

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 01.7 -00.1	N 23 05.2 -00.2	171 07.2 -00.9	N 23 17.1 -00.3	245 38.0 -30.8	N 15 53.8 +14.1	00						
01	194 01.6 -00.2	N 23 05.0 -00.1	186 06.3 -00.9	N 23 16.8 -00.3	260 07.2 -30.9	N 16 07.9 +14.0	01						
02	209 01.4 -00.1	N 23 04.9 -00.2	201 05.4 -00.8	N 23 16.5 -00.4	274 36.3 -31.0	N 16 21.9 +13.9	02						
03	224 01.3 -00.1	N 23 04.7 -00.2	216 04.6 -00.9	N 23 16.1 -00.3	289 05.3 -31.0	N 16 35.8 +13.8	03						
04	239 01.2 -00.1	N 23 04.5 -00.2	231 03.7 -00.9	N 23 15.8 -00.3	303 34.3 -31.1	N 16 49.6 +13.7	04						
05	254 01.1 -00.1	N 23 04.3 -00.2	246 02.8 -00.8	N 23 15.5 -00.3	318 03.2 -31.2	N 17 03.3 +13.6	05						
06	269 01.0 -00.2	N 23 04.1 -00.1	261 02.0 -00.9	N 23 15.2 -00.3	332 32.0 -31.2	N 17 16.9 +13.5	06						
07	284 00.8 -00.1	N 23 04.0 -00.2	276 01.1 -00.8	N 23 14.9 -00.3	347 00.8 -31.4	N 17 30.4 +13.4	07						
08	299 00.7 -00.1	N 23 03.8 -00.2	291 00.3 -00.9	N 23 14.6 -00.3	1 29.4 -31.3	N 17 43.8 +13.4	08						
09	314 00.6 -00.1	N 23 03.6 -00.2	305 59.4 -00.9	N 23 14.3 -00.4	15 58.1 -31.5	N 17 57.2 +13.2	09						
10	329 00.5 -00.1	N 23 03.4 -00.1	320 58.5 -00.8	N 23 13.9 -00.3	30 26.6 -31.5	N 18 10.4 +13.1	10						
11	344 00.4 -00.2	N 23 03.3 -00.2	335 57.7 -00.9	N 23 13.6 -00.3	44 55.1 -31.6	N 18 23.5 +13.0	11						
12	359 00.2 -00.1	N 23 03.1 -00.2	350 56.8 -00.9	N 23 13.3 -00.3	59 23.5 -31.7	N 18 36.5 +12.9	12						
13	14 00.1 -00.1	N 23 02.9 -00.2	5 55.9 -00.8	N 23 13.0 -00.4	73 51.8 -31.8	N 18 49.4 +12.8	13						
14	28 60.0 -00.1	N 23 02.7 -00.2	20 55.1 -00.9	N 23 12.6 -00.3	88 20.0 -31.8	N 19 02.2 +12.6	14						
15	43 59.9 -00.1	N 23 02.5 -00.2	35 54.2 -00.8	N 23 12.3 -00.3	102 48.2 -31.9	N 19 14.8 +12.6	15						
16	58 59.8 -00.2	N 23 02.3 -00.1	50 53.4 -00.9	N 23 12.0 -00.3	117 16.3 -32.0	N 19 27.4 +12.4	16						
17	73 59.6 -00.1	N 23 02.2 -00.2	65 52.5 -00.9	N 23 11.7 -00.4	131 44.3 -32.0	N 19 39.8 +12.4	17						
18	88 59.5 -00.1	N 23 02.0 -00.2	80 51.6 -00.8	N 23 11.3 -00.3	146 12.3 -32.1	N 19 52.2 +12.2	18						
19	103 59.4 -00.1	N 23 01.8 -00.2	95 50.8 -00.9	N 23 11.0 -00.3	160 40.2 -32.2	N 20 04.4 +12.1	19						
20	118 59.3 -00.1	N 23 01.6 -00.2	110 49.9 -00.8	N 23 10.7 -00.4	175 08.0 -32.3	N 20 16.5 +12.0	20						
21	133 59.2 -00.2	N 23 01.4 -00.2	125 49.1 -00.9	N 23 10.3 -00.3	189 35.7 -32.4	N 20 28.5 +11.8	21						
22	148 59.0 -00.1	N 23 01.2 -00.2	140 48.2 -00.8	N 23 10.0 -00.3	204 03.3 -32.4	N 20 40.3 +11.8	22						
23	163 58.9 -00.1	N 23 01.0 -00.2	155 47.4 -00.9	N 23 09.7 -00.4	218 30.9 -32.5	N 20 52.1 +11.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'0 16'0 16'0 16'0 16'0 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'8 58'8 58'7 58'6 58'6 58'5								
	SHA 259° 259° 259° 259° 259° 259°		SHA 251° 251° 251° 251° 251° 250°		SHA 325° 323° 320° 318° 316° 314°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 12:36		Greenwich Culmination Time: 07:53								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	235 45.6 +00.6	N 15 42.3 +00.6	212 57.5 +01.9	N 20 59.3 +00.1	288 28.6 +02.4	S 06 00.6 +00.0	00						
01	250 46.2 +00.7	N 15 42.9 +00.5	227 59.4 +01.9	N 20 59.4 +00.1	303 31.0 +02.5	S 06 00.6 +00.0	01						
02	265 46.9 +00.7	N 15 43.4 +00.6	243 01.3 +01.8	N 20 59.5 +00.1	318 33.5 +02.5	S 06 00.6 +00.0	02						
03	280 47.6 +00.7	N 15 44.0 +00.5	258 03.1 +01.9	N 20 59.6 +00.1	333 36.0 +02.4	S 06 00.6 +00.0	03						
04	295 48.3 +00.7	N 15 44.5 +00.5	273 05.0 +01.9	N 20 59.7 +00.1	348 38.4 +02.5	S 06 00.6 +00.0	04						
05	310 49.0 +00.7	N 15 45.0 +00.6	288 06.9 +01.9	N 20 59.8 +00.1	3 40.9 +02.5	S 06 00.6 +00.0	05						
06	325 49.7 +00.6	N 15 45.6 +00.5	303 08.8 +01.9	N 20 59.9 +00.1	18 43.4 +02.4	S 06 00.6 +00.0	06						
07	340 50.3 +00.7	N 15 46.1 +00.5	318 10.7 +01.9	N 20 60.0 +00.0	33 45.8 +02.5	S 06 00.6 +00.0	07						
08	355 51.0 +00.7	N 15 46.6 +00.6	333 12.6 +01.9	N 21 00.0 +00.1	48 48.3 +02.5	S 06 00.6 +00.1	08						
09	10 51.7 +00.7	N 15 47.2 +00.5	348 14.5 +01.9	N 21 00.1 +00.1	63 50.8 +02.4	S 06 00.7 +00.0	09						
10	25 52.4 +00.7	N 15 47.7 +00.6	3 16.4 +01.9	N 21 00.2 +00.1	78 53.2 +02.5	S 06 00.7 +00.0	10						
11	40 53.1 +00.6	N 15 48.3 +00.5	18 18.3 +01.9	N 21 00.3 +00.1	93 55.7 +02.5	S 06 00.7 +00.0	11						
12	55 53.7 +00.7	N 15 48.8 +00.5	33 20.2 +01.9	N 21 00.4 +00.1	108 58.2 +02.4	S 06 00.7 +00.0	12						
13	70 54.4 +00.7	N 15 49.3 +00.6	48 22.1 +01.9	N 21 00.5 +00.1	124 00.6 +02.5	S 06 00.7 +00.0	13						
14	85 55.1 +00.7	N 15 49.9 +00.5	63 24.0 +01.9	N 21 00.6 +00.0	139 03.1 +02.5	S 06 00.7 +00.0	14						
15	100 55.8 +00.7	N 15 50.4 +00.5	78 25.9 +01.8	N 21 00.6 +00.1	154 05.6 +02.4	S 06 00.7 +00.0	15						
16	115 56.5 +00.6	N 15 50.9 +00.6	93 27.7 +01.9	N 21 00.7 +00.1	169 08.0 +02.5	S 06 00.7 +00.1	16						
17	130 57.1 +00.7	N 15 51.5 +00.5	108 29.6 +01.9	N 21 00.8 +00.1	184 10.5 +02.5	S 06 00.8 +00.0	17						
18	145 57.8 +00.7	N 15 52.0 +00.5	123 31.5 +01.9	N 21 00.9 +00.1	199 13.0 +02.4	S 06 00.8 +00.0	18						
19	160 58.5 +00.7	N 15 52.5 +00.6	138 33.4 +01.9	N 21 01.0 +00.1	214 15.4 +02.5	S 06 00.8 +00.0	19						
20	175 59.2 +00.7	N 15 53.1 +00.5	153 35.3 +01.9	N 21 01.1 +00.1	229 17.9 +02.5	S 06 00.8 +00.0	20						
21	190 59.9 +00.6	N 15 53.6 +00.5	168 37.2 +01.9	N 21 01.2 +00.0	244 20.4 +02.4	S 06 00.8 +00.0	21						
22	206 00.5 +00.7	N 15 54.1 +00.6	183 39.1 +01.9	N 21 01.2 +00.1	259 22.8 +02.5	S 06 00.8 +00.0	22						
23	221 01.2 +00.7	N 15 54.7 +00.5	198 41.0 +01.9	N 21 01.3 +00.1	274 25.3 +02.5	S 06 00.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 316° 316° 316° 316° 316° 316°		SHA 293° 293° 293° 293° 293° 293°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:16		Greenwich Culmination Time: 09:46		Greenwich Culmination Time: 04:45								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 58.8 -00.1	N 23 00.8 -00.1	170 46.5 -00.9	N 23 09.3 -00.3	232 58.4 -32.6	N 21 03.7 +11.5	00						
01	193 58.7 -00.1	N 23 00.7 -00.2	185 45.6 -00.8	N 23 09.0 -00.3	247 25.8 -32.6	N 21 15.2 +11.3	01						
02	208 58.6 -00.1	N 23 00.5 -00.2	200 44.8 -00.9	N 23 08.7 -00.4	261 53.2 -32.8	N 21 26.5 +11.3	02						
03	223 58.5 -00.2	N 23 00.3 -00.2	215 43.9 -00.8	N 23 08.3 -00.3	276 20.4 -32.8	N 21 37.8 +11.1	03						
04	238 58.3 -00.1	N 23 00.1 -00.2	230 43.1 -00.9	N 23 08.0 -00.4	290 47.6 -32.9	N 21 48.9 +10.9	04						
05	253 58.2 -00.1	N 22 59.9 -00.2	245 42.2 -00.8	N 23 07.6 -00.3	305 14.7 -32.9	N 21 59.8 +10.9	05						
06	268 58.1 -00.1	N 22 59.7 -00.2	260 41.4 -00.9	N 23 07.3 -00.3	319 41.8 -33.0	N 22 10.7 +10.7	06						
07	283 58.0 -00.1	N 22 59.5 -00.2	275 40.5 -00.9	N 23 07.0 -00.4	334 08.8 -33.1	N 22 21.4 +10.6	07						
08	298 57.9 -00.2	N 22 59.3 -00.2	290 39.6 -00.8	N 23 06.6 -00.3	348 35.7 -33.2	N 22 32.0 +10.4	08						
09	313 57.7 -00.1	N 22 59.1 -00.2	305 38.8 -00.9	N 23 06.3 -00.4	3 02.5 -33.3	N 22 42.4 +10.3	09						
10	328 57.6 -00.1	N 22 58.9 -00.2	320 37.9 -00.8	N 23 05.9 -00.3	17 29.2 -33.3	N 22 52.7 +10.2	10						
11	343 57.5 -00.1	N 22 58.7 -00.2	335 37.1 -00.9	N 23 05.6 -00.4	31 55.9 -33.4	N 23 02.9 +10.0	11						
12	358 57.4 -00.1	N 22 58.5 -00.2	350 36.2 -00.8	N 23 05.2 -00.3	46 22.5 -33.5	N 23 12.9 +09.9	12						
13	13 57.3 -00.1	N 22 58.3 -00.2	5 35.4 -00.9	N 23 04.9 -00.4	60 49.0 -33.5	N 23 22.8 +09.8	13						
14	28 57.2 -00.2	N 22 58.1 -00.2	20 34.5 -00.8	N 23 04.5 -00.3	75 15.5 -33.6	N 23 32.6 +09.6	14						
15	43 57.0 -00.1	N 22 57.9 -00.2	35 33.7 -00.9	N 23 04.2 -00.4	89 41.9 -33.7	N 23 42.2 +09.4	15						
16	58 56.9 -00.1	N 22 57.7 -00.2	50 32.8 -00.8	N 23 03.8 -00.3	104 08.2 -33.7	N 23 51.6 +09.3	16						
17	73 56.8 -00.1	N 22 57.5 -00.2	65 32.0 -00.9	N 23 03.5 -00.4	118 34.5 -33.9	N 24 00.9 +09.2	17						
18	88 56.7 -00.1	N 22 57.3 -00.2	80 31.1 -00.8	N 23 03.1 -00.4	133 00.6 -33.8	N 24 10.1 +09.0	18						
19	103 56.6 -00.1	N 22 57.1 -00.2	95 30.3 -00.9	N 23 02.7 -00.3	147 26.8 -34.0	N 24 19.1 +08.9	19						
20	118 56.5 -00.1	N 22 56.9 -00.2	110 29.4 -00.9	N 23 02.4 -00.4	161 52.8 -34.0	N 24 28.0 +08.7	20						
21	133 56.4 -00.2	N 22 56.7 -00.2	125 28.5 -00.8	N 23 02.0 -00.3	176 18.8 -34.1	N 24 36.7 +08.5	21						
22	148 56.2 -00.1	N 22 56.5 -00.2	140 27.7 -00.9	N 23 01.7 -00.4	190 44.7 -34.1	N 24 45.2 +08.4	22						
23	163 56.1 -00.1	N 22 56.3 -00.2	155 26.8 -00.8	N 23 01.3 -00.4	205 10.6 -34.3	N 24 53.6 +08.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'9 15'9 15'9 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'5 58'4 58'4 58'3 58'2 58'2								
	SHA 258° 258° 258° 258° 258° 258°		SHA 250° 250° 250° 249° 249° 249°		SHA 311° 309° 307° 304° 302° 299°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 12:37		Greenwich Culmination Time: 08:47								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 01.9 +00.7	N 15 55.2 +00.5	213 42.9 +01.9	N 21 01.4 +00.1	289 27.8 +02.4	S 06 00.8 +00.1	00						
01	251 02.6 +00.7	N 15 55.7 +00.6	228 44.8 +01.9	N 21 01.5 +00.1	304 30.2 +02.5	S 06 00.9 +00.0	01						
02	266 03.3 +00.6	N 15 56.3 +00.5	243 46.7 +01.9	N 21 01.6 +00.1	319 32.7 +02.5	S 06 00.9 +00.0	02						
03	281 03.9 +00.7	N 15 56.8 +00.5	258 48.6 +01.9	N 21 01.7 +00.1	334 35.2 +02.4	S 06 00.9 +00.0	03						
04	296 04.6 +00.7	N 15 57.3 +00.6	273 50.5 +01.9	N 21 01.8 +00.0	349 37.6 +02.5	S 06 00.9 +00.0	04						
05	311 05.3 +00.7	N 15 57.9 +00.5	288 52.4 +01.9	N 21 01.8 +00.1	4 40.1 +02.5	S 06 00.9 +00.0	05						
06	326 06.0 +00.7	N 15 58.4 +00.5	303 54.3 +01.8	N 21 01.9 +00.1	19 42.6 +02.5	S 06 00.9 +00.0	06						
07	341 06.7 +00.6	N 15 58.9 +00.6	318 56.1 +01.9	N 21 02.0 +00.1	34 45.1 +02.4	S 06 00.9 +00.1	07						
08	356 07.3 +00.7	N 15 59.5 +00.5	333 58.0 +01.9	N 21 02.1 +00.1	49 47.5 +02.5	S 06 01.0 +00.0	08						
09	11 08.0 +00.7	N 15 60.0 +00.5	348 59.9 +01.9	N 21 02.2 +00.1	64 50.0 +02.5	S 06 01.0 +00.0	09						
10	26 08.7 +00.7	N 16 00.5 +00.6	4 01.8 +01.9	N 21 02.3 +00.1	79 52.5 +02.4	S 06 01.0 +00.0	10						
11	41 09.4 +00.7	N 16 01.1 +00.5	19 03.7 +01.9	N 21 02.4 +00.0	94 54.9 +02.5	S 06 01.0 +00.0	11						
12	56 10.1 +00.6	N 16 01.6 +00.5	34 05.6 +01.9	N 21 02.4 +00.1	109 57.4 +02.5	S 06 01.0 +00.0	12						
13	71 10.7 +00.7	N 16 02.1 +00.5	49 07.5 +01.9	N 21 02.5 +00.1	124 59.9 +02.4	S 06 01.0 +00.0	13						
14	86 11.4 +00.7	N 16 02.6 +00.6	64 09.4 +01.9	N 21 02.6 +00.1	140 02.3 +02.5	S 06 01.0 +00.1	14						
15	101 12.1 +00.7	N 16 03.2 +00.5	79 11.3 +01.9	N 21 02.7 +00.1	155 04.8 +02.5	S 06 01.1 +00.0	15						
16	116 12.8 +00.7	N 16 03.7 +00.5	94 13.2 +01.9	N 21 02.8 +00.1	170 07.3 +02.5	S 06 01.1 +00.0	16						
17	131 13.5 +00.6	N 16 04.2 +00.6	109 15.1 +01.9	N 21 02.9 +00.0	185 09.8 +02.4	S 06 01.1 +00.0	17						
18	146 14.1 +00.7	N 16 04.8 +00.5	124 17.0 +01.9	N 21 02.9 +00.1	200 12.2 +02.5	S 06 01.1 +00.0	18						
19	161 14.8 +00.7	N 16 05.3 +00.5	139 18.9 +01.9	N 21 03.0 +00.1	215 14.7 +02.5	S 06 01.1 +00.0	19						
20	176 15.5 +00.7	N 16 05.8 +00.5	154 20.8 +01.9	N 21 03.1 +00.1	230 17.2 +02.4	S 06 01.1 +00.0	20						
21	191 16.2 +00.6	N 16 06.3 +00.6	169 22.7 +01.9	N 21 03.2 +00.1	245 19.6 +02.5	S 06 01.1 +00.1	21						
22	206 16.8 +00.7	N 16 06.9 +00.5	184 24.6 +01.9	N 21 03.3 +00.1	260 22.1 +02.5	S 06 01.2 +00.0	22						
23	221 17.5 +00.7	N 16 07.4 +00.5	199 26.5 +01.9	N 21 03.4 +00.0	275 24.6 +02.5	S 06 01.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 315° 315° 315° 315° 315° 315°		SHA 293° 293° 293° 293° 293° 293°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:15		Greenwich Culmination Time: 09:43		Greenwich Culmination Time: 04:41								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 56.0 -00.1	N 22 56.1 -00.2	170 26.0 -00.9	N 23 00.9 -00.3	219 36.3 -34.2	N 25 01.9 +08.1	00						
01	193 55.9 -00.1	N 22 55.9 -00.2	185 25.1 -00.8	N 23 00.6 -00.4	234 02.1 -34.4	N 25 10.0 +08.0	01						
02	208 55.8 -00.1	N 22 55.7 -00.2	200 24.3 -00.9	N 23 00.2 -00.4	248 27.7 -34.4	N 25 18.0 +07.7	02						
03	223 55.7 -00.2	N 22 55.5 -00.2	215 23.4 -00.8	N 22 59.8 -00.3	262 53.3 -34.4	N 25 25.7 +07.7	03						
04	238 55.5 -00.1	N 22 55.3 -00.3	230 22.6 -00.9	N 22 59.5 -00.4	277 18.9 -34.5	N 25 33.4 +07.4	04						
05	253 55.4 -00.1	N 22 55.0 -00.2	245 21.7 -00.8	N 22 59.1 -00.4	291 44.4 -34.6	N 25 40.8 +07.4	05						
06	268 55.3 -00.1	N 22 54.8 -00.2	260 20.9 -00.9	N 22 58.7 -00.4	306 09.8 -34.6	N 25 48.2 +07.1	06						
07	283 55.2 -00.1	N 22 54.6 -00.2	275 20.0 -00.8	N 22 58.3 -00.3	320 35.2 -34.7	N 25 55.3 +07.0	07						
08	298 55.1 -00.1	N 22 54.4 -00.2	290 19.2 -00.8	N 22 58.0 -00.4	335 00.5 -34.7	N 26 02.3 +06.8	08						
09	313 55.0 -00.1	N 22 54.2 -00.2	305 18.4 -00.9	N 22 57.6 -00.4	349 25.8 -34.8	N 26 09.1 +06.7	09						
10	328 54.9 -00.2	N 22 54.0 -00.2	320 17.5 -00.8	N 22 57.2 -00.4	3 51.0 -34.8	N 26 15.8 +06.5	10						
11	343 54.7 -00.1	N 22 53.8 -00.2	335 16.7 -00.9	N 22 56.8 -00.3	18 16.2 -34.9	N 26 22.3 +06.3	11						
12	358 54.6 -00.1	N 22 53.6 -00.3	350 15.8 -00.8	N 22 56.5 -00.4	32 41.3 -34.9	N 26 28.6 +06.2	12						
13	13 54.5 -00.1	N 22 53.3 -00.2	5 15.0 -00.9	N 22 56.1 -00.4	47 06.4 -35.0	N 26 34.8 +06.0	13						
14	28 54.4 -00.1	N 22 53.1 -00.2	20 14.1 -00.8	N 22 55.7 -00.4	61 31.4 -35.0	N 26 40.8 +05.8	14						
15	43 54.3 -00.1	N 22 52.9 -00.2	35 13.3 -00.9	N 22 55.3 -00.4	75 56.4 -35.0	N 26 46.6 +05.7	15						
16	58 54.2 -00.1	N 22 52.7 -00.2	50 12.4 -00.8	N 22 54.9 -00.3	90 21.4 -35.1	N 26 52.3 +05.5	16						
17	73 54.1 -00.1	N 22 52.5 -00.2	65 11.6 -00.9	N 22 54.6 -00.4	104 46.3 -35.1	N 26 57.8 +05.3	17						
18	88 54.0 -00.2	N 22 52.3 -00.3	80 10.7 -00.8	N 22 54.2 -00.4	119 11.2 -35.2	N 27 03.1 +05.1	18						
19	103 53.8 -00.1	N 22 52.0 -00.2	95 09.9 -00.9	N 22 53.8 -00.4	133 36.0 -35.2	N 27 08.2 +05.0	19						
20	118 53.7 -00.1	N 22 51.8 -00.2	110 09.0 -00.8	N 22 53.4 -00.4	148 00.8 -35.2	N 27 13.2 +04.8	20						
21	133 53.6 -00.1	N 22 51.6 -00.2	125 08.2 -00.8	N 22 53.0 -00.4	162 25.6 -35.2	N 27 18.0 +04.7	21						
22	148 53.5 -00.1	N 22 51.4 -00.2	140 07.4 -00.9	N 22 52.6 -00.4	176 50.4 -35.3	N 27 22.7 +04.4	22						
23	163 53.4 -00.1	N 22 51.2 -00.3	155 06.5 -00.8	N 22 52.2 -00.4	191 15.1 -35.3	N 27 27.1 +04.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'8 15'8 15'7 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'1 58'0 57'9 57'9 57'8 57'7								
	SHA 257° 257° 257° 257° 257° 256°		SHA 249° 249° 248° 248° 248° 248°		SHA 297° 294° 292° 289° 287° 284°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 12:38		Greenwich Culmination Time: 09:43								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 18.2 +00.7	N 16 07.9 +00.5	214 28.4 +01.9	N 21 03.4 +00.1	290 27.1 +02.4	S 06 01.2 +00.0	00						
01	251 18.9 +00.7	N 16 08.4 +00.6	229 30.3 +01.9	N 21 03.5 +00.1	305 29.5 +02.5	S 06 01.2 +00.0	01						
02	266 19.6 +00.6	N 16 09.0 +00.5	244 32.2 +01.8	N 21 03.6 +00.1	320 32.0 +02.5	S 06 01.2 +00.0	02						
03	281 20.2 +00.7	N 16 09.5 +00.5	259 34.0 +01.9	N 21 03.7 +00.1	335 34.5 +02.4	S 06 01.2 +00.0	03						
04	296 20.9 +00.7	N 16 10.0 +00.5	274 35.9 +01.9	N 21 03.8 +00.1	350 36.9 +02.5	S 06 01.2 +00.1	04						
05	311 21.6 +00.7	N 16 10.5 +00.6	289 37.8 +01.9	N 21 03.9 +00.1	5 39.4 +02.5	S 06 01.3 +00.0	05						
06	326 22.3 +00.7	N 16 11.1 +00.5	304 39.7 +01.9	N 21 04.0 +00.0	20 41.9 +02.5	S 06 01.3 +00.0	06						
07	341 23.0 +00.6	N 16 11.6 +00.5	319 41.6 +01.9	N 21 04.0 +00.1	35 44.4 +02.4	S 06 01.3 +00.0	07						
08	356 23.6 +00.7	N 16 12.1 +00.5	334 43.5 +01.9	N 21 04.1 +00.1	50 46.8 +02.5	S 06 01.3 +00.0	08						
09	11 24.3 +00.7	N 16 12.6 +00.6	349 45.4 +01.9	N 21 04.2 +00.1	65 49.3 +02.5	S 06 01.3 +00.0	09						
10	26 25.0 +00.7	N 16 13.2 +00.5	4 47.3 +01.9	N 21 04.3 +00.1	80 51.8 +02.5	S 06 01.3 +00.1	10						
11	41 25.7 +00.7	N 16 13.7 +00.5	19 49.2 +01.9	N 21 04.4 +00.1	95 54.3 +02.4	S 06 01.4 +00.0	11						
12	56 26.4 +00.6	N 16 14.2 +00.5	34 51.1 +01.9	N 21 04.5 +00.0	110 56.7 +02.5	S 06 01.4 +00.0	12						
13	71 27.0 +00.7	N 16 14.7 +00.6	49 53.0 +01.9	N 21 04.5 +00.1	125 59.2 +02.5	S 06 01.4 +00.0	13						
14	86 27.7 +00.7	N 16 15.3 +00.5	64 54.9 +01.9	N 21 04.6 +00.1	141 01.7 +02.5	S 06 01.4 +00.0	14						
15	101 28.4 +00.7	N 16 15.8 +00.5	79 56.8 +01.9	N 21 04.7 +00.1	156 04.2 +02.4	S 06 01.4 +00.0	15						
16	116 29.1 +00.6	N 16 16.3 +00.5	94 58.7 +01.9	N 21 04.8 +00.1	171 06.6 +02.5	S 06 01.4 +00.0	16						
17	131 29.7 +00.7	N 16 16.8 +00.5	110 00.6 +01.9	N 21 04.9 +00.1	186 09.1 +02.5	S 06 01.4 +00.1	17						
18	146 30.4 +00.7	N 16 17.3 +00.6	125 02.5 +01.9	N 21 05.0 +00.0	201 11.6 +02.5	S 06 01.5 +00.0	18						
19	161 31.1 +00.7	N 16 17.9 +00.5	140 04.4 +01.9	N 21 05.0 +00.1	216 14.1 +02.4	S 06 01.5 +00.0	19						
20	176 31.8 +00.7	N 16 18.4 +00.5	155 06.3 +01.9	N 21 05.1 +00.1	231 16.5 +02.5	S 06 01.5 +00.0	20						
21	191 32.5 +00.6	N 16 18.9 +00.5	170 08.2 +01.9	N 21 05.2 +00.1	246 19.0 +02.5	S 06 01.5 +00.0	21						
22	206 33.1 +00.7	N 16 19.4 +00.6	185 10.1 +01.9	N 21 05.3 +00.1	261 21.5 +02.5	S 06 01.5 +00.0	22						
23	221 33.8 +00.7	N 16 20.0 +00.5	200 12.0 +01.9	N 21 05.4 +00.1	276 24.0 +02.4	S 06 01.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 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 315° 315° 314° 314° 314° 314°		SHA 293° 293° 293° 293° 293° 293°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:14		Greenwich Culmination Time: 09:40		Greenwich Culmination Time: 04:37								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 53.3 -00.1	N 22 50.9 -00.2	170 05.7 -00.9	N 22 51.8 -00.4	205 39.8 -35.3	N 27 31.4 +04.2	00						
01	193 53.2 -00.1	N 22 50.7 -00.2	185 04.8 -00.8	N 22 51.4 -00.4	220 04.5 -35.4	N 27 35.6 +03.9	01						
02	208 53.1 -00.2	N 22 50.5 -00.2	200 04.0 -00.9	N 22 51.0 -00.4	234 29.1 -35.4	N 27 39.5 +03.8	02						
03	223 52.9 -00.1	N 22 50.3 -00.3	215 03.1 -00.8	N 22 50.6 -00.3	248 53.7 -35.4	N 27 43.3 +03.6	03						
04	238 52.8 -00.1	N 22 50.0 -00.2	230 02.3 -00.8	N 22 50.3 -00.4	263 18.3 -35.4	N 27 46.9 +03.4	04						
05	253 52.7 -00.1	N 22 49.8 -00.2	245 01.5 -00.9	N 22 49.9 -00.4	277 42.9 -35.4	N 27 50.3 +03.3	05						
06	268 52.6 -00.1	N 22 49.6 -00.2	260 00.6 -00.8	N 22 49.5 -00.4	292 07.5 -35.4	N 27 53.6 +03.0	06						
07	283 52.5 -00.1	N 22 49.4 -00.3	274 59.8 -00.9	N 22 49.1 -00.4	306 32.1 -35.4	N 27 56.6 +02.9	07						
08	298 52.4 -00.1	N 22 49.1 -00.2	289 58.9 -00.8	N 22 48.7 -00.5	320 56.7 -35.5	N 27 59.5 +02.8	08						
09	313 52.3 -00.1	N 22 48.9 -00.2	304 58.1 -00.8	N 22 48.2 -00.4	335 21.2 -35.4	N 28 02.3 +02.5	09						
10	328 52.2 -00.1	N 22 48.7 -00.3	319 57.3 -00.9	N 22 47.8 -00.4	349 45.8 -35.5	N 28 04.8 +02.4	10						
11	343 52.1 -00.2	N 22 48.4 -00.2	334 56.4 -00.8	N 22 47.4 -00.4	4 10.3 -35.4	N 28 07.2 +02.2	11						
12	358 51.9 -00.1	N 22 48.2 -00.2	349 55.6 -00.9	N 22 47.0 -00.4	18 34.9 -35.5	N 28 09.4 +02.0	12						
13	13 51.8 -00.1	N 22 48.0 -00.3	4 54.7 -00.8	N 22 46.6 -00.4	32 59.4 -35.4	N 28 11.4 +01.8	13						
14	28 51.7 -00.1	N 22 47.7 -00.2	19 53.9 -00.8	N 22 46.2 -00.4	47 24.0 -35.5	N 28 13.2 +01.7	14						
15	43 51.6 -00.1	N 22 47.5 -00.2	34 53.1 -00.9	N 22 45.8 -00.4	61 48.5 -35.4	N 28 14.9 +01.5	15						
16	58 51.5 -00.1	N 22 47.3 -00.3	49 52.2 -00.8	N 22 45.4 -00.4	76 13.1 -35.4	N 28 16.4 +01.3	16						
17	73 51.4 -00.1	N 22 47.0 -00.2	64 51.4 -00.9	N 22 45.0 -00.4	90 37.7 -35.5	N 28 17.7 +01.2	17						
18	88 51.3 -00.1	N 22 46.8 -00.2	79 50.5 -00.8	N 22 44.6 -00.4	105 02.2 -35.3	N 28 18.9 +00.9	18						
19	103 51.2 -00.1	N 22 46.6 -00.3	94 49.7 -00.8	N 22 44.2 -00.5	119 26.9 -35.4	N 28 19.8 +00.8	19						
20	118 51.1 -00.1	N 22 46.3 -00.2	109 48.9 -00.9	N 22 43.7 -00.4	133 51.5 -35.4	N 28 20.6 +00.6	20						
21	133 51.0 -00.1	N 22 46.1 -00.2	124 48.0 -00.8	N 22 43.3 -00.4	148 16.1 -35.3	N 28 21.2 +00.5	21						
22	148 50.9 -00.2	N 22 45.9 -00.3	139 47.2 -00.8	N 22 42.9 -00.4	162 40.8 -35.3	N 28 21.7 +00.2	22						
23	163 50.7 -00.1	N 22 45.6 -00.2	154 46.4 -00.9	N 22 42.5 -00.4	177 05.5 -35.3	N 28 21.9 +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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'7 15'7 15'6 15'6 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'6 57'5 57'5 57'4 57'3 57'2								
	SHA 256° 256° 256° 256° 256° 255°		SHA 247° 247° 247° 247° 247° 246°		SHA 282° 279° 277° 274° 272° 269°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 12:40		Greenwich Culmination Time: 10:42								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 34.5 +00.7	N 16 20.5 +00.5	215 13.9 +01.9	N 21 05.5 +00.0	291 26.4 +02.5	S 06 01.6 +00.0	00						
01	251 35.2 +00.7	N 16 21.0 +00.5	230 15.8 +01.9	N 21 05.5 +00.1	306 28.9 +02.5	S 06 01.6 +00.0	01						
02	266 35.9 +00.6	N 16 21.5 +00.5	245 17.7 +01.9	N 21 05.6 +00.1	321 31.4 +02.5	S 06 01.6 +00.0	02						
03	281 36.5 +00.7	N 16 22.0 +00.5	260 19.6 +01.9	N 21 05.7 +00.1	336 33.9 +02.4	S 06 01.6 +00.0	03						
04	296 37.2 +00.7	N 16 22.5 +00.6	275 21.5 +01.9	N 21 05.8 +00.1	351 36.3 +02.5	S 06 01.6 +00.0	04						
05	311 37.9 +00.7	N 16 23.1 +00.5	290 23.4 +01.9	N 21 05.9 +00.1	6 38.8 +02.5	S 06 01.6 +00.1	05						
06	326 38.6 +00.6	N 16 23.6 +00.5	305 25.3 +01.9	N 21 06.0 +00.0	21 41.3 +02.5	S 06 01.7 +00.0	06						
07	341 39.2 +00.7	N 16 24.1 +00.5	320 27.2 +01.9	N 21 06.0 +00.1	36 43.8 +02.5	S 06 01.7 +00.0	07						
08	356 39.9 +00.7	N 16 24.6 +00.5	335 29.1 +01.9	N 21 06.1 +00.1	51 46.3 +02.4	S 06 01.7 +00.0	08						
09	11 40.6 +00.7	N 16 25.1 +00.6	350 31.0 +01.9	N 21 06.2 +00.1	66 48.7 +02.5	S 06 01.7 +00.0	09						
10	26 41.3 +00.7	N 16 25.7 +00.5	5 32.9 +01.9	N 21 06.3 +00.1	81 51.2 +02.5	S 06 01.7 +00.0	10						
11	41 42.0 +00.6	N 16 26.2 +00.5	20 34.8 +01.9	N 21 06.4 +00.1	96 53.7 +02.5	S 06 01.7 +00.1	11						
12	56 42.6 +00.7	N 16 26.7 +00.5	35 36.7 +01.9	N 21 06.5 +00.0	111 56.2 +02.4	S 06 01.8 +00.0	12						
13	71 43.3 +00.7	N 16 27.2 +00.5	50 38.6 +01.9	N 21 06.5 +00.1	126 58.6 +02.5	S 06 01.8 +00.0	13						
14	86 44.0 +00.7	N 16 27.7 +00.5	65 40.5 +01.9	N 21 06.6 +00.1	142 01.1 +02.5	S 06 01.8 +00.0	14						
15	101 44.7 +00.7	N 16 28.2 +00.5	80 42.4 +01.9	N 21 06.7 +00.1	157 03.6 +02.5	S 06 01.8 +00.0	15						
16	116 45.4 +00.6	N 16 28.7 +00.6	95 44.3 +01.9	N 21 06.8 +00.1	172 06.1 +02.5	S 06 01.8 +00.1	16						
17	131 46.0 +00.7	N 16 29.3 +00.5	110 46.2 +01.9	N 21 06.9 +00.0	187 08.6 +02.4	S 06 01.9 +00.0	17						
18	146 46.7 +00.7	N 16 29.8 +00.5	125 48.1 +01.9	N 21 06.9 +00.1	202 11.0 +02.5	S 06 01.9 +00.0	18						
19	161 47.4 +00.7	N 16 30.3 +00.5	140 50.0 +01.9	N 21 07.0 +00.1	217 13.5 +02.5	S 06 01.9 +00.0	19						
20	176 48.1 +00.6	N 16 30.8 +00.5	155 51.9 +01.9	N 21 07.1 +00.1	232 16.0 +02.5	S 06 01.9 +00.0	20						
21	191 48.7 +00.7	N 16 31.3 +00.5	170 53.8 +01.9	N 21 07.2 +00.1	247 18.5 +02.5	S 06 01.9 +00.0	21						
22	206 49.4 +00.7	N 16 31.8 +00.5	185 55.7 +01.9	N 21 07.3 +00.1	262 21.0 +02.4	S 06 01.9 +00.1	22						
23	221 50.1 +00.7	N 16 32.3 +00.6	200 57.6 +01.9	N 21 07.4 +00.0	277 23.4 +02.5	S 06 02.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 314° 314° 314° 314° 314° 313°		SHA 293° 293° 293° 293° 293° 293°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:13		Greenwich Culmination Time: 09:37		Greenwich Culmination Time: 04:33								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 50.6 -00.1	N 22 45.4 -00.3	169 45.5 -00.8	N 22 42.1 -00.5	191 30.2 -35.3	N 28 22.0 +00.0	00						
01	193 50.5 -00.1	N 22 45.1 -00.2	184 44.7 -00.8	N 22 41.6 -00.4	205 54.9 -35.2	N 28 22.0 -00.3	01						
02	208 50.4 -00.1	N 22 44.9 -00.2	199 43.9 -00.9	N 22 41.2 -00.4	220 19.7 -35.2	N 28 21.7 -00.4	02						
03	223 50.3 -00.1	N 22 44.7 -00.3	214 43.0 -00.8	N 22 40.8 -00.4	234 44.5 -35.2	N 28 21.3 -00.6	03						
04	238 50.2 -00.1	N 22 44.4 -00.2	229 42.2 -00.8	N 22 40.4 -00.5	249 09.3 -35.1	N 28 20.7 -00.8	04						
05	253 50.1 -00.1	N 22 44.2 -00.3	244 41.4 -00.9	N 22 39.9 -00.4	263 34.2 -35.1	N 28 19.9 -00.9	05						
06	268 50.0 -00.1	N 22 43.9 -00.2	259 40.5 -00.8	N 22 39.5 -00.4	277 59.1 -35.0	N 28 19.0 -01.1	06						
07	283 49.9 -00.1	N 22 43.7 -00.3	274 39.7 -00.8	N 22 39.1 -00.4	292 24.1 -35.0	N 28 17.9 -01.3	07						
08	298 49.8 -00.1	N 22 43.4 -00.2	289 38.9 -00.9	N 22 38.7 -00.5	306 49.1 -35.0	N 28 16.6 -01.5	08						
09	313 49.7 -00.1	N 22 43.2 -00.3	304 38.0 -00.8	N 22 38.2 -00.4	321 14.1 -34.9	N 28 15.1 -01.6	09						
10	328 49.6 -00.1	N 22 42.9 -00.2	319 37.2 -00.8	N 22 37.8 -00.4	335 39.2 -34.9	N 28 13.5 -01.8	10						
11	343 49.5 -00.2	N 22 42.7 -00.2	334 36.4 -00.9	N 22 37.4 -00.5	350 04.3 -34.8	N 28 11.7 -01.9	11						
12	358 49.3 -00.1	N 22 42.5 -00.3	349 35.5 -00.8	N 22 36.9 -00.4	4 29.5 -34.7	N 28 09.8 -02.2	12						
13	13 49.2 -00.1	N 22 42.2 -00.2	4 34.7 -00.8	N 22 36.5 -00.4	18 54.8 -34.7	N 28 07.6 -02.3	13						
14	28 49.1 -00.1	N 22 42.0 -00.3	19 33.9 -00.9	N 22 36.1 -00.5	33 20.1 -34.7	N 28 05.3 -02.4	14						
15	43 49.0 -00.1	N 22 41.7 -00.2	34 33.0 -00.8	N 22 35.6 -00.4	47 45.4 -34.6	N 28 02.9 -02.6	15						
16	58 48.9 -00.1	N 22 41.5 -00.3	49 32.2 -00.8	N 22 35.2 -00.5	62 10.8 -34.5	N 28 00.3 -02.8	16						
17	73 48.8 -00.1	N 22 41.2 -00.2	64 31.4 -00.9	N 22 34.7 -00.4	76 36.3 -34.5	N 27 57.5 -03.0	17						
18	88 48.7 -00.1	N 22 41.0 -00.3	79 30.5 -00.8	N 22 34.3 -00.4	91 01.8 -34.4	N 27 54.5 -03.1	18						
19	103 48.6 -00.1	N 22 40.7 -00.3	94 29.7 -00.8	N 22 33.9 -00.5	105 27.4 -34.3	N 27 51.4 -03.2	19						
20	118 48.5 -00.1	N 22 40.4 -00.2	109 28.9 -00.8	N 22 33.4 -00.4	119 53.1 -34.3	N 27 48.2 -03.5	20						
21	133 48.4 -00.1	N 22 40.2 -00.3	124 28.1 -00.9	N 22 33.0 -00.5	134 18.8 -34.2	N 27 44.7 -03.5	21						
22	148 48.3 -00.1	N 22 39.9 -00.2	139 27.2 -00.8	N 22 32.5 -00.4	148 44.6 -34.1	N 27 41.2 -03.8	22						
23	163 48.2 -00.1	N 22 39.7 -00.3	154 26.4 -00.8	N 22 32.1 -00.5	163 10.5 -34.0	N 27 37.4 -03.9	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	15'7 15'7 15'7 15'7 15'7 15'7	SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	15'6 15'5 15'5 15'5 15'5 15'4								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	57'1 57'0 56'9 56'8 56'7 56'7								
SHA	255° 255° 255° 255° 255° 254°	SHA	246° 246° 246° 246° 245° 245°	SHA	267° 264° 262° 259° 257° 254°								
Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 12:41			Greenwich Culmination Time: 11:41							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 50.8 +00.7	N 16 32.9 +00.5	215 59.5 +01.9	N 21 07.4 +00.1	292 25.9 +02.5	S 06 02.0 +00.0	00						
01	251 51.5 +00.6	N 16 33.4 +00.5	231 01.4 +01.9	N 21 07.5 +00.1	307 28.4 +02.5	S 06 02.0 +00.0	01						
02	266 52.1 +00.7	N 16 33.9 +00.5	246 03.3 +01.9	N 21 07.6 +00.1	322 30.9 +02.5	S 06 02.0 +00.0	02						
03	281 52.8 +00.7	N 16 34.4 +00.5	261 05.2 +01.9	N 21 07.7 +00.1	337 33.4 +02.4	S 06 02.0 +00.1	03						
04	296 53.5 +00.7	N 16 34.9 +00.5	276 07.1 +01.9	N 21 07.8 +00.0	352 35.8 +02.5	S 06 02.1 +00.0	04						
05	311 54.2 +00.6	N 16 35.4 +00.5	291 09.0 +01.9	N 21 07.8 +00.1	7 38.3 +02.5	S 06 02.1 +00.0	05						
06	326 54.8 +00.7	N 16 35.9 +00.5	306 10.9 +01.9	N 21 07.9 +00.1	22 40.8 +02.5	S 06 02.1 +00.0	06						
07	341 55.5 +00.7	N 16 36.4 +00.5	321 12.8 +01.9	N 21 08.0 +00.1	37 43.3 +02.5	S 06 02.1 +00.0	07						
08	356 56.2 +00.7	N 16 36.9 +00.6	336 14.7 +01.9	N 21 08.1 +00.1	52 45.8 +02.4	S 06 02.1 +00.0	08						
09	11 56.9 +00.7	N 16 37.5 +00.5	351 16.6 +01.9	N 21 08.2 +00.1	67 48.2 +02.5	S 06 02.1 +00.1	09						
10	26 57.6 +00.6	N 16 38.0 +00.5	6 18.5 +01.9	N 21 08.3 +00.0	82 50.7 +02.5	S 06 02.2 +00.0	10						
11	41 58.2 +00.7	N 16 38.5 +00.5	21 20.4 +01.9	N 21 08.3 +00.1	97 53.2 +02.5	S 06 02.2 +00.0	11						
12	56 58.9 +00.7	N 16 39.0 +00.5	36 22.3 +01.9	N 21 08.4 +00.1	112 55.7 +02.5	S 06 02.2 +00.0	12						
13	71 59.6 +00.7	N 16 39.5 +00.5	51 24.2 +01.9	N 21 08.5 +00.1	127 58.2 +02.4	S 06 02.2 +00.0	13						
14	87 00.3 +00.6	N 16 40.0 +00.5	66 26.1 +01.9	N 21 08.6 +00.1	143 00.6 +02.5	S 06 02.2 +00.1	14						
15	102 00.9 +00.7	N 16 40.5 +00.5	81 28.0 +01.9	N 21 08.7 +00.0	158 03.1 +02.5	S 06 02.3 +00.0	15						
16	117 01.6 +00.7	N 16 41.0 +00.5	96 29.9 +01.9	N 21 08.7 +00.1	173 05.6 +02.5	S 06 02.3 +00.0	16						
17	132 02.3 +00.7	N 16 41.5 +00.5	111 31.8 +01.9	N 21 08.8 +00.1	188 08.1 +02.5	S 06 02.3 +00.0	17						
18	147 03.0 +00.7	N 16 42.0 +00.5	126 33.7 +01.9	N 21 08.9 +00.1	203 10.6 +02.5	S 06 02.3 +00.0	18						
19	162 03.7 +00.6	N 16 42.5 +00.5	141 35.6 +01.9	N 21 09.0 +00.1	218 13.1 +02.4	S 06 02.3 +00.1	19						
20	177 04.3 +00.7	N 16 43.0 +00.6	156 37.5 +01.9	N 21 09.1 +00.0	233 15.5 +02.5	S 06 02.4 +00.0	20						
21	192 05.0 +00.7	N 16 43.6 +00.5	171 39.4 +01.9	N 21 09.1 +00.1	248 18.0 +02.5	S 06 02.4 +00.0	21						
22	207 05.7 +00.7	N 16 44.1 +00.5	186 41.3 +01.9	N 21 09.2 +00.1	263 20.5 +02.5	S 06 02.4 +00.0	22						
23	222 06.4 +00.6	N 16 44.6 +00.5	201 43.2 +01.9	N 21 09.3 +00.1	278 23.0 +02.5	S 06 02.4 +00.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'0 00'0 00'0 00'0 00'0 00'0	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'2 00'2 00'2 00'2 00'2 00'2								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	313° 313° 313° 313° 313° 313°	SHA	292° 292° 292° 292° 292° 292°	SHA	009° 009° 009° 009° 009° 009°								
Greenwich Culmination Time: 08:12			Greenwich Culmination Time: 09:34			Greenwich Culmination Time: 04:29							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 48.1 -00.1	N 22 39.4 -00.2	169 25.6 -00.8	N 22 31.6 -00.4	177 36.5 -34.0	N 27 33.5 -04.0	00						
01	193 48.0 -00.1	N 22 39.2 -00.3	184 24.8 -00.9	N 22 31.2 -00.5	192 02.5 -33.9	N 27 29.5 -04.3	01						
02	208 47.9 -00.1	N 22 38.9 -00.2	199 23.9 -00.8	N 22 30.7 -00.4	206 28.6 -33.8	N 27 25.2 -04.3	02						
03	223 47.8 -00.1	N 22 38.7 -00.3	214 23.1 -00.8	N 22 30.3 -00.5	220 54.8 -33.8	N 27 20.9 -04.5	03						
04	238 47.7 -00.1	N 22 38.4 -00.3	229 22.3 -00.9	N 22 29.8 -00.4	235 21.0 -33.6	N 27 16.4 -04.7	04						
05	253 47.6 -00.2	N 22 38.1 -00.2	244 21.4 -00.8	N 22 29.4 -00.5	249 47.4 -33.6	N 27 11.7 -04.8	05						
06	268 47.4 -00.1	N 22 37.9 -00.3	259 20.6 -00.8	N 22 28.9 -00.4	264 13.8 -33.5	N 27 06.9 -05.0	06						
07	283 47.3 -00.1	N 22 37.6 -00.2	274 19.8 -00.8	N 22 28.5 -00.5	278 40.3 -33.4	N 27 01.9 -05.1	07						
08	298 47.2 -00.1	N 22 37.4 -00.3	289 19.0 -00.8	N 22 28.0 -00.4	293 06.9 -33.4	N 26 56.8 -05.3	08						
09	313 47.1 -00.1	N 22 37.1 -00.3	304 18.2 -00.9	N 22 27.6 -00.5	307 33.5 -33.2	N 26 51.5 -05.4	09						
10	328 47.0 -00.1	N 22 36.8 -00.2	319 17.3 -00.8	N 22 27.1 -00.5	322 00.3 -33.2	N 26 46.1 -05.6	10						
11	343 46.9 -00.1	N 22 36.6 -00.3	334 16.5 -00.8	N 22 26.6 -00.4	336 27.1 -33.0	N 26 40.5 -05.7	11						
12	358 46.8 -00.1	N 22 36.3 -00.3	349 15.7 -00.8	N 22 26.2 -00.5	350 54.1 -33.0	N 26 34.8 -05.8	12						
13	13 46.7 -00.1	N 22 36.0 -00.2	4 14.9 -00.9	N 22 25.7 -00.5	5 21.1 -32.9	N 26 29.0 -06.0	13						
14	28 46.6 -00.1	N 22 35.8 -00.3	19 14.0 -00.8	N 22 25.2 -00.4	19 48.2 -32.8	N 26 23.0 -06.1	14						
15	43 46.5 -00.1	N 22 35.5 -00.3	34 13.2 -00.8	N 22 24.8 -00.5	34 15.4 -32.7	N 26 16.9 -06.3	15						
16	58 46.4 -00.1	N 22 35.2 -00.2	49 12.4 -00.8	N 22 24.3 -00.4	48 42.7 -32.6	N 26 10.6 -06.4	16						
17	73 46.3 -00.1	N 22 35.0 -00.3	64 11.6 -00.8	N 22 23.9 -00.5	63 10.1 -32.5	N 26 04.2 -06.5	17						
18	88 46.2 -00.1	N 22 34.7 -00.3	79 10.8 -00.9	N 22 23.4 -00.5	77 37.6 -32.5	N 25 57.7 -06.7	18						
19	103 46.1 -00.1	N 22 34.4 -00.2	94 09.9 -00.8	N 22 22.9 -00.5	92 05.1 -32.3	N 25 51.0 -06.8	19						
20	118 46.0 -00.1	N 22 34.2 -00.3	109 09.1 -00.8	N 22 22.4 -00.4	106 32.8 -32.2	N 25 44.2 -06.9	20						
21	133 45.9 -00.1	N 22 33.9 -00.3	124 08.3 -00.8	N 22 22.0 -00.5	121 00.6 -32.1	N 25 37.3 -07.1	21						
22	148 45.8 -00.1	N 22 33.6 -00.2	139 07.5 -00.8	N 22 21.5 -00.5	135 28.5 -32.1	N 25 30.2 -07.1	22						
23	163 45.7 -00.1	N 22 33.4 -00.3	154 06.7 -00.9	N 22 21.0 -00.4	149 56.4 -31.9	N 25 23.1 -07.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 15'4 15'4 15'3 15'3 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'6 56'5 56'4 56'3 56'2 56'1								
	SHA 254° 254° 254° 254° 254° 253°		SHA 245° 245° 244° 244° 244° 244°		SHA 252° 250° 247° 245° 242° 240°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 12:42		Greenwich Culmination Time: 12:37								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	237 07.0 +00.7	N 16 45.1 +00.5	216 45.1 +01.9	N 21 09.4 +00.1	293 25.5 +02.5	S 06 02.4 +00.1	00						
01	252 07.7 +00.7	N 16 45.6 +00.5	231 47.0 +01.9	N 21 09.5 +00.1	308 28.0 +02.4	S 06 02.5 +00.0	01						
02	267 08.4 +00.7	N 16 46.1 +00.5	246 48.9 +01.9	N 21 09.6 +00.0	323 30.4 +02.5	S 06 02.5 +00.0	02						
03	282 09.1 +00.7	N 16 46.6 +00.5	261 50.8 +01.9	N 21 09.6 +00.1	338 32.9 +02.5	S 06 02.5 +00.0	03						
04	297 09.8 +00.6	N 16 47.1 +00.5	276 52.7 +01.9	N 21 09.7 +00.1	353 35.4 +02.5	S 06 02.5 +00.0	04						
05	312 10.4 +00.7	N 16 47.6 +00.5	291 54.6 +01.9	N 21 09.8 +00.1	8 37.9 +02.5	S 06 02.5 +00.1	05						
06	327 11.1 +00.7	N 16 48.1 +00.5	306 56.5 +01.9	N 21 09.9 +00.1	23 40.4 +02.5	S 06 02.6 +00.0	06						
07	342 11.8 +00.7	N 16 48.6 +00.5	321 58.4 +01.9	N 21 10.0 +00.0	38 42.9 +02.5	S 06 02.6 +00.0	07						
08	357 12.5 +00.6	N 16 49.1 +00.5	337 00.3 +01.9	N 21 10.0 +00.1	53 45.4 +02.4	S 06 02.6 +00.0	08						
09	12 13.1 +00.7	N 16 49.6 +00.5	352 02.2 +01.9	N 21 10.1 +00.1	68 47.8 +02.5	S 06 02.6 +00.0	09						
10	27 13.8 +00.7	N 16 50.1 +00.5	7 04.1 +01.9	N 21 10.2 +00.1	83 50.3 +02.5	S 06 02.6 +00.1	10						
11	42 14.5 +00.7	N 16 50.6 +00.5	22 06.0 +01.9	N 21 10.3 +00.1	98 52.8 +02.5	S 06 02.7 +00.0	11						
12	57 15.2 +00.6	N 16 51.1 +00.5	37 07.9 +01.9	N 21 10.4 +00.0	113 55.3 +02.5	S 06 02.7 +00.0	12						
13	72 15.8 +00.7	N 16 51.6 +00.5	52 09.8 +01.9	N 21 10.4 +00.1	128 57.8 +02.5	S 06 02.7 +00.0	13						
14	87 16.5 +00.7	N 16 52.1 +00.5	67 11.7 +01.9	N 21 10.5 +00.1	144 00.3 +02.5	S 06 02.7 +00.0	14						
15	102 17.2 +00.7	N 16 52.6 +00.5	82 13.6 +01.9	N 21 10.6 +00.1	159 02.8 +02.4	S 06 02.7 +00.1	15						
16	117 17.9 +00.7	N 16 53.1 +00.5	97 15.5 +01.9	N 21 10.7 +00.1	174 05.2 +02.5	S 06 02.8 +00.0	16						
17	132 18.6 +00.6	N 16 53.6 +00.5	112 17.4 +01.9	N 21 10.8 +00.0	189 07.7 +02.5	S 06 02.8 +00.0	17						
18	147 19.2 +00.7	N 16 54.1 +00.5	127 19.3 +01.9	N 21 10.8 +00.1	204 10.2 +02.5	S 06 02.8 +00.0	18						
19	162 19.9 +00.7	N 16 54.6 +00.5	142 21.2 +02.0	N 21 10.9 +00.1	219 12.7 +02.5	S 06 02.8 +00.0	19						
20	177 20.6 +00.7	N 16 55.1 +00.5	157 23.2 +01.9	N 21 11.0 +00.1	234 15.2 +02.5	S 06 02.8 +00.1	20						
21	192 21.3 +00.6	N 16 55.6 +00.5	172 25.1 +01.9	N 21 11.1 +00.1	249 17.7 +02.5	S 06 02.9 +00.0	21						
22	207 21.9 +00.7	N 16 56.1 +00.5	187 27.0 +01.9	N 21 11.2 +00.0	264 20.2 +02.5	S 06 02.9 +00.0	22						
23	222 22.6 +00.7	N 16 56.6 +00.5	202 28.9 +01.9	N 21 11.2 +00.1	279 22.7 +02.4	S 06 02.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 313° 312° 312° 312° 312° 312°		SHA 292° 292° 292° 292° 292° 292°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:11		Greenwich Culmination Time: 09:31		Greenwich Culmination Time: 04:25								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 45.6 -00.1	N 22 33.1 -00.3	169 05.8 -00.8	N 22 20.6 -00.5	164 24.5 -31.8	N 25 15.7 -07.4	00						
01	193 45.5 -00.1	N 22 32.8 -00.3	184 05.0 -00.8	N 22 20.1 -00.5	178 52.7 -31.8	N 25 08.3 -07.6	01						
02	208 45.4 -00.1	N 22 32.5 -00.2	199 04.2 -00.8	N 22 19.6 -00.5	193 20.9 -31.6	N 25 00.7 -07.7	02						
03	223 45.3 -00.1	N 22 32.3 -00.3	214 03.4 -00.8	N 22 19.1 -00.5	207 49.3 -31.5	N 24 53.0 -07.8	03						
04	238 45.2 -00.1	N 22 32.0 -00.3	229 02.6 -00.8	N 22 18.6 -00.4	222 17.8 -31.5	N 24 45.2 -07.9	04						
05	253 45.1 -00.1	N 22 31.7 -00.3	244 01.8 -00.9	N 22 18.2 -00.5	236 46.3 -31.3	N 24 37.3 -08.1	05						
06	268 45.0 -00.1	N 22 31.4 -00.2	259 00.9 -00.8	N 22 17.7 -00.5	251 15.0 -31.2	N 24 29.2 -08.2	06						
07	283 44.9 -00.1	N 22 31.2 -00.3	274 00.1 -00.8	N 22 17.2 -00.5	265 43.8 -31.2	N 24 21.0 -08.3	07						
08	298 44.8 -00.1	N 22 30.9 -00.3	288 59.3 -00.8	N 22 16.7 -00.5	280 12.6 -31.0	N 24 12.7 -08.4	08						
09	313 44.7 -00.1	N 22 30.6 -00.3	303 58.5 -00.8	N 22 16.2 -00.5	294 41.6 -30.9	N 24 04.3 -08.5	09						
10	328 44.6 -00.1	N 22 30.3 -00.2	318 57.7 -00.8	N 22 15.7 -00.4	309 10.7 -30.8	N 23 55.8 -08.6	10						
11	343 44.5 -00.1	N 22 30.1 -00.3	333 56.9 -00.8	N 22 15.3 -00.5	323 39.9 -30.7	N 23 47.2 -08.8	11						
12	358 44.4 -00.1	N 22 29.8 -00.3	348 56.1 -00.9	N 22 14.8 -00.5	338 09.2 -30.7	N 23 38.4 -08.8	12						
13	13 44.3 -00.1	N 22 29.5 -00.3	3 55.2 -00.8	N 22 14.3 -00.5	352 38.5 -30.5	N 23 29.6 -09.0	13						
14	28 44.2 -00.1	N 22 29.2 -00.3	18 54.4 -00.8	N 22 13.8 -00.5	7 08.0 -30.4	N 23 20.6 -09.1	14						
15	43 44.1 -00.1	N 22 28.9 -00.3	33 53.6 -00.8	N 22 13.3 -00.5	21 37.6 -30.3	N 23 11.5 -09.2	15						
16	58 44.0 -00.1	N 22 28.6 -00.2	48 52.8 -00.8	N 22 12.8 -00.5	36 07.3 -30.2	N 23 02.3 -09.2	16						
17	73 43.9 -00.1	N 22 28.4 -00.3	63 52.0 -00.8	N 22 12.3 -00.5	50 37.1 -30.1	N 22 53.1 -09.4	17						
18	88 43.8 -00.1	N 22 28.1 -00.3	78 51.2 -00.8	N 22 11.8 -00.5	65 07.0 -30.0	N 22 43.7 -09.5	18						
19	103 43.7 -00.1	N 22 27.8 -00.3	93 50.4 -00.8	N 22 11.3 -00.5	79 37.0 -29.9	N 22 34.2 -09.6	19						
20	118 43.6 -00.1	N 22 27.5 -00.3	108 49.6 -00.8	N 22 10.8 -00.5	94 07.1 -29.8	N 22 24.6 -09.7	20						
21	133 43.5 -00.1	N 22 27.2 -00.3	123 48.8 -00.9	N 22 10.3 -00.5	108 37.3 -29.7	N 22 14.9 -09.8	21						
22	148 43.4 -00.1	N 22 26.9 -00.3	138 47.9 -00.8	N 22 09.8 -00.5	123 07.6 -29.5	N 22 05.1 -09.9	22						
23	163 43.3 -00.1	N 22 26.6 -00.2	153 47.1 -00.8	N 22 09.3 -00.5	137 38.1 -29.5	N 21 55.2 -10.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'2 15'2 15'2 15'2 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 55'9 55'8 55'7 55'6 55'5								
	SHA 253° 253° 253° 253° 253° 252°		SHA 244° 243° 243° 243° 243° 242°		SHA 238° 236° 233° 231° 229° 227°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:44		Greenwich Culmination Time: 13:30								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	237 23.3 +00.7	N 16 57.1 +00.5	217 30.8 +01.9	N 21 11.3 +00.1	294 25.1 +02.5	S 06 02.9 +00.0	00						
01	252 24.0 +00.7	N 16 57.6 +00.5	232 32.7 +01.9	N 21 11.4 +00.1	309 27.6 +02.5	S 06 02.9 +00.1	01						
02	267 24.7 +00.6	N 16 58.1 +00.5	247 34.6 +01.9	N 21 11.5 +00.1	324 30.1 +02.5	S 06 03.0 +00.0	02						
03	282 25.3 +00.7	N 16 58.6 +00.5	262 36.5 +01.9	N 21 11.6 +00.0	339 32.6 +02.5	S 06 03.0 +00.0	03						
04	297 26.0 +00.7	N 16 59.1 +00.5	277 38.4 +01.9	N 21 11.6 +00.1	354 35.1 +02.5	S 06 03.0 +00.0	04						
05	312 26.7 +00.7	N 16 59.6 +00.5	292 40.3 +01.9	N 21 11.7 +00.1	9 37.6 +02.5	S 06 03.0 +00.1	05						
06	327 27.4 +00.6	N 17 00.1 +00.5	307 42.2 +01.9	N 21 11.8 +00.1	24 40.1 +02.5	S 06 03.1 +00.0	06						
07	342 28.0 +00.7	N 17 00.6 +00.5	322 44.1 +01.9	N 21 11.9 +00.1	39 42.6 +02.4	S 06 03.1 +00.0	07						
08	357 28.7 +00.7	N 17 01.1 +00.5	337 46.0 +01.9	N 21 12.0 +00.0	54 45.0 +02.5	S 06 03.1 +00.0	08						
09	12 29.4 +00.7	N 17 01.6 +00.5	352 47.9 +01.9	N 21 12.0 +00.1	69 47.5 +02.5	S 06 03.1 +00.0	09						
10	27 30.1 +00.6	N 17 02.1 +00.5	7 49.8 +01.9	N 21 12.1 +00.1	84 50.0 +02.5	S 06 03.1 +00.1	10						
11	42 30.7 +00.7	N 17 02.6 +00.5	22 51.7 +01.9	N 21 12.2 +00.1	99 52.5 +02.5	S 06 03.2 +00.0	11						
12	57 31.4 +00.7	N 17 03.1 +00.5	37 53.6 +01.9	N 21 12.3 +00.0	114 55.0 +02.5	S 06 03.2 +00.0	12						
13	72 32.1 +00.7	N 17 03.6 +00.5	52 55.5 +01.9	N 21 12.3 +00.1	129 57.5 +02.5	S 06 03.2 +00.0	13						
14	87 32.8 +00.7	N 17 04.1 +00.5	67 57.4 +02.0	N 21 12.4 +00.1	144 60.0 +02.5	S 06 03.2 +00.1	14						
15	102 33.5 +00.6	N 17 04.6 +00.5	82 59.4 +01.9	N 21 12.5 +00.1	160 02.5 +02.5	S 06 03.3 +00.0	15						
16	117 34.1 +00.7	N 17 05.1 +00.4	98 01.3 +01.9	N 21 12.6 +00.1	175 05.0 +02.5	S 06 03.3 +00.0	16						
17	132 34.8 +00.7	N 17 05.5 +00.5	113 03.2 +01.9	N 21 12.7 +00.0	190 07.5 +02.4	S 06 03.3 +00.0	17						
18	147 35.5 +00.7	N 17 06.0 +00.5	128 05.1 +01.9	N 21 12.7 +00.1	205 09.9 +02.5	S 06 03.3 +00.0	18						
19	162 36.2 +00.6	N 17 06.5 +00.5	143 07.0 +01.9	N 21 12.8 +00.1	220 12.4 +02.5	S 06 03.3 +00.1	19						
20	177 36.8 +00.7	N 17 07.0 +00.5	158 08.9 +01.9	N 21 12.9 +00.1	235 14.9 +02.5	S 06 03.4 +00.0	20						
21	192 37.5 +00.7	N 17 07.5 +00.5	173 10.8 +01.9	N 21 13.0 +00.1	250 17.4 +02.5	S 06 03.4 +00.0	21						
22	207 38.2 +00.7	N 17 08.0 +00.5	188 12.7 +01.9	N 21 13.1 +00.0	265 19.9 +02.5	S 06 03.4 +00.0	22						
23	222 38.9 +00.6	N 17 08.5 +00.5	203 14.6 +01.9	N 21 13.1 +00.1	280 22.4 +02.5	S 06 03.4 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 312° 312° 312° 312° 311° 311°		SHA 292° 292° 292° 292° 292° 292°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:10		Greenwich Culmination Time: 09:28		Greenwich Culmination Time: 04:21								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 43.2 -00.1	N 22 26.4 -00.3	168 46.3 -00.8	N 22 08.8 -00.5	152 08.6 -29.4	N 21 45.2 -10.0	00							
01	193 43.1 -00.1	N 22 26.1 -00.3	183 45.5 -00.8	N 22 08.3 -00.5	166 39.2 -29.3	N 21 35.2 -10.2	01							
02	208 43.0 -00.1	N 22 25.8 -00.3	198 44.7 -00.8	N 22 07.8 -00.5	181 09.9 -29.2	N 21 25.0 -10.3	02							
03	223 42.9 -00.1	N 22 25.5 -00.3	213 43.9 -00.8	N 22 07.3 -00.5	195 40.7 -29.1	N 21 14.7 -10.3	03							
04	238 42.8 +00.0	N 22 25.2 -00.3	228 43.1 -00.8	N 22 06.8 -00.5	210 11.6 -29.0	N 21 04.4 -10.4	04							
05	253 42.8 -00.1	N 22 24.9 -00.3	243 42.3 -00.8	N 22 06.3 -00.5	224 42.6 -28.8	N 20 54.0 -10.6	05							
06	268 42.7 -00.1	N 22 24.6 -00.3	258 41.5 -00.8	N 22 05.8 -00.5	239 13.8 -28.8	N 20 43.4 -10.6	06							
07	283 42.6 -00.1	N 22 24.3 -00.3	273 40.7 -00.8	N 22 05.3 -00.5	253 45.0 -28.7	N 20 32.8 -10.7	07							
08	298 42.5 -00.1	N 22 24.0 -00.3	288 39.9 -00.8	N 22 04.8 -00.6	268 16.3 -28.6	N 20 22.1 -10.7	08							
09	313 42.4 -00.1	N 22 23.7 -00.3	303 39.1 -00.8	N 22 04.2 -00.5	282 47.7 -28.5	N 20 11.4 -10.9	09							
10	328 42.3 -00.1	N 22 23.4 -00.3	318 38.3 -00.8	N 22 03.7 -00.5	297 19.2 -28.4	N 20 00.5 -10.9	10							
11	343 42.2 -00.1	N 22 23.1 -00.3	333 37.5 -00.9	N 22 03.2 -00.5	311 50.8 -28.3	N 19 49.6 -11.1	11							
12	358 42.1 -00.1	N 22 22.8 -00.3	348 36.6 -00.8	N 22 02.7 -00.5	326 22.5 -28.2	N 19 38.5 -11.1	12							
13	13 42.0 -00.1	N 22 22.5 -00.3	3 35.8 -00.8	N 22 02.2 -00.5	340 54.3 -28.1	N 19 27.4 -11.1	13							
14	28 41.9 -00.1	N 22 22.2 -00.3	18 35.0 -00.8	N 22 01.7 -00.5	355 26.2 -28.0	N 19 16.3 -11.3	14							
15	43 41.8 -00.1	N 22 21.9 -00.3	33 34.2 -00.8	N 22 01.2 -00.6	9 58.2 -28.0	N 19 05.0 -11.3	15							
16	58 41.7 -00.1	N 22 21.6 -00.2	48 33.4 -00.8	N 22 00.6 -00.5	24 30.2 -27.8	N 18 53.7 -11.4	16							
17	73 41.6 -00.1	N 22 21.4 -00.4	63 32.6 -00.8	N 22 00.1 -00.5	39 02.4 -27.7	N 18 42.3 -11.5	17							
18	88 41.5 -00.1	N 22 21.0 -00.3	78 31.8 -00.8	N 21 59.6 -00.5	53 34.7 -27.7	N 18 30.8 -11.5	18							
19	103 41.4 -00.1	N 22 20.7 -00.3	93 31.0 -00.8	N 21 59.1 -00.6	68 07.0 -27.5	N 18 19.3 -11.6	19							
20	118 41.3 -00.1	N 22 20.4 -00.3	108 30.2 -00.8	N 21 58.5 -00.5	82 39.5 -27.5	N 18 07.7 -11.7	20							
21	133 41.2 +00.0	N 22 20.1 -00.3	123 29.4 -00.8	N 21 58.0 -00.5	97 12.0 -27.4	N 17 56.0 -11.8	21							
22	148 41.2 -00.1	N 22 19.8 -00.3	138 28.6 -00.8	N 21 57.5 -00.5	111 44.6 -27.3	N 17 44.2 -11.8	22							
23	163 41.1 -00.1	N 22 19.5 -00.3	153 27.8 -00.8	N 21 57.0 -00.6	126 17.3 -27.2	N 17 32.4 -11.9	23							
UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 252° 252° 252° 252° 252° 251°	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 242° 242° 242° 242° 241° 241°	Greenwich Culmination Time: 12:45	UT 02 06 10 14 18 22	SD 15'1 15'1 15'1 15'0 15'0 15'0	HP 55'5 55'4 55'3 55'2 55'1 55'1	SHA 225° 223° 220° 218° 216° 214°	Greenwich Culmination Time: 14:18

