

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 04.0 -00.2	N 23 08.2 -00.2	192 16.3 -00.9	N 23 12.7 +00.1	204 29.2 -33.6	N 19 47.8 +06.3							
01	194 03.8 -00.1	N 23 08.0 -00.1	207 15.4 -00.8	N 23 12.8 +00.2	218 55.6 -33.8	N 19 54.1 +06.2							
02	209 03.7 -00.1	N 23 07.9 -00.2	222 14.6 -00.9	N 23 13.0 +00.2	233 21.8 -33.9	N 20 00.3 +06.1							
03	224 03.6 -00.1	N 23 07.7 -00.2	237 13.7 -00.9	N 23 13.2 +00.2	247 47.9 -33.9	N 20 06.4 +06.0							
04	239 03.5 -00.2	N 23 07.5 -00.1	252 12.8 -00.8	N 23 13.4 +00.1	262 14.0 -34.0	N 20 12.4 +05.8							
05	254 03.3 -00.1	N 23 07.4 -00.2	267 12.0 -00.9	N 23 13.5 +00.2	276 40.0 -34.2	N 20 18.2 +05.8							
06	269 03.2 -00.1	N 23 07.2 -00.1	282 11.1 -00.9	N 23 13.7 +00.2	291 05.8 -34.2	N 20 24.0 +05.6							
07	284 03.1 -00.1	N 23 07.1 -00.2	297 10.2 -00.8	N 23 13.9 +00.1	305 31.6 -34.3	N 20 29.6 +05.5							
08	299 03.0 -00.1	N 23 06.9 -00.2	312 09.4 -00.9	N 23 14.0 +00.2	319 57.3 -34.3	N 20 35.1 +05.4							
09	314 02.9 -00.2	N 23 06.7 -00.1	327 08.5 -00.8	N 23 14.2 +00.2	334 23.0 -34.5	N 20 40.5 +05.3							
10	329 02.7 -00.1	N 23 06.6 -00.2	342 07.7 -00.9	N 23 14.4 +00.1	348 48.5 -34.6	N 20 45.8 +05.1							
11	344 02.6 -00.1	N 23 06.4 -00.2	357 06.8 -00.9	N 23 14.5 +00.2	3 13.9 -34.6	N 20 50.9 +05.0							
12	359 02.5 -00.1	N 23 06.2 -00.1	12 05.9 -00.8	N 23 14.7 +00.2	17 39.3 -34.7	N 20 55.9 +04.9							
13	14 02.4 -00.2	N 23 06.1 -00.2	27 05.1 -00.9	N 23 14.9 +00.1	32 04.6 -34.8	N 21 00.8 +04.7							
14	29 02.2 -00.1	N 23 05.9 -00.2	42 04.2 -00.9	N 23 15.0 +00.2	46 29.8 -34.9	N 21 05.5 +04.6							
15	44 02.1 -00.1	N 23 05.7 -00.2	57 03.3 -00.8	N 23 15.2 +00.1	60 54.9 -34.9	N 21 10.1 +04.5							
16	59 02.0 -00.1	N 23 05.5 -00.1	72 02.5 -00.9	N 23 15.3 +00.2	75 20.0 -35.0	N 21 14.6 +04.3							
17	74 01.9 -00.1	N 23 05.4 -00.2	87 01.6 -00.8	N 23 15.5 +00.1	89 45.0 -35.1	N 21 18.9 +04.2							
18	89 01.8 -00.2	N 23 05.2 -00.2	102 00.8 -00.9	N 23 15.6 +00.2	104 09.9 -35.2	N 21 23.1 +04.1							
19	104 01.6 -00.1	N 23 05.0 -00.1	116 59.9 -00.9	N 23 15.8 +00.2	118 34.7 -35.3	N 21 27.2 +04.0							
20	119 01.5 -00.1	N 23 04.9 -00.2	131 59.0 -00.8	N 23 16.0 +00.1	132 59.4 -35.3	N 21 31.2 +03.8							
21	134 01.4 -00.1	N 23 04.7 -00.2	146 58.2 -00.9	N 23 16.1 +00.2	147 24.1 -35.4	N 21 35.0 +03.6							
22	149 01.3 -00.1	N 23 04.5 -00.2	161 57.3 -00.9	N 23 16.3 +00.1	161 48.7 -35.4	N 21 38.6 +03.6							
23	164 01.2 -00.2	N 23 04.3 -00.1	176 56.4 -00.8	N 23 16.4 +00.2	176 13.3 -35.6	N 21 42.2 +03.3							
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 15'9 16'0 16'0 16'0 16'1 16'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 58'4 58'6 58'7 58'8 58'9 59'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 260° 260° 260° 260° 260° 259°	SHA 273° 273° 273° 273° 273° 272°	SHA 273° 273° 273° 273° 273° 272°	SHA 285° 282° 280° 277° 275° 272°	SHA 238° 238° 238° 238° 238° 238°	SHA 104° 104° 104° 104° 104° 104°	SHA 071° 071° 071° 071° 071° 071°						
	Greenwich Culmination Time: 12:03	Greenwich Culmination Time: 11:11	Greenwich Culmination Time: 10:46		Greenwich Culmination Time: 13:31	Greenwich Culmination Time: 22:24	Greenwich Culmination Time: 00:42						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	156 57.5 +00.8	N 21 25.8 -00.3	22 49.6 +02.7	S 22 16.2 +00.0	349 27.6 +02.7	S 21 55.1 +00.0							
01	171 58.3 +00.8	N 21 25.5 -00.3	37 52.3 +02.8	S 22 16.2 +00.0	4 30.3 +02.7	S 21 55.1 +00.0							
02	186 59.1 +00.8	N 21 25.2 -00.4	52 55.1 +02.8	S 22 16.2 +00.0	19 33.0 +02.6	S 21 55.1 +00.0							
03	201 59.9 +00.8	N 21 24.8 -00.3	67 57.9 +02.7	S 22 16.2 +00.0	34 35.6 +02.7	S 21 55.1 +00.1							
04	217 00.7 +00.8	N 21 24.5 -00.3	83 00.6 +02.8	S 22 16.2 -00.1	49 38.3 +02.6	S 21 55.2 +00.0							
05	232 01.5 +00.8	N 21 24.2 -00.4	98 03.4 +02.7	S 22 16.1 +00.0	64 40.9 +02.7	S 21 55.2 +00.0							
06	247 02.3 +00.8	N 21 23.8 -00.3	113 06.1 +02.8	S 22 16.1 +00.0	79 43.6 +02.6	S 21 55.2 +00.0							
07	262 03.1 +00.8	N 21 23.5 -00.3	128 08.9 +02.8	S 22 16.1 +00.0	94 46.2 +02.7	S 21 55.2 +00.1							
08	277 03.9 +00.8	N 21 23.2 -00.4	143 11.7 +02.7	S 22 16.1 +00.0	109 48.9 +02.7	S 21 55.3 +00.0							
09	292 04.7 +00.8	N 21 22.8 -00.3	158 14.4 +02.8	S 22 16.1 -00.1	124 51.6 +02.6	S 21 55.3 +00.0							
10	307 05.5 +00.8	N 21 22.5 -00.4	173 17.2 +02.7	S 22 16.0 +00.0	139 54.2 +02.7	S 21 55.3 +00.1							
11	322 06.3 +00.8	N 21 22.1 -00.3	188 19.9 +02.8	S 22 16.0 +00.0	154 56.9 +02.6	S 21 55.4 +00.0							
12	337 07.1 +00.7	N 21 21.8 -00.3	203 22.7 +02.8	S 22 16.0 +00.0	169 59.5 +02.7	S 21 55.4 +00.0							
13	352 07.8 +00.8	N 21 21.5 -00.4	218 25.5 +02.7	S 22 16.0 +00.0	185 02.2 +02.6	S 21 55.4 +00.0							
14	7 08.6 +00.8	N 21 21.1 -00.3	233 28.2 +02.8	S 22 16.0 -00.1	200 04.8 +02.7	S 21 55.4 +00.1							
15	22 09.4 +00.8	N 21 20.8 -00.3	248 31.0 +02.7	S 22 15.9 +00.0	215 07.5 +02.7	S 21 55.5 +00.0							
16	37 10.2 +00.8	N 21 20.5 -00.4	263 33.7 +02.8	S 22 15.9 +00.0	230 10.2 +02.6	S 21 55.5 +00.0							
17	52 11.0 +00.8	N 21 20.1 -00.3	278 36.5 +02.8	S 22 15.9 +00.0	245 12.8 +02.7	S 21 55.5 +00.0							
18	67 11.8 +00.8	N 21 19.8 -00.4	293 39.3 +02.7	S 22 15.9 +00.0	260 15.5 +02.6	S 21 55.5 +00.1							
19	82 12.6 +00.8	N 21 19.4 -00.3	308 42.0 +02.8	S 22 15.9 -00.1	275 18.1 +02.7	S 21 55.6 +00.0							
20	97 13.4 +00.8	N 21 19.1 -00.3	323 44.8 +02.7	S 22 15.8 +00.0	290 20.8 +02.6	S 21 55.6 +00.0							
21	112 14.2 +00.8	N 21 18.8 -00.4	338 47.5 +02.8	S 22 15.8 +00.0	305 23.4 +02.7	S 21 55.6 +00.1							
22	127 15.0 +00.8	N 21 18.4 -00.3	353 50.3 +02.7	S 22 15.8 +00.0	320 26.1 +02.7	S 21 55.7 +00.0							
23	142 15.8 +00.8	N 21 18.1 -00.3	8 53.0 +02.8	S 22 15.8 +00.0	335 28.8 +02.6	S 21 55.7 +00.0							
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	SD 00'4 00'4 00'4 00'4 00'4 00'4	SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 238° 238° 238° 238° 238° 238°	SHA 104° 104° 104° 104° 104° 104°	SHA 071° 071° 071° 071° 071° 071°		SHA 238° 238° 238° 238° 238° 238°	SHA 104° 104° 104° 104° 104° 104°	SHA 071° 071° 071° 071° 071° 071°						
	Greenwich Culmination Time: 13:31	Greenwich Culmination Time: 22:24	Greenwich Culmination Time: 00:42		Greenwich Culmination Time: 13:31	Greenwich Culmination Time: 22:24	Greenwich Culmination Time: 00:42						

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 01.0 -00.1	N 23 04.2 -00.2	191 55.6 -00.9	N 23 16.6 +00.1	190 37.7 -35.5	N 21 45.5 +03.3	00							
01	194 00.9 -00.1	N 23 04.0 -00.2	206 54.7 -00.9	N 23 16.7 +00.2	205 02.2 -35.7	N 21 48.8 +03.1	01							
02	209 00.8 -00.1	N 23 03.8 -00.2	221 53.8 -00.8	N 23 16.9 +00.1	219 26.5 -35.7	N 21 51.9 +02.9	02							
03	224 00.7 -00.1	N 23 03.6 -00.2	236 53.0 -00.9	N 23 17.0 +00.1	233 50.8 -35.8	N 21 54.8 +02.8	03							
04	239 00.6 -00.2	N 23 03.4 -00.1	251 52.1 -00.8	N 23 17.1 +00.2	248 15.0 -35.9	N 21 57.6 +02.7	04							
05	254 00.4 -00.1	N 23 03.3 -00.2	266 51.3 -00.9	N 23 17.3 +00.1	262 39.1 -35.9	N 22 00.3 +02.5	05							
06	269 00.3 -00.1	N 23 03.1 -00.2	281 50.4 -00.9	N 23 17.4 +00.2	277 03.2 -35.9	N 22 02.8 +02.4	06							
07	284 00.2 -00.1	N 23 02.9 -00.2	296 49.5 -00.8	N 23 17.6 +00.1	291 27.3 -36.0	N 22 05.2 +02.2	07							
08	299 00.1 -00.1	N 23 02.7 -00.2	311 48.7 -00.9	N 23 17.7 +00.1	305 51.3 -36.1	N 22 07.4 +02.1	08							
09	313 60.0 -00.2	N 23 02.5 -00.1	326 47.8 -00.9	N 23 17.8 +00.2	320 15.2 -36.1	N 22 09.5 +01.9	09							
10	328 59.8 -00.1	N 23 02.4 -00.2	341 46.9 -00.8	N 23 18.0 +00.1	334 39.1 -36.2	N 22 11.4 +01.8	10							
11	343 59.7 -00.1	N 23 02.2 -00.2	356 46.1 -00.9	N 23 18.1 +00.2	349 02.9 -36.2	N 22 13.2 +01.7	11							
12	358 59.6 -00.1	N 23 02.0 -00.2	11 45.2 -00.9	N 23 18.3 +00.1	3 26.7 -36.3	N 22 14.9 +01.4	12							
13	13 59.5 -00.1	N 23 01.8 -00.2	26 44.3 -00.8	N 23 18.4 +00.1	17 50.4 -36.3	N 22 16.3 +01.4	13							
14	28 59.4 -00.2	N 23 01.6 -00.2	41 43.5 -00.9	N 23 18.5 +00.2	32 14.1 -36.4	N 22 17.7 +01.1	14							
15	43 59.2 -00.1	N 23 01.4 -00.2	56 42.6 -00.9	N 23 18.7 +00.1	46 37.7 -36.3	N 22 18.8 +01.0	15							
16	58 59.1 -00.1	N 23 01.2 -00.1	71 41.7 -00.8	N 23 18.8 +00.1	61 01.4 -36.5	N 22 19.8 +00.9	16							
17	73 59.0 -00.1	N 23 01.1 -00.2	86 40.9 -00.9	N 23 18.9 +00.1	75 24.9 -36.5	N 22 20.7 +00.7	17							
18	88 58.9 -00.1	N 23 00.9 -00.2	101 40.0 -00.9	N 23 19.0 +00.2	89 48.4 -36.5	N 22 21.4 +00.6	18							
19	103 58.8 -00.2	N 23 00.7 -00.2	116 39.1 -00.8	N 23 19.2 +00.1	104 11.9 -36.5	N 22 22.0 +00.4	19							
20	118 58.6 -00.1	N 23 00.5 -00.2	131 38.3 -00.9	N 23 19.3 +00.1	118 35.4 -36.6	N 22 22.4 +00.2	20							
21	133 58.5 -00.1	N 23 00.3 -00.2	146 37.4 -00.9	N 23 19.4 +00.1	132 58.8 -36.6	N 22 22.6 +00.1	21							
22	148 58.4 -00.1	N 23 00.1 -00.2	161 36.5 -00.8	N 23 19.5 +00.2	147 22.2 -36.6	N 22 22.7 +00.0	22							
23	163 58.3 -00.1	N 22 59.9 -00.2	176 35.7 -00.9	N 23 19.7 +00.1	161 45.6 -36.7	N 22 22.7 -00.3	23							
UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 259° 259° 259° 259° 258° 258°	Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 272° 272° 272° 271° 271° 271°	Greenwich Culmination Time: 11:12	UT 02 06 10 14 18 22	SD 16'1 16'1 16'2 16'2 16'2 16'3	HP 59'2 59'3 59'4 59'5 59'6 59'7	SHA 270° 267° 264° 262° 259° 257°	Greenwich Culmination Time: 11:45

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	157 16.6 +00.8	N 21 17.8 -00.4	23 55.8 +02.8	S 22 15.8 -00.1	350 31.4 +02.7	S 21 55.7 +00.0	00							
01	172 17.4 +00.8	N 21 17.4 -00.3	38 58.6 +02.7	S 22 15.7 +00.0	5 34.1 +02.6	S 21 55.7 +00.1	01							
02	187 18.2 +00.8	N 21 17.1 -00.4	54 01.3 +02.8	S 22 15.7 +00.0	20 36.7 +02.7	S 21 55.8 +00.0	02							
03	202 19.0 +00.8	N 21 16.7 -00.3	69 04.1 +02.7	S 22 15.7 +00.0	35 39.4 +02.6	S 21 55.8 +00.0	03							
04	217 19.8 +00.8	N 21 16.4 -00.4	84 06.8 +02.8	S 22 15.7 +00.0	50 42.0 +02.7	S 21 55.8 +00.0	04							
05	232 20.6 +00.8	N 21 16.0 -00.3	99 09.6 +02.7	S 22 15.7 -00.1	65 44.7 +02.7	S 21 55.8 +00.1	05							
06	247 21.4 +00.8	N 21 15.7 -00.3	114 12.3 +02.8	S 22 15.6 +00.0	80 47.4 +02.6	S 21 55.9 +00.0	06							
07	262 22.2 +00.8	N 21 15.4 -00.4	129 15.1 +02.7	S 22 15.6 +00.0	95 50.0 +02.7	S 21 55.9 +00.0	07							
08	277 23.0 +00.8	N 21 15.0 -00.3	144 17.8 +02.8	S 22 15.6 +00.0	110 52.7 +02.6	S 21 55.9 +00.1	08							
09	292 23.8 +00.8	N 21 14.7 -00.4	159 20.6 +02.8	S 22 15.6 +00.0	125 55.3 +02.7	S 21 56.0 +00.0	09							
10	307 24.6 +00.8	N 21 14.3 -00.3	174 23.4 +02.7	S 22 15.6 -00.1	140 58.0 +02.7	S 21 56.0 +00.0	10							
11	322 25.4 +00.8	N 21 14.0 -00.3	189 26.1 +02.8	S 22 15.5 +00.0	156 00.7 +02.6	S 21 56.0 +00.0	11							
12	337 26.2 +00.8	N 21 13.7 -00.4	204 28.9 +02.7	S 22 15.5 +00.0	171 03.3 +02.7	S 21 56.0 +00.1	12							
13	352 27.0 +00.8	N 21 13.3 -00.3	219 31.6 +02.8	S 22 15.5 +00.0	186 06.0 +02.6	S 21 56.1 +00.0	13							
14	7 27.8 +00.8	N 21 13.0 -00.4	234 34.4 +02.7	S 22 15.5 +00.0	201 08.6 +02.7	S 21 56.1 +00.0	14							
15	22 28.6 +00.8	N 21 12.6 -00.3	249 37.1 +02.8	S 22 15.5 -00.1	216 11.3 +02.6	S 21 56.1 +00.0	15							
16	37 29.4 +00.8	N 21 12.3 -00.4	264 39.9 +02.7	S 22 15.4 +00.0	231 13.9 +02.7	S 21 56.1 +00.1	16							
17	52 30.2 +00.8	N 21 11.9 -00.3	279 42.6 +02.8	S 22 15.4 +00.0	246 16.6 +02.7	S 21 56.2 +00.0	17							
18	67 31.0 +00.8	N 21 11.6 -00.4	294 45.4 +02.7	S 22 15.4 +00.0	261 19.3 +02.6	S 21 56.2 +00.0	18							
19	82 31.8 +00.8	N 21 11.2 -00.3	309 48.1 +02.8	S 22 15.4 +00.0	276 21.9 +02.7	S 21 56.2 +00.1	19							
20	97 32.6 +00.8	N 21 10.9 -00.3	324 50.9 +02.7	S 22 15.4 +00.0	291 24.6 +02.6	S 21 56.3 +00.0	20							
21	112 33.4 +00.8	N 21 10.6 -00.4	339 53.6 +02.8	S 22 15.4 -00.1	306 27.2 +02.7	S 21 56.3 +00.0	21							
22	127 34.2 +00.8	N 21 10.2 -00.3	354 56.4 +02.8	S 22 15.3 +00.0	321 29.9 +02.6	S 21 56.3 +00.0	22							
23	142 35.0 +00.8	N 21 09.9 -00.4	9 59.2 +02.7	S 22 15.3 +00.0	336 32.5 +02.7	S 21 56.3 +00.1	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 237° 237° 237° 237° 237° 237°	Greenwich Culmination Time: 13:30	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 104° 104° 104° 104° 104° 104°	Greenwich Culmination Time: 22:20	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 071° 071° 071° 071° 071° 071°	Greenwich Culmination Time: 00:37

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 58.2 -00.1	N 22 59.7 -00.2	191 34.8 -00.9	N 23 19.8 +00.1	176 08.9 -36.7	N 22 22.4 -00.4	00						
01	193 58.1 -00.2	N 22 59.5 -00.2	206 33.9 -00.8	N 23 19.9 +00.1	190 32.2 -36.7	N 22 22.0 -00.5	01						
02	208 57.9 -00.1	N 22 59.3 -00.2	221 33.1 -00.9	N 23 20.0 +00.1	204 55.5 -36.7	N 22 21.5 -00.7	02						
03	223 57.8 -00.1	N 22 59.1 -00.2	236 32.2 -00.9	N 23 20.1 +00.2	219 18.8 -36.7	N 22 20.8 -00.8	03						
04	238 57.7 -00.1	N 22 58.9 -00.2	251 31.3 -00.8	N 23 20.3 +00.1	233 42.1 -36.8	N 22 20.0 -01.0	04						
05	253 57.6 -00.1	N 22 58.7 -00.1	266 30.5 -00.9	N 23 20.4 +00.1	248 05.3 -36.8	N 22 19.0 -01.2	05						
06	268 57.5 -00.1	N 22 58.6 -00.2	281 29.6 -00.9	N 23 20.5 +00.1	262 28.5 -36.8	N 22 17.8 -01.3	06						
07	283 57.4 -00.2	N 22 58.4 -00.2	296 28.7 -00.9	N 23 20.6 +00.1	276 51.7 -36.8	N 22 16.5 -01.5	07						
08	298 57.2 -00.1	N 22 58.2 -00.2	311 27.8 -00.8	N 23 20.7 +00.1	291 14.9 -36.8	N 22 15.0 -01.7	08						
09	313 57.1 -00.1	N 22 58.0 -00.2	326 27.0 -00.9	N 23 20.8 +00.1	305 38.1 -36.8	N 22 13.3 -01.8	09						
10	328 57.0 -00.1	N 22 57.8 -00.2	341 26.1 -00.9	N 23 20.9 +00.1	320 01.3 -36.8	N 22 11.5 -01.9	10						
11	343 56.9 -00.1	N 22 57.6 -00.2	356 25.2 -00.8	N 23 21.0 +00.1	334 24.5 -36.8	N 22 09.6 -02.1	11						
12	358 56.8 -00.1	N 22 57.4 -00.2	11 24.4 -00.9	N 23 21.1 +00.1	348 47.7 -36.8	N 22 07.5 -02.3	12						
13	13 56.7 -00.2	N 22 57.2 -00.3	26 23.5 -00.9	N 23 21.2 +00.2	3 10.9 -36.8	N 22 05.2 -02.4	13						
14	28 56.5 -00.1	N 22 56.9 -00.2	41 22.6 -00.8	N 23 21.4 +00.1	17 34.1 -36.8	N 22 02.8 -02.6	14						
15	43 56.4 -00.1	N 22 56.7 -00.2	56 21.8 -00.9	N 23 21.5 +00.1	31 57.3 -36.8	N 22 00.2 -02.8	15						
16	58 56.3 -00.1	N 22 56.5 -00.2	71 20.9 -00.9	N 23 21.6 +00.1	46 20.5 -36.8	N 21 57.4 -02.9	16						
17	73 56.2 -00.1	N 22 56.3 -00.2	86 20.0 -00.8	N 23 21.7 +00.1	60 43.7 -36.8	N 21 54.5 -03.0	17						
18	88 56.1 -00.1	N 22 56.1 -00.2	101 19.2 -00.9	N 23 21.8 +00.1	75 06.9 -36.8	N 21 51.5 -03.3	18						
19	103 56.0 -00.1	N 22 55.9 -00.2	116 18.3 -00.9	N 23 21.9 +00.1	89 30.1 -36.8	N 21 48.2 -03.3	19						
20	118 55.9 -00.2	N 22 55.7 -00.2	131 17.4 -00.9	N 23 22.0 +00.1	103 53.3 -36.7	N 21 44.9 -03.6	20						
21	133 55.7 -00.1	N 22 55.5 -00.2	146 16.5 -00.8	N 23 22.1 +00.0	118 16.6 -36.7	N 21 41.3 -03.6	21						
22	148 55.6 -00.1	N 22 55.3 -00.2	161 15.7 -00.9	N 23 22.1 +00.1	132 39.9 -36.7	N 21 37.7 -03.9	22						
23	163 55.5 -00.1	N 22 55.1 -00.2	176 14.8 -00.9	N 23 22.2 +00.1	147 03.2 -36.7	N 21 33.8 -04.0	23						
	UT 02 06 10 14 18 22 SD 15'7 15'7 15'7 15'7 15'7 15'7 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 258° 258° 258° 258° 257° 257° Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 271° 271° 270° 270° 270° 270° Greenwich Culmination Time: 11:14	UT 02 06 10 14 18 22 SD 16'3 16'3 16'3 16'3 16'4 16'4 HP 59'7 59'8 59'9 60'0 60'0 60'1 SHA 254° 251° 249° 246° 244° 241° Greenwich Culmination Time: 12:46										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	157 35.8 +00.8	N 21 09.5 -00.3	25 01.9 +02.8	S 22 15.3 +00.0	351 35.2 +02.7	S 21 56.4 +00.0	00						
01	172 36.6 +00.8	N 21 09.2 -00.4	40 04.7 +02.7	S 22 15.3 +00.0	6 37.9 +02.6	S 21 56.4 +00.0	01						
02	187 37.4 +00.8	N 21 08.8 -00.3	55 07.4 +02.8	S 22 15.3 -00.1	21 40.5 +02.7	S 21 56.4 +00.0	02						
03	202 38.2 +00.8	N 21 08.5 -00.4	70 10.2 +02.7	S 22 15.2 +00.0	36 43.2 +02.6	S 21 56.4 +00.1	03						
04	217 39.0 +00.8	N 21 08.1 -00.3	85 12.9 +02.8	S 22 15.2 +00.0	51 45.8 +02.7	S 21 56.5 +00.0	04						
05	232 39.8 +00.8	N 21 07.8 -00.4	100 15.7 +02.7	S 22 15.2 +00.0	66 48.5 +02.7	S 21 56.5 +00.0	05						
06	247 40.6 +00.8	N 21 07.4 -00.3	115 18.4 +02.8	S 22 15.2 +00.0	81 51.2 +02.6	S 21 56.5 +00.1	06						
07	262 41.4 +00.8	N 21 07.1 -00.4	130 21.2 +02.7	S 22 15.2 -00.1	96 53.8 +02.7	S 21 56.6 +00.0	07						
08	277 42.2 +00.8	N 21 06.7 -00.3	145 23.9 +02.8	S 22 15.1 +00.0	111 56.5 +02.6	S 21 56.6 +00.0	08						
09	292 43.0 +00.8	N 21 06.4 -00.4	160 26.7 +02.7	S 22 15.1 +00.0	126 59.1 +02.7	S 21 56.6 +00.0	09						
10	307 43.8 +00.8	N 21 06.0 -00.3	175 29.4 +02.8	S 22 15.1 +00.0	142 01.8 +02.7	S 21 56.6 +00.1	10						
11	322 44.6 +00.8	N 21 05.7 -00.4	190 32.2 +02.7	S 22 15.1 +00.0	157 04.5 +02.6	S 21 56.7 +00.0	11						
12	337 45.4 +00.8	N 21 05.3 -00.3	205 34.9 +02.8	S 22 15.1 -00.1	172 07.1 +02.7	S 21 56.7 +00.0	12						
13	352 46.2 +00.8	N 21 05.0 -00.4	220 37.7 +02.7	S 22 15.0 +00.0	187 09.8 +02.6	S 21 56.7 +00.0	13						
14	7 47.0 +00.8	N 21 04.6 -00.3	235 40.4 +02.8	S 22 15.0 +00.0	202 12.4 +02.7	S 21 56.7 +00.1	14						
15	22 47.8 +00.8	N 21 04.3 -00.4	250 43.2 +02.7	S 22 15.0 +00.0	217 15.1 +02.6	S 21 56.8 +00.0	15						
16	37 48.6 +00.8	N 21 03.9 -00.3	265 45.9 +02.8	S 22 15.0 +00.0	232 17.7 +02.7	S 21 56.8 +00.0	16						
17	52 49.4 +00.8	N 21 03.6 -00.4	280 48.7 +02.7	S 22 15.0 +00.0	247 20.4 +02.7	S 21 56.8 +00.1	17						
18	67 50.2 +00.8	N 21 03.2 -00.3	295 51.4 +02.8	S 22 15.0 -00.1	262 23.1 +02.6	S 21 56.9 +00.0	18						
19	82 51.0 +00.8	N 21 02.9 -00.4	310 54.2 +02.7	S 22 14.9 +00.0	277 25.7 +02.7	S 21 56.9 +00.0	19						
20	97 51.8 +00.8	N 21 02.5 -00.3	325 56.9 +02.7	S 22 14.9 +00.0	292 28.4 +02.6	S 21 56.9 +00.0	20						
21	112 52.6 +00.8	N 21 02.2 -00.4	340 59.6 +02.8	S 22 14.9 +00.0	307 31.0 +02.7	S 21 56.9 +00.1	21						
22	127 53.4 +00.8	N 21 01.8 -00.3	356 02.4 +02.7	S 22 14.9 +00.0	322 33.7 +02.7	S 21 57.0 +00.0	22						
23	142 54.2 +00.8	N 21 01.5 -00.4	11 05.1 +02.8	S 22 14.9 -00.1	337 36.4 +02.6	S 21 57.0 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 237° 237° 237° 236° 236° 236° Greenwich Culmination Time: 13:28	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 104° 104° 104° 104° 104° 104° Greenwich Culmination Time: 22:15	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 071° 071° 071° 071° 071° 071° Greenwich Culmination Time: 00:33										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 55.4 -00.1	N 22 54.9 -00.2	191 13.9 -00.8	N 23 22.3 +00.1	161 26.5 -36.7	N 21 29.8 -04.1	00						
01	193 55.3 -00.1	N 22 54.7 -00.2	206 13.1 -00.9	N 23 22.4 +00.1	175 49.8 -36.6	N 21 25.7 -04.3	01						
02	208 55.2 -00.2	N 22 54.5 -00.2	221 12.2 -00.9	N 23 22.5 +00.1	190 13.2 -36.7	N 21 21.4 -04.4	02						
03	223 55.0 -00.1	N 22 54.3 -00.3	236 11.3 -00.8	N 23 22.6 +00.1	204 36.5 -36.5	N 21 17.0 -04.6	03						
04	238 54.9 -00.1	N 22 54.0 -00.2	251 10.5 -00.9	N 23 22.7 +00.1	218 60.0 -36.6	N 21 12.4 -04.8	04						
05	253 54.8 -00.1	N 22 53.8 -00.2	266 09.6 -00.9	N 23 22.8 +00.1	233 23.4 -36.5	N 21 07.6 -04.9	05						
06	268 54.7 -00.1	N 22 53.6 -00.2	281 08.7 -00.9	N 23 22.9 +00.0	247 46.9 -36.5	N 21 02.7 -05.0	06						
07	283 54.6 -00.1	N 22 53.4 -00.2	296 07.8 -00.8	N 23 22.9 +00.1	262 10.4 -36.5	N 20 57.7 -05.2	07						
08	298 54.5 -00.1	N 22 53.2 -00.2	311 07.0 -00.9	N 23 23.0 +00.1	276 33.9 -36.4	N 20 52.5 -05.4	08						
09	313 54.4 -00.1	N 22 53.0 -00.2	326 06.1 -00.9	N 23 23.1 +00.1	290 57.5 -36.4	N 20 47.1 -05.5	09						
10	328 54.3 -00.2	N 22 52.8 -00.3	341 05.2 -00.8	N 23 23.2 +00.1	305 21.1 -36.3	N 20 41.6 -05.6	10						
11	343 54.1 -00.1	N 22 52.5 -00.2	356 04.4 -00.9	N 23 23.3 +00.0	319 44.8 -36.3	N 20 36.0 -05.8	11						
12	358 54.0 -00.1	N 22 52.3 -00.2	11 03.5 -00.9	N 23 23.3 +00.1	334 08.5 -36.3	N 20 30.2 -05.9	12						
13	13 53.9 -00.1	N 22 52.1 -00.2	26 02.6 -00.9	N 23 23.4 +00.1	348 32.2 -36.2	N 20 24.3 -06.1	13						
14	28 53.8 -00.1	N 22 51.9 -00.2	41 01.7 -00.8	N 23 23.5 +00.1	2 56.0 -36.2	N 20 18.2 -06.2	14						
15	43 53.7 -00.1	N 22 51.7 -00.3	56 00.9 -00.9	N 23 23.6 +00.0	17 19.8 -36.1	N 20 12.0 -06.4	15						
16	58 53.6 -00.1	N 22 51.4 -00.2	70 60.0 -00.9	N 23 23.6 +00.1	31 43.7 -36.1	N 20 05.6 -06.5	16						
17	73 53.5 -00.1	N 22 51.2 -00.2	85 59.1 -00.9	N 23 23.7 +00.1	46 07.6 -36.0	N 19 59.1 -06.6	17						
18	88 53.4 -00.2	N 22 51.0 -00.2	100 58.2 -00.8	N 23 23.8 +00.1	60 31.6 -36.0	N 19 52.5 -06.8	18						
19	103 53.2 -00.1	N 22 50.8 -00.2	115 57.4 -00.9	N 23 23.9 +00.0	74 55.6 -35.9	N 19 45.7 -06.9	19						
20	118 53.1 -00.1	N 22 50.6 -00.3	130 56.5 -00.9	N 23 23.9 +00.1	89 19.7 -35.9	N 19 38.8 -07.0	20						
21	133 53.0 -00.1	N 22 50.3 -00.2	145 55.6 -00.8	N 23 24.0 +00.1	103 43.8 -35.8	N 19 31.8 -07.2	21						
22	148 52.9 -00.1	N 22 50.1 -00.2	160 54.8 -00.9	N 23 24.1 +00.0	118 08.0 -35.7	N 19 24.6 -07.3	22						
23	163 52.8 -00.1	N 22 49.9 -00.2	175 53.9 -00.9	N 23 24.1 +00.1	132 32.3 -35.7	N 19 17.3 -07.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'4 16'4 16'4 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'1 60'2 60'2 60'2 60'2 60'2								
	SHA 257° 257° 257° 257° 256° 256°		SHA 269° 269° 269° 269° 269° 268°		SHA 238° 236° 233° 231° 228° 226°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 11:15		Greenwich Culmination Time: 13:47								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	157 55.0 +00.8	N 21 01.1 -00.3	26 07.9 +02.7	S 22 14.8 +00.0	352 39.0 +02.7	S 21 57.0 +00.0	00						
01	172 55.8 +00.8	N 21 00.8 -00.4	41 10.6 +02.8	S 22 14.8 +00.0	7 41.7 +02.6	S 21 57.0 +00.1	01						
02	187 56.6 +00.8	N 21 00.4 -00.3	56 13.4 +02.7	S 22 14.8 +00.0	22 44.3 +02.7	S 21 57.1 +00.0	02						
03	202 57.4 +00.8	N 21 00.1 -00.4	71 16.1 +02.8	S 22 14.8 +00.0	37 47.0 +02.7	S 21 57.1 +00.0	03						
04	217 58.2 +00.8	N 20 59.7 -00.3	86 18.9 +02.7	S 22 14.8 -00.1	52 49.7 +02.6	S 21 57.1 +00.1	04						
05	232 59.0 +00.8	N 20 59.4 -00.4	101 21.6 +02.8	S 22 14.7 +00.0	67 52.3 +02.7	S 21 57.2 +00.0	05						
06	247 59.8 +00.8	N 20 59.0 -00.3	116 24.4 +02.7	S 22 14.7 +00.0	82 55.0 +02.6	S 21 57.2 +00.0	06						
07	263 00.6 +00.8	N 20 58.7 -00.4	131 27.1 +02.8	S 22 14.7 +00.0	97 57.6 +02.7	S 21 57.2 +00.0	07						
08	278 01.4 +00.8	N 20 58.3 -00.3	146 29.9 +02.7	S 22 14.7 +00.0	113 00.3 +02.7	S 21 57.2 +00.1	08						
09	293 02.2 +00.8	N 20 58.0 -00.4	161 32.6 +02.7	S 22 14.7 +00.0	128 03.0 +02.6	S 21 57.3 +00.0	09						
10	308 03.0 +00.8	N 20 57.6 -00.4	176 35.3 +02.8	S 22 14.7 -00.1	143 05.6 +02.7	S 21 57.3 +00.0	10						
11	323 03.8 +00.9	N 20 57.2 -00.3	191 38.1 +02.7	S 22 14.6 +00.0	158 08.3 +02.6	S 21 57.3 +00.0	11						
12	338 04.7 +00.8	N 20 56.9 -00.4	206 40.8 +02.8	S 22 14.6 +00.0	173 10.9 +02.7	S 21 57.3 +00.1	12						
13	353 05.5 +00.8	N 20 56.5 -00.3	221 43.6 +02.7	S 22 14.6 +00.0	188 13.6 +02.7	S 21 57.4 +00.0	13						
14	8 06.3 +00.8	N 20 56.2 -00.4	236 46.3 +02.8	S 22 14.6 +00.0	203 16.3 +02.6	S 21 57.4 +00.0	14						
15	23 07.1 +00.8	N 20 55.8 -00.3	251 49.1 +02.7	S 22 14.6 -00.1	218 18.9 +02.7	S 21 57.4 +00.0	15						
16	38 07.9 +00.8	N 20 55.5 -00.4	266 51.8 +02.8	S 22 14.5 +00.0	233 21.6 +02.6	S 21 57.4 +00.1	16						
17	53 08.7 +00.8	N 20 55.1 -00.3	281 54.6 +02.7	S 22 14.5 +00.0	248 24.2 +02.7	S 21 57.5 +00.0	17						
18	68 09.5 +00.8	N 20 54.8 -00.4	296 57.3 +02.7	S 22 14.5 +00.0	263 26.9 +02.6	S 21 57.5 +00.0	18						
19	83 10.3 +00.8	N 20 54.4 -00.4	312 00.0 +02.8	S 22 14.5 +00.0	278 29.5 +02.7	S 21 57.5 +00.1	19						
20	98 11.1 +00.8	N 20 54.0 -00.3	327 02.8 +02.7	S 22 14.5 -00.1	293 32.2 +02.7	S 21 57.6 +00.0	20						
21	113 11.9 +00.8	N 20 53.7 -00.4	342 05.5 +02.8	S 22 14.4 +00.0	308 34.9 +02.6	S 21 57.6 +00.0	21						
22	128 12.7 +00.8	N 20 53.3 -00.3	357 08.3 +02.7	S 22 14.4 +00.0	323 37.5 +02.7	S 21 57.6 +00.0	22						
23	143 13.5 +00.8	N 20 53.0 -00.4	12 11.0 +02.8	S 22 14.4 +00.0	338 40.2 +02.6	S 21 57.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 236° 236° 236° 236° 236° 236°		SHA 104° 104° 104° 104° 105° 105°		SHA 071° 071° 071° 071° 071° 071°								
	Greenwich Culmination Time: 13:27		Greenwich Culmination Time: 22:11		Greenwich Culmination Time: 00:29								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 52.7 -00.1	N 22 49.7 -00.3	190 53.0 -00.9	N 23 24.2 +00.1	146 56.6 -35.7	N 19 09.8 -07.5	00						
01	193 52.6 -00.1	N 22 49.4 -00.2	205 52.1 -00.8	N 23 24.3 +00.0	161 20.9 -35.6	N 19 02.3 -07.7	01						
02	208 52.5 -00.1	N 22 49.2 -00.2	220 51.3 -00.9	N 23 24.3 +00.1	175 45.3 -35.5	N 18 54.6 -07.9	02						
03	223 52.4 -00.2	N 22 49.0 -00.3	235 50.4 -00.9	N 23 24.4 +00.0	190 09.8 -35.5	N 18 46.7 -07.9	03						
04	238 52.2 -00.1	N 22 48.7 -00.2	250 49.5 -00.9	N 23 24.4 +00.1	204 34.3 -35.4	N 18 38.8 -08.1	04						
05	253 52.1 -00.1	N 22 48.5 -00.2	265 48.6 -00.8	N 23 24.5 +00.1	218 58.9 -35.3	N 18 30.7 -08.3	05						
06	268 52.0 -00.1	N 22 48.3 -00.3	280 47.8 -00.9	N 23 24.6 +00.0	233 23.6 -35.3	N 18 22.4 -08.3	06						
07	283 51.9 -00.1	N 22 48.0 -00.2	295 46.9 -00.9	N 23 24.6 +00.1	247 48.3 -35.2	N 18 14.1 -08.4	07						
08	298 51.8 -00.1	N 22 47.8 -00.2	310 46.0 -00.8	N 23 24.7 +00.0	262 13.1 -35.2	N 18 05.7 -08.6	08						
09	313 51.7 -00.1	N 22 47.6 -00.2	325 45.2 -00.9	N 23 24.7 +00.1	276 37.9 -35.0	N 17 57.1 -08.7	09						
10	328 51.6 -00.1	N 22 47.4 -00.3	340 44.3 -00.9	N 23 24.8 +00.0	291 02.9 -35.1	N 17 48.4 -08.8	10						
11	343 51.5 -00.1	N 22 47.1 -00.2	355 43.4 -00.9	N 23 24.8 +00.1	305 27.8 -34.9	N 17 39.6 -09.0	11						
12	358 51.4 -00.1	N 22 46.9 -00.3	10 42.5 -00.8	N 23 24.9 +00.0	319 52.9 -34.9	N 17 30.6 -09.0	12						
13	13 51.3 -00.2	N 22 46.6 -00.2	25 41.7 -00.9	N 23 24.9 +00.1	334 18.0 -34.8	N 17 21.6 -09.2	13						
14	28 51.1 -00.1	N 22 46.4 -00.2	40 40.8 -00.9	N 23 25.0 +00.0	348 43.2 -34.8	N 17 12.4 -09.3	14						
15	43 51.0 -00.1	N 22 46.2 -00.3	55 39.9 -00.9	N 23 25.0 +00.1	3 08.4 -34.6	N 17 03.1 -09.4	15						
16	58 50.9 -00.1	N 22 45.9 -00.2	70 39.0 -00.8	N 23 25.1 +00.0	17 33.8 -34.6	N 16 53.7 -09.5	16						
17	73 50.8 -00.1	N 22 45.7 -00.2	85 38.2 -00.9	N 23 25.1 +00.0	31 59.2 -34.6	N 16 44.2 -09.6	17						
18	88 50.7 -00.1	N 22 45.5 -00.3	100 37.3 -00.9	N 23 25.1 +00.1	46 24.6 -34.4	N 16 34.6 -09.7	18						
19	103 50.6 -00.1	N 22 45.2 -00.2	115 36.4 -00.9	N 23 25.2 +00.0	60 50.2 -34.4	N 16 24.9 -09.8	19						
20	118 50.5 -00.1	N 22 45.0 -00.3	130 35.5 -00.8	N 23 25.2 +00.1	75 15.8 -34.4	N 16 15.1 -09.9	20						
21	133 50.4 -00.1	N 22 44.7 -00.2	145 34.7 -00.9	N 23 25.3 +00.0	89 41.4 -34.2	N 16 05.2 -10.0	21						
22	148 50.3 -00.1	N 22 44.5 -00.2	160 33.8 -00.9	N 23 25.3 +00.0	104 07.2 -34.2	N 15 55.2 -10.2	22						
23	163 50.2 -00.1	N 22 44.3 -00.3	175 32.9 -00.9	N 23 25.3 +00.1	118 33.0 -34.1	N 15 45.0 -10.2	23						
	UT 02 06 10 14 18 22 SD 15'7 15'7 15'7 15'7 15'7 15'7 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 256° 256° 256° 256° 255° 255° Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 268° 268° 268° 267° 267° 267° Greenwich Culmination Time: 11:17	UT 02 06 10 14 18 22 SD 16'4 16'4 16'4 16'4 16'4 16'4 HP 60'3 60'3 60'3 60'2 60'2 60'2 SHA 223° 220° 218° 215° 213° 211° Greenwich Culmination Time: 14:46										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	158 14.3 +00.8	N 20 52.6 -00.3	27 13.8 +02.7	S 22 14.4 +00.0	353 42.8 +02.7	S 21 57.7 +00.0	00						
01	173 15.1 +00.8	N 20 52.3 -00.4	42 16.5 +02.7	S 22 14.4 +00.0	8 45.5 +02.7	S 21 57.7 +00.0	01						
02	188 15.9 +00.8	N 20 51.9 -00.4	57 19.2 +02.8	S 22 14.4 -00.1	23 48.2 +02.6	S 21 57.7 +00.0	02						
03	203 16.7 +00.9	N 20 51.5 -00.3	72 22.0 +02.7	S 22 14.3 +00.0	38 50.8 +02.7	S 21 57.7 +00.1	03						
04	218 17.6 +00.8	N 20 51.2 -00.4	87 24.7 +02.8	S 22 14.3 +00.0	53 53.5 +02.6	S 21 57.8 +00.0	04						
05	233 18.4 +00.8	N 20 50.8 -00.3	102 27.5 +02.7	S 22 14.3 +00.0	68 56.1 +02.7	S 21 57.8 +00.0	05						
06	248 19.2 +00.8	N 20 50.5 -00.4	117 30.2 +02.7	S 22 14.3 +00.0	83 58.8 +02.7	S 21 57.8 +00.1	06						
07	263 20.0 +00.8	N 20 50.1 -00.4	132 32.9 +02.8	S 22 14.3 -00.1	99 01.5 +02.6	S 21 57.9 +00.0	07						
08	278 20.8 +00.8	N 20 49.7 -00.3	147 35.7 +02.7	S 22 14.2 +00.0	114 04.1 +02.7	S 21 57.9 +00.0	08						
09	293 21.6 +00.8	N 20 49.4 -00.4	162 38.4 +02.8	S 22 14.2 +00.0	129 06.8 +02.6	S 21 57.9 +00.0	09						
10	308 22.4 +00.8	N 20 49.0 -00.3	177 41.2 +02.7	S 22 14.2 +00.0	144 09.4 +02.7	S 21 57.9 +00.1	10						
11	323 23.2 +00.8	N 20 48.7 -00.4	192 43.9 +02.7	S 22 14.2 +00.0	159 12.1 +02.7	S 21 58.0 +00.0	11						
12	338 24.0 +00.8	N 20 48.3 -00.4	207 46.6 +02.8	S 22 14.2 +00.0	174 14.8 +02.6	S 21 58.0 +00.0	12						
13	353 24.8 +00.8	N 20 47.9 -00.3	222 49.4 +02.7	S 22 14.2 -00.1	189 17.4 +02.7	S 21 58.0 +00.0	13						
14	8 25.6 +00.8	N 20 47.6 -00.4	237 52.1 +02.8	S 22 14.1 +00.0	204 20.1 +02.6	S 21 58.0 +00.1	14						
15	23 26.4 +00.8	N 20 47.2 -00.4	252 54.9 +02.7	S 22 14.1 +00.0	219 22.7 +02.7	S 21 58.1 +00.0	15						
16	38 27.2 +00.9	N 20 46.8 -00.3	267 57.6 +02.7	S 22 14.1 +00.0	234 25.4 +02.7	S 21 58.1 +00.0	16						
17	53 28.1 +00.8	N 20 46.5 -00.4	283 00.3 +02.8	S 22 14.1 +00.0	249 28.1 +02.6	S 21 58.1 +00.1	17						
18	68 28.9 +00.8	N 20 46.1 -00.3	298 03.1 +02.7	S 22 14.1 -00.1	264 30.7 +02.7	S 21 58.2 +00.0	18						
19	83 29.7 +00.8	N 20 45.8 -00.4	313 05.8 +02.7	S 22 14.0 +00.0	279 33.4 +02.6	S 21 58.2 +00.0	19						
20	98 30.5 +00.8	N 20 45.4 -00.4	328 08.5 +02.8	S 22 14.0 +00.0	294 36.0 +02.7	S 21 58.2 +00.0	20						
21	113 31.3 +00.8	N 20 45.0 -00.3	343 11.3 +02.7	S 22 14.0 +00.0	309 38.7 +02.7	S 21 58.2 +00.1	21						
22	128 32.1 +00.8	N 20 44.7 -00.4	358 14.0 +02.8	S 22 14.0 +00.0	324 41.4 +02.6	S 21 58.3 +00.0	22						
23	143 32.9 +00.8	N 20 44.3 -00.4	13 16.8 +02.7	S 22 14.0 +00.0	339 44.0 +02.7	S 21 58.3 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 235° 235° 235° 235° 235° 235° Greenwich Culmination Time: 13:26	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 105° 105° 105° 105° 105° 105° Greenwich Culmination Time: 22:07	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 071° 071° 071° 071° 071° 071° Greenwich Culmination Time: 00:25										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 50.1 -00.1	N 22 44.0 -00.2	190 32.0 -00.8	N 23 25.4 +00.0	132 58.9 -34.1	N 15 34.8 -10.3	00						
01	193 50.0 -00.2	N 22 43.8 -00.3	205 31.2 -00.9	N 23 25.4 +00.0	147 24.8 -33.9	N 15 24.5 -10.4	01						
02	208 49.8 -00.1	N 22 43.5 -00.2	220 30.3 -00.9	N 23 25.4 +00.1	161 50.9 -33.9	N 15 14.1 -10.5	02						
03	223 49.7 -00.1	N 22 43.3 -00.3	235 29.4 -00.8	N 23 25.5 +00.0	176 17.0 -33.9	N 15 03.6 -10.6	03						
04	238 49.6 -00.1	N 22 43.0 -00.2	250 28.6 -00.9	N 23 25.5 +00.0	190 43.1 -33.7	N 14 53.0 -10.7	04						
05	253 49.5 -00.1	N 22 42.8 -00.3	265 27.7 -00.9	N 23 25.5 +00.1	205 09.4 -33.7	N 14 42.3 -10.8	05						
06	268 49.4 -00.1	N 22 42.5 -00.2	280 26.8 -00.9	N 23 25.6 +00.0	219 35.7 -33.6	N 14 31.5 -10.9	06						
07	283 49.3 -00.1	N 22 42.3 -00.2	295 25.9 -00.8	N 23 25.6 +00.0	234 02.1 -33.5	N 14 20.6 -10.9	07						
08	298 49.2 -00.1	N 22 42.1 -00.3	310 25.1 -00.9	N 23 25.6 +00.0	248 28.6 -33.5	N 14 09.7 -11.1	08						
09	313 49.1 -00.1	N 22 41.8 -00.2	325 24.2 -00.9	N 23 25.6 +00.1	262 55.1 -33.4	N 13 58.6 -11.1	09						
10	328 49.0 -00.1	N 22 41.6 -00.3	340 23.3 -00.9	N 23 25.7 +00.0	277 21.7 -33.3	N 13 47.5 -11.2	10						
11	343 48.9 -00.1	N 22 41.3 -00.2	355 22.4 -00.8	N 23 25.7 +00.0	291 48.4 -33.3	N 13 36.3 -11.3	11						
12	358 48.8 -00.1	N 22 41.1 -00.3	10 21.6 -00.9	N 23 25.7 +00.0	306 15.1 -33.1	N 13 25.0 -11.3	12						
13	13 48.7 -00.1	N 22 40.8 -00.3	25 20.7 -00.9	N 23 25.7 +00.0	320 42.0 -33.1	N 13 13.7 -11.5	13						
14	28 48.6 -00.1	N 22 40.5 -00.2	40 19.8 -00.9	N 23 25.7 +00.1	335 08.9 -33.1	N 13 02.2 -11.5	14						
15	43 48.5 -00.1	N 22 40.3 -00.3	55 18.9 -00.8	N 23 25.8 +00.0	349 35.8 -32.9	N 12 50.7 -11.6	15						
16	58 48.4 -00.1	N 22 40.0 -00.2	70 18.1 -00.9	N 23 25.8 +00.0	4 02.9 -32.9	N 12 39.1 -11.7	16						
17	73 48.3 -00.1	N 22 39.8 -00.3	85 17.2 -00.9	N 23 25.8 +00.0	18 30.0 -32.9	N 12 27.4 -11.7	17						
18	88 48.2 -00.1	N 22 39.5 -00.2	100 16.3 -00.9	N 23 25.8 +00.0	32 57.1 -32.7	N 12 15.7 -11.8	18						
19	103 48.1 -00.2	N 22 39.3 -00.3	115 15.4 -00.8	N 23 25.8 +00.0	47 24.4 -32.7	N 12 03.9 -11.9	19						
20	118 47.9 -00.1	N 22 39.0 -00.2	130 14.6 -00.9	N 23 25.8 +00.0	61 51.7 -32.6	N 11 52.0 -11.9	20						
21	133 47.8 -00.1	N 22 38.8 -00.3	145 13.7 -00.9	N 23 25.8 +00.0	76 19.1 -32.6	N 11 40.1 -12.0	21						
22	148 47.7 -00.1	N 22 38.5 -00.3	160 12.8 -00.9	N 23 25.8 +00.1	90 46.5 -32.4	N 11 28.1 -12.1	22						
23	163 47.6 -00.1	N 22 38.2 -00.2	175 11.9 -00.8	N 23 25.9 +00.0	105 14.1 -32.4	N 11 16.0 -12.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'4 16'4 16'4 16'4 16'4 16'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'2 60'1 60'1 60'1 60'0 60'0								
	SHA 255° 255° 255° 255° 254° 254°		SHA 267° 267° 266° 266° 266° 266°		SHA 208° 206° 203° 201° 199° 196°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 11:18		Greenwich Culmination Time: 15:43								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	158 33.7 +00.8	N 20 43.9 -00.3	28 19.5 +02.7	S 22 14.0 -00.1	354 46.7 +02.6	S 21 58.3 +00.0	00						
01	173 34.5 +00.8	N 20 43.6 -00.4	43 22.2 +02.8	S 22 13.9 +00.0	9 49.3 +02.7	S 21 58.3 +00.1	01						
02	188 35.3 +00.9	N 20 43.2 -00.4	58 25.0 +02.7	S 22 13.9 +00.0	24 52.0 +02.7	S 21 58.4 +00.0	02						
03	203 36.2 +00.8	N 20 42.8 -00.3	73 27.7 +02.7	S 22 13.9 +00.0	39 54.7 +02.6	S 21 58.4 +00.0	03						
04	218 37.0 +00.8	N 20 42.5 -00.4	88 30.4 +02.8	S 22 13.9 +00.0	54 57.3 +02.7	S 21 58.4 +00.1	04						
05	233 37.8 +00.8	N 20 42.1 -00.4	103 33.2 +02.7	S 22 13.9 -00.1	69 60.0 +02.6	S 21 58.5 +00.0	05						
06	248 38.6 +00.8	N 20 41.7 -00.3	118 35.9 +02.7	S 22 13.8 +00.0	85 02.6 +02.7	S 21 58.5 +00.0	06						
07	263 39.4 +00.8	N 20 41.4 -00.4	133 38.6 +02.8	S 22 13.8 +00.0	100 05.3 +02.7	S 21 58.5 +00.0	07						
08	278 40.2 +00.8	N 20 41.0 -00.4	148 41.4 +02.7	S 22 13.8 +00.0	115 08.0 +02.6	S 21 58.5 +00.1	08						
09	293 41.0 +00.8	N 20 40.6 -00.3	163 44.1 +02.7	S 22 13.8 +00.0	130 10.6 +02.7	S 21 58.6 +00.0	09						
10	308 41.8 +00.8	N 20 40.3 -00.4	178 46.8 +02.8	S 22 13.8 +00.0	145 13.3 +02.6	S 21 58.6 +00.0	10						
11	323 42.6 +00.9	N 20 39.9 -00.4	193 49.6 +02.7	S 22 13.8 -00.1	160 15.9 +02.7	S 21 58.6 +00.0	11						
12	338 43.5 +00.8	N 20 39.5 -00.3	208 52.3 +02.7	S 22 13.7 +00.0	175 18.6 +02.7	S 21 58.6 +00.1	12						
13	353 44.3 +00.8	N 20 39.2 -00.4	223 55.0 +02.8	S 22 13.7 +00.0	190 21.3 +02.6	S 21 58.7 +00.0	13						
14	8 45.1 +00.8	N 20 38.8 -00.4	238 57.8 +02.7	S 22 13.7 +00.0	205 23.9 +02.7	S 21 58.7 +00.0	14						
15	23 45.9 +00.8	N 20 38.4 -00.3	254 00.5 +02.7	S 22 13.7 +00.0	220 26.6 +02.6	S 21 58.7 +00.1	15						
16	38 46.7 +00.8	N 20 38.1 -00.4	269 03.2 +02.8	S 22 13.7 +00.0	235 29.2 +02.7	S 21 58.8 +00.0	16						
17	53 47.5 +00.8	N 20 37.7 -00.4	284 06.0 +02.7	S 22 13.7 -00.1	250 31.9 +02.7	S 21 58.8 +00.0	17						
18	68 48.3 +00.8	N 20 37.3 -00.3	299 08.7 +02.7	S 22 13.6 +00.0	265 34.6 +02.6	S 21 58.8 +00.0	18						
19	83 49.1 +00.9	N 20 37.0 -00.4	314 11.4 +02.8	S 22 13.6 +00.0	280 37.2 +02.7	S 21 58.8 +00.1	19						
20	98 50.0 +00.8	N 20 36.6 -00.4	329 14.2 +02.7	S 22 13.6 +00.0	295 39.9 +02.6	S 21 58.9 +00.0	20						
21	113 50.8 +00.8	N 20 36.2 -00.3	344 16.9 +02.7	S 22 13.6 +00.0	310 42.5 +02.7	S 21 58.9 +00.0	21						
22	128 51.6 +00.8	N 20 35.9 -00.4	359 19.6 +02.8	S 22 13.6 -00.1	325 45.2 +02.7	S 21 58.9 +00.0	22						
23	143 52.4 +00.8	N 20 35.5 -00.4	14 22.4 +02.7	S 22 13.5 +00.0	340 47.9 +02.6	S 21 58.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 235° 235° 235° 234° 234° 234°		SHA 105° 105° 105° 105° 105° 105°		SHA 071° 071° 071° 071° 071° 071°								
	Greenwich Culmination Time: 13:25		Greenwich Culmination Time: 22:02		Greenwich Culmination Time: 00:20								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 47.5 -00.1	N 22 38.0 -00.3	190 11.1 -00.9	N 23 25.9 +00.0	119 41.7 -32.4	N 11 03.9 -12.2	00						
01	193 47.4 -00.1	N 22 37.7 -00.2	205 10.2 -00.9	N 23 25.9 +00.0	134 09.3 -32.3	N 10 51.7 -12.2	01						
02	208 47.3 -00.1	N 22 37.5 -00.3	220 09.3 -00.9	N 23 25.9 +00.0	148 37.0 -32.2	N 10 39.5 -12.3	02						
03	223 47.2 -00.1	N 22 37.2 -00.3	235 08.4 -00.9	N 23 25.9 +00.0	163 04.8 -32.1	N 10 27.2 -12.4	03						
04	238 47.1 -00.1	N 22 36.9 -00.2	250 07.5 -00.8	N 23 25.9 +00.0	177 32.7 -32.1	N 10 14.8 -12.4	04						
05	253 47.0 -00.1	N 22 36.7 -00.3	265 06.7 -00.9	N 23 25.9 +00.0	192 00.6 -32.0	N 10 02.4 -12.5	05						
06	268 46.9 -00.1	N 22 36.4 -00.2	280 05.8 -00.9	N 23 25.9 +00.0	206 28.6 -32.0	N 09 49.9 -12.5	06						
07	283 46.8 -00.1	N 22 36.2 -00.3	295 04.9 -00.9	N 23 25.9 +00.0	220 56.6 -31.9	N 09 37.4 -12.6	07						
08	298 46.7 -00.1	N 22 35.9 -00.3	310 04.0 -00.8	N 23 25.9 +00.0	235 24.7 -31.8	N 09 24.8 -12.6	08						
09	313 46.6 -00.1	N 22 35.6 -00.2	325 03.2 -00.9	N 23 25.9 +00.0	249 52.9 -31.8	N 09 12.2 -12.6	09						
10	328 46.5 -00.1	N 22 35.4 -00.3	340 02.3 -00.9	N 23 25.9 +00.0	264 21.1 -31.7	N 08 59.6 -12.7	10						
11	343 46.4 -00.1	N 22 35.1 -00.3	355 01.4 -00.9	N 23 25.9 -00.1	278 49.4 -31.6	N 08 46.9 -12.8	11						
12	358 46.3 -00.1	N 22 34.8 -00.2	10 00.5 -00.8	N 23 25.8 +00.0	293 17.8 -31.6	N 08 34.1 -12.8	12						
13	13 46.2 -00.1	N 22 34.6 -00.3	24 59.7 -00.9	N 23 25.8 +00.0	307 46.2 -31.6	N 08 21.3 -12.8	13						
14	28 46.1 -00.1	N 22 34.3 -00.3	39 58.8 -00.9	N 23 25.8 +00.0	322 14.6 -31.4	N 08 08.5 -12.9	14						
15	43 46.0 -00.1	N 22 34.0 -00.2	54 57.9 -00.9	N 23 25.8 +00.0	336 43.2 -31.4	N 07 55.6 -12.9	15						
16	58 45.9 -00.1	N 22 33.8 -00.3	69 57.0 -00.8	N 23 25.8 +00.0	351 11.8 -31.4	N 07 42.7 -12.9	16						
17	73 45.8 -00.1	N 22 33.5 -00.3	84 56.2 -00.9	N 23 25.8 +00.0	5 40.4 -31.3	N 07 29.8 -13.0	17						
18	88 45.7 -00.1	N 22 33.2 -00.3	99 55.3 -00.9	N 23 25.8 +00.0	20 09.1 -31.2	N 07 16.8 -13.0	18						
19	103 45.6 -00.1	N 22 32.9 -00.2	114 54.4 -00.9	N 23 25.8 -00.1	34 37.9 -31.2	N 07 03.8 -13.0	19						
20	118 45.5 -00.1	N 22 32.7 -00.3	129 53.5 -00.8	N 23 25.7 +00.0	49 06.7 -31.2	N 06 50.8 -13.1	20						
21	133 45.4 -00.1	N 22 32.4 -00.3	144 52.7 -00.9	N 23 25.7 +00.0	63 35.5 -31.1	N 06 37.7 -13.1	21						
22	148 45.3 -00.1	N 22 32.1 -00.3	159 51.8 -00.9	N 23 25.7 +00.0	78 04.4 -31.0	N 06 24.6 -13.1	22						
23	163 45.2 -00.1	N 22 31.8 -00.2	174 50.9 -00.9	N 23 25.7 +00.0	92 33.4 -31.0	N 06 11.5 -13.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'3 16'2 16'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'9 59'8 59'8 59'7 59'6 59'6								
	SHA 254° 254° 254° 254° 253° 253°		SHA 265° 265° 265° 265° 265° 264°		SHA 194° 192° 189° 187° 185° 182°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 11:19		Greenwich Culmination Time: 16:36								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	158 53.2 +00.8	N 20 35.1 -00.3	29 25.1 +02.7	S 22 13.5 +00.0	355 50.5 +02.7	S 21 59.0 +00.0	00						
01	173 54.0 +00.8	N 20 34.8 -00.4	44 27.8 +02.8	S 22 13.5 +00.0	10 53.2 +02.7	S 21 59.0 +00.0	01						
02	188 54.8 +00.8	N 20 34.4 -00.4	59 30.6 +02.7	S 22 13.5 +00.0	25 55.9 +02.6	S 21 59.0 +00.1	02						
03	203 55.6 +00.9	N 20 34.0 -00.4	74 33.3 +02.7	S 22 13.5 +00.0	40 58.5 +02.7	S 21 59.1 +00.0	03						
04	218 56.5 +00.8	N 20 33.6 -00.3	89 36.0 +02.7	S 22 13.5 -00.1	56 01.2 +02.6	S 21 59.1 +00.0	04						
05	233 57.3 +00.8	N 20 33.3 -00.4	104 38.7 +02.8	S 22 13.4 +00.0	71 03.8 +02.7	S 21 59.1 +00.0	05						
06	248 58.1 +00.8	N 20 32.9 -00.4	119 41.5 +02.7	S 22 13.4 +00.0	86 06.5 +02.7	S 21 59.1 +00.1	06						
07	263 58.9 +00.8	N 20 32.5 -00.4	134 44.2 +02.7	S 22 13.4 +00.0	101 09.2 +02.6	S 21 59.2 +00.0	07						
08	278 59.7 +00.8	N 20 32.1 -00.3	149 46.9 +02.8	S 22 13.4 +00.0	116 11.8 +02.7	S 21 59.2 +00.0	08						
09	294 00.5 +00.9	N 20 31.8 -00.4	164 49.7 +02.7	S 22 13.4 +00.0	131 14.5 +02.6	S 21 59.2 +00.0	09						
10	309 01.4 +00.8	N 20 31.4 -00.4	179 52.4 +02.7	S 22 13.4 -00.1	146 17.1 +02.7	S 21 59.2 +00.1	10						
11	324 02.2 +00.8	N 20 31.0 -00.3	194 55.1 +02.7	S 22 13.3 +00.0	161 19.8 +02.7	S 21 59.3 +00.0	11						
12	339 03.0 +00.8	N 20 30.7 -00.4	209 57.8 +02.8	S 22 13.3 +00.0	176 22.5 +02.6	S 21 59.3 +00.0	12						
13	354 03.8 +00.8	N 20 30.3 -00.4	225 00.6 +02.7	S 22 13.3 +00.0	191 25.1 +02.7	S 21 59.3 +00.1	13						
14	9 04.6 +00.8	N 20 29.9 -00.4	240 03.3 +02.7	S 22 13.3 +00.0	206 27.8 +02.6	S 21 59.4 +00.0	14						
15	24 05.4 +00.8	N 20 29.5 -00.3	255 06.0 +02.8	S 22 13.3 -00.1	221 30.4 +02.7	S 21 59.4 +00.0	15						
16	39 06.2 +00.9	N 20 29.2 -00.4	270 08.8 +02.7	S 22 13.2 +00.0	236 33.1 +02.7	S 21 59.4 +00.0	16						
17	54 07.1 +00.8	N 20 28.8 -00.4	285 11.5 +02.7	S 22 13.2 +00.0	251 35.8 +02.6	S 21 59.4 +00.1	17						
18	69 07.9 +00.8	N 20 28.4 -00.4	300 14.2 +02.7	S 22 13.2 +00.0	266 38.4 +02.7	S 21 59.5 +00.0	18						
19	84 08.7 +00.8	N 20 28.0 -00.3	315 16.9 +02.8	S 22 13.2 +00.0	281 41.1 +02.6	S 21 59.5 +00.0	19						
20	99 09.5 +00.8	N 20 27.7 -00.4	330 19.7 +02.7	S 22 13.2 +00.0	296 43.7 +02.7	S 21 59.5 +00.0	20						
21	114 10.3 +00.8	N 20 27.3 -00.4	345 22.4 +02.7	S 22 13.2 -00.1	311 46.4 +02.7	S 21 59.5 +00.1	21						
22	129 11.1 +00.9	N 20 26.9 -00.4	0 25.1 +02.7	S 22 13.1 +00.0	326 49.1 +02.6	S 21 59.6 +00.0	22						
23	144 12.0 +00.8	N 20 26.5 -00.3	15 27.8 +02.8	S 22 13.1 +00.0	341 51.7 +02.7	S 21 59.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 234° 234° 234° 234° 234° 234°		SHA 105° 105° 105° 105° 105° 105°		SHA 071° 071° 071° 071° 071° 071°								
	Greenwich Culmination Time: 13:23		Greenwich Culmination Time: 21:58		Greenwich Culmination Time: 00:16								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 45.1 -00.1	N 22 31.6 -00.3	189 50.0 -00.8	N 23 25.7 -00.1	107 02.4 -30.9	N 05 58.3 -13.2	00						
01	193 45.0 -00.1	N 22 31.3 -00.3	204 49.2 -00.9	N 23 25.6 +00.0	121 31.5 -30.9	N 05 45.1 -13.2	01						
02	208 44.9 -00.1	N 22 31.0 -00.3	219 48.3 -00.9	N 23 25.6 +00.0	136 00.6 -30.8	N 05 31.9 -13.2	02						
03	223 44.8 -00.1	N 22 30.7 -00.2	234 47.4 -00.9	N 23 25.6 +00.0	150 29.8 -30.8	N 05 18.7 -13.2	03						
04	238 44.7 -00.1	N 22 30.5 -00.3	249 46.5 -00.8	N 23 25.6 -00.1	164 59.0 -30.8	N 05 05.5 -13.3	04						
05	253 44.6 -00.1	N 22 30.2 -00.3	264 45.7 -00.9	N 23 25.5 +00.0	179 28.2 -30.7	N 04 52.2 -13.3	05						
06	268 44.5 -00.1	N 22 29.9 -00.3	279 44.8 -00.9	N 23 25.5 +00.0	193 57.5 -30.6	N 04 38.9 -13.2	06						
07	283 44.4 -00.1	N 22 29.6 -00.3	294 43.9 -00.9	N 23 25.5 -00.1	208 26.9 -30.6	N 04 25.7 -13.4	07						
08	298 44.3 -00.1	N 22 29.3 -00.2	309 43.0 -00.8	N 23 25.4 +00.0	222 56.3 -30.6	N 04 12.3 -13.3	08						
09	313 44.2 -00.1	N 22 29.1 -00.3	324 42.2 -00.9	N 23 25.4 +00.0	237 25.7 -30.5	N 03 59.0 -13.3	09						
10	328 44.1 -00.1	N 22 28.8 -00.3	339 41.3 -00.9	N 23 25.4 -00.1	251 55.2 -30.5	N 03 45.7 -13.4	10						
11	343 44.0 -00.1	N 22 28.5 -00.3	354 40.4 -00.9	N 23 25.3 +00.0	266 24.7 -30.4	N 03 32.3 -13.3	11						
12	358 43.9 -00.1	N 22 28.2 -00.3	9 39.5 -00.8	N 23 25.3 +00.0	280 54.3 -30.4	N 03 19.0 -13.4	12						
13	13 43.8 -00.1	N 22 27.9 -00.3	24 38.7 -00.9	N 23 25.3 -00.1	295 23.9 -30.4	N 03 05.6 -13.3	13						
14	28 43.7 -00.1	N 22 27.6 -00.2	39 37.8 -00.9	N 23 25.2 +00.0	309 53.5 -30.3	N 02 52.3 -13.4	14						
15	43 43.6 -00.1	N 22 27.4 -00.3	54 36.9 -00.9	N 23 25.2 -00.1	324 23.2 -30.3	N 02 38.9 -13.4	15						
16	58 43.5 -00.1	N 22 27.1 -00.3	69 36.0 -00.9	N 23 25.1 +00.0	338 52.9 -30.3	N 02 25.5 -13.4	16						
17	73 43.4 -00.1	N 22 26.8 -00.3	84 35.1 -00.8	N 23 25.1 +00.0	353 22.6 -30.2	N 02 12.1 -13.4	17						
18	88 43.3 -00.1	N 22 26.5 -00.3	99 34.3 -00.9	N 23 25.1 -00.1	7 52.4 -30.2	N 01 58.7 -13.3	18						
19	103 43.2 +00.0	N 22 26.2 -00.3	114 33.4 -00.9	N 23 25.0 +00.0	22 22.2 -30.1	N 01 45.4 -13.4	19						
20	118 43.2 -00.1	N 22 25.9 -00.3	129 32.5 -00.9	N 23 25.0 -00.1	36 52.1 -30.1	N 01 32.0 -13.4	20						
21	133 43.1 -00.1	N 22 25.6 -00.3	144 31.6 -00.8	N 23 24.9 +00.0	51 22.0 -30.1	N 01 18.6 -13.4	21						
22	148 43.0 -00.1	N 22 25.3 -00.2	159 30.8 -00.9	N 23 24.9 -00.1	65 51.9 -30.1	N 01 05.2 -13.4	22						
23	163 42.9 -00.1	N 22 25.1 -00.3	174 29.9 -00.9	N 23 24.8 +00.0	80 21.8 -30.0	N 00 51.8 -13.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'2 16'2 16'2 16'1 16'1 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'5 59'4 59'3 59'2 59'1 59'1								
	SHA 253° 253° 253° 252° 252° 252°		SHA 264° 264° 264° 263° 263° 263°		SHA 180° 178° 176° 174° 171° 169°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:21		Greenwich Culmination Time: 17:27								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	159 12.8 +00.8	N 20 26.2 -00.4	30 30.6 +02.7	S 22 13.1 +00.0	356 54.4 +02.6	S 21 59.6 +00.1	00						
01	174 13.6 +00.8	N 20 25.8 -00.4	45 33.3 +02.7	S 22 13.1 +00.0	11 57.0 +02.7	S 21 59.7 +00.0	01						
02	189 14.4 +00.8	N 20 25.4 -00.4	60 36.0 +02.7	S 22 13.1 +00.0	26 59.7 +02.7	S 21 59.7 +00.0	02						
03	204 15.2 +00.8	N 20 25.0 -00.3	75 38.7 +02.8	S 22 13.1 -00.1	42 02.4 +02.6	S 21 59.7 +00.0	03						
04	219 16.0 +00.9	N 20 24.7 -00.4	90 41.5 +02.7	S 22 13.0 +00.0	57 05.0 +02.7	S 21 59.7 +00.1	04						
05	234 16.9 +00.8	N 20 24.3 -00.4	105 44.2 +02.7	S 22 13.0 +00.0	72 07.7 +02.6	S 21 59.8 +00.0	05						
06	249 17.7 +00.8	N 20 23.9 -00.4	120 46.9 +02.7	S 22 13.0 +00.0	87 10.3 +02.7	S 21 59.8 +00.0	06						
07	264 18.5 +00.8	N 20 23.5 -00.4	135 49.6 +02.8	S 22 13.0 +00.0	102 13.0 +02.7	S 21 59.8 +00.0	07						
08	279 19.3 +00.8	N 20 23.1 -00.3	150 52.4 +02.7	S 22 13.0 +00.0	117 15.7 +02.6	S 21 59.8 +00.1	08						
09	294 20.1 +00.9	N 20 22.8 -00.4	165 55.1 +02.7	S 22 13.0 -00.1	132 18.3 +02.7	S 21 59.9 +00.0	09						
10	309 21.0 +00.8	N 20 22.4 -00.4	180 57.8 +02.7	S 22 12.9 +00.0	147 21.0 +02.7	S 21 59.9 +00.0	10						
11	324 21.8 +00.8	N 20 22.0 -00.4	196 00.5 +02.7	S 22 12.9 +00.0	162 23.7 +02.6	S 21 59.9 +00.0	11						
12	339 22.6 +00.8	N 20 21.6 -00.4	211 03.2 +02.8	S 22 12.9 +00.0	177 26.3 +02.7	S 21 59.9 +00.1	12						
13	354 23.4 +00.8	N 20 21.2 -00.3	226 06.0 +02.7	S 22 12.9 +00.0	192 29.0 +02.6	S 21 60.0 +00.0	13						
14	9 24.2 +00.8	N 20 20.9 -00.4	241 08.7 +02.7	S 22 12.9 -00.1	207 31.6 +02.7	S 22 00.0 +00.0	14						
15	24 25.0 +00.9	N 20 20.5 -00.4	256 11.4 +02.7	S 22 12.8 +00.0	222 34.3 +02.7	S 22 00.0 +00.1	15						
16	39 25.9 +00.8	N 20 20.1 -00.4	271 14.1 +02.8	S 22 12.8 +00.0	237 37.0 +02.6	S 22 00.1 +00.0	16						
17	54 26.7 +00.8	N 20 19.7 -00.4	286 16.9 +02.7	S 22 12.8 +00.0	252 39.6 +02.7	S 22 00.1 +00.0	17						
18	69 27.5 +00.8	N 20 19.3 -00.3	301 19.6 +02.7	S 22 12.8 +00.0	267 42.3 +02.6	S 22 00.1 +00.0	18						
19	84 28.3 +00.8	N 20 19.0 -00.4	316 22.3 +02.7	S 22 12.8 +00.0	282 44.9 +02.7	S 22 00.1 +00.1	19						
20	99 29.1 +00.9	N 20 18.6 -00.4	331 25.0 +02.7	S 22 12.8 -00.1	297 47.6 +02.7	S 22 00.2 +00.0	20						
21	114 30.0 +00.8	N 20 18.2 -00.4	346 27.7 +02.8	S 22 12.7 +00.0	312 50.3 +02.6	S 22 00.2 +00.0	21						
22	129 30.8 +00.8	N 20 17.8 -00.4	1 30.5 +02.7	S 22 12.7 +00.0	327 52.9 +02.7	S 22 00.2 +00.0	22						
23	144 31.6 +00.8	N 20 17.4 -00.3	16 33.2 +02.7	S 22 12.7 +00.0	342 55.6 +02.6	S 22 00.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 233° 233° 233° 233° 233° 233°		SHA 105° 105° 105° 105° 105° 105°		SHA 071° 071° 071° 071° 071° 071°								
	Greenwich Culmination Time: 13:22		Greenwich Culmination Time: 21:53		Greenwich Culmination Time: 00:12								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 42.8 -00.1	N 22 24.8 -00.3	189 29.0 -00.9	N 23 24.8 -00.1	94 51.8 -30.0	N 00 38.5 -13.4	00	00	38.5 -13.4	00	00	38.5 -13.4	00	
01	193 42.7 -00.1	N 22 24.5 -00.3	204 28.1 -00.8	N 23 24.7 +00.0	109 21.8 -30.0	N 00 25.1 -13.3	01	00	25.1 -13.3	01	00	25.1 -13.3	01	
02	208 42.6 -00.1	N 22 24.2 -00.3	219 27.3 -00.9	N 23 24.7 -00.1	123 51.8 -29.9	N 00 11.8 -13.4	02	00	11.8 -13.4	02	00	11.8 -13.4	02	
03	223 42.5 -00.1	N 22 23.9 -00.3	234 26.4 -00.9	N 23 24.6 +00.0	138 21.9 -30.0	S 00 01.6 +13.3	03	00	01.6 +13.3	03	00	01.6 +13.3	03	
04	238 42.4 -00.1	N 22 23.6 -00.3	249 25.5 -00.9	N 23 24.6 -00.1	152 51.9 -29.9	S 00 14.9 +13.3	04	00	14.9 +13.3	04	00	14.9 +13.3	04	
05	253 42.3 -00.1	N 22 23.3 -00.3	264 24.6 -00.8	N 23 24.5 -00.1	167 22.0 -29.8	S 00 28.2 +13.4	05	00	28.2 +13.4	05	00	28.2 +13.4	05	
06	268 42.2 -00.1	N 22 23.0 -00.3	279 23.8 -00.9	N 23 24.4 +00.0	181 52.2 -29.9	S 00 41.6 +13.2	06	00	41.6 +13.2	06	00	41.6 +13.2	06	
07	283 42.1 -00.1	N 22 22.7 -00.3	294 22.9 -00.9	N 23 24.4 -00.1	196 22.3 -29.8	S 00 54.8 +13.3	07	00	54.8 +13.3	07	00	54.8 +13.3	07	
08	298 42.0 -00.1	N 22 22.4 -00.3	309 22.0 -00.9	N 23 24.3 +00.0	210 52.5 -29.8	S 01 08.1 +13.3	08	01	08.1 +13.3	08	01	08.1 +13.3	08	
09	313 41.9 -00.1	N 22 22.1 -00.3	324 21.1 -00.8	N 23 24.3 -00.1	225 22.7 -29.8	S 01 21.4 +13.2	09	01	21.4 +13.2	09	01	21.4 +13.2	09	
10	328 41.8 -00.1	N 22 21.8 -00.3	339 20.3 -00.9	N 23 24.2 -00.1	239 52.9 -29.8	S 01 34.6 +13.3	10	01	34.6 +13.3	10	01	34.6 +13.3	10	
11	343 41.7 -00.1	N 22 21.5 -00.3	354 19.4 -00.9	N 23 24.1 +00.0	254 23.1 -29.7	S 01 47.9 +13.2	11	01	47.9 +13.2	11	01	47.9 +13.2	11	
12	358 41.6 +00.0	N 22 21.2 -00.3	9 18.5 -00.9	N 23 24.1 -00.1	268 53.4 -29.8	S 02 01.1 +13.1	12	02	01.1 +13.1	12	02	01.1 +13.1	12	
13	13 41.6 -00.1	N 22 20.9 -00.3	24 17.6 -00.8	N 23 24.0 -00.1	283 23.6 -29.7	S 02 14.2 +13.2	13	02	14.2 +13.2	13	02	14.2 +13.2	13	
14	28 41.5 -00.1	N 22 20.6 -00.3	39 16.8 -00.9	N 23 23.9 +00.0	297 53.9 -29.7	S 02 27.4 +13.2	14	02	27.4 +13.2	14	02	27.4 +13.2	14	
15	43 41.4 -00.1	N 22 20.3 -00.3	54 15.9 -00.9	N 23 23.9 -00.1	312 24.2 -29.7	S 02 40.6 +13.1	15	02	40.6 +13.1	15	02	40.6 +13.1	15	
16	58 41.3 -00.1	N 22 20.0 -00.3	69 15.0 -00.9	N 23 23.8 -00.1	326 54.5 -29.7	S 02 53.7 +13.1	16	02	53.7 +13.1	16	02	53.7 +13.1	16	
17	73 41.2 -00.1	N 22 19.7 -00.3	84 14.1 -00.8	N 23 23.7 -00.1	341 24.8 -29.7	S 03 06.8 +13.0	17	03	06.8 +13.0	17	03	06.8 +13.0	17	
18	88 41.1 -00.1	N 22 19.4 -00.3	99 13.3 -00.9	N 23 23.6 +00.0	355 55.1 -29.6	S 03 19.8 +13.1	18	03	19.8 +13.1	18	03	19.8 +13.1	18	
19	103 41.0 -00.1	N 22 19.1 -00.3	114 12.4 -00.9	N 23 23.6 -00.1	10 25.5 -29.7	S 03 32.9 +13.0	19	03	32.9 +13.0	19	03	32.9 +13.0	19	
20	118 40.9 -00.1	N 22 18.8 -00.3	129 11.5 -00.9	N 23 23.5 -00.1	24 55.8 -29.6	S 03 45.9 +12.9	20	03	45.9 +12.9	20	03	45.9 +12.9	20	
21	133 40.8 -00.1	N 22 18.5 -00.3	144 10.6 -00.8	N 23 23.4 -00.1	39 26.2 -29.6	S 03 58.8 +13.0	21	03	58.8 +13.0	21	03	58.8 +13.0	21	
22	148 40.7 -00.1	N 22 18.2 -00.3	159 09.8 -00.9	N 23 23.3 +00.0	53 56.6 -29.6	S 04 11.8 +12.9	22	04	11.8 +12.9	22	04	11.8 +12.9	22	
23	163 40.6 +00.0	N 22 17.9 -00.3	174 08.9 -00.9	N 23 23.3 -00.1	68 27.0 -29.7	S 04 24.7 +12.9	23	04	24.7 +12.9	23	04	24.7 +12.9	23	
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22							
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'0 16'0 16'0 16'0 15'9		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'0 00'0 00'0 00'0 00'0 00'0	
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'0 58'9 58'8 58'7 58'6 58'5		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0	
	SHA 252° 252° 252° 251° 251° 251°		SHA 263° 263° 262° 262° 262° 262°		SHA 167° 165° 163° 161° 159° 156°		SHA 233° 233° 233° 233° 232° 232°		SHA 071° 071° 071° 071° 071° 071°		SHA 233° 233° 233° 233° 232° 232°		SHA 233° 233° 233° 233° 232° 232°	
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:22		Greenwich Culmination Time: 18:16		Greenwich Culmination Time: 13:21		Greenwich Culmination Time: 00:08		Greenwich Culmination Time: 13:21		Greenwich Culmination Time: 00:08	

