

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 12.1 -00.3	S	23 02.4 -00.2	160 39.0 -00.8	S	22 02.2 -00.6	68 43.6 -27.2	N	12 03.2 +13.4	00			
01	194 11.8 -00.3	S	23 02.2 -00.2	175 38.2 -00.9	S	22 01.6 -00.5	83 16.4 -27.2	N	12 16.6 +13.3	01			
02	209 11.5 -00.2	S	23 02.0 -00.2	190 37.3 -00.8	S	22 01.1 -00.6	97 49.2 -27.2	N	12 29.9 +13.3	02			
03	224 11.3 -00.3	S	23 01.8 -00.2	205 36.5 -00.9	S	22 00.5 -00.6	112 22.0 -27.2	N	12 43.2 +13.1	03			
04	239 11.0 -00.3	S	23 01.6 -00.2	220 35.6 -00.9	S	21 59.9 -00.5	126 54.8 -27.3	N	12 56.3 +13.1	04			
05	254 10.7 -00.3	S	23 01.4 -00.2	235 34.7 -00.8	S	21 59.4 -00.6	141 27.5 -27.3	N	13 09.4 +13.1	05			
06	269 10.4 -00.3	S	23 01.2 -00.2	250 33.9 -00.9	S	21 58.8 -00.6	156 00.2 -27.3	N	13 22.5 +13.0	06			
07	284 10.1 -00.3	S	23 01.0 -00.2	265 33.0 -00.8	S	21 58.2 -00.6	170 32.9 -27.4	N	13 35.5 +12.9	07			
08	299 09.8 -00.3	S	23 00.8 -00.2	280 32.2 -00.9	S	21 57.6 -00.5	185 05.5 -27.3	N	13 48.4 +12.8	08			
09	314 09.5 -00.3	S	23 00.6 -00.2	295 31.3 -00.8	S	21 57.1 -00.6	199 38.2 -27.5	N	14 01.2 +12.8	09			
10	329 09.2 -00.3	S	23 00.4 -00.2	310 30.5 -00.9	S	21 56.5 -00.6	214 10.7 -27.4	N	14 14.0 +12.6	10			
11	344 08.9 -00.3	S	23 00.2 -00.2	325 29.6 -00.8	S	21 55.9 -00.6	228 43.3 -27.5	N	14 26.6 +12.7	11			
12	359 08.6 -00.3	S	22 60.0 -00.2	340 28.8 -00.9	S	21 55.3 -00.5	243 15.8 -27.5	N	14 39.3 +12.5	12			
13	14 08.3 -00.3	S	22 59.8 -00.2	355 27.9 -00.8	S	21 54.8 -00.6	257 48.3 -27.5	N	14 51.8 +12.5	13			
14	29 08.0 -00.3	S	22 59.6 -00.3	10 27.1 -00.9	S	21 54.2 -00.6	272 20.8 -27.6	N	15 04.3 +12.4	14			
15	44 07.7 -00.3	S	22 59.3 -00.2	25 26.2 -00.8	S	21 53.6 -00.6	286 53.2 -27.6	N	15 16.7 +12.3	15			
16	59 07.4 -00.3	S	22 59.1 -00.2	40 25.4 -00.9	S	21 53.0 -00.6	301 25.6 -27.6	N	15 29.0 +12.2	16			
17	74 07.1 -00.3	S	22 58.9 -00.2	55 24.5 -00.8	S	21 52.4 -00.6	315 58.0 -27.7	N	15 41.2 +12.1	17			
18	89 06.8 -00.3	S	22 58.7 -00.2	70 23.7 -00.9	S	21 51.8 -00.5	330 30.3 -27.7	N	15 53.3 +12.1	18			
19	104 06.5 -00.3	S	22 58.5 -00.2	85 22.8 -00.8	S	21 51.3 -00.6	345 02.6 -27.8	N	16 05.4 +12.0	19			
20	119 06.2 -00.2	S	22 58.3 -00.2	100 22.0 -00.9	S	21 50.7 -00.6	359 34.8 -27.8	N	16 17.4 +11.9	20			
21	134 06.0 -00.3	S	22 58.1 -00.2	115 21.1 -00.8	S	21 50.1 -00.6	14 07.0 -27.8	N	16 29.3 +11.9	21			
22	149 05.7 -00.3	S	22 57.9 -00.3	130 20.3 -00.9	S	21 49.5 -00.6	28 39.2 -27.9	N	16 41.2 +11.7	22			
23	164 05.4 -00.3	S	22 57.6 -00.2	145 19.4 -00.8	S	21 48.9 -00.6	43 11.3 -27.9	N	16 52.9 +11.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'3 16'3 16'3 16'3 16'3 16'3			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'3 15'3 15'3 15'2 15'2 15'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'2 56'1 56'0 55'9 55'8 55'7						
	SHA 079° 079° 078° 078° 078° 078°			SHA 060° 060° 060° 059° 059° 059°			SHA 327° 325° 323° 321° 319° 317°						
	Greenwich Culmination Time: 12:03			Greenwich Culmination Time: 13:18			Greenwich Culmination Time: 20:01						
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	33 29.7 +02.9	N	24 35.3 +00.0	98 46.9 +02.2	S	00 42.4 -00.2	135 11.7 +02.2	S	15 12.9 -00.1	00			
01	48 32.6 +02.9	N	24 35.3 -00.1	113 49.1 +02.2	S	00 42.2 -00.1	150 13.9 +02.3	S	15 12.8 -00.1	01			
02	63 35.5 +02.9	N	24 35.2 +00.0	128 51.3 +02.2	S	00 42.1 -00.1	165 16.2 +02.2	S	15 12.7 -00.1	02			
03	78 38.4 +02.9	N	24 35.2 -00.1	143 53.5 +02.2	S	00 42.0 -00.1	180 18.4 +02.2	S	15 12.6 +00.0	03			
04	93 41.3 +02.9	N	24 35.1 +00.0	158 55.7 +02.2	S	00 41.9 -00.2	195 20.6 +02.2	S	15 12.6 -00.1	04			
05	108 44.2 +02.9	N	24 35.1 -00.1	173 57.9 +02.2	S	00 41.7 -00.1	210 22.8 +02.2	S	15 12.5 -00.1	05			
06	123 47.1 +02.9	N	24 35.0 +00.0	189 00.1 +02.2	S	00 41.6 -00.1	225 25.0 +02.2	S	15 12.4 -00.1	06			
07	138 50.0 +02.9	N	24 35.0 -00.1	204 02.3 +02.2	S	00 41.5 -00.2	240 27.2 +02.3	S	15 12.3 -00.1	07			
08	153 52.9 +02.9	N	24 34.9 +00.0	219 04.5 +02.2	S	00 41.3 -00.1	255 29.5 +02.2	S	15 12.2 -00.1	08			
09	168 55.8 +02.9	N	24 34.9 +00.0	234 06.7 +02.1	S	00 41.2 -00.1	270 31.7 +02.2	S	15 12.1 +00.0	09			
10	183 58.7 +02.9	N	24 34.9 -00.1	249 08.8 +02.2	S	00 41.1 -00.2	285 33.9 +02.2	S	15 12.1 -00.1	10			
11	199 01.6 +02.8	N	24 34.8 +00.0	264 11.0 +02.2	S	00 40.9 -00.1	300 36.1 +02.2	S	15 12.0 -00.1	11			
12	214 04.4 +02.9	N	24 34.8 -00.1	279 13.2 +02.2	S	00 40.8 -00.1	315 38.3 +02.3	S	15 11.9 -00.1	12			
13	229 07.3 +02.9	N	24 34.7 +00.0	294 15.4 +02.2	S	00 40.7 -00.1	330 40.6 +02.2	S	15 11.8 -00.1	13			
14	244 10.2 +02.9	N	24 34.7 -00.1	309 17.6 +02.2	S	00 40.6 -00.2	345 42.8 +02.2	S	15 11.7 +00.0	14			
15	259 13.1 +02.9	N	24 34.6 +00.0	324 19.8 +02.2	S	00 40.4 -00.1	0 45.0 +02.2	S	15 11.7 -00.1	15			
16	274 16.0 +02.8	N	24 34.6 +00.0	339 22.0 +02.2	S	00 40.3 -00.1	15 47.2 +02.2	S	15 11.6 -00.1	16			
17	289 18.8 +02.9	N	24 34.6 -00.1	354 24.2 +02.1	S	00 40.2 -00.2	30 49.4 +02.3	S	15 11.5 -00.1	17			
18	304 21.7 +02.9	N	24 34.5 +00.0	9 26.3 +02.2	S	00 40.0 -00.1	45 51.7 +02.2	S	15 11.4 -00.1	18			
19	319 24.6 +02.8	N	24 34.5 -00.1	24 28.5 +02.2	S	00 39.9 -00.1	60 53.9 +02.2	S	15 11.3 -00.1	19			
20	334 27.4 +02.9	N	24 34.4 +00.0	39 30.7 +02.2	S	00 39.8 -00.2	75 56.1 +02.2	S	15 11.2 +00.0	20			
21	349 30.3 +02.9	N	24 34.4 -00.1	54 32.9 +02.2	S	00 39.6 -00.1	90 58.3 +02.2	S	15 11.2 -00.1	21			
22	4 33.2 +02.8	N	24 34.3 +00.0	69 35.1 +02.2	S	00 39.5 -00.1	106 00.5 +02.3	S	15 11.1 -00.1	22			
23	19 36.0 +02.9	N	24 34.3 +00.0	84 37.3 +02.2	S	00 39.4 -00.2	121 02.8 +02.2	S	15 11.0 -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 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'2 00'2 00'2 00'2 00'2 00'2			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 293° 293° 293° 293° 293° 293°			SHA 358° 358° 358° 358° 358° 358°			SHA 035° 035° 035° 035° 035° 035°						
	Greenwich Culmination Time: 21:41			Greenwich Culmination Time: 17:22			Greenwich Culmination Time: 14:57						

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	179 05.1 -00.3	S	22 57.4 -00.2	160 18.6 -00.9	S	21 48.3 -00.6	57 43.4 -27.9	N	17 04.6 +11.6	00										
01	194 04.8 -00.3	S	22 57.2 -00.2	175 17.7 -00.8	S	21 47.7 -00.6	72 15.5 -28.0	N	17 16.2 +11.4	01										
02	209 04.5 -00.3	S	22 57.0 -00.2	190 16.9 -00.9	S	21 47.1 -00.6	86 47.5 -28.0	N	17 27.6 +11.5	02										
03	224 04.2 -00.3	S	22 56.8 -00.2	205 16.0 -00.8	S	21 46.5 -00.6	101 19.5 -28.1	N	17 39.1 +11.3	03										
04	239 03.9 -00.3	S	22 56.6 -00.3	220 15.2 -00.8	S	21 45.9 -00.6	115 51.4 -28.1	N	17 50.4 +11.2	04										
05	254 03.6 -00.3	S	22 56.3 -00.2	235 14.4 -00.9	S	21 45.3 -00.6	130 23.3 -28.2	N	18 01.6 +11.2	05										
06	269 03.3 -00.3	S	22 56.1 -00.2	250 13.5 -00.8	S	21 44.7 -00.6	144 55.1 -28.2	N	18 12.8 +11.0	06										
07	284 03.0 -00.3	S	22 55.9 -00.2	265 12.7 -00.9	S	21 44.1 -00.6	159 26.9 -28.2	N	18 23.8 +11.0	07										
08	299 02.7 -00.3	S	22 55.7 -00.2	280 11.8 -00.8	S	21 43.5 -00.6	173 58.7 -28.3	N	18 34.8 +10.9	08										
09	314 02.4 -00.2	S	22 55.5 -00.3	295 11.0 -00.9	S	21 42.9 -00.6	188 30.4 -28.3	N	18 45.7 +10.7	09										
10	329 02.2 -00.3	S	22 55.2 -00.2	310 10.1 -00.8	S	21 42.3 -00.6	203 02.1 -28.4	N	18 56.4 +10.7	10										
11	344 01.9 -00.3	S	22 55.0 -00.2	325 09.3 -00.8	S	21 41.7 -00.6	217 33.7 -28.4	N	19 07.1 +10.6	11										
12	359 01.6 -00.3	S	22 54.8 -00.2	340 08.5 -00.9	S	21 41.1 -00.6	232 05.3 -28.5	N	19 17.7 +10.5	12										
13	14 01.3 -00.3	S	22 54.6 -00.3	355 07.6 -00.8	S	21 40.5 -00.6	246 36.8 -28.5	N	19 28.2 +10.4	13										
14	29 01.0 -00.3	S	22 54.3 -00.2	10 06.8 -00.9	S	21 39.9 -00.6	261 08.3 -28.6	N	19 38.6 +10.4	14										
15	44 00.7 -00.3	S	22 54.1 -00.2	25 05.9 -00.8	S	21 39.3 -00.6	275 39.7 -28.6	N	19 49.0 +10.2	15										
16	59 00.4 -00.3	S	22 53.9 -00.2	40 05.1 -00.8	S	21 38.7 -00.7	290 11.1 -28.6	N	19 59.2 +10.1	16										
17	74 00.1 -00.3	S	22 53.7 -00.3	55 04.3 -00.9	S	21 38.0 -00.6	304 42.5 -28.7	N	20 09.3 +10.0	17										
18	88 59.8 -00.3	S	22 53.4 -00.2	70 03.4 -00.8	S	21 37.4 -00.6	319 13.8 -28.8	N	20 19.3 +09.9	18										
19	103 59.5 -00.2	S	22 53.2 -00.2	85 02.6 -00.8	S	21 36.8 -00.6	333 45.0 -28.8	N	20 29.2 +09.9	19										
20	118 59.3 -00.3	S	22 53.0 -00.3	100 01.8 -00.9	S	21 36.2 -00.6	348 16.2 -28.8	N	20 39.1 +09.7	20										
21	133 59.0 -00.3	S	22 52.7 -00.2	115 00.9 -00.8	S	21 35.6 -00.6	2 47.4 -28.9	N	20 48.8 +09.6	21										
22	148 58.7 -00.3	S	22 52.5 -00.2	130 00.1 -00.9	S	21 35.0 -00.6	17 18.5 -28.9	N	20 58.4 +09.5	22										
23	163 58.4 -00.3	S	22 52.3 -00.3	144 59.2 -00.8	S	21 34.4 -00.7	31 49.6 -29.0	N	21 07.9 +09.4	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'3	16'3	16'3	16'3	16'3	16'3	SD	00'1	00'1	00'1	00'1	00'1	00'1	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	00'1	00'1	00'1	00'1	00'1	00'1	HP	55'6	55'5	55'4	55'3	55'3	55'2
SHA	078°	077°	077°	077°	077°	077°	SHA	059°	059°	058°	058°	058°	058°	SHA	315°	313°	311°	309°	307°	305°
Greenwich Culmination Time: 12:03							Greenwich Culmination Time: 13:19							Greenwich Culmination Time: 20:48						

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	34 38.9 +02.9	N	24 34.3 -00.1	99 39.5 +02.1	S	00 39.2 -00.1	136 05.0 +02.2	S	15 10.9 -00.1	00										
01	49 41.8 +02.8	N	24 34.2 +00.0	114 41.6 +02.2	S	00 39.1 -00.1	151 07.2 +02.2	S	15 10.8 -00.1	01										
02	64 44.6 +02.9	N	24 34.2 -00.1	129 43.8 +02.2	S	00 39.0 -00.2	166 09.4 +02.2	S	15 10.7 +00.0	02										
03	79 47.5 +02.8	N	24 34.1 +00.0	144 46.0 +02.2	S	00 38.8 -00.1	181 11.6 +02.2	S	15 10.7 -00.1	03										
04	94 50.3 +02.9	N	24 34.1 +00.0	159 48.2 +02.2	S	00 38.7 -00.1	196 13.8 +02.3	S	15 10.6 -00.1	04										
05	109 53.2 +02.9	N	24 34.1 -00.1	174 50.4 +02.2	S	00 38.6 -00.2	211 16.1 +02.2	S	15 10.5 -00.1	05										
06	124 56.1 +02.8	N	24 34.0 +00.0	189 52.6 +02.2	S	00 38.4 -00.1	226 18.3 +02.2	S	15 10.4 -00.1	06										
07	139 58.9 +02.9	N	24 34.0 -00.1	204 54.8 +02.1	S	00 38.3 -00.1	241 20.5 +02.2	S	15 10.3 -00.1	07										
08	155 01.8 +02.8	N	24 33.9 +00.0	219 56.9 +02.2	S	00 38.2 -00.2	256 22.7 +02.2	S	15 10.2 +00.0	08										
09	170 04.6 +02.9	N	24 33.9 -00.1	234 59.1 +02.2	S	00 38.0 -00.1	271 24.9 +02.2	S	15 10.2 -00.1	09										
10	185 07.5 +02.8	N	24 33.8 +00.0	250 01.3 +02.2	S	00 37.9 -00.1	286 27.1 +02.3	S	15 10.1 -00.1	10										
11	200 10.3 +02.8	N	24 33.8 +00.0	265 03.5 +02.2	S	00 37.8 -00.1	301 29.4 +02.2	S	15 10.0 -00.1	11										
12	215 13.1 +02.9	N	24 33.8 -00.1	280 05.7 +02.2	S	00 37.7 -00.2	316 31.6 +02.2	S	15 09.9 -00.1	12										
13	230 16.0 +02.8	N	24 33.7 +00.0	295 07.9 +02.1	S	00 37.5 -00.1	331 33.8 +02.2	S	15 09.8 -00.1	13										
14	245 18.8 +02.9	N	24 33.7 -00.1	310 10.0 +02.2	S	00 37.4 -00.1	346 36.0 +02.2	S	15 09.7 +00.0	14										
15	260 21.7 +02.8	N	24 33.6 +00.0	325 12.2 +02.2	S	00 37.3 -00.2	1 38.2 +02.2	S	15 09.7 -00.1	15										
16	275 24.5 +02.8	N	24 33.6 +00.0	340 14.4 +02.2	S	00 37.1 -00.1	16 40.4 +02.3	S	15 09.6 -00.1	16										
17	290 27.3 +02.9	N	24 33.6 -00.1	355 16.6 +02.2	S	00 37.0 -00.2	31 42.7 +02.2	S	15 09.5 -00.1	17										
18	305 30.2 +02.8	N	24 33.5 +00.0	10 18.8 +02.1	S	00 36.8 -00.1	46 44.9 +02.2	S	15 09.4 -00.1	18										
19	320 33.0 +02.8	N	24 33.5 -00.1	25 20.9 +02.2	S	00 36.7 -00.1	61 47.1 +02.2	S	15 09.3 -00.1	19										
20	335 35.8 +02.9	N	24 33.4 +00.0	40 23.1 +02.2	S	00 36.6 -00.2	76 49.3 +02.2	S	15 09.2 +00.0	20										
21	350 38.7 +02.8	N	24 33.4 +00.0	55 25.3 +02.2	S	00 36.4 -00.1	91 51.5 +02.2	S	15 09.2 -00.1	21										
22	5 41.5 +02.8	N	24 33.4 -00.1	70 27.5 +02.2	S	00 36.3 -00.1	106 53.7 +02.3	S	15 09.1 -00.1	22										
23	20 44.3 +02.9	N	24 33.3 +00.0	85 29.7 +02.1	S	00 36.2 -00.2	121 56.0 +02.2	S	15 09.0 -00.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'2	00'2	00'2	00'2	00'2	00'2	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	293°	293°	293°	293°	293°	293°	SHA	358°	358°	358°	358°	358°	358°	SHA	035°	035°	035°	035°	035°	035°
Greenwich Culmination Time: 21:37							Greenwich Culmination Time: 17:18							Greenwich Culmination Time: 14:53						

Sun					Venus					Moon					A: 38%
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	178 58.1 -00.3	S	22 52.0 -00.2		159 58.4 -00.8	S	21 33.7 -00.6		46 20.6 -29.1	N	21 17.3 +09.4		00		
01	193 57.8 -00.3	S	22 51.8 -00.2		174 57.6 -00.9	S	21 33.1 -00.6		60 51.5 -29.0	N	21 26.7 +09.2		01		
02	208 57.5 -00.3	S	22 51.6 -00.3		189 56.7 -00.8	S	21 32.5 -00.6		75 22.5 -29.2	N	21 35.9 +09.1		02		
03	223 57.2 -00.3	S	22 51.3 -00.2		204 55.9 -00.8	S	21 31.9 -00.7		89 53.3 -29.1	N	21 45.0 +09.0		03		
04	238 56.9 -00.2	S	22 51.1 -00.3		219 55.1 -00.9	S	21 31.2 -00.6		104 24.2 -29.3	N	21 54.0 +08.9		04		
05	253 56.7 -00.3	S	22 50.8 -00.2		234 54.2 -00.8	S	21 30.6 -00.6		118 54.9 -29.2	N	22 02.9 +08.7		05		
06	268 56.4 -00.3	S	22 50.6 -00.2		249 53.4 -00.8	S	21 30.0 -00.6		133 25.7 -29.4	N	22 11.6 +08.7		06		
07	283 56.1 -00.3	S	22 50.4 -00.3		264 52.6 -00.8	S	21 29.4 -00.7		147 56.3 -29.3	N	22 20.3 +08.6		07		
08	298 55.8 -00.3	S	22 50.1 -00.2		279 51.8 -00.9	S	21 28.7 -00.6		162 27.0 -29.4	N	22 28.9 +08.4		08		
09	313 55.5 -00.3	S	22 49.9 -00.3		294 50.9 -00.8	S	21 28.1 -00.6		176 57.6 -29.5	N	22 37.3 +08.4		09		
10	328 55.2 -00.3	S	22 49.6 -00.2		309 50.1 -00.8	S	21 27.5 -00.7		191 28.1 -29.5	N	22 45.7 +08.2		10		
11	343 54.9 -00.3	S	22 49.4 -00.2		324 49.3 -00.9	S	21 26.8 -00.6		205 58.6 -29.6	N	22 53.9 +08.2		11		
12	358 54.6 -00.2	S	22 49.2 -00.3		339 48.4 -00.8	S	21 26.2 -00.6		220 29.0 -29.6	N	23 02.1 +08.0		12		
13	13 54.4 -00.3	S	22 48.9 -00.2		354 47.6 -00.8	S	21 25.6 -00.7		234 59.4 -29.6	N	23 10.1 +07.9		13		
14	28 54.1 -00.3	S	22 48.7 -00.3		9 46.8 -00.8	S	21 24.9 -00.6		249 29.8 -29.7	N	23 18.0 +07.8		14		
15	43 53.8 -00.3	S	22 48.4 -00.2		24 46.0 -00.9	S	21 24.3 -00.6		264 00.1 -29.8	N	23 25.8 +07.6		15		
16	58 53.5 -00.3	S	22 48.2 -00.3		39 45.1 -00.8	S	21 23.7 -00.7		278 30.3 -29.7	N	23 33.4 +07.6		16		
17	73 53.2 -00.3	S	22 47.9 -00.2		54 44.3 -00.8	S	21 23.0 -00.6		293 00.6 -29.9	N	23 41.0 +07.4		17		
18	88 52.9 -00.3	S	22 47.7 -00.3		69 43.5 -00.9	S	21 22.4 -00.7		307 30.7 -29.9	N	23 48.4 +07.4		18		
19	103 52.6 -00.2	S	22 47.4 -00.2		84 42.6 -00.8	S	21 21.7 -00.6		322 00.8 -29.9	N	23 55.8 +07.2		19		
20	118 52.4 -00.3	S	22 47.2 -00.3		99 41.8 -00.8	S	21 21.1 -00.6		336 30.9 -29.9	N	24 03.0 +07.1		20		
21	133 52.1 -00.3	S	22 46.9 -00.2		114 41.0 -00.8	S	21 20.5 -00.7		351 01.0 -30.1	N	24 10.1 +06.9		21		
22	148 51.8 -00.3	S	22 46.7 -00.3		129 40.2 -00.8	S	21 19.8 -00.6		5 30.9 -30.0	N	24 17.0 +06.9		22		
23	163 51.5 -00.3	S	22 46.4 -00.2		144 39.4 -00.9	S	21 19.2 -00.7		20 00.9 -30.1	N	24 23.9 +06.7		23		
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22
SD	16'3	16'3	16'3	16'3	16'3	16'3			SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1			HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	077°	076°	076°	076°	076°	076°			SHA	058°	057°	057°	057°	057°	056°
Greenwich Culmination Time: 12:04									Greenwich Culmination Time: 13:20						

Mars					Jupiter					Saturn					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	35 47.2 +02.8	N	24 33.3 -00.1		100 31.8 +02.2	S	00 36.0 -00.1		136 58.2 +02.2	S	15 08.9 -00.1		00		
01	50 50.0 +02.8	N	24 33.2 +00.0		115 34.0 +02.2	S	00 35.9 -00.1		152 00.4 +02.2	S	15 08.8 -00.1		01		
02	65 52.8 +02.8	N	24 33.2 +00.0		130 36.2 +02.2	S	00 35.8 -00.2		167 02.6 +02.2	S	15 08.7 +00.0		02		
03	80 55.6 +02.8	N	24 33.2 -00.1		145 38.4 +02.2	S	00 35.6 -00.1		182 04.8 +02.2	S	15 08.7 -00.1		03		
04	95 58.4 +02.9	N	24 33.1 +00.0		160 40.6 +02.1	S	00 35.5 -00.1		197 07.0 +02.3	S	15 08.6 -00.1		04		
05	111 01.3 +02.8	N	24 33.1 +00.0		175 42.7 +02.2	S	00 35.4 -00.2		212 09.3 +02.2	S	15 08.5 -00.1		05		
06	126 04.1 +02.8	N	24 33.1 -00.1		190 44.9 +02.2	S	00 35.2 -00.1		227 11.5 +02.2	S	15 08.4 -00.1		06		
07	141 06.9 +02.8	N	24 33.0 +00.0		205 47.1 +02.2	S	00 35.1 -00.1		242 13.7 +02.2	S	15 08.3 -00.1		07		
08	156 09.7 +02.8	N	24 33.0 -00.1		220 49.3 +02.1	S	00 35.0 -00.2		257 15.9 +02.2	S	15 08.2 +00.0		08		
09	171 12.5 +02.8	N	24 32.9 +00.0		235 51.4 +02.2	S	00 34.8 -00.1		272 18.1 +02.2	S	15 08.2 -00.1		09		
10	186 15.3 +02.8	N	24 32.9 +00.0		250 53.6 +02.2	S	00 34.7 -00.1		287 20.3 +02.2	S	15 08.1 -00.1		10		
11	201 18.1 +02.8	N	24 32.9 -00.1		265 55.8 +02.2	S	00 34.6 -00.2		302 22.5 +02.3	S	15 08.0 -00.1		11		
12	216 20.9 +02.8	N	24 32.8 +00.0		280 58.0 +02.2	S	00 34.4 -00.1		317 24.8 +02.2	S	15 07.9 -00.1		12		
13	231 23.7 +02.8	N	24 32.8 -00.1		296 00.2 +02.1	S	00 34.3 -00.1		332 27.0 +02.2	S	15 07.8 -00.1		13		
14	246 26.5 +02.8	N	24 32.7 +00.0		311 02.3 +02.2	S	00 34.2 -00.2		347 29.2 +02.2	S	15 07.7 +00.0		14		
15	261 29.3 +02.8	N	24 32.7 +00.0		326 04.5 +02.2	S	00 34.0 -00.1		2 31.4 +02.2	S	15 07.7 -00.1		15		
16	276 32.1 +02.8	N	24 32.7 -00.1		341 06.7 +02.2	S	00 33.9 -00.2		17 33.6 +02.2	S	15 07.6 -00.1		16		
17	291 34.9 +02.8	N	24 32.6 +00.0		356 08.9 +02.1	S	00 33.7 -00.1		32 35.8 +02.2	S	15 07.5 -00.1		17		
18	306 37.7 +02.8	N	24 32.6 +00.0		11 11.0 +02.2	S	00 33.6 -00.1		47 38.0 +02.3	S	15 07.4 -00.1		18		
19	321 40.5 +02.8	N	24 32.6 -00.1		26 13.2 +02.2	S	00 33.5 -00.2		62 40.3 +02.2	S	15 07.3 -00.1		19		
20	336 43.3 +02.8	N	24 32.5 +00.0		41 15.4 +02.2	S	00 33.3 -00.1		77 42.5 +02.2	S	15 07.2 -00.1		20		
21	351 46.1 +02.8	N	24 32.5 +00.0		56 17.6 +02.1	S	00 33.2 -00.1		92 44.7 +02.2	S	15 07.1 +00.0		21		
22	6 48.9 +02.8	N	24 32.5 -00.1		71 19.7 +02.2	S	00 33.1 -00.2		107 46.9 +02.2	S	15 07.1 -00.1		22		
23	21 51.7 +02.8	N	24 32.4 +00.0		86 21.9 +02.2	S	00 32.9 -00.1		122 49.1 +02.2	S	15 07.0 -00.1		23		
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1			SD	00'3	00'3	00'3	00'3	00'3	00'3
HP	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	293°	293°	293°	294°	294°	294°			SHA	035°	035°	035°	035°	035°	035°
Greenwich Culmination Time: 21:32									Greenwich Culmination Time: 17:15						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 51.2 -00.3	S	22 46.2 -00.3	159 38.5 -00.8	S	21 18.5 -00.6	34 30.8 -30.1	N	24 30.6 +06.6	00			
01	193 50.9 -00.3	S	22 45.9 -00.2	174 37.7 -00.8	S	21 17.9 -00.7	49 00.7 -30.2	N	24 37.2 +06.5	01			
02	208 50.6 -00.2	S	22 45.7 -00.3	189 36.9 -00.8	S	21 17.2 -00.6	63 30.5 -30.2	N	24 43.7 +06.4	02			
03	223 50.4 -00.3	S	22 45.4 -00.3	204 36.1 -00.9	S	21 16.6 -00.7	78 00.3 -30.3	N	24 50.1 +06.3	03			
04	238 50.1 -00.3	S	22 45.1 -00.2	219 35.2 -00.8	S	21 15.9 -00.6	92 30.0 -30.3	N	24 56.4 +06.1	04			
05	253 49.8 -00.3	S	22 44.9 -00.3	234 34.4 -00.8	S	21 15.3 -00.7	106 59.7 -30.3	N	25 02.5 +06.0	05			
06	268 49.5 -00.3	S	22 44.6 -00.2	249 33.6 -00.8	S	21 14.6 -00.6	121 29.4 -30.4	N	25 08.5 +05.9	06			
07	283 49.2 -00.3	S	22 44.4 -00.3	264 32.8 -00.8	S	21 14.0 -00.7	135 59.0 -30.4	N	25 14.4 +05.7	07			
08	298 48.9 -00.2	S	22 44.1 -00.2	279 32.0 -00.8	S	21 13.3 -00.6	150 28.6 -30.5	N	25 20.1 +05.7	08			
09	313 48.7 -00.3	S	22 43.9 -00.3	294 31.2 -00.9	S	21 12.7 -00.7	164 58.1 -30.5	N	25 25.8 +05.5	09			
10	328 48.4 -00.3	S	22 43.6 -00.3	309 30.3 -00.8	S	21 12.0 -00.7	179 27.6 -30.5	N	25 31.3 +05.4	10			
11	343 48.1 -00.3	S	22 43.3 -00.2	324 29.5 -00.8	S	21 11.3 -00.6	193 57.1 -30.6	N	25 36.7 +05.2	11			
12	358 47.8 -00.3	S	22 43.1 -00.3	339 28.7 -00.8	S	21 10.7 -00.7	208 26.5 -30.6	N	25 41.9 +05.2	12			
13	13 47.5 -00.3	S	22 42.8 -00.3	354 27.9 -00.8	S	21 10.0 -00.6	222 55.9 -30.6	N	25 47.1 +05.0	13			
14	28 47.2 -00.2	S	22 42.5 -00.2	9 27.1 -00.8	S	21 09.4 -00.7	237 25.3 -30.7	N	25 52.1 +04.8	14			
15	43 47.0 -00.3	S	22 42.3 -00.3	24 26.3 -00.9	S	21 08.7 -00.7	251 54.6 -30.7	N	25 56.9 +04.8	15			
16	58 46.7 -00.3	S	22 42.0 -00.3	39 25.4 -00.8	S	21 08.0 -00.6	266 23.9 -30.7	N	26 01.7 +04.6	16			
17	73 46.4 -00.3	S	22 41.7 -00.2	54 24.6 -00.8	S	21 07.4 -00.7	280 53.2 -30.7	N	26 06.3 +04.5	17			
18	88 46.1 -00.3	S	22 41.5 -00.3	69 23.8 -00.8	S	21 06.7 -00.7	295 22.5 -30.8	N	26 10.8 +04.3	18			
19	103 45.8 -00.2	S	22 41.2 -00.3	84 23.0 -00.8	S	21 06.0 -00.6	309 51.7 -30.8	N	26 15.1 +04.3	19			
20	118 45.6 -00.3	S	22 40.9 -00.2	99 22.2 -00.8	S	21 05.4 -00.7	324 20.9 -30.9	N	26 19.4 +04.1	20			
21	133 45.3 -00.3	S	22 40.7 -00.3	114 21.4 -00.8	S	21 04.7 -00.7	338 50.0 -30.8	N	26 23.5 +03.9	21			
22	148 45.0 -00.3	S	22 40.4 -00.3	129 20.6 -00.8	S	21 04.0 -00.6	353 19.2 -30.9	N	26 27.4 +03.9	22			
23	163 44.7 -00.3	S	22 40.1 -00.2	144 19.8 -00.8	S	21 03.4 -00.7	7 48.3 -30.9	N	26 31.3 +03.7	23			
UT	02 06 10 14 18 22			UT	02 06 10 14 18 22			UT	02 06 10 14 18 22				
SD	16'3 16'3 16'3 16'3 16'3 16'3			SD	00'1 00'1 00'1 00'1 00'1 00'1			SD	14'9 14'9 14'9 14'9 14'8 14'8				
HP	00'1 00'1 00'1 00'1 00'1 00'1			HP	00'1 00'1 00'1 00'1 00'1 00'1			HP	54'7 54'6 54'6 54'5 54'5 54'4				
SHA	075° 075° 075° 075° 075° 075°			SHA	056° 056° 056° 056° 055° 055°			SHA	290° 288° 286° 284° 281° 279°				
Greenwich Culmination Time: 12:04				Greenwich Culmination Time: 13:22				Greenwich Culmination Time: 22:27					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	36 54.5 +02.8	N	24 32.4 -00.1	101 24.1 +02.2	S	00 32.8 -00.1	137 51.3 +02.2	S	15 06.9 -00.1	00			
01	51 57.3 +02.8	N	24 32.3 +00.0	116 26.3 +02.1	S	00 32.7 -00.2	152 53.5 +02.3	S	15 06.8 -00.1	01			
02	67 00.1 +02.8	N	24 32.3 +00.0	131 28.4 +02.2	S	00 32.5 -00.1	167 55.8 +02.2	S	15 06.7 -00.1	02			
03	82 02.9 +02.7	N	24 32.3 -00.1	146 30.6 +02.2	S	00 32.4 -00.2	182 58.0 +02.2	S	15 06.6 +00.0	03			
04	97 05.6 +02.8	N	24 32.2 +00.0	161 32.8 +02.1	S	00 32.2 -00.1	198 00.2 +02.2	S	15 06.6 -00.1	04			
05	112 08.4 +02.8	N	24 32.2 +00.0	176 34.9 +02.2	S	00 32.1 -00.1	213 02.4 +02.2	S	15 06.5 -00.1	05			
06	127 11.2 +02.8	N	24 32.2 -00.1	191 37.1 +02.2	S	00 32.0 -00.2	228 04.6 +02.2	S	15 06.4 -00.1	06			
07	142 14.0 +02.7	N	24 32.1 +00.0	206 39.3 +02.2	S	00 31.8 -00.1	243 06.8 +02.2	S	15 06.3 -00.1	07			
08	157 16.7 +02.8	N	24 32.1 +00.0	221 41.5 +02.1	S	00 31.7 -00.1	258 09.0 +02.3	S	15 06.2 -00.1	08			
09	172 19.5 +02.8	N	24 32.1 -00.1	236 43.6 +02.2	S	00 31.6 -00.2	273 11.3 +02.2	S	15 06.1 -00.1	09			
10	187 22.3 +02.8	N	24 32.0 +00.0	251 45.8 +02.2	S	00 31.4 -00.1	288 13.5 +02.2	S	15 06.0 +00.0	10			
11	202 25.1 +02.7	N	24 32.0 +00.0	266 48.0 +02.1	S	00 31.3 -00.2	303 15.7 +02.2	S	15 06.0 -00.1	11			
12	217 27.8 +02.8	N	24 32.0 -00.1	281 50.1 +02.2	S	00 31.1 -00.1	318 17.9 +02.2	S	15 05.9 -00.1	12			
13	232 30.6 +02.8	N	24 31.9 +00.0	296 52.3 +02.2	S	00 31.0 -00.1	333 20.1 +02.2	S	15 05.8 -00.1	13			
14	247 33.4 +02.7	N	24 31.9 -00.1	311 54.5 +02.2	S	00 30.9 -00.2	348 22.3 +02.2	S	15 05.7 -00.1	14			
15	262 36.1 +02.8	N	24 31.8 +00.0	326 56.7 +02.1	S	00 30.7 -00.1	3 24.5 +02.2	S	15 05.6 -00.1	15			
16	277 38.9 +02.8	N	24 31.8 +00.0	341 58.8 +02.2	S	00 30.6 -00.2	18 26.7 +02.3	S	15 05.5 +00.0	16			
17	292 41.7 +02.7	N	24 31.8 -00.1	357 01.0 +02.2	S	00 30.4 -00.1	33 29.0 +02.2	S	15 05.5 -00.1	17			
18	307 44.4 +02.8	N	24 31.7 +00.0	12 03.2 +02.1	S	00 30.3 -00.1	48 31.2 +02.2	S	15 05.4 -00.1	18			
19	322 47.2 +02.7	N	24 31.7 +00.0	27 05.3 +02.2	S	00 30.2 -00.2	63 33.4 +02.2	S	15 05.3 -00.1	19			
20	337 49.9 +02.8	N	24 31.7 -00.1	42 07.5 +02.2	S	00 30.0 -00.1	78 35.6 +02.2	S	15 05.2 -00.1	20			
21	352 52.7 +02.7	N	24 31.6 +00.0	57 09.7 +02.1	S	00 29.9 -00.1	93 37.8 +02.2	S	15 05.1 -00.1	21			
22	7 55.4 +02.8	N	24 31.6 +00.0	72 11.8 +02.2	S	00 29.8 -00.2	108 40.0 +02.2	S	15 05.0 -00.1	22			
23	22 58.2 +02.7	N	24 31.6 -00.1	87 14.0 +02.2	S	00 29.6 -00.1	123 42.2 +02.2	S	15 04.9 +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	00'1 00'1 00'1 00'1 00'1 00'1			SD	00'3 00'3 00'3 00'3 00'3 00'3			SD	00'1 00'1 00'1 00'1 00'1 00'1				
HP	00'2 00'2 00'2 00'2 00'2 00'2			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	294° 294° 294° 294° 294° 294°			SHA	358° 358° 358° 358° 358° 358°			SHA	035° 034° 034° 034° 034° 034°				
Greenwich Culmination Time: 21:28				Greenwich Culmination Time: 17:11				Greenwich Culmination Time: 14:46					

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	178 44.4 -00.2	S	22 39.9 -00.3	159 19.0 -00.9	S	21 02.7 -00.7	22 17.4 -31.0	N	26 35.0 +03.6	00										
01	193 44.2 -00.3	S	22 39.6 -00.3	174 18.1 -00.8	S	21 02.0 -00.7	36 46.4 -30.9	N	26 38.6 +03.4	01										
02	208 43.9 -00.3	S	22 39.3 -00.3	189 17.3 -00.8	S	21 01.3 -00.6	51 15.5 -31.0	N	26 42.0 +03.3	02										
03	223 43.6 -00.3	S	22 39.0 -00.2	204 16.5 -00.8	S	21 00.7 -00.7	65 44.5 -31.0	N	26 45.3 +03.2	03										
04	238 43.3 -00.3	S	22 38.8 -00.3	219 15.7 -00.8	S	20 60.0 -00.7	80 13.5 -31.0	N	26 48.5 +03.1	04										
05	253 43.0 -00.2	S	22 38.5 -00.3	234 14.9 -00.8	S	20 59.3 -00.7	94 42.5 -31.1	N	26 51.6 +02.9	05										
06	268 42.8 -00.3	S	22 38.2 -00.3	249 14.1 -00.8	S	20 58.6 -00.6	109 11.4 -31.0	N	26 54.5 +02.8	06										
07	283 42.5 -00.3	S	22 37.9 -00.3	264 13.3 -00.8	S	20 58.0 -00.7	123 40.4 -31.1	N	26 57.3 +02.6	07										
08	298 42.2 -00.3	S	22 37.6 -00.2	279 12.5 -00.8	S	20 57.3 -00.7	138 09.3 -31.1	N	26 59.9 +02.5	08										
09	313 41.9 -00.3	S	22 37.4 -00.3	294 11.7 -00.8	S	20 56.6 -00.7	152 38.2 -31.1	N	27 02.4 +02.4	09										
10	328 41.6 -00.2	S	22 37.1 -00.3	309 10.9 -00.8	S	20 55.9 -00.7	167 07.1 -31.1	N	27 04.8 +02.2	10										
11	343 41.4 -00.3	S	22 36.8 -00.3	324 10.1 -00.8	S	20 55.2 -00.7	181 36.0 -31.1	N	27 07.0 +02.2	11										
12	358 41.1 -00.3	S	22 36.5 -00.3	339 09.3 -00.8	S	20 54.5 -00.6	196 04.9 -31.1	N	27 09.2 +01.9	12										
13	13 40.8 -00.3	S	22 36.2 -00.2	354 08.5 -00.8	S	20 53.9 -00.7	210 33.8 -31.2	N	27 11.1 +01.9	13										
14	28 40.5 -00.2	S	22 36.0 -00.3	9 07.7 -00.8	S	20 53.2 -00.7	225 02.6 -31.1	N	27 13.0 +01.7	14										
15	43 40.3 -00.3	S	22 35.7 -00.3	24 06.9 -00.8	S	20 52.5 -00.7	239 31.5 -31.2	N	27 14.7 +01.6	15										
16	58 40.0 -00.3	S	22 35.4 -00.3	39 06.1 -00.8	S	20 51.8 -00.7	254 00.3 -31.1	N	27 16.3 +01.4	16										
17	73 39.7 -00.3	S	22 35.1 -00.3	54 05.3 -00.8	S	20 51.1 -00.7	268 29.2 -31.2	N	27 17.7 +01.3	17										
18	88 39.4 -00.3	S	22 34.8 -00.3	69 04.5 -00.8	S	20 50.4 -00.7	282 58.0 -31.2	N	27 19.0 +01.2	18										
19	103 39.1 -00.2	S	22 34.5 -00.3	84 03.7 -00.8	S	20 49.7 -00.7	297 26.8 -31.1	N	27 20.2 +01.0	19										
20	118 38.9 -00.3	S	22 34.2 -00.2	99 02.9 -00.8	S	20 49.0 -00.7	311 55.7 -31.2	N	27 21.2 +00.9	20										
21	133 38.6 -00.3	S	22 34.0 -00.3	114 02.1 -00.8	S	20 48.3 -00.7	326 24.5 -31.1	N	27 22.1 +00.8	21										
22	148 38.3 -00.3	S	22 33.7 -00.3	129 01.3 -00.8	S	20 47.6 -00.7	340 53.4 -31.2	N	27 22.9 +00.6	22										
23	163 38.0 -00.2	S	22 33.4 -00.3	144 00.5 -00.8	S	20 46.9 -00.7	355 22.2 -31.2	N	27 23.5 +00.5	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'3	16'3	16'3	16'3	16'3	16'3	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP						
SHA	074°	074°	074°	074°	074°	073°	SHA	055°	055°	054°	054°	054°	054°	SHA						
Greenwich Culmination Time: 12:05							Greenwich Culmination Time: 13:23							Greenwich Culmination Time: 23:19						

