.4	12.8	54.0
	2	212 40.5	S 3 43.8	50 28.3	16.8	N 0 52.1	12.8	54.0
	3	227 40.7	S 3 44.7	65 04.1	16.8	N 1 04.9	12.8	54.0
	4	242 40.9	S 3 45.7	79 39.8	16.8	N 1 17.6	12.7	54.0
M	5	257 41.1	S 3 46.7	94 15.6	16.7	N 1 30.4	12.7	54.0
O								
N	6	272 41.3	S 3 47.6	108 51.3	16.7	N 1 43.1	12.7	54.0
D	7	287 41.5	S 3 48.6	123 27.0	16.7	N 1 55.8	12.7	54.0
A	8	302 41.7	S 3 49.6	138 02.8	16.7	N 2 08.6	12.7	54.0
Y	9	317 41.9	S 3 50.5	152 38.5	16.7	N 2 21.3	12.7	54.0
	10	332 42.1	S 3 51.5	167 14.2	16.7	N 2 34.0	12.7	54.0
	11	347 42.3	S 3 52.5	181 49.8	16.7	N 2 46.7	12.7	54.0
	12	2 42.5	S 3 53.4	196 25.5	16.7	N 2 59.4	12.7	54.0
	13	17 42.7	S 3 54.4	211 01.2	16.7	N 3 12.1	12.7	54.0
	14	32 42.9	S 3 55.3	225 36.8	16.6	N 3 24.8	12.7	54.0
	15	47 43.0	S 3 56.3	240 12.5	16.6	N 3 37.4	12.7	54.0
	16	62 43.2	S 3 57.3	254 48.1	16.6	N 3 50.1	12.7	54.0
	17	77 43.4	S 3 58.2	269 23.7	16.6	N 4 02.7	12.6	54.0
	18	92 43.6	S 3 59.2	283 59.2	16.6	N 4 15.4	12.6	54.0
	19	107 43.8	S 4 00.2	298 34.8	16.6	N 4 28.0	12.6	54.0
	20	122 44.0	S 4 01.1	313 10.3	16.5	N 4 40.6	12.6	54.0
	21	137 44.2	S 4 02.1	327 45.9	16.5	N 4 53.2	12.6	54.0
	22	152 44.4	S 4 03.1	342 21.4	16.5	N 5 05.7	12.6	54.0
	23	167 44.6	S 4 04.0	356 56.8	16.5	N 5 18.3	12.6	54.0
		S.D. 16.0	d 1.0	S.D. 14.7		14.7		14.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.1
Achernar	335 17.4	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.5	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 36.0	N16 34.1
Alioth	166 10.9	N55 48.3
Alkaid	152 50.1	N49 10.3
Al Na-ir	27 28.7	S46 49.2
Alnilam	275 34.5	S 1 10.9
Alphard	217 44.9	S 8 46.9
Alphecca	126 01.4	N26 37.2
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.1
Atria	107 04.1	S69 05.0
Avior	234 13.7	S59 35.9
Bellatrix	278 19.5	N 6 22.6
Betelgeuse	270 48.7	N 7 24.8
Canopus	263 51.0	S52 42.3
Capella	280 17.2	N46 01.5
Castor	245 53.3	N31 49.4
Deneb	49 23.5	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.6
Elnath	277 58.0	N28 37.8
Eltanin	90 40.9	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.5	S34 22.3
Kochab	137 21.2	N74 02.4
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.8
Miaplacidus	221 38.0	S69 49.9
Mirfak	308 23.5	N49 57.8
Nunki	75 44.0	S26 15.6
Peacock	53 00.7	S56 38.6
Polaris	314 59.7	N89 22.4
Pollux	243 13.7	N27 57.3
Procyon	244 47.7	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.8	S 8 09.9
Rigil Kent	139 36.8	S60 57.4
Sabik	101 59.4	S15 45.6
Schedar	349 26.9	N56 41.8
Shaula	96 06.4	S37 07.5
Sirius	258 23.6	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.3	S43 32.7
Vega	80 31.2	N38 48.9
Zuben-ubi	136 53.9	S16 09.7

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
3 0	12 13.6	219 20.2	N11 38.2	231 48.1	N16 45.9	184 03.3	S 2 19.8	333 51.5	N12 14.3
1	27 16.0	234 19.8	N11 37.4	246 49.0	N16 45.4	199 05.3	S 2 20.0	348 54.2	N12 14.3
2	42 18.5	249 19.4	N11 36.5	261 50.0	N16 45.0	214 07.2	S 2 20.2	3 56.8	N12 14.2
3	57 21.0	264 19.0	N11 35.6	276 50.9	N16 44.5	229 09.2	S 2 20.4	18 59.4	N12 14.2
4	72 23.4	279 18.6	N11 34.7	291 51.9	N16 44.1	244 11.2	S 2 20.6	34 02.0	N12 14.1
T 5	87 25.9	294 18.3	N11 33.7	306 52.8	N16 43.7	259 13.1	S 2 20.8	49 04.6	N12 14.1
U									
E 6	102 28.3	309 17.9	N11 32.8	321 53.8	N16 43.2	274 15.1	S 2 21.0	64 07.2	N12 14.0
S 7	117 30.8	324 17.5	N11 31.9	336 54.8	N16 42.8	289 17.1	S 2 21.3	79 09.9	N12 14.0
D 8	132 33.3	339 17.1	N11 31.0	351 55.7	N16 42.4	304 19.0	S 2 21.5	94 12.5	N12 13.9
A 9	147 35.7	354 16.7	N11 30.1	6 56.7	N16 41.9	319 21.0	S 2 21.7	109 15.1	N12 13.8
Y 10	162 38.2	9 16.4	N11 29.2	21 57.6	N16 41.5	334 23.0	S 2 21.9	124 17.7	N12 13.8
11	177 40.7	24 16.0	N11 28.3	36 58.6	N16 41.1	349 24.9	S 2 22.1	139 20.3	N12 13.7
12	192 43.1	39 15.6	N11 27.4	51 59.5	N16 40.6	4 26.9	S 2 22.3	154 23.0	N12 13.7
13	207 45.6	54 15.2	N11 26.5	67 00.5	N16 40.2	19 28.9	S 2 22.5	169 25.6	N12 13.6
14	222 48.1	69 14.8	N11 25.6	82 01.5	N16 39.7	34 30.8	S 2 22.7	184 28.2	N12 13.6
15	237 50.5	84 14.5	N11 24.7	97 02.4	N16 39.3	49 32.8	S 2 23.0	199 30.8	N12 13.5
16	252 53.0	99 14.1	N11 23.8	112 03.4	N16 38.9	64 34.8	S 2 23.2	214 33.4	N12 13.5
17	267 55.5	114 13.7	N11 22.9	127 04.3	N16 38.4	79 36.7	S 2 23.4	229 36.1	N12 13.4
18	282 57.9	129 13.3	N11 22.0	142 05.3	N16 38.0	94 38.7	S 2 23.6	244 38.7	N12 13.3
19	298 00.4	144 12.9	N11 21.1	157 06.3	N16 37.6	109 40.7	S 2 23.8	259 41.3	N12 13.3
20	313 02.8	159 12.6	N11 20.2	172 07.2	N16 37.1	124 42.6	S 2 24.0	274 43.9	N12 13.2
21	328 05.3	174 12.2	N11 19.2	187 08.2	N16 36.7	139 44.6	S 2 24.2	289 46.5	N12 13.2
22	343 07.8	189 11.8	N11 18.3	202 09.1	N16 36.2	154 46.5	S 2 24.4	304 49.2	N12 13.1
23	358 10.2	204 11.4	N11 17.4	217 10.1	N16 35.8	169 48.5	S 2 24.7	319 51.8	N12 13.1
4 0	13 12.7	219 11.1	N11 16.5	232 11.1	N16 35.4	184 50.5	S 2 24.9	334 54.4	N12 13.0
1	28 15.2	234 10.7	N11 15.6	247 12.0	N16 34.9	199 52.4	S 2 25.1	349 57.0	N12 13.0
2	43 17.6	249 10.3	N11 14.7	262 13.0	N16 34.5	214 54.4	S 2 25.3	4 59.6	N12 12.9
3	58 20.1	264 09.9	N11 13.8	277 13.9	N16 34.0	229 56.4	S 2 25.5	20 02.3	N12 12.8
4	73 22.6	279 09.5	N11 12.9	292 14.9	N16 33.6	244 58.3	S 2 25.7	35 04.9	N12 12.8
W 5	88 25.0	294 09.2	N11 11.9	307 15.9	N16 33.2	260 00.3	S 2 25.9	50 07.5	N12 12.7
E									
D 6	103 27.5	309 08.8	N11 11.0	322 16.8	N16 32.7	275 02.3	S 2 26.1	65 10.1	N12 12.7
N 7	118 30.0	324 08.4	N11 10.1	337 17.8	N16 32.3	290 04.2	S 2 26.4	80 12.8	N12 12.6
E 8	133 32.4	339 08.0	N11 09.2	352 18.8	N16 31.8	305 06.2	S 2 26.6	95 15.4	N12 12.6
S 9	148 34.9	354 07.7	N11 08.3	7 19.7	N16 31.4	320 08.2	S 2 26.8	110 18.0	N12 12.5
D 10	163 37.3	9 07.3	N11 07.3	22 20.7	N16 31.0	335 10.1	S 2 27.0	125 20.6	N12 12.4
A 11	178 39.8	24 06.9	N11 06.4	37 21.7	N16 30.5	350 12.1	S 2 27.2	140 23.2	N12 12.4
Y									
12	193 42.3	39 06.5	N11 05.5	52 22.6	N16 30.1	5 14.1	S 2 27.4	155 25.9	N12 12.3
13	208 44.7	54 06.1	N11 04.6	67 23.6	N16 29.6	20 16.0	S 2 27.6	170 28.5	N12 12.3
14	223 47.2	69 05.8	N11 03.7	82 24.5	N16 29.2	35 18.0	S 2 27.8	185 31.1	N12 12.2
15	238 49.7	84 05.4	N11 02.7	97 25.5	N16 28.8	50 20.0	S 2 28.1	200 33.7	N12 12.2
16	253 52.1	99 05.0	N11 01.8	112 26.5	N16 28.3	65 21.9	S 2 28.3	215 36.3	N12 12.1
17	268 54.6	114 04.6	N11 00.9	127 27.4	N16 27.9	80 23.9	S 2 28.5	230 39.0	N12 12.1
18	283 57.1	129 04.3	N10 60.0	142 28.4	N16 27.4	95 25.9	S 2 28.7	245 41.6	N12 12.0
19	298 59.5	144 03.9	N10 59.0	157 29.4	N16 27.0	110 27.8	S 2 28.9	260 44.2	N12 11.9
20	314 02.0	159 03.5	N10 58.1	172 30.3	N16 26.6	125 29.8	S 2 29.1	275 46.8	N12 11.9
21	329 04.4	174 03.1	N10 57.2	187 31.3	N16 26.1	140 31.8	S 2 29.3	290 49.5	N12 11.8
22	344 06.9	189 02.8	N10 56.3	202 32.3	N16 25.7	155 33.7	S 2 29.5	305 52.1	N12 11.8
23	359 09.4	204 02.4	N10 55.3	217 33.2	N16 25.2	170 35.7	S 2 29.7	320 54.7	N12 11.7
5 0	14 11.8	219 02.0	N10 54.4	232 34.2	N16 24.8	185 37.7	S 2 30.0	335 57.3	N12 11.7
1	29 14.3	234 01.6	N10 53.5	247 35.2	N16 24.4	200 39.6	S 2 30.2	350 60.0	N12 11.6
2	44 16.8	249 01.3	N10 52.6	262 36.1	N16 23.9	215 41.6	S 2 30.4	6 02.6	N12 11.5
3	59 19.2	264 00.9	N10 51.6	277 37.1	N16 23.5	230 43.6	S 2 30.6	21 05.2	N12 11.5
4	74 21.7	279 00.5	N10 50.7	292 38.1	N16 23.0	245 45.5	S 2 30.8	36 07.8	N12 11.4
T 5	89 24.2	294 00.1	N10 49.8	307 39.0	N16 22.6	260 47.5	S 2 31.0	51 10.4	N12 11.4
H									
U 6	104 26.6	308 59.8	N10 48.8	322 40.0	N16 22.1	275 49.5	S 2 31.2	66 13.1	N12 11.3
R 7	119 29.1	323 59.4	N10 47.9	337 41.0	N16 21.7	290 51.4	S 2 31.4	81 15.7	N12 11.3
S 8	134 31.6	338 59.0	N10 47.0	352 42.0	N16 21.3	305 53.4	S 2 31.7	96 18.3	N12 11.2
D 9	149 34.0	353 58.6	N10 46.0	7 42.9	N16 20.8	320 55.4	S 2 31.9	111 20.9	N12 11.1
A 10	164 36.5	8 58.3	N10 45.1	22 43.9	N16 20.4	335 57.3	S 2 32.1	126 23.6	N12 11.1
Y 11	179 38.9	23 57.9	N10 44.2	37 44.9	N16 19.9	350 59.3	S 2 32.3	141 26.2	N12 11.0
12	194 41.4	38 57.5	N10 43.2	52 45.8	N16 19.5	6 01.3	S 2 32.5	156 28.8	N12 11.0
13	209 43.9	53 57.1	N10 42.3	67 46.8	N16 19.0	21 03.2	S 2 32.7	171 31.4	N12 10.9
14	224 46.3	68 56.8	N10 41.4	82 47.8	N16 18.6	36 05.2	S 2 32.9	186 34.1	N12 10.9
15	239 48.8	83 56.4	N10 40.4	97 48.7	N16 18.2	51 07.2	S 2 33.1	201 36.7	N12 10.8
16	254 51.3	98 56.0	N10 39.5	112 49.7	N16 17.7	66 09.1	S 2 33.4	216 39.3	N12 10.8
17	269 53.7	113 55.6	N10 38.6	127 50.7	N16 17.3	81 11.1	S 2 33.6	231 41.9	N12 10.7
18	284 56.2	128 55.3	N10 37.6	142 51.7	N16 16.8	96 13.1	S 2 33.8	246 44.6	N12 10.6
19	299 58.7	143 54.9	N10 36.7	157 52.6	N16 16.4	111 15.0	S 2 34.0	261 47.2	N12 10.6
20	315 01.1	158 54.5	N10 35.7	172 53.6	N16 15.9	126 17.0	S 2 34.2	276 49.8	N12 10.5
21	330 03.6	173 54.2	N10 34.8	187 54.6	N16 15.5	141 19.0	S 2 34.4	291 52.4	N12 10.5
22	345 06.0	188 53.8	N10 33.9	202 55.5	N16 15.0	156 20.9	S 2 34.6	306 55.1	N12 10.4
23	0 08.5	203 53.4	N10 32.9	217 56.5	N16 14.6	171 22.9	S 2 34.8	321 57.7	N12 10.4
		v -0.4	d 0.9	v 1.0	d 0.4	v 2.0	d 0.2	v 2.6	d 0.1

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec		d	HP
		° '	° '		° '	'	° '		'	'
3	0	182 44.8	S 4 05.0		11 32.3	16.4	N 5 30.8		12.5	54.0
	1	197 45.0	S 4 06.0		26 07.7	16.4	N 5 43.3		12.5	54.0
	2	212 45.2	S 4 06.9		40 43.1	16.4	N 5 55.8		12.5	54.0
	3	227 45.4	S 4 07.9		55 18.5	16.4	N 6 08.3		12.5	54.0
	4	242 45.6	S 4 08.9		69 53.8	16.4	N 6 20.8		12.5	54.0
T	5	257 45.8	S 4 09.8		84 29.2	16.3	N 6 33.2		12.4	54.1
U										
E	6	272 46.0	S 4 10.8		99 04.5	16.3	N 6 45.6		12.4	54.1
S	7	287 46.2	S 4 11.8		113 39.7	16.3	N 6 58.0		12.4	54.1
D	8	302 46.4	S 4 12.7		128 15.0	16.2	N 7 10.4		12.4	54.1
A	9	317 46.6	S 4 13.7		142 50.2	16.2	N 7 22.7		12.3	54.1
Y	10	332 46.8	S 4 14.6		157 25.3	16.2	N 7 35.0		12.3	54.1
	11	347 47.0	S 4 15.6		172 00.5	16.1	N 7 47.3		12.3	54.1
	12	2 47.2	S 4 16.6		186 35.6	16.1	N 7 59.6		12.3	54.1
	13	17 47.3	S 4 17.5		201 10.7	16.1	N 8 11.8		12.2	54.1
	14	32 47.5	S 4 18.5		215 45.7	16.0	N 8 24.0		12.2	54.1
	15	47 47.7	S 4 19.5		230 20.7	16.0	N 8 36.2		12.2	54.1
	16	62 47.9	S 4 20.4		244 55.7	16.0	N 8 48.3		12.1	54.1
	17	77 48.1	S 4 21.4		259 30.6	15.9	N 9 00.4		12.1	54.1
	18	92 48.3	S 4 22.4		274 05.5	15.9	N 9 12.5		12.1	54.1
	19	107 48.5	S 4 23.3		288 40.4	15.9	N 9 24.6		12.1	54.1
	20	122 48.7	S 4 24.3		303 15.2	15.8	N 9 36.6		12.0	54.1
	21	137 48.9	S 4 25.2		317 50.0	15.8	N 9 48.6		12.0	54.2
	22	152 49.1	S 4 26.2		332 24.7	15.7	N10 00.5		11.9	54.2
	23	167 49.3	S 4 27.2		346 59.4	15.7	N10 12.4		11.9	54.2
4	0	182 49.5	S 4 28.1		1 34.1	15.7	N10 24.3		11.9	54.2
	1	197 49.7	S 4 29.1		16 08.7	15.6	N10 36.1		11.8	54.2
	2	212 49.8	S 4 30.1		30 43.2	15.6	N10 47.9		11.8	54.2
	3	227 50.0	S 4 31.0		45 17.8	15.5	N10 59.7		11.8	54.2
	4	242 50.2	S 4 32.0		59 52.2	15.5	N11 11.4		11.7	54.2
W	5	257 50.4	S 4 33.0		74 26.7	15.4	N11 23.1		11.7	54.2
E										
D	6	272 50.6	S 4 33.9		89 01.1	15.4	N11 34.7		11.6	54.2
N	7	287 50.8	S 4 34.9		103 35.4	15.3	N11 46.3		11.6	54.2
E	8	302 51.0	S 4 35.8		118 09.7	15.3	N11 57.9		11.6	54.2
S	9	317 51.2	S 4 36.8		132 43.9	15.2	N12 09.4		11.5	54.2
D	10	332 51.4	S 4 37.8		147 18.1	15.2	N12 20.9		11.5	54.3
A	11	347 51.6	S 4 38.7		161 52.3	15.1	N12 32.3		11.4	54.3
Y										
	12	2 51.8	S 4 39.7		176 26.3	15.1	N12 43.7		11.4	54.3
	13	17 51.9	S 4 40.6		191 00.4	15.0	N12 55.0		11.3	54.3
	14	32 52.1	S 4 41.6		205 34.4	15.0	N13 06.3		11.3	54.3
	15	47 52.3	S 4 42.6		220 08.3	14.9	N13 17.5		11.2	54.3
	16	62 52.5	S 4 43.5		234 42.2	14.9	N13 28.7		11.2	54.3
	17	77 52.7	S 4 44.5		249 16.0	14.8	N13 39.8		11.1	54.3
	18	92 52.9	S 4 45.5		263 49.8	14.8	N13 50.9		11.1	54.3
	19	107 53.1	S 4 46.4		278 23.5	14.7	N14 01.9		11.0	54.3
	20	122 53.3	S 4 47.4		292 57.2	14.7	N14 12.9		11.0	54.4
	21	137 53.5	S 4 48.3		307 30.8	14.6	N14 23.8		10.9	54.4
	22	152 53.7	S 4 49.3		322 04.3	14.5	N14 34.7		10.9	54.4
	23	167 53.8	S 4 50.3		336 37.8	14.5	N14 45.5		10.8	54.4
5	0	182 54.0	S 4 51.2		351 11.2	14.4	N14 56.2		10.8	54.4
	1	197 54.2	S 4 52.2		5 44.6	14.4	N15 06.9		10.7	54.4
	2	212 54.4	S 4 53.1		20 17.9	14.3	N15 17.6		10.6	54.4
	3	227 54.6	S 4 54.1		34 51.2	14.3	N15 28.1		10.6	54.4
	4	242 54.8	S 4 55.1		49 24.3	14.2	N15 38.7		10.5	54.4
T	5	257 55.0	S 4 56.0		63 57.5	14.1	N15 49.1		10.5	54.5
H										
U	6	272 55.2	S 4 57.0		78 30.5	14.1	N15 59.5		10.4	54.5
R	7	287 55.3	S 4 57.9		93 03.5	14.0	N16 09.8		10.3	54.5
S	8	302 55.5	S 4 58.9		107 36.5	13.9	N16 20.1		10.3	54.5
D	9	317 55.7	S 4 59.9		122 09.4	13.9	N16 30.3		10.2	54.5
A	10	332 55.9	S 5 00.8		136 42.2	13.8	N16 40.4		10.1	54.5
Y	11	347 56.1	S 5 01.8		151 14.9	13.8	N16 50.5		10.1	54.5
	12	2 56.3	S 5 02.7		165 47.6	13.7	N17 00.5		10.0	54.5
	13	17 56.5	S 5 03.7		180 20.2	13.6	N17 10.4		9.9	54.6
	14	32 56.6	S 5 04.7		194 52.8	13.6	N17 20.3		9.9	54.6
	15	47 56.8	S 5 05.6		209 25.3	13.5	N17 30.1		9.8	54.6
	16	62 57.0	S 5 06.6		223 57.7	13.4	N17 39.8		9.7	54.6
	17	77 57.2	S 5 07.5		238 30.1	13.4	N17 49.4		9.6	54.6
	18	92 57.4	S 5 08.5		253 02.4	13.3	N17 59.0		9.6	54.6
	19	107 57.6	S 5 09.5		267 34.6	13.2	N18 08.5		9.5	54.6
	20	122 57.8	S 5 10.4		282 06.7	13.2	N18 17.9		9.4	54.6
	21	137 57.9	S 5 11.4		296 38.8	13.1	N18 27.3		9.3	54.7
	22	152 58.1	S 5 12.3		311 10.8	13.0	N18 36.5		9.3	54.7
	23	167 58.3	S 5 13.3		325 42.8	12.9	N18 45.7		9.2	54.7
		S.D. 16.0	d 1.0		S.D. 14.7		14.8		14.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.1	S40 11.1
Achernar	335 17.4	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.5	S29 00.4
Albireo	67 01.5	N28 01.5
Aldebaran	290 35.9	N16 34.1
Alioth	166 10.9	N55 48.2
Alkaid	152 50.1	N49 10.2
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.5	S 1 10.9
Alphard	217 44.9	S 8 46.9
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.8
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.1	S69 04.9
Avior	234 13.7	S59 35.9
Bellatrix	278 19.5	N 6 22.6
Betelgeuse	270 48.7	N 7 24.8
Canopus	263 51.0	S52 42.4
Capella	280 17.2	N46 01.5
Castor	245 53.3	N31 49.4
Deneb	49 23.5	N45 23.3
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 38.0	N61 35.5
Elnath	277 57.9	N28 37.8
Eltanin	90 40.9	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.0
Gacrux	171 48.8	S57 16.5
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.5	N23 36.1
Kaus Austr.	83 28.6	S34 22.3
Kochab	137 21.2	N74 02.3
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 38.0	S69 49.9
Mirfak	308 23.5	N49 57.8
Nunki	75 44.0	S26 15.6
Peacock	53 00.7	S56 38.6
Polaris	314 59.1	N89 22.4
Pollux	243 13.7	N27 57.3
Procyon	244 47.7	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.5	N11 49.6
Rigel	281 00.8	S 8 09.9
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 41.9
Shaula	96 06.4	S37 07.5
Sirius	258 23.6	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.3	S43 32.7
Vega	80 31.2	N38 48.9
Zuben-ubi	136 53.9	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '	GHA ° '	Dec ° '
6	0	15 11.0	218 53.0	N10 32.0	232 57.5	N16 14.2	186 24.9	S 2 35.0	337 00.3	N12 10.3
	1	30 13.4	233 52.7	N10 31.0	247 58.5	N16 13.7	201 26.8	S 2 35.3	352 02.9	N12 10.2
	2	45 15.9	248 52.3	N10 30.1	262 59.4	N16 13.3	216 28.8	S 2 35.5	7 05.6	N12 10.2
	3	60 18.4	263 51.9	N10 29.1	278 00.4	N16 12.8	231 30.8	S 2 35.7	22 08.2	N12 10.1
	4	75 20.8	278 51.5	N10 28.2	293 01.4	N16 12.4	246 32.7	S 2 35.9	37 10.8	N12 10.1
F	5	90 23.3	293 51.2	N10 27.3	308 02.3	N16 11.9	261 34.7	S 2 36.1	52 13.5	N12 10.0
R										
I	6	105 25.8	308 50.8	N10 26.3	323 03.3	N16 11.5	276 36.7	S 2 36.3	67 16.1	N12 10.0
D	7	120 28.2	323 50.4	N10 25.4	338 04.3	N16 11.0	291 38.6	S 2 36.5	82 18.7	N12 09.9
A	8	135 30.7	338 50.1	N10 24.4	353 05.3	N16 10.6	306 40.6	S 2 36.7	97 21.3	N12 09.8
Y	9	150 33.2	353 49.7	N10 23.5	8 06.2	N16 10.2	321 42.6	S 2 36.9	112 24.0	N12 09.8
	10	165 35.6	8 49.3	N10 22.5	23 07.2	N16 09.7	336 44.5	S 2 37.2	127 26.6	N12 09.7
	11	180 38.1	23 48.9	N10 21.6	38 08.2	N16 09.3	351 46.5	S 2 37.4	142 29.2	N12 09.7
	12	195 40.5	38 48.6	N10 20.6	53 09.2	N16 08.8	6 48.5	S 2 37.6	157 31.8	N12 09.6
	13	210 43.0	53 48.2	N10 19.7	68 10.1	N16 08.4	21 50.4	S 2 37.8	172 34.5	N12 09.5
	14	225 45.5	68 47.8	N10 18.7	83 11.1	N16 07.9	36 52.4	S 2 38.0	187 37.1	N12 09.5
	15	240 47.9	83 47.5	N10 17.8	98 12.1	N16 07.5	51 54.4	S 2 38.2	202 39.7	N12 09.4
	16	255 50.4	98 47.1	N10 16.8	113 13.1	N16 07.0	66 56.3	S 2 38.4	217 42.3	N12 09.4
	17	270 52.9	113 46.7	N10 15.9	128 14.0	N16 06.6	81 58.3	S 2 38.6	232 45.0	N12 09.3
	18	285 55.3	128 46.3	N10 14.9	143 15.0	N16 06.1	97 00.3	S 2 38.9	247 47.6	N12 09.3
	19	300 57.8	143 46.0	N10 14.0	158 16.0	N16 05.7	112 02.2	S 2 39.1	262 50.2	N12 09.2
	20	316 00.3	158 45.6	N10 13.0	173 17.0	N16 05.2	127 04.2	S 2 39.3	277 52.9	N12 09.1
	21	331 02.7	173 45.2	N10 12.1	188 18.0	N16 04.8	142 06.2	S 2 39.5	292 55.5	N12 09.1
	22	346 05.2	188 44.9	N10 11.1	203 18.9	N16 04.3	157 08.1	S 2 39.7	307 58.1	N12 09.0
	23	1 07.7	203 44.5	N10 10.1	218 19.9	N16 03.9	172 10.1	S 2 39.9	323 00.7	N12 09.0
7	0	16 10.1	218 44.1	N10 09.2	233 20.9	N16 03.5	187 12.1	S 2 40.1	338 03.4	N12 08.9
	1	31 12.6	233 43.8	N10 08.2	248 21.9	N16 03.0	202 14.0	S 2 40.3	353 06.0	N12 08.9
	2	46 15.0	248 43.4	N10 07.3	263 22.8	N16 02.6	217 16.0	S 2 40.5	8 08.6	N12 08.8
	3	61 17.5	263 43.0	N10 06.3	278 23.8	N16 02.1	232 18.0	S 2 40.8	23 11.3	N12 08.7
	4	76 20.0	278 42.6	N10 05.4	293 24.8	N16 01.7	247 19.9	S 2 41.0	38 13.9	N12 08.7
S	5	91 22.4	293 42.3	N10 04.4	308 25.8	N16 01.2	262 21.9	S 2 41.2	53 16.5	N12 08.6
A										
T	6	106 24.9	308 41.9	N10 03.4	323 26.8	N16 00.8	277 23.9	S 2 41.4	68 19.1	N12 08.6
U	7	121 27.4	323 41.5	N10 02.5	338 27.7	N16 00.3	292 25.8	S 2 41.6	83 21.8	N12 08.5
R	8	136 29.8	338 41.2	N10 01.5	353 28.7	N15 59.9	307 27.8	S 2 41.8	98 24.4	N12 08.4
D	9	151 32.3	353 40.8	N10 00.6	8 29.7	N15 59.4	322 29.8	S 2 42.0	113 27.0	N12 08.4
A	10	166 34.8	8 40.4	N 9 59.6	23 30.7	N15 59.0	337 31.7	S 2 42.2	128 29.7	N12 08.3
Y	11	181 37.2	23 40.1	N 9 58.6	38 31.7	N15 58.5	352 33.7	S 2 42.4	143 32.3	N12 08.3
	12	196 39.7	38 39.7	N 9 57.7	53 32.6	N15 58.1	7 35.7	S 2 42.7	158 34.9	N12 08.2
	13	211 42.1	53 39.3	N 9 56.7	68 33.6	N15 57.6	22 37.6	S 2 42.9	173 37.5	N12 08.2
	14	226 44.6	68 39.0	N 9 55.8	83 34.6	N15 57.2	37 39.6	S 2 43.1	188 40.2	N12 08.1
	15	241 47.1	83 38.6	N 9 54.8	98 35.6	N15 56.7	52 41.6	S 2 43.3	203 42.8	N12 08.0
	16	256 49.5	98 38.2	N 9 53.8	113 36.6	N15 56.3	67 43.5	S 2 43.5	218 45.4	N12 08.0
	17	271 52.0	113 37.8	N 9 52.9	128 37.5	N15 55.8	82 45.5	S 2 43.7	233 48.1	N12 07.9
	18	286 54.5	128 37.5	N 9 51.9	143 38.5	N15 55.4	97 47.5	S 2 43.9	248 50.7	N12 07.9
	19	301 56.9	143 37.1	N 9 50.9	158 39.5	N15 54.9	112 49.4	S 2 44.1	263 53.3	N12 07.8
	20	316 59.4	158 36.7	N 9 50.0	173 40.5	N15 54.5	127 51.4	S 2 44.3	278 56.0	N12 07.8
	21	332 01.9	173 36.4	N 9 49.0	188 41.5	N15 54.0	142 53.4	S 2 44.6	293 58.6	N12 07.7
	22	347 04.3	188 36.0	N 9 48.0	203 42.5	N15 53.6	157 55.3	S 2 44.8	309 01.2	N12 07.6
	23	2 06.8	203 35.6	N 9 47.1	218 43.4	N15 53.1	172 57.3	S 2 45.0	324 03.9	N12 07.6
8	0	17 09.3	218 35.3	N 9 46.1	233 44.4	N15 52.7	187 59.3	S 2 45.2	339 06.5	N12 07.5
	1	32 11.7	233 34.9	N 9 45.1	248 45.4	N15 52.2	203 01.2	S 2 45.4	354 09.1	N12 07.5
	2	47 14.2	248 34.5	N 9 44.1	263 46.4	N15 51.8	218 03.2	S 2 45.6	9 11.7	N12 07.4
	3	62 16.6	263 34.2	N 9 43.2	278 47.4	N15 51.3	233 05.2	S 2 45.8	24 14.4	N12 07.3
	4	77 19.1	278 33.8	N 9 42.2	293 48.4	N15 50.9	248 07.1	S 2 46.0	39 17.0	N12 07.3
S	5	92 21.6	293 33.4	N 9 41.2	308 49.4	N15 50.4	263 09.1	S 2 46.2	54 19.6	N12 07.2
U										
N	6	107 24.0	308 33.1	N 9 40.3	323 50.3	N15 50.0	278 11.1	S 2 46.5	69 22.3	N12 07.2
D	7	122 26.5	323 32.7	N 9 39.3	338 51.3	N15 49.5	293 13.0	S 2 46.7	84 24.9	N12 07.1
A	8	137 29.0	338 32.3	N 9 38.3	353 52.3	N15 49.1	308 15.0	S 2 46.9	99 27.5	N12 07.0
Y	9	152 31.4	353 32.0	N 9 37.3	8 53.3	N15 48.6	323 17.0	S 2 47.1	114 30.2	N12 07.0
	10	167 33.9	8 31.6	N 9 36.4	23 54.3	N15 48.2	338 18.9	S 2 47.3	129 32.8	N12 06.9
	11	182 36.4	23 31.2	N 9 35.4	38 55.3	N15 47.7	353 20.9	S 2 47.5	144 35.4	N12 06.9
	12	197 38.8	38 30.9	N 9 34.4	53 56.2	N15 47.3	8 22.9	S 2 47.7	159 38.1	N12 06.8
	13	212 41.3	53 30.5	N 9 33.4	68 57.2	N15 46.8	23 24.8	S 2 47.9	174 40.7	N12 06.8
	14	227 43.8	68 30.1	N 9 32.5	83 58.2	N15 46.4	38 26.8	S 2 48.1	189 43.3	N12 06.7
	15	242 46.2	83 29.8	N 9 31.5	98 59.2	N15 45.9	53 28.8	S 2 48.4	204 46.0	N12 06.6
	16	257 48.7	98 29.4	N 9 30.5	114 00.2	N15 45.5	68 30.7	S 2 48.6	219 48.6	N12 06.6
	17	272 51.1	113 29.1	N 9 29.5	129 01.2	N15 45.0	83 32.7	S 2 48.8	234 51.2	N12 06.5
	18	287 53.6	128 28.7	N 9 28.5	144 02.2	N15 44.6	98 34.7	S 2 49.0	249 53.9	N12 06.5
	19	302 56.1	143 28.3	N 9 27.6	159 03.2	N15 44.1	113 36.6	S 2 49.2	264 56.5	N12 06.4
	20	317 58.5	158 28.0	N 9 26.6	174 04.1	N15 43.7	128 38.6	S 2 49.4	279 59.1	N12 06.3
	21	333 01.0	173 27.6	N 9 25.6	189 05.1	N15 43.2	143 40.6	S 2 49.6	295 01.7	N12 06.3
	22	348 03.5	188 27.2	N 9 24.6	204 06.1	N15 42.8	158 42.5	S 2 49.8	310 04.4	N12 06.2
	23	3 05.9	203 26.9	N 9 23.6	219 07.1	N15 42.3	173 44.5	S 2 50.0	325 07.0	N12 06.2
			v -0.4	d 1.0	v 1.0	d 0.4	v 2.0	d 0.2	v 2.6	d 0.1

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
6 0	182 58.5	S 5 14.2	340 14.7	12.9	N18 54.9	9.1	54.7
1	197 58.7	S 5 15.2	354 46.5	12.8	N19 03.9	9.0	54.7
2	212 58.9	S 5 16.2	9 18.2	12.7	N19 12.8	9.0	54.7
3	227 59.0	S 5 17.1	23 49.9	12.7	N19 21.7	8.9	54.7
4	242 59.2	S 5 18.1	38 21.5	12.6	N19 30.5	8.8	54.8
F 5	257 59.4	S 5 19.0	52 53.0	12.5	N19 39.2	8.7	54.8
R							
I 6	272 59.6	S 5 20.0	67 24.5	12.5	N19 47.8	8.6	54.8
D 7	287 59.8	S 5 20.9	81 55.8	12.4	N19 56.4	8.5	54.8
A 8	302 60.0	S 5 21.9	96 27.2	12.3	N20 04.8	8.4	54.8
Y 9	318 00.1	S 5 22.9	110 58.4	12.2	N20 13.2	8.4	54.8
10	333 00.3	S 5 23.8	125 29.6	12.2	N20 21.4	8.3	54.9
11	348 00.5	S 5 24.8	140 00.7	12.1	N20 29.6	8.2	54.9
12	3 00.7	S 5 25.7	154 31.7	12.0	N20 37.7	8.1	54.9
13	18 00.9	S 5 26.7	169 02.7	12.0	N20 45.7	8.0	54.9
14	33 01.1	S 5 27.6	183 33.5	11.9	N20 53.6	7.9	54.9
15	48 01.2	S 5 28.6	198 04.4	11.8	N21 01.4	7.8	54.9
16	63 01.4	S 5 29.6	212 35.1	11.7	N21 09.2	7.7	54.9
17	78 01.6	S 5 30.5	227 05.8	11.7	N21 16.8	7.6	55.0
18	93 01.8	S 5 31.5	241 36.4	11.6	N21 24.3	7.5	55.0
19	108 02.0	S 5 32.4	256 06.9	11.5	N21 31.7	7.4	55.0
20	123 02.1	S 5 33.4	270 37.4	11.5	N21 39.1	7.3	55.0
21	138 02.3	S 5 34.3	285 07.7	11.4	N21 46.3	7.2	55.0
22	153 02.5	S 5 35.3	299 38.1	11.3	N21 53.5	7.1	55.1
23	168 02.7	S 5 36.2	314 08.3	11.2	N22 00.5	7.0	55.1
7 0	183 02.9	S 5 37.2	328 38.5	11.2	N22 07.4	6.9	55.1
1	198 03.0	S 5 38.2	343 08.6	11.1	N22 14.3	6.8	55.1
2	213 03.2	S 5 39.1	357 38.6	11.0	N22 21.0	6.7	55.1
3	228 03.4	S 5 40.1	12 08.6	11.0	N22 27.6	6.6	55.1
4	243 03.6	S 5 41.0	26 38.4	10.9	N22 34.1	6.5	55.2
S 5	258 03.8	S 5 42.0	41 08.3	10.8	N22 40.5	6.4	55.2
A							
T 6	273 03.9	S 5 42.9	55 38.0	10.7	N22 46.9	6.3	55.2
U 7	288 04.1	S 5 43.9	70 07.7	10.7	N22 53.1	6.2	55.2
R 8	303 04.3	S 5 44.8	84 37.3	10.6	N22 59.1	6.1	55.2
D 9	318 04.5	S 5 45.8	99 06.8	10.5	N23 05.1	6.0	55.3
A 10	333 04.7	S 5 46.7	113 36.3	10.5	N23 11.0	5.9	55.3
Y 11	348 04.8	S 5 47.7	128 05.7	10.4	N23 16.7	5.8	55.3
12	3 05.0	S 5 48.7	142 35.0	10.3	N23 22.4	5.6	55.3
13	18 05.2	S 5 49.6	157 04.3	10.3	N23 27.9	5.5	55.3
14	33 05.4	S 5 50.6	171 33.5	10.2	N23 33.3	5.4	55.4
15	48 05.5	S 5 51.5	186 02.6	10.1	N23 38.6	5.3	55.4
16	63 05.7	S 5 52.5	200 31.7	10.1	N23 43.8	5.2	55.4
17	78 05.9	S 5 53.4	215 00.7	10.0	N23 48.9	5.1	55.4
18	93 06.1	S 5 54.4	229 29.6	9.9	N23 53.8	5.0	55.4
19	108 06.2	S 5 55.3	243 58.5	9.9	N23 58.7	4.8	55.5
20	123 06.4	S 5 56.3	258 27.3	9.8	N24 03.4	4.7	55.5
21	138 06.6	S 5 57.2	272 56.0	9.7	N24 08.0	4.6	55.5
22	153 06.8	S 5 58.2	287 24.7	9.7	N24 12.5	4.5	55.5
23	168 06.9	S 5 59.1	301 53.3	9.6	N24 16.8	4.4	55.5
8 0	183 07.1	S 6 00.1	316 21.9	9.6	N24 21.0	4.2	55.6
1	198 07.3	S 6 01.0	330 50.4	9.5	N24 25.2	4.1	55.6
2	213 07.5	S 6 02.0	345 18.8	9.4	N24 29.1	4.0	55.6
3	228 07.6	S 6 02.9	359 47.2	9.4	N24 33.0	3.9	55.6
4	243 07.8	S 6 03.9	14 15.5	9.3	N24 36.7	3.7	55.6
S 5	258 08.0	S 6 04.8	28 43.8	9.3	N24 40.3	3.6	55.7
U							
N 6	273 08.2	S 6 05.8	43 12.0	9.2	N24 43.8	3.5	55.7
D 7	288 08.3	S 6 06.8	57 40.1	9.1	N24 47.2	3.4	55.7
A 8	303 08.5	S 6 07.7	72 08.2	9.1	N24 50.4	3.2	55.7
Y 9	318 08.7	S 6 08.7	86 36.2	9.0	N24 53.5	3.1	55.8
10	333 08.9	S 6 09.6	101 04.2	9.0	N24 56.4	3.0	55.8
11	348 09.0	S 6 10.6	115 32.1	8.9	N24 59.3	2.8	55.8
12	3 09.2	S 6 11.5	129 60.0	8.9	N25 02.0	2.7	55.8
13	18 09.4	S 6 12.5	144 27.8	8.8	N25 04.5	2.6	55.9
14	33 09.6	S 6 13.4	158 55.6	8.8	N25 07.0	2.4	55.9
15	48 09.7	S 6 14.4	173 23.3	8.7	N25 09.3	2.3	55.9
16	63 09.9	S 6 15.3	187 51.0	8.7	N25 11.4	2.2	55.9
17	78 10.1	S 6 16.3	202 18.6	8.6	N25 13.5	2.0	56.0
18	93 10.2	S 6 17.2	216 46.2	8.6	N25 15.4	1.9	56.0
19	108 10.4	S 6 18.2	231 13.7	8.5	N25 17.1	1.8	56.0
20	123 10.6	S 6 19.1	245 41.2	8.5	N25 18.8	1.6	56.0
21	138 10.8	S 6 20.1	260 08.7	8.4	N25 20.3	1.5	56.1
22	153 10.9	S 6 21.0	274 36.1	8.4	N25 21.6	1.4	56.1
23	168 11.1	S 6 22.0	289 03.4	8.4	N25 22.8	1.2	56.1
	S.D. 16.0	d 1.0	S.D. 15.0		15.1		15.2

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.1
Achernar	335 17.4	S57 05.2
Acrux	172 57.3	S63 15.5
Adhara	255 03.5	S29 00.4
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.9	N16 34.1
Alioth	166 10.9	N55 48.2
Alkaid	152 50.1	N49 10.2
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.5	S 1 10.9
Alphard	217 44.9	S 8 46.9
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.2
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.1	S69 04.9
Avior	234 13.6	S59 35.9
Bellatrix	278 19.5	N 6 22.6
Betelgeuse	270 48.7	N 7 24.8
Canopus	263 50.9	S52 42.4
Capella	280 17.2	N46 01.5
Castor	245 53.2	N31 49.4
Deneb	49 23.5	N45 23.4
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 37.9	N61 35.5
Elnath	277 57.9	N28 37.8
Eltanin	90 40.9	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.8	S57 16.4
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.8
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.6	S34 22.3
Kochab	137 21.3	N74 02.3
Markab	13 26.6	N15 21.8
Menkar	314 02.7	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.9	S69 49.9
Mirfak	308 23.5	N49 57.8
Nunki	75 44.0	S26 15.6
Peacock	53 00.7	S56 38.6
Polaris	314 58.3	N89 22.5
Pollux	243 13.7	N27 57.3
Procyon	244 47.7	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.4	N11 49.6
Rigel	281 00.8	S 8 09.9
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 41.9
Shaula	96 06.4	S37 07.5
Sirius	258 23.5	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.2	S43 32.7
Vega	80 31.2	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
9	0	18 08.4	218 26.5	N 9	22.7	234 08.1	N15	41.8	188 46.5	S 2	50.3	340 09.6	N12	06.1
	1	33 10.9	233 26.1	N 9	21.7	249 09.1	N15	41.4	203 48.4	S 2	50.5	355 12.3	N12	06.0
	2	48 13.3	248 25.8	N 9	20.7	264 10.1	N15	40.9	218 50.4	S 2	50.7	10 14.9	N12	06.0
	3	63 15.8	263 25.4	N 9	19.7	279 11.1	N15	40.5	233 52.4	S 2	50.9	25 17.5	N12	05.9
	4	78 18.3	278 25.0	N 9	18.7	294 12.1	N15	40.0	248 54.3	S 2	51.1	40 20.2	N12	05.9
M	5	93 20.7	293 24.7	N 9	17.7	309 13.0	N15	39.6	263 56.3	S 2	51.3	55 22.8	N12	05.8
O														
N	6	108 23.2	308 24.3	N 9	16.8	324 14.0	N15	39.1	278 58.3	S 2	51.5	70 25.4	N12	05.8
D	7	123 25.6	323 23.9	N 9	15.8	339 15.0	N15	38.7	294 00.2	S 2	51.7	85 28.1	N12	05.7
A	8	138 28.1	338 23.6	N 9	14.8	354 16.0	N15	38.2	309 02.2	S 2	51.9	100 30.7	N12	05.6
Y	9	153 30.6	353 23.2	N 9	13.8	9 17.0	N15	37.8	324 04.2	S 2	52.2	115 33.3	N12	05.6
	10	168 33.0	8 22.9	N 9	12.8	24 18.0	N15	37.3	339 06.1	S 2	52.4	130 36.0	N12	05.5
	11	183 35.5	23 22.5	N 9	11.8	39 19.0	N15	36.9	354 08.1	S 2	52.6	145 38.6	N12	05.5
	12	198 38.0	38 22.1	N 9	10.8	54 20.0	N15	36.4	9 10.1	S 2	52.8	160 41.3	N12	05.4
	13	213 40.4	53 21.8	N 9	09.8	69 21.0	N15	36.0	24 12.0	S 2	53.0	175 43.9	N12	05.3
	14	228 42.9	68 21.4	N 9	08.9	84 22.0	N15	35.5	39 14.0	S 2	53.2	190 46.5	N12	05.3
	15	243 45.4	83 21.0	N 9	07.9	99 23.0	N15	35.0	54 16.0	S 2	53.4	205 49.2	N12	05.2
	16	258 47.8	98 20.7	N 9	06.9	114 24.0	N15	34.6	69 17.9	S 2	53.6	220 51.8	N12	05.2
	17	273 50.3	113 20.3	N 9	05.9	129 24.9	N15	34.1	84 19.9	S 2	53.8	235 54.4	N12	05.1
	18	288 52.7	128 20.0	N 9	04.9	144 25.9	N15	33.7	99 21.9	S 2	54.1	250 57.1	N12	05.0
	19	303 55.2	143 19.6	N 9	03.9	159 26.9	N15	33.2	114 23.8	S 2	54.3	265 59.7	N12	05.0
	20	318 57.7	158 19.2	N 9	02.9	174 27.9	N15	32.8	129 25.8	S 2	54.5	281 02.3	N12	04.9
	21	334 00.1	173 18.9	N 9	01.9	189 28.9	N15	32.3	144 27.8	S 2	54.7	296 05.0	N12	04.9
	22	349 02.6	188 18.5	N 9	00.9	204 29.9	N15	31.9	159 29.7	S 2	54.9	311 07.6	N12	04.8
	23	4 05.1	203 18.1	N 8	59.9	219 30.9	N15	31.4	174 31.7	S 2	55.1	326 10.2	N12	04.7
10	0	19 07.5	218 17.8	N 8	58.9	234 31.9	N15	30.9	189 33.7	S 2	55.3	341 12.9	N12	04.7
	1	34 10.0	233 17.4	N 8	57.9	249 32.9	N15	30.5	204 35.6	S 2	55.5	356 15.5	N12	04.6
	2	49 12.5	248 17.1	N 8	56.9	264 33.9	N15	30.0	219 37.6	S 2	55.7	11 18.1	N12	04.6
	3	64 14.9	263 16.7	N 8	55.9	279 34.9	N15	29.6	234 39.6	S 2	55.9	26 20.8	N12	04.5
	4	79 17.4	278 16.3	N 8	54.9	294 35.9	N15	29.1	249 41.5	S 2	56.2	41 23.4	N12	04.4
T	5	94 19.9	293 16.0	N 8	53.9	309 36.9	N15	28.7	264 43.5	S 2	56.4	56 26.0	N12	04.4
U														
E	6	109 22.3	308 15.6	N 8	53.0	324 37.9	N15	28.2	279 45.5	S 2	56.6	71 28.7	N12	04.3
S	7	124 24.8	323 15.2	N 8	52.0	339 38.9	N15	27.8	294 47.4	S 2	56.8	86 31.3	N12	04.3
D	8	139 27.2	338 14.9	N 8	51.0	354 39.9	N15	27.3	309 49.4	S 2	57.0	101 34.0	N12	04.2
A	9	154 29.7	353 14.5	N 8	50.0	9 40.9	N15	26.8	324 51.4	S 2	57.2	116 36.6	N12	04.1
Y	10	169 32.2	8 14.2	N 8	49.0	24 41.9	N15	26.4	339 53.3	S 2	57.4	131 39.2	N12	04.1
	11	184 34.6	23 13.8	N 8	48.0	39 42.9	N15	25.9	354 55.3	S 2	57.6	146 41.9	N12	04.0
	12	199 37.1	38 13.4	N 8	47.0	54 43.9	N15	25.5	9 57.3	S 2	57.8	161 44.5	N12	04.0
	13	214 39.6	53 13.1	N 8	46.0	69 44.9	N15	25.0	24 59.2	S 2	58.0	176 47.1	N12	03.9
	14	229 42.0	68 12.7	N 8	45.0	84 45.9	N15	24.6	40 01.2	S 2	58.3	191 49.8	N12	03.8
	15	244 44.5	83 12.4	N 8	43.9	99 46.8	N15	24.1	55 03.2	S 2	58.5	206 52.4	N12	03.8
	16	259 47.0	98 12.0	N 8	42.9	114 47.8	N15	23.7	70 05.1	S 2	58.7	221 55.0	N12	03.7
	17	274 49.4	113 11.6	N 8	41.9	129 48.8	N15	23.2	85 07.1	S 2	58.9	236 57.7	N12	03.7
	18	289 51.9	128 11.3	N 8	40.9	144 49.8	N15	22.7	100 09.1	S 2	59.1	252 00.3	N12	03.6
	19	304 54.4	143 10.9	N 8	39.9	159 50.8	N15	22.3	115 11.1	S 2	59.3	267 03.0	N12	03.6
	20	319 56.8	158 10.6	N 8	38.9	174 51.8	N15	21.8	130 13.0	S 2	59.5	282 05.6	N12	03.5
	21	334 59.3	173 10.2	N 8	37.9	189 52.8	N15	21.4	145 15.0	S 2	59.7	297 08.2	N12	03.4
	22	350 01.7	188 09.8	N 8	36.9	204 53.8	N15	20.9	160 17.0	S 2	59.9	312 10.9	N12	03.4
	23	5 04.2	203 09.5	N 8	35.9	219 54.8	N15	20.4	175 18.9	S 3	00.2	327 13.5	N12	03.3
11	0	20 06.7	218 09.1	N 8	34.9	234 55.8	N15	20.0	190 20.9	S 3	00.4	342 16.1	N12	03.3
	1	35 09.1	233 08.8	N 8	33.9	249 56.8	N15	19.5	205 22.9	S 3	00.6	357 18.8	N12	03.2
	2	50 11.6	248 08.4	N 8	32.9	264 57.8	N15	19.1	220 24.8	S 3	00.8	12 21.4	N12	03.1
	3	65 14.1	263 08.0	N 8	31.9	279 58.8	N15	18.6	235 26.8	S 3	01.0	27 24.1	N12	03.1
	4	80 16.5	278 07.7	N 8	30.9	294 59.8	N15	18.2	250 28.8	S 3	01.2	42 26.7	N12	03.0
W	5	95 19.0	293 07.3	N 8	29.9	310 00.8	N15	17.7	265 30.7	S 3	01.4	57 29.3	N12	02.9
E														
D	6	110 21.5	308 07.0	N 8	28.8	325 01.8	N15	17.2	280 32.7	S 3	01.6	72 32.0	N12	02.9
N	7	125 23.9	323 06.6	N 8	27.8	340 02.8	N15	16.8	295 34.7	S 3	01.8	87 34.6	N12	02.8
E	8	140 26.4	338 06.2	N 8	26.8	355 03.8	N15	16.3	310 36.6	S 3	02.0	102 37.2	N12	02.8
S	9	155 28.9	353 05.9	N 8	25.8	10 04.9	N15	15.9	325 38.6	S 3	02.3	117 39.9	N12	02.7
D	10	170 31.3	8 05.5	N 8	24.8	25 05.9	N15	15.4	340 40.6	S 3	02.5	132 42.5	N12	02.6
A	11	185 33.8	23 05.2	N 8	23.8	40 06.9	N15	15.0	355 42.5	S 3	02.7	147 45.2	N12	02.6
Y														
	12	200 36.2	38 04.8	N 8	22.8	55 07.9	N15	14.5	10 44.5	S 3	02.9	162 47.8	N12	02.5
	13	215 38.7	53 04.4	N 8	21.8	70 08.9	N15	14.0	25 46.5	S 3	03.1	177 50.4	N12	02.5
	14	230 41.2	68 04.1	N 8	20.8	85 09.9	N15	13.6	40 48.4	S 3	03.3	192 53.1	N12	02.4
	15	245 43.6	83 03.7	N 8	19.7	100 10.9	N15	13.1	55 50.4	S 3	03.5	207 55.7	N12	02.3
	16	260 46.1	98 03.4	N 8	18.7	115 11.9	N15	12.7	70 52.4	S 3	03.7	222 58.4	N12	02.3
	17	275 48.6	113 03.0	N 8	17.7	130 12.9	N15	12.2	85 54.3	S 3	03.9	238 01.0	N12	02.2
	18	290 51.0	128 02.7	N 8	16.7	145 13.9	N15	11.7	100 56.3	S 3	04.1	253 03.6	N12	02.2
	19	305 53.5	143 02.3	N 8	15.7	160 14.9	N15	11.3	115 58.3	S 3	04.3	268 06.3	N12	02.1
	20	320 56.0	158 01.9	N 8	14.7	175 15.9	N15	10.8	131 00.2	S 3	04.6	283 08.9	N12	02.0
	21	335 58.4	173 01.6	N 8	13.6	190 16.9	N15	10.4	146 02.2	S 3	04.8	298 11.6	N12	02.0
	22	351 00.9	188 01.2	N 8	12.6	205 17.9	N15	09.9	161 04.2	S 3	05.0	313 14.2	N12	01.9
	23	6 03.3	203 00.9	N 8	11.6	220 18.9	N15	09.4	176 06.1	S 3	05.2	328 16.8	N12	01.9
			v -0.4	d	1.0	v 1.0	d	0.5	v 2.0	d	0.2	v 2.6	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
9	0	183 11.3	S 6 22.9	303 30.8	8.3	N25 23.9	1.1	56.1
	1	198 11.4	S 6 23.9	317 58.0	8.3	N25 24.9	0.9	56.2
	2	213 11.6	S 6 24.8	332 25.3	8.2	N25 25.7	0.8	56.2
	3	228 11.8	S 6 25.7	346 52.5	8.2	N25 26.3	0.7	56.2
	4	243 12.0	S 6 26.7	1 19.7	8.2	N25 26.8	0.5	56.2
M	5	258 12.1	S 6 27.6	15 46.8	8.1	N25 27.2	0.4	56.3
O								
N	6	273 12.3	S 6 28.6	30 13.9	8.1	N25 27.5	0.2	56.3
D	7	288 12.5	S 6 29.5	44 41.0	8.1	N25 27.6	0.1	56.3
A	8	303 12.6	S 6 30.5	59 08.0	8.0	N25 27.5	0.0	56.3
Y	9	318 12.8	S 6 31.4	73 35.0	8.0	N25 27.3	0.2	56.4
	10	333 13.0	S 6 32.4	88 02.0	8.0	N25 27.0	0.3	56.4
	11	348 13.1	S 6 33.3	102 29.0	8.0	N25 26.5	0.5	56.4
	12	3 13.3	S 6 34.3	116 55.9	7.9	N25 25.9	0.6	56.4
	13	18 13.5	S 6 35.2	131 22.8	7.9	N25 25.2	0.8	56.5
	14	33 13.6	S 6 36.2	145 49.7	7.9	N25 24.3	0.9	56.5
	15	48 13.8	S 6 37.1	160 16.5	7.9	N25 23.2	1.0	56.5
	16	63 14.0	S 6 38.1	174 43.4	7.8	N25 22.0	1.2	56.6
	17	78 14.1	S 6 39.0	189 10.2	7.8	N25 20.7	1.3	56.6
	18	93 14.3	S 6 40.0	203 37.0	7.8	N25 19.2	1.5	56.6
	19	108 14.5	S 6 40.9	218 03.7	7.8	N25 17.6	1.6	56.6
	20	123 14.6	S 6 41.8	232 30.5	7.8	N25 15.8	1.8	56.7
	21	138 14.8	S 6 42.8	246 57.2	7.7	N25 13.9	1.9	56.7
	22	153 15.0	S 6 43.7	261 24.0	7.7	N25 11.9	2.1	56.7
	23	168 15.1	S 6 44.7	275 50.7	7.7	N25 09.7	2.2	56.8
10	0	183 15.3	S 6 45.6	290 17.4	7.7	N25 07.3	2.3	56.8
	1	198 15.5	S 6 46.6	304 44.1	7.7	N25 04.8	2.5	56.8
	2	213 15.6	S 6 47.5	319 10.7	7.7	N25 02.2	2.6	56.8
	3	228 15.8	S 6 48.5	333 37.4	7.7	N24 59.4	2.8	56.9
	4	243 16.0	S 6 49.4	348 04.1	7.7	N24 56.4	2.9	56.9
T	5	258 16.1	S 6 50.4	2 30.7	7.7	N24 53.4	3.1	56.9
U								
E	6	273 16.3	S 6 51.3	16 57.4	7.7	N24 50.1	3.2	57.0
S	7	288 16.5	S 6 52.2	31 24.0	7.6	N24 46.8	3.4	57.0
D	8	303 16.6	S 6 53.2	45 50.7	7.6	N24 43.3	3.5	57.0
A	9	318 16.8	S 6 54.1	60 17.3	7.6	N24 39.6	3.7	57.0
Y	10	333 17.0	S 6 55.1	74 44.0	7.6	N24 35.8	3.8	57.1
	11	348 17.1	S 6 56.0	89 10.6	7.6	N24 31.9	4.0	57.1
	12	3 17.3	S 6 57.0	103 37.2	7.6	N24 27.8	4.1	57.1
	13	18 17.4	S 6 57.9	118 03.9	7.6	N24 23.5	4.2	57.2
	14	33 17.6	S 6 58.8	132 30.5	7.6	N24 19.1	4.4	57.2
	15	48 17.8	S 6 59.8	146 57.2	7.7	N24 14.6	4.5	57.2
	16	63 17.9	S 7 00.7	161 23.9	7.7	N24 09.9	4.7	57.3
	17	78 18.1	S 7 01.7	175 50.5	7.7	N24 05.1	4.8	57.3
	18	93 18.3	S 7 02.6	190 17.2	7.7	N24 00.1	5.0	57.3
	19	108 18.4	S 7 03.6	204 43.9	7.7	N23 55.0	5.1	57.4
	20	123 18.6	S 7 04.5	219 10.6	7.7	N23 49.8	5.3	57.4
	21	138 18.7	S 7 05.4	233 37.3	7.7	N23 44.4	5.4	57.4
	22	153 18.9	S 7 06.4	248 04.0	7.7	N23 38.8	5.5	57.5
	23	168 19.1	S 7 07.3	262 30.7	7.7	N23 33.2	5.7	57.5
11	0	183 19.2	S 7 08.3	276 57.4	7.7	N23 27.3	5.8	57.5
	1	198 19.4	S 7 09.2	291 24.2	7.8	N23 21.4	6.0	57.5
	2	213 19.5	S 7 10.2	305 51.0	7.8	N23 15.3	6.1	57.6
	3	228 19.7	S 7 11.1	320 17.7	7.8	N23 09.0	6.2	57.6
	4	243 19.9	S 7 12.0	334 44.5	7.8	N23 02.6	6.4	57.6
W	5	258 20.0	S 7 13.0	349 11.4	7.8	N22 56.1	6.5	57.7
E								
D	6	273 20.2	S 7 13.9	3 38.2	7.8	N22 49.4	6.7	57.7
N	7	288 20.3	S 7 14.9	18 05.1	7.9	N22 42.6	6.8	57.7
E	8	303 20.5	S 7 15.8	32 31.9	7.9	N22 35.7	6.9	57.8
S	9	318 20.7	S 7 16.7	46 58.8	7.9	N22 28.6	7.1	57.8
D	10	333 20.8	S 7 17.7	61 25.7	7.9	N22 21.4	7.2	57.8
A	11	348 21.0	S 7 18.6	75 52.7	7.9	N22 14.0	7.4	57.9
Y								
	12	3 21.1	S 7 19.6	90 19.6	8.0	N22 06.5	7.5	57.9
	13	18 21.3	S 7 20.5	104 46.6	8.0	N21 58.9	7.6	57.9
	14	33 21.4	S 7 21.4	119 13.6	8.0	N21 51.1	7.8	58.0
	15	48 21.6	S 7 22.4	133 40.7	8.0	N21 43.2	7.9	58.0
	16	63 21.8	S 7 23.3	148 07.7	8.1	N21 35.2	8.0	58.0
	17	78 21.9	S 7 24.3	162 34.8	8.1	N21 27.0	8.2	58.1
	18	93 22.1	S 7 25.2	177 01.9	8.1	N21 18.7	8.3	58.1
	19	108 22.2	S 7 26.1	191 29.0	8.1	N21 10.2	8.4	58.1
	20	123 22.4	S 7 27.1	205 56.2	8.2	N21 01.7	8.6	58.2
	21	138 22.5	S 7 28.0	220 23.4	8.2	N20 53.0	8.7	58.2
	22	153 22.7	S 7 28.9	234 50.6	8.2	N20 44.1	8.8	58.2
	23	168 22.8	S 7 29.9	249 17.9	8.2	N20 35.2	9.0	58.3
		S.D. 16.0	d 0.9	S.D. 15.4		15.6		15.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.1
Achernar	335 17.4	S57 05.3
Acrux	172 57.3	S63 15.4
Adhara	255 03.4	S29 00.5
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.9	N16 34.1
Alioth	166 10.9	N55 48.2
Alkaid	152 50.1	N49 10.2
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.5	S 1 10.9
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.3
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.2	S69 04.9
Avior	234 13.6	S59 35.9
Bellatrix	278 19.5	N 6 22.6
Betelgeuse	270 48.7	N 7 24.8
Canopus	263 50.9	S52 42.4
Capella	280 17.2	N46 01.5
Castor	245 53.2	N31 49.4
Deneb	49 23.5	N45 23.4
Denebola	182 22.2	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 37.9	N61 35.5
Elnath	277 57.9	N28 37.8
Eltanin	90 41.0	N51 29.4
Enif	33 35.5	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.8	S57 16.4
Gienah	175 40.8	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.6	S34 22.3
Kochab	137 21.3	N74 02.3
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.9	S69 49.9
Mirfak	308 23.5	N49 57.8
Nunki	75 44.0	S26 15.6
Peacock	53 00.8	S56 38.6
Polaris	314 57.6	N89 22.5
Pollux	243 13.6	N27 57.3
Procyon	244 47.7	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.4	N11 49.6
Rigel	281 00.8	S 8 10.0
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 41.9
Shaula	96 06.4	S37 07.5
Sirius	258 23.5	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.2	S43 32.7
Vega	80 31.2	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
12	0	21 05.8	218 00.5	N 8	10.6	235 19.9	N15	09.0	191 08.1	S 3	05.4	343 19.5	N12	01.8
	1	36 08.3	233 00.2	N 8	09.6	250 20.9	N15	08.5	206 10.1	S 3	05.6	358 22.1	N12	01.7
	2	51 10.7	247 59.8	N 8	08.5	265 21.9	N15	08.1	221 12.0	S 3	05.8	13 24.7	N12	01.7
	3	66 13.2	262 59.4	N 8	07.5	280 22.9	N15	07.6	236 14.0	S 3	06.0	28 27.4	N12	01.6
	4	81 15.7	277 59.1	N 8	06.5	295 23.9	N15	07.1	251 16.0	S 3	06.2	43 30.0	N12	01.6
T	5	96 18.1	292 58.7	N 8	05.5	310 24.9	N15	06.7	266 18.0	S 3	06.4	58 32.7	N12	01.5
H														
U	6	111 20.6	307 58.4	N 8	04.5	325 25.9	N15	06.2	281 19.9	S 3	06.7	73 35.3	N12	01.4
R	7	126 23.1	322 58.0	N 8	03.4	340 27.0	N15	05.8	296 21.9	S 3	06.9	88 37.9	N12	01.4
S	8	141 25.5	337 57.7	N 8	02.4	355 28.0	N15	05.3	311 23.9	S 3	07.1	103 40.6	N12	01.3
D	9	156 28.0	352 57.3	N 8	01.4	10 29.0	N15	04.8	326 25.8	S 3	07.3	118 43.2	N12	01.3
A	10	171 30.5	7 56.9	N 8	00.4	25 30.0	N15	04.4	341 27.8	S 3	07.5	133 45.9	N12	01.2
Y	11	186 32.9	22 56.6	N 7	59.3	40 31.0	N15	03.9	356 29.8	S 3	07.7	148 48.5	N12	01.1
	12	201 35.4	37 56.2	N 7	58.3	55 32.0	N15	03.5	11 31.7	S 3	07.9	163 51.2	N12	01.1
	13	216 37.8	52 55.9	N 7	57.3	70 33.0	N15	03.0	26 33.7	S 3	08.1	178 53.8	N12	01.0
	14	231 40.3	67 55.5	N 7	56.3	85 34.0	N15	02.5	41 35.7	S 3	08.3	193 56.4	N12	01.0
	15	246 42.8	82 55.2	N 7	55.2	100 35.0	N15	02.1	56 37.6	S 3	08.5	208 59.1	N12	00.9
	16	261 45.2	97 54.8	N 7	54.2	115 36.0	N15	01.6	71 39.6	S 3	08.8	224 01.7	N12	00.8
	17	276 47.7	112 54.5	N 7	53.2	130 37.0	N15	01.1	86 41.6	S 3	09.0	239 04.4	N12	00.8
	18	291 50.2	127 54.1	N 7	52.2	145 38.0	N15	00.7	101 43.5	S 3	09.2	254 07.0	N12	00.7
	19	306 52.6	142 53.7	N 7	51.1	160 39.1	N15	00.2	116 45.5	S 3	09.4	269 09.6	N12	00.6
	20	321 55.1	157 53.4	N 7	50.1	175 40.1	N14	59.8	131 47.5	S 3	09.6	284 12.3	N12	00.6
	21	336 57.6	172 53.0	N 7	49.1	190 41.1	N14	59.3	146 49.4	S 3	09.8	299 14.9	N12	00.5
	22	352 00.0	187 52.7	N 7	48.1	205 42.1	N14	58.8	161 51.4	S 3	10.0	314 17.6	N12	00.5
	23	7 02.5	202 52.3	N 7	47.0	220 43.1	N14	58.4	176 53.4	S 3	10.2	329 20.2	N12	00.4
13	0	22 05.0	217 52.0	N 7	46.0	235 44.1	N14	57.9	191 55.3	S 3	10.4	344 22.8	N12	00.3
	1	37 07.4	232 51.6	N 7	45.0	250 45.1	N14	57.4	206 57.3	S 3	10.6	359 25.5	N12	00.3
	2	52 09.9	247 51.3	N 7	43.9	265 46.1	N14	57.0	221 59.3	S 3	10.8	14 28.1	N12	00.2
	3	67 12.3	262 50.9	N 7	42.9	280 47.1	N14	56.5	237 01.2	S 3	11.1	29 30.8	N12	00.2
	4	82 14.8	277 50.5	N 7	41.9	295 48.2	N14	56.1	252 03.2	S 3	11.3	44 33.4	N12	00.1
F	5	97 17.3	292 50.2	N 7	40.8	310 49.2	N14	55.6	267 05.2	S 3	11.5	59 36.1	N12	00.0
R														
I	6	112 19.7	307 49.8	N 7	39.8	325 50.2	N14	55.1	282 07.2	S 3	11.7	74 38.7	N11	60.0
D	7	127 22.2	322 49.5	N 7	38.8	340 51.2	N14	54.7	297 09.1	S 3	11.9	89 41.3	N11	59.9
A	8	142 24.7	337 49.1	N 7	37.7	355 52.2	N14	54.2	312 11.1	S 3	12.1	104 44.0	N11	59.9
Y	9	157 27.1	352 48.8	N 7	36.7	10 53.2	N14	53.7	327 13.1	S 3	12.3	119 46.6	N11	59.8
	10	172 29.6	7 48.4	N 7	35.7	25 54.2	N14	53.3	342 15.0	S 3	12.5	134 49.3	N11	59.7
	11	187 32.1	22 48.1	N 7	34.6	40 55.2	N14	52.8	357 17.0	S 3	12.7	149 51.9	N11	59.7
	12	202 34.5	37 47.7	N 7	33.6	55 56.3	N14	52.4	12 19.0	S 3	12.9	164 54.5	N11	59.6
	13	217 37.0	52 47.4	N 7	32.6	70 57.3	N14	51.9	27 20.9	S 3	13.1	179 57.2	N11	59.5
	14	232 39.5	67 47.0	N 7	31.5	85 58.3	N14	51.4	42 22.9	S 3	13.4	194 59.8	N11	59.5
	15	247 41.9	82 46.6	N 7	30.5	100 59.3	N14	51.0	57 24.9	S 3	13.6	210 02.5	N11	59.4
	16	262 44.4	97 46.3	N 7	29.4	116 00.3	N14	50.5	72 26.8	S 3	13.8	225 05.1	N11	59.4
	17	277 46.8	112 45.9	N 7	28.4	131 01.3	N14	50.0	87 28.8	S 3	14.0	240 07.8	N11	59.3
	18	292 49.3	127 45.6	N 7	27.4	146 02.3	N14	49.6	102 30.8	S 3	14.2	255 10.4	N11	59.2
	19	307 51.8	142 45.2	N 7	26.3	161 03.4	N14	49.1	117 32.7	S 3	14.4	270 13.0	N11	59.2
	20	322 54.2	157 44.9	N 7	25.3	176 04.4	N14	48.6	132 34.7	S 3	14.6	285 15.7	N11	59.1
	21	337 56.7	172 44.5	N 7	24.3	191 05.4	N14	48.2	147 36.7	S 3	14.8	300 18.3	N11	59.1
	22	352 59.2	187 44.2	N 7	23.2	206 06.4	N14	47.7	162 38.6	S 3	15.0	315 21.0	N11	59.0
	23	8 01.6	202 43.8	N 7	22.2	221 07.4	N14	47.3	177 40.6	S 3	15.2	330 23.6	N11	58.9
14	0	23 04.1	217 43.5	N 7	21.1	236 08.4	N14	46.8	192 42.6	S 3	15.4	345 26.3	N11	58.9
	1	38 06.6	232 43.1	N 7	20.1	251 09.5	N14	46.3	207 44.6	S 3	15.7	0 28.9	N11	58.8
	2	53 09.0	247 42.8	N 7	19.0	266 10.5	N14	45.9	222 46.5	S 3	15.9	15 31.6	N11	58.7
	3	68 11.5	262 42.4	N 7	18.0	281 11.5	N14	45.4	237 48.5	S 3	16.1	30 34.2	N11	58.7
	4	83 13.9	277 42.1	N 7	17.0	296 12.5	N14	44.9	252 50.5	S 3	16.3	45 36.8	N11	58.6
S	5	98 16.4	292 41.7	N 7	15.9	311 13.5	N14	44.5	267 52.4	S 3	16.5	60 39.5	N11	58.6
A														
T	6	113 18.9	307 41.3	N 7	14.9	326 14.6	N14	44.0	282 54.4	S 3	16.7	75 42.1	N11	58.5
U	7	128 21.3	322 41.0	N 7	13.8	341 15.6	N14	43.5	297 56.4	S 3	16.9	90 44.8	N11	58.4
R	8	143 23.8	337 40.6	N 7	12.8	356 16.6	N14	43.1	312 58.3	S 3	17.1	105 47.4	N11	58.4
D	9	158 26.3	352 40.3	N 7	11.7	11 17.6	N14	42.6	328 00.3	S 3	17.3	120 50.1	N11	58.3
A	10	173 28.7	7 39.9	N 7	10.7	26 18.6	N14	42.1	343 02.3	S 3	17.5	135 52.7	N11	58.3
Y	11	188 31.2	22 39.6	N 7	09.7	41 19.6	N14	41.7	358 04.2	S 3	17.7	150 55.3	N11	58.2
	12	203 33.7	37 39.2	N 7	08.6	56 20.7	N14	41.2	13 06.2	S 3	17.9	165 58.0	N11	58.1
	13	218 36.1	52 38.9	N 7	07.6	71 21.7	N14	40.7	28 08.2	S 3	18.2	181 00.6	N11	58.1
	14	233 38.6	67 38.5	N 7	06.5	86 22.7	N14	40.3	43 10.1	S 3	18.4	196 03.3	N11	58.0
	15	248 41.1	82 38.2	N 7	05.5	101 23.7	N14	39.8	58 12.1	S 3	18.6	211 05.9	N11	57.9
	16	263 43.5	97 37.8	N 7	04.4	116 24.7	N14	39.3	73 14.1	S 3	18.8	226 08.6	N11	57.9
	17	278 46.0	112 37.5	N 7	03.4	131 25.8	N14	38.9	88 16.1	S 3	19.0	241 11.2	N11	57.8
	18	293 48.4	127 37.1	N 7	02.3	146 26.8	N14	38.4	103 18.0	S 3	19.2	256 13.9	N11	57.8
	19	308 50.9	142 36.8	N 7	01.3	161 27.8	N14	38.0	118 20.0	S 3	19.4	271 16.5	N11	57.7
	20	323 53.4	157 36.4	N 7	00.2	176 28.8	N14	37.5	133 22.0	S 3	19.6	286 19.2	N11	57.6
	21	338 55.8	172 36.1	N 6	59.2	191 29.8	N14	37.0	148 23.9	S 3	19.8	301 21.8	N11	57.6
	22	353 58.3	187 35.7	N 6	58.1	206 30.9	N14	36.6	163 25.9	S 3	20.0	316 24.4	N11	57.5
	23	9 00.8	202 35.4	N 6	57.1	221 31.9	N14	36.1	178 27.9	S 3	20.2	331 27.1	N11	57.5
			v -0.4	d	1.0	v 1.0	d	0.5	v 2.0	d	0.2	v 2.6	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
12	0	183 23.0	S 7 30.8	263 45.1	8.3	N20 26.1	9.1	58.3
	1	198 23.2	S 7 31.8	278 12.4	8.3	N20 16.9	9.2	58.3
	2	213 23.3	S 7 32.7	292 39.8	8.3	N20 07.5	9.3	58.4
	3	228 23.5	S 7 33.6	307 07.1	8.4	N19 58.0	9.5	58.4
	4	243 23.6	S 7 34.6	321 34.5	8.4	N19 48.4	9.6	58.4
T	5	258 23.8	S 7 35.5	336 01.9	8.4	N19 38.7	9.7	58.5
H								
U	6	273 23.9	S 7 36.4	350 29.4	8.5	N19 28.9	9.9	58.5
R	7	288 24.1	S 7 37.4	4 56.9	8.5	N19 18.9	10.0	58.5
S	8	303 24.2	S 7 38.3	19 24.4	8.5	N19 08.8	10.1	58.6
D	9	318 24.4	S 7 39.2	33 51.9	8.5	N18 58.6	10.2	58.6
A	10	333 24.5	S 7 40.2	48 19.5	8.6	N18 48.2	10.3	58.6
Y	11	348 24.7	S 7 41.1	62 47.1	8.6	N18 37.8	10.5	58.7
	12	3 24.8	S 7 42.1	77 14.7	8.6	N18 27.2	10.6	58.7
	13	18 25.0	S 7 43.0	91 42.4	8.7	N18 16.5	10.7	58.7
	14	33 25.1	S 7 43.9	106 10.1	8.7	N18 05.7	10.8	58.8
	15	48 25.3	S 7 44.9	120 37.8	8.7	N17 54.7	10.9	58.8
	16	63 25.5	S 7 45.8	135 05.6	8.8	N17 43.7	11.0	58.8
	17	78 25.6	S 7 46.7	149 33.4	8.8	N17 32.5	11.2	58.9
	18	93 25.8	S 7 47.7	164 01.2	8.8	N17 21.3	11.3	58.9
	19	108 25.9	S 7 48.6	178 29.0	8.9	N17 09.9	11.4	58.9
	20	123 26.1	S 7 49.5	192 56.9	8.9	N16 58.4	11.5	59.0
	21	138 26.2	S 7 50.5	207 24.8	8.9	N16 46.8	11.6	59.0
	22	153 26.4	S 7 51.4	221 52.8	8.9	N16 35.0	11.7	59.0
	23	168 26.5	S 7 52.3	236 20.8	9.0	N16 23.2	11.8	59.1
13	0	183 26.7	S 7 53.3	250 48.8	9.0	N16 11.3	11.9	59.1
	1	198 26.8	S 7 54.2	265 16.8	9.0	N15 59.2	12.0	59.1
	2	213 27.0	S 7 55.1	279 44.8	9.1	N15 47.1	12.1	59.2
	3	228 27.1	S 7 56.1	294 12.9	9.1	N15 34.8	12.2	59.2
	4	243 27.3	S 7 57.0	308 41.1	9.1	N15 22.5	12.4	59.2
F	5	258 27.4	S 7 57.9	323 09.2	9.1	N15 10.0	12.5	59.3
R								
I	6	273 27.5	S 7 58.9	337 37.4	9.2	N14 57.5	12.6	59.3
D	7	288 27.7	S 7 59.8	352 05.6	9.2	N14 44.8	12.7	59.3
A	8	303 27.8	S 8 00.7	6 33.8	9.2	N14 32.1	12.8	59.4
Y	9	318 28.0	S 8 01.7	21 02.1	9.3	N14 19.2	12.8	59.4
	10	333 28.1	S 8 02.6	35 30.4	9.3	N14 06.3	12.9	59.4
	11	348 28.3	S 8 03.5	49 58.7	9.3	N13 53.2	13.0	59.5
	12	3 28.4	S 8 04.4	64 27.0	9.3	N13 40.1	13.1	59.5
	13	18 28.6	S 8 05.4	78 55.4	9.4	N13 26.9	13.2	59.5
	14	33 28.7	S 8 06.3	93 23.8	9.4	N13 13.6	13.3	59.6
	15	48 28.9	S 8 07.2	107 52.2	9.4	N13 00.1	13.4	59.6
	16	63 29.0	S 8 08.2	122 20.6	9.4	N12 46.7	13.5	59.6
	17	78 29.2	S 8 09.1	136 49.1	9.5	N12 33.1	13.6	59.7
	18	93 29.3	S 8 10.0	151 17.6	9.5	N12 19.4	13.7	59.7
	19	108 29.4	S 8 11.0	165 46.1	9.5	N12 05.6	13.8	59.7
	20	123 29.6	S 8 11.9	180 14.6	9.5	N11 51.8	13.8	59.7
	21	138 29.7	S 8 12.8	194 43.1	9.5	N11 37.9	13.9	59.8
	22	153 29.9	S 8 13.7	209 11.7	9.6	N11 23.9	14.0	59.8
	23	168 30.0	S 8 14.7	223 40.3	9.6	N11 09.8	14.1	59.8
14	0	183 30.2	S 8 15.6	238 08.9	9.6	N10 55.7	14.2	59.9
	1	198 30.3	S 8 16.5	252 37.5	9.6	N10 41.4	14.2	59.9
	2	213 30.5	S 8 17.5	267 06.2	9.6	N10 27.1	14.3	59.9
	3	228 30.6	S 8 18.4	281 34.8	9.7	N10 12.7	14.4	59.9
	4	243 30.7	S 8 19.3	296 03.5	9.7	N 9 58.3	14.5	60.0
S	5	258 30.9	S 8 20.2	310 32.2	9.7	N 9 43.7	14.5	60.0
A								
T	6	273 31.0	S 8 21.2	325 00.9	9.7	N 9 29.1	14.6	60.0
U	7	288 31.2	S 8 22.1	339 29.6	9.7	N 9 14.5	14.7	60.1
R	8	303 31.3	S 8 23.0	353 58.3	9.7	N 8 59.8	14.7	60.1
D	9	318 31.5	S 8 23.9	8 27.1	9.7	N 8 45.0	14.8	60.1
A	10	333 31.6	S 8 24.9	22 55.8	9.8	N 8 30.1	14.9	60.1
Y	11	348 31.7	S 8 25.8	37 24.6	9.8	N 8 15.2	14.9	60.2
	12	3 31.9	S 8 26.7	51 53.4	9.8	N 8 00.2	15.0	60.2
	13	18 32.0	S 8 27.7	66 22.2	9.8	N 7 45.1	15.0	60.2
	14	33 32.2	S 8 28.6	80 51.0	9.8	N 7 30.0	15.1	60.2
	15	48 32.3	S 8 29.5	95 19.8	9.8	N 7 14.9	15.2	60.3
	16	63 32.4	S 8 30.4	109 48.6	9.8	N 6 59.7	15.2	60.3
	17	78 32.6	S 8 31.4	124 17.4	9.8	N 6 44.4	15.3	60.3
	18	93 32.7	S 8 32.3	138 46.2	9.8	N 6 29.1	15.3	60.4
	19	108 32.9	S 8 33.2	153 15.0	9.8	N 6 13.7	15.4	60.4
	20	123 33.0	S 8 34.1	167 43.9	9.8	N 5 58.3	15.4	60.4
	21	138 33.1	S 8 35.1	182 12.7	9.8	N 5 42.8	15.5	60.4
	22	153 33.3	S 8 36.0	196 41.5	9.8	N 5 27.3	15.5	60.4
	23	168 33.4	S 8 36.9	211 10.4	9.8	N 5 11.8	15.6	60.5
		S.D. 16.0	d 0.9	S.D. 16.0		16.2		16.4