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 40.6 -00.1	N 22 17.6 -00.3	189 08.0 -00.9	N 23 23.2 -00.1	82 57.3 -29.6	S 04 37.6 +12.8	00						
01	193 40.5 -00.1	N 22 17.3 -00.4	204 07.1 -00.8	N 23 23.1 -00.1	97 27.7 -29.6	S 04 50.4 +12.8	01						
02	208 40.4 -00.1	N 22 16.9 -00.3	219 06.3 -00.9	N 23 23.0 -00.1	111 58.1 -29.6	S 05 03.2 +12.8	02						
03	223 40.3 -00.1	N 22 16.6 -00.3	234 05.4 -00.9	N 23 22.9 +00.0	126 28.5 -29.5	S 05 16.0 +12.7	03						
04	238 40.2 -00.1	N 22 16.3 -00.3	249 04.5 -00.9	N 23 22.9 -00.1	140 59.0 -29.6	S 05 28.7 +12.7	04						
05	253 40.1 -00.1	N 22 16.0 -00.3	264 03.6 -00.8	N 23 22.8 -00.1	155 29.4 -29.6	S 05 41.4 +12.7	05						
06	268 40.0 -00.1	N 22 15.7 -00.3	279 02.8 -00.9	N 23 22.7 -00.1	169 59.8 -29.6	S 05 54.1 +12.6	06						
07	283 39.9 -00.1	N 22 15.4 -00.3	294 01.9 -00.9	N 23 22.6 -00.1	184 30.2 -29.6	S 06 06.7 +12.6	07						
08	298 39.8 -00.1	N 22 15.1 -00.3	309 01.0 -00.9	N 23 22.5 -00.1	199 00.6 -29.6	S 06 19.3 +12.5	08						
09	313 39.7 +00.0	N 22 14.8 -00.4	324 00.1 -00.8	N 23 22.4 -00.1	213 31.0 -29.6	S 06 31.8 +12.5	09						
10	328 39.7 -00.1	N 22 14.4 -00.3	338 59.3 -00.9	N 23 22.3 -00.1	228 01.4 -29.6	S 06 44.3 +12.4	10						
11	343 39.6 -00.1	N 22 14.1 -00.3	353 58.4 -00.9	N 23 22.2 -00.1	242 31.8 -29.6	S 06 56.7 +12.4	11						
12	358 39.5 -00.1	N 22 13.8 -00.3	8 57.5 -00.9	N 23 22.1 -00.1	257 02.2 -29.5	S 07 09.1 +12.4	12						
13	13 39.4 -00.1	N 22 13.5 -00.3	23 56.6 -00.8	N 23 22.0 -00.1	271 32.7 -29.6	S 07 21.5 +12.3	13						
14	28 39.3 -00.1	N 22 13.2 -00.3	38 55.8 -00.9	N 23 21.9 -00.1	286 03.1 -29.7	S 07 33.8 +12.3	14						
15	43 39.2 -00.1	N 22 12.9 -00.3	53 54.9 -00.9	N 23 21.8 -00.1	300 33.4 -29.6	S 07 46.1 +12.2	15						
16	58 39.1 -00.1	N 22 12.6 -00.4	68 54.0 -00.9	N 23 21.7 -00.1	315 03.8 -29.6	S 07 58.3 +12.1	16						
17	73 39.0 +00.0	N 22 12.2 -00.3	83 53.1 -00.8	N 23 21.6 -00.1	329 34.2 -29.6	S 08 10.4 +12.1	17						
18	88 39.0 -00.1	N 22 11.9 -00.3	98 52.3 -00.9	N 23 21.5 -00.1	344 04.6 -29.6	S 08 22.5 +12.1	18						
19	103 38.9 -00.1	N 22 11.6 -00.3	113 51.4 -00.9	N 23 21.4 -00.1	358 35.0 -29.7	S 08 34.6 +12.0	19						
20	118 38.8 -00.1	N 22 11.3 -00.4	128 50.5 -00.9	N 23 21.3 -00.1	13 05.3 -29.6	S 08 46.6 +11.9	20						
21	133 38.7 -00.1	N 22 10.9 -00.3	143 49.6 -00.8	N 23 21.2 -00.1	27 35.7 -29.7	S 08 58.5 +11.9	21						
22	148 38.6 -00.1	N 22 10.6 -00.3	158 48.8 -00.9	N 23 21.1 -00.1	42 06.0 -29.7	S 09 10.4 +11.8	22						
23	163 38.5 -00.1	N 22 10.3 -00.3	173 47.9 -00.9	N 23 21.0 -00.1	56 36.3 -29.6	S 09 22.2 +11.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'9 15'8 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'4 58'3 58'2 58'1 58'0 57'9								
	SHA 251° 251° 251° 250° 250° 250°		SHA 261° 261° 261° 261° 261° 260°		SHA 154° 152° 150° 148° 146° 144°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:24		Greenwich Culmination Time: 19:05								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	159 52.2 +00.8	N 20 07.8 -00.4	32 41.1 +02.7	S 22 12.3 +00.0	359 02.1 +02.7	S 22 00.9 +00.0	00						
01	174 53.0 +00.8	N 20 07.4 -00.4	47 43.8 +02.7	S 22 12.3 +00.0	14 04.8 +02.6	S 22 00.9 +00.1	01						
02	189 53.8 +00.8	N 20 07.0 -00.4	62 46.5 +02.7	S 22 12.3 -00.1	29 07.4 +02.7	S 22 01.0 +00.0	02						
03	204 54.6 +00.9	N 20 06.6 -00.3	77 49.2 +02.7	S 22 12.2 +00.0	44 10.1 +02.6	S 22 01.0 +00.0	03						
04	219 55.5 +00.8	N 20 06.3 -00.4	92 51.9 +02.7	S 22 12.2 +00.0	59 12.7 +02.7	S 22 01.0 +00.1	04						
05	234 56.3 +00.8	N 20 05.9 -00.4	107 54.6 +02.8	S 22 12.2 +00.0	74 15.4 +02.7	S 22 01.1 +00.0	05						
06	249 57.1 +00.8	N 20 05.5 -00.4	122 57.4 +02.7	S 22 12.2 +00.0	89 18.1 +02.6	S 22 01.1 +00.0	06						
07	264 57.9 +00.9	N 20 05.1 -00.4	138 00.1 +02.7	S 22 12.2 +00.0	104 20.7 +02.7	S 22 01.1 +00.0	07						
08	279 58.8 +00.8	N 20 04.7 -00.4	153 02.8 +02.7	S 22 12.2 +00.0	119 23.4 +02.7	S 22 01.1 +00.1	08						
09	294 59.6 +00.8	N 20 04.3 -00.4	168 05.5 +02.7	S 22 12.2 -00.1	134 26.1 +02.6	S 22 01.2 +00.0	09						
10	310 00.4 +00.8	N 20 03.9 -00.4	183 08.2 +02.7	S 22 12.1 +00.0	149 28.7 +02.7	S 22 01.2 +00.0	10						
11	325 01.2 +00.9	N 20 03.5 -00.4	198 10.9 +02.7	S 22 12.1 +00.0	164 31.4 +02.6	S 22 01.2 +00.0	11						
12	340 02.1 +00.8	N 20 03.1 -00.4	213 13.6 +02.7	S 22 12.1 +00.0	179 34.0 +02.7	S 22 01.2 +00.1	12						
13	355 02.9 +00.8	N 20 02.7 -00.3	228 16.3 +02.7	S 22 12.1 +00.0	194 36.7 +02.7	S 22 01.3 +00.0	13						
14	10 03.7 +00.8	N 20 02.4 -00.4	243 19.0 +02.7	S 22 12.1 +00.0	209 39.4 +02.6	S 22 01.3 +00.0	14						
15	25 04.5 +00.9	N 20 02.0 -00.4	258 21.7 +02.8	S 22 12.1 -00.1	224 42.0 +02.7	S 22 01.3 +00.1	15						
16	40 05.4 +00.8	N 20 01.6 -00.4	273 24.5 +02.7	S 22 12.0 +00.0	239 44.7 +02.6	S 22 01.4 +00.0	16						
17	55 06.2 +00.8	N 20 01.2 -00.4	288 27.2 +02.7	S 22 12.0 +00.0	254 47.3 +02.7	S 22 01.4 +00.0	17						
18	70 07.0 +00.8	N 20 00.8 -00.4	303 29.9 +02.7	S 22 12.0 +00.0	269 50.0 +02.7	S 22 01.4 +00.0	18						
19	85 07.8 +00.9	N 20 00.4 -00.4	318 32.6 +02.7	S 22 12.0 +00.0	284 52.7 +02.6	S 22 01.4 +00.1	19						
20	100 08.7 +00.8	N 20 00.0 -00.4	333 35.3 +02.7	S 22 12.0 +00.0	299 55.3 +02.7	S 22 01.5 +00.0	20						
21	115 09.5 +00.8	N 19 59.6 -00.4	348 38.0 +02.7	S 22 12.0 -00.1	314 58.0 +02.6	S 22 01.5 +00.0	21						
22	130 10.3 +00.9	N 19 59.2 -00.4	3 40.7 +02.7	S 22 11.9 +00.0	330 00.6 +02.7	S 22 01.5 +00.0	22						
23	145 11.2 +00.8	N 19 58.8 -00.4	18 43.4 +02.7	S 22 11.9 +00.0	345 03.3 +02.7	S 22 01.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 232° 232° 232° 232° 232° 232°		SHA 105° 105° 105° 105° 105° 105°		SHA 071° 071° 071° 071° 071° 071°								
	Greenwich Culmination Time: 13:19		Greenwich Culmination Time: 21:45		Greenwich Culmination Time: 00:03								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 38.4 +00.0	N 22 10.0 -00.3	188 47.0 -00.8	N 23 20.9 -00.1	71 06.7 -29.7	S 09 34.0 +11.7	00						
01	193 38.4 -00.1	N 22 09.7 -00.4	203 46.2 -00.9	N 23 20.8 -00.1	85 37.0 -29.7	S 09 45.7 +11.7	01						
02	208 38.3 -00.1	N 22 09.3 -00.3	218 45.3 -00.9	N 23 20.7 -00.1	100 07.3 -29.8	S 09 57.4 +11.6	02						
03	223 38.2 -00.1	N 22 09.0 -00.3	233 44.4 -00.9	N 23 20.6 -00.1	114 37.5 -29.7	S 10 09.0 +11.5	03						
04	238 38.1 -00.1	N 22 08.7 -00.3	248 43.5 -00.8	N 23 20.5 -00.1	129 07.8 -29.7	S 10 20.5 +11.5	04						
05	253 38.0 -00.1	N 22 08.4 -00.4	263 42.7 -00.9	N 23 20.4 -00.2	143 38.1 -29.8	S 10 32.0 +11.4	05						
06	268 37.9 -00.1	N 22 08.0 -00.3	278 41.8 -00.9	N 23 20.2 -00.1	158 08.3 -29.8	S 10 43.4 +11.3	06						
07	283 37.8 +00.0	N 22 07.7 -00.3	293 40.9 -00.9	N 23 20.1 -00.1	172 38.5 -29.8	S 10 54.7 +11.3	07						
08	298 37.8 -00.1	N 22 07.4 -00.4	308 40.0 -00.8	N 23 20.0 -00.1	187 08.7 -29.8	S 11 06.0 +11.2	08						
09	313 37.7 -00.1	N 22 07.0 -00.3	323 39.2 -00.9	N 23 19.9 -00.1	201 38.9 -29.8	S 11 17.2 +11.1	09						
10	328 37.6 -00.1	N 22 06.7 -00.3	338 38.3 -00.9	N 23 19.8 -00.2	216 09.1 -29.9	S 11 28.3 +11.1	10						
11	343 37.5 -00.1	N 22 06.4 -00.4	353 37.4 -00.9	N 23 19.6 -00.1	230 39.2 -29.8	S 11 39.4 +11.0	11						
12	358 37.4 -00.1	N 22 06.0 -00.3	8 36.5 -00.8	N 23 19.5 -00.1	245 09.4 -29.9	S 11 50.4 +11.0	12						
13	13 37.3 +00.0	N 22 05.7 -00.3	23 35.7 -00.9	N 23 19.4 -00.1	259 39.5 -29.9	S 12 01.4 +10.8	13						
14	28 37.3 -00.1	N 22 05.4 -00.4	38 34.8 -00.9	N 23 19.3 -00.2	274 09.6 -29.9	S 12 12.2 +10.8	14						
15	43 37.2 -00.1	N 22 05.0 -00.3	53 33.9 -00.8	N 23 19.1 -00.1	288 39.7 -30.0	S 12 23.0 +10.8	15						
16	58 37.1 -00.1	N 22 04.7 -00.3	68 33.1 -00.9	N 23 19.0 -00.1	303 09.7 -29.9	S 12 33.8 +10.6	16						
17	73 37.0 -00.1	N 22 04.4 -00.4	83 32.2 -00.9	N 23 18.9 -00.1	317 39.8 -30.0	S 12 44.4 +10.6	17						
18	88 36.9 -00.1	N 22 04.0 -00.3	98 31.3 -00.9	N 23 18.8 -00.2	332 09.8 -30.0	S 12 55.0 +10.5	18						
19	103 36.8 +00.0	N 22 03.7 -00.3	113 30.4 -00.8	N 23 18.6 -00.1	346 39.8 -30.0	S 13 05.5 +10.4	19						
20	118 36.8 -00.1	N 22 03.4 -00.4	128 29.6 -00.9	N 23 18.5 -00.1	1 09.8 -30.1	S 13 15.9 +10.4	20						
21	133 36.7 -00.1	N 22 03.0 -00.3	143 28.7 -00.9	N 23 18.4 -00.2	15 39.7 -30.1	S 13 26.3 +10.3	21						
22	148 36.6 -00.1	N 22 02.7 -00.3	158 27.8 -00.8	N 23 18.2 -00.1	30 09.6 -30.0	S 13 36.6 +10.2	22						
23	163 36.5 -00.1	N 22 02.4 -00.4	173 27.0 -00.9	N 23 18.1 -00.1	44 39.6 -30.2	S 13 46.8 +10.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'7 15'7 15'7 15'7 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'8 57'7 57'6 57'5 57'4 57'4								
	SHA 250° 250° 250° 249° 249° 249°		SHA 260° 260° 260° 259° 259° 259°		SHA 141° 139° 137° 135° 133° 131°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:25		Greenwich Culmination Time: 19:55								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	160 12.0 +00.8	N 19 58.4 -00.4	33 46.1 +02.7	S 22 11.9 +00.0	0 06.0 +02.6	S 22 01.6 +00.0	00						
01	175 12.8 +00.8	N 19 58.0 -00.4	48 48.8 +02.7	S 22 11.9 +00.0	15 08.6 +02.7	S 22 01.6 +00.0	01						
02	190 13.6 +00.9	N 19 57.6 -00.4	63 51.5 +02.7	S 22 11.9 +00.0	30 11.3 +02.6	S 22 01.6 +00.0	02						
03	205 14.5 +00.8	N 19 57.2 -00.3	78 54.2 +02.7	S 22 11.9 -00.1	45 13.9 +02.7	S 22 01.6 +00.1	03						
04	220 15.3 +00.8	N 19 56.9 -00.4	93 56.9 +02.7	S 22 11.8 +00.0	60 16.6 +02.7	S 22 01.7 +00.0	04						
05	235 16.1 +00.9	N 19 56.5 -00.4	108 59.6 +02.8	S 22 11.8 +00.0	75 19.3 +02.6	S 22 01.7 +00.0	05						
06	250 17.0 +00.8	N 19 56.1 -00.4	124 02.4 +02.7	S 22 11.8 +00.0	90 21.9 +02.7	S 22 01.7 +00.1	06						
07	265 17.8 +00.8	N 19 55.7 -00.4	139 05.1 +02.7	S 22 11.8 +00.0	105 24.6 +02.6	S 22 01.8 +00.0	07						
08	280 18.6 +00.8	N 19 55.3 -00.4	154 07.8 +02.7	S 22 11.8 +00.0	120 27.2 +02.7	S 22 01.8 +00.0	08						
09	295 19.4 +00.9	N 19 54.9 -00.4	169 10.5 +02.7	S 22 11.8 +00.0	135 29.9 +02.7	S 22 01.8 +00.0	09						
10	310 20.3 +00.8	N 19 54.5 -00.4	184 13.2 +02.7	S 22 11.8 -00.1	150 32.6 +02.6	S 22 01.8 +00.1	10						
11	325 21.1 +00.8	N 19 54.1 -00.4	199 15.9 +02.7	S 22 11.7 +00.0	165 35.2 +02.7	S 22 01.9 +00.0	11						
12	340 21.9 +00.9	N 19 53.7 -00.4	214 18.6 +02.7	S 22 11.7 +00.0	180 37.9 +02.7	S 22 01.9 +00.0	12						
13	355 22.8 +00.8	N 19 53.3 -00.4	229 21.3 +02.7	S 22 11.7 +00.0	195 40.6 +02.6	S 22 01.9 +00.0	13						
14	10 23.6 +00.8	N 19 52.9 -00.4	244 24.0 +02.7	S 22 11.7 +00.0	210 43.2 +02.7	S 22 01.9 +00.1	14						
15	25 24.4 +00.8	N 19 52.5 -00.4	259 26.7 +02.7	S 22 11.7 +00.0	225 45.9 +02.6	S 22 02.0 +00.0	15						
16	40 25.2 +00.9	N 19 52.1 -00.4	274 29.4 +02.7	S 22 11.7 -00.1	240 48.5 +02.7	S 22 02.0 +00.0	16						
17	55 26.1 +00.8	N 19 51.7 -00.4	289 32.1 +02.7	S 22 11.6 +00.0	255 51.2 +02.7	S 22 02.0 +00.1	17						
18	70 26.9 +00.8	N 19 51.3 -00.4	304 34.8 +02.7	S 22 11.6 +00.0	270 53.9 +02.6	S 22 02.1 +00.0	18						
19	85 27.7 +00.9	N 19 50.9 -00.4	319 37.5 +02.7	S 22 11.6 +00.0	285 56.5 +02.7	S 22 02.1 +00.0	19						
20	100 28.6 +00.8	N 19 50.5 -00.4	334 40.2 +02.7	S 22 11.6 +00.0	300 59.2 +02.6	S 22 02.1 +00.0	20						
21	115 29.4 +00.8	N 19 50.1 -00.4	349 42.9 +02.7	S 22 11.6 +00.0	316 01.8 +02.7	S 22 02.1 +00.1	21						
22	130 30.2 +00.9	N 19 49.7 -00.4	4 45.6 +02.7	S 22 11.6 +00.0	331 04.5 +02.7	S 22 02.2 +00.0	22						
23	145 31.1 +00.8	N 19 49.3 -00.4	19 48.3 +02.7	S 22 11.6 -00.1	346 07.2 +02.6	S 22 02.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 232° 231° 231° 231° 231° 231°		SHA 105° 105° 105° 105° 105° 105°		SHA 071° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:18		Greenwich Culmination Time: 21:41		Greenwich Culmination Time: 23:55								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 36.4 +00.0	N 22 02.0 -00.3	188 26.1 -00.9	N 23 18.0 -00.2	59 09.4 -30.1	S 13 56.9 +10.0	00						
01	193 36.4 -00.1	N 22 01.7 -00.4	203 25.2 -00.9	N 23 17.8 -00.1	73 39.3 -30.2	S 14 06.9 +10.0	01						
02	208 36.3 -00.1	N 22 01.3 -00.3	218 24.3 -00.8	N 23 17.7 -00.2	88 09.1 -30.1	S 14 16.9 +09.8	02						
03	223 36.2 -00.1	N 22 01.0 -00.3	233 23.5 -00.9	N 23 17.5 -00.1	102 39.0 -30.2	S 14 26.7 +09.8	03						
04	238 36.1 -00.1	N 22 00.7 -00.4	248 22.6 -00.9	N 23 17.4 -00.2	117 08.8 -30.3	S 14 36.5 +09.7	04						
05	253 36.0 +00.0	N 22 00.3 -00.3	263 21.7 -00.8	N 23 17.2 -00.1	131 38.5 -30.2	S 14 46.2 +09.7	05						
06	268 36.0 -00.1	N 21 60.0 -00.4	278 20.9 -00.9	N 23 17.1 -00.1	146 08.3 -30.3	S 14 55.9 +09.5	06						
07	283 35.9 -00.1	N 21 59.6 -00.3	293 20.0 -00.9	N 23 17.0 -00.2	160 38.0 -30.3	S 15 05.4 +09.5	07						
08	298 35.8 -00.1	N 21 59.3 -00.4	308 19.1 -00.9	N 23 16.8 -00.1	175 07.7 -30.4	S 15 14.9 +09.3	08						
09	313 35.7 -00.1	N 21 58.9 -00.3	323 18.2 -00.8	N 23 16.7 -00.2	189 37.3 -30.3	S 15 24.2 +09.3	09						
10	328 35.6 +00.0	N 21 58.6 -00.4	338 17.4 -00.9	N 23 16.5 -00.1	204 07.0 -30.4	S 15 33.5 +09.2	10						
11	343 35.6 -00.1	N 21 58.2 -00.3	353 16.5 -00.9	N 23 16.4 -00.2	218 36.6 -30.4	S 15 42.7 +09.1	11						
12	358 35.5 -00.1	N 21 57.9 -00.4	8 15.6 -00.8	N 23 16.2 -00.1	233 06.2 -30.4	S 15 51.8 +09.0	12						
13	13 35.4 -00.1	N 21 57.5 -00.3	23 14.8 -00.9	N 23 16.1 -00.2	247 35.8 -30.5	S 16 00.8 +09.0	13						
14	28 35.3 +00.0	N 21 57.2 -00.4	38 13.9 -00.9	N 23 15.9 -00.1	262 05.3 -30.5	S 16 09.8 +08.8	14						
15	43 35.3 -00.1	N 21 56.8 -00.3	53 13.0 -00.9	N 23 15.8 -00.2	276 34.8 -30.5	S 16 18.6 +08.8	15						
16	58 35.2 -00.1	N 21 56.5 -00.4	68 12.1 -00.8	N 23 15.6 -00.2	291 04.3 -30.5	S 16 27.4 +08.6	16						
17	73 35.1 -00.1	N 21 56.1 -00.3	83 11.3 -00.9	N 23 15.4 -00.1	305 33.8 -30.6	S 16 36.0 +08.6	17						
18	88 35.0 -00.1	N 21 55.8 -00.4	98 10.4 -00.9	N 23 15.3 -00.2	320 03.2 -30.6	S 16 44.6 +08.4	18						
19	103 34.9 +00.0	N 21 55.4 -00.3	113 09.5 -00.8	N 23 15.1 -00.1	334 32.6 -30.6	S 16 53.0 +08.4	19						
20	118 34.9 -00.1	N 21 55.1 -00.4	128 08.7 -00.9	N 23 15.0 -00.2	349 02.0 -30.6	S 17 01.4 +08.3	20						
21	133 34.8 -00.1	N 21 54.7 -00.3	143 07.8 -00.9	N 23 14.8 -00.2	3 31.4 -30.7	S 17 09.7 +08.2	21						
22	148 34.7 -00.1	N 21 54.4 -00.4	158 06.9 -00.8	N 23 14.6 -00.1	18 00.7 -30.6	S 17 17.9 +08.1	22						
23	163 34.6 +00.0	N 21 54.0 -00.3	173 06.1 -00.9	N 23 14.5 -00.2	32 30.1 -30.8	S 17 26.0 +07.9	23						
UT	02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 15'6 15'6 15'6 15'5 15'5 15'5					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'3 57'2 57'1 57'0 56'9 56'8		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 249° 249° 249° 248° 248° 248°		SHA 259° 259° 258° 258° 258° 258°		SHA 128° 126° 124° 122° 120° 118°		SHA 072° 072° 072° 072° 072° 072°						
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:26		Greenwich Culmination Time: 20:45								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	160 31.9 +00.8	N 19 48.9 -00.4	34 51.0 +02.7	S 22 11.5 +00.0	1 09.8 +02.7	S 22 02.2 +00.0	00						
01	175 32.7 +00.8	N 19 48.5 -00.4	49 53.7 +02.7	S 22 11.5 +00.0	16 12.5 +02.6	S 22 02.2 +00.1	01						
02	190 33.5 +00.9	N 19 48.1 -00.4	64 56.4 +02.7	S 22 11.5 +00.0	31 15.1 +02.7	S 22 02.3 +00.0	02						
03	205 34.4 +00.8	N 19 47.7 -00.4	79 59.1 +02.7	S 22 11.5 +00.0	46 17.8 +02.7	S 22 02.3 +00.0	03						
04	220 35.2 +00.8	N 19 47.3 -00.4	95 01.8 +02.7	S 22 11.5 +00.0	61 20.5 +02.6	S 22 02.3 +00.0	04						
05	235 36.0 +00.9	N 19 46.9 -00.4	110 04.5 +02.7	S 22 11.5 -00.1	76 23.1 +02.7	S 22 02.3 +00.1	05						
06	250 36.9 +00.8	N 19 46.5 -00.4	125 07.2 +02.7	S 22 11.4 +00.0	91 25.8 +02.6	S 22 02.4 +00.0	06						
07	265 37.7 +00.8	N 19 46.1 -00.4	140 09.9 +02.7	S 22 11.4 +00.0	106 28.4 +02.7	S 22 02.4 +00.0	07						
08	280 38.5 +00.9	N 19 45.7 -00.4	155 12.6 +02.7	S 22 11.4 +00.0	121 31.1 +02.7	S 22 02.4 +00.1	08						
09	295 39.4 +00.8	N 19 45.3 -00.4	170 15.3 +02.7	S 22 11.4 +00.0	136 33.8 +02.6	S 22 02.5 +00.0	09						
10	310 40.2 +00.8	N 19 44.9 -00.4	185 18.0 +02.7	S 22 11.4 +00.0	151 36.4 +02.7	S 22 02.5 +00.0	10						
11	325 41.0 +00.9	N 19 44.5 -00.4	200 20.7 +02.7	S 22 11.4 +00.0	166 39.1 +02.6	S 22 02.5 +00.0	11						
12	340 41.9 +00.8	N 19 44.1 -00.4	215 23.4 +02.7	S 22 11.4 -00.1	181 41.7 +02.7	S 22 02.5 +00.1	12						
13	355 42.7 +00.8	N 19 43.7 -00.4	230 26.1 +02.7	S 22 11.3 +00.0	196 44.4 +02.7	S 22 02.6 +00.0	13						
14	10 43.5 +00.9	N 19 43.3 -00.4	245 28.8 +02.7	S 22 11.3 +00.0	211 47.1 +02.6	S 22 02.6 +00.0	14						
15	25 44.4 +00.8	N 19 42.9 -00.4	260 31.5 +02.7	S 22 11.3 +00.0	226 49.7 +02.7	S 22 02.6 +00.0	15						
16	40 45.2 +00.8	N 19 42.5 -00.4	275 34.2 +02.7	S 22 11.3 +00.0	241 52.4 +02.6	S 22 02.6 +00.1	16						
17	55 46.0 +00.9	N 19 42.1 -00.4	290 36.9 +02.7	S 22 11.3 +00.0	256 55.0 +02.7	S 22 02.7 +00.0	17						
18	70 46.9 +00.8	N 19 41.7 -00.4	305 39.6 +02.7	S 22 11.3 -00.1	271 57.7 +02.7	S 22 02.7 +00.0	18						
19	85 47.7 +00.8	N 19 41.3 -00.4	320 42.3 +02.7	S 22 11.2 +00.0	287 00.4 +02.6	S 22 02.7 +00.0	19						
20	100 48.5 +00.9	N 19 40.9 -00.4	335 45.0 +02.7	S 22 11.2 +00.0	302 03.0 +02.7	S 22 02.7 +00.1	20						
21	115 49.4 +00.8	N 19 40.5 -00.4	350 47.7 +02.6	S 22 11.2 +00.0	317 05.7 +02.6	S 22 02.8 +00.0	21						
22	130 50.2 +00.8	N 19 40.1 -00.4	5 50.3 +02.7	S 22 11.2 +00.0	332 08.3 +02.7	S 22 02.8 +00.0	22						
23	145 51.0 +00.9	N 19 39.7 -00.4	20 53.0 +02.7	S 22 11.2 +00.0	347 11.0 +02.7	S 22 02.8 +00.1	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 231° 231° 231° 231° 230° 230°		SHA 105° 105° 105° 105° 105° 105°		SHA 072° 072° 072° 072° 072° 072°		SHA 072° 072° 072° 072° 072° 072°						
	Greenwich Culmination Time: 13:17		Greenwich Culmination Time: 21:36		Greenwich Culmination Time: 23:51								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 34.6 -00.1	N 21 53.7 -00.4	188 05.2 -00.9	N 23 14.3 -00.2	46 59.3 -30.7	S 17 33.9 +07.9	00						
01	193 34.5 -00.1	N 21 53.3 -00.3	203 04.3 -00.9	N 23 14.1 -00.1	61 28.6 -30.8	S 17 41.8 +07.8	01						
02	208 34.4 -00.1	N 21 53.0 -00.4	218 03.4 -00.8	N 23 14.0 -00.2	75 57.8 -30.7	S 17 49.6 +07.7	02						
03	223 34.3 +00.0	N 21 52.6 -00.3	233 02.6 -00.9	N 23 13.8 -00.2	90 27.1 -30.9	S 17 57.3 +07.6	03						
04	238 34.3 -00.1	N 21 52.3 -00.4	248 01.7 -00.9	N 23 13.6 -00.1	104 56.2 -30.8	S 18 04.9 +07.5	04						
05	253 34.2 -00.1	N 21 51.9 -00.4	263 00.8 -00.8	N 23 13.5 -00.2	119 25.4 -30.9	S 18 12.4 +07.4	05						
06	268 34.1 -00.1	N 21 51.5 -00.3	277 60.0 -00.9	N 23 13.3 -00.2	133 54.5 -30.8	S 18 19.8 +07.3	06						
07	283 34.0 +00.0	N 21 51.2 -00.4	292 59.1 -00.9	N 23 13.1 -00.2	148 23.7 -30.9	S 18 27.1 +07.2	07						
08	298 34.0 -00.1	N 21 50.8 -00.3	307 58.2 -00.8	N 23 12.9 -00.1	162 52.8 -31.0	S 18 34.3 +07.1	08						
09	313 33.9 -00.1	N 21 50.5 -00.4	322 57.4 -00.9	N 23 12.8 -00.2	177 21.8 -30.9	S 18 41.4 +06.9	09						
10	328 33.8 -00.1	N 21 50.1 -00.4	337 56.5 -00.9	N 23 12.6 -00.2	191 50.9 -31.0	S 18 48.3 +06.9	10						
11	343 33.7 +00.0	N 21 49.7 -00.3	352 55.6 -00.8	N 23 12.4 -00.2	206 19.9 -31.0	S 18 55.2 +06.8	11						
12	358 33.7 -00.1	N 21 49.4 -00.4	7 54.8 -00.9	N 23 12.2 -00.2	220 48.9 -31.0	S 19 02.0 +06.7	12						
13	13 33.6 -00.1	N 21 49.0 -00.4	22 53.9 -00.9	N 23 12.0 -00.1	235 17.9 -31.1	S 19 08.7 +06.5	13						
14	28 33.5 -00.1	N 21 48.6 -00.3	37 53.0 -00.8	N 23 11.9 -00.2	249 46.8 -31.0	S 19 15.2 +06.5	14						
15	43 33.4 +00.0	N 21 48.3 -00.4	52 52.2 -00.9	N 23 11.7 -00.2	264 15.8 -31.1	S 19 21.7 +06.3	15						
16	58 33.4 -00.1	N 21 47.9 -00.4	67 51.3 -00.9	N 23 11.5 -00.2	278 44.7 -31.1	S 19 28.0 +06.3	16						
17	73 33.3 -00.1	N 21 47.5 -00.3	82 50.4 -00.8	N 23 11.3 -00.2	293 13.6 -31.1	S 19 34.3 +06.1	17						
18	88 33.2 +00.0	N 21 47.2 -00.4	97 49.6 -00.9	N 23 11.1 -00.2	307 42.5 -31.2	S 19 40.4 +06.0	18						
19	103 33.2 -00.1	N 21 46.8 -00.4	112 48.7 -00.9	N 23 10.9 -00.2	322 11.3 -31.1	S 19 46.4 +05.9	19						
20	118 33.1 -00.1	N 21 46.4 -00.3	127 47.8 -00.8	N 23 10.7 -00.2	336 40.2 -31.2	S 19 52.3 +05.8	20						
21	133 33.0 -00.1	N 21 46.1 -00.4	142 47.0 -00.9	N 23 10.5 -00.1	351 09.0 -31.2	S 19 58.1 +05.7	21						
22	148 32.9 +00.0	N 21 45.7 -00.4	157 46.1 -00.9	N 23 10.4 -00.2	5 37.8 -31.3	S 20 03.8 +05.6	22						
23	163 32.9 -00.1	N 21 45.3 -00.3	172 45.2 -00.8	N 23 10.2 -00.2	20 06.5 -31.2	S 20 09.4 +05.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'5 15'4 15'4 15'4 15'4 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'7 56'6 56'5 56'5 56'4 56'3								
	SHA 248° 248° 248° 247° 247° 247°		SHA 257° 257° 257° 257° 257° 256°		SHA 115° 113° 111° 109° 106° 104°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:28		Greenwich Culmination Time: 21:36								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	160 51.9 +00.8	N 19 39.3 -00.4	35 55.7 +02.7	S 22 11.2 +00.0	2 13.7 +02.6	S 22 02.9 +00.0	00						
01	175 52.7 +00.8	N 19 38.9 -00.5	50 58.4 +02.7	S 22 11.2 -00.1	17 16.3 +02.7	S 22 02.9 +00.0	01						
02	190 53.5 +00.9	N 19 38.4 -00.4	66 01.1 +02.7	S 22 11.1 +00.0	32 19.0 +02.7	S 22 02.9 +00.0	02						
03	205 54.4 +00.8	N 19 38.0 -00.4	81 03.8 +02.7	S 22 11.1 +00.0	47 21.7 +02.6	S 22 02.9 +00.1	03						
04	220 55.2 +00.8	N 19 37.6 -00.4	96 06.5 +02.7	S 22 11.1 +00.0	62 24.3 +02.7	S 22 03.0 +00.0	04						
05	235 56.0 +00.9	N 19 37.2 -00.4	111 09.2 +02.7	S 22 11.1 +00.0	77 27.0 +02.6	S 22 03.0 +00.0	05						
06	250 56.9 +00.8	N 19 36.8 -00.4	126 11.9 +02.7	S 22 11.1 +00.0	92 29.6 +02.7	S 22 03.0 +00.0	06						
07	265 57.7 +00.9	N 19 36.4 -00.4	141 14.6 +02.7	S 22 11.1 +00.0	107 32.3 +02.7	S 22 03.0 +00.1	07						
08	280 58.6 +00.8	N 19 36.0 -00.4	156 17.3 +02.7	S 22 11.1 -00.1	122 35.0 +02.6	S 22 03.1 +00.0	08						
09	295 59.4 +00.8	N 19 35.6 -00.4	171 20.0 +02.7	S 22 11.0 +00.0	137 37.6 +02.7	S 22 03.1 +00.0	09						
10	311 00.2 +00.9	N 19 35.2 -00.4	186 22.7 +02.7	S 22 11.0 +00.0	152 40.3 +02.6	S 22 03.1 +00.0	10						
11	326 01.1 +00.8	N 19 34.8 -00.4	201 25.4 +02.6	S 22 11.0 +00.0	167 42.9 +02.7	S 22 03.1 +00.1	11						
12	341 01.9 +00.8	N 19 34.4 -00.4	216 28.0 +02.7	S 22 11.0 +00.0	182 45.6 +02.7	S 22 03.2 +00.0	12						
13	356 02.7 +00.9	N 19 34.0 -00.4	231 30.7 +02.7	S 22 11.0 +00.0	197 48.3 +02.6	S 22 03.2 +00.0	13						
14	11 03.6 +00.8	N 19 33.6 -00.4	246 33.4 +02.7	S 22 11.0 +00.0	212 50.9 +02.7	S 22 03.2 +00.1	14						
15	26 04.4 +00.8	N 19 33.2 -00.5	261 36.1 +02.7	S 22 11.0 -00.1	227 53.6 +02.6	S 22 03.3 +00.0	15						
16	41 05.2 +00.9	N 19 32.7 -00.4	276 38.8 +02.7	S 22 10.9 +00.0	242 56.2 +02.7	S 22 03.3 +00.0	16						
17	56 06.1 +00.8	N 19 32.3 -00.4	291 41.5 +02.7	S 22 10.9 +00.0	257 58.9 +02.7	S 22 03.3 +00.0	17						
18	71 06.9 +00.9	N 19 31.9 -00.4	306 44.2 +02.7	S 22 10.9 +00.0	273 01.6 +02.6	S 22 03.3 +00.1	18						
19	86 07.8 +00.8	N 19 31.5 -00.4	321 46.9 +02.7	S 22 10.9 +00.0	288 04.2 +02.7	S 22 03.4 +00.0	19						
20	101 08.6 +00.8	N 19 31.1 -00.4	336 49.6 +02.7	S 22 10.9 +00.0	303 06.9 +02.6	S 22 03.4 +00.0	20						
21	116 09.4 +00.9	N 19 30.7 -00.4	351 52.3 +02.6	S 22 10.9 +00.0	318 09.5 +02.7	S 22 03.4 +00.0	21						
22	131 10.3 +00.8	N 19 30.3 -00.4	6 54.9 +02.7	S 22 10.9 -00.1	333 12.2 +02.7	S 22 03.4 +00.1	22						
23	146 11.1 +00.8	N 19 29.9 -00.4	21 57.6 +02.7	S 22 10.8 +00.0	348 14.9 +02.6	S 22 03.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 230° 230° 230° 230° 230° 230°		SHA 105° 105° 105° 105° 105° 105°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:15		Greenwich Culmination Time: 21:32		Greenwich Culmination Time: 23:46								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 32.8 -00.1	N 21 45.0 -00.4	187 44.4 -00.9	N 23 10.0 -00.2	34 35.3 -31.2	S 20 14.9 +05.4	00						
01	193 32.7 +00.0	N 21 44.6 -00.4	202 43.5 -00.9	N 23 09.8 -00.2	49 04.1 -31.3	S 20 20.3 +05.2	01						
02	208 32.7 -00.1	N 21 44.2 -00.4	217 42.6 -00.8	N 23 09.6 -00.2	63 32.8 -31.3	S 20 25.5 +05.2	02						
03	223 32.6 -00.1	N 21 43.8 -00.3	232 41.8 -00.9	N 23 09.4 -00.2	78 01.5 -31.3	S 20 30.7 +05.0	03						
04	238 32.5 +00.0	N 21 43.5 -00.4	247 40.9 -00.9	N 23 09.2 -00.2	92 30.2 -31.3	S 20 35.7 +04.9	04						
05	253 32.5 -00.1	N 21 43.1 -00.4	262 40.0 -00.8	N 23 09.0 -00.2	106 58.9 -31.3	S 20 40.6 +04.8	05						
06	268 32.4 -00.1	N 21 42.7 -00.3	277 39.2 -00.9	N 23 08.8 -00.2	121 27.6 -31.4	S 20 45.4 +04.7	06						
07	283 32.3 -00.1	N 21 42.4 -00.4	292 38.3 -00.9	N 23 08.6 -00.2	135 56.2 -31.3	S 20 50.1 +04.6	07						
08	298 32.2 +00.0	N 21 42.0 -00.4	307 37.4 -00.8	N 23 08.4 -00.2	150 24.9 -31.4	S 20 54.7 +04.5	08						
09	313 32.2 -00.1	N 21 41.6 -00.4	322 36.6 -00.9	N 23 08.2 -00.2	164 53.5 -31.3	S 20 59.2 +04.3	09						
10	328 32.1 -00.1	N 21 41.2 -00.4	337 35.7 -00.9	N 23 08.0 -00.2	179 22.2 -31.4	S 21 03.5 +04.2	10						
11	343 32.0 +00.0	N 21 40.8 -00.3	352 34.8 -00.8	N 23 07.8 -00.3	193 50.8 -31.4	S 21 07.7 +04.2	11						
12	358 32.0 -00.1	N 21 40.5 -00.4	7 34.0 -00.9	N 23 07.5 -00.2	208 19.4 -31.4	S 21 11.9 +04.0	12						
13	13 31.9 -00.1	N 21 40.1 -00.4	22 33.1 -00.9	N 23 07.3 -00.2	222 48.0 -31.4	S 21 15.9 +03.9	13						
14	28 31.8 +00.0	N 21 39.7 -00.4	37 32.2 -00.8	N 23 07.1 -00.2	237 16.6 -31.4	S 21 19.8 +03.7	14						
15	43 31.8 -00.1	N 21 39.3 -00.4	52 31.4 -00.9	N 23 06.9 -00.2	251 45.2 -31.5	S 21 23.5 +03.7	15						
16	58 31.7 -00.1	N 21 38.9 -00.3	67 30.5 -00.9	N 23 06.7 -00.2	266 13.7 -31.4	S 21 27.2 +03.5	16						
17	73 31.6 +00.0	N 21 38.6 -00.4	82 29.6 -00.8	N 23 06.5 -00.2	280 42.3 -31.4	S 21 30.7 +03.5	17						
18	88 31.6 -00.1	N 21 38.2 -00.4	97 28.8 -00.9	N 23 06.3 -00.3	295 10.9 -31.5	S 21 34.2 +03.3	18						
19	103 31.5 -00.1	N 21 37.8 -00.4	112 27.9 -00.8	N 23 06.0 -00.2	309 39.4 -31.4	S 21 37.5 +03.2	19						
20	118 31.4 +00.0	N 21 37.4 -00.4	127 27.1 -00.9	N 23 05.8 -00.2	324 08.0 -31.5	S 21 40.7 +03.0	20						
21	133 31.4 -00.1	N 21 37.0 -00.4	142 26.2 -00.9	N 23 05.6 -00.2	338 36.5 -31.4	S 21 43.7 +03.0	21						
22	148 31.3 -00.1	N 21 36.6 -00.3	157 25.3 -00.8	N 23 05.4 -00.2	353 05.1 -31.4	S 21 46.7 +02.8	22						
23	163 31.2 +00.0	N 21 36.3 -00.4	172 24.5 -00.9	N 23 05.2 -00.3	7 33.7 -31.5	S 21 49.5 +02.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'2 56'1 56'0 56'0 55'9 55'8								
	SHA 247° 247° 247° 246° 246° 246°		SHA 256° 256° 256° 255° 255° 255°		SHA 102° 100° 097° 095° 093° 091°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:29		Greenwich Culmination Time: 22:28								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	161 11.9 +00.9	N 19 29.5 -00.4	37 00.3 +02.7	S 22 10.8 +00.0	3 17.5 +02.7	S 22 03.5 +00.0	00						
01	176 12.8 +00.8	N 19 29.1 -00.5	52 03.0 +02.7	S 22 10.8 +00.0	18 20.2 +02.6	S 22 03.5 +00.0	01						
02	191 13.6 +00.9	N 19 28.6 -00.4	67 05.7 +02.7	S 22 10.8 +00.0	33 22.8 +02.7	S 22 03.5 +00.1	02						
03	206 14.5 +00.8	N 19 28.2 -00.4	82 08.4 +02.7	S 22 10.8 +00.0	48 25.5 +02.7	S 22 03.6 +00.0	03						
04	221 15.3 +00.8	N 19 27.8 -00.4	97 11.1 +02.6	S 22 10.8 +00.0	63 28.2 +02.6	S 22 03.6 +00.0	04						
05	236 16.1 +00.9	N 19 27.4 -00.4	112 13.7 +02.7	S 22 10.8 -00.1	78 30.8 +02.7	S 22 03.6 +00.1	05						
06	251 17.0 +00.8	N 19 27.0 -00.4	127 16.4 +02.7	S 22 10.7 +00.0	93 33.5 +02.6	S 22 03.7 +00.0	06						
07	266 17.8 +00.9	N 19 26.6 -00.4	142 19.1 +02.7	S 22 10.7 +00.0	108 36.1 +02.7	S 22 03.7 +00.0	07						
08	281 18.7 +00.8	N 19 26.2 -00.4	157 21.8 +02.7	S 22 10.7 +00.0	123 38.8 +02.7	S 22 03.7 +00.0	08						
09	296 19.5 +00.8	N 19 25.8 -00.4	172 24.5 +02.7	S 22 10.7 +00.0	138 41.5 +02.6	S 22 03.7 +00.1	09						
10	311 20.3 +00.9	N 19 25.4 -00.5	187 27.2 +02.7	S 22 10.7 +00.0	153 44.1 +02.7	S 22 03.8 +00.0	10						
11	326 21.2 +00.8	N 19 24.9 -00.4	202 29.9 +02.6	S 22 10.7 +00.0	168 46.8 +02.6	S 22 03.8 +00.0	11						
12	341 22.0 +00.9	N 19 24.5 -00.4	217 32.5 +02.7	S 22 10.7 -00.1	183 49.4 +02.7	S 22 03.8 +00.0	12						
13	356 22.9 +00.8	N 19 24.1 -00.4	232 35.2 +02.7	S 22 10.6 +00.0	198 52.1 +02.7	S 22 03.8 +00.1	13						
14	11 23.7 +00.8	N 19 23.7 -00.4	247 37.9 +02.7	S 22 10.6 +00.0	213 54.8 +02.6	S 22 03.9 +00.0	14						
15	26 24.5 +00.9	N 19 23.3 -00.4	262 40.6 +02.7	S 22 10.6 +00.0	228 57.4 +02.7	S 22 03.9 +00.0	15						
16	41 25.4 +00.8	N 19 22.9 -00.4	277 43.3 +02.7	S 22 10.6 +00.0	244 00.1 +02.6	S 22 03.9 +00.0	16						
17	56 26.2 +00.9	N 19 22.5 -00.5	292 46.0 +02.6	S 22 10.6 +00.0	259 02.7 +02.7	S 22 03.9 +00.1	17						
18	71 27.1 +00.8	N 19 22.0 -00.4	307 48.6 +02.7	S 22 10.6 +00.0	274 05.4 +02.6	S 22 04.0 +00.0	18						
19	86 27.9 +00.8	N 19 21.6 -00.4	322 51.3 +02.7	S 22 10.6 -00.1	289 08.0 +02.7	S 22 04.0 +00.0	19						
20	101 28.7 +00.9	N 19 21.2 -00.4	337 54.0 +02.7	S 22 10.5 +00.0	304 10.7 +02.7	S 22 04.0 +00.1	20						
21	116 29.6 +00.8	N 19 20.8 -00.4	352 56.7 +02.7	S 22 10.5 +00.0	319 13.4 +02.6	S 22 04.1 +00.0	21						
22	131 30.4 +00.9	N 19 20.4 -00.4	7 59.4 +02.7	S 22 10.5 +00.0	334 16.0 +02.7	S 22 04.1 +00.0	22						
23	146 31.3 +00.8	N 19 20.0 -00.5	23 02.1 +02.6	S 22 10.5 +00.0	349 18.7 +02.6	S 22 04.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 230° 229° 229° 229° 229° 229°		SHA 105° 105° 105° 105° 105° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:14		Greenwich Culmination Time: 21:28		Greenwich Culmination Time: 23:42								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 31.2 -00.1	N 21 35.9 -00.4	187 23.6 -00.9	N 23 04.9 -00.2	22 02.2 -31.4	S 21 52.3 +02.6	00						
01	193 31.1 -00.1	N 21 35.5 -00.4	202 22.7 -00.8	N 23 04.7 -00.2	36 30.8 -31.5	S 21 54.9 +02.5	01						
02	208 31.0 +00.0	N 21 35.1 -00.4	217 21.9 -00.9	N 23 04.5 -00.2	50 59.3 -31.4	S 21 57.4 +02.3	02						
03	223 31.0 -00.1	N 21 34.7 -00.4	232 21.0 -00.9	N 23 04.3 -00.3	65 27.9 -31.5	S 21 59.7 +02.3	03						
04	238 30.9 -00.1	N 21 34.3 -00.4	247 20.1 -00.8	N 23 04.0 -00.2	79 56.4 -31.4	S 22 02.0 +02.1	04						
05	253 30.8 +00.0	N 21 33.9 -00.4	262 19.3 -00.9	N 23 03.8 -00.2	94 25.0 -31.4	S 22 04.1 +02.0	05						
06	268 30.8 -00.1	N 21 33.5 -00.3	277 18.4 -00.8	N 23 03.6 -00.2	108 53.6 -31.4	S 22 06.1 +01.9	06						
07	283 30.7 +00.0	N 21 33.2 -00.4	292 17.6 -00.9	N 23 03.4 -00.3	123 22.2 -31.5	S 22 08.0 +01.8	07						
08	298 30.7 -00.1	N 21 32.8 -00.4	307 16.7 -00.9	N 23 03.1 -00.2	137 50.7 -31.4	S 22 09.8 +01.7	08						
09	313 30.6 -00.1	N 21 32.4 -00.4	322 15.8 -00.8	N 23 02.9 -00.2	152 19.3 -31.4	S 22 11.5 +01.5	09						
10	328 30.5 +00.0	N 21 32.0 -00.4	337 15.0 -00.9	N 23 02.7 -00.3	166 47.9 -31.4	S 22 13.0 +01.5	10						
11	343 30.5 -00.1	N 21 31.6 -00.4	352 14.1 -00.8	N 23 02.4 -00.2	181 16.5 -31.3	S 22 14.5 +01.3	11						
12	358 30.4 -00.1	N 21 31.2 -00.4	7 13.3 -00.9	N 23 02.2 -00.3	195 45.2 -31.4	S 22 15.8 +01.2	12						
13	13 30.3 +00.0	N 21 30.8 -00.4	22 12.4 -00.9	N 23 01.9 -00.2	210 13.8 -31.4	S 22 17.0 +01.1	13						
14	28 30.3 -00.1	N 21 30.4 -00.4	37 11.5 -00.8	N 23 01.7 -00.2	224 42.4 -31.3	S 22 18.1 +00.9	14						
15	43 30.2 -00.1	N 21 30.0 -00.4	52 10.7 -00.9	N 23 01.5 -00.3	239 11.1 -31.3	S 22 19.0 +00.9	15						
16	58 30.1 +00.0	N 21 29.6 -00.4	67 09.8 -00.9	N 23 01.2 -00.2	253 39.8 -31.3	S 22 19.9 +00.7	16						
17	73 30.1 -00.1	N 21 29.2 -00.4	82 08.9 -00.8	N 23 01.0 -00.3	268 08.5 -31.3	S 22 20.6 +00.6	17						
18	88 30.0 +00.0	N 21 28.8 -00.4	97 08.1 -00.9	N 23 00.7 -00.2	282 37.2 -31.3	S 22 21.2 +00.5	18						
19	103 30.0 -00.1	N 21 28.4 -00.4	112 07.2 -00.8	N 23 00.5 -00.3	297 05.9 -31.3	S 22 21.7 +00.4	19						
20	118 29.9 -00.1	N 21 28.0 -00.4	127 06.4 -00.9	N 23 00.2 -00.2	311 34.6 -31.2	S 22 22.1 +00.2	20						
21	133 29.8 +00.0	N 21 27.6 -00.4	142 05.5 -00.8	N 22 60.0 -00.3	326 03.4 -31.3	S 22 22.3 +00.2	21						
22	148 29.8 -00.1	N 21 27.2 -00.4	157 04.7 -00.9	N 22 59.7 -00.2	340 32.1 -31.2	S 22 22.5 +00.0	22						
23	163 29.7 +00.0	N 21 26.8 -00.4	172 03.8 -00.9	N 22 59.5 -00.3	355 00.9 -31.2	S 22 22.5 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'2 15'1 15'1 15'1 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'7 55'6 55'6 55'5 55'4 55'3								
	SHA 246° 246° 246° 245° 245° 245°		SHA 255° 255° 254° 254° 254° 254°		SHA 088° 086° 084° 082° 079° 077°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 11:31		Greenwich Culmination Time: 23:20								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	161 32.1 +00.8	N 19 19.5 -00.4	38 04.7 +02.7	S 22 10.5 +00.0	4 21.3 +02.7	S 22 04.1 +00.1	00						
01	176 32.9 +00.9	N 19 19.1 -00.4	53 07.4 +02.7	S 22 10.5 +00.0	19 24.0 +02.7	S 22 04.2 +00.0	01						
02	191 33.8 +00.8	N 19 18.7 -00.4	68 10.1 +02.7	S 22 10.5 -00.1	34 26.7 +02.6	S 22 04.2 +00.0	02						
03	206 34.6 +00.9	N 19 18.3 -00.4	83 12.8 +02.7	S 22 10.4 +00.0	49 29.3 +02.7	S 22 04.2 +00.0	03						
04	221 35.5 +00.8	N 19 17.9 -00.4	98 15.5 +02.6	S 22 10.4 +00.0	64 32.0 +02.6	S 22 04.2 +00.1	04						
05	236 36.3 +00.9	N 19 17.5 -00.5	113 18.1 +02.7	S 22 10.4 +00.0	79 34.6 +02.7	S 22 04.3 +00.0	05						
06	251 37.2 +00.8	N 19 17.0 -00.4	128 20.8 +02.7	S 22 10.4 +00.0	94 37.3 +02.7	S 22 04.3 +00.0	06						
07	266 38.0 +00.8	N 19 16.6 -00.4	143 23.5 +02.7	S 22 10.4 +00.0	109 40.0 +02.6	S 22 04.3 +00.0	07						
08	281 38.8 +00.9	N 19 16.2 -00.4	158 26.2 +02.6	S 22 10.4 +00.0	124 42.6 +02.7	S 22 04.3 +00.1	08						
09	296 39.7 +00.8	N 19 15.8 -00.4	173 28.8 +02.7	S 22 10.4 +00.0	139 45.3 +02.6	S 22 04.4 +00.0	09						
10	311 40.5 +00.9	N 19 15.4 -00.4	188 31.5 +02.7	S 22 10.4 -00.1	154 47.9 +02.7	S 22 04.4 +00.0	10						
11	326 41.4 +00.8	N 19 15.0 -00.5	203 34.2 +02.7	S 22 10.3 +00.0	169 50.6 +02.7	S 22 04.4 +00.0	11						
12	341 42.2 +00.9	N 19 14.5 -00.4	218 36.9 +02.7	S 22 10.3 +00.0	184 53.3 +02.6	S 22 04.4 +00.1	12						
13	356 43.1 +00.8	N 19 14.1 -00.4	233 39.6 +02.6	S 22 10.3 +00.0	199 55.9 +02.7	S 22 04.5 +00.0	13						
14	11 43.9 +00.8	N 19 13.7 -00.4	248 42.2 +02.7	S 22 10.3 +00.0	214 58.6 +02.6	S 22 04.5 +00.0	14						
15	26 44.7 +00.9	N 19 13.3 -00.4	263 44.9 +02.7	S 22 10.3 +00.0	230 01.2 +02.7	S 22 04.5 +00.1	15						
16	41 45.6 +00.8	N 19 12.9 -00.5	278 47.6 +02.7	S 22 10.3 +00.0	245 03.9 +02.7	S 22 04.6 +00.0	16						
17	56 46.4 +00.9	N 19 12.4 -00.4	293 50.3 +02.6	S 22 10.3 -00.1	260 06.6 +02.6	S 22 04.6 +00.0	17						
18	71 47.3 +00.8	N 19 12.0 -00.4	308 52.9 +02.7	S 22 10.2 +00.0	275 09.2 +02.7	S 22 04.6 +00.0	18						
19	86 48.1 +00.9	N 19 11.6 -00.4	323 55.6 +02.7	S 22 10.2 +00.0	290 11.9 +02.6	S 22 04.6 +00.1	19						
20	101 49.0 +00.8	N 19 11.2 -00.4	338 58.3 +02.7	S 22 10.2 +00.0	305 14.5 +02.7	S 22 04.7 +00.0	20						
21	116 49.8 +00.8	N 19 10.8 -00.5	354 01.0 +02.6	S 22 10.2 +00.0	320 17.2 +02.7	S 22 04.7 +00.0	21						
22	131 50.6 +00.9	N 19 10.3 -00.4	9 03.6 +02.7	S 22 10.2 +00.0	335 19.9 +02.6	S 22 04.7 +00.0	22						
23	146 51.5 +00.8	N 19 09.9 -00.4	24 06.3 +02.7	S 22 10.2 +00.0	350 22.5 +02.7	S 22 04.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 229° 229° 229° 229° 228° 228°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:13		Greenwich Culmination Time: 21:23		Greenwich Culmination Time: 23:38								

Sun					Venus					Moon					A: 48%					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	178 29.7 -00.1	N 21 26.4 -00.4	187 02.9 -00.8	N 22 59.2 -00.2	9 29.7 -31.1	S 22 22.4 -00.2	00													
01	193 29.6 -00.1	N 21 26.0 -00.4	202 02.1 -00.9	N 22 59.0 -00.3	23 58.6 -31.2	S 22 22.2 -00.3	01													
02	208 29.5 +00.0	N 21 25.6 -00.4	217 01.2 -00.8	N 22 58.7 -00.2	38 27.4 -31.1	S 22 21.9 -00.5	02													
03	223 29.5 -00.1	N 21 25.2 -00.4	232 00.4 -00.9	N 22 58.5 -00.3	52 56.3 -31.1	S 22 21.4 -00.5	03													
04	238 29.4 +00.0	N 21 24.8 -00.4	246 59.5 -00.9	N 22 58.2 -00.2	67 25.2 -31.0	S 22 20.9 -00.7	04													
05	253 29.4 -00.1	N 21 24.4 -00.4	261 58.6 -00.8	N 22 58.0 -00.3	81 54.2 -31.1	S 22 20.2 -00.8	05													
06	268 29.3 -00.1	N 21 24.0 -00.4	276 57.8 -00.9	N 22 57.7 -00.2	96 23.1 -31.0	S 22 19.4 -00.9	06													
07	283 29.2 +00.0	N 21 23.6 -00.4	291 56.9 -00.8	N 22 57.5 -00.3	110 52.1 -31.0	S 22 18.5 -01.0	07													
08	298 29.2 -00.1	N 21 23.2 -00.4	306 56.1 -00.9	N 22 57.2 -00.3	125 21.1 -30.9	S 22 17.5 -01.1	08													
09	313 29.1 +00.0	N 21 22.8 -00.4	321 55.2 -00.8	N 22 56.9 -00.2	139 50.2 -31.0	S 22 16.4 -01.2	09													
10	328 29.1 -00.1	N 21 22.4 -00.4	336 54.4 -00.9	N 22 56.7 -00.3	154 19.2 -30.9	S 22 15.2 -01.4	10													
11	343 29.0 +00.0	N 21 22.0 -00.4	351 53.5 -00.9	N 22 56.4 -00.3	168 48.3 -30.8	S 22 13.8 -01.5	11													
12	358 29.0 -00.1	N 21 21.6 -00.4	6 52.6 -00.8	N 22 56.1 -00.2	183 17.5 -30.9	S 22 12.3 -01.5	12													
13	13 28.9 -00.1	N 21 21.2 -00.5	21 51.8 -00.9	N 22 55.9 -00.3	197 46.6 -30.8	S 22 10.8 -01.7	13													
14	28 28.8 +00.0	N 21 20.7 -00.4	36 50.9 -00.8	N 22 55.6 -00.3	212 15.8 -30.7	S 22 09.1 -01.8	14													
15	43 28.8 -00.1	N 21 20.3 -00.4	51 50.1 -00.9	N 22 55.3 -00.2	226 45.1 -30.8	S 22 07.3 -01.9	15													
16	58 28.7 +00.0	N 21 19.9 -00.4	66 49.2 -00.8	N 22 55.1 -00.3	241 14.3 -30.7	S 22 05.4 -02.0	16													
17	73 28.7 -00.1	N 21 19.5 -00.4	81 48.4 -00.9	N 22 54.8 -00.3	255 43.6 -30.6	S 22 03.4 -02.2	17													
18	88 28.6 +00.0	N 21 19.1 -00.4	96 47.5 -00.9	N 22 54.5 -00.3	270 13.0 -30.7	S 22 01.2 -02.2	18													
19	103 28.6 -00.1	N 21 18.7 -00.4	111 46.6 -00.8	N 22 54.2 -00.2	284 42.3 -30.6	S 21 59.0 -02.4	19													
20	118 28.5 -00.1	N 21 18.3 -00.4	126 45.8 -00.9	N 22 54.0 -00.3	299 11.7 -30.5	S 21 56.6 -02.4	20													
21	133 28.4 +00.0	N 21 17.9 -00.5	141 44.9 -00.8	N 22 53.7 -00.3	313 41.2 -30.5	S 21 54.2 -02.6	21													
22	148 28.4 -00.1	N 21 17.4 -00.4	156 44.1 -00.9	N 22 53.4 -00.3	328 10.7 -30.5	S 21 51.6 -02.7	22													
23	163 28.3 +00.0	N 21 17.0 -00.4	171 43.2 -00.8	N 22 53.1 -00.2	342 40.2 -30.4	S 21 48.9 -02.7	23													
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	15'7	15'7	15'7	15'7	15'7	15'7	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP						
SHA	245°	245°	245°	244°	244°	244°	SHA	253°	253°	253°	253°	253°	252°	SHA						
Greenwich Culmination Time: 12:06							Greenwich Culmination Time: 11:32							Greenwich Culmination Time: -1:00						

Mars					Jupiter					Saturn										
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	161 52.3 +00.9	N 19 09.5 -00.4	39 09.0 +02.7	S 22 10.2 +00.0	5 25.2 +02.6	S 22 04.8 +00.0	00													
01	176 53.2 +00.8	N 19 09.1 -00.4	54 11.7 +02.6	S 22 10.2 -00.1	20 27.8 +02.7	S 22 04.8 +00.0	01													
02	191 54.0 +00.9	N 19 08.7 -00.5	69 14.3 +02.7	S 22 10.1 +00.0	35 30.5 +02.6	S 22 04.8 +00.0	02													
03	206 54.9 +00.8	N 19 08.2 -00.4	84 17.0 +02.7	S 22 10.1 +00.0	50 33.1 +02.7	S 22 04.8 +00.1	03													
04	221 55.7 +00.9	N 19 07.8 -00.4	99 19.7 +02.7	S 22 10.1 +00.0	65 35.8 +02.7	S 22 04.9 +00.0	04													
05	236 56.6 +00.8	N 19 07.4 -00.4	114 22.4 +02.6	S 22 10.1 +00.0	80 38.5 +02.6	S 22 04.9 +00.0	05													
06	251 57.4 +00.9	N 19 07.0 -00.5	129 25.0 +02.7	S 22 10.1 +00.0	95 41.1 +02.7	S 22 04.9 +00.0	06													
07	266 58.3 +00.8	N 19 06.5 -00.4	144 27.7 +02.7	S 22 10.1 +00.0	110 43.8 +02.6	S 22 04.9 +00.1	07													
08	281 59.1 +00.8	N 19 06.1 -00.4	159 30.4 +02.6	S 22 10.1 +00.0	125 46.4 +02.7	S 22 05.0 +00.0	08													
09	296 59.9 +00.9	N 19 05.7 -00.4	174 33.0 +02.7	S 22 10.1 -00.1	140 49.1 +02.7	S 22 05.0 +00.0	09													
10	312 00.8 +00.8	N 19 05.3 -00.5	189 35.7 +02.7	S 22 10.0 +00.0	155 51.8 +02.6	S 22 05.0 +00.1	10													
11	327 01.6 +00.9	N 19 04.8 -00.4	204 38.4 +02.7	S 22 10.0 +00.0	170 54.4 +02.7	S 22 05.1 +00.0	11													
12	342 02.5 +00.8	N 19 04.4 -00.4	219 41.1 +02.6	S 22 10.0 +00.0	185 57.1 +02.6	S 22 05.1 +00.0	12													
13	357 03.3 +00.9	N 19 04.0 -00.4	234 43.7 +02.7	S 22 10.0 +00.0	200 59.7 +02.7	S 22 05.1 +00.0	13													
14	12 04.2 +00.8	N 19 03.6 -00.5	249 46.4 +02.7	S 22 10.0 +00.0	216 02.4 +02.6	S 22 05.1 +00.1	14													
15	27 05.0 +00.9	N 19 03.1 -00.4	264 49.1 +02.6	S 22 10.0 +00.0	231 05.0 +02.7	S 22 05.2 +00.0	15													
16	42 05.9 +00.8	N 19 02.7 -00.4	279 51.7 +02.7	S 22 10.0 -00.1	246 07.7 +02.7	S 22 05.2 +00.0	16													
17	57 06.7 +00.9	N 19 02.3 -00.4	294 54.4 +02.7	S 22 09.9 +00.0	261 10.4 +02.6	S 22 05.2 +00.0	17													
18	72 07.6 +00.8	N 19 01.9 -00.5	309 57.1 +02.6	S 22 09.9 +00.0	276 13.0 +02.7	S 22 05.2 +00.1	18													
19	87 08.4 +00.9	N 19 01.4 -00.4	324 59.7 +02.7	S 22 09.9 +00.0	291 15.7 +02.6	S 22 05.3 +00.0	19													
20	102 09.3 +00.8	N 19 01.0 -00.4	340 02.4 +02.7	S 22 09.9 +00.0	306 18.3 +02.7	S 22 05.3 +00.0	20													
21	117 10.1 +00.9	N 19 00.6 -00.4	355 05.1 +02.6	S 22 09.9 +00.0	321 21.0 +02.7	S 22 05.3 +00.0	21													
22	132 11.0 +00.8	N 19 00.2 -00.5	10 07.7 +02.7	S 22 09.9 +00.0	336 23.7 +02.6	S 22 05.3 +00.1	22													
23	147 11.8 +00.9	N 18 59.7 -00.4	25 10.4 +02.7	S 22 09.9 +00.0	351 26.3 +02.7	S 22 05.4 +00.0	23													
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'0	00'0	00'0	00'0	00'0	00'0	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP						
SHA	228°	228°	228°	228°	228°	228°	SHA	106°	106°	106°	106°	106°	106°	SHA						
Greenwich Culmination Time: 13:11							Greenwich Culmination Time: 21:19							Greenwich Culmination Time: 23:34						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 28.3 -00.1	N 21 16.6 -00.4	186 42.4 -00.9	N 22 52.9 -00.3	357 09.8 -30.4	S 21 46.2 -02.9	00						
01	193 28.2 +00.0	N 21 16.2 -00.4	201 41.5 -00.8	N 22 52.6 -00.3	11 39.4 -30.4	S 21 43.3 -03.0	01						
02	208 28.2 -00.1	N 21 15.8 -00.4	216 40.7 -00.9	N 22 52.3 -00.3	26 09.0 -30.3	S 21 40.3 -03.1	02						
03	223 28.1 +00.0	N 21 15.4 -00.5	231 39.8 -00.8	N 22 52.0 -00.3	40 38.7 -30.3	S 21 37.2 -03.2	03						
04	238 28.1 -00.1	N 21 14.9 -00.4	246 39.0 -00.9	N 22 51.7 -00.3	55 08.4 -30.2	S 21 34.0 -03.3	04						
05	253 28.0 +00.0	N 21 14.5 -00.4	261 38.1 -00.9	N 22 51.4 -00.2	69 38.2 -30.2	S 21 30.7 -03.4	05						
06	268 28.0 -00.1	N 21 14.1 -00.4	276 37.2 -00.8	N 22 51.2 -00.3	84 08.0 -30.1	S 21 27.3 -03.5	06						
07	283 27.9 -00.1	N 21 13.7 -00.4	291 36.4 -00.9	N 22 50.9 -00.3	98 37.9 -30.1	S 21 23.8 -03.7	07						
08	298 27.8 +00.0	N 21 13.3 -00.5	306 35.5 -00.8	N 22 50.6 -00.3	113 07.8 -30.1	S 21 20.1 -03.7	08						
09	313 27.8 -00.1	N 21 12.8 -00.4	321 34.7 -00.9	N 22 50.3 -00.3	127 37.7 -30.0	S 21 16.4 -03.8	09						
10	328 27.7 +00.0	N 21 12.4 -00.4	336 33.8 -00.8	N 22 50.0 -00.3	142 07.7 -29.9	S 21 12.6 -03.9	10						
11	343 27.7 -00.1	N 21 12.0 -00.4	351 33.0 -00.9	N 22 49.7 -00.3	156 37.8 -29.9	S 21 08.7 -04.1	11						
12	358 27.6 +00.0	N 21 11.6 -00.5	6 32.1 -00.8	N 22 49.4 -00.3	171 07.9 -29.9	S 21 04.6 -04.1	12						
13	13 27.6 -00.1	N 21 11.1 -00.4	21 31.3 -00.9	N 22 49.1 -00.3	185 38.0 -29.8	S 21 00.5 -04.2	13						
14	28 27.5 +00.0	N 21 10.7 -00.4	36 30.4 -00.8	N 22 48.8 -00.3	200 08.2 -29.8	S 20 56.3 -04.3	14						
15	43 27.5 -00.1	N 21 10.3 -00.4	51 29.6 -00.9	N 22 48.5 -00.3	214 38.4 -29.7	S 20 52.0 -04.4	15						
16	58 27.4 +00.0	N 21 09.9 -00.5	66 28.7 -00.8	N 22 48.2 -00.3	229 08.7 -29.7	S 20 47.6 -04.6	16						
17	73 27.4 -00.1	N 21 09.4 -00.4	81 27.9 -00.9	N 22 47.9 -00.3	243 39.0 -29.6	S 20 43.0 -04.6	17						
18	88 27.3 +00.0	N 21 09.0 -00.4	96 27.0 -00.8	N 22 47.6 -00.3	258 09.4 -29.6	S 20 38.4 -04.7	18						
19	103 27.3 -00.1	N 21 08.6 -00.4	111 26.2 -00.9	N 22 47.3 -00.3	272 39.8 -29.5	S 20 33.7 -04.8	19						
20	118 27.2 +00.0	N 21 08.2 -00.5	126 25.3 -00.8	N 22 47.0 -00.3	287 10.3 -29.4	S 20 28.9 -04.9	20						
21	133 27.2 -00.1	N 21 07.7 -00.4	141 24.5 -00.9	N 22 46.7 -00.3	301 40.9 -29.5	S 20 24.0 -05.0	21						
22	148 27.1 +00.0	N 21 07.3 -00.4	156 23.6 -00.8	N 22 46.4 -00.3	316 11.4 -29.3	S 20 19.0 -05.1	22						
23	163 27.1 -00.1	N 21 06.9 -00.5	171 22.8 -00.9	N 22 46.1 -00.3	330 42.1 -29.4	S 20 13.9 -05.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'0 14'9 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'9 54'8 54'8 54'7 54'6 54'6								
	SHA 244° 244° 244° 243° 243° 243°		SHA 252° 252° 252° 251° 251° 251°		SHA 062° 059° 057° 055° 053° 051°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:33		Greenwich Culmination Time: 00:11								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	162 12.7 +00.8	N 18 59.3 -00.4	40 13.1 +02.6	S 22 09.9 -00.1	6 29.0 +02.6	S 22 05.4 +00.0	00						
01	177 13.5 +00.9	N 18 58.9 -00.4	55 15.7 +02.7	S 22 09.8 +00.0	21 31.6 +02.7	S 22 05.4 +00.0	01						
02	192 14.4 +00.8	N 18 58.5 -00.5	70 18.4 +02.7	S 22 09.8 +00.0	36 34.3 +02.7	S 22 05.4 +00.1	02						
03	207 15.2 +00.9	N 18 58.0 -00.4	85 21.1 +02.6	S 22 09.8 +00.0	51 37.0 +02.6	S 22 05.5 +00.0	03						
04	222 16.1 +00.8	N 18 57.6 -00.4	100 23.7 +02.7	S 22 09.8 +00.0	66 39.6 +02.7	S 22 05.5 +00.0	04						
05	237 16.9 +00.8	N 18 57.2 -00.5	115 26.4 +02.7	S 22 09.8 +00.0	81 42.3 +02.6	S 22 05.5 +00.1	05						
06	252 17.7 +00.9	N 18 56.7 -00.4	130 29.1 +02.6	S 22 09.8 +00.0	96 44.9 +02.7	S 22 05.6 +00.0	06						
07	267 18.6 +00.8	N 18 56.3 -00.4	145 31.7 +02.7	S 22 09.8 +00.0	111 47.6 +02.6	S 22 05.6 +00.0	07						
08	282 19.4 +00.9	N 18 55.9 -00.4	160 34.4 +02.7	S 22 09.8 +00.0	126 50.2 +02.7	S 22 05.6 +00.0	08						
09	297 20.3 +00.8	N 18 55.5 -00.5	175 37.1 +02.6	S 22 09.8 -00.1	141 52.9 +02.7	S 22 05.6 +00.1	09						
10	312 21.1 +00.9	N 18 55.0 -00.4	190 39.7 +02.7	S 22 09.7 +00.0	156 55.6 +02.6	S 22 05.7 +00.0	10						
11	327 22.0 +00.8	N 18 54.6 -00.4	205 42.4 +02.7	S 22 09.7 +00.0	171 58.2 +02.7	S 22 05.7 +00.0	11						
12	342 22.8 +00.9	N 18 54.2 -00.5	220 45.1 +02.6	S 22 09.7 +00.0	187 00.9 +02.6	S 22 05.7 +00.0	12						
13	357 23.7 +00.8	N 18 53.7 -00.4	235 47.7 +02.7	S 22 09.7 +00.0	202 03.5 +02.7	S 22 05.7 +00.1	13						
14	12 24.5 +00.9	N 18 53.3 -00.4	250 50.4 +02.7	S 22 09.7 +00.0	217 06.2 +02.6	S 22 05.8 +00.0	14						
15	27 25.4 +00.8	N 18 52.9 -00.4	265 53.1 +02.6	S 22 09.7 +00.0	232 08.8 +02.7	S 22 05.8 +00.0	15						
16	42 26.2 +00.9	N 18 52.5 -00.5	280 55.7 +02.7	S 22 09.7 +00.0	247 11.5 +02.7	S 22 05.8 +00.0	16						
17	57 27.1 +00.8	N 18 52.0 -00.4	295 58.4 +02.6	S 22 09.7 -00.1	262 14.2 +02.6	S 22 05.8 +00.1	17						
18	72 27.9 +00.9	N 18 51.6 -00.4	311 01.0 +02.7	S 22 09.6 +00.0	277 16.8 +02.7	S 22 05.9 +00.0	18						
19	87 28.8 +00.9	N 18 51.2 -00.5	326 03.7 +02.7	S 22 09.6 +00.0	292 19.5 +02.6	S 22 05.9 +00.0	19						
20	102 29.7 +00.8	N 18 50.7 -00.4	341 06.4 +02.6	S 22 09.6 +00.0	307 22.1 +02.7	S 22 05.9 +00.0	20						
21	117 30.5 +00.9	N 18 50.3 -00.4	356 09.0 +02.7	S 22 09.6 +00.0	322 24.8 +02.7	S 22 05.9 +00.1	21						
22	132 31.4 +00.8	N 18 49.9 -00.5	11 11.7 +02.6	S 22 09.6 +00.0	337 27.5 +02.6	S 22 06.0 +00.0	22						
23	147 32.2 +00.9	N 18 49.4 -00.4	26 14.3 +02.7	S 22 09.6 +00.0	352 30.1 +02.7	S 22 06.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 228° 228° 227° 227° 227° 227°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:10		Greenwich Culmination Time: 21:15		Greenwich Culmination Time: 23:29								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 27.0 +00.0	N 21 06.4 -00.4	186 21.9 -00.8	N 22 45.8 -00.3	345 12.7 -29.2	S 20 08.7 -05.2	00						
01	193 27.0 -00.1	N 21 06.0 -00.4	201 21.1 -00.9	N 22 45.5 -00.3	359 43.5 -29.2	S 20 03.5 -05.4	01						
02	208 26.9 +00.0	N 21 05.6 -00.5	216 20.2 -00.8	N 22 45.2 -00.3	14 14.3 -29.2	S 19 58.1 -05.5	02						
03	223 26.9 -00.1	N 21 05.1 -00.4	231 19.4 -00.9	N 22 44.9 -00.3	28 45.1 -29.1	S 19 52.6 -05.5	03						
04	238 26.8 +00.0	N 21 04.7 -00.4	246 18.5 -00.8	N 22 44.6 -00.3	43 16.0 -29.1	S 19 47.1 -05.7	04						
05	253 26.8 -00.1	N 21 04.3 -00.5	261 17.7 -00.9	N 22 44.3 -00.4	57 46.9 -29.0	S 19 41.4 -05.7	05						
06	268 26.7 +00.0	N 21 03.8 -00.4	276 16.8 -00.8	N 22 43.9 -00.3	72 17.9 -28.9	S 19 35.7 -05.8	06						
07	283 26.7 -00.1	N 21 03.4 -00.4	291 16.0 -00.9	N 22 43.6 -00.3	86 49.0 -28.9	S 19 29.9 -05.9	07						
08	298 26.6 +00.0	N 21 03.0 -00.5	306 15.1 -00.8	N 22 43.3 -00.3	101 20.1 -28.9	S 19 24.0 -06.0	08						
09	313 26.6 -00.1	N 21 02.5 -00.4	321 14.3 -00.9	N 22 43.0 -00.3	115 51.2 -28.8	S 19 18.0 -06.1	09						
10	328 26.5 +00.0	N 21 02.1 -00.5	336 13.4 -00.8	N 22 42.7 -00.3	130 22.4 -28.7	S 19 11.9 -06.1	10						
11	343 26.5 +00.0	N 21 01.6 -00.4	351 12.6 -00.9	N 22 42.4 -00.4	144 53.7 -28.7	S 19 05.8 -06.3	11						
12	358 26.5 -00.1	N 21 01.2 -00.4	6 11.7 -00.8	N 22 42.0 -00.3	159 25.0 -28.6	S 18 59.5 -06.3	12						
13	13 26.4 +00.0	N 21 00.8 -00.5	21 10.9 -00.9	N 22 41.7 -00.3	173 56.4 -28.6	S 18 53.2 -06.4	13						
14	28 26.4 -00.1	N 21 00.3 -00.4	36 10.0 -00.8	N 22 41.4 -00.3	188 27.8 -28.5	S 18 46.8 -06.5	14						
15	43 26.3 +00.0	N 20 59.9 -00.5	51 09.2 -00.8	N 22 41.1 -00.4	202 59.3 -28.5	S 18 40.3 -06.6	15						
16	58 26.3 -00.1	N 20 59.4 -00.4	66 08.4 -00.9	N 22 40.7 -00.3	217 30.8 -28.4	S 18 33.7 -06.6	16						
17	73 26.2 +00.0	N 20 59.0 -00.4	81 07.5 -00.8	N 22 40.4 -00.3	232 02.4 -28.4	S 18 27.1 -06.8	17						
18	88 26.2 -00.1	N 20 58.6 -00.5	96 06.7 -00.9	N 22 40.1 -00.4	246 34.0 -28.3	S 18 20.3 -06.8	18						
19	103 26.1 +00.0	N 20 58.1 -00.4	111 05.8 -00.8	N 22 39.7 -00.3	261 05.7 -28.2	S 18 13.5 -06.9	19						
20	118 26.1 -00.1	N 20 57.7 -00.5	126 05.0 -00.9	N 22 39.4 -00.3	275 37.5 -28.2	S 18 06.6 -06.9	20						
21	133 26.0 +00.0	N 20 57.2 -00.4	141 04.1 -00.8	N 22 39.1 -00.3	290 09.3 -28.2	S 17 59.7 -07.1	21						
22	148 26.0 +00.0	N 20 56.8 -00.5	156 03.3 -00.9	N 22 38.8 -00.4	304 41.1 -28.1	S 17 52.6 -07.1	22						
23	163 26.0 -00.1	N 20 56.3 -00.4	171 02.4 -00.8	N 22 38.4 -00.3	319 13.0 -28.0	S 17 45.5 -07.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'5 54'5 54'4 54'4 54'3 54'3								
	SHA 243° 243° 243° 242° 242° 242°		SHA 251° 251° 250° 250° 250° 250°		SHA 049° 047° 044° 042° 040° 038°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:35		Greenwich Culmination Time: 01:01								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	162 33.1 +00.8	N 18 49.0 -00.4	41 17.0 +02.7	S 22 09.6 +00.0	7 32.8 +02.6	S 22 06.0 +00.0	00						
01	177 33.9 +00.9	N 18 48.6 -00.5	56 19.7 +02.6	S 22 09.6 -00.1	22 35.4 +02.7	S 22 06.0 +00.1	01						
02	192 34.8 +00.8	N 18 48.1 -00.4	71 22.3 +02.7	S 22 09.5 +00.0	37 38.1 +02.6	S 22 06.1 +00.0	02						
03	207 35.6 +00.9	N 18 47.7 -00.4	86 25.0 +02.6	S 22 09.5 +00.0	52 40.7 +02.7	S 22 06.1 +00.0	03						
04	222 36.5 +00.8	N 18 47.3 -00.5	101 27.6 +02.7	S 22 09.5 +00.0	67 43.4 +02.7	S 22 06.1 +00.1	04						
05	237 37.3 +00.9	N 18 46.8 -00.4	116 30.3 +02.7	S 22 09.5 +00.0	82 46.1 +02.6	S 22 06.2 +00.0	05						
06	252 38.2 +00.8	N 18 46.4 -00.4	131 33.0 +02.6	S 22 09.5 +00.0	97 48.7 +02.7	S 22 06.2 +00.0	06						
07	267 39.0 +00.9	N 18 46.0 -00.5	146 35.6 +02.7	S 22 09.5 +00.0	112 51.4 +02.6	S 22 06.2 +00.0	07						
08	282 39.9 +00.8	N 18 45.5 -00.4	161 38.3 +02.6	S 22 09.5 +00.0	127 54.0 +02.7	S 22 06.2 +00.1	08						
09	297 40.7 +00.9	N 18 45.1 -00.4	176 40.9 +02.7	S 22 09.5 +00.0	142 56.7 +02.6	S 22 06.3 +00.0	09						
10	312 41.6 +00.8	N 18 44.7 -00.5	191 43.6 +02.6	S 22 09.5 -00.1	157 59.3 +02.7	S 22 06.3 +00.0	10						
11	327 42.4 +00.9	N 18 44.2 -00.4	206 46.2 +02.7	S 22 09.4 +00.0	173 02.0 +02.7	S 22 06.3 +00.0	11						
12	342 43.3 +00.8	N 18 43.8 -00.4	221 48.9 +02.7	S 22 09.4 +00.0	188 04.7 +02.6	S 22 06.3 +00.1	12						
13	357 44.1 +00.9	N 18 43.4 -00.5	236 51.6 +02.6	S 22 09.4 +00.0	203 07.3 +02.7	S 22 06.4 +00.0	13						
14	12 45.0 +00.8	N 18 42.9 -00.4	251 54.2 +02.7	S 22 09.4 +00.0	218 10.0 +02.6	S 22 06.4 +00.0	14						
15	27 45.8 +00.9	N 18 42.5 -00.4	266 56.9 +02.6	S 22 09.4 +00.0	233 12.6 +02.7	S 22 06.4 +00.0	15						
16	42 46.7 +00.9	N 18 42.1 -00.5	281 59.5 +02.7	S 22 09.4 +00.0	248 15.3 +02.6	S 22 06.4 +00.1	16						
17	57 47.6 +00.8	N 18 41.6 -00.4	297 02.2 +02.6	S 22 09.4 +00.0	263 17.9 +02.7	S 22 06.5 +00.0	17						
18	72 48.4 +00.9	N 18 41.2 -00.4	312 04.8 +02.7	S 22 09.4 +00.0	278 20.6 +02.7	S 22 06.5 +00.0	18						
19	87 49.3 +00.8	N 18 40.8 -00.5	327 07.5 +02.6	S 22 09.4 -00.1	293 23.3 +02.6	S 22 06.5 +00.0	19						
20	102 50.1 +00.9	N 18 40.3 -00.4	342 10.1 +02.7	S 22 09.3 +00.0	308 25.9 +02.7	S 22 06.5 +00.1	20						
21	117 51.0 +00.8	N 18 39.9 -00.5	357 12.8 +02.7	S 22 09.3 +00.0	323 28.6 +02.6	S 22 06.6 +00.0	21						
22	132 51.8 +00.9	N 18 39.4 -00.4	12 15.5 +02.6	S 22 09.3 +00.0	338 31.2 +02.7	S 22 06.6 +00.0	22						
23	147 52.7 +00.8	N 18 39.0 -00.4	27 18.1 +02.7	S 22 09.3 +00.0	353 33.9 +02.6	S 22 06.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 227° 227° 227° 227° 227° 226°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:09		Greenwich Culmination Time: 21:11		Greenwich Culmination Time: 23:25								

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	178 25.9 +00.0	N 20	55.9 -00.4	186 01.6 -00.8	N 22	38.1 -00.4	333 45.0 -28.0	S 17	38.3 -07.3	00										
01	193 25.9 -00.1	N 20	55.5 -00.5	201 00.8 -00.9	N 22	37.7 -00.3	348 17.0 -27.9	S 17	31.0 -07.3	01										
02	208 25.8 +00.0	N 20	55.0 -00.4	215 59.9 -00.8	N 22	37.4 -00.3	2 49.1 -27.9	S 17	23.7 -07.5	02										
03	223 25.8 -00.1	N 20	54.6 -00.5	230 59.1 -00.9	N 22	37.1 -00.4	17 21.2 -27.8	S 17	16.2 -07.5	03										
04	238 25.7 +00.0	N 20	54.1 -00.4	245 58.2 -00.8	N 22	36.7 -00.3	31 53.4 -27.8	S 17	08.7 -07.5	04										
05	253 25.7 +00.0	N 20	53.7 -00.5	260 57.4 -00.9	N 22	36.4 -00.4	46 25.6 -27.7	S 17	01.2 -07.7	05										
06	268 25.7 -00.1	N 20	53.2 -00.4	275 56.5 -00.8	N 22	36.0 -00.3	60 57.9 -27.7	S 16	53.5 -07.7	06										
07	283 25.6 +00.0	N 20	52.8 -00.5	290 55.7 -00.8	N 22	35.7 -00.3	75 30.2 -27.6	S 16	45.8 -07.8	07										
08	298 25.6 -00.1	N 20	52.3 -00.4	305 54.9 -00.9	N 22	35.4 -00.4	90 02.6 -27.6	S 16	38.0 -07.8	08										
09	313 25.5 +00.0	N 20	51.9 -00.5	320 54.0 -00.8	N 22	35.0 -00.3	104 35.0 -27.5	S 16	30.2 -07.9	09										
10	328 25.5 -00.1	N 20	51.4 -00.4	335 53.2 -00.9	N 22	34.7 -00.4	119 07.5 -27.5	S 16	22.3 -08.0	10										
11	343 25.4 +00.0	N 20	51.0 -00.5	350 52.3 -00.8	N 22	34.3 -00.3	133 40.0 -27.4	S 16	14.3 -08.1	11										
12	358 25.4 +00.0	N 20	50.5 -00.5	5 51.5 -00.9	N 22	34.0 -00.4	148 12.6 -27.4	S 16	06.2 -08.1	12										
13	13 25.4 -00.1	N 20	50.0 -00.4	20 50.6 -00.8	N 22	33.6 -00.3	162 45.2 -27.3	S 15	58.1 -08.2	13										
14	28 25.3 +00.0	N 20	49.6 -00.5	35 49.8 -00.8	N 22	33.3 -00.4	177 17.9 -27.2	S 15	49.9 -08.3	14										
15	43 25.3 -00.1	N 20	49.1 -00.4	50 49.0 -00.9	N 22	32.9 -00.3	191 50.7 -27.2	S 15	41.6 -08.3	15										
16	58 25.2 +00.0	N 20	48.7 -00.5	65 48.1 -00.8	N 22	32.6 -00.4	206 23.5 -27.2	S 15	33.3 -08.4	16										
17	73 25.2 +00.0	N 20	48.2 -00.4	80 47.3 -00.9	N 22	32.2 -00.3	220 56.3 -27.1	S 15	24.9 -08.4	17										
18	88 25.2 -00.1	N 20	47.8 -00.5	95 46.4 -00.8	N 22	31.9 -00.4	235 29.2 -27.1	S 15	16.5 -08.5	18										
19	103 25.1 +00.0	N 20	47.3 -00.5	110 45.6 -00.8	N 22	31.5 -00.4	250 02.1 -27.0	S 15	08.0 -08.6	19										
20	118 25.1 -00.1	N 20	46.8 -00.4	125 44.8 -00.9	N 22	31.1 -00.3	264 35.1 -27.0	S 14	59.4 -08.6	20										
21	133 25.0 +00.0	N 20	46.4 -00.5	140 43.9 -00.8	N 22	30.8 -00.4	279 08.1 -26.9	S 14	50.8 -08.7	21										
22	148 25.0 +00.0	N 20	45.9 -00.4	155 43.1 -00.8	N 22	30.4 -00.3	293 41.2 -26.9	S 14	42.1 -08.7	22										
23	163 25.0 -00.1	N 20	45.5 -00.5	170 42.3 -00.9	N 22	30.1 -00.4	308 14.3 -26.8	S 14	33.4 -08.8	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	15'7	15'7	15'7	15'7	15'7	15'7	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	14'8	14'8	14'8	14'8	14'8	14'7
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	54'3	54'2	54'2	54'2	54'1	54'1
SHA	242°	242°	242°	241°	241°	241°	SHA	249°	249°	249°	249°	249°	248°	SHA	036°	034°	032°	030°	028°	026°
Greenwich Culmination Time: 12:06							Greenwich Culmination Time: 11:36							Greenwich Culmination Time: 01:48						

