

UT	Sun				Venus				Moon				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 03.5 -00.1	N 23 08.2 -00.2	135 28.4 +01.0	N 14 59.6 -00.8	36 02.3 -34.7	S 23 55.0 +08.8	00										
01	194 03.4 -00.1	N 23 08.0 -00.1	150 29.4 +01.0	N 14 58.8 -00.8	50 27.6 -34.8	S 24 03.8 +08.7	01										
02	209 03.3 -00.2	N 23 07.9 -00.2	165 30.4 +01.0	N 14 58.0 -00.8	64 52.8 -35.0	S 24 12.5 +08.6	02										
03	224 03.1 -00.1	N 23 07.7 -00.2	180 31.4 +01.0	N 14 57.2 -00.8	79 17.8 -35.1	S 24 21.1 +08.4	03										
04	239 03.0 -00.1	N 23 07.5 -00.1	195 32.4 +01.1	N 14 56.4 -00.8	93 42.7 -35.3	S 24 29.5 +08.3	04										
05	254 02.9 -00.1	N 23 07.4 -00.2	210 33.5 +01.0	N 14 55.6 -00.8	108 07.4 -35.4	S 24 37.8 +08.1	05										
06	269 02.8 -00.1	N 23 07.2 -00.1	225 34.5 +01.0	N 14 54.8 -00.8	122 32.0 -35.5	S 24 45.9 +08.0	06										
07	284 02.7 -00.2	N 23 07.1 -00.2	240 35.5 +01.0	N 14 54.0 -00.9	136 56.5 -35.6	S 24 53.9 +07.8	07										
08	299 02.5 -00.1	N 23 06.9 -00.2	255 36.5 +01.1	N 14 53.1 -00.8	151 20.9 -35.8	S 25 01.7 +07.7	08										
09	314 02.4 -00.1	N 23 06.7 -00.1	270 37.6 +01.0	N 14 52.3 -00.8	165 45.1 -35.9	S 25 09.4 +07.5	09										
10	329 02.3 -00.1	N 23 06.6 -00.2	285 38.6 +01.1	N 14 51.5 -00.8	180 09.2 -36.0	S 25 16.9 +07.4	10										
11	344 02.2 -00.1	N 23 06.4 -00.2	300 39.7 +01.0	N 14 50.7 -00.8	194 33.2 -36.2	S 25 24.3 +07.2	11										
12	359 02.1 -00.2	N 23 06.2 -00.1	315 40.7 +01.0	N 14 49.9 -00.8	208 57.0 -36.2	S 25 31.5 +07.0	12										
13	14 01.9 -00.1	N 23 06.1 -00.2	330 41.7 +01.1	N 14 49.1 -00.8	223 20.8 -36.4	S 25 38.5 +06.9	13										
14	29 01.8 -00.1	N 23 05.9 -00.2	345 42.8 +01.0	N 14 48.3 -00.9	237 44.4 -36.5	S 25 45.4 +06.7	14										
15	44 01.7 -00.1	N 23 05.7 -00.2	0 43.8 +01.1	N 14 47.4 -00.8	252 07.9 -36.7	S 25 52.1 +06.6	15										
16	59 01.6 -00.1	N 23 05.5 -00.1	15 44.9 +01.0	N 14 46.6 -00.8	266 31.2 -36.7	S 25 58.7 +06.4	16										
17	74 01.5 -00.2	N 23 05.4 -00.2	30 45.9 +01.1	N 14 45.8 -00.8	280 54.5 -36.9	S 26 05.1 +06.2	17										
18	89 01.3 -00.1	N 23 05.2 -00.2	45 47.0 +01.0	N 14 45.0 -00.8	295 17.6 -37.0	S 26 11.3 +06.0	18										
19	104 01.2 -00.1	N 23 05.0 -00.2	60 48.0 +01.1	N 14 44.2 -00.8	309 40.6 -37.1	S 26 17.3 +05.9	19										
20	119 01.1 -00.1	N 23 04.8 -00.1	75 49.1 +01.1	N 14 43.4 -00.8	324 03.5 -37.2	S 26 23.2 +05.7	20										
21	134 01.0 -00.1	N 23 04.7 -00.2	90 50.2 +01.0	N 14 42.6 -00.8	338 26.3 -37.3	S 26 28.9 +05.5	21										
22	149 00.9 -00.2	N 23 04.5 -00.2	105 51.2 +01.1	N 14 41.8 -00.9	352 49.0 -37.4	S 26 34.4 +05.3	22										
23	164 00.7 -00.1	N 23 04.3 -00.2	120 52.3 +01.1	N 14 40.9 -00.8	7 11.6 -37.5	S 26 39.7 +05.2	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 260° 260° 260° 260° 259° 259°	Greenwich Culmination Time: 12:03		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'3 00'3 00'3 00'3 00'3 00'3	SHA 217° 217° 216° 216° 216° 216°	Greenwich Culmination Time: 14:57		UT 02 06 10 14 18 22	SD 16'1 16'1 16'1 16'2 16'2 16'2	HP 58'9 59'1 59'2 59'4 59'5 59'6	SHA 116° 113° 111° 108° 106° 103°	Greenwich Culmination Time: 22:29
UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	131 48.7 +01.0	N 14 33.9 -00.5	241 31.9 +02.0	N 13 30.5 +00.2	299 23.6 +02.5	S 10 25.8 +00.1	00										
01	146 49.7 +01.0	N 14 33.4 -00.5	256 33.9 +02.1	N 13 30.7 +00.1	314 26.1 +02.5	S 10 25.9 +00.0	01										
02	161 50.7 +01.0	N 14 32.9 -00.6	271 36.0 +02.0	N 13 30.8 +00.1	329 28.6 +02.5	S 10 25.9 +00.0	02										
03	176 51.7 +01.0	N 14 32.3 -00.5	286 38.0 +02.1	N 13 30.9 +00.1	344 31.1 +02.5	S 10 25.9 +00.1	03										
04	191 52.7 +01.0	N 14 31.8 -00.5	301 40.1 +02.0	N 13 31.0 +00.2	359 33.6 +02.5	S 10 26.0 +00.0	04										
05	206 53.7 +01.0	N 14 31.3 -00.5	316 42.1 +02.0	N 13 31.2 +00.1	14 36.1 +02.5	S 10 26.0 +00.0	05										
06	221 54.7 +01.0	N 14 30.8 -00.6	331 44.1 +02.1	N 13 31.3 +00.1	29 38.6 +02.6	S 10 26.0 +00.0	06										
07	236 55.7 +01.0	N 14 30.2 -00.5	346 46.2 +02.0	N 13 31.4 +00.2	44 41.2 +02.5	S 10 26.0 +00.1	07										
08	251 56.7 +01.0	N 14 29.7 -00.5	1 48.2 +02.1	N 13 31.6 +00.1	59 43.7 +02.5	S 10 26.1 +00.0	08										
09	266 57.7 +01.1	N 14 29.2 -00.5	16 50.3 +02.0	N 13 31.7 +00.1	74 46.2 +02.5	S 10 26.1 +00.0	09										
10	281 58.8 +01.0	N 14 28.7 -00.6	31 52.3 +02.0	N 13 31.8 +00.2	89 48.7 +02.5	S 10 26.1 +00.1	10										
11	296 59.8 +01.0	N 14 28.1 -00.5	46 54.3 +02.1	N 13 32.0 +00.1	104 51.2 +02.5	S 10 26.2 +00.0	11										
12	312 00.8 +01.0	N 14 27.6 -00.5	61 56.4 +02.0	N 13 32.1 +00.1	119 53.7 +02.5	S 10 26.2 +00.0	12										
13	327 01.8 +01.0	N 14 27.1 -00.5	76 58.4 +02.1	N 13 32.2 +00.2	134 56.2 +02.5	S 10 26.2 +00.0	13										
14	342 02.8 +01.0	N 14 26.6 -00.6	92 00.5 +02.0	N 13 32.4 +00.1	149 58.7 +02.6	S 10 26.2 +00.1	14										
15	357 03.8 +01.0	N 14 26.0 -00.5	107 02.5 +02.1	N 13 32.5 +00.1	165 01.3 +02.5	S 10 26.3 +00.0	15										
16	12 04.8 +01.0	N 14 25.5 -00.5	122 04.6 +02.0	N 13 32.6 +00.2	180 03.8 +02.5	S 10 26.3 +00.0	16										
17	27 05.8 +01.0	N 14 25.0 -00.5	137 06.6 +02.0	N 13 32.8 +00.1	195 06.3 +02.5	S 10 26.3 +00.1	17										
18	42 06.8 +01.0	N 14 24.5 -00.6	152 08.6 +02.1	N 13 32.9 +00.1	210 08.8 +02.5	S 10 26.4 +00.0	18										
19	57 07.8 +01.0	N 14 23.9 -00.5	167 10.7 +02.0	N 13 33.0 +00.1	225 11.3 +02.5	S 10 26.4 +00.0	19										
20	72 08.8 +01.0	N 14 23.4 -00.5	182 12.7 +02.1	N 13 33.1 +00.2	240 13.8 +02.5	S 10 26.4 +00.1	20										
21	87 09.8 +01.1	N 14 22.9 -00.5	197 14.8 +02.0	N 13 33.3 +00.1	255 16.3 +02.6	S 10 26.5 +00.0	21										
22	102 10.9 +01.0	N 14 22.4 -00.6	212 16.8 +02.0	N 13 33.4 +00.1	270 18.9 +02.5	S 10 26.5 +00.0	22										
23	117 11.9 +01.0	N 14 21.8 -00.5	227 18.8 +02.1	N 13 33.5 +00.2	285 21.4 +02.5	S 10 26.5 +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 213° 213° 213° 213° 213° 212°	Greenwich Culmination Time: 15:11		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 323° 323° 323° 323° 323° 323°	Greenwich Culmination Time: 07:52		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 021° 021° 021° 021° 021° 021°	Greenwich Culmination Time: 04:01

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 00.6 -00.1	N 23 04.1 -00.1	135 53.4 +01.0	N 14 40.1 -00.8	21 34.1 -37.6	S 26 44.9 +04.9	00						
01	194 00.5 -00.1	N 23 04.0 -00.2	150 54.4 +01.1	N 14 39.3 -00.8	35 56.5 -37.8	S 26 49.8 +04.8	01						
02	209 00.4 -00.1	N 23 03.8 -00.2	165 55.5 +01.1	N 14 38.5 -00.8	50 18.7 -37.8	S 26 54.6 +04.6	02						
03	224 00.3 -00.1	N 23 03.6 -00.2	180 56.6 +01.0	N 14 37.7 -00.8	64 40.9 -37.9	S 26 59.2 +04.4	03						
04	239 00.2 -00.2	N 23 03.4 -00.1	195 57.6 +01.1	N 14 36.9 -00.8	79 03.0 -38.0	S 27 03.6 +04.3	04						
05	254 00.0 -00.1	N 23 03.3 -00.2	210 58.7 +01.1	N 14 36.1 -00.8	93 25.0 -38.1	S 27 07.9 +04.0	05						
06	268 59.9 -00.1	N 23 03.1 -00.2	225 59.8 +01.1	N 14 35.3 -00.8	107 46.9 -38.2	S 27 11.9 +03.8	06						
07	283 59.8 -00.1	N 23 02.9 -00.2	241 00.9 +01.1	N 14 34.5 -00.9	122 08.7 -38.3	S 27 15.7 +03.7	07						
08	298 59.7 -00.1	N 23 02.7 -00.2	256 02.0 +01.1	N 14 33.6 -00.8	136 30.4 -38.4	S 27 19.4 +03.4	08						
09	313 59.6 -00.2	N 23 02.5 -00.2	271 03.1 +01.1	N 14 32.8 -00.8	150 52.0 -38.4	S 27 22.8 +03.3	09						
10	328 59.4 -00.1	N 23 02.3 -00.1	286 04.2 +01.1	N 14 32.0 -00.8	165 13.6 -38.5	S 27 26.1 +03.1	10						
11	343 59.3 -00.1	N 23 02.2 -00.2	301 05.3 +01.1	N 14 31.2 -00.8	179 35.1 -38.6	S 27 29.2 +02.8	11						
12	358 59.2 -00.1	N 23 02.0 -00.2	316 06.4 +01.1	N 14 30.4 -00.8	193 56.5 -38.7	S 27 32.0 +02.7	12						
13	13 59.1 -00.1	N 23 01.8 -00.2	331 07.5 +01.1	N 14 29.6 -00.8	208 17.8 -38.8	S 27 34.7 +02.5	13						
14	28 59.0 -00.1	N 23 01.6 -00.2	346 08.6 +01.1	N 14 28.8 -00.8	222 39.0 -38.8	S 27 37.2 +02.2	14						
15	43 58.9 -00.2	N 23 01.4 -00.2	1 09.7 +01.1	N 14 28.0 -00.8	237 00.2 -38.8	S 27 39.4 +02.1	15						
16	58 58.7 -00.1	N 23 01.2 -00.2	16 10.8 +01.1	N 14 27.2 -00.9	251 21.4 -39.0	S 27 41.5 +01.9	16						
17	73 58.6 -00.1	N 23 01.0 -00.2	31 11.9 +01.1	N 14 26.3 -00.8	265 42.4 -39.0	S 27 43.4 +01.6	17						
18	88 58.5 -00.1	N 23 00.8 -00.1	46 13.0 +01.1	N 14 25.5 -00.8	280 03.4 -39.0	S 27 45.0 +01.5	18						
19	103 58.4 -00.1	N 23 00.7 -00.2	61 14.1 +01.1	N 14 24.7 -00.8	294 24.4 -39.1	S 27 46.5 +01.2	19						
20	118 58.3 -00.1	N 23 00.5 -00.2	76 15.2 +01.1	N 14 23.9 -00.8	308 45.3 -39.2	S 27 47.7 +01.0	20						
21	133 58.2 -00.2	N 23 00.3 -00.2	91 16.3 +01.1	N 14 23.1 -00.8	323 06.1 -39.2	S 27 48.7 +00.9	21						
22	148 58.0 -00.1	N 23 00.1 -00.2	106 17.4 +01.2	N 14 22.3 -00.8	337 26.9 -39.2	S 27 49.6 +00.6	22						
23	163 57.9 -00.1	N 22 59.9 -00.2	121 18.6 +01.1	N 14 21.5 -00.8	351 47.7 -39.3	S 27 50.2 +00.4	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 00'3 00'3 00'3 00'3 00'3 00'3		SD 16'3 16'3 16'3 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 59'7 59'9 60'0 60'1 60'2 60'3								
	SHA 259° 259° 259° 259° 258° 258°		SHA 216° 216° 216° 216° 216° 216°		SHA 100° 098° 095° 092° 090° 087°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 14:55		Greenwich Culmination Time: 23:34								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	132 12.9 +01.0	N 14 21.3 -00.5	242 20.9 +02.0	N 13 33.7 +00.1	300 23.9 +02.5	S 10 26.5 +00.1	00						
01	147 13.9 +01.0	N 14 20.8 -00.5	257 22.9 +02.1	N 13 33.8 +00.1	315 26.4 +02.5	S 10 26.6 +00.0	01						
02	162 14.9 +01.0	N 14 20.3 -00.6	272 25.0 +02.0	N 13 33.9 +00.2	330 28.9 +02.5	S 10 26.6 +00.0	02						
03	177 15.9 +01.0	N 14 19.7 -00.5	287 27.0 +02.1	N 13 34.1 +00.1	345 31.4 +02.6	S 10 26.6 +00.1	03						
04	192 16.9 +01.0	N 14 19.2 -00.5	302 29.1 +02.0	N 13 34.2 +00.1	0 34.0 +02.5	S 10 26.7 +00.0	04						
05	207 17.9 +01.0	N 14 18.7 -00.6	317 31.1 +02.1	N 13 34.3 +00.2	15 36.5 +02.5	S 10 26.7 +00.0	05						
06	222 18.9 +01.0	N 14 18.1 -00.5	332 33.2 +02.0	N 13 34.5 +00.1	30 39.0 +02.5	S 10 26.7 +00.1	06						
07	237 19.9 +01.0	N 14 17.6 -00.5	347 35.2 +02.0	N 13 34.6 +00.1	45 41.5 +02.5	S 10 26.8 +00.0	07						
08	252 20.9 +01.0	N 14 17.1 -00.5	2 37.2 +02.1	N 13 34.7 +00.1	60 44.0 +02.5	S 10 26.8 +00.0	08						
09	267 21.9 +01.1	N 14 16.6 -00.6	17 39.3 +02.0	N 13 34.8 +00.2	75 46.5 +02.5	S 10 26.8 +00.0	09						
10	282 23.0 +01.0	N 14 16.0 -00.5	32 41.3 +02.1	N 13 35.0 +00.1	90 49.0 +02.6	S 10 26.8 +00.1	10						
11	297 24.0 +01.0	N 14 15.5 -00.5	47 43.4 +02.0	N 13 35.1 +00.1	105 51.6 +02.5	S 10 26.9 +00.0	11						
12	312 25.0 +01.0	N 14 15.0 -00.6	62 45.4 +02.1	N 13 35.2 +00.2	120 54.1 +02.5	S 10 26.9 +00.0	12						
13	327 26.0 +01.0	N 14 14.4 -00.5	77 47.5 +02.0	N 13 35.4 +00.1	135 56.6 +02.5	S 10 26.9 +00.1	13						
14	342 27.0 +01.0	N 14 13.9 -00.5	92 49.5 +02.1	N 13 35.5 +00.1	150 59.1 +02.5	S 10 27.0 +00.0	14						
15	357 28.0 +01.0	N 14 13.4 -00.5	107 51.6 +02.0	N 13 35.6 +00.1	166 01.6 +02.6	S 10 27.0 +00.0	15						
16	12 29.0 +01.0	N 14 12.9 -00.6	122 53.6 +02.1	N 13 35.7 +00.2	181 04.2 +02.5	S 10 27.0 +00.1	16						
17	27 30.0 +01.0	N 14 12.3 -00.5	137 55.7 +02.0	N 13 35.9 +00.1	196 06.7 +02.5	S 10 27.1 +00.0	17						
18	42 31.0 +01.0	N 14 11.8 -00.5	152 57.7 +02.0	N 13 36.0 +00.1	211 09.2 +02.5	S 10 27.1 +00.0	18						
19	57 32.0 +01.0	N 14 11.3 -00.6	167 59.7 +02.1	N 13 36.1 +00.2	226 11.7 +02.5	S 10 27.1 +00.1	19						
20	72 33.0 +01.1	N 14 10.7 -00.5	183 01.8 +02.0	N 13 36.3 +00.1	241 14.2 +02.5	S 10 27.2 +00.0	20						
21	87 34.1 +01.0	N 14 10.2 -00.5	198 03.8 +02.1	N 13 36.4 +00.1	256 16.7 +02.6	S 10 27.2 +00.0	21						
22	102 35.1 +01.0	N 14 09.7 -00.6	213 05.9 +02.0	N 13 36.5 +00.2	271 19.3 +02.5	S 10 27.2 +00.0	22						
23	117 36.1 +01.0	N 14 09.1 -00.5	228 07.9 +02.1	N 13 36.7 +00.1	286 21.8 +02.5	S 10 27.2 +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 00'3 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 212° 212° 212° 212° 212° 212°		SHA 323° 323° 323° 322° 322° 322°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 15:10		Greenwich Culmination Time: 07:49		Greenwich Culmination Time: 03:57								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 57.8 -00.1	N 22 59.7 -00.2	136 19.7 +01.1	N 14 20.7 -00.8	6 08.4 -39.3	S 27 50.6 +00.2	00						
01	193 57.7 -00.1	N 22 59.5 -00.2	151 20.8 +01.2	N 14 19.9 -00.8	20 29.1 -39.3	S 27 50.8 +00.0	01						
02	208 57.6 -00.1	N 22 59.3 -00.2	166 22.0 +01.1	N 14 19.1 -00.8	34 49.8 -39.4	S 27 50.8 -00.2	02						
03	223 57.5 -00.1	N 22 59.1 -00.2	181 23.1 +01.1	N 14 18.3 -00.9	49 10.4 -39.4	S 27 50.6 -00.5	03						
04	238 57.4 -00.2	N 22 58.9 -00.2	196 24.2 +01.2	N 14 17.4 -00.8	63 31.0 -39.4	S 27 50.1 -00.6	04						
05	253 57.2 -00.1	N 22 58.7 -00.2	211 25.4 +01.1	N 14 16.6 -00.8	77 51.6 -39.4	S 27 49.5 -00.9	05						
06	268 57.1 -00.1	N 22 58.5 -00.2	226 26.5 +01.1	N 14 15.8 -00.8	92 12.2 -39.5	S 27 48.6 -01.0	06						
07	283 57.0 -00.1	N 22 58.3 -00.2	241 27.6 +01.2	N 14 15.0 -00.8	106 32.7 -39.4	S 27 47.6 -01.3	07						
08	298 56.9 -00.1	N 22 58.1 -00.2	256 28.8 +01.1	N 14 14.2 -00.8	120 53.3 -39.5	S 27 46.3 -01.5	08						
09	313 56.8 -00.1	N 22 57.9 -00.2	271 29.9 +01.2	N 14 13.4 -00.8	135 13.8 -39.5	S 27 44.8 -01.7	09						
10	328 56.7 -00.1	N 22 57.7 -00.2	286 31.1 +01.1	N 14 12.6 -00.8	149 34.3 -39.5	S 27 43.1 -01.9	10						
11	343 56.6 -00.2	N 22 57.5 -00.2	301 32.2 +01.2	N 14 11.8 -00.8	163 54.8 -39.4	S 27 41.2 -02.1	11						
12	358 56.4 -00.1	N 22 57.3 -00.2	316 33.4 +01.2	N 14 11.0 -00.8	178 15.4 -39.5	S 27 39.1 -02.4	12						
13	13 56.3 -00.1	N 22 57.1 -00.2	331 34.6 +01.1	N 14 10.2 -00.8	192 35.9 -39.5	S 27 36.7 -02.5	13						
14	28 56.2 -00.1	N 22 56.9 -00.2	346 35.7 +01.2	N 14 09.4 -00.8	206 56.4 -39.4	S 27 34.2 -02.8	14						
15	43 56.1 -00.1	N 22 56.7 -00.2	1 36.9 +01.1	N 14 08.6 -00.8	221 17.0 -39.4	S 27 31.4 -03.0	15						
16	58 56.0 -00.1	N 22 56.5 -00.2	16 38.0 +01.2	N 14 07.8 -00.8	235 37.6 -39.5	S 27 28.4 -03.1	16						
17	73 55.9 -00.1	N 22 56.3 -00.2	31 39.2 +01.2	N 14 07.0 -00.9	249 58.1 -39.4	S 27 25.3 -03.4	17						
18	88 55.8 -00.2	N 22 56.1 -00.2	46 40.4 +01.1	N 14 06.1 -00.8	264 18.7 -39.3	S 27 21.9 -03.6	18						
19	103 55.6 -00.1	N 22 55.9 -00.2	61 41.5 +01.2	N 14 05.3 -00.8	278 39.4 -39.4	S 27 18.3 -03.9	19						
20	118 55.5 -00.1	N 22 55.7 -00.2	76 42.7 +01.2	N 14 04.5 -00.8	293 00.0 -39.3	S 27 14.4 -04.0	20						
21	133 55.4 -00.1	N 22 55.5 -00.2	91 43.9 +01.2	N 14 03.7 -00.8	307 20.7 -39.2	S 27 10.4 -04.2	21						
22	148 55.3 -00.1	N 22 55.3 -00.2	106 45.1 +01.2	N 14 02.9 -00.8	321 41.5 -39.3	S 27 06.2 -04.4	22						
23	163 55.2 -00.1	N 22 55.1 -00.3	121 46.3 +01.1	N 14 02.1 -00.8	336 02.2 -39.2	S 27 01.8 -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 15'7 15'7		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 16'4 16'5 16'5 16'5 16'5 16'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 60'4 60'5 60'5 60'6 60'7 60'7								
	SHA 258° 258° 258° 258° 257° 257°		SHA 216° 215° 215° 215° 215° 215°		SHA 084° 081° 078° 076° 073° 070°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 14:53		Greenwich Culmination Time: -1:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	132 37.1 +01.0	N 14 08.6 -00.5	243 10.0 +02.0	N 13 36.8 +00.1	301 24.3 +02.5	S 10 27.3 +00.0	00						
01	147 38.1 +01.0	N 14 08.1 -00.5	258 12.0 +02.1	N 13 36.9 +00.1	316 26.8 +02.5	S 10 27.3 +00.0	01						
02	162 39.1 +01.0	N 14 07.6 -00.6	273 14.1 +02.0	N 13 37.0 +00.2	331 29.3 +02.6	S 10 27.3 +00.1	02						
03	177 40.1 +01.0	N 14 07.0 -00.5	288 16.1 +02.1	N 13 37.2 +00.1	346 31.9 +02.5	S 10 27.4 +00.0	03						
04	192 41.1 +01.0	N 14 06.5 -00.5	303 18.2 +02.0	N 13 37.3 +00.1	1 34.4 +02.5	S 10 27.4 +00.0	04						
05	207 42.1 +01.0	N 14 06.0 -00.6	318 20.2 +02.1	N 13 37.4 +00.2	16 36.9 +02.5	S 10 27.4 +00.1	05						
06	222 43.1 +01.0	N 14 05.4 -00.5	333 22.3 +02.0	N 13 37.6 +00.1	31 39.4 +02.5	S 10 27.5 +00.0	06						
07	237 44.1 +01.1	N 14 04.9 -00.5	348 24.3 +02.1	N 13 37.7 +00.1	46 41.9 +02.6	S 10 27.5 +00.0	07						
08	252 45.2 +01.0	N 14 04.4 -00.6	3 26.4 +02.0	N 13 37.8 +00.1	61 44.5 +02.5	S 10 27.5 +00.1	08						
09	267 46.2 +01.0	N 14 03.8 -00.5	18 28.4 +02.1	N 13 37.9 +00.2	76 47.0 +02.5	S 10 27.6 +00.0	09						
10	282 47.2 +01.0	N 14 03.3 -00.5	33 30.5 +02.0	N 13 38.1 +00.1	91 49.5 +02.5	S 10 27.6 +00.0	10						
11	297 48.2 +01.0	N 14 02.8 -00.6	48 32.5 +02.1	N 13 38.2 +00.1	106 52.0 +02.5	S 10 27.6 +00.1	11						
12	312 49.2 +01.0	N 14 02.2 -00.5	63 34.6 +02.0	N 13 38.3 +00.1	121 54.5 +02.6	S 10 27.7 +00.0	12						
13	327 50.2 +01.0	N 14 01.7 -00.5	78 36.6 +02.1	N 13 38.4 +00.2	136 57.1 +02.5	S 10 27.7 +00.0	13						
14	342 51.2 +01.0	N 14 01.2 -00.6	93 38.7 +02.0	N 13 38.6 +00.1	151 59.6 +02.5	S 10 27.7 +00.1	14						
15	357 52.2 +01.0	N 14 00.6 -00.5	108 40.7 +02.1	N 13 38.7 +00.1	167 02.1 +02.5	S 10 27.8 +00.0	15						
16	12 53.2 +01.0	N 14 00.1 -00.5	123 42.8 +02.0	N 13 38.8 +00.2	182 04.6 +02.5	S 10 27.8 +00.0	16						
17	27 54.2 +01.1	N 13 59.6 -00.6	138 44.8 +02.1	N 13 39.0 +00.1	197 07.1 +02.6	S 10 27.8 +00.0	17						
18	42 55.3 +01.0	N 13 59.0 -00.5	153 46.9 +02.0	N 13 39.1 +00.1	212 09.7 +02.5	S 10 27.8 +00.1	18						
19	57 56.3 +01.0	N 13 58.5 -00.5	168 48.9 +02.1	N 13 39.2 +00.1	227 12.2 +02.5	S 10 27.9 +00.0	19						
20	72 57.3 +01.0	N 13 58.0 -00.6	183 51.0 +02.0	N 13 39.3 +00.2	242 14.7 +02.5	S 10 27.9 +00.0	20						
21	87 58.3 +01.0	N 13 57.4 -00.5	198 53.0 +02.1	N 13 39.5 +00.1	257 17.2 +02.6	S 10 27.9 +00.1	21						
22	102 59.3 +01.0	N 13 56.9 -00.5	213 55.1 +02.0	N 13 39.6 +00.1	272 19.8 +02.5	S 10 28.0 +00.0	22						
23	118 00.3 +01.0	N 13 56.4 -00.6	228 57.1 +02.1	N 13 39.7 +00.1	287 22.3 +02.5	S 10 28.0 +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 00'2 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 212° 212° 212° 212° 211° 211°		SHA 322° 322° 322° 322° 322° 322°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 15:08		Greenwich Culmination Time: 07:46		Greenwich Culmination Time: 03:53								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 55.1 -00.1	N 22 54.8 -00.2	136 47.4 +01.2	N 14 01.3 -00.8	350 23.0 -39.1	S 26 57.1 -04.8	00						
01	193 55.0 -00.1	N 22 54.6 -00.2	151 48.6 +01.2	N 14 00.5 -00.8	4 43.9 -39.1	S 26 52.3 -05.1	01						
02	208 54.9 -00.2	N 22 54.4 -00.2	166 49.8 +01.2	N 13 59.7 -00.8	19 04.8 -39.1	S 26 47.2 -05.3	02						
03	223 54.7 -00.1	N 22 54.2 -00.2	181 51.0 +01.2	N 13 58.9 -00.8	33 25.7 -39.0	S 26 41.9 -05.4	03						
04	238 54.6 -00.1	N 22 54.0 -00.2	196 52.2 +01.2	N 13 58.1 -00.8	47 46.7 -38.9	S 26 36.5 -05.7	04						
05	253 54.5 -00.1	N 22 53.8 -00.2	211 53.4 +01.2	N 13 57.3 -00.8	62 07.8 -38.9	S 26 30.8 -05.8	05						
06	268 54.4 -00.1	N 22 53.6 -00.2	226 54.6 +01.2	N 13 56.5 -00.8	76 28.9 -38.8	S 26 25.0 -06.1	06						
07	283 54.3 -00.1	N 22 53.4 -00.3	241 55.8 +01.2	N 13 55.7 -00.8	90 50.1 -38.8	S 26 18.9 -06.3	07						
08	298 54.2 -00.1	N 22 53.1 -00.2	256 57.0 +01.2	N 13 54.9 -00.8	105 11.3 -38.7	S 26 12.6 -06.4	08						
09	313 54.1 -00.1	N 22 52.9 -00.2	271 58.2 +01.2	N 13 54.1 -00.8	119 32.6 -38.6	S 26 06.2 -06.7	09						
10	328 54.0 -00.1	N 22 52.7 -00.2	286 59.4 +01.2	N 13 53.3 -00.8	133 54.0 -38.6	S 25 59.5 -06.8	10						
11	343 53.9 -00.2	N 22 52.5 -00.2	302 00.6 +01.3	N 13 52.5 -00.8	148 15.4 -38.5	S 25 52.7 -07.1	11						
12	358 53.7 -00.1	N 22 52.3 -00.3	317 01.9 +01.2	N 13 51.7 -00.8	162 36.9 -38.4	S 25 45.6 -07.2	12						
13	13 53.6 -00.1	N 22 52.0 -00.2	332 03.1 +01.2	N 13 50.9 -00.8	176 58.5 -38.3	S 25 38.4 -07.5	13						
14	28 53.5 -00.1	N 22 51.8 -00.2	347 04.3 +01.2	N 13 50.1 -00.8	191 20.2 -38.2	S 25 30.9 -07.6	14						
15	43 53.4 -00.1	N 22 51.6 -00.2	2 05.5 +01.2	N 13 49.3 -00.8	205 42.0 -38.2	S 25 23.3 -07.8	15						
16	58 53.3 -00.1	N 22 51.4 -00.2	17 06.7 +01.3	N 13 48.5 -00.8	220 03.8 -38.1	S 25 15.5 -08.0	16						
17	73 53.2 -00.1	N 22 51.2 -00.3	32 08.0 +01.2	N 13 47.7 -00.8	234 25.7 -38.0	S 25 07.5 -08.1	17						
18	88 53.1 -00.1	N 22 50.9 -00.2	47 09.2 +01.2	N 13 46.9 -00.9	248 47.7 -37.9	S 24 59.4 -08.4	18						
19	103 53.0 -00.1	N 22 50.7 -00.2	62 10.4 +01.3	N 13 46.0 -00.8	263 09.8 -37.8	S 24 51.0 -08.5	19						
20	118 52.9 -00.2	N 22 50.5 -00.2	77 11.7 +01.2	N 13 45.2 -00.8	277 32.0 -37.7	S 24 42.5 -08.7	20						
21	133 52.7 -00.1	N 22 50.3 -00.3	92 12.9 +01.2	N 13 44.4 -00.8	291 54.3 -37.6	S 24 33.8 -08.9	21						
22	148 52.6 -00.1	N 22 50.0 -00.2	107 14.1 +01.3	N 13 43.6 -00.8	306 16.7 -37.5	S 24 24.9 -09.1	22						
23	163 52.5 -00.1	N 22 49.8 -00.2	122 15.4 +01.2	N 13 42.8 -00.8	320 39.2 -37.5	S 24 15.8 -09.3	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 00'3 00'3 00'3 00'3 00'3 00'3		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 00'3 00'3 00'3 00'3 00'3 00'3		HP 60'8 60'8 60'8 60'8 60'8 60'9								
	SHA 257° 257° 257° 257° 256° 256°		SHA 215° 215° 215° 215° 215° 215°		SHA 067° 064° 062° 059° 056° 054°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 14:51		Greenwich Culmination Time: 00:40								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	133 01.3 +01.0	N 13 55.8 -00.5	243 59.2 +02.0	N 13 39.8 +00.2	302 24.8 +02.5	S 10 28.0 +00.1	00						
01	148 02.3 +01.0	N 13 55.3 -00.5	259 01.2 +02.1	N 13 40.0 +00.1	317 27.3 +02.5	S 10 28.1 +00.0	01						
02	163 03.3 +01.0	N 13 54.8 -00.6	274 03.3 +02.0	N 13 40.1 +00.1	332 29.8 +02.6	S 10 28.1 +00.0	02						
03	178 04.3 +01.1	N 13 54.2 -00.5	289 05.3 +02.1	N 13 40.2 +00.2	347 32.4 +02.5	S 10 28.1 +00.1	03						
04	193 05.4 +01.0	N 13 53.7 -00.5	304 07.4 +02.0	N 13 40.4 +00.1	2 34.9 +02.5	S 10 28.2 +00.0	04						
05	208 06.4 +01.0	N 13 53.2 -00.6	319 09.4 +02.1	N 13 40.5 +00.1	17 37.4 +02.5	S 10 28.2 +00.0	05						
06	223 07.4 +01.0	N 13 52.6 -00.5	334 11.5 +02.0	N 13 40.6 +00.1	32 39.9 +02.6	S 10 28.2 +00.1	06						
07	238 08.4 +01.0	N 13 52.1 -00.5	349 13.5 +02.1	N 13 40.7 +00.2	47 42.5 +02.5	S 10 28.3 +00.0	07						
08	253 09.4 +01.0	N 13 51.6 -00.6	4 15.6 +02.0	N 13 40.9 +00.1	62 45.0 +02.5	S 10 28.3 +00.0	08						
09	268 10.4 +01.0	N 13 51.0 -00.5	19 17.6 +02.1	N 13 41.0 +00.1	77 47.5 +02.5	S 10 28.3 +00.1	09						
10	283 11.4 +01.0	N 13 50.5 -00.5	34 19.7 +02.0	N 13 41.1 +00.1	92 50.0 +02.6	S 10 28.4 +00.0	10						
11	298 12.4 +01.0	N 13 50.0 -00.6	49 21.7 +02.1	N 13 41.2 +00.2	107 52.6 +02.5	S 10 28.4 +00.0	11						
12	313 13.4 +01.1	N 13 49.4 -00.5	64 23.8 +02.1	N 13 41.4 +00.1	122 55.1 +02.5	S 10 28.4 +00.1	12						
13	328 14.5 +01.0	N 13 48.9 -00.5	79 25.9 +02.0	N 13 41.5 +00.1	137 57.6 +02.5	S 10 28.5 +00.0	13						
14	343 15.5 +01.0	N 13 48.4 -00.6	94 27.9 +02.1	N 13 41.6 +00.1	153 00.1 +02.6	S 10 28.5 +00.0	14						
15	358 16.5 +01.0	N 13 47.8 -00.5	109 30.0 +02.0	N 13 41.7 +00.2	168 02.7 +02.5	S 10 28.5 +00.1	15						
16	13 17.5 +01.0	N 13 47.3 -00.6	124 32.0 +02.1	N 13 41.9 +00.1	183 05.2 +02.5	S 10 28.6 +00.0	16						
17	28 18.5 +01.0	N 13 46.7 -00.5	139 34.1 +02.0	N 13 42.0 +00.1	198 07.7 +02.5	S 10 28.6 +00.0	17						
18	43 19.5 +01.0	N 13 46.2 -00.5	154 36.1 +02.1	N 13 42.1 +00.1	213 10.2 +02.6	S 10 28.6 +00.1	18						
19	58 20.5 +01.0	N 13 45.7 -00.6	169 38.2 +02.0	N 13 42.2 +00.2	228 12.8 +02.5	S 10 28.7 +00.0	19						
20	73 21.5 +01.0	N 13 45.1 -00.5	184 40.2 +02.1	N 13 42.4 +00.1	243 15.3 +02.5	S 10 28.7 +00.0	20						
21	88 22.5 +01.1	N 13 44.6 -00.5	199 42.3 +02.0	N 13 42.5 +00.1	258 17.8 +02.5	S 10 28.7 +00.1	21						
22	103 23.6 +01.0	N 13 44.1 -00.6	214 44.3 +02.1	N 13 42.6 +00.1	273 20.3 +02.6	S 10 28.8 +00.0	22						
23	118 24.6 +01.0	N 13 43.5 -00.5	229 46.4 +02.1	N 13 42.7 +00.2	288 22.9 +02.5	S 10 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								
	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° 211° 211° 211° 211°		SHA 322° 322° 322° 322° 322° 322°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 15:06		Greenwich Culmination Time: 07:42		Greenwich Culmination Time: 03:49								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 52.4 -00.1	N 22 49.6 -00.2	137 16.6 +01.3	N 13 42.0 -00.8	335 01.7 -37.3	S 24 06.5 -09.4	00						
01	193 52.3 -00.1	N 22 49.4 -00.3	152 17.9 +01.2	N 13 41.2 -00.8	349 24.4 -37.2	S 23 57.1 -09.6	01						
02	208 52.2 -00.1	N 22 49.1 -00.2	167 19.1 +01.3	N 13 40.4 -00.8	3 47.2 -37.2	S 23 47.5 -09.7	02						
03	223 52.1 -00.1	N 22 48.9 -00.2	182 20.4 +01.2	N 13 39.6 -00.8	18 10.0 -37.0	S 23 37.8 -09.9	03						
04	238 52.0 -00.1	N 22 48.7 -00.3	197 21.6 +01.3	N 13 38.8 -00.8	32 33.0 -36.9	S 23 27.9 -10.1	04						
05	253 51.9 -00.1	N 22 48.4 -00.2	212 22.9 +01.3	N 13 38.0 -00.8	46 56.1 -36.8	S 23 17.8 -10.3	05						
06	268 51.8 -00.1	N 22 48.2 -00.2	227 24.2 +01.2	N 13 37.2 -00.8	61 19.3 -36.7	S 23 07.5 -10.4	06						
07	283 51.7 -00.1	N 22 48.0 -00.2	242 25.4 +01.3	N 13 36.4 -00.7	75 42.6 -36.6	S 22 57.1 -10.5	07						
08	298 51.6 -00.2	N 22 47.8 -00.3	257 26.7 +01.3	N 13 35.7 -00.8	90 06.0 -36.5	S 22 46.6 -10.7	08						
09	313 51.4 -00.1	N 22 47.5 -00.2	272 28.0 +01.2	N 13 34.9 -00.8	104 29.5 -36.3	S 22 35.9 -10.9	09						
10	328 51.3 -00.1	N 22 47.3 -00.2	287 29.2 +01.3	N 13 34.1 -00.8	118 53.2 -36.3	S 22 25.0 -11.0	10						
11	343 51.2 -00.1	N 22 47.1 -00.3	302 30.5 +01.3	N 13 33.3 -00.8	133 16.9 -36.1	S 22 14.0 -11.2	11						
12	358 51.1 -00.1	N 22 46.8 -00.2	317 31.8 +01.2	N 13 32.5 -00.8	147 40.8 -36.1	S 22 02.8 -11.3	12						
13	13 51.0 -00.1	N 22 46.6 -00.3	332 33.0 +01.3	N 13 31.7 -00.8	162 04.7 -35.9	S 21 51.5 -11.5	13						
14	28 50.9 -00.1	N 22 46.3 -00.2	347 34.3 +01.3	N 13 30.9 -00.8	176 28.8 -35.8	S 21 40.0 -11.6	14						
15	43 50.8 -00.1	N 22 46.1 -00.2	2 35.6 +01.3	N 13 30.1 -00.8	190 53.0 -35.7	S 21 28.4 -11.8	15						
16	58 50.7 -00.1	N 22 45.9 -00.3	17 36.9 +01.3	N 13 29.3 -00.8	205 17.3 -35.6	S 21 16.6 -11.9	16						
17	73 50.6 -00.1	N 22 45.6 -00.2	32 38.2 +01.3	N 13 28.5 -00.8	219 41.7 -35.5	S 21 04.7 -12.0	17						
18	88 50.5 -00.1	N 22 45.4 -00.2	47 39.5 +01.3	N 13 27.7 -00.8	234 06.2 -35.3	S 20 52.7 -12.2	18						
19	103 50.4 -00.1	N 22 45.2 -00.3	62 40.8 +01.3	N 13 26.9 -00.8	248 30.9 -35.2	S 20 40.5 -12.3	19						
20	118 50.3 -00.1	N 22 44.9 -00.2	77 42.1 +01.3	N 13 26.1 -00.8	262 55.7 -35.1	S 20 28.2 -12.4	20						
21	133 50.2 -00.1	N 22 44.7 -00.3	92 43.4 +01.3	N 13 25.3 -00.8	277 20.6 -35.0	S 20 15.8 -12.5	21						
22	148 50.1 -00.2	N 22 44.4 -00.2	107 44.7 +01.3	N 13 24.5 -00.8	291 45.6 -34.9	S 20 03.3 -12.7	22						
23	163 49.9 -00.1	N 22 44.2 -00.3	122 46.0 +01.3	N 13 23.7 -00.8	306 10.7 -34.8	S 19 50.6 -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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'3 00'3 00'3 00'3 00'3 00'3		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 00'3 00'3 00'3 00'3 00'3 00'3		HP 60'9 60'8 60'8 60'8 60'8 60'7								
	SHA 256° 256° 256° 256° 255° 255°		SHA 215° 214° 214° 214° 214° 214°		SHA 051° 048° 046° 043° 041° 038°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 14:49		Greenwich Culmination Time: 01:44								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	133 25.6 +01.0	N 13 43.0 -00.6	244 48.5 +02.0	N 13 42.9 +00.1	303 25.4 +02.5	S 10 28.8 +00.1	00						
01	148 26.6 +01.0	N 13 42.4 -00.5	259 50.5 +02.1	N 13 43.0 +00.1	318 27.9 +02.5	S 10 28.9 +00.0	01						
02	163 27.6 +01.0	N 13 41.9 -00.5	274 52.6 +02.0	N 13 43.1 +00.1	333 30.4 +02.6	S 10 28.9 +00.0	02						
03	178 28.6 +01.0	N 13 41.4 -00.6	289 54.6 +02.1	N 13 43.2 +00.2	348 33.0 +02.5	S 10 28.9 +00.1	03						
04	193 29.6 +01.0	N 13 40.8 -00.5	304 56.7 +02.0	N 13 43.4 +00.1	3 35.5 +02.5	S 10 29.0 +00.0	04						
05	208 30.6 +01.0	N 13 40.3 -00.5	319 58.7 +02.1	N 13 43.5 +00.1	18 38.0 +02.5	S 10 29.0 +00.0	05						
06	223 31.6 +01.1	N 13 39.8 -00.6	335 00.8 +02.1	N 13 43.6 +00.1	33 40.5 +02.6	S 10 29.0 +00.1	06						
07	238 32.7 +01.0	N 13 39.2 -00.5	350 02.9 +02.0	N 13 43.7 +00.2	48 43.1 +02.5	S 10 29.1 +00.0	07						
08	253 33.7 +01.0	N 13 38.7 -00.6	5 04.9 +02.1	N 13 43.9 +00.1	63 45.6 +02.5	S 10 29.1 +00.1	08						
09	268 34.7 +01.0	N 13 38.1 -00.5	20 07.0 +02.0	N 13 44.0 +00.1	78 48.1 +02.6	S 10 29.2 +00.0	09						
10	283 35.7 +01.0	N 13 37.6 -00.5	35 09.0 +02.1	N 13 44.1 +00.1	93 50.7 +02.5	S 10 29.2 +00.0	10						
11	298 36.7 +01.0	N 13 37.1 -00.6	50 11.1 +02.0	N 13 44.2 +00.2	108 53.2 +02.5	S 10 29.2 +00.1	11						
12	313 37.7 +01.0	N 13 36.5 -00.5	65 13.1 +02.1	N 13 44.4 +00.1	123 55.7 +02.5	S 10 29.3 +00.0	12						
13	328 38.7 +01.0	N 13 36.0 -00.6	80 15.2 +02.1	N 13 44.5 +00.1	138 58.2 +02.6	S 10 29.3 +00.0	13						
14	343 39.7 +01.1	N 13 35.4 -00.5	95 17.3 +02.0	N 13 44.6 +00.1	154 00.8 +02.5	S 10 29.3 +00.1	14						
15	358 40.8 +01.0	N 13 34.9 -00.5	110 19.3 +02.1	N 13 44.7 +00.2	169 03.3 +02.5	S 10 29.4 +00.0	15						
16	13 41.8 +01.0	N 13 34.4 -00.6	125 21.4 +02.0	N 13 44.9 +00.1	184 05.8 +02.6	S 10 29.4 +00.0	16						
17	28 42.8 +01.0	N 13 33.8 -00.5	140 23.4 +02.1	N 13 45.0 +00.1	199 08.4 +02.5	S 10 29.4 +00.1	17						
18	43 43.8 +01.0	N 13 33.3 -00.6	155 25.5 +02.1	N 13 45.1 +00.1	214 10.9 +02.5	S 10 29.5 +00.0	18						
19	58 44.8 +01.0	N 13 32.7 -00.5	170 27.6 +02.0	N 13 45.2 +00.2	229 13.4 +02.5	S 10 29.5 +00.0	19						
20	73 45.8 +01.0	N 13 32.2 -00.5	185 29.6 +02.1	N 13 45.4 +00.1	244 15.9 +02.6	S 10 29.5 +00.1	20						
21	88 46.8 +01.0	N 13 31.7 -00.6	200 31.7 +02.0	N 13 45.5 +00.1	259 18.5 +02.5	S 10 29.6 +00.0	21						
22	103 47.8 +01.0	N 13 31.1 -00.5	215 33.7 +02.1	N 13 45.6 +00.1	274 21.0 +02.5	S 10 29.6 +00.0	22						
23	118 48.8 +01.1	N 13 30.6 -00.6	230 35.8 +02.1	N 13 45.7 +00.2	289 23.5 +02.6	S 10 29.6 +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 00'3 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 322° 322° 322° 322° 322° 322°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 15:05		Greenwich Culmination Time: 07:39		Greenwich Culmination Time: 03:45								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 49.8 -00.1	N 22 43.9 -00.2	137 47.3 +01.3	N 13 22.9 -00.8	320 35.9 -34.6	S 19 37.8 -13.0	00						
01	193 49.7 -00.1	N 22 43.7 -00.2	152 48.6 +01.3	N 13 22.1 -00.8	335 01.3 -34.6	S 19 24.8 -13.0	01						
02	208 49.6 -00.1	N 22 43.5 -00.3	167 49.9 +01.3	N 13 21.3 -00.8	349 26.7 -34.4	S 19 11.8 -13.2	02						
03	223 49.5 -00.1	N 22 43.2 -00.2	182 51.2 +01.3	N 13 20.5 -00.8	3 52.3 -34.3	S 18 58.6 -13.2	03						
04	238 49.4 -00.1	N 22 43.0 -00.3	197 52.5 +01.4	N 13 19.7 -00.8	18 18.0 -34.2	S 18 45.4 -13.4	04						
05	253 49.3 -00.1	N 22 42.7 -00.2	212 53.9 +01.3	N 13 18.9 -00.8	32 43.8 -34.1	S 18 32.0 -13.5	05						
06	268 49.2 -00.1	N 22 42.5 -00.3	227 55.2 +01.3	N 13 18.1 -00.7	47 09.7 -33.9	S 18 18.5 -13.6	06						
07	283 49.1 -00.1	N 22 42.2 -00.2	242 56.5 +01.3	N 13 17.4 -00.8	61 35.8 -33.9	S 18 04.9 -13.8	07						
08	298 49.0 -00.1	N 22 42.0 -00.3	257 57.8 +01.4	N 13 16.6 -00.8	76 01.9 -33.7	S 17 51.1 -13.8	08						
09	313 48.9 -00.1	N 22 41.7 -00.2	272 59.2 +01.3	N 13 15.8 -00.8	90 28.2 -33.6	S 17 37.3 -13.9	09						
10	328 48.8 -00.1	N 22 41.5 -00.3	288 00.5 +01.3	N 13 15.0 -00.8	104 54.6 -33.5	S 17 23.4 -14.0	10						
11	343 48.7 -00.1	N 22 41.2 -00.2	303 01.8 +01.4	N 13 14.2 -00.8	119 21.1 -33.4	S 17 09.4 -14.2	11						
12	358 48.6 -00.1	N 22 41.0 -00.3	318 03.2 +01.3	N 13 13.4 -00.8	133 47.7 -33.3	S 16 55.2 -14.2	12						
13	13 48.5 -00.1	N 22 40.7 -00.2	333 04.5 +01.4	N 13 12.6 -00.8	148 14.4 -33.1	S 16 41.0 -14.3	13						
14	28 48.4 -00.1	N 22 40.5 -00.3	348 05.9 +01.3	N 13 11.8 -00.8	162 41.3 -33.1	S 16 26.7 -14.4	14						
15	43 48.3 -00.1	N 22 40.2 -00.2	3 07.2 +01.4	N 13 11.0 -00.8	177 08.2 -32.9	S 16 12.3 -14.5	15						
16	58 48.2 -00.1	N 22 40.0 -00.3	18 08.6 +01.3	N 13 10.2 -00.8	191 35.3 -32.9	S 15 57.8 -14.5	16						
17	73 48.1 -00.1	N 22 39.7 -00.2	33 09.9 +01.4	N 13 09.4 -00.7	206 02.4 -32.7	S 15 43.3 -14.7	17						
18	88 48.0 -00.1	N 22 39.5 -00.3	48 11.3 +01.3	N 13 08.7 -00.8	220 29.7 -32.6	S 15 28.6 -14.7	18						
19	103 47.9 -00.1	N 22 39.2 -00.3	63 12.6 +01.4	N 13 07.9 -00.8	234 57.1 -32.5	S 15 13.9 -14.9	19						
20	118 47.8 -00.1	N 22 38.9 -00.2	78 14.0 +01.4	N 13 07.1 -00.8	249 24.6 -32.4	S 14 59.0 -14.9	20						
21	133 47.7 -00.1	N 22 38.7 -00.3	93 15.4 +01.3	N 13 06.3 -00.8	263 52.2 -32.3	S 14 44.1 -14.9	21						
22	148 47.6 -00.1	N 22 38.4 -00.2	108 16.7 +01.4	N 13 05.5 -00.8	278 19.9 -32.2	S 14 29.2 -15.1	22						
23	163 47.5 -00.2	N 22 38.2 -00.3	123 18.1 +01.4	N 13 04.7 -00.8	292 47.7 -32.1	S 14 14.1 -15.1	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 00'3 00'3 00'3 00'3 00'3 00'3		SD 16'5 16'5 16'5 16'5 16'5 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 60'7 60'6 60'6 60'5 60'4 60'3								
	SHA 255° 255° 255° 255° 254° 254°		SHA 214° 214° 214° 214° 214° 214°		SHA 036° 033° 031° 028° 026° 024°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 14:47		Greenwich Culmination Time: 02:43								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	133 49.9 +01.0	N 13 30.0 -00.5	245 37.9 +02.0	N 13 45.9 +00.1	304 26.1 +02.5	S 10 29.7 +00.0	00						
01	148 50.9 +01.0	N 13 29.5 -00.5	260 39.9 +02.1	N 13 46.0 +00.1	319 28.6 +02.5	S 10 29.7 +00.0	01						
02	163 51.9 +01.0	N 13 29.0 -00.6	275 42.0 +02.0	N 13 46.1 +00.1	334 31.1 +02.5	S 10 29.7 +00.1	02						
03	178 52.9 +01.0	N 13 28.4 -00.5	290 44.0 +02.1	N 13 46.2 +00.1	349 33.6 +02.6	S 10 29.8 +00.0	03						
04	193 53.9 +01.0	N 13 27.9 -00.6	305 46.1 +02.1	N 13 46.3 +00.2	4 36.2 +02.5	S 10 29.8 +00.1	04						
05	208 54.9 +01.0	N 13 27.3 -00.5	320 48.2 +02.0	N 13 46.5 +00.1	19 38.7 +02.5	S 10 29.9 +00.0	05						
06	223 55.9 +01.0	N 13 26.8 -00.6	335 50.2 +02.1	N 13 46.6 +00.1	34 41.2 +02.6	S 10 29.9 +00.0	06						
07	238 56.9 +01.1	N 13 26.2 -00.5	350 52.3 +02.0	N 13 46.7 +00.1	49 43.8 +02.5	S 10 29.9 +00.1	07						
08	253 58.0 +01.0	N 13 25.7 -00.5	5 54.3 +02.1	N 13 46.8 +00.2	64 46.3 +02.5	S 10 30.0 +00.0	08						
09	268 59.0 +01.0	N 13 25.2 -00.6	20 56.4 +02.1	N 13 47.0 +00.1	79 48.8 +02.6	S 10 30.0 +00.0	09						
10	283 60.0 +01.0	N 13 24.6 -00.5	35 58.5 +02.0	N 13 47.1 +00.1	94 51.4 +02.5	S 10 30.0 +00.1	10						
11	299 01.0 +01.0	N 13 24.1 -00.6	51 00.5 +02.1	N 13 47.2 +00.1	109 53.9 +02.5	S 10 30.1 +00.0	11						
12	314 02.0 +01.0	N 13 23.5 -00.5	66 02.6 +02.0	N 13 47.3 +00.1	124 56.4 +02.6	S 10 30.1 +00.0	12						
13	329 03.0 +01.0	N 13 23.0 -00.6	81 04.6 +02.1	N 13 47.4 +00.2	139 59.0 +02.5	S 10 30.1 +00.1	13						
14	344 04.0 +01.0	N 13 22.4 -00.5	96 06.7 +02.1	N 13 47.6 +00.1	155 01.5 +02.5	S 10 30.2 +00.0	14						
15	359 05.0 +01.1	N 13 21.9 -00.5	111 08.8 +02.0	N 13 47.7 +00.1	170 04.0 +02.6	S 10 30.2 +00.1	15						
16	14 06.1 +01.0	N 13 21.4 -00.6	126 10.8 +02.1	N 13 47.8 +00.1	185 06.6 +02.5	S 10 30.3 +00.0	16						
17	29 07.1 +01.0	N 13 20.8 -00.5	141 12.9 +02.1	N 13 47.9 +00.2	200 09.1 +02.5	S 10 30.3 +00.0	17						
18	44 08.1 +01.0	N 13 20.3 -00.6	156 15.0 +02.0	N 13 48.1 +00.1	215 11.6 +02.6	S 10 30.3 +00.1	18						
19	59 09.1 +01.0	N 13 19.7 -00.5	171 17.0 +02.1	N 13 48.2 +00.1	230 14.2 +02.5	S 10 30.4 +00.0	19						
20	74 10.1 +01.0	N 13 19.2 -00.6	186 19.1 +02.1	N 13 48.3 +00.1	245 16.7 +02.5	S 10 30.4 +00.0	20						
21	89 11.1 +01.0	N 13 18.6 -00.5	201 21.2 +02.0	N 13 48.4 +00.1	260 19.2 +02.5	S 10 30.4 +00.1	21						
22	104 12.1 +01.1	N 13 18.1 -00.6	216 23.2 +02.1	N 13 48.5 +00.2	275 21.7 +02.6	S 10 30.5 +00.0	22						
23	119 13.2 +01.0	N 13 17.5 -00.5	231 25.3 +02.0	N 13 48.7 +00.1	290 24.3 +02.5	S 10 30.5 +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 00'2 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 322° 322° 322° 322° 322° 322°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 15:03		Greenwich Culmination Time: 07:36		Greenwich Culmination Time: 03:41								

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UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 47.3 -00.1	N 22 37.9 -00.3	138 19.5 +01.3	N 13 03.9 -00.8	307 15.6 -32.0	S 13 59.0 -15.2	00							
01	193 47.2 -00.1	N 22 37.6 -00.2	153 20.8 +01.4	N 13 03.1 -00.8	321 43.6 -31.9	S 13 43.8 -15.3	01							
02	208 47.1 -00.1	N 22 37.4 -00.3	168 22.2 +01.4	N 13 02.3 -00.7	336 11.7 -31.8	S 13 28.5 -15.3	02							
03	223 47.0 -00.1	N 22 37.1 -00.2	183 23.6 +01.4	N 13 01.6 -00.8	350 39.9 -31.6	S 13 13.2 -15.4	03							
04	238 46.9 -00.1	N 22 36.9 -00.3	198 25.0 +01.4	N 13 00.8 -00.8	5 08.3 -31.6	S 12 57.8 -15.4	04							
05	253 46.8 -00.1	N 22 36.6 -00.3	213 26.4 +01.3	N 12 60.0 -00.8	19 36.7 -31.5	S 12 42.4 -15.5	05							
06	268 46.7 -00.1	N 22 36.3 -00.2	228 27.7 +01.4	N 12 59.2 -00.8	34 05.2 -31.4	S 12 26.9 -15.6	06							
07	283 46.6 -00.1	N 22 36.1 -00.3	243 29.1 +01.4	N 12 58.4 -00.8	48 33.8 -31.3	S 12 11.3 -15.6	07							
08	298 46.5 -00.1	N 22 35.8 -00.3	258 30.5 +01.4	N 12 57.6 -00.8	63 02.5 -31.2	S 11 55.7 -15.7	08							
09	313 46.4 -00.1	N 22 35.5 -00.2	273 31.9 +01.4	N 12 56.8 -00.7	77 31.3 -31.2	S 11 40.0 -15.7	09							
10	328 46.3 -00.1	N 22 35.3 -00.3	288 33.3 +01.4	N 12 56.1 -00.8	92 00.1 -31.0	S 11 24.3 -15.8	10							
11	343 46.2 -00.1	N 22 35.0 -00.3	303 34.7 +01.4	N 12 55.3 -00.8	106 29.1 -30.9	S 11 08.5 -15.8	11							
12	358 46.1 -00.1	N 22 34.7 -00.2	318 36.1 +01.4	N 12 54.5 -00.8	120 58.2 -30.9	S 10 52.7 -15.9	12							
13	13 46.0 -00.1	N 22 34.5 -00.3	333 37.5 +01.4	N 12 53.7 -00.8	135 27.3 -30.7	S 10 36.8 -15.9	13							
14	28 45.9 -00.1	N 22 34.2 -00.3	348 38.9 +01.5	N 12 52.9 -00.8	149 56.6 -30.7	S 10 20.9 -16.0	14							
15	43 45.8 -00.1	N 22 33.9 -00.2	3 40.4 +01.4	N 12 52.1 -00.7	164 25.9 -30.6	S 10 04.9 -16.0	15							
16	58 45.7 -00.1	N 22 33.7 -00.3	18 41.8 +01.4	N 12 51.4 -00.8	178 55.3 -30.5	S 09 48.9 -16.0	16							
17	73 45.6 -00.1	N 22 33.4 -00.3	33 43.2 +01.4	N 12 50.6 -00.8	193 24.8 -30.4	S 09 32.9 -16.1	17							
18	88 45.5 -00.1	N 22 33.1 -00.3	48 44.6 +01.4	N 12 49.8 -00.8	207 54.4 -30.4	S 09 16.8 -16.1	18							
19	103 45.4 -00.1	N 22 32.8 -00.2	63 46.0 +01.5	N 12 49.0 -00.8	222 24.0 -30.3	S 09 00.7 -16.2	19							
20	118 45.3 -00.1	N 22 32.6 -00.3	78 47.5 +01.4	N 12 48.2 -00.8	236 53.7 -30.1	S 08 44.5 -16.2	20							
21	133 45.2 -00.1	N 22 32.3 -00.3	93 48.9 +01.4	N 12 47.4 -00.7	251 23.6 -30.2	S 08 28.3 -16.2	21							
22	148 45.1 -00.1	N 22 32.0 -00.2	108 50.3 +01.5	N 12 46.7 -00.8	265 53.4 -30.0	S 08 12.1 -16.2	22							
23	163 45.0 -00.1	N 22 31.8 -00.3	123 51.8 +01.4	N 12 45.9 -00.8	280 23.4 -29.9	S 07 55.9 -16.3	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 254° 254° 254° 253° 253° 253°	Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'3 00'3 00'3 00'3 00'3 00'3	SHA 214° 214° 213° 213° 213° 213°	Greenwich Culmination Time: 14:45	UT 02 06 10 14 18 22	SD 16'4 16'4 16'4 16'3 16'3 16'3	HP 60'3 60'2 60'1 60'0 59'9 59'8	SHA 021° 019° 017° 015° 012° 010°	Greenwich Culmination Time: 03:38
UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	134 14.2 +01.0	N 13 17.0 -00.5	246 27.3 +02.1	N 13 48.8 +00.1	305 26.8 +02.5	S 10 30.5 +00.1	00							
01	149 15.2 +01.0	N 13 16.5 -00.6	261 29.4 +02.1	N 13 48.9 +00.1	320 29.3 +02.6	S 10 30.6 +00.0	01							
02	164 16.2 +01.0	N 13 15.9 -00.5	276 31.5 +02.0	N 13 49.0 +00.2	335 31.9 +02.5	S 10 30.6 +00.1	02							
03	179 17.2 +01.0	N 13 15.4 -00.6	291 33.5 +02.1	N 13 49.2 +00.1	350 34.4 +02.6	S 10 30.7 +00.0	03							
04	194 18.2 +01.0	N 13 14.8 -00.5	306 35.6 +02.1	N 13 49.3 +00.1	5 37.0 +02.5	S 10 30.7 +00.0	04							
05	209 19.2 +01.0	N 13 14.3 -00.6	321 37.7 +02.0	N 13 49.4 +00.1	20 39.5 +02.5	S 10 30.7 +00.1	05							
06	224 20.2 +01.1	N 13 13.7 -00.5	336 39.7 +02.1	N 13 49.5 +00.1	35 42.0 +02.6	S 10 30.8 +00.0	06							
07	239 21.3 +01.0	N 13 13.2 -00.6	351 41.8 +02.1	N 13 49.6 +00.2	50 44.6 +02.5	S 10 30.8 +00.0	07							
08	254 22.3 +01.0	N 13 12.6 -00.5	6 43.9 +02.0	N 13 49.8 +00.1	65 47.1 +02.5	S 10 30.8 +00.1	08							
09	269 23.3 +01.0	N 13 12.1 -00.6	21 45.9 +02.1	N 13 49.9 +00.1	80 49.6 +02.6	S 10 30.9 +00.0	09							
10	284 24.3 +01.0	N 13 11.5 -00.5	36 48.0 +02.1	N 13 50.0 +00.1	95 52.2 +02.5	S 10 30.9 +00.1	10							
11	299 25.3 +01.0	N 13 11.0 -00.5	51 50.1 +02.0	N 13 50.1 +00.1	110 54.7 +02.5	S 10 31.0 +00.0	11							
12	314 26.3 +01.0	N 13 10.5 -00.6	66 52.1 +02.1	N 13 50.2 +00.2	125 57.2 +02.6	S 10 31.0 +00.0	12							
13	329 27.3 +01.1	N 13 09.9 -00.5	81 54.2 +02.1	N 13 50.4 +00.1	140 59.8 +02.5	S 10 31.0 +00.1	13							
14	344 28.4 +01.0	N 13 09.4 -00.6	96 56.3 +02.0	N 13 50.5 +00.1	156 02.3 +02.5	S 10 31.1 +00.0	14							
15	359 29.4 +01.0	N 13 08.8 -00.5	111 58.3 +02.1	N 13 50.6 +00.1	171 04.8 +02.6	S 10 31.1 +00.0	15							
16	14 30.4 +01.0	N 13 08.3 -00.6	127 00.4 +02.1	N 13 50.7 +00.1	186 07.4 +02.5	S 10 31.1 +00.1	16							
17	29 31.4 +01.0	N 13 07.7 -00.5	142 02.5 +02.0	N 13 50.8 +00.2	201 09.9 +02.5	S 10 31.2 +00.0	17							
18	44 32.4 +01.0	N 13 07.2 -00.6	157 04.5 +02.1	N 13 51.0 +00.1	216 12.4 +02.6	S 10 31.2 +00.1	18							
19	59 33.4 +01.0	N 13 06.6 -00.5	172 06.6 +02.1	N 13 51.1 +00.1	231 15.0 +02.5	S 10 31.3 +00.0	19							
20	74 34.4 +01.0	N 13 06.1 -00.6	187 08.7 +02.0	N 13 51.2 +00.1	246 17.5 +02.6	S 10 31.3 +00.0	20							
21	89 35.4 +01.1	N 13 05.5 -00.5	202 10.7 +02.1	N 13 51.3 +00.1	261 20.1 +02.5	S 10 31.3 +00.1	21							
22	104 36.5 +01.0	N 13 05.0 -00.6	217 12.8 +02.1	N 13 51.4 +00.2	276 22.6 +02.5	S 10 31.4 +00.0	22							
23	119 37.5 +01.0	N 13 04.4 -00.5	232 14.9 +02.1	N 13 51.6 +00.1	291 25.1 +02.6	S 10 31.4 +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 209° 209° 209° 209° 209° 209°	Greenwich Culmination Time: 15:02	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 322° 322° 322° 322° 322° 322°	Greenwich Culmination Time: 07:33	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 021° 021° 021° 021° 021° 021°	Greenwich Culmination Time: 03:37

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 44.9 -00.1	N 22 31.5 -00.3	138 53.2 +01.4	N 12 45.1 -00.8	294 53.5 -29.9	S 07 39.6 -16.3	00						
01	193 44.8 -00.1	N 22 31.2 -00.3	153 54.6 +01.5	N 12 44.3 -00.8	309 23.6 -29.9	S 07 23.3 -16.3	01						
02	208 44.7 -00.1	N 22 30.9 -00.3	168 56.1 +01.4	N 12 43.5 -00.7	323 53.7 -29.7	S 07 07.0 -16.3	02						
03	223 44.6 +00.0	N 22 30.6 -00.2	183 57.5 +01.5	N 12 42.8 -00.8	338 24.0 -29.7	S 06 50.7 -16.4	03						
04	238 44.6 -00.1	N 22 30.4 -00.3	198 59.0 +01.4	N 12 42.0 -00.8	352 54.3 -29.6	S 06 34.3 -16.3	04						
05	253 44.5 -00.1	N 22 30.1 -00.3	214 00.4 +01.5	N 12 41.2 -00.8	7 24.7 -29.5	S 06 18.0 -16.4	05						
06	268 44.4 -00.1	N 22 29.8 -00.3	229 01.9 +01.4	N 12 40.4 -00.7	21 55.2 -29.5	S 06 01.6 -16.4	06						
07	283 44.3 -00.1	N 22 29.5 -00.3	244 03.3 +01.5	N 12 39.7 -00.8	36 25.7 -29.4	S 05 45.2 -16.4	07						
08	298 44.2 -00.1	N 22 29.2 -00.2	259 04.8 +01.5	N 12 38.9 -00.8	50 56.3 -29.4	S 05 28.8 -16.5	08						
09	313 44.1 -00.1	N 22 29.0 -00.3	274 06.3 +01.4	N 12 38.1 -00.8	65 26.9 -29.3	S 05 12.3 -16.4	09						
10	328 44.0 -00.1	N 22 28.7 -00.3	289 07.7 +01.5	N 12 37.3 -00.7	79 57.6 -29.2	S 04 55.9 -16.5	10						
11	343 43.9 -00.1	N 22 28.4 -00.3	304 09.2 +01.5	N 12 36.6 -00.8	94 28.4 -29.2	S 04 39.4 -16.4	11						
12	358 43.8 -00.1	N 22 28.1 -00.3	319 10.7 +01.4	N 12 35.8 -00.8	108 59.2 -29.2	S 04 23.0 -16.5	12						
13	13 43.7 -00.1	N 22 27.8 -00.3	334 12.1 +01.5	N 12 35.0 -00.8	123 30.0 -29.0	S 04 06.5 -16.4	13						
14	28 43.6 -00.1	N 22 27.5 -00.2	349 13.6 +01.5	N 12 34.2 -00.8	138 01.0 -29.0	S 03 50.1 -16.5	14						
15	43 43.5 -00.1	N 22 27.3 -00.3	4 15.1 +01.5	N 12 33.4 -00.7	152 32.0 -29.0	S 03 33.6 -16.5	15						
16	58 43.4 -00.1	N 22 27.0 -00.3	19 16.6 +01.4	N 12 32.7 -00.8	167 03.0 -28.9	S 03 17.1 -16.4	16						
17	73 43.3 -00.1	N 22 26.7 -00.3	34 18.0 +01.5	N 12 31.9 -00.8	181 34.1 -28.9	S 03 00.7 -16.5	17						
18	88 43.2 -00.1	N 22 26.4 -00.3	49 19.5 +01.5	N 12 31.1 -00.7	196 05.2 -28.8	S 02 44.2 -16.4	18						
19	103 43.1 -00.1	N 22 26.1 -00.3	64 21.0 +01.5	N 12 30.4 -00.8	210 36.4 -28.8	S 02 27.8 -16.5	19						
20	118 43.0 -00.1	N 22 25.8 -00.3	79 22.5 +01.5	N 12 29.6 -00.8	225 07.6 -28.7	S 02 11.3 -16.4	20						
21	133 42.9 -00.1	N 22 25.5 -00.3	94 24.0 +01.5	N 12 28.8 -00.8	239 38.9 -28.7	S 01 54.9 -16.5	21						
22	148 42.8 -00.1	N 22 25.2 -00.3	109 25.5 +01.5	N 12 28.0 -00.7	254 10.2 -28.7	S 01 38.4 -16.4	22						
23	163 42.7 -00.1	N 22 24.9 -00.2	124 27.0 +01.5	N 12 27.3 -00.8	268 41.5 -28.6	S 01 22.0 -16.4	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	00'3 00'3 00'3 00'3 00'3 00'3	SD	16'3 16'2 16'2 16'2 16'1 16'1								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'3 00'3 00'3 00'3 00'3 00'3	HP	59'7 59'5 59'4 59'3 59'2 59'1								
SHA	253° 253° 253° 252° 252° 252°	SHA	213° 213° 213° 213° 213° 213°	SHA	008° 006° 004° 002° 360° 358°								
Greenwich Culmination Time: 12:05			Greenwich Culmination Time: 14:43			Greenwich Culmination Time: 04:29							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	134 38.5 +01.0	N 13 03.9 -00.6	247 17.0 +02.0	N 13 51.7 +00.1	306 27.7 +02.5	S 10 31.4 +00.1	00						
01	149 39.5 +01.0	N 13 03.3 -00.5	262 19.0 +02.1	N 13 51.8 +00.1	321 30.2 +02.5	S 10 31.5 +00.0	01						
02	164 40.5 +01.0	N 13 02.8 -00.6	277 21.1 +02.1	N 13 51.9 +00.1	336 32.7 +02.6	S 10 31.5 +00.1	02						
03	179 41.5 +01.0	N 13 02.2 -00.5	292 23.2 +02.0	N 13 52.0 +00.2	351 35.3 +02.5	S 10 31.6 +00.0	03						
04	194 42.5 +01.1	N 13 01.7 -00.6	307 25.2 +02.1	N 13 52.2 +00.1	6 37.8 +02.5	S 10 31.6 +00.0	04						
05	209 43.6 +01.0	N 13 01.1 -00.5	322 27.3 +02.1	N 13 52.3 +00.1	21 40.3 +02.6	S 10 31.6 +00.1	05						
06	224 44.6 +01.0	N 13 00.6 -00.6	337 29.4 +02.0	N 13 52.4 +00.1	36 42.9 +02.5	S 10 31.7 +00.0	06						
07	239 45.6 +01.0	N 13 00.0 -00.5	352 31.4 +02.1	N 13 52.5 +00.1	51 45.4 +02.6	S 10 31.7 +00.0	07						
08	254 46.6 +01.0	N 12 59.5 -00.6	7 33.5 +02.1	N 13 52.6 +00.2	66 48.0 +02.5	S 10 31.7 +00.1	08						
09	269 47.6 +01.0	N 12 58.9 -00.5	22 35.6 +02.1	N 13 52.8 +00.1	81 50.5 +02.5	S 10 31.8 +00.0	09						
10	284 48.6 +01.0	N 12 58.4 -00.6	37 37.7 +02.0	N 13 52.9 +00.1	96 53.0 +02.6	S 10 31.8 +00.1	10						
11	299 49.6 +01.1	N 12 57.8 -00.5	52 39.7 +02.1	N 13 53.0 +00.1	111 55.6 +02.5	S 10 31.9 +00.0	11						
12	314 50.7 +01.0	N 12 57.3 -00.6	67 41.8 +02.1	N 13 53.1 +00.1	126 58.1 +02.6	S 10 31.9 +00.0	12						
13	329 51.7 +01.0	N 12 56.7 -00.5	82 43.9 +02.0	N 13 53.2 +00.1	142 00.7 +02.5	S 10 31.9 +00.1	13						
14	344 52.7 +01.0	N 12 56.2 -00.6	97 45.9 +02.1	N 13 53.3 +00.2	157 03.2 +02.5	S 10 32.0 +00.0	14						
15	359 53.7 +01.0	N 12 55.6 -00.5	112 48.0 +02.1	N 13 53.5 +00.1	172 05.7 +02.6	S 10 32.0 +00.1	15						
16	14 54.7 +01.0	N 12 55.1 -00.6	127 50.1 +02.1	N 13 53.6 +00.1	187 08.3 +02.5	S 10 32.1 +00.0	16						
17	29 55.7 +01.0	N 12 54.5 -00.5	142 52.2 +02.0	N 13 53.7 +00.1	202 10.8 +02.6	S 10 32.1 +00.0	17						
18	44 56.7 +01.1	N 12 54.0 -00.6	157 54.2 +02.1	N 13 53.8 +00.1	217 13.4 +02.5	S 10 32.1 +00.1	18						
19	59 57.8 +01.0	N 12 53.4 -00.5	172 56.3 +02.1	N 13 53.9 +00.2	232 15.9 +02.5	S 10 32.2 +00.0	19						
20	74 58.8 +01.0	N 12 52.9 -00.6	187 58.4 +02.0	N 13 54.1 +00.1	247 18.4 +02.6	S 10 32.2 +00.1	20						
21	89 59.8 +01.0	N 12 52.3 -00.5	203 00.4 +02.1	N 13 54.2 +00.1	262 21.0 +02.5	S 10 32.3 +00.0	21						
22	105 00.8 +01.0	N 12 51.8 -00.6	218 02.5 +02.1	N 13 54.3 +00.1	277 23.5 +02.6	S 10 32.3 +00.0	22						
23	120 01.8 +01.0	N 12 51.2 -00.5	233 04.6 +02.1	N 13 54.4 +00.1	292 26.1 +02.5	S 10 32.3 +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	209° 209° 209° 209° 209° 208°	SHA	322° 322° 322° 321° 321° 321°	SHA	021° 021° 021° 021° 021° 021°								
Greenwich Culmination Time: 15:00			Greenwich Culmination Time: 07:29			Greenwich Culmination Time: 03:33							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 42.6 -00.1	N 22 24.7 -00.3	139 28.5 +01.5	N 12 26.5 -00.8	283 12.9 -28.6	S 01 05.6 -16.4	00						
01	193 42.5 -00.1	N 22 24.4 -00.3	154 30.0 +01.5	N 12 25.7 -00.7	297 44.3 -28.5	S 00 49.2 -16.4	01						
02	208 42.4 -00.1	N 22 24.1 -00.3	169 31.5 +01.6	N 12 25.0 -00.8	312 15.8 -28.5	S 00 32.8 -16.4	02						
03	223 42.3 +00.0	N 22 23.8 -00.3	184 33.1 +01.5	N 12 24.2 -00.8	326 47.3 -28.4	S 00 16.4 -16.4	03						
04	238 42.3 -00.1	N 22 23.5 -00.3	199 34.6 +01.5	N 12 23.4 -00.8	341 18.9 -28.5	S 00 00.0 +16.3	04						
05	253 42.2 -00.1	N 22 23.2 -00.3	214 36.1 +01.5	N 12 22.6 -00.7	355 50.4 -28.4	N 00 16.3 +16.4	05						
06	268 42.1 -00.1	N 22 22.9 -00.3	229 37.6 +01.5	N 12 21.9 -00.8	10 22.0 -28.3	N 00 32.7 +16.3	06						
07	283 42.0 -00.1	N 22 22.6 -00.3	244 39.1 +01.6	N 12 21.1 -00.8	24 53.7 -28.4	N 00 49.0 +16.3	07						
08	298 41.9 -00.1	N 22 22.3 -00.3	259 40.7 +01.5	N 12 20.3 -00.7	39 25.3 -28.3	N 01 05.3 +16.2	08						
09	313 41.8 -00.1	N 22 22.0 -00.3	274 42.2 +01.5	N 12 19.6 -00.8	53 57.0 -28.3	N 01 21.5 +16.3	09						
10	328 41.7 -00.1	N 22 21.7 -00.3	289 43.7 +01.6	N 12 18.8 -00.8	68 28.7 -28.2	N 01 37.8 +16.2	10						
11	343 41.6 -00.1	N 22 21.4 -00.3	304 45.3 +01.5	N 12 18.0 -00.7	83 00.5 -28.3	N 01 54.0 +16.2	11						
12	358 41.5 -00.1	N 22 21.1 -00.3	319 46.8 +01.5	N 12 17.3 -00.8	97 32.2 -28.2	N 02 10.2 +16.1	12						
13	13 41.4 -00.1	N 22 20.8 -00.3	334 48.3 +01.6	N 12 16.5 -00.8	112 04.0 -28.2	N 02 26.3 +16.2	13						
14	28 41.3 -00.1	N 22 20.5 -00.3	349 49.9 +01.5	N 12 15.7 -00.7	126 35.8 -28.2	N 02 42.5 +16.1	14						
15	43 41.2 -00.1	N 22 20.2 -00.3	4 51.4 +01.6	N 12 15.0 -00.8	141 07.6 -28.1	N 02 58.6 +16.0	15						
16	58 41.1 -00.1	N 22 19.9 -00.3	19 53.0 +01.5	N 12 14.2 -00.8	155 39.5 -28.2	N 03 14.6 +16.1	16						
17	73 41.0 +00.0	N 22 19.6 -00.3	34 54.5 +01.6	N 12 13.4 -00.7	170 11.3 -28.1	N 03 30.7 +16.0	17						
18	88 41.0 -00.1	N 22 19.3 -00.3	49 56.1 +01.5	N 12 12.7 -00.8	184 43.2 -28.1	N 03 46.7 +15.9	18						
19	103 40.9 -00.1	N 22 19.0 -00.3	64 57.6 +01.6	N 12 11.9 -00.8	199 15.1 -28.1	N 04 02.6 +16.0	19						
20	118 40.8 -00.1	N 22 18.7 -00.3	79 59.2 +01.6	N 12 11.1 -00.7	213 47.0 -28.1	N 04 18.6 +15.9	20						
21	133 40.7 -00.1	N 22 18.4 -00.3	95 00.8 +01.5	N 12 10.4 -00.8	228 18.9 -28.1	N 04 34.5 +15.8	21						
22	148 40.6 -00.1	N 22 18.1 -00.3	110 02.3 +01.6	N 12 09.6 -00.7	242 50.8 -28.0	N 04 50.3 +15.8	22						
23	163 40.5 -00.1	N 22 17.8 -00.4	125 03.9 +01.6	N 12 08.9 -00.8	257 22.8 -28.1	N 05 06.1 +15.8	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 00'3 00'3 00'3 00'3 00'3 00'3		SD 16'1 16'0 16'0 16'0 15'9 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 59'0 58'8 58'7 58'6 58'5 58'3								
	SHA 252° 252° 252° 251° 251° 251°		SHA 213° 213° 213° 213° 213° 212°		SHA 356° 353° 351° 349° 347° 345°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:40		Greenwich Culmination Time: 05:17								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 02.8 +01.1	N 12 50.7 -00.6	248 06.7 +02.0	N 13 54.5 +00.1	307 28.6 +02.5	S 10 32.4 +00.0	00						
01	150 03.9 +01.0	N 12 50.1 -00.5	263 08.7 +02.1	N 13 54.6 +00.2	322 31.1 +02.6	S 10 32.4 +00.1	01						
02	165 04.9 +01.0	N 12 49.6 -00.6	278 10.8 +02.1	N 13 54.8 +00.1	337 33.7 +02.5	S 10 32.5 +00.0	02						
03	180 05.9 +01.0	N 12 49.0 -00.5	293 12.9 +02.1	N 13 54.9 +00.1	352 36.2 +02.6	S 10 32.5 +00.0	03						
04	195 06.9 +01.0	N 12 48.5 -00.6	308 15.0 +02.0	N 13 55.0 +00.1	7 38.8 +02.5	S 10 32.5 +00.1	04						
05	210 07.9 +01.0	N 12 47.9 -00.5	323 17.0 +02.1	N 13 55.1 +00.1	22 41.3 +02.5	S 10 32.6 +00.0	05						
06	225 08.9 +01.0	N 12 47.4 -00.6	338 19.1 +02.1	N 13 55.2 +00.1	37 43.8 +02.6	S 10 32.6 +00.1	06						
07	240 09.9 +01.1	N 12 46.8 -00.5	353 21.2 +02.1	N 13 55.3 +00.2	52 46.4 +02.5	S 10 32.7 +00.0	07						
08	255 11.0 +01.0	N 12 46.3 -00.6	8 23.3 +02.0	N 13 55.5 +00.1	67 48.9 +02.6	S 10 32.7 +00.0	08						
09	270 12.0 +01.0	N 12 45.7 -00.5	23 25.3 +02.1	N 13 55.6 +00.1	82 51.5 +02.5	S 10 32.7 +00.1	09						
10	285 13.0 +01.0	N 12 45.2 -00.6	38 27.4 +02.1	N 13 55.7 +00.1	97 54.0 +02.5	S 10 32.8 +00.0	10						
11	300 14.0 +01.0	N 12 44.6 -00.6	53 29.5 +02.1	N 13 55.8 +00.1	112 56.5 +02.6	S 10 32.8 +00.1	11						
12	315 15.0 +01.0	N 12 44.0 -00.5	68 31.6 +02.0	N 13 55.9 +00.2	127 59.1 +02.5	S 10 32.9 +00.0	12						
13	330 16.0 +01.0	N 12 43.5 -00.6	83 33.6 +02.1	N 13 56.1 +00.1	143 01.6 +02.6	S 10 32.9 +00.0	13						
14	345 17.0 +01.1	N 12 42.9 -00.5	98 35.7 +02.1	N 13 56.2 +00.1	158 04.2 +02.5	S 10 32.9 +00.1	14						
15	0 18.1 +01.0	N 12 42.4 -00.6	113 37.8 +02.1	N 13 56.3 +00.1	173 06.7 +02.6	S 10 33.0 +00.0	15						
16	15 19.1 +01.0	N 12 41.8 -00.5	128 39.9 +02.0	N 13 56.4 +00.1	188 09.3 +02.5	S 10 33.0 +00.1	16						
17	30 20.1 +01.0	N 12 41.3 -00.6	143 41.9 +02.1	N 13 56.5 +00.1	203 11.8 +02.5	S 10 33.1 +00.0	17						
18	45 21.1 +01.0	N 12 40.7 -00.5	158 44.0 +02.1	N 13 56.6 +00.1	218 14.3 +02.6	S 10 33.1 +00.0	18						
19	60 22.1 +01.0	N 12 40.2 -00.6	173 46.1 +02.1	N 13 56.7 +00.2	233 16.9 +02.5	S 10 33.1 +00.1	19						
20	75 23.1 +01.1	N 12 39.6 -00.5	188 48.2 +02.1	N 13 56.9 +00.1	248 19.4 +02.6	S 10 33.2 +00.0	20						
21	90 24.2 +01.0	N 12 39.1 -00.6	203 50.3 +02.0	N 13 57.0 +00.1	263 22.0 +02.5	S 10 33.2 +00.1	21						
22	105 25.2 +01.0	N 12 38.5 -00.6	218 52.3 +02.1	N 13 57.1 +00.1	278 24.5 +02.6	S 10 33.3 +00.0	22						
23	120 26.2 +01.0	N 12 37.9 -00.5	233 54.4 +02.1	N 13 57.2 +00.1	293 27.1 +02.5	S 10 33.3 +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 00'2 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 208° 208° 208° 208° 208° 208°		SHA 321° 321° 321° 321° 321° 321°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:58		Greenwich Culmination Time: 07:26		Greenwich Culmination Time: 03:29								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 40.4 -00.1	N 22 17.4 -00.3	140 05.5 +01.6	N 12 08.1 -00.8	271 54.7 -28.0	N 05 21.9 +15.8	00						
01	193 40.3 -00.1	N 22 17.1 -00.3	155 07.1 +01.5	N 12 07.3 -00.7	286 26.7 -28.1	N 05 37.7 +15.6	01						
02	208 40.2 -00.1	N 22 16.8 -00.3	170 08.6 +01.6	N 12 06.6 -00.8	300 58.6 -28.0	N 05 53.3 +15.7	02						
03	223 40.1 +00.0	N 22 16.5 -00.3	185 10.2 +01.6	N 12 05.8 -00.7	315 30.6 -28.1	N 06 09.0 +15.6	03						
04	238 40.1 -00.1	N 22 16.2 -00.3	200 11.8 +01.6	N 12 05.1 -00.8	330 02.5 -28.0	N 06 24.6 +15.5	04						
05	253 40.0 -00.1	N 22 15.9 -00.3	215 13.4 +01.6	N 12 04.3 -00.8	344 34.5 -28.0	N 06 40.1 +15.6	05						
06	268 39.9 -00.1	N 22 15.6 -00.3	230 15.0 +01.6	N 12 03.5 -00.7	359 06.5 -28.1	N 06 55.7 +15.4	06						
07	283 39.8 -00.1	N 22 15.3 -00.3	245 16.6 +01.6	N 12 02.8 -00.8	13 38.4 -28.0	N 07 11.1 +15.4	07						
08	298 39.7 -00.1	N 22 15.0 -00.4	260 18.2 +01.6	N 12 02.0 -00.7	28 10.4 -28.1	N 07 26.5 +15.4	08						
09	313 39.6 -00.1	N 22 14.6 -00.3	275 19.8 +01.6	N 12 01.3 -00.8	42 42.3 -28.0	N 07 41.9 +15.3	09						
10	328 39.5 -00.1	N 22 14.3 -00.3	290 21.4 +01.6	N 12 00.5 -00.7	57 14.3 -28.1	N 07 57.2 +15.2	10						
11	343 39.4 -00.1	N 22 14.0 -00.3	305 23.0 +01.6	N 11 59.8 -00.8	71 46.2 -28.1	N 08 12.4 +15.2	11						
12	358 39.3 +00.0	N 22 13.7 -00.3	320 24.6 +01.6	N 11 59.0 -00.8	86 18.1 -28.0	N 08 27.6 +15.2	12						
13	13 39.3 -00.1	N 22 13.4 -00.3	335 26.2 +01.6	N 11 58.2 -00.7	100 50.1 -28.1	N 08 42.8 +15.1	13						
14	28 39.2 -00.1	N 22 13.1 -00.4	350 27.8 +01.6	N 11 57.5 -00.8	115 22.0 -28.1	N 08 57.9 +15.0	14						
15	43 39.1 -00.1	N 22 12.7 -00.3	5 29.4 +01.7	N 11 56.7 -00.7	129 53.9 -28.1	N 09 12.9 +15.0	15						
16	58 39.0 -00.1	N 22 12.4 -00.3	20 31.1 +01.6	N 11 56.0 -00.8	144 25.8 -28.1	N 09 27.9 +14.9	16						
17	73 38.9 -00.1	N 22 12.1 -00.3	35 32.7 +01.6	N 11 55.2 -00.7	158 57.7 -28.2	N 09 42.8 +14.8	17						
18	88 38.8 -00.1	N 22 11.8 -00.3	50 34.3 +01.6	N 11 54.5 -00.8	173 29.5 -28.1	N 09 57.6 +14.8	18						
19	103 38.7 -00.1	N 22 11.5 -00.4	65 35.9 +01.7	N 11 53.7 -00.7	188 01.4 -28.2	N 10 12.4 +14.7	19						
20	118 38.6 +00.0	N 22 11.1 -00.3	80 37.6 +01.6	N 11 53.0 -00.8	202 33.2 -28.1	N 10 27.1 +14.7	20						
21	133 38.6 -00.1	N 22 10.8 -00.3	95 39.2 +01.7	N 11 52.2 -00.7	217 05.1 -28.2	N 10 41.8 +14.6	21						
22	148 38.5 -00.1	N 22 10.5 -00.3	110 40.9 +01.6	N 11 51.5 -00.8	231 36.9 -28.3	N 10 56.4 +14.5	22						
23	163 38.4 -00.1	N 22 10.2 -00.3	125 42.5 +01.6	N 11 50.7 -00.7	246 08.6 -28.2	N 11 10.9 +14.5	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 00'3 00'3 00'3 00'3 00'3 00'3		SD 15'9 15'8 15'8 15'8 15'7 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 58'2 58'1 58'0 57'8 57'7 57'6								
	SHA 251° 251° 251° 250° 250° 250°		SHA 212° 212° 212° 212° 212° 212°		SHA 343° 341° 339° 337° 335° 333°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:38		Greenwich Culmination Time: 06:03								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 27.2 +01.0	N 12 37.4 -00.6	248 56.5 +02.1	N 13 57.3 +00.1	308 29.6 +02.6	S 10 33.3 +00.1	00						
01	150 28.2 +01.0	N 12 36.8 -00.5	263 58.6 +02.1	N 13 57.4 +00.2	323 32.2 +02.5	S 10 33.4 +00.0	01						
02	165 29.2 +01.0	N 12 36.3 -00.6	279 00.7 +02.0	N 13 57.6 +00.1	338 34.7 +02.5	S 10 33.4 +00.1	02						
03	180 30.2 +01.1	N 12 35.7 -00.5	294 02.7 +02.1	N 13 57.7 +00.1	353 37.2 +02.6	S 10 33.5 +00.0	03						
04	195 31.3 +01.0	N 12 35.2 -00.6	309 04.8 +02.1	N 13 57.8 +00.1	8 39.8 +02.5	S 10 33.5 +00.0	04						
05	210 32.3 +01.0	N 12 34.6 -00.5	324 06.9 +02.1	N 13 57.9 +00.1	23 42.3 +02.6	S 10 33.5 +00.1	05						
06	225 33.3 +01.0	N 12 34.1 -00.6	339 09.0 +02.0	N 13 58.0 +00.1	38 44.9 +02.5	S 10 33.6 +00.0	06						
07	240 34.3 +01.0	N 12 33.5 -00.6	354 11.0 +02.1	N 13 58.1 +00.2	53 47.4 +02.6	S 10 33.6 +00.1	07						
08	255 35.3 +01.0	N 12 32.9 -00.5	9 13.1 +02.1	N 13 58.3 +00.1	68 50.0 +02.5	S 10 33.7 +00.0	08						
09	270 36.3 +01.1	N 12 32.4 -00.6	24 15.2 +02.1	N 13 58.4 +00.1	83 52.5 +02.6	S 10 33.7 +00.0	09						
10	285 37.4 +01.0	N 12 31.8 -00.5	39 17.3 +02.1	N 13 58.5 +00.1	98 55.1 +02.5	S 10 33.7 +00.1	10						
11	300 38.4 +01.0	N 12 31.3 -00.6	54 19.4 +02.0	N 13 58.6 +00.1	113 57.6 +02.5	S 10 33.8 +00.0	11						
12	315 39.4 +01.0	N 12 30.7 -00.5	69 21.4 +02.1	N 13 58.7 +00.1	129 00.1 +02.6	S 10 33.8 +00.1	12						
13	330 40.4 +01.0	N 12 30.2 -00.6	84 23.5 +02.1	N 13 58.8 +00.1	144 02.7 +02.5	S 10 33.9 +00.0	13						
14	345 41.4 +01.0	N 12 29.6 -00.6	99 25.6 +02.1	N 13 58.9 +00.2	159 05.2 +02.6	S 10 33.9 +00.1	14						
15	0 42.4 +01.1	N 12 29.0 -00.5	114 27.7 +02.1	N 13 59.1 +00.1	174 07.8 +02.5	S 10 34.0 +00.0	15						
16	15 43.5 +01.0	N 12 28.5 -00.6	129 29.8 +02.1	N 13 59.2 +00.1	189 10.3 +02.6	S 10 34.0 +00.0	16						
17	30 44.5 +01.0	N 12 27.9 -00.5	144 31.9 +02.0	N 13 59.3 +00.1	204 12.9 +02.5	S 10 34.0 +00.1	17						
18	45 45.5 +01.0	N 12 27.4 -00.6	159 33.9 +02.1	N 13 59.4 +00.1	219 15.4 +02.6	S 10 34.1 +00.0	18						
19	60 46.5 +01.0	N 12 26.8 -00.5	174 36.0 +02.1	N 13 59.5 +00.1	234 18.0 +02.5	S 10 34.1 +00.1	19						
20	75 47.5 +01.0	N 12 26.3 -00.6	189 38.1 +02.1	N 13 59.6 +00.1	249 20.5 +02.6	S 10 34.2 +00.0	20						
21	90 48.5 +01.1	N 12 25.7 -00.6	204 40.2 +02.1	N 13 59.7 +00.2	264 23.1 +02.5	S 10 34.2 +00.0	21						
22	105 49.6 +01.0	N 12 25.1 -00.5	219 42.3 +02.0	N 13 59.9 +00.1	279 25.6 +02.6	S 10 34.2 +00.1	22						
23	120 50.6 +01.0	N 12 24.6 -00.6	234 44.3 +02.1	N 13 60.0 +00.1	294 28.2 +02.5	S 10 34.3 +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 00'2 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 208° 208° 208° 207° 207° 207°		SHA 321° 321° 321° 321° 321° 321°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:57		Greenwich Culmination Time: 07:23		Greenwich Culmination Time: 03:25								

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 38.3 -00.1	N 22 09.9 -00.4	140 44.1 +01.7	N 11 50.0 -00.8	260 40.4 -28.3	N 11 25.4 +14.4	00						
01	193 38.2 -00.1	N 22 09.5 -00.3	155 45.8 +01.6	N 11 49.2 -00.7	275 12.1 -28.2	N 11 39.8 +14.3	01						
02	208 38.1 -00.1	N 22 09.2 -00.3	170 47.4 +01.7	N 11 48.5 -00.8	289 43.9 -28.3	N 11 54.1 +14.3	02						
03	223 38.0 +00.0	N 22 08.9 -00.4	185 49.1 +01.6	N 11 47.7 -00.7	304 15.6 -28.4	N 12 08.4 +14.2	03						
04	238 38.0 -00.1	N 22 08.5 -00.3	200 50.7 +01.7	N 11 47.0 -00.8	318 47.2 -28.3	N 12 22.6 +14.1	04						
05	253 37.9 -00.1	N 22 08.2 -00.3	215 52.4 +01.7	N 11 46.2 -00.7	333 18.9 -28.4	N 12 36.7 +14.0	05						
06	268 37.8 -00.1	N 22 07.9 -00.3	230 54.1 +01.6	N 11 45.5 -00.8	347 50.5 -28.4	N 12 50.7 +14.0	06						
07	283 37.7 -00.1	N 22 07.6 -00.4	245 55.7 +01.7	N 11 44.7 -00.7	2 22.1 -28.4	N 13 04.7 +13.9	07						
08	298 37.6 -00.1	N 22 07.2 -00.3	260 57.4 +01.7	N 11 44.0 -00.8	16 53.7 -28.5	N 13 18.6 +13.8	08						
09	313 37.5 -00.1	N 22 06.9 -00.3	275 59.1 +01.7	N 11 43.2 -00.7	31 25.2 -28.5	N 13 32.4 +13.7	09						
10	328 37.4 +00.0	N 22 06.6 -00.4	291 00.8 +01.6	N 11 42.5 -00.8	45 56.7 -28.5	N 13 46.1 +13.7	10						
11	343 37.4 -00.1	N 22 06.2 -00.3	306 02.4 +01.7	N 11 41.7 -00.7	60 28.2 -28.6	N 13 59.8 +13.6	11						
12	358 37.3 -00.1	N 22 05.9 -00.3	321 04.1 +01.7	N 11 41.0 -00.8	74 59.6 -28.5	N 14 13.4 +13.5	12						
13	13 37.2 -00.1	N 22 05.6 -00.4	336 05.8 +01.7	N 11 40.2 -00.7	89 31.1 -28.7	N 14 26.9 +13.4	13						
14	28 37.1 -00.1	N 22 05.2 -00.3	351 07.5 +01.7	N 11 39.5 -00.8	104 02.4 -28.6	N 14 40.3 +13.3	14						
15	43 37.0 -00.1	N 22 04.9 -00.3	6 09.2 +01.7	N 11 38.7 -00.7	118 33.8 -28.7	N 14 53.6 +13.3	15						
16	58 36.9 +00.0	N 22 04.6 -00.4	21 10.9 +01.7	N 11 38.0 -00.7	133 05.1 -28.7	N 15 06.9 +13.2	16						
17	73 36.9 -00.1	N 22 04.2 -00.3	36 12.6 +01.7	N 11 37.3 -00.8	147 36.4 -28.8	N 15 20.1 +13.1	17						
18	88 36.8 -00.1	N 22 03.9 -00.3	51 14.3 +01.7	N 11 36.5 -00.7	162 07.6 -28.8	N 15 33.2 +13.0	18						
19	103 36.7 -00.1	N 22 03.6 -00.4	66 16.0 +01.7	N 11 35.8 -00.8	176 38.8 -28.8	N 15 46.2 +12.9	19						
20	118 36.6 -00.1	N 22 03.2 -00.3	81 17.7 +01.7	N 11 35.0 -00.7	191 10.0 -28.9	N 15 59.1 +12.8	20						
21	133 36.5 -00.1	N 22 02.9 -00.3	96 19.4 +01.7	N 11 34.3 -00.7	205 41.1 -28.9	N 16 11.9 +12.7	21						
22	148 36.4 +00.0	N 22 02.6 -00.4	111 21.1 +01.7	N 11 33.6 -00.8	220 12.2 -28.9	N 16 24.6 +12.7	22						
23	163 36.4 -00.1	N 22 02.2 -00.3	126 22.8 +01.7	N 11 32.8 -00.7	234 43.3 -29.0	N 16 37.3 +12.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 15'7 15'6 15'6 15'6 15'5 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 57'5 57'4 57'3 57'1 57'0 56'9								
	SHA 250° 250° 250° 249° 249° 249°		SHA 212° 212° 212° 212° 212° 212°		SHA 331° 329° 327° 325° 323° 321°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:35		Greenwich Culmination Time: 06:50								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 51.6 +01.0	N 12 24.0 -00.5	249 46.4 +02.1	N 14 00.1 +00.1	309 30.7 +02.6	S 10 34.3 +00.1	00						
01	150 52.6 +01.0	N 12 23.5 -00.6	264 48.5 +02.1	N 14 00.2 +00.1	324 33.3 +02.5	S 10 34.4 +00.0	01						
02	165 53.6 +01.0	N 12 22.9 -00.6	279 50.6 +02.1	N 14 00.3 +00.1	339 35.8 +02.6	S 10 34.4 +00.1	02						
03	180 54.6 +01.1	N 12 22.3 -00.5	294 52.7 +02.1	N 14 00.4 +00.1	354 38.4 +02.5	S 10 34.5 +00.0	03						
04	195 55.7 +01.0	N 12 21.8 -00.6	309 54.8 +02.0	N 14 00.5 +00.2	9 40.9 +02.5	S 10 34.5 +00.0	04						
05	210 56.7 +01.0	N 12 21.2 -00.5	324 56.8 +02.1	N 14 00.7 +00.1	24 43.4 +02.6	S 10 34.5 +00.1	05						
06	225 57.7 +01.0	N 12 20.7 -00.6	339 58.9 +02.1	N 14 00.8 +00.1	39 46.0 +02.5	S 10 34.6 +00.0	06						
07	240 58.7 +01.0	N 12 20.1 -00.6	355 01.0 +02.1	N 14 00.9 +00.1	54 48.5 +02.6	S 10 34.6 +00.1	07						
08	255 59.7 +01.0	N 12 19.5 -00.5	10 03.1 +02.1	N 14 01.0 +00.1	69 51.1 +02.5	S 10 34.7 +00.0	08						
09	271 00.7 +01.0	N 12 19.0 -00.6	25 05.2 +02.1	N 14 01.1 +00.1	84 53.6 +02.6	S 10 34.7 +00.1	09						
10	286 01.7 +01.1	N 12 18.4 -00.5	40 07.3 +02.1	N 14 01.2 +00.1	99 56.2 +02.5	S 10 34.8 +00.0	10						
11	301 02.8 +01.0	N 12 17.9 -00.6	55 09.4 +02.0	N 14 01.3 +00.1	114 58.7 +02.6	S 10 34.8 +00.0	11						
12	316 03.8 +01.0	N 12 17.3 -00.6	70 11.4 +02.1	N 14 01.4 +00.2	130 01.3 +02.5	S 10 34.8 +00.1	12						
13	331 04.8 +01.0	N 12 16.7 -00.5	85 13.5 +02.1	N 14 01.6 +00.1	145 03.8 +02.6	S 10 34.9 +00.0	13						
14	346 05.8 +01.0	N 12 16.2 -00.6	100 15.6 +02.1	N 14 01.7 +00.1	160 06.4 +02.5	S 10 34.9 +00.1	14						
15	1 06.8 +01.0	N 12 15.6 -00.5	115 17.7 +02.1	N 14 01.8 +00.1	175 08.9 +02.6	S 10 35.0 +00.0	15						
16	16 07.8 +01.1	N 12 15.1 -00.6	130 19.8 +02.1	N 14 01.9 +00.1	190 11.5 +02.5	S 10 35.0 +00.1	16						
17	31 08.9 +01.0	N 12 14.5 -00.6	145 21.9 +02.1	N 14 02.0 +00.1	205 14.0 +02.6	S 10 35.1 +00.0	17						
18	46 09.9 +01.0	N 12 13.9 -00.5	160 24.0 +02.0	N 14 02.1 +00.1	220 16.6 +02.5	S 10 35.1 +00.0	18						
19	61 10.9 +01.0	N 12 13.4 -00.6	175 26.0 +02.1	N 14 02.2 +00.1	235 19.1 +02.6	S 10 35.1 +00.1	19						
20	76 11.9 +01.0	N 12 12.8 -00.5	190 28.1 +02.1	N 14 02.3 +00.2	250 21.7 +02.5	S 10 35.2 +00.0	20						
21	91 12.9 +01.1	N 12 12.3 -00.6	205 30.2 +02.1	N 14 02.5 +00.1	265 24.2 +02.6	S 10 35.2 +00.1	21						
22	106 14.0 +01.0	N 12 11.7 -00.6	220 32.3 +02.1	N 14 02.6 +00.1	280 26.8 +02.5	S 10 35.3 +00.0	22						
23	121 15.0 +01.0	N 12 11.1 -00.5	235 34.4 +02.1	N 14 02.7 +00.1	295 29.3 +02.6	S 10 35.3 +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 207° 207° 207° 207° 207° 207°		SHA 321° 321° 321° 321° 321° 321°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:55		Greenwich Culmination Time: 07:19		Greenwich Culmination Time: 03:21								

Table with columns for planet names (Sun, Venus, Moon, Mars, Jupiter, Saturn) and rows for UT (00-23). Each row contains GHA, ddGHA, Dec, and dDec values for each planet. Includes summary rows for UT, SD, HP, and SHA, and Greenwich Culmination Time.