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.1
Achernar	335 17.4	S57 05.3
Acrux	172 57.3	S63 15.4
Adhara	255 03.4	S29 00.5
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.9	N16 34.1
Alioth	166 10.9	N55 48.2
Alkaid	152 50.1	N49 10.2
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.4	S 1 10.9
Alphard	217 44.9	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.2	N29 15.3
Altair	61 56.9	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.3	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.2	S69 04.9
Avior	234 13.5	S59 35.9
Bellatrix	278 19.4	N 6 22.6
Betelgeuse	270 48.6	N 7 24.8
Canopus	263 50.9	S52 42.4
Capella	280 17.1	N46 01.5
Castor	245 53.2	N31 49.4
Deneb	49 23.5	N45 23.4
Denebola	182 22.1	N14 24.7
Diphda	348 44.0	S17 49.5
Dubhe	193 37.9	N61 35.5
Elnath	277 57.9	N28 37.8
Eltanin	90 41.0	N51 29.4
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.7	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.6	S34 22.3
Kochab	137 21.3	N74 02.3
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.8	S69 49.9
Mirfak	308 23.4	N49 57.8
Nunki	75 44.0	S26 15.6
Peacock	53 00.8	S56 38.6
Polaris	314 57.1	N89 22.5
Pollux	243 13.6	N27 57.3
Procyon	244 47.6	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.4	N11 49.6
Rigel	281 00.8	S 8 10.0
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 41.9
Shaula	96 06.4	S37 07.5
Sirius	258 23.5	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.2	S43 32.7
Vega	80 31.2	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
15	0	24 03.2	217 35.0	N 6	56.0	236 32.9	N14	35.6	193 29.8	S 3	20.4	346 29.7	N11	57.4
	1	39 05.7	232 34.7	N 6	55.0	251 33.9	N14	35.2	208 31.8	S 3	20.7	1 32.4	N11	57.3
	2	54 08.2	247 34.3	N 6	53.9	266 35.0	N14	34.7	223 33.8	S 3	20.9	16 35.0	N11	57.3
	3	69 10.6	262 34.0	N 6	52.9	281 36.0	N14	34.2	238 35.7	S 3	21.1	31 37.7	N11	57.2
	4	84 13.1	277 33.6	N 6	51.8	296 37.0	N14	33.8	253 37.7	S 3	21.3	46 40.3	N11	57.1
S	5	99 15.5	292 33.3	N 6	50.8	311 38.0	N14	33.3	268 39.7	S 3	21.5	61 43.0	N11	57.1
U														
N	6	114 18.0	307 32.9	N 6	49.7	326 39.1	N14	32.8	283 41.6	S 3	21.7	76 45.6	N11	57.0
D	7	129 20.5	322 32.6	N 6	48.6	341 40.1	N14	32.4	298 43.6	S 3	21.9	91 48.2	N11	57.0
A	8	144 22.9	337 32.2	N 6	47.6	356 41.1	N14	31.9	313 45.6	S 3	22.1	106 50.9	N11	56.9
Y	9	159 25.4	352 31.9	N 6	46.5	11 42.1	N14	31.4	328 47.6	S 3	22.3	121 53.5	N11	56.8
	10	174 27.9	7 31.5	N 6	45.5	26 43.2	N14	31.0	343 49.5	S 3	22.5	136 56.2	N11	56.8
	11	189 30.3	22 31.2	N 6	44.4	41 44.2	N14	30.5	358 51.5	S 3	22.7	151 58.8	N11	56.7
	12	204 32.8	37 30.8	N 6	43.4	56 45.2	N14	30.0	13 53.5	S 3	22.9	167 01.5	N11	56.6
	13	219 35.3	52 30.5	N 6	42.3	71 46.2	N14	29.5	28 55.4	S 3	23.2	182 04.1	N11	56.6
	14	234 37.7	67 30.1	N 6	41.3	86 47.3	N14	29.1	43 57.4	S 3	23.4	197 06.8	N11	56.5
	15	249 40.2	82 29.8	N 6	40.2	101 48.3	N14	28.6	58 59.4	S 3	23.6	212 09.4	N11	56.5
	16	264 42.7	97 29.4	N 6	39.1	116 49.3	N14	28.1	74 01.3	S 3	23.8	227 12.1	N11	56.4
	17	279 45.1	112 29.1	N 6	38.1	131 50.3	N14	27.7	89 03.3	S 3	24.0	242 14.7	N11	56.3
	18	294 47.6	127 28.7	N 6	37.0	146 51.4	N14	27.2	104 05.3	S 3	24.2	257 17.4	N11	56.3
	19	309 50.0	142 28.4	N 6	36.0	161 52.4	N14	26.7	119 07.3	S 3	24.4	272 20.0	N11	56.2
	20	324 52.5	157 28.0	N 6	34.9	176 53.4	N14	26.3	134 09.2	S 3	24.6	287 22.7	N11	56.2
	21	339 55.0	172 27.7	N 6	33.8	191 54.4	N14	25.8	149 11.2	S 3	24.8	302 25.3	N11	56.1
	22	354 57.4	187 27.3	N 6	32.8	206 55.5	N14	25.3	164 13.2	S 3	25.0	317 27.9	N11	56.0
	23	9 59.9	202 27.0	N 6	31.7	221 56.5	N14	24.9	179 15.1	S 3	25.2	332 30.6	N11	56.0
16	0	25 02.4	217 26.6	N 6	30.7	236 57.5	N14	24.4	194 17.1	S 3	25.4	347 33.2	N11	55.9
	1	40 04.8	232 26.3	N 6	29.6	251 58.5	N14	23.9	209 19.1	S 3	25.6	2 35.9	N11	55.8
	2	55 07.3	247 25.9	N 6	28.5	266 59.6	N14	23.5	224 21.0	S 3	25.9	17 38.5	N11	55.8
	3	70 09.8	262 25.6	N 6	27.5	282 00.6	N14	23.0	239 23.0	S 3	26.1	32 41.2	N11	55.7
	4	85 12.2	277 25.2	N 6	26.4	297 01.6	N14	22.5	254 25.0	S 3	26.3	47 43.8	N11	55.7
M	5	100 14.7	292 24.9	N 6	25.3	312 02.7	N14	22.1	269 26.9	S 3	26.5	62 46.5	N11	55.6
O														
N	6	115 17.1	307 24.5	N 6	24.3	327 03.7	N14	21.6	284 28.9	S 3	26.7	77 49.1	N11	55.5
D	7	130 19.6	322 24.2	N 6	23.2	342 04.7	N14	21.1	299 30.9	S 3	26.9	92 51.8	N11	55.5
A	8	145 22.1	337 23.8	N 6	22.2	357 05.8	N14	20.7	314 32.9	S 3	27.1	107 54.4	N11	55.4
Y	9	160 24.5	352 23.5	N 6	21.1	12 06.8	N14	20.2	329 34.8	S 3	27.3	122 57.1	N11	55.3
	10	175 27.0	7 23.1	N 6	20.0	27 07.8	N14	19.7	344 36.8	S 3	27.5	137 59.7	N11	55.3
	11	190 29.5	22 22.8	N 6	19.0	42 08.8	N14	19.2	359 38.8	S 3	27.7	153 02.4	N11	55.2
	12	205 31.9	37 22.4	N 6	17.9	57 09.9	N14	18.8	14 40.7	S 3	27.9	168 05.0	N11	55.2
	13	220 34.4	52 22.1	N 6	16.8	72 10.9	N14	18.3	29 42.7	S 3	28.1	183 07.7	N11	55.1
	14	235 36.9	67 21.7	N 6	15.8	87 11.9	N14	17.8	44 44.7	S 3	28.3	198 10.3	N11	55.0
	15	250 39.3	82 21.4	N 6	14.7	102 13.0	N14	17.4	59 46.6	S 3	28.6	213 12.9	N11	55.0
	16	265 41.8	97 21.0	N 6	13.6	117 14.0	N14	16.9	74 48.6	S 3	28.8	228 15.6	N11	54.9
	17	280 44.3	112 20.7	N 6	12.6	132 15.0	N14	16.4	89 50.6	S 3	29.0	243 18.2	N11	54.8
	18	295 46.7	127 20.3	N 6	11.5	147 16.1	N14	16.0	104 52.6	S 3	29.2	258 20.9	N11	54.8
	19	310 49.2	142 20.0	N 6	10.4	162 17.1	N14	15.5	119 54.5	S 3	29.4	273 23.5	N11	54.7
	20	325 51.6	157 19.6	N 6	09.3	177 18.1	N14	15.0	134 56.5	S 3	29.6	288 26.2	N11	54.7
	21	340 54.1	172 19.3	N 6	08.3	192 19.2	N14	14.6	149 58.5	S 3	29.8	303 28.8	N11	54.6
	22	355 56.6	187 18.9	N 6	07.2	207 20.2	N14	14.1	165 00.4	S 3	30.0	318 31.5	N11	54.5
	23	10 59.0	202 18.6	N 6	06.1	222 21.2	N14	13.6	180 02.4	S 3	30.2	333 34.1	N11	54.5
17	0	26 01.5	217 18.2	N 6	05.1	237 22.3	N14	13.1	195 04.4	S 3	30.4	348 36.8	N11	54.4
	1	41 04.0	232 17.9	N 6	04.0	252 23.3	N14	12.7	210 06.3	S 3	30.6	3 39.4	N11	54.3
	2	56 06.4	247 17.5	N 6	02.9	267 24.3	N14	12.2	225 08.3	S 3	30.8	18 42.1	N11	54.3
	3	71 08.9	262 17.2	N 6	01.9	282 25.4	N14	11.7	240 10.3	S 3	31.0	33 44.7	N11	54.2
	4	86 11.4	277 16.9	N 6	00.8	297 26.4	N14	11.3	255 12.3	S 3	31.2	48 47.4	N11	54.2
T	5	101 13.8	292 16.5	N 5	59.7	312 27.4	N14	10.8	270 14.2	S 3	31.5	63 50.0	N11	54.1
U														
E	6	116 16.3	307 16.2	N 5	58.6	327 28.5	N14	10.3	285 16.2	S 3	31.7	78 52.7	N11	54.0
S	7	131 18.8	322 15.8	N 5	57.6	342 29.5	N14	09.8	300 18.2	S 3	31.9	93 55.3	N11	54.0
D	8	146 21.2	337 15.5	N 5	56.5	357 30.5	N14	09.4	315 20.1	S 3	32.1	108 58.0	N11	53.9
A	9	161 23.7	352 15.1	N 5	55.4	12 31.6	N14	08.9	330 22.1	S 3	32.3	124 00.6	N11	53.8
Y	10	176 26.1	7 14.8	N 5	54.3	27 32.6	N14	08.4	345 24.1	S 3	32.5	139 03.3	N11	53.8
	11	191 28.6	22 14.4	N 5	53.3	42 33.6	N14	08.0	0 26.0	S 3	32.7	154 05.9	N11	53.7
	12	206 31.1	37 14.1	N 5	52.2	57 34.7	N14	07.5	15 28.0	S 3	32.9	169 08.6	N11	53.7
	13	221 33.5	52 13.7	N 5	51.1	72 35.7	N14	07.0	30 30.0	S 3	33.1	184 11.2	N11	53.6
	14	236 36.0	67 13.4	N 5	50.0	87 36.8	N14	06.6	45 32.0	S 3	33.3	199 13.9	N11	53.5
	15	251 38.5	82 13.0	N 5	49.0	102 37.8	N14	06.1	60 33.9	S 3	33.5	214 16.5	N11	53.5
	16	266 40.9	97 12.7	N 5	47.9	117 38.8	N14	05.6	75 35.9	S 3	33.7	229 19.2	N11	53.4
	17	281 43.4	112 12.3	N 5	46.8	132 39.9	N14	05.1	90 37.9	S 3	33.9	244 21.8	N11	53.3
	18	296 45.9	127 12.0	N 5	45.7	147 40.9	N14	04.7	105 39.8	S 3	34.1	259 24.5	N11	53.3
	19	311 48.3	142 11.7	N 5	44.7	162 41.9	N14	04.2	120 41.8	S 3	34.4	274 27.1	N11	53.2
	20	326 50.8	157 11.3	N 5	43.6	177 43.0	N14	03.7	135 43.8	S 3	34.6	289 29.8	N11	53.1
	21	341 53.2	172 11.0	N 5	42.5	192 44.0	N14	03.3	150 45.8	S 3	34.8	304 32.4	N11	53.1
	22	356 55.7	187 10.6	N 5	41.4	207 45.1	N14	02.8	165 47.7	S 3	35.0	319 35.1	N11	53.0
	23	11 58.2	202 10.3	N 5	40.3	222 46.1	N14	02.3	180 49.7	S 3	35.2	334 37.7	N11	53.0
			v -0.3	d	1.1	v 1.0	d	0.5	v 2.0	d	0.2	v 2.6	d	0.1

G.M.T		SUN				MOON						STARS		
d	h	GHA ° '	Dec ° '			GHA ° '	v '	Dec ° '	d '	HP '		Name	SHA ° '	Dec ° '
15	0	183 33.5	S 8 37.8			225 39.2	9.8	N 4 56.2	15.6	60.5		Acamar	315 09.1	S40 11.1
	1	198 33.7	S 8 38.7			240 08.0	9.8	N 4 40.5	15.6	60.5		Achernar	335 17.4	S57 05.3
	2	213 33.8	S 8 39.7			254 36.8	9.8	N 4 24.9	15.7	60.5		Acrux	172 57.3	S63 15.4
	3	228 34.0	S 8 40.6			269 05.7	9.8	N 4 09.1	15.7	60.6		Adhara	255 03.4	S29 00.5
	4	243 34.1	S 8 41.5			283 34.5	9.8	N 3 53.4	15.7	60.6		Albireo	67 01.6	N28 01.5
S	5	258 34.2	S 8 42.4			298 03.3	9.8	N 3 37.6	15.8	60.6				
U												Aldebaran	290 35.9	N16 34.1
N	6	273 34.4	S 8 43.4			312 32.1	9.8	N 3 21.8	15.8	60.6		Alioth	166 10.9	N55 48.2
D	7	288 34.5	S 8 44.3			327 00.9	9.8	N 3 06.0	15.8	60.6		Alkaid	152 50.1	N49 10.2
A	8	303 34.6	S 8 45.2			341 29.7	9.8	N 2 50.1	15.9	60.7		Al Na-ir	27 28.8	S46 49.3
Y	9	318 34.8	S 8 46.1			355 58.5	9.8	N 2 34.2	15.9	60.7		Alnilam	275 34.4	S 1 10.9
	10	333 34.9	S 8 47.0			10 27.3	9.8	N 2 18.2	15.9	60.7				
	11	348 35.0	S 8 48.0			24 56.0	9.8	N 2 02.3	16.0	60.7		Alphard	217 44.8	S 8 47.0
												Alphecca	126 01.5	N26 37.2
	12	3 35.2	S 8 48.9			39 24.8	9.8	N 1 46.3	16.0	60.7		Alpheratz	357 31.3	N29 15.3
	13	18 35.3	S 8 49.8			53 53.5	9.7	N 1 30.3	16.0	60.8		Altair	61 57.0	N 8 56.9
	14	33 35.4	S 8 50.7			68 22.3	9.7	N 1 14.3	16.0	60.8		Ankaa	353 03.8	S42 08.9
	15	48 35.6	S 8 51.7			82 51.0	9.7	N 0 58.3	16.0	60.8				
	16	63 35.7	S 8 52.6			97 19.7	9.7	N 0 42.2	16.0	60.8		Antares	112 12.4	S26 29.7
	17	78 35.8	S 8 53.5			111 48.4	9.7	N 0 26.2	16.1	60.8		Arcturus	145 45.5	N19 02.0
												Atria	107 04.2	S69 04.9
	18	93 36.0	S 8 54.4			126 17.0	9.7	N 0 10.1	16.1	60.8		Avior	234 13.5	S59 35.9
	19	108 36.1	S 8 55.3			140 45.7	9.6	S 0 06.0	16.1	60.9		Bellatrix	278 19.4	N 6 22.6
	20	123 36.2	S 8 56.2			155 14.3	9.6	S 0 22.1	16.1	60.9				
	21	138 36.4	S 8 57.2			169 42.9	9.6	S 0 38.1	16.1	60.9		Betelgeuse	270 48.6	N 7 24.8
	22	153 36.5	S 8 58.1			184 11.5	9.6	S 0 54.2	16.1	60.9		Canopus	263 50.8	S52 42.4
	23	168 36.6	S 8 59.0			198 40.0	9.6	S 1 10.3	16.1	60.9		Capella	280 17.1	N46 01.5
												Castor	245 53.2	N31 49.4
16	0	183 36.8	S 8 59.9			213 08.6	9.5	S 1 26.4	16.1	60.9		Deneb	49 23.6	N45 23.4
	1	198 36.9	S 9 00.8			227 37.1	9.5	S 1 42.5	16.1	60.9				
	2	213 37.0	S 9 01.8			242 05.6	9.5	S 1 58.6	16.1	60.9		Denebola	182 22.1	N14 24.6
	3	228 37.2	S 9 02.7			256 34.1	9.5	S 2 14.7	16.1	61.0		Diphda	348 44.0	S17 49.5
	4	243 37.3	S 9 03.6			271 02.5	9.4	S 2 30.8	16.1	61.0		Dubhe	193 37.9	N61 35.5
M	5	258 37.4	S 9 04.5			285 30.9	9.4	S 2 46.9	16.1	61.0		Elnath	277 57.8	N28 37.8
O												Eltanin	90 41.0	N51 29.4
N	6	273 37.6	S 9 05.4			299 59.3	9.4	S 3 03.0	16.1	61.0				
D	7	288 37.7	S 9 06.3			314 27.6	9.3	S 3 19.0	16.1	61.0		Enif	33 35.6	N10 00.7
A	8	303 37.8	S 9 07.3			328 55.9	9.3	S 3 35.1	16.0	61.0		Fomalhaut	15 10.9	S29 28.1
Y	9	318 37.9	S 9 08.2			343 24.2	9.3	S 3 51.1	16.0	61.0		Gacrux	171 48.7	S57 16.4
	10	333 38.1	S 9 09.1			357 52.5	9.3	S 4 07.1	16.0	61.0		Gienah	175 40.7	S17 42.0
	11	348 38.2	S 9 10.0			12 20.7	9.2	S 4 23.1	16.0	61.0		Hadar	148 32.3	S60 30.7
	12	3 38.3	S 9 10.9			26 48.9	9.2	S 4 39.0	16.0	61.0		Hamal	327 47.4	N23 36.1
	13	18 38.5	S 9 11.8			41 17.0	9.2	S 4 55.0	15.9	61.0		Kaus Austr.	83 28.6	S34 22.3
	14	33 38.6	S 9 12.8			55 45.2	9.1	S 5 10.9	15.9	61.0		Kochab	137 21.3	N74 02.3
	15	48 38.7	S 9 13.7			70 13.2	9.1	S 5 26.8	15.9	61.1		Markab	13 26.6	N15 21.9
	16	63 38.8	S 9 14.6			84 41.3	9.0	S 5 42.6	15.9	61.1		Menkar	314 02.6	N 4 12.3
	17	78 39.0	S 9 15.5			99 09.3	9.0	S 5 58.5	15.8	61.1				
												Menkent	147 54.4	S36 30.7
	18	93 39.1	S 9 16.4			113 37.2	9.0	S 6 14.3	15.8	61.1		Miaplacidus	221 37.8	S69 49.9
	19	108 39.2	S 9 17.3			128 05.2	8.9	S 6 30.0	15.8	61.1		Mirfak	308 23.4	N49 57.8
	20	123 39.4	S 9 18.2			142 33.0	8.9	S 6 45.7	15.7	61.1		Nunki	75 44.1	S26 15.6
	21	138 39.5	S 9 19.2			157 00.9	8.8	S 7 01.4	15.7	61.1		Peacock	53 00.8	S56 38.6
	22	153 39.6	S 9 20.1			171 28.7	8.8	S 7 17.1	15.6	61.1				
	23	168 39.7	S 9 21.0			185 56.4	8.8	S 7 32.6	15.6	61.1		Polaris	314 56.7	N89 22.5
												Pollux	243 13.6	N27 57.3
17	0	183 39.9	S 9 21.9			200 24.1	8.7	S 7 48.2	15.6	61.1		Procyon	244 47.6	N 5 09.1
	1	198 40.0	S 9 22.8			214 51.8	8.7	S 8 03.7	15.5	61.1		Rasalhague	95 55.9	N12 32.6
	2	213 40.1	S 9 23.7			229 19.4	8.6	S 8 19.2	15.5	61.1		Regulus	207 31.4	N11 49.6
	3	228 40.2	S 9 24.6			243 47.0	8.6	S 8 34.6	15.4	61.1				
	4	243 40.4	S 9 25.5			258 14.5	8.5	S 8 49.9	15.4	61.1		Rigel	281 00.7	S 8 10.0
T	5	258 40.5	S 9 26.5			272 42.0	8.5	S 9 05.2	15.3	61.1		Rigil Kent	139 36.8	S60 57.3
U												Sabik	101 59.5	S15 45.6
E	6	273 40.6	S 9 27.4			287 09.4	8.4	S 9 20.5	15.2	61.1		Schedar	349 26.9	N56 41.9
S	7	288 40.7	S 9 28.3			301 36.8	8.4	S 9 35.6	15.2	61.1		Shaula	96 06.4	S37 07.5
D	8	303 40.8	S 9 29.2			316 04.1	8.3	S 9 50.8	15.1	61.1				
A	9	318 41.0	S 9 30.1			330 31.4	8.3	S10 05.8	15.1	61.1		Sirius	258 23.5	S16 45.2
Y	10	333 41.1	S 9 31.0			344 58.7	8.2	S10 20.8	15.0	61.1		Spica	158 19.4	S11 18.6
	11	348 41.2	S 9 31.9			359 25.8	8.2	S10 35.7	14.9	61.0		Suhail	222 44.2	S43 32.7
												Vega	80 31.3	N38 48.9
	12	3 41.3	S 9 32.8			13 53.0	8.1	S10 50.6	14.9	61.0		Zuben-ubi	136 53.9	S16 09.6
	13	18 41.5	S 9 33.7			28 20.0	8.1	S11 05.4	14.8	61.0				
	14	33 41.6	S 9 34.7			42 47.1	8.0	S11 20.1	14.7	61.0				
	15	48 41.7	S 9 35.6			57 14.0	8.0	S11 34.8	14.6	61.0				
	16	63 41.8	S 9 36.5			71 40.9	7.9	S11 49.3	14.6	61.0				
	17	78 41.9	S 9 37.4			86 07.8	7.9	S12 03.8	14.5	61.0				
	18	93 42.1	S 9 38.3			100 34.6	7.8	S12 18.2	14.4	61.0				
	19	108 42.2	S 9 39.2			115 01.4	7.8	S12 32.5	14.3	61.0				
	20	123 42.3	S 9 40.1			129 28.1	7.7	S12 46.8	14.2	61.0				
	21	138 42.4	S 9 41.0			143 54.7	7.6	S13 00.9	14.2	61.0				
	22	153 42.5	S 9 41.9			158 21.3	7.6	S13 15.0	14.1	61.0				
	23	168 42.7	S 9 42.8			172 47.8	7.5	S13 29.0	14.0	60.9				
		S.D. 16.1	d 0.9			S.D. 16.5		16.6	16.6					

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
18	0	27 00.6	217 09.9	N 5	39.3	237 47.1	N14	01.8	195 51.7	S 3	35.4	349 40.4	N11	52.9
	1	42 03.1	232 09.6	N 5	38.2	252 48.2	N14	01.4	210 53.6	S 3	35.6	4 43.0	N11	52.8
	2	57 05.6	247 09.2	N 5	37.1	267 49.2	N14	00.9	225 55.6	S 3	35.8	19 45.7	N11	52.8
	3	72 08.0	262 08.9	N 5	36.0	282 50.3	N14	00.4	240 57.6	S 3	36.0	34 48.3	N11	52.7
	4	87 10.5	277 08.5	N 5	34.9	297 51.3	N13	59.9	255 59.5	S 3	36.2	49 51.0	N11	52.6
W	5	102 13.0	292 08.2	N 5	33.8	312 52.3	N13	59.5	271 01.5	S 3	36.4	64 53.6	N11	52.6
E														
D	6	117 15.4	307 07.8	N 5	32.8	327 53.4	N13	59.0	286 03.5	S 3	36.6	79 56.3	N11	52.5
N	7	132 17.9	322 07.5	N 5	31.7	342 54.4	N13	58.5	301 05.5	S 3	36.8	94 58.9	N11	52.5
E	8	147 20.4	337 07.1	N 5	30.6	357 55.5	N13	58.1	316 07.4	S 3	37.0	110 01.6	N11	52.4
S	9	162 22.8	352 06.8	N 5	29.5	12 56.5	N13	57.6	331 09.4	S 3	37.2	125 04.2	N11	52.3
D	10	177 25.3	7 06.5	N 5	28.4	27 57.5	N13	57.1	346 11.4	S 3	37.5	140 06.9	N11	52.3
A	11	192 27.7	22 06.1	N 5	27.4	42 58.6	N13	56.6	1 13.3	S 3	37.7	155 09.5	N11	52.2
Y														
	12	207 30.2	37 05.8	N 5	26.3	57 59.6	N13	56.2	16 15.3	S 3	37.9	170 12.2	N11	52.1
	13	222 32.7	52 05.4	N 5	25.2	73 00.7	N13	55.7	31 17.3	S 3	38.1	185 14.8	N11	52.1
	14	237 35.1	67 05.1	N 5	24.1	88 01.7	N13	55.2	46 19.3	S 3	38.3	200 17.5	N11	52.0
	15	252 37.6	82 04.7	N 5	23.0	103 02.7	N13	54.7	61 21.2	S 3	38.5	215 20.1	N11	52.0
	16	267 40.1	97 04.4	N 5	21.9	118 03.8	N13	54.3	76 23.2	S 3	38.7	230 22.8	N11	51.9
	17	282 42.5	112 04.0	N 5	20.8	133 04.8	N13	53.8	91 25.2	S 3	38.9	245 25.4	N11	51.8
	18	297 45.0	127 03.7	N 5	19.8	148 05.9	N13	53.3	106 27.1	S 3	39.1	260 28.1	N11	51.8
	19	312 47.5	142 03.4	N 5	18.7	163 06.9	N13	52.9	121 29.1	S 3	39.3	275 30.7	N11	51.7
	20	327 49.9	157 03.0	N 5	17.6	178 08.0	N13	52.4	136 31.1	S 3	39.5	290 33.4	N11	51.6
	21	342 52.4	172 02.7	N 5	16.5	193 09.0	N13	51.9	151 33.1	S 3	39.7	305 36.0	N11	51.6
	22	357 54.8	187 02.3	N 5	15.4	208 10.1	N13	51.4	166 35.0	S 3	39.9	320 38.7	N11	51.5
	23	12 57.3	202 02.0	N 5	14.3	223 11.1	N13	51.0	181 37.0	S 3	40.1	335 41.3	N11	51.4
19	0	27 59.8	217 01.6	N 5	13.2	238 12.1	N13	50.5	196 39.0	S 3	40.3	350 44.0	N11	51.4
	1	43 02.2	232 01.3	N 5	12.1	253 13.2	N13	50.0	211 40.9	S 3	40.5	5 46.6	N11	51.3
	2	58 04.7	247 00.9	N 5	11.1	268 14.2	N13	49.5	226 42.9	S 3	40.8	20 49.3	N11	51.3
	3	73 07.2	262 00.6	N 5	10.0	283 15.3	N13	49.1	241 44.9	S 3	41.0	35 51.9	N11	51.2
	4	88 09.6	277 00.2	N 5	08.9	298 16.3	N13	48.6	256 46.9	S 3	41.2	50 54.6	N11	51.1
T	5	103 12.1	291 59.9	N 5	07.8	313 17.4	N13	48.1	271 48.8	S 3	41.4	65 57.2	N11	51.1
H														
U	6	118 14.6	306 59.6	N 5	06.7	328 18.4	N13	47.6	286 50.8	S 3	41.6	80 59.9	N11	51.0
R	7	133 17.0	321 59.2	N 5	05.6	343 19.5	N13	47.2	301 52.8	S 3	41.8	96 02.5	N11	50.9
S	8	148 19.5	336 58.9	N 5	04.5	358 20.5	N13	46.7	316 54.7	S 3	42.0	111 05.2	N11	50.9
D	9	163 22.0	351 58.5	N 5	03.4	13 21.6	N13	46.2	331 56.7	S 3	42.2	126 07.8	N11	50.8
A	10	178 24.4	6 58.2	N 5	02.3	28 22.6	N13	45.8	346 58.7	S 3	42.4	141 10.5	N11	50.8
Y	11	193 26.9	21 57.8	N 5	01.2	43 23.7	N13	45.3	2 00.7	S 3	42.6	156 13.1	N11	50.7
	12	208 29.3	36 57.5	N 5	00.1	58 24.7	N13	44.8	17 02.6	S 3	42.8	171 15.8	N11	50.6
	13	223 31.8	51 57.1	N 4	59.0	73 25.7	N13	44.3	32 04.6	S 3	43.0	186 18.5	N11	50.6
	14	238 34.3	66 56.8	N 4	58.0	88 26.8	N13	43.9	47 06.6	S 3	43.2	201 21.1	N11	50.5
	15	253 36.7	81 56.5	N 4	56.9	103 27.8	N13	43.4	62 08.5	S 3	43.4	216 23.8	N11	50.4
	16	268 39.2	96 56.1	N 4	55.8	118 28.9	N13	42.9	77 10.5	S 3	43.6	231 26.4	N11	50.4
	17	283 41.7	111 55.8	N 4	54.7	133 29.9	N13	42.4	92 12.5	S 3	43.8	246 29.1	N11	50.3
	18	298 44.1	126 55.4	N 4	53.6	148 31.0	N13	42.0	107 14.5	S 3	44.0	261 31.7	N11	50.2
	19	313 46.6	141 55.1	N 4	52.5	163 32.0	N13	41.5	122 16.4	S 3	44.3	276 34.4	N11	50.2
	20	328 49.1	156 54.7	N 4	51.4	178 33.1	N13	41.0	137 18.4	S 3	44.5	291 37.0	N11	50.1
	21	343 51.5	171 54.4	N 4	50.3	193 34.1	N13	40.5	152 20.4	S 3	44.7	306 39.7	N11	50.1
	22	358 54.0	186 54.0	N 4	49.2	208 35.2	N13	40.1	167 22.4	S 3	44.9	321 42.3	N11	50.0
	23	13 56.5	201 53.7	N 4	48.1	223 36.2	N13	39.6	182 24.3	S 3	45.1	336 45.0	N11	49.9
20	0	28 58.9	216 53.4	N 4	47.0	238 37.3	N13	39.1	197 26.3	S 3	45.3	351 47.6	N11	49.9
	1	44 01.4	231 53.0	N 4	45.9	253 38.3	N13	38.6	212 28.3	S 3	45.5	6 50.3	N11	49.8
	2	59 03.8	246 52.7	N 4	44.8	268 39.4	N13	38.2	227 30.2	S 3	45.7	21 52.9	N11	49.7
	3	74 06.3	261 52.3	N 4	43.7	283 40.4	N13	37.7	242 32.2	S 3	45.9	36 55.6	N11	49.7
	4	89 08.8	276 52.0	N 4	42.6	298 41.5	N13	37.2	257 34.2	S 3	46.1	51 58.2	N11	49.6
F	5	104 11.2	291 51.6	N 4	41.5	313 42.5	N13	36.7	272 36.2	S 3	46.3	67 00.9	N11	49.6
R														
I	6	119 13.7	306 51.3	N 4	40.4	328 43.6	N13	36.3	287 38.1	S 3	46.5	82 03.5	N11	49.5
D	7	134 16.2	321 51.0	N 4	39.3	343 44.7	N13	35.8	302 40.1	S 3	46.7	97 06.2	N11	49.4
A	8	149 18.6	336 50.6	N 4	38.2	358 45.7	N13	35.3	317 42.1	S 3	46.9	112 08.8	N11	49.4
Y	9	164 21.1	351 50.3	N 4	37.1	13 46.8	N13	34.8	332 44.1	S 3	47.1	127 11.5	N11	49.3
	10	179 23.6	6 49.9	N 4	36.0	28 47.8	N13	34.4	347 46.0	S 3	47.3	142 14.2	N11	49.2
	11	194 26.0	21 49.6	N 4	34.9	43 48.9	N13	33.9	2 48.0	S 3	47.5	157 16.8	N11	49.2
	12	209 28.5	36 49.2	N 4	33.8	58 49.9	N13	33.4	17 50.0	S 3	47.7	172 19.5	N11	49.1
	13	224 30.9	51 48.9	N 4	32.7	73 51.0	N13	32.9	32 51.9	S 3	48.0	187 22.1	N11	49.0
	14	239 33.4	66 48.6	N 4	31.6	88 52.0	N13	32.5	47 53.9	S 3	48.2	202 24.8	N11	49.0
	15	254 35.9	81 48.2	N 4	30.5	103 53.1	N13	32.0	62 55.9	S 3	48.4	217 27.4	N11	48.9
	16	269 38.3	96 47.9	N 4	29.4	118 54.1	N13	31.5	77 57.9	S 3	48.6	232 30.1	N11	48.9
	17	284 40.8	111 47.5	N 4	28.3	133 55.2	N13	31.0	92 59.8	S 3	48.8	247 32.7	N11	48.8
	18	299 43.3	126 47.2	N 4	27.2	148 56.2	N13	30.5	108 01.8	S 3	49.0	262 35.4	N11	48.7
	19	314 45.7	141 46.8	N 4	26.1	163 57.3	N13	30.1	123 03.8	S 3	49.2	277 38.0	N11	48.7
	20	329 48.2	156 46.5	N 4	25.0	178 58.4	N13	29.6	138 05.8	S 3	49.4	292 40.7	N11	48.6
	21	344 50.7	171 46.1	N 4	23.9	193 59.4	N13	29.1	153 07.7	S 3	49.6	307 43.3	N11	48.5
	22	359 53.1	186 45.8	N 4	22.8	209 00.5	N13	28.6	168 09.7	S 3	49.8	322 46.0	N11	48.5
	23	14 55.6	201 45.5	N 4	21.7	224 01.5	N13	28.2	183 11.7	S 3	50.0	337 48.6	N11	48.4
			v -0.3	d	1.1	v 1.0	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
18	0	183 42.8	S 9 43.7	187 14.3	7.5	S13 42.9	13.9	60.9
	1	198 42.9	S 9 44.6	201 40.7	7.4	S13 56.7	13.8	60.9
	2	213 43.0	S 9 45.5	216 07.1	7.4	S14 10.4	13.7	60.9
	3	228 43.1	S 9 46.5	230 33.4	7.3	S14 24.0	13.6	60.9
	4	243 43.3	S 9 47.4	244 59.6	7.2	S14 37.5	13.5	60.9
W	5	258 43.4	S 9 48.3	259 25.8	7.2	S14 50.9	13.4	60.9
E								
D	6	273 43.5	S 9 49.2	273 51.9	7.1	S15 04.2	13.3	60.8
N	7	288 43.6	S 9 50.1	288 18.0	7.1	S15 17.4	13.2	60.8
E	8	303 43.7	S 9 51.0	302 44.0	7.0	S15 30.5	13.1	60.8
S	9	318 43.8	S 9 51.9	317 10.0	7.0	S15 43.5	13.0	60.8
D	10	333 44.0	S 9 52.8	331 35.9	6.9	S15 56.4	12.9	60.8
A	11	348 44.1	S 9 53.7	346 01.7	6.8	S16 09.2	12.8	60.8
Y								
	12	3 44.2	S 9 54.6	0 27.5	6.8	S16 21.8	12.7	60.7
	13	18 44.3	S 9 55.5	14 53.3	6.7	S16 34.4	12.5	60.7
	14	33 44.4	S 9 56.4	29 19.0	6.7	S16 46.8	12.4	60.7
	15	48 44.5	S 9 57.3	43 44.6	6.6	S16 59.1	12.3	60.7
	16	63 44.7	S 9 58.2	58 10.1	6.6	S17 11.3	12.2	60.7
	17	78 44.8	S 9 59.1	72 35.7	6.5	S17 23.4	12.1	60.6
	18	93 44.9	S10 00.0	87 01.1	6.5	S17 35.3	11.9	60.6
	19	108 45.0	S10 00.9	101 26.5	6.4	S17 47.1	11.8	60.6
	20	123 45.1	S10 01.8	115 51.9	6.3	S17 58.8	11.7	60.6
	21	138 45.2	S10 02.7	130 17.2	6.3	S18 10.4	11.6	60.6
	22	153 45.3	S10 03.6	144 42.4	6.2	S18 21.8	11.4	60.5
	23	168 45.4	S10 04.5	159 07.6	6.2	S18 33.2	11.3	60.5
19	0	183 45.6	S10 05.4	173 32.7	6.1	S18 44.3	11.2	60.5
	1	198 45.7	S10 06.3	187 57.8	6.1	S18 55.4	11.0	60.5
	2	213 45.8	S10 07.2	202 22.9	6.0	S19 06.3	10.9	60.4
	3	228 45.9	S10 08.1	216 47.9	6.0	S19 17.1	10.8	60.4
	4	243 46.0	S10 09.0	231 12.8	5.9	S19 27.7	10.6	60.4
T	5	258 46.1	S10 09.9	245 37.7	5.9	S19 38.2	10.5	60.4
H								
U	6	273 46.2	S10 10.8	260 02.5	5.8	S19 48.6	10.4	60.3
R	7	288 46.3	S10 11.7	274 27.3	5.8	S19 58.8	10.2	60.3
S	8	303 46.5	S10 12.6	288 52.1	5.7	S20 08.9	10.1	60.3
D	9	318 46.6	S10 13.5	303 16.8	5.7	S20 18.8	9.9	60.3
A	10	333 46.7	S10 14.4	317 41.4	5.7	S20 28.6	9.8	60.2
Y	11	348 46.8	S10 15.3	332 06.0	5.6	S20 38.2	9.6	60.2
	12	3 46.9	S10 16.2	346 30.6	5.6	S20 47.7	9.5	60.2
	13	18 47.0	S10 17.1	0 55.2	5.5	S20 57.1	9.3	60.1
	14	33 47.1	S10 18.0	15 19.7	5.5	S21 06.3	9.2	60.1
	15	48 47.2	S10 18.9	29 44.1	5.5	S21 15.3	9.0	60.1
	16	63 47.3	S10 19.8	44 08.5	5.4	S21 24.2	8.9	60.0
	17	78 47.4	S10 20.7	58 32.9	5.4	S21 32.9	8.7	60.0
	18	93 47.5	S10 21.6	72 57.3	5.3	S21 41.5	8.6	60.0
	19	108 47.6	S10 22.5	87 21.6	5.3	S21 50.0	8.4	60.0
	20	123 47.8	S10 23.4	101 45.9	5.3	S21 58.2	8.3	59.9
	21	138 47.9	S10 24.3	116 10.1	5.3	S22 06.3	8.1	59.9
	22	153 48.0	S10 25.2	130 34.3	5.2	S22 14.3	8.0	59.9
	23	168 48.1	S10 26.1	144 58.5	5.2	S22 22.1	7.8	59.8
20	0	183 48.2	S10 27.0	159 22.7	5.2	S22 29.8	7.6	59.8
	1	198 48.3	S10 27.9	173 46.8	5.1	S22 37.2	7.5	59.8
	2	213 48.4	S10 28.8	188 10.9	5.1	S22 44.6	7.3	59.7
	3	228 48.5	S10 29.7	202 35.0	5.1	S22 51.7	7.2	59.7
	4	243 48.6	S10 30.6	216 59.1	5.1	S22 58.7	7.0	59.7
F	5	258 48.7	S10 31.5	231 23.2	5.1	S23 05.5	6.8	59.6
R								
I	6	273 48.8	S10 32.3	245 47.2	5.0	S23 12.2	6.7	59.6
D	7	288 48.9	S10 33.2	260 11.2	5.0	S23 18.7	6.5	59.6
A	8	303 49.0	S10 34.1	274 35.2	5.0	S23 25.1	6.3	59.5
Y	9	318 49.1	S10 35.0	288 59.2	5.0	S23 31.2	6.2	59.5
	10	333 49.2	S10 35.9	303 23.2	5.0	S23 37.3	6.0	59.5
	11	348 49.3	S10 36.8	317 47.2	5.0	S23 43.1	5.8	59.4
	12	3 49.4	S10 37.7	332 11.1	5.0	S23 48.8	5.7	59.4
	13	18 49.5	S10 38.6	346 35.1	5.0	S23 54.3	5.5	59.3
	14	33 49.6	S10 39.5	0 59.0	5.0	S23 59.6	5.3	59.3
	15	48 49.7	S10 40.4	15 23.0	5.0	S24 04.8	5.2	59.3
	16	63 49.8	S10 41.3	29 46.9	4.9	S24 09.8	5.0	59.2
	17	78 49.9	S10 42.2	44 10.9	5.0	S24 14.7	4.8	59.2
	18	93 50.0	S10 43.0	58 34.8	5.0	S24 19.3	4.7	59.2
	19	108 50.1	S10 43.9	72 58.8	5.0	S24 23.8	4.5	59.1
	20	123 50.2	S10 44.8	87 22.8	5.0	S24 28.2	4.3	59.1
	21	138 50.3	S10 45.7	101 46.7	5.0	S24 32.3	4.2	59.0
	22	153 50.4	S10 46.6	116 10.7	5.0	S24 36.3	4.0	59.0
	23	168 50.5	S10 47.5	130 34.7	5.0	S24 40.2	3.8	59.0
		S.D. 16.1	d 0.9	S.D. 16.6		16.4		16.2