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	162 53.5 +00.9	N 18	38.6 -00.5	42 20.8 +02.6	S 22	09.3 +00.0	8 36.5 +02.7	S 22	06.6 +00.1	00										
01	177 54.4 +00.8	N 18	38.1 -00.4	57 23.4 +02.7	S 22	09.3 +00.0	23 39.2 +02.7	S 22	06.7 +00.0	01										
02	192 55.2 +00.9	N 18	37.7 -00.4	72 26.1 +02.6	S 22	09.3 +00.0	38 41.9 +02.6	S 22	06.7 +00.0	02										
03	207 56.1 +00.9	N 18	37.3 -00.5	87 28.7 +02.7	S 22	09.3 -00.1	53 44.5 +02.7	S 22	06.7 +00.0	03										
04	222 57.0 +00.8	N 18	36.8 -00.4	102 31.4 +02.6	S 22	09.2 +00.0	68 47.2 +02.6	S 22	06.7 +00.1	04										
05	237 57.8 +00.9	N 18	36.4 -00.5	117 34.0 +02.7	S 22	09.2 +00.0	83 49.8 +02.7	S 22	06.8 +00.0	05										
06	252 58.7 +00.8	N 18	35.9 -00.4	132 36.7 +02.6	S 22	09.2 +00.0	98 52.5 +02.6	S 22	06.8 +00.0	06										
07	267 59.5 +00.9	N 18	35.5 -00.4	147 39.3 +02.7	S 22	09.2 +00.0	113 55.1 +02.7	S 22	06.8 +00.1	07										
08	283 00.4 +00.8	N 18	35.1 -00.5	162 42.0 +02.6	S 22	09.2 +00.0	128 57.8 +02.6	S 22	06.9 +00.0	08										
09	298 01.2 +00.9	N 18	34.6 -00.4	177 44.6 +02.7	S 22	09.2 +00.0	144 00.4 +02.7	S 22	06.9 +00.0	09										
10	313 02.1 +00.9	N 18	34.2 -00.5	192 47.3 +02.6	S 22	09.2 +00.0	159 03.1 +02.7	S 22	06.9 +00.0	10										
11	328 03.0 +00.8	N 18	33.7 -00.4	207 49.9 +02.7	S 22	09.2 +00.0	174 05.8 +02.6	S 22	06.9 +00.1	11										
12	343 03.8 +00.9	N 18	33.3 -00.4	222 52.6 +02.6	S 22	09.2 +00.0	189 08.4 +02.7	S 22	07.0 +00.0	12										
13	358 04.7 +00.8	N 18	32.9 -00.5	237 55.2 +02.7	S 22	09.2 -00.1	204 11.1 +02.6	S 22	07.0 +00.0	13										
14	13 05.5 +00.9	N 18	32.4 -00.4	252 57.9 +02.6	S 22	09.1 +00.0	219 13.7 +02.7	S 22	07.0 +00.0	14										
15	28 06.4 +00.8	N 18	32.0 -00.5	268 00.5 +02.7	S 22	09.1 +00.0	234 16.4 +02.6	S 22	07.0 +00.1	15										
16	43 07.2 +00.9	N 18	31.5 -00.4	283 03.2 +02.6	S 22	09.1 +00.0	249 19.0 +02.7	S 22	07.1 +00.0	16										
17	58 08.1 +00.9	N 18	31.1 -00.4	298 05.8 +02.7	S 22	09.1 +00.0	264 21.7 +02.7	S 22	07.1 +00.0	17										
18	73 09.0 +00.8	N 18	30.7 -00.5	313 08.5 +02.6	S 22	09.1 +00.0	279 24.4 +02.6	S 22	07.1 +00.0	18										
19	88 09.8 +00.9	N 18	30.2 -00.4	328 11.1 +02.7	S 22	09.1 +00.0	294 27.0 +02.7	S 22	07.1 +00.1	19										
20	103 10.7 +00.8	N 18	29.8 -00.5	343 13.8 +02.6	S 22	09.1 +00.0	309 29.7 +02.6	S 22	07.2 +00.0	20										
21	118 11.5 +00.9	N 18	29.3 -00.4	358 16.4 +02.7	S 22	09.1 +00.0	324 32.3 +02.7	S 22	07.2 +00.0	21										
22	133 12.4 +00.8	N 18	28.9 -00.4	13 19.1 +02.6	S 22	09.1 -00.1	339 35.0 +02.6	S 22	07.2 +00.0	22										
23	148 13.2 +00.9	N 18	28.5 -00.5	28 21.7 +02.6	S 22	09.0 +00.0	354 37.6 +02.7	S 22	07.2 +00.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'0	00'0	00'0	00'0	00'0	00'0	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'2	00'2	00'2	00'2	00'2	00'2
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	226°	226°	226°	226°	226°	226°	SHA	106°	106°	106°	106°	106°	106°	SHA	072°	072°	072°	072°	072°	072°
Greenwich Culmination Time: 13:07							Greenwich Culmination Time: 21:06							Greenwich Culmination Time: 23:21						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.9 +00.0	N 20 45.0 -00.5	185 41.4 -00.8	N 22 29.7 -00.4	322 47.5 -26.8	S 14 24.6 -08.9	00						
01	193 24.9 +00.0	N 20 44.5 -00.4	200 40.6 -00.9	N 22 29.3 -00.3	337 20.7 -26.7	S 14 15.7 -08.9	01						
02	208 24.9 -00.1	N 20 44.1 -00.5	215 39.7 -00.8	N 22 29.0 -00.4	351 54.0 -26.7	S 14 06.8 -09.0	02						
03	223 24.8 +00.0	N 20 43.6 -00.4	230 38.9 -00.8	N 22 28.6 -00.4	6 27.3 -26.6	S 13 57.8 -09.0	03						
04	238 24.8 -00.1	N 20 43.2 -00.5	245 38.1 -00.9	N 22 28.2 -00.3	21 00.7 -26.6	S 13 48.8 -09.1	04						
05	253 24.7 +00.0	N 20 42.7 -00.5	260 37.2 -00.8	N 22 27.9 -00.4	35 34.1 -26.6	S 13 39.7 -09.1	05						
06	268 24.7 +00.0	N 20 42.2 -00.4	275 36.4 -00.8	N 22 27.5 -00.4	50 07.5 -26.5	S 13 30.6 -09.2	06						
07	283 24.7 -00.1	N 20 41.8 -00.5	290 35.6 -00.9	N 22 27.1 -00.4	64 41.0 -26.5	S 13 21.4 -09.3	07						
08	298 24.6 +00.0	N 20 41.3 -00.5	305 34.7 -00.8	N 22 26.7 -00.3	79 14.5 -26.4	S 13 12.1 -09.3	08						
09	313 24.6 +00.0	N 20 40.8 -00.4	320 33.9 -00.9	N 22 26.4 -00.4	93 48.1 -26.4	S 13 02.8 -09.3	09						
10	328 24.6 -00.1	N 20 40.4 -00.5	335 33.0 -00.8	N 22 26.0 -00.4	108 21.7 -26.3	S 12 53.5 -09.4	10						
11	343 24.5 +00.0	N 20 39.9 -00.5	350 32.2 -00.8	N 22 25.6 -00.4	122 55.4 -26.3	S 12 44.1 -09.5	11						
12	358 24.5 +00.0	N 20 39.4 -00.4	5 31.4 -00.9	N 22 25.2 -00.3	137 29.1 -26.3	S 12 34.6 -09.5	12						
13	13 24.5 -00.1	N 20 39.0 -00.5	20 30.5 -00.8	N 22 24.9 -00.4	152 02.8 -26.2	S 12 25.1 -09.5	13						
14	28 24.4 +00.0	N 20 38.5 -00.5	35 29.7 -00.8	N 22 24.5 -00.4	166 36.6 -26.2	S 12 15.6 -09.6	14						
15	43 24.4 -00.1	N 20 38.0 -00.4	50 28.9 -00.9	N 22 24.1 -00.4	181 10.4 -26.1	S 12 06.0 -09.7	15						
16	58 24.3 +00.0	N 20 37.6 -00.5	65 28.0 -00.8	N 22 23.7 -00.4	195 44.3 -26.1	S 11 56.3 -09.7	16						
17	73 24.3 +00.0	N 20 37.1 -00.5	80 27.2 -00.8	N 22 23.3 -00.3	210 18.2 -26.1	S 11 46.6 -09.7	17						
18	88 24.3 -00.1	N 20 36.6 -00.5	95 26.4 -00.9	N 22 23.0 -00.4	224 52.1 -26.0	S 11 36.9 -09.8	18						
19	103 24.2 +00.0	N 20 36.1 -00.4	110 25.5 -00.8	N 22 22.6 -00.4	239 26.1 -26.0	S 11 27.1 -09.8	19						
20	118 24.2 +00.0	N 20 35.7 -00.5	125 24.7 -00.8	N 22 22.2 -00.4	254 00.1 -25.9	S 11 17.3 -09.9	20						
21	133 24.2 -00.1	N 20 35.2 -00.5	140 23.9 -00.9	N 22 21.8 -00.4	268 34.2 -25.9	S 11 07.4 -09.9	21						
22	148 24.1 +00.0	N 20 34.7 -00.5	155 23.0 -00.8	N 22 21.4 -00.4	283 08.3 -25.9	S 10 57.5 -10.0	22						
23	163 24.1 +00.0	N 20 34.2 -00.4	170 22.2 -00.8	N 22 21.0 -00.4	297 42.4 -25.9	S 10 47.5 -10.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'1 54'1								
	SHA 241° 241° 241° 240° 240° 240°		SHA 248° 248° 248° 247° 247° 247°		SHA 024° 022° 020° 019° 017° 015°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:37		Greenwich Culmination Time: 02:33								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	163 14.1 +00.9	N 18 28.0 -00.4	43 24.3 +02.7	S 22 09.0 +00.0	9 40.3 +02.6	S 22 07.3 +00.0	00						
01	178 15.0 +00.8	N 18 27.6 -00.5	58 27.0 +02.6	S 22 09.0 +00.0	24 42.9 +02.7	S 22 07.3 +00.0	01						
02	193 15.8 +00.9	N 18 27.1 -00.4	73 29.6 +02.7	S 22 09.0 +00.0	39 45.6 +02.7	S 22 07.3 +00.0	02						
03	208 16.7 +00.8	N 18 26.7 -00.5	88 32.3 +02.6	S 22 09.0 +00.0	54 48.3 +02.6	S 22 07.3 +00.1	03						
04	223 17.5 +00.9	N 18 26.2 -00.4	103 34.9 +02.7	S 22 09.0 +00.0	69 50.9 +02.7	S 22 07.4 +00.0	04						
05	238 18.4 +00.9	N 18 25.8 -00.5	118 37.6 +02.6	S 22 09.0 +00.0	84 53.6 +02.6	S 22 07.4 +00.0	05						
06	253 19.3 +00.8	N 18 25.3 -00.4	133 40.2 +02.7	S 22 09.0 +00.0	99 56.2 +02.7	S 22 07.4 +00.0	06						
07	268 20.1 +00.9	N 18 24.9 -00.4	148 42.9 +02.6	S 22 09.0 +00.0	114 58.9 +02.6	S 22 07.4 +00.1	07						
08	283 21.0 +00.8	N 18 24.5 -00.5	163 45.5 +02.6	S 22 09.0 -00.1	130 01.5 +02.7	S 22 07.5 +00.0	08						
09	298 21.8 +00.9	N 18 24.0 -00.4	178 48.1 +02.7	S 22 08.9 +00.0	145 04.2 +02.6	S 22 07.5 +00.0	09						
10	313 22.7 +00.9	N 18 23.6 -00.5	193 50.8 +02.6	S 22 08.9 +00.0	160 06.8 +02.7	S 22 07.5 +00.0	10						
11	328 23.6 +00.8	N 18 23.1 -00.4	208 53.4 +02.7	S 22 08.9 +00.0	175 09.5 +02.7	S 22 07.5 +00.1	11						
12	343 24.4 +00.9	N 18 22.7 -00.5	223 56.1 +02.6	S 22 08.9 +00.0	190 12.2 +02.6	S 22 07.6 +00.0	12						
13	358 25.3 +00.8	N 18 22.2 -00.4	238 58.7 +02.7	S 22 08.9 +00.0	205 14.8 +02.7	S 22 07.6 +00.0	13						
14	13 26.1 +00.9	N 18 21.8 -00.5	254 01.4 +02.6	S 22 08.9 +00.0	220 17.5 +02.6	S 22 07.6 +00.0	14						
15	28 27.0 +00.9	N 18 21.3 -00.4	269 04.0 +02.6	S 22 08.9 +00.0	235 20.1 +02.7	S 22 07.6 +00.1	15						
16	43 27.9 +00.8	N 18 20.9 -00.4	284 06.6 +02.7	S 22 08.9 +00.0	250 22.8 +02.6	S 22 07.7 +00.0	16						
17	58 28.7 +00.9	N 18 20.5 -00.5	299 09.3 +02.6	S 22 08.9 -00.1	265 25.4 +02.7	S 22 07.7 +00.0	17						
18	73 29.6 +00.8	N 18 20.0 -00.4	314 11.9 +02.7	S 22 08.8 +00.0	280 28.1 +02.6	S 22 07.7 +00.1	18						
19	88 30.4 +00.9	N 18 19.6 -00.5	329 14.6 +02.6	S 22 08.8 +00.0	295 30.7 +02.7	S 22 07.8 +00.0	19						
20	103 31.3 +00.9	N 18 19.1 -00.4	344 17.2 +02.6	S 22 08.8 +00.0	310 33.4 +02.7	S 22 07.8 +00.0	20						
21	118 32.2 +00.8	N 18 18.7 -00.5	359 19.8 +02.7	S 22 08.8 +00.0	325 36.1 +02.6	S 22 07.8 +00.0	21						
22	133 33.0 +00.9	N 18 18.2 -00.4	14 22.5 +02.6	S 22 08.8 +00.0	340 38.7 +02.7	S 22 07.8 +00.1	22						
23	148 33.9 +00.8	N 18 17.8 -00.5	29 25.1 +02.7	S 22 08.8 +00.0	355 41.4 +02.6	S 22 07.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 226° 226° 225° 225° 225° 225°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:06		Greenwich Culmination Time: 21:02		Greenwich Culmination Time: 23:17								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.1 -00.1	N 20 33.8 -00.5	185 21.4 -00.9	N 22 20.6 -00.4	312 16.5 -25.8	S 10 37.5 -10.0	00						
01	193 24.0 +00.0	N 20 33.3 -00.5	200 20.5 -00.8	N 22 20.2 -00.3	326 50.7 -25.8	S 10 27.5 -10.1	01						
02	208 24.0 +00.0	N 20 32.8 -00.5	215 19.7 -00.8	N 22 19.9 -00.4	341 24.9 -25.7	S 10 17.4 -10.1	02						
03	223 24.0 +00.0	N 20 32.3 -00.4	230 18.9 -00.8	N 22 19.5 -00.4	355 59.2 -25.7	S 10 07.3 -10.2	03						
04	238 24.0 -00.1	N 20 31.9 -00.5	245 18.1 -00.9	N 22 19.1 -00.4	10 33.5 -25.7	S 09 57.1 -10.2	04						
05	253 23.9 +00.0	N 20 31.4 -00.5	260 17.2 -00.8	N 22 18.7 -00.4	25 07.8 -25.7	S 09 46.9 -10.2	05						
06	268 23.9 +00.0	N 20 30.9 -00.5	275 16.4 -00.8	N 22 18.3 -00.4	39 42.1 -25.6	S 09 36.7 -10.3	06						
07	283 23.9 -00.1	N 20 30.4 -00.4	290 15.6 -00.9	N 22 17.9 -00.4	54 16.5 -25.6	S 09 26.4 -10.3	07						
08	298 23.8 +00.0	N 20 30.0 -00.5	305 14.7 -00.8	N 22 17.5 -00.4	68 50.9 -25.6	S 09 16.1 -10.3	08						
09	313 23.8 +00.0	N 20 29.5 -00.5	320 13.9 -00.8	N 22 17.1 -00.4	83 25.3 -25.5	S 09 05.8 -10.4	09						
10	328 23.8 -00.1	N 20 29.0 -00.5	335 13.1 -00.9	N 22 16.7 -00.4	97 59.8 -25.6	S 08 55.4 -10.4	10						
11	343 23.7 +00.0	N 20 28.5 -00.5	350 12.2 -00.8	N 22 16.3 -00.4	112 34.2 -25.5	S 08 45.0 -10.5	11						
12	358 23.7 +00.0	N 20 28.0 -00.5	5 11.4 -00.8	N 22 15.9 -00.4	127 08.7 -25.4	S 08 34.5 -10.5	12						
13	13 23.7 +00.0	N 20 27.5 -00.4	20 10.6 -00.8	N 22 15.5 -00.4	141 43.3 -25.5	S 08 24.0 -10.5	13						
14	28 23.7 -00.1	N 20 27.1 -00.5	35 09.8 -00.9	N 22 15.1 -00.5	156 17.8 -25.4	S 08 13.5 -10.6	14						
15	43 23.6 +00.0	N 20 26.6 -00.5	50 08.9 -00.8	N 22 14.6 -00.4	170 52.4 -25.4	S 08 02.9 -10.5	15						
16	58 23.6 +00.0	N 20 26.1 -00.5	65 08.1 -00.8	N 22 14.2 -00.4	185 27.0 -25.4	S 07 52.4 -10.7	16						
17	73 23.6 -00.1	N 20 25.6 -00.5	80 07.3 -00.8	N 22 13.8 -00.4	200 01.6 -25.3	S 07 41.7 -10.6	17						
18	88 23.5 +00.0	N 20 25.1 -00.5	95 06.5 -00.9	N 22 13.4 -00.4	214 36.3 -25.4	S 07 31.1 -10.7	18						
19	103 23.5 +00.0	N 20 24.6 -00.5	110 05.6 -00.8	N 22 13.0 -00.4	229 10.9 -25.3	S 07 20.4 -10.7	19						
20	118 23.5 +00.0	N 20 24.1 -00.4	125 04.8 -00.8	N 22 12.6 -00.4	243 45.6 -25.3	S 07 09.7 -10.7	20						
21	133 23.5 -00.1	N 20 23.7 -00.5	140 04.0 -00.9	N 22 12.2 -00.4	258 20.3 -25.2	S 06 59.0 -10.8	21						
22	148 23.4 +00.0	N 20 23.2 -00.5	155 03.1 -00.8	N 22 11.8 -00.5	272 55.1 -25.3	S 06 48.2 -10.8	22						
23	163 23.4 +00.0	N 20 22.7 -00.5	170 02.3 -00.8	N 22 11.3 -00.4	287 29.8 -25.2	S 06 37.4 -10.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'1 54'1								
	SHA 240° 240° 240° 239° 239° 239°		SHA 247° 247° 246° 246° 246° 246°		SHA 013° 011° 009° 007° 005° 004°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:39		Greenwich Culmination Time: 03:16								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	163 34.7 +00.9	N 18 17.3 -00.4	44 27.8 +02.6	S 22 08.8 +00.0	10 44.0 +02.7	S 22 07.9 +00.0	00						
01	178 35.6 +00.9	N 18 16.9 -00.5	59 30.4 +02.6	S 22 08.8 +00.0	25 46.7 +02.6	S 22 07.9 +00.0	01						
02	193 36.5 +00.8	N 18 16.4 -00.4	74 33.0 +02.7	S 22 08.8 +00.0	40 49.3 +02.7	S 22 07.9 +00.1	02						
03	208 37.3 +00.9	N 18 16.0 -00.5	89 35.7 +02.6	S 22 08.8 +00.0	55 52.0 +02.6	S 22 08.0 +00.0	03						
04	223 38.2 +00.9	N 18 15.5 -00.4	104 38.3 +02.6	S 22 08.8 -00.1	70 54.6 +02.7	S 22 08.0 +00.0	04						
05	238 39.1 +00.8	N 18 15.1 -00.5	119 40.9 +02.7	S 22 08.7 +00.0	85 57.3 +02.6	S 22 08.0 +00.0	05						
06	253 39.9 +00.9	N 18 14.6 -00.4	134 43.6 +02.6	S 22 08.7 +00.0	100 59.9 +02.7	S 22 08.0 +00.1	06						
07	268 40.8 +00.8	N 18 14.2 -00.5	149 46.2 +02.7	S 22 08.7 +00.0	116 02.6 +02.7	S 22 08.1 +00.0	07						
08	283 41.6 +00.9	N 18 13.7 -00.4	164 48.9 +02.6	S 22 08.7 +00.0	131 05.3 +02.6	S 22 08.1 +00.0	08						
09	298 42.5 +00.9	N 18 13.3 -00.5	179 51.5 +02.6	S 22 08.7 +00.0	146 07.9 +02.7	S 22 08.1 +00.0	09						
10	313 43.4 +00.8	N 18 12.8 -00.4	194 54.1 +02.7	S 22 08.7 +00.0	161 10.6 +02.6	S 22 08.1 +00.1	10						
11	328 44.2 +00.9	N 18 12.4 -00.5	209 56.8 +02.6	S 22 08.7 +00.0	176 13.2 +02.7	S 22 08.2 +00.0	11						
12	343 45.1 +00.9	N 18 11.9 -00.4	224 59.4 +02.6	S 22 08.7 +00.0	191 15.9 +02.6	S 22 08.2 +00.0	12						
13	358 46.0 +00.8	N 18 11.5 -00.5	240 02.0 +02.7	S 22 08.7 +00.0	206 18.5 +02.7	S 22 08.2 +00.0	13						
14	13 46.8 +00.9	N 18 11.0 -00.4	255 04.7 +02.6	S 22 08.7 -00.1	221 21.2 +02.6	S 22 08.2 +00.1	14						
15	28 47.7 +00.8	N 18 10.6 -00.5	270 07.3 +02.6	S 22 08.6 +00.0	236 23.8 +02.7	S 22 08.3 +00.0	15						
16	43 48.5 +00.9	N 18 10.1 -00.4	285 09.9 +02.7	S 22 08.6 +00.0	251 26.5 +02.6	S 22 08.3 +00.0	16						
17	58 49.4 +00.9	N 18 09.7 -00.5	300 12.6 +02.6	S 22 08.6 +00.0	266 29.1 +02.7	S 22 08.3 +00.0	17						
18	73 50.3 +00.8	N 18 09.2 -00.4	315 15.2 +02.6	S 22 08.6 +00.0	281 31.8 +02.6	S 22 08.3 +00.1	18						
19	88 51.1 +00.9	N 18 08.8 -00.5	330 17.8 +02.7	S 22 08.6 +00.0	296 34.4 +02.7	S 22 08.4 +00.0	19						
20	103 52.0 +00.9	N 18 08.3 -00.4	345 20.5 +02.6	S 22 08.6 +00.0	311 37.1 +02.7	S 22 08.4 +00.0	20						
21	118 52.9 +00.8	N 18 07.9 -00.5	0 23.1 +02.6	S 22 08.6 +00.0	326 39.8 +02.6	S 22 08.4 +00.0	21						
22	133 53.7 +00.9	N 18 07.4 -00.4	15 25.7 +02.7	S 22 08.6 +00.0	341 42.4 +02.7	S 22 08.4 +00.1	22						
23	148 54.6 +00.9	N 18 07.0 -00.5	30 28.4 +02.6	S 22 08.6 +00.0	356 45.1 +02.6	S 22 08.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 225° 225° 225° 225° 225° 225°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:04		Greenwich Culmination Time: 20:58		Greenwich Culmination Time: 23:12								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 23.4 -00.1	N 20 22.2 -00.5	185 01.5 -00.8	N 22 10.9 -00.4	302 04.6 -25.3	S 06 26.6 -10.8	00						
01	193 23.3 +00.0	N 20 21.7 -00.5	200 00.7 -00.9	N 22 10.5 -00.4	316 39.3 -25.2	S 06 15.8 -10.9	01						
02	208 23.3 +00.0	N 20 21.2 -00.5	214 59.8 -00.8	N 22 10.1 -00.4	331 14.1 -25.2	S 06 04.9 -10.9	02						
03	223 23.3 +00.0	N 20 20.7 -00.5	229 59.0 -00.8	N 22 09.7 -00.5	345 48.9 -25.2	S 05 54.0 -10.9	03						
04	238 23.3 -00.1	N 20 20.2 -00.5	244 58.2 -00.8	N 22 09.2 -00.4	0 23.7 -25.1	S 05 43.1 -11.0	04						
05	253 23.2 +00.0	N 20 19.7 -00.5	259 57.4 -00.8	N 22 08.8 -00.4	14 58.6 -25.2	S 05 32.1 -10.9	05						
06	268 23.2 +00.0	N 20 19.2 -00.4	274 56.6 -00.9	N 22 08.4 -00.4	29 33.4 -25.1	S 05 21.2 -11.0	06						
07	283 23.2 +00.0	N 20 18.8 -00.5	289 55.7 -00.8	N 22 08.0 -00.5	44 08.3 -25.2	S 05 10.2 -11.0	07						
08	298 23.2 -00.1	N 20 18.3 -00.5	304 54.9 -00.8	N 22 07.5 -00.4	58 43.1 -25.1	S 04 59.2 -11.1	08						
09	313 23.1 +00.0	N 20 17.8 -00.5	319 54.1 -00.8	N 22 07.1 -00.4	73 18.0 -25.1	S 04 48.1 -11.0	09						
10	328 23.1 +00.0	N 20 17.3 -00.5	334 53.3 -00.9	N 22 06.7 -00.4	87 52.9 -25.1	S 04 37.1 -11.1	10						
11	343 23.1 +00.0	N 20 16.8 -00.5	349 52.4 -00.8	N 22 06.3 -00.5	102 27.8 -25.1	S 04 26.0 -11.1	11						
12	358 23.1 -00.1	N 20 16.3 -00.5	4 51.6 -00.8	N 22 05.8 -00.4	117 02.7 -25.1	S 04 14.9 -11.1	12						
13	13 23.0 +00.0	N 20 15.8 -00.5	19 50.8 -00.8	N 22 05.4 -00.4	131 37.6 -25.1	S 04 03.8 -11.2	13						
14	28 23.0 +00.0	N 20 15.3 -00.5	34 50.0 -00.8	N 22 05.0 -00.5	146 12.5 -25.1	S 03 52.6 -11.1	14						
15	43 23.0 +00.0	N 20 14.8 -00.5	49 49.2 -00.9	N 22 04.5 -00.4	160 47.4 -25.1	S 03 41.5 -11.2	15						
16	58 23.0 +00.0	N 20 14.3 -00.5	64 48.3 -00.8	N 22 04.1 -00.4	175 22.3 -25.1	S 03 30.3 -11.2	16						
17	73 23.0 -00.1	N 20 13.8 -00.5	79 47.5 -00.8	N 22 03.7 -00.5	189 57.2 -25.1	S 03 19.1 -11.2	17						
18	88 22.9 +00.0	N 20 13.3 -00.5	94 46.7 -00.8	N 22 03.2 -00.4	204 32.1 -25.1	S 03 07.9 -11.2	18						
19	103 22.9 +00.0	N 20 12.8 -00.5	109 45.9 -00.8	N 22 02.8 -00.5	219 07.0 -25.0	S 02 56.7 -11.2	19						
20	118 22.9 +00.0	N 20 12.3 -00.5	124 45.1 -00.9	N 22 02.3 -00.4	233 42.0 -25.1	S 02 45.5 -11.3	20						
21	133 22.9 -00.1	N 20 11.8 -00.5	139 44.2 -00.8	N 22 01.9 -00.4	248 16.9 -25.1	S 02 34.2 -11.2	21						
22	148 22.8 +00.0	N 20 11.3 -00.5	154 43.4 -00.8	N 22 01.5 -00.5	262 51.8 -25.1	S 02 23.0 -11.3	22						
23	163 22.8 +00.0	N 20 10.8 -00.5	169 42.6 -00.8	N 22 01.0 -00.4	277 26.7 -25.1	S 02 11.7 -11.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'2 54'2 54'2 54'3 54'3								
	SHA 239° 239° 239° 238° 238° 238°		SHA 245° 245° 245° 245° 245° 244°		SHA 002° 360° 358° 356° 354° 353°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:40		Greenwich Culmination Time: 03:58								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	163 55.5 +00.8	N 18 06.5 -00.4	45 31.0 +02.6	S 22 08.6 +00.0	11 47.7 +02.7	S 22 08.5 +00.0	00						
01	178 56.3 +00.9	N 18 06.1 -00.5	60 33.6 +02.7	S 22 08.6 -00.1	26 50.4 +02.6	S 22 08.5 +00.0	01						
02	193 57.2 +00.9	N 18 05.6 -00.4	75 36.3 +02.6	S 22 08.5 +00.0	41 53.0 +02.7	S 22 08.5 +00.1	02						
03	208 58.1 +00.8	N 18 05.2 -00.5	90 38.9 +02.6	S 22 08.5 +00.0	56 55.7 +02.6	S 22 08.6 +00.0	03						
04	223 58.9 +00.9	N 18 04.7 -00.4	105 41.5 +02.6	S 22 08.5 +00.0	71 58.3 +02.7	S 22 08.6 +00.0	04						
05	238 59.8 +00.9	N 18 04.3 -00.5	120 44.1 +02.7	S 22 08.5 +00.0	87 01.0 +02.6	S 22 08.6 +00.0	05						
06	254 00.7 +00.8	N 18 03.8 -00.5	135 46.8 +02.6	S 22 08.5 +00.0	102 03.6 +02.7	S 22 08.6 +00.1	06						
07	269 01.5 +00.9	N 18 03.3 -00.4	150 49.4 +02.6	S 22 08.5 +00.0	117 06.3 +02.6	S 22 08.7 +00.0	07						
08	284 02.4 +00.9	N 18 02.9 -00.5	165 52.0 +02.7	S 22 08.5 +00.0	132 08.9 +02.7	S 22 08.7 +00.0	08						
09	299 03.3 +00.8	N 18 02.4 -00.4	180 54.7 +02.6	S 22 08.5 +00.0	147 11.6 +02.7	S 22 08.7 +00.0	09						
10	314 04.1 +00.9	N 18 02.0 -00.5	195 57.3 +02.6	S 22 08.5 +00.0	162 14.3 +02.6	S 22 08.7 +00.1	10						
11	329 05.0 +00.9	N 18 01.5 -00.4	210 59.9 +02.6	S 22 08.5 +00.0	177 16.9 +02.7	S 22 08.8 +00.0	11						
12	344 05.9 +00.8	N 18 01.1 -00.5	226 02.5 +02.7	S 22 08.5 -00.1	192 19.6 +02.6	S 22 08.8 +00.0	12						
13	359 06.7 +00.9	N 18 00.6 -00.4	241 05.2 +02.6	S 22 08.4 +00.0	207 22.2 +02.7	S 22 08.8 +00.0	13						
14	14 07.6 +00.9	N 18 00.2 -00.5	256 07.8 +02.6	S 22 08.4 +00.0	222 24.9 +02.6	S 22 08.8 +00.1	14						
15	29 08.5 +00.8	N 17 59.7 -00.5	271 10.4 +02.6	S 22 08.4 +00.0	237 27.5 +02.7	S 22 08.9 +00.0	15						
16	44 09.3 +00.9	N 17 59.2 -00.4	286 13.0 +02.7	S 22 08.4 +00.0	252 30.2 +02.6	S 22 08.9 +00.0	16						
17	59 10.2 +00.9	N 17 58.8 -00.5	301 15.7 +02.6	S 22 08.4 +00.0	267 32.8 +02.7	S 22 08.9 +00.0	17						
18	74 11.1 +00.8	N 17 58.3 -00.4	316 18.3 +02.6	S 22 08.4 +00.0	282 35.5 +02.6	S 22 08.9 +00.1	18						
19	89 11.9 +00.9	N 17 57.9 -00.5	331 20.9 +02.6	S 22 08.4 +00.0	297 38.1 +02.7	S 22 09.0 +00.0	19						
20	104 12.8 +00.9	N 17 57.4 -00.4	346 23.5 +02.7	S 22 08.4 +00.0	312 40.8 +02.6	S 22 09.0 +00.0	20						
21	119 13.7 +00.8	N 17 57.0 -00.5	1 26.2 +02.6	S 22 08.4 +00.0	327 43.4 +02.7	S 22 09.0 +00.0	21						
22	134 14.5 +00.9	N 17 56.5 -00.4	16 28.8 +02.6	S 22 08.4 +00.0	342 46.1 +02.6	S 22 09.0 +00.1	22						
23	149 15.4 +00.9	N 17 56.1 -00.5	31 31.4 +02.6	S 22 08.4 +00.0	357 48.7 +02.7	S 22 09.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 224° 224° 224° 224° 224° 224°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:03		Greenwich Culmination Time: 20:54		Greenwich Culmination Time: 23:08								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.8 +00.0	N 20 10.3 -00.5	184 41.8 -00.8	N 22 00.6 -00.5	292 01.6 -25.1	S 02 00.4 -11.3	00						
01	193 22.8 +00.0	N 20 09.8 -00.5	199 41.0 -00.8	N 22 00.1 -00.4	306 36.5 -25.1	S 01 49.1 -11.3	01						
02	208 22.8 -00.1	N 20 09.3 -00.5	214 40.2 -00.9	N 21 59.7 -00.5	321 11.4 -25.1	S 01 37.8 -11.3	02						
03	223 22.7 +00.0	N 20 08.8 -00.5	229 39.3 -00.8	N 21 59.2 -00.4	335 46.3 -25.1	S 01 26.5 -11.4	03						
04	238 22.7 +00.0	N 20 08.3 -00.6	244 38.5 -00.8	N 21 58.8 -00.5	350 21.2 -25.1	S 01 15.1 -11.3	04						
05	253 22.7 +00.0	N 20 07.7 -00.5	259 37.7 -00.8	N 21 58.3 -00.4	4 56.1 -25.2	S 01 03.8 -11.4	05						
06	268 22.7 +00.0	N 20 07.2 -00.5	274 36.9 -00.8	N 21 57.9 -00.5	19 30.9 -25.1	S 00 52.4 -11.3	06						
07	283 22.7 -00.1	N 20 06.7 -00.5	289 36.1 -00.8	N 21 57.4 -00.4	34 05.8 -25.2	S 00 41.1 -11.4	07						
08	298 22.6 +00.0	N 20 06.2 -00.5	304 35.3 -00.9	N 21 57.0 -00.5	48 40.6 -25.1	S 00 29.7 -11.4	08						
09	313 22.6 +00.0	N 20 05.7 -00.5	319 34.4 -00.8	N 21 56.5 -00.4	63 15.5 -25.2	S 00 18.3 -11.4	09						
10	328 22.6 +00.0	N 20 05.2 -00.5	334 33.6 -00.8	N 21 56.1 -00.5	77 50.3 -25.2	S 00 06.9 -11.4	10						
11	343 22.6 +00.0	N 20 04.7 -00.5	349 32.8 -00.8	N 21 55.6 -00.5	92 25.1 -25.2	N 00 04.5 +11.4	11						
12	358 22.6 -00.1	N 20 04.2 -00.5	4 32.0 -00.8	N 21 55.1 -00.4	106 59.9 -25.2	N 00 15.9 +11.4	12						
13	13 22.5 +00.0	N 20 03.7 -00.5	19 31.2 -00.8	N 21 54.7 -00.5	121 34.7 -25.2	N 00 27.3 +11.4	13						
14	28 22.5 +00.0	N 20 03.2 -00.6	34 30.4 -00.8	N 21 54.2 -00.4	136 09.5 -25.3	N 00 38.7 +11.4	14						
15	43 22.5 +00.0	N 20 02.6 -00.5	49 29.6 -00.8	N 21 53.8 -00.5	150 44.2 -25.3	N 00 50.1 +11.4	15						
16	58 22.5 +00.0	N 20 02.1 -00.5	64 28.8 -00.9	N 21 53.3 -00.5	165 18.9 -25.3	N 01 01.5 +11.4	16						
17	73 22.5 +00.0	N 20 01.6 -00.5	79 27.9 -00.8	N 21 52.8 -00.4	179 53.6 -25.3	N 01 12.9 +11.4	17						
18	88 22.5 -00.1	N 20 01.1 -00.5	94 27.1 -00.8	N 21 52.4 -00.5	194 28.3 -25.3	N 01 24.3 +11.4	18						
19	103 22.4 +00.0	N 20 00.6 -00.5	109 26.3 -00.8	N 21 51.9 -00.5	209 03.0 -25.4	N 01 35.7 +11.5	19						
20	118 22.4 +00.0	N 20 00.1 -00.5	124 25.5 -00.8	N 21 51.4 -00.4	223 37.6 -25.3	N 01 47.2 +11.4	20						
21	133 22.4 +00.0	N 19 59.6 -00.6	139 24.7 -00.8	N 21 51.0 -00.5	238 12.3 -25.4	N 01 58.6 +11.4	21						
22	148 22.4 +00.0	N 19 59.0 -00.5	154 23.9 -00.8	N 21 50.5 -00.5	252 46.9 -25.5	N 02 10.0 +11.4	22						
23	163 22.4 +00.0	N 19 58.5 -00.5	169 23.1 -00.8	N 21 50.0 -00.4	267 21.4 -25.4	N 02 21.4 +11.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'4 54'4 54'5 54'5 54'6 54'7								
	SHA 238° 238° 238° 237° 237° 237°		SHA 244° 244° 244° 243° 243° 243°		SHA 351° 349° 347° 345° 343° 341°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:41		Greenwich Culmination Time: 04:39								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	164 16.3 +00.8	N 17 55.6 -00.5	46 34.0 +02.7	S 22 08.4 -00.1	12 51.4 +02.6	S 22 09.1 +00.0	00						
01	179 17.1 +00.9	N 17 55.1 -00.4	61 36.7 +02.6	S 22 08.3 +00.0	27 54.0 +02.7	S 22 09.1 +00.0	01						
02	194 18.0 +00.9	N 17 54.7 -00.5	76 39.3 +02.6	S 22 08.3 +00.0	42 56.7 +02.7	S 22 09.1 +00.1	02						
03	209 18.9 +00.8	N 17 54.2 -00.4	91 41.9 +02.6	S 22 08.3 +00.0	57 59.4 +02.6	S 22 09.2 +00.0	03						
04	224 19.7 +00.9	N 17 53.8 -00.5	106 44.5 +02.7	S 22 08.3 +00.0	73 02.0 +02.7	S 22 09.2 +00.0	04						
05	239 20.6 +00.9	N 17 53.3 -00.5	121 47.2 +02.6	S 22 08.3 +00.0	88 04.7 +02.6	S 22 09.2 +00.0	05						
06	254 21.5 +00.8	N 17 52.8 -00.4	136 49.8 +02.6	S 22 08.3 +00.0	103 07.3 +02.7	S 22 09.2 +00.1	06						
07	269 22.3 +00.9	N 17 52.4 -00.5	151 52.4 +02.6	S 22 08.3 +00.0	118 10.0 +02.6	S 22 09.3 +00.0	07						
08	284 23.2 +00.9	N 17 51.9 -00.4	166 55.0 +02.6	S 22 08.3 +00.0	133 12.6 +02.7	S 22 09.3 +00.0	08						
09	299 24.1 +00.9	N 17 51.5 -00.5	181 57.6 +02.7	S 22 08.3 +00.0	148 15.3 +02.6	S 22 09.3 +00.0	09						
10	314 25.0 +00.8	N 17 51.0 -00.5	197 00.3 +02.6	S 22 08.3 +00.0	163 17.9 +02.7	S 22 09.3 +00.1	10						
11	329 25.8 +00.9	N 17 50.5 -00.4	212 02.9 +02.6	S 22 08.3 +00.0	178 20.6 +02.6	S 22 09.4 +00.0	11						
12	344 26.7 +00.9	N 17 50.1 -00.5	227 05.5 +02.6	S 22 08.3 -00.1	193 23.2 +02.7	S 22 09.4 +00.0	12						
13	359 27.6 +00.8	N 17 49.6 -00.4	242 08.1 +02.6	S 22 08.2 +00.0	208 25.9 +02.6	S 22 09.4 +00.0	13						
14	14 28.4 +00.9	N 17 49.2 -00.5	257 10.7 +02.7	S 22 08.2 +00.0	223 28.5 +02.7	S 22 09.4 +00.1	14						
15	29 29.3 +00.9	N 17 48.7 -00.5	272 13.4 +02.6	S 22 08.2 +00.0	238 31.2 +02.6	S 22 09.5 +00.0	15						
16	44 30.2 +00.8	N 17 48.2 -00.4	287 16.0 +02.6	S 22 08.2 +00.0	253 33.8 +02.7	S 22 09.5 +00.0	16						
17	59 31.0 +00.9	N 17 47.8 -00.5	302 18.6 +02.6	S 22 08.2 +00.0	268 36.5 +02.6	S 22 09.5 +00.0	17						
18	74 31.9 +00.9	N 17 47.3 -00.4	317 21.2 +02.6	S 22 08.2 +00.0	283 39.1 +02.7	S 22 09.5 +00.1	18						
19	89 32.8 +00.9	N 17 46.9 -00.5	332 23.8 +02.7	S 22 08.2 +00.0	298 41.8 +02.6	S 22 09.6 +00.0	19						
20	104 33.7 +00.8	N 17 46.4 -00.5	347 26.5 +02.6	S 22 08.2 +00.0	313 44.4 +02.7	S 22 09.6 +00.0	20						
21	119 34.5 +00.9	N 17 45.9 -00.4	2 29.1 +02.6	S 22 08.2 +00.0	328 47.1 +02.6	S 22 09.6 +00.0	21						
22	134 35.4 +00.9	N 17 45.5 -00.5	17 31.7 +02.6	S 22 08.2 +00.0	343 49.7 +02.7	S 22 09.6 +00.1	22						
23	149 36.3 +00.8	N 17 45.0 -00.5	32 34.3 +02.6	S 22 08.2 +00.0	358 52.4 +02.6	S 22 09.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 224° 224° 224° 223° 223° 223°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 072° 072° 072° 072° 072°								
	Greenwich Culmination Time: 13:02		Greenwich Culmination Time: 20:50		Greenwich Culmination Time: 23:04								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.4 +00.0	N 19 58.0 -00.5	184 22.3 -00.8	N 21 49.6 -00.5	281 56.0 -25.5	N 02 32.8 +11.4	00						
01	193 22.4 -00.1	N 19 57.5 -00.5	199 21.5 -00.9	N 21 49.1 -00.5	296 30.5 -25.5	N 02 44.2 +11.4	01						
02	208 22.3 +00.0	N 19 57.0 -00.5	214 20.6 -00.8	N 21 48.6 -00.5	311 05.0 -25.5	N 02 55.6 +11.5	02						
03	223 22.3 +00.0	N 19 56.5 -00.6	229 19.8 -00.8	N 21 48.1 -00.4	325 39.5 -25.6	N 03 07.1 +11.4	03						
04	238 22.3 +00.0	N 19 55.9 -00.5	244 19.0 -00.8	N 21 47.7 -00.5	340 13.9 -25.6	N 03 18.5 +11.4	04						
05	253 22.3 +00.0	N 19 55.4 -00.5	259 18.2 -00.8	N 21 47.2 -00.5	354 48.3 -25.6	N 03 29.9 +11.3	05						
06	268 22.3 +00.0	N 19 54.9 -00.5	274 17.4 -00.8	N 21 46.7 -00.5	9 22.7 -25.7	N 03 41.2 +11.4	06						
07	283 22.3 +00.0	N 19 54.4 -00.6	289 16.6 -00.8	N 21 46.2 -00.5	23 57.0 -25.7	N 03 52.6 +11.4	07						
08	298 22.3 -00.1	N 19 53.8 -00.5	304 15.8 -00.8	N 21 45.7 -00.4	38 31.3 -25.7	N 04 04.0 +11.4	08						
09	313 22.2 +00.0	N 19 53.3 -00.5	319 15.0 -00.8	N 21 45.3 -00.5	53 05.6 -25.8	N 04 15.4 +11.3	09						
10	328 22.2 +00.0	N 19 52.8 -00.5	334 14.2 -00.8	N 21 44.8 -00.5	67 39.8 -25.8	N 04 26.7 +11.4	10						
11	343 22.2 +00.0	N 19 52.3 -00.5	349 13.4 -00.8	N 21 44.3 -00.5	82 14.0 -25.8	N 04 38.1 +11.3	11						
12	358 22.2 +00.0	N 19 51.8 -00.6	4 12.6 -00.8	N 21 43.8 -00.5	96 48.2 -25.9	N 04 49.4 +11.4	12						
13	13 22.2 +00.0	N 19 51.2 -00.5	19 11.8 -00.8	N 21 43.3 -00.5	111 22.3 -25.9	N 05 00.8 +11.3	13						
14	28 22.2 +00.0	N 19 50.7 -00.5	34 11.0 -00.8	N 21 42.8 -00.4	125 56.4 -25.9	N 05 12.1 +11.3	14						
15	43 22.2 +00.0	N 19 50.2 -00.5	49 10.2 -00.8	N 21 42.4 -00.5	140 30.5 -26.0	N 05 23.4 +11.3	15						
16	58 22.2 -00.1	N 19 49.7 -00.6	64 09.4 -00.9	N 21 41.9 -00.5	155 04.5 -26.1	N 05 34.7 +11.3	16						
17	73 22.1 +00.0	N 19 49.1 -00.5	79 08.5 -00.8	N 21 41.4 -00.5	169 38.4 -26.0	N 05 46.0 +11.2	17						
18	88 22.1 +00.0	N 19 48.6 -00.5	94 07.7 -00.8	N 21 40.9 -00.5	184 12.4 -26.2	N 05 57.2 +11.3	18						
19	103 22.1 +00.0	N 19 48.1 -00.6	109 06.9 -00.8	N 21 40.4 -00.5	198 46.2 -26.1	N 06 08.5 +11.2	19						
20	118 22.1 +00.0	N 19 47.5 -00.5	124 06.1 -00.8	N 21 39.9 -00.5	213 20.1 -26.2	N 06 19.7 +11.2	20						
21	133 22.1 +00.0	N 19 47.0 -00.5	139 05.3 -00.8	N 21 39.4 -00.5	227 53.9 -26.3	N 06 30.9 +11.3	21						
22	148 22.1 +00.0	N 19 46.5 -00.6	154 04.5 -00.8	N 21 38.9 -00.5	242 27.6 -26.3	N 06 42.2 +11.1	22						
23	163 22.1 +00.0	N 19 45.9 -00.5	169 03.7 -00.8	N 21 38.4 -00.5	257 01.3 -26.4	N 06 53.3 +11.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 15'0 15'0 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'8 54'8 54'9 55'0 55'1 55'2								
	SHA 237° 237° 237° 236° 236° 236°		SHA 243° 243° 242° 242° 242° 242°		SHA 340° 338° 336° 334° 332° 330°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:43		Greenwich Culmination Time: 05:21								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	164 37.1 +00.9	N 17 44.5 -00.4	47 36.9 +02.6	S 22 08.2 -00.1	13 55.0 +02.7	S 22 09.7 +00.0	00						
01	179 38.0 +00.9	N 17 44.1 -00.5	62 39.5 +02.7	S 22 08.1 +00.0	28 57.7 +02.6	S 22 09.7 +00.0	01						
02	194 38.9 +00.9	N 17 43.6 -00.4	77 42.2 +02.6	S 22 08.1 +00.0	44 00.3 +02.7	S 22 09.7 +00.1	02						
03	209 39.8 +00.8	N 17 43.2 -00.5	92 44.8 +02.6	S 22 08.1 +00.0	59 03.0 +02.6	S 22 09.8 +00.0	03						
04	224 40.6 +00.9	N 17 42.7 -00.5	107 47.4 +02.6	S 22 08.1 +00.0	74 05.6 +02.7	S 22 09.8 +00.0	04						
05	239 41.5 +00.9	N 17 42.2 -00.4	122 50.0 +02.6	S 22 08.1 +00.0	89 08.3 +02.6	S 22 09.8 +00.0	05						
06	254 42.4 +00.8	N 17 41.8 -00.5	137 52.6 +02.6	S 22 08.1 +00.0	104 10.9 +02.7	S 22 09.8 +00.1	06						
07	269 43.2 +00.9	N 17 41.3 -00.5	152 55.2 +02.6	S 22 08.1 +00.0	119 13.6 +02.6	S 22 09.9 +00.0	07						
08	284 44.1 +00.9	N 17 40.8 -00.4	167 57.8 +02.7	S 22 08.1 +00.0	134 16.2 +02.7	S 22 09.9 +00.0	08						
09	299 45.0 +00.9	N 17 40.4 -00.5	183 00.5 +02.6	S 22 08.1 +00.0	149 18.9 +02.6	S 22 09.9 +00.0	09						
10	314 45.9 +00.8	N 17 39.9 -00.5	198 03.1 +02.6	S 22 08.1 +00.0	164 21.5 +02.7	S 22 09.9 +00.1	10						
11	329 46.7 +00.9	N 17 39.4 -00.4	213 05.7 +02.6	S 22 08.1 +00.0	179 24.2 +02.6	S 22 10.0 +00.0	11						
12	344 47.6 +00.9	N 17 39.0 -00.5	228 08.3 +02.6	S 22 08.1 +00.0	194 26.8 +02.7	S 22 10.0 +00.0	12						
13	359 48.5 +00.9	N 17 38.5 -00.5	243 10.9 +02.6	S 22 08.1 +00.0	209 29.5 +02.6	S 22 10.0 +00.0	13						
14	14 49.4 +00.8	N 17 38.0 -00.4	258 13.5 +02.6	S 22 08.1 -00.1	224 32.1 +02.7	S 22 10.0 +00.1	14						
15	29 50.2 +00.9	N 17 37.6 -00.5	273 16.1 +02.6	S 22 08.0 +00.0	239 34.8 +02.6	S 22 10.1 +00.0	15						
16	44 51.1 +00.9	N 17 37.1 -00.4	288 18.7 +02.6	S 22 08.0 +00.0	254 37.4 +02.7	S 22 10.1 +00.0	16						
17	59 52.0 +00.8	N 17 36.7 -00.5	303 21.3 +02.7	S 22 08.0 +00.0	269 40.1 +02.6	S 22 10.1 +00.0	17						
18	74 52.8 +00.9	N 17 36.2 -00.5	318 24.0 +02.6	S 22 08.0 +00.0	284 42.7 +02.7	S 22 10.1 +00.1	18						
19	89 53.7 +00.9	N 17 35.7 -00.4	333 26.6 +02.6	S 22 08.0 +00.0	299 45.4 +02.7	S 22 10.2 +00.0	19						
20	104 54.6 +00.9	N 17 35.3 -00.5	348 29.2 +02.6	S 22 08.0 +00.0	314 48.1 +02.6	S 22 10.2 +00.0	20						
21	119 55.5 +00.8	N 17 34.8 -00.5	3 31.8 +02.6	S 22 08.0 +00.0	329 50.7 +02.7	S 22 10.2 +00.0	21						
22	134 56.3 +00.9	N 17 34.3 -00.4	18 34.4 +02.6	S 22 08.0 +00.0	344 53.4 +02.6	S 22 10.2 +00.1	22						
23	149 57.2 +00.9	N 17 33.9 -00.5	33 37.0 +02.6	S 22 08.0 +00.0	359 56.0 +02.6	S 22 10.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 223° 223° 223° 223° 223° 223°		SHA 106° 106° 106° 106° 106° 106°		SHA 072° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 13:00		Greenwich Culmination Time: 20:45		Greenwich Culmination Time: 23:00								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.1 +00.0	N 19 45.4 -00.5	184 02.9 -00.8	N 21 37.9 -00.5	271 34.9 -26.4	N 07 04.5 +11.2	00						
01	193 22.1 +00.0	N 19 44.9 -00.5	199 02.1 -00.8	N 21 37.4 -00.5	286 08.5 -26.5	N 07 15.7 +11.1	01						
02	208 22.1 +00.0	N 19 44.4 -00.6	214 01.3 -00.8	N 21 36.9 -00.5	300 42.0 -26.5	N 07 26.8 +11.1	02						
03	223 22.1 -00.1	N 19 43.8 -00.5	229 00.5 -00.8	N 21 36.4 -00.5	315 15.5 -26.5	N 07 37.9 +11.1	03						
04	238 22.0 +00.0	N 19 43.3 -00.5	243 59.7 -00.8	N 21 35.9 -00.5	329 49.0 -26.7	N 07 49.0 +11.1	04						
05	253 22.0 +00.0	N 19 42.8 -00.6	258 58.9 -00.8	N 21 35.4 -00.5	344 22.3 -26.6	N 08 00.1 +11.0	05						
06	268 22.0 +00.0	N 19 42.2 -00.5	273 58.1 -00.8	N 21 34.9 -00.5	358 55.7 -26.8	N 08 11.1 +11.0	06						
07	283 22.0 +00.0	N 19 41.7 -00.6	288 57.3 -00.8	N 21 34.4 -00.5	13 28.9 -26.7	N 08 22.1 +11.0	07						
08	298 22.0 +00.0	N 19 41.1 -00.5	303 56.5 -00.8	N 21 33.9 -00.5	28 02.2 -26.9	N 08 33.1 +11.0	08						
09	313 22.0 +00.0	N 19 40.6 -00.5	318 55.7 -00.8	N 21 33.4 -00.5	42 35.3 -26.9	N 08 44.1 +10.9	09						
10	328 22.0 +00.0	N 19 40.1 -00.6	333 54.9 -00.8	N 21 32.9 -00.5	57 08.4 -27.0	N 08 55.0 +10.9	10						
11	343 22.0 +00.0	N 19 39.5 -00.5	348 54.1 -00.8	N 21 32.4 -00.5	71 41.4 -27.0	N 09 05.9 +10.9	11						
12	358 22.0 +00.0	N 19 39.0 -00.5	3 53.3 -00.8	N 21 31.9 -00.6	86 14.4 -27.1	N 09 16.8 +10.9	12						
13	13 22.0 +00.0	N 19 38.5 -00.6	18 52.5 -00.8	N 21 31.3 -00.5	100 47.3 -27.1	N 09 27.7 +10.8	13						
14	28 22.0 +00.0	N 19 37.9 -00.5	33 51.7 -00.8	N 21 30.8 -00.5	115 20.2 -27.2	N 09 38.5 +10.8	14						
15	43 22.0 +00.0	N 19 37.4 -00.6	48 50.9 -00.8	N 21 30.3 -00.5	129 53.0 -27.3	N 09 49.3 +10.8	15						
16	58 22.0 +00.0	N 19 36.8 -00.5	63 50.1 -00.8	N 21 29.8 -00.5	144 25.7 -27.3	N 10 00.1 +10.7	16						
17	73 22.0 +00.0	N 19 36.3 -00.5	78 49.3 -00.7	N 21 29.3 -00.5	158 58.4 -27.4	N 10 10.8 +10.7	17						
18	88 22.0 +00.0	N 19 35.8 -00.6	93 48.6 -00.8	N 21 28.8 -00.6	173 31.0 -27.5	N 10 21.5 +10.7	18						
19	103 22.0 -00.1	N 19 35.2 -00.5	108 47.8 -00.8	N 21 28.2 -00.5	188 03.5 -27.6	N 10 32.2 +10.6	19						
20	118 21.9 +00.0	N 19 34.7 -00.6	123 47.0 -00.8	N 21 27.7 -00.5	202 35.9 -27.6	N 10 42.8 +10.6	20						
21	133 21.9 +00.0	N 19 34.1 -00.5	138 46.2 -00.8	N 21 27.2 -00.5	217 08.3 -27.6	N 10 53.4 +10.5	21						
22	148 21.9 +00.0	N 19 33.6 -00.6	153 45.4 -00.8	N 21 26.7 -00.5	231 40.7 -27.8	N 11 03.9 +10.5	22						
23	163 21.9 +00.0	N 19 33.0 -00.5	168 44.6 -00.8	N 21 26.2 -00.6	246 12.9 -27.8	N 11 14.4 +10.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'3 55'4 55'5 55'6 55'8 55'9								
	SHA 236° 236° 236° 235° 235° 235°		SHA 242° 241° 241° 241° 241° 240°		SHA 328° 326° 324° 322° 320° 318°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:44		Greenwich Culmination Time: 06:04								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	164 58.1 +00.9	N 17 33.4 -00.5	48 39.6 +02.6	S 22 08.0 +00.0	14 58.6 +02.7	S 22 10.3 +00.0	00						
01	179 59.0 +00.8	N 17 32.9 -00.5	63 42.2 +02.6	S 22 08.0 +00.0	30 01.3 +02.6	S 22 10.3 +00.0	01						
02	194 59.8 +00.9	N 17 32.4 -00.4	78 44.8 +02.6	S 22 08.0 +00.0	45 03.9 +02.7	S 22 10.3 +00.1	02						
03	210 00.7 +00.9	N 17 32.0 -00.5	93 47.4 +02.6	S 22 08.0 +00.0	60 06.6 +02.6	S 22 10.4 +00.0	03						
04	225 01.6 +00.9	N 17 31.5 -00.5	108 50.0 +02.7	S 22 08.0 -00.1	75 09.2 +02.7	S 22 10.4 +00.0	04						
05	240 02.5 +00.8	N 17 31.0 -00.4	123 52.7 +02.6	S 22 07.9 +00.0	90 11.9 +02.6	S 22 10.4 +00.0	05						
06	255 03.3 +00.9	N 17 30.6 -00.5	138 55.3 +02.6	S 22 07.9 +00.0	105 14.5 +02.7	S 22 10.4 +00.1	06						
07	270 04.2 +00.9	N 17 30.1 -00.5	153 57.9 +02.6	S 22 07.9 +00.0	120 17.2 +02.6	S 22 10.5 +00.0	07						
08	285 05.1 +00.9	N 17 29.6 -00.4	169 00.5 +02.6	S 22 07.9 +00.0	135 19.8 +02.7	S 22 10.5 +00.0	08						
09	300 06.0 +00.8	N 17 29.2 -00.5	184 03.1 +02.6	S 22 07.9 +00.0	150 22.5 +02.6	S 22 10.5 +00.0	09						
10	315 06.8 +00.9	N 17 28.7 -00.5	199 05.7 +02.6	S 22 07.9 +00.0	165 25.1 +02.7	S 22 10.5 +00.1	10						
11	330 07.7 +00.9	N 17 28.2 -00.4	214 08.3 +02.6	S 22 07.9 +00.0	180 27.8 +02.6	S 22 10.6 +00.0	11						
12	345 08.6 +00.9	N 17 27.8 -00.5	229 10.9 +02.6	S 22 07.9 +00.0	195 30.4 +02.7	S 22 10.6 +00.0	12						
13	0 09.5 +00.9	N 17 27.3 -00.5	244 13.5 +02.6	S 22 07.9 +00.0	210 33.1 +02.6	S 22 10.6 +00.0	13						
14	15 10.4 +00.8	N 17 26.8 -00.5	259 16.1 +02.6	S 22 07.9 +00.0	225 35.7 +02.7	S 22 10.6 +00.1	14						
15	30 11.2 +00.9	N 17 26.3 -00.4	274 18.7 +02.6	S 22 07.9 +00.0	240 38.4 +02.6	S 22 10.7 +00.0	15						
16	45 12.1 +00.9	N 17 25.9 -00.5	289 21.3 +02.6	S 22 07.9 +00.0	255 41.0 +02.7	S 22 10.7 +00.0	16						
17	60 13.0 +00.9	N 17 25.4 -00.5	304 23.9 +02.6	S 22 07.9 +00.0	270 43.7 +02.6	S 22 10.7 +00.0	17						
18	75 13.9 +00.8	N 17 24.9 -00.4	319 26.5 +02.6	S 22 07.9 +00.0	285 46.3 +02.7	S 22 10.7 +00.1	18						
19	90 14.7 +00.9	N 17 24.5 -00.5	334 29.1 +02.6	S 22 07.9 -00.1	300 49.0 +02.6	S 22 10.8 +00.0	19						
20	105 15.6 +00.9	N 17 24.0 -00.5	349 31.7 +02.6	S 22 07.8 +00.0	315 51.6 +02.7	S 22 10.8 +00.0	20						
21	120 16.5 +00.9	N 17 23.5 -00.5	4 34.3 +02.6	S 22 07.8 +00.0	330 54.3 +02.6	S 22 10.8 +00.0	21						
22	135 17.4 +00.8	N 17 23.0 -00.4	19 36.9 +02.6	S 22 07.8 +00.0	345 56.9 +02.7	S 22 10.8 +00.1	22						
23	150 18.2 +00.9	N 17 22.6 -00.5	34 39.5 +02.6	S 22 07.8 +00.0	0 59.6 +02.6	S 22 10.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 223° 222° 222° 222° 222° 222°		SHA 106° 106° 106° 106° 106° 106°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:59		Greenwich Culmination Time: 20:41		Greenwich Culmination Time: 22:56								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.9 +00.0	N 19 32.5 -00.6	183 43.8 -00.8	N 21 25.6 -00.5	260 45.1 -27.9	N 11 24.9 +10.5	00						
01	193 21.9 +00.0	N 19 31.9 -00.5	198 43.0 -00.8	N 21 25.1 -00.5	275 17.2 -28.0	N 11 35.4 +10.4	01						
02	208 21.9 +00.0	N 19 31.4 -00.5	213 42.2 -00.8	N 21 24.6 -00.5	289 49.2 -28.0	N 11 45.8 +10.3	02						
03	223 21.9 +00.0	N 19 30.9 -00.6	228 41.4 -00.8	N 21 24.1 -00.6	304 21.2 -28.1	N 11 56.1 +10.3	03						
04	238 21.9 +00.0	N 19 30.3 -00.5	243 40.6 -00.8	N 21 23.5 -00.5	318 53.1 -28.2	N 12 06.4 +10.3	04						
05	253 21.9 +00.0	N 19 29.8 -00.6	258 39.8 -00.8	N 21 23.0 -00.5	333 24.9 -28.3	N 12 16.7 +10.2	05						
06	268 21.9 +00.0	N 19 29.2 -00.5	273 39.0 -00.8	N 21 22.5 -00.6	347 56.6 -28.3	N 12 26.9 +10.2	06						
07	283 21.9 +00.0	N 19 28.7 -00.6	288 38.2 -00.7	N 21 21.9 -00.5	2 28.3 -28.5	N 12 37.1 +10.2	07						
08	298 21.9 +00.0	N 19 28.1 -00.5	303 37.5 -00.8	N 21 21.4 -00.5	16 59.8 -28.5	N 12 47.3 +10.0	08						
09	313 21.9 +00.0	N 19 27.6 -00.6	318 36.7 -00.8	N 21 20.9 -00.6	31 31.3 -28.6	N 12 57.3 +10.1	09						
10	328 21.9 +00.0	N 19 27.0 -00.5	333 35.9 -00.8	N 21 20.3 -00.5	46 02.7 -28.6	N 13 07.4 +10.0	10						
11	343 21.9 +00.0	N 19 26.5 -00.6	348 35.1 -00.8	N 21 19.8 -00.5	60 34.1 -28.8	N 13 17.4 +09.9	11						
12	358 21.9 +00.0	N 19 25.9 -00.5	3 34.3 -00.8	N 21 19.3 -00.6	75 05.3 -28.8	N 13 27.3 +09.9	12						
13	13 21.9 +00.0	N 19 25.4 -00.6	18 33.5 -00.8	N 21 18.7 -00.5	89 36.5 -28.9	N 13 37.2 +09.8	13						
14	28 21.9 +00.0	N 19 24.8 -00.5	33 32.7 -00.8	N 21 18.2 -00.6	104 07.6 -29.0	N 13 47.0 +09.8	14						
15	43 21.9 +00.0	N 19 24.3 -00.6	48 31.9 -00.8	N 21 17.6 -00.5	118 38.6 -29.1	N 13 56.8 +09.7	15						
16	58 21.9 +00.0	N 19 23.7 -00.6	63 31.1 -00.7	N 21 17.1 -00.5	133 09.5 -29.2	N 14 06.5 +09.7	16						
17	73 21.9 +00.0	N 19 23.1 -00.5	78 30.4 -00.8	N 21 16.6 -00.6	147 40.3 -29.2	N 14 16.2 +09.6	17						
18	88 21.9 +00.0	N 19 22.6 -00.6	93 29.6 -00.8	N 21 16.0 -00.5	162 11.1 -29.4	N 14 25.8 +09.6	18						
19	103 21.9 +00.0	N 19 22.0 -00.5	108 28.8 -00.8	N 21 15.5 -00.6	176 41.7 -29.4	N 14 35.4 +09.4	19						
20	118 21.9 +00.0	N 19 21.5 -00.6	123 28.0 -00.8	N 21 14.9 -00.5	191 12.3 -29.5	N 14 44.8 +09.5	20						
21	133 21.9 +00.0	N 19 20.9 -00.5	138 27.2 -00.8	N 21 14.4 -00.6	205 42.8 -29.6	N 14 54.3 +09.3	21						
22	148 21.9 +00.0	N 19 20.4 -00.6	153 26.4 -00.8	N 21 13.8 -00.5	220 13.2 -29.7	N 15 03.6 +09.4	22						
23	163 21.9 +00.0	N 19 19.8 -00.6	168 25.6 -00.7	N 21 13.3 -00.6	234 43.5 -29.8	N 15 13.0 +09.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'4 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 56'1 56'3 56'4 56'5 56'7								
	SHA 235° 235° 235° 234° 234° 234°		SHA 240° 240° 240° 240° 239° 239°		SHA 316° 314° 312° 310° 308° 306°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:45		Greenwich Culmination Time: 06:49								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	165 19.1 +00.9	N 17 22.1 -00.5	49 42.1 +02.6	S 22 07.8 +00.0	16 02.2 +02.7	S 22 10.9 +00.0	00						
01	180 20.0 +00.9	N 17 21.6 -00.4	64 44.7 +02.6	S 22 07.8 +00.0	31 04.9 +02.6	S 22 10.9 +00.0	01						
02	195 20.9 +00.9	N 17 21.2 -00.5	79 47.3 +02.6	S 22 07.8 +00.0	46 07.5 +02.7	S 22 10.9 +00.0	02						
03	210 21.8 +00.8	N 17 20.7 -00.5	94 49.9 +02.6	S 22 07.8 +00.0	61 10.2 +02.6	S 22 10.9 +00.1	03						
04	225 22.6 +00.9	N 17 20.2 -00.5	109 52.5 +02.6	S 22 07.8 +00.0	76 12.8 +02.7	S 22 11.0 +00.0	04						
05	240 23.5 +00.9	N 17 19.7 -00.4	124 55.1 +02.6	S 22 07.8 +00.0	91 15.5 +02.6	S 22 11.0 +00.0	05						
06	255 24.4 +00.9	N 17 19.3 -00.5	139 57.7 +02.6	S 22 07.8 +00.0	106 18.1 +02.7	S 22 11.0 +00.0	06						
07	270 25.3 +00.8	N 17 18.8 -00.5	155 00.3 +02.6	S 22 07.8 +00.0	121 20.8 +02.6	S 22 11.0 +00.1	07						
08	285 26.1 +00.9	N 17 18.3 -00.5	170 02.9 +02.6	S 22 07.8 +00.0	136 23.4 +02.7	S 22 11.1 +00.0	08						
09	300 27.0 +00.9	N 17 17.8 -00.4	185 05.5 +02.6	S 22 07.8 +00.0	151 26.1 +02.6	S 22 11.1 +00.0	09						
10	315 27.9 +00.9	N 17 17.4 -00.5	200 08.1 +02.6	S 22 07.8 +00.0	166 28.7 +02.7	S 22 11.1 +00.0	10						
11	330 28.8 +00.9	N 17 16.9 -00.5	215 10.7 +02.6	S 22 07.8 +00.0	181 31.4 +02.6	S 22 11.1 +00.1	11						
12	345 29.7 +00.8	N 17 16.4 -00.5	230 13.3 +02.6	S 22 07.8 -00.1	196 34.0 +02.6	S 22 11.2 +00.0	12						
13	0 30.5 +00.9	N 17 15.9 -00.4	245 15.9 +02.6	S 22 07.7 +00.0	211 36.6 +02.7	S 22 11.2 +00.0	13						
14	15 31.4 +00.9	N 17 15.5 -00.5	260 18.5 +02.6	S 22 07.7 +00.0	226 39.3 +02.6	S 22 11.2 +00.0	14						
15	30 32.3 +00.9	N 17 15.0 -00.5	275 21.1 +02.6	S 22 07.7 +00.0	241 41.9 +02.7	S 22 11.2 +00.1	15						
16	45 33.2 +00.9	N 17 14.5 -00.5	290 23.7 +02.6	S 22 07.7 +00.0	256 44.6 +02.6	S 22 11.3 +00.0	16						
17	60 34.1 +00.8	N 17 14.0 -00.4	305 26.3 +02.6	S 22 07.7 +00.0	271 47.2 +02.7	S 22 11.3 +00.0	17						
18	75 34.9 +00.9	N 17 13.6 -00.5	320 28.9 +02.6	S 22 07.7 +00.0	286 49.9 +02.6	S 22 11.3 +00.0	18						
19	90 35.8 +00.9	N 17 13.1 -00.5	335 31.5 +02.6	S 22 07.7 +00.0	301 52.5 +02.7	S 22 11.3 +00.1	19						
20	105 36.7 +00.9	N 17 12.6 -00.5	350 34.1 +02.6	S 22 07.7 +00.0	316 55.2 +02.6	S 22 11.4 +00.0	20						
21	120 37.6 +00.9	N 17 12.1 -00.4	5 36.7 +02.6	S 22 07.7 +00.0	331 57.8 +02.7	S 22 11.4 +00.0	21						
22	135 38.5 +00.8	N 17 11.7 -00.5	20 39.3 +02.5	S 22 07.7 +00.0	347 00.5 +02.6	S 22 11.4 +00.0	22						
23	150 39.3 +00.9	N 17 11.2 -00.5	35 41.8 +02.6	S 22 07.7 +00.0	2 03.1 +02.7	S 22 11.4 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 222° 222° 222° 222° 221° 221°		SHA 106° 106° 106° 106° 106° 106°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:57		Greenwich Culmination Time: 20:37		Greenwich Culmination Time: 22:51								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.9 +00.0	N 19 19.2 -00.5	183 24.9 -00.8	N 21 12.7 -00.5	249 13.7 -29.8	N 15 22.2 +09.2	00						
01	193 21.9 +00.0	N 19 18.7 -00.6	198 24.1 -00.8	N 21 12.2 -00.6	263 43.9 -30.0	N 15 31.4 +09.1	01						
02	208 21.9 +00.0	N 19 18.1 -00.5	213 23.3 -00.8	N 21 11.6 -00.5	278 13.9 -30.1	N 15 40.5 +09.0	02						
03	223 21.9 +00.0	N 19 17.6 -00.6	228 22.5 -00.8	N 21 11.1 -00.6	292 43.8 -30.1	N 15 49.5 +09.0	03						
04	238 21.9 +00.0	N 19 17.0 -00.6	243 21.7 -00.8	N 21 10.5 -00.5	307 13.7 -30.3	N 15 58.5 +08.9	04						
05	253 21.9 +00.1	N 19 16.4 -00.5	258 20.9 -00.7	N 21 10.0 -00.6	321 43.4 -30.3	N 16 07.4 +08.8	05						
06	268 22.0 +00.0	N 19 15.9 -00.6	273 20.2 -00.8	N 21 09.4 -00.5	336 13.1 -30.4	N 16 16.2 +08.8	06						
07	283 22.0 +00.0	N 19 15.3 -00.5	288 19.4 -00.8	N 21 08.9 -00.6	350 42.7 -30.5	N 16 25.0 +08.7	07						
08	298 22.0 +00.0	N 19 14.8 -00.6	303 18.6 -00.8	N 21 08.3 -00.6	5 12.2 -30.7	N 16 33.7 +08.6	08						
09	313 22.0 +00.0	N 19 14.2 -00.6	318 17.8 -00.8	N 21 07.7 -00.5	19 41.5 -30.7	N 16 42.3 +08.5	09						
10	328 22.0 +00.0	N 19 13.6 -00.5	333 17.0 -00.7	N 21 07.2 -00.6	34 10.8 -30.8	N 16 50.8 +08.5	10						
11	343 22.0 +00.0	N 19 13.1 -00.6	348 16.3 -00.8	N 21 06.6 -00.5	48 40.0 -30.9	N 16 59.3 +08.4	11						
12	358 22.0 +00.0	N 19 12.5 -00.6	3 15.5 -00.8	N 21 06.1 -00.6	63 09.1 -31.0	N 17 07.7 +08.3	12						
13	13 22.0 +00.0	N 19 11.9 -00.5	18 14.7 -00.8	N 21 05.5 -00.6	77 38.1 -31.1	N 17 16.0 +08.2	13						
14	28 22.0 +00.0	N 19 11.4 -00.6	33 13.9 -00.8	N 21 04.9 -00.5	92 07.0 -31.2	N 17 24.2 +08.1	14						
15	43 22.0 +00.0	N 19 10.8 -00.6	48 13.1 -00.7	N 21 04.4 -00.6	106 35.8 -31.3	N 17 32.3 +08.1	15						
16	58 22.0 +00.0	N 19 10.2 -00.5	63 12.4 -00.8	N 21 03.8 -00.6	121 04.5 -31.4	N 17 40.4 +07.9	16						
17	73 22.0 +00.0	N 19 09.7 -00.6	78 11.6 -00.8	N 21 03.2 -00.5	135 33.1 -31.5	N 17 48.3 +07.9	17						
18	88 22.0 +00.0	N 19 09.1 -00.6	93 10.8 -00.8	N 21 02.7 -00.6	150 01.6 -31.5	N 17 56.2 +07.8	18						
19	103 22.0 +00.0	N 19 08.5 -00.5	108 10.0 -00.8	N 21 02.1 -00.6	164 30.1 -31.7	N 18 04.0 +07.7	19						
20	118 22.0 +00.0	N 19 08.0 -00.6	123 09.2 -00.7	N 21 01.5 -00.6	178 58.4 -31.8	N 18 11.7 +07.6	20						
21	133 22.0 +00.1	N 19 07.4 -00.6	138 08.5 -00.8	N 21 00.9 -00.5	193 26.6 -31.9	N 18 19.3 +07.5	21						
22	148 22.1 +00.0	N 19 06.8 -00.5	153 07.7 -00.8	N 21 00.4 -00.6	207 54.7 -32.0	N 18 26.8 +07.5	22						
23	163 22.1 +00.0	N 19 06.3 -00.6	168 06.9 -00.8	N 20 59.8 -00.6	222 22.7 -32.0	N 18 34.3 +07.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'5 15'5 15'6 15'6 15'6 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'8 57'0 57'1 57'3 57'4 57'6								
	SHA 234° 234° 234° 233° 233° 233°		SHA 239° 239° 238° 238° 238° 238°		SHA 304° 302° 299° 297° 295° 293°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:46		Greenwich Culmination Time: 07:38								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	165 40.2 +00.9	N 17 10.7 -00.5	50 44.4 +02.6	S 22 07.7 +00.0	17 05.8 +02.6	S 22 11.5 +00.0	00						
01	180 41.1 +00.9	N 17 10.2 -00.4	65 47.0 +02.6	S 22 07.7 +00.0	32 08.4 +02.7	S 22 11.5 +00.0	01						
02	195 42.0 +00.9	N 17 09.8 -00.5	80 49.6 +02.6	S 22 07.7 +00.0	47 11.1 +02.6	S 22 11.5 +00.0	02						
03	210 42.9 +00.9	N 17 09.3 -00.5	95 52.2 +02.6	S 22 07.7 +00.0	62 13.7 +02.7	S 22 11.5 +00.1	03						
04	225 43.8 +00.8	N 17 08.8 -00.5	110 54.8 +02.6	S 22 07.7 +00.0	77 16.4 +02.6	S 22 11.6 +00.0	04						
05	240 44.6 +00.9	N 17 08.3 -00.5	125 57.4 +02.6	S 22 07.7 +00.0	92 19.0 +02.6	S 22 11.6 +00.0	05						
06	255 45.5 +00.9	N 17 07.8 -00.4	140 60.0 +02.6	S 22 07.7 -00.1	107 21.6 +02.7	S 22 11.6 +00.0	06						
07	270 46.4 +00.9	N 17 07.4 -00.5	156 02.6 +02.6	S 22 07.6 +00.0	122 24.3 +02.6	S 22 11.6 +00.1	07						
08	285 47.3 +00.9	N 17 06.9 -00.5	171 05.2 +02.6	S 22 07.6 +00.0	137 26.9 +02.7	S 22 11.7 +00.0	08						
09	300 48.2 +00.8	N 17 06.4 -00.5	186 07.8 +02.6	S 22 07.6 +00.0	152 29.6 +02.6	S 22 11.7 +00.0	09						
10	315 49.0 +00.9	N 17 05.9 -00.5	201 10.4 +02.5	S 22 07.6 +00.0	167 32.2 +02.7	S 22 11.7 +00.0	10						
11	330 49.9 +00.9	N 17 05.4 -00.4	216 12.9 +02.6	S 22 07.6 +00.0	182 34.9 +02.6	S 22 11.7 +00.0	11						
12	345 50.8 +00.9	N 17 05.0 -00.5	231 15.5 +02.6	S 22 07.6 +00.0	197 37.5 +02.7	S 22 11.7 +00.1	12						
13	0 51.7 +00.9	N 17 04.5 -00.5	246 18.1 +02.6	S 22 07.6 +00.0	212 40.2 +02.6	S 22 11.8 +00.0	13						
14	15 52.6 +00.9	N 17 04.0 -00.5	261 20.7 +02.6	S 22 07.6 +00.0	227 42.8 +02.7	S 22 11.8 +00.0	14						
15	30 53.5 +00.8	N 17 03.5 -00.5	276 23.3 +02.6	S 22 07.6 +00.0	242 45.5 +02.6	S 22 11.8 +00.0	15						
16	45 54.3 +00.9	N 17 03.0 -00.4	291 25.9 +02.6	S 22 07.6 +00.0	257 48.1 +02.7	S 22 11.8 +00.1	16						
17	60 55.2 +00.9	N 17 02.6 -00.5	306 28.5 +02.6	S 22 07.6 +00.0	272 50.8 +02.6	S 22 11.9 +00.0	17						
18	75 56.1 +00.9	N 17 02.1 -00.5	321 31.1 +02.5	S 22 07.6 +00.0	287 53.4 +02.6	S 22 11.9 +00.0	18						
19	90 57.0 +00.9	N 17 01.6 -00.5	336 33.6 +02.6	S 22 07.6 +00.0	302 56.0 +02.7	S 22 11.9 +00.0	19						
20	105 57.9 +00.9	N 17 01.1 -00.5	351 36.2 +02.6	S 22 07.6 +00.0	317 58.7 +02.6	S 22 11.9 +00.1	20						
21	120 58.8 +00.8	N 17 00.6 -00.4	6 38.8 +02.6	S 22 07.6 +00.0	333 01.3 +02.7	S 22 12.0 +00.0	21						
22	135 59.6 +00.9	N 17 00.2 -00.5	21 41.4 +02.6	S 22 07.6 +00.0	348 04.0 +02.6	S 22 12.0 +00.0	22						
23	151 00.5 +00.9	N 16 59.7 -00.5	36 44.0 +02.6	S 22 07.6 +00.0	3 06.6 +02.7	S 22 12.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 221° 221° 221° 221° 221° 221°		SHA 106° 106° 106° 106° 106° 106°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:56		Greenwich Culmination Time: 20:33		Greenwich Culmination Time: 22:47								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.1 +00.0	N 19 05.7 -00.6	183 06.1 -00.7	N 20 59.2 -00.6	236 50.7 -32.2	N 18 41.6 +07.3	00						
01	193 22.1 +00.0	N 19 05.1 -00.6	198 05.4 -00.8	N 20 58.6 -00.5	251 18.5 -32.3	N 18 48.9 +07.1	01						
02	208 22.1 +00.0	N 19 04.5 -00.5	213 04.6 -00.8	N 20 58.1 -00.6	265 46.2 -32.4	N 18 56.0 +07.0	02						
03	223 22.1 +00.0	N 19 04.0 -00.6	228 03.8 -00.8	N 20 57.5 -00.6	280 13.8 -32.4	N 19 03.0 +07.0	03						
04	238 22.1 +00.0	N 19 03.4 -00.6	243 03.0 -00.7	N 20 56.9 -00.6	294 41.4 -32.6	N 19 10.0 +06.8	04						
05	253 22.1 +00.0	N 19 02.8 -00.6	258 02.3 -00.8	N 20 56.3 -00.6	309 08.8 -32.7	N 19 16.8 +06.8	05						
06	268 22.1 +00.0	N 19 02.2 -00.5	273 01.5 -00.8	N 20 55.7 -00.5	323 36.1 -32.7	N 19 23.6 +06.6	06						
07	283 22.1 +00.1	N 19 01.7 -00.6	288 00.7 -00.7	N 20 55.2 -00.6	338 03.4 -32.9	N 19 30.2 +06.6	07						
08	298 22.2 +00.0	N 19 01.1 -00.6	302 60.0 -00.8	N 20 54.6 -00.6	352 30.5 -32.9	N 19 36.8 +06.4	08						
09	313 22.2 +00.0	N 19 00.5 -00.6	317 59.2 -00.8	N 20 54.0 -00.6	6 57.6 -33.1	N 19 43.2 +06.3	09						
10	328 22.2 +00.0	N 18 59.9 -00.5	332 58.4 -00.8	N 20 53.4 -00.6	21 24.5 -33.2	N 19 49.5 +06.2	10						
11	343 22.2 +00.0	N 18 59.4 -00.6	347 57.6 -00.7	N 20 52.8 -00.6	35 51.3 -33.2	N 19 55.7 +06.1	11						
12	358 22.2 +00.0	N 18 58.8 -00.6	2 56.9 -00.8	N 20 52.2 -00.6	50 18.1 -33.4	N 20 01.8 +06.0	12						
13	13 22.2 +00.0	N 18 58.2 -00.6	17 56.1 -00.8	N 20 51.6 -00.5	64 44.7 -33.4	N 20 07.8 +05.9	13						
14	28 22.2 +00.0	N 18 57.6 -00.6	32 55.3 -00.7	N 20 51.1 -00.6	79 11.3 -33.5	N 20 13.7 +05.8	14						
15	43 22.2 +00.0	N 18 57.0 -00.5	47 54.6 -00.8	N 20 50.5 -00.6	93 37.8 -33.7	N 20 19.5 +05.6	15						
16	58 22.2 +00.1	N 18 56.5 -00.6	62 53.8 -00.8	N 20 49.9 -00.6	108 04.1 -33.7	N 20 25.1 +05.5	16						
17	73 22.3 +00.0	N 18 55.9 -00.6	77 53.0 -00.7	N 20 49.3 -00.6	122 30.4 -33.8	N 20 30.6 +05.5	17						
18	88 22.3 +00.0	N 18 55.3 -00.6	92 52.3 -00.8	N 20 48.7 -00.6	136 56.6 -33.9	N 20 36.1 +05.3	18						
19	103 22.3 +00.0	N 18 54.7 -00.6	107 51.5 -00.8	N 20 48.1 -00.6	151 22.7 -34.1	N 20 41.4 +05.1	19						
20	118 22.3 +00.0	N 18 54.1 -00.6	122 50.7 -00.8	N 20 47.5 -00.6	165 48.6 -34.1	N 20 46.5 +05.1	20						
21	133 22.3 +00.0	N 18 53.5 -00.5	137 49.9 -00.7	N 20 46.9 -00.6	180 14.5 -34.1	N 20 51.6 +04.9	21						
22	148 22.3 +00.0	N 18 53.0 -00.6	152 49.2 -00.8	N 20 46.3 -00.6	194 40.4 -34.3	N 20 56.5 +04.8	22						
23	163 22.3 +00.1	N 18 52.4 -00.6	167 48.4 -00.7	N 20 45.7 -00.6	209 06.1 -34.4	N 21 01.3 +04.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'8 15'8 15'9 15'9 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'7 57'9 58'1 58'2 58'4 58'5								
	SHA 233° 233° 233° 232° 232° 232°		SHA 238° 237° 237° 237° 237° 237°		SHA 290° 288° 286° 283° 281° 278°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:48		Greenwich Culmination Time: 08:31								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	166 01.4 +00.9	N 16 59.2 -00.5	51 46.6 +02.6	S 22 07.6 +00.0	18 09.3 +02.6	S 22 12.0 +00.1	00						
01	181 02.3 +00.9	N 16 58.7 -00.5	66 49.2 +02.5	S 22 07.6 +00.0	33 11.9 +02.7	S 22 12.1 +00.0	01						
02	196 03.2 +00.9	N 16 58.2 -00.4	81 51.7 +02.6	S 22 07.6 -00.1	48 14.6 +02.6	S 22 12.1 +00.0	02						
03	211 04.1 +00.8	N 16 57.8 -00.5	96 54.3 +02.6	S 22 07.5 +00.0	63 17.2 +02.6	S 22 12.1 +00.0	03						
04	226 04.9 +00.9	N 16 57.3 -00.5	111 56.9 +02.6	S 22 07.5 +00.0	78 19.8 +02.7	S 22 12.1 +00.1	04						
05	241 05.8 +00.9	N 16 56.8 -00.5	126 59.5 +02.6	S 22 07.5 +00.0	93 22.5 +02.6	S 22 12.2 +00.0	05						
06	256 06.7 +00.9	N 16 56.3 -00.5	142 02.1 +02.6	S 22 07.5 +00.0	108 25.1 +02.7	S 22 12.2 +00.0	06						
07	271 07.6 +00.9	N 16 55.8 -00.5	157 04.7 +02.5	S 22 07.5 +00.0	123 27.8 +02.6	S 22 12.2 +00.0	07						
08	286 08.5 +00.9	N 16 55.3 -00.4	172 07.2 +02.6	S 22 07.5 +00.0	138 30.4 +02.7	S 22 12.2 +00.0	08						
09	301 09.4 +00.9	N 16 54.9 -00.5	187 09.8 +02.6	S 22 07.5 +00.0	153 33.1 +02.6	S 22 12.2 +00.1	09						
10	316 10.3 +00.8	N 16 54.4 -00.5	202 12.4 +02.6	S 22 07.5 +00.0	168 35.7 +02.7	S 22 12.3 +00.0	10						
11	331 11.1 +00.9	N 16 53.9 -00.5	217 15.0 +02.6	S 22 07.5 +00.0	183 38.4 +02.6	S 22 12.3 +00.0	11						
12	346 12.0 +00.9	N 16 53.4 -00.5	232 17.6 +02.5	S 22 07.5 +00.0	198 41.0 +02.6	S 22 12.3 +00.0	12						
13	1 12.9 +00.9	N 16 52.9 -00.5	247 20.1 +02.6	S 22 07.5 +00.0	213 43.6 +02.7	S 22 12.3 +00.1	13						
14	16 13.8 +00.9	N 16 52.4 -00.5	262 22.7 +02.6	S 22 07.5 +00.0	228 46.3 +02.6	S 22 12.4 +00.0	14						
15	31 14.7 +00.9	N 16 51.9 -00.4	277 25.3 +02.6	S 22 07.5 +00.0	243 48.9 +02.7	S 22 12.4 +00.0	15						
16	46 15.6 +00.9	N 16 51.5 -00.5	292 27.9 +02.6	S 22 07.5 +00.0	258 51.6 +02.6	S 22 12.4 +00.0	16						
17	61 16.5 +00.8	N 16 51.0 -00.5	307 30.5 +02.5	S 22 07.5 +00.0	273 54.2 +02.7	S 22 12.4 +00.1	17						
18	76 17.3 +00.9	N 16 50.5 -00.5	322 33.0 +02.6	S 22 07.5 +00.0	288 56.9 +02.6	S 22 12.5 +00.0	18						
19	91 18.2 +00.9	N 16 50.0 -00.5	337 35.6 +02.6	S 22 07.5 +00.0	303 59.5 +02.7	S 22 12.5 +00.0	19						
20	106 19.1 +00.9	N 16 49.5 -00.5	352 38.2 +02.6	S 22 07.5 +00.0	319 02.2 +02.6	S 22 12.5 +00.0	20						
21	121 20.0 +00.9	N 16 49.0 -00.4	7 40.8 +02.6	S 22 07.5 +00.0	334 04.8 +02.6	S 22 12.5 +00.1	21						
22	136 20.9 +00.9	N 16 48.6 -00.5	22 43.4 +02.5	S 22 07.5 +00.0	349 07.4 +02.7	S 22 12.6 +00.0	22						
23	151 21.8 +00.9	N 16 48.1 -00.5	37 45.9 +02.6	S 22 07.5 +00.0	4 10.1 +02.6	S 22 12.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 221° 220° 220° 220° 220° 220°		SHA 106° 106° 106° 106° 106° 106°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:55		Greenwich Culmination Time: 20:29		Greenwich Culmination Time: 22:43								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.4 +00.0	N 18 51.8 -00.6	182 47.7 -00.8	N 20 45.1 -00.6	223 31.7 -34.5	N 21 06.0 +04.6	00						
01	193 22.4 +00.0	N 18 51.2 -00.6	197 46.9 -00.8	N 20 44.5 -00.6	237 57.2 -34.5	N 21 10.6 +04.4	01						
02	208 22.4 +00.0	N 18 50.6 -00.6	212 46.1 -00.7	N 20 43.9 -00.6	252 22.7 -34.7	N 21 15.0 +04.3	02						
03	223 22.4 +00.0	N 18 50.0 -00.5	227 45.4 -00.8	N 20 43.3 -00.6	266 48.0 -34.7	N 21 19.3 +04.2	03						
04	238 22.4 +00.0	N 18 49.5 -00.6	242 44.6 -00.8	N 20 42.7 -00.6	281 13.3 -34.8	N 21 23.5 +04.0	04						
05	253 22.4 +00.1	N 18 48.9 -00.6	257 43.8 -00.7	N 20 42.1 -00.6	295 38.5 -34.9	N 21 27.5 +03.9	05						
06	268 22.5 +00.0	N 18 48.3 -00.6	272 43.1 -00.8	N 20 41.5 -00.6	310 03.6 -35.0	N 21 31.4 +03.8	06						
07	283 22.5 +00.0	N 18 47.7 -00.6	287 42.3 -00.8	N 20 40.9 -00.6	324 28.6 -35.0	N 21 35.2 +03.6	07						
08	298 22.5 +00.0	N 18 47.1 -00.6	302 41.5 -00.7	N 20 40.3 -00.7	338 53.6 -35.2	N 21 38.8 +03.5	08						
09	313 22.5 +00.0	N 18 46.5 -00.6	317 40.8 -00.8	N 20 39.6 -00.6	353 18.4 -35.2	N 21 42.3 +03.4	09						
10	328 22.5 +00.0	N 18 45.9 -00.6	332 40.0 -00.7	N 20 39.0 -00.6	7 43.2 -35.3	N 21 45.7 +03.2	10						
11	343 22.5 +00.1	N 18 45.3 -00.6	347 39.3 -00.8	N 20 38.4 -00.6	22 07.9 -35.4	N 21 48.9 +03.1	11						
12	358 22.6 +00.0	N 18 44.7 -00.6	2 38.5 -00.8	N 20 37.8 -00.6	36 32.5 -35.4	N 21 52.0 +02.9	12						
13	13 22.6 +00.0	N 18 44.1 -00.5	17 37.7 -00.7	N 20 37.2 -00.6	50 57.1 -35.5	N 21 54.9 +02.8	13						
14	28 22.6 +00.0	N 18 43.6 -00.6	32 37.0 -00.8	N 20 36.6 -00.6	65 21.6 -35.6	N 21 57.7 +02.7	14						
15	43 22.6 +00.0	N 18 43.0 -00.6	47 36.2 -00.7	N 20 36.0 -00.7	79 46.0 -35.7	N 22 00.4 +02.5	15						
16	58 22.6 +00.1	N 18 42.4 -00.6	62 35.5 -00.8	N 20 35.3 -00.6	94 10.3 -35.8	N 22 02.9 +02.4	16						
17	73 22.7 +00.0	N 18 41.8 -00.6	77 34.7 -00.8	N 20 34.7 -00.6	108 34.5 -35.8	N 22 05.3 +02.2	17						
18	88 22.7 +00.0	N 18 41.2 -00.6	92 33.9 -00.7	N 20 34.1 -00.6	122 58.7 -35.9	N 22 07.5 +02.1	18						
19	103 22.7 +00.0	N 18 40.6 -00.6	107 33.2 -00.8	N 20 33.5 -00.6	137 22.8 -35.9	N 22 09.6 +01.9	19						
20	118 22.7 +00.0	N 18 40.0 -00.6	122 32.4 -00.7	N 20 32.9 -00.7	151 46.9 -36.0	N 22 11.5 +01.8	20						
21	133 22.7 +00.1	N 18 39.4 -00.6	137 31.7 -00.8	N 20 32.2 -00.6	166 10.9 -36.1	N 22 13.3 +01.6	21						
22	148 22.8 +00.0	N 18 38.8 -00.6	152 30.9 -00.8	N 20 31.6 -00.6	180 34.8 -36.2	N 22 14.9 +01.5	22						
23	163 22.8 +00.0	N 18 38.2 -00.6	167 30.1 -00.7	N 20 31.0 -00.6	194 58.6 -36.2	N 22 16.4 +01.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'0 16'0 16'1 16'1 16'1 16'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'7 58'8 59'0 59'1 59'3 59'4								
	SHA 232° 232° 232° 231° 231° 231°		SHA 236° 236° 236° 236° 235° 235°		SHA 276° 273° 271° 268° 266° 263°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:49		Greenwich Culmination Time: 09:27								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	166 22.7 +00.9	N 16 47.6 -00.5	52 48.5 +02.6	S 22 07.5 +00.0	19 12.7 +02.7	S 22 12.6 +00.0	00						
01	181 23.6 +00.8	N 16 47.1 -00.5	67 51.1 +02.6	S 22 07.5 +00.0	34 15.4 +02.6	S 22 12.6 +00.1	01						
02	196 24.4 +00.9	N 16 46.6 -00.5	82 53.7 +02.5	S 22 07.5 -00.1	49 18.0 +02.7	S 22 12.7 +00.0	02						
03	211 25.3 +00.9	N 16 46.1 -00.5	97 56.2 +02.6	S 22 07.4 +00.0	64 20.7 +02.6	S 22 12.7 +00.0	03						
04	226 26.2 +00.9	N 16 45.6 -00.5	112 58.8 +02.6	S 22 07.4 +00.0	79 23.3 +02.6	S 22 12.7 +00.0	04						
05	241 27.1 +00.9	N 16 45.1 -00.4	128 01.4 +02.6	S 22 07.4 +00.0	94 25.9 +02.7	S 22 12.7 +00.0	05						
06	256 28.0 +00.9	N 16 44.7 -00.5	143 04.0 +02.5	S 22 07.4 +00.0	109 28.6 +02.6	S 22 12.7 +00.1	06						
07	271 28.9 +00.9	N 16 44.2 -00.5	158 06.5 +02.6	S 22 07.4 +00.0	124 31.2 +02.7	S 22 12.8 +00.0	07						
08	286 29.8 +00.9	N 16 43.7 -00.5	173 09.1 +02.6	S 22 07.4 +00.0	139 33.9 +02.6	S 22 12.8 +00.0	08						
09	301 30.7 +00.8	N 16 43.2 -00.5	188 11.7 +02.6	S 22 07.4 +00.0	154 36.5 +02.7	S 22 12.8 +00.0	09						
10	316 31.5 +00.9	N 16 42.7 -00.5	203 14.3 +02.5	S 22 07.4 +00.0	169 39.2 +02.6	S 22 12.8 +00.1	10						
11	331 32.4 +00.9	N 16 42.2 -00.5	218 16.8 +02.6	S 22 07.4 +00.0	184 41.8 +02.6	S 22 12.9 +00.0	11						
12	346 33.3 +00.9	N 16 41.7 -00.5	233 19.4 +02.6	S 22 07.4 +00.0	199 44.4 +02.7	S 22 12.9 +00.0	12						
13	1 34.2 +00.9	N 16 41.2 -00.5	248 22.0 +02.6	S 22 07.4 +00.0	214 47.1 +02.6	S 22 12.9 +00.0	13						
14	16 35.1 +00.9	N 16 40.7 -00.4	263 24.6 +02.5	S 22 07.4 +00.0	229 49.7 +02.7	S 22 12.9 +00.1	14						
15	31 36.0 +00.9	N 16 40.3 -00.5	278 27.1 +02.6	S 22 07.4 +00.0	244 52.4 +02.6	S 22 13.0 +00.0	15						
16	46 36.9 +00.9	N 16 39.8 -00.5	293 29.7 +02.6	S 22 07.4 +00.0	259 55.0 +02.7	S 22 13.0 +00.0	16						
17	61 37.8 +00.9	N 16 39.3 -00.5	308 32.3 +02.5	S 22 07.4 +00.0	274 57.7 +02.6	S 22 13.0 +00.0	17						
18	76 38.7 +00.8	N 16 38.8 -00.5	323 34.8 +02.6	S 22 07.4 +00.0	290 00.3 +02.6	S 22 13.0 +00.1	18						
19	91 39.5 +00.9	N 16 38.3 -00.5	338 37.4 +02.6	S 22 07.4 +00.0	305 02.9 +02.7	S 22 13.1 +00.0	19						
20	106 40.4 +00.9	N 16 37.8 -00.5	353 40.0 +02.6	S 22 07.4 +00.0	320 05.6 +02.6	S 22 13.1 +00.0	20						
21	121 41.3 +00.9	N 16 37.3 -00.5	8 42.6 +02.5	S 22 07.4 +00.0	335 08.2 +02.7	S 22 13.1 +00.0	21						
22	136 42.2 +00.9	N 16 36.8 -00.5	23 45.1 +02.6	S 22 07.4 +00.0	350 10.9 +02.6	S 22 13.1 +00.0	22						
23	151 43.1 +00.9	N 16 36.3 -00.5	38 47.7 +02.6	S 22 07.4 +00.0	5 13.5 +02.6	S 22 13.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 220° 220° 220° 220° 220° 219°		SHA 106° 106° 106° 106° 106° 106°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:53		Greenwich Culmination Time: 20:25		Greenwich Culmination Time: 22:39								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.8 +00.0	N 18 37.6 -00.6	182 29.4 -00.8	N 20 30.4 -00.7	209 22.4 -36.2	N 22 17.7 +01.2	00						
01	193 22.8 +00.0	N 18 37.0 -00.6	197 28.6 -00.7	N 20 29.7 -00.6	223 46.2 -36.3	N 22 18.9 +01.1	01						
02	208 22.8 +00.1	N 18 36.4 -00.6	212 27.9 -00.8	N 20 29.1 -00.6	238 09.9 -36.4	N 22 20.0 +00.8	02						
03	223 22.9 +00.0	N 18 35.8 -00.6	227 27.1 -00.7	N 20 28.5 -00.6	252 33.5 -36.4	N 22 20.8 +00.8	03						
04	238 22.9 +00.0	N 18 35.2 -00.6	242 26.4 -00.8	N 20 27.9 -00.7	266 57.1 -36.5	N 22 21.6 +00.5	04						
05	253 22.9 +00.0	N 18 34.6 -00.6	257 25.6 -00.7	N 20 27.2 -00.6	281 20.6 -36.5	N 22 22.1 +00.5	05						
06	268 22.9 +00.1	N 18 34.0 -00.6	272 24.9 -00.8	N 20 26.6 -00.6	295 44.1 -36.6	N 22 22.6 +00.2	06						
07	283 23.0 +00.0	N 18 33.4 -00.6	287 24.1 -00.7	N 20 26.0 -00.7	310 07.5 -36.6	N 22 22.8 +00.1	07						
08	298 23.0 +00.0	N 18 32.8 -00.6	302 23.4 -00.8	N 20 25.3 -00.6	324 30.9 -36.7	N 22 22.9 +00.0	08						
09	313 23.0 +00.0	N 18 32.2 -00.6	317 22.6 -00.7	N 20 24.7 -00.6	338 54.2 -36.7	N 22 22.9 -00.2	09						
10	328 23.0 +00.0	N 18 31.6 -00.6	332 21.9 -00.8	N 20 24.1 -00.7	353 17.5 -36.8	N 22 22.7 -00.4	10						
11	343 23.0 +00.1	N 18 31.0 -00.6	347 21.1 -00.8	N 20 23.4 -00.6	7 40.7 -36.7	N 22 22.3 -00.5	11						
12	358 23.1 +00.0	N 18 30.4 -00.6	2 20.3 -00.7	N 20 22.8 -00.7	22 04.0 -36.9	N 22 21.8 -00.7	12						
13	13 23.1 +00.0	N 18 29.8 -00.6	17 19.6 -00.8	N 20 22.1 -00.6	36 27.1 -36.8	N 22 21.1 -00.9	13						
14	28 23.1 +00.0	N 18 29.2 -00.6	32 18.8 -00.7	N 20 21.5 -00.6	50 50.3 -36.9	N 22 20.2 -01.0	14						
15	43 23.1 +00.1	N 18 28.6 -00.6	47 18.1 -00.8	N 20 20.9 -00.7	65 13.4 -36.9	N 22 19.2 -01.1	15						
16	58 23.2 +00.0	N 18 28.0 -00.6	62 17.3 -00.7	N 20 20.2 -00.6	79 36.5 -37.0	N 22 18.1 -01.4	16						
17	73 23.2 +00.0	N 18 27.4 -00.6	77 16.6 -00.7	N 20 19.6 -00.7	93 59.5 -37.0	N 22 16.7 -01.4	17						
18	88 23.2 +00.1	N 18 26.8 -00.7	92 15.9 -00.8	N 20 18.9 -00.6	108 22.5 -37.0	N 22 15.3 -01.7	18						
19	103 23.3 +00.0	N 18 26.1 -00.6	107 15.1 -00.7	N 20 18.3 -00.7	122 45.5 -37.0	N 22 13.6 -01.8	19						
20	118 23.3 +00.0	N 18 25.5 -00.6	122 14.4 -00.8	N 20 17.6 -00.6	137 08.5 -37.1	N 22 11.8 -02.0	20						
21	133 23.3 +00.0	N 18 24.9 -00.6	137 13.6 -00.7	N 20 17.0 -00.6	151 31.4 -37.0	N 22 09.8 -02.1	21						
22	148 23.3 +00.1	N 18 24.3 -00.6	152 12.9 -00.8	N 20 16.4 -00.7	165 54.4 -37.1	N 22 07.7 -02.3	22						
23	163 23.4 +00.0	N 18 23.7 -00.6	167 12.1 -00.7	N 20 15.7 -00.6	180 17.3 -37.1	N 22 05.4 -02.4	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 16'2 16'3 16'3 16'3 16'4 16'4					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'5 59'7 59'8 59'9 60'0 60'2						
	SHA 231° 231° 231° 230° 230° 230°			SHA 235° 235° 235° 234° 234° 234°			SHA 261° 258° 256° 253° 250° 248°						
	Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 11:50			Greenwich Culmination Time: 10:27						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	166 44.0 +00.9	N 16 35.8 -00.4	53 50.3 +02.5	S 22 07.4 +00.0	20 16.1 +02.7	S 22 13.2 +00.0	00						
01	181 44.9 +00.9	N 16 35.4 -00.5	68 52.8 +02.6	S 22 07.4 +00.0	35 18.8 +02.6	S 22 13.2 +00.0	01						
02	196 45.8 +00.9	N 16 34.9 -00.5	83 55.4 +02.6	S 22 07.4 +00.0	50 21.4 +02.7	S 22 13.2 +00.0	02						
03	211 46.7 +00.9	N 16 34.4 -00.5	98 58.0 +02.5	S 22 07.4 +00.0	65 24.1 +02.6	S 22 13.2 +00.1	03						
04	226 47.6 +00.8	N 16 33.9 -00.5	114 00.5 +02.6	S 22 07.4 +00.0	80 26.7 +02.7	S 22 13.3 +00.0	04						
05	241 48.4 +00.9	N 16 33.4 -00.5	129 03.1 +02.6	S 22 07.4 +00.0	95 29.4 +02.6	S 22 13.3 +00.0	05						
06	256 49.3 +00.9	N 16 32.9 -00.5	144 05.7 +02.5	S 22 07.4 +00.0	110 32.0 +02.6	S 22 13.3 +00.0	06						
07	271 50.2 +00.9	N 16 32.4 -00.5	159 08.2 +02.6	S 22 07.4 +00.0	125 34.6 +02.7	S 22 13.3 +00.1	07						
08	286 51.1 +00.9	N 16 31.9 -00.5	174 10.8 +02.6	S 22 07.4 +00.0	140 37.3 +02.6	S 22 13.4 +00.0	08						
09	301 52.0 +00.9	N 16 31.4 -00.5	189 13.4 +02.5	S 22 07.4 +00.0	155 39.9 +02.7	S 22 13.4 +00.0	09						
10	316 52.9 +00.9	N 16 30.9 -00.5	204 15.9 +02.6	S 22 07.4 -00.1	170 42.6 +02.6	S 22 13.4 +00.0	10						
11	331 53.8 +00.9	N 16 30.4 -00.5	219 18.5 +02.6	S 22 07.3 +00.0	185 45.2 +02.6	S 22 13.4 +00.0	11						
12	346 54.7 +00.9	N 16 29.9 -00.5	234 21.1 +02.5	S 22 07.3 +00.0	200 47.8 +02.7	S 22 13.4 +00.1	12						
13	1 55.6 +00.9	N 16 29.4 -00.4	249 23.6 +02.6	S 22 07.3 +00.0	215 50.5 +02.6	S 22 13.5 +00.0	13						
14	16 56.5 +00.9	N 16 29.0 -00.5	264 26.2 +02.6	S 22 07.3 +00.0	230 53.1 +02.7	S 22 13.5 +00.0	14						
15	31 57.4 +00.9	N 16 28.5 -00.5	279 28.8 +02.5	S 22 07.3 +00.0	245 55.8 +02.6	S 22 13.5 +00.0	15						
16	46 58.3 +00.8	N 16 28.0 -00.5	294 31.3 +02.6	S 22 07.3 +00.0	260 58.4 +02.6	S 22 13.5 +00.1	16						
17	61 59.1 +00.9	N 16 27.5 -00.5	309 33.9 +02.5	S 22 07.3 +00.0	276 01.0 +02.7	S 22 13.6 +00.0	17						
18	77 00.0 +00.9	N 16 27.0 -00.5	324 36.4 +02.6	S 22 07.3 +00.0	291 03.7 +02.6	S 22 13.6 +00.0	18						
19	92 00.9 +00.9	N 16 26.5 -00.5	339 39.0 +02.6	S 22 07.3 +00.0	306 06.3 +02.7	S 22 13.6 +00.0	19						
20	107 01.8 +00.9	N 16 26.0 -00.5	354 41.6 +02.5	S 22 07.3 +00.0	321 09.0 +02.6	S 22 13.6 +00.1	20						
21	122 02.7 +00.9	N 16 25.5 -00.5	9 44.1 +02.6	S 22 07.3 +00.0	336 11.6 +02.6	S 22 13.7 +00.0	21						
22	137 03.6 +00.9	N 16 25.0 -00.5	24 46.7 +02.6	S 22 07.3 +00.0	351 14.2 +02.7	S 22 13.7 +00.0	22						
23	152 04.5 +00.9	N 16 24.5 -00.5	39 49.3 +02.5	S 22 07.3 +00.0	6 16.9 +02.6	S 22 13.7 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 219° 219° 219° 219° 219° 219°			SHA 106° 107° 107° 107° 107° 107°			SHA 073° 073° 073° 073° 073° 073°						
	Greenwich Culmination Time: 12:52			Greenwich Culmination Time: 20:21			Greenwich Culmination Time: 22:34						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 23.4 +00.0	N 18 23.1 -00.6	182 11.4 -00.8	N 20 15.1 -00.7	194 40.2 -37.1	N 22 03.0 -02.6	00						
01	193 23.4 +00.0	N 18 22.5 -00.6	197 10.6 -00.7	N 20 14.4 -00.6	209 03.1 -37.1	N 22 00.4 -02.8	01						
02	208 23.4 +00.1	N 18 21.9 -00.6	212 09.9 -00.8	N 20 13.8 -00.7	223 26.0 -37.2	N 21 57.6 -02.9	02						
03	223 23.5 +00.0	N 18 21.3 -00.6	227 09.1 -00.7	N 20 13.1 -00.7	237 48.8 -37.1	N 21 54.7 -03.1	03						
04	238 23.5 +00.0	N 18 20.7 -00.7	242 08.4 -00.8	N 20 12.4 -00.6	252 11.7 -37.2	N 21 51.6 -03.3	04						
05	253 23.5 +00.1	N 18 20.0 -00.6	257 07.6 -00.7	N 20 11.8 -00.7	266 34.5 -37.1	N 21 48.3 -03.4	05						
06	268 23.6 +00.0	N 18 19.4 -00.6	272 06.9 -00.7	N 20 11.1 -00.6	280 57.4 -37.1	N 21 44.9 -03.6	06						
07	283 23.6 +00.0	N 18 18.8 -00.6	287 06.2 -00.8	N 20 10.5 -00.7	295 20.3 -37.2	N 21 41.3 -03.7	07						
08	298 23.6 +00.0	N 18 18.2 -00.6	302 05.4 -00.7	N 20 09.8 -00.6	309 43.1 -37.1	N 21 37.6 -03.9	08						
09	313 23.6 +00.1	N 18 17.6 -00.6	317 04.7 -00.8	N 20 09.2 -00.7	324 06.0 -37.2	N 21 33.7 -04.0	09						
10	328 23.7 +00.0	N 18 17.0 -00.6	332 03.9 -00.7	N 20 08.5 -00.7	338 28.8 -37.1	N 21 29.7 -04.2	10						
11	343 23.7 +00.0	N 18 16.4 -00.7	347 03.2 -00.8	N 20 07.8 -00.6	352 51.7 -37.1	N 21 25.5 -04.4	11						
12	358 23.7 +00.1	N 18 15.7 -00.6	2 02.4 -00.7	N 20 07.2 -00.7	7 14.6 -37.1	N 21 21.1 -04.5	12						
13	13 23.8 +00.0	N 18 15.1 -00.6	17 01.7 -00.7	N 20 06.5 -00.6	21 37.5 -37.1	N 21 16.6 -04.7	13						
14	28 23.8 +00.0	N 18 14.5 -00.6	32 01.0 -00.8	N 20 05.9 -00.7	36 00.4 -37.1	N 21 11.9 -04.9	14						
15	43 23.8 +00.1	N 18 13.9 -00.6	47 00.2 -00.7	N 20 05.2 -00.7	50 23.3 -37.1	N 21 07.0 -05.0	15						
16	58 23.9 +00.0	N 18 13.3 -00.7	61 59.5 -00.8	N 20 04.5 -00.6	64 46.2 -37.0	N 21 02.0 -05.1	16						
17	73 23.9 +00.0	N 18 12.6 -00.6	76 58.7 -00.7	N 20 03.9 -00.7	79 09.2 -37.1	N 20 56.9 -05.3	17						
18	88 23.9 +00.1	N 18 12.0 -00.6	91 58.0 -00.7	N 20 03.2 -00.7	93 32.1 -37.0	N 20 51.6 -05.5	18						
19	103 24.0 +00.0	N 18 11.4 -00.6	106 57.3 -00.8	N 20 02.5 -00.7	107 55.1 -37.0	N 20 46.1 -05.6	19						
20	118 24.0 +00.0	N 18 10.8 -00.6	121 56.5 -00.7	N 20 01.8 -00.6	122 18.1 -36.9	N 20 40.5 -05.8	20						
21	133 24.0 +00.1	N 18 10.2 -00.7	136 55.8 -00.7	N 20 01.2 -00.7	136 41.2 -36.9	N 20 34.7 -05.9	21						
22	148 24.1 +00.0	N 18 09.5 -00.6	151 55.1 -00.8	N 20 00.5 -00.7	151 04.3 -36.9	N 20 28.8 -06.1	22						
23	163 24.1 +00.0	N 18 08.9 -00.6	166 54.3 -00.7	N 19 59.8 -00.6	165 27.4 -36.9	N 20 22.7 -06.2	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 16'4 16'4 16'5 16'5 16'5 16'5						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 60'3 60'4 60'5 60'5 60'6 60'7	SHA 230° 230° 230° 229° 229° 229°	SHA 234° 234° 233° 233° 233° 233°	SHA 245° 242° 240° 237° 234° 232°						
	Greenwich Culmination Time: 12:06	Greenwich Culmination Time: 11:51	Greenwich Culmination Time: 11:29										

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	167 05.4 +00.9	N 16 24.0 -00.5	54 51.8 +02.6	S 22 07.3 +00.0	21 19.5 +02.7	S 22 13.7 +00.1	00						
01	182 06.3 +00.9	N 16 23.5 -00.5	69 54.4 +02.5	S 22 07.3 +00.0	36 22.2 +02.6	S 22 13.8 +00.0	01						
02	197 07.2 +00.9	N 16 23.0 -00.5	84 56.9 +02.6	S 22 07.3 +00.0	51 24.8 +02.6	S 22 13.8 +00.0	02						
03	212 08.1 +00.9	N 16 22.5 -00.5	99 59.5 +02.6	S 22 07.3 +00.0	66 27.4 +02.7	S 22 13.8 +00.0	03						
04	227 09.0 +00.9	N 16 22.0 -00.5	115 02.1 +02.5	S 22 07.3 +00.0	81 30.1 +02.6	S 22 13.8 +00.0	04						
05	242 09.9 +00.9	N 16 21.5 -00.5	130 04.6 +02.6	S 22 07.3 +00.0	96 32.7 +02.6	S 22 13.8 +00.1	05						
06	257 10.8 +00.9	N 16 21.0 -00.5	145 07.2 +02.5	S 22 07.3 +00.0	111 35.3 +02.7	S 22 13.9 +00.0	06						
07	272 11.7 +00.8	N 16 20.5 -00.5	160 09.7 +02.6	S 22 07.3 +00.0	126 38.0 +02.6	S 22 13.9 +00.0	07						
08	287 12.5 +00.9	N 16 20.0 -00.5	175 12.3 +02.6	S 22 07.3 +00.0	141 40.6 +02.7	S 22 13.9 +00.0	08						
09	302 13.4 +00.9	N 16 19.5 -00.5	190 14.9 +02.5	S 22 07.3 +00.0	156 43.3 +02.6	S 22 13.9 +00.1	09						
10	317 14.3 +00.9	N 16 19.0 -00.5	205 17.4 +02.6	S 22 07.3 +00.0	171 45.9 +02.6	S 22 14.0 +00.0	10						
11	332 15.2 +00.9	N 16 18.5 -00.4	220 20.0 +02.5	S 22 07.3 +00.0	186 48.5 +02.7	S 22 14.0 +00.0	11						
12	347 16.1 +00.9	N 16 18.1 -00.5	235 22.5 +02.6	S 22 07.3 +00.0	201 51.2 +02.6	S 22 14.0 +00.0	12						
13	2 17.0 +00.9	N 16 17.6 -00.5	250 25.1 +02.5	S 22 07.3 +00.0	216 53.8 +02.7	S 22 14.0 +00.1	13						
14	17 17.9 +00.9	N 16 17.1 -00.5	265 27.6 +02.6	S 22 07.3 +00.0	231 56.5 +02.6	S 22 14.1 +00.0	14						
15	32 18.8 +00.9	N 16 16.6 -00.5	280 30.2 +02.6	S 22 07.3 +00.0	246 59.1 +02.6	S 22 14.1 +00.0	15						
16	47 19.7 +00.9	N 16 16.1 -00.5	295 32.8 +02.5	S 22 07.3 +00.0	262 01.7 +02.7	S 22 14.1 +00.0	16						
17	62 20.6 +00.9	N 16 15.6 -00.5	310 35.3 +02.6	S 22 07.3 +00.0	277 04.4 +02.6	S 22 14.1 +00.0	17						
18	77 21.5 +00.9	N 16 15.1 -00.5	325 37.9 +02.5	S 22 07.3 +00.0	292 07.0 +02.6	S 22 14.1 +00.1	18						
19	92 22.4 +00.9	N 16 14.6 -00.5	340 40.4 +02.6	S 22 07.3 +00.0	307 09.6 +02.7	S 22 14.2 +00.0	19						
20	107 23.3 +00.9	N 16 14.1 -00.5	355 43.0 +02.5	S 22 07.3 +00.0	322 12.3 +02.6	S 22 14.2 +00.0	20						
21	122 24.2 +00.9	N 16 13.6 -00.5	10 45.5 +02.6	S 22 07.3 +00.0	337 14.9 +02.7	S 22 14.2 +00.0	21						
22	137 25.1 +00.9	N 16 13.1 -00.5	25 48.1 +02.5	S 22 07.3 +00.0	352 17.6 +02.6	S 22 14.2 +00.1	22						
23	152 26.0 +00.9	N 16 12.6 -00.5	40 50.6 +02.6	S 22 07.3 +00.0	7 20.2 +02.6	S 22 14.3 +00.0	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	SD 00'4 00'4 00'4 00'4 00'4 00'4	SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 073° 073° 073° 073° 073° 073°	SHA 219° 219° 219° 218° 218° 218°	SHA 107° 107° 107° 107° 107° 107°	SHA 073° 073° 073° 073° 073° 073°						
	Greenwich Culmination Time: 12:50	Greenwich Culmination Time: 20:17	Greenwich Culmination Time: 22:30										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.1 +00.1	N 18 08.3 -00.6	181 53.6 -00.7	N 19 59.2 -00.7	179 50.5 -36.9	N 20 16.5 -06.4	00						
01	193 24.2 +00.0	N 18 07.7 -00.6	196 52.9 -00.8	N 19 58.5 -00.7	194 13.6 -36.8	N 20 10.1 -06.5	01						
02	208 24.2 +00.0	N 18 07.1 -00.7	211 52.1 -00.7	N 19 57.8 -00.7	208 36.8 -36.7	N 20 03.6 -06.7	02						
03	223 24.2 +00.1	N 18 06.4 -00.6	226 51.4 -00.7	N 19 57.1 -00.6	223 00.1 -36.8	N 19 56.9 -06.8	03						
04	238 24.3 +00.0	N 18 05.8 -00.6	241 50.7 -00.8	N 19 56.5 -00.7	237 23.3 -36.7	N 19 50.1 -06.9	04						
05	253 24.3 +00.0	N 18 05.2 -00.6	256 49.9 -00.7	N 19 55.8 -00.7	251 46.6 -36.6	N 19 43.2 -07.1	05						
06	268 24.3 +00.1	N 18 04.6 -00.7	271 49.2 -00.7	N 19 55.1 -00.7	266 10.0 -36.6	N 19 36.1 -07.3	06						
07	283 24.4 +00.0	N 18 03.9 -00.6	286 48.5 -00.8	N 19 54.4 -00.7	280 33.4 -36.6	N 19 28.8 -07.4	07						
08	298 24.4 +00.0	N 18 03.3 -00.6	301 47.7 -00.7	N 19 53.7 -00.7	294 56.8 -36.5	N 19 21.4 -07.5	08						
09	313 24.4 +00.1	N 18 02.7 -00.7	316 47.0 -00.7	N 19 53.0 -00.6	309 20.3 -36.5	N 19 13.9 -07.7	09						
10	328 24.5 +00.0	N 18 02.0 -00.6	331 46.3 -00.8	N 19 52.4 -00.7	323 43.8 -36.4	N 19 06.2 -07.8	10						
11	343 24.5 +00.0	N 18 01.4 -00.6	346 45.5 -00.7	N 19 51.7 -00.7	338 07.4 -36.4	N 18 58.4 -08.0	11						
12	358 24.5 +00.1	N 18 00.8 -00.6	1 44.8 -00.7	N 19 51.0 -00.7	352 31.0 -36.3	N 18 50.4 -08.1	12						
13	13 24.6 +00.0	N 18 00.2 -00.7	16 44.1 -00.8	N 19 50.3 -00.7	6 54.7 -36.3	N 18 42.3 -08.2	13						
14	28 24.6 +00.1	N 17 59.5 -00.6	31 43.3 -00.7	N 19 49.6 -00.7	21 18.4 -36.3	N 18 34.1 -08.3	14						
15	43 24.7 +00.0	N 17 58.9 -00.6	46 42.6 -00.7	N 19 48.9 -00.7	35 42.1 -36.1	N 18 25.8 -08.5	15						
16	58 24.7 +00.0	N 17 58.3 -00.7	61 41.9 -00.8	N 19 48.2 -00.7	50 06.0 -36.2	N 18 17.3 -08.7	16						
17	73 24.7 +00.1	N 17 57.6 -00.6	76 41.1 -00.7	N 19 47.5 -00.6	64 29.8 -36.0	N 18 08.6 -08.7	17						
18	88 24.8 +00.0	N 17 57.0 -00.6	91 40.4 -00.7	N 19 46.9 -00.7	78 53.8 -36.0	N 17 59.9 -08.9	18						
19	103 24.8 +00.1	N 17 56.4 -00.7	106 39.7 -00.7	N 19 46.2 -00.7	93 17.8 -36.0	N 17 51.0 -09.0	19						
20	118 24.9 +00.0	N 17 55.7 -00.6	121 39.0 -00.8	N 19 45.5 -00.7	107 41.8 -35.9	N 17 42.0 -09.1	20						
21	133 24.9 +00.0	N 17 55.1 -00.6	136 38.2 -00.7	N 19 44.8 -00.7	122 05.9 -35.8	N 17 32.9 -09.3	21						
22	148 24.9 +00.1	N 17 54.5 -00.7	151 37.5 -00.7	N 19 44.1 -00.7	136 30.1 -35.8	N 17 23.6 -09.4	22						
23	163 25.0 +00.0	N 17 53.8 -00.6	166 36.8 -00.7	N 19 43.4 -00.7	150 54.3 -35.7	N 17 14.2 -09.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'6 16'6 16'6 16'6 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'8 60'8 60'9 60'9 60'9 61'0								
	SHA 229° 229° 229° 229° 228° 228°		SHA 232° 232° 232° 232° 232° 231°		SHA 229° 227° 224° 221° 219° 216°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:53		Greenwich Culmination Time: 12:31								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	167 26.9 +00.9	N 16 12.1 -00.5	55 53.2 +02.5	S 22 07.3 +00.0	22 22.8 +02.7	S 22 14.3 +00.0	00						
01	182 27.8 +00.9	N 16 11.6 -00.5	70 55.7 +02.6	S 22 07.3 +00.0	37 25.5 +02.6	S 22 14.3 +00.0	01						
02	197 28.7 +00.9	N 16 11.1 -00.5	85 58.3 +02.5	S 22 07.3 +00.0	52 28.1 +02.6	S 22 14.3 +00.0	02						
03	212 29.6 +00.9	N 16 10.6 -00.5	101 00.8 +02.6	S 22 07.3 +00.0	67 30.7 +02.7	S 22 14.3 +00.1	03						
04	227 30.5 +00.9	N 16 10.1 -00.5	116 03.4 +02.5	S 22 07.3 +00.0	82 33.4 +02.6	S 22 14.4 +00.0	04						
05	242 31.4 +00.9	N 16 09.6 -00.5	131 05.9 +02.6	S 22 07.3 +00.0	97 36.0 +02.7	S 22 14.4 +00.0	05						
06	257 32.3 +00.8	N 16 09.1 -00.5	146 08.5 +02.5	S 22 07.3 +00.0	112 38.7 +02.6	S 22 14.4 +00.0	06						
07	272 33.1 +00.9	N 16 08.6 -00.5	161 11.0 +02.6	S 22 07.3 +00.0	127 41.3 +02.6	S 22 14.4 +00.1	07						
08	287 34.0 +00.9	N 16 08.1 -00.5	176 13.6 +02.5	S 22 07.3 +00.0	142 43.9 +02.7	S 22 14.5 +00.0	08						
09	302 34.9 +00.9	N 16 07.6 -00.5	191 16.1 +02.6	S 22 07.3 +00.0	157 46.6 +02.6	S 22 14.5 +00.0	09						
10	317 35.8 +00.9	N 16 07.1 -00.5	206 18.7 +02.5	S 22 07.3 +00.0	172 49.2 +02.6	S 22 14.5 +00.0	10						
11	332 36.7 +00.9	N 16 06.6 -00.5	221 21.2 +02.6	S 22 07.3 +00.0	187 51.8 +02.7	S 22 14.5 +00.1	11						
12	347 37.6 +00.9	N 16 06.1 -00.5	236 23.8 +02.5	S 22 07.3 +00.0	202 54.5 +02.6	S 22 14.6 +00.0	12						
13	2 38.5 +00.9	N 16 05.6 -00.6	251 26.3 +02.6	S 22 07.3 +00.0	217 57.1 +02.6	S 22 14.6 +00.0	13						
14	17 39.4 +00.9	N 16 05.0 -00.5	266 28.9 +02.5	S 22 07.3 +00.0	232 59.7 +02.7	S 22 14.6 +00.0	14						
15	32 40.3 +00.9	N 16 04.5 -00.5	281 31.4 +02.6	S 22 07.3 +00.0	248 02.4 +02.6	S 22 14.6 +00.0	15						
16	47 41.2 +00.9	N 16 04.0 -00.5	296 34.0 +02.5	S 22 07.3 +00.0	263 05.0 +02.7	S 22 14.6 +00.1	16						
17	62 42.1 +00.9	N 16 03.5 -00.5	311 36.5 +02.6	S 22 07.3 +00.0	278 07.7 +02.6	S 22 14.7 +00.0	17						
18	77 43.0 +00.9	N 16 03.0 -00.5	326 39.1 +02.5	S 22 07.3 +00.0	293 10.3 +02.6	S 22 14.7 +00.0	18						
19	92 43.9 +00.9	N 16 02.5 -00.5	341 41.6 +02.6	S 22 07.3 +00.0	308 12.9 +02.7	S 22 14.7 +00.0	19						
20	107 44.8 +00.9	N 16 02.0 -00.5	356 44.2 +02.5	S 22 07.3 +00.0	323 15.6 +02.6	S 22 14.7 +00.1	20						
21	122 45.7 +00.9	N 16 01.5 -00.5	11 46.7 +02.6	S 22 07.3 +00.0	338 18.2 +02.6	S 22 14.8 +00.0	21						
22	137 46.6 +00.9	N 16 01.0 -00.5	26 49.3 +02.5	S 22 07.3 +00.0	353 20.8 +02.7	S 22 14.8 +00.0	22						
23	152 47.5 +00.9	N 16 00.5 -00.5	41 51.8 +02.5	S 22 07.3 +00.0	8 23.5 +02.6	S 22 14.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 218° 218° 218° 218° 218° 218°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:49		Greenwich Culmination Time: 20:13		Greenwich Culmination Time: 22:26								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 25.0 +00.0	N 17 53.2 -00.6	181 36.1 -00.8	N 19 42.7 -00.7	165 18.6 -35.7	N 17 04.7 -09.6	00						
01	193 25.0 +00.1	N 17 52.6 -00.7	196 35.3 -00.7	N 19 42.0 -00.7	179 42.9 -35.6	N 16 55.1 -09.7	01						
02	208 25.1 +00.0	N 17 51.9 -00.6	211 34.6 -00.7	N 19 41.3 -00.7	194 07.3 -35.5	N 16 45.4 -09.9	02						
03	223 25.1 +00.1	N 17 51.3 -00.6	226 33.9 -00.7	N 19 40.6 -00.7	208 31.8 -35.5	N 16 35.5 -10.0	03						
04	238 25.2 +00.0	N 17 50.7 -00.7	241 33.2 -00.8	N 19 39.9 -00.7	222 56.3 -35.4	N 16 25.5 -10.1	04						
05	253 25.2 +00.1	N 17 50.0 -00.6	256 32.4 -00.7	N 19 39.2 -00.7	237 20.9 -35.3	N 16 15.4 -10.2	05						
06	268 25.3 +00.0	N 17 49.4 -00.7	271 31.7 -00.7	N 19 38.5 -00.7	251 45.6 -35.3	N 16 05.2 -10.3	06						
07	283 25.3 +00.0	N 17 48.7 -00.6	286 31.0 -00.7	N 19 37.8 -00.7	266 10.3 -35.2	N 15 54.9 -10.4	07						
08	298 25.3 +00.1	N 17 48.1 -00.6	301 30.3 -00.7	N 19 37.1 -00.7	280 35.1 -35.1	N 15 44.5 -10.5	08						
09	313 25.4 +00.0	N 17 47.5 -00.7	316 29.6 -00.8	N 19 36.4 -00.7	294 60.0 -35.1	N 15 34.0 -10.7	09						
10	328 25.4 +00.1	N 17 46.8 -00.6	331 28.8 -00.7	N 19 35.7 -00.8	309 24.9 -35.0	N 15 23.3 -10.7	10						
11	343 25.5 +00.0	N 17 46.2 -00.7	346 28.1 -00.7	N 19 34.9 -00.7	323 49.9 -34.9	N 15 12.6 -10.8	11						
12	358 25.5 +00.1	N 17 45.5 -00.6	1 27.4 -00.7	N 19 34.2 -00.7	338 15.0 -34.9	N 15 01.8 -11.0	12						
13	13 25.6 +00.0	N 17 44.9 -00.6	16 26.7 -00.7	N 19 33.5 -00.7	352 40.1 -34.8	N 14 50.8 -11.0	13						
14	28 25.6 +00.0	N 17 44.3 -00.7	31 26.0 -00.8	N 19 32.8 -00.7	7 05.3 -34.7	N 14 39.8 -11.1	14						
15	43 25.6 +00.1	N 17 43.6 -00.6	46 25.2 -00.7	N 19 32.1 -00.7	21 30.6 -34.7	N 14 28.7 -11.3	15						
16	58 25.7 +00.0	N 17 43.0 -00.7	61 24.5 -00.7	N 19 31.4 -00.7	35 55.9 -34.6	N 14 17.4 -11.3	16						
17	73 25.7 +00.1	N 17 42.3 -00.6	76 23.8 -00.7	N 19 30.7 -00.7	50 21.3 -34.5	N 14 06.1 -11.4	17						
18	88 25.8 +00.0	N 17 41.7 -00.7	91 23.1 -00.7	N 19 30.0 -00.8	64 46.8 -34.5	N 13 54.7 -11.5	18						
19	103 25.8 +00.1	N 17 41.0 -00.6	106 22.4 -00.7	N 19 29.2 -00.7	79 12.3 -34.3	N 13 43.2 -11.6	19						
20	118 25.9 +00.0	N 17 40.4 -00.6	121 21.7 -00.8	N 19 28.5 -00.7	93 38.0 -34.4	N 13 31.6 -11.7	20						
21	133 25.9 +00.1	N 17 39.8 -00.7	136 20.9 -00.7	N 19 27.8 -00.7	108 03.6 -34.2	N 13 19.9 -11.8	21						
22	148 26.0 +00.0	N 17 39.1 -00.6	151 20.2 -00.7	N 19 27.1 -00.7	122 29.4 -34.2	N 13 08.1 -11.8	22						
23	163 26.0 +00.1	N 17 38.5 -00.7	166 19.5 -00.7	N 19 26.4 -00.7	136 55.2 -34.1	N 12 56.3 -12.0	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 16'6 16'6 16'6 16'6 16'6 16'6					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'0 61'0 61'0 61'0 61'0 60'9		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 228° 228° 228° 228° 227° 227°		SHA 231° 231° 231° 231° 230° 230°		SHA 214° 211° 209° 206° 204° 201°		SHA 073° 073° 073° 073° 073° 073°						
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:54		Greenwich Culmination Time: 13:30								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	167 48.4 +00.9	N 16 00.0 -00.5	56 54.3 +02.6	S 22 07.3 +00.0	23 26.1 +02.6	S 22 14.8 +00.0	00						
01	182 49.3 +00.9	N 15 59.5 -00.5	71 56.9 +02.5	S 22 07.3 +00.0	38 28.7 +02.7	S 22 14.8 +00.1	01						
02	197 50.2 +00.9	N 15 59.0 -00.5	86 59.4 +02.6	S 22 07.3 +00.0	53 31.4 +02.6	S 22 14.9 +00.0	02						
03	212 51.1 +00.9	N 15 58.5 -00.5	102 02.0 +02.5	S 22 07.3 +00.0	68 34.0 +02.6	S 22 14.9 +00.0	03						
04	227 52.0 +00.9	N 15 58.0 -00.5	117 04.5 +02.6	S 22 07.3 +00.0	83 36.6 +02.7	S 22 14.9 +00.0	04						
05	242 52.9 +00.9	N 15 57.5 -00.5	132 07.1 +02.5	S 22 07.3 +00.0	98 39.3 +02.6	S 22 14.9 +00.1	05						
06	257 53.8 +00.9	N 15 57.0 -00.5	147 09.6 +02.6	S 22 07.3 +00.0	113 41.9 +02.7	S 22 15.0 +00.0	06						
07	272 54.7 +00.9	N 15 56.5 -00.5	162 12.2 +02.5	S 22 07.3 +00.0	128 44.6 +02.6	S 22 15.0 +00.0	07						
08	287 55.6 +00.9	N 15 56.0 -00.5	177 14.7 +02.5	S 22 07.3 +00.0	143 47.2 +02.6	S 22 15.0 +00.0	08						
09	302 56.5 +00.9	N 15 55.5 -00.5	192 17.2 +02.6	S 22 07.3 +00.0	158 49.8 +02.7	S 22 15.0 +00.0	09						
10	317 57.4 +00.9	N 15 55.0 -00.5	207 19.8 +02.5	S 22 07.3 +00.0	173 52.5 +02.6	S 22 15.0 +00.1	10						
11	332 58.3 +00.9	N 15 54.5 -00.5	222 22.3 +02.6	S 22 07.3 +00.0	188 55.1 +02.6	S 22 15.1 +00.0	11						
12	347 59.2 +00.9	N 15 54.0 -00.6	237 24.9 +02.5	S 22 07.3 +00.0	203 57.7 +02.7	S 22 15.1 +00.0	12						
13	3 00.1 +00.9	N 15 53.4 -00.5	252 27.4 +02.5	S 22 07.3 +00.0	219 00.4 +02.6	S 22 15.1 +00.0	13						
14	18 01.0 +00.9	N 15 52.9 -00.5	267 29.9 +02.6	S 22 07.3 +00.0	234 03.0 +02.6	S 22 15.1 +00.1	14						
15	33 01.9 +00.9	N 15 52.4 -00.5	282 32.5 +02.5	S 22 07.3 +00.0	249 05.6 +02.7	S 22 15.2 +00.0	15						
16	48 02.8 +00.9	N 15 51.9 -00.5	297 35.0 +02.6	S 22 07.3 +00.0	264 08.3 +02.6	S 22 15.2 +00.0	16						
17	63 03.7 +00.9	N 15 51.4 -00.5	312 37.6 +02.5	S 22 07.3 +00.0	279 10.9 +02.6	S 22 15.2 +00.0	17						
18	78 04.6 +00.9	N 15 50.9 -00.5	327 40.1 +02.5	S 22 07.3 +00.0	294 13.5 +02.7	S 22 15.2 +00.1	18						
19	93 05.5 +00.9	N 15 50.4 -00.5	342 42.6 +02.6	S 22 07.3 +00.0	309 16.2 +02.6	S 22 15.3 +00.0	19						
20	108 06.4 +00.9	N 15 49.9 -00.5	357 45.2 +02.5	S 22 07.3 +00.0	324 18.8 +02.6	S 22 15.3 +00.0	20						
21	123 07.3 +00.9	N 15 49.4 -00.5	12 47.7 +02.5	S 22 07.3 +00.0	339 21.4 +02.7	S 22 15.3 +00.0	21						
22	138 08.2 +00.9	N 15 48.9 -00.5	27 50.2 +02.6	S 22 07.3 +00.0	354 24.1 +02.6	S 22 15.3 +00.0	22						
23	153 09.1 +00.9	N 15 48.4 -00.5	42 52.8 +02.5	S 22 07.3 +00.0	9 26.7 +02.6	S 22 15.3 +00.1	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 217° 217° 217° 217° 217° 217°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 073° 073° 073°		SHA 073° 073° 073° 073° 073° 073°						
	Greenwich Culmination Time: 12:48		Greenwich Culmination Time: 20:08		Greenwich Culmination Time: 22:22								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 26.1 +00.0	N 17 37.8 -00.6	181 18.8 -00.7	N 19 25.7 -00.8	151 21.1 -34.0	N 12 44.3 -12.0	00						
01	193 26.1 +00.0	N 17 37.2 -00.7	196 18.1 -00.7	N 19 24.9 -00.7	165 47.1 -34.0	N 12 32.3 -12.1	01						
02	208 26.1 +00.1	N 17 36.5 -00.6	211 17.4 -00.7	N 19 24.2 -00.7	180 13.1 -33.9	N 12 20.2 -12.1	02						
03	223 26.2 +00.0	N 17 35.9 -00.7	226 16.7 -00.8	N 19 23.5 -00.7	194 39.2 -33.8	N 12 08.1 -12.3	03						
04	238 26.2 +00.1	N 17 35.2 -00.6	241 15.9 -00.7	N 19 22.8 -00.8	209 05.4 -33.8	N 11 55.8 -12.3	04						
05	253 26.3 +00.0	N 17 34.6 -00.7	256 15.2 -00.7	N 19 22.0 -00.7	223 31.6 -33.6	N 11 43.5 -12.3	05						
06	268 26.3 +00.1	N 17 33.9 -00.6	271 14.5 -00.7	N 19 21.3 -00.7	237 58.0 -33.7	N 11 31.2 -12.5	06						
07	283 26.4 +00.0	N 17 33.3 -00.7	286 13.8 -00.7	N 19 20.6 -00.7	252 24.3 -33.5	N 11 18.7 -12.5	07						
08	298 26.4 +00.1	N 17 32.6 -00.6	301 13.1 -00.7	N 19 19.9 -00.8	266 50.8 -33.5	N 11 06.2 -12.6	08						
09	313 26.5 +00.0	N 17 32.0 -00.7	316 12.4 -00.7	N 19 19.1 -00.7	281 17.3 -33.4	N 10 53.6 -12.7	09						
10	328 26.5 +00.1	N 17 31.3 -00.6	331 11.7 -00.7	N 19 18.4 -00.7	295 43.9 -33.3	N 10 40.9 -12.7	10						
11	343 26.6 +00.0	N 17 30.7 -00.7	346 11.0 -00.7	N 19 17.7 -00.8	310 10.6 -33.3	N 10 28.2 -12.7	11						
12	358 26.6 +00.1	N 17 30.0 -00.6	1 10.3 -00.8	N 19 16.9 -00.7	324 37.3 -33.2	N 10 15.5 -12.9	12						
13	13 26.7 +00.0	N 17 29.4 -00.7	16 09.5 -00.7	N 19 16.2 -00.7	339 04.1 -33.2	N 10 02.6 -12.8	13						
14	28 26.7 +00.1	N 17 28.7 -00.7	31 08.8 -00.7	N 19 15.5 -00.8	353 30.9 -33.1	N 09 49.8 -13.0	14						
15	43 26.8 +00.0	N 17 28.0 -00.6	46 08.1 -00.7	N 19 14.7 -00.7	7 57.8 -33.0	N 09 36.8 -13.0	15						
16	58 26.8 +00.1	N 17 27.4 -00.7	61 07.4 -00.7	N 19 14.0 -00.7	22 24.8 -32.9	N 09 23.8 -13.0	16						
17	73 26.9 +00.0	N 17 26.7 -00.6	76 06.7 -00.7	N 19 13.3 -00.8	36 51.9 -32.9	N 09 10.8 -13.1	17						
18	88 26.9 +00.1	N 17 26.1 -00.7	91 06.0 -00.7	N 19 12.5 -00.7	51 19.0 -32.8	N 08 57.7 -13.2	18						
19	103 27.0 +00.0	N 17 25.4 -00.6	106 05.3 -00.7	N 19 11.8 -00.8	65 46.2 -32.8	N 08 44.5 -13.1	19						
20	118 27.0 +00.1	N 17 24.8 -00.7	121 04.6 -00.7	N 19 11.0 -00.7	80 13.4 -32.7	N 08 31.4 -13.3	20						
21	133 27.1 +00.0	N 17 24.1 -00.6	136 03.9 -00.7	N 19 10.3 -00.7	94 40.7 -32.6	N 08 18.1 -13.3	21						
22	148 27.1 +00.1	N 17 23.5 -00.7	151 03.2 -00.7	N 19 09.6 -00.8	109 08.1 -32.6	N 08 04.8 -13.3	22						
23	163 27.2 +00.0	N 17 22.8 -00.7	166 02.5 -00.7	N 19 08.8 -00.7	123 35.5 -32.5	N 07 51.5 -13.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'6 16'6 16'6 16'6 16'5 16'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'9 60'8 60'8 60'7 60'7 60'6								
	SHA 227° 227° 227° 227° 226° 226°		SHA 230° 230° 229° 229° 229° 229°		SHA 199° 196° 194° 192° 189° 187°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:55		Greenwich Culmination Time: 14:26								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	168 10.0 +00.9	N 15 47.9 -00.5	57 55.3 +02.6	S 22 07.3 +00.0	24 29.3 +02.7	S 22 15.4 +00.0	00						
01	183 10.9 +00.9	N 15 47.4 -00.6	72 57.9 +02.5	S 22 07.3 +00.0	39 32.0 +02.6	S 22 15.4 +00.0	01						
02	198 11.8 +01.0	N 15 46.8 -00.5	88 00.4 +02.5	S 22 07.3 +00.0	54 34.6 +02.6	S 22 15.4 +00.0	02						
03	213 12.8 +00.9	N 15 46.3 -00.5	103 02.9 +02.6	S 22 07.3 +00.0	69 37.2 +02.7	S 22 15.4 +00.1	03						
04	228 13.7 +00.9	N 15 45.8 -00.5	118 05.5 +02.5	S 22 07.3 +00.0	84 39.9 +02.6	S 22 15.5 +00.0	04						
05	243 14.6 +00.9	N 15 45.3 -00.5	133 08.0 +02.5	S 22 07.3 +00.0	99 42.5 +02.6	S 22 15.5 +00.0	05						
06	258 15.5 +00.9	N 15 44.8 -00.5	148 10.5 +02.6	S 22 07.3 +00.0	114 45.1 +02.7	S 22 15.5 +00.0	06						
07	273 16.4 +00.9	N 15 44.3 -00.5	163 13.1 +02.5	S 22 07.3 +00.0	129 47.8 +02.6	S 22 15.5 +00.0	07						
08	288 17.3 +00.9	N 15 43.8 -00.5	178 15.6 +02.5	S 22 07.3 +00.0	144 50.4 +02.6	S 22 15.5 +00.1	08						
09	303 18.2 +00.9	N 15 43.3 -00.5	193 18.1 +02.6	S 22 07.3 +00.0	159 53.0 +02.6	S 22 15.6 +00.0	09						
10	318 19.1 +00.9	N 15 42.8 -00.5	208 20.7 +02.5	S 22 07.3 +00.0	174 55.6 +02.7	S 22 15.6 +00.0	10						
11	333 20.0 +00.9	N 15 42.3 -00.6	223 23.2 +02.5	S 22 07.3 +00.0	189 58.3 +02.6	S 22 15.6 +00.0	11						
12	348 20.9 +00.9	N 15 41.7 -00.5	238 25.7 +02.6	S 22 07.3 +00.0	205 00.9 +02.6	S 22 15.6 +00.1	12						
13	3 21.8 +00.9	N 15 41.2 -00.5	253 28.3 +02.5	S 22 07.3 +00.0	220 03.5 +02.7	S 22 15.7 +00.0	13						
14	18 22.7 +00.9	N 15 40.7 -00.5	268 30.8 +02.5	S 22 07.3 +00.0	235 06.2 +02.6	S 22 15.7 +00.0	14						
15	33 23.6 +00.9	N 15 40.2 -00.5	283 33.3 +02.6	S 22 07.3 +00.0	250 08.8 +02.6	S 22 15.7 +00.0	15						
16	48 24.5 +00.9	N 15 39.7 -00.5	298 35.9 +02.5	S 22 07.3 +00.0	265 11.4 +02.7	S 22 15.7 +00.0	16						
17	63 25.4 +00.9	N 15 39.2 -00.5	313 38.4 +02.5	S 22 07.3 +00.0	280 14.1 +02.6	S 22 15.7 +00.1	17						
18	78 26.3 +00.9	N 15 38.7 -00.5	328 40.9 +02.5	S 22 07.3 +00.0	295 16.7 +02.6	S 22 15.8 +00.0	18						
19	93 27.2 +00.9	N 15 38.2 -00.5	343 43.4 +02.6	S 22 07.3 +00.0	310 19.3 +02.7	S 22 15.8 +00.0	19						
20	108 28.1 +00.9	N 15 37.7 -00.6	358 46.0 +02.5	S 22 07.3 +00.0	325 22.0 +02.6	S 22 15.8 +00.0	20						
21	123 29.0 +00.9	N 15 37.1 -00.5	13 48.5 +02.5	S 22 07.3 +00.0	340 24.6 +02.6	S 22 15.8 +00.0	21						
22	138 29.9 +00.9	N 15 36.6 -00.5	28 51.0 +02.6	S 22 07.3 +00.0	355 27.2 +02.7	S 22 15.8 +00.1	22						
23	153 30.8 +00.9	N 15 36.1 -00.5	43 53.6 +02.5	S 22 07.3 +00.0	10 29.9 +02.6	S 22 15.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 217° 217° 217° 217° 216° 216°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:46		Greenwich Culmination Time: 20:04		Greenwich Culmination Time: 22:18								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 27.2 +00.1	N 17 22.1 -00.6	181 01.8 -00.7	N 19 08.1 -00.8	138 03.0 -32.4	N 07 38.2 -13.4	00						
01	193 27.3 +00.1	N 17 21.5 -00.7	196 01.1 -00.7	N 19 07.3 -00.7	152 30.6 -32.4	N 07 24.8 -13.5	01						
02	208 27.4 +00.0	N 17 20.8 -00.6	211 00.4 -00.7	N 19 06.6 -00.8	166 58.2 -32.3	N 07 11.3 -13.4	02						
03	223 27.4 +00.1	N 17 20.2 -00.7	225 59.7 -00.7	N 19 05.8 -00.7	181 25.9 -32.3	N 06 57.9 -13.5	03						
04	238 27.5 +00.0	N 17 19.5 -00.7	240 59.0 -00.7	N 19 05.1 -00.8	195 53.6 -32.2	N 06 44.4 -13.5	04						
05	253 27.5 +00.1	N 17 18.8 -00.6	255 58.3 -00.7	N 19 04.3 -00.7	210 21.4 -32.2	N 06 30.9 -13.6	05						
06	268 27.6 +00.0	N 17 18.2 -00.7	270 57.6 -00.7	N 19 03.6 -00.8	224 49.2 -32.0	N 06 17.3 -13.6	06						
07	283 27.6 +00.1	N 17 17.5 -00.7	285 56.9 -00.7	N 19 02.8 -00.7	239 17.2 -32.1	N 06 03.7 -13.6	07						
08	298 27.7 +00.0	N 17 16.8 -00.6	300 56.2 -00.7	N 19 02.1 -00.8	253 45.1 -32.0	N 05 50.1 -13.6	08						
09	313 27.7 +00.1	N 17 16.2 -00.7	315 55.5 -00.7	N 19 01.3 -00.7	268 13.1 -31.9	N 05 36.5 -13.7	09						
10	328 27.8 +00.0	N 17 15.5 -00.6	330 54.8 -00.7	N 19 00.6 -00.8	282 41.2 -31.9	N 05 22.8 -13.7	10						
11	343 27.8 +00.1	N 17 14.9 -00.7	345 54.1 -00.7	N 18 59.8 -00.7	297 09.3 -31.8	N 05 09.1 -13.7	11						
12	358 27.9 +00.1	N 17 14.2 -00.7	0 53.4 -00.7	N 18 59.1 -00.8	311 37.5 -31.8	N 04 55.4 -13.7	12						
13	13 28.0 +00.0	N 17 13.5 -00.6	15 52.7 -00.7	N 18 58.3 -00.7	326 05.7 -31.7	N 04 41.7 -13.7	13						
14	28 28.0 +00.1	N 17 12.9 -00.7	30 52.0 -00.7	N 18 57.6 -00.8	340 34.0 -31.6	N 04 28.0 -13.7	14						
15	43 28.1 +00.0	N 17 12.2 -00.7	45 51.3 -00.7	N 18 56.8 -00.8	355 02.4 -31.6	N 04 14.3 -13.8	15						
16	58 28.1 +00.1	N 17 11.5 -00.6	60 50.6 -00.7	N 18 56.0 -00.7	9 30.8 -31.6	N 04 00.5 -13.8	16						
17	73 28.2 +00.0	N 17 10.9 -00.7	75 49.9 -00.7	N 18 55.3 -00.8	23 59.2 -31.5	N 03 46.7 -13.8	17						
18	88 28.2 +00.1	N 17 10.2 -00.7	90 49.2 -00.7	N 18 54.5 -00.7	38 27.7 -31.5	N 03 32.9 -13.7	18						
19	103 28.3 +00.1	N 17 09.5 -00.6	105 48.5 -00.7	N 18 53.8 -00.8	52 56.2 -31.4	N 03 19.2 -13.8	19						
20	118 28.4 +00.0	N 17 08.9 -00.7	120 47.8 -00.7	N 18 53.0 -00.8	67 24.8 -31.4	N 03 05.4 -13.8	20						
21	133 28.4 +00.1	N 17 08.2 -00.7	135 47.1 -00.7	N 18 52.2 -00.7	81 53.4 -31.3	N 02 51.6 -13.8	21						
22	148 28.5 +00.0	N 17 07.5 -00.6	150 46.4 -00.7	N 18 51.5 -00.8	96 22.1 -31.3	N 02 37.8 -13.8	22						
23	163 28.5 +00.1	N 17 06.9 -00.7	165 45.7 -00.7	N 18 50.7 -00.8	110 50.8 -31.3	N 02 24.0 -13.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'5 16'5 16'4 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'5 60'5 60'4 60'3 60'2 60'1								
	SHA 226° 226° 226° 226° 225° 225°		SHA 229° 228° 228° 228° 228° 228°		SHA 185° 182° 180° 178° 175° 173°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 15:20								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	168 31.7 +00.9	N 15 35.6 -00.5	58 56.1 +02.5	S 22 07.3 +00.0	25 32.5 +02.6	S 22 15.9 +00.0	00						
01	183 32.6 +00.9	N 15 35.1 -00.5	73 58.6 +02.5	S 22 07.3 +00.0	40 35.1 +02.6	S 22 15.9 +00.0	01						
02	198 33.5 +01.0	N 15 34.6 -00.5	89 01.1 +02.6	S 22 07.3 +00.0	55 37.7 +02.7	S 22 15.9 +00.1	02						
03	213 34.5 +00.9	N 15 34.1 -00.5	104 03.7 +02.5	S 22 07.3 +00.0	70 40.4 +02.6	S 22 16.0 +00.0	03						
04	228 35.4 +00.9	N 15 33.6 -00.6	119 06.2 +02.5	S 22 07.3 +00.0	85 43.0 +02.6	S 22 16.0 +00.0	04						
05	243 36.3 +00.9	N 15 33.0 -00.5	134 08.7 +02.6	S 22 07.3 +00.0	100 45.6 +02.7	S 22 16.0 +00.0	05						
06	258 37.2 +00.9	N 15 32.5 -00.5	149 11.3 +02.5	S 22 07.3 +00.0	115 48.3 +02.6	S 22 16.0 +00.0	06						
07	273 38.1 +00.9	N 15 32.0 -00.5	164 13.8 +02.5	S 22 07.3 +00.0	130 50.9 +02.6	S 22 16.0 +00.1	07						
08	288 39.0 +00.9	N 15 31.5 -00.5	179 16.3 +02.5	S 22 07.3 +00.0	145 53.5 +02.7	S 22 16.1 +00.0	08						
09	303 39.9 +00.9	N 15 31.0 -00.5	194 18.8 +02.6	S 22 07.3 +00.0	160 56.2 +02.6	S 22 16.1 +00.0	09						
10	318 40.8 +00.9	N 15 30.5 -00.5	209 21.4 +02.5	S 22 07.3 +00.0	175 58.8 +02.6	S 22 16.1 +00.0	10						
11	333 41.7 +00.9	N 15 30.0 -00.6	224 23.9 +02.5	S 22 07.3 +00.0	191 01.4 +02.6	S 22 16.1 +00.1	11						
12	348 42.6 +00.9	N 15 29.4 -00.5	239 26.4 +02.5	S 22 07.3 +00.0	206 04.0 +02.7	S 22 16.2 +00.0	12						
13	3 43.5 +00.9	N 15 28.9 -00.5	254 28.9 +02.5	S 22 07.3 +00.0	221 06.7 +02.6	S 22 16.2 +00.0	13						
14	18 44.4 +00.9	N 15 28.4 -00.5	269 31.4 +02.6	S 22 07.3 +00.0	236 09.3 +02.6	S 22 16.2 +00.0	14						
15	33 45.3 +00.9	N 15 27.9 -00.5	284 34.0 +02.5	S 22 07.3 +00.0	251 11.9 +02.7	S 22 16.2 +00.0	15						
16	48 46.2 +00.9	N 15 27.4 -00.5	299 36.5 +02.5	S 22 07.3 +00.0	266 14.6 +02.6	S 22 16.2 +00.1	16						
17	63 47.1 +01.0	N 15 26.9 -00.6	314 39.0 +02.5	S 22 07.3 +00.0	281 17.2 +02.6	S 22 16.3 +00.0	17						
18	78 48.1 +00.9	N 15 26.3 -00.5	329 41.5 +02.6	S 22 07.3 +00.0	296 19.8 +02.7	S 22 16.3 +00.0	18						
19	93 49.0 +00.9	N 15 25.8 -00.5	344 44.1 +02.5	S 22 07.3 +00.0	311 22.5 +02.6	S 22 16.3 +00.0	19						
20	108 49.9 +00.9	N 15 25.3 -00.5	359 46.6 +02.5	S 22 07.3 +00.0	326 25.1 +02.6	S 22 16.3 +00.1	20						
21	123 50.8 +00.9	N 15 24.8 -00.5	14 49.1 +02.5	S 22 07.3 +00.0	341 27.7 +02.6	S 22 16.4 +00.0	21						
22	138 51.7 +00.9	N 15 24.3 -00.5	29 51.6 +02.5	S 22 07.3 +00.0	356 30.3 +02.7	S 22 16.4 +00.0	22						
23	153 52.6 +00.9	N 15 23.8 -00.5	44 54.1 +02.6	S 22 07.3 +00.0	11 33.0 +02.6	S 22 16.4 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 216° 216° 216° 216° 216° 216°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:45		Greenwich Culmination Time: 20:00		Greenwich Culmination Time: 22:13								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 28.6 +00.1	N 17 06.2 -00.7	180 45.0 -00.7	N 18 49.9 -00.7	125 19.5 -31.2	N 02 10.1 -13.8	00						
01	193 28.7 +00.0	N 17 05.5 -00.7	195 44.3 -00.6	N 18 49.2 -00.8	139 48.3 -31.1	N 01 56.3 -13.8	01						
02	208 28.7 +00.1	N 17 04.8 -00.6	210 43.7 -00.7	N 18 48.4 -00.8	154 17.2 -31.1	N 01 42.5 -13.8	02						
03	223 28.8 +00.0	N 17 04.2 -00.7	225 43.0 -00.7	N 18 47.6 -00.7	168 46.1 -31.1	N 01 28.7 -13.8	03						
04	238 28.8 +00.1	N 17 03.5 -00.7	240 42.3 -00.7	N 18 46.9 -00.8	183 15.0 -31.1	N 01 14.9 -13.7	04						
05	253 28.9 +00.1	N 17 02.8 -00.7	255 41.6 -00.7	N 18 46.1 -00.8	197 43.9 -31.0	N 01 01.2 -13.8	05						
06	268 29.0 +00.0	N 17 02.1 -00.6	270 40.9 -00.7	N 18 45.3 -00.8	212 12.9 -30.9	N 00 47.4 -13.8	06						
07	283 29.0 +00.1	N 17 01.5 -00.7	285 40.2 -00.7	N 18 44.5 -00.7	226 42.0 -31.0	N 00 33.6 -13.8	07						
08	298 29.1 +00.0	N 17 00.8 -00.7	300 39.5 -00.7	N 18 43.8 -00.8	241 11.0 -30.9	N 00 19.8 -13.7	08						
09	313 29.1 +00.1	N 17 00.1 -00.7	315 38.8 -00.7	N 18 43.0 -00.8	255 40.1 -30.8	N 00 06.1 -13.8	09						
10	328 29.2 +00.1	N 16 59.4 -00.6	330 38.1 -00.6	N 18 42.2 -00.8	270 09.3 -30.8	S 00 07.7 +13.7	10						
11	343 29.3 +00.0	N 16 58.8 -00.7	345 37.5 -00.7	N 18 41.4 -00.7	284 38.5 -30.8	S 00 21.4 +13.7	11						
12	358 29.3 +00.1	N 16 58.1 -00.7	0 36.8 -00.7	N 18 40.7 -00.8	299 07.7 -30.8	S 00 35.1 +13.7	12						
13	13 29.4 +00.1	N 16 57.4 -00.7	15 36.1 -00.7	N 18 39.9 -00.8	313 36.9 -30.7	S 00 48.8 +13.6	13						
14	28 29.5 +00.0	N 16 56.7 -00.6	30 35.4 -00.7	N 18 39.1 -00.8	328 06.2 -30.7	S 01 02.4 +13.7	14						
15	43 29.5 +00.1	N 16 56.1 -00.7	45 34.7 -00.7	N 18 38.3 -00.7	342 35.5 -30.7	S 01 16.1 +13.6	15						
16	58 29.6 +00.0	N 16 55.4 -00.7	60 34.0 -00.7	N 18 37.6 -00.8	357 04.8 -30.6	S 01 29.7 +13.6	16						
17	73 29.6 +00.1	N 16 54.7 -00.7	75 33.3 -00.6	N 18 36.8 -00.8	11 34.2 -30.6	S 01 43.3 +13.6	17						
18	88 29.7 +00.1	N 16 54.0 -00.6	90 32.7 -00.7	N 18 36.0 -00.8	26 03.6 -30.6	S 01 56.9 +13.6	18						
19	103 29.8 +00.0	N 16 53.4 -00.7	105 32.0 -00.7	N 18 35.2 -00.8	40 33.0 -30.6	S 02 10.5 +13.5	19						
20	118 29.8 +00.1	N 16 52.7 -00.7	120 31.3 -00.7	N 18 34.4 -00.8	55 02.4 -30.5	S 02 24.0 +13.5	20						
21	133 29.9 +00.1	N 16 52.0 -00.7	135 30.6 -00.7	N 18 33.6 -00.8	69 31.9 -30.5	S 02 37.5 +13.5	21						
22	148 30.0 +00.0	N 16 51.3 -00.7	150 29.9 -00.7	N 18 32.8 -00.7	84 01.4 -30.5	S 02 51.0 +13.4	22						
23	163 30.0 +00.1	N 16 50.6 -00.7	165 29.2 -00.6	N 18 32.1 -00.8	98 30.9 -30.5	S 03 04.4 +13.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'2 16'2 16'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'0 59'9 59'7 59'6 59'5 59'4								
	SHA 225° 225° 225° 225° 224° 224°		SHA 227° 227° 227° 227° 227° 226°		SHA 171° 169° 166° 164° 162° 160°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 16:12								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	168 53.5 +00.9	N 15 23.3 -00.6	59 56.7 +02.5	S 22 07.3 +00.0	26 35.6 +02.6	S 22 16.4 +00.0	00						
01	183 54.4 +00.9	N 15 22.7 -00.5	74 59.2 +02.5	S 22 07.3 +00.0	41 38.2 +02.6	S 22 16.4 +00.1	01						
02	198 55.3 +00.9	N 15 22.2 -00.5	90 01.7 +02.5	S 22 07.3 +00.0	56 40.8 +02.7	S 22 16.5 +00.0	02						
03	213 56.2 +00.9	N 15 21.7 -00.5	105 04.2 +02.5	S 22 07.3 +00.0	71 43.5 +02.6	S 22 16.5 +00.0	03						
04	228 57.1 +00.9	N 15 21.2 -00.5	120 06.7 +02.6	S 22 07.3 +00.0	86 46.1 +02.6	S 22 16.5 +00.0	04						
05	243 58.0 +01.0	N 15 20.7 -00.6	135 09.3 +02.5	S 22 07.3 +00.0	101 48.7 +02.7	S 22 16.5 +00.0	05						
06	258 59.0 +00.9	N 15 20.1 -00.5	150 11.8 +02.5	S 22 07.3 +00.0	116 51.4 +02.6	S 22 16.5 +00.1	06						
07	273 59.9 +00.9	N 15 19.6 -00.5	165 14.3 +02.5	S 22 07.3 +00.0	131 54.0 +02.6	S 22 16.6 +00.0	07						
08	289 00.8 +00.9	N 15 19.1 -00.5	180 16.8 +02.5	S 22 07.3 +00.0	146 56.6 +02.6	S 22 16.6 +00.0	08						
09	304 01.7 +00.9	N 15 18.6 -00.5	195 19.3 +02.5	S 22 07.3 +00.0	161 59.2 +02.7	S 22 16.6 +00.0	09						
10	319 02.6 +00.9	N 15 18.1 -00.5	210 21.8 +02.6	S 22 07.3 +00.0	177 01.9 +02.6	S 22 16.6 +00.1	10						
11	334 03.5 +00.9	N 15 17.6 -00.6	225 24.4 +02.5	S 22 07.3 +00.0	192 04.5 +02.6	S 22 16.7 +00.0	11						
12	349 04.4 +00.9	N 15 17.0 -00.5	240 26.9 +02.5	S 22 07.3 +00.0	207 07.1 +02.7	S 22 16.7 +00.0	12						
13	4 05.3 +00.9	N 15 16.5 -00.5	255 29.4 +02.5	S 22 07.3 +00.0	222 09.8 +02.6	S 22 16.7 +00.0	13						
14	19 06.2 +00.9	N 15 16.0 -00.5	270 31.9 +02.5	S 22 07.3 +00.0	237 12.4 +02.6	S 22 16.7 +00.0	14						
15	34 07.1 +01.0	N 15 15.5 -00.5	285 34.4 +02.5	S 22 07.3 +00.1	252 15.0 +02.6	S 22 16.7 +00.1	15						
16	49 08.1 +00.9	N 15 15.0 -00.6	300 36.9 +02.5	S 22 07.4 +00.0	267 17.6 +02.7	S 22 16.8 +00.0	16						
17	64 09.0 +00.9	N 15 14.4 -00.5	315 39.4 +02.6	S 22 07.4 +00.0	282 20.3 +02.6	S 22 16.8 +00.0	17						
18	79 09.9 +00.9	N 15 13.9 -00.5	330 42.0 +02.5	S 22 07.4 +00.0	297 22.9 +02.6	S 22 16.8 +00.0	18						
19	94 10.8 +00.9	N 15 13.4 -00.5	345 44.5 +02.5	S 22 07.4 +00.0	312 25.5 +02.6	S 22 16.8 +00.0	19						
20	109 11.7 +00.9	N 15 12.9 -00.5	0 47.0 +02.5	S 22 07.4 +00.0	327 28.1 +02.7	S 22 16.8 +00.1	20						
21	124 12.6 +00.9	N 15 12.4 -00.6	15 49.5 +02.5	S 22 07.4 +00.0	342 30.8 +02.6	S 22 16.9 +00.0	21						
22	139 13.5 +00.9	N 15 11.8 -00.5	30 52.0 +02.5	S 22 07.4 +00.0	357 33.4 +02.6	S 22 16.9 +00.0	22						
23	154 14.4 +00.9	N 15 11.3 -00.5	45 54.5 +02.5	S 22 07.4 +00.0	12 36.0 +02.6	S 22 16.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 216° 215° 215° 215° 215° 215°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 073° 073° 073°								
	Greenwich Culmination Time: 12:43		Greenwich Culmination Time: 19:56		Greenwich Culmination Time: 22:09								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 30.1 +00.1	N 16 49.9 -00.6	180 28.6 -00.7	N 18 31.3 -00.8	113 00.4 -30.4	S 03 17.8 +13.4	00							
01	193 30.2 +00.0	N 16 49.3 -00.7	195 27.9 -00.7	N 18 30.5 -00.8	127 30.0 -30.4	S 03 31.2 +13.3	01							
02	208 30.2 +00.1	N 16 48.6 -00.7	210 27.2 -00.7	N 18 29.7 -00.8	141 59.6 -30.4	S 03 44.5 +13.3	02							
03	223 30.3 +00.1	N 16 47.9 -00.7	225 26.5 -00.7	N 18 28.9 -00.8	156 29.2 -30.4	S 03 57.8 +13.3	03							
04	238 30.4 +00.0	N 16 47.2 -00.7	240 25.8 -00.6	N 18 28.1 -00.8	170 58.8 -30.4	S 04 11.1 +13.2	04							
05	253 30.4 +00.1	N 16 46.5 -00.7	255 25.2 -00.7	N 18 27.3 -00.8	185 28.4 -30.3	S 04 24.3 +13.2	05							
06	268 30.5 +00.1	N 16 45.8 -00.6	270 24.5 -00.7	N 18 26.5 -00.8	199 58.1 -30.4	S 04 37.5 +13.2	06							
07	283 30.6 +00.0	N 16 45.2 -00.7	285 23.8 -00.7	N 18 25.7 -00.8	214 27.7 -30.3	S 04 50.7 +13.1	07							
08	298 30.6 +00.1	N 16 44.5 -00.7	300 23.1 -00.6	N 18 24.9 -00.8	228 57.4 -30.3	S 05 03.8 +13.1	08							
09	313 30.7 +00.1	N 16 43.8 -00.7	315 22.5 -00.7	N 18 24.1 -00.8	243 27.1 -30.3	S 05 16.9 +13.0	09							
10	328 30.8 +00.0	N 16 43.1 -00.7	330 21.8 -00.7	N 18 23.3 -00.8	257 56.8 -30.2	S 05 29.9 +13.0	10							
11	343 30.8 +00.1	N 16 42.4 -00.7	345 21.1 -00.7	N 18 22.5 -00.8	272 26.6 -30.3	S 05 42.9 +12.9	11							
12	358 30.9 +00.1	N 16 41.7 -00.7	0 20.4 -00.6	N 18 21.7 -00.8	286 56.3 -30.2	S 05 55.8 +12.9	12							
13	13 31.0 +00.1	N 16 41.0 -00.6	15 19.8 -00.7	N 18 20.9 -00.8	301 26.1 -30.3	S 06 08.7 +12.9	13							
14	28 31.1 +00.0	N 16 40.4 -00.7	30 19.1 -00.7	N 18 20.1 -00.8	315 55.8 -30.2	S 06 21.6 +12.7	14							
15	43 31.1 +00.1	N 16 39.7 -00.7	45 18.4 -00.7	N 18 19.3 -00.8	330 25.6 -30.2	S 06 34.3 +12.8	15							
16	58 31.2 +00.1	N 16 39.0 -00.7	60 17.7 -00.6	N 18 18.5 -00.8	344 55.4 -30.2	S 06 47.1 +12.7	16							
17	73 31.3 +00.0	N 16 38.3 -00.7	75 17.1 -00.7	N 18 17.7 -00.8	359 25.2 -30.2	S 06 59.8 +12.6	17							
18	88 31.3 +00.1	N 16 37.6 -00.7	90 16.4 -00.7	N 18 16.9 -00.8	13 55.0 -30.2	S 07 12.4 +12.6	18							
19	103 31.4 +00.1	N 16 36.9 -00.7	105 15.7 -00.7	N 18 16.1 -00.8	28 24.8 -30.2	S 07 25.0 +12.6	19							
20	118 31.5 +00.0	N 16 36.2 -00.7	120 15.0 -00.6	N 18 15.3 -00.8	42 54.6 -30.2	S 07 37.6 +12.4	20							
21	133 31.5 +00.1	N 16 35.5 -00.7	135 14.4 -00.7	N 18 14.5 -00.8	57 24.4 -30.2	S 07 50.0 +12.5	21							
22	148 31.6 +00.1	N 16 34.8 -00.7	150 13.7 -00.7	N 18 13.7 -00.8	71 54.2 -30.1	S 08 02.5 +12.3	22							
23	163 31.7 +00.1	N 16 34.1 -00.7	165 13.0 -00.6	N 18 12.9 -00.8	86 24.1 -30.2	S 08 14.8 +12.3	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 224° 224° 224° 224° 224° 223°	Greenwich Culmination Time: 12:05	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 226° 226° 226° 226° 225° 225°	Greenwich Culmination Time: 11:58	UT 02 06 10 14 18 22	SD 16'1 16'1 16'1 16'0 16'0 16'0	HP 59'3 59'1 59'0 58'9 58'7 58'6	SHA 158° 155° 153° 151° 149° 147°	Greenwich Culmination Time: 17:02