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	237 39.5 +00.7	N 17 09.0 +00.5	218 16.5 +01.9	N 21 13.2 +00.1	295 24.9 +02.5	S 06 03.5 +00.0	00							
01	252 40.2 +00.7	N 17 09.5 +00.5	233 18.4 +01.9	N 21 13.3 +00.1	310 27.4 +02.5	S 06 03.5 +00.0	01							
02	267 40.9 +00.7	N 17 10.0 +00.5	248 20.3 +01.9	N 21 13.4 +00.0	325 29.9 +02.5	S 06 03.5 +00.0	02							
03	282 41.6 +00.6	N 17 10.5 +00.5	263 22.2 +01.9	N 21 13.4 +00.1	340 32.4 +02.5	S 06 03.5 +00.0	03							
04	297 42.2 +00.7	N 17 11.0 +00.4	278 24.1 +02.0	N 21 13.5 +00.1	355 34.9 +02.4	S 06 03.5 +00.1	04							
05	312 42.9 +00.7	N 17 11.4 +00.5	293 26.1 +01.9	N 21 13.6 +00.1	10 37.3 +02.5	S 06 03.6 +00.0	05							
06	327 43.6 +00.7	N 17 11.9 +00.5	308 28.0 +01.9	N 21 13.7 +00.1	25 39.8 +02.5	S 06 03.6 +00.0	06							
07	342 44.3 +00.7	N 17 12.4 +00.5	323 29.9 +01.9	N 21 13.8 +00.0	40 42.3 +02.5	S 06 03.6 +00.0	07							
08	357 45.0 +00.6	N 17 12.9 +00.5	338 31.8 +01.9	N 21 13.8 +00.1	55 44.8 +02.5	S 06 03.6 +00.1	08							
09	12 45.6 +00.7	N 17 13.4 +00.5	353 33.7 +01.9	N 21 13.9 +00.1	70 47.3 +02.5	S 06 03.7 +00.0	09							
10	27 46.3 +00.7	N 17 13.9 +00.5	8 35.6 +01.9	N 21 14.0 +00.1	85 49.8 +02.5	S 06 03.7 +00.0	10							
11	42 47.0 +00.7	N 17 14.4 +00.5	23 37.5 +01.9	N 21 14.1 +00.0	100 52.3 +02.5	S 06 03.7 +00.0	11							
12	57 47.7 +00.6	N 17 14.9 +00.5	38 39.4 +01.9	N 21 14.1 +00.1	115 54.8 +02.5	S 06 03.7 +00.1	12							
13	72 48.3 +00.7	N 17 15.4 +00.4	53 41.3 +01.9	N 21 14.2 +00.1	130 57.3 +02.5	S 06 03.8 +00.0	13							
14	87 49.0 +00.7	N 17 15.8 +00.5	68 43.2 +01.9	N 21 14.3 +00.1	145 59.8 +02.5	S 06 03.8 +00.0	14							
15	102 49.7 +00.7	N 17 16.3 +00.5	83 45.1 +01.9	N 21 14.4 +00.1	161 02.3 +02.5	S 06 03.8 +00.0	15							
16	117 50.4 +00.6	N 17 16.8 +00.5	98 47.0 +02.0	N 21 14.5 +00.0	176 04.8 +02.5	S 06 03.8 +00.1	16							
17	132 51.0 +00.7	N 17 17.3 +00.5	113 49.0 +01.9	N 21 14.5 +00.1	191 07.3 +02.5	S 06 03.9 +00.0	17							
18	147 51.7 +00.7	N 17 17.8 +00.5	128 50.9 +01.9	N 21 14.6 +00.1	206 09.8 +02.5	S 06 03.9 +00.0	18							
19	162 52.4 +00.7	N 17 18.3 +00.5	143 52.8 +01.9	N 21 14.7 +00.1	221 12.3 +02.5	S 06 03.9 +00.0	19							
20	177 53.1 +00.6	N 17 18.8 +00.4	158 54.7 +01.9	N 21 14.8 +00.0	236 14.8 +02.4	S 06 03.9 +00.1	20							
21	192 53.7 +00.7	N 17 19.2 +00.5	173 56.6 +01.9	N 21 14.8 +00.1	251 17.2 +02.5	S 06 04.0 +00.0	21							
22	207 54.4 +00.7	N 17 19.7 +00.5	188 58.5 +01.9	N 21 14.9 +00.1	266 19.7 +02.5	S 06 04.0 +00.0	22							
23	222 55.1 +00.7	N 17 20.2 +00.5	204 00.4 +01.9	N 21 15.0 +00.1	281 22.2 +02.5	S 06 04.0 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 311° 311° 311° 311° 311° 311°	Greenwich Culmination Time: 08:08	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 292° 292° 292° 292° 292° 292°	Greenwich Culmination Time: 09:25	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 009° 009° 009° 009° 009° 009°	Greenwich Culmination Time: 04:17