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.2
Achernar	335 17.4	S57 05.3
Acrux	172 57.2	S63 15.4
Adhara	255 03.4	S29 00.5
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.9	N16 34.1
Alioth	166 10.9	N55 48.2
Alkaid	152 50.2	N49 10.2
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.4	S 1 10.9
Alphard	217 44.8	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.4	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.3	S69 04.9
Avior	234 13.5	S59 35.9
Bellatrix	278 19.4	N 6 22.6
Betelgeuse	270 48.6	N 7 24.8
Canopus	263 50.8	S52 42.4
Capella	280 17.1	N46 01.5
Castor	245 53.1	N31 49.4
Deneb	49 23.6	N45 23.4
Denebola	182 22.1	N14 24.6
Diphda	348 44.0	S17 49.5
Dubhe	193 37.8	N61 35.5
Elnath	277 57.8	N28 37.8
Eltanin	90 41.0	N51 29.4
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.7	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.6	S34 22.3
Kochab	137 21.4	N74 02.3
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.7	S69 49.9
Mirfak	308 23.4	N49 57.8
Nunki	75 44.1	S26 15.6
Peacock	53 00.8	S56 38.6
Polaris	314 56.3	N89 22.5
Pollux	243 13.6	N27 57.2
Procyon	244 47.6	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.4	N11 49.5
Rigel	281 00.7	S 8 10.0
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 41.9
Shaula	96 06.4	S37 07.5
Sirius	258 23.4	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.1	S43 32.7
Vega	80 31.3	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
21	0	29 58.1	216 45.1	N 4	20.6	239 02.6	N13	27.7	198 13.6	S 3	50.2	352 51.3	N11	48.3
	1	45 00.5	231 44.8	N 4	19.5	254 03.6	N13	27.2	213 15.6	S 3	50.4	7 54.0	N11	48.3
	2	60 03.0	246 44.4	N 4	18.4	269 04.7	N13	26.7	228 17.6	S 3	50.6	22 56.6	N11	48.2
	3	75 05.4	261 44.1	N 4	17.3	284 05.7	N13	26.3	243 19.6	S 3	50.8	37 59.3	N11	48.2
	4	90 07.9	276 43.7	N 4	16.2	299 06.8	N13	25.8	258 21.5	S 3	51.0	53 01.9	N11	48.1
S	5	105 10.4	291 43.4	N 4	15.1	314 07.9	N13	25.3	273 23.5	S 3	51.2	68 04.6	N11	48.0
A														
T	6	120 12.8	306 43.1	N 4	14.0	329 08.9	N13	24.8	288 25.5	S 3	51.4	83 07.2	N11	48.0
U	7	135 15.3	321 42.7	N 4	12.9	344 10.0	N13	24.4	303 27.5	S 3	51.6	98 09.9	N11	47.9
R	8	150 17.8	336 42.4	N 4	11.7	359 11.0	N13	23.9	318 29.4	S 3	51.8	113 12.5	N11	47.8
D	9	165 20.2	351 42.0	N 4	10.6	14 12.1	N13	23.4	333 31.4	S 3	52.1	128 15.2	N11	47.8
A	10	180 22.7	6 41.7	N 4	09.5	29 13.2	N13	22.9	348 33.4	S 3	52.3	143 17.8	N11	47.7
Y	11	195 25.2	21 41.3	N 4	08.4	44 14.2	N13	22.4	3 35.3	S 3	52.5	158 20.5	N11	47.6
	12	210 27.6	36 41.0	N 4	07.3	59 15.3	N13	22.0	18 37.3	S 3	52.7	173 23.2	N11	47.6
	13	225 30.1	51 40.7	N 4	06.2	74 16.3	N13	21.5	33 39.3	S 3	52.9	188 25.8	N11	47.5
	14	240 32.6	66 40.3	N 4	05.1	89 17.4	N13	21.0	48 41.3	S 3	53.1	203 28.5	N11	47.5
	15	255 35.0	81 40.0	N 4	04.0	104 18.4	N13	20.5	63 43.2	S 3	53.3	218 31.1	N11	47.4
	16	270 37.5	96 39.6	N 4	02.9	119 19.5	N13	20.1	78 45.2	S 3	53.5	233 33.8	N11	47.3
	17	285 39.9	111 39.3	N 4	01.8	134 20.6	N13	19.6	93 47.2	S 3	53.7	248 36.4	N11	47.3
	18	300 42.4	126 39.0	N 4	00.7	149 21.6	N13	19.1	108 49.2	S 3	53.9	263 39.1	N11	47.2
	19	315 44.9	141 38.6	N 3	59.6	164 22.7	N13	18.6	123 51.1	S 3	54.1	278 41.7	N11	47.1
	20	330 47.3	156 38.3	N 3	58.4	179 23.7	N13	18.1	138 53.1	S 3	54.3	293 44.4	N11	47.1
	21	345 49.8	171 37.9	N 3	57.3	194 24.8	N13	17.7	153 55.1	S 3	54.5	308 47.0	N11	47.0
	22	0 52.3	186 37.6	N 3	56.2	209 25.9	N13	17.2	168 57.1	S 3	54.7	323 49.7	N11	46.9
	23	15 54.7	201 37.2	N 3	55.1	224 26.9	N13	16.7	183 59.0	S 3	54.9	338 52.3	N11	46.9
22	0	30 57.2	216 36.9	N 3	54.0	239 28.0	N13	16.2	199 01.0	S 3	55.1	353 55.0	N11	46.8
	1	45 59.7	231 36.6	N 3	52.9	254 29.1	N13	15.8	214 03.0	S 3	55.3	8 57.7	N11	46.8
	2	61 02.1	246 36.2	N 3	51.8	269 30.1	N13	15.3	229 05.0	S 3	55.5	24 00.3	N11	46.7
	3	76 04.6	261 35.9	N 3	50.7	284 31.2	N13	14.8	244 06.9	S 3	55.7	39 03.0	N11	46.6
	4	91 07.1	276 35.5	N 3	49.6	299 32.2	N13	14.3	259 08.9	S 3	55.9	54 05.6	N11	46.6
S	5	106 09.5	291 35.2	N 3	48.4	314 33.3	N13	13.8	274 10.9	S 3	56.1	69 08.3	N11	46.5
U														
N	6	121 12.0	306 34.8	N 3	47.3	329 34.4	N13	13.4	289 12.9	S 3	56.3	84 10.9	N11	46.4
D	7	136 14.4	321 34.5	N 3	46.2	344 35.4	N13	12.9	304 14.8	S 3	56.5	99 13.6	N11	46.4
A	8	151 16.9	336 34.2	N 3	45.1	359 36.5	N13	12.4	319 16.8	S 3	56.7	114 16.2	N11	46.3
Y	9	166 19.4	351 33.8	N 3	44.0	14 37.6	N13	11.9	334 18.8	S 3	57.0	129 18.9	N11	46.2
	10	181 21.8	6 33.5	N 3	42.9	29 38.6	N13	11.5	349 20.7	S 3	57.2	144 21.6	N11	46.2
	11	196 24.3	21 33.1	N 3	41.8	44 39.7	N13	11.0	4 22.7	S 3	57.4	159 24.2	N11	46.1
	12	211 26.8	36 32.8	N 3	40.6	59 40.8	N13	10.5	19 24.7	S 3	57.6	174 26.9	N11	46.1
	13	226 29.2	51 32.4	N 3	39.5	74 41.8	N13	10.0	34 26.7	S 3	57.8	189 29.5	N11	46.0
	14	241 31.7	66 32.1	N 3	38.4	89 42.9	N13	09.5	49 28.6	S 3	58.0	204 32.2	N11	45.9
	15	256 34.2	81 31.8	N 3	37.3	104 44.0	N13	09.1	64 30.6	S 3	58.2	219 34.8	N11	45.9
	16	271 36.6	96 31.4	N 3	36.2	119 45.0	N13	08.6	79 32.6	S 3	58.4	234 37.5	N11	45.8
	17	286 39.1	111 31.1	N 3	35.1	134 46.1	N13	08.1	94 34.6	S 3	58.6	249 40.1	N11	45.7
	18	301 41.5	126 30.7	N 3	33.9	149 47.2	N13	07.6	109 36.5	S 3	58.8	264 42.8	N11	45.7
	19	316 44.0	141 30.4	N 3	32.8	164 48.2	N13	07.1	124 38.5	S 3	59.0	279 45.5	N11	45.6
	20	331 46.5	156 30.1	N 3	31.7	179 49.3	N13	06.7	139 40.5	S 3	59.2	294 48.1	N11	45.5
	21	346 48.9	171 29.7	N 3	30.6	194 50.4	N13	06.2	154 42.5	S 3	59.4	309 50.8	N11	45.5
	22	1 51.4	186 29.4	N 3	29.5	209 51.4	N13	05.7	169 44.4	S 3	59.6	324 53.4	N11	45.4
	23	16 53.9	201 29.0	N 3	28.4	224 52.5	N13	05.2	184 46.4	S 3	59.8	339 56.1	N11	45.4
23	0	31 56.3	216 28.7	N 3	27.2	239 53.6	N13	04.8	199 48.4	S 4	00.0	354 58.7	N11	45.3
	1	46 58.8	231 28.3	N 3	26.1	254 54.6	N13	04.3	214 50.4	S 4	00.2	10 01.4	N11	45.2
	2	62 01.3	246 28.0	N 3	25.0	269 55.7	N13	03.8	229 52.3	S 4	00.4	25 04.0	N11	45.2
	3	77 03.7	261 27.7	N 3	23.9	284 56.8	N13	03.3	244 54.3	S 4	00.6	40 06.7	N11	45.1
	4	92 06.2	276 27.3	N 3	22.8	299 57.8	N13	02.8	259 56.3	S 4	00.8	55 09.4	N11	45.0
M	5	107 08.7	291 27.0	N 3	21.6	314 58.9	N13	02.4	274 58.3	S 4	01.0	70 12.0	N11	45.0
O														
N	6	122 11.1	306 26.6	N 3	20.5	329 60.0	N13	01.9	290 00.2	S 4	01.2	85 14.7	N11	44.9
D	7	137 13.6	321 26.3	N 3	19.4	345 01.0	N13	01.4	305 02.2	S 4	01.4	100 17.3	N11	44.8
A	8	152 16.0	336 26.0	N 3	18.3	0 02.1	N13	00.9	320 04.2	S 4	01.6	115 20.0	N11	44.8
Y	9	167 18.5	351 25.6	N 3	17.2	15 03.2	N13	00.4	335 06.2	S 4	01.8	130 22.6	N11	44.7
	10	182 21.0	6 25.3	N 3	16.0	30 04.2	N12	60.0	350 08.1	S 4	02.0	145 25.3	N11	44.7
	11	197 23.4	21 24.9	N 3	14.9	45 05.3	N12	59.5	5 10.1	S 4	02.2	160 27.9	N11	44.6
	12	212 25.9	36 24.6	N 3	13.8	60 06.4	N12	59.0	20 12.1	S 4	02.5	175 30.6	N11	44.5
	13	227 28.4	51 24.2	N 3	12.7	75 07.5	N12	58.5	35 14.1	S 4	02.7	190 33.3	N11	44.5
	14	242 30.8	66 23.9	N 3	11.6	90 08.5	N12	58.0	50 16.0	S 4	02.9	205 35.9	N11	44.4
	15	257 33.3	81 23.6	N 3	10.4	105 09.6	N12	57.6	65 18.0	S 4	03.1	220 38.6	N11	44.3
	16	272 35.8	96 23.2	N 3	09.3	120 10.7	N12	57.1	80 20.0	S 4	03.3	235 41.2	N11	44.3
	17	287 38.2	111 22.9	N 3	08.2	135 11.7	N12	56.6	95 22.0	S 4	03.5	250 43.9	N11	44.2
	18	302 40.7	126 22.5	N 3	07.1	150 12.8	N12	56.1	110 23.9	S 4	03.7	265 46.5	N11	44.1
	19	317 43.2	141 22.2	N 3	05.9	165 13.9	N12	55.6	125 25.9	S 4	03.9	280 49.2	N11	44.1
	20	332 45.6	156 21.8	N 3	04.8	180 15.0	N12	55.2	140 27.9	S 4	04.1	295 51.9	N11	44.0
	21	347 48.1	171 21.5	N 3	03.7	195 16.0	N12	54.7	155 29.9	S 4	04.3	310 54.5	N11	44.0
	22	2 50.5	186 21.2	N 3	02.6	210 17.1	N12	54.2	170 31.9	S 4	04.5	325 57.2	N11	43.9
	23	17 53.0	201 20.8	N 3	01.5	225 18.2	N12	53.7	185 33.8	S 4	04.7	340 59.8	N11	43.8
			v -0.3	d	1.1	v 1.1	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T		SUN			MOON					
d	h	GHA ° '	Dec ° '		GHA ° '	v '	Dec ° '	d '	HP '
21	0	183 50.6	S10 48.4		144 58.7	5.0	S24 43.8	3.7	58.9
	1	198 50.7	S10 49.3		159 22.8	5.0	S24 47.3	3.5	58.9
	2	213 50.8	S10 50.2		173 46.8	5.0	S24 50.7	3.3	58.9
	3	228 50.9	S10 51.0		188 10.9	5.1	S24 53.8	3.2	58.8
	4	243 51.0	S10 51.9		202 34.9	5.1	S24 56.8	3.0	58.8
S	5	258 51.1	S10 52.8		216 59.1	5.1	S24 59.6	2.8	58.7
A									
T	6	273 51.2	S10 53.7		231 23.2	5.1	S25 02.3	2.7	58.7
U	7	288 51.3	S10 54.6		245 47.3	5.2	S25 04.7	2.5	58.7
R	8	303 51.4	S10 55.5		260 11.5	5.2	S25 07.1	2.3	58.6
D	9	318 51.5	S10 56.4		274 35.8	5.2	S25 09.2	2.1	58.6
A	10	333 51.6	S10 57.2		289 00.0	5.3	S25 11.2	2.0	58.5
Y	11	348 51.7	S10 58.1		303 24.3	5.3	S25 13.0	1.8	58.5
	12	3 51.8	S10 59.0		317 48.6	5.3	S25 14.7	1.6	58.5
	13	18 51.9	S10 59.9		332 13.0	5.4	S25 16.1	1.5	58.4
	14	33 52.0	S11 00.8		346 37.4	5.4	S25 17.5	1.3	58.4
	15	48 52.1	S11 01.7		1 01.8	5.4	S25 18.6	1.2	58.4
	16	63 52.2	S11 02.5		15 26.3	5.5	S25 19.6	1.0	58.3
	17	78 52.3	S11 03.4		29 50.8	5.5	S25 20.4	0.8	58.3
	18	93 52.4	S11 04.3		44 15.4	5.6	S25 21.1	0.7	58.2
	19	108 52.5	S11 05.2		58 40.0	5.6	S25 21.6	0.5	58.2
	20	123 52.6	S11 06.1		73 04.7	5.7	S25 21.9	0.3	58.2
	21	138 52.7	S11 07.0		87 29.4	5.7	S25 22.1	0.2	58.1
	22	153 52.7	S11 07.8		101 54.2	5.8	S25 22.1	0.0	58.1
	23	168 52.8	S11 08.7		116 19.0	5.8	S25 22.0	0.1	58.0
22	0	183 52.9	S11 09.6		130 43.9	5.9	S25 21.7	0.3	58.0
	1	198 53.0	S11 10.5		145 08.9	5.9	S25 21.2	0.5	58.0
	2	213 53.1	S11 11.4		159 33.9	6.0	S25 20.6	0.6	57.9
	3	228 53.2	S11 12.2		173 59.0	6.1	S25 19.8	0.8	57.9
	4	243 53.3	S11 13.1		188 24.1	6.1	S25 18.9	0.9	57.8
S	5	258 53.4	S11 14.0		202 49.3	6.2	S25 17.8	1.1	57.8
U									
N	6	273 53.5	S11 14.9		217 14.5	6.3	S25 16.6	1.2	57.8
D	7	288 53.6	S11 15.8		231 39.9	6.3	S25 15.2	1.4	57.7
A	8	303 53.7	S11 16.6		246 05.3	6.4	S25 13.6	1.5	57.7
Y	9	318 53.8	S11 17.5		260 30.7	6.5	S25 11.9	1.7	57.6
	10	333 53.8	S11 18.4		274 56.3	6.5	S25 10.1	1.8	57.6
	11	348 53.9	S11 19.3		289 21.9	6.6	S25 08.1	2.0	57.6
	12	3 54.0	S11 20.2		303 47.6	6.7	S25 05.9	2.1	57.5
	13	18 54.1	S11 21.0		318 13.3	6.8	S25 03.7	2.3	57.5
	14	33 54.2	S11 21.9		332 39.2	6.8	S25 01.2	2.4	57.4
	15	48 54.3	S11 22.8		347 05.1	6.9	S24 58.6	2.6	57.4
	16	63 54.4	S11 23.7		1 31.1	7.0	S24 55.9	2.7	57.4
	17	78 54.5	S11 24.5		15 57.1	7.1	S24 53.0	2.9	57.3
	18	93 54.5	S11 25.4		30 23.3	7.1	S24 50.0	3.0	57.3
	19	108 54.6	S11 26.3		44 49.5	7.2	S24 46.8	3.2	57.3
	20	123 54.7	S11 27.2		59 15.8	7.3	S24 43.5	3.3	57.2
	21	138 54.8	S11 28.0		73 42.2	7.4	S24 40.1	3.4	57.2
	22	153 54.9	S11 28.9		88 08.7	7.5	S24 36.5	3.6	57.1
	23	168 55.0	S11 29.8		102 35.3	7.6	S24 32.8	3.7	57.1
23	0	183 55.1	S11 30.7		117 01.9	7.7	S24 28.9	3.9	57.1
	1	198 55.1	S11 31.5		131 28.7	7.7	S24 24.9	4.0	57.0
	2	213 55.2	S11 32.4		145 55.5	7.8	S24 20.8	4.1	57.0
	3	228 55.3	S11 33.3		160 22.4	7.9	S24 16.6	4.3	56.9
	4	243 55.4	S11 34.2		174 49.4	8.0	S24 12.2	4.4	56.9
M	5	258 55.5	S11 35.0		189 16.5	8.1	S24 07.7	4.5	56.9
O									
N	6	273 55.6	S11 35.9		203 43.7	8.2	S24 03.0	4.6	56.8
D	7	288 55.7	S11 36.8		218 11.0	8.3	S23 58.2	4.8	56.8
A	8	303 55.7	S11 37.7		232 38.3	8.4	S23 53.3	4.9	56.8
Y	9	318 55.8	S11 38.5		247 05.8	8.5	S23 48.3	5.0	56.7
	10	333 55.9	S11 39.4		261 33.3	8.6	S23 43.2	5.2	56.7
	11	348 56.0	S11 40.3		276 01.0	8.6	S23 37.9	5.3	56.7
	12	3 56.1	S11 41.1		290 28.7	8.7	S23 32.5	5.4	56.6
	13	18 56.1	S11 42.0		304 56.6	8.8	S23 27.0	5.5	56.6
	14	33 56.2	S11 42.9		319 24.5	8.9	S23 21.3	5.6	56.5
	15	48 56.3	S11 43.7		333 52.5	9.0	S23 15.6	5.8	56.5
	16	63 56.4	S11 44.6		348 20.6	9.1	S23 09.7	5.9	56.5
	17	78 56.5	S11 45.5		2 48.8	9.2	S23 03.7	6.0	56.4
	18	93 56.5	S11 46.4		17 17.1	9.3	S22 57.6	6.1	56.4
	19	108 56.6	S11 47.2		31 45.5	9.4	S22 51.4	6.2	56.4
	20	123 56.7	S11 48.1		46 14.0	9.5	S22 45.0	6.3	56.3
	21	138 56.8	S11 49.0		60 42.6	9.6	S22 38.6	6.4	56.3
	22	153 56.9	S11 49.8		75 11.3	9.7	S22 32.0	6.6	56.3
	23	168 56.9	S11 50.7		89 40.1	9.8	S22 25.4	6.7	56.2
		S.D. 16.1	d 0.9		S.D. 15.9		15.7	15.4	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.2
Achernar	335 17.4	S57 05.3
Acrux	172 57.2	S63 15.4
Adhara	255 03.3	S29 00.5
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.8	N16 34.1
Alioth	166 10.9	N55 48.1
Alkaid	152 50.1	N49 10.1
Al Na-ir	27 28.8	S46 49.3
Alnilam	275 34.4	S 1 10.9
Alphard	217 44.8	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.4	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.3	S69 04.9
Avior	234 13.4	S59 35.9
Bellatrix	278 19.4	N 6 22.6
Betelgeuse	270 48.6	N 7 24.8
Canopus	263 50.8	S52 42.4
Capella	280 17.0	N46 01.5
Castor	245 53.1	N31 49.4
Deneb	49 23.6	N45 23.4
Denebola	182 22.1	N14 24.6
Diphda	348 44.0	S17 49.5
Dubhe	193 37.8	N61 35.4
Elnath	277 57.8	N28 37.8
Eltanin	90 41.1	N51 29.4
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.7	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.4	N74 02.2
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.7	S69 49.9
Mirfak	308 23.4	N49 57.8
Nunki	75 44.1	S26 15.6
Peacock	53 00.9	S56 38.6
Polaris	314 55.7	N89 22.6
Pollux	243 13.5	N27 57.2
Procyon	244 47.6	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.3	N11 49.5
Rigel	281 00.7	S 8 10.0
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.4	S37 07.5
Sirius	258 23.4	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.1	S43 32.7
Vega	80 31.3	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
24	0	32 55.5	216 20.5	N 3	00.3	240 19.2	N12	53.2	200 35.8	S 4	04.9	356 02.5	N11	43.8
	1	47 57.9	231 20.1	N 2	59.2	255 20.3	N12	52.8	215 37.8	S 4	05.1	11 05.1	N11	43.7
	2	63 00.4	246 19.8	N 2	58.1	270 21.4	N12	52.3	230 39.8	S 4	05.3	26 07.8	N11	43.6
	3	78 02.9	261 19.5	N 2	57.0	285 22.5	N12	51.8	245 41.7	S 4	05.5	41 10.4	N11	43.6
	4	93 05.3	276 19.1	N 2	55.8	300 23.5	N12	51.3	260 43.7	S 4	05.7	56 13.1	N11	43.5
T	5	108 07.8	291 18.8	N 2	54.7	315 24.6	N12	50.8	275 45.7	S 4	05.9	71 15.8	N11	43.4
U														
E	6	123 10.3	306 18.4	N 2	53.6	330 25.7	N12	50.4	290 47.7	S 4	06.1	86 18.4	N11	43.4
S	7	138 12.7	321 18.1	N 2	52.5	345 26.8	N12	49.9	305 49.6	S 4	06.3	101 21.1	N11	43.3
D	8	153 15.2	336 17.7	N 2	51.3	0 27.8	N12	49.4	320 51.6	S 4	06.5	116 23.7	N11	43.3
A	9	168 17.7	351 17.4	N 2	50.2	15 28.9	N12	48.9	335 53.6	S 4	06.7	131 26.4	N11	43.2
Y	10	183 20.1	6 17.1	N 2	49.1	30 30.0	N12	48.4	350 55.6	S 4	06.9	146 29.0	N11	43.1
	11	198 22.6	21 16.7	N 2	47.9	45 31.1	N12	48.0	5 57.5	S 4	07.1	161 31.7	N11	43.1
	12	213 25.0	36 16.4	N 2	46.8	60 32.1	N12	47.5	20 59.5	S 4	07.3	176 34.4	N11	43.0
	13	228 27.5	51 16.0	N 2	45.7	75 33.2	N12	47.0	36 01.5	S 4	07.5	191 37.0	N11	42.9
	14	243 30.0	66 15.7	N 2	44.6	90 34.3	N12	46.5	51 03.5	S 4	07.7	206 39.7	N11	42.9
	15	258 32.4	81 15.4	N 2	43.4	105 35.4	N12	46.0	66 05.4	S 4	07.9	221 42.3	N11	42.8
	16	273 34.9	96 15.0	N 2	42.3	120 36.5	N12	45.6	81 07.4	S 4	08.1	236 45.0	N11	42.7
	17	288 37.4	111 14.7	N 2	41.2	135 37.5	N12	45.1	96 09.4	S 4	08.3	251 47.6	N11	42.7
	18	303 39.8	126 14.3	N 2	40.1	150 38.6	N12	44.6	111 11.4	S 4	08.5	266 50.3	N11	42.6
	19	318 42.3	141 14.0	N 2	38.9	165 39.7	N12	44.1	126 13.4	S 4	08.7	281 53.0	N11	42.5
	20	333 44.8	156 13.6	N 2	37.8	180 40.8	N12	43.6	141 15.3	S 4	08.9	296 55.6	N11	42.5
	21	348 47.2	171 13.3	N 2	36.7	195 41.8	N12	43.1	156 17.3	S 4	09.1	311 58.3	N11	42.4
	22	3 49.7	186 13.0	N 2	35.5	210 42.9	N12	42.7	171 19.3	S 4	09.3	327 00.9	N11	42.4
	23	18 52.1	201 12.6	N 2	34.4	225 44.0	N12	42.2	186 21.3	S 4	09.5	342 03.6	N11	42.3
25	0	33 54.6	216 12.3	N 2	33.3	240 45.1	N12	41.7	201 23.2	S 4	09.7	357 06.2	N11	42.2
	1	48 57.1	231 11.9	N 2	32.1	255 46.2	N12	41.2	216 25.2	S 4	09.9	12 08.9	N11	42.2
	2	63 59.5	246 11.6	N 2	31.0	270 47.2	N12	40.7	231 27.2	S 4	10.2	27 11.6	N11	42.1
	3	79 02.0	261 11.3	N 2	29.9	285 48.3	N12	40.3	246 29.2	S 4	10.4	42 14.2	N11	42.0
	4	94 04.5	276 10.9	N 2	28.8	300 49.4	N12	39.8	261 31.1	S 4	10.6	57 16.9	N11	42.0
W	5	109 06.9	291 10.6	N 2	27.6	315 50.5	N12	39.3	276 33.1	S 4	10.8	72 19.5	N11	41.9
E														
D	6	124 09.4	306 10.2	N 2	26.5	330 51.6	N12	38.8	291 35.1	S 4	11.0	87 22.2	N11	41.8
N	7	139 11.9	321 09.9	N 2	25.4	345 52.6	N12	38.3	306 37.1	S 4	11.2	102 24.8	N11	41.8
E	8	154 14.3	336 09.5	N 2	24.2	0 53.7	N12	37.8	321 39.1	S 4	11.4	117 27.5	N11	41.7
S	9	169 16.8	351 09.2	N 2	23.1	15 54.8	N12	37.4	336 41.0	S 4	11.6	132 30.2	N11	41.7
D	10	184 19.3	6 08.9	N 2	22.0	30 55.9	N12	36.9	351 43.0	S 4	11.8	147 32.8	N11	41.6
A	11	199 21.7	21 08.5	N 2	20.8	45 57.0	N12	36.4	6 45.0	S 4	12.0	162 35.5	N11	41.5
Y														
	12	214 24.2	36 08.2	N 2	19.7	60 58.0	N12	35.9	21 47.0	S 4	12.2	177 38.1	N11	41.5
	13	229 26.6	51 07.8	N 2	18.6	75 59.1	N12	35.4	36 48.9	S 4	12.4	192 40.8	N11	41.4
	14	244 29.1	66 07.5	N 2	17.4	91 00.2	N12	35.0	51 50.9	S 4	12.6	207 43.4	N11	41.3
	15	259 31.6	81 07.1	N 2	16.3	106 01.3	N12	34.5	66 52.9	S 4	12.8	222 46.1	N11	41.3
	16	274 34.0	96 06.8	N 2	15.2	121 02.4	N12	34.0	81 54.9	S 4	13.0	237 48.8	N11	41.2
	17	289 36.5	111 06.5	N 2	14.0	136 03.5	N12	33.5	96 56.9	S 4	13.2	252 51.4	N11	41.1
	18	304 39.0	126 06.1	N 2	12.9	151 04.5	N12	33.0	111 58.8	S 4	13.4	267 54.1	N11	41.1
	19	319 41.4	141 05.8	N 2	11.8	166 05.6	N12	32.5	127 00.8	S 4	13.6	282 56.7	N11	41.0
	20	334 43.9	156 05.4	N 2	10.6	181 06.7	N12	32.1	142 02.8	S 4	13.8	297 59.4	N11	41.0
	21	349 46.4	171 05.1	N 2	09.5	196 07.8	N12	31.6	157 04.8	S 4	14.0	313 02.0	N11	40.9
	22	4 48.8	186 04.7	N 2	08.4	211 08.9	N12	31.1	172 06.7	S 4	14.2	328 04.7	N11	40.8
	23	19 51.3	201 04.4	N 2	07.2	226 10.0	N12	30.6	187 08.7	S 4	14.4	343 07.4	N11	40.8
26	0	34 53.8	216 04.1	N 2	06.1	241 11.0	N12	30.1	202 10.7	S 4	14.6	358 10.0	N11	40.7
	1	49 56.2	231 03.7	N 2	05.0	256 12.1	N12	29.7	217 12.7	S 4	14.8	13 12.7	N11	40.6
	2	64 58.7	246 03.4	N 2	03.8	271 13.2	N12	29.2	232 14.7	S 4	15.0	28 15.3	N11	40.6
	3	80 01.1	261 03.0	N 2	02.7	286 14.3	N12	28.7	247 16.6	S 4	15.2	43 18.0	N11	40.5
	4	95 03.6	276 02.7	N 2	01.5	301 15.4	N12	28.2	262 18.6	S 4	15.4	58 20.7	N11	40.4
T	5	110 06.1	291 02.4	N 2	00.4	316 16.5	N12	27.7	277 20.6	S 4	15.6	73 23.3	N11	40.4
H														
U	6	125 08.5	306 02.0	N 1	59.3	331 17.6	N12	27.2	292 22.6	S 4	15.8	88 26.0	N11	40.3
R	7	140 11.0	321 01.7	N 1	58.1	346 18.6	N12	26.8	307 24.5	S 4	16.0	103 28.6	N11	40.3
S	8	155 13.5	336 01.3	N 1	57.0	1 19.7	N12	26.3	322 26.5	S 4	16.2	118 31.3	N11	40.2
D	9	170 15.9	351 01.0	N 1	55.9	16 20.8	N12	25.8	337 28.5	S 4	16.4	133 33.9	N11	40.1
A	10	185 18.4	6 00.6	N 1	54.7	31 21.9	N12	25.3	352 30.5	S 4	16.6	148 36.6	N11	40.1
Y	11	200 20.9	21 00.3	N 1	53.6	46 23.0	N12	24.8	7 32.5	S 4	16.8	163 39.3	N11	40.0
	12	215 23.3	35 60.0	N 1	52.4	61 24.1	N12	24.3	22 34.4	S 4	17.0	178 41.9	N11	39.9
	13	230 25.8	50 59.6	N 1	51.3	76 25.2	N12	23.9	37 36.4	S 4	17.2	193 44.6	N11	39.9
	14	245 28.3	65 59.3	N 1	50.2	91 26.3	N12	23.4	52 38.4	S 4	17.4	208 47.2	N11	39.8
	15	260 30.7	80 58.9	N 1	49.0	106 27.3	N12	22.9	67 40.4	S 4	17.6	223 49.9	N11	39.7
	16	275 33.2	95 58.6	N 1	47.9	121 28.4	N12	22.4	82 42.4	S 4	17.8	238 52.5	N11	39.7
	17	290 35.6	110 58.2	N 1	46.8	136 29.5	N12	21.9	97 44.3	S 4	18.0	253 55.2	N11	39.6
	18	305 38.1	125 57.9	N 1	45.6	151 30.6	N12	21.4	112 46.3	S 4	18.2	268 57.9	N11	39.5
	19	320 40.6	140 57.6	N 1	44.5	166 31.7	N12	21.0	127 48.3	S 4	18.4	284 00.5	N11	39.5
	20	335 43.0	155 57.2	N 1	43.3	181 32.8	N12	20.5	142 50.3	S 4	18.6	299 03.2	N11	39.4
	21	350 45.5	170 56.9	N 1	42.2	196 33.9	N12	20.0	157 52.2	S 4	18.8	314 05.8	N11	39.4
	22	5 48.0	185 56.5	N 1	41.1	211 35.0	N12	19.5	172 54.2	S 4	19.0	329 08.5	N11	39.3
	23	20 50.4	200 56.2	N 1	39.9	226 36.1	N12	19.0	187 56.2	S 4	19.2	344 11.2	N11	39.2
			v -0.3	d	1.1	v 1.1	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T		SUN		MOON					
d	h	GHA	Dec	GHA	v	Dec	d	HP
		° '	° '	° '	'	° '	'	'
24	0	183 57.0	S11 51.6	104 09.0	9.9	S22 18.6	6.8	56.2
	1	198 57.1	S11 52.4	118 38.0	10.0	S22 11.7	6.9	56.2
	2	213 57.2	S11 53.3	133 07.0	10.1	S22 04.7	7.0	56.1
	3	228 57.3	S11 54.2	147 36.2	10.2	S21 57.7	7.1	56.1
	4	243 57.3	S11 55.0	162 05.5	10.3	S21 50.5	7.2	56.1
T	5	258 57.4	S11 55.9	176 34.8	10.4	S21 43.2	7.3	56.0
U								
E	6	273 57.5	S11 56.8	191 04.3	10.5	S21 35.8	7.4	56.0
S	7	288 57.6	S11 57.6	205 33.8	10.6	S21 28.3	7.5	56.0
D	8	303 57.6	S11 58.5	220 03.5	10.6	S21 20.7	7.6	55.9
A	9	318 57.7	S11 59.3	234 33.2	10.7	S21 13.0	7.7	55.9
Y	10	333 57.8	S12 00.2	249 03.0	10.8	S21 05.2	7.8	55.9
	11	348 57.9	S12 01.1	263 33.0	10.9	S20 57.3	7.9	55.8
	12	3 57.9	S12 01.9	278 03.0	11.0	S20 49.4	8.0	55.8
	13	18 58.0	S12 02.8	292 33.1	11.1	S20 41.3	8.1	55.8
	14	33 58.1	S12 03.7	307 03.3	11.2	S20 33.1	8.2	55.8
	15	48 58.2	S12 04.5	321 33.6	11.3	S20 24.9	8.2	55.7
	16	63 58.2	S12 05.4	336 04.0	11.4	S20 16.6	8.3	55.7
	17	78 58.3	S12 06.2	350 34.5	11.5	S20 08.1	8.4	55.7
	18	93 58.4	S12 07.1	5 05.1	11.6	S19 59.6	8.5	55.6
	19	108 58.5	S12 08.0	19 35.8	11.7	S19 51.0	8.6	55.6
	20	123 58.5	S12 08.8	34 06.5	11.8	S19 42.4	8.7	55.6
	21	138 58.6	S12 09.7	48 37.4	11.9	S19 33.6	8.8	55.5
	22	153 58.7	S12 10.5	63 08.3	11.9	S19 24.7	8.8	55.5
	23	168 58.7	S12 11.4	77 39.4	12.0	S19 15.8	8.9	55.5
25	0	183 58.8	S12 12.3	92 10.5	12.1	S19 06.8	9.0	55.5
	1	198 58.9	S12 13.1	106 41.7	12.2	S18 57.7	9.1	55.4
	2	213 59.0	S12 14.0	121 13.0	12.3	S18 48.6	9.2	55.4
	3	228 59.0	S12 14.8	135 44.4	12.4	S18 39.3	9.2	55.4
	4	243 59.1	S12 15.7	150 15.9	12.5	S18 30.0	9.3	55.4
W	5	258 59.2	S12 16.6	164 47.4	12.6	S18 20.6	9.4	55.3
E								
D	6	273 59.2	S12 17.4	179 19.1	12.6	S18 11.1	9.5	55.3
N	7	288 59.3	S12 18.3	193 50.8	12.7	S18 01.6	9.5	55.3
E	8	303 59.4	S12 19.1	208 22.6	12.8	S17 52.0	9.6	55.2
S	9	318 59.4	S12 20.0	222 54.5	12.9	S17 42.3	9.7	55.2
D	10	333 59.5	S12 20.8	237 26.5	13.0	S17 32.6	9.8	55.2
A	11	348 59.6	S12 21.7	251 58.6	13.1	S17 22.7	9.8	55.2
Y								
	12	3 59.6	S12 22.5	266 30.7	13.1	S17 12.8	9.9	55.1
	13	18 59.7	S12 23.4	281 03.0	13.2	S17 02.9	10.0	55.1
	14	33 59.8	S12 24.3	295 35.3	13.3	S16 52.9	10.0	55.1
	15	48 59.8	S12 25.1	310 07.7	13.4	S16 42.8	10.1	55.1
	16	63 59.9	S12 26.0	324 40.1	13.5	S16 32.6	10.1	55.1
	17	78 60.0	S12 26.8	339 12.7	13.5	S16 22.4	10.2	55.0
	18	94 00.0	S12 27.7	353 45.3	13.6	S16 12.2	10.3	55.0
	19	109 00.1	S12 28.5	8 18.0	13.7	S16 01.8	10.3	55.0
	20	124 00.2	S12 29.4	22 50.8	13.8	S15 51.4	10.4	55.0
	21	139 00.2	S12 30.2	37 23.6	13.8	S15 41.0	10.5	54.9
	22	154 00.3	S12 31.1	51 56.5	13.9	S15 30.5	10.5	54.9
	23	169 00.4	S12 31.9	66 29.5	14.0	S15 19.9	10.6	54.9
26	0	184 00.4	S12 32.8	81 02.6	14.1	S15 09.3	10.6	54.9
	1	199 00.5	S12 33.6	95 35.7	14.1	S14 58.6	10.7	54.9
	2	214 00.5	S12 34.5	110 08.9	14.2	S14 47.9	10.7	54.8
	3	229 00.6	S12 35.3	124 42.2	14.3	S14 37.1	10.8	54.8
	4	244 00.7	S12 36.2	139 15.6	14.3	S14 26.2	10.8	54.8
T	5	259 00.7	S12 37.0	153 49.0	14.4	S14 15.3	10.9	54.8
H								
U	6	274 00.8	S12 37.9	168 22.4	14.5	S14 04.4	10.9	54.8
R	7	289 00.9	S12 38.7	182 56.0	14.5	S13 53.4	11.0	54.7
S	8	304 00.9	S12 39.6	197 29.6	14.6	S13 42.4	11.0	54.7
D	9	319 01.0	S12 40.4	212 03.3	14.7	S13 31.3	11.1	54.7
A	10	334 01.0	S12 41.3	226 37.0	14.7	S13 20.1	11.1	54.7
Y	11	349 01.1	S12 42.1	241 10.8	14.8	S13 09.0	11.2	54.7
	12	4 01.2	S12 43.0	255 44.7	14.9	S12 57.7	11.2	54.6
	13	19 01.2	S12 43.8	270 18.6	14.9	S12 46.5	11.3	54.6
	14	34 01.3	S12 44.7	284 52.6	15.0	S12 35.1	11.3	54.6
	15	49 01.3	S12 45.5	299 26.6	15.0	S12 23.8	11.4	54.6
	16	64 01.4	S12 46.3	314 00.7	15.1	S12 12.4	11.4	54.6
	17	79 01.5	S12 47.2	328 34.9	15.2	S12 00.9	11.4	54.6
	18	94 01.5	S12 48.0	343 09.1	15.2	S11 49.4	11.5	54.5
	19	109 01.6	S12 48.9	357 43.3	15.3	S11 37.9	11.5	54.5
	20	124 01.6	S12 49.7	12 17.6	15.3	S11 26.3	11.6	54.5
	21	139 01.7	S12 50.6	26 52.0	15.4	S11 14.7	11.6	54.5
	22	154 01.7	S12 51.4	41 26.4	15.4	S11 03.1	11.6	54.5
	23	169 01.8	S12 52.3	56 00.9	15.5	S10 51.4	11.7	54.5
		S.D. 16.1	d 0.9	S.D. 15.2		15.0	14.9	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.0	S40 11.2
Achernar	335 17.4	S57 05.3
Acrux	172 57.2	S63 15.4
Adhara	255 03.3	S29 00.5
Albireo	67 01.6	N28 01.5
Aldebaran	290 35.8	N16 34.1
Alioth	166 10.9	N55 48.1
Alkaid	152 50.1	N49 10.1
Al Na-ir	27 28.9	S46 49.3
Alnilam	275 34.4	S 1 10.9
Alphard	217 44.8	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.4	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.3	S69 04.9
Avior	234 13.4	S59 35.9
Bellatrix	278 19.4	N 6 22.6
Betelgeuse	270 48.6	N 7 24.8
Canopus	263 50.7	S52 42.4
Capella	280 17.0	N46 01.5
Castor	245 53.1	N31 49.4
Deneb	49 23.6	N45 23.4
Denebola	182 22.1	N14 24.6
Diphda	348 43.9	S17 49.5
Dubhe	193 37.8	N61 35.4
Elnath	277 57.8	N28 37.8
Eltanin	90 41.1	N51 29.4
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.7	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.4	N74 02.2
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.6	S69 49.9
Mirfak	308 23.4	N49 57.8
Nunki	75 44.1	S26 15.6
Peacock	53 00.9	S56 38.6
Polaris	314 55.3	N89 22.6
Pollux	243 13.5	N27 57.2
Procyon	244 47.5	N 5 09.1
Rasalhague	95 55.9	N12 32.6
Regulus	207 31.3	N11 49.5
Rigel	281 00.7	S 8 10.0
Rigil Kent	139 36.8	S60 57.3
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.4	S16 45.2
Spica	158 19.4	S11 18.6
Suhail	222 44.1	S43 32.7
Vega	80 31.3	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
27	0	35 52.9	215 55.8	N 1	38.8	241 37.1	N12	18.6	202 58.2	S 4	19.4	359 13.8	N11	39.2
	1	50 55.4	230 55.5	N 1	37.6	256 38.2	N12	18.1	218 00.2	S 4	19.6	14 16.5	N11	39.1
	2	65 57.8	245 55.2	N 1	36.5	271 39.3	N12	17.6	233 02.1	S 4	19.8	29 19.1	N11	39.0
	3	81 00.3	260 54.8	N 1	35.4	286 40.4	N12	17.1	248 04.1	S 4	20.0	44 21.8	N11	39.0
	4	96 02.7	275 54.5	N 1	34.2	301 41.5	N12	16.6	263 06.1	S 4	20.2	59 24.4	N11	38.9
F	5	111 05.2	290 54.1	N 1	33.1	316 42.6	N12	16.1	278 08.1	S 4	20.4	74 27.1	N11	38.8
R														
I	6	126 07.7	305 53.8	N 1	31.9	331 43.7	N12	15.6	293 10.1	S 4	20.6	89 29.8	N11	38.8
D	7	141 10.1	320 53.4	N 1	30.8	346 44.8	N12	15.2	308 12.0	S 4	20.8	104 32.4	N11	38.7
A	8	156 12.6	335 53.1	N 1	29.6	1 45.9	N12	14.7	323 14.0	S 4	21.0	119 35.1	N11	38.7
Y	9	171 15.1	350 52.7	N 1	28.5	16 47.0	N12	14.2	338 16.0	S 4	21.2	134 37.7	N11	38.6
	10	186 17.5	5 52.4	N 1	27.4	31 48.1	N12	13.7	353 18.0	S 4	21.4	149 40.4	N11	38.5
	11	201 20.0	20 52.1	N 1	26.2	46 49.2	N12	13.2	8 20.0	S 4	21.6	164 43.1	N11	38.5
	12	216 22.5	35 51.7	N 1	25.1	61 50.2	N12	12.7	23 21.9	S 4	21.8	179 45.7	N11	38.4
	13	231 24.9	50 51.4	N 1	23.9	76 51.3	N12	12.3	38 23.9	S 4	22.0	194 48.4	N11	38.3
	14	246 27.4	65 51.0	N 1	22.8	91 52.4	N12	11.8	53 25.9	S 4	22.2	209 51.0	N11	38.3
	15	261 29.9	80 50.7	N 1	21.7	106 53.5	N12	11.3	68 27.9	S 4	22.4	224 53.7	N11	38.2
	16	276 32.3	95 50.3	N 1	20.5	121 54.6	N12	10.8	83 29.9	S 4	22.6	239 56.4	N11	38.1
	17	291 34.8	110 50.0	N 1	19.4	136 55.7	N12	10.3	98 31.8	S 4	22.8	254 59.0	N11	38.1
	18	306 37.2	125 49.7	N 1	18.2	151 56.8	N12	09.8	113 33.8	S 4	23.0	270 01.7	N11	38.0
	19	321 39.7	140 49.3	N 1	17.1	166 57.9	N12	09.4	128 35.8	S 4	23.2	285 04.3	N11	38.0
	20	336 42.2	155 49.0	N 1	15.9	181 59.0	N12	08.9	143 37.8	S 4	23.4	300 07.0	N11	37.9
	21	351 44.6	170 48.6	N 1	14.8	197 00.1	N12	08.4	158 39.8	S 4	23.6	315 09.6	N11	37.8
	22	6 47.1	185 48.3	N 1	13.6	212 01.2	N12	07.9	173 41.7	S 4	23.8	330 12.3	N11	37.8
	23	21 49.6	200 47.9	N 1	12.5	227 02.3	N12	07.4	188 43.7	S 4	24.0	345 15.0	N11	37.7
28	0	36 52.0	215 47.6	N 1	11.4	242 03.4	N12	06.9	203 45.7	S 4	24.2	0 17.6	N11	37.6
	1	51 54.5	230 47.2	N 1	10.2	257 04.5	N12	06.5	218 47.7	S 4	24.4	15 20.3	N11	37.6
	2	66 57.0	245 46.9	N 1	09.1	272 05.6	N12	06.0	233 49.7	S 4	24.6	30 22.9	N11	37.5
	3	81 59.4	260 46.6	N 1	07.9	287 06.7	N12	05.5	248 51.6	S 4	24.8	45 25.6	N11	37.4
	4	97 01.9	275 46.2	N 1	06.8	302 07.8	N12	05.0	263 53.6	S 4	25.0	60 28.3	N11	37.4
S	5	112 04.4	290 45.9	N 1	05.6	317 08.9	N12	04.5	278 55.6	S 4	25.2	75 30.9	N11	37.3
A														
T	6	127 06.8	305 45.5	N 1	04.5	332 10.0	N12	04.0	293 57.6	S 4	25.4	90 33.6	N11	37.3
U	7	142 09.3	320 45.2	N 1	03.3	347 11.1	N12	03.6	308 59.6	S 4	25.6	105 36.2	N11	37.2
R	8	157 11.7	335 44.8	N 1	02.2	2 12.2	N12	03.1	324 01.5	S 4	25.8	120 38.9	N11	37.1
D	9	172 14.2	350 44.5	N 1	01.0	17 13.3	N12	02.6	339 03.5	S 4	26.0	135 41.5	N11	37.1
A	10	187 16.7	5 44.1	N 0	59.9	32 14.4	N12	02.1	354 05.5	S 4	26.2	150 44.2	N11	37.0
Y	11	202 19.1	20 43.8	N 0	58.8	47 15.5	N12	01.6	9 07.5	S 4	26.4	165 46.9	N11	36.9
	12	217 21.6	35 43.5	N 0	57.6	62 16.6	N12	01.1	24 09.5	S 4	26.6	180 49.5	N11	36.9
	13	232 24.1	50 43.1	N 0	56.5	77 17.7	N12	00.6	39 11.4	S 4	26.8	195 52.2	N11	36.8
	14	247 26.5	65 42.8	N 0	55.3	92 18.7	N12	00.2	54 13.4	S 4	27.0	210 54.8	N11	36.7
	15	262 29.0	80 42.4	N 0	54.2	107 19.8	N11	59.7	69 15.4	S 4	27.2	225 57.5	N11	36.7
	16	277 31.5	95 42.1	N 0	53.0	122 20.9	N11	59.2	84 17.4	S 4	27.4	241 00.2	N11	36.6
	17	292 33.9	110 41.7	N 0	51.9	137 22.0	N11	58.7	99 19.4	S 4	27.6	256 02.8	N11	36.6
	18	307 36.4	125 41.4	N 0	50.7	152 23.1	N11	58.2	114 21.4	S 4	27.8	271 05.5	N11	36.5
	19	322 38.8	140 41.0	N 0	49.6	167 24.2	N11	57.7	129 23.3	S 4	28.0	286 08.1	N11	36.4
	20	337 41.3	155 40.7	N 0	48.4	182 25.4	N11	57.3	144 25.3	S 4	28.2	301 10.8	N11	36.4
	21	352 43.8	170 40.3	N 0	47.3	197 26.5	N11	56.8	159 27.3	S 4	28.4	316 13.5	N11	36.3
	22	7 46.2	185 40.0	N 0	46.1	212 27.6	N11	56.3	174 29.3	S 4	28.6	331 16.1	N11	36.2
	23	22 48.7	200 39.7	N 0	45.0	227 28.7	N11	55.8	189 31.3	S 4	28.8	346 18.8	N11	36.2
29	0	37 51.2	215 39.3	N 0	43.8	242 29.8	N11	55.3	204 33.2	S 4	29.0	1 21.4	N11	36.1
	1	52 53.6	230 39.0	N 0	42.7	257 30.9	N11	54.8	219 35.2	S 4	29.2	16 24.1	N11	36.0
	2	67 56.1	245 38.6	N 0	41.5	272 32.0	N11	54.3	234 37.2	S 4	29.4	31 26.7	N11	36.0
	3	82 58.6	260 38.3	N 0	40.4	287 33.1	N11	53.9	249 39.2	S 4	29.6	46 29.4	N11	35.9
	4	98 01.0	275 37.9	N 0	39.2	302 34.2	N11	53.4	264 41.2	S 4	29.8	61 32.1	N11	35.9
S	5	113 03.5	290 37.6	N 0	38.1	317 35.3	N11	52.9	279 43.1	S 4	30.0	76 34.7	N11	35.8
U														
N	6	128 06.0	305 37.2	N 0	36.9	332 36.4	N11	52.4	294 45.1	S 4	30.2	91 37.4	N11	35.7
D	7	143 08.4	320 36.9	N 0	35.8	347 37.5	N11	51.9	309 47.1	S 4	30.4	106 40.0	N11	35.7
A	8	158 10.9	335 36.5	N 0	34.6	2 38.6	N11	51.4	324 49.1	S 4	30.6	121 42.7	N11	35.6
Y	9	173 13.3	350 36.2	N 0	33.5	17 39.7	N11	50.9	339 51.1	S 4	30.8	136 45.4	N11	35.5
	10	188 15.8	5 35.8	N 0	32.3	32 40.8	N11	50.5	354 53.1	S 4	31.0	151 48.0	N11	35.5
	11	203 18.3	20 35.5	N 0	31.2	47 41.9	N11	50.0	9 55.0	S 4	31.2	166 50.7	N11	35.4
	12	218 20.7	35 35.2	N 0	30.0	62 43.0	N11	49.5	24 57.0	S 4	31.4	181 53.3	N11	35.3
	13	233 23.2	50 34.8	N 0	28.9	77 44.1	N11	49.0	39 59.0	S 4	31.6	196 56.0	N11	35.3
	14	248 25.7	65 34.5	N 0	27.7	92 45.2	N11	48.5	55 01.0	S 4	31.8	211 58.7	N11	35.2
	15	263 28.1	80 34.1	N 0	26.6	107 46.3	N11	48.0	70 03.0	S 4	32.0	227 01.3	N11	35.2
	16	278 30.6	95 33.8	N 0	25.4	122 47.4	N11	47.6	85 05.0	S 4	32.2	242 04.0	N11	35.1
	17	293 33.1	110 33.4	N 0	24.3	137 48.5	N11	47.1	100 06.9	S 4	32.4	257 06.6	N11	35.0
	18	308 35.5	125 33.1	N 0	23.1	152 49.6	N11	46.6	115 08.9	S 4	32.6	272 09.3	N11	35.0
	19	323 38.0	140 32.7	N 0	22.0	167 50.7	N11	46.1	130 10.9	S 4	32.8	287 12.0	N11	34.9
	20	338 40.5	155 32.4	N 0	20.8	182 51.8	N11	45.6	145 12.9	S 4	33.0	302 14.6	N11	34.8
	21	353 42.9	170 32.0	N 0	19.7	197 52.9	N11	45.1	160 14.9	S 4	33.2	317 17.3	N11	34.8
	22	8 45.4	185 31.7	N 0	18.5	212 54.0	N11	44.6	175 16.8	S 4	33.4	332 19.9	N11	34.7
	23	23 47.8	200 31.3	N 0	17.4	227 55.2	N11	44.2	190 18.8	S 4	33.6	347 22.6	N11	34.6
			v -0.3	d	1.1	v 1.1	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
27	0	184 01.9	S12 53.1	70 35.4	15.5	S10 39.7	11.7	54.4
	1	199 01.9	S12 53.9	85 10.0	15.6	S10 27.9	11.8	54.4
	2	214 02.0	S12 54.8	99 44.6	15.6	S10 16.2	11.8	54.4
	3	229 02.0	S12 55.6	114 19.3	15.7	S10 04.3	11.8	54.4
	4	244 02.1	S12 56.5	128 54.0	15.7	S 9 52.5	11.9	54.4
F	5	259 02.1	S12 57.3	143 28.7	15.8	S 9 40.6	11.9	54.4
R								
I	6	274 02.2	S12 58.2	158 03.5	15.8	S 9 28.7	11.9	54.4
D	7	289 02.2	S12 59.0	172 38.4	15.8	S 9 16.7	11.9	54.4
A	8	304 02.3	S12 59.8	187 13.3	15.9	S 9 04.8	12.0	54.3
Y	9	319 02.3	S13 00.7	201 48.2	15.9	S 8 52.7	12.0	54.3
	10	334 02.4	S13 01.5	216 23.2	16.0	S 8 40.7	12.0	54.3
	11	349 02.4	S13 02.3	230 58.2	16.0	S 8 28.6	12.1	54.3
	12	4 02.5	S13 03.2	245 33.2	16.0	S 8 16.5	12.1	54.3
	13	19 02.6	S13 04.0	260 08.3	16.1	S 8 04.4	12.1	54.3
	14	34 02.6	S13 04.9	274 43.4	16.1	S 7 52.3	12.1	54.3
	15	49 02.7	S13 05.7	289 18.6	16.2	S 7 40.1	12.2	54.3
	16	64 02.7	S13 06.5	303 53.8	16.2	S 7 27.9	12.2	54.3
	17	79 02.8	S13 07.4	318 29.0	16.2	S 7 15.7	12.2	54.2
	18	94 02.8	S13 08.2	333 04.2	16.3	S 7 03.4	12.2	54.2
	19	109 02.9	S13 09.0	347 39.5	16.3	S 6 51.2	12.3	54.2
	20	124 02.9	S13 09.9	2 14.8	16.3	S 6 38.9	12.3	54.2
	21	139 03.0	S13 10.7	16 50.2	16.3	S 6 26.6	12.3	54.2
	22	154 03.0	S13 11.6	31 25.6	16.4	S 6 14.2	12.3	54.2
	23	169 03.1	S13 12.4	46 01.0	16.4	S 6 01.9	12.4	54.2
28	0	184 03.1	S13 13.2	60 36.4	16.4	S 5 49.5	12.4	54.2
	1	199 03.2	S13 14.1	75 11.8	16.5	S 5 37.1	12.4	54.2
	2	214 03.2	S13 14.9	89 47.3	16.5	S 5 24.7	12.4	54.2
	3	229 03.2	S13 15.7	104 22.8	16.5	S 5 12.3	12.4	54.2
	4	244 03.3	S13 16.6	118 58.3	16.5	S 4 59.9	12.4	54.2
S	5	259 03.3	S13 17.4	133 33.9	16.5	S 4 47.4	12.5	54.1
A								
T	6	274 03.4	S13 18.2	148 09.4	16.6	S 4 34.9	12.5	54.1
U	7	289 03.4	S13 19.1	162 45.0	16.6	S 4 22.4	12.5	54.1
R	8	304 03.5	S13 19.9	177 20.6	16.6	S 4 09.9	12.5	54.1
D	9	319 03.5	S13 20.7	191 56.2	16.6	S 3 57.4	12.5	54.1
A	10	334 03.6	S13 21.5	206 31.9	16.6	S 3 44.9	12.5	54.1
Y	11	349 03.6	S13 22.4	221 07.5	16.6	S 3 32.3	12.5	54.1
	12	4 03.7	S13 23.2	235 43.2	16.7	S 3 19.8	12.6	54.1
	13	19 03.7	S13 24.0	250 18.9	16.7	S 3 07.2	12.6	54.1
	14	34 03.7	S13 24.9	264 54.5	16.7	S 2 54.7	12.6	54.1
	15	49 03.8	S13 25.7	279 30.2	16.7	S 2 42.1	12.6	54.1
	16	64 03.8	S13 26.5	294 06.0	16.7	S 2 29.5	12.6	54.1
	17	79 03.9	S13 27.3	308 41.7	16.7	S 2 16.9	12.6	54.1
	18	94 03.9	S13 28.2	323 17.4	16.7	S 2 04.3	12.6	54.1
	19	109 04.0	S13 29.0	337 53.2	16.7	S 1 51.7	12.6	54.1
	20	124 04.0	S13 29.8	352 28.9	16.7	S 1 39.0	12.6	54.1
	21	139 04.0	S13 30.7	7 04.6	16.8	S 1 26.4	12.6	54.1
	22	154 04.1	S13 31.5	21 40.4	16.8	S 1 13.8	12.6	54.1
	23	169 04.1	S13 32.3	36 16.2	16.8	S 1 01.2	12.6	54.1
29	0	184 04.2	S13 33.1	50 51.9	16.8	S 0 48.5	12.6	54.1
	1	199 04.2	S13 34.0	65 27.7	16.8	S 0 35.9	12.6	54.1
	2	214 04.2	S13 34.8	80 03.5	16.8	S 0 23.2	12.6	54.1
	3	229 04.3	S13 35.6	94 39.2	16.8	S 0 10.6	12.6	54.1
	4	244 04.3	S13 36.4	109 15.0	16.8	N 0 02.1	12.6	54.1
S	5	259 04.4	S13 37.3	123 50.7	16.8	N 0 14.7	12.6	54.1
U								
N	6	274 04.4	S13 38.1	138 26.5	16.8	N 0 27.4	12.6	54.1
D	7	289 04.4	S13 38.9	153 02.3	16.8	N 0 40.0	12.6	54.1
A	8	304 04.5	S13 39.7	167 38.0	16.7	N 0 52.6	12.6	54.1
Y	9	319 04.5	S13 40.5	182 13.7	16.7	N 1 05.3	12.6	54.1
	10	334 04.6	S13 41.4	196 49.5	16.7	N 1 17.9	12.6	54.1
	11	349 04.6	S13 42.2	211 25.2	16.7	N 1 30.6	12.6	54.1
	12	4 04.6	S13 43.0	226 00.9	16.7	N 1 43.2	12.6	54.1
	13	19 04.7	S13 43.8	240 36.6	16.7	N 1 55.8	12.6	54.1
	14	34 04.7	S13 44.6	255 12.3	16.7	N 2 08.4	12.6	54.1
	15	49 04.7	S13 45.5	269 48.0	16.7	N 2 21.1	12.6	54.1
	16	64 04.8	S13 46.3	284 23.7	16.7	N 2 33.7	12.6	54.1
	17	79 04.8	S13 47.1	298 59.4	16.7	N 2 46.3	12.6	54.1
	18	94 04.8	S13 47.9	313 35.0	16.6	N 2 58.9	12.6	54.1
	19	109 04.9	S13 48.7	328 10.7	16.6	N 3 11.4	12.6	54.1
	20	124 04.9	S13 49.6	342 46.3	16.6	N 3 24.0	12.6	54.1
	21	139 04.9	S13 50.4	357 21.9	16.6	N 3 36.6	12.6	54.1
	22	154 05.0	S13 51.2	11 57.5	16.6	N 3 49.1	12.6	54.1
	23	169 05.0	S13 52.0	26 33.0	16.6	N 4 01.7	12.5	54.1
		S.D. 16.1	d 0.8	S.D. 14.8		14.7		14.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.2
Achernar	335 17.4	S57 05.3
Acrux	172 57.2	S63 15.4
Adhara	255 03.3	S29 00.5
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.8	N16 34.1
Alioth	166 10.8	N55 48.1
Alkaid	152 50.1	N49 10.1
Al Na-ir	27 28.9	S46 49.3
Alnilam	275 34.3	S 1 10.9
Alphard	217 44.8	S 8 47.0
Alphecca	126 01.5	N26 37.2
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 08.9
Antares	112 12.4	S26 29.7
Arcturus	145 45.5	N19 02.0
Atria	107 04.3	S69 04.9
Avior	234 13.4	S59 35.9
Bellatrix	278 19.3	N 6 22.6
Betelgeuse	270 48.5	N 7 24.8
Canopus	263 50.7	S52 42.4
Capella	280 17.0	N46 01.5
Castor	245 53.0	N31 49.4
Deneb	49 23.6	N45 23.4
Denebola	182 22.1	N14 24.6
Diphda	348 44.0	S17 49.5
Dubhe	193 37.7	N61 35.4
Elnath	277 57.7	N28 37.8
Eltanin	90 41.1	N51 29.3
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.7	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.3	S60 30.7
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.4	N74 02.2
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.4	S36 30.7
Miaplacidus	221 37.6	S69 49.9
Mirfak	308 23.3	N49 57.8
Nunki	75 44.1	S26 15.6
Peacock	53 00.9	S56 38.6
Polaris	314 55.2	N89 22.6
Pollux	243 13.5	N27 57.2
Procyon	244 47.5	N 5 09.1
Rasalhague	95 56.0	N12 32.6
Regulus	207 31.3	N11 49.5
Rigel	281 00.7	S 8 10.0
Rigil Kent	139 36.8	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.4	S16 45.2
Spica	158 19.4	S11 18.7
Suhail	222 44.1	S43 32.7
Vega	80 31.3	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
30	0	38 50.3	215 31.0	N 0	16.2	242 56.3	N11	43.7	205 20.8	S 4	33.8	2 25.2	N11	34.6
	1	53 52.8	230 30.6	N 0	15.1	257 57.4	N11	43.2	220 22.8	S 4	34.0	17 27.9	N11	34.5
	2	68 55.2	245 30.3	N 0	13.9	272 58.5	N11	42.7	235 24.8	S 4	34.2	32 30.6	N11	34.5
	3	83 57.7	260 29.9	N 0	12.8	287 59.6	N11	42.2	250 26.8	S 4	34.4	47 33.2	N11	34.4
	4	99 00.2	275 29.6	N 0	11.6	303 00.7	N11	41.7	265 28.7	S 4	34.6	62 35.9	N11	34.3
M	5	114 02.6	290 29.3	N 0	10.5	318 01.8	N11	41.2	280 30.7	S 4	34.8	77 38.5	N11	34.3
O														
N	6	129 05.1	305 28.9	N 0	09.3	333 02.9	N11	40.8	295 32.7	S 4	35.0	92 41.2	N11	34.2
D	7	144 07.6	320 28.6	N 0	08.2	348 04.0	N11	40.3	310 34.7	S 4	35.1	107 43.9	N11	34.1
A	8	159 10.0	335 28.2	N 0	07.0	3 05.1	N11	39.8	325 36.7	S 4	35.3	122 46.5	N11	34.1
Y	9	174 12.5	350 27.9	N 0	05.9	18 06.2	N11	39.3	340 38.7	S 4	35.5	137 49.2	N11	34.0
	10	189 14.9	5 27.5	N 0	04.7	33 07.3	N11	38.8	355 40.6	S 4	35.7	152 51.8	N11	33.9
	11	204 17.4	20 27.2	N 0	03.6	48 08.5	N11	38.3	10 42.6	S 4	35.9	167 54.5	N11	33.9
	12	219 19.9	35 26.8	N 0	02.4	63 09.6	N11	37.8	25 44.6	S 4	36.1	182 57.2	N11	33.8
	13	234 22.3	50 26.5	N 0	01.2	78 10.7	N11	37.4	40 46.6	S 4	36.3	197 59.8	N11	33.8
	14	249 24.8	65 26.1	N 0	00.1	93 11.8	N11	36.9	55 48.6	S 4	36.5	213 02.5	N11	33.7
	15	264 27.3	80 25.8	S 0	01.1	108 12.9	N11	36.4	70 50.6	S 4	36.7	228 05.1	N11	33.6
	16	279 29.7	95 25.4	S 0	02.2	123 14.0	N11	35.9	85 52.5	S 4	36.9	243 07.8	N11	33.6
	17	294 32.2	110 25.1	S 0	03.4	138 15.1	N11	35.4	100 54.5	S 4	37.1	258 10.5	N11	33.5
	18	309 34.7	125 24.7	S 0	04.5	153 16.2	N11	34.9	115 56.5	S 4	37.3	273 13.1	N11	33.4
	19	324 37.1	140 24.4	S 0	05.7	168 17.3	N11	34.4	130 58.5	S 4	37.5	288 15.8	N11	33.4
	20	339 39.6	155 24.0	S 0	06.8	183 18.5	N11	34.0	146 00.5	S 4	37.7	303 18.4	N11	33.3
	21	354 42.1	170 23.7	S 0	08.0	198 19.6	N11	33.5	161 02.5	S 4	37.9	318 21.1	N11	33.2
	22	9 44.5	185 23.3	S 0	09.1	213 20.7	N11	33.0	176 04.4	S 4	38.1	333 23.7	N11	33.2
	23	24 47.0	200 23.0	S 0	10.3	228 21.8	N11	32.5	191 06.4	S 4	38.3	348 26.4	N11	33.1
31	0	39 49.4	215 22.6	S 0	11.4	243 22.9	N11	32.0	206 08.4	S 4	38.5	3 29.1	N11	33.1
	1	54 51.9	230 22.3	S 0	12.6	258 24.0	N11	31.5	221 10.4	S 4	38.7	18 31.7	N11	33.0
	2	69 54.4	245 21.9	S 0	13.8	273 25.1	N11	31.0	236 12.4	S 4	38.9	33 34.4	N11	32.9
	3	84 56.8	260 21.6	S 0	14.9	288 26.2	N11	30.6	251 14.4	S 4	39.1	48 37.0	N11	32.9
	4	99 59.3	275 21.2	S 0	16.1	303 27.4	N11	30.1	266 16.4	S 4	39.3	63 39.7	N11	32.8
T	5	115 01.8	290 20.9	S 0	17.2	318 28.5	N11	29.6	281 18.3	S 4	39.5	78 42.4	N11	32.7
U														
E	6	130 04.2	305 20.5	S 0	18.4	333 29.6	N11	29.1	296 20.3	S 4	39.7	93 45.0	N11	32.7
S	7	145 06.7	320 20.2	S 0	19.5	348 30.7	N11	28.6	311 22.3	S 4	39.9	108 47.7	N11	32.6
D	8	160 09.2	335 19.8	S 0	20.7	3 31.8	N11	28.1	326 24.3	S 4	40.1	123 50.3	N11	32.5
A	9	175 11.6	350 19.5	S 0	21.8	18 32.9	N11	27.6	341 26.3	S 4	40.3	138 53.0	N11	32.5
Y	10	190 14.1	5 19.1	S 0	23.0	33 34.0	N11	27.1	356 28.3	S 4	40.5	153 55.7	N11	32.4
	11	205 16.5	20 18.8	S 0	24.2	48 35.2	N11	26.7	11 30.2	S 4	40.7	168 58.3	N11	32.4
	12	220 19.0	35 18.4	S 0	25.3	63 36.3	N11	26.2	26 32.2	S 4	40.9	184 01.0	N11	32.3
	13	235 21.5	50 18.1	S 0	26.5	78 37.4	N11	25.7	41 34.2	S 4	41.1	199 03.6	N11	32.2
	14	250 23.9	65 17.7	S 0	27.6	93 38.5	N11	25.2	56 36.2	S 4	41.3	214 06.3	N11	32.2
	15	265 26.4	80 17.4	S 0	28.8	108 39.6	N11	24.7	71 38.2	S 4	41.5	229 09.0	N11	32.1
	16	280 28.9	95 17.0	S 0	29.9	123 40.7	N11	24.2	86 40.2	S 4	41.7	244 11.6	N11	32.0
	17	295 31.3	110 16.7	S 0	31.1	138 41.9	N11	23.7	101 42.2	S 4	41.9	259 14.3	N11	32.0
	18	310 33.8	125 16.3	S 0	32.3	153 43.0	N11	23.3	116 44.1	S 4	42.1	274 16.9	N11	31.9
	19	325 36.3	140 16.0	S 0	33.4	168 44.1	N11	22.8	131 46.1	S 4	42.2	289 19.6	N11	31.9
	20	340 38.7	155 15.6	S 0	34.6	183 45.2	N11	22.3	146 48.1	S 4	42.4	304 22.2	N11	31.8
	21	355 41.2	170 15.3	S 0	35.7	198 46.3	N11	21.8	161 50.1	S 4	42.6	319 24.9	N11	31.7
	22	10 43.7	185 14.9	S 0	36.9	213 47.4	N11	21.3	176 52.1	S 4	42.8	334 27.6	N11	31.7
	23	25 46.1	200 14.6	S 0	38.0	228 48.6	N11	20.8	191 54.1	S 4	43.0	349 30.2	N11	31.6
1	0	40 48.6	215 14.2	S 0	39.2	243 49.7	N11	20.3	206 56.1	S 4	43.2	4 32.9	N11	31.5
	1	55 51.0	230 13.9	S 0	40.4	258 50.8	N11	19.8	221 58.0	S 4	43.4	19 35.5	N11	31.5
	2	70 53.5	245 13.5	S 0	41.5	273 51.9	N11	19.4	237 00.0	S 4	43.6	34 38.2	N11	31.4
	3	85 56.0	260 13.2	S 0	42.7	288 53.0	N11	18.9	252 02.0	S 4	43.8	49 40.9	N11	31.3
	4	100 58.4	275 12.8	S 0	43.8	303 54.2	N11	18.4	267 04.0	S 4	44.0	64 43.5	N11	31.3
W	5	116 00.9	290 12.4	S 0	45.0	318 55.3	N11	17.9	282 06.0	S 4	44.2	79 46.2	N11	31.2
E														
D	6	131 03.4	305 12.1	S 0	46.1	333 56.4	N11	17.4	297 08.0	S 4	44.4	94 48.8	N11	31.2
N	7	146 05.8	320 11.7	S 0	47.3	348 57.5	N11	16.9	312 10.0	S 4	44.6	109 51.5	N11	31.1
E	8	161 08.3	335 11.4	S 0	48.5	3 58.6	N11	16.4	327 11.9	S 4	44.8	124 54.2	N11	31.0
S	9	176 10.8	350 11.0	S 0	49.6	18 59.7	N11	16.0	342 13.9	S 4	45.0	139 56.8	N11	31.0
D	10	191 13.2	5 10.7	S 0	50.8	34 00.9	N11	15.5	357 15.9	S 4	45.2	154 59.5	N11	30.9
A	11	206 15.7	20 10.3	S 0	51.9	49 02.0	N11	15.0	12 17.9	S 4	45.4	170 02.1	N11	30.8
Y														
	12	221 18.1	35 10.0	S 0	53.1	64 03.1	N11	14.5	27 19.9	S 4	45.6	185 04.8	N11	30.8
	13	236 20.6	50 09.6	S 0	54.2	79 04.2	N11	14.0	42 21.9	S 4	45.8	200 07.5	N11	30.7
	14	251 23.1	65 09.3	S 0	55.4	94 05.4	N11	13.5	57 23.9	S 4	46.0	215 10.1	N11	30.7
	15	266 25.5	80 08.9	S 0	56.6	109 06.5	N11	13.0	72 25.8	S 4	46.2	230 12.8	N11	30.6
	16	281 28.0	95 08.6	S 0	57.7	124 07.6	N11	12.5	87 27.8	S 4	46.4	245 15.4	N11	30.5
	17	296 30.5	110 08.2	S 0	58.9	139 08.7	N11	12.1	102 29.8	S 4	46.6	260 18.1	N11	30.5
	18	311 32.9	125 07.9	S 1	00.0	154 09.8	N11	11.6	117 31.8	S 4	46.8	275 20.7	N11	30.4
	19	326 35.4	140 07.5	S 1	01.2	169 11.0	N11	11.1	132 33.8	S 4	47.0	290 23.4	N11	30.3
	20	341 37.9	155 07.1	S 1	02.4	184 12.1	N11	10.6	147 35.8	S 4	47.1	305 26.1	N11	30.3
	21	356 40.3	170 06.8	S 1	03.5	199 13.2	N11	10.1	162 37.8	S 4	47.3	320 28.7	N11	30.2
	22	11 42.8	185 06.4	S 1	04.7	214 14.3	N11	09.6	177 39.7	S 4	47.5	335 31.4	N11	30.1
	23	26 45.3	200 06.1	S 1	05.8	229 15.5	N11	09.1	192 41.7	S 4	47.7	350 34.0	N11	30.1
			v -0.4	d	1.2	v 1.1	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T		SUN		MOON						STARS		
d	h	GHA	Dec	GHA	v	Dec	d	HP		Name	SHA	Dec
		° '	° '	° '	'	° '	'	'			° '	° '
30	0	184 05.0	S13 52.8	41 08.6	16.5	N 4 14.2	12.5	54.1		Acamar	315 09.0	S40 11.2
	1	199 05.1	S13 53.6	55 44.1	16.5	N 4 26.7	12.5	54.1		Achernar	335 17.4	S57 05.4
	2	214 05.1	S13 54.5	70 19.6	16.5	N 4 39.2	12.5	54.1		Acrux	172 57.1	S63 15.4
	3	229 05.1	S13 55.3	84 55.1	16.5	N 4 51.7	12.5	54.1		Adhara	255 03.3	S29 00.5
	4	244 05.2	S13 56.1	99 30.5	16.5	N 5 04.2	12.5	54.1		Albireo	67 01.7	N28 01.5
M	5	259 05.2	S13 56.9	114 06.0	16.4	N 5 16.6	12.5	54.1				
O										Aldebaran	290 35.8	N16 34.1
N	6	274 05.2	S13 57.7	128 41.4	16.4	N 5 29.1	12.4	54.1		Alioth	166 10.8	N55 48.1
D	7	289 05.3	S13 58.5	143 16.7	16.4	N 5 41.5	12.4	54.1		Alkaid	152 50.1	N49 10.1
A	8	304 05.3	S13 59.3	157 52.1	16.4	N 5 53.9	12.4	54.1		Al Na-ir	27 28.9	S46 49.3
Y	9	319 05.3	S14 00.2	172 27.4	16.3	N 6 06.3	12.4	54.1		Alnilam	275 34.3	S 1 10.9
	10	334 05.4	S14 01.0	187 02.7	16.3	N 6 18.7	12.4	54.1				
	11	349 05.4	S14 01.8	201 38.0	16.3	N 6 31.0	12.3	54.2		Alphard	217 44.7	S 8 47.0
										Alphecca	126 01.5	N26 37.2
	12	4 05.4	S14 02.6	216 13.2	16.2	N 6 43.3	12.3	54.2		Alpheratz	357 31.3	N29 15.3
	13	19 05.4	S14 03.4	230 48.4	16.2	N 6 55.6	12.3	54.2		Altair	61 57.0	N 8 56.9
	14	34 05.5	S14 04.2	245 23.6	16.2	N 7 07.9	12.3	54.2		Ankaa	353 03.8	S42 08.9
	15	49 05.5	S14 05.0	259 58.7	16.1	N 7 20.2	12.3	54.2				
	16	64 05.5	S14 05.8	274 33.8	16.1	N 7 32.4	12.2	54.2		Antares	112 12.4	S26 29.7
	17	79 05.5	S14 06.6	289 08.9	16.1	N 7 44.6	12.2	54.2		Arcturus	145 45.5	N19 02.0
										Atria	107 04.3	S69 04.9
	18	94 05.6	S14 07.5	303 43.9	16.0	N 7 56.8	12.2	54.2		Avior	234 13.3	S59 35.9
	19	109 05.6	S14 08.3	318 18.9	16.0	N 8 09.0	12.2	54.2		Bellatrix	278 19.3	N 6 22.6
	20	124 05.6	S14 09.1	332 53.9	16.0	N 8 21.1	12.1	54.2				
	21	139 05.7	S14 09.9	347 28.8	15.9	N 8 33.2	12.1	54.2		Betelgeuse	270 48.5	N 7 24.8
	22	154 05.7	S14 10.7	2 03.7	15.9	N 8 45.3	12.1	54.2		Canopus	263 50.7	S52 42.4
	23	169 05.7	S14 11.5	16 38.6	15.8	N 8 57.3	12.0	54.2		Capella	280 17.0	N46 01.5
										Castor	245 53.0	N31 49.3
31	0	184 05.7	S14 12.3	31 13.4	15.8	N 9 09.3	12.0	54.2		Deneb	49 23.7	N45 23.4
	1	199 05.7	S14 13.1	45 48.1	15.8	N 9 21.3	12.0	54.3				
	2	214 05.8	S14 13.9	60 22.8	15.7	N 9 33.3	12.0	54.3		Denebola	182 22.1	N14 24.6
	3	229 05.8	S14 14.7	74 57.5	15.7	N 9 45.2	11.9	54.3		Diphda	348 44.0	S17 49.5
	4	244 05.8	S14 15.5	89 32.1	15.6	N 9 57.1	11.9	54.3		Dubhe	193 37.7	N61 35.4
T	5	259 05.8	S14 16.3	104 06.7	15.6	N10 08.9	11.9	54.3		Elnath	277 57.7	N28 37.8
U										Eltanin	90 41.1	N51 29.3
E	6	274 05.9	S14 17.1	118 41.3	15.5	N10 20.8	11.8	54.3				
S	7	289 05.9	S14 17.9	133 15.7	15.5	N10 32.5	11.8	54.3		Enif	33 35.6	N10 00.7
D	8	304 05.9	S14 18.7	147 50.2	15.4	N10 44.3	11.7	54.3		Fomalhaut	15 10.9	S29 28.1
A	9	319 05.9	S14 19.6	162 24.6	15.4	N10 56.0	11.7	54.3		Gacrux	171 48.6	S57 16.4
Y	10	334 06.0	S14 20.4	176 58.9	15.3	N11 07.7	11.7	54.3		Gienah	175 40.7	S17 42.0
	11	349 06.0	S14 21.2	191 33.2	15.3	N11 19.3	11.6	54.3		Hadar	148 32.3	S60 30.7
	12	4 06.0	S14 22.0	206 07.5	15.2	N11 30.9	11.6	54.4		Hamal	327 47.4	N23 36.1
	13	19 06.0	S14 22.8	220 41.7	15.2	N11 42.4	11.6	54.4		Kaus Austr.	83 28.7	S34 22.3
	14	34 06.0	S14 23.6	235 15.8	15.1	N11 54.0	11.5	54.4		Kochab	137 21.4	N74 02.2
	15	49 06.1	S14 24.4	249 49.9	15.1	N12 05.4	11.5	54.4		Markab	13 26.6	N15 21.9
	16	64 06.1	S14 25.2	264 24.0	15.0	N12 16.8	11.4	54.4		Menkar	314 02.6	N 4 12.3
	17	79 06.1	S14 26.0	278 58.0	15.0	N12 28.2	11.4	54.4				
										Menkent	147 54.4	S36 30.7
	18	94 06.1	S14 26.8	293 31.9	14.9	N12 39.6	11.3	54.4		Miaplacidus	221 37.5	S69 49.9
	19	109 06.1	S14 27.6	308 05.8	14.9	N12 50.8	11.3	54.4		Mirfak	308 23.3	N49 57.9
	20	124 06.1	S14 28.4	322 39.6	14.8	N13 02.1	11.2	54.4		Nunki	75 44.1	S26 15.6
	21	139 06.2	S14 29.2	337 13.3	14.8	N13 13.3	11.2	54.5		Peacock	53 00.9	S56 38.7
	22	154 06.2	S14 30.0	351 47.0	14.7	N13 24.4	11.1	54.5				
	23	169 06.2	S14 30.8	6 20.7	14.6	N13 35.5	11.1	54.5		Polaris	314 55.0	N89 22.6
										Pollux	243 13.4	N27 57.2
1	0	184 06.2	S14 31.6	20 54.3	14.6	N13 46.6	11.0	54.5		Procyon	244 47.5	N 5 09.1
	1	199 06.2	S14 32.4	35 27.8	14.5	N13 57.6	11.0	54.5		Rasalhague	95 56.0	N12 32.6
	2	214 06.2	S14 33.1	50 01.3	14.5	N14 08.5	10.9	54.5		Regulus	207 31.3	N11 49.5
	3	229 06.3	S14 33.9	64 34.7	14.4	N14 19.4	10.9	54.5				
	4	244 06.3	S14 34.7	79 08.0	14.3	N14 30.2	10.8	54.5		Rigel	281 00.6	S 8 10.0
W	5	259 06.3	S14 35.5	93 41.3	14.3	N14 41.0	10.8	54.5		Rigil Kent	139 36.8	S60 57.2
E										Sabik	101 59.5	S15 45.6
D	6	274 06.3	S14 36.3	108 14.5	14.2	N14 51.7	10.7	54.6		Schedar	349 26.9	N56 42.0
N	7	289 06.3	S14 37.1	122 47.7	14.2	N15 02.4	10.7	54.6		Shaula	96 06.5	S37 07.5
E	8	304 06.3	S14 37.9	137 20.8	14.1	N15 13.0	10.6	54.6				
S	9	319 06.3	S14 38.7	151 53.8	14.0	N15 23.6	10.5	54.6		Sirius	258 23.4	S16 45.2
D	10	334 06.4	S14 39.5	166 26.8	14.0	N15 34.0	10.5	54.6		Spica	158 19.4	S11 18.7
A	11	349 06.4	S14 40.3	180 59.7	13.9	N15 44.5	10.4	54.6		Suhail	222 44.0	S43 32.7
Y										Vega	80 31.3	N38 48.9
	12	4 06.4	S14 41.1	195 32.5	13.8	N15 54.8	10.4	54.6		Zuben-ubi	136 53.9	S16 09.6
	13	19 06.4	S14 41.9	210 05.3	13.8	N16 05.1	10.3	54.7				
	14	34 06.4	S14 42.7	224 38.0	13.7	N16 15.4	10.2	54.7				
	15	49 06.4	S14 43.5	239 10.6	13.6	N16 25.6	10.2	54.7				
	16	64 06.4	S14 44.3	253 43.2	13.6	N16 35.7	10.1	54.7				
	17	79 06.4	S14 45.0	268 15.7	13.5	N16 45.7	10.0	54.7				
	18	94 06.4	S14 45.8	282 48.1	13.4	N16 55.7	10.0	54.7				
	19	109 06.5	S14 46.6	297 20.5	13.4	N17 05.6	9.9	54.7				
	20	124 06.5	S14 47.4	311 52.8	13.3	N17 15.4	9.8	54.7				
	21	139 06.5	S14 48.2	326 25.0	13.2	N17 25.2	9.8	54.8				
	22	154 06.5	S14 49.0	340 57.2	13.2	N17 34.9	9.7	54.8				
	23	169 06.5	S14 49.8	355 29.2	13.1	N17 44.5	9.6	54.8				
		S.D. 16.1	d 0.8	S.D. 14.8		14.8		14.9				

G.M.T d h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
2 0	41 47.7	215 05.7	S 1 07.0	244 16.6	N11 08.6	207 43.7	S 4 47.9	5 36.7	N11 30.0
1	56 50.2	230 05.4	S 1 08.2	259 17.7	N11 08.2	222 45.7	S 4 48.1	20 39.4	N11 30.0
2	71 52.6	245 05.0	S 1 09.3	274 18.8	N11 07.7	237 47.7	S 4 48.3	35 42.0	N11 29.9
3	86 55.1	260 04.7	S 1 10.5	289 20.0	N11 07.2	252 49.7	S 4 48.5	50 44.7	N11 29.8
4	101 57.6	275 04.3	S 1 11.6	304 21.1	N11 06.7	267 51.7	S 4 48.7	65 47.3	N11 29.8
T 5	117 00.0	290 04.0	S 1 12.8	319 22.2	N11 06.2	282 53.7	S 4 48.9	80 50.0	N11 29.7
H U 6	132 02.5	305 03.6	S 1 14.0	334 23.3	N11 05.7	297 55.6	S 4 49.1	95 52.7	N11 29.6
R 7	147 05.0	320 03.2	S 1 15.1	349 24.5	N11 05.2	312 57.6	S 4 49.3	110 55.3	N11 29.6
S 8	162 07.4	335 02.9	S 1 16.3	4 25.6	N11 04.8	327 59.6	S 4 49.5	125 58.0	N11 29.5
D 9	177 09.9	350 02.5	S 1 17.4	19 26.7	N11 04.3	343 01.6	S 4 49.7	141 00.6	N11 29.5
A 10	192 12.4	5 02.2	S 1 18.6	34 27.8	N11 03.8	358 03.6	S 4 49.9	156 03.3	N11 29.4
Y 11	207 14.8	20 01.8	S 1 19.7	49 29.0	N11 03.3	13 05.6	S 4 50.1	171 05.9	N11 29.3
12	222 17.3	35 01.5	S 1 20.9	64 30.1	N11 02.8	28 07.6	S 4 50.3	186 08.6	N11 29.3
13	237 19.8	50 01.1	S 1 22.1	79 31.2	N11 02.3	43 09.6	S 4 50.5	201 11.3	N11 29.2
14	252 22.2	65 00.8	S 1 23.2	94 32.3	N11 01.8	58 11.5	S 4 50.7	216 13.9	N11 29.1
15	267 24.7	80 00.4	S 1 24.4	109 33.5	N11 01.3	73 13.5	S 4 50.9	231 16.6	N11 29.1
16	282 27.1	95 00.0	S 1 25.5	124 34.6	N11 00.9	88 15.5	S 4 51.1	246 19.2	N11 29.0
17	297 29.6	109 59.7	S 1 26.7	139 35.7	N11 00.4	103 17.5	S 4 51.2	261 21.9	N11 29.0
18	312 32.1	124 59.3	S 1 27.9	154 36.9	N10 59.9	118 19.5	S 4 51.4	276 24.6	N11 28.9
19	327 34.5	139 59.0	S 1 29.0	169 38.0	N10 59.4	133 21.5	S 4 51.6	291 27.2	N11 28.8
20	342 37.0	154 58.6	S 1 30.2	184 39.1	N10 58.9	148 23.5	S 4 51.8	306 29.9	N11 28.8
21	357 39.5	169 58.3	S 1 31.4	199 40.2	N10 58.4	163 25.5	S 4 52.0	321 32.5	N11 28.7
22	12 41.9	184 57.9	S 1 32.5	214 41.4	N10 57.9	178 27.4	S 4 52.2	336 35.2	N11 28.6
23	27 44.4	199 57.5	S 1 33.7	229 42.5	N10 57.4	193 29.4	S 4 52.4	351 37.9	N11 28.6
3 0	42 46.9	214 57.2	S 1 34.8	244 43.6	N10 57.0	208 31.4	S 4 52.6	6 40.5	N11 28.5
1	57 49.3	229 56.8	S 1 36.0	259 44.8	N10 56.5	223 33.4	S 4 52.8	21 43.2	N11 28.5
2	72 51.8	244 56.5	S 1 37.2	274 45.9	N10 56.0	238 35.4	S 4 53.0	36 45.8	N11 28.4
3	87 54.2	259 56.1	S 1 38.3	289 47.0	N10 55.5	253 37.4	S 4 53.2	51 48.5	N11 28.3
4	102 56.7	274 55.7	S 1 39.5	304 48.1	N10 55.0	268 39.4	S 4 53.4	66 51.1	N11 28.3
F 5	117 59.2	289 55.4	S 1 40.6	319 49.3	N10 54.5	283 41.4	S 4 53.6	81 53.8	N11 28.2
R I 6	133 01.6	304 55.0	S 1 41.8	334 50.4	N10 54.0	298 43.4	S 4 53.8	96 56.5	N11 28.1
D 7	148 04.1	319 54.7	S 1 43.0	349 51.5	N10 53.5	313 45.3	S 4 54.0	111 59.1	N11 28.1
A 8	163 06.6	334 54.3	S 1 44.1	4 52.7	N10 53.1	328 47.3	S 4 54.2	127 01.8	N11 28.0
Y 9	178 09.0	349 54.0	S 1 45.3	19 53.8	N10 52.6	343 49.3	S 4 54.4	142 04.4	N11 28.0
10	193 11.5	4 53.6	S 1 46.4	34 54.9	N10 52.1	358 51.3	S 4 54.6	157 07.1	N11 27.9
11	208 14.0	19 53.2	S 1 47.6	49 56.1	N10 51.6	13 53.3	S 4 54.7	172 09.8	N11 27.8
12	223 16.4	34 52.9	S 1 48.8	64 57.2	N10 51.1	28 55.3	S 4 54.9	187 12.4	N11 27.8
13	238 18.9	49 52.5	S 1 49.9	79 58.3	N10 50.6	43 57.3	S 4 55.1	202 15.1	N11 27.7
14	253 21.4	64 52.2	S 1 51.1	94 59.5	N10 50.1	58 59.3	S 4 55.3	217 17.7	N11 27.6
15	268 23.8	79 51.8	S 1 52.2	110 00.6	N10 49.6	74 01.3	S 4 55.5	232 20.4	N11 27.6
16	283 26.3	94 51.4	S 1 53.4	125 01.7	N10 49.2	89 03.2	S 4 55.7	247 23.0	N11 27.5
17	298 28.7	109 51.1	S 1 54.6	140 02.9	N10 48.7	104 05.2	S 4 55.9	262 25.7	N11 27.5
18	313 31.2	124 50.7	S 1 55.7	155 04.0	N10 48.2	119 07.2	S 4 56.1	277 28.4	N11 27.4
19	328 33.7	139 50.4	S 1 56.9	170 05.1	N10 47.7	134 09.2	S 4 56.3	292 31.0	N11 27.3
20	343 36.1	154 50.0	S 1 58.1	185 06.3	N10 47.2	149 11.2	S 4 56.5	307 33.7	N11 27.3
21	358 38.6	169 49.6	S 1 59.2	200 07.4	N10 46.7	164 13.2	S 4 56.7	322 36.3	N11 27.2
22	13 41.1	184 49.3	S 2 00.4	215 08.5	N10 46.2	179 15.2	S 4 56.9	337 39.0	N11 27.1
23	28 43.5	199 48.9	S 2 01.5	230 09.7	N10 45.7	194 17.2	S 4 57.1	352 41.7	N11 27.1
4 0	43 46.0	214 48.6	S 2 02.7	245 10.8	N10 45.3	209 19.2	S 4 57.3	7 44.3	N11 27.0
1	58 48.5	229 48.2	S 2 03.9	260 11.9	N10 44.8	224 21.2	S 4 57.5	22 47.0	N11 27.0
2	73 50.9	244 47.8	S 2 05.0	275 13.1	N10 44.3	239 23.1	S 4 57.7	37 49.6	N11 26.9
3	88 53.4	259 47.5	S 2 06.2	290 14.2	N10 43.8	254 25.1	S 4 57.9	52 52.3	N11 26.8
4	103 55.9	274 47.1	S 2 07.3	305 15.3	N10 43.3	269 27.1	S 4 58.0	67 55.0	N11 26.8
S 5	118 58.3	289 46.7	S 2 08.5	320 16.5	N10 42.8	284 29.1	S 4 58.2	82 57.6	N11 26.7
A T 6	134 00.8	304 46.4	S 2 09.7	335 17.6	N10 42.3	299 31.1	S 4 58.4	98 00.3	N11 26.6
U 7	149 03.2	319 46.0	S 2 10.8	350 18.8	N10 41.8	314 33.1	S 4 58.6	113 02.9	N11 26.6
R 8	164 05.7	334 45.7	S 2 12.0	5 19.9	N10 41.3	329 35.1	S 4 58.8	128 05.6	N11 26.5
D 9	179 08.2	349 45.3	S 2 13.2	20 21.0	N10 40.9	344 37.1	S 4 59.0	143 08.2	N11 26.5
A 10	194 10.6	4 44.9	S 2 14.3	35 22.2	N10 40.4	359 39.1	S 4 59.2	158 10.9	N11 26.4
Y 11	209 13.1	19 44.6	S 2 15.5	50 23.3	N10 39.9	14 41.1	S 4 59.4	173 13.6	N11 26.3
12	224 15.6	34 44.2	S 2 16.6	65 24.4	N10 39.4	29 43.0	S 4 59.6	188 16.2	N11 26.3
13	239 18.0	49 43.8	S 2 17.8	80 25.6	N10 38.9	44 45.0	S 4 59.8	203 18.9	N11 26.2
14	254 20.5	64 43.5	S 2 19.0	95 26.7	N10 38.4	59 47.0	S 4 60.0	218 21.5	N11 26.1
15	269 23.0	79 43.1	S 2 20.1	110 27.9	N10 37.9	74 49.0	S 5 00.2	233 24.2	N11 26.1
16	284 25.4	94 42.8	S 2 21.3	125 29.0	N10 37.4	89 51.0	S 5 00.4	248 26.8	N11 26.0
17	299 27.9	109 42.4	S 2 22.5	140 30.1	N10 37.0	104 53.0	S 5 00.6	263 29.5	N11 26.0
18	314 30.4	124 42.0	S 2 23.6	155 31.3	N10 36.5	119 55.0	S 5 00.7	278 32.2	N11 25.9
19	329 32.8	139 41.7	S 2 24.8	170 32.4	N10 36.0	134 57.0	S 5 00.9	293 34.8	N11 25.8
20	344 35.3	154 41.3	S 2 25.9	185 33.6	N10 35.5	149 59.0	S 5 01.1	308 37.5	N11 25.8
21	359 37.7	169 40.9	S 2 27.1	200 34.7	N10 35.0	165 01.0	S 5 01.3	323 40.1	N11 25.7
22	14 40.2	184 40.6	S 2 28.3	215 35.8	N10 34.5	180 03.0	S 5 01.5	338 42.8	N11 25.7
23	29 42.7	199 40.2	S 2 29.4	230 37.0	N10 34.0	195 05.0	S 5 01.7	353 45.5	N11 25.6
		v -0.4	d 1.2	v 1.1	d 0.5	v 2.0	d 0.2	v 2.7	d 0.1

G.M.T d h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
2 0	184 06.5	S14 50.6	10 01.3	13.0	N17 54.1	9.6	54.8
1	199 06.5	S14 51.4	24 33.2	12.9	N18 03.6	9.5	54.8
2	214 06.5	S14 52.1	39 05.1	12.9	N18 13.0	9.4	54.8
3	229 06.5	S14 52.9	53 36.9	12.8	N18 22.3	9.3	54.8
4	244 06.5	S14 53.7	68 08.6	12.7	N18 31.6	9.2	54.9
T 5	259 06.5	S14 54.5	82 40.2	12.7	N18 40.7	9.2	54.9
H							
U 6	274 06.5	S14 55.3	97 11.8	12.6	N18 49.8	9.1	54.9
R 7	289 06.5	S14 56.1	111 43.3	12.5	N18 58.8	9.0	54.9
S 8	304 06.5	S14 56.9	126 14.7	12.4	N19 07.8	8.9	54.9
D 9	319 06.6	S14 57.6	140 46.1	12.4	N19 16.6	8.8	54.9
A 10	334 06.6	S14 58.4	155 17.4	12.3	N19 25.4	8.8	55.0
Y 11	349 06.6	S14 59.2	169 48.6	12.2	N19 34.1	8.7	55.0
12	4 06.6	S14 60.0	184 19.7	12.1	N19 42.6	8.6	55.0
13	19 06.6	S15 00.8	198 50.8	12.1	N19 51.2	8.5	55.0
14	34 06.6	S15 01.6	213 21.8	12.0	N19 59.6	8.4	55.0
15	49 06.6	S15 02.3	227 52.7	11.9	N20 07.9	8.3	55.0
16	64 06.6	S15 03.1	242 23.5	11.8	N20 16.2	8.2	55.1
17	79 06.6	S15 03.9	256 54.3	11.8	N20 24.3	8.2	55.1
18	94 06.6	S15 04.7	271 25.0	11.7	N20 32.4	8.1	55.1
19	109 06.6	S15 05.5	285 55.6	11.6	N20 40.3	8.0	55.1
20	124 06.6	S15 06.2	300 26.2	11.5	N20 48.2	7.9	55.1
21	139 06.6	S15 07.0	314 56.6	11.5	N20 56.0	7.8	55.1
22	154 06.6	S15 07.8	329 27.0	11.4	N21 03.7	7.7	55.1
23	169 06.6	S15 08.6	343 57.3	11.3	N21 11.3	7.6	55.2
3 0	184 06.6	S15 09.3	358 27.6	11.2	N21 18.8	7.5	55.2
1	199 06.6	S15 10.1	12 57.8	11.2	N21 26.1	7.4	55.2
2	214 06.6	S15 10.9	27 27.9	11.1	N21 33.4	7.3	55.2
3	229 06.6	S15 11.7	41 57.9	11.0	N21 40.6	7.2	55.2
4	244 06.6	S15 12.4	56 27.9	11.0	N21 47.7	7.1	55.3
F 5	259 06.6	S15 13.2	70 57.7	10.9	N21 54.7	7.0	55.3
R							
I 6	274 06.6	S15 14.0	85 27.6	10.8	N22 01.6	6.9	55.3
D 7	289 06.6	S15 14.8	99 57.3	10.7	N22 08.4	6.8	55.3
A 8	304 06.6	S15 15.5	114 27.0	10.7	N22 15.1	6.7	55.3
Y 9	319 06.6	S15 16.3	128 56.6	10.6	N22 21.6	6.6	55.3
10	334 06.6	S15 17.1	143 26.1	10.5	N22 28.1	6.5	55.4
11	349 06.6	S15 17.9	157 55.5	10.5	N22 34.4	6.4	55.4
12	4 06.6	S15 18.6	172 24.9	10.4	N22 40.7	6.2	55.4
13	19 06.5	S15 19.4	186 54.2	10.3	N22 46.8	6.1	55.4
14	34 06.5	S15 20.2	201 23.5	10.2	N22 52.8	6.0	55.4
15	49 06.5	S15 21.0	215 52.6	10.2	N22 58.8	5.9	55.4
16	64 06.5	S15 21.7	230 21.7	10.1	N23 04.6	5.8	55.5
17	79 06.5	S15 22.5	244 50.8	10.0	N23 10.2	5.7	55.5
18	94 06.5	S15 23.3	259 19.8	10.0	N23 15.8	5.6	55.5
19	109 06.5	S15 24.0	273 48.7	9.9	N23 21.3	5.5	55.5
20	124 06.5	S15 24.8	288 17.5	9.8	N23 26.6	5.3	55.5
21	139 06.5	S15 25.6	302 46.3	9.8	N23 31.8	5.2	55.6
22	154 06.5	S15 26.3	317 15.0	9.7	N23 36.9	5.1	55.6
23	169 06.5	S15 27.1	331 43.6	9.6	N23 41.9	5.0	55.6
4 0	184 06.5	S15 27.9	346 12.2	9.6	N23 46.8	4.9	55.6
1	199 06.5	S15 28.6	0 40.7	9.5	N23 51.5	4.7	55.6
2	214 06.4	S15 29.4	15 09.2	9.5	N23 56.1	4.6	55.6
3	229 06.4	S15 30.2	29 37.6	9.4	N24 00.6	4.5	55.7
4	244 06.4	S15 30.9	44 05.9	9.3	N24 05.0	4.4	55.7
S 5	259 06.4	S15 31.7	58 34.2	9.3	N24 09.3	4.2	55.7
A							
T 6	274 06.4	S15 32.5	73 02.4	9.2	N24 13.4	4.1	55.7
U 7	289 06.4	S15 33.2	87 30.6	9.2	N24 17.4	4.0	55.7
R 8	304 06.4	S15 34.0	101 58.7	9.1	N24 21.2	3.9	55.8
D 9	319 06.4	S15 34.8	116 26.7	9.0	N24 25.0	3.7	55.8
A 10	334 06.4	S15 35.5	130 54.7	9.0	N24 28.6	3.6	55.8
Y 11	349 06.3	S15 36.3	145 22.6	8.9	N24 32.1	3.5	55.8
12	4 06.3	S15 37.0	159 50.5	8.9	N24 35.5	3.4	55.8
13	19 06.3	S15 37.8	174 18.3	8.8	N24 38.7	3.2	55.9
14	34 06.3	S15 38.6	188 46.1	8.8	N24 41.8	3.1	55.9
15	49 06.3	S15 39.3	203 13.9	8.7	N24 44.8	3.0	55.9
16	64 06.3	S15 40.1	217 41.5	8.7	N24 47.6	2.8	55.9
17	79 06.3	S15 40.8	232 09.2	8.6	N24 50.3	2.7	55.9
18	94 06.2	S15 41.6	246 36.8	8.6	N24 52.9	2.6	56.0
19	109 06.2	S15 42.4	261 04.3	8.5	N24 55.3	2.4	56.0
20	124 06.2	S15 43.1	275 31.8	8.5	N24 57.6	2.3	56.0
21	139 06.2	S15 43.9	289 59.2	8.5	N24 59.8	2.2	56.0
22	154 06.2	S15 44.6	304 26.7	8.4	N25 01.8	2.0	56.0
23	169 06.2	S15 45.4	318 54.0	8.4	N25 03.7	1.9	56.0
	S.D. 16.1	d 0.8	S.D. 15.0		15.1		15.2