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	169 15.3 +01.0	N 15 10.8 -00.5	60 57.0 +02.5	S 22 07.4 +00.0	27 38.6 +02.7	S 22 16.9 +00.1	00							
01	184 16.3 +00.9	N 15 10.3 -00.5	75 59.5 +02.6	S 22 07.4 +00.0	42 41.3 +02.6	S 22 17.0 +00.0	01							
02	199 17.2 +00.9	N 15 09.8 -00.6	91 02.1 +02.5	S 22 07.4 +00.0	57 43.9 +02.6	S 22 17.0 +00.0	02							
03	214 18.1 +00.9	N 15 09.2 -00.5	106 04.6 +02.5	S 22 07.4 +00.0	72 46.5 +02.6	S 22 17.0 +00.0	03							
04	229 19.0 +00.9	N 15 08.7 -00.5	121 07.1 +02.5	S 22 07.4 +00.0	87 49.1 +02.7	S 22 17.0 +00.0	04							
05	244 19.9 +00.9	N 15 08.2 -00.5	136 09.6 +02.5	S 22 07.4 +00.0	102 51.8 +02.6	S 22 17.0 +00.1	05							
06	259 20.8 +00.9	N 15 07.7 -00.6	151 12.1 +02.5	S 22 07.4 +00.0	117 54.4 +02.6	S 22 17.1 +00.0	06							
07	274 21.7 +00.9	N 15 07.1 -00.5	166 14.6 +02.5	S 22 07.4 +00.0	132 57.0 +02.6	S 22 17.1 +00.0	07							
08	289 22.6 +01.0	N 15 06.6 -00.5	181 17.1 +02.5	S 22 07.4 +00.0	147 59.6 +02.7	S 22 17.1 +00.0	08							
09	304 23.6 +00.9	N 15 06.1 -00.5	196 19.6 +02.5	S 22 07.4 +00.0	163 02.3 +02.6	S 22 17.1 +00.0	09							
10	319 24.5 +00.9	N 15 05.6 -00.5	211 22.1 +02.5	S 22 07.4 +00.0	178 04.9 +02.6	S 22 17.1 +00.1	10							
11	334 25.4 +00.9	N 15 05.1 -00.6	226 24.6 +02.6	S 22 07.4 +00.0	193 07.5 +02.6	S 22 17.2 +00.0	11							
12	349 26.3 +00.9	N 15 04.5 -00.5	241 27.2 +02.5	S 22 07.4 +00.0	208 10.1 +02.7	S 22 17.2 +00.0	12							
13	4 27.2 +00.9	N 15 04.0 -00.5	256 29.7 +02.5	S 22 07.4 +00.0	223 12.8 +02.6	S 22 17.2 +00.0	13							
14	19 28.1 +00.9	N 15 03.5 -00.5	271 32.2 +02.5	S 22 07.4 +00.0	238 15.4 +02.6	S 22 17.2 +00.1	14							
15	34 29.0 +00.9	N 15 03.0 -00.6	286 34.7 +02.5	S 22 07.4 +00.0	253 18.0 +02.6	S 22 17.3 +00.0	15							
16	49 29.9 +01.0	N 15 02.4 -00.5	301 37.2 +02.5	S 22 07.4 +00.0	268 20.6 +02.7	S 22 17.3 +00.0	16							
17	64 30.9 +00.9	N 15 01.9 -00.5	316 39.7 +02.5	S 22 07.4 +00.0	283 23.3 +02.6	S 22 17.3 +00.0	17							
18	79 31.8 +00.9	N 15 01.4 -00.5	331 42.2 +02.5	S 22 07.4 +00.0	298 25.9 +02.6	S 22 17.3 +00.0	18							
19	94 32.7 +00.9	N 15 00.9 -00.6	346 44.7 +02.5	S 22 07.4 +00.0	313 28.5 +02.6	S 22 17.3 +00.1	19							
20	109 33.6 +00.9	N 15 00.3 -00.5	1 47.2 +02.5	S 22 07.4 +00.0	328 31.1 +02.7	S 22 17.4 +00.0	20							
21	124 34.5 +00.9	N 14 59.8 -00.5	16 49.7 +02.5	S 22 07.4 +00.0	343 33.8 +02.6	S 22 17.4 +00.0	21							
22	139 35.4 +00.9	N 14 59.3 -00.5	31 52.2 +02.5	S 22 07.4 +00.1	358 36.4 +02.6	S 22 17.4 +00.0	22							
23	154 36.3 +01.0	N 14 58.8 -00.6	46 54.7 +02.5	S 22 07.5 +00.0	13 39.0 +02.6	S 22 17.4 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 215° 215° 215° 215° 215° 214°	Greenwich Culmination Time: 12:42	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 107° 107° 107° 107° 107° 107°	Greenwich Culmination Time: 19:52	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 073° 073° 073° 073° 073° 073°	Greenwich Culmination Time: 22:05

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 31.8 +00.0	N 16 33.4 -00.7	180 12.4 -00.7	N 18 12.1 -00.8	100 53.9 -30.2	S 08 27.1 +12.3	00						
01	193 31.8 +00.1	N 16 32.7 -00.6	195 11.7 -00.7	N 18 11.3 -00.8	115 23.7 -30.2	S 08 39.4 +12.2	01						
02	208 31.9 +00.1	N 16 32.1 -00.7	210 11.0 -00.6	N 18 10.5 -00.8	129 53.5 -30.1	S 08 51.6 +12.1	02						
03	223 32.0 +00.1	N 16 31.4 -00.7	225 10.4 -00.7	N 18 09.7 -00.9	144 23.4 -30.2	S 09 03.7 +12.1	03						
04	238 32.1 +00.0	N 16 30.7 -00.7	240 09.7 -00.7	N 18 08.8 -00.8	158 53.2 -30.1	S 09 15.8 +12.0	04						
05	253 32.1 +00.1	N 16 30.0 -00.7	255 09.0 -00.6	N 18 08.0 -00.8	173 23.1 -30.2	S 09 27.8 +11.9	05						
06	268 32.2 +00.1	N 16 29.3 -00.7	270 08.4 -00.7	N 18 07.2 -00.8	187 52.9 -30.2	S 09 39.7 +11.9	06						
07	283 32.3 +00.1	N 16 28.6 -00.7	285 07.7 -00.7	N 18 06.4 -00.8	202 22.7 -30.1	S 09 51.6 +11.8	07						
08	298 32.4 +00.0	N 16 27.9 -00.7	300 07.0 -00.6	N 18 05.6 -00.8	216 52.6 -30.2	S 10 03.4 +11.7	08						
09	313 32.4 +00.1	N 16 27.2 -00.7	315 06.4 -00.7	N 18 04.8 -00.9	231 22.4 -30.2	S 10 15.1 +11.7	09						
10	328 32.5 +00.1	N 16 26.5 -00.7	330 05.7 -00.7	N 18 03.9 -00.8	245 52.2 -30.2	S 10 26.8 +11.6	10						
11	343 32.6 +00.1	N 16 25.8 -00.7	345 05.0 -00.6	N 18 03.1 -00.8	260 22.0 -30.1	S 10 38.4 +11.6	11						
12	358 32.7 +00.0	N 16 25.1 -00.7	0 04.4 -00.7	N 18 02.3 -00.8	274 51.9 -30.2	S 10 50.0 +11.4	12						
13	13 32.7 +00.1	N 16 24.4 -00.7	15 03.7 -00.7	N 18 01.5 -00.8	289 21.7 -30.2	S 11 01.4 +11.4	13						
14	28 32.8 +00.1	N 16 23.7 -00.7	30 03.0 -00.6	N 18 00.7 -00.9	303 51.5 -30.2	S 11 12.8 +11.4	14						
15	43 32.9 +00.1	N 16 23.0 -00.7	45 02.4 -00.7	N 17 59.8 -00.8	318 21.3 -30.2	S 11 24.2 +11.2	15						
16	58 33.0 +00.0	N 16 22.3 -00.7	60 01.7 -00.7	N 17 59.0 -00.8	332 51.1 -30.2	S 11 35.4 +11.2	16						
17	73 33.0 +00.1	N 16 21.6 -00.7	75 01.0 -00.6	N 17 58.2 -00.8	347 20.9 -30.3	S 11 46.6 +11.1	17						
18	88 33.1 +00.1	N 16 20.9 -00.7	90 00.4 -00.7	N 17 57.4 -00.9	1 50.6 -30.2	S 11 57.7 +11.0	18						
19	103 33.2 +00.1	N 16 20.2 -00.7	104 59.7 -00.6	N 17 56.5 -00.8	16 20.4 -30.2	S 12 08.7 +11.0	19						
20	118 33.3 +00.0	N 16 19.5 -00.7	119 59.1 -00.7	N 17 55.7 -00.8	30 50.2 -30.3	S 12 19.7 +10.8	20						
21	133 33.3 +00.1	N 16 18.8 -00.7	134 58.4 -00.7	N 17 54.9 -00.9	45 19.9 -30.2	S 12 30.5 +10.8	21						
22	148 33.4 +00.1	N 16 18.1 -00.7	149 57.7 -00.6	N 17 54.0 -00.8	59 49.7 -30.3	S 12 41.3 +10.8	22						
23	163 33.5 +00.1	N 16 17.4 -00.7	164 57.1 -00.7	N 17 53.2 -00.8	74 19.4 -30.3	S 12 52.1 +10.6	23						
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'5 58'3 58'2 58'1 58'0 57'8		HP 00'1 00'1 00'1 00'1 00'1 00'1					
	SHA 223° 223° 223° 223° 223° 222°	SHA 225° 225° 224° 224° 224° 224°		SHA 225° 225° 224° 224° 224° 224°		SHA 145° 142° 140° 138° 136° 134°		SHA 145° 142° 140° 138° 136° 134°					
	Greenwich Culmination Time: 12:05	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 17:52		Greenwich Culmination Time: 17:52		Greenwich Culmination Time: 17:52					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	169 37.3 +00.9	N 14 58.2 -00.5	61 57.2 +02.5	S 22 07.5 +00.0	28 41.6 +02.6	S 22 17.4 +00.1	00						
01	184 38.2 +00.9	N 14 57.7 -00.5	76 59.7 +02.5	S 22 07.5 +00.0	43 44.2 +02.7	S 22 17.5 +00.0	01						
02	199 39.1 +00.9	N 14 57.2 -00.5	92 02.2 +02.5	S 22 07.5 +00.0	58 46.9 +02.6	S 22 17.5 +00.0	02						
03	214 40.0 +00.9	N 14 56.7 -00.6	107 04.7 +02.5	S 22 07.5 +00.0	73 49.5 +02.6	S 22 17.5 +00.0	03						
04	229 40.9 +00.9	N 14 56.1 -00.5	122 07.2 +02.5	S 22 07.5 +00.0	88 52.1 +02.6	S 22 17.5 +00.0	04						
05	244 41.8 +00.9	N 14 55.6 -00.5	137 09.7 +02.5	S 22 07.5 +00.0	103 54.7 +02.7	S 22 17.5 +00.1	05						
06	259 42.7 +01.0	N 14 55.1 -00.5	152 12.2 +02.5	S 22 07.5 +00.0	118 57.4 +02.6	S 22 17.6 +00.0	06						
07	274 43.7 +00.9	N 14 54.6 -00.6	167 14.7 +02.5	S 22 07.5 +00.0	133 60.0 +02.6	S 22 17.6 +00.0	07						
08	289 44.6 +00.9	N 14 54.0 -00.5	182 17.2 +02.5	S 22 07.5 +00.0	149 02.6 +02.6	S 22 17.6 +00.0	08						
09	304 45.5 +00.9	N 14 53.5 -00.5	197 19.7 +02.5	S 22 07.5 +00.0	164 05.2 +02.7	S 22 17.6 +00.0	09						
10	319 46.4 +00.9	N 14 53.0 -00.5	212 22.2 +02.5	S 22 07.5 +00.0	179 07.9 +02.6	S 22 17.6 +00.1	10						
11	334 47.3 +00.9	N 14 52.5 -00.6	227 24.7 +02.5	S 22 07.5 +00.0	194 10.5 +02.6	S 22 17.7 +00.0	11						
12	349 48.2 +01.0	N 14 51.9 -00.5	242 27.2 +02.5	S 22 07.5 +00.0	209 13.1 +02.6	S 22 17.7 +00.0	12						
13	4 49.2 +00.9	N 14 51.4 -00.5	257 29.7 +02.5	S 22 07.5 +00.0	224 15.7 +02.6	S 22 17.7 +00.0	13						
14	19 50.1 +00.9	N 14 50.9 -00.5	272 32.2 +02.5	S 22 07.5 +00.0	239 18.3 +02.7	S 22 17.7 +00.1	14						
15	34 51.0 +00.9	N 14 50.4 -00.6	287 34.7 +02.5	S 22 07.5 +00.0	254 21.0 +02.6	S 22 17.8 +00.0	15						
16	49 51.9 +00.9	N 14 49.8 -00.5	302 37.2 +02.5	S 22 07.5 +00.0	269 23.6 +02.6	S 22 17.8 +00.0	16						
17	64 52.8 +00.9	N 14 49.3 -00.5	317 39.7 +02.5	S 22 07.5 +00.0	284 26.2 +02.6	S 22 17.8 +00.0	17						
18	79 53.7 +01.0	N 14 48.8 -00.6	332 42.2 +02.5	S 22 07.5 +00.0	299 28.8 +02.6	S 22 17.8 +00.0	18						
19	94 54.7 +00.9	N 14 48.2 -00.5	347 44.7 +02.5	S 22 07.5 +00.0	314 31.4 +02.7	S 22 17.8 +00.1	19						
20	109 55.6 +00.9	N 14 47.7 -00.5	2 47.2 +02.5	S 22 07.5 +00.0	329 34.1 +02.6	S 22 17.9 +00.0	20						
21	124 56.5 +00.9	N 14 47.2 -00.5	17 49.7 +02.5	S 22 07.5 +00.0	344 36.7 +02.6	S 22 17.9 +00.0	21						
22	139 57.4 +00.9	N 14 46.7 -00.6	32 52.2 +02.5	S 22 07.5 +00.1	359 39.3 +02.6	S 22 17.9 +00.0	22						
23	154 58.3 +00.9	N 14 46.1 -00.5	47 54.7 +02.5	S 22 07.6 +00.0	14 41.9 +02.6	S 22 17.9 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 214° 214° 214° 214° 214° 214°	SHA 107° 107° 107° 107° 107° 107°		SHA 107° 107° 107° 107° 107° 107°		SHA 073° 073° 073° 074° 074° 074°		SHA 073° 073° 073° 074° 074° 074°					
	Greenwich Culmination Time: 12:40	Greenwich Culmination Time: 19:48		Greenwich Culmination Time: 22:01		Greenwich Culmination Time: 22:01		Greenwich Culmination Time: 22:01					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 33.6 +00.1	N 16 16.7 -00.7	179 56.4 -00.6	N 17 52.4 -00.8	88 49.1 -30.2	S 13 02.7 +10.6	00							
01	193 33.7 +00.0	N 16 16.0 -00.7	194 55.8 -00.7	N 17 51.6 -00.9	103 18.9 -30.3	S 13 13.3 +10.4	01							
02	208 33.7 +00.1	N 16 15.3 -00.7	209 55.1 -00.6	N 17 50.7 -00.8	117 48.6 -30.3	S 13 23.7 +10.4	02							
03	223 33.8 +00.1	N 16 14.6 -00.7	224 54.5 -00.7	N 17 49.9 -00.8	132 18.3 -30.4	S 13 34.1 +10.3	03							
04	238 33.9 +00.1	N 16 13.9 -00.8	239 53.8 -00.7	N 17 49.1 -00.9	146 47.9 -30.3	S 13 44.4 +10.3	04							
05	253 34.0 +00.1	N 16 13.1 -00.7	254 53.1 -00.6	N 17 48.2 -00.8	161 17.6 -30.3	S 13 54.7 +10.1	05							
06	268 34.1 +00.0	N 16 12.4 -00.7	269 52.5 -00.7	N 17 47.4 -00.9	175 47.3 -30.4	S 14 04.8 +10.1	06							
07	283 34.1 +00.1	N 16 11.7 -00.7	284 51.8 -00.6	N 17 46.5 -00.8	190 16.9 -30.4	S 14 14.9 +10.0	07							
08	298 34.2 +00.1	N 16 11.0 -00.7	299 51.2 -00.7	N 17 45.7 -00.8	204 46.5 -30.4	S 14 24.9 +09.8	08							
09	313 34.3 +00.1	N 16 10.3 -00.7	314 50.5 -00.6	N 17 44.9 -00.9	219 16.1 -30.3	S 14 34.7 +09.8	09							
10	328 34.4 +00.1	N 16 09.6 -00.7	329 49.9 -00.7	N 17 44.0 -00.8	233 45.8 -30.5	S 14 44.5 +09.8	10							
11	343 34.5 +00.0	N 16 08.9 -00.7	344 49.2 -00.6	N 17 43.2 -00.8	248 15.3 -30.4	S 14 54.3 +09.6	11							
12	358 34.5 +00.1	N 16 08.2 -00.7	359 48.6 -00.7	N 17 42.4 -00.9	262 44.9 -30.4	S 15 03.9 +09.5	12							
13	13 34.6 +00.1	N 16 07.5 -00.7	14 47.9 -00.6	N 17 41.5 -00.8	277 14.5 -30.5	S 15 13.4 +09.5	13							
14	28 34.7 +00.1	N 16 06.8 -00.7	29 47.3 -00.7	N 17 40.7 -00.9	291 44.0 -30.5	S 15 22.9 +09.3	14							
15	43 34.8 +00.1	N 16 06.1 -00.8	44 46.6 -00.6	N 17 39.8 -00.8	306 13.5 -30.4	S 15 32.2 +09.3	15							
16	58 34.9 +00.1	N 16 05.3 -00.7	59 46.0 -00.7	N 17 39.0 -00.9	320 43.1 -30.5	S 15 41.5 +09.2	16							
17	73 35.0 +00.0	N 16 04.6 -00.7	74 45.3 -00.6	N 17 38.1 -00.8	335 12.6 -30.6	S 15 50.7 +09.0	17							
18	88 35.0 +00.1	N 16 03.9 -00.7	89 44.7 -00.7	N 17 37.3 -00.9	349 42.0 -30.5	S 15 59.7 +09.0	18							
19	103 35.1 +00.1	N 16 03.2 -00.7	104 44.0 -00.6	N 17 36.4 -00.8	4 11.5 -30.5	S 16 08.7 +08.9	19							
20	118 35.2 +00.1	N 16 02.5 -00.7	119 43.4 -00.7	N 17 35.6 -00.9	18 41.0 -30.6	S 16 17.6 +08.8	20							
21	133 35.3 +00.1	N 16 01.8 -00.7	134 42.7 -00.6	N 17 34.7 -00.8	33 10.4 -30.6	S 16 26.4 +08.7	21							
22	148 35.4 +00.1	N 16 01.1 -00.7	149 42.1 -00.7	N 17 33.9 -00.9	47 39.8 -30.6	S 16 35.1 +08.6	22							
23	163 35.5 +00.0	N 16 00.4 -00.8	164 41.4 -00.6	N 17 33.0 -00.8	62 09.2 -30.6	S 16 43.7 +08.5	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 222° 222° 222° 222° 222° 221°	Greenwich Culmination Time: 12:05	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 224° 223° 223° 223° 223° 223°	Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'6 15'6 15'6	HP 57'7 57'6 57'4 57'3 57'2 57'1	SHA 132° 129° 127° 125° 123° 121°	Greenwich Culmination Time: 18:42
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	169 59.2 +01.0	N 14 45.6 -00.5	62 57.2 +02.5	S 22 07.6 +00.0	29 44.5 +02.7	S 22 17.9 +00.1	00							
01	185 00.2 +00.9	N 14 45.1 -00.6	77 59.7 +02.5	S 22 07.6 +00.0	44 47.2 +02.6	S 22 18.0 +00.0	01							
02	200 01.1 +00.9	N 14 44.5 -00.5	93 02.2 +02.5	S 22 07.6 +00.0	59 49.8 +02.6	S 22 18.0 +00.0	02							
03	215 02.0 +00.9	N 14 44.0 -00.5	108 04.7 +02.5	S 22 07.6 +00.0	74 52.4 +02.6	S 22 18.0 +00.0	03							
04	230 02.9 +00.9	N 14 43.5 -00.5	123 07.2 +02.5	S 22 07.6 +00.0	89 55.0 +02.6	S 22 18.0 +00.0	04							
05	245 03.8 +00.9	N 14 43.0 -00.6	138 09.7 +02.4	S 22 07.6 +00.0	104 57.6 +02.7	S 22 18.0 +00.1	05							
06	260 04.7 +01.0	N 14 42.4 -00.5	153 12.1 +02.5	S 22 07.6 +00.0	120 00.3 +02.6	S 22 18.1 +00.0	06							
07	275 05.7 +00.9	N 14 41.9 -00.5	168 14.6 +02.5	S 22 07.6 +00.0	135 02.9 +02.6	S 22 18.1 +00.0	07							
08	290 06.6 +00.9	N 14 41.4 -00.6	183 17.1 +02.5	S 22 07.6 +00.0	150 05.5 +02.6	S 22 18.1 +00.0	08							
09	305 07.5 +00.9	N 14 40.8 -00.5	198 19.6 +02.5	S 22 07.6 +00.0	165 08.1 +02.6	S 22 18.1 +00.0	09							
10	320 08.4 +00.9	N 14 40.3 -00.5	213 22.1 +02.5	S 22 07.6 +00.0	180 10.7 +02.7	S 22 18.1 +00.1	10							
11	335 09.3 +01.0	N 14 39.8 -00.6	228 24.6 +02.5	S 22 07.6 +00.0	195 13.4 +02.6	S 22 18.2 +00.0	11							
12	350 10.3 +00.9	N 14 39.2 -00.5	243 27.1 +02.5	S 22 07.6 +00.0	210 16.0 +02.6	S 22 18.2 +00.0	12							
13	5 11.2 +00.9	N 14 38.7 -00.5	258 29.6 +02.5	S 22 07.6 +00.0	225 18.6 +02.6	S 22 18.2 +00.0	13							
14	20 12.1 +00.9	N 14 38.2 -00.6	273 32.1 +02.5	S 22 07.6 +00.0	240 21.2 +02.6	S 22 18.2 +00.0	14							
15	35 13.0 +00.9	N 14 37.6 -00.5	288 34.6 +02.5	S 22 07.6 +00.0	255 23.8 +02.7	S 22 18.2 +00.1	15							
16	50 13.9 +00.9	N 14 37.1 -00.5	303 37.1 +02.4	S 22 07.6 +00.0	270 26.5 +02.6	S 22 18.3 +00.0	16							
17	65 14.8 +01.0	N 14 36.6 -00.5	318 39.5 +02.5	S 22 07.6 +00.0	285 29.1 +02.6	S 22 18.3 +00.0	17							
18	80 15.8 +00.9	N 14 36.1 -00.6	333 42.0 +02.5	S 22 07.6 +00.1	300 31.7 +02.6	S 22 18.3 +00.0	18							
19	95 16.7 +00.9	N 14 35.5 -00.5	348 44.5 +02.5	S 22 07.7 +00.0	315 34.3 +02.6	S 22 18.3 +00.0	19							
20	110 17.6 +00.9	N 14 35.0 -00.5	3 47.0 +02.5	S 22 07.7 +00.0	330 36.9 +02.7	S 22 18.3 +00.1	20							
21	125 18.5 +00.9	N 14 34.5 -00.6	18 49.5 +02.5	S 22 07.7 +00.0	345 39.6 +02.6	S 22 18.4 +00.0	21							
22	140 19.4 +01.0	N 14 33.9 -00.5	33 52.0 +02.5	S 22 07.7 +00.0	0 42.2 +02.6	S 22 18.4 +00.0	22							
23	155 20.4 +00.9	N 14 33.4 -00.5	48 54.5 +02.5	S 22 07.7 +00.0	15 44.8 +02.6	S 22 18.4 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 214° 214° 214° 213° 213° 213°	Greenwich Culmination Time: 12:39	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 107° 107° 107° 107° 107° 107°	Greenwich Culmination Time: 19:44	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 074° 074° 074° 074° 074° 074°	Greenwich Culmination Time: 21:57

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 30%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	178 35.5 +00.1	N 15 59.6 -00.7	179 40.8 -00.7	N 17 32.2 -00.9	76 38.6 -30.6	S 16 52.2 +08.5							
01	193 35.6 +00.1	N 15 58.9 -00.7	194 40.1 -00.6	N 17 31.3 -00.8	91 08.0 -30.7	S 17 00.7 +08.3							
02	208 35.7 +00.1	N 15 58.2 -00.7	209 39.5 -00.7	N 17 30.5 -00.9	105 37.3 -30.6	S 17 09.0 +08.2							
03	223 35.8 +00.1	N 15 57.5 -00.7	224 38.8 -00.6	N 17 29.6 -00.8	120 06.7 -30.7	S 17 17.2 +08.1							
04	238 35.9 +00.1	N 15 56.8 -00.7	239 38.2 -00.7	N 17 28.8 -00.9	134 36.0 -30.7	S 17 25.3 +08.0							
05	253 36.0 +00.1	N 15 56.1 -00.8	254 37.5 -00.6	N 17 27.9 -00.8	149 05.3 -30.7	S 17 33.3 +08.0							
06	268 36.1 +00.0	N 15 55.3 -00.7	269 36.9 -00.6	N 17 27.1 -00.9	163 34.6 -30.8	S 17 41.3 +07.8							
07	283 36.1 +00.1	N 15 54.6 -00.7	284 36.3 -00.7	N 17 26.2 -00.9	178 03.8 -30.7	S 17 49.1 +07.7							
08	298 36.2 +00.1	N 15 53.9 -00.7	299 35.6 -00.6	N 17 25.3 -00.8	192 33.1 -30.8	S 17 56.8 +07.6							
09	313 36.3 +00.1	N 15 53.2 -00.7	314 35.0 -00.7	N 17 24.5 -00.9	207 02.3 -30.7	S 18 04.4 +07.5							
10	328 36.4 +00.1	N 15 52.5 -00.8	329 34.3 -00.6	N 17 23.6 -00.8	221 31.6 -30.8	S 18 11.9 +07.5							
11	343 36.5 +00.1	N 15 51.7 -00.7	344 33.7 -00.7	N 17 22.8 -00.9	236 00.8 -30.8	S 18 19.4 +07.3							
12	358 36.6 +00.1	N 15 51.0 -00.7	359 33.0 -00.6	N 17 21.9 -00.9	250 30.0 -30.9	S 18 26.7 +07.2							
13	13 36.7 +00.1	N 15 50.3 -00.7	14 32.4 -00.6	N 17 21.0 -00.8	264 59.1 -30.8	S 18 33.9 +07.1							
14	28 36.8 +00.1	N 15 49.6 -00.7	29 31.8 -00.7	N 17 20.2 -00.9	279 28.3 -30.9	S 18 41.0 +07.0							
15	43 36.9 +00.0	N 15 48.9 -00.8	44 31.1 -00.6	N 17 19.3 -00.9	293 57.4 -30.8	S 18 48.0 +06.9							
16	58 36.9 +00.1	N 15 48.1 -00.7	59 30.5 -00.7	N 17 18.4 -00.8	308 26.6 -30.9	S 18 54.9 +06.8							
17	73 37.0 +00.1	N 15 47.4 -00.7	74 29.8 -00.6	N 17 17.6 -00.9	322 55.7 -30.9	S 19 01.7 +06.6							
18	88 37.1 +00.1	N 15 46.7 -00.7	89 29.2 -00.6	N 17 16.7 -00.9	337 24.8 -30.9	S 19 08.3 +06.6							
19	103 37.2 +00.1	N 15 46.0 -00.7	104 28.6 -00.7	N 17 15.8 -00.8	351 53.9 -31.0	S 19 14.9 +06.5							
20	118 37.3 +00.1	N 15 45.3 -00.8	119 27.9 -00.6	N 17 15.0 -00.9	6 22.9 -30.9	S 19 21.4 +06.3							
21	133 37.4 +00.1	N 15 44.5 -00.7	134 27.3 -00.6	N 17 14.1 -00.9	20 52.0 -31.0	S 19 27.7 +06.3							
22	148 37.5 +00.1	N 15 43.8 -00.7	149 26.7 -00.7	N 17 13.2 -00.8	35 21.0 -30.9	S 19 34.0 +06.1							
23	163 37.6 +00.1	N 15 43.1 -00.7	164 26.0 -00.6	N 17 12.4 -00.9	49 50.1 -31.0	S 19 40.1 +06.1							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'5 15'5 15'5 15'4 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'0 56'8 56'7 56'6 56'5 56'4								
	SHA 221° 221° 221° 221° 221° 221°		SHA 222° 222° 222° 222° 222° 221°		SHA 118° 116° 114° 112° 109° 107°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 19:33								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	170 21.3 +00.9	N 14 32.9 -00.6	63 57.0 +02.4	S 22 07.7 +00.0	30 47.4 +02.6	S 22 18.4 +00.0							
01	185 22.2 +00.9	N 14 32.3 -00.5	78 59.4 +02.5	S 22 07.7 +00.0	45 50.0 +02.6	S 22 18.4 +00.1							
02	200 23.1 +00.9	N 14 31.8 -00.5	94 01.9 +02.5	S 22 07.7 +00.0	60 52.6 +02.7	S 22 18.5 +00.0							
03	215 24.0 +01.0	N 14 31.3 -00.6	109 04.4 +02.5	S 22 07.7 +00.0	75 55.3 +02.6	S 22 18.5 +00.0							
04	230 25.0 +00.9	N 14 30.7 -00.5	124 06.9 +02.5	S 22 07.7 +00.0	90 57.9 +02.6	S 22 18.5 +00.0							
05	245 25.9 +00.9	N 14 30.2 -00.5	139 09.4 +02.5	S 22 07.7 +00.0	106 00.5 +02.6	S 22 18.5 +00.1							
06	260 26.8 +00.9	N 14 29.7 -00.6	154 11.9 +02.5	S 22 07.7 +00.0	121 03.1 +02.6	S 22 18.6 +00.0							
07	275 27.7 +01.0	N 14 29.1 -00.5	169 14.4 +02.4	S 22 07.7 +00.0	136 05.7 +02.6	S 22 18.6 +00.0							
08	290 28.7 +00.9	N 14 28.6 -00.5	184 16.8 +02.5	S 22 07.7 +00.0	151 08.3 +02.7	S 22 18.6 +00.0							
09	305 29.6 +00.9	N 14 28.1 -00.6	199 19.3 +02.5	S 22 07.7 +00.0	166 11.0 +02.6	S 22 18.6 +00.0							
10	320 30.5 +00.9	N 14 27.5 -00.5	214 21.8 +02.5	S 22 07.7 +00.0	181 13.6 +02.6	S 22 18.6 +00.1							
11	335 31.4 +00.9	N 14 27.0 -00.5	229 24.3 +02.5	S 22 07.7 +00.0	196 16.2 +02.6	S 22 18.7 +00.0							
12	350 32.3 +01.0	N 14 26.5 -00.6	244 26.8 +02.5	S 22 07.7 +00.1	211 18.8 +02.6	S 22 18.7 +00.0							
13	5 33.3 +00.9	N 14 25.9 -00.5	259 29.3 +02.4	S 22 07.8 +00.0	226 21.4 +02.6	S 22 18.7 +00.0							
14	20 34.2 +00.9	N 14 25.4 -00.6	274 31.7 +02.5	S 22 07.8 +00.0	241 24.0 +02.7	S 22 18.7 +00.0							
15	35 35.1 +00.9	N 14 24.8 -00.5	289 34.2 +02.5	S 22 07.8 +00.0	256 26.7 +02.6	S 22 18.7 +00.1							
16	50 36.0 +00.9	N 14 24.3 -00.5	304 36.7 +02.5	S 22 07.8 +00.0	271 29.3 +02.6	S 22 18.8 +00.0							
17	65 36.9 +01.0	N 14 23.8 -00.6	319 39.2 +02.5	S 22 07.8 +00.0	286 31.9 +02.6	S 22 18.8 +00.0							
18	80 37.9 +00.9	N 14 23.2 -00.5	334 41.7 +02.4	S 22 07.8 +00.0	301 34.5 +02.6	S 22 18.8 +00.0							
19	95 38.8 +00.9	N 14 22.7 -00.5	349 44.1 +02.5	S 22 07.8 +00.0	316 37.1 +02.6	S 22 18.8 +00.0							
20	110 39.7 +00.9	N 14 22.2 -00.6	4 46.6 +02.5	S 22 07.8 +00.0	331 39.7 +02.7	S 22 18.8 +00.1							
21	125 40.6 +01.0	N 14 21.6 -00.5	19 49.1 +02.5	S 22 07.8 +00.0	346 42.4 +02.6	S 22 18.9 +00.0							
22	140 41.6 +00.9	N 14 21.1 -00.5	34 51.6 +02.5	S 22 07.8 +00.0	1 45.0 +02.6	S 22 18.9 +00.0							
23	155 42.5 +00.9	N 14 20.6 -00.6	49 54.1 +02.4	S 22 07.8 +00.0	16 47.6 +02.6	S 22 18.9 +00.0							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 213° 213° 213° 213° 213° 213°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:37		Greenwich Culmination Time: 19:40		Greenwich Culmination Time: 21:53								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 37.7 +00.1	N 15 42.4 -00.8	179 25.4 -00.6	N 17 11.5 -00.9	64 19.1 -31.0	S 19 46.2 +05.9	00						
01	193 37.8 +00.0	N 15 41.6 -00.7	194 24.8 -00.7	N 17 10.6 -00.8	78 48.1 -31.0	S 19 52.1 +05.8	01						
02	208 37.8 +00.1	N 15 40.9 -00.7	209 24.1 -00.6	N 17 09.8 -00.9	93 17.1 -31.0	S 19 57.9 +05.7	02						
03	223 37.9 +00.1	N 15 40.2 -00.8	224 23.5 -00.7	N 17 08.9 -00.9	107 46.1 -31.0	S 20 03.6 +05.6	03						
04	238 38.0 +00.1	N 15 39.4 -00.7	239 22.8 -00.6	N 17 08.0 -00.9	122 15.1 -31.1	S 20 09.2 +05.5	04						
05	253 38.1 +00.1	N 15 38.7 -00.7	254 22.2 -00.6	N 17 07.1 -00.8	136 44.0 -31.0	S 20 14.7 +05.4	05						
06	268 38.2 +00.1	N 15 38.0 -00.7	269 21.6 -00.6	N 17 06.3 -00.9	151 13.0 -31.1	S 20 20.1 +05.3	06						
07	283 38.3 +00.1	N 15 37.3 -00.8	284 21.0 -00.7	N 17 05.4 -00.9	165 41.9 -31.1	S 20 25.4 +05.1	07						
08	298 38.4 +00.1	N 15 36.5 -00.7	299 20.3 -00.6	N 17 04.5 -00.9	180 10.8 -31.1	S 20 30.5 +05.1	08						
09	313 38.5 +00.1	N 15 35.8 -00.7	314 19.7 -00.6	N 17 03.6 -00.9	194 39.7 -31.0	S 20 35.6 +04.9	09						
10	328 38.6 +00.1	N 15 35.1 -00.8	329 19.1 -00.7	N 17 02.7 -00.8	209 08.7 -31.1	S 20 40.5 +04.8	10						
11	343 38.7 +00.1	N 15 34.3 -00.7	344 18.4 -00.6	N 17 01.9 -00.9	223 37.6 -31.2	S 20 45.3 +04.7	11						
12	358 38.8 +00.1	N 15 33.6 -00.7	359 17.8 -00.6	N 17 01.0 -00.9	238 06.4 -31.1	S 20 50.0 +04.6	12						
13	13 38.9 +00.1	N 15 32.9 -00.7	14 17.2 -00.7	N 17 00.1 -00.9	252 35.3 -31.1	S 20 54.6 +04.5	13						
14	28 39.0 +00.1	N 15 32.2 -00.8	29 16.5 -00.6	N 16 59.2 -00.9	267 04.2 -31.1	S 20 59.1 +04.4	14						
15	43 39.1 +00.1	N 15 31.4 -00.7	44 15.9 -00.6	N 16 58.3 -00.9	281 33.1 -31.1	S 21 03.5 +04.2	15						
16	58 39.2 +00.1	N 15 30.7 -00.7	59 15.3 -00.6	N 16 57.4 -00.8	296 02.0 -31.2	S 21 07.7 +04.1	16						
17	73 39.3 +00.0	N 15 30.0 -00.8	74 14.7 -00.7	N 16 56.6 -00.9	310 30.8 -31.1	S 21 11.8 +04.1	17						
18	88 39.3 +00.1	N 15 29.2 -00.7	89 14.0 -00.6	N 16 55.7 -00.9	324 59.7 -31.2	S 21 15.9 +03.9	18						
19	103 39.4 +00.1	N 15 28.5 -00.7	104 13.4 -00.6	N 16 54.8 -00.9	339 28.5 -31.1	S 21 19.8 +03.8	19						
20	118 39.5 +00.1	N 15 27.8 -00.8	119 12.8 -00.6	N 16 53.9 -00.9	353 57.4 -31.2	S 21 23.6 +03.7	20						
21	133 39.6 +00.1	N 15 27.0 -00.7	134 12.2 -00.7	N 16 53.0 -00.9	8 26.2 -31.1	S 21 27.3 +03.5	21						
22	148 39.7 +00.1	N 15 26.3 -00.7	149 11.5 -00.6	N 16 52.1 -00.9	22 55.1 -31.2	S 21 30.8 +03.5	22						
23	163 39.8 +00.1	N 15 25.6 -00.8	164 10.9 -00.6	N 16 51.2 -00.9	37 23.9 -31.2	S 21 34.3 +03.3	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 15'3 15'3 15'3 15'3 15'2 15'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'3 56'2 56'1 56'0 55'9 55'8		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 220° 220° 220° 220° 220° 220°		SHA 221° 221° 221° 221° 220° 220°		SHA 105° 103° 101° 098° 096° 094°		SHA 105° 103° 101° 098° 096° 094°						
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 20:25								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	170 43.4 +00.9	N 14 20.0 -00.5	64 56.5 +02.5	S 22 07.8 +00.0	31 50.2 +02.6	S 22 18.9 +00.0	00						
01	185 44.3 +01.0	N 14 19.5 -00.5	79 59.0 +02.5	S 22 07.8 +00.0	46 52.8 +02.6	S 22 18.9 +00.1	01						
02	200 45.3 +00.9	N 14 19.0 -00.6	95 01.5 +02.5	S 22 07.8 +00.0	61 55.4 +02.6	S 22 19.0 +00.0	02						
03	215 46.2 +00.9	N 14 18.4 -00.5	110 04.0 +02.4	S 22 07.8 +00.1	76 58.0 +02.7	S 22 19.0 +00.0	03						
04	230 47.1 +00.9	N 14 17.9 -00.6	125 06.4 +02.5	S 22 07.9 +00.0	92 00.7 +02.6	S 22 19.0 +00.0	04						
05	245 48.0 +00.9	N 14 17.3 -00.5	140 08.9 +02.5	S 22 07.9 +00.0	107 03.3 +02.6	S 22 19.0 +00.0	05						
06	260 48.9 +01.0	N 14 16.8 -00.5	155 11.4 +02.5	S 22 07.9 +00.0	122 05.9 +02.6	S 22 19.0 +00.1	06						
07	275 49.9 +00.9	N 14 16.3 -00.6	170 13.9 +02.5	S 22 07.9 +00.0	137 08.5 +02.6	S 22 19.1 +00.0	07						
08	290 50.8 +00.9	N 14 15.7 -00.5	185 16.4 +02.4	S 22 07.9 +00.0	152 11.1 +02.6	S 22 19.1 +00.0	08						
09	305 51.7 +00.9	N 14 15.2 -00.5	200 18.8 +02.5	S 22 07.9 +00.0	167 13.7 +02.6	S 22 19.1 +00.0	09						
10	320 52.6 +01.0	N 14 14.7 -00.6	215 21.3 +02.5	S 22 07.9 +00.0	182 16.3 +02.7	S 22 19.1 +00.0	10						
11	335 53.6 +00.9	N 14 14.1 -00.5	230 23.8 +02.5	S 22 07.9 +00.0	197 19.0 +02.6	S 22 19.1 +00.1	11						
12	350 54.5 +00.9	N 14 13.6 -00.6	245 26.3 +02.4	S 22 07.9 +00.0	212 21.6 +02.6	S 22 19.2 +00.0	12						
13	5 55.4 +00.9	N 14 13.0 -00.5	260 28.7 +02.5	S 22 07.9 +00.0	227 24.2 +02.6	S 22 19.2 +00.0	13						
14	20 56.3 +01.0	N 14 12.5 -00.5	275 31.2 +02.5	S 22 07.9 +00.0	242 26.8 +02.6	S 22 19.2 +00.0	14						
15	35 57.3 +00.9	N 14 12.0 -00.6	290 33.7 +02.4	S 22 07.9 +00.0	257 29.4 +02.6	S 22 19.2 +00.0	15						
16	50 58.2 +00.9	N 14 11.4 -00.5	305 36.1 +02.5	S 22 07.9 +00.0	272 32.0 +02.6	S 22 19.2 +00.0	16						
17	65 59.1 +00.9	N 14 10.9 -00.6	320 38.6 +02.5	S 22 07.9 +00.0	287 34.6 +02.6	S 22 19.2 +00.1	17						
18	81 00.0 +01.0	N 14 10.3 -00.5	335 41.1 +02.5	S 22 07.9 +00.1	302 37.2 +02.7	S 22 19.3 +00.0	18						
19	96 01.0 +00.9	N 14 09.8 -00.5	350 43.6 +02.4	S 22 08.0 +00.0	317 39.9 +02.6	S 22 19.3 +00.0	19						
20	111 01.9 +00.9	N 14 09.3 -00.6	5 46.0 +02.5	S 22 08.0 +00.0	332 42.5 +02.6	S 22 19.3 +00.0	20						
21	126 02.8 +00.9	N 14 08.7 -00.5	20 48.5 +02.5	S 22 08.0 +00.0	347 45.1 +02.6	S 22 19.3 +00.0	21						
22	141 03.7 +01.0	N 14 08.2 -00.6	35 51.0 +02.4	S 22 08.0 +00.0	2 47.7 +02.6	S 22 19.3 +00.1	22						
23	156 04.7 +00.9	N 14 07.6 -00.5	50 53.4 +02.5	S 22 08.0 +00.0	17 50.3 +02.6	S 22 19.4 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 212° 212° 212° 212° 212° 212°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°		SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:36		Greenwich Culmination Time: 19:36		Greenwich Culmination Time: 21:48								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 39.9 +00.1	N 15 24.8 -00.7	179 10.3 -00.6	N 16 50.3 -00.9	51 52.7 -31.1	S 21 37.6 +03.2	00						
01	193 40.0 +00.1	N 15 24.1 -00.8	194 09.7 -00.7	N 16 49.4 -00.9	66 21.6 -31.2	S 21 40.8 +03.1	01						
02	208 40.1 +00.1	N 15 23.3 -00.7	209 09.0 -00.6	N 16 48.5 -00.8	80 50.4 -31.1	S 21 43.9 +03.0	02						
03	223 40.2 +00.1	N 15 22.6 -00.7	224 08.4 -00.6	N 16 47.7 -00.9	95 19.3 -31.2	S 21 46.9 +02.9	03						
04	238 40.3 +00.1	N 15 21.9 -00.8	239 07.8 -00.6	N 16 46.8 -00.9	109 48.1 -31.1	S 21 49.8 +02.8	04						
05	253 40.4 +00.1	N 15 21.1 -00.7	254 07.2 -00.7	N 16 45.9 -00.9	124 17.0 -31.2	S 21 52.6 +02.6	05						
06	268 40.5 +00.1	N 15 20.4 -00.7	269 06.5 -00.6	N 16 45.0 -00.9	138 45.8 -31.1	S 21 55.2 +02.5	06						
07	283 40.6 +00.1	N 15 19.7 -00.8	284 05.9 -00.6	N 16 44.1 -00.9	153 14.7 -31.2	S 21 57.7 +02.5	07						
08	298 40.7 +00.1	N 15 18.9 -00.7	299 05.3 -00.6	N 16 43.2 -00.9	167 43.5 -31.1	S 22 00.2 +02.2	08						
09	313 40.8 +00.1	N 15 18.2 -00.8	314 04.7 -00.6	N 16 42.3 -00.9	182 12.4 -31.2	S 22 02.4 +02.2	09						
10	328 40.9 +00.1	N 15 17.4 -00.7	329 04.1 -00.7	N 16 41.4 -00.9	196 41.2 -31.1	S 22 04.6 +02.1	10						
11	343 41.0 +00.1	N 15 16.7 -00.7	344 03.4 -00.6	N 16 40.5 -00.9	211 10.1 -31.1	S 22 06.7 +01.9	11						
12	358 41.1 +00.1	N 15 16.0 -00.8	359 02.8 -00.6	N 16 39.6 -00.9	225 39.0 -31.1	S 22 08.6 +01.9	12						
13	13 41.2 +00.1	N 15 15.2 -00.7	14 02.2 -00.6	N 16 38.7 -00.9	240 07.9 -31.1	S 22 10.5 +01.7	13						
14	28 41.3 +00.1	N 15 14.5 -00.8	29 01.6 -00.6	N 16 37.8 -00.9	254 36.8 -31.1	S 22 12.2 +01.6	14						
15	43 41.4 +00.1	N 15 13.7 -00.7	44 01.0 -00.6	N 16 36.9 -00.9	269 05.7 -31.1	S 22 13.8 +01.5	15						
16	58 41.5 +00.1	N 15 13.0 -00.8	59 00.4 -00.7	N 16 36.0 -00.9	283 34.6 -31.1	S 22 15.3 +01.3	16						
17	73 41.6 +00.1	N 15 12.2 -00.7	73 59.7 -00.6	N 16 35.1 -01.0	298 03.5 -31.1	S 22 16.6 +01.3	17						
18	88 41.7 +00.1	N 15 11.5 -00.7	88 59.1 -00.6	N 16 34.1 -00.9	312 32.4 -31.0	S 22 17.9 +01.1	18						
19	103 41.8 +00.1	N 15 10.8 -00.8	103 58.5 -00.6	N 16 33.2 -00.9	327 01.4 -31.0	S 22 19.0 +01.1	19						
20	118 41.9 +00.1	N 15 10.0 -00.7	118 57.9 -00.6	N 16 32.3 -00.9	341 30.4 -31.1	S 22 20.1 +00.9	20						
21	133 42.0 +00.1	N 15 09.3 -00.8	133 57.3 -00.6	N 16 31.4 -00.9	355 59.3 -31.0	S 22 21.0 +00.8	21						
22	148 42.1 +00.1	N 15 08.5 -00.7	148 56.7 -00.6	N 16 30.5 -00.9	10 28.3 -31.0	S 22 21.8 +00.6	22						
23	163 42.2 +00.1	N 15 07.8 -00.8	163 56.1 -00.7	N 16 29.6 -00.9	24 57.3 -31.0	S 22 22.4 +00.6	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 15'2 15'2 15'1 15'1 15'1 15'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 55'7 55'6 55'5 55'4 55'4 55'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 219° 219° 219° 219° 219° 219°	SHA 220° 220° 219° 219° 219° 219°	SHA 220° 220° 219° 219° 219° 219°	SHA 220° 220° 219° 219° 219° 219°	SHA 092° 089° 087° 085° 083° 080°	SHA 092° 089° 087° 085° 083° 080°	SHA 092° 089° 087° 085° 083° 080°						
	Greenwich Culmination Time: 12:05	Greenwich Culmination Time: 12:03	Greenwich Culmination Time: 12:03	Greenwich Culmination Time: 12:03	Greenwich Culmination Time: 21:16	Greenwich Culmination Time: 21:16	Greenwich Culmination Time: 21:16						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	171 05.6 +00.9	N 14 07.1 -00.5	65 55.9 +02.5	S 22 08.0 +00.0	32 52.9 +02.6	S 22 19.4 +00.0	00						
01	186 06.5 +00.9	N 14 06.6 -00.6	80 58.4 +02.5	S 22 08.0 +00.0	47 55.5 +02.6	S 22 19.4 +00.0	01						
02	201 07.4 +01.0	N 14 06.0 -00.5	96 00.9 +02.4	S 22 08.0 +00.0	62 58.1 +02.7	S 22 19.4 +00.0	02						
03	216 08.4 +00.9	N 14 05.5 -00.6	111 03.3 +02.5	S 22 08.0 +00.0	78 00.8 +02.6	S 22 19.4 +00.1	03						
04	231 09.3 +00.9	N 14 04.9 -00.5	126 05.8 +02.5	S 22 08.0 +00.0	93 03.4 +02.6	S 22 19.5 +00.0	04						
05	246 10.2 +01.0	N 14 04.4 -00.5	141 08.3 +02.4	S 22 08.0 +00.0	108 06.0 +02.6	S 22 19.5 +00.0	05						
06	261 11.2 +00.9	N 14 03.9 -00.6	156 10.7 +02.5	S 22 08.0 +00.0	123 08.6 +02.6	S 22 19.5 +00.0	06						
07	276 12.1 +00.9	N 14 03.3 -00.5	171 13.2 +02.5	S 22 08.0 +00.1	138 11.2 +02.6	S 22 19.5 +00.0	07						
08	291 13.0 +00.9	N 14 02.8 -00.6	186 15.7 +02.4	S 22 08.1 +00.0	153 13.8 +02.6	S 22 19.5 +00.1	08						
09	306 13.9 +01.0	N 14 02.2 -00.5	201 18.1 +02.5	S 22 08.1 +00.0	168 16.4 +02.6	S 22 19.6 +00.0	09						
10	321 14.9 +00.9	N 14 01.7 -00.6	216 20.6 +02.5	S 22 08.1 +00.0	183 19.0 +02.6	S 22 19.6 +00.0	10						
11	336 15.8 +00.9	N 14 01.1 -00.5	231 23.1 +02.4	S 22 08.1 +00.0	198 21.6 +02.7	S 22 19.6 +00.0	11						
12	351 16.7 +00.9	N 14 00.6 -00.5	246 25.5 +02.5	S 22 08.1 +00.0	213 24.3 +02.6	S 22 19.6 +00.0	12						
13	6 17.6 +01.0	N 14 00.1 -00.6	261 28.0 +02.5	S 22 08.1 +00.0	228 26.9 +02.6	S 22 19.6 +00.1	13						
14	21 18.6 +00.9	N 13 59.5 -00.5	276 30.5 +02.4	S 22 08.1 +00.0	243 29.5 +02.6	S 22 19.7 +00.0	14						
15	36 19.5 +00.9	N 13 59.0 -00.6	291 32.9 +02.5	S 22 08.1 +00.0	258 32.1 +02.6	S 22 19.7 +00.0	15						
16	51 20.4 +01.0	N 13 58.4 -00.5	306 35.4 +02.5	S 22 08.1 +00.0	273 34.7 +02.6	S 22 19.7 +00.0	16						
17	66 21.4 +00.9	N 13 57.9 -00.5	321 37.9 +02.4	S 22 08.1 +00.0	288 37.3 +02.6	S 22 19.7 +00.0	17						
18	81 22.3 +00.9	N 13 57.4 -00.6	336 40.3 +02.5	S 22 08.1 +00.0	303 39.9 +02.6	S 22 19.7 +00.1	18						
19	96 23.2 +00.9	N 13 56.8 -00.5	351 42.8 +02.4	S 22 08.1 +00.0	318 42.5 +02.6	S 22 19.8 +00.0	19						
20	111 24.1 +01.0	N 13 56.3 -00.6	6 45.2 +02.5	S 22 08.1 +00.1	333 45.1 +02.6	S 22 19.8 +00.0	20						
21	126 25.1 +00.9	N 13 55.7 -00.5	21 47.7 +02.5	S 22 08.2 +00.0	348 47.7 +02.7	S 22 19.8 +00.0	21						
22	141 26.0 +00.9	N 13 55.2 -00.6	36 50.2 +02.4	S 22 08.2 +00.0	3 50.4 +02.6	S 22 19.8 +00.0	22						
23	156 26.9 +00.9	N 13 54.6 -00.5	51 52.6 +02.5	S 22 08.2 +00.0	18 53.0 +02.6	S 22 19.8 +00.1	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	SD 00'2 00'2 00'2 00'2 00'2 00'2	SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 212° 212° 212° 212° 211° 211°	SHA 107° 107° 107° 107° 107° 107°	SHA 107° 107° 107° 107° 107° 107°	SHA 107° 107° 107° 107° 107° 107°	SHA 074° 074° 074° 074° 074° 074°	SHA 074° 074° 074° 074° 074° 074°	SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:34	Greenwich Culmination Time: 19:33	Greenwich Culmination Time: 19:33	Greenwich Culmination Time: 19:33	Greenwich Culmination Time: 21:44	Greenwich Culmination Time: 21:44	Greenwich Culmination Time: 21:44						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 42.3 +00.1	N 15 07.0 -00.7	178 55.4 -00.6	N 16 28.7 -00.9	39 26.3 -30.9	S 22 23.0 +00.4	00						
01	193 42.4 +00.1	N 15 06.3 -00.8	193 54.8 -00.6	N 16 27.8 -00.9	53 55.4 -31.0	S 22 23.4 +00.4	01						
02	208 42.5 +00.2	N 15 05.5 -00.7	208 54.2 -00.6	N 16 26.9 -00.9	68 24.4 -30.9	S 22 23.8 +00.2	02						
03	223 42.7 +00.1	N 15 04.8 -00.8	223 53.6 -00.6	N 16 26.0 -01.0	82 53.5 -30.9	S 22 24.0 +00.1	03						
04	238 42.8 +00.1	N 15 04.0 -00.7	238 53.0 -00.6	N 16 25.0 -00.9	97 22.6 -30.9	S 22 24.1 +00.0	04						
05	253 42.9 +00.1	N 15 03.3 -00.7	253 52.4 -00.6	N 16 24.1 -00.9	111 51.7 -30.9	S 22 24.1 -00.2	05						
06	268 43.0 +00.1	N 15 02.6 -00.8	268 51.8 -00.6	N 16 23.2 -00.9	126 20.8 -30.8	S 22 23.9 -00.2	06						
07	283 43.1 +00.1	N 15 01.8 -00.7	283 51.2 -00.6	N 16 22.3 -00.9	140 50.0 -30.8	S 22 23.7 -00.4	07						
08	298 43.2 +00.1	N 15 01.1 -00.8	298 50.6 -00.7	N 16 21.4 -00.9	155 19.2 -30.8	S 22 23.3 -00.4	08						
09	313 43.3 +00.1	N 15 00.3 -00.7	313 49.9 -00.6	N 16 20.5 -01.0	169 48.4 -30.8	S 22 22.9 -00.6	09						
10	328 43.4 +00.1	N 14 59.6 -00.8	328 49.3 -00.6	N 16 19.5 -00.9	184 17.6 -30.8	S 22 22.3 -00.7	10						
11	343 43.5 +00.1	N 14 58.8 -00.7	343 48.7 -00.6	N 16 18.6 -00.9	198 46.8 -30.7	S 22 21.6 -00.8	11						
12	358 43.6 +00.1	N 14 58.1 -00.8	358 48.1 -00.6	N 16 17.7 -00.9	213 16.1 -30.7	S 22 20.8 -00.9	12						
13	13 43.7 +00.1	N 14 57.3 -00.7	13 47.5 -00.6	N 16 16.8 -00.9	227 45.4 -30.7	S 22 19.9 -01.1	13						
14	28 43.8 +00.1	N 14 56.6 -00.8	28 46.9 -00.6	N 16 15.9 -01.0	242 14.7 -30.6	S 22 18.8 -01.1	14						
15	43 43.9 +00.1	N 14 55.8 -00.8	43 46.3 -00.6	N 16 14.9 -00.9	256 44.1 -30.7	S 22 17.7 -01.3	15						
16	58 44.0 +00.1	N 14 55.0 -00.7	58 45.7 -00.6	N 16 14.0 -00.9	271 13.4 -30.6	S 22 16.4 -01.3	16						
17	73 44.1 +00.1	N 14 54.3 -00.8	73 45.1 -00.6	N 16 13.1 -00.9	285 42.8 -30.5	S 22 15.1 -01.5	17						
18	88 44.2 +00.2	N 14 53.5 -00.7	88 44.5 -00.6	N 16 12.2 -01.0	300 12.3 -30.6	S 22 13.6 -01.6	18						
19	103 44.4 +00.1	N 14 52.8 -00.8	103 43.9 -00.6	N 16 11.2 -00.9	314 41.7 -30.5	S 22 12.0 -01.7	19						
20	118 44.5 +00.1	N 14 52.0 -00.7	118 43.3 -00.6	N 16 10.3 -00.9	329 11.2 -30.4	S 22 10.3 -01.8	20						
21	133 44.6 +00.1	N 14 51.3 -00.8	133 42.7 -00.6	N 16 09.4 -00.9	343 40.8 -30.5	S 22 08.5 -01.9	21						
22	148 44.7 +00.1	N 14 50.5 -00.7	148 42.1 -00.6	N 16 08.5 -01.0	358 10.3 -30.4	S 22 06.6 -02.0	22						
23	163 44.8 +00.1	N 14 49.8 -00.8	163 41.5 -00.6	N 16 07.5 -00.9	12 39.9 -30.4	S 22 04.6 -02.2	23						
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 15'0 15'0 15'0 15'0 15'0 14'9							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 55'2 55'1 55'1 55'0 54'9 54'9		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 218° 218° 218° 218° 218° 218°	SHA 219° 218° 218° 218° 218° 218°	SHA 219° 218° 218° 218° 218° 218°	SHA 078° 076° 074° 072° 069° 067°		SHA 074° 074° 074° 074° 074° 074°							
	Greenwich Culmination Time: 12:05	Greenwich Culmination Time: 12:04	Greenwich Culmination Time: 12:04	Greenwich Culmination Time: 22:07		Greenwich Culmination Time: 21:40							

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	171 27.8 +01.0	N 13 54.1 -00.6	66 55.1 +02.5	S 22 08.2 +00.0	33 55.6 +02.6	S 22 19.9 +00.0	00						
01	186 28.8 +00.9	N 13 53.5 -00.5	81 57.6 +02.4	S 22 08.2 +00.0	48 58.2 +02.6	S 22 19.9 +00.0	01						
02	201 29.7 +00.9	N 13 53.0 -00.5	97 00.0 +02.5	S 22 08.2 +00.0	64 00.8 +02.6	S 22 19.9 +00.0	02						
03	216 30.6 +01.0	N 13 52.5 -00.6	112 02.5 +02.4	S 22 08.2 +00.0	79 03.4 +02.6	S 22 19.9 +00.0	03						
04	231 31.6 +00.9	N 13 51.9 -00.5	127 04.9 +02.5	S 22 08.2 +00.0	94 06.0 +02.6	S 22 19.9 +00.1	04						
05	246 32.5 +00.9	N 13 51.4 -00.6	142 07.4 +02.5	S 22 08.2 +00.0	109 08.6 +02.6	S 22 20.0 +00.0	05						
06	261 33.4 +01.0	N 13 50.8 -00.5	157 09.9 +02.4	S 22 08.2 +00.0	124 11.2 +02.6	S 22 20.0 +00.0	06						
07	276 34.4 +00.9	N 13 50.3 -00.6	172 12.3 +02.5	S 22 08.2 +00.0	139 13.8 +02.6	S 22 20.0 +00.0	07						
08	291 35.3 +00.9	N 13 49.7 -00.5	187 14.8 +02.4	S 22 08.2 +00.1	154 16.4 +02.6	S 22 20.0 +00.0	08						
09	306 36.2 +00.9	N 13 49.2 -00.6	202 17.2 +02.5	S 22 08.3 +00.0	169 19.0 +02.7	S 22 20.0 +00.0	09						
10	321 37.1 +01.0	N 13 48.6 -00.5	217 19.7 +02.4	S 22 08.3 +00.0	184 21.7 +02.6	S 22 20.0 +00.1	10						
11	336 38.1 +00.9	N 13 48.1 -00.5	232 22.1 +02.5	S 22 08.3 +00.0	199 24.3 +02.6	S 22 20.1 +00.0	11						
12	351 39.0 +00.9	N 13 47.6 -00.6	247 24.6 +02.5	S 22 08.3 +00.0	214 26.9 +02.6	S 22 20.1 +00.0	12						
13	6 39.9 +01.0	N 13 47.0 -00.5	262 27.1 +02.4	S 22 08.3 +00.0	229 29.5 +02.6	S 22 20.1 +00.0	13						
14	21 40.9 +00.9	N 13 46.5 -00.6	277 29.5 +02.5	S 22 08.3 +00.0	244 32.1 +02.6	S 22 20.1 +00.0	14						
15	36 41.8 +00.9	N 13 45.9 -00.5	292 32.0 +02.4	S 22 08.3 +00.0	259 34.7 +02.6	S 22 20.1 +00.1	15						
16	51 42.7 +00.9	N 13 45.4 -00.6	307 34.4 +02.5	S 22 08.3 +00.0	274 37.3 +02.6	S 22 20.2 +00.0	16						
17	66 43.6 +01.0	N 13 44.8 -00.5	322 36.9 +02.4	S 22 08.3 +00.0	289 39.9 +02.6	S 22 20.2 +00.0	17						
18	81 44.6 +00.9	N 13 44.3 -00.6	337 39.3 +02.5	S 22 08.3 +00.0	304 42.5 +02.6	S 22 20.2 +00.0	18						
19	96 45.5 +00.9	N 13 43.7 -00.5	352 41.8 +02.5	S 22 08.3 +00.0	319 45.1 +02.6	S 22 20.2 +00.0	19						
20	111 46.4 +01.0	N 13 43.2 -00.6	7 44.3 +02.4	S 22 08.3 +00.1	334 47.7 +02.6	S 22 20.2 +00.1	20						
21	126 47.4 +00.9	N 13 42.6 -00.5	22 46.7 +02.5	S 22 08.4 +00.0	349 50.3 +02.6	S 22 20.3 +00.0	21						
22	141 48.3 +00.9	N 13 42.1 -00.6	37 49.2 +02.4	S 22 08.4 +00.0	4 52.9 +02.6	S 22 20.3 +00.0	22						
23	156 49.2 +01.0	N 13 41.5 -00.5	52 51.6 +02.5	S 22 08.4 +00.0	19 55.5 +02.7	S 22 20.3 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 211° 211° 211° 211° 211° 211°	SHA 107° 107° 107° 107° 107° 107°	SHA 107° 107° 107° 107° 107° 107°	SHA 074° 074° 074° 074° 074° 074°		SHA 074° 074° 074° 074° 074° 074°							
	Greenwich Culmination Time: 12:33	Greenwich Culmination Time: 19:29	Greenwich Culmination Time: 19:29	Greenwich Culmination Time: 21:40		Greenwich Culmination Time: 21:40							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 44.9 +00.1	N 14 49.0 -00.7	178 40.9 -00.6	N 16 06.6 -00.9	27 09.5 -30.3	S 22 02.4 -02.2	00						
01	193 45.0 +00.1	N 14 48.3 -00.8	193 40.3 -00.6	N 16 05.7 -01.0	41 39.2 -30.3	S 22 00.2 -02.4	01						
02	208 45.1 +00.1	N 14 47.5 -00.8	208 39.7 -00.6	N 16 04.7 -00.9	56 08.9 -30.3	S 21 57.8 -02.4	02						
03	223 45.2 +00.1	N 14 46.7 -00.7	223 39.1 -00.6	N 16 03.8 -00.9	70 38.6 -30.3	S 21 55.4 -02.6	03						
04	238 45.3 +00.1	N 14 46.0 -00.8	238 38.5 -00.6	N 16 02.9 -01.0	85 08.3 -30.2	S 21 52.8 -02.6	04						
05	253 45.4 +00.2	N 14 45.2 -00.7	253 37.9 -00.6	N 16 01.9 -00.9	99 38.1 -30.1	S 21 50.2 -02.8	05						
06	268 45.6 +00.1	N 14 44.5 -00.8	268 37.3 -00.6	N 16 01.0 -00.9	114 08.0 -30.2	S 21 47.4 -02.9	06						
07	283 45.7 +00.1	N 14 43.7 -00.7	283 36.7 -00.6	N 16 00.1 -01.0	128 37.8 -30.1	S 21 44.5 -03.0	07						
08	298 45.8 +00.1	N 14 43.0 -00.8	298 36.1 -00.6	N 15 59.1 -00.9	143 07.7 -30.0	S 21 41.5 -03.1	08						
09	313 45.9 +00.1	N 14 42.2 -00.8	313 35.5 -00.6	N 15 58.2 -00.9	157 37.7 -30.0	S 21 38.4 -03.2	09						
10	328 46.0 +00.1	N 14 41.4 -00.7	328 34.9 -00.6	N 15 57.3 -01.0	172 07.7 -30.0	S 21 35.2 -03.3	10						
11	343 46.1 +00.1	N 14 40.7 -00.8	343 34.3 -00.6	N 15 56.3 -00.9	186 37.7 -30.0	S 21 31.9 -03.4	11						
12	358 46.2 +00.1	N 14 39.9 -00.7	358 33.7 -00.6	N 15 55.4 -01.0	201 07.7 -29.8	S 21 28.5 -03.5	12						
13	13 46.3 +00.1	N 14 39.2 -00.8	13 33.1 -00.6	N 15 54.4 -00.9	215 37.9 -29.9	S 21 25.0 -03.6	13						
14	28 46.4 +00.2	N 14 38.4 -00.8	28 32.5 -00.6	N 15 53.5 -00.9	230 08.0 -29.8	S 21 21.4 -03.7	14						
15	43 46.6 +00.1	N 14 37.6 -00.7	43 31.9 -00.6	N 15 52.6 -01.0	244 38.2 -29.8	S 21 17.7 -03.8	15						
16	58 46.7 +00.1	N 14 36.9 -00.8	58 31.3 -00.6	N 15 51.6 -00.9	259 08.4 -29.7	S 21 13.9 -03.9	16						
17	73 46.8 +00.1	N 14 36.1 -00.8	73 30.7 -00.6	N 15 50.7 -01.0	273 38.7 -29.7	S 21 10.0 -04.0	17						
18	88 46.9 +00.1	N 14 35.3 -00.7	88 30.1 -00.6	N 15 49.7 -00.9	288 09.0 -29.7	S 21 06.0 -04.1	18						
19	103 47.0 +00.1	N 14 34.6 -00.8	103 29.5 -00.6	N 15 48.8 -01.0	302 39.3 -29.6	S 21 01.9 -04.2	19						
20	118 47.1 +00.1	N 14 33.8 -00.7	118 28.9 -00.5	N 15 47.8 -00.9	317 09.7 -29.5	S 20 57.7 -04.3	20						
21	133 47.2 +00.2	N 14 33.1 -00.8	133 28.4 -00.6	N 15 46.9 -00.9	331 40.2 -29.5	S 20 53.4 -04.4	21						
22	148 47.4 +00.1	N 14 32.3 -00.8	148 27.8 -00.6	N 15 46.0 -01.0	346 10.7 -29.5	S 20 49.0 -04.5	22						
23	163 47.5 +00.1	N 14 31.5 -00.7	163 27.2 -00.6	N 15 45.0 -00.9	0 41.2 -29.4	S 20 44.5 -04.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'8 54'7 54'7 54'6 54'6 54'5								
	SHA 218° 217° 217° 217° 217° 217°		SHA 217° 217° 217° 217° 217° 216°		SHA 065° 063° 061° 058° 056° 054°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 22:57								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	171 50.2 +00.9	N 13 41.0 -00.6	67 54.1 +02.4	S 22 08.4 +00.0	34 58.2 +02.6	S 22 20.3 +00.0	00						
01	186 51.1 +00.9	N 13 40.4 -00.5	82 56.5 +02.5	S 22 08.4 +00.0	50 00.8 +02.6	S 22 20.3 +00.1	01						
02	201 52.0 +01.0	N 13 39.9 -00.6	97 59.0 +02.4	S 22 08.4 +00.0	65 03.4 +02.6	S 22 20.4 +00.0	02						
03	216 53.0 +00.9	N 13 39.3 -00.5	113 01.4 +02.5	S 22 08.4 +00.0	80 06.0 +02.6	S 22 20.4 +00.0	03						
04	231 53.9 +00.9	N 13 38.8 -00.6	128 03.9 +02.4	S 22 08.4 +00.0	95 08.6 +02.6	S 22 20.4 +00.0	04						
05	246 54.8 +01.0	N 13 38.2 -00.5	143 06.3 +02.5	S 22 08.4 +00.0	110 11.2 +02.6	S 22 20.4 +00.0	05						
06	261 55.8 +00.9	N 13 37.7 -00.5	158 08.8 +02.4	S 22 08.4 +00.0	125 13.8 +02.6	S 22 20.4 +00.0	06						
07	276 56.7 +00.9	N 13 37.2 -00.6	173 11.2 +02.5	S 22 08.4 +00.1	140 16.4 +02.6	S 22 20.4 +00.1	07						
08	291 57.6 +01.0	N 13 36.6 -00.5	188 13.7 +02.4	S 22 08.5 +00.0	155 19.0 +02.6	S 22 20.5 +00.0	08						
09	306 58.6 +00.9	N 13 36.1 -00.6	203 16.1 +02.5	S 22 08.5 +00.0	170 21.6 +02.6	S 22 20.5 +00.0	09						
10	321 59.5 +00.9	N 13 35.5 -00.5	218 18.6 +02.4	S 22 08.5 +00.0	185 24.2 +02.6	S 22 20.5 +00.0	10						
11	337 00.4 +00.9	N 13 35.0 -00.6	233 21.0 +02.5	S 22 08.5 +00.0	200 26.8 +02.6	S 22 20.5 +00.0	11						
12	352 01.3 +01.0	N 13 34.4 -00.5	248 23.5 +02.4	S 22 08.5 +00.0	215 29.4 +02.6	S 22 20.5 +00.1	12						
13	7 02.3 +00.9	N 13 33.9 -00.6	263 25.9 +02.5	S 22 08.5 +00.0	230 32.0 +02.6	S 22 20.6 +00.0	13						
14	22 03.2 +00.9	N 13 33.3 -00.5	278 28.4 +02.4	S 22 08.5 +00.0	245 34.6 +02.6	S 22 20.6 +00.0	14						
15	37 04.1 +01.0	N 13 32.8 -00.6	293 30.8 +02.5	S 22 08.5 +00.0	260 37.2 +02.6	S 22 20.6 +00.0	15						
16	52 05.1 +00.9	N 13 32.2 -00.5	308 33.3 +02.4	S 22 08.5 +00.0	275 39.8 +02.6	S 22 20.6 +00.0	16						
17	67 06.0 +00.9	N 13 31.7 -00.6	323 35.7 +02.5	S 22 08.5 +00.1	290 42.4 +02.6	S 22 20.6 +00.1	17						
18	82 06.9 +01.0	N 13 31.1 -00.5	338 38.2 +02.4	S 22 08.6 +00.0	305 45.0 +02.6	S 22 20.7 +00.0	18						
19	97 07.9 +00.9	N 13 30.6 -00.6	353 40.6 +02.5	S 22 08.6 +00.0	320 47.6 +02.6	S 22 20.7 +00.0	19						
20	112 08.8 +00.9	N 13 30.0 -00.5	8 43.1 +02.4	S 22 08.6 +00.0	335 50.2 +02.7	S 22 20.7 +00.0	20						
21	127 09.7 +01.0	N 13 29.5 -00.6	23 45.5 +02.5	S 22 08.6 +00.0	350 52.9 +02.6	S 22 20.7 +00.0	21						
22	142 10.7 +00.9	N 13 28.9 -00.5	38 48.0 +02.4	S 22 08.6 +00.0	5 55.5 +02.6	S 22 20.7 +00.0	22						
23	157 11.6 +00.9	N 13 28.4 -00.6	53 50.4 +02.4	S 22 08.6 +00.0	20 58.1 +02.6	S 22 20.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 211° 211° 210° 210° 210° 210°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:31		Greenwich Culmination Time: 19:25		Greenwich Culmination Time: 21:36								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 47.6 +00.1	N 14 30.8 -00.8	178 26.6 -00.6	N 15 44.1 -01.0	15 11.8 -29.4	S 20 39.9 -04.7	00						
01	193 47.7 +00.1	N 14 30.0 -00.8	193 26.0 -00.6	N 15 43.1 -00.9	29 42.4 -29.3	S 20 35.2 -04.8	01						
02	208 47.8 +00.1	N 14 29.2 -00.7	208 25.4 -00.6	N 15 42.2 -01.0	44 13.1 -29.3	S 20 30.4 -04.9	02						
03	223 47.9 +00.2	N 14 28.5 -00.8	223 24.8 -00.6	N 15 41.2 -00.9	58 43.8 -29.3	S 20 25.5 -05.0	03						
04	238 48.1 +00.1	N 14 27.7 -00.8	238 24.2 -00.6	N 15 40.3 -01.0	73 14.5 -29.1	S 20 20.5 -05.0	04						
05	253 48.2 +00.1	N 14 26.9 -00.7	253 23.6 -00.6	N 15 39.3 -00.9	87 45.4 -29.2	S 20 15.5 -05.2	05						
06	268 48.3 +00.1	N 14 26.2 -00.8	268 23.0 -00.5	N 15 38.4 -01.0	102 16.2 -29.1	S 20 10.3 -05.3	06						
07	283 48.4 +00.1	N 14 25.4 -00.8	283 22.5 -00.6	N 15 37.4 -00.9	116 47.1 -29.0	S 20 05.0 -05.3	07						
08	298 48.5 +00.1	N 14 24.6 -00.7	298 21.9 -00.6	N 15 36.5 -01.0	131 18.1 -29.0	S 19 59.7 -05.4	08						
09	313 48.6 +00.2	N 14 23.9 -00.8	313 21.3 -00.6	N 15 35.5 -01.0	145 49.1 -29.0	S 19 54.3 -05.6	09						
10	328 48.8 +00.1	N 14 23.1 -00.8	328 20.7 -00.6	N 15 34.5 -00.9	160 20.1 -28.9	S 19 48.7 -05.6	10						
11	343 48.9 +00.1	N 14 22.3 -00.8	343 20.1 -00.6	N 15 33.6 -01.0	174 51.2 -28.8	S 19 43.1 -05.7	11						
12	358 49.0 +00.1	N 14 21.5 -00.7	358 19.5 -00.6	N 15 32.6 -00.9	189 22.4 -28.9	S 19 37.4 -05.8	12						
13	13 49.1 +00.1	N 14 20.8 -00.8	13 18.9 -00.5	N 15 31.7 -01.0	203 53.5 -28.7	S 19 31.6 -05.9	13						
14	28 49.2 +00.1	N 14 20.0 -00.8	28 18.4 -00.6	N 15 30.7 -00.9	218 24.8 -28.7	S 19 25.7 -05.9	14						
15	43 49.3 +00.2	N 14 19.2 -00.7	43 17.8 -00.6	N 15 29.8 -01.0	232 56.1 -28.7	S 19 19.8 -06.1	15						
16	58 49.5 +00.1	N 14 18.5 -00.8	58 17.2 -00.6	N 15 28.8 -01.0	247 27.4 -28.6	S 19 13.7 -06.1	16						
17	73 49.6 +00.1	N 14 17.7 -00.8	73 16.6 -00.6	N 15 27.8 -00.9	261 58.8 -28.6	S 19 07.6 -06.3	17						
18	88 49.7 +00.1	N 14 16.9 -00.8	88 16.0 -00.5	N 15 26.9 -01.0	276 30.2 -28.5	S 19 01.3 -06.3	18						
19	103 49.8 +00.1	N 14 16.1 -00.7	103 15.5 -00.6	N 15 25.9 -01.0	291 01.7 -28.4	S 18 55.0 -06.4	19						
20	118 49.9 +00.2	N 14 15.4 -00.8	118 14.9 -00.6	N 15 24.9 -00.9	305 33.3 -28.4	S 18 48.6 -06.4	20						
21	133 50.1 +00.1	N 14 14.6 -00.8	133 14.3 -00.6	N 15 24.0 -01.0	320 04.9 -28.4	S 18 42.2 -06.6	21						
22	148 50.2 +00.1	N 14 13.8 -00.8	148 13.7 -00.6	N 15 23.0 -00.9	334 36.5 -28.3	S 18 35.6 -06.6	22						
23	163 50.3 +00.1	N 14 13.0 -00.7	163 13.1 -00.5	N 15 22.1 -01.0	349 08.2 -28.3	S 18 29.0 -06.8	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'5 54'4 54'4 54'3 54'3 54'2						
	SHA 217° 216° 216° 216° 216° 216°			SHA 216° 216° 216° 216° 215° 215°			SHA 052° 050° 048° 046° 044° 042°						
	Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 23:44						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	172 12.5 +01.0	N 13 27.8 -00.5	68 52.8 +02.5	S 22 08.6 +00.0	36 00.7 +02.6	S 22 20.8 +00.0	00						
01	187 13.5 +00.9	N 13 27.3 -00.6	83 55.3 +02.4	S 22 08.6 +00.0	51 03.3 +02.6	S 22 20.8 +00.0	01						
02	202 14.4 +01.0	N 13 26.7 -00.6	98 57.7 +02.5	S 22 08.6 +00.0	66 05.9 +02.6	S 22 20.8 +00.0	02						
03	217 15.4 +00.9	N 13 26.1 -00.5	114 00.2 +02.4	S 22 08.6 +00.1	81 08.5 +02.6	S 22 20.8 +00.0	03						
04	232 16.3 +00.9	N 13 25.6 -00.6	129 02.6 +02.5	S 22 08.7 +00.0	96 11.1 +02.6	S 22 20.8 +00.1	04						
05	247 17.2 +01.0	N 13 25.0 -00.5	144 05.1 +02.4	S 22 08.7 +00.0	111 13.7 +02.6	S 22 20.9 +00.0	05						
06	262 18.2 +00.9	N 13 24.5 -00.6	159 07.5 +02.5	S 22 08.7 +00.0	126 16.3 +02.6	S 22 20.9 +00.0	06						
07	277 19.1 +00.9	N 13 23.9 -00.5	174 10.0 +02.4	S 22 08.7 +00.0	141 18.9 +02.6	S 22 20.9 +00.0	07						
08	292 20.0 +01.0	N 13 23.4 -00.6	189 12.4 +02.4	S 22 08.7 +00.0	156 21.5 +02.6	S 22 20.9 +00.0	08						
09	307 21.0 +00.9	N 13 22.8 -00.5	204 14.8 +02.5	S 22 08.7 +00.0	171 24.1 +02.6	S 22 20.9 +00.0	09						
10	322 21.9 +00.9	N 13 22.3 -00.6	219 17.3 +02.4	S 22 08.7 +00.0	186 26.7 +02.6	S 22 20.9 +00.1	10						
11	337 22.8 +01.0	N 13 21.7 -00.5	234 19.7 +02.5	S 22 08.7 +00.0	201 29.3 +02.6	S 22 21.0 +00.0	11						
12	352 23.8 +00.9	N 13 21.2 -00.6	249 22.2 +02.4	S 22 08.7 +00.0	216 31.9 +02.6	S 22 21.0 +00.0	12						
13	7 24.7 +00.9	N 13 20.6 -00.5	264 24.6 +02.4	S 22 08.7 +00.1	231 34.5 +02.6	S 22 21.0 +00.0	13						
14	22 25.6 +01.0	N 13 20.1 -00.6	279 27.0 +02.5	S 22 08.8 +00.0	246 37.1 +02.6	S 22 21.0 +00.0	14						
15	37 26.6 +00.9	N 13 19.5 -00.5	294 29.5 +02.4	S 22 08.8 +00.0	261 39.7 +02.6	S 22 21.0 +00.1	15						
16	52 27.5 +00.9	N 13 19.0 -00.6	309 31.9 +02.5	S 22 08.8 +00.0	276 42.3 +02.6	S 22 21.1 +00.0	16						
17	67 28.4 +01.0	N 13 18.4 -00.5	324 34.4 +02.4	S 22 08.8 +00.0	291 44.9 +02.6	S 22 21.1 +00.0	17						
18	82 29.4 +00.9	N 13 17.9 -00.6	339 36.8 +02.4	S 22 08.8 +00.0	306 47.5 +02.6	S 22 21.1 +00.0	18						
19	97 30.3 +00.9	N 13 17.3 -00.5	354 39.2 +02.5	S 22 08.8 +00.0	321 50.1 +02.6	S 22 21.1 +00.0	19						
20	112 31.2 +01.0	N 13 16.8 -00.6	9 41.7 +02.4	S 22 08.8 +00.0	336 52.7 +02.6	S 22 21.1 +00.0	20						
21	127 32.2 +00.9	N 13 16.2 -00.6	24 44.1 +02.5	S 22 08.8 +00.0	351 55.3 +02.6	S 22 21.1 +00.1	21						
22	142 33.1 +01.0	N 13 15.6 -00.5	39 46.6 +02.4	S 22 08.8 +00.1	6 57.9 +02.6	S 22 21.2 +00.0	22						
23	157 34.1 +00.9	N 13 15.1 -00.6	54 49.0 +02.4	S 22 08.9 +00.0	22 00.5 +02.6	S 22 21.2 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 210° 210° 210° 210° 210° 210°			SHA 107° 107° 107° 107° 107° 107°			SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:30			Greenwich Culmination Time: 19:21			Greenwich Culmination Time: 21:32						

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 50.4 +00.1	N 14 12.3 -00.8	178 12.6 -00.6	N 15 21.1 -01.0	3 39.9 -28.2	S 18 22.2 -06.8	00							
01	193 50.5 +00.2	N 14 11.5 -00.8	193 12.0 -00.6	N 15 20.1 -00.9	18 11.7 -28.2	S 18 15.4 -06.8	01							
02	208 50.7 +00.1	N 14 10.7 -00.8	208 11.4 -00.6	N 15 19.2 -01.0	32 43.5 -28.1	S 18 08.6 -07.0	02							
03	223 50.8 +00.1	N 14 09.9 -00.7	223 10.8 -00.6	N 15 18.2 -01.0	47 15.4 -28.0	S 18 01.6 -07.0	03							
04	238 50.9 +00.1	N 14 09.2 -00.8	238 10.2 -00.5	N 15 17.2 -01.0	61 47.4 -28.0	S 17 54.6 -07.2	04							
05	253 51.0 +00.2	N 14 08.4 -00.8	253 09.7 -00.6	N 15 16.2 -00.9	76 19.4 -28.0	S 17 47.4 -07.1	05							
06	268 51.2 +00.1	N 14 07.6 -00.8	268 09.1 -00.6	N 15 15.3 -01.0	90 51.4 -27.9	S 17 40.3 -07.3	06							
07	283 51.3 +00.1	N 14 06.8 -00.7	283 08.5 -00.6	N 15 14.3 -01.0	105 23.5 -27.9	S 17 33.0 -07.4	07							
08	298 51.4 +00.1	N 14 06.1 -00.8	298 07.9 -00.5	N 15 13.3 -00.9	119 55.6 -27.8	S 17 25.6 -07.4	08							
09	313 51.5 +00.1	N 14 05.3 -00.8	313 07.4 -00.6	N 15 12.4 -01.0	134 27.8 -27.8	S 17 18.2 -07.5	09							
10	328 51.6 +00.2	N 14 04.5 -00.8	328 06.8 -00.6	N 15 11.4 -01.0	149 00.0 -27.7	S 17 10.7 -07.5	10							
11	343 51.8 +00.1	N 14 03.7 -00.8	343 06.2 -00.6	N 15 10.4 -01.0	163 32.3 -27.6	S 17 03.2 -07.7	11							
12	358 51.9 +00.1	N 14 02.9 -00.7	358 05.6 -00.5	N 15 09.4 -00.9	178 04.7 -27.7	S 16 55.5 -07.7	12							
13	13 52.0 +00.1	N 14 02.2 -00.8	13 05.1 -00.6	N 15 08.5 -01.0	192 37.0 -27.5	S 16 47.8 -07.7	13							
14	28 52.1 +00.2	N 14 01.4 -00.8	28 04.5 -00.6	N 15 07.5 -01.0	207 09.5 -27.5	S 16 40.1 -07.9	14							
15	43 52.3 +00.1	N 14 00.6 -00.8	43 03.9 -00.6	N 15 06.5 -01.0	221 42.0 -27.5	S 16 32.2 -07.9	15							
16	58 52.4 +00.1	N 13 59.8 -00.8	58 03.3 -00.5	N 15 05.5 -00.9	236 14.5 -27.4	S 16 24.3 -08.0	16							
17	73 52.5 +00.1	N 13 59.0 -00.7	73 02.8 -00.6	N 15 04.6 -01.0	250 47.1 -27.4	S 16 16.3 -08.1	17							
18	88 52.6 +00.2	N 13 58.3 -00.8	88 02.2 -00.6	N 15 03.6 -01.0	265 19.7 -27.3	S 16 08.2 -08.1	18							
19	103 52.8 +00.1	N 13 57.5 -00.8	103 01.6 -00.5	N 15 02.6 -01.0	279 52.4 -27.3	S 16 00.1 -08.2	19							
20	118 52.9 +00.1	N 13 56.7 -00.8	118 01.1 -00.6	N 15 01.6 -01.0	294 25.1 -27.2	S 15 51.9 -08.2	20							
21	133 53.0 +00.1	N 13 55.9 -00.8	133 00.5 -00.6	N 15 00.6 -00.9	308 57.9 -27.2	S 15 43.7 -08.3	21							
22	148 53.1 +00.2	N 13 55.1 -00.8	147 59.9 -00.5	N 14 59.7 -01.0	323 30.7 -27.2	S 15 35.4 -08.4	22							
23	163 53.3 +00.1	N 13 54.3 -00.7	162 59.4 -00.6	N 14 58.7 -01.0	338 03.5 -27.0	S 15 27.0 -08.5	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 216° 215° 215° 215° 215° 215°	Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 215° 215° 215° 214° 214° 214°	Greenwich Culmination Time: 12:07	UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'7 14'7 14'7	HP 54'2 54'2 54'1 54'1 54'1 54'1	SHA 040° 037° 035° 033° 031° 029°	Greenwich Culmination Time: -1:00
UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	172 35.0 +00.9	N 13 14.5 -00.5	69 51.4 +02.5	S 22 08.9 +00.0	37 03.1 +02.6	S 22 21.2 +00.0	00							
01	187 35.9 +01.0	N 13 14.0 -00.6	84 53.9 +02.4	S 22 08.9 +00.0	52 05.7 +02.6	S 22 21.2 +00.0	01							
02	202 36.9 +00.9	N 13 13.4 -00.5	99 56.3 +02.4	S 22 08.9 +00.0	67 08.3 +02.6	S 22 21.2 +00.1	02							
03	217 37.8 +00.9	N 13 12.9 -00.6	114 58.7 +02.5	S 22 08.9 +00.0	82 10.9 +02.6	S 22 21.3 +00.0	03							
04	232 38.7 +01.0	N 13 12.3 -00.5	130 01.2 +02.4	S 22 08.9 +00.0	97 13.5 +02.6	S 22 21.3 +00.0	04							
05	247 39.7 +00.9	N 13 11.8 -00.6	145 03.6 +02.4	S 22 08.9 +00.0	112 16.1 +02.6	S 22 21.3 +00.0	05							
06	262 40.6 +00.9	N 13 11.2 -00.6	160 06.0 +02.5	S 22 08.9 +00.0	127 18.7 +02.6	S 22 21.3 +00.0	06							
07	277 41.5 +01.0	N 13 10.6 -00.5	175 08.5 +02.4	S 22 08.9 +00.1	142 21.3 +02.6	S 22 21.3 +00.1	07							
08	292 42.5 +00.9	N 13 10.1 -00.6	190 10.9 +02.4	S 22 09.0 +00.0	157 23.9 +02.6	S 22 21.4 +00.0	08							
09	307 43.4 +01.0	N 13 09.5 -00.5	205 13.3 +02.5	S 22 09.0 +00.1	172 26.5 +02.6	S 22 21.4 +00.0	09							
10	322 44.4 +00.9	N 13 09.0 -00.6	220 15.8 +02.4	S 22 09.0 +00.0	187 29.1 +02.6	S 22 21.4 +00.0	10							
11	337 45.3 +00.9	N 13 08.4 -00.5	235 18.2 +02.4	S 22 09.0 +00.0	202 31.7 +02.6	S 22 21.4 +00.0	11							
12	352 46.2 +01.0	N 13 07.9 -00.6	250 20.6 +02.5	S 22 09.0 +00.0	217 34.3 +02.6	S 22 21.4 +00.0	12							
13	7 47.2 +00.9	N 13 07.3 -00.5	265 23.1 +02.4	S 22 09.0 +00.0	232 36.9 +02.6	S 22 21.4 +00.1	13							
14	22 48.1 +01.0	N 13 06.8 -00.6	280 25.5 +02.4	S 22 09.0 +00.0	247 39.5 +02.6	S 22 21.5 +00.0	14							
15	37 49.1 +00.9	N 13 06.2 -00.6	295 27.9 +02.5	S 22 09.0 +00.0	262 42.1 +02.6	S 22 21.5 +00.0	15							
16	52 50.0 +00.9	N 13 05.6 -00.5	310 30.4 +02.4	S 22 09.0 +00.1	277 44.7 +02.6	S 22 21.5 +00.0	16							
17	67 50.9 +01.0	N 13 05.1 -00.6	325 32.8 +02.4	S 22 09.1 +00.0	292 47.3 +02.6	S 22 21.5 +00.0	17							
18	82 51.9 +00.9	N 13 04.5 -00.5	340 35.2 +02.5	S 22 09.1 +00.0	307 49.9 +02.6	S 22 21.5 +00.0	18							
19	97 52.8 +00.9	N 13 04.0 -00.6	355 37.7 +02.4	S 22 09.1 +00.0	322 52.5 +02.6	S 22 21.5 +00.1	19							
20	112 53.7 +01.0	N 13 03.4 -00.5	10 40.1 +02.4	S 22 09.1 +00.0	337 55.1 +02.6	S 22 21.6 +00.0	20							
21	127 54.7 +00.9	N 13 02.9 -00.6	25 42.5 +02.5	S 22 09.1 +00.0	352 57.7 +02.6	S 22 21.6 +00.0	21							
22	142 55.6 +01.0	N 13 02.3 -00.6	40 45.0 +02.4	S 22 09.1 +00.0	8 00.3 +02.6	S 22 21.6 +00.0	22							
23	157 56.6 +00.9	N 13 01.7 -00.5	55 47.4 +02.4	S 22 09.1 +00.0	23 02.9 +02.6	S 22 21.6 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 209° 209° 209° 209° 209° 209°	Greenwich Culmination Time: 12:28	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 107° 107° 107° 107° 107° 107°	Greenwich Culmination Time: 19:17	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 074° 074° 074° 074° 074° 074°	Greenwich Culmination Time: 21:28