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 34.4 -00.1	N 21 53.5 -00.3	142 06.7 +01.8	N 11 14.5 -00.7	237 25.3 -30.1	N 21 21.7 +10.0	00						
01	193 34.3 -00.1	N 21 53.2 -00.4	157 08.5 +01.8	N 11 13.8 -00.7	251 55.2 -30.2	N 21 31.7 +09.9	01						
02	208 34.2 -00.1	N 21 52.8 -00.3	172 10.3 +01.8	N 11 13.1 -00.8	266 25.0 -30.2	N 21 41.6 +09.8	02						
03	223 34.1 +00.0	N 21 52.5 -00.4	187 12.1 +01.8	N 11 12.3 -00.7	280 54.8 -30.3	N 21 51.4 +09.7	03						
04	238 34.1 -00.1	N 21 52.1 -00.4	202 13.9 +01.8	N 11 11.6 -00.7	295 24.5 -30.3	N 22 01.1 +09.5	04						
05	253 34.0 -00.1	N 21 51.7 -00.3	217 15.7 +01.8	N 11 10.9 -00.7	309 54.2 -30.4	N 22 10.6 +09.4	05						
06	268 33.9 -00.1	N 21 51.4 -00.4	232 17.5 +01.8	N 11 10.2 -00.8	324 23.8 -30.4	N 22 20.0 +09.3	06						
07	283 33.8 +00.0	N 21 51.0 -00.3	247 19.3 +01.8	N 11 09.4 -00.7	338 53.4 -30.5	N 22 29.3 +09.2	07						
08	298 33.8 -00.1	N 21 50.7 -00.4	262 21.1 +01.9	N 11 08.7 -00.7	353 22.9 -30.5	N 22 38.5 +09.1	08						
09	313 33.7 -00.1	N 21 50.3 -00.4	277 23.0 +01.8	N 11 08.0 -00.7	7 52.4 -30.6	N 22 47.6 +08.9	09						
10	328 33.6 -00.1	N 21 49.9 -00.3	292 24.8 +01.8	N 11 07.3 -00.7	22 21.8 -30.6	N 22 56.5 +08.8	10						
11	343 33.5 +00.0	N 21 49.6 -00.4	307 26.6 +01.8	N 11 06.6 -00.8	36 51.2 -30.6	N 23 05.3 +08.7	11						
12	358 33.5 -00.1	N 21 49.2 -00.4	322 28.4 +01.9	N 11 05.8 -00.7	51 20.6 -30.7	N 23 14.0 +08.6	12						
13	13 33.4 -00.1	N 21 48.8 -00.3	337 30.3 +01.8	N 11 05.1 -00.7	65 49.9 -30.8	N 23 22.6 +08.5	13						
14	28 33.3 -00.1	N 21 48.5 -00.4	352 32.1 +01.9	N 11 04.4 -00.7	80 19.1 -30.8	N 23 31.1 +08.3	14						
15	43 33.2 +00.0	N 21 48.1 -00.4	7 34.0 +01.8	N 11 03.7 -00.7	94 48.3 -30.8	N 23 39.4 +08.2	15						
16	58 33.2 -00.1	N 21 47.7 -00.3	22 35.8 +01.9	N 11 03.0 -00.7	109 17.5 -30.9	N 23 47.6 +08.1	16						
17	73 33.1 -00.1	N 21 47.4 -00.4	37 37.7 +01.8	N 11 02.3 -00.8	123 46.6 -30.9	N 23 55.7 +08.0	17						
18	88 33.0 +00.0	N 21 47.0 -00.4	52 39.5 +01.9	N 11 01.5 -00.7	138 15.7 -31.0	N 24 03.7 +07.8	18						
19	103 33.0 -00.1	N 21 46.6 -00.3	67 41.4 +01.8	N 11 00.8 -00.7	152 44.7 -31.0	N 24 11.5 +07.7	19						
20	118 32.9 -00.1	N 21 46.3 -00.4	82 43.2 +01.9	N 11 00.1 -00.7	167 13.7 -31.1	N 24 19.2 +07.6	20						
21	133 32.8 -00.1	N 21 45.9 -00.4	97 45.1 +01.8	N 10 59.4 -00.7	181 42.6 -31.1	N 24 26.8 +07.4	21						
22	148 32.7 +00.0	N 21 45.5 -00.3	112 46.9 +01.9	N 10 58.7 -00.7	196 11.5 -31.2	N 24 34.2 +07.3	22						
23	163 32.7 -00.1	N 21 45.2 -00.4	127 48.8 +01.9	N 10 58.0 -00.7	210 40.3 -31.2	N 24 41.5 +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 00'3 00'3 00'3 00'3 00'3 00'3		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 56'2 56'1 56'0 55'9 55'8 55'7								
	SHA 248° 248° 248° 247° 247° 247°		SHA 211° 211° 211° 211° 211° 211°		SHA 306° 304° 301° 299° 297° 295°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:29		Greenwich Culmination Time: 08:27								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	136 40.4 +01.0	N 11 57.0 -00.5	251 26.7 +02.0	N 14 05.5 +00.1	311 33.2 +02.5	S 10 36.4 +00.1	00						
01	151 41.4 +01.0	N 11 56.5 -00.6	266 28.7 +02.1	N 14 05.6 +00.1	326 35.7 +02.6	S 10 36.5 +00.0	01						
02	166 42.4 +01.1	N 11 55.9 -00.6	281 30.8 +02.1	N 14 05.7 +00.1	341 38.3 +02.5	S 10 36.5 +00.0	02						
03	181 43.5 +01.0	N 11 55.3 -00.5	296 32.9 +02.1	N 14 05.8 +00.1	356 40.8 +02.6	S 10 36.5 +00.1	03						
04	196 44.5 +01.0	N 11 54.8 -00.6	311 35.0 +02.1	N 14 05.9 +00.1	11 43.4 +02.5	S 10 36.6 +00.0	04						
05	211 45.5 +01.0	N 11 54.2 -00.6	326 37.1 +02.1	N 14 06.0 +00.1	26 45.9 +02.6	S 10 36.6 +00.1	05						
06	226 46.5 +01.0	N 11 53.6 -00.5	341 39.2 +02.1	N 14 06.1 +00.1	41 48.5 +02.5	S 10 36.7 +00.0	06						
07	241 47.5 +01.0	N 11 53.1 -00.6	356 41.3 +02.1	N 14 06.2 +00.1	56 51.0 +02.6	S 10 36.7 +00.1	07						
08	256 48.5 +01.1	N 11 52.5 -00.6	11 43.4 +02.1	N 14 06.3 +00.2	71 53.6 +02.6	S 10 36.8 +00.0	08						
09	271 49.6 +01.0	N 11 51.9 -00.5	26 45.5 +02.1	N 14 06.5 +00.1	86 56.2 +02.5	S 10 36.8 +00.1	09						
10	286 50.6 +01.0	N 11 51.4 -00.6	41 47.6 +02.1	N 14 06.6 +00.1	101 58.7 +02.6	S 10 36.9 +00.0	10						
11	301 51.6 +01.0	N 11 50.8 -00.6	56 49.7 +02.1	N 14 06.7 +00.1	117 01.3 +02.5	S 10 36.9 +00.0	11						
12	316 52.6 +01.0	N 11 50.2 -00.5	71 51.8 +02.1	N 14 06.8 +00.1	132 03.8 +02.6	S 10 36.9 +00.1	12						
13	331 53.6 +01.0	N 11 49.7 -00.6	86 53.9 +02.1	N 14 06.9 +00.1	147 06.4 +02.5	S 10 37.0 +00.0	13						
14	346 54.6 +01.1	N 11 49.1 -00.6	101 56.0 +02.1	N 14 07.0 +00.1	162 08.9 +02.6	S 10 37.0 +00.1	14						
15	1 55.7 +01.0	N 11 48.5 -00.5	116 58.1 +02.1	N 14 07.1 +00.1	177 11.5 +02.5	S 10 37.1 +00.0	15						
16	16 56.7 +01.0	N 11 48.0 -00.6	132 00.2 +02.1	N 14 07.2 +00.1	192 14.0 +02.6	S 10 37.1 +00.1	16						
17	31 57.7 +01.0	N 11 47.4 -00.6	147 02.3 +02.1	N 14 07.3 +00.1	207 16.6 +02.6	S 10 37.2 +00.0	17						
18	46 58.7 +01.0	N 11 46.8 -00.5	162 04.4 +02.1	N 14 07.4 +00.1	222 19.2 +02.5	S 10 37.2 +00.1	18						
19	61 59.7 +01.1	N 11 46.3 -00.6	177 06.5 +02.1	N 14 07.5 +00.1	237 21.7 +02.6	S 10 37.3 +00.0	19						
20	77 00.8 +01.0	N 11 45.7 -00.6	192 08.6 +02.0	N 14 07.6 +00.2	252 24.3 +02.5	S 10 37.3 +00.1	20						
21	92 01.8 +01.0	N 11 45.1 -00.5	207 10.6 +02.1	N 14 07.8 +00.1	267 26.8 +02.6	S 10 37.4 +00.0	21						
22	107 02.8 +01.0	N 11 44.6 -00.6	222 12.7 +02.1	N 14 07.9 +00.1	282 29.4 +02.5	S 10 37.4 +00.0	22						
23	122 03.8 +01.0	N 11 44.0 -00.6	237 14.8 +02.1	N 14 08.0 +00.1	297 31.9 +02.6	S 10 37.4 +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 00'2 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 206° 206° 206° 206° 206° 206°		SHA 321° 321° 321° 321° 321° 321°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:52		Greenwich Culmination Time: 07:13		Greenwich Culmination Time: 03:13								

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 32.6 -00.1	N 21 44.8 -00.4	142 50.7 +01.8	N 10 57.3 -00.7	225 09.1 -31.2	N 24 48.7 +07.1	00						
01	193 32.5 -00.1	N 21 44.4 -00.4	157 52.5 +01.9	N 10 56.6 -00.8	239 37.9 -31.3	N 24 55.8 +06.9	01						
02	208 32.4 +00.0	N 21 44.0 -00.3	172 54.4 +01.9	N 10 55.8 -00.7	254 06.6 -31.3	N 25 02.7 +06.8	02						
03	223 32.4 -00.1	N 21 43.7 -00.4	187 56.3 +01.9	N 10 55.1 -00.7	268 35.3 -31.3	N 25 09.5 +06.6	03						
04	238 32.3 -00.1	N 21 43.3 -00.4	202 58.2 +01.9	N 10 54.4 -00.7	283 04.0 -31.4	N 25 16.1 +06.6	04						
05	253 32.2 +00.0	N 21 42.9 -00.4	218 00.1 +01.9	N 10 53.7 -00.7	297 32.6 -31.5	N 25 22.7 +06.4	05						
06	268 32.2 -00.1	N 21 42.5 -00.3	233 02.0 +01.9	N 10 53.0 -00.7	312 01.1 -31.4	N 25 29.1 +06.2	06						
07	283 32.1 -00.1	N 21 42.2 -00.4	248 03.9 +01.9	N 10 52.3 -00.7	326 29.7 -31.5	N 25 35.3 +06.1	07						
08	298 32.0 -00.1	N 21 41.8 -00.4	263 05.8 +01.8	N 10 51.6 -00.7	340 58.2 -31.6	N 25 41.4 +06.0	08						
09	313 31.9 +00.0	N 21 41.4 -00.4	278 07.6 +02.0	N 10 50.9 -00.7	355 26.6 -31.5	N 25 47.4 +05.9	09						
10	328 31.9 -00.1	N 21 41.0 -00.3	293 09.6 +01.9	N 10 50.2 -00.7	9 55.1 -31.6	N 25 53.3 +05.7	10						
11	343 31.8 -00.1	N 21 40.7 -00.4	308 11.5 +01.9	N 10 49.5 -00.7	24 23.5 -31.7	N 25 59.0 +05.6	11						
12	358 31.7 +00.0	N 21 40.3 -00.4	323 13.4 +01.9	N 10 48.8 -00.7	38 51.8 -31.7	N 26 04.6 +05.4	12						
13	13 31.7 -00.1	N 21 39.9 -00.4	338 15.3 +01.9	N 10 48.1 -00.7	53 20.1 -31.7	N 26 10.0 +05.3	13						
14	28 31.6 -00.1	N 21 39.5 -00.4	353 17.2 +01.9	N 10 47.4 -00.7	67 48.4 -31.7	N 26 15.3 +05.2	14						
15	43 31.5 +00.0	N 21 39.1 -00.3	8 19.1 +01.9	N 10 46.7 -00.7	82 16.7 -31.7	N 26 20.5 +05.0	15						
16	58 31.5 -00.1	N 21 38.8 -00.4	23 21.0 +02.0	N 10 46.0 -00.7	96 45.0 -31.8	N 26 25.5 +04.9	16						
17	73 31.4 -00.1	N 21 38.4 -00.4	38 23.0 +01.9	N 10 45.3 -00.7	111 13.2 -31.8	N 26 30.4 +04.7	17						
18	88 31.3 +00.0	N 21 38.0 -00.4	53 24.9 +01.9	N 10 44.6 -00.7	125 41.4 -31.9	N 26 35.1 +04.6	18						
19	103 31.3 -00.1	N 21 37.6 -00.4	68 26.8 +02.0	N 10 43.9 -00.7	140 09.5 -31.8	N 26 39.7 +04.5	19						
20	118 31.2 -00.1	N 21 37.2 -00.4	83 28.8 +01.9	N 10 43.2 -00.7	154 37.7 -31.9	N 26 44.2 +04.3	20						
21	133 31.1 +00.0	N 21 36.8 -00.3	98 30.7 +01.9	N 10 42.5 -00.7	169 05.8 -31.9	N 26 48.5 +04.2	21						
22	148 31.1 -00.1	N 21 36.5 -00.4	113 32.6 +02.0	N 10 41.8 -00.7	183 33.9 -32.0	N 26 52.7 +04.0	22						
23	163 31.0 -00.1	N 21 36.1 -00.4	128 34.6 +01.9	N 10 41.1 -00.7	198 01.9 -31.9	N 26 56.7 +03.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 15'2 15'1 15'1 15'1 15'1 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'4 00'4 00'4		HP 55'6 55'5 55'5 55'4 55'3 55'2								
	SHA 247° 247° 247° 246° 246° 246°		SHA 211° 211° 211° 211° 211° 211°		SHA 292° 290° 288° 286° 283° 281°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:26		Greenwich Culmination Time: 09:18								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	137 04.8 +01.0	N 11 43.4 -00.6	252 16.9 +02.1	N 14 08.1 +00.1	312 34.5 +02.6	S 10 37.5 +00.0	00						
01	152 05.8 +01.1	N 11 42.8 -00.5	267 19.0 +02.1	N 14 08.2 +00.1	327 37.1 +02.5	S 10 37.5 +00.1	01						
02	167 06.9 +01.0	N 11 42.3 -00.6	282 21.1 +02.1	N 14 08.3 +00.1	342 39.6 +02.6	S 10 37.6 +00.0	02						
03	182 07.9 +01.0	N 11 41.7 -00.6	297 23.2 +02.1	N 14 08.4 +00.1	357 42.2 +02.5	S 10 37.6 +00.1	03						
04	197 08.9 +01.0	N 11 41.1 -00.5	312 25.3 +02.1	N 14 08.5 +00.1	12 44.7 +02.6	S 10 37.7 +00.0	04						
05	212 09.9 +01.0	N 11 40.6 -00.6	327 27.4 +02.1	N 14 08.6 +00.1	27 47.3 +02.6	S 10 37.7 +00.1	05						
06	227 10.9 +01.1	N 11 40.0 -00.6	342 29.5 +02.1	N 14 08.7 +00.1	42 49.9 +02.5	S 10 37.8 +00.0	06						
07	242 12.0 +01.0	N 11 39.4 -00.5	357 31.6 +02.1	N 14 08.8 +00.1	57 52.4 +02.6	S 10 37.8 +00.1	07						
08	257 13.0 +01.0	N 11 38.9 -00.6	12 33.7 +02.1	N 14 08.9 +00.2	72 55.0 +02.5	S 10 37.9 +00.0	08						
09	272 14.0 +01.0	N 11 38.3 -00.6	27 35.8 +02.1	N 14 09.1 +00.1	87 57.5 +02.6	S 10 37.9 +00.1	09						
10	287 15.0 +01.0	N 11 37.7 -00.5	42 37.9 +02.1	N 14 09.2 +00.1	103 00.1 +02.6	S 10 38.0 +00.0	10						
11	302 16.0 +01.0	N 11 37.2 -00.6	57 40.0 +02.1	N 14 09.3 +00.1	118 02.7 +02.5	S 10 38.0 +00.0	11						
12	317 17.0 +01.1	N 11 36.6 -00.6	72 42.1 +02.1	N 14 09.4 +00.1	133 05.2 +02.6	S 10 38.0 +00.1	12						
13	332 18.1 +01.0	N 11 36.0 -00.6	87 44.2 +02.1	N 14 09.5 +00.1	148 07.8 +02.5	S 10 38.1 +00.0	13						
14	347 19.1 +01.0	N 11 35.4 -00.5	102 46.3 +02.1	N 14 09.6 +00.1	163 10.3 +02.6	S 10 38.1 +00.1	14						
15	2 20.1 +01.0	N 11 34.9 -00.6	117 48.4 +02.1	N 14 09.7 +00.1	178 12.9 +02.6	S 10 38.2 +00.0	15						
16	17 21.1 +01.0	N 11 34.3 -00.6	132 50.5 +02.1	N 14 09.8 +00.1	193 15.5 +02.5	S 10 38.2 +00.1	16						
17	32 22.1 +01.1	N 11 33.7 -00.5	147 52.6 +02.1	N 14 09.9 +00.1	208 18.0 +02.6	S 10 38.3 +00.0	17						
18	47 23.2 +01.0	N 11 33.2 -00.6	162 54.7 +02.1	N 14 10.0 +00.1	223 20.6 +02.5	S 10 38.3 +00.1	18						
19	62 24.2 +01.0	N 11 32.6 -00.6	177 56.8 +02.1	N 14 10.1 +00.1	238 23.1 +02.6	S 10 38.4 +00.0	19						
20	77 25.2 +01.0	N 11 32.0 -00.6	192 58.9 +02.1	N 14 10.2 +00.1	253 25.7 +02.6	S 10 38.4 +00.1	20						
21	92 26.2 +01.0	N 11 31.4 -00.5	208 01.0 +02.1	N 14 10.3 +00.1	268 28.3 +02.5	S 10 38.5 +00.0	21						
22	107 27.2 +01.1	N 11 30.9 -00.6	223 03.1 +02.1	N 14 10.4 +00.1	283 30.8 +02.6	S 10 38.5 +00.1	22						
23	122 28.3 +01.0	N 11 30.3 -00.6	238 05.2 +02.2	N 14 10.5 +00.2	298 33.4 +02.5	S 10 38.6 +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 00'2 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 205° 205° 205° 205° 205° 205°		SHA 321° 321° 321° 321° 321° 321°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:50		Greenwich Culmination Time: 07:09		Greenwich Culmination Time: 03:09								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 30.9 +00.0	N 21 35.7 -00.4	143 36.5 +02.0	N 10 40.4 -00.7	212 30.0 -32.0	N 27 00.6 +03.8	00						
01	193 30.9 -00.1	N 21 35.3 -00.4	158 38.5 +01.9	N 10 39.7 -00.7	226 58.0 -32.0	N 27 04.4 +03.6	01						
02	208 30.8 -00.1	N 21 34.9 -00.4	173 40.4 +02.0	N 10 39.0 -00.7	241 26.0 -32.0	N 27 08.0 +03.4	02						
03	223 30.7 +00.0	N 21 34.5 -00.4	188 42.4 +02.0	N 10 38.3 -00.7	255 54.0 -32.0	N 27 11.4 +03.4	03						
04	238 30.7 -00.1	N 21 34.1 -00.4	203 44.4 +01.9	N 10 37.6 -00.7	270 22.0 -32.0	N 27 14.8 +03.2	04						
05	253 30.6 -00.1	N 21 33.7 -00.3	218 46.3 +02.0	N 10 36.9 -00.7	284 50.0 -32.1	N 27 18.0 +03.0	05						
06	268 30.5 +00.0	N 21 33.4 -00.4	233 48.3 +02.0	N 10 36.2 -00.7	299 17.9 -32.0	N 27 21.0 +02.9	06						
07	283 30.5 -00.1	N 21 33.0 -00.4	248 50.3 +01.9	N 10 35.5 -00.7	313 45.9 -32.1	N 27 23.9 +02.7	07						
08	298 30.4 -00.1	N 21 32.6 -00.4	263 52.2 +02.0	N 10 34.8 -00.6	328 13.8 -32.0	N 27 26.6 +02.7	08						
09	313 30.3 +00.0	N 21 32.2 -00.4	278 54.2 +02.0	N 10 34.2 -00.7	342 41.8 -32.1	N 27 29.3 +02.4	09						
10	328 30.3 -00.1	N 21 31.8 -00.4	293 56.2 +02.0	N 10 33.5 -00.7	357 09.7 -32.1	N 27 31.7 +02.3	10						
11	343 30.2 -00.1	N 21 31.4 -00.4	308 58.2 +02.0	N 10 32.8 -00.7	11 37.6 -32.1	N 27 34.0 +02.2	11						
12	358 30.1 +00.0	N 21 31.0 -00.4	324 00.2 +02.0	N 10 32.1 -00.7	26 05.5 -32.1	N 27 36.2 +02.1	12						
13	13 30.1 -00.1	N 21 30.6 -00.4	339 02.2 +02.0	N 10 31.4 -00.7	40 33.4 -32.1	N 27 38.3 +01.9	13						
14	28 30.0 -00.1	N 21 30.2 -00.4	354 04.2 +02.0	N 10 30.7 -00.7	55 01.3 -32.1	N 27 40.2 +01.7	14						
15	43 29.9 +00.0	N 21 29.8 -00.4	9 06.2 +02.0	N 10 30.0 -00.7	69 29.2 -32.1	N 27 41.9 +01.6	15						
16	58 29.9 -00.1	N 21 29.4 -00.4	24 08.2 +02.0	N 10 29.3 -00.6	83 57.1 -32.1	N 27 43.5 +01.5	16						
17	73 29.8 -00.1	N 21 29.0 -00.4	39 10.2 +02.0	N 10 28.7 -00.7	98 25.0 -32.0	N 27 45.0 +01.3	17						
18	88 29.7 +00.0	N 21 28.6 -00.4	54 12.2 +02.0	N 10 28.0 -00.7	112 53.0 -32.1	N 27 46.3 +01.1	18						
19	103 29.7 -00.1	N 21 28.2 -00.4	69 14.2 +02.0	N 10 27.3 -00.7	127 20.9 -32.1	N 27 47.4 +01.1	19						
20	118 29.6 +00.0	N 21 27.8 -00.4	84 16.2 +02.0	N 10 26.6 -00.7	141 48.8 -32.1	N 27 48.5 +00.8	20						
21	133 29.6 -00.1	N 21 27.4 -00.4	99 18.2 +02.1	N 10 25.9 -00.7	156 16.7 -32.0	N 27 49.3 +00.8	21						
22	148 29.5 -00.1	N 21 27.0 -00.4	114 20.3 +02.0	N 10 25.2 -00.6	170 44.7 -32.1	N 27 50.1 +00.6	22						
23	163 29.4 +00.0	N 21 26.6 -00.4	129 22.3 +02.0	N 10 24.6 -00.7	185 12.6 -32.0	N 27 50.7 +00.4	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 00'3 00'3 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 55'2 55'1 55'0 54'9 54'9 54'8								
	SHA 246° 246° 246° 245° 245° 245°		SHA 211° 211° 211° 211° 211° 211°		SHA 279° 276° 274° 272° 270° 267°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 14:23		Greenwich Culmination Time: 10:11								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	137 29.3 +01.0	N 11 29.7 -00.5	253 07.4 +02.1	N 14 10.7 +00.1	313 35.9 +02.6	S 10 38.6 +00.1	00						
01	152 30.3 +01.0	N 11 29.2 -00.6	268 09.5 +02.1	N 14 10.8 +00.1	328 38.5 +02.6	S 10 38.7 +00.0	01						
02	167 31.3 +01.0	N 11 28.6 -00.6	283 11.6 +02.1	N 14 10.9 +00.1	343 41.1 +02.5	S 10 38.7 +00.0	02						
03	182 32.3 +01.0	N 11 28.0 -00.6	298 13.7 +02.1	N 14 11.0 +00.1	358 43.6 +02.6	S 10 38.7 +00.1	03						
04	197 33.3 +01.1	N 11 27.4 -00.5	313 15.8 +02.1	N 14 11.1 +00.1	13 46.2 +02.5	S 10 38.8 +00.0	04						
05	212 34.4 +01.0	N 11 26.9 -00.6	328 17.9 +02.1	N 14 11.2 +00.1	28 48.7 +02.6	S 10 38.8 +00.1	05						
06	227 35.4 +01.0	N 11 26.3 -00.6	343 20.0 +02.1	N 14 11.3 +00.1	43 51.3 +02.6	S 10 38.9 +00.0	06						
07	242 36.4 +01.0	N 11 25.7 -00.6	358 22.1 +02.1	N 14 11.4 +00.1	58 53.9 +02.5	S 10 38.9 +00.1	07						
08	257 37.4 +01.0	N 11 25.1 -00.5	13 24.2 +02.1	N 14 11.5 +00.1	73 56.4 +02.6	S 10 39.0 +00.0	08						
09	272 38.4 +01.1	N 11 24.6 -00.6	28 26.3 +02.1	N 14 11.6 +00.1	88 59.0 +02.6	S 10 39.0 +00.1	09						
10	287 39.5 +01.0	N 11 24.0 -00.6	43 28.4 +02.1	N 14 11.7 +00.1	104 01.6 +02.5	S 10 39.1 +00.0	10						
11	302 40.5 +01.0	N 11 23.4 -00.5	58 30.5 +02.1	N 14 11.8 +00.1	119 04.1 +02.6	S 10 39.1 +00.1	11						
12	317 41.5 +01.0	N 11 22.9 -00.6	73 32.6 +02.1	N 14 11.9 +00.1	134 06.7 +02.5	S 10 39.2 +00.0	12						
13	332 42.5 +01.0	N 11 22.3 -00.6	88 34.7 +02.1	N 14 12.0 +00.1	149 09.2 +02.6	S 10 39.2 +00.1	13						
14	347 43.5 +01.1	N 11 21.7 -00.6	103 36.8 +02.1	N 14 12.1 +00.1	164 11.8 +02.6	S 10 39.3 +00.0	14						
15	2 44.6 +01.0	N 11 21.1 -00.5	118 38.9 +02.1	N 14 12.2 +00.1	179 14.4 +02.5	S 10 39.3 +00.1	15						
16	17 45.6 +01.0	N 11 20.6 -00.6	133 41.0 +02.1	N 14 12.3 +00.2	194 16.9 +02.6	S 10 39.4 +00.0	16						
17	32 46.6 +01.0	N 11 20.0 -00.6	148 43.1 +02.1	N 14 12.5 +00.1	209 19.5 +02.6	S 10 39.4 +00.1	17						
18	47 47.6 +01.0	N 11 19.4 -00.6	163 45.2 +02.1	N 14 12.6 +00.1	224 22.1 +02.5	S 10 39.5 +00.0	18						
19	62 48.6 +01.1	N 11 18.8 -00.5	178 47.3 +02.2	N 14 12.7 +00.1	239 24.6 +02.6	S 10 39.5 +00.1	19						
20	77 49.7 +01.0	N 11 18.3 -00.6	193 49.5 +02.1	N 14 12.8 +00.1	254 27.2 +02.6	S 10 39.6 +00.0	20						
21	92 50.7 +01.0	N 11 17.7 -00.6	208 51.6 +02.1	N 14 12.9 +00.1	269 29.8 +02.5	S 10 39.6 +00.1	21						
22	107 51.7 +01.0	N 11 17.1 -00.6	223 53.7 +02.1	N 14 13.0 +00.1	284 32.3 +02.6	S 10 39.7 +00.0	22						
23	122 52.7 +01.0	N 11 16.5 -00.5	238 55.8 +02.1	N 14 13.1 +00.1	299 34.9 +02.5	S 10 39.7 +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 00'2 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 205° 205° 205° 205° 204° 204°		SHA 321° 320° 320° 320° 320° 320°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:49		Greenwich Culmination Time: 07:06		Greenwich Culmination Time: 03:05								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 29.4 -00.1	N 21 26.2 -00.4	144 24.3 +02.1	N 10 23.9 -00.7	199 40.6 -32.0	N 27 51.1 +00.3	00							
01	193 29.3 -00.1	N 21 25.8 -00.4	159 26.4 +02.0	N 10 23.2 -00.7	214 08.6 -32.0	N 27 51.4 +00.2	01							
02	208 29.2 +00.0	N 21 25.4 -00.4	174 28.4 +02.0	N 10 22.5 -00.6	228 36.6 -32.0	N 27 51.6 +00.0	02							
03	223 29.2 -00.1	N 21 25.0 -00.4	189 30.4 +02.1	N 10 21.9 -00.7	243 04.6 -32.0	N 27 51.6 -00.1	03							
04	238 29.1 +00.0	N 21 24.6 -00.4	204 32.5 +02.0	N 10 21.2 -00.7	257 32.6 -32.0	N 27 51.5 -00.3	04							
05	253 29.1 -00.1	N 21 24.2 -00.4	219 34.5 +02.1	N 10 20.5 -00.7	272 00.6 -31.9	N 27 51.2 -00.4	05							
06	268 29.0 -00.1	N 21 23.8 -00.4	234 36.6 +02.0	N 10 19.8 -00.6	286 28.7 -31.9	N 27 50.8 -00.6	06							
07	283 28.9 +00.0	N 21 23.4 -00.4	249 38.6 +02.1	N 10 19.2 -00.7	300 56.8 -31.9	N 27 50.2 -00.6	07							
08	298 28.9 -00.1	N 21 23.0 -00.4	264 40.7 +02.0	N 10 18.5 -00.7	315 24.9 -31.9	N 27 49.6 -00.9	08							
09	313 28.8 +00.0	N 21 22.6 -00.4	279 42.7 +02.1	N 10 17.8 -00.7	329 53.0 -31.8	N 27 48.7 -01.0	09							
10	328 28.8 -00.1	N 21 22.2 -00.4	294 44.8 +02.1	N 10 17.1 -00.6	344 21.2 -31.8	N 27 47.7 -01.1	10							
11	343 28.7 -00.1	N 21 21.8 -00.5	309 46.9 +02.0	N 10 16.5 -00.7	358 49.4 -31.8	N 27 46.6 -01.2	11							
12	358 28.6 +00.0	N 21 21.3 -00.4	324 48.9 +02.1	N 10 15.8 -00.7	13 17.6 -31.8	N 27 45.4 -01.4	12							
13	13 28.6 -00.1	N 21 20.9 -00.4	339 51.0 +02.1	N 10 15.1 -00.6	27 45.8 -31.7	N 27 44.0 -01.6	13							
14	28 28.5 +00.0	N 21 20.5 -00.4	354 53.1 +02.1	N 10 14.5 -00.7	42 14.1 -31.7	N 27 42.4 -01.6	14							
15	43 28.5 -00.1	N 21 20.1 -00.4	9 55.2 +02.1	N 10 13.8 -00.7	56 42.4 -31.6	N 27 40.8 -01.9	15							
16	58 28.4 -00.1	N 21 19.7 -00.4	24 57.3 +02.1	N 10 13.1 -00.6	71 10.8 -31.6	N 27 38.9 -01.9	16							
17	73 28.3 +00.0	N 21 19.3 -00.4	39 59.4 +02.1	N 10 12.5 -00.7	85 39.2 -31.6	N 27 37.0 -02.1	17							
18	88 28.3 -00.1	N 21 18.9 -00.4	55 01.5 +02.0	N 10 11.8 -00.7	100 07.6 -31.6	N 27 34.9 -02.2	18							
19	103 28.2 +00.0	N 21 18.5 -00.5	70 03.5 +02.1	N 10 11.1 -00.6	114 36.0 -31.5	N 27 32.7 -02.4	19							
20	118 28.2 -00.1	N 21 18.0 -00.4	85 05.6 +02.1	N 10 10.5 -00.7	129 04.5 -31.4	N 27 30.3 -02.5	20							
21	133 28.1 +00.0	N 21 17.6 -00.4	100 07.7 +02.2	N 10 09.8 -00.7	143 33.1 -31.5	N 27 27.8 -02.7	21							
22	148 28.1 -00.1	N 21 17.2 -00.4	115 09.0 +02.1	N 10 09.1 -00.6	158 01.6 -31.4	N 27 25.1 -02.7	22							
23	163 28.0 -00.1	N 21 16.8 -00.4	130 12.0 +02.1	N 10 08.5 -00.7	172 30.2 -31.3	N 27 22.4 -03.0	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 245° 245° 244° 244° 244° 244°	Greenwich Culmination Time: 12:06	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 211° 211° 211° 211° 211° 211°	Greenwich Culmination Time: 14:20	UT 02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 14'9 14'8	HP 54'8 54'7 54'6 54'6 54'5 54'5	SHA 265° 263° 260° 258° 256° 254°	Greenwich Culmination Time: 11:04
UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	137 53.7 +01.1	N 11 16.0 -00.6	253 57.9 +02.1	N 14 13.2 +00.1	314 37.4 +02.6	S 10 39.7 +00.1	00							
01	152 54.8 +01.0	N 11 15.4 -00.6	268 60.0 +02.1	N 14 13.3 +00.1	329 40.0 +02.6	S 10 39.8 +00.0	01							
02	167 55.8 +01.0	N 11 14.8 -00.6	284 02.1 +02.1	N 14 13.4 +00.1	344 42.6 +02.5	S 10 39.8 +00.1	02							
03	182 56.8 +01.0	N 11 14.2 -00.5	299 04.2 +02.1	N 14 13.5 +00.1	359 45.1 +02.6	S 10 39.9 +00.0	03							
04	197 57.8 +01.0	N 11 13.7 -00.6	314 06.3 +02.1	N 14 13.6 +00.1	14 47.7 +02.6	S 10 39.9 +00.1	04							
05	212 58.8 +01.0	N 11 13.1 -00.6	329 08.4 +02.1	N 14 13.7 +00.1	29 50.3 +02.5	S 10 40.0 +00.0	05							
06	227 59.8 +01.1	N 11 12.5 -00.6	344 10.5 +02.1	N 14 13.8 +00.1	44 52.8 +02.6	S 10 40.0 +00.1	06							
07	243 00.9 +01.0	N 11 11.9 -00.5	359 12.6 +02.2	N 14 13.9 +00.1	59 55.4 +02.6	S 10 40.1 +00.0	07							
08	258 01.9 +01.0	N 11 11.4 -00.6	14 14.8 +02.1	N 14 14.0 +00.1	74 58.0 +02.5	S 10 40.1 +00.1	08							
09	273 02.9 +01.0	N 11 10.8 -00.6	29 16.9 +02.1	N 14 14.1 +00.1	90 00.5 +02.6	S 10 40.2 +00.0	09							
10	288 03.9 +01.0	N 11 10.2 -00.6	44 19.0 +02.1	N 14 14.2 +00.1	105 03.1 +02.6	S 10 40.2 +00.1	10							
11	303 04.9 +01.1	N 11 09.6 -00.6	59 21.1 +02.1	N 14 14.3 +00.1	120 05.7 +02.5	S 10 40.3 +00.0	11							
12	318 06.0 +01.0	N 11 09.0 -00.5	74 23.2 +02.1	N 14 14.4 +00.1	135 08.2 +02.6	S 10 40.3 +00.1	12							
13	333 07.0 +01.0	N 11 08.5 -00.6	89 25.3 +02.1	N 14 14.5 +00.1	150 10.8 +02.6	S 10 40.4 +00.0	13							
14	348 08.0 +01.0	N 11 07.9 -00.6	104 27.4 +02.1	N 14 14.6 +00.1	165 13.4 +02.5	S 10 40.4 +00.1	14							
15	3 09.0 +01.0	N 11 07.3 -00.6	119 29.5 +02.1	N 14 14.7 +00.1	180 15.9 +02.6	S 10 40.5 +00.0	15							
16	18 10.0 +01.1	N 11 06.7 -00.5	134 31.6 +02.2	N 14 14.8 +00.1	195 18.5 +02.6	S 10 40.5 +00.1	16							
17	33 11.1 +01.0	N 11 06.2 -00.6	149 33.8 +02.1	N 14 14.9 +00.1	210 21.1 +02.5	S 10 40.6 +00.0	17							
18	48 12.1 +01.0	N 11 05.6 -00.6	164 35.9 +02.1	N 14 15.0 +00.1	225 23.6 +02.6	S 10 40.6 +00.1	18							
19	63 13.1 +01.0	N 11 05.0 -00.6	179 38.0 +02.1	N 14 15.1 +00.2	240 26.2 +02.6	S 10 40.7 +00.0	19							
20	78 14.1 +01.0	N 11 04.4 -00.5	194 40.1 +02.1	N 14 15.3 +00.1	255 28.8 +02.5	S 10 40.7 +00.1	20							
21	93 15.1 +01.1	N 11 03.9 -00.6	209 42.2 +02.1	N 14 15.4 +00.1	270 31.3 +02.6	S 10 40.8 +00.0	21							
22	108 16.2 +01.0	N 11 03.3 -00.6	224 44.3 +02.1	N 14 15.5 +00.1	285 33.9 +02.6	S 10 40.8 +00.1	22							
23	123 17.2 +01.0	N 11 02.7 -00.6	239 46.4 +02.1	N 14 15.6 +00.1	300 36.5 +02.5	S 10 40.9 +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 204° 204° 204° 204° 204° 204°	Greenwich Culmination Time: 14:47	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 320° 320° 320° 320° 320° 320°	Greenwich Culmination Time: 07:03	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 021° 021° 021° 021° 021° 021°	Greenwich Culmination Time: 03:00

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 27.9 +00.0	N 21 16.4 -00.4	145 14.1 +02.1	N 10 07.8 -00.6	186 58.9 -31.3	N 27 19.4 -03.0	00							
01	193 27.9 -00.1	N 21 16.0 -00.5	160 16.2 +02.1	N 10 07.2 -00.7	201 27.6 -31.2	N 27 16.4 -03.2	01							
02	208 27.8 +00.0	N 21 15.5 -00.4	175 18.3 +02.1	N 10 06.5 -00.7	215 56.4 -31.2	N 27 13.2 -03.3	02							
03	223 27.8 -00.1	N 21 15.1 -00.4	190 20.4 +02.2	N 10 05.8 -00.6	230 25.2 -31.2	N 27 09.9 -03.4	03							
04	238 27.7 +00.0	N 21 14.7 -00.4	205 22.6 +02.1	N 10 05.2 -00.7	244 54.0 -31.1	N 27 06.5 -03.6	04							
05	253 27.7 -00.1	N 21 14.3 -00.4	220 24.7 +02.1	N 10 04.5 -00.6	259 22.9 -31.1	N 27 02.9 -03.7	05							
06	268 27.6 +00.0	N 21 13.9 -00.5	235 26.8 +02.2	N 10 03.9 -00.7	273 51.8 -31.0	N 26 59.2 -03.9	06							
07	283 27.6 -00.1	N 21 13.4 -00.4	250 29.0 +02.1	N 10 03.2 -00.6	288 20.8 -30.9	N 26 55.3 -04.0	07							
08	298 27.5 -00.1	N 21 13.0 -00.4	265 31.1 +02.2	N 10 02.6 -00.7	302 49.9 -30.9	N 26 51.3 -04.1	08							
09	313 27.4 +00.0	N 21 12.6 -00.4	280 33.3 +02.1	N 10 01.9 -00.7	317 19.0 -30.9	N 26 47.2 -04.2	09							
10	328 27.4 -00.1	N 21 12.2 -00.4	295 35.4 +02.2	N 10 01.2 -00.6	331 48.1 -30.8	N 26 43.0 -04.3	10							
11	343 27.3 +00.0	N 21 11.8 -00.5	310 37.6 +02.1	N 10 00.6 -00.7	346 17.3 -30.7	N 26 38.7 -04.5	11							
12	358 27.3 -00.1	N 21 11.3 -00.4	325 39.7 +02.2	N 09 59.9 -00.6	0 46.6 -30.7	N 26 34.2 -04.6	12							
13	13 27.2 +00.0	N 21 10.9 -00.4	340 41.9 +02.1	N 09 59.3 -00.7	15 15.9 -30.6	N 26 29.6 -04.8	13							
14	28 27.2 -00.1	N 21 10.5 -00.5	355 44.0 +02.2	N 09 58.6 -00.6	29 45.3 -30.6	N 26 24.8 -04.8	14							
15	43 27.1 +00.0	N 21 10.0 -00.4	10 46.2 +02.2	N 09 58.0 -00.7	44 14.7 -30.5	N 26 20.0 -05.0	15							
16	58 27.1 -00.1	N 21 09.6 -00.4	25 48.4 +02.1	N 09 57.3 -00.6	58 44.2 -30.4	N 26 15.0 -05.1	16							
17	73 27.0 +00.0	N 21 09.2 -00.4	40 50.5 +02.2	N 09 56.7 -00.7	73 13.8 -30.4	N 26 09.9 -05.3	17							
18	88 27.0 -00.1	N 21 08.8 -00.5	55 52.7 +02.2	N 09 56.0 -00.6	87 43.4 -30.3	N 26 04.6 -05.3	18							
19	103 26.9 +00.0	N 21 08.3 -00.4	70 54.9 +02.2	N 09 55.4 -00.6	102 13.1 -30.3	N 25 59.3 -05.5	19							
20	118 26.9 -00.1	N 21 07.9 -00.4	85 57.1 +02.2	N 09 54.8 -00.7	116 42.8 -30.2	N 25 53.8 -05.6	20							
21	133 26.8 +00.0	N 21 07.5 -00.5	100 59.3 +02.2	N 09 54.1 -00.6	131 12.6 -30.1	N 25 48.2 -05.7	21							
22	148 26.8 -00.1	N 21 07.0 -00.4	116 01.5 +02.2	N 09 53.5 -00.7	145 42.5 -30.1	N 25 42.5 -05.9	22							
23	163 26.7 +00.0	N 21 06.6 -00.4	131 03.7 +02.2	N 09 52.8 -00.6	160 12.4 -30.0	N 25 36.6 -05.9	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 244° 244° 243° 243° 243° 243°	Greenwich Culmination Time: 12:06	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 211° 211° 211° 211° 211° 211°	Greenwich Culmination Time: 14:17	UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8	HP 54'4 54'4 54'3 54'3 54'3 54'2	SHA 251° 249° 247° 245° 242° 240°	Greenwich Culmination Time: 11:56

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	138 18.2 +01.0	N 11 02.1 -00.6	254 48.5 +02.2	N 14 15.7 +00.1	315 39.0 +02.6	S 10 40.9 +00.1	00							
01	153 19.2 +01.0	N 11 01.5 -00.5	269 50.7 +02.1	N 14 15.8 +00.1	330 41.6 +02.6	S 10 41.0 +00.0	01							
02	168 20.2 +01.1	N 11 01.0 -00.6	284 52.8 +02.1	N 14 15.9 +00.1	345 44.2 +02.5	S 10 41.0 +00.1	02							
03	183 21.3 +01.0	N 11 00.4 -00.6	299 54.9 +02.1	N 14 16.0 +00.1	0 46.7 +02.6	S 10 41.1 +00.0	03							
04	198 22.3 +01.0	N 10 59.8 -00.6	314 57.0 +02.1	N 14 16.1 +00.1	15 49.3 +02.6	S 10 41.1 +00.1	04							
05	213 23.3 +01.0	N 10 59.2 -00.6	329 59.1 +02.1	N 14 16.2 +00.1	30 51.9 +02.5	S 10 41.2 +00.0	05							
06	228 24.3 +01.0	N 10 58.6 -00.5	345 01.2 +02.1	N 14 16.3 +00.1	45 54.4 +02.6	S 10 41.2 +00.1	06							
07	243 25.3 +01.1	N 10 58.1 -00.6	0 03.3 +02.2	N 14 16.4 +00.1	60 57.0 +02.6	S 10 41.3 +00.0	07							
08	258 26.4 +01.0	N 10 57.5 -00.6	15 05.5 +02.1	N 14 16.5 +00.1	75 59.6 +02.5	S 10 41.3 +00.1	08							
09	273 27.4 +01.0	N 10 56.9 -00.6	30 07.6 +02.1	N 14 16.6 +00.1	91 02.1 +02.6	S 10 41.4 +00.0	09							
10	288 28.4 +01.0	N 10 56.3 -00.6	45 09.7 +02.1	N 14 16.7 +00.1	106 04.7 +02.6	S 10 41.4 +00.1	10							
11	303 29.4 +01.0	N 10 55.7 -00.5	60 11.8 +02.1	N 14 16.8 +00.1	121 07.3 +02.6	S 10 41.5 +00.0	11							
12	318 30.4 +01.1	N 10 55.2 -00.6	75 13.9 +02.1	N 14 16.9 +00.1	136 09.9 +02.5	S 10 41.5 +00.1	12							
13	333 31.5 +01.0	N 10 54.6 -00.6	90 16.0 +02.1	N 14 17.0 +00.1	151 12.4 +02.6	S 10 41.6 +00.0	13							
14	348 32.5 +01.0	N 10 54.0 -00.6	105 18.1 +02.2	N 14 17.1 +00.1	166 15.0 +02.6	S 10 41.6 +00.1	14							
15	3 33.5 +01.0	N 10 53.4 -00.6	120 20.3 +02.1	N 14 17.2 +00.1	181 17.6 +02.5	S 10 41.7 +00.0	15							
16	18 34.5 +01.0	N 10 52.8 -00.5	135 22.4 +02.1	N 14 17.3 +00.1	196 20.1 +02.6	S 10 41.7 +00.1	16							
17	33 35.5 +01.1	N 10 52.3 -00.6	150 24.5 +02.1	N 14 17.4 +00.1	211 22.7 +02.6	S 10 41.8 +00.0	17							
18	48 36.6 +01.0	N 10 51.7 -00.6	165 26.6 +02.1	N 14 17.5 +00.1	226 25.3 +02.5	S 10 41.8 +00.1	18							
19	63 37.6 +01.0	N 10 51.1 -00.6	180 28.7 +02.2	N 14 17.6 +00.1	241 27.8 +02.6	S 10 41.9 +00.0	19							
20	78 38.6 +01.0	N 10 50.5 -00.6	195 30.9 +02.1	N 14 17.7 +00.1	256 30.4 +02.6	S 10 41.9 +00.1	20							
21	93 39.6 +01.0	N 10 49.9 -00.5	210 33.0 +02.1	N 14 17.8 +00.1	271 33.0 +02.6	S 10 42.0 +00.0	21							
22	108 40.6 +01.1	N 10 49.4 -00.6	225 35.1 +02.1	N 14 17.9 +00.1	286 35.6 +02.5	S 10 42.0 +00.1	22							
23	123 41.7 +01.0	N 10 48.8 -00.6	240 37.2 +02.1	N 14 18.0 +00.1	301 38.1 +02.6	S 10 42.1 +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 204° 204° 204° 203° 203° 203°	Greenwich Culmination Time: 14:45	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 320° 320° 320° 320° 320° 320°	Greenwich Culmination Time: 06:59	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 021° 021° 021° 021° 021° 021°	Greenwich Culmination Time: 02:56

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 26.7 -00.1	N 21 06.2 -00.4	146 05.9 +02.2	N 09 52.2 -00.7	174 42.4 -29.9	N 25 30.7 -06.1	00						
01	193 26.6 -00.1	N 21 05.8 -00.5	161 08.1 +02.2	N 09 51.5 -00.6	189 12.5 -29.9	N 25 24.6 -06.2	01						
02	208 26.5 +00.0	N 21 05.3 -00.4	176 10.3 +02.2	N 09 50.9 -00.6	203 42.6 -29.8	N 25 18.4 -06.3	02						
03	223 26.5 -00.1	N 21 04.9 -00.5	191 12.5 +02.2	N 09 50.3 -00.7	218 12.8 -29.7	N 25 12.1 -06.4	03						
04	238 26.4 +00.0	N 21 04.4 -00.4	206 14.7 +02.2	N 09 49.6 -00.6	232 43.1 -29.7	N 25 05.7 -06.6	04						
05	253 26.4 -00.1	N 21 04.0 -00.4	221 16.9 +02.2	N 09 49.0 -00.6	247 13.4 -29.6	N 24 59.1 -06.6	05						
06	268 26.3 +00.0	N 21 03.6 -00.5	236 19.1 +02.2	N 09 48.4 -00.7	261 43.8 -29.5	N 24 52.5 -06.8	06						
07	283 26.3 -00.1	N 21 03.1 -00.4	251 21.3 +02.3	N 09 47.7 -00.6	276 14.3 -29.5	N 24 45.7 -06.8	07						
08	298 26.2 +00.0	N 21 02.7 -00.4	266 23.6 +02.2	N 09 47.1 -00.6	290 44.8 -29.4	N 24 38.9 -07.0	08						
09	313 26.2 +00.0	N 21 02.3 -00.5	281 25.8 +02.2	N 09 46.5 -00.7	305 15.4 -29.3	N 24 31.9 -07.1	09						
10	328 26.2 -00.1	N 21 01.8 -00.4	296 28.0 +02.3	N 09 45.8 -00.6	319 46.1 -29.3	N 24 24.8 -07.2	10						
11	343 26.1 +00.0	N 21 01.4 -00.5	311 30.3 +02.2	N 09 45.2 -00.6	334 16.8 -29.2	N 24 17.6 -07.3	11						
12	358 26.1 -00.1	N 21 00.9 -00.4	326 32.5 +02.3	N 09 44.6 -00.7	348 47.6 -29.1	N 24 10.3 -07.4	12						
13	13 26.0 +00.0	N 21 00.5 -00.4	341 34.8 +02.2	N 09 43.9 -00.6	3 18.5 -29.1	N 24 02.9 -07.6	13						
14	28 26.0 -00.1	N 21 00.1 -00.5	356 37.0 +02.3	N 09 43.3 -00.6	17 49.4 -28.9	N 23 55.3 -07.6	14						
15	43 25.9 +00.0	N 20 59.6 -00.4	11 39.3 +02.2	N 09 42.7 -00.7	32 20.5 -29.0	N 23 47.7 -07.7	15						
16	58 25.9 -00.1	N 20 59.2 -00.5	26 41.5 +02.3	N 09 42.0 -00.6	46 51.5 -28.8	N 23 40.0 -07.8	16						
17	73 25.8 +00.0	N 20 58.7 -00.4	41 43.8 +02.2	N 09 41.4 -00.6	61 22.7 -28.8	N 23 32.2 -08.0	17						
18	88 25.8 -00.1	N 20 58.3 -00.4	56 46.0 +02.3	N 09 40.8 -00.6	75 53.9 -28.7	N 23 24.2 -08.0	18						
19	103 25.7 +00.0	N 20 57.9 -00.5	71 48.3 +02.3	N 09 40.2 -00.7	90 25.2 -28.6	N 23 16.2 -08.2	19						
20	118 25.7 -00.1	N 20 57.4 -00.4	86 50.6 +02.2	N 09 39.5 -00.6	104 56.6 -28.5	N 23 08.0 -08.2	20						
21	133 25.6 +00.0	N 20 57.0 -00.5	101 52.8 +02.3	N 09 38.9 -00.6	119 28.1 -28.5	N 22 59.8 -08.3	21						
22	148 25.6 -00.1	N 20 56.5 -00.4	116 55.1 +02.3	N 09 38.3 -00.6	133 59.6 -28.4	N 22 51.5 -08.5	22						
23	163 25.5 +00.0	N 20 56.1 -00.5	131 57.4 +02.3	N 09 37.7 -00.7	148 31.2 -28.4	N 22 43.0 -08.5	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 00'4 00'4 00'4 00'4 00'4 00'4		SD 14'8 14'8 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'2 54'2 54'1 54'1 54'1 54'0								
	SHA 243° 243° 242° 242° 242° 242°		SHA 211° 211° 211° 210° 210° 210°		SHA 238° 236° 234° 232° 230° 228°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 14:13		Greenwich Culmination Time: 12:46								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	138 42.7 +01.0	N 10 48.2 -00.6	255 39.3 +02.1	N 14 18.1 +00.1	316 40.7 +02.6	S 10 42.1 +00.1	00						
01	153 43.7 +01.0	N 10 47.6 -00.6	270 41.4 +02.2	N 14 18.2 +00.1	331 43.3 +02.5	S 10 42.2 +00.0	01						
02	168 44.7 +01.1	N 10 47.0 -00.5	285 43.6 +02.1	N 14 18.3 +00.1	346 45.8 +02.6	S 10 42.2 +00.1	02						
03	183 45.8 +01.0	N 10 46.5 -00.6	300 45.7 +02.1	N 14 18.4 +00.1	1 48.4 +02.6	S 10 42.3 +00.0	03						
04	198 46.8 +01.0	N 10 45.9 -00.6	315 47.8 +02.1	N 14 18.5 +00.1	16 51.0 +02.6	S 10 42.3 +00.1	04						
05	213 47.8 +01.0	N 10 45.3 -00.6	330 49.9 +02.1	N 14 18.6 +00.1	31 53.6 +02.5	S 10 42.4 +00.0	05						
06	228 48.8 +01.0	N 10 44.7 -00.6	345 52.0 +02.2	N 14 18.7 +00.1	46 56.1 +02.6	S 10 42.4 +00.1	06						
07	243 49.8 +01.1	N 10 44.1 -00.6	0 54.2 +02.1	N 14 18.8 +00.1	61 58.7 +02.6	S 10 42.5 +00.0	07						
08	258 50.9 +01.0	N 10 43.5 -00.5	15 56.3 +02.1	N 14 18.9 +00.1	77 01.3 +02.5	S 10 42.5 +00.1	08						
09	273 51.9 +01.0	N 10 43.0 -00.6	30 58.4 +02.1	N 14 19.0 +00.1	92 03.8 +02.6	S 10 42.6 +00.0	09						
10	288 52.9 +01.0	N 10 42.4 -00.6	46 00.5 +02.1	N 14 19.1 +00.1	107 06.4 +02.6	S 10 42.6 +00.1	10						
11	303 53.9 +01.0	N 10 41.8 -00.6	61 02.6 +02.2	N 14 19.2 +00.1	122 09.0 +02.6	S 10 42.7 +00.0	11						
12	318 54.9 +01.1	N 10 41.2 -00.6	76 04.8 +02.1	N 14 19.3 +00.1	137 11.6 +02.5	S 10 42.7 +00.1	12						
13	333 56.0 +01.0	N 10 40.6 -00.6	91 06.9 +02.1	N 14 19.4 +00.1	152 14.1 +02.6	S 10 42.8 +00.0	13						
14	348 57.0 +01.0	N 10 40.0 -00.5	106 09.0 +02.1	N 14 19.5 +00.1	167 16.7 +02.6	S 10 42.8 +00.1	14						
15	3 58.0 +01.0	N 10 39.5 -00.6	121 11.1 +02.2	N 14 19.6 +00.1	182 19.3 +02.5	S 10 42.9 +00.0	15						
16	18 59.0 +01.0	N 10 38.9 -00.6	136 13.3 +02.1	N 14 19.7 +00.1	197 21.8 +02.6	S 10 42.9 +00.1	16						
17	34 00.0 +01.1	N 10 38.3 -00.6	151 15.4 +02.1	N 14 19.8 +00.1	212 24.4 +02.6	S 10 43.0 +00.0	17						
18	49 01.1 +01.0	N 10 37.7 -00.6	166 17.5 +02.1	N 14 19.9 +00.1	227 27.0 +02.6	S 10 43.0 +00.1	18						
19	64 02.1 +01.0	N 10 37.1 -00.6	181 19.6 +02.1	N 14 20.0 +00.1	242 29.6 +02.5	S 10 43.1 +00.0	19						
20	79 03.1 +01.0	N 10 36.5 -00.5	196 21.7 +02.2	N 14 20.1 +00.1	257 32.1 +02.6	S 10 43.1 +00.1	20						
21	94 04.1 +01.0	N 10 36.0 -00.6	211 23.9 +02.1	N 14 20.2 +00.1	272 34.7 +02.6	S 10 43.2 +00.0	21						
22	109 05.1 +01.1	N 10 35.4 -00.6	226 26.0 +02.1	N 14 20.3 +00.1	287 37.3 +02.6	S 10 43.2 +00.1	22						
23	124 06.2 +01.0	N 10 34.8 -00.6	241 28.1 +02.1	N 14 20.4 +00.1	302 39.9 +02.5	S 10 43.3 +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 00'2 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 203° 203° 203° 203° 203° 203°		SHA 320° 320° 320° 320° 320° 320°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:44		Greenwich Culmination Time: 06:56		Greenwich Culmination Time: 02:52								

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 25.5 -00.1	N 20 55.6 -00.4	146 59.7 +02.3	N 09 37.0 -00.6	163 02.8 -28.2	N 22 34.5 -08.6	00										
01	193 25.4 +00.0	N 20 55.2 -00.5	162 02.0 +02.3	N 09 36.4 -00.6	177 34.6 -28.2	N 22 25.9 -08.8	01										
02	208 25.4 +00.0	N 20 54.7 -00.4	177 04.3 +02.3	N 09 35.8 -00.6	192 06.4 -28.2	N 22 17.1 -08.8	02										
03	223 25.4 -00.1	N 20 54.3 -00.5	192 06.6 +02.3	N 09 35.2 -00.6	206 38.2 -28.0	N 22 08.3 -08.9	03										
04	238 25.3 +00.0	N 20 53.8 -00.4	207 08.9 +02.3	N 09 34.6 -00.6	221 10.2 -28.0	N 21 59.4 -09.0	04										
05	253 25.3 -00.1	N 20 53.4 -00.5	222 11.2 +02.3	N 09 34.0 -00.7	235 42.2 -27.9	N 21 50.4 -09.1	05										
06	268 25.2 +00.0	N 20 52.9 -00.4	237 13.5 +02.3	N 09 33.3 -00.6	250 14.3 -27.9	N 21 41.3 -09.2	06										
07	283 25.2 -00.1	N 20 52.5 -00.5	252 15.8 +02.3	N 09 32.7 -00.6	264 46.4 -27.7	N 21 32.1 -09.2	07										
08	298 25.1 +00.0	N 20 52.0 -00.4	267 18.1 +02.3	N 09 32.1 -00.6	279 18.7 -27.7	N 21 22.9 -09.4	08										
09	313 25.1 -00.1	N 20 51.6 -00.5	282 20.4 +02.3	N 09 31.5 -00.6	293 51.0 -27.7	N 21 13.5 -09.4	09										
10	328 25.0 +00.0	N 20 51.1 -00.4	297 22.7 +02.4	N 09 30.9 -00.6	308 23.3 -27.5	N 21 04.1 -09.6	10										
11	343 25.0 +00.0	N 20 50.7 -00.5	312 25.1 +02.3	N 09 30.3 -00.6	322 55.8 -27.5	N 20 54.5 -09.6	11										
12	358 25.0 -00.1	N 20 50.2 -00.4	327 27.4 +02.3	N 09 29.7 -00.6	337 28.3 -27.4	N 20 44.9 -09.7	12										
13	13 24.9 +00.0	N 20 49.8 -00.5	342 29.7 +02.4	N 09 29.1 -00.7	352 00.9 -27.4	N 20 35.2 -09.8	13										
14	28 24.9 -00.1	N 20 49.3 -00.4	357 32.1 +02.3	N 09 28.4 -00.6	6 33.5 -27.3	N 20 25.4 -09.9	14										
15	43 24.8 +00.0	N 20 48.9 -00.5	12 34.4 +02.4	N 09 27.8 -00.6	21 06.2 -27.2	N 20 15.5 -09.9	15										
16	58 24.8 +00.0	N 20 48.4 -00.5	27 36.8 +02.3	N 09 27.2 -00.6	35 39.0 -27.2	N 20 05.6 -10.1	16										
17	73 24.8 -00.1	N 20 47.9 -00.4	42 39.1 +02.4	N 09 26.6 -00.6	50 11.8 -27.0	N 19 55.5 -10.1	17										
18	88 24.7 +00.0	N 20 47.5 -00.5	57 41.5 +02.3	N 09 26.0 -00.6	64 44.8 -27.0	N 19 45.4 -10.2	18										
19	103 24.7 -00.1	N 20 47.0 -00.4	72 43.8 +02.4	N 09 25.4 -00.6	79 17.8 -27.0	N 19 35.2 -10.3	19										
20	118 24.6 +00.0	N 20 46.6 -00.5	87 46.2 +02.3	N 09 24.8 -00.6	93 50.8 -26.9	N 19 24.9 -10.3	20										
21	133 24.6 +00.0	N 20 46.1 -00.5	102 48.5 +02.4	N 09 24.2 -00.6	108 23.9 -26.8	N 19 14.6 -10.5	21										
22	148 24.6 -00.1	N 20 45.6 -00.4	117 50.9 +02.4	N 09 23.6 -00.6	122 57.1 -26.7	N 19 04.1 -10.5	22										
23	163 24.5 +00.0	N 20 45.2 -00.5	132 53.3 +02.3	N 09 23.0 -00.6	137 30.4 -26.7	N 18 53.6 -10.5	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 242° 242° 241° 241° 241° 241°	Greenwich Culmination Time: 12:06		UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 210° 210° 210° 210° 210° 210°	Greenwich Culmination Time: 14:09		UT 02 06 10 14 18 22	SD 14'7 14'7 14'7 14'7 14'7 14'7	HP 54'0 54'0 54'0 54'0 54'0 54'0	SHA 225° 223° 221° 219° 217° 216°	Greenwich Culmination Time: 13:32

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	139 07.2 +01.0	N 10 34.2 -00.6	256 30.2 +02.2	N 14 20.5 +00.1	317 42.4 +02.6	S 10 43.3 +00.1	00										
01	154 08.2 +01.0	N 10 33.6 -00.6	271 32.4 +02.1	N 14 20.6 +00.1	332 45.0 +02.6	S 10 43.4 +00.0	01										
02	169 09.2 +01.0	N 10 33.0 -00.5	286 34.5 +02.1	N 14 20.7 +00.1	347 47.6 +02.6	S 10 43.4 +00.1	02										
03	184 10.2 +01.1	N 10 32.5 -00.6	301 36.6 +02.1	N 14 20.8 +00.1	2 50.2 +02.5	S 10 43.5 +00.1	03										
04	199 11.3 +01.0	N 10 31.9 -00.6	316 38.7 +02.2	N 14 20.9 +00.1	17 52.7 +02.6	S 10 43.6 +00.0	04										
05	214 12.3 +01.0	N 10 31.3 -00.6	331 40.9 +02.1	N 14 21.0 +00.1	32 55.3 +02.6	S 10 43.6 +00.1	05										
06	229 13.3 +01.0	N 10 30.7 -00.6	346 43.0 +02.1	N 14 21.1 +00.1	47 57.9 +02.6	S 10 43.7 +00.0	06										
07	244 14.3 +01.1	N 10 30.1 -00.6	1 45.1 +02.1	N 14 21.2 +00.1	63 00.5 +02.5	S 10 43.7 +00.1	07										
08	259 15.4 +01.0	N 10 29.5 -00.6	16 47.2 +02.2	N 14 21.3 +00.1	78 03.0 +02.6	S 10 43.8 +00.0	08										
09	274 16.4 +01.0	N 10 28.9 -00.5	31 49.4 +02.1	N 14 21.4 +00.1	93 05.6 +02.6	S 10 43.8 +00.1	09										
10	289 17.4 +01.0	N 10 28.4 -00.6	46 51.5 +02.1	N 14 21.5 +00.1	108 08.2 +02.6	S 10 43.9 +00.0	10										
11	304 18.4 +01.0	N 10 27.8 -00.6	61 53.6 +02.1	N 14 21.6 +00.1	123 10.8 +02.5	S 10 43.9 +00.1	11										
12	319 19.4 +01.1	N 10 27.2 -00.6	76 55.7 +02.2	N 14 21.7 +00.0	138 13.3 +02.6	S 10 44.0 +00.0	12										
13	334 20.5 +01.0	N 10 26.6 -00.6	91 57.9 +02.1	N 14 21.7 +00.1	153 15.9 +02.6	S 10 44.0 +00.1	13										
14	349 21.5 +01.0	N 10 26.0 -00.6	106 60.0 +02.1	N 14 21.8 +00.1	168 18.5 +02.6	S 10 44.1 +00.0	14										
15	4 22.5 +01.0	N 10 25.4 -00.6	122 02.1 +02.2	N 14 21.9 +00.1	183 21.1 +02.5	S 10 44.1 +00.1	15										
16	19 23.5 +01.0	N 10 24.8 -00.5	137 04.3 +02.1	N 14 22.0 +00.1	198 23.6 +02.6	S 10 44.2 +00.0	16										
17	34 24.5 +01.1	N 10 24.3 -00.6	152 06.4 +02.1	N 14 22.1 +00.1	213 26.2 +02.6	S 10 44.2 +00.1	17										
18	49 25.6 +01.0	N 10 23.7 -00.6	167 08.5 +02.1	N 14 22.2 +00.1	228 28.8 +02.6	S 10 44.3 +00.0	18										
19	64 26.6 +01.0	N 10 23.1 -00.6	182 10.6 +02.2	N 14 22.3 +00.1	243 31.4 +02.5	S 10 44.3 +00.1	19										
20	79 27.6 +01.0	N 10 22.5 -00.6	197 12.8 +02.1	N 14 22.4 +00.1	258 33.9 +02.6	S 10 44.4 +00.0	20										
21	94 28.6 +01.1	N 10 21.9 -00.6	212 14.9 +02.1	N 14 22.5 +00.1	273 36.5 +02.6	S 10 44.4 +00.1	21										
22	109 29.7 +01.0	N 10 21.3 -00.6	227 17.0 +02.2	N 14 22.6 +00.1	288 39.1 +02.6	S 10 44.5 +00.0	22										
23	124 30.7 +01.0	N 10 20.7 -00.6	242 19.2 +02.1	N 14 22.7 +00.1	303 41.7 +02.5	S 10 44.5 +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 203° 202° 202° 202° 202° 202°	Greenwich Culmination Time: 14:42		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 320° 320° 320° 320° 320° 320°	Greenwich Culmination Time: 06:53		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 021° 021° 021° 021° 021° 021°	Greenwich Culmination Time: 02:48