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.2
Achernar	335 17.4	S57 05.4
Acrux	172 57.1	S63 15.4
Adhara	255 03.2	S29 00.5
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.8	N16 34.1
Alioth	166 10.8	N55 48.1
Alkaid	152 50.1	N49 10.1
Al Na-ir	27 28.9	S46 49.3
Alnilam	275 34.3	S 1 10.9
Alphard	217 44.7	S 8 47.0
Alphecca	126 01.5	N26 37.1
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.5	N19 01.9
Atria	107 04.3	S69 04.8
Avior	234 13.3	S59 35.9
Bellatrix	278 19.3	N 6 22.6
Betelgeuse	270 48.5	N 7 24.8
Canopus	263 50.7	S52 42.4
Capella	280 16.9	N46 01.5
Castor	245 53.0	N31 49.3
Deneb	49 23.7	N45 23.4
Denebola	182 22.0	N14 24.6
Diphda	348 44.0	S17 49.6
Dubhe	193 37.7	N61 35.4
Elnath	277 57.7	N28 37.8
Eltanin	90 41.1	N51 29.3
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.6	S57 16.4
Gienah	175 40.7	S17 42.0
Hadar	148 32.2	S60 30.6
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.5	N74 02.2
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.3	S36 30.7
Miaplacidus	221 37.5	S69 49.9
Mirfak	308 23.3	N49 57.9
Nunki	75 44.1	S26 15.6
Peacock	53 00.9	S56 38.6
Polaris	314 54.8	N89 22.6
Pollux	243 13.4	N27 57.2
Procyon	244 47.5	N 5 09.0
Rasalhague	95 56.0	N12 32.6
Regulus	207 31.3	N11 49.5
Rigel	281 00.6	S 8 10.0
Rigil Kent	139 36.8	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.3	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 32.7
Vega	80 31.4	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
5	0	44 45.1	214 39.8	S 2	30.6	245 38.1	N10	33.5	210 06.9	S 5	01.9	8 48.1	N11	25.5
	1	59 47.6	229 39.5	S 2	31.8	260 39.3	N10	33.1	225 08.9	S 5	02.1	23 50.8	N11	25.5
	2	74 50.1	244 39.1	S 2	32.9	275 40.4	N10	32.6	240 10.9	S 5	02.3	38 53.4	N11	25.4
	3	89 52.5	259 38.7	S 2	34.1	290 41.5	N10	32.1	255 12.9	S 5	02.5	53 56.1	N11	25.3
	4	104 55.0	274 38.4	S 2	35.2	305 42.7	N10	31.6	270 14.9	S 5	02.7	68 58.7	N11	25.3
S	5	119 57.5	289 38.0	S 2	36.4	320 43.8	N10	31.1	285 16.9	S 5	02.9	84 01.4	N11	25.2
U														
N	6	134 59.9	304 37.6	S 2	37.6	335 45.0	N10	30.6	300 18.9	S 5	03.1	99 04.1	N11	25.2
D	7	150 02.4	319 37.3	S 2	38.7	350 46.1	N10	30.1	315 20.9	S 5	03.3	114 06.7	N11	25.1
A	8	165 04.8	334 36.9	S 2	39.9	5 47.2	N10	29.6	330 22.9	S 5	03.4	129 09.4	N11	25.0
Y	9	180 07.3	349 36.5	S 2	41.0	20 48.4	N10	29.2	345 24.9	S 5	03.6	144 12.0	N11	25.0
	10	195 09.8	4 36.2	S 2	42.2	35 49.5	N10	28.7	0 26.9	S 5	03.8	159 14.7	N11	24.9
	11	210 12.2	19 35.8	S 2	43.4	50 50.7	N10	28.2	15 28.9	S 5	04.0	174 17.3	N11	24.8
	12	225 14.7	34 35.4	S 2	44.5	65 51.8	N10	27.7	30 30.8	S 5	04.2	189 20.0	N11	24.8
	13	240 17.2	49 35.1	S 2	45.7	80 53.0	N10	27.2	45 32.8	S 5	04.4	204 22.7	N11	24.7
	14	255 19.6	64 34.7	S 2	46.9	95 54.1	N10	26.7	60 34.8	S 5	04.6	219 25.3	N11	24.7
	15	270 22.1	79 34.3	S 2	48.0	110 55.3	N10	26.2	75 36.8	S 5	04.8	234 28.0	N11	24.6
	16	285 24.6	94 34.0	S 2	49.2	125 56.4	N10	25.7	90 38.8	S 5	05.0	249 30.6	N11	24.5
	17	300 27.0	109 33.6	S 2	50.3	140 57.5	N10	25.2	105 40.8	S 5	05.2	264 33.3	N11	24.5
	18	315 29.5	124 33.2	S 2	51.5	155 58.7	N10	24.8	120 42.8	S 5	05.4	279 35.9	N11	24.4
	19	330 32.0	139 32.9	S 2	52.7	170 59.8	N10	24.3	135 44.8	S 5	05.6	294 38.6	N11	24.4
	20	345 34.4	154 32.5	S 2	53.8	186 01.0	N10	23.8	150 46.8	S 5	05.8	309 41.3	N11	24.3
	21	0 36.9	169 32.1	S 2	55.0	201 02.1	N10	23.3	165 48.8	S 5	05.9	324 43.9	N11	24.2
	22	15 39.3	184 31.8	S 2	56.2	216 03.3	N10	22.8	180 50.8	S 5	06.1	339 46.6	N11	24.2
	23	30 41.8	199 31.4	S 2	57.3	231 04.4	N10	22.3	195 52.8	S 5	06.3	354 49.2	N11	24.1
6	0	45 44.3	214 31.0	S 2	58.5	246 05.6	N10	21.8	210 54.8	S 5	06.5	9 51.9	N11	24.0
	1	60 46.7	229 30.7	S 2	59.6	261 06.7	N10	21.3	225 56.8	S 5	06.7	24 54.6	N11	24.0
	2	75 49.2	244 30.3	S 3	00.8	276 07.9	N10	20.9	240 58.7	S 5	06.9	39 57.2	N11	23.9
	3	90 51.7	259 29.9	S 3	02.0	291 09.0	N10	20.4	256 00.7	S 5	07.1	54 59.9	N11	23.9
	4	105 54.1	274 29.5	S 3	03.1	306 10.1	N10	19.9	271 02.7	S 5	07.3	70 02.5	N11	23.8
M	5	120 56.6	289 29.2	S 3	04.3	321 11.3	N10	19.4	286 04.7	S 5	07.5	85 05.2	N11	23.7
O														
N	6	135 59.1	304 28.8	S 3	05.5	336 12.4	N10	18.9	301 06.7	S 5	07.7	100 07.8	N11	23.7
D	7	151 01.5	319 28.4	S 3	06.6	351 13.6	N10	18.4	316 08.7	S 5	07.9	115 10.5	N11	23.6
A	8	166 04.0	334 28.1	S 3	07.8	6 14.7	N10	17.9	331 10.7	S 5	08.0	130 13.2	N11	23.6
Y	9	181 06.5	349 27.7	S 3	08.9	21 15.9	N10	17.4	346 12.7	S 5	08.2	145 15.8	N11	23.5
	10	196 08.9	4 27.3	S 3	10.1	36 17.0	N10	17.0	1 14.7	S 5	08.4	160 18.5	N11	23.4
	11	211 11.4	19 27.0	S 3	11.3	51 18.2	N10	16.5	16 16.7	S 5	08.6	175 21.1	N11	23.4
	12	226 13.8	34 26.6	S 3	12.4	66 19.3	N10	16.0	31 18.7	S 5	08.8	190 23.8	N11	23.3
	13	241 16.3	49 26.2	S 3	13.6	81 20.5	N10	15.5	46 20.7	S 5	09.0	205 26.4	N11	23.2
	14	256 18.8	64 25.8	S 3	14.7	96 21.6	N10	15.0	61 22.7	S 5	09.2	220 29.1	N11	23.2
	15	271 21.2	79 25.5	S 3	15.9	111 22.8	N10	14.5	76 24.7	S 5	09.4	235 31.8	N11	23.1
	16	286 23.7	94 25.1	S 3	17.1	126 23.9	N10	14.0	91 26.7	S 5	09.6	250 34.4	N11	23.1
	17	301 26.2	109 24.7	S 3	18.2	141 25.1	N10	13.5	106 28.6	S 5	09.8	265 37.1	N11	23.0
	18	316 28.6	124 24.3	S 3	19.4	156 26.2	N10	13.0	121 30.6	S 5	10.0	280 39.7	N11	22.9
	19	331 31.1	139 24.0	S 3	20.6	171 27.4	N10	12.6	136 32.6	S 5	10.2	295 42.4	N11	22.9
	20	346 33.6	154 23.6	S 3	21.7	186 28.5	N10	12.1	151 34.6	S 5	10.3	310 45.0	N11	22.8
	21	1 36.0	169 23.2	S 3	22.9	201 29.7	N10	11.6	166 36.6	S 5	10.5	325 47.7	N11	22.8
	22	16 38.5	184 22.9	S 3	24.0	216 30.8	N10	11.1	181 38.6	S 5	10.7	340 50.3	N11	22.7
	23	31 41.0	199 22.5	S 3	25.2	231 32.0	N10	10.6	196 40.6	S 5	10.9	355 53.0	N11	22.6
7	0	46 43.4	214 22.1	S 3	26.4	246 33.1	N10	10.1	211 42.6	S 5	11.1	10 55.7	N11	22.6
	1	61 45.9	229 21.7	S 3	27.5	261 34.3	N10	09.6	226 44.6	S 5	11.3	25 58.3	N11	22.5
	2	76 48.3	244 21.4	S 3	28.7	276 35.4	N10	09.1	241 46.6	S 5	11.5	41 01.0	N11	22.5
	3	91 50.8	259 21.0	S 3	29.8	291 36.6	N10	08.7	256 48.6	S 5	11.7	56 03.6	N11	22.4
	4	106 53.3	274 20.6	S 3	31.0	306 37.7	N10	08.2	271 50.6	S 5	11.9	71 06.3	N11	22.3
T	5	121 55.7	289 20.2	S 3	32.2	321 38.9	N10	07.7	286 52.6	S 5	12.1	86 08.9	N11	22.3
U														
E	6	136 58.2	304 19.9	S 3	33.3	336 40.1	N10	07.2	301 54.6	S 5	12.2	101 11.6	N11	22.2
S	7	152 00.7	319 19.5	S 3	34.5	351 41.2	N10	06.7	316 56.6	S 5	12.4	116 14.3	N11	22.1
D	8	167 03.1	334 19.1	S 3	35.7	6 42.4	N10	06.2	331 58.6	S 5	12.6	131 16.9	N11	22.1
A	9	182 05.6	349 18.7	S 3	36.8	21 43.5	N10	05.7	347 00.6	S 5	12.8	146 19.6	N11	22.0
Y	10	197 08.1	4 18.4	S 3	38.0	36 44.7	N10	05.2	2 02.6	S 5	13.0	161 22.2	N11	22.0
	11	212 10.5	19 18.0	S 3	39.1	51 45.8	N10	04.8	17 04.6	S 5	13.2	176 24.9	N11	21.9
	12	227 13.0	34 17.6	S 3	40.3	66 47.0	N10	04.3	32 06.6	S 5	13.4	191 27.5	N11	21.8
	13	242 15.5	49 17.2	S 3	41.5	81 48.1	N10	03.8	47 08.6	S 5	13.6	206 30.2	N11	21.8
	14	257 17.9	64 16.9	S 3	42.6	96 49.3	N10	03.3	62 10.5	S 5	13.8	221 32.9	N11	21.7
	15	272 20.4	79 16.5	S 3	43.8	111 50.4	N10	02.8	77 12.5	S 5	14.0	236 35.5	N11	21.7
	16	287 22.8	94 16.1	S 3	44.9	126 51.6	N10	02.3	92 14.5	S 5	14.2	251 38.2	N11	21.6
	17	302 25.3	109 15.7	S 3	46.1	141 52.8	N10	01.8	107 16.5	S 5	14.3	266 40.8	N11	21.5
	18	317 27.8	124 15.4	S 3	47.3	156 53.9	N10	01.3	122 18.5	S 5	14.5	281 43.5	N11	21.5
	19	332 30.2	139 15.0	S 3	48.4	171 55.1	N10	00.9	137 20.5	S 5	14.7	296 46.1	N11	21.4
	20	347 32.7	154 14.6	S 3	49.6	186 56.2	N10	00.4	152 22.5	S 5	14.9	311 48.8	N11	21.4
	21	2 35.2	169 14.2	S 3	50.7	201 57.4	N 9	59.9	167 24.5	S 5	15.1	326 51.4	N11	21.3
	22	17 37.6	184 13.8	S 3	51.9	216 58.5	N 9	59.4	182 26.5	S 5	15.3	341 54.1	N11	21.2
	23	32 40.1	199 13.5	S 3	53.1	231 59.7	N 9	58.9	197 28.5	S 5	15.5	356 56.8	N11	21.2
			v -0.4	d	1.2	v 1.1	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
5 0	184 06.1	S15 46.1	333 21.4	8.3	N25 05.4	1.8	56.1
1	199 06.1	S15 46.9	347 48.6	8.3	N25 07.1	1.6	56.1
2	214 06.1	S15 47.7	2 15.9	8.3	N25 08.5	1.5	56.1
3	229 06.1	S15 48.4	16 43.1	8.2	N25 09.9	1.3	56.1
4	244 06.1	S15 49.2	31 10.3	8.2	N25 11.1	1.2	56.1
S 5	259 06.0	S15 49.9	45 37.4	8.1	N25 12.1	1.1	56.2
U							
N 6	274 06.0	S15 50.7	60 04.6	8.1	N25 13.1	0.9	56.2
D 7	289 06.0	S15 51.4	74 31.6	8.1	N25 13.9	0.8	56.2
A 8	304 06.0	S15 52.2	88 58.7	8.1	N25 14.5	0.6	56.2
Y 9	319 06.0	S15 52.9	103 25.7	8.0	N25 15.0	0.5	56.3
10	334 05.9	S15 53.7	117 52.7	8.0	N25 15.4	0.4	56.3
11	349 05.9	S15 54.4	132 19.7	8.0	N25 15.6	0.2	56.3
12	4 05.9	S15 55.2	146 46.6	7.9	N25 15.7	0.1	56.3
13	19 05.9	S15 55.9	161 13.6	7.9	N25 15.6	0.1	56.3
14	34 05.9	S15 56.7	175 40.5	7.9	N25 15.4	0.2	56.4
15	49 05.8	S15 57.4	190 07.4	7.9	N25 15.0	0.3	56.4
16	64 05.8	S15 58.2	204 34.2	7.9	N25 14.6	0.5	56.4
17	79 05.8	S15 58.9	219 01.1	7.8	N25 13.9	0.6	56.4
18	94 05.8	S15 59.7	233 27.9	7.8	N25 13.1	0.8	56.4
19	109 05.7	S16 00.4	247 54.7	7.8	N25 12.2	0.9	56.5
20	124 05.7	S16 01.2	262 21.5	7.8	N25 11.2	1.1	56.5
21	139 05.7	S16 01.9	276 48.3	7.8	N25 10.0	1.2	56.5
22	154 05.7	S16 02.7	291 15.1	7.8	N25 08.6	1.4	56.5
23	169 05.6	S16 03.4	305 41.8	7.8	N25 07.1	1.5	56.5
6 0	184 05.6	S16 04.2	320 08.6	7.8	N25 05.5	1.6	56.6
1	199 05.6	S16 04.9	334 35.3	7.7	N25 03.7	1.8	56.6
2	214 05.6	S16 05.7	349 02.1	7.7	N25 01.8	1.9	56.6
3	229 05.5	S16 06.4	3 28.8	7.7	N24 59.7	2.1	56.6
4	244 05.5	S16 07.1	17 55.6	7.7	N24 57.5	2.2	56.6
M 5	259 05.5	S16 07.9	32 22.3	7.7	N24 55.1	2.4	56.7
O							
N 6	274 05.4	S16 08.6	46 49.0	7.7	N24 52.6	2.5	56.7
D 7	289 05.4	S16 09.4	61 15.8	7.7	N24 50.0	2.6	56.7
A 8	304 05.4	S16 10.1	75 42.5	7.7	N24 47.2	2.8	56.7
Y 9	319 05.4	S16 10.9	90 09.2	7.7	N24 44.3	2.9	56.8
10	334 05.3	S16 11.6	104 36.0	7.7	N24 41.2	3.1	56.8
11	349 05.3	S16 12.3	119 02.7	7.7	N24 38.0	3.2	56.8
12	4 05.3	S16 13.1	133 29.5	7.8	N24 34.6	3.4	56.8
13	19 05.2	S16 13.8	147 56.2	7.8	N24 31.1	3.5	56.8
14	34 05.2	S16 14.6	162 23.0	7.8	N24 27.4	3.6	56.9
15	49 05.2	S16 15.3	176 49.8	7.8	N24 23.7	3.8	56.9
16	64 05.1	S16 16.0	191 16.6	7.8	N24 19.7	3.9	56.9
17	79 05.1	S16 16.8	205 43.4	7.8	N24 15.6	4.1	56.9
18	94 05.1	S16 17.5	220 10.2	7.8	N24 11.4	4.2	57.0
19	109 05.0	S16 18.2	234 37.1	7.8	N24 07.1	4.4	57.0
20	124 05.0	S16 19.0	249 03.9	7.9	N24 02.6	4.5	57.0
21	139 05.0	S16 19.7	263 30.8	7.9	N23 57.9	4.6	57.0
22	154 04.9	S16 20.4	277 57.7	7.9	N23 53.2	4.8	57.0
23	169 04.9	S16 21.2	292 24.6	7.9	N23 48.2	4.9	57.1
7 0	184 04.9	S16 21.9	306 51.5	7.9	N23 43.2	5.1	57.1
1	199 04.8	S16 22.6	321 18.4	7.9	N23 38.0	5.2	57.1
2	214 04.8	S16 23.4	335 45.4	8.0	N23 32.6	5.3	57.1
3	229 04.8	S16 24.1	350 12.4	8.0	N23 27.2	5.5	57.2
4	244 04.7	S16 24.8	4 39.4	8.0	N23 21.6	5.6	57.2
T 5	259 04.7	S16 25.6	19 06.5	8.0	N23 15.8	5.8	57.2
U							
E 6	274 04.6	S16 26.3	33 33.5	8.1	N23 09.9	5.9	57.2
S 7	289 04.6	S16 27.0	48 00.6	8.1	N23 03.9	6.0	57.2
D 8	304 04.6	S16 27.8	62 27.8	8.1	N22 57.7	6.2	57.3
A 9	319 04.5	S16 28.5	76 54.9	8.2	N22 51.4	6.3	57.3
Y 10	334 04.5	S16 29.2	91 22.1	8.2	N22 45.0	6.4	57.3
11	349 04.4	S16 30.0	105 49.3	8.2	N22 38.4	6.6	57.3
12	4 04.4	S16 30.7	120 16.5	8.2	N22 31.8	6.7	57.4
13	19 04.4	S16 31.4	134 43.8	8.3	N22 24.9	6.8	57.4
14	34 04.3	S16 32.1	149 11.1	8.3	N22 18.0	7.0	57.4
15	49 04.3	S16 32.9	163 38.5	8.3	N22 10.9	7.1	57.4
16	64 04.2	S16 33.6	178 05.8	8.4	N22 03.6	7.2	57.5
17	79 04.2	S16 34.3	192 33.3	8.4	N21 56.3	7.4	57.5
18	94 04.2	S16 35.0	207 00.7	8.4	N21 48.8	7.5	57.5
19	109 04.1	S16 35.8	221 28.2	8.5	N21 41.2	7.6	57.5
20	124 04.1	S16 36.5	235 55.7	8.5	N21 33.5	7.7	57.6
21	139 04.0	S16 37.2	250 23.2	8.6	N21 25.6	7.9	57.6
22	154 04.0	S16 37.9	264 50.8	8.6	N21 17.6	8.0	57.6
23	169 03.9	S16 38.7	279 18.5	8.6	N21 09.5	8.1	57.6
	S.D. 16.1	d 0.7	S.D. 15.3		15.5		15.6

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.2
Achernar	335 17.4	S57 05.4
Acrux	172 57.1	S63 15.4
Adhara	255 03.2	S29 00.5
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.8	N55 48.0
Alkaid	152 50.1	N49 10.1
Al Na-ir	27 28.9	S46 49.3
Alnilam	275 34.3	S 1 10.9
Alphard	217 44.7	S 8 47.0
Alphecca	126 01.5	N26 37.1
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.3	S69 04.8
Avior	234 13.2	S59 35.9
Bellatrix	278 19.3	N 6 22.6
Betelgeuse	270 48.5	N 7 24.8
Canopus	263 50.6	S52 42.4
Capella	280 16.9	N46 01.5
Castor	245 53.0	N31 49.3
Deneb	49 23.7	N45 23.4
Denebola	182 22.0	N14 24.6
Diphda	348 44.0	S17 49.6
Dubhe	193 37.7	N61 35.4
Elnath	277 57.7	N28 37.8
Eltanin	90 41.2	N51 29.3
Enif	33 35.6	N10 00.7
Fomalhaut	15 10.9	S29 28.1
Gacrux	171 48.6	S57 16.3
Gienah	175 40.6	S17 42.0
Hadar	148 32.2	S60 30.6
Hamal	327 47.4	N23 36.1
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.5	N74 02.1
Markab	13 26.6	N15 21.9
Menkar	314 02.6	N 4 12.3
Menkent	147 54.3	S36 30.7
Miaplacidus	221 37.4	S69 49.9
Mirfak	308 23.3	N49 57.9
Nunki	75 44.1	S26 15.6
Peacock	53 01.0	S56 38.6
Polaris	314 54.5	N89 22.6
Pollux	243 13.4	N27 57.2
Procyon	244 47.5	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.2	N11 49.5
Rigel	281 00.6	S 8 10.0
Rigil Kent	139 36.8	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.3	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 44.0	S43 32.7
Vega	80 31.4	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
8	0	47 42.6	214 13.1	S 3	54.2	247 00.9	N 9	58.4	212 30.5	S 5	15.7	11 59.4	N11	21.1
	1	62 45.0	229 12.7	S 3	55.4	262 02.0	N 9	57.9	227 32.5	S 5	15.9	27 02.1	N11	21.1
	2	77 47.5	244 12.3	S 3	56.5	277 03.2	N 9	57.4	242 34.5	S 5	16.0	42 04.7	N11	21.0
	3	92 50.0	259 11.9	S 3	57.7	292 04.3	N 9	57.0	257 36.5	S 5	16.2	57 07.4	N11	20.9
	4	107 52.4	274 11.6	S 3	58.9	307 05.5	N 9	56.5	272 38.5	S 5	16.4	72 10.0	N11	20.9
W	5	122 54.9	289 11.2	S 4	00.0	322 06.6	N 9	56.0	287 40.5	S 5	16.6	87 12.7	N11	20.8
E														
D	6	137 57.3	304 10.8	S 4	01.2	337 07.8	N 9	55.5	302 42.5	S 5	16.8	102 15.3	N11	20.7
N	7	152 59.8	319 10.4	S 4	02.3	352 09.0	N 9	55.0	317 44.5	S 5	17.0	117 18.0	N11	20.7
E	8	168 02.3	334 10.1	S 4	03.5	7 10.1	N 9	54.5	332 46.5	S 5	17.2	132 20.7	N11	20.6
S	9	183 04.7	349 09.7	S 4	04.7	22 11.3	N 9	54.0	347 48.5	S 5	17.4	147 23.3	N11	20.6
D	10	198 07.2	4 09.3	S 4	05.8	37 12.4	N 9	53.5	2 50.5	S 5	17.6	162 26.0	N11	20.5
A	11	213 09.7	19 08.9	S 4	07.0	52 13.6	N 9	53.0	17 52.5	S 5	17.8	177 28.6	N11	20.4
Y														
	12	228 12.1	34 08.5	S 4	08.1	67 14.8	N 9	52.6	32 54.5	S 5	17.9	192 31.3	N11	20.4
	13	243 14.6	49 08.1	S 4	09.3	82 15.9	N 9	52.1	47 56.5	S 5	18.1	207 33.9	N11	20.3
	14	258 17.1	64 07.8	S 4	10.5	97 17.1	N 9	51.6	62 58.5	S 5	18.3	222 36.6	N11	20.3
	15	273 19.5	79 07.4	S 4	11.6	112 18.2	N 9	51.1	78 00.5	S 5	18.5	237 39.2	N11	20.2
	16	288 22.0	94 07.0	S 4	12.8	127 19.4	N 9	50.6	93 02.5	S 5	18.7	252 41.9	N11	20.1
	17	303 24.4	109 06.6	S 4	13.9	142 20.6	N 9	50.1	108 04.5	S 5	18.9	267 44.6	N11	20.1
	18	318 26.9	124 06.2	S 4	15.1	157 21.7	N 9	49.6	123 06.5	S 5	19.1	282 47.2	N11	20.0
	19	333 29.4	139 05.9	S 4	16.3	172 22.9	N 9	49.1	138 08.5	S 5	19.3	297 49.9	N11	20.0
	20	348 31.8	154 05.5	S 4	17.4	187 24.1	N 9	48.7	153 10.5	S 5	19.5	312 52.5	N11	19.9
	21	3 34.3	169 05.1	S 4	18.6	202 25.2	N 9	48.2	168 12.5	S 5	19.6	327 55.2	N11	19.8
	22	18 36.8	184 04.7	S 4	19.7	217 26.4	N 9	47.7	183 14.4	S 5	19.8	342 57.8	N11	19.8
	23	33 39.2	199 04.3	S 4	20.9	232 27.5	N 9	47.2	198 16.4	S 5	20.0	358 00.5	N11	19.7
9	0	48 41.7	214 03.9	S 4	22.1	247 28.7	N 9	46.7	213 18.4	S 5	20.2	13 03.1	N11	19.7
	1	63 44.2	229 03.6	S 4	23.2	262 29.9	N 9	46.2	228 20.4	S 5	20.4	28 05.8	N11	19.6
	2	78 46.6	244 03.2	S 4	24.4	277 31.0	N 9	45.7	243 22.4	S 5	20.6	43 08.5	N11	19.5
	3	93 49.1	259 02.8	S 4	25.5	292 32.2	N 9	45.2	258 24.4	S 5	20.8	58 11.1	N11	19.5
	4	108 51.6	274 02.4	S 4	26.7	307 33.4	N 9	44.8	273 26.4	S 5	21.0	73 13.8	N11	19.4
T	5	123 54.0	289 02.0	S 4	27.9	322 34.5	N 9	44.3	288 28.4	S 5	21.1	88 16.4	N11	19.4
H														
U	6	138 56.5	304 01.6	S 4	29.0	337 35.7	N 9	43.8	303 30.4	S 5	21.3	103 19.1	N11	19.3
R	7	153 58.9	319 01.2	S 4	30.2	352 36.9	N 9	43.3	318 32.4	S 5	21.5	118 21.7	N11	19.2
S	8	169 01.4	334 00.9	S 4	31.3	7 38.0	N 9	42.8	333 34.4	S 5	21.7	133 24.4	N11	19.2
D	9	184 03.9	349 00.5	S 4	32.5	22 39.2	N 9	42.3	348 36.4	S 5	21.9	148 27.0	N11	19.1
A	10	199 06.3	4 00.1	S 4	33.6	37 40.4	N 9	41.8	3 38.4	S 5	22.1	163 29.7	N11	19.1
Y	11	214 08.8	18 59.7	S 4	34.8	52 41.5	N 9	41.3	18 40.4	S 5	22.3	178 32.3	N11	19.0
	12	229 11.3	33 59.3	S 4	36.0	67 42.7	N 9	40.9	33 42.4	S 5	22.5	193 35.0	N11	18.9
	13	244 13.7	48 58.9	S 4	37.1	82 43.9	N 9	40.4	48 44.4	S 5	22.7	208 37.7	N11	18.9
	14	259 16.2	63 58.5	S 4	38.3	97 45.0	N 9	39.9	63 46.4	S 5	22.8	223 40.3	N11	18.8
	15	274 18.7	78 58.2	S 4	39.4	112 46.2	N 9	39.4	78 48.4	S 5	23.0	238 43.0	N11	18.8
	16	289 21.1	93 57.8	S 4	40.6	127 47.4	N 9	38.9	93 50.4	S 5	23.2	253 45.6	N11	18.7
	17	304 23.6	108 57.4	S 4	41.7	142 48.5	N 9	38.4	108 52.4	S 5	23.4	268 48.3	N11	18.6
	18	319 26.1	123 57.0	S 4	42.9	157 49.7	N 9	37.9	123 54.4	S 5	23.6	283 50.9	N11	18.6
	19	334 28.5	138 56.6	S 4	44.1	172 50.9	N 9	37.4	138 56.4	S 5	23.8	298 53.6	N11	18.5
	20	349 31.0	153 56.2	S 4	45.2	187 52.0	N 9	37.0	153 58.4	S 5	24.0	313 56.2	N11	18.5
	21	4 33.4	168 55.8	S 4	46.4	202 53.2	N 9	36.5	169 00.4	S 5	24.2	328 58.9	N11	18.4
	22	19 35.9	183 55.4	S 4	47.5	217 54.4	N 9	36.0	184 02.4	S 5	24.3	344 01.5	N11	18.3
	23	34 38.4	198 55.1	S 4	48.7	232 55.5	N 9	35.5	199 04.4	S 5	24.5	359 04.2	N11	18.3
10	0	49 40.8	213 54.7	S 4	49.8	247 56.7	N 9	35.0	214 06.4	S 5	24.7	14 06.9	N11	18.2
	1	64 43.3	228 54.3	S 4	51.0	262 57.9	N 9	34.5	229 08.4	S 5	24.9	29 09.5	N11	18.2
	2	79 45.8	243 53.9	S 4	52.2	277 59.0	N 9	34.0	244 10.4	S 5	25.1	44 12.2	N11	18.1
	3	94 48.2	258 53.5	S 4	53.3	293 00.2	N 9	33.5	259 12.4	S 5	25.3	59 14.8	N11	18.0
	4	109 50.7	273 53.1	S 4	54.5	308 01.4	N 9	33.1	274 14.4	S 5	25.5	74 17.5	N11	18.0
F	5	124 53.2	288 52.7	S 4	55.6	323 02.5	N 9	32.6	289 16.4	S 5	25.7	89 20.1	N11	17.9
R														
I	6	139 55.6	303 52.3	S 4	56.8	338 03.7	N 9	32.1	304 18.4	S 5	25.8	104 22.8	N11	17.9
D	7	154 58.1	318 51.9	S 4	57.9	353 04.9	N 9	31.6	319 20.4	S 5	26.0	119 25.4	N11	17.8
A	8	170 00.5	333 51.5	S 4	59.1	8 06.1	N 9	31.1	334 22.4	S 5	26.2	134 28.1	N11	17.7
Y	9	185 03.0	348 51.2	S 5	00.2	23 07.2	N 9	30.6	349 24.4	S 5	26.4	149 30.7	N11	17.7
	10	200 05.5	3 50.8	S 5	01.4	38 08.4	N 9	30.1	4 26.4	S 5	26.6	164 33.4	N11	17.6
	11	215 07.9	18 50.4	S 5	02.6	53 09.6	N 9	29.7	19 28.4	S 5	26.8	179 36.0	N11	17.6
	12	230 10.4	33 50.0	S 5	03.7	68 10.7	N 9	29.2	34 30.4	S 5	27.0	194 38.7	N11	17.5
	13	245 12.9	48 49.6	S 5	04.9	83 11.9	N 9	28.7	49 32.4	S 5	27.2	209 41.4	N11	17.4
	14	260 15.3	63 49.2	S 5	06.0	98 13.1	N 9	28.2	64 34.4	S 5	27.3	224 44.0	N11	17.4
	15	275 17.8	78 48.8	S 5	07.2	113 14.3	N 9	27.7	79 36.4	S 5	27.5	239 46.7	N11	17.3
	16	290 20.3	93 48.4	S 5	08.3	128 15.4	N 9	27.2	94 38.4	S 5	27.7	254 49.3	N11	17.3
	17	305 22.7	108 48.0	S 5	09.5	143 16.6	N 9	26.7	109 40.4	S 5	27.9	269 52.0	N11	17.2
	18	320 25.2	123 47.6	S 5	10.6	158 17.8	N 9	26.2	124 42.4	S 5	28.1	284 54.6	N11	17.2
	19	335 27.7	138 47.2	S 5	11.8	173 19.0	N 9	25.8	139 44.4	S 5	28.3	299 57.3	N11	17.1
	20	350 30.1	153 46.8	S 5	13.0	188 20.1	N 9	25.3	154 46.4	S 5	28.5	314 59.9	N11	17.0
	21	5 32.6	168 46.4	S 5	14.1	203 21.3	N 9	24.8	169 48.4	S 5	28.6	330 02.6	N11	17.0
	22	20 35.0	183 46.0	S 5	15.3	218 22.5	N 9	24.3	184 50.4	S 5	28.8	345 05.2	N11	16.9
	23	35 37.5	198 45.7	S 5	16.4	233 23.7	N 9	23.8	199 52.5	S 5	29.0	0 07.9	N11	16.9
			v -0.4	d	1.2	v 1.2	d	0.5	v 2.0	d	0.2	v 2.7	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
8	0	184 03.9	S16 39.4	293 46.1	8.7	N21 01.2	8.2	57.6
	1	199 03.9	S16 40.1	308 13.8	8.7	N20 52.9	8.4	57.7
	2	214 03.8	S16 40.8	322 41.6	8.7	N20 44.4	8.5	57.7
	3	229 03.8	S16 41.6	337 09.3	8.8	N20 35.8	8.6	57.7
	4	244 03.7	S16 42.3	351 37.2	8.8	N20 27.0	8.7	57.7
W	5	259 03.7	S16 43.0	6 05.0	8.9	N20 18.2	8.9	57.8
E								
D	6	274 03.6	S16 43.7	20 32.9	8.9	N20 09.2	9.0	57.8
N	7	289 03.6	S16 44.4	35 00.9	8.9	N20 00.1	9.1	57.8
E	8	304 03.5	S16 45.2	49 28.8	9.0	N19 50.9	9.2	57.8
S	9	319 03.5	S16 45.9	63 56.9	9.0	N19 41.5	9.3	57.9
D	10	334 03.4	S16 46.6	78 24.9	9.1	N19 32.1	9.5	57.9
A	11	349 03.4	S16 47.3	92 53.0	9.1	N19 22.5	9.6	57.9
Y								
	12	4 03.3	S16 48.0	107 21.2	9.1	N19 12.8	9.7	57.9
	13	19 03.3	S16 48.7	121 49.3	9.2	N19 03.0	9.8	58.0
	14	34 03.2	S16 49.5	136 17.6	9.2	N18 53.1	9.9	58.0
	15	49 03.2	S16 50.2	150 45.8	9.3	N18 43.1	10.0	58.0
	16	64 03.1	S16 50.9	165 14.1	9.3	N18 33.0	10.1	58.0
	17	79 03.1	S16 51.6	179 42.5	9.3	N18 22.7	10.2	58.0
	18	94 03.0	S16 52.3	194 10.9	9.4	N18 12.4	10.4	58.1
	19	109 03.0	S16 53.0	208 39.3	9.4	N18 01.9	10.5	58.1
	20	124 02.9	S16 53.7	223 07.8	9.5	N17 51.4	10.6	58.1
	21	139 02.9	S16 54.5	237 36.3	9.5	N17 40.7	10.7	58.1
	22	154 02.8	S16 55.2	252 04.9	9.6	N17 29.9	10.8	58.2
	23	169 02.8	S16 55.9	266 33.4	9.6	N17 19.0	10.9	58.2
9	0	184 02.7	S16 56.6	281 02.1	9.6	N17 08.0	11.0	58.2
	1	199 02.7	S16 57.3	295 30.8	9.7	N16 56.9	11.1	58.2
	2	214 02.6	S16 58.0	309 59.5	9.7	N16 45.8	11.2	58.3
	3	229 02.6	S16 58.7	324 28.2	9.8	N16 34.5	11.3	58.3
	4	244 02.5	S16 59.4	338 57.0	9.8	N16 23.1	11.4	58.3
T	5	259 02.4	S17 00.1	353 25.8	9.8	N16 11.6	11.5	58.3
H								
U	6	274 02.4	S17 00.8	7 54.7	9.9	N15 60.0	11.6	58.4
R	7	289 02.3	S17 01.5	22 23.6	9.9	N15 48.3	11.7	58.4
S	8	304 02.3	S17 02.3	36 52.6	9.9	N15 36.5	11.8	58.4
D	9	319 02.2	S17 03.0	51 21.6	10.0	N15 24.7	11.9	58.4
A	10	334 02.2	S17 03.7	65 50.6	10.0	N15 12.7	12.0	58.5
Y	11	349 02.1	S17 04.4	80 19.6	10.1	N15 00.6	12.1	58.5
	12	4 02.1	S17 05.1	94 48.7	10.1	N14 48.5	12.1	58.5
	13	19 02.0	S17 05.8	109 17.9	10.1	N14 36.2	12.2	58.5
	14	34 01.9	S17 06.5	123 47.0	10.2	N14 23.9	12.3	58.6
	15	49 01.9	S17 07.2	138 16.2	10.2	N14 11.5	12.4	58.6
	16	64 01.8	S17 07.9	152 45.5	10.2	N13 59.0	12.5	58.6
	17	79 01.8	S17 08.6	167 14.7	10.3	N13 46.4	12.6	58.6
	18	94 01.7	S17 09.3	181 44.0	10.3	N13 33.7	12.7	58.6
	19	109 01.6	S17 10.0	196 13.4	10.3	N13 21.0	12.8	58.7
	20	124 01.6	S17 10.7	210 42.7	10.4	N13 08.2	12.8	58.7
	21	139 01.5	S17 11.4	225 12.1	10.4	N12 55.2	12.9	58.7
	22	154 01.5	S17 12.1	239 41.6	10.4	N12 42.2	13.0	58.7
	23	169 01.4	S17 12.8	254 11.0	10.5	N12 29.2	13.1	58.8
10	0	184 01.3	S17 13.5	268 40.5	10.5	N12 16.0	13.2	58.8
	1	199 01.3	S17 14.2	283 10.0	10.5	N12 02.8	13.2	58.8
	2	214 01.2	S17 14.9	297 39.6	10.5	N11 49.5	13.3	58.8
	3	229 01.1	S17 15.6	312 09.1	10.6	N11 36.1	13.4	58.9
	4	244 01.1	S17 16.3	326 38.7	10.6	N11 22.7	13.4	58.9
F	5	259 01.0	S17 17.0	341 08.4	10.6	N11 09.1	13.5	58.9
R								
I	6	274 00.9	S17 17.7	355 38.0	10.6	N10 55.6	13.6	58.9
D	7	289 00.9	S17 18.4	10 07.7	10.7	N10 41.9	13.7	59.0
A	8	304 00.8	S17 19.1	24 37.4	10.7	N10 28.2	13.7	59.0
Y	9	319 00.7	S17 19.8	39 07.1	10.7	N10 14.4	13.8	59.0
	10	334 00.7	S17 20.5	53 36.8	10.7	N10 00.5	13.9	59.0
	11	349 00.6	S17 21.1	68 06.6	10.8	N 9 46.6	13.9	59.0
	12	4 00.5	S17 21.8	82 36.4	10.8	N 9 32.6	14.0	59.1
	13	19 00.5	S17 22.5	97 06.2	10.8	N 9 18.5	14.0	59.1
	14	34 00.4	S17 23.2	111 36.0	10.8	N 9 04.4	14.1	59.1
	15	49 00.3	S17 23.9	126 05.8	10.8	N 8 50.3	14.2	59.1
	16	64 00.3	S17 24.6	140 35.7	10.9	N 8 36.0	14.2	59.2
	17	79 00.2	S17 25.3	155 05.5	10.9	N 8 21.8	14.3	59.2
	18	94 00.1	S17 26.0	169 35.4	10.9	N 8 07.4	14.3	59.2
	19	109 00.1	S17 26.7	184 05.3	10.9	N 7 53.0	14.4	59.2
	20	124 00.0	S17 27.4	198 35.2	10.9	N 7 38.6	14.4	59.2
	21	138 59.9	S17 28.1	213 05.1	10.9	N 7 24.1	14.5	59.3
	22	153 59.9	S17 28.7	227 35.1	10.9	N 7 09.5	14.5	59.3
	23	168 59.8	S17 29.4	242 05.0	10.9	N 6 54.9	14.6	59.3
		S.D. 16.2	d 0.7	S.D. 15.8		15.9		16.1

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.3
Achernar	335 17.4	S57 05.4
Acrux	172 57.0	S63 15.3
Adhara	255 03.2	S29 00.5
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.8	N55 48.0
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 28.9	S46 49.3
Alnilam	275 34.3	S 1 10.9
Alphard	217 44.7	S 8 47.0
Alphecca	126 01.5	N26 37.1
Alpheratz	357 31.3	N29 15.3
Altair	61 57.0	N 8 56.9
Ankaa	353 03.8	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.4	S69 04.8
Avior	234 13.2	S59 35.9
Bellatrix	278 19.3	N 6 22.6
Betelgeuse	270 48.5	N 7 24.8
Canopus	263 50.6	S52 42.5
Capella	280 16.9	N46 01.5
Castor	245 52.9	N31 49.3
Deneb	49 23.7	N45 23.4
Denebola	182 22.0	N14 24.6
Diphda	348 44.0	S17 49.6
Dubhe	193 37.6	N61 35.3
Elnath	277 57.6	N28 37.8
Eltanin	90 41.2	N51 29.3
Enif	33 35.6	N10 00.7
Fomalhaut	15 11.0	S29 28.1
Gacrux	171 48.6	S57 16.3
Gienah	175 40.6	S17 42.0
Hadar	148 32.2	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.5	N74 02.1
Markab	13 26.6	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.3	S36 30.7
Miaplacidus	221 37.4	S69 49.9
Mirfak	308 23.3	N49 57.9
Nunki	75 44.1	S26 15.6
Peacock	53 01.0	S56 38.6
Polaris	314 54.5	N89 22.7
Pollux	243 13.4	N27 57.2
Procyon	244 47.4	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.2	N11 49.5
Rigel	281 00.6	S 8 10.0
Rigil Kent	139 36.7	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.3	S16 45.2
Spica	158 19.3	S11 18.7
Suhail	222 43.9	S43 32.7
Vega	80 31.4	N38 48.9
Zuben-ubi	136 53.9	S16 09.6

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
11	0	50 40.0	213 45.3	S 5 17.6	248 24.8	N 9 23.3	214 54.5	S 5 29.2	15 10.5	N11 16.8
	1	65 42.4	228 44.9	S 5 18.7	263 26.0	N 9 22.8	229 56.5	S 5 29.4	30 13.2	N11 16.7
	2	80 44.9	243 44.5	S 5 19.9	278 27.2	N 9 22.3	244 58.5	S 5 29.6	45 15.8	N11 16.7
	3	95 47.4	258 44.1	S 5 21.0	293 28.4	N 9 21.9	260 00.5	S 5 29.8	60 18.5	N11 16.6
	4	110 49.8	273 43.7	S 5 22.2	308 29.5	N 9 21.4	275 02.5	S 5 29.9	75 21.1	N11 16.6
S	5	125 52.3	288 43.3	S 5 23.3	323 30.7	N 9 20.9	290 04.5	S 5 30.1	90 23.8	N11 16.5
A										
T	6	140 54.8	303 42.9	S 5 24.5	338 31.9	N 9 20.4	305 06.5	S 5 30.3	105 26.5	N11 16.4
U	7	155 57.2	318 42.5	S 5 25.6	353 33.1	N 9 19.9	320 08.5	S 5 30.5	120 29.1	N11 16.4
R	8	170 59.7	333 42.1	S 5 26.8	8 34.2	N 9 19.4	335 10.5	S 5 30.7	135 31.8	N11 16.3
D	9	186 02.2	348 41.7	S 5 28.0	23 35.4	N 9 18.9	350 12.5	S 5 30.9	150 34.4	N11 16.3
A	10	201 04.6	3 41.3	S 5 29.1	38 36.6	N 9 18.5	5 14.5	S 5 31.1	165 37.1	N11 16.2
Y	11	216 07.1	18 40.9	S 5 30.3	53 37.8	N 9 18.0	20 16.5	S 5 31.3	180 39.7	N11 16.1
	12	231 09.5	33 40.5	S 5 31.4	68 38.9	N 9 17.5	35 18.5	S 5 31.4	195 42.4	N11 16.1
	13	246 12.0	48 40.1	S 5 32.6	83 40.1	N 9 17.0	50 20.5	S 5 31.6	210 45.0	N11 16.0
	14	261 14.5	63 39.7	S 5 33.7	98 41.3	N 9 16.5	65 22.5	S 5 31.8	225 47.7	N11 16.0
	15	276 16.9	78 39.3	S 5 34.9	113 42.5	N 9 16.0	80 24.5	S 5 32.0	240 50.3	N11 15.9
	16	291 19.4	93 38.9	S 5 36.0	128 43.7	N 9 15.5	95 26.5	S 5 32.2	255 53.0	N11 15.9
	17	306 21.9	108 38.5	S 5 37.2	143 44.8	N 9 15.1	110 28.5	S 5 32.4	270 55.6	N11 15.8
	18	321 24.3	123 38.1	S 5 38.3	158 46.0	N 9 14.6	125 30.5	S 5 32.5	285 58.3	N11 15.7
	19	336 26.8	138 37.7	S 5 39.5	173 47.2	N 9 14.1	140 32.5	S 5 32.7	301 00.9	N11 15.7
	20	351 29.3	153 37.3	S 5 40.6	188 48.4	N 9 13.6	155 34.5	S 5 32.9	316 03.6	N11 15.6
	21	6 31.7	168 36.9	S 5 41.8	203 49.6	N 9 13.1	170 36.5	S 5 33.1	331 06.2	N11 15.6
	22	21 34.2	183 36.5	S 5 42.9	218 50.7	N 9 12.6	185 38.5	S 5 33.3	346 08.9	N11 15.5
	23	36 36.6	198 36.1	S 5 44.1	233 51.9	N 9 12.1	200 40.5	S 5 33.5	1 11.5	N11 15.4
12	0	51 39.1	213 35.7	S 5 45.2	248 53.1	N 9 11.6	215 42.5	S 5 33.7	16 14.2	N11 15.4
	1	66 41.6	228 35.3	S 5 46.4	263 54.3	N 9 11.2	230 44.5	S 5 33.8	31 16.8	N11 15.3
	2	81 44.0	243 34.9	S 5 47.5	278 55.5	N 9 10.7	245 46.5	S 5 34.0	46 19.5	N11 15.3
	3	96 46.5	258 34.5	S 5 48.7	293 56.6	N 9 10.2	260 48.5	S 5 34.2	61 22.1	N11 15.2
	4	111 49.0	273 34.1	S 5 49.8	308 57.8	N 9 09.7	275 50.5	S 5 34.4	76 24.8	N11 15.1
S	5	126 51.4	288 33.7	S 5 51.0	323 59.0	N 9 09.2	290 52.5	S 5 34.6	91 27.4	N11 15.1
U										
N	6	141 53.9	303 33.3	S 5 52.1	339 00.2	N 9 08.7	305 54.6	S 5 34.8	106 30.1	N11 15.0
D	7	156 56.4	318 32.9	S 5 53.3	354 01.4	N 9 08.2	320 56.6	S 5 35.0	121 32.8	N11 15.0
A	8	171 58.8	333 32.5	S 5 54.4	9 02.6	N 9 07.8	335 58.6	S 5 35.1	136 35.4	N11 14.9
Y	9	187 01.3	348 32.1	S 5 55.6	24 03.7	N 9 07.3	351 00.6	S 5 35.3	151 38.1	N11 14.9
	10	202 03.8	3 31.7	S 5 56.7	39 04.9	N 9 06.8	6 02.6	S 5 35.5	166 40.7	N11 14.8
	11	217 06.2	18 31.3	S 5 57.9	54 06.1	N 9 06.3	21 04.6	S 5 35.7	181 43.4	N11 14.7
	12	232 08.7	33 30.9	S 5 59.0	69 07.3	N 9 05.8	36 06.6	S 5 35.9	196 46.0	N11 14.7
	13	247 11.1	48 30.5	S 6 00.2	84 08.5	N 9 05.3	51 08.6	S 5 36.1	211 48.7	N11 14.6
	14	262 13.6	63 30.1	S 6 01.3	99 09.7	N 9 04.8	66 10.6	S 5 36.2	226 51.3	N11 14.6
	15	277 16.1	78 29.7	S 6 02.5	114 10.8	N 9 04.4	81 12.6	S 5 36.4	241 54.0	N11 14.5
	16	292 18.5	93 29.2	S 6 03.6	129 12.0	N 9 03.9	96 14.6	S 5 36.6	256 56.6	N11 14.5
	17	307 21.0	108 28.8	S 6 04.8	144 13.2	N 9 03.4	111 16.6	S 5 36.8	271 59.3	N11 14.4
	18	322 23.5	123 28.4	S 6 05.9	159 14.4	N 9 02.9	126 18.6	S 5 37.0	287 01.9	N11 14.3
	19	337 25.9	138 28.0	S 6 07.1	174 15.6	N 9 02.4	141 20.6	S 5 37.2	302 04.6	N11 14.3
	20	352 28.4	153 27.6	S 6 08.2	189 16.8	N 9 01.9	156 22.6	S 5 37.4	317 07.2	N11 14.2
	21	7 30.9	168 27.2	S 6 09.4	204 17.9	N 9 01.4	171 24.6	S 5 37.5	332 09.9	N11 14.2
	22	22 33.3	183 26.8	S 6 10.5	219 19.1	N 9 01.0	186 26.6	S 5 37.7	347 12.5	N11 14.1
	23	37 35.8	198 26.4	S 6 11.7	234 20.3	N 9 00.5	201 28.6	S 5 37.9	2 15.2	N11 14.0
13	0	52 38.2	213 26.0	S 6 12.8	249 21.5	N 8 60.0	216 30.6	S 5 38.1	17 17.8	N11 14.0
	1	67 40.7	228 25.6	S 6 13.9	264 22.7	N 8 59.5	231 32.7	S 5 38.3	32 20.5	N11 13.9
	2	82 43.2	243 25.2	S 6 15.1	279 23.9	N 8 59.0	246 34.7	S 5 38.5	47 23.1	N11 13.9
	3	97 45.6	258 24.8	S 6 16.2	294 25.1	N 8 58.5	261 36.7	S 5 38.6	62 25.8	N11 13.8
	4	112 48.1	273 24.4	S 6 17.4	309 26.3	N 8 58.0	276 38.7	S 5 38.8	77 28.4	N11 13.8
M	5	127 50.6	288 24.0	S 6 18.5	324 27.4	N 8 57.6	291 40.7	S 5 39.0	92 31.1	N11 13.7
O										
N	6	142 53.0	303 23.5	S 6 19.7	339 28.6	N 8 57.1	306 42.7	S 5 39.2	107 33.7	N11 13.6
D	7	157 55.5	318 23.1	S 6 20.8	354 29.8	N 8 56.6	321 44.7	S 5 39.4	122 36.4	N11 13.6
A	8	172 58.0	333 22.7	S 6 22.0	9 31.0	N 8 56.1	336 46.7	S 5 39.6	137 39.0	N11 13.5
Y	9	188 00.4	348 22.3	S 6 23.1	24 32.2	N 8 55.6	351 48.7	S 5 39.7	152 41.7	N11 13.5
	10	203 02.9	3 21.9	S 6 24.3	39 33.4	N 8 55.1	6 50.7	S 5 39.9	167 44.3	N11 13.4
	11	218 05.4	18 21.5	S 6 25.4	54 34.6	N 8 54.6	21 52.7	S 5 40.1	182 47.0	N11 13.4
	12	233 07.8	33 21.1	S 6 26.6	69 35.8	N 8 54.2	36 54.7	S 5 40.3	197 49.6	N11 13.3
	13	248 10.3	48 20.7	S 6 27.7	84 37.0	N 8 53.7	51 56.7	S 5 40.5	212 52.3	N11 13.2
	14	263 12.7	63 20.3	S 6 28.8	99 38.1	N 8 53.2	66 58.7	S 5 40.7	227 54.9	N11 13.2
	15	278 15.2	78 19.9	S 6 30.0	114 39.3	N 8 52.7	82 00.7	S 5 40.8	242 57.6	N11 13.1
	16	293 17.7	93 19.4	S 6 31.1	129 40.5	N 8 52.2	97 02.8	S 5 41.0	258 00.2	N11 13.1
	17	308 20.1	108 19.0	S 6 32.3	144 41.7	N 8 51.7	112 04.8	S 5 41.2	273 02.9	N11 13.0
	18	323 22.6	123 18.6	S 6 33.4	159 42.9	N 8 51.2	127 06.8	S 5 41.4	288 05.5	N11 12.9
	19	338 25.1	138 18.2	S 6 34.6	174 44.1	N 8 50.8	142 08.8	S 5 41.6	303 08.2	N11 12.9
	20	353 27.5	153 17.8	S 6 35.7	189 45.3	N 8 50.3	157 10.8	S 5 41.8	318 10.8	N11 12.8
	21	8 30.0	168 17.4	S 6 36.8	204 46.5	N 8 49.8	172 12.8	S 5 41.9	333 13.5	N11 12.8
	22	23 32.5	183 17.0	S 6 38.0	219 47.7	N 8 49.3	187 14.8	S 5 42.1	348 16.1	N11 12.7
	23	38 34.9	198 16.5	S 6 39.1	234 48.9	N 8 48.8	202 16.8	S 5 42.3	3 18.8	N11 12.7
			v -0.4	d 1.1	v 1.2	d 0.5	v 2.0	d 0.2	v 2.7	d 0.1

G.M.T		SUN				MOON						STARS		
d	h	GHA		Dec		GHA	v		Dec	d	HP	Name	SHA	Dec
		°	'	°	'	°	'	'	° '	'	'		° '	° '
11	0	183	59.7	S17	30.1	256	35.0	10.9	N 6 40.3	14.6	59.3	Acamar	315 09.0	S40 11.3
	1	198	59.6	S17	30.8	271	04.9	11.0	N 6 25.6	14.7	59.4	Achernar	335 17.4	S57 05.4
	2	213	59.6	S17	31.5	285	34.9	11.0	N 6 10.9	14.7	59.4	Acrux	172 57.0	S63 15.3
	3	228	59.5	S17	32.2	300	04.8	11.0	N 5 56.1	14.8	59.4	Adhara	255 03.2	S29 00.5
	4	243	59.4	S17	32.9	314	34.8	11.0	N 5 41.3	14.8	59.4	Albireo	67 01.7	N28 01.5
S	5	258	59.4	S17	33.5	329	04.8	11.0	N 5 26.4	14.9	59.4			
A												Aldebaran	290 35.7	N16 34.1
T	6	273	59.3	S17	34.2	343	34.8	11.0	N 5 11.5	14.9	59.5	Alioth	166 10.8	N55 48.0
U	7	288	59.2	S17	34.9	358	04.8	11.0	N 4 56.5	14.9	59.5	Alkaid	152 50.1	N49 10.0
R	8	303	59.1	S17	35.6	12	34.7	11.0	N 4 41.6	15.0	59.5	Al Na-ir	27 29.0	S46 49.3
D	9	318	59.1	S17	36.3	27	04.7	11.0	N 4 26.5	15.0	59.5	Alnilam	275 34.3	S 1 11.0
A	10	333	59.0	S17	36.9	41	34.7	11.0	N 4 11.5	15.1	59.5			
Y	11	348	58.9	S17	37.6	56	04.7	11.0	N 3 56.4	15.1	59.6	Alphard	217 44.6	S 8 47.0
												Alphecca	126 01.5	N26 37.1
	12	3	58.8	S17	38.3	70	34.7	11.0	N 3 41.3	15.1	59.6	Alpheratz	357 31.3	N29 15.3
	13	18	58.8	S17	39.0	85	04.6	11.0	N 3 26.2	15.1	59.6	Altair	61 57.1	N 8 56.9
	14	33	58.7	S17	39.7	99	34.6	11.0	N 3 11.0	15.2	59.6	Ankaa	353 03.8	S42 09.0
	15	48	58.6	S17	40.3	114	04.6	11.0	N 2 55.8	15.2	59.6			
	16	63	58.5	S17	41.0	128	34.5	10.9	N 2 40.6	15.2	59.7	Antares	112 12.4	S26 29.7
	17	78	58.4	S17	41.7	143	04.4	10.9	N 2 25.3	15.3	59.7	Arcturus	145 45.4	N19 01.9
												Atria	107 04.4	S69 04.8
	18	93	58.4	S17	42.4	157	34.4	10.9	N 2 10.0	15.3	59.7	Avior	234 13.2	S59 35.9
	19	108	58.3	S17	43.1	172	04.3	10.9	N 1 54.7	15.3	59.7	Bellatrix	278 19.2	N 6 22.6
	20	123	58.2	S17	43.7	186	34.2	10.9	N 1 39.4	15.3	59.7			
	21	138	58.1	S17	44.4	201	04.1	10.9	N 1 24.1	15.3	59.7	Betelgeuse	270 48.4	N 7 24.8
	22	153	58.0	S17	45.1	215	34.0	10.9	N 1 08.7	15.4	59.8	Canopus	263 50.6	S52 42.5
	23	168	58.0	S17	45.8	230	03.8	10.9	N 0 53.3	15.4	59.8	Capella	280 16.9	N46 01.5
												Castor	245 52.9	N31 49.3
12	0	183	57.9	S17	46.4	244	33.7	10.8	N 0 38.0	15.4	59.8	Deneb	49 23.7	N45 23.4
	1	198	57.8	S17	47.1	259	03.5	10.8	N 0 22.6	15.4	59.8			
	2	213	57.7	S17	47.8	273	33.3	10.8	N 0 07.2	15.4	59.8	Denebola	182 22.0	N14 24.6
	3	228	57.6	S17	48.4	288	03.1	10.8	S 0 08.3	15.4	59.8	Diphda	348 44.0	S17 49.6
	4	243	57.6	S17	49.1	302	32.9	10.8	S 0 23.7	15.4	59.9	Dubhe	193 37.6	N61 35.3
S	5	258	57.5	S17	49.8	317	02.6	10.7	S 0 39.1	15.4	59.9	Elnath	277 57.6	N28 37.8
U												Eltanin	90 41.2	N51 29.3
N	6	273	57.4	S17	50.5	331	32.4	10.7	S 0 54.6	15.4	59.9			
D	7	288	57.3	S17	51.1	346	02.1	10.7	S 1 10.0	15.4	59.9	Enif	33 35.7	N10 00.7
A	8	303	57.2	S17	51.8	0	31.7	10.7	S 1 25.5	15.4	59.9	Fomalhaut	15 11.0	S29 28.1
Y	9	318	57.1	S17	52.5	15	01.4	10.7	S 1 40.9	15.4	59.9	Gacrux	171 48.5	S57 16.3
	10	333	57.1	S17	53.1	29	31.0	10.6	S 1 56.4	15.4	60.0	Gienah	175 40.6	S17 42.0
	11	348	57.0	S17	53.8	44	00.6	10.6	S 2 11.8	15.4	60.0	Hadar	148 32.2	S60 30.6
	12	3	56.9	S17	54.5	58	30.2	10.6	S 2 27.2	15.4	60.0	Hamal	327 47.3	N23 36.2
	13	18	56.8	S17	55.1	72	59.7	10.5	S 2 42.7	15.4	60.0	Kaus Austr.	83 28.7	S34 22.3
	14	33	56.7	S17	55.8	87	29.2	10.5	S 2 58.1	15.4	60.0	Kochab	137 21.5	N74 02.1
	15	48	56.6	S17	56.5	101	58.7	10.5	S 3 13.5	15.4	60.0	Markab	13 26.6	N15 21.9
	16	63	56.5	S17	57.1	116	28.1	10.4	S 3 28.9	15.4	60.0	Menkar	314 02.5	N 4 12.3
	17	78	56.5	S17	57.8	130	57.5	10.4	S 3 44.3	15.4	60.1			
												Menkent	147 54.3	S36 30.7
	18	93	56.4	S17	58.5	145	26.9	10.4	S 3 59.7	15.4	60.1	Miaplacidus	221 37.3	S69 49.9
	19	108	56.3	S17	59.1	159	56.2	10.3	S 4 15.1	15.4	60.1	Mirfak	308 23.3	N49 57.9
	20	123	56.2	S17	59.8	174	25.5	10.3	S 4 30.4	15.4	60.1	Nunki	75 44.2	S26 15.6
	21	138	56.1	S18	00.5	188	54.8	10.3	S 4 45.8	15.3	60.1	Peacock	53 01.0	S56 38.6
	22	153	56.0	S18	01.1	203	24.0	10.2	S 5 01.1	15.3	60.1			
	23	168	55.9	S18	01.8	217	53.1	10.2	S 5 16.4	15.3	60.1	Polaris	314 54.7	N89 22.7
												Pollux	243 13.3	N27 57.2
13	0	183	55.8	S18	02.4	232	22.3	10.1	S 5 31.7	15.3	60.1	Procyon	244 47.4	N 5 09.0
	1	198	55.8	S18	03.1	246	51.3	10.1	S 5 46.9	15.2	60.1	Rasalhague	95 56.0	N12 32.5
	2	213	55.7	S18	03.8	261	20.4	10.0	S 6 02.1	15.2	60.2	Regulus	207 31.2	N11 49.5
	3	228	55.6	S18	04.4	275	49.4	10.0	S 6 17.3	15.2	60.2			
	4	243	55.5	S18	05.1	290	18.3	9.9	S 6 32.5	15.2	60.2	Rigel	281 00.6	S 8 10.0
M	5	258	55.4	S18	05.7	304	47.2	9.9	S 6 47.6	15.1	60.2	Rigil Kent	139 36.7	S60 57.2
O												Sabik	101 59.5	S15 45.6
N	6	273	55.3	S18	06.4	319	16.1	9.9	S 7 02.7	15.1	60.2	Schedar	349 26.9	N56 42.0
D	7	288	55.2	S18	07.0	333	44.9	9.8	S 7 17.8	15.1	60.2	Shaula	96 06.5	S37 07.5
A	8	303	55.1	S18	07.7	348	13.6	9.8	S 7 32.8	15.0	60.2			
Y	9	318	55.0	S18	08.4	2	42.3	9.7	S 7 47.8	15.0	60.2	Sirius	258 23.3	S16 45.3
	10	333	54.9	S18	09.0	17	11.0	9.7	S 8 02.7	14.9	60.2	Spica	158 19.3	S11 18.7
	11	348	54.8	S18	09.7	31	39.6	9.6	S 8 17.7	14.9	60.2	Suhail	222 43.9	S43 32.7
												Vega	80 31.4	N38 48.9
	12	3	54.7	S18	10.3	46	08.1	9.5	S 8 32.5	14.9	60.2	Zuben-ubi	136 53.8	S16 09.7
	13	18	54.6	S18	11.0	60	36.6	9.5	S 8 47.3	14.8	60.2			
	14	33	54.5	S18	11.6	75	05.1	9.4	S 9 02.1	14.8	60.3			
	15	48	54.5	S18	12.3	89	33.5	9.4	S 9 16.8	14.7	60.3			
	16	63	54.4	S18	12.9	104	01.8	9.3	S 9 31.5	14.7	60.3			
	17	78	54.3	S18	13.6	118	30.0	9.3	S 9 46.1	14.6	60.3			
	18	93	54.2	S18	14.2	132	58.3	9.2	S10 00.7	14.6	60.3			
	19	108	54.1	S18	14.9	147	26.4	9.1	S10 15.2	14.5	60.3			
	20	123	54.0	S18	15.5	161	54.5	9.1	S10 29.7	14.5	60.3			
	21	138	53.9	S18	16.2	176	22.5	9.0	S10 44.1	14.4	60.3			
	22	153	53.8	S18	16.8	190	50.5	9.0	S10 58.4	14.3	60.3			
	23	168	53.7	S18	17.5	205	18.4	8.9	S11 12.7	14.3	60.3			
		S.D.	16.2	d	0.7	S.D.	16.2		16.3		16.4			

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA	Dec		GHA	Dec		GHA	Dec		GHA	Dec	
		° '	° '	° '		° '	° '		° '	° '		° '	° '	
14	0	53 37.4	213 16.1	S 6	40.3	249 50.1	N 8	48.3	217 18.8	S 5	42.5	18 21.4	N11	12.6
	1	68 39.9	228 15.7	S 6	41.4	264 51.3	N 8	47.9	232 20.8	S 5	42.7	33 24.1	N11	12.5
	2	83 42.3	243 15.3	S 6	42.6	279 52.4	N 8	47.4	247 22.8	S 5	42.9	48 26.7	N11	12.5
	3	98 44.8	258 14.9	S 6	43.7	294 53.6	N 8	46.9	262 24.8	S 5	43.0	63 29.4	N11	12.4
	4	113 47.2	273 14.5	S 6	44.8	309 54.8	N 8	46.4	277 26.8	S 5	43.2	78 32.0	N11	12.4
T	5	128 49.7	288 14.1	S 6	46.0	324 56.0	N 8	45.9	292 28.9	S 5	43.4	93 34.7	N11	12.3
U														
E	6	143 52.2	303 13.6	S 6	47.1	339 57.2	N 8	45.4	307 30.9	S 5	43.6	108 37.3	N11	12.3
S	7	158 54.6	318 13.2	S 6	48.3	354 58.4	N 8	44.9	322 32.9	S 5	43.8	123 40.0	N11	12.2
D	8	173 57.1	333 12.8	S 6	49.4	9 59.6	N 8	44.5	337 34.9	S 5	44.0	138 42.6	N11	12.1
A	9	188 59.6	348 12.4	S 6	50.6	25 00.8	N 8	44.0	352 36.9	S 5	44.1	153 45.2	N11	12.1
Y	10	204 02.0	3 12.0	S 6	51.7	40 02.0	N 8	43.5	7 38.9	S 5	44.3	168 47.9	N11	12.0
	11	219 04.5	18 11.6	S 6	52.8	55 03.2	N 8	43.0	22 40.9	S 5	44.5	183 50.5	N11	12.0
	12	234 07.0	33 11.1	S 6	54.0	70 04.4	N 8	42.5	37 42.9	S 5	44.7	198 53.2	N11	11.9
	13	249 09.4	48 10.7	S 6	55.1	85 05.6	N 8	42.0	52 44.9	S 5	44.9	213 55.8	N11	11.9
	14	264 11.9	63 10.3	S 6	56.3	100 06.8	N 8	41.6	67 46.9	S 5	45.0	228 58.5	N11	11.8
	15	279 14.3	78 09.9	S 6	57.4	115 08.0	N 8	41.1	82 48.9	S 5	45.2	244 01.1	N11	11.7
	16	294 16.8	93 09.5	S 6	58.5	130 09.2	N 8	40.6	97 51.0	S 5	45.4	259 03.8	N11	11.7
	17	309 19.3	108 09.0	S 6	59.7	145 10.4	N 8	40.1	112 53.0	S 5	45.6	274 06.4	N11	11.6
	18	324 21.7	123 08.6	S 7	00.8	160 11.6	N 8	39.6	127 55.0	S 5	45.8	289 09.1	N11	11.6
	19	339 24.2	138 08.2	S 7	02.0	175 12.8	N 8	39.1	142 57.0	S 5	46.0	304 11.7	N11	11.5
	20	354 26.7	153 07.8	S 7	03.1	190 14.0	N 8	38.6	157 59.0	S 5	46.1	319 14.4	N11	11.5
	21	9 29.1	168 07.4	S 7	04.2	205 15.2	N 8	38.2	173 01.0	S 5	46.3	334 17.0	N11	11.4
	22	24 31.6	183 06.9	S 7	05.4	220 16.4	N 8	37.7	188 03.0	S 5	46.5	349 19.7	N11	11.4
	23	39 34.1	198 06.5	S 7	06.5	235 17.6	N 8	37.2	203 05.0	S 5	46.7	4 22.3	N11	11.3
15	0	54 36.5	213 06.1	S 7	07.6	250 18.8	N 8	36.7	218 07.0	S 5	46.9	19 25.0	N11	11.2
	1	69 39.0	228 05.7	S 7	08.8	265 20.0	N 8	36.2	233 09.0	S 5	47.0	34 27.6	N11	11.2
	2	84 41.5	243 05.3	S 7	09.9	280 21.2	N 8	35.7	248 11.1	S 5	47.2	49 30.3	N11	11.1
	3	99 43.9	258 04.8	S 7	11.1	295 22.4	N 8	35.3	263 13.1	S 5	47.4	64 32.9	N11	11.1
	4	114 46.4	273 04.4	S 7	12.2	310 23.6	N 8	34.8	278 15.1	S 5	47.6	79 35.6	N11	11.0
W	5	129 48.8	288 04.0	S 7	13.3	325 24.8	N 8	34.3	293 17.1	S 5	47.8	94 38.2	N11	11.0
E														
D	6	144 51.3	303 03.6	S 7	14.5	340 26.0	N 8	33.8	308 19.1	S 5	48.0	109 40.8	N11	10.9
N	7	159 53.8	318 03.1	S 7	15.6	355 27.2	N 8	33.3	323 21.1	S 5	48.1	124 43.5	N11	10.8
E	8	174 56.2	333 02.7	S 7	16.7	10 28.4	N 8	32.8	338 23.1	S 5	48.3	139 46.1	N11	10.8
S	9	189 58.7	348 02.3	S 7	17.9	25 29.6	N 8	32.4	353 25.1	S 5	48.5	154 48.8	N11	10.7
D	10	205 01.2	3 01.9	S 7	19.0	40 30.8	N 8	31.9	8 27.1	S 5	48.7	169 51.4	N11	10.7
A	11	220 03.6	18 01.5	S 7	20.1	55 32.0	N 8	31.4	23 29.2	S 5	48.9	184 54.1	N11	10.6
Y														
	12	235 06.1	33 01.0	S 7	21.3	70 33.2	N 8	30.9	38 31.2	S 5	49.0	199 56.7	N11	10.6
	13	250 08.6	48 00.6	S 7	22.4	85 34.4	N 8	30.4	53 33.2	S 5	49.2	214 59.4	N11	10.5
	14	265 11.0	63 00.2	S 7	23.6	100 35.6	N 8	29.9	68 35.2	S 5	49.4	230 02.0	N11	10.5
	15	280 13.5	77 59.7	S 7	24.7	115 36.8	N 8	29.5	83 37.2	S 5	49.6	245 04.7	N11	10.4
	16	295 16.0	92 59.3	S 7	25.8	130 38.0	N 8	29.0	98 39.2	S 5	49.8	260 07.3	N11	10.3
	17	310 18.4	107 58.9	S 7	27.0	145 39.2	N 8	28.5	113 41.2	S 5	49.9	275 10.0	N11	10.3
	18	325 20.9	122 58.5	S 7	28.1	160 40.4	N 8	28.0	128 43.2	S 5	50.1	290 12.6	N11	10.2
	19	340 23.3	137 58.0	S 7	29.2	175 41.6	N 8	27.5	143 45.2	S 5	50.3	305 15.3	N11	10.2
	20	355 25.8	152 57.6	S 7	30.4	190 42.8	N 8	27.0	158 47.3	S 5	50.5	320 17.9	N11	10.1
	21	10 28.3	167 57.2	S 7	31.5	205 44.0	N 8	26.6	173 49.3	S 5	50.7	335 20.5	N11	10.1
	22	25 30.7	182 56.8	S 7	32.6	220 45.2	N 8	26.1	188 51.3	S 5	50.8	350 23.2	N11	10.0
	23	40 33.2	197 56.3	S 7	33.8	235 46.4	N 8	25.6	203 53.3	S 5	51.0	5 25.8	N11	09.9
16	0	55 35.7	212 55.9	S 7	34.9	250 47.6	N 8	25.1	218 55.3	S 5	51.2	20 28.5	N11	09.9
	1	70 38.1	227 55.5	S 7	36.0	265 48.8	N 8	24.6	233 57.3	S 5	51.4	35 31.1	N11	09.8
	2	85 40.6	242 55.0	S 7	37.2	280 50.0	N 8	24.1	248 59.3	S 5	51.6	50 33.8	N11	09.8
	3	100 43.1	257 54.6	S 7	38.3	295 51.2	N 8	23.7	264 01.3	S 5	51.7	65 36.4	N11	09.7
	4	115 45.5	272 54.2	S 7	39.4	310 52.4	N 8	23.2	279 03.4	S 5	51.9	80 39.1	N11	09.7
T	5	130 48.0	287 53.8	S 7	40.5	325 53.6	N 8	22.7	294 05.4	S 5	52.1	95 41.7	N11	09.6
H														
U	6	145 50.4	302 53.3	S 7	41.7	340 54.8	N 8	22.2	309 07.4	S 5	52.3	110 44.4	N11	09.6
R	7	160 52.9	317 52.9	S 7	42.8	355 56.0	N 8	21.7	324 09.4	S 5	52.5	125 47.0	N11	09.5
S	8	175 55.4	332 52.5	S 7	43.9	10 57.2	N 8	21.2	339 11.4	S 5	52.6	140 49.6	N11	09.4
D	9	190 57.8	347 52.0	S 7	45.1	25 58.5	N 8	20.8	354 13.4	S 5	52.8	155 52.3	N11	09.4
A	10	206 00.3	2 51.6	S 7	46.2	40 59.7	N 8	20.3	9 15.4	S 5	53.0	170 54.9	N11	09.3
Y	11	221 02.8	17 51.2	S 7	47.3	56 00.9	N 8	19.8	24 17.5	S 5	53.2	185 57.6	N11	09.3
	12	236 05.2	32 50.7	S 7	48.5	71 02.1	N 8	19.3	39 19.5	S 5	53.4	201 00.2	N11	09.2
	13	251 07.7	47 50.3	S 7	49.6	86 03.3	N 8	18.8	54 21.5	S 5	53.5	216 02.9	N11	09.2
	14	266 10.2	62 49.9	S 7	50.7	101 04.5	N 8	18.3	69 23.5	S 5	53.7	231 05.5	N11	09.1
	15	281 12.6	77 49.4	S 7	51.8	116 05.7	N 8	17.9	84 25.5	S 5	53.9	246 08.2	N11	09.1
	16	296 15.1	92 49.0	S 7	53.0	131 06.9	N 8	17.4	99 27.5	S 5	54.1	261 10.8	N11	09.0
	17	311 17.6	107 48.6	S 7	54.1	146 08.1	N 8	16.9	114 29.5	S 5	54.3	276 13.5	N11	08.9
	18	326 20.0	122 48.1	S 7	55.2	161 09.3	N 8	16.4	129 31.6	S 5	54.4	291 16.1	N11	08.9
	19	341 22.5	137 47.7	S 7	56.4	176 10.5	N 8	15.9	144 33.6	S 5	54.6	306 18.7	N11	08.8
	20	356 24.9	152 47.3	S 7	57.5	191 11.7	N 8	15.5	159 35.6	S 5	54.8	321 21.4	N11	08.8
	21	11 27.4	167 46.8	S 7	58.6	206 13.0	N 8	15.0	174 37.6	S 5	55.0	336 24.0	N11	08.7
	22	26 29.9	182 46.4	S 7	59.7	221 14.2	N 8	14.5	189 39.6	S 5	55.2	351 26.7	N11	08.7
	23	41 32.3	197 46.0	S 8	00.9	236 15.4	N 8	14.0	204 41.6	S 5	55.3	6 29.3	N11	08.6
			v -0.4	d	1.1	v 1.2	d	0.5	v 2.0	d	0.2	v 2.6	d	0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	v '	MOON Dec ° '	d '	HP '
14	0	183 53.6	S18 18.1	219 46.2	8.8	S11 26.9	14.2	60.3
	1	198 53.5	S18 18.8	234 14.0	8.8	S11 41.0	14.1	60.3
	2	213 53.4	S18 19.4	248 41.7	8.7	S11 55.1	14.1	60.3
	3	228 53.3	S18 20.1	263 09.4	8.7	S12 09.1	14.0	60.3
	4	243 53.2	S18 20.7	277 37.0	8.6	S12 23.0	13.9	60.3
T	5	258 53.1	S18 21.4	292 04.5	8.5	S12 36.9	13.9	60.3
U								
E	6	273 53.0	S18 22.0	306 32.0	8.5	S12 50.7	13.8	60.3
S	7	288 52.9	S18 22.6	320 59.4	8.4	S13 04.4	13.7	60.3
D	8	303 52.8	S18 23.3	335 26.7	8.3	S13 18.0	13.6	60.3
A	9	318 52.7	S18 23.9	349 53.9	8.3	S13 31.6	13.5	60.3
Y	10	333 52.6	S18 24.6	4 21.1	8.2	S13 45.0	13.5	60.3
	11	348 52.5	S18 25.2	18 48.2	8.1	S13 58.4	13.4	60.3
	12	3 52.4	S18 25.9	33 15.3	8.1	S14 11.7	13.3	60.3
	13	18 52.3	S18 26.5	47 42.3	8.0	S14 24.9	13.2	60.3
	14	33 52.2	S18 27.1	62 09.2	7.9	S14 38.0	13.1	60.3
	15	48 52.1	S18 27.8	76 36.0	7.8	S14 51.1	13.0	60.3
	16	63 52.0	S18 28.4	91 02.8	7.8	S15 04.0	12.9	60.3
	17	78 51.8	S18 29.1	105 29.5	7.7	S15 16.8	12.8	60.3
	18	93 51.7	S18 29.7	119 56.2	7.6	S15 29.6	12.7	60.3
	19	108 51.6	S18 30.3	134 22.7	7.6	S15 42.2	12.6	60.3
	20	123 51.5	S18 31.0	148 49.2	7.5	S15 54.8	12.5	60.3
	21	138 51.4	S18 31.6	163 15.7	7.4	S16 07.2	12.4	60.3
	22	153 51.3	S18 32.2	177 42.0	7.4	S16 19.6	12.3	60.3
	23	168 51.2	S18 32.9	192 08.3	7.3	S16 31.8	12.2	60.2
15	0	183 51.1	S18 33.5	206 34.5	7.2	S16 43.9	12.1	60.2
	1	198 51.0	S18 34.1	221 00.7	7.1	S16 56.0	12.0	60.2
	2	213 50.9	S18 34.8	235 26.8	7.1	S17 07.9	11.9	60.2
	3	228 50.8	S18 35.4	249 52.8	7.0	S17 19.7	11.8	60.2
	4	243 50.7	S18 36.0	264 18.7	6.9	S17 31.4	11.7	60.2
W	5	258 50.6	S18 36.7	278 44.6	6.9	S17 42.9	11.6	60.2
E								
D	6	273 50.4	S18 37.3	293 10.4	6.8	S17 54.4	11.5	60.2
N	7	288 50.3	S18 37.9	307 36.1	6.7	S18 05.7	11.3	60.2
E	8	303 50.2	S18 38.6	322 01.8	6.7	S18 17.0	11.2	60.2
S	9	318 50.1	S18 39.2	336 27.4	6.6	S18 28.1	11.1	60.2
D	10	333 50.0	S18 39.8	350 52.9	6.5	S18 39.0	11.0	60.1
A	11	348 49.9	S18 40.4	5 18.4	6.5	S18 49.9	10.9	60.1
Y								
	12	3 49.8	S18 41.1	19 43.8	6.4	S19 00.6	10.7	60.1
	13	18 49.7	S18 41.7	34 09.1	6.3	S19 11.2	10.6	60.1
	14	33 49.6	S18 42.3	48 34.4	6.3	S19 21.7	10.5	60.1
	15	48 49.4	S18 42.9	62 59.6	6.2	S19 32.0	10.3	60.1
	16	63 49.3	S18 43.6	77 24.8	6.1	S19 42.2	10.2	60.1
	17	78 49.2	S18 44.2	91 49.8	6.1	S19 52.3	10.1	60.1
	18	93 49.1	S18 44.8	106 14.9	6.0	S20 02.2	9.9	60.0
	19	108 49.0	S18 45.4	120 39.8	6.0	S20 12.0	9.8	60.0
	20	123 48.9	S18 46.1	135 04.7	5.9	S20 21.7	9.7	60.0
	21	138 48.8	S18 46.7	149 29.5	5.8	S20 31.2	9.5	60.0
	22	153 48.6	S18 47.3	163 54.3	5.8	S20 40.6	9.4	60.0
	23	168 48.5	S18 47.9	178 19.0	5.7	S20 49.8	9.2	60.0
16	0	183 48.4	S18 48.5	192 43.7	5.7	S20 58.9	9.1	59.9
	1	198 48.3	S18 49.2	207 08.3	5.6	S21 07.9	9.0	59.9
	2	213 48.2	S18 49.8	221 32.9	5.6	S21 16.7	8.8	59.9
	3	228 48.1	S18 50.4	235 57.4	5.5	S21 25.4	8.7	59.9
	4	243 47.9	S18 51.0	250 21.8	5.4	S21 33.9	8.5	59.9
T	5	258 47.8	S18 51.6	264 46.2	5.4	S21 42.2	8.4	59.9
H								
U	6	273 47.7	S18 52.3	279 10.6	5.3	S21 50.4	8.2	59.8
R	7	288 47.6	S18 52.9	293 34.9	5.3	S21 58.5	8.1	59.8
S	8	303 47.5	S18 53.5	307 59.1	5.3	S22 06.4	7.9	59.8
D	9	318 47.3	S18 54.1	322 23.3	5.2	S22 14.2	7.8	59.8
A	10	333 47.2	S18 54.7	336 47.5	5.2	S22 21.8	7.6	59.8
Y	11	348 47.1	S18 55.3	351 11.6	5.1	S22 29.2	7.4	59.7
	12	3 47.0	S18 55.9	5 35.7	5.1	S22 36.5	7.3	59.7
	13	18 46.9	S18 56.6	19 59.7	5.0	S22 43.6	7.1	59.7
	14	33 46.7	S18 57.2	34 23.7	5.0	S22 50.6	7.0	59.7
	15	48 46.6	S18 57.8	48 47.7	5.0	S22 57.4	6.8	59.6
	16	63 46.5	S18 58.4	63 11.6	4.9	S23 04.1	6.6	59.6
	17	78 46.4	S18 59.0	77 35.5	4.9	S23 10.5	6.5	59.6
	18	93 46.3	S18 59.6	91 59.4	4.9	S23 16.9	6.3	59.6
	19	108 46.1	S19 00.2	106 23.2	4.8	S23 23.0	6.2	59.5
	20	123 46.0	S19 00.8	120 47.1	4.8	S23 29.0	6.0	59.5
	21	138 45.9	S19 01.4	135 10.8	4.8	S23 34.9	5.8	59.5
	22	153 45.8	S19 02.0	149 34.6	4.8	S23 40.5	5.7	59.5
	23	168 45.6	S19 02.7	163 58.3	4.7	S23 46.0	5.5	59.4
		S.D. 16.2	d 0.6	S.D. 16.4		16.4		16.3