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 53.4 +00.1	N 13 53.6 -00.8	177 58.8 -00.6	N 14 57.7 -01.0	352 36.5 -27.1	S 15 18.5 -08.5							
01	193 53.5 +00.1	N 13 52.8 -00.8	192 58.2 -00.5	N 14 56.7 -01.0	7 09.4 -27.0	S 15 10.0 -08.5							
02	208 53.6 +00.2	N 13 52.0 -00.8	207 57.7 -00.6	N 14 55.7 -01.0	21 42.4 -26.9	S 15 01.5 -08.7							
03	223 53.8 +00.1	N 13 51.2 -00.8	222 57.1 -00.6	N 14 54.7 -00.9	36 15.5 -26.9	S 14 52.8 -08.7							
04	238 53.9 +00.1	N 13 50.4 -00.8	237 56.5 -00.5	N 14 53.8 -01.0	50 48.6 -26.9	S 14 44.1 -08.7							
05	253 54.0 +00.2	N 13 49.6 -00.8	252 56.0 -00.6	N 14 52.8 -01.0	65 21.7 -26.8	S 14 35.4 -08.8							
06	268 54.2 +00.1	N 13 48.8 -00.7	267 55.4 -00.6	N 14 51.8 -01.0	79 54.9 -26.8	S 14 26.6 -08.9							
07	283 54.3 +00.1	N 13 48.1 -00.8	282 54.8 -00.5	N 14 50.8 -01.0	94 28.1 -26.7	S 14 17.7 -08.9							
08	298 54.4 +00.1	N 13 47.3 -00.8	297 54.3 -00.6	N 14 49.8 -01.0	109 01.4 -26.7	S 14 08.8 -09.0							
09	313 54.5 +00.2	N 13 46.5 -00.8	312 53.7 -00.6	N 14 48.8 -01.0	123 34.7 -26.6	S 13 59.8 -09.1							
10	328 54.7 +00.1	N 13 45.7 -00.8	327 53.1 -00.5	N 14 47.8 -01.0	138 08.1 -26.6	S 13 50.7 -09.1							
11	343 54.8 +00.1	N 13 44.9 -00.8	342 52.6 -00.6	N 14 46.8 -01.0	152 41.5 -26.6	S 13 41.6 -09.1							
12	358 54.9 +00.2	N 13 44.1 -00.8	357 52.0 -00.6	N 14 45.8 -00.9	167 14.9 -26.5	S 13 32.5 -09.2							
13	13 55.1 +00.1	N 13 43.3 -00.8	12 51.4 -00.5	N 14 44.9 -01.0	181 48.4 -26.4	S 13 23.3 -09.3							
14	28 55.2 +00.1	N 13 42.5 -00.7	27 50.9 -00.6	N 14 43.9 -01.0	196 22.0 -26.5	S 13 14.0 -09.3							
15	43 55.3 +00.1	N 13 41.8 -00.8	42 50.3 -00.5	N 14 42.9 -01.0	210 55.5 -26.4	S 13 04.7 -09.4							
16	58 55.4 +00.2	N 13 41.0 -00.8	57 49.8 -00.6	N 14 41.9 -01.0	225 29.1 -26.3	S 12 55.3 -09.4							
17	73 55.6 +00.1	N 13 40.2 -00.8	72 49.2 -00.6	N 14 40.9 -01.0	240 02.8 -26.3	S 12 45.9 -09.5							
18	88 55.7 +00.1	N 13 39.4 -00.8	87 48.6 -00.5	N 14 39.9 -01.0	254 36.5 -26.3	S 12 36.4 -09.5							
19	103 55.8 +00.2	N 13 38.6 -00.8	102 48.1 -00.6	N 14 38.9 -01.0	269 10.2 -26.2	S 12 26.9 -09.6							
20	118 56.0 +00.1	N 13 37.8 -00.8	117 47.5 -00.5	N 14 37.9 -01.0	283 44.0 -26.2	S 12 17.3 -09.6							
21	133 56.1 +00.1	N 13 37.0 -00.8	132 47.0 -00.6	N 14 36.9 -01.0	298 17.8 -26.1	S 12 07.7 -09.7							
22	148 56.2 +00.2	N 13 36.2 -00.8	147 46.4 -00.6	N 14 35.9 -01.0	312 51.7 -26.1	S 11 58.0 -09.7							
23	163 56.4 +00.1	N 13 35.4 -00.8	162 45.8 -00.5	N 14 34.9 -01.0	327 25.6 -26.1	S 11 48.3 -09.7							
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 14'7 14'7 14'7 14'7 14'7 14'7							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'0 54'0 54'0 54'0 54'0							
	SHA 215° 215° 214° 214° 214° 214°	SHA 214° 214° 213° 213° 213° 213°		SHA 214° 214° 213° 213° 213° 213°		SHA 028° 026° 024° 022° 020° 018°							
	Greenwich Culmination Time: 12:04	Greenwich Culmination Time: 12:08		Greenwich Culmination Time: 00:30		Greenwich Culmination Time: 00:30							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	172 57.5 +00.9	N 13 01.2 -00.6	70 49.8 +02.4	S 22 09.1 +00.0	38 05.5 +02.5	S 22 21.6 +00.1							
01	187 58.4 +01.0	N 13 00.6 -00.5	85 52.2 +02.5	S 22 09.1 +00.1	53 08.0 +02.6	S 22 21.7 +00.0							
02	202 59.4 +00.9	N 13 00.1 -00.6	100 54.7 +02.4	S 22 09.2 +00.0	68 10.6 +02.6	S 22 21.7 +00.0							
03	218 00.3 +01.0	N 12 59.5 -00.6	115 57.1 +02.4	S 22 09.2 +00.0	83 13.2 +02.6	S 22 21.7 +00.0							
04	233 01.3 +00.9	N 12 58.9 -00.5	130 59.5 +02.5	S 22 09.2 +00.0	98 15.8 +02.6	S 22 21.7 +00.0							
05	248 02.2 +00.9	N 12 58.4 -00.6	146 02.0 +02.4	S 22 09.2 +00.0	113 18.4 +02.6	S 22 21.7 +00.0							
06	263 03.1 +01.0	N 12 57.8 -00.5	161 04.4 +02.4	S 22 09.2 +00.0	128 21.0 +02.6	S 22 21.7 +00.1							
07	278 04.1 +00.9	N 12 57.3 -00.6	176 06.8 +02.4	S 22 09.2 +00.0	143 23.6 +02.6	S 22 21.8 +00.0							
08	293 05.0 +01.0	N 12 56.7 -00.5	191 09.2 +02.5	S 22 09.2 +00.0	158 26.2 +02.6	S 22 21.8 +00.0							
09	308 06.0 +00.9	N 12 56.2 -00.6	206 11.7 +02.4	S 22 09.2 +00.1	173 28.8 +02.6	S 22 21.8 +00.0							
10	323 06.9 +00.9	N 12 55.6 -00.6	221 14.1 +02.4	S 22 09.3 +00.0	188 31.4 +02.6	S 22 21.8 +00.0							
11	338 07.8 +01.0	N 12 55.0 -00.5	236 16.5 +02.4	S 22 09.3 +00.0	203 34.0 +02.6	S 22 21.8 +00.1							
12	353 08.8 +00.9	N 12 54.5 -00.6	251 18.9 +02.5	S 22 09.3 +00.0	218 36.6 +02.6	S 22 21.9 +00.0							
13	8 09.7 +01.0	N 12 53.9 -00.5	266 21.4 +02.4	S 22 09.3 +00.0	233 39.2 +02.6	S 22 21.9 +00.0							
14	23 10.7 +00.9	N 12 53.4 -00.6	281 23.8 +02.4	S 22 09.3 +00.0	248 41.8 +02.6	S 22 21.9 +00.0							
15	38 11.6 +00.9	N 12 52.8 -00.6	296 26.2 +02.4	S 22 09.3 +00.0	263 44.4 +02.6	S 22 21.9 +00.0							
16	53 12.5 +01.0	N 12 52.2 -00.5	311 28.6 +02.4	S 22 09.3 +00.0	278 47.0 +02.6	S 22 21.9 +00.0							
17	68 13.5 +00.9	N 12 51.7 -00.6	326 31.0 +02.5	S 22 09.3 +00.0	293 49.6 +02.6	S 22 21.9 +00.1							
18	83 14.4 +01.0	N 12 51.1 -00.5	341 33.5 +02.4	S 22 09.3 +00.1	308 52.2 +02.6	S 22 22.0 +00.0							
19	98 15.4 +00.9	N 12 50.6 -00.6	356 35.9 +02.4	S 22 09.4 +00.0	323 54.8 +02.6	S 22 22.0 +00.0							
20	113 16.3 +00.9	N 12 50.0 -00.6	11 38.3 +02.4	S 22 09.4 +00.0	338 57.4 +02.6	S 22 22.0 +00.0							
21	128 17.2 +01.0	N 12 49.4 -00.5	26 40.7 +02.5	S 22 09.4 +00.0	353 60.0 +02.5	S 22 22.0 +00.0							
22	143 18.2 +00.9	N 12 48.9 -00.6	41 43.2 +02.4	S 22 09.4 +00.0	9 02.5 +02.6	S 22 22.0 +00.0							
23	158 19.1 +01.0	N 12 48.3 -00.6	56 45.6 +02.4	S 22 09.4 +00.0	24 05.1 +02.6	S 22 22.0 +00.1							
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'2 00'2 00'1 00'1 00'1 00'1							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 209° 209° 209° 209° 208° 208°	SHA 107° 107° 107° 107° 107° 107°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°							
	Greenwich Culmination Time: 12:27	Greenwich Culmination Time: 19:13		Greenwich Culmination Time: 21:23		Greenwich Culmination Time: 21:23							

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 56.5 +00.1	N 13 34.6 -00.8			177 45.3 -00.6	N 14 33.9 -01.0			341 59.5 -26.0	S 11 38.6 -09.8			00
01	193 56.6 +00.2	N 13 33.8 -00.8			192 44.7 -00.5	N 14 32.9 -01.0			356 33.5 -26.0	S 11 28.8 -09.9			01
02	208 56.8 +00.1	N 13 33.0 -00.8			207 44.2 -00.6	N 14 31.9 -01.0			11 07.5 -26.0	S 11 18.9 -09.9			02
03	223 56.9 +00.1	N 13 32.2 -00.7			222 43.6 -00.5	N 14 30.9 -01.0			25 41.5 -25.9	S 11 09.0 -09.9			03
04	238 57.0 +00.2	N 13 31.5 -00.8			237 43.1 -00.6	N 14 29.9 -01.0			40 15.6 -25.9	S 10 59.1 -10.0			04
05	253 57.2 +00.1	N 13 30.7 -00.8			252 42.5 -00.6	N 14 28.9 -01.0			54 49.7 -25.9	S 10 49.1 -10.0			05
06	268 57.3 +00.1	N 13 29.9 -00.8			267 41.9 -00.5	N 14 27.9 -01.0			69 23.8 -25.8	S 10 39.1 -10.1			06
07	283 57.4 +00.2	N 13 29.1 -00.8			282 41.4 -00.6	N 14 26.9 -01.0			83 58.0 -25.8	S 10 29.0 -10.1			07
08	298 57.6 +00.1	N 13 28.3 -00.8			297 40.8 -00.5	N 14 25.9 -01.0			98 32.2 -25.8	S 10 18.9 -10.2			08
09	313 57.7 +00.1	N 13 27.5 -00.8			312 40.3 -00.6	N 14 24.9 -01.0			113 06.4 -25.7	S 10 08.7 -10.1			09
10	328 57.8 +00.2	N 13 26.7 -00.8			327 39.7 -00.5	N 14 23.9 -01.1			127 40.7 -25.7	S 09 58.6 -10.3			10
11	343 58.0 +00.1	N 13 25.9 -00.8			342 39.2 -00.6	N 14 22.8 -01.0			142 15.0 -25.7	S 09 48.3 -10.2			11
12	358 58.1 +00.1	N 13 25.1 -00.8			357 38.6 -00.5	N 14 21.8 -01.0			156 49.3 -25.6	S 09 38.1 -10.3			12
13	13 58.2 +00.2	N 13 24.3 -00.8			12 38.1 -00.6	N 14 20.8 -01.0			171 23.7 -25.6	S 09 27.8 -10.4			13
14	28 58.4 +00.1	N 13 23.5 -00.8			27 37.5 -00.5	N 14 19.8 -01.0			185 58.1 -25.6	S 09 17.4 -10.4			14
15	43 58.5 +00.1	N 13 22.7 -00.8			42 37.0 -00.6	N 14 18.8 -01.0			200 32.5 -25.5	S 09 07.0 -10.4			15
16	58 58.6 +00.2	N 13 21.9 -00.8			57 36.4 -00.5	N 14 17.8 -01.0			215 07.0 -25.5	S 08 56.6 -10.4			16
17	73 58.8 +00.1	N 13 21.1 -00.8			72 35.9 -00.6	N 14 16.8 -01.0			229 41.5 -25.5	S 08 46.2 -10.5			17
18	88 58.9 +00.1	N 13 20.3 -00.8			87 35.3 -00.5	N 14 15.8 -01.0			244 16.0 -25.5	S 08 35.7 -10.5			18
19	103 59.0 +00.2	N 13 19.5 -00.8			102 34.8 -00.6	N 14 14.8 -01.1			258 50.5 -25.5	S 08 25.2 -10.6			19
20	118 59.2 +00.1	N 13 18.7 -00.8			117 34.2 -00.5	N 14 13.7 -01.0			273 25.0 -25.4	S 08 14.6 -10.5			20
21	133 59.3 +00.1	N 13 17.9 -00.8			132 33.7 -00.6	N 14 12.7 -01.0			287 59.6 -25.4	S 08 04.1 -10.7			21
22	148 59.4 +00.2	N 13 17.1 -00.8			147 33.1 -00.5	N 14 11.7 -01.0			302 34.2 -25.3	S 07 53.4 -10.6			22
23	163 59.6 +00.1	N 13 16.3 -00.8			162 32.6 -00.6	N 14 10.7 -01.0			317 08.9 -25.4	S 07 42.8 -10.7			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'7 14'7 14'7 14'7				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'0 54'0 53'9 54'0 54'0 54'0				
	SHA 214° 214° 213° 213° 213° 213°				SHA 213° 212° 212° 212° 212° 212°				SHA 016° 014° 012° 010° 008° 007°				
	Greenwich Culmination Time: 12:04				Greenwich Culmination Time: 12:09				Greenwich Culmination Time: 01:14				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	173 20.1 +00.9	N 12 47.7 -00.5			71 48.0 +02.4	S 22 09.4 +00.0			39 07.7 +02.6	S 22 22.1 +00.0			00
01	188 21.0 +00.9	N 12 47.2 -00.6			86 50.4 +02.4	S 22 09.4 +00.0			54 10.3 +02.6	S 22 22.1 +00.0			01
02	203 21.9 +01.0	N 12 46.6 -00.5			101 52.8 +02.5	S 22 09.4 +00.1			69 12.9 +02.6	S 22 22.1 +00.0			02
03	218 22.9 +00.9	N 12 46.1 -00.6			116 55.3 +02.4	S 22 09.5 +00.0			84 15.5 +02.6	S 22 22.1 +00.0			03
04	233 23.8 +01.0	N 12 45.5 -00.6			131 57.7 +02.4	S 22 09.5 +00.0			99 18.1 +02.6	S 22 22.1 +00.0			04
05	248 24.8 +00.9	N 12 44.9 -00.5			147 00.1 +02.4	S 22 09.5 +00.0			114 20.7 +02.6	S 22 22.1 +00.1			05
06	263 25.7 +01.0	N 12 44.4 -00.6			162 02.5 +02.4	S 22 09.5 +00.0			129 23.3 +02.6	S 22 22.2 +00.0			06
07	278 26.7 +00.9	N 12 43.8 -00.5			177 04.9 +02.5	S 22 09.5 +00.0			144 25.9 +02.6	S 22 22.2 +00.0			07
08	293 27.6 +00.9	N 12 43.3 -00.6			192 07.4 +02.4	S 22 09.5 +00.0			159 28.5 +02.6	S 22 22.2 +00.0			08
09	308 28.5 +01.0	N 12 42.7 -00.6			207 09.8 +02.4	S 22 09.5 +00.1			174 31.1 +02.6	S 22 22.2 +00.0			09
10	323 29.5 +00.9	N 12 42.1 -00.5			222 12.2 +02.4	S 22 09.6 +00.0			189 33.7 +02.6	S 22 22.2 +00.1			10
11	338 30.4 +01.0	N 12 41.6 -00.6			237 14.6 +02.4	S 22 09.6 +00.0			204 36.3 +02.5	S 22 22.3 +00.0			11
12	353 31.4 +00.9	N 12 41.0 -00.6			252 17.0 +02.4	S 22 09.6 +00.0			219 38.8 +02.6	S 22 22.3 +00.0			12
13	8 32.3 +01.0	N 12 40.4 -00.5			267 19.4 +02.4	S 22 09.6 +00.0			234 41.4 +02.6	S 22 22.3 +00.0			13
14	23 33.3 +00.9	N 12 39.9 -00.6			282 21.8 +02.5	S 22 09.6 +00.0			249 44.0 +02.6	S 22 22.3 +00.0			14
15	38 34.2 +00.9	N 12 39.3 -00.6			297 24.3 +02.4	S 22 09.6 +00.0			264 46.6 +02.6	S 22 22.3 +00.0			15
16	53 35.1 +01.0	N 12 38.7 -00.5			312 26.7 +02.4	S 22 09.6 +00.0			279 49.2 +02.6	S 22 22.3 +00.1			16
17	68 36.1 +00.9	N 12 38.2 -00.6			327 29.1 +02.4	S 22 09.6 +00.1			294 51.8 +02.6	S 22 22.4 +00.0			17
18	83 37.0 +01.0	N 12 37.6 -00.5			342 31.5 +02.4	S 22 09.7 +00.0			309 54.4 +02.6	S 22 22.4 +00.0			18
19	98 38.0 +00.9	N 12 37.1 -00.6			357 33.9 +02.4	S 22 09.7 +00.0			324 57.0 +02.6	S 22 22.4 +00.0			19
20	113 38.9 +01.0	N 12 36.5 -00.6			12 36.3 +02.4	S 22 09.7 +00.0			339 59.6 +02.6	S 22 22.4 +00.0			20
21	128 39.9 +00.9	N 12 35.9 -00.5			27 38.7 +02.5	S 22 09.7 +00.0			355 02.2 +02.6	S 22 22.4 +00.0			21
22	143 40.8 +00.9	N 12 35.4 -00.6			42 41.2 +02.4	S 22 09.7 +00.0			10 04.8 +02.5	S 22 22.4 +00.1			22
23	158 41.7 +01.0	N 12 34.8 -00.6			57 43.6 +02.4	S 22 09.7 +00.0			25 07.3 +02.6	S 22 22.5 +00.0			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 208° 208° 208° 208° 208° 208°				SHA 107° 107° 107° 107° 107° 107°				SHA 074° 074° 074° 074° 074° 074°				
	Greenwich Culmination Time: 12:25				Greenwich Culmination Time: 19:09				Greenwich Culmination Time: 21:19				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 59.7 +00.2	N 13 15.5 -00.8	177 32.0 -00.5	N 14 09.7 -01.0	331 43.5 -25.3	S 07 32.1 -10.7	00						
01	193 59.9 +00.1	N 13 14.7 -00.8	192 31.5 -00.6	N 14 08.7 -01.0	346 18.2 -25.3	S 07 21.4 -10.7	01						
02	208 60.0 +00.1	N 13 13.9 -00.8	207 30.9 -00.5	N 14 07.7 -01.1	0 52.9 -25.3	S 07 10.7 -10.8	02						
03	224 00.1 +00.2	N 13 13.1 -00.8	222 30.4 -00.5	N 14 06.6 -01.0	15 27.6 -25.3	S 06 59.9 -10.8	03						
04	239 00.3 +00.1	N 13 12.3 -00.8	237 29.9 -00.6	N 14 05.6 -01.0	30 02.3 -25.2	S 06 49.1 -10.8	04						
05	254 00.4 +00.1	N 13 11.5 -00.8	252 29.3 -00.5	N 14 04.6 -01.0	44 37.1 -25.2	S 06 38.3 -10.8	05						
06	269 00.5 +00.2	N 13 10.7 -00.8	267 28.8 -00.6	N 14 03.6 -01.0	59 11.9 -25.2	S 06 27.5 -10.9	06						
07	284 00.7 +00.1	N 13 09.9 -00.8	282 28.2 -00.5	N 14 02.6 -01.1	73 46.7 -25.2	S 06 16.6 -10.9	07						
08	299 00.8 +00.2	N 13 09.1 -00.9	297 27.7 -00.6	N 14 01.5 -01.0	88 21.5 -25.2	S 06 05.7 -10.9	08						
09	314 01.0 +00.1	N 13 08.2 -00.8	312 27.1 -00.5	N 14 00.5 -01.0	102 56.3 -25.1	S 05 54.8 -10.9	09						
10	329 01.1 +00.1	N 13 07.4 -00.8	327 26.6 -00.5	N 13 59.5 -01.0	117 31.2 -25.2	S 05 43.9 -11.0	10						
11	344 01.2 +00.2	N 13 06.6 -00.8	342 26.1 -00.6	N 13 58.5 -01.1	132 06.0 -25.1	S 05 32.9 -11.0	11						
12	359 01.4 +00.1	N 13 05.8 -00.8	357 25.5 -00.5	N 13 57.4 -01.0	146 40.9 -25.1	S 05 21.9 -11.0	12						
13	14 01.5 +00.2	N 13 05.0 -00.8	12 25.0 -00.6	N 13 56.4 -01.0	161 15.8 -25.1	S 05 10.9 -11.0	13						
14	29 01.7 +00.1	N 13 04.2 -00.8	27 24.4 -00.5	N 13 55.4 -01.0	175 50.7 -25.1	S 04 59.9 -11.1	14						
15	44 01.8 +00.1	N 13 03.4 -00.8	42 23.9 -00.6	N 13 54.4 -01.1	190 25.6 -25.1	S 04 48.8 -11.0	15						
16	59 01.9 +00.2	N 13 02.6 -00.8	57 23.3 -00.5	N 13 53.3 -01.0	205 00.5 -25.0	S 04 37.8 -11.1	16						
17	74 02.1 +00.1	N 13 01.8 -00.8	72 22.8 -00.5	N 13 52.3 -01.0	219 35.5 -25.1	S 04 26.7 -11.1	17						
18	89 02.2 +00.2	N 13 01.0 -00.8	87 22.3 -00.6	N 13 51.3 -01.1	234 10.4 -25.0	S 04 15.6 -11.2	18						
19	104 02.4 +00.1	N 13 00.2 -00.8	102 21.7 -00.5	N 13 50.2 -01.0	248 45.4 -25.0	S 04 04.4 -11.1	19						
20	119 02.5 +00.1	N 12 59.4 -00.8	117 21.2 -00.5	N 13 49.2 -01.0	263 20.4 -25.1	S 03 53.3 -11.2	20						
21	134 02.6 +00.2	N 12 58.6 -00.9	132 20.7 -00.6	N 13 48.2 -01.0	277 55.3 -25.0	S 03 42.1 -11.1	21						
22	149 02.8 +00.1	N 12 57.7 -00.8	147 20.1 -00.5	N 13 47.2 -01.1	292 30.3 -25.0	S 03 31.0 -11.2	22						
23	164 02.9 +00.2	N 12 56.9 -00.8	162 19.6 -00.6	N 13 46.1 -01.0	307 05.3 -25.0	S 03 19.8 -11.2	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 14'7 14'7 14'7 14'7 14'7 14'7					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'0 54'0 54'0 54'0 54'1		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 213° 213° 213° 212° 212° 212°		SHA 211° 211° 211° 211° 211° 210°		SHA 005° 003° 001° 359° 357° 356°		SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 12:10		Greenwich Culmination Time: 01:56								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	173 42.7 +00.9	N 12 34.2 -00.5	72 46.0 +02.4	S 22 09.7 +00.0	40 09.9 +02.6	S 22 22.5 +00.0	00						
01	188 43.6 +01.0	N 12 33.7 -00.6	87 48.4 +02.4	S 22 09.7 +00.1	55 12.5 +02.6	S 22 22.5 +00.0	01						
02	203 44.6 +00.9	N 12 33.1 -00.6	102 50.8 +02.4	S 22 09.8 +00.0	70 15.1 +02.6	S 22 22.5 +00.0	02						
03	218 45.5 +01.0	N 12 32.5 -00.5	117 53.2 +02.4	S 22 09.8 +00.0	85 17.7 +02.6	S 22 22.5 +00.0	03						
04	233 46.5 +00.9	N 12 32.0 -00.6	132 55.6 +02.4	S 22 09.8 +00.0	100 20.3 +02.6	S 22 22.5 +00.1	04						
05	248 47.4 +00.9	N 12 31.4 -00.6	147 58.0 +02.5	S 22 09.8 +00.0	115 22.9 +02.6	S 22 22.6 +00.0	05						
06	263 48.3 +01.0	N 12 30.8 -00.5	163 00.5 +02.4	S 22 09.8 +00.0	130 25.5 +02.6	S 22 22.6 +00.0	06						
07	278 49.3 +00.9	N 12 30.3 -00.6	178 02.9 +02.4	S 22 09.8 +00.0	145 28.1 +02.6	S 22 22.6 +00.0	07						
08	293 50.2 +01.0	N 12 29.7 -00.6	193 05.3 +02.4	S 22 09.8 +00.1	160 30.7 +02.5	S 22 22.6 +00.0	08						
09	308 51.2 +00.9	N 12 29.1 -00.5	208 07.7 +02.4	S 22 09.9 +00.0	175 33.2 +02.6	S 22 22.6 +00.0	09						
10	323 52.1 +01.0	N 12 28.6 -00.6	223 10.1 +02.4	S 22 09.9 +00.0	190 35.8 +02.6	S 22 22.6 +00.1	10						
11	338 53.1 +00.9	N 12 28.0 -00.6	238 12.5 +02.4	S 22 09.9 +00.0	205 38.4 +02.6	S 22 22.7 +00.0	11						
12	353 54.0 +01.0	N 12 27.4 -00.5	253 14.9 +02.4	S 22 09.9 +00.0	220 41.0 +02.6	S 22 22.7 +00.0	12						
13	8 55.0 +00.9	N 12 26.9 -00.6	268 17.3 +02.4	S 22 09.9 +00.0	235 43.6 +02.6	S 22 22.7 +00.0	13						
14	23 55.9 +01.0	N 12 26.3 -00.6	283 19.7 +02.4	S 22 09.9 +00.0	250 46.2 +02.6	S 22 22.7 +00.0	14						
15	38 56.9 +00.9	N 12 25.7 -00.5	298 22.1 +02.4	S 22 09.9 +00.1	265 48.8 +02.6	S 22 22.7 +00.0	15						
16	53 57.8 +00.9	N 12 25.2 -00.6	313 24.5 +02.4	S 22 10.0 +00.0	280 51.4 +02.5	S 22 22.7 +00.1	16						
17	68 58.7 +01.0	N 12 24.6 -00.6	328 26.9 +02.5	S 22 10.0 +00.0	295 53.9 +02.6	S 22 22.8 +00.0	17						
18	83 59.7 +00.9	N 12 24.0 -00.5	343 29.4 +02.4	S 22 10.0 +00.0	310 56.5 +02.6	S 22 22.8 +00.0	18						
19	99 00.6 +01.0	N 12 23.5 -00.6	358 31.8 +02.4	S 22 10.0 +00.0	325 59.1 +02.6	S 22 22.8 +00.0	19						
20	114 01.6 +00.9	N 12 22.9 -00.6	13 34.2 +02.4	S 22 10.0 +00.0	341 01.7 +02.6	S 22 22.8 +00.0	20						
21	129 02.5 +01.0	N 12 22.3 -00.5	28 36.6 +02.4	S 22 10.0 +00.0	356 04.3 +02.6	S 22 22.8 +00.1	21						
22	144 03.5 +00.9	N 12 21.8 -00.6	43 39.0 +02.4	S 22 10.0 +00.0	11 06.9 +02.6	S 22 22.9 +00.0	22						
23	159 04.4 +01.0	N 12 21.2 -00.6	58 41.4 +02.4	S 22 10.0 +00.1	26 09.5 +02.6	S 22 22.9 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 208° 207° 207° 207° 207° 207°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:24		Greenwich Culmination Time: 19:05		Greenwich Culmination Time: 21:15								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 61%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	179 03.1 +00.1	N 12	56.1 -00.8	177 19.0 -00.5	N 13	45.1 -01.0	321 40.3 -25.0	S 03	08.6 -11.3	00			
01	194 03.2 +00.2	N 12	55.3 -00.8	192 18.5 -00.5	N 13	44.1 -01.1	336 15.3 -25.0	S 02	57.3 -11.2	01			
02	209 03.4 +00.1	N 12	54.5 -00.8	207 18.0 -00.6	N 13	43.0 -01.0	350 50.3 -25.0	S 02	46.1 -11.2	02			
03	224 03.5 +00.1	N 12	53.7 -00.8	222 17.4 -00.5	N 13	42.0 -01.0	5 25.3 -25.0	S 02	34.9 -11.3	03			
04	239 03.6 +00.2	N 12	52.9 -00.8	237 16.9 -00.5	N 13	41.0 -01.1	20 00.3 -25.0	S 02	23.6 -11.3	04			
05	254 03.8 +00.1	N 12	52.1 -00.8	252 16.4 -00.6	N 13	39.9 -01.0	34 35.3 -24.9	S 02	12.3 -11.3	05			
06	269 03.9 +00.2	N 12	51.3 -00.9	267 15.8 -00.5	N 13	38.9 -01.0	49 10.4 -25.0	S 02	01.0 -11.2	06			
07	284 04.1 +00.1	N 12	50.4 -00.8	282 15.3 -00.5	N 13	37.9 -01.1	63 45.4 -25.0	S 01	49.8 -11.3	07			
08	299 04.2 +00.2	N 12	49.6 -00.8	297 14.8 -00.6	N 13	36.8 -01.0	78 20.4 -25.0	S 01	38.5 -11.4	08			
09	314 04.4 +00.1	N 12	48.8 -00.8	312 14.2 -00.5	N 13	35.8 -01.1	92 55.4 -25.0	S 01	27.1 -11.3	09			
10	329 04.5 +00.1	N 12	48.0 -00.8	327 13.7 -00.5	N 13	34.7 -01.0	107 30.4 -25.0	S 01	15.8 -11.3	10			
11	344 04.6 +00.2	N 12	47.2 -00.8	342 13.2 -00.6	N 13	33.7 -01.0	122 05.4 -25.0	S 01	04.5 -11.3	11			
12	359 04.8 +00.1	N 12	46.4 -00.8	357 12.6 -00.5	N 13	32.7 -01.1	136 40.4 -25.0	S 00	53.2 -11.4	12			
13	14 04.9 +00.2	N 12	45.6 -00.9	12 12.1 -00.5	N 13	31.6 -01.0	151 15.4 -25.0	S 00	41.8 -11.3	13			
14	29 05.1 +00.1	N 12	44.7 -00.8	27 11.6 -00.6	N 13	30.6 -01.1	165 50.4 -25.0	S 00	30.5 -11.4	14			
15	44 05.2 +00.2	N 12	43.9 -00.8	42 11.0 -00.5	N 13	29.5 -01.0	180 25.4 -25.0	S 00	19.1 -11.4	15			
16	59 05.4 +00.1	N 12	43.1 -00.8	57 10.5 -00.5	N 13	28.5 -01.1	195 00.4 -25.1	S 00	07.7 -11.3	16			
17	74 05.5 +00.2	N 12	42.3 -00.8	72 10.0 -00.5	N 13	27.4 -01.0	209 35.3 -25.0	N 00	03.6 +11.4	17			
18	89 05.7 +00.1	N 12	41.5 -00.8	87 09.5 -00.6	N 13	26.4 -01.0	224 10.3 -25.0	N 00	15.0 +11.4	18			
19	104 05.8 +00.2	N 12	40.7 -00.9	102 08.9 -00.5	N 13	25.4 -01.1	238 45.3 -25.1	N 00	26.4 +11.3	19			
20	119 06.0 +00.1	N 12	39.8 -00.8	117 08.4 -00.5	N 13	24.3 -01.0	253 20.2 -25.1	N 00	37.7 +11.4	20			
21	134 06.1 +00.1	N 12	39.0 -00.8	132 07.9 -00.5	N 13	23.3 -01.1	267 55.1 -25.0	N 00	49.1 +11.4	21			
22	149 06.2 +00.2	N 12	38.2 -00.8	147 07.4 -00.6	N 13	22.2 -01.0	282 30.1 -25.1	N 01	00.5 +11.3	22			
23	164 06.4 +00.1	N 12	37.4 -00.8	162 06.8 -00.5	N 13	21.2 -01.1	297 05.0 -25.1	N 01	11.8 +11.4	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'8 14'8 14'8 14'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'1 54'1 54'2 54'2 54'2 54'3						
	SHA 212° 212° 212° 211° 211° 211°			SHA 210° 210° 210° 210° 209° 209°			SHA 354° 352° 350° 348° 346° 345°						
	Greenwich Culmination Time: 12:03			Greenwich Culmination Time: 12:11			Greenwich Culmination Time: 02:37						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	174 05.4 +00.9	N 12	20.6 -00.5	73 43.8 +02.4	S 22	10.1 +00.0	41 12.1 +02.5	S 22	22.9 +00.0	00			
01	189 06.3 +01.0	N 12	20.1 -00.6	88 46.2 +02.4	S 22	10.1 +00.0	56 14.6 +02.6	S 22	22.9 +00.0	01			
02	204 07.3 +00.9	N 12	19.5 -00.6	103 48.6 +02.4	S 22	10.1 +00.0	71 17.2 +02.6	S 22	22.9 +00.0	02			
03	219 08.2 +00.9	N 12	18.9 -00.5	118 51.0 +02.4	S 22	10.1 +00.0	86 19.8 +02.6	S 22	22.9 +00.1	03			
04	234 09.1 +01.0	N 12	18.4 -00.6	133 53.4 +02.4	S 22	10.1 +00.0	101 22.4 +02.6	S 22	23.0 +00.0	04			
05	249 10.1 +00.9	N 12	17.8 -00.6	148 55.8 +02.4	S 22	10.1 +00.0	116 25.0 +02.6	S 22	23.0 +00.0	05			
06	264 11.0 +01.0	N 12	17.2 -00.5	163 58.2 +02.4	S 22	10.1 +00.1	131 27.6 +02.6	S 22	23.0 +00.0	06			
07	279 12.0 +00.9	N 12	16.7 -00.6	179 00.6 +02.4	S 22	10.2 +00.0	146 30.2 +02.5	S 22	23.0 +00.0	07			
08	294 12.9 +01.0	N 12	16.1 -00.6	194 03.0 +02.4	S 22	10.2 +00.0	161 32.7 +02.6	S 22	23.0 +00.0	08			
09	309 13.9 +00.9	N 12	15.5 -00.5	209 05.4 +02.4	S 22	10.2 +00.0	176 35.3 +02.6	S 22	23.0 +00.1	09			
10	324 14.8 +01.0	N 12	15.0 -00.6	224 07.8 +02.4	S 22	10.2 +00.0	191 37.9 +02.6	S 22	23.1 +00.0	10			
11	339 15.8 +00.9	N 12	14.4 -00.6	239 10.2 +02.4	S 22	10.2 +00.0	206 40.5 +02.6	S 22	23.1 +00.0	11			
12	354 16.7 +01.0	N 12	13.8 -00.6	254 12.6 +02.4	S 22	10.2 +00.1	221 43.1 +02.6	S 22	23.1 +00.0	12			
13	9 17.7 +00.9	N 12	13.2 -00.5	269 15.0 +02.4	S 22	10.3 +00.0	236 45.7 +02.6	S 22	23.1 +00.0	13			
14	24 18.6 +01.0	N 12	12.7 -00.6	284 17.4 +02.4	S 22	10.3 +00.0	251 48.3 +02.5	S 22	23.1 +00.0	14			
15	39 19.6 +00.9	N 12	12.1 -00.6	299 19.8 +02.4	S 22	10.3 +00.0	266 50.8 +02.6	S 22	23.1 +00.0	15			
16	54 20.5 +01.0	N 12	11.5 -00.5	314 22.2 +02.4	S 22	10.3 +00.0	281 53.4 +02.6	S 22	23.1 +00.1	16			
17	69 21.5 +00.9	N 12	11.0 -00.6	329 24.6 +02.4	S 22	10.3 +00.0	296 56.0 +02.6	S 22	23.2 +00.0	17			
18	84 22.4 +01.0	N 12	10.4 -00.6	344 27.0 +02.4	S 22	10.3 +00.0	311 58.6 +02.6	S 22	23.2 +00.0	18			
19	99 23.4 +00.9	N 12	09.8 -00.5	359 29.4 +02.4	S 22	10.3 +00.1	327 01.2 +02.6	S 22	23.2 +00.0	19			
20	114 24.3 +01.0	N 12	09.3 -00.6	14 31.8 +02.4	S 22	10.4 +00.0	342 03.8 +02.5	S 22	23.2 +00.0	20			
21	129 25.3 +00.9	N 12	08.7 -00.6	29 34.2 +02.4	S 22	10.4 +00.0	357 06.3 +02.6	S 22	23.2 +00.0	21			
22	144 26.2 +00.9	N 12	08.1 -00.6	44 36.6 +02.4	S 22	10.4 +00.0	12 08.9 +02.6	S 22	23.2 +00.1	22			
23	159 27.1 +01.0	N 12	07.5 -00.5	59 39.0 +02.4	S 22	10.4 +00.0	27 11.5 +02.6	S 22	23.3 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 207° 207° 207° 207° 207° 206°			SHA 107° 107° 107° 107° 107° 107°			SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:22			Greenwich Culmination Time: 19:02			Greenwich Culmination Time: 21:11						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 06.5 +00.2	N 12 36.6 -00.9	177 06.3 -00.5	N 13 20.1 -01.0	311 39.9 -25.2	N 01 23.2 +11.4	00						
01	194 06.7 +00.1	N 12 35.7 -00.8	192 05.8 -00.6	N 13 19.1 -01.1	326 14.7 -25.1	N 01 34.6 +11.4	01						
02	209 06.8 +00.2	N 12 34.9 -00.8	207 05.2 -00.5	N 13 18.0 -01.0	340 49.6 -25.2	N 01 46.0 +11.3	02						
03	224 07.0 +00.1	N 12 34.1 -00.8	222 04.7 -00.5	N 13 17.0 -01.1	355 24.4 -25.1	N 01 57.3 +11.4	03						
04	239 07.1 +00.2	N 12 33.3 -00.8	237 04.2 -00.5	N 13 15.9 -01.0	9 59.3 -25.2	N 02 08.7 +11.4	04						
05	254 07.3 +00.1	N 12 32.5 -00.9	252 03.7 -00.5	N 13 14.9 -01.1	24 34.1 -25.2	N 02 20.1 +11.3	05						
06	269 07.4 +00.2	N 12 31.6 -00.8	267 03.2 -00.6	N 13 13.8 -01.0	39 08.9 -25.3	N 02 31.4 +11.4	06						
07	284 07.6 +00.1	N 12 30.8 -00.8	282 02.6 -00.5	N 13 12.8 -01.1	53 43.6 -25.2	N 02 42.8 +11.3	07						
08	299 07.7 +00.2	N 12 30.0 -00.8	297 02.1 -00.5	N 13 11.7 -01.0	68 18.4 -25.3	N 02 54.1 +11.4	08						
09	314 07.9 +00.1	N 12 29.2 -00.8	312 01.6 -00.5	N 13 10.7 -01.1	82 53.1 -25.3	N 03 05.5 +11.3	09						
10	329 08.0 +00.2	N 12 28.4 -00.9	327 01.1 -00.6	N 13 09.6 -01.0	97 27.8 -25.3	N 03 16.8 +11.3	10						
11	344 08.2 +00.1	N 12 27.5 -00.8	342 00.5 -00.5	N 13 08.6 -01.1	112 02.5 -25.3	N 03 28.1 +11.4	11						
12	359 08.3 +00.2	N 12 26.7 -00.8	357 00.0 -00.5	N 13 07.5 -01.0	126 37.2 -25.4	N 03 39.5 +11.3	12						
13	14 08.5 +00.1	N 12 25.9 -00.8	11 59.5 -00.5	N 13 06.5 -01.1	141 11.8 -25.4	N 03 50.8 +11.3	13						
14	29 08.6 +00.2	N 12 25.1 -00.9	26 59.0 -00.5	N 13 05.4 -01.1	155 46.4 -25.4	N 04 02.1 +11.3	14						
15	44 08.8 +00.1	N 12 24.2 -00.8	41 58.5 -00.6	N 13 04.3 -01.0	170 21.0 -25.5	N 04 13.4 +11.3	15						
16	59 08.9 +00.2	N 12 23.4 -00.8	56 57.9 -00.5	N 13 03.3 -01.1	184 55.5 -25.4	N 04 24.7 +11.2	16						
17	74 09.1 +00.1	N 12 22.6 -00.8	71 57.4 -00.5	N 13 02.2 -01.0	199 30.1 -25.5	N 04 35.9 +11.3	17						
18	89 09.2 +00.2	N 12 21.8 -00.9	86 56.9 -00.5	N 13 01.2 -01.1	214 04.6 -25.6	N 04 47.2 +11.2	18						
19	104 09.4 +00.1	N 12 20.9 -00.8	101 56.4 -00.5	N 13 00.1 -01.1	228 39.0 -25.5	N 04 58.4 +11.3	19						
20	119 09.5 +00.2	N 12 20.1 -00.8	116 55.9 -00.6	N 12 59.0 -01.0	243 13.5 -25.6	N 05 09.7 +11.2	20						
21	134 09.7 +00.1	N 12 19.3 -00.8	131 55.3 -00.5	N 12 58.0 -01.1	257 47.9 -25.7	N 05 20.9 +11.2	21						
22	149 09.8 +00.2	N 12 18.5 -00.9	146 54.8 -00.5	N 12 56.9 -01.0	272 22.2 -25.6	N 05 32.1 +11.2	22						
23	164 10.0 +00.1	N 12 17.6 -00.8	161 54.3 -00.5	N 12 55.9 -01.1	286 56.6 -25.7	N 05 43.3 +11.1	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'8 15'8 15'8 15'8 15'8 15'8		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	14'8 14'8 14'8 14'9 14'9 14'9						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	54'3 54'4 54'4 54'5 54'6 54'6						
SHA	211° 211° 211° 211° 210° 210°		SHA	209° 209° 209° 208° 208° 208°		SHA	343° 341° 339° 337° 335° 333°						
Greenwich Culmination Time: 12:03				Greenwich Culmination Time: 12:12				Greenwich Culmination Time: 03:18					

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	174 28.1 +00.9	N 12 07.0 -00.6	74 41.4 +02.4	S 22 10.4 +00.0	42 14.1 +02.6	S 22 23.3 +00.0	00						
01	189 29.0 +01.0	N 12 06.4 -00.6	89 43.8 +02.4	S 22 10.4 +00.0	57 16.7 +02.6	S 22 23.3 +00.0	01						
02	204 30.0 +00.9	N 12 05.8 -00.5	104 46.2 +02.4	S 22 10.4 +00.1	72 19.3 +02.5	S 22 23.3 +00.0	02						
03	219 30.9 +01.0	N 12 05.3 -00.6	119 48.6 +02.4	S 22 10.5 +00.0	87 21.8 +02.6	S 22 23.3 +00.0	03						
04	234 31.9 +00.9	N 12 04.7 -00.6	134 51.0 +02.3	S 22 10.5 +00.0	102 24.4 +02.6	S 22 23.3 +00.1	04						
05	249 32.8 +01.0	N 12 04.1 -00.6	149 53.3 +02.4	S 22 10.5 +00.0	117 27.0 +02.6	S 22 23.4 +00.0	05						
06	264 33.8 +00.9	N 12 03.5 -00.5	164 55.7 +02.4	S 22 10.5 +00.0	132 29.6 +02.6	S 22 23.4 +00.0	06						
07	279 34.7 +01.0	N 12 03.0 -00.6	179 58.1 +02.4	S 22 10.5 +00.0	147 32.2 +02.6	S 22 23.4 +00.0	07						
08	294 35.7 +00.9	N 12 02.4 -00.6	195 00.5 +02.4	S 22 10.5 +00.0	162 34.8 +02.5	S 22 23.4 +00.0	08						
09	309 36.6 +01.0	N 12 01.8 -00.6	210 02.9 +02.4	S 22 10.5 +00.1	177 37.3 +02.6	S 22 23.4 +00.0	09						
10	324 37.6 +00.9	N 12 01.2 -00.5	225 05.3 +02.4	S 22 10.6 +00.0	192 39.9 +02.6	S 22 23.4 +00.1	10						
11	339 38.5 +01.0	N 12 00.7 -00.6	240 07.7 +02.4	S 22 10.6 +00.0	207 42.5 +02.6	S 22 23.5 +00.0	11						
12	354 39.5 +00.9	N 12 00.1 -00.6	255 10.1 +02.4	S 22 10.6 +00.0	222 45.1 +02.6	S 22 23.5 +00.0	12						
13	9 40.4 +01.0	N 11 59.5 -00.5	270 12.5 +02.4	S 22 10.6 +00.0	237 47.7 +02.5	S 22 23.5 +00.0	13						
14	24 41.4 +00.9	N 11 59.0 -00.6	285 14.9 +02.4	S 22 10.6 +00.0	252 50.2 +02.6	S 22 23.5 +00.0	14						
15	39 42.3 +01.0	N 11 58.4 -00.6	300 17.3 +02.4	S 22 10.6 +00.1	267 52.8 +02.6	S 22 23.5 +00.0	15						
16	54 43.3 +00.9	N 11 57.8 -00.6	315 19.7 +02.4	S 22 10.7 +00.0	282 55.4 +02.6	S 22 23.5 +00.1	16						
17	69 44.2 +01.0	N 11 57.2 -00.5	330 22.1 +02.3	S 22 10.7 +00.0	297 58.0 +02.6	S 22 23.6 +00.0	17						
18	84 45.2 +00.9	N 11 56.7 -00.6	345 24.4 +02.4	S 22 10.7 +00.0	313 00.6 +02.6	S 22 23.6 +00.0	18						
19	99 46.1 +01.0	N 11 56.1 -00.6	0 26.8 +02.4	S 22 10.7 +00.0	328 03.2 +02.5	S 22 23.6 +00.0	19						
20	114 47.1 +00.9	N 11 55.5 -00.6	15 29.2 +02.4	S 22 10.7 +00.0	343 05.7 +02.6	S 22 23.6 +00.0	20						
21	129 48.0 +01.0	N 11 54.9 -00.5	30 31.6 +02.4	S 22 10.7 +00.1	358 08.3 +02.6	S 22 23.6 +00.0	21						
22	144 49.0 +00.9	N 11 54.4 -00.6	45 34.0 +02.4	S 22 10.8 +00.0	13 10.9 +02.6	S 22 23.6 +00.1	22						
23	159 49.9 +01.0	N 11 53.8 -00.6	60 36.4 +02.4	S 22 10.8 +00.0	28 13.5 +02.6	S 22 23.7 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'0 00'0 00'0 00'0 00'0 00'0		SD	00'3 00'3 00'3 00'3 00'3 00'3		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	206° 206° 206° 206° 206° 206°		SHA	107° 107° 107° 107° 107° 107°		SHA	074° 074° 074° 074° 074° 074°						
Greenwich Culmination Time: 12:21				Greenwich Culmination Time: 18:58				Greenwich Culmination Time: 21:07					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 10.1 +00.2	N 12 16.8 -00.8	176 53.8 -00.5	N 12 54.8 -01.1	301 30.9 -25.8	N 05 54.4 +11.2	00						
01	194 10.3 +00.1	N 12 16.0 -00.9	191 53.3 -00.5	N 12 53.7 -01.0	316 05.1 -25.7	N 06 05.6 +11.1	01						
02	209 10.4 +00.2	N 12 15.1 -00.8	206 52.8 -00.6	N 12 52.7 -01.1	330 39.4 -25.8	N 06 16.7 +11.2	02						
03	224 10.6 +00.1	N 12 14.3 -00.8	221 52.2 -00.5	N 12 51.6 -01.1	345 13.6 -25.9	N 06 27.9 +11.1	03						
04	239 10.7 +00.2	N 12 13.5 -00.8	236 51.7 -00.5	N 12 50.5 -01.0	359 47.7 -25.9	N 06 39.0 +11.0	04						
05	254 10.9 +00.1	N 12 12.7 -00.9	251 51.2 -00.5	N 12 49.5 -01.1	14 21.8 -25.9	N 06 50.0 +11.1	05						
06	269 11.0 +00.2	N 12 11.8 -00.8	266 50.7 -00.5	N 12 48.4 -01.1	28 55.9 -26.0	N 07 01.1 +11.0	06						
07	284 11.2 +00.2	N 12 11.0 -00.8	281 50.2 -00.5	N 12 47.3 -01.0	43 29.9 -26.0	N 07 12.1 +11.1	07						
08	299 11.4 +00.1	N 12 10.2 -00.9	296 49.7 -00.5	N 12 46.3 -01.1	58 03.9 -26.0	N 07 23.2 +10.9	08						
09	314 11.5 +00.2	N 12 09.3 -00.8	311 49.2 -00.5	N 12 45.2 -01.1	72 37.9 -26.1	N 07 34.1 +11.0	09						
10	329 11.7 +00.1	N 12 08.5 -00.8	326 48.7 -00.6	N 12 44.1 -01.0	87 11.8 -26.2	N 07 45.1 +11.0	10						
11	344 11.8 +00.2	N 12 07.7 -00.9	341 48.1 -00.5	N 12 43.1 -01.1	101 45.6 -26.2	N 07 56.1 +10.9	11						
12	359 12.0 +00.1	N 12 06.8 -00.8	356 47.6 -00.5	N 12 42.0 -01.1	116 19.4 -26.2	N 08 07.0 +10.9	12						
13	14 12.1 +00.2	N 12 06.0 -00.8	11 47.1 -00.5	N 12 40.9 -01.0	130 53.2 -26.3	N 08 17.9 +10.9	13						
14	29 12.3 +00.1	N 12 05.2 -00.9	26 46.6 -00.5	N 12 39.9 -01.1	145 26.9 -26.3	N 08 28.8 +10.8	14						
15	44 12.4 +00.2	N 12 04.3 -00.8	41 46.1 -00.5	N 12 38.8 -01.1	160 00.6 -26.4	N 08 39.6 +10.8	15						
16	59 12.6 +00.1	N 12 03.5 -00.8	56 45.6 -00.5	N 12 37.7 -01.1	174 34.2 -26.4	N 08 50.4 +10.8	16						
17	74 12.7 +00.2	N 12 02.7 -00.9	71 45.1 -00.5	N 12 36.6 -01.0	189 07.8 -26.5	N 09 01.2 +10.8	17						
18	89 12.9 +00.2	N 12 01.8 -00.8	86 44.6 -00.5	N 12 35.6 -01.1	203 41.3 -26.5	N 09 12.0 +10.7	18						
19	104 13.1 +00.1	N 12 01.0 -00.8	101 44.1 -00.5	N 12 34.5 -01.1	218 14.8 -26.6	N 09 22.7 +10.7	19						
20	119 13.2 +00.2	N 12 00.2 -00.9	116 43.6 -00.5	N 12 33.4 -01.1	232 48.2 -26.6	N 09 33.4 +10.6	20						
21	134 13.4 +00.1	N 11 59.3 -00.8	131 43.1 -00.6	N 12 32.3 -01.0	247 21.6 -26.7	N 09 44.0 +10.7	21						
22	149 13.5 +00.2	N 11 58.5 -00.8	146 42.5 -00.5	N 12 31.3 -01.1	261 54.9 -26.7	N 09 54.7 +10.6	22						
23	164 13.7 +00.1	N 11 57.7 -00.9	161 42.0 -00.5	N 12 30.2 -01.1	276 28.2 -26.8	N 10 05.3 +10.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 15'0 15'0 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'7 54'8 54'9 55'0 55'0 55'1								
	SHA 210° 210° 210° 210° 209° 209°		SHA 208° 208° 207° 207° 207° 207°		SHA 332° 330° 328° 326° 324° 322°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 12:12		Greenwich Culmination Time: 04:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	174 50.9 +00.9	N 11 53.2 -00.6	75 38.8 +02.4	S 22 10.8 +00.0	43 16.1 +02.5	S 22 23.7 +00.0	00						
01	189 51.8 +01.0	N 11 52.6 -00.5	90 41.2 +02.3	S 22 10.8 +00.0	58 18.6 +02.6	S 22 23.7 +00.0	01						
02	204 52.8 +00.9	N 11 52.1 -00.6	105 43.5 +02.4	S 22 10.8 +00.0	73 21.2 +02.6	S 22 23.7 +00.0	02						
03	219 53.7 +01.0	N 11 51.5 -00.6	120 45.9 +02.4	S 22 10.8 +00.0	88 23.8 +02.6	S 22 23.7 +00.0	03						
04	234 54.7 +00.9	N 11 50.9 -00.6	135 48.3 +02.4	S 22 10.8 +00.1	103 26.4 +02.6	S 22 23.7 +00.0	04						
05	249 55.6 +01.0	N 11 50.3 -00.5	150 50.7 +02.4	S 22 10.9 +00.0	118 29.0 +02.5	S 22 23.7 +00.1	05						
06	264 56.6 +00.9	N 11 49.8 -00.6	165 53.1 +02.4	S 22 10.9 +00.0	133 31.5 +02.6	S 22 23.8 +00.0	06						
07	279 57.5 +01.0	N 11 49.2 -00.6	180 55.5 +02.4	S 22 10.9 +00.0	148 34.1 +02.6	S 22 23.8 +00.0	07						
08	294 58.5 +00.9	N 11 48.6 -00.6	195 57.9 +02.3	S 22 10.9 +00.0	163 36.7 +02.6	S 22 23.8 +00.0	08						
09	309 59.4 +01.0	N 11 48.0 -00.5	211 00.2 +02.4	S 22 10.9 +00.0	178 39.3 +02.5	S 22 23.8 +00.0	09						
10	325 00.4 +00.9	N 11 47.5 -00.6	226 02.6 +02.4	S 22 10.9 +00.1	193 41.8 +02.6	S 22 23.8 +00.0	10						
11	340 01.3 +01.0	N 11 46.9 -00.6	241 05.0 +02.4	S 22 11.0 +00.0	208 44.4 +02.6	S 22 23.8 +00.1	11						
12	355 02.3 +00.9	N 11 46.3 -00.6	256 07.4 +02.4	S 22 11.0 +00.0	223 47.0 +02.6	S 22 23.9 +00.0	12						
13	10 03.2 +01.0	N 11 45.7 -00.5	271 09.8 +02.4	S 22 11.0 +00.0	238 49.6 +02.6	S 22 23.9 +00.0	13						
14	25 04.2 +01.0	N 11 45.2 -00.6	286 12.2 +02.4	S 22 11.0 +00.0	253 52.2 +02.5	S 22 23.9 +00.0	14						
15	40 05.2 +00.9	N 11 44.6 -00.6	301 14.6 +02.3	S 22 11.0 +00.0	268 54.7 +02.6	S 22 23.9 +00.0	15						
16	55 06.1 +01.0	N 11 44.0 -00.6	316 16.9 +02.4	S 22 11.0 +00.1	283 57.3 +02.6	S 22 23.9 +00.0	16						
17	70 07.1 +00.9	N 11 43.4 -00.5	331 19.3 +02.4	S 22 11.1 +00.0	298 59.9 +02.6	S 22 23.9 +00.1	17						
18	85 08.0 +01.0	N 11 42.9 -00.6	346 21.7 +02.4	S 22 11.1 +00.0	314 02.5 +02.5	S 22 24.0 +00.0	18						
19	100 09.0 +00.9	N 11 42.3 -00.6	1 24.1 +02.4	S 22 11.1 +00.0	329 05.0 +02.6	S 22 24.0 +00.0	19						
20	115 09.9 +01.0	N 11 41.7 -00.6	16 26.5 +02.3	S 22 11.1 +00.0	344 07.6 +02.6	S 22 24.0 +00.0	20						
21	130 10.9 +00.9	N 11 41.1 -00.5	31 28.8 +02.4	S 22 11.1 +00.0	359 10.2 +02.6	S 22 24.0 +00.0	21						
22	145 11.8 +01.0	N 11 40.6 -00.6	46 31.2 +02.4	S 22 11.1 +00.1	14 12.8 +02.6	S 22 24.0 +00.0	22						
23	160 12.8 +00.9	N 11 40.0 -00.6	61 33.6 +02.4	S 22 11.2 +00.0	29 15.4 +02.5	S 22 24.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 206° 206° 206° 205° 205° 205°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:19		Greenwich Culmination Time: 18:54		Greenwich Culmination Time: 21:03								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 13.8 +00.2	N 11 56.8 -00.8	176 41.5 -00.5	N 12 29.1 -01.1	291 01.4 -26.9	N 10 15.8 +10.6	00						
01	194 14.0 +00.1	N 11 56.0 -00.8	191 41.0 -00.5	N 12 28.0 -01.0	305 34.5 -26.9	N 10 26.4 +10.5	01						
02	209 14.1 +00.2	N 11 55.2 -00.9	206 40.5 -00.5	N 12 27.0 -01.1	320 07.6 -27.0	N 10 36.9 +10.4	02						
03	224 14.3 +00.2	N 11 54.3 -00.8	221 40.0 -00.5	N 12 25.9 -01.1	334 40.6 -27.0	N 10 47.3 +10.4	03						
04	239 14.5 +00.1	N 11 53.5 -00.8	236 39.5 -00.5	N 12 24.8 -01.1	349 13.6 -27.1	N 10 57.7 +10.4	04						
05	254 14.6 +00.2	N 11 52.7 -00.9	251 39.0 -00.5	N 12 23.7 -01.1	3 46.5 -27.2	N 11 08.1 +10.4	05						
06	269 14.8 +00.1	N 11 51.8 -00.8	266 38.5 -00.5	N 12 22.6 -01.0	18 19.3 -27.2	N 11 18.5 +10.3	06						
07	284 14.9 +00.2	N 11 51.0 -00.9	281 38.0 -00.5	N 12 21.6 -01.1	32 52.1 -27.2	N 11 28.8 +10.2	07						
08	299 15.1 +00.1	N 11 50.1 -00.8	296 37.5 -00.5	N 12 20.5 -01.1	47 24.9 -27.4	N 11 39.0 +10.3	08						
09	314 15.2 +00.2	N 11 49.3 -00.8	311 37.0 -00.5	N 12 19.4 -01.1	61 57.5 -27.4	N 11 49.3 +10.1	09						
10	329 15.4 +00.2	N 11 48.5 -00.9	326 36.5 -00.5	N 12 18.3 -01.1	76 30.1 -27.5	N 11 59.4 +10.2	10						
11	344 15.6 +00.1	N 11 47.6 -00.8	341 36.0 -00.5	N 12 17.2 -01.1	91 02.6 -27.5	N 12 09.6 +10.1	11						
12	359 15.7 +00.2	N 11 46.8 -00.8	356 35.5 -00.5	N 12 16.1 -01.0	105 35.1 -27.6	N 12 19.7 +10.0	12						
13	14 15.9 +00.1	N 11 46.0 -00.9	11 35.0 -00.5	N 12 15.1 -01.1	120 07.5 -27.7	N 12 29.7 +10.0	13						
14	29 16.0 +00.2	N 11 45.1 -00.8	26 34.5 -00.5	N 12 14.0 -01.1	134 39.8 -27.7	N 12 39.7 +10.0	14						
15	44 16.2 +00.2	N 11 44.3 -00.9	41 34.0 -00.5	N 12 12.9 -01.1	149 12.1 -27.8	N 12 49.7 +09.9	15						
16	59 16.4 +00.1	N 11 43.4 -00.8	56 33.5 -00.5	N 12 11.8 -01.1	163 44.3 -27.9	N 12 59.6 +09.8	16						
17	74 16.5 +00.2	N 11 42.6 -00.9	71 33.0 -00.5	N 12 10.7 -01.1	178 16.4 -27.9	N 13 09.4 +09.8	17						
18	89 16.7 +00.1	N 11 41.7 -00.8	86 32.5 -00.5	N 12 09.6 -01.1	192 48.5 -28.1	N 13 19.2 +09.8	18						
19	104 16.8 +00.2	N 11 40.9 -00.8	101 32.0 -00.5	N 12 08.5 -01.0	207 20.4 -28.1	N 13 29.0 +09.7	19						
20	119 17.0 +00.2	N 11 40.1 -00.9	116 31.5 -00.5	N 12 07.5 -01.1	221 52.3 -28.1	N 13 38.7 +09.6	20						
21	134 17.2 +00.1	N 11 39.2 -00.8	131 31.0 -00.5	N 12 06.4 -01.1	236 24.2 -28.3	N 13 48.3 +09.6	21						
22	149 17.3 +00.2	N 11 38.4 -00.9	146 30.5 -00.5	N 12 05.3 -01.1	250 55.9 -28.3	N 13 57.9 +09.6	22						
23	164 17.5 +00.1	N 11 37.5 -00.8	161 30.0 -00.5	N 12 04.2 -01.1	265 27.6 -28.4	N 14 07.5 +09.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'1 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'2 55'3 55'4 55'6 55'7 55'8								
	SHA 209° 209° 209° 209° 209° 208°		SHA 207° 206° 206° 206° 206° 206°		SHA 320° 318° 316° 314° 312° 310°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 12:13		Greenwich Culmination Time: 04:44								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	175 13.7 +01.0	N 11 39.4 -00.6	76 36.0 +02.4	S 22 11.2 +00.0	44 17.9 +02.6	S 22 24.0 +00.1	00						
01	190 14.7 +00.9	N 11 38.8 -00.6	91 38.4 +02.3	S 22 11.2 +00.0	59 20.5 +02.6	S 22 24.1 +00.0	01						
02	205 15.6 +01.0	N 11 38.2 -00.5	106 40.7 +02.4	S 22 11.2 +00.0	74 23.1 +02.6	S 22 24.1 +00.0	02						
03	220 16.6 +00.9	N 11 37.7 -00.6	121 43.1 +02.4	S 22 11.2 +00.0	89 25.7 +02.5	S 22 24.1 +00.0	03						
04	235 17.5 +01.0	N 11 37.1 -00.6	136 45.5 +02.4	S 22 11.2 +00.1	104 28.2 +02.6	S 22 24.1 +00.0	04						
05	250 18.5 +00.9	N 11 36.5 -00.6	151 47.9 +02.4	S 22 11.3 +00.0	119 30.8 +02.6	S 22 24.1 +00.0	05						
06	265 19.4 +01.0	N 11 35.9 -00.5	166 50.3 +02.3	S 22 11.3 +00.0	134 33.4 +02.6	S 22 24.1 +00.1	06						
07	280 20.4 +00.9	N 11 35.4 -00.6	181 52.6 +02.4	S 22 11.3 +00.0	149 36.0 +02.5	S 22 24.2 +00.0	07						
08	295 21.3 +01.0	N 11 34.8 -00.6	196 55.0 +02.4	S 22 11.3 +00.0	164 38.5 +02.6	S 22 24.2 +00.0	08						
09	310 22.3 +01.0	N 11 34.2 -00.6	211 57.4 +02.4	S 22 11.3 +00.0	179 41.1 +02.6	S 22 24.2 +00.0	09						
10	325 23.3 +00.9	N 11 33.6 -00.6	226 59.8 +02.3	S 22 11.3 +00.1	194 43.7 +02.6	S 22 24.2 +00.0	10						
11	340 24.2 +01.0	N 11 33.0 -00.5	242 02.1 +02.4	S 22 11.4 +00.0	209 46.3 +02.5	S 22 24.2 +00.0	11						
12	355 25.2 +00.9	N 11 32.5 -00.6	257 04.5 +02.4	S 22 11.4 +00.0	224 48.8 +02.6	S 22 24.2 +00.0	12						
13	10 26.1 +01.0	N 11 31.9 -00.6	272 06.9 +02.4	S 22 11.4 +00.0	239 51.4 +02.6	S 22 24.2 +00.1	13						
14	25 27.1 +00.9	N 11 31.3 -00.6	287 09.3 +02.3	S 22 11.4 +00.0	254 54.0 +02.6	S 22 24.3 +00.0	14						
15	40 28.0 +01.0	N 11 30.7 -00.6	302 11.6 +02.4	S 22 11.4 +00.0	269 56.6 +02.5	S 22 24.3 +00.0	15						
16	55 29.0 +00.9	N 11 30.1 -00.5	317 14.0 +02.4	S 22 11.4 +00.1	284 59.1 +02.6	S 22 24.3 +00.0	16						
17	70 29.9 +01.0	N 11 29.6 -00.6	332 16.4 +02.4	S 22 11.5 +00.0	300 01.7 +02.6	S 22 24.3 +00.0	17						
18	85 30.9 +00.9	N 11 29.0 -00.6	347 18.8 +02.3	S 22 11.5 +00.0	315 04.3 +02.5	S 22 24.3 +00.0	18						
19	100 31.8 +01.0	N 11 28.4 -00.6	2 21.1 +02.4	S 22 11.5 +00.0	330 06.8 +02.6	S 22 24.3 +00.1	19						
20	115 32.8 +01.0	N 11 27.8 -00.6	17 23.5 +02.4	S 22 11.5 +00.0	345 09.4 +02.6	S 22 24.4 +00.0	20						
21	130 33.8 +00.9	N 11 27.2 -00.5	32 25.9 +02.3	S 22 11.5 +00.0	0 12.0 +02.6	S 22 24.4 +00.0	21						
22	145 34.7 +01.0	N 11 26.7 -00.6	47 28.2 +02.4	S 22 11.5 +00.1	15 14.6 +02.5	S 22 24.4 +00.0	22						
23	160 35.7 +00.9	N 11 26.1 -00.6	62 30.6 +02.4	S 22 11.6 +00.0	30 17.1 +02.6	S 22 24.4 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 205° 205° 205° 205° 205° 205°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:18		Greenwich Culmination Time: 18:50		Greenwich Culmination Time: 20:59								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 17.6 +00.2	N 11 36.7 -00.8	176 29.5 -00.5	N 12 03.1 -01.1	279 59.2 -28.4	N 14 17.0 +09.4	00						
01	194 17.8 +00.2	N 11 35.9 -00.9	191 29.0 -00.5	N 12 02.0 -01.1	294 30.8 -28.6	N 14 26.4 +09.4	01						
02	209 18.0 +00.1	N 11 35.0 -00.8	206 28.5 -00.5	N 12 00.9 -01.1	309 02.2 -28.6	N 14 35.8 +09.3	02						
03	224 18.1 +00.2	N 11 34.2 -00.9	221 28.0 -00.5	N 11 59.8 -01.1	323 33.6 -28.7	N 14 45.1 +09.2	03						
04	239 18.3 +00.2	N 11 33.3 -00.8	236 27.5 -00.5	N 11 58.7 -01.1	338 04.9 -28.8	N 14 54.3 +09.2	04						
05	254 18.5 +00.1	N 11 32.5 -00.9	251 27.0 -00.5	N 11 57.6 -01.1	352 36.1 -28.8	N 15 03.5 +09.2	05						
06	269 18.6 +00.2	N 11 31.6 -00.8	266 26.5 -00.5	N 11 56.5 -01.1	7 07.3 -28.9	N 15 12.7 +09.0	06						
07	284 18.8 +00.1	N 11 30.8 -00.9	281 26.0 -00.5	N 11 55.4 -01.1	21 38.4 -29.1	N 15 21.7 +09.1	07						
08	299 18.9 +00.2	N 11 29.9 -00.8	296 25.5 -00.5	N 11 54.3 -01.1	36 09.3 -29.1	N 15 30.8 +08.9	08						
09	314 19.1 +00.2	N 11 29.1 -00.9	311 25.0 -00.5	N 11 53.2 -01.0	50 40.2 -29.1	N 15 39.7 +08.9	09						
10	329 19.3 +00.1	N 11 28.2 -00.8	326 24.5 -00.4	N 11 52.2 -01.1	65 11.1 -29.3	N 15 48.6 +08.8	10						
11	344 19.4 +00.2	N 11 27.4 -00.8	341 24.1 -00.5	N 11 51.1 -01.1	79 41.8 -29.3	N 15 57.4 +08.7	11						
12	359 19.6 +00.2	N 11 26.6 -00.9	356 23.6 -00.5	N 11 50.0 -01.1	94 12.5 -29.5	N 16 06.1 +08.7	12						
13	14 19.8 +00.1	N 11 25.7 -00.8	11 23.1 -00.5	N 11 48.9 -01.1	108 43.0 -29.5	N 16 14.8 +08.6	13						
14	29 19.9 +00.2	N 11 24.9 -00.9	26 22.6 -00.5	N 11 47.8 -01.1	123 13.5 -29.6	N 16 23.4 +08.6	14						
15	44 20.1 +00.1	N 11 24.0 -00.8	41 22.1 -00.5	N 11 46.7 -01.1	137 43.9 -29.7	N 16 32.0 +08.4	15						
16	59 20.2 +00.2	N 11 23.2 -00.9	56 21.6 -00.5	N 11 45.6 -01.1	152 14.2 -29.7	N 16 40.4 +08.4	16						
17	74 20.4 +00.2	N 11 22.3 -00.8	71 21.1 -00.5	N 11 44.5 -01.1	166 44.5 -29.9	N 16 48.8 +08.3	17						
18	89 20.6 +00.1	N 11 21.5 -00.9	86 20.6 -00.5	N 11 43.4 -01.1	181 14.6 -29.9	N 16 57.1 +08.3	18						
19	104 20.7 +00.2	N 11 20.6 -00.8	101 20.1 -00.5	N 11 42.3 -01.1	195 44.7 -30.0	N 17 05.4 +08.2	19						
20	119 20.9 +00.2	N 11 19.8 -00.9	116 19.6 -00.4	N 11 41.2 -01.1	210 14.7 -30.2	N 17 13.6 +08.0	20						
21	134 21.1 +00.1	N 11 18.9 -00.8	131 19.2 -00.5	N 11 40.1 -01.2	224 44.5 -30.2	N 17 21.6 +08.1	21						
22	149 21.2 +00.2	N 11 18.1 -00.9	146 18.7 -00.5	N 11 38.9 -01.1	239 14.3 -30.3	N 17 29.7 +07.9	22						
23	164 21.4 +00.2	N 11 17.2 -00.8	161 18.2 -00.5	N 11 37.8 -01.1	253 44.0 -30.3	N 17 37.6 +07.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'3 15'3 15'3 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'9 56'0 56'2 56'3 56'4 56'6								
	SHA 208° 208° 208° 208° 208° 207°		SHA 205° 205° 205° 205° 205° 204°		SHA 308° 306° 304° 302° 300° 297°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 12:14		Greenwich Culmination Time: 05:30								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	175 36.6 +01.0	N 11 25.5 -00.6	77 33.0 +02.4	S 22 11.6 +00.0	45 19.7 +02.6	S 22 24.4 +00.0	00						
01	190 37.6 +00.9	N 11 24.9 -00.6	92 35.4 +02.3	S 22 11.6 +00.0	60 22.3 +02.6	S 22 24.4 +00.0	01						
02	205 38.5 +01.0	N 11 24.3 -00.5	107 37.7 +02.4	S 22 11.6 +00.0	75 24.9 +02.5	S 22 24.4 +00.1	02						
03	220 39.5 +00.9	N 11 23.8 -00.6	122 40.1 +02.4	S 22 11.6 +00.0	90 27.4 +02.6	S 22 24.5 +00.0	03						
04	235 40.4 +01.0	N 11 23.2 -00.6	137 42.5 +02.3	S 22 11.6 +00.1	105 30.0 +02.6	S 22 24.5 +00.0	04						
05	250 41.4 +00.9	N 11 22.6 -00.6	152 44.8 +02.4	S 22 11.7 +00.0	120 32.6 +02.5	S 22 24.5 +00.0	05						
06	265 42.3 +01.0	N 11 22.0 -00.6	167 47.2 +02.4	S 22 11.7 +00.0	135 35.1 +02.6	S 22 24.5 +00.0	06						
07	280 43.3 +01.0	N 11 21.4 -00.5	182 49.6 +02.3	S 22 11.7 +00.0	150 37.7 +02.6	S 22 24.5 +00.0	07						
08	295 44.3 +00.9	N 11 20.9 -00.6	197 51.9 +02.4	S 22 11.7 +00.0	165 40.3 +02.6	S 22 24.5 +00.0	08						
09	310 45.2 +01.0	N 11 20.3 -00.6	212 54.3 +02.4	S 22 11.7 +00.1	180 42.9 +02.5	S 22 24.5 +00.1	09						
10	325 46.2 +00.9	N 11 19.7 -00.6	227 56.7 +02.4	S 22 11.8 +00.0	195 45.4 +02.6	S 22 24.6 +00.0	10						
11	340 47.1 +01.0	N 11 19.1 -00.6	242 59.1 +02.3	S 22 11.8 +00.0	210 48.0 +02.6	S 22 24.6 +00.0	11						
12	355 48.1 +00.9	N 11 18.5 -00.6	258 01.4 +02.4	S 22 11.8 +00.0	225 50.6 +02.5	S 22 24.6 +00.0	12						
13	10 49.0 +01.0	N 11 17.9 -00.5	273 03.8 +02.4	S 22 11.8 +00.0	240 53.1 +02.6	S 22 24.6 +00.0	13						
14	25 50.0 +00.9	N 11 17.4 -00.6	288 06.2 +02.3	S 22 11.8 +00.0	255 55.7 +02.6	S 22 24.6 +00.0	14						
15	40 50.9 +01.0	N 11 16.8 -00.6	303 08.5 +02.4	S 22 11.8 +00.1	270 58.3 +02.6	S 22 24.6 +00.1	15						
16	55 51.9 +01.0	N 11 16.2 -00.6	318 10.9 +02.4	S 22 11.9 +00.0	286 00.9 +02.5	S 22 24.7 +00.0	16						
17	70 52.9 +00.9	N 11 15.6 -00.6	333 13.3 +02.3	S 22 11.9 +00.0	301 03.4 +02.6	S 22 24.7 +00.0	17						
18	85 53.8 +01.0	N 11 15.0 -00.6	348 15.6 +02.4	S 22 11.9 +00.0	316 06.0 +02.6	S 22 24.7 +00.0	18						
19	100 54.8 +00.9	N 11 14.4 -00.5	3 18.0 +02.3	S 22 11.9 +00.0	331 08.6 +02.5	S 22 24.7 +00.0	19						
20	115 55.7 +01.0	N 11 13.9 -00.6	18 20.3 +02.4	S 22 11.9 +00.1	346 11.1 +02.6	S 22 24.7 +00.0	20						
21	130 56.7 +00.9	N 11 13.3 -00.6	33 22.7 +02.4	S 22 12.0 +00.0	1 13.7 +02.6	S 22 24.7 +00.0	21						
22	145 57.6 +01.0	N 11 12.7 -00.6	48 25.1 +02.3	S 22 12.0 +00.0	16 16.3 +02.5	S 22 24.7 +00.1	22						
23	160 58.6 +01.0	N 11 12.1 -00.6	63 27.4 +02.4	S 22 12.0 +00.0	31 18.8 +02.6	S 22 24.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 205° 204° 204° 204° 204° 204°		SHA 107° 107° 107° 107° 107° 107°		SHA 074° 074° 074° 074° 074° 074°								
	Greenwich Culmination Time: 12:16		Greenwich Culmination Time: 18:46		Greenwich Culmination Time: 20:55								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 77%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	179 21.6 +00.1	N 11 16.4 -00.9	176 17.7 -00.5	N 11 36.7 -01.1	268 13.7 -30.5	N 17 45.4 +07.8							
01	194 21.7 +00.2	N 11 15.5 -00.8	191 17.2 -00.5	N 11 35.6 -01.1	282 43.2 -30.6	N 17 53.2 +07.7							
02	209 21.9 +00.2	N 11 14.7 -00.9	206 16.7 -00.5	N 11 34.5 -01.1	297 12.6 -30.6	N 18 00.9 +07.6							
03	224 22.1 +00.1	N 11 13.8 -00.8	221 16.2 -00.5	N 11 33.4 -01.1	311 42.0 -30.7	N 18 08.5 +07.5							
04	239 22.2 +00.2	N 11 13.0 -00.9	236 15.7 -00.4	N 11 32.3 -01.1	326 11.3 -30.9	N 18 16.0 +07.5							
05	254 22.4 +00.2	N 11 12.1 -00.8	251 15.3 -00.5	N 11 31.2 -01.1	340 40.4 -30.9	N 18 23.5 +07.3							
06	269 22.6 +00.1	N 11 11.3 -00.9	266 14.8 -00.5	N 11 30.1 -01.1	355 09.5 -31.0	N 18 30.8 +07.3							
07	284 22.7 +00.2	N 11 10.4 -00.9	281 14.3 -00.5	N 11 29.0 -01.1	9 38.5 -31.1	N 18 38.1 +07.1							
08	299 22.9 +00.2	N 11 09.5 -00.8	296 13.8 -00.5	N 11 27.9 -01.1	24 07.4 -31.2	N 18 45.2 +07.1							
09	314 23.1 +00.1	N 11 08.7 -00.9	311 13.3 -00.5	N 11 26.8 -01.1	38 36.2 -31.3	N 18 52.3 +07.0							
10	329 23.2 +00.2	N 11 07.8 -00.8	326 12.8 -00.5	N 11 25.7 -01.1	53 04.9 -31.4	N 18 59.3 +06.9							
11	344 23.4 +00.2	N 11 07.0 -00.9	341 12.3 -00.4	N 11 24.6 -01.2	67 33.5 -31.4	N 19 06.2 +06.8							
12	359 23.6 +00.1	N 11 06.1 -00.8	356 11.9 -00.5	N 11 23.4 -01.1	82 02.1 -31.6	N 19 13.0 +06.7							
13	14 23.7 +00.2	N 11 05.3 -00.9	11 11.4 -00.5	N 11 22.3 -01.1	96 30.5 -31.6	N 19 19.7 +06.6							
14	29 23.9 +00.2	N 11 04.4 -00.8	26 10.9 -00.5	N 11 21.2 -01.1	110 58.9 -31.8	N 19 26.3 +06.5							
15	44 24.1 +00.1	N 11 03.6 -00.9	41 10.4 -00.5	N 11 20.1 -01.1	125 27.1 -31.8	N 19 32.8 +06.4							
16	59 24.2 +00.2	N 11 02.7 -00.8	56 09.9 -00.4	N 11 19.0 -01.1	139 55.3 -31.9	N 19 39.2 +06.3							
17	74 24.4 +00.2	N 11 01.9 -00.9	71 09.5 -00.5	N 11 17.9 -01.1	154 23.4 -32.0	N 19 45.5 +06.2							
18	89 24.6 +00.1	N 11 01.0 -00.9	86 09.0 -00.5	N 11 16.8 -01.1	168 51.4 -32.2	N 19 51.7 +06.1							
19	104 24.7 +00.2	N 11 00.1 -00.8	101 08.5 -00.5	N 11 15.7 -01.2	183 19.2 -32.2	N 19 57.8 +06.0							
20	119 24.9 +00.2	N 10 59.3 -00.9	116 08.0 -00.5	N 11 14.5 -01.1	197 47.0 -32.3	N 20 03.8 +05.9							
21	134 25.1 +00.1	N 10 58.4 -00.8	131 07.5 -00.4	N 11 13.4 -01.1	212 14.7 -32.3	N 20 09.7 +05.8							
22	149 25.2 +00.2	N 10 57.6 -00.9	146 07.1 -00.5	N 11 12.3 -01.1	226 42.4 -32.5	N 20 15.5 +05.7							
23	164 25.4 +00.2	N 10 56.7 -00.8	161 06.6 -00.5	N 11 11.2 -01.1	241 09.9 -32.6	N 20 21.2 +05.6							
	UT 02 06 10 14 18 22 SD 15'8 15'8 15'8 15'8 15'8 15'8 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 207° 207° 207° 207° 207° 207° Greenwich Culmination Time: 12:02	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 204° 204° 204° 204° 203° 203° Greenwich Culmination Time: 12:15	UT 02 06 10 14 18 22 SD 15'4 15'5 15'5 15'6 15'6 15'7 HP 56'7 56'8 57'0 57'1 57'3 57'4 SHA 295° 293° 291° 288° 286° 284° Greenwich Culmination Time: 06:20										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	175 59.6 +00.9	N 11 11.5 -00.6	78 29.8 +02.4	S 22 12.0 +00.0	46 21.4 +02.6	S 22 24.8 +00.0							
01	191 00.5 +01.0	N 11 10.9 -00.5	93 32.2 +02.3	S 22 12.0 +00.0	61 24.0 +02.6	S 22 24.8 +00.0							
02	206 01.5 +00.9	N 11 10.4 -00.6	108 34.5 +02.4	S 22 12.0 +00.1	76 26.6 +02.5	S 22 24.8 +00.0							
03	221 02.4 +01.0	N 11 09.8 -00.6	123 36.9 +02.4	S 22 12.1 +00.0	91 29.1 +02.6	S 22 24.8 +00.0							
04	236 03.4 +00.9	N 11 09.2 -00.6	138 39.3 +02.3	S 22 12.1 +00.0	106 31.7 +02.6	S 22 24.8 +00.0							
05	251 04.3 +01.0	N 11 08.6 -00.6	153 41.6 +02.4	S 22 12.1 +00.0	121 34.3 +02.5	S 22 24.8 +00.1							
06	266 05.3 +01.0	N 11 08.0 -00.6	168 44.0 +02.3	S 22 12.1 +00.0	136 36.8 +02.6	S 22 24.9 +00.0							
07	281 06.3 +00.9	N 11 07.4 -00.5	183 46.3 +02.4	S 22 12.1 +00.1	151 39.4 +02.6	S 22 24.9 +00.0							
08	296 07.2 +01.0	N 11 06.9 -00.6	198 48.7 +02.4	S 22 12.2 +00.0	166 42.0 +02.5	S 22 24.9 +00.0							
09	311 08.2 +00.9	N 11 06.3 -00.6	213 51.1 +02.3	S 22 12.2 +00.0	181 44.5 +02.6	S 22 24.9 +00.0							
10	326 09.1 +01.0	N 11 05.7 -00.6	228 53.4 +02.4	S 22 12.2 +00.0	196 47.1 +02.6	S 22 24.9 +00.0							
11	341 10.1 +00.9	N 11 05.1 -00.6	243 55.8 +02.3	S 22 12.2 +00.0	211 49.7 +02.5	S 22 24.9 +00.0							
12	356 11.0 +01.0	N 11 04.5 -00.6	258 58.1 +02.4	S 22 12.2 +00.0	226 52.2 +02.6	S 22 24.9 +00.1							
13	11 12.0 +01.0	N 11 03.9 -00.5	274 00.5 +02.4	S 22 12.2 +00.1	241 54.8 +02.6	S 22 25.0 +00.0							
14	26 13.0 +00.9	N 11 03.4 -00.6	289 02.9 +02.3	S 22 12.3 +00.0	256 57.4 +02.5	S 22 25.0 +00.0							
15	41 13.9 +01.0	N 11 02.8 -00.6	304 05.2 +02.4	S 22 12.3 +00.0	271 59.9 +02.6	S 22 25.0 +00.0							
16	56 14.9 +00.9	N 11 02.2 -00.6	319 07.6 +02.3	S 22 12.3 +00.0	287 02.5 +02.6	S 22 25.0 +00.0							
17	71 15.8 +01.0	N 11 01.6 -00.6	334 09.9 +02.4	S 22 12.3 +00.0	302 05.1 +02.5	S 22 25.0 +00.0							
18	86 16.8 +00.9	N 11 01.0 -00.6	349 12.3 +02.3	S 22 12.3 +00.1	317 07.6 +02.6	S 22 25.0 +00.0							
19	101 17.7 +01.0	N 11 00.4 -00.6	4 14.6 +02.4	S 22 12.4 +00.0	332 10.2 +02.6	S 22 25.0 +00.1							
20	116 18.7 +01.0	N 10 59.8 -00.5	19 17.0 +02.4	S 22 12.4 +00.0	347 12.8 +02.5	S 22 25.1 +00.0							
21	131 19.7 +00.9	N 10 59.3 -00.6	34 19.4 +02.3	S 22 12.4 +00.0	2 15.3 +02.6	S 22 25.1 +00.0							
22	146 20.6 +01.0	N 10 58.7 -00.6	49 21.7 +02.4	S 22 12.4 +00.0	17 17.9 +02.6	S 22 25.1 +00.0							
23	161 21.6 +00.9	N 10 58.1 -00.6	64 24.1 +02.3	S 22 12.4 +00.1	32 20.5 +02.5	S 22 25.1 +00.0							
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 204° 204° 204° 204° 204° 203° Greenwich Culmination Time: 12:15	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 107° 107° 106° 106° 106° 106° Greenwich Culmination Time: 18:43	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 074° 074° 074° 074° 074° 074° Greenwich Culmination Time: 20:51										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 25.6 +00.2	N 10	55.9 -00.9	176 06.1 -00.5	N 11	10.1 -01.1	255 37.3 -32.6	N 20	26.8 +05.4	00			
01	194 25.8 +00.1	N 10	55.0 -00.9	191 05.6 -00.5	N 11	09.0 -01.2	270 04.7 -32.8	N 20	32.2 +05.4	01			
02	209 25.9 +00.2	N 10	54.1 -00.8	206 05.1 -00.4	N 11	07.8 -01.1	284 31.9 -32.8	N 20	37.6 +05.2	02			
03	224 26.1 +00.2	N 10	53.3 -00.9	221 04.7 -00.5	N 11	06.7 -01.1	298 59.1 -32.9	N 20	42.8 +05.2	03			
04	239 26.3 +00.1	N 10	52.4 -00.8	236 04.2 -00.5	N 11	05.6 -01.1	313 26.2 -33.1	N 20	48.0 +05.0	04			
05	254 26.4 +00.2	N 10	51.6 -00.9	251 03.7 -00.5	N 11	04.5 -01.1	327 53.1 -33.1	N 20	53.0 +04.9	05			
06	269 26.6 +00.2	N 10	50.7 -00.9	266 03.2 -00.4	N 11	03.4 -01.2	342 20.0 -33.2	N 20	57.9 +04.8	06			
07	284 26.8 +00.1	N 10	49.8 -00.8	281 02.8 -00.5	N 11	02.2 -01.1	356 46.8 -33.2	N 21	02.7 +04.6	07			
08	299 26.9 +00.2	N 10	49.0 -00.9	296 02.3 -00.5	N 11	01.1 -01.1	11 13.6 -33.4	N 21	07.3 +04.6	08			
09	314 27.1 +00.2	N 10	48.1 -00.8	311 01.8 -00.5	N 10	60.0 -01.1	25 40.2 -33.5	N 21	11.9 +04.4	09			
10	329 27.3 +00.2	N 10	47.3 -00.9	326 01.3 -00.4	N 10	58.9 -01.2	40 06.7 -33.5	N 21	16.3 +04.3	10			
11	344 27.5 +00.1	N 10	46.4 -00.9	341 00.9 -00.5	N 10	57.7 -01.1	54 33.2 -33.6	N 21	20.6 +04.2	11			
12	359 27.6 +00.2	N 10	45.5 -00.8	356 00.4 -00.5	N 10	56.6 -01.1	68 59.6 -33.8	N 21	24.8 +04.1	12			
13	14 27.8 +00.2	N 10	44.7 -00.9	10 59.9 -00.5	N 10	55.5 -01.1	83 25.8 -33.8	N 21	28.9 +03.9	13			
14	29 28.0 +00.2	N 10	43.8 -00.9	25 59.4 -00.4	N 10	54.4 -01.2	97 52.0 -33.8	N 21	32.8 +03.8	14			
15	44 28.2 +00.1	N 10	42.9 -00.8	40 59.0 -00.5	N 10	53.2 -01.1	112 18.2 -34.0	N 21	36.6 +03.7	15			
16	59 28.3 +00.2	N 10	42.1 -00.9	55 58.5 -00.5	N 10	52.1 -01.1	126 44.2 -34.1	N 21	40.3 +03.6	16			
17	74 28.5 +00.2	N 10	41.2 -00.8	70 58.0 -00.5	N 10	51.0 -01.1	141 10.1 -34.1	N 21	43.9 +03.4	17			
18	89 28.7 +00.1	N 10	40.4 -00.9	85 57.5 -00.4	N 10	49.9 -01.2	155 36.0 -34.2	N 21	47.3 +03.3	18			
19	104 28.8 +00.2	N 10	39.5 -00.9	100 57.1 -00.5	N 10	48.7 -01.1	170 01.8 -34.3	N 21	50.6 +03.1	19			
20	119 29.0 +00.2	N 10	38.6 -00.8	115 56.6 -00.5	N 10	47.6 -01.1	184 27.5 -34.4	N 21	53.7 +03.1	20			
21	134 29.2 +00.2	N 10	37.8 -00.9	130 56.1 -00.4	N 10	46.5 -01.1	198 53.1 -34.4	N 21	56.8 +02.9	21			
22	149 29.4 +00.1	N 10	36.9 -00.9	145 55.7 -00.5	N 10	45.4 -01.2	213 18.7 -34.6	N 21	59.7 +02.7	22			
23	164 29.5 +00.2	N 10	36.0 -00.8	160 55.2 -00.5	N 10	44.2 -01.1	227 44.1 -34.6	N 22	02.4 +02.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'7 15'7 15'8 15'8 15'9 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 57'6 57'8 57'9 58'1 58'2 58'4						
	SHA 206° 206° 206° 206° 206° 206°			SHA 203° 203° 203° 202° 202° 202°			SHA 281° 279° 277° 274° 272° 269°						
	Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 12:15			Greenwich Culmination Time: 07:13						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	176 22.5 +01.0	N 10	57.5 -00.6	79 26.4 +02.4	S 22	12.5 +00.0	47 23.0 +02.6	S 22	25.1 +00.0	00			
01	191 23.5 +01.0	N 10	56.9 -00.6	94 28.8 +02.3	S 22	12.5 +00.0	62 25.6 +02.6	S 22	25.1 +00.1	01			
02	206 24.5 +00.9	N 10	56.3 -00.6	109 31.1 +02.4	S 22	12.5 +00.0	77 28.2 +02.5	S 22	25.2 +00.0	02			
03	221 25.4 +01.0	N 10	55.7 -00.6	124 33.5 +02.3	S 22	12.5 +00.0	92 30.7 +02.6	S 22	25.2 +00.0	03			
04	236 26.4 +00.9	N 10	55.1 -00.5	139 35.8 +02.4	S 22	12.5 +00.0	107 33.3 +02.5	S 22	25.2 +00.0	04			
05	251 27.3 +01.0	N 10	54.6 -00.6	154 38.2 +02.4	S 22	12.5 +00.1	122 35.8 +02.6	S 22	25.2 +00.0	05			
06	266 28.3 +01.0	N 10	54.0 -00.6	169 40.6 +02.3	S 22	12.6 +00.0	137 38.4 +02.6	S 22	25.2 +00.0	06			
07	281 29.3 +00.9	N 10	53.4 -00.6	184 42.9 +02.4	S 22	12.6 +00.0	152 41.0 +02.5	S 22	25.2 +00.0	07			
08	296 30.2 +01.0	N 10	52.8 -00.6	199 45.3 +02.3	S 22	12.6 +00.0	167 43.5 +02.6	S 22	25.2 +00.1	08			
09	311 31.2 +00.9	N 10	52.2 -00.6	214 47.6 +02.4	S 22	12.6 +00.0	182 46.1 +02.6	S 22	25.3 +00.0	09			
10	326 32.1 +01.0	N 10	51.6 -00.6	229 50.0 +02.3	S 22	12.6 +00.1	197 48.7 +02.5	S 22	25.3 +00.0	10			
11	341 33.1 +01.0	N 10	51.0 -00.5	244 52.3 +02.4	S 22	12.7 +00.0	212 51.2 +02.6	S 22	25.3 +00.0	11			
12	356 34.1 +00.9	N 10	50.5 -00.6	259 54.7 +02.3	S 22	12.7 +00.0	227 53.8 +02.6	S 22	25.3 +00.0	12			
13	11 35.0 +01.0	N 10	49.9 -00.6	274 57.0 +02.4	S 22	12.7 +00.0	242 56.4 +02.5	S 22	25.3 +00.0	13			
14	26 36.0 +00.9	N 10	49.3 -00.6	289 59.4 +02.3	S 22	12.7 +00.0	257 58.9 +02.6	S 22	25.3 +00.0	14			
15	41 36.9 +01.0	N 10	48.7 -00.6	305 01.7 +02.4	S 22	12.7 +00.1	273 01.5 +02.5	S 22	25.3 +00.0	15			
16	56 37.9 +01.0	N 10	48.1 -00.6	320 04.1 +02.3	S 22	12.8 +00.0	288 04.0 +02.6	S 22	25.3 +00.1	16			
17	71 38.9 +00.9	N 10	47.5 -00.6	335 06.4 +02.4	S 22	12.8 +00.0	303 06.6 +02.6	S 22	25.4 +00.0	17			
18	86 39.8 +01.0	N 10	46.9 -00.6	350 08.8 +02.3	S 22	12.8 +00.0	318 09.2 +02.5	S 22	25.4 +00.0	18			
19	101 40.8 +00.9	N 10	46.3 -00.6	5 11.1 +02.4	S 22	12.8 +00.0	333 11.7 +02.6	S 22	25.4 +00.0	19			
20	116 41.7 +01.0	N 10	45.7 -00.5	20 13.5 +02.3	S 22	12.8 +00.1	348 14.3 +02.6	S 22	25.4 +00.0	20			
21	131 42.7 +01.0	N 10	45.2 -00.6	35 15.8 +02.4	S 22	12.9 +00.0	3 16.9 +02.5	S 22	25.4 +00.0	21			
22	146 43.7 +00.9	N 10	44.6 -00.6	50 18.2 +02.3	S 22	12.9 +00.0	18 19.4 +02.6	S 22	25.4 +00.0	22			
23	161 44.6 +01.0	N 10	44.0 -00.6	65 20.5 +02.4	S 22	12.9 +00.0	33 22.0 +02.5	S 22	25.4 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 203° 203° 203° 203° 203° 203°			SHA 106° 106° 106° 106° 106° 106°			SHA 074° 074° 074° 074° 074° 074°						
	Greenwich Culmination Time: 12:13			Greenwich Culmination Time: 18:39			Greenwich Culmination Time: 20:46						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 29.7 +00.2	N 10 35.2 -00.9	175 54.7 -00.5	N 10 43.1 -01.1	242 09.5 -34.6	N 22 05.1 +02.5	00						
01	194 29.9 +00.2	N 10 34.3 -00.9	190 54.2 -00.4	N 10 42.0 -01.2	256 34.9 -34.8	N 22 07.6 +02.3	01						
02	209 30.1 +00.1	N 10 33.4 -00.8	205 53.8 -00.5	N 10 40.8 -01.1	271 00.1 -34.8	N 22 09.9 +02.3	02						
03	224 30.2 +00.2	N 10 32.6 -00.9	220 53.3 -00.5	N 10 39.7 -01.1	285 25.3 -34.9	N 22 12.2 +02.0	03						
04	239 30.4 +00.2	N 10 31.7 -00.9	235 52.8 -00.4	N 10 38.6 -01.2	299 50.4 -35.0	N 22 14.2 +02.0	04						
05	254 30.6 +00.2	N 10 30.8 -00.8	250 52.4 -00.5	N 10 37.4 -01.1	314 15.4 -35.0	N 22 16.2 +01.8	05						
06	269 30.8 +00.1	N 10 30.0 -00.9	265 51.9 -00.5	N 10 36.3 -01.1	328 40.4 -35.1	N 22 18.0 +01.6	06						
07	284 30.9 +00.2	N 10 29.1 -00.9	280 51.4 -00.4	N 10 35.2 -01.2	343 05.3 -35.2	N 22 19.6 +01.6	07						
08	299 31.1 +00.2	N 10 28.2 -00.8	295 51.0 -00.5	N 10 34.0 -01.1	357 30.1 -35.3	N 22 21.2 +01.3	08						
09	314 31.3 +00.2	N 10 27.4 -00.9	310 50.5 -00.5	N 10 32.9 -01.1	11 54.8 -35.3	N 22 22.5 +01.3	09						
10	329 31.5 +00.1	N 10 26.5 -00.9	325 50.0 -00.4	N 10 31.8 -01.2	26 19.5 -35.4	N 22 23.8 +01.0	10						
11	344 31.6 +00.2	N 10 25.6 -00.8	340 49.6 -00.5	N 10 30.6 -01.1	40 44.1 -35.4	N 22 24.8 +01.0	11						
12	359 31.8 +00.2	N 10 24.8 -00.9	355 49.1 -00.5	N 10 29.5 -01.1	55 08.7 -35.5	N 22 25.8 +00.8	12						
13	14 32.0 +00.2	N 10 23.9 -00.9	10 48.6 -00.4	N 10 28.4 -01.2	69 33.2 -35.5	N 22 26.6 +00.6	13						
14	29 32.2 +00.1	N 10 23.0 -00.9	25 48.2 -00.5	N 10 27.2 -01.1	83 57.7 -35.7	N 22 27.2 +00.5	14						
15	44 32.3 +00.2	N 10 22.1 -00.8	40 47.7 -00.5	N 10 26.1 -01.1	98 22.0 -35.6	N 22 27.7 +00.4	15						
16	59 32.5 +00.2	N 10 21.3 -00.9	55 47.2 -00.4	N 10 25.0 -01.2	112 46.4 -35.8	N 22 28.1 +00.2	16						
17	74 32.7 +00.2	N 10 20.4 -00.9	70 46.8 -00.5	N 10 23.8 -01.1	127 10.6 -35.7	N 22 28.3 +00.0	17						
18	89 32.9 +00.1	N 10 19.5 -00.8	85 46.3 -00.4	N 10 22.7 -01.2	141 34.9 -35.9	N 22 28.3 -00.1	18						
19	104 33.0 +00.2	N 10 18.7 -00.9	100 45.9 -00.5	N 10 21.5 -01.1	155 59.0 -35.9	N 22 28.2 -00.2	19						
20	119 33.2 +00.2	N 10 17.8 -00.9	115 45.4 -00.5	N 10 20.4 -01.1	170 23.1 -35.9	N 22 28.0 -00.5	20						
21	134 33.4 +00.2	N 10 16.9 -00.8	130 44.9 -00.4	N 10 19.3 -01.2	184 47.2 -36.0	N 22 27.5 -00.5	21						
22	149 33.6 +00.1	N 10 16.1 -00.9	145 44.5 -00.5	N 10 18.1 -01.1	199 11.2 -36.0	N 22 27.0 -00.7	22						
23	164 33.7 +00.2	N 10 15.2 -00.9	160 44.0 -00.5	N 10 17.0 -01.2	213 35.2 -36.1	N 22 26.3 -00.9	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'8 15'8 15'8 15'8 15'8 15'8		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	16'0 16'0 16'0 16'1 16'1 16'2						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	58'5 58'7 58'9 59'0 59'2 59'3						
SHA	205° 205° 205° 205° 205° 205°		SHA	202° 202° 201° 201° 201° 201°		SHA	267° 264° 262° 259° 257° 254°						
Greenwich Culmination Time: 12:01				Greenwich Culmination Time: 12:16				Greenwich Culmination Time: 08:10					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	176 45.6 +00.9	N 10 43.4 -00.6	80 22.9 +02.3	S 22 12.9 +00.0	48 24.5 +02.6	S 22 25.5 +00.0	00						
01	191 46.5 +01.0	N 10 42.8 -00.6	95 25.2 +02.3	S 22 12.9 +00.1	63 27.1 +02.6	S 22 25.5 +00.0	01						
02	206 47.5 +01.0	N 10 42.2 -00.6	110 27.5 +02.4	S 22 13.0 +00.0	78 29.7 +02.5	S 22 25.5 +00.0	02						
03	221 48.5 +00.9	N 10 41.6 -00.6	125 29.9 +02.3	S 22 13.0 +00.0	93 32.2 +02.6	S 22 25.5 +00.0	03						
04	236 49.4 +01.0	N 10 41.0 -00.6	140 32.2 +02.4	S 22 13.0 +00.0	108 34.8 +02.5	S 22 25.5 +00.0	04						
05	251 50.4 +00.9	N 10 40.4 -00.5	155 34.6 +02.3	S 22 13.0 +00.0	123 37.3 +02.6	S 22 25.5 +00.0	05						
06	266 51.3 +01.0	N 10 39.9 -00.6	170 36.9 +02.4	S 22 13.0 +00.1	138 39.9 +02.6	S 22 25.5 +00.1	06						
07	281 52.3 +01.0	N 10 39.3 -00.6	185 39.3 +02.3	S 22 13.1 +00.0	153 42.5 +02.5	S 22 25.6 +00.0	07						
08	296 53.3 +00.9	N 10 38.7 -00.6	200 41.6 +02.4	S 22 13.1 +00.0	168 45.0 +02.6	S 22 25.6 +00.0	08						
09	311 54.2 +01.0	N 10 38.1 -00.6	215 44.0 +02.3	S 22 13.1 +00.0	183 47.6 +02.6	S 22 25.6 +00.0	09						
10	326 55.2 +00.9	N 10 37.5 -00.6	230 46.3 +02.4	S 22 13.1 +00.0	198 50.2 +02.5	S 22 25.6 +00.0	10						
11	341 56.1 +01.0	N 10 36.9 -00.6	245 48.7 +02.3	S 22 13.1 +00.1	213 52.7 +02.6	S 22 25.6 +00.0	11						
12	356 57.1 +01.0	N 10 36.3 -00.6	260 51.0 +02.3	S 22 13.2 +00.0	228 55.3 +02.5	S 22 25.6 +00.0	12						
13	11 58.1 +00.9	N 10 35.7 -00.6	275 53.3 +02.4	S 22 13.2 +00.0	243 57.8 +02.6	S 22 25.6 +00.1	13						
14	26 59.0 +01.0	N 10 35.1 -00.6	290 55.7 +02.3	S 22 13.2 +00.0	259 00.4 +02.5	S 22 25.7 +00.0	14						
15	41 60.0 +01.0	N 10 34.5 -00.6	305 58.0 +02.4	S 22 13.2 +00.0	274 02.9 +02.6	S 22 25.7 +00.0	15						
16	57 01.0 +00.9	N 10 33.9 -00.5	321 00.4 +02.3	S 22 13.2 +00.1	289 05.5 +02.6	S 22 25.7 +00.0	16						
17	72 01.9 +01.0	N 10 33.4 -00.6	336 02.7 +02.3	S 22 13.3 +00.0	304 08.1 +02.5	S 22 25.7 +00.0	17						
18	87 02.9 +00.9	N 10 32.8 -00.6	351 05.0 +02.4	S 22 13.3 +00.0	319 10.6 +02.6	S 22 25.7 +00.0	18						
19	102 03.8 +01.0	N 10 32.2 -00.6	6 07.4 +02.3	S 22 13.3 +00.0	334 13.2 +02.5	S 22 25.7 +00.0	19						
20	117 04.8 +01.0	N 10 31.6 -00.6	21 09.7 +02.4	S 22 13.3 +00.0	349 15.7 +02.6	S 22 25.7 +00.1	20						
21	132 05.8 +00.9	N 10 31.0 -00.6	36 12.1 +02.3	S 22 13.3 +00.1	4 18.3 +02.6	S 22 25.8 +00.0	21						
22	147 06.7 +01.0	N 10 30.4 -00.6	51 14.4 +02.4	S 22 13.4 +00.0	19 20.9 +02.5	S 22 25.8 +00.0	22						
23	162 07.7 +01.0	N 10 29.8 -00.6	66 16.8 +02.3	S 22 13.4 +00.0	34 23.4 +02.6	S 22 25.8 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'0 00'0 00'0 00'0 00'0 00'0		SD	00'3 00'3 00'3 00'3 00'3 00'3		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	203° 203° 203° 202° 202° 202°		SHA	106° 106° 106° 106° 106° 106°		SHA	074° 074° 074° 074° 074° 074°						
Greenwich Culmination Time: 12:12				Greenwich Culmination Time: 18:35				Greenwich Culmination Time: 20:42					

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	179 33.9 +00.2	N 10 14.3 -00.9	175 43.5 -00.4	N 10 15.8 -01.1	227 59.1 -36.1	N 22 25.4 -01.0	00								
01	194 34.1 +00.2	N 10 13.4 -00.8	190 43.1 -00.5	N 10 14.7 -01.1	242 23.0 -36.2	N 22 24.4 -01.2	01								
02	209 34.3 +00.2	N 10 12.6 -00.9	205 42.6 -00.4	N 10 13.6 -01.2	256 46.8 -36.2	N 22 23.2 -01.3	02								
03	224 34.5 +00.1	N 10 11.7 -00.9	220 42.2 -00.5	N 10 12.4 -01.1	271 10.6 -36.2	N 22 21.9 -01.5	03								
04	239 34.6 +00.2	N 10 10.8 -00.9	235 41.7 -00.5	N 10 11.3 -01.2	285 34.4 -36.3	N 22 20.4 -01.6	04								
05	254 34.8 +00.2	N 10 09.9 -00.8	250 41.2 -00.4	N 10 10.1 -01.1	299 58.1 -36.3	N 22 18.8 -01.8	05								
06	269 35.0 +00.2	N 10 09.1 -00.9	265 40.8 -00.5	N 10 09.0 -01.2	314 21.8 -36.3	N 22 17.0 -02.0	06								
07	284 35.2 +00.2	N 10 08.2 -00.9	280 40.3 -00.4	N 10 07.8 -01.1	328 45.5 -36.4	N 22 15.0 -02.1	07								
08	299 35.4 +00.1	N 10 07.3 -00.9	295 39.9 -00.5	N 10 06.7 -01.2	343 09.1 -36.4	N 22 12.9 -02.2	08								
09	314 35.5 +00.2	N 10 06.4 -00.8	310 39.4 -00.5	N 10 05.5 -01.1	357 32.7 -36.4	N 22 10.7 -02.5	09								
10	329 35.7 +00.2	N 10 05.6 -00.9	325 38.9 -00.4	N 10 04.4 -01.2	11 56.3 -36.5	N 22 08.2 -02.5	10								
11	344 35.9 +00.2	N 10 04.7 -00.9	340 38.5 -00.5	N 10 03.2 -01.1	26 19.8 -36.5	N 22 05.7 -02.8	11								
12	359 36.1 +00.2	N 10 03.8 -00.9	355 38.0 -00.4	N 10 02.1 -01.1	40 43.3 -36.5	N 22 02.9 -02.9	12								
13	14 36.3 +00.1	N 10 02.9 -00.8	10 37.6 -00.5	N 10 01.0 -01.2	55 06.8 -36.5	N 22 00.0 -03.0	13								
14	29 36.4 +00.2	N 10 02.1 -00.9	25 37.1 -00.4	N 09 59.8 -01.1	69 30.3 -36.5	N 21 57.0 -03.2	14								
15	44 36.6 +00.2	N 10 01.2 -00.9	40 36.7 -00.5	N 09 58.7 -01.2	83 53.8 -36.6	N 21 53.8 -03.4	15								
16	59 36.8 +00.2	N 10 00.3 -00.9	55 36.2 -00.4	N 09 57.5 -01.1	98 17.2 -36.6	N 21 50.4 -03.5	16								
17	74 37.0 +00.2	N 09 59.4 -00.8	70 35.8 -00.5	N 09 56.4 -01.2	112 40.6 -36.6	N 21 46.9 -03.7	17								
18	89 37.2 +00.1	N 09 58.6 -00.9	85 35.3 -00.5	N 09 55.2 -01.1	127 04.0 -36.6	N 21 43.2 -03.8	18								
19	104 37.3 +00.2	N 09 57.7 -00.9	100 34.8 -00.4	N 09 54.1 -01.2	141 27.4 -36.6	N 21 39.4 -04.0	19								
20	119 37.5 +00.2	N 09 56.8 -00.9	115 34.4 -00.5	N 09 52.9 -01.1	155 50.8 -36.6	N 21 35.4 -04.2	20								
21	134 37.7 +00.2	N 09 55.9 -00.9	130 33.9 -00.4	N 09 51.8 -01.2	170 14.2 -36.6	N 21 31.2 -04.3	21								
22	149 37.9 +00.2	N 09 55.0 -00.8	145 33.5 -00.5	N 09 50.6 -01.2	184 37.6 -36.7	N 21 26.9 -04.5	22								
23	164 38.1 +00.1	N 09 54.2 -00.9	160 33.0 -00.4	N 09 49.4 -01.1	199 00.9 -36.6	N 21 22.4 -04.6	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 205° 204° 204° 204° 204° 204°	Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 201° 200° 200° 200° 200° 200°	Greenwich Culmination Time: 12:17	UT 02 06 10 14 18 22	SD 16'2 16'2 16'3 16'3 16'4 16'4	HP 59'5 59'6 59'8 59'9 60'1 60'2	SHA 252° 249° 247° 244° 241° 239°	Greenwich Culmination Time: 09:10
UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	177 08.7 +00.9	N 10 29.2 -00.6	81 19.1 +02.3	S 22 13.4 +00.0	49 26.0 +02.5	S 22 25.8 +00.0	00								
01	192 09.6 +01.0	N 10 28.6 -00.6	96 21.4 +02.4	S 22 13.4 +00.0	64 28.5 +02.6	S 22 25.8 +00.0	01								
02	207 10.6 +00.9	N 10 28.0 -00.6	111 23.8 +02.3	S 22 13.4 +00.1	79 31.1 +02.5	S 22 25.8 +00.0	02								
03	222 11.5 +01.0	N 10 27.4 -00.6	126 26.1 +02.3	S 22 13.5 +00.0	94 33.6 +02.6	S 22 25.8 +00.0	03								
04	237 12.5 +01.0	N 10 26.8 -00.5	141 28.4 +02.4	S 22 13.5 +00.0	109 36.2 +02.6	S 22 25.8 +00.1	04								
05	252 13.5 +00.9	N 10 26.3 -00.6	156 30.8 +02.3	S 22 13.5 +00.0	124 38.8 +02.5	S 22 25.9 +00.0	05								
06	267 14.4 +01.0	N 10 25.7 -00.6	171 33.1 +02.4	S 22 13.5 +00.0	139 41.3 +02.6	S 22 25.9 +00.0	06								
07	282 15.4 +01.0	N 10 25.1 -00.6	186 35.5 +02.3	S 22 13.5 +00.1	154 43.9 +02.5	S 22 25.9 +00.0	07								
08	297 16.4 +00.9	N 10 24.5 -00.6	201 37.8 +02.3	S 22 13.6 +00.0	169 46.4 +02.6	S 22 25.9 +00.0	08								
09	312 17.3 +01.0	N 10 23.9 -00.6	216 40.1 +02.4	S 22 13.6 +00.0	184 49.0 +02.5	S 22 25.9 +00.0	09								
10	327 18.3 +00.9	N 10 23.3 -00.6	231 42.5 +02.3	S 22 13.6 +00.0	199 51.5 +02.6	S 22 25.9 +00.0	10								
11	342 19.2 +01.0	N 10 22.7 -00.6	246 44.8 +02.3	S 22 13.6 +00.1	214 54.1 +02.6	S 22 25.9 +00.1	11								
12	357 20.2 +01.0	N 10 22.1 -00.6	261 47.1 +02.4	S 22 13.7 +00.0	229 56.7 +02.5	S 22 26.0 +00.0	12								
13	12 21.2 +00.9	N 10 21.5 -00.6	276 49.5 +02.3	S 22 13.7 +00.0	244 59.2 +02.6	S 22 26.0 +00.0	13								
14	27 22.1 +01.0	N 10 20.9 -00.6	291 51.8 +02.3	S 22 13.7 +00.0	260 01.8 +02.5	S 22 26.0 +00.0	14								
15	42 23.1 +01.0	N 10 20.3 -00.6	306 54.1 +02.4	S 22 13.7 +00.0	275 04.3 +02.6	S 22 26.0 +00.0	15								
16	57 24.1 +00.9	N 10 19.7 -00.6	321 56.5 +02.3	S 22 13.7 +00.1	290 06.9 +02.5	S 22 26.0 +00.0	16								
17	72 25.0 +01.0	N 10 19.1 -00.6	336 58.8 +02.3	S 22 13.8 +00.0	305 09.4 +02.6	S 22 26.0 +00.0	17								
18	87 26.0 +01.0	N 10 18.5 -00.6	352 01.1 +02.4	S 22 13.8 +00.0	320 12.0 +02.5	S 22 26.0 +00.0	18								
19	102 27.0 +00.9	N 10 17.9 -00.5	7 03.5 +02.3	S 22 13.8 +00.0	335 14.5 +02.6	S 22 26.0 +00.1	19								
20	117 27.9 +01.0	N 10 17.4 -00.6	22 05.8 +02.3	S 22 13.8 +00.0	350 17.1 +02.5	S 22 26.1 +00.0	20								
21	132 28.9 +01.0	N 10 16.8 -00.6	37 08.1 +02.4	S 22 13.8 +00.1	5 19.6 +02.6	S 22 26.1 +00.0	21								
22	147 29.9 +00.9	N 10 16.2 -00.6	52 10.5 +02.3	S 22 13.9 +00.0	20 22.2 +02.6	S 22 26.1 +00.0	22								
23	162 30.8 +01.0	N 10 15.6 -00.6	67 12.8 +02.3	S 22 13.9 +00.0	35 24.8 +02.5	S 22 26.1 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 202° 202° 202° 202° 202° 202°	Greenwich Culmination Time: 12:10	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 106° 106° 106° 106° 106° 106°	Greenwich Culmination Time: 18:31	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 074° 075° 075° 075° 075° 075°	Greenwich Culmination Time: 20:38