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 41.0 -00.1	N 22 19.2 -00.3	168 27.0 -00.8	N 21 56.4 -00.5	140 50.1 -27.1	N 17 20.5 -11.9	00						
01	193 40.9 -00.1	N 22 18.9 -00.3	183 26.2 -00.8	N 21 55.9 -00.5	155 23.0 -27.0	N 17 08.6 -12.0	01						
02	208 40.8 -00.1	N 22 18.6 -00.3	198 25.4 -00.8	N 21 55.4 -00.6	169 56.0 -27.0	N 16 56.6 -12.1	02						
03	223 40.7 -00.1	N 22 18.3 -00.3	213 24.6 -00.8	N 21 54.8 -00.5	184 29.0 -26.8	N 16 44.5 -12.1	03						
04	238 40.6 -00.1	N 22 18.0 -00.3	228 23.8 -00.8	N 21 54.3 -00.5	199 02.2 -26.8	N 16 32.4 -12.2	04						
05	253 40.5 -00.1	N 22 17.7 -00.3	243 23.0 -00.8	N 21 53.8 -00.6	213 35.4 -26.7	N 16 20.2 -12.3	05						
06	268 40.4 -00.1	N 22 17.4 -00.3	258 22.2 -00.7	N 21 53.2 -00.5	228 08.7 -26.6	N 16 07.9 -12.3	06						
07	283 40.3 -00.1	N 22 17.1 -00.3	273 21.5 -00.8	N 21 52.7 -00.5	242 42.1 -26.6	N 15 55.6 -12.3	07						
08	298 40.2 -00.1	N 22 16.8 -00.3	288 20.7 -00.8	N 21 52.2 -00.6	257 15.5 -26.4	N 15 43.3 -12.4	08						
09	313 40.1 +00.0	N 22 16.5 -00.3	303 19.9 -00.8	N 21 51.6 -00.5	271 49.1 -26.4	N 15 30.9 -12.5	09						
10	328 40.1 -00.1	N 22 16.2 -00.4	318 19.1 -00.8	N 21 51.1 -00.6	286 22.7 -26.3	N 15 18.4 -12.5	10						
11	343 40.0 -00.1	N 22 15.8 -00.3	333 18.3 -00.8	N 21 50.5 -00.5	300 56.4 -26.2	N 15 05.9 -12.6	11						
12	358 39.9 -00.1	N 22 15.5 -00.3	348 17.5 -00.8	N 21 50.0 -00.5	315 30.2 -26.2	N 14 53.3 -12.6	12						
13	13 39.8 -00.1	N 22 15.2 -00.3	3 16.7 -00.8	N 21 49.5 -00.6	330 04.0 -26.0	N 14 40.7 -12.7	13						
14	28 39.7 -00.1	N 22 14.9 -00.3	18 15.9 -00.8	N 21 48.9 -00.5	344 38.0 -26.0	N 14 28.0 -12.7	14						
15	43 39.6 -00.1	N 22 14.6 -00.3	33 15.1 -00.8	N 21 48.4 -00.6	359 12.0 -26.0	N 14 15.3 -12.8	15						
16	58 39.5 -00.1	N 22 14.3 -00.3	48 14.3 -00.8	N 21 47.8 -00.5	13 46.0 -25.8	N 14 02.5 -12.8	16						
17	73 39.4 -00.1	N 22 14.0 -00.4	63 13.5 -00.8	N 21 47.3 -00.6	28 20.2 -25.8	N 13 49.7 -12.9	17						
18	88 39.3 -00.1	N 22 13.6 -00.3	78 12.7 -00.8	N 21 46.7 -00.5	42 54.4 -25.7	N 13 36.8 -12.9	18						
19	103 39.2 +00.0	N 22 13.3 -00.3	93 11.9 -00.8	N 21 46.2 -00.6	57 28.7 -25.7	N 13 23.9 -12.9	19						
20	118 39.2 -00.1	N 22 13.0 -00.3	108 11.1 -00.7	N 21 45.6 -00.5	72 03.0 -25.5	N 13 11.0 -13.0	20						
21	133 39.1 -00.1	N 22 12.7 -00.3	123 10.4 -00.8	N 21 45.1 -00.6	86 37.5 -25.6	N 12 58.0 -13.1	21						
22	148 39.0 -00.1	N 22 12.4 -00.4	138 09.6 -00.8	N 21 44.5 -00.5	101 11.9 -25.4	N 12 44.9 -13.1	22						
23	163 38.9 -00.1	N 22 12.0 -00.3	153 08.8 -00.8	N 21 44.0 -00.6	115 46.5 -25.4	N 12 31.8 -13.1	23						
	UT 02 06 10 14 18 22 SD 15'7 15'7 15'7 15'7 15'7 15'7 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 251° 251° 251° 251° 250° 250° 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 241° 241° 240° 240° 240° 240° Greenwich Culmination Time: 12:46	UT 02 06 10 14 18 22 SD 15'0 15'0 14'9 14'9 14'9 14'9 HP 55'0 54'9 54'8 54'8 54'7 54'7 SHA 212° 210° 209° 207° 205° 203° Greenwich Culmination Time: 15:03										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	237 55.8 +00.7	N 17 20.7 +00.5	219 02.3 +01.9	N 21 15.1 +00.1	296 24.7 +02.5	S 06 04.0 +00.0	00						
01	252 56.5 +00.6	N 17 21.2 +00.5	234 04.2 +01.9	N 21 15.2 +00.0	311 27.2 +02.5	S 06 04.0 +00.1	01						
02	267 57.1 +00.7	N 17 21.7 +00.4	249 06.1 +02.0	N 21 15.2 +00.1	326 29.7 +02.5	S 06 04.1 +00.0	02						
03	282 57.8 +00.7	N 17 22.1 +00.5	264 08.1 +01.9	N 21 15.3 +00.1	341 32.2 +02.5	S 06 04.1 +00.0	03						
04	297 58.5 +00.7	N 17 22.6 +00.5	279 10.0 +01.9	N 21 15.4 +00.1	356 34.7 +02.5	S 06 04.1 +00.0	04						
05	312 59.2 +00.6	N 17 23.1 +00.5	294 11.9 +01.9	N 21 15.5 +00.0	11 37.2 +02.5	S 06 04.1 +00.1	05						
06	327 59.8 +00.7	N 17 23.6 +00.5	309 13.8 +01.9	N 21 15.5 +00.1	26 39.7 +02.5	S 06 04.2 +00.0	06						
07	343 00.5 +00.7	N 17 24.1 +00.5	324 15.7 +01.9	N 21 15.6 +00.1	41 42.2 +02.5	S 06 04.2 +00.0	07						
08	358 01.2 +00.7	N 17 24.6 +00.4	339 17.6 +01.9	N 21 15.7 +00.1	56 44.7 +02.5	S 06 04.2 +00.0	08						
09	13 01.9 +00.6	N 17 25.0 +00.5	354 19.5 +01.9	N 21 15.8 +00.0	71 47.2 +02.5	S 06 04.2 +00.1	09						
10	28 02.5 +00.7	N 17 25.5 +00.5	9 21.4 +01.9	N 21 15.8 +00.1	86 49.7 +02.5	S 06 04.3 +00.0	10						
11	43 03.2 +00.7	N 17 26.0 +00.5	24 23.3 +01.9	N 21 15.9 +00.1	101 52.2 +02.5	S 06 04.3 +00.0	11						
12	58 03.9 +00.7	N 17 26.5 +00.5	39 25.2 +02.0	N 21 16.0 +00.1	116 54.7 +02.5	S 06 04.3 +00.0	12						
13	73 04.6 +00.6	N 17 27.0 +00.4	54 27.2 +01.9	N 21 16.1 +00.1	131 57.2 +02.5	S 06 04.3 +00.1	13						
14	88 05.2 +00.7	N 17 27.4 +00.5	69 29.1 +01.9	N 21 16.2 +00.0	146 59.7 +02.5	S 06 04.4 +00.0	14						
15	103 05.9 +00.7	N 17 27.9 +00.5	84 31.0 +01.9	N 21 16.2 +00.1	162 02.2 +02.5	S 06 04.4 +00.0	15						
16	118 06.6 +00.7	N 17 28.4 +00.5	99 32.9 +01.9	N 21 16.3 +00.1	177 04.7 +02.5	S 06 04.4 +00.1	16						
17	133 07.3 +00.6	N 17 28.9 +00.5	114 34.8 +01.9	N 21 16.4 +00.1	192 07.2 +02.5	S 06 04.5 +00.0	17						
18	148 07.9 +00.7	N 17 29.4 +00.4	129 36.7 +01.9	N 21 16.5 +00.0	207 09.7 +02.5	S 06 04.5 +00.0	18						
19	163 08.6 +00.7	N 17 29.8 +00.5	144 38.6 +01.9	N 21 16.5 +00.1	222 12.2 +02.5	S 06 04.5 +00.0	19						
20	178 09.3 +00.7	N 17 30.3 +00.5	159 40.5 +02.0	N 21 16.6 +00.1	237 14.7 +02.5	S 06 04.5 +00.1	20						
21	193 10.0 +00.6	N 17 30.8 +00.5	174 42.5 +01.9	N 21 16.7 +00.1	252 17.2 +02.5	S 06 04.6 +00.0	21						
22	208 10.6 +00.7	N 17 31.3 +00.5	189 44.4 +01.9	N 21 16.8 +00.0	267 19.7 +02.5	S 06 04.6 +00.0	22						
23	223 11.3 +00.7	N 17 31.8 +00.4	204 46.3 +01.9	N 21 16.8 +00.1	282 22.2 +02.5	S 06 04.6 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 310° 310° 310° 310° 310° 310° Greenwich Culmination Time: 08:07	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 292° 292° 292° 291° 291° 291° Greenwich Culmination Time: 09:22	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 009° 009° 009° 009° 009° 009° Greenwich Culmination Time: 04:13										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 38.8 -00.1	N 22 11.7 -00.3	168 08.0 -00.8	N 21 43.4 -00.5	130 21.1 -25.3	N 12 18.7 -13.1	00						
01	193 38.7 -00.1	N 22 11.4 -00.3	183 07.2 -00.8	N 21 42.9 -00.6	144 55.8 -25.3	N 12 05.6 -13.2	01						
02	208 38.6 -00.1	N 22 11.1 -00.3	198 06.4 -00.8	N 21 42.3 -00.6	159 30.5 -25.2	N 11 52.4 -13.3	02						
03	223 38.5 +00.0	N 22 10.8 -00.4	213 05.6 -00.8	N 21 41.7 -00.5	174 05.3 -25.1	N 11 39.1 -13.2	03						
04	238 38.5 -00.1	N 22 10.4 -00.3	228 04.8 -00.8	N 21 41.2 -00.6	188 40.2 -25.1	N 11 25.9 -13.4	04						
05	253 38.4 -00.1	N 22 10.1 -00.3	243 04.0 -00.7	N 21 40.6 -00.5	203 15.1 -25.0	N 11 12.5 -13.3	05						
06	268 38.3 -00.1	N 22 09.8 -00.3	258 03.3 -00.8	N 21 40.1 -00.6	217 50.1 -24.9	N 10 59.2 -13.4	06						
07	283 38.2 -00.1	N 22 09.5 -00.4	273 02.5 -00.8	N 21 39.5 -00.6	232 25.2 -24.9	N 10 45.8 -13.4	07						
08	298 38.1 -00.1	N 22 09.1 -00.3	288 01.7 -00.8	N 21 38.9 -00.5	247 00.3 -24.9	N 10 32.4 -13.4	08						
09	313 38.0 -00.1	N 22 08.8 -00.3	303 00.9 -00.8	N 21 38.4 -00.6	261 35.4 -24.8	N 10 19.0 -13.5	09						
10	328 37.9 +00.0	N 22 08.5 -00.3	318 00.1 -00.8	N 21 37.8 -00.6	276 10.6 -24.7	N 10 05.5 -13.5	10						
11	343 37.9 -00.1	N 22 08.2 -00.4	332 59.3 -00.7	N 21 37.2 -00.5	290 45.9 -24.7	N 09 52.0 -13.5	11						
12	358 37.8 -00.1	N 22 07.8 -00.3	347 58.6 -00.8	N 21 36.7 -00.6	305 21.2 -24.7	N 09 38.5 -13.6	12						
13	13 37.7 -00.1	N 22 07.5 -00.3	2 57.8 -00.8	N 21 36.1 -00.6	319 56.5 -24.6	N 09 24.9 -13.6	13						
14	28 37.6 -00.1	N 22 07.2 -00.4	17 57.0 -00.8	N 21 35.5 -00.5	334 31.9 -24.5	N 09 11.3 -13.6	14						
15	43 37.5 -00.1	N 22 06.8 -00.3	32 56.2 -00.8	N 21 35.0 -00.6	349 07.4 -24.5	N 08 57.7 -13.6	15						
16	58 37.4 -00.1	N 22 06.5 -00.3	47 55.4 -00.8	N 21 34.4 -00.6	3 42.9 -24.5	N 08 44.1 -13.7	16						
17	73 37.3 +00.0	N 22 06.2 -00.4	62 54.6 -00.7	N 21 33.8 -00.6	18 18.4 -24.4	N 08 30.4 -13.7	17						
18	88 37.3 -00.1	N 22 05.8 -00.3	77 53.9 -00.8	N 21 33.2 -00.5	32 54.0 -24.3	N 08 16.7 -13.7	18						
19	103 37.2 -00.1	N 22 05.5 -00.3	92 53.1 -00.8	N 21 32.7 -00.6	47 29.7 -24.4	N 08 03.0 -13.8	19						
20	118 37.1 -00.1	N 22 05.2 -00.4	107 52.3 -00.8	N 21 32.1 -00.6	62 05.3 -24.2	N 07 49.2 -13.7	20						
21	133 37.0 -00.1	N 22 04.8 -00.3	122 51.5 -00.8	N 21 31.5 -00.6	76 41.1 -24.3	N 07 35.5 -13.8	21						
22	148 36.9 -00.1	N 22 04.5 -00.3	137 50.7 -00.7	N 21 30.9 -00.5	91 16.8 -24.2	N 07 21.7 -13.8	22						
23	163 36.8 +00.0	N 22 04.2 -00.4	152 50.0 -00.8	N 21 30.4 -00.6	105 52.6 -24.2	N 07 07.9 -13.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 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 54'6 54'5 54'5 54'4 54'4 54'4								
	SHA 250° 250° 250° 250° 249° 249°		SHA 240° 239° 239° 239° 239° 239°		SHA 201° 199° 197° 196° 194° 192°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:48		Greenwich Culmination Time: 15:44								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 12.0 +00.7	N 17 32.2 +00.5	219 48.2 +01.9	N 21 16.9 +00.1	297 24.7 +02.5	S 06 04.6 +00.1	00						
01	253 12.7 +00.7	N 17 32.7 +00.5	234 50.1 +01.9	N 21 17.0 +00.1	312 27.2 +02.5	S 06 04.7 +00.0	01						
02	268 13.4 +00.6	N 17 33.2 +00.5	249 52.0 +01.9	N 21 17.1 +00.0	327 29.7 +02.5	S 06 04.7 +00.0	02						
03	283 14.0 +00.7	N 17 33.7 +00.4	264 53.9 +01.9	N 21 17.1 +00.1	342 32.2 +02.5	S 06 04.7 +00.0	03						
04	298 14.7 +00.7	N 17 34.1 +00.5	279 55.8 +02.0	N 21 17.2 +00.1	357 34.7 +02.5	S 06 04.7 +00.1	04						
05	313 15.4 +00.7	N 17 34.6 +00.5	294 57.8 +01.9	N 21 17.3 +00.1	12 37.2 +02.5	S 06 04.8 +00.0	05						
06	328 16.1 +00.6	N 17 35.1 +00.5	309 59.7 +01.9	N 21 17.4 +00.0	27 39.7 +02.5	S 06 04.8 +00.0	06						
07	343 16.7 +00.7	N 17 35.6 +00.4	325 01.6 +01.9	N 21 17.4 +00.1	42 42.2 +02.5	S 06 04.8 +00.0	07						
08	358 17.4 +00.7	N 17 36.0 +00.5	340 03.5 +01.9	N 21 17.5 +00.1	57 44.7 +02.5	S 06 04.8 +00.1	08						
09	13 18.1 +00.7	N 17 36.5 +00.5	355 05.4 +01.9	N 21 17.6 +00.1	72 47.2 +02.5	S 06 04.9 +00.0	09						
10	28 18.8 +00.6	N 17 37.0 +00.5	10 07.3 +01.9	N 21 17.7 +00.1	87 49.7 +02.5	S 06 04.9 +00.0	10						
11	43 19.4 +00.7	N 17 37.5 +00.4	25 09.2 +01.9	N 21 17.8 +00.0	102 52.2 +02.5	S 06 04.9 +00.0	11						
12	58 20.1 +00.7	N 17 37.9 +00.5	40 11.1 +02.0	N 21 17.8 +00.1	117 54.7 +02.5	S 06 04.9 +00.1	12						
13	73 20.8 +00.7	N 17 38.4 +00.5	55 13.1 +01.9	N 21 17.9 +00.1	132 57.2 +02.5	S 06 05.0 +00.0	13						
14	88 21.5 +00.6	N 17 38.9 +00.4	70 15.0 +01.9	N 21 18.0 +00.1	147 59.7 +02.5	S 06 05.0 +00.0	14						
15	103 22.1 +00.7	N 17 39.3 +00.5	85 16.9 +01.9	N 21 18.1 +00.0	163 02.2 +02.5	S 06 05.0 +00.1	15						
16	118 22.8 +00.7	N 17 39.8 +00.5	100 18.8 +01.9	N 21 18.1 +00.1	178 04.7 +02.5	S 06 05.1 +00.0	16						
17	133 23.5 +00.7	N 17 40.3 +00.5	115 20.7 +01.9	N 21 18.2 +00.1	193 07.2 +02.5	S 06 05.1 +00.0	17						
18	148 24.2 +00.6	N 17 40.8 +00.4	130 22.6 +01.9	N 21 18.3 +00.1	208 09.7 +02.5	S 06 05.1 +00.0	18						
19	163 24.8 +00.7	N 17 41.2 +00.5	145 24.5 +02.0	N 21 18.4 +00.0	223 12.2 +02.5	S 06 05.1 +00.1	19						
20	178 25.5 +00.7	N 17 41.7 +00.5	160 26.5 +01.9	N 21 18.4 +00.1	238 14.7 +02.5	S 06 05.2 +00.0	20						
21	193 26.2 +00.7	N 17 42.2 +00.4	175 28.4 +01.9	N 21 18.5 +00.1	253 17.2 +02.5	S 06 05.2 +00.0	21						
22	208 26.9 +00.6	N 17 42.6 +00.5	190 30.3 +01.9	N 21 18.6 +00.1	268 19.7 +02.5	S 06 05.2 +00.0	22						
23	223 27.5 +00.7	N 17 43.1 +00.5	205 32.2 +01.9	N 21 18.7 +00.0	283 22.2 +02.5	S 06 05.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 310° 310° 309° 309° 309° 309°		SHA 291° 291° 291° 291° 291° 291°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:06		Greenwich Culmination Time: 09:19		Greenwich Culmination Time: 04:09								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 36.8 -00.1	N 22 03.8 -00.3			167 49.2 -00.8	N 21 29.8 -00.6			120 28.4 -24.1	N 06 54.1 -13.9			00
01	193 36.7 -00.1	N 22 03.5 -00.3			182 48.4 -00.8	N 21 29.2 -00.6			135 04.3 -24.1	N 06 40.2 -13.8			01
02	208 36.6 -00.1	N 22 03.2 -00.4			197 47.6 -00.7	N 21 28.6 -00.6			149 40.2 -24.0	N 06 26.4 -13.9			02
03	223 36.5 -00.1	N 22 02.8 -00.3			212 46.9 -00.8	N 21 28.0 -00.6			164 16.2 -24.1	N 06 12.5 -13.9			03
04	238 36.4 -00.1	N 22 02.5 -00.4			227 46.1 -00.8	N 21 27.4 -00.5			178 52.1 -24.0	N 05 58.6 -13.9			04
05	253 36.3 +00.0	N 22 02.1 -00.3			242 45.3 -00.8	N 21 26.9 -00.6			193 28.1 -23.9	N 05 44.7 -13.9			05
06	268 36.3 -00.1	N 22 01.8 -00.3			257 44.5 -00.8	N 21 26.3 -00.6			208 04.2 -24.0	N 05 30.8 -14.0			06
07	283 36.2 -00.1	N 22 01.5 -00.4			272 43.7 -00.7	N 21 25.7 -00.6			222 40.2 -23.9	N 05 16.8 -13.9			07
08	298 36.1 -00.1	N 22 01.1 -00.3			287 43.0 -00.8	N 21 25.1 -00.6			237 16.3 -23.8	N 05 02.9 -14.0			08
09	313 36.0 -00.1	N 22 00.8 -00.4			302 42.2 -00.8	N 21 24.5 -00.6			251 52.5 -23.9	N 04 48.9 -14.0			09
10	328 35.9 +00.0	N 22 00.4 -00.3			317 41.4 -00.7	N 21 23.9 -00.6			266 28.6 -23.8	N 04 34.9 -14.0			10
11	343 35.9 -00.1	N 22 00.1 -00.3			332 40.7 -00.8	N 21 23.3 -00.6			281 04.8 -23.8	N 04 20.9 -14.0			11
12	358 35.8 -00.1	N 21 59.8 -00.4			347 39.9 -00.8	N 21 22.7 -00.6			295 41.0 -23.8	N 04 06.9 -14.0			12
13	13 35.7 -00.1	N 21 59.4 -00.3			2 39.1 -00.8	N 21 22.1 -00.6			310 17.2 -23.8	N 03 52.9 -14.1			13
14	28 35.6 -00.1	N 21 59.1 -00.4			17 38.3 -00.7	N 21 21.5 -00.6			324 53.4 -23.7	N 03 38.8 -14.0			14
15	43 35.5 +00.0	N 21 58.7 -00.3			32 37.6 -00.8	N 21 20.9 -00.6			339 29.7 -23.7	N 03 24.8 -14.0			15
16	58 35.5 -00.1	N 21 58.4 -00.4			47 36.8 -00.8	N 21 20.3 -00.6			354 06.0 -23.7	N 03 10.8 -14.1			16
17	73 35.4 -00.1	N 21 58.0 -00.3			62 36.0 -00.8	N 21 19.7 -00.6			8 42.3 -23.7	N 02 56.7 -14.0			17
18	88 35.3 -00.1	N 21 57.7 -00.4			77 35.2 -00.7	N 21 19.1 -00.6			23 18.6 -23.7	N 02 42.7 -14.1			18
19	103 35.2 -00.1	N 21 57.3 -00.3			92 34.5 -00.8	N 21 18.5 -00.6			37 54.9 -23.6	N 02 28.6 -14.1			19
20	118 35.1 +00.0	N 21 57.0 -00.4			107 33.7 -00.8	N 21 17.9 -00.6			52 31.3 -23.7	N 02 14.5 -14.1			20
21	133 35.1 -00.1	N 21 56.6 -00.3			122 32.9 -00.7	N 21 17.3 -00.6			67 07.6 -23.6	N 02 00.4 -14.1			21
22	148 35.0 -00.1	N 21 56.3 -00.4			137 32.2 -00.8	N 21 16.7 -00.6			81 44.0 -23.6	N 01 46.3 -14.0			22
23	163 34.9 -00.1	N 21 55.9 -00.3			152 31.4 -00.8	N 21 16.1 -00.6			96 20.4 -23.6	N 01 32.3 -14.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'7 15'7 15'7 15'7 15'7 15'7				SD 00'1 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 54'3 54'3 54'2 54'2 54'2				
	SHA 249° 249° 249° 249° 248° 248°				SHA 238° 238° 238° 238° 237° 237°				SHA 190° 188° 187° 185° 183° 181°				
	Greenwich Culmination Time: 12:05				Greenwich Culmination Time: 12:49				Greenwich Culmination Time: 16:24				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 28.2 +00.7	N 17 43.6 +00.5			220 34.1 +01.9	N 21 18.7 +00.1			298 24.7 +02.5	S 06 05.3 +00.0			00
01	253 28.9 +00.7	N 17 44.1 +00.4			235 36.0 +02.0	N 21 18.8 +00.1			313 27.2 +02.5	S 06 05.3 +00.0			01
02	268 29.6 +00.6	N 17 44.5 +00.5			250 38.0 +01.9	N 21 18.9 +00.1			328 29.7 +02.5	S 06 05.3 +00.1			02
03	283 30.2 +00.7	N 17 45.0 +00.5			265 39.9 +01.9	N 21 19.0 +00.0			343 32.2 +02.5	S 06 05.4 +00.0			03
04	298 30.9 +00.7	N 17 45.5 +00.4			280 41.8 +01.9	N 21 19.0 +00.1			358 34.7 +02.5	S 06 05.4 +00.0			04
05	313 31.6 +00.7	N 17 45.9 +00.5			295 43.7 +01.9	N 21 19.1 +00.1			13 37.2 +02.5	S 06 05.4 +00.0			05
06	328 32.3 +00.6	N 17 46.4 +00.5			310 45.6 +01.9	N 21 19.2 +00.0			28 39.7 +02.5	S 06 05.4 +00.1			06
07	343 32.9 +00.7	N 17 46.9 +00.4			325 47.5 +01.9	N 21 19.2 +00.1			43 42.2 +02.5	S 06 05.5 +00.0			07
08	358 33.6 +00.7	N 17 47.3 +00.5			340 49.4 +02.0	N 21 19.3 +00.1			58 44.7 +02.5	S 06 05.5 +00.0			08
09	13 34.3 +00.7	N 17 47.8 +00.5			355 51.4 +01.9	N 21 19.4 +00.1			73 47.2 +02.5	S 06 05.5 +00.1			09
10	28 35.0 +00.7	N 17 48.3 +00.4			10 53.3 +01.9	N 21 19.5 +00.0			88 49.7 +02.5	S 06 05.6 +00.0			10
11	43 35.7 +00.6	N 17 48.7 +00.5			25 55.2 +01.9	N 21 19.5 +00.1			103 52.2 +02.5	S 06 05.6 +00.0			11
12	58 36.3 +00.7	N 17 49.2 +00.5			40 57.1 +01.9	N 21 19.6 +00.1			118 54.7 +02.5	S 06 05.6 +00.0			12
13	73 37.0 +00.7	N 17 49.7 +00.4			55 59.0 +01.9	N 21 19.7 +00.1			133 57.2 +02.5	S 06 05.6 +00.1			13
14	88 37.7 +00.7	N 17 50.1 +00.5			71 00.9 +02.0	N 21 19.8 +00.0			148 59.7 +02.5	S 06 05.7 +00.0			14
15	103 38.4 +00.6	N 17 50.6 +00.5			86 02.9 +01.9	N 21 19.8 +00.1			164 02.2 +02.6	S 06 05.7 +00.0			15
16	118 39.0 +00.7	N 17 51.1 +00.4			101 04.8 +01.9	N 21 19.9 +00.1			179 04.8 +02.5	S 06 05.7 +00.1			16
17	133 39.7 +00.7	N 17 51.5 +00.5			116 06.7 +01.9	N 21 20.0 +00.1			194 07.3 +02.5	S 06 05.8 +00.0			17
18	148 40.4 +00.7	N 17 52.0 +00.4			131 08.6 +01.9	N 21 20.1 +00.0			209 09.8 +02.5	S 06 05.8 +00.0			18
19	163 41.1 +00.6	N 17 52.4 +00.5			146 10.5 +01.9	N 21 20.1 +00.1			224 12.3 +02.5	S 06 05.8 +00.0			19
20	178 41.7 +00.7	N 17 52.9 +00.5			161 12.4 +02.0	N 21 20.2 +00.1			239 14.8 +02.5	S 06 05.8 +00.1			20
21	193 42.4 +00.7	N 17 53.4 +00.4			176 14.4 +01.9	N 21 20.3 +00.1			254 17.3 +02.5	S 06 05.9 +00.0			21
22	208 43.1 +00.7	N 17 53.8 +00.5			191 16.3 +01.9	N 21 20.4 +00.0			269 19.8 +02.5	S 06 05.9 +00.0			22
23	223 43.8 +00.6	N 17 54.3 +00.5			206 18.2 +01.9	N 21 20.4 +00.1			284 22.3 +02.5	S 06 05.9 +00.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 309° 309° 309° 309° 309° 308°				SHA 291° 291° 291° 291° 291° 291°				SHA 009° 009° 009° 009° 009° 009°				
	Greenwich Culmination Time: 08:05				Greenwich Culmination Time: 09:16				Greenwich Culmination Time: 04:05				

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 34.8 -00.1	N 21 55.6 -00.4	167 30.6 -00.7	N 21 15.5 -00.6	110 56.8 -23.6	N 01 18.2 -14.1	00						
01	193 34.7 +00.0	N 21 55.2 -00.3	182 29.9 -00.8	N 21 14.9 -00.6	125 33.2 -23.6	N 01 04.1 -14.1	01						
02	208 34.7 -00.1	N 21 54.9 -00.4	197 29.1 -00.8	N 21 14.3 -00.6	140 09.6 -23.6	N 00 50.0 -14.1	02						
03	223 34.6 -00.1	N 21 54.5 -00.3	212 28.3 -00.7	N 21 13.7 -00.6	154 46.0 -23.6	N 00 35.9 -14.1	03						
04	238 34.5 -00.1	N 21 54.2 -00.4	227 27.6 -00.8	N 21 13.1 -00.6	169 22.4 -23.5	N 00 21.8 -14.1	04						
05	253 34.4 +00.0	N 21 53.8 -00.4	242 26.8 -00.8	N 21 12.5 -00.6	183 58.9 -23.6	N 00 07.7 -14.1	05						
06	268 34.4 -00.1	N 21 53.4 -00.3	257 26.0 -00.7	N 21 11.9 -00.7	198 35.3 -23.6	S 00 06.4 +14.1	06						
07	283 34.3 -00.1	N 21 53.1 -00.4	272 25.3 -00.8	N 21 11.2 -00.6	213 11.7 -23.6	S 00 20.5 +14.1	07						
08	298 34.2 -00.1	N 21 52.7 -00.3	287 24.5 -00.7	N 21 10.6 -00.6	227 48.1 -23.5	S 00 34.6 +14.1	08						
09	313 34.1 +00.0	N 21 52.4 -00.4	302 23.8 -00.8	N 21 10.0 -00.6	242 24.6 -23.6	S 00 48.7 +14.1	09						
10	328 34.1 -00.1	N 21 52.0 -00.3	317 23.0 -00.8	N 21 09.4 -00.6	257 01.0 -23.6	S 01 02.8 +14.1	10						
11	343 34.0 -00.1	N 21 51.7 -00.4	332 22.2 -00.7	N 21 08.8 -00.6	271 37.4 -23.6	S 01 16.9 +14.0	11						
12	358 33.9 -00.1	N 21 51.3 -00.4	347 21.5 -00.8	N 21 08.2 -00.7	286 13.8 -23.5	S 01 30.9 +14.1	12						
13	13 33.8 +00.0	N 21 50.9 -00.3	2 20.7 -00.8	N 21 07.5 -00.6	300 50.3 -23.6	S 01 45.0 +14.1	13						
14	28 33.8 -00.1	N 21 50.6 -00.4	17 19.9 -00.7	N 21 06.9 -00.6	315 26.7 -23.6	S 01 59.1 +14.0	14						
15	43 33.7 -00.1	N 21 50.2 -00.3	32 19.2 -00.8	N 21 06.3 -00.6	330 03.1 -23.6	S 02 13.1 +14.1	15						
16	58 33.6 -00.1	N 21 49.9 -00.4	47 18.4 -00.7	N 21 05.7 -00.7	344 39.5 -23.7	S 02 27.2 +14.0	16						
17	73 33.5 +00.0	N 21 49.5 -00.4	62 17.7 -00.8	N 21 05.0 -00.6	359 15.8 -23.6	S 02 41.2 +14.1	17						
18	88 33.5 -00.1	N 21 49.1 -00.3	77 16.9 -00.8	N 21 04.4 -00.6	13 52.2 -23.6	S 02 55.3 +14.0	18						
19	103 33.4 -00.1	N 21 48.8 -00.4	92 16.1 -00.7	N 21 03.8 -00.6	28 28.6 -23.7	S 03 09.3 +14.0	19						
20	118 33.3 -00.1	N 21 48.4 -00.4	107 15.4 -00.8	N 21 03.2 -00.7	43 04.9 -23.7	S 03 23.3 +14.0	20						
21	133 33.2 +00.0	N 21 48.0 -00.3	122 14.6 -00.7	N 21 02.5 -00.6	57 41.2 -23.7	S 03 37.3 +14.0	21						
22	148 33.2 -00.1	N 21 47.7 -00.4	137 13.9 -00.8	N 21 01.9 -00.6	72 17.5 -23.7	S 03 51.3 +14.0	22						
23	163 33.1 -00.1	N 21 47.3 -00.4	152 13.1 -00.7	N 21 01.3 -00.7	86 53.8 -23.7	S 04 05.3 +14.0	23						
	UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 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 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'2 54'2 54'2 54'2 54'2 54'2							
	SHA 248° 248° 248° 248° 247° 247°	SHA 237° 237° 237° 236° 236° 236°		SHA 180° 178° 176° 174° 173° 171°		SHA 180° 178° 176° 174° 173° 171°							
	Greenwich Culmination Time: 12:05	Greenwich Culmination Time: 12:50		Greenwich Culmination Time: 17:03									

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 44.4 +00.7	N 17 54.8 +00.4	221 20.1 +01.9	N 21 20.5 +00.1	299 24.8 +02.5	S 06 06.0 +00.0	00						
01	253 45.1 +00.7	N 17 55.2 +00.5	236 22.0 +02.0	N 21 20.6 +00.1	314 27.3 +02.5	S 06 06.0 +00.0	01						
02	268 45.8 +00.7	N 17 55.7 +00.4	251 24.0 +01.9	N 21 20.7 +00.0	329 29.8 +02.5	S 06 06.0 +00.0	02						
03	283 46.5 +00.6	N 17 56.1 +00.5	266 25.9 +01.9	N 21 20.7 +00.1	344 32.3 +02.5	S 06 06.0 +00.1	03						
04	298 47.1 +00.7	N 17 56.6 +00.5	281 27.8 +01.9	N 21 20.8 +00.1	359 34.8 +02.5	S 06 06.1 +00.0	04						
05	313 47.8 +00.7	N 17 57.1 +00.4	296 29.7 +01.9	N 21 20.9 +00.0	14 37.3 +02.5	S 06 06.1 +00.0	05						
06	328 48.5 +00.7	N 17 57.5 +00.5	311 31.6 +01.9	N 21 20.9 +00.1	29 39.8 +02.6	S 06 06.1 +00.1	06						
07	343 49.2 +00.6	N 17 58.0 +00.5	326 33.5 +02.0	N 21 21.0 +00.1	44 42.4 +02.5	S 06 06.2 +00.0	07						
08	358 49.8 +00.7	N 17 58.5 +00.4	341 35.5 +01.9	N 21 21.1 +00.1	59 44.9 +02.5	S 06 06.2 +00.0	08						
09	13 50.5 +00.7	N 17 58.9 +00.5	356 37.4 +01.9	N 21 21.2 +00.0	74 47.4 +02.5	S 06 06.2 +00.1	09						
10	28 51.2 +00.7	N 17 59.4 +00.4	11 39.3 +01.9	N 21 21.2 +00.1	89 49.9 +02.5	S 06 06.3 +00.0	10						
11	43 51.9 +00.6	N 17 59.8 +00.5	26 41.2 +01.9	N 21 21.3 +00.1	104 52.4 +02.5	S 06 06.3 +00.0	11						
12	58 52.5 +00.7	N 18 00.3 +00.4	41 43.1 +02.0	N 21 21.4 +00.1	119 54.9 +02.5	S 06 06.3 +00.0	12						
13	73 53.2 +00.7	N 18 00.7 +00.5	56 45.1 +01.9	N 21 21.5 +00.0	134 57.4 +02.5	S 06 06.3 +00.1	13						
14	88 53.9 +00.7	N 18 01.2 +00.5	71 47.0 +01.9	N 21 21.5 +00.1	149 59.9 +02.5	S 06 06.4 +00.0	14						
15	103 54.6 +00.6	N 18 01.7 +00.4	86 48.9 +01.9	N 21 21.6 +00.1	165 02.4 +02.5	S 06 06.4 +00.0	15						
16	118 55.2 +00.7	N 18 02.1 +00.5	101 50.8 +01.9	N 21 21.7 +00.1	180 04.9 +02.5	S 06 06.4 +00.1	16						
17	133 55.9 +00.7	N 18 02.6 +00.4	116 52.7 +02.0	N 21 21.8 +00.0	195 07.4 +02.5	S 06 06.5 +00.0	17						
18	148 56.6 +00.7	N 18 03.0 +00.5	131 54.7 +01.9	N 21 21.8 +00.1	210 09.9 +02.6	S 06 06.5 +00.0	18						
19	163 57.3 +00.6	N 18 03.5 +00.4	146 56.6 +01.9	N 21 21.9 +00.1	225 12.5 +02.5	S 06 06.5 +00.1	19						
20	178 57.9 +00.7	N 18 03.9 +00.5	161 58.5 +01.9	N 21 22.0 +00.0	240 15.0 +02.5	S 06 06.6 +00.0	20						
21	193 58.6 +00.7	N 18 04.4 +00.5	177 00.4 +01.9	N 21 22.0 +00.1	255 17.5 +02.5	S 06 06.6 +00.0	21						
22	208 59.3 +00.7	N 18 04.9 +00.4	192 02.3 +02.0	N 21 22.1 +00.1	270 20.0 +02.5	S 06 06.6 +00.0	22						
23	223 60.0 +00.6	N 18 05.3 +00.5	207 04.3 +01.9	N 21 22.2 +00.1	285 22.5 +02.5	S 06 06.6 +00.1	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 308° 308° 308° 308° 308° 308°	SHA 291° 291° 291° 291° 291° 291°		SHA 009° 009° 009° 009° 009° 009°		SHA 009° 009° 009° 009° 009° 009°							
	Greenwich Culmination Time: 08:04	Greenwich Culmination Time: 09:13		Greenwich Culmination Time: 04:01									

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 33.0 -00.1	N 21 46.9 -00.3			167 12.4 -00.8	N 21 00.6 -00.6			101 30.1 -23.7	S 04 19.3 +14.0			00
01	193 32.9 +00.0	N 21 46.6 -00.4			182 11.6 -00.8	N 21 00.0 -00.6			116 06.4 -23.8	S 04 33.3 +13.9			01
02	208 32.9 -00.1	N 21 46.2 -00.4			197 10.8 -00.7	N 20 59.4 -00.7			130 42.6 -23.8	S 04 47.2 +13.9			02
03	223 32.8 -00.1	N 21 45.8 -00.3			212 10.1 -00.8	N 20 58.7 -00.6			145 18.8 -23.8	S 05 01.1 +14.0			03
04	238 32.7 +00.0	N 21 45.5 -00.4			227 09.3 -00.7	N 20 58.1 -00.6			159 55.0 -23.8	S 05 15.1 +13.9			04
05	253 32.7 -00.1	N 21 45.1 -00.4			242 08.6 -00.8	N 20 57.5 -00.7			174 31.2 -23.9	S 05 29.0 +13.9			05
06	268 32.6 -00.1	N 21 44.7 -00.4			257 07.8 -00.7	N 20 56.8 -00.6			189 07.3 -23.9	S 05 42.9 +13.8			06
07	283 32.5 -00.1	N 21 44.3 -00.3			272 07.1 -00.8	N 20 56.2 -00.6			203 43.4 -23.9	S 05 56.7 +13.9			07
08	298 32.4 +00.0	N 21 44.0 -00.4			287 06.3 -00.7	N 20 55.6 -00.7			218 19.5 -24.0	S 06 10.6 +13.8			08
09	313 32.4 -00.1	N 21 43.6 -00.4			302 05.6 -00.8	N 20 54.9 -00.6			232 55.5 -23.9	S 06 24.4 +13.8			09
10	328 32.3 -00.1	N 21 43.2 -00.4			317 04.8 -00.7	N 20 54.3 -00.7			247 31.6 -24.0	S 06 38.2 +13.8			10
11	343 32.2 +00.0	N 21 42.8 -00.3			332 04.1 -00.8	N 20 53.6 -00.6			262 07.6 -24.1	S 06 52.0 +13.8			11
12	358 32.2 -00.1	N 21 42.5 -00.4			347 03.3 -00.7	N 20 53.0 -00.7			276 43.5 -24.1	S 07 05.8 +13.7			12
13	13 32.1 -00.1	N 21 42.1 -00.4			2 02.6 -00.8	N 20 52.3 -00.6			291 19.4 -24.1	S 07 19.5 +13.8			13
14	28 32.0 -00.1	N 21 41.7 -00.4			17 01.8 -00.7	N 20 51.7 -00.7			305 55.3 -24.1	S 07 33.3 +13.7			14
15	43 31.9 +00.0	N 21 41.3 -00.3			32 01.1 -00.8	N 20 51.0 -00.6			320 31.2 -24.2	S 07 47.0 +13.7			15
16	58 31.9 -00.1	N 21 41.0 -00.4			47 00.3 -00.7	N 20 50.4 -00.6			335 07.0 -24.2	S 08 00.7 +13.6			16
17	73 31.8 -00.1	N 21 40.6 -00.4			61 59.6 -00.8	N 20 49.8 -00.7			349 42.8 -24.3	S 08 14.3 +13.7			17
18	88 31.7 +00.0	N 21 40.2 -00.4			76 58.8 -00.7	N 20 49.1 -00.6			4 18.5 -24.3	S 08 28.0 +13.6			18
19	103 31.7 -00.1	N 21 39.8 -00.4			91 58.1 -00.8	N 20 48.5 -00.7			18 54.2 -24.3	S 08 41.6 +13.6			19
20	118 31.6 -00.1	N 21 39.4 -00.3			106 57.3 -00.7	N 20 47.8 -00.7			33 29.9 -24.4	S 08 55.2 +13.5			20
21	133 31.5 +00.0	N 21 39.1 -00.4			121 56.6 -00.8	N 20 47.1 -00.6			48 05.5 -24.5	S 09 08.7 +13.6			21
22	148 31.5 -00.1	N 21 38.7 -00.4			136 55.8 -00.7	N 20 46.5 -00.7			62 41.0 -24.4	S 09 22.3 +13.5			22
23	163 31.4 -00.1	N 21 38.3 -00.4			151 55.1 -00.8	N 20 45.8 -00.6			77 16.6 -24.6	S 09 35.8 +13.4			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'7 15'7 15'7 15'7 15'7 15'7				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'8 14'8 14'8 14'8 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'2 54'3 54'3 54'3 54'4 54'4				
	SHA 247° 247° 247° 247° 246° 246°				SHA 236° 236° 235° 235° 235° 235°				SHA 169° 168° 166° 164° 162° 160°				
	Greenwich Culmination Time: 12:05				Greenwich Culmination Time: 12:51				Greenwich Culmination Time: 17:42				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 00.6 +00.7	N 18 05.8 +00.4			222 06.2 +01.9	N 21 22.3 +00.0			300 25.0 +02.5	S 06 06.7 +00.0			00
01	254 01.3 +00.7	N 18 06.2 +00.5			237 08.1 +01.9	N 21 22.3 +00.1			315 27.5 +02.5	S 06 06.7 +00.0			01
02	269 02.0 +00.7	N 18 06.7 +00.4			252 10.0 +01.9	N 21 22.4 +00.1			330 30.0 +02.5	S 06 06.7 +00.1			02
03	284 02.7 +00.6	N 18 07.1 +00.5			267 11.9 +02.0	N 21 22.5 +00.1			345 32.5 +02.5	S 06 06.8 +00.0			03
04	299 03.3 +00.7	N 18 07.6 +00.4			282 13.9 +01.9	N 21 22.6 +00.0			0 35.0 +02.6	S 06 06.8 +00.0			04
05	314 04.0 +00.7	N 18 08.0 +00.5			297 15.8 +01.9	N 21 22.6 +00.1			15 37.6 +02.5	S 06 06.8 +00.1			05
06	329 04.7 +00.7	N 18 08.5 +00.4			312 17.7 +01.9	N 21 22.7 +00.1			30 40.1 +02.5	S 06 06.9 +00.0			06
07	344 05.4 +00.6	N 18 08.9 +00.5			327 19.6 +01.9	N 21 22.8 +00.0			45 42.6 +02.5	S 06 06.9 +00.0			07
08	359 06.0 +00.7	N 18 09.4 +00.4			342 21.5 +02.0	N 21 22.8 +00.1			60 45.1 +02.5	S 06 06.9 +00.1			08
09	14 06.7 +00.7	N 18 09.8 +00.5			357 23.5 +01.9	N 21 22.9 +00.1			75 47.6 +02.5	S 06 07.0 +00.0			09
10	29 07.4 +00.7	N 18 10.3 +00.4			12 25.4 +01.9	N 21 23.0 +00.1			90 50.1 +02.5	S 06 07.0 +00.0			10
11	44 08.1 +00.6	N 18 10.7 +00.5			27 27.3 +01.9	N 21 23.1 +00.0			105 52.6 +02.5	S 06 07.0 +00.1			11
12	59 08.7 +00.7	N 18 11.2 +00.4			42 29.2 +02.0	N 21 23.1 +00.1			120 55.1 +02.6	S 06 07.1 +00.0			12
13	74 09.4 +00.7	N 18 11.6 +00.5			57 31.2 +01.9	N 21 23.2 +00.1			135 57.7 +02.5	S 06 07.1 +00.0			13
14	89 10.1 +00.7	N 18 12.1 +00.5			72 33.1 +01.9	N 21 23.3 +00.0			151 00.2 +02.5	S 06 07.1 +00.0			14
15	104 10.8 +00.6	N 18 12.6 +00.4			87 35.0 +01.9	N 21 23.3 +00.1			166 02.7 +02.5	S 06 07.1 +00.1			15
16	119 11.4 +00.7	N 18 13.0 +00.5			102 36.9 +01.9	N 21 23.4 +00.1			181 05.2 +02.5	S 06 07.2 +00.0			16
17	134 12.1 +00.7	N 18 13.5 +00.4			117 38.8 +02.0	N 21 23.5 +00.1			196 07.7 +02.5	S 06 07.2 +00.0			17
18	149 12.8 +00.7	N 18 13.9 +00.4			132 40.8 +01.9	N 21 23.6 +00.0			211 10.2 +02.5	S 06 07.2 +00.1			18
19	164 13.5 +00.6	N 18 14.3 +00.5			147 42.7 +01.9	N 21 23.6 +00.1			226 12.7 +02.5	S 06 07.3 +00.0			19
20	179 14.1 +00.7	N 18 14.8 +00.4			162 44.6 +01.9	N 21 23.7 +00.1			241 15.2 +02.6	S 06 07.3 +00.0			20
21	194 14.8 +00.7	N 18 15.2 +00.5			177 46.5 +02.0	N 21 23.8 +00.0			256 17.8 +02.5	S 06 07.3 +00.1			21
22	209 15.5 +00.7	N 18 15.7 +00.4			192 48.5 +01.9	N 21 23.8 +00.1			271 20.3 +02.5	S 06 07.4 +00.0			22
23	224 16.2 +00.6	N 18 16.1 +00.5			207 50.4 +01.9	N 21 23.9 +00.1			286 22.8 +02.5	S 06 07.4 +00.0			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 308° 307° 307° 307° 307° 307°				SHA 291° 291° 291° 291° 291° 291°				SHA 009° 009° 009° 009° 009° 009°				
	Greenwich Culmination Time: 08:03				Greenwich Culmination Time: 09:10				Greenwich Culmination Time: 03:57				

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 31.3 +00.0	N 21 37.9 -00.4	166 54.3 -00.7	N 20 45.2 -00.7	91 52.0 -24.5	S 09 49.2 +13.5	00						
01	193 31.3 -00.1	N 21 37.5 -00.4	181 53.6 -00.7	N 20 44.5 -00.6	106 27.5 -24.7	S 10 02.7 +13.4	01						
02	208 31.2 -00.1	N 21 37.1 -00.3	196 52.9 -00.8	N 20 43.9 -00.7	121 02.8 -24.6	S 10 16.1 +13.4	02						
03	223 31.1 +00.0	N 21 36.8 -00.4	211 52.1 -00.7	N 20 43.2 -00.7	135 38.2 -24.8	S 10 29.5 +13.3	03						
04	238 31.1 -00.1	N 21 36.4 -00.4	226 51.4 -00.8	N 20 42.5 -00.6	150 13.4 -24.7	S 10 42.8 +13.3	04						
05	253 31.0 -00.1	N 21 36.0 -00.4	241 50.6 -00.7	N 20 41.9 -00.7	164 48.7 -24.9	S 10 56.1 +13.3	05						
06	268 30.9 +00.0	N 21 35.6 -00.4	256 49.9 -00.8	N 20 41.2 -00.6	179 23.8 -24.9	S 11 09.4 +13.3	06						
07	283 30.9 -00.1	N 21 35.2 -00.4	271 49.1 -00.7	N 20 40.6 -00.7	193 58.9 -24.9	S 11 22.7 +13.2	07						
08	298 30.8 -00.1	N 21 34.8 -00.4	286 48.4 -00.7	N 20 39.9 -00.7	208 34.0 -25.0	S 11 35.9 +13.2	08						
09	313 30.7 +00.0	N 21 34.4 -00.3	301 47.7 -00.8	N 20 39.2 -00.6	223 09.0 -25.1	S 11 49.1 +13.1	09						
10	328 30.7 -00.1	N 21 34.1 -00.4	316 46.9 -00.7	N 20 38.6 -00.7	237 43.9 -25.1	S 12 02.2 +13.1	10						
11	343 30.6 -00.1	N 21 33.7 -00.4	331 46.2 -00.8	N 20 37.9 -00.7	252 18.8 -25.2	S 12 15.3 +13.1	11						
12	358 30.5 +00.0	N 21 33.3 -00.4	346 45.4 -00.7	N 20 37.2 -00.6	266 53.6 -25.2	S 12 28.4 +13.0	12						
13	13 30.5 -00.1	N 21 32.9 -00.4	1 44.7 -00.7	N 20 36.6 -00.7	281 28.4 -25.4	S 12 41.4 +13.0	13						
14	28 30.4 -00.1	N 21 32.5 -00.4	16 44.0 -00.8	N 20 35.9 -00.7	296 03.0 -25.3	S 12 54.4 +12.9	14						
15	43 30.3 +00.0	N 21 32.1 -00.4	31 43.2 -00.7	N 20 35.2 -00.7	310 37.7 -25.5	S 13 07.3 +12.9	15						
16	58 30.3 -00.1	N 21 31.7 -00.4	46 42.5 -00.7	N 20 34.5 -00.6	325 12.2 -25.5	S 13 20.2 +12.9	16						
17	73 30.2 -00.1	N 21 31.3 -00.4	61 41.8 -00.8	N 20 33.9 -00.7	339 46.7 -25.6	S 13 33.1 +12.8	17						
18	88 30.1 +00.0	N 21 30.9 -00.4	76 41.0 -00.7	N 20 33.2 -00.7	354 21.1 -25.6	S 13 45.9 +12.8	18						
19	103 30.1 -00.1	N 21 30.5 -00.4	91 40.3 -00.8	N 20 32.5 -00.7	8 55.5 -25.7	S 13 58.7 +12.7	19						
20	118 30.0 +00.0	N 21 30.1 -00.4	106 39.5 -00.7	N 20 31.8 -00.6	23 29.8 -25.8	S 14 11.4 +12.7	20						
21	133 30.0 -00.1	N 21 29.7 -00.4	121 38.8 -00.7	N 20 31.2 -00.7	38 04.0 -25.9	S 14 24.1 +12.6	21						
22	148 29.9 -00.1	N 21 29.3 -00.4	136 38.1 -00.8	N 20 30.5 -00.7	52 38.1 -25.9	S 14 36.7 +12.6	22						
23	163 29.8 +00.0	N 21 28.9 -00.4	151 37.3 -00.7	N 20 29.8 -00.7	67 12.2 -26.0	S 14 49.3 +12.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'9 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'5 54'5 54'6 54'6 54'7 54'8								
	SHA 246° 246° 246° 246° 245° 245°		SHA 234° 234° 234° 234° 234° 233°		SHA 159° 157° 155° 153° 151° 149°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 12:53		Greenwich Culmination Time: 18:23								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 16.8 +00.7	N 18 16.6 +00.4	222 52.3 +01.9	N 21 24.0 +00.1	301 25.3 +02.5	S 06 07.4 +00.1	00						
01	254 17.5 +00.7	N 18 17.0 +00.5	237 54.2 +02.0	N 21 24.1 +00.0	316 27.8 +02.5	S 06 07.5 +00.0	01						
02	269 18.2 +00.7	N 18 17.5 +00.4	252 56.2 +01.9	N 21 24.1 +00.1	331 30.3 +02.5	S 06 07.5 +00.0	02						
03	284 18.9 +00.6	N 18 17.9 +00.5	267 58.1 +01.9	N 21 24.2 +00.1	346 32.8 +02.6	S 06 07.5 +00.1	03						
04	299 19.5 +00.7	N 18 18.4 +00.4	283 00.0 +01.9	N 21 24.3 +00.0	1 35.4 +02.5	S 06 07.6 +00.0	04						
05	314 20.2 +00.7	N 18 18.8 +00.5	298 01.9 +02.0	N 21 24.3 +00.1	16 37.9 +02.5	S 06 07.6 +00.0	05						
06	329 20.9 +00.7	N 18 19.3 +00.4	313 03.9 +01.9	N 21 24.4 +00.1	31 40.4 +02.5	S 06 07.6 +00.1	06						
07	344 21.6 +00.6	N 18 19.7 +00.5	328 05.8 +01.9	N 21 24.5 +00.1	46 42.9 +02.5	S 06 07.7 +00.0	07						
08	359 22.2 +00.7	N 18 20.2 +00.4	343 07.7 +01.9	N 21 24.6 +00.0	61 45.4 +02.5	S 06 07.7 +00.0	08						
09	14 22.9 +00.7	N 18 20.6 +00.4	358 09.6 +02.0	N 21 24.6 +00.1	76 47.9 +02.5	S 06 07.7 +00.1	09						
10	29 23.6 +00.7	N 18 21.0 +00.5	13 11.6 +01.9	N 21 24.7 +00.1	91 50.4 +02.6	S 06 07.8 +00.0	10						
11	44 24.3 +00.6	N 18 21.5 +00.4	28 13.5 +01.9	N 21 24.8 +00.0	106 53.0 +02.5	S 06 07.8 +00.0	11						
12	59 24.9 +00.7	N 18 21.9 +00.5	43 15.4 +01.9	N 21 24.8 +00.1	121 55.5 +02.5	S 06 07.8 +00.1	12						
13	74 25.6 +00.7	N 18 22.4 +00.4	58 17.3 +02.0	N 21 24.9 +00.1	136 58.0 +02.5	S 06 07.9 +00.0	13						
14	89 26.3 +00.7	N 18 22.8 +00.5	73 19.3 +01.9	N 21 25.0 +00.1	152 00.5 +02.5	S 06 07.9 +00.0	14						
15	104 27.0 +00.7	N 18 23.3 +00.4	88 21.2 +01.9	N 21 25.1 +00.0	167 03.0 +02.5	S 06 07.9 +00.1	15						
16	119 27.7 +00.6	N 18 23.7 +00.4	103 23.1 +01.9	N 21 25.1 +00.1	182 05.5 +02.6	S 06 08.0 +00.0	16						
17	134 28.3 +00.7	N 18 24.1 +00.5	118 25.0 +02.0	N 21 25.2 +00.1	197 08.1 +02.5	S 06 08.0 +00.0	17						
18	149 29.0 +00.7	N 18 24.6 +00.4	133 27.0 +01.9	N 21 25.3 +00.0	212 10.6 +02.5	S 06 08.0 +00.1	18						
19	164 29.7 +00.7	N 18 25.0 +00.5	148 28.9 +01.9	N 21 25.3 +00.1	227 13.1 +02.5	S 06 08.1 +00.0	19						
20	179 30.4 +00.6	N 18 25.5 +00.4	163 30.8 +01.9	N 21 25.4 +00.1	242 15.6 +02.5	S 06 08.1 +00.0	20						
21	194 31.0 +00.7	N 18 25.9 +00.5	178 32.7 +02.0	N 21 25.5 +00.0	257 18.1 +02.5	S 06 08.1 +00.1	21						
22	209 31.7 +00.7	N 18 26.4 +00.4	193 34.7 +01.9	N 21 25.5 +00.1	272 20.6 +02.6	S 06 08.2 +00.0	22						
23	224 32.4 +00.7	N 18 26.8 +00.4	208 36.6 +01.9	N 21 25.6 +00.1	287 23.2 +02.5	S 06 08.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 307° 307° 307° 307° 306° 306°		SHA 291° 290° 290° 290° 290° 290°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:02		Greenwich Culmination Time: 09:07		Greenwich Culmination Time: 03:53								