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.3
Achernar	335 17.4	S57 05.4
Acrux	172 57.0	S63 15.3
Adhara	255 03.1	S29 00.5
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.7	N55 48.0
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 29.0	S46 49.3
Alnilam	275 34.2	S 1 11.0
Alphard	217 44.6	S 8 47.0
Alphecca	126 01.5	N26 37.1
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.8	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.4	S69 04.8
Avior	234 13.1	S59 35.9
Bellatrix	278 19.2	N 6 22.6
Betelgeuse	270 48.4	N 7 24.7
Canopus	263 50.6	S52 42.5
Capella	280 16.8	N46 01.5
Castor	245 52.9	N31 49.3
Deneb	49 23.7	N45 23.4
Denebola	182 22.0	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.5	N61 35.3
Elnath	277 57.6	N28 37.8
Eltanin	90 41.2	N51 29.3
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.0	S29 28.1
Gacrux	171 48.5	S57 16.3
Gienah	175 40.6	S17 42.1
Hadar	148 32.2	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.5	N74 02.1
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.3	S36 30.7
Miaplacidus	221 37.2	S69 49.9
Mirfak	308 23.3	N49 57.9
Nunki	75 44.2	S26 15.6
Peacock	53 01.0	S56 38.6
Polaris	314 54.8	N89 22.7
Pollux	243 13.3	N27 57.2
Procyon	244 47.4	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.2	N11 49.5
Rigel	281 00.6	S 8 10.0
Rigil Kent	139 36.7	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.0
Shaula	96 06.5	S37 07.5
Sirius	258 23.2	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 43.9	S43 32.8
Vega	80 31.4	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
17	0	56 34.8	212 45.5	S 8 02.0	251 16.6	N 8 13.5	219 43.6	S 5 55.5	21 32.0	N11 08.6
	1	71 37.3	227 45.1	S 8 03.1	266 17.8	N 8 13.0	234 45.7	S 5 55.7	36 34.6	N11 08.5
	2	86 39.7	242 44.6	S 8 04.2	281 19.0	N 8 12.6	249 47.7	S 5 55.9	51 37.3	N11 08.5
	3	101 42.2	257 44.2	S 8 05.4	296 20.2	N 8 12.1	264 49.7	S 5 56.1	66 39.9	N11 08.4
	4	116 44.7	272 43.8	S 8 06.5	311 21.4	N 8 11.6	279 51.7	S 5 56.2	81 42.5	N11 08.3
F	5	131 47.1	287 43.3	S 8 07.6	326 22.6	N 8 11.1	294 53.7	S 5 56.4	96 45.2	N11 08.3
R										
I	6	146 49.6	302 42.9	S 8 08.7	341 23.9	N 8 10.6	309 55.7	S 5 56.6	111 47.8	N11 08.2
D	7	161 52.1	317 42.5	S 8 09.9	356 25.1	N 8 10.2	324 57.7	S 5 56.8	126 50.5	N11 08.2
A	8	176 54.5	332 42.0	S 8 11.0	11 26.3	N 8 09.7	339 59.8	S 5 57.0	141 53.1	N11 08.1
Y	9	191 57.0	347 41.6	S 8 12.1	26 27.5	N 8 09.2	355 01.8	S 5 57.1	156 55.8	N11 08.1
	10	206 59.4	2 41.1	S 8 13.2	41 28.7	N 8 08.7	10 03.8	S 5 57.3	171 58.4	N11 08.0
	11	222 01.9	17 40.7	S 8 14.4	56 29.9	N 8 08.2	25 05.8	S 5 57.5	187 01.0	N11 08.0
	12	237 04.4	32 40.3	S 8 15.5	71 31.1	N 8 07.7	40 07.8	S 5 57.7	202 03.7	N11 07.9
	13	252 06.8	47 39.8	S 8 16.6	86 32.4	N 8 07.3	55 09.8	S 5 57.8	217 06.3	N11 07.9
	14	267 09.3	62 39.4	S 8 17.7	101 33.6	N 8 06.8	70 11.9	S 5 58.0	232 09.0	N11 07.8
	15	282 11.8	77 38.9	S 8 18.9	116 34.8	N 8 06.3	85 13.9	S 5 58.2	247 11.6	N11 07.7
	16	297 14.2	92 38.5	S 8 20.0	131 36.0	N 8 05.8	100 15.9	S 5 58.4	262 14.3	N11 07.7
	17	312 16.7	107 38.1	S 8 21.1	146 37.2	N 8 05.3	115 17.9	S 5 58.6	277 16.9	N11 07.6
	18	327 19.2	122 37.6	S 8 22.2	161 38.4	N 8 04.9	130 19.9	S 5 58.7	292 19.5	N11 07.6
	19	342 21.6	137 37.2	S 8 23.4	176 39.6	N 8 04.4	145 21.9	S 5 58.9	307 22.2	N11 07.5
	20	357 24.1	152 36.7	S 8 24.5	191 40.9	N 8 03.9	160 24.0	S 5 59.1	322 24.8	N11 07.5
	21	12 26.5	167 36.3	S 8 25.6	206 42.1	N 8 03.4	175 26.0	S 5 59.3	337 27.5	N11 07.4
	22	27 29.0	182 35.8	S 8 26.7	221 43.3	N 8 02.9	190 28.0	S 5 59.4	352 30.1	N11 07.4
	23	42 31.5	197 35.4	S 8 27.8	236 44.5	N 8 02.5	205 30.0	S 5 59.6	7 32.8	N11 07.3
18	0	57 33.9	212 35.0	S 8 29.0	251 45.7	N 8 02.0	220 32.0	S 5 59.8	22 35.4	N11 07.3
	1	72 36.4	227 34.5	S 8 30.1	266 46.9	N 8 01.5	235 34.0	S 5 60.0	37 38.0	N11 07.2
	2	87 38.9	242 34.1	S 8 31.2	281 48.2	N 8 01.0	250 36.1	S 6 00.2	52 40.7	N11 07.1
	3	102 41.3	257 33.6	S 8 32.3	296 49.4	N 8 00.5	265 38.1	S 6 00.3	67 43.3	N11 07.1
	4	117 43.8	272 33.2	S 8 33.4	311 50.6	N 8 00.0	280 40.1	S 6 00.5	82 46.0	N11 07.0
S	5	132 46.3	287 32.7	S 8 34.6	326 51.8	N 7 59.6	295 42.1	S 6 00.7	97 48.6	N11 07.0
A										
T	6	147 48.7	302 32.3	S 8 35.7	341 53.0	N 7 59.1	310 44.1	S 6 00.9	112 51.2	N11 06.9
U	7	162 51.2	317 31.8	S 8 36.8	356 54.3	N 7 58.6	325 46.1	S 6 01.0	127 53.9	N11 06.9
R	8	177 53.7	332 31.4	S 8 37.9	11 55.5	N 7 58.1	340 48.2	S 6 01.2	142 56.5	N11 06.8
D	9	192 56.1	347 30.9	S 8 39.0	26 56.7	N 7 57.6	355 50.2	S 6 01.4	157 59.2	N11 06.8
A	10	207 58.6	2 30.5	S 8 40.1	41 57.9	N 7 57.2	10 52.2	S 6 01.6	173 01.8	N11 06.7
Y	11	223 01.0	17 30.0	S 8 41.3	56 59.1	N 7 56.7	25 54.2	S 6 01.8	188 04.5	N11 06.7
	12	238 03.5	32 29.6	S 8 42.4	72 00.4	N 7 56.2	40 56.2	S 6 01.9	203 07.1	N11 06.6
	13	253 06.0	47 29.2	S 8 43.5	87 01.6	N 7 55.7	55 58.3	S 6 02.1	218 09.7	N11 06.6
	14	268 08.4	62 28.7	S 8 44.6	102 02.8	N 7 55.2	71 00.3	S 6 02.3	233 12.4	N11 06.5
	15	283 10.9	77 28.3	S 8 45.7	117 04.0	N 7 54.8	86 02.3	S 6 02.5	248 15.0	N11 06.4
	16	298 13.4	92 27.8	S 8 46.8	132 05.2	N 7 54.3	101 04.3	S 6 02.6	263 17.7	N11 06.4
	17	313 15.8	107 27.4	S 8 48.0	147 06.5	N 7 53.8	116 06.3	S 6 02.8	278 20.3	N11 06.3
	18	328 18.3	122 26.9	S 8 49.1	162 07.7	N 7 53.3	131 08.3	S 6 03.0	293 22.9	N11 06.3
	19	343 20.8	137 26.5	S 8 50.2	177 08.9	N 7 52.8	146 10.4	S 6 03.2	308 25.6	N11 06.2
	20	358 23.2	152 26.0	S 8 51.3	192 10.1	N 7 52.4	161 12.4	S 6 03.3	323 28.2	N11 06.2
	21	13 25.7	167 25.5	S 8 52.4	207 11.3	N 7 51.9	176 14.4	S 6 03.5	338 30.9	N11 06.1
	22	28 28.2	182 25.1	S 8 53.5	222 12.6	N 7 51.4	191 16.4	S 6 03.7	353 33.5	N11 06.1
	23	43 30.6	197 24.6	S 8 54.6	237 13.8	N 7 50.9	206 18.4	S 6 03.9	8 36.1	N11 06.0
19	0	58 33.1	212 24.2	S 8 55.8	252 15.0	N 7 50.4	221 20.5	S 6 04.1	23 38.8	N11 06.0
	1	73 35.5	227 23.7	S 8 56.9	267 16.2	N 7 50.0	236 22.5	S 6 04.2	38 41.4	N11 05.9
	2	88 38.0	242 23.3	S 8 58.0	282 17.5	N 7 49.5	251 24.5	S 6 04.4	53 44.1	N11 05.9
	3	103 40.5	257 22.8	S 8 59.1	297 18.7	N 7 49.0	266 26.5	S 6 04.6	68 46.7	N11 05.8
	4	118 42.9	272 22.4	S 9 00.2	312 19.9	N 7 48.5	281 28.5	S 6 04.8	83 49.3	N11 05.8
S	5	133 45.4	287 21.9	S 9 01.3	327 21.1	N 7 48.0	296 30.6	S 6 04.9	98 52.0	N11 05.7
U										
N	6	148 47.9	302 21.5	S 9 02.4	342 22.4	N 7 47.6	311 32.6	S 6 05.1	113 54.6	N11 05.6
D	7	163 50.3	317 21.0	S 9 03.5	357 23.6	N 7 47.1	326 34.6	S 6 05.3	128 57.3	N11 05.6
A	8	178 52.8	332 20.6	S 9 04.6	12 24.8	N 7 46.6	341 36.6	S 6 05.5	143 59.9	N11 05.5
Y	9	193 55.3	347 20.1	S 9 05.8	27 26.0	N 7 46.1	356 38.6	S 6 05.6	159 02.5	N11 05.5
	10	208 57.7	2 19.7	S 9 06.9	42 27.3	N 7 45.7	11 40.7	S 6 05.8	174 05.2	N11 05.4
	11	224 00.2	17 19.2	S 9 08.0	57 28.5	N 7 45.2	26 42.7	S 6 06.0	189 07.8	N11 05.4
	12	239 02.7	32 18.7	S 9 09.1	72 29.7	N 7 44.7	41 44.7	S 6 06.2	204 10.5	N11 05.3
	13	254 05.1	47 18.3	S 9 10.2	87 30.9	N 7 44.2	56 46.7	S 6 06.3	219 13.1	N11 05.3
	14	269 07.6	62 17.8	S 9 11.3	102 32.2	N 7 43.7	71 48.8	S 6 06.5	234 15.7	N11 05.2
	15	284 10.0	77 17.4	S 9 12.4	117 33.4	N 7 43.3	86 50.8	S 6 06.7	249 18.4	N11 05.2
	16	299 12.5	92 16.9	S 9 13.5	132 34.6	N 7 42.8	101 52.8	S 6 06.9	264 21.0	N11 05.1
	17	314 15.0	107 16.4	S 9 14.6	147 35.9	N 7 42.3	116 54.8	S 6 07.0	279 23.7	N11 05.1
	18	329 17.4	122 16.0	S 9 15.7	162 37.1	N 7 41.8	131 56.8	S 6 07.2	294 26.3	N11 05.0
	19	344 19.9	137 15.5	S 9 16.8	177 38.3	N 7 41.3	146 58.9	S 6 07.4	309 28.9	N11 05.0
	20	359 22.4	152 15.1	S 9 17.9	192 39.5	N 7 40.9	162 00.9	S 6 07.6	324 31.6	N11 04.9
	21	14 24.8	167 14.6	S 9 19.1	207 40.8	N 7 40.4	177 02.9	S 6 07.7	339 34.2	N11 04.9
	22	29 27.3	182 14.2	S 9 20.2	222 42.0	N 7 39.9	192 04.9	S 6 07.9	354 36.8	N11 04.8
	23	44 29.8	197 13.7	S 9 21.3	237 43.2	N 7 39.4	207 06.9	S 6 08.1	9 39.5	N11 04.7
			v -0.4	d 1.1	v 1.2	d 0.5	v 2.0	d 0.2	v 2.6	d 0.1

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
17	0	183 45.5	S19 03.3	178 22.1	4.7	S23 51.4	5.3	59.4
	1	198 45.4	S19 03.9	192 45.8	4.7	S23 56.6	5.2	59.4
	2	213 45.3	S19 04.5	207 09.4	4.7	S24 01.6	5.0	59.4
	3	228 45.1	S19 05.1	221 33.1	4.7	S24 06.4	4.8	59.3
	4	243 45.0	S19 05.7	235 56.8	4.7	S24 11.1	4.7	59.3
F	5	258 44.9	S19 06.3	250 20.4	4.6	S24 15.6	4.5	59.3
R								
I	6	273 44.8	S19 06.9	264 44.1	4.6	S24 19.9	4.3	59.3
D	7	288 44.6	S19 07.5	279 07.7	4.6	S24 24.1	4.2	59.2
A	8	303 44.5	S19 08.1	293 31.3	4.6	S24 28.1	4.0	59.2
Y	9	318 44.4	S19 08.7	307 54.9	4.6	S24 31.9	3.8	59.2
	10	333 44.2	S19 09.3	322 18.6	4.6	S24 35.5	3.7	59.2
	11	348 44.1	S19 09.9	336 42.2	4.6	S24 39.0	3.5	59.1
	12	3 44.0	S19 10.5	351 05.8	4.6	S24 42.3	3.3	59.1
	13	18 43.8	S19 11.1	5 29.5	4.6	S24 45.5	3.1	59.1
	14	33 43.7	S19 11.7	19 53.1	4.6	S24 48.5	3.0	59.0
	15	48 43.6	S19 12.3	34 16.8	4.7	S24 51.3	2.8	59.0
	16	63 43.5	S19 12.9	48 40.4	4.7	S24 53.9	2.6	59.0
	17	78 43.3	S19 13.5	63 04.1	4.7	S24 56.4	2.5	58.9
	18	93 43.2	S19 14.1	77 27.8	4.7	S24 58.7	2.3	58.9
	19	108 43.1	S19 14.7	91 51.5	4.7	S25 00.8	2.1	58.9
	20	123 42.9	S19 15.3	106 15.2	4.7	S25 02.7	2.0	58.9
	21	138 42.8	S19 15.9	120 39.0	4.8	S25 04.5	1.8	58.8
	22	153 42.7	S19 16.4	135 02.8	4.8	S25 06.1	1.6	58.8
	23	168 42.5	S19 17.0	149 26.6	4.8	S25 07.6	1.4	58.8
18	0	183 42.4	S19 17.6	163 50.4	4.8	S25 08.9	1.3	58.7
	1	198 42.3	S19 18.2	178 14.3	4.9	S25 10.0	1.1	58.7
	2	213 42.1	S19 18.8	192 38.2	4.9	S25 10.9	0.9	58.7
	3	228 42.0	S19 19.4	207 02.1	4.9	S25 11.7	0.8	58.6
	4	243 41.9	S19 20.0	221 26.1	5.0	S25 12.3	0.6	58.6
S	5	258 41.7	S19 20.6	235 50.1	5.0	S25 12.7	0.4	58.6
A								
T	6	273 41.6	S19 21.2	250 14.2	5.1	S25 13.0	0.3	58.5
U	7	288 41.5	S19 21.8	264 38.3	5.1	S25 13.1	0.1	58.5
R	8	303 41.3	S19 22.3	279 02.4	5.1	S25 13.0	0.1	58.5
D	9	318 41.2	S19 22.9	293 26.6	5.2	S25 12.8	0.2	58.4
A	10	333 41.0	S19 23.5	307 50.9	5.2	S25 12.4	0.4	58.4
Y	11	348 40.9	S19 24.1	322 15.2	5.3	S25 11.9	0.6	58.4
	12	3 40.8	S19 24.7	336 39.5	5.3	S25 11.2	0.7	58.3
	13	18 40.6	S19 25.3	351 03.9	5.4	S25 10.3	0.9	58.3
	14	33 40.5	S19 25.9	5 28.3	5.5	S25 09.3	1.0	58.3
	15	48 40.4	S19 26.4	19 52.9	5.5	S25 08.1	1.2	58.2
	16	63 40.2	S19 27.0	34 17.4	5.6	S25 06.7	1.4	58.2
	17	78 40.1	S19 27.6	48 42.1	5.6	S25 05.2	1.5	58.2
	18	93 39.9	S19 28.2	63 06.8	5.7	S25 03.5	1.7	58.1
	19	108 39.8	S19 28.8	77 31.5	5.8	S25 01.7	1.8	58.1
	20	123 39.6	S19 29.3	91 56.4	5.8	S24 59.7	2.0	58.1
	21	138 39.5	S19 29.9	106 21.3	5.9	S24 57.6	2.1	58.0
	22	153 39.4	S19 30.5	120 46.2	6.0	S24 55.3	2.3	58.0
	23	168 39.2	S19 31.1	135 11.3	6.0	S24 52.8	2.4	58.0
19	0	183 39.1	S19 31.7	149 36.4	6.1	S24 50.2	2.6	57.9
	1	198 38.9	S19 32.2	164 01.6	6.2	S24 47.5	2.8	57.9
	2	213 38.8	S19 32.8	178 26.8	6.3	S24 44.6	2.9	57.9
	3	228 38.7	S19 33.4	192 52.2	6.3	S24 41.5	3.1	57.8
	4	243 38.5	S19 34.0	207 17.6	6.4	S24 38.3	3.2	57.8
S	5	258 38.4	S19 34.5	221 43.1	6.5	S24 35.0	3.3	57.7
U								
N	6	273 38.2	S19 35.1	236 08.7	6.6	S24 31.5	3.5	57.7
D	7	288 38.1	S19 35.7	250 34.4	6.7	S24 27.8	3.6	57.7
A	8	303 37.9	S19 36.2	265 00.1	6.7	S24 24.0	3.8	57.6
Y	9	318 37.8	S19 36.8	279 25.9	6.8	S24 20.1	3.9	57.6
	10	333 37.6	S19 37.4	293 51.9	6.9	S24 16.1	4.1	57.6
	11	348 37.5	S19 38.0	308 17.9	7.0	S24 11.9	4.2	57.5
	12	3 37.4	S19 38.5	322 44.0	7.1	S24 07.5	4.3	57.5
	13	18 37.2	S19 39.1	337 10.2	7.2	S24 03.0	4.5	57.5
	14	33 37.1	S19 39.7	351 36.4	7.3	S23 58.4	4.6	57.4
	15	48 36.9	S19 40.2	6 02.8	7.4	S23 53.7	4.8	57.4
	16	63 36.8	S19 40.8	20 29.3	7.5	S23 48.8	4.9	57.4
	17	78 36.6	S19 41.4	34 55.8	7.6	S23 43.8	5.0	57.3
	18	93 36.5	S19 41.9	49 22.4	7.6	S23 38.6	5.2	57.3
	19	108 36.3	S19 42.5	63 49.2	7.7	S23 33.3	5.3	57.3
	20	123 36.2	S19 43.1	78 16.0	7.8	S23 27.9	5.4	57.2
	21	138 36.0	S19 43.6	92 43.0	7.9	S23 22.4	5.5	57.2
	22	153 35.9	S19 44.2	107 10.0	8.0	S23 16.7	5.7	57.2
	23	168 35.7	S19 44.8	121 37.1	8.1	S23 10.9	5.8	57.1
		S.D. 16.2	d 0.6	S.D. 16.1		15.9		15.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.3
Achernar	335 17.5	S57 05.4
Acrux	172 56.9	S63 15.3
Adhara	255 03.1	S29 00.6
Albireo	67 01.7	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.7	N55 48.0
Alkaid	152 50.1	N49 10.0
Al Na-ir	27 29.0	S46 49.3
Alnilam	275 34.2	S 1 11.0
Alphard	217 44.6	S 8 47.0
Alphecca	126 01.5	N26 37.1
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.8	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.4	S69 04.8
Avior	234 13.1	S59 35.9
Bellatrix	278 19.2	N 6 22.6
Betelgeuse	270 48.4	N 7 24.7
Canopus	263 50.5	S52 42.5
Capella	280 16.8	N46 01.5
Castor	245 52.9	N31 49.3
Deneb	49 23.8	N45 23.4
Denebola	182 21.9	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.5	N61 35.3
Elnath	277 57.6	N28 37.8
Eltanin	90 41.2	N51 29.3
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.0	S29 28.1
Gacrux	171 48.5	S57 16.3
Gienah	175 40.6	S17 42.1
Hadar	148 32.1	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.3
Kochab	137 21.5	N74 02.1
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.3	S36 30.7
Miaplacidus	221 37.2	S69 49.9
Mirfak	308 23.2	N49 57.9
Nunki	75 44.2	S26 15.6
Peacock	53 01.1	S56 38.6
Polaris	314 54.8	N89 22.7
Pollux	243 13.3	N27 57.2
Procyon	244 47.4	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.1	N11 49.5
Rigel	281 00.5	S 8 10.0
Rigil Kent	139 36.7	S60 57.2
Sabik	101 59.5	S15 45.6
Schedar	349 26.9	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.2	S16 45.3
Spica	158 19.3	S11 18.7
Suhail	222 43.8	S43 32.8
Vega	80 31.4	N38 48.9
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS			MARS			JUPITER			SATURN		
d	h	GHA	GHA		Dec	GHA		Dec	GHA		Dec	GHA		Dec
		° '	° '		° '	° '		° '	° '		° '	° '		° '
20	0	59 32.2	212 13.2	S	9 22.4	252 44.5	N	7 38.9	222 09.0	S	6 08.3	24 42.1	N	11 04.7
	1	74 34.7	227 12.8	S	9 23.5	267 45.7	N	7 38.5	237 11.0	S	6 08.4	39 44.8	N	11 04.6
	2	89 37.2	242 12.3	S	9 24.6	282 46.9	N	7 38.0	252 13.0	S	6 08.6	54 47.4	N	11 04.6
	3	104 39.6	257 11.8	S	9 25.7	297 48.1	N	7 37.5	267 15.0	S	6 08.8	69 50.0	N	11 04.5
	4	119 42.1	272 11.4	S	9 26.8	312 49.4	N	7 37.0	282 17.1	S	6 09.0	84 52.7	N	11 04.5
M	5	134 44.5	287 10.9	S	9 27.9	327 50.6	N	7 36.6	297 19.1	S	6 09.1	99 55.3	N	11 04.4
O														
N	6	149 47.0	302 10.5	S	9 29.0	342 51.8	N	7 36.1	312 21.1	S	6 09.3	114 58.0	N	11 04.4
D	7	164 49.5	317 10.0	S	9 30.1	357 53.1	N	7 35.6	327 23.1	S	6 09.5	130 00.6	N	11 04.3
A	8	179 51.9	332 09.5	S	9 31.2	12 54.3	N	7 35.1	342 25.2	S	6 09.7	145 03.2	N	11 04.3
Y	9	194 54.4	347 09.1	S	9 32.3	27 55.5	N	7 34.6	357 27.2	S	6 09.8	160 05.9	N	11 04.2
	10	209 56.9	2 08.6	S	9 33.4	42 56.8	N	7 34.2	12 29.2	S	6 10.0	175 08.5	N	11 04.2
	11	224 59.3	17 08.1	S	9 34.5	57 58.0	N	7 33.7	27 31.2	S	6 10.2	190 11.1	N	11 04.1
	12	240 01.8	32 07.7	S	9 35.6	72 59.2	N	7 33.2	42 33.2	S	6 10.4	205 13.8	N	11 04.1
	13	255 04.3	47 07.2	S	9 36.7	88 00.5	N	7 32.7	57 35.3	S	6 10.5	220 16.4	N	11 04.0
	14	270 06.7	62 06.7	S	9 37.8	103 01.7	N	7 32.3	72 37.3	S	6 10.7	235 19.1	N	11 04.0
	15	285 09.2	77 06.3	S	9 38.9	118 02.9	N	7 31.8	87 39.3	S	6 10.9	250 21.7	N	11 03.9
	16	300 11.7	92 05.8	S	9 40.0	133 04.2	N	7 31.3	102 41.3	S	6 11.1	265 24.3	N	11 03.9
	17	315 14.1	107 05.3	S	9 41.1	148 05.4	N	7 30.8	117 43.4	S	6 11.2	280 27.0	N	11 03.8
	18	330 16.6	122 04.9	S	9 42.2	163 06.6	N	7 30.3	132 45.4	S	6 11.4	295 29.6	N	11 03.8
	19	345 19.0	137 04.4	S	9 43.3	178 07.9	N	7 29.9	147 47.4	S	6 11.6	310 32.2	N	11 03.7
	20	0 21.5	152 03.9	S	9 44.4	193 09.1	N	7 29.4	162 49.4	S	6 11.8	325 34.9	N	11 03.7
	21	15 24.0	167 03.5	S	9 45.5	208 10.3	N	7 28.9	177 51.5	S	6 11.9	340 37.5	N	11 03.6
	22	30 26.4	182 03.0	S	9 46.6	223 11.6	N	7 28.4	192 53.5	S	6 12.1	355 40.1	N	11 03.6
	23	45 28.9	197 02.5	S	9 47.7	238 12.8	N	7 28.0	207 55.5	S	6 12.3	10 42.8	N	11 03.5
21	0	60 31.4	212 02.1	S	9 48.8	253 14.0	N	7 27.5	222 57.5	S	6 12.5	25 45.4	N	11 03.4
	1	75 33.8	227 01.6	S	9 49.9	268 15.3	N	7 27.0	237 59.6	S	6 12.6	40 48.1	N	11 03.4
	2	90 36.3	242 01.1	S	9 51.0	283 16.5	N	7 26.5	253 01.6	S	6 12.8	55 50.7	N	11 03.3
	3	105 38.8	257 00.7	S	9 52.1	298 17.8	N	7 26.1	268 03.6	S	6 13.0	70 53.3	N	11 03.3
	4	120 41.2	272 00.2	S	9 53.2	313 19.0	N	7 25.6	283 05.6	S	6 13.2	85 56.0	N	11 03.2
T	5	135 43.7	286 59.7	S	9 54.3	328 20.2	N	7 25.1	298 07.7	S	6 13.3	100 58.6	N	11 03.2
U														
E	6	150 46.2	301 59.2	S	9 55.4	343 21.5	N	7 24.6	313 09.7	S	6 13.5	116 01.2	N	11 03.1
S	7	165 48.6	316 58.8	S	9 56.5	358 22.7	N	7 24.1	328 11.7	S	6 13.7	131 03.9	N	11 03.1
D	8	180 51.1	331 58.3	S	9 57.6	13 23.9	N	7 23.7	343 13.7	S	6 13.8	146 06.5	N	11 03.0
A	9	195 53.5	346 57.8	S	9 58.7	28 25.2	N	7 23.2	358 15.8	S	6 14.0	161 09.1	N	11 03.0
Y	10	210 56.0	1 57.3	S	9 59.8	43 26.4	N	7 22.7	13 17.8	S	6 14.2	176 11.8	N	11 02.9
	11	225 58.5	16 56.9	S	10 00.9	58 27.7	N	7 22.2	28 19.8	S	6 14.4	191 14.4	N	11 02.9
	12	241 00.9	31 56.4	S	10 01.9	73 28.9	N	7 21.8	43 21.8	S	6 14.5	206 17.0	N	11 02.8
	13	256 03.4	46 55.9	S	10 03.0	88 30.1	N	7 21.3	58 23.9	S	6 14.7	221 19.7	N	11 02.8
	14	271 05.9	61 55.4	S	10 04.1	103 31.4	N	7 20.8	73 25.9	S	6 14.9	236 22.3	N	11 02.7
	15	286 08.3	76 55.0	S	10 05.2	118 32.6	N	7 20.3	88 27.9	S	6 15.1	251 24.9	N	11 02.7
	16	301 10.8	91 54.5	S	10 06.3	133 33.9	N	7 19.9	103 29.9	S	6 15.2	266 27.6	N	11 02.6
	17	316 13.3	106 54.0	S	10 07.4	148 35.1	N	7 19.4	118 32.0	S	6 15.4	281 30.2	N	11 02.6
	18	331 15.7	121 53.5	S	10 08.5	163 36.3	N	7 18.9	133 34.0	S	6 15.6	296 32.8	N	11 02.5
	19	346 18.2	136 53.1	S	10 09.6	178 37.6	N	7 18.4	148 36.0	S	6 15.7	311 35.5	N	11 02.5
	20	1 20.6	151 52.6	S	10 10.7	193 38.8	N	7 18.0	163 38.0	S	6 15.9	326 38.1	N	11 02.4
	21	16 23.1	166 52.1	S	10 11.8	208 40.1	N	7 17.5	178 40.1	S	6 16.1	341 40.8	N	11 02.4
	22	31 25.6	181 51.6	S	10 12.9	223 41.3	N	7 17.0	193 42.1	S	6 16.3	356 43.4	N	11 02.3
	23	46 28.0	196 51.2	S	10 14.0	238 42.5	N	7 16.5	208 44.1	S	6 16.4	11 46.0	N	11 02.3
22	0	61 30.5	211 50.7	S	10 15.0	253 43.8	N	7 16.1	223 46.2	S	6 16.6	26 48.7	N	11 02.2
	1	76 33.0	226 50.2	S	10 16.1	268 45.0	N	7 15.6	238 48.2	S	6 16.8	41 51.3	N	11 02.2
	2	91 35.4	241 49.7	S	10 17.2	283 46.3	N	7 15.1	253 50.2	S	6 17.0	56 53.9	N	11 02.1
	3	106 37.9	256 49.2	S	10 18.3	298 47.5	N	7 14.6	268 52.2	S	6 17.1	71 56.6	N	11 02.1
	4	121 40.4	271 48.8	S	10 19.4	313 48.8	N	7 14.2	283 54.3	S	6 17.3	86 59.2	N	11 02.0
W	5	136 42.8	286 48.3	S	10 20.5	328 50.0	N	7 13.7	298 56.3	S	6 17.5	102 01.8	N	11 02.0
E														
D	6	151 45.3	301 47.8	S	10 21.6	343 51.3	N	7 13.2	313 58.3	S	6 17.6	117 04.5	N	11 01.9
N	7	166 47.8	316 47.3	S	10 22.7	358 52.5	N	7 12.7	329 00.4	S	6 17.8	132 07.1	N	11 01.9
E	8	181 50.2	331 46.8	S	10 23.7	13 53.7	N	7 12.3	344 02.4	S	6 18.0	147 09.7	N	11 01.8
S	9	196 52.7	346 46.4	S	10 24.8	28 55.0	N	7 11.8	359 04.4	S	6 18.2	162 12.4	N	11 01.8
D	10	211 55.1	1 45.9	S	10 25.9	43 56.2	N	7 11.3	14 06.4	S	6 18.3	177 15.0	N	11 01.7
A	11	226 57.6	16 45.4	S	10 27.0	58 57.5	N	7 10.8	29 08.5	S	6 18.5	192 17.6	N	11 01.7
Y														
	12	242 00.1	31 44.9	S	10 28.1	73 58.7	N	7 10.4	44 10.5	S	6 18.7	207 20.3	N	11 01.6
	13	257 02.5	46 44.4	S	10 29.2	88 60.0	N	7 09.9	59 12.5	S	6 18.8	222 22.9	N	11 01.6
	14	272 05.0	61 43.9	S	10 30.2	104 01.2	N	7 09.4	74 14.6	S	6 19.0	237 25.5	N	11 01.5
	15	287 07.5	76 43.5	S	10 31.3	119 02.5	N	7 08.9	89 16.6	S	6 19.2	252 28.1	N	11 01.5
	16	302 09.9	91 43.0	S	10 32.4	134 03.7	N	7 08.5	104 18.6	S	6 19.4	267 30.8	N	11 01.4
	17	317 12.4	106 42.5	S	10 33.5	149 05.0	N	7 08.0	119 20.6	S	6 19.5	282 33.4	N	11 01.4
	18	332 14.9	121 42.0	S	10 34.6	164 06.2	N	7 07.5	134 22.7	S	6 19.7	297 36.0	N	11 01.3
	19	347 17.3	136 41.5	S	10 35.7	179 07.4	N	7 07.0	149 24.7	S	6 19.9	312 38.7	N	11 01.3
	20	2 19.8	151 41.0	S	10 36.7	194 08.7	N	7 06.6	164 26.7	S	6 20.0	327 41.3	N	11 01.2
	21	17 22.3	166 40.5	S	10 37.8	209 09.9	N	7 06.1	179 28.8	S	6 20.2	342 43.9	N	11 01.2
	22	32 24.7	181 40.0	S	10 38.9	224 11.2	N	7 05.6	194 30.8	S	6 20.4	357 46.6	N	11 01.1
	23	47 27.2	196 39.6	S	10 40.0	239 12.4	N	7 05.1	209 32.8	S	6 20.6	12 49.2	N	11 01.1
			v -0.5		d 1.1	v 1.2		d 0.5	v 2.0		d 0.2	v 2.6		d 0.1

G.M.T		SUN				MOON						STARS		
d	h	GHA		Dec		GHA	v	Dec		d	HP	Name	SHA	Dec
		°	'	°	'	°	'	°	'	'	'		° '	° '
20	0	183	35.6	S19	45.3	136	04.3	8.2	S23	05.0	5.9	57.1	Acamar	315 09.0 S40 11.3
	1	198	35.4	S19	45.9	150	31.6	8.3	S22	59.0	6.0	57.0	Achernar	335 17.5 S57 05.5
	2	213	35.3	S19	46.4	164	59.1	8.4	S22	52.8	6.2	57.0	Acrux	172 56.9 S63 15.3
	3	228	35.1	S19	47.0	179	26.6	8.5	S22	46.5	6.3	57.0	Adhara	255 03.1 S29 00.6
	4	243	35.0	S19	47.6	193	54.2	8.6	S22	40.1	6.4	56.9	Albireo	67 01.8 N28 01.5
M	5	258	34.8	S19	48.1	208	21.9	8.7	S22	33.6	6.5	56.9		
O													Aldebaran	290 35.7 N16 34.1
N	6	273	34.7	S19	48.7	222	49.7	8.8	S22	27.0	6.6	56.9	Alioth	166 10.7 N55 48.0
D	7	288	34.5	S19	49.2	237	17.7	8.9	S22	20.3	6.7	56.8	Alkaid	152 50.0 N49 10.0
A	8	303	34.4	S19	49.8	251	45.7	9.0	S22	13.4	6.9	56.8	Al Na-ir	27 29.0 S46 49.3
Y	9	318	34.2	S19	50.4	266	13.8	9.1	S22	06.4	7.0	56.8	Alnilam	275 34.2 S 1 11.0
	10	333	34.0	S19	50.9	280	42.0	9.2	S21	59.4	7.1	56.7		
	11	348	33.9	S19	51.5	295	10.3	9.3	S21	52.2	7.2	56.7	Alphard	217 44.6 S 8 47.0
													Alphecca	126 01.5 N26 37.1
	12	3	33.7	S19	52.0	309	38.8	9.4	S21	44.9	7.3	56.7	Alpheratz	357 31.3 N29 15.3
	13	18	33.6	S19	52.6	324	07.3	9.5	S21	37.5	7.4	56.6	Altair	61 57.1 N 8 56.9
	14	33	33.4	S19	53.1	338	35.9	9.6	S21	30.0	7.5	56.6	Ankaa	353 03.8 S42 09.0
	15	48	33.3	S19	53.7	353	04.6	9.7	S21	22.4	7.6	56.6		
	16	63	33.1	S19	54.2	7	33.5	9.8	S21	14.7	7.7	56.5	Antares	112 12.4 S26 29.7
	17	78	33.0	S19	54.8	22	02.4	9.9	S21	06.8	7.8	56.5	Arcturus	145 45.4 N19 01.9
													Atria	107 04.4 S69 04.8
	18	93	32.8	S19	55.3	36	31.4	10.0	S20	58.9	7.9	56.5	Avior	234 13.1 S59 35.9
	19	108	32.6	S19	55.9	51	00.6	10.1	S20	50.9	8.0	56.4	Bellatrix	278 19.2 N 6 22.6
	20	123	32.5	S19	56.4	65	29.8	10.2	S20	42.8	8.1	56.4		
	21	138	32.3	S19	57.0	79	59.1	10.3	S20	34.6	8.2	56.4	Betelgeuse	270 48.4 N 7 24.7
	22	153	32.2	S19	57.5	94	28.6	10.4	S20	26.3	8.3	56.3	Canopus	263 50.5 S52 42.5
	23	168	32.0	S19	58.1	108	58.1	10.5	S20	17.9	8.4	56.3	Capella	280 16.8 N46 01.5
													Castor	245 52.8 N31 49.3
21	0	183	31.9	S19	58.6	123	27.8	10.6	S20	09.4	8.5	56.3	Deneb	49 23.8 N45 23.4
	1	198	31.7	S19	59.2	137	57.5	10.7	S20	00.8	8.6	56.2		
	2	213	31.5	S19	59.7	152	27.3	10.8	S19	52.2	8.7	56.2	Denebola	182 21.9 N14 24.5
	3	228	31.4	S20	00.3	166	57.3	10.9	S19	43.4	8.8	56.2	Diphda	348 44.0 S17 49.6
	4	243	31.2	S20	00.8	181	27.3	11.0	S19	34.6	8.8	56.1	Dubhe	193 37.5 N61 35.3
T	5	258	31.1	S20	01.4	195	57.4	11.1	S19	25.7	8.9	56.1	Elnath	277 57.6 N28 37.8
U													Eltanin	90 41.2 N51 29.3
E	6	273	30.9	S20	01.9	210	27.7	11.2	S19	16.6	9.0	56.1		
S	7	288	30.7	S20	02.4	224	58.0	11.3	S19	07.6	9.1	56.0	Enif	33 35.7 N10 00.7
D	8	303	30.6	S20	03.0	239	28.4	11.4	S18	58.4	9.2	56.0	Fomalhaut	15 11.0 S29 28.1
A	9	318	30.4	S20	03.5	253	59.0	11.5	S18	49.1	9.3	56.0	Gacrux	171 48.4 S57 16.3
Y	10	333	30.2	S20	04.1	268	29.6	11.6	S18	39.8	9.3	56.0	Gienah	175 40.5 S17 42.1
	11	348	30.1	S20	04.6	283	00.3	11.7	S18	30.4	9.4	55.9	Hadar	148 32.1 S60 30.6
	12	3	29.9	S20	05.2	297	31.1	11.8	S18	20.9	9.5	55.9	Hamal	327 47.3 N23 36.2
	13	18	29.8	S20	05.7	312	02.0	11.9	S18	11.3	9.6	55.9	Kaus Austr.	83 28.7 S34 22.2
	14	33	29.6	S20	06.2	326	33.0	12.0	S18	01.7	9.6	55.8	Kochab	137 21.4 N74 02.0
	15	48	29.4	S20	06.8	341	04.1	12.1	S17	51.9	9.7	55.8	Markab	13 26.7 N15 21.9
	16	63	29.3	S20	07.3	355	35.3	12.2	S17	42.2	9.8	55.8	Menkar	314 02.5 N 4 12.3
	17	78	29.1	S20	07.8	10	06.6	12.3	S17	32.3	9.9	55.7		
													Menkent	147 54.3 S36 30.7
	18	93	28.9	S20	08.4	24	37.9	12.4	S17	22.4	9.9	55.7	Miaplacidus	221 37.1 S69 49.9
	19	108	28.8	S20	08.9	39	09.4	12.5	S17	12.4	10.0	55.7	Mirfak	308 23.2 N49 57.9
	20	123	28.6	S20	09.4	53	40.9	12.6	S17	02.3	10.1	55.7	Nunki	75 44.2 S26 15.6
	21	138	28.4	S20	10.0	68	12.6	12.6	S16	52.2	10.1	55.6	Peacock	53 01.1 S56 38.6
	22	153	28.3	S20	10.5	82	44.3	12.7	S16	42.0	10.2	55.6		
	23	168	28.1	S20	11.0	97	16.1	12.8	S16	31.7	10.3	55.6	Polaris	314 54.9 N89 22.7
													Pollux	243 13.3 N27 57.2
22	0	183	27.9	S20	11.6	111	48.0	12.9	S16	21.4	10.3	55.5	Procyon	244 47.3 N 5 09.0
	1	198	27.8	S20	12.1	126	20.0	13.0	S16	11.0	10.4	55.5	Rasalhague	95 56.0 N12 32.5
	2	213	27.6	S20	12.6	140	52.1	13.1	S16	00.5	10.5	55.5	Regulus	207 31.1 N11 49.4
	3	228	27.4	S20	13.2	155	24.3	13.2	S15	50.0	10.5	55.5		
	4	243	27.3	S20	13.7	169	56.5	13.2	S15	39.4	10.6	55.4	Rigel	281 00.5 S 8 10.0
W	5	258	27.1	S20	14.2	184	28.8	13.3	S15	28.8	10.6	55.4	Rigil Kent	139 36.7 S60 57.2
E													Sabik	101 59.5 S15 45.6
D	6	273	26.9	S20	14.8	199	01.2	13.4	S15	18.1	10.7	55.4	Schedar	349 27.0 N56 42.1
N	7	288	26.8	S20	15.3	213	33.7	13.5	S15	07.4	10.7	55.4	Shaula	96 06.5 S37 07.4
E	8	303	26.6	S20	15.8	228	06.3	13.6	S14	56.6	10.8	55.3		
S	9	318	26.4	S20	16.3	242	38.9	13.6	S14	45.7	10.9	55.3	Sirius	258 23.2 S16 45.3
D	10	333	26.3	S20	16.9	257	11.7	13.7	S14	34.8	10.9	55.3	Spica	158 19.2 S11 18.7
A	11	348	26.1	S20	17.4	271	44.5	13.8	S14	23.9	11.0	55.3	Suhail	222 43.8 S43 32.8
Y													Vega	80 31.4 N38 48.9
	12	3	25.9	S20	17.9	286	17.4	13.9	S14	12.9	11.0	55.2	Zuben-ubi	136 53.8 S16 09.7
	13	18	25.7	S20	18.4	300	50.3	14.0	S14	01.8	11.1	55.2		
	14	33	25.6	S20	19.0	315	23.3	14.0	S13	50.7	11.1	55.2		
	15	48	25.4	S20	19.5	329	56.5	14.1	S13	39.5	11.2	55.2		
	16	63	25.2	S20	20.0	344	29.6	14.2	S13	28.3	11.2	55.1		
	17	78	25.1	S20	20.5	359	02.9	14.3	S13	17.1	11.3	55.1		
	18	93	24.9	S20	21.0	13	36.2	14.3	S13	05.8	11.3	55.1		
	19	108	24.7	S20	21.6	28	09.6	14.4	S12	54.4	11.3	55.1		
	20	123	24.5	S20	22.1	42	43.1	14.5	S12	43.1	11.4	55.0		
	21	138	24.4	S20	22.6	57	16.6	14.5	S12	31.6	11.4	55.0		
	22	153	24.2	S20	23.1	71	50.2	14.6	S12	20.2	11.5	55.0		
	23	168	24.0	S20	23.6	86	23.9	14.7	S12	08.7	11.5	55.0		
		S.D. 16.2		d	0.5	S.D.	15.4		15.2		15.0			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
23	0	62 29.6	211 39.1	S10 41.1	254 13.7	N 7 04.7	224 34.9	S 6 20.7	27 51.8	N11 01.0
	1	77 32.1	226 38.6	S10 42.1	269 14.9	N 7 04.2	239 36.9	S 6 20.9	42 54.5	N11 01.0
	2	92 34.6	241 38.1	S10 43.2	284 16.2	N 7 03.7	254 38.9	S 6 21.1	57 57.1	N11 00.9
	3	107 37.0	256 37.6	S10 44.3	299 17.4	N 7 03.2	269 40.9	S 6 21.2	72 59.7	N11 00.9
	4	122 39.5	271 37.1	S10 45.4	314 18.7	N 7 02.8	284 43.0	S 6 21.4	88 02.4	N11 00.8
T	5	137 42.0	286 36.6	S10 46.5	329 19.9	N 7 02.3	299 45.0	S 6 21.6	103 05.0	N11 00.8
H										
U	6	152 44.4	301 36.1	S10 47.5	344 21.2	N 7 01.8	314 47.0	S 6 21.8	118 07.6	N11 00.7
R	7	167 46.9	316 35.6	S10 48.6	359 22.4	N 7 01.4	329 49.1	S 6 21.9	133 10.3	N11 00.7
S	8	182 49.4	331 35.2	S10 49.7	14 23.7	N 7 00.9	344 51.1	S 6 22.1	148 12.9	N11 00.6
D	9	197 51.8	346 34.7	S10 50.8	29 24.9	N 7 00.4	359 53.1	S 6 22.3	163 15.5	N11 00.6
A	10	212 54.3	1 34.2	S10 51.8	44 26.2	N 6 59.9	14 55.2	S 6 22.4	178 18.1	N11 00.5
Y	11	227 56.8	16 33.7	S10 52.9	59 27.4	N 6 59.5	29 57.2	S 6 22.6	193 20.8	N11 00.5
	12	242 59.2	31 33.2	S10 54.0	74 28.7	N 6 59.0	44 59.2	S 6 22.8	208 23.4	N11 00.4
	13	258 01.7	46 32.7	S10 55.1	89 29.9	N 6 58.5	60 01.3	S 6 22.9	223 26.0	N11 00.4
	14	273 04.1	61 32.2	S10 56.1	104 31.2	N 6 58.0	75 03.3	S 6 23.1	238 28.7	N11 00.3
	15	288 06.6	76 31.7	S10 57.2	119 32.5	N 6 57.6	90 05.3	S 6 23.3	253 31.3	N11 00.3
	16	303 09.1	91 31.2	S10 58.3	134 33.7	N 6 57.1	105 07.3	S 6 23.5	268 33.9	N11 00.2
	17	318 11.5	106 30.7	S10 59.4	149 35.0	N 6 56.6	120 09.4	S 6 23.6	283 36.6	N11 00.2
	18	333 14.0	121 30.2	S11 00.4	164 36.2	N 6 56.1	135 11.4	S 6 23.8	298 39.2	N11 00.1
	19	348 16.5	136 29.7	S11 01.5	179 37.5	N 6 55.7	150 13.4	S 6 24.0	313 41.8	N11 00.1
	20	3 18.9	151 29.2	S11 02.6	194 38.7	N 6 55.2	165 15.5	S 6 24.1	328 44.4	N11 00.0
	21	18 21.4	166 28.7	S11 03.6	209 40.0	N 6 54.7	180 17.5	S 6 24.3	343 47.1	N10 60.0
	22	33 23.9	181 28.2	S11 04.7	224 41.2	N 6 54.3	195 19.5	S 6 24.5	358 49.7	N10 59.9
	23	48 26.3	196 27.7	S11 05.8	239 42.5	N 6 53.8	210 21.6	S 6 24.6	13 52.3	N10 59.9
24	0	63 28.8	211 27.2	S11 06.8	254 43.7	N 6 53.3	225 23.6	S 6 24.8	28 55.0	N10 59.8
	1	78 31.2	226 26.7	S11 07.9	269 45.0	N 6 52.8	240 25.6	S 6 25.0	43 57.6	N10 59.8
	2	93 33.7	241 26.2	S11 09.0	284 46.2	N 6 52.4	255 27.7	S 6 25.2	59 00.2	N10 59.7
	3	108 36.2	256 25.7	S11 10.1	299 47.5	N 6 51.9	270 29.7	S 6 25.3	74 02.8	N10 59.7
	4	123 38.6	271 25.2	S11 11.1	314 48.8	N 6 51.4	285 31.7	S 6 25.5	89 05.5	N10 59.7
F	5	138 41.1	286 24.7	S11 12.2	329 50.0	N 6 51.0	300 33.8	S 6 25.7	104 08.1	N10 59.6
R										
I	6	153 43.6	301 24.2	S11 13.3	344 51.3	N 6 50.5	315 35.8	S 6 25.8	119 10.7	N10 59.6
D	7	168 46.0	316 23.7	S11 14.3	359 52.5	N 6 50.0	330 37.8	S 6 26.0	134 13.4	N10 59.5
A	8	183 48.5	331 23.2	S11 15.4	14 53.8	N 6 49.5	345 39.9	S 6 26.2	149 16.0	N10 59.5
Y	9	198 51.0	346 22.7	S11 16.5	29 55.0	N 6 49.1	0 41.9	S 6 26.3	164 18.6	N10 59.4
	10	213 53.4	1 22.2	S11 17.5	44 56.3	N 6 48.6	15 43.9	S 6 26.5	179 21.2	N10 59.4
	11	228 55.9	16 21.7	S11 18.6	59 57.6	N 6 48.1	30 46.0	S 6 26.7	194 23.9	N10 59.3
	12	243 58.4	31 21.2	S11 19.7	74 58.8	N 6 47.7	45 48.0	S 6 26.8	209 26.5	N10 59.3
	13	259 00.8	46 20.7	S11 20.7	90 00.1	N 6 47.2	60 50.0	S 6 27.0	224 29.1	N10 59.2
	14	274 03.3	61 20.2	S11 21.8	105 01.3	N 6 46.7	75 52.1	S 6 27.2	239 31.8	N10 59.2
	15	289 05.7	76 19.7	S11 22.8	120 02.6	N 6 46.2	90 54.1	S 6 27.3	254 34.4	N10 59.1
	16	304 08.2	91 19.2	S11 23.9	135 03.9	N 6 45.8	105 56.1	S 6 27.5	269 37.0	N10 59.1
	17	319 10.7	106 18.7	S11 25.0	150 05.1	N 6 45.3	120 58.2	S 6 27.7	284 39.6	N10 59.0
	18	334 13.1	121 18.2	S11 26.0	165 06.4	N 6 44.8	136 00.2	S 6 27.9	299 42.3	N10 59.0
	19	349 15.6	136 17.7	S11 27.1	180 07.6	N 6 44.4	151 02.3	S 6 28.0	314 44.9	N10 58.9
	20	4 18.1	151 17.2	S11 28.2	195 08.9	N 6 43.9	166 04.3	S 6 28.2	329 47.5	N10 58.9
	21	19 20.5	166 16.7	S11 29.2	210 10.2	N 6 43.4	181 06.3	S 6 28.4	344 50.1	N10 58.8
	22	34 23.0	181 16.2	S11 30.3	225 11.4	N 6 42.9	196 08.4	S 6 28.5	359 52.8	N10 58.8
	23	49 25.5	196 15.7	S11 31.3	240 12.7	N 6 42.5	211 10.4	S 6 28.7	14 55.4	N10 58.7
25	0	64 27.9	211 15.2	S11 32.4	255 13.9	N 6 42.0	226 12.4	S 6 28.9	29 58.0	N10 58.7
	1	79 30.4	226 14.7	S11 33.5	270 15.2	N 6 41.5	241 14.5	S 6 29.0	45 00.7	N10 58.6
	2	94 32.9	241 14.2	S11 34.5	285 16.5	N 6 41.1	256 16.5	S 6 29.2	60 03.3	N10 58.6
	3	109 35.3	256 13.6	S11 35.6	300 17.7	N 6 40.6	271 18.5	S 6 29.4	75 05.9	N10 58.5
	4	124 37.8	271 13.1	S11 36.6	315 19.0	N 6 40.1	286 20.6	S 6 29.5	90 08.5	N10 58.5
S	5	139 40.2	286 12.6	S11 37.7	330 20.3	N 6 39.7	301 22.6	S 6 29.7	105 11.2	N10 58.5
A										
T	6	154 42.7	301 12.1	S11 38.7	345 21.5	N 6 39.2	316 24.6	S 6 29.9	120 13.8	N10 58.4
U	7	169 45.2	316 11.6	S11 39.8	0 22.8	N 6 38.7	331 26.7	S 6 30.0	135 16.4	N10 58.4
R	8	184 47.6	331 11.1	S11 40.9	15 24.0	N 6 38.2	346 28.7	S 6 30.2	150 19.0	N10 58.3
D	9	199 50.1	346 10.6	S11 41.9	30 25.3	N 6 37.8	1 30.8	S 6 30.4	165 21.7	N10 58.3
A	10	214 52.6	1 10.1	S11 43.0	45 26.6	N 6 37.3	16 32.8	S 6 30.5	180 24.3	N10 58.2
Y	11	229 55.0	16 09.6	S11 44.0	60 27.8	N 6 36.8	31 34.8	S 6 30.7	195 26.9	N10 58.2
	12	244 57.5	31 09.0	S11 45.1	75 29.1	N 6 36.4	46 36.9	S 6 30.9	210 29.5	N10 58.1
	13	259 60.0	46 08.5	S11 46.1	90 30.4	N 6 35.9	61 38.9	S 6 31.0	225 32.2	N10 58.1
	14	275 02.4	61 08.0	S11 47.2	105 31.6	N 6 35.4	76 40.9	S 6 31.2	240 34.8	N10 58.0
	15	290 04.9	76 07.5	S11 48.2	120 32.9	N 6 35.0	91 43.0	S 6 31.4	255 37.4	N10 58.0
	16	305 07.3	91 07.0	S11 49.3	135 34.2	N 6 34.5	106 45.0	S 6 31.5	270 40.0	N10 57.9
	17	320 09.8	106 06.5	S11 50.3	150 35.4	N 6 34.0	121 47.1	S 6 31.7	285 42.7	N10 57.9
	18	335 12.3	121 06.0	S11 51.4	165 36.7	N 6 33.5	136 49.1	S 6 31.9	300 45.3	N10 57.8
	19	350 14.7	136 05.4	S11 52.4	180 38.0	N 6 33.1	151 51.1	S 6 32.0	315 47.9	N10 57.8
	20	5 17.2	151 04.9	S11 53.5	195 39.2	N 6 32.6	166 53.2	S 6 32.2	330 50.5	N10 57.7
	21	20 19.7	166 04.4	S11 54.5	210 40.5	N 6 32.1	181 55.2	S 6 32.4	345 53.2	N10 57.7
	22	35 22.1	181 03.9	S11 55.6	225 41.8	N 6 31.7	196 57.2	S 6 32.5	0 55.8	N10 57.7
	23	50 24.6	196 03.4	S11 56.6	240 43.0	N 6 31.2	211 59.3	S 6 32.7	15 58.4	N10 57.6
			v -0.5	d 1.1	v 1.3	d 0.5	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T		SUN				MOON					
d	h	GHA		Dec		GHA	v	Dec		d	HP
		°	'	°	'	°	'	°	'	'	'
23	0	183	23.8	S20	24.2	100	57.6	14.7	S11	57.1	11.5	55.0
	1	198	23.7	S20	24.7	115	31.4	14.8	S11	45.5	11.6	54.9
	2	213	23.5	S20	25.2	130	05.2	14.9	S11	33.9	11.6	54.9
	3	228	23.3	S20	25.7	144	39.2	14.9	S11	22.2	11.7	54.9
	4	243	23.1	S20	26.2	159	13.1	15.0	S11	10.5	11.7	54.9
T	5	258	23.0	S20	26.7	173	47.2	15.0	S10	58.8	11.7	54.9
H												
U	6	273	22.8	S20	27.2	188	21.3	15.1	S10	47.0	11.8	54.8
R	7	288	22.6	S20	27.7	202	55.4	15.2	S10	35.2	11.8	54.8
S	8	303	22.4	S20	28.3	217	29.7	15.2	S10	23.4	11.8	54.8
D	9	318	22.2	S20	28.8	232	03.9	15.3	S10	11.5	11.9	54.8
A	10	333	22.1	S20	29.3	246	38.3	15.3	S 9	59.6	11.9	54.8
Y	11	348	21.9	S20	29.8	261	12.6	15.4	S 9	47.7	11.9	54.7
	12	3	21.7	S20	30.3	275	47.1	15.4	S 9	35.7	12.0	54.7
	13	18	21.5	S20	30.8	290	21.6	15.5	S 9	23.7	12.0	54.7
	14	33	21.4	S20	31.3	304	56.1	15.5	S 9	11.7	12.0	54.7
	15	48	21.2	S20	31.8	319	30.7	15.6	S 8	59.6	12.1	54.7
	16	63	21.0	S20	32.3	334	05.3	15.6	S 8	47.5	12.1	54.6
	17	78	20.8	S20	32.8	348	40.0	15.7	S 8	35.4	12.1	54.6
	18	93	20.6	S20	33.3	3	14.7	15.7	S 8	23.3	12.1	54.6
	19	108	20.5	S20	33.8	17	49.5	15.8	S 8	11.2	12.2	54.6
	20	123	20.3	S20	34.3	32	24.3	15.8	S 7	59.0	12.2	54.6
	21	138	20.1	S20	34.8	46	59.2	15.9	S 7	46.8	12.2	54.6
	22	153	19.9	S20	35.3	61	34.1	15.9	S 7	34.6	12.2	54.6
	23	168	19.7	S20	35.8	76	09.0	15.9	S 7	22.3	12.2	54.5
24	0	183	19.5	S20	36.3	90	44.0	16.0	S 7	10.0	12.3	54.5
	1	198	19.4	S20	36.8	105	19.1	16.0	S 6	57.7	12.3	54.5
	2	213	19.2	S20	37.3	119	54.1	16.1	S 6	45.4	12.3	54.5
	3	228	19.0	S20	37.8	134	29.2	16.1	S 6	33.1	12.3	54.5
	4	243	18.8	S20	38.3	149	04.4	16.1	S 6	20.8	12.3	54.5
F	5	258	18.6	S20	38.8	163	39.5	16.2	S 6	08.4	12.4	54.5
R												
I	6	273	18.4	S20	39.3	178	14.7	16.2	S 5	56.0	12.4	54.4
D	7	288	18.3	S20	39.8	192	50.0	16.2	S 5	43.6	12.4	54.4
A	8	303	18.1	S20	40.3	207	25.3	16.3	S 5	31.2	12.4	54.4
Y	9	318	17.9	S20	40.8	222	00.6	16.3	S 5	18.8	12.4	54.4
	10	333	17.7	S20	41.3	236	35.9	16.3	S 5	06.3	12.4	54.4
	11	348	17.5	S20	41.8	251	11.3	16.4	S 4	53.9	12.5	54.4
	12	3	17.3	S20	42.3	265	46.6	16.4	S 4	41.4	12.5	54.4
	13	18	17.1	S20	42.8	280	22.1	16.4	S 4	28.9	12.5	54.4
	14	33	17.0	S20	43.3	294	57.5	16.4	S 4	16.4	12.5	54.4
	15	48	16.8	S20	43.8	309	33.0	16.5	S 4	03.9	12.5	54.3
	16	63	16.6	S20	44.3	324	08.4	16.5	S 3	51.4	12.5	54.3
	17	78	16.4	S20	44.8	338	44.0	16.5	S 3	38.9	12.5	54.3
	18	93	16.2	S20	45.2	353	19.5	16.5	S 3	26.3	12.5	54.3
	19	108	16.0	S20	45.7	7	55.0	16.6	S 3	13.8	12.5	54.3
	20	123	15.8	S20	46.2	22	30.6	16.6	S 3	01.2	12.6	54.3
	21	138	15.6	S20	46.7	37	06.2	16.6	S 2	48.7	12.6	54.3
	22	153	15.4	S20	47.2	51	41.8	16.6	S 2	36.1	12.6	54.3
	23	168	15.3	S20	47.7	66	17.4	16.6	S 2	23.5	12.6	54.3
25	0	183	15.1	S20	48.2	80	53.1	16.6	S 2	11.0	12.6	54.3
	1	198	14.9	S20	48.6	95	28.7	16.6	S 1	58.4	12.6	54.3
	2	213	14.7	S20	49.1	110	04.4	16.7	S 1	45.8	12.6	54.2
	3	228	14.5	S20	49.6	124	40.0	16.7	S 1	33.2	12.6	54.2
	4	243	14.3	S20	50.1	139	15.7	16.7	S 1	20.6	12.6	54.2
S	5	258	14.1	S20	50.6	153	51.4	16.7	S 1	08.0	12.6	54.2
A												
T	6	273	13.9	S20	51.1	168	27.1	16.7	S 0	55.4	12.6	54.2
U	7	288	13.7	S20	51.5	183	02.8	16.7	S 0	42.8	12.6	54.2
R	8	303	13.5	S20	52.0	197	38.5	16.7	S 0	30.2	12.6	54.2
D	9	318	13.3	S20	52.5	212	14.3	16.7	S 0	17.6	12.6	54.2
A	10	333	13.1	S20	53.0	226	50.0	16.7	S 0	05.0	12.6	54.2
Y	11	348	12.9	S20	53.4	241	25.7	16.7	N 0	07.6	12.6	54.2
	12	3	12.8	S20	53.9	256	01.4	16.7	N 0	20.2	12.6	54.2
	13	18	12.6	S20	54.4	270	37.2	16.7	N 0	32.8	12.6	54.2
	14	33	12.4	S20	54.9	285	12.9	16.7	N 0	45.4	12.6	54.2
	15	48	12.2	S20	55.3	299	48.6	16.7	N 0	58.0	12.6	54.2
	16	63	12.0	S20	55.8	314	24.4	16.7	N 1	10.6	12.6	54.2
	17	78	11.8	S20	56.3	329	00.1	16.7	N 1	23.1	12.6	54.2
	18	93	11.6	S20	56.8	343	35.8	16.7	N 1	35.7	12.6	54.2
	19	108	11.4	S20	57.2	358	11.5	16.7	N 1	48.3	12.6	54.2
	20	123	11.2	S20	57.7	12	47.2	16.7	N 2	00.9	12.6	54.2
	21	138	11.0	S20	58.2	27	22.9	16.7	N 2	13.4	12.6	54.2
	22	153	10.8	S20	58.6	41	58.6	16.7	N 2	26.0	12.5	54.2
	23	168	10.6	S20	59.1	56	34.3	16.7	N 2	38.5	12.5	54.2
		S.D. 16.2		d	0.5	S.D.	14.9		14.8		14.8	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.0	S40 11.3
Achernar	335 17.5	S57 05.5
Acrux	172 56.8	S63 15.3
Adhara	255 03.1	S29 00.6
Albireo	67 01.8	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.7	N55 47.9
Alkaid	152 50.0	N49 09.9
Al Na-ir	27 29.0	S46 49.3
Alnilam	275 34.2	S 1 11.0
Alphard	217 44.5	S 8 47.1
Alphecca	126 01.5	N26 37.0
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.9	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.9
Atria	107 04.4	S69 04.8
Avior	234 13.0	S59 35.9
Bellatrix	278 19.2	N 6 22.6
Betelgeuse	270 48.4	N 7 24.7
Canopus	263 50.5	S52 42.5
Capella	280 16.8	N46 01.6
Castor	245 52.8	N31 49.3
Deneb	49 23.8	N45 23.4
Denebola	182 21.9	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.4	N61 35.3
Elnath	277 57.6	N28 37.8
Eltanin	90 41.2	N51 29.2
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.0	S29 28.1
Gacrux	171 48.4	S57 16.3
Gienah	175 40.5	S17 42.1
Hadar	148 32.1	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.4	N74 02.0
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.2	S36 30.7
Miaplacidus	221 37.1	S69 49.9
Mirfak	308 23.2	N49 57.9
Nunki	75 44.2	S26 15.6
Peacock	53 01.1	S56 38.6
Polaris	314 55.3	N89 22.8
Pollux	243 13.2	N27 57.2
Procyon	244 47.3	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.1	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.6	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.0	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.2	S16 45.3
Spica	158 19.2	S11 18.7
Suhail	222 43.8	S43 32.8
Vega	80 31.4	N38 48.8
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
26	0	65 27.1	211 02.9	S11 57.7	255 44.3	N 6 30.7	227 01.3	S 6 32.9	31 01.0	N10 57.6
	1	80 29.5	226 02.3	S11 58.7	270 45.6	N 6 30.3	242 03.4	S 6 33.0	46 03.7	N10 57.5
	2	95 32.0	241 01.8	S11 59.8	285 46.8	N 6 29.8	257 05.4	S 6 33.2	61 06.3	N10 57.5
	3	110 34.5	256 01.3	S12 00.8	300 48.1	N 6 29.3	272 07.4	S 6 33.4	76 08.9	N10 57.4
	4	125 36.9	271 00.8	S12 01.9	315 49.4	N 6 28.9	287 09.5	S 6 33.5	91 11.5	N10 57.4
S	5	140 39.4	286 00.3	S12 02.9	330 50.6	N 6 28.4	302 11.5	S 6 33.7	106 14.1	N10 57.3
U										
N	6	155 41.8	300 59.7	S12 04.0	345 51.9	N 6 27.9	317 13.6	S 6 33.9	121 16.8	N10 57.3
D	7	170 44.3	315 59.2	S12 05.0	0 53.2	N 6 27.5	332 15.6	S 6 34.0	136 19.4	N10 57.2
A	8	185 46.8	330 58.7	S12 06.1	15 54.5	N 6 27.0	347 17.6	S 6 34.2	151 22.0	N10 57.2
Y	9	200 49.2	345 58.2	S12 07.1	30 55.7	N 6 26.5	2 19.7	S 6 34.4	166 24.6	N10 57.1
	10	215 51.7	0 57.7	S12 08.2	45 57.0	N 6 26.1	17 21.7	S 6 34.5	181 27.3	N10 57.1
	11	230 54.2	15 57.1	S12 09.2	60 58.3	N 6 25.6	32 23.8	S 6 34.7	196 29.9	N10 57.1
	12	245 56.6	30 56.6	S12 10.2	75 59.5	N 6 25.1	47 25.8	S 6 34.9	211 32.5	N10 57.0
	13	260 59.1	45 56.1	S12 11.3	91 00.8	N 6 24.6	62 27.8	S 6 35.0	226 35.1	N10 57.0
	14	276 01.6	60 55.6	S12 12.3	106 02.1	N 6 24.2	77 29.9	S 6 35.2	241 37.8	N10 56.9
	15	291 04.0	75 55.0	S12 13.4	121 03.4	N 6 23.7	92 31.9	S 6 35.4	256 40.4	N10 56.9
	16	306 06.5	90 54.5	S12 14.4	136 04.6	N 6 23.2	107 34.0	S 6 35.5	271 43.0	N10 56.8
	17	321 09.0	105 54.0	S12 15.5	151 05.9	N 6 22.8	122 36.0	S 6 35.7	286 45.6	N10 56.8
	18	336 11.4	120 53.5	S12 16.5	166 07.2	N 6 22.3	137 38.0	S 6 35.9	301 48.2	N10 56.7
	19	351 13.9	135 52.9	S12 17.5	181 08.5	N 6 21.8	152 40.1	S 6 36.0	316 50.9	N10 56.7
	20	6 16.3	150 52.4	S12 18.6	196 09.7	N 6 21.4	167 42.1	S 6 36.2	331 53.5	N10 56.6
	21	21 18.8	165 51.9	S12 19.6	211 11.0	N 6 20.9	182 44.2	S 6 36.4	346 56.1	N10 56.6
	22	36 21.3	180 51.4	S12 20.7	226 12.3	N 6 20.4	197 46.2	S 6 36.5	1 58.7	N10 56.6
	23	51 23.7	195 50.8	S12 21.7	241 13.5	N 6 20.0	212 48.2	S 6 36.7	17 01.3	N10 56.5
27	0	66 26.2	210 50.3	S12 22.7	256 14.8	N 6 19.5	227 50.3	S 6 36.9	32 04.0	N10 56.5
	1	81 28.7	225 49.8	S12 23.8	271 16.1	N 6 19.0	242 52.3	S 6 37.0	47 06.6	N10 56.4
	2	96 31.1	240 49.2	S12 24.8	286 17.4	N 6 18.6	257 54.4	S 6 37.2	62 09.2	N10 56.4
	3	111 33.6	255 48.7	S12 25.8	301 18.6	N 6 18.1	272 56.4	S 6 37.3	77 11.8	N10 56.3
	4	126 36.1	270 48.2	S12 26.9	316 19.9	N 6 17.6	287 58.4	S 6 37.5	92 14.5	N10 56.3
M	5	141 38.5	285 47.6	S12 27.9	331 21.2	N 6 17.2	303 00.5	S 6 37.7	107 17.1	N10 56.2
O										
N	6	156 41.0	300 47.1	S12 28.9	346 22.5	N 6 16.7	318 02.5	S 6 37.8	122 19.7	N10 56.2
D	7	171 43.4	315 46.6	S12 30.0	1 23.8	N 6 16.2	333 04.6	S 6 38.0	137 22.3	N10 56.1
A	8	186 45.9	330 46.1	S12 31.0	16 25.0	N 6 15.8	348 06.6	S 6 38.2	152 24.9	N10 56.1
Y	9	201 48.4	345 45.5	S12 32.0	31 26.3	N 6 15.3	3 08.7	S 6 38.3	167 27.6	N10 56.1
	10	216 50.8	0 45.0	S12 33.1	46 27.6	N 6 14.8	18 10.7	S 6 38.5	182 30.2	N10 56.0
	11	231 53.3	15 44.5	S12 34.1	61 28.9	N 6 14.4	33 12.7	S 6 38.7	197 32.8	N10 56.0
	12	246 55.8	30 43.9	S12 35.1	76 30.1	N 6 13.9	48 14.8	S 6 38.8	212 35.4	N10 55.9
	13	261 58.2	45 43.4	S12 36.2	91 31.4	N 6 13.5	63 16.8	S 6 39.0	227 38.0	N10 55.9
	14	277 00.7	60 42.9	S12 37.2	106 32.7	N 6 13.0	78 18.9	S 6 39.2	242 40.7	N10 55.8
	15	292 03.2	75 42.3	S12 38.2	121 34.0	N 6 12.5	93 20.9	S 6 39.3	257 43.3	N10 55.8
	16	307 05.6	90 41.8	S12 39.3	136 35.3	N 6 12.1	108 23.0	S 6 39.5	272 45.9	N10 55.7
	17	322 08.1	105 41.2	S12 40.3	151 36.5	N 6 11.6	123 25.0	S 6 39.6	287 48.5	N10 55.7
	18	337 10.6	120 40.7	S12 41.3	166 37.8	N 6 11.1	138 27.0	S 6 39.8	302 51.1	N10 55.6
	19	352 13.0	135 40.2	S12 42.3	181 39.1	N 6 10.7	153 29.1	S 6 40.0	317 53.7	N10 55.6
	20	7 15.5	150 39.6	S12 43.4	196 40.4	N 6 10.2	168 31.1	S 6 40.1	332 56.4	N10 55.6
	21	22 17.9	165 39.1	S12 44.4	211 41.7	N 6 09.7	183 33.2	S 6 40.3	347 59.0	N10 55.5
	22	37 20.4	180 38.6	S12 45.4	226 42.9	N 6 09.3	198 35.2	S 6 40.5	3 01.6	N10 55.5
	23	52 22.9	195 38.0	S12 46.5	241 44.2	N 6 08.8	213 37.3	S 6 40.6	18 04.2	N10 55.4
28	0	67 25.3	210 37.5	S12 47.5	256 45.5	N 6 08.3	228 39.3	S 6 40.8	33 06.8	N10 55.4
	1	82 27.8	225 36.9	S12 48.5	271 46.8	N 6 07.9	243 41.4	S 6 41.0	48 09.5	N10 55.3
	2	97 30.3	240 36.4	S12 49.5	286 48.1	N 6 07.4	258 43.4	S 6 41.1	63 12.1	N10 55.3
	3	112 32.7	255 35.9	S12 50.6	301 49.3	N 6 06.9	273 45.4	S 6 41.3	78 14.7	N10 55.2
	4	127 35.2	270 35.3	S12 51.6	316 50.6	N 6 06.5	288 47.5	S 6 41.4	93 17.3	N10 55.2
T	5	142 37.7	285 34.8	S12 52.6	331 51.9	N 6 06.0	303 49.5	S 6 41.6	108 19.9	N10 55.2
U										
E	6	157 40.1	300 34.2	S12 53.6	346 53.2	N 6 05.5	318 51.6	S 6 41.8	123 22.6	N10 55.1
S	7	172 42.6	315 33.7	S12 54.6	1 54.5	N 6 05.1	333 53.6	S 6 41.9	138 25.2	N10 55.1
D	8	187 45.0	330 33.2	S12 55.7	16 55.8	N 6 04.6	348 55.7	S 6 42.1	153 27.8	N10 55.0
A	9	202 47.5	345 32.6	S12 56.7	31 57.0	N 6 04.2	3 57.7	S 6 42.3	168 30.4	N10 55.0
Y	10	217 50.0	0 32.1	S12 57.7	46 58.3	N 6 03.7	18 59.8	S 6 42.4	183 33.0	N10 54.9
	11	232 52.4	15 31.5	S12 58.7	61 59.6	N 6 03.2	34 01.8	S 6 42.6	198 35.6	N10 54.9
	12	247 54.9	30 31.0	S12 59.7	77 00.9	N 6 02.8	49 03.9	S 6 42.8	213 38.3	N10 54.9
	13	262 57.4	45 30.4	S13 00.8	92 02.2	N 6 02.3	64 05.9	S 6 42.9	228 40.9	N10 54.8
	14	277 59.8	60 29.9	S13 01.8	107 03.5	N 6 01.8	79 07.9	S 6 43.1	243 43.5	N10 54.8
	15	293 02.3	75 29.3	S13 02.8	122 04.8	N 6 01.4	94 10.0	S 6 43.2	258 46.1	N10 54.7
	16	308 04.8	90 28.8	S13 03.8	137 06.0	N 6 00.9	109 12.0	S 6 43.4	273 48.7	N10 54.7
	17	323 07.2	105 28.2	S13 04.8	152 07.3	N 6 00.4	124 14.1	S 6 43.6	288 51.3	N10 54.6
	18	338 09.7	120 27.7	S13 05.9	167 08.6	N 5 60.0	139 16.1	S 6 43.7	303 54.0	N10 54.6
	19	353 12.2	135 27.2	S13 06.9	182 09.9	N 5 59.5	154 18.2	S 6 43.9	318 56.6	N10 54.5
	20	8 14.6	150 26.6	S13 07.9	197 11.2	N 5 59.1	169 20.2	S 6 44.1	333 59.2	N10 54.5
	21	23 17.1	165 26.1	S13 08.9	212 12.5	N 5 58.6	184 22.3	S 6 44.2	349 01.8	N10 54.5
	22	38 19.5	180 25.5	S13 09.9	227 13.8	N 5 58.1	199 24.3	S 6 44.4	4 04.4	N10 54.4
	23	53 22.0	195 25.0	S13 10.9	242 15.0	N 5 57.7	214 26.4	S 6 44.5	19 07.0	N10 54.4
			v -0.5	d 1.0	v 1.3	d 0.5	v 2.0	d 0.2	v 2.6	d 0.0