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	38 00.9 +02.8	N	24 31.5 +00.0	102 16.2 +02.1	S	00 29.5 -00.2	138 44.4 +02.3	S	15 04.9 -00.1	00										
01	53 03.7 +02.7	N	24 31.5 +00.0	117 18.3 +02.2	S	00 29.3 -00.1	153 46.7 +02.2	S	15 04.8 -00.1	01										
02	68 06.4 +02.8	N	24 31.5 -00.1	132 20.5 +02.2	S	00 29.2 -00.1	168 48.9 +02.2	S	15 04.7 -00.1	02										
03	83 09.2 +02.7	N	24 31.4 +00.0	147 22.7 +02.1	S	00 29.1 -00.2	183 51.1 +02.2	S	15 04.6 -00.1	03										
04	98 11.9 +02.8	N	24 31.4 +00.0	162 24.8 +02.2	S	00 28.9 -00.1	198 53.3 +02.2	S	15 04.5 -00.1	04										
05	113 14.7 +02.7	N	24 31.4 -00.1	177 27.0 +02.2	S	00 28.8 -00.2	213 55.5 +02.2	S	15 04.4 -00.1	05										
06	128 17.4 +02.7	N	24 31.3 +00.0	192 29.2 +02.1	S	00 28.6 -00.1	228 57.7 +02.2	S	15 04.3 +00.0	06										
07	143 20.1 +02.8	N	24 31.3 +00.0	207 31.3 +02.2	S	00 28.5 -00.1	243 59.9 +02.2	S	15 04.3 -00.1	07										
08	158 22.9 +02.7	N	24 31.3 -00.1	222 33.5 +02.2	S	00 28.4 -00.2	259 02.1 +02.2	S	15 04.2 -00.1	08										
09	173 25.6 +02.8	N	24 31.2 +00.0	237 35.7 +02.1	S	00 28.2 -00.1	274 04.3 +02.3	S	15 04.1 -00.1	09										
10	188 28.4 +02.7	N	24 31.2 +00.0	252 37.8 +02.2	S	00 28.1 -00.2	289 06.6 +02.2	S	15 04.0 -00.1	10										
11	203 31.1 +02.7	N	24 31.2 +00.0	267 40.0 +02.2	S	00 27.9 -00.1	304 08.8 +02.2	S	15 03.9 -00.1	11										
12	218 33.8 +02.7	N	24 31.2 -00.1	282 42.2 +02.1	S	00 27.8 -00.1	319 11.0 +02.2	S	15 03.8 +00.0	12										
13	233 36.5 +02.8	N	24 31.1 +00.0	297 44.3 +02.2	S	00 27.7 -00.2	334 13.2 +02.2	S	15 03.8 -00.1	13										
14	248 39.3 +02.7	N	24 31.1 +00.0	312 46.5 +02.2	S	00 27.5 -00.1	349 15.4 +02.2	S	15 03.7 -00.1	14										
15	263 42.0 +02.7	N	24 31.1 -00.1	327 48.7 +02.1	S	00 27.4 -00.2	4 17.6 +02.2	S	15 03.6 -00.1	15										
16	278 44.7 +02.8	N	24 31.0 +00.0	342 50.8 +02.2	S	00 27.2 -00.1	19 19.8 +02.2	S	15 03.5 -00.1	16										
17	293 47.5 +02.7	N	24 31.0 +00.0	357 53.0 +02.1	S	00 27.1 -00.1	34 22.0 +02.2	S	15 03.4 -00.1	17										
18	308 50.2 +02.7	N	24 31.0 -00.1	12 55.1 +02.2	S	00 27.0 -00.2	49 24.2 +02.3	S	15 03.3 -00.1	18										
19	323 52.9 +02.7	N	24 30.9 +00.0	27 57.3 +02.2	S	00 26.8 -00.1	64 26.5 +02.2	S	15 03.2 +00.0	19										
20	338 55.6 +02.7	N	24 30.9 +00.0	42 59.5 +02.1	S	00 26.7 -00.2	79 28.7 +02.2	S	15 03.2 -00.1	20										
21	353 58.3 +02.7	N	24 30.9 -00.1	58 01.6 +02.2	S	00 26.5 -00.1	94 30.9 +02.2	S	15 03.1 -00.1	21										
22	9 01.0 +02.8	N	24 30.8 +00.0	73 03.8 +02.2	S	00 26.4 -00.2	109 33.1 +02.2	S	15 03.0 -00.1	22										
23	24 03.8 +02.7	N	24 30.8 +00.0	88 06.0 +02.1	S	00 26.2 -00.1	124 35.3 +02.2	S	15 02.9 -00.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD						
HP	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	HP						
SHA	294°	294°	294°	294°	294°	294°	SHA	358°	358°	358°	358°	358°	358°	SHA						
Greenwich Culmination Time: 21:24							Greenwich Culmination Time: 17:08							Greenwich Culmination Time: 14:42						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 37.8 -00.3	S	22 33.1 -00.3	158 59.7 -00.8	S	20 46.2 -00.7	9 51.0 -31.1	N	27 24.0 +00.4	00			
01	193 37.5 -00.3	S	22 32.8 -00.3	173 58.9 -00.8	S	20 45.5 -00.7	24 19.9 -31.2	N	27 24.4 +00.2	01			
02	208 37.2 -00.3	S	22 32.5 -00.3	188 58.1 -00.8	S	20 44.8 -00.7	38 48.7 -31.1	N	27 24.6 +00.1	02			
03	223 36.9 -00.2	S	22 32.2 -00.3	203 57.3 -00.8	S	20 44.1 -00.7	53 17.6 -31.1	N	27 24.7 -00.1	03			
04	238 36.7 -00.3	S	22 31.9 -00.3	218 56.5 -00.8	S	20 43.4 -00.7	67 46.5 -31.2	N	27 24.6 -00.2	04			
05	253 36.4 -00.3	S	22 31.6 -00.3	233 55.7 -00.8	S	20 42.7 -00.7	82 15.3 -31.1	N	27 24.4 -00.3	05			
06	268 36.1 -00.3	S	22 31.3 -00.3	248 54.9 -00.8	S	20 42.0 -00.7	96 44.2 -31.1	N	27 24.1 -00.4	06			
07	283 35.8 -00.2	S	22 31.0 -00.3	263 54.1 -00.8	S	20 41.3 -00.7	111 13.1 -31.0	N	27 23.7 -00.6	07			
08	298 35.6 -00.3	S	22 30.7 -00.3	278 53.3 -00.8	S	20 40.6 -00.7	125 42.1 -31.1	N	27 23.1 -00.7	08			
09	313 35.3 -00.3	S	22 30.4 -00.3	293 52.5 -00.8	S	20 39.9 -00.7	140 11.0 -31.1	N	27 22.4 -00.9	09			
10	328 35.0 -00.3	S	22 30.1 -00.3	308 51.7 -00.8	S	20 39.2 -00.7	154 39.9 -31.0	N	27 21.5 -00.9	10			
11	343 34.7 -00.2	S	22 29.8 -00.3	323 50.9 -00.8	S	20 38.5 -00.7	169 08.9 -31.0	N	27 20.6 -01.2	11			
12	358 34.5 -00.3	S	22 29.5 -00.3	338 50.1 -00.7	S	20 37.8 -00.7	183 37.9 -31.0	N	27 19.4 -01.2	12			
13	13 34.2 -00.3	S	22 29.2 -00.3	353 49.4 -00.8	S	20 37.1 -00.7	198 06.9 -31.0	N	27 18.2 -01.4	13			
14	28 33.9 -00.3	S	22 28.9 -00.3	8 48.6 -00.8	S	20 36.4 -00.7	212 35.9 -30.9	N	27 16.8 -01.5	14			
15	43 33.6 -00.2	S	22 28.6 -00.3	23 47.8 -00.8	S	20 35.7 -00.8	227 05.0 -31.0	N	27 15.3 -01.7	15			
16	58 33.4 -00.3	S	22 28.3 -00.3	38 47.0 -00.8	S	20 34.9 -00.7	241 34.0 -30.9	N	27 13.6 -01.7	16			
17	73 33.1 -00.3	S	22 28.0 -00.3	53 46.2 -00.8	S	20 34.2 -00.7	256 03.1 -30.9	N	27 11.9 -01.9	17			
18	88 32.8 -00.2	S	22 27.7 -00.3	68 45.4 -00.8	S	20 33.5 -00.7	270 32.2 -30.8	N	27 10.0 -02.1	18			
19	103 32.6 -00.3	S	22 27.4 -00.3	83 44.6 -00.8	S	20 32.8 -00.7	285 01.4 -30.8	N	27 07.9 -02.2	19			
20	118 32.3 -00.3	S	22 27.1 -00.3	98 43.8 -00.7	S	20 32.1 -00.7	299 30.6 -30.8	N	27 05.7 -02.3	20			
21	133 32.0 -00.3	S	22 26.8 -00.3	113 43.1 -00.8	S	20 31.4 -00.8	313 59.8 -30.8	N	27 03.4 -02.4	21			
22	148 31.7 -00.2	S	22 26.5 -00.3	128 42.3 -00.8	S	20 30.6 -00.7	328 29.0 -30.8	N	27 01.0 -02.6	22			
23	163 31.5 -00.3	S	22 26.2 -00.3	143 41.5 -00.8	S	20 29.9 -00.7	342 58.2 -30.7	N	26 58.4 -02.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'3 16'3 16'3 16'3 16'3 16'3			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'8 14'7 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'1 54'1 54'1 54'1 54'0 54'0						
	SHA 073° 073° 073° 073° 072° 072°			SHA 054° 053° 053° 053° 053° 052°			SHA 263° 261° 259° 257° 254° 252°						
	Greenwich Culmination Time: 12:05			Greenwich Culmination Time: 13:24			Greenwich Culmination Time: -1:00						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	39 06.5 +02.7	N	24 30.8 +00.0	103 08.1 +02.2	S	00 26.1 -00.1	139 37.5 +02.2	S	15 02.8 -00.1	00			
01	54 09.2 +02.7	N	24 30.8 -00.1	118 10.3 +02.1	S	00 26.0 -00.2	154 39.7 +02.2	S	15 02.7 -00.1	01			
02	69 11.9 +02.7	N	24 30.7 +00.0	133 12.4 +02.2	S	00 25.8 -00.1	169 41.9 +02.2	S	15 02.6 +00.0	02			
03	84 14.6 +02.7	N	24 30.7 +00.0	148 14.6 +02.2	S	00 25.7 -00.2	184 44.1 +02.2	S	15 02.6 -00.1	03			
04	99 17.3 +02.7	N	24 30.7 -00.1	163 16.8 +02.1	S	00 25.5 -00.1	199 46.3 +02.3	S	15 02.5 -00.1	04			
05	114 20.0 +02.7	N	24 30.6 +00.0	178 18.9 +02.2	S	00 25.4 -00.1	214 48.6 +02.2	S	15 02.4 -00.1	05			
06	129 22.7 +02.7	N	24 30.6 +00.0	193 21.1 +02.2	S	00 25.3 -00.2	229 50.8 +02.2	S	15 02.3 -00.1	06			
07	144 25.4 +02.7	N	24 30.6 -00.1	208 23.3 +02.1	S	00 25.1 -00.1	244 53.0 +02.2	S	15 02.2 -00.1	07			
08	159 28.1 +02.7	N	24 30.5 +00.0	223 25.4 +02.2	S	00 25.0 -00.2	259 55.2 +02.2	S	15 02.1 -00.1	08			
09	174 30.8 +02.7	N	24 30.5 +00.0	238 27.6 +02.1	S	00 24.8 -00.1	274 57.4 +02.2	S	15 02.0 +00.0	09			
10	189 33.5 +02.7	N	24 30.5 +00.0	253 29.7 +02.2	S	00 24.7 -00.2	289 59.6 +02.2	S	15 02.0 -00.1	10			
11	204 36.2 +02.7	N	24 30.5 -00.1	268 31.9 +02.1	S	00 24.5 -00.1	305 01.8 +02.2	S	15 01.9 -00.1	11			
12	219 38.9 +02.7	N	24 30.4 +00.0	283 34.0 +02.2	S	00 24.4 -00.1	320 04.0 +02.2	S	15 01.8 -00.1	12			
13	234 41.6 +02.7	N	24 30.4 +00.0	298 36.2 +02.2	S	00 24.3 -00.2	335 06.2 +02.2	S	15 01.7 -00.1	13			
14	249 44.3 +02.7	N	24 30.4 -00.1	313 38.4 +02.1	S	00 24.1 -00.1	350 08.4 +02.2	S	15 01.6 -00.1	14			
15	264 47.0 +02.7	N	24 30.3 +00.0	328 40.5 +02.2	S	00 24.0 -00.2	5 10.6 +02.3	S	15 01.5 -00.1	15			
16	279 49.7 +02.7	N	24 30.3 +00.0	343 42.7 +02.1	S	00 23.8 -00.1	20 12.9 +02.2	S	15 01.4 -00.1	16			
17	294 52.4 +02.6	N	24 30.3 +00.0	358 44.8 +02.2	S	00 23.7 -00.2	35 15.1 +02.2	S	15 01.3 +00.0	17			
18	309 55.0 +02.7	N	24 30.3 -00.1	13 47.0 +02.2	S	00 23.5 -00.1	50 17.3 +02.2	S	15 01.3 -00.1	18			
19	324 57.7 +02.7	N	24 30.2 +00.0	28 49.2 +02.1	S	00 23.4 -00.2	65 19.5 +02.2	S	15 01.2 -00.1	19			
20	340 00.4 +02.7	N	24 30.2 +00.0	43 51.3 +02.2	S	00 23.2 -00.1	80 21.7 +02.2	S	15 01.1 -00.1	20			
21	355 03.1 +02.7	N	24 30.2 +00.0	58 53.5 +02.1	S	00 23.1 -00.1	95 23.9 +02.2	S	15 01.0 -00.1	21			
22	10 05.8 +02.6	N	24 30.2 -00.1	73 55.6 +02.2	S	00 23.0 -00.2	110 26.1 +02.2	S	15 00.9 -00.1	22			
23	25 08.4 +02.7	N	24 30.1 +00.0	88 57.8 +02.1	S	00 22.8 -00.1	125 28.3 +02.2	S	15 00.8 -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 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'2 00'2 00'2 00'2 00'2 00'2			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 294° 294° 294° 294° 294° 294°			SHA 358° 358° 358° 358° 358° 358°			SHA 034° 034° 034° 034° 034° 034°						
	Greenwich Culmination Time: 21:19			Greenwich Culmination Time: 17:04			Greenwich Culmination Time: 14:39						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 31.2 -00.3	S	22 25.9 -00.3	158 40.7 -00.8	S	20 29.2 -00.7	357 27.5 -30.6	N	26 55.7 -02.8				
01	193 30.9 -00.2	S	22 25.6 -00.3	173 39.9 -00.8	S	20 28.5 -00.8	11 56.9 -30.7	N	26 52.9 -02.9				
02	208 30.7 -00.3	S	22 25.3 -00.3	188 39.1 -00.7	S	20 27.7 -00.7	26 26.2 -30.6	N	26 50.0 -03.1				
03	223 30.4 -00.3	S	22 25.0 -00.4	203 38.4 -00.8	S	20 27.0 -00.7	40 55.6 -30.5	N	26 46.9 -03.2				
04	238 30.1 -00.3	S	22 24.6 -00.3	218 37.6 -00.8	S	20 26.3 -00.7	55 25.1 -30.6	N	26 43.7 -03.3				
05	253 29.8 -00.2	S	22 24.3 -00.3	233 36.8 -00.8	S	20 25.6 -00.8	69 54.5 -30.5	N	26 40.4 -03.5				
06	268 29.6 -00.3	S	22 24.0 -00.3	248 36.0 -00.8	S	20 24.8 -00.7	84 24.0 -30.4	N	26 36.9 -03.6				
07	283 29.3 -00.3	S	22 23.7 -00.3	263 35.2 -00.7	S	20 24.1 -00.7	98 53.6 -30.4	N	26 33.3 -03.7				
08	298 29.0 -00.2	S	22 23.4 -00.3	278 34.5 -00.8	S	20 23.4 -00.8	113 23.2 -30.4	N	26 29.6 -03.8				
09	313 28.8 -00.3	S	22 23.1 -00.3	293 33.7 -00.8	S	20 22.6 -00.7	127 52.8 -30.3	N	26 25.8 -04.0				
10	328 28.5 -00.3	S	22 22.8 -00.4	308 32.9 -00.8	S	20 21.9 -00.7	142 22.5 -30.3	N	26 21.8 -04.1				
11	343 28.2 -00.2	S	22 22.4 -00.3	323 32.1 -00.8	S	20 21.2 -00.8	156 52.2 -30.2	N	26 17.7 -04.2				
12	358 28.0 -00.3	S	22 22.1 -00.3	338 31.3 -00.7	S	20 20.4 -00.7	171 22.0 -30.2	N	26 13.5 -04.3				
13	13 27.7 -00.3	S	22 21.8 -00.3	353 30.6 -00.8	S	20 19.7 -00.7	185 51.8 -30.2	N	26 09.2 -04.5				
14	28 27.4 -00.2	S	22 21.5 -00.3	8 29.8 -00.8	S	20 19.0 -00.8	200 21.6 -30.1	N	26 04.7 -04.6				
15	43 27.2 -00.3	S	22 21.2 -00.4	23 29.0 -00.8	S	20 18.2 -00.7	214 51.5 -30.0	N	26 00.1 -04.7				
16	58 26.9 -00.3	S	22 20.8 -00.3	38 28.2 -00.7	S	20 17.5 -00.8	229 21.5 -30.1	N	25 55.4 -04.8				
17	73 26.6 -00.2	S	22 20.5 -00.3	53 27.5 -00.8	S	20 16.7 -00.7	243 51.4 -29.9	N	25 50.6 -04.9				
18	88 26.4 -00.3	S	22 20.2 -00.3	68 26.7 -00.8	S	20 16.0 -00.7	258 21.5 -29.9	N	25 45.7 -05.1				
19	103 26.1 -00.3	S	22 19.9 -00.4	83 25.9 -00.8	S	20 15.3 -00.8	272 51.6 -29.9	N	25 40.6 -05.2				
20	118 25.8 -00.2	S	22 19.5 -00.3	98 25.1 -00.7	S	20 14.5 -00.7	287 21.7 -29.8	N	25 35.4 -05.2				
21	133 25.6 -00.3	S	22 19.2 -00.3	113 24.4 -00.8	S	20 13.8 -00.8	301 51.9 -29.8	N	25 30.2 -05.5				
22	148 25.3 -00.3	S	22 18.9 -00.3	128 23.8 -00.8	S	20 13.0 -00.7	316 22.1 -29.7	N	25 24.7 -05.5				
23	163 25.0 -00.2	S	22 18.6 -00.4	143 22.8 -00.8	S	20 12.3 -00.8	330 52.4 -29.6	N	25 19.2 -05.6				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
	SD 16'3 16'3 16'3 16'3 16'3 16'3			SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'7 14'7 14'7 14'7					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'0 54'0 54'0 53'9 53'9 53'9					
	SHA 072° 072° 072° 072° 071° 071°			SHA 052° 052° 052° 052° 051° 051°				SHA 250° 248° 246° 243° 241° 239°					
	Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 13:25				Greenwich Culmination Time: 00:10					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	40 11.1 +02.7	N	24 30.1 +00.0	103 59.9 +02.2	S	00 22.7 -00.2	140 30.5 +02.2	S	15 00.7 +00.0				
01	55 13.8 +02.7	N	24 30.1 -00.1	119 02.1 +02.2	S	00 22.5 -00.1	155 32.7 +02.2	S	15 00.7 -00.1				
02	70 16.5 +02.6	N	24 30.0 +00.0	134 04.3 +02.1	S	00 22.4 -00.2	170 34.9 +02.2	S	15 00.6 -00.1				
03	85 19.1 +02.7	N	24 30.0 +00.0	149 06.4 +02.2	S	00 22.2 -00.1	185 37.1 +02.3	S	15 00.5 -00.1				
04	100 21.8 +02.7	N	24 30.0 +00.0	164 08.6 +02.1	S	00 22.1 -00.1	200 39.4 +02.2	S	15 00.4 -00.1				
05	115 24.5 +02.6	N	24 30.0 -00.1	179 10.7 +02.2	S	00 22.0 -00.2	215 41.6 +02.2	S	15 00.3 -00.1				
06	130 27.1 +02.7	N	24 29.9 +00.0	194 12.9 +02.1	S	00 21.8 -00.1	230 43.8 +02.2	S	15 00.2 -00.1				
07	145 29.8 +02.7	N	24 29.9 +00.0	209 15.0 +02.2	S	00 21.7 -00.2	245 46.0 +02.2	S	15 00.1 -00.1				
08	160 32.5 +02.6	N	24 29.9 +00.0	224 17.2 +02.1	S	00 21.5 -00.1	260 48.2 +02.2	S	15 00.0 +00.0				
09	175 35.1 +02.7	N	24 29.9 -00.1	239 19.3 +02.2	S	00 21.4 -00.2	275 50.4 +02.2	S	14 60.0 -00.1				
10	190 37.8 +02.6	N	24 29.8 +00.0	254 21.5 +02.1	S	00 21.2 -00.1	290 52.6 +02.2	S	14 59.9 -00.1				
11	205 40.4 +02.7	N	24 29.8 +00.0	269 23.6 +02.2	S	00 21.1 -00.2	305 54.8 +02.2	S	14 59.8 -00.1				
12	220 43.1 +02.7	N	24 29.8 +00.0	284 25.8 +02.1	S	00 20.9 -00.1	320 57.0 +02.2	S	14 59.7 -00.1				
13	235 45.8 +02.6	N	24 29.8 -00.1	299 27.9 +02.2	S	00 20.8 -00.2	335 59.2 +02.2	S	14 59.6 -00.1				
14	250 48.4 +02.7	N	24 29.7 +00.0	314 30.1 +02.2	S	00 20.6 -00.1	351 01.4 +02.2	S	14 59.5 -00.1				
15	265 51.1 +02.6	N	24 29.7 +00.0	329 32.3 +02.1	S	00 20.5 -00.1	6 03.6 +02.2	S	14 59.4 +00.0				
16	280 53.7 +02.7	N	24 29.7 +00.0	344 34.4 +02.2	S	00 20.4 -00.2	21 05.8 +02.2	S	14 59.4 -00.1				
17	295 56.4 +02.6	N	24 29.7 -00.1	359 36.6 +02.1	S	00 20.2 -00.1	36 08.0 +02.3	S	14 59.3 -00.1				
18	310 59.0 +02.7	N	24 29.6 +00.0	14 38.7 +02.2	S	00 20.1 -00.2	51 10.3 +02.2	S	14 59.2 -00.1				
19	326 01.7 +02.6	N	24 29.6 +00.0	29 40.9 +02.1	S	00 19.9 -00.1	66 12.5 +02.2	S	14 59.1 -00.1				
20	341 04.3 +02.7	N	24 29.6 +00.0	44 43.0 +02.2	S	00 19.8 -00.2	81 14.7 +02.2	S	14 59.0 -00.1				
21	356 07.0 +02.6	N	24 29.6 -00.1	59 45.2 +02.1	S	00 19.6 -00.1	96 16.9 +02.2	S	14 58.9 -00.1				
22	11 09.6 +02.6	N	24 29.5 +00.0	74 47.3 +02.2	S	00 19.5 -00.2	111 19.1 +02.2	S	14 58.8 -00.1				
23	26 12.2 +02.7	N	24 29.5 +00.0	89 49.5 +02.1	S	00 19.3 -00.1	126 21.3 +02.2	S	14 58.7 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'2 00'2 00'2 00'2 00'2 00'2			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 294° 294° 294° 294° 294° 294°			SHA 358° 358° 358° 358° 358° 358°				SHA 034° 034° 034° 034° 034° 034°					
	Greenwich Culmination Time: 21:15			Greenwich Culmination Time: 17:01				Greenwich Culmination Time: 14:35					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.8 -00.3	S	22 18.2 -00.3	158 22.0 -00.7	S	20 11.5 -00.7	345 22.8 -29.6	N	25 13.6 -05.8	00			
01	193 24.5 -00.3	S	22 17.9 -00.3	173 21.3 -00.8	S	20 10.8 -00.8	359 53.2 -29.6	N	25 07.8 -05.9	01			
02	208 24.2 -00.2	S	22 17.6 -00.3	188 20.5 -00.8	S	20 10.0 -00.7	14 23.6 -29.5	N	25 01.9 -06.0	02			
03	223 24.0 -00.3	S	22 17.3 -00.4	203 19.7 -00.7	S	20 09.3 -00.8	28 54.1 -29.4	N	24 55.9 -06.1	03			
04	238 23.7 -00.3	S	22 16.9 -00.3	218 19.0 -00.8	S	20 08.5 -00.7	43 24.7 -29.4	N	24 49.8 -06.2	04			
05	253 23.4 -00.2	S	22 16.6 -00.3	233 18.2 -00.8	S	20 07.8 -00.8	57 55.3 -29.3	N	24 43.6 -06.3	05			
06	268 23.2 -00.3	S	22 16.3 -00.4	248 17.4 -00.7	S	20 07.0 -00.7	72 26.0 -29.3	N	24 37.3 -06.4	06			
07	283 22.9 -00.3	S	22 15.9 -00.3	263 16.7 -00.8	S	20 06.3 -00.8	86 56.7 -29.2	N	24 30.9 -06.6	07			
08	298 22.6 -00.2	S	22 15.6 -00.3	278 15.9 -00.8	S	20 05.5 -00.7	101 27.5 -29.2	N	24 24.3 -06.7	08			
09	313 22.4 -00.3	S	22 15.3 -00.4	293 15.1 -00.7	S	20 04.8 -00.8	115 58.3 -29.1	N	24 17.6 -06.7	09			
10	328 22.1 -00.3	S	22 14.9 -00.3	308 14.4 -00.8	S	20 04.0 -00.7	130 29.2 -29.0	N	24 10.9 -06.9	10			
11	343 21.8 -00.2	S	22 14.6 -00.3	323 13.6 -00.8	S	20 03.3 -00.8	145 00.2 -29.0	N	24 04.0 -07.0	11			
12	358 21.6 -00.3	S	22 14.3 -00.4	338 12.8 -00.7	S	20 02.5 -00.8	159 31.2 -28.9	N	23 57.0 -07.1	12			
13	13 21.3 -00.2	S	22 13.9 -00.3	353 12.1 -00.8	S	20 01.7 -00.7	174 02.3 -28.9	N	23 49.9 -07.2	13			
14	28 21.1 -00.3	S	22 13.6 -00.4	8 11.3 -00.7	S	20 01.0 -00.8	188 33.4 -28.8	N	23 42.7 -07.3	14			
15	43 20.8 -00.3	S	22 13.2 -00.3	23 10.6 -00.8	S	20 00.2 -00.8	203 04.6 -28.8	N	23 35.4 -07.4	15			
16	58 20.5 -00.2	S	22 12.9 -00.3	38 09.8 -00.8	S	19 59.4 -00.7	217 35.8 -28.7	N	23 28.0 -07.5	16			
17	73 20.3 -00.3	S	22 12.6 -00.4	53 09.0 -00.7	S	19 58.7 -00.8	232 07.1 -28.6	N	23 20.5 -07.6	17			
18	88 20.0 -00.3	S	22 12.2 -00.3	68 08.3 -00.8	S	19 57.9 -00.7	246 38.5 -28.6	N	23 12.9 -07.7	18			
19	103 19.7 -00.2	S	22 11.9 -00.4	83 07.5 -00.8	S	19 57.2 -00.8	261 09.9 -28.5	N	23 05.2 -07.8	19			
20	118 19.5 -00.3	S	22 11.5 -00.3	98 06.7 -00.7	S	19 56.4 -00.8	275 41.4 -28.4	N	22 57.4 -07.9	20			
21	133 19.2 -00.2	S	22 11.2 -00.4	113 06.0 -00.8	S	19 55.6 -00.8	290 13.0 -28.4	N	22 49.5 -08.1	21			
22	148 19.0 -00.3	S	22 10.8 -00.3	128 05.2 -00.7	S	19 54.8 -00.7	304 44.6 -28.3	N	22 41.4 -08.1	22			
23	163 18.7 -00.3	S	22 10.5 -00.3	143 04.5 -00.8	S	19 54.1 -00.8	319 16.3 -28.3	N	22 33.3 -08.2	23			
UT 02 06 10 14 18 22 SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 071° 071° 071° 070° 070° 070° Greenwich Culmination Time: 12:06				UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 051° 051° 051° 050° 050° 050° Greenwich Culmination Time: 13:27				UT 02 06 10 14 18 22 SD 14'7 14'7 14'7 14'7 14'7 14'7 HP 53'9 53'9 53'9 53'9 53'9 53'9 SHA 237° 235° 233° 231° 229° 227° Greenwich Culmination Time: 01:00					
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	41 14.9 +02.6	N	24 29.5 +00.0	104 51.6 +02.2	S	00 19.2 -00.2	141 23.5 +02.2	S	14 58.7 -00.1	00			
01	56 17.5 +02.6	N	24 29.5 -00.1	119 53.8 +02.1	S	00 19.0 -00.1	156 25.7 +02.2	S	14 58.6 -00.1	01			
02	71 20.1 +02.7	N	24 29.4 +00.0	134 55.9 +02.2	S	00 18.9 -00.2	171 27.9 +02.2	S	14 58.5 -00.1	02			
03	86 22.8 +02.6	N	24 29.4 +00.0	149 58.1 +02.1	S	00 18.7 -00.1	186 30.1 +02.2	S	14 58.4 -00.1	03			
04	101 25.4 +02.6	N	24 29.4 +00.0	165 00.2 +02.2	S	00 18.6 -00.1	201 32.3 +02.2	S	14 58.3 -00.1	04			
05	116 28.0 +02.7	N	24 29.4 +00.0	180 02.4 +02.1	S	00 18.5 -00.2	216 34.5 +02.2	S	14 58.2 -00.1	05			
06	131 30.7 +02.6	N	24 29.4 -00.1	195 04.5 +02.2	S	00 18.3 -00.1	231 36.7 +02.2	S	14 58.1 -00.1	06			
07	146 33.3 +02.6	N	24 29.3 +00.0	210 06.7 +02.1	S	00 18.2 -00.2	246 38.9 +02.2	S	14 58.0 +00.0	07			
08	161 35.9 +02.7	N	24 29.3 +00.0	225 08.8 +02.2	S	00 18.0 -00.1	261 41.1 +02.2	S	14 58.0 -00.1	08			
09	176 38.6 +02.6	N	24 29.3 +00.0	240 11.0 +02.1	S	00 17.9 -00.2	276 43.3 +02.3	S	14 57.9 -00.1	09			
10	191 41.2 +02.6	N	24 29.3 -00.1	255 13.1 +02.2	S	00 17.7 -00.1	291 45.6 +02.2	S	14 57.8 -00.1	10			
11	206 43.8 +02.6	N	24 29.2 +00.0	270 15.3 +02.1	S	00 17.6 -00.2	306 47.8 +02.2	S	14 57.7 -00.1	11			
12	221 46.4 +02.6	N	24 29.2 +00.0	285 17.4 +02.2	S	00 17.4 -00.1	321 50.0 +02.2	S	14 57.6 -00.1	12			
13	236 49.0 +02.7	N	24 29.2 +00.0	300 19.6 +02.1	S	00 17.3 -00.2	336 52.2 +02.2	S	14 57.5 -00.1	13			
14	251 51.7 +02.6	N	24 29.2 +00.0	315 21.7 +02.1	S	00 17.1 -00.1	351 54.4 +02.2	S	14 57.4 -00.1	14			
15	266 54.3 +02.6	N	24 29.2 -00.1	330 23.8 +02.2	S	00 17.0 -00.2	6 56.6 +02.2	S	14 57.3 +00.0	15			
16	281 56.9 +02.6	N	24 29.1 +00.0	345 26.0 +02.1	S	00 16.8 -00.1	21 58.8 +02.2	S	14 57.3 -00.1	16			
17	296 59.5 +02.6	N	24 29.1 +00.0	0 28.1 +02.2	S	00 16.7 -00.2	37 01.0 +02.2	S	14 57.2 -00.1	17			
18	312 02.1 +02.6	N	24 29.1 +00.0	15 30.3 +02.1	S	00 16.5 -00.1	52 03.2 +02.2	S	14 57.1 -00.1	18			
19	327 04.7 +02.6	N	24 29.1 +00.0	30 32.4 +02.2	S	00 16.4 -00.2	67 05.4 +02.2	S	14 57.0 -00.1	19			
20	342 07.3 +02.6	N	24 29.1 -00.1	45 34.6 +02.1	S	00 16.2 -00.1	82 07.6 +02.2	S	14 56.9 -00.1	20			
21	357 09.9 +02.6	N	24 29.0 +00.0	60 36.7 +02.2	S	00 16.1 -00.2	97 09.8 +02.2	S	14 56.8 -00.1	21			
22	12 12.5 +02.6	N	24 29.0 +00.0	75 38.9 +02.1	S	00 15.9 -00.1	112 12.0 +02.2	S	14 56.7 -00.1	22			
23	27 15.1 +02.6	N	24 29.0 +00.0	90 41.0 +02.2	S	00 15.8 -00.2	127 14.2 +02.2	S	14 56.6 +00.0	23			
UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 294° 294° 294° 294° 294° 294° Greenwich Culmination Time: 21:11				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 358° 358° 358° 357° 357° 357° Greenwich Culmination Time: 16:58				UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 034° 034° 034° 034° 034° 034° Greenwich Culmination Time: 14:32					

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

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Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each column contains astronomical data for various UT times (00-23), including GHA, ddGHA, Dec, and dDec values. Summary statistics like SD, HP, and SHA are provided at the bottom of each section.

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 06.2 -00.3	S	21 52.7 -00.4	157 28.0 -00.7	S	19 15.1 -00.8	312 17.8 -25.6	N	14 11.4 -12.1	00			
01	193 05.9 -00.2	S	21 52.3 -00.4	172 27.3 -00.7	S	19 14.3 -00.8	326 52.2 -25.6	N	13 59.3 -12.1	01			
02	208 05.7 -00.3	S	21 51.9 -00.4	187 26.6 -00.8	S	19 13.5 -00.8	341 26.6 -25.6	N	13 47.2 -12.1	02			
03	223 05.4 -00.2	S	21 51.5 -00.3	202 25.8 -00.7	S	19 12.7 -00.9	356 01.0 -25.6	N	13 35.1 -12.2	03			
04	238 05.2 -00.2	S	21 51.2 -00.4	217 25.1 -00.7	S	19 11.8 -00.8	10 35.4 -25.5	N	13 22.9 -12.3	04			
05	253 05.0 -00.3	S	21 50.8 -00.4	232 24.4 -00.8	S	19 11.0 -00.8	25 09.9 -25.4	N	13 10.6 -12.3	05			
06	268 04.7 -00.2	S	21 50.4 -00.4	247 23.6 -00.7	S	19 10.2 -00.8	39 44.5 -25.5	N	12 58.3 -12.4	06			
07	283 04.5 -00.3	S	21 50.0 -00.4	262 22.9 -00.7	S	19 09.4 -00.8	54 19.0 -25.4	N	12 45.9 -12.4	07			
08	298 04.2 -00.2	S	21 49.6 -00.4	277 22.2 -00.7	S	19 08.6 -00.9	68 53.6 -25.3	N	12 33.5 -12.5	08			
09	313 04.0 -00.3	S	21 49.2 -00.4	292 21.5 -00.8	S	19 07.7 -00.8	83 28.3 -25.4	N	12 21.0 -12.5	09			
10	328 03.7 -00.2	S	21 48.8 -00.4	307 20.7 -00.7	S	19 06.9 -00.8	98 02.9 -25.3	N	12 08.5 -12.6	10			
11	343 03.5 -00.3	S	21 48.4 -00.3	322 20.0 -00.7	S	19 06.1 -00.9	112 37.6 -25.2	N	11 55.9 -12.6	11			
12	358 03.2 -00.2	S	21 48.1 -00.4	337 19.3 -00.7	S	19 05.2 -00.8	127 12.4 -25.3	N	11 43.3 -12.7	12			
13	13 03.0 -00.3	S	21 47.7 -00.4	352 18.6 -00.8	S	19 04.4 -00.8	141 47.1 -25.2	N	11 30.6 -12.7	13			
14	28 02.7 -00.2	S	21 47.3 -00.4	7 17.8 -00.7	S	19 03.6 -00.9	156 21.9 -25.2	N	11 17.9 -12.8	14			
15	43 02.5 -00.3	S	21 46.9 -00.4	22 17.1 -00.7	S	19 02.7 -00.8	170 56.7 -25.1	N	11 05.1 -12.9	15			
16	58 02.2 -00.2	S	21 46.5 -00.4	37 16.4 -00.7	S	19 01.9 -00.8	185 31.6 -25.1	N	10 52.2 -12.8	16			
17	73 02.0 -00.3	S	21 46.1 -00.4	52 15.7 -00.7	S	19 01.1 -00.9	200 06.5 -25.1	N	10 39.4 -13.0	17			
18	88 01.7 -00.2	S	21 45.7 -00.4	67 15.0 -00.8	S	19 00.2 -00.8	214 41.4 -25.1	N	10 26.4 -12.9	18			
19	103 01.5 -00.2	S	21 45.3 -00.4	82 14.2 -00.7	S	18 59.4 -00.8	229 16.3 -25.1	N	10 13.5 -13.1	19			
20	118 01.3 -00.3	S	21 44.9 -00.4	97 13.5 -00.7	S	18 58.6 -00.9	243 51.2 -25.0	N	10 00.4 -13.0	20			
21	133 01.0 -00.2	S	21 44.5 -00.4	112 12.8 -00.7	S	18 57.7 -00.8	258 26.2 -25.0	N	09 47.4 -13.1	21			
22	148 00.8 -00.3	S	21 44.1 -00.4	127 12.1 -00.7	S	18 56.9 -00.8	273 01.2 -25.0	N	09 34.3 -13.2	22			
23	163 00.5 -00.2	S	21 43.7 -00.4	142 11.4 -00.7	S	18 56.1 -00.9	287 36.2 -24.9	N	09 21.1 -13.2	23			
	UT 02 06 10 14 18 22 SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 068° 068° 067° 067° 067° 067° Greenwich Culmination Time: 12:07		UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 047° 047° 047° 046° 046° 046° Greenwich Culmination Time: 13:30		UT 02 06 10 14 18 22 SD 14'8 14'8 14'8 14'8 14'9 14'9 HP 54'3 54'3 54'4 54'5 54'5 54'6 SHA 201° 199° 197° 196° 194° 192° Greenwich Culmination Time: 03:16								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	44 20.9 +02.5	N	24 28.2 +00.0	107 25.9 +02.1	S	00 08.4 -00.2	144 02.2 +02.2	S	14 52.3 -00.1	00			
01	59 23.4 +02.5	N	24 28.2 +00.0	122 28.0 +02.1	S	00 08.2 -00.1	159 04.4 +02.2	S	14 52.2 -00.1	01			
02	74 25.9 +02.6	N	24 28.2 +00.0	137 30.1 +02.2	S	00 08.1 -00.2	174 06.6 +02.2	S	14 52.1 -00.1	02			
03	89 28.5 +02.5	N	24 28.2 -00.1	152 32.3 +02.1	S	00 07.9 -00.1	189 08.8 +02.2	S	14 52.0 +00.0	03			
04	104 31.0 +02.5	N	24 28.1 +00.0	167 34.4 +02.1	S	00 07.8 -00.2	204 11.0 +02.2	S	14 52.0 -00.1	04			
05	119 33.5 +02.5	N	24 28.1 +00.0	182 36.5 +02.2	S	00 07.6 -00.1	219 13.2 +02.2	S	14 51.9 -00.1	05			
06	134 36.0 +02.5	N	24 28.1 +00.0	197 38.7 +02.1	S	00 07.5 -00.2	234 15.4 +02.2	S	14 51.8 -00.1	06			
07	149 38.5 +02.6	N	24 28.1 +00.0	212 40.8 +02.1	S	00 07.3 -00.1	249 17.6 +02.2	S	14 51.7 -00.1	07			
08	164 41.1 +02.5	N	24 28.1 +00.0	227 42.9 +02.1	S	00 07.2 -00.2	264 19.8 +02.2	S	14 51.6 -00.1	08			
09	179 43.6 +02.5	N	24 28.1 +00.0	242 45.0 +02.2	S	00 07.0 -00.1	279 22.0 +02.2	S	14 51.5 -00.1	09			
10	194 46.1 +02.5	N	24 28.1 +00.0	257 47.2 +02.1	S	00 06.9 -00.2	294 24.2 +02.2	S	14 51.4 -00.1	10			
11	209 48.6 +02.5	N	24 28.1 -00.1	272 49.3 +02.1	S	00 06.7 -00.1	309 26.4 +02.2	S	14 51.3 -00.1	11			
12	224 51.1 +02.5	N	24 28.0 +00.0	287 51.4 +02.2	S	00 06.6 -00.2	324 28.6 +02.2	S	14 51.2 -00.1	12			
13	239 53.6 +02.5	N	24 28.0 +00.0	302 53.6 +02.1	S	00 06.4 -00.2	339 30.8 +02.2	S	14 51.1 +00.0	13			
14	254 56.1 +02.5	N	24 28.0 +00.0	317 55.7 +02.1	S	00 06.2 -00.1	354 33.0 +02.2	S	14 51.1 -00.1	14			
15	269 58.6 +02.6	N	24 28.0 +00.0	332 57.8 +02.2	S	00 06.1 -00.2	9 35.2 +02.2	S	14 51.0 -00.1	15			
16	285 01.2 +02.5	N	24 28.0 +00.0	347 60.0 +02.1	S	00 05.9 -00.1	24 37.4 +02.2	S	14 50.9 -00.1	16			
17	300 03.7 +02.5	N	24 28.0 +00.0	3 02.1 +02.1	S	00 05.8 -00.2	39 39.6 +02.2	S	14 50.8 -00.1	17			
18	315 06.2 +02.5	N	24 28.0 +00.0	18 04.2 +02.2	S	00 05.6 -00.1	54 41.8 +02.2	S	14 50.7 -00.1	18			
19	330 08.7 +02.5	N	24 28.0 +00.0	33 06.4 +02.1	S	00 05.5 -00.2	69 44.0 +02.2	S	14 50.6 -00.1	19			
20	345 11.2 +02.5	N	24 28.0 +00.0	48 08.5 +02.1	S	00 05.3 -00.1	84 46.2 +02.2	S	14 50.5 -00.1	20			
21	0 13.7 +02.5	N	24 28.0 -00.1	63 10.6 +02.1	S	00 05.2 -00.2	99 48.4 +02.2	S	14 50.4 -00.1	21			
22	15 16.2 +02.5	N	24 27.9 +00.0	78 12.7 +02.2	S	00 05.0 -00.2	114 50.6 +02.2	S	14 50.3 +00.0	22			
23	30 18.7 +02.4	N	24 27.9 +00.0	93 14.9 +02.1	S	00 04.8 -00.1	129 52.8 +02.2	S	14 50.3 -00.1	23			
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 294° 294° 294° 294° 294° 294° Greenwich Culmination Time: 20:59		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 357° 357° 357° 357° 357° 357° Greenwich Culmination Time: 16:47		UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 034° 034° 034° 034° 034° 034° Greenwich Culmination Time: 14:21								

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Table with columns for UT, Sun, Venus, Moon (A: 72%), Mars, Jupiter, Saturn, and UT. Each planet section contains a grid of coordinates (GHA, ddGHA, Dec, dDec) and a summary row for SD, HP, and SHA.

Table with 5 main columns: Sun, Venus, Moon (A: 78%), Mars, Jupiter, Saturn. Each column contains UT, GHA, ddGHA, Dec, dDec data for days 00-23. Summary rows include SD, HP, SHA values and Greenwich Culmination Time.

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	177 18.6 -00.2	S	20 13.5 -00.5	155 03.6 -00.6	S	15 57.6 -01.0	205 44.4 -39.8	S	27 25.1 +01.0	00					
01	192 18.4 -00.2	S	20 13.0 -00.5	170 03.0 -00.6	S	15 56.6 -01.1	220 04.6 -39.9	S	27 26.1 +00.7	01					
02	207 18.2 -00.1	S	20 12.5 -00.6	185 02.4 -00.6	S	15 55.5 -01.0	234 24.7 -39.9	S	27 26.8 +00.6	02					
03	222 18.1 -00.2	S	20 11.9 -00.5	200 01.8 -00.6	S	15 54.5 -01.0	248 44.8 -40.0	S	27 27.4 +00.3	03					
04	237 17.9 -00.2	S	20 11.4 -00.5	215 01.2 -00.6	S	15 53.5 -01.0	263 04.8 -40.0	S	27 27.7 +00.1	04					
05	252 17.7 -00.2	S	20 10.9 -00.6	230 00.6 -00.6	S	15 52.5 -01.0	277 24.8 -40.0	S	27 27.8 -00.1	05					
06	267 17.5 -00.2	S	20 10.3 -00.5	244 60.0 -00.6	S	15 51.5 -01.0	291 44.8 -40.1	S	27 27.7 -00.3	06					
07	282 17.3 -00.2	S	20 09.8 -00.6	259 59.4 -00.6	S	15 50.5 -01.0	306 04.7 -40.1	S	27 27.4 -00.5	07					
08	297 17.1 -00.2	S	20 09.2 -00.5	274 58.8 -00.6	S	15 49.5 -01.0	320 24.6 -40.1	S	27 26.9 -00.7	08					
09	312 16.9 -00.1	S	20 08.7 -00.5	289 58.2 -00.6	S	15 48.5 -01.0	334 44.5 -40.1	S	27 26.2 -01.0	09					
10	327 16.8 -00.2	S	20 08.2 -00.6	304 57.6 -00.6	S	15 47.5 -01.0	349 04.4 -40.1	S	27 25.2 -01.1	10					
11	342 16.6 -00.2	S	20 07.6 -00.5	319 57.0 -00.6	S	15 46.5 -01.0	3 24.3 -40.2	S	27 24.1 -01.4	11					
12	357 16.4 -00.2	S	20 07.1 -00.6	334 56.4 -00.6	S	15 45.5 -01.1	17 44.1 -40.2	S	27 22.7 -01.6	12					
13	12 16.2 -00.2	S	20 06.5 -00.5	349 55.8 -00.6	S	15 44.4 -01.0	32 03.9 -40.1	S	27 21.1 -01.9	13					
14	27 16.0 -00.2	S	20 06.0 -00.5	4 55.2 -00.6	S	15 43.4 -01.0	46 23.8 -40.2	S	27 19.2 -02.0	14					
15	42 15.8 -00.2	S	20 05.5 -00.6	19 54.6 -00.6	S	15 42.4 -01.0	60 43.6 -40.2	S	27 17.2 -02.3	15					
16	57 15.6 -00.1	S	20 04.9 -00.5	34 54.0 -00.6	S	15 41.4 -01.0	75 03.4 -40.2	S	27 14.9 -02.4	16					
17	72 15.5 -00.2	S	20 04.4 -00.6	49 53.4 -00.6	S	15 40.4 -01.0	89 23.2 -40.1	S	27 12.5 -02.7	17					
18	87 15.3 -00.2	S	20 03.8 -00.5	64 52.8 -00.6	S	15 39.4 -01.1	103 43.1 -40.2	S	27 09.8 -02.9	18					
19	102 15.1 -00.2	S	20 03.3 -00.6	79 52.2 -00.6	S	15 38.3 -01.0	118 02.9 -40.1	S	27 06.9 -03.2	19					
20	117 14.9 -00.2	S	20 02.7 -00.5	94 51.6 -00.6	S	15 37.3 -01.0	132 22.8 -40.1	S	27 03.7 -03.3	20					
21	132 14.7 -00.1	S	20 02.2 -00.6	109 51.0 -00.6	S	15 36.3 -01.0	146 42.7 -40.1	S	27 00.4 -03.6	21					
22	147 14.6 -00.2	S	20 01.6 -00.5	124 50.4 -00.6	S	15 35.3 -01.0	161 02.6 -40.1	S	26 56.8 -03.7	22					
23	162 14.4 -00.2	S	20 01.1 -00.6	139 49.8 -00.6	S	15 34.3 -01.1	175 22.5 -40.0	S	26 53.1 -04.0	23					
UT 02 06 10 14 18 22	SD 16'3 16'3 16'3 16'3 16'3 16'3	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 058° 058° 058° 058° 057° 057°	Greenwich Culmination Time: 12:10				UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 036° 036° 035° 035° 035° 035°	Greenwich Culmination Time: 13:40			
UT 02 06 10 14 18 22	SD 16'6 16'6 16'6 16'7 16'7 16'7	HP 60'9 61'0 61'1 61'2 61'2 61'3	SHA 085° 082° 080° 077° 074° 071°	Greenwich Culmination Time: 10:45				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 356° 356° 356° 356° 356° 356°	Greenwich Culmination Time: 16:17			

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	176 54.9 -00.1	S 18 50.1 -00.7	153 41.9 -00.6	S 13 25.6 -01.1	121 03.4 -28.7	S 01 29.3 -16.2	00						
01	191 54.8 -00.2	S 18 49.4 -00.6	168 41.3 -00.5	S 13 24.5 -01.1	135 34.7 -28.7	S 01 13.1 -16.2	01						
02	206 54.6 -00.1	S 18 48.8 -00.6	183 40.8 -00.5	S 13 23.4 -01.1	150 06.0 -28.6	S 00 56.9 -16.2	02						
03	221 54.5 -00.1	S 18 48.2 -00.7	198 40.3 -00.5	S 13 22.3 -01.1	164 37.4 -28.5	S 00 40.7 -16.2	03						
04	236 54.4 -00.2	S 18 47.5 -00.6	213 39.8 -00.6	S 13 21.2 -01.1	179 08.9 -28.5	S 00 24.5 -16.1	04						
05	251 54.2 -00.1	S 18 46.9 -00.6	228 39.2 -00.5	S 13 20.1 -01.1	193 40.4 -28.5	S 00 08.4 -16.1	05						
06	266 54.1 -00.2	S 18 46.3 -00.6	243 38.7 -00.5	S 13 19.0 -01.1	208 11.9 -28.4	N 00 07.7 +16.1	06						
07	281 53.9 -00.1	S 18 45.7 -00.7	258 38.2 -00.5	S 13 17.9 -01.1	222 43.5 -28.4	N 00 23.8 +16.1	07						
08	296 53.8 -00.1	S 18 45.0 -00.6	273 37.7 -00.6	S 13 16.8 -01.1	237 15.1 -28.3	N 00 39.9 +16.0	08						
09	311 53.7 -00.2	S 18 44.4 -00.6	288 37.1 -00.5	S 13 15.7 -01.1	251 46.8 -28.3	N 00 55.9 +16.0	09						
10	326 53.5 -00.1	S 18 43.8 -00.7	303 36.6 -00.5	S 13 14.6 -01.1	266 18.5 -28.3	N 01 11.9 +16.0	10						
11	341 53.4 -00.1	S 18 43.1 -00.6	318 36.1 -00.5	S 13 13.5 -01.1	280 50.2 -28.2	N 01 27.9 +15.9	11						
12	356 53.3 -00.2	S 18 42.5 -00.6	333 35.6 -00.6	S 13 12.4 -01.2	295 22.0 -28.2	N 01 43.8 +16.0	12						
13	11 53.1 -00.1	S 18 41.9 -00.6	348 35.0 -00.5	S 13 11.2 -01.1	309 53.8 -28.2	N 01 59.8 +15.9	13						
14	26 53.0 -00.1	S 18 41.3 -00.7	3 34.5 -00.5	S 13 10.1 -01.1	324 25.6 -28.1	N 02 15.7 +15.8	14						
15	41 52.9 -00.2	S 18 40.6 -00.6	18 34.0 -00.5	S 13 09.0 -01.1	338 57.5 -28.1	N 02 31.5 +15.8	15						
16	56 52.7 -00.1	S 18 40.0 -00.6	33 33.5 -00.5	S 13 07.9 -01.1	353 29.4 -28.0	N 02 47.3 +15.8	16						
17	71 52.6 -00.2	S 18 39.4 -00.7	48 33.0 -00.6	S 13 06.8 -01.1	8 01.4 -28.0	N 03 03.1 +15.8	17						
18	86 52.4 -00.1	S 18 38.7 -00.6	63 32.4 -00.5	S 13 05.7 -01.1	22 33.4 -28.0	N 03 18.9 +15.7	18						
19	101 52.3 -00.1	S 18 38.1 -00.7	78 31.9 -00.5	S 13 04.6 -01.1	37 05.4 -28.0	N 03 34.6 +15.7	19						
20	116 52.2 -00.2	S 18 37.4 -00.6	93 31.4 -00.5	S 13 03.5 -01.2	51 37.4 -28.0	N 03 50.3 +15.6	20						
21	131 52.0 -00.1	S 18 36.8 -00.6	108 30.9 -00.5	S 13 02.3 -01.1	66 09.4 -27.9	N 04 05.9 +15.6	21						
22	146 51.9 -00.1	S 18 36.2 -00.7	123 30.4 -00.6	S 13 01.2 -01.1	80 41.5 -27.9	N 04 21.5 +15.5	22						
23	161 51.8 -00.1	S 18 35.5 -00.6	138 29.8 -00.5	S 13 00.1 -01.1	95 13.6 -27.9	N 04 37.0 +15.5	23						
	UT 02 06 10 14 18 22 SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 052° 052° 051° 051° 051° 051° Greenwich Culmination Time: 12:12	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 029° 028° 028° 028° 028° 028° Greenwich Culmination Time: 13:45	UT 02 06 10 14 18 22 SD 16'1 16'0 16'0 15'9 15'9 15'8 HP 58'9 58'8 58'6 58'5 58'3 58'1 SHA 355° 353° 351° 349° 347° 345° Greenwich Culmination Time: 16:26										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	58 00.7 +02.0	N 24 33.4 +00.0	120 00.3 +02.1	N 00 52.4 +00.1	157 10.6 +02.2	S 14 18.7 -00.1	00						
01	73 02.7 +02.1	N 24 33.4 +00.1	135 02.4 +02.0	N 00 52.5 +00.2	172 12.8 +02.1	S 14 18.6 -00.1	01						
02	88 04.8 +02.0	N 24 33.5 +00.0	150 04.4 +02.1	N 00 52.7 +00.2	187 14.9 +02.2	S 14 18.5 -00.1	02						
03	103 06.8 +02.0	N 24 33.5 +00.0	165 06.5 +02.1	N 00 52.9 +00.2	202 17.1 +02.2	S 14 18.4 -00.1	03						
04	118 08.8 +02.1	N 24 33.5 +00.1	180 08.6 +02.0	N 00 53.1 +00.2	217 19.3 +02.2	S 14 18.3 -00.1	04						
05	133 10.9 +02.0	N 24 33.6 +00.0	195 10.6 +02.1	N 00 53.3 +00.1	232 21.5 +02.2	S 14 18.2 -00.1	05						
06	148 12.9 +02.1	N 24 33.6 +00.1	210 12.7 +02.0	N 00 53.4 +00.2	247 23.7 +02.1	S 14 18.1 -00.1	06						
07	163 15.0 +02.0	N 24 33.7 +00.0	225 14.7 +02.1	N 00 53.6 +00.2	262 25.8 +02.2	S 14 18.0 -00.1	07						
08	178 17.0 +02.0	N 24 33.7 +00.0	240 16.8 +02.1	N 00 53.8 +00.2	277 28.0 +02.2	S 14 17.9 -00.1	08						
09	193 19.0 +02.1	N 24 33.7 +00.1	255 18.9 +02.0	N 00 54.0 +00.2	292 30.2 +02.2	S 14 17.8 -00.1	09						
10	208 21.1 +02.0	N 24 33.8 +00.0	270 20.9 +02.1	N 00 54.2 +00.2	307 32.4 +02.2	S 14 17.7 -00.1	10						
11	223 23.1 +02.0	N 24 33.8 +00.1	285 23.0 +02.0	N 00 54.4 +00.2	322 34.6 +02.1	S 14 17.6 -00.1	11						
12	238 25.1 +02.0	N 24 33.9 +00.0	300 25.0 +02.1	N 00 54.6 +00.1	337 36.7 +02.2	S 14 17.5 -00.1	12						
13	253 27.1 +02.1	N 24 33.9 +00.1	315 27.1 +02.0	N 00 54.7 +00.2	352 38.9 +02.2	S 14 17.4 -00.1	13						
14	268 29.2 +02.0	N 24 34.0 +00.0	330 29.1 +02.1	N 00 54.9 +00.2	7 41.1 +02.2	S 14 17.3 -00.1	14						
15	283 31.2 +02.0	N 24 34.0 +00.0	345 31.2 +02.1	N 00 55.1 +00.2	22 43.3 +02.2	S 14 17.2 -00.1	15						
16	298 33.2 +02.0	N 24 34.0 +00.1	0 33.3 +02.0	N 00 55.3 +00.2	37 45.5 +02.2	S 14 17.1 -00.1	16						
17	313 35.2 +02.1	N 24 34.1 +00.0	15 35.3 +02.1	N 00 55.5 +00.2	52 47.7 +02.1	S 14 17.0 -00.1	17						
18	328 37.3 +02.0	N 24 34.1 +00.1	30 37.4 +02.0	N 00 55.7 +00.1	67 49.8 +02.2	S 14 16.9 -00.1	18						
19	343 39.3 +02.0	N 24 34.2 +00.0	45 39.4 +02.1	N 00 55.8 +00.2	82 52.0 +02.2	S 14 16.8 -00.1	19						
20	358 41.3 +02.0	N 24 34.2 +00.0	60 41.5 +02.0	N 00 56.0 +00.2	97 54.2 +02.2	S 14 16.7 -00.1	20						
21	13 43.3 +02.0	N 24 34.2 +00.1	75 43.5 +02.1	N 00 56.2 +00.2	112 56.4 +02.2	S 14 16.6 -00.1	21						
22	28 45.3 +02.1	N 24 34.3 +00.0	90 45.6 +02.1	N 00 56.4 +00.2	127 58.6 +02.1	S 14 16.5 -00.1	22						
23	43 47.4 +02.0	N 24 34.3 +00.1	105 47.7 +02.0	N 00 56.6 +00.2	143 00.7 +02.2	S 14 16.4 -00.1	23						
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 293° 293° 293° 293° 293° 293° Greenwich Culmination Time: 20:05	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 355° 355° 355° 355° 355° 355° Greenwich Culmination Time: 15:57	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 032° 032° 032° 032° 032° 032° Greenwich Culmination Time: 13:29										