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 38.2 +00.2	N 09 53.3 -00.9	175 32.6 -00.5	N 09 48.3 -01.2	213 24.3 -36.7	N 21 17.8 -04.8	00							
01	194 38.4 +00.2	N 09 52.4 -00.9	190 32.1 -00.4	N 09 47.1 -01.1	227 47.6 -36.6	N 21 13.0 -04.9	01							
02	209 38.6 +00.2	N 09 51.5 -00.8	205 31.7 -00.5	N 09 46.0 -01.2	242 11.0 -36.7	N 21 08.1 -05.1	02							
03	224 38.8 +00.2	N 09 50.7 -00.9	220 31.2 -00.4	N 09 44.8 -01.1	256 34.3 -36.6	N 21 03.0 -05.2	03							
04	239 39.0 +00.1	N 09 49.8 -00.9	235 30.8 -00.5	N 09 43.7 -01.2	270 57.7 -36.6	N 20 57.8 -05.4	04							
05	254 39.1 +00.2	N 09 48.9 -00.9	250 30.3 -00.4	N 09 42.5 -01.1	285 21.1 -36.7	N 20 52.4 -05.6	05							
06	269 39.3 +00.2	N 09 48.0 -00.9	265 29.9 -00.5	N 09 41.4 -01.2	299 44.4 -36.6	N 20 46.8 -05.7	06							
07	284 39.5 +00.2	N 09 47.1 -00.9	280 29.4 -00.4	N 09 40.2 -01.1	314 07.8 -36.6	N 20 41.1 -05.8	07							
08	299 39.7 +00.2	N 09 46.2 -00.8	295 29.0 -00.5	N 09 39.1 -01.2	328 31.2 -36.6	N 20 35.3 -06.0	08							
09	314 39.9 +00.2	N 09 45.4 -00.9	310 28.5 -00.4	N 09 37.9 -01.2	342 54.6 -36.6	N 20 29.3 -06.2	09							
10	329 40.1 +00.1	N 09 44.5 -00.9	325 28.1 -00.5	N 09 36.7 -01.1	357 18.0 -36.6	N 20 23.1 -06.3	10							
11	344 40.2 +00.2	N 09 43.6 -00.9	340 27.6 -00.4	N 09 35.6 -01.2	11 41.4 -36.5	N 20 16.8 -06.5	11							
12	359 40.4 +00.2	N 09 42.7 -00.9	355 27.2 -00.5	N 09 34.4 -01.1	26 04.9 -36.6	N 20 10.3 -06.6	12							
13	14 40.6 +00.2	N 09 41.8 -00.8	10 26.7 -00.4	N 09 33.3 -01.2	40 28.3 -36.5	N 20 03.7 -06.8	13							
14	29 40.8 +00.2	N 09 41.0 -00.9	25 26.3 -00.5	N 09 32.1 -01.2	54 51.8 -36.5	N 19 56.9 -06.9	14							
15	44 41.0 +00.2	N 09 40.1 -00.9	40 25.8 -00.4	N 09 30.9 -01.1	69 15.3 -36.5	N 19 50.0 -07.0	15							
16	59 41.2 +00.1	N 09 39.2 -00.9	55 25.4 -00.5	N 09 29.8 -01.2	83 38.8 -36.4	N 19 43.0 -07.3	16							
17	74 41.3 +00.2	N 09 38.3 -00.9	70 24.9 -00.4	N 09 28.6 -01.1	98 02.4 -36.5	N 19 35.7 -07.3	17							
18	89 41.5 +00.2	N 09 37.4 -00.9	85 24.5 -00.5	N 09 27.5 -01.2	112 25.9 -36.4	N 19 28.4 -07.5	18							
19	104 41.7 +00.2	N 09 36.5 -00.8	100 24.0 -00.4	N 09 26.3 -01.2	126 49.5 -36.3	N 19 20.9 -07.6	19							
20	119 41.9 +00.2	N 09 35.7 -00.9	115 23.6 -00.5	N 09 25.1 -01.1	141 13.2 -36.4	N 19 13.3 -07.8	20							
21	134 42.1 +00.2	N 09 34.8 -00.9	130 23.1 -00.4	N 09 24.0 -01.2	155 36.8 -36.3	N 19 05.5 -08.0	21							
22	149 42.3 +00.2	N 09 33.9 -00.9	145 22.7 -00.5	N 09 22.8 -01.2	170 00.5 -36.3	N 18 57.5 -08.0	22							
23	164 42.5 +00.1	N 09 33.0 -00.9	160 22.2 -00.4	N 09 21.6 -01.1	184 24.2 -36.3	N 18 49.5 -08.2	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 204° 203° 203° 203° 203° 203°	Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 200° 199° 199° 199° 199° 199°	Greenwich Culmination Time: 12:18	UT 02 06 10 14 18 22	SD 16'4 16'5 16'5 16'5 16'6 16'6	HP 60'3 60'4 60'6 60'7 60'8 60'9	SHA 236° 234° 231° 228° 226° 223°	Greenwich Culmination Time: 10:11
UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	177 31.8 +00.9	N 10 15.0 -00.6	82 15.1 +02.4	S 22 13.9 +00.0	50 27.3 +02.6	S 22 26.1 +00.0	00							
01	192 32.7 +01.0	N 10 14.4 -00.6	97 17.5 +02.3	S 22 13.9 +00.0	65 29.9 +02.5	S 22 26.1 +00.0	01							
02	207 33.7 +01.0	N 10 13.8 -00.6	112 19.8 +02.3	S 22 13.9 +00.1	80 32.4 +02.6	S 22 26.1 +00.1	02							
03	222 34.7 +00.9	N 10 13.2 -00.6	127 22.1 +02.4	S 22 14.0 +00.0	95 35.0 +02.5	S 22 26.2 +00.0	03							
04	237 35.6 +01.0	N 10 12.6 -00.6	142 24.5 +02.3	S 22 14.0 +00.0	110 37.5 +02.6	S 22 26.2 +00.0	04							
05	252 36.6 +01.0	N 10 12.0 -00.6	157 26.8 +02.3	S 22 14.0 +00.0	125 40.1 +02.5	S 22 26.2 +00.0	05							
06	267 37.6 +00.9	N 10 11.4 -00.6	172 29.1 +02.3	S 22 14.0 +00.1	140 42.6 +02.6	S 22 26.2 +00.0	06							
07	282 38.5 +01.0	N 10 10.8 -00.6	187 31.4 +02.4	S 22 14.1 +00.0	155 45.2 +02.5	S 22 26.2 +00.0	07							
08	297 39.5 +01.0	N 10 10.2 -00.6	202 33.8 +02.3	S 22 14.1 +00.0	170 47.7 +02.6	S 22 26.2 +00.0	08							
09	312 40.5 +00.9	N 10 09.6 -00.6	217 36.1 +02.3	S 22 14.1 +00.0	185 50.3 +02.5	S 22 26.2 +00.0	09							
10	327 41.4 +01.0	N 10 09.0 -00.6	232 38.4 +02.4	S 22 14.1 +00.0	200 52.8 +02.6	S 22 26.2 +00.1	10							
11	342 42.4 +01.0	N 10 08.4 -00.6	247 40.8 +02.3	S 22 14.1 +00.1	215 55.4 +02.5	S 22 26.3 +00.0	11							
12	357 43.4 +00.9	N 10 07.8 -00.6	262 43.1 +02.3	S 22 14.2 +00.0	230 57.9 +02.6	S 22 26.3 +00.0	12							
13	12 44.3 +01.0	N 10 07.2 -00.6	277 45.4 +02.3	S 22 14.2 +00.0	246 00.5 +02.5	S 22 26.3 +00.0	13							
14	27 45.3 +01.0	N 10 06.6 -00.6	292 47.7 +02.4	S 22 14.2 +00.0	261 03.0 +02.6	S 22 26.3 +00.0	14							
15	42 46.3 +00.9	N 10 06.0 -00.6	307 50.1 +02.3	S 22 14.2 +00.0	276 05.6 +02.6	S 22 26.3 +00.0	15							
16	57 47.2 +01.0	N 10 05.4 -00.6	322 52.4 +02.3	S 22 14.2 +00.1	291 08.2 +02.5	S 22 26.3 +00.0	16							
17	72 48.2 +01.0	N 10 04.8 -00.5	337 54.7 +02.3	S 22 14.3 +00.0	306 10.7 +02.6	S 22 26.3 +00.0	17							
18	87 49.2 +00.9	N 10 04.3 -00.6	352 57.0 +02.4	S 22 14.3 +00.0	321 13.3 +02.5	S 22 26.3 +00.1	18							
19	102 50.1 +01.0	N 10 03.7 -00.6	7 59.4 +02.3	S 22 14.3 +00.0	336 15.8 +02.6	S 22 26.4 +00.0	19							
20	117 51.1 +01.0	N 10 03.1 -00.6	23 01.7 +02.3	S 22 14.3 +00.1	351 18.4 +02.5	S 22 26.4 +00.0	20							
21	132 52.1 +00.9	N 10 02.5 -00.6	38 04.0 +02.3	S 22 14.4 +00.0	6 20.9 +02.6	S 22 26.4 +00.0	21							
22	147 53.0 +01.0	N 10 01.9 -00.6	53 06.3 +02.4	S 22 14.4 +00.0	21 23.5 +02.5	S 22 26.4 +00.0	22							
23	162 54.0 +00.9	N 10 01.3 -00.6	68 08.7 +02.3	S 22 14.4 +00.0	36 26.0 +02.6	S 22 26.4 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 202° 201° 201° 201° 201° 201°	Greenwich Culmination Time: 12:09	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 106° 106° 106° 106° 106° 106°	Greenwich Culmination Time: 18:28	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 075° 075° 075° 075° 075° 075°	Greenwich Culmination Time: 20:34

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 42.6 +00.2	N 09 32.1 -00.9	175 21.8 -00.5	N 09 20.5 -01.2	198 47.9 -36.2	N 18 41.3 -08.4	00						
01	194 42.8 +00.2	N 09 31.2 -00.9	190 21.3 -00.4	N 09 19.3 -01.1	213 11.7 -36.2	N 18 32.9 -08.5	01						
02	209 43.0 +00.2	N 09 30.3 -00.8	205 20.9 -00.4	N 09 18.2 -01.2	227 35.5 -36.2	N 18 24.4 -08.6	02						
03	224 43.2 +00.2	N 09 29.5 -00.9	220 20.5 -00.5	N 09 17.0 -01.2	241 59.3 -36.1	N 18 15.8 -08.8	03						
04	239 43.4 +00.2	N 09 28.6 -00.9	235 20.0 -00.4	N 09 15.8 -01.1	256 23.2 -36.1	N 18 07.0 -08.8	04						
05	254 43.6 +00.2	N 09 27.7 -00.9	250 19.6 -00.5	N 09 14.7 -01.2	270 47.1 -36.0	N 17 58.2 -09.1	05						
06	269 43.8 +00.1	N 09 26.8 -00.9	265 19.1 -00.4	N 09 13.5 -01.2	285 11.1 -36.0	N 17 49.1 -09.1	06						
07	284 43.9 +00.2	N 09 25.9 -00.9	280 18.7 -00.5	N 09 12.3 -01.1	299 35.1 -36.0	N 17 40.0 -09.3	07						
08	299 44.1 +00.2	N 09 25.0 -00.9	295 18.2 -00.4	N 09 11.2 -01.2	313 59.1 -35.9	N 17 30.7 -09.4	08						
09	314 44.3 +00.2	N 09 24.1 -00.9	310 17.8 -00.4	N 09 10.0 -01.2	328 23.2 -35.9	N 17 21.3 -09.6	09						
10	329 44.5 +00.2	N 09 23.2 -00.8	325 17.4 -00.5	N 09 08.8 -01.1	342 47.3 -35.8	N 17 11.7 -09.6	10						
11	344 44.7 +00.2	N 09 22.4 -00.9	340 16.9 -00.4	N 09 07.7 -01.2	357 11.5 -35.8	N 17 02.1 -09.8	11						
12	359 44.9 +00.2	N 09 21.5 -00.9	355 16.5 -00.5	N 09 06.5 -01.2	11 35.7 -35.7	N 16 52.3 -10.0	12						
13	14 45.1 +00.1	N 09 20.6 -00.9	10 16.0 -00.4	N 09 05.3 -01.2	25 60.0 -35.7	N 16 42.3 -10.0	13						
14	29 45.2 +00.2	N 09 19.7 -00.9	25 15.6 -00.5	N 09 04.1 -01.1	40 24.3 -35.7	N 16 32.3 -10.2	14						
15	44 45.4 +00.2	N 09 18.8 -00.9	40 15.1 -00.4	N 09 03.0 -01.2	54 48.6 -35.6	N 16 22.1 -10.3	15						
16	59 45.6 +00.2	N 09 17.9 -00.9	55 14.7 -00.4	N 09 01.8 -01.2	69 13.0 -35.5	N 16 11.8 -10.4	16						
17	74 45.8 +00.2	N 09 17.0 -00.9	70 14.3 -00.5	N 09 00.6 -01.1	83 37.5 -35.5	N 16 01.4 -10.5	17						
18	89 46.0 +00.2	N 09 16.1 -00.9	85 13.8 -00.4	N 08 59.5 -01.2	98 02.0 -35.5	N 15 50.9 -10.6	18						
19	104 46.2 +00.2	N 09 15.2 -00.9	100 13.4 -00.5	N 08 58.3 -01.2	112 26.5 -35.4	N 15 40.3 -10.8	19						
20	119 46.4 +00.2	N 09 14.3 -00.8	115 12.9 -00.4	N 08 57.1 -01.2	126 51.1 -35.3	N 15 29.5 -10.8	20						
21	134 46.6 +00.1	N 09 13.5 -00.9	130 12.5 -00.4	N 08 55.9 -01.1	141 15.8 -35.3	N 15 18.7 -11.0	21						
22	149 46.7 +00.2	N 09 12.6 -00.9	145 12.1 -00.5	N 08 54.8 -01.2	155 40.5 -35.3	N 15 07.7 -11.1	22						
23	164 46.9 +00.2	N 09 11.7 -00.9	160 11.6 -00.4	N 08 53.6 -01.2	170 05.2 -35.2	N 14 56.6 -11.1	23						
	UT 02 06 10 14 18 22 SD 15'8 15'8 15'8 15'8 15'8 15'8 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 203° 203° 202° 202° 202° 202° Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 198° 198° 198° 198° 198° 197° Greenwich Culmination Time: 12:18	UT 02 06 10 14 18 22 SD 16'6 16'6 16'6 16'7 16'7 16'7 HP 61'0 61'0 61'1 61'2 61'2 61'3 SHA 221° 218° 215° 213° 210° 208° Greenwich Culmination Time: 11:11										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	177 54.9 +01.0	N 10 00.7 -00.6	83 11.0 +02.3	S 22 14.4 +00.0	51 28.6 +02.5	S 22 26.4 +00.0	00						
01	192 55.9 +01.0	N 10 00.1 -00.6	98 13.3 +02.3	S 22 14.4 +00.1	66 31.1 +02.6	S 22 26.4 +00.1	01						
02	207 56.9 +00.9	N 09 59.5 -00.6	113 15.6 +02.4	S 22 14.5 +00.0	81 33.7 +02.5	S 22 26.5 +00.0	02						
03	222 57.8 +01.0	N 09 58.9 -00.6	128 18.0 +02.3	S 22 14.5 +00.0	96 36.2 +02.6	S 22 26.5 +00.0	03						
04	237 58.8 +01.0	N 09 58.3 -00.6	143 20.3 +02.3	S 22 14.5 +00.0	111 38.8 +02.5	S 22 26.5 +00.0	04						
05	252 59.8 +00.9	N 09 57.7 -00.6	158 22.6 +02.3	S 22 14.5 +00.1	126 41.3 +02.6	S 22 26.5 +00.0	05						
06	268 00.7 +01.0	N 09 57.1 -00.6	173 24.9 +02.3	S 22 14.6 +00.0	141 43.9 +02.5	S 22 26.5 +00.0	06						
07	283 01.7 +01.0	N 09 56.5 -00.6	188 27.2 +02.4	S 22 14.6 +00.0	156 46.4 +02.5	S 22 26.5 +00.0	07						
08	298 02.7 +00.9	N 09 55.9 -00.6	203 29.6 +02.3	S 22 14.6 +00.0	171 48.9 +02.6	S 22 26.5 +00.0	08						
09	313 03.6 +01.0	N 09 55.3 -00.6	218 31.9 +02.3	S 22 14.6 +00.0	186 51.5 +02.5	S 22 26.5 +00.1	09						
10	328 04.6 +01.0	N 09 54.7 -00.6	233 34.2 +02.3	S 22 14.6 +00.1	201 54.0 +02.6	S 22 26.6 +00.0	10						
11	343 05.6 +00.9	N 09 54.1 -00.6	248 36.5 +02.3	S 22 14.7 +00.0	216 56.6 +02.5	S 22 26.6 +00.0	11						
12	358 06.5 +01.0	N 09 53.5 -00.6	263 38.8 +02.4	S 22 14.7 +00.0	231 59.1 +02.6	S 22 26.6 +00.0	12						
13	13 07.5 +01.0	N 09 52.9 -00.6	278 41.2 +02.3	S 22 14.7 +00.0	247 01.7 +02.5	S 22 26.6 +00.0	13						
14	28 08.5 +01.0	N 09 52.3 -00.6	293 43.5 +02.3	S 22 14.7 +00.1	262 04.2 +02.6	S 22 26.6 +00.0	14						
15	43 09.5 +00.9	N 09 51.7 -00.6	308 45.8 +02.3	S 22 14.8 +00.0	277 06.8 +02.5	S 22 26.6 +00.0	15						
16	58 10.4 +01.0	N 09 51.1 -00.6	323 48.1 +02.3	S 22 14.8 +00.0	292 09.3 +02.6	S 22 26.6 +00.0	16						
17	73 11.4 +01.0	N 09 50.5 -00.6	338 50.4 +02.4	S 22 14.8 +00.0	307 11.9 +02.5	S 22 26.6 +00.1	17						
18	88 12.4 +00.9	N 09 49.9 -00.6	353 52.8 +02.3	S 22 14.8 +00.0	322 14.4 +02.6	S 22 26.7 +00.0	18						
19	103 13.3 +01.0	N 09 49.3 -00.6	8 55.1 +02.3	S 22 14.8 +00.1	337 17.0 +02.5	S 22 26.7 +00.0	19						
20	118 14.3 +01.0	N 09 48.7 -00.6	23 57.4 +02.3	S 22 14.9 +00.0	352 19.5 +02.6	S 22 26.7 +00.0	20						
21	133 15.3 +00.9	N 09 48.1 -00.6	38 59.7 +02.3	S 22 14.9 +00.0	7 22.1 +02.5	S 22 26.7 +00.0	21						
22	148 16.2 +01.0	N 09 47.5 -00.6	54 02.0 +02.3	S 22 14.9 +00.0	22 24.6 +02.6	S 22 26.7 +00.0	22						
23	163 17.2 +01.0	N 09 46.9 -00.6	69 04.3 +02.3	S 22 14.9 +00.1	37 27.2 +02.5	S 22 26.7 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 201° 201° 201° 201° 201° 200° Greenwich Culmination Time: 12:07	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 106° 106° 106° 106° 106° 106° Greenwich Culmination Time: 18:24	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 075° 075° 075° 075° 075° 075° Greenwich Culmination Time: 20:30										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 47.1 +00.2	N 09 10.8 -00.9	175 11.2 -00.4	N 08 52.4 -01.2	184 30.0 -35.1	N 14 45.5 -11.3	00						
01	194 47.3 +00.2	N 09 09.9 -00.9	190 10.8 -00.5	N 08 51.2 -01.1	198 54.9 -35.1	N 14 34.2 -11.4	01						
02	209 47.5 +00.2	N 09 09.0 -00.9	205 10.3 -00.4	N 08 50.1 -01.2	213 19.8 -35.1	N 14 22.8 -11.5	02						
03	224 47.7 +00.2	N 09 08.1 -00.9	220 09.9 -00.5	N 08 48.9 -01.2	227 44.7 -34.9	N 14 11.3 -11.6	03						
04	239 47.9 +00.2	N 09 07.2 -00.9	235 09.4 -00.4	N 08 47.7 -01.2	242 09.8 -35.0	N 13 59.7 -11.7	04						
05	254 48.1 +00.2	N 09 06.3 -00.9	250 09.0 -00.4	N 08 46.5 -01.1	256 34.8 -34.8	N 13 48.0 -11.8	05						
06	269 48.3 +00.2	N 09 05.4 -00.9	265 08.6 -00.5	N 08 45.4 -01.2	270 60.0 -34.9	N 13 36.2 -11.9	06						
07	284 48.5 +00.1	N 09 04.5 -00.9	280 08.1 -00.4	N 08 44.2 -01.2	285 25.1 -34.7	N 13 24.3 -12.0	07						
08	299 48.6 +00.2	N 09 03.6 -00.9	295 07.7 -00.4	N 08 43.0 -01.2	299 50.4 -34.7	N 13 12.3 -12.0	08						
09	314 48.8 +00.2	N 09 02.7 -00.8	310 07.3 -00.5	N 08 41.8 -01.1	314 15.7 -34.7	N 13 00.3 -12.2	09						
10	329 49.0 +00.2	N 09 01.9 -00.9	325 06.8 -00.4	N 08 40.7 -01.2	328 41.0 -34.6	N 12 48.1 -12.3	10						
11	344 49.2 +00.2	N 09 01.0 -00.9	340 06.4 -00.4	N 08 39.5 -01.2	343 06.4 -34.5	N 12 35.8 -12.3	11						
12	359 49.4 +00.2	N 09 00.1 -00.9	355 06.0 -00.5	N 08 38.3 -01.2	357 31.9 -34.5	N 12 23.5 -12.4	12						
13	14 49.6 +00.2	N 08 59.2 -00.9	10 05.5 -00.4	N 08 37.1 -01.2	11 57.4 -34.4	N 12 11.1 -12.5	13						
14	29 49.8 +00.2	N 08 58.3 -00.9	25 05.1 -00.4	N 08 35.9 -01.1	26 23.0 -34.4	N 11 58.6 -12.6	14						
15	44 50.0 +00.2	N 08 57.4 -00.9	40 04.7 -00.5	N 08 34.8 -01.2	40 48.6 -34.3	N 11 46.0 -12.7	15						
16	59 50.2 +00.2	N 08 56.5 -00.9	55 04.2 -00.4	N 08 33.6 -01.2	55 14.3 -34.3	N 11 33.3 -12.7	16						
17	74 50.4 +00.1	N 08 55.6 -00.9	70 03.8 -00.4	N 08 32.4 -01.2	69 40.0 -34.2	N 11 20.6 -12.8	17						
18	89 50.5 +00.2	N 08 54.7 -00.9	85 03.4 -00.5	N 08 31.2 -01.2	84 05.8 -34.1	N 11 07.8 -12.9	18						
19	104 50.7 +00.2	N 08 53.8 -00.9	100 02.9 -00.4	N 08 30.0 -01.2	98 31.7 -34.1	N 10 54.9 -13.0	19						
20	119 50.9 +00.2	N 08 52.9 -00.9	115 02.5 -00.4	N 08 28.8 -01.1	112 57.6 -34.1	N 10 41.9 -13.0	20						
21	134 51.1 +00.2	N 08 52.0 -00.9	130 02.1 -00.5	N 08 27.7 -01.2	127 23.5 -33.9	N 10 28.9 -13.1	21						
22	149 51.3 +00.2	N 08 51.1 -00.9	145 01.6 -00.4	N 08 26.5 -01.2	141 49.6 -34.0	N 10 15.8 -13.2	22						
23	164 51.5 +00.2	N 08 50.2 -00.9	160 01.2 -00.4	N 08 25.3 -01.2	156 15.6 -33.8	N 10 02.6 -13.2	23						
	UT 02 06 10 14 18 22 SD 15'8 15'8 15'8 15'8 15'8 15'8 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 202° 202° 202° 201° 201° 201° Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 197° 197° 197° 197° 196° 196° Greenwich Culmination Time: 12:19	UT 02 06 10 14 18 22 SD 16'7 16'7 16'7 16'7 16'7 16'7 HP 61'3 61'3 61'4 61'4 61'4 61'4 SHA 205° 203° 200° 198° 195° 193° Greenwich Culmination Time: 12:10										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 18.2 +00.9	N 09 46.3 -00.6	84 06.6 +02.4	S 22 15.0 +00.0	52 29.7 +02.5	S 22 26.7 +00.0	00						
01	193 19.1 +01.0	N 09 45.7 -00.6	99 09.0 +02.3	S 22 15.0 +00.0	67 32.2 +02.6	S 22 26.7 +00.1	01						
02	208 20.1 +01.0	N 09 45.1 -00.6	114 11.3 +02.3	S 22 15.0 +00.0	82 34.8 +02.5	S 22 26.8 +00.0	02						
03	223 21.1 +00.9	N 09 44.5 -00.6	129 13.6 +02.3	S 22 15.0 +00.1	97 37.3 +02.6	S 22 26.8 +00.0	03						
04	238 22.0 +01.0	N 09 43.9 -00.6	144 15.9 +02.3	S 22 15.1 +00.0	112 39.9 +02.5	S 22 26.8 +00.0	04						
05	253 23.0 +01.0	N 09 43.3 -00.6	159 18.2 +02.3	S 22 15.1 +00.0	127 42.4 +02.6	S 22 26.8 +00.0	05						
06	268 24.0 +00.9	N 09 42.7 -00.6	174 20.5 +02.3	S 22 15.1 +00.0	142 45.0 +02.5	S 22 26.8 +00.0	06						
07	283 24.9 +01.0	N 09 42.1 -00.6	189 22.8 +02.4	S 22 15.1 +00.0	157 47.5 +02.6	S 22 26.8 +00.0	07						
08	298 25.9 +01.0	N 09 41.5 -00.6	204 25.2 +02.3	S 22 15.1 +00.1	172 50.1 +02.5	S 22 26.8 +00.0	08						
09	313 26.9 +00.9	N 09 40.9 -00.6	219 27.5 +02.3	S 22 15.2 +00.0	187 52.6 +02.6	S 22 26.8 +00.1	09						
10	328 27.8 +01.0	N 09 40.3 -00.6	234 29.8 +02.3	S 22 15.2 +00.0	202 55.2 +02.5	S 22 26.9 +00.0	10						
11	343 28.8 +01.0	N 09 39.7 -00.6	249 32.1 +02.3	S 22 15.2 +00.0	217 57.7 +02.5	S 22 26.9 +00.0	11						
12	358 29.8 +00.9	N 09 39.1 -00.6	264 34.4 +02.3	S 22 15.2 +00.1	233 00.2 +02.6	S 22 26.9 +00.0	12						
13	13 30.7 +01.0	N 09 38.5 -00.6	279 36.7 +02.3	S 22 15.3 +00.0	248 02.8 +02.5	S 22 26.9 +00.0	13						
14	28 31.7 +01.0	N 09 37.9 -00.6	294 39.0 +02.3	S 22 15.3 +00.0	263 05.3 +02.6	S 22 26.9 +00.0	14						
15	43 32.7 +01.0	N 09 37.3 -00.6	309 41.3 +02.4	S 22 15.3 +00.0	278 07.9 +02.5	S 22 26.9 +00.0	15						
16	58 33.7 +00.9	N 09 36.7 -00.6	324 43.7 +02.3	S 22 15.3 +00.1	293 10.4 +02.6	S 22 26.9 +00.0	16						
17	73 34.6 +01.0	N 09 36.1 -00.6	339 46.0 +02.3	S 22 15.4 +00.0	308 13.0 +02.5	S 22 26.9 +00.0	17						
18	88 35.6 +01.0	N 09 35.5 -00.6	354 48.3 +02.3	S 22 15.4 +00.0	323 15.5 +02.5	S 22 26.9 +00.1	18						
19	103 36.6 +00.9	N 09 34.9 -00.6	9 50.6 +02.3	S 22 15.4 +00.0	338 18.0 +02.6	S 22 27.0 +00.0	19						
20	118 37.5 +01.0	N 09 34.3 -00.6	24 52.9 +02.3	S 22 15.4 +00.0	353 20.6 +02.5	S 22 27.0 +00.0	20						
21	133 38.5 +01.0	N 09 33.7 -00.6	39 55.2 +02.3	S 22 15.4 +00.1	8 23.1 +02.6	S 22 27.0 +00.0	21						
22	148 39.5 +00.9	N 09 33.1 -00.6	54 57.5 +02.3	S 22 15.5 +00.0	23 25.7 +02.5	S 22 27.0 +00.0	22						
23	163 40.4 +01.0	N 09 32.5 -00.6	69 59.8 +02.3	S 22 15.5 +00.0	38 28.2 +02.6	S 22 27.0 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 200° 200° 200° 200° 200° 200° Greenwich Culmination Time: 12:06	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 106° 106° 106° 106° 106° 106° Greenwich Culmination Time: 18:20	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 075° 075° 075° 075° 075° 075° Greenwich Culmination Time: 20:26										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 51.7 +00.2	N 08 49.3 -00.9	175 00.8 -00.5	N 08 24.1 -01.2	170 41.8 -33.8	N 09 49.4 -13.3	00						
01	194 51.9 +00.2	N 08 48.4 -00.9	190 00.3 -00.4	N 08 22.9 -01.2	185 08.0 -33.8	N 09 36.1 -13.3	01						
02	209 52.1 +00.2	N 08 47.5 -00.9	204 59.9 -00.4	N 08 21.7 -01.1	199 34.2 -33.7	N 09 22.8 -13.5	02						
03	224 52.3 +00.2	N 08 46.6 -00.9	219 59.5 -00.5	N 08 20.6 -01.2	214 00.5 -33.7	N 09 09.3 -13.4	03						
04	239 52.5 +00.2	N 08 45.7 -00.9	234 59.0 -00.4	N 08 19.4 -01.2	228 26.8 -33.6	N 08 55.9 -13.6	04						
05	254 52.7 +00.2	N 08 44.8 -00.9	249 58.6 -00.4	N 08 18.2 -01.2	242 53.2 -33.5	N 08 42.3 -13.5	05						
06	269 52.9 +00.1	N 08 43.9 -00.9	264 58.2 -00.4	N 08 17.0 -01.2	257 19.7 -33.5	N 08 28.8 -13.7	06						
07	284 53.0 +00.2	N 08 43.0 -00.9	279 57.8 -00.5	N 08 15.8 -01.2	271 46.2 -33.4	N 08 15.1 -13.6	07						
08	299 53.2 +00.2	N 08 42.1 -00.9	294 57.3 -00.4	N 08 14.6 -01.2	286 12.8 -33.4	N 08 01.5 -13.8	08						
09	314 53.4 +00.2	N 08 41.2 -00.9	309 56.9 -00.4	N 08 13.4 -01.2	300 39.4 -33.4	N 07 47.7 -13.7	09						
10	329 53.6 +00.2	N 08 40.3 -00.9	324 56.5 -00.4	N 08 12.2 -01.1	315 06.0 -33.2	N 07 34.0 -13.8	10						
11	344 53.8 +00.2	N 08 39.4 -00.9	339 56.1 -00.5	N 08 11.1 -01.2	329 32.8 -33.3	N 07 20.2 -13.9	11						
12	359 54.0 +00.2	N 08 38.5 -00.9	354 55.6 -00.4	N 08 09.9 -01.2	343 59.5 -33.2	N 07 06.3 -13.9	12						
13	14 54.2 +00.2	N 08 37.6 -00.9	9 55.2 -00.4	N 08 08.7 -01.2	358 26.3 -33.1	N 06 52.4 -13.9	13						
14	29 54.4 +00.2	N 08 36.7 -00.9	24 54.8 -00.5	N 08 07.5 -01.2	12 53.2 -33.1	N 06 38.5 -14.0	14						
15	44 54.6 +00.2	N 08 35.8 -00.9	39 54.3 -00.4	N 08 06.3 -01.2	27 20.1 -33.0	N 06 24.5 -14.0	15						
16	59 54.8 +00.2	N 08 34.9 -00.9	54 53.9 -00.4	N 08 05.1 -01.2	41 47.1 -33.0	N 06 10.5 -14.1	16						
17	74 55.0 +00.2	N 08 34.0 -00.9	69 53.5 -00.4	N 08 03.9 -01.2	56 14.1 -32.9	N 05 56.4 -14.0	17						
18	89 55.2 +00.2	N 08 33.1 -00.9	84 53.1 -00.5	N 08 02.7 -01.2	70 41.2 -32.9	N 05 42.4 -14.1	18						
19	104 55.4 +00.2	N 08 32.2 -00.9	99 52.6 -00.4	N 08 01.5 -01.2	85 08.3 -32.8	N 05 28.3 -14.1	19						
20	119 55.6 +00.2	N 08 31.3 -00.9	114 52.2 -00.4	N 08 00.3 -01.1	99 35.5 -32.8	N 05 14.2 -14.2	20						
21	134 55.8 +00.2	N 08 30.4 -00.9	129 51.8 -00.4	N 07 59.2 -01.2	114 02.7 -32.8	N 05 00.0 -14.2	21						
22	149 56.0 +00.2	N 08 29.5 -00.9	144 51.4 -00.5	N 07 58.0 -01.2	128 29.9 -32.7	N 04 45.8 -14.2	22						
23	164 56.2 +00.2	N 08 28.6 -00.9	159 50.9 -00.4	N 07 56.8 -01.2	142 57.2 -32.6	N 04 31.6 -14.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'3 61'3 61'3 61'2 61'2 61'1								
	SHA 201° 201° 201° 200° 200° 200°		SHA 196° 196° 196° 195° 195° 195°		SHA 191° 188° 186° 183° 181° 179°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 12:20		Greenwich Culmination Time: 13:06								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 41.4 +01.0	N 09 31.9 -00.6	85 02.1 +02.3	S 22 15.5 +00.0	53 30.8 +02.5	S 22 27.0 +00.0	00						
01	193 42.4 +01.0	N 09 31.3 -00.6	100 04.4 +02.3	S 22 15.5 +00.1	68 33.3 +02.5	S 22 27.0 +00.0	01						
02	208 43.4 +00.9	N 09 30.7 -00.6	115 06.7 +02.3	S 22 15.6 +00.0	83 35.8 +02.6	S 22 27.0 +00.1	02						
03	223 44.3 +01.0	N 09 30.1 -00.6	130 09.0 +02.3	S 22 15.6 +00.0	98 38.4 +02.5	S 22 27.1 +00.0	03						
04	238 45.3 +01.0	N 09 29.5 -00.6	145 11.3 +02.4	S 22 15.6 +00.0	113 40.9 +02.6	S 22 27.1 +00.0	04						
05	253 46.3 +00.9	N 09 28.9 -00.6	160 13.7 +02.3	S 22 15.6 +00.1	128 43.5 +02.5	S 22 27.1 +00.0	05						
06	268 47.2 +01.0	N 09 28.3 -00.6	175 16.0 +02.3	S 22 15.7 +00.0	143 46.0 +02.5	S 22 27.1 +00.0	06						
07	283 48.2 +01.0	N 09 27.7 -00.6	190 18.3 +02.3	S 22 15.7 +00.0	158 48.5 +02.6	S 22 27.1 +00.0	07						
08	298 49.2 +00.9	N 09 27.1 -00.6	205 20.6 +02.3	S 22 15.7 +00.0	173 51.1 +02.5	S 22 27.1 +00.0	08						
09	313 50.1 +01.0	N 09 26.5 -00.6	220 22.9 +02.3	S 22 15.7 +00.1	188 53.6 +02.6	S 22 27.1 +00.0	09						
10	328 51.1 +01.0	N 09 25.9 -00.7	235 25.2 +02.3	S 22 15.8 +00.0	203 56.2 +02.5	S 22 27.1 +00.1	10						
11	343 52.1 +01.0	N 09 25.2 -00.6	250 27.5 +02.3	S 22 15.8 +00.0	218 58.7 +02.5	S 22 27.2 +00.0	11						
12	358 53.1 +00.9	N 09 24.6 -00.6	265 29.8 +02.3	S 22 15.8 +00.0	234 01.2 +02.6	S 22 27.2 +00.0	12						
13	13 54.0 +01.0	N 09 24.0 -00.6	280 32.1 +02.3	S 22 15.8 +00.1	249 03.8 +02.5	S 22 27.2 +00.0	13						
14	28 55.0 +01.0	N 09 23.4 -00.6	295 34.4 +02.3	S 22 15.9 +00.0	264 06.3 +02.6	S 22 27.2 +00.0	14						
15	43 56.0 +00.9	N 09 22.8 -00.6	310 36.7 +02.3	S 22 15.9 +00.0	279 08.9 +02.5	S 22 27.2 +00.0	15						
16	58 56.9 +01.0	N 09 22.2 -00.6	325 39.0 +02.3	S 22 15.9 +00.0	294 11.4 +02.5	S 22 27.2 +00.0	16						
17	73 57.9 +01.0	N 09 21.6 -00.6	340 41.3 +02.3	S 22 15.9 +00.0	309 13.9 +02.6	S 22 27.2 +00.0	17						
18	88 58.9 +00.9	N 09 21.0 -00.6	355 43.6 +02.3	S 22 15.9 +00.1	324 16.5 +02.5	S 22 27.2 +00.0	18						
19	103 59.8 +01.0	N 09 20.4 -00.6	10 45.9 +02.3	S 22 16.0 +00.0	339 19.0 +02.6	S 22 27.2 +00.1	19						
20	119 00.8 +01.0	N 09 19.8 -00.6	25 48.2 +02.3	S 22 16.0 +00.0	354 21.6 +02.5	S 22 27.3 +00.0	20						
21	134 01.8 +01.0	N 09 19.2 -00.6	40 50.5 +02.3	S 22 16.0 +00.0	9 24.1 +02.5	S 22 27.3 +00.0	21						
22	149 02.8 +00.9	N 09 18.6 -00.6	55 52.8 +02.3	S 22 16.0 +00.1	24 26.6 +02.6	S 22 27.3 +00.0	22						
23	164 03.7 +01.0	N 09 18.0 -00.6	70 55.1 +02.3	S 22 16.1 +00.0	39 29.2 +02.5	S 22 27.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 200° 200° 200° 199° 199° 199°		SHA 106° 106° 106° 106° 106° 106°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 18:17		Greenwich Culmination Time: 20:22								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 56.4 +00.1	N 08 27.7 -00.9	174 50.5 -00.4	N 07 55.6 -01.2	157 24.6 -32.7	N 04 17.4 -14.2	00						
01	194 56.5 +00.2	N 08 26.8 -00.9	189 50.1 -00.4	N 07 54.4 -01.2	171 51.9 -32.5	N 04 03.2 -14.3	01						
02	209 56.7 +00.2	N 08 25.9 -00.9	204 49.7 -00.5	N 07 53.2 -01.2	186 19.4 -32.5	N 03 48.9 -14.2	02						
03	224 56.9 +00.2	N 08 25.0 -00.9	219 49.2 -00.4	N 07 52.0 -01.2	200 46.9 -32.5	N 03 34.7 -14.3	03						
04	239 57.1 +00.2	N 08 24.1 -00.9	234 48.8 -00.4	N 07 50.8 -01.2	215 14.4 -32.5	N 03 20.4 -14.3	04						
05	254 57.3 +00.2	N 08 23.2 -00.9	249 48.4 -00.4	N 07 49.6 -01.2	229 41.9 -32.4	N 03 06.1 -14.3	05						
06	269 57.5 +00.2	N 08 22.3 -00.9	264 48.0 -00.4	N 07 48.4 -01.2	244 09.5 -32.3	N 02 51.8 -14.3	06						
07	284 57.7 +00.2	N 08 21.4 -00.9	279 47.6 -00.5	N 07 47.2 -01.2	258 37.2 -32.4	N 02 37.5 -14.3	07						
08	299 57.9 +00.2	N 08 20.5 -01.0	294 47.1 -00.4	N 07 46.0 -01.2	273 04.8 -32.2	N 02 23.2 -14.3	08						
09	314 58.1 +00.2	N 08 19.5 -00.9	309 46.7 -00.4	N 07 44.8 -01.2	287 32.6 -32.3	N 02 08.9 -14.3	09						
10	329 58.3 +00.2	N 08 18.6 -00.9	324 46.3 -00.4	N 07 43.6 -01.2	302 00.3 -32.2	N 01 54.6 -14.3	10						
11	344 58.5 +00.2	N 08 17.7 -00.9	339 45.9 -00.4	N 07 42.4 -01.2	316 28.1 -32.2	N 01 40.3 -14.4	11						
12	359 58.7 +00.2	N 08 16.8 -00.9	354 45.5 -00.5	N 07 41.2 -01.2	330 55.9 -32.1	N 01 25.9 -14.3	12						
13	14 58.9 +00.2	N 08 15.9 -00.9	9 45.0 -00.4	N 07 40.0 -01.2	345 23.8 -32.1	N 01 11.6 -14.3	13						
14	29 59.1 +00.2	N 08 15.0 -00.9	24 44.6 -00.4	N 07 38.8 -01.2	359 51.7 -32.1	N 00 57.3 -14.3	14						
15	44 59.3 +00.2	N 08 14.1 -00.9	39 44.2 -00.4	N 07 37.6 -01.2	14 19.6 -32.0	N 00 43.0 -14.3	15						
16	59 59.5 +00.2	N 08 13.2 -00.9	54 43.8 -00.4	N 07 36.4 -01.2	28 47.6 -32.0	N 00 28.7 -14.3	16						
17	74 59.7 +00.2	N 08 12.3 -00.9	69 43.4 -00.5	N 07 35.2 -01.2	43 15.6 -31.9	N 00 14.4 -14.2	17						
18	89 59.9 +00.2	N 08 11.4 -00.9	84 42.9 -00.4	N 07 34.0 -01.2	57 43.7 -32.0	N 00 00.2 -14.3	18						
19	105 00.1 +00.2	N 08 10.5 -00.9	99 42.5 -00.4	N 07 32.8 -01.2	72 11.7 -31.9	S 00 14.1 +14.2	19						
20	120 00.3 +00.2	N 08 09.6 -00.9	114 42.1 -00.4	N 07 31.6 -01.2	86 39.8 -31.8	S 00 28.3 +14.3	20						
21	135 00.5 +00.2	N 08 08.7 -00.9	129 41.7 -00.4	N 07 30.4 -01.2	101 08.0 -31.9	S 00 42.6 +14.2	21						
22	150 00.7 +00.2	N 08 07.8 -01.0	144 41.3 -00.5	N 07 29.2 -01.2	115 36.1 -31.8	S 00 56.8 +14.2	22						
23	165 00.9 +00.2	N 08 06.8 -00.9	159 40.8 -00.4	N 07 28.0 -01.2	130 04.3 -31.8	S 01 11.0 +14.1	23						
	UT 02 06 10 14 18 22 SD 15'8 15'8 15'8 15'8 15'8 15'8 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 200° 200° 200° 200° 199° 199° Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 195° 195° 194° 194° 194° 194° Greenwich Culmination Time: 12:20	UT 02 06 10 14 18 22 SD 16'6 16'6 16'6 16'6 16'5 16'5 HP 61'0 60'9 60'9 60'8 60'7 60'6 SHA 176° 174° 172° 169° 167° 165° Greenwich Culmination Time: 14:00										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 04.7 +01.0	N 09 17.4 -00.6	85 57.4 +02.3	S 22 16.1 +00.0	54 31.7 +02.6	S 22 27.3 +00.0	00						
01	194 05.7 +00.9	N 09 16.8 -00.6	100 59.7 +02.3	S 22 16.1 +00.0	69 34.3 +02.5	S 22 27.3 +00.0	01						
02	209 06.6 +01.0	N 09 16.2 -00.6	116 02.0 +02.3	S 22 16.1 +00.1	84 36.8 +02.5	S 22 27.3 +00.0	02						
03	224 07.6 +01.0	N 09 15.6 -00.6	131 04.3 +02.3	S 22 16.2 +00.0	99 39.3 +02.6	S 22 27.3 +00.1	03						
04	239 08.6 +01.0	N 09 15.0 -00.6	146 06.6 +02.3	S 22 16.2 +00.0	114 41.9 +02.5	S 22 27.4 +00.0	04						
05	254 09.6 +00.9	N 09 14.4 -00.6	161 08.9 +02.3	S 22 16.2 +00.0	129 44.4 +02.5	S 22 27.4 +00.0	05						
06	269 10.5 +01.0	N 09 13.8 -00.6	176 11.2 +02.3	S 22 16.2 +00.1	144 46.9 +02.6	S 22 27.4 +00.0	06						
07	284 11.5 +01.0	N 09 13.2 -00.6	191 13.5 +02.3	S 22 16.3 +00.0	159 49.5 +02.5	S 22 27.4 +00.0	07						
08	299 12.5 +01.0	N 09 12.6 -00.7	206 15.8 +02.3	S 22 16.3 +00.0	174 52.0 +02.5	S 22 27.4 +00.0	08						
09	314 13.5 +00.9	N 09 11.9 -00.6	221 18.1 +02.3	S 22 16.3 +00.0	189 54.5 +02.6	S 22 27.4 +00.0	09						
10	329 14.4 +01.0	N 09 11.3 -00.6	236 20.4 +02.3	S 22 16.3 +00.1	204 57.1 +02.5	S 22 27.4 +00.0	10						
11	344 15.4 +01.0	N 09 10.7 -00.6	251 22.7 +02.3	S 22 16.4 +00.0	219 59.6 +02.6	S 22 27.4 +00.0	11						
12	359 16.4 +00.9	N 09 10.1 -00.6	266 25.0 +02.3	S 22 16.4 +00.0	235 02.2 +02.5	S 22 27.4 +00.1	12						
13	14 17.3 +01.0	N 09 09.5 -00.6	281 27.3 +02.3	S 22 16.4 +00.0	250 04.7 +02.5	S 22 27.5 +00.0	13						
14	29 18.3 +01.0	N 09 08.9 -00.6	296 29.6 +02.3	S 22 16.4 +00.1	265 07.2 +02.6	S 22 27.5 +00.0	14						
15	44 19.3 +01.0	N 09 08.3 -00.6	311 31.9 +02.3	S 22 16.5 +00.0	280 09.8 +02.5	S 22 27.5 +00.0	15						
16	59 20.3 +00.9	N 09 07.7 -00.6	326 34.2 +02.3	S 22 16.5 +00.0	295 12.3 +02.5	S 22 27.5 +00.0	16						
17	74 21.2 +01.0	N 09 07.1 -00.6	341 36.5 +02.2	S 22 16.5 +00.0	310 14.8 +02.6	S 22 27.5 +00.0	17						
18	89 22.2 +01.0	N 09 06.5 -00.6	356 38.7 +02.3	S 22 16.5 +00.1	325 17.4 +02.5	S 22 27.5 +00.0	18						
19	104 23.2 +00.9	N 09 05.9 -00.6	11 41.0 +02.3	S 22 16.6 +00.0	340 19.9 +02.5	S 22 27.5 +00.0	19						
20	119 24.1 +01.0	N 09 05.3 -00.6	26 43.3 +02.3	S 22 16.6 +00.0	355 22.4 +02.6	S 22 27.5 +00.0	20						
21	134 25.1 +01.0	N 09 04.7 -00.6	41 45.6 +02.3	S 22 16.6 +00.0	10 25.0 +02.5	S 22 27.5 +00.1	21						
22	149 26.1 +01.0	N 09 04.1 -00.6	56 47.9 +02.3	S 22 16.6 +00.1	25 27.5 +02.5	S 22 27.6 +00.0	22						
23	164 27.1 +00.9	N 09 03.5 -00.6	71 50.2 +02.3	S 22 16.7 +00.0	40 30.0 +02.6	S 22 27.6 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 199° 199° 199° 199° 199° 199° Greenwich Culmination Time: 12:02	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 106° 106° 106° 106° 106° 106° Greenwich Culmination Time: 18:13	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 075° 075° 075° 075° 075° 075° Greenwich Culmination Time: 20:18										

Warning: This page has been generated by a computer program. Complex computer programs usually have bugs and may produce wrong data. The data on this page is believed to be accurate but no warranty is given for its correctness. Use it only for training and exercising!

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	01.1 +00.2	N 08 05.9	-00.9	174	40.4 -00.4	N 07 26.8	-01.2	144	32.5 -31.7	S 01 25.1	+14.2	00
01	195	01.3 +00.2	N 08 05.0	-00.9	189	40.0 -00.4	N 07 25.6	-01.2	159	00.8 -31.7	S 01 39.3	+14.1	01
02	210	01.5 +00.2	N 08 04.1	-00.9	204	39.6 -00.4	N 07 24.4	-01.2	173	29.1 -31.7	S 01 53.4	+14.1	02
03	225	01.7 +00.2	N 08 03.2	-00.9	219	39.2 -00.4	N 07 23.2	-01.2	187	57.4 -31.7	S 02 07.5	+14.1	03
04	240	01.9 +00.2	N 08 02.3	-00.9	234	38.8 -00.5	N 07 22.0	-01.2	202	25.7 -31.7	S 02 21.6	+14.0	04
05	255	02.1 +00.2	N 08 01.4	-00.9	249	38.3 -00.4	N 07 20.8	-01.2	216	54.0 -31.6	S 02 35.6	+14.0	05
06	270	02.3 +00.2	N 08 00.5	-00.9	264	37.9 -00.4	N 07 19.6	-01.2	231	22.4 -31.6	S 02 49.6	+14.0	06
07	285	02.5 +00.2	N 07 59.6	-00.9	279	37.5 -00.4	N 07 18.4	-01.2	245	50.8 -31.6	S 03 03.6	+14.0	07
08	300	02.7 +00.2	N 07 58.7	-01.0	294	37.1 -00.4	N 07 17.2	-01.2	260	19.2 -31.5	S 03 17.6	+13.9	08
09	315	02.9 +00.2	N 07 57.7	-00.9	309	36.7 -00.4	N 07 16.0	-01.2	274	47.7 -31.6	S 03 31.5	+13.8	09
10	330	03.1 +00.2	N 07 56.8	-00.9	324	36.3 -00.4	N 07 14.8	-01.2	289	16.1 -31.5	S 03 45.3	+13.9	10
11	345	03.3 +00.2	N 07 55.9	-00.9	339	35.9 -00.5	N 07 13.6	-01.2	303	44.6 -31.5	S 03 59.2	+13.8	11
12	0	03.5 +00.2	N 07 55.0	-00.9	354	35.4 -00.4	N 07 12.4	-01.2	318	13.1 -31.5	S 04 13.0	+13.7	12
13	15	03.7 +00.2	N 07 54.1	-00.9	9	35.0 -00.4	N 07 11.2	-01.3	332	41.6 -31.4	S 04 26.7	+13.8	13
14	30	03.9 +00.2	N 07 53.2	-00.9	24	34.6 -00.4	N 07 09.9	-01.2	347	10.2 -31.5	S 04 40.5	+13.6	14
15	45	04.1 +00.2	N 07 52.3	-00.9	39	34.2 -00.4	N 07 08.7	-01.2	1	38.7 -31.4	S 04 54.1	+13.7	15
16	60	04.3 +00.2	N 07 51.4	-01.0	54	33.8 -00.4	N 07 07.5	-01.2	16	07.3 -31.4	S 05 07.8	+13.6	16
17	75	04.5 +00.2	N 07 50.4	-00.9	69	33.4 -00.4	N 07 06.3	-01.2	30	35.9 -31.4	S 05 21.4	+13.5	17
18	90	04.7 +00.2	N 07 49.5	-00.9	84	33.0 -00.5	N 07 05.1	-01.2	45	04.5 -31.4	S 05 34.9	+13.5	18
19	105	04.9 +00.2	N 07 48.6	-00.9	99	32.5 -00.4	N 07 03.9	-01.2	59	33.1 -31.3	S 05 48.4	+13.4	19
20	120	05.1 +00.2	N 07 47.7	-00.9	114	32.1 -00.4	N 07 02.7	-01.2	74	01.8 -31.4	S 06 01.8	+13.4	20
21	135	05.3 +00.2	N 07 46.8	-00.9	129	31.7 -00.4	N 07 01.5	-01.2	88	30.4 -31.3	S 06 15.2	+13.4	21
22	150	05.5 +00.2	N 07 45.9	-00.9	144	31.3 -00.4	N 07 00.3	-01.2	102	59.1 -31.4	S 06 28.6	+13.3	22
23	165	05.7 +00.2	N 07 45.0	-00.9	159	30.9 -00.4	N 06 59.1	-01.2	117	27.7 -31.3	S 06 41.9	+13.2	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'5 16'4 16'4 16'4 16'3 16'3				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'4 60'3 60'2 60'1 59'9 59'8				
	SHA 199° 199° 199° 199° 198° 198°				SHA 194° 194° 193° 193° 193° 193°				SHA 163° 160° 158° 156° 153° 151°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 12:21				Greenwich Culmination Time: 14:53				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179	28.0 +01.0	N 09 02.9	-00.7	86	52.5 +02.3	S 22 16.7	+00.0	55	32.6 +02.5	S 22 27.6	+00.0	00
01	194	29.0 +01.0	N 09 02.2	-00.6	101	54.8 +02.3	S 22 16.7	+00.0	70	35.1 +02.5	S 22 27.6	+00.0	01
02	209	30.0 +01.0	N 09 01.6	-00.6	116	57.1 +02.3	S 22 16.7	+00.1	85	37.6 +02.6	S 22 27.6	+00.0	02
03	224	31.0 +00.9	N 09 01.0	-00.6	131	59.4 +02.3	S 22 16.8	+00.0	100	40.2 +02.5	S 22 27.6	+00.0	03
04	239	31.9 +01.0	N 09 00.4	-00.6	147	01.7 +02.3	S 22 16.8	+00.0	115	42.7 +02.5	S 22 27.6	+00.0	04
05	254	32.9 +01.0	N 08 59.8	-00.6	162	04.0 +02.2	S 22 16.8	+00.0	130	45.2 +02.6	S 22 27.6	+00.0	05
06	269	33.9 +01.0	N 08 59.2	-00.6	177	06.2 +02.3	S 22 16.8	+00.1	145	47.8 +02.5	S 22 27.6	+00.1	06
07	284	34.9 +00.9	N 08 58.6	-00.6	192	08.5 +02.3	S 22 16.9	+00.0	160	50.3 +02.5	S 22 27.7	+00.0	07
08	299	35.8 +01.0	N 08 58.0	-00.6	207	10.8 +02.3	S 22 16.9	+00.0	175	52.8 +02.6	S 22 27.7	+00.0	08
09	314	36.8 +01.0	N 08 57.4	-00.6	222	13.1 +02.3	S 22 16.9	+00.0	190	55.4 +02.5	S 22 27.7	+00.0	09
10	329	37.8 +00.9	N 08 56.8	-00.6	237	15.4 +02.3	S 22 16.9	+00.1	205	57.9 +02.5	S 22 27.7	+00.0	10
11	344	38.7 +01.0	N 08 56.2	-00.6	252	17.7 +02.3	S 22 17.0	+00.0	221	00.4 +02.6	S 22 27.7	+00.0	11
12	359	39.7 +01.0	N 08 55.6	-00.6	267	20.0 +02.3	S 22 17.0	+00.0	236	03.0 +02.5	S 22 27.7	+00.0	12
13	14	40.7 +01.0	N 08 55.0	-00.7	282	22.3 +02.3	S 22 17.0	+00.0	251	05.5 +02.5	S 22 27.7	+00.0	13
14	29	41.7 +00.9	N 08 54.3	-00.6	297	24.6 +02.2	S 22 17.0	+00.1	266	08.0 +02.6	S 22 27.7	+00.0	14
15	44	42.6 +01.0	N 08 53.7	-00.6	312	26.8 +02.3	S 22 17.1	+00.0	281	10.6 +02.5	S 22 27.7	+00.1	15
16	59	43.6 +01.0	N 08 53.1	-00.6	327	29.1 +02.3	S 22 17.1	+00.0	296	13.1 +02.5	S 22 27.8	+00.0	16
17	74	44.6 +01.0	N 08 52.5	-00.6	342	31.4 +02.3	S 22 17.1	+00.0	311	15.6 +02.6	S 22 27.8	+00.0	17
18	89	45.6 +00.9	N 08 51.9	-00.6	357	33.7 +02.3	S 22 17.1	+00.1	326	18.2 +02.5	S 22 27.8	+00.0	18
19	104	46.5 +01.0	N 08 51.3	-00.6	12	36.0 +02.3	S 22 17.2	+00.0	341	20.7 +02.5	S 22 27.8	+00.0	19
20	119	47.5 +01.0	N 08 50.7	-00.6	27	38.3 +02.3	S 22 17.2	+00.0	356	23.2 +02.5	S 22 27.8	+00.0	20
21	134	48.5 +01.0	N 08 50.1	-00.6	42	40.6 +02.2	S 22 17.2	+00.0	11	25.7 +02.6	S 22 27.8	+00.0	21
22	149	49.5 +00.9	N 08 49.5	-00.6	57	42.8 +02.3	S 22 17.2	+00.1	26	28.3 +02.5	S 22 27.8	+00.0	22
23	164	50.4 +01.0	N 08 48.9	-00.6	72	45.1 +02.3	S 22 17.3	+00.0	41	30.8 +02.5	S 22 27.8	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 199° 198° 198° 198° 198° 198°				SHA 106° 106° 106° 106° 106° 106°				SHA 075° 075° 075° 075° 075° 075°				
	Greenwich Culmination Time: 12:01				Greenwich Culmination Time: 18:09				Greenwich Culmination Time: 20:14				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 05.9 +00.2	N 07 44.1 -01.0	174 30.5 -00.4	N 06 57.9 -01.3	131 56.4 -31.3	S 06 55.1 +13.2	00						
01	195 06.1 +00.2	N 07 43.1 -00.9	189 30.1 -00.4	N 06 56.6 -01.2	146 25.1 -31.3	S 07 08.3 +13.1	01						
02	210 06.3 +00.2	N 07 42.2 -00.9	204 29.7 -00.4	N 06 55.4 -01.2	160 53.8 -31.2	S 07 21.4 +13.0	02						
03	225 06.5 +00.2	N 07 41.3 -00.9	219 29.3 -00.5	N 06 54.2 -01.2	175 22.6 -31.3	S 07 34.4 +13.0	03						
04	240 06.7 +00.2	N 07 40.4 -00.9	234 28.8 -00.4	N 06 53.0 -01.2	189 51.3 -31.3	S 07 47.4 +13.0	04						
05	255 06.9 +00.2	N 07 39.5 -00.9	249 28.4 -00.4	N 06 51.8 -01.2	204 20.0 -31.2	S 08 00.4 +12.9	05						
06	270 07.1 +00.2	N 07 38.6 -01.0	264 28.0 -00.4	N 06 50.6 -01.2	218 48.8 -31.3	S 08 13.3 +12.8	06						
07	285 07.3 +00.2	N 07 37.6 -00.9	279 27.6 -00.4	N 06 49.4 -01.2	233 17.5 -31.2	S 08 26.1 +12.7	07						
08	300 07.5 +00.2	N 07 36.7 -00.9	294 27.2 -00.4	N 06 48.2 -01.3	247 46.3 -31.3	S 08 38.8 +12.7	08						
09	315 07.7 +00.2	N 07 35.8 -00.9	309 26.8 -00.4	N 06 46.9 -01.2	262 15.0 -31.2	S 08 51.5 +12.6	09						
10	330 07.9 +00.2	N 07 34.9 -00.9	324 26.4 -00.4	N 06 45.7 -01.2	276 43.8 -31.2	S 09 04.1 +12.6	10						
11	345 08.1 +00.2	N 07 34.0 -00.9	339 26.0 -00.4	N 06 44.5 -01.2	291 12.6 -31.3	S 09 16.7 +12.4	11						
12	0 08.3 +00.2	N 07 33.1 -01.0	354 25.6 -00.4	N 06 43.3 -01.2	305 41.3 -31.2	S 09 29.1 +12.5	12						
13	15 08.5 +00.2	N 07 32.1 -00.9	9 25.2 -00.4	N 06 42.1 -01.2	320 10.1 -31.2	S 09 41.6 +12.3	13						
14	30 08.7 +00.2	N 07 31.2 -00.9	24 24.8 -00.4	N 06 40.9 -01.2	334 38.9 -31.2	S 09 53.9 +12.3	14						
15	45 08.9 +00.2	N 07 30.3 -00.9	39 24.4 -00.5	N 06 39.7 -01.3	349 07.7 -31.2	S 10 06.2 +12.2	15						
16	60 09.1 +00.2	N 07 29.4 -00.9	54 23.9 -00.4	N 06 38.4 -01.2	3 36.5 -31.2	S 10 18.4 +12.1	16						
17	75 09.3 +00.3	N 07 28.5 -00.9	69 23.5 -00.4	N 06 37.2 -01.2	18 05.3 -31.2	S 10 30.5 +12.0	17						
18	90 09.6 +00.2	N 07 27.6 -01.0	84 23.1 -00.4	N 06 36.0 -01.2	32 34.1 -31.2	S 10 42.5 +12.0	18						
19	105 09.8 +00.2	N 07 26.6 -00.9	99 22.7 -00.4	N 06 34.8 -01.2	47 02.9 -31.2	S 10 54.5 +11.9	19						
20	120 10.0 +00.2	N 07 25.7 -00.9	114 22.3 -00.4	N 06 33.6 -01.3	61 31.7 -31.2	S 11 06.4 +11.8	20						
21	135 10.2 +00.2	N 07 24.8 -00.9	129 21.9 -00.4	N 06 32.3 -01.2	76 00.5 -31.2	S 11 18.2 +11.7	21						
22	150 10.4 +00.2	N 07 23.9 -00.9	144 21.5 -00.4	N 06 31.1 -01.2	90 29.3 -31.2	S 11 29.9 +11.7	22						
23	165 10.6 +00.2	N 07 23.0 -01.0	159 21.1 -00.4	N 06 29.9 -01.2	104 58.1 -31.2	S 11 41.6 +11.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'2 16'2 16'1 16'1 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'7 59'5 59'4 59'2 59'1 58'9								
	SHA 198° 198° 198° 198° 198° 197°		SHA 193° 192° 192° 192° 192° 192°		SHA 149° 147° 144° 142° 140° 138°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 12:22		Greenwich Culmination Time: 15:45								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 51.4 +01.0	N 08 48.3 -00.7	87 47.4 +02.3	S 22 17.3 +00.0	56 33.3 +02.6	S 22 27.8 +00.0	00						
01	194 52.4 +01.0	N 08 47.6 -00.6	102 49.7 +02.3	S 22 17.3 +00.0	71 35.9 +02.5	S 22 27.8 +00.1	01						
02	209 53.4 +00.9	N 08 47.0 -00.6	117 52.0 +02.3	S 22 17.3 +00.1	86 38.4 +02.5	S 22 27.9 +00.0	02						
03	224 54.3 +01.0	N 08 46.4 -00.6	132 54.3 +02.2	S 22 17.4 +00.0	101 40.9 +02.5	S 22 27.9 +00.0	03						
04	239 55.3 +01.0	N 08 45.8 -00.6	147 56.5 +02.3	S 22 17.4 +00.0	116 43.4 +02.6	S 22 27.9 +00.0	04						
05	254 56.3 +01.0	N 08 45.2 -00.6	162 58.8 +02.3	S 22 17.4 +00.0	131 46.0 +02.5	S 22 27.9 +00.0	05						
06	269 57.3 +00.9	N 08 44.6 -00.6	178 01.1 +02.3	S 22 17.4 +00.1	146 48.5 +02.5	S 22 27.9 +00.0	06						
07	284 58.2 +01.0	N 08 44.0 -00.6	193 03.4 +02.3	S 22 17.5 +00.0	161 51.0 +02.6	S 22 27.9 +00.0	07						
08	299 59.2 +01.0	N 08 43.4 -00.6	208 05.7 +02.3	S 22 17.5 +00.0	176 53.6 +02.5	S 22 27.9 +00.0	08						
09	315 00.2 +01.0	N 08 42.8 -00.6	223 08.0 +02.2	S 22 17.5 +00.0	191 56.1 +02.5	S 22 27.9 +00.0	09						
10	330 01.2 +00.9	N 08 42.2 -00.7	238 10.2 +02.3	S 22 17.5 +00.1	206 58.6 +02.5	S 22 27.9 +00.1	10						
11	345 02.1 +01.0	N 08 41.5 -00.6	253 12.5 +02.3	S 22 17.6 +00.0	222 01.1 +02.6	S 22 28.0 +00.0	11						
12	0 03.1 +01.0	N 08 40.9 -00.6	268 14.8 +02.3	S 22 17.6 +00.0	237 03.7 +02.5	S 22 28.0 +00.0	12						
13	15 04.1 +01.0	N 08 40.3 -00.6	283 17.1 +02.3	S 22 17.6 +00.0	252 06.2 +02.5	S 22 28.0 +00.0	13						
14	30 05.1 +00.9	N 08 39.7 -00.6	298 19.4 +02.2	S 22 17.6 +00.1	267 08.7 +02.6	S 22 28.0 +00.0	14						
15	45 06.0 +01.0	N 08 39.1 -00.6	313 21.6 +02.3	S 22 17.7 +00.0	282 11.3 +02.5	S 22 28.0 +00.0	15						
16	60 07.0 +01.0	N 08 38.5 -00.6	328 23.9 +02.3	S 22 17.7 +00.0	297 13.8 +02.5	S 22 28.0 +00.0	16						
17	75 08.0 +01.0	N 08 37.9 -00.6	343 26.2 +02.3	S 22 17.7 +00.0	312 16.3 +02.5	S 22 28.0 +00.0	17						
18	90 09.0 +00.9	N 08 37.3 -00.6	358 28.5 +02.3	S 22 17.7 +00.1	327 18.8 +02.6	S 22 28.0 +00.0	18						
19	105 09.9 +01.0	N 08 36.7 -00.7	13 30.8 +02.2	S 22 17.8 +00.0	342 21.4 +02.5	S 22 28.0 +00.0	19						
20	120 10.9 +01.0	N 08 36.0 -00.6	28 33.0 +02.3	S 22 17.8 +00.0	357 23.9 +02.5	S 22 28.0 +00.1	20						
21	135 11.9 +01.0	N 08 35.4 -00.6	43 35.3 +02.3	S 22 17.8 +00.1	12 26.4 +02.5	S 22 28.1 +00.0	21						
22	150 12.9 +01.0	N 08 34.8 -00.6	58 37.6 +02.3	S 22 17.9 +00.0	27 28.9 +02.6	S 22 28.1 +00.0	22						
23	165 13.9 +00.9	N 08 34.2 -00.6	73 39.9 +02.2	S 22 17.9 +00.0	42 31.5 +02.5	S 22 28.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 198° 198° 198° 198° 198° 197°		SHA 106° 106° 106° 106° 106° 106°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 18:06		Greenwich Culmination Time: 20:10								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	10.8 +00.2	N 07 22.0	-00.9	174	20.7 -00.4	N 06 28.7	-01.2	119	26.9 -31.3	S 11 53.2	+11.4	00
01	195	11.0 +00.2	N 07 21.1	-00.9	189	20.3 -00.4	N 06 27.5	-01.2	133	55.6 -31.2	S 12 04.6	+11.4	01
02	210	11.2 +00.2	N 07 20.2	-00.9	204	19.9 -00.4	N 06 26.3	-01.3	148	24.4 -31.2	S 12 16.0	+11.4	02
03	225	11.4 +00.2	N 07 19.3	-00.9	219	19.5 -00.4	N 06 25.0	-01.2	162	53.2 -31.2	S 12 27.4	+11.2	03
04	240	11.6 +00.2	N 07 18.4	-01.0	234	19.1 -00.4	N 06 23.8	-01.2	177	22.0 -31.2	S 12 38.6	+11.2	04
05	255	11.8 +00.2	N 07 17.4	-00.9	249	18.7 -00.4	N 06 22.6	-01.2	191	50.8 -31.2	S 12 49.8	+11.0	05
06	270	12.0 +00.2	N 07 16.5	-00.9	264	18.3 -00.4	N 06 21.4	-01.2	206	19.6 -31.3	S 13 00.8	+11.0	06
07	285	12.2 +00.2	N 07 15.6	-00.9	279	17.9 -00.4	N 06 20.2	-01.3	220	48.3 -31.2	S 13 11.8	+10.9	07
08	300	12.4 +00.2	N 07 14.7	-00.9	294	17.5 -00.4	N 06 18.9	-01.2	235	17.1 -31.2	S 13 22.7	+10.8	08
09	315	12.6 +00.2	N 07 13.8	-01.0	309	17.1 -00.4	N 06 17.7	-01.2	249	45.9 -31.3	S 13 33.5	+10.7	09
10	330	12.8 +00.2	N 07 12.8	-00.9	324	16.7 -00.4	N 06 16.5	-01.2	264	14.6 -31.2	S 13 44.2	+10.6	10
11	345	13.0 +00.2	N 07 11.9	-00.9	339	16.3 -00.4	N 06 15.3	-01.3	278	43.4 -31.2	S 13 54.8	+10.6	11
12	0	13.2 +00.3	N 07 11.0	-00.9	354	15.9 -00.4	N 06 14.0	-01.2	293	12.2 -31.3	S 14 05.4	+10.4	12
13	15	13.5 +00.2	N 07 10.1	-00.9	9	15.5 -00.4	N 06 12.8	-01.2	307	40.9 -31.3	S 14 15.8	+10.3	13
14	30	13.7 +00.2	N 07 09.2	-01.0	24	15.1 -00.5	N 06 11.6	-01.2	322	09.6 -31.2	S 14 26.1	+10.3	14
15	45	13.9 +00.2	N 07 08.2	-00.9	39	14.6 -00.4	N 06 10.4	-01.2	336	38.4 -31.3	S 14 36.4	+10.2	15
16	60	14.1 +00.2	N 07 07.3	-00.9	54	14.2 -00.4	N 06 09.2	-01.3	351	07.1 -31.3	S 14 46.6	+10.0	16
17	75	14.3 +00.2	N 07 06.4	-00.9	69	13.8 -00.4	N 06 07.9	-01.2	5	35.8 -31.3	S 14 56.6	+10.0	17
18	90	14.5 +00.2	N 07 05.5	-01.0	84	13.4 -00.4	N 06 06.7	-01.2	20	04.5 -31.2	S 15 06.6	+09.8	18
19	105	14.7 +00.2	N 07 04.5	-00.9	99	13.0 -00.4	N 06 05.5	-01.2	34	33.3 -31.3	S 15 16.4	+09.8	19
20	120	14.9 +00.2	N 07 03.6	-00.9	114	12.6 -00.4	N 06 04.3	-01.3	49	02.0 -31.3	S 15 26.2	+09.7	20
21	135	15.1 +00.2	N 07 02.7	-00.9	129	12.2 -00.4	N 06 03.0	-01.2	63	30.7 -31.3	S 15 35.9	+09.6	21
22	150	15.3 +00.2	N 07 01.8	-01.0	144	11.8 -00.4	N 06 01.8	-01.2	77	59.4 -31.4	S 15 45.5	+09.4	22
23	165	15.5 +00.2	N 07 00.8	-00.9	159	11.4 -00.4	N 06 00.6	-01.2	92	28.0 -31.3	S 15 54.9	+09.4	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'0 16'0 15'9 15'9 15'8 15'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 58'8 58'6 58'5 58'3 58'1 58'0				
	SHA 197° 197° 197° 197° 197° 197°				SHA 191° 191° 191° 191° 191° 190°				SHA 135° 133° 131° 129° 127° 124°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 12:22				Greenwich Culmination Time: 16:36				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	14.8 +01.0	N 08 33.6	-00.6	88	42.1 +02.3	S 22 17.9	+00.0	57	34.0 +02.5	S 22 28.1	+00.0	00
01	195	15.8 +01.0	N 08 33.0	-00.6	103	44.4 +02.3	S 22 17.9	+00.1	72	36.5 +02.5	S 22 28.1	+00.0	01
02	210	16.8 +01.0	N 08 32.4	-00.6	118	46.7 +02.3	S 22 18.0	+00.0	87	39.0 +02.6	S 22 28.1	+00.0	02
03	225	17.8 +00.9	N 08 31.8	-00.6	133	49.0 +02.2	S 22 18.0	+00.0	102	41.6 +02.5	S 22 28.1	+00.0	03
04	240	18.7 +01.0	N 08 31.2	-00.7	148	51.2 +02.3	S 22 18.0	+00.0	117	44.1 +02.5	S 22 28.1	+00.0	04
05	255	19.7 +01.0	N 08 30.5	-00.6	163	53.5 +02.3	S 22 18.0	+00.1	132	46.6 +02.5	S 22 28.1	+00.1	05
06	270	20.7 +01.0	N 08 29.9	-00.6	178	55.8 +02.3	S 22 18.1	+00.0	147	49.1 +02.6	S 22 28.2	+00.0	06
07	285	21.7 +00.9	N 08 29.3	-00.6	193	58.1 +02.2	S 22 18.1	+00.0	162	51.7 +02.5	S 22 28.2	+00.0	07
08	300	22.6 +01.0	N 08 28.7	-00.6	209	00.3 +02.3	S 22 18.1	+00.0	177	54.2 +02.5	S 22 28.2	+00.0	08
09	315	23.6 +01.0	N 08 28.1	-00.6	224	02.6 +02.3	S 22 18.1	+00.1	192	56.7 +02.5	S 22 28.2	+00.0	09
10	330	24.6 +01.0	N 08 27.5	-00.6	239	04.9 +02.3	S 22 18.2	+00.0	207	59.2 +02.6	S 22 28.2	+00.0	10
11	345	25.6 +00.9	N 08 26.9	-00.6	254	07.2 +02.2	S 22 18.2	+00.0	223	01.8 +02.5	S 22 28.2	+00.0	11
12	0	26.5 +01.0	N 08 26.3	-00.7	269	09.4 +02.3	S 22 18.2	+00.0	238	04.3 +02.5	S 22 28.2	+00.0	12
13	15	27.5 +01.0	N 08 25.6	-00.6	284	11.7 +02.3	S 22 18.2	+00.1	253	06.8 +02.5	S 22 28.2	+00.0	13
14	30	28.5 +01.0	N 08 25.0	-00.6	299	14.0 +02.3	S 22 18.3	+00.0	268	09.3 +02.6	S 22 28.2	+00.0	14
15	45	29.5 +01.0	N 08 24.4	-00.6	314	16.3 +02.2	S 22 18.3	+00.0	283	11.9 +02.5	S 22 28.2	+00.1	15
16	60	30.5 +00.9	N 08 23.8	-00.6	329	18.5 +02.3	S 22 18.3	+00.1	298	14.4 +02.5	S 22 28.3	+00.0	16
17	75	31.4 +01.0	N 08 23.2	-00.6	344	20.8 +02.3	S 22 18.4	+00.0	313	16.9 +02.5	S 22 28.3	+00.0	17
18	90	32.4 +01.0	N 08 22.6	-00.6	359	23.1 +02.2	S 22 18.4	+00.0	328	19.4 +02.5	S 22 28.3	+00.0	18
19	105	33.4 +01.0	N 08 22.0	-00.7	14	25.3 +02.3	S 22 18.4	+00.0	343	21.9 +02.6	S 22 28.3	+00.0	19
20	120	34.4 +00.9	N 08 21.3	-00.6	29	27.6 +02.3	S 22 18.4	+00.1	358	24.5 +02.5	S 22 28.3	+00.0	20
21	135	35.3 +01.0	N 08 20.7	-00.6	44	29.9 +02.2	S 22 18.5	+00.0	13	27.0 +02.5	S 22 28.3	+00.0	21
22	150	36.3 +01.0	N 08 20.1	-00.6	59	32.1 +02.3	S 22 18.5	+00.0	28	29.5 +02.5	S 22 28.3	+00.0	22
23	165	37.3 +01.0	N 08 19.5	-00.6	74	34.4 +02.3	S 22 18.5	+00.0	43	32.0 +02.6	S 22 28.3	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 197° 197° 197° 197° 197° 197°				SHA 106° 106° 106° 106° 106° 106°				SHA 075° 075° 075° 075° 075° 075°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 18:02				Greenwich Culmination Time: 20:06				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 22%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 15.7 +00.2	N 06 59.9 -00.9	174 11.0 -00.4	N 05 59.4 -01.3	106 56.7 -31.3	S 16 04.3 +09.3	00						
01	195 15.9 +00.2	N 06 59.0 -00.9	189 10.6 -00.4	N 05 58.1 -01.2	121 25.4 -31.4	S 16 13.6 +09.1	01						
02	210 16.1 +00.3	N 06 58.1 -01.0	204 10.2 -00.4	N 05 56.9 -01.2	135 54.0 -31.3	S 16 22.7 +09.1	02						
03	225 16.4 +00.2	N 06 57.1 -00.9	219 09.8 -00.4	N 05 55.7 -01.2	150 22.7 -31.4	S 16 31.8 +09.0	03						
04	240 16.6 +00.2	N 06 56.2 -00.9	234 09.4 -00.4	N 05 54.5 -01.3	164 51.3 -31.3	S 16 40.8 +08.8	04						
05	255 16.8 +00.2	N 06 55.3 -00.9	249 09.0 -00.3	N 05 53.2 -01.2	179 20.0 -31.4	S 16 49.6 +08.8	05						
06	270 17.0 +00.2	N 06 54.4 -01.0	264 08.7 -00.4	N 05 52.0 -01.2	193 48.6 -31.4	S 16 58.4 +08.7	06						
07	285 17.2 +00.2	N 06 53.4 -00.9	279 08.3 -00.4	N 05 50.8 -01.3	208 17.2 -31.3	S 17 07.1 +08.5	07						
08	300 17.4 +00.2	N 06 52.5 -00.9	294 07.9 -00.4	N 05 49.5 -01.2	222 45.9 -31.4	S 17 15.6 +08.4	08						
09	315 17.6 +00.2	N 06 51.6 -00.9	309 07.5 -00.4	N 05 48.3 -01.2	237 14.5 -31.4	S 17 24.0 +08.4	09						
10	330 17.8 +00.2	N 06 50.7 -01.0	324 07.1 -00.4	N 05 47.1 -01.2	251 43.1 -31.4	S 17 32.4 +08.2	10						
11	345 18.0 +00.2	N 06 49.7 -00.9	339 06.7 -00.4	N 05 45.9 -01.3	266 11.7 -31.4	S 17 40.6 +08.1	11						
12	0 18.2 +00.2	N 06 48.8 -00.9	354 06.3 -00.4	N 05 44.6 -01.2	280 40.3 -31.4	S 17 48.7 +08.1	12						
13	15 18.4 +00.2	N 06 47.9 -00.9	9 05.9 -00.4	N 05 43.4 -01.2	295 08.9 -31.5	S 17 56.8 +07.9	13						
14	30 18.6 +00.3	N 06 47.0 -01.0	24 05.5 -00.4	N 05 42.2 -01.3	309 37.4 -31.4	S 18 04.7 +07.8	14						
15	45 18.9 +00.2	N 06 46.0 -00.9	39 05.1 -00.4	N 05 40.9 -01.2	324 06.0 -31.4	S 18 12.5 +07.7	15						
16	60 19.1 +00.2	N 06 45.1 -00.9	54 04.7 -00.4	N 05 39.7 -01.2	338 34.6 -31.5	S 18 20.2 +07.5	16						
17	75 19.3 +00.2	N 06 44.2 -00.9	69 04.3 -00.4	N 05 38.5 -01.3	353 03.1 -31.4	S 18 27.7 +07.5	17						
18	90 19.5 +00.2	N 06 43.3 -01.0	84 03.9 -00.4	N 05 37.2 -01.2	7 31.7 -31.5	S 18 35.2 +07.4	18						
19	105 19.7 +00.2	N 06 42.3 -00.9	99 03.5 -00.4	N 05 36.0 -01.2	22 00.2 -31.4	S 18 42.6 +07.2	19						
20	120 19.9 +00.2	N 06 41.4 -00.9	114 03.1 -00.4	N 05 34.8 -01.3	36 28.8 -31.5	S 18 49.8 +07.1	20						
21	135 20.1 +00.2	N 06 40.5 -01.0	129 02.7 -00.4	N 05 33.5 -01.2	50 57.3 -31.5	S 18 56.9 +07.1	21						
22	150 20.3 +00.2	N 06 39.5 -00.9	144 02.3 -00.4	N 05 32.3 -01.2	65 25.8 -31.4	S 19 04.0 +06.9	22						
23	165 20.5 +00.2	N 06 38.6 -00.9	159 01.9 -00.4	N 05 31.1 -01.3	79 54.4 -31.5	S 19 10.9 +06.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'7 15'7 15'6 15'6 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'8 57'7 57'5 57'4 57'2 57'1								
	SHA 196° 196° 196° 196° 196° 196°		SHA 190° 190° 190° 190° 190° 189°		SHA 122° 120° 117° 115° 113° 111°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 12:23		Greenwich Culmination Time: 17:28								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 38.3 +01.0	N 08 18.9 -00.6	89 36.7 +02.3	S 22 18.5 +00.1	58 34.6 +02.5	S 22 28.3 +00.0	00						
01	195 39.3 +00.9	N 08 18.3 -00.6	104 39.0 +02.2	S 22 18.6 +00.0	73 37.1 +02.5	S 22 28.3 +00.1	01						
02	210 40.2 +01.0	N 08 17.7 -00.6	119 41.2 +02.3	S 22 18.6 +00.0	88 39.6 +02.5	S 22 28.4 +00.0	02						
03	225 41.2 +01.0	N 08 17.1 -00.7	134 43.5 +02.3	S 22 18.6 +00.1	103 42.1 +02.5	S 22 28.4 +00.0	03						
04	240 42.2 +01.0	N 08 16.4 -00.6	149 45.8 +02.2	S 22 18.7 +00.0	118 44.6 +02.6	S 22 28.4 +00.0	04						
05	255 43.2 +00.9	N 08 15.8 -00.6	164 48.0 +02.3	S 22 18.7 +00.0	133 47.2 +02.5	S 22 28.4 +00.0	05						
06	270 44.1 +01.0	N 08 15.2 -00.6	179 50.3 +02.3	S 22 18.7 +00.0	148 49.7 +02.5	S 22 28.4 +00.0	06						
07	285 45.1 +01.0	N 08 14.6 -00.6	194 52.6 +02.2	S 22 18.7 +00.1	163 52.2 +02.5	S 22 28.4 +00.0	07						
08	300 46.1 +01.0	N 08 14.0 -00.6	209 54.8 +02.3	S 22 18.8 +00.0	178 54.7 +02.5	S 22 28.4 +00.0	08						
09	315 47.1 +01.0	N 08 13.4 -00.6	224 57.1 +02.3	S 22 18.8 +00.0	193 57.2 +02.6	S 22 28.4 +00.0	09						
10	330 48.1 +00.9	N 08 12.8 -00.7	239 59.4 +02.2	S 22 18.8 +00.0	208 59.8 +02.5	S 22 28.4 +00.0	10						
11	345 49.0 +01.0	N 08 12.1 -00.6	255 01.6 +02.3	S 22 18.8 +00.1	224 02.3 +02.5	S 22 28.4 +00.0	11						
12	0 50.0 +01.0	N 08 11.5 -00.6	270 03.9 +02.3	S 22 18.9 +00.0	239 04.8 +02.5	S 22 28.4 +00.1	12						
13	15 51.0 +01.0	N 08 10.9 -00.6	285 06.2 +02.2	S 22 18.9 +00.0	254 07.3 +02.5	S 22 28.5 +00.0	13						
14	30 52.0 +00.9	N 08 10.3 -00.6	300 08.4 +02.3	S 22 18.9 +00.0	269 09.8 +02.6	S 22 28.5 +00.0	14						
15	45 52.9 +01.0	N 08 09.7 -00.6	315 10.7 +02.2	S 22 18.9 +00.1	284 12.4 +02.5	S 22 28.5 +00.0	15						
16	60 53.9 +01.0	N 08 09.1 -00.7	330 12.9 +02.3	S 22 19.0 +00.0	299 14.9 +02.5	S 22 28.5 +00.0	16						
17	75 54.9 +01.0	N 08 08.4 -00.6	345 15.2 +02.3	S 22 19.0 +00.0	314 17.4 +02.5	S 22 28.5 +00.0	17						
18	90 55.9 +01.0	N 08 07.8 -00.6	0 17.5 +02.2	S 22 19.0 +00.1	329 19.9 +02.5	S 22 28.5 +00.0	18						
19	105 56.9 +00.9	N 08 07.2 -00.6	15 19.7 +02.3	S 22 19.1 +00.0	344 22.4 +02.5	S 22 28.5 +00.0	19						
20	120 57.8 +01.0	N 08 06.6 -00.6	30 22.0 +02.3	S 22 19.1 +00.0	359 24.9 +02.6	S 22 28.5 +00.0	20						
21	135 58.8 +01.0	N 08 06.0 -00.6	45 24.3 +02.2	S 22 19.1 +00.0	14 27.5 +02.5	S 22 28.5 +00.0	21						
22	150 59.8 +01.0	N 08 05.4 -00.6	60 26.5 +02.3	S 22 19.1 +00.1	29 30.0 +02.5	S 22 28.5 +00.1	22						
23	166 00.8 +01.0	N 08 04.8 -00.7	75 28.8 +02.2	S 22 19.2 +00.0	44 32.5 +02.5	S 22 28.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 197° 197° 197° 196° 196° 196°		SHA 106° 106° 106° 106° 106° 106°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 17:58		Greenwich Culmination Time: 20:02								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 20.7 +00.3	N 06 37.7 -00.9	174 01.5 -00.4	N 05 29.8 -01.2	94 22.9 -31.5	S 19 17.7 +06.7	00						
01	195 21.0 +00.2	N 06 36.8 -01.0	189 01.1 -00.4	N 05 28.6 -01.2	108 51.4 -31.5	S 19 24.4 +06.5	01						
02	210 21.2 +00.2	N 06 35.8 -00.9	204 00.7 -00.4	N 05 27.4 -01.2	123 19.9 -31.5	S 19 30.9 +06.5	02						
03	225 21.4 +00.2	N 06 34.9 -00.9	219 00.3 -00.4	N 05 26.2 -01.3	137 48.4 -31.5	S 19 37.4 +06.4	03						
04	240 21.6 +00.2	N 06 34.0 -01.0	233 59.9 -00.4	N 05 24.9 -01.2	152 16.9 -31.5	S 19 43.8 +06.2	04						
05	255 21.8 +00.2	N 06 33.0 -00.9	248 59.5 -00.3	N 05 23.7 -01.3	166 45.4 -31.5	S 19 50.0 +06.1	05						
06	270 22.0 +00.2	N 06 32.1 -00.9	263 59.2 -00.4	N 05 22.4 -01.2	181 13.9 -31.5	S 19 56.1 +06.0	06						
07	285 22.2 +00.2	N 06 31.2 -01.0	278 58.8 -00.4	N 05 21.2 -01.2	195 42.4 -31.5	S 20 02.1 +05.9	07						
08	300 22.4 +00.2	N 06 30.2 -00.9	293 58.4 -00.4	N 05 20.0 -01.3	210 10.9 -31.5	S 20 08.0 +05.8	08						
09	315 22.6 +00.3	N 06 29.3 -00.9	308 58.0 -00.4	N 05 18.7 -01.2	224 39.4 -31.5	S 20 13.8 +05.6	09						
10	330 22.9 +00.2	N 06 28.4 -00.9	323 57.6 -00.4	N 05 17.5 -01.2	239 07.9 -31.5	S 20 19.4 +05.6	10						
11	345 23.1 +00.2	N 06 27.5 -01.0	338 57.2 -00.4	N 05 16.3 -01.3	253 36.4 -31.5	S 20 25.0 +05.4	11						
12	0 23.3 +00.2	N 06 26.5 -00.9	353 56.8 -00.4	N 05 15.0 -01.2	268 04.9 -31.5	S 20 30.4 +05.3	12						
13	15 23.5 +00.2	N 06 25.6 -00.9	8 56.4 -00.4	N 05 13.8 -01.2	282 33.4 -31.5	S 20 35.7 +05.2	13						
14	30 23.7 +00.2	N 06 24.7 -01.0	23 56.0 -00.4	N 05 12.6 -01.3	297 01.9 -31.5	S 20 40.9 +05.1	14						
15	45 23.9 +00.2	N 06 23.7 -00.9	38 55.6 -00.4	N 05 11.3 -01.2	311 30.4 -31.5	S 20 46.0 +04.9	15						
16	60 24.1 +00.2	N 06 22.8 -00.9	53 55.2 -00.4	N 05 10.1 -01.2	325 58.9 -31.5	S 20 50.9 +04.9	16						
17	75 24.3 +00.2	N 06 21.9 -01.0	68 54.8 -00.4	N 05 08.9 -01.3	340 27.4 -31.5	S 20 55.8 +04.7	17						
18	90 24.5 +00.3	N 06 20.9 -00.9	83 54.4 -00.3	N 05 07.6 -01.2	354 55.9 -31.5	S 21 00.5 +04.6	18						
19	105 24.8 +00.2	N 06 20.0 -00.9	98 54.1 -00.4	N 05 06.4 -01.3	9 24.4 -31.5	S 21 05.1 +04.5	19						
20	120 25.0 +00.2	N 06 19.1 -01.0	113 53.7 -00.4	N 05 05.1 -01.2	23 52.9 -31.5	S 21 09.6 +04.3	20						
21	135 25.2 +00.2	N 06 18.1 -00.9	128 53.3 -00.4	N 05 03.9 -01.2	38 21.4 -31.5	S 21 13.9 +04.3	21						
22	150 25.4 +00.2	N 06 17.2 -00.9	143 52.9 -00.4	N 05 02.7 -01.3	52 49.9 -31.5	S 21 18.2 +04.1	22						
23	165 25.6 +00.2	N 06 16.3 -01.0	158 52.5 -00.4	N 05 01.4 -01.2	67 18.4 -31.5	S 21 22.3 +04.0	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 15'5 15'5 15'4 15'4 15'4 15'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 57'0 56'8 56'7 56'5 56'4 56'3	SHA 195° 195° 195° 195° 195° 195°	SHA 189° 189° 189° 189° 188° 188°	SHA 108° 106° 104° 102° 099° 097°						
	Greenwich Culmination Time: 11:58	Greenwich Culmination Time: 12:24	Greenwich Culmination Time: 18:21										

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 01.8 +00.9	N 08 04.1 -00.6	90 31.0 +02.3	S 22 19.2 +00.0	59 35.0 +02.5	S 22 28.6 +00.0	00						
01	196 02.7 +01.0	N 08 03.5 -00.6	105 33.3 +02.3	S 22 19.2 +00.0	74 37.5 +02.5	S 22 28.6 +00.0	01						
02	211 03.7 +01.0	N 08 02.9 -00.6	120 35.6 +02.2	S 22 19.2 +00.1	89 40.0 +02.6	S 22 28.6 +00.0	02						
03	226 04.7 +01.0	N 08 02.3 -00.6	135 37.8 +02.3	S 22 19.3 +00.0	104 42.6 +02.5	S 22 28.6 +00.0	03						
04	241 05.7 +01.0	N 08 01.7 -00.6	150 40.1 +02.3	S 22 19.3 +00.0	119 45.1 +02.5	S 22 28.6 +00.0	04						
05	256 06.7 +00.9	N 08 01.1 -00.7	165 42.4 +02.2	S 22 19.3 +00.1	134 47.6 +02.5	S 22 28.6 +00.0	05						
06	271 07.6 +01.0	N 08 00.4 -00.6	180 44.6 +02.3	S 22 19.4 +00.0	149 50.1 +02.5	S 22 28.6 +00.0	06						
07	286 08.6 +01.0	N 07 59.8 -00.6	195 46.9 +02.2	S 22 19.4 +00.0	164 52.6 +02.5	S 22 28.6 +00.0	07						
08	301 09.6 +01.0	N 07 59.2 -00.6	210 49.1 +02.3	S 22 19.4 +00.0	179 55.1 +02.6	S 22 28.6 +00.0	08						
09	316 10.6 +01.0	N 07 58.6 -00.6	225 51.4 +02.2	S 22 19.4 +00.1	194 57.7 +02.5	S 22 28.6 +00.1	09						
10	331 11.6 +00.9	N 07 58.0 -00.6	240 53.6 +02.3	S 22 19.5 +00.0	210 00.2 +02.5	S 22 28.7 +00.0	10						
11	346 12.5 +01.0	N 07 57.4 -00.7	255 55.9 +02.3	S 22 19.5 +00.0	225 02.7 +02.5	S 22 28.7 +00.0	11						
12	1 13.5 +01.0	N 07 56.7 -00.6	270 58.2 +02.2	S 22 19.5 +00.1	240 05.2 +02.5	S 22 28.7 +00.0	12						
13	16 14.5 +01.0	N 07 56.1 -00.6	286 00.4 +02.3	S 22 19.6 +00.0	255 07.7 +02.5	S 22 28.7 +00.0	13						
14	31 15.5 +01.0	N 07 55.5 -00.6	301 02.7 +02.2	S 22 19.6 +00.0	270 10.2 +02.5	S 22 28.7 +00.0	14						
15	46 16.5 +00.9	N 07 54.9 -00.6	316 04.9 +02.3	S 22 19.6 +00.0	285 12.7 +02.6	S 22 28.7 +00.0	15						
16	61 17.4 +01.0	N 07 54.3 -00.6	331 07.2 +02.2	S 22 19.6 +00.1	300 15.3 +02.5	S 22 28.7 +00.0	16						
17	76 18.4 +01.0	N 07 53.7 -00.7	346 09.4 +02.3	S 22 19.7 +00.0	315 17.8 +02.5	S 22 28.7 +00.0	17						
18	91 19.4 +01.0	N 07 53.0 -00.6	1 11.7 +02.3	S 22 19.7 +00.0	330 20.3 +02.5	S 22 28.7 +00.0	18						
19	106 20.4 +01.0	N 07 52.4 -00.6	16 14.0 +02.2	S 22 19.7 +00.0	345 22.8 +02.5	S 22 28.7 +00.0	19						
20	121 21.4 +00.9	N 07 51.8 -00.6	31 16.2 +02.3	S 22 19.7 +00.1	0 25.3 +02.5	S 22 28.7 +00.1	20						
21	136 22.3 +01.0	N 07 51.2 -00.6	46 18.5 +02.2	S 22 19.8 +00.0	15 27.8 +02.5	S 22 28.8 +00.0	21						
22	151 23.3 +01.0	N 07 50.6 -00.7	61 20.7 +02.3	S 22 19.8 +00.0	30 30.3 +02.6	S 22 28.8 +00.0	22						
23	166 24.3 +01.0	N 07 49.9 -00.6	76 23.0 +02.2	S 22 19.8 +00.1	45 32.9 +02.5	S 22 28.8 +00.0	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	SD 00'3 00'3 00'3 00'3 00'3 00'3	SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 075° 075° 075° 075° 075° 075°	SHA 196° 196° 196° 196° 196° 196°	SHA 106° 106° 106° 106° 106° 106°	SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:55	Greenwich Culmination Time: 17:55	Greenwich Culmination Time: 19:58										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 25.8 +00.2	N 06 15.3 -00.9	173 52.1 -00.4	N 05 00.2 -01.3	81 46.9 -31.5	S 21 26.3 +03.9	00						
01	195 26.0 +00.2	N 06 14.4 -00.9	188 51.7 -00.4	N 04 58.9 -01.2	96 15.4 -31.4	S 21 30.2 +03.8	01						
02	210 26.2 +00.3	N 06 13.5 -01.0	203 51.3 -00.4	N 04 57.7 -01.2	110 44.0 -31.5	S 21 34.0 +03.7	02						
03	225 26.5 +00.2	N 06 12.5 -00.9	218 50.9 -00.4	N 04 56.5 -01.3	125 12.5 -31.4	S 21 37.7 +03.5	03						
04	240 26.7 +00.2	N 06 11.6 -00.9	233 50.5 -00.3	N 04 55.2 -01.2	139 41.1 -31.5	S 21 41.2 +03.4	04						
05	255 26.9 +00.2	N 06 10.7 -01.0	248 50.2 -00.4	N 04 54.0 -01.3	154 09.6 -31.4	S 21 44.6 +03.3	05						
06	270 27.1 +00.2	N 06 09.7 -00.9	263 49.8 -00.4	N 04 52.7 -01.2	168 38.2 -31.4	S 21 47.9 +03.2	06						
07	285 27.3 +00.2	N 06 08.8 -00.9	278 49.4 -00.4	N 04 51.5 -01.2	183 06.8 -31.4	S 21 51.1 +03.1	07						
08	300 27.5 +00.2	N 06 07.9 -01.0	293 49.0 -00.4	N 04 50.3 -01.3	197 35.4 -31.5	S 21 54.2 +02.9	08						
09	315 27.7 +00.2	N 06 06.9 -00.9	308 48.6 -00.4	N 04 49.0 -01.2	212 03.9 -31.4	S 21 57.1 +02.9	09						
10	330 27.9 +00.3	N 06 06.0 -00.9	323 48.2 -00.4	N 04 47.8 -01.3	226 32.5 -31.3	S 21 60.0 +02.7	10						
11	345 28.2 +00.2	N 06 05.1 -01.0	338 47.8 -00.4	N 04 46.5 -01.2	241 01.2 -31.4	S 22 02.7 +02.6	11						
12	0 28.4 +00.2	N 06 04.1 -00.9	353 47.4 -00.3	N 04 45.3 -01.2	255 29.8 -31.4	S 22 05.3 +02.4	12						
13	15 28.6 +00.2	N 06 03.2 -00.9	8 47.1 -00.4	N 04 44.1 -01.3	269 58.4 -31.3	S 22 07.7 +02.4	13						
14	30 28.8 +00.2	N 06 02.3 -01.0	23 46.7 -00.4	N 04 42.8 -01.2	284 27.1 -31.3	S 22 10.1 +02.2	14						
15	45 29.0 +00.2	N 06 01.3 -00.9	38 46.3 -00.4	N 04 41.6 -01.3	298 55.8 -31.4	S 22 12.3 +02.2	15						
16	60 29.2 +00.2	N 06 00.4 -00.9	53 45.9 -00.4	N 04 40.3 -01.2	313 24.4 -31.3	S 22 14.5 +02.0	16						
17	75 29.4 +00.3	N 05 59.5 -01.0	68 45.5 -00.4	N 04 39.1 -01.3	327 53.1 -31.2	S 22 16.5 +01.8	17						
18	90 29.7 +00.2	N 05 58.5 -00.9	83 45.1 -00.4	N 04 37.8 -01.2	342 21.9 -31.3	S 22 18.3 +01.8	18						
19	105 29.9 +00.2	N 05 57.6 -01.0	98 44.7 -00.4	N 04 36.6 -01.2	356 50.6 -31.3	S 22 20.1 +01.6	19						
20	120 30.1 +00.2	N 05 56.6 -00.9	113 44.3 -00.3	N 04 35.4 -01.3	11 19.3 -31.2	S 22 21.7 +01.6	20						
21	135 30.3 +00.2	N 05 55.7 -00.9	128 44.0 -00.4	N 04 34.1 -01.2	25 48.1 -31.2	S 22 23.3 +01.4	21						
22	150 30.5 +00.2	N 05 54.8 -01.0	143 43.6 -00.4	N 04 32.9 -01.3	40 16.9 -31.2	S 22 24.7 +01.3	22						
23	165 30.7 +00.2	N 05 53.8 -00.9	158 43.2 -00.4	N 04 31.6 -01.2	54 45.7 -31.2	S 22 26.0 +01.1	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'9 15'9 15'9 15'9 15'9 15'9		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	15'3 15'3 15'2 15'2 15'2 15'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	56'2 56'0 55'9 55'8 55'7 55'6						
SHA	195° 194° 194° 194° 194° 194°		SHA	188° 188° 188° 187° 187° 187°		SHA	095° 093° 090° 088° 086° 084°						
Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 12:24				Greenwich Culmination Time: 19:13					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 25.3 +01.0	N 07 49.3 -00.6	91 25.2 +02.3	S 22 19.9 +00.0	60 35.4 +02.5	S 22 28.8 +00.0	00						
01	196 26.3 +00.9	N 07 48.7 -00.6	106 27.5 +02.2	S 22 19.9 +00.0	75 37.9 +02.5	S 22 28.8 +00.0	01						
02	211 27.2 +01.0	N 07 48.1 -00.6	121 29.7 +02.3	S 22 19.9 +00.0	90 40.4 +02.5	S 22 28.8 +00.0	02						
03	226 28.2 +01.0	N 07 47.5 -00.6	136 32.0 +02.2	S 22 19.9 +00.1	105 42.9 +02.5	S 22 28.8 +00.0	03						
04	241 29.2 +01.0	N 07 46.9 -00.7	151 34.2 +02.3	S 22 20.0 +00.0	120 45.4 +02.5	S 22 28.8 +00.0	04						
05	256 30.2 +01.0	N 07 46.2 -00.6	166 36.5 +02.2	S 22 20.0 +00.0	135 47.9 +02.5	S 22 28.8 +00.0	05						
06	271 31.2 +00.9	N 07 45.6 -00.6	181 38.7 +02.3	S 22 20.0 +00.1	150 50.4 +02.6	S 22 28.8 +00.0	06						
07	286 32.1 +01.0	N 07 45.0 -00.6	196 41.0 +02.3	S 22 20.1 +00.0	165 53.0 +02.5	S 22 28.8 +00.1	07						
08	301 33.1 +01.0	N 07 44.4 -00.6	211 43.3 +02.2	S 22 20.1 +00.0	180 55.5 +02.5	S 22 28.9 +00.0	08						
09	316 34.1 +01.0	N 07 43.8 -00.7	226 45.5 +02.3	S 22 20.1 +00.0	195 58.0 +02.5	S 22 28.9 +00.0	09						
10	331 35.1 +01.0	N 07 43.1 -00.6	241 47.8 +02.2	S 22 20.1 +00.1	211 00.5 +02.5	S 22 28.9 +00.0	10						
11	346 36.1 +00.9	N 07 42.5 -00.6	256 50.0 +02.3	S 22 20.2 +00.0	226 03.0 +02.5	S 22 28.9 +00.0	11						
12	1 37.0 +01.0	N 07 41.9 -00.6	271 52.3 +02.2	S 22 20.2 +00.0	241 05.5 +02.5	S 22 28.9 +00.0	12						
13	16 38.0 +01.0	N 07 41.3 -00.6	286 54.5 +02.3	S 22 20.2 +00.1	256 08.0 +02.5	S 22 28.9 +00.0	13						
14	31 39.0 +01.0	N 07 40.7 -00.6	301 56.8 +02.2	S 22 20.3 +00.0	271 10.5 +02.5	S 22 28.9 +00.0	14						
15	46 40.0 +01.0	N 07 40.1 -00.7	316 59.0 +02.3	S 22 20.3 +00.0	286 13.0 +02.5	S 22 28.9 +00.0	15						
16	61 41.0 +01.0	N 07 39.4 -00.6	332 01.3 +02.2	S 22 20.3 +00.0	301 15.5 +02.6	S 22 28.9 +00.0	16						
17	76 42.0 +00.9	N 07 38.8 -00.6	347 03.5 +02.3	S 22 20.3 +00.1	316 18.1 +02.5	S 22 28.9 +00.0	17						
18	91 42.9 +01.0	N 07 38.2 -00.6	2 05.8 +02.2	S 22 20.4 +00.0	331 20.6 +02.5	S 22 28.9 +00.1	18						
19	106 43.9 +01.0	N 07 37.6 -00.6	17 08.0 +02.2	S 22 20.4 +00.0	346 23.1 +02.5	S 22 29.0 +00.0	19						
20	121 44.9 +01.0	N 07 37.0 -00.7	32 10.2 +02.3	S 22 20.4 +00.1	1 25.6 +02.5	S 22 29.0 +00.0	20						
21	136 45.9 +01.0	N 07 36.3 -00.6	47 12.5 +02.2	S 22 20.5 +00.0	16 28.1 +02.5	S 22 29.0 +00.0	21						
22	151 46.9 +00.9	N 07 35.7 -00.6	62 14.7 +02.3	S 22 20.5 +00.0	31 30.6 +02.5	S 22 29.0 +00.0	22						
23	166 47.8 +01.0	N 07 35.1 -00.6	77 17.0 +02.2	S 22 20.5 +00.0	46 33.1 +02.5	S 22 29.0 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'0 00'0 00'0 00'0 00'0 00'0		SD	00'3 00'3 00'3 00'3 00'3 00'3		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	196° 195° 195° 195° 195° 195°		SHA	106° 106° 106° 106° 106° 106°		SHA	075° 075° 075° 075° 075° 075°						
Greenwich Culmination Time: 11:53				Greenwich Culmination Time: 17:51				Greenwich Culmination Time: 19:54					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 30.9 +00.3	N 05 52.9 -00.9	173 42.8 -00.4	N 04 30.4 -01.3	69 14.5 -31.1	S 22 27.1 +01.1	00						
01	195 31.2 +00.2	N 05 52.0 -01.0	188 42.4 -00.4	N 04 29.1 -01.2	83 43.4 -31.2	S 22 28.2 +00.9	01						
02	210 31.4 +00.2	N 05 51.0 -00.9	203 42.0 -00.4	N 04 27.9 -01.3	98 12.2 -31.1	S 22 29.1 +00.9	02						
03	225 31.6 +00.2	N 05 50.1 -01.0	218 41.6 -00.3	N 04 26.6 -01.2	112 41.1 -31.1	S 22 30.0 +00.7	03						
04	240 31.8 +00.2	N 05 49.1 -00.9	233 41.3 -00.4	N 04 25.4 -01.3	127 10.0 -31.0	S 22 30.7 +00.6	04						
05	255 32.0 +00.2	N 05 48.2 -00.9	248 40.9 -00.4	N 04 24.1 -01.2	141 39.0 -31.1	S 22 31.3 +00.4	05						
06	270 32.2 +00.2	N 05 47.3 -01.0	263 40.5 -00.4	N 04 22.9 -01.2	156 07.9 -31.0	S 22 31.7 +00.4	06						
07	285 32.4 +00.3	N 05 46.3 -00.9	278 40.1 -00.4	N 04 21.7 -01.3	170 36.9 -31.0	S 22 32.1 +00.2	07						
08	300 32.7 +00.2	N 05 45.4 -00.9	293 39.7 -00.4	N 04 20.4 -01.2	185 05.9 -31.0	S 22 32.3 +00.2	08						
09	315 32.9 +00.2	N 05 44.5 -01.0	308 39.3 -00.3	N 04 19.2 -01.3	199 34.9 -30.9	S 22 32.5 +00.0	09						
10	330 33.1 +00.2	N 05 43.5 -00.9	323 39.0 -00.4	N 04 17.9 -01.2	214 04.0 -30.9	S 22 32.5 -00.1	10						
11	345 33.3 +00.2	N 05 42.6 -01.0	338 38.6 -00.4	N 04 16.7 -01.3	228 33.1 -30.9	S 22 32.4 -00.2	11						
12	0 33.5 +00.2	N 05 41.6 -00.9	353 38.2 -00.4	N 04 15.4 -01.2	243 02.2 -30.9	S 22 32.2 -00.4	12						
13	15 33.7 +00.3	N 05 40.7 -00.9	8 37.8 -00.4	N 04 14.2 -01.3	257 31.3 -30.8	S 22 31.8 -00.4	13						
14	30 34.0 +00.2	N 05 39.8 -01.0	23 37.4 -00.4	N 04 12.9 -01.2	272 00.5 -30.8	S 22 31.4 -00.6	14						
15	45 34.2 +00.2	N 05 38.8 -00.9	38 37.0 -00.3	N 04 11.7 -01.3	286 29.7 -30.8	S 22 30.8 -00.7	15						
16	60 34.4 +00.2	N 05 37.9 -01.0	53 36.7 -00.4	N 04 10.4 -01.2	300 58.9 -30.7	S 22 30.1 -00.7	16						
17	75 34.6 +00.2	N 05 36.9 -00.9	68 36.3 -00.4	N 04 09.2 -01.3	315 28.2 -30.7	S 22 29.4 -00.9	17						
18	90 34.8 +00.2	N 05 36.0 -00.9	83 35.9 -00.4	N 04 07.9 -01.2	329 57.5 -30.7	S 22 28.5 -01.0	18						
19	105 35.0 +00.3	N 05 35.1 -01.0	98 35.5 -00.4	N 04 06.7 -01.3	344 26.8 -30.6	S 22 27.5 -01.2	19						
20	120 35.3 +00.2	N 05 34.1 -00.9	113 35.1 -00.4	N 04 05.4 -01.2	358 56.2 -30.7	S 22 26.3 -01.2	20						
21	135 35.5 +00.2	N 05 33.2 -01.0	128 34.7 -00.3	N 04 04.2 -01.3	13 25.5 -30.5	S 22 25.1 -01.4	21						
22	150 35.7 +00.2	N 05 32.2 -00.9	143 34.4 -00.4	N 04 02.9 -01.2	27 55.0 -30.6	S 22 23.7 -01.4	22						
23	165 35.9 +00.2	N 05 31.3 -00.9	158 34.0 -00.4	N 04 01.7 -01.3	42 24.4 -30.5	S 22 22.3 -01.6	23						
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 15'1 15'1 15'1 15'0 15'0 15'0							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 55'5 55'4 55'3 55'2 55'1 55'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 194° 194° 193° 193° 193° 193°	SHA 187° 187° 186° 186° 186° 186°	SHA 187° 187° 186° 186° 186° 186°	SHA 081° 079° 077° 075° 072° 070°		SHA 075° 075° 075° 075° 075° 075°							
	Greenwich Culmination Time: 11:57	Greenwich Culmination Time: 12:25	Greenwich Culmination Time: 12:25	Greenwich Culmination Time: 20:04		Greenwich Culmination Time: 19:50							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 48.8 +01.0	N 07 34.5 -00.6	92 19.2 +02.3	S 22 20.5 +00.1	61 35.6 +02.5	S 22 29.0 +00.0	00						
01	196 49.8 +01.0	N 07 33.9 -00.7	107 21.5 +02.2	S 22 20.6 +00.0	76 38.1 +02.5	S 22 29.0 +00.0	01						
02	211 50.8 +01.0	N 07 33.2 -00.6	122 23.7 +02.3	S 22 20.6 +00.0	91 40.6 +02.5	S 22 29.0 +00.0	02						
03	226 51.8 +01.0	N 07 32.6 -00.6	137 26.0 +02.2	S 22 20.6 +00.1	106 43.1 +02.6	S 22 29.0 +00.0	03						
04	241 52.8 +00.9	N 07 32.0 -00.6	152 28.2 +02.3	S 22 20.7 +00.0	121 45.7 +02.5	S 22 29.0 +00.0	04						
05	256 53.7 +01.0	N 07 31.4 -00.6	167 30.5 +02.2	S 22 20.7 +00.0	136 48.2 +02.5	S 22 29.0 +00.0	05						
06	271 54.7 +01.0	N 07 30.8 -00.7	182 32.7 +02.3	S 22 20.7 +00.0	151 50.7 +02.5	S 22 29.0 +00.1	06						
07	286 55.7 +01.0	N 07 30.1 -00.6	197 35.0 +02.2	S 22 20.7 +00.1	166 53.2 +02.5	S 22 29.1 +00.0	07						
08	301 56.7 +01.0	N 07 29.5 -00.6	212 37.2 +02.2	S 22 20.8 +00.0	181 55.7 +02.5	S 22 29.1 +00.0	08						
09	316 57.7 +01.0	N 07 28.9 -00.6	227 39.4 +02.3	S 22 20.8 +00.0	196 58.2 +02.5	S 22 29.1 +00.0	09						
10	331 58.7 +00.9	N 07 28.3 -00.7	242 41.7 +02.2	S 22 20.8 +00.1	212 00.7 +02.5	S 22 29.1 +00.0	10						
11	346 59.6 +01.0	N 07 27.6 -00.6	257 43.9 +02.3	S 22 20.9 +00.0	227 03.2 +02.5	S 22 29.1 +00.0	11						
12	2 00.6 +01.0	N 07 27.0 -00.6	272 46.2 +02.2	S 22 20.9 +00.0	242 05.7 +02.5	S 22 29.1 +00.0	12						
13	17 01.6 +01.0	N 07 26.4 -00.6	287 48.4 +02.3	S 22 20.9 +00.0	257 08.2 +02.5	S 22 29.1 +00.0	13						
14	32 02.6 +01.0	N 07 25.8 -00.6	302 50.7 +02.2	S 22 20.9 +00.1	272 10.7 +02.5	S 22 29.1 +00.0	14						
15	47 03.6 +00.9	N 07 25.2 -00.7	317 52.9 +02.2	S 22 21.0 +00.0	287 13.2 +02.5	S 22 29.1 +00.0	15						
16	62 04.5 +01.0	N 07 24.5 -00.6	332 55.1 +02.3	S 22 21.0 +00.0	302 15.7 +02.5	S 22 29.1 +00.0	16						
17	77 05.5 +01.0	N 07 23.9 -00.6	347 57.4 +02.2	S 22 21.0 +00.1	317 18.2 +02.5	S 22 29.1 +00.0	17						
18	92 06.5 +01.0	N 07 23.3 -00.6	2 59.6 +02.3	S 22 21.1 +00.0	332 20.7 +02.6	S 22 29.1 +00.1	18						
19	107 07.5 +01.0	N 07 22.7 -00.6	18 01.9 +02.2	S 22 21.1 +00.0	347 23.3 +02.5	S 22 29.2 +00.0	19						
20	122 08.5 +01.0	N 07 22.1 -00.7	33 04.1 +02.2	S 22 21.1 +00.0	2 25.8 +02.5	S 22 29.2 +00.0	20						
21	137 09.5 +00.9	N 07 21.4 -00.6	48 06.3 +02.3	S 22 21.1 +00.1	17 28.3 +02.5	S 22 29.2 +00.0	21						
22	152 10.4 +01.0	N 07 20.8 -00.6	63 08.6 +02.2	S 22 21.2 +00.0	32 30.8 +02.5	S 22 29.2 +00.0	22						
23	167 11.4 +01.0	N 07 20.2 -00.6	78 10.8 +02.3	S 22 21.2 +00.0	47 33.3 +02.5	S 22 29.2 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 195° 195° 195° 195° 195° 195°	SHA 106° 106° 106° 106° 105° 105°	SHA 106° 106° 106° 106° 105° 105°	SHA 075° 075° 075° 075° 075° 075°		SHA 075° 075° 075° 075° 075° 075°							
	Greenwich Culmination Time: 11:51	Greenwich Culmination Time: 17:48	Greenwich Culmination Time: 17:48	Greenwich Culmination Time: 19:50		Greenwich Culmination Time: 19:50							