G.M.T		SUN		MOON					
d	h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
26	0	183 10.4	S20 59.6	71 10.0	16.7	N 2 51.0	12.5	54.2
	1	198 10.2	S21 00.1	85 45.6	16.7	N 3 03.5	12.5	54.2
	2	213 10.0	S21 00.5	100 21.3	16.6	N 3 16.1	12.5	54.2
	3	228 09.8	S21 01.0	114 56.9	16.6	N 3 28.6	12.5	54.2
	4	243 09.6	S21 01.5	129 32.5	16.6	N 3 41.0	12.5	54.2
S	5	258 09.4	S21 01.9	144 08.1	16.6	N 3 53.5	12.5	54.2
U								
N	6	273 09.2	S21 02.4	158 43.7	16.6	N 4 06.0	12.5	54.2
D	7	288 09.0	S21 02.8	173 19.3	16.6	N 4 18.4	12.4	54.2
A	8	303 08.8	S21 03.3	187 54.8	16.6	N 4 30.9	12.4	54.2
Y	9	318 08.6	S21 03.8	202 30.4	16.5	N 4 43.3	12.4	54.2
	10	333 08.4	S21 04.2	217 05.9	16.5	N 4 55.7	12.4	54.2
	11	348 08.2	S21 04.7	231 41.4	16.5	N 5 08.1	12.4	54.2
	12	3 08.0	S21 05.2	246 16.9	16.5	N 5 20.5	12.4	54.2
	13	18 07.8	S21 05.6	260 52.3	16.4	N 5 32.8	12.4	54.2
	14	33 07.6	S21 06.1	275 27.7	16.4	N 5 45.1	12.3	54.2
	15	48 07.4	S21 06.5	290 03.1	16.4	N 5 57.5	12.3	54.2
	16	63 07.2	S21 07.0	304 38.5	16.4	N 6 09.8	12.3	54.2
	17	78 07.0	S21 07.4	319 13.8	16.3	N 6 22.0	12.3	54.2
	18	93 06.8	S21 07.9	333 49.1	16.3	N 6 34.3	12.3	54.2
	19	108 06.6	S21 08.4	348 24.4	16.3	N 6 46.5	12.2	54.2
	20	123 06.4	S21 08.8	2 59.7	16.3	N 6 58.7	12.2	54.2
	21	138 06.2	S21 09.3	17 34.9	16.2	N 7 10.9	12.2	54.2
	22	153 06.0	S21 09.7	32 10.1	16.2	N 7 23.1	12.2	54.2
	23	168 05.8	S21 10.2	46 45.2	16.2	N 7 35.3	12.1	54.3
27	0	183 05.6	S21 10.6	61 20.3	16.1	N 7 47.4	12.1	54.3
	1	198 05.4	S21 11.1	75 55.4	16.1	N 7 59.5	12.1	54.3
	2	213 05.1	S21 11.5	90 30.5	16.0	N 8 11.5	12.1	54.3
	3	228 04.9	S21 12.0	105 05.5	16.0	N 8 23.6	12.0	54.3
	4	243 04.7	S21 12.4	119 40.5	16.0	N 8 35.6	12.0	54.3
M	5	258 04.5	S21 12.9	134 15.4	15.9	N 8 47.6	12.0	54.3
O								
N	6	273 04.3	S21 13.3	148 50.3	15.9	N 8 59.5	12.0	54.3
D	7	288 04.1	S21 13.8	163 25.1	15.9	N 9 11.5	11.9	54.3
A	8	303 03.9	S21 14.2	177 60.0	15.8	N 9 23.4	11.9	54.3
Y	9	318 03.7	S21 14.7	192 34.7	15.8	N 9 35.2	11.9	54.3
	10	333 03.5	S21 15.1	207 09.5	15.7	N 9 47.1	11.8	54.3
	11	348 03.3	S21 15.5	221 44.1	15.7	N 9 58.9	11.8	54.3
	12	3 03.1	S21 16.0	236 18.8	15.6	N10 10.6	11.8	54.4
	13	18 02.9	S21 16.4	250 53.4	15.6	N10 22.4	11.7	54.4
	14	33 02.7	S21 16.9	265 27.9	15.5	N10 34.0	11.7	54.4
	15	48 02.4	S21 17.3	280 02.4	15.5	N10 45.7	11.7	54.4
	16	63 02.2	S21 17.8	294 36.8	15.4	N10 57.3	11.6	54.4
	17	78 02.0	S21 18.2	309 11.2	15.4	N11 08.9	11.6	54.4
	18	93 01.8	S21 18.6	323 45.6	15.3	N11 20.5	11.5	54.4
	19	108 01.6	S21 19.1	338 19.9	15.3	N11 32.0	11.5	54.4
	20	123 01.4	S21 19.5	352 54.1	15.2	N11 43.5	11.5	54.4
	21	138 01.2	S21 19.9	7 28.3	15.2	N11 54.9	11.4	54.4
	22	153 01.0	S21 20.4	22 02.4	15.1	N12 06.3	11.4	54.5
	23	168 00.8	S21 20.8	36 36.5	15.1	N12 17.6	11.3	54.5
28	0	183 00.5	S21 21.3	51 10.5	15.0	N12 28.9	11.3	54.5
	1	198 00.3	S21 21.7	65 44.5	15.0	N12 40.2	11.3	54.5
	2	213 00.1	S21 22.1	80 18.4	14.9	N12 51.4	11.2	54.5
	3	227 59.9	S21 22.6	94 52.2	14.8	N13 02.6	11.2	54.5
	4	242 59.7	S21 23.0	109 26.0	14.8	N13 13.7	11.1	54.5
T	5	257 59.5	S21 23.4	123 59.7	14.7	N13 24.8	11.1	54.5
U								
E	6	272 59.3	S21 23.8	138 33.4	14.7	N13 35.8	11.0	54.6
S	7	287 59.0	S21 24.3	153 07.0	14.6	N13 46.8	11.0	54.6
D	8	302 58.8	S21 24.7	167 40.6	14.5	N13 57.7	10.9	54.6
A	9	317 58.6	S21 25.1	182 14.0	14.5	N14 08.6	10.9	54.6
Y	10	332 58.4	S21 25.6	196 47.4	14.4	N14 19.4	10.8	54.6
	11	347 58.2	S21 26.0	211 20.8	14.4	N14 30.2	10.8	54.6
	12	2 58.0	S21 26.4	225 54.1	14.3	N14 40.9	10.7	54.6
	13	17 57.7	S21 26.8	240 27.3	14.2	N14 51.6	10.7	54.7
	14	32 57.5	S21 27.3	255 00.5	14.2	N15 02.2	10.6	54.7
	15	47 57.3	S21 27.7	269 33.5	14.1	N15 12.7	10.6	54.7
	16	62 57.1	S21 28.1	284 06.6	14.0	N15 23.2	10.5	54.7
	17	77 56.9	S21 28.5	298 39.5	13.9	N15 33.7	10.4	54.7
	18	92 56.7	S21 29.0	313 12.4	13.9	N15 44.1	10.4	54.7
	19	107 56.4	S21 29.4	327 45.2	13.8	N15 54.4	10.3	54.8
	20	122 56.2	S21 29.8	342 17.9	13.7	N16 04.6	10.3	54.8
	21	137 56.0	S21 30.2	356 50.6	13.7	N16 14.8	10.2	54.8
	22	152 55.8	S21 30.6	11 23.2	13.6	N16 25.0	10.1	54.8
	23	167 55.6	S21 31.1	25 55.7	13.5	N16 35.0	10.1	54.8
		S.D. 16.2	d 0.4	S.D. 14.8		14.8		14.9

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.3
Achernar	335 17.5	S57 05.5
Acrux	172 56.8	S63 15.3
Adhara	255 03.1	S29 00.6
Albireo	67 01.8	N28 01.5
Aldebaran	290 35.7	N16 34.1
Alioth	166 10.6	N55 47.9
Alkaid	152 50.0	N49 09.9
Al Na-ir	27 29.0	S46 49.3
Alnilam	275 34.2	S 1 11.0
Alphard	217 44.5	S 8 47.1
Alphecca	126 01.5	N26 37.0
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.9	S42 09.0
Antares	112 12.4	S26 29.7
Arcturus	145 45.4	N19 01.8
Atria	107 04.4	S69 04.7
Avior	234 13.0	S59 35.9
Bellatrix	278 19.2	N 6 22.5
Betelgeuse	270 48.4	N 7 24.7
Canopus	263 50.5	S52 42.5
Capella	280 16.8	N46 01.6
Castor	245 52.8	N31 49.3
Deneb	49 23.8	N45 23.4
Denebola	182 21.9	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.4	N61 35.3
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.2
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.0	S29 28.2
Gacrux	171 48.4	S57 16.3
Gienah	175 40.5	S17 42.1
Hadar	148 32.0	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.4	N74 02.0
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.2	S36 30.7
Miaplacidus	221 37.0	S69 49.9
Mirfak	308 23.2	N49 57.9
Nunki	75 44.2	S26 15.6
Peacock	53 01.1	S56 38.6
Polaris	314 55.8	N89 22.8
Pollux	243 13.2	N27 57.2
Procyon	244 47.3	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.1	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.6	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.0	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.2	S16 45.3
Spica	158 19.2	S11 18.7
Suhail	222 43.8	S43 32.8
Vega	80 31.5	N38 48.8
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
29	0	68 24.5	210 23.9	S13 11.9	257 16.3	N 5 57.2	229 28.4	S 6 44.7	34 09.6	N10 54.3
	1	83 26.9	225 23.9	S13 13.0	272 17.6	N 5 56.7	244 30.5	S 6 44.9	49 12.3	N10 54.3
	2	98 29.4	240 23.3	S13 14.0	287 18.9	N 5 56.3	259 32.5	S 6 45.0	64 14.9	N10 54.2
	3	113 31.9	255 22.8	S13 15.0	302 20.2	N 5 55.8	274 34.6	S 6 45.2	79 17.5	N10 54.2
	4	128 34.3	270 22.2	S13 16.0	317 21.5	N 5 55.4	289 36.6	S 6 45.3	94 20.1	N10 54.2
W	5	143 36.8	285 21.7	S13 17.0	332 22.8	N 5 54.9	304 38.7	S 6 45.5	109 22.7	N10 54.1
E										
D	6	158 39.3	300 21.1	S13 18.0	347 24.1	N 5 54.4	319 40.7	S 6 45.7	124 25.3	N10 54.1
N	7	173 41.7	315 20.5	S13 19.0	2 25.4	N 5 54.0	334 42.8	S 6 45.8	139 28.0	N10 54.0
E	8	188 44.2	330 20.0	S13 20.0	17 26.7	N 5 53.5	349 44.8	S 6 46.0	154 30.6	N10 54.0
S	9	203 46.7	345 19.4	S13 21.0	32 27.9	N 5 53.0	4 46.9	S 6 46.2	169 33.2	N10 53.9
D	10	218 49.1	0 18.9	S13 22.0	47 29.2	N 5 52.6	19 48.9	S 6 46.3	184 35.8	N10 53.9
A	11	233 51.6	15 18.3	S13 23.0	62 30.5	N 5 52.1	34 50.9	S 6 46.5	199 38.4	N10 53.9
Y										
	12	248 54.0	30 17.8	S13 24.1	77 31.8	N 5 51.7	49 53.0	S 6 46.6	214 41.0	N10 53.8
	13	263 56.5	45 17.2	S13 25.1	92 33.1	N 5 51.2	64 55.0	S 6 46.8	229 43.6	N10 53.8
	14	278 59.0	60 16.7	S13 26.1	107 34.4	N 5 50.7	79 57.1	S 6 47.0	244 46.3	N10 53.7
	15	294 01.4	75 16.1	S13 27.1	122 35.7	N 5 50.3	94 59.1	S 6 47.1	259 48.9	N10 53.7
	16	309 03.9	90 15.5	S13 28.1	137 37.0	N 5 49.8	110 01.2	S 6 47.3	274 51.5	N10 53.6
	17	324 06.4	105 15.0	S13 29.1	152 38.3	N 5 49.4	125 03.2	S 6 47.4	289 54.1	N10 53.6
	18	339 08.8	120 14.4	S13 30.1	167 39.6	N 5 48.9	140 05.3	S 6 47.6	304 56.7	N10 53.6
	19	354 11.3	135 13.9	S13 31.1	182 40.9	N 5 48.4	155 07.3	S 6 47.8	319 59.3	N10 53.5
	20	9 13.8	150 13.3	S13 32.1	197 42.2	N 5 48.0	170 09.4	S 6 47.9	335 01.9	N10 53.5
	21	24 16.2	165 12.7	S13 33.1	212 43.4	N 5 47.5	185 11.4	S 6 48.1	350 04.5	N10 53.4
	22	39 18.7	180 12.2	S13 34.1	227 44.7	N 5 47.0	200 13.5	S 6 48.2	5 07.2	N10 53.4
	23	54 21.1	195 11.6	S13 35.1	242 46.0	N 5 46.6	215 15.5	S 6 48.4	20 09.8	N10 53.4
30	0	69 23.6	210 11.1	S13 36.1	257 47.3	N 5 46.1	230 17.6	S 6 48.6	35 12.4	N10 53.3
	1	84 26.1	225 10.5	S13 37.1	272 48.6	N 5 45.7	245 19.6	S 6 48.7	50 15.0	N10 53.3
	2	99 28.5	240 09.9	S13 38.1	287 49.9	N 5 45.2	260 21.7	S 6 48.9	65 17.6	N10 53.2
	3	114 31.0	255 09.4	S13 39.1	302 51.2	N 5 44.7	275 23.8	S 6 49.0	80 20.2	N10 53.2
	4	129 33.5	270 08.8	S13 40.1	317 52.5	N 5 44.3	290 25.8	S 6 49.2	95 22.8	N10 53.1
T	5	144 35.9	285 08.3	S13 41.1	332 53.8	N 5 43.8	305 27.9	S 6 49.4	110 25.4	N10 53.1
H										
U	6	159 38.4	300 07.7	S13 42.1	347 55.1	N 5 43.4	320 29.9	S 6 49.5	125 28.1	N10 53.1
R	7	174 40.9	315 07.1	S13 43.1	2 56.4	N 5 42.9	335 32.0	S 6 49.7	140 30.7	N10 53.0
S	8	189 43.3	330 06.6	S13 44.1	17 57.7	N 5 42.4	350 34.0	S 6 49.8	155 33.3	N10 53.0
D	9	204 45.8	345 06.0	S13 45.1	32 59.0	N 5 42.0	5 36.1	S 6 50.0	170 35.9	N10 52.9
A	10	219 48.3	0 05.4	S13 46.1	48 00.3	N 5 41.5	20 38.1	S 6 50.2	185 38.5	N10 52.9
Y	11	234 50.7	15 04.9	S13 47.1	63 01.6	N 5 41.1	35 40.2	S 6 50.3	200 41.1	N10 52.9
	12	249 53.2	30 04.3	S13 48.1	78 02.9	N 5 40.6	50 42.2	S 6 50.5	215 43.7	N10 52.8
	13	264 55.6	45 03.7	S13 49.0	93 04.2	N 5 40.1	65 44.3	S 6 50.6	230 46.3	N10 52.8
	14	279 58.1	60 03.2	S13 50.0	108 05.5	N 5 39.7	80 46.3	S 6 50.8	245 48.9	N10 52.7
	15	295 00.6	75 02.6	S13 51.0	123 06.8	N 5 39.2	95 48.4	S 6 51.0	260 51.6	N10 52.7
	16	310 03.0	90 02.0	S13 52.0	138 08.1	N 5 38.8	110 50.4	S 6 51.1	275 54.2	N10 52.6
	17	325 05.5	105 01.5	S13 53.0	153 09.4	N 5 38.3	125 52.5	S 6 51.3	290 56.8	N10 52.6
	18	340 08.0	120 00.9	S13 54.0	168 10.7	N 5 37.9	140 54.5	S 6 51.4	305 59.4	N10 52.6
	19	355 10.4	135 00.3	S13 55.0	183 12.0	N 5 37.4	155 56.6	S 6 51.6	321 02.0	N10 52.5
	20	10 12.9	149 59.7	S13 56.0	198 13.3	N 5 36.9	170 58.6	S 6 51.8	336 04.6	N10 52.5
	21	25 15.4	164 59.2	S13 57.0	213 14.6	N 5 36.5	186 00.7	S 6 51.9	351 07.2	N10 52.4
	22	40 17.8	179 58.6	S13 58.0	228 15.9	N 5 36.0	201 02.7	S 6 52.1	6 09.8	N10 52.4
	23	55 20.3	194 58.0	S13 58.9	243 17.2	N 5 35.6	216 04.8	S 6 52.2	21 12.4	N10 52.4
1	0	70 22.8	209 57.5	S13 59.9	258 18.5	N 5 35.1	231 06.9	S 6 52.4	36 15.1	N10 52.3
	1	85 25.2	224 56.9	S14 00.9	273 19.8	N 5 34.6	246 08.9	S 6 52.6	51 17.7	N10 52.3
	2	100 27.7	239 56.3	S14 01.9	288 21.1	N 5 34.2	261 11.0	S 6 52.7	66 20.3	N10 52.2
	3	115 30.1	254 55.7	S14 02.9	303 22.4	N 5 33.7	276 13.0	S 6 52.9	81 22.9	N10 52.2
	4	130 32.6	269 55.2	S14 03.9	318 23.7	N 5 33.3	291 15.1	S 6 53.0	96 25.5	N10 52.2
F	5	145 35.1	284 54.6	S14 04.9	333 25.0	N 5 32.8	306 17.1	S 6 53.2	111 28.1	N10 52.1
R										
I	6	160 37.5	299 54.0	S14 05.8	348 26.3	N 5 32.4	321 19.2	S 6 53.3	126 30.7	N10 52.1
D	7	175 40.0	314 53.4	S14 06.8	3 27.6	N 5 31.9	336 21.2	S 6 53.5	141 33.3	N10 52.0
A	8	190 42.5	329 52.9	S14 07.8	18 28.9	N 5 31.4	351 23.3	S 6 53.7	156 35.9	N10 52.0
Y	9	205 44.9	344 52.3	S14 08.8	33 30.2	N 5 31.0	6 25.3	S 6 53.8	171 38.5	N10 52.0
	10	220 47.4	359 51.7	S14 09.8	48 31.5	N 5 30.5	21 27.4	S 6 54.0	186 41.1	N10 51.9
	11	235 49.9	14 51.1	S14 10.7	63 32.8	N 5 30.1	36 29.5	S 6 54.1	201 43.7	N10 51.9
	12	250 52.3	29 50.5	S14 11.7	78 34.1	N 5 29.6	51 31.5	S 6 54.3	216 46.4	N10 51.8
	13	265 54.8	44 50.0	S14 12.7	93 35.4	N 5 29.2	66 33.6	S 6 54.5	231 49.0	N10 51.8
	14	280 57.3	59 49.4	S14 13.7	108 36.7	N 5 28.7	81 35.6	S 6 54.6	246 51.6	N10 51.7
	15	295 59.7	74 48.8	S14 14.7	123 38.0	N 5 28.2	96 37.7	S 6 54.8	261 54.2	N10 51.7
	16	311 02.2	89 48.2	S14 15.6	138 39.4	N 5 27.8	111 39.7	S 6 54.9	276 56.8	N10 51.7
	17	326 04.6	104 47.6	S14 16.6	153 40.7	N 5 27.3	126 41.8	S 6 55.1	291 59.4	N10 51.6
	18	341 07.1	119 47.1	S14 17.6	168 42.0	N 5 26.9	141 43.8	S 6 55.2	307 02.0	N10 51.6
	19	356 09.6	134 46.5	S14 18.6	183 43.3	N 5 26.4	156 45.9	S 6 55.4	322 04.6	N10 51.6
	20	11 12.0	149 45.9	S14 19.5	198 44.6	N 5 26.0	171 48.0	S 6 55.6	337 07.2	N10 51.5
	21	26 14.5	164 45.3	S14 20.5	213 45.9	N 5 25.5	186 50.0	S 6 55.7	352 09.8	N10 51.5
	22	41 17.0	179 44.7	S14 21.5	228 47.2	N 5 25.0	201 52.1	S 6 55.9	7 12.4	N10 51.4
	23	56 19.4	194 44.1	S14 22.5	243 48.5	N 5 24.6	216 54.1	S 6 56.0	22 15.0	N10 51.4
			v -0.6	d 1.0	v 1.3	d 0.5	v 2.1	d 0.2	v 2.6	d 0.0

G.M.T		SUN				MOON					
d	h	GHA		Dec		GHA		v	Dec	d	HP
		°	'	°	'	°	'	'	° '	'	'
29	0	182	55.3	S21	31.5	40	28.2	13.5	N16 45.0	10.0	54.8
	1	197	55.1	S21	31.9	55	00.6	13.4	N16 55.0	9.9	54.8
	2	212	54.9	S21	32.3	69	32.9	13.3	N17 04.9	9.9	54.9
	3	227	54.7	S21	32.7	84	05.1	13.2	N17 14.7	9.8	54.9
	4	242	54.5	S21	33.1	98	37.2	13.2	N17 24.4	9.7	54.9
W	5	257	54.2	S21	33.6	113	09.3	13.1	N17 34.1	9.7	54.9
E											
D	6	272	54.0	S21	34.0	127	41.3	13.0	N17 43.7	9.6	54.9
N	7	287	53.8	S21	34.4	142	13.2	12.9	N17 53.2	9.5	55.0
E	8	302	53.6	S21	34.8	156	45.1	12.8	N18 02.6	9.5	55.0
S	9	317	53.4	S21	35.2	171	16.9	12.8	N18 12.0	9.4	55.0
D	10	332	53.1	S21	35.6	185	48.6	12.7	N18 21.3	9.3	55.0
A	11	347	52.9	S21	36.0	200	20.2	12.6	N18 30.5	9.2	55.0
Y											
	12	2	52.7	S21	36.4	214	51.7	12.5	N18 39.7	9.2	55.0
	13	17	52.5	S21	36.9	229	23.2	12.5	N18 48.8	9.1	55.1
	14	32	52.2	S21	37.3	243	54.6	12.4	N18 57.8	9.0	55.1
	15	47	52.0	S21	37.7	258	25.9	12.3	N19 06.7	8.9	55.1
	16	62	51.8	S21	38.1	272	57.1	12.2	N19 15.5	8.8	55.1
	17	77	51.6	S21	38.5	287	28.2	12.1	N19 24.3	8.8	55.1
	18	92	51.3	S21	38.9	301	59.3	12.1	N19 32.9	8.7	55.2
	19	107	51.1	S21	39.3	316	30.3	12.0	N19 41.5	8.6	55.2
	20	122	50.9	S21	39.7	331	01.2	11.9	N19 50.0	8.5	55.2
	21	137	50.7	S21	40.1	345	32.0	11.8	N19 58.4	8.4	55.2
	22	152	50.4	S21	40.5	0	02.7	11.7	N20 06.7	8.3	55.2
	23	167	50.2	S21	40.9	14	33.4	11.7	N20 15.0	8.2	55.3
30	0	182	50.0	S21	41.3	29	04.0	11.6	N20 23.1	8.1	55.3
	1	197	49.8	S21	41.7	43	34.4	11.5	N20 31.2	8.1	55.3
	2	212	49.5	S21	42.1	58	04.9	11.4	N20 39.1	8.0	55.3
	3	227	49.3	S21	42.5	72	35.2	11.3	N20 47.0	7.9	55.3
	4	242	49.1	S21	42.9	87	05.4	11.3	N20 54.8	7.8	55.4
T	5	257	48.9	S21	43.3	101	35.6	11.2	N21 02.5	7.7	55.4
H											
U	6	272	48.6	S21	43.7	116	05.7	11.1	N21 10.0	7.6	55.4
R	7	287	48.4	S21	44.1	130	35.7	11.0	N21 17.5	7.5	55.4
S	8	302	48.2	S21	44.5	145	05.6	10.9	N21 24.9	7.4	55.4
D	9	317	47.9	S21	44.9	159	35.5	10.8	N21 32.2	7.3	55.5
A	10	332	47.7	S21	45.3	174	05.2	10.8	N21 39.4	7.2	55.5
Y	11	347	47.5	S21	45.7	188	34.9	10.7	N21 46.5	7.1	55.5
	12	2	47.3	S21	46.1	203	04.5	10.6	N21 53.5	7.0	55.5
	13	17	47.0	S21	46.4	217	34.1	10.5	N22 00.4	6.9	55.5
	14	32	46.8	S21	46.8	232	03.5	10.4	N22 07.1	6.8	55.6
	15	47	46.6	S21	47.2	246	32.9	10.4	N22 13.8	6.7	55.6
	16	62	46.3	S21	47.6	261	02.2	10.3	N22 20.4	6.6	55.6
	17	77	46.1	S21	48.0	275	31.4	10.2	N22 26.8	6.5	55.6
	18	92	45.9	S21	48.4	290	00.5	10.1	N22 33.2	6.3	55.7
	19	107	45.6	S21	48.8	304	29.5	10.1	N22 39.4	6.2	55.7
	20	122	45.4	S21	49.2	318	58.5	10.0	N22 45.5	6.1	55.7
	21	137	45.2	S21	49.6	333	27.4	9.9	N22 51.6	6.0	55.7
	22	152	44.9	S21	49.9	347	56.2	9.8	N22 57.5	5.9	55.7
	23	167	44.7	S21	50.3	2	25.0	9.7	N23 03.2	5.8	55.8
1	0	182	44.5	S21	50.7	16	53.6	9.7	N23 08.9	5.7	55.8
	1	197	44.2	S21	51.1	31	22.2	9.6	N23 14.5	5.6	55.8
	2	212	44.0	S21	51.5	45	50.8	9.5	N23 19.9	5.4	55.8
	3	227	43.8	S21	51.9	60	19.2	9.4	N23 25.2	5.3	55.8
	4	242	43.5	S21	52.2	74	47.6	9.4	N23 30.4	5.2	55.9
F	5	257	43.3	S21	52.6	89	15.9	9.3	N23 35.5	5.1	55.9
R											
I	6	272	43.1	S21	53.0	103	44.1	9.2	N23 40.5	5.0	55.9
D	7	287	42.8	S21	53.4	118	12.3	9.2	N23 45.3	4.8	55.9
A	8	302	42.6	S21	53.8	132	40.3	9.1	N23 50.0	4.7	56.0
Y	9	317	42.4	S21	54.1	147	08.4	9.0	N23 54.6	4.6	56.0
	10	332	42.1	S21	54.5	161	36.3	8.9	N23 59.1	4.5	56.0
	11	347	41.9	S21	54.9	176	04.2	8.9	N24 03.5	4.3	56.0
	12	2	41.7	S21	55.3	190	32.0	8.8	N24 07.7	4.2	56.0
	13	17	41.4	S21	55.6	204	59.7	8.7	N24 11.8	4.1	56.1
	14	32	41.2	S21	56.0	219	27.4	8.7	N24 15.7	4.0	56.1
	15	47	40.9	S21	56.4	233	55.0	8.6	N24 19.6	3.8	56.1
	16	62	40.7	S21	56.7	248	22.6	8.6	N24 23.3	3.7	56.1
	17	77	40.5	S21	57.1	262	50.1	8.5	N24 26.8	3.6	56.2
	18	92	40.2	S21	57.5	277	17.5	8.4	N24 30.3	3.4	56.2
	19	107	40.0	S21	57.9	291	44.9	8.4	N24 33.6	3.3	56.2
	20	122	39.8	S21	58.2	306	12.2	8.3	N24 36.7	3.2	56.2
	21	137	39.5	S21	58.6	320	39.5	8.3	N24 39.8	3.0	56.2
	22	152	39.3	S21	59.0	335	06.7	8.2	N24 42.7	2.9	56.3
	23	167	39.0	S21	59.3	349	33.8	8.1	N24 45.5	2.8	56.3
		S.D.	16.2	d	0.4	S.D.		15.0	15.1	15.3	

STARS				
Name	SHA		Dec	
	°	'	°	'
Acamar	315	09.0	S40	11.4
Achernar	335	17.5	S57	05.5
Acrux	172	56.8	S63	15.3
Adhara	255	03.0	S29	00.6
Albireo	67	01.8	N28	01.4
Aldebaran	290	35.6	N16	34.1
Alioth	166	10.6	N55	47.9
Alkaid	152	50.0	N49	09.9
Al Na-ir	27	29.1	S46	49.3
Alnilam	275	34.2	S 1	11.0
Alphard	217	44.5	S 8	47.1
Alphecca	126	01.5	N26	37.0
Alpheratz	357	31.3	N29	15.3
Altair	61	57.1	N 8	56.9
Ankaa	353	03.9	S42	09.0
Antares	112	12.3	S26	29.7
Arcturus	145	45.3	N19	01.8
Atria	107	04.3	S69	04.7
Avior	234	13.0	S59	36.0
Bellatrix	278	19.2	N 6	22.5
Betelgeuse	270	48.3	N 7	24.7
Canopus	263	50.5	S52	42.6
Capella	280	16.7	N46	01.6
Castor	245	52.8	N31	49.3
Deneb	49	23.8	N45	23.4
Denebola	182	21.8	N14	24.5
Diphda	348	44.0	S17	49.6
Dubhe	193	37.3	N61	35.3
Elnath	277	57.5	N28	37.8
Eltanin	90	41.3	N51	29.2
Enif	33	35.7	N10	00.7
Fomalhaut	15	11.0	S29	28.2
Gacrux	171	48.3	S57	16.3
Gienah	175	40.5	S17	42.1
Hadar	148	32.0	S60	30.6
Hamal	327	47.3	N23	36.2
Kaus Austr.	83	28.7	S34	22.2
Kochab	137	21.4	N74	02.0
Markab	13	26.7	N15	21.9
Menkar	314	02.5	N 4	12.3
Menkent	147	54.2	S36	30.7
Miaplacidus	221	37.0	S69	49.9
Mirfak	308	23.2	N49	58.0
Nunki	75	44.2	S26	15.6
Peacock	53	01.1	S56	38.6
Polaris	314	56.1	N89	22.8
Pollux	243	13.2	N27	57.2
Procyon	244	47.3	N 5	09.0
Rasalhague	95	56.0	N12	32.5
Regulus	207	31.0	N11	49.4
Rigel	281	00.5	S 8	10.1
Rigil Kent	139	36.6	S60	57.1
Sabik	101	59.5	S15	45.6
Schedar	349	27.0	N56	42.1
Shaula	96	06.5	S37	07.4
Sirius	258	23.2	S16	45.3
Spica	158	19.2	S11	18.7
Suhail	222	43.7	S43	32.8
Vega	80	31.5	N38	48.8
Zuben-ubi	136	53.8	S16	09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
2	0	71 21.9	209 43.6	S14 23.4	258 49.8	N 5 24.1	231 56.2	S 6 56.2	37 17.6	N10 51.4
	1	86 24.4	224 43.0	S14 24.4	273 51.1	N 5 23.7	246 58.2	S 6 56.3	52 20.3	N10 51.3
	2	101 26.8	239 42.4	S14 25.4	288 52.4	N 5 23.2	262 00.3	S 6 56.5	67 22.9	N10 51.3
	3	116 29.3	254 41.8	S14 26.3	303 53.7	N 5 22.8	277 02.4	S 6 56.7	82 25.5	N10 51.2
	4	131 31.8	269 41.2	S14 27.3	318 55.1	N 5 22.3	292 04.4	S 6 56.8	97 28.1	N10 51.2
S	5	146 34.2	284 40.6	S14 28.3	333 56.4	N 5 21.9	307 06.5	S 6 57.0	112 30.7	N10 51.2
A										
T	6	161 36.7	299 40.0	S14 29.3	348 57.7	N 5 21.4	322 08.5	S 6 57.1	127 33.3	N10 51.1
U	7	176 39.1	314 39.5	S14 30.2	3 59.0	N 5 20.9	337 10.6	S 6 57.3	142 35.9	N10 51.1
R	8	191 41.6	329 38.9	S14 31.2	19 00.3	N 5 20.5	352 12.6	S 6 57.4	157 38.5	N10 51.0
D	9	206 44.1	344 38.3	S14 32.2	34 01.6	N 5 20.0	7 14.7	S 6 57.6	172 41.1	N10 51.0
A	10	221 46.5	359 37.7	S14 33.1	49 02.9	N 5 19.6	22 16.8	S 6 57.8	187 43.7	N10 51.0
Y	11	236 49.0	14 37.1	S14 34.1	64 04.2	N 5 19.1	37 18.8	S 6 57.9	202 46.3	N10 50.9
	12	251 51.5	29 36.5	S14 35.1	79 05.5	N 5 18.7	52 20.9	S 6 58.1	217 48.9	N10 50.9
	13	266 53.9	44 35.9	S14 36.0	94 06.8	N 5 18.2	67 22.9	S 6 58.2	232 51.5	N10 50.8
	14	281 56.4	59 35.3	S14 37.0	109 08.2	N 5 17.8	82 25.0	S 6 58.4	247 54.1	N10 50.8
	15	296 58.9	74 34.7	S14 37.9	124 09.5	N 5 17.3	97 27.1	S 6 58.5	262 56.7	N10 50.8
	16	312 01.3	89 34.1	S14 38.9	139 10.8	N 5 16.8	112 29.1	S 6 58.7	277 59.3	N10 50.7
	17	327 03.8	104 33.6	S14 39.9	154 12.1	N 5 16.4	127 31.2	S 6 58.8	293 01.9	N10 50.7
	18	342 06.2	119 33.0	S14 40.8	169 13.4	N 5 15.9	142 33.2	S 6 59.0	308 04.5	N10 50.6
	19	357 08.7	134 32.4	S14 41.8	184 14.7	N 5 15.5	157 35.3	S 6 59.2	323 07.1	N10 50.6
	20	12 11.2	149 31.8	S14 42.8	199 16.0	N 5 15.0	172 37.4	S 6 59.3	338 09.7	N10 50.6
	21	27 13.6	164 31.2	S14 43.7	214 17.4	N 5 14.6	187 39.4	S 6 59.5	353 12.3	N10 50.5
	22	42 16.1	179 30.6	S14 44.7	229 18.7	N 5 14.1	202 41.5	S 6 59.6	8 15.0	N10 50.5
	23	57 18.6	194 30.0	S14 45.6	244 20.0	N 5 13.7	217 43.5	S 6 59.8	23 17.6	N10 50.5
3	0	72 21.0	209 29.4	S14 46.6	259 21.3	N 5 13.2	232 45.6	S 6 59.9	38 20.2	N10 50.4
	1	87 23.5	224 28.8	S14 47.5	274 22.6	N 5 12.8	247 47.7	S 7 00.1	53 22.8	N10 50.4
	2	102 26.0	239 28.2	S14 48.5	289 23.9	N 5 12.3	262 49.7	S 7 00.2	68 25.4	N10 50.3
	3	117 28.4	254 27.6	S14 49.5	304 25.3	N 5 11.9	277 51.8	S 7 00.4	83 28.0	N10 50.3
	4	132 30.9	269 27.0	S14 50.4	319 26.6	N 5 11.4	292 53.8	S 7 00.6	98 30.6	N10 50.3
S	5	147 33.4	284 26.4	S14 51.4	334 27.9	N 5 10.9	307 55.9	S 7 00.7	113 33.2	N10 50.2
U										
N	6	162 35.8	299 25.8	S14 52.3	349 29.2	N 5 10.5	322 58.0	S 7 00.9	128 35.8	N10 50.2
D	7	177 38.3	314 25.2	S14 53.3	4 30.5	N 5 10.0	338 00.0	S 7 01.0	143 38.4	N10 50.1
A	8	192 40.7	329 24.6	S14 54.2	19 31.8	N 5 09.6	353 02.1	S 7 01.2	158 41.0	N10 50.1
Y	9	207 43.2	344 24.0	S14 55.2	34 33.2	N 5 09.1	8 04.1	S 7 01.3	173 43.6	N10 50.1
	10	222 45.7	359 23.4	S14 56.1	49 34.5	N 5 08.7	23 06.2	S 7 01.5	188 46.2	N10 50.0
	11	237 48.1	14 22.8	S14 57.1	64 35.8	N 5 08.2	38 08.3	S 7 01.6	203 48.8	N10 50.0
	12	252 50.6	29 22.2	S14 58.0	79 37.1	N 5 07.8	53 10.3	S 7 01.8	218 51.4	N10 50.0
	13	267 53.1	44 21.6	S14 59.0	94 38.4	N 5 07.3	68 12.4	S 7 02.0	233 54.0	N10 49.9
	14	282 55.5	59 21.0	S14 59.9	109 39.7	N 5 06.9	83 14.5	S 7 02.1	248 56.6	N10 49.9
	15	297 58.0	74 20.4	S15 00.9	124 41.1	N 5 06.4	98 16.5	S 7 02.3	263 59.2	N10 49.8
	16	313 00.5	89 19.8	S15 01.8	139 42.4	N 5 06.0	113 18.6	S 7 02.4	279 01.8	N10 49.8
	17	328 02.9	104 19.2	S15 02.8	154 43.7	N 5 05.5	128 20.6	S 7 02.6	294 04.4	N10 49.8
	18	343 05.4	119 18.6	S15 03.7	169 45.0	N 5 05.1	143 22.7	S 7 02.7	309 07.0	N10 49.7
	19	358 07.9	134 18.0	S15 04.7	184 46.3	N 5 04.6	158 24.8	S 7 02.9	324 09.6	N10 49.7
	20	13 10.3	149 17.4	S15 05.6	199 47.7	N 5 04.2	173 26.8	S 7 03.0	339 12.2	N10 49.7
	21	28 12.8	164 16.8	S15 06.6	214 49.0	N 5 03.7	188 28.9	S 7 03.2	354 14.8	N10 49.6
	22	43 15.2	179 16.2	S15 07.5	229 50.3	N 5 03.3	203 31.0	S 7 03.3	9 17.4	N10 49.6
	23	58 17.7	194 15.5	S15 08.4	244 51.6	N 5 02.8	218 33.0	S 7 03.5	24 20.0	N10 49.5
4	0	73 20.2	209 14.9	S15 09.4	259 53.0	N 5 02.4	233 35.1	S 7 03.7	39 22.6	N10 49.5
	1	88 22.6	224 14.3	S15 10.3	274 54.3	N 5 01.9	248 37.2	S 7 03.8	54 25.2	N10 49.5
	2	103 25.1	239 13.7	S15 11.3	289 55.6	N 5 01.5	263 39.2	S 7 04.0	69 27.8	N10 49.4
	3	118 27.6	254 13.1	S15 12.2	304 56.9	N 5 01.0	278 41.3	S 7 04.1	84 30.4	N10 49.4
	4	133 30.0	269 12.5	S15 13.2	319 58.3	N 5 00.6	293 43.3	S 7 04.3	99 33.0	N10 49.4
M	5	148 32.5	284 11.9	S15 14.1	334 59.6	N 5 00.1	308 45.4	S 7 04.4	114 35.6	N10 49.3
O										
N	6	163 35.0	299 11.3	S15 15.0	350 00.9	N 4 59.7	323 47.5	S 7 04.6	129 38.2	N10 49.3
D	7	178 37.4	314 10.7	S15 16.0	5 02.2	N 4 59.2	338 49.5	S 7 04.7	144 40.8	N10 49.3
A	8	193 39.9	329 10.1	S15 16.9	20 03.5	N 4 58.8	353 51.6	S 7 04.9	159 43.4	N10 49.2
Y	9	208 42.4	344 09.4	S15 17.8	35 04.9	N 4 58.3	8 53.7	S 7 05.0	174 46.0	N10 49.2
	10	223 44.8	359 08.8	S15 18.8	50 06.2	N 4 57.9	23 55.7	S 7 05.2	189 48.6	N10 49.1
	11	238 47.3	14 08.2	S15 19.7	65 07.5	N 4 57.4	38 57.8	S 7 05.3	204 51.2	N10 49.1
	12	253 49.7	29 07.6	S15 20.6	80 08.8	N 4 57.0	53 59.9	S 7 05.5	219 53.8	N10 49.1
	13	268 52.2	44 07.0	S15 21.6	95 10.2	N 4 56.5	69 01.9	S 7 05.6	234 56.4	N10 49.0
	14	283 54.7	59 06.4	S15 22.5	110 11.5	N 4 56.1	84 04.0	S 7 05.8	249 59.0	N10 49.0
	15	298 57.1	74 05.8	S15 23.5	125 12.8	N 4 55.6	99 06.1	S 7 06.0	265 01.6	N10 49.0
	16	313 59.6	89 05.1	S15 24.4	140 14.2	N 4 55.2	114 08.1	S 7 06.1	280 04.2	N10 48.9
	17	329 02.1	104 04.5	S15 25.3	155 15.5	N 4 54.7	129 10.2	S 7 06.3	295 06.8	N10 48.9
	18	344 04.5	119 03.9	S15 26.2	170 16.8	N 4 54.3	144 12.3	S 7 06.4	310 09.4	N10 48.9
	19	359 07.0	134 03.3	S15 27.2	185 18.1	N 4 53.8	159 14.3	S 7 06.6	325 12.0	N10 48.8
	20	14 09.5	149 02.7	S15 28.1	200 19.5	N 4 53.4	174 16.4	S 7 06.7	340 14.6	N10 48.8
	21	29 11.9	164 02.1	S15 29.0	215 20.8	N 4 52.9	189 18.5	S 7 06.9	355 17.2	N10 48.7
	22	44 14.4	179 01.4	S15 30.0	230 22.1	N 4 52.5	204 20.5	S 7 07.0	10 19.8	N10 48.7
	23	59 16.9	194 00.8	S15 30.9	245 23.5	N 4 52.0	219 22.6	S 7 07.2	25 22.4	N10 48.7
			v -0.6	d 1.0	v 1.3	d 0.5	v 2.1	d 0.2	v 2.6	d 0.0

G.M.T	SUN		MOON				
d h	GHA ° '	Dec ° '	GHA ° '	v '	Dec ° '	d '	HP '
2 0	182 38.8	S21 59.7	4 00.9	8.1	N24 48.1	2.6	56.3
1	197 38.6	S22 00.1	18 28.0	8.0	N24 50.6	2.5	56.3
2	212 38.3	S22 00.4	32 55.0	8.0	N24 52.9	2.4	56.4
3	227 38.1	S22 00.8	47 21.9	7.9	N24 55.2	2.2	56.4
4	242 37.8	S22 01.2	61 48.8	7.9	N24 57.2	2.1	56.4
S 5	257 37.6	S22 01.5	76 15.6	7.8	N24 59.2	1.9	56.4
A							
T 6	272 37.3	S22 01.9	90 42.4	7.8	N25 01.0	1.8	56.4
U 7	287 37.1	S22 02.2	105 09.2	7.8	N25 02.6	1.7	56.5
R 8	302 36.9	S22 02.6	119 35.9	7.7	N25 04.2	1.5	56.5
D 9	317 36.6	S22 03.0	134 02.6	7.7	N25 05.5	1.4	56.5
A 10	332 36.4	S22 03.3	148 29.2	7.6	N25 06.8	1.2	56.5
Y 11	347 36.1	S22 03.7	162 55.8	7.6	N25 07.9	1.1	56.6
12	2 35.9	S22 04.0	177 22.3	7.6	N25 08.8	0.9	56.6
13	17 35.7	S22 04.4	191 48.9	7.5	N25 09.6	0.8	56.6
14	32 35.4	S22 04.7	206 15.3	7.5	N25 10.3	0.7	56.6
15	47 35.2	S22 05.1	220 41.8	7.4	N25 10.8	0.5	56.6
16	62 34.9	S22 05.5	235 08.2	7.4	N25 11.1	0.4	56.7
17	77 34.7	S22 05.8	249 34.6	7.4	N25 11.4	0.2	56.7
18	92 34.4	S22 06.2	264 01.0	7.4	N25 11.4	0.1	56.7
19	107 34.2	S22 06.5	278 27.3	7.3	N25 11.4	0.1	56.7
20	122 33.9	S22 06.9	292 53.6	7.3	N25 11.2	0.2	56.8
21	137 33.7	S22 07.2	307 19.9	7.3	N25 10.8	0.4	56.8
22	152 33.5	S22 07.6	321 46.1	7.3	N25 10.3	0.5	56.8
23	167 33.2	S22 07.9	336 12.4	7.2	N25 09.6	0.7	56.8
3 0	182 33.0	S22 08.3	350 38.6	7.2	N25 08.8	0.8	56.8
1	197 32.7	S22 08.6	5 04.8	7.2	N25 07.9	1.0	56.9
2	212 32.5	S22 09.0	19 31.0	7.2	N25 06.8	1.1	56.9
3	227 32.2	S22 09.3	33 57.2	7.2	N25 05.5	1.3	56.9
4	242 32.0	S22 09.7	48 23.3	7.2	N25 04.1	1.4	56.9
S 5	257 31.7	S22 10.0	62 49.5	7.1	N25 02.6	1.5	56.9
U							
N 6	272 31.5	S22 10.3	77 15.6	7.1	N25 00.9	1.7	57.0
D 7	287 31.2	S22 10.7	91 41.7	7.1	N24 59.0	1.8	57.0
A 8	302 31.0	S22 11.0	106 07.8	7.1	N24 57.0	2.0	57.0
Y 9	317 30.7	S22 11.4	120 34.0	7.1	N24 54.9	2.1	57.0
10	332 30.5	S22 11.7	135 00.1	7.1	N24 52.6	2.3	57.1
11	347 30.2	S22 12.1	149 26.2	7.1	N24 50.2	2.4	57.1
12	2 30.0	S22 12.4	163 52.3	7.1	N24 47.6	2.6	57.1
13	17 29.7	S22 12.7	178 18.4	7.1	N24 44.8	2.7	57.1
14	32 29.5	S22 13.1	192 44.5	7.1	N24 41.9	2.9	57.1
15	47 29.2	S22 13.4	207 10.6	7.1	N24 38.9	3.0	57.2
16	62 29.0	S22 13.7	221 36.8	7.1	N24 35.7	3.2	57.2
17	77 28.7	S22 14.1	236 02.9	7.1	N24 32.4	3.3	57.2
18	92 28.5	S22 14.4	250 29.0	7.1	N24 28.9	3.5	57.2
19	107 28.2	S22 14.7	264 55.2	7.2	N24 25.3	3.6	57.2
20	122 28.0	S22 15.1	279 21.4	7.2	N24 21.5	3.8	57.3
21	137 27.7	S22 15.4	293 47.5	7.2	N24 17.6	3.9	57.3
22	152 27.5	S22 15.7	308 13.7	7.2	N24 13.6	4.1	57.3
23	167 27.2	S22 16.1	322 39.9	7.2	N24 09.3	4.2	57.3
4 0	182 27.0	S22 16.4	337 06.2	7.2	N24 05.0	4.4	57.3
1	197 26.7	S22 16.7	351 32.4	7.2	N24 00.5	4.5	57.4
2	212 26.5	S22 17.1	5 58.7	7.3	N23 55.8	4.6	57.4
3	227 26.2	S22 17.4	20 24.9	7.3	N23 51.0	4.8	57.4
4	242 26.0	S22 17.7	34 51.2	7.3	N23 46.1	4.9	57.4
M 5	257 25.7	S22 18.0	49 17.6	7.3	N23 41.0	5.1	57.4
O							
N 6	272 25.5	S22 18.4	63 43.9	7.4	N23 35.8	5.2	57.5
D 7	287 25.2	S22 18.7	78 10.3	7.4	N23 30.4	5.4	57.5
A 8	302 25.0	S22 19.0	92 36.7	7.4	N23 24.9	5.5	57.5
Y 9	317 24.7	S22 19.3	107 03.2	7.4	N23 19.3	5.6	57.5
10	332 24.4	S22 19.7	121 29.6	7.5	N23 13.5	5.8	57.5
11	347 24.2	S22 20.0	135 56.1	7.5	N23 07.6	5.9	57.6
12	2 23.9	S22 20.3	150 22.6	7.5	N23 01.5	6.1	57.6
13	17 23.7	S22 20.6	164 49.2	7.6	N22 55.3	6.2	57.6
14	32 23.4	S22 21.0	179 15.8	7.6	N22 49.0	6.3	57.6
15	47 23.2	S22 21.3	193 42.4	7.6	N22 42.5	6.5	57.6
16	62 22.9	S22 21.6	208 09.1	7.7	N22 35.9	6.6	57.7
17	77 22.7	S22 21.9	222 35.8	7.7	N22 29.1	6.8	57.7
18	92 22.4	S22 22.2	237 02.6	7.7	N22 22.2	6.9	57.7
19	107 22.1	S22 22.5	251 29.3	7.8	N22 15.2	7.0	57.7
20	122 21.9	S22 22.9	265 56.2	7.8	N22 08.0	7.2	57.7
21	137 21.6	S22 23.2	280 23.0	7.9	N22 00.7	7.3	57.7
22	152 21.4	S22 23.5	294 49.9	7.9	N21 53.3	7.4	57.8
23	167 21.1	S22 23.8	309 16.9	7.9	N21 45.8	7.6	57.8
	S.D. 16.2	d 0.3	S.D.	15.4	15.6	15.7	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.5	S57 05.5
Acrux	172 56.7	S63 15.3
Adhara	255 03.0	S29 00.6
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.6	N55 47.9
Alkaid	152 50.0	N49 09.9
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.2	S 1 11.0
Alphard	217 44.5	S 8 47.1
Alphecca	126 01.4	N26 37.0
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.3	N19 01.8
Atria	107 04.3	S69 04.7
Avior	234 12.9	S59 36.0
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.6
Capella	280 16.7	N46 01.6
Castor	245 52.7	N31 49.3
Deneb	49 23.8	N45 23.3
Denebola	182 21.8	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.3	N61 35.3
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.2
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.0	S29 28.2
Gacrux	171 48.3	S57 16.3
Gienah	175 40.4	S17 42.1
Hadar	148 32.0	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.4	N74 02.0
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.2	S36 30.7
Miaplacidus	221 36.9	S69 49.9
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.1	S56 38.6
Polaris	314 56.4	N89 22.8
Pollux	243 13.2	N27 57.2
Procyon	244 47.3	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.0	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.6	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.0	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.1	S16 45.3
Spica	158 19.2	S11 18.7
Suhail	222 43.7	S43 32.8
Vega	80 31.5	N38 48.8
Zuben-ubi	136 53.8	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
5	0	74 19.3	209 00.2	S15 31.8	260 24.8	N 4 51.6	234 24.7	S 7 07.3	40 25.0	N10 48.6
	1	89 21.8	223 59.6	S15 32.7	275 26.1	N 4 51.1	249 26.7	S 7 07.5	55 27.6	N10 48.6
	2	104 24.2	238 59.0	S15 33.7	290 27.4	N 4 50.7	264 28.8	S 7 07.6	70 30.2	N10 48.6
	3	119 26.7	253 58.3	S15 34.6	305 28.8	N 4 50.2	279 30.9	S 7 07.8	85 32.8	N10 48.5
	4	134 29.2	268 57.7	S15 35.5	320 30.1	N 4 49.8	294 32.9	S 7 07.9	100 35.4	N10 48.5
T	5	149 31.6	283 57.1	S15 36.4	335 31.4	N 4 49.3	309 35.0	S 7 08.1	115 38.0	N10 48.5
U										
E	6	164 34.1	298 56.5	S15 37.4	350 32.8	N 4 48.9	324 37.1	S 7 08.2	130 40.5	N10 48.4
S	7	179 36.6	313 55.8	S15 38.3	5 34.1	N 4 48.4	339 39.1	S 7 08.4	145 43.1	N10 48.4
D	8	194 39.0	328 55.2	S15 39.2	20 35.4	N 4 48.0	354 41.2	S 7 08.5	160 45.7	N10 48.4
A	9	209 41.5	343 54.6	S15 40.1	35 36.8	N 4 47.5	9 43.3	S 7 08.7	175 48.3	N10 48.3
Y	10	224 44.0	358 54.0	S15 41.0	50 38.1	N 4 47.1	24 45.3	S 7 08.8	190 50.9	N10 48.3
	11	239 46.4	13 53.3	S15 42.0	65 39.4	N 4 46.6	39 47.4	S 7 09.0	205 53.5	N10 48.2
	12	254 48.9	28 52.7	S15 42.9	80 40.8	N 4 46.2	54 49.5	S 7 09.1	220 56.1	N10 48.2
	13	269 51.4	43 52.1	S15 43.8	95 42.1	N 4 45.8	69 51.5	S 7 09.3	235 58.7	N10 48.2
	14	284 53.8	58 51.5	S15 44.7	110 43.4	N 4 45.3	84 53.6	S 7 09.4	251 01.3	N10 48.1
	15	299 56.3	73 50.8	S15 45.6	125 44.8	N 4 44.9	99 55.7	S 7 09.6	266 03.9	N10 48.1
	16	314 58.7	88 50.2	S15 46.6	140 46.1	N 4 44.4	114 57.8	S 7 09.8	281 06.5	N10 48.1
	17	330 01.2	103 49.6	S15 47.5	155 47.4	N 4 44.0	129 59.8	S 7 09.9	296 09.1	N10 48.0
	18	345 03.7	118 48.9	S15 48.4	170 48.8	N 4 43.5	145 01.9	S 7 10.1	311 11.7	N10 48.0
	19	0 06.1	133 48.3	S15 49.3	185 50.1	N 4 43.1	160 04.0	S 7 10.2	326 14.3	N10 48.0
	20	15 08.6	148 47.7	S15 50.2	200 51.4	N 4 42.6	175 06.0	S 7 10.4	341 16.9	N10 47.9
	21	30 11.1	163 47.1	S15 51.1	215 52.8	N 4 42.2	190 08.1	S 7 10.5	356 19.5	N10 47.9
	22	45 13.5	178 46.4	S15 52.0	230 54.1	N 4 41.7	205 10.2	S 7 10.7	11 22.1	N10 47.9
	23	60 16.0	193 45.8	S15 53.0	245 55.4	N 4 41.3	220 12.2	S 7 10.8	26 24.7	N10 47.8
6	0	75 18.5	208 45.2	S15 53.9	260 56.8	N 4 40.8	235 14.3	S 7 11.0	41 27.3	N10 47.8
	1	90 20.9	223 44.5	S15 54.8	275 58.1	N 4 40.4	250 16.4	S 7 11.1	56 29.8	N10 47.8
	2	105 23.4	238 43.9	S15 55.7	290 59.5	N 4 40.0	265 18.5	S 7 11.3	71 32.4	N10 47.7
	3	120 25.9	253 43.3	S15 56.6	306 00.8	N 4 39.5	280 20.5	S 7 11.4	86 35.0	N10 47.7
	4	135 28.3	268 42.6	S15 57.5	321 02.1	N 4 39.1	295 22.6	S 7 11.6	101 37.6	N10 47.7
W	5	150 30.8	283 42.0	S15 58.4	336 03.5	N 4 38.6	310 24.7	S 7 11.7	116 40.2	N10 47.6
E										
D	6	165 33.2	298 41.4	S15 59.3	351 04.8	N 4 38.2	325 26.7	S 7 11.9	131 42.8	N10 47.6
N	7	180 35.7	313 40.7	S16 00.2	6 06.1	N 4 37.7	340 28.8	S 7 12.0	146 45.4	N10 47.6
E	8	195 38.2	328 40.1	S16 01.1	21 07.5	N 4 37.3	355 30.9	S 7 12.2	161 48.0	N10 47.5
S	9	210 40.6	343 39.4	S16 02.0	36 08.8	N 4 36.8	10 33.0	S 7 12.3	176 50.6	N10 47.5
D	10	225 43.1	358 38.8	S16 02.9	51 10.2	N 4 36.4	25 35.0	S 7 12.5	191 53.2	N10 47.4
A	11	240 45.6	13 38.2	S16 03.8	66 11.5	N 4 35.9	40 37.1	S 7 12.6	206 55.8	N10 47.4
Y										
	12	255 48.0	28 37.5	S16 04.7	81 12.8	N 4 35.5	55 39.2	S 7 12.8	221 58.4	N10 47.4
	13	270 50.5	43 36.9	S16 05.6	96 14.2	N 4 35.1	70 41.2	S 7 12.9	237 01.0	N10 47.3
	14	285 53.0	58 36.3	S16 06.5	111 15.5	N 4 34.6	85 43.3	S 7 13.1	252 03.5	N10 47.3
	15	300 55.4	73 35.6	S16 07.4	126 16.9	N 4 34.2	100 45.4	S 7 13.2	267 06.1	N10 47.3
	16	315 57.9	88 35.0	S16 08.3	141 18.2	N 4 33.7	115 47.5	S 7 13.4	282 08.7	N10 47.2
	17	331 00.3	103 34.3	S16 09.2	156 19.5	N 4 33.3	130 49.5	S 7 13.5	297 11.3	N10 47.2
	18	346 02.8	118 33.7	S16 10.1	171 20.9	N 4 32.8	145 51.6	S 7 13.7	312 13.9	N10 47.2
	19	1 05.3	133 33.0	S16 11.0	186 22.2	N 4 32.4	160 53.7	S 7 13.8	327 16.5	N10 47.1
	20	16 07.7	148 32.4	S16 11.9	201 23.6	N 4 32.0	175 55.8	S 7 14.0	342 19.1	N10 47.1
	21	31 10.2	163 31.8	S16 12.8	216 24.9	N 4 31.5	190 57.8	S 7 14.1	357 21.7	N10 47.1
	22	46 12.7	178 31.1	S16 13.7	231 26.3	N 4 31.1	205 59.9	S 7 14.2	12 24.3	N10 47.0
	23	61 15.1	193 30.5	S16 14.6	246 27.6	N 4 30.6	221 02.0	S 7 14.4	27 26.9	N10 47.0
7	0	76 17.6	208 29.8	S16 15.5	261 29.0	N 4 30.2	236 04.1	S 7 14.5	42 29.5	N10 47.0
	1	91 20.1	223 29.2	S16 16.4	276 30.3	N 4 29.7	251 06.1	S 7 14.7	57 32.0	N10 46.9
	2	106 22.5	238 28.5	S16 17.3	291 31.6	N 4 29.3	266 08.2	S 7 14.8	72 34.6	N10 46.9
	3	121 25.0	253 27.9	S16 18.2	306 33.0	N 4 28.9	281 10.3	S 7 15.0	87 37.2	N10 46.9
	4	136 27.5	268 27.2	S16 19.1	321 34.3	N 4 28.4	296 12.4	S 7 15.1	102 39.8	N10 46.8
T	5	151 29.9	283 26.6	S16 20.0	336 35.7	N 4 28.0	311 14.4	S 7 15.3	117 42.4	N10 46.8
H										
U	6	166 32.4	298 25.9	S16 20.9	351 37.0	N 4 27.5	326 16.5	S 7 15.4	132 45.0	N10 46.8
R	7	181 34.8	313 25.3	S16 21.7	6 38.4	N 4 27.1	341 18.6	S 7 15.6	147 47.6	N10 46.7
S	8	196 37.3	328 24.7	S16 22.6	21 39.7	N 4 26.6	356 20.7	S 7 15.7	162 50.2	N10 46.7
D	9	211 39.8	343 24.0	S16 23.5	36 41.1	N 4 26.2	11 22.7	S 7 15.9	177 52.8	N10 46.7
A	10	226 42.2	358 23.4	S16 24.4	51 42.4	N 4 25.8	26 24.8	S 7 16.0	192 55.4	N10 46.7
Y	11	241 44.7	13 22.7	S16 25.3	66 43.8	N 4 25.3	41 26.9	S 7 16.2	207 57.9	N10 46.6
	12	256 47.2	28 22.0	S16 26.2	81 45.1	N 4 24.9	56 29.0	S 7 16.3	223 00.5	N10 46.6
	13	271 49.6	43 21.4	S16 27.1	96 46.5	N 4 24.4	71 31.0	S 7 16.5	238 03.1	N10 46.6
	14	286 52.1	58 20.7	S16 27.9	111 47.8	N 4 24.0	86 33.1	S 7 16.6	253 05.7	N10 46.5
	15	301 54.6	73 20.1	S16 28.8	126 49.1	N 4 23.6	101 35.2	S 7 16.8	268 08.3	N10 46.5
	16	316 57.0	88 19.4	S16 29.7	141 50.5	N 4 23.1	116 37.3	S 7 16.9	283 10.9	N10 46.5
	17	331 59.5	103 18.8	S16 30.6	156 51.8	N 4 22.7	131 39.3	S 7 17.1	298 13.5	N10 46.4
	18	347 02.0	118 18.1	S16 31.5	171 53.2	N 4 22.2	146 41.4	S 7 17.2	313 16.1	N10 46.4
	19	2 04.4	133 17.5	S16 32.4	186 54.5	N 4 21.8	161 43.5	S 7 17.4	328 18.6	N10 46.4
	20	17 06.9	148 16.8	S16 33.2	201 55.9	N 4 21.4	176 45.6	S 7 17.5	343 21.2	N10 46.3
	21	32 09.3	163 16.2	S16 34.1	216 57.2	N 4 20.9	191 47.6	S 7 17.7	358 23.8	N10 46.3
	22	47 11.8	178 15.5	S16 35.0	231 58.6	N 4 20.5	206 49.7	S 7 17.8	13 26.4	N10 46.3
	23	62 14.3	193 14.9	S16 35.9	246 59.9	N 4 20.0	221 51.8	S 7 17.9	28 29.0	N10 46.2
			v -0.6	d 0.9	v 1.3	d 0.4	v 2.1	d 0.1	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
5	0	182 20.9	S22 24.1	323 43.9	8.0	N21 38.1	7.7	57.8
	1	197 20.6	S22 24.4	338 10.9	8.0	N21 30.2	7.8	57.8
	2	212 20.3	S22 24.7	352 38.0	8.1	N21 22.3	7.9	57.8
	3	227 20.1	S22 25.1	7 05.1	8.1	N21 14.2	8.1	57.9
	4	242 19.8	S22 25.4	21 32.3	8.2	N21 06.0	8.2	57.9
T	5	257 19.6	S22 25.7	35 59.5	8.2	N20 57.7	8.3	57.9
U								
E	6	272 19.3	S22 26.0	50 26.8	8.3	N20 49.2	8.5	57.9
S	7	287 19.0	S22 26.3	64 54.1	8.3	N20 40.7	8.6	57.9
D	8	302 18.8	S22 26.6	79 21.4	8.4	N20 32.0	8.7	57.9
A	9	317 18.5	S22 26.9	93 48.9	8.4	N20 23.2	8.8	58.0
Y	10	332 18.3	S22 27.2	108 16.3	8.5	N20 14.2	8.9	58.0
	11	347 18.0	S22 27.5	122 43.8	8.5	N20 05.1	9.1	58.0
	12	2 17.7	S22 27.8	137 11.4	8.6	N19 56.0	9.2	58.0
	13	17 17.5	S22 28.1	151 39.0	8.6	N19 46.7	9.3	58.0
	14	32 17.2	S22 28.4	166 06.7	8.7	N19 37.2	9.4	58.0
	15	47 17.0	S22 28.7	180 34.4	8.7	N19 27.7	9.5	58.1
	16	62 16.7	S22 29.0	195 02.1	8.8	N19 18.1	9.6	58.1
	17	77 16.4	S22 29.3	209 29.9	8.8	N19 08.3	9.8	58.1
	18	92 16.2	S22 29.6	223 57.8	8.9	N18 58.4	9.9	58.1
	19	107 15.9	S22 29.9	238 25.7	8.9	N18 48.4	10.0	58.1
	20	122 15.6	S22 30.2	252 53.7	9.0	N18 38.3	10.1	58.1
	21	137 15.4	S22 30.5	267 21.7	9.0	N18 28.1	10.2	58.2
	22	152 15.1	S22 30.8	281 49.8	9.1	N18 17.8	10.3	58.2
	23	167 14.8	S22 31.1	296 17.9	9.1	N18 07.4	10.4	58.2
6	0	182 14.6	S22 31.4	310 46.1	9.2	N17 56.8	10.5	58.2
	1	197 14.3	S22 31.7	325 14.3	9.2	N17 46.2	10.6	58.2
	2	212 14.1	S22 32.0	339 42.6	9.3	N17 35.5	10.7	58.2
	3	227 13.8	S22 32.3	354 11.0	9.3	N17 24.6	10.8	58.3
	4	242 13.5	S22 32.6	8 39.3	9.4	N17 13.7	10.9	58.3
W	5	257 13.3	S22 32.9	23 07.8	9.4	N17 02.6	11.0	58.3
E								
D	6	272 13.0	S22 33.1	37 36.3	9.5	N16 51.5	11.1	58.3
N	7	287 12.7	S22 33.4	52 04.8	9.5	N16 40.2	11.2	58.3
E	8	302 12.5	S22 33.7	66 33.4	9.6	N16 28.9	11.3	58.3
S	9	317 12.2	S22 34.0	81 02.1	9.6	N16 17.5	11.4	58.3
D	10	332 11.9	S22 34.3	95 30.8	9.7	N16 05.9	11.5	58.4
A	11	347 11.7	S22 34.6	109 59.5	9.7	N15 54.3	11.6	58.4
Y								
	12	2 11.4	S22 34.9	124 28.3	9.8	N15 42.6	11.7	58.4
	13	17 11.1	S22 35.2	138 57.2	9.9	N15 30.8	11.8	58.4
	14	32 10.9	S22 35.4	153 26.1	9.9	N15 18.9	11.9	58.4
	15	47 10.6	S22 35.7	167 55.0	9.9	N15 06.9	12.0	58.4
	16	62 10.3	S22 36.0	182 24.0	10.0	N14 54.8	12.1	58.5
	17	77 10.1	S22 36.3	196 53.1	10.0	N14 42.7	12.2	58.5
	18	92 09.8	S22 36.6	211 22.2	10.1	N14 30.4	12.2	58.5
	19	107 09.5	S22 36.8	225 51.3	10.1	N14 18.1	12.3	58.5
	20	122 09.3	S22 37.1	240 20.5	10.2	N14 05.7	12.4	58.5
	21	137 09.0	S22 37.4	254 49.7	10.2	N13 53.2	12.5	58.5
	22	152 08.7	S22 37.7	269 19.0	10.3	N13 40.6	12.6	58.5
	23	167 08.5	S22 38.0	283 48.3	10.3	N13 28.0	12.7	58.5
7	0	182 08.2	S22 38.2	298 17.7	10.4	N13 15.2	12.7	58.6
	1	197 07.9	S22 38.5	312 47.1	10.4	N13 02.4	12.8	58.6
	2	212 07.6	S22 38.8	327 16.6	10.5	N12 49.6	12.9	58.6
	3	227 07.4	S22 39.1	341 46.1	10.5	N12 36.6	13.0	58.6
	4	242 07.1	S22 39.3	356 15.7	10.5	N12 23.6	13.0	58.6
T	5	257 06.8	S22 39.6	10 45.2	10.6	N12 10.5	13.1	58.6
H								
U	6	272 06.6	S22 39.9	25 14.9	10.6	N11 57.3	13.2	58.6
R	7	287 06.3	S22 40.1	39 44.5	10.7	N11 44.1	13.2	58.7
S	8	302 06.0	S22 40.4	54 14.3	10.7	N11 30.8	13.3	58.7
D	9	317 05.8	S22 40.7	68 44.0	10.8	N11 17.4	13.4	58.7
A	10	332 05.5	S22 40.9	83 13.8	10.8	N11 04.0	13.4	58.7
Y	11	347 05.2	S22 41.2	97 43.6	10.8	N10 50.5	13.5	58.7
	12	2 04.9	S22 41.5	112 13.5	10.9	N10 36.9	13.6	58.7
	13	17 04.7	S22 41.7	126 43.4	10.9	N10 23.3	13.6	58.7
	14	32 04.4	S22 42.0	141 13.3	10.9	N10 09.6	13.7	58.7
	15	47 04.1	S22 42.3	155 43.3	11.0	N 9 55.9	13.7	58.8
	16	62 03.8	S22 42.5	170 13.3	11.0	N 9 42.1	13.8	58.8
	17	77 03.6	S22 42.8	184 43.4	11.0	N 9 28.2	13.9	58.8
	18	92 03.3	S22 43.1	199 13.4	11.1	N 9 14.3	13.9	58.8
	19	107 03.0	S22 43.3	213 43.5	11.1	N 9 00.4	14.0	58.8
	20	122 02.8	S22 43.6	228 13.7	11.1	N 8 46.4	14.0	58.8
	21	137 02.5	S22 43.8	242 43.8	11.2	N 8 32.3	14.1	58.8
	22	152 02.2	S22 44.1	257 14.0	11.2	N 8 18.2	14.1	58.8
	23	167 01.9	S22 44.4	271 44.2	11.2	N 8 04.0	14.2	58.9
		S.D. 16.2	d 0.3	S.D. 15.8		15.9		16.0

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.5	S57 05.5
Acrux	172 56.7	S63 15.3
Adhara	255 03.0	S29 00.6
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.5	N55 47.9
Alkaid	152 49.9	N49 09.9
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.1	S 1 11.0
Alphard	217 44.4	S 8 47.1
Alphecca	126 01.4	N26 37.0
Alpheratz	357 31.3	N29 15.3
Altair	61 57.1	N 8 56.9
Ankaa	353 03.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.3	N19 01.8
Atria	107 04.3	S69 04.7
Avior	234 12.9	S59 36.0
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.6
Capella	280 16.7	N46 01.6
Castor	245 52.7	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.8	N14 24.5
Diphda	348 44.0	S17 49.6
Dubhe	193 37.2	N61 35.3
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.2
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.2	S57 16.3
Gienah	175 40.4	S17 42.1
Hadar	148 31.9	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.3	N74 02.0
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.1	S36 30.7
Miaplacidus	221 36.9	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.1	S56 38.6
Polaris	314 56.9	N89 22.8
Pollux	243 13.1	N27 57.2
Procyon	244 47.2	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.0	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.5	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.0	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.1	S16 45.3
Spica	158 19.1	S11 18.7
Suhail	222 43.7	S43 32.8
Vega	80 31.5	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
8	0	77 16.7	208 14.2	S16 36.7	262 01.3	N 4 19.6	236 53.9	S 7 18.1	43 31.6	N10 46.2
	1	92 19.2	223 13.5	S16 37.6	277 02.7	N 4 19.2	251 56.0	S 7 18.2	58 34.2	N10 46.2
	2	107 21.7	238 12.9	S16 38.5	292 04.0	N 4 18.7	266 58.0	S 7 18.4	73 36.8	N10 46.1
	3	122 24.1	253 12.2	S16 39.4	307 05.4	N 4 18.3	282 00.1	S 7 18.5	88 39.3	N10 46.1
	4	137 26.6	268 11.6	S16 40.2	322 06.7	N 4 17.8	297 02.2	S 7 18.7	103 41.9	N10 46.1
F	5	152 29.1	283 10.9	S16 41.1	337 08.1	N 4 17.4	312 04.3	S 7 18.8	118 44.5	N10 46.0
R										
I	6	167 31.5	298 10.2	S16 42.0	352 09.4	N 4 17.0	327 06.4	S 7 19.0	133 47.1	N10 46.0
D	7	182 34.0	313 09.6	S16 42.9	7 10.8	N 4 16.5	342 08.4	S 7 19.1	148 49.7	N10 46.0
A	8	197 36.4	328 08.9	S16 43.7	22 12.1	N 4 16.1	357 10.5	S 7 19.3	163 52.3	N10 45.9
Y	9	212 38.9	343 08.3	S16 44.6	37 13.5	N 4 15.6	12 12.6	S 7 19.4	178 54.9	N10 45.9
	10	227 41.4	358 07.6	S16 45.5	52 14.8	N 4 15.2	27 14.7	S 7 19.6	193 57.4	N10 45.9
	11	242 43.8	13 06.9	S16 46.3	67 16.2	N 4 14.8	42 16.8	S 7 19.7	209 00.0	N10 45.9
	12	257 46.3	28 06.3	S16 47.2	82 17.5	N 4 14.3	57 18.8	S 7 19.9	224 02.6	N10 45.8
	13	272 48.8	43 05.6	S16 48.1	97 18.9	N 4 13.9	72 20.9	S 7 20.0	239 05.2	N10 45.8
	14	287 51.2	58 04.9	S16 48.9	112 20.3	N 4 13.5	87 23.0	S 7 20.1	254 07.8	N10 45.8
	15	302 53.7	73 04.3	S16 49.8	127 21.6	N 4 13.0	102 25.1	S 7 20.3	269 10.4	N10 45.7
	16	317 56.2	88 03.6	S16 50.7	142 23.0	N 4 12.6	117 27.2	S 7 20.4	284 12.9	N10 45.7
	17	332 58.6	103 02.9	S16 51.5	157 24.3	N 4 12.1	132 29.2	S 7 20.6	299 15.5	N10 45.7
	18	348 01.1	118 02.3	S16 52.4	172 25.7	N 4 11.7	147 31.3	S 7 20.7	314 18.1	N10 45.6
	19	3 03.6	133 01.6	S16 53.3	187 27.0	N 4 11.3	162 33.4	S 7 20.9	329 20.7	N10 45.6
	20	18 06.0	148 00.9	S16 54.1	202 28.4	N 4 10.8	177 35.5	S 7 21.0	344 23.3	N10 45.6
	21	33 08.5	163 00.3	S16 55.0	217 29.8	N 4 10.4	192 37.6	S 7 21.2	359 25.9	N10 45.5
	22	48 10.9	177 59.6	S16 55.8	232 31.1	N 4 10.0	207 39.6	S 7 21.3	14 28.4	N10 45.5
	23	63 13.4	192 58.9	S16 56.7	247 32.5	N 4 09.5	222 41.7	S 7 21.5	29 31.0	N10 45.5
9	0	78 15.9	207 58.3	S16 57.5	262 33.8	N 4 09.1	237 43.8	S 7 21.6	44 33.6	N10 45.4
	1	93 18.3	222 57.6	S16 58.4	277 35.2	N 4 08.6	252 45.9	S 7 21.7	59 36.2	N10 45.4
	2	108 20.8	237 56.9	S16 59.3	292 36.5	N 4 08.2	267 48.0	S 7 21.9	74 38.8	N10 45.4
	3	123 23.3	252 56.3	S17 00.1	307 37.9	N 4 07.8	282 50.0	S 7 22.0	89 41.4	N10 45.4
	4	138 25.7	267 55.6	S17 01.0	322 39.3	N 4 07.3	297 52.1	S 7 22.2	104 43.9	N10 45.3
S	5	153 28.2	282 54.9	S17 01.8	337 40.6	N 4 06.9	312 54.2	S 7 22.3	119 46.5	N10 45.3
A										
T	6	168 30.7	297 54.2	S17 02.7	352 42.0	N 4 06.5	327 56.3	S 7 22.5	134 49.1	N10 45.3
U	7	183 33.1	312 53.6	S17 03.5	7 43.4	N 4 06.0	342 58.4	S 7 22.6	149 51.7	N10 45.2
R	8	198 35.6	327 52.9	S17 04.4	22 44.7	N 4 05.6	358 00.5	S 7 22.8	164 54.3	N10 45.2
D	9	213 38.1	342 52.2	S17 05.2	37 46.1	N 4 05.2	13 02.5	S 7 22.9	179 56.9	N10 45.2
A	10	228 40.5	357 51.5	S17 06.1	52 47.4	N 4 04.7	28 04.6	S 7 23.0	194 59.4	N10 45.1
Y	11	243 43.0	12 50.9	S17 06.9	67 48.8	N 4 04.3	43 06.7	S 7 23.2	210 02.0	N10 45.1
	12	258 45.4	27 50.2	S17 07.8	82 50.2	N 4 03.8	58 08.8	S 7 23.3	225 04.6	N10 45.1
	13	273 47.9	42 49.5	S17 08.6	97 51.5	N 4 03.4	73 10.9	S 7 23.5	240 07.2	N10 45.1
	14	288 50.4	57 48.8	S17 09.5	112 52.9	N 4 03.0	88 13.0	S 7 23.6	255 09.8	N10 45.0
	15	303 52.8	72 48.2	S17 10.3	127 54.3	N 4 02.5	103 15.0	S 7 23.8	270 12.3	N10 45.0
	16	318 55.3	87 47.5	S17 11.2	142 55.6	N 4 02.1	118 17.1	S 7 23.9	285 14.9	N10 45.0
	17	333 57.8	102 46.8	S17 12.0	157 57.0	N 4 01.7	133 19.2	S 7 24.1	300 17.5	N10 44.9
	18	349 00.2	117 46.1	S17 12.9	172 58.3	N 4 01.2	148 21.3	S 7 24.2	315 20.1	N10 44.9
	19	4 02.7	132 45.4	S17 13.7	187 59.7	N 4 00.8	163 23.4	S 7 24.3	330 22.7	N10 44.9
	20	19 05.2	147 44.8	S17 14.6	203 01.1	N 4 00.4	178 25.5	S 7 24.5	345 25.2	N10 44.9
	21	34 07.6	162 44.1	S17 15.4	218 02.4	N 3 59.9	193 27.6	S 7 24.6	0 27.8	N10 44.8
	22	49 10.1	177 43.4	S17 16.2	233 03.8	N 3 59.5	208 29.6	S 7 24.8	15 30.4	N10 44.8
	23	64 12.5	192 42.7	S17 17.1	248 05.2	N 3 59.1	223 31.7	S 7 24.9	30 33.0	N10 44.8
10	0	79 15.0	207 42.0	S17 17.9	263 06.5	N 3 58.6	238 33.8	S 7 25.1	45 35.6	N10 44.7
	1	94 17.5	222 41.4	S17 18.8	278 07.9	N 3 58.2	253 35.9	S 7 25.2	60 38.1	N10 44.7
	2	109 19.9	237 40.7	S17 19.6	293 09.3	N 3 57.8	268 38.0	S 7 25.3	75 40.7	N10 44.7
	3	124 22.4	252 40.0	S17 20.4	308 10.6	N 3 57.3	283 40.1	S 7 25.5	90 43.3	N10 44.6
	4	139 24.9	267 39.3	S17 21.3	323 12.0	N 3 56.9	298 42.1	S 7 25.6	105 45.9	N10 44.6
S	5	154 27.3	282 38.6	S17 22.1	338 13.4	N 3 56.5	313 44.2	S 7 25.8	120 48.5	N10 44.6
U										
N	6	169 29.8	297 37.9	S17 22.9	353 14.7	N 3 56.0	328 46.3	S 7 25.9	135 51.0	N10 44.6
D	7	184 32.3	312 37.3	S17 23.8	8 16.1	N 3 55.6	343 48.4	S 7 26.1	150 53.6	N10 44.5
A	8	199 34.7	327 36.6	S17 24.6	23 17.5	N 3 55.2	358 50.5	S 7 26.2	165 56.2	N10 44.5
Y	9	214 37.2	342 35.9	S17 25.4	38 18.9	N 3 54.7	13 52.6	S 7 26.4	180 58.8	N10 44.5
	10	229 39.7	357 35.2	S17 26.3	53 20.2	N 3 54.3	28 54.7	S 7 26.5	196 01.4	N10 44.4
	11	244 42.1	12 34.5	S17 27.1	68 21.6	N 3 53.9	43 56.8	S 7 26.6	211 03.9	N10 44.4
	12	259 44.6	27 33.8	S17 27.9	83 23.0	N 3 53.4	58 58.8	S 7 26.8	226 06.5	N10 44.4
	13	274 47.0	42 33.1	S17 28.8	98 24.3	N 3 53.0	74 00.9	S 7 26.9	241 09.1	N10 44.4
	14	289 49.5	57 32.4	S17 29.6	113 25.7	N 3 52.6	89 03.0	S 7 27.1	256 11.7	N10 44.3
	15	304 52.0	72 31.7	S17 30.4	128 27.1	N 3 52.1	104 05.1	S 7 27.2	271 14.2	N10 44.3
	16	319 54.4	87 31.1	S17 31.3	143 28.5	N 3 51.7	119 07.2	S 7 27.3	286 16.8	N10 44.3
	17	334 56.9	102 30.4	S17 32.1	158 29.8	N 3 51.3	134 09.3	S 7 27.5	301 19.4	N10 44.2
	18	349 59.4	117 29.7	S17 32.9	173 31.2	N 3 50.9	149 11.4	S 7 27.6	316 22.0	N10 44.2
	19	5 01.8	132 29.0	S17 33.7	188 32.6	N 3 50.4	164 13.5	S 7 27.8	331 24.5	N10 44.2
	20	20 04.3	147 28.3	S17 34.6	203 33.9	N 3 50.0	179 15.5	S 7 27.9	346 27.1	N10 44.2
	21	35 06.8	162 27.6	S17 35.4	218 35.3	N 3 49.6	194 17.6	S 7 28.1	1 29.7	N10 44.1
	22	50 09.2	177 26.9	S17 36.2	233 36.7	N 3 49.1	209 19.7	S 7 28.2	16 32.3	N10 44.1
	23	65 11.7	192 26.2	S17 37.0	248 38.1	N 3 48.7	224 21.8	S 7 28.3	31 34.9	N10 44.1
			v -0.7	d 0.8	v 1.4	d 0.4	v 2.1	d 0.1	v 2.6	d 0.0