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 29.8 -00.1	N 21 28.5 -00.4	166 36.6 -00.7	N 20 29.1 -00.7	81 46.2 -26.1	S 15 01.8 +12.5	00						
01	193 29.7 -00.1	N 21 28.1 -00.4	181 35.9 -00.8	N 20 28.4 -00.6	96 20.1 -26.2	S 15 14.3 +12.4	01						
02	208 29.6 +00.0	N 21 27.7 -00.4	196 35.1 -00.7	N 20 27.8 -00.7	110 53.9 -26.2	S 15 26.7 +12.4	02						
03	223 29.6 -00.1	N 21 27.3 -00.4	211 34.4 -00.7	N 20 27.1 -00.7	125 27.7 -26.3	S 15 39.1 +12.3	03						
04	238 29.5 +00.0	N 21 26.9 -00.4	226 33.7 -00.8	N 20 26.4 -00.7	140 01.4 -26.4	S 15 51.4 +12.3	04						
05	253 29.5 -00.1	N 21 26.5 -00.4	241 32.9 -00.7	N 20 25.7 -00.7	154 35.0 -26.5	S 16 03.7 +12.2	05						
06	268 29.4 -00.1	N 21 26.1 -00.4	256 32.2 -00.7	N 20 25.0 -00.7	169 08.5 -26.6	S 16 15.9 +12.1	06						
07	283 29.3 +00.0	N 21 25.7 -00.4	271 31.5 -00.7	N 20 24.3 -00.7	183 41.9 -26.6	S 16 28.0 +12.1	07						
08	298 29.3 -00.1	N 21 25.3 -00.4	286 30.8 -00.8	N 20 23.6 -00.7	198 15.3 -26.8	S 16 40.1 +12.1	08						
09	313 29.2 +00.0	N 21 24.9 -00.4	301 30.0 -00.7	N 20 22.9 -00.6	212 48.5 -26.8	S 16 52.2 +12.0	09						
10	328 29.2 -00.1	N 21 24.5 -00.4	316 29.3 -00.7	N 20 22.3 -00.7	227 21.7 -26.9	S 17 04.2 +11.9	10						
11	343 29.1 -00.1	N 21 24.1 -00.4	331 28.6 -00.8	N 20 21.6 -00.7	241 54.8 -27.0	S 17 16.1 +11.9	11						
12	358 29.0 +00.0	N 21 23.7 -00.4	346 27.8 -00.7	N 20 20.9 -00.7	256 27.8 -27.1	S 17 28.0 +11.7	12						
13	13 29.0 -00.1	N 21 23.3 -00.4	1 27.1 -00.7	N 20 20.2 -00.7	271 00.7 -27.1	S 17 39.7 +11.8	13						
14	28 28.9 +00.0	N 21 22.9 -00.4	16 26.4 -00.7	N 20 19.5 -00.7	285 33.6 -27.3	S 17 51.5 +11.7	14						
15	43 28.9 -00.1	N 21 22.5 -00.4	31 25.7 -00.8	N 20 18.8 -00.7	300 06.3 -27.3	S 18 03.2 +11.6	15						
16	58 28.8 -00.1	N 21 22.1 -00.4	46 24.9 -00.7	N 20 18.1 -00.7	314 39.0 -27.5	S 18 14.8 +11.5	16						
17	73 28.7 +00.0	N 21 21.7 -00.4	61 24.2 -00.7	N 20 17.4 -00.7	329 11.5 -27.5	S 18 26.3 +11.5	17						
18	88 28.7 -00.1	N 21 21.3 -00.5	76 23.5 -00.7	N 20 16.7 -00.7	343 44.0 -27.7	S 18 37.8 +11.4	18						
19	103 28.6 +00.0	N 21 20.8 -00.4	91 22.8 -00.8	N 20 16.0 -00.7	358 16.3 -27.7	S 18 49.2 +11.3	19						
20	118 28.6 -00.1	N 21 20.4 -00.4	106 22.0 -00.7	N 20 15.3 -00.7	12 48.6 -27.8	S 19 00.5 +11.2	20						
21	133 28.5 +00.0	N 21 20.0 -00.4	121 21.3 -00.7	N 20 14.6 -00.7	27 20.8 -27.9	S 19 11.7 +11.2	21						
22	148 28.5 -00.1	N 21 19.6 -00.4	136 20.6 -00.7	N 20 13.9 -00.7	41 52.9 -28.1	S 19 22.9 +11.1	22						
23	163 28.4 -00.1	N 21 19.2 -00.4	151 19.9 -00.7	N 20 13.2 -00.7	56 24.8 -28.1	S 19 34.0 +11.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 15'0 15'0 15'0 15'0 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'8 54'9 55'0 55'1 55'2 55'3								
	SHA 245° 245° 245° 245° 244° 244°		SHA 233° 233° 233° 233° 232° 232°		SHA 147° 146° 144° 142° 140° 138°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 12:54		Greenwich Culmination Time: 19:07								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 33.1 +00.6	N 18 27.2 +00.5	223 38.5 +01.9	N 21 25.7 +00.1	302 25.7 +02.5	S 06 08.2 +00.1	00						
01	254 33.7 +00.7	N 18 27.7 +00.4	238 40.4 +02.0	N 21 25.8 +00.0	317 28.2 +02.5	S 06 08.3 +00.0	01						
02	269 34.4 +00.7	N 18 28.1 +00.5	253 42.4 +01.9	N 21 25.8 +00.1	332 30.7 +02.5	S 06 08.3 +00.0	02						
03	284 35.1 +00.7	N 18 28.6 +00.4	268 44.3 +01.9	N 21 25.9 +00.1	347 33.2 +02.5	S 06 08.3 +00.1	03						
04	299 35.8 +00.6	N 18 29.0 +00.4	283 46.2 +01.9	N 21 26.0 +00.0	2 35.7 +02.6	S 06 08.4 +00.0	04						
05	314 36.4 +00.7	N 18 29.4 +00.5	298 48.1 +02.0	N 21 26.0 +00.1	17 38.3 +02.5	S 06 08.4 +00.0	05						
06	329 37.1 +00.7	N 18 29.9 +00.4	313 50.1 +01.9	N 21 26.1 +00.1	32 40.8 +02.5	S 06 08.4 +00.1	06						
07	344 37.8 +00.7	N 18 30.3 +00.4	328 52.0 +01.9	N 21 26.2 +00.0	47 43.3 +02.5	S 06 08.5 +00.0	07						
08	359 38.5 +00.6	N 18 30.7 +00.5	343 53.9 +02.0	N 21 26.2 +00.1	62 45.8 +02.5	S 06 08.5 +00.0	08						
09	14 39.1 +00.7	N 18 31.2 +00.4	358 55.9 +01.9	N 21 26.3 +00.1	77 48.3 +02.6	S 06 08.5 +00.1	09						
10	29 39.8 +00.7	N 18 31.6 +00.5	13 57.8 +01.9	N 21 26.4 +00.1	92 50.9 +02.5	S 06 08.6 +00.0	10						
11	44 40.5 +00.7	N 18 32.1 +00.4	28 59.7 +01.9	N 21 26.5 +00.0	107 53.4 +02.5	S 06 08.6 +00.0	11						
12	59 41.2 +00.6	N 18 32.5 +00.4	44 01.6 +02.0	N 21 26.5 +00.1	122 55.9 +02.5	S 06 08.6 +00.1	12						
13	74 41.8 +00.7	N 18 32.9 +00.5	59 03.6 +01.9	N 21 26.6 +00.1	137 58.4 +02.5	S 06 08.7 +00.0	13						
14	89 42.5 +00.7	N 18 33.4 +00.4	74 05.5 +01.9	N 21 26.7 +00.0	153 00.9 +02.6	S 06 08.7 +00.0	14						
15	104 43.2 +00.7	N 18 33.8 +00.4	89 07.4 +02.0	N 21 26.7 +00.1	168 03.5 +02.5	S 06 08.7 +00.1	15						
16	119 43.9 +00.6	N 18 34.2 +00.5	104 09.4 +01.9	N 21 26.8 +00.1	183 06.0 +02.5	S 06 08.8 +00.0	16						
17	134 44.5 +00.7	N 18 34.7 +00.4	119 11.3 +01.9	N 21 26.9 +00.0	198 08.5 +02.5	S 06 08.8 +00.0	17						
18	149 45.2 +00.7	N 18 35.1 +00.4	134 13.2 +01.9	N 21 26.9 +00.1	213 11.0 +02.5	S 06 08.8 +00.1	18						
19	164 45.9 +00.7	N 18 35.5 +00.5	149 15.1 +02.0	N 21 27.0 +00.1	228 13.5 +02.6	S 06 08.9 +00.0	19						
20	179 46.6 +00.6	N 18 36.0 +00.4	164 17.1 +01.9	N 21 27.1 +00.0	243 16.1 +02.5	S 06 08.9 +00.0	20						
21	194 47.2 +00.7	N 18 36.4 +00.4	179 19.0 +01.9	N 21 27.1 +00.1	258 18.6 +02.5	S 06 08.9 +00.1	21						
22	209 47.9 +00.7	N 18 36.8 +00.5	194 20.9 +02.0	N 21 27.2 +00.1	273 21.1 +02.5	S 06 09.0 +00.0	22						
23	224 48.6 +00.7	N 18 37.3 +00.4	209 22.9 +01.9	N 21 27.3 +00.1	288 23.6 +02.5	S 06 09.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 306° 306° 306° 306° 306° 306°		SHA 290° 290° 290° 290° 290° 290°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:01		Greenwich Culmination Time: 09:04		Greenwich Culmination Time: 03:49								

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 28.3 +00.0	N 21 18.8 -00.4	166 19.2 -00.8	N 20 12.5 -00.7	70 56.7 -28.2	S 19 45.1 +10.9	00						
01	193 28.3 -00.1	N 21 18.4 -00.4	181 18.4 -00.7	N 20 11.8 -00.7	85 28.5 -28.3	S 19 56.0 +10.9	01						
02	208 28.2 +00.0	N 21 18.0 -00.5	196 17.7 -00.7	N 20 11.1 -00.7	100 00.2 -28.4	S 20 06.9 +10.8	02						
03	223 28.2 -00.1	N 21 17.5 -00.4	211 17.0 -00.7	N 20 10.4 -00.7	114 31.8 -28.6	S 20 17.7 +10.7	03						
04	238 28.1 +00.0	N 21 17.1 -00.4	226 16.3 -00.7	N 20 09.7 -00.8	129 03.2 -28.6	S 20 28.4 +10.7	04						
05	253 28.1 -00.1	N 21 16.7 -00.4	241 15.6 -00.8	N 20 08.9 -00.7	143 34.6 -28.7	S 20 39.1 +10.5	05						
06	268 28.0 +00.0	N 21 16.3 -00.4	256 14.8 -00.7	N 20 08.2 -00.7	158 05.9 -28.8	S 20 49.6 +10.5	06						
07	283 28.0 -00.1	N 21 15.9 -00.4	271 14.1 -00.7	N 20 07.5 -00.7	172 37.1 -29.0	S 21 00.1 +10.4	07						
08	298 27.9 -00.1	N 21 15.5 -00.5	286 13.4 -00.7	N 20 06.8 -00.7	187 08.1 -29.0	S 21 10.5 +10.3	08						
09	313 27.8 +00.0	N 21 15.0 -00.4	301 12.7 -00.7	N 20 06.1 -00.7	201 39.1 -29.2	S 21 20.8 +10.2	09						
10	328 27.8 -00.1	N 21 14.6 -00.4	316 12.0 -00.7	N 20 05.4 -00.7	216 09.9 -29.2	S 21 31.0 +10.1	10						
11	343 27.7 +00.0	N 21 14.2 -00.4	331 11.3 -00.8	N 20 04.7 -00.8	230 40.7 -29.4	S 21 41.1 +10.0	11						
12	358 27.7 -00.1	N 21 13.8 -00.4	346 10.5 -00.7	N 20 03.9 -00.7	245 11.3 -29.5	S 21 51.1 +10.0	12						
13	13 27.6 +00.0	N 21 13.4 -00.5	1 09.8 -00.7	N 20 03.2 -00.7	259 41.8 -29.5	S 22 01.1 +09.8	13						
14	28 27.6 -00.1	N 21 12.9 -00.4	16 09.1 -00.7	N 20 02.5 -00.7	274 12.3 -29.7	S 22 10.9 +09.8	14						
15	43 27.5 +00.0	N 21 12.5 -00.4	31 08.4 -00.7	N 20 01.8 -00.7	288 42.6 -29.8	S 22 20.7 +09.6	15						
16	58 27.5 -00.1	N 21 12.1 -00.4	46 07.7 -00.7	N 20 01.1 -00.7	303 12.8 -29.9	S 22 30.3 +09.6	16						
17	73 27.4 +00.0	N 21 11.7 -00.5	61 07.0 -00.7	N 20 00.4 -00.8	317 42.9 -30.1	S 22 39.9 +09.4	17						
18	88 27.4 -00.1	N 21 11.2 -00.4	76 06.3 -00.8	N 19 59.6 -00.7	332 12.8 -30.1	S 22 49.3 +09.4	18						
19	103 27.3 +00.0	N 21 10.8 -00.4	91 05.5 -00.7	N 19 58.9 -00.7	346 42.7 -30.2	S 22 58.7 +09.3	19						
20	118 27.3 -00.1	N 21 10.4 -00.4	106 04.8 -00.7	N 19 58.2 -00.7	1 12.5 -30.4	S 23 08.0 +09.1	20						
21	133 27.2 +00.0	N 21 10.0 -00.5	121 04.1 -00.7	N 19 57.5 -00.8	15 42.1 -30.4	S 23 17.1 +09.1	21						
22	148 27.2 -00.1	N 21 09.5 -00.4	136 03.4 -00.7	N 19 56.7 -00.7	30 11.7 -30.6	S 23 26.2 +08.9	22						
23	163 27.1 +00.0	N 21 09.1 -00.4	151 02.7 -00.7	N 19 56.0 -00.7	44 41.1 -30.7	S 23 35.1 +08.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'4 55'5 55'6 55'7 55'8 55'9								
	SHA 244° 244° 244° 244° 243° 243°		SHA 232° 232° 231° 231° 231° 231°		SHA 136° 134° 131° 129° 127° 125°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 12:55		Greenwich Culmination Time: 19:55								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 49.3 +00.6	N 18 37.7 +00.4	224 24.8 +01.9	N 21 27.4 +00.0	303 26.1 +02.6	S 06 09.0 +00.1	00						
01	254 49.9 +00.7	N 18 38.1 +00.5	239 26.7 +01.9	N 21 27.4 +00.1	318 28.7 +02.5	S 06 09.1 +00.0	01						
02	269 50.6 +00.7	N 18 38.6 +00.4	254 28.6 +02.0	N 21 27.5 +00.1	333 31.2 +02.5	S 06 09.1 +00.1	02						
03	284 51.3 +00.7	N 18 39.0 +00.4	269 30.6 +01.9	N 21 27.6 +00.0	348 33.7 +02.5	S 06 09.2 +00.0	03						
04	299 52.0 +00.6	N 18 39.4 +00.5	284 32.5 +01.9	N 21 27.6 +00.1	3 36.2 +02.6	S 06 09.2 +00.0	04						
05	314 52.6 +00.7	N 18 39.9 +00.4	299 34.4 +02.0	N 21 27.7 +00.1	18 38.8 +02.5	S 06 09.2 +00.1	05						
06	329 53.3 +00.7	N 18 40.3 +00.4	314 36.4 +01.9	N 21 27.8 +00.0	33 41.3 +02.5	S 06 09.3 +00.0	06						
07	344 54.0 +00.7	N 18 40.7 +00.4	329 38.3 +01.9	N 21 27.8 +00.1	48 43.8 +02.5	S 06 09.3 +00.0	07						
08	359 54.7 +00.6	N 18 41.1 +00.5	344 40.2 +02.0	N 21 27.9 +00.1	63 46.3 +02.5	S 06 09.3 +00.1	08						
09	14 55.3 +00.7	N 18 41.6 +00.4	359 42.2 +01.9	N 21 28.0 +00.0	78 48.8 +02.6	S 06 09.4 +00.0	09						
10	29 56.0 +00.7	N 18 42.0 +00.4	14 44.1 +01.9	N 21 28.0 +00.1	93 51.4 +02.5	S 06 09.4 +00.0	10						
11	44 56.7 +00.7	N 18 42.4 +00.5	29 46.0 +01.9	N 21 28.1 +00.1	108 53.9 +02.5	S 06 09.4 +00.1	11						
12	59 57.4 +00.6	N 18 42.9 +00.4	44 47.9 +02.0	N 21 28.2 +00.0	123 56.4 +02.5	S 06 09.5 +00.0	12						
13	74 58.0 +00.7	N 18 43.3 +00.4	59 49.9 +01.9	N 21 28.2 +00.1	138 58.9 +02.6	S 06 09.5 +00.0	13						
14	89 58.7 +00.7	N 18 43.7 +00.4	74 51.8 +01.9	N 21 28.3 +00.1	154 01.5 +02.5	S 06 09.5 +00.1	14						
15	104 59.4 +00.7	N 18 44.1 +00.5	89 53.7 +02.0	N 21 28.4 +00.1	169 04.0 +02.5	S 06 09.6 +00.0	15						
16	120 00.1 +00.6	N 18 44.6 +00.4	104 55.7 +01.9	N 21 28.5 +00.0	184 06.5 +02.5	S 06 09.6 +00.1	16						
17	135 00.7 +00.7	N 18 45.0 +00.4	119 57.6 +01.9	N 21 28.5 +00.1	199 09.0 +02.6	S 06 09.7 +00.0	17						
18	150 01.4 +00.7	N 18 45.4 +00.5	134 59.5 +02.0	N 21 28.6 +00.1	214 11.6 +02.5	S 06 09.7 +00.0	18						
19	165 02.1 +00.7	N 18 45.9 +00.4	150 01.5 +01.9	N 21 28.7 +00.0	229 14.1 +02.5	S 06 09.7 +00.1	19						
20	180 02.8 +00.6	N 18 46.3 +00.4	165 03.4 +01.9	N 21 28.7 +00.1	244 16.6 +02.5	S 06 09.8 +00.0	20						
21	195 03.4 +00.7	N 18 46.7 +00.4	180 05.3 +02.0	N 21 28.8 +00.1	259 19.1 +02.6	S 06 09.8 +00.0	21						
22	210 04.1 +00.7	N 18 47.1 +00.5	195 07.3 +01.9	N 21 28.9 +00.0	274 21.7 +02.5	S 06 09.8 +00.1	22						
23	225 04.8 +00.7	N 18 47.6 +00.4	210 09.2 +01.9	N 21 28.9 +00.1	289 24.2 +02.5	S 06 09.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 305° 305° 305° 305° 305° 305°		SHA 290° 290° 290° 290° 290° 290°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 08:00		Greenwich Culmination Time: 09:01		Greenwich Culmination Time: 03:45								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 27.1 -00.1	N 21 08.7 -00.5	166 02.0 -00.7	N 19 55.3 -00.8	59 10.4 -30.8	S 23 44.0 +08.7	00						
01	193 27.0 +00.0	N 21 08.2 -00.4	181 01.3 -00.7	N 19 54.5 -00.7	73 39.6 -30.9	S 23 52.7 +08.6	01						
02	208 27.0 -00.1	N 21 07.8 -00.4	196 00.6 -00.7	N 19 53.8 -00.7	88 08.7 -31.0	S 24 01.3 +08.5	02						
03	223 26.9 +00.0	N 21 07.4 -00.4	210 59.9 -00.7	N 19 53.1 -00.8	102 37.7 -31.2	S 24 09.8 +08.4	03						
04	238 26.9 -00.1	N 21 07.0 -00.5	225 59.2 -00.8	N 19 52.3 -00.7	117 06.5 -31.2	S 24 18.2 +08.3	04						
05	253 26.8 +00.0	N 21 06.5 -00.4	240 58.4 -00.7	N 19 51.6 -00.7	131 35.3 -31.4	S 24 26.5 +08.2	05						
06	268 26.8 -00.1	N 21 06.1 -00.4	255 57.7 -00.7	N 19 50.9 -00.8	146 03.9 -31.4	S 24 34.7 +08.0	06						
07	283 26.7 +00.0	N 21 05.7 -00.5	270 57.0 -00.7	N 19 50.1 -00.7	160 32.5 -31.6	S 24 42.7 +08.0	07						
08	298 26.7 -00.1	N 21 05.2 -00.4	285 56.3 -00.7	N 19 49.4 -00.7	175 00.9 -31.7	S 24 50.7 +07.8	08						
09	313 26.6 +00.0	N 21 04.8 -00.4	300 55.6 -00.7	N 19 48.7 -00.8	189 29.2 -31.8	S 24 58.5 +07.7	09						
10	328 26.6 -00.1	N 21 04.4 -00.5	315 54.9 -00.7	N 19 47.9 -00.7	203 57.4 -32.0	S 25 06.2 +07.5	10						
11	343 26.5 +00.0	N 21 03.9 -00.4	330 54.2 -00.7	N 19 47.2 -00.7	218 25.4 -32.0	S 25 13.7 +07.5	11						
12	358 26.5 -00.1	N 21 03.5 -00.4	345 53.5 -00.7	N 19 46.5 -00.8	232 53.4 -32.1	S 25 21.2 +07.3	12						
13	13 26.4 +00.0	N 21 03.1 -00.5	0 52.8 -00.7	N 19 45.7 -00.7	247 21.3 -32.3	S 25 28.5 +07.2	13						
14	28 26.4 -00.1	N 21 02.6 -00.4	15 52.1 -00.7	N 19 45.0 -00.8	261 49.0 -32.4	S 25 35.7 +07.0	14						
15	43 26.3 +00.0	N 21 02.2 -00.5	30 51.4 -00.7	N 19 44.2 -00.7	276 16.6 -32.4	S 25 42.7 +07.0	15						
16	58 26.3 -00.1	N 21 01.7 -00.4	45 50.7 -00.7	N 19 43.5 -00.8	290 44.2 -32.6	S 25 49.7 +06.8	16						
17	73 26.2 +00.0	N 21 01.3 -00.4	60 50.0 -00.7	N 19 42.7 -00.7	305 11.6 -32.7	S 25 56.5 +06.6	17						
18	88 26.2 -00.1	N 21 00.9 -00.5	75 49.3 -00.7	N 19 42.0 -00.7	319 38.9 -32.8	S 26 03.1 +06.6	18						
19	103 26.1 +00.0	N 21 00.4 -00.4	90 48.6 -00.7	N 19 41.3 -00.8	334 06.1 -32.9	S 26 09.7 +06.4	19						
20	118 26.1 -00.1	N 20 60.0 -00.5	105 47.9 -00.7	N 19 40.5 -00.7	348 33.2 -33.1	S 26 16.1 +06.2	20						
21	133 26.0 +00.0	N 20 59.5 -00.4	120 47.2 -00.7	N 19 39.8 -00.8	3 00.1 -33.1	S 26 22.3 +06.1	21						
22	148 26.0 -00.1	N 20 59.1 -00.4	135 46.5 -00.7	N 19 39.0 -00.7	17 27.0 -33.2	S 26 28.4 +06.0	22						
23	163 25.9 +00.0	N 20 58.7 -00.5	150 45.8 -00.7	N 19 38.3 -00.8	31 53.8 -33.4	S 26 34.4 +05.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'4 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 56'2 56'3 56'4 56'5 56'7								
	SHA 243° 243° 243° 243° 242° 242°		SHA 231° 230° 230° 230° 230° 230°		SHA 123° 121° 118° 116° 114° 111°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 12:56		Greenwich Culmination Time: 20:47								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 05.5 +00.6	N 18 48.0 +00.4	225 11.1 +02.0	N 21 29.0 +00.1	304 26.7 +02.5	S 06 09.9 +00.0	00						
01	255 06.1 +00.7	N 18 48.4 +00.4	240 13.1 +01.9	N 21 29.1 +00.0	319 29.2 +02.6	S 06 09.9 +00.1	01						
02	270 06.8 +00.7	N 18 48.8 +00.5	255 15.0 +01.9	N 21 29.1 +00.1	334 31.8 +02.5	S 06 10.0 +00.0	02						
03	285 07.5 +00.7	N 18 49.3 +00.4	270 16.9 +02.0	N 21 29.2 +00.1	349 34.3 +02.5	S 06 10.0 +00.1	03						
04	300 08.2 +00.6	N 18 49.7 +00.4	285 18.9 +01.9	N 21 29.3 +00.0	4 36.8 +02.5	S 06 10.1 +00.0	04						
05	315 08.8 +00.7	N 18 50.1 +00.4	300 20.8 +01.9	N 21 29.3 +00.1	19 39.3 +02.6	S 06 10.1 +00.0	05						
06	330 09.5 +00.7	N 18 50.5 +00.4	315 22.7 +02.0	N 21 29.4 +00.1	34 41.9 +02.5	S 06 10.1 +00.1	06						
07	345 10.2 +00.7	N 18 50.9 +00.5	330 24.7 +01.9	N 21 29.5 +00.0	49 44.4 +02.5	S 06 10.2 +00.0	07						
08	0 10.9 +00.6	N 18 51.4 +00.4	345 26.6 +01.9	N 21 29.5 +00.1	64 46.9 +02.5	S 06 10.2 +00.0	08						
09	15 11.5 +00.7	N 18 51.8 +00.4	0 28.5 +02.0	N 21 29.6 +00.1	79 49.4 +02.6	S 06 10.2 +00.1	09						
10	30 12.2 +00.7	N 18 52.2 +00.4	15 30.5 +01.9	N 21 29.7 +00.0	94 52.0 +02.5	S 06 10.3 +00.0	10						
11	45 12.9 +00.7	N 18 52.6 +00.5	30 32.4 +01.9	N 21 29.7 +00.1	109 54.5 +02.5	S 06 10.3 +00.1	11						
12	60 13.6 +00.6	N 18 53.1 +00.4	45 34.3 +02.0	N 21 29.8 +00.1	124 57.0 +02.5	S 06 10.4 +00.0	12						
13	75 14.2 +00.7	N 18 53.5 +00.4	60 36.3 +01.9	N 21 29.9 +00.0	139 59.5 +02.6	S 06 10.4 +00.0	13						
14	90 14.9 +00.7	N 18 53.9 +00.4	75 38.2 +01.9	N 21 29.9 +00.1	155 02.1 +02.5	S 06 10.4 +00.1	14						
15	105 15.6 +00.7	N 18 54.3 +00.4	90 40.1 +02.0	N 21 30.0 +00.1	170 04.6 +02.5	S 06 10.5 +00.0	15						
16	120 16.3 +00.6	N 18 54.7 +00.5	105 42.1 +01.9	N 21 30.1 +00.0	185 07.1 +02.5	S 06 10.5 +00.0	16						
17	135 16.9 +00.7	N 18 55.2 +00.4	120 44.0 +01.9	N 21 30.1 +00.1	200 09.6 +02.6	S 06 10.5 +00.1	17						
18	150 17.6 +00.7	N 18 55.6 +00.4	135 45.9 +02.0	N 21 30.2 +00.1	215 12.2 +02.5	S 06 10.6 +00.0	18						
19	165 18.3 +00.7	N 18 56.0 +00.4	150 47.9 +01.9	N 21 30.3 +00.0	230 14.7 +02.5	S 06 10.6 +00.1	19						
20	180 19.0 +00.6	N 18 56.4 +00.4	165 49.8 +01.9	N 21 30.3 +00.1	245 17.2 +02.6	S 06 10.7 +00.0	20						
21	195 19.6 +00.7	N 18 56.8 +00.5	180 51.7 +02.0	N 21 30.4 +00.1	260 19.8 +02.5	S 06 10.7 +00.0	21						
22	210 20.3 +00.7	N 18 57.3 +00.4	195 53.7 +01.9	N 21 30.5 +00.0	275 22.3 +02.5	S 06 10.7 +00.1	22						
23	225 21.0 +00.7	N 18 57.7 +00.4	210 55.6 +01.9	N 21 30.5 +00.1	290 24.8 +02.5	S 06 10.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 305° 305° 304° 304° 304° 304°		SHA 290° 290° 290° 290° 290° 290°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:59		Greenwich Culmination Time: 08:58		Greenwich Culmination Time: 03:41								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	178 25.9 +00.0	N 20 58.2 -00.4	165 45.1 -00.7	N 19 37.5 -00.7	46 20.4 -33.4	S 26 40.2 +05.7	00							
01	193 25.9 -00.1	N 20 57.8 -00.5	180 44.4 -00.7	N 19 36.8 -00.8	60 47.0 -33.5	S 26 45.9 +05.6	01							
02	208 25.8 +00.0	N 20 57.3 -00.4	195 43.7 -00.7	N 19 36.0 -00.8	75 13.5 -33.7	S 26 51.5 +05.4	02							
03	223 25.8 -00.1	N 20 56.9 -00.5	210 43.0 -00.7	N 19 35.2 -00.7	89 39.8 -33.7	S 26 56.9 +05.2	03							
04	238 25.7 +00.0	N 20 56.4 -00.4	225 42.3 -00.7	N 19 34.5 -00.8	104 06.1 -33.9	S 27 02.1 +05.1	04							
05	253 25.7 -00.1	N 20 56.0 -00.5	240 41.6 -00.7	N 19 33.7 -00.7	118 32.2 -33.9	S 27 07.2 +05.0	05							
06	268 25.6 +00.0	N 20 55.5 -00.4	255 40.9 -00.7	N 19 33.0 -00.8	132 58.3 -34.1	S 27 12.2 +04.8	06							
07	283 25.6 -00.1	N 20 55.1 -00.5	270 40.2 -00.6	N 19 32.2 -00.7	147 24.2 -34.1	S 27 17.0 +04.7	07							
08	298 25.5 +00.0	N 20 54.6 -00.4	285 39.6 -00.7	N 19 31.5 -00.8	161 50.1 -34.3	S 27 21.7 +04.5	08							
09	313 25.5 +00.0	N 20 54.2 -00.5	300 38.9 -00.7	N 19 30.7 -00.8	176 15.8 -34.3	S 27 26.2 +04.3	09							
10	328 25.5 -00.1	N 20 53.7 -00.4	315 38.2 -00.7	N 19 29.9 -00.7	190 41.5 -34.4	S 27 30.5 +04.2	10							
11	343 25.4 +00.0	N 20 53.3 -00.5	330 37.5 -00.7	N 19 29.2 -00.8	205 07.1 -34.6	S 27 34.7 +04.0	11							
12	358 25.4 -00.1	N 20 52.8 -00.4	345 36.8 -00.7	N 19 28.4 -00.8	219 32.5 -34.6	S 27 38.7 +03.9	12							
13	13 25.3 +00.0	N 20 52.4 -00.5	0 36.1 -00.7	N 19 27.6 -00.7	233 57.9 -34.7	S 27 42.6 +03.7	13							
14	28 25.3 -00.1	N 20 51.9 -00.4	15 35.4 -00.7	N 19 26.9 -00.8	248 23.2 -34.8	S 27 46.3 +03.5	14							
15	43 25.2 +00.0	N 20 51.5 -00.5	30 34.7 -00.7	N 19 26.1 -00.7	262 48.4 -34.8	S 27 49.8 +03.4	15							
16	58 25.2 +00.0	N 20 51.0 -00.4	45 34.0 -00.7	N 19 25.4 -00.8	277 13.6 -35.0	S 27 53.2 +03.2	16							
17	73 25.2 -00.1	N 20 50.6 -00.5	60 33.3 -00.7	N 19 24.6 -00.8	291 38.6 -35.0	S 27 56.4 +03.1	17							
18	88 25.1 +00.0	N 20 50.1 -00.4	75 32.6 -00.6	N 19 23.8 -00.8	306 03.6 -35.2	S 27 59.5 +02.9	18							
19	103 25.1 -00.1	N 20 49.7 -00.5	90 32.0 -00.7	N 19 23.0 -00.7	320 28.4 -35.2	S 28 02.4 +02.7	19							
20	118 25.0 +00.0	N 20 49.2 -00.4	105 31.3 -00.7	N 19 22.3 -00.8	334 53.2 -35.2	S 28 05.1 +02.5	20							
21	133 25.0 +00.0	N 20 48.8 -00.5	120 30.6 -00.7	N 19 21.5 -00.8	349 18.0 -35.4	S 28 07.6 +02.4	21							
22	148 25.0 -00.1	N 20 48.3 -00.4	135 29.9 -00.7	N 19 20.7 -00.7	3 42.6 -35.4	S 28 10.0 +02.2	22							
23	163 24.9 +00.0	N 20 47.9 -00.5	150 29.2 -00.7	N 19 20.0 -00.8	18 07.2 -35.5	S 28 12.2 +02.0	23							
UT	02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 15'5 15'5 15'5 15'6 15'6 15'7						
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	56'8 56'9 57'1 57'2 57'3 57'5	SHA	229° 229° 229° 229° 229° 228°	SHA	109° 106° 104° 102° 099° 097°					
SHA	242° 242° 242° 242° 241° 241°	SHA	229° 229° 229° 229° 229° 228°	SHA	109° 106° 104° 102° 099° 097°	Greenwich Culmination Time: 21:44								
Greenwich Culmination Time: 12:06									Greenwich Culmination Time: 12:57			Greenwich Culmination Time: 21:44		

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	240 21.7 +00.6	N 18 58.1 +00.4	225 57.5 +02.0	N 21 30.6 +00.1	305 27.3 +02.6	S 06 10.8 +00.0	00							
01	255 22.3 +00.7	N 18 58.5 +00.4	240 59.5 +01.9	N 21 30.7 +00.0	320 29.9 +02.5	S 06 10.8 +00.1	01							
02	270 23.0 +00.7	N 18 58.9 +00.4	256 01.4 +02.0	N 21 30.7 +00.1	335 32.4 +02.5	S 06 10.9 +00.0	02							
03	285 23.7 +00.7	N 18 59.3 +00.5	271 03.4 +01.9	N 21 30.8 +00.1	350 34.9 +02.6	S 06 10.9 +00.1	03							
04	300 24.4 +00.6	N 18 59.8 +00.4	286 05.3 +01.9	N 21 30.9 +00.0	5 37.5 +02.5	S 06 11.0 +00.0	04							
05	315 25.0 +00.7	N 19 00.2 +00.4	301 07.2 +02.0	N 21 30.9 +00.1	20 40.0 +02.5	S 06 11.0 +00.0	05							
06	330 25.7 +00.7	N 19 00.6 +00.4	316 09.2 +01.9	N 21 31.0 +00.1	35 42.5 +02.5	S 06 11.0 +00.1	06							
07	345 26.4 +00.7	N 19 01.0 +00.4	331 11.1 +01.9	N 21 31.1 +00.0	50 45.0 +02.6	S 06 11.1 +00.0	07							
08	0 27.1 +00.6	N 19 01.4 +00.4	346 13.0 +02.0	N 21 31.1 +00.1	65 47.6 +02.5	S 06 11.1 +00.0	08							
09	15 27.7 +00.7	N 19 01.8 +00.4	1 15.0 +01.9	N 21 31.2 +00.1	80 50.1 +02.5	S 06 11.1 +00.1	09							
10	30 28.4 +00.7	N 19 02.2 +00.5	16 16.9 +01.9	N 21 31.3 +00.0	95 52.6 +02.6	S 06 11.2 +00.0	10							
11	45 29.1 +00.7	N 19 02.7 +00.4	31 18.8 +02.0	N 21 31.3 +00.1	110 55.2 +02.5	S 06 11.2 +00.1	11							
12	60 29.8 +00.6	N 19 03.1 +00.4	46 20.8 +01.9	N 21 31.4 +00.1	125 57.7 +02.5	S 06 11.3 +00.0	12							
13	75 30.4 +00.7	N 19 03.5 +00.4	61 22.7 +02.0	N 21 31.5 +00.0	141 00.2 +02.6	S 06 11.3 +00.0	13							
14	90 31.1 +00.7	N 19 03.9 +00.4	76 24.7 +01.9	N 21 31.5 +00.1	156 02.8 +02.5	S 06 11.3 +00.1	14							
15	105 31.8 +00.7	N 19 04.3 +00.4	91 26.6 +01.9	N 21 31.6 +00.1	171 05.3 +02.5	S 06 11.4 +00.0	15							
16	120 32.5 +00.6	N 19 04.7 +00.4	106 28.5 +02.0	N 21 31.7 +00.0	186 07.8 +02.6	S 06 11.4 +00.1	16							
17	135 33.1 +00.7	N 19 05.1 +00.4	121 30.5 +01.9	N 21 31.7 +00.1	201 10.4 +02.5	S 06 11.5 +00.0	17							
18	150 33.8 +00.7	N 19 05.5 +00.5	136 32.4 +01.9	N 21 31.8 +00.1	216 12.9 +02.5	S 06 11.5 +00.0	18							
19	165 34.5 +00.7	N 19 06.0 +00.4	151 34.3 +02.0	N 21 31.9 +00.0	231 15.4 +02.5	S 06 11.5 +00.1	19							
20	180 35.2 +00.6	N 19 06.4 +00.4	166 36.3 +01.9	N 21 31.9 +00.1	246 17.9 +02.6	S 06 11.6 +00.0	20							
21	195 35.8 +00.7	N 19 06.8 +00.4	181 38.2 +02.0	N 21 32.0 +00.1	261 20.5 +02.5	S 06 11.6 +00.1	21							
22	210 36.5 +00.7	N 19 07.2 +00.4	196 40.2 +01.9	N 21 32.1 +00.0	276 23.0 +02.5	S 06 11.7 +00.0	22							
23	225 37.2 +00.7	N 19 07.6 +00.4	211 42.1 +01.9	N 21 32.1 +00.1	291 25.5 +02.6	S 06 11.7 +00.0	23							
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2						
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0	SHA	304° 304° 304° 304° 304° 303°	SHA	009° 009° 009° 009° 009° 009°					
SHA	304° 304° 304° 304° 304° 303°	SHA	290° 290° 290° 290° 290° 289°	SHA	009° 009° 009° 009° 009° 009°	Greenwich Culmination Time: 03:37								
Greenwich Culmination Time: 07:58									Greenwich Culmination Time: 08:55			Greenwich Culmination Time: 03:37		