UT	Sun				Venus				Moon A: 20%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	176 51.7 -00.2	S	18 34.9 -00.6	153 29.3 -00.5	S	12 59.0 -01.1	109 45.7 -27.8	N	04 52.5 +15.5				
01	191 51.5 -00.1	S	18 34.3 -00.7	168 28.8 -00.5	S	12 57.9 -01.1	124 17.9 -27.9	N	05 08.0 +15.4				
02	206 51.4 -00.1	S	18 33.6 -00.6	183 28.3 -00.5	S	12 56.8 -01.2	138 50.0 -27.8	N	05 23.4 +15.4				
03	221 51.3 -00.2	S	18 33.0 -00.7	198 27.8 -00.5	S	12 55.6 -01.1	153 22.2 -27.8	N	05 38.8 +15.3				
04	236 51.1 -00.1	S	18 32.3 -00.6	213 27.3 -00.5	S	12 54.5 -01.1	167 54.4 -27.8	N	05 54.1 +15.3				
05	251 51.0 -00.1	S	18 31.7 -00.6	228 26.8 -00.6	S	12 53.4 -01.1	182 26.6 -27.8	N	06 09.4 +15.2				
06	266 50.9 -00.2	S	18 31.1 -00.7	243 26.2 -00.5	S	12 52.3 -01.1	196 58.8 -27.7	N	06 24.6 +15.1				
07	281 50.7 -00.1	S	18 30.4 -00.6	258 25.7 -00.5	S	12 51.2 -01.2	211 31.1 -27.8	N	06 39.7 +15.2				
08	296 50.6 -00.1	S	18 29.8 -00.7	273 25.2 -00.5	S	12 50.0 -01.1	226 03.3 -27.7	N	06 54.9 +15.0				
09	311 50.5 -00.1	S	18 29.1 -00.6	288 24.7 -00.5	S	12 48.9 -01.1	240 35.6 -27.7	N	07 09.9 +15.0				
10	326 50.4 -00.2	S	18 28.5 -00.7	303 24.2 -00.5	S	12 47.8 -01.1	255 07.9 -27.8	N	07 24.9 +15.0				
11	341 50.2 -00.1	S	18 27.8 -00.6	318 23.7 -00.5	S	12 46.7 -01.2	269 40.1 -27.7	N	07 39.9 +14.9				
12	356 50.1 -00.1	S	18 27.2 -00.6	333 23.2 -00.5	S	12 45.5 -01.1	284 12.4 -27.7	N	07 54.8 +14.8				
13	11 50.0 -00.1	S	18 26.6 -00.7	348 22.7 -00.6	S	12 44.4 -01.1	298 44.7 -27.7	N	08 09.6 +14.8				
14	26 49.9 -00.2	S	18 25.9 -00.6	3 22.1 -00.5	S	12 43.3 -01.1	313 17.0 -27.7	N	08 24.4 +14.8				
15	41 49.7 -00.1	S	18 25.3 -00.7	18 21.6 -00.5	S	12 42.2 -01.2	327 49.3 -27.7	N	08 39.2 +14.6				
16	56 49.6 -00.1	S	18 24.6 -00.6	33 21.1 -00.5	S	12 41.0 -01.1	342 21.6 -27.7	N	08 53.8 +14.6				
17	71 49.5 -00.2	S	18 24.0 -00.7	48 20.6 -00.5	S	12 39.9 -01.1	356 53.9 -27.7	N	09 08.4 +14.6				
18	86 49.3 -00.1	S	18 23.3 -00.6	63 20.1 -00.5	S	12 38.8 -01.1	11 26.2 -27.7	N	09 23.0 +14.5				
19	101 49.2 -00.1	S	18 22.7 -00.7	78 19.6 -00.5	S	12 37.7 -01.2	25 58.5 -27.7	N	09 37.5 +14.4				
20	116 49.1 -00.1	S	18 22.0 -00.6	93 19.1 -00.5	S	12 36.5 -01.1	40 30.8 -27.7	N	09 51.9 +14.3				
21	131 49.0 -00.1	S	18 21.4 -00.7	108 18.6 -00.5	S	12 35.4 -01.1	55 03.1 -27.7	N	10 06.2 +14.3				
22	146 48.9 -00.2	S	18 20.7 -00.6	123 18.1 -00.5	S	12 34.3 -01.2	69 35.4 -27.7	N	10 20.5 +14.2				
23	161 48.7 -00.1	S	18 20.1 -00.7	138 17.6 -00.5	S	12 33.1 -01.1	84 07.7 -27.7	N	10 34.7 +14.2				
	UT 02 06 10 14 18 22 SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 051° 051° 050° 050° 050° 050° Greenwich Culmination Time: 12:12	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 027° 027° 027° 027° 027° 026° Greenwich Culmination Time: 13:46	UT 02 06 10 14 18 22 SD 15'8 15'8 15'7 15'7 15'6 15'6 HP 58'0 57'8 57'7 57'5 57'4 57'2 SHA 343° 341° 339° 337° 335° 333° Greenwich Culmination Time: 17:12										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	58 49.4 +02.0	N	24 34.4 +00.0	120 49.7 +02.1	N	00 56.8 +00.1	158 02.9 +02.2	S	14 16.3 -00.1				
01	73 51.4 +02.0	N	24 34.4 +00.1	135 51.8 +02.0	N	00 56.9 +00.2	173 05.1 +02.2	S	14 16.2 -00.1				
02	88 53.4 +02.0	N	24 34.5 +00.0	150 53.8 +02.1	N	00 57.1 +00.2	188 07.3 +02.2	S	14 16.1 -00.1				
03	103 55.4 +02.0	N	24 34.5 +00.0	165 55.9 +02.0	N	00 57.3 +00.2	203 09.5 +02.1	S	14 16.0 -00.1				
04	118 57.4 +02.0	N	24 34.5 +00.1	180 57.9 +02.1	N	00 57.5 +00.2	218 11.6 +02.2	S	14 15.9 +00.0				
05	133 59.4 +02.0	N	24 34.6 +00.0	195 60.0 +02.0	N	00 57.7 +00.2	233 13.8 +02.2	S	14 15.9 -00.1				
06	149 01.4 +02.0	N	24 34.6 +00.1	211 02.0 +02.1	N	00 57.9 +00.2	248 16.0 +02.2	S	14 15.8 -00.1				
07	164 03.4 +02.0	N	24 34.7 +00.0	226 04.1 +02.1	N	00 58.1 +00.1	263 18.2 +02.2	S	14 15.7 -00.1				
08	179 05.4 +02.1	N	24 34.7 +00.1	241 06.2 +02.0	N	00 58.2 +00.2	278 20.4 +02.1	S	14 15.6 -00.1				
09	194 07.5 +02.0	N	24 34.8 +00.0	256 08.2 +02.1	N	00 58.4 +00.2	293 22.5 +02.2	S	14 15.5 -00.1				
10	209 09.5 +02.0	N	24 34.8 +00.1	271 10.3 +02.0	N	00 58.6 +00.2	308 24.7 +02.2	S	14 15.4 -00.1				
11	224 11.5 +02.0	N	24 34.9 +00.0	286 12.3 +02.1	N	00 58.8 +00.2	323 26.9 +02.2	S	14 15.3 -00.1				
12	239 13.5 +02.0	N	24 34.9 +00.0	301 14.4 +02.0	N	00 59.0 +00.2	338 29.1 +02.2	S	14 15.2 -00.1				
13	254 15.5 +02.0	N	24 34.9 +00.1	316 16.4 +02.1	N	00 59.2 +00.2	353 31.3 +02.1	S	14 15.1 -00.1				
14	269 17.5 +02.0	N	24 35.0 +00.0	331 18.5 +02.0	N	00 59.4 +00.1	8 33.4 +02.2	S	14 15.0 -00.1				
15	284 19.5 +02.0	N	24 35.0 +00.1	346 20.5 +02.1	N	00 59.5 +00.2	23 35.6 +02.2	S	14 14.9 -00.1				
16	299 21.5 +02.0	N	24 35.1 +00.0	1 22.6 +02.0	N	00 59.7 +00.2	38 37.8 +02.2	S	14 14.8 -00.1				
17	314 23.5 +01.9	N	24 35.1 +00.1	16 24.6 +02.1	N	00 59.9 +00.2	53 40.0 +02.1	S	14 14.7 -00.1				
18	329 25.4 +02.0	N	24 35.2 +00.0	31 26.7 +02.0	N	01 00.1 +00.2	68 42.1 +02.2	S	14 14.6 -00.1				
19	344 27.4 +02.0	N	24 35.2 +00.1	46 28.7 +02.1	N	01 00.3 +00.2	83 44.3 +02.2	S	14 14.5 -00.1				
20	359 29.4 +02.0	N	24 35.3 +00.0	61 30.8 +02.1	N	01 00.5 +00.2	98 46.5 +02.2	S	14 14.4 -00.1				
21	14 31.4 +02.0	N	24 35.3 +00.0	76 32.9 +02.0	N	01 00.7 +00.1	113 48.7 +02.2	S	14 14.3 -00.1				
22	29 33.4 +02.0	N	24 35.3 +00.1	91 34.9 +02.1	N	01 00.8 +00.2	128 50.9 +02.1	S	14 14.2 -00.1				
23	44 35.4 +02.0	N	24 35.4 +00.0	106 37.0 +02.0	N	01 01.0 +00.2	143 53.0 +02.2	S	14 14.1 -00.1				
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 293° 293° 293° 293° 293° 293° Greenwich Culmination Time: 20:02	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 355° 355° 355° 355° 355° 355° Greenwich Culmination Time: 15:54	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 032° 032° 032° 032° 032° 032° Greenwich Culmination Time: 13:25										

Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each column includes UT, GHA, ddGHA, Dec, dDec, and UT. It also includes summary statistics like SD, HP, SHA and Greenwich Culmination Time.

Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each column contains data for UT (00-23) including GHA, ddGHA, Dec, and dDec. Summary statistics (SD, HP, SHA) and Greenwich Culmination Time are provided at the bottom of each column.

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

Main table with columns for planet names (Sun, Venus, Moon, Mars, Jupiter, Saturn) and rows for Universal Time (UT) from 00 to 23. Each row contains GHA, ddGHA, Dec, and dDec values for the planet and the Moon. Summary statistics for each planet are provided at the bottom of each section.

Table with columns for UT, Sun, Venus, Moon, Mars, Jupiter, Saturn, and UT. Each planet section includes GHA, ddGHA, Dec, dDec, and a summary table with UT, SD, HP, and SHA values.

Main table containing astronomical data for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Columns include UT, GHA, ddGHA, Dec, dDec for each object, and UT. Summary rows at the bottom of each object section provide SD, HP, and SHA values for UT 02, 06, 10, 14, 18, 22, along with Greenwich Culmination Time.

Table for Sun, Venus, and Moon. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Sun: UT 00-23, GHA 176-341, Dec 09 16.3-06.1. Venus: UT 00-23, GHA 148-133, Dec 01 30.4-00.4. Moon: UT 00-23, GHA 118-92, Dec 14 37.2-20.1. Includes Greenwich Culmination Time and SHA/HP/SD data.

Table for Mars, Jupiter, and Saturn. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Mars: UT 00-23, GHA 78-63, Dec 25 18.0-19.4. Jupiter: UT 00-23, GHA 144-129, Dec 03 19.0-24.1. Saturn: UT 00-23, GHA 183-169, Dec 13 06.1-03.7. Includes Greenwich Culmination Time and SHA/HP/SD data.

UT	Sun				Venus				Moon				UT					
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec						
00	176 45.4 +00.1 S 08 54.0 -01.0				148 52.4 -00.3 N 02 01.7 +01.3				106 44.0 -29.5 N 19 31.2 +11.0				00					
01	191 45.5 +00.1 S 08 53.0 -00.9				163 52.1 -00.3 N 02 03.0 +01.3				121 14.5 -29.6 N 19 42.2 +10.9				01					
02	206 45.6 +00.1 S 08 52.1 -00.9				178 51.8 -00.3 N 02 04.3 +01.3				135 44.9 -29.6 N 19 53.1 +10.7				02					
03	221 45.7 +00.2 S 08 51.2 -01.0				193 51.5 -00.3 N 02 05.6 +01.3				150 15.3 -29.7 N 20 03.8 +10.7				03					
04	236 45.9 +00.1 S 08 50.2 -00.9				208 51.2 -00.4 N 02 06.9 +01.3				164 45.6 -29.6 N 20 14.5 +10.5				04					
05	251 46.0 +00.1 S 08 49.3 -00.9				223 50.8 -00.3 N 02 08.2 +01.3				179 16.0 -29.8 N 20 25.0 +10.4				05					
06	266 46.1 +00.1 S 08 48.4 -01.0				238 50.5 -00.3 N 02 09.5 +01.4				193 46.2 -29.7 N 20 35.4 +10.3				06					
07	281 46.2 +00.1 S 08 47.4 -00.9				253 50.2 -00.3 N 02 10.9 +01.3				208 16.5 -29.8 N 20 45.7 +10.2				07					
08	296 46.3 +00.1 S 08 46.5 -01.0				268 49.9 -00.3 N 02 12.2 +01.3				222 46.7 -29.8 N 20 55.9 +10.1				08					
09	311 46.4 +00.1 S 08 45.5 -00.9				283 49.6 -00.3 N 02 13.5 +01.3				237 16.9 -29.8 N 21 06.0 +10.0				09					
10	326 46.5 +00.1 S 08 44.6 -00.9				298 49.3 -00.3 N 02 14.8 +01.3				251 47.1 -29.9 N 21 16.0 +09.8				10					
11	341 46.6 +00.1 S 08 43.7 -01.0				313 49.0 -00.3 N 02 16.1 +01.3				266 17.2 -29.9 N 21 25.8 +09.8				11					
12	356 46.7 +00.1 S 08 42.7 -00.9				328 48.7 -00.3 N 02 17.4 +01.3				280 47.3 -29.9 N 21 35.6 +09.6				12					
13	11 46.8 +00.1 S 08 41.8 -00.9				343 48.4 -00.4 N 02 18.7 +01.3				295 17.4 -30.0 N 21 45.2 +09.5				13					
14	26 46.9 +00.1 S 08 40.9 -01.0				358 48.0 -00.3 N 02 20.0 +01.3				309 47.4 -30.0 N 21 54.7 +09.4				14					
15	41 47.0 +00.1 S 08 39.9 -00.9				13 47.7 -00.3 N 02 21.3 +01.3				324 17.4 -30.0 N 22 04.1 +09.2				15					
16	56 47.1 +00.1 S 08 39.0 -00.9				28 47.4 -00.3 N 02 22.6 +01.3				338 47.4 -30.1 N 22 13.3 +09.2				16					
17	71 47.2 +00.1 S 08 38.1 -01.0				43 47.1 -00.3 N 02 23.9 +01.3				353 17.3 -30.1 N 22 22.5 +09.0				17					
18	86 47.3 +00.1 S 08 37.1 -00.9				58 46.8 -00.3 N 02 25.2 +01.3				7 47.2 -30.1 N 22 31.5 +08.9				18					
19	101 47.4 +00.1 S 08 36.2 -00.9				73 46.5 -00.3 N 02 26.5 +01.3				22 17.1 -30.2 N 22 40.4 +08.8				19					
20	116 47.5 +00.1 S 08 35.3 -01.0				88 46.2 -00.3 N 02 27.8 +01.3				36 46.9 -30.2 N 22 49.2 +08.7				20					
21	131 47.6 +00.1 S 08 34.3 -00.9				103 45.9 -00.3 N 02 29.1 +01.3				51 16.7 -30.2 N 22 57.9 +08.6				21					
22	146 47.7 +00.1 S 08 33.4 -01.0				118 45.6 -00.4 N 02 30.4 +01.3				65 46.5 -30.3 N 23 06.5 +08.4				22					
23	161 47.8 +00.1 S 08 32.4 -00.9				133 45.2 -00.3 N 02 31.7 +01.3				80 16.2 -30.3 N 23 14.9 +08.3				23					
UT	02	06	10	14	18	22												
SD	16'2	16'2	16'2	16'2	16'2	16'2	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1				
HP	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1				
SHA	021°	021°	021°	021°	020°	020°	353°	353°	353°	353°	352°	352°	310°	308°				
Greenwich Culmination Time:	12:12						14:04						17:27					

UT	Mars				Jupiter				Saturn				UT					
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec						
00	78 56.5 +01.4 N 25 19.4 +00.1				144 51.0 +01.9 N 03 24.3 +00.2				184 07.9 +02.2 S 13 03.6 -00.1				00					
01	93 57.9 +01.4 N 25 19.5 +00.0				159 52.9 +02.0 N 03 24.5 +00.2				199 10.1 +02.2 S 13 03.5 -00.1				01					
02	108 59.3 +01.4 N 25 19.5 +00.1				174 54.9 +01.9 N 03 24.7 +00.3				214 12.3 +02.1 S 13 03.4 -00.1				02					
03	124 00.7 +01.4 N 25 19.6 +00.1				189 56.8 +02.0 N 03 25.0 +00.2				229 14.4 +02.2 S 13 03.3 -00.1				03					
04	139 02.1 +01.4 N 25 19.7 +00.0				204 58.8 +02.0 N 03 25.2 +00.2				244 16.6 +02.2 S 13 03.2 -00.1				04					
05	154 03.5 +01.4 N 25 19.7 +00.1				220 00.8 +01.9 N 03 25.4 +00.2				259 18.8 +02.2 S 13 03.1 -00.1				05					
06	169 04.9 +01.4 N 25 19.8 +00.0				235 02.7 +02.0 N 03 25.6 +00.2				274 21.0 +02.1 S 13 03.0 -00.1				06					
07	184 06.3 +01.4 N 25 19.8 +00.1				250 04.7 +01.9 N 03 25.8 +00.3				289 23.1 +02.2 S 13 02.9 -00.1				07					
08	199 07.7 +01.4 N 25 19.9 +00.1				265 06.6 +02.0 N 03 26.1 +00.2				304 25.3 +02.2 S 13 02.8 -00.1				08					
09	214 09.1 +01.4 N 25 20.0 +00.0				280 08.6 +01.9 N 03 26.3 +00.2				319 27.5 +02.2 S 13 02.7 -00.1				09					
10	229 10.5 +01.4 N 25 20.0 +00.1				295 10.5 +02.0 N 03 26.5 +00.2				334 29.7 +02.1 S 13 02.6 -00.1				10					
11	244 11.9 +01.4 N 25 20.1 +00.0				310 12.5 +01.9 N 03 26.7 +00.2				349 31.8 +02.2 S 13 02.5 -00.1				11					
12	259 13.3 +01.4 N 25 20.1 +00.1				325 14.4 +02.0 N 03 26.9 +00.3				4 34.0 +02.2 S 13 02.4 -00.1				12					
13	274 14.7 +01.4 N 25 20.2 +00.1				340 16.4 +02.0 N 03 27.2 +00.2				19 36.2 +02.1 S 13 02.3 -00.1				13					
14	289 16.1 +01.4 N 25 20.3 +00.0				355 18.4 +01.9 N 03 27.4 +00.2				34 38.3 +02.2 S 13 02.2 -00.1				14					
15	304 17.5 +01.4 N 25 20.3 +00.1				10 20.3 +02.0 N 03 27.6 +00.2				49 40.5 +02.2 S 13 02.1 -00.1				15					
16	319 18.9 +01.4 N 25 20.4 +00.0				25 22.3 +01.9 N 03 27.8 +00.3				64 42.7 +02.2 S 13 02.0 -00.1				16					
17	334 20.3 +01.4 N 25 20.4 +00.1				40 24.2 +02.0 N 03 28.1 +00.2				79 44.9 +02.1 S 13 01.9 -00.1				17					
18	349 21.7 +01.4 N 25 20.5 +00.1				55 26.2 +01.9 N 03 28.3 +00.2				94 47.0 +02.2 S 13 01.8 -00.1				18					
19	4 23.1 +01.4 N 25 20.6 +00.0				70 28.1 +02.0 N 03 28.5 +00.2				109 49.2 +02.2 S 13 01.7 -00.1				19					
20	19 24.5 +01.4 N 25 20.6 +00.1				85 30.1 +01.9 N 03 28.7 +00.2				124 51.4 +02.2 S 13 01.6 -00.1				20					
21	34 25.9 +01.4 N 25 20.7 +00.0				100 32.0 +02.0 N 03 28.9 +00.3				139 53.6 +02.1 S 13 01.5 -00.1				21					
22	49 27.3 +01.3 N 25 20.7 +00.1				115 34.0 +02.0 N 03 29.2 +00.2				154 55.7 +02.2 S 13 01.4 -00.1				22					
23	64 28.6 +01.4 N 25 20.8 +00.0				130 36.0 +01.9 N 03 29.4 +00.2				169 57.9 +02.2 S 13 01.3 -00.1				23					
UT	02	06	10	14	18	22												
SD	00'1	00'1	00'1	00'1	00'1	00'1	00'3	00'3	00'3	00'3	00'3	00'3	00'1	00'1				
HP	00'1	00'1	00'1	00'1	00'1	00'1	00'0	00'0	00'0	00'0	00'0	00'0	00'0	00'0				
SHA	283°	283°	283°	283°	283°	283°	349°	349°	349°	349°	349°	029°	029°	028°				
Greenwich Culmination Time:	18:42						14:18						11:41					

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 24 hours (00-23 UT). Includes summary rows for SD, HP, and SHA at the bottom of each planet section.

UT	Sun				Venus				Moon A: 27%				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	176 50.6 +00.1	S	08 08.9 -00.9	148 37.5 -00.4	N	03 04.3 +01.3	82 30.0 -31.0	N	26 04.6 +05.1	00							
01	191 50.7 +00.1	S	08 08.0 -01.0	163 37.1 -00.3	N	03 05.6 +01.3	96 59.0 -31.0	N	26 09.7 +05.0	01							
02	206 50.8 +00.1	S	08 07.0 -00.9	178 36.8 -00.3	N	03 06.9 +01.3	111 28.0 -31.0	N	26 14.7 +04.8	02							
03	221 50.9 +00.1	S	08 06.1 -00.9	193 36.5 -00.3	N	03 08.2 +01.3	125 57.0 -31.0	N	26 19.5 +04.7	03							
04	236 51.0 +00.1	S	08 05.2 -01.0	208 36.2 -00.3	N	03 09.5 +01.3	140 26.0 -31.1	N	26 24.2 +04.6	04							
05	251 51.1 +00.1	S	08 04.2 -00.9	223 35.9 -00.3	N	03 10.8 +01.3	154 54.9 -31.1	N	26 28.8 +04.4	05							
06	266 51.2 +00.2	S	08 03.3 -01.0	238 35.6 -00.3	N	03 12.1 +01.3	169 23.8 -31.1	N	26 33.2 +04.3	06							
07	281 51.4 +00.1	S	08 02.3 -00.9	253 35.3 -00.3	N	03 13.4 +01.3	183 52.7 -31.1	N	26 37.5 +04.2	07							
08	296 51.5 +00.1	S	08 01.4 -01.0	268 35.0 -00.3	N	03 14.7 +01.3	198 21.6 -31.1	N	26 41.7 +04.0	08							
09	311 51.6 +00.1	S	08 00.4 -00.9	283 34.7 -00.4	N	03 16.0 +01.3	212 50.5 -31.1	N	26 45.7 +03.9	09							
10	326 51.7 +00.1	S	07 59.5 -01.0	298 34.3 -00.3	N	03 17.3 +01.3	227 19.4 -31.2	N	26 49.6 +03.7	10							
11	341 51.8 +00.1	S	07 58.5 -00.9	313 34.0 -00.3	N	03 18.6 +01.3	241 48.2 -31.1	N	26 53.3 +03.7	11							
12	356 51.9 +00.1	S	07 57.6 -01.0	328 33.7 -00.3	N	03 19.9 +01.3	256 17.1 -31.2	N	26 57.0 +03.5	12							
13	11 52.0 +00.2	S	07 56.6 -00.9	343 33.4 -00.3	N	03 21.2 +01.3	270 45.9 -31.2	N	27 00.5 +03.3	13							
14	26 52.2 +00.1	S	07 55.7 -00.9	358 33.1 -00.3	N	03 22.5 +01.3	285 14.7 -31.2	N	27 03.8 +03.2	14							
15	41 52.3 +00.1	S	07 54.8 -01.0	13 32.8 -00.3	N	03 23.8 +01.3	299 43.5 -31.2	N	27 07.0 +03.1	15							
16	56 52.4 +00.1	S	07 53.8 -00.9	28 32.5 -00.3	N	03 25.1 +01.3	314 12.3 -31.2	N	27 10.1 +02.9	16							
17	71 52.5 +00.1	S	07 52.9 -01.0	43 32.2 -00.3	N	03 26.4 +01.3	328 41.1 -31.2	N	27 13.0 +02.9	17							
18	86 52.6 +00.1	S	07 51.9 -00.9	58 31.9 -00.4	N	03 27.7 +01.3	343 09.9 -31.2	N	27 15.9 +02.6	18							
19	101 52.7 +00.2	S	07 51.0 -01.0	73 31.5 -00.3	N	03 29.0 +01.3	357 38.7 -31.3	N	27 18.5 +02.6	19							
20	116 52.9 +00.1	S	07 50.0 -00.9	88 31.2 -00.3	N	03 30.3 +01.3	12 07.4 -31.2	N	27 21.1 +02.4	20							
21	131 53.0 +00.1	S	07 49.1 -01.0	103 30.9 -00.3	N	03 31.6 +01.3	26 36.2 -31.2	N	27 23.5 +02.2	21							
22	146 53.1 +00.1	S	07 48.1 -00.9	118 30.6 -00.3	N	03 32.9 +01.3	41 05.0 -31.3	N	27 25.7 +02.1	22							
23	161 53.2 +00.1	S	07 47.2 -01.0	133 30.3 -00.3	N	03 34.2 +01.3	55 33.7 -31.2	N	27 27.8 +02.0	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT			
SD	16°1	16°1	16°1	16°1	16°1	16°1	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD			
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP			
SHA	019°	019°	019°	019°	019°	018°	SHA	351°	351°	351°	350°	350°	350°	SHA			
Greenwich Culmination Time: 12:12						Greenwich Culmination Time: 14:05						Greenwich Culmination Time: 19:09					

UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	80 03.3 +01.3	N	25 22.2 +00.1	146 24.8 +01.9	N	03 34.9 +00.2	185 52.3 +02.2	S	12 58.7 -00.1	00							
01	95 04.6 +01.4	N	25 22.3 +00.0	161 26.7 +02.0	N	03 35.1 +00.3	200 54.5 +02.1	S	12 58.6 -00.1	01							
02	110 06.0 +01.4	N	25 22.3 +00.1	176 28.7 +01.9	N	03 35.4 +00.2	215 56.6 +02.2	S	12 58.5 -00.1	02							
03	125 07.4 +01.4	N	25 22.4 +00.1	191 30.6 +02.0	N	03 35.6 +00.2	230 58.8 +02.2	S	12 58.4 -00.1	03							
04	140 08.8 +01.3	N	25 22.5 +00.0	206 32.6 +01.9	N	03 35.8 +00.2	246 01.0 +02.2	S	12 58.3 -00.1	04							
05	155 10.1 +01.4	N	25 22.5 +00.1	221 34.5 +02.0	N	03 36.0 +00.2	261 03.2 +02.1	S	12 58.2 -00.1	05							
06	170 11.5 +01.4	N	25 22.6 +00.0	236 36.5 +01.9	N	03 36.2 +00.3	276 05.3 +02.2	S	12 58.1 -00.1	06							
07	185 12.9 +01.4	N	25 22.6 +00.1	251 38.4 +02.0	N	03 36.5 +00.2	291 07.5 +02.2	S	12 58.0 -00.1	07							
08	200 14.3 +01.3	N	25 22.7 +00.0	266 40.4 +01.9	N	03 36.7 +00.2	306 09.7 +02.2	S	12 57.9 -00.1	08							
09	215 15.6 +01.4	N	25 22.7 +00.1	281 42.3 +02.0	N	03 36.9 +00.2	321 11.9 +02.1	S	12 57.8 -00.1	09							
10	230 17.0 +01.4	N	25 22.8 +00.0	296 44.3 +02.0	N	03 37.1 +00.3	336 14.0 +02.2	S	12 57.7 -00.1	10							
11	245 18.4 +01.4	N	25 22.8 +00.1	311 46.3 +01.9	N	03 37.4 +00.2	351 16.2 +02.2	S	12 57.6 -00.1	11							
12	260 19.8 +01.3	N	25 22.9 +00.1	326 48.2 +02.0	N	03 37.6 +00.2	6 18.4 +02.2	S	12 57.5 -00.1	12							
13	275 21.1 +01.4	N	25 23.0 +00.0	341 50.2 +01.9	N	03 37.8 +00.2	21 20.6 +02.1	S	12 57.4 -00.1	13							
14	290 22.5 +01.4	N	25 23.0 +00.1	356 52.1 +02.0	N	03 38.0 +00.2	36 22.7 +02.2	S	12 57.3 -00.1	14							
15	305 23.9 +01.3	N	25 23.1 +00.0	11 54.1 +01.9	N	03 38.2 +00.3	51 24.9 +02.2	S	12 57.2 -00.1	15							
16	320 25.2 +01.4	N	25 23.1 +00.1	26 56.0 +02.0	N	03 38.5 +00.2	66 27.1 +02.2	S	12 57.1 -00.1	16							
17	335 26.6 +01.4	N	25 23.2 +00.0	41 58.0 +01.9	N	03 38.7 +00.2	81 29.3 +02.1	S	12 57.0 -00.1	17							
18	350 28.0 +01.3	N	25 23.2 +00.1	56 59.9 +02.0	N	03 38.9 +00.2	96 31.4 +02.2	S	12 56.9 -00.1	18							
19	5 29.3 +01.4	N	25 23.3 +00.0	72 01.9 +01.9	N	03 39.1 +00.3	111 33.6 +02.2	S	12 56.8 -00.1	19							
20	20 30.7 +01.4	N	25 23.3 +00.1	87 03.8 +02.0	N	03 39.4 +00.2	126 35.8 +02.2	S	12 56.7 -00.1	20							
21	35 32.1 +01.3	N	25 23.4 +00.1	102 05.8 +01.9	N	03 39.6 +00.2	141 38.0 +02.1	S	12 56.6 -00.1	21							
22	50 33.4 +01.4	N	25 23.5 +00.0	117 07.7 +02.0	N	03 39.8 +00.2	156 40.1 +02.2	S	12 56.5 -00.1	22							
23	65 34.8 +01.4	N	25 23.5 +00.1	132 09.7 +01.9	N	03 40.0 +00.3	171 42.3 +02.2	S	12 56.4 -00.1	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT			
SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	00°3	00°3	00°3	00°3	00°3	00°3	SD			
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°0	00°0	00°0	00°0	00°0	00°0	HP			
SHA	282°	282°	282°	282°	282°	282°	SHA	349°	349°	349°	349°	349°	349°	SHA			
Greenwich Culmination Time: 18:38						Greenwich Culmination Time: 14:12						Greenwich Culmination Time: 11:34					

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UT	Sun				Venus				Moon A: 31%				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	176 53.3 +00.1	S	07 46.2 -00.9	148 30.0 -00.3	N 03 35.5 +01.3	70 02.5 -31.2	N 27 29.8 +01.9	00												
01	191 53.4 +00.2	S	07 45.3 -01.0	163 29.7 -00.3	N 03 36.8 +01.3	84 31.3 -31.3	N 27 31.7 +01.7	01												
02	206 53.6 +00.1	S	07 44.3 -00.9	178 29.4 -00.3	N 03 38.1 +01.3	99 00.0 -31.2	N 27 33.4 +01.6	02												
03	221 53.7 +00.1	S	07 43.4 -01.0	193 29.1 -00.4	N 03 39.4 +01.3	113 28.8 -31.3	N 27 35.0 +01.4	03												
04	236 53.8 +00.1	S	07 42.4 -00.9	208 28.7 -00.3	N 03 40.7 +01.3	127 57.5 -31.2	N 27 36.4 +01.3	04												
05	251 53.9 +00.1	S	07 41.5 -01.0	223 28.4 -00.3	N 03 42.0 +01.3	142 26.3 -31.2	N 27 37.7 +01.2	05												
06	266 54.0 +00.2	S	07 40.5 -00.9	238 28.1 -00.3	N 03 43.3 +01.3	156 55.1 -31.2	N 27 38.9 +01.0	06												
07	281 54.2 +00.1	S	07 39.6 -01.0	253 27.8 -00.3	N 03 44.6 +01.3	171 23.9 -31.2	N 27 39.9 +00.9	07												
08	296 54.3 +00.1	S	07 38.6 -00.9	268 27.5 -00.3	N 03 45.9 +01.3	185 52.7 -31.3	N 27 40.8 +00.8	08												
09	311 54.4 +00.1	S	07 37.7 -01.0	283 27.2 -00.3	N 03 47.2 +01.3	200 21.4 -31.1	N 27 41.6 +00.6	09												
10	326 54.5 +00.1	S	07 36.7 -00.9	298 26.9 -00.3	N 03 48.5 +01.3	214 50.3 -31.2	N 27 42.2 +00.5	10												
11	341 54.6 +00.2	S	07 35.8 -01.0	313 26.6 -00.4	N 03 49.8 +01.3	229 19.1 -31.2	N 27 42.7 +00.4	11												
12	356 54.8 +00.1	S	07 34.8 -00.9	328 26.2 -00.3	N 03 51.1 +01.3	243 47.9 -31.2	N 27 43.1 +00.2	12												
13	11 54.9 +00.1	S	07 33.9 -01.0	343 25.9 -00.3	N 03 52.4 +01.3	258 16.7 -31.1	N 27 43.3 +00.1	13												
14	26 55.0 +00.1	S	07 32.9 -00.9	358 25.6 -00.3	N 03 53.7 +01.3	272 45.6 -31.2	N 27 43.4 -00.1	14												
15	41 55.1 +00.1	S	07 32.0 -01.0	13 25.3 -00.3	N 03 55.0 +01.3	287 14.4 -31.1	N 27 43.3 -00.2	15												
16	56 55.2 +00.2	S	07 31.0 -00.9	28 25.0 -00.3	N 03 56.3 +01.3	301 43.3 -31.1	N 27 43.1 -00.3	16												
17	71 55.4 +00.1	S	07 30.1 -01.0	43 24.7 -00.3	N 03 57.6 +01.3	316 12.2 -31.1	N 27 42.8 -00.5	17												
18	86 55.5 +00.1	S	07 29.1 -00.9	58 24.4 -00.3	N 03 58.9 +01.3	330 41.1 -31.1	N 27 42.3 -00.6	18												
19	101 55.6 +00.1	S	07 28.2 -01.0	73 24.1 -00.3	N 04 00.2 +01.3	345 10.0 -31.0	N 27 41.7 -00.7	19												
20	116 55.7 +00.2	S	07 27.2 -00.9	88 23.8 -00.4	N 04 01.5 +01.3	359 39.0 -31.1	N 27 41.0 -00.9	20												
21	131 55.9 +00.1	S	07 26.3 -01.0	103 23.4 -00.3	N 04 02.8 +01.3	14 07.9 -31.0	N 27 40.1 -01.0	21												
22	146 56.0 +00.1	S	07 25.3 -00.9	118 23.1 -00.3	N 04 04.1 +01.3	28 36.9 -31.0	N 27 39.1 -01.1	22												
23	161 56.1 +00.1	S	07 24.4 -01.0	133 22.8 -00.3	N 04 05.4 +01.2	43 05.9 -30.9	N 27 38.0 -01.3	23												
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22							
SD	16'1	16'1	16'1	16'1	16'1	16'1	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	14'8	14'8	14'8	14'8	14'8	14'8
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	54'5	54'4	54'4	54'3	54'3	54'2
SHA	018°	018°	018°	018°	018°	017°	SHA	350°	350°	349°	349°	349°	349°	SHA	270°	268°	266°	264°	261°	259°
Greenwich Culmination Time: 12:12							Greenwich Culmination Time: 14:06							Greenwich Culmination Time: 20:01						
UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	80 36.2 +01.3	N 25 23.6 +00.0	147 11.6 +02.0	N 03 40.3 +00.2	186 44.5 +02.2	S 12 56.3 -00.1	00													
01	95 37.5 +01.4	N 25 23.6 +00.1	162 13.6 +01.9	N 03 40.5 +00.2	201 46.7 +02.1	S 12 56.2 -00.1	01													
02	110 38.9 +01.4	N 25 23.7 +00.0	177 15.5 +02.0	N 03 40.7 +00.2	216 48.8 +02.2	S 12 56.1 -00.1	02													
03	125 40.3 +01.3	N 25 23.7 +00.1	192 17.5 +01.9	N 03 40.9 +00.2	231 51.0 +02.2	S 12 56.0 -00.1	03													
04	140 41.6 +01.4	N 25 23.8 +00.0	207 19.4 +02.0	N 03 41.1 +00.3	246 53.2 +02.2	S 12 55.9 -00.1	04													
05	155 43.0 +01.3	N 25 23.8 +00.1	222 21.4 +01.9	N 03 41.4 +00.2	261 55.4 +02.2	S 12 55.8 -00.1	05													
06	170 44.3 +01.4	N 25 23.9 +00.0	237 23.3 +02.0	N 03 41.6 +00.2	276 57.6 +02.1	S 12 55.7 -00.1	06													
07	185 45.7 +01.4	N 25 23.9 +00.1	252 25.3 +01.9	N 03 41.8 +00.2	291 59.7 +02.2	S 12 55.6 -00.1	07													
08	200 47.1 +01.3	N 25 24.0 +00.1	267 27.2 +02.0	N 03 42.0 +00.3	307 01.9 +02.2	S 12 55.5 -00.1	08													
09	215 48.4 +01.4	N 25 24.1 +00.0	282 29.2 +01.9	N 03 42.3 +00.2	322 04.1 +02.2	S 12 55.4 -00.1	09													
10	230 49.8 +01.3	N 25 24.1 +00.1	297 31.1 +01.9	N 03 42.5 +00.2	337 06.3 +02.1	S 12 55.3 -00.1	10													
11	245 51.1 +01.4	N 25 24.2 +00.0	312 33.0 +02.0	N 03 42.7 +00.2	352 08.4 +02.2	S 12 55.2 -00.1	11													
12	260 52.5 +01.4	N 25 24.2 +00.1	327 35.0 +01.9	N 03 42.9 +00.2	7 10.6 +02.2	S 12 55.1 -00.1	12													
13	275 53.9 +01.3	N 25 24.3 +00.0	342 36.9 +02.0	N 03 43.1 +00.3	22 12.8 +02.2	S 12 55.0 -00.1	13													
14	290 55.2 +01.4	N 25 24.3 +00.1	357 38.9 +01.9	N 03 43.4 +00.2	37 15.0 +02.1	S 12 54.9 -00.1	14													
15	305 56.6 +01.3	N 25 24.4 +00.0	12 40.8 +02.0	N 03 43.6 +00.2	52 17.1 +02.2	S 12 54.8 -00.1	15													
16	320 57.9 +01.4	N 25 24.4 +00.1	27 42.8 +01.9	N 03 43.8 +00.2	67 19.3 +02.2	S 12 54.7 -00.1	16													
17	335 59.3 +01.3	N 25 24.5 +00.0	42 44.7 +02.0	N 03 44.0 +00.3	82 21.5 +02.2	S 12 54.6 -00.1	17													
18	351 00.6 +01.4	N 25 24.5 +00.1	57 46.7 +01.9	N 03 44.3 +00.2	97 23.7 +02.1	S 12 54.5 -00.1	18													
19	6 02.0 +01.4	N 25 24.6 +00.0	72 48.6 +02.0	N 03 44.5 +00.2	112 25.8 +02.2	S 12 54.4 -00.1	19													
20	21 03.4 +01.3	N 25 24.6 +00.1	87 50.6 +01.9	N 03 44.7 +00.2	127 28.0 +02.2	S 12 54.3 -00.1	20													
21	36 04.7 +01.4	N 25 24.7 +00.0	102 52.5 +02.0	N 03 44.9 +00.3	142 30.2 +02.2	S 12 54.2 -00.1	21													
22	51 06.1 +01.3	N 25 24.7 +00.1	117 54.5 +01.9	N 03 45.2 +00.2	157 32.4 +02.1	S 12 54.1 -00.2	22													
23	66 07.4 +01.4	N 25 24.8 +00.0	132 56.4 +02.0	N 03 45.4 +00.2	172 34.5 +02.2	S 12 53.9 -00.1	23													
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22							
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	282°	282°	282°	282°	282°	282°	SHA	349°	349°	349°	349°	348°	348°	SHA	028°	028°	028°	028°	028°	028°
Greenwich Culmination Time: 18:35							Greenwich Culmination Time: 14:09							Greenwich Culmination Time: 11:31						

UT	Sun					Venus					Moon A: 34%					UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	176 56.2 +00.1	S	07 23.4 -00.9	148 22.5 -00.3	N 04 06.6 +01.3	57 35.0 -31.0	N 27 36.7 -01.4	00								
01	191 56.3 +00.2	S	07 22.5 -01.0	163 22.2 -00.3	N 04 07.9 +01.3	72 04.0 -30.9	N 27 35.3 -01.5	01								
02	206 56.5 +00.1	S	07 21.5 -00.9	178 21.9 -00.3	N 04 09.2 +01.3	86 33.1 -30.9	N 27 33.8 -01.6	02								
03	221 56.6 +00.1	S	07 20.6 -01.0	193 21.6 -00.3	N 04 10.5 +01.3	101 02.2 -30.9	N 27 32.2 -01.8	03								
04	236 56.7 +00.1	S	07 19.6 -00.9	208 21.3 -00.4	N 04 11.8 +01.3	115 31.3 -30.8	N 27 30.4 -02.0	04								
05	251 56.8 +00.2	S	07 18.7 -01.0	223 20.9 -00.3	N 04 13.1 +01.3	130 00.5 -30.8	N 27 28.4 -02.0	05								
06	266 57.0 +00.1	S	07 17.7 -00.9	238 20.6 -00.3	N 04 14.4 +01.3	144 29.7 -30.8	N 27 26.4 -02.2	06								
07	281 57.1 +00.1	S	07 16.8 -01.0	253 20.3 -00.3	N 04 15.7 +01.3	158 58.9 -30.7	N 27 24.2 -02.3	07								
08	296 57.2 +00.1	S	07 15.8 -00.9	268 20.0 -00.3	N 04 17.0 +01.3	173 28.2 -30.8	N 27 21.9 -02.5	08								
09	311 57.3 +00.2	S	07 14.9 -01.0	283 19.7 -00.3	N 04 18.3 +01.3	187 57.4 -30.7	N 27 19.4 -02.6	09								
10	326 57.5 +00.1	S	07 13.9 -01.0	298 19.4 -00.3	N 04 19.6 +01.3	202 26.7 -30.6	N 27 16.8 -02.7	10								
11	341 57.6 +00.1	S	07 12.9 -00.9	313 19.1 -00.3	N 04 20.9 +01.3	216 56.1 -30.6	N 27 14.1 -02.8	11								
12	356 57.7 +00.1	S	07 12.0 -01.0	328 18.8 -00.4	N 04 22.2 +01.3	231 25.5 -30.6	N 27 11.3 -03.0	12								
13	11 57.8 +00.2	S	07 11.0 -00.9	343 18.4 -00.3	N 04 23.5 +01.3	245 54.9 -30.6	N 27 08.3 -03.1	13								
14	26 58.0 +00.1	S	07 10.1 -01.0	358 18.1 -00.3	N 04 24.8 +01.3	260 24.3 -30.5	N 27 05.2 -03.2	14								
15	41 58.1 +00.1	S	07 09.1 -00.9	13 17.8 -00.3	N 04 26.1 +01.3	274 53.8 -30.5	N 27 02.0 -03.4	15								
16	56 58.2 +00.2	S	07 08.2 -01.0	28 17.5 -00.3	N 04 27.4 +01.3	289 23.3 -30.4	N 26 58.6 -03.5	16								
17	71 58.4 +00.1	S	07 07.2 -00.9	43 17.2 -00.3	N 04 28.7 +01.2	303 52.9 -30.4	N 26 55.1 -03.6	17								
18	86 58.5 +00.1	S	07 06.3 -01.0	58 16.9 -00.3	N 04 29.9 +01.3	318 22.5 -30.4	N 26 51.5 -03.7	18								
19	101 58.6 +00.1	S	07 05.3 -00.9	73 16.6 -00.3	N 04 31.2 +01.3	332 52.1 -30.3	N 26 47.8 -03.9	19								
20	116 58.7 +00.2	S	07 04.4 -01.0	88 16.3 -00.4	N 04 32.5 +01.3	347 21.8 -30.3	N 26 43.9 -04.0	20								
21	131 58.9 +00.1	S	07 03.4 -01.0	103 15.9 -00.3	N 04 33.8 +01.3	1 51.5 -30.2	N 26 39.9 -04.1	21								
22	146 59.0 +00.1	S	07 02.4 -00.9	118 15.6 -00.3	N 04 35.1 +01.3	16 21.3 -30.2	N 26 35.8 -04.2	22								
23	161 59.1 +00.2	S	07 01.5 -01.0	133 15.3 -00.3	N 04 36.4 +01.3	30 51.1 -30.2	N 26 31.6 -04.4	23								

UT	02	06	10	14	18	22
SD	16°1	16°1	16°1	16°1	16°1	16°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	017°	017°	017°	017°	017°	017°
Greenwich Culmination Time: 12:12						

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	349°	349°	348°	348°	348°	348°
Greenwich Culmination Time: 14:06						

UT	02	06	10	14	18	22
SD	14°8	14°8	14°7	14°7	14°7	14°7
HP	54°2	54°2	54°1	54°1	54°1	54°0
SHA	257°	255°	253°	250°	248°	246°
Greenwich Culmination Time: 20:52						