G.M.T		SUN				MOON						
d	h	GHA ° '		Dec ° '		GHA ° '	v '	Dec ° '		d '	HP '
8	0	182	01.7	S22	44.6	286	14.5	11.2	N 7	49.8	14.2	58.9
	1	197	01.4	S22	44.9	300	44.7	11.3	N 7	35.6	14.3	58.9
	2	212	01.1	S22	45.1	315	15.0	11.3	N 7	21.3	14.3	58.9
	3	227	00.8	S22	45.4	329	45.3	11.3	N 7	06.9	14.3	58.9
	4	242	00.6	S22	45.6	344	15.7	11.3	N 6	52.5	14.4	58.9
F	5	257	00.3	S22	45.9	358	46.0	11.4	N 6	38.1	14.4	58.9
R												
I	6	272	00.0	S22	46.2	13	16.4	11.4	N 6	23.6	14.5	58.9
D	7	286	59.7	S22	46.4	27	46.8	11.4	N 6	09.1	14.5	58.9
A	8	301	59.5	S22	46.7	42	17.2	11.4	N 5	54.6	14.5	59.0
Y	9	316	59.2	S22	46.9	56	47.7	11.4	N 5	40.0	14.6	59.0
	10	331	58.9	S22	47.2	71	18.1	11.5	N 5	25.4	14.6	59.0
	11	346	58.6	S22	47.4	85	48.6	11.5	N 5	10.8	14.6	59.0
	12	1	58.3	S22	47.7	100	19.1	11.5	N 4	56.1	14.7	59.0
	13	16	58.1	S22	47.9	114	49.6	11.5	N 4	41.4	14.7	59.0
	14	31	57.8	S22	48.1	129	20.1	11.5	N 4	26.7	14.7	59.0
	15	46	57.5	S22	48.4	143	50.6	11.5	N 4	11.9	14.8	59.0
	16	61	57.2	S22	48.6	158	21.1	11.5	N 3	57.1	14.8	59.0
	17	76	57.0	S22	48.9	172	51.6	11.5	N 3	42.3	14.8	59.0
	18	91	56.7	S22	49.1	187	22.2	11.5	N 3	27.5	14.8	59.1
	19	106	56.4	S22	49.4	201	52.7	11.6	N 3	12.6	14.9	59.1
	20	121	56.1	S22	49.6	216	23.3	11.6	N 2	57.7	14.9	59.1
	21	136	55.8	S22	49.9	230	53.9	11.6	N 2	42.8	14.9	59.1
	22	151	55.6	S22	50.1	245	24.4	11.6	N 2	27.9	14.9	59.1
	23	166	55.3	S22	50.3	259	55.0	11.6	N 2	13.0	14.9	59.1
9	0	181	55.0	S22	50.6	274	25.6	11.6	N 1	58.0	15.0	59.1
	1	196	54.7	S22	50.8	288	56.1	11.6	N 1	43.1	15.0	59.1
	2	211	54.5	S22	51.0	303	26.7	11.6	N 1	28.1	15.0	59.1
	3	226	54.2	S22	51.3	317	57.3	11.6	N 1	13.1	15.0	59.1
	4	241	53.9	S22	51.5	332	27.8	11.6	N 0	58.1	15.0	59.2
S	5	256	53.6	S22	51.8	346	58.4	11.6	N 0	43.1	15.0	59.2
A												
T	6	271	53.3	S22	52.0	1	28.9	11.6	N 0	28.1	15.0	59.2
U	7	286	53.0	S22	52.2	15	59.5	11.5	N 0	13.0	15.0	59.2
R	8	301	52.8	S22	52.5	30	30.0	11.5	S 0	02.0	15.0	59.2
D	9	316	52.5	S22	52.7	45	00.5	11.5	S 0	17.0	15.0	59.2
A	10	331	52.2	S22	52.9	59	31.1	11.5	S 0	32.1	15.0	59.2
Y	11	346	51.9	S22	53.1	74	01.6	11.5	S 0	47.1	15.0	59.2
	12	1	51.6	S22	53.4	88	32.1	11.5	S 1	02.1	15.0	59.2
	13	16	51.4	S22	53.6	103	02.5	11.5	S 1	17.2	15.0	59.2
	14	31	51.1	S22	53.8	117	33.0	11.5	S 1	32.2	15.0	59.2
	15	46	50.8	S22	54.1	132	03.4	11.4	S 1	47.2	15.0	59.2
	16	61	50.5	S22	54.3	146	33.9	11.4	S 2	02.3	15.0	59.2
	17	76	50.2	S22	54.5	161	04.3	11.4	S 2	17.3	15.0	59.3
	18	91	49.9	S22	54.7	175	34.7	11.4	S 2	32.3	15.0	59.3
	19	106	49.7	S22	55.0	190	05.1	11.4	S 2	47.3	15.0	59.3
	20	121	49.4	S22	55.2	204	35.4	11.4	S 3	02.3	15.0	59.3
	21	136	49.1	S22	55.4	219	05.7	11.3	S 3	17.3	15.0	59.3
	22	151	48.8	S22	55.6	233	36.1	11.3	S 3	32.2	15.0	59.3
	23	166	48.5	S22	55.8	248	06.3	11.3	S 3	47.2	14.9	59.3
10	0	181	48.2	S22	56.1	262	36.6	11.3	S 4	02.1	14.9	59.3
	1	196	48.0	S22	56.3	277	06.8	11.2	S 4	17.0	14.9	59.3
	2	211	47.7	S22	56.5	291	37.0	11.2	S 4	31.9	14.9	59.3
	3	226	47.4	S22	56.7	306	07.2	11.2	S 4	46.8	14.9	59.3
	4	241	47.1	S22	56.9	320	37.3	11.1	S 5	01.6	14.9	59.3
S	5	256	46.8	S22	57.2	335	07.4	11.1	S 5	16.5	14.8	59.3
U												
N	6	271	46.5	S22	57.4	349	37.5	11.1	S 5	31.3	14.8	59.3
D	7	286	46.3	S22	57.6	4	07.5	11.0	S 5	46.1	14.8	59.3
A	8	301	46.0	S22	57.8	18	37.6	11.0	S 6	00.8	14.8	59.3
Y	9	316	45.7	S22	58.0	33	07.5	11.0	S 6	15.5	14.7	59.3
	10	331	45.4	S22	58.2	47	37.5	10.9	S 6	30.2	14.7	59.4
	11	346	45.1	S22	58.4	62	07.3	10.9	S 6	44.9	14.7	59.4
	12	1	44.8	S22	58.6	76	37.2	10.9	S 6	59.5	14.6	59.4
	13	16	44.5	S22	58.9	91	07.0	10.8	S 7	14.1	14.6	59.4
	14	31	44.2	S22	59.1	105	36.8	10.8	S 7	28.7	14.6	59.4
	15	46	44.0	S22	59.3	120	06.5	10.7	S 7	43.2	14.5	59.4
	16	61	43.7	S22	59.5	134	36.2	10.7	S 7	57.7	14.5	59.4
	17	76	43.4	S22	59.7	149	05.9	10.6	S 8	12.1	14.4	59.4
	18	91	43.1	S22	59.9	163	35.5	10.6	S 8	26.5	14.4	59.4
	19	106	42.8	S23	00.1	178	05.0	10.6	S 8	40.9	14.4	59.4
	20	121	42.5	S23	00.3	192	34.5	10.5	S 8	55.2	14.3	59.4
	21	136	42.2	S23	00.5	207	04.0	10.5	S 9	09.4	14.3	59.4
	22	151	42.0	S23	00.7	221	33.4	10.4	S 9	23.6	14.2	59.4
	23	166	41.7	S23	00.9	236	02.7	10.4	S 9	37.8	14.2	59.4
		S.D.	16.2	d	0.2	S.D.	16.1		16.1		16.2	

STARS		
Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.6	S57 05.5
Acrux	172 56.6	S63 15.3
Adhara	255 03.0	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.5	N55 47.9
Alkaid	152 49.9	N49 09.9
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.1	S 1 11.0
Alphard	217 44.4	S 8 47.1
Alphecca	126 01.4	N26 37.0
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 03.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.3	N19 01.8
Atria	107 04.3	S69 04.7
Avior	234 12.9	S59 36.0
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.6
Capella	280 16.7	N46 01.6
Castor	245 52.7	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.8	N14 24.4
Diphda	348 44.0	S17 49.6
Dubhe	193 37.2	N61 35.2
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.2
Enif	33 35.7	N10 00.7
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.2	S57 16.3
Gienah	175 40.4	S17 42.1
Hadar	148 31.9	S60 30.6
Hamal	327 47.3	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.3	N74 01.9
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.1	S36 30.7
Miaplacidus	221 36.8	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.2	S56 38.6
Polaris	314 57.6	N89 22.8
Pollux	243 13.1	N27 57.2
Procyon	244 47.2	N 5 09.0
Rasalhague	95 56.0	N12 32.5
Regulus	207 31.0	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.5	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.1	S16 45.4
Spica	158 19.1	S11 18.7
Suhail	222 43.6	S43 32.8
Vega	80 31.5	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
11	0	80 14.2	207 25.5	S17 37.8	263 39.4	N 3 48.3	239 23.9	S 7 28.5	46 37.4	N10 44.0
	1	95 16.6	222 24.8	S17 38.7	278 40.8	N 3 47.8	254 26.0	S 7 28.6	61 40.0	N10 44.0
	2	110 19.1	237 24.1	S17 39.5	293 42.2	N 3 47.4	269 28.1	S 7 28.8	76 42.6	N10 44.0
	3	125 21.5	252 23.4	S17 40.3	308 43.6	N 3 47.0	284 30.2	S 7 28.9	91 45.2	N10 44.0
	4	140 24.0	267 22.7	S17 41.1	323 44.9	N 3 46.6	299 32.3	S 7 29.0	106 47.7	N10 43.9
M	5	155 26.5	282 22.0	S17 41.9	338 46.3	N 3 46.1	314 34.4	S 7 29.2	121 50.3	N10 43.9
O										
N	6	170 28.9	297 21.3	S17 42.8	353 47.7	N 3 45.7	329 36.4	S 7 29.3	136 52.9	N10 43.9
D	7	185 31.4	312 20.6	S17 43.6	8 49.1	N 3 45.3	344 38.5	S 7 29.5	151 55.5	N10 43.9
A	8	200 33.9	327 19.9	S17 44.4	23 50.5	N 3 44.8	359 40.6	S 7 29.6	166 58.0	N10 43.8
Y	9	215 36.3	342 19.2	S17 45.2	38 51.8	N 3 44.4	14 42.7	S 7 29.8	182 00.6	N10 43.8
	10	230 38.8	357 18.5	S17 46.0	53 53.2	N 3 44.0	29 44.8	S 7 29.9	197 03.2	N10 43.8
	11	245 41.3	12 17.8	S17 46.8	68 54.6	N 3 43.5	44 46.9	S 7 30.0	212 05.8	N10 43.7
	12	260 43.7	27 17.1	S17 47.6	83 56.0	N 3 43.1	59 49.0	S 7 30.2	227 08.3	N10 43.7
	13	275 46.2	42 16.4	S17 48.4	98 57.3	N 3 42.7	74 51.1	S 7 30.3	242 10.9	N10 43.7
	14	290 48.6	57 15.7	S17 49.2	113 58.7	N 3 42.3	89 53.2	S 7 30.5	257 13.5	N10 43.7
	15	305 51.1	72 15.0	S17 50.1	129 00.1	N 3 41.8	104 55.3	S 7 30.6	272 16.0	N10 43.6
	16	320 53.6	87 14.3	S17 50.9	144 01.5	N 3 41.4	119 57.4	S 7 30.7	287 18.6	N10 43.6
	17	335 56.0	102 13.6	S17 51.7	159 02.9	N 3 41.0	134 59.4	S 7 30.9	302 21.2	N10 43.6
	18	350 58.5	117 12.9	S17 52.5	174 04.2	N 3 40.6	150 01.5	S 7 31.0	317 23.8	N10 43.6
	19	6 01.0	132 12.2	S17 53.3	189 05.6	N 3 40.1	165 03.6	S 7 31.2	332 26.3	N10 43.5
	20	21 03.4	147 11.5	S17 54.1	204 07.0	N 3 39.7	180 05.7	S 7 31.3	347 28.9	N10 43.5
	21	36 05.9	162 10.8	S17 54.9	219 08.4	N 3 39.3	195 07.8	S 7 31.4	2 31.5	N10 43.5
	22	51 08.4	177 10.1	S17 55.7	234 09.8	N 3 38.8	210 09.9	S 7 31.6	17 34.1	N10 43.5
	23	66 10.8	192 09.4	S17 56.5	249 11.2	N 3 38.4	225 12.0	S 7 31.7	32 36.6	N10 43.4
12	0	81 13.3	207 08.7	S17 57.3	264 12.5	N 3 38.0	240 14.1	S 7 31.9	47 39.2	N10 43.4
	1	96 15.8	222 08.0	S17 58.1	279 13.9	N 3 37.6	255 16.2	S 7 32.0	62 41.8	N10 43.4
	2	111 18.2	237 07.3	S17 58.9	294 15.3	N 3 37.1	270 18.3	S 7 32.1	77 44.3	N10 43.3
	3	126 20.7	252 06.6	S17 59.7	309 16.7	N 3 36.7	285 20.4	S 7 32.3	92 46.9	N10 43.3
	4	141 23.1	267 05.9	S18 00.5	324 18.1	N 3 36.3	300 22.5	S 7 32.4	107 49.5	N10 43.3
T	5	156 25.6	282 05.1	S18 01.3	339 19.5	N 3 35.9	315 24.6	S 7 32.6	122 52.1	N10 43.3
U										
E	6	171 28.1	297 04.4	S18 02.1	354 20.8	N 3 35.4	330 26.7	S 7 32.7	137 54.6	N10 43.2
S	7	186 30.5	312 03.7	S18 02.9	9 22.2	N 3 35.0	345 28.8	S 7 32.8	152 57.2	N10 43.2
D	8	201 33.0	327 03.0	S18 03.7	24 23.6	N 3 34.6	0 30.8	S 7 33.0	167 59.8	N10 43.2
A	9	216 35.5	342 02.3	S18 04.5	39 25.0	N 3 34.2	15 32.9	S 7 33.1	183 02.3	N10 43.2
Y	10	231 37.9	357 01.6	S18 05.3	54 26.4	N 3 33.7	30 35.0	S 7 33.2	198 04.9	N10 43.1
	11	246 40.4	12 00.9	S18 06.1	69 27.8	N 3 33.3	45 37.1	S 7 33.4	213 07.5	N10 43.1
	12	261 42.9	27 00.2	S18 06.9	84 29.2	N 3 32.9	60 39.2	S 7 33.5	228 10.1	N10 43.1
	13	276 45.3	41 59.5	S18 07.6	99 30.5	N 3 32.5	75 41.3	S 7 33.7	243 12.6	N10 43.1
	14	291 47.8	56 58.7	S18 08.4	114 31.9	N 3 32.0	90 43.4	S 7 33.8	258 15.2	N10 43.0
	15	306 50.3	71 58.0	S18 09.2	129 33.3	N 3 31.6	105 45.5	S 7 33.9	273 17.8	N10 43.0
	16	321 52.7	86 57.3	S18 10.0	144 34.7	N 3 31.2	120 47.6	S 7 34.1	288 20.3	N10 43.0
	17	336 55.2	101 56.6	S18 10.8	159 36.1	N 3 30.8	135 49.7	S 7 34.2	303 22.9	N10 43.0
	18	351 57.6	116 55.9	S18 11.6	174 37.5	N 3 30.3	150 51.8	S 7 34.4	318 25.5	N10 42.9
	19	7 00.1	131 55.2	S18 12.4	189 38.9	N 3 29.9	165 53.9	S 7 34.5	333 28.0	N10 42.9
	20	22 02.6	146 54.4	S18 13.2	204 40.3	N 3 29.5	180 56.0	S 7 34.6	348 30.6	N10 42.9
	21	37 05.0	161 53.7	S18 13.9	219 41.7	N 3 29.1	195 58.1	S 7 34.8	3 33.2	N10 42.9
	22	52 07.5	176 53.0	S18 14.7	234 43.0	N 3 28.6	211 00.2	S 7 34.9	18 35.8	N10 42.8
	23	67 10.0	191 52.3	S18 15.5	249 44.4	N 3 28.2	226 02.3	S 7 35.0	33 38.3	N10 42.8
13	0	82 12.4	206 51.6	S18 16.3	264 45.8	N 3 27.8	241 04.4	S 7 35.2	48 40.9	N10 42.8
	1	97 14.9	221 50.8	S18 17.1	279 47.2	N 3 27.4	256 06.5	S 7 35.3	63 43.5	N10 42.8
	2	112 17.4	236 50.1	S18 17.8	294 48.6	N 3 26.9	271 08.6	S 7 35.5	78 46.0	N10 42.7
	3	127 19.8	251 49.4	S18 18.6	309 50.0	N 3 26.5	286 10.7	S 7 35.6	93 48.6	N10 42.7
	4	142 22.3	266 48.7	S18 19.4	324 51.4	N 3 26.1	301 12.8	S 7 35.7	108 51.2	N10 42.7
W	5	157 24.7	281 48.0	S18 20.2	339 52.8	N 3 25.7	316 14.9	S 7 35.9	123 53.7	N10 42.7
E										
D	6	172 27.2	296 47.2	S18 21.0	354 54.2	N 3 25.3	331 17.0	S 7 36.0	138 56.3	N10 42.6
N	7	187 29.7	311 46.5	S18 21.7	9 55.6	N 3 24.8	346 19.1	S 7 36.1	153 58.9	N10 42.6
E	8	202 32.1	326 45.8	S18 22.5	24 57.0	N 3 24.4	1 21.2	S 7 36.3	169 01.4	N10 42.6
S	9	217 34.6	341 45.1	S18 23.3	39 58.4	N 3 24.0	16 23.3	S 7 36.4	184 04.0	N10 42.6
D	10	232 37.1	356 44.3	S18 24.0	54 59.8	N 3 23.6	31 25.4	S 7 36.6	199 06.6	N10 42.5
A	11	247 39.5	11 43.6	S18 24.8	70 01.1	N 3 23.1	46 27.5	S 7 36.7	214 09.1	N10 42.5
Y										
	12	262 42.0	26 42.9	S18 25.6	85 02.5	N 3 22.7	61 29.6	S 7 36.8	229 11.7	N10 42.5
	13	277 44.5	41 42.2	S18 26.4	100 03.9	N 3 22.3	76 31.7	S 7 37.0	244 14.3	N10 42.5
	14	292 46.9	56 41.4	S18 27.1	115 05.3	N 3 21.9	91 33.8	S 7 37.1	259 16.8	N10 42.4
	15	307 49.4	71 40.7	S18 27.9	130 06.7	N 3 21.5	106 35.9	S 7 37.2	274 19.4	N10 42.4
	16	322 51.9	86 40.0	S18 28.7	145 08.1	N 3 21.0	121 38.0	S 7 37.4	289 22.0	N10 42.4
	17	337 54.3	101 39.3	S18 29.4	160 09.5	N 3 20.6	136 40.1	S 7 37.5	304 24.5	N10 42.4
	18	352 56.8	116 38.5	S18 30.2	175 10.9	N 3 20.2	151 42.2	S 7 37.7	319 27.1	N10 42.3
	19	7 59.2	131 37.8	S18 31.0	190 12.3	N 3 19.8	166 44.3	S 7 37.8	334 29.7	N10 42.3
	20	23 01.7	146 37.1	S18 31.7	205 13.7	N 3 19.4	181 46.4	S 7 37.9	349 32.2	N10 42.3
	21	38 04.2	161 36.3	S18 32.5	220 15.1	N 3 18.9	196 48.5	S 7 38.1	4 34.8	N10 42.3
	22	53 06.6	176 35.6	S18 33.3	235 16.5	N 3 18.5	211 50.6	S 7 38.2	19 37.3	N10 42.3
	23	68 09.1	191 34.9	S18 34.0	250 17.9	N 3 18.1	226 52.7	S 7 38.3	34 39.9	N10 42.2
			v -0.7	d 0.8	v 1.4	d 0.4	v 2.1	d 0.1	v 2.6	d 0.0

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
11	0	181 41.4	S23	01.1	250 32.1	10.3	S 9 51.9	14.1	59.4
	1	196 41.1	S23	01.3	265 01.3	10.3	S10 06.0	14.1	59.4
	2	211 40.8	S23	01.5	279 30.5	10.2	S10 20.0	14.0	59.4
	3	226 40.5	S23	01.7	293 59.7	10.2	S10 33.9	14.0	59.4
	4	241 40.2	S23	01.9	308 28.8	10.1	S10 47.8	13.9	59.4
M	5	256 39.9	S23	02.1	322 57.8	10.0	S11 01.7	13.8	59.4
O									
N	6	271 39.6	S23	02.3	337 26.8	10.0	S11 15.5	13.8	59.4
D	7	286 39.3	S23	02.5	351 55.7	9.9	S11 29.2	13.7	59.4
A	8	301 39.1	S23	02.7	6 24.6	9.9	S11 42.8	13.7	59.4
Y	9	316 38.8	S23	02.9	20 53.4	9.8	S11 56.4	13.6	59.4
	10	331 38.5	S23	03.1	35 22.2	9.8	S12 10.0	13.5	59.4
	11	346 38.2	S23	03.3	49 50.8	9.7	S12 23.4	13.5	59.4
	12	1 37.9	S23	03.5	64 19.5	9.6	S12 36.8	13.4	59.4
	13	16 37.6	S23	03.7	78 48.0	9.6	S12 50.1	13.3	59.4
	14	31 37.3	S23	03.8	93 16.6	9.5	S13 03.4	13.2	59.4
	15	46 37.0	S23	04.0	107 45.0	9.4	S13 16.5	13.2	59.4
	16	61 36.7	S23	04.2	122 13.4	9.4	S13 29.6	13.1	59.4
	17	76 36.4	S23	04.4	136 41.7	9.3	S13 42.7	13.0	59.4
	18	91 36.2	S23	04.6	151 10.0	9.3	S13 55.6	12.9	59.4
	19	106 35.9	S23	04.8	165 38.2	9.2	S14 08.5	12.9	59.4
	20	121 35.6	S23	05.0	180 06.3	9.1	S14 21.3	12.8	59.4
	21	136 35.3	S23	05.2	194 34.3	9.1	S14 34.0	12.7	59.4
	22	151 35.0	S23	05.3	209 02.3	9.0	S14 46.6	12.6	59.4
	23	166 34.7	S23	05.5	223 30.3	8.9	S14 59.1	12.5	59.4
12	0	181 34.4	S23	05.7	237 58.1	8.9	S15 11.6	12.4	59.4
	1	196 34.1	S23	05.9	252 25.9	8.8	S15 23.9	12.4	59.4
	2	211 33.8	S23	06.1	266 53.6	8.7	S15 36.2	12.3	59.4
	3	226 33.5	S23	06.2	281 21.3	8.7	S15 48.4	12.2	59.4
	4	241 33.2	S23	06.4	295 48.9	8.6	S16 00.4	12.1	59.4
T	5	256 32.9	S23	06.6	310 16.4	8.5	S16 12.4	12.0	59.4
U									
E	6	271 32.6	S23	06.8	324 43.8	8.4	S16 24.3	11.9	59.4
S	7	286 32.3	S23	07.0	339 11.2	8.4	S16 36.1	11.8	59.4
D	8	301 32.1	S23	07.1	353 38.5	8.3	S16 47.8	11.7	59.4
A	9	316 31.8	S23	07.3	8 05.7	8.2	S16 59.4	11.6	59.4
Y	10	331 31.5	S23	07.5	22 32.9	8.2	S17 10.9	11.5	59.4
	11	346 31.2	S23	07.7	37 00.0	8.1	S17 22.3	11.4	59.4
	12	1 30.9	S23	07.8	51 27.0	8.0	S17 33.6	11.3	59.4
	13	16 30.6	S23	08.0	65 54.0	8.0	S17 44.7	11.2	59.4
	14	31 30.3	S23	08.2	80 20.9	7.9	S17 55.8	11.1	59.3
	15	46 30.0	S23	08.3	94 47.7	7.8	S18 06.8	11.0	59.3
	16	61 29.7	S23	08.5	109 14.5	7.7	S18 17.6	10.9	59.3
	17	76 29.4	S23	08.7	123 41.1	7.7	S18 28.4	10.7	59.3
	18	91 29.1	S23	08.8	138 07.7	7.6	S18 39.0	10.6	59.3
	19	106 28.8	S23	09.0	152 34.3	7.5	S18 49.5	10.5	59.3
	20	121 28.5	S23	09.2	167 00.7	7.5	S18 59.9	10.4	59.3
	21	136 28.2	S23	09.3	181 27.1	7.4	S19 10.2	10.3	59.3
	22	151 27.9	S23	09.5	195 53.5	7.3	S19 20.3	10.2	59.3
	23	166 27.6	S23	09.7	210 19.7	7.3	S19 30.4	10.0	59.3
13	0	181 27.3	S23	09.8	224 45.9	7.2	S19 40.3	9.9	59.3
	1	196 27.0	S23	10.0	239 12.1	7.1	S19 50.1	9.8	59.3
	2	211 26.7	S23	10.2	253 38.1	7.1	S19 59.7	9.7	59.3
	3	226 26.4	S23	10.3	268 04.1	7.0	S20 09.3	9.5	59.3
	4	241 26.2	S23	10.5	282 30.1	6.9	S20 18.7	9.4	59.2
W	5	256 25.9	S23	10.6	296 55.9	6.9	S20 27.9	9.3	59.2
E									
D	6	271 25.6	S23	10.8	311 21.7	6.8	S20 37.1	9.2	59.2
N	7	286 25.3	S23	10.9	325 47.4	6.7	S20 46.1	9.0	59.2
E	8	301 25.0	S23	11.1	340 13.1	6.7	S20 55.0	8.9	59.2
S	9	316 24.7	S23	11.3	354 38.7	6.6	S21 03.8	8.8	59.2
D	10	331 24.4	S23	11.4	9 04.3	6.5	S21 12.4	8.6	59.2
A	11	346 24.1	S23	11.6	23 29.8	6.5	S21 20.9	8.5	59.2
Y									
	12	1 23.8	S23	11.7	37 55.2	6.4	S21 29.2	8.3	59.2
	13	16 23.5	S23	11.9	52 20.6	6.4	S21 37.4	8.2	59.2
	14	31 23.2	S23	12.0	66 45.9	6.3	S21 45.5	8.1	59.1
	15	46 22.9	S23	12.2	81 11.1	6.3	S21 53.4	7.9	59.1
	16	61 22.6	S23	12.3	95 36.3	6.2	S22 01.2	7.8	59.1
	17	76 22.3	S23	12.5	110 01.4	6.1	S22 08.8	7.6	59.1
	18	91 22.0	S23	12.6	124 26.5	6.1	S22 16.3	7.5	59.1
	19	106 21.7	S23	12.8	138 51.6	6.0	S22 23.6	7.3	59.1
	20	121 21.4	S23	12.9	153 16.5	6.0	S22 30.8	7.2	59.1
	21	136 21.1	S23	13.1	167 41.5	5.9	S22 37.9	7.1	59.1
	22	151 20.8	S23	13.2	182 06.3	5.9	S22 44.8	6.9	59.0
	23	166 20.5	S23	13.4	196 31.2	5.8	S22 51.6	6.8	59.0
		S.D. 16.2	d	0.2	S.D.	16.2	16.2	16.1	

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.6	S57 05.5
Acrux	172 56.6	S63 15.3
Adhara	255 03.0	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.5	N55 47.9
Alkaid	152 49.9	N49 09.9
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.1	S 1 11.0
Alphard	217 44.4	S 8 47.1
Alphecca	126 01.4	N26 37.0
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 03.9	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.3	N19 01.8
Atria	107 04.3	S69 04.7
Avior	234 12.8	S59 36.0
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.6
Capella	280 16.7	N46 01.6
Castor	245 52.7	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.7	N14 24.4
Diphda	348 44.0	S17 49.6
Dubhe	193 37.2	N61 35.2
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.1
Enif	33 35.8	N10 00.7
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.2	S57 16.3
Gienah	175 40.4	S17 42.1
Hadar	148 31.9	S60 30.6
Hamal	327 47.4	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.3	N74 01.9
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.3
Menkent	147 54.1	S36 30.7
Miaplacidus	221 36.8	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.2	S56 38.6
Polaris	314 58.3	N89 22.9
Pollux	243 13.1	N27 57.2
Procyon	244 47.2	N 5 08.9
Rasalhague	95 56.0	N12 32.4
Regulus	207 30.9	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.5	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.1	S16 45.4
Spica	158 19.1	S11 18.7
Suhail	222 43.6	S43 32.9
Vega	80 31.5	N38 48.8
Zuben-ubi	136 53.7	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
14	0	83 11.6	206 34.1	S18 34.8	265 19.3	N 3 17.7	241 54.8	S 7 38.5	49 42.5	N10 42.2
	1	98 14.0	221 33.4	S18 35.5	280 20.7	N 3 17.3	256 56.9	S 7 38.6	64 45.0	N10 42.2
	2	113 16.5	236 32.7	S18 36.3	295 22.1	N 3 16.8	271 59.0	S 7 38.7	79 47.6	N10 42.2
	3	128 19.0	251 31.9	S18 37.0	310 23.5	N 3 16.4	287 01.1	S 7 38.9	94 50.2	N10 42.1
	4	143 21.4	266 31.2	S18 37.8	325 24.9	N 3 16.0	302 03.2	S 7 39.0	109 52.7	N10 42.1
T	5	158 23.9	281 30.5	S18 38.6	340 26.3	N 3 15.6	317 05.3	S 7 39.1	124 55.3	N10 42.1
H U	6	173 26.4	296 29.7	S18 39.3	355 27.7	N 3 15.2	332 07.4	S 7 39.3	139 57.9	N10 42.1
R	7	188 28.8	311 29.0	S18 40.1	10 29.1	N 3 14.7	347 09.5	S 7 39.4	155 00.4	N10 42.0
S	8	203 31.3	326 28.3	S18 40.8	25 30.5	N 3 14.3	2 11.6	S 7 39.6	170 03.0	N10 42.0
D	9	218 33.7	341 27.5	S18 41.6	40 31.9	N 3 13.9	17 13.7	S 7 39.7	185 05.6	N10 42.0
A	10	233 36.2	356 26.8	S18 42.3	55 33.3	N 3 13.5	32 15.8	S 7 39.8	200 08.1	N10 42.0
Y	11	248 38.7	11 26.1	S18 43.1	70 34.7	N 3 13.1	47 17.9	S 7 40.0	215 10.7	N10 42.0
	12	263 41.1	26 25.3	S18 43.8	85 36.1	N 3 12.7	62 20.0	S 7 40.1	230 13.2	N10 41.9
	13	278 43.6	41 24.6	S18 44.6	100 37.5	N 3 12.2	77 22.1	S 7 40.2	245 15.8	N10 41.9
	14	293 46.1	56 23.8	S18 45.3	115 38.9	N 3 11.8	92 24.2	S 7 40.4	260 18.4	N10 41.9
	15	308 48.5	71 23.1	S18 46.1	130 40.3	N 3 11.4	107 26.3	S 7 40.5	275 20.9	N10 41.9
	16	323 51.0	86 22.4	S18 46.8	145 41.8	N 3 11.0	122 28.4	S 7 40.6	290 23.5	N10 41.8
	17	338 53.5	101 21.6	S18 47.6	160 43.2	N 3 10.6	137 30.5	S 7 40.8	305 26.1	N10 41.8
	18	353 55.9	116 20.9	S18 48.3	175 44.6	N 3 10.2	152 32.6	S 7 40.9	320 28.6	N10 41.8
	19	8 58.4	131 20.1	S18 49.1	190 46.0	N 3 09.7	167 34.7	S 7 41.0	335 31.2	N10 41.8
	20	24 00.9	146 19.4	S18 49.8	205 47.4	N 3 09.3	182 36.8	S 7 41.2	350 33.7	N10 41.7
	21	39 03.3	161 18.7	S18 50.5	220 48.8	N 3 08.9	197 38.9	S 7 41.3	5 36.3	N10 41.7
	22	54 05.8	176 17.9	S18 51.3	235 50.2	N 3 08.5	212 41.0	S 7 41.4	20 38.9	N10 41.7
	23	69 08.2	191 17.2	S18 52.0	250 51.6	N 3 08.1	227 43.2	S 7 41.6	35 41.4	N10 41.7
15	0	84 10.7	206 16.4	S18 52.8	265 53.0	N 3 07.7	242 45.3	S 7 41.7	50 44.0	N10 41.7
	1	99 13.2	221 15.7	S18 53.5	280 54.4	N 3 07.2	257 47.4	S 7 41.8	65 46.5	N10 41.6
	2	114 15.6	236 14.9	S18 54.2	295 55.8	N 3 06.8	272 49.5	S 7 42.0	80 49.1	N10 41.6
	3	129 18.1	251 14.2	S18 55.0	310 57.2	N 3 06.4	287 51.6	S 7 42.1	95 51.7	N10 41.6
	4	144 20.6	266 13.5	S18 55.7	325 58.6	N 3 06.0	302 53.7	S 7 42.2	110 54.2	N10 41.6
F	5	159 23.0	281 12.7	S18 56.4	341 00.0	N 3 05.6	317 55.8	S 7 42.4	125 56.8	N10 41.6
R I	6	174 25.5	296 12.0	S18 57.2	356 01.5	N 3 05.2	332 57.9	S 7 42.5	140 59.3	N10 41.5
D	7	189 28.0	311 11.2	S18 57.9	11 02.9	N 3 04.7	348 00.0	S 7 42.6	156 01.9	N10 41.5
A	8	204 30.4	326 10.5	S18 58.6	26 04.3	N 3 04.3	3 02.1	S 7 42.8	171 04.5	N10 41.5
Y	9	219 32.9	341 09.7	S18 59.4	41 05.7	N 3 03.9	18 04.2	S 7 42.9	186 07.0	N10 41.5
	10	234 35.3	356 09.0	S19 00.1	56 07.1	N 3 03.5	33 06.3	S 7 43.0	201 09.6	N10 41.4
	11	249 37.8	11 08.2	S19 00.8	71 08.5	N 3 03.1	48 08.4	S 7 43.2	216 12.1	N10 41.4
	12	264 40.3	26 07.5	S19 01.6	86 09.9	N 3 02.7	63 10.5	S 7 43.3	231 14.7	N10 41.4
	13	279 42.7	41 06.7	S19 02.3	101 11.3	N 3 02.3	78 12.6	S 7 43.4	246 17.2	N10 41.4
	14	294 45.2	56 06.0	S19 03.0	116 12.8	N 3 01.8	93 14.8	S 7 43.6	261 19.8	N10 41.4
	15	309 47.7	71 05.2	S19 03.7	131 14.2	N 3 01.4	108 16.9	S 7 43.7	276 22.4	N10 41.3
	16	324 50.1	86 04.5	S19 04.5	146 15.6	N 3 01.0	123 19.0	S 7 43.8	291 24.9	N10 41.3
	17	339 52.6	101 03.7	S19 05.2	161 17.0	N 3 00.6	138 21.1	S 7 44.0	306 27.5	N10 41.3
	18	354 55.1	116 03.0	S19 05.9	176 18.4	N 3 00.2	153 23.2	S 7 44.1	321 30.0	N10 41.3
	19	9 57.5	131 02.2	S19 06.6	191 19.8	N 2 59.8	168 25.3	S 7 44.2	336 32.6	N10 41.3
	20	24 60.0	146 01.5	S19 07.4	206 21.2	N 2 59.4	183 27.4	S 7 44.4	351 35.2	N10 41.2
	21	40 02.5	161 00.7	S19 08.1	221 22.7	N 2 59.0	198 29.5	S 7 44.5	6 37.7	N10 41.2
	22	55 04.9	175 59.9	S19 08.8	236 24.1	N 2 58.5	213 31.6	S 7 44.6	21 40.3	N10 41.2
	23	70 07.4	190 59.2	S19 09.5	251 25.5	N 2 58.1	228 33.7	S 7 44.8	36 42.8	N10 41.2
16	0	85 09.8	205 58.4	S19 10.2	266 26.9	N 2 57.7	243 35.8	S 7 44.9	51 45.4	N10 41.2
	1	100 12.3	220 57.7	S19 11.0	281 28.3	N 2 57.3	258 38.0	S 7 45.0	66 47.9	N10 41.1
	2	115 14.8	235 56.9	S19 11.7	296 29.7	N 2 56.9	273 40.1	S 7 45.2	81 50.5	N10 41.1
	3	130 17.2	250 56.2	S19 12.4	311 31.2	N 2 56.5	288 42.2	S 7 45.3	96 53.1	N10 41.1
	4	145 19.7	265 55.4	S19 13.1	326 32.6	N 2 56.1	303 44.3	S 7 45.4	111 55.6	N10 41.1
S	5	160 22.2	280 54.6	S19 13.8	341 34.0	N 2 55.7	318 46.4	S 7 45.6	126 58.2	N10 41.1
A T	6	175 24.6	295 53.9	S19 14.5	356 35.4	N 2 55.3	333 48.5	S 7 45.7	142 00.7	N10 41.0
U	7	190 27.1	310 53.1	S19 15.2	11 36.8	N 2 54.8	348 50.6	S 7 45.8	157 03.3	N10 41.0
R	8	205 29.6	325 52.4	S19 16.0	26 38.2	N 2 54.4	3 52.7	S 7 46.0	172 05.8	N10 41.0
D	9	220 32.0	340 51.6	S19 16.7	41 39.7	N 2 54.0	18 54.8	S 7 46.1	187 08.4	N10 41.0
A	10	235 34.5	355 50.8	S19 17.4	56 41.1	N 2 53.6	33 57.0	S 7 46.2	202 10.9	N10 41.0
Y	11	250 37.0	10 50.1	S19 18.1	71 42.5	N 2 53.2	48 59.1	S 7 46.3	217 13.5	N10 40.9
	12	265 39.4	25 49.3	S19 18.8	86 43.9	N 2 52.8	64 01.2	S 7 46.5	232 16.0	N10 40.9
	13	280 41.9	40 48.6	S19 19.5	101 45.4	N 2 52.4	79 03.3	S 7 46.6	247 18.6	N10 40.9
	14	295 44.3	55 47.8	S19 20.2	116 46.8	N 2 52.0	94 05.4	S 7 46.7	262 21.2	N10 40.9
	15	310 46.8	70 47.0	S19 20.9	131 48.2	N 2 51.6	109 07.5	S 7 46.9	277 23.7	N10 40.9
	16	325 49.3	85 46.3	S19 21.6	146 49.6	N 2 51.2	124 09.6	S 7 47.0	292 26.3	N10 40.8
	17	340 51.7	100 45.5	S19 22.3	161 51.0	N 2 50.7	139 11.7	S 7 47.1	307 28.8	N10 40.8
	18	355 54.2	115 44.7	S19 23.0	176 52.5	N 2 50.3	154 13.9	S 7 47.3	322 31.4	N10 40.8
	19	10 56.7	130 44.0	S19 23.7	191 53.9	N 2 49.9	169 16.0	S 7 47.4	337 33.9	N10 40.8
	20	25 59.1	145 43.2	S19 24.4	206 55.3	N 2 49.5	184 18.1	S 7 47.5	352 36.5	N10 40.8
	21	41 01.6	160 42.4	S19 25.1	221 56.7	N 2 49.1	199 20.2	S 7 47.7	7 39.0	N10 40.7
	22	56 04.1	175 41.7	S19 25.8	236 58.2	N 2 48.7	214 22.3	S 7 47.8	22 41.6	N10 40.7
	23	71 06.5	190 40.9	S19 26.5	251 59.6	N 2 48.3	229 24.4	S 7 47.9	37 44.1	N10 40.7
			v -0.8	d 0.7	v 1.4	d 0.4	v 2.1	d 0.1	v 2.6	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
14	0	181 20.2	S23 13.5	210 56.0	5.8	S22 58.2	6.6	59.0
	1	196 19.9	S23 13.6	225 20.7	5.7	S23 04.6	6.5	59.0
	2	211 19.6	S23 13.8	239 45.4	5.7	S23 10.9	6.3	59.0
	3	226 19.3	S23 13.9	254 10.1	5.7	S23 17.1	6.1	59.0
	4	241 19.0	S23 14.1	268 34.7	5.6	S23 23.1	6.0	59.0
T	5	256 18.7	S23 14.2	282 59.2	5.6	S23 28.9	5.8	58.9
H								
U	6	271 18.4	S23 14.3	297 23.8	5.5	S23 34.6	5.7	58.9
R	7	286 18.1	S23 14.5	311 48.3	5.5	S23 40.1	5.5	58.9
S	8	301 17.8	S23 14.6	326 12.7	5.5	S23 45.5	5.4	58.9
D	9	316 17.5	S23 14.8	340 37.2	5.4	S23 50.7	5.2	58.9
A	10	331 17.2	S23 14.9	355 01.6	5.4	S23 55.7	5.1	58.9
Y	11	346 16.9	S23 15.0	9 25.9	5.4	S24 00.6	4.9	58.8
	12	1 16.6	S23 15.2	23 50.3	5.3	S24 05.4	4.7	58.8
	13	16 16.3	S23 15.3	38 14.6	5.3	S24 09.9	4.6	58.8
	14	31 16.0	S23 15.4	52 38.9	5.3	S24 14.4	4.4	58.8
	15	46 15.7	S23 15.6	67 03.1	5.3	S24 18.6	4.3	58.8
	16	61 15.4	S23 15.7	81 27.4	5.2	S24 22.7	4.1	58.8
	17	76 15.1	S23 15.8	95 51.6	5.2	S24 26.6	3.9	58.7
	18	91 14.8	S23 15.9	110 15.8	5.2	S24 30.4	3.8	58.7
	19	106 14.5	S23 16.1	124 40.0	5.2	S24 34.0	3.6	58.7
	20	121 14.2	S23 16.2	139 04.2	5.2	S24 37.4	3.4	58.7
	21	136 13.9	S23 16.3	153 28.4	5.2	S24 40.7	3.3	58.7
	22	151 13.6	S23 16.5	167 52.5	5.2	S24 43.8	3.1	58.7
	23	166 13.3	S23 16.6	182 16.7	5.2	S24 46.8	2.9	58.6
15	0	181 13.0	S23 16.7	196 40.8	5.1	S24 49.6	2.8	58.6
	1	196 12.7	S23 16.8	211 05.0	5.1	S24 52.2	2.6	58.6
	2	211 12.4	S23 17.0	225 29.1	5.1	S24 54.6	2.5	58.6
	3	226 12.1	S23 17.1	239 53.3	5.1	S24 56.9	2.3	58.6
	4	241 11.8	S23 17.2	254 17.4	5.1	S24 59.0	2.1	58.5
F	5	256 11.5	S23 17.3	268 41.6	5.1	S25 01.0	2.0	58.5
R								
I	6	271 11.2	S23 17.4	283 05.7	5.2	S25 02.8	1.8	58.5
D	7	286 10.9	S23 17.6	297 29.9	5.2	S25 04.4	1.6	58.5
A	8	301 10.6	S23 17.7	311 54.1	5.2	S25 05.9	1.5	58.4
Y	9	316 10.2	S23 17.8	326 18.2	5.2	S25 07.2	1.3	58.4
	10	331 09.9	S23 17.9	340 42.4	5.2	S25 08.3	1.1	58.4
	11	346 09.6	S23 18.0	355 06.7	5.2	S25 09.3	1.0	58.4
	12	1 09.3	S23 18.1	9 30.9	5.2	S25 10.1	0.8	58.4
	13	16 09.0	S23 18.2	23 55.2	5.3	S25 10.7	0.6	58.3
	14	31 08.7	S23 18.4	38 19.4	5.3	S25 11.2	0.5	58.3
	15	46 08.4	S23 18.5	52 43.7	5.3	S25 11.5	0.3	58.3
	16	61 08.1	S23 18.6	67 08.1	5.3	S25 11.7	0.1	58.3
	17	76 07.8	S23 18.7	81 32.4	5.4	S25 11.7	0.0	58.2
	18	91 07.5	S23 18.8	95 56.8	5.4	S25 11.5	0.2	58.2
	19	106 07.2	S23 18.9	110 21.3	5.4	S25 11.2	0.3	58.2
	20	121 06.9	S23 19.0	124 45.7	5.5	S25 10.7	0.5	58.2
	21	136 06.6	S23 19.1	139 10.2	5.5	S25 10.0	0.7	58.2
	22	151 06.3	S23 19.2	153 34.8	5.5	S25 09.2	0.8	58.1
	23	166 06.0	S23 19.3	167 59.3	5.6	S25 08.2	1.0	58.1
16	0	181 05.7	S23 19.4	182 24.0	5.6	S25 07.0	1.1	58.1
	1	196 05.4	S23 19.5	196 48.6	5.7	S25 05.7	1.3	58.1
	2	211 05.1	S23 19.7	211 13.3	5.7	S25 04.3	1.5	58.0
	3	226 04.8	S23 19.8	225 38.1	5.8	S25 02.7	1.6	58.0
	4	241 04.5	S23 19.9	240 02.9	5.8	S25 00.9	1.8	58.0
S	5	256 04.2	S23 20.0	254 27.8	5.9	S24 59.0	1.9	58.0
A								
T	6	271 03.9	S23 20.1	268 52.7	5.9	S24 56.9	2.1	57.9
U	7	286 03.6	S23 20.2	283 17.6	6.0	S24 54.6	2.2	57.9
R	8	301 03.2	S23 20.3	297 42.7	6.0	S24 52.2	2.4	57.9
D	9	316 02.9	S23 20.4	312 07.7	6.1	S24 49.7	2.5	57.9
A	10	331 02.6	S23 20.4	326 32.9	6.1	S24 47.0	2.7	57.8
Y	11	346 02.3	S23 20.5	340 58.1	6.2	S24 44.1	2.9	57.8
	12	1 02.0	S23 20.6	355 23.4	6.3	S24 41.1	3.0	57.8
	13	16 01.7	S23 20.7	9 48.7	6.3	S24 38.0	3.2	57.7
	14	31 01.4	S23 20.8	24 14.1	6.4	S24 34.7	3.3	57.7
	15	46 01.1	S23 20.9	38 39.6	6.5	S24 31.2	3.4	57.7
	16	61 00.8	S23 21.0	53 05.1	6.5	S24 27.6	3.6	57.7
	17	76 00.5	S23 21.1	67 30.7	6.6	S24 23.9	3.7	57.6
	18	91 00.2	S23 21.2	81 56.4	6.7	S24 20.0	3.9	57.6
	19	105 59.9	S23 21.3	96 22.1	6.8	S24 16.0	4.0	57.6
	20	120 59.6	S23 21.4	110 48.0	6.8	S24 11.8	4.2	57.6
	21	135 59.3	S23 21.5	125 13.9	6.9	S24 07.5	4.3	57.5
	22	150 59.0	S23 21.5	139 39.9	7.0	S24 03.0	4.5	57.5
	23	165 58.7	S23 21.6	154 05.9	7.1	S23 58.4	4.6	57.5
		S.D. 16.3	d 0.1	S.D. 16.0		15.9		15.7

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.6	S57 05.5
Acrux	172 56.5	S63 15.3
Adhara	255 03.0	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.5	N55 47.8
Alkaid	152 49.9	N49 09.8
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.1	S 1 11.0
Alphard	217 44.4	S 8 47.1
Alphecca	126 01.4	N26 36.9
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 04.0	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.2	N19 01.8
Atria	107 04.2	S69 04.7
Avior	234 12.8	S59 36.0
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.7
Capella	280 16.7	N46 01.6
Castor	245 52.6	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.7	N14 24.4
Diphda	348 44.0	S17 49.6
Dubhe	193 37.1	N61 35.2
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.1
Enif	33 35.8	N10 00.7
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.1	S57 16.3
Gienah	175 40.3	S17 42.1
Hadar	148 31.8	S60 30.6
Hamal	327 47.4	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.2	N74 01.9
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.2
Menkent	147 54.1	S36 30.7
Miaplacidus	221 36.8	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.2	S56 38.6
Polaris	314 58.8	N89 22.9
Pollux	243 13.1	N27 57.2
Procyon	244 47.2	N 5 08.9
Rasalhague	95 56.0	N12 32.4
Regulus	207 30.9	N11 49.4
Rigel	281 00.5	S 8 10.1
Rigil Kent	139 36.4	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.5	S37 07.4
Sirius	258 23.1	S16 45.4
Spica	158 19.1	S11 18.7
Suhail	222 43.6	S43 32.9
Vega	80 31.5	N38 48.7
Zuben-ubi	136 53.7	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
17	0	86 09.0	205 40.1	S19 27.2	267 01.0	N 2 47.9	244 26.5	S 7 48.0	52 46.7	N10 40.7
	1	101 11.5	220 39.4	S19 27.9	282 02.4	N 2 47.5	259 28.7	S 7 48.2	67 49.2	N10 40.7
	2	116 13.9	235 38.6	S19 28.6	297 03.9	N 2 47.1	274 30.8	S 7 48.3	82 51.8	N10 40.6
	3	131 16.4	250 37.8	S19 29.3	312 05.3	N 2 46.7	289 32.9	S 7 48.4	97 54.3	N10 40.6
	4	146 18.8	265 37.1	S19 30.0	327 06.7	N 2 46.3	304 35.0	S 7 48.6	112 56.9	N10 40.6
S	5	161 21.3	280 36.3	S19 30.7	342 08.1	N 2 45.8	319 37.1	S 7 48.7	127 59.5	N10 40.6
U										
N	6	176 23.8	295 35.5	S19 31.3	357 09.6	N 2 45.4	334 39.2	S 7 48.8	143 02.0	N10 40.6
D	7	191 26.2	310 34.8	S19 32.0	12 11.0	N 2 45.0	349 41.3	S 7 48.9	158 04.6	N10 40.5
A	8	206 28.7	325 34.0	S19 32.7	27 12.4	N 2 44.6	4 43.5	S 7 49.1	173 07.1	N10 40.5
Y	9	221 31.2	340 33.2	S19 33.4	42 13.9	N 2 44.2	19 45.6	S 7 49.2	188 09.7	N10 40.5
	10	236 33.6	355 32.4	S19 34.1	57 15.3	N 2 43.8	34 47.7	S 7 49.3	203 12.2	N10 40.5
	11	251 36.1	10 31.7	S19 34.8	72 16.7	N 2 43.4	49 49.8	S 7 49.5	218 14.8	N10 40.5
	12	266 38.6	25 30.9	S19 35.5	87 18.1	N 2 43.0	64 51.9	S 7 49.6	233 17.3	N10 40.5
	13	281 41.0	40 30.1	S19 36.2	102 19.6	N 2 42.6	79 54.0	S 7 49.7	248 19.9	N10 40.4
	14	296 43.5	55 29.3	S19 36.8	117 21.0	N 2 42.2	94 56.2	S 7 49.9	263 22.4	N10 40.4
	15	311 46.0	70 28.6	S19 37.5	132 22.4	N 2 41.8	109 58.3	S 7 50.0	278 25.0	N10 40.4
	16	326 48.4	85 27.8	S19 38.2	147 23.9	N 2 41.4	125 00.4	S 7 50.1	293 27.5	N10 40.4
	17	341 50.9	100 27.0	S19 38.9	162 25.3	N 2 41.0	140 02.5	S 7 50.2	308 30.1	N10 40.4
	18	356 53.3	115 26.2	S19 39.6	177 26.7	N 2 40.6	155 04.6	S 7 50.4	323 32.6	N10 40.4
	19	11 55.8	130 25.5	S19 40.2	192 28.2	N 2 40.2	170 06.7	S 7 50.5	338 35.2	N10 40.3
	20	26 58.3	145 24.7	S19 40.9	207 29.6	N 2 39.8	185 08.9	S 7 50.6	353 37.7	N10 40.3
	21	42 00.7	160 23.9	S19 41.6	222 31.0	N 2 39.4	200 11.0	S 7 50.8	8 40.3	N10 40.3
	22	57 03.2	175 23.1	S19 42.3	237 32.5	N 2 38.9	215 13.1	S 7 50.9	23 42.8	N10 40.3
	23	72 05.7	190 22.4	S19 42.9	252 33.9	N 2 38.5	230 15.2	S 7 51.0	38 45.4	N10 40.3
18	0	87 08.1	205 21.6	S19 43.6	267 35.3	N 2 38.1	245 17.3	S 7 51.1	53 47.9	N10 40.2
	1	102 10.6	220 20.8	S19 44.3	282 36.8	N 2 37.7	260 19.5	S 7 51.3	68 50.5	N10 40.2
	2	117 13.1	235 20.0	S19 45.0	297 38.2	N 2 37.3	275 21.6	S 7 51.4	83 53.0	N10 40.2
	3	132 15.5	250 19.2	S19 45.6	312 39.6	N 2 36.9	290 23.7	S 7 51.5	98 55.5	N10 40.2
	4	147 18.0	265 18.5	S19 46.3	327 41.1	N 2 36.5	305 25.8	S 7 51.6	113 58.1	N10 40.2
M	5	162 20.5	280 17.7	S19 47.0	342 42.5	N 2 36.1	320 27.9	S 7 51.8	129 00.6	N10 40.2
O										
N	6	177 22.9	295 16.9	S19 47.6	357 44.0	N 2 35.7	335 30.1	S 7 51.9	144 03.2	N10 40.1
D	7	192 25.4	310 16.1	S19 48.3	12 45.4	N 2 35.3	350 32.2	S 7 52.0	159 05.7	N10 40.1
A	8	207 27.8	325 15.3	S19 49.0	27 46.8	N 2 34.9	5 34.3	S 7 52.2	174 08.3	N10 40.1
Y	9	222 30.3	340 14.5	S19 49.6	42 48.3	N 2 34.5	20 36.4	S 7 52.3	189 10.8	N10 40.1
	10	237 32.8	355 13.8	S19 50.3	57 49.7	N 2 34.1	35 38.5	S 7 52.4	204 13.4	N10 40.1
	11	252 35.2	10 13.0	S19 51.0	72 51.1	N 2 33.7	50 40.7	S 7 52.5	219 15.9	N10 40.1
	12	267 37.7	25 12.2	S19 51.6	87 52.6	N 2 33.3	65 42.8	S 7 52.7	234 18.5	N10 40.0
	13	282 40.2	40 11.4	S19 52.3	102 54.0	N 2 32.9	80 44.9	S 7 52.8	249 21.0	N10 40.0
	14	297 42.6	55 10.6	S19 52.9	117 55.5	N 2 32.5	95 47.0	S 7 52.9	264 23.6	N10 40.0
	15	312 45.1	70 09.8	S19 53.6	132 56.9	N 2 32.1	110 49.1	S 7 53.0	279 26.1	N10 40.0
	16	327 47.6	85 09.0	S19 54.3	147 58.3	N 2 31.7	125 51.3	S 7 53.2	294 28.7	N10 40.0
	17	342 50.0	100 08.3	S19 54.9	162 59.8	N 2 31.3	140 53.4	S 7 53.3	309 31.2	N10 40.0
	18	357 52.5	115 07.5	S19 55.6	178 01.2	N 2 30.9	155 55.5	S 7 53.4	324 33.7	N10 39.9
	19	12 54.9	130 06.7	S19 56.2	193 02.7	N 2 30.5	170 57.6	S 7 53.6	339 36.3	N10 39.9
	20	27 57.4	145 05.9	S19 56.9	208 04.1	N 2 30.1	185 59.7	S 7 53.7	354 38.8	N10 39.9
	21	42 59.9	160 05.1	S19 57.5	223 05.5	N 2 29.7	201 01.9	S 7 53.8	9 41.4	N10 39.9
	22	58 02.3	175 04.3	S19 58.2	238 07.0	N 2 29.3	216 04.0	S 7 53.9	24 43.9	N10 39.9
	23	73 04.8	190 03.5	S19 58.8	253 08.4	N 2 28.9	231 06.1	S 7 54.1	39 46.5	N10 39.9
19	0	88 07.3	205 02.7	S19 59.5	268 09.9	N 2 28.5	246 08.2	S 7 54.2	54 49.0	N10 39.8
	1	103 09.7	220 01.9	S20 00.1	283 11.3	N 2 28.1	261 10.4	S 7 54.3	69 51.6	N10 39.8
	2	118 12.2	235 01.2	S20 00.8	298 12.8	N 2 27.7	276 12.5	S 7 54.4	84 54.1	N10 39.8
	3	133 14.7	250 00.4	S20 01.4	313 14.2	N 2 27.3	291 14.6	S 7 54.6	99 56.6	N10 39.8
	4	148 17.1	264 59.6	S20 02.1	328 15.7	N 2 26.9	306 16.7	S 7 54.7	114 59.2	N10 39.8
T	5	163 19.6	279 58.8	S20 02.7	343 17.1	N 2 26.5	321 18.9	S 7 54.8	130 01.7	N10 39.8
U										
E	6	178 22.1	294 58.0	S20 03.4	358 18.5	N 2 26.1	336 21.0	S 7 54.9	145 04.3	N10 39.8
S	7	193 24.5	309 57.2	S20 04.0	13 20.0	N 2 25.7	351 23.1	S 7 55.1	160 06.8	N10 39.7
D	8	208 27.0	324 56.4	S20 04.6	28 21.4	N 2 25.3	6 25.2	S 7 55.2	175 09.4	N10 39.7
A	9	223 29.4	339 55.6	S20 05.3	43 22.9	N 2 24.9	21 27.4	S 7 55.3	190 11.9	N10 39.7
Y	10	238 31.9	354 54.8	S20 05.9	58 24.3	N 2 24.5	36 29.5	S 7 55.4	205 14.5	N10 39.7
	11	253 34.4	9 54.0	S20 06.6	73 25.8	N 2 24.1	51 31.6	S 7 55.6	220 17.0	N10 39.7
	12	268 36.8	24 53.2	S20 07.2	88 27.2	N 2 23.7	66 33.7	S 7 55.7	235 19.5	N10 39.7
	13	283 39.3	39 52.4	S20 07.8	103 28.7	N 2 23.3	81 35.9	S 7 55.8	250 22.1	N10 39.6
	14	298 41.8	54 51.6	S20 08.5	118 30.1	N 2 22.9	96 38.0	S 7 55.9	265 24.6	N10 39.6
	15	313 44.2	69 50.8	S20 09.1	133 31.6	N 2 22.5	111 40.1	S 7 56.1	280 27.2	N10 39.6
	16	328 46.7	84 50.0	S20 09.7	148 33.0	N 2 22.1	126 42.2	S 7 56.2	295 29.7	N10 39.6
	17	343 49.2	99 49.2	S20 10.4	163 34.5	N 2 21.7	141 44.4	S 7 56.3	310 32.2	N10 39.6
	18	358 51.6	114 48.4	S20 11.0	178 35.9	N 2 21.3	156 46.5	S 7 56.4	325 34.8	N10 39.6
	19	13 54.1	129 47.6	S20 11.6	193 37.4	N 2 20.9	171 48.6	S 7 56.6	340 37.3	N10 39.6
	20	28 56.6	144 46.8	S20 12.3	208 38.8	N 2 20.5	186 50.7	S 7 56.7	355 39.9	N10 39.5
	21	43 59.0	159 46.0	S20 12.9	223 40.3	N 2 20.1	201 52.9	S 7 56.8	10 42.4	N10 39.5
	22	59 01.5	174 45.2	S20 13.5	238 41.7	N 2 19.7	216 55.0	S 7 56.9	25 44.9	N10 39.5
	23	74 03.9	189 44.4	S20 14.2	253 43.2	N 2 19.3	231 57.1	S 7 57.1	40 47.5	N10 39.5
			v -0.8	d 0.7	v 1.4	d 0.4	v 2.1	d 0.1	v 2.5	d 0.0

G.M.T		SUN			MOON					
d	h	GHA	Dec		GHA	v	Dec	d	HP
		° '	° '		° '	'	° '	'	'
17	0	180 58.4	S23 21.7		168 32.1	7.1	S23 53.7	4.7	57.5
	1	195 58.0	S23 21.8		182 58.3	7.2	S23 48.8	4.9	57.4
	2	210 57.7	S23 21.9		197 24.6	7.3	S23 43.8	5.0	57.4
	3	225 57.4	S23 22.0		211 51.0	7.4	S23 38.7	5.1	57.4
	4	240 57.1	S23 22.1		226 17.5	7.5	S23 33.4	5.3	57.3
S	5	255 56.8	S23 22.1		240 44.0	7.6	S23 28.0	5.4	57.3
U									
N	6	270 56.5	S23 22.2		255 10.7	7.6	S23 22.5	5.5	57.3
D	7	285 56.2	S23 22.3		269 37.4	7.7	S23 16.8	5.7	57.3
A	8	300 55.9	S23 22.4		284 04.2	7.8	S23 11.0	5.8	57.2
Y	9	315 55.6	S23 22.5		298 31.1	7.9	S23 05.1	5.9	57.2
	10	330 55.3	S23 22.5		312 58.1	8.0	S22 59.0	6.1	57.2
	11	345 55.0	S23 22.6		327 25.2	8.1	S22 52.8	6.2	57.1
	12	0 54.7	S23 22.7		341 52.4	8.2	S22 46.5	6.3	57.1
	13	15 54.4	S23 22.8		356 19.7	8.3	S22 40.1	6.4	57.1
	14	30 54.1	S23 22.8		10 47.0	8.4	S22 33.6	6.5	57.1
	15	45 53.7	S23 22.9		25 14.5	8.5	S22 26.9	6.7	57.0
	16	60 53.4	S23 23.0		39 42.0	8.5	S22 20.1	6.8	57.0
	17	75 53.1	S23 23.0		54 09.7	8.6	S22 13.2	6.9	57.0
	18	90 52.8	S23 23.1		68 37.4	8.7	S22 06.2	7.0	56.9
	19	105 52.5	S23 23.2		83 05.2	8.8	S21 59.1	7.1	56.9
	20	120 52.2	S23 23.3		97 33.2	8.9	S21 51.8	7.2	56.9
	21	135 51.9	S23 23.3		112 01.2	9.0	S21 44.5	7.4	56.9
	22	150 51.6	S23 23.4		126 29.3	9.1	S21 37.0	7.5	56.8
	23	165 51.3	S23 23.5		140 57.5	9.2	S21 29.4	7.6	56.8
18	0	180 51.0	S23 23.5		155 25.8	9.3	S21 21.8	7.7	56.8
	1	195 50.7	S23 23.6		169 54.2	9.4	S21 14.0	7.8	56.7
	2	210 50.4	S23 23.7		184 22.7	9.5	S21 06.1	7.9	56.7
	3	225 50.0	S23 23.7		198 51.3	9.6	S20 58.1	8.0	56.7
	4	240 49.7	S23 23.8		213 20.0	9.7	S20 50.0	8.1	56.7
M	5	255 49.4	S23 23.8		227 48.8	9.8	S20 41.8	8.2	56.6
O									
N	6	270 49.1	S23 23.9		242 17.7	9.9	S20 33.5	8.3	56.6
D	7	285 48.8	S23 24.0		256 46.7	10.0	S20 25.1	8.4	56.6
A	8	300 48.5	S23 24.0		271 15.8	10.1	S20 16.6	8.5	56.5
Y	9	315 48.2	S23 24.1		285 45.0	10.2	S20 08.0	8.6	56.5
	10	330 47.9	S23 24.1		300 14.3	10.3	S19 59.3	8.7	56.5
	11	345 47.6	S23 24.2		314 43.6	10.4	S19 50.5	8.8	56.5
	12	0 47.3	S23 24.3		329 13.1	10.5	S19 41.6	8.9	56.4
	13	15 47.0	S23 24.3		343 42.7	10.6	S19 32.7	9.0	56.4
	14	30 46.6	S23 24.4		358 12.4	10.7	S19 23.6	9.1	56.4
	15	45 46.3	S23 24.4		12 42.1	10.8	S19 14.5	9.1	56.3
	16	60 46.0	S23 24.5		27 12.0	10.9	S19 05.2	9.2	56.3
	17	75 45.7	S23 24.5		41 42.0	11.0	S18 55.9	9.3	56.3
	18	90 45.4	S23 24.6		56 12.0	11.1	S18 46.5	9.4	56.3
	19	105 45.1	S23 24.6		70 42.2	11.1	S18 37.0	9.5	56.2
	20	120 44.8	S23 24.7		85 12.4	11.2	S18 27.5	9.6	56.2
	21	135 44.5	S23 24.7		99 42.7	11.3	S18 17.8	9.6	56.2
	22	150 44.2	S23 24.8		114 13.2	11.4	S18 08.1	9.7	56.1
	23	165 43.9	S23 24.8		128 43.7	11.5	S17 58.3	9.8	56.1
19	0	180 43.6	S23 24.9		143 14.3	11.6	S17 48.4	9.9	56.1
	1	195 43.2	S23 24.9		157 45.0	11.7	S17 38.5	10.0	56.1
	2	210 42.9	S23 25.0		172 15.8	11.8	S17 28.5	10.0	56.0
	3	225 42.6	S23 25.0		186 46.7	11.9	S17 18.4	10.1	56.0
	4	240 42.3	S23 25.0		201 17.7	12.0	S17 08.2	10.2	56.0
T	5	255 42.0	S23 25.1		215 48.8	12.1	S16 58.0	10.2	56.0
U									
E	6	270 41.7	S23 25.1		230 20.0	12.2	S16 47.7	10.3	55.9
S	7	285 41.4	S23 25.2		244 51.2	12.3	S16 37.3	10.4	55.9
D	8	300 41.1	S23 25.2		259 22.6	12.3	S16 26.8	10.4	55.9
A	9	315 40.8	S23 25.2		273 54.0	12.4	S16 16.3	10.5	55.8
Y	10	330 40.5	S23 25.3		288 25.5	12.5	S16 05.8	10.6	55.8
	11	345 40.1	S23 25.3		302 57.2	12.6	S15 55.1	10.6	55.8
	12	0 39.8	S23 25.4		317 28.9	12.7	S15 44.4	10.7	55.8
	13	15 39.5	S23 25.4		332 00.6	12.8	S15 33.7	10.8	55.7
	14	30 39.2	S23 25.4		346 32.5	12.9	S15 22.8	10.8	55.7
	15	45 38.9	S23 25.5		1 04.5	13.0	S15 12.0	10.9	55.7
	16	60 38.6	S23 25.5		15 36.5	13.0	S15 01.0	10.9	55.7
	17	75 38.3	S23 25.5		30 08.6	13.1	S14 50.0	11.0	55.6
	18	90 38.0	S23 25.6		44 40.8	13.2	S14 39.0	11.0	55.6
	19	105 37.7	S23 25.6		59 13.1	13.3	S14 27.9	11.1	55.6
	20	120 37.4	S23 25.6		73 45.5	13.4	S14 16.7	11.2	55.6
	21	135 37.0	S23 25.6		88 17.9	13.4	S14 05.5	11.2	55.5
	22	150 36.7	S23 25.7		102 50.4	13.5	S13 54.3	11.3	55.5
	23	165 36.4	S23 25.7		117 23.0	13.6	S13 43.0	11.3	55.5
		S.D. 16.3	d 0.1		S.D. 15.6		15.4		15.2

STARS		
Name	SHA	Dec
	° '	° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.6	S57 05.6
Acrux	172 56.5	S63 15.3
Adhara	255 03.0	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.4	N55 47.8
Alkaid	152 49.8	N49 09.8
Al Na-ir	27 29.1	S46 49.3
Alnilam	275 34.1	S 1 11.0
Alphard	217 44.4	S 8 47.1
Alphecca	126 01.4	N26 36.9
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 04.0	S42 09.1
Antares	112 12.3	S26 29.7
Arcturus	145 45.2	N19 01.7
Atria	107 04.2	S69 04.6
Avior	234 12.8	S59 36.1
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.7
Capella	280 16.7	N46 01.6
Castor	245 52.6	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.7	N14 24.4
Diphda	348 44.0	S17 49.6
Dubhe	193 37.1	N61 35.2
Elnath	277 57.5	N28 37.8
Eltanin	90 41.3	N51 29.1
Enif	33 35.8	N10 00.7
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.1	S57 16.3
Gienah	175 40.3	S17 42.1
Hadar	148 31.8	S60 30.6
Hamal	327 47.4	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.2	N74 01.9
Markab	13 26.7	N15 21.9
Menkar	314 02.5	N 4 12.2
Menkent	147 54.0	S36 30.7
Miaplacidus	221 36.7	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.2	S56 38.6
Polaris	314 59.4	N89 22.9
Pollux	243 13.1	N27 57.2
Procyon	244 47.2	N 5 08.9
Rasalhague	95 56.0	N12 32.4
Regulus	207 30.9	N11 49.4
Rigel	281 00.4	S 8 10.1
Rigil Kent	139 36.4	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.4	S37 07.4
Sirius	258 23.1	S16 45.4
Spica	158 19.1	S11 18.8
Suhail	222 43.6	S43 32.9
Vega	80 31.5	N38 48.7
Zuben-ubi	136 53.7	S16 09.7