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.9 -00.1	N 20	47.4 -00.5	165 28.5 -00.7	N 19	19.2 -00.8	32 31.7 -35.6	S 28	14.2 +01.9				
01	193 24.8 +00.0	N 20	46.9 -00.4	180 27.8 -00.6	N 19	18.4 -00.8	46 56.1 -35.6	S 28	16.1 +01.7				
02	208 24.8 +00.0	N 20	46.5 -00.5	195 27.2 -00.7	N 19	17.6 -00.7	61 20.5 -35.7	S 28	17.8 +01.5				
03	223 24.8 -00.1	N 20	46.0 -00.4	210 26.5 -00.7	N 19	16.9 -00.8	75 44.8 -35.8	S 28	19.3 +01.3				
04	238 24.7 +00.0	N 20	45.6 -00.5	225 25.8 -00.7	N 19	16.1 -00.8	90 09.0 -35.8	S 28	20.6 +01.2				
05	253 24.7 +00.0	N 20	45.1 -00.5	240 25.1 -00.7	N 19	15.3 -00.8	104 33.2 -35.9	S 28	21.8 +01.0				
06	268 24.7 -00.1	N 20	44.6 -00.4	255 24.4 -00.7	N 19	14.5 -00.8	118 57.3 -35.9	S 28	22.8 +00.8				
07	283 24.6 +00.0	N 20	44.2 -00.5	270 23.7 -00.6	N 19	13.7 -00.7	133 21.4 -36.0	S 28	23.6 +00.6				
08	298 24.6 -00.1	N 20	43.7 -00.5	285 23.1 -00.7	N 19	13.0 -00.8	147 45.4 -36.1	S 28	24.2 +00.5				
09	313 24.5 +00.0	N 20	43.2 -00.4	300 22.4 -00.7	N 19	12.2 -00.8	162 09.3 -36.1	S 28	24.7 +00.2				
10	328 24.5 +00.0	N 20	42.8 -00.5	315 21.7 -00.7	N 19	11.4 -00.8	176 33.2 -36.1	S 28	24.9 +00.1				
11	343 24.5 -00.1	N 20	42.3 -00.4	330 21.0 -00.7	N 19	10.6 -00.8	190 57.1 -36.2	S 28	25.0 -00.1				
12	358 24.4 +00.0	N 20	41.9 -00.5	345 20.3 -00.6	N 19	09.8 -00.8	205 20.9 -36.2	S 28	24.9 -00.3				
13	13 24.4 +00.0	N 20	41.4 -00.5	0 19.7 -00.7	N 19	09.0 -00.7	219 44.7 -36.3	S 28	24.6 -00.4				
14	28 24.4 -00.1	N 20	40.9 -00.4	15 19.0 -00.7	N 19	08.3 -00.8	234 08.4 -36.3	S 28	24.2 -00.7				
15	43 24.3 +00.0	N 20	40.5 -00.5	30 18.3 -00.7	N 19	07.5 -00.8	248 32.1 -36.4	S 28	23.5 -00.8				
16	58 24.3 +00.0	N 20	40.0 -00.5	45 17.6 -00.6	N 19	06.7 -00.8	262 55.7 -36.3	S 28	22.7 -01.0				
17	73 24.3 -00.1	N 20	39.5 -00.4	60 17.0 -00.7	N 19	05.9 -00.8	277 19.4 -36.5	S 28	21.7 -01.2				
18	88 24.2 +00.0	N 20	39.1 -00.5	75 16.3 -00.7	N 19	05.1 -00.8	291 42.9 -36.4	S 28	20.5 -01.4				
19	103 24.2 -00.1	N 20	38.6 -00.5	90 15.6 -00.7	N 19	04.3 -00.8	306 06.5 -36.5	S 28	19.1 -01.6				
20	118 24.1 +00.0	N 20	38.1 -00.5	105 14.9 -00.6	N 19	03.5 -00.8	320 30.0 -36.5	S 28	17.5 -01.8				
21	133 24.1 +00.0	N 20	37.6 -00.4	120 14.3 -00.7	N 19	02.7 -00.8	334 53.5 -36.5	S 28	15.7 -01.9				
22	148 24.1 -00.1	N 20	37.2 -00.5	135 13.6 -00.7	N 19	01.9 -00.8	349 17.0 -36.5	S 28	13.8 -02.1				
23	163 24.0 +00.0	N 20	36.7 -00.5	150 12.9 -00.7	N 19	01.1 -00.8	3 40.5 -36.6	S 28	11.7 -02.4				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'7 15'7 15'7 15'7 15'7 15'7			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'7 15'7 15'8 15'8 15'8 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 57'6 57'7 57'8 58'0 58'1 58'2						
	SHA 241° 241° 241° 241° 240° 240°			SHA 228° 228° 228° 227° 227° 227°			SHA 094° 091° 089° 086° 084° 081°						
	Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 12:58			Greenwich Culmination Time: 22:44						
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 37.9 +00.6	N 19	08.0 +00.4	226 44.0 +02.0	N 21	32.2 +00.1	306 28.1 +02.5	S 06	11.7 +00.1				
01	255 38.5 +00.7	N 19	08.4 +00.4	241 46.0 +01.9	N 21	32.3 +00.0	321 30.6 +02.5	S 06	11.8 +00.0				
02	270 39.2 +00.7	N 19	08.8 +00.4	256 47.9 +02.0	N 21	32.3 +00.1	336 33.1 +02.6	S 06	11.8 +00.1				
03	285 39.9 +00.7	N 19	09.2 +00.4	271 49.9 +01.9	N 21	32.4 +00.1	351 35.7 +02.5	S 06	11.9 +00.0				
04	300 40.6 +00.6	N 19	09.6 +00.4	286 51.8 +01.9	N 21	32.5 +00.0	6 38.2 +02.5	S 06	11.9 +00.0				
05	315 41.2 +00.7	N 19	10.0 +00.5	301 53.7 +02.0	N 21	32.5 +00.1	21 40.7 +02.6	S 06	11.9 +00.1				
06	330 41.9 +00.7	N 19	10.5 +00.4	316 55.7 +01.9	N 21	32.6 +00.1	36 43.3 +02.5	S 06	12.0 +00.0				
07	345 42.6 +00.7	N 19	10.9 +00.4	331 57.6 +02.0	N 21	32.7 +00.0	51 45.8 +02.5	S 06	12.0 +00.1				
08	0 43.3 +00.6	N 19	11.3 +00.4	346 59.6 +01.9	N 21	32.7 +00.1	66 48.3 +02.6	S 06	12.1 +00.0				
09	15 43.9 +00.7	N 19	11.7 +00.4	2 01.5 +01.9	N 21	32.8 +00.0	81 50.9 +02.5	S 06	12.1 +00.0				
10	30 44.6 +00.7	N 19	12.1 +00.4	17 03.4 +02.0	N 21	32.8 +00.1	96 53.4 +02.5	S 06	12.1 +00.1				
11	45 45.3 +00.7	N 19	12.5 +00.4	32 05.4 +01.9	N 21	32.9 +00.1	111 55.9 +02.6	S 06	12.2 +00.0				
12	60 46.0 +00.6	N 19	12.9 +00.4	47 07.3 +02.0	N 21	33.0 +00.0	126 58.5 +02.5	S 06	12.2 +00.1				
13	75 46.6 +00.7	N 19	13.3 +00.4	62 09.3 +01.9	N 21	33.0 +00.1	142 01.0 +02.5	S 06	12.3 +00.0				
14	90 47.3 +00.7	N 19	13.7 +00.4	77 11.2 +01.9	N 21	33.1 +00.1	157 03.5 +02.6	S 06	12.3 +00.0				
15	105 48.0 +00.7	N 19	14.1 +00.4	92 13.1 +02.0	N 21	33.2 +00.0	172 06.1 +02.5	S 06	12.3 +00.1				
16	120 48.7 +00.7	N 19	14.5 +00.4	107 15.1 +01.9	N 21	33.2 +00.1	187 08.6 +02.5	S 06	12.4 +00.0				
17	135 49.4 +00.6	N 19	14.9 +00.4	122 17.0 +02.0	N 21	33.3 +00.1	202 11.1 +02.6	S 06	12.4 +00.1				
18	150 50.0 +00.7	N 19	15.3 +00.4	137 19.0 +01.9	N 21	33.4 +00.0	217 13.7 +02.5	S 06	12.5 +00.0				
19	165 50.7 +00.7	N 19	15.7 +00.4	152 20.9 +01.9	N 21	33.4 +00.1	232 16.2 +02.5	S 06	12.5 +00.0				
20	180 51.4 +00.7	N 19	16.1 +00.4	167 22.8 +02.0	N 21	33.5 +00.1	247 18.7 +02.6	S 06	12.5 +00.1				
21	195 52.1 +00.6	N 19	16.5 +00.4	182 24.8 +01.9	N 21	33.6 +00.0	262 21.3 +02.5	S 06	12.6 +00.0				
22	210 52.7 +00.7	N 19	16.9 +00.4	197 26.7 +02.0	N 21	33.6 +00.1	277 23.8 +02.5	S 06	12.6 +00.1				
23	225 53.4 +00.7	N 19	17.3 +00.4	212 28.7 +01.9	N 21	33.7 +00.1	292 26.3 +02.6	S 06	12.7 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 303° 303° 303° 303° 303° 303°			SHA 289° 289° 289° 289° 289° 289°			SHA 009° 009° 009° 009° 009° 009°						
	Greenwich Culmination Time: 07:57			Greenwich Culmination Time: 08:51			Greenwich Culmination Time: 03:33						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 24.0 +00.0	N 20 36.2 -00.4	165 12.2 -00.6	N 19 00.3 -00.8	18 03.9 -36.5	S 28 09.3 -02.5	00						
01	193 24.0 -00.1	N 20 35.8 -00.5	180 11.6 -00.7	N 18 59.5 -00.8	32 27.4 -36.6	S 28 06.8 -02.7	01						
02	208 23.9 +00.0	N 20 35.3 -00.5	195 10.9 -00.7	N 18 58.7 -00.8	46 50.8 -36.6	S 28 04.1 -02.9	02						
03	223 23.9 +00.0	N 20 34.8 -00.5	210 10.2 -00.6	N 18 57.9 -00.8	61 14.2 -36.6	S 28 01.2 -03.0	03						
04	238 23.9 -00.1	N 20 34.3 -00.4	225 09.6 -00.7	N 18 57.1 -00.8	75 37.6 -36.6	S 27 58.2 -03.3	04						
05	253 23.8 +00.0	N 20 33.9 -00.5	240 08.9 -00.7	N 18 56.3 -00.8	90 01.0 -36.6	S 27 54.9 -03.4	05						
06	268 23.8 +00.0	N 20 33.4 -00.5	255 08.2 -00.7	N 18 55.5 -00.8	104 24.4 -36.6	S 27 51.5 -03.7	06						
07	283 23.8 -00.1	N 20 32.9 -00.5	270 07.5 -00.6	N 18 54.7 -00.8	118 47.8 -36.6	S 27 47.8 -03.8	07						
08	298 23.7 +00.0	N 20 32.4 -00.4	285 06.9 -00.7	N 18 53.9 -00.8	133 11.2 -36.5	S 27 44.0 -04.0	08						
09	313 23.7 +00.0	N 20 32.0 -00.5	300 06.2 -00.7	N 18 53.1 -00.8	147 34.7 -36.6	S 27 40.0 -04.2	09						
10	328 23.7 +00.0	N 20 31.5 -00.5	315 05.5 -00.6	N 18 52.3 -00.8	161 58.1 -36.6	S 27 35.8 -04.4	10						
11	343 23.7 -00.1	N 20 31.0 -00.5	330 04.9 -00.7	N 18 51.5 -00.8	176 21.5 -36.5	S 27 31.4 -04.6	11						
12	358 23.6 +00.0	N 20 30.5 -00.5	345 04.2 -00.7	N 18 50.7 -00.8	190 45.0 -36.6	S 27 26.8 -04.7	12						
13	13 23.6 +00.0	N 20 30.0 -00.4	0 03.5 -00.6	N 18 49.9 -00.8	205 08.4 -36.5	S 27 22.1 -05.0	13						
14	28 23.6 -00.1	N 20 29.6 -00.5	15 02.9 -00.7	N 18 49.1 -00.8	219 31.9 -36.5	S 27 17.1 -05.1	14						
15	43 23.5 +00.0	N 20 29.1 -00.5	30 02.2 -00.6	N 18 48.3 -00.8	233 55.4 -36.5	S 27 12.0 -05.3	15						
16	58 23.5 +00.0	N 20 28.6 -00.5	45 01.6 -00.7	N 18 47.5 -00.8	248 18.9 -36.4	S 27 06.7 -05.5	16						
17	73 23.5 -00.1	N 20 28.1 -00.5	60 00.9 -00.7	N 18 46.7 -00.9	262 42.5 -36.5	S 27 01.2 -05.7	17						
18	88 23.4 +00.0	N 20 27.6 -00.5	75 00.2 -00.6	N 18 45.8 -00.8	277 06.0 -36.4	S 26 55.5 -05.8	18						
19	103 23.4 +00.0	N 20 27.1 -00.4	89 59.6 -00.7	N 18 45.0 -00.8	291 29.6 -36.3	S 26 49.7 -06.1	19						
20	118 23.4 +00.0	N 20 26.7 -00.5	104 58.9 -00.7	N 18 44.2 -00.8	305 53.3 -36.4	S 26 43.6 -06.2	20						
21	133 23.4 -00.1	N 20 26.2 -00.5	119 58.2 -00.6	N 18 43.4 -00.8	320 16.9 -36.3	S 26 37.4 -06.4	21						
22	148 23.3 +00.0	N 20 25.7 -00.5	134 57.6 -00.7	N 18 42.6 -00.8	334 40.6 -36.2	S 26 31.0 -06.6	22						
23	163 23.3 +00.0	N 20 25.2 -00.5	149 56.9 -00.6	N 18 41.8 -00.9	349 04.4 -36.3	S 26 24.4 -06.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 16'0 16'0 16'0 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'4 58'5 58'6 58'7 58'8 58'9								
	SHA 240° 240° 240° 240° 239° 239°		SHA 227° 227° 226° 226° 226° 226°		SHA 078° 076° 073° 071° 068° 066°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 12:59		Greenwich Culmination Time: 23:45								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 54.1 +00.7	N 19 17.7 +00.4	227 30.6 +02.0	N 21 33.8 +00.0	307 28.9 +02.5	S 06 12.7 +00.0	00						
01	255 54.8 +00.6	N 19 18.1 +00.4	242 32.6 +01.9	N 21 33.8 +00.1	322 31.4 +02.6	S 06 12.7 +00.1	01						
02	270 55.4 +00.7	N 19 18.5 +00.4	257 34.5 +01.9	N 21 33.9 +00.0	337 34.0 +02.5	S 06 12.8 +00.0	02						
03	285 56.1 +00.7	N 19 18.9 +00.4	272 36.4 +02.0	N 21 33.9 +00.1	352 36.5 +02.5	S 06 12.8 +00.1	03						
04	300 56.8 +00.7	N 19 19.3 +00.5	287 38.4 +01.9	N 21 34.0 +00.1	7 39.0 +02.6	S 06 12.9 +00.0	04						
05	315 57.5 +00.6	N 19 19.8 +00.4	302 40.3 +02.0	N 21 34.1 +00.0	22 41.6 +02.5	S 06 12.9 +00.0	05						
06	330 58.1 +00.7	N 19 20.2 +00.4	317 42.3 +01.9	N 21 34.1 +00.1	37 44.1 +02.5	S 06 12.9 +00.1	06						
07	345 58.8 +00.7	N 19 20.6 +00.3	332 44.2 +02.0	N 21 34.2 +00.1	52 46.6 +02.6	S 06 13.0 +00.0	07						
08	0 59.5 +00.7	N 19 20.9 +00.4	347 46.2 +01.9	N 21 34.3 +00.0	67 49.2 +02.5	S 06 13.0 +00.1	08						
09	16 00.2 +00.6	N 19 21.3 +00.4	2 48.1 +01.9	N 21 34.3 +00.1	82 51.7 +02.5	S 06 13.1 +00.0	09						
10	31 00.8 +00.7	N 19 21.7 +00.4	17 50.0 +02.0	N 21 34.4 +00.1	97 54.2 +02.6	S 06 13.1 +00.1	10						
11	46 01.5 +00.7	N 19 22.1 +00.4	32 52.0 +01.9	N 21 34.5 +00.0	112 56.8 +02.5	S 06 13.2 +00.0	11						
12	61 02.2 +00.7	N 19 22.5 +00.4	47 53.9 +02.0	N 21 34.5 +00.1	127 59.3 +02.6	S 06 13.2 +00.0	12						
13	76 02.9 +00.6	N 19 22.9 +00.4	62 55.9 +01.9	N 21 34.6 +00.1	143 01.9 +02.5	S 06 13.2 +00.1	13						
14	91 03.5 +00.7	N 19 23.3 +00.4	77 57.8 +02.0	N 21 34.7 +00.0	158 04.4 +02.5	S 06 13.3 +00.0	14						
15	106 04.2 +00.7	N 19 23.7 +00.4	92 59.8 +01.9	N 21 34.7 +00.1	173 06.9 +02.6	S 06 13.3 +00.1	15						
16	121 04.9 +00.7	N 19 24.1 +00.4	108 01.7 +01.9	N 21 34.8 +00.0	188 09.5 +02.5	S 06 13.4 +00.0	16						
17	136 05.6 +00.6	N 19 24.5 +00.4	123 03.6 +02.0	N 21 34.8 +00.1	203 12.0 +02.6	S 06 13.4 +00.0	17						
18	151 06.2 +00.7	N 19 24.9 +00.4	138 05.6 +01.9	N 21 34.9 +00.1	218 14.6 +02.5	S 06 13.4 +00.1	18						
19	166 06.9 +00.7	N 19 25.3 +00.4	153 07.5 +02.0	N 21 35.0 +00.0	233 17.1 +02.5	S 06 13.5 +00.0	19						
20	181 07.6 +00.7	N 19 25.7 +00.4	168 09.5 +01.9	N 21 35.0 +00.1	248 19.6 +02.6	S 06 13.5 +00.1	20						
21	196 08.3 +00.6	N 19 26.1 +00.4	183 11.4 +02.0	N 21 35.1 +00.1	263 22.2 +02.5	S 06 13.6 +00.0	21						
22	211 08.9 +00.7	N 19 26.5 +00.4	198 13.4 +01.9	N 21 35.2 +00.0	278 24.7 +02.5	S 06 13.6 +00.1	22						
23	226 09.6 +00.7	N 19 26.9 +00.4	213 15.3 +02.0	N 21 35.2 +00.1	293 27.2 +02.6	S 06 13.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 303° 302° 302° 302° 302° 302°		SHA 289° 289° 289° 289° 289° 289°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:56		Greenwich Culmination Time: 08:48		Greenwich Culmination Time: 03:29								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 50%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	178 23.3 -00.1	N 20	24.7 -00.5	164 56.3 -00.7	N 18	40.9 -00.8	3 28.1 -36.1	S 26	17.6 -06.9	00			
01	193 23.2 +00.0	N 20	24.2 -00.5	179 55.6 -00.7	N 18	40.1 -00.8	17 52.0 -36.2	S 26	10.7 -07.2	01			
02	208 23.2 +00.0	N 20	23.7 -00.4	194 54.9 -00.6	N 18	39.3 -00.8	32 15.8 -36.1	S 26	03.5 -07.3	02			
03	223 23.2 +00.0	N 20	23.3 -00.5	209 54.3 -00.7	N 18	38.5 -00.8	46 39.7 -36.0	S 25	56.2 -07.5	03			
04	238 23.2 -00.1	N 20	22.8 -00.5	224 53.6 -00.6	N 18	37.7 -00.9	61 03.7 -36.0	S 25	48.7 -07.6	04			
05	253 23.1 +00.0	N 20	22.3 -00.5	239 53.0 -00.7	N 18	36.8 -00.8	75 27.7 -36.0	S 25	41.1 -07.9	05			
06	268 23.1 +00.0	N 20	21.8 -00.5	254 52.3 -00.7	N 18	36.0 -00.8	89 51.7 -35.9	S 25	33.2 -08.0	06			
07	283 23.1 +00.0	N 20	21.3 -00.5	269 51.6 -00.6	N 18	35.2 -00.8	104 15.8 -35.8	S 25	25.2 -08.2	07			
08	298 23.1 -00.1	N 20	20.8 -00.5	284 51.0 -00.7	N 18	34.4 -00.9	118 40.0 -35.8	S 25	17.0 -08.3	08			
09	313 23.0 +00.0	N 20	20.3 -00.5	299 50.3 -00.6	N 18	33.5 -00.8	133 04.2 -35.7	S 25	08.7 -08.5	09			
10	328 23.0 +00.0	N 20	19.8 -00.5	314 49.7 -00.7	N 18	32.7 -00.8	147 28.5 -35.7	S 25	00.2 -08.7	10			
11	343 23.0 +00.0	N 20	19.3 -00.5	329 49.0 -00.6	N 18	31.9 -00.8	161 52.8 -35.6	S 24	51.5 -08.9	11			
12	358 23.0 -00.1	N 20	18.8 -00.5	344 48.4 -00.7	N 18	31.1 -00.9	176 17.2 -35.5	S 24	42.6 -09.0	12			
13	13 22.9 +00.0	N 20	18.3 -00.5	359 47.7 -00.6	N 18	30.2 -00.8	190 41.7 -35.5	S 24	33.6 -09.2	13			
14	28 22.9 +00.0	N 20	17.8 -00.4	14 47.1 -00.7	N 18	29.4 -00.8	205 06.2 -35.4	S 24	24.4 -09.4	14			
15	43 22.9 +00.0	N 20	17.4 -00.5	29 46.4 -00.6	N 18	28.6 -00.9	219 30.8 -35.4	S 24	15.0 -09.5	15			
16	58 22.9 -00.1	N 20	16.9 -00.5	44 45.8 -00.7	N 18	27.7 -00.8	233 55.4 -35.3	S 24	05.5 -09.7	16			
17	73 22.8 +00.0	N 20	16.4 -00.5	59 45.1 -00.6	N 18	26.9 -00.8	248 20.1 -35.2	S 23	55.8 -09.8	17			
18	88 22.8 +00.0	N 20	15.9 -00.5	74 44.5 -00.7	N 18	26.1 -00.9	262 44.9 -35.2	S 23	46.0 -10.0	18			
19	103 22.8 +00.0	N 20	15.4 -00.5	89 43.8 -00.6	N 18	25.2 -00.8	277 09.7 -35.0	S 23	36.0 -10.2	19			
20	118 22.8 +00.0	N 20	14.9 -00.5	104 43.2 -00.7	N 18	24.4 -00.8	291 34.7 -35.0	S 23	25.8 -10.3	20			
21	133 22.8 -00.1	N 20	14.4 -00.5	119 42.5 -00.6	N 18	23.6 -00.9	305 59.7 -35.0	S 23	15.5 -10.5	21			
22	148 22.7 +00.0	N 20	13.9 -00.5	134 41.9 -00.7	N 18	22.7 -00.8	320 24.7 -34.8	S 23	05.0 -10.6	22			
23	163 22.7 +00.0	N 20	13.4 -00.5	149 41.2 -00.6	N 18	21.9 -00.9	334 49.9 -34.8	S 22	54.4 -10.8	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'7 15'7 15'7 15'7 15'7 15'7			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'1 16'1 16'1 16'2 16'2 16'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'0 59'1 59'2 59'3 59'4 59'5						
	SHA 239° 239° 239° 239° 238° 238°			SHA 226° 225° 225° 225° 225° 225°			SHA 063° 060° 058° 055° 053° 050°						
	Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 13:00			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	241 10.3 +00.7	N 19	27.3 +00.4	228 17.3 +01.9	N 21	35.3 +00.1	308 29.8 +02.5	S 06	13.7 +00.0	00			
01	256 11.0 +00.6	N 19	27.7 +00.4	243 19.2 +01.9	N 21	35.4 +00.0	323 32.3 +02.6	S 06	13.7 +00.1	01			
02	271 11.6 +00.7	N 19	28.1 +00.4	258 21.1 +02.0	N 21	35.4 +00.1	338 34.9 +02.5	S 06	13.8 +00.0	02			
03	286 12.3 +00.7	N 19	28.5 +00.4	273 23.1 +01.9	N 21	35.5 +00.0	353 37.4 +02.5	S 06	13.8 +00.1	03			
04	301 13.0 +00.7	N 19	28.9 +00.4	288 25.0 +02.0	N 21	35.5 +00.1	8 39.9 +02.6	S 06	13.9 +00.0	04			
05	316 13.7 +00.6	N 19	29.3 +00.4	303 27.0 +01.9	N 21	35.6 +00.1	23 42.5 +02.5	S 06	13.9 +00.1	05			
06	331 14.3 +00.7	N 19	29.7 +00.4	318 28.9 +02.0	N 21	35.7 +00.0	38 45.0 +02.6	S 06	14.0 +00.0	06			
07	346 15.0 +00.7	N 19	30.1 +00.3	333 30.9 +01.9	N 21	35.7 +00.1	53 47.6 +02.5	S 06	14.0 +00.0	07			
08	1 15.7 +00.7	N 19	30.4 +00.4	348 32.8 +02.0	N 21	35.8 +00.1	68 50.1 +02.5	S 06	14.0 +00.1	08			
09	16 16.4 +00.7	N 19	30.8 +00.4	3 34.8 +01.9	N 21	35.9 +00.0	83 52.6 +02.6	S 06	14.1 +00.0	09			
10	31 17.1 +00.6	N 19	31.2 +00.4	18 36.7 +02.0	N 21	35.9 +00.1	98 55.2 +02.5	S 06	14.1 +00.1	10			
11	46 17.7 +00.7	N 19	31.6 +00.4	33 38.7 +01.9	N 21	36.0 +00.0	113 57.7 +02.6	S 06	14.2 +00.0	11			
12	61 18.4 +00.7	N 19	32.0 +00.4	48 40.6 +02.0	N 21	36.0 +00.1	129 00.3 +02.5	S 06	14.2 +00.1	12			
13	76 19.1 +00.7	N 19	32.4 +00.4	63 42.6 +01.9	N 21	36.1 +00.1	144 02.8 +02.5	S 06	14.3 +00.0	13			
14	91 19.8 +00.6	N 19	32.8 +00.4	78 44.5 +02.0	N 21	36.2 +00.0	159 05.3 +02.6	S 06	14.3 +00.0	14			
15	106 20.4 +00.7	N 19	33.2 +00.4	93 46.5 +01.9	N 21	36.2 +00.1	174 07.9 +02.5	S 06	14.3 +00.1	15			
16	121 21.1 +00.7	N 19	33.6 +00.4	108 48.4 +01.9	N 21	36.3 +00.1	189 10.4 +02.6	S 06	14.4 +00.0	16			
17	136 21.8 +00.7	N 19	34.0 +00.3	123 50.3 +02.0	N 21	36.4 +00.0	204 13.0 +02.5	S 06	14.4 +00.1	17			
18	151 22.5 +00.6	N 19	34.3 +00.4	138 52.3 +01.9	N 21	36.4 +00.1	219 15.5 +02.6	S 06	14.5 +00.0	18			
19	166 23.1 +00.7	N 19	34.7 +00.4	153 54.2 +02.0	N 21	36.5 +00.0	234 18.1 +02.5	S 06	14.5 +00.1	19			
20	181 23.8 +00.7	N 19	35.1 +00.4	168 56.2 +01.9	N 21	36.5 +00.1	249 20.6 +02.5	S 06	14.6 +00.0	20			
21	196 24.5 +00.7	N 19	35.5 +00.4	183 58.1 +02.0	N 21	36.6 +00.1	264 23.1 +02.6	S 06	14.6 +00.0	21			
22	211 25.2 +00.6	N 19	35.9 +00.4	199 00.1 +01.9	N 21	36.7 +00.0	279 25.7 +02.5	S 06	14.6 +00.1	22			
23	226 25.8 +00.7	N 19	36.3 +00.4	214 02.0 +02.0	N 21	36.7 +00.1	294 28.2 +02.6	S 06	14.7 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 302° 302° 302° 302° 301° 301°			SHA 289° 289° 289° 289° 289° 289°			SHA 009° 009° 009° 009° 009° 009°						
	Greenwich Culmination Time: 07:54			Greenwich Culmination Time: 08:45			Greenwich Culmination Time: 03:25						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.7 +00.0	N 20 12.9 -00.5	164 40.6 -00.7	N 18 21.0 -00.8	349 15.1 -34.7	S 22 43.6 -11.0	00						
01	193 22.7 -00.1	N 20 12.4 -00.5	179 39.9 -00.6	N 18 20.2 -00.8	3 40.4 -34.7	S 22 32.6 -11.0	01						
02	208 22.6 +00.0	N 20 11.9 -00.5	194 39.3 -00.7	N 18 19.4 -00.9	18 05.7 -34.5	S 22 21.6 -11.3	02						
03	223 22.6 +00.0	N 20 11.4 -00.5	209 38.6 -00.6	N 18 18.5 -00.8	32 31.2 -34.5	S 22 10.3 -11.3	03						
04	238 22.6 +00.0	N 20 10.9 -00.5	224 38.0 -00.7	N 18 17.7 -00.9	46 56.7 -34.4	S 21 59.0 -11.6	04						
05	253 22.6 +00.0	N 20 10.4 -00.5	239 37.3 -00.6	N 18 16.8 -00.8	61 22.3 -34.3	S 21 47.4 -11.6	05						
06	268 22.6 -00.1	N 20 09.9 -00.6	254 36.7 -00.7	N 18 16.0 -00.9	75 48.0 -34.3	S 21 35.8 -11.8	06						
07	283 22.5 +00.0	N 20 09.3 -00.5	269 36.0 -00.6	N 18 15.1 -00.8	90 13.7 -34.1	S 21 24.0 -12.0	07						
08	298 22.5 +00.0	N 20 08.8 -00.5	284 35.4 -00.6	N 18 14.3 -00.8	104 39.6 -34.1	S 21 12.0 -12.1	08						
09	313 22.5 +00.0	N 20 08.3 -00.5	299 34.8 -00.7	N 18 13.5 -00.9	119 05.5 -34.0	S 20 59.9 -12.2	09						
10	328 22.5 +00.0	N 20 07.8 -00.5	314 34.1 -00.6	N 18 12.6 -00.8	133 31.5 -34.0	S 20 47.7 -12.3	10						
11	343 22.5 -00.1	N 20 07.3 -00.5	329 33.5 -00.7	N 18 11.8 -00.9	147 57.5 -33.8	S 20 35.4 -12.5	11						
12	358 22.4 +00.0	N 20 06.8 -00.5	344 32.8 -00.6	N 18 10.9 -00.8	162 23.7 -33.8	S 20 22.9 -12.6	12						
13	13 22.4 +00.0	N 20 06.3 -00.5	359 32.2 -00.6	N 18 10.1 -00.9	176 49.9 -33.6	S 20 10.3 -12.8	13						
14	28 22.4 +00.0	N 20 05.8 -00.5	14 31.6 -00.7	N 18 09.2 -00.8	191 16.3 -33.6	S 19 57.5 -12.9	14						
15	43 22.4 +00.0	N 20 05.3 -00.5	29 30.9 -00.6	N 18 08.4 -00.9	205 42.7 -33.6	S 19 44.6 -13.0	15						
16	58 22.4 +00.0	N 20 04.8 -00.5	44 30.3 -00.7	N 18 07.5 -00.9	220 09.1 -33.4	S 19 31.6 -13.1	16						
17	73 22.4 -00.1	N 20 04.3 -00.5	59 29.6 -00.6	N 18 06.6 -00.8	234 35.7 -33.3	S 19 18.5 -13.2	17						
18	88 22.3 +00.0	N 20 03.8 -00.6	74 29.0 -00.6	N 18 05.8 -00.9	249 02.4 -33.3	S 19 05.3 -13.4	18						
19	103 22.3 +00.0	N 20 03.2 -00.5	89 28.4 -00.7	N 18 04.9 -00.8	263 29.1 -33.2	S 18 51.9 -13.5	19						
20	118 22.3 +00.0	N 20 02.7 -00.5	104 27.7 -00.6	N 18 04.1 -00.9	277 55.9 -33.1	S 18 38.4 -13.6	20						
21	133 22.3 +00.0	N 20 02.2 -00.5	119 27.1 -00.7	N 18 03.2 -00.8	292 22.8 -33.0	S 18 24.8 -13.7	21						
22	148 22.3 +00.0	N 20 01.7 -00.5	134 26.4 -00.6	N 18 02.4 -00.9	306 49.8 -33.0	S 18 11.1 -13.8	22						
23	163 22.3 -00.1	N 20 01.2 -00.5	149 25.8 -00.6	N 18 01.5 -00.9	321 16.8 -32.8	S 17 57.3 -14.0	23						
	UT 02 06 10 14 18 22 SD 15'7 15'7 15'7 15'7 15'7 15'7 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 238° 238° 238° 238° 237° 237° 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 224° 224° 224° 224° 224° 223° Greenwich Culmination Time: 13:01	UT 02 06 10 14 18 22 SD 16'2 16'3 16'3 16'3 16'3 16'3 HP 59'6 59'6 59'7 59'8 59'8 59'9 SHA 048° 045° 043° 040° 038° 036° Greenwich Culmination Time: 00:44										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 26.5 +00.7	N 19 36.7 +00.4	229 04.0 +01.9	N 21 36.8 +00.1	309 30.8 +02.5	S 06 14.7 +00.1	00						
01	256 27.2 +00.7	N 19 37.1 +00.3	244 05.9 +02.0	N 21 36.9 +00.0	324 33.3 +02.5	S 06 14.8 +00.0	01						
02	271 27.9 +00.6	N 19 37.4 +00.4	259 07.9 +01.9	N 21 36.9 +00.1	339 35.8 +02.6	S 06 14.8 +00.1	02						
03	286 28.5 +00.7	N 19 37.8 +00.4	274 09.8 +02.0	N 21 37.0 +00.0	354 38.4 +02.5	S 06 14.9 +00.0	03						
04	301 29.2 +00.7	N 19 38.2 +00.4	289 11.8 +01.9	N 21 37.0 +00.1	9 40.9 +02.6	S 06 14.9 +00.0	04						
05	316 29.9 +00.7	N 19 38.6 +00.4	304 13.7 +02.0	N 21 37.1 +00.1	24 43.5 +02.5	S 06 14.9 +00.1	05						
06	331 30.6 +00.7	N 19 39.0 +00.4	319 15.7 +01.9	N 21 37.2 +00.0	39 46.0 +02.6	S 06 15.0 +00.0	06						
07	346 31.3 +00.6	N 19 39.4 +00.4	334 17.6 +02.0	N 21 37.2 +00.1	54 48.6 +02.5	S 06 15.0 +00.1	07						
08	1 31.9 +00.7	N 19 39.8 +00.3	349 19.6 +01.9	N 21 37.3 +00.1	69 51.1 +02.6	S 06 15.1 +00.0	08						
09	16 32.6 +00.7	N 19 40.1 +00.4	4 21.5 +02.0	N 21 37.4 +00.0	84 53.7 +02.5	S 06 15.1 +00.1	09						
10	31 33.3 +00.7	N 19 40.5 +00.4	19 23.5 +01.9	N 21 37.4 +00.1	99 56.2 +02.5	S 06 15.2 +00.0	10						
11	46 34.0 +00.6	N 19 40.9 +00.4	34 25.4 +02.0	N 21 37.5 +00.0	114 58.7 +02.6	S 06 15.2 +00.1	11						
12	61 34.6 +00.7	N 19 41.3 +00.4	49 27.4 +01.9	N 21 37.5 +00.1	130 01.3 +02.5	S 06 15.3 +00.0	12						
13	76 35.3 +00.7	N 19 41.7 +00.4	64 29.3 +02.0	N 21 37.6 +00.1	145 03.8 +02.6	S 06 15.3 +00.0	13						
14	91 36.0 +00.7	N 19 42.1 +00.3	79 31.3 +01.9	N 21 37.7 +00.0	160 06.4 +02.5	S 06 15.3 +00.1	14						
15	106 36.7 +00.6	N 19 42.4 +00.4	94 33.2 +02.0	N 21 37.7 +00.1	175 08.9 +02.6	S 06 15.4 +00.0	15						
16	121 37.3 +00.7	N 19 42.8 +00.4	109 35.2 +01.9	N 21 37.8 +00.0	190 11.5 +02.5	S 06 15.4 +00.1	16						
17	136 38.0 +00.7	N 19 43.2 +00.4	124 37.1 +02.0	N 21 37.8 +00.1	205 14.0 +02.6	S 06 15.5 +00.0	17						
18	151 38.7 +00.7	N 19 43.6 +00.4	139 39.1 +01.9	N 21 37.9 +00.1	220 16.6 +02.5	S 06 15.5 +00.1	18						
19	166 39.4 +00.6	N 19 44.0 +00.3	154 41.0 +02.0	N 21 38.0 +00.0	235 19.1 +02.5	S 06 15.6 +00.0	19						
20	181 40.0 +00.7	N 19 44.3 +00.4	169 43.0 +01.9	N 21 38.0 +00.1	250 21.6 +02.6	S 06 15.6 +00.1	20						
21	196 40.7 +00.7	N 19 44.7 +00.4	184 44.9 +02.0	N 21 38.1 +00.1	265 24.2 +02.5	S 06 15.7 +00.0	21						
22	211 41.4 +00.7	N 19 45.1 +00.4	199 46.9 +01.9	N 21 38.2 +00.0	280 26.7 +02.6	S 06 15.7 +00.0	22						
23	226 42.1 +00.6	N 19 45.5 +00.4	214 48.8 +02.0	N 21 38.2 +00.1	295 29.3 +02.5	S 06 15.7 +00.1	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 301° 301° 301° 301° 301° 301° Greenwich Culmination Time: 07:53	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 289° 289° 289° 289° 289° 289° Greenwich Culmination Time: 08:42	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 009° 009° 009° 009° 009° 009° Greenwich Culmination Time: 03:21										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.2 +00.0	N 20 00.7 -00.5	164 25.2 -00.7	N 18 00.6 -00.8	335 44.0 -32.8	S 17 43.3 -14.0	00						
01	193 22.2 +00.0	N 20 00.2 -00.5	179 24.5 -00.6	N 17 59.8 -00.9	350 11.2 -32.7	S 17 29.3 -14.2	01						
02	208 22.2 +00.0	N 19 59.7 -00.6	194 23.9 -00.6	N 17 58.9 -00.8	4 38.5 -32.6	S 17 15.1 -14.3	02						
03	223 22.2 +00.0	N 19 59.1 -00.5	209 23.3 -00.7	N 17 58.1 -00.9	19 05.9 -32.6	S 17 00.8 -14.3	03						
04	238 22.2 +00.0	N 19 58.6 -00.5	224 22.6 -00.6	N 17 57.2 -00.9	33 33.3 -32.4	S 16 46.5 -14.5	04						
05	253 22.2 -00.1	N 19 58.1 -00.5	239 22.0 -00.6	N 17 56.3 -00.8	48 00.9 -32.4	S 16 32.0 -14.6	05						
06	268 22.1 +00.0	N 19 57.6 -00.5	254 21.4 -00.7	N 17 55.5 -00.9	62 28.5 -32.3	S 16 17.4 -14.7	06						
07	283 22.1 +00.0	N 19 57.1 -00.6	269 20.7 -00.6	N 17 54.6 -00.9	76 56.2 -32.2	S 16 02.7 -14.7	07						
08	298 22.1 +00.0	N 19 56.5 -00.5	284 20.1 -00.6	N 17 53.7 -00.8	91 24.0 -32.2	S 15 48.0 -14.9	08						
09	313 22.1 +00.0	N 19 56.0 -00.5	299 19.5 -00.6	N 17 52.9 -00.9	105 51.8 -32.1	S 15 33.1 -15.0	09						
10	328 22.1 +00.0	N 19 55.5 -00.5	314 18.9 -00.7	N 17 52.0 -00.9	120 19.7 -32.0	S 15 18.1 -15.0	10						
11	343 22.1 +00.0	N 19 55.0 -00.5	329 18.2 -00.6	N 17 51.1 -00.8	134 47.7 -31.9	S 15 03.1 -15.1	11						
12	358 22.1 +00.0	N 19 54.5 -00.6	344 17.6 -00.6	N 17 50.3 -00.9	149 15.8 -31.8	S 14 48.0 -15.3	12						
13	13 22.1 -00.1	N 19 53.9 -00.5	359 17.0 -00.7	N 17 49.4 -00.9	163 44.0 -31.8	S 14 32.7 -15.3	13						
14	28 22.0 +00.0	N 19 53.4 -00.5	14 16.3 -00.6	N 17 48.5 -00.9	178 12.2 -31.7	S 14 17.4 -15.4	14						
15	43 22.0 +00.0	N 19 52.9 -00.5	29 15.7 -00.6	N 17 47.6 -00.8	192 40.5 -31.6	S 14 02.0 -15.5	15						
16	58 22.0 +00.0	N 19 52.4 -00.6	44 15.1 -00.6	N 17 46.8 -00.9	207 08.9 -31.6	S 13 46.5 -15.5	16						
17	73 22.0 +00.0	N 19 51.8 -00.5	59 14.5 -00.7	N 17 45.9 -00.9	221 37.3 -31.4	S 13 31.0 -15.6	17						
18	88 22.0 +00.0	N 19 51.3 -00.5	74 13.8 -00.6	N 17 45.0 -00.9	236 05.9 -31.5	S 13 15.4 -15.8	18						
19	103 22.0 +00.0	N 19 50.8 -00.5	89 13.2 -00.6	N 17 44.1 -00.8	250 34.4 -31.3	S 12 59.6 -15.7	19						
20	118 22.0 +00.0	N 19 50.3 -00.6	104 12.6 -00.6	N 17 43.3 -00.9	265 03.1 -31.3	S 12 43.9 -15.9	20						
21	133 22.0 +00.0	N 19 49.7 -00.5	119 12.0 -00.7	N 17 42.4 -00.9	279 31.8 -31.2	S 12 28.0 -15.9	21						
22	148 22.0 -00.1	N 19 49.2 -00.5	134 11.3 -00.6	N 17 41.5 -00.9	294 00.6 -31.1	S 12 12.1 -16.0	22						
23	163 21.9 +00.0	N 19 48.7 -00.5	149 10.7 -00.6	N 17 40.6 -00.9	308 29.5 -31.1	S 11 56.1 -16.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'9 60'0 60'0 60'0 60'0 60'0								
	SHA 237° 237° 237° 237° 236° 236°		SHA 223° 223° 223° 222° 222° 222°		SHA 033° 031° 029° 026° 024° 022°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:02		Greenwich Culmination Time: 01:40								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 42.7 +00.7	N 19 45.9 +00.3	229 50.8 +01.9	N 21 38.3 +00.0	310 31.8 +02.6	S 06 15.8 +00.0	00						
01	256 43.4 +00.7	N 19 46.2 +00.4	244 52.7 +02.0	N 21 38.3 +00.1	325 34.4 +02.5	S 06 15.8 +00.1	01						
02	271 44.1 +00.7	N 19 46.6 +00.4	259 54.7 +02.0	N 21 38.4 +00.1	340 36.9 +02.6	S 06 15.9 +00.0	02						
03	286 44.8 +00.7	N 19 47.0 +00.4	274 56.7 +01.9	N 21 38.5 +00.0	355 39.5 +02.5	S 06 15.9 +00.1	03						
04	301 45.5 +00.6	N 19 47.4 +00.3	289 58.6 +02.0	N 21 38.5 +00.1	10 42.0 +02.6	S 06 16.0 +00.0	04						
05	316 46.1 +00.7	N 19 47.7 +00.4	305 00.6 +01.9	N 21 38.6 +00.0	25 44.6 +02.5	S 06 16.0 +00.1	05						
06	331 46.8 +00.7	N 19 48.1 +00.4	320 02.5 +02.0	N 21 38.6 +00.1	40 47.1 +02.6	S 06 16.1 +00.0	06						
07	346 47.5 +00.7	N 19 48.5 +00.4	335 04.5 +01.9	N 21 38.7 +00.1	55 49.7 +02.5	S 06 16.1 +00.1	07						
08	1 48.2 +00.6	N 19 48.9 +00.4	350 06.4 +02.0	N 21 38.8 +00.0	70 52.2 +02.5	S 06 16.2 +00.0	08						
09	16 48.8 +00.7	N 19 49.3 +00.3	5 08.4 +01.9	N 21 38.8 +00.1	85 54.7 +02.6	S 06 16.2 +00.0	09						
10	31 49.5 +00.7	N 19 49.6 +00.4	20 10.3 +02.0	N 21 38.9 +00.0	100 57.3 +02.5	S 06 16.2 +00.1	10						
11	46 50.2 +00.7	N 19 50.0 +00.4	35 12.3 +01.9	N 21 38.9 +00.1	115 59.8 +02.6	S 06 16.3 +00.0	11						
12	61 50.9 +00.6	N 19 50.4 +00.4	50 14.2 +02.0	N 21 39.0 +00.1	131 02.4 +02.5	S 06 16.3 +00.1	12						
13	76 51.5 +00.7	N 19 50.8 +00.3	65 16.2 +01.9	N 21 39.1 +00.0	146 04.9 +02.6	S 06 16.4 +00.0	13						
14	91 52.2 +00.7	N 19 51.1 +00.4	80 18.1 +02.0	N 21 39.1 +00.1	161 07.5 +02.5	S 06 16.4 +00.1	14						
15	106 52.9 +00.7	N 19 51.5 +00.4	95 20.1 +02.0	N 21 39.2 +00.0	176 10.0 +02.6	S 06 16.5 +00.0	15						
16	121 53.6 +00.7	N 19 51.9 +00.3	110 22.1 +01.9	N 21 39.2 +00.1	191 12.6 +02.5	S 06 16.5 +00.1	16						
17	136 54.3 +00.6	N 19 52.2 +00.4	125 24.0 +02.0	N 21 39.3 +00.1	206 15.1 +02.6	S 06 16.6 +00.0	17						
18	151 54.9 +00.7	N 19 52.6 +00.4	140 26.0 +01.9	N 21 39.4 +00.0	221 17.7 +02.5	S 06 16.6 +00.1	18						
19	166 55.6 +00.7	N 19 53.0 +00.4	155 27.9 +02.0	N 21 39.4 +00.1	236 20.2 +02.6	S 06 16.7 +00.0	19						
20	181 56.3 +00.7	N 19 53.4 +00.3	170 29.9 +01.9	N 21 39.5 +00.0	251 22.8 +02.5	S 06 16.7 +00.1	20						
21	196 57.0 +00.6	N 19 53.7 +00.4	185 31.8 +02.0	N 21 39.5 +00.1	266 25.3 +02.6	S 06 16.8 +00.0	21						
22	211 57.6 +00.7	N 19 54.1 +00.4	200 33.8 +01.9	N 21 39.6 +00.1	281 27.9 +02.5	S 06 16.8 +00.0	22						
23	226 58.3 +00.7	N 19 54.5 +00.4	215 35.7 +02.0	N 21 39.7 +00.0	296 30.4 +02.6	S 06 16.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 300° 300° 300° 300° 300° 300°		SHA 289° 289° 289° 289° 288° 288°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:52		Greenwich Culmination Time: 08:39		Greenwich Culmination Time: 03:17								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.9 +00.0	N 19 48.2 -00.6	164 10.1 -00.6	N 17 39.7 -00.8	322 58.4 -31.0	S 11 40.0 -16.1	00						
01	193 21.9 +00.0	N 19 47.6 -00.5	179 09.5 -00.7	N 17 38.9 -00.9	337 27.4 -30.9	S 11 23.9 -16.2	01						
02	208 21.9 +00.0	N 19 47.1 -00.5	194 08.8 -00.6	N 17 38.0 -00.9	351 56.5 -30.9	S 11 07.7 -16.3	02						
03	223 21.9 +00.0	N 19 46.6 -00.6	209 08.2 -00.6	N 17 37.1 -00.9	6 25.6 -30.8	S 10 51.4 -16.3	03						
04	238 21.9 +00.0	N 19 46.0 -00.5	224 07.6 -00.6	N 17 36.2 -00.9	20 54.8 -30.8	S 10 35.1 -16.4	04						
05	253 21.9 +00.0	N 19 45.5 -00.5	239 07.0 -00.6	N 17 35.3 -00.9	35 24.0 -30.7	S 10 18.7 -16.4	05						
06	268 21.9 +00.0	N 19 45.0 -00.6	254 06.4 -00.7	N 17 34.4 -00.8	49 53.3 -30.6	S 10 02.3 -16.5	06						
07	283 21.9 +00.0	N 19 44.4 -00.5	269 05.7 -00.6	N 17 33.6 -00.9	64 22.7 -30.6	S 09 45.8 -16.5	07						
08	298 21.9 +00.0	N 19 43.9 -00.5	284 05.1 -00.6	N 17 32.7 -00.9	78 52.1 -30.5	S 09 29.3 -16.6	08						
09	313 21.9 +00.0	N 19 43.4 -00.6	299 04.5 -00.6	N 17 31.8 -00.9	93 21.6 -30.5	S 09 12.7 -16.6	09						
10	328 21.9 -00.1	N 19 42.8 -00.5	314 03.9 -00.6	N 17 30.9 -00.9	107 51.1 -30.4	S 08 56.1 -16.7	10						
11	343 21.8 +00.0	N 19 42.3 -00.5	329 03.3 -00.6	N 17 30.0 -00.9	122 20.7 -30.4	S 08 39.4 -16.7	11						
12	358 21.8 +00.0	N 19 41.8 -00.6	344 02.7 -00.7	N 17 29.1 -00.9	136 50.3 -30.3	S 08 22.7 -16.8	12						
13	13 21.8 +00.0	N 19 41.2 -00.5	359 02.0 -00.6	N 17 28.2 -00.9	151 20.0 -30.3	S 08 05.9 -16.8	13						
14	28 21.8 +00.0	N 19 40.7 -00.5	14 01.4 -00.6	N 17 27.3 -00.9	165 49.7 -30.2	S 07 49.1 -16.8	14						
15	43 21.8 +00.0	N 19 40.2 -00.6	29 00.8 -00.6	N 17 26.4 -00.9	180 19.5 -30.1	S 07 32.3 -16.9	15						
16	58 21.8 +00.0	N 19 39.6 -00.5	44 00.2 -00.6	N 17 25.5 -00.9	194 49.4 -30.1	S 07 15.4 -16.9	16						
17	73 21.8 +00.0	N 19 39.1 -00.5	58 59.6 -00.6	N 17 24.6 -00.9	209 19.3 -30.1	S 06 58.5 -17.0	17						
18	88 21.8 +00.0	N 19 38.6 -00.6	73 59.0 -00.6	N 17 23.7 -00.8	223 49.2 -30.0	S 06 41.5 -17.0	18						
19	103 21.8 +00.0	N 19 38.0 -00.5	88 58.4 -00.7	N 17 22.9 -00.9	238 19.2 -30.0	S 06 24.5 -17.0	19						
20	118 21.8 +00.0	N 19 37.5 -00.6	103 57.7 -00.6	N 17 22.0 -00.9	252 49.2 -30.0	S 06 07.5 -17.0	20						
21	133 21.8 +00.0	N 19 36.9 -00.5	118 57.1 -00.6	N 17 21.1 -00.9	267 19.2 -29.9	S 05 50.5 -17.1	21						
22	148 21.8 +00.0	N 19 36.4 -00.5	133 56.5 -00.6	N 17 20.2 -00.9	281 49.3 -29.8	S 05 33.4 -17.1	22						
23	163 21.8 +00.0	N 19 35.9 -00.6	148 55.9 -00.6	N 17 19.3 -00.9	296 19.5 -29.8	S 05 16.3 -17.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'4 16'4 16'4 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'1 60'1 60'1 60'0 60'0 60'0								
	SHA 236° 236° 236° 236° 235° 235°		SHA 222° 222° 221° 221° 221° 221°		SHA 020° 017° 015° 013° 011° 009°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:03		Greenwich Culmination Time: 02:33								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 59.0 +00.7	N 19 54.9 +00.3	230 37.7 +01.9	N 21 39.7 +00.1	311 33.0 +02.5	S 06 16.9 +00.0	00						
01	256 59.7 +00.6	N 19 55.2 +00.4	245 39.6 +02.0	N 21 39.8 +00.0	326 35.5 +02.6	S 06 16.9 +00.1	01						
02	272 00.3 +00.7	N 19 55.6 +00.4	260 41.6 +02.0	N 21 39.8 +00.1	341 38.1 +02.5	S 06 17.0 +00.0	02						
03	287 01.0 +00.7	N 19 56.0 +00.3	275 43.6 +01.9	N 21 39.9 +00.1	356 40.6 +02.6	S 06 17.0 +00.1	03						
04	302 01.7 +00.7	N 19 56.3 +00.4	290 45.5 +02.0	N 21 40.0 +00.0	11 43.2 +02.5	S 06 17.1 +00.0	04						
05	317 02.4 +00.7	N 19 56.7 +00.4	305 47.5 +01.9	N 21 40.0 +00.1	26 45.7 +02.6	S 06 17.1 +00.1	05						
06	332 03.1 +00.6	N 19 57.1 +00.3	320 49.4 +02.0	N 21 40.1 +00.0	41 48.3 +02.5	S 06 17.2 +00.0	06						
07	347 03.7 +00.7	N 19 57.4 +00.4	335 51.4 +01.9	N 21 40.1 +00.1	56 50.8 +02.6	S 06 17.2 +00.1	07						
08	2 04.4 +00.7	N 19 57.8 +00.4	350 53.3 +02.0	N 21 40.2 +00.1	71 53.4 +02.5	S 06 17.3 +00.0	08						
09	17 05.1 +00.7	N 19 58.2 +00.3	5 55.3 +02.0	N 21 40.3 +00.0	86 55.9 +02.6	S 06 17.3 +00.1	09						
10	32 05.8 +00.6	N 19 58.5 +00.4	20 57.3 +01.9	N 21 40.3 +00.1	101 58.5 +02.5	S 06 17.4 +00.0	10						
11	47 06.4 +00.7	N 19 58.9 +00.4	35 59.2 +02.0	N 21 40.4 +00.0	117 01.0 +02.6	S 06 17.4 +00.1	11						
12	62 07.1 +00.7	N 19 59.3 +00.3	51 01.2 +01.9	N 21 40.4 +00.1	132 03.6 +02.5	S 06 17.5 +00.0	12						
13	77 07.8 +00.7	N 19 59.6 +00.4	66 03.1 +02.0	N 21 40.5 +00.1	147 06.1 +02.6	S 06 17.5 +00.0	13						
14	92 08.5 +00.6	N 20 00.0 +00.4	81 05.1 +01.9	N 21 40.6 +00.0	162 08.7 +02.5	S 06 17.5 +00.1	14						
15	107 09.1 +00.7	N 20 00.4 +00.3	96 07.0 +02.0	N 21 40.6 +00.1	177 11.2 +02.6	S 06 17.6 +00.0	15						
16	122 09.8 +00.7	N 20 00.7 +00.4	111 09.0 +02.0	N 21 40.7 +00.0	192 13.8 +02.5	S 06 17.6 +00.1	16						
17	137 10.5 +00.7	N 20 01.1 +00.4	126 11.0 +01.9	N 21 40.7 +00.1	207 16.3 +02.6	S 06 17.7 +00.0	17						
18	152 11.2 +00.7	N 20 01.5 +00.3	141 12.9 +02.0	N 21 40.8 +00.1	222 18.9 +02.5	S 06 17.7 +00.1	18						
19	167 11.9 +00.6	N 20 01.8 +00.4	156 14.9 +01.9	N 21 40.9 +00.0	237 21.4 +02.6	S 06 17.8 +00.0	19						
20	182 12.5 +00.7	N 20 02.2 +00.4	171 16.8 +02.0	N 21 40.9 +00.1	252 24.0 +02.5	S 06 17.8 +00.1	20						
21	197 13.2 +00.7	N 20 02.6 +00.3	186 18.8 +02.0	N 21 41.0 +00.0	267 26.5 +02.6	S 06 17.9 +00.0	21						
22	212 13.9 +00.7	N 20 02.9 +00.4	201 20.8 +01.9	N 21 41.0 +00.1	282 29.1 +02.5	S 06 17.9 +00.1	22						
23	227 14.6 +00.6	N 20 03.3 +00.4	216 22.7 +02.0	N 21 41.1 +00.1	297 31.6 +02.6	S 06 18.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 300° 300° 299° 299° 299° 299°		SHA 288° 288° 288° 288° 288° 288°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:51		Greenwich Culmination Time: 08:36		Greenwich Culmination Time: 03:13								