UT	Mars					Jupiter					Saturn					UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	81 08.8 +01.3	N 25 24.8 +00.1	147 58.4 +01.9	N 03 45.6 +00.2	187 36.7 +02.2	S 12 53.8 -00.1	00									
01	96 10.1 +01.4	N 25 24.9 +00.1	163 00.3 +02.0	N 03 45.8 +00.2	202 38.9 +02.2	S 12 53.7 -00.1	01									
02	111 11.5 +01.3	N 25 25.0 +00.0	178 02.3 +01.9	N 03 46.0 +00.3	217 41.1 +02.2	S 12 53.6 -00.1	02									
03	126 12.8 +01.4	N 25 25.0 +00.1	193 04.2 +02.0	N 03 46.3 +00.2	232 43.3 +02.1	S 12 53.5 -00.1	03									
04	141 14.2 +01.3	N 25 25.1 +00.0	208 06.2 +01.9	N 03 46.5 +00.2	247 45.4 +02.2	S 12 53.4 -00.1	04									
05	156 15.5 +01.4	N 25 25.1 +00.1	223 08.1 +02.0	N 03 46.7 +00.2	262 47.6 +02.2	S 12 53.3 -00.1	05									
06	171 16.9 +01.3	N 25 25.2 +00.0	238 10.1 +01.9	N 03 46.9 +00.3	277 49.8 +02.2	S 12 53.2 -00.1	06									
07	186 18.2 +01.4	N 25 25.2 +00.1	253 12.0 +02.0	N 03 47.2 +00.2	292 52.0 +02.1	S 12 53.1 -00.1	07									
08	201 19.6 +01.3	N 25 25.3 +00.0	268 14.0 +01.9	N 03 47.4 +00.2	307 54.1 +02.2	S 12 53.0 -00.1	08									
09	216 20.9 +01.4	N 25 25.3 +00.1	283 15.9 +01.9	N 03 47.6 +00.2	322 56.3 +02.2	S 12 52.9 -00.1	09									
10	231 22.3 +01.3	N 25 25.4 +00.0	298 17.8 +02.0	N 03 47.8 +00.3	337 58.5 +02.2	S 12 52.8 -00.1	10									
11	246 23.6 +01.3	N 25 25.4 +00.1	313 19.8 +01.9	N 03 48.1 +00.2	353 00.7 +02.1	S 12 52.7 -00.1	11									
12	261 24.9 +01.4	N 25 25.5 +00.0	328 21.7 +02.0	N 03 48.3 +00.2	8 02.8 +02.2	S 12 52.6 -00.1	12									
13	276 26.3 +01.3	N 25 25.5 +00.1	343 23.7 +01.9	N 03 48.5 +00.2	23 05.0 +02.2	S 12 52.5 -00.1	13									
14	291 27.6 +01.4	N 25 25.6 +00.0	358 25.6 +02.0	N 03 48.7 +00.2	38 07.2 +02.2	S 12 52.4 -00.1	14									
15	306 29.0 +01.3	N 25 25.6 +00.1	13 27.6 +01.9	N 03 48.9 +00.3	53 09.4 +02.1	S 12 52.3 -00.1	15									
16	321 30.3 +01.4	N 25 25.7 +00.0	28 29.5 +02.0	N 03 49.2 +00.2	68 11.5 +02.2	S 12 52.2 -00.1	16									
17	336 31.7 +01.3	N 25 25.7 +00.1	43 31.5 +01.9	N 03 49.4 +00.2	83 13.7 +02.2	S 12 52.1 -00.1	17									
18	351 33.0 +01.3	N 25 25.8 +00.0	58 33.4 +02.0	N 03 49.6 +00.2	98 15.9 +02.2	S 12 52.0 -00.1	18									
19	6 34.3 +01.4	N 25 25.8 +00.1	73 35.4 +01.9	N 03 49.8 +00.3	113 18.1 +02.2	S 12 51.9 -00.1	19									
20	21 35.7 +01.3	N 25 25.9 +00.0	88 37.3 +02.0	N 03 50.1 +00.2	128 20.3 +02.1	S 12 51.8 -00.1	20									
21	36 37.0 +01.4	N 25 25.9 +00.1	103 39.3 +01.9	N 03 50.3 +00.2	143 22.4 +02.2	S 12 51.7 -00.1	21									
22	51 38.4 +01.3	N 25 26.0 +00.0	118 41.2 +01.9	N 03 50.5 +00.2	158 24.6 +02.2	S 12 51.6 -00.1	22									
23	66 39.7 +01.3	N 25 26.0 +00.1	133 43.1 +02.0	N 03 50.7 +00.3	173 26.8 +02.2	S 12 51.5 -00.1	23									

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	282°	282°	281°	281°	281°	281°
Greenwich Culmination Time: 18:33						

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	348°	348°	348°	348°	348°	348°
Greenwich Culmination Time: 14:06						

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°0	00°0	00°0	00°0	00°0	00°0
SHA	028°	028°	028°	028°	028°	028°
Greenwich Culmination Time: 11:27						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 38%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	176 59.3 +00.1	S	07 00.5 -00.9	148 15.0 -00.3	N	04 37.7 +01.3	45 20.9 -30.1	N	26 27.2 -04.4				
01	191 59.4 +00.1	S	06 59.6 -01.0	163 14.7 -00.3	N	04 39.0 +01.3	59 50.8 -30.0	N	26 22.8 -04.6				
02	206 59.5 +00.1	S	06 58.6 -00.9	178 14.4 -00.3	N	04 40.3 +01.3	74 20.8 -30.1	N	26 18.2 -04.8				
03	221 59.6 +00.2	S	06 57.7 -01.0	193 14.1 -00.3	N	04 41.6 +01.3	88 50.7 -29.9	N	26 13.4 -04.8				
04	236 59.8 +00.1	S	06 56.7 -01.0	208 13.8 -00.4	N	04 42.9 +01.3	103 20.8 -30.0	N	26 08.6 -05.0				
05	251 59.9 +00.1	S	06 55.7 -00.9	223 13.4 -00.3	N	04 44.2 +01.2	117 50.8 -29.8	N	26 03.6 -05.1				
06	267 00.0 +00.2	S	06 54.8 -01.0	238 13.1 -00.3	N	04 45.4 +01.3	132 21.0 -29.9	N	25 58.5 -05.2				
07	282 00.2 +00.1	S	06 53.8 -00.9	253 12.8 -00.3	N	04 46.7 +01.3	146 51.1 -29.7	N	25 53.3 -05.3				
08	297 00.3 +00.1	S	06 52.9 -01.0	268 12.5 -00.3	N	04 48.0 +01.3	161 21.4 -29.8	N	25 48.0 -05.5				
09	312 00.4 +00.2	S	06 51.9 -00.9	283 12.2 -00.3	N	04 49.3 +01.3	175 51.6 -29.7	N	25 42.5 -05.5				
10	327 00.6 +00.1	S	06 51.0 -01.0	298 11.9 -00.3	N	04 50.6 +01.3	190 21.9 -29.6	N	25 37.0 -05.7				
11	342 00.7 +00.1	S	06 50.0 -01.0	313 11.6 -00.4	N	04 51.9 +01.3	204 52.3 -29.6	N	25 31.3 -05.8				
12	357 00.8 +00.1	S	06 49.0 -00.9	328 11.2 -00.3	N	04 53.2 +01.3	219 22.7 -29.5	N	25 25.5 -05.9				
13	12 00.9 +00.2	S	06 48.1 -01.0	343 10.9 -00.3	N	04 54.5 +01.3	233 53.2 -29.5	N	25 19.6 -06.1				
14	27 01.1 +00.1	S	06 47.1 -00.9	358 10.6 -00.3	N	04 55.8 +01.3	248 23.7 -29.4	N	25 13.5 -06.1				
15	42 01.2 +00.1	S	06 46.2 -01.0	13 10.3 -00.3	N	04 57.1 +01.2	262 54.3 -29.4	N	25 07.4 -06.3				
16	57 01.3 +00.2	S	06 45.2 -01.0	28 10.0 -00.3	N	04 58.3 +01.3	277 24.9 -29.4	N	25 01.1 -06.3				
17	72 01.5 +00.1	S	06 44.2 -00.9	43 09.7 -00.3	N	04 59.6 +01.3	291 55.5 -29.2	N	24 54.8 -06.5				
18	87 01.6 +00.1	S	06 43.3 -01.0	58 09.4 -00.4	N	05 00.9 +01.3	306 26.3 -29.3	N	24 48.3 -06.6				
19	102 01.7 +00.2	S	06 42.3 -00.9	73 09.0 -00.3	N	05 02.2 +01.3	320 57.0 -29.1	N	24 41.7 -06.7				
20	117 01.9 +00.1	S	06 41.4 -01.0	88 08.7 -00.3	N	05 03.5 +01.3	335 27.9 -29.1	N	24 35.0 -06.9				
21	132 02.0 +00.1	S	06 40.4 -01.0	103 08.4 -00.3	N	05 04.8 +01.3	349 58.8 -29.1	N	24 28.1 -06.9				
22	147 02.1 +00.2	S	06 39.4 -00.9	118 08.1 -00.3	N	05 06.1 +01.3	4 29.7 -29.0	N	24 21.2 -07.0				
23	162 02.3 +00.1	S	06 38.5 -01.0	133 07.8 -00.3	N	05 07.4 +01.2	19 00.7 -29.0	N	24 14.2 -07.2				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'1 16'1 16'1 16'1 16'1 16'1			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'0 54'0 54'0 54'0 54'0 54'0						
	SHA 016° 016° 016° 016° 016° 016°			SHA 348° 347° 347° 347° 347° 347°			SHA 244° 242° 239° 237° 235° 233°						
	Greenwich Culmination Time: 12:11			Greenwich Culmination Time: 14:07			Greenwich Culmination Time: 21:41						
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	81 41.0 +01.4	N	25 26.1 +00.0	148 45.1 +01.9	N	03 51.0 +00.2	188 29.0 +02.1	S	12 51.4 -00.1				
01	96 42.4 +01.3	N	25 26.1 +00.1	163 47.0 +02.0	N	03 51.2 +00.2	203 31.1 +02.2	S	12 51.3 -00.1				
02	111 43.7 +01.4	N	25 26.2 +00.0	178 49.0 +01.9	N	03 51.4 +00.2	218 33.3 +02.2	S	12 51.2 -00.1				
03	126 45.1 +01.3	N	25 26.2 +00.1	193 50.9 +02.0	N	03 51.6 +00.3	233 35.5 +02.2	S	12 51.1 -00.1				
04	141 46.4 +01.3	N	25 26.3 +00.0	208 52.9 +01.9	N	03 51.9 +00.2	248 37.7 +02.1	S	12 51.0 -00.1				
05	156 47.7 +01.4	N	25 26.3 +00.1	223 54.8 +02.0	N	03 52.1 +00.2	263 39.8 +02.2	S	12 50.9 -00.1				
06	171 49.1 +01.3	N	25 26.4 +00.0	238 56.8 +01.9	N	03 52.3 +00.2	278 42.0 +02.2	S	12 50.8 -00.1				
07	186 50.4 +01.3	N	25 26.4 +00.1	253 58.7 +02.0	N	03 52.5 +00.2	293 44.2 +02.2	S	12 50.7 -00.1				
08	201 51.7 +01.4	N	25 26.5 +00.0	269 00.7 +01.9	N	03 52.7 +00.3	308 46.4 +02.2	S	12 50.6 -00.1				
09	216 53.1 +01.3	N	25 26.5 +00.1	284 02.6 +01.9	N	03 53.0 +00.2	323 48.6 +02.1	S	12 50.5 -00.1				
10	231 54.4 +01.3	N	25 26.6 +00.0	299 04.5 +02.0	N	03 53.2 +00.2	338 50.7 +02.2	S	12 50.4 -00.1				
11	246 55.7 +01.4	N	25 26.6 +00.1	314 06.5 +01.9	N	03 53.4 +00.2	353 52.9 +02.2	S	12 50.3 -00.1				
12	261 57.1 +01.3	N	25 26.7 +00.0	329 08.4 +02.0	N	03 53.6 +00.3	8 55.1 +02.2	S	12 50.2 -00.1				
13	276 58.4 +01.3	N	25 26.7 +00.1	344 10.4 +01.9	N	03 53.9 +00.2	23 57.3 +02.1	S	12 50.1 -00.1				
14	291 59.7 +01.4	N	25 26.8 +00.0	359 12.3 +02.0	N	03 54.1 +00.2	38 59.4 +02.2	S	12 50.0 -00.1				
15	307 01.1 +01.3	N	25 26.8 +00.1	14 14.3 +01.9	N	03 54.3 +00.2	54 01.6 +02.2	S	12 49.9 -00.1				
16	322 02.4 +01.3	N	25 26.9 +00.0	29 16.2 +02.0	N	03 54.5 +00.3	69 03.8 +02.2	S	12 49.8 -00.1				
17	337 03.7 +01.4	N	25 26.9 +00.1	44 18.2 +01.9	N	03 54.8 +00.2	84 06.0 +02.2	S	12 49.7 -00.1				
18	352 05.1 +01.3	N	25 27.0 +00.0	59 20.1 +01.9	N	03 55.0 +00.2	99 08.2 +02.1	S	12 49.6 -00.1				
19	7 06.4 +01.3	N	25 27.0 +00.1	74 22.0 +02.0	N	03 55.2 +00.2	114 10.3 +02.2	S	12 49.5 -00.1				
20	22 07.7 +01.4	N	25 27.1 +00.0	89 24.0 +01.9	N	03 55.4 +00.3	129 12.5 +02.2	S	12 49.4 -00.1				
21	37 09.1 +01.3	N	25 27.1 +00.1	104 25.9 +02.0	N	03 55.7 +00.2	144 14.7 +02.2	S	12 49.3 -00.1				
22	52 10.4 +01.3	N	25 27.2 +00.0	119 27.9 +01.9	N	03 55.9 +00.2	159 16.9 +02.1	S	12 49.2 -00.1				
23	67 11.7 +01.3	N	25 27.2 +00.1	134 29.8 +02.0	N	03 56.1 +00.2	174 19.0 +02.2	S	12 49.1 -00.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 281° 281° 281° 281° 281° 281°			SHA 348° 348° 348° 348° 348° 348°			SHA 028° 028° 028° 028° 028° 028°						
	Greenwich Culmination Time: 18:31			Greenwich Culmination Time: 14:03			Greenwich Culmination Time: 11:24						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	177 02.4 +00.1	S 06	37.5 -00.9	148 07.5 -00.3	N 05	08.6 +01.3	33 31.7 -28.9	N 24	07.0 -07.3				
01	192 02.5 +00.2	S 06	36.6 -01.0	163 07.2 -00.4	N 05	09.9 +01.3	48 02.8 -28.8	N 23	59.7 -07.3				
02	207 02.7 +00.1	S 06	35.6 -01.0	178 06.8 -00.3	N 05	11.2 +01.3	62 34.0 -28.8	N 23	52.4 -07.5				
03	222 02.8 +00.1	S 06	34.6 -00.9	193 06.5 -00.3	N 05	12.5 +01.3	77 05.2 -28.7	N 23	44.9 -07.6				
04	237 02.9 +00.2	S 06	33.7 -01.0	208 06.2 -00.3	N 05	13.8 +01.3	91 36.5 -28.7	N 23	37.3 -07.7				
05	252 03.1 +00.1	S 06	32.7 -00.9	223 05.9 -00.3	N 05	15.1 +01.3	106 07.8 -28.6	N 23	29.6 -07.8				
06	267 03.2 +00.1	S 06	31.8 -01.0	238 05.6 -00.3	N 05	16.4 +01.3	120 39.2 -28.6	N 23	21.8 -07.8				
07	282 03.3 +00.2	S 06	30.8 -01.0	253 05.3 -00.3	N 05	17.7 +01.2	135 10.6 -28.5	N 23	14.0 -08.0				
08	297 03.5 +00.1	S 06	29.8 -00.9	268 05.0 -00.4	N 05	18.9 +01.3	149 42.1 -28.5	N 23	06.0 -08.1				
09	312 03.6 +00.1	S 06	28.9 -01.0	283 04.6 -00.3	N 05	20.2 +01.3	164 13.6 -28.4	N 22	57.9 -08.2				
10	327 03.7 +00.2	S 06	27.9 -01.0	298 04.3 -00.3	N 05	21.5 +01.3	178 45.2 -28.3	N 22	49.7 -08.3				
11	342 03.9 +00.1	S 06	26.9 -00.9	313 04.0 -00.3	N 05	22.8 +01.3	193 16.9 -28.3	N 22	41.4 -08.4				
12	357 04.0 +00.2	S 06	26.0 -01.0	328 03.7 -00.3	N 05	24.1 +01.3	207 48.6 -28.2	N 22	33.0 -08.5				
13	12 04.2 +00.1	S 06	25.0 -00.9	343 03.4 -00.3	N 05	25.4 +01.3	222 20.4 -28.2	N 22	24.5 -08.6				
14	27 04.3 +00.1	S 06	24.1 -01.0	358 03.1 -00.3	N 05	26.7 +01.2	236 52.2 -28.1	N 22	15.9 -08.7				
15	42 04.4 +00.2	S 06	23.1 -01.0	13 02.8 -00.4	N 05	27.9 +01.3	251 24.1 -28.1	N 22	07.2 -08.8				
16	57 04.6 +00.1	S 06	22.1 -00.9	28 02.4 -00.3	N 05	29.2 +01.3	265 56.0 -28.0	N 21	58.4 -08.9				
17	72 04.7 +00.1	S 06	21.2 -01.0	43 02.1 -00.3	N 05	30.5 +01.3	280 28.0 -28.0	N 21	49.5 -09.0				
18	87 04.8 +00.2	S 06	20.2 -01.0	58 01.8 -00.3	N 05	31.8 +01.3	295 00.0 -27.9	N 21	40.5 -09.1				
19	102 05.0 +00.1	S 06	19.2 -00.9	73 01.5 -00.3	N 05	33.1 +01.3	309 32.1 -27.8	N 21	31.4 -09.2				
20	117 05.1 +00.2	S 06	18.3 -01.0	88 01.2 -00.3	N 05	34.4 +01.2	324 04.3 -27.8	N 21	22.2 -09.2				
21	132 05.3 +00.1	S 06	17.3 -00.9	103 00.9 -00.4	N 05	35.6 +01.3	338 36.5 -27.7	N 21	13.0 -09.4				
22	147 05.4 +00.1	S 06	16.4 -01.0	118 00.5 -00.4	N 05	36.9 +01.3	353 08.8 -27.7	N 21	03.6 -09.5				
23	162 05.5 +00.2	S 06	15.4 -01.0	133 00.2 -00.3	N 05	38.2 +01.3	7 41.1 -27.6	N 20	54.1 -09.5				

UT	02	06	10	14	18	22
SD	16'1	16'1	16'1	16'1	16'1	16'1
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	015°	015°	015°	015°	015°	015°
Greenwich Culmination Time: 12:11						

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	347°	346°	346°	346°	346°	346°
Greenwich Culmination Time: 14:07						

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	54'1	54'1
SHA	231°	229°	227°	225°	223°	221°
Greenwich Culmination Time: 22:28						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	82 13.0 +01.4	N 25	27.3 +00.0	149 31.8 +01.9	N 03	56.3 +00.3	189 21.2 +02.2	S 12	49.0 -00.1				
01	97 14.4 +01.3	N 25	27.3 +00.1	164 33.7 +01.9	N 03	56.6 +00.2	204 23.4 +02.2	S 12	48.9 -00.1				
02	112 15.7 +01.3	N 25	27.4 +00.0	179 35.6 +02.0	N 03	56.8 +00.2	219 25.6 +02.2	S 12	48.8 -00.1				
03	127 17.0 +01.3	N 25	27.4 +00.1	194 37.6 +01.9	N 03	57.0 +00.2	234 27.8 +02.1	S 12	48.7 -00.1				
04	142 18.3 +01.4	N 25	27.5 +00.0	209 39.5 +02.0	N 03	57.2 +00.3	249 29.9 +02.2	S 12	48.6 -00.1				
05	157 19.7 +01.3	N 25	27.5 +00.1	224 41.5 +01.9	N 03	57.5 +00.2	264 32.1 +02.2	S 12	48.5 -00.1				
06	172 21.0 +01.3	N 25	27.6 +00.0	239 43.4 +02.0	N 03	57.7 +00.2	279 34.3 +02.2	S 12	48.4 -00.1				
07	187 22.3 +01.3	N 25	27.6 +00.0	254 45.4 +01.9	N 03	57.9 +00.2	294 36.5 +02.1	S 12	48.3 -00.1				
08	202 23.6 +01.4	N 25	27.6 +00.1	269 47.3 +01.9	N 03	58.1 +00.3	309 38.6 +02.2	S 12	48.2 -00.1				
09	217 25.0 +01.3	N 25	27.7 +00.0	284 49.2 +02.0	N 03	58.4 +00.2	324 40.8 +02.2	S 12	48.1 -00.1				
10	232 26.3 +01.3	N 25	27.7 +00.1	299 51.2 +01.9	N 03	58.6 +00.2	339 43.0 +02.2	S 12	48.0 -00.1				
11	247 27.6 +01.3	N 25	27.8 +00.0	314 53.1 +02.0	N 03	58.8 +00.2	354 45.2 +02.2	S 12	47.9 -00.1				
12	262 28.9 +01.3	N 25	27.8 +00.1	329 55.1 +01.9	N 03	59.0 +00.3	9 47.4 +02.1	S 12	47.8 -00.1				
13	277 30.2 +01.4	N 25	27.9 +00.0	344 57.0 +02.0	N 03	59.3 +00.2	24 49.5 +02.2	S 12	47.7 -00.1				
14	292 31.6 +01.3	N 25	27.9 +00.1	359 59.0 +01.9	N 03	59.5 +00.2	39 51.7 +02.2	S 12	47.6 -00.1				
15	307 32.9 +01.3	N 25	28.0 +00.0	15 00.9 +01.9	N 03	59.7 +00.2	54 53.9 +02.2	S 12	47.5 -00.1				
16	322 34.2 +01.3	N 25	28.0 +00.1	30 02.8 +02.0	N 03	59.9 +00.2	69 56.1 +02.1	S 12	47.4 -00.1				
17	337 35.5 +01.3	N 25	28.1 +00.0	45 04.8 +01.9	N 04	00.1 +00.3	84 58.2 +02.2	S 12	47.3 -00.1				
18	352 36.8 +01.4	N 25	28.1 +00.1	60 06.7 +02.0	N 04	00.4 +00.2	100 00.4 +02.2	S 12	47.2 -00.1				
19	7 38.2 +01.3	N 25	28.2 +00.0	75 08.7 +01.9	N 04	00.6 +00.2	115 02.6 +02.2	S 12	47.1 -00.1				
20	22 39.5 +01.3	N 25	28.2 +00.1	90 10.6 +02.0	N 04	00.8 +00.2	130 04.8 +02.2	S 12	47.0 -00.1				
21	37 40.8 +01.3	N 25	28.3 +00.0	105 12.6 +01.9	N 04	01.0 +00.3	145 07.0 +02.1	S 12	46.9 -00.1				
22	52 42.1 +01.3	N 25	28.3 +00.0	120 14.5 +01.9	N 04	01.3 +00.2	160 09.1 +02.2	S 12	46.8 -00.1				
23	67 43.4 +01.3	N 25	28.3 +00.1	135 16.4 +02.0	N 04	01.5 +00.2	175 11.3 +02.2	S 12	46.7 -00.1				

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	281°	281°	281°	280°	280°	280°
Greenwich Culmination Time: 18:29						

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	348°	348°	348°	348°	348°	348°
Greenwich Culmination Time: 14:00						

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	028°	028°	028°	028°	028°	028°
Greenwich Culmination Time: 11:20						

Sun					Venus				Moon				A: 44%	
UT	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	UT	
00	177 05.7 +00.1	S	06 14.4 -00.9		147 59.9 -00.3	N 05 39.5 +01.3			22 13.5 -27.6	N 20 44.6 -09.6			00	
01	192 05.8 +00.1	S	06 13.5 -01.0		162 59.6 -00.3	N 05 40.8 +01.3			36 45.9 -27.5	N 20 35.0 -09.8			01	
02	207 05.9 +00.2	S	06 12.5 -01.0		177 59.3 -00.3	N 05 42.1 +01.2			51 18.4 -27.5	N 20 25.2 -09.8			02	
03	222 06.1 +00.1	S	06 11.5 -00.9		192 59.0 -00.4	N 05 43.3 +01.3			65 50.9 -27.4	N 20 15.4 -09.9			03	
04	237 06.2 +00.2	S	06 10.6 -01.0		207 58.6 -00.3	N 05 44.6 +01.3			80 23.5 -27.3	N 20 05.5 -10.0			04	
05	252 06.4 +00.1	S	06 09.6 -01.0		222 58.3 -00.3	N 05 45.9 +01.3			94 56.2 -27.3	N 19 55.5 -10.0			05	
06	267 06.5 +00.1	S	06 08.6 -00.9		237 58.0 -00.3	N 05 47.2 +01.3			109 28.9 -27.2	N 19 45.5 -10.2			06	
07	282 06.6 +00.2	S	06 07.7 -01.0		252 57.7 -00.3	N 05 48.5 +01.2			124 01.7 -27.2	N 19 35.3 -10.2			07	
08	297 06.8 +00.1	S	06 06.7 -01.0		267 57.4 -00.3	N 05 49.7 +01.3			138 34.5 -27.2	N 19 25.1 -10.4			08	
09	312 06.9 +00.2	S	06 05.7 -00.9		282 57.1 -00.4	N 05 51.0 +01.3			153 07.3 -27.1	N 19 14.7 -10.4			09	
10	327 07.1 +00.1	S	06 04.8 -01.0		297 56.7 -00.3	N 05 52.3 +01.3			167 40.2 -27.0	N 19 04.3 -10.5			10	
11	342 07.2 +00.1	S	06 03.8 -01.0		312 56.4 -00.3	N 05 53.6 +01.3			182 13.2 -27.0	N 18 53.8 -10.5			11	
12	357 07.3 +00.2	S	06 02.8 -00.9		327 56.1 -00.3	N 05 54.9 +01.2			196 46.2 -26.9	N 18 43.3 -10.7			12	
13	12 07.5 +00.1	S	06 01.9 -01.0		342 55.8 -00.3	N 05 56.1 +01.3			211 19.3 -26.9	N 18 32.6 -10.7			13	
14	27 07.6 +00.2	S	06 00.9 -00.9		357 55.5 -00.3	N 05 57.4 +01.3			225 52.4 -26.8	N 18 21.9 -10.9			14	
15	42 07.8 +00.1	S	05 60.0 -01.0		12 55.2 -00.4	N 05 58.7 +01.3			240 25.6 -26.8	N 18 11.0 -10.8			15	
16	57 07.9 +00.2	S	05 59.0 -01.0		27 54.8 -00.3	N 05 60.0 +01.3			254 58.8 -26.7	N 18 00.2 -11.0			16	
17	72 08.1 +00.1	S	05 58.0 -00.9		42 54.5 -00.3	N 06 01.3 +01.2			269 32.1 -26.7	N 17 49.2 -11.1			17	
18	87 08.2 +00.1	S	05 57.1 -01.0		57 54.2 -00.3	N 06 02.5 +01.3			284 05.4 -26.6	N 17 38.1 -11.1			18	
19	102 08.3 +00.2	S	05 56.1 -01.0		72 53.9 -00.3	N 06 03.8 +01.3			298 38.8 -26.6	N 17 27.0 -11.2			19	
20	117 08.5 +00.1	S	05 55.1 -00.9		87 53.6 -00.4	N 06 05.1 +01.3			313 12.2 -26.6	N 17 15.8 -11.3			20	
21	132 08.6 +00.2	S	05 54.2 -01.0		102 53.2 -00.3	N 06 06.4 +01.3			327 45.6 -26.5	N 17 04.5 -11.3			21	
22	147 08.8 +00.1	S	05 53.2 -01.0		117 52.9 -00.3	N 06 07.7 +01.2			342 19.1 -26.4	N 16 53.2 -11.4			22	
23	162 08.9 +00.1	S	05 52.2 -01.0		132 52.6 -00.3	N 06 08.9 +01.3			356 52.7 -26.4	N 16 41.8 -11.5			23	
UT	02 06 10 14 18 22				UT	02 06 10 14 18 22			UT	02 06 10 14 18 22				
SD	16°1 16°1 16°1 16°1 16°1 16°1				SD	00°1 00°1 00°1 00°1 00°1 00°1			SD	14°7 14°7 14°8 14°8 14°8 14°8				
HP	00°1 00°1 00°1 00°1 00°1 00°1				HP	00°1 00°1 00°1 00°1 00°1 00°1			HP	54°1 54°1 54°2 54°2 54°2 54°3				
SHA	015° 014° 014° 014° 014° 014°				SHA	345° 345° 345° 345° 345° 344°			SHA	219° 217° 215° 213° 211° 209°				
Greenwich Culmination Time: 12:11					Greenwich Culmination Time: 14:08					Greenwich Culmination Time: 23:12				

Mars					Jupiter				Saturn				
UT	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	GHA ° ' ''	ddGHA	Dec ° ' ''	dDec	UT
00	82 44.7 +01.3	N 25 28.4 +00.0			150 18.4 +01.9	N 04 01.7 +00.2			190 13.5 +02.2	S 12 46.6 -00.1			00
01	97 46.0 +01.4	N 25 28.4 +00.1			165 20.3 +02.0	N 04 01.9 +00.3			205 15.7 +02.2	S 12 46.5 -00.1			01
02	112 47.4 +01.3	N 25 28.5 +00.0			180 22.3 +01.9	N 04 02.2 +00.2			220 17.9 +02.1	S 12 46.4 -00.1			02
03	127 48.7 +01.3	N 25 28.5 +00.1			195 24.2 +01.9	N 04 02.4 +00.2			235 20.0 +02.2	S 12 46.3 -00.1			03
04	142 50.0 +01.3	N 25 28.6 +00.0			210 26.1 +02.0	N 04 02.6 +00.2			250 22.2 +02.2	S 12 46.2 -00.1			04
05	157 51.3 +01.3	N 25 28.6 +00.1			225 28.1 +01.9	N 04 02.8 +00.3			265 24.4 +02.2	S 12 46.1 -00.1			05
06	172 52.6 +01.3	N 25 28.7 +00.0			240 30.0 +02.0	N 04 03.1 +00.2			280 26.6 +02.1	S 12 46.0 -00.1			06
07	187 53.9 +01.3	N 25 28.7 +00.0			255 32.0 +01.9	N 04 03.3 +00.2			295 28.7 +02.2	S 12 45.9 -00.1			07
08	202 55.2 +01.3	N 25 28.7 +00.1			270 33.9 +02.0	N 04 03.5 +00.2			310 30.9 +02.2	S 12 45.8 -00.1			08
09	217 56.5 +01.4	N 25 28.8 +00.0			285 35.9 +01.9	N 04 03.7 +00.3			325 33.1 +02.2	S 12 45.7 -00.1			09
10	232 57.9 +01.3	N 25 28.8 +00.1			300 37.8 +01.9	N 04 04.0 +00.2			340 35.3 +02.2	S 12 45.6 -00.1			10
11	247 59.2 +01.3	N 25 28.9 +00.0			315 39.7 +02.0	N 04 04.2 +00.2			355 37.5 +02.1	S 12 45.5 -00.1			11
12	263 00.5 +01.3	N 25 28.9 +00.1			330 41.7 +01.9	N 04 04.4 +00.2			10 39.6 +02.2	S 12 45.4 -00.1			12
13	278 01.8 +01.3	N 25 29.0 +00.0			345 43.6 +02.0	N 04 04.6 +00.3			25 41.8 +02.2	S 12 45.3 -00.1			13
14	293 03.1 +01.3	N 25 29.0 +00.1			0 45.6 +01.9	N 04 04.9 +00.2			40 44.0 +02.2	S 12 45.2 -00.1			14
15	308 04.4 +01.3	N 25 29.1 +00.0			15 47.5 +01.9	N 04 05.1 +00.2			55 46.2 +02.2	S 12 45.1 -00.1			15
16	323 05.7 +01.3	N 25 29.1 +00.0			30 49.4 +02.0	N 04 05.3 +00.2			70 48.4 +02.1	S 12 45.0 -00.1			16
17	338 07.0 +01.3	N 25 29.1 +00.1			45 51.4 +01.9	N 04 05.5 +00.3			85 50.5 +02.2	S 12 44.9 -00.1			17
18	353 08.3 +01.3	N 25 29.2 +00.0			60 53.3 +02.0	N 04 05.8 +00.2			100 52.7 +02.2	S 12 44.8 -00.1			18
19	8 09.6 +01.3	N 25 29.2 +00.1			75 55.3 +01.9	N 04 06.0 +00.2			115 54.9 +02.2	S 12 44.7 -00.1			19
20	23 10.9 +01.3	N 25 29.3 +00.0			90 57.2 +01.9	N 04 06.2 +00.2			130 57.1 +02.2	S 12 44.6 -00.1			20
21	38 12.2 +01.3	N 25 29.3 +00.1			105 59.1 +02.0	N 04 06.4 +00.3			145 59.3 +02.1	S 12 44.5 -00.1			21
22	53 13.5 +01.3	N 25 29.4 +00.0			121 01.1 +01.9	N 04 06.7 +00.2			161 01.4 +02.2	S 12 44.4 -00.1			22
23	68 14.8 +01.4	N 25 29.4 +00.1			136 03.0 +02.0	N 04 06.9 +00.2			176 03.6 +02.2	S 12 44.3 -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°1 00°1 00°1 00°1 00°1 00°1				SD	00°3 00°3 00°3 00°3 00°3 00°3			SD	00°1 00°1 00°1 00°1 00°1 00°1			
HP	00°1 00°1 00°1 00°1 00°1 00°1				HP	00°0 00°0 00°0 00°0 00°0 00°0			HP	00°0 00°0 00°0 00°0 00°0 00°0			
SHA	280° 280° 280° 280° 280° 280°				SHA	348° 348° 348° 348° 348° 348°			SHA	028° 028° 028° 028° 028° 028°			
Greenwich Culmination Time: 18:27					Greenwich Culmination Time: 13:56					Greenwich Culmination Time: 11:17			

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	177 09.0 +00.2	S 05 51.2 -00.9	147 52.3 -00.3	N 06 10.2 +01.3	11 26.3 -26.4	N 16 30.3 -11.6	00						
01	192 09.2 +00.1	S 05 50.3 -01.0	162 52.0 -00.3	N 06 11.5 +01.3	25 59.9 -26.3	N 16 18.7 -11.6	01						
02	207 09.3 +00.2	S 05 49.3 -01.0	177 51.7 -00.4	N 06 12.8 +01.2	40 33.6 -26.2	N 16 07.1 -11.7	02						
03	222 09.5 +00.1	S 05 48.3 -00.9	192 51.3 -00.3	N 06 14.0 +01.3	55 07.4 -26.3	N 15 55.4 -11.8	03						
04	237 09.6 +00.2	S 05 47.4 -01.0	207 51.0 -00.3	N 06 15.3 +01.3	69 41.1 -26.1	N 15 43.6 -11.8	04						
05	252 09.8 +00.1	S 05 46.4 -01.0	222 50.7 -00.3	N 06 16.6 +01.3	84 15.0 -26.2	N 15 31.8 -11.9	05						
06	267 09.9 +00.2	S 05 45.4 -00.9	237 50.4 -00.3	N 06 17.9 +01.2	98 48.8 -26.1	N 15 19.9 -12.0	06						
07	282 10.1 +00.1	S 05 44.5 -01.0	252 50.1 -00.4	N 06 19.1 +01.3	113 22.7 -26.0	N 15 07.9 -12.0	07						
08	297 10.2 +00.1	S 05 43.5 -01.0	267 49.7 -00.3	N 06 20.4 +01.3	127 56.7 -26.0	N 14 55.9 -12.1	08						
09	312 10.3 +00.2	S 05 42.5 -00.9	282 49.4 -00.3	N 06 21.7 +01.3	142 30.7 -26.0	N 14 43.8 -12.2	09						
10	327 10.5 +00.1	S 05 41.6 -01.0	297 49.1 -00.3	N 06 23.0 +01.2	157 04.7 -25.9	N 14 31.6 -12.2	10						
11	342 10.6 +00.2	S 05 40.6 -01.0	312 48.8 -00.3	N 06 24.2 +01.3	171 38.8 -25.9	N 14 19.4 -12.3	11						
12	357 10.8 +00.1	S 05 39.6 -00.9	327 48.5 -00.4	N 06 25.5 +01.3	186 12.9 -25.9	N 14 07.1 -12.3	12						
13	12 10.9 +00.2	S 05 38.7 -01.0	342 48.1 -00.3	N 06 26.8 +01.3	200 47.0 -25.8	N 13 54.8 -12.5	13						
14	27 11.1 +00.1	S 05 37.7 -01.0	357 47.8 -00.3	N 06 28.1 +01.2	215 21.2 -25.8	N 13 42.3 -12.4	14						
15	42 11.2 +00.2	S 05 36.7 -00.9	12 47.5 -00.3	N 06 29.3 +01.3	229 55.4 -25.7	N 13 29.9 -12.6	15						
16	57 11.4 +00.1	S 05 35.8 -01.0	27 47.2 -00.3	N 06 30.6 +01.3	244 29.7 -25.7	N 13 17.3 -12.5	16						
17	72 11.5 +00.2	S 05 34.8 -01.0	42 46.9 -00.4	N 06 31.9 +01.3	259 04.0 -25.7	N 13 04.8 -12.7	17						
18	87 11.7 +00.1	S 05 33.8 -01.0	57 46.5 -00.3	N 06 33.2 +01.2	273 38.3 -25.6	N 12 52.1 -12.7	18						
19	102 11.8 +00.1	S 05 32.8 -00.9	72 46.2 -00.3	N 06 34.4 +01.3	288 12.7 -25.6	N 12 39.4 -12.7	19						
20	117 11.9 +00.2	S 05 31.9 -01.0	87 45.9 -00.3	N 06 35.7 +01.3	302 47.1 -25.6	N 12 26.7 -12.9	20						
21	132 12.1 +00.1	S 05 30.9 -01.0	102 45.6 -00.3	N 06 37.0 +01.2	317 21.5 -25.5	N 12 13.8 -12.8	21						
22	147 12.2 +00.2	S 05 29.9 -00.9	117 45.3 -00.4	N 06 38.2 +01.3	331 56.0 -25.5	N 12 01.0 -12.9	22						
23	162 12.4 +00.1	S 05 29.0 -01.0	132 44.9 -00.3	N 06 39.5 +01.3	346 30.5 -25.5	N 11 48.1 -13.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	16°1 16°1 16°1 16°1 16°1 16°1	SD	00°1 00°1 00°1 00°1 00°1 00°1	SD	14°8 14°8 14°8 14°8 14°8 14°9								
HP	00°1 00°1 00°1 00°1 00°1 00°1	HP	00°1 00°1 00°1 00°1 00°1 00°1	HP	54°3 54°3 54°4 54°4 54°5 54°5								
SHA	014° 013° 013° 013° 013° 013°	SHA	344° 344° 344° 344° 344° 343°	SHA	207° 205° 203° 201° 199° 198°								
Greenwich Culmination Time: 12:11				Greenwich Culmination Time: 14:08				Greenwich Culmination Time: 23:55					
00	83 16.2 +01.3	N 25 29.5 +00.0	151 05.0 +01.9	N 04 07.1 +00.2	191 05.8 +02.2	S 12 44.2 -00.1	00						
01	98 17.5 +01.3	N 25 29.5 +00.0	166 06.9 +01.9	N 04 07.3 +00.3	206 08.0 +02.2	S 12 44.1 -00.1	01						
02	113 18.8 +01.3	N 25 29.5 +00.1	181 08.8 +02.0	N 04 07.6 +00.2	221 10.2 +02.1	S 12 44.0 -00.1	02						
03	128 20.1 +01.3	N 25 29.6 +00.0	196 10.8 +01.9	N 04 07.8 +00.2	236 12.3 +02.2	S 12 43.9 -00.1	03						
04	143 21.4 +01.3	N 25 29.6 +00.1	211 12.7 +01.9	N 04 08.0 +00.2	251 14.5 +02.2	S 12 43.8 -00.1	04						
05	158 22.7 +01.3	N 25 29.7 +00.0	226 14.6 +02.0	N 04 08.2 +00.3	266 16.7 +02.2	S 12 43.7 -00.1	05						
06	173 24.0 +01.3	N 25 29.7 +00.1	241 16.6 +01.9	N 04 08.5 +00.2	281 18.9 +02.1	S 12 43.6 -00.1	06						
07	188 25.3 +01.3	N 25 29.8 +00.0	256 18.5 +02.0	N 04 08.7 +00.2	296 21.0 +02.2	S 12 43.5 -00.1	07						
08	203 26.6 +01.3	N 25 29.8 +00.0	271 20.5 +01.9	N 04 08.9 +00.2	311 23.2 +02.2	S 12 43.4 -00.1	08						
09	218 27.9 +01.3	N 25 29.8 +00.1	286 22.4 +01.9	N 04 09.1 +00.3	326 25.4 +02.2	S 12 43.3 -00.2	09						
10	233 29.2 +01.3	N 25 29.9 +00.0	301 24.3 +02.0	N 04 09.4 +00.2	341 27.6 +02.2	S 12 43.1 -00.1	10						
11	248 30.5 +01.3	N 25 29.9 +00.1	316 26.3 +01.9	N 04 09.6 +00.2	356 29.8 +02.1	S 12 43.0 -00.1	11						
12	263 31.8 +01.3	N 25 30.0 +00.0	331 28.2 +02.0	N 04 09.8 +00.2	11 31.9 +02.2	S 12 42.9 -00.1	12						
13	278 33.1 +01.3	N 25 30.0 +00.0	346 30.2 +01.9	N 04 10.0 +00.3	26 34.1 +02.2	S 12 42.8 -00.1	13						
14	293 34.4 +01.2	N 25 30.0 +00.1	1 32.1 +01.9	N 04 10.3 +00.2	41 36.3 +02.2	S 12 42.7 -00.1	14						
15	308 35.6 +01.3	N 25 30.1 +00.0	16 34.0 +02.0	N 04 10.5 +00.2	56 38.5 +02.2	S 12 42.6 -00.1	15						
16	323 36.9 +01.3	N 25 30.1 +00.1	31 36.0 +01.9	N 04 10.7 +00.3	71 40.7 +02.1	S 12 42.5 -00.1	16						
17	338 38.2 +01.3	N 25 30.2 +00.0	46 37.9 +01.9	N 04 11.0 +00.2	86 42.8 +02.2	S 12 42.4 -00.1	17						
18	353 39.5 +01.3	N 25 30.2 +00.0	61 39.8 +02.0	N 04 11.2 +00.2	101 45.0 +02.2	S 12 42.3 -00.1	18						
19	8 40.8 +01.3	N 25 30.2 +00.1	76 41.8 +01.9	N 04 11.4 +00.2	116 47.2 +02.2	S 12 42.2 -00.1	19						
20	23 42.1 +01.3	N 25 30.3 +00.0	91 43.7 +02.0	N 04 11.6 +00.3	131 49.4 +02.2	S 12 42.1 -00.1	20						
21	38 43.4 +01.3	N 25 30.3 +00.1	106 45.7 +01.9	N 04 11.9 +00.2	146 51.6 +02.1	S 12 42.0 -00.1	21						
22	53 44.7 +01.3	N 25 30.4 +00.0	121 47.6 +01.9	N 04 12.1 +00.2	161 53.7 +02.2	S 12 41.9 -00.1	22						
23	68 46.0 +01.3	N 25 30.4 +00.1	136 49.5 +02.0	N 04 12.3 +00.2	176 55.9 +02.2	S 12 41.8 -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°1 00°1 00°1 00°1 00°1 00°1	SD	00°3 00°3 00°3 00°3 00°3 00°3	SD	00°1 00°1 00°1 00°1 00°1 00°1								
HP	00°1 00°1 00°1 00°1 00°1 00°1	HP	00°0 00°0 00°0 00°0 00°0 00°0	HP	00°0 00°0 00°0 00°0 00°0 00°0								
SHA	280° 280° 280° 280° 279° 279°	SHA	348° 348° 348° 347° 347° 347°	SHA	028° 028° 028° 028° 028° 028°								
Greenwich Culmination Time: 18:25				Greenwich Culmination Time: 13:53				Greenwich Culmination Time: 11:13					

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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	177	12.5 +00.2	S 05 28.0	-01.0	147	44.6 -00.3	N 06 40.8	+01.3	1	05.0 -25.5	N 11 35.1	-13.0	00				
01	192	12.7 +00.1	S 05 27.0	-00.9	162	44.3 -00.3	N 06 42.1	+01.2	15	39.5 -25.4	N 11 22.1	-13.1	01				
02	207	12.8 +00.2	S 05 26.1	-01.0	177	44.0 -00.4	N 06 43.3	+01.3	30	14.1 -25.4	N 11 09.0	-13.1	02				
03	222	13.0 +00.1	S 05 25.1	-01.0	192	43.6 -00.3	N 06 44.6	+01.3	44	48.7 -25.3	N 10 55.9	-13.2	03				
04	237	13.1 +00.2	S 05 24.1	-01.0	207	43.3 -00.3	N 06 45.9	+01.2	59	23.4 -25.4	N 10 42.7	-13.2	04				
05	252	13.3 +00.1	S 05 23.1	-00.9	222	43.0 -00.3	N 06 47.1	+01.3	73	58.0 -25.3	N 10 29.5	-13.3	05				
06	267	13.4 +00.2	S 05 22.2	-01.0	237	42.7 -00.3	N 06 48.4	+01.3	88	32.7 -25.3	N 10 16.2	-13.3	06				
07	282	13.6 +00.1	S 05 21.2	-01.0	252	42.4 -00.4	N 06 49.7	+01.2	103	07.4 -25.2	N 10 02.9	-13.3	07				
08	297	13.7 +00.2	S 05 20.2	-00.9	267	42.0 -00.3	N 06 50.9	+01.3	117	42.2 -25.3	N 09 49.6	-13.4	08				
09	312	13.9 +00.1	S 05 19.3	-01.0	282	41.7 -00.3	N 06 52.2	+01.3	132	16.9 -25.2	N 09 36.2	-13.5	09				
10	327	14.0 +00.2	S 05 18.3	-01.0	297	41.4 -00.3	N 06 53.5	+01.3	146	51.7 -25.2	N 09 22.7	-13.5	10				
11	342	14.2 +00.1	S 05 17.3	-01.0	312	41.1 -00.4	N 06 54.8	+01.2	161	26.5 -25.2	N 09 09.2	-13.5	11				
12	357	14.3 +00.2	S 05 16.3	-00.9	327	40.7 -00.3	N 06 56.0	+01.3	176	01.3 -25.1	N 08 55.7	-13.6	12				
13	12	14.5 +00.1	S 05 15.4	-01.0	342	40.4 -00.3	N 06 57.3	+01.3	190	36.2 -25.2	N 08 42.1	-13.6	13				
14	27	14.6 +00.2	S 05 14.4	-01.0	357	40.1 -00.3	N 06 58.6	+01.2	205	11.0 -25.1	N 08 28.5	-13.6	14				
15	42	14.8 +00.1	S 05 13.4	-01.0	12	39.8 -00.3	N 06 59.8	+01.3	219	45.9 -25.1	N 08 14.9	-13.7	15				
16	57	14.9 +00.2	S 05 12.4	-00.9	27	39.5 -00.4	N 07 01.1	+01.3	234	20.8 -25.1	N 08 01.2	-13.8	16				
17	72	15.1 +00.1	S 05 11.5	-01.0	42	39.1 -00.3	N 07 02.4	+01.2	248	55.7 -25.0	N 07 47.4	-13.7	17				
18	87	15.2 +00.2	S 05 10.5	-01.0	57	38.8 -00.3	N 07 03.6	+01.3	263	30.7 -25.1	N 07 33.7	-13.8	18				
19	102	15.4 +00.1	S 05 09.5	-00.9	72	38.5 -00.3	N 07 04.9	+01.3	278	05.6 -25.0	N 07 19.9	-13.9	19				
20	117	15.5 +00.2	S 05 08.6	-01.0	87	38.2 -00.4	N 07 06.2	+01.2	292	40.6 -25.1	N 07 06.0	-13.9	20				
21	132	15.7 +00.1	S 05 07.6	-01.0	102	37.8 -00.3	N 07 07.4	+01.3	307	15.5 -25.0	N 06 52.1	-13.9	21				
22	147	15.8 +00.2	S 05 06.6	-01.0	117	37.5 -00.3	N 07 08.7	+01.3	321	50.5 -25.0	N 06 38.2	-13.9	22				
23	162	16.0 +00.1	S 05 05.6	-00.9	132	37.2 -00.3	N 07 10.0	+01.2	336	25.5 -25.0	N 06 24.3	-14.0	23				
	UT 02 06 10 14 18 22	SD 16'1 16'1 16'1 16'1 16'1 16'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 013° 013° 012° 012° 012° 012°	Greenwich Culmination Time: 12:11		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 343° 343° 343° 343° 342° 342°	Greenwich Culmination Time: 14:09		UT 02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 14'9 15'0	HP 54'6 54'6 54'7 54'8 54'8 54'9	SHA 196° 194° 192° 190° 188° 186°	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	83	47.3 +01.3	N 25 30.5	+00.0	151	51.5 +01.9	N 04 12.5	+00.3	191	58.1 +02.2	S 12 41.7	-00.1	00				
01	98	48.6 +01.3	N 25 30.5	+00.0	166	53.4 +01.9	N 04 12.8	+00.2	207	00.3 +02.2	S 12 41.6	-00.1	01				
02	113	49.9 +01.3	N 25 30.5	+00.1	181	55.3 +02.0	N 04 13.0	+00.2	222	02.5 +02.1	S 12 41.5	-00.1	02				
03	128	51.2 +01.3	N 25 30.6	+00.0	196	57.3 +01.9	N 04 13.2	+00.2	237	04.6 +02.2	S 12 41.4	-00.1	03				
04	143	52.5 +01.2	N 25 30.6	+00.1	211	59.2 +02.0	N 04 13.4	+00.3	252	06.8 +02.2	S 12 41.3	-00.1	04				
05	158	53.7 +01.3	N 25 30.7	+00.0	227	01.2 +01.9	N 04 13.7	+00.2	267	09.0 +02.2	S 12 41.2	-00.1	05				
06	173	55.0 +01.3	N 25 30.7	+00.0	242	03.1 +01.9	N 04 13.9	+00.2	282	11.2 +02.2	S 12 41.1	-00.1	06				
07	188	56.3 +01.3	N 25 30.7	+00.1	257	05.0 +02.0	N 04 14.1	+00.2	297	13.4 +02.2	S 12 41.0	-00.1	07				
08	203	57.6 +01.3	N 25 30.8	+00.0	272	07.0 +01.9	N 04 14.3	+00.3	312	15.6 +02.1	S 12 40.9	-00.1	08				
09	218	58.9 +01.3	N 25 30.8	+00.0	287	08.9 +01.9	N 04 14.6	+00.2	327	17.7 +02.2	S 12 40.8	-00.1	09				
10	234	00.2 +01.3	N 25 30.8	+00.1	302	10.8 +02.0	N 04 14.8	+00.2	342	19.9 +02.2	S 12 40.7	-00.1	10				
11	249	01.5 +01.3	N 25 30.9	+00.0	317	12.8 +01.9	N 04 15.0	+00.2	357	22.1 +02.2	S 12 40.6	-00.1	11				
12	264	02.8 +01.2	N 25 30.9	+00.1	332	14.7 +02.0	N 04 15.2	+00.3	12	24.3 +02.2	S 12 40.5	-00.1	12				
13	279	04.0 +01.3	N 25 31.0	+00.0	347	16.7 +01.9	N 04 15.5	+00.2	27	26.5 +02.1	S 12 40.4	-00.1	13				
14	294	05.3 +01.3	N 25 31.0	+00.0	2	18.6 +01.9	N 04 15.7	+00.2	42	28.6 +02.2	S 12 40.3	-00.1	14				
15	309	06.6 +01.3	N 25 31.0	+00.1	17	20.5 +02.0	N 04 15.9	+00.2	57	30.8 +02.2	S 12 40.2	-00.1	15				
16	324	07.9 +01.3	N 25 31.1	+00.0	32	22.5 +01.9	N 04 16.1	+00.3	72	33.0 +02.2	S 12 40.1	-00.1	16				
17	339	09.2 +01.3	N 25 31.1	+00.1	47	24.4 +01.9	N 04 16.4	+00.2	87	35.2 +02.2	S 12 40.0	-00.1	17				
18	354	10.5 +01.3	N 25 31.2	+00.0	62	26.3 +02.0	N 04 16.6	+00.2	102	37.4 +02.1	S 12 39.9	-00.1	18				
19	9	11.8 +01.2	N 25 31.2	+00.0	77	28.3 +01.9	N 04 16.8	+00.2	117	39.5 +02.2	S 12 39.8	-00.1	19				
20	24	13.0 +01.3	N 25 31.2	+00.1	92	30.2 +01.9	N 04 17.0	+00.3	132	41.7 +02.2	S 12 39.7	-00.1	20				
21	39	14.3 +01.3	N 25 31.3	+00.0	107	32.1 +02.0	N 04 17.3	+00.2	147	43.9 +02.2	S 12 39.6	-00.1	21				
22	54	15.6 +01.3	N 25 31.3	+00.0	122	34.1 +01.9	N 04 17.5	+00.2	162	46.1 +02.2	S 12 39.5	-00.1	22				
23	69	16.9 +01.3	N 25 31.3	+00.1	137	36.0 +02.0	N 04 17.7	+00.3	177	48.3 +02.1	S 12 39.4	-00.1	23				
	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 279° 279° 279° 279° 279° 279°	Greenwich Culmination Time: 18:23		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 347° 347° 347° 347° 347° 347°	Greenwich Culmination Time: 13:50		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 028° 027° 027° 027° 027° 027°	Greenwich Culmination Time: 11:10

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Table with columns for planet (Sun, Venus, Moon, Mars, Jupiter, Saturn), UT, GHA, ddGHA, Dec, and dDec. Includes sub-columns for specific UT values (02, 06, 10, 14, 18, 22) and Greenwich Culmination Time for each planet. The Moon section specifies 'A: 53%'.