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.5 -00.1	N 20 44.7 -00.4	147 55.6 +02.4	N 09 22.4 -00.6	152 03.7 -26.7	N 18 43.1 -10.7	00						
01	193 24.4 +00.0	N 20 44.3 -00.5	162 58.0 +02.4	N 09 21.8 -00.6	166 37.0 -26.5	N 18 32.4 -10.7	01						
02	208 24.4 +00.0	N 20 43.8 -00.5	178 00.4 +02.4	N 09 21.2 -00.6	181 10.5 -26.5	N 18 21.7 -10.8	02						
03	223 24.4 -00.1	N 20 43.3 -00.4	193 02.8 +02.4	N 09 20.6 -00.6	195 44.0 -26.4	N 18 10.9 -10.9	03						
04	238 24.3 +00.0	N 20 42.9 -00.5	208 05.2 +02.4	N 09 20.0 -00.6	210 17.6 -26.4	N 17 60.0 -10.9	04						
05	253 24.3 -00.1	N 20 42.4 -00.5	223 07.6 +02.4	N 09 19.4 -00.6	224 51.2 -26.3	N 17 49.1 -11.1	05						
06	268 24.2 +00.0	N 20 41.9 -00.4	238 10.0 +02.4	N 09 18.8 -00.5	239 24.9 -26.3	N 17 38.0 -11.0	06						
07	283 24.2 +00.0	N 20 41.5 -00.5	253 12.4 +02.4	N 09 18.3 -00.6	253 58.6 -26.2	N 17 27.0 -11.2	07						
08	298 24.2 -00.1	N 20 41.0 -00.5	268 14.8 +02.4	N 09 17.7 -00.6	268 32.4 -26.1	N 17 15.8 -11.2	08						
09	313 24.1 +00.0	N 20 40.5 -00.4	283 17.2 +02.4	N 09 17.1 -00.6	283 06.3 -26.0	N 17 04.6 -11.3	09						
10	328 24.1 -00.1	N 20 40.1 -00.5	298 19.6 +02.4	N 09 16.5 -00.6	297 40.3 -26.1	N 16 53.3 -11.3	10						
11	343 24.0 +00.0	N 20 39.6 -00.5	313 22.0 +02.4	N 09 15.9 -00.6	312 14.2 -25.9	N 16 42.0 -11.5	11						
12	358 24.0 +00.0	N 20 39.1 -00.4	328 24.4 +02.4	N 09 15.3 -00.6	326 48.3 -25.9	N 16 30.5 -11.4	12						
13	13 24.0 -00.1	N 20 38.7 -00.5	343 26.8 +02.5	N 09 14.7 -00.6	341 22.4 -25.8	N 16 19.1 -11.6	13						
14	28 23.9 +00.0	N 20 38.2 -00.5	358 29.3 +02.4	N 09 14.1 -00.5	355 56.6 -25.8	N 16 07.5 -11.6	14						
15	43 23.9 +00.0	N 20 37.7 -00.4	13 31.7 +02.4	N 09 13.6 -00.6	10 30.8 -25.7	N 15 55.9 -11.6	15						
16	58 23.9 -00.1	N 20 37.3 -00.5	28 34.1 +02.5	N 09 13.0 -00.6	25 05.1 -25.7	N 15 44.3 -11.8	16						
17	73 23.8 +00.0	N 20 36.8 -00.5	43 36.6 +02.4	N 09 12.4 -00.6	39 39.4 -25.6	N 15 32.5 -11.8	17						
18	88 23.8 +00.0	N 20 36.3 -00.5	58 39.0 +02.5	N 09 11.8 -00.6	54 13.8 -25.6	N 15 20.7 -11.8	18						
19	103 23.8 -00.1	N 20 35.8 -00.4	73 41.5 +02.4	N 09 11.2 -00.5	68 48.2 -25.5	N 15 08.9 -11.9	19						
20	118 23.7 +00.0	N 20 35.4 -00.5	88 43.9 +02.5	N 09 10.7 -00.6	83 22.7 -25.5	N 14 57.0 -12.0	20						
21	133 23.7 +00.0	N 20 34.9 -00.5	103 46.4 +02.4	N 09 10.1 -00.6	97 57.2 -25.4	N 14 45.0 -12.0	21						
22	148 23.7 -00.1	N 20 34.4 -00.5	118 48.8 +02.5	N 09 09.5 -00.6	112 31.8 -25.3	N 14 33.0 -12.0	22						
23	163 23.6 +00.0	N 20 33.9 -00.4	133 51.3 +02.4	N 09 08.9 -00.6	127 06.5 -25.4	N 14 21.0 -12.2	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 00'4 00'4 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 53'9 53'9 53'9 53'9 54'0 54'0								
	SHA 241° 241° 240° 240° 240° 240°		SHA 210° 210° 210° 210° 210° 210°		SHA 214° 212° 210° 208° 206° 204°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 14:06		Greenwich Culmination Time: 14:16								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	139 31.7 +01.0	N 10 20.1 -00.5	257 21.3 +02.1	N 14 22.8 +00.1	318 44.2 +02.6	S 10 44.6 +00.1	00						
01	154 32.7 +01.0	N 10 19.6 -00.6	272 23.4 +02.1	N 14 22.9 +00.1	333 46.8 +02.6	S 10 44.7 +00.0	01						
02	169 33.7 +01.1	N 10 19.0 -00.6	287 25.5 +02.2	N 14 23.0 +00.1	348 49.4 +02.6	S 10 44.7 +00.1	02						
03	184 34.8 +01.0	N 10 18.4 -00.6	302 27.7 +02.1	N 14 23.1 +00.1	3 52.0 +02.6	S 10 44.8 +00.0	03						
04	199 35.8 +01.0	N 10 17.8 -00.6	317 29.8 +02.1	N 14 23.2 +00.1	18 54.6 +02.5	S 10 44.8 +00.1	04						
05	214 36.8 +01.0	N 10 17.2 -00.6	332 31.9 +02.2	N 14 23.3 +00.1	33 57.1 +02.6	S 10 44.9 +00.0	05						
06	229 37.8 +01.0	N 10 16.6 -00.6	347 34.1 +02.1	N 14 23.4 +00.1	48 59.7 +02.6	S 10 44.9 +00.1	06						
07	244 38.8 +01.1	N 10 16.0 -00.6	2 36.2 +02.1	N 14 23.5 +00.1	64 02.3 +02.6	S 10 45.0 +00.0	07						
08	259 39.9 +01.0	N 10 15.4 -00.5	17 38.3 +02.2	N 14 23.6 +00.1	79 04.9 +02.5	S 10 45.0 +00.1	08						
09	274 40.9 +01.0	N 10 14.9 -00.6	32 40.5 +02.1	N 14 23.7 +00.1	94 07.4 +02.6	S 10 45.1 +00.0	09						
10	289 41.9 +01.0	N 10 14.3 -00.6	47 42.6 +02.1	N 14 23.8 +00.1	109 10.0 +02.6	S 10 45.1 +00.1	10						
11	304 42.9 +01.1	N 10 13.7 -00.6	62 44.7 +02.2	N 14 23.9 +00.1	124 12.6 +02.6	S 10 45.2 +00.0	11						
12	319 44.0 +01.0	N 10 13.1 -00.6	77 46.9 +02.1	N 14 24.0 +00.1	139 15.2 +02.6	S 10 45.2 +00.1	12						
13	334 45.0 +01.0	N 10 12.5 -00.6	92 49.0 +02.1	N 14 24.1 +00.1	154 17.8 +02.5	S 10 45.3 +00.0	13						
14	349 46.0 +01.0	N 10 11.9 -00.6	107 51.1 +02.2	N 14 24.2 +00.0	169 20.3 +02.6	S 10 45.3 +00.1	14						
15	4 47.0 +01.0	N 10 11.3 -00.6	122 53.3 +02.1	N 14 24.2 +00.1	184 22.9 +02.6	S 10 45.4 +00.0	15						
16	19 48.0 +01.1	N 10 10.7 -00.6	137 55.4 +02.1	N 14 24.3 +00.1	199 25.5 +02.6	S 10 45.4 +00.1	16						
17	34 49.1 +01.0	N 10 10.1 -00.5	152 57.5 +02.2	N 14 24.4 +00.1	214 28.1 +02.6	S 10 45.5 +00.1	17						
18	49 50.1 +01.0	N 10 09.6 -00.6	167 59.7 +02.1	N 14 24.5 +00.1	229 30.7 +02.5	S 10 45.6 +00.0	18						
19	64 51.1 +01.0	N 10 09.0 -00.6	183 01.8 +02.1	N 14 24.6 +00.1	244 33.2 +02.6	S 10 45.6 +00.1	19						
20	79 52.1 +01.0	N 10 08.4 -00.6	198 03.9 +02.2	N 14 24.7 +00.1	259 35.8 +02.6	S 10 45.7 +00.0	20						
21	94 53.1 +01.1	N 10 07.8 -00.6	213 06.1 +02.1	N 14 24.8 +00.1	274 38.4 +02.6	S 10 45.7 +00.1	21						
22	109 54.2 +01.0	N 10 07.2 -00.6	228 08.2 +02.1	N 14 24.9 +00.1	289 41.0 +02.6	S 10 45.8 +00.0	22						
23	124 55.2 +01.0	N 10 06.6 -00.6	243 10.3 +02.2	N 14 25.0 +00.1	304 43.6 +02.5	S 10 45.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	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 202° 202° 202° 202° 202° 201°		SHA 320° 320° 320° 320° 320° 320°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:40		Greenwich Culmination Time: 06:49		Greenwich Culmination Time: 02:44								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 23.6 +00.0	N 20 33.5 -00.5	148 53.7 +02.5	N 09 08.3 -00.5	141 41.1 -25.2	N 14 08.8 -12.2	00						
01	193 23.6 -00.1	N 20 33.0 -00.5	163 56.2 +02.5	N 09 07.8 -00.6	156 15.9 -25.2	N 13 56.6 -12.2	01						
02	208 23.5 +00.0	N 20 32.5 -00.5	178 58.7 +02.5	N 09 07.2 -00.6	170 50.7 -25.2	N 13 44.4 -12.3	02						
03	223 23.5 +00.0	N 20 32.0 -00.4	194 01.2 +02.4	N 09 06.6 -00.5	185 25.5 -25.1	N 13 32.1 -12.3	03						
04	238 23.5 -00.1	N 20 31.6 -00.5	209 03.6 +02.5	N 09 06.1 -00.6	200 00.4 -25.1	N 13 19.8 -12.4	04						
05	253 23.4 +00.0	N 20 31.1 -00.5	224 06.1 +02.5	N 09 05.5 -00.6	214 35.3 -25.0	N 13 07.4 -12.4	05						
06	268 23.4 +00.0	N 20 30.6 -00.5	239 08.6 +02.5	N 09 04.9 -00.6	229 10.3 -25.0	N 12 55.0 -12.5	06						
07	283 23.4 -00.1	N 20 30.1 -00.5	254 11.1 +02.5	N 09 04.3 -00.5	243 45.3 -25.0	N 12 42.5 -12.6	07						
08	298 23.3 +00.0	N 20 29.6 -00.4	269 13.6 +02.5	N 09 03.8 -00.6	258 20.3 -24.9	N 12 29.9 -12.5	08						
09	313 23.3 +00.0	N 20 29.2 -00.5	284 16.1 +02.5	N 09 03.2 -00.5	272 55.4 -24.9	N 12 17.4 -12.7	09						
10	328 23.3 -00.1	N 20 28.7 -00.5	299 18.6 +02.5	N 09 02.7 -00.6	287 30.5 -24.8	N 12 04.7 -12.6	10						
11	343 23.2 +00.0	N 20 28.2 -00.5	314 21.1 +02.5	N 09 02.1 -00.6	302 05.7 -24.8	N 11 52.1 -12.8	11						
12	358 23.2 +00.0	N 20 27.7 -00.5	329 23.6 +02.5	N 09 01.5 -00.5	316 40.9 -24.7	N 11 39.3 -12.7	12						
13	13 23.2 -00.1	N 20 27.2 -00.5	344 26.1 +02.5	N 09 01.0 -00.6	331 16.2 -24.7	N 11 26.6 -12.8	13						
14	28 23.1 +00.0	N 20 26.7 -00.4	359 28.6 +02.6	N 09 00.4 -00.6	345 51.5 -24.7	N 11 13.8 -12.9	14						
15	43 23.1 +00.0	N 20 26.3 -00.5	14 31.2 +02.5	N 08 59.8 -00.5	0 26.8 -24.6	N 11 00.9 -12.9	15						
16	58 23.1 +00.0	N 20 25.8 -00.5	29 33.7 +02.5	N 08 59.3 -00.6	15 02.2 -24.6	N 10 48.0 -12.9	16						
17	73 23.1 -00.1	N 20 25.3 -00.5	44 36.2 +02.5	N 08 58.7 -00.5	29 37.6 -24.6	N 10 35.1 -13.0	17						
18	88 23.0 +00.0	N 20 24.8 -00.5	59 38.7 +02.6	N 08 58.2 -00.6	44 13.0 -24.6	N 10 22.1 -13.0	18						
19	103 23.0 +00.0	N 20 24.3 -00.5	74 41.3 +02.5	N 08 57.6 -00.5	58 48.4 -24.5	N 10 09.1 -13.1	19						
20	118 23.0 -00.1	N 20 23.8 -00.5	89 43.8 +02.6	N 08 57.1 -00.6	73 23.9 -24.4	N 09 56.0 -13.1	20						
21	133 22.9 +00.0	N 20 23.3 -00.5	104 46.4 +02.5	N 08 56.5 -00.5	87 59.5 -24.5	N 09 42.9 -13.1	21						
22	148 22.9 +00.0	N 20 22.8 -00.5	119 48.9 +02.6	N 08 56.0 -00.6	102 35.0 -24.4	N 09 29.8 -13.2	22						
23	163 22.9 +00.0	N 20 22.3 -00.4	134 51.5 +02.5	N 08 55.4 -00.5	117 10.6 -24.4	N 09 16.6 -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 00'4 00'4 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'0 54'0 54'0 54'0 54'1 54'1								
	SHA 240° 240° 239° 239° 239° 239°		SHA 210° 210° 210° 210° 210° 210°		SHA 202° 200° 199° 197° 195° 193°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 14:02		Greenwich Culmination Time: 14:58								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	139 56.2 +01.0	N 10 06.0 -00.6	258 12.5 +02.1	N 14 25.1 +00.1	319 46.1 +02.6	S 10 45.9 +00.0	00						
01	154 57.2 +01.1	N 10 05.4 -00.6	273 14.6 +02.1	N 14 25.2 +00.1	334 48.7 +02.6	S 10 45.9 +00.1	01						
02	169 58.3 +01.0	N 10 04.8 -00.6	288 16.7 +02.2	N 14 25.3 +00.1	349 51.3 +02.6	S 10 46.0 +00.0	02						
03	184 59.3 +01.0	N 10 04.2 -00.5	303 18.9 +02.1	N 14 25.4 +00.1	4 53.9 +02.6	S 10 46.0 +00.1	03						
04	200 00.3 +01.0	N 10 03.7 -00.6	318 21.0 +02.1	N 14 25.5 +00.1	19 56.5 +02.5	S 10 46.1 +00.0	04						
05	215 01.3 +01.0	N 10 03.1 -00.6	333 23.1 +02.2	N 14 25.6 +00.1	34 59.0 +02.6	S 10 46.1 +00.1	05						
06	230 02.3 +01.1	N 10 02.5 -00.6	348 25.3 +02.1	N 14 25.7 +00.1	50 01.6 +02.6	S 10 46.2 +00.1	06						
07	245 03.4 +01.0	N 10 01.9 -00.6	3 27.4 +02.1	N 14 25.8 +00.1	65 04.2 +02.6	S 10 46.3 +00.0	07						
08	260 04.4 +01.0	N 10 01.3 -00.6	18 29.5 +02.2	N 14 25.9 +00.0	80 06.8 +02.6	S 10 46.3 +00.1	08						
09	275 05.4 +01.0	N 10 00.7 -00.6	33 31.7 +02.1	N 14 25.9 +00.1	95 09.4 +02.5	S 10 46.4 +00.0	09						
10	290 06.4 +01.1	N 10 00.1 -00.6	48 33.8 +02.2	N 14 26.0 +00.1	110 11.9 +02.6	S 10 46.4 +00.1	10						
11	305 07.5 +01.0	N 09 59.5 -00.6	63 36.0 +02.1	N 14 26.1 +00.1	125 14.5 +02.6	S 10 46.5 +00.0	11						
12	320 08.5 +01.0	N 09 58.9 -00.6	78 38.1 +02.1	N 14 26.2 +00.1	140 17.1 +02.6	S 10 46.5 +00.1	12						
13	335 09.5 +01.0	N 09 58.3 -00.6	93 40.2 +02.2	N 14 26.3 +00.1	155 19.7 +02.6	S 10 46.6 +00.0	13						
14	350 10.5 +01.0	N 09 57.7 -00.5	108 42.4 +02.1	N 14 26.4 +00.1	170 22.3 +02.6	S 10 46.6 +00.1	14						
15	5 11.5 +01.1	N 09 57.2 -00.6	123 44.5 +02.2	N 14 26.5 +00.1	185 24.9 +02.5	S 10 46.7 +00.0	15						
16	20 12.6 +01.0	N 09 56.6 -00.6	138 46.7 +02.1	N 14 26.6 +00.1	200 27.4 +02.6	S 10 46.7 +00.1	16						
17	35 13.6 +01.0	N 09 56.0 -00.6	153 48.8 +02.1	N 14 26.7 +00.1	215 30.0 +02.6	S 10 46.8 +00.1	17						
18	50 14.6 +01.0	N 09 55.4 -00.6	168 50.9 +02.2	N 14 26.8 +00.1	230 32.6 +02.6	S 10 46.9 +00.0	18						
19	65 15.6 +01.1	N 09 54.8 -00.6	183 53.1 +02.1	N 14 26.9 +00.1	245 35.2 +02.6	S 10 46.9 +00.1	19						
20	80 16.7 +01.0	N 09 54.2 -00.6	198 55.2 +02.2	N 14 27.0 +00.1	260 37.8 +02.5	S 10 47.0 +00.0	20						
21	95 17.7 +01.0	N 09 53.6 -00.6	213 57.4 +02.1	N 14 27.1 +00.1	275 40.3 +02.6	S 10 47.0 +00.1	21						
22	110 18.7 +01.0	N 09 53.0 -00.6	228 59.5 +02.1	N 14 27.2 +00.0	290 42.9 +02.6	S 10 47.1 +00.0	22						
23	125 19.7 +01.0	N 09 52.4 -00.6	244 01.6 +02.2	N 14 27.2 +00.1	305 45.5 +02.6	S 10 47.1 +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 00'3 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 201° 201° 201° 201° 201° 201°		SHA 320° 320° 320° 320° 320° 320°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:39		Greenwich Culmination Time: 06:46		Greenwich Culmination Time: 02:40								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.9 -00.1	N 20 21.9 -00.5	149 54.0 +02.6	N 08 54.9 -00.6	131 46.2 -24.4	N 09 03.4 -13.2	00						
01	193 22.8 +00.0	N 20 21.4 -00.5	164 56.6 +02.5	N 08 54.3 -00.5	146 21.8 -24.3	N 08 50.2 -13.3	01						
02	208 22.8 +00.0	N 20 20.9 -00.5	179 59.1 +02.6	N 08 53.8 -00.6	160 57.5 -24.3	N 08 36.9 -13.3	02						
03	223 22.8 -00.1	N 20 20.4 -00.5	195 01.7 +02.6	N 08 53.2 -00.5	175 33.2 -24.3	N 08 23.6 -13.4	03						
04	238 22.7 +00.0	N 20 19.9 -00.5	210 04.3 +02.6	N 08 52.7 -00.6	190 08.9 -24.3	N 08 10.2 -13.4	04						
05	253 22.7 +00.0	N 20 19.4 -00.5	225 06.9 +02.5	N 08 52.1 -00.5	204 44.6 -24.2	N 07 56.8 -13.4	05						
06	268 22.7 +00.0	N 20 18.9 -00.5	240 09.4 +02.6	N 08 51.6 -00.6	219 20.4 -24.2	N 07 43.4 -13.4	06						
07	283 22.7 -00.1	N 20 18.4 -00.5	255 12.0 +02.6	N 08 51.0 -00.5	233 56.2 -24.3	N 07 30.0 -13.5	07						
08	298 22.6 +00.0	N 20 17.9 -00.5	270 14.6 +02.6	N 08 50.5 -00.5	248 31.9 -24.1	N 07 16.5 -13.5	08						
09	313 22.6 +00.0	N 20 17.4 -00.5	285 17.2 +02.6	N 08 50.0 -00.6	263 07.8 -24.2	N 07 03.0 -13.6	09						
10	328 22.6 +00.0	N 20 16.9 -00.5	300 19.8 +02.6	N 08 49.4 -00.5	277 43.6 -24.2	N 06 49.4 -13.5	10						
11	343 22.6 -00.1	N 20 16.4 -00.5	315 22.4 +02.6	N 08 48.9 -00.6	292 19.4 -24.1	N 06 35.9 -13.6	11						
12	358 22.5 +00.0	N 20 15.9 -00.5	330 25.0 +02.6	N 08 48.3 -00.5	306 55.3 -24.1	N 06 22.3 -13.6	12						
13	13 22.5 +00.0	N 20 15.4 -00.5	345 27.6 +02.6	N 08 47.8 -00.5	321 31.2 -24.1	N 06 08.7 -13.7	13						
14	28 22.5 +00.0	N 20 14.9 -00.5	0 30.2 +02.6	N 08 47.3 -00.6	336 07.1 -24.1	N 05 55.0 -13.7	14						
15	43 22.5 -00.1	N 20 14.4 -00.5	15 32.8 +02.6	N 08 46.7 -00.5	350 43.0 -24.1	N 05 41.3 -13.7	15						
16	58 22.4 +00.0	N 20 13.9 -00.5	30 35.4 +02.7	N 08 46.2 -00.5	5 18.9 -24.1	N 05 27.6 -13.7	16						
17	73 22.4 +00.0	N 20 13.4 -00.5	45 38.1 +02.6	N 08 45.7 -00.6	19 54.8 -24.1	N 05 13.9 -13.7	17						
18	88 22.4 +00.0	N 20 12.9 -00.5	60 40.7 +02.6	N 08 45.1 -00.5	34 30.7 -24.0	N 05 00.2 -13.8	18						
19	103 22.4 +00.0	N 20 12.4 -00.5	75 43.3 +02.7	N 08 44.6 -00.5	49 06.7 -24.1	N 04 46.4 -13.8	19						
20	118 22.4 -00.1	N 20 11.9 -00.5	90 46.0 +02.6	N 08 44.1 -00.5	63 42.6 -24.0	N 04 32.6 -13.8	20						
21	133 22.3 +00.0	N 20 11.4 -00.5	105 48.6 +02.6	N 08 43.6 -00.6	78 18.6 -24.0	N 04 18.8 -13.9	21						
22	148 22.3 +00.0	N 20 10.9 -00.5	120 51.2 +02.7	N 08 43.0 -00.5	92 54.6 -24.1	N 04 04.9 -13.8	22						
23	163 22.3 +00.0	N 20 10.4 -00.5	135 53.9 +02.6	N 08 42.5 -00.5	107 30.5 -24.0	N 03 51.1 -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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'4 00'4 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'1 54'2 54'2 54'3 54'3 54'4								
	SHA 239° 239° 238° 238° 238° 238°		SHA 210° 210° 210° 210° 210° 210°		SHA 191° 190° 188° 186° 184° 183°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:57		Greenwich Culmination Time: 15:38								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	140 20.7 +01.1	N 09 51.8 -00.6	259 03.8 +02.1	N 14 27.3 +00.1	320 48.1 +02.6	S 10 47.2 +00.0	00						
01	155 21.8 +01.0	N 09 51.2 -00.6	274 05.9 +02.2	N 14 27.4 +00.1	335 50.7 +02.6	S 10 47.2 +00.1	01						
02	170 22.8 +01.0	N 09 50.6 -00.6	289 08.1 +02.1	N 14 27.5 +00.1	350 53.3 +02.5	S 10 47.3 +00.1	02						
03	185 23.8 +01.0	N 09 50.0 -00.6	304 10.2 +02.1	N 14 27.6 +00.1	5 55.8 +02.6	S 10 47.4 +00.0	03						
04	200 24.8 +01.1	N 09 49.4 -00.5	319 12.3 +02.2	N 14 27.7 +00.1	20 58.4 +02.6	S 10 47.4 +00.1	04						
05	215 25.9 +01.0	N 09 48.9 -00.6	334 14.5 +02.1	N 14 27.8 +00.1	36 01.0 +02.6	S 10 47.5 +00.0	05						
06	230 26.9 +01.0	N 09 48.3 -00.6	349 16.6 +02.2	N 14 27.9 +00.1	51 03.6 +02.6	S 10 47.5 +00.1	06						
07	245 27.9 +01.0	N 09 47.7 -00.6	4 18.8 +02.1	N 14 28.0 +00.1	66 06.2 +02.6	S 10 47.6 +00.0	07						
08	260 28.9 +01.0	N 09 47.1 -00.6	19 20.9 +02.1	N 14 28.1 +00.1	81 08.8 +02.6	S 10 47.6 +00.1	08						
09	275 29.9 +01.1	N 09 46.5 -00.6	34 23.0 +02.2	N 14 28.2 +00.1	96 11.4 +02.5	S 10 47.7 +00.0	09						
10	290 31.0 +01.0	N 09 45.9 -00.6	49 25.2 +02.1	N 14 28.3 +00.0	111 13.9 +02.6	S 10 47.7 +00.1	10						
11	305 32.0 +01.0	N 09 45.3 -00.6	64 27.3 +02.2	N 14 28.3 +00.1	126 16.5 +02.6	S 10 47.8 +00.0	11						
12	320 33.0 +01.0	N 09 44.7 -00.6	79 29.5 +02.1	N 14 28.4 +00.1	141 19.1 +02.6	S 10 47.8 +00.1	12						
13	335 34.0 +01.1	N 09 44.1 -00.6	94 31.6 +02.2	N 14 28.5 +00.1	156 21.7 +02.6	S 10 47.9 +00.1	13						
14	350 35.1 +01.0	N 09 43.5 -00.6	109 33.8 +02.1	N 14 28.6 +00.1	171 24.3 +02.6	S 10 48.0 +00.0	14						
15	5 36.1 +01.0	N 09 42.9 -00.6	124 35.9 +02.2	N 14 28.7 +00.1	186 26.9 +02.5	S 10 48.0 +00.1	15						
16	20 37.1 +01.0	N 09 42.3 -00.6	139 38.1 +02.1	N 14 28.8 +00.1	201 29.4 +02.6	S 10 48.1 +00.0	16						
17	35 38.1 +01.0	N 09 41.7 -00.6	154 40.2 +02.1	N 14 28.9 +00.1	216 32.0 +02.6	S 10 48.1 +00.1	17						
18	50 39.1 +01.1	N 09 41.1 -00.6	169 42.3 +02.2	N 14 29.0 +00.1	231 34.6 +02.6	S 10 48.2 +00.0	18						
19	65 40.2 +01.0	N 09 40.5 -00.6	184 44.5 +02.1	N 14 29.1 +00.1	246 37.2 +02.6	S 10 48.2 +00.1	19						
20	80 41.2 +01.0	N 09 39.9 -00.6	199 46.6 +02.2	N 14 29.2 +00.1	261 39.8 +02.6	S 10 48.3 +00.0	20						
21	95 42.2 +01.0	N 09 39.3 -00.6	214 48.8 +02.1	N 14 29.3 +00.0	276 42.4 +02.6	S 10 48.3 +00.1	21						
22	110 43.2 +01.1	N 09 38.7 -00.6	229 50.9 +02.2	N 14 29.3 +00.1	291 45.0 +02.5	S 10 48.4 +00.1	22						
23	125 44.3 +01.0	N 09 38.1 -00.5	244 53.1 +02.1	N 14 29.4 +00.1	306 47.5 +02.6	S 10 48.5 +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 00'2 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 201° 201° 201° 201° 200° 200°		SHA 320° 320° 320° 319° 319° 319°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:37		Greenwich Culmination Time: 06:42		Greenwich Culmination Time: 02:36								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.3 -00.1	N 20 09.9 -00.5	150 56.5 +02.7	N 08 42.0 -00.5	122 06.5 -24.0	N 03 37.2 -13.9	00						
01	193 22.2 +00.0	N 20 09.4 -00.5	165 59.2 +02.6	N 08 41.5 -00.6	136 42.5 -24.1	N 03 23.3 -13.9	01						
02	208 22.2 +00.0	N 20 08.9 -00.5	181 01.8 +02.7	N 08 40.9 -00.5	151 18.4 -24.0	N 03 09.4 -14.0	02						
03	223 22.2 +00.0	N 20 08.4 -00.5	196 04.5 +02.7	N 08 40.4 -00.5	165 54.4 -24.0	N 02 55.4 -13.9	03						
04	238 22.2 +00.0	N 20 07.9 -00.5	211 07.2 +02.6	N 08 39.9 -00.5	180 30.4 -24.1	N 02 41.5 -14.0	04						
05	253 22.2 -00.1	N 20 07.4 -00.5	226 09.8 +02.7	N 08 39.4 -00.5	195 06.3 -24.0	N 02 27.5 -14.0	05						
06	268 22.1 +00.0	N 20 06.9 -00.5	241 12.5 +02.7	N 08 38.9 -00.5	209 42.3 -24.1	N 02 13.5 -14.0	06						
07	283 22.1 +00.0	N 20 06.4 -00.5	256 15.2 +02.7	N 08 38.4 -00.6	224 18.2 -24.0	N 01 59.5 -14.0	07						
08	298 22.1 +00.0	N 20 05.9 -00.6	271 17.9 +02.6	N 08 37.8 -00.5	238 54.2 -24.1	N 01 45.5 -14.0	08						
09	313 22.1 +00.0	N 20 05.3 -00.5	286 20.5 +02.7	N 08 37.3 -00.5	253 30.1 -24.1	N 01 31.5 -14.1	09						
10	328 22.1 -00.1	N 20 04.8 -00.5	301 23.2 +02.7	N 08 36.8 -00.5	268 06.0 -24.0	N 01 17.4 -14.0	10						
11	343 22.0 +00.0	N 20 04.3 -00.5	316 25.9 +02.7	N 08 36.3 -00.5	282 42.0 -24.1	N 01 03.4 -14.1	11						
12	358 22.0 +00.0	N 20 03.8 -00.5	331 28.6 +02.7	N 08 35.8 -00.5	297 17.9 -24.1	N 00 49.3 -14.1	12						
13	13 22.0 +00.0	N 20 03.3 -00.5	346 31.3 +02.7	N 08 35.3 -00.5	311 53.8 -24.1	N 00 35.2 -14.1	13						
14	28 22.0 +00.0	N 20 02.8 -00.5	1 34.0 +02.7	N 08 34.8 -00.5	326 29.7 -24.2	N 00 21.1 -14.1	14						
15	43 22.0 +00.0	N 20 02.3 -00.5	16 36.7 +02.7	N 08 34.3 -00.5	341 05.5 -24.1	N 00 07.0 -14.1	15						
16	58 22.0 -00.1	N 20 01.8 -00.5	31 39.4 +02.8	N 08 33.8 -00.5	355 41.4 -24.2	S 00 07.1 +14.1	16						
17	73 21.9 +00.0	N 20 01.3 -00.6	46 42.2 +02.7	N 08 33.3 -00.5	10 17.2 -24.2	S 00 21.2 +14.1	17						
18	88 21.9 +00.0	N 20 00.7 -00.5	61 44.9 +02.7	N 08 32.8 -00.5	24 53.0 -24.2	S 00 35.3 +14.2	18						
19	103 21.9 +00.0	N 20 00.2 -00.5	76 47.6 +02.7	N 08 32.3 -00.5	39 28.8 -24.2	S 00 49.5 +14.1	19						
20	118 21.9 +00.0	N 19 59.7 -00.5	91 50.3 +02.8	N 08 31.8 -00.5	54 04.6 -24.2	S 01 03.6 +14.2	20						
21	133 21.9 +00.0	N 19 59.2 -00.5	106 53.1 +02.7	N 08 31.3 -00.5	68 40.4 -24.3	S 01 17.8 +14.1	21						
22	148 21.9 -00.1	N 19 58.7 -00.5	121 55.8 +02.7	N 08 30.8 -00.5	83 16.1 -24.3	S 01 31.9 +14.2	22						
23	163 21.8 +00.0	N 19 58.2 -00.6	136 58.5 +02.8	N 08 30.3 -00.5	97 51.8 -24.3	S 01 46.1 +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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 14'8 14'8 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'4 54'5 54'6 54'6 54'7 54'8								
	SHA 238° 238° 237° 237° 237° 237°		SHA 210° 210° 211° 211° 211° 211°		SHA 181° 179° 177° 175° 174° 172°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:53		Greenwich Culmination Time: 16:17								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	140 45.3 +01.0	N 09 37.6 -00.6	259 55.2 +02.2	N 14 29.5 +00.1	321 50.1 +02.6	S 10 48.5 +00.1	00						
01	155 46.3 +01.0	N 09 37.0 -00.6	274 57.4 +02.1	N 14 29.6 +00.1	336 52.7 +02.6	S 10 48.6 +00.0	01						
02	170 47.3 +01.1	N 09 36.4 -00.6	289 59.5 +02.2	N 14 29.7 +00.1	351 55.3 +02.6	S 10 48.6 +00.1	02						
03	185 48.4 +01.0	N 09 35.8 -00.6	305 01.7 +02.1	N 14 29.8 +00.1	6 57.9 +02.6	S 10 48.7 +00.0	03						
04	200 49.4 +01.0	N 09 35.2 -00.6	320 03.8 +02.2	N 14 29.9 +00.1	22 00.5 +02.6	S 10 48.7 +00.1	04						
05	215 50.4 +01.0	N 09 34.6 -00.6	335 06.0 +02.1	N 14 30.0 +00.1	37 03.1 +02.5	S 10 48.8 +00.1	05						
06	230 51.4 +01.0	N 09 34.0 -00.6	350 08.1 +02.2	N 14 30.1 +00.1	52 05.6 +02.6	S 10 48.9 +00.0	06						
07	245 52.4 +01.1	N 09 33.4 -00.6	5 10.3 +02.1	N 14 30.2 +00.0	67 08.2 +02.6	S 10 48.9 +00.1	07						
08	260 53.5 +01.0	N 09 32.8 -00.6	20 12.4 +02.1	N 14 30.2 +00.1	82 10.8 +02.6	S 10 49.0 +00.0	08						
09	275 54.5 +01.0	N 09 32.2 -00.6	35 14.5 +02.2	N 14 30.3 +00.1	97 13.4 +02.6	S 10 49.0 +00.1	09						
10	290 55.5 +01.0	N 09 31.6 -00.6	50 16.7 +02.1	N 14 30.4 +00.1	112 16.0 +02.6	S 10 49.1 +00.0	10						
11	305 56.5 +01.1	N 09 31.0 -00.6	65 18.8 +02.2	N 14 30.5 +00.1	127 18.6 +02.6	S 10 49.1 +00.1	11						
12	320 57.6 +01.0	N 09 30.4 -00.6	80 21.0 +02.1	N 14 30.6 +00.1	142 21.2 +02.6	S 10 49.2 +00.0	12						
13	335 58.6 +01.0	N 09 29.8 -00.6	95 23.1 +02.2	N 14 30.7 +00.1	157 23.8 +02.5	S 10 49.2 +00.1	13						
14	350 59.6 +01.0	N 09 29.2 -00.6	110 25.3 +02.1	N 14 30.8 +00.1	172 26.3 +02.6	S 10 49.3 +00.1	14						
15	6 00.6 +01.1	N 09 28.6 -00.6	125 27.4 +02.2	N 14 30.9 +00.1	187 28.9 +02.6	S 10 49.4 +00.0	15						
16	21 01.7 +01.0	N 09 28.0 -00.6	140 29.6 +02.1	N 14 31.0 +00.0	202 31.5 +02.6	S 10 49.4 +00.1	16						
17	36 02.7 +01.0	N 09 27.4 -00.6	155 31.7 +02.2	N 14 31.0 +00.1	217 34.1 +02.6	S 10 49.5 +00.0	17						
18	51 03.7 +01.0	N 09 26.8 -00.6	170 33.9 +02.1	N 14 31.1 +00.1	232 36.7 +02.6	S 10 49.5 +00.1	18						
19	66 04.7 +01.0	N 09 26.2 -00.6	185 36.0 +02.2	N 14 31.2 +00.1	247 39.3 +02.6	S 10 49.6 +00.0	19						
20	81 05.7 +01.1	N 09 25.6 -00.6	200 38.2 +02.1	N 14 31.3 +00.1	262 41.9 +02.6	S 10 49.6 +00.1	20						
21	96 06.8 +01.0	N 09 25.0 -00.6	215 40.3 +02.2	N 14 31.4 +00.1	277 44.5 +02.6	S 10 49.7 +00.1	21						
22	111 07.8 +01.0	N 09 24.4 -00.6	230 42.5 +02.2	N 14 31.5 +00.1	292 47.1 +02.5	S 10 49.8 +00.0	22						
23	126 08.8 +01.0	N 09 23.8 -00.6	245 44.7 +02.1	N 14 31.6 +00.1	307 49.6 +02.6	S 10 49.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	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 200° 200° 200° 200° 200° 200°		SHA 319° 319° 319° 319° 319° 319°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:35		Greenwich Culmination Time: 06:39		Greenwich Culmination Time: 02:32								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.8 +00.0	N 19 57.6 -00.5	152 01.3 +02.7	N 08 29.8 -00.5	112 27.5 -24.3	S 02 00.2 +14.2	00						
01	193 21.8 +00.0	N 19 57.1 -00.5	167 04.0 +02.8	N 08 29.3 -00.5	127 03.2 -24.4	S 02 14.4 +14.2	01						
02	208 21.8 +00.0	N 19 56.6 -00.5	182 06.8 +02.7	N 08 28.8 -00.5	141 38.8 -24.4	S 02 28.6 +14.1	02						
03	223 21.8 +00.0	N 19 56.1 -00.5	197 09.5 +02.8	N 08 28.3 -00.5	156 14.4 -24.4	S 02 42.7 +14.2	03						
04	238 21.8 -00.1	N 19 55.6 -00.6	212 12.3 +02.7	N 08 27.8 -00.5	170 50.0 -24.5	S 02 56.9 +14.1	04						
05	253 21.7 +00.0	N 19 55.0 -00.5	227 15.0 +02.8	N 08 27.3 -00.5	185 25.5 -24.4	S 03 11.0 +14.2	05						
06	268 21.7 +00.0	N 19 54.5 -00.5	242 17.8 +02.8	N 08 26.8 -00.5	200 01.1 -24.6	S 03 25.2 +14.2	06						
07	283 21.7 +00.0	N 19 54.0 -00.5	257 20.6 +02.8	N 08 26.3 -00.5	214 36.5 -24.5	S 03 39.4 +14.1	07						
08	298 21.7 +00.0	N 19 53.5 -00.6	272 23.4 +02.7	N 08 25.8 -00.4	229 12.0 -24.6	S 03 53.5 +14.2	08						
09	313 21.7 +00.0	N 19 52.9 -00.5	287 26.1 +02.8	N 08 25.4 -00.5	243 47.4 -24.7	S 04 07.7 +14.1	09						
10	328 21.7 +00.0	N 19 52.4 -00.5	302 28.9 +02.8	N 08 24.9 -00.5	258 22.7 -24.6	S 04 21.8 +14.2	10						
11	343 21.7 +00.0	N 19 51.9 -00.5	317 31.7 +02.8	N 08 24.4 -00.5	272 58.1 -24.7	S 04 36.0 +14.1	11						
12	358 21.7 -00.1	N 19 51.4 -00.6	332 34.5 +02.8	N 08 23.9 -00.5	287 33.4 -24.8	S 04 50.1 +14.2	12						
13	13 21.6 +00.0	N 19 50.8 -00.5	347 37.3 +02.8	N 08 23.4 -00.4	302 08.6 -24.8	S 05 04.3 +14.1	13						
14	28 21.6 +00.0	N 19 50.3 -00.5	2 40.1 +02.8	N 08 23.0 -00.5	316 43.8 -24.8	S 05 18.4 +14.1	14						
15	43 21.6 +00.0	N 19 49.8 -00.5	17 42.9 +02.8	N 08 22.5 -00.5	331 19.0 -24.9	S 05 32.5 +14.1	15						
16	58 21.6 +00.0	N 19 49.3 -00.6	32 45.7 +02.8	N 08 22.0 -00.5	345 54.1 -24.9	S 05 46.6 +14.1	16						
17	73 21.6 +00.0	N 19 48.7 -00.5	47 48.5 +02.8	N 08 21.5 -00.5	0 29.2 -25.0	S 06 00.7 +14.1	17						
18	88 21.6 +00.0	N 19 48.2 -00.5	62 51.3 +02.8	N 08 21.0 -00.4	15 04.2 -25.0	S 06 14.8 +14.1	18						
19	103 21.6 +00.0	N 19 47.7 -00.6	77 54.1 +02.9	N 08 20.6 -00.5	29 39.2 -25.1	S 06 28.9 +14.1	19						
20	118 21.6 +00.0	N 19 47.1 -00.5	92 57.0 +02.8	N 08 20.1 -00.5	44 14.1 -25.1	S 06 43.0 +14.0	20						
21	133 21.6 -00.1	N 19 46.6 -00.5	107 59.8 +02.8	N 08 19.6 -00.4	58 49.0 -25.2	S 06 57.0 +14.1	21						
22	148 21.5 +00.0	N 19 46.1 -00.5	123 02.6 +02.8	N 08 19.2 -00.5	73 23.8 -25.2	S 07 11.1 +14.0	22						
23	163 21.5 +00.0	N 19 45.6 -00.6	138 05.4 +02.9	N 08 18.7 -00.5	87 58.6 -25.3	S 07 25.1 +14.0	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 00'4 00'4 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'9 54'9 55'0 55'1 55'2 55'3								
	SHA 237° 237° 236° 236° 236° 236°		SHA 211° 211° 211° 211° 211° 211°		SHA 170° 168° 167° 165° 163° 161°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:49		Greenwich Culmination Time: 16:57								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	141 09.8 +01.1	N 09 23.2 -00.6	260 46.8 +02.2	N 14 31.7 +00.1	322 52.2 +02.6	S 10 49.9 +00.0	00						
01	156 10.9 +01.0	N 09 22.6 -00.6	275 49.0 +02.1	N 14 31.8 +00.0	337 54.8 +02.6	S 10 49.9 +00.1	01						
02	171 11.9 +01.0	N 09 22.0 -00.6	290 51.1 +02.2	N 14 31.8 +00.1	352 57.4 +02.6	S 10 50.0 +00.0	02						
03	186 12.9 +01.0	N 09 21.4 -00.6	305 53.3 +02.1	N 14 31.9 +00.1	7 60.0 +02.6	S 10 50.0 +00.1	03						
04	201 13.9 +01.1	N 09 20.8 -00.6	320 55.4 +02.2	N 14 32.0 +00.1	23 02.6 +02.6	S 10 50.1 +00.1	04						
05	216 15.0 +01.0	N 09 20.2 -00.6	335 57.6 +02.1	N 14 32.1 +00.1	38 05.2 +02.6	S 10 50.2 +00.0	05						
06	231 16.0 +01.0	N 09 19.6 -00.6	350 59.7 +02.2	N 14 32.2 +00.1	53 07.8 +02.6	S 10 50.2 +00.1	06						
07	246 17.0 +01.0	N 09 19.0 -00.6	6 01.9 +02.1	N 14 32.3 +00.1	68 10.4 +02.5	S 10 50.3 +00.0	07						
08	261 18.0 +01.0	N 09 18.4 -00.6	21 04.0 +02.2	N 14 32.4 +00.1	83 12.9 +02.6	S 10 50.3 +00.1	08						
09	276 19.0 +01.1	N 09 17.8 -00.6	36 06.2 +02.1	N 14 32.5 +00.0	98 15.5 +02.6	S 10 50.4 +00.0	09						
10	291 20.1 +01.0	N 09 17.2 -00.6	51 08.3 +02.2	N 14 32.5 +00.1	113 18.1 +02.6	S 10 50.4 +00.1	10						
11	306 21.1 +01.0	N 09 16.6 -00.6	66 10.5 +02.2	N 14 32.6 +00.1	128 20.7 +02.6	S 10 50.5 +00.1	11						
12	321 22.1 +01.0	N 09 16.0 -00.6	81 12.7 +02.1	N 14 32.7 +00.1	143 23.3 +02.6	S 10 50.6 +00.0	12						
13	336 23.1 +01.1	N 09 15.4 -00.6	96 14.8 +02.2	N 14 32.8 +00.1	158 25.9 +02.6	S 10 50.6 +00.1	13						
14	351 24.2 +01.0	N 09 14.8 -00.6	111 17.0 +02.1	N 14 32.9 +00.1	173 28.5 +02.6	S 10 50.7 +00.0	14						
15	6 25.2 +01.0	N 09 14.2 -00.6	126 19.1 +02.2	N 14 33.0 +00.1	188 31.1 +02.6	S 10 50.7 +00.1	15						
16	21 26.2 +01.0	N 09 13.6 -00.6	141 21.3 +02.1	N 14 33.1 +00.0	203 33.7 +02.6	S 10 50.8 +00.0	16						
17	36 27.2 +01.1	N 09 13.0 -00.6	156 23.4 +02.2	N 14 33.1 +00.1	218 36.3 +02.6	S 10 50.8 +00.1	17						
18	51 28.3 +01.0	N 09 12.4 -00.6	171 25.6 +02.1	N 14 33.2 +00.1	233 38.9 +02.5	S 10 50.9 +00.1	18						
19	66 29.3 +01.0	N 09 11.8 -00.6	186 27.7 +02.2	N 14 33.3 +00.1	248 41.4 +02.6	S 10 51.0 +00.0	19						
20	81 30.3 +01.0	N 09 11.2 -00.6	201 29.9 +02.2	N 14 33.4 +00.1	263 44.0 +02.6	S 10 51.0 +00.1	20						
21	96 31.3 +01.0	N 09 10.6 -00.6	216 32.1 +02.1	N 14 33.5 +00.1	278 46.6 +02.6	S 10 51.1 +00.0	21						
22	111 32.3 +01.1	N 09 10.0 -00.6	231 34.2 +02.2	N 14 33.6 +00.1	293 49.2 +02.6	S 10 51.1 +00.1	22						
23	126 33.4 +01.0	N 09 09.4 -00.6	246 36.4 +02.1	N 14 33.7 +00.1	308 51.8 +02.6	S 10 51.2 +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 00'2 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 200° 200° 199° 199° 199° 199°		SHA 319° 319° 319° 319° 319° 319°		SHA 021° 021° 021° 021° 021° 021°								
	Greenwich Culmination Time: 14:34		Greenwich Culmination Time: 06:35		Greenwich Culmination Time: 02:28								

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 21.5 +00.0	N 19 45.0 -00.5	153 08.3 +02.8	N 08 18.2 -00.4	102 33.3 -25.4	S 07 39.1 +14.0	00						
01	193 21.5 +00.0	N 19 44.5 -00.5	168 11.1 +02.9	N 08 17.8 -00.5	117 07.9 -25.4	S 07 53.1 +14.0	01						
02	208 21.5 +00.0	N 19 44.0 -00.6	183 14.0 +02.8	N 08 17.3 -00.5	131 42.5 -25.4	S 08 07.1 +13.9	02						
03	223 21.5 +00.0	N 19 43.4 -00.5	198 16.8 +02.9	N 08 16.8 -00.4	146 17.1 -25.6	S 08 21.0 +14.0	03						
04	238 21.5 +00.0	N 19 42.9 -00.5	213 19.7 +02.8	N 08 16.4 -00.5	160 51.5 -25.5	S 08 35.0 +13.9	04						
05	253 21.5 +00.0	N 19 42.4 -00.6	228 22.5 +02.9	N 08 15.9 -00.4	175 26.0 -25.7	S 08 48.9 +13.9	05						
06	268 21.5 +00.0	N 19 41.8 -00.5	243 25.4 +02.9	N 08 15.5 -00.5	190 00.3 -25.7	S 09 02.8 +13.9	06						
07	283 21.5 +00.0	N 19 41.3 -00.6	258 28.3 +02.8	N 08 15.0 -00.5	204 34.6 -25.8	S 09 16.7 +13.8	07						
08	298 21.5 +00.0	N 19 40.7 -00.5	273 31.1 +02.9	N 08 14.5 -00.4	219 08.8 -25.8	S 09 30.5 +13.9	08						
09	313 21.5 +00.0	N 19 40.2 -00.5	288 34.0 +02.9	N 08 14.1 -00.5	233 43.0 -25.9	S 09 44.4 +13.8	09						
10	328 21.5 -00.1	N 19 39.7 -00.6	303 36.9 +02.9	N 08 13.6 -00.4	248 17.1 -26.0	S 09 58.2 +13.8	10						
11	343 21.4 +00.0	N 19 39.1 -00.5	318 39.8 +02.8	N 08 13.2 -00.5	262 51.1 -26.1	S 10 12.0 +13.7	11						
12	358 21.4 +00.0	N 19 38.6 -00.5	333 42.6 +02.9	N 08 12.7 -00.4	277 25.0 -26.1	S 10 25.7 +13.7	12						
13	13 21.4 +00.0	N 19 38.1 -00.6	348 45.5 +02.9	N 08 12.3 -00.5	291 58.9 -26.2	S 10 39.4 +13.7	13						
14	28 21.4 +00.0	N 19 37.5 -00.5	3 48.4 +02.9	N 08 11.8 -00.4	306 32.7 -26.3	S 10 53.1 +13.7	14						
15	43 21.4 +00.0	N 19 37.0 -00.6	18 51.3 +02.9	N 08 11.4 -00.5	321 06.4 -26.3	S 11 06.8 +13.7	15						
16	58 21.4 +00.0	N 19 36.4 -00.5	33 54.2 +02.9	N 08 10.9 -00.4	335 40.1 -26.5	S 11 20.5 +13.6	16						
17	73 21.4 +00.0	N 19 35.9 -00.6	48 57.1 +02.9	N 08 10.5 -00.4	350 13.6 -26.5	S 11 34.1 +13.5	17						
18	88 21.4 +00.0	N 19 35.3 -00.5	64 00.0 +02.9	N 08 10.1 -00.5	4 47.1 -26.6	S 11 47.6 +13.6	18						
19	103 21.4 +00.0	N 19 34.8 -00.5	79 02.9 +03.0	N 08 09.6 -00.4	19 20.5 -26.6	S 12 01.2 +13.5	19						
20	118 21.4 +00.0	N 19 34.3 -00.6	94 05.9 +02.9	N 08 09.2 -00.5	33 53.9 -26.8	S 12 14.7 +13.4	20						
21	133 21.4 +00.0	N 19 33.7 -00.5	109 08.8 +02.9	N 08 08.7 -00.4	48 27.1 -26.8	S 12 28.1 +13.5	21						
22	148 21.4 +00.0	N 19 33.2 -00.6	124 11.7 +02.9	N 08 08.3 -00.4	63 00.3 -26.9	S 12 41.6 +13.4	22						
23	163 21.4 +00.0	N 19 32.6 -00.5	139 14.6 +03.0	N 08 07.9 -00.5	77 33.4 -27.0	S 12 55.0 +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 00'4 00'4 00'4 00'4 00'4 00'4		SD 15'1 15'1 15'2 15'2 15'2 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'4 00'4 00'4		HP 55'4 55'6 55'7 55'8 55'9 56'0								
	SHA 236° 236° 235° 235° 235° 235°		SHA 211° 211° 211° 211° 211° 211°		SHA 159° 157° 155° 154° 152° 150°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:44		Greenwich Culmination Time: 17:40								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	141 34.4 +01.0	N 09 08.8 -00.6	261 38.5 +02.2	N 14 33.8 +00.0	323 54.4 +02.6	S 10 51.2 +00.1	00						
01	156 35.4 +01.0	N 09 08.2 -00.6	276 40.7 +02.1	N 14 33.8 +00.1	338 57.0 +02.6	S 10 51.3 +00.1	01						
02	171 36.4 +01.1	N 09 07.6 -00.6	291 42.8 +02.2	N 14 33.9 +00.1	353 59.6 +02.6	S 10 51.4 +00.0	02						
03	186 37.5 +01.0	N 09 07.0 -00.6	306 45.0 +02.2	N 14 34.0 +00.1	9 02.2 +02.6	S 10 51.4 +00.1	03						
04	201 38.5 +01.0	N 09 06.4 -00.6	321 47.2 +02.1	N 14 34.1 +00.1	24 04.8 +02.6	S 10 51.5 +00.0	04						
05	216 39.5 +01.0	N 09 05.8 -00.6	336 49.3 +02.2	N 14 34.2 +00.1	39 07.4 +02.6	S 10 51.5 +00.1	05						
06	231 40.5 +01.1	N 09 05.2 -00.6	351 51.5 +02.1	N 14 34.3 +00.1	54 10.0 +02.5	S 10 51.6 +00.1	06						
07	246 41.6 +01.0	N 09 04.6 -00.6	6 53.6 +02.2	N 14 34.4 +00.0	69 12.5 +02.6	S 10 51.7 +00.0	07						
08	261 42.6 +01.0	N 09 04.0 -00.6	21 55.8 +02.2	N 14 34.4 +00.1	84 15.1 +02.6	S 10 51.7 +00.1	08						
09	276 43.6 +01.0	N 09 03.4 -00.6	36 58.0 +02.1	N 14 34.5 +00.1	99 17.7 +02.6	S 10 51.8 +00.0	09						
10	291 44.6 +01.1	N 09 02.8 -00.6	52 00.1 +02.2	N 14 34.6 +00.1	114 20.3 +02.6	S 10 51.8 +00.1	10						
11	306 45.7 +01.0	N 09 02.2 -00.6	67 02.3 +02.1	N 14 34.7 +00.1	129 22.9 +02.6	S 10 51.9 +00.0	11						
12	321 46.7 +01.0	N 09 01.6 -00.6	82 04.4 +02.2	N 14 34.8 +00.1	144 25.5 +02.6	S 10 51.9 +00.1	12						
13	336 47.7 +01.0	N 09 01.0 -00.6	97 06.6 +02.2	N 14 34.9 +00.0	159 28.1 +02.6	S 10 52.0 +00.1	13						
14	351 48.7 +01.0	N 09 00.4 -00.6	112 08.8 +02.1	N 14 34.9 +00.1	174 30.7 +02.6	S 10 52.1 +00.0	14						
15	6 49.7 +01.1	N 08 59.8 -00.6	127 10.9 +02.2	N 14 35.0 +00.1	189 33.3 +02.6	S 10 52.1 +00.1	15						
16	21 50.8 +01.0	N 08 59.2 -00.6	142 13.1 +02.2	N 14 35.1 +00.1	204 35.9 +02.6	S 10 52.2 +00.0	16						
17	36 51.8 +01.0	N 08 58.6 -00.6	157 15.3 +02.1	N 14 35.2 +00.1	219 38.5 +02.6	S 10 52.2 +00.1	17						
18	51 52.8 +01.0	N 08 58.0 -00.6	172 17.4 +02.2	N 14 35.3 +00.1	234 41.1 +02.6	S 10 52.3 +00.1	18						
19	66 53.8 +01.1	N 08 57.4 -00.6	187 19.6 +02.1	N 14 35.4 +00.1	249 43.7 +02.6	S 10 52.4 +00.0	19						
20	81 54.9 +01.0	N 08 56.8 -00.6	202 21.7 +02.2	N 14 35.5 +00.0	264 46.3 +02.6	S 10 52.4 +00.1	20						
21	96 55.9 +01.0	N 08 56.2 -00.6	217 23.9 +02.2	N 14 35.5 +00.1	279 48.9 +02.5	S 10 52.5 +00.0	21						
22	111 56.9 +01.0	N 08 55.6 -00.6	232 26.1 +02.1	N 14 35.6 +00.1	294 51.4 +02.6	S 10 52.5 +00.1	22						
23	126 57.9 +01.1	N 08 55.0 -00.6	247 28.2 +02.2	N 14 35.7 +00.1	309 54.0 +02.6	S 10 52.6 +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 00'3 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 199° 199° 199° 199° 199° 199°		SHA 319° 319° 319° 319° 319° 319°		SHA 021° 021° 021° 021° 021° 022°								
	Greenwich Culmination Time: 14:32		Greenwich Culmination Time: 06:32		Greenwich Culmination Time: 02:23								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.4 +00.0	N 19 32.1 -00.6	154 17.6 +02.9	N 08 07.4 -00.4	92 06.4 -27.1	S 13 08.3 +13.3	00						
01	193 21.4 +00.0	N 19 31.5 -00.5	169 20.5 +02.9	N 08 07.0 -00.4	106 39.3 -27.2	S 13 21.6 +13.3	01						
02	208 21.4 +00.0	N 19 31.0 -00.6	184 23.4 +03.0	N 08 06.6 -00.5	121 12.1 -27.3	S 13 34.9 +13.2	02						
03	223 21.4 +00.0	N 19 30.4 -00.5	199 26.4 +02.9	N 08 06.1 -00.4	135 44.8 -27.4	S 13 48.1 +13.2	03						
04	238 21.4 +00.0	N 19 29.9 -00.6	214 29.3 +03.0	N 08 05.7 -00.4	150 17.4 -27.4	S 14 01.3 +13.2	04						
05	253 21.4 +00.0	N 19 29.3 -00.5	229 32.3 +02.9	N 08 05.3 -00.5	164 50.0 -27.6	S 14 14.5 +13.1	05						
06	268 21.4 +00.0	N 19 28.8 -00.6	244 35.2 +03.0	N 08 04.8 -00.4	179 22.4 -27.6	S 14 27.6 +13.0	06						
07	283 21.4 +00.0	N 19 28.2 -00.5	259 38.2 +03.0	N 08 04.4 -00.4	193 54.8 -27.8	S 14 40.6 +13.0	07						
08	298 21.4 +00.0	N 19 27.7 -00.6	274 41.2 +02.9	N 08 04.0 -00.4	208 27.0 -27.8	S 14 53.6 +13.0	08						
09	313 21.4 +00.0	N 19 27.1 -00.5	289 44.1 +03.0	N 08 03.6 -00.5	222 59.2 -28.0	S 15 06.6 +12.9	09						
10	328 21.4 +00.0	N 19 26.6 -00.6	304 47.1 +03.0	N 08 03.1 -00.4	237 31.2 -28.0	S 15 19.5 +12.8	10						
11	343 21.4 +00.0	N 19 26.0 -00.5	319 50.1 +03.0	N 08 02.7 -00.4	252 03.2 -28.2	S 15 32.3 +12.8	11						
12	358 21.4 +00.0	N 19 25.5 -00.6	334 53.1 +02.9	N 08 02.3 -00.4	266 35.0 -28.2	S 15 45.1 +12.7	12						
13	13 21.4 +00.0	N 19 24.9 -00.5	349 56.0 +03.0	N 08 01.9 -00.4	281 06.8 -28.4	S 15 57.8 +12.7	13						
14	28 21.4 +00.0	N 19 24.4 -00.6	4 59.0 +03.0	N 08 01.5 -00.5	295 38.4 -28.4	S 16 10.5 +12.6	14						
15	43 21.4 +00.0	N 19 23.8 -00.5	20 02.0 +03.0	N 08 01.0 -00.4	310 10.0 -28.6	S 16 23.1 +12.6	15						
16	58 21.4 +00.0	N 19 23.3 -00.6	35 05.0 +03.0	N 08 00.6 -00.4	324 41.4 -28.7	S 16 35.7 +12.5	16						
17	73 21.4 +00.0	N 19 22.7 -00.5	50 08.0 +03.0	N 08 00.2 -00.4	339 12.7 -28.7	S 16 48.2 +12.4	17						
18	88 21.4 +00.0	N 19 22.2 -00.6	65 11.0 +03.0	N 07 59.8 -00.4	353 44.0 -28.9	S 17 00.6 +12.4	18						
19	103 21.4 +00.0	N 19 21.6 -00.5	80 14.0 +03.0	N 07 59.4 -00.4	8 15.1 -29.0	S 17 13.0 +12.3	19						
20	118 21.4 +00.0	N 19 21.1 -00.6	95 17.0 +03.1	N 07 59.0 -00.4	22 46.1 -29.2	S 17 25.3 +12.2	20						
21	133 21.4 +00.0	N 19 20.5 -00.6	110 20.1 +03.0	N 07 58.6 -00.4	37 16.9 -29.2	S 17 37.5 +12.2	21						
22	148 21.4 +00.0	N 19 19.9 -00.5	125 23.1 +03.0	N 07 58.2 -00.4	51 47.7 -29.3	S 17 49.7 +12.1	22						
23	163 21.4 +00.0	N 19 19.4 -00.6	140 26.1 +03.0	N 07 57.8 -00.4	66 18.4 -29.5	S 18 01.8 +12.0	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	00'4 00'4 00'4 00'4 00'4 00'4	SD	15'3 15'3 15'4 15'4 15'5 15'5								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'4 00'4 00'4 00'4 00'4 00'4	HP	56'2 56'3 56'4 56'6 56'7 56'9								
SHA	235° 235° 235° 234° 234° 234°	SHA	211° 211° 211° 211° 211° 211°	SHA	148° 146° 144° 142° 140° 137°								
Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 13:40			Greenwich Culmination Time: 18:25							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	141 59.0 +01.0	N 08 54.4 -00.6	262 30.4 +02.2	N 14 35.8 +00.1	324 56.6 +02.6	S 10 52.7 +00.0	00						
01	156 60.0 +01.0	N 08 53.8 -00.6	277 32.6 +02.1	N 14 35.9 +00.1	339 59.2 +02.6	S 10 52.7 +00.1	01						
02	172 01.0 +01.0	N 08 53.2 -00.6	292 34.7 +02.2	N 14 36.0 +00.0	355 01.8 +02.6	S 10 52.8 +00.0	02						
03	187 02.0 +01.1	N 08 52.6 -00.7	307 36.9 +02.2	N 14 36.0 +00.1	10 04.4 +02.6	S 10 52.8 +00.1	03						
04	202 03.1 +01.0	N 08 51.9 -00.6	322 39.1 +02.1	N 14 36.1 +00.1	25 07.0 +02.6	S 10 52.9 +00.0	04						
05	217 04.1 +01.0	N 08 51.3 -00.6	337 41.2 +02.2	N 14 36.2 +00.1	40 09.6 +02.6	S 10 52.9 +00.1	05						
06	232 05.1 +01.0	N 08 50.7 -00.6	352 43.4 +02.2	N 14 36.3 +00.1	55 12.2 +02.6	S 10 53.0 +00.1	06						
07	247 06.1 +01.1	N 08 50.1 -00.6	7 45.6 +02.1	N 14 36.4 +00.1	70 14.8 +02.6	S 10 53.1 +00.0	07						
08	262 07.2 +01.0	N 08 49.5 -00.6	22 47.7 +02.2	N 14 36.5 +00.0	85 17.4 +02.6	S 10 53.1 +00.1	08						
09	277 08.2 +01.0	N 08 48.9 -00.6	37 49.9 +02.2	N 14 36.5 +00.1	100 20.0 +02.6	S 10 53.2 +00.0	09						
10	292 09.2 +01.0	N 08 48.3 -00.6	52 52.1 +02.1	N 14 36.6 +00.1	115 22.6 +02.6	S 10 53.2 +00.1	10						
11	307 10.2 +01.0	N 08 47.7 -00.6	67 54.2 +02.2	N 14 36.7 +00.1	130 25.2 +02.6	S 10 53.3 +00.1	11						
12	322 11.2 +01.1	N 08 47.1 -00.6	82 56.4 +02.2	N 14 36.8 +00.1	145 27.8 +02.6	S 10 53.4 +00.0	12						
13	337 12.3 +01.0	N 08 46.5 -00.6	97 58.6 +02.1	N 14 36.9 +00.1	160 30.4 +02.6	S 10 53.4 +00.1	13						
14	352 13.3 +01.0	N 08 45.9 -00.6	113 00.7 +02.2	N 14 37.0 +00.0	175 33.0 +02.6	S 10 53.5 +00.0	14						
15	7 14.3 +01.0	N 08 45.3 -00.6	128 02.9 +02.2	N 14 37.0 +00.1	190 35.6 +02.6	S 10 53.5 +00.1	15						
16	22 15.3 +01.1	N 08 44.7 -00.6	143 05.1 +02.1	N 14 37.1 +00.1	205 38.2 +02.6	S 10 53.6 +00.1	16						
17	37 16.4 +01.0	N 08 44.1 -00.6	158 07.2 +02.2	N 14 37.2 +00.1	220 40.8 +02.6	S 10 53.7 +00.0	17						
18	52 17.4 +01.0	N 08 43.5 -00.6	173 09.4 +02.2	N 14 37.3 +00.1	235 43.4 +02.6	S 10 53.7 +00.1	18						
19	67 18.4 +01.0	N 08 42.9 -00.6	188 11.6 +02.1	N 14 37.4 +00.1	250 46.0 +02.5	S 10 53.8 +00.0	19						
20	82 19.4 +01.1	N 08 42.3 -00.6	203 13.7 +02.2	N 14 37.5 +00.0	265 48.5 +02.6	S 10 53.8 +00.1	20						
21	97 20.5 +01.0	N 08 41.7 -00.6	218 15.9 +02.2	N 14 37.5 +00.1	280 51.1 +02.6	S 10 53.9 +00.1	21						
22	112 21.5 +01.0	N 08 41.1 -00.7	233 18.1 +02.1	N 14 37.6 +00.1	295 53.7 +02.6	S 10 54.0 +00.0	22						
23	127 22.5 +01.0	N 08 40.4 -00.6	248 20.2 +02.2	N 14 37.7 +00.1	310 56.3 +02.6	S 10 54.0 +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	199° 198° 198° 198° 198° 198°	SHA	319° 319° 319° 319° 319° 319°	SHA	022° 022° 022° 022° 022° 022°								
Greenwich Culmination Time: 14:31			Greenwich Culmination Time: 06:29			Greenwich Culmination Time: 02:19							

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.4 +00.0	N 19 18.8 -00.5	155 29.1 +03.1	N 07 57.4 -00.4	80 48.9 -29.6	S 18 13.8 +12.0	00						
01	193 21.4 +00.0	N 19 18.3 -00.6	170 32.2 +03.0	N 07 57.0 -00.4	95 19.3 -29.7	S 18 25.8 +11.9	01						
02	208 21.4 +00.0	N 19 17.7 -00.6	185 35.2 +03.0	N 07 56.6 -00.4	109 49.6 -29.8	S 18 37.7 +11.8	02						
03	223 21.4 +00.0	N 19 17.1 -00.5	200 38.2 +03.1	N 07 56.2 -00.4	124 19.8 -29.9	S 18 49.5 +11.7	03						
04	238 21.4 +00.0	N 19 16.6 -00.6	215 41.3 +03.0	N 07 55.8 -00.4	138 49.9 -30.1	S 19 01.2 +11.7	04						
05	253 21.4 +00.0	N 19 16.0 -00.5	230 44.3 +03.1	N 07 55.4 -00.4	153 19.8 -30.1	S 19 12.9 +11.6	05						
06	268 21.4 +00.0	N 19 15.5 -00.6	245 47.4 +03.0	N 07 55.0 -00.4	167 49.7 -30.3	S 19 24.5 +11.5	06						
07	283 21.4 +00.0	N 19 14.9 -00.6	260 50.4 +03.1	N 07 54.6 -00.4	182 19.4 -30.4	S 19 36.0 +11.4	07						
08	298 21.4 +00.1	N 19 14.3 -00.5	275 53.5 +03.1	N 07 54.2 -00.4	196 49.0 -30.6	S 19 47.4 +11.3	08						
09	313 21.5 +00.0	N 19 13.8 -00.6	290 56.6 +03.0	N 07 53.8 -00.4	211 18.4 -30.7	S 19 58.7 +11.2	09						
10	328 21.5 +00.0	N 19 13.2 -00.6	305 59.6 +03.1	N 07 53.4 -00.4	225 47.7 -30.8	S 20 09.9 +11.2	10						
11	343 21.5 +00.0	N 19 12.6 -00.5	321 02.7 +03.1	N 07 53.0 -00.4	240 16.9 -30.9	S 20 21.1 +11.0	11						
12	358 21.5 +00.0	N 19 12.1 -00.6	336 05.8 +03.0	N 07 52.6 -00.4	254 46.0 -31.0	S 20 32.1 +11.0	12						
13	13 21.5 +00.0	N 19 11.5 -00.6	351 08.8 +03.1	N 07 52.2 -00.3	269 15.0 -31.2	S 20 43.1 +10.9	13						
14	28 21.5 +00.0	N 19 10.9 -00.5	6 11.9 +03.1	N 07 51.9 -00.4	283 43.8 -31.3	S 20 54.0 +10.8	14						
15	43 21.5 +00.0	N 19 10.4 -00.6	21 15.0 +03.1	N 07 51.5 -00.4	298 12.5 -31.4	S 21 04.8 +10.7	15						
16	58 21.5 +00.0	N 19 09.8 -00.6	36 18.1 +03.1	N 07 51.1 -00.4	312 41.1 -31.6	S 21 15.5 +10.5	16						
17	73 21.5 +00.0	N 19 09.2 -00.5	51 21.2 +03.1	N 07 50.7 -00.4	327 09.5 -31.7	S 21 26.0 +10.5	17						
18	88 21.5 +00.0	N 19 08.7 -00.6	66 24.3 +03.1	N 07 50.3 -00.3	341 37.8 -31.8	S 21 36.5 +10.4	18						
19	103 21.5 +00.0	N 19 08.1 -00.6	81 27.4 +03.1	N 07 50.0 -00.4	356 06.0 -32.0	S 21 46.9 +10.3	19						
20	118 21.5 +00.0	N 19 07.5 -00.5	96 30.5 +03.1	N 07 49.6 -00.4	10 34.0 -32.1	S 21 57.2 +10.2	20						
21	133 21.5 +00.1	N 19 07.0 -00.6	111 33.6 +03.1	N 07 49.2 -00.4	25 01.9 -32.2	S 22 07.4 +10.0	21						
22	148 21.6 +00.0	N 19 06.4 -00.6	126 36.7 +03.1	N 07 48.8 -00.3	39 29.7 -32.3	S 22 17.4 +10.0	22						
23	163 21.6 +00.0	N 19 05.8 -00.6	141 39.8 +03.2	N 07 48.5 -00.4	53 57.4 -32.5	S 22 27.4 +09.8	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 00'4 00'4 00'4 00'4 00'4 00'4		SD 15'5 15'6 15'6 15'7 15'7 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'4 00'4 00'4		HP 57'0 57'2 57'3 57'5 57'6 57'8								
	SHA 234° 234° 234° 233° 233° 233°		SHA 211° 211° 211° 211° 211° 211°		SHA 135° 133° 131° 129° 126° 124°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:35		Greenwich Culmination Time: 19:16								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	142 23.5 +01.1	N 08 39.8 -00.6	263 22.4 +02.2	N 14 37.8 +00.1	325 58.9 +02.6	S 10 54.1 +00.0	00						
01	157 24.6 +01.0	N 08 39.2 -00.6	278 24.6 +02.1	N 14 37.9 +00.0	341 01.5 +02.6	S 10 54.1 +00.1	01						
02	172 25.6 +01.0	N 08 38.6 -00.6	293 26.7 +02.2	N 14 37.9 +00.1	356 04.1 +02.6	S 10 54.2 +00.1	02						
03	187 26.6 +01.0	N 08 38.0 -00.6	308 28.9 +02.2	N 14 38.0 +00.1	11 06.7 +02.6	S 10 54.3 +00.0	03						
04	202 27.6 +01.1	N 08 37.4 -00.6	323 31.1 +02.2	N 14 38.1 +00.1	26 09.3 +02.6	S 10 54.3 +00.1	04						
05	217 28.7 +01.0	N 08 36.8 -00.6	338 33.3 +02.1	N 14 38.2 +00.1	41 11.9 +02.6	S 10 54.4 +00.0	05						
06	232 29.7 +01.0	N 08 36.2 -00.6	353 35.4 +02.2	N 14 38.3 +00.1	56 14.5 +02.6	S 10 54.4 +00.1	06						
07	247 30.7 +01.0	N 08 35.6 -00.6	8 37.6 +02.2	N 14 38.4 +00.0	71 17.1 +02.6	S 10 54.5 +00.1	07						
08	262 31.7 +01.1	N 08 35.0 -00.6	23 39.8 +02.1	N 14 38.4 +00.1	86 19.7 +02.6	S 10 54.6 +00.0	08						
09	277 32.8 +01.0	N 08 34.4 -00.6	38 41.9 +02.2	N 14 38.5 +00.1	101 22.3 +02.6	S 10 54.6 +00.1	09						
10	292 33.8 +01.0	N 08 33.8 -00.6	53 44.1 +02.2	N 14 38.6 +00.1	116 24.9 +02.6	S 10 54.7 +00.0	10						
11	307 34.8 +01.0	N 08 33.2 -00.6	68 46.3 +02.2	N 14 38.7 +00.1	131 27.5 +02.6	S 10 54.7 +00.1	11						
12	322 35.8 +01.0	N 08 32.6 -00.6	83 48.5 +02.1	N 14 38.8 +00.0	146 30.1 +02.6	S 10 54.8 +00.1	12						
13	337 36.8 +01.1	N 08 32.0 -00.7	98 50.6 +02.2	N 14 38.8 +00.1	161 32.7 +02.6	S 10 54.9 +00.0	13						
14	352 37.9 +01.0	N 08 31.3 -00.6	113 52.8 +02.2	N 14 38.9 +00.1	176 35.3 +02.6	S 10 54.9 +00.1	14						
15	7 38.9 +01.0	N 08 30.7 -00.6	128 55.0 +02.2	N 14 39.0 +00.1	191 37.9 +02.6	S 10 55.0 +00.0	15						
16	22 39.9 +01.0	N 08 30.1 -00.6	143 57.2 +02.1	N 14 39.1 +00.1	206 40.5 +02.6	S 10 55.0 +00.1	16						
17	37 40.9 +01.1	N 08 29.5 -00.6	158 59.3 +02.2	N 14 39.2 +00.0	221 43.1 +02.6	S 10 55.1 +00.1	17						
18	52 42.0 +01.0	N 08 28.9 -00.6	174 01.5 +02.2	N 14 39.2 +00.1	236 45.7 +02.6	S 10 55.2 +00.0	18						
19	67 43.0 +01.0	N 08 28.3 -00.6	189 03.7 +02.2	N 14 39.3 +00.1	251 48.3 +02.6	S 10 55.2 +00.1	19						
20	82 44.0 +01.0	N 08 27.7 -00.6	204 05.9 +02.1	N 14 39.4 +00.1	266 50.9 +02.6	S 10 55.3 +00.0	20						
21	97 45.0 +01.1	N 08 27.1 -00.6	219 08.0 +02.2	N 14 39.5 +00.1	281 53.5 +02.6	S 10 55.3 +00.1	21						
22	112 46.1 +01.0	N 08 26.5 -00.6	234 10.2 +02.2	N 14 39.6 +00.0	296 56.1 +02.6	S 10 55.4 +00.1	22						
23	127 47.1 +01.0	N 08 25.9 -00.6	249 12.4 +02.2	N 14 39.6 +00.1	311 58.7 +02.6	S 10 55.5 +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 00'2 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 198° 198° 198° 198° 198° 197°		SHA 319° 319° 319° 319° 319° 319°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:29		Greenwich Culmination Time: 06:25		Greenwich Culmination Time: 02:15								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.6 +00.0	N 19 05.2 -00.5	156 43.0 +03.1	N 07 48.1 -00.4	68 24.9 -32.6	S 22 37.2 +09.8	00						
01	193 21.6 +00.0	N 19 04.7 -00.6	171 46.1 +03.1	N 07 47.7 -00.4	82 52.3 -32.8	S 22 47.0 +09.6	01						
02	208 21.6 +00.0	N 19 04.1 -00.6	186 49.2 +03.2	N 07 47.3 -00.3	97 19.5 -32.9	S 22 56.6 +09.5	02						
03	223 21.6 +00.0	N 19 03.5 -00.6	201 52.4 +03.1	N 07 47.0 -00.4	111 46.6 -33.0	S 23 06.1 +09.4	03						
04	238 21.6 +00.0	N 19 02.9 -00.5	216 55.5 +03.1	N 07 46.6 -00.3	126 13.6 -33.2	S 23 15.5 +09.3	04						
05	253 21.6 +00.0	N 19 02.4 -00.6	231 58.6 +03.2	N 07 46.3 -00.4	140 40.4 -33.3	S 23 24.8 +09.1	05						
06	268 21.6 +00.1	N 19 01.8 -00.6	247 01.8 +03.1	N 07 45.9 -00.4	155 07.1 -33.4	S 23 33.9 +09.0	06						
07	283 21.7 +00.0	N 19 01.2 -00.6	262 04.9 +03.2	N 07 45.5 -00.3	169 33.7 -33.6	S 23 42.9 +08.9	07						
08	298 21.7 +00.0	N 19 00.6 -00.5	277 08.1 +03.1	N 07 45.2 -00.4	184 00.1 -33.6	S 23 51.8 +08.8	08						
09	313 21.7 +00.0	N 19 00.1 -00.6	292 11.2 +03.2	N 07 44.8 -00.3	198 26.5 -33.9	S 24 00.6 +08.6	09						
10	328 21.7 +00.0	N 18 59.5 -00.6	307 14.4 +03.2	N 07 44.5 -00.4	212 52.6 -33.9	S 24 09.2 +08.5	10						
11	343 21.7 +00.0	N 18 58.9 -00.6	322 17.6 +03.1	N 07 44.1 -00.3	227 18.7 -34.1	S 24 17.7 +08.4	11						
12	358 21.7 +00.0	N 18 58.3 -00.5	337 20.7 +03.2	N 07 43.8 -00.4	241 44.6 -34.3	S 24 26.1 +08.2	12						
13	13 21.7 +00.0	N 18 57.8 -00.6	352 23.9 +03.2	N 07 43.4 -00.4	256 10.3 -34.3	S 24 34.3 +08.1	13						
14	28 21.7 +00.1	N 18 57.2 -00.6	7 27.1 +03.2	N 07 43.0 -00.3	270 36.0 -34.5	S 24 42.4 +08.0	14						
15	43 21.8 +00.0	N 18 56.6 -00.6	22 30.3 +03.1	N 07 42.7 -00.3	285 01.5 -34.7	S 24 50.4 +07.8	15						
16	58 21.8 +00.0	N 18 56.0 -00.6	37 33.4 +03.2	N 07 42.4 -00.4	299 26.8 -34.7	S 24 58.2 +07.7	16						
17	73 21.8 +00.0	N 18 55.4 -00.6	52 36.6 +03.2	N 07 42.0 -00.3	313 52.1 -34.9	S 25 05.9 +07.5	17						
18	88 21.8 +00.0	N 18 54.8 -00.5	67 39.8 +03.2	N 07 41.7 -00.4	328 17.2 -35.0	S 25 13.4 +07.4	18						
19	103 21.8 +00.0	N 18 54.3 -00.6	82 43.0 +03.2	N 07 41.3 -00.3	342 42.2 -35.2	S 25 20.8 +07.2	19						
20	118 21.8 +00.1	N 18 53.7 -00.6	97 46.2 +03.2	N 07 41.0 -00.4	357 07.0 -35.3	S 25 28.0 +07.1	20						
21	133 21.9 +00.0	N 18 53.1 -00.6	112 49.4 +03.2	N 07 40.6 -00.3	11 31.7 -35.4	S 25 35.1 +07.0	21						
22	148 21.9 +00.0	N 18 52.5 -00.6	127 52.6 +03.2	N 07 40.3 -00.3	25 56.3 -35.5	S 25 42.1 +06.7	22						
23	163 21.9 +00.0	N 18 51.9 -00.6	142 55.8 +03.2	N 07 40.0 -00.4	40 20.8 -35.7	S 25 48.8 +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 15'7 15'8 15'8 15'8 15'8 15'8		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 15'8 15'8 15'9 15'9 16'0 16'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'4 00'4 00'4 00'5 00'5 00'5		HP 58'0 58'1 58'3 58'4 58'6 58'8								
	SHA 233° 233° 233° 232° 232° 232°		SHA 211° 211° 211° 211° 212° 212°		SHA 122° 119° 117° 115° 112° 110°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:30		Greenwich Culmination Time: 20:12								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	142 48.1 +01.0	N 08 25.3 -00.6	264 14.6 +02.1	N 14 39.7 +00.1	327 01.3 +02.6	S 10 55.5 +00.1	00						
01	157 49.1 +01.1	N 08 24.7 -00.7	279 16.7 +02.2	N 14 39.8 +00.1	342 03.9 +02.6	S 10 55.6 +00.0	01						
02	172 50.2 +01.0	N 08 24.0 -00.6	294 18.9 +02.2	N 14 39.9 +00.1	357 06.5 +02.6	S 10 55.6 +00.1	02						
03	187 51.2 +01.0	N 08 23.4 -00.6	309 21.1 +02.2	N 14 40.0 +00.0	12 09.1 +02.6	S 10 55.7 +00.1	03						
04	202 52.2 +01.0	N 08 22.8 -00.6	324 23.3 +02.1	N 14 40.0 +00.1	27 11.7 +02.6	S 10 55.8 +00.0	04						
05	217 53.2 +01.1	N 08 22.2 -00.6	339 25.4 +02.2	N 14 40.1 +00.1	42 14.3 +02.6	S 10 55.8 +00.1	05						
06	232 54.3 +01.0	N 08 21.6 -00.6	354 27.6 +02.2	N 14 40.2 +00.1	57 16.9 +02.6	S 10 55.9 +00.0	06						
07	247 55.3 +01.0	N 08 21.0 -00.6	9 29.8 +02.2	N 14 40.3 +00.1	72 19.5 +02.6	S 10 55.9 +00.1	07						
08	262 56.3 +01.0	N 08 20.4 -00.6	24 32.0 +02.2	N 14 40.4 +00.0	87 22.1 +02.6	S 10 56.0 +00.1	08						
09	277 57.3 +01.1	N 08 19.8 -00.6	39 34.2 +02.1	N 14 40.4 +00.1	102 24.7 +02.6	S 10 56.1 +00.0	09						
10	292 58.4 +01.0	N 08 19.2 -00.6	54 36.3 +02.2	N 14 40.5 +00.1	117 27.3 +02.6	S 10 56.1 +00.1	10						
11	307 59.4 +01.0	N 08 18.6 -00.7	69 38.5 +02.2	N 14 40.6 +00.1	132 29.9 +02.6	S 10 56.2 +00.0	11						
12	323 00.4 +01.0	N 08 17.9 -00.6	84 40.7 +02.2	N 14 40.7 +00.1	147 32.5 +02.6	S 10 56.2 +00.1	12						
13	338 01.4 +01.1	N 08 17.3 -00.6	99 42.9 +02.2	N 14 40.8 +00.0	162 35.1 +02.6	S 10 56.3 +00.1	13						
14	353 02.5 +01.0	N 08 16.7 -00.6	114 45.1 +02.1	N 14 40.8 +00.1	177 37.7 +02.6	S 10 56.4 +00.0	14						
15	8 03.5 +01.0	N 08 16.1 -00.6	129 47.2 +02.2	N 14 40.9 +00.1	192 40.3 +02.6	S 10 56.4 +00.1	15						
16	23 04.5 +01.0	N 08 15.5 -00.6	144 49.4 +02.2	N 14 41.0 +00.1	207 42.9 +02.6	S 10 56.5 +00.1	16						
17	38 05.5 +01.1	N 08 14.9 -00.6	159 51.6 +02.2	N 14 41.1 +00.0	222 45.5 +02.6	S 10 56.6 +00.0	17						
18	53 06.6 +01.0	N 08 14.3 -00.6	174 53.8 +02.2	N 14 41.1 +00.1	237 48.1 +02.6	S 10 56.6 +00.1	18						
19	68 07.6 +01.0	N 08 13.7 -00.6	189 56.0 +02.1	N 14 41.2 +00.1	252 50.7 +02.6	S 10 56.7 +00.0	19						
20	83 08.6 +01.0	N 08 13.1 -00.6	204 58.1 +02.2	N 14 41.3 +00.1	267 53.3 +02.6	S 10 56.7 +00.1	20						
21	98 09.6 +01.1	N 08 12.5 -00.7	220 00.3 +02.2	N 14 41.4 +00.1	282 55.9 +02.6	S 10 56.8 +00.1	21						
22	113 10.7 +01.0	N 08 11.8 -00.6	235 02.5 +02.2	N 14 41.5 +00.0	297 58.5 +02.6	S 10 56.9 +00.0	22						
23	128 11.7 +01.0	N 08 11.2 -00.6	250 04.7 +02.2	N 14 41.5 +00.1	313 01.1 +02.6	S 10 56.9 +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 00'3 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 197° 197° 197° 197° 197° 197°		SHA 319° 319° 319° 319° 319° 319°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:27		Greenwich Culmination Time: 06:22		Greenwich Culmination Time: 02:11								

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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 21.9 +00.0	N 18 51.3 -00.5	157 59.0 +03.3	N 07 39.6 -00.3	54 45.1 -35.7	S 25 55.5 +06.4	00						
01	193 21.9 +00.0	N 18 50.8 -00.6	173 02.3 +03.2	N 07 39.3 -00.3	69 09.4 -36.0	S 26 01.9 +06.3	01						
02	208 21.9 +00.1	N 18 50.2 -00.6	188 05.5 +03.2	N 07 39.0 -00.4	83 33.4 -36.0	S 26 08.2 +06.2	02						
03	223 22.0 +00.0	N 18 49.6 -00.6	203 08.7 +03.2	N 07 38.6 -00.3	97 57.4 -36.1	S 26 14.4 +06.0	03						
04	238 22.0 +00.0	N 18 49.0 -00.6	218 11.9 +03.3	N 07 38.3 -00.3	112 21.3 -36.3	S 26 20.4 +05.8	04						
05	253 22.0 +00.0	N 18 48.4 -00.6	233 15.2 +03.2	N 07 38.0 -00.4	126 45.0 -36.4	S 26 26.2 +05.6	05						
06	268 22.0 +00.0	N 18 47.8 -00.6	248 18.4 +03.3	N 07 37.6 -00.3	141 08.6 -36.5	S 26 31.8 +05.5	06						
07	283 22.0 +00.0	N 18 47.2 -00.6	263 21.7 +03.2	N 07 37.3 -00.3	155 32.1 -36.6	S 26 37.3 +05.3	07						
08	298 22.0 +00.1	N 18 46.6 -00.5	278 24.9 +03.2	N 07 37.0 -00.3	169 55.5 -36.8	S 26 42.6 +05.2	08						
09	313 22.1 +00.0	N 18 46.1 -00.6	293 28.1 +03.3	N 07 36.7 -00.4	184 18.7 -36.8	S 26 47.8 +04.9	09						
10	328 22.1 +00.0	N 18 45.5 -00.6	308 31.4 +03.3	N 07 36.3 -00.3	198 41.9 -37.0	S 26 52.7 +04.8	10						
11	343 22.1 +00.0	N 18 44.9 -00.6	323 34.7 +03.2	N 07 36.0 -00.3	213 04.9 -37.1	S 26 57.5 +04.6	11						
12	358 22.1 +00.0	N 18 44.3 -00.6	338 37.9 +03.3	N 07 35.7 -00.3	227 27.8 -37.1	S 27 02.1 +04.5	12						
13	13 22.1 +00.1	N 18 43.7 -00.6	353 41.2 +03.2	N 07 35.4 -00.3	241 50.7 -37.3	S 27 06.6 +04.2	13						
14	28 22.2 +00.0	N 18 43.1 -00.6	8 44.4 +03.3	N 07 35.1 -00.3	256 13.4 -37.4	S 27 10.8 +04.1	14						
15	43 22.2 +00.0	N 18 42.5 -00.6	23 47.7 +03.3	N 07 34.8 -00.4	270 36.0 -37.5	S 27 14.9 +03.9	15						
16	58 22.2 +00.0	N 18 41.9 -00.6	38 51.0 +03.3	N 07 34.4 -00.3	284 58.5 -37.6	S 27 18.8 +03.7	16						
17	73 22.2 +00.0	N 18 41.3 -00.6	53 54.3 +03.3	N 07 34.1 -00.3	299 20.9 -37.7	S 27 22.5 +03.5	17						
18	88 22.2 +00.1	N 18 40.7 -00.6	68 57.6 +03.2	N 07 33.8 -00.3	313 43.2 -37.8	S 27 26.0 +03.3	18						
19	103 22.3 +00.0	N 18 40.1 -00.6	84 00.8 +03.3	N 07 33.5 -00.3	328 05.4 -37.8	S 27 29.3 +03.2	19						
20	118 22.3 +00.0	N 18 39.5 -00.6	99 04.1 +03.3	N 07 33.2 -00.3	342 27.6 -38.0	S 27 32.5 +02.9	20						
21	133 22.3 +00.0	N 18 38.9 -00.6	114 07.4 +03.3	N 07 32.9 -00.3	356 49.6 -38.0	S 27 35.4 +02.8	21						
22	148 22.3 +00.1	N 18 38.3 -00.6	129 10.7 +03.3	N 07 32.6 -00.3	11 11.6 -38.2	S 27 38.2 +02.6	22						
23	163 22.4 +00.0	N 18 37.7 -00.6	144 14.0 +03.3	N 07 32.3 -00.3	25 33.4 -38.2	S 27 40.8 +02.3	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 00'4 00'4 00'4 00'4 00'4 00'4		SD 16'1 16'1 16'1 16'2 16'2 16'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 58'9 59'1 59'2 59'4 59'5 59'7								
	SHA 232° 232° 232° 231° 231° 231°		SHA 212° 212° 212° 212° 212° 212°		SHA 107° 105° 102° 099° 097° 094°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:25		Greenwich Culmination Time: 21:13								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	143 12.7 +01.0	N 08 10.6 -00.6	265 06.9 +02.1	N 14 41.6 +00.1	328 03.7 +02.6	S 10 57.0 +00.0	00						
01	158 13.7 +01.1	N 08 10.0 -00.6	280 09.0 +02.2	N 14 41.7 +00.1	343 06.3 +02.6	S 10 57.0 +00.1	01						
02	173 14.8 +01.0	N 08 09.4 -00.6	295 11.2 +02.2	N 14 41.8 +00.0	358 08.9 +02.6	S 10 57.1 +00.1	02						
03	188 15.8 +01.0	N 08 08.8 -00.6	310 13.4 +02.2	N 14 41.8 +00.1	13 11.5 +02.6	S 10 57.2 +00.0	03						
04	203 16.8 +01.0	N 08 08.2 -00.6	325 15.6 +02.2	N 14 41.9 +00.1	28 14.1 +02.6	S 10 57.2 +00.1	04						
05	218 17.8 +01.0	N 08 07.6 -00.7	340 17.8 +02.1	N 14 42.0 +00.1	43 16.7 +02.6	S 10 57.3 +00.1	05						
06	233 18.8 +01.1	N 08 06.9 -00.6	355 20.0 +02.1	N 14 42.1 +00.1	58 19.3 +02.6	S 10 57.4 +00.0	06						
07	248 19.9 +01.0	N 08 06.3 -00.6	10 22.1 +02.2	N 14 42.2 +00.0	73 21.9 +02.6	S 10 57.4 +00.1	07						
08	263 20.9 +01.0	N 08 05.7 -00.6	25 24.3 +02.2	N 14 42.2 +00.1	88 24.5 +02.7	S 10 57.5 +00.0	08						
09	278 21.9 +01.0	N 08 05.1 -00.6	40 26.5 +02.2	N 14 42.3 +00.1	103 27.2 +02.6	S 10 57.5 +00.1	09						
10	293 22.9 +01.1	N 08 04.5 -00.6	55 28.7 +02.2	N 14 42.4 +00.1	118 29.8 +02.6	S 10 57.6 +00.1	10						
11	308 24.0 +01.0	N 08 03.9 -00.6	70 30.9 +02.2	N 14 42.5 +00.0	133 32.4 +02.6	S 10 57.7 +00.0	11						
12	323 25.0 +01.0	N 08 03.3 -00.6	85 33.1 +02.2	N 14 42.5 +00.1	148 35.0 +02.6	S 10 57.7 +00.1	12						
13	338 26.0 +01.0	N 08 02.7 -00.6	100 35.3 +02.1	N 14 42.6 +00.1	163 37.6 +02.6	S 10 57.8 +00.0	13						
14	353 27.0 +01.1	N 08 02.1 -00.7	115 37.4 +02.2	N 14 42.7 +00.1	178 40.2 +02.6	S 10 57.8 +00.1	14						
15	8 28.1 +01.0	N 08 01.4 -00.6	130 39.6 +02.2	N 14 42.8 +00.0	193 42.8 +02.6	S 10 57.9 +00.1	15						
16	23 29.1 +01.0	N 08 00.8 -00.6	145 41.8 +02.2	N 14 42.8 +00.1	208 45.4 +02.6	S 10 58.0 +00.0	16						
17	38 30.1 +01.0	N 08 00.2 -00.6	160 44.0 +02.2	N 14 42.9 +00.1	223 48.0 +02.6	S 10 58.0 +00.1	17						
18	53 31.1 +01.1	N 07 59.6 -00.6	175 46.2 +02.2	N 14 43.0 +00.1	238 50.6 +02.6	S 10 58.1 +00.1	18						
19	68 32.2 +01.0	N 07 59.0 -00.6	190 48.4 +02.2	N 14 43.1 +00.1	253 53.2 +02.6	S 10 58.2 +00.0	19						
20	83 33.2 +01.0	N 07 58.4 -00.6	205 50.6 +02.1	N 14 43.2 +00.0	268 55.8 +02.6	S 10 58.2 +00.1	20						
21	98 34.2 +01.0	N 07 57.8 -00.7	220 52.7 +02.2	N 14 43.2 +00.1	283 58.4 +02.6	S 10 58.3 +00.0	21						
22	113 35.2 +01.1	N 07 57.1 -00.6	235 54.9 +02.2	N 14 43.3 +00.1	299 01.0 +02.6	S 10 58.3 +00.1	22						
23	128 36.3 +01.0	N 07 56.5 -00.6	250 57.1 +02.2	N 14 43.4 +00.1	314 03.6 +02.6	S 10 58.4 +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 00'2 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 197° 197° 197° 196° 196° 196°		SHA 319° 319° 319° 319° 319° 319°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:26		Greenwich Culmination Time: 06:18		Greenwich Culmination Time: 02:07								

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 37.1 -00.6	159 17.3 +03.3	N 07 32.0 -00.3	39 55.2 -38.3	S 27 43.1 +02.2	00						
01	193 22.4 +00.0	N 18 36.5 -00.6	174 20.6 +03.4	N 07 31.7 -00.3	54 16.9 -38.4	S 27 45.3 +02.0	01						
02	208 22.4 +00.1	N 18 35.9 -00.6	189 24.0 +03.3	N 07 31.4 -00.3	68 38.5 -38.4	S 27 47.3 +01.8	02						
03	223 22.5 +00.0	N 18 35.3 -00.6	204 27.3 +03.3	N 07 31.1 -00.3	83 00.1 -38.5	S 27 49.1 +01.5	03						
04	238 22.5 +00.0	N 18 34.7 -00.6	219 30.6 +03.3	N 07 30.8 -00.3	97 21.6 -38.6	S 27 50.6 +01.4	04						
05	253 22.5 +00.0	N 18 34.1 -00.6	234 33.9 +03.3	N 07 30.5 -00.3	111 43.0 -38.7	S 27 52.0 +01.2	05						
06	268 22.5 +00.1	N 18 33.5 -00.6	249 37.2 +03.4	N 07 30.2 -00.3	126 04.3 -38.7	S 27 53.2 +01.0	06						
07	283 22.6 +00.0	N 18 32.9 -00.6	264 40.6 +03.3	N 07 29.9 -00.2	140 25.6 -38.8	S 27 54.2 +00.7	07						
08	298 22.6 +00.0	N 18 32.3 -00.6	279 43.9 +03.4	N 07 29.7 -00.3	154 46.8 -38.8	S 27 54.9 +00.6	08						
09	313 22.6 +00.0	N 18 31.7 -00.6	294 47.3 +03.3	N 07 29.4 -00.3	169 08.0 -38.9	S 27 55.5 +00.3	09						
10	328 22.6 +00.1	N 18 31.1 -00.6	309 50.6 +03.3	N 07 29.1 -00.3	183 29.1 -38.9	S 27 55.8 +00.2	10						
11	343 22.7 +00.0	N 18 30.5 -00.6	324 53.9 +03.4	N 07 28.8 -00.3	197 50.2 -39.0	S 27 56.0 -00.1	11						
12	358 22.7 +00.0	N 18 29.9 -00.6	339 57.3 +03.3	N 07 28.5 -00.3	212 11.2 -39.1	S 27 55.9 -00.2	12						
13	13 22.7 +00.0	N 18 29.3 -00.6	355 00.6 +03.4	N 07 28.2 -00.2	226 32.1 -39.1	S 27 55.7 -00.5	13						
14	28 22.7 +00.1	N 18 28.7 -00.6	10 04.0 +03.4	N 07 28.0 -00.3	240 53.0 -39.1	S 27 55.2 -00.7	14						
15	43 22.8 +00.0	N 18 28.1 -00.6	25 07.4 +03.3	N 07 27.7 -00.3	255 13.9 -39.1	S 27 54.5 -00.9	15						
16	58 22.8 +00.0	N 18 27.5 -00.6	40 10.7 +03.4	N 07 27.4 -00.3	269 34.8 -39.2	S 27 53.6 -01.1	16						
17	73 22.8 +00.0	N 18 26.9 -00.6	55 14.1 +03.4	N 07 27.1 -00.2	283 55.6 -39.2	S 27 52.5 -01.3	17						
18	88 22.8 +00.1	N 18 26.3 -00.6	70 17.5 +03.4	N 07 26.9 -00.3	298 16.4 -39.3	S 27 51.2 -01.5	18						
19	103 22.9 +00.0	N 18 25.7 -00.6	85 20.9 +03.3	N 07 26.6 -00.3	312 37.1 -39.2	S 27 49.7 -01.7	19						
20	118 22.9 +00.0	N 18 25.1 -00.6	100 24.2 +03.4	N 07 26.3 -00.3	326 57.9 -39.3	S 27 48.0 -02.0	20						
21	133 22.9 +00.1	N 18 24.5 -00.6	115 27.6 +03.4	N 07 26.0 -00.2	341 18.6 -39.3	S 27 46.0 -02.1	21						
22	148 23.0 +00.0	N 18 23.9 -00.7	130 31.0 +03.4	N 07 25.8 -00.3	355 39.3 -39.3	S 27 43.9 -02.4	22						
23	163 23.0 +00.0	N 18 23.2 -00.6	145 34.4 +03.4	N 07 25.5 -00.2	9 60.0 -39.4	S 27 41.5 -02.6	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 00'4 00'4 00'4 00'4 00'4 00'4		SD 16'3 16'3 16'4 16'4 16'4 16'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 59'8 60'0 60'1 60'2 60'4 60'5								
	SHA 231° 231° 231° 230° 230° 230°		SHA 212° 212° 212° 212° 212° 212°		SHA 091° 088° 086° 083° 080° 077°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:19		Greenwich Culmination Time: 22:18								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	143 37.3 +01.0	N 07 55.9 -00.6	265 59.3 +02.2	N 14 43.5 +00.0	329 06.2 +02.6	S 10 58.5 +00.0	00						
01	158 38.3 +01.0	N 07 55.3 -00.6	281 01.5 +02.2	N 14 43.5 +00.1	344 08.8 +02.6	S 10 58.5 +00.1	01						
02	173 39.3 +01.1	N 07 54.7 -00.6	296 03.7 +02.2	N 14 43.6 +00.1	359 11.4 +02.6	S 10 58.6 +00.1	02						
03	188 40.4 +01.0	N 07 54.1 -00.6	311 05.9 +02.2	N 14 43.7 +00.1	14 14.0 +02.6	S 10 58.7 +00.0	03						
04	203 41.4 +01.0	N 07 53.5 -00.6	326 08.1 +02.2	N 14 43.8 +00.0	29 16.6 +02.6	S 10 58.7 +00.1	04						
05	218 42.4 +01.0	N 07 52.9 -00.7	341 10.3 +02.1	N 14 43.8 +00.1	44 19.2 +02.6	S 10 58.8 +00.0	05						
06	233 43.4 +01.1	N 07 52.2 -00.6	356 12.4 +02.2	N 14 43.9 +00.1	59 21.8 +02.6	S 10 58.8 +00.1	06						
07	248 44.5 +01.0	N 07 51.6 -00.6	11 14.6 +02.2	N 14 44.0 +00.1	74 24.4 +02.7	S 10 58.9 +00.1	07						
08	263 45.5 +01.0	N 07 51.0 -00.6	26 16.8 +02.2	N 14 44.1 +00.0	89 27.1 +02.6	S 10 59.0 +00.0	08						
09	278 46.5 +01.0	N 07 50.4 -00.6	41 19.0 +02.2	N 14 44.1 +00.1	104 29.7 +02.6	S 10 59.0 +00.1	09						
10	293 47.5 +01.1	N 07 49.8 -00.6	56 21.2 +02.2	N 14 44.2 +00.1	119 32.3 +02.6	S 10 59.1 +00.1	10						
11	308 48.6 +01.0	N 07 49.2 -00.6	71 23.4 +02.2	N 14 44.3 +00.1	134 34.9 +02.6	S 10 59.2 +00.0	11						
12	323 49.6 +01.0	N 07 48.6 -00.7	86 25.6 +02.2	N 14 44.4 +00.0	149 37.5 +02.6	S 10 59.2 +00.1	12						
13	338 50.6 +01.0	N 07 47.9 -00.6	101 27.8 +02.2	N 14 44.4 +00.1	164 40.1 +02.6	S 10 59.3 +00.0	13						
14	353 51.6 +01.1	N 07 47.3 -00.6	116 30.0 +02.2	N 14 44.5 +00.1	179 42.7 +02.6	S 10 59.3 +00.1	14						
15	8 52.7 +01.0	N 07 46.7 -00.6	131 32.2 +02.2	N 14 44.6 +00.1	194 45.3 +02.6	S 10 59.4 +00.1	15						
16	23 53.7 +01.0	N 07 46.1 -00.6	146 34.4 +02.2	N 14 44.7 +00.0	209 47.9 +02.6	S 10 59.5 +00.0	16						
17	38 54.7 +01.0	N 07 45.5 -00.6	161 36.6 +02.1	N 14 44.7 +00.1	224 50.5 +02.6	S 10 59.5 +00.1	17						
18	53 55.7 +01.1	N 07 44.9 -00.7	176 38.7 +02.2	N 14 44.8 +00.1	239 53.1 +02.6	S 10 59.6 +00.1	18						
19	68 56.8 +01.0	N 07 44.2 -00.6	191 40.9 +02.2	N 14 44.9 +00.0	254 55.7 +02.6	S 10 59.7 +00.0	19						
20	83 57.8 +01.0	N 07 43.6 -00.6	206 43.1 +02.2	N 14 44.9 +00.1	269 58.3 +02.6	S 10 59.7 +00.1	20						
21	98 58.8 +01.0	N 07 43.0 -00.6	221 45.3 +02.2	N 14 45.0 +00.1	285 00.9 +02.6	S 10 59.8 +00.0	21						
22	113 59.8 +01.1	N 07 42.4 -00.6	236 47.5 +02.2	N 14 45.1 +00.1	300 03.5 +02.6	S 10 59.8 +00.1	22						
23	129 00.9 +01.0	N 07 41.8 -00.6	251 49.7 +02.2	N 14 45.2 +00.0	315 06.1 +02.7	S 10 59.9 +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 00'3 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 196° 196° 196° 196° 196° 196°		SHA 319° 319° 319° 319° 319° 319°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:24		Greenwich Culmination Time: 06:15		Greenwich Culmination Time: 02:03								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 23.0 +00.0	N 18 22.6 -00.6			160 37.8 +03.4	N 07 25.3 -00.3			24 20.6 -39.3	S 27 38.9 -02.7			00
01	193 23.0 +00.1	N 18 22.0 -00.6			175 41.2 +03.4	N 07 25.0 -00.3			38 41.3 -39.3	S 27 36.2 -03.0			01
02	208 23.1 +00.0	N 18 21.4 -00.6			190 44.6 +03.4	N 07 24.7 -00.2			53 02.0 -39.4	S 27 33.2 -03.3			02
03	223 23.1 +00.0	N 18 20.8 -00.6			205 48.0 +03.4	N 07 24.5 -00.3			67 22.6 -39.3	S 27 29.9 -03.4			03
04	238 23.1 +00.1	N 18 20.2 -00.6			220 51.4 +03.4	N 07 24.2 -00.2			81 43.3 -39.3	S 27 26.5 -03.6			04
05	253 23.2 +00.0	N 18 19.6 -00.6			235 54.8 +03.4	N 07 24.0 -00.3			96 04.0 -39.4	S 27 22.9 -03.9			05
06	268 23.2 +00.0	N 18 19.0 -00.7			250 58.2 +03.5	N 07 23.7 -00.3			110 24.6 -39.3	S 27 19.0 -04.0			06
07	283 23.2 +00.1	N 18 18.3 -00.6			266 01.7 +03.4	N 07 23.4 -00.2			124 45.3 -39.3	S 27 15.0 -04.3			07
08	298 23.3 +00.0	N 18 17.7 -00.6			281 05.1 +03.4	N 07 23.2 -00.3			139 06.0 -39.2	S 27 10.7 -04.5			08
09	313 23.3 +00.0	N 18 17.1 -00.6			296 08.5 +03.4	N 07 22.9 -00.2			153 26.8 -39.3	S 27 06.2 -04.7			09
10	328 23.3 +00.1	N 18 16.5 -00.6			311 11.9 +03.5	N 07 22.7 -00.2			167 47.5 -39.2	S 27 01.5 -04.9			10
11	343 23.4 +00.0	N 18 15.9 -00.6			326 15.4 +03.4	N 07 22.5 -00.3			182 08.3 -39.2	S 26 56.6 -05.1			11
12	358 23.4 +00.0	N 18 15.3 -00.6			341 18.8 +03.4	N 07 22.2 -00.2			196 29.1 -39.2	S 26 51.5 -05.3			12
13	13 23.4 +00.1	N 18 14.7 -00.7			356 22.2 +03.5	N 07 22.0 -00.3			210 49.9 -39.1	S 26 46.2 -05.5			13
14	28 23.5 +00.0	N 18 14.0 -00.6			11 25.7 +03.4	N 07 21.7 -00.2			225 10.8 -39.1	S 26 40.7 -05.7			14
15	43 23.5 +00.0	N 18 13.4 -00.6			26 29.1 +03.5	N 07 21.5 -00.3			239 31.7 -39.0	S 26 35.0 -06.0			15
16	58 23.5 +00.1	N 18 12.8 -00.6			41 32.6 +03.4	N 07 21.2 -00.2			253 52.7 -39.0	S 26 29.0 -06.1			16
17	73 23.6 +00.0	N 18 12.2 -00.6			56 36.0 +03.5	N 07 21.0 -00.2			268 13.7 -39.0	S 26 22.9 -06.3			17
18	88 23.6 +00.0	N 18 11.6 -00.7			71 39.5 +03.5	N 07 20.8 -00.3			282 34.7 -38.9	S 26 16.6 -06.6			18
19	103 23.6 +00.1	N 18 10.9 -00.6			86 43.0 +03.4	N 07 20.5 -00.2			296 55.8 -38.9	S 26 10.0 -06.7			19
20	118 23.7 +00.0	N 18 10.3 -00.6			101 46.4 +03.5	N 07 20.3 -00.2			311 16.9 -38.8	S 26 03.3 -07.0			20
21	133 23.7 +00.0	N 18 09.7 -00.6			116 49.9 +03.5	N 07 20.1 -00.3			325 38.1 -38.8	S 25 56.3 -07.1			21
22	148 23.7 +00.1	N 18 09.1 -00.6			131 53.4 +03.5	N 07 19.8 -00.2			339 59.3 -38.7	S 25 49.2 -07.4			22
23	163 23.8 +00.0	N 18 08.5 -00.7			146 56.9 +03.4	N 07 19.6 -00.2			354 20.6 -38.6	S 25 41.8 -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 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'4 00'4 00'4 00'4 00'4 00'4				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 00'5 00'5 00'5 00'5 00'5 00'5				HP 60'6 60'7 60'8 60'9 61'0 61'0				
	SHA 230° 230° 230° 229° 229° 229°				SHA 212° 212° 212° 212° 213° 213°				SHA 075° 072° 069° 066° 063° 061°				
	Greenwich Culmination Time: 12:06				Greenwich Culmination Time: 13:14				Greenwich Culmination Time: 23:23				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 01.9 +01.0	N 07 41.2 -00.6			266 51.9 +02.2	N 14 45.2 +00.1			330 08.8 +02.6	S 10 60.0 +00.0			00
01	159 02.9 +01.0	N 07 40.6 -00.7			281 54.1 +02.2	N 14 45.3 +00.1			345 11.4 +02.6	S 11 00.0 +00.1			01
02	174 03.9 +01.1	N 07 39.9 -00.6			296 56.3 +02.2	N 14 45.4 +00.1			0 14.0 +02.6	S 11 00.1 +00.1			02
03	189 05.0 +01.0	N 07 39.3 -00.6			311 58.5 +02.2	N 14 45.5 +00.0			15 16.6 +02.6	S 11 00.2 +00.0			03
04	204 06.0 +01.0	N 07 38.7 -00.6			327 00.7 +02.2	N 14 45.5 +00.1			30 19.2 +02.6	S 11 00.2 +00.1			04
05	219 07.0 +01.0	N 07 38.1 -00.6			342 02.9 +02.2	N 14 45.6 +00.1			45 21.8 +02.6	S 11 00.3 +00.0			05
06	234 08.0 +01.1	N 07 37.5 -00.6			357 05.1 +02.2	N 14 45.7 +00.1			60 24.4 +02.6	S 11 00.3 +00.1			06
07	249 09.1 +01.0	N 07 36.9 -00.7			12 07.3 +02.2	N 14 45.8 +00.0			75 27.0 +02.6	S 11 00.4 +00.1			07
08	264 10.1 +01.0	N 07 36.2 -00.6			27 09.5 +02.2	N 14 45.8 +00.1			90 29.6 +02.6	S 11 00.5 +00.0			08
09	279 11.1 +01.0	N 07 35.6 -00.6			42 11.7 +02.2	N 14 45.9 +00.1			105 32.2 +02.6	S 11 00.5 +00.1			09
10	294 12.1 +01.1	N 07 35.0 -00.6			57 13.9 +02.2	N 14 46.0 +00.0			120 34.8 +02.6	S 11 00.6 +00.1			10
11	309 13.2 +01.0	N 07 34.4 -00.6			72 16.1 +02.2	N 14 46.0 +00.1			135 37.4 +02.6	S 11 00.7 +00.0			11
12	324 14.2 +01.0	N 07 33.8 -00.6			87 18.3 +02.2	N 14 46.1 +00.1			150 40.0 +02.7	S 11 00.7 +00.1			12
13	339 15.2 +01.0	N 07 33.2 -00.7			102 20.5 +02.2	N 14 46.2 +00.1			165 42.7 +02.6	S 11 00.8 +00.1			13
14	354 16.2 +01.1	N 07 32.5 -00.6			117 22.7 +02.2	N 14 46.3 +00.0			180 45.3 +02.6	S 11 00.9 +00.0			14
15	9 17.3 +01.0	N 07 31.9 -00.6			132 24.9 +02.2	N 14 46.3 +00.1			195 47.9 +02.6	S 11 00.9 +00.1			15
16	24 18.3 +01.0	N 07 31.3 -00.6			147 27.1 +02.2	N 14 46.4 +00.1			210 50.5 +02.6	S 11 01.0 +00.0			16
17	39 19.3 +01.0	N 07 30.7 -00.6			162 29.3 +02.2	N 14 46.5 +00.1			225 53.1 +02.6	S 11 01.0 +00.1			17
18	54 20.3 +01.1	N 07 30.1 -00.7			177 31.5 +02.2	N 14 46.6 +00.0			240 55.7 +02.6	S 11 01.1 +00.1			18
19	69 21.4 +01.0	N 07 29.4 -00.6			192 33.7 +02.2	N 14 46.6 +00.1			255 58.3 +02.6	S 11 01.2 +00.0			19
20	84 22.4 +01.0	N 07 28.8 -00.6			207 35.9 +02.2	N 14 46.7 +00.1			271 00.9 +02.6	S 11 01.2 +00.1			20
21	99 23.4 +01.0	N 07 28.2 -00.6			222 38.1 +02.2	N 14 46.8 +00.0			286 03.5 +02.6	S 11 01.3 +00.1			21
22	114 24.4 +01.1	N 07 27.6 -00.6			237 40.3 +02.2	N 14 46.8 +00.1			301 06.1 +02.6	S 11 01.4 +00.0			22
23	129 25.5 +01.0	N 07 27.0 -00.6			252 42.5 +02.2	N 14 46.9 +00.1			316 08.7 +02.7	S 11 01.4 +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 00'2 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 196° 196° 195° 195° 195° 195°				SHA 318° 318° 318° 318° 318° 318°				SHA 022° 022° 022° 022° 022° 022°				
	Greenwich Culmination Time: 14:22				Greenwich Culmination Time: 06:11				Greenwich Culmination Time: 01:59				