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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	178 21.8 +00.0	N 19 35.3 -00.5	163 55.3 -00.6	N 17 18.4 -00.9	310 49.7 -29.8	S 04 59.2 -17.2	00						
01	193 21.8 +00.0	N 19 34.8 -00.6	178 54.7 -00.6	N 17 17.5 -00.9	325 19.9 -29.8	S 04 42.0 -17.1	01						
02	208 21.8 +00.0	N 19 34.2 -00.5	193 54.1 -00.6	N 17 16.6 -01.0	339 50.1 -29.7	S 04 24.9 -17.2	02						
03	223 21.8 +00.0	N 19 33.7 -00.6	208 53.5 -00.6	N 17 15.6 -00.9	354 20.4 -29.7	S 04 07.7 -17.2	03						
04	238 21.8 +00.0	N 19 33.1 -00.5	223 52.9 -00.6	N 17 14.7 -00.9	8 50.7 -29.6	S 03 50.5 -17.2	04						
05	253 21.8 +00.0	N 19 32.6 -00.6	238 52.3 -00.7	N 17 13.8 -00.9	23 21.1 -29.6	S 03 33.3 -17.3	05						
06	268 21.8 +00.0	N 19 32.0 -00.5	253 51.6 -00.6	N 17 12.9 -00.9	37 51.5 -29.6	S 03 16.0 -17.2	06						
07	283 21.8 +00.0	N 19 31.5 -00.5	268 51.0 -00.6	N 17 12.0 -00.9	52 21.9 -29.6	S 02 58.8 -17.3	07						
08	298 21.8 +00.0	N 19 31.0 -00.6	283 50.4 -00.6	N 17 11.1 -00.9	66 52.3 -29.5	S 02 41.5 -17.2	08						
09	313 21.8 +00.0	N 19 30.4 -00.5	298 49.8 -00.6	N 17 10.2 -00.9	81 22.8 -29.6	S 02 24.3 -17.3	09						
10	328 21.8 +00.0	N 19 29.9 -00.6	313 49.2 -00.6	N 17 09.3 -00.9	95 53.2 -29.4	S 02 07.0 -17.2	10						
11	343 21.8 +00.0	N 19 29.3 -00.5	328 48.6 -00.6	N 17 08.4 -00.9	110 23.8 -29.5	S 01 49.8 -17.3	11						
12	358 21.8 +00.0	N 19 28.8 -00.6	343 48.0 -00.6	N 17 07.5 -00.9	124 54.3 -29.5	S 01 32.5 -17.3	12						
13	13 21.8 +00.0	N 19 28.2 -00.5	358 47.4 -00.6	N 17 06.6 -00.9	139 24.8 -29.4	S 01 15.2 -17.3	13						
14	28 21.8 +00.0	N 19 27.7 -00.6	13 46.8 -00.6	N 17 05.7 -01.0	153 55.4 -29.4	S 00 57.9 -17.2	14						
15	43 21.8 +00.0	N 19 27.1 -00.5	28 46.2 -00.6	N 17 04.7 -00.9	168 26.0 -29.4	S 00 40.7 -17.3	15						
16	58 21.8 +00.0	N 19 26.6 -00.6	43 45.6 -00.6	N 17 03.8 -00.9	182 56.6 -29.4	S 00 23.4 -17.3	16						
17	73 21.8 +00.0	N 19 26.0 -00.5	58 45.0 -00.6	N 17 02.9 -00.9	197 27.2 -29.3	S 00 06.1 -17.2	17						
18	88 21.8 +00.0	N 19 25.5 -00.6	73 44.4 -00.6	N 17 02.0 -00.9	211 57.9 -29.4	N 00 11.1 +17.3	18						
19	103 21.8 +00.0	N 19 24.9 -00.5	88 43.8 -00.6	N 17 01.1 -00.9	226 28.5 -29.3	N 00 28.4 +17.2	19						
20	118 21.8 +00.0	N 19 24.4 -00.6	103 43.2 -00.6	N 17 00.2 -00.9	240 59.2 -29.3	N 00 45.6 +17.2	20						
21	133 21.8 +00.0	N 19 23.8 -00.6	118 42.6 -00.6	N 16 59.3 -01.0	255 29.9 -29.3	N 01 02.8 +17.3	21						
22	148 21.8 +00.0	N 19 23.2 -00.5	133 42.0 -00.6	N 16 58.3 -00.9	270 00.6 -29.4	N 01 20.1 +17.2	22						
23	163 21.8 +00.0	N 19 22.7 -00.6	148 41.4 -00.6	N 16 57.4 -00.9	284 31.2 -29.3	N 01 37.3 +17.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'3 16'3 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 60'0 60'0 59'9 59'9 59'8 59'8								
	SHA 235° 235° 235° 235° 234° 234°		SHA 221° 220° 220° 220° 220° 220°		SHA 007° 004° 002° 000° 358° 356°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:04		Greenwich Culmination Time: 03:23								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	242 15.2 +00.7	N 20 03.7 +00.3	231 24.7 +01.9	N 21 41.2 +00.0	312 34.2 +02.6	S 06 18.0 +00.1	00						
01	257 15.9 +00.7	N 20 04.0 +00.4	246 26.6 +02.0	N 21 41.2 +00.1	327 36.8 +02.5	S 06 18.1 +00.0	01						
02	272 16.6 +00.7	N 20 04.4 +00.4	261 28.6 +01.9	N 21 41.3 +00.0	342 39.3 +02.6	S 06 18.1 +00.1	02						
03	287 17.3 +00.7	N 20 04.8 +00.3	276 30.5 +02.0	N 21 41.3 +00.1	357 41.9 +02.5	S 06 18.2 +00.0	03						
04	302 18.0 +00.6	N 20 05.1 +00.4	291 32.5 +02.0	N 21 41.4 +00.0	12 44.4 +02.6	S 06 18.2 +00.1	04						
05	317 18.6 +00.7	N 20 05.5 +00.3	306 34.5 +01.9	N 21 41.4 +00.1	27 47.0 +02.5	S 06 18.3 +00.0	05						
06	332 19.3 +00.7	N 20 05.8 +00.4	321 36.4 +02.0	N 21 41.5 +00.1	42 49.5 +02.6	S 06 18.3 +00.1	06						
07	347 20.0 +00.7	N 20 06.2 +00.4	336 38.4 +01.9	N 21 41.6 +00.0	57 52.1 +02.5	S 06 18.4 +00.0	07						
08	2 20.7 +00.6	N 20 06.6 +00.3	351 40.3 +02.0	N 21 41.6 +00.1	72 54.6 +02.6	S 06 18.4 +00.1	08						
09	17 21.3 +00.7	N 20 06.9 +00.4	6 42.3 +02.0	N 21 41.7 +00.0	87 57.2 +02.5	S 06 18.5 +00.0	09						
10	32 22.0 +00.7	N 20 07.3 +00.3	21 44.3 +01.9	N 21 41.7 +00.1	102 59.7 +02.6	S 06 18.5 +00.0	10						
11	47 22.7 +00.7	N 20 07.6 +00.4	36 46.2 +02.0	N 21 41.8 +00.1	118 02.3 +02.5	S 06 18.5 +00.1	11						
12	62 23.4 +00.7	N 20 08.0 +00.4	51 48.2 +02.0	N 21 41.9 +00.0	133 04.8 +02.6	S 06 18.6 +00.0	12						
13	77 24.1 +00.6	N 20 08.4 +00.3	66 50.2 +01.9	N 21 41.9 +00.1	148 07.4 +02.6	S 06 18.6 +00.1	13						
14	92 24.7 +00.7	N 20 08.7 +00.4	81 52.1 +02.0	N 21 42.0 +00.0	163 10.0 +02.5	S 06 18.7 +00.0	14						
15	107 25.4 +00.7	N 20 09.1 +00.3	96 54.1 +01.9	N 21 42.0 +00.1	178 12.5 +02.6	S 06 18.7 +00.1	15						
16	122 26.1 +00.7	N 20 09.4 +00.4	111 56.0 +02.0	N 21 42.1 +00.0	193 15.1 +02.5	S 06 18.8 +00.0	16						
17	137 26.8 +00.6	N 20 09.8 +00.4	126 58.0 +02.0	N 21 42.1 +00.1	208 17.6 +02.6	S 06 18.8 +00.1	17						
18	152 27.4 +00.7	N 20 10.2 +00.3	141 60.0 +01.9	N 21 42.2 +00.1	223 20.2 +02.5	S 06 18.9 +00.0	18						
19	167 28.1 +00.7	N 20 10.5 +00.4	157 01.9 +02.0	N 21 42.3 +00.0	238 22.7 +02.6	S 06 18.9 +00.1	19						
20	182 28.8 +00.7	N 20 10.9 +00.3	172 03.9 +01.9	N 21 42.3 +00.1	253 25.3 +02.5	S 06 19.0 +00.0	20						
21	197 29.5 +00.7	N 20 11.2 +00.4	187 05.8 +02.0	N 21 42.4 +00.0	268 27.8 +02.6	S 06 19.0 +00.1	21						
22	212 30.2 +00.6	N 20 11.6 +00.3	202 07.8 +02.0	N 21 42.4 +00.1	283 30.4 +02.6	S 06 19.1 +00.0	22						
23	227 30.8 +00.7	N 20 11.9 +00.4	217 09.8 +01.9	N 21 42.5 +00.1	298 33.0 +02.5	S 06 19.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 299° 299° 299° 299° 299° 298°		SHA 288° 288° 288° 288° 288° 288°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:50		Greenwich Culmination Time: 08:33		Greenwich Culmination Time: 03:09								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 68%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.8 +00.0	N 19 22.1 -00.5	163 40.8 -00.6	N 16 56.5 -00.9	299 01.9 -29.3	N 01 54.4 +17.2	00						
01	193 21.8 +00.0	N 19 21.6 -00.6	178 40.2 -00.6	N 16 55.6 -00.9	313 32.6 -29.3	N 02 11.6 +17.1	01						
02	208 21.8 +00.0	N 19 21.0 -00.5	193 39.6 -00.6	N 16 54.7 -01.0	328 03.3 -29.3	N 02 28.7 +17.2	02						
03	223 21.8 +00.0	N 19 20.5 -00.6	208 39.0 -00.6	N 16 53.7 -00.9	342 34.0 -29.3	N 02 45.9 +17.1	03						
04	238 21.8 +00.0	N 19 19.9 -00.6	223 38.4 -00.6	N 16 52.8 -00.9	357 04.7 -29.2	N 03 03.0 +17.1	04						
05	253 21.8 +00.0	N 19 19.3 -00.5	238 37.8 -00.6	N 16 51.9 -00.9	11 35.5 -29.3	N 03 20.1 +17.0	05						
06	268 21.8 +00.0	N 19 18.8 -00.6	253 37.2 -00.6	N 16 51.0 -01.0	26 06.2 -29.3	N 03 37.1 +17.0	06						
07	283 21.8 +00.0	N 19 18.2 -00.5	268 36.6 -00.6	N 16 50.0 -00.9	40 36.9 -29.4	N 03 54.1 +17.0	07						
08	298 21.8 +00.0	N 19 17.7 -00.6	283 36.0 -00.6	N 16 49.1 -00.9	55 07.5 -29.3	N 04 11.1 +17.0	08						
09	313 21.8 +00.0	N 19 17.1 -00.6	298 35.4 -00.5	N 16 48.2 -00.9	69 38.2 -29.3	N 04 28.1 +16.9	09						
10	328 21.8 +00.0	N 19 16.5 -00.5	313 34.9 -00.6	N 16 47.3 -01.0	84 08.9 -29.3	N 04 45.0 +16.9	10						
11	343 21.8 +00.0	N 19 16.0 -00.6	328 34.3 -00.6	N 16 46.3 -00.9	98 39.6 -29.3	N 05 01.9 +16.9	11						
12	358 21.8 +00.0	N 19 15.4 -00.5	343 33.7 -00.6	N 16 45.4 -00.9	113 10.3 -29.4	N 05 18.8 +16.8	12						
13	13 21.8 +00.0	N 19 14.9 -00.6	358 33.1 -00.6	N 16 44.5 -01.0	127 40.9 -29.4	N 05 35.6 +16.8	13						
14	28 21.8 +00.0	N 19 14.3 -00.6	13 32.5 -00.6	N 16 43.5 -00.9	142 11.5 -29.3	N 05 52.4 +16.8	14						
15	43 21.8 +00.0	N 19 13.7 -00.5	28 31.9 -00.6	N 16 42.6 -00.9	156 42.2 -29.4	N 06 09.2 +16.7	15						
16	58 21.8 +00.0	N 19 13.2 -00.6	43 31.3 -00.6	N 16 41.7 -01.0	171 12.8 -29.4	N 06 25.9 +16.7	16						
17	73 21.8 +00.0	N 19 12.6 -00.6	58 30.7 -00.6	N 16 40.7 -00.9	185 43.4 -29.5	N 06 42.6 +16.6	17						
18	88 21.8 +00.1	N 19 12.0 -00.5	73 30.1 -00.6	N 16 39.8 -00.9	200 13.9 -29.4	N 06 59.2 +16.6	18						
19	103 21.9 +00.0	N 19 11.5 -00.6	88 29.5 -00.5	N 16 38.9 -01.0	214 44.5 -29.5	N 07 15.8 +16.5	19						
20	118 21.9 +00.0	N 19 10.9 -00.6	103 29.0 -00.6	N 16 37.9 -00.9	229 15.0 -29.5	N 07 32.3 +16.5	20						
21	133 21.9 +00.0	N 19 10.3 -00.5	118 28.4 -00.6	N 16 37.0 -00.9	243 45.5 -29.5	N 07 48.8 +16.4	21						
22	148 21.9 +00.0	N 19 09.8 -00.6	133 27.8 -00.6	N 16 36.1 -01.0	258 16.0 -29.5	N 08 05.2 +16.4	22						
23	163 21.9 +00.0	N 19 09.2 -00.6	148 27.2 -00.6	N 16 35.1 -00.9	272 46.5 -29.6	N 08 21.6 +16.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'2 16'2 16'2 16'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'8 59'7 59'6 59'6 59'5 59'5								
	SHA 234° 234° 234° 234° 233° 233°		SHA 219° 219° 219° 219° 219° 218°		SHA 354° 352° 350° 347° 345° 343°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:05		Greenwich Culmination Time: 04:12								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	242 31.5 +00.7	N 20 12.3 +00.3	232 11.7 +02.0	N 21 42.6 +00.0	313 35.5 +02.6	S 06 19.2 +00.0	00						
01	257 32.2 +00.7	N 20 12.6 +00.4	247 13.7 +02.0	N 21 42.6 +00.1	328 38.1 +02.5	S 06 19.2 +00.1	01						
02	272 32.9 +00.6	N 20 13.0 +00.4	262 15.7 +01.9	N 21 42.7 +00.0	343 40.6 +02.6	S 06 19.3 +00.0	02						
03	287 33.5 +00.7	N 20 13.4 +00.3	277 17.6 +02.0	N 21 42.7 +00.1	358 43.2 +02.5	S 06 19.3 +00.1	03						
04	302 34.2 +00.7	N 20 13.7 +00.4	292 19.6 +01.9	N 21 42.8 +00.0	13 45.7 +02.6	S 06 19.4 +00.0	04						
05	317 34.9 +00.7	N 20 14.1 +00.3	307 21.5 +02.0	N 21 42.8 +00.1	28 48.3 +02.5	S 06 19.4 +00.1	05						
06	332 35.6 +00.7	N 20 14.4 +00.4	322 23.5 +02.0	N 21 42.9 +00.1	43 50.8 +02.6	S 06 19.5 +00.0	06						
07	347 36.3 +00.6	N 20 14.8 +00.3	337 25.5 +01.9	N 21 43.0 +00.0	58 53.4 +02.6	S 06 19.5 +00.1	07						
08	2 36.9 +00.7	N 20 15.1 +00.4	352 27.4 +02.0	N 21 43.0 +00.1	73 56.0 +02.5	S 06 19.6 +00.0	08						
09	17 37.6 +00.7	N 20 15.5 +00.3	7 29.4 +02.0	N 21 43.1 +00.0	88 58.5 +02.6	S 06 19.6 +00.1	09						
10	32 38.3 +00.7	N 20 15.8 +00.4	22 31.4 +01.9	N 21 43.1 +00.1	104 01.1 +02.5	S 06 19.7 +00.0	10						
11	47 39.0 +00.6	N 20 16.2 +00.3	37 33.3 +02.0	N 21 43.2 +00.0	119 03.6 +02.6	S 06 19.7 +00.1	11						
12	62 39.6 +00.7	N 20 16.5 +00.4	52 35.3 +02.0	N 21 43.2 +00.1	134 06.2 +02.6	S 06 19.8 +00.0	12						
13	77 40.3 +00.7	N 20 16.9 +00.3	67 37.3 +01.9	N 21 43.3 +00.1	149 08.8 +02.5	S 06 19.8 +00.1	13						
14	92 41.0 +00.7	N 20 17.2 +00.4	82 39.2 +02.0	N 21 43.4 +00.0	164 11.3 +02.6	S 06 19.9 +00.0	14						
15	107 41.7 +00.7	N 20 17.6 +00.3	97 41.2 +02.0	N 21 43.4 +00.1	179 13.9 +02.5	S 06 19.9 +00.1	15						
16	122 42.4 +00.6	N 20 17.9 +00.4	112 43.2 +01.9	N 21 43.5 +00.0	194 16.4 +02.6	S 06 20.0 +00.0	16						
17	137 43.0 +00.7	N 20 18.3 +00.3	127 45.1 +02.0	N 21 43.5 +00.1	209 19.0 +02.5	S 06 20.0 +00.1	17						
18	152 43.7 +00.7	N 20 18.6 +00.4	142 47.1 +02.0	N 21 43.6 +00.0	224 21.5 +02.6	S 06 20.1 +00.0	18						
19	167 44.4 +00.7	N 20 19.0 +00.3	157 49.1 +01.9	N 21 43.6 +00.1	239 24.1 +02.6	S 06 20.1 +00.1	19						
20	182 45.1 +00.7	N 20 19.3 +00.4	172 51.0 +02.0	N 21 43.7 +00.1	254 26.7 +02.5	S 06 20.2 +00.0	20						
21	197 45.8 +00.6	N 20 19.7 +00.3	187 53.0 +02.0	N 21 43.8 +00.0	269 29.2 +02.6	S 06 20.2 +00.1	21						
22	212 46.4 +00.7	N 20 20.0 +00.4	202 55.0 +01.9	N 21 43.8 +00.1	284 31.8 +02.5	S 06 20.3 +00.0	22						
23	227 47.1 +00.7	N 20 20.4 +00.3	217 56.9 +02.0	N 21 43.9 +00.0	299 34.3 +02.6	S 06 20.3 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 298° 298° 298° 298° 298° 298°		SHA 288° 288° 288° 288° 288° 288°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:49		Greenwich Culmination Time: 08:30		Greenwich Culmination Time: 03:05								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 21.9 +00.0	N 19 08.6 -00.5	163 26.6 -00.6	N 16 34.2 -01.0	287 16.9 -29.5	N 08 38.0 +16.2	00						
01	193 21.9 +00.0	N 19 08.1 -00.6	178 26.0 -00.6	N 16 33.2 -00.9	301 47.4 -29.7	N 08 54.2 +16.3	01						
02	208 21.9 +00.0	N 19 07.5 -00.6	193 25.4 -00.5	N 16 32.3 -00.9	316 17.7 -29.6	N 09 10.5 +16.1	02						
03	223 21.9 +00.0	N 19 06.9 -00.5	208 24.9 -00.6	N 16 31.4 -01.0	330 48.1 -29.7	N 09 26.6 +16.1	03						
04	238 21.9 +00.0	N 19 06.4 -00.6	223 24.3 -00.6	N 16 30.4 -00.9	345 18.4 -29.7	N 09 42.7 +16.1	04						
05	253 21.9 +00.0	N 19 05.8 -00.6	238 23.7 -00.6	N 16 29.5 -01.0	359 48.7 -29.7	N 09 58.8 +16.0	05						
06	268 21.9 +00.1	N 19 05.2 -00.6	253 23.1 -00.6	N 16 28.5 -00.9	14 19.0 -29.8	N 10 14.8 +15.9	06						
07	283 22.0 +00.0	N 19 04.6 -00.5	268 22.5 -00.6	N 16 27.6 -01.0	28 49.2 -29.8	N 10 30.7 +15.8	07						
08	298 22.0 +00.0	N 19 04.1 -00.6	283 21.9 -00.5	N 16 26.6 -00.9	43 19.4 -29.8	N 10 46.5 +15.8	08						
09	313 22.0 +00.0	N 19 03.5 -00.6	298 21.4 -00.6	N 16 25.7 -01.0	57 49.6 -29.9	N 11 02.3 +15.8	09						
10	328 22.0 +00.0	N 19 02.9 -00.6	313 20.8 -00.6	N 16 24.7 -00.9	72 19.7 -29.9	N 11 18.1 +15.6	10						
11	343 22.0 +00.0	N 19 02.3 -00.5	328 20.2 -00.6	N 16 23.8 -00.9	86 49.8 -30.0	N 11 33.7 +15.6	11						
12	358 22.0 +00.0	N 19 01.8 -00.6	343 19.6 -00.6	N 16 22.9 -01.0	101 19.8 -29.9	N 11 49.3 +15.5	12						
13	13 22.0 +00.0	N 19 01.2 -00.6	358 19.0 -00.5	N 16 21.9 -00.9	115 49.9 -30.1	N 12 04.8 +15.5	13						
14	28 22.0 +00.0	N 19 00.6 -00.6	13 18.5 -00.6	N 16 21.0 -01.0	130 19.8 -30.1	N 12 20.3 +15.3	14						
15	43 22.0 +00.1	N 19 00.0 -00.5	28 17.9 -00.6	N 16 20.0 -00.9	144 49.7 -30.1	N 12 35.6 +15.3	15						
16	58 22.1 +00.0	N 18 59.5 -00.6	43 17.3 -00.6	N 16 19.1 -01.0	159 19.6 -30.1	N 12 50.9 +15.2	16						
17	73 22.1 +00.0	N 18 58.9 -00.6	58 16.7 -00.5	N 16 18.1 -01.0	173 49.5 -30.3	N 13 06.1 +15.2	17						
18	88 22.1 +00.0	N 18 58.3 -00.6	73 16.2 -00.6	N 16 17.1 -00.9	188 19.2 -30.2	N 13 21.3 +15.0	18						
19	103 22.1 +00.0	N 18 57.7 -00.6	88 15.6 -00.6	N 16 16.2 -01.0	202 49.0 -30.3	N 13 36.3 +15.0	19						
20	118 22.1 +00.0	N 18 57.1 -00.5	103 15.0 -00.6	N 16 15.2 -00.9	217 18.7 -30.4	N 13 51.3 +14.9	20						
21	133 22.1 +00.0	N 18 56.6 -00.6	118 14.4 -00.5	N 16 14.3 -01.0	231 48.3 -30.4	N 14 06.2 +14.8	21						
22	148 22.1 +00.1	N 18 56.0 -00.6	133 13.9 -00.6	N 16 13.3 -00.9	246 17.9 -30.4	N 14 21.0 +14.7	22						
23	163 22.2 +00.0	N 18 55.4 -00.6	148 13.3 -00.6	N 16 12.4 -01.0	260 47.5 -30.5	N 14 35.7 +14.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'2 16'2 16'1 16'1 16'1 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'4 59'3 59'2 59'2 59'1 59'0								
	SHA 233° 233° 233° 233° 232° 232°		SHA 218° 218° 218° 218° 217° 217°		SHA 341° 339° 337° 335° 332° 330°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:06		Greenwich Culmination Time: 05:00								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	242 47.8 +00.7	N 20 20.7 +00.4	232 58.9 +02.0	N 21 43.9 +00.1	314 36.9 +02.6	S 06 20.4 +00.0	00						
01	257 48.5 +00.6	N 20 21.1 +00.3	248 00.9 +01.9	N 21 44.0 +00.0	329 39.5 +02.5	S 06 20.4 +00.1	01						
02	272 49.1 +00.7	N 20 21.4 +00.4	263 02.8 +02.0	N 21 44.0 +00.1	344 42.0 +02.6	S 06 20.5 +00.0	02						
03	287 49.8 +00.7	N 20 21.8 +00.3	278 04.8 +02.0	N 21 44.1 +00.1	359 44.6 +02.5	S 06 20.5 +00.1	03						
04	302 50.5 +00.7	N 20 22.1 +00.4	293 06.8 +01.9	N 21 44.2 +00.0	14 47.1 +02.6	S 06 20.6 +00.0	04						
05	317 51.2 +00.7	N 20 22.5 +00.3	308 08.7 +02.0	N 21 44.2 +00.1	29 49.7 +02.6	S 06 20.6 +00.1	05						
06	332 51.9 +00.6	N 20 22.8 +00.3	323 10.7 +02.0	N 21 44.3 +00.0	44 52.3 +02.5	S 06 20.7 +00.0	06						
07	347 52.5 +00.7	N 20 23.1 +00.4	338 12.7 +01.9	N 21 44.3 +00.1	59 54.8 +02.6	S 06 20.7 +00.1	07						
08	2 53.2 +00.7	N 20 23.5 +00.3	353 14.6 +02.0	N 21 44.4 +00.0	74 57.4 +02.5	S 06 20.8 +00.0	08						
09	17 53.9 +00.7	N 20 23.8 +00.4	8 16.6 +02.0	N 21 44.4 +00.1	89 59.9 +02.6	S 06 20.8 +00.1	09						
10	32 54.6 +00.7	N 20 24.2 +00.3	23 18.6 +01.9	N 21 44.5 +00.0	105 02.5 +02.6	S 06 20.9 +00.0	10						
11	47 55.3 +00.6	N 20 24.5 +00.4	38 20.5 +02.0	N 21 44.5 +00.1	120 05.1 +02.5	S 06 20.9 +00.1	11						
12	62 55.9 +00.7	N 20 24.9 +00.3	53 22.5 +02.0	N 21 44.6 +00.1	135 07.6 +02.6	S 06 21.0 +00.0	12						
13	77 56.6 +00.7	N 20 25.2 +00.4	68 24.5 +01.9	N 21 44.7 +00.0	150 10.2 +02.5	S 06 21.0 +00.1	13						
14	92 57.3 +00.7	N 20 25.6 +00.3	83 26.4 +02.0	N 21 44.7 +00.1	165 12.7 +02.6	S 06 21.1 +00.0	14						
15	107 58.0 +00.7	N 20 25.9 +00.3	98 28.4 +02.0	N 21 44.8 +00.0	180 15.3 +02.6	S 06 21.1 +00.1	15						
16	122 58.7 +00.6	N 20 26.2 +00.4	113 30.4 +01.9	N 21 44.8 +00.1	195 17.9 +02.5	S 06 21.2 +00.0	16						
17	137 59.3 +00.7	N 20 26.6 +00.3	128 32.3 +02.0	N 21 44.9 +00.0	210 20.4 +02.6	S 06 21.2 +00.1	17						
18	153 00.0 +00.7	N 20 26.9 +00.4	143 34.3 +02.0	N 21 44.9 +00.1	225 23.0 +02.6	S 06 21.3 +00.0	18						
19	168 00.7 +00.7	N 20 27.3 +00.3	158 36.3 +01.9	N 21 45.0 +00.0	240 25.6 +02.5	S 06 21.3 +00.1	19						
20	183 01.4 +00.7	N 20 27.6 +00.4	173 38.2 +02.0	N 21 45.0 +00.1	255 28.1 +02.6	S 06 21.4 +00.0	20						
21	198 02.1 +00.6	N 20 28.0 +00.3	188 40.2 +02.0	N 21 45.1 +00.1	270 30.7 +02.5	S 06 21.4 +00.1	21						
22	213 02.7 +00.7	N 20 28.3 +00.3	203 42.2 +02.0	N 21 45.2 +00.0	285 33.2 +02.6	S 06 21.5 +00.0	22						
23	228 03.4 +00.7	N 20 28.6 +00.4	218 44.2 +01.9	N 21 45.2 +00.1	300 35.8 +02.6	S 06 21.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 298° 297° 297° 297° 297° 297°		SHA 288° 288° 288° 288° 288° 288°		SHA 009° 009° 009° 009° 009° 009°								
	Greenwich Culmination Time: 07:48		Greenwich Culmination Time: 08:26		Greenwich Culmination Time: 03:01								