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	180 36.1 +00.2	N 05 30.4 -01.0	173 33.6 -00.4	N 04 00.4 -01.2	56 53.9 -30.5	S 22 20.7 -01.7	00								
01	195 36.3 +00.3	N 05 29.4 -00.9	188 33.2 -00.4	N 03 59.2 -01.3	71 23.4 -30.4	S 22 19.0 -01.8	01								
02	210 36.6 +00.2	N 05 28.5 -01.0	203 32.8 -00.3	N 03 57.9 -01.2	85 53.0 -30.4	S 22 17.2 -01.9	02								
03	225 36.8 +00.2	N 05 27.5 -00.9	218 32.5 -00.4	N 03 56.7 -01.3	100 22.6 -30.4	S 22 15.3 -02.0	03								
04	240 37.0 +00.2	N 05 26.6 -01.0	233 32.1 -00.4	N 03 55.4 -01.2	114 52.2 -30.3	S 22 13.3 -02.1	04								
05	255 37.2 +00.2	N 05 25.6 -00.9	248 31.7 -00.4	N 03 54.2 -01.3	129 21.9 -30.3	S 22 11.2 -02.2	05								
06	270 37.4 +00.2	N 05 24.7 -00.9	263 31.3 -00.4	N 03 52.9 -01.2	143 51.6 -30.3	S 22 09.0 -02.3	06								
07	285 37.6 +00.3	N 05 23.8 -01.0	278 30.9 -00.4	N 03 51.7 -01.3	158 21.3 -30.2	S 22 06.7 -02.5	07								
08	300 37.9 +00.2	N 05 22.8 -00.9	293 30.5 -00.3	N 03 50.4 -01.2	172 51.1 -30.2	S 22 04.2 -02.5	08								
09	315 38.1 +00.2	N 05 21.9 -01.0	308 30.2 -00.4	N 03 49.2 -01.3	187 20.9 -30.1	S 22 01.7 -02.7	09								
10	330 38.3 +00.2	N 05 20.9 -00.9	323 29.8 -00.4	N 03 47.9 -01.2	201 50.8 -30.1	S 21 59.0 -02.7	10								
11	345 38.5 +00.2	N 05 20.0 -01.0	338 29.4 -00.4	N 03 46.7 -01.3	216 20.7 -30.1	S 21 56.3 -02.9	11								
12	0 38.7 +00.2	N 05 19.0 -00.9	353 29.0 -00.4	N 03 45.4 -01.2	230 50.6 -30.0	S 21 53.4 -03.0	12								
13	15 38.9 +00.3	N 05 18.1 -00.9	8 28.6 -00.3	N 03 44.2 -01.3	245 20.6 -30.0	S 21 50.4 -03.0	13								
14	30 39.2 +00.2	N 05 17.2 -01.0	23 28.3 -00.4	N 03 42.9 -01.2	259 50.6 -29.9	S 21 47.4 -03.2	14								
15	45 39.4 +00.2	N 05 16.2 -00.9	38 27.9 -00.4	N 03 41.7 -01.3	274 20.7 -29.9	S 21 44.2 -03.3	15								
16	60 39.6 +00.2	N 05 15.3 -01.0	53 27.5 -00.4	N 03 40.4 -01.2	288 50.8 -29.9	S 21 40.9 -03.4	16								
17	75 39.8 +00.2	N 05 14.3 -00.9	68 27.1 -00.4	N 03 39.2 -01.3	303 20.9 -29.8	S 21 37.5 -03.5	17								
18	90 40.0 +00.3	N 05 13.4 -01.0	83 26.7 -00.3	N 03 37.9 -01.3	317 51.1 -29.8	S 21 34.0 -03.6	18								
19	105 40.3 +00.2	N 05 12.4 -00.9	98 26.4 -00.4	N 03 36.6 -01.2	332 21.3 -29.7	S 21 30.4 -03.6	19								
20	120 40.5 +00.2	N 05 11.5 -00.9	113 26.0 -00.4	N 03 35.4 -01.3	346 51.6 -29.7	S 21 26.8 -03.8	20								
21	135 40.7 +00.2	N 05 10.6 -01.0	128 25.6 -00.4	N 03 34.1 -01.2	1 21.9 -29.6	S 21 23.0 -03.9	21								
22	150 40.9 +00.2	N 05 09.6 -00.9	143 25.2 -00.3	N 03 32.9 -01.3	15 52.3 -29.6	S 21 19.1 -04.0	22								
23	165 41.1 +00.2	N 05 08.7 -01.0	158 24.9 -00.4	N 03 31.6 -01.2	30 22.7 -29.5	S 21 15.1 -04.1	23								
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 193° 193° 192° 192° 192° 192°	Greenwich Culmination Time: 11:57	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 186° 186° 185° 185° 185° 185°	Greenwich Culmination Time: 12:26	UT 02 06 10 14 18 22	SD 15'0 14'9 14'9 14'9 14'9 14'9	HP 54'9 54'9 54'8 54'7 54'6 54'6	SHA 068° 066° 064° 062° 059° 057°	Greenwich Culmination Time: 20:54

UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	182 12.4 +01.0	N 07 19.6 -00.6	93 13.1 +02.2	S 22 21.2 +00.1	62 35.8 +02.5	S 22 29.2 +00.0	00								
01	197 13.4 +01.0	N 07 19.0 -00.7	108 15.3 +02.2	S 22 21.3 +00.0	77 38.3 +02.5	S 22 29.2 +00.0	01								
02	212 14.4 +01.0	N 07 18.3 -00.6	123 17.5 +02.3	S 22 21.3 +00.0	92 40.8 +02.5	S 22 29.2 +00.0	02								
03	227 15.4 +00.9	N 07 17.7 -00.6	138 19.8 +02.2	S 22 21.3 +00.1	107 43.3 +02.5	S 22 29.2 +00.0	03								
04	242 16.3 +01.0	N 07 17.1 -00.6	153 22.0 +02.3	S 22 21.4 +00.0	122 45.8 +02.5	S 22 29.2 +00.0	04								
05	257 17.3 +01.0	N 07 16.5 -00.7	168 24.3 +02.2	S 22 21.4 +00.0	137 48.3 +02.5	S 22 29.2 +00.0	05								
06	272 18.3 +01.0	N 07 15.8 -00.6	183 26.5 +02.2	S 22 21.4 +00.0	152 50.8 +02.5	S 22 29.2 +00.1	06								
07	287 19.3 +01.0	N 07 15.2 -00.6	198 28.7 +02.3	S 22 21.4 +00.1	167 53.3 +02.5	S 22 29.3 +00.0	07								
08	302 20.3 +01.0	N 07 14.6 -00.6	213 31.0 +02.2	S 22 21.5 +00.0	182 55.8 +02.5	S 22 29.3 +00.0	08								
09	317 21.3 +00.9	N 07 14.0 -00.6	228 33.2 +02.2	S 22 21.5 +00.0	197 58.3 +02.5	S 22 29.3 +00.0	09								
10	332 22.2 +01.0	N 07 13.4 -00.7	243 35.4 +02.3	S 22 21.5 +00.1	213 00.8 +02.5	S 22 29.3 +00.0	10								
11	347 23.2 +01.0	N 07 12.7 -00.6	258 37.7 +02.2	S 22 21.6 +00.0	228 03.3 +02.5	S 22 29.3 +00.0	11								
12	2 24.2 +01.0	N 07 12.1 -00.6	273 39.9 +02.2	S 22 21.6 +00.0	243 05.8 +02.5	S 22 29.3 +00.0	12								
13	17 25.2 +01.0	N 07 11.5 -00.6	288 42.1 +02.3	S 22 21.6 +00.0	258 08.3 +02.5	S 22 29.3 +00.0	13								
14	32 26.2 +01.0	N 07 10.9 -00.7	303 44.4 +02.2	S 22 21.6 +00.1	273 10.8 +02.5	S 22 29.3 +00.0	14								
15	47 27.2 +00.9	N 07 10.2 -00.6	318 46.6 +02.3	S 22 21.7 +00.0	288 13.3 +02.5	S 22 29.3 +00.0	15								
16	62 28.1 +01.0	N 07 09.6 -00.6	333 48.9 +02.2	S 22 21.7 +00.0	303 15.8 +02.5	S 22 29.3 +00.0	16								
17	77 29.1 +01.0	N 07 09.0 -00.6	348 51.1 +02.2	S 22 21.7 +00.1	318 18.3 +02.5	S 22 29.3 +00.0	17								
18	92 30.1 +01.0	N 07 08.4 -00.7	3 53.3 +02.3	S 22 21.8 +00.0	333 20.8 +02.5	S 22 29.3 +00.1	18								
19	107 31.1 +01.0	N 07 07.7 -00.6	18 55.6 +02.2	S 22 21.8 +00.0	348 23.3 +02.5	S 22 29.4 +00.0	19								
20	122 32.1 +01.0	N 07 07.1 -00.6	33 57.8 +02.2	S 22 21.8 +00.1	3 25.8 +02.5	S 22 29.4 +00.0	20								
21	137 33.1 +01.0	N 07 06.5 -00.6	49 00.0 +02.3	S 22 21.9 +00.0	18 28.3 +02.5	S 22 29.4 +00.0	21								
22	152 34.1 +00.9	N 07 05.9 -00.7	64 02.3 +02.2	S 22 21.9 +00.0	33 30.8 +02.5	S 22 29.4 +00.0	22								
23	167 35.0 +01.0	N 07 05.2 -00.6	79 04.5 +02.2	S 22 21.9 +00.0	48 33.3 +02.5	S 22 29.4 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 194° 194° 194° 194° 194° 194°	Greenwich Culmination Time: 11:50	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 105° 105° 105° 105° 105° 105°	Greenwich Culmination Time: 17:44	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 075° 075° 075° 075° 075° 075°	Greenwich Culmination Time: 19:46

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	180 41.3 +00.3	N 05 07.7 -00.9	173 24.5 -00.4	N 03 30.4 -01.3	44 53.2 -29.5	S 21 11.0 -04.2	00								
01	195 41.6 +00.2	N 05 06.8 -01.0	188 24.1 -00.4	N 03 29.1 -01.2	59 23.7 -29.5	S 21 06.8 -04.3	01								
02	210 41.8 +00.2	N 05 05.8 -00.9	203 23.7 -00.4	N 03 27.9 -01.3	73 54.2 -29.4	S 21 02.5 -04.4	02								
03	225 42.0 +00.2	N 05 04.9 -01.0	218 23.3 -00.3	N 03 26.6 -01.2	88 24.8 -29.4	S 20 58.1 -04.4	03								
04	240 42.2 +00.2	N 05 03.9 -00.9	233 23.0 -00.4	N 03 25.4 -01.3	102 55.4 -29.3	S 20 53.7 -04.6	04								
05	255 42.4 +00.3	N 05 03.0 -01.0	248 22.6 -00.4	N 03 24.1 -01.3	117 26.1 -29.2	S 20 49.1 -04.7	05								
06	270 42.7 +00.2	N 05 02.0 -00.9	263 22.2 -00.4	N 03 22.8 -01.2	131 56.9 -29.3	S 20 44.4 -04.7	06								
07	285 42.9 +00.2	N 05 01.1 -00.9	278 21.8 -00.3	N 03 21.6 -01.3	146 27.6 -29.1	S 20 39.7 -04.9	07								
08	300 43.1 +00.2	N 05 00.2 -01.0	293 21.5 -00.4	N 03 20.3 -01.2	160 58.5 -29.2	S 20 34.8 -05.0	08								
09	315 43.3 +00.2	N 04 59.2 -00.9	308 21.1 -00.4	N 03 19.1 -01.3	175 29.3 -29.1	S 20 29.8 -05.0	09								
10	330 43.5 +00.3	N 04 58.3 -01.0	323 20.7 -00.4	N 03 17.8 -01.2	190 00.2 -29.0	S 20 24.8 -05.2	10								
11	345 43.8 +00.2	N 04 57.3 -00.9	338 20.3 -00.4	N 03 16.6 -01.3	204 31.2 -29.0	S 20 19.6 -05.2	11								
12	0 44.0 +00.2	N 04 56.4 -01.0	353 19.9 -00.3	N 03 15.3 -01.3	219 02.2 -28.9	S 20 14.4 -05.3	12								
13	15 44.2 +00.2	N 04 55.4 -00.9	8 19.6 -00.4	N 03 14.0 -01.2	233 33.3 -28.9	S 20 09.1 -05.4	13								
14	30 44.4 +00.2	N 04 54.5 -01.0	23 19.2 -00.4	N 03 12.8 -01.3	248 04.4 -28.9	S 20 03.7 -05.5	14								
15	45 44.6 +00.2	N 04 53.5 -00.9	38 18.8 -00.4	N 03 11.5 -01.2	262 35.5 -28.7	S 19 58.2 -05.6	15								
16	60 44.8 +00.3	N 04 52.6 -01.0	53 18.4 -00.3	N 03 10.3 -01.3	277 06.8 -28.8	S 19 52.6 -05.7	16								
17	75 45.1 +00.2	N 04 51.6 -00.9	68 18.1 -00.4	N 03 09.0 -01.2	291 38.0 -28.7	S 19 46.9 -05.8	17								
18	90 45.3 +00.2	N 04 50.7 -01.0	83 17.7 -00.4	N 03 07.8 -01.3	306 09.3 -28.6	S 19 41.1 -05.9	18								
19	105 45.5 +00.2	N 04 49.7 -00.9	98 17.3 -00.4	N 03 06.5 -01.3	320 40.7 -28.6	S 19 35.2 -05.9	19								
20	120 45.7 +00.2	N 04 48.8 -01.0	113 16.9 -00.3	N 03 05.2 -01.2	335 12.1 -28.6	S 19 29.3 -06.0	20								
21	135 45.9 +00.3	N 04 47.8 -00.9	128 16.6 -00.4	N 03 04.0 -01.3	349 43.5 -28.5	S 19 23.3 -06.2	21								
22	150 46.2 +00.2	N 04 46.9 -01.0	143 16.2 -00.4	N 03 02.7 -01.2	4 15.0 -28.4	S 19 17.1 -06.2	22								
23	165 46.4 +00.2	N 04 45.9 -00.9	158 15.8 -00.4	N 03 01.5 -01.3	18 46.6 -28.5	S 19 10.9 -06.2	23								
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 192° 192° 192° 191° 191° 191°	Greenwich Culmination Time: 11:57	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 185° 184° 184° 184° 184° 184°	Greenwich Culmination Time: 12:26	UT 02 06 10 14 18 22	SD 14'9 14'8 14'8 14'8 14'8 14'8	HP 54'5 54'5 54'4 54'4 54'3 54'3	SHA 055° 053° 051° 049° 047° 045°	Greenwich Culmination Time: 21:42

UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	182 36.0 +01.0	N 07 04.6 -00.6	94 06.7 +02.2	S 22 21.9 +00.1	63 35.8 +02.5	S 22 29.4 +00.0	00								
01	197 37.0 +01.0	N 07 04.0 -00.6	109 08.9 +02.3	S 22 22.0 +00.0	78 38.3 +02.5	S 22 29.4 +00.0	01								
02	212 38.0 +01.0	N 07 03.4 -00.6	124 11.2 +02.2	S 22 22.0 +00.0	93 40.8 +02.5	S 22 29.4 +00.0	02								
03	227 39.0 +01.0	N 07 02.8 -00.7	139 13.4 +02.2	S 22 22.0 +00.1	108 43.3 +02.5	S 22 29.4 +00.0	03								
04	242 40.0 +00.9	N 07 02.1 -00.6	154 15.6 +02.3	S 22 22.1 +00.0	123 45.8 +02.5	S 22 29.4 +00.0	04								
05	257 40.9 +01.0	N 07 01.5 -00.6	169 17.9 +02.2	S 22 22.1 +00.0	138 48.3 +02.5	S 22 29.4 +00.0	05								
06	272 41.9 +01.0	N 07 00.9 -00.6	184 20.1 +02.2	S 22 22.1 +00.1	153 50.8 +02.5	S 22 29.4 +00.0	06								
07	287 42.9 +01.0	N 07 00.3 -00.7	199 22.3 +02.3	S 22 22.2 +00.0	168 53.3 +02.5	S 22 29.4 +00.1	07								
08	302 43.9 +01.0	N 06 59.6 -00.6	214 24.6 +02.2	S 22 22.2 +00.0	183 55.8 +02.5	S 22 29.5 +00.0	08								
09	317 44.9 +01.0	N 06 59.0 -00.6	229 26.8 +02.2	S 22 22.2 +00.0	198 58.3 +02.5	S 22 29.5 +00.0	09								
10	332 45.9 +01.0	N 06 58.4 -00.6	244 29.0 +02.2	S 22 22.2 +00.1	214 00.8 +02.5	S 22 29.5 +00.0	10								
11	347 46.9 +00.9	N 06 57.8 -00.7	259 31.2 +02.3	S 22 22.3 +00.0	229 03.3 +02.5	S 22 29.5 +00.0	11								
12	2 47.8 +01.0	N 06 57.1 -00.6	274 33.5 +02.2	S 22 22.3 +00.0	244 05.8 +02.5	S 22 29.5 +00.0	12								
13	17 48.8 +01.0	N 06 56.5 -00.6	289 35.7 +02.2	S 22 22.3 +00.1	259 08.3 +02.5	S 22 29.5 +00.0	13								
14	32 49.8 +01.0	N 06 55.9 -00.6	304 37.9 +02.3	S 22 22.4 +00.0	274 10.8 +02.5	S 22 29.5 +00.0	14								
15	47 50.8 +01.0	N 06 55.3 -00.7	319 40.2 +02.2	S 22 22.4 +00.0	289 13.3 +02.5	S 22 29.5 +00.0	15								
16	62 51.8 +01.0	N 06 54.6 -00.6	334 42.4 +02.2	S 22 22.4 +00.1	304 15.8 +02.5	S 22 29.5 +00.0	16								
17	77 52.8 +00.9	N 06 54.0 -00.6	349 44.6 +02.2	S 22 22.5 +00.0	319 18.3 +02.5	S 22 29.5 +00.0	17								
18	92 53.7 +01.0	N 06 53.4 -00.6	4 46.8 +02.3	S 22 22.5 +00.0	334 20.8 +02.5	S 22 29.5 +00.0	18								
19	107 54.7 +01.0	N 06 52.8 -00.7	19 49.1 +02.2	S 22 22.5 +00.0	349 23.3 +02.5	S 22 29.5 +00.0	19								
20	122 55.7 +01.0	N 06 52.1 -00.6	34 51.3 +02.2	S 22 22.5 +00.1	4 25.8 +02.5	S 22 29.5 +00.1	20								
21	137 56.7 +01.0	N 06 51.5 -00.6	49 53.5 +02.2	S 22 22.6 +00.0	19 28.3 +02.5	S 22 29.6 +00.0	21								
22	152 57.7 +01.0	N 06 50.9 -00.6	64 55.7 +02.3	S 22 22.6 +00.0	34 30.8 +02.5	S 22 29.6 +00.0	22								
23	167 58.7 +01.0	N 06 50.3 -00.7	79 58.0 +02.2	S 22 22.6 +00.1	49 33.3 +02.5	S 22 29.6 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 194° 194° 194° 194° 193° 193°	Greenwich Culmination Time: 11:48	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 105° 105° 105° 105° 105° 105°	Greenwich Culmination Time: 17:40	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 075° 075° 075° 075° 075° 075°	Greenwich Culmination Time: 19:42

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 46.6 +00.2	N 04 45.0 -00.9	173 15.4 -00.3	N 03 00.2 -01.3	33 18.1 -28.3	S 19 04.7 -06.4	00						
01	195 46.8 +00.2	N 04 44.1 -01.0	188 15.1 -00.4	N 02 58.9 -01.2	47 49.8 -28.3	S 18 58.3 -06.5	01						
02	210 47.0 +00.3	N 04 43.1 -00.9	203 14.7 -00.4	N 02 57.7 -01.3	62 21.5 -28.3	S 18 51.8 -06.5	02						
03	225 47.3 +00.2	N 04 42.2 -01.0	218 14.3 -00.4	N 02 56.4 -01.2	76 53.2 -28.2	S 18 45.3 -06.6	03						
04	240 47.5 +00.2	N 04 41.2 -00.9	233 13.9 -00.3	N 02 55.2 -01.3	91 25.0 -28.1	S 18 38.7 -06.7	04						
05	255 47.7 +00.2	N 04 40.3 -01.0	248 13.6 -00.4	N 02 53.9 -01.3	105 56.9 -28.2	S 18 32.0 -06.8	05						
06	270 47.9 +00.2	N 04 39.3 -00.9	263 13.2 -00.4	N 02 52.6 -01.2	120 28.7 -28.0	S 18 25.2 -06.9	06						
07	285 48.1 +00.3	N 04 38.4 -01.0	278 12.8 -00.4	N 02 51.4 -01.3	135 00.7 -28.0	S 18 18.3 -06.9	07						
08	300 48.4 +00.2	N 04 37.4 -00.9	293 12.4 -00.3	N 02 50.1 -01.2	149 32.7 -28.0	S 18 11.4 -07.1	08						
09	315 48.6 +00.2	N 04 36.5 -01.0	308 12.1 -00.4	N 02 48.9 -01.3	164 04.7 -27.9	S 18 04.3 -07.1	09						
10	330 48.8 +00.2	N 04 35.5 -00.9	323 11.7 -00.4	N 02 47.6 -01.3	178 36.8 -27.9	S 17 57.2 -07.1	10						
11	345 49.0 +00.2	N 04 34.6 -01.0	338 11.3 -00.4	N 02 46.3 -01.2	193 08.9 -27.8	S 17 50.1 -07.3	11						
12	0 49.2 +00.3	N 04 33.6 -00.9	353 10.9 -00.3	N 02 45.1 -01.3	207 41.1 -27.8	S 17 42.8 -07.3	12						
13	15 49.5 +00.2	N 04 32.7 -01.0	8 10.6 -00.4	N 02 43.8 -01.2	222 13.3 -27.7	S 17 35.5 -07.4	13						
14	30 49.7 +00.2	N 04 31.7 -00.9	23 10.2 -00.4	N 02 42.6 -01.3	236 45.6 -27.7	S 17 28.1 -07.5	14						
15	45 49.9 +00.2	N 04 30.8 -01.0	38 09.8 -00.4	N 02 41.3 -01.3	251 17.9 -27.6	S 17 20.6 -07.5	15						
16	60 50.1 +00.3	N 04 29.8 -00.9	53 09.4 -00.3	N 02 40.0 -01.2	265 50.3 -27.6	S 17 13.1 -07.7	16						
17	75 50.4 +00.2	N 04 28.9 -01.0	68 09.1 -00.4	N 02 38.8 -01.3	280 22.7 -27.5	S 17 05.4 -07.7	17						
18	90 50.6 +00.2	N 04 27.9 -00.9	83 08.7 -00.4	N 02 37.5 -01.2	294 55.2 -27.5	S 16 57.7 -07.7	18						
19	105 50.8 +00.2	N 04 27.0 -01.0	98 08.3 -00.3	N 02 36.3 -01.3	309 27.7 -27.5	S 16 50.0 -07.9	19						
20	120 51.0 +00.2	N 04 26.0 -00.9	113 08.0 -00.4	N 02 35.0 -01.3	324 00.2 -27.4	S 16 42.1 -07.9	20						
21	135 51.2 +00.3	N 04 25.1 -01.0	128 07.6 -00.4	N 02 33.7 -01.2	338 32.8 -27.3	S 16 34.2 -08.0	21						
22	150 51.5 +00.2	N 04 24.1 -00.9	143 07.2 -00.4	N 02 32.5 -01.3	353 05.5 -27.3	S 16 26.2 -08.0	22						
23	165 51.7 +00.2	N 04 23.2 -01.0	158 06.8 -00.3	N 02 31.2 -01.3	7 38.2 -27.3	S 16 18.2 -08.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'2 54'2 54'1 54'1 54'1 54'1								
	SHA 191° 191° 191° 191° 190° 190°		SHA 183° 183° 183° 183° 183° 182°		SHA 043° 041° 038° 036° 034° 032°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 12:27		Greenwich Culmination Time: 22:28								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 59.7 +00.9	N 06 49.6 -00.6	95 00.2 +02.2	S 22 22.7 +00.0	64 35.8 +02.5	S 22 29.6 +00.0	00						
01	198 00.6 +01.0	N 06 49.0 -00.6	110 02.4 +02.2	S 22 22.7 +00.0	79 38.3 +02.5	S 22 29.6 +00.0	01						
02	213 01.6 +01.0	N 06 48.4 -00.6	125 04.6 +02.3	S 22 22.7 +00.1	94 40.8 +02.5	S 22 29.6 +00.0	02						
03	228 02.6 +01.0	N 06 47.8 -00.7	140 06.9 +02.2	S 22 22.8 +00.0	109 43.3 +02.5	S 22 29.6 +00.0	03						
04	243 03.6 +01.0	N 06 47.1 -00.6	155 09.1 +02.2	S 22 22.8 +00.0	124 45.8 +02.5	S 22 29.6 +00.0	04						
05	258 04.6 +01.0	N 06 46.5 -00.6	170 11.3 +02.2	S 22 22.8 +00.0	139 48.3 +02.4	S 22 29.6 +00.0	05						
06	273 05.6 +01.0	N 06 45.9 -00.6	185 13.5 +02.3	S 22 22.8 +00.1	154 50.7 +02.5	S 22 29.6 +00.0	06						
07	288 06.6 +00.9	N 06 45.3 -00.7	200 15.8 +02.2	S 22 22.9 +00.0	169 53.2 +02.5	S 22 29.6 +00.0	07						
08	303 07.5 +01.0	N 06 44.6 -00.6	215 18.0 +02.2	S 22 22.9 +00.0	184 55.7 +02.5	S 22 29.6 +00.0	08						
09	318 08.5 +01.0	N 06 44.0 -00.6	230 20.2 +02.2	S 22 22.9 +00.1	199 58.2 +02.5	S 22 29.6 +00.0	09						
10	333 09.5 +01.0	N 06 43.4 -00.6	245 22.4 +02.2	S 22 23.0 +00.0	215 00.7 +02.5	S 22 29.6 +00.1	10						
11	348 10.5 +01.0	N 06 42.8 -00.7	260 24.6 +02.3	S 22 23.0 +00.0	230 03.2 +02.5	S 22 29.7 +00.0	11						
12	3 11.5 +01.0	N 06 42.1 -00.6	275 26.9 +02.2	S 22 23.0 +00.1	245 05.7 +02.5	S 22 29.7 +00.0	12						
13	18 12.5 +01.0	N 06 41.5 -00.6	290 29.1 +02.2	S 22 23.1 +00.0	260 08.2 +02.5	S 22 29.7 +00.0	13						
14	33 13.5 +00.9	N 06 40.9 -00.7	305 31.3 +02.2	S 22 23.1 +00.0	275 10.7 +02.5	S 22 29.7 +00.0	14						
15	48 14.4 +01.0	N 06 40.2 -00.6	320 33.5 +02.3	S 22 23.1 +00.1	290 13.2 +02.5	S 22 29.7 +00.0	15						
16	63 15.4 +01.0	N 06 39.6 -00.6	335 35.8 +02.2	S 22 23.2 +00.0	305 15.7 +02.5	S 22 29.7 +00.0	16						
17	78 16.4 +01.0	N 06 39.0 -00.6	350 38.0 +02.2	S 22 23.2 +00.0	320 18.2 +02.5	S 22 29.7 +00.0	17						
18	93 17.4 +01.0	N 06 38.4 -00.7	5 40.2 +02.2	S 22 23.2 +00.0	335 20.7 +02.5	S 22 29.7 +00.0	18						
19	108 18.4 +01.0	N 06 37.7 -00.6	20 42.4 +02.2	S 22 23.2 +00.1	350 23.2 +02.5	S 22 29.7 +00.0	19						
20	123 19.4 +01.0	N 06 37.1 -00.6	35 44.6 +02.2	S 22 23.3 +00.0	5 25.7 +02.4	S 22 29.7 +00.0	20						
21	138 20.4 +01.0	N 06 36.5 -00.6	50 46.8 +02.3	S 22 23.3 +00.0	20 28.1 +02.5	S 22 29.7 +00.0	21						
22	153 21.4 +00.9	N 06 35.9 -00.7	65 49.1 +02.2	S 22 23.3 +00.1	35 30.6 +02.5	S 22 29.7 +00.0	22						
23	168 22.3 +01.0	N 06 35.2 -00.6	80 51.3 +02.2	S 22 23.4 +00.0	50 33.1 +02.5	S 22 29.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 193° 193° 193° 193° 193° 193°		SHA 105° 105° 105° 105° 105° 105°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:47		Greenwich Culmination Time: 17:37		Greenwich Culmination Time: 19:38								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 51.9 +00.2	N 04 22.2 -01.0	173 06.5 -00.4	N 02 29.9 -01.2	22 10.9 -27.2	S 16 10.1 -08.2	00						
01	195 52.1 +00.2	N 04 21.2 -00.9	188 06.1 -00.4	N 02 28.7 -01.3	36 43.7 -27.1	S 16 01.9 -08.3	01						
02	210 52.3 +00.3	N 04 20.3 -01.0	203 05.7 -00.4	N 02 27.4 -01.3	51 16.6 -27.2	S 15 53.6 -08.3	02						
03	225 52.6 +00.2	N 04 19.3 -00.9	218 05.3 -00.3	N 02 26.1 -01.2	65 49.4 -27.0	S 15 45.3 -08.4	03						
04	240 52.8 +00.2	N 04 18.4 -01.0	233 05.0 -00.4	N 02 24.9 -01.3	80 22.4 -27.1	S 15 36.9 -08.4	04						
05	255 53.0 +00.2	N 04 17.4 -00.9	248 04.6 -00.4	N 02 23.6 -01.2	94 55.3 -27.0	S 15 28.5 -08.5	05						
06	270 53.2 +00.3	N 04 16.5 -01.0	263 04.2 -00.3	N 02 22.4 -01.3	109 28.3 -26.9	S 15 20.0 -08.6	06						
07	285 53.5 +00.2	N 04 15.5 -00.9	278 03.9 -00.4	N 02 21.1 -01.3	124 01.4 -26.9	S 15 11.4 -08.7	07						
08	300 53.7 +00.2	N 04 14.6 -01.0	293 03.5 -00.4	N 02 19.8 -01.2	138 34.5 -26.8	S 15 02.7 -08.7	08						
09	315 53.9 +00.2	N 04 13.6 -00.9	308 03.1 -00.4	N 02 18.6 -01.3	153 07.7 -26.9	S 14 54.0 -08.7	09						
10	330 54.1 +00.2	N 04 12.7 -01.0	323 02.7 -00.3	N 02 17.3 -01.3	167 40.8 -26.7	S 14 45.3 -08.8	10						
11	345 54.3 +00.3	N 04 11.7 -00.9	338 02.4 -00.4	N 02 16.0 -01.2	182 14.1 -26.7	S 14 36.5 -08.9	11						
12	0 54.6 +00.2	N 04 10.8 -01.0	353 02.0 -00.4	N 02 14.8 -01.3	196 47.4 -26.7	S 14 27.6 -09.0	12						
13	15 54.8 +00.2	N 04 09.8 -00.9	8 01.6 -00.3	N 02 13.5 -01.3	211 20.7 -26.7	S 14 18.6 -09.0	13						
14	30 55.0 +00.2	N 04 08.9 -01.0	23 01.3 -00.4	N 02 12.2 -01.2	225 54.0 -26.6	S 14 09.6 -09.0	14						
15	45 55.2 +00.2	N 04 07.9 -00.9	38 00.9 -00.4	N 02 11.0 -01.3	240 27.4 -26.5	S 14 00.6 -09.1	15						
16	60 55.4 +00.3	N 04 07.0 -01.0	53 00.5 -00.4	N 02 09.7 -01.3	255 00.9 -26.6	S 13 51.5 -09.2	16						
17	75 55.7 +00.2	N 04 06.0 -00.9	68 00.1 -00.3	N 02 08.4 -01.2	269 34.3 -26.4	S 13 42.3 -09.3	17						
18	90 55.9 +00.2	N 04 05.1 -01.0	82 59.8 -00.4	N 02 07.2 -01.3	284 07.9 -26.5	S 13 33.0 -09.2	18						
19	105 56.1 +00.2	N 04 04.1 -01.0	97 59.4 -00.4	N 02 05.9 -01.2	298 41.4 -26.4	S 13 23.8 -09.4	19						
20	120 56.3 +00.3	N 04 03.1 -00.9	112 59.0 -00.3	N 02 04.7 -01.3	313 15.0 -26.3	S 13 14.4 -09.4	20						
21	135 56.6 +00.2	N 04 02.2 -01.0	127 58.7 -00.4	N 02 03.4 -01.3	327 48.7 -26.4	S 13 05.0 -09.4	21						
22	150 56.8 +00.2	N 04 01.2 -00.9	142 58.3 -00.4	N 02 02.1 -01.2	342 22.3 -26.2	S 12 55.6 -09.5	22						
23	165 57.0 +00.2	N 04 00.3 -01.0	157 57.9 -00.4	N 02 00.9 -01.3	356 56.1 -26.3	S 12 46.1 -09.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'0 54'0 54'0 54'0 54'0								
	SHA 190° 190° 190° 190° 189° 189°		SHA 182° 182° 182° 182° 182° 181°		SHA 030° 029° 027° 025° 023° 021°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 12:27		Greenwich Culmination Time: 23:12								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 23.3 +01.0	N 06 34.6 -00.6	95 53.5 +02.2	S 22 23.4 +00.0	65 35.6 +02.5	S 22 29.7 +00.1	00						
01	198 24.3 +01.0	N 06 34.0 -00.6	110 55.7 +02.2	S 22 23.4 +00.1	80 38.1 +02.5	S 22 29.8 +00.0	01						
02	213 25.3 +01.0	N 06 33.4 -00.7	125 57.9 +02.3	S 22 23.5 +00.0	95 40.6 +02.5	S 22 29.8 +00.0	02						
03	228 26.3 +01.0	N 06 32.7 -00.6	141 00.2 +02.2	S 22 23.5 +00.0	110 43.1 +02.5	S 22 29.8 +00.0	03						
04	243 27.3 +01.0	N 06 32.1 -00.6	156 02.4 +02.2	S 22 23.5 +00.1	125 45.6 +02.5	S 22 29.8 +00.0	04						
05	258 28.3 +00.9	N 06 31.5 -00.7	171 04.6 +02.2	S 22 23.6 +00.0	140 48.1 +02.5	S 22 29.8 +00.0	05						
06	273 29.2 +01.0	N 06 30.8 -00.6	186 06.8 +02.2	S 22 23.6 +00.0	155 50.6 +02.5	S 22 29.8 +00.0	06						
07	288 30.2 +01.0	N 06 30.2 -00.6	201 09.0 +02.2	S 22 23.6 +00.0	170 53.1 +02.4	S 22 29.8 +00.0	07						
08	303 31.2 +01.0	N 06 29.6 -00.6	216 11.2 +02.2	S 22 23.6 +00.1	185 55.5 +02.5	S 22 29.8 +00.0	08						
09	318 32.2 +01.0	N 06 29.0 -00.7	231 13.4 +02.3	S 22 23.7 +00.0	200 58.0 +02.5	S 22 29.8 +00.0	09						
10	333 33.2 +01.0	N 06 28.3 -00.6	246 15.7 +02.2	S 22 23.7 +00.0	216 00.5 +02.5	S 22 29.8 +00.0	10						
11	348 34.2 +01.0	N 06 27.7 -00.6	261 17.9 +02.2	S 22 23.7 +00.1	231 03.0 +02.5	S 22 29.8 +00.0	11						
12	3 35.2 +01.0	N 06 27.1 -00.7	276 20.1 +02.2	S 22 23.8 +00.0	246 05.5 +02.5	S 22 29.8 +00.0	12						
13	18 36.2 +00.9	N 06 26.4 -00.6	291 22.3 +02.2	S 22 23.8 +00.0	261 08.0 +02.5	S 22 29.8 +00.0	13						
14	33 37.1 +01.0	N 06 25.8 -00.6	306 24.5 +02.2	S 22 23.8 +00.1	276 10.5 +02.5	S 22 29.8 +00.0	14						
15	48 38.1 +01.0	N 06 25.2 -00.6	321 26.7 +02.2	S 22 23.9 +00.0	291 13.0 +02.5	S 22 29.8 +00.1	15						
16	63 39.1 +01.0	N 06 24.6 -00.7	336 28.9 +02.3	S 22 23.9 +00.0	306 15.5 +02.4	S 22 29.9 +00.0	16						
17	78 40.1 +01.0	N 06 23.9 -00.6	351 31.2 +02.2	S 22 23.9 +00.1	321 17.9 +02.5	S 22 29.9 +00.0	17						
18	93 41.1 +01.0	N 06 23.3 -00.6	6 33.4 +02.2	S 22 24.0 +00.0	336 20.4 +02.5	S 22 29.9 +00.0	18						
19	108 42.1 +01.0	N 06 22.7 -00.7	21 35.6 +02.2	S 22 24.0 +00.0	351 22.9 +02.5	S 22 29.9 +00.0	19						
20	123 43.1 +00.9	N 06 22.0 -00.6	36 37.8 +02.2	S 22 24.0 +00.0	6 25.4 +02.5	S 22 29.9 +00.0	20						
21	138 44.0 +01.0	N 06 21.4 -00.6	51 40.0 +02.2	S 22 24.0 +00.1	21 27.9 +02.5	S 22 29.9 +00.0	21						
22	153 45.0 +01.0	N 06 20.8 -00.6	66 42.2 +02.2	S 22 24.1 +00.0	36 30.4 +02.5	S 22 29.9 +00.0	22						
23	168 46.0 +01.0	N 06 20.2 -00.7	81 44.4 +02.2	S 22 24.1 +00.0	51 32.9 +02.5	S 22 29.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 193° 193° 192° 192° 192° 192°		SHA 105° 105° 105° 105° 105° 105°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:45		Greenwich Culmination Time: 17:33		Greenwich Culmination Time: 19:34								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 57.2 +00.2	N 03 59.3 -00.9	172 57.5 -00.3	N 01 59.6 -01.3	11 29.8 -26.2	S 12 36.5 -09.6	00						
01	195 57.4 +00.3	N 03 58.4 -01.0	187 57.2 -00.4	N 01 58.3 -01.2	26 03.6 -26.2	S 12 26.9 -09.6	01						
02	210 57.7 +00.2	N 03 57.4 -00.9	202 56.8 -00.4	N 01 57.1 -01.3	40 37.4 -26.1	S 12 17.3 -09.7	02						
03	225 57.9 +00.2	N 03 56.5 -01.0	217 56.4 -00.3	N 01 55.8 -01.3	55 11.3 -26.1	S 12 07.6 -09.8	03						
04	240 58.1 +00.2	N 03 55.5 -00.9	232 56.1 -00.4	N 01 54.5 -01.2	69 45.2 -26.1	S 11 57.8 -09.8	04						
05	255 58.3 +00.3	N 03 54.6 -01.0	247 55.7 -00.4	N 01 53.3 -01.3	84 19.1 -26.0	S 11 48.0 -09.8	05						
06	270 58.6 +00.2	N 03 53.6 -01.0	262 55.3 -00.3	N 01 52.0 -01.3	98 53.1 -26.0	S 11 38.2 -09.9	06						
07	285 58.8 +00.2	N 03 52.6 -00.9	277 55.0 -00.4	N 01 50.7 -01.2	113 27.1 -26.0	S 11 28.3 -09.9	07						
08	300 59.0 +00.2	N 03 51.7 -01.0	292 54.6 -00.4	N 01 49.5 -01.3	128 01.1 -25.9	S 11 18.4 -10.0	08						
09	315 59.2 +00.2	N 03 50.7 -00.9	307 54.2 -00.4	N 01 48.2 -01.3	142 35.2 -25.9	S 11 08.4 -10.0	09						
10	330 59.4 +00.3	N 03 49.8 -01.0	322 53.8 -00.3	N 01 46.9 -01.2	157 09.3 -25.9	S 10 58.4 -10.1	10						
11	345 59.7 +00.2	N 03 48.8 -00.9	337 53.5 -00.4	N 01 45.7 -01.3	171 43.4 -25.8	S 10 48.3 -10.1	11						
12	0 59.9 +00.2	N 03 47.9 -01.0	352 53.1 -00.4	N 01 44.4 -01.3	186 17.6 -25.8	S 10 38.2 -10.2	12						
13	16 00.1 +00.2	N 03 46.9 -00.9	7 52.7 -00.3	N 01 43.1 -01.2	200 51.8 -25.8	S 10 28.0 -10.2	13						
14	31 00.3 +00.3	N 03 46.0 -01.0	22 52.4 -00.4	N 01 41.9 -01.3	215 26.0 -25.7	S 10 17.8 -10.2	14						
15	46 00.6 +00.2	N 03 45.0 -01.0	37 52.0 -00.4	N 01 40.6 -01.3	230 00.3 -25.7	S 10 07.6 -10.3	15						
16	61 00.8 +00.2	N 03 44.0 -00.9	52 51.6 -00.3	N 01 39.3 -01.3	244 34.6 -25.7	S 09 57.3 -10.3	16						
17	76 01.0 +00.2	N 03 43.1 -01.0	67 51.3 -00.4	N 01 38.0 -01.2	259 08.9 -25.7	S 09 47.0 -10.4	17						
18	91 01.2 +00.3	N 03 42.1 -00.9	82 50.9 -00.4	N 01 36.8 -01.3	273 43.2 -25.6	S 09 36.6 -10.4	18						
19	106 01.5 +00.2	N 03 41.2 -01.0	97 50.5 -00.4	N 01 35.5 -01.3	288 17.6 -25.6	S 09 26.2 -10.4	19						
20	121 01.7 +00.2	N 03 40.2 -00.9	112 50.1 -00.3	N 01 34.2 -01.2	302 52.0 -25.6	S 09 15.8 -10.5	20						
21	136 01.9 +00.2	N 03 39.3 -01.0	127 49.8 -00.4	N 01 33.0 -01.3	317 26.4 -25.5	S 09 05.3 -10.5	21						
22	151 02.1 +00.2	N 03 38.3 -01.0	142 49.4 -00.4	N 01 31.7 -01.3	332 00.9 -25.5	S 08 54.8 -10.6	22						
23	166 02.3 +00.3	N 03 37.3 -00.9	157 49.0 -00.3	N 01 30.4 -01.2	346 35.4 -25.5	S 08 44.2 -10.6	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	15'9 15'9 15'9 15'9 15'9 15'9	SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	14'7 14'7 14'7 14'7 14'7 14'7								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	53'9 53'9 53'9 53'9 53'9 53'9								
SHA	189° 189° 189° 189° 189° 188°	SHA	181° 181° 181° 181° 180° 180°	SHA	019° 017° 015° 013° 011° 009°								
Greenwich Culmination Time: 11:56			Greenwich Culmination Time: 12:28			Greenwich Culmination Time: 23:55							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 47.0 +01.0	N 06 19.5 -00.6	96 46.6 +02.2	S 22 24.1 +00.1	66 35.4 +02.4	S 22 29.9 +00.0	00						
01	198 48.0 +01.0	N 06 18.9 -00.6	111 48.8 +02.3	S 22 24.2 +00.0	81 37.8 +02.5	S 22 29.9 +00.0	01						
02	213 49.0 +01.0	N 06 18.3 -00.7	126 51.1 +02.2	S 22 24.2 +00.0	96 40.3 +02.5	S 22 29.9 +00.0	02						
03	228 50.0 +01.0	N 06 17.6 -00.6	141 53.3 +02.2	S 22 24.2 +00.1	111 42.8 +02.5	S 22 29.9 +00.0	03						
04	243 51.0 +00.9	N 06 17.0 -00.6	156 55.5 +02.2	S 22 24.3 +00.0	126 45.3 +02.5	S 22 29.9 +00.0	04						
05	258 51.9 +01.0	N 06 16.4 -00.6	171 57.7 +02.2	S 22 24.3 +00.0	141 47.8 +02.5	S 22 29.9 +00.0	05						
06	273 52.9 +01.0	N 06 15.8 -00.7	186 59.9 +02.2	S 22 24.3 +00.1	156 50.3 +02.5	S 22 29.9 +00.1	06						
07	288 53.9 +01.0	N 06 15.1 -00.6	202 02.1 +02.2	S 22 24.4 +00.0	171 52.8 +02.5	S 22 30.0 +00.0	07						
08	303 54.9 +01.0	N 06 14.5 -00.6	217 04.3 +02.2	S 22 24.4 +00.0	186 55.3 +02.4	S 22 30.0 +00.0	08						
09	318 55.9 +01.0	N 06 13.9 -00.7	232 06.5 +02.2	S 22 24.4 +00.1	201 57.7 +02.5	S 22 30.0 +00.0	09						
10	333 56.9 +01.0	N 06 13.2 -00.6	247 08.7 +02.2	S 22 24.5 +00.0	217 00.2 +02.5	S 22 30.0 +00.0	10						
11	348 57.9 +01.0	N 06 12.6 -00.6	262 10.9 +02.2	S 22 24.5 +00.0	232 02.7 +02.5	S 22 30.0 +00.0	11						
12	3 58.9 +01.0	N 06 12.0 -00.6	277 13.1 +02.3	S 22 24.5 +00.1	247 05.2 +02.5	S 22 30.0 +00.0	12						
13	18 59.9 +00.9	N 06 11.4 -00.7	292 15.4 +02.2	S 22 24.6 +00.0	262 07.7 +02.5	S 22 30.0 +00.0	13						
14	34 00.8 +01.0	N 06 10.7 -00.6	307 17.6 +02.2	S 22 24.6 +00.0	277 10.2 +02.4	S 22 30.0 +00.0	14						
15	49 01.8 +01.0	N 06 10.1 -00.6	322 19.8 +02.2	S 22 24.6 +00.0	292 12.6 +02.5	S 22 30.0 +00.0	15						
16	64 02.8 +01.0	N 06 09.5 -00.7	337 22.0 +02.2	S 22 24.6 +00.1	307 15.1 +02.5	S 22 30.0 +00.0	16						
17	79 03.8 +01.0	N 06 08.8 -00.6	352 24.2 +02.2	S 22 24.7 +00.0	322 17.6 +02.5	S 22 30.0 +00.0	17						
18	94 04.8 +01.0	N 06 08.2 -00.6	7 26.4 +02.2	S 22 24.7 +00.0	337 20.1 +02.5	S 22 30.0 +00.0	18						
19	109 05.8 +01.0	N 06 07.6 -00.7	22 28.6 +02.2	S 22 24.7 +00.1	352 22.6 +02.5	S 22 30.0 +00.0	19						
20	124 06.8 +01.0	N 06 06.9 -00.6	37 30.8 +02.2	S 22 24.8 +00.0	7 25.1 +02.4	S 22 30.0 +00.0	20						
21	139 07.8 +00.9	N 06 06.3 -00.6	52 33.0 +02.2	S 22 24.8 +00.0	22 27.5 +02.5	S 22 30.0 +00.0	21						
22	154 08.7 +01.0	N 06 05.7 -00.6	67 35.2 +02.2	S 22 24.8 +00.1	37 30.0 +02.5	S 22 30.0 +00.1	22						
23	169 09.7 +01.0	N 06 05.1 -00.7	82 37.4 +02.2	S 22 24.9 +00.0	52 32.5 +02.5	S 22 30.1 +00.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'0 00'0 00'0 00'0 00'0 00'0	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'1 00'1 00'1 00'1 00'1 00'1								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	192° 192° 192° 192° 192° 192°	SHA	105° 105° 105° 105° 105° 105°	SHA	075° 075° 075° 075° 075° 075°								
Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 17:30			Greenwich Culmination Time: 19:30							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 02.6 +00.2	N 03 36.4 -01.0	172 48.7 -00.4	N 01 29.2 -01.3	1 09.9 -25.5	S 08 33.6 -10.6	00						
01	196 02.8 +00.2	N 03 35.4 -00.9	187 48.3 -00.4	N 01 27.9 -01.3	15 44.4 -25.5	S 08 23.0 -10.6	01						
02	211 03.0 +00.2	N 03 34.5 -01.0	202 47.9 -00.3	N 01 26.6 -01.2	30 18.9 -25.4	S 08 12.4 -10.7	02						
03	226 03.2 +00.3	N 03 33.5 -00.9	217 47.6 -00.4	N 01 25.4 -01.3	44 53.5 -25.4	S 08 01.7 -10.7	03						
04	241 03.5 +00.2	N 03 32.6 -01.0	232 47.2 -00.4	N 01 24.1 -01.3	59 28.1 -25.4	S 07 51.0 -10.8	04						
05	256 03.7 +00.2	N 03 31.6 -01.0	247 46.8 -00.3	N 01 22.8 -01.2	74 02.7 -25.3	S 07 40.2 -10.8	05						
06	271 03.9 +00.2	N 03 30.6 -00.9	262 46.5 -00.4	N 01 21.6 -01.3	88 37.4 -25.4	S 07 29.4 -10.8	06						
07	286 04.1 +00.3	N 03 29.7 -01.0	277 46.1 -00.4	N 01 20.3 -01.3	103 12.0 -25.3	S 07 18.6 -10.8	07						
08	301 04.4 +00.2	N 03 28.7 -00.9	292 45.7 -00.3	N 01 19.0 -01.3	117 46.7 -25.3	S 07 07.8 -10.9	08						
09	316 04.6 +00.2	N 03 27.8 -01.0	307 45.4 -00.4	N 01 17.7 -01.2	132 21.4 -25.3	S 06 56.9 -10.9	09						
10	331 04.8 +00.2	N 03 26.8 -01.0	322 45.0 -00.4	N 01 16.5 -01.3	146 56.1 -25.2	S 06 46.0 -10.9	10						
11	346 05.0 +00.2	N 03 25.8 -00.9	337 44.6 -00.4	N 01 15.2 -01.3	161 30.9 -25.3	S 06 35.1 -11.0	11						
12	1 05.2 +00.3	N 03 24.9 -01.0	352 44.2 -00.3	N 01 13.9 -01.2	176 05.6 -25.2	S 06 24.1 -11.0	12						
13	16 05.5 +00.2	N 03 23.9 -00.9	7 43.9 -00.4	N 01 12.7 -01.3	190 40.4 -25.2	S 06 13.1 -11.0	13						
14	31 05.7 +00.2	N 03 23.0 -01.0	22 43.5 -00.4	N 01 11.4 -01.3	205 15.2 -25.2	S 06 02.1 -11.0	14						
15	46 05.9 +00.2	N 03 22.0 -00.9	37 43.1 -00.3	N 01 10.1 -01.2	219 50.0 -25.2	S 05 51.1 -11.0	15						
16	61 06.1 +00.3	N 03 21.1 -01.0	52 42.8 -00.4	N 01 08.9 -01.3	234 24.8 -25.2	S 05 40.1 -11.1	16						
17	76 06.4 +00.2	N 03 20.1 -01.0	67 42.4 -00.4	N 01 07.6 -01.3	248 59.6 -25.1	S 05 29.0 -11.1	17						
18	91 06.6 +00.2	N 03 19.1 -00.9	82 42.0 -00.3	N 01 06.3 -01.3	263 34.5 -25.2	S 05 17.9 -11.1	18						
19	106 06.8 +00.2	N 03 18.2 -01.0	97 41.7 -00.4	N 01 05.0 -01.2	278 09.3 -25.1	S 05 06.8 -11.2	19						
20	121 07.0 +00.3	N 03 17.2 -00.9	112 41.3 -00.4	N 01 03.8 -01.3	292 44.2 -25.1	S 04 55.6 -11.2	20						
21	136 07.3 +00.2	N 03 16.3 -01.0	127 40.9 -00.3	N 01 02.5 -01.3	307 19.1 -25.2	S 04 44.4 -11.1	21						
22	151 07.5 +00.2	N 03 15.3 -01.0	142 40.6 -00.4	N 01 01.2 -01.2	321 53.9 -25.1	S 04 33.3 -11.2	22						
23	166 07.7 +00.2	N 03 14.3 -00.9	157 40.2 -00.4	N 00 60.0 -01.3	336 28.8 -25.0	S 04 22.1 -11.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 53'9 54'0 54'0 54'0 54'0 54'0								
	SHA 188° 188° 188° 188° 188° 188°		SHA 180° 180° 180° 179° 179° 179°		SHA 008° 006° 004° 002° 000° 358°								
	Greenwich Culmination Time: 11:55		Greenwich Culmination Time: 12:29		Greenwich Culmination Time: -1:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184 10.7 +01.0	N 06 04.4 -00.6	97 39.6 +02.2	S 22 24.9 +00.0	67 35.0 +02.5	S 22 30.1 +00.0	00						
01	199 11.7 +01.0	N 06 03.8 -00.6	112 41.8 +02.2	S 22 24.9 +00.1	82 37.5 +02.5	S 22 30.1 +00.0	01						
02	214 12.7 +01.0	N 06 03.2 -00.7	127 44.0 +02.2	S 22 25.0 +00.0	97 40.0 +02.4	S 22 30.1 +00.0	02						
03	229 13.7 +01.0	N 06 02.5 -00.6	142 46.2 +02.2	S 22 25.0 +00.0	112 42.4 +02.5	S 22 30.1 +00.0	03						
04	244 14.7 +01.0	N 06 01.9 -00.6	157 48.4 +02.2	S 22 25.0 +00.1	127 44.9 +02.5	S 22 30.1 +00.0	04						
05	259 15.7 +01.0	N 06 01.3 -00.7	172 50.6 +02.2	S 22 25.1 +00.0	142 47.4 +02.5	S 22 30.1 +00.0	05						
06	274 16.7 +00.9	N 06 00.6 -00.6	187 52.8 +02.2	S 22 25.1 +00.0	157 49.9 +02.5	S 22 30.1 +00.0	06						
07	289 17.6 +01.0	N 06 00.0 -00.6	202 55.0 +02.2	S 22 25.1 +00.1	172 52.4 +02.5	S 22 30.1 +00.0	07						
08	304 18.6 +01.0	N 05 59.4 -00.7	217 57.2 +02.2	S 22 25.2 +00.0	187 54.9 +02.4	S 22 30.1 +00.0	08						
09	319 19.6 +01.0	N 05 58.7 -00.6	232 59.4 +02.2	S 22 25.2 +00.0	202 57.3 +02.5	S 22 30.1 +00.0	09						
10	334 20.6 +01.0	N 05 58.1 -00.6	248 01.6 +02.2	S 22 25.2 +00.0	217 59.8 +02.5	S 22 30.1 +00.0	10						
11	349 21.6 +01.0	N 05 57.5 -00.6	263 03.8 +02.2	S 22 25.2 +00.1	233 02.3 +02.5	S 22 30.1 +00.0	11						
12	4 22.6 +01.0	N 05 56.9 -00.7	278 06.0 +02.2	S 22 25.3 +00.0	248 04.8 +02.5	S 22 30.1 +00.0	12						
13	19 23.6 +01.0	N 05 56.2 -00.6	293 08.2 +02.2	S 22 25.3 +00.0	263 07.3 +02.4	S 22 30.1 +00.0	13						
14	34 24.6 +01.0	N 05 55.6 -00.6	308 10.4 +02.2	S 22 25.3 +00.1	278 09.7 +02.5	S 22 30.1 +00.0	14						
15	49 25.6 +00.9	N 05 55.0 -00.7	323 12.6 +02.2	S 22 25.4 +00.0	293 12.2 +02.5	S 22 30.1 +00.1	15						
16	64 26.5 +01.0	N 05 54.3 -00.6	338 14.8 +02.2	S 22 25.4 +00.0	308 14.7 +02.5	S 22 30.2 +00.0	16						
17	79 27.5 +01.0	N 05 53.7 -00.6	353 17.0 +02.2	S 22 25.4 +00.1	323 17.2 +02.5	S 22 30.2 +00.0	17						
18	94 28.5 +01.0	N 05 53.1 -00.7	8 19.2 +02.2	S 22 25.5 +00.0	338 19.7 +02.4	S 22 30.2 +00.0	18						
19	109 29.5 +01.0	N 05 52.4 -00.6	23 21.4 +02.2	S 22 25.5 +00.0	353 22.1 +02.5	S 22 30.2 +00.0	19						
20	124 30.5 +01.0	N 05 51.8 -00.6	38 23.6 +02.2	S 22 25.5 +00.1	8 24.6 +02.5	S 22 30.2 +00.0	20						
21	139 31.5 +01.0	N 05 51.2 -00.7	53 25.8 +02.2	S 22 25.6 +00.0	23 27.1 +02.5	S 22 30.2 +00.0	21						
22	154 32.5 +01.0	N 05 50.5 -00.6	68 28.0 +02.2	S 22 25.6 +00.0	38 29.6 +02.5	S 22 30.2 +00.0	22						
23	169 33.5 +01.0	N 05 49.9 -00.6	83 30.2 +02.2	S 22 25.6 +00.1	53 32.1 +02.4	S 22 30.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 191° 191° 191° 191° 191° 191°		SHA 105° 105° 105° 105° 105° 105°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:42		Greenwich Culmination Time: 17:26		Greenwich Culmination Time: 19:26								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 07.9 +00.3	N 03 13.4 -01.0	172 39.8 -00.3	N 00 58.7 -01.3	351 03.8 -25.1	S 04 10.8 -11.2	00						00
01	196 08.2 +00.2	N 03 12.4 -00.9	187 39.5 -00.4	N 00 57.4 -01.3	5 38.7 -25.1	S 03 59.6 -11.3	01						01
02	211 08.4 +00.2	N 03 11.5 -01.0	202 39.1 -00.4	N 00 56.1 -01.2	20 13.6 -25.1	S 03 48.3 -11.3	02						02
03	226 08.6 +00.2	N 03 10.5 -01.0	217 38.7 -00.3	N 00 54.9 -01.3	34 48.5 -25.0	S 03 37.0 -11.3	03						03
04	241 08.8 +00.2	N 03 09.5 -00.9	232 38.4 -00.4	N 00 53.6 -01.3	49 23.5 -25.1	S 03 25.7 -11.3	04						04
05	256 09.0 +00.3	N 03 08.6 -01.0	247 38.0 -00.4	N 00 52.3 -01.2	63 58.4 -25.0	S 03 14.4 -11.3	05						05
06	271 09.3 +00.2	N 03 07.6 -00.9	262 37.6 -00.3	N 00 51.1 -01.3	78 33.4 -25.1	S 03 03.1 -11.3	06						06
07	286 09.5 +00.2	N 03 06.7 -01.0	277 37.3 -00.4	N 00 49.8 -01.3	93 08.3 -25.0	S 02 51.8 -11.4	07						07
08	301 09.7 +00.2	N 03 05.7 -01.0	292 36.9 -00.4	N 00 48.5 -01.3	107 43.3 -25.0	S 02 40.4 -11.3	08						08
09	316 09.9 +00.3	N 03 04.7 -00.9	307 36.5 -00.3	N 00 47.2 -01.2	122 18.3 -25.1	S 02 29.1 -11.4	09						09
10	331 10.2 +00.2	N 03 03.8 -01.0	322 36.2 -00.4	N 00 46.0 -01.3	136 53.2 -25.0	S 02 17.7 -11.4	10						10
11	346 10.4 +00.2	N 03 02.8 -00.9	337 35.8 -00.4	N 00 44.7 -01.3	151 28.2 -25.0	S 02 06.3 -11.4	11						11
12	1 10.6 +00.2	N 03 01.9 -01.0	352 35.4 -00.3	N 00 43.4 -01.2	166 03.2 -25.1	S 01 54.9 -11.4	12						12
13	16 10.8 +00.3	N 03 00.9 -01.0	7 35.1 -00.4	N 00 42.2 -01.3	180 38.1 -25.0	S 01 43.5 -11.4	13						13
14	31 11.1 +00.2	N 02 59.9 -00.9	22 34.7 -00.4	N 00 40.9 -01.3	195 13.1 -25.0	S 01 32.1 -11.5	14						14
15	46 11.3 +00.2	N 02 59.0 -01.0	37 34.3 -00.3	N 00 39.6 -01.3	209 48.1 -25.1	S 01 20.6 -11.4	15						15
16	61 11.5 +00.2	N 02 58.0 -01.0	52 34.0 -00.4	N 00 38.3 -01.2	224 23.0 -25.0	S 01 09.2 -11.5	16						16
17	76 11.7 +00.3	N 02 57.0 -00.9	67 33.6 -00.4	N 00 37.1 -01.3	238 58.0 -25.1	S 00 57.7 -11.4	17						17
18	91 12.0 +00.2	N 02 56.1 -01.0	82 33.2 -00.3	N 00 35.8 -01.3	253 32.9 -25.0	S 00 46.3 -11.5	18						18
19	106 12.2 +00.2	N 02 55.1 -00.9	97 32.9 -00.4	N 00 34.5 -01.3	268 07.9 -25.0	S 00 34.8 -11.4	19						19
20	121 12.4 +00.2	N 02 54.2 -01.0	112 32.5 -00.4	N 00 33.2 -01.2	282 42.9 -25.1	S 00 23.4 -11.5	20						20
21	136 12.6 +00.3	N 02 53.2 -01.0	127 32.1 -00.3	N 00 32.0 -01.3	297 17.8 -25.1	S 00 11.9 -11.5	21						21
22	151 12.9 +00.2	N 02 52.2 -00.9	142 31.8 -00.4	N 00 30.7 -01.3	311 52.7 -25.0	S 00 00.4 -11.5	22						22
23	166 13.1 +00.2	N 02 51.3 -01.0	157 31.4 -00.4	N 00 29.4 -01.2	326 27.7 -25.1	N 00 11.1 +11.4	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'1 54'1 54'1 54'1 54'2								
	SHA 187° 187° 187° 187° 187° 187°		SHA 179° 179° 179° 178° 178° 178°		SHA 356° 355° 353° 351° 349° 347°								
	Greenwich Culmination Time: 11:55		Greenwich Culmination Time: 12:29		Greenwich Culmination Time: 00:36								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184 34.5 +00.9	N 05 49.3 -00.7	98 32.4 +02.2	S 22 25.7 +00.0	68 34.5 +02.5	S 22 30.2 +00.0	00						00
01	199 35.4 +01.0	N 05 48.6 -00.6	113 34.6 +02.2	S 22 25.7 +00.0	83 37.0 +02.5	S 22 30.2 +00.0	01						01
02	214 36.4 +01.0	N 05 48.0 -00.6	128 36.8 +02.2	S 22 25.7 +00.1	98 39.5 +02.5	S 22 30.2 +00.0	02						02
03	229 37.4 +01.0	N 05 47.4 -00.7	143 39.0 +02.2	S 22 25.8 +00.0	113 42.0 +02.4	S 22 30.2 +00.0	03						03
04	244 38.4 +01.0	N 05 46.7 -00.6	158 41.2 +02.2	S 22 25.8 +00.0	128 44.4 +02.5	S 22 30.2 +00.0	04						04
05	259 39.4 +01.0	N 05 46.1 -00.6	173 43.4 +02.2	S 22 25.8 +00.1	143 46.9 +02.5	S 22 30.2 +00.0	05						05
06	274 40.4 +01.0	N 05 45.5 -00.7	188 45.6 +02.2	S 22 25.9 +00.0	158 49.4 +02.5	S 22 30.2 +00.0	06						06
07	289 41.4 +01.0	N 05 44.8 -00.6	203 47.8 +02.2	S 22 25.9 +00.0	173 51.9 +02.4	S 22 30.2 +00.0	07						07
08	304 42.4 +01.0	N 05 44.2 -00.6	218 50.0 +02.2	S 22 25.9 +00.1	188 54.3 +02.5	S 22 30.2 +00.0	08						08
09	319 43.4 +00.9	N 05 43.6 -00.7	233 52.2 +02.2	S 22 26.0 +00.0	203 56.8 +02.5	S 22 30.2 +00.1	09						09
10	334 44.3 +01.0	N 05 42.9 -00.6	248 54.4 +02.2	S 22 26.0 +00.0	218 59.3 +02.5	S 22 30.3 +00.0	10						10
11	349 45.3 +01.0	N 05 42.3 -00.6	263 56.6 +02.1	S 22 26.0 +00.1	234 01.8 +02.5	S 22 30.3 +00.0	11						11
12	4 46.3 +01.0	N 05 41.7 -00.6	278 58.7 +02.2	S 22 26.1 +00.0	249 04.3 +02.4	S 22 30.3 +00.0	12						12
13	19 47.3 +01.0	N 05 41.1 -00.7	294 00.9 +02.2	S 22 26.1 +00.0	264 06.7 +02.5	S 22 30.3 +00.0	13						13
14	34 48.3 +01.0	N 05 40.4 -00.6	309 03.1 +02.2	S 22 26.1 +00.0	279 09.2 +02.5	S 22 30.3 +00.0	14						14
15	49 49.3 +01.0	N 05 39.8 -00.6	324 05.3 +02.2	S 22 26.1 +00.1	294 11.7 +02.5	S 22 30.3 +00.0	15						15
16	64 50.3 +01.0	N 05 39.2 -00.7	339 07.5 +02.2	S 22 26.2 +00.0	309 14.2 +02.4	S 22 30.3 +00.0	16						16
17	79 51.3 +01.0	N 05 38.5 -00.6	354 09.7 +02.2	S 22 26.2 +00.0	324 16.6 +02.5	S 22 30.3 +00.0	17						17
18	94 52.3 +01.0	N 05 37.9 -00.6	9 11.9 +02.2	S 22 26.2 +00.1	339 19.1 +02.5	S 22 30.3 +00.0	18						18
19	109 53.3 +00.9	N 05 37.3 -00.7	24 14.1 +02.2	S 22 26.3 +00.0	354 21.6 +02.5	S 22 30.3 +00.0	19						19
20	124 54.2 +01.0	N 05 36.6 -00.6	39 16.3 +02.2	S 22 26.3 +00.0	9 24.1 +02.4	S 22 30.3 +00.0	20						20
21	139 55.2 +01.0	N 05 36.0 -00.6	54 18.5 +02.2	S 22 26.3 +00.1	24 26.5 +02.5	S 22 30.3 +00.0	21						21
22	154 56.2 +01.0	N 05 35.4 -00.7	69 20.7 +02.2	S 22 26.4 +00.0	39 29.0 +02.5	S 22 30.3 +00.0	22						22
23	169 57.2 +01.0	N 05 34.7 -00.6	84 22.9 +02.1	S 22 26.4 +00.0	54 31.5 +02.5	S 22 30.3 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 191° 191° 191° 191° 190° 190°		SHA 105° 105° 105° 105° 105° 105°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:40		Greenwich Culmination Time: 17:23		Greenwich Culmination Time: 19:22								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181	13.3 +00.2	N 02 50.3	-01.0	172	31.0 -00.3	N 00 28.2	-01.3	341	02.6 -25.1	N 00 22.5	+11.5	00
01	196	13.5 +00.3	N 02 49.3	-00.9	187	30.7 -00.4	N 00 26.9	-01.3	355	37.5 -25.1	N 00 34.0	+11.5	01
02	211	13.8 +00.2	N 02 48.4	-01.0	202	30.3 -00.4	N 00 25.6	-01.3	10	12.4 -25.1	N 00 45.5	+11.5	02
03	226	14.0 +00.2	N 02 47.4	-00.9	217	29.9 -00.3	N 00 24.3	-01.2	24	47.3 -25.1	N 00 57.0	+11.5	03
04	241	14.2 +00.2	N 02 46.5	-01.0	232	29.6 -00.4	N 00 23.1	-01.3	39	22.2 -25.1	N 01 08.5	+11.4	04
05	256	14.4 +00.2	N 02 45.5	-01.0	247	29.2 -00.4	N 00 21.8	-01.3	53	57.1 -25.2	N 01 19.9	+11.5	05
06	271	14.6 +00.3	N 02 44.5	-00.9	262	28.8 -00.3	N 00 20.5	-01.3	68	31.9 -25.1	N 01 31.4	+11.5	06
07	286	14.9 +00.2	N 02 43.6	-01.0	277	28.5 -00.4	N 00 19.2	-01.2	83	06.8 -25.2	N 01 42.9	+11.5	07
08	301	15.1 +00.2	N 02 42.6	-01.0	292	28.1 -00.4	N 00 18.0	-01.3	97	41.6 -25.2	N 01 54.4	+11.4	08
09	316	15.3 +00.2	N 02 41.6	-00.9	307	27.7 -00.3	N 00 16.7	-01.3	112	16.4 -25.2	N 02 05.8	+11.5	09
10	331	15.5 +00.3	N 02 40.7	-01.0	322	27.4 -00.4	N 00 15.4	-01.3	126	51.2 -25.2	N 02 17.3	+11.5	10
11	346	15.8 +00.2	N 02 39.7	-00.9	337	27.0 -00.4	N 00 14.1	-01.2	141	26.0 -25.2	N 02 28.8	+11.4	11
12	1	16.0 +00.2	N 02 38.8	-01.0	352	26.6 -00.3	N 00 12.9	-01.3	156	00.8 -25.3	N 02 40.2	+11.5	12
13	16	16.2 +00.2	N 02 37.8	-01.0	7	26.3 -00.4	N 00 11.6	-01.3	170	35.5 -25.3	N 02 51.7	+11.4	13
14	31	16.4 +00.3	N 02 36.8	-00.9	22	25.9 -00.4	N 00 10.3	-01.2	185	10.2 -25.2	N 03 03.1	+11.5	14
15	46	16.7 +00.2	N 02 35.9	-01.0	37	25.5 -00.3	N 00 09.1	-01.3	199	45.0 -25.3	N 03 14.6	+11.4	15
16	61	16.9 +00.2	N 02 34.9	-01.0	52	25.2 -00.4	N 00 07.8	-01.3	214	19.7 -25.4	N 03 26.0	+11.4	16
17	76	17.1 +00.2	N 02 33.9	-00.9	67	24.8 -00.4	N 00 06.5	-01.3	228	54.3 -25.3	N 03 37.4	+11.4	17
18	91	17.3 +00.3	N 02 33.0	-01.0	82	24.4 -00.3	N 00 05.2	-01.2	243	29.0 -25.4	N 03 48.8	+11.4	18
19	106	17.6 +00.2	N 02 32.0	-01.0	97	24.1 -00.4	N 00 04.0	-01.3	258	03.6 -25.4	N 04 00.2	+11.4	19
20	121	17.8 +00.2	N 02 31.0	-00.9	112	23.7 -00.4	N 00 02.7	-01.3	272	38.2 -25.4	N 04 11.6	+11.4	20
21	136	18.0 +00.2	N 02 30.1	-01.0	127	23.3 -00.3	N 00 01.4	-01.3	287	12.8 -25.5	N 04 23.0	+11.4	21
22	151	18.2 +00.3	N 02 29.1	-00.9	142	23.0 -00.4	N 00 00.1	-01.2	301	47.3 -25.4	N 04 34.4	+11.3	22
23	166	18.5 +00.2	N 02 28.2	-01.0	157	22.6 -00.4	S 00 01.1	+01.3	316	21.9 -25.5	N 04 45.7	+11.4	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'8 14'8 14'8 14'8 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'2 54'2 54'3 54'3 54'4 54'4				
	SHA 186° 186° 186° 186° 186° 186°				SHA 178° 178° 177° 177° 177° 177°				SHA 345° 344° 342° 340° 338° 336°				
	Greenwich Culmination Time: 11:54				Greenwich Culmination Time: 12:30				Greenwich Culmination Time: 01:18				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184	58.2 +01.0	N 05 34.1	-00.6	99	25.0 +02.2	S 22 26.4	+00.1	69	34.0 +02.4	S 22 30.3	+00.0	00
01	199	59.2 +01.0	N 05 33.5	-00.7	114	27.2 +02.2	S 22 26.5	+00.0	84	36.4 +02.5	S 22 30.3	+00.0	01
02	215	00.2 +01.0	N 05 32.8	-00.6	129	29.4 +02.2	S 22 26.5	+00.0	99	38.9 +02.5	S 22 30.3	+00.0	02
03	230	01.2 +01.0	N 05 32.2	-00.6	144	31.6 +02.2	S 22 26.5	+00.1	114	41.4 +02.5	S 22 30.3	+00.0	03
04	245	02.2 +01.0	N 05 31.6	-00.7	159	33.8 +02.2	S 22 26.6	+00.0	129	43.9 +02.4	S 22 30.3	+00.1	04
05	260	03.2 +00.9	N 05 30.9	-00.6	174	36.0 +02.2	S 22 26.6	+00.0	144	46.3 +02.5	S 22 30.4	+00.0	05
06	275	04.1 +01.0	N 05 30.3	-00.6	189	38.2 +02.2	S 22 26.6	+00.1	159	48.8 +02.5	S 22 30.4	+00.0	06
07	290	05.1 +01.0	N 05 29.7	-00.7	204	40.4 +02.2	S 22 26.7	+00.0	174	51.3 +02.4	S 22 30.4	+00.0	07
08	305	06.1 +01.0	N 05 29.0	-00.6	219	42.6 +02.1	S 22 26.7	+00.0	189	53.7 +02.5	S 22 30.4	+00.0	08
09	320	07.1 +01.0	N 05 28.4	-00.7	234	44.7 +02.2	S 22 26.7	+00.1	204	56.2 +02.5	S 22 30.4	+00.0	09
10	335	08.1 +01.0	N 05 27.7	-00.6	249	46.9 +02.2	S 22 26.8	+00.0	219	58.7 +02.5	S 22 30.4	+00.0	10
11	350	09.1 +01.0	N 05 27.1	-00.6	264	49.1 +02.2	S 22 26.8	+00.0	235	01.2 +02.4	S 22 30.4	+00.0	11
12	5	10.1 +01.0	N 05 26.5	-00.7	279	51.3 +02.2	S 22 26.8	+00.1	250	03.6 +02.5	S 22 30.4	+00.0	12
13	20	11.1 +01.0	N 05 25.8	-00.6	294	53.5 +02.2	S 22 26.9	+00.0	265	06.1 +02.5	S 22 30.4	+00.0	13
14	35	12.1 +01.0	N 05 25.2	-00.6	309	55.7 +02.2	S 22 26.9	+00.0	280	08.6 +02.4	S 22 30.4	+00.0	14
15	50	13.1 +00.9	N 05 24.6	-00.7	324	57.9 +02.1	S 22 26.9	+00.1	295	11.0 +02.5	S 22 30.4	+00.0	15
16	65	14.0 +01.0	N 05 23.9	-00.6	340	00.0 +02.2	S 22 27.0	+00.0	310	13.5 +02.5	S 22 30.4	+00.0	16
17	80	15.0 +01.0	N 05 23.3	-00.6	355	02.2 +02.2	S 22 27.0	+00.0	325	16.0 +02.5	S 22 30.4	+00.0	17
18	95	16.0 +01.0	N 05 22.7	-00.7	10	04.4 +02.2	S 22 27.0	+00.1	340	18.5 +02.4	S 22 30.4	+00.0	18
19	110	17.0 +01.0	N 05 22.0	-00.6	25	06.6 +02.2	S 22 27.1	+00.0	355	20.9 +02.5	S 22 30.4	+00.0	19
20	125	18.0 +01.0	N 05 21.4	-00.6	40	08.8 +02.2	S 22 27.1	+00.0	10	23.4 +02.5	S 22 30.4	+00.0	20
21	140	19.0 +01.0	N 05 20.8	-00.7	55	11.0 +02.1	S 22 27.1	+00.1	25	25.9 +02.4	S 22 30.4	+00.0	21
22	155	20.0 +01.0	N 05 20.1	-00.6	70	13.1 +02.2	S 22 27.2	+00.0	40	28.3 +02.5	S 22 30.4	+00.0	22
23	170	21.0 +01.0	N 05 19.5	-00.6	85	15.3 +02.2	S 22 27.2	+00.0	55	30.8 +02.5	S 22 30.4	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 190° 190° 190° 190° 190° 190°				SHA 105° 105° 105° 105° 105° 105°				SHA 075° 075° 075° 075° 075° 075°				
	Greenwich Culmination Time: 11:39				Greenwich Culmination Time: 17:19				Greenwich Culmination Time: 19:18				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 18.7 +00.2	N 02 27.2 -01.0	172 22.2 -00.3	S 00 02.4 +01.3	330 56.4 -25.5	N 04 57.1 +11.3	00						00
01	196 18.9 +00.2	N 02 26.2 -00.9	187 21.9 -00.4	S 00 03.7 +01.3	345 30.9 -25.6	N 05 08.4 +11.3	01						01
02	211 19.1 +00.3	N 02 25.3 -01.0	202 21.5 -00.4	S 00 05.0 +01.2	0 05.3 -25.6	N 05 19.7 +11.3	02						02
03	226 19.4 +00.2	N 02 24.3 -01.0	217 21.1 -00.3	S 00 06.2 +01.3	14 39.7 -25.6	N 05 31.0 +11.3	03						03
04	241 19.6 +00.2	N 02 23.3 -00.9	232 20.8 -00.4	S 00 07.5 +01.3	29 14.1 -25.6	N 05 42.3 +11.2	04						04
05	256 19.8 +00.2	N 02 22.4 -01.0	247 20.4 -00.4	S 00 08.8 +01.3	43 48.5 -25.7	N 05 53.5 +11.2	05						05
06	271 20.0 +00.3	N 02 21.4 -01.0	262 20.0 -00.3	S 00 10.1 +01.2	58 22.8 -25.7	N 06 04.7 +11.3	06						06
07	286 20.3 +00.2	N 02 20.4 -00.9	277 19.7 -00.4	S 00 11.3 +01.3	72 57.1 -25.7	N 06 16.0 +11.2	07						07
08	301 20.5 +00.2	N 02 19.5 -01.0	292 19.3 -00.4	S 00 12.6 +01.3	87 31.4 -25.8	N 06 27.2 +11.1	08						08
09	316 20.7 +00.2	N 02 18.5 -01.0	307 18.9 -00.3	S 00 13.9 +01.3	102 05.6 -25.8	N 06 38.3 +11.2	09						09
10	331 20.9 +00.2	N 02 17.5 -00.9	322 18.6 -00.4	S 00 15.2 +01.2	116 39.8 -25.8	N 06 49.5 +11.1	10						10
11	346 21.1 +00.3	N 02 16.6 -01.0	337 18.2 -00.4	S 00 16.4 +01.3	131 14.0 -25.9	N 07 00.6 +11.1	11						11
12	1 21.4 +00.2	N 02 15.6 -01.0	352 17.8 -00.3	S 00 17.7 +01.3	145 48.1 -25.9	N 07 11.7 +11.1	12						12
13	16 21.6 +00.2	N 02 14.6 -00.9	7 17.5 -00.4	S 00 19.0 +01.3	160 22.2 -25.9	N 07 22.8 +11.1	13						13
14	31 21.8 +00.2	N 02 13.7 -01.0	22 17.1 -00.4	S 00 20.3 +01.2	174 56.3 -26.0	N 07 33.9 +11.0	14						14
15	46 22.0 +00.3	N 02 12.7 -01.0	37 16.7 -00.3	S 00 21.5 +01.3	189 30.3 -26.0	N 07 44.9 +11.1	15						15
16	61 22.3 +00.2	N 02 11.7 -00.9	52 16.4 -00.4	S 00 22.8 +01.3	204 04.3 -26.1	N 07 56.0 +10.9	16						16
17	76 22.5 +00.2	N 02 10.8 -01.0	67 16.0 -00.4	S 00 24.1 +01.3	218 38.2 -26.1	N 08 06.9 +11.0	17						17
18	91 22.7 +00.2	N 02 09.8 -00.9	82 15.6 -00.3	S 00 25.4 +01.2	233 12.1 -26.1	N 08 17.9 +10.9	18						18
19	106 22.9 +00.3	N 02 08.9 -01.0	97 15.3 -00.4	S 00 26.6 +01.3	247 46.0 -26.2	N 08 28.8 +10.9	19						19
20	121 23.2 +00.2	N 02 07.9 -01.0	112 14.9 -00.4	S 00 27.9 +01.3	262 19.8 -26.2	N 08 39.7 +10.9	20						20
21	136 23.4 +00.2	N 02 06.9 -00.9	127 14.5 -00.3	S 00 29.2 +01.3	276 53.6 -26.3	N 08 50.6 +10.9	21						21
22	151 23.6 +00.2	N 02 06.0 -01.0	142 14.2 -00.4	S 00 30.5 +01.2	291 27.3 -26.3	N 09 01.5 +10.8	22						22
23	166 23.8 +00.3	N 02 05.0 -01.0	157 13.8 -00.4	S 00 31.7 +01.3	306 01.0 -26.4	N 09 12.3 +10.7	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'9 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'5 54'5 54'6 54'7 54'7 54'8								
	SHA 186° 185° 185° 185° 185° 185°		SHA 177° 176° 176° 176° 176° 176°		SHA 334° 332° 331° 329° 327° 325°								
	Greenwich Culmination Time: 11:54		Greenwich Culmination Time: 12:30		Greenwich Culmination Time: 01:59								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	185 22.0 +01.0	N 05 18.9 -00.7	100 17.5 +02.2	S 22 27.2 +00.1	70 33.3 +02.4	S 22 30.4 +00.1	00						00
01	200 23.0 +01.0	N 05 18.2 -00.6	115 19.7 +02.2	S 22 27.3 +00.0	85 35.7 +02.5	S 22 30.5 +00.0	01						01
02	215 24.0 +00.9	N 05 17.6 -00.6	130 21.9 +02.2	S 22 27.3 +00.0	100 38.2 +02.5	S 22 30.5 +00.0	02						02
03	230 24.9 +01.0	N 05 17.0 -00.7	145 24.1 +02.1	S 22 27.3 +00.1	115 40.7 +02.5	S 22 30.5 +00.0	03						03
04	245 25.9 +01.0	N 05 16.3 -00.6	160 26.2 +02.2	S 22 27.4 +00.0	130 43.2 +02.4	S 22 30.5 +00.0	04						04
05	260 26.9 +01.0	N 05 15.7 -00.6	175 28.4 +02.2	S 22 27.4 +00.0	145 45.6 +02.5	S 22 30.5 +00.0	05						05
06	275 27.9 +01.0	N 05 15.1 -00.7	190 30.6 +02.2	S 22 27.4 +00.1	160 48.1 +02.5	S 22 30.5 +00.0	06						06
07	290 28.9 +01.0	N 05 14.4 -00.6	205 32.8 +02.2	S 22 27.5 +00.0	175 50.6 +02.4	S 22 30.5 +00.0	07						07
08	305 29.9 +01.0	N 05 13.8 -00.7	220 35.0 +02.1	S 22 27.5 +00.0	190 53.0 +02.5	S 22 30.5 +00.0	08						08
09	320 30.9 +01.0	N 05 13.1 -00.6	235 37.1 +02.2	S 22 27.5 +00.1	205 55.5 +02.5	S 22 30.5 +00.0	09						09
10	335 31.9 +01.0	N 05 12.5 -00.6	250 39.3 +02.2	S 22 27.6 +00.0	220 58.0 +02.4	S 22 30.5 +00.0	10						10
11	350 32.9 +01.0	N 05 11.9 -00.7	265 41.5 +02.2	S 22 27.6 +00.0	236 00.4 +02.5	S 22 30.5 +00.0	11						11
12	5 33.9 +00.9	N 05 11.2 -00.6	280 43.7 +02.2	S 22 27.6 +00.1	251 02.9 +02.5	S 22 30.5 +00.0	12						12
13	20 34.8 +01.0	N 05 10.6 -00.6	295 45.9 +02.1	S 22 27.7 +00.0	266 05.4 +02.4	S 22 30.5 +00.0	13						13
14	35 35.8 +01.0	N 05 10.0 -00.7	310 48.0 +02.2	S 22 27.7 +00.0	281 07.8 +02.5	S 22 30.5 +00.0	14						14
15	50 36.8 +01.0	N 05 09.3 -00.6	325 50.2 +02.2	S 22 27.7 +00.1	296 10.3 +02.5	S 22 30.5 +00.0	15						15
16	65 37.8 +01.0	N 05 08.7 -00.6	340 52.4 +02.2	S 22 27.8 +00.0	311 12.8 +02.4	S 22 30.5 +00.0	16						16
17	80 38.8 +01.0	N 05 08.1 -00.7	355 54.6 +02.2	S 22 27.8 +00.0	326 15.2 +02.5	S 22 30.5 +00.0	17						17
18	95 39.8 +01.0	N 05 07.4 -00.6	10 56.8 +02.1	S 22 27.8 +00.1	341 17.7 +02.5	S 22 30.5 +00.0	18						18
19	110 40.8 +01.0	N 05 06.8 -00.6	25 58.9 +02.2	S 22 27.9 +00.0	356 20.2 +02.4	S 22 30.5 +00.0	19						19
20	125 41.8 +01.0	N 05 06.2 -00.7	41 01.1 +02.2	S 22 27.9 +00.0	11 22.6 +02.5	S 22 30.5 +00.0	20						20
21	140 42.8 +01.0	N 05 05.5 -00.6	56 03.3 +02.2	S 22 27.9 +00.1	26 25.1 +02.5	S 22 30.5 +00.0	21						21
22	155 43.8 +01.0	N 05 04.9 -00.7	71 05.5 +02.1	S 22 28.0 +00.0	41 27.6 +02.4	S 22 30.5 +00.1	22						22
23	170 44.8 +01.0	N 05 04.2 -00.6	86 07.6 +02.2	S 22 28.0 +00.0	56 30.0 +02.5	S 22 30.6 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 190° 190° 189° 189° 189° 189°		SHA 105° 105° 105° 105° 105° 105°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:37		Greenwich Culmination Time: 17:16		Greenwich Culmination Time: 19:14								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 24.1 +00.2	N 02 04.0 -00.9	172 13.4 -00.3	S 00 33.0 +01.3	320 34.6 -26.4	N 09 23.0 +10.8	00						00
01	196 24.3 +00.2	N 02 03.1 -01.0	187 13.1 -00.4	S 00 34.3 +01.3	335 08.2 -26.4	N 09 33.8 +10.7	01						01
02	211 24.5 +00.2	N 02 02.1 -01.0	202 12.7 -00.4	S 00 35.6 +01.2	349 41.8 -26.5	N 09 44.5 +10.7	02						02
03	226 24.7 +00.3	N 02 01.1 -00.9	217 12.3 -00.3	S 00 36.8 +01.3	4 15.3 -26.5	N 09 55.2 +10.6	03						03
04	241 25.0 +00.2	N 02 00.2 -01.0	232 12.0 -00.4	S 00 38.1 +01.3	18 48.8 -26.6	N 10 05.8 +10.6	04						04
05	256 25.2 +00.2	N 01 59.2 -01.0	247 11.6 -00.4	S 00 39.4 +01.3	33 22.2 -26.7	N 10 16.4 +10.6	05						05
06	271 25.4 +00.2	N 01 58.2 -00.9	262 11.2 -00.4	S 00 40.7 +01.2	47 55.5 -26.7	N 10 27.0 +10.5	06						06
07	286 25.6 +00.3	N 01 57.3 -01.0	277 10.8 -00.3	S 00 41.9 +01.3	62 28.8 -26.7	N 10 37.5 +10.5	07						07
08	301 25.9 +00.2	N 01 56.3 -01.0	292 10.5 -00.4	S 00 43.2 +01.3	77 02.1 -26.8	N 10 48.0 +10.5	08						08
09	316 26.1 +00.2	N 01 55.3 -00.9	307 10.1 -00.4	S 00 44.5 +01.3	91 35.3 -26.8	N 10 58.5 +10.4	09						09
10	331 26.3 +00.2	N 01 54.4 -01.0	322 09.7 -00.3	S 00 45.8 +01.2	106 08.5 -26.9	N 11 08.9 +10.4	10						10
11	346 26.5 +00.2	N 01 53.4 -01.0	337 09.4 -00.4	S 00 47.0 +01.3	120 41.6 -27.0	N 11 19.3 +10.3	11						11
12	1 26.7 +00.3	N 01 52.4 -00.9	352 09.0 -00.4	S 00 48.3 +01.3	135 14.6 -27.0	N 11 29.6 +10.3	12						12
13	16 27.0 +00.2	N 01 51.5 -01.0	7 08.6 -00.3	S 00 49.6 +01.3	149 47.6 -27.0	N 11 39.9 +10.3	13						13
14	31 27.2 +00.2	N 01 50.5 -01.0	22 08.3 -00.4	S 00 50.9 +01.2	164 20.6 -27.2	N 11 50.2 +10.2	14						14
15	46 27.4 +00.2	N 01 49.5 -01.0	37 07.9 -00.4	S 00 52.1 +01.3	178 53.4 -27.1	N 12 00.4 +10.1	15						15
16	61 27.6 +00.3	N 01 48.5 -00.9	52 07.5 -00.3	S 00 53.4 +01.3	193 26.3 -27.3	N 12 10.5 +10.1	16						16
17	76 27.9 +00.2	N 01 47.6 -01.0	67 07.2 -00.4	S 00 54.7 +01.3	207 59.0 -27.2	N 12 20.6 +10.1	17						17
18	91 28.1 +00.2	N 01 46.6 -01.0	82 06.8 -00.4	S 00 56.0 +01.2	222 31.8 -27.4	N 12 30.7 +10.0	18						18
19	106 28.3 +00.2	N 01 45.6 -00.9	97 06.4 -00.3	S 00 57.2 +01.3	237 04.4 -27.4	N 12 40.7 +10.0	19						19
20	121 28.5 +00.3	N 01 44.7 -01.0	112 06.1 -00.4	S 00 58.5 +01.3	251 37.0 -27.4	N 12 50.7 +09.9	20						20
21	136 28.8 +00.2	N 01 43.7 -01.0	127 05.7 -00.4	S 00 59.8 +01.3	266 09.6 -27.6	N 13 00.6 +09.9	21						21
22	151 29.0 +00.2	N 01 42.7 -00.9	142 05.3 -00.3	S 01 01.1 +01.2	280 42.0 -27.5	N 13 10.5 +09.8	22						22
23	166 29.2 +00.2	N 01 41.8 -01.0	157 05.0 -00.4	S 01 02.3 +01.3	295 14.5 -27.7	N 13 20.3 +09.8	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 15'0 15'0 15'0 15'0 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'8 54'9 55'0 55'1 55'2 55'2								
	SHA 185° 185° 184° 184° 184° 184°		SHA 176° 175° 175° 175° 175° 175°		SHA 323° 321° 319° 317° 315° 313°								
	Greenwich Culmination Time: 11:54		Greenwich Culmination Time: 12:31		Greenwich Culmination Time: 02:42								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	185 45.8 +00.9	N 05 03.6 -00.6	101 09.8 +02.2	S 22 28.0 +00.1	71 32.5 +02.5	S 22 30.6 +00.0	00						00
01	200 46.7 +01.0	N 05 03.0 -00.7	116 12.0 +02.2	S 22 28.1 +00.0	86 35.0 +02.4	S 22 30.6 +00.0	01						01
02	215 47.7 +01.0	N 05 02.3 -00.6	131 14.2 +02.1	S 22 28.1 +00.0	101 37.4 +02.5	S 22 30.6 +00.0	02						02
03	230 48.7 +01.0	N 05 01.7 -00.6	146 16.3 +02.2	S 22 28.1 +00.1	116 39.9 +02.5	S 22 30.6 +00.0	03						03
04	245 49.7 +01.0	N 05 01.1 -00.7	161 18.5 +02.2	S 22 28.2 +00.0	131 42.4 +02.4	S 22 30.6 +00.0	04						04
05	260 50.7 +01.0	N 05 00.4 -00.6	176 20.7 +02.2	S 22 28.2 +00.0	146 44.8 +02.5	S 22 30.6 +00.0	05						05
06	275 51.7 +01.0	N 04 59.8 -00.6	191 22.9 +02.1	S 22 28.2 +00.1	161 47.3 +02.4	S 22 30.6 +00.0	06						06
07	290 52.7 +01.0	N 04 59.2 -00.7	206 25.0 +02.2	S 22 28.3 +00.0	176 49.7 +02.5	S 22 30.6 +00.0	07						07
08	305 53.7 +01.0	N 04 58.5 -00.6	221 27.2 +02.2	S 22 28.3 +00.0	191 52.2 +02.5	S 22 30.6 +00.0	08						08
09	320 54.7 +01.0	N 04 57.9 -00.7	236 29.4 +02.2	S 22 28.3 +00.1	206 54.7 +02.4	S 22 30.6 +00.0	09						09
10	335 55.7 +01.0	N 04 57.2 -00.6	251 31.6 +02.1	S 22 28.4 +00.0	221 57.1 +02.5	S 22 30.6 +00.0	10						10
11	350 56.7 +00.9	N 04 56.6 -00.6	266 33.7 +02.2	S 22 28.4 +00.0	236 59.6 +02.5	S 22 30.6 +00.0	11						11
12	5 57.6 +01.0	N 04 56.0 -00.7	281 35.9 +02.2	S 22 28.4 +00.1	252 02.1 +02.4	S 22 30.6 +00.0	12						12
13	20 58.6 +01.0	N 04 55.3 -00.6	296 38.1 +02.2	S 22 28.5 +00.0	267 04.5 +02.5	S 22 30.6 +00.0	13						13
14	35 59.6 +01.0	N 04 54.7 -00.6	311 40.3 +02.1	S 22 28.5 +00.0	282 07.0 +02.5	S 22 30.6 +00.0	14						14
15	51 00.6 +01.0	N 04 54.1 -00.7	326 42.4 +02.2	S 22 28.5 +00.1	297 09.5 +02.4	S 22 30.6 +00.0	15						15
16	66 01.6 +01.0	N 04 53.4 -00.6	341 44.6 +02.2	S 22 28.6 +00.0	312 11.9 +02.5	S 22 30.6 +00.0	16						16
17	81 02.6 +01.0	N 04 52.8 -00.7	356 46.8 +02.1	S 22 28.6 +00.0	327 14.4 +02.4	S 22 30.6 +00.0	17						17
18	96 03.6 +01.0	N 04 52.1 -00.6	11 48.9 +02.2	S 22 28.6 +00.1	342 16.8 +02.5	S 22 30.6 +00.0	18						18
19	111 04.6 +01.0	N 04 51.5 -00.6	26 51.1 +02.2	S 22 28.7 +00.0	357 19.3 +02.5	S 22 30.6 +00.0	19						19
20	126 05.6 +01.0	N 04 50.9 -00.7	41 53.3 +02.2	S 22 28.7 +00.0	12 21.8 +02.4	S 22 30.6 +00.0	20						20
21	141 06.6 +01.0	N 04 50.2 -00.6	56 55.5 +02.1	S 22 28.7 +00.1	27 24.2 +02.5	S 22 30.6 +00.0	21						21
22	156 07.6 +01.0	N 04 49.6 -00.6	71 57.6 +02.2	S 22 28.8 +00.0	42 26.7 +02.4	S 22 30.6 +00.1	22						22
23	171 08.6 +00.9	N 04 49.0 -00.7	86 59.8 +02.2	S 22 28.8 +00.0	57 29.1 +02.5	S 22 30.7 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 189° 189° 189° 189° 189° 189°		SHA 105° 105° 104° 104° 104° 104°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:36		Greenwich Culmination Time: 17:12		Greenwich Culmination Time: 19:10								

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	181 29.4 +00.3	N 01 40.8 -01.0	172 04.6 -00.4	S 01 03.6 +01.3	309 46.8 -27.7	N 13 30.1 +09.7	00								
01	196 29.7 +00.2	N 01 39.8 -00.9	187 04.2 -00.3	S 01 04.9 +01.3	324 19.1 -27.8	N 13 39.8 +09.6	01								
02	211 29.9 +00.2	N 01 38.9 -01.0	202 03.9 -00.4	S 01 06.2 +01.2	338 51.3 -27.8	N 13 49.4 +09.6	02								
03	226 30.1 +00.2	N 01 37.9 -01.0	217 03.5 -00.4	S 01 07.4 +01.3	353 23.5 -27.9	N 13 59.0 +09.6	03								
04	241 30.3 +00.3	N 01 36.9 -00.9	232 03.1 -00.3	S 01 08.7 +01.3	7 55.6 -27.9	N 14 08.6 +09.5	04								
05	256 30.6 +00.2	N 01 36.0 -01.0	247 02.8 -00.4	S 01 10.0 +01.3	22 27.7 -28.1	N 14 18.1 +09.4	05								
06	271 30.8 +00.2	N 01 35.0 -01.0	262 02.4 -00.4	S 01 11.3 +01.2	36 59.6 -28.1	N 14 27.5 +09.4	06								
07	286 31.0 +00.2	N 01 34.0 -00.9	277 02.0 -00.3	S 01 12.5 +01.3	51 31.5 -28.1	N 14 36.9 +09.3	07								
08	301 31.2 +00.2	N 01 33.1 -01.0	292 01.7 -00.4	S 01 13.8 +01.3	66 03.4 -28.3	N 14 46.2 +09.3	08								
09	316 31.4 +00.3	N 01 32.1 -01.0	307 01.3 -00.4	S 01 15.1 +01.3	80 35.1 -28.2	N 14 55.5 +09.2	09								
10	331 31.7 +00.2	N 01 31.1 -00.9	322 00.9 -00.3	S 01 16.4 +01.2	95 06.9 -28.4	N 15 04.7 +09.1	10								
11	346 31.9 +00.2	N 01 30.2 -01.0	337 00.6 -00.4	S 01 17.6 +01.3	109 38.5 -28.4	N 15 13.8 +09.1	11								
12	1 32.1 +00.2	N 01 29.2 -01.0	352 00.2 -00.4	S 01 18.9 +01.3	124 10.1 -28.5	N 15 22.9 +09.0	12								
13	16 32.3 +00.3	N 01 28.2 -01.0	6 59.8 -00.3	S 01 20.2 +01.3	138 41.6 -28.6	N 15 31.9 +08.9	13								
14	31 32.6 +00.2	N 01 27.2 -00.9	21 59.5 -00.4	S 01 21.5 +01.2	153 13.0 -28.6	N 15 40.8 +08.9	14								
15	46 32.8 +00.2	N 01 26.3 -01.0	36 59.1 -00.4	S 01 22.7 +01.3	167 44.4 -28.8	N 15 49.7 +08.8	15								
16	61 33.0 +00.2	N 01 25.3 -01.0	51 58.7 -00.3	S 01 24.0 +01.3	182 15.6 -28.7	N 15 58.5 +08.8	16								
17	76 33.2 +00.3	N 01 24.3 -00.9	66 58.4 -00.4	S 01 25.3 +01.3	196 46.9 -28.9	N 16 07.3 +08.6	17								
18	91 33.5 +00.2	N 01 23.4 -01.0	81 58.0 -00.4	S 01 26.6 +01.2	211 18.0 -28.9	N 16 15.9 +08.6	18								
19	106 33.7 +00.2	N 01 22.4 -01.0	96 57.6 -00.3	S 01 27.8 +01.3	225 49.1 -29.0	N 16 24.5 +08.6	19								
20	121 33.9 +00.2	N 01 21.4 -00.9	111 57.3 -00.4	S 01 29.1 +01.3	240 20.1 -29.1	N 16 33.1 +08.4	20								
21	136 34.1 +00.2	N 01 20.5 -01.0	126 56.9 -00.4	S 01 30.4 +01.3	254 51.0 -29.1	N 16 41.5 +08.4	21								
22	151 34.3 +00.3	N 01 19.5 -01.0	141 56.5 -00.4	S 01 31.7 +01.2	269 21.9 -29.2	N 16 49.9 +08.4	22								
23	166 34.6 +00.2	N 01 18.5 -00.9	156 56.1 -00.3	S 01 32.9 +01.3	283 52.7 -29.3	N 16 58.3 +08.2	23								
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 184° 184° 184° 183° 183° 183°	Greenwich Culmination Time: 11:53	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 174° 174° 174° 174° 174° 173°	Greenwich Culmination Time: 12:31	UT 02 06 10 14 18 22	SD 15'1 15'1 15'1 15'2 15'2 15'2	HP 55'3 55'4 55'5 55'6 55'7 55'8	SHA 311° 309° 307° 305° 303° 301°	Greenwich Culmination Time: 03:27
UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	186 09.5 +01.0	N 04 48.3 -00.6	102 02.0 +02.1	S 22 28.8 +00.1	72 31.6 +02.5	S 22 30.7 +00.0	00								
01	201 10.5 +01.0	N 04 47.7 -00.7	117 04.1 +02.2	S 22 28.9 +00.0	87 34.1 +02.4	S 22 30.7 +00.0	01								
02	216 11.5 +01.0	N 04 47.0 -00.6	132 06.3 +02.2	S 22 28.9 +00.0	102 36.5 +02.5	S 22 30.7 +00.0	02								
03	231 12.5 +01.0	N 04 46.4 -00.6	147 08.5 +02.1	S 22 28.9 +00.1	117 39.0 +02.5	S 22 30.7 +00.0	03								
04	246 13.5 +01.0	N 04 45.8 -00.7	162 10.6 +02.2	S 22 29.0 +00.0	132 41.5 +02.4	S 22 30.7 +00.0	04								
05	261 14.5 +01.0	N 04 45.1 -00.6	177 12.8 +02.2	S 22 29.0 +00.0	147 43.9 +02.5	S 22 30.7 +00.0	05								
06	276 15.5 +01.0	N 04 44.5 -00.6	192 15.0 +02.1	S 22 29.0 +00.1	162 46.4 +02.4	S 22 30.7 +00.0	06								
07	291 16.5 +01.0	N 04 43.9 -00.7	207 17.1 +02.2	S 22 29.1 +00.0	177 48.8 +02.5	S 22 30.7 +00.0	07								
08	306 17.5 +01.0	N 04 43.2 -00.6	222 19.3 +02.2	S 22 29.1 +00.0	192 51.3 +02.4	S 22 30.7 +00.0	08								
09	321 18.5 +01.0	N 04 42.6 -00.7	237 21.5 +02.1	S 22 29.1 +00.1	207 53.7 +02.5	S 22 30.7 +00.0	09								
10	336 19.5 +01.0	N 04 41.9 -00.6	252 23.6 +02.2	S 22 29.2 +00.0	222 56.2 +02.5	S 22 30.7 +00.0	10								
11	351 20.5 +00.9	N 04 41.3 -00.6	267 25.8 +02.2	S 22 29.2 +00.0	237 58.7 +02.4	S 22 30.7 +00.0	11								
12	6 21.4 +01.0	N 04 40.7 -00.7	282 28.0 +02.1	S 22 29.2 +00.1	253 01.1 +02.5	S 22 30.7 +00.0	12								
13	21 22.4 +01.0	N 04 40.0 -00.6	297 30.1 +02.2	S 22 29.3 +00.0	268 03.6 +02.4	S 22 30.7 +00.0	13								
14	36 23.4 +01.0	N 04 39.4 -00.6	312 32.3 +02.2	S 22 29.3 +00.0	283 06.0 +02.5	S 22 30.7 +00.0	14								
15	51 24.4 +01.0	N 04 38.8 -00.7	327 34.5 +02.1	S 22 29.3 +00.1	298 08.5 +02.5	S 22 30.7 +00.0	15								
16	66 25.4 +01.0	N 04 38.1 -00.6	342 36.6 +02.2	S 22 29.4 +00.0	313 11.0 +02.4	S 22 30.7 +00.0	16								
17	81 26.4 +01.0	N 04 37.5 -00.7	357 38.8 +02.2	S 22 29.4 +00.0	328 13.4 +02.5	S 22 30.7 +00.0	17								
18	96 27.4 +01.0	N 04 36.8 -00.6	12 41.0 +02.1	S 22 29.4 +00.1	343 15.9 +02.4	S 22 30.7 +00.0	18								
19	111 28.4 +01.0	N 04 36.2 -00.6	27 43.1 +02.2	S 22 29.5 +00.0	358 18.3 +02.5	S 22 30.7 +00.0	19								
20	126 29.4 +01.0	N 04 35.6 -00.7	42 45.3 +02.2	S 22 29.5 +00.0	13 20.8 +02.4	S 22 30.7 +00.0	20								
21	141 30.4 +01.0	N 04 34.9 -00.6	57 47.5 +02.1	S 22 29.5 +00.1	28 23.2 +02.5	S 22 30.7 +00.0	21								
22	156 31.4 +01.0	N 04 34.3 -00.7	72 49.6 +02.2	S 22 29.6 +00.0	43 25.7 +02.5	S 22 30.7 +00.0	22								
23	171 32.4 +01.0	N 04 33.6 -00.6	87 51.8 +02.1	S 22 29.6 +00.0	58 28.2 +02.4	S 22 30.7 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 188° 188° 188° 188° 188° 188°	Greenwich Culmination Time: 11:34	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 104° 104° 104° 104° 104° 104°	Greenwich Culmination Time: 17:09	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 075° 075° 075° 075° 075° 075°	Greenwich Culmination Time: 19:06