Sun					Venus					Moon A: 55%										
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	177 19.8 +00.2	S	04 41.3 -01.0		147 29.0 -00.3	N	07 41.5 +01.3		341 01.2 -25.1	N	00 27.5 -14.5		00							
01	192 20.0 +00.1	S	04 40.3 -01.0		162 28.7 -00.3	N	07 42.8 +01.2		355 36.1 -25.0	N	00 13.0 -14.6		01							
02	207 20.1 +00.2	S	04 39.3 -01.0		177 28.4 -00.3	N	07 44.0 +01.3		10 11.1 -25.1	S	00 01.6 +14.5		02							
03	222 20.3 +00.1	S	04 38.3 -00.9		192 28.1 -00.4	N	07 45.3 +01.2		24 46.0 -25.1	S	00 16.1 +14.5		03							
04	237 20.4 +00.2	S	04 37.4 -01.0		207 27.7 -00.3	N	07 46.5 +01.3		39 20.9 -25.1	S	00 30.6 +14.5		04							
05	252 20.6 +00.1	S	04 36.4 -01.0		222 27.4 -00.3	N	07 47.8 +01.2		53 55.8 -25.2	S	00 45.1 +14.6		05							
06	267 20.7 +00.2	S	04 35.4 -01.0		237 27.1 -00.4	N	07 49.0 +01.3		68 30.6 -25.1	S	00 59.7 +14.5		06							
07	282 20.9 +00.1	S	04 34.4 -00.9		252 26.7 -00.3	N	07 50.3 +01.3		83 05.5 -25.2	S	01 14.2 +14.6		07							
08	297 21.0 +00.2	S	04 33.5 -01.0		267 26.4 -00.3	N	07 51.6 +01.2		97 40.3 -25.2	S	01 28.8 +14.5		08							
09	312 21.2 +00.2	S	04 32.5 -01.0		282 26.1 -00.3	N	07 52.8 +01.3		112 15.1 -25.2	S	01 43.3 +14.6		09							
10	327 21.4 +00.1	S	04 31.5 -01.0		297 25.8 -00.4	N	07 54.1 +01.2		126 49.9 -25.3	S	01 57.9 +14.6		10							
11	342 21.5 +00.2	S	04 30.5 -01.0		312 25.4 -00.3	N	07 55.3 +01.3		141 24.6 -25.3	S	02 12.5 +14.5		11							
12	357 21.7 +00.1	S	04 29.5 -00.9		327 25.1 -00.3	N	07 56.6 +01.2		155 59.3 -25.3	S	02 27.0 +14.6		12							
13	12 21.8 +00.2	S	04 28.6 -01.0		342 24.8 -00.4	N	07 57.8 +01.3		170 34.0 -25.3	S	02 41.6 +14.5		13							
14	27 22.0 +00.1	S	04 27.6 -01.0		357 24.4 -00.3	N	07 59.1 +01.2		185 08.7 -25.4	S	02 56.1 +14.6		14							
15	42 22.1 +00.2	S	04 26.6 -01.0		12 24.1 -00.3	N	08 00.3 +01.3		199 43.3 -25.4	S	03 10.7 +14.5		15							
16	57 22.3 +00.2	S	04 25.6 -00.9		27 23.8 -00.3	N	08 01.6 +01.2		214 17.9 -25.4	S	03 25.2 +14.6		16							
17	72 22.5 +00.1	S	04 24.7 -01.0		42 23.5 -00.4	N	08 02.8 +01.3		228 52.5 -25.4	S	03 39.8 +14.5		17							
18	87 22.6 +00.2	S	04 23.7 -01.0		57 23.1 -00.3	N	08 04.1 +01.3		243 27.1 -25.5	S	03 54.3 +14.6		18							
19	102 22.8 +00.1	S	04 22.7 -01.0		72 22.8 -00.3	N	08 05.4 +01.2		258 01.6 -25.6	S	04 08.9 +14.5		19							
20	117 22.9 +00.2	S	04 21.7 -01.0		87 22.5 -00.4	N	08 06.6 +01.3		272 36.0 -25.5	S	04 23.4 +14.5		20							
21	132 23.1 +00.2	S	04 20.7 -00.9		102 22.1 -00.3	N	08 07.9 +01.2		287 10.5 -25.6	S	04 37.9 +14.5		21							
22	147 23.3 +00.1	S	04 19.8 -01.0		117 21.8 -00.3	N	08 09.1 +01.3		301 44.9 -25.6	S	04 52.4 +14.5		22							
23	162 23.4 +00.2	S	04 18.8 -01.0		132 21.5 -00.4	N	08 10.4 +01.2		316 19.3 -25.7	S	05 06.9 +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	16'1	16'1	16'1	16'1	16'1	16'1	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	15'1	15'1	15'1	15'1	15'2	15'2
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	55'3	55'4	55'5	55'6	55'6	55'7
SHA	011°	011°	011°	010°	010°	010°	SHA	341°	341°	341°	340°	340°	340°	SHA	174°	172°	170°	168°	166°	164°
Greenwich Culmination Time: 12:10							Greenwich Culmination Time: 14:10							Greenwich Culmination Time: 01:18						

Mars					Jupiter					Saturn										
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	84 48.8 +01.3	N	25 32.2 +00.1		153 24.4 +01.9	N	04 23.4 +00.2		193 42.8 +02.2	S	12 36.9 -00.1		00							
01	99 50.1 +01.2	N	25 32.3 +00.0		168 26.3 +02.0	N	04 23.6 +00.2		208 45.0 +02.2	S	12 36.8 -00.1		01							
02	114 51.3 +01.3	N	25 32.3 +00.1		183 28.3 +01.9	N	04 23.8 +00.3		223 47.2 +02.1	S	12 36.7 -00.1		02							
03	129 52.6 +01.3	N	25 32.4 +00.0		198 30.2 +01.9	N	04 24.1 +00.2		238 49.3 +02.2	S	12 36.6 -00.1		03							
04	144 53.9 +01.2	N	25 32.4 +00.0		213 32.1 +02.0	N	04 24.3 +00.2		253 51.5 +02.2	S	12 36.5 -00.1		04							
05	159 55.1 +01.3	N	25 32.4 +00.1		228 34.1 +01.9	N	04 24.5 +00.2		268 53.7 +02.2	S	12 36.4 -00.1		05							
06	174 56.4 +01.3	N	25 32.5 +00.0		243 36.0 +01.9	N	04 24.7 +00.3		283 55.9 +02.2	S	12 36.3 -00.1		06							
07	189 57.7 +01.2	N	25 32.5 +00.0		258 37.9 +02.0	N	04 25.0 +00.2		298 58.1 +02.2	S	12 36.2 -00.1		07							
08	204 58.9 +01.3	N	25 32.5 +00.1		273 39.9 +01.9	N	04 25.2 +00.2		314 00.3 +02.1	S	12 36.1 +00.0		08							
09	220 00.2 +01.3	N	25 32.6 +00.0		288 41.8 +01.9	N	04 25.4 +00.2		329 02.4 +02.2	S	12 36.1 -00.1		09							
10	235 01.5 +01.2	N	25 32.6 +00.0		303 43.7 +02.0	N	04 25.6 +00.3		344 04.6 +02.2	S	12 36.0 -00.1		10							
11	250 02.7 +01.3	N	25 32.6 +00.1		318 45.7 +01.9	N	04 25.9 +00.2		359 06.8 +02.2	S	12 35.9 -00.1		11							
12	265 04.0 +01.3	N	25 32.7 +00.0		333 47.6 +01.9	N	04 26.1 +00.2		14 09.0 +02.2	S	12 35.8 -00.1		12							
13	280 05.3 +01.2	N	25 32.7 +00.0		348 49.5 +02.0	N	04 26.3 +00.3		29 11.2 +02.2	S	12 35.7 -00.1		13							
14	295 06.5 +01.3	N	25 32.7 +00.1		3 51.5 +01.9	N	04 26.6 +00.2		44 13.4 +02.1	S	12 35.6 -00.1		14							
15	310 07.8 +01.2	N	25 32.8 +00.0		18 53.4 +01.9	N	04 26.8 +00.2		59 15.5 +02.2	S	12 35.5 -00.1		15							
16	325 09.0 +01.3	N	25 32.8 +00.0		33 55.3 +02.0	N	04 27.0 +00.2		74 17.7 +02.2	S	12 35.4 -00.1		16							
17	340 10.3 +01.3	N	25 32.8 +00.1		48 57.3 +01.9	N	04 27.2 +00.3		89 19.9 +02.2	S	12 35.3 -00.1		17							
18	355 11.6 +01.2	N	25 32.9 +00.0		63 59.2 +01.9	N	04 27.5 +00.2		104 22.1 +02.2	S	12 35.2 -00.1		18							
19	10 12.8 +01.3	N	25 32.9 +00.0		79 01.1 +01.9	N	04 27.7 +00.2		119 24.3 +02.2	S	12 35.1 -00.1		19							
20	25 14.1 +01.3	N	25 32.9 +00.0		94 03.0 +02.0	N	04 27.9 +00.2		134 26.5 +02.1	S	12 35.0 -00.1		20							
21	40 15.4 +01.2	N	25 32.9 +00.1		109 05.0 +01.9	N	04 28.1 +00.3		149 28.6 +02.2	S	12 34.9 -00.1		21							
22	55 16.6 +01.3	N	25 33.0 +00.0		124 06.9 +01.9	N	04 28.4 +00.2		164 30.8 +02.2	S	12 34.8 -00.1		22							
23	70 17.9 +01.2	N	25 33.0 +00.0		139 08.8 +02.0	N	04 28.6 +00.2		179 33.0 +02.2	S	12 34.7 -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	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	278°	278°	278°	278°	278°	278°	SHA	347°	347°	347°	347°	347°	SHA	027°	027°	027°	027°	027°	027°	
Greenwich Culmination Time: 18:19							Greenwich Culmination Time: 13:44							Greenwich Culmination Time: 11:03						

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	Sun				Venus				Moon				A: 58%	
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
00	177 23.6 +00.1	S 04	17.8 -01.0		147 21.1 -00.3	N 08	11.6 +01.3		330 53.6 -25.7	S 05	21.4 +14.5		00	
01	192 23.7 +00.2	S 04	16.8 -01.0		162 20.8 -00.3	N 08	12.9 +01.2		345 27.9 -25.8	S 05	35.9 +14.5		01	
02	207 23.9 +00.1	S 04	15.8 -00.9		177 20.5 -00.4	N 08	14.1 +01.3		0 02.1 -25.8	S 05	50.4 +14.4		02	
03	222 24.0 +00.2	S 04	14.9 -01.0		192 20.1 -00.3	N 08	15.4 +01.2		14 36.3 -25.8	S 06	04.8 +14.5		03	
04	237 24.2 +00.2	S 04	13.9 -01.0		207 19.8 -00.3	N 08	16.6 +01.3		29 10.5 -25.9	S 06	19.3 +14.4		04	
05	252 24.4 +00.1	S 04	12.9 -01.0		222 19.5 -00.4	N 08	17.9 +01.2		43 44.6 -25.9	S 06	33.7 +14.4		05	
06	267 24.5 +00.2	S 04	11.9 -00.9		237 19.1 -00.3	N 08	19.1 +01.3		58 18.7 -26.0	S 06	48.1 +14.4		06	
07	282 24.7 +00.1	S 04	11.0 -01.0		252 18.8 -00.3	N 08	20.4 +01.2		72 52.7 -26.0	S 07	02.5 +14.3		07	
08	297 24.8 +00.2	S 04	10.0 -01.0		267 18.5 -00.4	N 08	21.6 +01.3		87 26.7 -26.1	S 07	16.8 +14.4		08	
09	312 25.0 +00.2	S 04	09.0 -01.0		282 18.1 -00.3	N 08	22.9 +01.2		102 00.6 -26.1	S 07	31.2 +14.3		09	
10	327 25.2 +00.1	S 04	08.0 -01.0		297 17.8 -00.3	N 08	24.1 +01.2		116 34.5 -26.2	S 07	45.5 +14.3		10	
11	342 25.3 +00.2	S 04	07.0 -00.9		312 17.5 -00.4	N 08	25.3 +01.3		131 08.3 -26.2	S 07	59.8 +14.3		11	
12	357 25.5 +00.1	S 04	06.1 -01.0		327 17.1 -00.3	N 08	26.6 +01.2		145 42.1 -26.3	S 08	14.1 +14.2		12	
13	12 25.6 +00.2	S 04	05.1 -01.0		342 16.8 -00.3	N 08	27.8 +01.3		160 15.8 -26.3	S 08	28.3 +14.3		13	
14	27 25.8 +00.2	S 04	04.1 -01.0		357 16.5 -00.4	N 08	29.1 +01.2		174 49.5 -26.4	S 08	42.6 +14.2		14	
15	42 26.0 +00.1	S 04	03.1 -01.0		12 16.1 -00.3	N 08	30.3 +01.3		189 23.1 -26.4	S 08	56.8 +14.2		15	
16	57 26.1 +00.2	S 04	02.1 -00.9		27 15.8 -00.3	N 08	31.6 +01.2		203 56.7 -26.5	S 09	11.0 +14.1		16	
17	72 26.3 +00.2	S 04	01.2 -01.0		42 15.5 -00.4	N 08	32.8 +01.3		218 30.2 -26.6	S 09	25.1 +14.1		17	
18	87 26.5 +00.1	S 04	00.2 -01.0		57 15.1 -00.3	N 08	34.1 +01.2		233 03.6 -26.6	S 09	39.2 +14.1		18	
19	102 26.6 +00.2	S 03	59.2 -01.0		72 14.8 -00.3	N 08	35.3 +01.3		247 37.0 -26.7	S 09	53.3 +14.1		19	
20	117 26.8 +00.1	S 03	58.2 -01.0		87 14.5 -00.4	N 08	36.6 +01.2		262 10.3 -26.7	S 10	07.4 +14.0		20	
21	132 26.9 +00.2	S 03	57.2 -00.9		102 14.1 -00.3	N 08	37.8 +01.2		276 43.6 -26.8	S 10	21.4 +14.0		21	
22	147 27.1 +00.2	S 03	56.3 -01.0		117 13.8 -00.3	N 08	39.0 +01.3		291 16.8 -26.9	S 10	35.4 +13.9		22	
23	162 27.3 +00.1	S 03	55.3 -01.0		132 13.5 -00.4	N 08	40.3 +01.2		305 49.9 -26.9	S 10	49.3 +13.9		23	

UT	02	06	10	14	18	22
SD	16°1	16°1	16°1	16°1	16°1	16°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	010°	010°	010°	009°	009°	009°
Greenwich Culmination Time: 12:10						

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	340°	340°	339°	339°	339°	339°
Greenwich Culmination Time: 14:10						

UT	02	06	10	14	18	22
SD	15°2	15°2	15°2	15°3	15°3	15°3
HP	55°8	55°9	55°9	56°0	56°1	56°2
SHA	163°	161°	159°	157°	155°	153°
Greenwich Culmination Time: 01:59						

	Mars				Jupiter				Saturn				
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	85 19.1 +01.3	N 25	33.0 +00.1		154 10.8 +01.9	N 04	28.8 +00.3		194 35.2 +02.2	S 12	34.6 -00.1		00
01	100 20.4 +01.3	N 25	33.1 +00.0		169 12.7 +01.9	N 04	29.1 +00.2		209 37.4 +02.1	S 12	34.5 -00.1		01
02	115 21.7 +01.2	N 25	33.1 +00.0		184 14.6 +02.0	N 04	29.3 +00.2		224 39.5 +02.2	S 12	34.4 -00.1		02
03	130 22.9 +01.3	N 25	33.1 +00.1		199 16.6 +01.9	N 04	29.5 +00.2		239 41.7 +02.2	S 12	34.3 -00.1		03
04	145 24.2 +01.2	N 25	33.2 +00.0		214 18.5 +01.9	N 04	29.7 +00.3		254 43.9 +02.2	S 12	34.2 -00.1		04
05	160 25.4 +01.3	N 25	33.2 +00.0		229 20.4 +02.0	N 04	30.0 +00.2		269 46.1 +02.2	S 12	34.1 -00.1		05
06	175 26.7 +01.2	N 25	33.2 +00.1		244 22.4 +01.9	N 04	30.2 +00.2		284 48.3 +02.2	S 12	34.0 -00.1		06
07	190 27.9 +01.3	N 25	33.3 +00.0		259 24.3 +01.9	N 04	30.4 +00.2		299 50.5 +02.1	S 12	33.9 -00.1		07
08	205 29.2 +01.3	N 25	33.3 +00.0		274 26.2 +02.0	N 04	30.6 +00.3		314 52.6 +02.2	S 12	33.8 -00.1		08
09	220 30.5 +01.2	N 25	33.3 +00.1		289 28.2 +01.9	N 04	30.9 +00.2		329 54.8 +02.2	S 12	33.7 -00.1		09
10	235 31.7 +01.3	N 25	33.4 +00.0		304 30.1 +01.9	N 04	31.1 +00.2		344 57.0 +02.2	S 12	33.6 -00.1		10
11	250 33.0 +01.2	N 25	33.4 +00.0		319 32.0 +02.0	N 04	31.3 +00.2		359 59.2 +02.2	S 12	33.5 -00.1		11
12	265 34.2 +01.3	N 25	33.4 +00.0		334 34.0 +01.9	N 04	31.5 +00.3		15 01.4 +02.2	S 12	33.4 -00.1		12
13	280 35.5 +01.2	N 25	33.4 +00.1		349 35.9 +01.9	N 04	31.8 +00.2		30 03.6 +02.1	S 12	33.3 -00.1		13
14	295 36.7 +01.3	N 25	33.5 +00.0		4 37.8 +01.9	N 04	32.0 +00.2		45 05.7 +02.2	S 12	33.2 -00.1		14
15	310 38.0 +01.2	N 25	33.5 +00.0		19 39.7 +02.0	N 04	32.2 +00.3		60 07.9 +02.2	S 12	33.1 -00.1		15
16	325 39.2 +01.3	N 25	33.5 +00.1		34 41.7 +01.9	N 04	32.5 +00.2		75 10.1 +02.2	S 12	33.0 -00.1		16
17	340 40.5 +01.2	N 25	33.6 +00.0		49 43.6 +01.9	N 04	32.7 +00.2		90 12.3 +02.2	S 12	32.9 -00.1		17
18	355 41.7 +01.3	N 25	33.6 +00.0		64 45.5 +02.0	N 04	32.9 +00.2		105 14.5 +02.2	S 12	32.8 -00.1		18
19	10 43.0 +01.2	N 25	33.6 +00.0		79 47.5 +01.9	N 04	33.1 +00.3		120 16.7 +02.2	S 12	32.7 -00.1		19
20	25 44.2 +01.3	N 25	33.6 +00.1		94 49.4 +01.9	N 04	33.4 +00.2		135 18.9 +02.1	S 12	32.6 -00.1		20
21	40 45.5 +01.2	N 25	33.7 +00.0		109 51.3 +02.0	N 04	33.6 +00.2		150 21.0 +02.2	S 12	32.5 -00.1		21
22	55 46.7 +01.3	N 25	33.7 +00.0		124 53.3 +01.9	N 04	33.8 +00.2		165 23.2 +02.2	S 12	32.4 -00.1		22
23	70 48.0 +01.2	N 25	33.7 +00.1		139 55.2 +01.9	N 04	34.0 +00.3		180 25.4 +02.2	S 12	32.3 -00.1		23

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°1	00°1	00°1	00°1	00°1	00°1
SHA	278°	278°	278°	278°	278°	277°
Greenwich Culmination Time: 18:17						

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	347°	347°	347°	347°	347°	347°
Greenwich Culmination Time: 13:41						

UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°0	00°0	00°0	00°0	00°0	00°0
SHA	027°	027°	027°	027°	027°	027°
Greenwich Culmination Time: 11:00						

UT	Sun				Venus				Moon A: 61%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	177 27.4 +00.2	S	03 54.3 -01.0	147 13.1 -00.3	N	08 41.5 +01.3	320 23.0 -27.0	S	11 03.2 +13.9	00			
01	192 27.6 +00.2	S	03 53.3 -01.0	162 12.8 -00.3	N	08 42.8 +01.2	334 56.0 -27.1	S	11 17.1 +13.8	01			
02	207 27.8 +00.1	S	03 52.3 -01.0	177 12.5 -00.4	N	08 44.0 +01.3	349 28.9 -27.1	S	11 30.9 +13.8	02			
03	222 27.9 +00.2	S	03 51.3 -00.9	192 12.1 -00.3	N	08 45.3 +01.2	4 01.8 -27.2	S	11 44.7 +13.8	03			
04	237 28.1 +00.1	S	03 50.4 -01.0	207 11.8 -00.3	N	08 46.5 +01.2	18 34.6 -27.3	S	11 58.5 +13.7	04			
05	252 28.2 +00.2	S	03 49.4 -01.0	222 11.5 -00.4	N	08 47.7 +01.3	33 07.3 -27.3	S	12 12.2 +13.7	05			
06	267 28.4 +00.2	S	03 48.4 -01.0	237 11.1 -00.3	N	08 49.0 +01.2	47 40.0 -27.5	S	12 25.9 +13.6	06			
07	282 28.6 +00.1	S	03 47.4 -01.0	252 10.8 -00.4	N	08 50.2 +01.3	62 12.5 -27.4	S	12 39.5 +13.6	07			
08	297 28.7 +00.2	S	03 46.4 -00.9	267 10.4 -00.3	N	08 51.5 +01.2	76 45.1 -27.6	S	12 53.1 +13.5	08			
09	312 28.9 +00.2	S	03 45.5 -01.0	282 10.1 -00.3	N	08 52.7 +01.2	91 17.5 -27.7	S	13 06.6 +13.5	09			
10	327 29.1 +00.1	S	03 44.5 -01.0	297 09.8 -00.4	N	08 53.9 +01.3	105 49.8 -27.7	S	13 20.1 +13.4	10			
11	342 29.2 +00.2	S	03 43.5 -01.0	312 09.4 -00.3	N	08 55.2 +01.2	120 22.1 -27.8	S	13 33.5 +13.4	11			
12	357 29.4 +00.1	S	03 42.5 -01.0	327 09.1 -00.3	N	08 56.4 +01.3	134 54.3 -27.8	S	13 46.9 +13.3	12			
13	12 29.5 +00.2	S	03 41.5 -00.9	342 08.8 -00.4	N	08 57.7 +01.2	149 26.5 -28.0	S	14 00.2 +13.3	13			
14	27 29.7 +00.2	S	03 40.6 -01.0	357 08.4 -00.3	N	08 58.9 +01.2	163 58.5 -28.0	S	14 13.5 +13.2	14			
15	42 29.9 +00.1	S	03 39.6 -01.0	12 08.1 -00.4	N	09 00.1 +01.3	178 30.5 -28.2	S	14 26.7 +13.2	15			
16	57 30.0 +00.2	S	03 38.6 -01.0	27 07.7 -00.3	N	09 01.4 +01.2	193 02.3 -28.2	S	14 39.9 +13.1	16			
17	72 30.2 +00.2	S	03 37.6 -01.0	42 07.4 -00.3	N	09 02.6 +01.3	207 34.1 -28.2	S	14 53.0 +13.1	17			
18	87 30.4 +00.1	S	03 36.6 -01.0	57 07.1 -00.4	N	09 03.9 +01.2	222 05.9 -28.4	S	15 06.1 +12.9	18			
19	102 30.5 +00.2	S	03 35.6 -00.9	72 06.7 -00.3	N	09 05.1 +01.2	236 37.5 -28.5	S	15 19.0 +13.0	19			
20	117 30.7 +00.2	S	03 34.7 -01.0	87 06.4 -00.4	N	09 06.3 +01.3	251 09.0 -28.5	S	15 32.0 +12.8	20			
21	132 30.9 +00.1	S	03 33.7 -01.0	102 06.0 -00.3	N	09 07.6 +01.2	265 40.5 -28.6	S	15 44.8 +12.8	21			
22	147 31.0 +00.2	S	03 32.7 -01.0	117 05.7 -00.3	N	09 08.8 +01.2	280 11.9 -28.8	S	15 57.6 +12.8	22			
23	162 31.2 +00.2	S	03 31.7 -01.0	132 05.4 -00.4	N	09 10.0 +01.3	294 43.1 -28.8	S	16 10.4 +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 16'1 16'1 16'1 16'1 16'1 16'1			SD 00'1 00'1 00'1 00'1 00'1 00'1			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 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'3 56'4 56'5 56'5 56'6 56'7						
	SHA 009° 009° 009° 009° 008° 008°			SHA 339° 339° 338° 338° 338° 338°			SHA 151° 149° 147° 145° 143° 141°						
	Greenwich Culmination Time: 12:10			Greenwich Culmination Time: 14:11			Greenwich Culmination Time: 02:43						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	85 49.2 +01.3	N	25 33.8 +00.0	154 57.1 +02.0	N	04 34.3 +00.2	195 27.6 +02.2	S	12 32.2 -00.1	00			
01	100 50.5 +01.2	N	25 33.8 +00.0	169 59.1 +01.9	N	04 34.5 +00.2	210 29.8 +02.2	S	12 32.1 -00.1	01			
02	115 51.7 +01.3	N	25 33.8 +00.0	185 01.0 +01.9	N	04 34.7 +00.3	225 32.0 +02.1	S	12 32.0 -00.1	02			
03	130 53.0 +01.2	N	25 33.8 +00.1	200 02.9 +01.9	N	04 35.0 +00.2	240 34.1 +02.2	S	12 31.9 -00.1	03			
04	145 54.2 +01.3	N	25 33.9 +00.0	215 04.8 +02.0	N	04 35.2 +00.2	255 36.3 +02.2	S	12 31.8 -00.1	04			
05	160 55.5 +01.2	N	25 33.9 +00.0	230 06.8 +01.9	N	04 35.4 +00.2	270 38.5 +02.2	S	12 31.7 -00.1	05			
06	175 56.7 +01.3	N	25 33.9 +00.1	245 08.7 +01.9	N	04 35.6 +00.3	285 40.7 +02.2	S	12 31.6 -00.1	06			
07	190 58.0 +01.2	N	25 34.0 +00.0	260 10.6 +02.0	N	04 35.9 +00.2	300 42.9 +02.2	S	12 31.5 -00.1	07			
08	205 59.2 +01.3	N	25 34.0 +00.0	275 12.6 +01.9	N	04 36.1 +00.2	315 45.1 +02.1	S	12 31.4 -00.1	08			
09	221 00.5 +01.2	N	25 34.0 +00.0	290 14.5 +01.9	N	04 36.3 +00.2	330 47.2 +02.2	S	12 31.3 -00.1	09			
10	236 01.7 +01.3	N	25 34.0 +00.1	305 16.4 +02.0	N	04 36.5 +00.3	345 49.4 +02.2	S	12 31.2 -00.1	10			
11	251 03.0 +01.2	N	25 34.1 +00.0	320 18.4 +01.9	N	04 36.8 +00.2	0 51.6 +02.2	S	12 31.1 -00.1	11			
12	266 04.2 +01.3	N	25 34.1 +00.0	335 20.3 +01.9	N	04 37.0 +00.2	15 53.8 +02.2	S	12 31.0 -00.1	12			
13	281 05.5 +01.2	N	25 34.1 +00.0	350 22.2 +01.9	N	04 37.2 +00.3	30 56.0 +02.2	S	12 30.9 -00.1	13			
14	296 06.7 +01.2	N	25 34.1 +00.1	5 24.1 +02.0	N	04 37.5 +00.2	45 58.2 +02.2	S	12 30.8 -00.1	14			
15	311 07.9 +01.3	N	25 34.2 +00.0	20 26.1 +01.9	N	04 37.7 +00.2	61 00.4 +02.1	S	12 30.7 -00.1	15			
16	326 09.2 +01.2	N	25 34.2 +00.0	35 28.0 +01.9	N	04 37.9 +00.2	76 02.5 +02.2	S	12 30.6 -00.1	16			
17	341 10.4 +01.3	N	25 34.2 +00.1	50 29.9 +02.0	N	04 38.1 +00.3	91 04.7 +02.2	S	12 30.5 -00.1	17			
18	356 11.7 +01.2	N	25 34.3 +00.0	65 31.9 +01.9	N	04 38.4 +00.2	106 06.9 +02.2	S	12 30.4 -00.1	18			
19	11 12.9 +01.3	N	25 34.3 +00.0	80 33.8 +01.9	N	04 38.6 +00.2	121 09.1 +02.2	S	12 30.3 -00.1	19			
20	26 14.2 +01.2	N	25 34.3 +00.0	95 35.7 +01.9	N	04 38.8 +00.3	136 11.3 +02.2	S	12 30.2 -00.1	20			
21	41 15.4 +01.2	N	25 34.3 +00.1	110 37.6 +02.0	N	04 39.1 +00.2	151 13.5 +02.1	S	12 30.1 -00.1	21			
22	56 16.6 +01.3	N	25 34.4 +00.0	125 39.6 +01.9	N	04 39.3 +00.2	166 15.6 +02.2	S	12 30.0 -00.1	22			
23	71 17.9 +01.2	N	25 34.4 +00.0	140 41.5 +01.9	N	04 39.5 +00.2	181 17.8 +02.2	S	12 29.9 -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 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 277° 277° 277° 277° 277° 277°			SHA 347° 347° 346° 346° 346° 346°			SHA 027° 027° 027° 027° 027° 027°						
	Greenwich Culmination Time: 18:15			Greenwich Culmination Time: 13:38			Greenwich Culmination Time: 10:56						

Table with columns for planet (Sun, Venus, Moon, Mars, Jupiter, Saturn) and rows for UT (00-23). Each planet section includes GHA, ddGHA, Dec, dDec, and a summary row for UT 02, 06, 10, 14, 18, 22. Summary rows include SD, HP, and SHA values and Greenwich Culmination Time.

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Sun					Venus					Moon					A: 68%
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	°	'	°	'	°	'	°	'	°	'	°	'			
00	177	35.4	+00.1	S 03 07.1	-01.0	146	56.8	-00.3	N 09 40.8	+01.2	297	13.9	-31.2	S 21 03.6	+10.6
01	192	35.5	+00.2	S 03 06.1	-00.9	161	56.5	-00.4	N 09 42.0	+01.2	311	42.7	-31.5	S 21 14.2	+10.4
02	207	35.7	+00.2	S 03 05.2	-01.0	176	56.1	-00.3	N 09 43.2	+01.3	326	11.2	-31.5	S 21 24.6	+10.3
03	222	35.9	+00.1	S 03 04.2	-01.0	191	55.8	-00.4	N 09 44.5	+01.2	340	39.7	-31.6	S 21 34.9	+10.3
04	237	36.0	+00.2	S 03 03.2	-01.0	206	55.4	-00.3	N 09 45.7	+01.2	355	08.1	-31.7	S 21 45.2	+10.1
05	252	36.2	+00.2	S 03 02.2	-01.0	221	55.1	-00.4	N 09 46.9	+01.2	9	36.4	-31.9	S 21 55.3	+10.0
06	267	36.4	+00.1	S 03 01.2	-01.0	236	54.7	-00.3	N 09 48.1	+01.3	24	04.5	-31.9	S 22 05.3	+09.9
07	282	36.5	+00.2	S 03 00.2	-01.0	251	54.4	-00.4	N 09 49.4	+01.2	38	32.6	-32.0	S 22 15.2	+09.8
08	297	36.7	+00.2	S 02 59.2	-00.9	266	54.0	-00.3	N 09 50.6	+01.2	53	00.6	-32.2	S 22 25.0	+09.7
09	312	36.9	+00.2	S 02 58.3	-01.0	281	53.7	-00.4	N 09 51.8	+01.2	67	28.4	-32.3	S 22 34.7	+09.6
10	327	37.1	+00.1	S 02 57.3	-01.0	296	53.3	-00.3	N 09 53.0	+01.3	81	56.1	-32.4	S 22 44.3	+09.4
11	342	37.2	+00.2	S 02 56.3	-01.0	311	53.0	-00.4	N 09 54.3	+01.2	96	23.7	-32.4	S 22 53.7	+09.3
12	357	37.4	+00.2	S 02 55.3	-01.0	326	52.6	-00.3	N 09 55.5	+01.2	110	51.3	-32.6	S 23 03.0	+09.2
13	12	37.6	+00.1	S 02 54.3	-01.0	341	52.3	-00.4	N 09 56.7	+01.2	125	18.7	-32.8	S 23 12.2	+09.1
14	27	37.7	+00.2	S 02 53.3	-00.9	356	51.9	-00.3	N 09 57.9	+01.2	139	45.9	-32.8	S 23 21.3	+09.0
15	42	37.9	+00.2	S 02 52.4	-01.0	11	51.6	-00.4	N 09 59.1	+01.3	154	13.1	-32.9	S 23 30.3	+08.8
16	57	38.1	+00.1	S 02 51.4	-01.0	26	51.2	-00.3	N 10 00.4	+01.2	168	40.2	-33.0	S 23 39.1	+08.7
17	72	38.2	+00.2	S 02 50.4	-01.0	41	50.9	-00.3	N 10 01.6	+01.2	183	07.2	-33.2	S 23 47.8	+08.6
18	87	38.4	+00.2	S 02 49.4	-01.0	56	50.6	-00.4	N 10 02.8	+01.2	197	34.0	-33.2	S 23 56.4	+08.5
19	102	38.6	+00.2	S 02 48.4	-01.0	71	50.2	-00.3	N 10 04.0	+01.2	212	00.8	-33.4	S 24 04.9	+08.3
20	117	38.8	+00.1	S 02 47.4	-01.0	86	49.9	-00.4	N 10 05.2	+01.3	226	27.4	-33.4	S 24 13.2	+08.2
21	132	38.9	+00.2	S 02 46.4	-00.9	101	49.5	-00.3	N 10 06.5	+01.2	240	54.0	-33.6	S 24 21.4	+08.0
22	147	39.1	+00.2	S 02 45.5	-01.0	116	49.2	-00.4	N 10 07.7	+01.2	255	20.4	-33.7	S 24 29.4	+07.9
23	162	39.3	+00.1	S 02 44.5	-01.0	131	48.8	-00.3	N 10 08.9	+01.2	269	46.7	-33.8	S 24 37.3	+07.8
UT 02 06 10 14 18 22 SD 16'1 16'1 16'1 16'1 16'1 16'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 007° 007° 007° 007° 007° 006° Greenwich Culmination Time: 12:09					UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 336° 336° 336° 336° 336° 336° Greenwich Culmination Time: 14:12					UT 02 06 10 14 18 22 SD 15'6 15'7 15'7 15'7 15'7 15'8 HP 57'4 57'5 57'6 57'7 57'8 57'9 SHA 126° 123° 121° 119° 116° 114° Greenwich Culmination Time: 04:20					
Mars					Jupiter					Saturn					UT
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	°	'	°	'	°	'	°	'	°	'	°	'			
00	86	48.7	+01.3	N 25 35.0	+00.0	156	29.7	+01.9	N 04 45.2	+00.2	197	12.5	+02.2	S 12 27.4	-00.1
01	101	50.0	+01.2	N 25 35.0	+00.0	171	31.6	+01.9	N 04 45.4	+00.3	212	14.7	+02.1	S 12 27.3	-00.1
02	116	51.2	+01.2	N 25 35.0	+00.0	186	33.5	+02.0	N 04 45.7	+00.2	227	16.8	+02.2	S 12 27.2	-00.1
03	131	52.4	+01.3	N 25 35.0	+00.1	201	35.5	+01.9	N 04 45.9	+00.2	242	19.0	+02.2	S 12 27.1	-00.1
04	146	53.7	+01.2	N 25 35.1	+00.0	216	37.4	+01.9	N 04 46.1	+00.2	257	21.2	+02.2	S 12 27.0	-00.1
05	161	54.9	+01.2	N 25 35.1	+00.0	231	39.3	+02.0	N 04 46.3	+00.3	272	23.4	+02.2	S 12 26.9	-00.1
06	176	56.1	+01.2	N 25 35.1	+00.0	246	41.3	+01.9	N 04 46.6	+00.2	287	25.6	+02.2	S 12 26.8	-00.1
07	191	57.3	+01.3	N 25 35.1	+00.0	261	43.2	+01.9	N 04 46.8	+00.2	302	27.8	+02.2	S 12 26.7	-00.1
08	206	58.6	+01.2	N 25 35.1	+00.1	276	45.1	+01.9	N 04 47.0	+00.3	317	30.0	+02.1	S 12 26.6	+00.0
09	221	59.8	+01.2	N 25 35.2	+00.0	291	47.0	+02.0	N 04 47.3	+00.2	332	32.1	+02.2	S 12 26.6	-00.1
10	237	01.0	+01.2	N 25 35.2	+00.0	306	49.0	+01.9	N 04 47.5	+00.2	347	34.3	+02.2	S 12 26.5	-00.1
11	252	02.2	+01.3	N 25 35.2	+00.0	321	50.9	+01.9	N 04 47.7	+00.2	2	36.5	+02.2	S 12 26.4	-00.1
12	267	03.5	+01.2	N 25 35.2	+00.0	336	52.8	+01.9	N 04 47.9	+00.3	17	38.7	+02.2	S 12 26.3	-00.1
13	282	04.7	+01.2	N 25 35.2	+00.1	351	54.7	+02.0	N 04 48.2	+00.2	32	40.9	+02.2	S 12 26.2	-00.1
14	297	05.9	+01.2	N 25 35.3	+00.0	6	56.7	+01.9	N 04 48.4	+00.2	47	43.1	+02.2	S 12 26.1	-00.1
15	312	07.1	+01.3	N 25 35.3	+00.0	21	58.6	+01.9	N 04 48.6	+00.3	62	45.3	+02.2	S 12 26.0	-00.1
16	327	08.4	+01.2	N 25 35.3	+00.0	37	00.5	+01.9	N 04 48.9	+00.2	77	47.5	+02.1	S 12 25.9	-00.1
17	342	09.6	+01.2	N 25 35.3	+00.0	52	02.4	+02.0	N 04 49.1	+00.2	92	49.6	+02.2	S 12 25.8	-00.1
18	357	10.8	+01.2	N 25 35.3	+00.1	67	04.4	+01.9	N 04 49.3	+00.2	107	51.8	+02.2	S 12 25.7	-00.1
19	12	12.0	+01.3	N 25 35.4	+00.0	82	06.3	+01.9	N 04 49.5	+00.3	122	54.0	+02.2	S 12 25.6	-00.1
20	27	13.3	+01.2	N 25 35.4	+00.0	97	08.2	+01.9	N 04 49.8	+00.2	137	56.2	+02.2	S 12 25.5	-00.1
21	42	14.5	+01.2	N 25 35.4	+00.0	112	10.1	+02.0	N 04 50.0	+00.2	152	58.4	+02.2	S 12 25.4	-00.1
22	57	15.7	+01.2	N 25 35.4	+00.0	127	12.1	+01.9	N 04 50.2	+00.3	168	00.6	+02.2	S 12 25.3	-00.1
23	72	16.9	+01.2	N 25 35.4	+00.1	142	14.0	+01.9	N 04 50.5	+00.2	183	02.8	+02.2	S 12 25.2	-00.1
UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 276° 276° 276° 276° 276° 276° Greenwich Culmination Time: 18:11					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 346° 346° 346° 346° 346° 346° Greenwich Culmination Time: 13:32					UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 027° 027° 027° 027° 027° 027° Greenwich Culmination Time: 10:49					

Sun					Venus					Moon					A: 72%
UT	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	UT		
00	177 39.4 +00.2	S	02 43.5 -01.0		146 48.5 -00.4	N	10 10.1 +01.2		284 12.9 -33.9	S	24 45.1 +07.6		00		
01	192 39.6 +00.2	S	02 42.5 -01.0		161 48.1 -00.3	N	10 11.3 +01.2		298 39.0 -34.0	S	24 52.7 +07.5		01		
02	207 39.8 +00.2	S	02 41.5 -01.0		176 47.8 -00.4	N	10 12.5 +01.3		313 05.0 -34.1	S	25 00.2 +07.4		02		
03	222 40.0 +00.1	S	02 40.5 -01.0		191 47.4 -00.4	N	10 13.8 +01.2		327 30.9 -34.2	S	25 07.6 +07.2		03		
04	237 40.1 +00.2	S	02 39.5 -00.9		206 47.0 -00.3	N	10 15.0 +01.2		341 56.7 -34.3	S	25 14.8 +07.1		04		
05	252 40.3 +00.2	S	02 38.6 -01.0		221 46.7 -00.4	N	10 16.2 +01.2		356 22.4 -34.4	S	25 21.9 +06.9		05		
06	267 40.5 +00.1	S	02 37.6 -01.0		236 46.3 -00.3	N	10 17.4 +01.2		10 48.0 -34.5	S	25 28.8 +06.7		06		
07	282 40.6 +00.2	S	02 36.6 -01.0		251 46.0 -00.4	N	10 18.6 +01.2		25 13.5 -34.6	S	25 35.5 +06.7		07		
08	297 40.8 +00.2	S	02 35.6 -01.0		266 45.6 -00.3	N	10 19.8 +01.2		39 38.9 -34.7	S	25 42.2 +06.4		08		
09	312 41.0 +00.2	S	02 34.6 -01.0		281 45.3 -00.4	N	10 21.0 +01.3		54 04.2 -34.8	S	25 48.6 +06.4		09		
10	327 41.2 +00.1	S	02 33.6 -01.0		296 44.9 -00.3	N	10 22.3 +01.2		68 29.4 -34.9	S	25 55.0 +06.1		10		
11	342 41.3 +00.2	S	02 32.6 -01.0		311 44.6 -00.4	N	10 23.5 +01.2		82 54.5 -35.0	S	26 01.1 +06.0		11		
12	357 41.5 +00.2	S	02 31.6 -00.9		326 44.2 -00.3	N	10 24.7 +01.2		97 19.5 -35.1	S	26 07.1 +05.9		12		
13	12 41.7 +00.1	S	02 30.7 -01.0		341 43.9 -00.4	N	10 25.9 +01.2		111 44.4 -35.2	S	26 13.0 +05.7		13		
14	27 41.8 +00.2	S	02 29.7 -01.0		356 43.5 -00.3	N	10 27.1 +01.2		126 09.2 -35.3	S	26 18.7 +05.5		14		
15	42 42.0 +00.2	S	02 28.7 -01.0		11 43.2 -00.4	N	10 28.3 +01.2		140 33.9 -35.4	S	26 24.2 +05.4		15		
16	57 42.2 +00.2	S	02 27.7 -01.0		26 42.8 -00.3	N	10 29.5 +01.2		154 58.5 -35.5	S	26 29.6 +05.2		16		
17	72 42.4 +00.1	S	02 26.7 -01.0		41 42.5 -00.4	N	10 30.7 +01.2		169 23.0 -35.5	S	26 34.8 +05.0		17		
18	87 42.5 +00.2	S	02 25.7 -01.0		56 42.1 -00.3	N	10 31.9 +01.3		183 47.5 -35.7	S	26 39.8 +04.9		18		
19	102 42.7 +00.2	S	02 24.7 -00.9		71 41.8 -00.4	N	10 33.2 +01.2		198 11.8 -35.7	S	26 44.7 +04.7		19		
20	117 42.9 +00.2	S	02 23.8 -01.0		86 41.4 -00.4	N	10 34.4 +01.2		212 36.1 -35.9	S	26 49.4 +04.6		20		
21	132 43.1 +00.1	S	02 22.8 -01.0		101 41.0 -00.3	N	10 35.6 +01.2		227 00.2 -35.9	S	26 54.0 +04.4		21		
22	147 43.2 +00.2	S	02 21.8 -01.0		116 40.7 -00.4	N	10 36.8 +01.2		241 24.3 -36.0	S	26 58.4 +04.2		22		
23	162 43.4 +00.2	S	02 20.8 -01.0		131 40.3 -00.3	N	10 38.0 +01.2		255 48.3 -36.0	S	27 02.6 +04.0		23		
UT 02 06 10 14 18 22 SD 16'1 16'1 16'1 16'1 16'1 16'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 006° 006° 006° 006° 006° 005° Greenwich Culmination Time: 12:09					UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 335° 335° 335° 335° 335° 334° Greenwich Culmination Time: 14:13					UT 02 06 10 14 18 22 SD 15'8 15'8 15'9 15'9 15'9 15'9 HP 58'0 58'1 58'2 58'3 58'4 58'5 SHA 112° 109° 107° 104° 102° 099° Greenwich Culmination Time: 05:15					

Mars					Jupiter					Saturn					
UT	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	UT		
00	87 18.1 +01.3	N	25 35.5 +00.0		157 15.9 +01.9	N	04 50.7 +00.2		198 05.0 +02.1	S	12 25.1 -00.1		00		
01	102 19.4 +01.2	N	25 35.5 +00.0		172 17.8 +02.0	N	04 50.9 +00.2		213 07.1 +02.2	S	12 25.0 -00.1		01		
02	117 20.6 +01.2	N	25 35.5 +00.0		187 19.8 +01.9	N	04 51.1 +00.3		228 09.3 +02.2	S	12 24.9 -00.1		02		
03	132 21.8 +01.2	N	25 35.5 +00.0		202 21.7 +01.9	N	04 51.4 +00.2		243 11.5 +02.2	S	12 24.8 -00.1		03		
04	147 23.0 +01.2	N	25 35.5 +00.0		217 23.6 +01.9	N	04 51.6 +00.2		258 13.7 +02.2	S	12 24.7 -00.1		04		
05	162 24.2 +01.3	N	25 35.5 +00.1		232 25.5 +02.0	N	04 51.8 +00.2		273 15.9 +02.2	S	12 24.6 -00.1		05		
06	177 25.5 +01.2	N	25 35.6 +00.0		247 27.5 +01.9	N	04 52.0 +00.3		288 18.1 +02.2	S	12 24.5 -00.1		06		
07	192 26.7 +01.2	N	25 35.6 +00.0		262 29.4 +01.9	N	04 52.3 +00.2		303 20.3 +02.2	S	12 24.4 -00.1		07		
08	207 27.9 +01.2	N	25 35.6 +00.0		277 31.3 +01.9	N	04 52.5 +00.2		318 22.5 +02.1	S	12 24.3 -00.1		08		
09	222 29.1 +01.2	N	25 35.6 +00.0		292 33.2 +02.0	N	04 52.7 +00.3		333 24.6 +02.2	S	12 24.2 -00.1		09		
10	237 30.3 +01.2	N	25 35.6 +00.1		307 35.2 +01.9	N	04 53.0 +00.2		348 26.8 +02.2	S	12 24.1 -00.1		10		
11	252 31.5 +01.3	N	25 35.7 +00.0		322 37.1 +01.9	N	04 53.2 +00.2		3 29.0 +02.2	S	12 24.0 -00.1		11		
12	267 32.8 +01.2	N	25 35.7 +00.0		337 39.0 +01.9	N	04 53.4 +00.2		18 31.2 +02.2	S	12 23.9 -00.1		12		
13	282 34.0 +01.2	N	25 35.7 +00.0		352 40.9 +02.0	N	04 53.6 +00.3		33 33.4 +02.2	S	12 23.8 -00.1		13		
14	297 35.2 +01.2	N	25 35.7 +00.0		7 42.9 +01.9	N	04 53.9 +00.2		48 35.6 +02.2	S	12 23.7 -00.1		14		
15	312 36.4 +01.2	N	25 35.7 +00.0		22 44.8 +01.9	N	04 54.1 +00.2		63 37.8 +02.2	S	12 23.6 -00.1		15		
16	327 37.6 +01.2	N	25 35.7 +00.0		37 46.7 +01.9	N	04 54.3 +00.3		78 40.0 +02.1	S	12 23.5 -00.1		16		
17	342 38.8 +01.2	N	25 35.7 +00.1		52 48.6 +02.0	N	04 54.6 +00.2		93 42.1 +02.2	S	12 23.4 -00.1		17		
18	357 40.0 +01.3	N	25 35.8 +00.0		67 50.6 +01.9	N	04 54.8 +00.2		108 44.3 +02.2	S	12 23.3 -00.1		18		
19	12 41.3 +01.2	N	25 35.8 +00.0		82 52.5 +01.9	N	04 55.0 +00.2		123 46.5 +02.2	S	12 23.2 -00.1		19		
20	27 42.5 +01.2	N	25 35.8 +00.0		97 54.4 +01.9	N	04 55.2 +00.3		138 48.7 +02.2	S	12 23.1 -00.1		20		
21	42 43.7 +01.2	N	25 35.8 +00.0		112 56.3 +02.0	N	04 55.5 +00.2		153 50.9 +02.2	S	12 23.0 -00.1		21		
22	57 44.9 +01.2	N	25 35.8 +00.0		127 58.3 +01.9	N	04 55.7 +00.2		168 53.1 +02.2	S	12 22.9 -00.1		22		
23	72 46.1 +01.2	N	25 35.8 +00.1		143 00.2 +01.9	N	04 55.9 +00.3		183 55.3 +02.2	S	12 22.8 -00.1		23		
UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 276° 276° 276° 276° 276° 275° Greenwich Culmination Time: 18:09					UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 346° 346° 346° 346° 346° 346° Greenwich Culmination Time: 13:29					UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 027° 027° 027° 027° 027° 027° Greenwich Culmination Time: 10:46					