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.2 +00.0	N 18 54.8 -00.6	163 12.7 -00.6	N 16 11.4 -00.9	275 17.0 -30.6	N 14 50.4 +14.5							
01	193 22.2 +00.0	N 18 54.2 -00.5	178 12.1 -00.5	N 16 10.5 -01.0	289 46.4 -30.6	N 15 04.9 +14.5							
02	208 22.2 +00.0	N 18 53.7 -00.6	193 11.6 -00.6	N 16 09.5 -01.0	304 15.8 -30.6	N 15 19.4 +14.3							
03	223 22.2 +00.0	N 18 53.1 -00.6	208 11.0 -00.6	N 16 08.5 -00.9	318 45.2 -30.7	N 15 33.7 +14.3							
04	238 22.2 +00.0	N 18 52.5 -00.6	223 10.4 -00.6	N 16 07.6 -01.0	333 14.5 -30.8	N 15 48.0 +14.2							
05	253 22.2 +00.1	N 18 51.9 -00.6	238 09.8 -00.5	N 16 06.6 -00.9	347 43.7 -30.8	N 16 02.2 +14.1							
06	268 22.3 +00.0	N 18 51.3 -00.6	253 09.3 -00.6	N 16 05.7 -01.0	2 12.9 -30.9	N 16 16.3 +14.0							
07	283 22.3 +00.0	N 18 50.7 -00.6	268 08.7 -00.6	N 16 04.7 -01.0	16 42.0 -30.9	N 16 30.3 +13.9							
08	298 22.3 +00.0	N 18 50.1 -00.5	283 08.1 -00.5	N 16 03.7 -00.9	31 11.1 -31.0	N 16 44.2 +13.7							
09	313 22.3 +00.0	N 18 49.6 -00.6	298 07.6 -00.6	N 16 02.8 -01.0	45 40.1 -31.1	N 16 57.9 +13.7							
10	328 22.3 +00.0	N 18 49.0 -00.6	313 07.0 -00.6	N 16 01.8 -01.0	60 09.0 -31.1	N 17 11.6 +13.6							
11	343 22.3 +00.1	N 18 48.4 -00.6	328 06.4 -00.5	N 16 00.8 -00.9	74 37.9 -31.2	N 17 25.2 +13.5							
12	358 22.4 +00.0	N 18 47.8 -00.6	343 05.9 -00.6	N 15 59.9 -01.0	89 06.7 -31.2	N 17 38.7 +13.4							
13	13 22.4 +00.0	N 18 47.2 -00.6	358 05.3 -00.6	N 15 58.9 -01.0	103 35.5 -31.3	N 17 52.1 +13.3							
14	28 22.4 +00.0	N 18 46.6 -00.6	13 04.7 -00.5	N 15 57.9 -00.9	118 04.2 -31.3	N 18 05.4 +13.1							
15	43 22.4 +00.0	N 18 46.0 -00.6	28 04.2 -00.6	N 15 57.0 -01.0	132 32.9 -31.4	N 18 18.5 +13.1							
16	58 22.4 +00.1	N 18 45.4 -00.6	43 03.6 -00.6	N 15 56.0 -01.0	147 01.5 -31.5	N 18 31.6 +12.9							
17	73 22.5 +00.0	N 18 44.8 -00.5	58 03.0 -00.5	N 15 55.0 -01.0	161 30.0 -31.6	N 18 44.5 +12.9							
18	88 22.5 +00.0	N 18 44.3 -00.6	73 02.5 -00.6	N 15 54.0 -00.9	175 58.4 -31.6	N 18 57.4 +12.7							
19	103 22.5 +00.0	N 18 43.7 -00.6	88 01.9 -00.6	N 15 53.1 -01.0	190 26.8 -31.6	N 19 10.1 +12.6							
20	118 22.5 +00.0	N 18 43.1 -00.6	103 01.3 -00.5	N 15 52.1 -01.0	204 55.2 -31.8	N 19 22.7 +12.5							
21	133 22.5 +00.0	N 18 42.5 -00.6	118 00.8 -00.6	N 15 51.1 -00.9	219 23.4 -31.7	N 19 35.2 +12.4							
22	148 22.5 +00.1	N 18 41.9 -00.6	133 00.2 -00.5	N 15 50.2 -01.0	233 51.7 -31.9	N 19 47.6 +12.3							
23	163 22.6 +00.0	N 18 41.3 -00.6	147 59.7 -00.6	N 15 49.2 -01.0	248 19.8 -31.9	N 19 59.9 +12.1							
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 232° 232° 232° 232° 231° 231°	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 217° 217° 217° 216° 216° 216°	Greenwich Culmination Time: 13:07								
	UT 02 06 10 14 18 22	SD 16'1 16'0 16'0 16'0 16'0 15'9	HP 58'9 58'8 58'8 58'7 58'6 58'5	SHA 328° 326° 324° 321° 319° 317°	Greenwich Culmination Time: 05:50								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 04.1 +00.7	N 20 29.0 +00.3	233 46.1 +02.0	N 21 45.3 +00.0	315 38.4 +02.5	S 06 21.6 +00.1							
01	258 04.8 +00.7	N 20 29.3 +00.4	248 48.1 +02.0	N 21 45.3 +00.1	330 40.9 +02.6	S 06 21.7 +00.0							
02	273 05.5 +00.6	N 20 29.7 +00.3	263 50.1 +01.9	N 21 45.4 +00.0	345 43.5 +02.6	S 06 21.7 +00.1							
03	288 06.1 +00.7	N 20 30.0 +00.3	278 52.0 +02.0	N 21 45.4 +00.1	0 46.1 +02.5	S 06 21.8 +00.0							
04	303 06.8 +00.7	N 20 30.3 +00.4	293 54.0 +02.0	N 21 45.5 +00.0	15 48.6 +02.6	S 06 21.8 +00.1							
05	318 07.5 +00.7	N 20 30.7 +00.3	308 56.0 +02.0	N 21 45.5 +00.1	30 51.2 +02.5	S 06 21.9 +00.0							
06	333 08.2 +00.7	N 20 31.0 +00.3	323 58.0 +01.9	N 21 45.6 +00.1	45 53.7 +02.6	S 06 21.9 +00.1							
07	348 08.9 +00.6	N 20 31.3 +00.4	338 59.9 +02.0	N 21 45.7 +00.0	60 56.3 +02.6	S 06 22.0 +00.0							
08	3 09.5 +00.7	N 20 31.7 +00.3	354 01.9 +02.0	N 21 45.7 +00.1	75 58.9 +02.5	S 06 22.0 +00.1							
09	18 10.2 +00.7	N 20 32.0 +00.4	9 03.9 +01.9	N 21 45.8 +00.0	91 01.4 +02.6	S 06 22.1 +00.0							
10	33 10.9 +00.7	N 20 32.4 +00.3	24 05.8 +02.0	N 21 45.8 +00.1	106 04.0 +02.6	S 06 22.1 +00.1							
11	48 11.6 +00.7	N 20 32.7 +00.3	39 07.8 +02.0	N 21 45.9 +00.0	121 06.6 +02.5	S 06 22.2 +00.0							
12	63 12.3 +00.6	N 20 33.0 +00.4	54 09.8 +02.0	N 21 45.9 +00.1	136 09.1 +02.6	S 06 22.2 +00.1							
13	78 12.9 +00.7	N 20 33.4 +00.3	69 11.8 +01.9	N 21 46.0 +00.0	151 11.7 +02.6	S 06 22.3 +00.0							
14	93 13.6 +00.7	N 20 33.7 +00.3	84 13.7 +02.0	N 21 46.0 +00.1	166 14.3 +02.5	S 06 22.3 +00.1							
15	108 14.3 +00.7	N 20 34.0 +00.4	99 15.7 +02.0	N 21 46.1 +00.1	181 16.8 +02.6	S 06 22.4 +00.0							
16	123 15.0 +00.7	N 20 34.4 +00.3	114 17.7 +01.9	N 21 46.2 +00.0	196 19.4 +02.6	S 06 22.4 +00.1							
17	138 15.7 +00.6	N 20 34.7 +00.3	129 19.6 +02.0	N 21 46.2 +00.1	211 22.0 +02.5	S 06 22.5 +00.0							
18	153 16.3 +00.7	N 20 35.0 +00.4	144 21.6 +02.0	N 21 46.3 +00.0	226 24.5 +02.6	S 06 22.5 +00.1							
19	168 17.0 +00.7	N 20 35.4 +00.3	159 23.6 +02.0	N 21 46.3 +00.1	241 27.1 +02.5	S 06 22.6 +00.0							
20	183 17.7 +00.7	N 20 35.7 +00.3	174 25.6 +01.9	N 21 46.4 +00.0	256 29.6 +02.6	S 06 22.6 +00.1							
21	198 18.4 +00.7	N 20 36.0 +00.4	189 27.5 +02.0	N 21 46.4 +00.1	271 32.2 +02.6	S 06 22.7 +00.0							
22	213 19.1 +00.6	N 20 36.4 +00.3	204 29.5 +02.0	N 21 46.5 +00.0	286 34.8 +02.5	S 06 22.7 +00.1							
23	228 19.7 +00.7	N 20 36.7 +00.3	219 31.5 +02.0	N 21 46.5 +00.1	301 37.3 +02.6	S 06 22.8 +00.1							
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 297° 297° 297° 296° 296° 296°	Greenwich Culmination Time: 07:47								
	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 288° 288° 288° 288° 287° 287°	Greenwich Culmination Time: 08:23								
	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 009° 009° 010° 010° 010° 010°	Greenwich Culmination Time: 02:56								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 22.6 +00.0	N 18 40.7 -00.6	162 59.1 -00.6	N 15 48.2 -01.0	262 47.9 -32.0	N 20 12.0 +12.0	00						
01	193 22.6 +00.0	N 18 40.1 -00.6	177 58.5 -00.5	N 15 47.2 -00.9	277 15.9 -32.1	N 20 24.0 +11.9	01						
02	208 22.6 +00.1	N 18 39.5 -00.6	192 58.0 -00.6	N 15 46.3 -01.0	291 43.8 -32.1	N 20 35.9 +11.8	02						
03	223 22.7 +00.0	N 18 38.9 -00.6	207 57.4 -00.5	N 15 45.3 -01.0	306 11.7 -32.2	N 20 47.7 +11.6	03						
04	238 22.7 +00.0	N 18 38.3 -00.6	222 56.9 -00.6	N 15 44.3 -01.0	320 39.5 -32.2	N 20 59.3 +11.6	04						
05	253 22.7 +00.0	N 18 37.7 -00.6	237 56.3 -00.6	N 15 43.3 -01.0	335 07.3 -32.3	N 21 10.9 +11.4	05						
06	268 22.7 +00.0	N 18 37.1 -00.6	252 55.7 -00.5	N 15 42.3 -00.9	349 35.0 -32.4	N 21 22.3 +11.3	06						
07	283 22.7 +00.1	N 18 36.5 -00.6	267 55.2 -00.6	N 15 41.4 -01.0	4 02.6 -32.4	N 21 33.6 +11.1	07						
08	298 22.8 +00.0	N 18 35.9 -00.6	282 54.6 -00.5	N 15 40.4 -01.0	18 30.2 -32.5	N 21 44.7 +11.0	08						
09	313 22.8 +00.0	N 18 35.3 -00.6	297 54.1 -00.6	N 15 39.4 -01.0	32 57.7 -32.6	N 21 55.7 +10.9	09						
10	328 22.8 +00.0	N 18 34.7 -00.6	312 53.5 -00.5	N 15 38.4 -01.0	47 25.1 -32.6	N 22 06.6 +10.7	10						
11	343 22.8 +00.1	N 18 34.1 -00.6	327 53.0 -00.6	N 15 37.4 -01.0	61 52.5 -32.7	N 22 17.3 +10.7	11						
12	358 22.9 +00.0	N 18 33.5 -00.6	342 52.4 -00.6	N 15 36.4 -00.9	76 19.8 -32.8	N 22 28.0 +10.4	12						
13	13 22.9 +00.0	N 18 32.9 -00.6	357 51.8 -00.5	N 15 35.5 -01.0	90 47.0 -32.8	N 22 38.4 +10.4	13						
14	28 22.9 +00.0	N 18 32.3 -00.6	12 51.3 -00.6	N 15 34.5 -01.0	105 14.2 -32.9	N 22 48.8 +10.2	14						
15	43 22.9 +00.1	N 18 31.7 -00.6	27 50.7 -00.5	N 15 33.5 -01.0	119 41.3 -33.0	N 22 59.0 +10.1	15						
16	58 23.0 +00.0	N 18 31.1 -00.6	42 50.2 -00.6	N 15 32.5 -01.0	134 08.3 -33.0	N 23 09.1 +09.9	16						
17	73 23.0 +00.0	N 18 30.5 -00.6	57 49.6 -00.5	N 15 31.5 -01.0	148 35.3 -33.1	N 23 19.0 +09.8	17						
18	88 23.0 +00.0	N 18 29.9 -00.6	72 49.1 -00.6	N 15 30.5 -01.0	163 02.2 -33.1	N 23 28.8 +09.6	18						
19	103 23.0 +00.1	N 18 29.3 -00.6	87 48.5 -00.5	N 15 29.5 -01.0	177 29.1 -33.2	N 23 38.4 +09.6	19						
20	118 23.1 +00.0	N 18 28.7 -00.6	102 48.0 -00.6	N 15 28.5 -01.0	191 55.9 -33.3	N 23 48.0 +09.3	20						
21	133 23.1 +00.0	N 18 28.1 -00.6	117 47.4 -00.5	N 15 27.5 -00.9	206 22.6 -33.3	N 23 57.3 +09.2	21						
22	148 23.1 +00.0	N 18 27.5 -00.6	132 46.9 -00.6	N 15 26.6 -01.0	220 49.3 -33.4	N 24 06.5 +09.1	22						
23	163 23.1 +00.1	N 18 26.9 -00.6	147 46.3 -00.5	N 15 25.6 -01.0	235 15.9 -33.5	N 24 15.6 +08.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'9 15'8 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'4 58'3 58'2 58'2 58'1 58'0								
	SHA 231° 231° 231° 231° 231° 230°		SHA 216° 216° 215° 215° 215° 215°		SHA 315° 312° 310° 308° 305° 303°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:08		Greenwich Culmination Time: 06:43								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 20.4 +00.7	N 20 37.0 +00.4	234 33.5 +01.9	N 21 46.6 +00.0	316 39.9 +02.6	S 06 22.9 +00.0	00						
01	258 21.1 +00.7	N 20 37.4 +00.3	249 35.4 +02.0	N 21 46.6 +00.1	331 42.5 +02.5	S 06 22.9 +00.1	01						
02	273 21.8 +00.7	N 20 37.7 +00.3	264 37.4 +02.0	N 21 46.7 +00.1	346 45.0 +02.6	S 06 23.0 +00.0	02						
03	288 22.5 +00.6	N 20 38.0 +00.4	279 39.4 +02.0	N 21 46.8 +00.0	1 47.6 +02.6	S 06 23.0 +00.1	03						
04	303 23.1 +00.7	N 20 38.4 +00.3	294 41.4 +01.9	N 21 46.8 +00.1	16 50.2 +02.5	S 06 23.1 +00.0	04						
05	318 23.8 +00.7	N 20 38.7 +00.3	309 43.3 +02.0	N 21 46.9 +00.0	31 52.7 +02.6	S 06 23.1 +00.1	05						
06	333 24.5 +00.7	N 20 39.0 +00.3	324 45.3 +02.0	N 21 46.9 +00.1	46 55.3 +02.6	S 06 23.2 +00.0	06						
07	348 25.2 +00.7	N 20 39.3 +00.4	339 47.3 +02.0	N 21 47.0 +00.0	61 57.9 +02.5	S 06 23.2 +00.1	07						
08	3 25.9 +00.6	N 20 39.7 +00.3	354 49.3 +01.9	N 21 47.0 +00.1	77 00.4 +02.6	S 06 23.3 +00.0	08						
09	18 26.5 +00.7	N 20 40.0 +00.3	9 51.2 +02.0	N 21 47.1 +00.0	92 03.0 +02.6	S 06 23.3 +00.1	09						
10	33 27.2 +00.7	N 20 40.3 +00.4	24 53.2 +02.0	N 21 47.1 +00.1	107 05.6 +02.5	S 06 23.4 +00.0	10						
11	48 27.9 +00.7	N 20 40.7 +00.3	39 55.2 +02.0	N 21 47.2 +00.0	122 08.1 +02.6	S 06 23.4 +00.1	11						
12	63 28.6 +00.7	N 20 41.0 +00.3	54 57.2 +01.9	N 21 47.2 +00.1	137 10.7 +02.6	S 06 23.5 +00.0	12						
13	78 29.3 +00.7	N 20 41.3 +00.3	69 59.1 +02.0	N 21 47.3 +00.0	152 13.3 +02.5	S 06 23.5 +00.1	13						
14	93 30.0 +00.6	N 20 41.6 +00.4	85 01.1 +02.0	N 21 47.3 +00.1	167 15.8 +02.6	S 06 23.6 +00.1	14						
15	108 30.6 +00.7	N 20 42.0 +00.3	100 03.1 +02.0	N 21 47.4 +00.1	182 18.4 +02.6	S 06 23.7 +00.0	15						
16	123 31.3 +00.7	N 20 42.3 +00.3	115 05.1 +01.9	N 21 47.5 +00.0	197 21.0 +02.6	S 06 23.7 +00.1	16						
17	138 32.0 +00.7	N 20 42.6 +00.3	130 07.0 +02.0	N 21 47.5 +00.1	212 23.6 +02.5	S 06 23.8 +00.0	17						
18	153 32.7 +00.7	N 20 42.9 +00.4	145 09.0 +02.0	N 21 47.6 +00.0	227 26.1 +02.6	S 06 23.8 +00.1	18						
19	168 33.4 +00.6	N 20 43.3 +00.3	160 11.0 +02.0	N 21 47.6 +00.1	242 28.7 +02.6	S 06 23.9 +00.0	19						
20	183 34.0 +00.7	N 20 43.6 +00.3	175 13.0 +02.0	N 21 47.7 +00.0	257 31.3 +02.5	S 06 23.9 +00.1	20						
21	198 34.7 +00.7	N 20 43.9 +00.3	190 15.0 +01.9	N 21 47.7 +00.1	272 33.8 +02.6	S 06 24.0 +00.0	21						
22	213 35.4 +00.7	N 20 44.2 +00.4	205 16.9 +02.0	N 21 47.8 +00.0	287 36.4 +02.6	S 06 24.0 +00.1	22						
23	228 36.1 +00.7	N 20 44.6 +00.3	220 18.9 +02.0	N 21 47.8 +00.1	302 39.0 +02.5	S 06 24.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 296° 296° 296° 296° 296° 296°		SHA 287° 287° 287° 287° 287° 287°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:46		Greenwich Culmination Time: 08:20		Greenwich Culmination Time: 02:52								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	178 23.2 +00.0	N 18 26.3 -00.7	162 45.8 -00.6	N 15 24.6 -01.0	249 42.4 -33.5	N 24 24.5 +08.8	00								
01	193 23.2 +00.0	N 18 25.6 -00.6	177 45.2 -00.5	N 15 23.6 -01.0	264 08.9 -33.5	N 24 33.3 +08.6	01								
02	208 23.2 +00.0	N 18 25.0 -00.6	192 44.7 -00.6	N 15 22.6 -01.0	278 35.4 -33.7	N 24 41.9 +08.5	02								
03	223 23.2 +00.1	N 18 24.4 -00.6	207 44.1 -00.5	N 15 21.6 -01.0	293 01.7 -33.6	N 24 50.4 +08.4	03								
04	238 23.3 +00.0	N 18 23.8 -00.6	222 43.6 -00.6	N 15 20.6 -01.0	307 28.1 -33.8	N 24 58.8 +08.1	04								
05	253 23.3 +00.0	N 18 23.2 -00.6	237 43.0 -00.5	N 15 19.6 -01.0	321 54.3 -33.8	N 25 06.9 +08.1	05								
06	268 23.3 +00.1	N 18 22.6 -00.6	252 42.5 -00.6	N 15 18.6 -01.0	336 20.5 -33.8	N 25 15.0 +07.8	06								
07	283 23.4 +00.0	N 18 22.0 -00.6	267 41.9 -00.5	N 15 17.6 -01.0	350 46.7 -33.9	N 25 22.8 +07.7	07								
08	298 23.4 +00.0	N 18 21.4 -00.6	282 41.4 -00.5	N 15 16.6 -01.0	5 12.8 -33.9	N 25 30.5 +07.6	08								
09	313 23.4 +00.0	N 18 20.8 -00.7	297 40.9 -00.6	N 15 15.6 -01.0	19 38.9 -34.0	N 25 38.1 +07.4	09								
10	328 23.4 +00.1	N 18 20.1 -00.6	312 40.3 -00.5	N 15 14.6 -01.0	34 04.9 -34.1	N 25 45.5 +07.3	10								
11	343 23.5 +00.0	N 18 19.5 -00.6	327 39.8 -00.6	N 15 13.6 -01.0	48 30.8 -34.1	N 25 52.8 +07.1	11								
12	358 23.5 +00.0	N 18 18.9 -00.6	342 39.2 -00.5	N 15 12.6 -01.0	62 56.7 -34.1	N 25 59.9 +06.9	12								
13	13 23.5 +00.1	N 18 18.3 -00.6	357 38.7 -00.6	N 15 11.6 -01.0	77 22.6 -34.2	N 26 06.8 +06.8	13								
14	28 23.6 +00.0	N 18 17.7 -00.6	12 38.1 -00.5	N 15 10.6 -01.0	91 48.4 -34.2	N 26 13.6 +06.6	14								
15	43 23.6 +00.0	N 18 17.1 -00.6	27 37.6 -00.5	N 15 09.6 -01.0	106 14.2 -34.3	N 26 20.2 +06.4	15								
16	58 23.6 +00.0	N 18 16.5 -00.7	42 37.1 -00.6	N 15 08.6 -01.0	120 39.9 -34.3	N 26 26.6 +06.3	16								
17	73 23.6 +00.1	N 18 15.8 -00.6	57 36.5 -00.5	N 15 07.6 -01.0	135 05.6 -34.4	N 26 32.9 +06.1	17								
18	88 23.7 +00.0	N 18 15.2 -00.6	72 36.0 -00.6	N 15 06.6 -01.0	149 31.2 -34.4	N 26 39.0 +06.0	18								
19	103 23.7 +00.0	N 18 14.6 -00.6	87 35.4 -00.5	N 15 05.6 -01.0	163 56.8 -34.4	N 26 45.0 +05.8	19								
20	118 23.7 +00.1	N 18 14.0 -00.6	102 34.9 -00.5	N 15 04.6 -01.0	178 22.4 -34.5	N 26 50.8 +05.7	20								
21	133 23.8 +00.0	N 18 13.4 -00.6	117 34.4 -00.6	N 15 03.6 -01.1	192 47.9 -34.5	N 26 56.5 +05.4	21								
22	148 23.8 +00.0	N 18 12.8 -00.7	132 33.8 -00.5	N 15 02.5 -01.0	207 13.4 -34.6	N 27 01.9 +05.3	22								
23	163 23.8 +00.1	N 18 12.1 -00.6	147 33.3 -00.6	N 15 01.5 -01.0	221 38.8 -34.5	N 27 07.2 +05.2	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 230° 230° 230° 230° 230° 229°	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 215° 214° 214° 214° 214° 214°	Greenwich Culmination Time: 13:09	UT 02 06 10 14 18 22	SD 15'8 15'8 15'7 15'7 15'7 15'7	HP 57'9 57'8 57'7 57'6 57'5 57'5	SHA 300° 298° 296° 293° 291° 288°	Greenwich Culmination Time: 07:38

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	243 36.8 +00.7	N 20 44.9 +00.3	235 20.9 +02.0	N 21 47.9 +00.0	317 41.5 +02.6	S 06 24.1 +00.1	00								
01	258 37.5 +00.6	N 20 45.2 +00.3	250 22.9 +01.9	N 21 47.9 +00.1	332 44.1 +02.6	S 06 24.2 +00.0	01								
02	273 38.1 +00.7	N 20 45.5 +00.4	265 24.8 +02.0	N 21 48.0 +00.0	347 46.7 +02.5	S 06 24.2 +00.1	02								
03	288 38.8 +00.7	N 20 45.9 +00.3	280 26.8 +02.0	N 21 48.0 +00.1	2 49.2 +02.6	S 06 24.3 +00.1	03								
04	303 39.5 +00.7	N 20 46.2 +00.3	295 28.8 +02.0	N 21 48.1 +00.1	17 51.8 +02.6	S 06 24.4 +00.0	04								
05	318 40.2 +00.7	N 20 46.5 +00.3	310 30.8 +02.0	N 21 48.2 +00.0	32 54.4 +02.6	S 06 24.4 +00.1	05								
06	333 40.9 +00.6	N 20 46.8 +00.4	325 32.8 +01.9	N 21 48.2 +00.1	47 57.0 +02.5	S 06 24.5 +00.0	06								
07	348 41.5 +00.7	N 20 47.2 +00.3	340 34.7 +02.0	N 21 48.3 +00.0	62 59.5 +02.6	S 06 24.5 +00.1	07								
08	3 42.2 +00.7	N 20 47.5 +00.3	355 36.7 +02.0	N 21 48.3 +00.1	78 02.1 +02.6	S 06 24.6 +00.0	08								
09	18 42.9 +00.7	N 20 47.8 +00.3	10 38.7 +02.0	N 21 48.4 +00.0	93 04.7 +02.5	S 06 24.6 +00.1	09								
10	33 43.6 +00.7	N 20 48.1 +00.3	25 40.7 +02.0	N 21 48.4 +00.1	108 07.2 +02.6	S 06 24.7 +00.0	10								
11	48 44.3 +00.7	N 20 48.4 +00.4	40 42.7 +01.9	N 21 48.5 +00.0	123 09.8 +02.6	S 06 24.7 +00.1	11								
12	63 45.0 +00.6	N 20 48.8 +00.3	55 44.6 +02.0	N 21 48.5 +00.1	138 12.4 +02.5	S 06 24.8 +00.0	12								
13	78 45.6 +00.7	N 20 49.1 +00.3	70 46.6 +02.0	N 21 48.6 +00.0	153 14.9 +02.6	S 06 24.8 +00.1	13								
14	93 46.3 +00.7	N 20 49.4 +00.3	85 48.6 +02.0	N 21 48.6 +00.1	168 17.5 +02.6	S 06 24.9 +00.1	14								
15	108 47.0 +00.7	N 20 49.7 +00.3	100 50.6 +02.0	N 21 48.7 +00.0	183 20.1 +02.6	S 06 25.0 +00.0	15								
16	123 47.7 +00.7	N 20 50.0 +00.4	115 52.6 +01.9	N 21 48.7 +00.1	198 22.7 +02.5	S 06 25.0 +00.1	16								
17	138 48.4 +00.7	N 20 50.4 +00.3	130 54.5 +02.0	N 21 48.8 +00.0	213 25.2 +02.6	S 06 25.1 +00.0	17								
18	153 49.1 +00.6	N 20 50.7 +00.3	145 56.5 +02.0	N 21 48.8 +00.1	228 27.8 +02.6	S 06 25.1 +00.1	18								
19	168 49.7 +00.7	N 20 51.0 +00.3	160 58.5 +02.0	N 21 48.9 +00.0	243 30.4 +02.5	S 06 25.2 +00.0	19								
20	183 50.4 +00.7	N 20 51.3 +00.3	176 00.5 +02.0	N 21 48.9 +00.1	258 32.9 +02.6	S 06 25.2 +00.1	20								
21	198 51.1 +00.7	N 20 51.6 +00.3	191 02.5 +01.9	N 21 49.0 +00.0	273 35.5 +02.6	S 06 25.3 +00.0	21								
22	213 51.8 +00.7	N 20 51.9 +00.4	206 04.4 +02.0	N 21 49.0 +00.1	288 38.1 +02.6	S 06 25.3 +00.1	22								
23	228 52.5 +00.7	N 20 52.3 +00.3	221 06.4 +02.0	N 21 49.1 +00.1	303 40.7 +02.5	S 06 25.4 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 295° 295° 295° 295° 295° 295°	Greenwich Culmination Time: 07:45	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 287° 287° 287° 287° 287° 287°	Greenwich Culmination Time: 08:17	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 010° 010° 010° 010° 010° 010°	Greenwich Culmination Time: 02:48

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 23.9 +00.0	N 18 11.5 -00.6	162 32.7 -00.5	N 15 00.5 -01.0	236 04.3 -34.6	N 27 12.4 +05.0	00						
01	193 23.9 +00.0	N 18 10.9 -00.6	177 32.2 -00.5	N 14 59.5 -01.0	250 29.7 -34.7	N 27 17.4 +04.8	01						
02	208 23.9 +00.1	N 18 10.3 -00.7	192 31.7 -00.6	N 14 58.5 -01.0	264 55.0 -34.6	N 27 22.2 +04.6	02						
03	223 24.0 +00.0	N 18 09.6 -00.6	207 31.1 -00.5	N 14 57.5 -01.0	279 20.4 -34.7	N 27 26.8 +04.5	03						
04	238 24.0 +00.0	N 18 09.0 -00.6	222 30.6 -00.5	N 14 56.5 -01.0	293 45.7 -34.7	N 27 31.3 +04.3	04						
05	253 24.0 +00.1	N 18 08.4 -00.6	237 30.1 -00.6	N 14 55.5 -01.1	308 11.0 -34.8	N 27 35.6 +04.1	05						
06	268 24.1 +00.0	N 18 07.8 -00.6	252 29.5 -00.5	N 14 54.4 -01.0	322 36.2 -34.7	N 27 39.7 +04.0	06						
07	283 24.1 +00.0	N 18 07.2 -00.7	267 29.0 -00.5	N 14 53.4 -01.0	337 01.5 -34.8	N 27 43.7 +03.8	07						
08	298 24.1 +00.1	N 18 06.5 -00.6	282 28.5 -00.6	N 14 52.4 -01.0	351 26.7 -34.8	N 27 47.5 +03.7	08						
09	313 24.2 +00.0	N 18 05.9 -00.6	297 27.9 -00.5	N 14 51.4 -01.0	5 51.9 -34.8	N 27 51.2 +03.4	09						
10	328 24.2 +00.1	N 18 05.3 -00.6	312 27.4 -00.5	N 14 50.4 -01.0	20 17.1 -34.8	N 27 54.6 +03.3	10						
11	343 24.3 +00.0	N 18 04.7 -00.7	327 26.9 -00.6	N 14 49.4 -01.1	34 42.3 -34.8	N 27 57.9 +03.1	11						
12	358 24.3 +00.0	N 18 04.0 -00.6	342 26.3 -00.5	N 14 48.3 -01.0	49 07.5 -34.9	N 28 01.0 +03.0	12						
13	13 24.3 +00.1	N 18 03.4 -00.6	357 25.8 -00.5	N 14 47.3 -01.0	63 32.6 -34.8	N 28 04.0 +02.8	13						
14	28 24.4 +00.0	N 18 02.8 -00.7	12 25.3 -00.6	N 14 46.3 -01.0	77 57.8 -34.9	N 28 06.8 +02.6	14						
15	43 24.4 +00.0	N 18 02.1 -00.6	27 24.7 -00.5	N 14 45.3 -01.0	92 22.9 -34.8	N 28 09.4 +02.4	15						
16	58 24.4 +00.1	N 18 01.5 -00.6	42 24.2 -00.5	N 14 44.3 -01.1	106 48.1 -34.9	N 28 11.8 +02.3	16						
17	73 24.5 +00.0	N 18 00.9 -00.6	57 23.7 -00.6	N 14 43.2 -01.0	121 13.2 -34.9	N 28 14.1 +02.1	17						
18	88 24.5 +00.0	N 18 00.3 -00.7	72 23.1 -00.5	N 14 42.2 -01.0	135 38.3 -34.8	N 28 16.2 +01.9	18						
19	103 24.5 +00.1	N 17 59.6 -00.6	87 22.6 -00.5	N 14 41.2 -01.0	150 03.5 -34.9	N 28 18.1 +01.8	19						
20	118 24.6 +00.0	N 17 59.0 -00.6	102 22.1 -00.5	N 14 40.2 -01.0	164 28.6 -34.8	N 28 19.9 +01.6	20						
21	133 24.6 +00.1	N 17 58.4 -00.7	117 21.6 -00.6	N 14 39.2 -01.1	178 53.8 -34.8	N 28 21.5 +01.4	21						
22	148 24.7 +00.0	N 17 57.7 -00.6	132 21.0 -00.5	N 14 38.1 -01.0	193 19.0 -34.9	N 28 22.9 +01.3	22						
23	163 24.7 +00.0	N 17 57.1 -00.6	147 20.5 -00.5	N 14 37.1 -01.0	207 44.1 -34.8	N 28 24.2 +01.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'6 15'6 15'6 15'5 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'4 57'3 57'2 57'1 57'0 56'9								
	SHA 229° 229° 229° 229° 229° 228°		SHA 213° 213° 213° 213° 213° 212°		SHA 286° 283° 281° 278° 276° 273°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:10		Greenwich Culmination Time: 08:35								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 53.2 +00.6	N 20 52.6 +00.3	236 08.4 +02.0	N 21 49.2 +00.0	318 43.2 +02.6	S 06 25.4 +00.1	00						
01	258 53.8 +00.7	N 20 52.9 +00.3	251 10.4 +02.0	N 21 49.2 +00.1	333 45.8 +02.6	S 06 25.5 +00.1	01						
02	273 54.5 +00.7	N 20 53.2 +00.3	266 12.4 +02.0	N 21 49.3 +00.0	348 48.4 +02.6	S 06 25.6 +00.0	02						
03	288 55.2 +00.7	N 20 53.5 +00.3	281 14.4 +01.9	N 21 49.3 +00.1	3 51.0 +02.5	S 06 25.6 +00.1	03						
04	303 55.9 +00.7	N 20 53.8 +00.4	296 16.3 +02.0	N 21 49.4 +00.0	18 53.5 +02.6	S 06 25.7 +00.0	04						
05	318 56.6 +00.7	N 20 54.2 +00.3	311 18.3 +02.0	N 21 49.4 +00.1	33 56.1 +02.6	S 06 25.7 +00.1	05						
06	333 57.3 +00.6	N 20 54.5 +00.3	326 20.3 +02.0	N 21 49.5 +00.0	48 58.7 +02.5	S 06 25.8 +00.0	06						
07	348 57.9 +00.7	N 20 54.8 +00.3	341 22.3 +02.0	N 21 49.5 +00.1	64 01.2 +02.6	S 06 25.8 +00.1	07						
08	3 58.6 +00.7	N 20 55.1 +00.3	356 24.3 +02.0	N 21 49.6 +00.0	79 03.8 +02.6	S 06 25.9 +00.0	08						
09	18 59.3 +00.7	N 20 55.4 +00.3	11 26.3 +01.9	N 21 49.6 +00.1	94 06.4 +02.6	S 06 25.9 +00.1	09						
10	33 60.0 +00.7	N 20 55.7 +00.3	26 28.2 +02.0	N 21 49.7 +00.0	109 09.0 +02.5	S 06 26.0 +00.1	10						
11	49 00.7 +00.7	N 20 56.0 +00.3	41 30.2 +02.0	N 21 49.7 +00.1	124 11.5 +02.6	S 06 26.1 +00.0	11						
12	64 01.4 +00.6	N 20 56.3 +00.4	56 32.2 +02.0	N 21 49.8 +00.0	139 14.1 +02.6	S 06 26.1 +00.1	12						
13	79 02.0 +00.7	N 20 56.7 +00.3	71 34.2 +02.0	N 21 49.8 +00.1	154 16.7 +02.6	S 06 26.2 +00.0	13						
14	94 02.7 +00.7	N 20 57.0 +00.3	86 36.2 +02.0	N 21 49.9 +00.0	169 19.3 +02.5	S 06 26.2 +00.1	14						
15	109 03.4 +00.7	N 20 57.3 +00.3	101 38.2 +01.9	N 21 49.9 +00.1	184 21.8 +02.6	S 06 26.3 +00.0	15						
16	124 04.1 +00.7	N 20 57.6 +00.3	116 40.1 +02.0	N 21 50.0 +00.0	199 24.4 +02.6	S 06 26.3 +00.1	16						
17	139 04.8 +00.7	N 20 57.9 +00.3	131 42.1 +02.0	N 21 50.0 +00.1	214 27.0 +02.6	S 06 26.4 +00.1	17						
18	154 05.5 +00.6	N 20 58.2 +00.3	146 44.1 +02.0	N 21 50.1 +00.0	229 29.6 +02.5	S 06 26.5 +00.0	18						
19	169 06.1 +00.7	N 20 58.5 +00.3	161 46.1 +02.0	N 21 50.1 +00.1	244 32.1 +02.6	S 06 26.5 +00.1	19						
20	184 06.8 +00.7	N 20 58.8 +00.3	176 48.1 +02.0	N 21 50.2 +00.0	259 34.7 +02.6	S 06 26.6 +00.0	20						
21	199 07.5 +00.7	N 20 59.1 +00.3	191 50.1 +02.0	N 21 50.2 +00.1	274 37.3 +02.6	S 06 26.6 +00.1	21						
22	214 08.2 +00.7	N 20 59.4 +00.4	206 52.1 +01.9	N 21 50.3 +00.0	289 39.9 +02.5	S 06 26.7 +00.0	22						
23	229 08.9 +00.7	N 20 59.8 +00.3	221 54.0 +02.0	N 21 50.3 +00.1	304 42.4 +02.6	S 06 26.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 295° 295° 294° 294° 294° 294°		SHA 287° 287° 287° 287° 287° 287°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:44		Greenwich Culmination Time: 08:14		Greenwich Culmination Time: 02:44								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	178 24.7 +00.1	N 17 56.5 -00.7	162 20.0 -00.5	N 14 36.1 -01.1	222 09.3 -34.8	N 28 25.2 +00.9	00										
01	193 24.8 +00.0	N 17 55.8 -00.6	177 19.5 -00.6	N 14 35.0 -01.0	236 34.5 -34.8	N 28 26.1 +00.8	01										
02	208 24.8 +00.1	N 17 55.2 -00.6	192 18.9 -00.5	N 14 34.0 -01.0	250 59.7 -34.8	N 28 26.9 +00.6	02										
03	223 24.9 +00.0	N 17 54.6 -00.7	207 18.4 -00.5	N 14 33.0 -01.0	265 24.9 -34.7	N 28 27.5 +00.4	03										
04	238 24.9 +00.0	N 17 53.9 -00.6	222 17.9 -00.5	N 14 32.0 -01.1	279 50.2 -34.7	N 28 27.9 +00.2	04										
05	253 24.9 +00.1	N 17 53.3 -00.6	237 17.4 -00.6	N 14 30.9 -01.0	294 15.5 -34.7	N 28 28.1 +00.0	05										
06	268 25.0 +00.0	N 17 52.7 -00.7	252 16.8 -00.5	N 14 29.9 -01.0	308 40.8 -34.7	N 28 28.1 -00.1	06										
07	283 25.0 +00.1	N 17 52.0 -00.6	267 16.3 -00.5	N 14 28.9 -01.1	323 06.1 -34.7	N 28 28.0 -00.2	07										
08	298 25.1 +00.0	N 17 51.4 -00.6	282 15.8 -00.5	N 14 27.8 -01.0	337 31.4 -34.6	N 28 27.8 -00.5	08										
09	313 25.1 +00.0	N 17 50.8 -00.7	297 15.3 -00.5	N 14 26.8 -01.0	351 56.8 -34.6	N 28 27.3 -00.6	09										
10	328 25.1 +00.1	N 17 50.1 -00.6	312 14.8 -00.6	N 14 25.8 -01.1	6 22.2 -34.6	N 28 26.7 -00.8	10										
11	343 25.2 +00.0	N 17 49.5 -00.7	327 14.2 -00.5	N 14 24.7 -01.0	20 47.6 -34.5	N 28 25.9 -00.9	11										
12	358 25.2 +00.1	N 17 48.8 -00.6	342 13.7 -00.5	N 14 23.7 -01.0	35 13.1 -34.5	N 28 25.0 -01.1	12										
13	13 25.3 +00.0	N 17 48.2 -00.6	357 13.2 -00.5	N 14 22.7 -01.1	49 38.6 -34.4	N 28 23.9 -01.3	13										
14	28 25.3 +00.1	N 17 47.6 -00.7	12 12.7 -00.5	N 14 21.6 -01.0	64 04.2 -34.4	N 28 22.6 -01.4	14										
15	43 25.4 +00.0	N 17 46.9 -00.6	27 12.2 -00.6	N 14 20.6 -01.0	78 29.8 -34.4	N 28 21.2 -01.6	15										
16	58 25.4 +00.0	N 17 46.3 -00.7	42 11.6 -00.5	N 14 19.6 -01.1	92 55.4 -34.3	N 28 19.6 -01.8	16										
17	73 25.4 +00.1	N 17 45.6 -00.6	57 11.1 -00.5	N 14 18.5 -01.0	107 21.1 -34.3	N 28 17.8 -01.9	17										
18	88 25.5 +00.0	N 17 45.0 -00.6	72 10.6 -00.5	N 14 17.5 -01.1	121 46.8 -34.2	N 28 15.9 -02.1	18										
19	103 25.5 +00.1	N 17 44.4 -00.7	87 10.1 -00.5	N 14 16.4 -01.0	136 12.6 -34.2	N 28 13.8 -02.3	19										
20	118 25.6 +00.0	N 17 43.7 -00.6	102 09.6 -00.5	N 14 15.4 -01.0	150 38.4 -34.1	N 28 11.5 -02.4	20										
21	133 25.6 +00.1	N 17 43.1 -00.7	117 09.1 -00.6	N 14 14.4 -01.1	165 04.3 -34.1	N 28 09.1 -02.6	21										
22	148 25.7 +00.0	N 17 42.4 -00.6	132 08.5 -00.5	N 14 13.3 -01.0	179 30.2 -34.0	N 28 06.5 -02.7	22										
23	163 25.7 +00.1	N 17 41.8 -00.7	147 08.0 -00.5	N 14 12.3 -01.1	193 56.2 -34.0	N 28 03.8 -02.9	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 228° 228° 228° 228° 228° 227°	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 212° 212° 212° 212° 211° 211°	Greenwich Culmination Time: 13:11		UT 02 06 10 14 18 22	SD 15'5 15'5 15'4 15'4 15'4 15'4	HP 56'8 56'8 56'7 56'6 56'5 56'4	SHA 271° 268° 266° 263° 261° 259°	Greenwich Culmination Time: 09:33
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	244 09.6 +00.6	N 21 00.1 +00.3	236 56.0 +02.0	N 21 50.4 +00.0	319 45.0 +02.6	S 06 26.8 +00.0	00										
01	259 10.2 +00.7	N 21 00.4 +00.3	251 58.0 +02.0	N 21 50.4 +00.1	334 47.6 +02.6	S 06 26.8 +00.1	01										
02	274 10.9 +00.7	N 21 00.7 +00.3	267 00.0 +02.0	N 21 50.5 +00.0	349 50.2 +02.5	S 06 26.9 +00.1	02										
03	289 11.6 +00.7	N 21 01.0 +00.3	282 02.0 +02.0	N 21 50.5 +00.1	4 52.7 +02.6	S 06 27.0 +00.0	03										
04	304 12.3 +00.7	N 21 01.3 +00.3	297 04.0 +02.0	N 21 50.6 +00.1	19 55.3 +02.6	S 06 27.0 +00.1	04										
05	319 13.0 +00.7	N 21 01.6 +00.3	312 06.0 +02.0	N 21 50.7 +00.0	34 57.9 +02.6	S 06 27.1 +00.0	05										
06	334 13.7 +00.7	N 21 01.9 +00.3	327 08.0 +01.9	N 21 50.7 +00.1	50 00.5 +02.5	S 06 27.1 +00.1	06										
07	349 14.4 +00.6	N 21 02.2 +00.3	342 09.9 +02.0	N 21 50.8 +00.0	65 03.0 +02.6	S 06 27.2 +00.0	07										
08	4 15.0 +00.7	N 21 02.5 +00.3	357 11.9 +02.0	N 21 50.8 +00.1	80 05.6 +02.6	S 06 27.2 +00.1	08										
09	19 15.7 +00.7	N 21 02.8 +00.3	12 13.9 +02.0	N 21 50.9 +00.0	95 08.2 +02.6	S 06 27.3 +00.1	09										
10	34 16.4 +00.7	N 21 03.1 +00.3	27 15.9 +02.0	N 21 50.9 +00.1	110 10.8 +02.5	S 06 27.4 +00.0	10										
11	49 17.1 +00.7	N 21 03.4 +00.3	42 17.9 +02.0	N 21 51.0 +00.0	125 13.3 +02.6	S 06 27.4 +00.1	11										
12	64 17.8 +00.7	N 21 03.7 +00.3	57 19.9 +02.0	N 21 51.0 +00.1	140 15.9 +02.6	S 06 27.5 +00.0	12										
13	79 18.5 +00.7	N 21 04.0 +00.3	72 21.9 +02.0	N 21 51.1 +00.0	155 18.5 +02.6	S 06 27.5 +00.1	13										
14	94 19.2 +00.6	N 21 04.3 +00.3	87 23.9 +01.9	N 21 51.1 +00.1	170 21.1 +02.6	S 06 27.6 +00.0	14										
15	109 19.8 +00.7	N 21 04.6 +00.3	102 25.8 +02.0	N 21 51.2 +00.0	185 23.7 +02.5	S 06 27.6 +00.1	15										
16	124 20.5 +00.7	N 21 04.9 +00.3	117 27.8 +02.0	N 21 51.2 +00.1	200 26.2 +02.6	S 06 27.7 +00.1	16										
17	139 21.2 +00.7	N 21 05.2 +00.4	132 29.8 +02.0	N 21 51.3 +00.0	215 28.8 +02.6	S 06 27.8 +00.0	17										
18	154 21.9 +00.7	N 21 05.6 +00.3	147 31.8 +02.0	N 21 51.3 +00.1	230 31.4 +02.6	S 06 27.8 +00.1	18										
19	169 22.6 +00.7	N 21 05.9 +00.3	162 33.8 +02.0	N 21 51.4 +00.0	245 34.0 +02.5	S 06 27.9 +00.0	19										
20	184 23.3 +00.7	N 21 06.2 +00.3	177 35.8 +02.0	N 21 51.4 +00.1	260 36.5 +02.6	S 06 27.9 +00.1	20										
21	199 24.0 +00.6	N 21 06.5 +00.3	192 37.8 +02.0	N 21 51.5 +00.0	275 39.1 +02.6	S 06 28.0 +00.0	21										
22	214 24.6 +00.7	N 21 06.8 +00.3	207 39.8 +02.0	N 21 51.5 +00.1	290 41.7 +02.6	S 06 28.0 +00.1	22										
23	229 25.3 +00.7	N 21 07.1 +00.3	222 41.8 +02.0	N 21 51.6 +00.0	305 44.3 +02.6	S 06 28.1 +00.1	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 294° 294° 294° 294° 294° 293°	Greenwich Culmination Time: 07:43		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 287° 287° 287° 287° 287° 287°	Greenwich Culmination Time: 08:11		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 010° 010° 010° 010° 010° 010°	Greenwich Culmination Time: 02:40