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 23.8 +00.0	N 18 07.8 -00.6	162 00.3 +03.5	N 07 19.4 -00.2	8 42.0 -38.6	S 25 34.3 -07.7	00						
01	193 23.8 +00.1	N 18 07.2 -00.6	177 03.8 +03.5	N 07 19.2 -00.3	23 03.4 -38.5	S 25 26.6 -08.0	01						
02	208 23.9 +00.0	N 18 06.6 -00.6	192 07.3 +03.5	N 07 18.9 -00.2	37 24.9 -38.4	S 25 18.6 -08.1	02						
03	223 23.9 +00.1	N 18 06.0 -00.7	207 10.8 +03.5	N 07 18.7 -00.2	51 46.5 -38.4	S 25 10.5 -08.3	03						
04	238 24.0 +00.0	N 18 05.3 -00.6	222 14.3 +03.5	N 07 18.5 -00.2	66 08.1 -38.3	S 25 02.2 -08.5	04						
05	253 24.0 +00.0	N 18 04.7 -00.6	237 17.8 +03.5	N 07 18.3 -00.2	80 29.8 -38.2	S 24 53.7 -08.7	05						
06	268 24.0 +00.1	N 18 04.1 -00.6	252 21.3 +03.5	N 07 18.1 -00.3	94 51.6 -38.1	S 24 45.0 -08.9	06						
07	283 24.1 +00.0	N 18 03.5 -00.7	267 24.8 +03.5	N 07 17.8 -00.2	109 13.5 -38.1	S 24 36.1 -09.1	07						
08	298 24.1 +00.0	N 18 02.8 -00.6	282 28.3 +03.5	N 07 17.6 -00.2	123 35.4 -38.0	S 24 27.0 -09.2	08						
09	313 24.1 +00.1	N 18 02.2 -00.6	297 31.8 +03.5	N 07 17.4 -00.2	137 57.4 -37.9	S 24 17.8 -09.5	09						
10	328 24.2 +00.0	N 18 01.6 -00.7	312 35.3 +03.6	N 07 17.2 -00.2	152 19.5 -37.8	S 24 08.3 -09.6	10						
11	343 24.2 +00.1	N 18 00.9 -00.6	327 38.9 +03.5	N 07 17.0 -00.2	166 41.7 -37.7	S 23 58.7 -09.8	11						
12	358 24.3 +00.0	N 18 00.3 -00.6	342 42.4 +03.5	N 07 16.8 -00.2	181 04.0 -37.7	S 23 48.9 -09.9	12						
13	13 24.3 +00.0	N 17 59.7 -00.6	357 45.9 +03.5	N 07 16.6 -00.2	195 26.3 -37.5	S 23 39.0 -10.2	13						
14	28 24.3 +00.1	N 17 59.1 -00.7	12 49.4 +03.6	N 07 16.4 -00.2	209 48.8 -37.5	S 23 28.8 -10.3	14						
15	43 24.4 +00.0	N 17 58.4 -00.6	27 53.0 +03.5	N 07 16.2 -00.2	224 11.3 -37.3	S 23 18.5 -10.5	15						
16	58 24.4 +00.1	N 17 57.8 -00.6	42 56.5 +03.5	N 07 16.0 -00.2	238 34.0 -37.3	S 23 08.0 -10.7	16						
17	73 24.5 +00.0	N 17 57.2 -00.7	58 00.0 +03.6	N 07 15.8 -00.2	252 56.7 -37.2	S 22 57.3 -10.8	17						
18	88 24.5 +00.0	N 17 56.5 -00.6	73 03.6 +03.5	N 07 15.6 -00.2	267 19.5 -37.1	S 22 46.5 -11.0	18						
19	103 24.5 +00.1	N 17 55.9 -00.6	88 07.1 +03.6	N 07 15.4 -00.2	281 42.4 -37.0	S 22 35.5 -11.2	19						
20	118 24.6 +00.0	N 17 55.3 -00.7	103 10.7 +03.5	N 07 15.2 -00.2	296 05.4 -36.8	S 22 24.3 -11.3	20						
21	133 24.6 +00.1	N 17 54.6 -00.6	118 14.2 +03.6	N 07 15.0 -00.2	310 28.6 -36.8	S 22 13.0 -11.5	21						
22	148 24.7 +00.0	N 17 54.0 -00.6	133 17.8 +03.5	N 07 14.8 -00.2	324 51.8 -36.7	S 22 01.5 -11.6	22						
23	163 24.7 +00.1	N 17 53.4 -00.7	148 21.3 +03.6	N 07 14.6 -00.2	339 15.1 -36.6	S 21 49.9 -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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'4 00'4 00'4 00'4 00'4 00'5		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 00'5 00'5 00'5 00'5 00'5 00'5		HP 61'1 61'2 61'2 61'3 61'3 61'3								
	SHA 229° 229° 229° 228° 228° 228°		SHA 213° 213° 213° 213° 213° 213°		SHA 058° 055° 053° 050° 047° 045°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:08		Greenwich Culmination Time: -1:00								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 26.5 +01.0	N 07 26.4 -00.7	267 44.7 +02.2	N 14 47.0 +00.1	331 11.4 +02.6	S 11 01.5 +00.1	00						
01	159 27.5 +01.0	N 07 25.7 -00.6	282 46.9 +02.2	N 14 47.1 +00.0	346 14.0 +02.6	S 11 01.6 +00.0	01						
02	174 28.5 +01.1	N 07 25.1 -00.6	297 49.1 +02.2	N 14 47.1 +00.1	1 16.6 +02.6	S 11 01.6 +00.1	02						
03	189 29.6 +01.0	N 07 24.5 -00.6	312 51.3 +02.2	N 14 47.2 +00.1	16 19.2 +02.6	S 11 01.7 +00.0	03						
04	204 30.6 +01.0	N 07 23.9 -00.6	327 53.5 +02.2	N 14 47.3 +00.0	31 21.8 +02.6	S 11 01.7 +00.1	04						
05	219 31.6 +01.0	N 07 23.3 -00.7	342 55.7 +02.2	N 14 47.3 +00.1	46 24.4 +02.6	S 11 01.8 +00.1	05						
06	234 32.6 +01.1	N 07 22.6 -00.6	357 57.9 +02.2	N 14 47.4 +00.1	61 27.0 +02.6	S 11 01.9 +00.0	06						
07	249 33.7 +01.0	N 07 22.0 -00.6	13 00.1 +02.2	N 14 47.5 +00.1	76 29.6 +02.6	S 11 01.9 +00.1	07						
08	264 34.7 +01.0	N 07 21.4 -00.6	28 02.3 +02.2	N 14 47.6 +00.0	91 32.2 +02.6	S 11 02.0 +00.1	08						
09	279 35.7 +01.0	N 07 20.8 -00.6	43 04.5 +02.2	N 14 47.6 +00.1	106 34.8 +02.7	S 11 02.1 +00.0	09						
10	294 36.7 +01.1	N 07 20.2 -00.6	58 06.7 +02.2	N 14 47.7 +00.1	121 37.5 +02.6	S 11 02.1 +00.1	10						
11	309 37.8 +01.0	N 07 19.6 -00.7	73 08.9 +02.2	N 14 47.8 +00.0	136 40.1 +02.6	S 11 02.2 +00.1	11						
12	324 38.8 +01.0	N 07 18.9 -00.6	88 11.1 +02.2	N 14 47.8 +00.1	151 42.7 +02.6	S 11 02.3 +00.0	12						
13	339 39.8 +01.0	N 07 18.3 -00.6	103 13.3 +02.2	N 14 47.9 +00.1	166 45.3 +02.6	S 11 02.3 +00.1	13						
14	354 40.8 +01.1	N 07 17.7 -00.6	118 15.5 +02.2	N 14 48.0 +00.0	181 47.9 +02.6	S 11 02.4 +00.1	14						
15	9 41.9 +01.0	N 07 17.1 -00.6	133 17.7 +02.2	N 14 48.0 +00.1	196 50.5 +02.6	S 11 02.5 +00.0	15						
16	24 42.9 +01.0	N 07 16.5 -00.7	148 19.9 +02.2	N 14 48.1 +00.1	211 53.1 +02.6	S 11 02.5 +00.1	16						
17	39 43.9 +01.0	N 07 15.8 -00.6	163 22.1 +02.2	N 14 48.2 +00.1	226 55.7 +02.6	S 11 02.6 +00.0	17						
18	54 44.9 +01.1	N 07 15.2 -00.6	178 24.3 +02.2	N 14 48.3 +00.0	241 58.3 +02.7	S 11 02.6 +00.1	18						
19	69 46.0 +01.0	N 07 14.6 -00.6	193 26.5 +02.2	N 14 48.3 +00.1	257 01.0 +02.6	S 11 02.7 +00.1	19						
20	84 47.0 +01.0	N 07 14.0 -00.6	208 28.7 +02.2	N 14 48.4 +00.1	272 03.6 +02.6	S 11 02.8 +00.0	20						
21	99 48.0 +01.0	N 07 13.4 -00.7	223 30.9 +02.2	N 14 48.5 +00.0	287 06.2 +02.6	S 11 02.8 +00.1	21						
22	114 49.0 +01.1	N 07 12.7 -00.6	238 33.1 +02.3	N 14 48.5 +00.1	302 08.8 +02.6	S 11 02.9 +00.1	22						
23	129 50.1 +01.0	N 07 12.1 -00.6	253 35.4 +02.2	N 14 48.6 +00.1	317 11.4 +02.6	S 11 03.0 +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 00'2 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 195° 195° 195° 195° 195° 195°		SHA 318° 318° 318° 318° 318° 318°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:21		Greenwich Culmination Time: 06:08		Greenwich Culmination Time: 01:54								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	
00	178 24.8 +00.0	N 17 52.7 -00.6	163 24.9 +03.6	N 07 14.4 -00.2	353 38.5 -36.5	S 21 38.1 -11.9	00						
01	193 24.8 +00.0	N 17 52.1 -00.6	178 28.5 +03.5	N 07 14.2 -00.1	8 02.0 -36.3	S 21 26.2 -12.1	01						
02	208 24.8 +00.1	N 17 51.5 -00.7	193 32.0 +03.6	N 07 14.1 -00.2	22 25.7 -36.3	S 21 14.1 -12.3	02						
03	223 24.9 +00.0	N 17 50.8 -00.6	208 35.6 +03.6	N 07 13.9 -00.2	36 49.4 -36.2	S 21 01.8 -12.4	03						
04	238 24.9 +00.1	N 17 50.2 -00.7	223 39.2 +03.6	N 07 13.7 -00.2	51 13.2 -36.0	S 20 49.4 -12.5	04						
05	253 25.0 +00.0	N 17 49.5 -00.6	238 42.8 +03.5	N 07 13.5 -00.2	65 37.2 -36.0	S 20 36.9 -12.7	05						
06	268 25.0 +00.1	N 17 48.9 -00.6	253 46.3 +03.6	N 07 13.3 -00.2	80 01.2 -35.8	S 20 24.2 -12.8	06						
07	283 25.1 +00.0	N 17 48.3 -00.7	268 49.9 +03.6	N 07 13.1 -00.1	94 25.4 -35.8	S 20 11.4 -12.9	07						
08	298 25.1 +00.0	N 17 47.6 -00.6	283 53.5 +03.6	N 07 13.0 -00.2	108 49.6 -35.6	S 19 58.5 -13.1	08						
09	313 25.1 +00.1	N 17 47.0 -00.6	298 57.1 +03.6	N 07 12.8 -00.2	123 14.0 -35.5	S 19 45.4 -13.3	09						
10	328 25.2 +00.0	N 17 46.4 -00.7	314 00.7 +03.6	N 07 12.6 -00.1	137 38.5 -35.4	S 19 32.1 -13.3	10						
11	343 25.2 +00.1	N 17 45.7 -00.6	329 04.3 +03.6	N 07 12.5 -00.2	152 03.1 -35.3	S 19 18.8 -13.5	11						
12	358 25.3 +00.0	N 17 45.1 -00.7	344 07.9 +03.6	N 07 12.3 -00.2	166 27.8 -35.2	S 19 05.3 -13.6	12						
13	13 25.3 +00.1	N 17 44.4 -00.6	359 11.5 +03.6	N 07 12.1 -00.1	180 52.6 -35.1	S 18 51.7 -13.8	13						
14	28 25.4 +00.0	N 17 43.8 -00.7	14 15.1 +03.6	N 07 12.0 -00.2	195 17.5 -35.0	S 18 37.9 -13.8	14						
15	43 25.4 +00.1	N 17 43.1 -00.6	29 18.7 +03.6	N 07 11.8 -00.2	209 42.5 -34.9	S 18 24.1 -14.0	15						
16	58 25.5 +00.0	N 17 42.5 -00.6	44 22.3 +03.7	N 07 11.6 -00.1	224 07.6 -34.7	S 18 10.1 -14.1	16						
17	73 25.5 +00.1	N 17 41.9 -00.7	59 26.0 +03.6	N 07 11.5 -00.2	238 32.9 -34.7	S 17 56.0 -14.2	17						
18	88 25.6 +00.0	N 17 41.2 -00.6	74 29.6 +03.6	N 07 11.3 -00.2	252 58.2 -34.6	S 17 41.8 -14.3	18						
19	103 25.6 +00.1	N 17 40.6 -00.7	89 33.2 +03.6	N 07 11.1 -00.1	267 23.6 -34.4	S 17 27.5 -14.4	19						
20	118 25.7 +00.0	N 17 39.9 -00.6	104 36.8 +03.7	N 07 11.0 -00.2	281 49.2 -34.3	S 17 13.1 -14.6	20						
21	133 25.7 +00.0	N 17 39.3 -00.7	119 40.5 +03.6	N 07 10.8 -00.1	296 14.9 -34.3	S 16 58.5 -14.6	21						
22	148 25.7 +00.1	N 17 38.6 -00.6	134 44.1 +03.6	N 07 10.7 -00.2	310 40.6 -34.1	S 16 43.9 -14.8	22						
23	163 25.8 +00.0	N 17 38.0 -00.7	149 47.7 +03.7	N 07 10.5 -00.1	325 06.5 -34.0	S 16 29.1 -14.8	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	00'5 00'5 00'5 00'5 00'5 00'5		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	00'5 00'5 00'5 00'5 00'5 00'5		HP	61'3 61'3 61'3 61'3 61'3 61'3						
SHA	228° 228° 228° 228° 227° 227°		SHA	213° 213° 213° 213° 213° 213°		SHA	042° 039° 037° 034° 032° 029°						
Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 13:03			Greenwich Culmination Time: 00:26							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	
00	144 51.1 +01.0	N 07 11.5 -00.6	268 37.6 +02.2	N 14 48.7 +00.0	332 14.0 +02.6	S 11 03.0 +00.1	00						
01	159 52.1 +01.0	N 07 10.9 -00.6	283 39.8 +02.2	N 14 48.7 +00.1	347 16.6 +02.6	S 11 03.1 +00.1	01						
02	174 53.1 +01.1	N 07 10.3 -00.7	298 42.0 +02.2	N 14 48.8 +00.1	2 19.2 +02.6	S 11 03.2 +00.0	02						
03	189 54.2 +01.0	N 07 09.6 -00.6	313 44.2 +02.2	N 14 48.9 +00.1	17 21.8 +02.7	S 11 03.2 +00.1	03						
04	204 55.2 +01.0	N 07 09.0 -00.6	328 46.4 +02.2	N 14 49.0 +00.0	32 24.5 +02.6	S 11 03.3 +00.1	04						
05	219 56.2 +01.0	N 07 08.4 -00.6	343 48.6 +02.2	N 14 49.0 +00.1	47 27.1 +02.6	S 11 03.4 +00.0	05						
06	234 57.2 +01.0	N 07 07.8 -00.6	358 50.8 +02.2	N 14 49.1 +00.1	62 29.7 +02.6	S 11 03.4 +00.1	06						
07	249 58.2 +01.1	N 07 07.2 -00.7	13 53.0 +02.2	N 14 49.2 +00.0	77 32.3 +02.6	S 11 03.5 +00.0	07						
08	264 59.3 +01.0	N 07 06.5 -00.6	28 55.2 +02.2	N 14 49.2 +00.1	92 34.9 +02.6	S 11 03.5 +00.1	08						
09	280 00.3 +01.0	N 07 05.9 -00.6	43 57.4 +02.2	N 14 49.3 +00.1	107 37.5 +02.6	S 11 03.6 +00.1	09						
10	295 01.3 +01.0	N 07 05.3 -00.6	58 59.6 +02.3	N 14 49.4 +00.0	122 40.1 +02.6	S 11 03.7 +00.0	10						
11	310 02.3 +01.1	N 07 04.7 -00.7	74 01.9 +02.2	N 14 49.4 +00.1	137 42.7 +02.7	S 11 03.7 +00.1	11						
12	325 03.4 +01.0	N 07 04.0 -00.6	89 04.1 +02.2	N 14 49.5 +00.1	152 45.4 +02.6	S 11 03.8 +00.1	12						
13	340 04.4 +01.0	N 07 03.4 -00.6	104 06.3 +02.2	N 14 49.6 +00.0	167 48.0 +02.6	S 11 03.9 +00.0	13						
14	355 05.4 +01.0	N 07 02.8 -00.6	119 08.5 +02.2	N 14 49.6 +00.1	182 50.6 +02.6	S 11 03.9 +00.1	14						
15	10 06.4 +01.1	N 07 02.2 -00.6	134 10.7 +02.2	N 14 49.7 +00.1	197 53.2 +02.6	S 11 04.0 +00.1	15						
16	25 07.5 +01.0	N 07 01.6 -00.7	149 12.9 +02.2	N 14 49.8 +00.0	212 55.8 +02.6	S 11 04.1 +00.0	16						
17	40 08.5 +01.0	N 07 00.9 -00.6	164 15.1 +02.2	N 14 49.8 +00.1	227 58.4 +02.6	S 11 04.1 +00.1	17						
18	55 09.5 +01.0	N 07 00.3 -00.6	179 17.3 +02.3	N 14 49.9 +00.1	243 01.0 +02.7	S 11 04.2 +00.1	18						
19	70 10.5 +01.1	N 06 59.7 -00.6	194 19.6 +02.2	N 14 50.0 +00.0	258 03.7 +02.6	S 11 04.3 +00.0	19						
20	85 11.6 +01.0	N 06 59.1 -00.6	209 21.8 +02.2	N 14 50.0 +00.1	273 06.3 +02.6	S 11 04.3 +00.1	20						
21	100 12.6 +01.0	N 06 58.5 -00.7	224 24.0 +02.2	N 14 50.1 +00.1	288 08.9 +02.6	S 11 04.4 +00.1	21						
22	115 13.6 +01.0	N 06 57.8 -00.6	239 26.2 +02.2	N 14 50.2 +00.0	303 11.5 +02.6	S 11 04.5 +00.0	22						
23	130 14.6 +01.1	N 06 57.2 -00.6	254 28.4 +02.2	N 14 50.2 +00.1	318 14.1 +02.6	S 11 04.5 +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	00'3 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	194° 194° 194° 194° 194° 194°		SHA	318° 318° 318° 318° 318° 318°		SHA	022° 022° 022° 022° 022° 022°						
Greenwich Culmination Time: 14:19			Greenwich Culmination Time: 06:04			Greenwich Culmination Time: 01:50							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 25.8 +00.1	N 17 37.3 -00.6	164 51.4 +03.6	N 07 10.4 -00.2	339 32.5 -33.9	S 16 14.3 -15.0	00						
01	193 25.9 +00.0	N 17 36.7 -00.7	179 55.0 +03.7	N 07 10.2 -00.1	353 58.6 -33.8	S 15 59.3 -15.0	01						
02	208 25.9 +00.1	N 17 36.0 -00.6	194 58.7 +03.6	N 07 10.1 -00.2	8 24.8 -33.7	S 15 44.3 -15.2	02						
03	223 26.0 +00.0	N 17 35.4 -00.7	210 02.3 +03.7	N 07 09.9 -00.1	22 51.1 -33.6	S 15 29.1 -15.2	03						
04	238 26.0 +00.1	N 17 34.7 -00.6	225 06.0 +03.6	N 07 09.8 -00.1	37 17.5 -33.5	S 15 13.9 -15.3	04						
05	253 26.1 +00.0	N 17 34.1 -00.7	240 09.6 +03.7	N 07 09.7 -00.2	51 44.0 -33.4	S 14 58.6 -15.4	05						
06	268 26.1 +00.1	N 17 33.4 -00.6	255 13.3 +03.6	N 07 09.5 -00.1	66 10.6 -33.3	S 14 43.2 -15.5	06						
07	283 26.2 +00.0	N 17 32.8 -00.7	270 16.9 +03.7	N 07 09.4 -00.2	80 37.3 -33.2	S 14 27.7 -15.6	07						
08	298 26.2 +00.1	N 17 32.1 -00.6	285 20.6 +03.7	N 07 09.2 -00.1	95 04.1 -33.0	S 14 12.1 -15.6	08						
09	313 26.3 +00.0	N 17 31.5 -00.7	300 24.3 +03.6	N 07 09.1 -00.1	109 31.1 -33.0	S 13 56.5 -15.7	09						
10	328 26.3 +00.1	N 17 30.8 -00.6	315 27.9 +03.7	N 07 09.0 -00.2	123 58.1 -32.9	S 13 40.8 -15.8	10						
11	343 26.4 +00.1	N 17 30.2 -00.7	330 31.6 +03.7	N 07 08.8 -00.1	138 25.2 -32.8	S 13 25.0 -15.9	11						
12	358 26.5 +00.0	N 17 29.5 -00.6	345 35.3 +03.7	N 07 08.7 -00.1	152 52.4 -32.7	S 13 09.1 -16.0	12						
13	13 26.5 +00.1	N 17 28.9 -00.7	0 39.0 +03.7	N 07 08.6 -00.2	167 19.7 -32.6	S 12 53.1 -16.0	13						
14	28 26.6 +00.0	N 17 28.2 -00.6	15 42.7 +03.6	N 07 08.4 -00.1	181 47.1 -32.5	S 12 37.1 -16.1	14						
15	43 26.6 +00.1	N 17 27.6 -00.7	30 46.3 +03.7	N 07 08.3 -00.1	196 14.6 -32.4	S 12 21.0 -16.1	15						
16	58 26.7 +00.0	N 17 26.9 -00.6	45 50.0 +03.7	N 07 08.2 -00.1	210 42.2 -32.3	S 12 04.9 -16.2	16						
17	73 26.7 +00.1	N 17 26.3 -00.7	60 53.7 +03.7	N 07 08.1 -00.1	225 09.9 -32.2	S 11 48.7 -16.3	17						
18	88 26.8 +00.0	N 17 25.6 -00.6	75 57.4 +03.7	N 07 08.0 -00.2	239 37.7 -32.1	S 11 32.4 -16.3	18						
19	103 26.8 +00.1	N 17 25.0 -00.7	91 01.1 +03.7	N 07 07.8 -00.1	254 05.6 -32.1	S 11 16.1 -16.4	19						
20	118 26.9 +00.0	N 17 24.3 -00.7	106 04.8 +03.7	N 07 07.7 -00.1	268 33.5 -31.9	S 10 59.7 -16.4	20						
21	133 26.9 +00.1	N 17 23.6 -00.6	121 08.5 +03.7	N 07 07.6 -00.1	283 01.6 -31.9	S 10 43.3 -16.5	21						
22	148 27.0 +00.0	N 17 23.0 -00.7	136 12.2 +03.7	N 07 07.5 -00.1	297 29.7 -31.8	S 10 26.8 -16.5	22						
23	163 27.0 +00.1	N 17 22.3 -00.6	151 15.9 +03.7	N 07 07.4 -00.1	311 57.9 -31.6	S 10 10.3 -16.6	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 00'5 00'5 00'5 00'5 00'5 00'5		SD 16'7 16'7 16'7 16'6 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 61'2 61'2 61'1 61'0 61'0 60'9								
	SHA 227° 227° 227° 227° 226° 226°		SHA 214° 214° 214° 214° 214° 214°		SHA 027° 025° 022° 020° 018° 015°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 12:57		Greenwich Culmination Time: 01:25								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	145 15.7 +01.0	N 06 56.6 -00.6	269 30.6 +02.2	N 14 50.3 +00.1	333 16.7 +02.6	S 11 04.6 +00.1	00						
01	160 16.7 +01.0	N 06 56.0 -00.7	284 32.8 +02.2	N 14 50.4 +00.0	348 19.3 +02.7	S 11 04.7 +00.0	01						
02	175 17.7 +01.0	N 06 55.3 -00.6	299 35.0 +02.3	N 14 50.4 +00.1	3 22.0 +02.6	S 11 04.7 +00.1	02						
03	190 18.7 +01.1	N 06 54.7 -00.6	314 37.3 +02.2	N 14 50.5 +00.1	18 24.6 +02.6	S 11 04.8 +00.0	03						
04	205 19.8 +01.0	N 06 54.1 -00.6	329 39.5 +02.2	N 14 50.6 +00.0	33 27.2 +02.6	S 11 04.8 +00.1	04						
05	220 20.8 +01.0	N 06 53.5 -00.7	344 41.7 +02.2	N 14 50.6 +00.1	48 29.8 +02.6	S 11 04.9 +00.1	05						
06	235 21.8 +01.0	N 06 52.8 -00.6	359 43.9 +02.2	N 14 50.7 +00.1	63 32.4 +02.6	S 11 05.0 +00.0	06						
07	250 22.8 +01.1	N 06 52.2 -00.6	14 46.1 +02.2	N 14 50.8 +00.0	78 35.0 +02.6	S 11 05.0 +00.1	07						
08	265 23.9 +01.0	N 06 51.6 -00.6	29 48.3 +02.3	N 14 50.8 +00.1	93 37.6 +02.7	S 11 05.1 +00.1	08						
09	280 24.9 +01.0	N 06 51.0 -00.6	44 50.6 +02.2	N 14 50.9 +00.1	108 40.3 +02.6	S 11 05.2 +00.0	09						
10	295 25.9 +01.0	N 06 50.4 -00.7	59 52.8 +02.2	N 14 51.0 +00.0	123 42.9 +02.6	S 11 05.2 +00.1	10						
11	310 26.9 +01.1	N 06 49.7 -00.6	74 55.0 +02.2	N 14 51.0 +00.1	138 45.5 +02.6	S 11 05.3 +00.1	11						
12	325 28.0 +01.0	N 06 49.1 -00.6	89 57.2 +02.2	N 14 51.1 +00.1	153 48.1 +02.6	S 11 05.4 +00.0	12						
13	340 29.0 +01.0	N 06 48.5 -00.6	104 59.4 +02.2	N 14 51.2 +00.0	168 50.7 +02.6	S 11 05.4 +00.1	13						
14	355 30.0 +01.0	N 06 47.9 -00.7	120 01.6 +02.3	N 14 51.2 +00.1	183 53.3 +02.6	S 11 05.5 +00.1	14						
15	10 31.0 +01.1	N 06 47.2 -00.6	135 03.9 +02.2	N 14 51.3 +00.1	198 55.9 +02.7	S 11 05.6 +00.0	15						
16	25 32.1 +01.0	N 06 46.6 -00.6	150 06.1 +02.2	N 14 51.4 +00.0	213 58.6 +02.6	S 11 05.6 +00.1	16						
17	40 33.1 +01.0	N 06 46.0 -00.6	165 08.3 +02.2	N 14 51.4 +00.1	229 01.2 +02.6	S 11 05.7 +00.1	17						
18	55 34.1 +01.0	N 06 45.4 -00.7	180 10.5 +02.2	N 14 51.5 +00.1	244 03.8 +02.6	S 11 05.8 +00.0	18						
19	70 35.1 +01.1	N 06 44.7 -00.6	195 12.7 +02.3	N 14 51.6 +00.0	259 06.4 +02.6	S 11 05.8 +00.1	19						
20	85 36.2 +01.0	N 06 44.1 -00.6	210 15.0 +02.2	N 14 51.6 +00.1	274 09.0 +02.6	S 11 05.9 +00.1	20						
21	100 37.2 +01.0	N 06 43.5 -00.6	225 17.2 +02.2	N 14 51.7 +00.1	289 11.6 +02.7	S 11 06.0 +00.0	21						
22	115 38.2 +01.0	N 06 42.9 -00.7	240 19.4 +02.2	N 14 51.8 +00.0	304 14.3 +02.6	S 11 06.0 +00.1	22						
23	130 39.2 +01.1	N 06 42.2 -00.6	255 21.6 +02.2	N 14 51.8 +00.1	319 16.9 +02.6	S 11 06.1 +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 00'3 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 194° 194° 194° 194° 194° 193°		SHA 318° 318° 318° 318° 318° 318°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:17		Greenwich Culmination Time: 06:01		Greenwich Culmination Time: 01:46								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 27.1 +00.0	N 17 21.7 -00.7	166 19.6 +03.8	N 07 07.3 -00.2	326 26.3 -31.6	S 09 53.7 -16.6	00						
01	193 27.1 +00.1	N 17 21.0 -00.7	181 23.4 +03.7	N 07 07.1 -00.1	340 54.7 -31.6	S 09 37.1 -16.7	01						
02	208 27.2 +00.1	N 17 20.3 -00.6	196 27.1 +03.7	N 07 07.0 -00.1	355 23.1 -31.4	S 09 20.4 -16.7	02						
03	223 27.3 +00.0	N 17 19.7 -00.7	211 30.8 +03.7	N 07 06.9 -00.1	9 51.7 -31.4	S 09 03.7 -16.8	03						
04	238 27.3 +00.1	N 17 19.0 -00.6	226 34.5 +03.8	N 07 06.8 -00.1	24 20.3 -31.2	S 08 46.9 -16.7	04						
05	253 27.4 +00.0	N 17 18.4 -00.7	241 38.3 +03.7	N 07 06.7 -00.1	38 49.1 -31.2	S 08 30.2 -16.9	05						
06	268 27.4 +00.1	N 17 17.7 -00.7	256 42.0 +03.7	N 07 06.6 -00.1	53 17.9 -31.1	S 08 13.3 -16.8	06						
07	283 27.5 +00.0	N 17 17.0 -00.6	271 45.7 +03.7	N 07 06.5 -00.1	67 46.8 -31.1	S 07 56.5 -16.9	07						
08	298 27.5 +00.1	N 17 16.4 -00.7	286 49.4 +03.8	N 07 06.4 -00.1	82 15.7 -31.0	S 07 39.6 -16.9	08						
09	313 27.6 +00.1	N 17 15.7 -00.7	301 53.2 +03.7	N 07 06.3 -00.1	96 44.7 -30.9	S 07 22.7 -16.9	09						
10	328 27.7 +00.0	N 17 15.0 -00.6	316 56.9 +03.8	N 07 06.2 -00.1	111 13.8 -30.8	S 07 05.8 -17.0	10						
11	343 27.7 +00.1	N 17 14.4 -00.7	332 00.7 +03.7	N 07 06.1 -00.1	125 43.0 -30.7	S 06 48.8 -16.9	11						
12	358 27.8 +00.0	N 17 13.7 -00.6	347 04.4 +03.8	N 07 06.0 +00.0	140 12.3 -30.7	S 06 31.9 -17.0	12						
13	13 27.8 +00.1	N 17 13.1 -00.7	2 08.2 +03.7	N 07 06.0 -00.1	154 41.6 -30.6	S 06 14.9 -17.1	13						
14	28 27.9 +00.0	N 17 12.4 -00.7	17 11.9 +03.8	N 07 05.9 -00.1	169 11.0 -30.6	S 05 57.8 -17.0	14						
15	43 27.9 +00.1	N 17 11.7 -00.6	32 15.7 +03.7	N 07 05.8 -00.1	183 40.4 -30.4	S 05 40.8 -17.0	15						
16	58 28.0 +00.1	N 17 11.1 -00.7	47 19.4 +03.8	N 07 05.7 -00.1	198 10.0 -30.5	S 05 23.8 -17.1	16						
17	73 28.1 +00.0	N 17 10.4 -00.7	62 23.2 +03.7	N 07 05.6 -00.1	212 39.5 -30.3	S 05 06.7 -17.1	17						
18	88 28.1 +00.1	N 17 09.7 -00.6	77 26.9 +03.8	N 07 05.5 -00.1	227 09.2 -30.3	S 04 49.6 -17.0	18						
19	103 28.2 +00.0	N 17 09.1 -00.7	92 30.7 +03.8	N 07 05.4 +00.0	241 38.9 -30.2	S 04 32.6 -17.1	19						
20	118 28.2 +00.1	N 17 08.4 -00.7	107 34.5 +03.8	N 07 05.4 -00.1	256 08.7 -30.2	S 04 15.5 -17.1	20						
21	133 28.3 +00.1	N 17 07.7 -00.7	122 38.3 +03.7	N 07 05.3 -00.1	270 38.5 -30.1	S 03 58.4 -17.1	21						
22	148 28.4 +00.0	N 17 07.0 -00.6	137 42.0 +03.8	N 07 05.2 -00.1	285 08.4 -30.1	S 03 41.3 -17.1	22						
23	163 28.4 +00.1	N 17 06.4 -00.7	152 45.8 +03.8	N 07 05.1 +00.0	299 38.3 -30.0	S 03 24.2 -17.1	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 00'5 00'5 00'5 00'5 00'5 00'5				SD 16'6 16'5 16'5 16'5 16'5 16'4					
HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'5 00'5 00'5 00'5 00'5 00'5				HP 60'8 60'7 60'6 60'5 60'4 60'3					
SHA 226° 226° 226° 226° 225° 225°				SHA 214° 214° 214° 214° 214° 214°				SHA 013° 011° 009° 006° 004° 002°					
Greenwich Culmination Time: 12:06				Greenwich Culmination Time: 12:51				Greenwich Culmination Time: 02:19					
<hr/>													
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	145 40.3 +01.0	N 06 41.6 -00.6	270 23.8 +02.3	N 14 51.9 +00.1	334 19.5 +02.6	S 11 06.2 +00.0	00						
01	160 41.3 +01.0	N 06 41.0 -00.6	285 26.1 +02.2	N 14 52.0 +00.0	349 22.1 +02.6	S 11 06.2 +00.1	01						
02	175 42.3 +01.0	N 06 40.4 -00.7	300 28.3 +02.2	N 14 52.0 +00.1	4 24.7 +02.6	S 11 06.3 +00.1	02						
03	190 43.3 +01.1	N 06 39.7 -00.6	315 30.5 +02.2	N 14 52.1 +00.1	19 27.3 +02.7	S 11 06.4 +00.0	03						
04	205 44.4 +01.0	N 06 39.1 -00.6	330 32.7 +02.2	N 14 52.2 +00.0	34 30.0 +02.6	S 11 06.4 +00.1	04						
05	220 45.4 +01.0	N 06 38.5 -00.6	345 34.9 +02.3	N 14 52.2 +00.1	49 32.6 +02.6	S 11 06.5 +00.1	05						
06	235 46.4 +01.0	N 06 37.9 -00.7	0 37.2 +02.2	N 14 52.3 +00.1	64 35.2 +02.6	S 11 06.6 +00.0	06						
07	250 47.4 +01.1	N 06 37.2 -00.6	15 39.4 +02.2	N 14 52.4 +00.0	79 37.8 +02.6	S 11 06.6 +00.1	07						
08	265 48.5 +01.0	N 06 36.6 -00.6	30 41.6 +02.2	N 14 52.4 +00.1	94 40.4 +02.6	S 11 06.7 +00.1	08						
09	280 49.5 +01.0	N 06 36.0 -00.6	45 43.8 +02.3	N 14 52.5 +00.0	109 43.0 +02.7	S 11 06.8 +00.0	09						
10	295 50.5 +01.0	N 06 35.4 -00.7	60 46.1 +02.2	N 14 52.5 +00.1	124 45.7 +02.6	S 11 06.8 +00.1	10						
11	310 51.5 +01.1	N 06 34.7 -00.6	75 48.3 +02.2	N 14 52.6 +00.1	139 48.3 +02.6	S 11 06.9 +00.1	11						
12	325 52.6 +01.0	N 06 34.1 -00.6	90 50.5 +02.2	N 14 52.7 +00.0	154 50.9 +02.6	S 11 07.0 +00.0	12						
13	340 53.6 +01.0	N 06 33.5 -00.6	105 52.7 +02.2	N 14 52.7 +00.1	169 53.5 +02.6	S 11 07.0 +00.1	13						
14	355 54.6 +01.0	N 06 32.9 -00.7	120 54.9 +02.3	N 14 52.8 +00.1	184 56.1 +02.6	S 11 07.1 +00.1	14						
15	10 55.6 +01.1	N 06 32.2 -00.6	135 57.2 +02.2	N 14 52.9 +00.0	199 58.7 +02.7	S 11 07.2 +00.0	15						
16	25 56.7 +01.0	N 06 31.6 -00.6	150 59.4 +02.2	N 14 52.9 +00.1	215 01.4 +02.6	S 11 07.2 +00.1	16						
17	40 57.7 +01.0	N 06 31.0 -00.6	166 01.6 +02.2	N 14 53.0 +00.1	230 04.0 +02.6	S 11 07.3 +00.1	17						
18	55 58.7 +01.0	N 06 30.4 -00.7	181 03.8 +02.3	N 14 53.1 +00.0	245 06.6 +02.6	S 11 07.4 +00.0	18						
19	70 59.7 +01.1	N 06 29.7 -00.6	196 06.1 +02.2	N 14 53.1 +00.1	260 09.2 +02.6	S 11 07.4 +00.1	19						
20	86 00.8 +01.0	N 06 29.1 -00.6	211 08.3 +02.2	N 14 53.2 +00.0	275 11.8 +02.6	S 11 07.5 +00.1	20						
21	101 01.8 +01.0	N 06 28.5 -00.6	226 10.5 +02.3	N 14 53.2 +00.1	290 14.4 +02.7	S 11 07.6 +00.0	21						
22	116 02.8 +01.0	N 06 27.9 -00.7	241 12.8 +02.2	N 14 53.3 +00.1	305 17.1 +02.6	S 11 07.6 +00.1	22						
23	131 03.8 +01.0	N 06 27.2 -00.6	256 15.0 +02.2	N 14 53.4 +00.0	320 19.7 +02.6	S 11 07.7 +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 193° 193° 193° 193° 193° 193°				SHA 318° 318° 318° 318° 318° 318°				SHA 022° 022° 022° 022° 022° 022°					
Greenwich Culmination Time: 14:16				Greenwich Culmination Time: 05:57				Greenwich Culmination Time: 01:42					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 28.5 +00.0	N 17 05.7 -00.7	167 49.6 +03.8	N 07 05.1 -00.1	314 08.3 -29.9	S 03 07.1 -17.1	00						
01	193 28.5 +00.1	N 17 05.0 -00.6	182 53.4 +03.7	N 07 05.0 -00.1	328 38.4 -29.9	S 02 50.0 -17.1	01						
02	208 28.6 +00.1	N 17 04.4 -00.7	197 57.1 +03.8	N 07 04.9 +00.0	343 08.5 -29.9	S 02 32.9 -17.1	02						
03	223 28.7 +00.0	N 17 03.7 -00.7	213 00.9 +03.8	N 07 04.9 -00.1	357 38.6 -29.8	S 02 15.8 -17.0	03						
04	238 28.7 +00.1	N 17 03.0 -00.7	228 04.7 +03.8	N 07 04.8 -00.1	12 08.8 -29.7	S 01 58.8 -17.1	04						
05	253 28.8 +00.1	N 17 02.3 -00.6	243 08.5 +03.8	N 07 04.7 +00.0	26 39.1 -29.7	S 01 41.7 -17.1	05						
06	268 28.9 +00.0	N 17 01.7 -00.7	258 12.3 +03.8	N 07 04.7 -00.1	41 09.4 -29.7	S 01 24.6 -17.0	06						
07	283 28.9 +00.1	N 17 01.0 -00.7	273 16.1 +03.8	N 07 04.6 -00.1	55 39.7 -29.6	S 01 07.6 -17.0	07						
08	298 29.0 +00.0	N 17 00.3 -00.7	288 19.9 +03.8	N 07 04.5 +00.0	70 10.1 -29.6	S 00 50.6 -17.1	08						
09	313 29.0 +00.1	N 16 59.6 -00.6	303 23.7 +03.8	N 07 04.5 -00.1	84 40.5 -29.5	S 00 33.5 -17.0	09						
10	328 29.1 +00.1	N 16 59.0 -00.7	318 27.5 +03.8	N 07 04.4 +00.0	99 11.0 -29.5	S 00 16.5 -16.9	10						
11	343 29.2 +00.0	N 16 58.3 -00.7	333 31.3 +03.8	N 07 04.4 -00.1	113 41.5 -29.5	N 00 00.4 +17.0	11						
12	358 29.2 +00.1	N 16 57.6 -00.7	348 35.1 +03.8	N 07 04.3 +00.0	128 12.0 -29.4	N 00 17.4 +16.9	12						
13	13 29.3 +00.1	N 16 56.9 -00.6	3 38.9 +03.8	N 07 04.3 -00.1	142 42.6 -29.4	N 00 34.3 +16.9	13						
14	28 29.4 +00.0	N 16 56.3 -00.7	18 42.7 +03.9	N 07 04.2 +00.0	157 13.2 -29.3	N 00 51.2 +16.9	14						
15	43 29.4 +00.1	N 16 55.6 -00.7	33 46.6 +03.8	N 07 04.2 -00.1	171 43.9 -29.3	N 01 08.1 +16.9	15						
16	58 29.5 +00.1	N 16 54.9 -00.7	48 50.4 +03.8	N 07 04.1 +00.0	186 14.6 -29.3	N 01 25.0 +16.8	16						
17	73 29.6 +00.0	N 16 54.2 -00.6	63 54.2 +03.8	N 07 04.1 -00.1	200 45.3 -29.2	N 01 41.8 +16.8	17						
18	88 29.6 +00.1	N 16 53.6 -00.7	78 58.0 +03.8	N 07 04.0 +00.0	215 16.1 -29.3	N 01 58.6 +16.8	18						
19	103 29.7 +00.1	N 16 52.9 -00.7	94 01.8 +03.9	N 07 04.0 -00.1	229 46.8 -29.2	N 02 15.4 +16.8	19						
20	118 29.8 +00.0	N 16 52.2 -00.7	109 05.7 +03.8	N 07 03.9 +00.0	244 17.6 -29.1	N 02 32.2 +16.7	20						
21	133 29.8 +00.1	N 16 51.5 -00.7	124 09.5 +03.8	N 07 03.9 +00.0	258 48.5 -29.2	N 02 48.9 +16.6	21						
22	148 29.9 +00.1	N 16 50.8 -00.6	139 13.3 +03.9	N 07 03.9 -00.1	273 19.3 -29.1	N 03 05.5 +16.7	22						
23	163 30.0 +00.0	N 16 50.2 -00.7	154 17.2 +03.8	N 07 03.8 +00.0	287 50.2 -29.1	N 03 22.2 +16.6	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 00'5 00'5 00'5 00'5 00'5 00'5	UT	02 06 10 14 18 22	SD 16'4 16'3 16'3 16'3 16'2 16'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 60'1 60'0 59'9 59'7 59'6 59'5								
	SHA 225° 225° 225° 225° 224° 224°	SHA 215° 215° 215° 215° 215° 215°		SHA 225° 225° 225° 225° 224° 224°	SHA 360° 358° 355° 353° 351° 349°								
	Greenwich Culmination Time: 12:06	Greenwich Culmination Time: 12:45		Greenwich Culmination Time: 03:09									

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	146 04.8 +01.1	N 06 26.6 -00.6	271 17.2 +02.2	N 14 53.4 +00.1	335 22.3 +02.6	S 11 07.8 +00.0	00						
01	161 05.9 +01.0	N 06 26.0 -00.6	286 19.4 +02.3	N 14 53.5 +00.1	350 24.9 +02.6	S 11 07.8 +00.1	01						
02	176 06.9 +01.0	N 06 25.4 -00.7	301 21.7 +02.2	N 14 53.6 +00.0	5 27.5 +02.7	S 11 07.9 +00.1	02						
03	191 07.9 +01.0	N 06 24.7 -00.6	316 23.9 +02.2	N 14 53.6 +00.1	20 30.2 +02.6	S 11 08.0 +00.0	03						
04	206 08.9 +01.1	N 06 24.1 -00.6	331 26.1 +02.2	N 14 53.7 +00.0	35 32.8 +02.6	S 11 08.0 +00.1	04						
05	221 10.0 +01.0	N 06 23.5 -00.7	346 28.3 +02.3	N 14 53.7 +00.1	50 35.4 +02.6	S 11 08.1 +00.1	05						
06	236 11.0 +01.0	N 06 22.8 -00.6	1 30.6 +02.2	N 14 53.8 +00.1	65 38.0 +02.6	S 11 08.2 +00.0	06						
07	251 12.0 +01.0	N 06 22.2 -00.6	16 32.8 +02.2	N 14 53.9 +00.0	80 40.6 +02.7	S 11 08.2 +00.1	07						
08	266 13.0 +01.1	N 06 21.6 -00.6	31 35.0 +02.3	N 14 53.9 +00.1	95 43.3 +02.6	S 11 08.3 +00.1	08						
09	281 14.1 +01.0	N 06 21.0 -00.7	46 37.3 +02.2	N 14 54.0 +00.1	110 45.9 +02.6	S 11 08.4 +00.0	09						
10	296 15.1 +01.0	N 06 20.3 -00.6	61 39.5 +02.2	N 14 54.1 +00.0	125 48.5 +02.6	S 11 08.4 +00.1	10						
11	311 16.1 +01.0	N 06 19.7 -00.6	76 41.7 +02.3	N 14 54.1 +00.1	140 51.1 +02.6	S 11 08.5 +00.1	11						
12	326 17.1 +01.1	N 06 19.1 -00.6	91 44.0 +02.2	N 14 54.2 +00.0	155 53.7 +02.6	S 11 08.6 +00.0	12						
13	341 18.2 +01.0	N 06 18.5 -00.7	106 46.2 +02.2	N 14 54.2 +00.1	170 56.3 +02.7	S 11 08.6 +00.1	13						
14	356 19.2 +01.0	N 06 17.8 -00.6	121 48.4 +02.2	N 14 54.3 +00.1	185 59.0 +02.6	S 11 08.7 +00.1	14						
15	11 20.2 +01.0	N 06 17.2 -00.6	136 50.6 +02.3	N 14 54.4 +00.0	201 01.6 +02.6	S 11 08.8 +00.0	15						
16	26 21.2 +01.1	N 06 16.6 -00.7	151 52.9 +02.2	N 14 54.4 +00.1	216 04.2 +02.6	S 11 08.8 +00.1	16						
17	41 22.3 +01.0	N 06 15.9 -00.6	166 55.1 +02.2	N 14 54.5 +00.0	231 06.8 +02.6	S 11 08.9 +00.1	17						
18	56 23.3 +01.0	N 06 15.3 -00.6	181 57.3 +02.3	N 14 54.5 +00.1	246 09.4 +02.7	S 11 09.0 +00.0	18						
19	71 24.3 +01.0	N 06 14.7 -00.6	196 59.6 +02.2	N 14 54.6 +00.1	261 12.1 +02.6	S 11 09.0 +00.1	19						
20	86 25.3 +01.1	N 06 14.1 -00.7	212 01.8 +02.2	N 14 54.7 +00.0	276 14.7 +02.6	S 11 09.1 +00.1	20						
21	101 26.4 +01.0	N 06 13.4 -00.6	227 04.0 +02.3	N 14 54.7 +00.1	291 17.3 +02.6	S 11 09.2 +00.0	21						
22	116 27.4 +01.0	N 06 12.8 -00.6	242 06.3 +02.2	N 14 54.8 +00.1	306 19.9 +02.6	S 11 09.2 +00.1	22						
23	131 28.4 +01.0	N 06 12.2 -00.7	257 08.5 +02.2	N 14 54.9 +00.0	321 22.5 +02.7	S 11 09.3 +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 00'3 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 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 193° 193° 193° 192° 192° 192°	SHA 318° 318° 318° 318° 318° 318°		SHA 193° 193° 193° 192° 192° 192°	SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:14	Greenwich Culmination Time: 05:53		Greenwich Culmination Time: 01:38									

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 31.7 +00.1	N 16 33.0 -00.7	170 53.8 +03.9	N 07 03.4 +00.0	290 46.3 -28.9	N 10 02.3 +15.2	00							
01	193 31.8 +00.1	N 16 32.3 -00.7	185 57.7 +03.9	N 07 03.4 +00.0	305 17.4 -28.9	N 10 17.5 +15.2	01							
02	208 31.9 +00.0	N 16 31.6 -00.7	201 01.6 +03.9	N 07 03.4 +00.0	319 48.5 -29.0	N 10 32.7 +15.1	02							
03	223 31.9 +00.1	N 16 30.9 -00.7	216 05.5 +03.9	N 07 03.4 +00.1	334 19.5 -29.0	N 10 47.8 +15.0	03							
04	238 32.0 +00.1	N 16 30.2 -00.7	231 09.4 +03.9	N 07 03.5 +00.0	348 50.5 -28.9	N 11 02.8 +14.9	04							
05	253 32.1 +00.0	N 16 29.5 -00.7	246 13.3 +03.9	N 07 03.5 +00.0	3 21.6 -29.0	N 11 17.7 +14.9	05							
06	268 32.1 +00.1	N 16 28.8 -00.7	261 17.2 +03.9	N 07 03.5 +00.0	17 52.6 -29.0	N 11 32.6 +14.8	06							
07	283 32.2 +00.1	N 16 28.1 -00.7	276 21.1 +03.9	N 07 03.5 +00.0	32 23.6 -29.0	N 11 47.4 +14.7	07							
08	298 32.3 +00.1	N 16 27.4 -00.7	291 25.0 +03.9	N 07 03.5 +00.0	46 54.6 -29.1	N 12 02.1 +14.6	08							
09	313 32.4 +00.0	N 16 26.7 -00.7	306 28.9 +03.9	N 07 03.5 +00.0	61 25.5 -29.0	N 12 16.7 +14.6	09							
10	328 32.4 +00.1	N 16 26.0 -00.7	321 32.8 +03.9	N 07 03.5 +00.1	75 56.5 -29.1	N 12 31.3 +14.4	10							
11	343 32.5 +00.1	N 16 25.3 -00.7	336 36.7 +03.9	N 07 03.6 +00.0	90 27.4 -29.1	N 12 45.7 +14.4	11							
12	358 32.6 +00.1	N 16 24.6 -00.7	351 40.6 +03.9	N 07 03.6 +00.0	104 58.3 -29.1	N 13 00.1 +14.3	12							
13	13 32.7 +00.1	N 16 23.9 -00.7	6 44.5 +04.0	N 07 03.6 +00.0	119 29.2 -29.1	N 13 14.4 +14.2	13							
14	28 32.8 +00.0	N 16 23.2 -00.7	21 48.5 +03.9	N 07 03.6 +00.1	134 00.1 -29.1	N 13 28.6 +14.2	14							
15	43 32.8 +00.1	N 16 22.5 -00.7	36 52.4 +03.9	N 07 03.7 +00.0	148 31.0 -29.2	N 13 42.8 +14.0	15							
16	58 32.9 +00.1	N 16 21.8 -00.7	51 56.3 +03.9	N 07 03.7 +00.0	163 01.8 -29.2	N 13 56.8 +14.0	16							
17	73 33.0 +00.1	N 16 21.1 -00.7	67 00.2 +04.0	N 07 03.7 +00.1	177 32.6 -29.2	N 14 10.8 +13.9	17							
18	88 33.1 +00.0	N 16 20.4 -00.7	82 04.2 +03.9	N 07 03.8 +00.0	192 03.4 -29.2	N 14 24.7 +13.8	18							
19	103 33.1 +00.1	N 16 19.7 -00.7	97 08.1 +03.9	N 07 03.8 +00.0	206 34.2 -29.3	N 14 38.5 +13.7	19							
20	118 33.2 +00.1	N 16 19.0 -00.7	112 12.0 +03.9	N 07 03.8 +00.1	221 04.9 -29.3	N 14 52.2 +13.6	20							
21	133 33.3 +00.1	N 16 18.3 -00.7	127 15.9 +04.0	N 07 03.9 +00.0	235 35.6 -29.3	N 15 05.8 +13.5	21							
22	148 33.4 +00.1	N 16 17.6 -00.7	142 19.9 +03.9	N 07 03.9 +00.0	250 06.3 -29.3	N 15 19.3 +13.4	22							
23	163 33.5 +00.0	N 16 16.9 -00.7	157 23.8 +03.9	N 07 03.9 +00.1	264 37.0 -29.4	N 15 32.7 +13.4	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 223° 223° 223° 223° 223° 222°	Greenwich Culmination Time: 12:05	UT 02 06 10 14 18 22	SD 00'5 00'5 00'5 00'5 00'5 00'5	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 216° 216° 216° 216° 216° 216°	Greenwich Culmination Time: 12:33	UT 02 06 10 14 18 22	SD 15'9 15'9 15'8 15'8 15'8 15'7	HP 58'4 58'3 58'1 58'0 57'8 57'7	SHA 334° 332° 330° 328° 326° 324°	Greenwich Culmination Time: 04:46

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	146 54.0 +01.0	N 05 56.4 -00.6	273 04.4 +02.3	N 14 56.3 +00.1	337 28.1 +02.6	S 11 11.0 +00.0	00							
01	161 55.0 +01.1	N 05 55.8 -00.6	288 06.7 +02.2	N 14 56.4 +00.1	352 30.7 +02.6	S 11 11.0 +00.1	01							
02	176 56.1 +01.0	N 05 55.2 -00.7	303 08.9 +02.3	N 14 56.5 +00.0	7 33.3 +02.6	S 11 11.1 +00.1	02							
03	191 57.1 +01.0	N 05 54.5 -00.6	318 11.2 +02.2	N 14 56.5 +00.1	22 35.9 +02.7	S 11 11.2 +00.0	03							
04	206 58.1 +01.0	N 05 53.9 -00.6	333 13.4 +02.2	N 14 56.6 +00.0	37 38.6 +02.6	S 11 11.2 +00.1	04							
05	221 59.1 +01.0	N 05 53.3 -00.7	348 15.6 +02.3	N 14 56.6 +00.1	52 41.2 +02.6	S 11 11.3 +00.1	05							
06	237 00.1 +01.1	N 05 52.6 -00.6	3 17.9 +02.2	N 14 56.7 +00.0	67 43.8 +02.6	S 11 11.4 +00.1	06							
07	252 01.2 +01.0	N 05 52.0 -00.6	18 20.1 +02.3	N 14 56.7 +00.1	82 46.4 +02.7	S 11 11.5 +00.0	07							
08	267 02.2 +01.0	N 05 51.4 -00.6	33 22.4 +02.2	N 14 56.8 +00.1	97 49.1 +02.6	S 11 11.5 +00.1	08							
09	282 03.2 +01.0	N 05 50.8 -00.7	48 24.6 +02.3	N 14 56.9 +00.0	112 51.7 +02.6	S 11 11.6 +00.1	09							
10	297 04.2 +01.1	N 05 50.1 -00.6	63 26.9 +02.2	N 14 56.9 +00.1	127 54.3 +02.6	S 11 11.7 +00.0	10							
11	312 05.3 +01.0	N 05 49.5 -00.6	78 29.1 +02.2	N 14 57.0 +00.0	142 56.9 +02.6	S 11 11.7 +00.1	11							
12	327 06.3 +01.0	N 05 48.9 -00.7	93 31.3 +02.3	N 14 57.0 +00.1	157 59.5 +02.7	S 11 11.8 +00.1	12							
13	342 07.3 +01.0	N 05 48.2 -00.6	108 33.6 +02.2	N 14 57.1 +00.1	173 02.2 +02.6	S 11 11.9 +00.0	13							
14	357 08.3 +01.1	N 05 47.6 -00.6	123 35.8 +02.3	N 14 57.2 +00.0	188 04.8 +02.6	S 11 11.9 +00.1	14							
15	12 09.4 +01.0	N 05 47.0 -00.7	138 38.1 +02.2	N 14 57.2 +00.1	203 07.4 +02.6	S 11 12.0 +00.1	15							
16	27 10.4 +01.0	N 05 46.3 -00.6	153 40.3 +02.3	N 14 57.3 +00.0	218 10.0 +02.7	S 11 12.1 +00.0	16							
17	42 11.4 +01.0	N 05 45.7 -00.6	168 42.6 +02.2	N 14 57.3 +00.1	233 12.7 +02.6	S 11 12.1 +00.1	17							
18	57 12.4 +01.0	N 05 45.1 -00.7	183 44.8 +02.3	N 14 57.4 +00.0	248 15.3 +02.6	S 11 12.2 +00.1	18							
19	72 13.4 +01.1	N 05 44.4 -00.6	198 47.1 +02.2	N 14 57.4 +00.1	263 17.9 +02.6	S 11 12.3 +00.0	19							
20	87 14.5 +01.0	N 05 43.8 -00.6	213 49.3 +02.3	N 14 57.5 +00.0	278 20.5 +02.7	S 11 12.3 +00.1	20							
21	102 15.5 +01.0	N 05 43.2 -00.7	228 51.6 +02.2	N 14 57.5 +00.1	293 23.2 +02.6	S 11 12.4 +00.1	21							
22	117 16.5 +01.0	N 05 42.5 -00.6	243 53.8 +02.2	N 14 57.6 +00.1	308 25.8 +02.6	S 11 12.5 +00.0	22							
23	132 17.5 +01.1	N 05 41.9 -00.6	258 56.0 +02.3	N 14 57.7 +00.0	323 28.4 +02.6	S 11 12.5 +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 192° 191° 191° 191° 191° 191°	Greenwich Culmination Time: 14:11	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 318° 318° 318° 318° 318° 318°	Greenwich Culmination Time: 05:46	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 022° 022° 022° 022° 022° 022°	Greenwich Culmination Time: 01:29

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 35.5 +00.1	N 15 59.1 -00.7	174 02.6 +04.0	N 07 05.4 +00.1	267 12.9 -30.2	N 20 35.8 +10.7	00						
01	193 35.6 +00.1	N 15 58.4 -00.7	189 06.6 +04.0	N 07 05.5 +00.1	281 42.7 -30.3	N 20 46.5 +10.6	01						
02	208 35.7 +00.1	N 15 57.7 -00.7	204 10.6 +04.0	N 07 05.6 +00.0	296 12.4 -30.3	N 20 57.1 +10.5	02						
03	223 35.8 +00.0	N 15 57.0 -00.7	219 14.6 +03.9	N 07 05.6 +00.1	310 42.1 -30.4	N 21 07.6 +10.4	03						
04	238 35.8 +00.1	N 15 56.3 -00.7	234 18.5 +04.0	N 07 05.7 +00.1	325 11.7 -30.4	N 21 18.0 +10.2	04						
05	253 35.9 +00.1	N 15 55.6 -00.8	249 22.5 +04.0	N 07 05.8 +00.1	339 41.3 -30.4	N 21 28.2 +10.2	05						
06	268 36.0 +00.1	N 15 54.8 -00.7	264 26.5 +04.0	N 07 05.9 +00.1	354 10.9 -30.5	N 21 38.4 +10.0	06						
07	283 36.1 +00.1	N 15 54.1 -00.7	279 30.5 +04.0	N 07 06.0 +00.1	8 40.4 -30.5	N 21 48.4 +09.9	07						
08	298 36.2 +00.1	N 15 53.4 -00.7	294 34.5 +03.9	N 07 06.1 +00.0	23 09.9 -30.6	N 21 58.3 +09.7	08						
09	313 36.3 +00.1	N 15 52.7 -00.7	309 38.4 +04.0	N 07 06.1 +00.1	37 39.3 -30.6	N 22 08.0 +09.7	09						
10	328 36.4 +00.1	N 15 52.0 -00.8	324 42.4 +04.0	N 07 06.2 +00.1	52 08.7 -30.6	N 22 17.7 +09.5	10						
11	343 36.5 +00.0	N 15 51.2 -00.7	339 46.4 +04.0	N 07 06.3 +00.1	66 38.1 -30.7	N 22 27.2 +09.4	11						
12	358 36.5 +00.1	N 15 50.5 -00.7	354 50.4 +04.0	N 07 06.4 +00.1	81 07.4 -30.7	N 22 36.6 +09.3	12						
13	13 36.6 +00.1	N 15 49.8 -00.7	9 54.4 +04.0	N 07 06.5 +00.1	95 36.7 -30.8	N 22 45.9 +09.1	13						
14	28 36.7 +00.1	N 15 49.1 -00.7	24 58.4 +04.0	N 07 06.6 +00.1	110 05.9 -30.8	N 22 55.0 +09.1	14						
15	43 36.8 +00.1	N 15 48.4 -00.8	40 02.4 +04.0	N 07 06.7 +00.1	124 35.1 -30.8	N 23 04.1 +08.9	15						
16	58 36.9 +00.1	N 15 47.6 -00.7	55 06.4 +04.0	N 07 06.8 +00.1	139 04.3 -30.9	N 23 13.0 +08.8	16						
17	73 37.0 +00.1	N 15 46.9 -00.7	70 10.4 +03.9	N 07 06.9 +00.1	153 33.4 -30.9	N 23 21.8 +08.6	17						
18	88 37.1 +00.1	N 15 46.2 -00.7	85 14.3 +04.0	N 07 07.0 +00.1	168 02.5 -31.0	N 23 30.4 +08.5	18						
19	103 37.2 +00.1	N 15 45.5 -00.8	100 18.3 +04.0	N 07 07.1 +00.1	182 31.5 -30.9	N 23 38.9 +08.4	19						
20	118 37.3 +00.0	N 15 44.7 -00.7	115 22.3 +04.0	N 07 07.2 +00.1	197 00.6 -31.1	N 23 47.3 +08.3	20						
21	133 37.3 +00.1	N 15 44.0 -00.7	130 26.3 +04.0	N 07 07.3 +00.1	211 29.5 -31.0	N 23 55.6 +08.1	21						
22	148 37.4 +00.1	N 15 43.3 -00.7	145 30.3 +04.0	N 07 07.4 +00.2	225 58.5 -31.1	N 24 03.7 +08.0	22						
23	163 37.5 +00.1	N 15 42.6 -00.8	160 34.3 +04.0	N 07 07.6 +00.1	240 27.4 -31.2	N 24 11.7 +07.9	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 00'5 00'5 00'5 00'5 00'5 00'5		SD 15'4 15'4 15'4 15'3 15'3 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 56'7 56'6 56'4 56'3 56'2 56'1								
	SHA 221° 221° 221° 221° 221° 220°		SHA 217° 217° 217° 217° 217° 217°		SHA 309° 307° 305° 302° 300° 298°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:20		Greenwich Culmination Time: 06:24								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	147 43.1 +01.0	N 05 26.1 -00.7	274 52.3 +02.3	N 14 59.0 +00.1	339 34.0 +02.7	S 11 14.3 +00.0	00						
01	162 44.1 +01.1	N 05 25.4 -00.6	289 54.6 +02.2	N 14 59.1 +00.0	354 36.7 +02.6	S 11 14.3 +00.1	01						
02	177 45.2 +01.0	N 05 24.8 -00.6	304 56.8 +02.3	N 14 59.1 +00.1	9 39.3 +02.6	S 11 14.4 +00.1	02						
03	192 46.2 +01.0	N 05 24.2 -00.7	319 59.1 +02.2	N 14 59.2 +00.1	24 41.9 +02.6	S 11 14.5 +00.0	03						
04	207 47.2 +01.0	N 05 23.5 -00.6	335 01.3 +02.3	N 14 59.3 +00.0	39 44.5 +02.7	S 11 14.5 +00.1	04						
05	222 48.2 +01.1	N 05 22.9 -00.6	350 03.6 +02.3	N 14 59.3 +00.1	54 47.2 +02.6	S 11 14.6 +00.1	05						
06	237 49.3 +01.0	N 05 22.3 -00.7	5 05.9 +02.2	N 14 59.4 +00.0	69 49.8 +02.6	S 11 14.7 +00.0	06						
07	252 50.3 +01.0	N 05 21.6 -00.6	20 08.1 +02.3	N 14 59.4 +00.1	84 52.4 +02.6	S 11 14.7 +00.1	07						
08	267 51.3 +01.0	N 05 21.0 -00.6	35 10.4 +02.2	N 14 59.5 +00.0	99 55.0 +02.7	S 11 14.8 +00.1	08						
09	282 52.3 +01.0	N 05 20.4 -00.7	50 12.6 +02.3	N 14 59.5 +00.1	114 57.7 +02.6	S 11 14.9 +00.0	09						
10	297 53.3 +01.1	N 05 19.7 -00.6	65 14.9 +02.2	N 14 59.6 +00.0	130 00.3 +02.6	S 11 14.9 +00.1	10						
11	312 54.4 +01.0	N 05 19.1 -00.7	80 17.1 +02.3	N 14 59.6 +00.1	145 02.9 +02.6	S 11 15.0 +00.1	11						
12	327 55.4 +01.0	N 05 18.4 -00.6	95 19.4 +02.3	N 14 59.7 +00.0	160 05.5 +02.7	S 11 15.1 +00.0	12						
13	342 56.4 +01.0	N 05 17.8 -00.6	110 21.7 +02.2	N 14 59.7 +00.1	175 08.2 +02.6	S 11 15.1 +00.1	13						
14	357 57.4 +01.1	N 05 17.2 -00.7	125 23.9 +02.3	N 14 59.8 +00.0	190 10.8 +02.6	S 11 15.2 +00.1	14						
15	12 58.5 +01.0	N 05 16.5 -00.6	140 26.2 +02.2	N 14 59.8 +00.1	205 13.4 +02.7	S 11 15.3 +00.1	15						
16	27 59.5 +01.0	N 05 15.9 -00.6	155 28.4 +02.3	N 14 59.9 +00.0	220 16.1 +02.6	S 11 15.4 +00.0	16						
17	43 00.5 +01.0	N 05 15.3 -00.7	170 30.7 +02.2	N 14 59.9 +00.1	235 18.7 +02.6	S 11 15.4 +00.1	17						
18	58 01.5 +01.0	N 05 14.6 -00.6	185 32.9 +02.3	N 14 60.0 +00.1	250 21.3 +02.6	S 11 15.5 +00.1	18						
19	73 02.5 +01.1	N 05 14.0 -00.6	200 35.2 +02.3	N 15 00.1 +00.0	265 23.9 +02.7	S 11 15.6 +00.0	19						
20	88 03.6 +01.0	N 05 13.4 -00.7	215 37.5 +02.2	N 15 00.1 +00.1	280 26.6 +02.6	S 11 15.6 +00.1	20						
21	103 04.6 +01.0	N 05 12.7 -00.6	230 39.7 +02.3	N 15 00.2 +00.0	295 29.2 +02.6	S 11 15.7 +00.1	21						
22	118 05.6 +01.0	N 05 12.1 -00.6	245 42.0 +02.3	N 15 00.2 +00.1	310 31.8 +02.6	S 11 15.8 +00.0	22						
23	133 06.6 +01.1	N 05 11.5 -00.7	260 44.3 +02.2	N 15 00.3 +00.0	325 34.4 +02.7	S 11 15.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	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 190° 190° 190° 190° 190° 190°		SHA 318° 318° 318° 318° 318° 318°		SHA 022° 022° 022° 022° 022° 022°								
	Greenwich Culmination Time: 14:08		Greenwich Culmination Time: 05:39		Greenwich Culmination Time: 01:21								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 37.6 +00.1	N 15 41.8 -00.7	175 38.3 +04.0	N 07 07.7 +00.1	254 56.2 -31.2	N 24 19.6 +07.8	00						
01	193 37.7 +00.1	N 15 41.1 -00.7	190 42.3 +04.0	N 07 07.8 +00.1	269 25.0 -31.2	N 24 27.4 +07.6	01						
02	208 37.8 +00.1	N 15 40.4 -00.7	205 46.3 +04.0	N 07 07.9 +00.1	283 53.8 -31.2	N 24 35.0 +07.5	02						
03	223 37.9 +00.1	N 15 39.7 -00.8	220 50.3 +04.0	N 07 08.0 +00.1	298 22.6 -31.3	N 24 42.5 +07.3	03						
04	238 38.0 +00.1	N 15 38.9 -00.7	235 54.3 +04.0	N 07 08.1 +00.2	312 51.3 -31.3	N 24 49.8 +07.2	04						
05	253 38.1 +00.1	N 15 38.2 -00.7	250 58.3 +04.0	N 07 08.3 +00.1	327 20.0 -31.4	N 24 57.0 +07.1	05						
06	268 38.2 +00.1	N 15 37.5 -00.7	266 02.3 +04.0	N 07 08.4 +00.1	341 48.6 -31.3	N 25 04.1 +07.0	06						
07	283 38.3 +00.0	N 15 36.8 -00.8	281 06.3 +04.1	N 07 08.5 +00.1	356 17.3 -31.5	N 25 11.1 +06.8	07						
08	298 38.3 +00.1	N 15 36.0 -00.7	296 10.4 +04.0	N 07 08.6 +00.1	10 45.8 -31.4	N 25 17.9 +06.6	08						
09	313 38.4 +00.1	N 15 35.3 -00.7	311 14.4 +04.0	N 07 08.7 +00.2	25 14.4 -31.5	N 25 24.5 +06.6	09						
10	328 38.5 +00.1	N 15 34.6 -00.8	326 18.4 +04.0	N 07 08.9 +00.1	39 42.9 -31.5	N 25 31.1 +06.4	10						
11	343 38.6 +00.1	N 15 33.8 -00.7	341 22.4 +04.0	N 07 09.0 +00.1	54 11.4 -31.5	N 25 37.5 +06.3	11						
12	358 38.7 +00.1	N 15 33.1 -00.7	356 26.4 +04.0	N 07 09.1 +00.2	68 39.9 -31.6	N 25 43.8 +06.1	12						
13	13 38.8 +00.1	N 15 32.4 -00.8	11 30.4 +04.0	N 07 09.3 +00.1	83 08.3 -31.6	N 25 49.9 +06.0	13						
14	28 38.9 +00.1	N 15 31.6 -00.7	26 34.4 +04.0	N 07 09.4 +00.1	97 36.7 -31.6	N 25 55.9 +05.8	14						
15	43 39.0 +00.1	N 15 30.9 -00.7	41 38.4 +04.0	N 07 09.5 +00.2	112 05.1 -31.7	N 26 01.7 +05.7	15						
16	58 39.1 +00.1	N 15 30.2 -00.8	56 42.4 +04.0	N 07 09.7 +00.1	126 33.4 -31.6	N 26 07.4 +05.6	16						
17	73 39.2 +00.1	N 15 29.4 -00.7	71 46.4 +04.1	N 07 09.8 +00.1	141 01.8 -31.7	N 26 13.0 +05.5	17						
18	88 39.3 +00.1	N 15 28.7 -00.7	86 50.5 +04.0	N 07 09.9 +00.2	155 30.1 -31.8	N 26 18.5 +05.3	18						
19	103 39.4 +00.1	N 15 28.0 -00.8	101 54.5 +04.0	N 07 10.1 +00.1	169 58.3 -31.7	N 26 23.8 +05.1	19						
20	118 39.5 +00.1	N 15 27.2 -00.7	116 58.5 +04.0	N 07 10.2 +00.1	184 26.6 -31.8	N 26 28.9 +05.0	20						
21	133 39.6 +00.1	N 15 26.5 -00.7	132 02.5 +04.0	N 07 10.3 +00.2	198 54.8 -31.8	N 26 33.9 +04.9	21						
22	148 39.7 +00.1	N 15 25.8 -00.8	147 06.5 +04.0	N 07 10.5 +00.1	213 23.0 -31.8	N 26 38.8 +04.7	22						
23	163 39.8 +00.1	N 15 25.0 -00.7	162 10.5 +04.1	N 07 10.6 +00.2	227 51.2 -31.8	N 26 43.5 +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 220° 220° 220° 220° 220° 220°	Greenwich Culmination Time: 12:05								
UT	02 06 10 14 18 22	SD 00'5 00'5 00'5 00'5 00'5 00'5	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 217° 218° 218° 218° 218° 218°	Greenwich Culmination Time: 12:14								
UT	02 06 10 14 18 22	SD 15'2 15'2 15'2 15'2 15'1 15'1	HP 56'0 55'8 55'7 55'6 55'5 55'4	SHA 296° 293° 291° 289° 287° 284°	Greenwich Culmination Time: 07:15								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	148 07.7 +01.0	N 05 10.8 -00.6	275 46.5 +02.3	N 15 00.3 +00.1	340 37.1 +02.6	S 11 15.9 +00.1	00						
01	163 08.7 +01.0	N 05 10.2 -00.7	290 48.8 +02.2	N 15 00.4 +00.0	355 39.7 +02.6	S 11 16.0 +00.0	01						
02	178 09.7 +01.0	N 05 09.5 -00.6	305 51.0 +02.3	N 15 00.4 +00.1	10 42.3 +02.7	S 11 16.0 +00.1	02						
03	193 10.7 +01.0	N 05 08.9 -00.6	320 53.3 +02.3	N 15 00.5 +00.0	25 45.0 +02.6	S 11 16.1 +00.1	03						
04	208 11.7 +01.1	N 05 08.3 -00.7	335 55.6 +02.2	N 15 00.5 +00.1	40 47.6 +02.6	S 11 16.2 +00.1	04						
05	223 12.8 +01.0	N 05 07.6 -00.6	350 57.8 +02.3	N 15 00.6 +00.0	55 50.2 +02.6	S 11 16.3 +00.0	05						
06	238 13.8 +01.0	N 05 07.0 -00.6	6 00.1 +02.3	N 15 00.6 +00.1	70 52.8 +02.7	S 11 16.3 +00.1	06						
07	253 14.8 +01.0	N 05 06.4 -00.7	21 02.4 +02.2	N 15 00.7 +00.0	85 55.5 +02.6	S 11 16.4 +00.1	07						
08	268 15.8 +01.1	N 05 05.7 -00.6	36 04.6 +02.3	N 15 00.7 +00.1	100 58.1 +02.6	S 11 16.5 +00.0	08						
09	283 16.9 +01.0	N 05 05.1 -00.7	51 06.9 +02.2	N 15 00.8 +00.0	116 00.7 +02.7	S 11 16.5 +00.1	09						
10	298 17.9 +01.0	N 05 04.4 -00.6	66 09.1 +02.3	N 15 00.8 +00.1	131 03.4 +02.6	S 11 16.6 +00.1	10						
11	313 18.9 +01.0	N 05 03.8 -00.6	81 11.4 +02.3	N 15 00.9 +00.0	146 06.0 +02.6	S 11 16.7 +00.0	11						
12	328 19.9 +01.0	N 05 03.2 -00.7	96 13.7 +02.2	N 15 00.9 +00.1	161 08.6 +02.6	S 11 16.7 +00.1	12						
13	343 20.9 +01.1	N 05 02.5 -00.6	111 15.9 +02.3	N 15 01.0 +00.0	176 11.2 +02.7	S 11 16.8 +00.1	13						
14	358 22.0 +01.0	N 05 01.9 -00.6	126 18.2 +02.3	N 15 01.0 +00.1	191 13.9 +02.6	S 11 16.9 +00.1	14						
15	13 23.0 +01.0	N 05 01.3 -00.7	141 20.5 +02.2	N 15 01.1 +00.0	206 16.5 +02.6	S 11 17.0 +00.0	15						
16	28 24.0 +01.0	N 05 00.6 -00.6	156 22.7 +02.3	N 15 01.1 +00.1	221 19.1 +02.7	S 11 17.0 +00.1	16						
17	43 25.0 +01.1	N 04 60.0 -00.6	171 25.0 +02.3	N 15 01.2 +00.0	236 21.8 +02.6	S 11 17.1 +00.1	17						
18	58 26.1 +01.0	N 04 59.4 -00.7	186 27.3 +02.2	N 15 01.2 +00.1	251 24.4 +02.6	S 11 17.2 +00.0	18						
19	73 27.1 +01.0	N 04 58.7 -00.6	201 29.5 +02.3	N 15 01.3 +00.0	266 27.0 +02.6	S 11 17.2 +00.1	19						
20	88 28.1 +01.0	N 04 58.1 -00.7	216 31.8 +02.3	N 15 01.3 +00.1	281 29.6 +02.7	S 11 17.3 +00.1	20						
21	103 29.1 +01.0	N 04 57.4 -00.6	231 34.1 +02.2	N 15 01.4 +00.0	296 32.3 +02.6	S 11 17.4 +00.0	21						
22	118 30.1 +01.1	N 04 56.8 -00.6	246 36.3 +02.3	N 15 01.4 +00.1	311 34.9 +02.6	S 11 17.4 +00.1	22						
23	133 31.2 +01.0	N 04 56.2 -00.7	261 38.6 +02.3	N 15 01.5 +00.0	326 37.5 +02.7	S 11 17.5 +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 190° 190° 190° 190° 189° 189°	Greenwich Culmination Time: 14:06								
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 318° 318° 318° 318° 317° 317°	Greenwich Culmination Time: 05:36								
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 022° 022° 022° 022° 022° 022°	Greenwich Culmination Time: 01:17								

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 39.9 +00.1	N 15 24.3 -00.7	177 14.6 +04.0	N 07 10.8 +00.1	242 19.4 -31.9	N 26 48.1 +04.5	00						
01	193 40.0 +00.1	N 15 23.6 -00.8	192 18.6 +04.0	N 07 10.9 +00.2	256 47.5 -31.8	N 26 52.6 +04.3	01						
02	208 40.1 +00.1	N 15 22.8 -00.7	207 22.6 +04.0	N 07 11.1 +00.1	271 15.7 -31.9	N 26 56.9 +04.2	02						
03	223 40.2 +00.1	N 15 22.1 -00.8	222 26.6 +04.0	N 07 11.2 +00.2	285 43.8 -31.9	N 27 01.1 +04.0	03						
04	238 40.3 +00.1	N 15 21.3 -00.7	237 30.6 +04.1	N 07 11.4 +00.1	300 11.9 -31.9	N 27 05.1 +03.9	04						
05	253 40.4 +00.0	N 15 20.6 -00.7	252 34.7 +04.0	N 07 11.5 +00.2	314 40.0 -32.0	N 27 09.0 +03.7	05						
06	268 40.4 +00.1	N 15 19.9 -00.8	267 38.7 +04.0	N 07 11.7 +00.1	329 08.0 -31.9	N 27 12.7 +03.6	06						
07	283 40.5 +00.1	N 15 19.1 -00.7	282 42.7 +04.0	N 07 11.8 +00.2	343 36.1 -32.0	N 27 16.3 +03.5	07						
08	298 40.6 +00.1	N 15 18.4 -00.7	297 46.7 +04.0	N 07 12.0 +00.1	358 04.1 -31.9	N 27 19.8 +03.3	08						
09	313 40.7 +00.1	N 15 17.7 -00.8	312 50.7 +04.1	N 07 12.1 +00.2	12 32.2 -32.0	N 27 23.1 +03.2	09						
10	328 40.8 +00.1	N 15 16.9 -00.7	327 54.8 +04.0	N 07 12.3 +00.2	27 00.2 -32.0	N 27 26.3 +03.0	10						
11	343 40.9 +00.1	N 15 16.2 -00.8	342 58.8 +04.0	N 07 12.5 +00.1	41 28.2 -32.0	N 27 29.3 +02.9	11						
12	358 41.0 +00.1	N 15 15.4 -00.7	358 02.8 +04.0	N 07 12.6 +00.2	55 56.2 -32.0	N 27 32.2 +02.7	12						
13	13 41.1 +00.1	N 15 14.7 -00.8	13 06.8 +04.1	N 07 12.8 +00.2	70 24.2 -31.9	N 27 34.9 +02.6	13						
14	28 41.2 +00.1	N 15 13.9 -00.7	28 10.9 +04.0	N 07 13.0 +00.1	84 52.3 -32.0	N 27 37.5 +02.4	14						
15	43 41.3 +00.1	N 15 13.2 -00.7	43 14.9 +04.0	N 07 13.1 +00.2	99 20.3 -32.0	N 27 39.9 +02.4	15						
16	58 41.4 +00.1	N 15 12.5 -00.8	58 18.9 +04.0	N 07 13.3 +00.2	113 48.3 -32.0	N 27 42.3 +02.1	16						
17	73 41.5 +00.1	N 15 11.7 -00.7	73 22.9 +04.1	N 07 13.5 +00.1	128 16.3 -32.0	N 27 44.4 +02.0	17						
18	88 41.6 +00.1	N 15 11.0 -00.8	88 27.0 +04.0	N 07 13.6 +00.2	142 44.3 -32.0	N 27 46.4 +01.9	18						
19	103 41.7 +00.1	N 15 10.2 -00.7	103 31.0 +04.0	N 07 13.8 +00.2	157 12.3 -32.0	N 27 48.3 +01.7	19						
20	118 41.8 +00.1	N 15 09.5 -00.8	118 35.0 +04.0	N 07 14.0 +00.1	171 40.3 -32.0	N 27 50.0 +01.6	20						
21	133 41.9 +00.1	N 15 08.7 -00.7	133 39.0 +04.1	N 07 14.1 +00.2	186 08.3 -32.0	N 27 51.6 +01.5	21						
22	148 42.0 +00.2	N 15 08.0 -00.8	148 43.1 +04.0	N 07 14.3 +00.2	200 36.3 -32.0	N 27 53.1 +01.3	22						
23	163 42.2 +00.1	N 15 07.2 -00.7	163 47.1 +04.0	N 07 14.5 +00.2	215 04.3 -32.0	N 27 54.4 +01.1	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 00'5 00'5 00'5 00'5 00'5 00'5	UT 02 06 10 14 18 22	SD 15'1 15'0 15'0 15'0 15'0 15'0							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 55'3 55'2 55'1 55'1 55'0 54'9		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 219° 219° 219° 219° 219° 219°	SHA 218° 218° 218° 218° 219° 219°		SHA 282° 280° 277° 275° 273° 270°		SHA 022° 022° 022° 023° 023° 023°							
	Greenwich Culmination Time: 12:05	Greenwich Culmination Time: 12:07		Greenwich Culmination Time: 08:08		Greenwich Culmination Time: 01:13							

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	148 32.2 +01.0	N 04 55.5 -00.6	276 40.9 +02.2	N 15 01.5 +00.1	341 40.2 +02.6	S 11 17.6 +00.0	00						
01	163 33.2 +01.0	N 04 54.9 -00.7	291 43.1 +02.3	N 15 01.6 +00.0	356 42.8 +02.6	S 11 17.6 +00.1	01						
02	178 34.2 +01.0	N 04 54.2 -00.6	306 45.4 +02.3	N 15 01.6 +00.1	11 45.4 +02.6	S 11 17.7 +00.1	02						
03	193 35.2 +01.1	N 04 53.6 -00.6	321 47.7 +02.3	N 15 01.7 +00.0	26 48.0 +02.7	S 11 17.8 +00.1	03						
04	208 36.3 +01.0	N 04 53.0 -00.7	336 50.0 +02.2	N 15 01.7 +00.1	41 50.7 +02.6	S 11 17.9 +00.0	04						
05	223 37.3 +01.0	N 04 52.3 -00.6	351 52.2 +02.3	N 15 01.8 +00.0	56 53.3 +02.6	S 11 17.9 +00.1	05						
06	238 38.3 +01.0	N 04 51.7 -00.6	6 54.5 +02.3	N 15 01.8 +00.1	71 55.9 +02.7	S 11 18.0 +00.1	06						
07	253 39.3 +01.1	N 04 51.1 -00.7	21 56.8 +02.2	N 15 01.9 +00.0	86 58.6 +02.6	S 11 18.1 +00.0	07						
08	268 40.4 +01.0	N 04 50.4 -00.6	36 59.0 +02.3	N 15 01.9 +00.1	102 01.2 +02.6	S 11 18.1 +00.1	08						
09	283 41.4 +01.0	N 04 49.8 -00.7	52 01.3 +02.3	N 15 02.0 +00.0	117 03.8 +02.7	S 11 18.2 +00.1	09						
10	298 42.4 +01.0	N 04 49.1 -00.6	67 03.6 +02.3	N 15 02.0 +00.1	132 06.5 +02.6	S 11 18.3 +00.0	10						
11	313 43.4 +01.0	N 04 48.5 -00.6	82 05.9 +02.2	N 15 02.1 +00.0	147 09.1 +02.6	S 11 18.3 +00.1	11						
12	328 44.4 +01.1	N 04 47.9 -00.7	97 08.1 +02.3	N 15 02.1 +00.1	162 11.7 +02.6	S 11 18.4 +00.1	12						
13	343 45.5 +01.0	N 04 47.2 -00.6	112 10.4 +02.3	N 15 02.2 +00.0	177 14.3 +02.7	S 11 18.5 +00.1	13						
14	358 46.5 +01.0	N 04 46.6 -00.7	127 12.7 +02.2	N 15 02.2 +00.1	192 17.0 +02.6	S 11 18.6 +00.0	14						
15	13 47.5 +01.0	N 04 45.9 -00.6	142 14.9 +02.3	N 15 02.3 +00.0	207 19.6 +02.6	S 11 18.6 +00.1	15						
16	28 48.5 +01.0	N 04 45.3 -00.6	157 17.2 +02.3	N 15 02.3 +00.1	222 22.2 +02.7	S 11 18.7 +00.1	16						
17	43 49.5 +01.1	N 04 44.7 -00.7	172 19.5 +02.3	N 15 02.4 +00.0	237 24.9 +02.6	S 11 18.8 +00.0	17						
18	58 50.6 +01.0	N 04 44.0 -00.6	187 21.8 +02.2	N 15 02.4 +00.1	252 27.5 +02.6	S 11 18.8 +00.1	18						
19	73 51.6 +01.0	N 04 43.4 -00.7	202 24.0 +02.3	N 15 02.5 +00.0	267 30.1 +02.7	S 11 18.9 +00.1	19						
20	88 52.6 +01.0	N 04 42.7 -00.6	217 26.3 +02.3	N 15 02.5 +00.0	282 32.8 +02.6	S 11 19.0 +00.0	20						
21	103 53.6 +01.0	N 04 42.1 -00.6	232 28.6 +02.3	N 15 02.5 +00.1	297 35.4 +02.6	S 11 19.0 +00.1	21						
22	118 54.6 +01.1	N 04 41.5 -00.7	247 30.9 +02.2	N 15 02.6 +00.0	312 38.0 +02.6	S 11 19.1 +00.1	22						
23	133 55.7 +01.0	N 04 40.8 -00.6	262 33.1 +02.3	N 15 02.6 +00.1	327 40.6 +02.7	S 11 19.2 +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 00'3 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 189° 189° 189° 189° 189° 189°	SHA 317° 317° 317° 317° 317° 317°		SHA 022° 022° 022° 023° 023° 023°		SHA 022° 022° 022° 023° 023° 023°							
	Greenwich Culmination Time: 14:04	Greenwich Culmination Time: 05:32		Greenwich Culmination Time: 01:13		Greenwich Culmination Time: 01:13							

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	178 42.3 +00.1	N 15 06.5 -00.7	178 51.1 +04.0	N 07 14.7 +00.1	229 32.3 -31.9	N 27 55.5 +01.0	00								
01	193 42.4 +00.1	N 15 05.8 -00.8	193 55.1 +04.1	N 07 14.8 +00.2	244 00.4 -32.0	N 27 56.5 +00.9	01								
02	208 42.5 +00.1	N 15 05.0 -00.7	208 59.2 +04.0	N 07 15.0 +00.2	258 28.4 -31.9	N 27 57.4 +00.7	02								
03	223 42.6 +00.1	N 15 04.3 -00.8	224 03.2 +04.0	N 07 15.2 +00.2	272 56.5 -31.9	N 27 58.1 +00.6	03								
04	238 42.7 +00.1	N 15 03.5 -00.7	239 07.2 +04.1	N 07 15.4 +00.2	287 24.6 -31.9	N 27 58.7 +00.4	04								
05	253 42.8 +00.1	N 15 02.8 -00.8	254 11.3 +04.0	N 07 15.6 +00.2	301 52.7 -31.9	N 27 59.1 +00.3	05								
06	268 42.9 +00.1	N 15 02.0 -00.7	269 15.3 +04.0	N 07 15.8 +00.1	316 20.8 -31.9	N 27 59.4 +00.2	06								
07	283 43.0 +00.1	N 15 01.3 -00.8	284 19.3 +04.0	N 07 15.9 +00.2	330 48.9 -31.9	N 27 59.6 +00.0	07								
08	298 43.1 +00.1	N 15 00.5 -00.7	299 23.3 +04.1	N 07 16.1 +00.2	345 17.0 -31.8	N 27 59.6 -00.1	08								
09	313 43.2 +00.1	N 14 59.8 -00.8	314 27.4 +04.0	N 07 16.3 +00.2	359 45.2 -31.8	N 27 59.5 -00.3	09								
10	328 43.3 +00.1	N 14 59.0 -00.7	329 31.4 +04.0	N 07 16.5 +00.2	14 13.4 -31.8	N 27 59.2 -00.4	10								
11	343 43.4 +00.1	N 14 58.3 -00.8	344 35.4 +04.1	N 07 16.7 +00.2	28 41.6 -31.8	N 27 58.8 -00.6	11								
12	358 43.5 +00.1	N 14 57.5 -00.7	359 39.5 +04.0	N 07 16.9 +00.2	43 09.8 -31.8	N 27 58.2 -00.7	12								
13	13 43.6 +00.1	N 14 56.8 -00.8	14 43.5 +04.0	N 07 17.1 +00.2	57 38.0 -31.7	N 27 57.5 -00.8	13								
14	28 43.7 +00.1	N 14 56.0 -00.7	29 47.5 +04.0	N 07 17.3 +00.2	72 06.3 -31.7	N 27 56.7 -01.0	14								
15	43 43.8 +00.1	N 14 55.3 -00.8	44 51.5 +04.1	N 07 17.5 +00.2	86 34.6 -31.6	N 27 55.7 -01.1	15								
16	58 43.9 +00.1	N 14 54.5 -00.8	59 55.6 +04.0	N 07 17.7 +00.2	101 03.0 -31.7	N 27 54.6 -01.3	16								
17	73 44.0 +00.1	N 14 53.7 -00.7	74 59.6 +04.0	N 07 17.9 +00.2	115 31.3 -31.6	N 27 53.3 -01.4	17								
18	88 44.1 +00.1	N 14 53.0 -00.8	90 03.6 +04.1	N 07 18.1 +00.2	129 59.7 -31.6	N 27 51.9 -01.5	18								
19	103 44.2 +00.1	N 14 52.2 -00.7	105 07.7 +04.0	N 07 18.3 +00.2	144 28.1 -31.5	N 27 50.4 -01.7	19								
20	118 44.3 +00.2	N 14 51.5 -00.8	120 11.7 +04.0	N 07 18.5 +00.2	158 56.6 -31.5	N 27 48.7 -01.8	20								
21	133 44.5 +00.1	N 14 50.7 -00.7	135 15.7 +04.0	N 07 18.7 +00.2	173 25.1 -31.5	N 27 46.9 -01.9	21								
22	148 44.6 +00.1	N 14 50.0 -00.8	150 19.7 +04.1	N 07 18.9 +00.2	187 53.6 -31.5	N 27 45.0 -02.1	22								
23	163 44.7 +00.1	N 14 49.2 -00.7	165 23.8 +04.0	N 07 19.1 +00.2	202 22.1 -31.4	N 27 42.9 -02.3	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 218° 218° 218° 218° 218° 218°	Greenwich Culmination Time: 12:05	UT 02 06 10 14 18 22	SD 00'5 00'5 00'5 00'5 00'5 00'5	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 219° 219° 219° 219° 219° 219°	Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 14'9 14'8	HP 54'8 54'8 54'7 54'6 54'6 54'5	SHA 268° 266° 264° 261° 259° 257°	Greenwich Culmination Time: 09:01
UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	148 56.7 +01.0	N 04 40.2 -00.7	277 35.4 +02.3	N 15 02.7 +00.0	342 43.3 +02.6	S 11 19.3 +00.0	00								
01	163 57.7 +01.0	N 04 39.5 -00.6	292 37.7 +02.3	N 15 02.7 +00.1	357 45.9 +02.6	S 11 19.3 +00.1	01								
02	178 58.7 +01.1	N 04 38.9 -00.6	307 40.0 +02.2	N 15 02.8 +00.0	12 48.5 +02.7	S 11 19.4 +00.1	02								
03	193 59.8 +01.0	N 04 38.3 -00.7	322 42.2 +02.3	N 15 02.8 +00.1	27 51.2 +02.6	S 11 19.5 +00.0	03								
04	209 00.8 +01.0	N 04 37.6 -00.6	337 44.5 +02.3	N 15 02.9 +00.0	42 53.8 +02.6	S 11 19.5 +00.1	04								
05	224 01.8 +01.0	N 04 37.0 -00.7	352 46.8 +02.3	N 15 02.9 +00.1	57 56.4 +02.7	S 11 19.6 +00.1	05								
06	239 02.8 +01.0	N 04 36.3 -00.6	7 49.1 +02.3	N 15 03.0 +00.0	72 59.1 +02.6	S 11 19.7 +00.0	06								
07	254 03.8 +01.1	N 04 35.7 -00.6	22 51.4 +02.2	N 15 03.0 +00.1	88 01.7 +02.6	S 11 19.7 +00.1	07								
08	269 04.9 +01.0	N 04 35.1 -00.7	37 53.6 +02.3	N 15 03.1 +00.0	103 04.3 +02.7	S 11 19.8 +00.1	08								
09	284 05.9 +01.0	N 04 34.4 -00.6	52 55.9 +02.3	N 15 03.1 +00.1	118 07.0 +02.6	S 11 19.9 +00.1	09								
10	299 06.9 +01.0	N 04 33.8 -00.7	67 58.2 +02.3	N 15 03.2 +00.0	133 09.6 +02.6	S 11 20.0 +00.0	10								
11	314 07.9 +01.0	N 04 33.1 -00.6	83 00.5 +02.2	N 15 03.2 +00.1	148 12.2 +02.7	S 11 20.0 +00.1	11								
12	329 08.9 +01.1	N 04 32.5 -00.6	98 02.7 +02.3	N 15 03.3 +00.0	163 14.9 +02.6	S 11 20.1 +00.1	12								
13	344 10.0 +01.0	N 04 31.9 -00.7	113 05.0 +02.3	N 15 03.3 +00.0	178 17.5 +02.6	S 11 20.2 +00.0	13								
14	359 11.0 +01.0	N 04 31.2 -00.6	128 07.3 +02.3	N 15 03.3 +00.1	193 20.1 +02.6	S 11 20.2 +00.1	14								
15	14 12.0 +01.0	N 04 30.6 -00.7	143 09.6 +02.3	N 15 03.4 +00.0	208 22.7 +02.7	S 11 20.3 +00.1	15								
16	29 13.0 +01.0	N 04 29.9 -00.6	158 11.9 +02.3	N 15 03.4 +00.1	223 25.4 +02.6	S 11 20.4 +00.0	16								
17	44 14.0 +01.1	N 04 29.3 -00.6	173 14.2 +02.2	N 15 03.5 +00.0	238 28.0 +02.6	S 11 20.4 +00.1	17								
18	59 15.1 +01.0	N 04 28.7 -00.7	188 16.4 +02.3	N 15 03.5 +00.1	253 30.6 +02.7	S 11 20.5 +00.1	18								
19	74 16.1 +01.0	N 04 28.0 -00.6	203 18.7 +02.3	N 15 03.6 +00.0	268 33.3 +02.6	S 11 20.6 +00.1	19								
20	89 17.1 +01.0	N 04 27.4 -00.7	218 21.0 +02.3	N 15 03.6 +00.1	283 35.9 +02.6	S 11 20.7 +00.0	20								
21	104 18.1 +01.0	N 04 26.7 -00.6	233 23.3 +02.3	N 15 03.7 +00.0	298 38.5 +02.7	S 11 20.7 +00.1	21								
22	119 19.1 +01.1	N 04 26.1 -00.6	248 25.6 +02.2	N 15 03.7 +00.1	313 41.2 +02.6	S 11 20.8 +00.1	22								
23	134 20.2 +01.0	N 04 25.5 -00.7	263 27.8 +02.3	N 15 03.8 +00.0	328 43.8 +02.6	S 11 20.9 +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 189° 189° 189° 188° 188° 188°	Greenwich Culmination Time: 14:03	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 05:28	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 023° 023° 023° 023° 023° 023°	Greenwich Culmination Time: 01:08