Sun					Venus					Moon					A: 76%	
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	177 43.6	+00.1	S 02 19.8	-01.0	146 40.0	-00.4	N 10 39.2	+01.2	270 12.3	-36.2	S 27 06.6	+03.9	00			
01	192 43.7	+00.2	S 02 18.8	-01.0	161 39.6	-00.3	N 10 40.4	+01.2	284 36.1	-36.2	S 27 10.5	+03.7	01			
02	207 43.9	+00.2	S 02 17.8	-01.0	176 39.3	-00.4	N 10 41.6	+01.2	298 59.9	-36.3	S 27 14.2	+03.5	02			
03	222 44.1	+00.2	S 02 16.8	-00.9	191 38.9	-00.4	N 10 42.8	+01.2	313 23.6	-36.4	S 27 17.7	+03.3	03			
04	237 44.3	+00.1	S 02 15.9	-01.0	206 38.5	-00.3	N 10 44.0	+01.2	327 47.2	-36.4	S 27 21.0	+03.2	04			
05	252 44.4	+00.2	S 02 14.9	-01.0	221 38.2	-00.4	N 10 45.2	+01.2	342 10.8	-36.6	S 27 24.2	+03.0	05			
06	267 44.6	+00.2	S 02 13.9	-01.0	236 37.8	-00.3	N 10 46.4	+01.2	356 34.2	-36.5	S 27 27.2	+02.8	06			
07	282 44.8	+00.2	S 02 12.9	-01.0	251 37.5	-00.4	N 10 47.6	+01.2	10 57.7	-36.7	S 27 30.0	+02.7	07			
08	297 45.0	+00.1	S 02 11.9	-01.0	266 37.1	-00.3	N 10 48.8	+01.2	25 21.0	-36.7	S 27 32.7	+02.4	08			
09	312 45.1	+00.2	S 02 10.9	-01.0	281 36.8	-00.4	N 10 50.0	+01.2	39 44.3	-36.8	S 27 35.1	+02.3	09			
10	327 45.3	+00.2	S 02 09.9	-01.0	296 36.4	-00.4	N 10 51.2	+01.2	54 07.5	-36.8	S 27 37.4	+02.1	10			
11	342 45.5	+00.2	S 02 08.9	-00.9	311 36.0	-00.3	N 10 52.4	+01.2	68 30.7	-36.9	S 27 39.5	+01.9	11			
12	357 45.7	+00.1	S 02 08.0	-01.0	326 35.7	-00.4	N 10 53.6	+01.2	82 53.8	-37.0	S 27 41.4	+01.7	12			
13	12 45.8	+00.2	S 02 07.0	-01.0	341 35.3	-00.3	N 10 54.8	+01.2	97 16.8	-37.0	S 27 43.1	+01.5	13			
14	27 46.0	+00.2	S 02 06.0	-01.0	356 35.0	-00.4	N 10 56.0	+01.2	111 39.8	-37.0	S 27 44.6	+01.4	14			
15	42 46.2	+00.2	S 02 05.0	-01.0	11 34.6	-00.4	N 10 57.2	+01.2	126 02.8	-37.2	S 27 46.0	+01.1	15			
16	57 46.4	+00.1	S 02 04.0	-01.0	26 34.2	-00.3	N 10 58.4	+01.2	140 25.6	-37.1	S 27 47.1	+01.0	16			
17	72 46.5	+00.2	S 02 03.0	-01.0	41 33.9	-00.4	N 10 59.6	+01.2	154 48.5	-37.2	S 27 48.1	+00.8	17			
18	87 46.7	+00.2	S 02 02.0	-01.0	56 33.5	-00.3	N 11 00.8	+01.2	169 11.3	-37.3	S 27 48.9	+00.6	18			
19	102 46.9	+00.2	S 02 01.0	-00.9	71 33.2	-00.4	N 11 02.0	+01.2	183 34.0	-37.2	S 27 49.5	+00.4	19			
20	117 47.1	+00.1	S 02 00.1	-01.0	86 32.8	-00.4	N 11 03.2	+01.2	197 56.8	-37.4	S 27 49.9	+00.2	20			
21	132 47.2	+00.2	S 01 59.1	-01.0	101 32.4	-00.3	N 11 04.4	+01.2	212 19.4	-37.3	S 27 50.1	+00.1	21			
22	147 47.4	+00.2	S 01 58.1	-01.0	116 32.1	-00.4	N 11 05.6	+01.2	226 42.1	-37.4	S 27 50.2	-00.2	22			
23	162 47.6	+00.2	S 01 57.1	-01.0	131 31.7	-00.3	N 11 06.8	+01.2	241 04.7	-37.4	S 27 50.0	-00.4	23			
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22	
SD	16'1	16'1	16'1	16'1	16'1	16'1			SD	16'0	16'0	16'0	16'1	16'1	16'1	
HP	00'1	00'1	00'1	00'1	00'1	00'1			HP	58'6	58'7	58'8	58'9	59'0	59'1	
SHA	005°	005°	005°	005°	005°	005°			SHA	097°	094°	091°	089°	086°	083°	
Greenwich Culmination Time: 12:08									Greenwich Culmination Time: 14:13							
Greenwich Culmination Time: 12:08									Greenwich Culmination Time: 06:14							

Mars					Jupiter					Saturn						
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	87 47.3	+01.2	N 25 35.9	+00.0	158 02.1	+01.9	N 04 56.2	+00.2	198 57.5	+02.2	S 12 22.7	-00.1	00			
01	102 48.5	+01.2	N 25 35.9	+00.0	173 04.0	+02.0	N 04 56.4	+00.2	213 59.7	+02.1	S 12 22.6	-00.1	01			
02	117 49.7	+01.2	N 25 35.9	+00.0	188 06.0	+01.9	N 04 56.6	+00.2	229 01.8	+02.2	S 12 22.5	-00.1	02			
03	132 50.9	+01.3	N 25 35.9	+00.0	203 07.9	+01.9	N 04 56.8	+00.3	244 04.0	+02.2	S 12 22.4	-00.1	03			
04	147 52.2	+01.2	N 25 35.9	+00.0	218 09.8	+01.9	N 04 57.1	+00.2	259 06.2	+02.2	S 12 22.3	-00.1	04			
05	162 53.4	+01.2	N 25 35.9	+00.0	233 11.7	+02.0	N 04 57.3	+00.2	274 08.4	+02.2	S 12 22.2	-00.1	05			
06	177 54.6	+01.2	N 25 35.9	+00.1	248 13.7	+01.9	N 04 57.5	+00.3	289 10.6	+02.2	S 12 22.1	-00.1	06			
07	192 55.8	+01.2	N 25 36.0	+00.0	263 15.6	+01.9	N 04 57.8	+00.2	304 12.8	+02.2	S 12 22.0	-00.1	07			
08	207 57.0	+01.2	N 25 36.0	+00.0	278 17.5	+01.9	N 04 58.0	+00.2	319 15.0	+02.2	S 12 21.9	+00.0	08			
09	222 58.2	+01.2	N 25 36.0	+00.0	293 19.4	+01.9	N 04 58.2	+00.2	334 17.2	+02.2	S 12 21.9	-00.1	09			
10	237 59.4	+01.2	N 25 36.0	+00.0	308 21.3	+02.0	N 04 58.4	+00.3	349 19.4	+02.1	S 12 21.8	-00.1	10			
11	253 00.6	+01.2	N 25 36.0	+00.0	323 23.3	+01.9	N 04 58.7	+00.2	4 21.5	+02.2	S 12 21.7	-00.1	11			
12	268 01.8	+01.2	N 25 36.0	+00.0	338 25.2	+01.9	N 04 58.9	+00.2	19 23.7	+02.2	S 12 21.6	-00.1	12			
13	283 03.0	+01.2	N 25 36.0	+00.1	353 27.1	+01.9	N 04 59.1	+00.3	34 25.9	+02.2	S 12 21.5	-00.1	13			
14	298 04.2	+01.2	N 25 36.1	+00.0	8 29.0	+02.0	N 04 59.4	+00.2	49 28.1	+02.2	S 12 21.4	-00.1	14			
15	313 05.4	+01.2	N 25 36.1	+00.0	23 31.0	+01.9	N 04 59.6	+00.2	64 30.3	+02.2	S 12 21.3	-00.1	15			
16	328 06.6	+01.2	N 25 36.1	+00.0	38 32.9	+01.9	N 04 59.8	+00.2	79 32.5	+02.2	S 12 21.2	-00.1	16			
17	343 07.8	+01.2	N 25 36.1	+00.0	53 34.8	+01.9	N 05 00.0	+00.3	94 34.7	+02.2	S 12 21.1	-00.1	17			
18	358 09.0	+01.3	N 25 36.1	+00.0	68 36.7	+01.9	N 05 00.3	+00.2	109 36.9	+02.2	S 12 21.0	-00.1	18			
19	13 10.3	+01.2	N 25 36.1	+00.0	83 38.6	+02.0	N 05 00.5	+00.2	124 39.1	+02.1	S 12 20.9	-00.1	19			
20	28 11.5	+01.2	N 25 36.1	+00.0	98 40.6	+01.9	N 05 00.7	+00.3	139 41.2	+02.2	S 12 20.8	-00.1	20			
21	43 12.7	+01.2	N 25 36.1	+00.1	113 42.5	+01.9	N 05 01.0	+00.2	154 43.4	+02.2	S 12 20.7	-00.1	21			
22	58 13.9	+01.2	N 25 36.2	+00.0	128 44.4	+01.9	N 05 01.2	+00.2	169 45.6	+02.2	S 12 20.6	-00.1	22			
23	73 15.1	+01.2	N 25 36.2	+00.0	143 46.3	+02.0	N 05 01.4	+00.3	184 47.8	+02.2	S 12 20.5	-00.1	23			
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22	
SD	00'1	00'1	00'1	00'1	00'1	00'1			SD	00'3	00'3	00'3	00'3	00'3	00'3	
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	275°	275°	275°	275°	275°	275°			SHA	346°	346°	346°	346°	346°	345°	
Greenwich Culmination Time: 18:07									Greenwich Culmination Time: 13:26							
Greenwich Culmination Time: 18:07									Greenwich Culmination Time: 10:42							

Sun					Venus					Moon					A: 80%					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	177 47.8 +00.1	S 01 56.1 -01.0	146 31.4 -00.4	N 11 08.0 +01.2	255 27.3 -37.5	S 27 49.6 -00.5	00													
01	192 47.9 +00.2	S 01 55.1 -01.0	161 31.0 -00.4	N 11 09.2 +01.2	269 49.8 -37.5	S 27 49.1 -00.7	01													
02	207 48.1 +00.2	S 01 54.1 -01.0	176 30.6 -00.3	N 11 10.4 +01.2	284 12.3 -37.5	S 27 48.4 -01.0	02													
03	222 48.3 +00.2	S 01 53.1 -00.9	191 30.3 -00.4	N 11 11.6 +01.2	298 34.8 -37.5	S 27 47.4 -01.1	03													
04	237 48.5 +00.1	S 01 52.2 -01.0	206 29.9 -00.4	N 11 12.8 +01.2	312 57.3 -37.5	S 27 46.3 -01.3	04													
05	252 48.6 +00.2	S 01 51.2 -01.0	221 29.5 -00.3	N 11 14.0 +01.2	327 19.8 -37.6	S 27 45.0 -01.5	05													
06	267 48.8 +00.2	S 01 50.2 -01.0	236 29.2 -00.4	N 11 15.2 +01.2	341 42.2 -37.5	S 27 43.5 -01.7	06													
07	282 49.0 +00.2	S 01 49.2 -01.0	251 28.8 -00.3	N 11 16.4 +01.2	356 04.7 -37.6	S 27 41.8 -01.9	07													
08	297 49.2 +00.1	S 01 48.2 -01.0	266 28.5 -00.4	N 11 17.6 +01.2	10 27.1 -37.6	S 27 39.9 -02.1	08													
09	312 49.3 +00.2	S 01 47.2 -01.0	281 28.1 -00.4	N 11 18.8 +01.2	24 49.5 -37.6	S 27 37.8 -02.3	09													
10	327 49.5 +00.2	S 01 46.2 -01.0	296 27.7 -00.3	N 11 20.0 +01.2	39 11.9 -37.6	S 27 35.5 -02.4	10													
11	342 49.7 +00.2	S 01 45.2 -01.0	311 27.4 -00.4	N 11 21.2 +01.2	53 34.3 -37.6	S 27 33.1 -02.7	11													
12	357 49.9 +00.2	S 01 44.2 -00.9	326 27.0 -00.4	N 11 22.4 +01.2	67 56.7 -37.6	S 27 30.4 -02.9	12													
13	12 50.1 +00.1	S 01 43.3 -01.0	341 26.6 -00.3	N 11 23.6 +01.1	82 19.1 -37.6	S 27 27.5 -03.0	13													
14	27 50.2 +00.2	S 01 42.3 -01.0	356 26.3 -00.4	N 11 24.7 +01.2	96 41.5 -37.6	S 27 24.5 -03.3	14													
15	42 50.4 +00.2	S 01 41.3 -01.0	11 25.9 -00.4	N 11 25.9 +01.2	111 03.9 -37.5	S 27 21.2 -03.4	15													
16	57 50.6 +00.2	S 01 40.3 -01.0	26 25.5 -00.3	N 11 27.1 +01.2	125 26.4 -37.6	S 27 17.8 -03.6	16													
17	72 50.8 +00.1	S 01 39.3 -01.0	41 25.2 -00.4	N 11 28.3 +01.2	139 48.8 -37.6	S 27 14.2 -03.9	17													
18	87 50.9 +00.2	S 01 38.3 -01.0	56 24.8 -00.4	N 11 29.5 +01.2	154 11.2 -37.5	S 27 10.3 -04.0	18													
19	102 51.1 +00.2	S 01 37.3 -01.0	71 24.4 -00.3	N 11 30.7 +01.2	168 33.7 -37.5	S 27 06.3 -04.2	19													
20	117 51.3 +00.2	S 01 36.3 -00.9	86 24.1 -00.4	N 11 31.9 +01.2	182 56.2 -37.5	S 27 02.1 -04.4	20													
21	132 51.5 +00.1	S 01 35.4 -01.0	101 23.7 -00.4	N 11 33.1 +01.2	197 18.7 -37.5	S 26 57.7 -04.6	21													
22	147 51.6 +00.2	S 01 34.4 -01.0	116 23.3 -00.3	N 11 34.3 +01.1	211 41.2 -37.5	S 26 53.1 -04.8	22													
23	162 51.8 +00.2	S 01 33.4 -01.0	131 23.0 -00.4	N 11 35.4 +01.2	226 03.7 -37.4	S 26 48.3 -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	16°1	16°1	16°1	16°1	16°1	16°1	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	16°1	16°2	16°2	16°2	16°2	16°3
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	59°2	59°3	59°4	59°5	59°6	59°7
SHA	004°	004°	004°	004°	004°	004°	SHA	333°	333°	333°	333°	332°	332°	SHA	081°	078°	075°	073°	070°	067°
Greenwich Culmination Time: 12:08							Greenwich Culmination Time: 14:14							Greenwich Culmination Time: 07:16						

Mars					Jupiter					Saturn										
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	88 16.3 +01.2	N 25 36.2 +00.0	158 48.3 +01.9	N 05 01.7 +00.2	199 50.0 +02.2	S 12 20.4 -00.1	00													
01	103 17.5 +01.2	N 25 36.2 +00.0	173 50.2 +01.9	N 05 01.9 +00.2	214 52.2 +02.2	S 12 20.3 -00.1	01													
02	118 18.7 +01.2	N 25 36.2 +00.0	188 52.1 +01.9	N 05 02.1 +00.2	229 54.4 +02.2	S 12 20.2 -00.1	02													
03	133 19.9 +01.2	N 25 36.2 +00.0	203 54.0 +01.9	N 05 02.3 +00.3	244 56.6 +02.2	S 12 20.1 -00.1	03													
04	148 21.1 +01.2	N 25 36.2 +00.0	218 55.9 +02.0	N 05 02.6 +00.2	259 58.8 +02.2	S 12 20.0 -00.1	04													
05	163 22.3 +01.2	N 25 36.2 +00.0	233 57.9 +01.9	N 05 02.8 +00.2	275 01.0 +02.1	S 12 19.9 -00.1	05													
06	178 23.5 +01.2	N 25 36.2 +00.1	248 59.8 +01.9	N 05 03.0 +00.3	290 03.1 +02.2	S 12 19.8 -00.1	06													
07	193 24.7 +01.2	N 25 36.3 +00.0	264 01.7 +01.9	N 05 03.3 +00.2	305 05.3 +02.2	S 12 19.7 -00.1	07													
08	208 25.9 +01.2	N 25 36.3 +00.0	279 03.6 +02.0	N 05 03.5 +00.2	320 07.5 +02.2	S 12 19.6 -00.1	08													
09	223 27.1 +01.2	N 25 36.3 +00.0	294 05.6 +01.9	N 05 03.7 +00.2	335 09.7 +02.2	S 12 19.5 -00.1	09													
10	238 28.3 +01.2	N 25 36.3 +00.0	309 07.5 +01.9	N 05 03.9 +00.3	350 11.9 +02.2	S 12 19.4 -00.1	10													
11	253 29.5 +01.2	N 25 36.3 +00.0	324 09.4 +01.9	N 05 04.2 +00.2	5 14.1 +02.2	S 12 19.3 -00.1	11													
12	268 30.7 +01.2	N 25 36.3 +00.0	339 11.3 +01.9	N 05 04.4 +00.2	20 16.3 +02.2	S 12 19.2 -00.1	12													
13	283 31.9 +01.1	N 25 36.3 +00.0	354 13.2 +02.0	N 05 04.6 +00.3	35 18.5 +02.2	S 12 19.1 -00.1	13													
14	298 33.0 +01.2	N 25 36.3 +00.0	9 15.2 +01.9	N 05 04.9 +00.2	50 20.7 +02.2	S 12 19.0 -00.1	14													
15	313 34.2 +01.2	N 25 36.3 +00.0	24 17.1 +01.9	N 05 05.1 +00.2	65 22.9 +02.1	S 12 18.9 -00.1	15													
16	328 35.4 +01.2	N 25 36.3 +00.0	39 19.0 +01.9	N 05 05.3 +00.2	80 25.0 +02.2	S 12 18.8 -00.1	16													
17	343 36.6 +01.2	N 25 36.3 +00.1	54 20.9 +02.0	N 05 05.5 +00.3	95 27.2 +02.2	S 12 18.7 -00.1	17													
18	358 37.8 +01.2	N 25 36.4 +00.0	69 22.9 +01.9	N 05 05.8 +00.2	110 29.4 +02.2	S 12 18.6 -00.1	18													
19	13 39.0 +01.2	N 25 36.4 +00.0	84 24.8 +01.9	N 05 06.0 +00.2	125 31.6 +02.2	S 12 18.5 -00.1	19													
20	28 40.2 +01.2	N 25 36.4 +00.0	99 26.7 +01.9	N 05 06.2 +00.3	140 33.8 +02.2	S 12 18.4 +00.0	20													
21	43 41.4 +01.2	N 25 36.4 +00.0	114 28.6 +01.9	N 05 06.5 +00.2	155 36.0 +02.2	S 12 18.4 -00.1	21													
22	58 42.6 +01.2	N 25 36.4 +00.0	129 30.5 +02.0	N 05 06.7 +00.2	170 38.2 +02.2	S 12 18.3 -00.1	22													
23	73 43.8 +01.2	N 25 36.4 +00.0	144 32.5 +01.9	N 05 06.9 +00.2	185 40.4 +02.2	S 12 18.2 -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°1	00°1	00°1	00°1	00°1	00°1	SD	00°3	00°3	00°3	00°3	00°3	00°3	SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°0	00°0	00°0	00°0	00°0	00°0	HP	00°0	00°0	00°0	00°0	00°0	00°0
SHA	275°	275°	275°	275°	275°	274°	SHA	345°	345°	345°	345°	345°	345°	SHA	026°	026°	026°	026°	026°	026°
Greenwich Culmination Time: 18:05							Greenwich Culmination Time: 13:23							Greenwich Culmination Time: 10:39						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	177 52.0 +00.2	S 01 32.4 -01.0	146 22.6 -00.4	N 11 36.6 +01.2	240 26.3 -37.4	S 26 43.4 -05.2	00						
01	192 52.2 +00.2	S 01 31.4 -01.0	161 22.2 -00.3	N 11 37.8 +01.2	254 48.9 -37.3	S 26 38.2 -05.4	01						
02	207 52.4 +00.1	S 01 30.4 -01.0	176 21.9 -00.4	N 11 39.0 +01.2	269 11.6 -37.4	S 26 32.8 -05.5	02						
03	222 52.5 +00.2	S 01 29.4 -01.0	191 21.5 -00.4	N 11 40.2 +01.2	283 34.2 -37.3	S 26 27.3 -05.7	03						
04	237 52.7 +00.2	S 01 28.4 -01.0	206 21.1 -00.3	N 11 41.4 +01.2	297 56.9 -37.2	S 26 21.6 -05.9	04						
05	252 52.9 +00.2	S 01 27.4 -00.9	221 20.8 -00.4	N 11 42.6 +01.1	312 19.7 -37.2	S 26 15.7 -06.2	05						
06	267 53.1 +00.1	S 01 26.5 -01.0	236 20.4 -00.4	N 11 43.7 +01.2	326 42.5 -37.2	S 26 09.5 -06.2	06						
07	282 53.2 +00.2	S 01 25.5 -01.0	251 20.0 -00.4	N 11 44.9 +01.2	341 05.3 -37.1	S 26 03.3 -06.5	07						
08	297 53.4 +00.2	S 01 24.5 -01.0	266 19.6 -00.3	N 11 46.1 +01.2	355 28.2 -37.1	S 25 56.8 -06.7	08						
09	312 53.6 +00.2	S 01 23.5 -01.0	281 19.3 -00.4	N 11 47.3 +01.2	9 51.1 -37.1	S 25 50.1 -06.8	09						
10	327 53.8 +00.2	S 01 22.5 -01.0	296 18.9 -00.4	N 11 48.5 +01.1	24 14.0 -36.9	S 25 43.3 -07.0	10						
11	342 54.0 +00.1	S 01 21.5 -01.0	311 18.5 -00.3	N 11 49.6 +01.2	38 37.1 -37.0	S 25 36.3 -07.2	11						
12	357 54.1 +00.2	S 01 20.5 -01.0	326 18.2 -00.4	N 11 50.8 +01.2	53 00.1 -36.9	S 25 29.1 -07.4	12						
13	12 54.3 +00.2	S 01 19.5 -01.0	341 17.8 -00.4	N 11 52.0 +01.2	67 23.2 -36.8	S 25 21.7 -07.6	13						
14	27 54.5 +00.2	S 01 18.5 -00.9	356 17.4 -00.4	N 11 53.2 +01.2	81 46.4 -36.8	S 25 14.1 -07.7	14						
15	42 54.7 +00.2	S 01 17.6 -01.0	11 17.0 -00.3	N 11 54.4 +01.1	96 09.6 -36.7	S 25 06.4 -07.9	15						
16	57 54.9 +00.1	S 01 16.6 -01.0	26 16.7 -00.4	N 11 55.5 +01.2	110 32.9 -36.6	S 24 58.5 -08.1	16						
17	72 55.0 +00.2	S 01 15.6 -01.0	41 16.3 -00.4	N 11 56.7 +01.2	124 56.3 -36.6	S 24 50.4 -08.3	17						
18	87 55.2 +00.2	S 01 14.6 -01.0	56 15.9 -00.3	N 11 57.9 +01.2	139 19.7 -36.5	S 24 42.1 -08.4	18						
19	102 55.4 +00.2	S 01 13.6 -01.0	71 15.6 -00.4	N 11 59.1 +01.2	153 43.2 -36.5	S 24 33.7 -08.7	19						
20	117 55.6 +00.2	S 01 12.6 -01.0	86 15.2 -00.4	N 12 00.3 +01.1	168 06.7 -36.4	S 24 25.0 -08.7	20						
21	132 55.8 +00.1	S 01 11.6 -01.0	101 14.8 -00.4	N 12 01.4 +01.2	182 30.3 -36.3	S 24 16.3 -09.0	21						
22	147 55.9 +00.2	S 01 10.6 -01.0	116 14.4 -00.3	N 12 02.6 +01.2	196 54.0 -36.2	S 24 07.3 -09.1	22						
23	162 56.1 +00.2	S 01 09.6 -00.9	131 14.1 -00.4	N 12 03.8 +01.2	211 17.8 -36.2	S 23 58.2 -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 16'1 16'1 16'1 16'1 16'1 16'1		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'3 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'7 59'8 59'9 60'0 60'0 60'1								
	SHA 003° 003° 003° 003° 003° 003°		SHA 332° 332° 332° 331° 331° 331°		SHA 065° 062° 060° 057° 054° 052°								
	Greenwich Culmination Time: 12:08		Greenwich Culmination Time: 14:14		Greenwich Culmination Time: 08:18								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	
00	88 45.0 +01.2	N 25 36.4 +00.0	159 34.4 +01.9	N 05 07.1 +00.3	200 42.6 +02.2	S 12 18.1 -00.1	00						
01	103 46.2 +01.2	N 25 36.4 +00.0	174 36.3 +01.9	N 05 07.4 +00.2	215 44.8 +02.2	S 12 18.0 -00.1	01						
02	118 47.4 +01.2	N 25 36.4 +00.0	189 38.2 +01.9	N 05 07.6 +00.2	230 47.0 +02.1	S 12 17.9 -00.1	02						
03	133 48.6 +01.2	N 25 36.4 +00.0	204 40.1 +02.0	N 05 07.8 +00.3	245 49.1 +02.2	S 12 17.8 -00.1	03						
04	148 49.8 +01.2	N 25 36.4 +00.0	219 42.1 +01.9	N 05 08.1 +00.2	260 51.3 +02.2	S 12 17.7 -00.1	04						
05	163 51.0 +01.1	N 25 36.4 +00.0	234 44.0 +01.9	N 05 08.3 +00.2	275 53.5 +02.2	S 12 17.6 -00.1	05						
06	178 52.1 +01.2	N 25 36.4 +00.1	249 45.9 +01.9	N 05 08.5 +00.3	290 55.7 +02.2	S 12 17.5 -00.1	06						
07	193 53.3 +01.2	N 25 36.5 +00.0	264 47.8 +01.9	N 05 08.8 +00.2	305 57.9 +02.2	S 12 17.4 -00.1	07						
08	208 54.5 +01.2	N 25 36.5 +00.0	279 49.7 +02.0	N 05 09.0 +00.2	321 00.1 +02.2	S 12 17.3 -00.1	08						
09	223 55.7 +01.2	N 25 36.5 +00.0	294 51.7 +01.9	N 05 09.2 +00.2	336 02.3 +02.2	S 12 17.2 -00.1	09						
10	238 56.9 +01.2	N 25 36.5 +00.0	309 53.6 +01.9	N 05 09.4 +00.3	351 04.5 +02.2	S 12 17.1 -00.1	10						
11	253 58.1 +01.2	N 25 36.5 +00.0	324 55.5 +01.9	N 05 09.7 +00.2	6 06.7 +02.2	S 12 17.0 -00.1	11						
12	268 59.3 +01.2	N 25 36.5 +00.0	339 57.4 +01.9	N 05 09.9 +00.2	21 08.9 +02.2	S 12 16.9 -00.1	12						
13	284 00.5 +01.2	N 25 36.5 +00.0	354 59.3 +02.0	N 05 10.1 +00.3	36 11.1 +02.1	S 12 16.8 -00.1	13						
14	299 01.7 +01.1	N 25 36.5 +00.0	10 01.3 +01.9	N 05 10.4 +00.2	51 13.2 +02.2	S 12 16.7 -00.1	14						
15	314 02.8 +01.2	N 25 36.5 +00.0	25 03.2 +01.9	N 05 10.6 +00.2	66 15.4 +02.2	S 12 16.6 -00.1	15						
16	329 04.0 +01.2	N 25 36.5 +00.0	40 05.1 +01.9	N 05 10.8 +00.2	81 17.6 +02.2	S 12 16.5 -00.1	16						
17	344 05.2 +01.2	N 25 36.5 +00.0	55 07.0 +01.9	N 05 11.0 +00.3	96 19.8 +02.2	S 12 16.4 -00.1	17						
18	359 06.4 +01.2	N 25 36.5 +00.0	70 08.9 +02.0	N 05 11.3 +00.2	111 22.0 +02.2	S 12 16.3 -00.1	18						
19	14 07.6 +01.2	N 25 36.5 +00.0	85 10.9 +01.9	N 05 11.5 +00.2	126 24.2 +02.2	S 12 16.2 -00.1	19						
20	29 08.8 +01.2	N 25 36.5 +00.0	100 12.8 +01.9	N 05 11.7 +00.3	141 26.4 +02.2	S 12 16.1 -00.1	20						
21	44 10.0 +01.1	N 25 36.5 +00.0	115 14.7 +01.9	N 05 12.0 +00.2	156 28.6 +02.2	S 12 16.0 -00.1	21						
22	59 11.1 +01.2	N 25 36.5 +00.0	130 16.6 +01.9	N 05 12.2 +00.2	171 30.8 +02.2	S 12 15.9 -00.1	22						
23	74 12.3 +01.2	N 25 36.5 +00.0	145 18.5 +02.0	N 05 12.4 +00.2	186 33.0 +02.2	S 12 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 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 274° 274° 274° 274° 274° 274°		SHA 345° 345° 345° 345° 345° 345°		SHA 026° 026° 026° 026° 026° 026°								
	Greenwich Culmination Time: 18:03		Greenwich Culmination Time: 13:20		Greenwich Culmination Time: 10:35								

Sun					Venus					Moon					A: 88%					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	177 56.3 +00.2	S	01 08.7 -01.0		146 13.7 -00.4	N	12 05.0 +01.1		225 41.6 -36.1	S	23 48.9 -09.5		00							
01	192 56.5 +00.1	S	01 07.7 -01.0		161 13.3 -00.4	N	12 06.1 +01.2		240 05.5 -36.1	S	23 39.4 -09.6		01							
02	207 56.6 +00.2	S	01 06.7 -01.0		176 12.9 -00.3	N	12 07.3 +01.2		254 29.4 -36.0	S	23 29.8 -09.8		02							
03	222 56.8 +00.2	S	01 05.7 -01.0		191 12.6 -00.4	N	12 08.5 +01.2		268 53.4 -35.8	S	23 20.0 -09.9		03							
04	237 57.0 +00.2	S	01 04.7 -01.0		206 12.2 -00.4	N	12 09.7 +01.1		283 17.6 -35.9	S	23 10.1 -10.1		04							
05	252 57.2 +00.2	S	01 03.7 -01.0		221 11.8 -00.4	N	12 10.8 +01.2		297 41.7 -35.7	S	22 60.0 -10.3		05							
06	267 57.4 +00.1	S	01 02.7 -01.0		236 11.4 -00.3	N	12 12.0 +01.2		312 06.0 -35.7	S	22 49.7 -10.4		06							
07	282 57.5 +00.2	S	01 01.7 -01.0		251 11.1 -00.4	N	12 13.2 +01.1		326 30.3 -35.5	S	22 39.3 -10.6		07							
08	297 57.7 +00.2	S	01 00.7 -00.9		266 10.7 -00.4	N	12 14.3 +01.2		340 54.8 -35.5	S	22 28.7 -10.7		08							
09	312 57.9 +00.2	S	00 59.8 -01.0		281 10.3 -00.4	N	12 15.5 +01.2		355 19.3 -35.5	S	22 18.0 -10.9		09							
10	327 58.1 +00.2	S	00 58.8 -01.0		296 09.9 -00.4	N	12 16.7 +01.1		9 43.8 -35.3	S	22 07.1 -11.0		10							
11	342 58.3 +00.1	S	00 57.8 -01.0		311 09.5 -00.3	N	12 17.8 +01.2		24 08.5 -35.3	S	21 56.1 -11.2		11							
12	357 58.4 +00.2	S	00 56.8 -01.0		326 09.2 -00.4	N	12 19.0 +01.2		38 33.2 -35.2	S	21 44.9 -11.3		12							
13	12 58.6 +00.2	S	00 55.8 -01.0		341 08.8 -00.4	N	12 20.2 +01.2		52 58.0 -35.0	S	21 33.6 -11.5		13							
14	27 58.8 +00.2	S	00 54.8 -01.0		356 08.4 -00.4	N	12 21.4 +01.1		67 23.0 -35.1	S	21 22.1 -11.6		14							
15	42 59.0 +00.2	S	00 53.8 -01.0		11 08.0 -00.4	N	12 22.5 +01.2		81 47.9 -34.9	S	21 10.5 -11.7		15							
16	57 59.2 +00.2	S	00 52.8 -01.0		26 07.6 -00.3	N	12 23.7 +01.2		96 13.0 -34.8	S	20 58.8 -11.9		16							
17	72 59.4 +00.1	S	00 51.8 -01.0		41 07.3 -00.4	N	12 24.9 +01.1		110 38.2 -34.8	S	20 46.9 -12.1		17							
18	87 59.5 +00.2	S	00 50.8 -00.9		56 06.9 -00.4	N	12 26.0 +01.2		125 03.4 -34.7	S	20 34.8 -12.2		18							
19	102 59.7 +00.2	S	00 49.9 -01.0		71 06.5 -00.4	N	12 27.2 +01.2		139 28.7 -34.5	S	20 22.6 -12.3		19							
20	117 59.9 +00.2	S	00 48.9 -01.0		86 06.1 -00.4	N	12 28.4 +01.1		153 54.2 -34.5	S	20 10.3 -12.4		20							
21	133 00.1 +00.2	S	00 47.9 -01.0		101 05.7 -00.3	N	12 29.5 +01.2		168 19.7 -34.5	S	19 57.9 -12.6		21							
22	148 00.3 +00.1	S	00 46.9 -01.0		116 05.4 -00.4	N	12 30.7 +01.1		182 45.2 -34.3	S	19 45.3 -12.7		22							
23	163 00.4 +00.2	S	00 45.9 -01.0		131 05.0 -00.4	N	12 31.8 +01.2		197 10.9 -34.2	S	19 32.6 -12.8		23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	16'1	16'1	16'1	16'1	16'1	16'1			SD	00'1	00'1	00'1	00'1	00'1	00'1					
HP	00'1	00'1	00'1	00'1	00'1	00'1			HP	00'1	00'1	00'1	00'1	00'1	00'1					
SHA	003°	002°	002°	002°	002°	002°			SHA	331°	331°	330°	330°	330°	330°					
Greenwich Culmination Time: 12:08							Greenwich Culmination Time: 14:15							Greenwich Culmination Time: 09:19						

Mars					Jupiter					Saturn					UT					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	89 13.5 +01.2	N	25 36.5 +00.1		160 20.5 +01.9	N	05 12.6 +00.3		201 35.2 +02.2	S	12 15.7 -00.1		00							
01	104 14.7 +01.2	N	25 36.6 +00.0		175 22.4 +01.9	N	05 12.9 +00.2		216 37.4 +02.2	S	12 15.6 -00.1		01							
02	119 15.9 +01.2	N	25 36.6 +00.0		190 24.3 +01.9	N	05 13.1 +00.2		231 39.6 +02.1	S	12 15.5 +00.0		02							
03	134 17.1 +01.1	N	25 36.6 +00.0		205 26.2 +01.9	N	05 13.3 +00.3		246 41.7 +02.2	S	12 15.5 -00.1		03							
04	149 18.2 +01.2	N	25 36.6 +00.0		220 28.1 +02.0	N	05 13.6 +00.2		261 43.9 +02.2	S	12 15.4 -00.1		04							
05	164 19.4 +01.2	N	25 36.6 +00.0		235 30.1 +01.9	N	05 13.8 +00.2		276 46.1 +02.2	S	12 15.3 -00.1		05							
06	179 20.6 +01.2	N	25 36.6 +00.0		250 32.0 +01.9	N	05 14.0 +00.3		291 48.3 +02.2	S	12 15.2 -00.1		06							
07	194 21.8 +01.2	N	25 36.6 +00.0		265 33.9 +01.9	N	05 14.3 +00.2		306 50.5 +02.2	S	12 15.1 -00.1		07							
08	209 23.0 +01.2	N	25 36.6 +00.0		280 35.8 +01.9	N	05 14.5 +00.2		321 52.7 +02.2	S	12 15.0 -00.1		08							
09	224 24.2 +01.1	N	25 36.6 +00.0		295 37.7 +01.9	N	05 14.7 +00.2		336 54.9 +02.2	S	12 14.9 -00.1		09							
10	239 25.3 +01.2	N	25 36.6 +00.0		310 39.6 +02.0	N	05 14.9 +00.3		351 57.1 +02.2	S	12 14.8 -00.1		10							
11	254 26.5 +01.2	N	25 36.6 +00.0		325 41.6 +01.9	N	05 15.2 +00.2		6 59.3 +02.2	S	12 14.7 -00.1		11							
12	269 27.7 +01.2	N	25 36.6 +00.0		340 43.5 +01.9	N	05 15.4 +00.2		22 01.5 +02.2	S	12 14.6 -00.1		12							
13	284 28.9 +01.2	N	25 36.6 +00.0		355 45.4 +01.9	N	05 15.6 +00.3		37 03.7 +02.2	S	12 14.5 -00.1		13							
14	299 30.1 +01.1	N	25 36.6 +00.0		10 47.3 +01.9	N	05 15.9 +00.2		52 05.9 +02.2	S	12 14.4 -00.1		14							
15	314 31.2 +01.2	N	25 36.6 +00.0		25 49.2 +02.0	N	05 16.1 +00.2		67 08.1 +02.2	S	12 14.3 -00.1		15							
16	329 32.4 +01.2	N	25 36.6 +00.0		40 51.2 +01.9	N	05 16.3 +00.2		82 10.3 +02.1	S	12 14.2 -00.1		16							
17	344 33.6 +01.2	N	25 36.6 +00.0		55 53.1 +01.9	N	05 16.5 +00.3		97 12.4 +02.2	S	12 14.1 -00.1		17							
18	359 34.8 +01.1	N	25 36.6 +00.0		70 55.0 +01.9	N	05 16.8 +00.2		112 14.6 +02.2	S	12 14.0 -00.1		18							
19	14 35.9 +01.2	N	25 36.6 +00.0		85 56.9 +01.9	N	05 17.0 +00.2		127 16.8 +02.2	S	12 13.9 -00.1		19							
20	29 37.1 +01.2	N	25 36.6 +00.0		100 58.8 +01.9	N	05 17.2 +00.3		142 19.0 +02.2	S	12 13.8 -00.1		20							
21	44 38.3 +01.2	N	25 36.6 +00.0		116 00.7 +02.0	N	05 17.5 +00.2		157 21.2 +02.2	S	12 13.7 -00.1		21							
22	59 39.5 +01.1	N	25 36.6 +00.0		131 02.7 +01.9	N	05 17.7 +00.2		172 23.4 +02.2	S	12 13.6 -00.1		22							
23	74 40.6 +01.2	N	25 36.6 +00.0		146 04.6 +01.9	N	05 17.9 +00.3		187 25.6 +02.2	S	12 13.5 -00.1		23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	00'1	00'1	00'1	00'1	00'1	00'1			SD	00'3	00'3	00'3	00'3	00'3	00'3					
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	274°	274°	274°	274°	274°	273°			SHA	345°	345°	345°	345°	345°	345°					
Greenwich Culmination Time: 18:01							Greenwich Culmination Time: 13:16							Greenwich Culmination Time: 10:32						

Table with columns for UT, Sun, Venus, Moon, Mars, Jupiter, Saturn, and UT. Each planet section contains GHA, ddGHA, Dec, and dDec values for each hour from 00 to 23. Summary statistics (SD, HP, SHA) and Greenwich Culmination Time are provided at the bottom of each section.

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 05.0 +00.2	S	00 21.2 -01.0	145 55.4 -00.4	N	13 00.8 +01.1	198 20.4 -32.1	S	13 38.5 -15.4	00			
01	193 05.2 +00.2	S	00 20.2 -01.0	160 55.0 -00.4	N	13 01.9 +01.2	212 48.3 -32.1	S	13 23.1 -15.5	01			
02	208 05.4 +00.1	S	00 19.2 -01.0	175 54.6 -00.4	N	13 03.1 +01.1	227 16.2 -32.0	S	13 07.6 -15.5	02			
03	223 05.5 +00.2	S	00 18.2 -01.0	190 54.2 -00.4	N	13 04.2 +01.2	241 44.2 -31.9	S	12 52.1 -15.6	03			
04	238 05.7 +00.2	S	00 17.2 -01.0	205 53.8 -00.4	N	13 05.4 +01.1	256 12.3 -31.9	S	12 36.5 -15.7	04			
05	253 05.9 +00.2	S	00 16.2 -01.0	220 53.4 -00.4	N	13 06.5 +01.2	270 40.4 -31.7	S	12 20.8 -15.8	05			
06	268 06.1 +00.2	S	00 15.2 -00.9	235 53.0 -00.4	N	13 07.7 +01.1	285 08.7 -31.8	S	12 05.0 -15.8	06			
07	283 06.3 +00.1	S	00 14.3 -01.0	250 52.6 -00.4	N	13 08.8 +01.2	299 36.9 -31.6	S	11 49.2 -15.9	07			
08	298 06.4 +00.2	S	00 13.3 -01.0	265 52.2 -00.3	N	13 10.0 +01.1	314 05.3 -31.5	S	11 33.3 -16.0	08			
09	313 06.6 +00.2	S	00 12.3 -01.0	280 51.9 -00.4	N	13 11.1 +01.2	328 33.8 -31.5	S	11 17.3 -16.0	09			
10	328 06.8 +00.2	S	00 11.3 -01.0	295 51.5 -00.4	N	13 12.3 +01.1	343 02.3 -31.4	S	11 01.3 -16.1	10			
11	343 07.0 +00.2	S	00 10.3 -01.0	310 51.1 -00.4	N	13 13.4 +01.1	357 30.9 -31.4	S	10 45.2 -16.1	11			
12	358 07.2 +00.2	S	00 09.3 -01.0	325 50.7 -00.4	N	13 14.5 +01.2	11 59.5 -31.3	S	10 29.1 -16.2	12			
13	13 07.4 +00.1	S	00 08.3 -01.0	340 50.3 -00.4	N	13 15.7 +01.1	26 28.2 -31.2	S	10 12.9 -16.3	13			
14	28 07.5 +00.2	S	00 07.3 -01.0	355 49.9 -00.4	N	13 16.8 +01.2	40 57.0 -31.1	S	09 56.6 -16.3	14			
15	43 07.7 +00.2	S	00 06.3 -00.9	10 49.5 -00.4	N	13 18.0 +01.1	55 25.9 -31.1	S	09 40.3 -16.3	15			
16	58 07.9 +00.2	S	00 05.4 -01.0	25 49.1 -00.4	N	13 19.1 +01.2	69 54.8 -31.0	S	09 24.0 -16.4	16			
17	73 08.1 +00.2	S	00 04.4 -01.0	40 48.7 -00.4	N	13 20.3 +01.1	84 23.8 -31.0	S	09 07.6 -16.5	17			
18	88 08.3 +00.2	S	00 03.4 -01.0	55 48.3 -00.4	N	13 21.4 +01.1	98 52.8 -30.9	S	08 51.1 -16.5	18			
19	103 08.5 +00.2	S	00 02.4 -01.0	70 47.9 -00.4	N	13 22.5 +01.2	113 21.9 -30.8	S	08 34.6 -16.5	19			
20	118 08.7 +00.1	S	00 01.4 -01.0	85 47.5 -00.4	N	13 23.7 +01.1	127 51.1 -30.8	S	08 18.1 -16.6	20			
21	133 08.8 +00.2	S	00 00.4 -01.0	100 47.1 -00.4	N	13 24.8 +01.2	142 20.3 -30.7	S	08 01.5 -16.6	21			
22	148 09.0 +00.2	N	00 00.6 +01.0	115 46.7 -00.4	N	13 26.0 +01.1	156 49.6 -30.7	S	07 44.9 -16.6	22			
23	163 09.2 +00.2	N	00 01.6 +01.0	130 46.3 -00.4	N	13 27.1 +01.1	171 18.9 -30.6	S	07 28.3 -16.7	23			
	UT 02 06 10 14 18 22 SD 16'1 16'1 16'1 16'1 16'1 16'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 001° 001° 000° 000° 000° 360° Greenwich Culmination Time: 12:07		UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 329° 328° 328° 328° 328° 328° Greenwich Culmination Time: 14:16		UT 02 06 10 14 18 22 SD 16'5 16'5 16'4 16'4 16'4 16'4 HP 60'4 60'4 60'4 60'3 60'3 60'2 SHA 020° 018° 015° 013° 011° 009° Greenwich Culmination Time: 11:10								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	90 09.9 +01.2	N	25 36.6 +00.0	161 52.5 +01.9	N	05 23.7 +00.2	203 20.5 +02.2	S	12 11.1 -00.1	00			
01	105 11.1 +01.2	N	25 36.6 -00.1	176 54.4 +02.0	N	05 23.9 +00.2	218 22.7 +02.2	S	12 11.0 -00.1	01			
02	120 12.3 +01.1	N	25 36.5 +00.0	191 56.4 +01.9	N	05 24.1 +00.2	233 24.9 +02.2	S	12 10.9 +00.0	02			
03	135 13.4 +01.2	N	25 36.5 +00.0	206 58.3 +01.9	N	05 24.3 +00.3	248 27.1 +02.1	S	12 10.9 -00.1	03			
04	150 14.6 +01.2	N	25 36.5 +00.0	222 00.2 +01.9	N	05 24.6 +00.2	263 29.2 +02.2	S	12 10.8 -00.1	04			
05	165 15.8 +01.1	N	25 36.5 +00.0	237 02.1 +01.9	N	05 24.8 +00.2	278 31.4 +02.2	S	12 10.7 -00.1	05			
06	180 16.9 +01.2	N	25 36.5 +00.0	252 04.0 +01.9	N	05 25.0 +00.3	293 33.6 +02.2	S	12 10.6 -00.1	06			
07	195 18.1 +01.2	N	25 36.5 +00.0	267 05.9 +01.9	N	05 25.3 +00.2	308 35.8 +02.2	S	12 10.5 -00.1	07			
08	210 19.3 +01.1	N	25 36.5 +00.0	282 07.8 +02.0	N	05 25.5 +00.2	323 38.0 +02.2	S	12 10.4 -00.1	08			
09	225 20.4 +01.2	N	25 36.5 +00.0	297 09.8 +01.9	N	05 25.7 +00.3	338 40.2 +02.2	S	12 10.3 -00.1	09			
10	240 21.6 +01.1	N	25 36.5 +00.0	312 11.7 +01.9	N	05 26.0 +00.2	353 42.4 +02.2	S	12 10.2 -00.1	10			
11	255 22.7 +01.2	N	25 36.5 +00.0	327 13.6 +01.9	N	05 26.2 +00.2	8 44.6 +02.2	S	12 10.1 -00.1	11			
12	270 23.9 +01.2	N	25 36.5 +00.0	342 15.5 +01.9	N	05 26.4 +00.2	23 46.8 +02.2	S	12 10.0 -00.1	12			
13	285 25.1 +01.1	N	25 36.5 +00.0	357 17.4 +01.9	N	05 26.6 +00.3	38 49.0 +02.2	S	12 09.9 -00.1	13			
14	300 26.2 +01.2	N	25 36.5 +00.0	12 19.3 +02.0	N	05 26.9 +00.2	53 51.2 +02.2	S	12 09.8 -00.1	14			
15	315 27.4 +01.2	N	25 36.5 +00.0	27 21.3 +01.9	N	05 27.1 +00.2	68 53.4 +02.2	S	12 09.7 -00.1	15			
16	330 28.6 +01.1	N	25 36.5 +00.0	42 23.2 +01.9	N	05 27.3 +00.3	83 55.6 +02.2	S	12 09.6 -00.1	16			
17	345 29.7 +01.2	N	25 36.5 +00.0	57 25.1 +01.9	N	05 27.6 +00.2	98 57.8 +02.2	S	12 09.5 -00.1	17			
18	0 30.9 +01.1	N	25 36.5 +00.0	72 27.0 +01.9	N	05 27.8 +00.2	113 60.0 +02.2	S	12 09.4 -00.1	18			
19	15 32.0 +01.2	N	25 36.5 -00.1	87 28.9 +01.9	N	05 28.0 +00.3	129 02.2 +02.2	S	12 09.3 -00.1	19			
20	30 33.2 +01.2	N	25 36.4 +00.0	102 30.8 +02.0	N	05 28.3 +00.2	144 04.4 +02.2	S	12 09.2 -00.1	20			
21	45 34.4 +01.1	N	25 36.4 +00.0	117 32.8 +01.9	N	05 28.5 +00.2	159 06.6 +02.2	S	12 09.1 -00.1	21			
22	60 35.5 +01.2	N	25 36.4 +00.0	132 34.7 +01.9	N	05 28.7 +00.2	174 08.8 +02.2	S	12 09.0 +00.0	22			
23	75 36.7 +01.1	N	25 36.4 +00.0	147 36.6 +01.9	N	05 28.9 +00.3	189 11.0 +02.2	S	12 09.0 -00.1	23			
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 273° 273° 273° 273° 273° 272° Greenwich Culmination Time: 17:57		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 345° 345° 345° 344° 344° 344° Greenwich Culmination Time: 13:10		UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 026° 026° 026° 026° 026° 026° Greenwich Culmination Time: 10:25								