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 34.8 +00.2	N 01 17.6 -01.0	171 55.8 -00.4	S 01 34.2 +01.3	298 23.4 -29.4	N 17 06.5 +08.2	00						
01	196 35.0 +00.2	N 01 16.6 -01.0	186 55.4 -00.4	S 01 35.5 +01.3	312 54.0 -29.4	N 17 14.7 +08.1	01						
02	211 35.2 +00.3	N 01 15.6 -01.0	201 55.0 -00.3	S 01 36.8 +01.2	327 24.6 -29.6	N 17 22.8 +08.0	02						
03	226 35.5 +00.2	N 01 14.6 -00.9	216 54.7 -00.4	S 01 38.0 +01.3	341 55.0 -29.5	N 17 30.8 +07.9	03						
04	241 35.7 +00.2	N 01 13.7 -01.0	231 54.3 -00.4	S 01 39.3 +01.3	356 25.5 -29.7	N 17 38.7 +07.9	04						
05	256 35.9 +00.2	N 01 12.7 -01.0	246 53.9 -00.3	S 01 40.6 +01.3	10 55.8 -29.8	N 17 46.6 +07.8	05						
06	271 36.1 +00.3	N 01 11.7 -00.9	261 53.6 -00.4	S 01 41.9 +01.2	25 26.0 -29.8	N 17 54.4 +07.6	06						
07	286 36.4 +00.2	N 01 10.8 -01.0	276 53.2 -00.4	S 01 43.1 +01.3	39 56.2 -29.9	N 18 02.0 +07.7	07						
08	301 36.6 +00.2	N 01 09.8 -01.0	291 52.8 -00.3	S 01 44.4 +01.3	54 26.3 -30.0	N 18 09.7 +07.5	08						
09	316 36.8 +00.2	N 01 08.8 -00.9	306 52.5 -00.4	S 01 45.7 +01.3	68 56.3 -30.0	N 18 17.2 +07.4	09						
10	331 37.0 +00.2	N 01 07.9 -01.0	321 52.1 -00.4	S 01 47.0 +01.2	83 26.3 -30.1	N 18 24.6 +07.4	10						
11	346 37.2 +00.3	N 01 06.9 -01.0	336 51.7 -00.3	S 01 48.2 +01.3	97 56.2 -30.3	N 18 32.0 +07.3	11						
12	1 37.5 +00.2	N 01 05.9 -01.0	351 51.4 -00.4	S 01 49.5 +01.3	112 25.9 -30.2	N 18 39.3 +07.2	12						
13	16 37.7 +00.2	N 01 04.9 -00.9	6 51.0 -00.4	S 01 50.8 +01.3	126 55.7 -30.4	N 18 46.5 +07.1	13						
14	31 37.9 +00.2	N 01 04.0 -01.0	21 50.6 -00.4	S 01 52.1 +01.2	141 25.3 -30.5	N 18 53.6 +07.0	14						
15	46 38.1 +00.3	N 01 03.0 -01.0	36 50.2 -00.3	S 01 53.3 +01.3	155 54.8 -30.5	N 19 00.6 +06.9	15						
16	61 38.4 +00.2	N 01 02.0 -00.9	51 49.9 -00.4	S 01 54.6 +01.3	170 24.3 -30.6	N 19 07.5 +06.8	16						
17	76 38.6 +00.2	N 01 01.1 -01.0	66 49.5 -00.4	S 01 55.9 +01.3	184 53.7 -30.7	N 19 14.3 +06.8	17						
18	91 38.8 +00.2	N 01 00.1 -01.0	81 49.1 -00.3	S 01 57.2 +01.2	199 23.0 -30.7	N 19 21.1 +06.6	18						
19	106 39.0 +00.3	N 00 59.1 -00.9	96 48.8 -00.4	S 01 58.4 +01.3	213 52.3 -30.9	N 19 27.7 +06.6	19						
20	121 39.3 +00.2	N 00 58.2 -01.0	111 48.4 -00.4	S 01 59.7 +01.3	228 21.4 -30.9	N 19 34.3 +06.4	20						
21	136 39.5 +00.2	N 00 57.2 -01.0	126 48.0 -00.3	S 02 01.0 +01.3	242 50.5 -31.0	N 19 40.7 +06.4	21						
22	151 39.7 +00.2	N 00 56.2 -01.0	141 47.7 -00.4	S 02 02.3 +01.2	257 19.5 -31.0	N 19 47.1 +06.2	22						
23	166 39.9 +00.2	N 00 55.2 -00.9	156 47.3 -00.4	S 02 03.5 +01.3	271 48.5 -31.2	N 19 53.3 +06.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'3 15'3 15'3 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'9 56'0 56'1 56'2 56'4 56'5								
	SHA 183° 183° 183° 182° 182° 182°		SHA 173° 173° 173° 173° 172° 172°		SHA 299° 297° 294° 292° 290° 288°								
	Greenwich Culmination Time: 11:53		Greenwich Culmination Time: 12:32		Greenwich Culmination Time: 04:14								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	186 33.4 +00.9	N 04 33.0 -00.6	102 53.9 +02.2	S 22 29.6 +00.1	73 30.6 +02.5	S 22 30.7 +00.0	00						
01	201 34.3 +01.0	N 04 32.4 -00.7	117 56.1 +02.2	S 22 29.7 +00.0	88 33.1 +02.4	S 22 30.7 +00.1	01						
02	216 35.3 +01.0	N 04 31.7 -00.6	132 58.3 +02.1	S 22 29.7 +00.0	103 35.5 +02.5	S 22 30.8 +00.0	02						
03	231 36.3 +01.0	N 04 31.1 -00.7	148 00.4 +02.2	S 22 29.7 +00.1	118 38.0 +02.4	S 22 30.8 +00.0	03						
04	246 37.3 +01.0	N 04 30.4 -00.6	163 02.6 +02.2	S 22 29.8 +00.0	133 40.4 +02.5	S 22 30.8 +00.0	04						
05	261 38.3 +01.0	N 04 29.8 -00.6	178 04.8 +02.1	S 22 29.8 +00.0	148 42.9 +02.5	S 22 30.8 +00.0	05						
06	276 39.3 +01.0	N 04 29.2 -00.7	193 06.9 +02.2	S 22 29.8 +00.1	163 45.4 +02.4	S 22 30.8 +00.0	06						
07	291 40.3 +01.0	N 04 28.5 -00.6	208 09.1 +02.1	S 22 29.9 +00.0	178 47.8 +02.5	S 22 30.8 +00.0	07						
08	306 41.3 +01.0	N 04 27.9 -00.6	223 11.2 +02.2	S 22 29.9 +00.0	193 50.3 +02.4	S 22 30.8 +00.0	08						
09	321 42.3 +01.0	N 04 27.3 -00.7	238 13.4 +02.2	S 22 29.9 +00.1	208 52.7 +02.5	S 22 30.8 +00.0	09						
10	336 43.3 +01.0	N 04 26.6 -00.6	253 15.6 +02.1	S 22 30.0 +00.0	223 55.2 +02.4	S 22 30.8 +00.0	10						
11	351 44.3 +01.0	N 04 26.0 -00.7	268 17.7 +02.2	S 22 30.0 +00.0	238 57.6 +02.5	S 22 30.8 +00.0	11						
12	6 45.3 +01.0	N 04 25.3 -00.6	283 19.9 +02.1	S 22 30.0 +00.1	254 00.1 +02.4	S 22 30.8 +00.0	12						
13	21 46.3 +00.9	N 04 24.7 -00.6	298 22.0 +02.2	S 22 30.1 +00.0	269 02.5 +02.5	S 22 30.8 +00.0	13						
14	36 47.2 +01.0	N 04 24.1 -00.7	313 24.2 +02.2	S 22 30.1 +00.0	284 05.0 +02.4	S 22 30.8 +00.0	14						
15	51 48.2 +01.0	N 04 23.4 -00.6	328 26.4 +02.1	S 22 30.1 +00.1	299 07.4 +02.5	S 22 30.8 +00.0	15						
16	66 49.2 +01.0	N 04 22.8 -00.7	343 28.5 +02.2	S 22 30.2 +00.0	314 09.9 +02.4	S 22 30.8 +00.0	16						
17	81 50.2 +01.0	N 04 22.1 -00.6	358 30.7 +02.1	S 22 30.2 +00.1	329 12.3 +02.5	S 22 30.8 +00.0	17						
18	96 51.2 +01.0	N 04 21.5 -00.6	13 32.8 +02.2	S 22 30.3 +00.0	344 14.8 +02.5	S 22 30.8 +00.0	18						
19	111 52.2 +01.0	N 04 20.9 -00.7	28 35.0 +02.1	S 22 30.3 +00.0	359 17.3 +02.4	S 22 30.8 +00.0	19						
20	126 53.2 +01.0	N 04 20.2 -00.6	43 37.1 +02.2	S 22 30.3 +00.1	14 19.7 +02.5	S 22 30.8 +00.0	20						
21	141 54.2 +01.0	N 04 19.6 -00.7	58 39.3 +02.2	S 22 30.4 +00.0	29 22.2 +02.4	S 22 30.8 +00.0	21						
22	156 55.2 +01.0	N 04 18.9 -00.6	73 41.5 +02.1	S 22 30.4 +00.0	44 24.6 +02.5	S 22 30.8 +00.0	22						
23	171 56.2 +01.0	N 04 18.3 -00.6	88 43.6 +02.2	S 22 30.4 +00.1	59 27.1 +02.4	S 22 30.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 188° 188° 188° 188° 188° 187°		SHA 104° 104° 104° 104° 104° 104°		SHA 075° 075° 075° 075° 075° 075°								
	Greenwich Culmination Time: 11:33		Greenwich Culmination Time: 17:05		Greenwich Culmination Time: 19:02								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 40.1 +00.3	N 00	54.3 -01.0	171 46.9 -00.3	S 02	04.8 +01.3	286 17.3 -31.2	N 19	59.5 +06.1	00			
01	196 40.4 +00.2	N 00	53.3 -01.0	186 46.6 -00.4	S 02	06.1 +01.3	300 46.1 -31.3	N 20	05.6 +05.9	01			
02	211 40.6 +00.2	N 00	52.3 -00.9	201 46.2 -00.4	S 02	07.4 +01.2	315 14.8 -31.4	N 20	11.5 +05.9	02			
03	226 40.8 +00.2	N 00	51.4 -01.0	216 45.8 -00.4	S 02	08.6 +01.3	329 43.4 -31.5	N 20	17.4 +05.8	03			
04	241 41.0 +00.3	N 00	50.4 -01.0	231 45.4 -00.3	S 02	09.9 +01.3	344 11.9 -31.6	N 20	23.2 +05.6	04			
05	256 41.3 +00.2	N 00	49.4 -01.0	246 45.1 -00.4	S 02	11.2 +01.3	358 40.3 -31.6	N 20	28.8 +05.6	05			
06	271 41.5 +00.2	N 00	48.4 -00.9	261 44.7 -00.4	S 02	12.5 +01.2	13 08.7 -31.7	N 20	34.4 +05.4	06			
07	286 41.7 +00.2	N 00	47.5 -01.0	276 44.3 -00.3	S 02	13.7 +01.3	27 37.0 -31.8	N 20	39.8 +05.4	07			
08	301 41.9 +00.2	N 00	46.5 -01.0	291 44.0 -00.4	S 02	15.0 +01.3	42 05.2 -31.8	N 20	45.2 +05.2	08			
09	316 42.1 +00.3	N 00	45.5 -00.9	306 43.6 -00.4	S 02	16.3 +01.2	56 33.4 -32.0	N 20	50.4 +05.1	09			
10	331 42.4 +00.2	N 00	44.6 -01.0	321 43.2 -00.4	S 02	17.5 +01.3	71 01.4 -32.0	N 20	55.5 +05.0	10			
11	346 42.6 +00.2	N 00	43.6 -01.0	336 42.8 -00.3	S 02	18.8 +01.3	85 29.4 -32.1	N 21	00.5 +04.9	11			
12	1 42.8 +00.2	N 00	42.6 -01.0	351 42.5 -00.4	S 02	20.1 +01.3	99 57.3 -32.1	N 21	05.4 +04.8	12			
13	16 43.0 +00.2	N 00	41.6 -00.9	6 42.1 -00.4	S 02	21.4 +01.2	114 25.2 -32.3	N 21	10.2 +04.7	13			
14	31 43.2 +00.3	N 00	40.7 -01.0	21 41.7 -00.3	S 02	22.6 +01.3	128 52.9 -32.3	N 21	14.9 +04.6	14			
15	46 43.5 +00.2	N 00	39.7 -01.0	36 41.4 -00.4	S 02	23.9 +01.3	143 20.6 -32.4	N 21	19.5 +04.4	15			
16	61 43.7 +00.2	N 00	38.7 -00.9	51 41.0 -00.4	S 02	25.2 +01.3	157 48.2 -32.5	N 21	23.9 +04.4	16			
17	76 43.9 +00.2	N 00	37.8 -01.0	66 40.6 -00.4	S 02	26.5 +01.2	172 15.7 -32.5	N 21	28.3 +04.2	17			
18	91 44.1 +00.3	N 00	36.8 -01.0	81 40.2 -00.3	S 02	27.7 +01.3	186 43.2 -32.6	N 21	32.5 +04.1	18			
19	106 44.4 +00.2	N 00	35.8 -01.0	96 39.9 -00.4	S 02	29.0 +01.3	201 10.6 -32.7	N 21	36.6 +04.0	19			
20	121 44.6 +00.2	N 00	34.8 -00.9	111 39.5 -00.4	S 02	30.3 +01.3	215 37.9 -32.8	N 21	40.6 +03.8	20			
21	136 44.8 +00.2	N 00	33.9 -01.0	126 39.1 -00.3	S 02	31.6 +01.2	230 05.1 -32.9	N 21	44.4 +03.8	21			
22	151 45.0 +00.2	N 00	32.9 -01.0	141 38.8 -00.4	S 02	32.8 +01.3	244 32.2 -32.9	N 21	48.2 +03.6	22			
23	166 45.2 +00.3	N 00	31.9 -00.9	156 38.4 -00.4	S 02	34.1 +01.3	258 59.3 -33.0	N 21	51.8 +03.5	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'4 15'5 15'5 15'5 15'6 15'6						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'6 56'7 56'9 57'0 57'1 57'3						
	SHA 182° 182° 182° 182° 181° 181°			SHA 172° 172° 172° 172° 171° 171°			SHA 286° 283° 281° 279° 276° 274°						
	Greenwich Culmination Time: 11:53			Greenwich Culmination Time: 12:33			Greenwich Culmination Time: 05:05						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	186 57.2 +01.0	N 04	17.7 -00.7	103 45.8 +02.1	S 22	30.5 +00.0	74 29.5 +02.5	S 22	30.8 +00.0	00			
01	201 58.2 +01.0	N 04	17.0 -00.6	118 47.9 +02.2	S 22	30.5 +00.0	89 32.0 +02.4	S 22	30.8 +00.0	01			
02	216 59.2 +00.9	N 04	16.4 -00.7	133 50.1 +02.1	S 22	30.5 +00.1	104 34.4 +02.5	S 22	30.8 +00.0	02			
03	232 00.1 +01.0	N 04	15.7 -00.6	148 52.2 +02.2	S 22	30.6 +00.0	119 36.9 +02.4	S 22	30.8 +00.0	03			
04	247 01.1 +01.0	N 04	15.1 -00.6	163 54.4 +02.1	S 22	30.6 +00.0	134 39.3 +02.5	S 22	30.8 +00.0	04			
05	262 02.1 +01.0	N 04	14.5 -00.7	178 56.5 +02.2	S 22	30.6 +00.1	149 41.8 +02.4	S 22	30.8 +00.0	05			
06	277 03.1 +01.0	N 04	13.8 -00.6	193 58.7 +02.2	S 22	30.7 +00.0	164 44.2 +02.5	S 22	30.8 +00.0	06			
07	292 04.1 +01.0	N 04	13.2 -00.7	209 00.9 +02.1	S 22	30.7 +00.0	179 46.7 +02.4	S 22	30.8 +00.0	07			
08	307 05.1 +01.0	N 04	12.5 -00.6	224 03.0 +02.2	S 22	30.7 +00.1	194 49.1 +02.5	S 22	30.8 +00.0	08			
09	322 06.1 +01.0	N 04	11.9 -00.7	239 05.2 +02.1	S 22	30.8 +00.0	209 51.6 +02.4	S 22	30.8 +00.1	09			
10	337 07.1 +01.0	N 04	11.2 -00.6	254 07.3 +02.2	S 22	30.8 +00.0	224 54.0 +02.5	S 22	30.9 +00.0	10			
11	352 08.1 +01.0	N 04	10.6 -00.6	269 09.5 +02.1	S 22	30.8 +00.1	239 56.5 +02.4	S 22	30.9 +00.0	11			
12	7 09.1 +01.0	N 04	10.0 -00.7	284 11.6 +02.2	S 22	30.9 +00.0	254 58.9 +02.5	S 22	30.9 +00.0	12			
13	22 10.1 +01.0	N 04	09.3 -00.6	299 13.8 +02.1	S 22	30.9 +00.0	270 01.4 +02.4	S 22	30.9 +00.0	13			
14	37 11.1 +01.0	N 04	08.7 -00.7	314 15.9 +02.2	S 22	30.9 +00.1	285 03.8 +02.5	S 22	30.9 +00.0	14			
15	52 12.1 +01.0	N 04	08.0 -00.6	329 18.1 +02.1	S 22	31.0 +00.0	300 06.3 +02.4	S 22	30.9 +00.0	15			
16	67 13.1 +00.9	N 04	07.4 -00.6	344 20.2 +02.2	S 22	31.0 +00.0	315 08.7 +02.5	S 22	30.9 +00.0	16			
17	82 14.0 +01.0	N 04	06.8 -00.7	359 22.4 +02.1	S 22	31.0 +00.1	330 11.2 +02.4	S 22	30.9 +00.0	17			
18	97 15.0 +01.0	N 04	06.1 -00.6	14 24.5 +02.2	S 22	31.1 +00.0	345 13.6 +02.5	S 22	30.9 +00.0	18			
19	112 16.0 +01.0	N 04	05.5 -00.7	29 26.7 +02.1	S 22	31.1 +00.0	0 16.1 +02.4	S 22	30.9 +00.0	19			
20	127 17.0 +01.0	N 04	04.8 -00.6	44 28.8 +02.2	S 22	31.1 +00.1	15 18.5 +02.5	S 22	30.9 +00.0	20			
21	142 18.0 +01.0	N 04	04.2 -00.6	59 31.0 +02.1	S 22	31.2 +00.0	30 21.0 +02.4	S 22	30.9 +00.0	21			
22	157 19.0 +01.0	N 04	03.6 -00.7	74 33.1 +02.2	S 22	31.2 +00.1	45 23.4 +02.5	S 22	30.9 +00.0	22			
23	172 20.0 +01.0	N 04	02.9 -00.6	89 35.3 +02.1	S 22	31.3 +00.0	60 25.9 +02.4	S 22	30.9 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 187° 187° 187° 187° 187° 187°			SHA 104° 104° 104° 104° 104° 104°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:31			Greenwich Culmination Time: 17:02			Greenwich Culmination Time: 18:58						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 45.5 +00.2	N 00	31.0 -01.0	171 38.0 -00.4	S 02	35.4 +01.2	273 26.3 -33.0	N 21	55.3 +03.4	00			
01	196 45.7 +00.2	N 00	30.0 -01.0	186 37.6 -00.3	S 02	36.6 +01.3	287 53.3 -33.1	N 21	58.7 +03.3	01			
02	211 45.9 +00.2	N 00	29.0 -01.0	201 37.3 -00.4	S 02	37.9 +01.3	302 20.2 -33.2	N 22	02.0 +03.1	02			
03	226 46.1 +00.2	N 00	28.0 -00.9	216 36.9 -00.4	S 02	39.2 +01.3	316 47.0 -33.3	N 22	05.1 +03.0	03			
04	241 46.3 +00.3	N 00	27.1 -01.0	231 36.5 -00.3	S 02	40.5 +01.2	331 13.7 -33.3	N 22	08.1 +02.9	04			
05	256 46.6 +00.2	N 00	26.1 -01.0	246 36.2 -00.4	S 02	41.7 +01.3	345 40.4 -33.4	N 22	11.0 +02.7	05			
06	271 46.8 +00.2	N 00	25.1 -00.9	261 35.8 -00.4	S 02	43.0 +01.3	0 07.0 -33.5	N 22	13.7 +02.7	06			
07	286 47.0 +00.2	N 00	24.2 -01.0	276 35.4 -00.4	S 02	44.3 +01.3	14 33.5 -33.5	N 22	16.4 +02.5	07			
08	301 47.2 +00.2	N 00	23.2 -01.0	291 35.0 -00.3	S 02	45.6 +01.2	28 60.0 -33.6	N 22	18.9 +02.3	08			
09	316 47.4 +00.3	N 00	22.2 -01.0	306 34.7 -00.4	S 02	46.8 +01.3	43 26.4 -33.7	N 22	21.2 +02.3	09			
10	331 47.7 +00.2	N 00	21.2 -00.9	321 34.3 -00.4	S 02	48.1 +01.3	57 52.7 -33.7	N 22	23.5 +02.1	10			
11	346 47.9 +00.2	N 00	20.3 -01.0	336 33.9 -00.4	S 02	49.4 +01.2	72 19.0 -33.8	N 22	25.6 +02.0	11			
12	1 48.1 +00.2	N 00	19.3 -01.0	351 33.5 -00.3	S 02	50.6 +01.3	86 45.2 -33.9	N 22	27.6 +01.8	12			
13	16 48.3 +00.3	N 00	18.3 -01.0	6 33.2 -00.4	S 02	51.9 +01.3	101 11.3 -33.9	N 22	29.4 +01.7	13			
14	31 48.6 +00.2	N 00	17.3 -00.9	21 32.8 -00.4	S 02	53.2 +01.3	115 37.4 -33.9	N 22	31.1 +01.6	14			
15	46 48.8 +00.2	N 00	16.4 -01.0	36 32.4 -00.3	S 02	54.5 +01.2	130 03.5 -34.1	N 22	32.7 +01.4	15			
16	61 49.0 +00.2	N 00	15.4 -01.0	51 32.1 -00.4	S 02	55.7 +01.3	144 29.4 -34.1	N 22	34.1 +01.3	16			
17	76 49.2 +00.2	N 00	14.4 -00.9	66 31.7 -00.4	S 02	57.0 +01.3	158 55.3 -34.1	N 22	35.4 +01.2	17			
18	91 49.4 +00.3	N 00	13.5 -01.0	81 31.3 -00.4	S 02	58.3 +01.3	173 21.2 -34.2	N 22	36.6 +01.0	18			
19	106 49.7 +00.2	N 00	12.5 -01.0	96 30.9 -00.3	S 02	59.6 +01.2	187 47.0 -34.3	N 22	37.6 +00.9	19			
20	121 49.9 +00.2	N 00	11.5 -01.0	111 30.6 -00.4	S 03	00.8 +01.3	202 12.7 -34.3	N 22	38.5 +00.8	20			
21	136 50.1 +00.2	N 00	10.5 -00.9	126 30.2 -00.4	S 03	02.1 +01.3	216 38.4 -34.3	N 22	39.3 +00.6	21			
22	151 50.3 +00.2	N 00	09.6 -01.0	141 29.8 -00.4	S 03	03.4 +01.2	231 04.1 -34.5	N 22	39.9 +00.5	22			
23	166 50.5 +00.3	N 00	08.6 -01.0	156 29.4 -00.3	S 03	04.6 +01.3	245 29.6 -34.4	N 22	40.4 +00.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'6 15'7 15'7 15'8 15'8 15'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 57'4 57'5 57'7 57'8 58'0 58'1						
	SHA 181° 181° 181° 181° 181° 180°			SHA 171° 171° 171° 170° 170° 170°			SHA 272° 269° 267° 264° 262° 260°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 12:33			Greenwich Culmination Time: 05:59						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	187 21.0 +01.0	N 04	02.3 -00.7	104 37.4 +02.2	S 22	31.3 +00.0	75 28.3 +02.5	S 22	30.9 +00.0	00			
01	202 22.0 +01.0	N 04	01.6 -00.6	119 39.6 +02.1	S 22	31.3 +00.1	90 30.8 +02.4	S 22	30.9 +00.0	01			
02	217 23.0 +01.0	N 04	01.0 -00.6	134 41.7 +02.2	S 22	31.4 +00.0	105 33.2 +02.5	S 22	30.9 +00.0	02			
03	232 24.0 +01.0	N 04	00.4 -00.7	149 43.9 +02.1	S 22	31.4 +00.0	120 35.7 +02.4	S 22	30.9 +00.0	03			
04	247 25.0 +01.0	N 03	59.7 -00.6	164 46.0 +02.2	S 22	31.4 +00.1	135 38.1 +02.4	S 22	30.9 +00.0	04			
05	262 26.0 +00.9	N 03	59.1 -00.7	179 48.2 +02.1	S 22	31.5 +00.0	150 40.5 +02.5	S 22	30.9 +00.0	05			
06	277 26.9 +01.0	N 03	58.4 -00.6	194 50.3 +02.2	S 22	31.5 +00.0	165 43.0 +02.4	S 22	30.9 +00.0	06			
07	292 27.9 +01.0	N 03	57.8 -00.7	209 52.5 +02.1	S 22	31.5 +00.1	180 45.4 +02.5	S 22	30.9 +00.0	07			
08	307 28.9 +01.0	N 03	57.1 -00.6	224 54.6 +02.2	S 22	31.6 +00.0	195 47.9 +02.4	S 22	30.9 +00.0	08			
09	322 29.9 +01.0	N 03	56.5 -00.6	239 56.8 +02.1	S 22	31.6 +00.0	210 50.3 +02.5	S 22	30.9 +00.0	09			
10	337 30.9 +01.0	N 03	55.9 -00.7	254 58.9 +02.2	S 22	31.6 +00.1	225 52.8 +02.4	S 22	30.9 +00.0	10			
11	352 31.9 +01.0	N 03	55.2 -00.6	270 01.1 +02.1	S 22	31.7 +00.0	240 55.2 +02.5	S 22	30.9 +00.0	11			
12	7 32.9 +01.0	N 03	54.6 -00.7	285 03.2 +02.2	S 22	31.7 +00.0	255 57.7 +02.4	S 22	30.9 +00.0	12			
13	22 33.9 +01.0	N 03	53.9 -00.6	300 05.4 +02.1	S 22	31.7 +00.1	271 00.1 +02.5	S 22	30.9 +00.0	13			
14	37 34.9 +01.0	N 03	53.3 -00.6	315 07.5 +02.2	S 22	31.8 +00.0	286 02.6 +02.4	S 22	30.9 +00.0	14			
15	52 35.9 +01.0	N 03	52.7 -00.7	330 09.7 +02.1	S 22	31.8 +00.0	301 05.0 +02.4	S 22	30.9 +00.0	15			
16	67 36.9 +01.0	N 03	52.0 -00.6	345 11.8 +02.1	S 22	31.8 +00.1	316 07.4 +02.5	S 22	30.9 +00.0	16			
17	82 37.9 +01.0	N 03	51.4 -00.7	0 13.9 +02.2	S 22	31.9 +00.0	331 09.9 +02.4	S 22	30.9 +00.0	17			
18	97 38.9 +01.0	N 03	50.7 -00.6	15 16.1 +02.1	S 22	31.9 +00.0	346 12.3 +02.5	S 22	30.9 +00.0	18			
19	112 39.9 +01.0	N 03	50.1 -00.7	30 18.2 +02.2	S 22	31.9 +00.1	1 14.8 +02.4	S 22	30.9 +00.0	19			
20	127 40.9 +00.9	N 03	49.4 -00.6	45 20.4 +02.1	S 22	32.0 +00.0	16 17.2 +02.5	S 22	30.9 +00.0	20			
21	142 41.8 +01.0	N 03	48.8 -00.6	60 22.5 +02.2	S 22	32.0 +00.1	31 19.7 +02.4	S 22	30.9 +00.0	21			
22	157 42.8 +01.0	N 03	48.2 -00.7	75 24.7 +02.1	S 22	32.1 +00.0	46 22.1 +02.5	S 22	30.9 +00.0	22			
23	172 43.8 +01.0	N 03	47.5 -00.6	90 26.8 +02.1	S 22	32.1 +00.0	61 24.6 +02.4	S 22	30.9 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 187° 187° 187° 186° 186° 186°			SHA 104° 104° 104° 104° 104° 104°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:29			Greenwich Culmination Time: 16:59			Greenwich Culmination Time: 18:55						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 50.8 +00.2	N 00	07.6 -01.0	171 29.1 -00.4	S 03	05.9 +01.3	259 55.2 -34.5	N 22	40.7 +00.2	00			
01	196 51.0 +00.2	N 00	06.6 -00.9	186 28.7 -00.4	S 03	07.2 +01.3	274 20.7 -34.6	N 22	40.9 +00.0	01			
02	211 51.2 +00.2	N 00	05.7 -01.0	201 28.3 -00.4	S 03	08.5 +01.2	288 46.1 -34.6	N 22	40.9 -00.1	02			
03	226 51.4 +00.2	N 00	04.7 -01.0	216 27.9 -00.3	S 03	09.7 +01.3	303 11.5 -34.7	N 22	40.8 -00.2	03			
04	241 51.6 +00.3	N 00	03.7 -00.9	231 27.6 -00.4	S 03	11.0 +01.3	317 36.8 -34.7	N 22	40.6 -00.4	04			
05	256 51.9 +00.2	N 00	02.8 -01.0	246 27.2 -00.4	S 03	12.3 +01.2	332 02.1 -34.7	N 22	40.2 -00.5	05			
06	271 52.1 +00.2	N 00	01.8 -01.0	261 26.8 -00.4	S 03	13.5 +01.3	346 27.4 -34.8	N 22	39.7 -00.7	06			
07	286 52.3 +00.2	N 00	00.8 -01.0	276 26.4 -00.3	S 03	14.8 +01.3	0 52.6 -34.9	N 22	39.0 -00.8	07			
08	301 52.5 +00.2	S 00	00.2 +00.9	291 26.1 -00.4	S 03	16.1 +01.2	15 17.7 -34.8	N 22	38.2 -00.9	08			
09	316 52.7 +00.3	S 00	01.1 +01.0	306 25.7 -00.4	S 03	17.3 +01.3	29 42.9 -34.9	N 22	37.3 -01.1	09			
10	331 53.0 +00.2	S 00	02.1 +01.0	321 25.3 -00.4	S 03	18.6 +01.3	44 08.0 -35.0	N 22	36.2 -01.3	10			
11	346 53.2 +00.2	S 00	03.1 +01.0	336 24.9 -00.3	S 03	19.9 +01.3	58 33.0 -35.0	N 22	34.9 -01.4	11			
12	1 53.4 +00.2	S 00	04.1 +00.9	351 24.6 -00.4	S 03	21.2 +01.2	72 58.0 -35.0	N 22	33.5 -01.5	12			
13	16 53.6 +00.2	S 00	05.0 +01.0	6 24.2 -00.4	S 03	22.4 +01.3	87 23.0 -35.0	N 22	32.0 -01.7	13			
14	31 53.8 +00.2	S 00	06.0 +01.0	21 23.8 -00.4	S 03	23.7 +01.3	101 48.0 -35.1	N 22	30.3 -01.8	14			
15	46 54.0 +00.3	S 00	07.0 +00.9	36 23.4 -00.3	S 03	25.0 +01.2	116 12.9 -35.1	N 22	28.5 -02.0	15			
16	61 54.3 +00.2	S 00	07.9 +01.0	51 23.1 -00.4	S 03	26.2 +01.3	130 37.8 -35.2	N 22	26.5 -02.1	16			
17	76 54.5 +00.2	S 00	08.9 +01.0	66 22.7 -00.4	S 03	27.5 +01.3	145 02.6 -35.2	N 22	24.4 -02.3	17			
18	91 54.7 +00.2	S 00	09.9 +01.0	81 22.3 -00.4	S 03	28.8 +01.2	159 27.4 -35.2	N 22	22.1 -02.4	18			
19	106 54.9 +00.2	S 00	10.9 +00.9	96 21.9 -00.3	S 03	30.0 +01.3	173 52.2 -35.2	N 22	19.7 -02.6	19			
20	121 55.1 +00.3	S 00	11.8 +01.0	111 21.6 -00.4	S 03	31.3 +01.3	188 17.0 -35.2	N 22	17.1 -02.7	20			
21	136 55.4 +00.2	S 00	12.8 +01.0	126 21.2 -00.4	S 03	32.6 +01.3	202 41.8 -35.3	N 22	14.4 -02.9	21			
22	151 55.6 +00.2	S 00	13.8 +01.0	141 20.8 -00.4	S 03	33.9 +01.2	217 06.5 -35.3	N 22	11.5 -03.0	22			
23	166 55.8 +00.2	S 00	14.8 +00.9	156 20.4 -00.4	S 03	35.1 +01.3	231 31.2 -35.3	N 22	08.5 -03.2	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15°9 15°9 15°9 15°9 15°9 15°9			SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 15°9 15°9 16°0 16°0 16°0 16°1						
	HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 58°3 58°4 58°5 58°7 58°8 59°0						
	SHA 180° 180° 180° 180° 180° 179°			SHA 170° 170° 169° 169° 169° 169°			SHA 257° 255° 252° 250° 247° 245°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 12:34			Greenwich Culmination Time: 06:56						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	187 44.8 +01.0	N 03	46.9 -00.7	105 28.9 +02.2	S 22	32.1 +00.1	76 27.0 +02.4	S 22	30.9 +00.0	00			
01	202 45.8 +01.0	N 03	46.2 -00.6	120 31.1 +02.1	S 22	32.2 +00.0	91 29.4 +02.5	S 22	30.9 +00.1	01			
02	217 46.8 +01.0	N 03	45.6 -00.7	135 33.2 +02.2	S 22	32.2 +00.0	106 31.9 +02.4	S 22	31.0 +00.0	02			
03	232 47.8 +01.0	N 03	44.9 -00.6	150 35.4 +02.1	S 22	32.2 +00.1	121 34.3 +02.5	S 22	31.0 +00.0	03			
04	247 48.8 +01.0	N 03	44.3 -00.6	165 37.5 +02.2	S 22	32.3 +00.0	136 36.8 +02.4	S 22	31.0 +00.0	04			
05	262 49.8 +01.0	N 03	43.7 -00.7	180 39.7 +02.1	S 22	32.3 +00.0	151 39.2 +02.5	S 22	31.0 +00.0	05			
06	277 50.8 +01.0	N 03	43.0 -00.6	195 41.8 +02.1	S 22	32.3 +00.1	166 41.7 +02.4	S 22	31.0 +00.0	06			
07	292 51.8 +01.0	N 03	42.4 -00.7	210 43.9 +02.2	S 22	32.4 +00.0	181 44.1 +02.4	S 22	31.0 +00.0	07			
08	307 52.8 +01.0	N 03	41.7 -00.6	225 46.1 +02.1	S 22	32.4 +00.0	196 46.5 +02.5	S 22	31.0 +00.0	08			
09	322 53.8 +01.0	N 03	41.1 -00.7	240 48.2 +02.2	S 22	32.4 +00.1	211 49.0 +02.4	S 22	31.0 +00.0	09			
10	337 54.8 +00.9	N 03	40.4 -00.6	255 50.4 +02.1	S 22	32.5 +00.0	226 51.4 +02.5	S 22	31.0 +00.0	10			
11	352 55.7 +01.0	N 03	39.8 -00.6	270 52.5 +02.1	S 22	32.5 +00.0	241 53.9 +02.4	S 22	31.0 +00.0	11			
12	7 56.7 +01.0	N 03	39.2 -00.7	285 54.6 +02.2	S 22	32.5 +00.1	256 56.3 +02.4	S 22	31.0 +00.0	12			
13	22 57.7 +01.0	N 03	38.5 -00.6	300 56.8 +02.1	S 22	32.6 +00.0	271 58.7 +02.5	S 22	31.0 +00.0	13			
14	37 58.7 +01.0	N 03	37.9 -00.7	315 58.9 +02.2	S 22	32.6 +00.0	287 01.2 +02.4	S 22	31.0 +00.0	14			
15	52 59.7 +01.0	N 03	37.2 -00.6	331 01.1 +02.1	S 22	32.6 +00.1	302 03.6 +02.5	S 22	31.0 +00.0	15			
16	68 00.7 +01.0	N 03	36.6 -00.7	346 03.2 +02.1	S 22	32.7 +00.0	317 06.1 +02.4	S 22	31.0 +00.0	16			
17	83 01.7 +01.0	N 03	35.9 -00.6	1 05.3 +02.2	S 22	32.7 +00.1	332 08.5 +02.4	S 22	31.0 +00.0	17			
18	98 02.7 +01.0	N 03	35.3 -00.6	16 07.5 +02.1	S 22	32.8 +00.0	347 10.9 +02.5	S 22	31.0 +00.0	18			
19	113 03.7 +01.0	N 03	34.7 -00.7	31 09.6 +02.2	S 22	32.8 +00.0	2 13.4 +02.4	S 22	31.0 +00.0	19			
20	128 04.7 +01.0	N 03	34.0 -00.6	46 11.8 +02.1	S 22	32.8 +00.1	17 15.8 +02.5	S 22	31.0 +00.0	20			
21	143 05.7 +01.0	N 03	33.4 -00.7	61 13.9 +02.1	S 22	32.9 +00.0	32 18.3 +02.4	S 22	31.0 +00.0	21			
22	158 06.7 +01.0	N 03	32.7 -00.6	76 16.0 +02.2	S 22	32.9 +00.0	47 20.7 +02.4	S 22	31.0 +00.0	22			
23	173 07.7 +01.0	N 03	32.1 -00.7	91 18.2 +02.1	S 22	32.9 +00.1	62 23.1 +02.5	S 22	31.0 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00°0 00°0 00°0 00°0 00°0 00°0			SD 00°3 00°3 00°3 00°3 00°3 00°3			SD 00°1 00°1 00°1 00°1 00°1 00°1						
	HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 00°0 00°0 00°0 00°0 00°0 00°0			HP 00°0 00°0 00°0 00°0 00°0 00°0						
	SHA 186° 186° 186° 186° 186° 186°			SHA 104° 104° 104° 104° 104° 104°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:28			Greenwich Culmination Time: 16:55			Greenwich Culmination Time: 18:51						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 56.0 +00.2	S	00 15.7 +01.0	171 20.0 -00.3	S	03 36.4 +01.3	245 55.9 -35.4	N	22 05.3 -03.3	00			
01	196 56.2 +00.3	S	00 16.7 +01.0	186 19.7 -00.4	S	03 37.7 +01.2	260 20.5 -35.3	N	22 02.0 -03.5	01			
02	211 56.5 +00.2	S	00 17.7 +01.0	201 19.3 -00.4	S	03 38.9 +01.3	274 45.2 -35.4	N	21 58.5 -03.6	02			
03	226 56.7 +00.2	S	00 18.7 +00.9	216 18.9 -00.4	S	03 40.2 +01.3	289 09.8 -35.4	N	21 54.9 -03.8	03			
04	241 56.9 +00.2	S	00 19.6 +01.0	231 18.5 -00.3	S	03 41.5 +01.2	303 34.4 -35.4	N	21 51.1 -03.9	04			
05	256 57.1 +00.2	S	00 20.6 +01.0	246 18.2 -00.4	S	03 42.7 +01.3	317 59.0 -35.4	N	21 47.2 -04.1	05			
06	271 57.3 +00.2	S	00 21.6 +00.9	261 17.8 -00.4	S	03 44.0 +01.3	332 23.6 -35.4	N	21 43.1 -04.2	06			
07	286 57.5 +00.3	S	00 22.5 +01.0	276 17.4 -00.4	S	03 45.3 +01.2	346 48.2 -35.5	N	21 38.9 -04.3	07			
08	301 57.8 +00.2	S	00 23.5 +01.0	291 17.0 -00.4	S	03 46.5 +01.3	1 12.7 -35.4	N	21 34.6 -04.5	08			
09	316 58.0 +00.2	S	00 24.5 +01.0	306 16.6 -00.3	S	03 47.8 +01.3	15 37.3 -35.4	N	21 30.1 -04.7	09			
10	331 58.2 +00.2	S	00 25.5 +00.9	321 16.3 -00.4	S	03 49.1 +01.2	30 01.9 -35.5	N	21 25.4 -04.8	10			
11	346 58.4 +00.2	S	00 26.4 +01.0	336 15.9 -00.4	S	03 50.3 +01.3	44 26.4 -35.5	N	21 20.6 -05.0	11			
12	1 58.6 +00.2	S	00 27.4 +01.0	351 15.5 -00.4	S	03 51.6 +01.3	58 50.9 -35.4	N	21 15.6 -05.1	12			
13	16 58.8 +00.3	S	00 28.4 +01.0	6 15.1 -00.4	S	03 52.9 +01.3	73 15.5 -35.5	N	21 10.5 -05.2	13			
14	31 59.1 +00.2	S	00 29.4 +00.9	21 14.7 -00.3	S	03 54.2 +01.2	87 40.0 -35.5	N	21 05.3 -05.4	14			
15	46 59.3 +00.2	S	00 30.3 +01.0	36 14.4 -00.4	S	03 55.4 +01.3	102 04.5 -35.4	N	20 59.9 -05.6	15			
16	61 59.5 +00.2	S	00 31.3 +01.0	51 14.0 -00.4	S	03 56.7 +01.3	116 29.1 -35.5	N	20 54.3 -05.7	16			
17	76 59.7 +00.2	S	00 32.3 +01.0	66 13.6 -00.4	S	03 58.0 +01.2	130 53.6 -35.4	N	20 48.6 -05.8	17			
18	91 59.9 +00.3	S	00 33.3 +00.9	81 13.2 -00.3	S	03 59.2 +01.3	145 18.2 -35.5	N	20 42.8 -06.0	18			
19	107 00.2 +00.2	S	00 34.2 +01.0	96 12.9 -00.4	S	04 00.5 +01.3	159 42.7 -35.4	N	20 36.8 -06.1	19			
20	122 00.4 +00.2	S	00 35.2 +01.0	111 12.5 -00.4	S	04 01.8 +01.2	174 07.3 -35.5	N	20 30.7 -06.3	20			
21	137 00.6 +00.2	S	00 36.2 +01.0	126 12.1 -00.4	S	04 03.0 +01.3	188 31.8 -35.4	N	20 24.4 -06.4	21			
22	152 00.8 +00.2	S	00 37.2 +00.9	141 11.7 -00.4	S	04 04.3 +01.3	202 56.4 -35.5	N	20 18.0 -06.6	22			
23	167 01.0 +00.2	S	00 38.1 +01.0	156 11.3 -00.3	S	04 05.6 +01.2	217 20.9 -35.4	N	20 11.4 -06.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'1 16'1 16'2 16'2 16'3 16'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'1 59'3 59'4 59'5 59'7 59'8						
	SHA 179° 179° 179° 179° 179° 179°			SHA 169° 169° 168° 168° 168° 168°			SHA 242° 240° 237° 235° 232° 229°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 12:34			Greenwich Culmination Time: 07:54						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	188 08.7 +01.0	N	03 31.4 -00.6	106 20.3 +02.1	S	22 33.0 +00.0	77 25.6 +02.4	S	22 31.0 +00.0	00			
01	203 09.7 +00.9	N	03 30.8 -00.6	121 22.4 +02.2	S	22 33.0 +00.0	92 28.0 +02.5	S	22 31.0 +00.0	01			
02	218 10.6 +01.0	N	03 30.2 -00.7	136 24.6 +02.1	S	22 33.0 +00.1	107 30.5 +02.4	S	22 31.0 +00.0	02			
03	233 11.6 +01.0	N	03 29.5 -00.6	151 26.7 +02.1	S	22 33.1 +00.0	122 32.9 +02.4	S	22 31.0 +00.0	03			
04	248 12.6 +01.0	N	03 28.9 -00.7	166 28.8 +02.2	S	22 33.1 +00.0	137 35.3 +02.5	S	22 31.0 +00.0	04			
05	263 13.6 +01.0	N	03 28.2 -00.6	181 31.0 +02.1	S	22 33.1 +00.1	152 37.8 +02.4	S	22 31.0 +00.0	05			
06	278 14.6 +01.0	N	03 27.6 -00.7	196 33.1 +02.2	S	22 33.2 +00.0	167 40.2 +02.4	S	22 31.0 +00.0	06			
07	293 15.6 +01.0	N	03 26.9 -00.6	211 35.3 +02.1	S	22 33.2 +00.0	182 42.6 +02.5	S	22 31.0 +00.0	07			
08	308 16.6 +01.0	N	03 26.3 -00.7	226 37.4 +02.1	S	22 33.2 +00.1	197 45.1 +02.4	S	22 31.0 +00.0	08			
09	323 17.6 +01.0	N	03 25.6 -00.6	241 39.5 +02.2	S	22 33.3 +00.0	212 47.5 +02.5	S	22 31.0 +00.0	09			
10	338 18.6 +01.0	N	03 25.0 -00.6	256 41.7 +02.1	S	22 33.3 +00.1	227 50.0 +02.4	S	22 31.0 +00.0	10			
11	353 19.6 +01.0	N	03 24.4 -00.7	271 43.8 +02.1	S	22 33.4 +00.0	242 52.4 +02.4	S	22 31.0 +00.0	11			
12	8 20.6 +01.0	N	03 23.7 -00.6	286 45.9 +02.2	S	22 33.4 +00.0	257 54.8 +02.5	S	22 31.0 +00.0	12			
13	23 21.6 +01.0	N	03 23.1 -00.7	301 48.1 +02.1	S	22 33.4 +00.1	272 57.3 +02.4	S	22 31.0 +00.0	13			
14	38 22.6 +01.0	N	03 22.4 -00.6	316 50.2 +02.1	S	22 33.5 +00.0	287 59.7 +02.4	S	22 31.0 +00.0	14			
15	53 23.6 +01.0	N	03 21.8 -00.7	331 52.3 +02.2	S	22 33.5 +00.0	303 02.1 +02.5	S	22 31.0 +00.0	15			
16	68 24.6 +00.9	N	03 21.1 -00.6	346 54.5 +02.1	S	22 33.5 +00.1	318 04.6 +02.4	S	22 31.0 +00.0	16			
17	83 25.5 +01.0	N	03 20.5 -00.6	1 56.6 +02.1	S	22 33.6 +00.0	333 07.0 +02.4	S	22 31.0 +00.0	17			
18	98 26.5 +01.0	N	03 19.9 -00.7	16 58.7 +02.2	S	22 33.6 +00.0	348 09.4 +02.5	S	22 31.0 +00.0	18			
19	113 27.5 +01.0	N	03 19.2 -00.6	32 00.9 +02.1	S	22 33.6 +00.1	3 11.9 +02.4	S	22 31.0 +00.0	19			
20	128 28.5 +01.0	N	03 18.6 -00.7	47 03.0 +02.1	S	22 33.7 +00.0	18 14.3 +02.5	S	22 31.0 +00.0	20			
21	143 29.5 +01.0	N	03 17.9 -00.6	62 05.1 +02.1	S	22 33.7 +00.0	33 16.8 +02.4	S	22 31.0 +00.0	21			
22	158 30.5 +01.0	N	03 17.3 -00.7	77 07.2 +02.2	S	22 33.7 +00.1	48 19.2 +02.4	S	22 31.0 +00.0	22			
23	173 31.5 +01.0	N	03 16.6 -00.6	92 09.4 +02.1	S	22 33.8 +00.0	63 21.6 +02.5	S	22 31.0 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 186° 185° 185° 185° 185° 185°			SHA 104° 104° 104° 104° 104° 104°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:26			Greenwich Culmination Time: 16:52			Greenwich Culmination Time: 18:47						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 01.2 +00.3	S 00	39.1 +01.0	171 11.0 -00.4	S 04	06.8 +01.3	231 45.5 -35.4	N 20	04.7 -06.8	00			
01	197 01.5 +00.2	S 00	40.1 +00.9	186 10.6 -00.4	S 04	08.1 +01.3	246 10.1 -35.4	N 19	57.9 -07.0	01			
02	212 01.7 +00.2	S 00	41.0 +01.0	201 10.2 -00.4	S 04	09.4 +01.2	260 34.7 -35.4	N 19	50.9 -07.1	02			
03	227 01.9 +00.2	S 00	42.0 +01.0	216 09.8 -00.4	S 04	10.6 +01.3	274 59.3 -35.3	N 19	43.8 -07.3	03			
04	242 02.1 +00.2	S 00	43.0 +01.0	231 09.4 -00.4	S 04	11.9 +01.3	289 24.0 -35.4	N 19	36.5 -07.4	04			
05	257 02.3 +00.2	S 00	44.0 +00.9	246 09.0 -00.3	S 04	13.2 +01.2	303 48.6 -35.3	N 19	29.1 -07.6	05			
06	272 02.5 +00.3	S 00	44.9 +01.0	261 08.7 -00.4	S 04	14.4 +01.3	318 13.3 -35.3	N 19	21.5 -07.7	06			
07	287 02.8 +00.2	S 00	45.9 +01.0	276 08.3 -00.4	S 04	15.7 +01.2	332 38.0 -35.3	N 19	13.8 -07.8	07			
08	302 03.0 +00.2	S 00	46.9 +01.0	291 07.9 -00.4	S 04	16.9 +01.3	347 02.7 -35.3	N 19	06.0 -08.0	08			
09	317 03.2 +00.2	S 00	47.9 +00.9	306 07.5 -00.4	S 04	18.2 +01.3	1 27.4 -35.3	N 18	58.0 -08.1	09			
10	332 03.4 +00.2	S 00	48.8 +01.0	321 07.1 -00.3	S 04	19.5 +01.2	15 52.1 -35.2	N 18	49.9 -08.2	10			
11	347 03.6 +00.2	S 00	49.8 +01.0	336 06.8 -00.4	S 04	20.7 +01.3	30 16.9 -35.2	N 18	41.7 -08.4	11			
12	2 03.8 +00.2	S 00	50.8 +01.0	351 06.4 -00.4	S 04	22.0 +01.3	44 41.7 -35.2	N 18	33.3 -08.5	12			
13	17 04.0 +00.3	S 00	51.8 +00.9	6 06.0 -00.4	S 04	23.3 +01.2	59 06.5 -35.2	N 18	24.8 -08.6	13			
14	32 04.3 +00.2	S 00	52.7 +01.0	21 05.6 -00.4	S 04	24.5 +01.3	73 31.3 -35.1	N 18	16.2 -08.8	14			
15	47 04.5 +00.2	S 00	53.7 +01.0	36 05.2 -00.4	S 04	25.8 +01.3	87 56.2 -35.2	N 18	07.4 -08.9	15			
16	62 04.7 +00.2	S 00	54.7 +01.0	51 04.8 -00.3	S 04	27.1 +01.2	102 21.0 -35.0	N 17	58.5 -09.0	16			
17	77 04.9 +00.2	S 00	55.7 +00.9	66 04.5 -00.4	S 04	28.3 +01.3	116 46.0 -35.1	N 17	49.5 -09.2	17			
18	92 05.1 +00.2	S 00	56.6 +01.0	81 04.1 -00.4	S 04	29.6 +01.3	131 10.9 -35.1	N 17	40.3 -09.2	18			
19	107 05.3 +00.3	S 00	57.6 +01.0	96 03.7 -00.4	S 04	30.9 +01.2	145 35.8 -35.0	N 17	31.1 -09.5	19			
20	122 05.6 +00.2	S 00	58.6 +00.9	111 03.3 -00.4	S 04	32.1 +01.3	160 00.8 -34.9	N 17	21.6 -09.5	20			
21	137 05.8 +00.2	S 00	59.5 +01.0	126 02.9 -00.4	S 04	33.4 +01.2	174 25.9 -35.0	N 17	12.1 -09.6	21			
22	152 06.0 +00.2	S 01	00.5 +01.0	141 02.5 -00.3	S 04	34.6 +01.3	188 50.9 -34.9	N 17	02.5 -09.8	22			
23	167 06.2 +00.2	S 01	01.5 +01.0	156 02.2 -00.4	S 04	35.9 +01.3	203 16.0 -34.9	N 16	52.7 -09.9	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'3 16'4 16'4 16'4 16'5 16'5						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'9 60'1 60'2 60'3 60'4 60'5						
	SHA 178° 178° 178° 178° 178° 178°			SHA 168° 167° 167° 167° 167° 167°			SHA 227° 224° 222° 219° 217° 214°						
	Greenwich Culmination Time: 11:51			Greenwich Culmination Time: 12:35			Greenwich Culmination Time: 08:53						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	188 32.5 +01.0	N 03	16.0 -00.7	107 11.5 +02.1	S 22	33.8 +00.0	78 24.1 +02.4	S 22	31.0 +00.0	00			
01	203 33.5 +01.0	N 03	15.3 -00.6	122 13.6 +02.2	S 22	33.8 +00.1	93 26.5 +02.4	S 22	31.0 +00.0	01			
02	218 34.5 +01.0	N 03	14.7 -00.6	137 15.8 +02.1	S 22	33.9 +00.0	108 28.9 +02.5	S 22	31.0 +00.0	02			
03	233 35.5 +01.0	N 03	14.1 -00.7	152 17.9 +02.1	S 22	33.9 +00.1	123 31.4 +02.4	S 22	31.0 +00.0	03			
04	248 36.5 +01.0	N 03	13.4 -00.6	167 20.0 +02.2	S 22	34.0 +00.0	138 33.8 +02.4	S 22	31.0 +00.0	04			
05	263 37.5 +01.0	N 03	12.8 -00.7	182 22.2 +02.1	S 22	34.0 +00.0	153 36.2 +02.5	S 22	31.0 +00.0	05			
06	278 38.5 +01.0	N 03	12.1 -00.6	197 24.3 +02.1	S 22	34.0 +00.1	168 38.7 +02.4	S 22	31.0 +00.0	06			
07	293 39.5 +00.9	N 03	11.5 -00.7	212 26.4 +02.1	S 22	34.1 +00.0	183 41.1 +02.4	S 22	31.0 +00.0	07			
08	308 40.4 +01.0	N 03	10.8 -00.6	227 28.5 +02.2	S 22	34.1 +00.0	198 43.5 +02.5	S 22	31.0 +00.0	08			
09	323 41.4 +01.0	N 03	10.2 -00.7	242 30.7 +02.1	S 22	34.1 +00.1	213 46.0 +02.4	S 22	31.0 +00.0	09			
10	338 42.4 +01.0	N 03	09.5 -00.6	257 32.8 +02.1	S 22	34.2 +00.0	228 48.4 +02.4	S 22	31.0 +00.0	10			
11	353 43.4 +01.0	N 03	08.9 -00.6	272 34.9 +02.1	S 22	34.2 +00.0	243 50.8 +02.5	S 22	31.0 +00.0	11			
12	8 44.4 +01.0	N 03	08.3 -00.7	287 37.0 +02.2	S 22	34.2 +00.1	258 53.3 +02.4	S 22	31.0 +00.0	12			
13	23 45.4 +01.0	N 03	07.6 -00.6	302 39.2 +02.1	S 22	34.3 +00.0	273 55.7 +02.4	S 22	31.0 +00.0	13			
14	38 46.4 +01.0	N 03	07.0 -00.7	317 41.3 +02.1	S 22	34.3 +00.0	288 58.1 +02.4	S 22	31.0 +00.0	14			
15	53 47.4 +01.0	N 03	06.3 -00.6	332 43.4 +02.2	S 22	34.3 +00.1	304 00.5 +02.5	S 22	31.0 +00.0	15			
16	68 48.4 +01.0	N 03	05.7 -00.7	347 45.6 +02.1	S 22	34.4 +00.0	319 03.0 +02.4	S 22	31.0 +00.0	16			
17	83 49.4 +01.0	N 03	05.0 -00.6	2 47.7 +02.1	S 22	34.4 +00.1	334 05.4 +02.4	S 22	31.0 +00.1	17			
18	98 50.4 +01.0	N 03	04.4 -00.7	17 49.8 +02.1	S 22	34.5 +00.0	349 07.8 +02.5	S 22	31.1 +00.0	18			
19	113 51.4 +01.0	N 03	03.7 -00.6	32 51.9 +02.2	S 22	34.5 +00.0	4 10.3 +02.4	S 22	31.1 +00.0	19			
20	128 52.4 +01.0	N 03	03.1 -00.7	47 54.1 +02.1	S 22	34.5 +00.1	19 12.7 +02.4	S 22	31.1 +00.0	20			
21	143 53.4 +01.0	N 03	02.4 -00.6	62 56.2 +02.1	S 22	34.6 +00.0	34 15.1 +02.5	S 22	31.1 +00.0	21			
22	158 54.4 +00.9	N 03	01.8 -00.6	77 58.3 +02.1	S 22	34.6 +00.0	49 17.6 +02.4	S 22	31.1 +00.0	22			
23	173 55.3 +01.0	N 03	01.2 -00.7	93 00.4 +02.2	S 22	34.6 +00.1	64 20.0 +02.4	S 22	31.1 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 185° 185° 185° 185° 185° 184°			SHA 104° 104° 104° 104° 104° 104°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:25			Greenwich Culmination Time: 16:48			Greenwich Culmination Time: 18:43						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 06.4 +00.2	S	01 02.5 +00.9	171 01.8 -00.4	S	04 37.2 +01.2	217 41.1 -34.9	N	16 42.8 -10.1	00			
01	197 06.6 +00.2	S	01 03.4 +01.0	186 01.4 -00.4	S	04 38.4 +01.3	232 06.2 -34.8	N	16 32.7 -10.1	01			
02	212 06.8 +00.3	S	01 04.4 +01.0	201 01.0 -00.4	S	04 39.7 +01.3	246 31.4 -34.8	N	16 22.6 -10.3	02			
03	227 07.1 +00.2	S	01 05.4 +01.0	216 00.6 -00.4	S	04 41.0 +01.2	260 56.6 -34.7	N	16 12.3 -10.4	03			
04	242 07.3 +00.2	S	01 06.4 +00.9	231 00.2 -00.4	S	04 42.2 +01.3	275 21.9 -34.8	N	16 01.9 -10.5	04			
05	257 07.5 +00.2	S	01 07.3 +01.0	245 59.8 -00.3	S	04 43.5 +01.2	289 47.1 -34.7	N	15 51.4 -10.6	05			
06	272 07.7 +00.2	S	01 08.3 +01.0	260 59.5 -00.4	S	04 44.7 +01.3	304 12.4 -34.6	N	15 40.8 -10.7	06			
07	287 07.9 +00.2	S	01 09.3 +01.0	275 59.1 -00.4	S	04 46.0 +01.3	318 37.8 -34.6	N	15 30.1 -10.9	07			
08	302 08.1 +00.2	S	01 10.3 +00.9	290 58.7 -00.4	S	04 47.3 +01.2	333 03.2 -34.6	N	15 19.2 -10.9	08			
09	317 08.3 +00.3	S	01 11.2 +01.0	305 58.3 -00.4	S	04 48.5 +01.3	347 28.6 -34.6	N	15 08.3 -11.1	09			
10	332 08.6 +00.2	S	01 12.2 +01.0	320 57.9 -00.4	S	04 49.8 +01.3	1 54.0 -34.5	N	14 57.2 -11.1	10			
11	347 08.8 +00.2	S	01 13.2 +01.0	335 57.5 -00.4	S	04 51.1 +01.2	16 19.5 -34.5	N	14 46.1 -11.3	11			
12	2 09.0 +00.2	S	01 14.2 +00.9	350 57.1 -00.3	S	04 52.3 +01.3	30 45.0 -34.4	N	14 34.8 -11.4	12			
13	17 09.2 +00.2	S	01 15.1 +01.0	5 56.8 -00.4	S	04 53.6 +01.2	45 10.6 -34.4	N	14 23.4 -11.5	13			
14	32 09.4 +00.2	S	01 16.1 +01.0	20 56.4 -00.4	S	04 54.8 +01.3	59 36.2 -34.4	N	14 11.9 -11.6	14			
15	47 09.6 +00.2	S	01 17.1 +00.9	35 56.0 -00.4	S	04 56.1 +01.3	74 01.8 -34.3	N	14 00.3 -11.6	15			
16	62 09.8 +00.3	S	01 18.0 +01.0	50 55.6 -00.4	S	04 57.4 +01.2	88 27.5 -34.3	N	13 48.7 -11.8	16			
17	77 10.1 +00.2	S	01 19.0 +01.0	65 55.2 -00.4	S	04 58.6 +01.3	102 53.2 -34.3	N	13 36.9 -11.9	17			
18	92 10.3 +00.2	S	01 20.0 +01.0	80 54.8 -00.4	S	04 59.9 +01.2	117 18.9 -34.2	N	13 25.0 -12.0	18			
19	107 10.5 +00.2	S	01 21.0 +00.9	95 54.4 -00.3	S	05 01.1 +01.3	131 44.7 -34.2	N	13 13.0 -12.1	19			
20	122 10.7 +00.2	S	01 21.9 +01.0	110 54.1 -00.4	S	05 02.4 +01.3	146 10.5 -34.1	N	13 00.9 -12.1	20			
21	137 10.9 +00.2	S	01 22.9 +01.0	125 53.7 -00.4	S	05 03.7 +01.2	160 36.4 -34.1	N	12 48.8 -12.3	21			
22	152 11.1 +00.2	S	01 23.9 +01.0	140 53.3 -00.4	S	05 04.9 +01.3	175 02.3 -34.1	N	12 36.5 -12.4	22			
23	167 11.3 +00.3	S	01 24.9 +00.9	155 52.9 -00.4	S	05 06.2 +01.2	189 28.2 -34.0	N	12 24.1 -12.4	23			
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					UT 02 06 10 14 18 22			
	SD 15'9 15'9 16'0 16'0 16'0 16'0				SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 16'5 16'5 16'6 16'6 16'6 16'6			
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 60'6 60'7 60'8 60'9 61'0 61'0			
	SHA 178° 177° 177° 177° 177° 177°				SHA 166° 166° 166° 166° 166° 165°					SHA 212° 209° 207° 205° 202° 200°			
	Greenwich Culmination Time: 11:51				Greenwich Culmination Time: 12:36					Greenwich Culmination Time: 09:52			
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	188 56.3 +01.0	N	03 00.5 -00.6	108 02.6 +02.1	S	22 34.7 +00.0	79 22.4 +02.5	S	22 31.1 +00.0	00			
01	203 57.3 +01.0	N	02 59.9 -00.7	123 04.7 +02.1	S	22 34.7 +00.0	94 24.9 +02.4	S	22 31.1 +00.0	01			
02	218 58.3 +01.0	N	02 59.2 -00.6	138 06.8 +02.1	S	22 34.7 +00.1	109 27.3 +02.4	S	22 31.1 +00.0	02			
03	233 59.3 +01.0	N	02 58.6 -00.7	153 08.9 +02.1	S	22 34.8 +00.0	124 29.7 +02.4	S	22 31.1 +00.0	03			
04	249 00.3 +01.0	N	02 57.9 -00.6	168 11.0 +02.2	S	22 34.8 +00.0	139 32.1 +02.5	S	22 31.1 +00.0	04			
05	264 01.3 +01.0	N	02 57.3 -00.7	183 13.2 +02.1	S	22 34.8 +00.1	154 34.6 +02.4	S	22 31.1 +00.0	05			
06	279 02.3 +01.0	N	02 56.6 -00.6	198 15.3 +02.1	S	22 34.9 +00.0	169 37.0 +02.4	S	22 31.1 +00.0	06			
07	294 03.3 +01.0	N	02 56.0 -00.7	213 17.4 +02.1	S	22 34.9 +00.1	184 39.4 +02.5	S	22 31.1 +00.0	07			
08	309 04.3 +01.0	N	02 55.3 -00.6	228 19.5 +02.2	S	22 35.0 +00.0	199 41.9 +02.4	S	22 31.1 +00.0	08			
09	324 05.3 +01.0	N	02 54.7 -00.6	243 21.7 +02.1	S	22 35.0 +00.0	214 44.3 +02.4	S	22 31.1 +00.0	09			
10	339 06.3 +01.0	N	02 54.1 -00.7	258 23.8 +02.1	S	22 35.0 +00.1	229 46.7 +02.4	S	22 31.1 +00.0	10			
11	354 07.3 +01.0	N	02 53.4 -00.6	273 25.9 +02.1	S	22 35.1 +00.0	244 49.1 +02.5	S	22 31.1 +00.0	11			
12	9 08.3 +01.0	N	02 52.8 -00.7	288 28.0 +02.1	S	22 35.1 +00.0	259 51.6 +02.4	S	22 31.1 +00.0	12			
13	24 09.3 +00.9	N	02 52.1 -00.6	303 30.1 +02.2	S	22 35.1 +00.1	274 54.0 +02.4	S	22 31.1 +00.0	13			
14	39 10.2 +01.0	N	02 51.5 -00.7	318 32.3 +02.1	S	22 35.2 +00.0	289 56.4 +02.5	S	22 31.1 +00.0	14			
15	54 11.2 +01.0	N	02 50.8 -00.6	333 34.4 +02.1	S	22 35.2 +00.0	304 58.9 +02.4	S	22 31.1 +00.0	15			
16	69 12.2 +01.0	N	02 50.2 -00.7	348 36.5 +02.1	S	22 35.2 +00.1	320 01.3 +02.4	S	22 31.1 +00.0	16			
17	84 13.2 +01.0	N	02 49.5 -00.6	3 38.6 +02.1	S	22 35.3 +00.0	335 03.7 +02.4	S	22 31.1 +00.0	17			
18	99 14.2 +01.0	N	02 48.9 -00.7	18 40.7 +02.2	S	22 35.3 +00.0	350 06.1 +02.5	S	22 31.1 +00.0	18			
19	114 15.2 +01.0	N	02 48.2 -00.6	33 42.9 +02.1	S	22 35.3 +00.1	5 08.6 +02.4	S	22 31.1 +00.0	19			
20	129 16.2 +01.0	N	02 47.6 -00.6	48 45.0 +02.1	S	22 35.4 +00.0	20 11.0 +02.4	S	22 31.1 +00.0	20			
21	144 17.2 +01.0	N	02 47.0 -00.7	63 47.1 +02.1	S	22 35.4 +00.1	35 13.4 +02.4	S	22 31.1 +00.0	21			
22	159 18.2 +01.0	N	02 46.3 -00.6	78 49.2 +02.1	S	22 35.5 +00.0	50 15.8 +02.5	S	22 31.1 +00.0	22			
23	174 19.2 +01.0	N	02 45.7 -00.7	93 51.3 +02.2	S	22 35.5 +00.0	65 18.3 +02.4	S	22 31.1 +00.0	23			
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					UT 02 06 10 14 18 22			
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3					SD 00'1 00'1 00'1 00'1 00'1 00'1			
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0			
	SHA 184° 184° 184° 184° 184° 184°				SHA 104° 103° 103° 103° 103° 103°					SHA 075° 075° 075° 075° 075° 075°			
	Greenwich Culmination Time: 11:23				Greenwich Culmination Time: 16:45					Greenwich Culmination Time: 18:39			

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182	11.6 +00.2	S 01 25.8	+01.0	170	52.5 -00.4	S 05 07.4	+01.3	203	54.2 -34.0	N 12 11.7	-12.5	00
01	197	11.8 +00.2	S 01 26.8	+01.0	185	52.1 -00.4	S 05 08.7	+01.3	218	20.2 -34.0	N 11 59.2	-12.6	01
02	212	12.0 +00.2	S 01 27.8	+01.0	200	51.7 -00.4	S 05 10.0	+01.2	232	46.2 -33.9	N 11 46.6	-12.7	02
03	227	12.2 +00.2	S 01 28.8	+00.9	215	51.3 -00.4	S 05 11.2	+01.3	247	12.3 -33.8	N 11 33.9	-12.8	03
04	242	12.4 +00.2	S 01 29.7	+01.0	230	50.9 -00.3	S 05 12.5	+01.2	261	38.5 -33.9	N 11 21.1	-12.9	04
05	257	12.6 +00.2	S 01 30.7	+01.0	245	50.6 -00.4	S 05 13.7	+01.3	276	04.6 -33.8	N 11 08.2	-12.9	05
06	272	12.8 +00.2	S 01 31.7	+01.0	260	50.2 -00.4	S 05 15.0	+01.3	290	30.8 -33.7	N 10 55.3	-13.0	06
07	287	13.0 +00.3	S 01 32.7	+00.9	275	49.8 -00.4	S 05 16.3	+01.2	304	57.1 -33.8	N 10 42.3	-13.1	07
08	302	13.3 +00.2	S 01 33.6	+01.0	290	49.4 -00.4	S 05 17.5	+01.3	319	23.3 -33.6	N 10 29.2	-13.2	08
09	317	13.5 +00.2	S 01 34.6	+01.0	305	49.0 -00.4	S 05 18.8	+01.2	333	49.7 -33.7	N 10 16.0	-13.2	09
10	332	13.7 +00.2	S 01 35.6	+00.9	320	48.6 -00.4	S 05 20.0	+01.3	348	16.0 -33.6	N 10 02.8	-13.3	10
11	347	13.9 +00.2	S 01 36.5	+01.0	335	48.2 -00.4	S 05 21.3	+01.2	2	42.4 -33.6	N 09 49.5	-13.4	11
12	2	14.1 +00.2	S 01 37.5	+01.0	350	47.8 -00.4	S 05 22.5	+01.3	17	08.8 -33.5	N 09 36.1	-13.4	12
13	17	14.3 +00.2	S 01 38.5	+01.0	5	47.4 -00.4	S 05 23.8	+01.3	31	35.3 -33.5	N 09 22.7	-13.5	13
14	32	14.5 +00.2	S 01 39.5	+00.9	20	47.0 -00.3	S 05 25.1	+01.2	46	01.8 -33.5	N 09 09.2	-13.6	14
15	47	14.7 +00.2	S 01 40.4	+01.0	35	46.7 -00.4	S 05 26.3	+01.3	60	28.3 -33.4	N 08 55.6	-13.6	15
16	62	14.9 +00.3	S 01 41.4	+01.0	50	46.3 -00.4	S 05 27.6	+01.2	74	54.9 -33.4	N 08 42.0	-13.7	16
17	77	15.2 +00.2	S 01 42.4	+01.0	65	45.9 -00.4	S 05 28.8	+01.3	89	21.5 -33.4	N 08 28.3	-13.7	17
18	92	15.4 +00.2	S 01 43.4	+00.9	80	45.5 -00.4	S 05 30.1	+01.2	103	48.1 -33.3	N 08 14.6	-13.8	18
19	107	15.6 +00.2	S 01 44.3	+01.0	95	45.1 -00.4	S 05 31.3	+01.3	118	14.8 -33.3	N 08 00.8	-13.9	19
20	122	15.8 +00.2	S 01 45.3	+01.0	110	44.7 -00.4	S 05 32.6	+01.2	132	41.5 -33.2	N 07 46.9	-13.9	20
21	137	16.0 +00.2	S 01 46.3	+01.0	125	44.3 -00.4	S 05 33.8	+01.3	147	08.3 -33.2	N 07 33.0	-13.9	21
22	152	16.2 +00.2	S 01 47.3	+00.9	140	43.9 -00.4	S 05 35.1	+01.3	161	35.1 -33.2	N 07 19.1	-14.0	22
23	167	16.4 +00.2	S 01 48.2	+01.0	155	43.5 -00.4	S 05 36.4	+01.2	176	01.9 -33.2	N 07 05.1	-14.1	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22		
	SD 16'0 16'0 16'0 16'0 16'0 16'0					SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 16'6 16'7 16'7 16'7 16'7 16'7		
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 61'1 61'1 61'2 61'2 61'2 61'2		
	SHA 177° 176° 176° 176° 176° 176°					SHA 165° 165° 165° 165° 165° 164°					SHA 197° 195° 192° 190° 188° 185°		
	Greenwich Culmination Time: 11:51					Greenwich Culmination Time: 12:36					Greenwich Culmination Time: 10:48		

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	189	20.2 +01.0	N 02 45.0	-00.6	108	53.5 +02.1	S 22 35.5	+00.1	80	20.7 +02.4	S 22 31.1	+00.0	00
01	204	21.2 +01.0	N 02 44.4	-00.7	123	55.6 +02.1	S 22 35.6	+00.0	95	23.1 +02.4	S 22 31.1	+00.0	01
02	219	22.2 +01.0	N 02 43.7	-00.6	138	57.7 +02.1	S 22 35.6	+00.0	110	25.5 +02.5	S 22 31.1	+00.0	02
03	234	23.2 +01.0	N 02 43.1	-00.7	153	59.8 +02.1	S 22 35.6	+00.1	125	28.0 +02.4	S 22 31.1	+00.0	03
04	249	24.2 +00.9	N 02 42.4	-00.6	169	01.9 +02.1	S 22 35.7	+00.0	140	30.4 +02.4	S 22 31.1	+00.0	04
05	264	25.1 +01.0	N 02 41.8	-00.7	184	04.0 +02.2	S 22 35.7	+00.0	155	32.8 +02.4	S 22 31.1	+00.0	05
06	279	26.1 +01.0	N 02 41.1	-00.6	199	06.2 +02.1	S 22 35.7	+00.1	170	35.2 +02.5	S 22 31.1	+00.0	06
07	294	27.1 +01.0	N 02 40.5	-00.7	214	08.3 +02.1	S 22 35.8	+00.0	185	37.7 +02.4	S 22 31.1	+00.0	07
08	309	28.1 +01.0	N 02 39.8	-00.6	229	10.4 +02.1	S 22 35.8	+00.0	200	40.1 +02.4	S 22 31.1	+00.0	08
09	324	29.1 +01.0	N 02 39.2	-00.6	244	12.5 +02.1	S 22 35.8	+00.1	215	42.5 +02.4	S 22 31.1	+00.0	09
10	339	30.1 +01.0	N 02 38.6	-00.7	259	14.6 +02.1	S 22 35.9	+00.0	230	44.9 +02.5	S 22 31.1	+00.0	10
11	354	31.1 +01.0	N 02 37.9	-00.6	274	16.7 +02.1	S 22 35.9	+00.1	245	47.4 +02.4	S 22 31.1	+00.0	11
12	9	32.1 +01.0	N 02 37.3	-00.7	289	18.8 +02.2	S 22 36.0	+00.0	260	49.8 +02.4	S 22 31.1	+00.0	12
13	24	33.1 +01.0	N 02 36.6	-00.6	304	21.0 +02.1	S 22 36.0	+00.0	275	52.2 +02.4	S 22 31.1	+00.0	13
14	39	34.1 +01.0	N 02 36.0	-00.7	319	23.1 +02.1	S 22 36.0	+00.1	290	54.6 +02.4	S 22 31.1	+00.0	14
15	54	35.1 +01.0	N 02 35.3	-00.6	334	25.2 +02.1	S 22 36.1	+00.0	305	57.0 +02.5	S 22 31.1	+00.0	15
16	69	36.1 +01.0	N 02 34.7	-00.7	349	27.3 +02.1	S 22 36.1	+00.0	320	59.5 +02.4	S 22 31.1	+00.0	16
17	84	37.1 +01.0	N 02 34.0	-00.6	4	29.4 +02.1	S 22 36.1	+00.1	336	01.9 +02.4	S 22 31.1	+00.0	17
18	99	38.1 +01.0	N 02 33.4	-00.7	19	31.5 +02.1	S 22 36.2	+00.0	351	04.3 +02.4	S 22 31.1	+00.0	18
19	114	39.1 +00.9	N 02 32.7	-00.6	34	33.6 +02.2	S 22 36.2	+00.0	6	06.7 +02.5	S 22 31.1	+00.0	19
20	129	40.0 +01.0	N 02 32.1	-00.7	49	35.8 +02.1	S 22 36.2	+00.1	21	09.2 +02.4	S 22 31.1	+00.0	20
21	144	41.0 +01.0	N 02 31.4	-00.6	64	37.9 +02.1	S 22 36.3	+00.0	36	11.6 +02.4	S 22 31.1	+00.0	21
22	159	42.0 +01.0	N 02 30.8	-00.7	79	40.0 +02.1	S 22 36.3	+00.1	51	14.0 +02.4	S 22 31.1	+00.0	22
23	174	43.0 +01.0	N 02 30.1	-00.6	94	42.1 +02.1	S 22 36.4	+00.0	66	16.4 +02.4	S 22 31.1	+00.0	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22		
	SD 00'0 00'0 00'0 00'0 00'0 00'0					SD 00'3 00'3 00'3 00'3 00'3 00'3					SD 00'1 00'1 00'1 00'1 00'1 00'1		
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0		
	SHA 184° 184° 184° 183° 183° 183°					SHA 103° 103° 103° 103° 103° 103°					SHA 075° 075° 075° 075° 075° 075°		
	Greenwich Culmination Time: 11:21					Greenwich Culmination Time: 16:42					Greenwich Culmination Time: 18:35		

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 16.6 +00.2	S 01	49.2 +01.0	170 43.1 -00.4	S 05	37.6 +01.3	190 28.7 -33.1	N 06	51.0 -14.1	00			
01	197 16.8 +00.3	S 01	50.2 +00.9	185 42.7 -00.4	S 05	38.9 +01.2	204 55.6 -33.1	N 06	36.9 -14.1	01			
02	212 17.1 +00.2	S 01	51.1 +01.0	200 42.3 -00.4	S 05	40.1 +01.3	219 22.5 -33.1	N 06	22.8 -14.2	02			
03	227 17.3 +00.2	S 01	52.1 +01.0	215 41.9 -00.4	S 05	41.4 +01.2	233 49.4 -33.0	N 06	08.6 -14.2	03			
04	242 17.5 +00.2	S 01	53.1 +01.0	230 41.5 -00.3	S 05	42.6 +01.3	248 16.4 -33.0	N 05	54.4 -14.3	04			
05	257 17.7 +00.2	S 01	54.1 +00.9	245 41.2 -00.4	S 05	43.9 +01.2	262 43.4 -32.9	N 05	40.1 -14.3	05			
06	272 17.9 +00.2	S 01	55.0 +01.0	260 40.8 -00.4	S 05	45.1 +01.3	277 10.5 -33.0	N 05	25.8 -14.3	06			
07	287 18.1 +00.2	S 01	56.0 +01.0	275 40.4 -00.4	S 05	46.4 +01.2	291 37.5 -32.9	N 05	11.5 -14.4	07			
08	302 18.3 +00.2	S 01	57.0 +01.0	290 40.0 -00.4	S 05	47.6 +01.3	306 04.6 -32.9	N 04	57.1 -14.4	08			
09	317 18.5 +00.2	S 01	58.0 +00.9	305 39.6 -00.4	S 05	48.9 +01.2	320 31.7 -32.8	N 04	42.7 -14.4	09			
10	332 18.7 +00.2	S 01	58.9 +01.0	320 39.2 -00.4	S 05	50.1 +01.3	334 58.9 -32.8	N 04	28.3 -14.4	10			
11	347 18.9 +00.3	S 01	59.9 +01.0	335 38.8 -00.4	S 05	51.4 +01.3	349 26.1 -32.8	N 04	13.9 -14.5	11			
12	2 19.2 +00.2	S 02	00.9 +00.9	350 38.4 -00.4	S 05	52.7 +01.2	3 53.3 -32.8	N 03	59.4 -14.5	12			
13	17 19.4 +00.2	S 02	01.8 +01.0	5 38.0 -00.4	S 05	53.9 +01.3	18 20.5 -32.7	N 03	44.9 -14.5	13			
14	32 19.6 +00.2	S 02	02.8 +01.0	20 37.6 -00.4	S 05	55.2 +01.2	32 47.8 -32.7	N 03	30.4 -14.6	14			
15	47 19.8 +00.2	S 02	03.8 +01.0	35 37.2 -00.4	S 05	56.4 +01.3	47 15.1 -32.7	N 03	15.8 -14.5	15			
16	62 20.0 +00.2	S 02	04.8 +00.9	50 36.8 -00.4	S 05	57.7 +01.2	61 42.4 -32.7	N 03	01.3 -14.6	16			
17	77 20.2 +00.2	S 02	05.7 +01.0	65 36.4 -00.4	S 05	58.9 +01.3	76 09.7 -32.6	N 02	46.7 -14.6	17			
18	92 20.4 +00.2	S 02	06.7 +01.0	80 36.0 -00.4	S 06	00.2 +01.2	90 37.1 -32.6	N 02	32.1 -14.6	18			
19	107 20.6 +00.2	S 02	07.7 +01.0	95 35.6 -00.4	S 06	01.4 +01.3	105 04.5 -32.6	N 02	17.5 -14.6	19			
20	122 20.8 +00.2	S 02	08.7 +00.9	110 35.2 -00.4	S 06	02.7 +01.2	119 31.9 -32.6	N 02	02.9 -14.6	20			
21	137 21.0 +00.2	S 02	09.6 +01.0	125 34.8 -00.4	S 06	03.9 +01.3	133 59.3 -32.5	N 01	48.3 -14.6	21			
22	152 21.2 +00.3	S 02	10.6 +01.0	140 34.4 -00.4	S 06	05.2 +01.2	148 26.8 -32.6	N 01	33.7 -14.6	22			
23	167 21.5 +00.2	S 02	11.6 +00.9	155 34.0 -00.4	S 06	06.4 +01.3	162 54.2 -32.5	N 01	19.1 -14.6	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'7 16'7 16'7 16'7 16'7 16'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 61'3 61'3 61'2 61'2 61'2 61'1						
	SHA 176° 176° 175° 175° 175° 175°			SHA 164° 164° 164° 164° 163° 163°			SHA 183° 180° 178° 176° 173° 171°						
	Greenwich Culmination Time: 11:50			Greenwich Culmination Time: 12:37			Greenwich Culmination Time: 11:43						
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	189 44.0 +01.0	N 02	29.5 -00.6	109 44.2 +02.1	S 22	36.4 +00.0	81 18.8 +02.5	S 22	31.1 +00.0	00			
01	204 45.0 +01.0	N 02	28.9 -00.7	124 46.3 +02.1	S 22	36.4 +00.1	96 21.3 +02.4	S 22	31.1 +00.0	01			
02	219 46.0 +01.0	N 02	28.2 -00.6	139 48.4 +02.1	S 22	36.5 +00.0	111 23.7 +02.4	S 22	31.1 +00.0	02			
03	234 47.0 +01.0	N 02	27.6 -00.7	154 50.5 +02.1	S 22	36.5 +00.0	126 26.1 +02.4	S 22	31.1 +00.0	03			
04	249 48.0 +01.0	N 02	26.9 -00.6	169 52.6 +02.2	S 22	36.5 +00.1	141 28.5 +02.4	S 22	31.1 +00.0	04			
05	264 49.0 +01.0	N 02	26.3 -00.7	184 54.8 +02.1	S 22	36.6 +00.0	156 30.9 +02.5	S 22	31.1 +00.0	05			
06	279 50.0 +01.0	N 02	25.6 -00.6	199 56.9 +02.1	S 22	36.6 +00.0	171 33.4 +02.4	S 22	31.1 +00.0	06			
07	294 51.0 +01.0	N 02	25.0 -00.7	214 59.0 +02.1	S 22	36.6 +00.1	186 35.8 +02.4	S 22	31.1 +00.0	07			
08	309 52.0 +01.0	N 02	24.3 -00.6	230 01.1 +02.1	S 22	36.7 +00.0	201 38.2 +02.4	S 22	31.1 +00.0	08			
09	324 53.0 +01.0	N 02	23.7 -00.7	245 03.2 +02.1	S 22	36.7 +00.0	216 40.6 +02.4	S 22	31.1 +00.0	09			
10	339 54.0 +01.0	N 02	23.0 -00.6	260 05.3 +02.1	S 22	36.7 +00.1	231 43.0 +02.5	S 22	31.1 +00.0	10			
11	354 55.0 +00.9	N 02	22.4 -00.7	275 07.4 +02.1	S 22	36.8 +00.0	246 45.5 +02.4	S 22	31.1 +00.0	11			
12	9 55.9 +01.0	N 02	21.7 -00.6	290 09.5 +02.1	S 22	36.8 +00.1	261 47.9 +02.4	S 22	31.1 +00.0	12			
13	24 56.9 +01.0	N 02	21.1 -00.7	305 11.6 +02.1	S 22	36.9 +00.0	276 50.3 +02.4	S 22	31.1 +00.0	13			
14	39 57.9 +01.0	N 02	20.4 -00.6	320 13.7 +02.1	S 22	36.9 +00.0	291 52.7 +02.4	S 22	31.1 +00.0	14			
15	54 58.9 +01.0	N 02	19.8 -00.6	335 15.8 +02.2	S 22	36.9 +00.1	306 55.1 +02.5	S 22	31.1 +00.0	15			
16	69 59.9 +01.0	N 02	19.2 -00.7	350 18.0 +02.1	S 22	37.0 +00.0	321 57.6 +02.4	S 22	31.1 +00.0	16			
17	85 00.9 +01.0	N 02	18.5 -00.6	5 20.1 +02.1	S 22	37.0 +00.0	336 60.0 +02.4	S 22	31.1 +00.0	17			
18	100 01.9 +01.0	N 02	17.9 -00.7	20 22.2 +02.1	S 22	37.0 +00.1	352 02.4 +02.4	S 22	31.1 +00.0	18			
19	115 02.9 +01.0	N 02	17.2 -00.6	35 24.3 +02.1	S 22	37.1 +00.0	7 04.8 +02.4	S 22	31.1 +00.0	19			
20	130 03.9 +01.0	N 02	16.6 -00.7	50 26.4 +02.1	S 22	37.1 +00.0	22 07.2 +02.4	S 22	31.1 +00.0	20			
21	145 04.9 +01.0	N 02	15.9 -00.6	65 28.5 +02.1	S 22	37.1 +00.1	37 09.6 +02.5	S 22	31.1 +00.0	21			
22	160 05.9 +01.0	N 02	15.3 -00.7	80 30.6 +02.1	S 22	37.2 +00.0	52 12.1 +02.4	S 22	31.1 +00.0	22			
23	175 06.9 +01.0	N 02	14.6 -00.6	95 32.7 +02.1	S 22	37.2 +00.1	67 14.5 +02.4	S 22	31.1 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 183° 183° 183° 183° 183° 183°			SHA 103° 103° 103° 103° 103° 103°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:20			Greenwich Culmination Time: 16:38			Greenwich Culmination Time: 18:31						

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	182 21.7 +00.2	S	02 12.5 +01.0	170 33.6 -00.4	S	06 07.7 +01.2	177 21.7 -32.5	N	01 04.5 -14.7	00										
01	197 21.9 +00.2	S	02 13.5 +01.0	185 33.2 -00.4	S	06 08.9 +01.3	191 49.2 -32.4	N	00 49.8 -14.6	01										
02	212 22.1 +00.2	S	02 14.5 +01.0	200 32.8 -00.4	S	06 10.2 +01.2	206 16.8 -32.5	N	00 35.2 -14.6	02										
03	227 22.3 +00.2	S	02 15.5 +00.9	215 32.4 -00.4	S	06 11.4 +01.3	220 44.3 -32.4	N	00 20.6 -14.6	03										
04	242 22.5 +00.2	S	02 16.4 +01.0	230 32.0 -00.4	S	06 12.7 +01.2	235 11.9 -32.4	N	00 06.0 -14.7	04										
05	257 22.7 +00.2	S	02 17.4 +01.0	245 31.6 -00.4	S	06 13.9 +01.3	249 39.5 -32.4	S	00 08.7 +14.6	05										
06	272 22.9 +00.2	S	02 18.4 +01.0	260 31.2 -00.4	S	06 15.2 +01.2	264 07.1 -32.4	S	00 23.3 +14.6	06										
07	287 23.1 +00.2	S	02 19.4 +00.9	275 30.8 -00.4	S	06 16.4 +01.3	278 34.7 -32.4	S	00 37.9 +14.6	07										
08	302 23.3 +00.2	S	02 20.3 +01.0	290 30.4 -00.4	S	06 17.7 +01.2	293 02.3 -32.3	S	00 52.5 +14.5	08										
09	317 23.5 +00.2	S	02 21.3 +01.0	305 30.0 -00.4	S	06 18.9 +01.3	307 30.0 -32.3	S	01 07.0 +14.6	09										
10	332 23.7 +00.2	S	02 22.3 +00.9	320 29.6 -00.4	S	06 20.2 +01.2	321 57.7 -32.4	S	01 21.6 +14.5	10										
11	347 23.9 +00.3	S	02 23.2 +01.0	335 29.2 -00.4	S	06 21.4 +01.3	336 25.3 -32.3	S	01 36.1 +14.5	11										
12	2 24.2 +00.2	S	02 24.2 +01.0	350 28.8 -00.4	S	06 22.7 +01.2	350 53.0 -32.3	S	01 50.6 +14.5	12										
13	17 24.4 +00.2	S	02 25.2 +01.0	5 28.4 -00.4	S	06 23.9 +01.2	5 20.7 -32.2	S	02 05.1 +14.5	13										
14	32 24.6 +00.2	S	02 26.2 +00.9	20 28.0 -00.4	S	06 25.1 +01.3	19 48.5 -32.3	S	02 19.6 +14.5	14										
15	47 24.8 +00.2	S	02 27.1 +01.0	35 27.6 -00.4	S	06 26.4 +01.2	34 16.2 -32.3	S	02 34.1 +14.4	15										
16	62 25.0 +00.2	S	02 28.1 +01.0	50 27.2 -00.4	S	06 27.6 +01.3	48 43.9 -32.2	S	02 48.5 +14.4	16										
17	77 25.2 +00.2	S	02 29.1 +00.9	65 26.8 -00.4	S	06 28.9 +01.2	63 11.7 -32.2	S	03 02.9 +14.4	17										
18	92 25.4 +00.2	S	02 30.0 +01.0	80 26.4 -00.4	S	06 30.1 +01.3	77 39.5 -32.3	S	03 17.3 +14.3	18										
19	107 25.6 +00.2	S	02 31.0 +01.0	95 26.0 -00.4	S	06 31.4 +01.2	92 07.2 -32.2	S	03 31.6 +14.4	19										
20	122 25.8 +00.2	S	02 32.0 +01.0	110 25.6 -00.4	S	06 32.6 +01.3	106 35.0 -32.2	S	03 46.0 +14.2	20										
21	137 26.0 +00.2	S	02 33.0 +00.9	125 25.2 -00.4	S	06 33.9 +01.2	121 02.8 -32.2	S	04 00.2 +14.3	21										
22	152 26.2 +00.2	S	02 33.9 +01.0	140 24.8 -00.4	S	06 35.1 +01.3	135 30.6 -32.2	S	04 14.5 +14.2	22										
23	167 26.4 +00.2	S	02 34.9 +01.0	155 24.4 -00.4	S	06 36.4 +01.2	149 58.4 -32.2	S	04 28.7 +14.2	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'0	16'0	16'0	16'0	16'0	16'0	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	16'6	16'6	16'6	16'6	16'6	16'5
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	61'1	61'0	61'0	60'9	60'8	60'7
SHA	175°	175°	175°	174°	174°	174°	SHA	163°	163°	163°	162°	162°	162°	SHA	169°	166°	164°	162°	159°	157°
Greenwich Culmination Time: 11:50							Greenwich Culmination Time: 12:38							Greenwich Culmination Time: 12:37						

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	190 07.9 +01.0	N	02 14.0 -00.7	110 34.8 +02.1	S	22 37.3 +00.0	82 16.9 +02.4	S	22 31.1 +00.0	00										
01	205 08.9 +01.0	N	02 13.3 -00.6	125 36.9 +02.1	S	22 37.3 +00.0	97 19.3 +02.4	S	22 31.1 +00.0	01										
02	220 09.9 +00.9	N	02 12.7 -00.7	140 39.0 +02.1	S	22 37.3 +00.1	112 21.7 +02.4	S	22 31.1 +00.0	02										
03	235 10.8 +01.0	N	02 12.0 -00.6	155 41.1 +02.1	S	22 37.4 +00.0	127 24.1 +02.5	S	22 31.1 +00.0	03										
04	250 11.8 +01.0	N	02 11.4 -00.7	170 43.2 +02.1	S	22 37.4 +00.0	142 26.6 +02.4	S	22 31.1 +00.0	04										
05	265 12.8 +01.0	N	02 10.7 -00.6	185 45.3 +02.1	S	22 37.4 +00.1	157 29.0 +02.4	S	22 31.1 +00.0	05										
06	280 13.8 +01.0	N	02 10.1 -00.7	200 47.4 +02.1	S	22 37.5 +00.0	172 31.4 +02.4	S	22 31.1 +00.0	06										
07	295 14.8 +01.0	N	02 09.4 -00.6	215 49.5 +02.1	S	22 37.5 +00.0	187 33.8 +02.4	S	22 31.1 +00.0	07										
08	310 15.8 +01.0	N	02 08.8 -00.7	230 51.6 +02.1	S	22 37.5 +00.1	202 36.2 +02.4	S	22 31.1 +00.0	08										
09	325 16.8 +01.0	N	02 08.1 -00.6	245 53.7 +02.1	S	22 37.6 +00.0	217 38.6 +02.5	S	22 31.1 +00.0	09										
10	340 17.8 +01.0	N	02 07.5 -00.7	260 55.8 +02.1	S	22 37.6 +00.1	232 41.1 +02.4	S	22 31.1 +00.0	10										
11	355 18.8 +01.0	N	02 06.8 -00.6	275 57.9 +02.2	S	22 37.7 +00.0	247 43.5 +02.4	S	22 31.1 +00.0	11										
12	10 19.8 +01.0	N	02 06.2 -00.6	291 00.1 +02.1	S	22 37.7 +00.0	262 45.9 +02.4	S	22 31.1 +00.0	12										
13	25 20.8 +01.0	N	02 05.6 -00.7	306 02.2 +02.1	S	22 37.7 +00.1	277 48.3 +02.4	S	22 31.1 +00.0	13										
14	40 21.8 +01.0	N	02 04.9 -00.6	321 04.3 +02.1	S	22 37.8 +00.0	292 50.7 +02.4	S	22 31.1 +00.0	14										
15	55 22.8 +01.0	N	02 04.3 -00.7	336 06.4 +02.1	S	22 37.8 +00.0	307 53.1 +02.4	S	22 31.1 +00.0	15										
16	70 23.8 +01.0	N	02 03.6 -00.6	351 08.5 +02.1	S	22 37.8 +00.1	322 55.5 +02.4	S	22 31.1 +00.0	16										
17	85 24.8 +00.9	N	02 03.0 -00.7	6 10.6 +02.1	S	22 37.9 +00.0	337 57.9 +02.5	S	22 31.1 +00.0	17										
18	100 25.7 +01.0	N	02 02.3 -00.6	21 12.7 +02.1	S	22 37.9 +00.0	353 00.4 +02.4	S	22 31.1 +00.0	18										
19	115 26.7 +01.0	N	02 01.7 -00.7	36 14.8 +02.1	S	22 37.9 +00.1	8 02.8 +02.4	S	22 31.1 +00.0	19										
20	130 27.7 +01.0	N	02 01.0 -00.6	51 16.9 +02.1	S	22 38.0 +00.0	23 05.2 +02.4	S	22 31.1 +00.0	20										
21	145 28.7 +01.0	N	02 00.4 -00.7	66 19.0 +02.1	S	22 38.0 +00.1	38 07.6 +02.4	S	22 31.1 +00.0	21										
22	160 29.7 +01.0	N	01 59.7 -00.6	81 21.1 +02.1	S	22 38.1 +00.0	53 10.0 +02.4	S	22 31.1 +00.0	22										
23	175 30.7 +01.0	N	01 59.1 -00.7	96 23.2 +02.1	S	22 38.1 +00.0	68 12.4 +02.4	S	22 31.1 +00.0	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'0	00'0	00'0	00'0	00'0	00'0	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	183°	183°	182°	182°	182°	182°	SHA	103°	103°	103°	103°	103°	103°	SHA	075°	075°	075°	075°	075°	075°
Greenwich Culmination Time: 11:18							Greenwich Culmination Time: 16:35							Greenwich Culmination Time: 18:27						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 26.6 +00.2	S	02 35.9 +00.9	170 24.0 -00.4	S	06 37.6 +01.2	164 26.2 -32.2	S	04 42.9 +14.1	00			
01	197 26.8 +00.2	S	02 36.8 +01.0	185 23.6 -00.4	S	06 38.8 +01.3	178 54.0 -32.2	S	04 57.0 +14.1	01			
02	212 27.0 +00.2	S	02 37.8 +01.0	200 23.2 -00.4	S	06 40.1 +01.2	193 21.8 -32.1	S	05 11.1 +14.0	02			
03	227 27.2 +00.3	S	02 38.8 +01.0	215 22.8 -00.4	S	06 41.3 +01.3	207 49.7 -32.2	S	05 25.1 +14.0	03			
04	242 27.5 +00.2	S	02 39.8 +00.9	230 22.4 -00.4	S	06 42.6 +01.2	222 17.5 -32.2	S	05 39.1 +14.0	04			
05	257 27.7 +00.2	S	02 40.7 +01.0	245 22.0 -00.4	S	06 43.8 +01.3	236 45.3 -32.1	S	05 53.1 +13.9	05			
06	272 27.9 +00.2	S	02 41.7 +01.0	260 21.6 -00.4	S	06 45.1 +01.2	251 13.2 -32.2	S	06 07.0 +13.8	06			
07	287 28.1 +00.2	S	02 42.7 +00.9	275 21.2 -00.4	S	06 46.3 +01.2	265 41.0 -32.2	S	06 20.8 +13.8	07			
08	302 28.3 +00.2	S	02 43.6 +01.0	290 20.8 -00.4	S	06 47.5 +01.3	280 08.8 -32.1	S	06 34.6 +13.8	08			
09	317 28.5 +00.2	S	02 44.6 +01.0	305 20.4 -00.4	S	06 48.8 +01.2	294 36.7 -32.2	S	06 48.4 +13.7	09			
10	332 28.7 +00.2	S	02 45.6 +01.0	320 20.0 -00.4	S	06 50.0 +01.3	309 04.5 -32.1	S	07 02.1 +13.6	10			
11	347 28.9 +00.2	S	02 46.6 +00.9	335 19.6 -00.4	S	06 51.3 +01.2	323 32.4 -32.2	S	07 15.7 +13.6	11			
12	2 29.1 +00.2	S	02 47.5 +01.0	350 19.2 -00.4	S	06 52.5 +01.3	338 00.2 -32.1	S	07 29.3 +13.6	12			
13	17 29.3 +00.2	S	02 48.5 +01.0	5 18.8 -00.5	S	06 53.8 +01.2	352 28.1 -32.2	S	07 42.9 +13.4	13			
14	32 29.5 +00.2	S	02 49.5 +00.9	20 18.3 -00.4	S	06 55.0 +01.2	6 55.9 -32.1	S	07 56.3 +13.4	14			
15	47 29.7 +00.2	S	02 50.4 +01.0	35 17.9 -00.4	S	06 56.2 +01.3	21 23.8 -32.2	S	08 09.7 +13.4	15			
16	62 29.9 +00.2	S	02 51.4 +01.0	50 17.5 -00.4	S	06 57.5 +01.2	35 51.6 -32.2	S	08 23.1 +13.2	16			
17	77 30.1 +00.2	S	02 52.4 +01.0	65 17.1 -00.4	S	06 58.7 +01.3	50 19.4 -32.1	S	08 36.3 +13.3	17			
18	92 30.3 +00.2	S	02 53.4 +00.9	80 16.7 -00.4	S	06 60.0 +01.2	64 47.3 -32.2	S	08 49.6 +13.1	18			
19	107 30.5 +00.2	S	02 54.3 +01.0	95 16.3 -00.4	S	07 01.2 +01.2	79 15.1 -32.1	S	09 02.7 +13.1	19			
20	122 30.7 +00.2	S	02 55.3 +01.0	110 15.9 -00.4	S	07 02.4 +01.3	93 43.0 -32.2	S	09 15.8 +13.0	20			
21	137 30.9 +00.2	S	02 56.3 +00.9	125 15.5 -00.4	S	07 03.7 +01.2	108 10.8 -32.2	S	09 28.8 +12.9	21			
22	152 31.1 +00.2	S	02 57.2 +01.0	140 15.1 -00.4	S	07 04.9 +01.3	122 38.6 -32.2	S	09 41.7 +12.9	22			
23	167 31.3 +00.2	S	02 58.2 +01.0	155 14.7 -00.4	S	07 06.2 +01.2	137 06.4 -32.2	S	09 54.6 +12.8	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'5 16'5 16'5 16'4 16'4 16'4						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 60'6 60'5 60'4 60'3 60'2 60'0						
	SHA 174° 174° 174° 173° 173° 173°			SHA 162° 162° 161° 161° 161° 161°			SHA 155° 153° 150° 148° 146° 143°						
	Greenwich Culmination Time: 11:50			Greenwich Culmination Time: 12:38			Greenwich Culmination Time: 13:31						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	190 31.7 +01.0	N	01 58.4 -00.6	111 25.3 +02.1	S	22 38.1 +00.1	83 14.8 +02.5	S	22 31.1 +00.0	00			
01	205 32.7 +01.0	N	01 57.8 -00.7	126 27.4 +02.1	S	22 38.2 +00.0	98 17.3 +02.4	S	22 31.1 +00.0	01			
02	220 33.7 +01.0	N	01 57.1 -00.6	141 29.5 +02.1	S	22 38.2 +00.0	113 19.7 +02.4	S	22 31.1 +00.0	02			
03	235 34.7 +01.0	N	01 56.5 -00.7	156 31.6 +02.1	S	22 38.2 +00.1	128 22.1 +02.4	S	22 31.1 +00.0	03			
04	250 35.7 +01.0	N	01 55.8 -00.6	171 33.7 +02.1	S	22 38.3 +00.0	143 24.5 +02.4	S	22 31.1 -00.1	04			
05	265 36.7 +01.0	N	01 55.2 -00.7	186 35.8 +02.1	S	22 38.3 +00.0	158 26.9 +02.4	S	22 31.0 +00.0	05			
06	280 37.7 +01.0	N	01 54.5 -00.6	201 37.9 +02.0	S	22 38.3 +00.1	173 29.3 +02.4	S	22 31.0 +00.0	06			
07	295 38.7 +00.9	N	01 53.9 -00.7	216 39.9 +02.1	S	22 38.4 +00.0	188 31.7 +02.4	S	22 31.0 +00.0	07			
08	310 39.6 +01.0	N	01 53.2 -00.6	231 42.0 +02.1	S	22 38.4 +00.0	203 34.1 +02.4	S	22 31.0 +00.0	08			
09	325 40.6 +01.0	N	01 52.6 -00.7	246 44.1 +02.1	S	22 38.4 +00.1	218 36.5 +02.5	S	22 31.0 +00.0	09			
10	340 41.6 +01.0	N	01 51.9 -00.6	261 46.2 +02.1	S	22 38.5 +00.0	233 39.0 +02.4	S	22 31.0 +00.0	10			
11	355 42.6 +01.0	N	01 51.3 -00.7	276 48.3 +02.1	S	22 38.5 +00.1	248 41.4 +02.4	S	22 31.0 +00.0	11			
12	10 43.6 +01.0	N	01 50.6 -00.6	291 50.4 +02.1	S	22 38.6 +00.0	263 43.8 +02.4	S	22 31.0 +00.0	12			
13	25 44.6 +01.0	N	01 50.0 -00.7	306 52.5 +02.1	S	22 38.6 +00.0	278 46.2 +02.4	S	22 31.0 +00.0	13			
14	40 45.6 +01.0	N	01 49.3 -00.6	321 54.6 +02.1	S	22 38.6 +00.1	293 48.6 +02.4	S	22 31.0 +00.0	14			
15	55 46.6 +01.0	N	01 48.7 -00.6	336 56.7 +02.1	S	22 38.7 +00.0	308 51.0 +02.4	S	22 31.0 +00.0	15			
16	70 47.6 +01.0	N	01 48.1 -00.7	351 58.8 +02.1	S	22 38.7 +00.0	323 53.4 +02.4	S	22 31.0 +00.0	16			
17	85 48.6 +01.0	N	01 47.4 -00.6	7 00.9 +02.1	S	22 38.7 +00.1	338 55.8 +02.4	S	22 31.0 +00.0	17			
18	100 49.6 +01.0	N	01 46.8 -00.7	22 03.0 +02.1	S	22 38.8 +00.0	353 58.2 +02.4	S	22 31.0 +00.0	18			
19	115 50.6 +01.0	N	01 46.1 -00.6	37 05.1 +02.1	S	22 38.8 +00.0	9 00.6 +02.4	S	22 31.0 +00.0	19			
20	130 51.6 +01.0	N	01 45.5 -00.7	52 07.2 +02.1	S	22 38.8 +00.1	24 03.0 +02.5	S	22 31.0 +00.0	20			
21	145 52.6 +01.0	N	01 44.8 -00.6	67 09.3 +02.1	S	22 38.9 +00.0	39 05.5 +02.4	S	22 31.0 +00.0	21			
22	160 53.6 +00.9	N	01 44.2 -00.7	82 11.4 +02.1	S	22 38.9 +00.1	54 07.9 +02.4	S	22 31.0 +00.0	22			
23	175 54.5 +01.0	N	01 43.5 -00.6	97 13.5 +02.1	S	22 39.0 +00.0	69 10.3 +02.4	S	22 31.0 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 182° 182° 182° 182° 182° 182°			SHA 103° 103° 103° 103° 103° 103°			SHA 075° 075° 075° 075° 075° 075°						
	Greenwich Culmination Time: 11:17			Greenwich Culmination Time: 16:32			Greenwich Culmination Time: 18:24						