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 44.8 +00.1	N 14 48.5 -00.8	180 27.8 +04.0	N 07 19.3 +00.2	216 50.7 -31.3	N 27 40.6 -02.3	00						
01	193 44.9 +00.1	N 14 47.7 -00.8	195 31.8 +04.1	N 07 19.5 +00.2	231 19.4 -31.3	N 27 38.3 -02.5	01						
02	208 45.0 +00.1	N 14 46.9 -00.7	210 35.9 +04.0	N 07 19.7 +00.2	245 48.1 -31.3	N 27 35.8 -02.7	02						
03	223 45.1 +00.1	N 14 46.2 -00.8	225 39.9 +04.0	N 07 19.9 +00.3	260 16.8 -31.3	N 27 33.1 -02.7	03						
04	238 45.2 +00.1	N 14 45.4 -00.7	240 43.9 +04.0	N 07 20.2 +00.2	274 45.5 -31.2	N 27 30.4 -02.9	04						
05	253 45.3 +00.1	N 14 44.7 -00.8	255 47.9 +04.1	N 07 20.4 +00.2	289 14.3 -31.1	N 27 27.5 -03.1	05						
06	268 45.4 +00.1	N 14 43.9 -00.7	270 52.0 +04.0	N 07 20.6 +00.2	303 43.2 -31.1	N 27 24.4 -03.1	06						
07	283 45.5 +00.2	N 14 43.2 -00.8	285 56.0 +04.0	N 07 20.8 +00.2	318 12.1 -31.1	N 27 21.3 -03.3	07						
08	298 45.7 +00.1	N 14 42.4 -00.8	301 00.0 +04.0	N 07 21.0 +00.2	332 41.0 -31.0	N 27 18.0 -03.5	08						
09	313 45.8 +00.1	N 14 41.6 -00.7	316 04.0 +04.1	N 07 21.2 +00.3	347 10.0 -31.0	N 27 14.5 -03.5	09						
10	328 45.9 +00.1	N 14 40.9 -00.8	331 08.1 +04.0	N 07 21.5 +00.2	1 39.0 -30.9	N 27 11.0 -03.7	10						
11	343 46.0 +00.1	N 14 40.1 -00.7	346 12.1 +04.0	N 07 21.7 +00.2	16 08.1 -30.9	N 27 07.3 -03.9	11						
12	358 46.1 +00.1	N 14 39.4 -00.8	1 16.1 +04.0	N 07 21.9 +00.2	30 37.2 -30.8	N 27 03.4 -03.9	12						
13	13 46.2 +00.1	N 14 38.6 -00.8	16 20.1 +04.1	N 07 22.1 +00.3	45 06.4 -30.8	N 26 59.5 -04.1	13						
14	28 46.3 +00.1	N 14 37.8 -00.7	31 24.2 +04.0	N 07 22.4 +00.2	59 35.6 -30.7	N 26 55.4 -04.2	14						
15	43 46.4 +00.1	N 14 37.1 -00.8	46 28.2 +04.0	N 07 22.6 +00.2	74 04.9 -30.7	N 26 51.2 -04.4	15						
16	58 46.5 +00.2	N 14 36.3 -00.8	61 32.2 +04.0	N 07 22.8 +00.2	88 34.2 -30.6	N 26 46.8 -04.4	16						
17	73 46.7 +00.1	N 14 35.5 -00.7	76 36.2 +04.0	N 07 23.0 +00.3	103 03.6 -30.5	N 26 42.4 -04.6	17						
18	88 46.8 +00.1	N 14 34.8 -00.8	91 40.2 +04.1	N 07 23.3 +00.2	117 33.1 -30.5	N 26 37.8 -04.8	18						
19	103 46.9 +00.1	N 14 34.0 -00.8	106 44.3 +04.0	N 07 23.5 +00.2	132 02.6 -30.5	N 26 33.0 -04.8	19						
20	118 47.0 +00.1	N 14 33.2 -00.7	121 48.3 +04.0	N 07 23.7 +00.3	146 32.1 -30.3	N 26 28.2 -05.0	20						
21	133 47.1 +00.1	N 14 32.5 -00.8	136 52.3 +04.0	N 07 24.0 +00.2	161 01.8 -30.4	N 26 23.2 -05.1	21						
22	148 47.2 +00.1	N 14 31.7 -00.8	151 56.3 +04.0	N 07 24.2 +00.2	175 31.4 -30.2	N 26 18.1 -05.2	22						
23	163 47.3 +00.1	N 14 30.9 -00.7	167 00.3 +04.1	N 07 24.4 +00.3	190 01.2 -30.3	N 26 12.9 -05.3	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	00'5 00'5 00'5 00'5 00'5 00'5	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	00'5 00'5 00'5 00'5 00'5 00'5	HP	54'4 54'4 54'3 54'3 54'2 54'2								
SHA	217° 217° 217° 217° 217° 217°	SHA	219° 219° 220° 220° 220° 220°	SHA	255° 252° 250° 248° 246° 243°								
Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 11:54			Greenwich Culmination Time: 09:53							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	149 21.2 +01.0	N 04 24.8 -00.6	278 30.1 +02.3	N 15 03.8 +00.0	343 46.4 +02.7	S 11 20.9 +00.1	00						
01	164 22.2 +01.0	N 04 24.2 -00.7	293 32.4 +02.3	N 15 03.8 +00.1	358 49.1 +02.6	S 11 21.0 +00.1	01						
02	179 23.2 +01.0	N 04 23.5 -00.6	308 34.7 +02.3	N 15 03.9 +00.0	13 51.7 +02.6	S 11 21.1 +00.1	02						
03	194 24.2 +01.1	N 04 22.9 -00.7	323 37.0 +02.3	N 15 03.9 +00.1	28 54.3 +02.7	S 11 21.2 +00.0	03						
04	209 25.3 +01.0	N 04 22.2 -00.6	338 39.3 +02.2	N 15 04.0 +00.0	43 57.0 +02.6	S 11 21.2 +00.1	04						
05	224 26.3 +01.0	N 04 21.6 -00.6	353 41.5 +02.3	N 15 04.0 +00.1	58 59.6 +02.6	S 11 21.3 +00.1	05						
06	239 27.3 +01.0	N 04 21.0 -00.7	8 43.8 +02.3	N 15 04.1 +00.0	74 02.2 +02.7	S 11 21.4 +00.0	06						
07	254 28.3 +01.0	N 04 20.3 -00.6	23 46.1 +02.3	N 15 04.1 +00.1	89 04.9 +02.6	S 11 21.4 +00.1	07						
08	269 29.3 +01.1	N 04 19.7 -00.7	38 48.4 +02.3	N 15 04.2 +00.0	104 07.5 +02.6	S 11 21.5 +00.1	08						
09	284 30.4 +01.0	N 04 19.0 -00.6	53 50.7 +02.3	N 15 04.2 +00.0	119 10.1 +02.7	S 11 21.6 +00.0	09						
10	299 31.4 +01.0	N 04 18.4 -00.6	68 53.0 +02.3	N 15 04.2 +00.1	134 12.8 +02.6	S 11 21.6 +00.1	10						
11	314 32.4 +01.0	N 04 17.8 -00.7	83 55.3 +02.2	N 15 04.3 +00.0	149 15.4 +02.6	S 11 21.7 +00.1	11						
12	329 33.4 +01.0	N 04 17.1 -00.6	98 57.5 +02.3	N 15 04.3 +00.1	164 18.0 +02.7	S 11 21.8 +00.1	12						
13	344 34.4 +01.1	N 04 16.5 -00.7	113 59.8 +02.3	N 15 04.4 +00.0	179 20.7 +02.6	S 11 21.9 +00.0	13						
14	359 35.5 +01.0	N 04 15.8 -00.6	129 02.1 +02.3	N 15 04.4 +00.1	194 23.3 +02.6	S 11 21.9 +00.1	14						
15	14 36.5 +01.0	N 04 15.2 -00.7	144 04.4 +02.3	N 15 04.5 +00.0	209 25.9 +02.7	S 11 22.0 +00.1	15						
16	29 37.5 +01.0	N 04 14.5 -00.6	159 06.7 +02.3	N 15 04.5 +00.1	224 28.6 +02.6	S 11 22.1 +00.0	16						
17	44 38.5 +01.0	N 04 13.9 -00.6	174 09.0 +02.3	N 15 04.6 +00.0	239 31.2 +02.6	S 11 22.1 +00.1	17						
18	59 39.5 +01.1	N 04 13.3 -00.7	189 11.3 +02.3	N 15 04.6 +00.0	254 33.8 +02.7	S 11 22.2 +00.1	18						
19	74 40.6 +01.0	N 04 12.6 -00.6	204 13.6 +02.3	N 15 04.6 +00.1	269 36.5 +02.6	S 11 22.3 +00.1	19						
20	89 41.6 +01.0	N 04 12.0 -00.7	219 15.9 +02.2	N 15 04.7 +00.0	284 39.1 +02.6	S 11 22.4 +00.0	20						
21	104 42.6 +01.0	N 04 11.3 -00.6	234 18.1 +02.3	N 15 04.7 +00.1	299 41.7 +02.7	S 11 22.4 +00.1	21						
22	119 43.6 +01.0	N 04 10.7 -00.7	249 20.4 +02.3	N 15 04.8 +00.0	314 44.4 +02.6	S 11 22.5 +00.1	22						
23	134 44.6 +01.1	N 04 10.0 -00.6	264 22.7 +02.3	N 15 04.8 +00.1	329 47.0 +02.6	S 11 22.6 +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	00'2 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	188° 188° 188° 188° 188° 188°	SHA	317° 317° 317° 317° 317° 317°	SHA	023° 023° 023° 023° 023° 023°								
Greenwich Culmination Time: 14:01			Greenwich Culmination Time: 05:25			Greenwich Culmination Time: 01:04							

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 47.4 +00.2	N 14 30.2 -00.8	182 04.4 +04.0	N 07 24.7 +00.2	204 30.9 -30.1	N 26 07.6 -05.5	00								
01	193 47.6 +00.1	N 14 29.4 -00.8	197 08.4 +04.0	N 07 24.9 +00.2	219 00.8 -30.1	N 26 02.1 -05.6	01								
02	208 47.7 +00.1	N 14 28.6 -00.7	212 12.4 +04.0	N 07 25.1 +00.3	233 30.7 -30.0	N 25 56.5 -05.7	02								
03	223 47.8 +00.1	N 14 27.9 -00.8	227 16.4 +04.0	N 07 25.4 +00.2	248 00.7 -30.0	N 25 50.8 -05.8	03								
04	238 47.9 +00.1	N 14 27.1 -00.8	242 20.4 +04.0	N 07 25.6 +00.3	262 30.7 -29.9	N 25 45.0 -05.9	04								
05	253 48.0 +00.1	N 14 26.3 -00.7	257 24.4 +04.0	N 07 25.9 +00.2	277 00.8 -29.8	N 25 39.1 -06.1	05								
06	268 48.1 +00.1	N 14 25.6 -00.8	272 28.4 +04.1	N 07 26.1 +00.3	291 31.0 -29.8	N 25 33.0 -06.2	06								
07	283 48.2 +00.2	N 14 24.8 -00.8	287 32.5 +04.0	N 07 26.4 +00.2	306 01.2 -29.7	N 25 26.8 -06.3	07								
08	298 48.4 +00.1	N 14 24.0 -00.7	302 36.5 +04.0	N 07 26.6 +00.2	320 31.5 -29.7	N 25 20.5 -06.4	08								
09	313 48.5 +00.1	N 14 23.3 -00.8	317 40.5 +04.0	N 07 26.8 +00.3	335 01.8 -29.6	N 25 14.1 -06.5	09								
10	328 48.6 +00.1	N 14 22.5 -00.8	332 44.5 +04.0	N 07 27.1 +00.2	349 32.2 -29.5	N 25 07.6 -06.6	10								
11	343 48.7 +00.1	N 14 21.7 -00.7	347 48.5 +04.0	N 07 27.3 +00.3	4 02.7 -29.4	N 25 01.0 -06.8	11								
12	358 48.8 +00.1	N 14 21.0 -00.8	2 52.5 +04.0	N 07 27.6 +00.2	18 33.3 -29.4	N 24 54.2 -06.8	12								
13	13 48.9 +00.2	N 14 20.2 -00.8	17 56.5 +04.0	N 07 27.8 +00.3	33 03.9 -29.4	N 24 47.4 -07.0	13								
14	28 49.1 +00.1	N 14 19.4 -00.8	33 00.5 +04.0	N 07 28.1 +00.2	47 34.5 -29.2	N 24 40.4 -07.1	14								
15	43 49.2 +00.1	N 14 18.6 -00.7	48 04.5 +04.0	N 07 28.3 +00.3	62 05.3 -29.2	N 24 33.3 -07.2	15								
16	58 49.3 +00.1	N 14 17.9 -00.8	63 08.5 +04.1	N 07 28.6 +00.3	76 36.1 -29.1	N 24 26.1 -07.3	16								
17	73 49.4 +00.1	N 14 17.1 -00.8	78 12.6 +04.0	N 07 28.9 +00.2	91 07.0 -29.1	N 24 18.8 -07.4	17								
18	88 49.5 +00.1	N 14 16.3 -00.8	93 16.6 +04.0	N 07 29.1 +00.3	105 37.9 -29.0	N 24 11.4 -07.5	18								
19	103 49.6 +00.2	N 14 15.5 -00.7	108 20.6 +04.0	N 07 29.4 +00.2	120 08.9 -28.9	N 24 03.9 -07.6	19								
20	118 49.8 +00.1	N 14 14.8 -00.8	123 24.6 +04.0	N 07 29.6 +00.3	134 40.0 -28.8	N 23 56.3 -07.7	20								
21	133 49.9 +00.1	N 14 14.0 -00.8	138 28.6 +04.0	N 07 29.9 +00.3	149 11.2 -28.8	N 23 48.6 -07.8	21								
22	148 50.0 +00.1	N 14 13.2 -00.8	153 32.6 +04.0	N 07 30.2 +00.2	163 42.4 -28.7	N 23 40.8 -08.0	22								
23	163 50.1 +00.1	N 14 12.4 -00.7	168 36.6 +04.0	N 07 30.4 +00.3	178 13.7 -28.7	N 23 32.8 -08.0	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 217° 216° 216° 216° 216° 216°	Greenwich Culmination Time: 12:04	UT 02 06 10 14 18 22	SD 00'5 00'5 00'5 00'5 00'5 00'5	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 220° 220° 220° 220° 220° 220°	Greenwich Culmination Time: 11:48	UT 02 06 10 14 18 22	SD 14'8 14'7 14'7 14'7 14'7 14'7	HP 54'2 54'1 54'1 54'1 54'0 54'0	SHA 241° 239° 237° 235° 233° 231°	Greenwich Culmination Time: 10:43

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	149 45.7 +01.0	N 04 09.4 -00.6	279 25.0 +02.3	N 15 04.9 +00.0	344 49.6 +02.7	S 11 22.6 +00.1	00								
01	164 46.7 +01.0	N 04 08.8 -00.7	294 27.3 +02.3	N 15 04.9 +00.0	359 52.3 +02.6	S 11 22.7 +00.1	01								
02	179 47.7 +01.0	N 04 08.1 -00.6	309 29.6 +02.3	N 15 04.9 +00.1	14 54.9 +02.6	S 11 22.8 +00.1	02								
03	194 48.7 +01.0	N 04 07.5 -00.7	324 31.9 +02.3	N 15 05.0 +00.0	29 57.5 +02.7	S 11 22.9 +00.0	03								
04	209 49.7 +01.1	N 04 06.8 -00.6	339 34.2 +02.3	N 15 05.0 +00.1	45 00.2 +02.6	S 11 22.9 +00.1	04								
05	224 50.8 +01.0	N 04 06.2 -00.7	354 36.5 +02.3	N 15 05.1 +00.0	60 02.8 +02.6	S 11 23.0 +00.1	05								
06	239 51.8 +01.0	N 04 05.5 -00.6	9 38.8 +02.3	N 15 05.1 +00.1	75 05.4 +02.7	S 11 23.1 +00.0	06								
07	254 52.8 +01.0	N 04 04.9 -00.6	24 41.1 +02.2	N 15 05.2 +00.0	90 08.1 +02.6	S 11 23.1 +00.1	07								
08	269 53.8 +01.0	N 04 04.3 -00.7	39 43.3 +02.3	N 15 05.2 +00.0	105 10.7 +02.6	S 11 23.2 +00.1	08								
09	284 54.8 +01.0	N 04 03.6 -00.6	54 45.6 +02.3	N 15 05.2 +00.1	120 13.3 +02.7	S 11 23.3 +00.0	09								
10	299 55.8 +01.1	N 04 03.0 -00.7	69 47.9 +02.3	N 15 05.3 +00.0	135 16.0 +02.6	S 11 23.3 +00.1	10								
11	314 56.9 +01.0	N 04 02.3 -00.6	84 50.2 +02.3	N 15 05.3 +00.1	150 18.6 +02.6	S 11 23.4 +00.1	11								
12	329 57.9 +01.0	N 04 01.7 -00.7	99 52.5 +02.3	N 15 05.4 +00.0	165 21.2 +02.7	S 11 23.5 +00.1	12								
13	344 58.9 +01.0	N 04 01.0 -00.6	114 54.8 +02.3	N 15 05.4 +00.0	180 23.9 +02.6	S 11 23.6 +00.0	13								
14	359 59.9 +01.0	N 04 00.4 -00.7	129 57.1 +02.3	N 15 05.4 +00.1	195 26.5 +02.6	S 11 23.6 +00.1	14								
15	15 00.9 +01.1	N 03 59.7 -00.6	144 59.4 +02.3	N 15 05.5 +00.0	210 29.1 +02.7	S 11 23.7 +00.1	15								
16	30 02.0 +01.0	N 03 59.1 -00.6	160 01.7 +02.3	N 15 05.5 +00.1	225 31.8 +02.6	S 11 23.8 +00.0	16								
17	45 03.0 +01.0	N 03 58.5 -00.7	175 04.0 +02.3	N 15 05.6 +00.0	240 34.4 +02.6	S 11 23.8 +00.1	17								
18	60 04.0 +01.0	N 03 57.8 -00.6	190 06.3 +02.3	N 15 05.6 +00.1	255 37.0 +02.7	S 11 23.9 +00.1	18								
19	75 05.0 +01.0	N 03 57.2 -00.7	205 08.6 +02.3	N 15 05.7 +00.0	270 39.7 +02.6	S 11 24.0 +00.1	19								
20	90 06.0 +01.1	N 03 56.5 -00.6	220 10.9 +02.3	N 15 05.7 +00.0	285 42.3 +02.6	S 11 24.1 +00.0	20								
21	105 07.1 +01.0	N 03 55.9 -00.7	235 13.2 +02.3	N 15 05.7 +00.1	300 44.9 +02.7	S 11 24.1 +00.1	21								
22	120 08.1 +01.0	N 03 55.2 -00.6	250 15.5 +02.3	N 15 05.8 +00.0	315 47.6 +02.6	S 11 24.2 +00.1	22								
23	135 09.1 +01.0	N 03 54.6 -00.7	265 17.8 +02.3	N 15 05.8 +00.1	330 50.2 +02.6	S 11 24.3 +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 188° 187° 187° 187° 187° 187°	Greenwich Culmination Time: 14:00	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 05:21	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 023° 023° 023° 023° 023° 023°	Greenwich Culmination Time: 01:00

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 50.2 +00.2	N 14 11.7 -00.8	183 40.6 +04.0	N 07 30.7 +00.2	192 45.0 -28.6	N 23 24.8 -08.1	00						
01	193 50.4 +00.1	N 14 10.9 -00.8	198 44.6 +04.0	N 07 30.9 +00.3	207 16.4 -28.5	N 23 16.7 -08.2	01						
02	208 50.5 +00.1	N 14 10.1 -00.8	213 48.6 +04.0	N 07 31.2 +00.3	221 47.9 -28.4	N 23 08.5 -08.4	02						
03	223 50.6 +00.1	N 14 09.3 -00.7	228 52.6 +04.0	N 07 31.5 +00.2	236 19.5 -28.4	N 23 00.1 -08.4	03						
04	238 50.7 +00.1	N 14 08.6 -00.8	243 56.6 +04.0	N 07 31.7 +00.3	250 51.1 -28.3	N 22 51.7 -08.5	04						
05	253 50.8 +00.2	N 14 07.8 -00.8	259 00.6 +03.9	N 07 32.0 +00.3	265 22.8 -28.2	N 22 43.2 -08.7	05						
06	268 51.0 +00.1	N 14 07.0 -00.8	274 04.5 +04.0	N 07 32.3 +00.2	279 54.6 -28.2	N 22 34.5 -08.7	06						
07	283 51.1 +00.1	N 14 06.2 -00.7	289 08.5 +04.0	N 07 32.5 +00.3	294 26.4 -28.1	N 22 25.8 -08.8	07						
08	298 51.2 +00.1	N 14 05.5 -00.8	304 12.5 +04.0	N 07 32.8 +00.3	308 58.3 -28.0	N 22 17.0 -08.9	08						
09	313 51.3 +00.1	N 14 04.7 -00.8	319 16.5 +04.0	N 07 33.1 +00.3	323 30.3 -28.0	N 22 08.1 -09.0	09						
10	328 51.4 +00.2	N 14 03.9 -00.8	334 20.5 +04.0	N 07 33.4 +00.2	338 02.3 -27.9	N 21 59.1 -09.1	10						
11	343 51.6 +00.1	N 14 03.1 -00.8	349 24.5 +04.0	N 07 33.6 +00.3	352 34.4 -27.8	N 21 50.0 -09.2	11						
12	358 51.7 +00.1	N 14 02.3 -00.7	4 28.5 +04.0	N 07 33.9 +00.3	7 06.6 -27.7	N 21 40.8 -09.3	12						
13	13 51.8 +00.1	N 14 01.6 -00.8	19 32.5 +03.9	N 07 34.2 +00.3	21 38.9 -27.7	N 21 31.5 -09.4	13						
14	28 51.9 +00.2	N 14 00.8 -00.8	34 36.4 +04.0	N 07 34.5 +00.2	36 11.2 -27.7	N 21 22.1 -09.4	14						
15	43 52.1 +00.1	N 13 60.0 -00.8	49 40.4 +04.0	N 07 34.7 +00.3	50 43.5 -27.5	N 21 12.7 -09.6	15						
16	58 52.2 +00.1	N 13 59.2 -00.8	64 44.4 +04.0	N 07 35.0 +00.3	65 16.0 -27.5	N 21 03.1 -09.6	16						
17	73 52.3 +00.1	N 13 58.4 -00.8	79 48.4 +04.0	N 07 35.3 +00.3	79 48.5 -27.4	N 20 53.5 -09.7	17						
18	88 52.4 +00.2	N 13 57.6 -00.7	94 52.4 +03.9	N 07 35.6 +00.3	94 21.1 -27.4	N 20 43.8 -09.8	18						
19	103 52.6 +00.1	N 13 56.9 -00.8	109 56.3 +04.0	N 07 35.9 +00.2	108 53.7 -27.2	N 20 34.0 -09.9	19						
20	118 52.7 +00.1	N 13 56.1 -00.8	125 00.3 +04.0	N 07 36.1 +00.3	123 26.5 -27.3	N 20 24.1 -10.0	20						
21	133 52.8 +00.1	N 13 55.3 -00.8	140 04.3 +04.0	N 07 36.4 +00.3	137 59.2 -27.1	N 20 14.1 -10.0	21						
22	148 52.9 +00.1	N 13 54.5 -00.8	155 08.3 +03.9	N 07 36.7 +00.3	152 32.1 -27.1	N 20 04.1 -10.2	22						
23	163 53.0 +00.2	N 13 53.7 -00.8	170 12.2 +04.0	N 07 37.0 +00.3	167 05.0 -27.0	N 19 53.9 -10.2	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 00'5 00'5 00'5 00'5 00'5 00'5		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 00'5 00'5 00'5 00'5 00'5 00'5		HP 54'0 54'0 53'9 53'9 53'9 53'9								
	SHA 216° 215° 215° 215° 215° 215°		SHA 221° 221° 221° 221° 221° 221°		SHA 229° 227° 224° 222° 220° 218°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 11:42		Greenwich Culmination Time: 11:30								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	150 10.1 +01.0	N 03 53.9 -00.6	280 20.1 +02.3	N 15 05.9 +00.0	345 52.8 +02.7	S 11 24.3 +00.1	00						
01	165 11.1 +01.0	N 03 53.3 -00.6	295 22.4 +02.3	N 15 05.9 +00.0	0 55.5 +02.6	S 11 24.4 +00.1	01						
02	180 12.1 +01.1	N 03 52.7 -00.7	310 24.7 +02.3	N 15 05.9 +00.1	15 58.1 +02.7	S 11 24.5 +00.1	02						
03	195 13.2 +01.0	N 03 52.0 -00.6	325 27.0 +02.3	N 15 06.0 +00.0	31 00.8 +02.6	S 11 24.6 +00.0	03						
04	210 14.2 +01.0	N 03 51.4 -00.7	340 29.3 +02.3	N 15 06.0 +00.1	46 03.4 +02.6	S 11 24.6 +00.1	04						
05	225 15.2 +01.0	N 03 50.7 -00.6	355 31.6 +02.3	N 15 06.1 +00.0	61 06.0 +02.7	S 11 24.7 +00.1	05						
06	240 16.2 +01.0	N 03 50.1 -00.7	10 33.9 +02.3	N 15 06.1 +00.0	76 08.7 +02.6	S 11 24.8 +00.0	06						
07	255 17.2 +01.1	N 03 49.4 -00.6	25 36.2 +02.3	N 15 06.1 +00.1	91 11.3 +02.6	S 11 24.8 +00.1	07						
08	270 18.3 +01.0	N 03 48.8 -00.7	40 38.5 +02.3	N 15 06.2 +00.0	106 13.9 +02.7	S 11 24.9 +00.1	08						
09	285 19.3 +01.0	N 03 48.1 -00.6	55 40.8 +02.3	N 15 06.2 +00.1	121 16.6 +02.6	S 11 25.0 +00.1	09						
10	300 20.3 +01.0	N 03 47.5 -00.6	70 43.1 +02.3	N 15 06.3 +00.0	136 19.2 +02.6	S 11 25.1 +00.0	10						
11	315 21.3 +01.0	N 03 46.9 -00.7	85 45.4 +02.3	N 15 06.3 +00.0	151 21.8 +02.7	S 11 25.1 +00.1	11						
12	330 22.3 +01.0	N 03 46.2 -00.6	100 47.7 +02.3	N 15 06.3 +00.1	166 24.5 +02.6	S 11 25.2 +00.1	12						
13	345 23.3 +01.1	N 03 45.6 -00.7	115 50.0 +02.3	N 15 06.4 +00.0	181 27.1 +02.6	S 11 25.3 +00.0	13						
14	0 24.4 +01.0	N 03 44.9 -00.6	130 52.3 +02.3	N 15 06.4 +00.1	196 29.7 +02.7	S 11 25.3 +00.1	14						
15	15 25.4 +01.0	N 03 44.3 -00.7	145 54.6 +02.3	N 15 06.5 +00.0	211 32.4 +02.6	S 11 25.4 +00.1	15						
16	30 26.4 +01.0	N 03 43.6 -00.6	160 56.9 +02.3	N 15 06.5 +00.0	226 35.0 +02.6	S 11 25.5 +00.1	16						
17	45 27.4 +01.0	N 03 43.0 -00.7	175 59.2 +02.3	N 15 06.5 +00.1	241 37.6 +02.7	S 11 25.6 +00.0	17						
18	60 28.4 +01.1	N 03 42.3 -00.6	191 01.5 +02.3	N 15 06.6 +00.0	256 40.3 +02.6	S 11 25.6 +00.1	18						
19	75 29.5 +01.0	N 03 41.7 -00.7	206 03.8 +02.3	N 15 06.6 +00.0	271 42.9 +02.7	S 11 25.7 +00.1	19						
20	90 30.5 +01.0	N 03 41.0 -00.6	221 06.1 +02.3	N 15 06.6 +00.1	286 45.6 +02.6	S 11 25.8 +00.0	20						
21	105 31.5 +01.0	N 03 40.4 -00.6	236 08.4 +02.3	N 15 06.7 +00.0	301 48.2 +02.6	S 11 25.8 +00.1	21						
22	120 32.5 +01.0	N 03 39.8 -00.7	251 10.7 +02.3	N 15 06.7 +00.1	316 50.8 +02.7	S 11 25.9 +00.1	22						
23	135 33.5 +01.0	N 03 39.1 -00.6	266 13.0 +02.3	N 15 06.8 +00.0	331 53.5 +02.6	S 11 26.0 +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 187° 187° 187° 187° 187° 186°		SHA 317° 317° 317° 317° 317° 317°		SHA 023° 023° 023° 023° 023° 023°								
	Greenwich Culmination Time: 13:58		Greenwich Culmination Time: 05:17		Greenwich Culmination Time: 00:56								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 56.2 +00.2	N 13 34.0 -00.8	186 51.1 +03.9	N 07 44.5 +00.3	171 07.8 -25.5	N 15 16.5 -12.0	00						
01	193 56.4 +00.1	N 13 33.2 -00.8	201 55.0 +03.9	N 07 44.8 +00.3	185 42.3 -25.5	N 15 04.5 -12.0	01						
02	208 56.5 +00.1	N 13 32.4 -00.8	216 58.9 +04.0	N 07 45.1 +00.3	200 16.8 -25.5	N 14 52.5 -12.1	02						
03	223 56.6 +00.2	N 13 31.6 -00.8	232 02.9 +03.9	N 07 45.4 +00.3	214 51.3 -25.4	N 14 40.4 -12.1	03						
04	238 56.8 +00.1	N 13 30.8 -00.8	247 06.8 +03.9	N 07 45.7 +00.3	229 25.9 -25.3	N 14 28.3 -12.2	04						
05	253 56.9 +00.1	N 13 30.0 -00.8	262 10.7 +04.0	N 07 46.0 +00.3	244 00.6 -25.3	N 14 16.1 -12.2	05						
06	268 57.0 +00.2	N 13 29.2 -00.8	277 14.7 +03.9	N 07 46.3 +00.3	258 35.3 -25.3	N 14 03.9 -12.3	06						
07	283 57.2 +00.1	N 13 28.4 -00.8	292 18.6 +03.9	N 07 46.6 +00.4	273 10.0 -25.2	N 13 51.6 -12.3	07						
08	298 57.3 +00.1	N 13 27.6 -00.8	307 22.5 +03.9	N 07 47.0 +00.3	287 44.8 -25.1	N 13 39.3 -12.4	08						
09	313 57.4 +00.2	N 13 26.8 -00.8	322 26.4 +03.9	N 07 47.3 +00.3	302 19.7 -25.2	N 13 26.9 -12.5	09						
10	328 57.6 +00.1	N 13 26.0 -00.8	337 30.3 +03.9	N 07 47.6 +00.3	316 54.5 -25.0	N 13 14.4 -12.5	10						
11	343 57.7 +00.1	N 13 25.2 -00.8	352 34.2 +04.0	N 07 47.9 +00.3	331 29.5 -25.1	N 13 01.9 -12.5	11						
12	358 57.8 +00.2	N 13 24.4 -00.8	7 38.2 +03.9	N 07 48.2 +00.3	346 04.4 -24.9	N 12 49.4 -12.6	12						
13	13 58.0 +00.1	N 13 23.6 -00.8	22 42.1 +03.9	N 07 48.5 +00.4	0 39.5 -25.0	N 12 36.8 -12.7	13						
14	28 58.1 +00.1	N 13 22.8 -00.8	37 46.0 +03.9	N 07 48.9 +00.3	15 14.5 -24.9	N 12 24.1 -12.7	14						
15	43 58.2 +00.2	N 13 22.0 -00.8	52 49.9 +03.9	N 07 49.2 +00.3	29 49.6 -24.8	N 12 11.4 -12.7	15						
16	58 58.4 +00.1	N 13 21.2 -00.8	67 53.8 +03.9	N 07 49.5 +00.3	44 24.8 -24.9	N 11 58.7 -12.8	16						
17	73 58.5 +00.1	N 13 20.4 -00.8	82 57.7 +03.9	N 07 49.8 +00.3	58 59.9 -24.7	N 11 45.9 -12.9	17						
18	88 58.6 +00.2	N 13 19.6 -00.8	98 01.6 +03.9	N 07 50.1 +00.4	73 35.2 -24.8	N 11 33.0 -12.8	18						
19	103 58.8 +00.1	N 13 18.8 -00.8	113 05.5 +03.9	N 07 50.5 +00.3	88 10.4 -24.7	N 11 20.2 -13.0	19						
20	118 58.9 +00.1	N 13 18.0 -00.8	128 09.4 +03.9	N 07 50.8 +00.3	102 45.7 -24.7	N 11 07.2 -12.9	20						
21	133 59.0 +00.2	N 13 17.2 -00.8	143 13.3 +03.9	N 07 51.1 +00.4	117 21.0 -24.6	N 10 54.3 -13.0	21						
22	148 59.2 +00.1	N 13 16.4 -00.8	158 17.2 +03.9	N 07 51.5 +00.3	131 56.4 -24.6	N 10 41.3 -13.1	22						
23	163 59.3 +00.1	N 13 15.6 -00.8	173 21.1 +03.9	N 07 51.8 +00.3	146 31.8 -24.5	N 10 28.2 -13.1	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 00'5 00'5 00'5 00'5 00'5 00'5	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 00'5 00'5 00'5 00'5 00'5 00'5			HP 53'9 53'9 53'9 54'0 54'0 54'0						
	SHA 214° 214° 213° 213° 213° 213°			SHA 222° 222° 222° 222° 222° 222°			SHA 205° 203° 201° 200° 198° 196°						
	Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 11:29			Greenwich Culmination Time: 12:57						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	150 59.0 +01.0	N 03 22.9 -00.6	282 10.7 +02.4	N 15 07.7 +00.0	347 59.4 +02.6	S 11 27.8 +00.0	00						
01	165 60.0 +01.0	N 03 22.3 -00.7	297 13.1 +02.3	N 15 07.7 +00.1	3 02.0 +02.7	S 11 27.8 +00.1	01						
02	181 01.0 +01.0	N 03 21.6 -00.6	312 15.4 +02.3	N 15 07.8 +00.0	18 04.7 +02.6	S 11 27.9 +00.1	02						
03	196 02.0 +01.0	N 03 21.0 -00.6	327 17.7 +02.3	N 15 07.8 +00.0	33 07.3 +02.6	S 11 28.0 +00.1	03						
04	211 03.0 +01.0	N 03 20.4 -00.7	342 20.0 +02.3	N 15 07.8 +00.1	48 09.9 +02.7	S 11 28.1 +00.0	04						
05	226 04.0 +01.1	N 03 19.7 -00.6	357 22.3 +02.3	N 15 07.9 +00.0	63 12.6 +02.6	S 11 28.1 +00.1	05						
06	241 05.1 +01.0	N 03 19.1 -00.7	12 24.6 +02.3	N 15 07.9 +00.0	78 15.2 +02.6	S 11 28.2 +00.1	06						
07	256 06.1 +01.0	N 03 18.4 -00.6	27 26.9 +02.4	N 15 07.9 +00.1	93 17.8 +02.7	S 11 28.3 +00.0	07						
08	271 07.1 +01.0	N 03 17.8 -00.7	42 29.3 +02.3	N 15 08.0 +00.0	108 20.5 +02.6	S 11 28.3 +00.1	08						
09	286 08.1 +01.0	N 03 17.1 -00.6	57 31.6 +02.3	N 15 08.0 +00.0	123 23.1 +02.7	S 11 28.4 +00.1	09						
10	301 09.1 +01.0	N 03 16.5 -00.7	72 33.9 +02.3	N 15 08.0 +00.1	138 25.8 +02.6	S 11 28.5 +00.1	10						
11	316 10.1 +01.1	N 03 15.8 -00.6	87 36.2 +02.3	N 15 08.1 +00.0	153 28.4 +02.6	S 11 28.6 +00.0	11						
12	331 11.2 +01.0	N 03 15.2 -00.7	102 38.5 +02.3	N 15 08.1 +00.0	168 31.0 +02.7	S 11 28.6 +00.1	12						
13	346 12.2 +01.0	N 03 14.5 -00.6	117 40.8 +02.4	N 15 08.1 +00.1	183 33.7 +02.6	S 11 28.7 +00.1	13						
14	1 13.2 +01.0	N 03 13.9 -00.7	132 43.2 +02.3	N 15 08.2 +00.0	198 36.3 +02.6	S 11 28.8 +00.0	14						
15	16 14.2 +01.0	N 03 13.2 -00.6	147 45.5 +02.3	N 15 08.2 +00.1	213 38.9 +02.7	S 11 28.8 +00.1	15						
16	31 15.2 +01.0	N 03 12.6 -00.7	162 47.8 +02.3	N 15 08.3 +00.0	228 41.6 +02.6	S 11 28.9 +00.1	16						
17	46 16.2 +01.1	N 03 11.9 -00.6	177 50.1 +02.3	N 15 08.3 +00.0	243 44.2 +02.7	S 11 29.0 +00.1	17						
18	61 17.3 +01.0	N 03 11.3 -00.7	192 52.4 +02.4	N 15 08.3 +00.1	258 46.9 +02.6	S 11 29.1 +00.0	18						
19	76 18.3 +01.0	N 03 10.6 -00.6	207 54.8 +02.3	N 15 08.4 +00.0	273 49.5 +02.6	S 11 29.1 +00.1	19						
20	91 19.3 +01.0	N 03 10.0 -00.7	222 57.1 +02.3	N 15 08.4 +00.0	288 52.1 +02.7	S 11 29.2 +00.1	20						
21	106 20.3 +01.0	N 03 09.3 -00.6	237 59.4 +02.3	N 15 08.4 +00.1	303 54.8 +02.6	S 11 29.3 +00.0	21						
22	121 21.3 +01.0	N 03 08.7 -00.7	253 01.7 +02.3	N 15 08.5 +00.0	318 57.4 +02.6	S 11 29.3 +00.1	22						
23	136 22.3 +01.0	N 03 08.0 -00.6	268 04.0 +02.4	N 15 08.5 +00.0	334 00.0 +02.7	S 11 29.4 +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 00'3 00'3 00'3 00'3 00'3 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 186° 186° 186° 186° 185° 185°			SHA 317° 317° 317° 317° 317° 317°			SHA 023° 023° 023° 023° 023° 023°						
	Greenwich Culmination Time: 13:55			Greenwich Culmination Time: 05:10			Greenwich Culmination Time: 00:47						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 02.8 +00.1	N 12 55.4 -00.8	189 57.6 +03.9	N 08 00.2 +00.3	151 25.5 -24.0	N 04 50.9 -13.9	00						
01	194 02.9 +00.1	N 12 54.6 -00.8	205 01.5 +03.8	N 08 00.5 +00.4	166 01.5 -24.0	N 04 37.0 -13.8	01						
02	209 03.0 +00.2	N 12 53.8 -00.8	220 05.3 +03.8	N 08 00.9 +00.3	180 37.5 -24.0	N 04 23.2 -13.9	02						
03	224 03.2 +00.1	N 12 53.0 -00.8	235 09.1 +03.8	N 08 01.2 +00.4	195 13.5 -24.0	N 04 09.3 -13.9	03						
04	239 03.3 +00.2	N 12 52.2 -00.8	250 12.9 +03.9	N 08 01.6 +00.3	209 49.5 -24.0	N 03 55.4 -14.0	04						
05	254 03.5 +00.1	N 12 51.4 -00.8	265 16.8 +03.8	N 08 01.9 +00.4	224 25.5 -24.0	N 03 41.4 -13.9	05						
06	269 03.6 +00.1	N 12 50.6 -00.9	280 20.6 +03.8	N 08 02.3 +00.3	239 01.5 -23.9	N 03 27.5 -14.0	06						
07	284 03.7 +00.2	N 12 49.7 -00.8	295 24.4 +03.8	N 08 02.6 +00.4	253 37.6 -24.0	N 03 13.5 -14.0	07						
08	299 03.9 +00.1	N 12 48.9 -00.8	310 28.2 +03.8	N 08 03.0 +00.3	268 13.6 -24.0	N 02 59.5 -14.0	08						
09	314 04.0 +00.2	N 12 48.1 -00.8	325 32.0 +03.8	N 08 03.3 +00.4	282 49.6 -23.9	N 02 45.5 -14.0	09						
10	329 04.2 +00.1	N 12 47.3 -00.8	340 35.8 +03.9	N 08 03.7 +00.3	297 25.7 -24.0	N 02 31.5 -14.0	10						
11	344 04.3 +00.2	N 12 46.5 -00.8	355 39.7 +03.8	N 08 04.0 +00.4	312 01.7 -24.0	N 02 17.5 -14.0	11						
12	359 04.5 +00.1	N 12 45.7 -00.8	10 43.5 +03.8	N 08 04.4 +00.3	326 37.7 -23.9	N 02 03.5 -14.1	12						
13	14 04.6 +00.1	N 12 44.9 -00.9	25 47.3 +03.8	N 08 04.7 +00.4	341 13.8 -24.0	N 01 49.4 -14.1	13						
14	29 04.7 +00.2	N 12 44.0 -00.8	40 51.1 +03.8	N 08 05.1 +00.3	355 49.8 -24.0	N 01 35.3 -14.0	14						
15	44 04.9 +00.1	N 12 43.2 -00.8	55 54.9 +03.8	N 08 05.4 +00.4	10 25.8 -24.0	N 01 21.3 -14.1	15						
16	59 05.0 +00.2	N 12 42.4 -00.8	70 58.7 +03.8	N 08 05.8 +00.4	25 01.8 -23.9	N 01 07.2 -14.1	16						
17	74 05.2 +00.1	N 12 41.6 -00.8	86 02.5 +03.7	N 08 06.2 +00.3	39 37.9 -24.0	N 00 53.1 -14.1	17						
18	89 05.3 +00.2	N 12 40.8 -00.9	101 06.2 +03.8	N 08 06.5 +00.4	54 13.9 -24.0	N 00 39.0 -14.1	18						
19	104 05.5 +00.1	N 12 39.9 -00.8	116 10.0 +03.8	N 08 06.9 +00.3	68 49.9 -24.1	N 00 24.9 -14.2	19						
20	119 05.6 +00.2	N 12 39.1 -00.8	131 13.8 +03.8	N 08 07.2 +00.4	83 25.8 -24.0	N 00 10.7 -14.1	20						
21	134 05.8 +00.1	N 12 38.3 -00.8	146 17.6 +03.8	N 08 07.6 +00.3	98 01.8 -24.0	S 00 03.4 +14.1	21						
22	149 05.9 +00.2	N 12 37.5 -00.8	161 21.4 +03.8	N 08 07.9 +00.4	112 37.8 -24.1	S 00 17.5 +14.2	22						
23	164 06.1 +00.1	N 12 36.7 -00.9	176 25.2 +03.7	N 08 08.3 +00.4	127 13.7 -24.0	S 00 31.7 +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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'5 00'5 00'5 00'5 00'5 00'5		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 00'5 00'5 00'5 00'5 00'5 00'5		HP 54'2 54'2 54'3 54'3 54'4 54'4								
	SHA 212° 212° 212° 211° 211° 211°		SHA 223° 223° 223° 223° 223° 223°		SHA 183° 182° 180° 178° 176° 175°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 11:17		Greenwich Culmination Time: 14:17								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	151 47.7 +01.0	N 02 51.8 -00.6	284 02.1 +02.4	N 15 09.3 +00.0	350 06.0 +02.7	S 11 31.2 +00.1	00						
01	166 48.7 +01.0	N 02 51.2 -00.7	299 04.5 +02.3	N 15 09.3 +00.1	5 08.7 +02.6	S 11 31.3 +00.1	01						
02	181 49.7 +01.1	N 02 50.5 -00.6	314 06.8 +02.3	N 15 09.4 +00.0	20 11.3 +02.6	S 11 31.4 +00.0	02						
03	196 50.8 +01.0	N 02 49.9 -00.7	329 09.1 +02.4	N 15 09.4 +00.0	35 13.9 +02.7	S 11 31.4 +00.1	03						
04	211 51.8 +01.0	N 02 49.2 -00.6	344 11.5 +02.3	N 15 09.4 +00.1	50 16.6 +02.6	S 11 31.5 +00.1	04						
05	226 52.8 +01.0	N 02 48.6 -00.7	359 13.8 +02.3	N 15 09.5 +00.0	65 19.2 +02.6	S 11 31.6 +00.1	05						
06	241 53.8 +01.0	N 02 47.9 -00.6	14 16.1 +02.4	N 15 09.5 +00.0	80 21.8 +02.7	S 11 31.7 +00.0	06						
07	256 54.8 +01.0	N 02 47.3 -00.7	29 18.5 +02.3	N 15 09.5 +00.0	95 24.5 +02.6	S 11 31.7 +00.1	07						
08	271 55.8 +01.0	N 02 46.6 -00.6	44 20.8 +02.3	N 15 09.5 +00.1	110 27.1 +02.7	S 11 31.8 +00.1	08						
09	286 56.8 +01.1	N 02 46.0 -00.7	59 23.1 +02.3	N 15 09.6 +00.0	125 29.8 +02.6	S 11 31.9 +00.0	09						
10	301 57.9 +01.0	N 02 45.3 -00.6	74 25.4 +02.4	N 15 09.6 +00.0	140 32.4 +02.6	S 11 31.9 +00.1	10						
11	316 58.9 +01.0	N 02 44.7 -00.7	89 27.8 +02.3	N 15 09.6 +00.1	155 35.0 +02.7	S 11 32.0 +00.1	11						
12	331 59.9 +01.0	N 02 44.0 -00.6	104 30.1 +02.3	N 15 09.7 +00.0	170 37.7 +02.6	S 11 32.1 +00.1	12						
13	347 00.9 +01.0	N 02 43.4 -00.7	119 32.4 +02.4	N 15 09.7 +00.0	185 40.3 +02.7	S 11 32.2 +00.0	13						
14	2 01.9 +01.0	N 02 42.7 -00.6	134 34.8 +02.3	N 15 09.7 +00.1	200 43.0 +02.6	S 11 32.2 +00.1	14						
15	17 02.9 +01.0	N 02 42.1 -00.7	149 37.1 +02.3	N 15 09.8 +00.0	215 45.6 +02.6	S 11 32.3 +00.1	15						
16	32 03.9 +01.1	N 02 41.4 -00.7	164 39.4 +02.4	N 15 09.8 +00.0	230 48.2 +02.7	S 11 32.4 +00.0	16						
17	47 05.0 +01.0	N 02 40.7 -00.6	179 41.8 +02.3	N 15 09.8 +00.0	245 50.9 +02.6	S 11 32.4 +00.1	17						
18	62 06.0 +01.0	N 02 40.1 -00.7	194 44.1 +02.3	N 15 09.8 +00.1	260 53.5 +02.7	S 11 32.5 +00.1	18						
19	77 07.0 +01.0	N 02 39.4 -00.6	209 46.4 +02.4	N 15 09.9 +00.0	275 56.2 +02.6	S 11 32.6 +00.1	19						
20	92 08.0 +01.0	N 02 38.8 -00.7	224 48.8 +02.3	N 15 09.9 +00.0	290 58.8 +02.6	S 11 32.7 +00.0	20						
21	107 09.0 +01.0	N 02 38.1 -00.6	239 51.1 +02.3	N 15 09.9 +00.1	306 01.4 +02.7	S 11 32.7 +00.1	21						
22	122 10.0 +01.0	N 02 37.5 -00.7	254 53.4 +02.4	N 15 10.0 +00.0	321 04.1 +02.6	S 11 32.8 +00.1	22						
23	137 11.0 +01.1	N 02 36.8 -00.6	269 55.8 +02.3	N 15 10.0 +00.0	336 06.7 +02.7	S 11 32.9 +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 185° 185° 184° 184° 184° 184°		SHA 317° 317° 317° 317° 317° 317°		SHA 023° 023° 023° 023° 023° 023°								
	Greenwich Culmination Time: 13:51		Greenwich Culmination Time: 05:03		Greenwich Culmination Time: 00:39								

UT	Sun				Venus				Moon A: 11%				UT
	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	
00	179 06.2 +00.1	N 12 35.8 -00.8	191 28.9 +03.8	N 08 08.7 +00.3	141 49.7 -24.1	S 00 45.8 +14.1							
01	194 06.3 +00.2	N 12 35.0 -00.8	206 32.7 +03.8	N 08 09.0 +00.4	156 25.6 -24.1	S 00 59.9 +14.2							
02	209 06.5 +00.1	N 12 34.2 -00.8	221 36.5 +03.7	N 08 09.4 +00.3	171 01.5 -24.1	S 01 14.1 +14.1							
03	224 06.6 +00.2	N 12 33.4 -00.8	236 40.2 +03.8	N 08 09.7 +00.4	185 37.4 -24.1	S 01 28.2 +14.2							
04	239 06.8 +00.1	N 12 32.6 -00.9	251 44.0 +03.8	N 08 10.1 +00.4	200 13.3 -24.1	S 01 42.4 +14.2							
05	254 06.9 +00.2	N 12 31.7 -00.8	266 47.8 +03.7	N 08 10.5 +00.3	214 49.2 -24.2	S 01 56.6 +14.1							
06	269 07.1 +00.1	N 12 30.9 -00.8	281 51.5 +03.8	N 08 10.8 +00.4	229 25.0 -24.2	S 02 10.7 +14.2							
07	284 07.2 +00.2	N 12 30.1 -00.8	296 55.3 +03.7	N 08 11.2 +00.4	244 00.8 -24.2	S 02 24.9 +14.1							
08	299 07.4 +00.1	N 12 29.3 -00.8	311 59.0 +03.8	N 08 11.6 +00.3	258 36.6 -24.2	S 02 39.0 +14.2							
09	314 07.5 +00.2	N 12 28.5 -00.9	327 02.8 +03.7	N 08 11.9 +00.4	273 12.4 -24.3	S 02 53.2 +14.1							
10	329 07.7 +00.1	N 12 27.6 -00.8	342 06.5 +03.8	N 08 12.3 +00.3	287 48.1 -24.3	S 03 07.3 +14.2							
11	344 07.8 +00.2	N 12 26.8 -00.8	357 10.3 +03.7	N 08 12.6 +00.4	302 23.8 -24.3	S 03 21.5 +14.1							
12	359 08.0 +00.1	N 12 26.0 -00.8	12 14.0 +03.7	N 08 13.0 +00.4	316 59.5 -24.3	S 03 35.6 +14.1							
13	14 08.1 +00.2	N 12 25.2 -00.9	27 17.7 +03.8	N 08 13.4 +00.3	331 35.2 -24.4	S 03 49.7 +14.2							
14	29 08.3 +00.1	N 12 24.3 -00.8	42 21.5 +03.7	N 08 13.7 +00.4	346 10.8 -24.3	S 04 03.9 +14.1							
15	44 08.4 +00.2	N 12 23.5 -00.8	57 25.2 +03.7	N 08 14.1 +00.4	0 46.5 -24.5	S 04 18.0 +14.1							
16	59 08.6 +00.1	N 12 22.7 -00.8	72 28.9 +03.8	N 08 14.5 +00.3	15 22.0 -24.4	S 04 32.1 +14.1							
17	74 08.7 +00.2	N 12 21.9 -00.9	87 32.7 +03.7	N 08 14.8 +00.4	29 57.6 -24.5	S 04 46.2 +14.1							
18	89 08.9 +00.1	N 12 21.0 -00.8	102 36.4 +03.7	N 08 15.2 +00.4	44 33.1 -24.5	S 05 00.3 +14.1							
19	104 09.0 +00.2	N 12 20.2 -00.8	117 40.1 +03.7	N 08 15.6 +00.4	59 08.6 -24.6	S 05 14.4 +14.1							
20	119 09.2 +00.1	N 12 19.4 -00.9	132 43.8 +03.7	N 08 16.0 +00.3	73 44.0 -24.6	S 05 28.5 +14.0							
21	134 09.3 +00.2	N 12 18.5 -00.8	147 47.5 +03.8	N 08 16.3 +00.4	88 19.4 -24.6	S 05 42.5 +14.1							
22	149 09.5 +00.1	N 12 17.7 -00.8	162 51.3 +03.7	N 08 16.7 +00.4	102 54.8 -24.7	S 05 56.6 +14.0							
23	164 09.6 +00.2	N 12 16.9 -00.8	177 55.0 +03.7	N 08 17.1 +00.3	117 30.1 -24.7	S 06 10.6 +14.0							
	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 211° 211° 211° 210° 210° 210° Greenwich Culmination Time: 12:03	UT 02 06 10 14 18 22 SD 00'5 00'5 00'5 00'5 00'5 00'5 HP 00'5 00'5 00'5 00'5 00'5 00'5 SHA 223° 224° 224° 224° 224° 224° Greenwich Culmination Time: 11:11	UT 02 06 10 14 18 22 SD 14'9 14'9 14'9 14'9 14'9 14'9 HP 54'5 54'6 54'6 54'7 54'8 54'8 SHA 173° 171° 169° 168° 166° 164° Greenwich Culmination Time: 14:56										
UT	Mars				Jupiter				Saturn				UT
	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	
00	152 12.1 +01.0	N 02 36.2 -00.7	284 58.1 +02.4	N 15 10.0 +00.1	351 09.4 +02.6	S 11 32.9 +00.1							
01	167 13.1 +01.0	N 02 35.5 -00.6	300 00.5 +02.3	N 15 10.1 +00.0	6 12.0 +02.6	S 11 33.0 +00.1							
02	182 14.1 +01.0	N 02 34.9 -00.7	315 02.8 +02.3	N 15 10.1 +00.0	21 14.6 +02.7	S 11 33.1 +00.1							
03	197 15.1 +01.0	N 02 34.2 -00.6	330 05.1 +02.4	N 15 10.1 +00.0	36 17.3 +02.6	S 11 33.2 +00.0							
04	212 16.1 +01.0	N 02 33.6 -00.7	345 07.5 +02.3	N 15 10.1 +00.1	51 19.9 +02.7	S 11 33.2 +00.1							
05	227 17.1 +01.0	N 02 32.9 -00.6	0 09.8 +02.3	N 15 10.2 +00.0	66 22.6 +02.6	S 11 33.3 +00.1							
06	242 18.1 +01.1	N 02 32.3 -00.7	15 12.1 +02.4	N 15 10.2 +00.0	81 25.2 +02.6	S 11 33.4 +00.1							
07	257 19.2 +01.0	N 02 31.6 -00.6	30 14.5 +02.3	N 15 10.2 +00.1	96 27.8 +02.7	S 11 33.5 +00.0							
08	272 20.2 +01.0	N 02 31.0 -00.7	45 16.8 +02.4	N 15 10.3 +00.0	111 30.5 +02.6	S 11 33.5 +00.1							
09	287 21.2 +01.0	N 02 30.3 -00.6	60 19.2 +02.3	N 15 10.3 +00.0	126 33.1 +02.7	S 11 33.6 +00.1							
10	302 22.2 +01.0	N 02 29.7 -00.7	75 21.5 +02.3	N 15 10.3 +00.0	141 35.8 +02.6	S 11 33.7 +00.0							
11	317 23.2 +01.0	N 02 29.0 -00.6	90 23.8 +02.4	N 15 10.3 +00.1	156 38.4 +02.6	S 11 33.7 +00.1							
12	332 24.2 +01.0	N 02 28.4 -00.7	105 26.2 +02.3	N 15 10.4 +00.0	171 41.0 +02.7	S 11 33.8 +00.1							
13	347 25.2 +01.0	N 02 27.7 -00.6	120 28.5 +02.4	N 15 10.4 +00.0	186 43.7 +02.6	S 11 33.9 +00.1							
14	2 26.2 +01.1	N 02 27.1 -00.7	135 30.9 +02.3	N 15 10.4 +00.0	201 46.3 +02.7	S 11 34.0 +00.0							
15	17 27.3 +01.0	N 02 26.4 -00.6	150 33.2 +02.3	N 15 10.4 +00.1	216 49.0 +02.6	S 11 34.0 +00.1							
16	32 28.3 +01.0	N 02 25.8 -00.7	165 35.5 +02.4	N 15 10.5 +00.0	231 51.6 +02.6	S 11 34.1 +00.1							
17	47 29.3 +01.0	N 02 25.1 -00.6	180 37.9 +02.3	N 15 10.5 +00.0	246 54.2 +02.7	S 11 34.2 +00.0							
18	62 30.3 +01.0	N 02 24.5 -00.7	195 40.2 +02.4	N 15 10.5 +00.1	261 56.9 +02.6	S 11 34.2 +00.1							
19	77 31.3 +01.0	N 02 23.8 -00.6	210 42.6 +02.3	N 15 10.6 +00.0	276 59.5 +02.7	S 11 34.3 +00.1							
20	92 32.3 +01.0	N 02 23.2 -00.7	225 44.9 +02.4	N 15 10.6 +00.0	292 02.2 +02.6	S 11 34.4 +00.1							
21	107 33.3 +01.0	N 02 22.5 -00.6	240 47.3 +02.3	N 15 10.6 +00.0	307 04.8 +02.6	S 11 34.5 +00.0							
22	122 34.3 +01.1	N 02 21.9 -00.7	255 49.6 +02.3	N 15 10.6 +00.1	322 07.4 +02.7	S 11 34.5 +00.1							
23	137 35.4 +01.0	N 02 21.2 -00.7	270 51.9 +02.4	N 15 10.7 +00.0	337 10.1 +02.6	S 11 34.6 +00.1							
	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 184° 184° 184° 184° 184° 184° Greenwich Culmination Time: 13:50	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 04:59	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 023° 023° 023° 023° 023° 023° Greenwich Culmination Time: 00:35										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 09.8 +00.1	N 12 16.1 -00.9	192 58.7 +03.7	N 08 17.4 +00.4	132 05.4 -24.8	S 06 24.6 +14.1	00						
01	194 09.9 +00.2	N 12 15.2 -00.8	208 02.4 +03.7	N 08 17.8 +00.4	146 40.6 -24.8	S 06 38.7 +13.9	01						
02	209 10.1 +00.1	N 12 14.4 -00.8	223 06.1 +03.7	N 08 18.2 +00.3	161 15.8 -24.8	S 06 52.6 +14.0	02						
03	224 10.2 +00.2	N 12 13.6 -00.9	238 09.8 +03.7	N 08 18.5 +00.4	175 51.0 -24.9	S 07 06.6 +14.0	03						
04	239 10.4 +00.1	N 12 12.7 -00.8	253 13.5 +03.7	N 08 18.9 +00.4	190 26.1 -25.0	S 07 20.6 +13.9	04						
05	254 10.5 +00.2	N 12 11.9 -00.8	268 17.2 +03.6	N 08 19.3 +00.4	205 01.1 -24.9	S 07 34.5 +13.9	05						
06	269 10.7 +00.1	N 12 11.1 -00.8	283 20.8 +03.7	N 08 19.7 +00.3	219 36.2 -25.1	S 07 48.4 +13.9	06						
07	284 10.8 +00.2	N 12 10.3 -00.9	298 24.5 +03.7	N 08 20.0 +00.4	234 11.1 -25.1	S 08 02.3 +13.9	07						
08	299 11.0 +00.1	N 12 09.4 -00.8	313 28.2 +03.7	N 08 20.4 +00.4	248 46.0 -25.1	S 08 16.2 +13.9	08						
09	314 11.1 +00.2	N 12 08.6 -00.8	328 31.9 +03.7	N 08 20.8 +00.4	263 20.9 -25.2	S 08 30.1 +13.8	09						
10	329 11.3 +00.1	N 12 07.8 -00.9	343 35.6 +03.6	N 08 21.2 +00.3	277 55.7 -25.2	S 08 43.9 +13.8	10						
11	344 11.4 +00.2	N 12 06.9 -00.8	358 39.2 +03.7	N 08 21.5 +00.4	292 30.5 -25.3	S 08 57.7 +13.8	11						
12	359 11.6 +00.2	N 12 06.1 -00.8	13 42.9 +03.7	N 08 21.9 +00.4	307 05.2 -25.3	S 09 11.5 +13.8	12						
13	14 11.8 +00.1	N 12 05.3 -00.9	28 46.6 +03.6	N 08 22.3 +00.4	321 39.9 -25.5	S 09 25.3 +13.7	13						
14	29 11.9 +00.2	N 12 04.4 -00.8	43 50.2 +03.7	N 08 22.7 +00.4	336 14.4 -25.4	S 09 39.0 +13.7	14						
15	44 12.1 +00.1	N 12 03.6 -00.8	58 53.9 +03.7	N 08 23.1 +00.3	350 49.0 -25.5	S 09 52.7 +13.7	15						
16	59 12.2 +00.2	N 12 02.8 -00.9	73 57.6 +03.6	N 08 23.4 +00.4	5 23.5 -25.6	S 10 06.4 +13.7	16						
17	74 12.4 +00.1	N 12 01.9 -00.8	89 01.2 +03.7	N 08 23.8 +00.4	19 57.9 -25.7	S 10 20.1 +13.6	17						
18	89 12.5 +00.2	N 12 01.1 -00.8	104 04.9 +03.6	N 08 24.2 +00.4	34 32.2 -25.7	S 10 33.7 +13.6	18						
19	104 12.7 +00.1	N 12 00.3 -00.9	119 08.5 +03.6	N 08 24.6 +00.3	49 06.5 -25.7	S 10 47.3 +13.5	19						
20	119 12.8 +00.2	N 11 59.4 -00.8	134 12.1 +03.7	N 08 24.9 +00.4	63 40.8 -25.9	S 11 00.8 +13.5	20						
21	134 13.0 +00.1	N 11 58.6 -00.8	149 15.8 +03.6	N 08 25.3 +00.4	78 14.9 -25.9	S 11 14.3 +13.5	21						
22	149 13.1 +00.2	N 11 57.8 -00.9	164 19.4 +03.7	N 08 25.7 +00.4	92 49.0 -26.0	S 11 27.8 +13.5	22						
23	164 13.3 +00.2	N 11 56.9 -00.8	179 23.1 +03.6	N 08 26.1 +00.4	107 23.0 -26.0	S 11 41.3 +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	00'5 00'5 00'5 00'5 00'5 00'5		SD	15'0 15'0 15'0 15'0 15'1 15'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'5 00'5 00'5 00'5 00'5 00'5		HP	54'9 55'0 55'1 55'2 55'3 55'4						
SHA	210° 210° 210° 210° 209° 209°		SHA	224° 224° 224° 224° 224° 224°		SHA	162° 160° 158° 157° 155° 153°						
Greenwich Culmination Time: 12:03				Greenwich Culmination Time: 11:05				Greenwich Culmination Time: 15:37					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	152 36.4 +01.0	N 02 20.5 -00.6	285 54.3 +02.3	N 15 10.7 +00.0	352 12.7 +02.7	S 11 34.7 +00.1	00						
01	167 37.4 +01.0	N 02 19.9 -00.7	300 56.6 +02.4	N 15 10.7 +00.0	7 15.4 +02.6	S 11 34.8 +00.0	01						
02	182 38.4 +01.0	N 02 19.2 -00.6	315 59.0 +02.3	N 15 10.7 +00.1	22 18.0 +02.7	S 11 34.8 +00.1	02						
03	197 39.4 +01.0	N 02 18.6 -00.7	331 01.3 +02.4	N 15 10.8 +00.0	37 20.7 +02.6	S 11 34.9 +00.1	03						
04	212 40.4 +01.0	N 02 17.9 -00.6	346 03.7 +02.3	N 15 10.8 +00.0	52 23.3 +02.6	S 11 35.0 +00.0	04						
05	227 41.4 +01.0	N 02 17.3 -00.7	1 06.0 +02.4	N 15 10.8 +00.0	67 25.9 +02.7	S 11 35.0 +00.1	05						
06	242 42.4 +01.1	N 02 16.6 -00.6	16 08.4 +02.3	N 15 10.8 +00.1	82 28.6 +02.6	S 11 35.1 +00.1	06						
07	257 43.5 +01.0	N 02 16.0 -00.7	31 10.7 +02.3	N 15 10.9 +00.0	97 31.2 +02.7	S 11 35.2 +00.1	07						
08	272 44.5 +01.0	N 02 15.3 -00.6	46 13.0 +02.4	N 15 10.9 +00.0	112 33.9 +02.6	S 11 35.3 +00.0	08						
09	287 45.5 +01.0	N 02 14.7 -00.7	61 15.4 +02.3	N 15 10.9 +00.1	127 36.5 +02.6	S 11 35.3 +00.1	09						
10	302 46.5 +01.0	N 02 14.0 -00.6	76 17.7 +02.4	N 15 11.0 +00.0	142 39.1 +02.7	S 11 35.4 +00.1	10						
11	317 47.5 +01.0	N 02 13.4 -00.7	91 20.1 +02.3	N 15 11.0 +00.0	157 41.8 +02.6	S 11 35.5 +00.0	11						
12	332 48.5 +01.0	N 02 12.7 -00.6	106 22.4 +02.4	N 15 11.0 +00.0	172 44.4 +02.7	S 11 35.5 +00.1	12						
13	347 49.5 +01.0	N 02 12.1 -00.7	121 24.8 +02.3	N 15 11.0 +00.1	187 47.1 +02.6	S 11 35.6 +00.1	13						
14	2 50.5 +01.1	N 02 11.4 -00.6	136 27.1 +02.4	N 15 11.1 +00.0	202 49.7 +02.6	S 11 35.7 +00.1	14						
15	17 51.6 +01.0	N 02 10.8 -00.7	151 29.5 +02.3	N 15 11.1 +00.0	217 52.3 +02.7	S 11 35.8 +00.0	15						
16	32 52.6 +01.0	N 02 10.1 -00.6	166 31.8 +02.4	N 15 11.1 +00.0	232 55.0 +02.6	S 11 35.8 +00.1	16						
17	47 53.6 +01.0	N 02 09.5 -00.7	181 34.2 +02.3	N 15 11.1 +00.1	247 57.6 +02.7	S 11 35.9 +00.1	17						
18	62 54.6 +01.0	N 02 08.8 -00.7	196 36.5 +02.4	N 15 11.2 +00.0	263 00.3 +02.6	S 11 36.0 +00.0	18						
19	77 55.6 +01.0	N 02 08.1 -00.6	211 38.9 +02.3	N 15 11.2 +00.0	278 02.9 +02.6	S 11 36.0 +00.1	19						
20	92 56.6 +01.0	N 02 07.5 -00.7	226 41.2 +02.4	N 15 11.2 +00.0	293 05.5 +02.7	S 11 36.1 +00.1	20						
21	107 57.6 +01.0	N 02 06.8 -00.6	241 43.6 +02.3	N 15 11.2 +00.1	308 08.2 +02.6	S 11 36.2 +00.1	21						
22	122 58.6 +01.1	N 02 06.2 -00.7	256 45.9 +02.4	N 15 11.3 +00.0	323 10.8 +02.7	S 11 36.3 +00.0	22						
23	137 59.7 +01.0	N 02 05.5 -00.6	271 48.3 +02.3	N 15 11.3 +00.0	338 13.5 +02.6	S 11 36.3 +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	183° 183° 183° 183° 183° 183°		SHA	317° 317° 317° 317° 317° 317°		SHA	023° 023° 023° 023° 023° 023°						
Greenwich Culmination Time: 13:48				Greenwich Culmination Time: 04:55				Greenwich Culmination Time: 00:31					

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 13.5 +00.1	N 11 56.1 -00.8	194 26.7 +03.6	N 08 26.5 +00.3	121 57.0 -26.1	S 11 54.7 +13.4	00						
01	194 13.6 +00.2	N 11 55.3 -00.9	209 30.3 +03.6	N 08 26.8 +00.4	136 30.9 -26.2	S 12 08.1 +13.3	01						
02	209 13.8 +00.1	N 11 54.4 -00.8	224 33.9 +03.7	N 08 27.2 +00.4	151 04.7 -26.2	S 12 21.4 +13.4	02						
03	224 13.9 +00.2	N 11 53.6 -00.9	239 37.6 +03.6	N 08 27.6 +00.4	165 38.5 -26.4	S 12 34.8 +13.2	03						
04	239 14.1 +00.1	N 11 52.7 -00.8	254 41.2 +03.6	N 08 28.0 +00.4	180 12.1 -26.4	S 12 48.0 +13.2	04						
05	254 14.2 +00.2	N 11 51.9 -00.8	269 44.8 +03.6	N 08 28.4 +00.4	194 45.7 -26.4	S 13 01.2 +13.2	05						
06	269 14.4 +00.2	N 11 51.1 -00.9	284 48.4 +03.6	N 08 28.8 +00.3	209 19.3 -26.6	S 13 14.4 +13.2	06						
07	284 14.6 +00.1	N 11 50.2 -00.8	299 52.0 +03.6	N 08 29.1 +00.4	223 52.7 -26.6	S 13 27.6 +13.1	07						
08	299 14.7 +00.2	N 11 49.4 -00.9	314 55.6 +03.6	N 08 29.5 +00.4	238 26.1 -26.7	S 13 40.7 +13.0	08						
09	314 14.9 +00.1	N 11 48.5 -00.8	329 59.2 +03.6	N 08 29.9 +00.4	252 59.4 -26.8	S 13 53.7 +13.0	09						
10	329 15.0 +00.2	N 11 47.7 -00.8	345 02.8 +03.6	N 08 30.3 +00.4	267 32.6 -26.9	S 14 06.7 +13.0	10						
11	344 15.2 +00.1	N 11 46.9 -00.9	0 06.4 +03.6	N 08 30.7 +00.4	282 05.7 -27.0	S 14 19.7 +12.9	11						
12	359 15.3 +00.2	N 11 46.0 -00.8	15 10.0 +03.6	N 08 31.1 +00.3	296 38.7 -27.0	S 14 32.6 +12.9	12						
13	14 15.5 +00.2	N 11 45.2 -00.9	30 13.6 +03.6	N 08 31.4 +00.4	311 11.7 -27.1	S 14 45.5 +12.8	13						
14	29 15.7 +00.1	N 11 44.3 -00.8	45 17.2 +03.6	N 08 31.8 +00.4	325 44.6 -27.2	S 14 58.3 +12.7	14						
15	44 15.8 +00.2	N 11 43.5 -00.8	60 20.8 +03.6	N 08 32.2 +00.4	340 17.4 -27.3	S 15 11.0 +12.7	15						
16	59 16.0 +00.1	N 11 42.7 -00.9	75 24.4 +03.5	N 08 32.6 +00.4	354 50.1 -27.4	S 15 23.7 +12.7	16						
17	74 16.1 +00.2	N 11 41.8 -00.8	90 27.9 +03.6	N 08 33.0 +00.4	9 22.7 -27.5	S 15 36.4 +12.6	17						
18	89 16.3 +00.2	N 11 41.0 -00.9	105 31.5 +03.6	N 08 33.4 +00.4	23 55.2 -27.6	S 15 49.0 +12.5	18						
19	104 16.5 +00.1	N 11 40.1 -00.8	120 35.1 +03.5	N 08 33.8 +00.3	38 27.6 -27.6	S 16 01.5 +12.5	19						
20	119 16.6 +00.2	N 11 39.3 -00.8	135 38.6 +03.6	N 08 34.1 +00.4	52 60.0 -27.8	S 16 14.0 +12.4	20						
21	134 16.8 +00.1	N 11 38.5 -00.9	150 42.2 +03.6	N 08 34.5 +00.4	67 32.2 -27.8	S 16 26.4 +12.4	21						
22	149 16.9 +00.2	N 11 37.6 -00.8	165 45.8 +03.5	N 08 34.9 +00.4	82 04.4 -28.0	S 16 38.8 +12.3	22						
23	164 17.1 +00.2	N 11 36.8 -00.9	180 49.3 +03.6	N 08 35.3 +00.4	96 36.4 -28.0	S 16 51.1 +12.2	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 00'5 00'5 00'5 00'5 00'5 00'5		SD 15'1 15'1 15'2 15'2 15'2 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 55'5 55'6 55'7 55'8 55'9 56'0								
	SHA 209° 209° 209° 209° 208° 208°		SHA 224° 225° 225° 225° 225° 225°		SHA 151° 149° 147° 145° 143° 141°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 10:59		Greenwich Culmination Time: 16:21								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	153 00.7 +01.0	N 02 04.9 -00.7	286 50.6 +02.4	N 15 11.3 +00.0	353 16.1 +02.7	S 11 36.4 +00.1	00						
01	168 01.7 +01.0	N 02 04.2 -00.6	301 53.0 +02.3	N 15 11.3 +00.0	8 18.8 +02.6	S 11 36.5 +00.1	01						
02	183 02.7 +01.0	N 02 03.6 -00.7	316 55.3 +02.4	N 15 11.3 +00.1	23 21.4 +02.6	S 11 36.6 +00.0	02						
03	198 03.7 +01.0	N 02 02.9 -00.6	331 57.7 +02.3	N 15 11.4 +00.0	38 24.0 +02.7	S 11 36.6 +00.1	03						
04	213 04.7 +01.0	N 02 02.3 -00.7	347 00.0 +02.4	N 15 11.4 +00.0	53 26.7 +02.6	S 11 36.7 +00.1	04						
05	228 05.7 +01.0	N 02 01.6 -00.6	2 02.4 +02.4	N 15 11.4 +00.0	68 29.3 +02.7	S 11 36.8 +00.0	05						
06	243 06.7 +01.0	N 02 01.0 -00.7	17 04.8 +02.3	N 15 11.4 +00.1	83 32.0 +02.6	S 11 36.8 +00.1	06						
07	258 07.7 +01.1	N 02 00.3 -00.6	32 07.1 +02.4	N 15 11.5 +00.0	98 34.6 +02.6	S 11 36.9 +00.1	07						
08	273 08.8 +01.0	N 01 59.7 -00.7	47 09.5 +02.3	N 15 11.5 +00.0	113 37.2 +02.7	S 11 37.0 +00.1	08						
09	288 09.8 +01.0	N 01 59.0 -00.7	62 11.8 +02.4	N 15 11.5 +00.0	128 39.9 +02.6	S 11 37.1 +00.0	09						
10	303 10.8 +01.0	N 01 58.3 -00.6	77 14.2 +02.3	N 15 11.5 +00.1	143 42.5 +02.7	S 11 37.1 +00.1	10						
11	318 11.8 +01.0	N 01 57.7 -00.7	92 16.5 +02.4	N 15 11.6 +00.0	158 45.2 +02.6	S 11 37.2 +00.1	11						
12	333 12.8 +01.0	N 01 57.0 -00.6	107 18.9 +02.3	N 15 11.6 +00.0	173 47.8 +02.7	S 11 37.3 +00.0	12						
13	348 13.8 +01.0	N 01 56.4 -00.7	122 21.2 +02.4	N 15 11.6 +00.0	188 50.5 +02.6	S 11 37.3 +00.1	13						
14	3 14.8 +01.0	N 01 55.7 -00.6	137 23.6 +02.3	N 15 11.6 +00.1	203 53.1 +02.6	S 11 37.4 +00.1	14						
15	18 15.8 +01.0	N 01 55.1 -00.7	152 25.9 +02.4	N 15 11.7 +00.0	218 55.7 +02.7	S 11 37.5 +00.1	15						
16	33 16.8 +01.0	N 01 54.4 -00.6	167 28.3 +02.4	N 15 11.7 +00.0	233 58.4 +02.6	S 11 37.6 +00.0	16						
17	48 17.8 +01.1	N 01 53.8 -00.7	182 30.7 +02.3	N 15 11.7 +00.0	249 01.0 +02.7	S 11 37.6 +00.1	17						
18	63 18.9 +01.0	N 01 53.1 -00.6	197 33.0 +02.4	N 15 11.7 +00.0	264 03.7 +02.6	S 11 37.7 +00.1	18						
19	78 19.9 +01.0	N 01 52.5 -00.7	212 35.4 +02.3	N 15 11.7 +00.1	279 06.3 +02.6	S 11 37.8 +00.1	19						
20	93 20.9 +01.0	N 01 51.8 -00.6	227 37.7 +02.4	N 15 11.8 +00.0	294 08.9 +02.7	S 11 37.9 +00.0	20						
21	108 21.9 +01.0	N 01 51.2 -00.7	242 40.1 +02.4	N 15 11.8 +00.0	309 11.6 +02.6	S 11 37.9 +00.1	21						
22	123 22.9 +01.0	N 01 50.5 -00.7	257 42.5 +02.3	N 15 11.8 +00.0	324 14.2 +02.7	S 11 38.0 +00.1	22						
23	138 23.9 +01.0	N 01 49.8 -00.6	272 44.8 +02.4	N 15 11.8 +00.1	339 16.9 +02.6	S 11 38.1 +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 183° 183° 183° 183° 183° 182°		SHA 317° 317° 317° 317° 317° 317°		SHA 023° 023° 023° 023° 023° 023°								
	Greenwich Culmination Time: 13:47		Greenwich Culmination Time: 04:51		Greenwich Culmination Time: 00:26								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 17.3 +00.1	N 11 35.9 -00.8	195 52.9 +03.5	N 08 35.7 +00.4	111 08.4 -28.1	S 17 03.3 +12.2	00						
01	194 17.4 +00.2	N 11 35.1 -00.9	210 56.4 +03.6	N 08 36.1 +00.4	125 40.3 -28.3	S 17 15.5 +12.1	01						
02	209 17.6 +00.2	N 11 34.2 -00.8	225 60.0 +03.5	N 08 36.5 +00.4	140 12.0 -28.3	S 17 27.6 +12.1	02						
03	224 17.8 +00.1	N 11 33.4 -00.9	241 03.5 +03.5	N 08 36.9 +00.3	154 43.7 -28.4	S 17 39.7 +11.9	03						
04	239 17.9 +00.2	N 11 32.5 -00.8	256 07.0 +03.6	N 08 37.2 +00.4	169 15.3 -28.6	S 17 51.6 +11.9	04						
05	254 18.1 +00.1	N 11 31.7 -00.8	271 10.6 +03.5	N 08 37.6 +00.4	183 46.7 -28.6	S 18 03.5 +11.9	05						
06	269 18.2 +00.2	N 11 30.9 -00.9	286 14.1 +03.5	N 08 38.0 +00.4	198 18.1 -28.7	S 18 15.4 +11.7	06						
07	284 18.4 +00.2	N 11 30.0 -00.8	301 17.6 +03.5	N 08 38.4 +00.4	212 49.4 -28.9	S 18 27.1 +11.7	07						
08	299 18.6 +00.1	N 11 29.2 -00.9	316 21.1 +03.6	N 08 38.8 +00.4	227 20.5 -28.9	S 18 38.8 +11.6	08						
09	314 18.7 +00.2	N 11 28.3 -00.8	331 24.7 +03.5	N 08 39.2 +00.4	241 51.6 -29.1	S 18 50.4 +11.6	09						
10	329 18.9 +00.2	N 11 27.5 -00.9	346 28.2 +03.5	N 08 39.6 +00.4	256 22.5 -29.2	S 19 02.0 +11.5	10						
11	344 19.1 +00.1	N 11 26.6 -00.8	1 31.7 +03.5	N 08 40.0 +00.4	270 53.3 -29.2	S 19 13.5 +11.3	11						
12	359 19.2 +00.2	N 11 25.8 -00.9	16 35.2 +03.5	N 08 40.4 +00.3	285 24.1 -29.4	S 19 24.8 +11.4	12						
13	14 19.4 +00.1	N 11 24.9 -00.8	31 38.7 +03.5	N 08 40.7 +00.4	299 54.7 -29.5	S 19 36.2 +11.2	13						
14	29 19.5 +00.2	N 11 24.1 -00.9	46 42.2 +03.5	N 08 41.1 +00.4	314 25.2 -29.6	S 19 47.4 +11.1	14						
15	44 19.7 +00.2	N 11 23.2 -00.8	61 45.7 +03.5	N 08 41.5 +00.4	328 55.6 -29.7	S 19 58.5 +11.1	15						
16	59 19.9 +00.1	N 11 22.4 -00.9	76 49.2 +03.5	N 08 41.9 +00.4	343 25.9 -29.8	S 20 09.6 +11.0	16						
17	74 20.0 +00.2	N 11 21.5 -00.8	91 52.7 +03.5	N 08 42.3 +00.4	357 56.1 -29.9	S 20 20.6 +10.8	17						
18	89 20.2 +00.2	N 11 20.7 -00.9	106 56.2 +03.5	N 08 42.7 +00.4	12 26.2 -30.1	S 20 31.4 +10.8	18						
19	104 20.4 +00.1	N 11 19.8 -00.8	121 59.7 +03.5	N 08 43.1 +00.4	26 56.1 -30.2	S 20 42.2 +10.8	19						
20	119 20.5 +00.2	N 11 19.0 -00.9	137 03.2 +03.4	N 08 43.5 +00.4	41 25.9 -30.2	S 20 53.0 +10.6	20						
21	134 20.7 +00.2	N 11 18.1 -00.8	152 06.6 +03.5	N 08 43.9 +00.4	55 55.7 -30.4	S 21 03.6 +10.5	21						
22	149 20.9 +00.1	N 11 17.3 -00.9	167 10.1 +03.5	N 08 44.3 +00.4	70 25.3 -30.5	S 21 14.1 +10.4	22						
23	164 21.0 +00.2	N 11 16.4 -00.8	182 13.6 +03.4	N 08 44.7 +00.4	84 54.8 -30.7	S 21 24.5 +10.4	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 00'5 00'5 00'5 00'5 00'5 00'5		SD 15'3 15'3 15'4 15'4 15'4 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 56'1 56'2 56'4 56'5 56'6 56'7								
	SHA 208° 208° 208° 208° 208° 207°		SHA 225° 225° 225° 225° 225° 225°		SHA 139° 137° 135° 133° 131° 128°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 10:53		Greenwich Culmination Time: 17:08								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	153 24.9 +01.0	N 01 49.2 -00.7	287 47.2 +02.3	N 15 11.9 +00.0	354 19.5 +02.7	S 11 38.1 +00.1	00						
01	168 25.9 +01.0	N 01 48.5 -00.6	302 49.5 +02.4	N 15 11.9 +00.0	9 22.2 +02.6	S 11 38.2 +00.1	01						
02	183 26.9 +01.1	N 01 47.9 -00.7	317 51.9 +02.4	N 15 11.9 +00.0	24 24.8 +02.6	S 11 38.3 +00.1	02						
03	198 28.0 +01.0	N 01 47.2 -00.6	332 54.3 +02.3	N 15 11.9 +00.0	39 27.4 +02.7	S 11 38.4 +00.0	03						
04	213 29.0 +01.0	N 01 46.6 -00.7	347 56.6 +02.4	N 15 11.9 +00.1	54 30.1 +02.6	S 11 38.4 +00.1	04						
05	228 30.0 +01.0	N 01 45.9 -00.6	2 59.0 +02.3	N 15 12.0 +00.0	69 32.7 +02.7	S 11 38.5 +00.1	05						
06	243 31.0 +01.0	N 01 45.3 -00.7	18 01.3 +02.4	N 15 12.0 +00.0	84 35.4 +02.6	S 11 38.6 +00.0	06						
07	258 32.0 +01.0	N 01 44.6 -00.6	33 03.7 +02.4	N 15 12.0 +00.0	99 38.0 +02.6	S 11 38.6 +00.1	07						
08	273 33.0 +01.0	N 01 44.0 -00.7	48 06.1 +02.3	N 15 12.0 +00.0	114 40.6 +02.7	S 11 38.7 +00.1	08						
09	288 34.0 +01.0	N 01 43.3 -00.7	63 08.4 +02.4	N 15 12.0 +00.1	129 43.3 +02.6	S 11 38.8 +00.1	09						
10	303 35.0 +01.0	N 01 42.6 -00.6	78 10.8 +02.3	N 15 12.1 +00.0	144 45.9 +02.7	S 11 38.9 +00.0	10						
11	318 36.0 +01.0	N 01 42.0 -00.7	93 13.1 +02.4	N 15 12.1 +00.0	159 48.6 +02.6	S 11 38.9 +00.1	11						
12	333 37.0 +01.1	N 01 41.3 -00.6	108 15.5 +02.4	N 15 12.1 +00.0	174 51.2 +02.7	S 11 39.0 +00.1	12						
13	348 38.1 +01.0	N 01 40.7 -00.7	123 17.9 +02.3	N 15 12.1 +00.1	189 53.9 +02.6	S 11 39.1 +00.1	13						
14	3 39.1 +01.0	N 01 40.0 -00.6	138 20.2 +02.4	N 15 12.2 +00.0	204 56.5 +02.6	S 11 39.2 +00.0	14						
15	18 40.1 +01.0	N 01 39.4 -00.7	153 22.6 +02.4	N 15 12.2 +00.0	219 59.1 +02.7	S 11 39.2 +00.1	15						
16	33 41.1 +01.0	N 01 38.7 -00.6	168 25.0 +02.3	N 15 12.2 +00.0	235 01.8 +02.6	S 11 39.3 +00.1	16						
17	48 42.1 +01.0	N 01 38.1 -00.7	183 27.3 +02.4	N 15 12.2 +00.0	250 04.4 +02.7	S 11 39.4 +00.0	17						
18	63 43.1 +01.0	N 01 37.4 -00.7	198 29.7 +02.4	N 15 12.2 +00.1	265 07.1 +02.6	S 11 39.4 +00.1	18						
19	78 44.1 +01.0	N 01 36.7 -00.6	213 32.1 +02.3	N 15 12.3 +00.0	280 09.7 +02.6	S 11 39.5 +00.1	19						
20	93 45.1 +01.0	N 01 36.1 -00.7	228 34.4 +02.4	N 15 12.3 +00.0	295 12.3 +02.7	S 11 39.6 +00.1	20						
21	108 46.1 +01.0	N 01 35.4 -00.6	243 36.8 +02.4	N 15 12.3 +00.0	310 15.0 +02.6	S 11 39.7 +00.0	21						
22	123 47.1 +01.0	N 01 34.8 -00.7	258 39.2 +02.3	N 15 12.3 +00.0	325 17.6 +02.7	S 11 39.7 +00.1	22						
23	138 48.1 +01.1	N 01 34.1 -00.6	273 41.5 +02.4	N 15 12.3 +00.1	340 20.3 +02.6	S 11 39.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	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 182° 182° 182° 182° 182° 182°		SHA 317° 317° 317° 317° 317° 317°		SHA 023° 023° 023° 023° 023° 023°								
	Greenwich Culmination Time: 13:45		Greenwich Culmination Time: 04:48		Greenwich Culmination Time: 00:22								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 21.2 +00.2	N 11 15.6 -00.9	197 17.0 +03.5	N 08 45.1 +00.3	99 24.1 -30.7	S 21 34.9 +10.2	00							
01	194 21.4 +00.1	N 11 14.7 -00.8	212 20.5 +03.5	N 08 45.4 +00.4	113 53.4 -30.9	S 21 45.1 +10.2	01							
02	209 21.5 +00.2	N 11 13.9 -00.9	227 24.0 +03.4	N 08 45.8 +00.4	128 22.5 -30.9	S 21 55.3 +10.0	02							
03	224 21.7 +00.2	N 11 13.0 -00.8	242 27.4 +03.5	N 08 46.2 +00.4	142 51.6 -31.1	S 22 05.3 +09.9	03							
04	239 21.9 +00.1	N 11 12.2 -00.9	257 30.9 +03.4	N 08 46.6 +00.4	157 20.5 -31.3	S 22 15.2 +09.9	04							
05	254 22.0 +00.2	N 11 11.3 -00.8	272 34.3 +03.5	N 08 47.0 +00.4	171 49.2 -31.3	S 22 25.1 +09.7	05							
06	269 22.2 +00.2	N 11 10.5 -00.9	287 37.8 +03.4	N 08 47.4 +00.4	186 17.9 -31.5	S 22 34.8 +09.6	06							
07	284 22.4 +00.1	N 11 09.6 -00.8	302 41.2 +03.4	N 08 47.8 +00.4	200 46.4 -31.5	S 22 44.4 +09.5	07							
08	299 22.5 +00.2	N 11 08.8 -00.9	317 44.6 +03.5	N 08 48.2 +00.4	215 14.9 -31.7	S 22 53.9 +09.4	08							
09	314 22.7 +00.2	N 11 07.9 -00.8	332 48.1 +03.4	N 08 48.6 +00.4	229 43.2 -31.8	S 23 03.3 +09.3	09							
10	329 22.9 +00.1	N 11 07.1 -00.9	347 51.5 +03.4	N 08 49.0 +00.4	244 11.4 -32.0	S 23 12.6 +09.2	10							
11	344 23.0 +00.2	N 11 06.2 -00.9	2 54.9 +03.5	N 08 49.4 +00.4	258 39.4 -32.1	S 23 21.8 +09.1	11							
12	359 23.2 +00.2	N 11 05.3 -00.8	17 58.4 +03.4	N 08 49.8 +00.4	273 07.3 -32.1	S 23 30.9 +08.9	12							
13	14 23.4 +00.1	N 11 04.5 -00.9	33 01.8 +03.4	N 08 50.2 +00.4	287 35.2 -32.4	S 23 39.8 +08.9	13							
14	29 23.5 +00.2	N 11 03.6 -00.8	48 05.2 +03.4	N 08 50.6 +00.4	302 02.8 -32.4	S 23 48.7 +08.7	14							
15	44 23.7 +00.2	N 11 02.8 -00.9	63 08.6 +03.4	N 08 51.0 +00.3	316 30.4 -32.5	S 23 57.4 +08.6	15							
16	59 23.9 +00.1	N 11 01.9 -00.8	78 12.0 +03.4	N 08 51.3 +00.4	330 57.9 -32.7	S 24 06.0 +08.5	16							
17	74 24.0 +00.2	N 11 01.1 -00.9	93 15.4 +03.4	N 08 51.7 +00.4	345 25.2 -32.8	S 24 14.5 +08.3	17							
18	89 24.2 +00.2	N 11 00.2 -00.9	108 18.8 +03.4	N 08 52.1 +00.4	359 52.4 -32.9	S 24 22.8 +08.2	18							
19	104 24.4 +00.1	N 10 59.3 -00.8	123 22.2 +03.4	N 08 52.5 +00.4	14 19.5 -33.1	S 24 31.0 +08.1	19							
20	119 24.5 +00.2	N 10 58.5 -00.9	138 25.6 +03.4	N 08 52.9 +00.4	28 46.4 -33.1	S 24 39.1 +08.0	20							
21	134 24.7 +00.2	N 10 57.6 -00.8	153 29.0 +03.4	N 08 53.3 +00.4	43 13.3 -33.3	S 24 47.1 +07.8	21							
22	149 24.9 +00.2	N 10 56.8 -00.9	168 32.4 +03.4	N 08 53.7 +00.4	57 40.0 -33.4	S 24 54.9 +07.7	22							
23	164 25.1 +00.1	N 10 55.9 -00.8	183 35.8 +03.3	N 08 54.1 +00.4	72 06.6 -33.6	S 25 02.6 +07.6	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 207° 207° 207° 207° 207° 206°	Greenwich Culmination Time: 12:02	UT 02 06 10 14 18 22	SD 00'5 00'5 00'5 00'5 00'5 00'5	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 225° 225° 225° 225° 226° 226°	Greenwich Culmination Time: 10:48	UT 02 06 10 14 18 22	SD 15'5 15'5 15'6 15'6 15'7 15'7	HP 56'9 57'0 57'2 57'3 57'4 57'6	SHA 126° 124° 122° 119° 117° 115°	Greenwich Culmination Time: 18:00

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	153 49.2 +01.0	N 01 33.5 -00.7	288 43.9 +02.4	N 15 12.4 +00.0	355 22.9 +02.7	S 11 39.9 +00.0	00							
01	168 50.2 +01.0	N 01 32.8 -00.6	303 46.3 +02.3	N 15 12.4 +00.0	10 25.6 +02.6	S 11 39.9 +00.1	01							
02	183 51.2 +01.0	N 01 32.2 -00.7	318 48.6 +02.4	N 15 12.4 +00.0	25 28.2 +02.6	S 11 40.0 +00.1	02							
03	198 52.2 +01.0	N 01 31.5 -00.7	333 51.0 +02.4	N 15 12.4 +00.0	40 30.8 +02.7	S 11 40.1 +00.1	03							
04	213 53.2 +01.0	N 01 30.8 -00.6	348 53.4 +02.3	N 15 12.4 +00.1	55 33.5 +02.6	S 11 40.2 +00.0	04							
05	228 54.2 +01.0	N 01 30.2 -00.7	3 55.7 +02.4	N 15 12.5 +00.0	70 36.1 +02.7	S 11 40.2 +00.1	05							
06	243 55.2 +01.0	N 01 29.5 -00.6	18 58.1 +02.4	N 15 12.5 +00.0	85 38.8 +02.6	S 11 40.3 +00.1	06							
07	258 56.2 +01.0	N 01 28.9 -00.7	34 00.5 +02.3	N 15 12.5 +00.0	100 41.4 +02.7	S 11 40.4 +00.0	07							
08	273 57.2 +01.0	N 01 28.2 -00.6	49 02.8 +02.4	N 15 12.5 +00.0	115 44.1 +02.6	S 11 40.4 +00.1	08							
09	288 58.2 +01.0	N 01 27.6 -00.7	64 05.2 +02.4	N 15 12.5 +00.0	130 46.7 +02.6	S 11 40.5 +00.1	09							
10	303 59.2 +01.0	N 01 26.9 -00.6	79 07.6 +02.4	N 15 12.5 +00.1	145 49.3 +02.7	S 11 40.6 +00.1	10							
11	319 00.2 +01.1	N 01 26.3 -00.7	94 10.0 +02.3	N 15 12.6 +00.0	160 52.0 +02.6	S 11 40.7 +00.0	11							
12	334 01.3 +01.0	N 01 25.6 -00.7	109 12.3 +02.4	N 15 12.6 +00.0	175 54.6 +02.7	S 11 40.7 +00.1	12							
13	349 02.3 +01.0	N 01 24.9 -00.6	124 14.7 +02.4	N 15 12.6 +00.0	190 57.3 +02.6	S 11 40.8 +00.1	13							
14	4 03.3 +01.0	N 01 24.3 -00.7	139 17.1 +02.3	N 15 12.6 +00.0	205 59.9 +02.7	S 11 40.9 +00.1	14							
15	19 04.3 +01.0	N 01 23.6 -00.6	154 19.4 +02.4	N 15 12.6 +00.1	221 02.6 +02.6	S 11 41.0 +00.0	15							
16	34 05.3 +01.0	N 01 23.0 -00.7	169 21.8 +02.4	N 15 12.7 +00.0	236 05.2 +02.6	S 11 41.0 +00.1	16							
17	49 06.3 +01.0	N 01 22.3 -00.6	184 24.2 +02.4	N 15 12.7 +00.0	251 07.8 +02.7	S 11 41.1 +00.1	17							
18	64 07.3 +01.0	N 01 21.7 -00.7	199 26.6 +02.3	N 15 12.7 +00.0	266 10.5 +02.6	S 11 41.2 +00.0	18							
19	79 08.3 +01.0	N 01 21.0 -00.6	214 28.9 +02.4	N 15 12.7 +00.0	281 13.1 +02.7	S 11 41.2 +00.1	19							
20	94 09.3 +01.0	N 01 20.4 -00.7	229 31.3 +02.4	N 15 12.7 +00.0	296 15.8 +02.6	S 11 41.3 +00.1	20							
21	109 10.3 +01.0	N 01 19.7 -00.7	244 33.7 +02.4	N 15 12.7 +00.1	311 18.4 +02.7	S 11 41.4 +00.1	21							
22	124 11.3 +01.0	N 01 19.0 -00.6	259 36.1 +02.3	N 15 12.8 +00.0	326 21.1 +02.6	S 11 41.5 +00.0	22							
23	139 12.3 +01.1	N 01 18.4 -00.7	274 38.4 +02.4	N 15 12.8 +00.0	341 23.7 +02.6	S 11 41.5 +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 182° 182° 182° 181° 181° 181°	Greenwich Culmination Time: 13:43	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 04:44	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 023° 023° 023° 023° 023° 023°	Greenwich Culmination Time: 00:18