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 09.4 +00.2	N 00	02.6 +00.9	145 45.9 -00.4	N 13	28.2 +01.2	185 48.3 -30.5	S 07	11.6 -16.7				
01	193 09.6 +00.2	N 00	03.5 +01.0	160 45.5 -00.3	N 13	29.4 +01.1	200 17.8 -30.5	S 06	54.9 -16.7				
02	208 09.8 +00.1	N 00	04.5 +01.0	175 45.2 -00.4	N 13	30.5 +01.1	214 47.3 -30.5	S 06	38.2 -16.8				
03	223 09.9 +00.2	N 00	05.5 +01.0	190 44.8 -00.4	N 13	31.6 +01.2	229 16.8 -30.4	S 06	21.4 -16.8				
04	238 10.1 +00.2	N 00	06.5 +01.0	205 44.4 -00.4	N 13	32.8 +01.1	243 46.4 -30.3	S 06	04.6 -16.8				
05	253 10.3 +00.2	N 00	07.5 +01.0	220 44.0 -00.4	N 13	33.9 +01.2	258 16.1 -30.3	S 05	47.8 -16.9				
06	268 10.5 +00.2	N 00	08.5 +01.0	235 43.6 -00.4	N 13	35.1 +01.1	272 45.8 -30.2	S 05	30.9 -16.8				
07	283 10.7 +00.2	N 00	09.5 +01.0	250 43.2 -00.4	N 13	36.2 +01.1	287 15.6 -30.2	S 05	14.1 -16.9				
08	298 10.9 +00.1	N 00	10.5 +01.0	265 42.8 -00.4	N 13	37.3 +01.2	301 45.4 -30.2	S 04	57.2 -16.9				
09	313 11.0 +00.2	N 00	11.5 +00.9	280 42.4 -00.4	N 13	38.5 +01.1	316 15.2 -30.1	S 04	40.3 -16.9				
10	328 11.2 +00.2	N 00	12.4 +01.0	295 42.0 -00.4	N 13	39.6 +01.1	330 45.1 -30.0	S 04	23.4 -16.9				
11	343 11.4 +00.2	N 00	13.4 +01.0	310 41.6 -00.4	N 13	40.7 +01.1	345 15.1 -30.0	S 04	06.5 -17.0				
12	358 11.6 +00.2	N 00	14.4 +01.0	325 41.2 -00.4	N 13	41.8 +01.2	359 45.1 -30.0	S 03	49.5 -16.9				
13	13 11.8 +00.2	N 00	15.4 +01.0	340 40.8 -00.4	N 13	43.0 +01.1	14 15.1 -29.9	S 03	32.6 -17.0				
14	28 12.0 +00.2	N 00	16.4 +01.0	355 40.4 -00.4	N 13	44.1 +01.1	28 45.2 -29.9	S 03	15.6 -17.0				
15	43 12.2 +00.1	N 00	17.4 +01.0	10 40.0 -00.4	N 13	45.2 +01.2	43 15.3 -29.9	S 02	58.6 -16.9				
16	58 12.3 +00.2	N 00	18.4 +01.0	25 39.6 -00.4	N 13	46.4 +01.1	57 45.4 -29.8	S 02	41.7 -17.0				
17	73 12.5 +00.2	N 00	19.4 +00.9	40 39.2 -00.4	N 13	47.5 +01.1	72 15.6 -29.8	S 02	24.7 -17.0				
18	88 12.7 +00.2	N 00	20.3 +01.0	55 38.8 -00.4	N 13	48.6 +01.2	86 45.8 -29.7	S 02	07.7 -16.9				
19	103 12.9 +00.2	N 00	21.3 +01.0	70 38.4 -00.4	N 13	49.8 +01.1	101 16.1 -29.7	S 01	50.8 -17.0				
20	118 13.1 +00.2	N 00	22.3 +01.0	85 38.0 -00.4	N 13	50.9 +01.1	115 46.4 -29.7	S 01	33.8 -17.0				
21	133 13.3 +00.1	N 00	23.3 +01.0	100 37.6 -00.4	N 13	52.0 +01.1	130 16.7 -29.6	S 01	16.8 -16.9				
22	148 13.4 +00.2	N 00	24.3 +01.0	115 37.2 -00.4	N 13	53.1 +01.2	144 47.1 -29.7	S 00	59.9 -17.0				
23	163 13.6 +00.2	N 00	25.3 +01.0	130 36.8 -00.4	N 13	54.3 +01.1	159 17.4 -29.5	S 00	42.9 -16.9				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'1 16'1 16'1 16'1 16'1 16'1			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'4 16'4 16'4 16'3 16'3 16'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 60'2 60'1 60'0 60'0 59'9 59'8						
	SHA 360° 360° 360° 359° 359° 359°			SHA 327° 327° 327° 327° 327° 326°			SHA 006° 004° 002° 360° 358° 356°						
	Greenwich Culmination Time: 12:07			Greenwich Culmination Time: 14:17			Greenwich Culmination Time: 12:01						
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	90 37.8 +01.2	N 25	36.4 +00.0	162 38.5 +01.9	N 05	29.2 +00.2	204 13.2 +02.2	S 12	08.9 -00.1				
01	105 39.0 +01.1	N 25	36.4 +00.0	177 40.4 +01.9	N 05	29.4 +00.2	219 15.4 +02.2	S 12	08.8 -00.1				
02	120 40.1 +01.2	N 25	36.4 +00.0	192 42.3 +01.9	N 05	29.6 +00.3	234 17.6 +02.2	S 12	08.7 -00.1				
03	135 41.3 +01.2	N 25	36.4 +00.0	207 44.2 +02.0	N 05	29.9 +00.2	249 19.8 +02.2	S 12	08.6 -00.1				
04	150 42.5 +01.1	N 25	36.4 +00.0	222 46.2 +01.9	N 05	30.1 +00.2	264 22.0 +02.1	S 12	08.5 -00.1				
05	165 43.6 +01.2	N 25	36.4 +00.0	237 48.1 +01.9	N 05	30.3 +00.2	279 24.1 +02.2	S 12	08.4 -00.1				
06	180 44.8 +01.1	N 25	36.4 +00.0	252 50.0 +01.9	N 05	30.5 +00.3	294 26.3 +02.2	S 12	08.3 -00.1				
07	195 45.9 +01.2	N 25	36.4 +00.0	267 51.9 +01.9	N 05	30.8 +00.2	309 28.5 +02.2	S 12	08.2 -00.1				
08	210 47.1 +01.1	N 25	36.4 -00.1	282 53.8 +01.9	N 05	31.0 +00.2	324 30.7 +02.2	S 12	08.1 -00.1				
09	225 48.2 +01.2	N 25	36.3 +00.0	297 55.7 +02.0	N 05	31.2 +00.3	339 32.9 +02.2	S 12	08.0 -00.1				
10	240 49.4 +01.2	N 25	36.3 +00.0	312 57.7 +01.9	N 05	31.5 +00.2	354 35.1 +02.2	S 12	07.9 -00.1				
11	255 50.6 +01.1	N 25	36.3 +00.0	327 59.6 +01.9	N 05	31.7 +00.2	9 37.3 +02.2	S 12	07.8 -00.1				
12	270 51.7 +01.2	N 25	36.3 +00.0	343 01.5 +01.9	N 05	31.9 +00.3	24 39.5 +02.2	S 12	07.7 -00.1				
13	285 52.9 +01.1	N 25	36.3 +00.0	358 03.4 +01.9	N 05	32.2 +00.2	39 41.7 +02.2	S 12	07.6 -00.1				
14	300 54.0 +01.2	N 25	36.3 +00.0	13 05.3 +01.9	N 05	32.4 +00.2	54 43.9 +02.2	S 12	07.5 -00.1				
15	315 55.2 +01.1	N 25	36.3 +00.0	28 07.2 +01.9	N 05	32.6 +00.2	69 46.1 +02.2	S 12	07.4 -00.1				
16	330 56.3 +01.2	N 25	36.3 +00.0	43 09.1 +02.0	N 05	32.8 +00.3	84 48.3 +02.2	S 12	07.3 -00.1				
17	345 57.5 +01.1	N 25	36.3 +00.0	58 11.1 +01.9	N 05	33.1 +00.2	99 50.5 +02.2	S 12	07.2 +00.0				
18	0 58.6 +01.2	N 25	36.3 -00.1	73 13.0 +01.9	N 05	33.3 +00.2	114 52.7 +02.2	S 12	07.2 -00.1				
19	15 59.8 +01.1	N 25	36.2 +00.0	88 14.9 +01.9	N 05	33.5 +00.3	129 54.9 +02.2	S 12	07.1 -00.1				
20	31 00.9 +01.2	N 25	36.2 +00.0	103 16.8 +01.9	N 05	33.8 +00.2	144 57.1 +02.2	S 12	07.0 -00.1				
21	46 02.1 +01.1	N 25	36.2 +00.0	118 18.7 +01.9	N 05	34.0 +00.2	159 59.3 +02.2	S 12	06.9 -00.1				
22	61 03.2 +01.2	N 25	36.2 +00.0	133 20.6 +01.9	N 05	34.2 +00.3	175 01.5 +02.2	S 12	06.8 -00.1				
23	76 04.4 +01.1	N 25	36.2 +00.0	148 22.5 +02.0	N 05	34.5 +00.2	190 03.7 +02.2	S 12	06.7 -00.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 272° 272° 272° 272° 272° 272°			SHA 344° 344° 344° 344° 344° 344°			SHA 026° 026° 026° 026° 026° 026°						
	Greenwich Culmination Time: 17:56			Greenwich Culmination Time: 13:07			Greenwich Culmination Time: 10:21						

UT	Sun				Venus				Moon				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	178	13.8	+00.2	N 00 26.3	+01.0	145	36.4	-00.5	N 13 55.4	+01.1	173	47.9	-29.6	S 00 26.0	-17.0	00
01	193	14.0	+00.2	N 00 27.3	+00.9	160	35.9	-00.4	N 13 56.5	+01.1	188	18.3	-29.5	S 00 09.0	-16.9	01
02	208	14.2	+00.2	N 00 28.2	+01.0	175	35.5	-00.4	N 13 57.6	+01.2	202	48.8	-29.5	N 00 07.9	+16.9	02
03	223	14.4	+00.2	N 00 29.2	+01.0	190	35.1	-00.4	N 13 58.8	+01.1	217	19.3	-29.5	N 00 24.8	+16.9	03
04	238	14.6	+00.1	N 00 30.2	+01.0	205	34.7	-00.4	N 13 59.9	+01.1	231	49.8	-29.5	N 00 41.7	+16.8	04
05	253	14.7	+00.2	N 00 31.2	+01.0	220	34.3	-00.4	N 14 01.0	+01.1	246	20.3	-29.4	N 00 58.5	+16.9	05
06	268	14.9	+00.2	N 00 32.2	+01.0	235	33.9	-00.4	N 14 02.1	+01.1	260	50.9	-29.4	N 01 15.4	+16.8	06
07	283	15.1	+00.2	N 00 33.2	+01.0	250	33.5	-00.4	N 14 03.2	+01.2	275	21.5	-29.4	N 01 32.2	+16.8	07
08	298	15.3	+00.2	N 00 34.2	+01.0	265	33.1	-00.4	N 14 04.4	+01.1	289	52.1	-29.4	N 01 49.0	+16.8	08
09	313	15.5	+00.2	N 00 35.2	+00.9	280	32.7	-00.4	N 14 05.5	+01.1	304	22.7	-29.3	N 02 05.8	+16.8	09
10	328	15.7	+00.2	N 00 36.1	+01.0	295	32.3	-00.4	N 14 06.6	+01.1	318	53.4	-29.4	N 02 22.6	+16.7	10
11	343	15.9	+00.1	N 00 37.1	+01.0	310	31.9	-00.4	N 14 07.7	+01.1	333	24.0	-29.3	N 02 39.3	+16.7	11
12	358	16.0	+00.2	N 00 38.1	+01.0	325	31.5	-00.4	N 14 08.8	+01.2	347	54.7	-29.3	N 02 56.0	+16.7	12
13	13	16.2	+00.2	N 00 39.1	+01.0	340	31.1	-00.4	N 14 10.0	+01.1	2	25.4	-29.3	N 03 12.7	+16.6	13
14	28	16.4	+00.2	N 00 40.1	+01.0	355	30.7	-00.4	N 14 11.1	+01.1	16	56.1	-29.3	N 03 29.3	+16.6	14
15	43	16.6	+00.2	N 00 41.1	+01.0	10	30.3	-00.4	N 14 12.2	+01.1	31	26.8	-29.2	N 03 45.9	+16.6	15
16	58	16.8	+00.2	N 00 42.1	+01.0	25	29.9	-00.5	N 14 13.3	+01.1	45	57.6	-29.3	N 04 02.5	+16.5	16
17	73	17.0	+00.2	N 00 43.1	+00.9	40	29.4	-00.4	N 14 14.4	+01.1	60	28.3	-29.3	N 04 19.0	+16.5	17
18	88	17.2	+00.1	N 00 44.0	+01.0	55	29.0	-00.4	N 14 15.5	+01.1	74	59.0	-29.2	N 04 35.5	+16.5	18
19	103	17.3	+00.2	N 00 45.0	+01.0	70	28.6	-00.4	N 14 16.6	+01.2	89	29.8	-29.2	N 04 52.0	+16.4	19
20	118	17.5	+00.2	N 00 46.0	+01.0	85	28.2	-00.4	N 14 17.8	+01.1	104	00.6	-29.3	N 05 08.4	+16.3	20
21	133	17.7	+00.2	N 00 47.0	+01.0	100	27.8	-00.4	N 14 18.9	+01.1	118	31.3	-29.2	N 05 24.7	+16.4	21
22	148	17.9	+00.2	N 00 48.0	+01.0	115	27.4	-00.4	N 14 20.0	+01.1	133	02.1	-29.2	N 05 41.1	+16.2	22
23	163	18.1	+00.2	N 00 49.0	+01.0	130	27.0	-00.4	N 14 21.1	+01.1	147	32.9	-29.2	N 05 57.3	+16.3	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					
	SD 16'1 16'1 16'1 16'1 16'1 16'1					SD 00'1 00'1 00'1 00'1 00'1 00'1					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 00'1 00'1 00'1 00'1 00'1 00'1					HP 59'7 59'6 59'5 59'4 59'3 59'1					
	SHA 359° 359° 359° 358° 358° 358°					SHA 326° 326° 326° 326° 326° 325°					SHA 353° 351° 349° 347° 345° 343°					
	Greenwich Culmination Time: 12:06				Greenwich Culmination Time: 14:17				Greenwich Culmination Time: 12:49							
UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	91	05.5	+01.2	N 25 36.2	+00.0	163	24.5	+01.9	N 05 34.7	+00.2	205	05.9	+02.2	S 12 06.6	-00.1	00
01	106	06.7	+01.1	N 25 36.2	+00.0	178	26.4	+01.9	N 05 34.9	+00.2	220	08.1	+02.2	S 12 06.5	-00.1	01
02	121	07.8	+01.2	N 25 36.2	-00.1	193	28.3	+01.9	N 05 35.1	+00.3	235	10.3	+02.2	S 12 06.4	-00.1	02
03	136	09.0	+01.1	N 25 36.1	+00.0	208	30.2	+01.9	N 05 35.4	+00.2	250	12.5	+02.2	S 12 06.3	-00.1	03
04	151	10.1	+01.2	N 25 36.1	+00.0	223	32.1	+01.9	N 05 35.6	+00.2	265	14.7	+02.2	S 12 06.2	-00.1	04
05	166	11.3	+01.1	N 25 36.1	+00.0	238	34.0	+01.9	N 05 35.8	+00.3	280	16.9	+02.2	S 12 06.1	-00.1	05
06	181	12.4	+01.2	N 25 36.1	+00.0	253	35.9	+02.0	N 05 36.1	+00.2	295	19.1	+02.2	S 12 06.0	-00.1	06
07	196	13.6	+01.1	N 25 36.1	+00.0	268	37.9	+01.9	N 05 36.3	+00.2	310	21.3	+02.2	S 12 05.9	-00.1	07
08	211	14.7	+01.2	N 25 36.1	+00.0	283	39.8	+01.9	N 05 36.5	+00.3	325	23.5	+02.2	S 12 05.8	-00.1	08
09	226	15.9	+01.1	N 25 36.1	+00.0	298	41.7	+01.9	N 05 36.8	+00.2	340	25.7	+02.2	S 12 05.7	-00.1	09
10	241	17.0	+01.2	N 25 36.1	-00.1	313	43.6	+01.9	N 05 37.0	+00.2	355	27.9	+02.2	S 12 05.6	-00.1	10
11	256	18.2	+01.1	N 25 36.0	+00.0	328	45.5	+01.9	N 05 37.2	+00.2	10	30.1	+02.2	S 12 05.5	+00.0	11
12	271	19.3	+01.2	N 25 36.0	+00.0	343	47.4	+01.9	N 05 37.4	+00.3	25	32.3	+02.2	S 12 05.5	-00.1	12
13	286	20.5	+01.1	N 25 36.0	+00.0	358	49.3	+01.9	N 05 37.7	+00.2	40	34.5	+02.2	S 12 05.4	-00.1	13
14	301	21.6	+01.2	N 25 36.0	+00.0	13	51.2	+02.0	N 05 37.9	+00.2	55	36.7	+02.2	S 12 05.3	-00.1	14
15	316	22.8	+01.1	N 25 36.0	+00.0	28	53.2	+01.9	N 05 38.1	+00.3	70	38.9	+02.2	S 12 05.2	-00.1	15
16	331	23.9	+01.2	N 25 36.0	+00.0	43	55.1	+01.9	N 05 38.4	+00.2	85	41.1	+02.2	S 12 05.1	-00.1	16
17	346	25.1	+01.1	N 25 36.0	-00.1	58	57.0	+01.9	N 05 38.6	+00.2	100	43.3	+02.2	S 12 05.0	-00.1	17
18	1	26.2	+01.2	N 25 35.9	+00.0	73	58.9	+01.9	N 05 38.8	+00.2	115	45.5	+02.2	S 12 04.9	-00.1	18
19	16	27.4	+01.1	N 25 35.9	+00.0	89	00.8	+01.9	N 05 39.0	+00.3	130	47.7	+02.2	S 12 04.8	-00.1	19
20	31	28.5	+01.1	N 25 35.9	+00.0	104	02.7	+01.9	N 05 39.3	+00.2	145	49.9	+02.2	S 12 04.7	-00.1	20
21	46	29.6	+01.2	N 25 35.9	+00.0	119	04.6	+02.0	N 05 39.5	+00.2	160	52.1	+02.2	S 12 04.6	-00.1	21
22	61	30.8	+01.1	N 25 35.9	+00.0	134	06.6	+01.9	N 05 39.7	+00.3	175	54.3	+02.2	S 12 04.5	-00.1	22
23	76	31.9	+01.2	N 25 35.9	-00.1	149	08.5	+01.9	N 05 40.0	+00.2	190	56.5	+02.2	S 12 04.4	-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 00'1 00'1 00'1 00'1 00'1 00'1					SD 00'3 00'3 00'3 00'3 00'3 00'3					SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 272° 272° 272° 272° 271° 271°					SHA 344° 344° 344° 344° 344° 344°					SHA 026° 026° 026° 026° 026° 026°					
	Greenwich Culmination Time: 17:54				Greenwich Culmination Time: 13:04				Greenwich Culmination Time: 10:18							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 18.3 +00.2	N 00	50.0 +01.0	145 26.6 -00.4	N 14	22.2 +01.1	162 03.7 -29.2	N 06	13.6 +16.2	00			
01	193 18.5 +00.1	N 00	51.0 +00.9	160 26.2 -00.4	N 14	23.3 +01.1	176 34.5 -29.2	N 06	29.8 +16.1	01			
02	208 18.6 +00.2	N 00	51.9 +01.0	175 25.8 -00.5	N 14	24.4 +01.1	191 05.3 -29.3	N 06	45.9 +16.1	02			
03	223 18.8 +00.2	N 00	52.9 +01.0	190 25.3 -00.4	N 14	25.5 +01.1	205 36.0 -29.2	N 07	02.0 +16.0	03			
04	238 19.0 +00.2	N 00	53.9 +01.0	205 24.9 -00.4	N 14	26.6 +01.2	220 06.8 -29.2	N 07	18.0 +16.0	04			
05	253 19.2 +00.2	N 00	54.9 +01.0	220 24.5 -00.4	N 14	27.8 +01.1	234 37.6 -29.2	N 07	34.0 +15.9	05			
06	268 19.4 +00.2	N 00	55.9 +01.0	235 24.1 -00.4	N 14	28.9 +01.1	249 08.4 -29.2	N 07	49.9 +15.8	06			
07	283 19.6 +00.2	N 00	56.9 +01.0	250 23.7 -00.4	N 14	30.0 +01.1	263 39.2 -29.3	N 08	05.7 +15.8	07			
08	298 19.8 +00.1	N 00	57.9 +01.0	265 23.3 -00.4	N 14	31.1 +01.1	278 09.9 -29.2	N 08	21.5 +15.8	08			
09	313 19.9 +00.2	N 00	58.9 +00.9	280 22.9 -00.5	N 14	32.2 +01.1	292 40.7 -29.2	N 08	37.3 +15.7	09			
10	328 20.1 +00.2	N 00	59.8 +01.0	295 22.4 -00.4	N 14	33.3 +01.1	307 11.5 -29.3	N 08	53.0 +15.6	10			
11	343 20.3 +00.2	N 01	00.8 +01.0	310 22.0 -00.4	N 14	34.4 +01.1	321 42.2 -29.2	N 09	08.6 +15.5	11			
12	358 20.5 +00.2	N 01	01.8 +01.0	325 21.6 -00.4	N 14	35.5 +01.1	336 13.0 -29.3	N 09	24.1 +15.5	12			
13	13 20.7 +00.2	N 01	02.8 +01.0	340 21.2 -00.4	N 14	36.6 +01.1	350 43.7 -29.3	N 09	39.6 +15.4	13			
14	28 20.9 +00.2	N 01	03.8 +01.0	355 20.8 -00.4	N 14	37.7 +01.1	5 14.4 -29.3	N 09	55.0 +15.4	14			
15	43 21.1 +00.2	N 01	04.8 +01.0	10 20.4 -00.4	N 14	38.8 +01.1	19 45.1 -29.3	N 10	10.4 +15.3	15			
16	58 21.3 +00.1	N 01	05.8 +00.9	25 20.0 -00.5	N 14	39.9 +01.1	34 15.8 -29.3	N 10	25.7 +15.2	16			
17	73 21.4 +00.2	N 01	06.7 +01.0	40 19.5 -00.4	N 14	41.0 +01.1	48 46.5 -29.3	N 10	40.9 +15.1	17			
18	88 21.6 +00.2	N 01	07.7 +01.0	55 19.1 -00.4	N 14	42.1 +01.1	63 17.2 -29.4	N 10	56.0 +15.1	18			
19	103 21.8 +00.2	N 01	08.7 +01.0	70 18.7 -00.4	N 14	43.2 +01.1	77 47.8 -29.3	N 11	11.1 +15.0	19			
20	118 22.0 +00.2	N 01	09.7 +01.0	85 18.3 -00.4	N 14	44.3 +01.1	92 18.5 -29.4	N 11	26.1 +14.9	20			
21	133 22.2 +00.2	N 01	10.7 +01.0	100 17.9 -00.4	N 14	45.4 +01.1	106 49.1 -29.4	N 11	41.0 +14.8	21			
22	148 22.4 +00.2	N 01	11.7 +01.0	115 17.5 -00.5	N 14	46.5 +01.1	121 19.7 -29.4	N 11	55.8 +14.8	22			
23	163 22.6 +00.1	N 01	12.7 +00.9	130 17.0 -00.4	N 14	47.6 +01.1	135 50.3 -29.4	N 12	10.6 +14.7	23			

UT	02	06	10	14	18	22
SD	16'1	16'0	16'0	16'0	16'0	16'0
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	358°	358°	358°	358°	357°	357°

Greenwich Culmination Time: 12:06

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	325°	325°	325°	325°	324°	324°

Greenwich Culmination Time: 14:18

UT	02	06	10	14	18	22
SD	16'1	16'0	16'0	16'0	15'9	15'9
HP	59'0	58'9	58'8	58'6	58'5	58'3
SHA	341°	339°	337°	334°	332°	330°

Greenwich Culmination Time: 13:38

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	91 33.1 +01.1	N 25	35.8 +00.0	164 10.4 +01.9	N 05	40.2 +00.2	205 58.7 +02.2	S 12	04.3 -00.1	00			
01	106 34.2 +01.2	N 25	35.8 +00.0	179 12.3 +01.9	N 05	40.4 +00.3	221 00.9 +02.2	S 12	04.2 -00.1	01			
02	121 35.4 +01.1	N 25	35.8 +00.0	194 14.2 +01.9	N 05	40.7 +00.2	236 03.1 +02.2	S 12	04.1 -00.1	02			
03	136 36.5 +01.1	N 25	35.8 +00.0	209 16.1 +01.9	N 05	40.9 +00.2	251 05.3 +02.2	S 12	04.0 +00.0	03			
04	151 37.6 +01.2	N 25	35.8 +00.0	224 18.0 +01.9	N 05	41.1 +00.2	266 07.5 +02.2	S 12	04.0 -00.1	04			
05	166 38.8 +01.1	N 25	35.8 -00.1	239 19.9 +02.0	N 05	41.3 +00.3	281 09.7 +02.2	S 12	03.9 -00.1	05			
06	181 39.9 +01.2	N 25	35.7 +00.0	254 21.9 +01.9	N 05	41.6 +00.2	296 11.9 +02.2	S 12	03.8 -00.1	06			
07	196 41.1 +01.1	N 25	35.7 +00.0	269 23.8 +01.9	N 05	41.8 +00.2	311 14.1 +02.2	S 12	03.7 -00.1	07			
08	211 42.2 +01.1	N 25	35.7 +00.0	284 25.7 +01.9	N 05	42.0 +00.3	326 16.3 +02.2	S 12	03.6 -00.1	08			
09	226 43.3 +01.2	N 25	35.7 +00.0	299 27.6 +01.9	N 05	42.3 +00.2	341 18.5 +02.2	S 12	03.5 -00.1	09			
10	241 44.5 +01.1	N 25	35.7 +00.0	314 29.5 +01.9	N 05	42.5 +00.2	356 20.7 +02.2	S 12	03.4 -00.1	10			
11	256 45.6 +01.2	N 25	35.7 -00.1	329 31.4 +01.9	N 05	42.7 +00.3	11 22.9 +02.2	S 12	03.3 -00.1	11			
12	271 46.8 +01.1	N 25	35.6 +00.0	344 33.3 +01.9	N 05	43.0 +00.2	26 25.1 +02.2	S 12	03.2 -00.1	12			
13	286 47.9 +01.1	N 25	35.6 +00.0	359 35.2 +02.0	N 05	43.2 +00.2	41 27.3 +02.2	S 12	03.1 -00.1	13			
14	301 49.0 +01.2	N 25	35.6 +00.0	14 37.2 +01.9	N 05	43.4 +00.2	56 29.5 +02.2	S 12	03.0 -00.1	14			
15	316 50.2 +01.1	N 25	35.6 +00.0	29 39.1 +01.9	N 05	43.6 +00.3	71 31.7 +02.2	S 12	02.9 -00.1	15			
16	331 51.3 +01.2	N 25	35.6 -00.1	44 41.0 +01.9	N 05	43.9 +00.2	86 33.9 +02.2	S 12	02.8 -00.1	16			
17	346 52.5 +01.1	N 25	35.5 +00.0	59 42.9 +01.9	N 05	44.1 +00.2	101 36.1 +02.2	S 12	02.7 -00.1	17			
18	1 53.6 +01.1	N 25	35.5 +00.0	74 44.8 +01.9	N 05	44.3 +00.3	116 38.3 +02.2	S 12	02.6 -00.1	18			
19	16 54.7 +01.2	N 25	35.5 +00.0	89 46.7 +01.9	N 05	44.6 +00.2	131 40.5 +02.2	S 12	02.5 +00.0	19			
20	31 55.9 +01.1	N 25	35.5 +00.0	104 48.6 +01.9	N 05	44.8 +00.2	146 42.7 +02.2	S 12	02.5 -00.1	20			
21	46 57.0 +01.1	N 25	35.5 -00.1	119 50.5 +02.0	N 05	45.0 +00.3	161 44.9 +02.2	S 12	02.4 -00.1	21			
22	61 58.1 +01.2	N 25	35.4 +00.0	134 52.5 +01.9	N 05	45.3 +00.2	176 47.1 +02.2	S 12	02.3 -00.1	22			
23	76 59.3 +01.1	N 25	35.4 +00.0	149 54.4 +01.9	N 05	45.5 +00.2	191 49.3 +02.2	S 12	02.2 -00.1	23			

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	271°	271°	271°	271°	271°	271°

Greenwich Culmination Time: 17:52

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	344°	344°	344°	344°	344°	344°

Greenwich Culmination Time: 13:01

UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	026°	026°	026°	026°	026°	026°

Greenwich Culmination Time: 10:14

Sun					Venus					Moon					A: 09%
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "				
00	178 22.7 +00.2		N 01 13.6 +01.0		145 16.6 -00.4		N 14 48.7 +01.1		150 20.9 -29.5		N 12 25.3 +14.6		00		
01	193 22.9 +00.2		N 01 14.6 +01.0		160 16.2 -00.4		N 14 49.8 +01.1		164 51.4 -29.4		N 12 39.9 +14.5		01		
02	208 23.1 +00.2		N 01 15.6 +01.0		175 15.8 -00.4		N 14 50.9 +01.1		179 22.0 -29.5		N 12 54.4 +14.4		02		
03	223 23.3 +00.2		N 01 16.6 +01.0		190 15.4 -00.5		N 14 52.0 +01.1		193 52.5 -29.5		N 13 08.8 +14.4		03		
04	238 23.5 +00.2		N 01 17.6 +01.0		205 14.9 -00.4		N 14 53.1 +01.1		208 23.0 -29.6		N 13 23.2 +14.2		04		
05	253 23.7 +00.2		N 01 18.6 +01.0		220 14.5 -00.4		N 14 54.2 +01.1		222 53.4 -29.5		N 13 37.4 +14.2		05		
06	268 23.9 +00.2		N 01 19.6 +00.9		235 14.1 -00.4		N 14 55.3 +01.1		237 23.9 -29.6		N 13 51.6 +14.1		06		
07	283 24.1 +00.1		N 01 20.5 +01.0		250 13.7 -00.4		N 14 56.4 +01.0		251 54.3 -29.6		N 14 05.7 +14.0		07		
08	298 24.2 +00.2		N 01 21.5 +01.0		265 13.3 -00.5		N 14 57.4 +01.1		266 24.7 -29.6		N 14 19.7 +13.9		08		
09	313 24.4 +00.2		N 01 22.5 +01.0		280 12.8 -00.4		N 14 58.5 +01.1		280 55.1 -29.7		N 14 33.6 +13.8		09		
10	328 24.6 +00.2		N 01 23.5 +01.0		295 12.4 -00.4		N 14 59.6 +01.1		295 25.4 -29.6		N 14 47.4 +13.8		10		
11	343 24.8 +00.2		N 01 24.5 +01.0		310 12.0 -00.4		N 15 00.7 +01.1		309 55.8 -29.7		N 15 01.2 +13.6		11		
12	358 25.0 +00.2		N 01 25.5 +01.0		325 11.6 -00.5		N 15 01.8 +01.1		324 26.1 -29.8		N 15 14.8 +13.5		12		
13	13 25.2 +00.2		N 01 26.5 +00.9		340 11.1 -00.4		N 15 02.9 +01.1		338 56.3 -29.7		N 15 28.3 +13.5		13		
14	28 25.4 +00.2		N 01 27.4 +01.0		355 10.7 -00.4		N 15 04.0 +01.1		353 26.6 -29.8		N 15 41.8 +13.3		14		
15	43 25.6 +00.1		N 01 28.4 +01.0		10 10.3 -00.4		N 15 05.1 +01.1		7 56.8 -29.8		N 15 55.1 +13.3		15		
16	58 25.7 +00.2		N 01 29.4 +01.0		25 09.9 -00.5		N 15 06.2 +01.0		22 27.0 -29.9		N 16 08.4 +13.2		16		
17	73 25.9 +00.2		N 01 30.4 +01.0		40 09.4 -00.4		N 15 07.2 +01.1		36 57.1 -29.8		N 16 21.6 +13.0		17		
18	88 26.1 +00.2		N 01 31.4 +01.0		55 09.0 -00.4		N 15 08.3 +01.1		51 27.3 -29.9		N 16 34.6 +13.0		18		
19	103 26.3 +00.2		N 01 32.4 +00.9		70 08.6 -00.4		N 15 09.4 +01.1		65 57.4 -29.9		N 16 47.6 +12.8		19		
20	118 26.5 +00.2		N 01 33.3 +01.0		85 08.2 -00.5		N 15 10.5 +01.1		80 27.5 -30.0		N 17 00.4 +12.8		20		
21	133 26.7 +00.2		N 01 34.3 +01.0		100 07.7 -00.4		N 15 11.6 +01.1		94 57.5 -30.0		N 17 13.2 +12.6		21		
22	148 26.9 +00.2		N 01 35.3 +01.0		115 07.3 -00.4		N 15 12.7 +01.1		109 27.5 -30.0		N 17 25.8 +12.6		22		
23	163 27.1 +00.1		N 01 36.3 +01.0		130 06.9 -00.4		N 15 13.8 +01.0		123 57.5 -30.1		N 17 38.4 +12.4		23		
UT	02 06 10 14 18 22				UT	02 06 10 14 18 22			UT	02 06 10 14 18 22					
SD	16'0 16'0 16'0 16'0 16'0 16'0				SD	00'1 00'1 00'1 00'1 00'1 00'1			SD	15'9 15'8 15'8 15'7 15'7 15'7					
HP	00'1 00'1 00'1 00'1 00'1 00'1				HP	00'1 00'1 00'1 00'1 00'1 00'1			HP	58'2 58'1 57'9 57'8 57'6 57'5					
SHA	357° 357° 357° 357° 356° 356°				SHA	324° 324° 324° 323° 323° 323°			SHA	328° 326° 324° 322° 320° 317°					
Greenwich Culmination Time: 12:06					Greenwich Culmination Time: 14:19					Greenwich Culmination Time: 14:27					

Mars					Jupiter					Saturn					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT		
	° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "				
00	92 00.4 +01.1		N 25 35.4 +00.0		164 56.3 +01.9		N 05 45.7 +00.2		206 51.5 +02.2		S 12 02.1 -00.1		00		
01	107 01.5 +01.2		N 25 35.4 +00.0		179 58.2 +01.9		N 05 45.9 +00.3		221 53.7 +02.2		S 12 02.0 -00.1		01		
02	122 02.7 +01.1		N 25 35.4 -00.1		195 00.1 +01.9		N 05 46.2 +00.2		236 55.9 +02.2		S 12 01.9 -00.1		02		
03	137 03.8 +01.2		N 25 35.3 +00.0		210 02.0 +01.9		N 05 46.4 +00.2		251 58.1 +02.2		S 12 01.8 -00.1		03		
04	152 05.0 +01.1		N 25 35.3 +00.0		225 03.9 +01.9		N 05 46.6 +00.3		267 00.3 +02.2		S 12 01.7 -00.1		04		
05	167 06.1 +01.1		N 25 35.3 +00.0		240 05.8 +01.9		N 05 46.9 +00.2		282 02.5 +02.2		S 12 01.6 -00.1		05		
06	182 07.2 +01.2		N 25 35.3 +00.0		255 07.7 +02.0		N 05 47.1 +00.2		297 04.7 +02.2		S 12 01.5 -00.1		06		
07	197 08.4 +01.1		N 25 35.3 -00.1		270 09.7 +01.9		N 05 47.3 +00.3		312 06.9 +02.2		S 12 01.4 -00.1		07		
08	212 09.5 +01.1		N 25 35.2 +00.0		285 11.6 +01.9		N 05 47.6 +00.2		327 09.1 +02.2		S 12 01.3 -00.1		08		
09	227 10.6 +01.2		N 25 35.2 +00.0		300 13.5 +01.9		N 05 47.8 +00.2		342 11.3 +02.2		S 12 01.2 -00.1		09		
10	242 11.8 +01.1		N 25 35.2 +00.0		315 15.4 +01.9		N 05 48.0 +00.2		357 13.5 +02.2		S 12 01.1 +00.0		10		
11	257 12.9 +01.1		N 25 35.2 -00.1		330 17.3 +01.9		N 05 48.2 +00.3		12 15.7 +02.2		S 12 01.1 -00.1		11		
12	272 14.0 +01.1		N 25 35.1 +00.0		345 19.2 +01.9		N 05 48.5 +00.2		27 17.9 +02.2		S 12 01.0 -00.1		12		
13	287 15.1 +01.2		N 25 35.1 +00.0		0 21.1 +01.9		N 05 48.7 +00.2		42 20.1 +02.2		S 12 00.9 -00.1		13		
14	302 16.3 +01.1		N 25 35.1 +00.0		15 23.0 +01.9		N 05 48.9 +00.3		57 22.3 +02.2		S 12 00.8 -00.1		14		
15	317 17.4 +01.1		N 25 35.1 +00.0		30 24.9 +02.0		N 05 49.2 +00.2		72 24.5 +02.2		S 12 00.7 -00.1		15		
16	332 18.5 +01.2		N 25 35.1 -00.1		45 26.9 +01.9		N 05 49.4 +00.2		87 26.7 +02.2		S 12 00.6 -00.1		16		
17	347 19.7 +01.1		N 25 35.0 +00.0		60 28.8 +01.9		N 05 49.6 +00.2		102 28.9 +02.2		S 12 00.5 -00.1		17		
18	2 20.8 +01.1		N 25 35.0 +00.0		75 30.7 +01.9		N 05 49.8 +00.3		117 31.1 +02.2		S 12 00.4 -00.1		18		
19	17 21.9 +01.2		N 25 35.0 +00.0		90 32.6 +01.9		N 05 50.1 +00.2		132 33.3 +02.2		S 12 00.3 -00.1		19		
20	32 23.1 +01.1		N 25 35.0 -00.1		105 34.5 +01.9		N 05 50.3 +00.2		147 35.5 +02.2		S 12 00.2 -00.1		20		
21	47 24.2 +01.1		N 25 34.9 +00.0		120 36.4 +01.9		N 05 50.5 +00.3		162 37.7 +02.2		S 12 00.1 -00.1		21		
22	62 25.3 +01.1		N 25 34.9 +00.0		135 38.3 +01.9		N 05 50.8 +00.2		177 39.9 +02.2		S 12 00.0 -00.1		22		
23	77 26.4 +01.2		N 25 34.9 +00.0		150 40.2 +01.9		N 05 51.0 +00.2		192 42.1 +02.2		S 11 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	00'1 00'1 00'1 00'1 00'1 00'1				SD	00'3 00'3 00'3 00'3 00'3 00'3			SD	00'1 00'1 00'1 00'1 00'1 00'1					
HP	00'1 00'1 00'1 00'1 00'1 00'1				HP	00'0 00'0 00'0 00'0 00'0 00'0			HP	00'0 00'0 00'0 00'0 00'0 00'0					
SHA	271° 271° 271° 270° 270° 270°				SHA	344° 344° 344° 344° 344° 344°			SHA	026° 026° 026° 026° 026° 026°					
Greenwich Culmination Time: 17:50					Greenwich Culmination Time: 12:58					Greenwich Culmination Time: 10:11					

Table with columns for planet names (Sun, Venus, Moon, Mars, Jupiter, Saturn) and rows for Universal Time (UT) from 00 to 23. Each planet section includes columns for GHA, ddGHA, Dec, and dDec, with a summary row at the bottom of each section.

Sun					Venus					Moon					A: 16%	
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT			
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				
00	178	31.7	+00.2	N 02 00.9	+01.0	144	56.1	-00.4	N 15 40.6	+01.1	126	16.1	-30.8	N 22 15.5	+09.5	00
01	193	31.9	+00.2	N 02 01.9	+00.9	159	55.7	-00.5	N 15 41.7	+01.0	140	45.3	-31.0	N 22 25.0	+09.4	01
02	208	32.1	+00.2	N 02 02.8	+01.0	174	55.2	-00.4	N 15 42.7	+01.1	155	14.3	-30.9	N 22 34.4	+09.3	02
03	223	32.3	+00.2	N 02 03.8	+01.0	189	54.8	-00.4	N 15 43.8	+01.1	169	43.4	-31.0	N 22 43.7	+09.1	03
04	238	32.5	+00.2	N 02 04.8	+01.0	204	54.4	-00.5	N 15 44.9	+01.0	184	12.4	-31.0	N 22 52.8	+09.1	04
05	253	32.7	+00.2	N 02 05.8	+01.0	219	53.9	-00.4	N 15 45.9	+01.1	198	41.4	-31.1	N 23 01.9	+08.9	05
06	268	32.9	+00.2	N 02 06.8	+01.0	234	53.5	-00.4	N 15 47.0	+01.1	213	10.3	-31.1	N 23 10.8	+08.7	06
07	283	33.1	+00.2	N 02 07.8	+00.9	249	53.1	-00.5	N 15 48.1	+01.0	227	39.2	-31.1	N 23 19.5	+08.6	07
08	298	33.3	+00.1	N 02 08.7	+01.0	264	52.6	-00.4	N 15 49.1	+01.1	242	08.1	-31.1	N 23 28.1	+08.5	08
09	313	33.4	+00.2	N 02 09.7	+01.0	279	52.2	-00.4	N 15 50.2	+01.0	256	37.0	-31.2	N 23 36.6	+08.4	09
10	328	33.6	+00.2	N 02 10.7	+01.0	294	51.8	-00.5	N 15 51.2	+01.1	271	05.8	-31.2	N 23 45.0	+08.3	10
11	343	33.8	+00.2	N 02 11.7	+01.0	309	51.3	-00.4	N 15 52.3	+01.1	285	34.6	-31.3	N 23 53.3	+08.1	11
12	358	34.0	+00.2	N 02 12.7	+00.9	324	50.9	-00.5	N 15 53.4	+01.0	300	03.3	-31.2	N 24 01.4	+07.9	12
13	13	34.2	+00.2	N 02 13.6	+01.0	339	50.4	-00.4	N 15 54.4	+01.1	314	32.1	-31.3	N 24 09.3	+07.9	13
14	28	34.4	+00.2	N 02 14.6	+01.0	354	50.0	-00.4	N 15 55.5	+01.0	329	00.8	-31.4	N 24 17.2	+07.7	14
15	43	34.6	+00.2	N 02 15.6	+01.0	9	49.6	-00.5	N 15 56.5	+01.1	343	29.4	-31.3	N 24 24.9	+07.6	15
16	58	34.8	+00.1	N 02 16.6	+01.0	24	49.1	-00.4	N 15 57.6	+01.0	357	58.1	-31.4	N 24 32.5	+07.4	16
17	73	34.9	+00.2	N 02 17.6	+01.0	39	48.7	-00.5	N 15 58.6	+01.1	12	26.7	-31.4	N 24 39.9	+07.3	17
18	88	35.1	+00.2	N 02 18.6	+00.9	54	48.2	-00.4	N 15 59.7	+01.1	26	55.3	-31.4	N 24 47.2	+07.2	18
19	103	35.3	+00.2	N 02 19.5	+01.0	69	47.8	-00.5	N 16 00.8	+01.0	41	23.9	-31.5	N 24 54.4	+07.0	19
20	118	35.5	+00.2	N 02 20.5	+01.0	84	47.3	-00.4	N 16 01.8	+01.1	55	52.4	-31.4	N 25 01.4	+06.9	20
21	133	35.7	+00.2	N 02 21.5	+01.0	99	46.9	-00.4	N 16 02.9	+01.0	70	21.0	-31.5	N 25 08.3	+06.8	21
22	148	35.9	+00.2	N 02 22.5	+01.0	114	46.5	-00.5	N 16 03.9	+01.1	84	49.5	-31.6	N 25 15.1	+06.6	22
23	163	36.1	+00.2	N 02 23.5	+00.9	129	46.0	-00.4	N 16 05.0	+01.0	99	17.9	-31.5	N 25 21.7	+06.5	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 355° 355° 355° 355° 355° 355°															
	Greenwich Culmination Time: 12:05															
	UT 02 06 10 14 18 22															
	SD 00'1 00'1 00'1 00'1 00'1 00'1															
	HP 00'1 00'1 00'1 00'1 00'1 00'1															
	SHA 322° 321° 321° 321° 321° 321°															
	Greenwich Culmination Time: 14:20															
	UT 02 06 10 14 18 22															
	SD 15'4 15'4 15'3 15'3 15'3 15'2															
	HP 56'5 56'4 56'2 56'1 56'0 55'9															
	SHA 302° 300° 298° 295° 293° 291°															
	Greenwich Culmination Time: 16:08															
Mars					Jupiter					Saturn						
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT			
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				
00	92	54.6	+01.1	N 25 34.2	+00.0	166	28.0	+01.9	N 05 56.7	+00.3	208	37.2	+02.2	S 11 57.6	-00.1	00
01	107	55.7	+01.1	N 25 34.2	+00.0	181	29.9	+01.9	N 05 57.0	+00.2	223	39.4	+02.2	S 11 57.5	-00.1	01
02	122	56.8	+01.1	N 25 34.2	-00.1	196	31.8	+01.9	N 05 57.2	+00.2	238	41.6	+02.2	S 11 57.4	+00.0	02
03	137	57.9	+01.1	N 25 34.1	+00.0	211	33.7	+01.9	N 05 57.4	+00.3	253	43.8	+02.2	S 11 57.4	-00.1	03
04	152	59.0	+01.2	N 25 34.1	+00.0	226	35.6	+01.9	N 05 57.7	+00.2	268	46.0	+02.2	S 11 57.3	-00.1	04
05	168	00.2	+01.1	N 25 34.1	-00.1	241	37.5	+02.0	N 05 57.9	+00.2	283	48.2	+02.2	S 11 57.2	-00.1	05
06	183	01.3	+01.1	N 25 34.0	+00.0	256	39.5	+01.9	N 05 58.1	+00.3	298	50.4	+02.2	S 11 57.1	-00.1	06
07	198	02.4	+01.1	N 25 34.0	+00.0	271	41.4	+01.9	N 05 58.4	+00.2	313	52.6	+02.2	S 11 57.0	-00.1	07
08	213	03.5	+01.1	N 25 34.0	-00.1	286	43.3	+01.9	N 05 58.6	+00.2	328	54.8	+02.3	S 11 56.9	-00.1	08
09	228	04.6	+01.2	N 25 33.9	+00.0	301	45.2	+01.9	N 05 58.8	+00.2	343	57.1	+02.2	S 11 56.8	-00.1	09
10	243	05.8	+01.1	N 25 33.9	+00.0	316	47.1	+01.9	N 05 59.0	+00.3	358	59.3	+02.2	S 11 56.7	-00.1	10
11	258	06.9	+01.1	N 25 33.9	+00.0	331	49.0	+01.9	N 05 59.3	+00.2	14	01.5	+02.2	S 11 56.6	-00.1	11
12	273	08.0	+01.1	N 25 33.9	-00.1	346	50.9	+01.9	N 05 59.5	+00.2	29	03.7	+02.2	S 11 56.5	-00.1	12
13	288	09.1	+01.1	N 25 33.8	+00.0	1	52.8	+01.9	N 05 59.7	+00.3	44	05.9	+02.2	S 11 56.4	-00.1	13
14	303	10.2	+01.2	N 25 33.8	+00.0	16	54.7	+01.9	N 05 60.0	+00.2	59	08.1	+02.2	S 11 56.3	+00.0	14
15	318	11.4	+01.1	N 25 33.8	-00.1	31	56.6	+01.9	N 06 00.2	+00.2	74	10.3	+02.2	S 11 56.3	-00.1	15
16	333	12.5	+01.1	N 25 33.7	+00.0	46	58.5	+02.0	N 06 00.4	+00.2	89	12.5	+02.2	S 11 56.2	-00.1	16
17	348	13.6	+01.1	N 25 33.7	+00.0	62	00.5	+01.9	N 06 00.6	+00.3	104	14.7	+02.2	S 11 56.1	-00.1	17
18	3	14.7	+01.1	N 25 33.7	-00.1	77	02.4	+01.9	N 06 00.9	+00.2	119	16.9	+02.2	S 11 56.0	-00.1	18
19	18	15.8	+01.1	N 25 33.6	+00.0	92	04.3	+01.9	N 06 01.1	+00.2	134	19.1	+02.2	S 11 55.9	-00.1	19
20	33	16.9	+01.1	N 25 33.6	+00.0	107	06.2	+01.9	N 06 01.3	+00.3	149	21.3	+02.2	S 11 55.8	-00.1	20
21	48	18.0	+01.2	N 25 33.6	-00.1	122	08.1	+01.9	N 06 01.6	+00.2	164	23.5	+02.2	S 11 55.7	-00.1	21
22	63	19.2	+01.1	N 25 33.5	+00.0	137	10.0	+01.9	N 06 01.8	+00.2	179	25.7	+02.2	S 11 55.6	-00.1	22
23	78	20.3	+01.1	N 25 33.5	+00.0	152	11.9	+01.9	N 06 02.0	+00.3	194	27.9	+02.2	S 11 55.5	-00.1	23
	UT 02 06 10 14 18 22															
	SD 00'1 00'1 00'1 00'1 00'1 00'1															
	HP 00'0 00'0 00'0 00'0 00'0 00'0															
	SHA 270° 270° 270° 269° 269° 269°															
	Greenwich Culmination Time: 17:47															
	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 343° 343° 343° 343° 343° 343°															
	Greenwich Culmination Time: 12:52															
	UT 02 06 10 14 18 22															
	SD 00'1 00'1 00'1 00'1 00'1 00'1															
	HP 00'0 00'0 00'0 00'0 00'0 00'0															
	SHA 025° 025° 025° 025° 025° 025°															
	Greenwich Culmination Time: 10:04															