G.M.T d	h	ARIES GHA ° '	VENUS GHA ° '	VENUS Dec ° '	MARS GHA ° '	MARS Dec ° '	JUPITER GHA ° '	JUPITER Dec ° '	SATURN GHA ° '	SATURN Dec ° '
20	0	89 06.4	204 43.6	S20 14.8	268 44.6	N 2 19.0	246 59.3	S 7 57.2	55 50.0	N10 39.5
	1	104 08.9	219 42.8	S20 15.4	283 46.1	N 2 18.6	262 01.4	S 7 57.3	70 52.6	N10 39.5
	2	119 11.3	234 42.0	S20 16.0	298 47.6	N 2 18.2	277 03.5	S 7 57.4	85 55.1	N10 39.5
	3	134 13.8	249 41.2	S20 16.7	313 49.0	N 2 17.8	292 05.6	S 7 57.6	100 57.6	N10 39.4
	4	149 16.3	264 40.4	S20 17.3	328 50.5	N 2 17.4	307 07.8	S 7 57.7	116 00.2	N10 39.4
W	5	164 18.7	279 39.6	S20 17.9	343 51.9	N 2 17.0	322 09.9	S 7 57.8	131 02.7	N10 39.4
E										
D	6	179 21.2	294 38.8	S20 18.5	358 53.4	N 2 16.6	337 12.0	S 7 57.9	146 05.3	N10 39.4
N	7	194 23.7	309 38.0	S20 19.1	13 54.8	N 2 16.2	352 14.2	S 7 58.0	161 07.8	N10 39.4
E	8	209 26.1	324 37.2	S20 19.8	28 56.3	N 2 15.8	7 16.3	S 7 58.2	176 10.3	N10 39.4
S	9	224 28.6	339 36.4	S20 20.4	43 57.7	N 2 15.4	22 18.4	S 7 58.3	191 12.9	N10 39.4
D	10	239 31.1	354 35.6	S20 21.0	58 59.2	N 2 15.0	37 20.5	S 7 58.4	206 15.4	N10 39.3
A	11	254 33.5	9 34.8	S20 21.6	74 00.7	N 2 14.6	52 22.7	S 7 58.5	221 18.0	N10 39.3
Y										
	12	269 36.0	24 34.0	S20 22.2	89 02.1	N 2 14.2	67 24.8	S 7 58.7	236 20.5	N10 39.3
	13	284 38.4	39 33.2	S20 22.8	104 03.6	N 2 13.8	82 26.9	S 7 58.8	251 23.0	N10 39.3
	14	299 40.9	54 32.3	S20 23.5	119 05.0	N 2 13.4	97 29.1	S 7 58.9	266 25.6	N10 39.3
	15	314 43.4	69 31.5	S20 24.1	134 06.5	N 2 13.0	112 31.2	S 7 59.0	281 28.1	N10 39.3
	16	329 45.8	84 30.7	S20 24.7	149 07.9	N 2 12.7	127 33.3	S 7 59.2	296 30.7	N10 39.3
	17	344 48.3	99 29.9	S20 25.3	164 09.4	N 2 12.3	142 35.5	S 7 59.3	311 33.2	N10 39.2
	18	359 50.8	114 29.1	S20 25.9	179 10.9	N 2 11.9	157 37.6	S 7 59.4	326 35.7	N10 39.2
	19	14 53.2	129 28.3	S20 26.5	194 12.3	N 2 11.5	172 39.7	S 7 59.5	341 38.3	N10 39.2
	20	29 55.7	144 27.5	S20 27.1	209 13.8	N 2 11.1	187 41.9	S 7 59.6	356 40.8	N10 39.2
	21	44 58.2	159 26.7	S20 27.7	224 15.2	N 2 10.7	202 44.0	S 7 59.8	11 43.3	N10 39.2
	22	60 00.6	174 25.9	S20 28.3	239 16.7	N 2 10.3	217 46.1	S 7 59.9	26 45.9	N10 39.2
	23	75 03.1	189 25.0	S20 28.9	254 18.2	N 2 09.9	232 48.3	S 8 00.0	41 48.4	N10 39.2
21	0	90 05.6	204 24.2	S20 29.5	269 19.6	N 2 09.5	247 50.4	S 8 00.1	56 50.9	N10 39.2
	1	105 08.0	219 23.4	S20 30.1	284 21.1	N 2 09.1	262 52.5	S 8 00.3	71 53.5	N10 39.1
	2	120 10.5	234 22.6	S20 30.7	299 22.6	N 2 08.7	277 54.6	S 8 00.4	86 56.0	N10 39.1
	3	135 12.9	249 21.8	S20 31.3	314 24.0	N 2 08.3	292 56.8	S 8 00.5	101 58.6	N10 39.1
	4	150 15.4	264 21.0	S20 31.9	329 25.5	N 2 08.0	307 58.9	S 8 00.6	117 01.1	N10 39.1
T	5	165 17.9	279 20.2	S20 32.5	344 27.0	N 2 07.6	323 01.0	S 8 00.7	132 03.6	N10 39.1
H										
U	6	180 20.3	294 19.4	S20 33.1	359 28.4	N 2 07.2	338 03.2	S 8 00.9	147 06.2	N10 39.1
R	7	195 22.8	309 18.5	S20 33.7	14 29.9	N 2 06.8	353 05.3	S 8 01.0	162 08.7	N10 39.1
S	8	210 25.3	324 17.7	S20 34.3	29 31.3	N 2 06.4	8 07.5	S 8 01.1	177 11.2	N10 39.1
D	9	225 27.7	339 16.9	S20 34.9	44 32.8	N 2 06.0	23 09.6	S 8 01.2	192 13.8	N10 39.0
A	10	240 30.2	354 16.1	S20 35.5	59 34.3	N 2 05.6	38 11.7	S 8 01.3	207 16.3	N10 39.0
Y	11	255 32.7	9 15.3	S20 36.1	74 35.7	N 2 05.2	53 13.9	S 8 01.5	222 18.8	N10 39.0
	12	270 35.1	24 14.4	S20 36.7	89 37.2	N 2 04.8	68 16.0	S 8 01.6	237 21.4	N10 39.0
	13	285 37.6	39 13.6	S20 37.3	104 38.7	N 2 04.4	83 18.1	S 8 01.7	252 23.9	N10 39.0
	14	300 40.0	54 12.8	S20 37.9	119 40.1	N 2 04.1	98 20.3	S 8 01.8	267 26.4	N10 39.0
	15	315 42.5	69 12.0	S20 38.4	134 41.6	N 2 03.7	113 22.4	S 8 01.9	282 29.0	N10 39.0
	16	330 45.0	84 11.2	S20 39.0	149 43.1	N 2 03.3	128 24.5	S 8 02.1	297 31.5	N10 39.0
	17	345 47.4	99 10.4	S20 39.6	164 44.6	N 2 02.9	143 26.7	S 8 02.2	312 34.0	N10 38.9
	18	0 49.9	114 09.5	S20 40.2	179 46.0	N 2 02.5	158 28.8	S 8 02.3	327 36.6	N10 38.9
	19	15 52.4	129 08.7	S20 40.8	194 47.5	N 2 02.1	173 30.9	S 8 02.4	342 39.1	N10 38.9
	20	30 54.8	144 07.9	S20 41.4	209 49.0	N 2 01.7	188 33.1	S 8 02.5	357 41.6	N10 38.9
	21	45 57.3	159 07.1	S20 41.9	224 50.4	N 2 01.3	203 35.2	S 8 02.7	12 44.2	N10 38.9
	22	60 59.8	174 06.2	S20 42.5	239 51.9	N 2 01.0	218 37.3	S 8 02.8	27 46.7	N10 38.9
	23	76 02.2	189 05.4	S20 43.1	254 53.4	N 2 00.6	233 39.5	S 8 02.9	42 49.2	N10 38.9
22	0	91 04.7	204 04.6	S20 43.7	269 54.9	N 2 00.2	248 41.6	S 8 03.0	57 51.8	N10 38.9
	1	106 07.2	219 03.8	S20 44.3	284 56.3	N 1 59.8	263 43.8	S 8 03.1	72 54.3	N10 38.9
	2	121 09.6	234 02.9	S20 44.8	299 57.8	N 1 59.4	278 45.9	S 8 03.3	87 56.8	N10 38.8
	3	136 12.1	249 02.1	S20 45.4	314 59.3	N 1 59.0	293 48.0	S 8 03.4	102 59.4	N10 38.8
	4	151 14.5	264 01.3	S20 46.0	330 00.7	N 1 58.6	308 50.2	S 8 03.5	118 01.9	N10 38.8
F	5	166 17.0	279 00.5	S20 46.6	345 02.2	N 1 58.3	323 52.3	S 8 03.6	133 04.4	N10 38.8
R										
I	6	181 19.5	293 59.6	S20 47.1	0 03.7	N 1 57.9	338 54.4	S 8 03.7	148 06.9	N10 38.8
D	7	196 21.9	308 58.8	S20 47.7	15 05.2	N 1 57.5	353 56.6	S 8 03.9	163 09.5	N10 38.8
A	8	211 24.4	323 58.0	S20 48.3	30 06.6	N 1 57.1	8 58.7	S 8 04.0	178 12.0	N10 38.8
Y	9	226 26.9	338 57.2	S20 48.8	45 08.1	N 1 56.7	24 00.9	S 8 04.1	193 14.5	N10 38.8
	10	241 29.3	353 56.3	S20 49.4	60 09.6	N 1 56.3	39 03.0	S 8 04.2	208 17.1	N10 38.8
	11	256 31.8	8 55.5	S20 50.0	75 11.1	N 1 55.9	54 05.1	S 8 04.3	223 19.6	N10 38.7
	12	271 34.3	23 54.7	S20 50.5	90 12.5	N 1 55.6	69 07.3	S 8 04.5	238 22.1	N10 38.7
	13	286 36.7	38 53.9	S20 51.1	105 14.0	N 1 55.2	84 09.4	S 8 04.6	253 24.7	N10 38.7
	14	301 39.2	53 53.0	S20 51.7	120 15.5	N 1 54.8	99 11.6	S 8 04.7	268 27.2	N10 38.7
	15	316 41.7	68 52.2	S20 52.2	135 17.0	N 1 54.4	114 13.7	S 8 04.8	283 29.7	N10 38.7
	16	331 44.1	83 51.4	S20 52.8	150 18.5	N 1 54.0	129 15.8	S 8 04.9	298 32.2	N10 38.7
	17	346 46.6	98 50.5	S20 53.3	165 19.9	N 1 53.6	144 18.0	S 8 05.1	313 34.8	N10 38.7
	18	1 49.0	113 49.7	S20 53.9	180 21.4	N 1 53.3	159 20.1	S 8 05.2	328 37.3	N10 38.7
	19	16 51.5	128 48.9	S20 54.5	195 22.9	N 1 52.9	174 22.3	S 8 05.3	343 39.8	N10 38.7
	20	31 54.0	143 48.0	S20 55.0	210 24.4	N 1 52.5	189 24.4	S 8 05.4	358 42.4	N10 38.7
	21	46 56.4	158 47.2	S20 55.6	225 25.9	N 1 52.1	204 26.6	S 8 05.5	13 44.9	N10 38.6
	22	61 58.9	173 46.4	S20 56.1	240 27.3	N 1 51.7	219 28.7	S 8 05.6	28 47.4	N10 38.6
	23	77 01.4	188 45.5	S20 56.7	255 28.8	N 1 51.3	234 30.8	S 8 05.8	43 49.9	N10 38.6
			v -0.8	d 0.6	v 1.5	d 0.4	v 2.1	d 0.1	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
20	0	180 36.1	S23 25.7	131 55.7	13.7	S13 31.6	11.4	55.5
	1	195 35.8	S23 25.8	146 28.5	13.8	S13 20.2	11.4	55.4
	2	210 35.5	S23 25.8	161 01.3	13.8	S13 08.8	11.4	55.4
	3	225 35.2	S23 25.8	175 34.2	13.9	S12 57.3	11.5	55.4
	4	240 34.9	S23 25.8	190 07.2	14.0	S12 45.8	11.5	55.4
W	5	255 34.6	S23 25.9	204 40.2	14.0	S12 34.2	11.6	55.3
E								
D	6	270 34.2	S23 25.9	219 13.3	14.1	S12 22.6	11.6	55.3
N	7	285 33.9	S23 25.9	233 46.5	14.2	S12 10.9	11.7	55.3
E	8	300 33.6	S23 25.9	248 19.8	14.3	S11 59.2	11.7	55.3
S	9	315 33.3	S23 25.9	262 53.1	14.3	S11 47.4	11.7	55.2
D	10	330 33.0	S23 26.0	277 26.5	14.4	S11 35.7	11.8	55.2
A	11	345 32.7	S23 26.0	291 60.0	14.5	S11 23.8	11.8	55.2
Y								
	12	0 32.4	S23 26.0	306 33.5	14.5	S11 12.0	11.9	55.2
	13	15 32.1	S23 26.0	321 07.1	14.6	S11 00.1	11.9	55.2
	14	30 31.8	S23 26.0	335 40.8	14.7	S10 48.2	11.9	55.1
	15	45 31.5	S23 26.0	350 14.5	14.7	S10 36.2	12.0	55.1
	16	60 31.1	S23 26.0	4 48.3	14.8	S10 24.2	12.0	55.1
	17	75 30.8	S23 26.1	19 22.1	14.9	S10 12.2	12.0	55.1
	18	90 30.5	S23 26.1	33 56.1	14.9	S10 00.1	12.1	55.1
	19	105 30.2	S23 26.1	48 30.0	15.0	S 9 48.0	12.1	55.0
	20	120 29.9	S23 26.1	63 04.1	15.0	S 9 35.9	12.1	55.0
	21	135 29.6	S23 26.1	77 38.1	15.1	S 9 23.8	12.1	55.0
	22	150 29.3	S23 26.1	92 12.3	15.1	S 9 11.6	12.2	55.0
	23	165 29.0	S23 26.1	106 46.5	15.2	S 8 59.4	12.2	54.9
21	0	180 28.7	S23 26.1	121 20.7	15.3	S 8 47.2	12.2	54.9
	1	195 28.3	S23 26.1	135 55.0	15.3	S 8 34.9	12.3	54.9
	2	210 28.0	S23 26.1	150 29.4	15.4	S 8 22.6	12.3	54.9
	3	225 27.7	S23 26.1	165 03.8	15.4	S 8 10.3	12.3	54.9
	4	240 27.4	S23 26.1	179 38.3	15.5	S 7 58.0	12.3	54.9
T	5	255 27.1	S23 26.2	194 12.8	15.5	S 7 45.7	12.3	54.8
H								
U	6	270 26.8	S23 26.2	208 47.3	15.6	S 7 33.3	12.4	54.8
R	7	285 26.5	S23 26.2	223 21.9	15.6	S 7 20.9	12.4	54.8
S	8	300 26.2	S23 26.2	237 56.6	15.7	S 7 08.5	12.4	54.8
D	9	315 25.9	S23 26.2	252 31.3	15.7	S 6 56.1	12.4	54.8
A	10	330 25.5	S23 26.2	267 06.0	15.7	S 6 43.6	12.4	54.7
Y	11	345 25.2	S23 26.2	281 40.8	15.8	S 6 31.2	12.5	54.7
	12	0 24.9	S23 26.1	296 15.6	15.8	S 6 18.7	12.5	54.7
	13	15 24.6	S23 26.1	310 50.5	15.9	S 6 06.2	12.5	54.7
	14	30 24.3	S23 26.1	325 25.4	15.9	S 5 53.7	12.5	54.7
	15	45 24.0	S23 26.1	340 00.4	15.9	S 5 41.2	12.5	54.7
	16	60 23.7	S23 26.1	354 35.4	16.0	S 5 28.6	12.5	54.6
	17	75 23.4	S23 26.1	9 10.4	16.0	S 5 16.1	12.5	54.6
	18	90 23.1	S23 26.1	23 45.4	16.1	S 5 03.5	12.6	54.6
	19	105 22.7	S23 26.1	38 20.5	16.1	S 4 51.0	12.6	54.6
	20	120 22.4	S23 26.1	52 55.7	16.1	S 4 38.4	12.6	54.6
	21	135 22.1	S23 26.1	67 30.8	16.2	S 4 25.8	12.6	54.6
	22	150 21.8	S23 26.1	82 06.0	16.2	S 4 13.2	12.6	54.6
	23	165 21.5	S23 26.1	96 41.2	16.2	S 4 00.6	12.6	54.5
22	0	180 21.2	S23 26.1	111 16.5	16.2	S 3 47.9	12.6	54.5
	1	195 20.9	S23 26.0	125 51.7	16.3	S 3 35.3	12.6	54.5
	2	210 20.6	S23 26.0	140 27.1	16.3	S 3 22.7	12.6	54.5
	3	225 20.3	S23 26.0	155 02.4	16.3	S 3 10.1	12.6	54.5
	4	240 19.9	S23 26.0	169 37.7	16.4	S 2 57.4	12.6	54.5
F	5	255 19.6	S23 26.0	184 13.1	16.4	S 2 44.8	12.6	54.5
R								
I	6	270 19.3	S23 26.0	198 48.5	16.4	S 2 32.1	12.7	54.5
D	7	285 19.0	S23 25.9	213 24.0	16.4	S 2 19.5	12.7	54.4
A	8	300 18.7	S23 25.9	227 59.4	16.4	S 2 06.8	12.7	54.4
Y	9	315 18.4	S23 25.9	242 34.9	16.5	S 1 54.1	12.7	54.4
	10	330 18.1	S23 25.9	257 10.4	16.5	S 1 41.5	12.7	54.4
	11	345 17.8	S23 25.9	271 45.9	16.5	S 1 28.8	12.7	54.4
	12	0 17.5	S23 25.8	286 21.4	16.5	S 1 16.2	12.7	54.4
	13	15 17.1	S23 25.8	300 56.9	16.5	S 1 03.5	12.7	54.4
	14	30 16.8	S23 25.8	315 32.5	16.6	S 0 50.8	12.7	54.4
	15	45 16.5	S23 25.8	330 08.0	16.6	S 0 38.2	12.7	54.4
	16	60 16.2	S23 25.7	344 43.6	16.6	S 0 25.5	12.7	54.4
	17	75 15.9	S23 25.7	359 19.2	16.6	S 0 12.9	12.7	54.3
	18	90 15.6	S23 25.7	13 54.8	16.6	S 0 00.2	12.6	54.3
	19	105 15.3	S23 25.7	28 30.4	16.6	N 0 12.4	12.6	54.3
	20	120 15.0	S23 25.6	43 06.0	16.6	N 0 25.1	12.6	54.3
	21	135 14.7	S23 25.6	57 41.6	16.6	N 0 37.7	12.6	54.3
	22	150 14.3	S23 25.6	72 17.3	16.6	N 0 50.3	12.6	54.3
	23	165 14.0	S23 25.5	86 52.9	16.6	N 1 03.0	12.6	54.3
		S.D. 16.3	d 0.0	S.D. 15.0	14.9		14.8	

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.0	S40 11.4
Achernar	335 17.6	S57 05.6
Acrux	172 56.4	S63 15.3
Adhara	255 02.9	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.4	N55 47.8
Alkaid	152 49.8	N49 09.8
Al Na-ir	27 29.2	S46 49.3
Alnilam	275 34.1	S 1 11.1
Alphard	217 44.3	S 8 47.2
Alphecca	126 01.4	N26 36.9
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 04.0	S42 09.1
Antares	112 12.2	S26 29.7
Arcturus	145 45.2	N19 01.7
Atria	107 04.2	S69 04.6
Avior	234 12.8	S59 36.1
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.7
Capella	280 16.6	N46 01.6
Castor	245 52.6	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.7	N14 24.4
Diphda	348 44.1	S17 49.6
Dubhe	193 37.0	N61 35.2
Elnath	277 57.4	N28 37.8
Eltanin	90 41.3	N51 29.1
Enif	33 35.8	N10 00.6
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.0	S57 16.3
Gienah	175 40.3	S17 42.1
Hadar	148 31.7	S60 30.6
Hamal	327 47.4	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.2	N74 01.9
Markab	13 26.8	N15 21.8
Menkar	314 02.5	N 4 12.2
Menkent	147 54.0	S36 30.7
Miaplacidus	221 36.7	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.6
Peacock	53 01.2	S56 38.6
Polaris	315 00.3	N89 22.9
Pollux	243 13.0	N27 57.2
Procyon	244 47.1	N 5 08.9
Rasalhague	95 55.9	N12 32.4
Regulus	207 30.9	N11 49.3
Rigel	281 00.4	S 8 10.1
Rigil Kent	139 36.4	S60 57.1
Sabik	101 59.5	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.4	S37 07.4
Sirius	258 23.1	S16 45.4
Spica	158 19.0	S11 18.8
Suhail	222 43.5	S43 32.9
Vega	80 31.5	N38 48.7
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
23	0	92 03.8	203 44.7	S20 57.2	270 30.3	N 1 51.0	249 33.0	S 8 05.9	58 52.5	N10 38.6
	1	107 06.3	218 43.9	S20 57.8	285 31.8	N 1 50.6	264 35.1	S 8 06.0	73 55.0	N10 38.6
	2	122 08.8	233 43.0	S20 58.3	300 33.3	N 1 50.2	279 37.3	S 8 06.1	88 57.5	N10 38.6
	3	137 11.2	248 42.2	S20 58.9	315 34.8	N 1 49.8	294 39.4	S 8 06.2	104 00.1	N10 38.6
	4	152 13.7	263 41.4	S20 59.4	330 36.2	N 1 49.4	309 41.5	S 8 06.3	119 02.6	N10 38.6
S	5	167 16.1	278 40.5	S20 60.0	345 37.7	N 1 49.0	324 43.7	S 8 06.5	134 05.1	N10 38.6
A										
T	6	182 18.6	293 39.7	S21 00.5	0 39.2	N 1 48.7	339 45.8	S 8 06.6	149 07.6	N10 38.6
U	7	197 21.1	308 38.9	S21 01.1	15 40.7	N 1 48.3	354 48.0	S 8 06.7	164 10.2	N10 38.5
R	8	212 23.5	323 38.0	S21 01.6	30 42.2	N 1 47.9	9 50.1	S 8 06.8	179 12.7	N10 38.5
D	9	227 26.0	338 37.2	S21 02.2	45 43.7	N 1 47.5	24 52.3	S 8 06.9	194 15.2	N10 38.5
A	10	242 28.5	353 36.3	S21 02.7	60 45.1	N 1 47.1	39 54.4	S 8 07.0	209 17.7	N10 38.5
Y	11	257 30.9	8 35.5	S21 03.3	75 46.6	N 1 46.8	54 56.6	S 8 07.2	224 20.3	N10 38.5
	12	272 33.4	23 34.7	S21 03.8	90 48.1	N 1 46.4	69 58.7	S 8 07.3	239 22.8	N10 38.5
	13	287 35.9	38 33.8	S21 04.3	105 49.6	N 1 46.0	85 00.8	S 8 07.4	254 25.3	N10 38.5
	14	302 38.3	53 33.0	S21 04.9	120 51.1	N 1 45.6	100 03.0	S 8 07.5	269 27.8	N10 38.5
	15	317 40.8	68 32.1	S21 05.4	135 52.6	N 1 45.2	115 05.1	S 8 07.6	284 30.4	N10 38.5
	16	332 43.3	83 31.3	S21 06.0	150 54.1	N 1 44.9	130 07.3	S 8 07.7	299 32.9	N10 38.5
	17	347 45.7	98 30.5	S21 06.5	165 55.6	N 1 44.5	145 09.4	S 8 07.9	314 35.4	N10 38.5
	18	2 48.2	113 29.6	S21 07.0	180 57.0	N 1 44.1	160 11.6	S 8 08.0	329 37.9	N10 38.5
	19	17 50.6	128 28.8	S21 07.6	195 58.5	N 1 43.7	175 13.7	S 8 08.1	344 40.5	N10 38.4
	20	32 53.1	143 27.9	S21 08.1	211 00.0	N 1 43.4	190 15.9	S 8 08.2	359 43.0	N10 38.4
	21	47 55.6	158 27.1	S21 08.6	226 01.5	N 1 43.0	205 18.0	S 8 08.3	14 45.5	N10 38.4
	22	62 58.0	173 26.3	S21 09.1	241 03.0	N 1 42.6	220 20.2	S 8 08.4	29 48.0	N10 38.4
	23	78 00.5	188 25.4	S21 09.7	256 04.5	N 1 42.2	235 22.3	S 8 08.6	44 50.6	N10 38.4
24	0	93 03.0	203 24.6	S21 10.2	271 06.0	N 1 41.8	250 24.4	S 8 08.7	59 53.1	N10 38.4
	1	108 05.4	218 23.7	S21 10.7	286 07.5	N 1 41.5	265 26.6	S 8 08.8	74 55.6	N10 38.4
	2	123 07.9	233 22.9	S21 11.3	301 09.0	N 1 41.1	280 28.7	S 8 08.9	89 58.1	N10 38.4
	3	138 10.4	248 22.0	S21 11.8	316 10.5	N 1 40.7	295 30.9	S 8 09.0	105 00.6	N10 38.4
	4	153 12.8	263 21.2	S21 12.3	331 12.0	N 1 40.3	310 33.0	S 8 09.1	120 03.2	N10 38.4
S	5	168 15.3	278 20.3	S21 12.8	346 13.5	N 1 40.0	325 35.2	S 8 09.2	135 05.7	N10 38.4
U										
N	6	183 17.8	293 19.5	S21 13.4	1 15.0	N 1 39.6	340 37.3	S 8 09.4	150 08.2	N10 38.4
D	7	198 20.2	308 18.6	S21 13.9	16 16.4	N 1 39.2	355 39.5	S 8 09.5	165 10.7	N10 38.3
A	8	213 22.7	323 17.8	S21 14.4	31 17.9	N 1 38.8	10 41.6	S 8 09.6	180 13.3	N10 38.3
Y	9	228 25.1	338 17.0	S21 14.9	46 19.4	N 1 38.5	25 43.8	S 8 09.7	195 15.8	N10 38.3
	10	243 27.6	353 16.1	S21 15.4	61 20.9	N 1 38.1	40 45.9	S 8 09.8	210 18.3	N10 38.3
	11	258 30.1	8 15.3	S21 15.9	76 22.4	N 1 37.7	55 48.1	S 8 09.9	225 20.8	N10 38.3
	12	273 32.5	23 14.4	S21 16.5	91 23.9	N 1 37.3	70 50.2	S 8 10.0	240 23.3	N10 38.3
	13	288 35.0	38 13.6	S21 17.0	106 25.4	N 1 37.0	85 52.4	S 8 10.2	255 25.9	N10 38.3
	14	303 37.5	53 12.7	S21 17.5	121 26.9	N 1 36.6	100 54.5	S 8 10.3	270 28.4	N10 38.3
	15	318 39.9	68 11.9	S21 18.0	136 28.4	N 1 36.2	115 56.7	S 8 10.4	285 30.9	N10 38.3
	16	333 42.4	83 11.0	S21 18.5	151 29.9	N 1 35.8	130 58.8	S 8 10.5	300 33.4	N10 38.3
	17	348 44.9	98 10.2	S21 19.0	166 31.4	N 1 35.5	146 01.0	S 8 10.6	315 36.0	N10 38.3
	18	3 47.3	113 09.3	S21 19.5	181 32.9	N 1 35.1	161 03.1	S 8 10.7	330 38.5	N10 38.3
	19	18 49.8	128 08.5	S21 20.0	196 34.4	N 1 34.7	176 05.3	S 8 10.8	345 41.0	N10 38.3
	20	33 52.2	143 07.6	S21 20.5	211 35.9	N 1 34.3	191 07.4	S 8 11.0	0 43.5	N10 38.3
	21	48 54.7	158 06.7	S21 21.0	226 37.4	N 1 34.0	206 09.6	S 8 11.1	15 46.0	N10 38.2
	22	63 57.2	173 05.9	S21 21.5	241 38.9	N 1 33.6	221 11.7	S 8 11.2	30 48.5	N10 38.2
	23	78 59.6	188 05.0	S21 22.1	256 40.4	N 1 33.2	236 13.9	S 8 11.3	45 51.1	N10 38.2
25	0	94 02.1	203 04.2	S21 22.6	271 41.9	N 1 32.8	251 16.0	S 8 11.4	60 53.6	N10 38.2
	1	109 04.6	218 03.3	S21 23.1	286 43.4	N 1 32.5	266 18.2	S 8 11.5	75 56.1	N10 38.2
	2	124 07.0	233 02.5	S21 23.6	301 44.9	N 1 32.1	281 20.3	S 8 11.6	90 58.6	N10 38.2
	3	139 09.5	248 01.6	S21 24.1	316 46.4	N 1 31.7	296 22.5	S 8 11.8	106 01.1	N10 38.2
	4	154 12.0	263 00.8	S21 24.6	331 47.9	N 1 31.4	311 24.6	S 8 11.9	121 03.7	N10 38.2
M	5	169 14.4	277 59.9	S21 25.1	346 49.4	N 1 31.0	326 26.8	S 8 12.0	136 06.2	N10 38.2
O										
N	6	184 16.9	292 59.1	S21 25.5	1 50.9	N 1 30.6	341 28.9	S 8 12.1	151 08.7	N10 38.2
D	7	199 19.4	307 58.2	S21 26.0	16 52.4	N 1 30.2	356 31.1	S 8 12.2	166 11.2	N10 38.2
A	8	214 21.8	322 57.3	S21 26.5	31 54.0	N 1 29.9	11 33.3	S 8 12.3	181 13.7	N10 38.2
Y	9	229 24.3	337 56.5	S21 27.0	46 55.5	N 1 29.5	26 35.4	S 8 12.4	196 16.3	N10 38.2
	10	244 26.7	352 55.6	S21 27.5	61 57.0	N 1 29.1	41 37.6	S 8 12.5	211 18.8	N10 38.2
	11	259 29.2	7 54.8	S21 28.0	76 58.5	N 1 28.8	56 39.7	S 8 12.7	226 21.3	N10 38.2
	12	274 31.7	22 53.9	S21 28.5	91 60.0	N 1 28.4	71 41.9	S 8 12.8	241 23.8	N10 38.1
	13	289 34.1	37 53.1	S21 29.0	107 01.5	N 1 28.0	86 44.0	S 8 12.9	256 26.3	N10 38.1
	14	304 36.6	52 52.2	S21 29.5	122 03.0	N 1 27.6	101 46.2	S 8 13.0	271 28.8	N10 38.1
	15	319 39.1	67 51.3	S21 30.0	137 04.5	N 1 27.3	116 48.3	S 8 13.1	286 31.4	N10 38.1
	16	334 41.5	82 50.5	S21 30.4	152 06.0	N 1 26.9	131 50.5	S 8 13.2	301 33.9	N10 38.1
	17	349 44.0	97 49.6	S21 30.9	167 07.5	N 1 26.5	146 52.6	S 8 13.3	316 36.4	N10 38.1
	18	4 46.5	112 48.8	S21 31.4	182 09.0	N 1 26.2	161 54.8	S 8 13.4	331 38.9	N10 38.1
	19	19 48.9	127 47.9	S21 31.9	197 10.5	N 1 25.8	176 57.0	S 8 13.6	346 41.4	N10 38.1
	20	34 51.4	142 47.0	S21 32.4	212 12.0	N 1 25.4	191 59.1	S 8 13.7	1 43.9	N10 38.1
	21	49 53.9	157 46.2	S21 32.9	227 13.6	N 1 25.1	207 01.3	S 8 13.8	16 46.4	N10 38.1
	22	64 56.3	172 45.3	S21 33.3	242 15.1	N 1 24.7	222 03.4	S 8 13.9	31 49.0	N10 38.1
	23	79 58.8	187 44.4	S21 33.8	257 16.6	N 1 24.3	237 05.6	S 8 14.0	46 51.5	N10 38.1
			v -0.8	d 0.5	v 1.5	d 0.4	v 2.1	d 0.1	v 2.5	d 0.0

G.M.T d	h	SUN GHA ° '	SUN Dec ° '	MOON GHA ° '	MOON v '	MOON Dec ° '	MOON d '	MOON HP '
23	0	180 13.7	S23 25.5	101 28.5	16.6	N 1 15.6	12.6	54.3
	1	195 13.4	S23 25.5	116 04.2	16.6	N 1 28.2	12.6	54.3
	2	210 13.1	S23 25.4	130 39.8	16.6	N 1 40.8	12.6	54.3
	3	225 12.8	S23 25.4	145 15.5	16.6	N 1 53.4	12.6	54.3
	4	240 12.5	S23 25.4	159 51.1	16.6	N 2 05.9	12.6	54.3
S	5	255 12.2	S23 25.3	174 26.8	16.6	N 2 18.5	12.6	54.3
A								
T	6	270 11.9	S23 25.3	189 02.4	16.6	N 2 31.1	12.6	54.3
U	7	285 11.5	S23 25.3	203 38.0	16.6	N 2 43.6	12.5	54.3
R	8	300 11.2	S23 25.2	218 13.7	16.6	N 2 56.1	12.5	54.2
D	9	315 10.9	S23 25.2	232 49.3	16.6	N 3 08.7	12.5	54.2
A	10	330 10.6	S23 25.1	247 24.9	16.6	N 3 21.2	12.5	54.2
Y	11	345 10.3	S23 25.1	262 00.5	16.6	N 3 33.7	12.5	54.2
	12	0 10.0	S23 25.1	276 36.1	16.6	N 3 46.1	12.5	54.2
	13	15 09.7	S23 25.0	291 11.7	16.6	N 3 58.6	12.5	54.2
	14	30 09.4	S23 25.0	305 47.3	16.6	N 4 11.0	12.4	54.2
	15	45 09.1	S23 24.9	320 22.9	16.6	N 4 23.5	12.4	54.2
	16	60 08.8	S23 24.9	334 58.4	16.6	N 4 35.9	12.4	54.2
	17	75 08.4	S23 24.8	349 34.0	16.5	N 4 48.3	12.4	54.2
	18	90 08.1	S23 24.8	4 09.5	16.5	N 5 00.7	12.4	54.2
	19	105 07.8	S23 24.7	18 45.0	16.5	N 5 13.0	12.4	54.2
	20	120 07.5	S23 24.7	33 20.5	16.5	N 5 25.4	12.3	54.2
	21	135 07.2	S23 24.6	47 56.0	16.5	N 5 37.7	12.3	54.2
	22	150 06.9	S23 24.6	62 31.5	16.5	N 5 50.0	12.3	54.2
	23	165 06.6	S23 24.5	77 06.9	16.4	N 6 02.2	12.3	54.2
24	0	180 06.3	S23 24.5	91 42.3	16.4	N 6 14.5	12.3	54.2
	1	195 06.0	S23 24.4	106 17.7	16.4	N 6 26.7	12.2	54.2
	2	210 05.6	S23 24.4	120 53.1	16.4	N 6 38.9	12.2	54.2
	3	225 05.3	S23 24.3	135 28.5	16.4	N 6 51.1	12.2	54.2
	4	240 05.0	S23 24.3	150 03.8	16.3	N 7 03.3	12.2	54.2
S	5	255 04.7	S23 24.2	164 39.1	16.3	N 7 15.4	12.1	54.2
U								
N	6	270 04.4	S23 24.2	179 14.3	16.3	N 7 27.5	12.1	54.2
D	7	285 04.1	S23 24.1	193 49.6	16.2	N 7 39.6	12.1	54.2
A	8	300 03.8	S23 24.1	208 24.8	16.2	N 7 51.7	12.1	54.2
Y	9	315 03.5	S23 24.0	222 60.0	16.2	N 8 03.7	12.0	54.2
	10	330 03.2	S23 23.9	237 35.1	16.2	N 8 15.7	12.0	54.2
	11	345 02.9	S23 23.9	252 10.3	16.1	N 8 27.7	12.0	54.3
	12	0 02.5	S23 23.8	266 45.4	16.1	N 8 39.6	11.9	54.3
	13	15 02.2	S23 23.7	281 20.4	16.1	N 8 51.5	11.9	54.3
	14	30 01.9	S23 23.7	295 55.4	16.0	N 9 03.4	11.9	54.3
	15	45 01.6	S23 23.6	310 30.4	16.0	N 9 15.3	11.8	54.3
	16	60 01.3	S23 23.6	325 05.4	15.9	N 9 27.1	11.8	54.3
	17	75 01.0	S23 23.5	339 40.3	15.9	N 9 38.9	11.8	54.3
	18	90 00.7	S23 23.4	354 15.1	15.9	N 9 50.6	11.8	54.3
	19	105 00.4	S23 23.4	8 50.0	15.8	N10 02.3	11.7	54.3
	20	120 00.1	S23 23.3	23 24.7	15.8	N10 14.0	11.7	54.3
	21	134 59.8	S23 23.2	37 59.5	15.7	N10 25.7	11.6	54.3
	22	149 59.4	S23 23.2	52 34.2	15.7	N10 37.3	11.6	54.3
	23	164 59.1	S23 23.1	67 08.8	15.7	N10 48.8	11.6	54.3
25	0	179 58.8	S23 23.0	81 43.5	15.6	N11 00.4	11.5	54.3
	1	194 58.5	S23 22.9	96 18.0	15.6	N11 11.9	11.5	54.3
	2	209 58.2	S23 22.9	110 52.5	15.5	N11 23.3	11.5	54.4
	3	224 57.9	S23 22.8	125 27.0	15.5	N11 34.7	11.4	54.4
	4	239 57.6	S23 22.7	140 01.4	15.4	N11 46.1	11.4	54.4
M	5	254 57.3	S23 22.6	154 35.8	15.4	N11 57.5	11.3	54.4
O								
N	6	269 57.0	S23 22.6	169 10.1	15.3	N12 08.8	11.3	54.4
D	7	284 56.7	S23 22.5	183 44.4	15.3	N12 20.0	11.3	54.4
A	8	299 56.4	S23 22.4	198 18.6	15.2	N12 31.2	11.2	54.4
Y	9	314 56.0	S23 22.3	212 52.8	15.2	N12 42.4	11.2	54.4
	10	329 55.7	S23 22.3	227 26.9	15.1	N12 53.5	11.1	54.4
	11	344 55.4	S23 22.2	242 01.0	15.1	N13 04.6	11.1	54.4
	12	359 55.1	S23 22.1	256 35.0	15.0	N13 15.6	11.0	54.5
	13	14 54.8	S23 22.0	271 08.9	14.9	N13 26.6	11.0	54.5
	14	29 54.5	S23 21.9	285 42.8	14.9	N13 37.5	10.9	54.5
	15	44 54.2	S23 21.8	300 16.6	14.8	N13 48.4	10.9	54.5
	16	59 53.9	S23 21.8	314 50.4	14.8	N13 59.2	10.8	54.5
	17	74 53.6	S23 21.7	329 24.1	14.7	N14 10.0	10.8	54.5
	18	89 53.3	S23 21.6	343 57.7	14.6	N14 20.7	10.7	54.5
	19	104 53.0	S23 21.5	358 31.3	14.6	N14 31.4	10.7	54.5
	20	119 52.7	S23 21.4	13 04.8	14.5	N14 42.0	10.6	54.6
	21	134 52.3	S23 21.3	27 38.3	14.5	N14 52.6	10.6	54.6
	22	149 52.0	S23 21.2	42 11.7	14.4	N15 03.1	10.5	54.6
	23	164 51.7	S23 21.1	56 45.0	14.3	N15 13.6	10.5	54.6
		S.D. 16.3	d 0.1	S.D. 14.8		14.8		14.8

STARS Name	SHA ° '	Dec ° '
Acamar	315 09.1	S40 11.4
Achernar	335 17.7	S57 05.6
Acrux	172 56.4	S63 15.3
Adhara	255 02.9	S29 00.7
Albireo	67 01.8	N28 01.4
Aldebaran	290 35.6	N16 34.1
Alioth	166 10.3	N55 47.8
Alkaid	152 49.8	N49 09.8
Al Na-ir	27 29.2	S46 49.3
Alnilam	275 34.1	S 1 11.1
Alphard	217 44.3	S 8 47.2
Alphecca	126 01.3	N26 36.9
Alpheratz	357 31.4	N29 15.3
Altair	61 57.1	N 8 56.8
Ankaa	353 04.0	S42 09.1
Antares	112 12.2	S26 29.7
Arcturus	145 45.2	N19 01.7
Atria	107 04.1	S69 04.6
Avior	234 12.7	S59 36.1
Bellatrix	278 19.1	N 6 22.5
Betelgeuse	270 48.3	N 7 24.7
Canopus	263 50.4	S52 42.7
Capella	280 16.6	N46 01.6
Castor	245 52.6	N31 49.3
Deneb	49 23.9	N45 23.3
Denebola	182 21.6	N14 24.4
Diphda	348 44.1	S17 49.7
Dubhe	193 37.0	N61 35.2
Elnath	277 57.4	N28 37.8
Eltanin	90 41.3	N51 29.1
Enif	33 35.8	N10 00.6
Fomalhaut	15 11.1	S29 28.2
Gacrux	171 48.0	S57 16.3
Gienah	175 40.3	S17 42.2
Hadar	148 31.7	S60 30.5
Hamal	327 47.4	N23 36.2
Kaus Austr.	83 28.7	S34 22.2
Kochab	137 21.1	N74 01.9
Markab	13 26.8	N15 21.8
Menkar	314 02.5	N 4 12.2
Menkent	147 54.0	S36 30.7
Miaplacidus	221 36.6	S69 50.0
Mirfak	308 23.2	N49 58.0
Nunki	75 44.2	S26 15.5
Peacock	53 01.2	S56 38.5
Polaris	315 01.3	N89 22.9
Pollux	243 13.0	N27 57.2
Procyon	244 47.1	N 5 08.9
Rasalhague	95 55.9	N12 32.4
Regulus	207 30.8	N11 49.3
Rigel	281 00.4	S 8 10.1
Rigil Kent	139 36.3	S60 57.1
Sabik	101 59.4	S15 45.6
Schedar	349 27.1	N56 42.1
Shaula	96 06.4	S37 07.4
Sirius	258 23.0	S16 45.4
Spica	158 19.0	S11 18.8
Suhail	222 43.5	S43 32.9
Vega	80 31.5	N38 48.7
Zuben-ubi	136 53.6	S16 09.7

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
26	0	95 01.2	202 43.6	S21 34.3	272 18.1	N 1 24.0	252 07.7	S 8 14.1	61 54.0	N10 38.1
	1	110 03.7	217 42.7	S21 34.8	287 19.6	N 1 23.6	267 09.9	S 8 14.2	76 56.5	N10 38.1
	2	125 06.2	232 41.9	S21 35.2	302 21.1	N 1 23.2	282 12.0	S 8 14.3	91 59.0	N10 38.1
	3	140 08.6	247 41.0	S21 35.7	317 22.6	N 1 22.8	297 14.2	S 8 14.4	107 01.5	N10 38.1
	4	155 11.1	262 40.1	S21 36.2	332 24.1	N 1 22.5	312 16.4	S 8 14.6	122 04.0	N10 38.1
T	5	170 13.6	277 39.3	S21 36.7	347 25.7	N 1 22.1	327 18.5	S 8 14.7	137 06.6	N10 38.1
U										
E	6	185 16.0	292 38.4	S21 37.1	2 27.2	N 1 21.7	342 20.7	S 8 14.8	152 09.1	N10 38.1
S	7	200 18.5	307 37.5	S21 37.6	17 28.7	N 1 21.4	357 22.8	S 8 14.9	167 11.6	N10 38.0
D	8	215 21.0	322 36.7	S21 38.1	32 30.2	N 1 21.0	12 25.0	S 8 15.0	182 14.1	N10 38.0
A	9	230 23.4	337 35.8	S21 38.5	47 31.7	N 1 20.6	27 27.2	S 8 15.1	197 16.6	N10 38.0
Y	10	245 25.9	352 34.9	S21 39.0	62 33.2	N 1 20.3	42 29.3	S 8 15.2	212 19.1	N10 38.0
	11	260 28.3	7 34.1	S21 39.5	77 34.8	N 1 19.9	57 31.5	S 8 15.3	227 21.6	N10 38.0
	12	275 30.8	22 33.2	S21 39.9	92 36.3	N 1 19.6	72 33.6	S 8 15.4	242 24.2	N10 38.0
	13	290 33.3	37 32.3	S21 40.4	107 37.8	N 1 19.2	87 35.8	S 8 15.5	257 26.7	N10 38.0
	14	305 35.7	52 31.5	S21 40.8	122 39.3	N 1 18.8	102 38.0	S 8 15.7	272 29.2	N10 38.0
	15	320 38.2	67 30.6	S21 41.3	137 40.8	N 1 18.5	117 40.1	S 8 15.8	287 31.7	N10 38.0
	16	335 40.7	82 29.7	S21 41.8	152 42.3	N 1 18.1	132 42.3	S 8 15.9	302 34.2	N10 38.0
	17	350 43.1	97 28.9	S21 42.2	167 43.9	N 1 17.7	147 44.4	S 8 16.0	317 36.7	N10 38.0
	18	5 45.6	112 28.0	S21 42.7	182 45.4	N 1 17.4	162 46.6	S 8 16.1	332 39.2	N10 38.0
	19	20 48.1	127 27.1	S21 43.1	197 46.9	N 1 17.0	177 48.8	S 8 16.2	347 41.7	N10 38.0
	20	35 50.5	142 26.2	S21 43.6	212 48.4	N 1 16.6	192 50.9	S 8 16.3	2 44.2	N10 38.0
	21	50 53.0	157 25.4	S21 44.0	227 50.0	N 1 16.3	207 53.1	S 8 16.4	17 46.8	N10 38.0
	22	65 55.5	172 24.5	S21 44.5	242 51.5	N 1 15.9	222 55.2	S 8 16.5	32 49.3	N10 38.0
	23	80 57.9	187 23.6	S21 44.9	257 53.0	N 1 15.5	237 57.4	S 8 16.6	47 51.8	N10 38.0
27	0	96 00.4	202 22.8	S21 45.4	272 54.5	N 1 15.2	252 59.6	S 8 16.7	62 54.3	N10 38.0
	1	111 02.8	217 21.9	S21 45.8	287 56.0	N 1 14.8	268 01.7	S 8 16.9	77 56.8	N10 38.0
	2	126 05.3	232 21.0	S21 46.3	302 57.6	N 1 14.5	283 03.9	S 8 17.0	92 59.3	N10 38.0
	3	141 07.8	247 20.1	S21 46.7	317 59.1	N 1 14.1	298 06.0	S 8 17.1	108 01.8	N10 38.0
	4	156 10.2	262 19.3	S21 47.2	333 00.6	N 1 13.7	313 08.2	S 8 17.2	123 04.3	N10 38.0
W	5	171 12.7	277 18.4	S21 47.6	348 02.1	N 1 13.4	328 10.4	S 8 17.3	138 06.8	N10 38.0
E										
D	6	186 15.2	292 17.5	S21 48.1	3 03.7	N 1 13.0	343 12.5	S 8 17.4	153 09.3	N10 38.0
N	7	201 17.6	307 16.6	S21 48.5	18 05.2	N 1 12.6	358 14.7	S 8 17.5	168 11.9	N10 38.0
E	8	216 20.1	322 15.8	S21 48.9	33 06.7	N 1 12.3	13 16.9	S 8 17.6	183 14.4	N10 38.0
S	9	231 22.6	337 14.9	S21 49.4	48 08.2	N 1 11.9	28 19.0	S 8 17.7	198 16.9	N10 38.0
D	10	246 25.0	352 14.0	S21 49.8	63 09.8	N 1 11.6	43 21.2	S 8 17.8	213 19.4	N10 38.0
A	11	261 27.5	7 13.1	S21 50.3	78 11.3	N 1 11.2	58 23.4	S 8 17.9	228 21.9	N10 37.9
Y										
	12	276 30.0	22 12.3	S21 50.7	93 12.8	N 1 10.8	73 25.5	S 8 18.0	243 24.4	N10 37.9
	13	291 32.4	37 11.4	S21 51.1	108 14.4	N 1 10.5	88 27.7	S 8 18.2	258 26.9	N10 37.9
	14	306 34.9	52 10.5	S21 51.6	123 15.9	N 1 10.1	103 29.9	S 8 18.3	273 29.4	N10 37.9
	15	321 37.3	67 09.6	S21 52.0	138 17.4	N 1 09.8	118 32.0	S 8 18.4	288 31.9	N10 37.9
	16	336 39.8	82 08.8	S21 52.4	153 18.9	N 1 09.4	133 34.2	S 8 18.5	303 34.4	N10 37.9
	17	351 42.3	97 07.9	S21 52.9	168 20.5	N 1 09.0	148 36.3	S 8 18.6	318 36.9	N10 37.9
	18	6 44.7	112 07.0	S21 53.3	183 22.0	N 1 08.7	163 38.5	S 8 18.7	333 39.4	N10 37.9
	19	21 47.2	127 06.1	S21 53.7	198 23.5	N 1 08.3	178 40.7	S 8 18.8	348 42.0	N10 37.9
	20	36 49.7	142 05.2	S21 54.1	213 25.1	N 1 08.0	193 42.8	S 8 18.9	3 44.5	N10 37.9
	21	51 52.1	157 04.4	S21 54.6	228 26.6	N 1 07.6	208 45.0	S 8 19.0	18 47.0	N10 37.9
	22	66 54.6	172 03.5	S21 55.0	243 28.1	N 1 07.2	223 47.2	S 8 19.1	33 49.5	N10 37.9
	23	81 57.1	187 02.6	S21 55.4	258 29.7	N 1 06.9	238 49.3	S 8 19.2	48 52.0	N10 37.9
28	0	96 59.5	202 01.7	S21 55.8	273 31.2	N 1 06.5	253 51.5	S 8 19.3	63 54.5	N10 37.9
	1	112 02.0	217 00.8	S21 56.3	288 32.7	N 1 06.2	268 53.7	S 8 19.4	78 57.0	N10 37.9
	2	127 04.5	231 60.0	S21 56.7	303 34.3	N 1 05.8	283 55.8	S 8 19.5	93 59.5	N10 37.9
	3	142 06.9	246 59.1	S21 57.1	318 35.8	N 1 05.5	298 58.0	S 8 19.7	109 02.0	N10 37.9
	4	157 09.4	261 58.2	S21 57.5	333 37.3	N 1 05.1	314 00.2	S 8 19.8	124 04.5	N10 37.9
T	5	172 11.8	276 57.3	S21 57.9	348 38.9	N 1 04.7	329 02.3	S 8 19.9	139 07.0	N10 37.9
H										
U	6	187 14.3	291 56.4	S21 58.4	3 40.4	N 1 04.4	344 04.5	S 8 20.0	154 09.5	N10 37.9
R	7	202 16.8	306 55.5	S21 58.8	18 41.9	N 1 04.0	359 06.7	S 8 20.1	169 12.0	N10 37.9
S	8	217 19.2	321 54.7	S21 59.2	33 43.5	N 1 03.7	14 08.9	S 8 20.2	184 14.5	N10 37.9
D	9	232 21.7	336 53.8	S21 59.6	48 45.0	N 1 03.3	29 11.0	S 8 20.3	199 17.0	N10 37.9
A	10	247 24.2	351 52.9	S22 00.0	63 46.6	N 1 03.0	44 13.2	S 8 20.4	214 19.5	N10 37.9
Y	11	262 26.6	6 52.0	S22 00.4	78 48.1	N 1 02.6	59 15.4	S 8 20.5	229 22.0	N10 37.9
	12	277 29.1	21 51.1	S22 00.8	93 49.6	N 1 02.2	74 17.5	S 8 20.6	244 24.5	N10 37.9
	13	292 31.6	36 50.2	S22 01.2	108 51.2	N 1 01.9	89 19.7	S 8 20.7	259 27.0	N10 37.9
	14	307 34.0	51 49.4	S22 01.7	123 52.7	N 1 01.5	104 21.9	S 8 20.8	274 29.5	N10 37.9
	15	322 36.5	66 48.5	S22 02.1	138 54.2	N 1 01.2	119 24.0	S 8 20.9	289 32.1	N10 37.9
	16	337 38.9	81 47.6	S22 02.5	153 55.8	N 1 00.8	134 26.2	S 8 21.0	304 34.6	N10 37.9
	17	352 41.4	96 46.7	S22 02.9	168 57.3	N 1 00.5	149 28.4	S 8 21.1	319 37.1	N10 37.9
	18	7 43.9	111 45.8	S22 03.3	183 58.9	N 1 00.1	164 30.6	S 8 21.2	334 39.6	N10 37.9
	19	22 46.3	126 44.9	S22 03.7	199 00.4	N 0 59.8	179 32.7	S 8 21.3	349 42.1	N10 37.9
	20	37 48.8	141 44.0	S22 04.1	214 02.0	N 0 59.4	194 34.9	S 8 21.5	4 44.6	N10 37.9
	21	52 51.3	156 43.1	S22 04.5	229 03.5	N 0 59.1	209 37.1	S 8 21.6	19 47.1	N10 37.9
	22	67 53.7	171 42.3	S22 04.9	244 05.0	N 0 58.7	224 39.2	S 8 21.7	34 49.6	N10 37.9
	23	82 56.2	186 41.4	S22 05.3	259 06.6	N 0 58.4	239 41.4	S 8 21.8	49 52.1	N10 37.9
			v -0.9	d 0.4	v 1.5	d 0.4	v 2.2	d 0.1	v 2.5	d 0.0

G.M.T		SUN				MOON						STARS		
d	h	GHA		Dec		GHA		v	Dec		d	HP	Name	SHA	Dec
		°	'	°	'	°	'	'	°	'	'	'		° '	° '
26	0	179	51.4	S23	21.1	71	18.3	14.3	N15	24.0	10.4	54.6	Acamar	315 09.1	S40 11.5
	1	194	51.1	S23	21.0	85	51.5	14.2	N15	34.3	10.3	54.6	Achernar	335 17.7	S57 05.6
	2	209	50.8	S23	20.9	100	24.6	14.1	N15	44.6	10.3	54.6	Acrux	172 56.4	S63 15.3
	3	224	50.5	S23	20.8	114	57.7	14.1	N15	54.8	10.2	54.7	Adhara	255 02.9	S29 00.7
	4	239	50.2	S23	20.7	129	30.7	14.0	N16	05.0	10.2	54.7	Albireo	67 01.8	N28 01.3
T	5	254	49.9	S23	20.6	144	03.6	13.9	N16	15.1	10.1	54.7			
U													Aldebaran	290 35.6	N16 34.0
E	6	269	49.6	S23	20.5	158	36.4	13.9	N16	25.2	10.0	54.7	Alioth	166 10.3	N55 47.8
S	7	284	49.3	S23	20.4	173	09.2	13.8	N16	35.2	10.0	54.7	Alkaid	152 49.7	N49 09.8
D	8	299	49.0	S23	20.3	187	41.9	13.7	N16	45.1	9.9	54.7	Al Na-ir	27 29.2	S46 49.3
A	9	314	48.6	S23	20.2	202	14.6	13.6	N16	54.9	9.9	54.8	Alnilam	275 34.1	S 1 11.1
Y	10	329	48.3	S23	20.1	216	47.1	13.6	N17	04.7	9.8	54.8			
	11	344	48.0	S23	20.0	231	19.6	13.5	N17	14.4	9.7	54.8	Alphard	217 44.3	S 8 47.2
													Alphecca	126 01.3	N26 36.9
	12	359	47.7	S23	19.9	245	52.0	13.4	N17	24.1	9.7	54.8	Alpheratz	357 31.4	N29 15.3
	13	14	47.4	S23	19.8	260	24.4	13.3	N17	33.7	9.6	54.8	Altair	61 57.1	N 8 56.8
	14	29	47.1	S23	19.7	274	56.6	13.3	N17	43.2	9.5	54.9	Ankaa	353 04.0	S42 09.1
	15	44	46.8	S23	19.6	289	28.8	13.2	N17	52.7	9.5	54.9			
	16	59	46.5	S23	19.5	304	00.9	13.1	N18	02.1	9.4	54.9	Antares	112 12.2	S26 29.7
	17	74	46.2	S23	19.4	318	32.9	13.0	N18	11.4	9.3	54.9	Arcturus	145 45.2	N19 01.7
													Atria	107 04.1	S69 04.6
	18	89	45.9	S23	19.3	333	04.9	13.0	N18	20.6	9.2	54.9	Avior	234 12.7	S59 36.1
	19	104	45.6	S23	19.2	347	36.8	12.9	N18	29.8	9.2	54.9	Bellatrix	278 19.1	N 6 22.5
	20	119	45.3	S23	19.1	2	08.6	12.8	N18	38.8	9.1	55.0			
	21	134	45.0	S23	19.0	16	40.3	12.7	N18	47.9	9.0	55.0	Betelgeuse	270 48.2	N 7 24.7
	22	149	44.7	S23	18.9	31	11.9	12.6	N18	56.8	8.9	55.0	Canopus	263 50.4	S52 42.7
	23	164	44.4	S23	18.7	45	43.5	12.6	N19	05.7	8.9	55.0	Capella	280 16.6	N46 01.6
													Castor	245 52.6	N31 49.3
27	0	179	44.0	S23	18.6	60	15.0	12.5	N19	14.4	8.8	55.1	Deneb	49 23.9	N45 23.3
	1	194	43.7	S23	18.5	74	46.3	12.4	N19	23.1	8.7	55.1			
	2	209	43.4	S23	18.4	89	17.7	12.3	N19	31.7	8.6	55.1	Denebola	182 21.6	N14 24.4
	3	224	43.1	S23	18.3	103	48.9	12.2	N19	40.3	8.5	55.1	Diphda	348 44.1	S17 49.7
	4	239	42.8	S23	18.2	118	20.0	12.1	N19	48.7	8.5	55.1	Dubhe	193 36.9	N61 35.2
W	5	254	42.5	S23	18.1	132	51.1	12.1	N19	57.1	8.4	55.2	Elnath	277 57.4	N28 37.8
E													Eltanin	90 41.3	N51 29.1
D	6	269	42.2	S23	18.0	147	22.1	12.0	N20	05.4	8.3	55.2			
N	7	284	41.9	S23	17.8	161	53.0	11.9	N20	13.6	8.2	55.2	Enif	33 35.8	N10 00.6
E	8	299	41.6	S23	17.7	176	23.8	11.8	N20	21.7	8.1	55.2	Fomalhaut	15 11.1	S29 28.2
S	9	314	41.3	S23	17.6	190	54.5	11.7	N20	29.7	8.0	55.2	Gacrux	171 48.0	S57 16.4
D	10	329	41.0	S23	17.5	205	25.2	11.6	N20	37.7	7.9	55.3	Gienah	175 40.2	S17 42.2
A	11	344	40.7	S23	17.4	219	55.7	11.6	N20	45.5	7.8	55.3	Hadar	148 31.7	S60 30.5
Y															
	12	359	40.4	S23	17.2	234	26.2	11.5	N20	53.3	7.8	55.3	Hamal	327 47.4	N23 36.2
	13	14	40.1	S23	17.1	248	56.6	11.4	N21	00.9	7.7	55.3	Kaus Austr.	83 28.7	S34 22.2
	14	29	39.8	S23	17.0	263	26.9	11.3	N21	08.5	7.6	55.4	Kochab	137 21.1	N74 01.8
	15	44	39.5	S23	16.9	277	57.1	11.2	N21	16.0	7.5	55.4	Markab	13 26.8	N15 21.8
	16	59	39.2	S23	16.8	292	27.2	11.1	N21	23.3	7.4	55.4	Menkar	314 02.5	N 4 12.2
	17	74	38.8	S23	16.6	306	57.3	11.0	N21	30.6	7.3	55.4			
													Menkent	147 54.0	S36 30.7
	18	89	38.5	S23	16.5	321	27.3	11.0	N21	37.8	7.2	55.5	Miaplacidus	221 36.6	S69 50.1
	19	104	38.2	S23	16.4	335	57.1	10.9	N21	44.9	7.1	55.5	Mirfak	308 23.2	N49 58.0
	20	119	37.9	S23	16.3	350	26.9	10.8	N21	51.9	7.0	55.5	Nunki	75 44.2	S26 15.5
	21	134	37.6	S23	16.1	4	56.6	10.7	N21	58.8	6.9	55.5	Peacock	53 01.2	S56 38.5
	22	149	37.3	S23	16.0	19	26.3	10.6	N22	05.6	6.8	55.6			
	23	164	37.0	S23	15.9	33	55.8	10.5	N22	12.2	6.7	55.6	Polaris	315 02.1	N89 22.9
													Pollux	243 13.0	N27 57.2
28	0	179	36.7	S23	15.7	48	25.3	10.5	N22	18.8	6.6	55.6	Procyon	244 47.1	N 5 08.9
	1	194	36.4	S23	15.6	62	54.6	10.4	N22	25.3	6.5	55.6	Rasalhague	95 55.9	N12 32.4
	2	209	36.1	S23	15.5	77	23.9	10.3	N22	31.6	6.4	55.7	Regulus	207 30.8	N11 49.3
	3	224	35.8	S23	15.4	91	53.1	10.2	N22	37.9	6.3	55.7			
	4	239	35.5	S23	15.2	106	22.2	10.1	N22	44.1	6.1	55.7	Rigel	281 00.4	S 8 10.2
T	5	254	35.2	S23	15.1	120	51.3	10.0	N22	50.1	6.0	55.7	Rigil Kent	139 36.3	S60 57.1
H													Sabik	101 59.4	S15 45.6
U	6	269	34.9	S23	15.0	135	20.2	9.9	N22	56.0	5.9	55.8	Schedar	349 27.2	N56 42.1
R	7	284	34.6	S23	14.8	149	49.1	9.9	N23	01.8	5.8	55.8	Shaula	96 06.4	S37 07.4
S	8	299	34.3	S23	14.7	164	17.9	9.8	N23	07.5	5.7	55.8			
D	9	314	34.0	S23	14.5	178	46.6	9.7	N23	13.1	5.6	55.8	Sirius	258 23.0	S16 45.4
A	10	329	33.7	S23	14.4	193	15.2	9.6	N23	18.6	5.5	55.9	Spica	158 19.0	S11 18.8
Y	11	344	33.4	S23	14.3	207	43.7	9.5	N23	24.0	5.4	55.9	Suhail	222 43.5	S43 32.9
													Vega	80 31.5	N38 48.7
	12	359	33.1	S23	14.1	222	12.2	9.5	N23	29.2	5.2	55.9	Zuben-ubi	136 53.6	S16 09.7
	13	14	32.8	S23	14.0	236	40.5	9.4	N23	34.3	5.1	56.0			
	14	29	32.5	S23	13.8	251	08.8	9.3	N23	39.4	5.0	56.0			
	15	44	32.2	S23	13.7	265	37.0	9.2	N23	44.2	4.9	56.0			
	16	59	31.9	S23	13.6	280	05.2	9.1	N23	49.0	4.8	56.0			
	17	74	31.5	S23	13.4	294	33.2	9.1	N23	53.7	4.6	56.1			
	18	89	31.2	S23	13.3	309	01.2	9.0	N23	58.2	4.5	56.1			
	19	104	30.9	S23	13.1	323	29.1	8.9	N24	02.6	4.4	56.1			
	20	119	30.6	S23	13.0	337	56.9	8.8	N24	06.9	4.3	56.2			
	21	134	30.3	S23	12.8	352	24.7	8.8	N24	11.0	4.1	56.2			
	22	149	30.0	S23	12.7	6	52.4	8.7	N24	15.0	4.0	56.2			
	23	164	29.7	S23	12.5	21	20.0	8.6	N24	18.9	3.9	56.2			
		S.D.	16.3	d	0.1	S.D.		14.9		15.1		15.2			

G.M.T		ARIES	VENUS		MARS		JUPITER		SATURN	
d	h	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
		° '	° '	° '	° '	° '	° '	° '	° '	° '
29	0	97 58.7	201 40.5	S22 05.7	274 08.1	N 0 58.0	254 43.6	S 8 21.9	64 54.6	N10 37.9
	1	113 01.1	216 39.6	S22 06.1	289 09.7	N 0 57.6	269 45.8	S 8 22.0	79 57.1	N10 37.9
	2	128 03.6	231 38.7	S22 06.5	304 11.2	N 0 57.3	284 47.9	S 8 22.1	94 59.6	N10 37.9
	3	143 06.1	246 37.8	S22 06.8	319 12.8	N 0 56.9	299 50.1	S 8 22.2	110 02.1	N10 37.9
	4	158 08.5	261 36.9	S22 07.2	334 14.3	N 0 56.6	314 52.3	S 8 22.3	125 04.6	N10 37.9
F	5	173 11.0	276 36.0	S22 07.6	349 15.9	N 0 56.2	329 54.4	S 8 22.4	140 07.1	N10 37.9
R										
I	6	188 13.4	291 35.1	S22 08.0	4 17.4	N 0 55.9	344 56.6	S 8 22.5	155 09.6	N10 37.9
D	7	203 15.9	306 34.2	S22 08.4	19 19.0	N 0 55.5	359 58.8	S 8 22.6	170 12.1	N10 37.9
A	8	218 18.4	321 33.4	S22 08.8	34 20.5	N 0 55.2	15 01.0	S 8 22.7	185 14.6	N10 37.9
Y	9	233 20.8	336 32.5	S22 09.2	49 22.0	N 0 54.8	30 03.1	S 8 22.8	200 17.1	N10 37.9
	10	248 23.3	351 31.6	S22 09.6	64 23.6	N 0 54.5	45 05.3	S 8 22.9	215 19.6	N10 37.9
	11	263 25.8	6 30.7	S22 09.9	79 25.1	N 0 54.1	60 07.5	S 8 23.0	230 22.1	N10 37.9
	12	278 28.2	21 29.8	S22 10.3	94 26.7	N 0 53.8	75 09.7	S 8 23.1	245 24.6	N10 37.9
	13	293 30.7	36 28.9	S22 10.7	109 28.2	N 0 53.4	90 11.8	S 8 23.2	260 27.1	N10 37.9
	14	308 33.2	51 28.0	S22 11.1	124 29.8	N 0 53.1	105 14.0	S 8 23.3	275 29.6	N10 37.9
	15	323 35.6	66 27.1	S22 11.5	139 31.3	N 0 52.7	120 16.2	S 8 23.4	290 32.1	N10 37.9
	16	338 38.1	81 26.2	S22 11.8	154 32.9	N 0 52.4	135 18.4	S 8 23.5	305 34.6	N10 37.9
	17	353 40.6	96 25.3	S22 12.2	169 34.4	N 0 52.0	150 20.5	S 8 23.6	320 37.1	N10 37.9
	18	8 43.0	111 24.4	S22 12.6	184 36.0	N 0 51.7	165 22.7	S 8 23.7	335 39.6	N10 37.9
	19	23 45.5	126 23.5	S22 13.0	199 37.6	N 0 51.3	180 24.9	S 8 23.8	350 42.1	N10 37.9
	20	38 47.9	141 22.6	S22 13.3	214 39.1	N 0 51.0	195 27.1	S 8 23.9	5 44.6	N10 37.9
	21	53 50.4	156 21.7	S22 13.7	229 40.7	N 0 50.6	210 29.2	S 8 24.0	20 47.1	N10 37.9
	22	68 52.9	171 20.8	S22 14.1	244 42.2	N 0 50.3	225 31.4	S 8 24.1	35 49.6	N10 37.9
	23	83 55.3	186 19.9	S22 14.5	259 43.8	N 0 49.9	240 33.6	S 8 24.2	50 52.1	N10 37.9
30	0	98 57.8	201 19.1	S22 14.8	274 45.3	N 0 49.6	255 35.8	S 8 24.3	65 54.6	N10 37.9
	1	114 00.3	216 18.2	S22 15.2	289 46.9	N 0 49.2	270 38.0	S 8 24.5	80 57.1	N10 37.9
	2	129 02.7	231 17.3	S22 15.6	304 48.4	N 0 48.9	285 40.1	S 8 24.6	95 59.6	N10 37.9
	3	144 05.2	246 16.4	S22 15.9	319 50.0	N 0 48.6	300 42.3	S 8 24.7	111 02.0	N10 37.9
	4	159 07.7	261 15.5	S22 16.3	334 51.6	N 0 48.2	315 44.5	S 8 24.8	126 04.5	N10 37.9
S	5	174 10.1	276 14.6	S22 16.7	349 53.1	N 0 47.9	330 46.7	S 8 24.9	141 07.0	N10 37.9
A										
T	6	189 12.6	291 13.7	S22 17.0	4 54.7	N 0 47.5	345 48.9	S 8 25.0	156 09.5	N10 37.9
U	7	204 15.1	306 12.8	S22 17.4	19 56.2	N 0 47.2	0 51.0	S 8 25.1	171 12.0	N10 37.9
R	8	219 17.5	321 11.9	S22 17.7	34 57.8	N 0 46.8	15 53.2	S 8 25.2	186 14.5	N10 37.9
D	9	234 20.0	336 11.0	S22 18.1	49 59.3	N 0 46.5	30 55.4	S 8 25.3	201 17.0	N10 37.9
A	10	249 22.4	351 10.1	S22 18.4	65 00.9	N 0 46.1	45 57.6	S 8 25.4	216 19.5	N10 37.9
Y	11	264 24.9	6 09.2	S22 18.8	80 02.5	N 0 45.8	60 59.7	S 8 25.5	231 22.0	N10 37.9
	12	279 27.4	21 08.3	S22 19.2	95 04.0	N 0 45.4	76 01.9	S 8 25.6	246 24.5	N10 37.9
	13	294 29.8	36 07.4	S22 19.5	110 05.6	N 0 45.1	91 04.1	S 8 25.7	261 27.0	N10 37.9
	14	309 32.3	51 06.5	S22 19.9	125 07.1	N 0 44.7	106 06.3	S 8 25.8	276 29.5	N10 37.9
	15	324 34.8	66 05.6	S22 20.2	140 08.7	N 0 44.4	121 08.5	S 8 25.9	291 32.0	N10 37.9
	16	339 37.2	81 04.7	S22 20.6	155 10.3	N 0 44.1	136 10.7	S 8 26.0	306 34.5	N10 37.9
	17	354 39.7	96 03.8	S22 20.9	170 11.8	N 0 43.7	151 12.8	S 8 26.1	321 37.0	N10 37.9
	18	9 42.2	111 02.9	S22 21.3	185 13.4	N 0 43.4	166 15.0	S 8 26.2	336 39.5	N10 37.9
	19	24 44.6	126 02.0	S22 21.6	200 15.0	N 0 43.0	181 17.2	S 8 26.3	351 42.0	N10 37.9
	20	39 47.1	141 01.1	S22 22.0	215 16.5	N 0 42.7	196 19.4	S 8 26.4	6 44.5	N10 37.9
	21	54 49.6	156 00.2	S22 22.3	230 18.1	N 0 42.3	211 21.6	S 8 26.5	21 47.0	N10 37.9
	22	69 52.0	170 59.2	S22 22.6	245 19.7	N 0 42.0	226 23.7	S 8 26.6	36 49.5	N10 38.0
	23	84 54.5	185 58.3	S22 23.0	260 21.2	N 0 41.7	241 25.9	S 8 26.7	51 51.9	N10 38.0
31	0	99 56.9	200 57.4	S22 23.3	275 22.8	N 0 41.3	256 28.1	S 8 26.8	66 54.4	N10 38.0
	1	114 59.4	215 56.5	S22 23.7	290 24.4	N 0 41.0	271 30.3	S 8 26.9	81 56.9	N10 38.0
	2	130 01.9	230 55.6	S22 24.0	305 25.9	N 0 40.6	286 32.5	S 8 27.0	96 59.4	N10 38.0
	3	145 04.3	245 54.7	S22 24.3	320 27.5	N 0 40.3	301 34.7	S 8 27.1	112 01.9	N10 38.0
	4	160 06.8	260 53.8	S22 24.7	335 29.1	N 0 39.9	316 36.8	S 8 27.2	127 04.4	N10 38.0
S	5	175 09.3	275 52.9	S22 25.0	350 30.6	N 0 39.6	331 39.0	S 8 27.3	142 06.9	N10 38.0
U										
N	6	190 11.7	290 52.0	S22 25.3	5 32.2	N 0 39.3	346 41.2	S 8 27.4	157 09.4	N10 38.0
D	7	205 14.2	305 51.1	S22 25.7	20 33.8	N 0 38.9	1 43.4	S 8 27.5	172 11.9	N10 38.0
A	8	220 16.7	320 50.2	S22 26.0	35 35.3	N 0 38.6	16 45.6	S 8 27.6	187 14.4	N10 38.0
Y	9	235 19.1	335 49.3	S22 26.3	50 36.9	N 0 38.2	31 47.8	S 8 27.7	202 16.9	N10 38.0
	10	250 21.6	350 48.4	S22 26.7	65 38.5	N 0 37.9	46 49.9	S 8 27.8	217 19.4	N10 38.0
	11	265 24.1	5 47.5	S22 27.0	80 40.1	N 0 37.6	61 52.1	S 8 27.9	232 21.8	N10 38.0
	12	280 26.5	20 46.6	S22 27.3	95 41.6	N 0 37.2	76 54.3	S 8 28.0	247 24.3	N10 38.0
	13	295 29.0	35 45.7	S22 27.7	110 43.2	N 0 36.9	91 56.5	S 8 28.1	262 26.8	N10 38.0
	14	310 31.4	50 44.8	S22 28.0	125 44.8	N 0 36.5	106 58.7	S 8 28.2	277 29.3	N10 38.0
	15	325 33.9	65 43.9	S22 28.3	140 46.3	N 0 36.2	122 00.9	S 8 28.3	292 31.8	N10 38.0
	16	340 36.4	80 42.9	S22 28.6	155 47.9	N 0 35.9	137 03.1	S 8 28.4	307 34.3	N10 38.0
	17	355 38.8	95 42.0	S22 28.9	170 49.5	N 0 35.5	152 05.2	S 8 28.5	322 36.8	N10 38.0
	18	10 41.3	110 41.1	S22 29.3	185 51.1	N 0 35.2	167 07.4	S 8 28.6	337 39.3	N10 38.0
	19	25 43.8	125 40.2	S22 29.6	200 52.6	N 0 34.9	182 09.6	S 8 28.7	352 41.8	N10 38.0
	20	40 46.2	140 39.3	S22 29.9	215 54.2	N 0 34.5	197 11.8	S 8 28.8	7 44.3	N10 38.0
	21	55 48.7	155 38.4	S22 30.2	230 55.8	N 0 34.2	212 14.0	S 8 28.9	22 46.7	N10 38.0
	22	70 51.2	170 37.5	S22 30.5	245 57.4	N 0 33.8	227 16.2	S 8 29.0	37 49.2	N10 38.0
	23	85 53.6	185 36.6	S22 30.8	260 59.0	N 0 33.5	242 18.4	S 8 29.1	52 51.7	N10 38.0
			v -0.9	d 0.4	v 1.6	d 0.3	v 2.2	d 0.1	v 2.5	d 0.0

G.M.T		SUN				MOON						STARS			
d	h	GHA		Dec		GHA		v	Dec		d	HP	Name	SHA	Dec
		°	'	°	'	°	'	'	°	'	'	'		° '	° '
29	0	179	29.4	S23	12.4	35	47.5	8.5	N24	22.7	3.8	56.3	Acamar	315 09.1	S40 11.5
	1	194	29.1	S23	12.2	50	15.0	8.5	N24	26.3	3.6	56.3	Achernar	335 17.7	S57 05.6
	2	209	28.8	S23	12.1	64	42.4	8.4	N24	29.8	3.5	56.3	Acrux	172 56.3	S63 15.4
	3	224	28.5	S23	11.9	79	09.7	8.3	N24	33.2	3.4	56.3	Adhara	255 02.9	S29 00.8
	4	239	28.2	S23	11.8	93	36.9	8.2	N24	36.4	3.2	56.4	Albireo	67 01.8	N28 01.3
F	5	254	27.9	S23	11.6	108	04.1	8.2	N24	39.5	3.1	56.4			
R													Aldebaran	290 35.6	N16 34.0
I	6	269	27.6	S23	11.5	122	31.2	8.1	N24	42.5	3.0	56.4	Alioth	166 10.3	N55 47.8
D	7	284	27.3	S23	11.3	136	58.3	8.0	N24	45.3	2.8	56.5	Alkaid	152 49.7	N49 09.8
A	8	299	27.0	S23	11.2	151	25.2	8.0	N24	48.0	2.7	56.5	Al Na-ir	27 29.2	S46 49.3
Y	9	314	26.7	S23	11.0	165	52.2	7.9	N24	50.6	2.6	56.5	Alnilam	275 34.1	S 1 11.1
	10	329	26.4	S23	10.9	180	19.0	7.9	N24	53.0	2.4	56.5			
	11	344	26.1	S23	10.7	194	45.8	7.8	N24	55.3	2.3	56.6	Alphard	217 44.3	S 8 47.2
													Alphecca	126 01.3	N26 36.9
	12	359	25.8	S23	10.5	209	12.5	7.7	N24	57.5	2.1	56.6	Alpheratz	357 31.4	N29 15.3
	13	14	25.5	S23	10.4	223	39.2	7.7	N24	59.5	2.0	56.6	Altair	61 57.1	N 8 56.8
	14	29	25.2	S23	10.2	238	05.8	7.6	N25	01.3	1.9	56.7	Ankaa	353 04.0	S42 09.1
	15	44	24.9	S23	10.1	252	32.4	7.6	N25	03.1	1.7	56.7			
	16	59	24.6	S23	09.9	266	58.9	7.5	N25	04.6	1.6	56.7	Antares	112 12.2	S26 29.7
	17	74	24.3	S23	09.7	281	25.3	7.5	N25	06.1	1.4	56.8	Arcturus	145 45.1	N19 01.7
													Atria	107 04.1	S69 04.6
	18	89	24.0	S23	09.6	295	51.7	7.4	N25	07.4	1.3	56.8	Avior	234 12.7	S59 36.1
	19	104	23.7	S23	09.4	310	18.1	7.3	N25	08.5	1.2	56.8	Bellatrix	278 19.1	N 6 22.5
	20	119	23.4	S23	09.2	324	44.4	7.3	N25	09.5	1.0	56.8			
	21	134	23.1	S23	09.1	339	10.6	7.2	N25	10.4	0.9	56.9	Betelgeuse	270 48.2	N 7 24.7
	22	149	22.8	S23	08.9	353	36.8	7.2	N25	11.1	0.7	56.9	Canopus	263 50.4	S52 42.7
	23	164	22.5	S23	08.7	8	03.0	7.2	N25	11.7	0.6	56.9	Capella	280 16.6	N46 01.6
													Castor	245 52.6	N31 49.3
30	0	179	22.2	S23	08.6	22	29.1	7.1	N25	12.1	0.4	57.0	Deneb	49 23.9	N45 23.3
	1	194	21.9	S23	08.4	36	55.2	7.1	N25	12.4	0.3	57.0			
	2	209	21.6	S23	08.2	51	21.2	7.0	N25	12.5	0.1	57.0	Denebola	182 21.6	N14 24.4
	3	224	21.3	S23	08.1	65	47.2	7.0	N25	12.5	0.0	57.0	Diphda	348 44.1	S17 49.7
	4	239	21.0	S23	07.9	80	13.2	7.0	N25	12.3	0.2	57.1	Dubhe	193 36.9	N61 35.2
S	5	254	20.7	S23	07.7	94	39.1	6.9	N25	12.0	0.3	57.1	Elnath	277 57.4	N28 37.8
A													Eltanin	90 41.2	N51 29.0
T	6	269	20.4	S23	07.5	109	05.0	6.9	N25	11.5	0.5	57.1			
U	7	284	20.1	S23	07.4	123	30.8	6.8	N25	10.9	0.6	57.2	Enif	33 35.8	N10 00.6
R	8	299	19.8	S23	07.2	137	56.6	6.8	N25	10.1	0.8	57.2	Fomalhaut	15 11.1	S29 28.2
D	9	314	19.5	S23	07.0	152	22.4	6.8	N25	09.2	0.9	57.2	Gacrux	171 47.9	S57 16.4
A	10	329	19.2	S23	06.8	166	48.2	6.8	N25	08.1	1.1	57.2	Gienah	175 40.2	S17 42.2
Y	11	344	18.9	S23	06.7	181	13.9	6.7	N25	06.9	1.2	57.3	Hadar	148 31.6	S60 30.5
	12	359	18.6	S23	06.5	195	39.6	6.7	N25	05.5	1.4	57.3	Hamal	327 47.4	N23 36.2
	13	14	18.3	S23	06.3	210	05.3	6.7	N25	04.0	1.5	57.3	Kaus Austr.	83 28.7	S34 22.2
	14	29	18.0	S23	06.1	224	31.0	6.7	N25	02.3	1.7	57.4	Kochab	137 21.0	N74 01.8
	15	44	17.7	S23	06.0	238	56.6	6.6	N25	00.4	1.8	57.4	Markab	13 26.8	N15 21.8
	16	59	17.4	S23	05.8	253	22.2	6.6	N24	58.4	2.0	57.4	Menkar	314 02.5	N 4 12.2
	17	74	17.1	S23	05.6	267	47.8	6.6	N24	56.3	2.1	57.4			
													Menkent	147 53.9	S36 30.7
	18	89	16.8	S23	05.4	282	13.4	6.6	N24	54.0	2.3	57.5	Miaplacidus	221 36.6	S69 50.1
	19	104	16.5	S23	05.2	296	39.0	6.6	N24	51.5	2.5	57.5	Mirfak	308 23.2	N49 58.0
	20	119	16.2	S23	05.0	311	04.6	6.6	N24	48.9	2.6	57.5	Nunki	75 44.1	S26 15.5
	21	134	15.9	S23	04.9	325	30.2	6.6	N24	46.2	2.8	57.5	Peacock	53 01.2	S56 38.5
	22	149	15.6	S23	04.7	339	55.7	6.6	N24	43.2	2.9	57.6			
	23	164	15.3	S23	04.5	354	21.2	6.5	N24	40.2	3.1	57.6	Polaris	315 02.9	N89 22.9
													Pollux	243 13.0	N27 57.2
31	0	179	15.1	S23	04.3	8	46.8	6.5	N24	36.9	3.2	57.6	Procyon	244 47.1	N 5 08.9
	1	194	14.8	S23	04.1	23	12.3	6.5	N24	33.6	3.4	57.7	Rasalhague	95 55.9	N12 32.4
	2	209	14.5	S23	03.9	37	37.9	6.5	N24	30.0	3.5	57.7	Regulus	207 30.8	N11 49.3
	3	224	14.2	S23	03.7	52	03.4	6.5	N24	26.4	3.7	57.7			
	4	239	13.9	S23	03.5	66	28.9	6.5	N24	22.5	3.8	57.7	Rigel	281 00.4	S 8 10.2
S	5	254	13.6	S23	03.3	80	54.5	6.5	N24	18.5	4.0	57.8	Rigil Kent	139 36.2	S60 57.1
U													Sabik	101 59.4	S15 45.6
N	6	269	13.3	S23	03.2	95	20.0	6.5	N24	14.4	4.1	57.8	Schedar	349 27.2	N56 42.1
D	7	284	13.0	S23	03.0	109	45.6	6.5	N24	10.1	4.3	57.8	Shaula	96 06.4	S37 07.4
A	8	299	12.7	S23	02.8	124	11.1	6.6	N24	05.7	4.4	57.8			
Y	9	314	12.4	S23	02.6	138	36.7	6.6	N24	01.1	4.6	57.9	Sirius	258 23.0	S16 45.4
	10	329	12.1	S23	02.4	153	02.3	6.6	N23	56.3	4.7	57.9	Spica	158 19.0	S11 18.8
	11	344	11.8	S23	02.2	167	27.9	6.6	N23	51.4	4.9	57.9	Suhail	222 43.5	S43 33.0
													Vega	80 31.5	N38 48.7
	12	359	11.5	S23	02.0	181	53.5	6.6	N23	46.4	5.1	57.9	Zuben-ubi	136 53.6	S16 09.7
	13	14	11.2	S23	01.8	196	19.1	6.6	N23	41.2	5.2	58.0			
	14	29	10.9	S23	01.6	210	44.7	6.6	N23	35.8	5.4	58.0			
	15	44	10.6	S23	01.4	225	10.4	6.7	N23	30.3	5.5	58.0			
	16	59	10.3	S23	01.2	239	36.0	6.7	N23	24.6	5.6	58.1			
	17	74	10.0	S23	01.0	254	01.7	6.7	N23	18.8	5.8	58.1			
	18	89	09.7	S23	00.8	268	27.5	6.7	N23	12.9	5.9	58.1			
	19	104	09.4	S23	00.6	282	53.2	6.7	N23	06.8	6.1	58.1			
	20	119	09.1	S23	00.4	297	19.0	6.8	N23	00.6	6.2	58.1			
	21	134	08.8	S23	00.2	311	44.8	6.8	N22	54.2	6.4	58.2			
	22	149	08.6	S22	60.0	326	10.6	6.8	N22	47.7	6.5	58.2			
	23	164	08.3	S22	59.8	340	36.4	6.9	N22	41.0	6.7	58.2			
		S.D.	16.3	d	0.2	S.D.		15.4		15.6		15.8			