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 25.2 +00.2	N 10 55.1 -00.9	198 39.1 +03.4	N 08 54.5 +00.4	86 33.0 -33.6	S 25 10.2 +07.4	00						
01	194 25.4 +00.2	N 10 54.2 -00.9	213 42.5 +03.4	N 08 54.9 +00.4	100 59.4 -33.8	S 25 17.6 +07.3	01						
02	209 25.6 +00.1	N 10 53.3 -00.8	228 45.9 +03.3	N 08 55.3 +00.4	115 25.6 -33.9	S 25 24.9 +07.2	02						
03	224 25.7 +00.2	N 10 52.5 -00.9	243 49.2 +03.4	N 08 55.7 +00.4	129 51.7 -34.0	S 25 32.1 +07.0	03						
04	239 25.9 +00.2	N 10 51.6 -00.8	258 52.6 +03.4	N 08 56.1 +00.4	144 17.7 -34.1	S 25 39.1 +06.8	04						
05	254 26.1 +00.2	N 10 50.8 -00.9	273 56.0 +03.3	N 08 56.5 +00.4	158 43.6 -34.3	S 25 45.9 +06.8	05						
06	269 26.3 +00.1	N 10 49.9 -00.9	288 59.3 +03.4	N 08 56.9 +00.4	173 09.3 -34.3	S 25 52.7 +06.6	06						
07	284 26.4 +00.2	N 10 49.0 -00.8	304 02.7 +03.3	N 08 57.3 +00.4	187 35.0 -34.5	S 25 59.3 +06.4	07						
08	299 26.6 +00.2	N 10 48.2 -00.9	319 06.0 +03.3	N 08 57.7 +00.4	202 00.5 -34.6	S 26 05.7 +06.3	08						
09	314 26.8 +00.1	N 10 47.3 -00.8	334 09.3 +03.4	N 08 58.1 +00.4	216 25.9 -34.7	S 26 12.0 +06.1	09						
10	329 26.9 +00.2	N 10 46.5 -00.9	349 12.7 +03.3	N 08 58.5 +00.4	230 51.2 -34.8	S 26 18.1 +06.0	10						
11	344 27.1 +00.2	N 10 45.6 -00.9	4 16.0 +03.4	N 08 58.9 +00.3	245 16.4 -35.0	S 26 24.1 +05.8	11						
12	359 27.3 +00.2	N 10 44.7 -00.8	19 19.4 +03.3	N 08 59.2 +00.4	259 41.4 -35.0	S 26 29.9 +05.7	12						
13	14 27.5 +00.1	N 10 43.9 -00.9	34 22.7 +03.3	N 08 59.6 +00.4	274 06.4 -35.2	S 26 35.6 +05.5	13						
14	29 27.6 +00.2	N 10 43.0 -00.9	49 26.0 +03.3	N 09 00.0 +00.4	288 31.2 -35.3	S 26 41.1 +05.4	14						
15	44 27.8 +00.2	N 10 42.1 -00.8	64 29.3 +03.3	N 09 00.4 +00.4	302 55.9 -35.4	S 26 46.5 +05.2	15						
16	59 28.0 +00.2	N 10 41.3 -00.9	79 32.6 +03.3	N 09 00.8 +00.4	317 20.5 -35.5	S 26 51.7 +05.0	16						
17	74 28.2 +00.1	N 10 40.4 -00.8	94 35.9 +03.4	N 09 01.2 +00.4	331 45.0 -35.6	S 26 56.7 +04.9	17						
18	89 28.3 +00.2	N 10 39.6 -00.9	109 39.3 +03.3	N 09 01.6 +00.4	346 09.4 -35.7	S 27 01.6 +04.7	18						
19	104 28.5 +00.2	N 10 38.7 -00.9	124 42.6 +03.3	N 09 02.0 +00.4	0 33.7 -35.8	S 27 06.3 +04.5	19						
20	119 28.7 +00.2	N 10 37.8 -00.8	139 45.9 +03.3	N 09 02.4 +00.4	14 57.9 -35.9	S 27 10.8 +04.4	20						
21	134 28.9 +00.1	N 10 37.0 -00.9	154 49.2 +03.2	N 09 02.8 +00.4	29 22.0 -36.0	S 27 15.2 +04.2	21						
22	149 29.0 +00.2	N 10 36.1 -00.9	169 52.4 +03.3	N 09 03.2 +00.4	43 46.0 -36.1	S 27 19.4 +04.0	22						
23	164 29.2 +00.2	N 10 35.2 -00.8	184 55.7 +03.3	N 09 03.6 +00.4	58 09.9 -36.2	S 27 23.4 +03.9	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 00'5 00'5 00'5 00'5 00'4 00'4	UT	02 06 10 14 18 22	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 00'5 00'5 00'5 00'5 00'5 00'5		HP 00'5 00'5 00'5 00'5 00'5 00'5	HP 57'7 57'9 58'0 58'2 58'3 58'5								
	SHA 206° 206° 206° 206° 206° 206°	SHA 226° 226° 226° 226° 226° 226°		SHA 112° 110° 107° 105° 102° 100°	Greenwich Culmination Time: 18:57								
	Greenwich Culmination Time: 12:02	Greenwich Culmination Time: 10:42											

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	154 13.4 +01.0	N 01 17.7 -00.6	289 40.8 +02.4	N 15 12.8 +00.0	356 26.3 +02.7	S 11 41.6 +00.1	00						
01	169 14.4 +01.0	N 01 17.1 -00.7	304 43.2 +02.4	N 15 12.8 +00.0	11 29.0 +02.6	S 11 41.7 +00.0	01						
02	184 15.4 +01.0	N 01 16.4 -00.6	319 45.6 +02.3	N 15 12.8 +00.0	26 31.6 +02.7	S 11 41.7 +00.1	02						
03	199 16.4 +01.0	N 01 15.8 -00.7	334 47.9 +02.4	N 15 12.8 +00.1	41 34.3 +02.6	S 11 41.8 +00.1	03						
04	214 17.4 +01.0	N 01 15.1 -00.6	349 50.3 +02.4	N 15 12.9 +00.0	56 36.9 +02.6	S 11 41.9 +00.1	04						
05	229 18.4 +01.0	N 01 14.5 -00.7	4 52.7 +02.4	N 15 12.9 +00.0	71 39.5 +02.7	S 11 42.0 +00.0	05						
06	244 19.4 +01.0	N 01 13.8 -00.7	19 55.1 +02.4	N 15 12.9 +00.0	86 42.2 +02.6	S 11 42.0 +00.1	06						
07	259 20.4 +01.0	N 01 13.1 -00.6	34 57.5 +02.3	N 15 12.9 +00.0	101 44.8 +02.7	S 11 42.1 +00.1	07						
08	274 21.4 +01.0	N 01 12.5 -00.7	49 59.8 +02.4	N 15 12.9 +00.0	116 47.5 +02.6	S 11 42.2 +00.0	08						
09	289 22.4 +01.0	N 01 11.8 -00.6	65 02.2 +02.4	N 15 12.9 +00.1	131 50.1 +02.7	S 11 42.2 +00.1	09						
10	304 23.4 +01.0	N 01 11.2 -00.7	80 04.6 +02.4	N 15 13.0 +00.0	146 52.8 +02.6	S 11 42.3 +00.1	10						
11	319 24.4 +01.0	N 01 10.5 -00.6	95 07.0 +02.3	N 15 13.0 +00.0	161 55.4 +02.6	S 11 42.4 +00.1	11						
12	334 25.4 +01.0	N 01 09.9 -00.7	110 09.3 +02.4	N 15 13.0 +00.0	176 58.0 +02.7	S 11 42.5 +00.0	12						
13	349 26.4 +01.1	N 01 09.2 -00.7	125 11.7 +02.4	N 15 13.0 +00.0	192 00.7 +02.6	S 11 42.5 +00.1	13						
14	4 27.5 +01.0	N 01 08.5 -00.6	140 14.1 +02.4	N 15 13.0 +00.0	207 03.3 +02.7	S 11 42.6 +00.1	14						
15	19 28.5 +01.0	N 01 07.9 -00.7	155 16.5 +02.4	N 15 13.0 +00.1	222 06.0 +02.6	S 11 42.7 +00.1	15						
16	34 29.5 +01.0	N 01 07.2 -00.6	170 18.9 +02.3	N 15 13.1 +00.0	237 08.6 +02.7	S 11 42.8 +00.0	16						
17	49 30.5 +01.0	N 01 06.6 -00.7	185 21.2 +02.4	N 15 13.1 +00.0	252 11.3 +02.6	S 11 42.8 +00.1	17						
18	64 31.5 +01.0	N 01 05.9 -00.6	200 23.6 +02.4	N 15 13.1 +00.0	267 13.9 +02.6	S 11 42.9 +00.1	18						
19	79 32.5 +01.0	N 01 05.3 -00.7	215 26.0 +02.4	N 15 13.1 +00.0	282 16.5 +02.7	S 11 43.0 +00.0	19						
20	94 33.5 +01.0	N 01 04.6 -00.7	230 28.4 +02.4	N 15 13.1 +00.0	297 19.2 +02.6	S 11 43.0 +00.1	20						
21	109 34.5 +01.0	N 01 03.9 -00.6	245 30.8 +02.4	N 15 13.1 +00.1	312 21.8 +02.7	S 11 43.1 +00.1	21						
22	124 35.5 +01.0	N 01 03.3 -00.7	260 33.2 +02.3	N 15 13.2 +00.0	327 24.5 +02.6	S 11 43.2 +00.1	22						
23	139 36.5 +01.0	N 01 02.6 -00.6	275 35.5 +02.4	N 15 13.2 +00.0	342 27.1 +02.7	S 11 43.3 +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 00'4 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 181° 181° 181° 181° 181° 181°	SHA 317° 317° 317° 317° 317° 317°		SHA 023° 023° 023° 023° 023° 024°	Greenwich Culmination Time: 00:14								
	Greenwich Culmination Time: 13:42	Greenwich Culmination Time: 04:40											

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	179 29.4 +00.1	N 10 34.4 -00.9	199 59.0 +03.3	N 09 04.0 +00.4	72 33.7 -36.3	S 27 27.3 +03.7	00								
01	194 29.5 +00.2	N 10 33.5 -00.9	215 02.3 +03.3	N 09 04.4 +00.4	86 57.4 -36.4	S 27 31.0 +03.5	01								
02	209 29.7 +00.2	N 10 32.6 -00.8	230 05.6 +03.2	N 09 04.8 +00.4	101 21.0 -36.5	S 27 34.5 +03.3	02								
03	224 29.9 +00.2	N 10 31.8 -00.9	245 08.8 +03.3	N 09 05.2 +00.4	115 44.5 -36.6	S 27 37.8 +03.2	03								
04	239 30.1 +00.2	N 10 30.9 -00.9	260 12.1 +03.3	N 09 05.6 +00.4	130 07.9 -36.7	S 27 41.0 +03.0	04								
05	254 30.3 +00.1	N 10 30.0 -00.8	275 15.4 +03.2	N 09 06.0 +00.4	144 31.2 -36.8	S 27 44.0 +02.8	05								
06	269 30.4 +00.2	N 10 29.2 -00.9	290 18.6 +03.3	N 09 06.4 +00.3	158 54.4 -36.8	S 27 46.8 +02.6	06								
07	284 30.6 +00.2	N 10 28.3 -00.9	305 21.9 +03.2	N 09 06.7 +00.4	173 17.6 -37.0	S 27 49.4 +02.4	07								
08	299 30.8 +00.2	N 10 27.4 -00.8	320 25.1 +03.3	N 09 07.1 +00.4	187 40.6 -37.0	S 27 51.8 +02.3	08								
09	314 31.0 +00.1	N 10 26.6 -00.9	335 28.4 +03.2	N 09 07.5 +00.4	202 03.6 -37.1	S 27 54.1 +02.0	09								
10	329 31.1 +00.2	N 10 25.7 -00.9	350 31.6 +03.3	N 09 07.9 +00.4	216 26.5 -37.1	S 27 56.1 +01.9	10								
11	344 31.3 +00.2	N 10 24.8 -00.8	5 34.9 +03.2	N 09 08.3 +00.4	230 49.4 -37.3	S 27 58.0 +01.7	11								
12	359 31.5 +00.2	N 10 24.0 -00.9	20 38.1 +03.3	N 09 08.7 +00.4	245 12.1 -37.3	S 27 59.7 +01.5	12								
13	14 31.7 +00.1	N 10 23.1 -00.9	35 41.4 +03.2	N 09 09.1 +00.4	259 34.8 -37.4	S 28 01.2 +01.3	13								
14	29 31.8 +00.2	N 10 22.2 -00.9	50 44.6 +03.2	N 09 09.5 +00.4	273 57.4 -37.4	S 28 02.5 +01.2	14								
15	44 32.0 +00.2	N 10 21.3 -00.8	65 47.8 +03.2	N 09 09.9 +00.4	288 20.0 -37.6	S 28 03.7 +00.9	15								
16	59 32.2 +00.2	N 10 20.5 -00.9	80 51.0 +03.2	N 09 10.3 +00.4	302 42.4 -37.6	S 28 04.6 +00.7	16								
17	74 32.4 +00.2	N 10 19.6 -00.9	95 54.2 +03.3	N 09 10.7 +00.4	317 04.8 -37.6	S 28 05.3 +00.6	17								
18	89 32.6 +00.1	N 10 18.7 -00.8	110 57.5 +03.2	N 09 11.1 +00.4	331 27.2 -37.7	S 28 05.9 +00.3	18								
19	104 32.7 +00.2	N 10 17.9 -00.9	126 00.7 +03.2	N 09 11.5 +00.4	345 49.5 -37.8	S 28 06.2 +00.2	19								
20	119 32.9 +00.2	N 10 17.0 -00.9	141 03.9 +03.2	N 09 11.9 +00.4	0 11.7 -37.8	S 28 06.4 +00.0	20								
21	134 33.1 +00.2	N 10 16.1 -00.8	156 07.1 +03.2	N 09 12.3 +00.4	14 33.9 -37.8	S 28 06.4 -00.3	21								
22	149 33.3 +00.1	N 10 15.3 -00.9	171 10.3 +03.2	N 09 12.7 +00.4	28 56.1 -38.0	S 28 06.1 -00.4	22								
23	164 33.4 +00.2	N 10 14.4 -00.9	186 13.5 +03.1	N 09 13.1 +00.3	43 18.1 -37.9	S 28 05.7 -00.6	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° 205° 205° 205° 205° 205°	Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'5 00'5 00'5 00'5 00'5 00'5	SHA 226° 226° 226° 226° 226° 226°	Greenwich Culmination Time: 10:37	UT 02 06 10 14 18 22	SD 16'0 16'0 16'1 16'1 16'1 16'2	HP 58'6 58'8 58'9 59'1 59'2 59'4	SHA 097° 095° 092° 089° 087° 084°	Greenwich Culmination Time: 19:59
UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	154 37.5 +01.0	N 01 02.0 -00.7	290 37.9 +02.4	N 15 13.2 +00.0	357 29.8 +02.6	S 11 43.3 +00.1	00								
01	169 38.5 +01.0	N 01 01.3 -00.6	305 40.3 +02.4	N 15 13.2 +00.0	12 32.4 +02.6	S 11 43.4 +00.1	01								
02	184 39.5 +01.0	N 01 00.7 -00.7	320 42.7 +02.4	N 15 13.2 +00.0	27 35.0 +02.7	S 11 43.5 +00.0	02								
03	199 40.5 +01.0	N 01 00.0 -00.7	335 45.1 +02.4	N 15 13.2 +00.0	42 37.7 +02.6	S 11 43.5 +00.1	03								
04	214 41.5 +01.1	N 00 59.3 -00.6	350 47.5 +02.3	N 15 13.2 +00.1	57 40.3 +02.7	S 11 43.6 +00.1	04								
05	229 42.6 +01.0	N 00 58.7 -00.7	5 49.8 +02.4	N 15 13.3 +00.0	72 43.0 +02.6	S 11 43.7 +00.1	05								
06	244 43.6 +01.0	N 00 58.0 -00.6	20 52.2 +02.4	N 15 13.3 +00.0	87 45.6 +02.7	S 11 43.8 +00.0	06								
07	259 44.6 +01.0	N 00 57.4 -00.7	35 54.6 +02.4	N 15 13.3 +00.0	102 48.3 +02.6	S 11 43.8 +00.1	07								
08	274 45.6 +01.0	N 00 56.7 -00.6	50 57.0 +02.4	N 15 13.3 +00.0	117 50.9 +02.6	S 11 43.9 +00.1	08								
09	289 46.6 +01.0	N 00 56.1 -00.7	65 59.4 +02.4	N 15 13.3 +00.0	132 53.5 +02.7	S 11 44.0 +00.0	09								
10	304 47.6 +01.0	N 00 55.4 -00.7	81 01.8 +02.4	N 15 13.3 +00.0	147 56.2 +02.6	S 11 44.0 +00.1	10								
11	319 48.6 +01.0	N 00 54.7 -00.6	96 04.2 +02.4	N 15 13.3 +00.1	162 58.8 +02.7	S 11 44.1 +00.1	11								
12	334 49.6 +01.0	N 00 54.1 -00.7	111 06.6 +02.3	N 15 13.4 +00.0	178 01.5 +02.6	S 11 44.2 +00.1	12								
13	349 50.6 +01.0	N 00 53.4 -00.6	126 08.9 +02.4	N 15 13.4 +00.0	193 04.1 +02.7	S 11 44.3 +00.0	13								
14	4 51.6 +01.0	N 00 52.8 -00.7	141 11.3 +02.4	N 15 13.4 +00.0	208 06.8 +02.6	S 11 44.3 +00.1	14								
15	19 52.6 +01.0	N 00 52.1 -00.6	156 13.7 +02.4	N 15 13.4 +00.0	223 09.4 +02.6	S 11 44.4 +00.1	15								
16	34 53.6 +01.0	N 00 51.5 -00.7	171 16.1 +02.4	N 15 13.4 +00.0	238 12.0 +02.7	S 11 44.5 +00.0	16								
17	49 54.6 +01.0	N 00 50.8 -00.7	186 18.5 +02.4	N 15 13.4 +00.0	253 14.7 +02.6	S 11 44.5 +00.1	17								
18	64 55.6 +01.0	N 00 50.1 -00.6	201 20.9 +02.4	N 15 13.4 +00.1	268 17.3 +02.7	S 11 44.6 +00.1	18								
19	79 56.6 +01.0	N 00 49.5 -00.7	216 23.3 +02.4	N 15 13.5 +00.0	283 20.0 +02.6	S 11 44.7 +00.1	19								
20	94 57.6 +01.0	N 00 48.8 -00.6	231 25.7 +02.4	N 15 13.5 +00.0	298 22.6 +02.7	S 11 44.8 +00.0	20								
21	109 58.6 +01.0	N 00 48.2 -00.7	246 28.1 +02.3	N 15 13.5 +00.0	313 25.3 +02.6	S 11 44.8 +00.1	21								
22	124 59.6 +01.1	N 00 47.5 -00.6	261 30.4 +02.4	N 15 13.5 +00.0	328 27.9 +02.6	S 11 44.9 +00.1	22								
23	140 00.7 +01.0	N 00 46.9 -00.7	276 32.8 +02.4	N 15 13.5 +00.0	343 30.5 +02.7	S 11 45.0 +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 181° 180° 180° 180° 180° 180°	Greenwich Culmination Time: 13:40	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 04:36	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 024° 024° 024° 024° 024° 024°	Greenwich Culmination Time: 00:09

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 33.6 +00.2	N 10 13.5 -00.9	201 16.6 +03.2	N 09 13.4 +00.4	57 40.2 -38.0	S 28 05.1 -00.9	00						
01	194 33.8 +00.2	N 10 12.6 -00.8	216 19.8 +03.2	N 09 13.8 +00.4	72 02.2 -38.1	S 28 04.2 -01.0	01						
02	209 34.0 +00.2	N 10 11.8 -00.9	231 23.0 +03.2	N 09 14.2 +00.4	86 24.1 -38.0	S 28 03.2 -01.2	02						
03	224 34.2 +00.1	N 10 10.9 -00.9	246 26.2 +03.2	N 09 14.6 +00.4	100 46.1 -38.1	S 28 02.0 -01.5	03						
04	239 34.3 +00.2	N 10 10.0 -00.9	261 29.4 +03.1	N 09 15.0 +00.4	115 08.0 -38.2	S 28 00.5 -01.6	04						
05	254 34.5 +00.2	N 10 09.1 -00.8	276 32.5 +03.2	N 09 15.4 +00.4	129 29.8 -38.2	S 27 58.9 -01.8	05						
06	269 34.7 +00.2	N 10 08.3 -00.9	291 35.7 +03.1	N 09 15.8 +00.4	143 51.6 -38.2	S 27 57.1 -02.1	06						
07	284 34.9 +00.2	N 10 07.4 -00.9	306 38.8 +03.2	N 09 16.2 +00.4	158 13.4 -38.2	S 27 55.0 -02.2	07						
08	299 35.1 +00.1	N 10 06.5 -00.9	321 42.0 +03.1	N 09 16.6 +00.4	172 35.2 -38.2	S 27 52.8 -02.4	08						
09	314 35.2 +00.2	N 10 05.6 -00.8	336 45.1 +03.2	N 09 17.0 +00.4	186 57.0 -38.3	S 27 50.4 -02.7	09						
10	329 35.4 +00.2	N 10 04.8 -00.9	351 48.3 +03.1	N 09 17.4 +00.4	201 18.7 -38.3	S 27 47.7 -02.8	10						
11	344 35.6 +00.2	N 10 03.9 -00.9	6 51.4 +03.2	N 09 17.8 +00.4	215 40.4 -38.3	S 27 44.9 -03.1	11						
12	359 35.8 +00.2	N 10 03.0 -00.9	21 54.6 +03.1	N 09 18.2 +00.3	230 02.1 -38.3	S 27 41.8 -03.2	12						
13	14 36.0 +00.1	N 10 02.1 -00.8	36 57.7 +03.1	N 09 18.5 +00.4	244 23.8 -38.3	S 27 38.6 -03.5	13						
14	29 36.1 +00.2	N 10 01.3 -00.9	52 00.8 +03.2	N 09 18.9 +00.4	258 45.5 -38.3	S 27 35.1 -03.6	14						
15	44 36.3 +00.2	N 10 00.4 -00.9	67 04.0 +03.1	N 09 19.3 +00.4	273 07.2 -38.3	S 27 31.5 -03.9	15						
16	59 36.5 +00.2	N 09 59.5 -00.9	82 07.1 +03.1	N 09 19.7 +00.4	287 28.9 -38.3	S 27 27.6 -04.0	16						
17	74 36.7 +00.2	N 09 58.6 -00.8	97 10.2 +03.1	N 09 20.1 +00.4	301 50.6 -38.3	S 27 23.6 -04.3	17						
18	89 36.9 +00.2	N 09 57.8 -00.9	112 13.3 +03.1	N 09 20.5 +00.4	316 12.3 -38.3	S 27 19.3 -04.4	18						
19	104 37.1 +00.1	N 09 56.9 -00.9	127 16.4 +03.1	N 09 20.9 +00.4	330 34.0 -38.3	S 27 14.9 -04.7	19						
20	119 37.2 +00.2	N 09 56.0 -00.9	142 19.5 +03.1	N 09 21.3 +00.4	344 55.7 -38.3	S 27 10.2 -04.9	20						
21	134 37.4 +00.2	N 09 55.1 -00.9	157 22.6 +03.1	N 09 21.7 +00.4	359 17.4 -38.3	S 27 05.3 -05.1	21						
22	149 37.6 +00.2	N 09 54.2 -00.8	172 25.7 +03.1	N 09 22.1 +00.3	13 39.1 -38.2	S 27 00.2 -05.2	22						
23	164 37.8 +00.2	N 09 53.4 -00.9	187 28.8 +03.1	N 09 22.4 +00.4	28 00.9 -38.3	S 26 55.0 -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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'4 00'4 00'4 00'4 00'4 00'4		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 00'5 00'5 00'5 00'5 00'5 00'5		HP 59'5 59'7 59'8 60'0 60'1 60'2								
	SHA 205° 204° 204° 204° 204° 204°		SHA 226° 226° 226° 226° 227° 227°		SHA 081° 079° 076° 073° 070° 068°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 10:32		Greenwich Culmination Time: 21:02								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	155 01.7 +01.0	N 00 46.2 -00.7	291 35.2 +02.4	N 15 13.5 +00.0	358 33.2 +02.6	S 11 45.1 +00.0	00						
01	170 02.7 +01.0	N 00 45.5 -00.6	306 37.6 +02.4	N 15 13.5 +00.0	13 35.8 +02.7	S 11 45.1 +00.1	01						
02	185 03.7 +01.0	N 00 44.9 -00.7	321 40.0 +02.4	N 15 13.5 +00.1	28 38.5 +02.6	S 11 45.2 +00.1	02						
03	200 04.7 +01.0	N 00 44.2 -00.6	336 42.4 +02.4	N 15 13.6 +00.0	43 41.1 +02.7	S 11 45.3 +00.0	03						
04	215 05.7 +01.0	N 00 43.6 -00.7	351 44.8 +02.4	N 15 13.6 +00.0	58 43.8 +02.6	S 11 45.3 +00.1	04						
05	230 06.7 +01.0	N 00 42.9 -00.6	6 47.2 +02.4	N 15 13.6 +00.0	73 46.4 +02.6	S 11 45.4 +00.1	05						
06	245 07.7 +01.0	N 00 42.3 -00.7	21 49.6 +02.4	N 15 13.6 +00.0	88 49.0 +02.7	S 11 45.5 +00.1	06						
07	260 08.7 +01.0	N 00 41.6 -00.7	36 52.0 +02.4	N 15 13.6 +00.0	103 51.7 +02.6	S 11 45.6 +00.0	07						
08	275 09.7 +01.0	N 00 40.9 -00.6	51 54.4 +02.4	N 15 13.6 +00.0	118 54.3 +02.7	S 11 45.6 +00.1	08						
09	290 10.7 +01.0	N 00 40.3 -00.7	66 56.8 +02.4	N 15 13.6 +00.0	133 57.0 +02.6	S 11 45.7 +00.1	09						
10	305 11.7 +01.0	N 00 39.6 -00.6	81 59.2 +02.4	N 15 13.6 +00.0	148 59.6 +02.7	S 11 45.8 +00.0	10						
11	320 12.7 +01.0	N 00 39.0 -00.7	97 01.6 +02.3	N 15 13.6 +00.1	164 02.3 +02.6	S 11 45.8 +00.1	11						
12	335 13.7 +01.0	N 00 38.3 -00.7	112 03.9 +02.4	N 15 13.7 +00.0	179 04.9 +02.6	S 11 45.9 +00.1	12						
13	350 14.7 +01.0	N 00 37.6 -00.6	127 06.3 +02.4	N 15 13.7 +00.0	194 07.5 +02.7	S 11 46.0 +00.1	13						
14	5 15.7 +01.0	N 00 37.0 -00.7	142 08.7 +02.4	N 15 13.7 +00.0	209 10.2 +02.6	S 11 46.1 +00.0	14						
15	20 16.7 +01.0	N 00 36.3 -00.6	157 11.1 +02.4	N 15 13.7 +00.0	224 12.8 +02.7	S 11 46.1 +00.1	15						
16	35 17.7 +01.0	N 00 35.7 -00.7	172 13.5 +02.4	N 15 13.7 +00.0	239 15.5 +02.6	S 11 46.2 +00.1	16						
17	50 18.7 +01.0	N 00 35.0 -00.6	187 15.9 +02.4	N 15 13.7 +00.0	254 18.1 +02.7	S 11 46.3 +00.0	17						
18	65 19.7 +01.0	N 00 34.4 -00.7	202 18.3 +02.4	N 15 13.7 +00.0	269 20.8 +02.6	S 11 46.3 +00.1	18						
19	80 20.7 +01.0	N 00 33.7 -00.7	217 20.7 +02.4	N 15 13.7 +00.1	284 23.4 +02.7	S 11 46.4 +00.1	19						
20	95 21.7 +01.0	N 00 33.0 -00.6	232 23.1 +02.4	N 15 13.8 +00.0	299 26.1 +02.6	S 11 46.5 +00.1	20						
21	110 22.7 +01.0	N 00 32.4 -00.7	247 25.5 +02.4	N 15 13.8 +00.0	314 28.7 +02.6	S 11 46.6 +00.0	21						
22	125 23.7 +01.1	N 00 31.7 -00.6	262 27.9 +02.4	N 15 13.8 +00.0	329 31.3 +02.7	S 11 46.6 +00.1	22						
23	140 24.8 +01.0	N 00 31.1 -00.7	277 30.3 +02.4	N 15 13.8 +00.0	344 34.0 +02.6	S 11 46.7 +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 180° 180° 180° 180° 180° 180°		SHA 317° 317° 317° 317° 317° 317°		SHA 024° 024° 024° 024° 024° 024°								
	Greenwich Culmination Time: 13:38		Greenwich Culmination Time: 04:32		Greenwich Culmination Time: 00:05								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 38.0 +00.2	N 09 52.5 -00.9	202 31.9 +03.1	N 09 22.8 +00.4	42 22.6 -38.2	S 26 49.5 -05.7	00						
01	194 38.2 +00.1	N 09 51.6 -00.9	217 35.0 +03.1	N 09 23.2 +00.4	56 44.4 -38.2	S 26 43.8 -05.8	01						
02	209 38.3 +00.2	N 09 50.7 -00.8	232 38.1 +03.1	N 09 23.6 +00.4	71 06.2 -38.1	S 26 38.0 -06.1	02						
03	224 38.5 +00.2	N 09 49.9 -00.9	247 41.2 +03.0	N 09 24.0 +00.4	85 28.1 -38.1	S 26 31.9 -06.3	03						
04	239 38.7 +00.2	N 09 49.0 -00.9	262 44.2 +03.1	N 09 24.4 +00.4	99 50.0 -38.1	S 26 25.6 -06.5	04						
05	254 38.9 +00.2	N 09 48.1 -00.9	277 47.3 +03.1	N 09 24.8 +00.4	114 11.9 -38.1	S 26 19.1 -06.6	05						
06	269 39.1 +00.2	N 09 47.2 -00.9	292 50.4 +03.0	N 09 25.2 +00.4	128 33.8 -38.0	S 26 12.5 -06.9	06						
07	284 39.3 +00.1	N 09 46.3 -00.9	307 53.4 +03.1	N 09 25.6 +00.3	142 55.8 -38.0	S 26 05.6 -07.0	07						
08	299 39.4 +00.2	N 09 45.4 -00.8	322 56.5 +03.0	N 09 25.9 +00.4	157 17.8 -37.9	S 25 58.6 -07.3	08						
09	314 39.6 +00.2	N 09 44.6 -00.9	337 59.5 +03.1	N 09 26.3 +00.4	171 39.9 -37.9	S 25 51.3 -07.4	09						
10	329 39.8 +00.2	N 09 43.7 -00.9	353 02.6 +03.0	N 09 26.7 +00.4	186 02.0 -37.9	S 25 43.9 -07.7	10						
11	344 40.0 +00.2	N 09 42.8 -00.9	8 05.6 +03.1	N 09 27.1 +00.4	200 24.1 -37.8	S 25 36.2 -07.8	11						
12	359 40.2 +00.2	N 09 41.9 -00.9	23 08.7 +03.0	N 09 27.5 +00.4	214 46.3 -37.7	S 25 28.4 -08.0	12						
13	14 40.4 +00.2	N 09 41.0 -00.8	38 11.7 +03.0	N 09 27.9 +00.4	229 08.6 -37.7	S 25 20.4 -08.2	13						
14	29 40.6 +00.1	N 09 40.2 -00.9	53 14.7 +03.1	N 09 28.3 +00.4	243 30.9 -37.7	S 25 12.2 -08.4	14						
15	44 40.7 +00.2	N 09 39.3 -00.9	68 17.8 +03.0	N 09 28.7 +00.3	257 53.2 -37.6	S 25 03.8 -08.6	15						
16	59 40.9 +00.2	N 09 38.4 -00.9	83 20.8 +03.0	N 09 29.0 +00.4	272 15.6 -37.5	S 24 55.2 -08.8	16						
17	74 41.1 +00.2	N 09 37.5 -00.9	98 23.8 +03.0	N 09 29.4 +00.4	286 38.1 -37.5	S 24 46.4 -08.9	17						
18	89 41.3 +00.2	N 09 36.6 -00.9	113 26.8 +03.0	N 09 29.8 +00.4	301 00.6 -37.4	S 24 37.5 -09.2	18						
19	104 41.5 +00.2	N 09 35.7 -00.8	128 29.8 +03.0	N 09 30.2 +00.4	315 23.2 -37.3	S 24 28.3 -09.3	19						
20	119 41.7 +00.2	N 09 34.9 -00.9	143 32.8 +03.0	N 09 30.6 +00.4	329 45.9 -37.3	S 24 19.0 -09.5	20						
21	134 41.9 +00.1	N 09 34.0 -00.9	158 35.8 +03.0	N 09 31.0 +00.3	344 08.6 -37.2	S 24 09.5 -09.7	21						
22	149 42.0 +00.2	N 09 33.1 -00.9	173 38.8 +03.0	N 09 31.3 +00.4	358 31.4 -37.2	S 23 59.8 -09.8	22						
23	164 42.2 +00.2	N 09 32.2 -00.9	188 41.8 +03.0	N 09 31.7 +00.4	12 54.2 -37.0	S 23 50.0 -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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 16'4 16'5 16'5 16'5 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'5 00'5 00'5 00'5 00'5 00'5		HP 60'3 60'5 60'6 60'7 60'8 60'9								
	SHA 204° 203° 203° 203° 203° 203°		SHA 227° 227° 227° 227° 227° 227°		SHA 065° 062° 060° 057° 054° 052°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 10:27		Greenwich Culmination Time: 22:06								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	155 25.8 +01.0	N 00 30.4 -00.7	292 32.7 +02.4	N 15 13.8 +00.0	359 36.6 +02.7	S 11 46.8 +00.0	00						
01	170 26.8 +01.0	N 00 29.7 -00.6	307 35.1 +02.4	N 15 13.8 +00.0	14 39.3 +02.6	S 11 46.8 +00.1	01						
02	185 27.8 +01.0	N 00 29.1 -00.7	322 37.5 +02.4	N 15 13.8 +00.0	29 41.9 +02.7	S 11 46.9 +00.1	02						
03	200 28.8 +01.0	N 00 28.4 -00.6	337 39.9 +02.4	N 15 13.8 +00.0	44 44.6 +02.6	S 11 47.0 +00.1	03						
04	215 29.8 +01.0	N 00 27.8 -00.7	352 42.3 +02.4	N 15 13.8 +00.0	59 47.2 +02.6	S 11 47.1 +00.0	04						
05	230 30.8 +01.0	N 00 27.1 -00.6	7 44.7 +02.4	N 15 13.8 +00.1	74 49.8 +02.7	S 11 47.1 +00.1	05						
06	245 31.8 +01.0	N 00 26.5 -00.7	22 47.1 +02.4	N 15 13.9 +00.0	89 52.5 +02.6	S 11 47.2 +00.1	06						
07	260 32.8 +01.0	N 00 25.8 -00.7	37 49.5 +02.4	N 15 13.9 +00.0	104 55.1 +02.7	S 11 47.3 +00.0	07						
08	275 33.8 +01.0	N 00 25.1 -00.6	52 51.9 +02.4	N 15 13.9 +00.0	119 57.8 +02.6	S 11 47.3 +00.1	08						
09	290 34.8 +01.0	N 00 24.5 -00.7	67 54.3 +02.4	N 15 13.9 +00.0	135 00.4 +02.7	S 11 47.4 +00.1	09						
10	305 35.8 +01.0	N 00 23.8 -00.6	82 56.7 +02.4	N 15 13.9 +00.0	150 03.1 +02.6	S 11 47.5 +00.1	10						
11	320 36.8 +01.0	N 00 23.2 -00.7	97 59.1 +02.4	N 15 13.9 +00.0	165 05.7 +02.6	S 11 47.6 +00.0	11						
12	335 37.8 +01.0	N 00 22.5 -00.7	113 01.5 +02.4	N 15 13.9 +00.0	180 08.3 +02.7	S 11 47.6 +00.1	12						
13	350 38.8 +01.0	N 00 21.8 -00.6	128 03.9 +02.4	N 15 13.9 +00.0	195 11.0 +02.6	S 11 47.7 +00.1	13						
14	5 39.8 +01.0	N 00 21.2 -00.7	143 06.3 +02.5	N 15 13.9 +00.0	210 13.6 +02.7	S 11 47.8 +00.0	14						
15	20 40.8 +01.0	N 00 20.5 -00.6	158 08.8 +02.4	N 15 13.9 +00.0	225 16.3 +02.6	S 11 47.8 +00.1	15						
16	35 41.8 +01.0	N 00 19.9 -00.7	173 11.2 +02.4	N 15 13.9 +00.1	240 18.9 +02.7	S 11 47.9 +00.1	16						
17	50 42.8 +01.0	N 00 19.2 -00.7	188 13.6 +02.4	N 15 14.0 +00.0	255 21.6 +02.6	S 11 48.0 +00.1	17						
18	65 43.8 +01.0	N 00 18.5 -00.6	203 16.0 +02.4	N 15 14.0 +00.0	270 24.2 +02.6	S 11 48.1 +00.0	18						
19	80 44.8 +01.0	N 00 17.9 -00.7	218 18.4 +02.4	N 15 14.0 +00.0	285 26.8 +02.7	S 11 48.1 +00.1	19						
20	95 45.8 +01.0	N 00 17.2 -00.6	233 20.8 +02.4	N 15 14.0 +00.0	300 29.5 +02.6	S 11 48.2 +00.1	20						
21	110 46.8 +01.0	N 00 16.6 -00.7	248 23.2 +02.4	N 15 14.0 +00.0	315 32.1 +02.7	S 11 48.3 +00.0	21						
22	125 47.8 +01.0	N 00 15.9 -00.6	263 25.6 +02.4	N 15 14.0 +00.0	330 34.8 +02.6	S 11 48.3 +00.1	22						
23	140 48.8 +01.0	N 00 15.3 -00.7	278 28.0 +02.4	N 15 14.0 +00.0	345 37.4 +02.7	S 11 48.4 +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 179° 179° 179° 179° 179° 179°		SHA 317° 317° 317° 317° 317° 317°		SHA 024° 024° 024° 024° 024° 024°								
	Greenwich Culmination Time: 13:37		Greenwich Culmination Time: 04:29		Greenwich Culmination Time: 00:01								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 42.4 +00.2	N 09 31.3 -00.9	203 44.8 +03.0	N 09 32.1 +00.4	27 17.2 -37.0	S 23 39.9 -10.2	00						
01	194 42.6 +00.2	N 09 30.4 -00.9	218 47.8 +03.0	N 09 32.5 +00.4	41 40.2 -36.9	S 23 29.7 -10.4	01						
02	209 42.8 +00.2	N 09 29.5 -00.8	233 50.8 +03.0	N 09 32.9 +00.4	56 03.3 -36.9	S 23 19.3 -10.5	02						
03	224 43.0 +00.2	N 09 28.7 -00.9	248 53.8 +02.9	N 09 33.3 +00.3	70 26.4 -36.8	S 23 08.8 -10.7	03						
04	239 43.2 +00.2	N 09 27.8 -00.9	263 56.7 +03.0	N 09 33.6 +00.4	84 49.6 -36.7	S 22 58.1 -10.9	04						
05	254 43.4 +00.1	N 09 26.9 -00.9	278 59.7 +03.0	N 09 34.0 +00.4	99 12.9 -36.6	S 22 47.2 -11.1	05						
06	269 43.5 +00.2	N 09 26.0 -00.9	294 02.7 +02.9	N 09 34.4 +00.4	113 36.3 -36.5	S 22 36.1 -11.2	06						
07	284 43.7 +00.2	N 09 25.1 -00.9	309 05.6 +03.0	N 09 34.8 +00.4	127 59.8 -36.5	S 22 24.9 -11.4	07						
08	299 43.9 +00.2	N 09 24.2 -00.9	324 08.6 +02.9	N 09 35.2 +00.4	142 23.3 -36.4	S 22 13.5 -11.6	08						
09	314 44.1 +00.2	N 09 23.3 -00.8	339 11.5 +03.0	N 09 35.6 +00.3	156 46.9 -36.3	S 22 01.9 -11.7	09						
10	329 44.3 +00.2	N 09 22.5 -00.9	354 14.5 +02.9	N 09 35.9 +00.4	171 10.6 -36.2	S 21 50.2 -11.8	10						
11	344 44.5 +00.2	N 09 21.6 -00.9	9 17.4 +03.0	N 09 36.3 +00.4	185 34.4 -36.1	S 21 38.4 -12.1	11						
12	359 44.7 +00.2	N 09 20.7 -00.9	24 20.4 +02.9	N 09 36.7 +00.4	199 58.3 -36.1	S 21 26.3 -12.2	12						
13	14 44.9 +00.2	N 09 19.8 -00.9	39 23.3 +02.9	N 09 37.1 +00.4	214 22.2 -35.9	S 21 14.1 -12.3	13						
14	29 45.1 +00.1	N 09 18.9 -00.9	54 26.2 +03.0	N 09 37.5 +00.3	228 46.3 -35.9	S 21 01.8 -12.5	14						
15	44 45.2 +00.2	N 09 18.0 -00.9	69 29.2 +02.9	N 09 37.8 +00.4	243 10.4 -35.8	S 20 49.3 -12.6	15						
16	59 45.4 +00.2	N 09 17.1 -00.9	84 32.1 +02.9	N 09 38.2 +00.4	257 34.6 -35.7	S 20 36.7 -12.8	16						
17	74 45.6 +00.2	N 09 16.2 -00.9	99 35.0 +02.9	N 09 38.6 +00.4	271 58.9 -35.6	S 20 23.9 -12.9	17						
18	89 45.8 +00.2	N 09 15.3 -00.9	114 37.9 +02.9	N 09 39.0 +00.3	286 23.3 -35.5	S 20 11.0 -13.1	18						
19	104 46.0 +00.2	N 09 14.4 -00.8	129 40.8 +02.9	N 09 39.3 +00.4	300 47.8 -35.4	S 19 57.9 -13.2	19						
20	119 46.2 +00.2	N 09 13.6 -00.9	144 43.7 +02.9	N 09 39.7 +00.4	315 12.4 -35.4	S 19 44.7 -13.3	20						
21	134 46.4 +00.2	N 09 12.7 -00.9	159 46.6 +02.9	N 09 40.1 +00.4	329 37.0 -35.2	S 19 31.4 -13.5	21						
22	149 46.6 +00.2	N 09 11.8 -00.9	174 49.5 +02.9	N 09 40.5 +00.4	344 01.8 -35.2	S 19 17.9 -13.6	22						
23	164 46.8 +00.2	N 09 10.9 -00.9	189 52.4 +02.9	N 09 40.9 +00.3	358 26.6 -35.0	S 19 04.3 -13.7	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 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'5 00'5 00'5 00'5 00'5 00'5 SHA 227° 227° 227° 227° 227° 227° Greenwich Culmination Time: 10:22	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 049° 046° 044° 041° 039° 036° Greenwich Culmination Time: 23:06										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	155 49.8 +01.0	N 00 14.6 -00.7	293 30.4 +02.4	N 15 14.0 +00.0	0 40.1 +02.6	S 11 48.5 +00.1	00						
01	170 50.8 +01.0	N 00 13.9 -00.6	308 32.8 +02.4	N 15 14.0 +00.0	15 42.7 +02.6	S 11 48.6 +00.0	01						
02	185 51.8 +01.0	N 00 13.3 -00.7	323 35.2 +02.4	N 15 14.0 +00.0	30 45.3 +02.7	S 11 48.6 +00.1	02						
03	200 52.8 +01.0	N 00 12.6 -00.6	338 37.6 +02.4	N 15 14.0 +00.0	45 48.0 +02.6	S 11 48.7 +00.1	03						
04	215 53.8 +01.0	N 00 12.0 -00.7	353 40.0 +02.5	N 15 14.0 +00.1	60 50.6 +02.7	S 11 48.8 +00.0	04						
05	230 54.8 +01.0	N 00 11.3 -00.7	8 42.5 +02.4	N 15 14.1 +00.0	75 53.3 +02.6	S 11 48.8 +00.1	05						
06	245 55.8 +01.0	N 00 10.6 -00.6	23 44.9 +02.4	N 15 14.1 +00.0	90 55.9 +02.7	S 11 48.9 +00.1	06						
07	260 56.8 +01.0	N 00 10.0 -00.7	38 47.3 +02.4	N 15 14.1 +00.0	105 58.6 +02.6	S 11 49.0 +00.1	07						
08	275 57.8 +01.0	N 00 09.3 -00.6	53 49.7 +02.4	N 15 14.1 +00.0	121 01.2 +02.6	S 11 49.1 +00.0	08						
09	290 58.8 +01.0	N 00 08.7 -00.7	68 52.1 +02.4	N 15 14.1 +00.0	136 03.8 +02.7	S 11 49.1 +00.1	09						
10	305 59.8 +01.0	N 00 08.0 -00.7	83 54.5 +02.4	N 15 14.1 +00.0	151 06.5 +02.6	S 11 49.2 +00.1	10						
11	321 00.8 +01.0	N 00 07.3 -00.6	98 56.9 +02.4	N 15 14.1 +00.0	166 09.1 +02.7	S 11 49.3 +00.0	11						
12	336 01.8 +01.0	N 00 06.7 -00.7	113 59.3 +02.4	N 15 14.1 +00.0	181 11.8 +02.6	S 11 49.3 +00.1	12						
13	351 02.8 +01.0	N 00 06.0 -00.6	129 01.7 +02.4	N 15 14.1 +00.0	196 14.4 +02.7	S 11 49.4 +00.1	13						
14	6 03.8 +01.0	N 00 05.4 -00.7	144 04.1 +02.5	N 15 14.1 +00.0	211 17.1 +02.6	S 11 49.5 +00.1	14						
15	21 04.8 +01.0	N 00 04.7 -00.7	159 06.6 +02.4	N 15 14.1 +00.0	226 19.7 +02.6	S 11 49.6 +00.0	15						
16	36 05.8 +01.0	N 00 04.0 -00.6	174 09.0 +02.4	N 15 14.1 +00.0	241 22.3 +02.7	S 11 49.6 +00.1	16						
17	51 06.8 +01.0	N 00 03.4 -00.7	189 11.4 +02.4	N 15 14.1 +00.0	256 25.0 +02.6	S 11 49.7 +00.1	17						
18	66 07.8 +01.0	N 00 02.7 -00.6	204 13.8 +02.4	N 15 14.1 +00.0	271 27.6 +02.7	S 11 49.8 +00.0	18						
19	81 08.8 +01.0	N 00 02.1 -00.7	219 16.2 +02.4	N 15 14.1 +00.1	286 30.3 +02.6	S 11 49.8 +00.1	19						
20	96 09.8 +01.0	N 00 01.4 -00.6	234 18.6 +02.4	N 15 14.2 +00.0	301 32.9 +02.7	S 11 49.9 +00.1	20						
21	111 10.8 +01.0	N 00 00.8 -00.7	249 21.0 +02.5	N 15 14.2 +00.0	316 35.6 +02.6	S 11 50.0 +00.0	21						
22	126 11.8 +01.0	N 00 00.1 -00.7	264 23.5 +02.4	N 15 14.2 +00.0	331 38.2 +02.6	S 11 50.0 +00.1	22						
23	141 12.8 +01.0	S 00 00.6 +00.6	279 25.9 +02.4	N 15 14.2 +00.0	346 40.8 +02.7	S 11 50.1 +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 179° 179° 179° 179° 178° 178° Greenwich Culmination Time: 13:35	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 04:25	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 024° 024° 024° 024° 024° 024° Greenwich Culmination Time: 23:53										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 47.0 +00.1	N 09 10.0 -00.9	204 55.3 +02.9	N 09 41.2 +00.4	12 51.6 -35.0	S 18 50.6 -13.9	00						
01	194 47.1 +00.2	N 09 09.1 -00.9	219 58.2 +02.9	N 09 41.6 +00.4	27 16.6 -34.9	S 18 36.7 -14.0	01						
02	209 47.3 +00.2	N 09 08.2 -00.9	235 01.1 +02.8	N 09 42.0 +00.4	41 41.7 -34.8	S 18 22.7 -14.1	02						
03	224 47.5 +00.2	N 09 07.3 -00.9	250 03.9 +02.9	N 09 42.4 +00.3	56 06.9 -34.7	S 18 08.6 -14.3	03						
04	239 47.7 +00.2	N 09 06.4 -00.9	265 06.8 +02.9	N 09 42.7 +00.4	70 32.2 -34.6	S 17 54.3 -14.4	04						
05	254 47.9 +00.2	N 09 05.5 -00.9	280 09.7 +02.8	N 09 43.1 +00.4	84 57.6 -34.6	S 17 39.9 -14.4	05						
06	269 48.1 +00.2	N 09 04.6 -00.9	295 12.5 +02.9	N 09 43.5 +00.4	99 23.0 -34.4	S 17 25.5 -14.6	06						
07	284 48.3 +00.2	N 09 03.7 -00.8	310 15.4 +02.9	N 09 43.9 +00.3	113 48.6 -34.3	S 17 10.9 -14.8	07						
08	299 48.5 +00.2	N 09 02.9 -00.9	325 18.3 +02.8	N 09 44.2 +00.4	128 14.3 -34.3	S 16 56.1 -14.8	08						
09	314 48.7 +00.2	N 09 02.0 -00.9	340 21.1 +02.8	N 09 44.6 +00.4	142 40.0 -34.2	S 16 41.3 -15.0	09						
10	329 48.9 +00.2	N 09 01.1 -00.9	355 23.9 +02.9	N 09 45.0 +00.3	157 05.8 -34.0	S 16 26.3 -15.0	10						
11	344 49.1 +00.2	N 09 00.2 -00.9	10 26.8 +02.8	N 09 45.3 +00.4	171 31.8 -34.0	S 16 11.3 -15.2	11						
12	359 49.3 +00.2	N 08 59.3 -00.9	25 29.6 +02.9	N 09 45.7 +00.4	185 57.8 -33.9	S 15 56.1 -15.2	12						
13	14 49.5 +00.1	N 08 58.4 -00.9	40 32.5 +02.8	N 09 46.1 +00.4	200 23.9 -33.8	S 15 40.9 -15.4	13						
14	29 49.6 +00.2	N 08 57.5 -00.9	55 35.3 +02.8	N 09 46.5 +00.3	214 50.1 -33.8	S 15 25.5 -15.5	14						
15	44 49.8 +00.2	N 08 56.6 -00.9	70 38.1 +02.8	N 09 46.8 +00.4	229 16.3 -33.6	S 15 10.0 -15.5	15						
16	59 50.0 +00.2	N 08 55.7 -00.9	85 40.9 +02.8	N 09 47.2 +00.4	243 42.7 -33.6	S 14 54.5 -15.7	16						
17	74 50.2 +00.2	N 08 54.8 -00.9	100 43.7 +02.9	N 09 47.6 +00.3	258 09.1 -33.4	S 14 38.8 -15.7	17						
18	89 50.4 +00.2	N 08 53.9 -00.9	115 46.6 +02.8	N 09 47.9 +00.4	272 35.7 -33.4	S 14 23.1 -15.8	18						
19	104 50.6 +00.2	N 08 53.0 -00.9	130 49.4 +02.8	N 09 48.3 +00.4	287 02.3 -33.3	S 14 07.3 -16.0	19						
20	119 50.8 +00.2	N 08 52.1 -00.9	145 52.2 +02.8	N 09 48.7 +00.3	301 29.0 -33.2	S 13 51.3 -16.0	20						
21	134 51.0 +00.2	N 08 51.2 -00.9	160 55.0 +02.8	N 09 49.0 +00.4	315 55.8 -33.1	S 13 35.3 -16.1	21						
22	149 51.2 +00.2	N 08 50.3 -00.9	175 57.8 +02.8	N 09 49.4 +00.4	330 22.7 -33.1	S 13 19.2 -16.1	22						
23	164 51.4 +00.2	N 08 49.4 -00.9	191 00.6 +02.7	N 09 49.8 +00.3	344 49.6 -32.9	S 13 03.1 -16.3	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 202° 202° 201° 201° 201° 201° Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'4 00'4 00'4 00'4 00'4 00'4 SHA 227° 227° 227° 227° 227° 227° Greenwich Culmination Time: 10:18	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 61'3 SHA 034° 031° 029° 026° 024° 022° Greenwich Culmination Time: -1:00										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	156 13.8 +01.0	S 00 01.2 +00.7	294 28.3 +02.4	N 15 14.2 +00.0	1 43.5 +02.6	S 11 50.2 +00.1	00						
01	171 14.8 +01.0	S 00 01.9 +00.6	309 30.7 +02.4	N 15 14.2 +00.0	16 46.1 +02.7	S 11 50.3 +00.0	01						
02	186 15.8 +01.0	S 00 02.5 +00.7	324 33.1 +02.4	N 15 14.2 +00.0	31 48.8 +02.6	S 11 50.3 +00.1	02						
03	201 16.8 +01.0	S 00 03.2 +00.7	339 35.5 +02.5	N 15 14.2 +00.0	46 51.4 +02.7	S 11 50.4 +00.1	03						
04	216 17.8 +01.0	S 00 03.9 +00.6	354 38.0 +02.4	N 15 14.2 +00.0	61 54.1 +02.6	S 11 50.5 +00.0	04						
05	231 18.8 +01.0	S 00 04.5 +00.7	9 40.4 +02.4	N 15 14.2 +00.0	76 56.7 +02.6	S 11 50.5 +00.1	05						
06	246 19.8 +01.0	S 00 05.2 +00.6	24 42.8 +02.4	N 15 14.2 +00.0	91 59.3 +02.7	S 11 50.6 +00.1	06						
07	261 20.8 +01.0	S 00 05.8 +00.7	39 45.2 +02.4	N 15 14.2 +00.0	107 02.0 +02.6	S 11 50.7 +00.1	07						
08	276 21.8 +01.0	S 00 06.5 +00.7	54 47.6 +02.4	N 15 14.2 +00.0	122 04.6 +02.7	S 11 50.8 +00.0	08						
09	291 22.8 +01.0	S 00 07.2 +00.6	69 50.0 +02.5	N 15 14.2 +00.0	137 07.3 +02.6	S 11 50.8 +00.1	09						
10	306 23.8 +01.0	S 00 07.8 +00.7	84 52.5 +02.4	N 15 14.2 +00.0	152 09.9 +02.7	S 11 50.9 +00.1	10						
11	321 24.8 +01.0	S 00 08.5 +00.6	99 54.9 +02.4	N 15 14.2 +00.0	167 12.6 +02.6	S 11 51.0 +00.0	11						
12	336 25.8 +01.0	S 00 09.1 +00.7	114 57.3 +02.4	N 15 14.2 +00.0	182 15.2 +02.6	S 11 51.0 +00.1	12						
13	351 26.8 +01.0	S 00 09.8 +00.7	129 59.7 +02.4	N 15 14.2 +00.0	197 17.8 +02.7	S 11 51.1 +00.1	13						
14	6 27.8 +01.0	S 00 10.5 +00.6	145 02.1 +02.5	N 15 14.2 +00.1	212 20.5 +02.6	S 11 51.2 +00.1	14						
15	21 28.8 +01.0	S 00 11.1 +00.7	160 04.6 +02.4	N 15 14.3 +00.0	227 23.1 +02.7	S 11 51.3 +00.0	15						
16	36 29.8 +01.0	S 00 11.8 +00.6	175 07.0 +02.4	N 15 14.3 +00.0	242 25.8 +02.6	S 11 51.3 +00.1	16						
17	51 30.8 +01.0	S 00 12.4 +00.7	190 09.4 +02.4	N 15 14.3 +00.0	257 28.4 +02.7	S 11 51.4 +00.1	17						
18	66 31.8 +01.0	S 00 13.1 +00.7	205 11.8 +02.5	N 15 14.3 +00.0	272 31.1 +02.6	S 11 51.5 +00.0	18						
19	81 32.8 +01.0	S 00 13.8 +00.6	220 14.3 +02.4	N 15 14.3 +00.0	287 33.7 +02.6	S 11 51.5 +00.1	19						
20	96 33.8 +01.0	S 00 14.4 +00.7	235 16.7 +02.4	N 15 14.3 +00.0	302 36.3 +02.7	S 11 51.6 +00.1	20						
21	111 34.8 +01.0	S 00 15.1 +00.6	250 19.1 +02.4	N 15 14.3 +00.0	317 39.0 +02.6	S 11 51.7 +00.1	21						
22	126 35.8 +01.0	S 00 15.7 +00.7	265 21.5 +02.4	N 15 14.3 +00.0	332 41.6 +02.7	S 11 51.8 +00.0	22						
23	141 36.8 +01.0	S 00 16.4 +00.7	280 23.9 +02.5	N 15 14.3 +00.0	347 44.3 +02.6	S 11 51.8 +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 178° 178° 178° 178° 178° 178° Greenwich Culmination Time: 13:34	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 04:21	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 024° 024° 024° 024° 024° 024° Greenwich Culmination Time: 23:48										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 51%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	179 51.6 +00.2	N 08 48.5 -00.9	206 03.3 +02.8	N 09 50.1 +00.4	359 16.7 -32.9	S 12 46.8 -16.3	00						
01	194 51.8 +00.2	N 08 47.6 -00.9	221 06.1 +02.8	N 09 50.5 +00.4	13 43.8 -32.8	S 12 30.5 -16.4	01						
02	209 52.0 +00.2	N 08 46.7 -00.9	236 08.9 +02.8	N 09 50.9 +00.3	28 11.0 -32.7	S 12 14.1 -16.5	02						
03	224 52.2 +00.2	N 08 45.8 -00.9	251 11.7 +02.7	N 09 51.2 +00.4	42 38.3 -32.6	S 11 57.6 -16.5	03						
04	239 52.4 +00.2	N 08 44.9 -00.9	266 14.4 +02.8	N 09 51.6 +00.4	57 05.7 -32.6	S 11 41.1 -16.7	04						
05	254 52.6 +00.1	N 08 44.0 -00.9	281 17.2 +02.8	N 09 52.0 +00.3	71 33.1 -32.5	S 11 24.4 -16.6	05						
06	269 52.7 +00.2	N 08 43.1 -00.9	296 20.0 +02.7	N 09 52.3 +00.4	86 00.6 -32.4	S 11 07.8 -16.8	06						
07	284 52.9 +00.2	N 08 42.2 -00.9	311 22.7 +02.8	N 09 52.7 +00.4	100 28.2 -32.3	S 10 51.0 -16.8	07						
08	299 53.1 +00.2	N 08 41.3 -00.9	326 25.5 +02.7	N 09 53.1 +00.3	114 55.9 -32.3	S 10 34.2 -16.8	08						
09	314 53.3 +00.2	N 08 40.4 -00.9	341 28.2 +02.8	N 09 53.4 +00.4	129 23.6 -32.2	S 10 17.4 -16.9	09						
10	329 53.5 +00.2	N 08 39.5 -00.9	356 31.0 +02.7	N 09 53.8 +00.4	143 51.4 -32.1	S 10 00.5 -17.0	10						
11	344 53.7 +00.2	N 08 38.6 -00.9	11 33.7 +02.7	N 09 54.2 +00.3	158 19.3 -32.0	S 09 43.5 -17.0	11						
12	359 53.9 +00.2	N 08 37.7 -00.9	26 36.4 +02.8	N 09 54.5 +00.4	172 47.3 -32.0	S 09 26.5 -17.1	12						
13	14 54.1 +00.2	N 08 36.8 -00.9	41 39.2 +02.7	N 09 54.9 +00.3	187 15.3 -31.9	S 09 09.4 -17.1	13						
14	29 54.3 +00.2	N 08 35.9 -00.9	56 41.9 +02.7	N 09 55.2 +00.4	201 43.4 -31.8	S 08 52.3 -17.2	14						
15	44 54.5 +00.2	N 08 35.0 -00.9	71 44.6 +02.7	N 09 55.6 +00.4	216 11.6 -31.7	S 08 35.1 -17.2	15						
16	59 54.7 +00.2	N 08 34.1 -00.9	86 47.3 +02.7	N 09 56.0 +00.3	230 39.9 -31.7	S 08 17.9 -17.2	16						
17	74 54.9 +00.2	N 08 33.2 -00.9	101 50.0 +02.8	N 09 56.3 +00.4	245 08.2 -31.7	S 08 00.7 -17.3	17						
18	89 55.1 +00.2	N 08 32.3 -00.9	116 52.8 +02.7	N 09 56.7 +00.3	259 36.5 -31.5	S 07 43.4 -17.3	18						
19	104 55.3 +00.2	N 08 31.4 -00.9	131 55.5 +02.7	N 09 57.0 +00.4	274 05.0 -31.5	S 07 26.1 -17.4	19						
20	119 55.5 +00.2	N 08 30.5 -00.9	146 58.2 +02.7	N 09 57.4 +00.4	288 33.5 -31.5	S 07 08.7 -17.4	20						
21	134 55.7 +00.2	N 08 29.6 -00.9	162 00.9 +02.6	N 09 57.8 +00.3	303 02.0 -31.4	S 06 51.3 -17.4	21						
22	149 55.9 +00.2	N 08 28.7 -00.9	177 03.5 +02.7	N 09 58.1 +00.4	317 30.6 -31.3	S 06 33.9 -17.4	22						
23	164 56.1 +00.2	N 08 27.8 -00.9	192 06.2 +02.7	N 09 58.5 +00.3	331 59.3 -31.2	S 06 16.5 -17.5	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 201° 201° 201° 200° 200° 200° Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'4 00'4 00'4 00'4 00'4 00'4 SHA 227° 227° 227° 227° 227° 227° Greenwich Culmination Time: 10:13	UT 02 06 10 14 18 22 SD 16'7 16'7 16'7 16'7 16'7 16'6 HP 61'3 61'3 61'3 61'2 61'2 61'1 SHA 019° 017° 015° 012° 010° 008° Greenwich Culmination Time: 00:02										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	156 37.8 +01.0	S 00 17.1 +00.6	295 26.4 +02.4	N 15 14.3 +00.0	2 46.9 +02.7	S 11 51.9 +00.1	00						
01	171 38.8 +01.0	S 00 17.7 +00.7	310 28.8 +02.4	N 15 14.3 +00.0	17 49.6 +02.6	S 11 52.0 +00.0	01						
02	186 39.8 +01.0	S 00 18.4 +00.6	325 31.2 +02.4	N 15 14.3 +00.0	32 52.2 +02.6	S 11 52.0 +00.1	02						
03	201 40.8 +01.0	S 00 19.0 +00.7	340 33.6 +02.5	N 15 14.3 +00.0	47 54.8 +02.7	S 11 52.1 +00.1	03						
04	216 41.8 +01.0	S 00 19.7 +00.7	355 36.1 +02.4	N 15 14.3 +00.0	62 57.5 +02.6	S 11 52.2 +00.0	04						
05	231 42.8 +01.0	S 00 20.4 +00.6	10 38.5 +02.4	N 15 14.3 +00.0	78 00.1 +02.7	S 11 52.2 +00.1	05						
06	246 43.8 +01.0	S 00 21.0 +00.7	25 40.9 +02.4	N 15 14.3 +00.0	93 02.8 +02.6	S 11 52.3 +00.1	06						
07	261 44.8 +01.0	S 00 21.7 +00.6	40 43.3 +02.5	N 15 14.3 +00.0	108 05.4 +02.7	S 11 52.4 +00.1	07						
08	276 45.8 +01.0	S 00 22.3 +00.7	55 45.8 +02.4	N 15 14.3 +00.0	123 08.1 +02.6	S 11 52.5 +00.0	08						
09	291 46.8 +01.0	S 00 23.0 +00.7	70 48.2 +02.4	N 15 14.3 +00.0	138 10.7 +02.6	S 11 52.5 +00.1	09						
10	306 47.8 +01.0	S 00 23.7 +00.6	85 50.6 +02.5	N 15 14.3 +00.0	153 13.3 +02.7	S 11 52.6 +00.1	10						
11	321 48.8 +01.0	S 00 24.3 +00.7	100 53.1 +02.4	N 15 14.3 +00.0	168 16.0 +02.6	S 11 52.7 +00.0	11						
12	336 49.8 +01.0	S 00 25.0 +00.6	115 55.5 +02.4	N 15 14.3 +00.0	183 18.6 +02.7	S 11 52.7 +00.1	12						
13	351 50.8 +01.0	S 00 25.6 +00.7	130 57.9 +02.4	N 15 14.3 +00.0	198 21.3 +02.6	S 11 52.8 +00.1	13						
14	6 51.8 +01.0	S 00 26.3 +00.7	146 00.3 +02.5	N 15 14.3 +00.0	213 23.9 +02.7	S 11 52.9 +00.1	14						
15	21 52.8 +01.0	S 00 27.0 +00.6	161 02.8 +02.4	N 15 14.3 +00.0	228 26.6 +02.6	S 11 53.0 +00.0	15						
16	36 53.8 +01.0	S 00 27.6 +00.7	176 05.2 +02.4	N 15 14.3 +00.0	243 29.2 +02.6	S 11 53.0 +00.1	16						
17	51 54.8 +01.0	S 00 28.3 +00.6	191 07.6 +02.5	N 15 14.3 +00.0	258 31.8 +02.7	S 11 53.1 +00.1	17						
18	66 55.8 +01.0	S 00 28.9 +00.7	206 10.1 +02.4	N 15 14.3 +00.0	273 34.5 +02.6	S 11 53.2 +00.0	18						
19	81 56.8 +01.0	S 00 29.6 +00.7	221 12.5 +02.4	N 15 14.3 +00.0	288 37.1 +02.7	S 11 53.2 +00.1	19						
20	96 57.8 +01.0	S 00 30.3 +00.6	236 14.9 +02.4	N 15 14.3 +00.0	303 39.8 +02.6	S 11 53.3 +00.1	20						
21	111 58.8 +01.0	S 00 30.9 +00.7	251 17.3 +02.5	N 15 14.3 +00.0	318 42.4 +02.6	S 11 53.4 +00.0	21						
22	126 59.8 +01.0	S 00 31.6 +00.6	266 19.8 +02.4	N 15 14.3 +00.0	333 45.0 +02.7	S 11 53.4 +00.1	22						
23	142 00.8 +01.0	S 00 32.2 +00.7	281 22.2 +02.4	N 15 14.3 +00.0	348 47.7 +02.6	S 11 53.5 +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 178° 178° 177° 177° 177° 177° Greenwich Culmination Time: 13:32	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 04:17	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 024° 024° 024° 024° 024° 024° Greenwich Culmination Time: 23:44										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 56.3 +00.2	N 08 26.9 -00.9	207 08.9 +02.7	N 09 58.8 +00.4	346 28.1 -31.2	S 05 59.0 -17.5	00						
01	194 56.5 +00.2	N 08 26.0 -00.9	222 11.6 +02.7	N 09 59.2 +00.3	0 56.9 -31.2	S 05 41.5 -17.5	01						
02	209 56.7 +00.2	N 08 25.1 -00.9	237 14.3 +02.6	N 09 59.5 +00.4	15 25.7 -31.1	S 05 24.0 -17.6	02						
03	224 56.9 +00.2	N 08 24.2 -00.9	252 16.9 +02.7	N 09 59.9 +00.3	29 54.6 -31.0	S 05 06.4 -17.5	03						
04	239 57.1 +00.2	N 08 23.3 -00.9	267 19.6 +02.7	N 10 00.2 +00.4	44 23.6 -31.0	S 04 48.9 -17.6	04						
05	254 57.3 +00.2	N 08 22.4 -00.9	282 22.3 +02.6	N 10 00.6 +00.3	58 52.6 -31.0	S 04 31.3 -17.6	05						
06	269 57.5 +00.2	N 08 21.5 -00.9	297 24.9 +02.7	N 10 00.9 +00.4	73 21.6 -30.8	S 04 13.7 -17.5	06						
07	284 57.7 +00.2	N 08 20.6 -00.9	312 27.6 +02.6	N 10 01.3 +00.4	87 50.8 -30.9	S 03 56.2 -17.6	07						
08	299 57.9 +00.2	N 08 19.7 -00.9	327 30.2 +02.7	N 10 01.7 +00.3	102 19.9 -30.8	S 03 38.6 -17.7	08						
09	314 58.1 +00.2	N 08 18.8 -00.9	342 32.9 +02.6	N 10 02.0 +00.4	116 49.1 -30.7	S 03 20.9 -17.6	09						
10	329 58.3 +00.2	N 08 17.9 -00.9	357 35.5 +02.7	N 10 02.4 +00.3	131 18.4 -30.7	S 03 03.3 -17.6	10						
11	344 58.5 +00.2	N 08 17.0 -00.9	12 38.2 +02.6	N 10 02.7 +00.4	145 47.7 -30.7	S 02 45.7 -17.6	11						
12	359 58.7 +00.2	N 08 16.1 -00.9	27 40.8 +02.6	N 10 03.1 +00.3	160 17.0 -30.6	S 02 28.1 -17.6	12						
13	14 58.9 +00.2	N 08 15.2 -00.9	42 43.4 +02.6	N 10 03.4 +00.4	174 46.4 -30.6	S 02 10.5 -17.6	13						
14	29 59.1 +00.2	N 08 14.3 -00.9	57 46.0 +02.7	N 10 03.8 +00.3	189 15.8 -30.5	S 01 52.9 -17.6	14						
15	44 59.3 +00.2	N 08 13.4 -01.0	72 48.7 +02.6	N 10 04.1 +00.4	203 45.3 -30.5	S 01 35.3 -17.7	15						
16	59 59.5 +00.2	N 08 12.4 -00.9	87 51.3 +02.6	N 10 04.5 +00.3	218 14.8 -30.4	S 01 17.6 -17.5	16						
17	74 59.7 +00.2	N 08 11.5 -00.9	102 53.9 +02.6	N 10 04.8 +00.4	232 44.4 -30.5	S 01 00.1 -17.6	17						
18	89 59.9 +00.2	N 08 10.6 -00.9	117 56.5 +02.6	N 10 05.2 +00.3	247 13.9 -30.4	S 00 42.5 -17.6	18						
19	105 00.1 +00.2	N 08 09.7 -00.9	132 59.1 +02.6	N 10 05.5 +00.3	261 43.5 -30.3	S 00 24.9 -17.6	19						
20	120 00.3 +00.2	N 08 08.8 -00.9	148 01.7 +02.6	N 10 05.8 +00.4	276 13.2 -30.3	S 00 07.3 -17.5	20						
21	135 00.5 +00.2	N 08 07.9 -00.9	163 04.3 +02.6	N 10 06.2 +00.3	290 42.9 -30.3	N 00 10.2 +17.5	21						
22	150 00.7 +00.2	N 08 07.0 -00.9	178 06.9 +02.6	N 10 06.5 +00.4	305 12.6 -30.3	N 00 27.7 +17.5	22						
23	165 00.9 +00.2	N 08 06.1 -00.9	193 09.5 +02.6	N 10 06.9 +00.3	319 42.3 -30.2	N 00 45.2 +17.5	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 200° 200° 200° 200° 199° 199° Greenwich Culmination Time: 12:00	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'4 00'4 00'4 00'4 00'4 00'4 SHA 227° 227° 227° 227° 227° 227° Greenwich Culmination Time: 10:09	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 60'5 SHA 005° 003° 001° 359° 357° 354° Greenwich Culmination Time: 00:56										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	157 01.8 +01.0	S 00 32.9 +00.7	296 24.6 +02.5	N 15 14.3 +00.0	3 50.3 +02.7	S 11 53.6 +00.1	00						
01	172 02.8 +01.0	S 00 33.6 +00.6	311 27.1 +02.4	N 15 14.3 +00.0	18 53.0 +02.6	S 11 53.7 +00.0	01						
02	187 03.8 +01.0	S 00 34.2 +00.7	326 29.5 +02.4	N 15 14.3 +00.0	33 55.6 +02.7	S 11 53.7 +00.1	02						
03	202 04.8 +01.0	S 00 34.9 +00.6	341 31.9 +02.5	N 15 14.3 +00.0	48 58.3 +02.6	S 11 53.8 +00.1	03						
04	217 05.8 +00.9	S 00 35.5 +00.7	356 34.4 +02.4	N 15 14.3 +00.0	64 00.9 +02.6	S 11 53.9 +00.0	04						
05	232 06.7 +01.0	S 00 36.2 +00.7	11 36.8 +02.4	N 15 14.3 +00.0	79 03.5 +02.7	S 11 53.9 +00.1	05						
06	247 07.7 +01.0	S 00 36.9 +00.6	26 39.2 +02.5	N 15 14.3 +00.0	94 06.2 +02.6	S 11 54.0 +00.1	06						
07	262 08.7 +01.0	S 00 37.5 +00.7	41 41.7 +02.4	N 15 14.3 +00.0	109 08.8 +02.7	S 11 54.1 +00.1	07						
08	277 09.7 +01.0	S 00 38.2 +00.6	56 44.1 +02.4	N 15 14.3 +00.0	124 11.5 +02.6	S 11 54.2 +00.0	08						
09	292 10.7 +01.0	S 00 38.8 +00.7	71 46.5 +02.5	N 15 14.3 +00.0	139 14.1 +02.7	S 11 54.2 +00.1	09						
10	307 11.7 +01.0	S 00 39.5 +00.7	86 49.0 +02.4	N 15 14.3 +00.0	154 16.8 +02.6	S 11 54.3 +00.1	10						
11	322 12.7 +01.0	S 00 40.2 +00.6	101 51.4 +02.5	N 15 14.3 +00.0	169 19.4 +02.6	S 11 54.4 +00.0	11						
12	337 13.7 +01.0	S 00 40.8 +00.7	116 53.9 +02.4	N 15 14.3 +00.0	184 22.0 +02.7	S 11 54.4 +00.1	12						
13	352 14.7 +01.0	S 00 41.5 +00.7	131 56.3 +02.4	N 15 14.3 +00.0	199 24.7 +02.6	S 11 54.5 +00.1	13						
14	7 15.7 +01.0	S 00 42.2 +00.6	146 58.7 +02.5	N 15 14.3 +00.0	214 27.3 +02.7	S 11 54.6 +00.0	14						
15	22 16.7 +01.0	S 00 42.8 +00.7	162 01.2 +02.4	N 15 14.3 +00.0	229 30.0 +02.6	S 11 54.6 +00.1	15						
16	37 17.7 +01.0	S 00 43.5 +00.6	177 03.6 +02.4	N 15 14.3 +00.0	244 32.6 +02.7	S 11 54.7 +00.1	16						
17	52 18.7 +01.0	S 00 44.1 +00.7	192 06.0 +02.5	N 15 14.3 +00.0	259 35.3 +02.6	S 11 54.8 +00.1	17						
18	67 19.7 +01.0	S 00 44.8 +00.7	207 08.5 +02.4	N 15 14.3 +00.0	274 37.9 +02.6	S 11 54.9 +00.0	18						
19	82 20.7 +01.0	S 00 45.5 +00.6	222 10.9 +02.5	N 15 14.3 +00.0	289 40.5 +02.7	S 11 54.9 +00.1	19						
20	97 21.7 +01.0	S 00 46.1 +00.7	237 13.4 +02.4	N 15 14.3 +00.0	304 43.2 +02.6	S 11 55.0 +00.1	20						
21	112 22.7 +01.0	S 00 46.8 +00.6	252 15.8 +02.4	N 15 14.3 +00.0	319 45.8 +02.7	S 11 55.1 +00.0	21						
22	127 23.7 +01.0	S 00 47.4 +00.7	267 18.2 +02.5	N 15 14.3 +00.0	334 48.5 +02.6	S 11 55.1 +00.1	22						
23	142 24.7 +01.0	S 00 48.1 +00.7	282 20.7 +02.4	N 15 14.3 +00.0	349 51.1 +02.6	S 11 55.2 +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 177° 177° 177° 177° 177° 177° 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 317° 317° 317° 317° 317° 316° Greenwich Culmination Time: 04:13	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 024° 024° 024° 024° 024° 024° Greenwich Culmination Time: 23:40										

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	01.1 +00.2	N 08 05.2	-00.9	208	12.1 +02.5	N 10 07.2	+00.4	334	12.1 -30.2	N 01 02.7	+17.5	00
01	195	01.3 +00.2	N 08 04.3	-00.9	223	14.6 +02.6	N 10 07.6	+00.3	348	41.9 -30.2	N 01 20.2	+17.4	01
02	210	01.5 +00.2	N 08 03.4	-00.9	238	17.2 +02.6	N 10 07.9	+00.4	3	11.7 -30.1	N 01 37.6	+17.4	02
03	225	01.7 +00.2	N 08 02.5	-01.0	253	19.8 +02.5	N 10 08.3	+00.3	17	41.6 -30.2	N 01 55.0	+17.4	03
04	240	01.9 +00.2	N 08 01.5	-00.9	268	22.3 +02.6	N 10 08.6	+00.3	32	11.4 -30.1	N 02 12.4	+17.3	04
05	255	02.1 +00.2	N 08 00.6	-00.9	283	24.9 +02.6	N 10 08.9	+00.4	46	41.3 -30.0	N 02 29.7	+17.4	05
06	270	02.3 +00.2	N 07 59.7	-00.9	298	27.5 +02.5	N 10 09.3	+00.3	61	11.3 -30.1	N 02 47.1	+17.3	06
07	285	02.5 +00.2	N 07 58.8	-00.9	313	30.0 +02.6	N 10 09.6	+00.4	75	41.2 -30.1	N 03 04.4	+17.2	07
08	300	02.7 +00.2	N 07 57.9	-00.9	328	32.6 +02.5	N 10 10.0	+00.3	90	11.1 -30.0	N 03 21.6	+17.2	08
09	315	02.9 +00.2	N 07 57.0	-00.9	343	35.1 +02.5	N 10 10.3	+00.3	104	41.1 -30.0	N 03 38.8	+17.2	09
10	330	03.1 +00.2	N 07 56.1	-00.9	358	37.6 +02.6	N 10 10.6	+00.4	119	11.1 -30.0	N 03 56.0	+17.1	10
11	345	03.3 +00.2	N 07 55.2	-00.9	13	40.2 +02.5	N 10 11.0	+00.3	133	41.1 -30.0	N 04 13.1	+17.1	11
12	0	03.5 +00.2	N 07 54.3	-00.9	28	42.7 +02.5	N 10 11.3	+00.3	148	11.1 -29.9	N 04 30.2	+17.0	12
13	15	03.7 +00.2	N 07 53.4	-01.0	43	45.2 +02.6	N 10 11.6	+00.4	162	41.2 -30.0	N 04 47.2	+17.0	13
14	30	03.9 +00.2	N 07 52.4	-00.9	58	47.8 +02.5	N 10 12.0	+00.3	177	11.2 -29.9	N 05 04.2	+17.0	14
15	45	04.1 +00.2	N 07 51.5	-00.9	73	50.3 +02.5	N 10 12.3	+00.4	191	41.3 -30.0	N 05 21.2	+16.9	15
16	60	04.3 +00.2	N 07 50.6	-00.9	88	52.8 +02.5	N 10 12.7	+00.3	206	11.3 -29.9	N 05 38.1	+16.9	16
17	75	04.5 +00.2	N 07 49.7	-00.9	103	55.3 +02.5	N 10 13.0	+00.3	220	41.4 -29.9	N 05 55.0	+16.8	17
18	90	04.7 +00.2	N 07 48.8	-00.9	118	57.8 +02.5	N 10 13.3	+00.4	235	11.5 -29.9	N 06 11.8	+16.7	18
19	105	04.9 +00.2	N 07 47.9	-00.9	134	00.3 +02.5	N 10 13.7	+00.3	249	41.6 -29.9	N 06 28.5	+16.7	19
20	120	05.1 +00.2	N 07 47.0	-00.9	149	02.8 +02.5	N 10 14.0	+00.3	264	11.7 -30.0	N 06 45.2	+16.6	20
21	135	05.3 +00.2	N 07 46.1	-01.0	164	05.3 +02.5	N 10 14.3	+00.4	278	41.7 -29.9	N 07 01.8	+16.6	21
22	150	05.5 +00.2	N 07 45.1	-00.9	179	07.8 +02.5	N 10 14.7	+00.3	293	11.8 -29.9	N 07 18.4	+16.5	22
23	165	05.7 +00.2	N 07 44.2	-00.9	194	10.3 +02.5	N 10 15.0	+00.3	307	41.9 -29.9	N 07 34.9	+16.5	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 15'9 15'9 15'9 15'9				SD 00'4 00'4 00'4 00'4 00'4 00'4				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 00'4 00'4 00'4 00'4 00'4 00'4				HP 60'4 60'3 60'2 60'0 59'9 59'8				
	SHA 199° 199° 199° 199° 198° 198°				SHA 227° 227° 227° 227° 227° 227°				SHA 352° 350° 348° 346° 344° 341°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 10:05				Greenwich Culmination Time: 01:46				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	157	25.7 +01.0	S 00 48.8	+00.6	297	23.1 +02.5	N 15 14.3	+00.0	4	53.7 +02.7	S 11 55.3	+00.0	00
01	172	26.7 +01.0	S 00 49.4	+00.7	312	25.6 +02.4	N 15 14.3	+00.0	19	56.4 +02.6	S 11 55.3	+00.1	01
02	187	27.7 +00.9	S 00 50.1	+00.6	327	28.0 +02.4	N 15 14.3	+00.0	34	59.0 +02.7	S 11 55.4	+00.1	02
03	202	28.6 +01.0	S 00 50.7	+00.7	342	30.4 +02.5	N 15 14.3	+00.0	50	01.7 +02.6	S 11 55.5	+00.1	03
04	217	29.6 +01.0	S 00 51.4	+00.7	357	32.9 +02.4	N 15 14.3	+00.0	65	04.3 +02.7	S 11 55.6	+00.0	04
05	232	30.6 +01.0	S 00 52.1	+00.6	12	35.3 +02.5	N 15 14.3	+00.0	80	07.0 +02.6	S 11 55.6	+00.1	05
06	247	31.6 +01.0	S 00 52.7	+00.7	27	37.8 +02.4	N 15 14.3	+00.0	95	09.6 +02.6	S 11 55.7	+00.1	06
07	262	32.6 +01.0	S 00 53.4	+00.6	42	40.2 +02.4	N 15 14.3	+00.0	110	12.2 +02.7	S 11 55.8	+00.0	07
08	277	33.6 +01.0	S 00 54.0	+00.7	57	42.6 +02.5	N 15 14.3	+00.0	125	14.9 +02.6	S 11 55.8	+00.1	08
09	292	34.6 +01.0	S 00 54.7	+00.7	72	45.1 +02.4	N 15 14.3	+00.0	140	17.5 +02.7	S 11 55.9	+00.1	09
10	307	35.6 +01.0	S 00 55.4	+00.6	87	47.5 +02.5	N 15 14.3	+00.0	155	20.2 +02.6	S 11 56.0	+00.0	10
11	322	36.6 +01.0	S 00 56.0	+00.7	102	50.0 +02.4	N 15 14.3	+00.0	170	22.8 +02.6	S 11 56.0	+00.1	11
12	337	37.6 +01.0	S 00 56.7	+00.6	117	52.4 +02.5	N 15 14.3	+00.0	185	25.4 +02.7	S 11 56.1	+00.1	12
13	352	38.6 +01.0	S 00 57.3	+00.7	132	54.9 +02.4	N 15 14.3	+00.0	200	28.1 +02.6	S 11 56.2	+00.1	13
14	7	39.6 +01.0	S 00 58.0	+00.7	147	57.3 +02.5	N 15 14.3	+00.0	215	30.7 +02.7	S 11 56.3	+00.0	14
15	22	40.6 +01.0	S 00 58.7	+00.6	162	59.8 +02.4	N 15 14.3	+00.0	230	33.4 +02.6	S 11 56.3	+00.1	15
16	37	41.6 +01.0	S 00 59.3	+00.7	178	02.2 +02.4	N 15 14.3	+00.0	245	36.0 +02.7	S 11 56.4	+00.1	16
17	52	42.6 +01.0	S 00 60.0	+00.7	193	04.6 +02.5	N 15 14.3	+00.0	260	38.7 +02.6	S 11 56.5	+00.0	17
18	67	43.6 +00.9	S 01 00.7	+00.6	208	07.1 +02.4	N 15 14.3	+00.0	275	41.3 +02.6	S 11 56.5	+00.1	18
19	82	44.5 +01.0	S 01 01.3	+00.7	223	09.5 +02.5	N 15 14.3	+00.0	290	43.9 +02.7	S 11 56.6	+00.1	19
20	97	45.5 +01.0	S 01 02.0	+00.6	238	12.0 +02.4	N 15 14.3	+00.0	305	46.6 +02.6	S 11 56.7	+00.0	20
21	112	46.5 +01.0	S 01 02.6	+00.7	253	14.4 +02.5	N 15 14.3	+00.0	320	49.2 +02.7	S 11 56.7	+00.1	21
22	127	47.5 +01.0	S 01 03.3	+00.7	268	16.9 +02.4	N 15 14.3	+00.0	335	51.9 +02.6	S 11 56.8	+00.1	22
23	142	48.5 +01.0	S 01 04.0	+00.6	283	19.3 +02.5	N 15 14.3	+00.0	350	54.5 +02.7	S 11 56.9	+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 176° 176° 176° 176° 176° 176°				SHA 316° 316° 316° 316° 316° 316°				SHA 024° 024° 024° 024° 024° 024°				
	Greenwich Culmination Time: 13:29				Greenwich Culmination Time: 04:09				Greenwich Culmination Time: 23:36				