Sun					Venus					Moon					A: 19%					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "									
00	178 36.3 +00.1		N 02 24.4 +01.0		144 45.6 -00.5		N 16 06.0 +01.1		113 46.4 -31.6		N 25 28.2 +06.3		00							
01	193 36.4 +00.2		N 02 25.4 +01.0		159 45.1 -00.4		N 16 07.1 +01.0		128 14.8 -31.6		N 25 34.5 +06.2		01							
02	208 36.6 +00.2		N 02 26.4 +01.0		174 44.7 -00.5		N 16 08.1 +01.1		142 43.2 -31.6		N 25 40.7 +06.1		02							
03	223 36.8 +00.2		N 02 27.4 +01.0		189 44.2 -00.4		N 16 09.2 +01.0		157 11.6 -31.6		N 25 46.8 +05.9		03							
04	238 37.0 +00.2		N 02 28.4 +00.9		204 43.8 -00.4		N 16 10.2 +01.1		171 40.0 -31.7		N 25 52.7 +05.8		04							
05	253 37.2 +00.2		N 02 29.3 +01.0		219 43.4 -00.5		N 16 11.3 +01.0		186 08.3 -31.6		N 25 58.5 +05.7		05							
06	268 37.4 +00.2		N 02 30.3 +01.0		234 42.9 -00.4		N 16 12.3 +01.1		200 36.7 -31.7		N 26 04.2 +05.5		06							
07	283 37.6 +00.2		N 02 31.3 +01.0		249 42.5 -00.5		N 16 13.4 +01.0		215 05.0 -31.7		N 26 09.7 +05.3		07							
08	298 37.8 +00.2		N 02 32.3 +01.0		264 42.0 -00.4		N 16 14.4 +01.0		229 33.3 -31.7		N 26 15.0 +05.3		08							
09	313 38.0 +00.1		N 02 33.3 +00.9		279 41.6 -00.5		N 16 15.4 +01.1		244 01.6 -31.8		N 26 20.3 +05.1		09							
10	328 38.1 +00.2		N 02 34.2 +01.0		294 41.1 -00.4		N 16 16.5 +01.0		258 29.8 -31.7		N 26 25.4 +04.9		10							
11	343 38.3 +00.2		N 02 35.2 +01.0		309 40.7 -00.5		N 16 17.5 +01.1		272 58.1 -31.8		N 26 30.3 +04.8		11							
12	358 38.5 +00.2		N 02 36.2 +01.0		324 40.2 -00.4		N 16 18.6 +01.0		287 26.3 -31.7		N 26 35.1 +04.7		12							
13	13 38.7 +00.2		N 02 37.2 +01.0		339 39.8 -00.5		N 16 19.6 +01.1		301 54.6 -31.8		N 26 39.8 +04.5		13							
14	28 38.9 +00.2		N 02 38.2 +00.9		354 39.3 -00.4		N 16 20.7 +01.0		316 22.8 -31.8		N 26 44.3 +04.4		14							
15	43 39.1 +00.2		N 02 39.1 +01.0		9 38.9 -00.5		N 16 21.7 +01.0		330 51.0 -31.8		N 26 48.7 +04.2		15							
16	58 39.3 +00.2		N 02 40.1 +01.0		24 38.4 -00.4		N 16 22.7 +01.1		345 19.2 -31.8		N 26 52.9 +04.1		16							
17	73 39.5 +00.1		N 02 41.1 +01.0		39 38.0 -00.5		N 16 23.8 +01.0		359 47.4 -31.8		N 26 57.0 +04.0		17							
18	88 39.6 +00.2		N 02 42.1 +00.9		54 37.5 -00.4		N 16 24.8 +01.1		14 15.6 -31.8		N 27 01.0 +03.8		18							
19	103 39.8 +00.2		N 02 43.0 +01.0		69 37.1 -00.5		N 16 25.9 +01.0		28 43.8 -31.8		N 27 04.8 +03.7		19							
20	118 40.0 +00.2		N 02 44.0 +01.0		84 36.6 -00.4		N 16 26.9 +01.0		43 12.0 -31.9		N 27 08.5 +03.5		20							
21	133 40.2 +00.2		N 02 45.0 +01.0		99 36.2 -00.5		N 16 27.9 +01.1		57 40.1 -31.8		N 27 12.0 +03.4		21							
22	148 40.4 +00.2		N 02 46.0 +01.0		114 35.7 -00.4		N 16 29.0 +01.0		72 08.3 -31.8		N 27 15.4 +03.3		22							
23	163 40.6 +00.2		N 02 47.0 +00.9		129 35.3 -00.5		N 16 30.0 +01.0		86 36.5 -31.9		N 27 18.7 +03.1		23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	16'0	16'0	16'0	16'0	16'0	16'0	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	15'2	15'2	15'1	15'1	15'1	15'0
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	55'7	55'6	55'5	55'4	55'3	55'2
SHA	354°	354°	354°	354°	354°	354°	SHA	320°	320°	320°	320°	320°	320°	SHA	288°	286°	284°	282°	279°	277°
Greenwich Culmination Time: 12:05							Greenwich Culmination Time: 14:21							Greenwich Culmination Time: 17:00						

Mars					Jupiter					Saturn					UT					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "		° / ' / "									
00	93 21.4 +01.1		N 25 33.5 -00.1		167 13.8 +01.9		N 06 02.3 +00.2		209 30.1 +02.2		S 11 55.4 -00.1		00							
01	108 22.5 +01.1		N 25 33.4 +00.0		182 15.7 +01.9		N 06 02.5 +00.2		224 32.3 +02.3		S 11 55.3 -00.1		01							
02	123 23.6 +01.1		N 25 33.4 +00.0		197 17.6 +01.9		N 06 02.7 +00.2		239 34.6 +02.2		S 11 55.2 +00.0		02							
03	138 24.7 +01.1		N 25 33.4 -00.1		212 19.5 +02.0		N 06 02.9 +00.3		254 36.8 +02.2		S 11 55.2 -00.1		03							
04	153 25.8 +01.2		N 25 33.3 +00.0		227 21.5 +01.9		N 06 03.2 +00.2		269 39.0 +02.2		S 11 55.1 -00.1		04							
05	168 27.0 +01.1		N 25 33.3 +00.0		242 23.4 +01.9		N 06 03.4 +00.2		284 41.2 +02.2		S 11 55.0 -00.1		05							
06	183 28.1 +01.1		N 25 33.3 -00.1		257 25.3 +01.9		N 06 03.6 +00.3		299 43.4 +02.2		S 11 54.9 -00.1		06							
07	198 29.2 +01.1		N 25 33.2 +00.0		272 27.2 +01.9		N 06 03.9 +00.2		314 45.6 +02.2		S 11 54.8 -00.1		07							
08	213 30.3 +01.1		N 25 33.2 +00.0		287 29.1 +01.9		N 06 04.1 +00.2		329 47.8 +02.2		S 11 54.7 -00.1		08							
09	228 31.4 +01.1		N 25 33.2 -00.1		302 31.0 +01.9		N 06 04.3 +00.3		344 50.0 +02.2		S 11 54.6 -00.1		09							
10	243 32.5 +01.1		N 25 33.1 +00.0		317 32.9 +01.9		N 06 04.6 +00.2		359 52.2 +02.2		S 11 54.5 -00.1		10							
11	258 33.6 +01.1		N 25 33.1 -00.1		332 34.8 +01.9		N 06 04.8 +00.2		14 54.4 +02.2		S 11 54.4 -00.1		11							
12	273 34.7 +01.2		N 25 33.0 +00.0		347 36.7 +01.9		N 06 05.0 +00.2		29 56.6 +02.2		S 11 54.3 -00.1		12							
13	288 35.9 +01.1		N 25 33.0 +00.0		2 38.6 +01.9		N 06 05.2 +00.3		44 58.8 +02.2		S 11 54.2 -00.1		13							
14	303 37.0 +01.1		N 25 33.0 -00.1		17 40.5 +01.9		N 06 05.5 +00.2		60 01.0 +02.2		S 11 54.1 +00.0		14							
15	318 38.1 +01.1		N 25 32.9 +00.0		32 42.4 +02.0		N 06 05.7 +00.2		75 03.2 +02.2		S 11 54.1 -00.1		15							
16	333 39.2 +01.1		N 25 32.9 +00.0		47 44.4 +01.9		N 06 05.9 +00.3		90 05.4 +02.3		S 11 54.0 -00.1		16							
17	348 40.3 +01.1		N 25 32.9 -00.1		62 46.3 +01.9		N 06 06.2 +00.2		105 07.7 +02.2		S 11 53.9 -00.1		17							
18	3 41.4 +01.1		N 25 32.8 +00.0		77 48.2 +01.9		N 06 06.4 +00.2		120 09.9 +02.2		S 11 53.8 -00.1		18							
19	18 42.5 +01.1		N 25 32.8 +00.0		92 50.1 +01.9		N 06 06.6 +00.3		135 12.1 +02.2		S 11 53.7 -00.1		19							
20	33 43.6 +01.1		N 25 32.8 -00.1		107 52.0 +01.9		N 06 06.9 +00.2		150 14.3 +02.2		S 11 53.6 -00.1		20							
21	48 44.7 +01.1		N 25 32.7 +00.0		122 53.9 +01.9		N 06 07.1 +00.2		165 16.5 +02.2		S 11 53.5 -00.1		21							
22	63 45.8 +01.2		N 25 32.7 -00.1		137 55.8 +01.9		N 06 07.3 +00.2		180 18.7 +02.2		S 11 53.4 -00.1		22							
23	78 47.0 +01.1		N 25 32.6 +00.0		152 57.7 +01.9		N 06 07.5 +00.3		195 20.9 +02.2		S 11 53.3 -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	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	269°	269°	269°	269°	269°	269°	SHA	343°	343°	343°	343°	343°	343°	SHA	025°	025°	025°	025°	025°	025°
Greenwich Culmination Time: 17:45							Greenwich Culmination Time: 12:49							Greenwich Culmination Time: 10:00						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 40.8 +00.2	N 02 47.9 +01.0	144 34.8 -00.4	N 16 31.0 +01.1	101 04.6 -31.8	N 27 21.8 +02.9	00						
01	193 41.0 +00.2	N 02 48.9 +01.0	159 34.4 -00.5	N 16 32.1 +01.0	115 32.8 -31.8	N 27 24.7 +02.9	01						
02	208 41.2 +00.1	N 02 49.9 +01.0	174 33.9 -00.4	N 16 33.1 +01.0	130 01.0 -31.9	N 27 27.6 +02.6	02						
03	223 41.3 +00.2	N 02 50.9 +00.9	189 33.5 -00.5	N 16 34.1 +01.1	144 29.1 -31.8	N 27 30.2 +02.6	03						
04	238 41.5 +00.2	N 02 51.8 +01.0	204 33.0 -00.4	N 16 35.2 +01.0	158 57.3 -31.8	N 27 32.8 +02.4	04						
05	253 41.7 +00.2	N 02 52.8 +01.0	219 32.6 -00.5	N 16 36.2 +01.0	173 25.5 -31.8	N 27 35.2 +02.2	05						
06	268 41.9 +00.2	N 02 53.8 +01.0	234 32.1 -00.4	N 16 37.2 +01.1	187 53.7 -31.8	N 27 37.4 +02.1	06						
07	283 42.1 +00.2	N 02 54.8 +01.0	249 31.7 -00.5	N 16 38.3 +01.0	202 21.9 -31.8	N 27 39.5 +02.0	07						
08	298 42.3 +00.2	N 02 55.8 +00.9	264 31.2 -00.4	N 16 39.3 +01.0	216 50.1 -31.8	N 27 41.5 +01.8	08						
09	313 42.5 +00.2	N 02 56.7 +01.0	279 30.8 -00.5	N 16 40.3 +01.0	231 18.3 -31.8	N 27 43.3 +01.7	09						
10	328 42.7 +00.1	N 02 57.7 +01.0	294 30.3 -00.4	N 16 41.3 +01.1	245 46.5 -31.8	N 27 45.0 +01.5	10						
11	343 42.8 +00.2	N 02 58.7 +01.0	309 29.9 -00.5	N 16 42.4 +01.0	260 14.7 -31.8	N 27 46.5 +01.4	11						
12	358 43.0 +00.2	N 02 59.7 +00.9	324 29.4 -00.5	N 16 43.4 +01.0	274 42.9 -31.7	N 27 47.9 +01.3	12						
13	13 43.2 +00.2	N 03 00.6 +01.0	339 28.9 -00.4	N 16 44.4 +01.0	289 11.2 -31.7	N 27 49.2 +01.1	13						
14	28 43.4 +00.2	N 03 01.6 +01.0	354 28.5 -00.5	N 16 45.4 +01.1	303 39.5 -31.8	N 27 50.3 +01.0	14						
15	43 43.6 +00.2	N 03 02.6 +01.0	9 28.0 -00.4	N 16 46.5 +01.0	318 07.7 -31.7	N 27 51.3 +00.8	15						
16	58 43.8 +00.2	N 03 03.6 +01.0	24 27.6 -00.5	N 16 47.5 +01.0	332 36.0 -31.7	N 27 52.1 +00.7	16						
17	73 44.0 +00.2	N 03 04.6 +00.9	39 27.1 -00.4	N 16 48.5 +01.0	347 04.3 -31.6	N 27 52.8 +00.6	17						
18	88 44.2 +00.2	N 03 05.5 +01.0	54 26.7 -00.5	N 16 49.5 +01.1	1 32.7 -31.7	N 27 53.4 +00.4	18						
19	103 44.4 +00.1	N 03 06.5 +01.0	69 26.2 -00.5	N 16 50.6 +01.0	16 01.0 -31.6	N 27 53.8 +00.3	19						
20	118 44.5 +00.2	N 03 07.5 +01.0	84 25.7 -00.4	N 16 51.6 +01.0	30 29.4 -31.6	N 27 54.1 +00.1	20						
21	133 44.7 +00.2	N 03 08.5 +00.9	99 25.3 -00.5	N 16 52.6 +01.0	44 57.8 -31.6	N 27 54.2 +00.0	21						
22	148 44.9 +00.2	N 03 09.4 +01.0	114 24.8 -00.4	N 16 53.6 +01.0	59 26.2 -31.6	N 27 54.2 -00.2	22						
23	163 45.1 +00.2	N 03 10.4 +01.0	129 24.4 -00.5	N 16 54.6 +01.1	73 54.6 -31.5	N 27 54.0 -00.3	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 353° 353° 353° 353° 353° 353° Greenwich Culmination Time: 12:05	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 319° 319° 319° 319° 319° 318° Greenwich Culmination Time: 14:22	UT 02 06 10 14 18 22 SD 15'0 15'0 15'0 14'9 14'9 14'9 HP 55'1 55'0 54'9 54'8 54'7 54'7 SHA 275° 272° 270° 268° 266° 263° Greenwich Culmination Time: 17:53										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	93 48.1 +01.1	N 25 32.6 +00.0	167 59.6 +01.9	N 06 07.8 +00.2	210 23.1 +02.2	S 11 53.2 -00.1	00						
01	108 49.2 +01.1	N 25 32.6 -00.1	183 01.5 +01.9	N 06 08.0 +00.2	225 25.3 +02.2	S 11 53.1 +00.0	01						
02	123 50.3 +01.1	N 25 32.5 +00.0	198 03.4 +01.9	N 06 08.2 +00.3	240 27.5 +02.2	S 11 53.1 -00.1	02						
03	138 51.4 +01.1	N 25 32.5 -00.1	213 05.3 +02.0	N 06 08.5 +00.2	255 29.7 +02.2	S 11 53.0 -00.1	03						
04	153 52.5 +01.1	N 25 32.4 +00.0	228 07.3 +01.9	N 06 08.7 +00.2	270 31.9 +02.2	S 11 52.9 -00.1	04						
05	168 53.6 +01.1	N 25 32.4 +00.0	243 09.2 +01.9	N 06 08.9 +00.2	285 34.1 +02.3	S 11 52.8 -00.1	05						
06	183 54.7 +01.1	N 25 32.4 -00.1	258 11.1 +01.9	N 06 09.1 +00.3	300 36.4 +02.2	S 11 52.7 -00.1	06						
07	198 55.8 +01.1	N 25 32.3 +00.0	273 13.0 +01.9	N 06 09.4 +00.2	315 38.6 +02.2	S 11 52.6 -00.1	07						
08	213 56.9 +01.1	N 25 32.3 +00.0	288 14.9 +01.9	N 06 09.6 +00.2	330 40.8 +02.2	S 11 52.5 -00.1	08						
09	228 58.0 +01.1	N 25 32.3 -00.1	303 16.8 +01.9	N 06 09.8 +00.3	345 43.0 +02.2	S 11 52.4 -00.1	09						
10	243 59.1 +01.1	N 25 32.2 +00.0	318 18.7 +01.9	N 06 10.1 +00.2	0 45.2 +02.2	S 11 52.3 -00.1	10						
11	259 00.2 +01.1	N 25 32.2 -00.1	333 20.6 +01.9	N 06 10.3 +00.2	15 47.4 +02.2	S 11 52.2 +00.0	11						
12	274 01.3 +01.1	N 25 32.1 +00.0	348 22.5 +01.9	N 06 10.5 +00.3	30 49.6 +02.2	S 11 52.2 -00.1	12						
13	289 02.4 +01.1	N 25 32.1 -00.1	3 24.4 +01.9	N 06 10.8 +00.2	45 51.8 +02.2	S 11 52.1 -00.1	13						
14	304 03.5 +01.1	N 25 32.0 +00.0	18 26.3 +01.9	N 06 11.0 +00.2	60 54.0 +02.2	S 11 52.0 -00.1	14						
15	319 04.6 +01.1	N 25 32.0 +00.0	33 28.2 +01.9	N 06 11.2 +00.2	75 56.2 +02.2	S 11 51.9 -00.1	15						
16	334 05.7 +01.2	N 25 32.0 -00.1	48 30.1 +02.0	N 06 11.4 +00.3	90 58.4 +02.3	S 11 51.8 -00.1	16						
17	349 06.9 +01.1	N 25 31.9 +00.0	63 32.1 +01.9	N 06 11.7 +00.2	106 00.7 +02.2	S 11 51.7 -00.1	17						
18	4 08.0 +01.1	N 25 31.9 -00.1	78 34.0 +01.9	N 06 11.9 +00.2	121 02.9 +02.2	S 11 51.6 -00.1	18						
19	19 09.1 +01.1	N 25 31.8 +00.0	93 35.9 +01.9	N 06 12.1 +00.3	136 05.1 +02.2	S 11 51.5 -00.1	19						
20	34 10.2 +01.1	N 25 31.8 +00.0	108 37.8 +01.9	N 06 12.4 +00.2	151 07.3 +02.2	S 11 51.4 -00.1	20						
21	49 11.3 +01.1	N 25 31.8 -00.1	123 39.7 +01.9	N 06 12.6 +00.2	166 09.5 +02.2	S 11 51.3 -00.1	21						
22	64 12.4 +01.1	N 25 31.7 +00.0	138 41.6 +01.9	N 06 12.8 +00.3	181 11.7 +02.2	S 11 51.2 +00.0	22						
23	79 13.5 +01.1	N 25 31.7 -00.1	153 43.5 +01.9	N 06 13.1 +00.2	196 13.9 +02.2	S 11 51.2 -00.1	23						
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 269° 269° 268° 268° 268° 268° Greenwich Culmination Time: 17:43	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 343° 343° 343° 343° 343° 343° Greenwich Culmination Time: 12:46	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 025° 025° 025° 025° 025° 025° Greenwich Culmination Time: 09:56										

Sun					Venus					Moon					A: 26%					
UT	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	UT							
00	178 45.3 +00.2	N 03 11.4 +01.0	144 23.9 -00.5	N 16 55.7 +01.0	88 23.1 -31.5	N 27 53.7 -00.4	00						00							
01	193 45.5 +00.2	N 03 12.4 +00.9	159 23.4 -00.4	N 16 56.7 +01.0	102 51.6 -31.5	N 27 53.3 -00.5	01						01							
02	208 45.7 +00.2	N 03 13.3 +01.0	174 23.0 -00.5	N 16 57.7 +01.0	117 20.1 -31.5	N 27 52.8 -00.7	02						02							
03	223 45.9 +00.1	N 03 14.3 +01.0	189 22.5 -00.4	N 16 58.7 +01.0	131 48.6 -31.4	N 27 52.1 -00.9	03						03							
04	238 46.0 +00.2	N 03 15.3 +01.0	204 22.1 -00.5	N 16 59.7 +01.0	146 17.2 -31.4	N 27 51.2 -01.0	04						04							
05	253 46.2 +00.2	N 03 16.3 +00.9	219 21.6 -00.5	N 17 00.7 +01.0	160 45.8 -31.4	N 27 50.2 -01.1	05						05							
06	268 46.4 +00.2	N 03 17.2 +01.0	234 21.1 -00.4	N 17 01.7 +01.1	175 14.4 -31.3	N 27 49.1 -01.2	06						06							
07	283 46.6 +00.2	N 03 18.2 +01.0	249 20.7 -00.5	N 17 02.8 +01.0	189 43.1 -31.3	N 27 47.9 -01.4	07						07							
08	298 46.8 +00.2	N 03 19.2 +01.0	264 20.2 -00.5	N 17 03.8 +01.0	204 11.8 -31.3	N 27 46.5 -01.5	08						08							
09	313 47.0 +00.2	N 03 20.2 +00.9	279 19.7 -00.4	N 17 04.8 +01.0	218 40.5 -31.2	N 27 45.0 -01.7	09						09							
10	328 47.2 +00.2	N 03 21.1 +01.0	294 19.3 -00.5	N 17 05.8 +01.0	233 09.3 -31.2	N 27 43.3 -01.8	10						10							
11	343 47.4 +00.2	N 03 22.1 +01.0	309 18.8 -00.4	N 17 06.8 +01.0	247 38.1 -31.2	N 27 41.5 -01.9	11						11							
12	358 47.6 +00.1	N 03 23.1 +01.0	324 18.4 -00.5	N 17 07.8 +01.0	262 06.9 -31.1	N 27 39.6 -02.1	12						12							
13	13 47.7 +00.2	N 03 24.1 +00.9	339 17.9 -00.5	N 17 08.8 +01.0	276 35.8 -31.1	N 27 37.5 -02.2	13						13							
14	28 47.9 +00.2	N 03 25.0 +01.0	354 17.4 -00.4	N 17 09.8 +01.0	291 04.7 -31.0	N 27 35.3 -02.3	14						14							
15	43 48.1 +00.2	N 03 26.0 +01.0	9 17.0 -00.5	N 17 10.8 +01.0	305 33.7 -31.1	N 27 33.0 -02.4	15						15							
16	58 48.3 +00.2	N 03 27.0 +01.0	24 16.5 -00.5	N 17 11.8 +01.0	320 02.6 -30.9	N 27 30.6 -02.6	16						16							
17	73 48.5 +00.2	N 03 28.0 +00.9	39 16.0 -00.4	N 17 12.8 +01.1	334 31.7 -31.0	N 27 28.0 -02.8	17						17							
18	88 48.7 +00.2	N 03 28.9 +01.0	54 15.6 -00.5	N 17 13.9 +01.0	349 00.7 -30.8	N 27 25.2 -02.8	18						18							
19	103 48.9 +00.2	N 03 29.9 +01.0	69 15.1 -00.5	N 17 14.9 +01.0	3 29.9 -30.9	N 27 22.4 -03.0	19						19							
20	118 49.1 +00.1	N 03 30.9 +00.9	84 14.6 -00.4	N 17 15.9 +01.0	17 59.0 -30.8	N 27 19.4 -03.1	20						20							
21	133 49.2 +00.2	N 03 31.8 +01.0	99 14.2 -00.5	N 17 16.9 +01.0	32 28.2 -30.7	N 27 16.3 -03.3	21						21							
22	148 49.4 +00.2	N 03 32.8 +01.0	114 13.7 -00.5	N 17 17.9 +01.0	46 57.5 -30.8	N 27 13.0 -03.3	22						22							
23	163 49.6 +00.2	N 03 33.8 +01.0	129 13.2 -00.4	N 17 18.9 +01.0	61 26.7 -30.6	N 27 09.7 -03.5	23						23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'0	16'0	16'0	16'0	16'0	16'0	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP						
SHA	353°	352°	352°	352°	352°	352°	SHA	318°	318°	318°	318°	317°	317°	SHA						
Greenwich Culmination Time: 12:04							Greenwich Culmination Time: 14:22							Greenwich Culmination Time: 18:45						

Mars					Jupiter					Saturn										
UT	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	UT							
00	94 14.6 +01.1	N 25 31.6 +00.0	168 45.4 +01.9	N 06 13.3 +00.2	211 16.1 +02.2	S 11 51.1 -00.1	00						00							
01	109 15.7 +01.1	N 25 31.6 -00.1	183 47.3 +01.9	N 06 13.5 +00.2	226 18.3 +02.2	S 11 51.0 -00.1	01						01							
02	124 16.8 +01.1	N 25 31.5 +00.0	198 49.2 +01.9	N 06 13.7 +00.3	241 20.5 +02.2	S 11 50.9 -00.1	02						02							
03	139 17.9 +01.1	N 25 31.5 +00.0	213 51.1 +01.9	N 06 14.0 +00.2	256 22.7 +02.3	S 11 50.8 -00.1	03						03							
04	154 19.0 +01.1	N 25 31.5 -00.1	228 53.0 +01.9	N 06 14.2 +00.2	271 25.0 +02.2	S 11 50.7 -00.1	04						04							
05	169 20.1 +01.1	N 25 31.4 +00.0	243 54.9 +01.9	N 06 14.4 +00.3	286 27.2 +02.2	S 11 50.6 -00.1	05						05							
06	184 21.2 +01.1	N 25 31.4 -00.1	258 56.8 +02.0	N 06 14.7 +00.2	301 29.4 +02.2	S 11 50.5 -00.1	06						06							
07	199 22.3 +01.1	N 25 31.3 +00.0	273 58.8 +01.9	N 06 14.9 +00.2	316 31.6 +02.2	S 11 50.4 -00.1	07						07							
08	214 23.4 +01.1	N 25 31.3 -00.1	289 00.7 +01.9	N 06 15.1 +00.2	331 33.8 +02.2	S 11 50.3 +00.0	08						08							
09	229 24.5 +01.1	N 25 31.2 +00.0	304 02.6 +01.9	N 06 15.3 +00.3	346 36.0 +02.2	S 11 50.3 -00.1	09						09							
10	244 25.6 +01.1	N 25 31.2 -00.1	319 04.5 +01.9	N 06 15.6 +00.2	1 38.2 +02.2	S 11 50.2 -00.1	10						10							
11	259 26.7 +01.1	N 25 31.1 +00.0	334 06.4 +01.9	N 06 15.8 +00.2	16 40.4 +02.2	S 11 50.1 -00.1	11						11							
12	274 27.8 +01.1	N 25 31.1 +00.0	349 08.3 +01.9	N 06 16.0 +00.3	31 42.6 +02.3	S 11 50.0 -00.1	12						12							
13	289 28.9 +01.1	N 25 31.1 -00.1	4 10.2 +01.9	N 06 16.3 +00.2	46 44.9 +02.2	S 11 49.9 -00.1	13						13							
14	304 30.0 +01.1	N 25 31.0 +00.0	19 12.1 +01.9	N 06 16.5 +00.2	61 47.1 +02.2	S 11 49.8 -00.1	14						14							
15	319 31.1 +01.1	N 25 31.0 -00.1	34 14.0 +01.9	N 06 16.7 +00.3	76 49.3 +02.2	S 11 49.7 -00.1	15						15							
16	334 32.2 +01.1	N 25 30.9 +00.0	49 15.9 +01.9	N 06 17.0 +00.2	91 51.5 +02.2	S 11 49.6 -00.1	16						16							
17	349 33.3 +01.1	N 25 30.9 -00.1	64 17.8 +01.9	N 06 17.2 +00.2	106 53.7 +02.2	S 11 49.5 -00.1	17						17							
18	4 34.4 +01.0	N 25 30.8 +00.0	79 19.7 +01.9	N 06 17.4 +00.2	121 55.9 +02.2	S 11 49.4 +00.0	18						18							
19	19 35.4 +01.1	N 25 30.8 -00.1	94 21.6 +01.9	N 06 17.6 +00.3	136 58.1 +02.2	S 11 49.4 -00.1	19						19							
20	34 36.5 +01.1	N 25 30.7 +00.0	109 23.5 +01.9	N 06 17.9 +00.2	152 00.3 +02.2	S 11 49.3 -00.1	20						20							
21	49 37.6 +01.1	N 25 30.7 -00.1	124 25.4 +02.0	N 06 18.1 +00.2	167 02.5 +02.3	S 11 49.2 -00.1	21						21							
22	64 38.7 +01.1	N 25 30.6 +00.0	139 27.4 +01.9	N 06 18.3 +00.3	182 04.8 +02.2	S 11 49.1 -00.1	22						22							
23	79 39.8 +01.1	N 25 30.6 -00.1	154 29.3 +01.9	N 06 18.6 +00.2	197 07.0 +02.2	S 11 49.0 -00.1	23						23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'3	00'3	00'3	00'3	00'3	00'3	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP						
SHA	268°	268°	268°	268°	268°	268°	SHA	343°	343°	343°	342°	342°	342°	SHA						
Greenwich Culmination Time: 17:41							Greenwich Culmination Time: 12:43							Greenwich Culmination Time: 09:53						

UT	Sun				Venus				Moon A: 30%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	178 49.8 +00.2	N 03 34.8 +00.9			144 12.8 -00.5	N 17 19.9 +01.0			75 56.1 -30.6	N 27 06.2 -03.7			00
01	193 50.0 +00.2	N 03 35.7 +01.0			159 12.3 -00.5	N 17 20.9 +01.0			90 25.5 -30.6	N 27 02.5 -03.7			01
02	208 50.2 +00.2	N 03 36.7 +01.0			174 11.8 -00.4	N 17 21.9 +01.0			104 54.9 -30.5	N 26 58.8 -03.9			02
03	223 50.4 +00.2	N 03 37.7 +01.0			189 11.4 -00.5	N 17 22.9 +01.0			119 24.4 -30.5	N 26 54.9 -04.0			03
04	238 50.6 +00.1	N 03 38.7 +00.9			204 10.9 -00.5	N 17 23.9 +01.0			133 53.9 -30.4	N 26 50.9 -04.2			04
05	253 50.7 +00.2	N 03 39.6 +01.0			219 10.4 -00.5	N 17 24.9 +01.0			148 23.5 -30.4	N 26 46.7 -04.2			05
06	268 50.9 +00.2	N 03 40.6 +01.0			234 09.9 -00.4	N 17 25.9 +01.0			162 53.1 -30.3	N 26 42.5 -04.4			06
07	283 51.1 +00.2	N 03 41.6 +00.9			249 09.5 -00.5	N 17 26.9 +00.9			177 22.8 -30.3	N 26 38.1 -04.5			07
08	298 51.3 +00.2	N 03 42.5 +01.0			264 09.0 -00.5	N 17 27.8 +01.0			191 52.5 -30.2	N 26 33.6 -04.7			08
09	313 51.5 +00.2	N 03 43.5 +01.0			279 08.5 -00.4	N 17 28.8 +01.0			206 22.3 -30.2	N 26 28.9 -04.7			09
10	328 51.7 +00.2	N 03 44.5 +01.0			294 08.1 -00.5	N 17 29.8 +01.0			220 52.1 -30.1	N 26 24.2 -04.9			10
11	343 51.9 +00.2	N 03 45.5 +00.9			309 07.6 -00.5	N 17 30.8 +01.0			235 22.0 -30.1	N 26 19.3 -05.0			11
12	358 52.1 +00.1	N 03 46.4 +01.0			324 07.1 -00.5	N 17 31.8 +01.0			249 51.9 -30.0	N 26 14.3 -05.1			12
13	13 52.2 +00.2	N 03 47.4 +01.0			339 06.6 -00.4	N 17 32.8 +01.0			264 21.9 -29.9	N 26 09.2 -05.3			13
14	28 52.4 +00.2	N 03 48.4 +00.9			354 06.2 -00.5	N 17 33.8 +01.0			278 52.0 -29.9	N 26 03.9 -05.4			14
15	43 52.6 +00.2	N 03 49.3 +01.0			9 05.7 -00.5	N 17 34.8 +01.0			293 22.1 -29.9	N 25 58.5 -05.4			15
16	58 52.8 +00.2	N 03 50.3 +01.0			24 05.2 -00.5	N 17 35.8 +01.0			307 52.2 -29.8	N 25 53.1 -05.6			16
17	73 53.0 +00.2	N 03 51.3 +01.0			39 04.7 -00.4	N 17 36.8 +01.0			322 22.4 -29.7	N 25 47.5 -05.8			17
18	88 53.2 +00.2	N 03 52.3 +00.9			54 04.3 -00.5	N 17 37.8 +00.9			336 52.7 -29.7	N 25 41.7 -05.8			18
19	103 53.4 +00.2	N 03 53.2 +01.0			69 03.8 -00.5	N 17 38.7 +01.0			351 23.0 -29.6	N 25 35.9 -05.9			19
20	118 53.6 +00.1	N 03 54.2 +01.0			84 03.3 -00.5	N 17 39.7 +01.0			5 53.4 -29.6	N 25 30.0 -06.1			20
21	133 53.7 +00.2	N 03 55.2 +00.9			99 02.8 -00.4	N 17 40.7 +01.0			20 23.8 -29.5	N 25 23.9 -06.2			21
22	148 53.9 +00.2	N 03 56.1 +01.0			114 02.4 -00.5	N 17 41.7 +01.0			34 54.3 -29.4	N 25 17.7 -06.3			22
23	163 54.1 +00.2	N 03 57.1 +01.0			129 01.9 -00.5	N 17 42.7 +01.0			49 24.9 -29.4	N 25 11.4 -06.4			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 16'0 16'0 16'0 16'0 16'0 16'0				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'8 14'8 14'8 14'8 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'3 54'2 54'2 54'2 54'2 54'2				
	SHA 352° 351° 351° 351° 351° 351°				SHA 317° 317° 317° 316° 316° 316°				SHA 248° 246° 243° 241° 239° 237°				
	Greenwich Culmination Time: 12:04				Greenwich Culmination Time: 14:23				Greenwich Culmination Time: 19:35				

UT	Mars				Jupiter				Saturn				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	94 40.9 +01.1	N 25 30.5 +00.0			169 31.2 +01.9	N 06 18.8 +00.2			212 09.2 +02.2	S 11 48.9 -00.1			00
01	109 42.0 +01.1	N 25 30.5 +00.0			184 33.1 +01.9	N 06 19.0 +00.2			227 11.4 +02.2	S 11 48.8 -00.1			01
02	124 43.1 +01.1	N 25 30.5 -00.1			199 35.0 +01.9	N 06 19.2 +00.3			242 13.6 +02.2	S 11 48.7 -00.1			02
03	139 44.2 +01.1	N 25 30.4 +00.0			214 36.9 +01.9	N 06 19.5 +00.2			257 15.8 +02.2	S 11 48.6 +00.0			03
04	154 45.3 +01.1	N 25 30.4 -00.1			229 38.8 +01.9	N 06 19.7 +00.2			272 18.0 +02.2	S 11 48.6 -00.1			04
05	169 46.4 +01.1	N 25 30.3 +00.0			244 40.7 +01.9	N 06 19.9 +00.3			287 20.2 +02.2	S 11 48.5 -00.1			05
06	184 47.5 +01.1	N 25 30.3 -00.1			259 42.6 +01.9	N 06 20.2 +00.2			302 22.4 +02.3	S 11 48.4 -00.1			06
07	199 48.6 +01.1	N 25 30.2 +00.0			274 44.5 +01.9	N 06 20.4 +00.2			317 24.7 +02.2	S 11 48.3 -00.1			07
08	214 49.7 +01.1	N 25 30.2 -00.1			289 46.4 +01.9	N 06 20.6 +00.3			332 26.9 +02.2	S 11 48.2 -00.1			08
09	229 50.8 +01.1	N 25 30.1 +00.0			304 48.3 +01.9	N 06 20.9 +00.2			347 29.1 +02.2	S 11 48.1 -00.1			09
10	244 51.9 +01.1	N 25 30.1 -00.1			319 50.2 +01.9	N 06 21.1 +00.2			2 31.3 +02.2	S 11 48.0 -00.1			10
11	259 53.0 +01.1	N 25 30.0 +00.0			334 52.1 +01.9	N 06 21.3 +00.2			17 33.5 +02.2	S 11 47.9 -00.1			11
12	274 54.1 +01.0	N 25 30.0 -00.1			349 54.0 +01.9	N 06 21.5 +00.3			32 35.7 +02.2	S 11 47.8 -00.1			12
13	289 55.1 +01.1	N 25 29.9 +00.0			4 55.9 +02.0	N 06 21.8 +00.2			47 37.9 +02.2	S 11 47.7 +00.0			13
14	304 56.2 +01.1	N 25 29.9 -00.1			19 57.9 +01.9	N 06 22.0 +00.2			62 40.1 +02.3	S 11 47.7 -00.1			14
15	319 57.3 +01.1	N 25 29.8 +00.0			34 59.8 +01.9	N 06 22.2 +00.3			77 42.4 +02.2	S 11 47.6 -00.1			15
16	334 58.4 +01.1	N 25 29.8 -00.1			50 01.7 +01.9	N 06 22.5 +00.2			92 44.6 +02.2	S 11 47.5 -00.1			16
17	349 59.5 +01.1	N 25 29.7 +00.0			65 03.6 +01.9	N 06 22.7 +00.2			107 46.8 +02.2	S 11 47.4 -00.1			17
18	5 00.6 +01.1	N 25 29.7 -00.1			80 05.5 +01.9	N 06 22.9 +00.2			122 49.0 +02.2	S 11 47.3 -00.1			18
19	20 01.7 +01.1	N 25 29.6 +00.0			95 07.4 +01.9	N 06 23.1 +00.3			137 51.2 +02.2	S 11 47.2 -00.1			19
20	35 02.8 +01.1	N 25 29.6 -00.1			110 09.3 +01.9	N 06 23.4 +00.2			152 53.4 +02.2	S 11 47.1 -00.1			20
21	50 03.9 +01.1	N 25 29.5 +00.0			125 11.2 +01.9	N 06 23.6 +00.2			167 55.6 +02.2	S 11 47.0 -00.1			21
22	65 05.0 +01.1	N 25 29.5 -00.1			140 13.1 +01.9	N 06 23.8 +00.3			182 57.8 +02.3	S 11 46.9 +00.0			22
23	80 06.1 +01.0	N 25 29.4 +00.0			155 15.0 +01.9	N 06 24.1 +00.2			198 00.1 +02.2	S 11 46.9 -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 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 268° 267° 267° 267° 267° 267°				SHA 342° 342° 342° 342° 342° 342°				SHA 025° 025° 025° 025° 025° 025°				
	Greenwich Culmination Time: 17:39				Greenwich Culmination Time: 12:40				Greenwich Culmination Time: 09:49				

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

UT	Sun				Venus				Moon A: 33%				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	178 54.3 +00.2		N 03 58.1 +00.9		144 01.4 -00.5		N 17 43.7 +00.9		63 55.5 -29.4		N 25 05.0 -06.5		00		
01	193 54.5 +00.2		N 03 59.0 +01.0		159 00.9 -00.4		N 17 44.6 +01.0		78 26.1 -29.2		N 24 58.5 -06.7		01		
02	208 54.7 +00.2		N 04 00.0 +01.0		174 00.5 -00.5		N 17 45.6 +01.0		92 56.9 -29.2		N 24 51.8 -06.7		02		
03	223 54.9 +00.2		N 04 01.0 +01.0		188 60.0 -00.5		N 17 46.6 +01.0		107 27.7 -29.2		N 24 45.1 -06.9		03		
04	238 55.1 +00.1		N 04 02.0 +00.9		203 59.5 -00.5		N 17 47.6 +01.0		121 58.5 -29.1		N 24 38.2 -06.9		04		
05	253 55.2 +00.2		N 04 02.9 +01.0		218 59.0 -00.5		N 17 48.6 +00.9		136 29.4 -29.0		N 24 31.3 -07.1		05		
06	268 55.4 +00.2		N 04 03.9 +01.0		233 58.5 -00.4		N 17 49.5 +01.0		151 00.4 -29.0		N 24 24.2 -07.2		06		
07	283 55.6 +00.2		N 04 04.9 +00.9		248 58.1 -00.5		N 17 50.5 +01.0		165 31.4 -29.0		N 24 17.0 -07.3		07		
08	298 55.8 +00.2		N 04 05.8 +01.0		263 57.6 -00.5		N 17 51.5 +01.0		180 02.4 -28.8		N 24 09.7 -07.4		08		
09	313 56.0 +00.2		N 04 06.8 +01.0		278 57.1 -00.5		N 17 52.5 +00.9		194 33.6 -28.8		N 24 02.3 -07.5		09		
10	328 56.2 +00.2		N 04 07.8 +00.9		293 56.6 -00.4		N 17 53.4 +01.0		209 04.8 -28.8		N 23 54.8 -07.6		10		
11	343 56.4 +00.1		N 04 08.7 +01.0		308 56.2 -00.5		N 17 54.4 +01.0		223 36.0 -28.7		N 23 47.2 -07.7		11		
12	358 56.5 +00.2		N 04 09.7 +01.0		323 55.7 -00.5		N 17 55.4 +01.0		238 07.3 -28.6		N 23 39.5 -07.8		12		
13	13 56.7 +00.2		N 04 10.7 +00.9		338 55.2 -00.5		N 17 56.4 +00.9		252 38.7 -28.5		N 23 31.7 -08.0		13		
14	28 56.9 +00.2		N 04 11.6 +01.0		353 54.7 -00.5		N 17 57.3 +01.0		267 10.2 -28.6		N 23 23.7 -08.0		14		
15	43 57.1 +00.2		N 04 12.6 +01.0		8 54.2 -00.5		N 17 58.3 +01.0		281 41.6 -28.4		N 23 15.7 -08.1		15		
16	58 57.3 +00.2		N 04 13.6 +00.9		23 53.7 -00.4		N 17 59.3 +01.0		296 13.2 -28.4		N 23 07.6 -08.2		16		
17	73 57.5 +00.2		N 04 14.5 +01.0		38 53.3 -00.5		N 18 00.3 +00.9		310 44.8 -28.3		N 22 59.4 -08.4		17		
18	88 57.7 +00.2		N 04 15.5 +01.0		53 52.8 -00.5		N 18 01.2 +01.0		325 16.5 -28.3		N 22 51.0 -08.4		18		
19	103 57.9 +00.1		N 04 16.5 +00.9		68 52.3 -00.5		N 18 02.2 +01.0		339 48.2 -28.2		N 22 42.6 -08.5		19		
20	118 58.0 +00.2		N 04 17.4 +01.0		83 51.8 -00.5		N 18 03.2 +00.9		354 20.0 -28.2		N 22 34.1 -08.7		20		
21	133 58.2 +00.2		N 04 18.4 +01.0		98 51.3 -00.5		N 18 04.1 +01.0		8 51.8 -28.1		N 22 25.4 -08.7		21		
22	148 58.4 +00.2		N 04 19.4 +00.9		113 50.8 -00.4		N 18 05.1 +01.0		23 23.7 -28.0		N 22 16.7 -08.8		22		
23	163 58.6 +00.2		N 04 20.3 +01.0		128 50.4 -00.5		N 18 06.1 +00.9		37 55.7 -28.0		N 22 07.9 -08.9		23		
	UT 02 06 10 14 18 22		SD 16'0 16'0 16'0 16'0 16'0 16'0		UT 02 06 10 14 18 22		SD 00'1 00'1 00'1 00'1 00'1 00'1		UT 02 06 10 14 18 22		SD 14'8 14'7 14'7 14'7 14'7 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1		SHA 351° 351° 350° 350° 350° 350°		HP 00'1 00'1 00'1 00'1 00'1 00'1		SHA 316° 316° 315° 315° 315° 315°		HP 54'1 54'1 54'1 54'1 54'1 54'1		SHA 235° 233° 231° 228° 226° 224°				
	Greenwich Culmination Time: 12:04					Greenwich Culmination Time: 14:24					Greenwich Culmination Time: 20:23				

UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "			
00	95 07.1 +01.1		N 25 29.4 -00.1		170 16.9 +01.9		N 06 24.3 +00.2		213 02.3 +02.2		S 11 46.8 -00.1		00		
01	110 08.2 +01.1		N 25 29.3 -00.1		185 18.8 +01.9		N 06 24.5 +00.3		228 04.5 +02.2		S 11 46.7 -00.1		01		
02	125 09.3 +01.1		N 25 29.2 +00.0		200 20.7 +01.9		N 06 24.8 +00.2		243 06.7 +02.2		S 11 46.6 -00.1		02		
03	140 10.4 +01.1		N 25 29.2 -00.1		215 22.6 +01.9		N 06 25.0 +00.2		258 08.9 +02.2		S 11 46.5 -00.1		03		
04	155 11.5 +01.1		N 25 29.1 +00.0		230 24.5 +01.9		N 06 25.2 +00.2		273 11.1 +02.2		S 11 46.4 -00.1		04		
05	170 12.6 +01.1		N 25 29.1 -00.1		245 26.4 +01.9		N 06 25.4 +00.3		288 13.3 +02.3		S 11 46.3 -00.1		05		
06	185 13.7 +01.1		N 25 29.0 +00.0		260 28.3 +01.9		N 06 25.7 +00.2		303 15.6 +02.2		S 11 46.2 -00.1		06		
07	200 14.8 +01.1		N 25 29.0 -00.1		275 30.2 +02.0		N 06 25.9 +00.2		318 17.8 +02.2		S 11 46.1 +00.0		07		
08	215 15.9 +01.0		N 25 28.9 +00.0		290 32.2 +01.9		N 06 26.1 +00.3		333 20.0 +02.2		S 11 46.1 -00.1		08		
09	230 16.9 +01.1		N 25 28.9 -00.1		305 34.1 +01.9		N 06 26.4 +00.2		348 22.2 +02.2		S 11 46.0 -00.1		09		
10	245 18.0 +01.1		N 25 28.8 +00.0		320 36.0 +01.9		N 06 26.6 +00.2		3 24.4 +02.2		S 11 45.9 -00.1		10		
11	260 19.1 +01.1		N 25 28.8 -00.1		335 37.9 +01.9		N 06 26.8 +00.2		18 26.6 +02.2		S 11 45.8 -00.1		11		
12	275 20.2 +01.1		N 25 28.7 +00.0		350 39.8 +01.9		N 06 27.0 +00.3		33 28.8 +02.3		S 11 45.7 -00.1		12		
13	290 21.3 +01.1		N 25 28.7 -00.1		5 41.7 +01.9		N 06 27.3 +00.2		48 31.1 +02.2		S 11 45.6 -00.1		13		
14	305 22.4 +01.1		N 25 28.6 -00.1		20 43.6 +01.9		N 06 27.5 +00.2		63 33.3 +02.2		S 11 45.5 -00.1		14		
15	320 23.5 +01.0		N 25 28.5 +00.0		35 45.5 +01.9		N 06 27.7 +00.3		78 35.5 +02.2		S 11 45.4 +00.0		15		
16	335 24.5 +01.1		N 25 28.5 -00.1		50 47.4 +01.9		N 06 28.0 +00.2		93 37.7 +02.2		S 11 45.4 -00.1		16		
17	350 25.6 +01.1		N 25 28.4 +00.0		65 49.3 +01.9		N 06 28.2 +00.2		108 39.9 +02.2		S 11 45.3 -00.1		17		
18	5 26.7 +01.1		N 25 28.4 -00.1		80 51.2 +01.9		N 06 28.4 +00.2		123 42.1 +02.2		S 11 45.2 -00.1		18		
19	20 27.8 +01.1		N 25 28.3 +00.0		95 53.1 +01.9		N 06 28.6 +00.3		138 44.3 +02.3		S 11 45.1 -00.1		19		
20	35 28.9 +01.1		N 25 28.3 -00.1		110 55.0 +01.9		N 06 28.9 +00.2		153 46.6 +02.2		S 11 45.0 -00.1		20		
21	50 30.0 +01.1		N 25 28.2 +00.0		125 56.9 +01.9		N 06 29.1 +00.2		168 48.8 +02.2		S 11 44.9 -00.1		21		
22	65 31.1 +01.0		N 25 28.2 -00.1		140 58.8 +01.9		N 06 29.3 +00.3		183 51.0 +02.2		S 11 44.8 -00.1		22		
23	80 32.1 +01.1		N 25 28.1 -00.1		156 00.7 +01.9		N 06 29.6 +00.2		198 53.2 +02.2		S 11 44.7 -00.1		23		
	UT 02 06 10 14 18 22		SD 00'1 00'1 00'1 00'1 00'1 00'1		UT 02 06 10 14 18 22		SD 00'3 00'3 00'3 00'3 00'3 00'3		UT 02 06 10 14 18 22		SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1		SHA 267° 267° 267° 267° 267° 267°		HP 00'0 00'0 00'0 00'0 00'0 00'0		SHA 342° 342° 342° 342° 342° 342°		HP 00'0 00'0 00'0 00'0 00'0 00'0		SHA 025° 025° 025° 025° 025° 025°				
	Greenwich Culmination Time: 17:38					Greenwich Culmination Time: 12:37					Greenwich Culmination Time: 09:46				