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	43.3 -00.9	209 12.8 +02.4	N 10	15.3 +00.3	322 12.0 -29.9	N 07	51.4 +16.4	00			
01	195 06.1 +00.2	N 07	42.4 -00.9	224 15.2 +02.5	N 10	15.6 +00.4	336 42.1 -29.9	N 08	07.8 +16.3	01			
02	210 06.3 +00.2	N 07	41.5 -00.9	239 17.7 +02.5	N 10	16.0 +00.3	351 12.2 -29.9	N 08	24.1 +16.3	02			
03	225 06.5 +00.2	N 07	40.6 -00.9	254 20.2 +02.4	N 10	16.3 +00.3	5 42.3 -29.9	N 08	40.4 +16.2	03			
04	240 06.7 +00.2	N 07	39.7 -01.0	269 22.6 +02.5	N 10	16.6 +00.4	20 12.4 -29.9	N 08	56.6 +16.1	04			
05	255 06.9 +00.2	N 07	38.7 -00.9	284 25.1 +02.5	N 10	17.0 +00.3	34 42.5 -29.9	N 09	12.7 +16.1	05			
06	270 07.1 +00.2	N 07	37.8 -00.9	299 27.6 +02.4	N 10	17.3 +00.3	49 12.6 -29.9	N 09	28.8 +16.0	06			
07	285 07.3 +00.2	N 07	36.9 -00.9	314 30.0 +02.5	N 10	17.6 +00.3	63 42.7 -30.0	N 09	44.8 +15.9	07			
08	300 07.5 +00.2	N 07	36.0 -00.9	329 32.5 +02.4	N 10	17.9 +00.4	78 12.7 -29.9	N 10	00.7 +15.9	08			
09	315 07.7 +00.3	N 07	35.1 -00.9	344 34.9 +02.4	N 10	18.3 +00.3	92 42.8 -30.0	N 10	16.6 +15.7	09			
10	330 08.0 +00.2	N 07	34.2 -01.0	359 37.3 +02.5	N 10	18.6 +00.3	107 12.8 -29.9	N 10	32.3 +15.7	10			
11	345 08.2 +00.2	N 07	33.2 -00.9	14 39.8 +02.4	N 10	18.9 +00.3	121 42.9 -30.0	N 10	48.0 +15.6	11			
12	0 08.4 +00.2	N 07	32.3 -00.9	29 42.2 +02.4	N 10	19.2 +00.4	136 12.9 -30.0	N 11	03.6 +15.6	12			
13	15 08.6 +00.2	N 07	31.4 -00.9	44 44.6 +02.5	N 10	19.6 +00.3	150 42.9 -30.0	N 11	19.2 +15.4	13			
14	30 08.8 +00.2	N 07	30.5 -00.9	59 47.1 +02.4	N 10	19.9 +00.3	165 12.9 -30.0	N 11	34.6 +15.4	14			
15	45 09.0 +00.2	N 07	29.6 -00.9	74 49.5 +02.4	N 10	20.2 +00.3	179 42.9 -30.0	N 11	50.0 +15.3	15			
16	60 09.2 +00.2	N 07	28.7 -01.0	89 51.9 +02.4	N 10	20.5 +00.3	194 12.9 -30.1	N 12	05.3 +15.2	16			
17	75 09.4 +00.2	N 07	27.7 -00.9	104 54.3 +02.4	N 10	20.8 +00.4	208 42.8 -30.1	N 12	20.5 +15.2	17			
18	90 09.6 +00.2	N 07	26.8 -00.9	119 56.7 +02.4	N 10	21.2 +00.3	223 12.7 -30.0	N 12	35.7 +15.0	18			
19	105 09.8 +00.2	N 07	25.9 -00.9	134 59.1 +02.4	N 10	21.5 +00.3	237 42.7 -30.1	N 12	50.7 +14.9	19			
20	120 10.0 +00.2	N 07	25.0 -00.9	150 01.5 +02.4	N 10	21.8 +00.3	252 12.6 -30.2	N 13	05.6 +14.9	20			
21	135 10.2 +00.2	N 07	24.1 -00.9	165 03.9 +02.4	N 10	22.1 +00.3	266 42.4 -30.1	N 13	20.5 +14.8	21			
22	150 10.4 +00.2	N 07	23.2 -01.0	180 06.3 +02.4	N 10	22.4 +00.4	281 12.3 -30.2	N 13	35.3 +14.7	22			
23	165 10.6 +00.2	N 07	22.2 -00.9	195 08.7 +02.4	N 10	22.8 +00.3	295 42.1 -30.1	N 13	50.0 +14.5	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 198° 198° 198° 198° 198° 197° Greenwich Culmination Time: 11:59				UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'4 00'4 00'4 00'4 00'4 00'4 SHA 227° 227° 227° 227° 227° 227° Greenwich Culmination Time: 10:01				UT 02 06 10 14 18 22 SD 16'2 16'2 16'2 16'1 16'1 16'0 HP 59'6 59'5 59'3 59'2 59'0 58'8 SHA 339° 337° 335° 333° 331° 328° Greenwich Culmination Time: 02:36					
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	157 49.5 +01.0	S 01	04.6 +00.7	298 21.8 +02.4	N 15	14.3 +00.0	5 57.2 +02.6	S 11	57.0 +00.0	00			
01	172 50.5 +01.0	S 01	05.3 +00.6	313 24.2 +02.5	N 15	14.3 +00.0	20 59.8 +02.6	S 11	57.0 +00.1	01			
02	187 51.5 +01.0	S 01	05.9 +00.7	328 26.7 +02.4	N 15	14.3 +00.0	36 02.4 +02.7	S 11	57.1 +00.1	02			
03	202 52.5 +01.0	S 01	06.6 +00.7	343 29.1 +02.5	N 15	14.3 +00.0	51 05.1 +02.6	S 11	57.2 +00.0	03			
04	217 53.5 +01.0	S 01	07.3 +00.6	358 31.6 +02.4	N 15	14.3 -00.1	66 07.7 +02.7	S 11	57.2 +00.1	04			
05	232 54.5 +01.0	S 01	07.9 +00.7	13 34.0 +02.5	N 15	14.2 +00.0	81 10.4 +02.6	S 11	57.3 +00.1	05			
06	247 55.5 +01.0	S 01	08.6 +00.6	28 36.5 +02.4	N 15	14.2 +00.0	96 13.0 +02.6	S 11	57.4 +00.0	06			
07	262 56.5 +00.9	S 01	09.2 +00.7	43 38.9 +02.5	N 15	14.2 +00.0	111 15.6 +02.7	S 11	57.4 +00.1	07			
08	277 57.4 +01.0	S 01	09.9 +00.7	58 41.4 +02.4	N 15	14.2 +00.0	126 18.3 +02.6	S 11	57.5 +00.1	08			
09	292 58.4 +01.0	S 01	10.6 +00.6	73 43.8 +02.5	N 15	14.2 +00.0	141 20.9 +02.7	S 11	57.6 +00.0	09			
10	307 59.4 +01.0	S 01	11.2 +00.7	88 46.3 +02.4	N 15	14.2 +00.0	156 23.6 +02.6	S 11	57.6 +00.1	10			
11	323 00.4 +01.0	S 01	11.9 +00.7	103 48.7 +02.5	N 15	14.2 +00.0	171 26.2 +02.6	S 11	57.7 +00.1	11			
12	338 01.4 +01.0	S 01	12.6 +00.6	118 51.2 +02.4	N 15	14.2 +00.0	186 28.8 +02.7	S 11	57.8 +00.1	12			
13	353 02.4 +01.0	S 01	13.2 +00.7	133 53.6 +02.5	N 15	14.2 +00.0	201 31.5 +02.6	S 11	57.9 +00.0	13			
14	8 03.4 +01.0	S 01	13.9 +00.6	148 56.1 +02.4	N 15	14.2 +00.0	216 34.1 +02.7	S 11	57.9 +00.1	14			
15	23 04.4 +01.0	S 01	14.5 +00.7	163 58.5 +02.5	N 15	14.2 +00.0	231 36.8 +02.6	S 11	58.0 +00.1	15			
16	38 05.4 +01.0	S 01	15.2 +00.7	179 01.0 +02.5	N 15	14.2 +00.0	246 39.4 +02.7	S 11	58.1 +00.0	16			
17	53 06.4 +01.0	S 01	15.9 +00.6	194 03.5 +02.4	N 15	14.2 +00.0	261 42.1 +02.6	S 11	58.1 +00.1	17			
18	68 07.4 +01.0	S 01	16.5 +00.7	209 05.9 +02.5	N 15	14.2 +00.0	276 44.7 +02.6	S 11	58.2 +00.1	18			
19	83 08.4 +00.9	S 01	17.2 +00.6	224 08.4 +02.4	N 15	14.2 +00.0	291 47.3 +02.7	S 11	58.3 +00.0	19			
20	98 09.3 +01.0	S 01	17.8 +00.7	239 10.8 +02.5	N 15	14.2 +00.0	306 50.0 +02.6	S 11	58.3 +00.1	20			
21	113 10.3 +01.0	S 01	18.5 +00.7	254 13.3 +02.4	N 15	14.2 +00.0	321 52.6 +02.7	S 11	58.4 +00.1	21			
22	128 11.3 +01.0	S 01	19.2 +00.6	269 15.7 +02.5	N 15	14.2 +00.0	336 55.3 +02.6	S 11	58.5 +00.1	22			
23	143 12.3 +01.0	S 01	19.8 +00.7	284 18.2 +02.4	N 15	14.2 -00.1	351 57.9 +02.6	S 11	58.6 +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 176° 176° 176° 176° 176° 175° Greenwich Culmination Time: 13:27				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 316° 316° 316° 316° 316° 316° Greenwich Culmination Time: 04:05				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 024° 024° 024° 024° 024° 024° Greenwich Culmination Time: 23:32					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 10.8 +00.2	N 07 21.3 -00.9	210 11.1 +02.3	N 10 23.1 +00.3	310 12.0 -30.2	N 14 04.5 +14.5	00						
01	195 11.0 +00.2	N 07 20.4 -00.9	225 13.4 +02.4	N 10 23.4 +00.3	324 41.8 -30.3	N 14 19.0 +14.4	01						
02	210 11.2 +00.2	N 07 19.5 -00.9	240 15.8 +02.4	N 10 23.7 +00.3	339 11.5 -30.2	N 14 33.4 +14.3	02						
03	225 11.4 +00.3	N 07 18.6 -01.0	255 18.2 +02.3	N 10 24.0 +00.3	353 41.3 -30.3	N 14 47.7 +14.2	03						
04	240 11.7 +00.2	N 07 17.6 -00.9	270 20.5 +02.4	N 10 24.3 +00.3	8 11.0 -30.3	N 15 01.9 +14.1	04						
05	255 11.9 +00.2	N 07 16.7 -00.9	285 22.9 +02.4	N 10 24.6 +00.4	22 40.7 -30.3	N 15 16.0 +14.0	05						
06	270 12.1 +00.2	N 07 15.8 -00.9	300 25.3 +02.3	N 10 25.0 +00.3	37 10.4 -30.4	N 15 30.0 +14.0	06						
07	285 12.3 +00.2	N 07 14.9 -00.9	315 27.6 +02.4	N 10 25.3 +00.3	51 40.0 -30.4	N 15 44.0 +13.8	07						
08	300 12.5 +00.2	N 07 14.0 -01.0	330 30.0 +02.3	N 10 25.6 +00.3	66 09.6 -30.4	N 15 57.8 +13.7	08						
09	315 12.7 +00.2	N 07 13.0 -00.9	345 32.3 +02.3	N 10 25.9 +00.3	80 39.2 -30.4	N 16 11.5 +13.6	09						
10	330 12.9 +00.2	N 07 12.1 -00.9	0 34.6 +02.4	N 10 26.2 +00.3	95 08.8 -30.5	N 16 25.1 +13.4	10						
11	345 13.1 +00.2	N 07 11.2 -00.9	15 37.0 +02.3	N 10 26.5 +00.3	109 38.3 -30.5	N 16 38.5 +13.4	11						
12	0 13.3 +00.2	N 07 10.3 -01.0	30 39.3 +02.3	N 10 26.8 +00.3	124 07.8 -30.5	N 16 51.9 +13.3	12						
13	15 13.5 +00.2	N 07 09.3 -00.9	45 41.6 +02.4	N 10 27.1 +00.3	138 37.3 -30.5	N 17 05.2 +13.2	13						
14	30 13.7 +00.2	N 07 08.4 -00.9	60 44.0 +02.3	N 10 27.4 +00.3	153 06.8 -30.6	N 17 18.4 +13.0	14						
15	45 13.9 +00.2	N 07 07.5 -00.9	75 46.3 +02.3	N 10 27.7 +00.3	167 36.2 -30.6	N 17 31.4 +13.0	15						
16	60 14.1 +00.2	N 07 06.6 -00.9	90 48.6 +02.3	N 10 28.0 +00.3	182 05.6 -30.7	N 17 44.4 +12.8	16						
17	75 14.3 +00.2	N 07 05.7 -01.0	105 50.9 +02.3	N 10 28.3 +00.3	196 34.9 -30.6	N 17 57.2 +12.8	17						
18	90 14.5 +00.3	N 07 04.7 -00.9	120 53.2 +02.3	N 10 28.6 +00.4	211 04.3 -30.8	N 18 10.0 +12.6	18						
19	105 14.8 +00.2	N 07 03.8 -00.9	135 55.5 +02.3	N 10 29.0 +00.3	225 33.5 -30.7	N 18 22.6 +12.5	19						
20	120 15.0 +00.2	N 07 02.9 -00.9	150 57.8 +02.3	N 10 29.3 +00.3	240 02.8 -30.8	N 18 35.1 +12.4	20						
21	135 15.2 +00.2	N 07 02.0 -01.0	166 00.1 +02.3	N 10 29.6 +00.3	254 32.0 -30.8	N 18 47.5 +12.2	21						
22	150 15.4 +00.2	N 07 01.0 -00.9	181 02.4 +02.3	N 10 29.9 +00.3	269 01.2 -30.8	N 18 59.7 +12.2	22						
23	165 15.6 +00.2	N 07 00.1 -00.9	196 04.7 +02.3	N 10 30.2 +00.3	283 30.4 -30.9	N 19 11.9 +12.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'9 15'9 15'9 15'9 15'9 15'9		SD	00'4 00'4 00'4 00'4 00'4 00'4		SD	16'0 15'9 15'9 15'9 15'8 15'8						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'4 00'4 00'4 00'4 00'4 00'4		HP	58'7 58'5 58'4 58'2 58'0 57'9						
SHA	197° 197° 197° 197° 197° 196°		SHA	227° 227° 227° 227° 227° 227°		SHA	326° 324° 322° 320° 317° 315°						
Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 09:57				Greenwich Culmination Time: 03:26					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	158 13.3 +01.0	S 01 20.5 +00.7	299 20.6 +02.5	N 15 14.1 +00.0	7 00.5 +02.7	S 11 58.6 +00.1	00						
01	173 14.3 +01.0	S 01 21.2 +00.6	314 23.1 +02.5	N 15 14.1 +00.0	22 03.2 +02.6	S 11 58.7 +00.1	01						
02	188 15.3 +01.0	S 01 21.8 +00.7	329 25.6 +02.4	N 15 14.1 +00.0	37 05.8 +02.7	S 11 58.8 +00.0	02						
03	203 16.3 +01.0	S 01 22.5 +00.6	344 28.0 +02.5	N 15 14.1 +00.0	52 08.5 +02.6	S 11 58.8 +00.1	03						
04	218 17.3 +01.0	S 01 23.1 +00.7	359 30.5 +02.4	N 15 14.1 +00.0	67 11.1 +02.6	S 11 58.9 +00.1	04						
05	233 18.3 +01.0	S 01 23.8 +00.7	14 32.9 +02.5	N 15 14.1 +00.0	82 13.7 +02.7	S 11 59.0 +00.0	05						
06	248 19.3 +00.9	S 01 24.5 +00.6	29 35.4 +02.4	N 15 14.1 +00.0	97 16.4 +02.6	S 11 59.0 +00.1	06						
07	263 20.2 +01.0	S 01 25.1 +00.7	44 37.8 +02.5	N 15 14.1 +00.0	112 19.0 +02.7	S 11 59.1 +00.1	07						
08	278 21.2 +01.0	S 01 25.8 +00.6	59 40.3 +02.5	N 15 14.1 +00.0	127 21.7 +02.6	S 11 59.2 +00.0	08						
09	293 22.2 +01.0	S 01 26.4 +00.7	74 42.8 +02.4	N 15 14.1 +00.0	142 24.3 +02.7	S 11 59.2 +00.1	09						
10	308 23.2 +01.0	S 01 27.1 +00.7	89 45.2 +02.5	N 15 14.1 +00.0	157 27.0 +02.6	S 11 59.3 +00.1	10						
11	323 24.2 +01.0	S 01 27.8 +00.6	104 47.7 +02.4	N 15 14.1 +00.0	172 29.6 +02.6	S 11 59.4 +00.0	11						
12	338 25.2 +01.0	S 01 28.4 +00.7	119 50.1 +02.5	N 15 14.1 +00.0	187 32.2 +02.7	S 11 59.4 +00.1	12						
13	353 26.2 +01.0	S 01 29.1 +00.6	134 52.6 +02.5	N 15 14.1 +00.0	202 34.9 +02.6	S 11 59.5 +00.1	13						
14	8 27.2 +01.0	S 01 29.7 +00.7	149 55.1 +02.4	N 15 14.1 -00.1	217 37.5 +02.7	S 11 59.6 +00.1	14						
15	23 28.2 +01.0	S 01 30.4 +00.7	164 57.5 +02.5	N 15 14.0 +00.0	232 40.2 +02.6	S 11 59.7 +00.0	15						
16	38 29.2 +00.9	S 01 31.1 +00.6	179 60.0 +02.5	N 15 14.0 +00.0	247 42.8 +02.6	S 11 59.7 +00.1	16						
17	53 30.1 +01.0	S 01 31.7 +00.7	195 02.5 +02.4	N 15 14.0 +00.0	262 45.4 +02.7	S 11 59.8 +00.1	17						
18	68 31.1 +01.0	S 01 32.4 +00.7	210 04.9 +02.5	N 15 14.0 +00.0	277 48.1 +02.6	S 11 59.9 +00.0	18						
19	83 32.1 +01.0	S 01 33.1 +00.6	225 07.4 +02.4	N 15 14.0 +00.0	292 50.7 +02.7	S 11 59.9 +00.1	19						
20	98 33.1 +01.0	S 01 33.7 +00.7	240 09.8 +02.5	N 15 14.0 +00.0	307 53.4 +02.6	S 12 00.0 +00.1	20						
21	113 34.1 +01.0	S 01 34.4 +00.6	255 12.3 +02.5	N 15 14.0 +00.0	322 56.0 +02.6	S 12 00.1 +00.0	21						
22	128 35.1 +01.0	S 01 35.0 +00.7	270 14.8 +02.4	N 15 14.0 +00.0	337 58.6 +02.7	S 12 00.1 +00.1	22						
23	143 36.1 +01.0	S 01 35.7 +00.7	285 17.2 +02.5	N 15 14.0 +00.0	353 01.3 +02.6	S 12 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	175° 175° 175° 175° 175° 175°		SHA	316° 316° 316° 316° 316° 316°		SHA	024° 024° 024° 024° 024° 024°						
Greenwich Culmination Time: 13:26				Greenwich Culmination Time: 04:01				Greenwich Culmination Time: 23:27					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 69%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	180 15.8 +00.2	N 06	59.2 -00.9		211 07.0 +02.3	N 10	30.5 +00.3		297 59.5 -30.9	N 19	23.9 +12.0		00
01	195 16.0 +00.2	N 06	58.3 -01.0		226 09.3 +02.2	N 10	30.8 +00.3		312 28.6 -31.0	N 19	35.9 +11.8		01
02	210 16.2 +00.2	N 06	57.3 -00.9		241 11.5 +02.3	N 10	31.1 +00.3		326 57.6 -30.9	N 19	47.7 +11.6		02
03	225 16.4 +00.2	N 06	56.4 -00.9		256 13.8 +02.3	N 10	31.4 +00.3		341 26.7 -31.0	N 19	59.3 +11.6		03
04	240 16.6 +00.2	N 06	55.5 -00.9		271 16.1 +02.2	N 10	31.7 +00.2		355 55.7 -31.1	N 20	10.9 +11.4		04
05	255 16.8 +00.3	N 06	54.6 -01.0		286 18.3 +02.3	N 10	31.9 +00.3		10 24.6 -31.1	N 20	22.3 +11.3		05
06	270 17.1 +00.2	N 06	53.6 -00.9		301 20.6 +02.2	N 10	32.2 +00.3		24 53.5 -31.1	N 20	33.6 +11.2		06
07	285 17.3 +00.2	N 06	52.7 -00.9		316 22.8 +02.3	N 10	32.5 +00.3		39 22.4 -31.1	N 20	44.8 +11.1		07
08	300 17.5 +00.2	N 06	51.8 -00.9		331 25.1 +02.2	N 10	32.8 +00.3		53 51.3 -31.2	N 20	55.9 +10.9		08
09	315 17.7 +00.2	N 06	50.9 -01.0		346 27.3 +02.3	N 10	33.1 +00.3		68 20.1 -31.2	N 21	06.8 +10.9		09
10	330 17.9 +00.2	N 06	49.9 -00.9		1 29.6 +02.2	N 10	33.4 +00.3		82 48.9 -31.3	N 21	17.7 +10.6		10
11	345 18.1 +00.2	N 06	49.0 -00.9		16 31.8 +02.3	N 10	33.7 +00.3		97 17.6 -31.3	N 21	28.3 +10.6		11
12	0 18.3 +00.2	N 06	48.1 -00.9		31 34.1 +02.2	N 10	34.0 +00.3		111 46.3 -31.3	N 21	38.9 +10.4		12
13	15 18.5 +00.2	N 06	47.2 -01.0		46 36.3 +02.2	N 10	34.3 +00.3		126 15.0 -31.4	N 21	49.3 +10.3		13
14	30 18.7 +00.2	N 06	46.2 -00.9		61 38.5 +02.2	N 10	34.6 +00.3		140 43.6 -31.4	N 21	59.6 +10.2		14
15	45 18.9 +00.2	N 06	45.3 -00.9		76 40.7 +02.3	N 10	34.9 +00.3		155 12.2 -31.4	N 22	09.8 +10.0		15
16	60 19.1 +00.3	N 06	44.4 -00.9		91 43.0 +02.2	N 10	35.2 +00.3		169 40.8 -31.4	N 22	19.8 +10.0		16
17	75 19.4 +00.2	N 06	43.5 -01.0		106 45.2 +02.2	N 10	35.5 +00.2		184 09.4 -31.5	N 22	29.8 +09.7		17
18	90 19.6 +00.2	N 06	42.5 -00.9		121 47.4 +02.2	N 10	35.7 +00.3		198 37.9 -31.6	N 22	39.5 +09.7		18
19	105 19.8 +00.2	N 06	41.6 -00.9		136 49.6 +02.2	N 10	36.0 +00.3		213 06.3 -31.5	N 22	49.2 +09.5		19
20	120 20.0 +00.2	N 06	40.7 -01.0		151 51.8 +02.2	N 10	36.3 +00.3		227 34.8 -31.6	N 22	58.7 +09.4		20
21	135 20.2 +00.2	N 06	39.7 -00.9		166 54.0 +02.2	N 10	36.6 +00.3		242 03.2 -31.7	N 23	08.1 +09.2		21
22	150 20.4 +00.2	N 06	38.8 -00.9		181 56.2 +02.2	N 10	36.9 +00.3		256 31.5 -31.6	N 23	17.3 +09.1		22
23	165 20.6 +00.2	N 06	37.9 -00.9		196 58.4 +02.2	N 10	37.2 +00.3		270 59.9 -31.7	N 23	26.4 +09.0		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 196° 196° 196° 196° 196° 196°
Greenwich Culmination Time: 11:58	

UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4
HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 227° 227° 227° 227° 227° 227°
Greenwich Culmination Time: 09:54	

UT 02 06 10 14 18 22	SD 15'7 15'7 15'6 15'6 15'6 15'5
HP 57'7 57'6 57'4 57'2 57'1 56'9	SHA 313° 311° 309° 306° 304° 302°
Greenwich Culmination Time: 04:16	

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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 41.4 +00.2	N 05 07.0 -01.0	215 12.6 +01.8	N 11 01.2 +00.2	234 22.5 -30.5	N 26 46.2 -04.8	00						
01	195 41.6 +00.2	N 05 06.0 -00.9	230 14.4 +01.8	N 11 01.4 +00.2	248 52.0 -30.5	N 26 41.4 -04.9	01						
02	210 41.8 +00.3	N 05 05.1 -01.0	245 16.2 +01.9	N 11 01.6 +00.2	263 21.5 -30.4	N 26 36.5 -05.0	02						
03	225 42.1 +00.2	N 05 04.1 -00.9	260 18.1 +01.8	N 11 01.8 +00.2	277 51.1 -30.3	N 26 31.5 -05.2	03						
04	240 42.3 +00.2	N 05 03.2 -01.0	275 19.9 +01.8	N 11 02.0 +00.2	292 20.8 -30.3	N 26 26.3 -05.3	04						
05	255 42.5 +00.2	N 05 02.2 -00.9	290 21.7 +01.8	N 11 02.2 +00.2	306 50.5 -30.2	N 26 21.0 -05.4	05						
06	270 42.7 +00.2	N 05 01.3 -01.0	305 23.5 +01.8	N 11 02.4 +00.2	321 20.3 -30.1	N 26 15.6 -05.6	06						
07	285 42.9 +00.2	N 05 00.3 -00.9	320 25.3 +01.8	N 11 02.6 +00.2	335 50.2 -30.1	N 26 10.0 -05.6	07						
08	300 43.1 +00.3	N 04 59.4 -01.0	335 27.1 +01.8	N 11 02.8 +00.2	350 20.1 -30.0	N 26 04.4 -05.8	08						
09	315 43.4 +00.2	N 04 58.4 -00.9	350 28.9 +01.8	N 11 03.0 +00.2	4 50.1 -29.9	N 25 58.6 -05.9	09						
10	330 43.6 +00.2	N 04 57.5 -00.9	5 30.7 +01.7	N 11 03.2 +00.2	19 20.2 -29.9	N 25 52.7 -06.1	10						
11	345 43.8 +00.2	N 04 56.6 -01.0	20 32.4 +01.8	N 11 03.4 +00.2	33 50.3 -29.8	N 25 46.6 -06.1	11						
12	0 44.0 +00.2	N 04 55.6 -00.9	35 34.2 +01.8	N 11 03.6 +00.2	48 20.5 -29.8	N 25 40.5 -06.2	12						
13	15 44.2 +00.2	N 04 54.7 -01.0	50 36.0 +01.8	N 11 03.8 +00.2	62 50.7 -29.6	N 25 34.3 -06.4	13						
14	30 44.4 +00.3	N 04 53.7 -00.9	65 37.8 +01.7	N 11 04.0 +00.2	77 21.1 -29.7	N 25 27.9 -06.5	14						
15	45 44.7 +00.2	N 04 52.8 -01.0	80 39.5 +01.8	N 11 04.2 +00.2	91 51.4 -29.5	N 25 21.4 -06.6	15						
16	60 44.9 +00.2	N 04 51.8 -00.9	95 41.3 +01.8	N 11 04.4 +00.2	106 21.9 -29.5	N 25 14.8 -06.7	16						
17	75 45.1 +00.2	N 04 50.9 -01.0	110 43.1 +01.7	N 11 04.6 +00.2	120 52.4 -29.4	N 25 08.1 -06.8	17						
18	90 45.3 +00.2	N 04 49.9 -00.9	125 44.8 +01.8	N 11 04.8 +00.2	135 23.0 -29.3	N 25 01.3 -07.0	18						
19	105 45.5 +00.3	N 04 49.0 -01.0	140 46.6 +01.7	N 11 05.0 +00.2	149 53.7 -29.3	N 24 54.3 -07.0	19						
20	120 45.8 +00.2	N 04 48.0 -00.9	155 48.3 +01.8	N 11 05.2 +00.2	164 24.4 -29.2	N 24 47.3 -07.2	20						
21	135 46.0 +00.2	N 04 47.1 -01.0	170 50.1 +01.7	N 11 05.4 +00.2	178 55.2 -29.2	N 24 40.1 -07.2	21						
22	150 46.2 +00.2	N 04 46.1 -00.9	185 51.8 +01.8	N 11 05.6 +00.2	193 26.0 -29.0	N 24 32.9 -07.4	22						
23	165 46.4 +00.2	N 04 45.2 -01.0	200 53.6 +01.7	N 11 05.8 +00.2	207 57.0 -29.0	N 24 25.5 -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 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'4 00'4 00'4 00'4 00'4 00'4		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'3 54'3 54'2 54'2 54'2 54'1								
	SHA 192° 192° 192° 191° 191° 191°		SHA 226° 226° 226° 226° 226° 226°		SHA 245° 242° 240° 238° 236° 234°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:38		Greenwich Culmination Time: 08:39								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	160 35.0 +01.0	S 02 55.8 +00.6	305 18.0 +02.5	N 15 12.2 +00.0	13 20.5 +02.6	S 12 08.4 +00.0	00						
01	175 36.0 +00.9	S 02 56.4 +00.7	320 20.5 +02.5	N 15 12.2 +00.0	28 23.1 +02.7	S 12 08.4 +00.1	01						
02	190 36.9 +01.0	S 02 57.1 +00.7	335 23.0 +02.5	N 15 12.2 +00.0	43 25.8 +02.6	S 12 08.5 +00.1	02						
03	205 37.9 +01.0	S 02 57.8 +00.6	350 25.5 +02.6	N 15 12.2 +00.0	58 28.4 +02.7	S 12 08.6 +00.0	03						
04	220 38.9 +01.0	S 02 58.4 +00.7	5 28.1 +02.5	N 15 12.2 -00.1	73 31.1 +02.6	S 12 08.6 +00.1	04						
05	235 39.9 +00.9	S 02 59.1 +00.6	20 30.6 +02.5	N 15 12.1 +00.0	88 33.7 +02.6	S 12 08.7 +00.1	05						
06	250 40.8 +01.0	S 02 59.7 +00.7	35 33.1 +02.5	N 15 12.1 +00.0	103 36.3 +02.7	S 12 08.8 +00.0	06						
07	265 41.8 +01.0	S 03 00.4 +00.7	50 35.6 +02.5	N 15 12.1 +00.0	118 39.0 +02.6	S 12 08.8 +00.1	07						
08	280 42.8 +01.0	S 03 01.1 +00.6	65 38.1 +02.5	N 15 12.1 +00.0	133 41.6 +02.6	S 12 08.9 +00.1	08						
09	295 43.8 +00.9	S 03 01.7 +00.7	80 40.6 +02.5	N 15 12.1 -00.1	148 44.2 +02.7	S 12 09.0 +00.0	09						
10	310 44.7 +01.0	S 03 02.4 +00.7	95 43.1 +02.5	N 15 12.0 +00.0	163 46.9 +02.6	S 12 09.0 +00.1	10						
11	325 45.7 +01.0	S 03 03.1 +00.6	110 45.6 +02.5	N 15 12.0 +00.0	178 49.5 +02.6	S 12 09.1 +00.1	11						
12	340 46.7 +01.0	S 03 03.7 +00.7	125 48.1 +02.5	N 15 12.0 +00.0	193 52.1 +02.7	S 12 09.2 +00.0	12						
13	355 47.7 +00.9	S 03 04.4 +00.6	140 50.6 +02.6	N 15 12.0 -00.1	208 54.8 +02.6	S 12 09.2 +00.1	13						
14	10 48.6 +01.0	S 03 05.0 +00.7	155 53.2 +02.5	N 15 11.9 +00.0	223 57.4 +02.6	S 12 09.3 +00.1	14						
15	25 49.6 +01.0	S 03 05.7 +00.7	170 55.7 +02.5	N 15 11.9 +00.0	239 00.0 +02.7	S 12 09.4 +00.0	15						
16	40 50.6 +01.0	S 03 06.4 +00.6	185 58.2 +02.5	N 15 11.9 +00.0	254 02.7 +02.6	S 12 09.4 +00.1	16						
17	55 51.6 +00.9	S 03 07.0 +00.7	201 00.7 +02.5	N 15 11.9 +00.0	269 05.3 +02.6	S 12 09.5 +00.0	17						
18	70 52.5 +01.0	S 03 07.7 +00.7	216 03.2 +02.5	N 15 11.9 -00.1	284 07.9 +02.7	S 12 09.5 +00.1	18						
19	85 53.5 +01.0	S 03 08.4 +00.6	231 05.7 +02.5	N 15 11.8 +00.0	299 10.6 +02.6	S 12 09.6 +00.1	19						
20	100 54.5 +01.0	S 03 09.0 +00.7	246 08.2 +02.5	N 15 11.8 +00.0	314 13.2 +02.6	S 12 09.7 +00.0	20						
21	115 55.5 +00.9	S 03 09.7 +00.6	261 10.7 +02.6	N 15 11.8 +00.0	329 15.8 +02.7	S 12 09.7 +00.1	21						
22	130 56.4 +01.0	S 03 10.3 +00.7	276 13.3 +02.5	N 15 11.8 -00.1	344 18.5 +02.6	S 12 09.8 +00.1	22						
23	145 57.4 +01.0	S 03 11.0 +00.7	291 15.8 +02.5	N 15 11.7 +00.0	359 21.1 +02.7	S 12 09.9 +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 172° 172° 172° 171° 171° 171°		SHA 317° 317° 317° 317° 317° 317°		SHA 025° 025° 025° 025° 025° 025°								
	Greenwich Culmination Time: 13:16		Greenwich Culmination Time: 03:38		Greenwich Culmination Time: 23:02								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	180 46.6 +00.3	N 04 44.2 -00.9	215 55.3 +01.8	N 11 06.0 +00.1	222 28.0 -28.9	N 24 18.0 -07.5	00							
01	195 46.9 +00.2	N 04 43.3 -01.0	230 57.1 +01.7	N 11 06.1 +00.2	236 59.1 -28.9	N 24 10.5 -07.7	01							
02	210 47.1 +00.2	N 04 42.3 -00.9	245 58.8 +01.7	N 11 06.3 +00.2	251 30.2 -28.8	N 24 02.8 -07.8	02							
03	225 47.3 +00.2	N 04 41.4 -01.0	261 00.5 +01.8	N 11 06.5 +00.2	266 01.4 -28.7	N 23 55.0 -07.9	03							
04	240 47.5 +00.2	N 04 40.4 -00.9	276 02.3 +01.7	N 11 06.7 +00.2	280 32.7 -28.7	N 23 47.1 -08.0	04							
05	255 47.7 +00.2	N 04 39.5 -01.0	291 04.0 +01.7	N 11 06.9 +00.2	295 04.0 -28.6	N 23 39.1 -08.1	05							
06	270 47.9 +00.3	N 04 38.5 -00.9	306 05.7 +01.7	N 11 07.1 +00.2	309 35.4 -28.5	N 23 31.0 -08.2	06							
07	285 48.2 +00.2	N 04 37.6 -01.0	321 07.4 +01.7	N 11 07.3 +00.1	324 06.9 -28.4	N 23 22.8 -08.3	07							
08	300 48.4 +00.2	N 04 36.6 -00.9	336 09.1 +01.7	N 11 07.4 +00.2	338 38.5 -28.4	N 23 14.5 -08.4	08							
09	315 48.6 +00.2	N 04 35.7 -01.0	351 10.8 +01.7	N 11 07.6 +00.2	353 10.1 -28.3	N 23 06.1 -08.6	09							
10	330 48.8 +00.2	N 04 34.7 -00.9	6 12.5 +01.7	N 11 07.8 +00.2	7 41.8 -28.2	N 22 57.5 -08.6	10							
11	345 49.0 +00.3	N 04 33.8 -01.0	21 14.2 +01.7	N 11 08.0 +00.2	22 13.6 -28.2	N 22 48.9 -08.6	11							
12	0 49.3 +00.2	N 04 32.8 -00.9	36 15.9 +01.7	N 11 08.2 +00.1	36 45.4 -28.1	N 22 40.3 -08.8	12							
13	15 49.5 +00.2	N 04 31.9 -01.0	51 17.6 +01.7	N 11 08.3 +00.2	51 17.3 -28.0	N 22 31.5 -08.9	13							
14	30 49.7 +00.2	N 04 30.9 -00.9	66 19.3 +01.7	N 11 08.5 +00.2	65 49.3 -28.0	N 22 22.6 -09.0	14							
15	45 49.9 +00.2	N 04 30.0 -01.0	81 21.0 +01.7	N 11 08.7 +00.2	80 21.3 -27.9	N 22 13.6 -09.1	15							
16	60 50.1 +00.3	N 04 29.0 -00.9	96 22.7 +01.7	N 11 08.9 +00.2	94 53.4 -27.8	N 22 04.5 -09.2	16							
17	75 50.4 +00.2	N 04 28.1 -01.0	111 24.4 +01.7	N 11 09.1 +00.1	109 25.6 -27.8	N 21 55.3 -09.2	17							
18	90 50.6 +00.2	N 04 27.1 -00.9	126 26.1 +01.6	N 11 09.2 +00.2	123 57.8 -27.7	N 21 46.1 -09.4	18							
19	105 50.8 +00.2	N 04 26.2 -01.0	141 27.7 +01.7	N 11 09.4 +00.2	138 30.1 -27.6	N 21 36.7 -09.4	19							
20	120 51.0 +00.2	N 04 25.2 -00.9	156 29.4 +01.7	N 11 09.6 +00.1	153 02.5 -27.6	N 21 27.3 -09.5	20							
21	135 51.2 +00.3	N 04 24.3 -01.0	171 31.1 +01.6	N 11 09.7 +00.2	167 34.9 -27.5	N 21 17.8 -09.7	21							
22	150 51.5 +00.2	N 04 23.3 -00.9	186 32.7 +01.7	N 11 09.9 +00.2	182 07.4 -27.4	N 21 08.1 -09.7	22							
23	165 51.7 +00.2	N 04 22.4 -01.0	201 34.4 +01.7	N 11 10.1 +00.2	196 40.0 -27.3	N 20 58.4 -09.8	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 191° 191° 191° 190° 190° 190°	Greenwich Culmination Time: 11:56	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 226° 226° 226° 226° 226° 226°	Greenwich Culmination Time: 09:35	UT 02 06 10 14 18 22	SD 14'7 14'7 14'7 14'7 14'7 14'7	HP 54'1 54'1 54'0 54'0 54'0 54'0	SHA 232° 230° 228° 225° 223° 221°	Greenwich Culmination Time: 09:28

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	160 58.4 +01.0	S 03 11.7 +00.6	306 18.3 +02.5	N 15 11.7 +00.0	14 23.8 +02.6	S 12 09.9 +00.1	00							
01	175 59.4 +00.9	S 03 12.3 +00.7	321 20.8 +02.5	N 15 11.7 +00.0	29 26.4 +02.6	S 12 10.0 +00.1	01							
02	191 00.3 +01.0	S 03 13.0 +00.6	336 23.3 +02.5	N 15 11.7 +00.0	44 29.0 +02.7	S 12 10.1 +00.0	02							
03	206 01.3 +01.0	S 03 13.6 +00.7	351 25.8 +02.6	N 15 11.7 -00.1	59 31.7 +02.6	S 12 10.1 +00.1	03							
04	221 02.3 +01.0	S 03 14.3 +00.7	6 28.4 +02.5	N 15 11.6 +00.0	74 34.3 +02.6	S 12 10.2 +00.1	04							
05	236 03.3 +00.9	S 03 15.0 +00.6	21 30.9 +02.5	N 15 11.6 +00.0	89 36.9 +02.7	S 12 10.3 +00.0	05							
06	251 04.2 +01.0	S 03 15.6 +00.7	36 33.4 +02.5	N 15 11.6 +00.0	104 39.6 +02.6	S 12 10.3 +00.1	06							
07	266 05.2 +01.0	S 03 16.3 +00.6	51 35.9 +02.5	N 15 11.6 -00.1	119 42.2 +02.6	S 12 10.4 +00.1	07							
08	281 06.2 +01.0	S 03 16.9 +00.7	66 38.4 +02.5	N 15 11.5 +00.0	134 44.8 +02.7	S 12 10.5 +00.0	08							
09	296 07.2 +00.9	S 03 17.6 +00.7	81 40.9 +02.6	N 15 11.5 +00.0	149 47.5 +02.6	S 12 10.5 +00.1	09							
10	311 08.1 +01.0	S 03 18.3 +00.6	96 43.5 +02.5	N 15 11.5 +00.0	164 50.1 +02.6	S 12 10.6 +00.1	10							
11	326 09.1 +01.0	S 03 18.9 +00.7	111 46.0 +02.5	N 15 11.5 -00.1	179 52.7 +02.7	S 12 10.7 +00.0	11							
12	341 10.1 +00.9	S 03 19.6 +00.7	126 48.5 +02.5	N 15 11.4 +00.0	194 55.4 +02.6	S 12 10.7 +00.1	12							
13	356 11.0 +01.0	S 03 20.3 +00.6	141 51.0 +02.5	N 15 11.4 +00.0	209 58.0 +02.6	S 12 10.8 +00.1	13							
14	11 12.0 +01.0	S 03 20.9 +00.7	156 53.5 +02.6	N 15 11.4 +00.0	225 00.6 +02.7	S 12 10.9 +00.0	14							
15	26 13.0 +01.0	S 03 21.6 +00.6	171 56.1 +02.5	N 15 11.4 -00.1	240 03.3 +02.6	S 12 10.9 +00.1	15							
16	41 14.0 +00.9	S 03 22.2 +00.7	186 58.6 +02.5	N 15 11.3 +00.0	255 05.9 +02.6	S 12 11.0 +00.0	16							
17	56 14.9 +01.0	S 03 22.9 +00.7	202 01.1 +02.5	N 15 11.3 +00.0	270 08.5 +02.7	S 12 11.0 +00.1	17							
18	71 15.9 +01.0	S 03 23.6 +00.6	217 03.6 +02.5	N 15 11.3 +00.0	285 11.2 +02.6	S 12 11.1 +00.1	18							
19	86 16.9 +00.9	S 03 24.2 +00.7	232 06.1 +02.6	N 15 11.3 +00.0	300 13.8 +02.6	S 12 11.2 +00.0	19							
20	101 17.8 +01.0	S 03 24.9 +00.6	247 08.7 +02.5	N 15 11.3 -00.1	315 16.4 +02.7	S 12 11.2 +00.1	20							
21	116 18.8 +01.0	S 03 25.5 +00.7	262 11.2 +02.5	N 15 11.2 +00.0	330 19.1 +02.6	S 12 11.3 +00.1	21							
22	131 19.8 +01.0	S 03 26.2 +00.7	277 13.7 +02.5	N 15 11.2 +00.0	345 21.7 +02.6	S 12 11.4 +00.0	22							
23	146 20.8 +00.9	S 03 26.9 +00.6	292 16.2 +02.6	N 15 11.2 +00.0	0 24.3 +02.7	S 12 11.4 +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 171° 171° 171° 171° 171° 171°	Greenwich Culmination Time: 13:15	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 03:34	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 025° 025° 025° 025° 025° 025°	Greenwich Culmination Time: 22:58

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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 51.9 +00.2	N 04 21.4 -00.9	216 36.1 +01.6	N 11 10.3 +00.1	211 12.7 -27.3	N 20 48.6 -09.8	00						
01	195 52.1 +00.2	N 04 20.5 -01.0	231 37.7 +01.7	N 11 10.4 +00.2	225 45.4 -27.3	N 20 38.8 -10.0	01						
02	210 52.3 +00.3	N 04 19.5 -00.9	246 39.4 +01.6	N 11 10.6 +00.2	240 18.1 -27.1	N 20 28.8 -10.1	02						
03	225 52.6 +00.2	N 04 18.6 -01.0	261 41.0 +01.7	N 11 10.8 +00.1	254 51.0 -27.1	N 20 18.7 -10.1	03						
04	240 52.8 +00.2	N 04 17.6 -00.9	276 42.7 +01.6	N 11 10.9 +00.2	269 23.9 -27.1	N 20 08.6 -10.2	04						
05	255 53.0 +00.2	N 04 16.7 -01.0	291 44.3 +01.6	N 11 11.1 +00.1	283 56.8 -26.9	N 19 58.4 -10.3	05						
06	270 53.2 +00.2	N 04 15.7 -01.0	306 45.9 +01.7	N 11 11.2 +00.2	298 29.9 -26.9	N 19 48.1 -10.4	06						
07	285 53.4 +00.3	N 04 14.7 -00.9	321 47.6 +01.6	N 11 11.4 +00.2	313 03.0 -26.9	N 19 37.7 -10.4	07						
08	300 53.7 +00.2	N 04 13.8 -01.0	336 49.2 +01.6	N 11 11.6 +00.1	327 36.1 -26.8	N 19 27.3 -10.5	08						
09	315 53.9 +00.2	N 04 12.8 -00.9	351 50.8 +01.7	N 11 11.7 +00.2	342 09.3 -26.7	N 19 16.8 -10.7	09						
10	330 54.1 +00.2	N 04 11.9 -01.0	6 52.5 +01.6	N 11 11.9 +00.2	356 42.6 -26.6	N 19 06.1 -10.6	10						
11	345 54.3 +00.2	N 04 10.9 -00.9	21 54.1 +01.6	N 11 12.1 +00.1	11 16.0 -26.6	N 18 55.5 -10.8	11						
12	0 54.5 +00.3	N 04 10.0 -01.0	36 55.7 +01.6	N 11 12.2 +00.2	25 49.4 -26.6	N 18 44.7 -10.8	12						
13	15 54.8 +00.2	N 04 09.0 -00.9	51 57.3 +01.6	N 11 12.4 +00.1	40 22.8 -26.4	N 18 33.9 -11.0	13						
14	30 55.0 +00.2	N 04 08.1 -01.0	66 58.9 +01.6	N 11 12.5 +00.2	54 56.4 -26.4	N 18 22.9 -10.9	14						
15	45 55.2 +00.2	N 04 07.1 -00.9	82 00.5 +01.6	N 11 12.7 +00.1	69 30.0 -26.4	N 18 12.0 -11.1	15						
16	60 55.4 +00.2	N 04 06.2 -01.0	97 02.1 +01.6	N 11 12.8 +00.2	84 03.6 -26.3	N 18 00.9 -11.1	16						
17	75 55.6 +00.3	N 04 05.2 -00.9	112 03.7 +01.6	N 11 13.0 +00.1	98 37.3 -26.2	N 17 49.8 -11.2	17						
18	90 55.9 +00.2	N 04 04.3 -01.0	127 05.3 +01.6	N 11 13.1 +00.2	113 11.1 -26.2	N 17 38.6 -11.3	18						
19	105 56.1 +00.2	N 04 03.3 -01.0	142 06.9 +01.6	N 11 13.3 +00.1	127 44.9 -26.1	N 17 27.3 -11.4	19						
20	120 56.3 +00.2	N 04 02.3 -00.9	157 08.5 +01.6	N 11 13.4 +00.2	142 18.8 -26.1	N 17 15.9 -11.4	20						
21	135 56.5 +00.2	N 04 01.4 -01.0	172 10.1 +01.6	N 11 13.6 +00.1	156 52.7 -26.0	N 17 04.5 -11.4	21						
22	150 56.7 +00.3	N 04 00.4 -00.9	187 11.7 +01.6	N 11 13.7 +00.2	171 26.7 -26.0	N 16 53.1 -11.6	22						
23	165 57.0 +00.2	N 03 59.5 -01.0	202 13.3 +01.6	N 11 13.9 +00.1	186 00.7 -25.9	N 16 41.5 -11.6	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 190° 190° 190° 190° 189° 189° Greenwich Culmination Time: 11:56	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'3 00'3 00'3 HP 00'4 00'4 00'4 00'4 00'4 00'4 SHA 226° 226° 226° 226° 226° 226° Greenwich Culmination Time: 09:32	UT 02 06 10 14 18 22 SD 14'7 14'7 14'7 14'7 14'7 14'7 HP 54'0 54'0 53'9 53'9 53'9 53'9 SHA 219° 218° 216° 214° 212° 210° Greenwich Culmination Time: 10:13										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	161 21.7 +01.0	S 03 27.5 +00.7	307 18.8 +02.5	N 15 11.2 -00.1	15 27.0 +02.6	S 12 11.5 +00.1	00						
01	176 22.7 +01.0	S 03 28.2 +00.7	322 21.3 +02.5	N 15 11.1 +00.0	30 29.6 +02.6	S 12 11.6 +00.0	01						
02	191 23.7 +00.9	S 03 28.9 +00.6	337 23.8 +02.5	N 15 11.1 +00.0	45 32.2 +02.7	S 12 11.6 +00.1	02						
03	206 24.6 +01.0	S 03 29.5 +00.7	352 26.3 +02.6	N 15 11.1 +00.0	60 34.9 +02.6	S 12 11.7 +00.1	03						
04	221 25.6 +01.0	S 03 30.2 +00.6	7 28.9 +02.5	N 15 11.1 -00.1	75 37.5 +02.6	S 12 11.8 +00.0	04						
05	236 26.6 +01.0	S 03 30.8 +00.7	22 31.4 +02.5	N 15 11.0 +00.0	90 40.1 +02.7	S 12 11.8 +00.1	05						
06	251 27.6 +00.9	S 03 31.5 +00.7	37 33.9 +02.5	N 15 11.0 +00.0	105 42.8 +02.6	S 12 11.9 +00.1	06						
07	266 28.5 +01.0	S 03 32.2 +00.6	52 36.4 +02.6	N 15 11.0 -00.1	120 45.4 +02.6	S 12 12.0 +00.0	07						
08	281 29.5 +01.0	S 03 32.8 +00.7	67 39.0 +02.5	N 15 10.9 +00.0	135 48.0 +02.7	S 12 12.0 +00.1	08						
09	296 30.5 +00.9	S 03 33.5 +00.6	82 41.5 +02.5	N 15 10.9 +00.0	150 50.7 +02.6	S 12 12.1 +00.0	09						
10	311 31.4 +01.0	S 03 34.1 +00.7	97 44.0 +02.5	N 15 10.9 +00.0	165 53.3 +02.6	S 12 12.1 +00.1	10						
11	326 32.4 +01.0	S 03 34.8 +00.7	112 46.5 +02.6	N 15 10.9 -00.1	180 55.9 +02.7	S 12 12.2 +00.1	11						
12	341 33.4 +01.0	S 03 35.5 +00.6	127 49.1 +02.5	N 15 10.8 +00.0	195 58.6 +02.6	S 12 12.3 +00.0	12						
13	356 34.4 +00.9	S 03 36.1 +00.7	142 51.6 +02.5	N 15 10.8 +00.0	211 01.2 +02.6	S 12 12.3 +00.1	13						
14	11 35.3 +01.0	S 03 36.8 +00.6	157 54.1 +02.5	N 15 10.8 +00.0	226 03.8 +02.7	S 12 12.4 +00.1	14						
15	26 36.3 +01.0	S 03 37.4 +00.7	172 56.6 +02.6	N 15 10.8 -00.1	241 06.5 +02.6	S 12 12.5 +00.0	15						
16	41 37.3 +00.9	S 03 38.1 +00.7	187 59.2 +02.5	N 15 10.7 +00.0	256 09.1 +02.6	S 12 12.5 +00.1	16						
17	56 38.2 +01.0	S 03 38.8 +00.6	203 01.7 +02.5	N 15 10.7 +00.0	271 11.7 +02.7	S 12 12.6 +00.1	17						
18	71 39.2 +01.0	S 03 39.4 +00.7	218 04.2 +02.6	N 15 10.7 +00.0	286 14.4 +02.6	S 12 12.7 +00.0	18						
19	86 40.2 +00.9	S 03 40.1 +00.7	233 06.8 +02.5	N 15 10.7 -00.1	301 17.0 +02.6	S 12 12.7 +00.1	19						
20	101 41.1 +01.0	S 03 40.8 +00.6	248 09.3 +02.5	N 15 10.6 +00.0	316 19.6 +02.6	S 12 12.8 +00.0	20						
21	116 42.1 +01.0	S 03 41.4 +00.7	263 11.8 +02.6	N 15 10.6 +00.0	331 22.2 +02.7	S 12 12.8 +00.1	21						
22	131 43.1 +00.9	S 03 42.1 +00.6	278 14.4 +02.5	N 15 10.6 -00.1	346 24.9 +02.6	S 12 12.9 +00.1	22						
23	146 44.0 +01.0	S 03 42.7 +00.7	293 16.9 +02.5	N 15 10.5 +00.0	1 27.5 +02.6	S 12 13.0 +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 171° 170° 170° 170° 170° 170° Greenwich Culmination Time: 13:13	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 03:30	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 025° 025° 025° 025° 025° 025° Greenwich Culmination Time: 22:54										

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 58.5 -00.9	217 14.9 +01.5	N 11 14.0 +00.2	200 34.8 -25.8	N 16 29.9 -11.7	00										
01	195 57.4 +00.2	N 03 57.6 -01.0	232 16.4 +01.6	N 11 14.2 +00.1	215 09.0 -25.8	N 16 18.2 -11.7	01										
02	210 57.6 +00.3	N 03 56.6 -00.9	247 18.0 +01.6	N 11 14.3 +00.2	229 43.2 -25.8	N 16 06.5 -11.8	02										
03	225 57.9 +00.2	N 03 55.7 -01.0	262 19.6 +01.6	N 11 14.5 +00.1	244 17.4 -25.7	N 15 54.7 -11.9	03										
04	240 58.1 +00.2	N 03 54.7 -01.0	277 21.2 +01.5	N 11 14.6 +00.2	258 51.7 -25.6	N 15 42.8 -11.9	04										
05	255 58.3 +00.2	N 03 53.7 -00.9	292 22.7 +01.6	N 11 14.8 +00.1	273 26.1 -25.6	N 15 30.9 -12.0	05										
06	270 58.5 +00.2	N 03 52.8 -01.0	307 24.3 +01.5	N 11 14.9 +00.2	288 00.5 -25.6	N 15 18.9 -12.1	06										
07	285 58.7 +00.3	N 03 51.8 -00.9	322 25.8 +01.6	N 11 15.1 +00.1	302 34.9 -25.5	N 15 06.8 -12.1	07										
08	300 59.0 +00.2	N 03 50.9 -01.0	337 27.4 +01.5	N 11 15.2 +00.1	317 09.4 -25.4	N 14 54.7 -12.1	08										
09	315 59.2 +00.2	N 03 49.9 -00.9	352 28.9 +01.6	N 11 15.3 +00.2	331 44.0 -25.4	N 14 42.6 -12.3	09										
10	330 59.4 +00.2	N 03 49.0 -01.0	7 30.5 +01.5	N 11 15.5 +00.1	346 18.6 -25.4	N 14 30.3 -12.3	10										
11	345 59.6 +00.2	N 03 48.0 -01.0	22 32.0 +01.6	N 11 15.6 +00.2	0 53.2 -25.3	N 14 18.0 -12.3	11										
12	0 59.8 +00.3	N 03 47.0 -00.9	37 33.6 +01.5	N 11 15.8 +00.1	15 27.9 -25.2	N 14 05.7 -12.4	12										
13	16 00.1 +00.2	N 03 46.1 -01.0	52 35.1 +01.5	N 11 15.9 +00.1	30 02.7 -25.2	N 13 53.3 -12.4	13										
14	31 00.3 +00.2	N 03 45.1 -00.9	67 36.6 +01.6	N 11 16.0 +00.2	44 37.5 -25.2	N 13 40.9 -12.5	14										
15	46 00.5 +00.2	N 03 44.2 -01.0	82 38.2 +01.5	N 11 16.2 +00.1	59 12.3 -25.1	N 13 28.4 -12.6	15										
16	61 00.7 +00.2	N 03 43.2 -00.9	97 39.7 +01.5	N 11 16.3 +00.1	73 47.2 -25.1	N 13 15.8 -12.6	16										
17	76 00.9 +00.3	N 03 42.3 -01.0	112 41.2 +01.5	N 11 16.4 +00.2	88 22.1 -25.1	N 13 03.2 -12.7	17										
18	91 01.2 +00.2	N 03 41.3 -01.0	127 42.7 +01.6	N 11 16.6 +00.1	102 57.0 -25.0	N 12 50.5 -12.7	18										
19	106 01.4 +00.2	N 03 40.3 -00.9	142 44.3 +01.5	N 11 16.7 +00.1	117 32.0 -25.0	N 12 37.8 -12.7	19										
20	121 01.6 +00.2	N 03 39.4 -01.0	157 45.8 +01.5	N 11 16.8 +00.2	132 07.0 -24.9	N 12 25.1 -12.9	20										
21	136 01.8 +00.3	N 03 38.4 -00.9	172 47.3 +01.5	N 11 17.0 +00.1	146 42.1 -24.9	N 12 12.2 -12.8	21										
22	151 02.1 +00.2	N 03 37.5 -01.0	187 48.8 +01.5	N 11 17.1 +00.1	161 17.2 -24.8	N 11 59.4 -12.9	22										
23	166 02.3 +00.2	N 03 36.5 -00.9	202 50.3 +01.5	N 11 17.2 +00.1	175 52.4 -24.8	N 11 46.5 -13.0	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 189° 189° 189° 189° 189° 188°	Greenwich Culmination Time: 11:56		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'4 00'4 00'4 00'4 00'4 00'4	SHA 225° 225° 225° 225° 225° 225°	Greenwich Culmination Time: 09:30		UT 02 06 10 14 18 22	SD 14'7 14'7 14'7 14'7 14'7 14'7	HP 54'0 54'0 54'0 54'0 54'0 54'0	SHA 208° 206° 204° 202° 200° 199°	Greenwich Culmination Time: 10:56
UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	161 45.0 +01.0	S 03 43.4 +00.7	308 19.4 +02.6	N 15 10.5 +00.0	16 30.1 +02.7	S 12 13.0 +00.1	00										
01	176 46.0 +01.0	S 03 44.1 +00.6	323 22.0 +02.5	N 15 10.5 +00.0	31 32.8 +02.6	S 12 13.1 +00.1	01										
02	191 47.0 +00.9	S 03 44.7 +00.7	338 24.5 +02.5	N 15 10.5 -00.1	46 35.4 +02.6	S 12 13.2 +00.0	02										
03	206 47.9 +01.0	S 03 45.4 +00.6	353 27.0 +02.6	N 15 10.4 +00.0	61 38.0 +02.7	S 12 13.2 +00.1	03										
04	221 48.9 +01.0	S 03 46.0 +00.7	8 29.6 +02.5	N 15 10.4 +00.0	76 40.7 +02.6	S 12 13.3 +00.1	04										
05	236 49.9 +00.9	S 03 46.7 +00.7	23 32.1 +02.5	N 15 10.4 +00.0	91 43.3 +02.6	S 12 13.4 +00.0	05										
06	251 50.8 +01.0	S 03 47.4 +00.6	38 34.6 +02.6	N 15 10.4 -00.1	106 45.9 +02.7	S 12 13.4 +00.1	06										
07	266 51.8 +01.0	S 03 48.0 +00.7	53 37.2 +02.5	N 15 10.3 +00.0	121 48.6 +02.6	S 12 13.5 +00.1	07										
08	281 52.8 +00.9	S 03 48.7 +00.6	68 39.7 +02.5	N 15 10.3 +00.0	136 51.2 +02.6	S 12 13.6 +00.0	08										
09	296 53.7 +01.0	S 03 49.3 +00.7	83 42.2 +02.6	N 15 10.3 -00.1	151 53.8 +02.7	S 12 13.6 +00.1	09										
10	311 54.7 +01.0	S 03 50.0 +00.7	98 44.8 +02.5	N 15 10.2 +00.0	166 56.5 +02.6	S 12 13.7 +00.0	10										
11	326 55.7 +00.9	S 03 50.7 +00.6	113 47.3 +02.5	N 15 10.2 +00.0	181 59.1 +02.6	S 12 13.7 +00.1	11										
12	341 56.6 +01.0	S 03 51.3 +00.7	128 49.8 +02.6	N 15 10.2 +00.0	197 01.7 +02.7	S 12 13.8 +00.1	12										
13	356 57.6 +01.0	S 03 52.0 +00.6	143 52.4 +02.5	N 15 10.2 -00.1	212 04.4 +02.6	S 12 13.9 +00.0	13										
14	11 58.6 +00.9	S 03 52.6 +00.7	158 54.9 +02.5	N 15 10.1 +00.0	227 07.0 +02.6	S 12 13.9 +00.1	14										
15	26 59.5 +01.0	S 03 53.3 +00.7	173 57.4 +02.6	N 15 10.1 +00.0	242 09.6 +02.6	S 12 14.0 +00.1	15										
16	42 00.5 +01.0	S 03 54.0 +00.6	188 60.0 +02.5	N 15 10.1 -00.1	257 12.2 +02.7	S 12 14.1 +00.0	16										
17	57 01.5 +00.9	S 03 54.6 +00.7	204 02.5 +02.6	N 15 10.0 +00.0	272 14.9 +02.6	S 12 14.1 +00.1	17										
18	72 02.4 +01.0	S 03 55.3 +00.6	219 05.1 +02.5	N 15 10.0 +00.0	287 17.5 +02.6	S 12 14.2 +00.0	18										
19	87 03.4 +01.0	S 03 55.9 +00.7	234 07.6 +02.5	N 15 10.0 +00.0	302 20.1 +02.7	S 12 14.2 +00.1	19										
20	102 04.4 +00.9	S 03 56.6 +00.7	249 10.1 +02.6	N 15 10.0 -00.1	317 22.8 +02.6	S 12 14.3 +00.1	20										
21	117 05.3 +01.0	S 03 57.3 +00.6	264 12.7 +02.5	N 15 09.9 +00.0	332 25.4 +02.6	S 12 14.4 +00.0	21										
22	132 06.3 +01.0	S 03 57.9 +00.7	279 15.2 +02.5	N 15 09.9 +00.0	347 28.0 +02.7	S 12 14.4 +00.1	22										
23	147 07.3 +00.9	S 03 58.6 +00.7	294 17.7 +02.6	N 15 09.9 -00.1	2 30.7 +02.6	S 12 14.5 +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 170° 170° 170° 170° 170° 169°	Greenwich Culmination Time: 13:12		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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 03:26		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 025° 025° 025° 025° 025° 025°	Greenwich Culmination Time: 22:49

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 02.5 +00.2	N 03 35.6 -01.0	217 51.8 +01.5	N 11 17.3 +00.2	190 27.6 -24.8	N 11 33.5 -13.0	00						
01	196 02.7 +00.2	N 03 34.6 -01.0	232 53.3 +01.5	N 11 17.5 +00.1	205 02.8 -24.8	N 11 20.5 -13.0	01						
02	211 02.9 +00.3	N 03 33.6 -00.9	247 54.8 +01.5	N 11 17.6 +00.1	219 38.0 -24.7	N 11 07.5 -13.1	02						
03	226 03.2 +00.2	N 03 32.7 -01.0	262 56.3 +01.5	N 11 17.7 +00.1	234 13.3 -24.6	N 10 54.4 -13.1	03						
04	241 03.4 +00.2	N 03 31.7 -00.9	277 57.8 +01.5	N 11 17.8 +00.2	248 48.7 -24.7	N 10 41.3 -13.2	04						
05	256 03.6 +00.2	N 03 30.8 -01.0	292 59.3 +01.5	N 11 18.0 +00.1	263 24.0 -24.6	N 10 28.1 -13.2	05						
06	271 03.8 +00.2	N 03 29.8 -01.0	308 00.8 +01.4	N 11 18.1 +00.1	277 59.4 -24.6	N 10 14.9 -13.3	06						
07	286 04.0 +00.3	N 03 28.8 -00.9	323 02.2 +01.5	N 11 18.2 +00.1	292 34.8 -24.5	N 10 01.6 -13.3	07						
08	301 04.3 +00.2	N 03 27.9 -01.0	338 03.7 +01.5	N 11 18.3 +00.1	307 10.3 -24.6	N 09 48.3 -13.3	08						
09	316 04.5 +00.2	N 03 26.9 -00.9	353 05.2 +01.5	N 11 18.4 +00.2	321 45.7 -24.5	N 09 35.0 -13.4	09						
10	331 04.7 +00.2	N 03 26.0 -01.0	8 06.7 +01.4	N 11 18.6 +00.1	336 21.2 -24.4	N 09 21.6 -13.4	10						
11	346 04.9 +00.3	N 03 25.0 -00.9	23 08.1 +01.5	N 11 18.7 +00.1	350 56.8 -24.5	N 09 08.2 -13.4	11						
12	1 05.2 +00.2	N 03 24.1 -01.0	38 09.6 +01.5	N 11 18.8 +00.1	5 32.3 -24.4	N 08 54.8 -13.5	12						
13	16 05.4 +00.2	N 03 23.1 -01.0	53 11.1 +01.4	N 11 18.9 +00.1	20 07.9 -24.4	N 08 41.3 -13.5	13						
14	31 05.6 +00.2	N 03 22.1 -00.9	68 12.5 +01.5	N 11 19.0 +00.1	34 43.5 -24.3	N 08 27.8 -13.6	14						
15	46 05.8 +00.2	N 03 21.2 -01.0	83 14.0 +01.4	N 11 19.1 +00.1	49 19.2 -24.4	N 08 14.2 -13.6	15						
16	61 06.0 +00.3	N 03 20.2 -00.9	98 15.4 +01.5	N 11 19.2 +00.2	63 54.8 -24.3	N 08 00.6 -13.6	16						
17	76 06.3 +00.2	N 03 19.3 -01.0	113 16.9 +01.4	N 11 19.4 +00.1	78 30.5 -24.3	N 07 47.0 -13.6	17						
18	91 06.5 +00.2	N 03 18.3 -01.0	128 18.3 +01.5	N 11 19.5 +00.1	93 06.2 -24.3	N 07 33.4 -13.7	18						
19	106 06.7 +00.2	N 03 17.3 -00.9	143 19.8 +01.4	N 11 19.6 +00.1	107 41.9 -24.3	N 07 19.7 -13.7	19						
20	121 06.9 +00.3	N 03 16.4 -01.0	158 21.2 +01.5	N 11 19.7 +00.1	122 17.6 -24.2	N 07 06.0 -13.8	20						
21	136 07.2 +00.2	N 03 15.4 -00.9	173 22.7 +01.4	N 11 19.8 +00.1	136 53.4 -24.2	N 06 52.2 -13.8	21						
22	151 07.4 +00.2	N 03 14.5 -01.0	188 24.1 +01.4	N 11 19.9 +00.1	151 29.2 -24.2	N 06 38.4 -13.8	22						
23	166 07.6 +00.2	N 03 13.5 -01.0	203 25.5 +01.5	N 11 20.0 +00.1	166 05.0 -24.2	N 06 24.6 -13.8	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	00'3 00'3 00'3 00'3 00'3 00'3		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	00'4 00'4 00'4 00'4 00'4 00'4		HP	54'0 54'1 54'1 54'1 54'2 54'2						
SHA	188° 188° 188° 188° 188° 188°		SHA	225° 225° 225° 225° 225° 225°		SHA	197° 195° 193° 191° 190° 188°						
Greenwich Culmination Time: 11:55			Greenwich Culmination Time: 09:27			Greenwich Culmination Time: 11:37							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	162 08.2 +01.0	S 03 59.3 +00.6	309 20.3 +02.5	N 15 09.8 +00.0	17 33.3 +02.6	S 12 14.6 +00.0	00						
01	177 09.2 +01.0	S 03 59.9 +00.7	324 22.8 +02.6	N 15 09.8 +00.0	32 35.9 +02.7	S 12 14.6 +00.1	01						
02	192 10.2 +00.9	S 04 00.6 +00.6	339 25.4 +02.5	N 15 09.8 -00.1	47 38.6 +02.6	S 12 14.7 +00.1	02						
03	207 11.1 +01.0	S 04 01.2 +00.7	354 27.9 +02.6	N 15 09.7 +00.0	62 41.2 +02.6	S 12 14.8 +00.0	03						
04	222 12.1 +01.0	S 04 01.9 +00.7	9 30.5 +02.5	N 15 09.7 +00.0	77 43.8 +02.6	S 12 14.8 +00.1	04						
05	237 13.1 +00.9	S 04 02.6 +00.6	24 33.0 +02.5	N 15 09.7 +00.0	92 46.4 +02.7	S 12 14.9 +00.0	05						
06	252 14.0 +01.0	S 04 03.2 +00.7	39 35.5 +02.6	N 15 09.7 -00.1	107 49.1 +02.6	S 12 14.9 +00.1	06						
07	267 15.0 +01.0	S 04 03.9 +00.6	54 38.1 +02.5	N 15 09.6 +00.0	122 51.7 +02.6	S 12 15.0 +00.1	07						
08	282 16.0 +00.9	S 04 04.5 +00.7	69 40.6 +02.6	N 15 09.6 +00.0	137 54.3 +02.7	S 12 15.1 +00.0	08						
09	297 16.9 +01.0	S 04 05.2 +00.7	84 43.2 +02.5	N 15 09.6 -00.1	152 57.0 +02.6	S 12 15.1 +00.1	09						
10	312 17.9 +00.9	S 04 05.9 +00.6	99 45.7 +02.6	N 15 09.5 +00.0	167 59.6 +02.6	S 12 15.2 +00.1	10						
11	327 18.8 +01.0	S 04 06.5 +00.7	114 48.3 +02.5	N 15 09.5 +00.0	183 02.2 +02.6	S 12 15.3 +00.0	11						
12	342 19.8 +01.0	S 04 07.2 +00.6	129 50.8 +02.5	N 15 09.5 -00.1	198 04.8 +02.7	S 12 15.3 +00.1	12						
13	357 20.8 +00.9	S 04 07.8 +00.7	144 53.3 +02.6	N 15 09.4 +00.0	213 07.5 +02.6	S 12 15.4 +00.0	13						
14	12 21.7 +01.0	S 04 08.5 +00.7	159 55.9 +02.5	N 15 09.4 +00.0	228 10.1 +02.6	S 12 15.4 +00.1	14						
15	27 22.7 +01.0	S 04 09.2 +00.6	174 58.4 +02.6	N 15 09.4 -00.1	243 12.7 +02.7	S 12 15.5 +00.1	15						
16	42 23.7 +00.9	S 04 09.8 +00.7	190 01.0 +02.5	N 15 09.3 +00.0	258 15.4 +02.6	S 12 15.6 +00.0	16						
17	57 24.6 +01.0	S 04 10.5 +00.6	205 03.5 +02.6	N 15 09.3 +00.0	273 18.0 +02.6	S 12 15.6 +00.1	17						
18	72 25.6 +01.0	S 04 11.1 +00.7	220 06.1 +02.5	N 15 09.3 +00.0	288 20.6 +02.7	S 12 15.7 +00.1	18						
19	87 26.6 +00.9	S 04 11.8 +00.7	235 08.6 +02.6	N 15 09.3 -00.1	303 23.3 +02.6	S 12 15.8 +00.0	19						
20	102 27.5 +01.0	S 04 12.5 +00.6	250 11.2 +02.5	N 15 09.2 +00.0	318 25.9 +02.6	S 12 15.8 +00.1	20						
21	117 28.5 +01.0	S 04 13.1 +00.7	265 13.7 +02.6	N 15 09.2 +00.0	333 28.5 +02.6	S 12 15.9 +00.0	21						
22	132 29.5 +00.9	S 04 13.8 +00.6	280 16.3 +02.5	N 15 09.2 -00.1	348 31.1 +02.7	S 12 15.9 +00.1	22						
23	147 30.4 +01.0	S 04 14.4 +00.7	295 18.8 +02.6	N 15 09.1 +00.0	3 33.8 +02.6	S 12 16.0 +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	169° 169° 169° 169° 169° 169°		SHA	317° 317° 317° 317° 317° 317°		SHA	025° 025° 025° 025° 025° 025°						
Greenwich Culmination Time: 13:10			Greenwich Culmination Time: 03:22			Greenwich Culmination Time: 22:45							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 07.8 +00.2	N 03 12.5 -00.9	218 27.0 +01.4	N 11 20.1 +00.1	180 40.8 -24.2	N 06 10.8 -13.9	00						
01	196 08.0 +00.3	N 03 11.6 -01.0	233 28.4 +01.4	N 11 20.2 +00.1	195 16.6 -24.2	N 05 56.9 -13.9	01						
02	211 08.3 +00.2	N 03 10.6 -01.0	248 29.8 +01.4	N 11 20.3 +00.1	209 52.4 -24.1	N 05 43.0 -13.9	02						
03	226 08.5 +00.2	N 03 09.6 -00.9	263 31.2 +01.4	N 11 20.4 +00.1	224 28.3 -24.2	N 05 29.1 -13.9	03						
04	241 08.7 +00.2	N 03 08.7 -01.0	278 32.6 +01.5	N 11 20.5 +00.1	239 04.1 -24.1	N 05 15.2 -14.0	04						
05	256 08.9 +00.3	N 03 07.7 -00.9	293 34.1 +01.4	N 11 20.6 +00.1	253 40.0 -24.1	N 05 01.2 -13.9	05						
06	271 09.2 +00.2	N 03 06.8 -01.0	308 35.5 +01.4	N 11 20.7 +00.1	268 15.9 -24.2	N 04 47.3 -14.0	06						
07	286 09.4 +00.2	N 03 05.8 -01.0	323 36.9 +01.4	N 11 20.8 +00.1	282 51.7 -24.1	N 04 33.3 -14.1	07						
08	301 09.6 +00.2	N 03 04.8 -00.9	338 38.3 +01.4	N 11 20.9 +00.1	297 27.6 -24.1	N 04 19.2 -14.0	08						
09	316 09.8 +00.2	N 03 03.9 -01.0	353 39.7 +01.4	N 11 21.0 +00.1	312 03.5 -24.1	N 04 05.2 -14.1	09						
10	331 10.0 +00.3	N 03 02.9 -00.9	8 41.1 +01.4	N 11 21.1 +00.1	326 39.4 -24.0	N 03 51.1 -14.1	10						
11	346 10.3 +00.2	N 03 02.0 -01.0	23 42.5 +01.4	N 11 21.2 +00.1	341 15.4 -24.1	N 03 37.0 -14.1	11						
12	1 10.5 +00.2	N 03 01.0 -01.0	38 43.9 +01.4	N 11 21.3 +00.1	355 51.3 -24.1	N 03 22.9 -14.1	12						
13	16 10.7 +00.2	N 03 00.0 -00.9	53 45.3 +01.4	N 11 21.4 +00.1	10 27.2 -24.1	N 03 08.8 -14.1	13						
14	31 10.9 +00.3	N 02 59.1 -01.0	68 46.7 +01.3	N 11 21.5 +00.1	25 03.1 -24.1	N 02 54.7 -14.2	14						
15	46 11.2 +00.2	N 02 58.1 -01.0	83 48.0 +01.4	N 11 21.6 +00.1	39 39.0 -24.0	N 02 40.5 -14.2	15						
16	61 11.4 +00.2	N 02 57.1 -00.9	98 49.4 +01.4	N 11 21.7 +00.1	54 15.0 -24.1	N 02 26.3 -14.1	16						
17	76 11.6 +00.2	N 02 56.2 -01.0	113 50.8 +01.4	N 11 21.8 +00.0	68 50.9 -24.1	N 02 12.2 -14.2	17						
18	91 11.8 +00.2	N 02 55.2 -00.9	128 52.2 +01.4	N 11 21.8 +00.1	83 26.8 -24.1	N 01 58.0 -14.2	18						
19	106 12.0 +00.3	N 02 54.3 -01.0	143 53.6 +01.3	N 11 21.9 +00.1	98 02.7 -24.1	N 01 43.8 -14.3	19						
20	121 12.3 +00.2	N 02 53.3 -01.0	158 54.9 +01.4	N 11 22.0 +00.1	112 38.6 -24.1	N 01 29.5 -14.2	20						
21	136 12.5 +00.2	N 02 52.3 -00.9	173 56.3 +01.4	N 11 22.1 +00.1	127 14.5 -24.1	N 01 15.3 -14.2	21						
22	151 12.7 +00.2	N 02 51.4 -01.0	188 57.7 +01.3	N 11 22.2 +00.1	141 50.4 -24.1	N 01 01.1 -14.3	22						
23	166 12.9 +00.3	N 02 50.4 -01.0	203 59.0 +01.4	N 11 22.3 +00.1	156 26.3 -24.1	N 00 46.8 -14.3	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 00'3 00'3 00'3 00'3 00'3 00'3		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 00'4 00'4 00'4 00'4 00'4 00'4		HP 54'2 54'3 54'3 54'3 54'4 54'4								
	SHA 187° 187° 187° 187° 187° 187°		SHA 225° 225° 225° 225° 224° 224°		SHA 186° 184° 183° 181° 179° 177°								
	Greenwich Culmination Time: 11:55		Greenwich Culmination Time: 09:25		Greenwich Culmination Time: 12:17								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	162 31.4 +00.9	S 04 15.1 +00.7	310 21.4 +02.5	N 15 09.1 +00.0	18 36.4 +02.6	S 12 16.1 +00.0	00						
01	177 32.3 +01.0	S 04 15.8 +00.6	325 23.9 +02.6	N 15 09.1 -00.1	33 39.0 +02.7	S 12 16.1 +00.1	01						
02	192 33.3 +01.0	S 04 16.4 +00.7	340 26.5 +02.5	N 15 09.0 +00.0	48 41.7 +02.6	S 12 16.2 +00.1	02						
03	207 34.3 +00.9	S 04 17.1 +00.6	355 29.0 +02.5	N 15 09.0 +00.0	63 44.3 +02.6	S 12 16.3 +00.0	03						
04	222 35.2 +01.0	S 04 17.7 +00.7	10 31.5 +02.6	N 15 09.0 -00.1	78 46.9 +02.6	S 12 16.3 +00.1	04						
05	237 36.2 +01.0	S 04 18.4 +00.7	25 34.1 +02.5	N 15 08.9 +00.0	93 49.5 +02.7	S 12 16.4 +00.0	05						
06	252 37.2 +00.9	S 04 19.1 +00.6	40 36.6 +02.6	N 15 08.9 +00.0	108 52.2 +02.6	S 12 16.4 +00.1	06						
07	267 38.1 +01.0	S 04 19.7 +00.7	55 39.2 +02.6	N 15 08.9 -00.1	123 54.8 +02.6	S 12 16.5 +00.1	07						
08	282 39.1 +00.9	S 04 20.4 +00.6	70 41.8 +02.5	N 15 08.8 +00.0	138 57.4 +02.7	S 12 16.6 +00.0	08						
09	297 40.0 +01.0	S 04 21.0 +00.7	85 44.3 +02.6	N 15 08.8 +00.0	154 00.1 +02.6	S 12 16.6 +00.1	09						
10	312 41.0 +01.0	S 04 21.7 +00.7	100 46.9 +02.5	N 15 08.8 -00.1	169 02.7 +02.6	S 12 16.7 +00.1	10						
11	327 42.0 +00.9	S 04 22.4 +00.6	115 49.4 +02.6	N 15 08.7 +00.0	184 05.3 +02.6	S 12 16.8 +00.0	11						
12	342 42.9 +01.0	S 04 23.0 +00.7	130 52.0 +02.5	N 15 08.7 +00.0	199 07.9 +02.7	S 12 16.8 +00.1	12						
13	357 43.9 +00.9	S 04 23.7 +00.6	145 54.5 +02.6	N 15 08.7 -00.1	214 10.6 +02.6	S 12 16.9 +00.0	13						
14	12 44.8 +01.0	S 04 24.3 +00.7	160 57.1 +02.5	N 15 08.6 +00.0	229 13.2 +02.6	S 12 16.9 +00.1	14						
15	27 45.8 +01.0	S 04 25.0 +00.7	175 59.6 +02.6	N 15 08.6 +00.0	244 15.8 +02.6	S 12 17.0 +00.1	15						
16	42 46.8 +00.9	S 04 25.7 +00.6	191 02.2 +02.5	N 15 08.6 -00.1	259 18.4 +02.7	S 12 17.1 +00.0	16						
17	57 47.7 +01.0	S 04 26.3 +00.7	206 04.7 +02.6	N 15 08.5 +00.0	274 21.1 +02.6	S 12 17.1 +00.1	17						
18	72 48.7 +01.0	S 04 27.0 +00.6	221 07.3 +02.5	N 15 08.5 +00.0	289 23.7 +02.6	S 12 17.2 +00.0	18						
19	87 49.7 +00.9	S 04 27.6 +00.7	236 09.8 +02.6	N 15 08.5 -00.1	304 26.3 +02.7	S 12 17.2 +00.1	19						
20	102 50.6 +01.0	S 04 28.3 +00.6	251 12.4 +02.5	N 15 08.4 +00.0	319 29.0 +02.6	S 12 17.3 +00.1	20						
21	117 51.6 +00.9	S 04 28.9 +00.7	266 14.9 +02.6	N 15 08.4 +00.0	334 31.6 +02.6	S 12 17.4 +00.0	21						
22	132 52.5 +01.0	S 04 29.6 +00.7	281 17.5 +02.6	N 15 08.4 -00.1	349 34.2 +02.6	S 12 17.4 +00.1	22						
23	147 53.5 +01.0	S 04 30.3 +00.6	296 20.1 +02.5	N 15 08.3 +00.0	4 36.8 +02.7	S 12 17.5 +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 169° 169° 169° 168° 168° 168°		SHA 317° 317° 317° 317° 317° 317°		SHA 025° 025° 025° 025° 025° 025°								
	Greenwich Culmination Time: 13:09		Greenwich Culmination Time: 03:18		Greenwich Culmination Time: 22:41								

UT	Sun				Venus				Moon				UT											
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec												
00	181	13.2	+00.2	N 02	49.4	-00.9	219	00.4	+01.3	N 11	22.4	+00.0	171	02.2	-24.1	N 00	32.5	-14.2	00					
01	196	13.4	+00.2	N 02	48.5	-01.0	234	01.7	+01.4	N 11	22.4	+00.1	185	38.1	-24.1	N 00	18.3	-14.3	01					
02	211	13.6	+00.2	N 02	47.5	-00.9	249	03.1	+01.3	N 11	22.5	+00.1	200	14.0	-24.2	N 00	04.0	-14.3	02					
03	226	13.8	+00.3	N 02	46.6	-01.0	264	04.4	+01.4	N 11	22.6	+00.1	214	49.8	-24.1	S 00	10.3	+14.3	03					
04	241	14.1	+00.2	N 02	45.6	-01.0	279	05.8	+01.3	N 11	22.7	+00.1	229	25.7	-24.2	S 00	24.6	+14.3	04					
05	256	14.3	+00.2	N 02	44.6	-00.9	294	07.1	+01.4	N 11	22.8	+00.0	244	01.5	-24.2	S 00	38.9	+14.3	05					
06	271	14.5	+00.2	N 02	43.7	-01.0	309	08.5	+01.3	N 11	22.8	+00.1	258	37.3	-24.2	S 00	53.2	+14.3	06					
07	286	14.7	+00.2	N 02	42.7	-01.0	324	09.8	+01.3	N 11	22.9	+00.1	273	13.1	-24.2	S 01	07.5	+14.3	07					
08	301	14.9	+00.3	N 02	41.7	-00.9	339	11.1	+01.4	N 11	23.0	+00.1	287	48.9	-24.2	S 01	21.8	+14.3	08					
09	316	15.2	+00.2	N 02	40.8	-01.0	354	12.5	+01.3	N 11	23.1	+00.0	302	24.7	-24.3	S 01	36.1	+14.3	09					
10	331	15.4	+00.2	N 02	39.8	-01.0	9	13.8	+01.3	N 11	23.1	+00.1	317	00.4	-24.2	S 01	50.4	+14.3	10					
11	346	15.6	+00.2	N 02	38.8	-00.9	24	15.1	+01.4	N 11	23.2	+00.1	331	36.2	-24.3	S 02	04.7	+14.3	11					
12	1	15.8	+00.3	N 02	37.9	-01.0	39	16.5	+01.3	N 11	23.3	+00.1	346	11.9	-24.3	S 02	19.0	+14.3	12					
13	16	16.1	+00.2	N 02	36.9	-01.0	54	17.8	+01.3	N 11	23.4	+00.0	0	47.6	-24.3	S 02	33.3	+14.3	13					
14	31	16.3	+00.2	N 02	35.9	-00.9	69	19.1	+01.3	N 11	23.4	+00.1	15	23.3	-24.4	S 02	47.6	+14.3	14					
15	46	16.5	+00.2	N 02	35.0	-01.0	84	20.4	+01.3	N 11	23.5	+00.1	29	58.9	-24.4	S 03	01.9	+14.3	15					
16	61	16.7	+00.2	N 02	34.0	-00.9	99	21.7	+01.3	N 11	23.6	+00.0	44	34.5	-24.4	S 03	16.2	+14.3	16					
17	76	16.9	+00.3	N 02	33.1	-01.0	114	23.0	+01.3	N 11	23.6	+00.1	59	10.1	-24.4	S 03	30.5	+14.3	17					
18	91	17.2	+00.2	N 02	32.1	-01.0	129	24.3	+01.3	N 11	23.7	+00.1	73	45.7	-24.4	S 03	44.8	+14.3	18					
19	106	17.4	+00.2	N 02	31.1	-00.9	144	25.6	+01.3	N 11	23.8	+00.0	88	21.3	-24.5	S 03	59.1	+14.2	19					
20	121	17.6	+00.2	N 02	30.2	-01.0	159	26.9	+01.3	N 11	23.8	+00.1	102	56.8	-24.5	S 04	13.3	+14.3	20					
21	136	17.8	+00.3	N 02	29.2	-01.0	174	28.2	+01.3	N 11	23.9	+00.1	117	32.3	-24.6	S 04	27.6	+14.2	21					
22	151	18.1	+00.2	N 02	28.2	-00.9	189	29.5	+01.3	N 11	24.0	+00.0	132	07.7	-24.6	S 04	41.8	+14.3	22					
23	166	18.3	+00.2	N 02	27.3	-01.0	204	30.8	+01.3	N 11	24.0	+00.1	146	43.1	-24.6	S 04	56.1	+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	15'9	15'9	15'9	15'9	15'9	15'9		SD	00'3	00'3	00'3	00'3	00'3	00'3		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	00'3	00'3	00'3	00'3	00'3	00'3		HP	54'5	54'5	54'6	54'6	54'7	54'8	
	SHA	186°	186°	186°	186°	186°	186°		SHA	224°	224°	224°	224°	224°	224°		SHA	175°	174°	172°	170°	168°	167°	
	Greenwich Culmination Time: 11:54								Greenwich Culmination Time: 09:23								Greenwich Culmination Time: 12:56							

Table for Sun, Venus, and Moon. Columns include UT, GHA, ddGHA, Dec, dDec for each celestial body. Includes summary rows for UT 02, 06, 10, 14, 18, 22 and Greenwich Culmination Time: 11:54 for Sun, 09:21 for Venus, and 13:37 for Moon.

Table for Mars, Jupiter, and Saturn. Columns include UT, GHA, ddGHA, Dec, dDec for each celestial body. Includes summary rows for UT 02, 06, 10, 14, 18, 22 and Greenwich Culmination Time: 13:06 for Mars, 03:09 for Jupiter, and 22:33 for Saturn.

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	181 23.9 +00.2	N 02 03.1 -01.0	220 02.3 +01.2	N 11 25.3 +00.0	151 15.5 -25.8	S 10 46.2 +13.7	00								
01	196 24.1 +00.2	N 02 02.1 -00.9	235 03.5 +01.2	N 11 25.3 +00.1	165 49.7 -25.8	S 10 59.9 +13.6	01								
02	211 24.3 +00.2	N 02 01.2 -01.0	250 04.7 +01.2	N 11 25.4 +00.0	180 23.9 -25.9	S 11 13.5 +13.6	02								
03	226 24.5 +00.2	N 02 00.2 -01.0	265 05.9 +01.2	N 11 25.4 +00.0	194 58.0 -25.9	S 11 27.1 +13.5	03								
04	241 24.7 +00.3	N 01 59.2 -00.9	280 07.1 +01.3	N 11 25.4 +00.1	209 32.1 -26.1	S 11 40.6 +13.5	04								
05	256 25.0 +00.2	N 01 58.3 -01.0	295 08.4 +01.2	N 11 25.5 +00.0	224 06.0 -26.0	S 11 54.1 +13.5	05								
06	271 25.2 +00.2	N 01 57.3 -01.0	310 09.6 +01.2	N 11 25.5 +00.0	238 40.0 -26.2	S 12 07.6 +13.4	06								
07	286 25.4 +00.2	N 01 56.3 -00.9	325 10.8 +01.2	N 11 25.5 +00.1	253 13.8 -26.2	S 12 21.0 +13.4	07								
08	301 25.6 +00.3	N 01 55.4 -01.0	340 12.0 +01.2	N 11 25.6 +00.0	267 47.6 -26.3	S 12 34.4 +13.4	08								
09	316 25.9 +00.2	N 01 54.4 -01.0	355 13.2 +01.2	N 11 25.6 +00.0	282 21.3 -26.3	S 12 47.8 +13.3	09								
10	331 26.1 +00.2	N 01 53.4 -00.9	10 14.4 +01.2	N 11 25.6 +00.0	296 55.0 -26.4	S 13 01.1 +13.2	10								
11	346 26.3 +00.2	N 01 52.5 -01.0	25 15.6 +01.2	N 11 25.6 +00.1	311 28.6 -26.5	S 13 14.3 +13.2	11								
12	1 26.5 +00.3	N 01 51.5 -01.0	40 16.8 +01.1	N 11 25.7 +00.0	326 02.1 -26.5	S 13 27.5 +13.2	12								
13	16 26.8 +00.2	N 01 50.5 -00.9	55 17.9 +01.2	N 11 25.7 +00.0	340 35.6 -26.7	S 13 40.7 +13.1	13								
14	31 27.0 +00.2	N 01 49.6 -01.0	70 19.1 +01.2	N 11 25.7 +00.1	355 08.9 -26.7	S 13 53.8 +13.1	14								
15	46 27.2 +00.2	N 01 48.6 -01.0	85 20.3 +01.2	N 11 25.8 +00.0	9 42.2 -26.8	S 14 06.9 +13.0	15								
16	61 27.4 +00.2	N 01 47.6 -00.9	100 21.5 +01.2	N 11 25.8 +00.0	24 15.4 -26.8	S 14 19.9 +13.0	16								
17	76 27.6 +00.3	N 01 46.7 -01.0	115 22.7 +01.2	N 11 25.8 +00.0	38 48.6 -26.9	S 14 32.9 +12.9	17								
18	91 27.9 +00.2	N 01 45.7 -01.0	130 23.9 +01.1	N 11 25.8 +00.0	53 21.7 -27.0	S 14 45.8 +12.9	18								
19	106 28.1 +00.2	N 01 44.7 -00.9	145 25.0 +01.2	N 11 25.8 +00.1	67 54.7 -27.1	S 14 58.7 +12.8	19								
20	121 28.3 +00.2	N 01 43.8 -01.0	160 26.2 +01.2	N 11 25.9 +00.0	82 27.6 -27.2	S 15 11.5 +12.7	20								
21	136 28.5 +00.3	N 01 42.8 -01.0	175 27.4 +01.1	N 11 25.9 +00.0	97 00.4 -27.2	S 15 24.2 +12.7	21								
22	151 28.8 +00.2	N 01 41.8 -01.0	190 28.5 +01.2	N 11 25.9 +00.0	111 33.2 -27.3	S 15 36.9 +12.7	22								
23	166 29.0 +00.2	N 01 40.8 -00.9	205 29.7 +01.2	N 11 25.9 +00.0	126 05.9 -27.5	S 15 49.6 +12.5	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 185° 185° 184° 184° 184° 184°	Greenwich Culmination Time: 11:54	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'3 00'3 00'3 00'3 00'3 00'3	SHA 223° 223° 223° 223° 223° 223°	Greenwich Culmination Time: 09:19	UT 02 06 10 14 18 22	SD 15'0 15'1 15'1 15'1 15'1 15'2	HP 55'2 55'3 55'4 55'5 55'5 55'6	SHA 154° 152° 150° 148° 146° 144°	Greenwich Culmination Time: 14:19

UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	163 40.4 +01.0	S 05 02.5 +00.7	313 25.7 +02.6	N 15 06.5 +00.0	21 45.5 +02.6	S 12 20.5 +00.0	00								
01	178 41.4 +00.9	S 05 03.2 +00.7	328 28.3 +02.6	N 15 06.5 +00.0	36 48.1 +02.6	S 12 20.5 +00.1	01								
02	193 42.3 +01.0	S 05 03.9 +00.6	343 30.9 +02.5	N 15 06.5 -00.1	51 50.7 +02.7	S 12 20.6 +00.0	02								
03	208 43.3 +00.9	S 05 04.5 +00.7	358 33.4 +02.6	N 15 06.4 +00.0	66 53.4 +02.6	S 12 20.6 +00.1	03								
04	223 44.2 +01.0	S 05 05.2 +00.6	13 36.0 +02.6	N 15 06.4 -00.1	81 56.0 +02.6	S 12 20.7 +00.1	04								
05	238 45.2 +00.9	S 05 05.8 +00.7	28 38.6 +02.6	N 15 06.3 +00.0	96 58.6 +02.6	S 12 20.8 +00.0	05								
06	253 46.1 +01.0	S 05 06.5 +00.6	43 41.2 +02.5	N 15 06.3 +00.0	112 01.2 +02.6	S 12 20.8 +00.1	06								
07	268 47.1 +00.9	S 05 07.1 +00.7	58 43.7 +02.6	N 15 06.3 -00.1	127 03.8 +02.7	S 12 20.9 +00.0	07								
08	283 48.0 +01.0	S 05 07.8 +00.7	73 46.3 +02.6	N 15 06.2 +00.0	142 06.5 +02.6	S 12 20.9 +00.1	08								
09	298 49.0 +00.9	S 05 08.5 +00.6	88 48.9 +02.6	N 15 06.2 -00.1	157 09.1 +02.6	S 12 21.0 +00.1	09								
10	313 49.9 +01.0	S 05 09.1 +00.7	103 51.5 +02.6	N 15 06.1 +00.0	172 11.7 +02.6	S 12 21.1 +00.0	10								
11	328 50.9 +00.9	S 05 09.8 +00.6	118 54.1 +02.5	N 15 06.1 +00.0	187 14.3 +02.7	S 12 21.1 +00.1	11								
12	343 51.8 +01.0	S 05 10.4 +00.7	133 56.6 +02.6	N 15 06.1 -00.1	202 17.0 +02.6	S 12 21.2 +00.0	12								
13	358 52.8 +00.9	S 05 11.1 +00.7	148 59.2 +02.6	N 15 06.0 +00.0	217 19.6 +02.6	S 12 21.2 +00.1	13								
14	13 53.7 +01.0	S 05 11.8 +00.6	164 01.8 +02.6	N 15 06.0 -00.1	232 22.2 +02.6	S 12 21.3 +00.1	14								
15	28 54.7 +01.0	S 05 12.4 +00.7	179 04.4 +02.5	N 15 05.9 +00.0	247 24.8 +02.6	S 12 21.4 +00.0	15								
16	43 55.7 +00.9	S 05 13.1 +00.6	194 06.9 +02.6	N 15 05.9 +00.0	262 27.4 +02.7	S 12 21.4 +00.1	16								
17	58 56.6 +01.0	S 05 13.7 +00.7	209 09.5 +02.6	N 15 05.9 -00.1	277 30.1 +02.6	S 12 21.5 +00.0	17								
18	73 57.6 +00.9	S 05 14.4 +00.6	224 12.1 +02.6	N 15 05.8 +00.0	292 32.7 +02.6	S 12 21.5 +00.1	18								
19	88 58.5 +01.0	S 05 15.0 +00.7	239 14.7 +02.6	N 15 05.8 -00.1	307 35.3 +02.6	S 12 21.6 +00.1	19								
20	103 59.5 +00.9	S 05 15.7 +00.7	254 17.3 +02.5	N 15 05.7 +00.0	322 37.9 +02.7	S 12 21.7 +00.0	20								
21	119 00.4 +01.0	S 05 16.4 +00.6	269 19.8 +02.6	N 15 05.7 -00.1	337 40.6 +02.6	S 12 21.7 +00.1	21								
22	134 01.4 +00.9	S 05 17.0 +00.7	284 22.4 +02.6	N 15 05.6 +00.0	352 43.2 +02.6	S 12 21.8 +00.0	22								
23	149 02.3 +01.0	S 05 17.7 +00.6	299 25.0 +02.6	N 15 05.6 +00.0	7 45.8 +02.6	S 12 21.8 +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 167° 167° 167° 167° 167° 166°	Greenwich Culmination Time: 13:04	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 03:05	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 025° 025° 025° 025° 025° 025°	Greenwich Culmination Time: 22:29

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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 29.2 +00.2	N 01 39.9 -01.0	220 30.9 +01.1	N 11 25.9 +00.0	140 38.4 -27.4	S 16 02.1 +12.6	00								
01	196 29.4 +00.2	N 01 38.9 -01.0	235 32.0 +01.2	N 11 25.9 +00.1	155 11.0 -27.6	S 16 14.7 +12.4	01								
02	211 29.6 +00.3	N 01 37.9 -00.9	250 33.2 +01.1	N 11 26.0 +00.0	169 43.4 -27.7	S 16 27.1 +12.4	02								
03	226 29.9 +00.2	N 01 37.0 -01.0	265 34.3 +01.2	N 11 26.0 +00.0	184 15.7 -27.7	S 16 39.5 +12.3	03								
04	241 30.1 +00.2	N 01 36.0 -01.0	280 35.5 +01.1	N 11 26.0 +00.0	198 48.0 -27.9	S 16 51.8 +12.3	04								
05	256 30.3 +00.2	N 01 35.0 -00.9	295 36.6 +01.2	N 11 26.0 +00.0	213 20.1 -27.9	S 17 04.1 +12.2	05								
06	271 30.5 +00.3	N 01 34.1 -01.0	310 37.8 +01.1	N 11 26.0 +00.0	227 52.2 -28.0	S 17 16.3 +12.1	06								
07	286 30.8 +00.2	N 01 33.1 -01.0	325 38.9 +01.2	N 11 26.0 +00.0	242 24.2 -28.1	S 17 28.4 +12.1	07								
08	301 31.0 +00.2	N 01 32.1 -00.9	340 40.1 +01.1	N 11 26.0 +00.0	256 56.1 -28.2	S 17 40.5 +12.0	08								
09	316 31.2 +00.2	N 01 31.2 -01.0	355 41.2 +01.1	N 11 26.0 +00.0	271 27.9 -28.3	S 17 52.5 +11.9	09								
10	331 31.4 +00.2	N 01 30.2 -01.0	10 42.3 +01.2	N 11 26.0 +00.1	285 59.6 -28.3	S 18 04.4 +11.9	10								
11	346 31.6 +00.3	N 01 29.2 -01.0	25 43.5 +01.1	N 11 26.1 +00.0	300 31.3 -28.5	S 18 16.3 +11.7	11								
12	1 31.9 +00.2	N 01 28.2 -00.9	40 44.6 +01.1	N 11 26.1 +00.0	315 02.8 -28.5	S 18 28.0 +11.7	12								
13	16 32.1 +00.2	N 01 27.3 -01.0	55 45.7 +01.2	N 11 26.1 +00.0	329 34.3 -28.7	S 18 39.7 +11.7	13								
14	31 32.3 +00.2	N 01 26.3 -01.0	70 46.9 +01.1	N 11 26.1 +00.0	344 05.6 -28.7	S 18 51.4 +11.5	14								
15	46 32.5 +00.3	N 01 25.3 -00.9	85 48.0 +01.1	N 11 26.1 +00.0	358 36.9 -28.9	S 19 02.9 +11.5	15								
16	61 32.8 +00.2	N 01 24.4 -01.0	100 49.1 +01.1	N 11 26.1 +00.0	13 08.0 -28.9	S 19 14.4 +11.4	16								
17	76 33.0 +00.2	N 01 23.4 -01.0	115 50.2 +01.1	N 11 26.1 +00.0	27 39.1 -29.1	S 19 25.8 +11.3	17								
18	91 33.2 +00.2	N 01 22.4 -00.9	130 51.3 +01.2	N 11 26.1 +00.0	42 10.0 -29.1	S 19 37.1 +11.2	18								
19	106 33.4 +00.3	N 01 21.5 -01.0	145 52.5 +01.1	N 11 26.1 +00.0	56 40.9 -29.2	S 19 48.3 +11.1	19								
20	121 33.7 +00.2	N 01 20.5 -01.0	160 53.6 +01.1	N 11 26.1 +00.0	71 11.7 -29.4	S 19 59.4 +11.1	20								
21	136 33.9 +00.2	N 01 19.5 -01.0	175 54.7 +01.1	N 11 26.1 +00.0	85 42.3 -29.4	S 20 10.5 +11.0	21								
22	151 34.1 +00.2	N 01 18.5 -00.9	190 55.8 +01.1	N 11 26.1 +00.0	100 12.9 -29.5	S 20 21.5 +10.8	22								
23	166 34.3 +00.2	N 01 17.6 -01.0	205 56.9 +01.1	N 11 26.1 -00.1	114 43.4 -29.7	S 20 32.3 +10.8	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° 183° 183° 183° 183°	Greenwich Culmination Time: 11:53	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'3 00'3 00'3 00'3 00'3 00'3	SHA 223° 223° 223° 223° 222° 222°	Greenwich Culmination Time: 09:17	UT 02 06 10 14 18 22	SD 15'2 15'2 15'2 15'3 15'3 15'3	HP 55'7 55'8 55'9 56'0 56'1 56'2	SHA 142° 140° 138° 136° 134° 132°	Greenwich Culmination Time: 15:05

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	164 03.3 +00.9	S 05 18.3 +00.7	314 27.6 +02.6	N 15 05.6 -00.1	22 48.4 +02.6	S 12 21.9 +00.0	00								
01	179 04.2 +01.0	S 05 19.0 +00.6	329 30.2 +02.5	N 15 05.5 +00.0	37 51.0 +02.7	S 12 21.9 +00.1	01								
02	194 05.2 +00.9	S 05 19.6 +00.7	344 32.7 +02.6	N 15 05.5 -00.1	52 53.7 +02.6	S 12 22.0 +00.1	02								
03	209 06.1 +01.0	S 05 20.3 +00.7	359 35.3 +02.6	N 15 05.4 +00.0	67 56.3 +02.6	S 12 22.1 +00.0	03								
04	224 07.1 +00.9	S 05 21.0 +00.6	14 37.9 +02.6	N 15 05.4 +00.0	82 58.9 +02.6	S 12 22.1 +00.1	04								
05	239 08.0 +01.0	S 05 21.6 +00.7	29 40.5 +02.6	N 15 05.4 -00.1	98 01.5 +02.6	S 12 22.2 +00.0	05								
06	254 09.0 +00.9	S 05 22.3 +00.6	44 43.1 +02.6	N 15 05.3 +00.0	113 04.1 +02.7	S 12 22.2 +00.1	06								
07	269 09.9 +01.0	S 05 22.9 +00.7	59 45.7 +02.5	N 15 05.3 -00.1	128 06.8 +02.6	S 12 22.3 +00.1	07								
08	284 10.9 +00.9	S 05 23.6 +00.6	74 48.2 +02.6	N 15 05.2 +00.0	143 09.4 +02.6	S 12 22.4 +00.0	08								
09	299 11.8 +01.0	S 05 24.2 +00.7	89 50.8 +02.6	N 15 05.2 -00.1	158 12.0 +02.6	S 12 22.4 +00.1	09								
10	314 12.8 +00.9	S 05 24.9 +00.7	104 53.4 +02.6	N 15 05.1 +00.0	173 14.6 +02.7	S 12 22.5 +00.0	10								
11	329 13.7 +01.0	S 05 25.6 +00.6	119 56.0 +02.6	N 15 05.1 +00.0	188 17.3 +02.6	S 12 22.5 +00.1	11								
12	344 14.7 +00.9	S 05 26.2 +00.7	134 58.6 +02.6	N 15 05.1 -00.1	203 19.9 +02.6	S 12 22.6 +00.0	12								
13	359 15.6 +01.0	S 05 26.9 +00.6	150 01.2 +02.5	N 15 05.0 +00.0	218 22.5 +02.6	S 12 22.6 +00.1	13								
14	14 16.6 +00.9	S 05 27.5 +00.7	165 03.7 +02.6	N 15 05.0 -00.1	233 25.1 +02.6	S 12 22.7 +00.1	14								
15	29 17.5 +01.0	S 05 28.2 +00.6	180 06.3 +02.6	N 15 04.9 +00.0	248 27.7 +02.7	S 12 22.8 +00.0	15								
16	44 18.5 +00.9	S 05 28.8 +00.7	195 08.9 +02.6	N 15 04.9 +00.0	263 30.4 +02.6	S 12 22.8 +00.1	16								
17	59 19.4 +01.0	S 05 29.5 +00.6	210 11.5 +02.6	N 15 04.9 -00.1	278 33.0 +02.6	S 12 22.9 +00.0	17								
18	74 20.4 +00.9	S 05 30.1 +00.7	225 14.1 +02.6	N 15 04.8 +00.0	293 35.6 +02.6	S 12 22.9 +00.1	18								
19	89 21.3 +01.0	S 05 30.8 +00.7	240 16.7 +02.6	N 15 04.8 -00.1	308 38.2 +02.6	S 12 23.0 +00.1	19								
20	104 22.3 +00.9	S 05 31.5 +00.6	255 19.3 +02.6	N 15 04.7 +00.0	323 40.8 +02.7	S 12 23.1 +00.0	20								
21	119 23.2 +01.0	S 05 32.1 +00.7	270 21.9 +02.5	N 15 04.7 -00.1	338 43.5 +02.6	S 12 23.1 +00.1	21								
22	134 24.2 +00.9	S 05 32.8 +00.6	285 24.4 +02.6	N 15 04.6 +00.0	353 46.1 +02.6	S 12 23.2 +00.0	22								
23	149 25.1 +01.0	S 05 33.4 +00.7	300 27.0 +02.6	N 15 04.6 -00.1	8 48.7 +02.6	S 12 23.2 +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 166° 166° 166° 166° 166° 166°	Greenwich Culmination Time: 13:02	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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 03:01	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 025° 025° 025° 025° 025° 025°	Greenwich Culmination Time: 22:24

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 34.5 +00.3	N 01 16.6 -01.0	220 58.0 +01.1	N 11 26.0 +00.0	129 13.7 -29.7	S 20 43.1 +10.7	00						
01	196 34.8 +00.2	N 01 15.6 -00.9	235 59.1 +01.1	N 11 26.0 +00.0	143 44.0 -29.9	S 20 53.8 +10.6	01						
02	211 35.0 +00.2	N 01 14.7 -01.0	251 00.2 +01.1	N 11 26.0 +00.0	158 14.1 -29.9	S 21 04.4 +10.6	02						
03	226 35.2 +00.2	N 01 13.7 -01.0	266 01.3 +01.1	N 11 26.0 +00.0	172 44.2 -30.0	S 21 15.0 +10.4	03						
04	241 35.4 +00.3	N 01 12.7 -00.9	281 02.4 +01.1	N 11 26.0 +00.0	187 14.2 -30.2	S 21 25.4 +10.3	04						
05	256 35.7 +00.2	N 01 11.8 -01.0	296 03.5 +01.0	N 11 26.0 +00.0	201 44.0 -30.2	S 21 35.7 +10.2	05						
06	271 35.9 +00.2	N 01 10.8 -01.0	311 04.5 +01.1	N 11 26.0 +00.0	216 13.8 -30.4	S 21 45.9 +10.2	06						
07	286 36.1 +00.2	N 01 09.8 -01.0	326 05.6 +01.1	N 11 26.0 +00.0	230 43.4 -30.5	S 21 56.1 +10.0	07						
08	301 36.3 +00.2	N 01 08.8 -00.9	341 06.7 +01.1	N 11 26.0 -00.1	245 12.9 -30.5	S 22 06.1 +09.9	08						
09	316 36.5 +00.3	N 01 07.9 -01.0	356 07.8 +01.1	N 11 25.9 +00.0	259 42.4 -30.7	S 22 16.0 +09.8	09						
10	331 36.8 +00.2	N 01 06.9 -01.0	11 08.9 +01.0	N 11 25.9 +00.0	274 11.7 -30.8	S 22 25.8 +09.7	10						
11	346 37.0 +00.2	N 01 05.9 -00.9	26 09.9 +01.1	N 11 25.9 +00.0	288 40.9 -30.9	S 22 35.5 +09.6	11						
12	1 37.2 +00.2	N 01 05.0 -01.0	41 11.0 +01.1	N 11 25.9 +00.0	303 10.0 -31.0	S 22 45.1 +09.5	12						
13	16 37.4 +00.3	N 01 04.0 -01.0	56 12.1 +01.0	N 11 25.9 +00.0	317 39.0 -31.1	S 22 54.6 +09.4	13						
14	31 37.7 +00.2	N 01 03.0 -01.0	71 13.1 +01.1	N 11 25.9 -00.1	332 07.9 -31.2	S 23 04.0 +09.3	14						
15	46 37.9 +00.2	N 01 02.0 -00.9	86 14.2 +01.1	N 11 25.8 +00.0	346 36.7 -31.3	S 23 13.3 +09.2	15						
16	61 38.1 +00.2	N 01 01.1 -01.0	101 15.3 +01.0	N 11 25.8 +00.0	1 05.4 -31.4	S 23 22.5 +09.1	16						
17	76 38.3 +00.2	N 01 00.1 -01.0	116 16.3 +01.1	N 11 25.8 +00.0	15 34.0 -31.5	S 23 31.6 +08.9	17						
18	91 38.5 +00.3	N 00 59.1 -00.9	131 17.4 +01.0	N 11 25.8 -00.1	30 02.5 -31.7	S 23 40.5 +08.8	18						
19	106 38.8 +00.2	N 00 58.2 -01.0	146 18.4 +01.1	N 11 25.7 +00.0	44 30.8 -31.7	S 23 49.3 +08.7	19						
20	121 39.0 +00.2	N 00 57.2 -01.0	161 19.5 +01.0	N 11 25.7 +00.0	58 59.1 -31.9	S 23 58.0 +08.6	20						
21	136 39.2 +00.2	N 00 56.2 -00.9	176 20.5 +01.1	N 11 25.7 +00.0	73 27.2 -31.9	S 24 06.6 +08.5	21						
22	151 39.4 +00.3	N 00 55.3 -01.0	191 21.6 +01.0	N 11 25.7 -00.1	87 55.3 -32.1	S 24 15.1 +08.4	22						
23	166 39.7 +00.2	N 00 54.3 -01.0	206 22.6 +01.1	N 11 25.6 +00.0	102 23.2 -32.2	S 24 23.5 +08.2	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 00'3 00'3 00'3 00'3 00'3 00'3		SD 15'3 15'4 15'4 15'4 15'4 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'3 00'3 00'3 00'3 00'3 00'3		HP 56'3 56'4 56'5 56'6 56'7 56'8								
	SHA 183° 183° 183° 182° 182° 182°		SHA 222° 222° 222° 222° 222° 222°		SHA 130° 127° 125° 123° 121° 118°								
	Greenwich Culmination Time: 11:53		Greenwich Culmination Time: 09:15		Greenwich Culmination Time: 15:55								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	164 26.1 +00.9	S 05 34.1 +00.6	315 29.6 +02.6	N 15 04.5 +00.0	23 51.3 +02.6	S 12 23.3 +00.0	00						
01	179 27.0 +01.0	S 05 34.7 +00.7	330 32.2 +02.6	N 15 04.5 +00.0	38 53.9 +02.7	S 12 23.3 +00.1	01						
02	194 28.0 +00.9	S 05 35.4 +00.7	345 34.8 +02.6	N 15 04.5 -00.1	53 56.6 +02.6	S 12 23.4 +00.1	02						
03	209 28.9 +00.9	S 05 36.1 +00.6	0 37.4 +02.6	N 15 04.4 +00.0	68 59.2 +02.6	S 12 23.5 +00.0	03						
04	224 29.8 +01.0	S 05 36.7 +00.7	15 40.0 +02.6	N 15 04.4 -00.1	84 01.8 +02.6	S 12 23.5 +00.1	04						
05	239 30.8 +00.9	S 05 37.4 +00.6	30 42.6 +02.6	N 15 04.3 +00.0	99 04.4 +02.6	S 12 23.6 +00.0	05						
06	254 31.7 +01.0	S 05 38.0 +00.7	45 45.2 +02.6	N 15 04.3 -00.1	114 07.0 +02.6	S 12 23.6 +00.1	06						
07	269 32.7 +00.9	S 05 38.7 +00.6	60 47.8 +02.5	N 15 04.2 +00.0	129 09.6 +02.7	S 12 23.7 +00.0	07						
08	284 33.6 +01.0	S 05 39.3 +00.7	75 50.3 +02.6	N 15 04.2 +00.0	144 12.3 +02.6	S 12 23.7 +00.1	08						
09	299 34.6 +00.9	S 05 40.0 +00.6	90 52.9 +02.6	N 15 04.2 -00.1	159 14.9 +02.6	S 12 23.8 +00.1	09						
10	314 35.5 +01.0	S 05 40.6 +00.7	105 55.5 +02.6	N 15 04.1 +00.0	174 17.5 +02.6	S 12 23.9 +00.0	10						
11	329 36.5 +00.9	S 05 41.3 +00.7	120 58.1 +02.6	N 15 04.1 -00.1	189 20.1 +02.6	S 12 23.9 +00.1	11						
12	344 37.4 +01.0	S 05 42.0 +00.6	136 00.7 +02.6	N 15 04.0 +00.0	204 22.7 +02.7	S 12 24.0 +00.0	12						
13	359 38.4 +00.9	S 05 42.6 +00.7	151 03.3 +02.6	N 15 04.0 -00.1	219 25.4 +02.6	S 12 24.0 +00.1	13						
14	14 39.3 +01.0	S 05 43.3 +00.6	166 05.9 +02.6	N 15 03.9 +00.0	234 28.0 +02.6	S 12 24.1 +00.0	14						
15	29 40.3 +00.9	S 05 43.9 +00.7	181 08.5 +02.6	N 15 03.9 -00.1	249 30.6 +02.6	S 12 24.1 +00.1	15						
16	44 41.2 +01.0	S 05 44.6 +00.6	196 11.1 +02.6	N 15 03.8 +00.0	264 33.2 +02.6	S 12 24.2 +00.1	16						
17	59 42.2 +00.9	S 05 45.2 +00.7	211 13.7 +02.6	N 15 03.8 -00.1	279 35.8 +02.6	S 12 24.3 +00.0	17						
18	74 43.1 +00.9	S 05 45.9 +00.6	226 16.3 +02.6	N 15 03.7 +00.0	294 38.4 +02.7	S 12 24.3 +00.1	18						
19	89 44.0 +01.0	S 05 46.5 +00.7	241 18.9 +02.6	N 15 03.7 +00.0	309 41.1 +02.6	S 12 24.4 +00.0	19						
20	104 45.0 +00.9	S 05 47.2 +00.7	256 21.5 +02.6	N 15 03.7 -00.1	324 43.7 +02.6	S 12 24.4 +00.1	20						
21	119 45.9 +01.0	S 05 47.9 +00.6	271 24.1 +02.6	N 15 03.6 +00.0	339 46.3 +02.6	S 12 24.5 +00.0	21						
22	134 46.9 +00.9	S 05 48.5 +00.7	286 26.7 +02.6	N 15 03.6 -00.1	354 48.9 +02.6	S 12 24.5 +00.1	22						
23	149 47.8 +01.0	S 05 49.2 +00.6	301 29.3 +02.6	N 15 03.5 +00.0	9 51.5 +02.7	S 12 24.6 +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 166° 166° 166° 165° 165° 165°		SHA 317° 317° 317° 317° 317° 317°		SHA 025° 025° 025° 025° 025° 025°								
	Greenwich Culmination Time: 13:01		Greenwich Culmination Time: 02:57		Greenwich Culmination Time: 22:20								

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 39.9 +00.2	N 00	53.3 -01.0	221 23.7 +01.0	N 11	25.6 +00.0	116 51.0 -32.3	S 24	31.7 +08.1	00			
01	196 40.1 +00.2	N 00	52.3 -00.9	236 24.7 +01.1	N 11	25.6 +00.0	131 18.7 -32.4	S 24	39.8 +08.0	01			
02	211 40.3 +00.2	N 00	51.4 -01.0	251 25.8 +01.0	N 11	25.6 -00.1	145 46.3 -32.4	S 24	47.8 +07.8	02			
03	226 40.5 +00.3	N 00	50.4 -01.0	266 26.8 +01.0	N 11	25.5 +00.0	160 13.9 -32.7	S 24	55.6 +07.7	03			
04	241 40.8 +00.2	N 00	49.4 -00.9	281 27.8 +01.1	N 11	25.5 +00.0	174 41.2 -32.7	S 25	03.3 +07.6	04			
05	256 41.0 +00.2	N 00	48.5 -01.0	296 28.9 +01.0	N 11	25.5 -00.1	189 08.5 -32.8	S 25	10.9 +07.5	05			
06	271 41.2 +00.2	N 00	47.5 -01.0	311 29.9 +01.0	N 11	25.4 +00.0	203 35.7 -32.9	S 25	18.4 +07.3	06			
07	286 41.4 +00.2	N 00	46.5 -01.0	326 30.9 +01.0	N 11	25.4 -00.1	218 02.8 -33.0	S 25	25.7 +07.2	07			
08	301 41.6 +00.3	N 00	45.5 -00.9	341 31.9 +01.1	N 11	25.3 +00.0	232 29.8 -33.1	S 25	32.9 +07.0	08			
09	316 41.9 +00.2	N 00	44.6 -01.0	356 33.0 +01.0	N 11	25.3 +00.0	246 56.7 -33.3	S 25	39.9 +07.0	09			
10	331 42.1 +00.2	N 00	43.6 -01.0	11 34.0 +01.0	N 11	25.3 -00.1	261 23.4 -33.3	S 25	46.9 +06.7	10			
11	346 42.3 +00.2	N 00	42.6 -00.9	26 35.0 +01.0	N 11	25.2 +00.0	275 50.1 -33.4	S 25	53.6 +06.7	11			
12	1 42.5 +00.3	N 00	41.7 -01.0	41 36.0 +01.0	N 11	25.2 +00.0	290 16.7 -33.6	S 26	00.3 +06.5	12			
13	16 42.8 +00.2	N 00	40.7 -01.0	56 37.0 +01.0	N 11	25.2 -00.1	304 43.1 -33.6	S 26	06.8 +06.3	13			
14	31 43.0 +00.2	N 00	39.7 -01.0	71 38.0 +01.0	N 11	25.1 +00.0	319 09.5 -33.8	S 26	13.1 +06.2	14			
15	46 43.2 +00.2	N 00	38.7 -00.9	86 39.0 +01.0	N 11	25.1 -00.1	333 35.7 -33.8	S 26	19.3 +06.1	15			
16	61 43.4 +00.2	N 00	37.8 -01.0	101 40.0 +01.0	N 11	25.0 +00.0	348 01.9 -33.9	S 26	25.4 +05.9	16			
17	76 43.6 +00.3	N 00	36.8 -01.0	116 41.0 +01.0	N 11	25.0 -00.1	2 28.0 -34.1	S 26	31.3 +05.8	17			
18	91 43.9 +00.2	N 00	35.8 -01.0	131 42.0 +01.0	N 11	24.9 +00.0	16 53.9 -34.1	S 26	37.1 +05.6	18			
19	106 44.1 +00.2	N 00	34.8 -00.9	146 43.0 +01.0	N 11	24.9 -00.1	31 19.8 -34.3	S 26	42.7 +05.4	19			
20	121 44.3 +00.2	N 00	33.9 -01.0	161 44.0 +01.0	N 11	24.8 +00.0	45 45.5 -34.3	S 26	48.1 +05.4	20			
21	136 44.5 +00.2	N 00	32.9 -01.0	176 45.0 +01.0	N 11	24.8 -00.1	60 11.2 -34.4	S 26	53.5 +05.1	21			
22	151 44.7 +00.3	N 00	31.9 -00.9	191 46.0 +01.0	N 11	24.7 +00.0	74 36.8 -34.5	S 26	58.6 +05.0	22			
23	166 45.0 +00.2	N 00	31.0 -01.0	206 47.0 +01.0	N 11	24.7 -00.1	89 02.3 -34.6	S 27	03.6 +04.9	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 00'3 00'3 00'3 00'3 00'3 00'3			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 00'3 00'3 00'3 00'3 00'3 00'3			HP 56'9 57'0 57'1 57'2 57'4 57'5						
	SHA 182° 182° 182° 182° 181° 181°			SHA 222° 222° 222° 221° 221° 221°			SHA 116° 114° 111° 109° 107° 104°						
	Greenwich Culmination Time: 11:53			Greenwich Culmination Time: 09:13			Greenwich Culmination Time: 16:49						

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 48.8 +00.9	S 05	49.8 +00.7	316 31.9 +02.5	N 15	03.5 -00.1	24 54.2 +02.6	S 12	24.7 +00.0	00			
01	179 49.7 +01.0	S 05	50.5 +00.6	331 34.4 +02.6	N 15	03.4 +00.0	39 56.8 +02.6	S 12	24.7 +00.1	01			
02	194 50.7 +00.9	S 05	51.1 +00.7	346 37.0 +02.6	N 15	03.4 -00.1	54 59.4 +02.6	S 12	24.8 +00.0	02			
03	209 51.6 +00.9	S 05	51.8 +00.6	1 39.6 +02.6	N 15	03.3 +00.0	70 02.0 +02.6	S 12	24.8 +00.1	03			
04	224 52.5 +01.0	S 05	52.4 +00.7	16 42.2 +02.6	N 15	03.3 -00.1	85 04.6 +02.6	S 12	24.9 +00.0	04			
05	239 53.5 +00.9	S 05	53.1 +00.7	31 44.8 +02.6	N 15	03.2 +00.0	100 07.2 +02.7	S 12	24.9 +00.1	05			
06	254 54.4 +01.0	S 05	53.8 +00.6	46 47.4 +02.6	N 15	03.2 +00.0	115 09.9 +02.6	S 12	25.0 +00.1	06			
07	269 55.4 +00.9	S 05	54.4 +00.7	61 50.0 +02.6	N 15	03.2 -00.1	130 12.5 +02.6	S 12	25.1 +00.0	07			
08	284 56.3 +01.0	S 05	55.1 +00.6	76 52.6 +02.6	N 15	03.1 +00.0	145 15.1 +02.6	S 12	25.1 +00.1	08			
09	299 57.3 +00.9	S 05	55.7 +00.7	91 55.2 +02.6	N 15	03.1 -00.1	160 17.7 +02.6	S 12	25.2 +00.0	09			
10	314 58.2 +01.0	S 05	56.4 +00.6	106 57.8 +02.6	N 15	03.0 +00.0	175 20.3 +02.6	S 12	25.2 +00.1	10			
11	329 59.2 +00.9	S 05	57.0 +00.7	122 00.4 +02.6	N 15	03.0 -00.1	190 22.9 +02.7	S 12	25.3 +00.0	11			
12	345 00.1 +00.9	S 05	57.7 +00.6	137 03.0 +02.6	N 15	02.9 +00.0	205 25.6 +02.6	S 12	25.3 +00.1	12			
13	0 01.0 +01.0	S 05	58.3 +00.7	152 05.6 +02.6	N 15	02.9 -00.1	220 28.2 +02.6	S 12	25.4 +00.1	13			
14	15 02.0 +00.9	S 05	59.0 +00.6	167 08.2 +02.6	N 15	02.8 +00.0	235 30.8 +02.6	S 12	25.5 +00.0	14			
15	30 02.9 +01.0	S 05	59.6 +00.7	182 10.8 +02.6	N 15	02.8 -00.1	250 33.4 +02.6	S 12	25.5 +00.1	15			
16	45 03.9 +00.9	S 06	00.3 +00.7	197 13.4 +02.6	N 15	02.7 +00.0	265 36.0 +02.6	S 12	25.6 +00.0	16			
17	60 04.8 +01.0	S 06	01.0 +00.6	212 16.0 +02.6	N 15	02.7 -00.1	280 38.6 +02.7	S 12	25.6 +00.1	17			
18	75 05.8 +00.9	S 06	01.6 +00.7	227 18.6 +02.7	N 15	02.6 +00.0	295 41.3 +02.6	S 12	25.7 +00.0	18			
19	90 06.7 +00.9	S 06	02.3 +00.6	242 21.3 +02.6	N 15	02.6 -00.1	310 43.9 +02.6	S 12	25.7 +00.1	19			
20	105 07.6 +01.0	S 06	02.9 +00.7	257 23.9 +02.6	N 15	02.5 +00.0	325 46.5 +02.6	S 12	25.8 +00.0	20			
21	120 08.6 +00.9	S 06	03.6 +00.6	272 26.5 +02.6	N 15	02.5 -00.1	340 49.1 +02.6	S 12	25.8 +00.1	21			
22	135 09.5 +01.0	S 06	04.2 +00.7	287 29.1 +02.6	N 15	02.4 +00.0	355 51.7 +02.6	S 12	25.9 +00.1	22			
23	150 10.5 +00.9	S 06	04.9 +00.6	302 31.7 +02.6	N 15	02.4 +00.0	10 54.3 +02.6	S 12	26.0 +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 165° 165° 165° 165° 165° 165°			SHA 317° 317° 317° 317° 317° 317°			SHA 025° 025° 025° 025° 025° 025°						
	Greenwich Culmination Time: 12:59			Greenwich Culmination Time: 02:53			Greenwich Culmination Time: 22:16						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 45.2 +00.2	N 00	30.0 -01.0	221 48.0 +01.0	N 11	24.6 +00.0	103 27.7 -34.7	S 27	08.5 +04.6	00			
01	196 45.4 +00.2	N 00	29.0 -01.0	236 49.0 +01.0	N 11	24.6 -00.1	117 53.0 -34.8	S 27	13.1 +04.6	01			
02	211 45.6 +00.3	N 00	28.0 -00.9	251 50.0 +00.9	N 11	24.5 +00.0	132 18.2 -34.9	S 27	17.7 +04.3	02			
03	226 45.9 +00.2	N 00	27.1 -01.0	266 50.9 +01.0	N 11	24.5 -00.1	146 43.3 -34.9	S 27	22.0 +04.3	03			
04	241 46.1 +00.2	N 00	26.1 -01.0	281 51.9 +01.0	N 11	24.4 +00.0	161 08.4 -35.1	S 27	26.3 +04.0	04			
05	256 46.3 +00.2	N 00	25.1 -00.9	296 52.9 +01.0	N 11	24.4 -00.1	175 33.3 -35.1	S 27	30.3 +03.9	05			
06	271 46.5 +00.2	N 00	24.2 -01.0	311 53.9 +00.9	N 11	24.3 -00.1	189 58.2 -35.2	S 27	34.2 +03.7	06			
07	286 46.7 +00.3	N 00	23.2 -01.0	326 54.8 +01.0	N 11	24.2 +00.0	204 23.0 -35.3	S 27	37.9 +03.5	07			
08	301 47.0 +00.2	N 00	22.2 -01.0	341 55.8 +01.0	N 11	24.2 -00.1	218 47.7 -35.4	S 27	41.4 +03.4	08			
09	316 47.2 +00.2	N 00	21.2 -00.9	356 56.8 +00.9	N 11	24.1 +00.0	233 12.3 -35.5	S 27	44.8 +03.2	09			
10	331 47.4 +00.2	N 00	20.3 -01.0	11 57.7 +01.0	N 11	24.1 -00.1	247 36.8 -35.5	S 27	48.0 +03.1	10			
11	346 47.6 +00.2	N 00	19.3 -01.0	26 58.7 +01.0	N 11	24.0 -00.1	262 01.3 -35.6	S 27	51.1 +02.9	11			
12	1 47.8 +00.3	N 00	18.3 -01.0	41 59.7 +00.9	N 11	23.9 +00.0	276 25.7 -35.7	S 27	54.0 +02.7	12			
13	16 48.1 +00.2	N 00	17.3 -00.9	57 00.6 +01.0	N 11	23.9 -00.1	290 50.0 -35.7	S 27	56.7 +02.5	13			
14	31 48.3 +00.2	N 00	16.4 -01.0	72 01.6 +00.9	N 11	23.8 -00.1	305 14.3 -35.8	S 27	59.2 +02.3	14			
15	46 48.5 +00.2	N 00	15.4 -01.0	87 02.5 +01.0	N 11	23.7 +00.0	319 38.5 -35.9	S 28	01.5 +02.2	15			
16	61 48.7 +00.2	N 00	14.4 -00.9	102 03.5 +00.9	N 11	23.7 -00.1	334 02.6 -36.0	S 28	03.7 +02.0	16			
17	76 48.9 +00.3	N 00	13.5 -01.0	117 04.4 +01.0	N 11	23.6 -00.1	348 26.6 -36.0	S 28	05.7 +01.9	17			
18	91 49.2 +00.2	N 00	12.5 -01.0	132 05.4 +00.9	N 11	23.5 +00.0	2 50.6 -36.1	S 28	07.6 +01.6	18			
19	106 49.4 +00.2	N 00	11.5 -01.0	147 06.3 +01.0	N 11	23.5 -00.1	17 14.5 -36.1	S 28	09.2 +01.5	19			
20	121 49.6 +00.2	N 00	10.5 -00.9	162 07.3 +00.9	N 11	23.4 -00.1	31 38.4 -36.2	S 28	10.7 +01.3	20			
21	136 49.8 +00.3	N 00	09.6 -01.0	177 08.2 +00.9	N 11	23.3 +00.0	46 02.2 -36.3	S 28	12.0 +01.1	21			
22	151 50.1 +00.2	N 00	08.6 -01.0	192 09.1 +01.0	N 11	23.3 -00.1	60 25.9 -36.3	S 28	13.1 +00.9	22			
23	166 50.3 +00.2	N 00	07.6 -01.0	207 10.1 +00.9	N 11	23.2 -00.1	74 49.6 -36.3	S 28	14.0 +00.8	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 00'3 00'3 00'3 00'3 00'3 00'3			SD 15'7 15'7 15'8 15'8 15'8 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'3 00'3 00'3 00'3 00'3 00'3			HP 57'6 57'7 57'8 58'0 58'1 58'2						
	SHA 181° 181° 181° 181° 180° 180°			SHA 221° 221° 221° 221° 221° 221°			SHA 102° 099° 097° 094° 092° 089°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 09:12			Greenwich Culmination Time: 17:48						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	165 11.4 +00.9	S 06	05.5 +00.7	317 34.3 +02.6	N 15	02.4 -00.1	25 56.9 +02.7	S 12	26.0 +00.1	00			
01	180 12.3 +01.0	S 06	06.2 +00.6	332 36.9 +02.6	N 15	02.3 +00.0	40 59.6 +02.6	S 12	26.1 +00.0	01			
02	195 13.3 +00.9	S 06	06.8 +00.7	347 39.5 +02.6	N 15	02.3 -00.1	56 02.2 +02.6	S 12	26.1 +00.1	02			
03	210 14.2 +01.0	S 06	07.5 +00.7	2 42.1 +02.6	N 15	02.2 +00.0	71 04.8 +02.6	S 12	26.2 +00.0	03			
04	225 15.2 +00.9	S 06	08.2 +00.6	17 44.7 +02.6	N 15	02.2 -00.1	86 07.4 +02.6	S 12	26.2 +00.1	04			
05	240 16.1 +01.0	S 06	08.8 +00.7	32 47.3 +02.6	N 15	02.1 +00.0	101 10.0 +02.6	S 12	26.3 +00.0	05			
06	255 17.1 +00.9	S 06	09.5 +00.6	47 49.9 +02.6	N 15	02.1 -00.1	116 12.6 +02.6	S 12	26.3 +00.1	06			
07	270 18.0 +00.9	S 06	10.1 +00.7	62 52.5 +02.6	N 15	02.0 +00.0	131 15.2 +02.7	S 12	26.4 +00.1	07			
08	285 18.9 +01.0	S 06	10.8 +00.6	77 55.1 +02.6	N 15	02.0 -00.1	146 17.9 +02.6	S 12	26.5 +00.0	08			
09	300 19.9 +00.9	S 06	11.4 +00.7	92 57.7 +02.6	N 15	01.9 +00.0	161 20.5 +02.6	S 12	26.5 +00.1	09			
10	315 20.8 +01.0	S 06	12.1 +00.6	108 00.3 +02.6	N 15	01.9 -00.1	176 23.1 +02.6	S 12	26.6 +00.0	10			
11	330 21.8 +00.9	S 06	12.7 +00.7	123 02.9 +02.7	N 15	01.8 +00.0	191 25.7 +02.6	S 12	26.6 +00.1	11			
12	345 22.7 +00.9	S 06	13.4 +00.6	138 05.6 +02.6	N 15	01.8 -00.1	206 28.3 +02.6	S 12	26.7 +00.0	12			
13	0 23.6 +01.0	S 06	14.0 +00.7	153 08.2 +02.6	N 15	01.7 +00.0	221 30.9 +02.6	S 12	26.7 +00.1	13			
14	15 24.6 +00.9	S 06	14.7 +00.6	168 10.8 +02.6	N 15	01.7 -00.1	236 33.5 +02.7	S 12	26.8 +00.0	14			
15	30 25.5 +01.0	S 06	15.3 +00.7	183 13.4 +02.6	N 15	01.6 +00.0	251 36.2 +02.6	S 12	26.8 +00.1	15			
16	45 26.5 +00.9	S 06	16.0 +00.7	198 16.0 +02.6	N 15	01.6 -00.1	266 38.8 +02.6	S 12	26.9 +00.1	16			
17	60 27.4 +00.9	S 06	16.7 +00.6	213 18.6 +02.6	N 15	01.5 +00.0	281 41.4 +02.6	S 12	27.0 +00.0	17			
18	75 28.3 +01.0	S 06	17.3 +00.7	228 21.2 +02.6	N 15	01.5 -00.1	296 44.0 +02.6	S 12	27.0 +00.1	18			
19	90 29.3 +00.9	S 06	18.0 +00.6	243 23.8 +02.6	N 15	01.4 +00.0	311 46.6 +02.6	S 12	27.1 +00.0	19			
20	105 30.2 +01.0	S 06	18.6 +00.7	258 26.4 +02.6	N 15	01.4 -00.1	326 49.2 +02.6	S 12	27.1 +00.1	20			
21	120 31.2 +00.9	S 06	19.3 +00.6	273 29.0 +02.7	N 15	01.3 +00.0	341 51.8 +02.7	S 12	27.2 +00.0	21			
22	135 32.1 +00.9	S 06	19.9 +00.7	288 31.7 +02.6	N 15	01.3 -00.1	356 54.5 +02.6	S 12	27.2 +00.1	22			
23	150 33.0 +01.0	S 06	20.6 +00.6	303 34.3 +02.6	N 15	01.2 +00.0	11 57.1 +02.6	S 12	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 00'4 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 165° 164° 164° 164° 164° 164°			SHA 317° 317° 317° 317° 317° 317°			SHA 025° 025° 025° 025° 025° 025°						
	Greenwich Culmination Time: 12:58			Greenwich Culmination Time: 02:49			Greenwich Culmination Time: 22:12						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 27%				UT
	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	
00	181 50.5 +00.2	N 00	06.6 -00.9	222 11.0 +00.9	N 11	23.1 -00.1	89 13.3 -36.4	S 28	14.8 +00.5				
01	196 50.7 +00.2	N 00	05.7 -01.0	237 11.9 +01.0	N 11	23.0 +00.0	103 36.9 -36.5	S 28	15.3 +00.4				
02	211 50.9 +00.3	N 00	04.7 -01.0	252 12.9 +00.9	N 11	23.0 -00.1	118 00.4 -36.5	S 28	15.7 +00.2				
03	226 51.2 +00.2	N 00	03.7 -00.9	267 13.8 +00.9	N 11	22.9 -00.1	132 23.9 -36.5	S 28	15.9 +00.1				
04	241 51.4 +00.2	N 00	02.8 -01.0	282 14.7 +00.9	N 11	22.8 -00.1	146 47.4 -36.6	S 28	16.0 -00.2				
05	256 51.6 +00.2	N 00	01.8 -01.0	297 15.6 +01.0	N 11	22.7 -00.1	161 10.8 -36.7	S 28	15.8 -00.4				
06	271 51.8 +00.2	N 00	00.8 -01.0	312 16.6 +00.9	N 11	22.6 +00.0	175 34.1 -36.6	S 28	15.4 -00.5				
07	286 52.0 +00.3	S 00	00.2 +00.9	327 17.5 +00.9	N 11	22.6 -00.1	189 57.5 -36.7	S 28	14.9 -00.7				
08	301 52.3 +00.2	S 00	01.1 +01.0	342 18.4 +00.9	N 11	22.5 -00.1	204 20.8 -36.8	S 28	14.2 -00.9				
09	316 52.5 +00.2	S 00	02.1 +01.0	357 19.3 +00.9	N 11	22.4 -00.1	218 44.0 -36.7	S 28	13.3 -01.1				
10	331 52.7 +00.2	S 00	03.1 +01.0	12 20.2 +00.9	N 11	22.3 -00.1	233 07.3 -36.8	S 28	12.2 -01.3				
11	346 52.9 +00.2	S 00	04.1 +00.9	27 21.1 +00.9	N 11	22.2 -00.1	247 30.5 -36.8	S 28	10.9 -01.5				
12	1 53.1 +00.3	S 00	05.0 +01.0	42 22.0 +00.9	N 11	22.1 -00.1	261 53.7 -36.9	S 28	09.4 -01.7				
13	16 53.4 +00.2	S 00	06.0 +01.0	57 22.9 +00.9	N 11	22.0 +00.0	276 16.8 -36.9	S 28	07.7 -01.8				
14	31 53.6 +00.2	S 00	07.0 +00.9	72 23.8 +00.9	N 11	22.0 -00.1	290 39.9 -36.8	S 28	05.9 -02.1				
15	46 53.8 +00.2	S 00	07.9 +01.0	87 24.7 +00.9	N 11	21.9 -00.1	305 03.1 -36.9	S 28	03.8 -02.2				
16	61 54.0 +00.2	S 00	08.9 +01.0	102 25.6 +00.9	N 11	21.8 -00.1	319 26.2 -37.0	S 28	01.6 -02.4				
17	76 54.2 +00.2	S 00	09.9 +01.0	117 26.5 +00.9	N 11	21.7 -00.1	333 49.2 -36.9	S 27	59.2 -02.6				
18	91 54.4 +00.3	S 00	10.9 +00.9	132 27.4 +00.9	N 11	21.6 -00.1	348 12.3 -36.9	S 27	56.6 -02.8				
19	106 54.7 +00.2	S 00	11.8 +01.0	147 28.3 +00.9	N 11	21.5 -00.1	2 35.4 -37.0	S 27	53.8 -03.0				
20	121 54.9 +00.2	S 00	12.8 +01.0	162 29.2 +00.9	N 11	21.4 -00.1	16 58.4 -36.9	S 27	50.8 -03.2				
21	136 55.1 +00.2	S 00	13.8 +01.0	177 30.1 +00.9	N 11	21.3 -00.1	31 21.5 -37.0	S 27	47.6 -03.4				
22	151 55.3 +00.2	S 00	14.8 +00.9	192 31.0 +00.9	N 11	21.2 -00.1	45 44.5 -36.9	S 27	44.2 -03.5				
23	166 55.5 +00.3	S 00	15.7 +01.0	207 31.9 +00.8	N 11	21.1 -00.1	60 07.6 -37.0	S 27	40.7 -03.8				
	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 180° 180° 180° 180° 180° 179° Greenwich Culmination Time: 11:52	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 221° 220° 220° 220° 220° 220° Greenwich Culmination Time: 09:10	UT 02 06 10 14 18 22 SD 15'9 15'9 16'0 16'0 16'0 16'1 HP 58'3 58'5 58'6 58'7 58'9 59'0 SHA 086° 084° 081° 079° 076° 073° Greenwich Culmination Time: 18:49										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	GHA ° ' "	ddGHA /	Dec ° ' "	dDec /	
00	165 34.0 +00.9	S 06	21.2 +00.7	318 36.9 +02.6	N 15	01.2 -00.1	26 59.7 +02.6	S 12	27.3 +00.1				
01	180 34.9 +00.9	S 06	21.9 +00.6	333 39.5 +02.6	N 15	01.1 +00.0	42 02.3 +02.6	S 12	27.4 +00.0				
02	195 35.8 +01.0	S 06	22.5 +00.7	348 42.1 +02.6	N 15	01.1 -00.1	57 04.9 +02.6	S 12	27.4 +00.1				
03	210 36.8 +00.9	S 06	23.2 +00.6	3 44.7 +02.6	N 15	01.0 +00.0	72 07.5 +02.6	S 12	27.5 +00.1				
04	225 37.7 +01.0	S 06	23.8 +00.7	18 47.3 +02.6	N 15	01.0 -00.1	87 10.1 +02.6	S 12	27.6 +00.0				
05	240 38.7 +00.9	S 06	24.5 +00.6	33 49.9 +02.7	N 15	00.9 +00.0	102 12.7 +02.7	S 12	27.6 +00.1				
06	255 39.6 +00.9	S 06	25.1 +00.7	48 52.6 +02.6	N 15	00.9 -00.1	117 15.4 +02.6	S 12	27.7 +00.0				
07	270 40.5 +01.0	S 06	25.8 +00.6	63 55.2 +02.6	N 15	00.8 +00.0	132 18.0 +02.6	S 12	27.7 +00.1				
08	285 41.5 +00.9	S 06	26.4 +00.7	78 57.8 +02.6	N 15	00.8 -00.1	147 20.6 +02.6	S 12	27.8 +00.0				
09	300 42.4 +00.9	S 06	27.1 +00.7	94 00.4 +02.6	N 15	00.7 +00.0	162 23.2 +02.6	S 12	27.8 +00.1				
10	315 43.3 +01.0	S 06	27.8 +00.6	109 03.0 +02.6	N 15	00.7 -00.1	177 25.8 +02.6	S 12	27.9 +00.0				
11	330 44.3 +00.9	S 06	28.4 +00.7	124 05.6 +02.7	N 15	00.6 +00.0	192 28.4 +02.6	S 12	27.9 +00.1				
12	345 45.2 +01.0	S 06	29.1 +00.6	139 08.3 +02.6	N 15	00.6 -00.1	207 31.0 +02.6	S 12	28.0 +00.0				
13	0 46.2 +00.9	S 06	29.7 +00.7	154 10.9 +02.6	N 15	00.5 +00.0	222 33.6 +02.6	S 12	28.0 +00.1				
14	15 47.1 +00.9	S 06	30.4 +00.6	169 13.5 +02.6	N 15	00.5 -00.1	237 36.2 +02.7	S 12	28.1 +00.1				
15	30 48.0 +01.0	S 06	31.0 +00.7	184 16.1 +02.6	N 15	00.4 +00.0	252 38.9 +02.6	S 12	28.2 +00.0				
16	45 49.0 +00.9	S 06	31.7 +00.6	199 18.7 +02.6	N 15	00.4 -00.1	267 41.5 +02.6	S 12	28.2 +00.1				
17	60 49.9 +00.9	S 06	32.3 +00.7	214 21.3 +02.7	N 15	00.3 +00.0	282 44.1 +02.6	S 12	28.3 +00.0				
18	75 50.8 +01.0	S 06	33.0 +00.6	229 24.0 +02.6	N 15	00.3 -00.1	297 46.7 +02.6	S 12	28.3 +00.1				
19	90 51.8 +00.9	S 06	33.6 +00.7	244 26.6 +02.6	N 15	00.2 +00.0	312 49.3 +02.6	S 12	28.4 +00.0				
20	105 52.7 +00.9	S 06	34.3 +00.6	259 29.2 +02.6	N 15	00.2 -00.1	327 51.9 +02.6	S 12	28.4 +00.1				
21	120 53.6 +01.0	S 06	34.9 +00.7	274 31.8 +02.6	N 15	00.1 +00.0	342 54.5 +02.6	S 12	28.5 +00.0				
22	135 54.6 +00.9	S 06	35.6 +00.6	289 34.4 +02.7	N 15	00.1 -00.1	357 57.1 +02.6	S 12	28.5 +00.1				
23	150 55.5 +00.9	S 06	36.2 +00.7	304 37.1 +02.6	N 14	60.0 -00.1	12 59.7 +02.7	S 12	28.6 +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 164° 164° 164° 164° 164° 163° Greenwich Culmination Time: 12:56	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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 02:45	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 025° 025° 025° 025° 025° 025° Greenwich Culmination Time: 22:08										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 55.8 +00.2	S 00	16.7 +01.0	222 32.7 +00.9	N 11	21.0 -00.1	74 30.6 -36.9	S 27	36.9 -03.9	00			
01	196 56.0 +00.2	S 00	17.7 +01.0	237 33.6 +00.9	N 11	20.9 -00.1	88 53.7 -37.0	S 27	33.0 -04.2	01			
02	211 56.2 +00.2	S 00	18.7 +00.9	252 34.5 +00.9	N 11	20.8 -00.1	103 16.7 -36.9	S 27	28.8 -04.3	02			
03	226 56.4 +00.2	S 00	19.6 +01.0	267 35.4 +00.9	N 11	20.7 -00.1	117 39.8 -37.0	S 27	24.5 -04.5	03			
04	241 56.6 +00.3	S 00	20.6 +01.0	282 36.3 +00.8	N 11	20.6 -00.1	132 02.8 -36.9	S 27	20.0 -04.7	04			
05	256 56.9 +00.2	S 00	21.6 +00.9	297 37.1 +00.9	N 11	20.5 -00.1	146 25.9 -36.9	S 27	15.3 -04.9	05			
06	271 57.1 +00.2	S 00	22.5 +01.0	312 38.0 +00.9	N 11	20.4 -00.1	160 49.0 -36.9	S 27	10.4 -05.1	06			
07	286 57.3 +00.2	S 00	23.5 +01.0	327 38.9 +00.8	N 11	20.3 -00.1	175 12.1 -36.8	S 27	05.3 -05.2	07			
08	301 57.5 +00.2	S 00	24.5 +01.0	342 39.7 +00.9	N 11	20.2 -00.1	189 35.3 -36.9	S 27	00.1 -05.5	08			
09	316 57.7 +00.3	S 00	25.5 +00.9	357 40.6 +00.8	N 11	20.1 -00.1	203 58.4 -36.8	S 26	54.6 -05.6	09			
10	331 58.0 +00.2	S 00	26.4 +01.0	12 41.4 +00.9	N 11	20.0 -00.1	218 21.6 -36.8	S 26	49.0 -05.8	10			
11	346 58.2 +00.2	S 00	27.4 +01.0	27 42.3 +00.9	N 11	19.9 -00.1	232 44.8 -36.8	S 26	43.2 -06.1	11			
12	1 58.4 +00.2	S 00	28.4 +01.0	42 43.2 +00.8	N 11	19.8 -00.1	247 08.0 -36.7	S 26	37.1 -06.2	12			
13	16 58.6 +00.2	S 00	29.4 +00.9	57 44.0 +00.9	N 11	19.7 -00.1	261 31.3 -36.7	S 26	30.9 -06.3	13			
14	31 58.8 +00.2	S 00	30.3 +01.0	72 44.9 +00.8	N 11	19.6 -00.2	275 54.6 -36.7	S 26	24.6 -06.6	14			
15	46 59.0 +00.3	S 00	31.3 +01.0	87 45.7 +00.9	N 11	19.4 -00.1	290 17.9 -36.6	S 26	18.0 -06.8	15			
16	61 59.3 +00.2	S 00	32.3 +01.0	102 46.6 +00.8	N 11	19.3 -00.1	304 41.3 -36.6	S 26	11.2 -06.9	16			
17	76 59.5 +00.2	S 00	33.3 +00.9	117 47.4 +00.9	N 11	19.2 -00.1	319 04.7 -36.6	S 26	04.3 -07.1	17			
18	91 59.7 +00.2	S 00	34.2 +01.0	132 48.3 +00.8	N 11	19.1 -00.1	333 28.1 -36.5	S 25	57.2 -07.3	18			
19	106 59.9 +00.2	S 00	35.2 +01.0	147 49.1 +00.8	N 11	19.0 -00.1	347 51.6 -36.5	S 25	49.9 -07.5	19			
20	122 00.1 +00.3	S 00	36.2 +00.9	162 49.9 +00.9	N 11	18.9 -00.1	2 15.1 -36.5	S 25	42.4 -07.6	20			
21	137 00.4 +00.2	S 00	37.1 +01.0	177 50.8 +00.8	N 11	18.8 -00.2	16 38.6 -36.4	S 25	34.8 -07.9	21			
22	152 00.6 +00.2	S 00	38.1 +01.0	192 51.6 +00.9	N 11	18.6 -00.1	31 02.2 -36.3	S 25	26.9 -08.0	22			
23	167 00.8 +00.2	S 00	39.1 +01.0	207 52.5 +00.8	N 11	18.5 -00.1	45 25.9 -36.3	S 25	18.9 -08.2	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 00'3 00'3 00'3 00'3 00'3 00'3					SD 16'1 16'1 16'2 16'2 16'2 16'3		
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'3 00'3 00'3 00'3 00'3 00'3					HP 59'1 59'2 59'3 59'5 59'6 59'7		
	SHA 179° 179° 179° 179° 179° 179°					SHA 220° 220° 220° 220° 219° 219°					SHA 071° 068° 065° 063° 060° 058°		
	Greenwich Culmination Time: 11:52				Greenwich Culmination Time: 09:09				Greenwich Culmination Time: 19:50				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	165 56.4 +01.0	S 06	36.9 +00.6	319 39.7 +02.6	N 14	59.9 +00.0	28 02.4 +02.6	S 12	28.6 +00.1	00			
01	180 57.4 +00.9	S 06	37.5 +00.7	334 42.3 +02.6	N 14	59.9 -00.1	43 05.0 +02.6	S 12	28.7 +00.0	01			
02	195 58.3 +01.0	S 06	38.2 +00.6	349 44.9 +02.6	N 14	59.8 +00.0	58 07.6 +02.6	S 12	28.7 +00.1	02			
03	210 59.3 +00.9	S 06	38.8 +00.7	4 47.5 +02.7	N 14	59.8 -00.1	73 10.2 +02.6	S 12	28.8 +00.1	03			
04	226 00.2 +00.9	S 06	39.5 +00.6	19 50.2 +02.6	N 14	59.7 +00.0	88 12.8 +02.6	S 12	28.9 +00.0	04			
05	241 01.1 +01.0	S 06	40.1 +00.7	34 52.8 +02.6	N 14	59.7 -00.1	103 15.4 +02.6	S 12	28.9 +00.1	05			
06	256 02.1 +00.9	S 06	40.8 +00.6	49 55.4 +02.6	N 14	59.6 +00.0	118 18.0 +02.6	S 12	29.0 +00.0	06			
07	271 03.0 +00.9	S 06	41.4 +00.7	64 58.0 +02.6	N 14	59.6 -00.1	133 20.6 +02.6	S 12	29.0 +00.1	07			
08	286 03.9 +01.0	S 06	42.1 +00.7	80 00.6 +02.7	N 14	59.5 +00.0	148 23.2 +02.6	S 12	29.1 +00.0	08			
09	301 04.9 +00.9	S 06	42.8 +00.6	95 03.3 +02.6	N 14	59.5 -00.1	163 25.8 +02.7	S 12	29.1 +00.1	09			
10	316 05.8 +00.9	S 06	43.4 +00.7	110 05.9 +02.6	N 14	59.4 +00.0	178 28.5 +02.6	S 12	29.2 +00.0	10			
11	331 06.7 +01.0	S 06	44.1 +00.6	125 08.5 +02.6	N 14	59.4 -00.1	193 31.1 +02.6	S 12	29.2 +00.1	11			
12	346 07.7 +00.9	S 06	44.7 +00.7	140 11.1 +02.7	N 14	59.3 +00.0	208 33.7 +02.6	S 12	29.3 +00.0	12			
13	1 08.6 +00.9	S 06	45.4 +00.6	155 13.8 +02.6	N 14	59.3 -00.1	223 36.3 +02.6	S 12	29.3 +00.1	13			
14	16 09.5 +01.0	S 06	46.0 +00.7	170 16.4 +02.6	N 14	59.2 +00.0	238 38.9 +02.6	S 12	29.4 +00.0	14			
15	31 10.5 +00.9	S 06	46.7 +00.6	185 19.0 +02.6	N 14	59.2 -00.1	253 41.5 +02.6	S 12	29.4 +00.1	15			
16	46 11.4 +00.9	S 06	47.3 +00.7	200 21.6 +02.7	N 14	59.1 -00.1	268 44.1 +02.6	S 12	29.5 +00.0	16			
17	61 12.3 +01.0	S 06	48.0 +00.6	215 24.3 +02.6	N 14	59.0 +00.0	283 46.7 +02.6	S 12	29.5 +00.1	17			
18	76 13.3 +00.9	S 06	48.6 +00.7	230 26.9 +02.6	N 14	59.0 -00.1	298 49.3 +02.6	S 12	29.6 +00.0	18			
19	91 14.2 +00.9	S 06	49.3 +00.6	245 29.5 +02.6	N 14	58.9 +00.0	313 51.9 +02.6	S 12	29.6 +00.1	19			
20	106 15.1 +00.9	S 06	49.9 +00.7	260 32.1 +02.7	N 14	58.9 -00.1	328 54.5 +02.7	S 12	29.7 +00.1	20			
21	121 16.0 +01.0	S 06	50.6 +00.6	275 34.8 +02.6	N 14	58.8 +00.0	343 57.2 +02.6	S 12	29.8 +00.0	21			
22	136 17.0 +00.9	S 06	51.2 +00.7	290 37.4 +02.6	N 14	58.8 -00.1	358 59.8 +02.6	S 12	29.8 +00.1	22			
23	151 17.9 +00.9	S 06	51.9 +00.6	305 40.0 +02.7	N 14	58.7 +00.0	14 02.4 +02.6	S 12	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 00'4 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 163° 163° 163° 163° 163° 163°					SHA 317° 317° 317° 317° 317° 317°					SHA 025° 025° 025° 026° 026° 026°		
	Greenwich Culmination Time: 12:55				Greenwich Culmination Time: 02:40				Greenwich Culmination Time: 22:04				

UT	Sun				Venus				Moon A: 35%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	182 01.0 +00.2	S 00	40.1 +00.9	222 53.3 +00.8	N 11	18.4 -00.1	59 49.6 -36.3	S 25	10.7 -08.4				
01	197 01.2 +00.2	S 00	41.0 +01.0	237 54.1 +00.8	N 11	18.3 -00.2	74 13.3 -36.2	S 25	02.3 -08.5				
02	212 01.4 +00.3	S 00	42.0 +01.0	252 54.9 +00.9	N 11	18.1 -00.1	88 37.1 -36.1	S 24	53.8 -08.7				
03	227 01.7 +00.2	S 00	43.0 +01.0	267 55.8 +00.8	N 11	18.0 -00.1	103 01.0 -36.1	S 24	45.1 -08.9				
04	242 01.9 +00.2	S 00	44.0 +00.9	282 56.6 +00.8	N 11	17.9 -00.1	117 24.9 -36.1	S 24	36.2 -09.1				
05	257 02.1 +00.2	S 00	44.9 +01.0	297 57.4 +00.8	N 11	17.8 -00.2	131 48.8 -36.0	S 24	27.1 -09.2				
06	272 02.3 +00.2	S 00	45.9 +01.0	312 58.2 +00.9	N 11	17.6 -00.1	146 12.8 -35.9	S 24	17.9 -09.4				
07	287 02.5 +00.3	S 00	46.9 +01.0	327 59.1 +00.8	N 11	17.5 -00.1	160 36.9 -35.9	S 24	08.5 -09.6				
08	302 02.8 +00.2	S 00	47.9 +00.9	342 59.9 +00.8	N 11	17.4 -00.1	175 01.0 -35.8	S 23	58.9 -09.8				
09	317 03.0 +00.2	S 00	48.8 +01.0	358 00.7 +00.8	N 11	17.3 -00.2	189 25.2 -35.7	S 23	49.1 -09.9				
10	332 03.2 +00.2	S 00	49.8 +01.0	13 01.5 +00.8	N 11	17.1 -00.1	203 49.5 -35.7	S 23	39.2 -10.0				
11	347 03.4 +00.2	S 00	50.8 +00.9	28 02.3 +00.8	N 11	17.0 -00.1	218 13.8 -35.6	S 23	29.2 -10.3				
12	2 03.6 +00.2	S 00	51.7 +01.0	43 03.1 +00.8	N 11	16.9 -00.2	232 38.2 -35.6	S 23	18.9 -10.4				
13	17 03.8 +00.3	S 00	52.7 +01.0	58 03.9 +00.8	N 11	16.7 -00.1	247 02.6 -35.5	S 23	08.5 -10.5				
14	32 04.1 +00.2	S 00	53.7 +01.0	73 04.7 +00.8	N 11	16.6 -00.1	261 27.1 -35.4	S 22	58.0 -10.8				
15	47 04.3 +00.2	S 00	54.7 +00.9	88 05.5 +00.8	N 11	16.5 -00.2	275 51.7 -35.3	S 22	47.2 -10.8				
16	62 04.5 +00.2	S 00	55.6 +01.0	103 06.3 +00.8	N 11	16.3 -00.1	290 16.4 -35.3	S 22	36.4 -11.1				
17	77 04.7 +00.2	S 00	56.6 +01.0	118 07.1 +00.8	N 11	16.2 -00.1	304 41.1 -35.3	S 22	25.3 -11.2				
18	92 04.9 +00.2	S 00	57.6 +01.0	133 07.9 +00.8	N 11	16.1 -00.2	319 05.8 -35.1	S 22	14.1 -11.3				
19	107 05.1 +00.3	S 00	58.6 +00.9	148 08.7 +00.8	N 11	15.9 -00.1	333 30.7 -35.1	S 22	02.8 -11.5				
20	122 05.4 +00.2	S 00	59.5 +01.0	163 09.5 +00.8	N 11	15.8 -00.2	347 55.6 -35.0	S 21	51.3 -11.7				
21	137 05.6 +00.2	S 01	00.5 +01.0	178 10.3 +00.8	N 11	15.6 -00.1	2 20.6 -34.9	S 21	39.6 -11.8				
22	152 05.8 +00.2	S 01	01.5 +01.0	193 11.1 +00.8	N 11	15.5 -00.1	16 45.7 -34.9	S 21	27.8 -11.9				
23	167 06.0 +00.2	S 01	02.5 +00.9	208 11.9 +00.8	N 11	15.4 -00.2	31 10.8 -34.8	S 21	15.9 -12.1				
	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 178° 178° 178° 178° 178° 178° Greenwich Culmination Time: 11:51		UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 219° 219° 219° 219° 219° 219° Greenwich Culmination Time: 09:07		UT 02 06 10 14 18 22 SD 16'3 16'3 16'4 16'4 16'4 16'4 HP 59'8 59'9 60'0 60'1 60'2 60'3 SHA 055° 052° 050° 047° 045° 042° Greenwich Culmination Time: 20:50								

UT	Mars				Jupiter				Saturn				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	166 18.8 +01.0	S 06	52.5 +00.7	320 42.7 +02.6	N 14	58.7 -00.1	29 05.0 +02.6	S 12	29.9 +00.1				
01	181 19.8 +00.9	S 06	53.2 +00.6	335 45.3 +02.6	N 14	58.6 +00.0	44 07.6 +02.6	S 12	30.0 +00.0				
02	196 20.7 +00.9	S 06	53.8 +00.7	350 47.9 +02.6	N 14	58.6 -00.1	59 10.2 +02.6	S 12	30.0 +00.1				
03	211 21.6 +01.0	S 06	54.5 +00.6	5 50.5 +02.7	N 14	58.5 -00.1	74 12.8 +02.6	S 12	30.1 +00.0				
04	226 22.6 +00.9	S 06	55.1 +00.7	20 53.2 +02.6	N 14	58.4 +00.0	89 15.4 +02.6	S 12	30.1 +00.1				
05	241 23.5 +00.9	S 06	55.8 +00.6	35 55.8 +02.6	N 14	58.4 -00.1	104 18.0 +02.6	S 12	30.2 +00.0				
06	256 24.4 +01.0	S 06	56.4 +00.7	50 58.4 +02.7	N 14	58.3 +00.0	119 20.6 +02.6	S 12	30.2 +00.1				
07	271 25.4 +00.9	S 06	57.1 +00.6	66 01.1 +02.6	N 14	58.3 -00.1	134 23.2 +02.6	S 12	30.3 +00.0				
08	286 26.3 +00.9	S 06	57.7 +00.7	81 03.7 +02.6	N 14	58.2 +00.0	149 25.8 +02.6	S 12	30.3 +00.1				
09	301 27.2 +01.0	S 06	58.4 +00.6	96 06.3 +02.6	N 14	58.2 -00.1	164 28.4 +02.7	S 12	30.4 +00.0				
10	316 28.2 +00.9	S 06	59.0 +00.7	111 08.9 +02.7	N 14	58.1 +00.0	179 31.1 +02.6	S 12	30.4 +00.1				
11	331 29.1 +00.9	S 06	59.7 +00.6	126 11.6 +02.6	N 14	58.1 -00.1	194 33.7 +02.6	S 12	30.5 +00.0				
12	346 30.0 +00.9	S 07	00.3 +00.7	141 14.2 +02.6	N 14	58.0 +00.0	209 36.3 +02.6	S 12	30.5 +00.1				
13	1 30.9 +01.0	S 07	01.0 +00.6	156 16.8 +02.7	N 14	58.0 -00.1	224 38.9 +02.6	S 12	30.6 +00.0				
14	16 31.9 +00.9	S 07	01.6 +00.7	171 19.5 +02.6	N 14	57.9 -00.1	239 41.5 +02.6	S 12	30.6 +00.1				
15	31 32.8 +00.9	S 07	02.3 +00.6	186 22.1 +02.6	N 14	57.8 +00.0	254 44.1 +02.6	S 12	30.7 +00.0				
16	46 33.7 +01.0	S 07	02.9 +00.7	201 24.7 +02.7	N 14	57.8 -00.1	269 46.7 +02.6	S 12	30.7 +00.1				
17	61 34.7 +00.9	S 07	03.6 +00.6	216 27.4 +02.6	N 14	57.7 +00.0	284 49.3 +02.6	S 12	30.8 +00.1				
18	76 35.6 +00.9	S 07	04.2 +00.7	231 30.0 +02.6	N 14	57.7 -00.1	299 51.9 +02.6	S 12	30.9 +00.0				
19	91 36.5 +00.9	S 07	04.9 +00.6	246 32.6 +02.7	N 14	57.6 +00.0	314 54.5 +02.6	S 12	30.9 +00.1				
20	106 37.4 +01.0	S 07	05.5 +00.7	261 35.3 +02.6	N 14	57.6 -00.1	329 57.1 +02.6	S 12	31.0 +00.0				
21	121 38.4 +00.9	S 07	06.2 +00.6	276 37.9 +02.6	N 14	57.5 +00.0	344 59.7 +02.6	S 12	31.0 +00.1				
22	136 39.3 +00.9	S 07	06.8 +00.7	291 40.5 +02.7	N 14	57.5 -00.1	0 02.3 +02.6	S 12	31.1 +00.0				
23	151 40.2 +01.0	S 07	07.5 +00.6	306 43.2 +02.6	N 14	57.4 -00.1	15 04.9 +02.6	S 12	31.1 +00.1				
	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 163° 163° 163° 162° 162° 162° Greenwich Culmination Time: 12:53		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 317° 317° 317° 317° 317° 317° Greenwich Culmination Time: 02:36		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 026° 026° 026° 026° 026° 026° Greenwich Culmination Time: 21:59								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 06.2 +00.2	S 01 03.4 +01.0	223 12.7 +00.7	N 11 15.2 -00.1	45 36.0 -34.7	S 21 03.8 -12.2	00						
01	197 06.4 +00.3	S 01 04.4 +01.0	238 13.4 +00.8	N 11 15.1 -00.2	60 01.3 -34.7	S 20 51.6 -12.4	01						
02	212 06.7 +00.2	S 01 05.4 +00.9	253 14.2 +00.8	N 11 14.9 -00.1	74 26.6 -34.6	S 20 39.2 -12.5	02						
03	227 06.9 +00.2	S 01 06.3 +01.0	268 15.0 +00.8	N 11 14.8 -00.2	88 52.0 -34.5	S 20 26.7 -12.7	03						
04	242 07.1 +00.2	S 01 07.3 +01.0	283 15.8 +00.8	N 11 14.6 -00.1	103 17.5 -34.4	S 20 14.0 -12.8	04						
05	257 07.3 +00.2	S 01 08.3 +01.0	298 16.6 +00.7	N 11 14.5 -00.2	117 43.1 -34.3	S 20 01.2 -12.9	05						
06	272 07.5 +00.2	S 01 09.3 +00.9	313 17.3 +00.8	N 11 14.3 -00.1	132 08.8 -34.3	S 19 48.3 -13.1	06						
07	287 07.7 +00.2	S 01 10.2 +01.0	328 18.1 +00.8	N 11 14.2 -00.2	146 34.5 -34.2	S 19 35.2 -13.2	07						
08	302 07.9 +00.3	S 01 11.2 +01.0	343 18.9 +00.7	N 11 14.0 -00.1	161 00.3 -34.2	S 19 22.0 -13.3	08						
09	317 08.2 +00.2	S 01 12.2 +01.0	358 19.6 +00.8	N 11 13.9 -00.2	175 26.1 -34.0	S 19 08.7 -13.5	09						
10	332 08.4 +00.2	S 01 13.2 +00.9	13 20.4 +00.8	N 11 13.7 -00.1	189 52.1 -34.0	S 18 55.2 -13.6	10						
11	347 08.6 +00.2	S 01 14.1 +01.0	28 21.2 +00.7	N 11 13.6 -00.2	204 18.1 -33.9	S 18 41.6 -13.7	11						
12	2 08.8 +00.2	S 01 15.1 +01.0	43 21.9 +00.8	N 11 13.4 -00.1	218 44.2 -33.8	S 18 27.9 -13.9	12						
13	17 09.0 +00.2	S 01 16.1 +01.0	58 22.7 +00.7	N 11 13.3 -00.2	233 10.4 -33.8	S 18 14.0 -13.9	13						
14	32 09.2 +00.3	S 01 17.1 +00.9	73 23.4 +00.8	N 11 13.1 -00.2	247 36.6 -33.7	S 18 00.1 -14.1	14						
15	47 09.5 +00.2	S 01 18.0 +01.0	88 24.2 +00.8	N 11 12.9 -00.1	262 02.9 -33.6	S 17 46.0 -14.2	15						
16	62 09.7 +00.2	S 01 19.0 +01.0	103 25.0 +00.7	N 11 12.8 -00.2	276 29.3 -33.5	S 17 31.8 -14.3	16						
17	77 09.9 +00.2	S 01 20.0 +00.9	118 25.7 +00.8	N 11 12.6 -00.1	290 55.8 -33.5	S 17 17.5 -14.5	17						
18	92 10.1 +00.2	S 01 20.9 +01.0	133 26.5 +00.7	N 11 12.5 -00.2	305 22.3 -33.4	S 17 03.0 -14.5	18						
19	107 10.3 +00.2	S 01 21.9 +01.0	148 27.2 +00.7	N 11 12.3 -00.2	319 48.9 -33.3	S 16 48.5 -14.7	19						
20	122 10.5 +00.2	S 01 22.9 +01.0	163 27.9 +00.8	N 11 12.1 -00.1	334 15.6 -33.2	S 16 33.8 -14.8	20						
21	137 10.7 +00.3	S 01 23.9 +00.9	178 28.7 +00.7	N 11 12.0 -00.2	348 42.4 -33.2	S 16 19.0 -14.8	21						
22	152 11.0 +00.2	S 01 24.8 +01.0	193 29.4 +00.8	N 11 11.8 -00.2	3 09.2 -33.1	S 16 04.2 -15.0	22						
23	167 11.2 +00.2	S 01 25.8 +01.0	208 30.2 +00.7	N 11 11.6 -00.1	17 36.1 -33.0	S 15 49.2 -15.1	23						
UT 02 06 10 14 18 22	SD 15'9 16'0 16'0 16'0 16'0 16'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 177° 177° 177° 177° 177° 177°	Greenwich Culmination Time: 11:51									
UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'3 00'3 00'3 00'3 00'3 00'3	SHA 219° 218° 218° 218° 218° 218°	Greenwich Culmination Time: 09:06									
UT 02 06 10 14 18 22	SD 16'5 16'5 16'5 16'5 16'5 16'5	HP 60'4 60'5 60'5 60'6 60'7 60'7	SHA 040° 037° 035° 032° 030° 028°	Greenwich Culmination Time: 21:46									

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	166 41.2 +00.9	S 07 08.1 +00.7	321 45.8 +02.6	N 14 57.3 +00.0	30 07.5 +02.7	S 12 31.2 +00.0	00						
01	181 42.1 +00.9	S 07 08.8 +00.6	336 48.4 +02.7	N 14 57.3 -00.1	45 10.2 +02.6	S 12 31.2 +00.1	01						
02	196 43.0 +00.9	S 07 09.4 +00.7	351 51.1 +02.6	N 14 57.2 +00.0	60 12.8 +02.6	S 12 31.3 +00.0	02						
03	211 43.9 +01.0	S 07 10.1 +00.6	6 53.7 +02.7	N 14 57.2 -00.1	75 15.4 +02.6	S 12 31.3 +00.1	03						
04	226 44.9 +00.9	S 07 10.7 +00.7	21 56.4 +02.6	N 14 57.1 +00.0	90 18.0 +02.6	S 12 31.4 +00.0	04						
05	241 45.8 +00.9	S 07 11.4 +00.6	36 59.0 +02.6	N 14 57.1 -00.1	105 20.6 +02.6	S 12 31.4 +00.1	05						
06	256 46.7 +01.0	S 07 12.0 +00.7	52 01.6 +02.7	N 14 57.0 -00.1	120 23.2 +02.6	S 12 31.5 +00.0	06						
07	271 47.7 +00.9	S 07 12.7 +00.6	67 04.3 +02.6	N 14 56.9 +00.0	135 25.8 +02.6	S 12 31.5 +00.1	07						
08	286 48.6 +00.9	S 07 13.3 +00.7	82 06.9 +02.6	N 14 56.9 -00.1	150 28.4 +02.6	S 12 31.6 +00.0	08						
09	301 49.5 +00.9	S 07 14.0 +00.6	97 09.5 +02.7	N 14 56.8 +00.0	165 31.0 +02.6	S 12 31.6 +00.1	09						
10	316 50.4 +01.0	S 07 14.6 +00.6	112 12.2 +02.6	N 14 56.8 -00.1	180 33.6 +02.6	S 12 31.7 +00.0	10						
11	331 51.4 +00.9	S 07 15.2 +00.7	127 14.8 +02.7	N 14 56.7 +00.0	195 36.2 +02.6	S 12 31.7 +00.1	11						
12	346 52.3 +00.9	S 07 15.9 +00.6	142 17.5 +02.6	N 14 56.7 -00.1	210 38.8 +02.6	S 12 31.8 +00.0	12						
13	1 53.2 +00.9	S 07 16.5 +00.7	157 20.1 +02.6	N 14 56.6 -00.1	225 41.4 +02.6	S 12 31.8 +00.1	13						
14	16 54.1 +01.0	S 07 17.2 +00.6	172 22.7 +02.7	N 14 56.5 +00.0	240 44.0 +02.6	S 12 31.9 +00.0	14						
15	31 55.1 +00.9	S 07 17.8 +00.7	187 25.4 +02.6	N 14 56.5 -00.1	255 46.6 +02.6	S 12 31.9 +00.1	15						
16	46 56.0 +00.9	S 07 18.5 +00.6	202 28.0 +02.7	N 14 56.4 +00.0	270 49.2 +02.6	S 12 32.0 +00.0	16						
17	61 56.9 +00.9	S 07 19.1 +00.7	217 30.7 +02.6	N 14 56.4 -00.1	285 51.8 +02.6	S 12 32.0 +00.1	17						
18	76 57.8 +01.0	S 07 19.8 +00.6	232 33.3 +02.6	N 14 56.3 -00.1	300 54.4 +02.6	S 12 32.1 +00.0	18						
19	91 58.8 +00.9	S 07 20.4 +00.7	247 35.9 +02.7	N 14 56.2 +00.0	315 57.0 +02.6	S 12 32.1 +00.1	19						
20	106 59.7 +00.9	S 07 21.1 +00.6	262 38.6 +02.6	N 14 56.2 -00.1	330 59.6 +02.6	S 12 32.2 +00.0	20						
21	122 00.6 +00.9	S 07 21.7 +00.7	277 41.2 +02.7	N 14 56.1 +00.0	346 02.2 +02.6	S 12 32.2 +00.1	21						
22	137 01.5 +01.0	S 07 22.4 +00.6	292 43.9 +02.6	N 14 56.1 -00.1	1 04.8 +02.6	S 12 32.3 +00.0	22						
23	152 02.5 +00.9	S 07 23.0 +00.7	307 46.5 +02.6	N 14 56.0 +00.0	16 07.4 +02.6	S 12 32.3 +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 162° 162° 162° 162° 162° 162°	Greenwich Culmination Time: 12:52									
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 317° 317° 317° 317° 317° 317°	Greenwich Culmination Time: 02:32									
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 026° 026° 026° 026° 026° 026°	Greenwich Culmination Time: 21:55									

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 11.4 +00.2	S	01 26.8 +01.0	223 30.9 +00.8	N	11 11.5 -00.2	32 03.1 -33.0	S	15 34.1 -15.2	00			
01	197 11.6 +00.2	S	01 27.8 +00.9	238 31.7 +00.7	N	11 11.3 -00.2	46 30.1 -32.9	S	15 18.9 -15.3	01			
02	212 11.8 +00.2	S	01 28.7 +01.0	253 32.4 +00.7	N	11 11.1 -00.1	60 57.2 -32.8	S	15 03.6 -15.4	02			
03	227 12.0 +00.2	S	01 29.7 +01.0	268 33.1 +00.8	N	11 11.0 -00.2	75 24.4 -32.8	S	14 48.2 -15.5	03			
04	242 12.2 +00.3	S	01 30.7 +00.9	283 33.9 +00.7	N	11 10.8 -00.2	89 51.6 -32.6	S	14 32.7 -15.5	04			
05	257 12.5 +00.2	S	01 31.6 +01.0	298 34.6 +00.7	N	11 10.6 -00.2	104 19.0 -32.7	S	14 17.2 -15.7	05			
06	272 12.7 +00.2	S	01 32.6 +01.0	313 35.3 +00.7	N	11 10.4 -00.1	118 46.3 -32.5	S	14 01.5 -15.8	06			
07	287 12.9 +00.2	S	01 33.6 +01.0	328 36.0 +00.8	N	11 10.3 -00.2	133 13.8 -32.5	S	13 45.7 -15.8	07			
08	302 13.1 +00.2	S	01 34.6 +00.9	343 36.8 +00.7	N	11 10.1 -00.2	147 41.3 -32.4	S	13 29.9 -15.9	08			
09	317 13.3 +00.2	S	01 35.5 +01.0	358 37.5 +00.7	N	11 09.9 -00.2	162 08.9 -32.3	S	13 14.0 -16.0	09			
10	332 13.5 +00.2	S	01 36.5 +01.0	13 38.2 +00.7	N	11 09.7 -00.1	176 36.6 -32.3	S	12 58.0 -16.1	10			
11	347 13.7 +00.3	S	01 37.5 +01.0	28 38.9 +00.7	N	11 09.6 -00.2	191 04.3 -32.3	S	12 41.9 -16.2	11			
12	2 14.0 +00.2	S	01 38.5 +00.9	43 39.6 +00.8	N	11 09.4 -00.2	205 32.0 -32.1	S	12 25.7 -16.3	12			
13	17 14.2 +00.2	S	01 39.4 +01.0	58 40.4 +00.7	N	11 09.2 -00.2	219 59.9 -32.1	S	12 09.4 -16.3	13			
14	32 14.4 +00.2	S	01 40.4 +01.0	73 41.1 +00.7	N	11 09.0 -00.2	234 27.8 -32.0	S	11 53.1 -16.4	14			
15	47 14.6 +00.2	S	01 41.4 +00.9	88 41.8 +00.7	N	11 08.8 -00.1	248 55.8 -32.0	S	11 36.7 -16.5	15			
16	62 14.8 +00.2	S	01 42.3 +01.0	103 42.5 +00.7	N	11 08.7 -00.2	263 23.8 -31.9	S	11 20.2 -16.5	16			
17	77 15.0 +00.2	S	01 43.3 +01.0	118 43.2 +00.7	N	11 08.5 -00.2	277 51.9 -31.9	S	11 03.7 -16.6	17			
18	92 15.2 +00.3	S	01 44.3 +01.0	133 43.9 +00.7	N	11 08.3 -00.2	292 20.0 -31.8	S	10 47.1 -16.7	18			
19	107 15.5 +00.2	S	01 45.3 +00.9	148 44.6 +00.7	N	11 08.1 -00.2	306 48.2 -31.7	S	10 30.4 -16.8	19			
20	122 15.7 +00.2	S	01 46.2 +01.0	163 45.3 +00.7	N	11 07.9 -00.2	321 16.5 -31.7	S	10 13.6 -16.8	20			
21	137 15.9 +00.2	S	01 47.2 +01.0	178 46.0 +00.7	N	11 07.7 -00.1	335 44.8 -31.6	S	09 56.8 -16.8	21			
22	152 16.1 +00.2	S	01 48.2 +01.0	193 46.7 +00.7	N	11 07.6 -00.2	350 13.2 -31.6	S	09 40.0 -17.0	22			
23	167 16.3 +00.2	S	01 49.2 +00.9	208 47.4 +00.7	N	11 07.4 -00.2	4 41.6 -31.5	S	09 23.0 -16.9	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 00'3 00'3 00'3 00'3 00'3 00'3			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 00'3 00'3 00'3 00'3 00'3 00'3			HP 60'8 60'8 60'8 60'9 60'9 60'9						
	SHA 177° 176° 176° 176° 176° 176°			SHA 218° 218° 218° 218° 217° 217°			SHA 025° 023° 021° 018° 016° 014°						
	Greenwich Culmination Time: 11:51			Greenwich Culmination Time: 09:05			Greenwich Culmination Time: 22:40						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	167 03.4 +00.9	S	07 23.7 +00.6	322 49.1 +02.7	N	14 56.0 -00.1	31 10.0 +02.7	S	12 32.4 +00.0	00			
01	182 04.3 +00.9	S	07 24.3 +00.7	337 51.8 +02.6	N	14 55.9 -00.1	46 12.7 +02.6	S	12 32.4 +00.1	01			
02	197 05.2 +01.0	S	07 25.0 +00.6	352 54.4 +02.7	N	14 55.8 +00.0	61 15.3 +02.6	S	12 32.5 +00.0	02			
03	212 06.2 +00.9	S	07 25.6 +00.7	7 57.1 +02.6	N	14 55.8 -00.1	76 17.9 +02.6	S	12 32.5 +00.1	03			
04	227 07.1 +00.9	S	07 26.3 +00.6	22 59.7 +02.7	N	14 55.7 +00.0	91 20.5 +02.6	S	12 32.6 +00.0	04			
05	242 08.0 +00.9	S	07 26.9 +00.7	38 02.4 +02.6	N	14 55.7 -00.1	106 23.1 +02.6	S	12 32.6 +00.1	05			
06	257 08.9 +01.0	S	07 27.6 +00.6	53 05.0 +02.7	N	14 55.6 -00.1	121 25.7 +02.6	S	12 32.7 +00.0	06			
07	272 09.9 +00.9	S	07 28.2 +00.7	68 07.7 +02.6	N	14 55.5 +00.0	136 28.3 +02.6	S	12 32.7 +00.1	07			
08	287 10.8 +00.9	S	07 28.9 +00.6	83 10.3 +02.6	N	14 55.5 -00.1	151 30.9 +02.6	S	12 32.8 +00.0	08			
09	302 11.7 +00.9	S	07 29.5 +00.6	98 12.9 +02.7	N	14 55.4 +00.0	166 33.5 +02.6	S	12 32.8 +00.1	09			
10	317 12.6 +01.0	S	07 30.1 +00.7	113 15.6 +02.6	N	14 55.4 -00.1	181 36.1 +02.6	S	12 32.9 +00.0	10			
11	332 13.6 +00.9	S	07 30.8 +00.6	128 18.2 +02.7	N	14 55.3 -00.1	196 38.7 +02.6	S	12 32.9 +00.1	11			
12	347 14.5 +00.9	S	07 31.4 +00.7	143 20.9 +02.6	N	14 55.2 +00.0	211 41.3 +02.6	S	12 33.0 +00.0	12			
13	2 15.4 +00.9	S	07 32.1 +00.6	158 23.5 +02.7	N	14 55.2 -00.1	226 43.9 +02.6	S	12 33.0 +00.1	13			
14	17 16.3 +00.9	S	07 32.7 +00.7	173 26.2 +02.6	N	14 55.1 +00.0	241 46.5 +02.6	S	12 33.1 +00.0	14			
15	32 17.2 +01.0	S	07 33.4 +00.6	188 28.8 +02.7	N	14 55.1 -00.1	256 49.1 +02.6	S	12 33.1 +00.1	15			
16	47 18.2 +00.9	S	07 34.0 +00.7	203 31.5 +02.6	N	14 55.0 -00.1	271 51.7 +02.6	S	12 33.2 +00.0	16			
17	62 19.1 +00.9	S	07 34.7 +00.6	218 34.1 +02.7	N	14 54.9 +00.0	286 54.3 +02.6	S	12 33.2 +00.1	17			
18	77 20.0 +00.9	S	07 35.3 +00.7	233 36.8 +02.6	N	14 54.9 -00.1	301 56.9 +02.6	S	12 33.3 +00.0	18			
19	92 20.9 +00.9	S	07 36.0 +00.6	248 39.4 +02.7	N	14 54.8 +00.0	316 59.5 +02.6	S	12 33.3 +00.1	19			
20	107 21.8 +01.0	S	07 36.6 +00.7	263 42.1 +02.6	N	14 54.8 -00.1	332 02.1 +02.6	S	12 33.4 +00.0	20			
21	122 22.8 +00.9	S	07 37.3 +00.6	278 44.7 +02.7	N	14 54.7 -00.1	347 04.7 +02.6	S	12 33.4 +00.1	21			
22	137 23.7 +00.9	S	07 37.9 +00.7	293 47.4 +02.6	N	14 54.6 +00.0	2 07.3 +02.6	S	12 33.5 +00.0	22			
23	152 24.6 +00.9	S	07 38.6 +00.6	308 50.0 +02.7	N	14 54.6 -00.1	17 09.9 +02.6	S	12 33.5 +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 161° 161° 161° 161° 161° 161°			SHA 317° 317° 317° 317° 317° 317°			SHA 026° 026° 026° 026° 026° 026°						
	Greenwich Culmination Time: 12:50			Greenwich Culmination Time: 02:28			Greenwich Culmination Time: 21:51						

UT	Sun				Venus				Moon A: 47%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 16.5 +00.2	S	01 50.1 +01.0	223 48.1 +00.7	N	11 07.2 -00.2	19 10.1 -31.5	S	09 06.1 -17.1	00			
01	197 16.7 +00.2	S	01 51.1 +01.0	238 48.8 +00.7	N	11 07.0 -00.2	33 38.6 -31.4	S	08 49.0 -17.0	01			
02	212 16.9 +00.3	S	01 52.1 +00.9	253 49.5 +00.7	N	11 06.8 -00.2	48 07.2 -31.4	S	08 32.0 -17.2	02			
03	227 17.2 +00.2	S	01 53.0 +01.0	268 50.2 +00.7	N	11 06.6 -00.2	62 35.8 -31.3	S	08 14.8 -17.2	03			
04	242 17.4 +00.2	S	01 54.0 +01.0	283 50.9 +00.7	N	11 06.4 -00.2	77 04.5 -31.3	S	07 57.6 -17.2	04			
05	257 17.6 +00.2	S	01 55.0 +01.0	298 51.6 +00.6	N	11 06.2 -00.2	91 33.2 -31.2	S	07 40.4 -17.3	05			
06	272 17.8 +00.2	S	01 56.0 +00.9	313 52.2 +00.7	N	11 06.0 -00.2	106 02.0 -31.2	S	07 23.1 -17.3	06			
07	287 18.0 +00.2	S	01 56.9 +01.0	328 52.9 +00.7	N	11 05.8 -00.2	120 30.8 -31.2	S	07 05.8 -17.3	07			
08	302 18.2 +00.2	S	01 57.9 +01.0	343 53.6 +00.7	N	11 05.6 -00.2	134 59.6 -31.1	S	06 48.5 -17.4	08			
09	317 18.4 +00.2	S	01 58.9 +00.9	358 54.3 +00.7	N	11 05.4 -00.2	149 28.5 -31.0	S	06 31.1 -17.4	09			
10	332 18.6 +00.2	S	01 59.8 +01.0	13 55.0 +00.6	N	11 05.2 -00.2	163 57.5 -31.0	S	06 13.7 -17.5	10			
11	347 18.8 +00.3	S	02 00.8 +01.0	28 55.6 +00.7	N	11 05.0 -00.2	178 26.5 -31.0	S	05 56.2 -17.5	11			
12	2 19.1 +00.2	S	02 01.8 +01.0	43 56.3 +00.7	N	11 04.8 -00.2	192 55.5 -30.9	S	05 38.7 -17.5	12			
13	17 19.3 +00.2	S	02 02.8 +00.9	58 57.0 +00.7	N	11 04.6 -00.2	207 24.6 -30.9	S	05 21.2 -17.5	13			
14	32 19.5 +00.2	S	02 03.7 +01.0	73 57.7 +00.6	N	11 04.4 -00.2	221 53.7 -30.9	S	05 03.7 -17.6	14			
15	47 19.7 +00.2	S	02 04.7 +01.0	88 58.3 +00.7	N	11 04.2 -00.2	236 22.8 -30.8	S	04 46.1 -17.6	15			
16	62 19.9 +00.2	S	02 05.7 +01.0	103 59.0 +00.7	N	11 04.0 -00.2	250 52.0 -30.8	S	04 28.5 -17.6	16			
17	77 20.1 +00.2	S	02 06.7 +00.9	118 59.7 +00.6	N	11 03.8 -00.2	265 21.2 -30.8	S	04 10.9 -17.6	17			
18	92 20.3 +00.2	S	02 07.6 +01.0	134 00.3 +00.7	N	11 03.6 -00.2	279 50.4 -30.7	S	03 53.3 -17.7	18			
19	107 20.5 +00.2	S	02 08.6 +01.0	149 01.0 +00.6	N	11 03.4 -00.2	294 19.7 -30.7	S	03 35.6 -17.6	19			
20	122 20.7 +00.3	S	02 09.6 +00.9	164 01.6 +00.7	N	11 03.2 -00.2	308 49.0 -30.6	S	03 18.0 -17.7	20			
21	137 21.0 +00.2	S	02 10.5 +01.0	179 02.3 +00.7	N	11 03.0 -00.3	323 18.4 -30.7	S	03 00.3 -17.7	21			
22	152 21.2 +00.2	S	02 11.5 +01.0	194 03.0 +00.6	N	11 02.7 -00.2	337 47.7 -30.6	S	02 42.6 -17.7	22			
23	167 21.4 +00.2	S	02 12.5 +01.0	209 03.6 +00.7	N	11 02.5 -00.2	352 17.1 -30.6	S	02 24.9 -17.7	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 00'3 00'3 00'3 00'3 00'3 00'3			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 00'3 00'3 00'3 00'3 00'3 00'3			HP 60'9 60'9 60'9 60'9 60'8 60'8						
	SHA 176° 176° 175° 175° 175° 175°			SHA 217° 217° 217° 217° 217° 217°			SHA 012° 009° 007° 005° 003° 000°						
	Greenwich Culmination Time: 11:50			Greenwich Culmination Time: 09:04			Greenwich Culmination Time: 23:31						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	167 25.5 +01.0	S	07 39.2 +00.6	323 52.7 +02.6	N	14 54.5 +00.0	32 12.5 +02.6	S	12 33.6 +00.0	00			
01	182 26.5 +00.9	S	07 39.8 +00.7	338 55.3 +02.7	N	14 54.5 -00.1	47 15.1 +02.6	S	12 33.6 +00.1	01			
02	197 27.4 +00.9	S	07 40.5 +00.6	353 58.0 +02.6	N	14 54.4 -00.1	62 17.7 +02.6	S	12 33.7 +00.0	02			
03	212 28.3 +00.9	S	07 41.1 +00.7	9 00.6 +02.7	N	14 54.3 +00.0	77 20.3 +02.6	S	12 33.7 +00.1	03			
04	227 29.2 +00.9	S	07 41.8 +00.6	24 03.3 +02.6	N	14 54.3 -00.1	92 22.9 +02.6	S	12 33.8 +00.0	04			
05	242 30.1 +01.0	S	07 42.4 +00.7	39 05.9 +02.7	N	14 54.2 +00.0	107 25.5 +02.6	S	12 33.8 +00.1	05			
06	257 31.1 +00.9	S	07 43.1 +00.6	54 08.6 +02.6	N	14 54.2 -00.1	122 28.1 +02.6	S	12 33.9 +00.0	06			
07	272 32.0 +00.9	S	07 43.7 +00.7	69 11.2 +02.7	N	14 54.1 -00.1	137 30.7 +02.6	S	12 33.9 +00.1	07			
08	287 32.9 +00.9	S	07 44.4 +00.6	84 13.9 +02.6	N	14 54.0 +00.0	152 33.3 +02.6	S	12 34.0 +00.0	08			
09	302 33.8 +00.9	S	07 45.0 +00.7	99 16.5 +02.7	N	14 54.0 -00.1	167 35.9 +02.6	S	12 34.0 +00.1	09			
10	317 34.7 +01.0	S	07 45.7 +00.6	114 19.2 +02.6	N	14 53.9 +00.0	182 38.5 +02.6	S	12 34.1 +00.0	10			
11	332 35.7 +00.9	S	07 46.3 +00.6	129 21.8 +02.7	N	14 53.9 -00.1	197 41.1 +02.6	S	12 34.1 +00.1	11			
12	347 36.6 +00.9	S	07 46.9 +00.7	144 24.5 +02.6	N	14 53.8 -00.1	212 43.7 +02.6	S	12 34.2 +00.0	12			
13	2 37.5 +00.9	S	07 47.6 +00.6	159 27.1 +02.7	N	14 53.7 +00.0	227 46.3 +02.6	S	12 34.2 +00.1	13			
14	17 38.4 +00.9	S	07 48.2 +00.7	174 29.8 +02.6	N	14 53.7 -00.1	242 48.9 +02.6	S	12 34.3 +00.0	14			
15	32 39.3 +00.9	S	07 48.9 +00.6	189 32.4 +02.7	N	14 53.6 -00.1	257 51.5 +02.6	S	12 34.3 +00.1	15			
16	47 40.2 +01.0	S	07 49.5 +00.7	204 35.1 +02.7	N	14 53.5 +00.0	272 54.1 +02.6	S	12 34.4 +00.0	16			
17	62 41.2 +00.9	S	07 50.2 +00.6	219 37.8 +02.6	N	14 53.5 -00.1	287 56.7 +02.6	S	12 34.4 +00.1	17			
18	77 42.1 +00.9	S	07 50.8 +00.7	234 40.4 +02.7	N	14 53.4 +00.0	302 59.3 +02.6	S	12 34.5 +00.0	18			
19	92 43.0 +00.9	S	07 51.5 +00.6	249 43.1 +02.6	N	14 53.4 -00.1	318 01.9 +02.6	S	12 34.5 +00.1	19			
20	107 43.9 +00.9	S	07 52.1 +00.7	264 45.7 +02.7	N	14 53.3 -00.1	333 04.5 +02.6	S	12 34.6 +00.0	20			
21	122 44.8 +01.0	S	07 52.8 +00.6	279 48.4 +02.6	N	14 53.2 +00.0	348 07.1 +02.6	S	12 34.6 +00.0	21			
22	137 45.8 +00.9	S	07 53.4 +00.6	294 51.0 +02.7	N	14 53.2 -00.1	3 09.7 +02.6	S	12 34.6 +00.1	22			
23	152 46.7 +00.9	S	07 54.0 +00.7	309 53.7 +02.6	N	14 53.1 -00.1	18 12.3 +02.6	S	12 34.7 +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 161° 161° 161° 161° 160° 160°			SHA 317° 317° 317° 317° 317° 317°			SHA 026° 026° 026° 026° 026° 026°						
	Greenwich Culmination Time: 12:49			Greenwich Culmination Time: 02:24			Greenwich Culmination Time: 21:47						

Table with columns for UT, Sun, Venus, Moon, Mars, Jupiter, Saturn, and UT. Each planet section contains data for GHA, ddGHA, Dec, and dDec across various UT values from 00 to 23. Summary rows include SD, HP, SHA values and Greenwich Culmination Time.

UT	Sun				Venus				Moon A: 53%				UT
	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	
00	182 26.6 +00.2	S	02 36.8 +00.9	224 19.5 +00.6	N	10 56.9 -00.2	354 37.4 -30.4	N	04 54.9 +17.2	00			
01	197 26.8 +00.2	S	02 37.7 +01.0	239 20.1 +00.6	N	10 56.7 -00.3	9 07.0 -30.3	N	05 12.1 +17.3	01			
02	212 27.0 +00.2	S	02 38.7 +01.0	254 20.7 +00.6	N	10 56.4 -00.2	23 36.7 -30.3	N	05 29.4 +17.1	02			
03	227 27.2 +00.2	S	02 39.7 +00.9	269 21.3 +00.6	N	10 56.2 -00.2	38 06.4 -30.3	N	05 46.5 +17.2	03			
04	242 27.4 +00.2	S	02 40.6 +01.0	284 21.9 +00.6	N	10 56.0 -00.3	52 36.1 -30.3	N	06 03.7 +17.1	04			
05	257 27.6 +00.2	S	02 41.6 +01.0	299 22.5 +00.6	N	10 55.7 -00.2	67 05.8 -30.4	N	06 20.8 +17.0	05			
06	272 27.8 +00.2	S	02 42.6 +01.0	314 23.1 +00.6	N	10 55.5 -00.3	81 35.4 -30.3	N	06 37.8 +17.0	06			
07	287 28.0 +00.3	S	02 43.6 +00.9	329 23.7 +00.6	N	10 55.2 -00.2	96 05.1 -30.4	N	06 54.8 +16.9	07			
08	302 28.3 +00.2	S	02 44.5 +01.0	344 24.3 +00.6	N	10 55.0 -00.3	110 34.7 -30.3	N	07 11.7 +16.9	08			
09	317 28.5 +00.2	S	02 45.5 +01.0	359 24.9 +00.6	N	10 54.7 -00.2	125 04.4 -30.4	N	07 28.6 +16.8	09			
10	332 28.7 +00.2	S	02 46.5 +00.9	14 25.5 +00.6	N	10 54.5 -00.2	139 34.0 -30.4	N	07 45.4 +16.8	10			
11	347 28.9 +00.2	S	02 47.4 +01.0	29 26.1 +00.6	N	10 54.3 -00.3	154 03.6 -30.4	N	08 02.2 +16.7	11			
12	2 29.1 +00.2	S	02 48.4 +01.0	44 26.7 +00.6	N	10 54.0 -00.2	168 33.2 -30.4	N	08 18.9 +16.6	12			
13	17 29.3 +00.2	S	02 49.4 +01.0	59 27.3 +00.6	N	10 53.8 -00.3	183 02.8 -30.5	N	08 35.5 +16.6	13			
14	32 29.5 +00.2	S	02 50.4 +00.9	74 27.9 +00.6	N	10 53.5 -00.2	197 32.3 -30.4	N	08 52.1 +16.5	14			
15	47 29.7 +00.2	S	02 51.3 +01.0	89 28.5 +00.6	N	10 53.3 -00.3	212 01.9 -30.5	N	09 08.6 +16.5	15			
16	62 29.9 +00.2	S	02 52.3 +01.0	104 29.1 +00.5	N	10 53.0 -00.3	226 31.4 -30.5	N	09 25.1 +16.4	16			
17	77 30.1 +00.2	S	02 53.3 +00.9	119 29.6 +00.6	N	10 52.7 -00.2	241 00.9 -30.5	N	09 41.5 +16.3	17			
18	92 30.3 +00.2	S	02 54.2 +01.0	134 30.2 +00.6	N	10 52.5 -00.3	255 30.4 -30.5	N	09 57.8 +16.2	18			
19	107 30.5 +00.2	S	02 55.2 +01.0	149 30.8 +00.6	N	10 52.2 -00.2	269 59.9 -30.6	N	10 14.0 +16.2	19			
20	122 30.7 +00.2	S	02 56.2 +00.9	164 31.4 +00.6	N	10 52.0 -00.3	284 29.3 -30.6	N	10 30.2 +16.1	20			
21	137 30.9 +00.2	S	02 57.1 +01.0	179 32.0 +00.5	N	10 51.7 -00.2	298 58.7 -30.6	N	10 46.3 +16.0	21			
22	152 31.1 +00.2	S	02 58.1 +01.0	194 32.5 +00.6	N	10 51.5 -00.3	313 28.1 -30.6	N	11 02.3 +16.0	22			
23	167 31.3 +00.2	S	02 59.1 +00.9	209 33.1 +00.6	N	10 51.2 -00.2	327 57.5 -30.6	N	11 18.3 +15.8	23			
	UT 02 06 10 14 18 22 SD 16'0 16'0 16'0 16'0 16'0 16'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 174° 174° 174° 173° 173° 173° 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 00'3 00'3 00'3 00'3 00'3 00'3 SHA 216° 216° 216° 215° 215° 215° Greenwich Culmination Time: 09:02					UT 02 06 10 14 18 22 SD 16'4 16'4 16'4 16'3 16'3 16'3 HP 60'3 60'2 60'1 60'0 59'9 59'7 SHA 345° 343° 341° 338° 336° 334° Greenwich Culmination Time: 00:22			
UT	Mars				Jupiter				Saturn				UT
	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	GHA ° / '	ddGHA / '	Dec ° / '	dDec / '	
00	168 09.6 +00.9	S	08 10.1 +00.7	326 00.2 +02.7	N	14 51.5 +00.0	34 17.2 +02.6	S	12 35.9 +00.0	00			
01	183 10.5 +00.9	S	08 10.8 +00.6	341 02.9 +02.6	N	14 51.5 -00.1	49 19.8 +02.6	S	12 35.9 +00.1	01			
02	198 11.4 +00.9	S	08 11.4 +00.7	356 05.5 +02.7	N	14 51.4 -00.1	64 22.4 +02.6	S	12 36.0 +00.0	02			
03	213 12.3 +00.9	S	08 12.1 +00.6	11 08.2 +02.7	N	14 51.3 +00.0	79 25.0 +02.6	S	12 36.0 +00.1	03			
04	228 13.2 +00.9	S	08 12.7 +00.6	26 10.9 +02.6	N	14 51.3 -00.1	94 27.6 +02.5	S	12 36.1 +00.0	04			
05	243 14.1 +00.9	S	08 13.3 +00.7	41 13.5 +02.7	N	14 51.2 -00.1	109 30.1 +02.6	S	12 36.1 +00.1	05			
06	258 15.0 +00.9	S	08 14.0 +00.6	56 16.2 +02.7	N	14 51.1 +00.0	124 32.7 +02.6	S	12 36.2 +00.0	06			
07	273 15.9 +01.0	S	08 14.6 +00.7	71 18.9 +02.6	N	14 51.1 -00.1	139 35.3 +02.6	S	12 36.2 +00.1	07			
08	288 16.9 +00.9	S	08 15.3 +00.6	86 21.5 +02.7	N	14 51.0 -00.1	154 37.9 +02.6	S	12 36.3 +00.0	08			
09	303 17.8 +00.9	S	08 15.9 +00.7	101 24.2 +02.7	N	14 50.9 +00.0	169 40.5 +02.6	S	12 36.3 +00.1	09			
10	318 18.7 +00.9	S	08 16.6 +00.6	116 26.9 +02.6	N	14 50.9 -00.1	184 43.1 +02.6	S	12 36.4 +00.0	10			
11	333 19.6 +00.9	S	08 17.2 +00.6	131 29.5 +02.7	N	14 50.8 -00.1	199 45.7 +02.6	S	12 36.4 +00.0	11			
12	348 20.5 +00.9	S	08 17.8 +00.7	146 32.2 +02.7	N	14 50.7 +00.0	214 48.3 +02.6	S	12 36.4 +00.1	12			
13	3 21.4 +00.9	S	08 18.5 +00.6	161 34.9 +02.6	N	14 50.7 -00.1	229 50.9 +02.6	S	12 36.5 +00.0	13			
14	18 22.3 +00.9	S	08 19.1 +00.7	176 37.5 +02.7	N	14 50.6 -00.1	244 53.5 +02.6	S	12 36.5 +00.1	14			
15	33 23.2 +00.9	S	08 19.8 +00.6	191 40.2 +02.7	N	14 50.5 +00.0	259 56.1 +02.6	S	12 36.6 +00.0	15			
16	48 24.1 +01.0	S	08 20.4 +00.6	206 42.9 +02.6	N	14 50.5 -00.1	274 58.7 +02.6	S	12 36.6 +00.1	16			
17	63 25.1 +00.9	S	08 21.0 +00.7	221 45.5 +02.7	N	14 50.4 -00.1	290 01.3 +02.6	S	12 36.7 +00.0	17			
18	78 26.0 +00.9	S	08 21.7 +00.6	236 48.2 +02.7	N	14 50.3 +00.0	305 03.9 +02.6	S	12 36.7 +00.1	18			
19	93 26.9 +00.9	S	08 22.3 +00.7	251 50.9 +02.6	N	14 50.3 -00.1	320 06.5 +02.6	S	12 36.8 +00.0	19			
20	108 27.8 +00.9	S	08 23.0 +00.6	266 53.5 +02.7	N	14 50.2 -00.1	335 09.1 +02.5	S	12 36.8 +00.1	20			
21	123 28.7 +00.9	S	08 23.6 +00.7	281 56.2 +02.7	N	14 50.1 +00.0	350 11.6 +02.6	S	12 36.9 +00.0	21			
22	138 29.6 +00.9	S	08 24.3 +00.6	296 58.9 +02.7	N	14 50.1 -00.1	5 14.2 +02.6	S	12 36.9 +00.0	22			
23	153 30.5 +00.9	S	08 24.9 +00.6	312 01.6 +02.6	N	14 50.0 -00.1	20 16.8 +02.6	S	12 36.9 +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 160° 160° 159° 159° 159° 159° Greenwich Culmination Time: 12:46				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 318° 318° 318° 318° 318° 318° Greenwich Culmination Time: 02:15					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 026° 026° 026° 026° 026° 026° Greenwich Culmination Time: 21:39			

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