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 25.8 +00.0	N 17 41.1 -00.6	162 07.5 -00.5	N 14 11.2 -01.0	208 22.2 -33.9	N 28 00.9 -03.1	00						
01	193 25.8 +00.0	N 17 40.5 -00.7	177 07.0 -00.5	N 14 10.2 -01.1	222 48.3 -33.8	N 27 57.8 -03.2	01						
02	208 25.8 +00.1	N 17 39.8 -00.6	192 06.5 -00.5	N 14 09.1 -01.0	237 14.5 -33.8	N 27 54.6 -03.4	02						
03	223 25.9 +00.0	N 17 39.2 -00.6	207 06.0 -00.5	N 14 08.1 -01.0	251 40.7 -33.7	N 27 51.2 -03.5	03						
04	238 25.9 +00.1	N 17 38.6 -00.7	222 05.5 -00.6	N 14 07.1 -01.1	266 07.0 -33.7	N 27 47.7 -03.7	04						
05	253 26.0 +00.0	N 17 37.9 -00.6	237 04.9 -00.5	N 14 06.0 -01.0	280 33.3 -33.6	N 27 44.0 -03.8	05						
06	268 26.0 +00.1	N 17 37.3 -00.7	252 04.4 -00.5	N 14 05.0 -01.1	294 59.7 -33.5	N 27 40.2 -04.0	06						
07	283 26.1 +00.0	N 17 36.6 -00.6	267 03.9 -00.5	N 14 03.9 -01.0	309 26.2 -33.5	N 27 36.2 -04.1	07						
08	298 26.1 +00.1	N 17 36.0 -00.7	282 03.4 -00.5	N 14 02.9 -01.1	323 52.7 -33.4	N 27 32.1 -04.3	08						
09	313 26.2 +00.0	N 17 35.3 -00.6	297 02.9 -00.5	N 14 01.8 -01.0	338 19.3 -33.3	N 27 27.8 -04.4	09						
10	328 26.2 +00.1	N 17 34.7 -00.7	312 02.4 -00.5	N 14 00.8 -01.1	352 46.0 -33.2	N 27 23.4 -04.6	10						
11	343 26.3 +00.0	N 17 34.0 -00.6	327 01.9 -00.5	N 13 59.7 -01.0	7 12.8 -33.2	N 27 18.8 -04.8	11						
12	358 26.3 +00.1	N 17 33.4 -00.7	342 01.4 -00.5	N 13 58.7 -01.1	21 39.6 -33.1	N 27 14.0 -04.9	12						
13	13 26.4 +00.0	N 17 32.7 -00.6	357 00.9 -00.5	N 13 57.6 -01.0	36 06.5 -33.0	N 27 09.1 -05.0	13						
14	28 26.4 +00.1	N 17 32.1 -00.7	12 00.4 -00.5	N 13 56.6 -01.1	50 33.5 -32.9	N 27 04.1 -05.2	14						
15	43 26.5 +00.0	N 17 31.4 -00.6	26 59.9 -00.6	N 13 55.5 -01.0	65 00.6 -32.9	N 26 58.9 -05.3	15						
16	58 26.5 +00.1	N 17 30.8 -00.7	41 59.3 -00.5	N 13 54.5 -01.1	79 27.7 -32.8	N 26 53.6 -05.4	16						
17	73 26.6 +00.0	N 17 30.1 -00.7	56 58.8 -00.5	N 13 53.4 -01.0	93 54.9 -32.7	N 26 48.2 -05.6	17						
18	88 26.6 +00.1	N 17 29.4 -00.6	71 58.3 -00.5	N 13 52.4 -01.1	108 22.2 -32.6	N 26 42.6 -05.8	18						
19	103 26.7 +00.0	N 17 28.8 -00.7	86 57.8 -00.5	N 13 51.3 -01.1	122 49.6 -32.5	N 26 36.8 -05.9	19						
20	118 26.7 +00.1	N 17 28.1 -00.6	101 57.3 -00.5	N 13 50.2 -01.0	137 17.1 -32.5	N 26 30.9 -06.0	20						
21	133 26.8 +00.0	N 17 27.5 -00.7	116 56.8 -00.5	N 13 49.2 -01.1	151 44.6 -32.3	N 26 24.9 -06.1	21						
22	148 26.8 +00.1	N 17 26.8 -00.6	131 56.3 -00.5	N 13 48.1 -01.0	166 12.3 -32.3	N 26 18.8 -06.3	22						
23	163 26.9 +00.0	N 17 26.2 -00.7	146 55.8 -00.5	N 13 47.1 -01.1	180 40.0 -32.2	N 26 12.5 -06.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 15'3 15'3 15'3 15'3 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'3 56'3 56'2 56'1 56'0 55'9								
	SHA 227° 227° 227° 227° 227° 226°		SHA 211° 211° 211° 210° 210° 210°		SHA 256° 254° 251° 249° 247° 244°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:11		Greenwich Culmination Time: 10:30								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	244 26.0 +00.7	N 21 07.4 +00.3	237 43.8 +01.9	N 21 51.6 +00.1	320 46.9 +02.5	S 06 28.2 +00.0	00						
01	259 26.7 +00.7	N 21 07.7 +00.3	252 45.7 +02.0	N 21 51.7 +00.0	335 49.4 +02.6	S 06 28.2 +00.1	01						
02	274 27.4 +00.7	N 21 08.0 +00.3	267 47.7 +02.0	N 21 51.7 +00.1	350 52.0 +02.6	S 06 28.3 +00.0	02						
03	289 28.1 +00.7	N 21 08.3 +00.3	282 49.7 +02.0	N 21 51.8 +00.0	5 54.6 +02.6	S 06 28.3 +00.1	03						
04	304 28.8 +00.6	N 21 08.6 +00.3	297 51.7 +02.0	N 21 51.8 +00.1	20 57.2 +02.5	S 06 28.4 +00.0	04						
05	319 29.4 +00.7	N 21 08.9 +00.3	312 53.7 +02.0	N 21 51.9 +00.0	35 59.7 +02.6	S 06 28.4 +00.1	05						
06	334 30.1 +00.7	N 21 09.2 +00.3	327 55.7 +02.0	N 21 51.9 +00.1	51 02.3 +02.6	S 06 28.5 +00.1	06						
07	349 30.8 +00.7	N 21 09.5 +00.2	342 57.7 +02.0	N 21 52.0 +00.0	66 04.9 +02.6	S 06 28.6 +00.0	07						
08	4 31.5 +00.7	N 21 09.7 +00.3	357 59.7 +02.0	N 21 52.0 +00.1	81 07.5 +02.6	S 06 28.6 +00.1	08						
09	19 32.2 +00.7	N 21 10.0 +00.3	13 01.7 +02.0	N 21 52.1 +00.0	96 10.1 +02.5	S 06 28.7 +00.0	09						
10	34 32.9 +00.7	N 21 10.3 +00.3	28 03.7 +02.0	N 21 52.1 +00.1	111 12.6 +02.6	S 06 28.7 +00.1	10						
11	49 33.6 +00.7	N 21 10.6 +00.3	43 05.7 +02.0	N 21 52.2 +00.0	126 15.2 +02.6	S 06 28.8 +00.1	11						
12	64 34.3 +00.6	N 21 10.9 +00.3	58 07.7 +01.9	N 21 52.2 +00.1	141 17.8 +02.6	S 06 28.9 +00.0	12						
13	79 34.9 +00.7	N 21 11.2 +00.3	73 09.6 +02.0	N 21 52.3 +00.0	156 20.4 +02.6	S 06 28.9 +00.1	13						
14	94 35.6 +00.7	N 21 11.5 +00.3	88 11.6 +02.0	N 21 52.3 +00.1	171 23.0 +02.5	S 06 29.0 +00.0	14						
15	109 36.3 +00.7	N 21 11.8 +00.3	103 13.6 +02.0	N 21 52.4 +00.0	186 25.5 +02.6	S 06 29.0 +00.1	15						
16	124 37.0 +00.7	N 21 12.1 +00.3	118 15.6 +02.0	N 21 52.4 +00.1	201 28.1 +02.6	S 06 29.1 +00.0	16						
17	139 37.7 +00.7	N 21 12.4 +00.3	133 17.6 +02.0	N 21 52.5 +00.0	216 30.7 +02.6	S 06 29.1 +00.1	17						
18	154 38.4 +00.7	N 21 12.7 +00.3	148 19.6 +02.0	N 21 52.5 +00.1	231 33.3 +02.6	S 06 29.2 +00.1	18						
19	169 39.1 +00.7	N 21 13.0 +00.3	163 21.6 +02.0	N 21 52.6 +00.0	246 35.9 +02.5	S 06 29.3 +00.0	19						
20	184 39.8 +00.6	N 21 13.3 +00.3	178 23.6 +02.0	N 21 52.6 +00.1	261 38.4 +02.6	S 06 29.3 +00.1	20						
21	199 40.4 +00.7	N 21 13.6 +00.3	193 25.6 +02.0	N 21 52.7 +00.0	276 41.0 +02.6	S 06 29.4 +00.0	21						
22	214 41.1 +00.7	N 21 13.9 +00.3	208 27.6 +02.0	N 21 52.7 +00.1	291 43.6 +02.6	S 06 29.4 +00.1	22						
23	229 41.8 +00.7	N 21 14.2 +00.3	223 29.6 +02.0	N 21 52.8 +00.0	306 46.2 +02.6	S 06 29.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 293° 293° 293° 293° 293° 293°		SHA 287° 287° 287° 287° 287° 286°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:41		Greenwich Culmination Time: 08:08		Greenwich Culmination Time: 02:36								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 26.9 +00.1	N 17 25.5 -00.6	161 55.3 -00.5	N 13 46.0 -01.0	195 07.8 -32.1	N 26 06.0 -06.5	00						
01	193 27.0 +00.0	N 17 24.9 -00.7	176 54.8 -00.5	N 13 45.0 -01.1	209 35.7 -32.0	N 25 59.5 -06.7	01						
02	208 27.0 +00.1	N 17 24.2 -00.7	191 54.3 -00.5	N 13 43.9 -01.1	224 03.7 -32.0	N 25 52.8 -06.9	02						
03	223 27.1 +00.0	N 17 23.5 -00.6	206 53.8 -00.5	N 13 42.8 -01.0	238 31.7 -31.8	N 25 45.9 -06.9	03						
04	238 27.1 +00.1	N 17 22.9 -00.7	221 53.3 -00.5	N 13 41.8 -01.1	252 59.9 -31.7	N 25 39.0 -07.1	04						
05	253 27.2 +00.0	N 17 22.2 -00.6	236 52.8 -00.5	N 13 40.7 -01.0	267 28.2 -31.7	N 25 31.9 -07.2	05						
06	268 27.2 +00.1	N 17 21.6 -00.7	251 52.3 -00.5	N 13 39.7 -01.1	281 56.5 -31.6	N 25 24.7 -07.4	06						
07	283 27.3 +00.0	N 17 20.9 -00.7	266 51.8 -00.5	N 13 38.6 -01.1	296 24.9 -31.4	N 25 17.3 -07.4	07						
08	298 27.3 +00.1	N 17 20.2 -00.6	281 51.3 -00.5	N 13 37.5 -01.0	310 53.5 -31.4	N 25 09.9 -07.6	08						
09	313 27.4 +00.0	N 17 19.6 -00.7	296 50.8 -00.5	N 13 36.5 -01.1	325 22.1 -31.3	N 25 02.3 -07.7	09						
10	328 27.4 +00.1	N 17 18.9 -00.6	311 50.3 -00.5	N 13 35.4 -01.1	339 50.8 -31.2	N 24 54.6 -07.9	10						
11	343 27.5 +00.1	N 17 18.3 -00.7	326 49.8 -00.5	N 13 34.3 -01.0	354 19.6 -31.1	N 24 46.7 -07.9	11						
12	358 27.6 +00.0	N 17 17.6 -00.7	341 49.3 -00.5	N 13 33.3 -01.1	8 48.5 -31.0	N 24 38.8 -08.1	12						
13	13 27.6 +00.1	N 17 16.9 -00.6	356 48.8 -00.5	N 13 32.2 -01.1	23 17.5 -31.0	N 24 30.7 -08.2	13						
14	28 27.7 +00.0	N 17 16.3 -00.7	11 48.3 -00.5	N 13 31.1 -01.0	37 46.5 -30.8	N 24 22.5 -08.3	14						
15	43 27.7 +00.1	N 17 15.6 -00.7	26 47.8 -00.5	N 13 30.1 -01.1	52 15.7 -30.7	N 24 14.2 -08.4	15						
16	58 27.8 +00.0	N 17 14.9 -00.6	41 47.3 -00.5	N 13 29.0 -01.1	66 45.0 -30.6	N 24 05.8 -08.5	16						
17	73 27.8 +00.1	N 17 14.3 -00.7	56 46.8 -00.5	N 13 27.9 -01.0	81 14.4 -30.6	N 23 57.3 -08.7	17						
18	88 27.9 +00.0	N 17 13.6 -00.7	71 46.3 -00.5	N 13 26.9 -01.1	95 43.8 -30.4	N 23 48.6 -08.7	18						
19	103 27.9 +00.1	N 17 12.9 -00.6	86 45.8 -00.5	N 13 25.8 -01.1	110 13.4 -30.3	N 23 39.9 -08.9	19						
20	118 28.0 +00.1	N 17 12.3 -00.7	101 45.3 -00.4	N 13 24.7 -01.0	124 43.1 -30.3	N 23 31.0 -09.0	20						
21	133 28.1 +00.0	N 17 11.6 -00.7	116 44.9 -00.5	N 13 23.7 -01.1	139 12.8 -30.2	N 23 22.0 -09.1	21						
22	148 28.1 +00.1	N 17 10.9 -00.6	131 44.4 -00.5	N 13 22.6 -01.1	153 42.6 -30.0	N 23 12.9 -09.2	22						
23	163 28.2 +00.0	N 17 10.3 -00.7	146 43.9 -00.5	N 13 21.5 -01.1	168 12.6 -30.0	N 23 03.7 -09.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'2 15'2 15'2 15'1 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'9 55'8 55'7 55'6 55'5 55'5								
	SHA 226° 226° 226° 226° 226° 225°		SHA 210° 210° 209° 209° 209° 209°		SHA 242° 240° 237° 235° 233° 231°								
	Greenwich Culmination Time: 12:06		Greenwich Culmination Time: 13:12		Greenwich Culmination Time: 11:23								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	244 42.5 +00.7	N 21 14.5 +00.3	238 31.6 +02.0	N 21 52.8 +00.1	321 48.8 +02.6	S 06 29.6 +00.0	00						
01	259 43.2 +00.7	N 21 14.8 +00.2	253 33.6 +02.0	N 21 52.9 +00.0	336 51.4 +02.5	S 06 29.6 +00.1	01						
02	274 43.9 +00.7	N 21 15.0 +00.3	268 35.6 +02.0	N 21 52.9 +00.1	351 53.9 +02.6	S 06 29.7 +00.0	02						
03	289 44.6 +00.7	N 21 15.3 +00.3	283 37.6 +02.0	N 21 53.0 +00.0	6 56.5 +02.6	S 06 29.7 +00.1	03						
04	304 45.3 +00.6	N 21 15.6 +00.3	298 39.6 +02.0	N 21 53.0 +00.0	21 59.1 +02.6	S 06 29.8 +00.0	04						
05	319 45.9 +00.7	N 21 15.9 +00.3	313 41.6 +01.9	N 21 53.0 +00.1	37 01.7 +02.6	S 06 29.8 +00.1	05						
06	334 46.6 +00.7	N 21 16.2 +00.3	328 43.5 +02.0	N 21 53.1 +00.0	52 04.3 +02.5	S 06 29.9 +00.1	06						
07	349 47.3 +00.7	N 21 16.5 +00.3	343 45.5 +02.0	N 21 53.1 +00.1	67 06.8 +02.6	S 06 30.0 +00.0	07						
08	4 48.0 +00.7	N 21 16.8 +00.3	358 47.5 +02.0	N 21 53.2 +00.0	82 09.4 +02.6	S 06 30.0 +00.1	08						
09	19 48.7 +00.7	N 21 17.1 +00.3	13 49.5 +02.0	N 21 53.2 +00.1	97 12.0 +02.6	S 06 30.1 +00.0	09						
10	34 49.4 +00.7	N 21 17.4 +00.3	28 51.5 +02.0	N 21 53.3 +00.0	112 14.6 +02.6	S 06 30.1 +00.1	10						
11	49 50.1 +00.7	N 21 17.7 +00.2	43 53.5 +02.0	N 21 53.3 +00.1	127 17.2 +02.6	S 06 30.2 +00.1	11						
12	64 50.8 +00.7	N 21 17.9 +00.3	58 55.5 +02.0	N 21 53.4 +00.0	142 19.8 +02.5	S 06 30.3 +00.0	12						
13	79 51.5 +00.6	N 21 18.2 +00.3	73 57.5 +02.0	N 21 53.4 +00.1	157 22.3 +02.6	S 06 30.3 +00.1	13						
14	94 52.1 +00.7	N 21 18.5 +00.3	88 59.5 +02.0	N 21 53.5 +00.0	172 24.9 +02.6	S 06 30.4 +00.0	14						
15	109 52.8 +00.7	N 21 18.8 +00.3	104 01.5 +02.0	N 21 53.5 +00.1	187 27.5 +02.6	S 06 30.4 +00.1	15						
16	124 53.5 +00.7	N 21 19.1 +00.3	119 03.5 +02.0	N 21 53.6 +00.0	202 30.1 +02.6	S 06 30.5 +00.1	16						
17	139 54.2 +00.7	N 21 19.4 +00.3	134 05.5 +02.0	N 21 53.6 +00.1	217 32.7 +02.6	S 06 30.6 +00.0	17						
18	154 54.9 +00.7	N 21 19.7 +00.3	149 07.5 +02.0	N 21 53.7 +00.0	232 35.3 +02.5	S 06 30.6 +00.1	18						
19	169 55.6 +00.7	N 21 20.0 +00.2	164 09.5 +02.0	N 21 53.7 +00.1	247 37.8 +02.6	S 06 30.7 +00.0	19						
20	184 56.3 +00.7	N 21 20.2 +00.3	179 11.5 +02.0	N 21 53.8 +00.0	262 40.4 +02.6	S 06 30.7 +00.1	20						
21	199 57.0 +00.7	N 21 20.5 +00.3	194 13.5 +02.0	N 21 53.8 +00.1	277 43.0 +02.6	S 06 30.8 +00.1	21						
22	214 57.7 +00.6	N 21 20.8 +00.3	209 15.5 +02.0	N 21 53.9 +00.0	292 45.6 +02.6	S 06 30.9 +00.0	22						
23	229 58.3 +00.7	N 21 21.1 +00.3	224 17.5 +02.0	N 21 53.9 +00.1	307 48.2 +02.6	S 06 30.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 293° 292° 292° 292° 292° 292°		SHA 286° 286° 286° 286° 286° 286°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:40		Greenwich Culmination Time: 08:04		Greenwich Culmination Time: 02:32								

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 28.2 +00.1	N 17 09.6 -00.7	161 43.4 -00.5	N 13 20.4 -01.0	182 42.6 -29.8	N 22 54.4 -09.4	00										
01	193 28.3 +00.0	N 17 08.9 -00.6	176 42.9 -00.5	N 13 19.4 -01.1	197 12.8 -29.8	N 22 45.0 -09.5	01										
02	208 28.3 +00.1	N 17 08.3 -00.7	191 42.4 -00.5	N 13 18.3 -01.1	211 43.0 -29.7	N 22 35.5 -09.6	02										
03	223 28.4 +00.1	N 17 07.6 -00.7	206 41.9 -00.5	N 13 17.2 -01.1	226 13.3 -29.6	N 22 25.9 -09.7	03										
04	238 28.5 +00.0	N 17 06.9 -00.6	221 41.4 -00.5	N 13 16.1 -01.0	240 43.7 -29.4	N 22 16.2 -09.8	04										
05	253 28.5 +00.1	N 17 06.3 -00.7	236 40.9 -00.5	N 13 15.1 -01.1	255 14.3 -29.4	N 22 06.4 -09.9	05										
06	268 28.6 +00.0	N 17 05.6 -00.7	251 40.4 -00.5	N 13 14.0 -01.1	269 44.9 -29.3	N 21 56.5 -10.0	06										
07	283 28.6 +00.1	N 17 04.9 -00.7	266 39.9 -00.4	N 13 12.9 -01.1	284 15.6 -29.2	N 21 46.5 -10.1	07										
08	298 28.7 +00.1	N 17 04.2 -00.6	281 39.5 -00.5	N 13 11.8 -01.1	298 46.4 -29.1	N 21 36.4 -10.1	08										
09	313 28.8 +00.0	N 17 03.6 -00.7	296 39.0 -00.5	N 13 10.7 -01.0	313 17.3 -29.0	N 21 26.3 -10.3	09										
10	328 28.8 +00.1	N 17 02.9 -00.7	311 38.5 -00.5	N 13 09.7 -01.1	327 48.3 -29.0	N 21 16.0 -10.4	10										
11	343 28.9 +00.0	N 17 02.2 -00.6	326 38.0 -00.5	N 13 08.6 -01.1	342 19.3 -28.8	N 21 05.6 -10.4	11										
12	358 28.9 +00.1	N 17 01.6 -00.7	341 37.5 -00.5	N 13 07.5 -01.1	356 50.5 -28.7	N 20 55.2 -10.6	12										
13	13 29.0 +00.1	N 17 00.9 -00.7	356 37.0 -00.5	N 13 06.4 -01.1	11 21.8 -28.6	N 20 44.6 -10.6	13										
14	28 29.1 +00.0	N 17 00.2 -00.7	11 36.5 -00.4	N 13 05.3 -01.0	25 53.2 -28.6	N 20 34.0 -10.7	14										
15	43 29.1 +00.1	N 16 59.5 -00.6	26 36.1 -00.5	N 13 04.3 -01.1	40 24.6 -28.4	N 20 23.3 -10.8	15										
16	58 29.2 +00.0	N 16 58.9 -00.7	41 35.6 -00.5	N 13 03.2 -01.1	54 56.2 -28.4	N 20 12.5 -10.9	16										
17	73 29.2 +00.1	N 16 58.2 -00.7	56 35.1 -00.5	N 13 02.1 -01.1	69 27.8 -28.3	N 20 01.6 -11.0	17										
18	88 29.3 +00.1	N 16 57.5 -00.7	71 34.6 -00.5	N 13 01.0 -01.1	83 59.5 -28.2	N 19 50.6 -11.0	18										
19	103 29.4 +00.0	N 16 56.8 -00.7	86 34.1 -00.5	N 12 59.9 -01.1	98 31.3 -28.1	N 19 39.6 -11.2	19										
20	118 29.4 +00.1	N 16 56.1 -00.6	101 33.6 -00.4	N 12 58.8 -01.0	113 03.2 -28.0	N 19 28.4 -11.2	20										
21	133 29.5 +00.1	N 16 55.5 -00.7	116 33.2 -00.5	N 12 57.8 -01.1	127 35.2 -27.9	N 19 17.2 -11.2	21										
22	148 29.6 +00.0	N 16 54.8 -00.7	131 32.7 -00.5	N 12 56.7 -01.1	142 07.3 -27.8	N 19 06.0 -11.4	22										
23	163 29.6 +00.1	N 16 54.1 -00.7	146 32.2 -00.5	N 12 55.6 -01.1	156 39.5 -27.7	N 18 54.6 -11.4	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 225° 225° 225° 225° 225° 225°	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 209° 208° 208° 208° 208° 208°	Greenwich Culmination Time: 13:13		UT 02 06 10 14 18 22	SD 15'1 15'1 15'1 15'0 15'0 15'0	HP 55'4 55'3 55'2 55'2 55'1 55'0	SHA 229° 226° 224° 222° 220° 218°	Greenwich Culmination Time: 12:13

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	244 59.0 +00.7	N 21 21.4 +00.3	239 19.5 +02.0	N 21 54.0 +00.0	322 50.8 +02.6	S 06 31.0 +00.0	00										
01	259 59.7 +00.7	N 21 21.7 +00.2	254 21.5 +02.0	N 21 54.0 +00.1	337 53.4 +02.5	S 06 31.0 +00.1	01										
02	275 00.4 +00.7	N 21 21.9 +00.3	269 23.5 +02.0	N 21 54.1 +00.0	352 55.9 +02.6	S 06 31.1 +00.1	02										
03	290 01.1 +00.7	N 21 22.2 +00.3	284 25.5 +02.0	N 21 54.1 +00.1	7 58.5 +02.6	S 06 31.2 +00.0	03										
04	305 01.8 +00.7	N 21 22.5 +00.3	299 27.5 +02.0	N 21 54.2 +00.0	23 01.1 +02.6	S 06 31.2 +00.1	04										
05	320 02.5 +00.7	N 21 22.8 +00.3	314 29.5 +02.0	N 21 54.2 +00.1	38 03.7 +02.6	S 06 31.3 +00.0	05										
06	335 03.2 +00.7	N 21 23.1 +00.3	329 31.5 +02.0	N 21 54.3 +00.0	53 06.3 +02.6	S 06 31.3 +00.1	06										
07	350 03.9 +00.7	N 21 23.4 +00.2	344 33.5 +02.0	N 21 54.3 +00.1	68 08.9 +02.5	S 06 31.4 +00.1	07										
08	5 04.6 +00.6	N 21 23.6 +00.3	359 35.5 +02.0	N 21 54.4 +00.0	83 11.4 +02.6	S 06 31.5 +00.0	08										
09	20 05.2 +00.7	N 21 23.9 +00.3	14 37.5 +02.0	N 21 54.4 +00.0	98 14.0 +02.6	S 06 31.5 +00.1	09										
10	35 05.9 +00.7	N 21 24.2 +00.3	29 39.5 +02.0	N 21 54.4 +00.1	113 16.6 +02.6	S 06 31.6 +00.0	10										
11	50 06.6 +00.7	N 21 24.5 +00.3	44 41.5 +02.0	N 21 54.5 +00.0	128 19.2 +02.6	S 06 31.6 +00.1	11										
12	65 07.3 +00.7	N 21 24.8 +00.2	59 43.5 +02.0	N 21 54.5 +00.1	143 21.8 +02.6	S 06 31.7 +00.1	12										
13	80 08.0 +00.7	N 21 25.0 +00.3	74 45.5 +02.0	N 21 54.6 +00.0	158 24.4 +02.6	S 06 31.8 +00.0	13										
14	95 08.7 +00.7	N 21 25.3 +00.3	89 47.5 +02.0	N 21 54.6 +00.1	173 27.0 +02.5	S 06 31.8 +00.1	14										
15	110 09.4 +00.7	N 21 25.6 +00.3	104 49.5 +02.0	N 21 54.7 +00.0	188 29.5 +02.6	S 06 31.9 +00.0	15										
16	125 10.1 +00.7	N 21 25.9 +00.3	119 51.5 +02.0	N 21 54.7 +00.1	203 32.1 +02.6	S 06 31.9 +00.1	16										
17	140 10.8 +00.7	N 21 26.2 +00.2	134 53.5 +02.0	N 21 54.8 +00.0	218 34.7 +02.6	S 06 32.0 +00.1	17										
18	155 11.5 +00.7	N 21 26.4 +00.3	149 55.5 +02.0	N 21 54.8 +00.1	233 37.3 +02.6	S 06 32.1 +00.0	18										
19	170 12.2 +00.6	N 21 26.7 +00.3	164 57.5 +02.0	N 21 54.9 +00.0	248 39.9 +02.6	S 06 32.1 +00.1	19										
20	185 12.8 +00.7	N 21 27.0 +00.3	179 59.5 +02.0	N 21 54.9 +00.1	263 42.5 +02.6	S 06 32.2 +00.0	20										
21	200 13.5 +00.7	N 21 27.3 +00.2	195 01.5 +02.0	N 21 55.0 +00.0	278 45.1 +02.6	S 06 32.2 +00.1	21										
22	215 14.2 +00.7	N 21 27.5 +00.3	210 03.5 +02.0	N 21 55.0 +00.1	293 47.7 +02.5	S 06 32.3 +00.1	22										
23	230 14.9 +00.7	N 21 27.8 +00.3	225 05.5 +02.0	N 21 55.1 +00.0	308 50.2 +02.6	S 06 32.4 +00.0	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 292° 292° 292° 292° 291° 291°	Greenwich Culmination Time: 07:39		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 286° 286° 286° 286° 286° 286°	Greenwich Culmination Time: 08:01		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 010° 010° 010° 010° 010° 010°	Greenwich Culmination Time: 02:28

UT	Sun				Venus				Moon				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	178 29.7 +00.1	N 16 53.4 -00.7	161 31.7 -00.5	N 12 54.5 -01.1	171 11.8 -27.7	N 18 43.2 -11.5	00								
01	193 29.8 +00.0	N 16 52.7 -00.6	176 31.2 -00.4	N 12 53.4 -01.1	185 44.1 -27.5	N 18 31.7 -11.6	01								
02	208 29.8 +00.1	N 16 52.1 -00.7	191 30.8 -00.5	N 12 52.3 -01.1	200 16.6 -27.5	N 18 20.1 -11.7	02								
03	223 29.9 +00.0	N 16 51.4 -00.7	206 30.3 -00.5	N 12 51.2 -01.1	214 49.1 -27.4	N 18 08.4 -11.7	03								
04	238 29.9 +00.1	N 16 50.7 -00.7	221 29.8 -00.5	N 12 50.1 -01.0	229 21.7 -27.3	N 17 56.7 -11.8	04								
05	253 30.0 +00.1	N 16 50.0 -00.7	236 29.3 -00.5	N 12 49.1 -01.1	243 54.4 -27.2	N 17 44.9 -11.8	05								
06	268 30.1 +00.0	N 16 49.3 -00.6	251 28.8 -00.4	N 12 48.0 -01.1	258 27.2 -27.2	N 17 33.1 -12.0	06								
07	283 30.1 +00.1	N 16 48.7 -00.7	266 28.4 -00.5	N 12 46.9 -01.1	273 00.0 -27.0	N 17 21.1 -12.0	07								
08	298 30.2 +00.1	N 16 48.0 -00.7	281 27.9 -00.5	N 12 45.8 -01.1	287 33.0 -27.0	N 17 09.1 -12.0	08								
09	313 30.3 +00.0	N 16 47.3 -00.7	296 27.4 -00.5	N 12 44.7 -01.1	302 06.0 -26.9	N 16 57.1 -12.1	09								
10	328 30.3 +00.1	N 16 46.6 -00.7	311 26.9 -00.4	N 12 43.6 -01.1	316 39.1 -26.8	N 16 45.0 -12.2	10								
11	343 30.4 +00.1	N 16 45.9 -00.7	326 26.5 -00.5	N 12 42.5 -01.1	331 12.3 -26.8	N 16 32.8 -12.2	11								
12	358 30.5 +00.0	N 16 45.2 -00.7	341 26.0 -00.5	N 12 41.4 -01.1	345 45.5 -26.6	N 16 20.6 -12.3	12								
13	13 30.5 +00.1	N 16 44.5 -00.6	356 25.5 -00.5	N 12 40.3 -01.1	0 18.9 -26.6	N 16 08.3 -12.4	13								
14	28 30.6 +00.1	N 16 43.9 -00.7	11 25.0 -00.4	N 12 39.2 -01.1	14 52.3 -26.5	N 15 55.9 -12.4	14								
15	43 30.7 +00.0	N 16 43.2 -00.7	26 24.6 -00.5	N 12 38.1 -01.1	29 25.8 -26.4	N 15 43.5 -12.5	15								
16	58 30.7 +00.1	N 16 42.5 -00.7	41 24.1 -00.5	N 12 37.0 -01.1	43 59.4 -26.4	N 15 31.0 -12.5	16								
17	73 30.8 +00.1	N 16 41.8 -00.7	56 23.6 -00.5	N 12 35.9 -01.1	58 33.0 -26.3	N 15 18.5 -12.6	17								
18	88 30.9 +00.1	N 16 41.1 -00.7	71 23.1 -00.4	N 12 34.8 -01.1	73 06.7 -26.2	N 15 05.9 -12.6	18								
19	103 31.0 +00.0	N 16 40.4 -00.7	86 22.7 -00.5	N 12 33.7 -01.1	87 40.5 -26.1	N 14 53.3 -12.7	19								
20	118 31.0 +00.1	N 16 39.7 -00.7	101 22.2 -00.5	N 12 32.6 -01.1	102 14.4 -26.1	N 14 40.6 -12.8	20								
21	133 31.1 +00.1	N 16 39.0 -00.6	116 21.7 -00.5	N 12 31.5 -01.1	116 48.3 -25.9	N 14 27.8 -12.7	21								
22	148 31.2 +00.0	N 16 38.4 -00.7	131 21.2 -00.4	N 12 30.4 -01.1	131 22.4 -26.0	N 14 15.1 -12.9	22								
23	163 31.2 +00.1	N 16 37.7 -00.7	146 20.8 -00.5	N 12 29.3 -01.1	145 56.4 -25.8	N 14 02.2 -12.9	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 224° 224° 224° 224° 224° 224°	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 207° 207° 207° 207° 207° 206°	Greenwich Culmination Time: 13:14	UT 02 06 10 14 18 22	SD 15'0 15'0 14'9 14'9 14'9 14'9	HP 55'0 54'9 54'8 54'8 54'7 54'7	SHA 216° 214° 212° 210° 208° 206°	Greenwich Culmination Time: 12:58

UT	Mars				Jupiter				Saturn				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	245 15.6 +00.7	N 21 28.1 +00.3	240 07.5 +02.0	N 21 55.1 +00.1	323 52.8 +02.6	S 06 32.4 +00.1	00								
01	260 16.3 +00.7	N 21 28.4 +00.3	255 09.5 +02.0	N 21 55.2 +00.0	338 55.4 +02.6	S 06 32.5 +00.0	01								
02	275 17.0 +00.7	N 21 28.7 +00.2	270 11.5 +02.1	N 21 55.2 +00.1	353 58.0 +02.6	S 06 32.5 +00.1	02								
03	290 17.7 +00.7	N 21 28.9 +00.3	285 13.6 +02.0	N 21 55.3 +00.0	9 00.6 +02.6	S 06 32.6 +00.1	03								
04	305 18.4 +00.7	N 21 29.2 +00.3	300 15.6 +02.0	N 21 55.3 +00.0	24 03.2 +02.6	S 06 32.7 +00.0	04								
05	320 19.1 +00.7	N 21 29.5 +00.3	315 17.6 +02.0	N 21 55.3 +00.1	39 05.8 +02.6	S 06 32.7 +00.1	05								
06	335 19.8 +00.7	N 21 29.8 +00.2	330 19.6 +02.0	N 21 55.4 +00.0	54 08.4 +02.5	S 06 32.8 +00.1	06								
07	350 20.5 +00.6	N 21 30.0 +00.3	345 21.6 +02.0	N 21 55.4 +00.1	69 10.9 +02.6	S 06 32.9 +00.0	07								
08	5 21.1 +00.7	N 21 30.3 +00.3	0 23.6 +02.0	N 21 55.5 +00.0	84 13.5 +02.6	S 06 32.9 +00.1	08								
09	20 21.8 +00.7	N 21 30.6 +00.2	15 25.6 +02.0	N 21 55.5 +00.1	99 16.1 +02.6	S 06 33.0 +00.0	09								
10	35 22.5 +00.7	N 21 30.8 +00.3	30 27.6 +02.0	N 21 55.6 +00.0	114 18.7 +02.6	S 06 33.0 +00.1	10								
11	50 23.2 +00.7	N 21 31.1 +00.3	45 29.6 +02.0	N 21 55.6 +00.1	129 21.3 +02.6	S 06 33.1 +00.1	11								
12	65 23.9 +00.7	N 21 31.4 +00.3	60 31.6 +02.0	N 21 55.7 +00.0	144 23.9 +02.6	S 06 33.2 +00.0	12								
13	80 24.6 +00.7	N 21 31.7 +00.2	75 33.6 +02.0	N 21 55.7 +00.1	159 26.5 +02.6	S 06 33.2 +00.1	13								
14	95 25.3 +00.7	N 21 31.9 +00.3	90 35.6 +02.0	N 21 55.8 +00.0	174 29.1 +02.5	S 06 33.3 +00.0	14								
15	110 26.0 +00.7	N 21 32.2 +00.3	105 37.6 +02.0	N 21 55.8 +00.1	189 31.6 +02.6	S 06 33.3 +00.1	15								
16	125 26.7 +00.7	N 21 32.5 +00.2	120 39.6 +02.0	N 21 55.9 +00.0	204 34.2 +02.6	S 06 33.4 +00.1	16								
17	140 27.4 +00.7	N 21 32.7 +00.3	135 41.6 +02.0	N 21 55.9 +00.1	219 36.8 +02.6	S 06 33.5 +00.0	17								
18	155 28.1 +00.7	N 21 33.0 +00.3	150 43.6 +02.0	N 21 56.0 +00.0	234 39.4 +02.6	S 06 33.5 +00.1	18								
19	170 28.8 +00.7	N 21 33.3 +00.3	165 45.6 +02.1	N 21 56.0 +00.0	249 42.0 +02.6	S 06 33.6 +00.1	19								
20	185 29.5 +00.7	N 21 33.6 +00.2	180 47.7 +02.0	N 21 56.0 +00.1	264 44.6 +02.6	S 06 33.7 +00.0	20								
21	200 30.2 +00.7	N 21 33.8 +00.3	195 49.7 +02.0	N 21 56.1 +00.0	279 47.2 +02.6	S 06 33.7 +00.1	21								
22	215 30.9 +00.6	N 21 34.1 +00.3	210 51.7 +02.0	N 21 56.1 +00.1	294 49.8 +02.6	S 06 33.8 +00.0	22								
23	230 31.5 +00.7	N 21 34.4 +00.2	225 53.7 +02.0	N 21 56.2 +00.0	309 52.4 +02.6	S 06 33.8 +00.1	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 291° 291° 291° 291° 291° 291°	Greenwich Culmination Time: 07:38	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 286° 286° 286° 286° 286° 286°	Greenwich Culmination Time: 07:58	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 010° 010° 010° 010° 010° 010°	Greenwich Culmination Time: 02:24

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 31.3 +00.1	N 16 37.0 -00.7			161 20.3 -00.5	N 12 28.2 -01.1			160 30.6 -25.8	N 13 49.3 -12.9			00
01	193 31.4 +00.0	N 16 36.3 -00.7			176 19.8 -00.4	N 12 27.1 -01.1			175 04.8 -25.7	N 13 36.4 -13.0			01
02	208 31.4 +00.1	N 16 35.6 -00.7			191 19.4 -00.5	N 12 26.0 -01.1			189 39.1 -25.7	N 13 23.4 -13.0			02
03	223 31.5 +00.1	N 16 34.9 -00.7			206 18.9 -00.5	N 12 24.9 -01.1			204 13.4 -25.5	N 13 10.4 -13.1			03
04	238 31.6 +00.1	N 16 34.2 -00.7			221 18.4 -00.4	N 12 23.8 -01.1			218 47.9 -25.6	N 12 57.3 -13.1			04
05	253 31.7 +00.0	N 16 33.5 -00.7			236 18.0 -00.5	N 12 22.7 -01.1			233 22.3 -25.4	N 12 44.2 -13.1			05
06	268 31.7 +00.1	N 16 32.8 -00.7			251 17.5 -00.5	N 12 21.6 -01.1			247 56.9 -25.4	N 12 31.1 -13.2			06
07	283 31.8 +00.1	N 16 32.1 -00.7			266 17.0 -00.4	N 12 20.5 -01.1			262 31.5 -25.3	N 12 17.9 -13.3			07
08	298 31.9 +00.0	N 16 31.4 -00.7			281 16.6 -00.5	N 12 19.4 -01.1			277 06.2 -25.3	N 12 04.6 -13.3			08
09	313 31.9 +00.1	N 16 30.7 -00.7			296 16.1 -00.5	N 12 18.3 -01.1			291 40.9 -25.2	N 11 51.3 -13.3			09
10	328 32.0 +00.1	N 16 30.0 -00.7			311 15.6 -00.4	N 12 17.2 -01.1			306 15.7 -25.2	N 11 38.0 -13.3			10
11	343 32.1 +00.1	N 16 29.3 -00.7			326 15.2 -00.5	N 12 16.1 -01.1			320 50.5 -25.1	N 11 24.7 -13.4			11
12	358 32.2 +00.0	N 16 28.6 -00.7			341 14.7 -00.5	N 12 15.0 -01.1			335 25.4 -25.0	N 11 11.3 -13.4			12
13	13 32.2 +00.1	N 16 27.9 -00.6			356 14.2 -00.4	N 12 13.9 -01.2			350 00.4 -25.0	N 10 57.9 -13.5			13
14	28 32.3 +00.1	N 16 27.3 -00.7			11 13.8 -00.5	N 12 12.7 -01.1			4 35.4 -24.9	N 10 44.4 -13.5			14
15	43 32.4 +00.1	N 16 26.6 -00.7			26 13.3 -00.5	N 12 11.6 -01.1			19 10.5 -24.9	N 10 30.9 -13.5			15
16	58 32.5 +00.0	N 16 25.9 -00.7			41 12.8 -00.4	N 12 10.5 -01.1			33 45.6 -24.8	N 10 17.4 -13.6			16
17	73 32.5 +00.1	N 16 25.2 -00.7			56 12.4 -00.5	N 12 09.4 -01.1			48 20.8 -24.8	N 10 03.8 -13.5			17
18	88 32.6 +00.1	N 16 24.5 -00.7			71 11.9 -00.4	N 12 08.3 -01.1			62 56.0 -24.7	N 09 50.3 -13.7			18
19	103 32.7 +00.1	N 16 23.8 -00.7			86 11.5 -00.5	N 12 07.2 -01.1			77 31.3 -24.7	N 09 36.6 -13.6			19
20	118 32.8 +00.0	N 16 23.1 -00.7			101 11.0 -00.5	N 12 06.1 -01.1			92 06.6 -24.6	N 09 23.0 -13.7			20
21	133 32.8 +00.1	N 16 22.4 -00.7			116 10.5 -00.4	N 12 05.0 -01.2			106 42.0 -24.6	N 09 09.3 -13.7			21
22	148 32.9 +00.1	N 16 21.7 -00.7			131 10.1 -00.5	N 12 03.8 -01.1			121 17.4 -24.5	N 08 55.6 -13.7			22
23	163 33.0 +00.1	N 16 21.0 -00.8			146 09.6 -00.4	N 12 02.7 -01.1			135 52.9 -24.5	N 08 41.9 -13.8			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 14'9 14'8 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 54'6 54'6 54'5 54'5 54'4 54'4				
	SHA 223° 223° 223° 223° 223° 223°				SHA 206° 206° 206° 206° 205° 205°				SHA 205° 203° 201° 199° 197° 195°				
	Greenwich Culmination Time: 12:05				Greenwich Culmination Time: 13:15				Greenwich Culmination Time: 13:41				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	245 32.2 +00.7	N 21 34.6 +00.3			240 55.7 +02.0	N 21 56.2 +00.1			324 55.0 +02.5	S 06 33.9 +00.1			00
01	260 32.9 +00.7	N 21 34.9 +00.3			255 57.7 +02.0	N 21 56.3 +00.0			339 57.5 +02.6	S 06 34.0 +00.0			01
02	275 33.6 +00.7	N 21 35.2 +00.2			270 59.7 +02.0	N 21 56.3 +00.1			355 00.1 +02.6	S 06 34.0 +00.1			02
03	290 34.3 +00.7	N 21 35.4 +00.3			286 01.7 +02.0	N 21 56.4 +00.0			10 02.7 +02.6	S 06 34.1 +00.1			03
04	305 35.0 +00.7	N 21 35.7 +00.3			301 03.7 +02.0	N 21 56.4 +00.1			25 05.3 +02.6	S 06 34.2 +00.0			04
05	320 35.7 +00.7	N 21 36.0 +00.2			316 05.7 +02.0	N 21 56.5 +00.0			40 07.9 +02.6	S 06 34.2 +00.1			05
06	335 36.4 +00.7	N 21 36.2 +00.3			331 07.7 +02.0	N 21 56.5 +00.0			55 10.5 +02.6	S 06 34.3 +00.0			06
07	350 37.1 +00.7	N 21 36.5 +00.3			346 09.7 +02.1	N 21 56.5 +00.1			70 13.1 +02.6	S 06 34.3 +00.1			07
08	5 37.8 +00.7	N 21 36.8 +00.2			1 11.8 +02.0	N 21 56.6 +00.0			85 15.7 +02.6	S 06 34.4 +00.1			08
09	20 38.5 +00.7	N 21 37.0 +00.3			16 13.8 +02.0	N 21 56.6 +00.1			100 18.3 +02.6	S 06 34.5 +00.0			09
10	35 39.2 +00.7	N 21 37.3 +00.3			31 15.8 +02.0	N 21 56.7 +00.0			115 20.9 +02.6	S 06 34.5 +00.1			10
11	50 39.9 +00.7	N 21 37.6 +00.2			46 17.8 +02.0	N 21 56.7 +00.1			130 23.5 +02.5	S 06 34.6 +00.0			11
12	65 40.6 +00.7	N 21 37.8 +00.3			61 19.8 +02.0	N 21 56.8 +00.0			145 26.0 +02.6	S 06 34.6 +00.1			12
13	80 41.3 +00.7	N 21 38.1 +00.3			76 21.8 +02.0	N 21 56.8 +00.1			160 28.6 +02.6	S 06 34.7 +00.1			13
14	95 42.0 +00.7	N 21 38.4 +00.2			91 23.8 +02.0	N 21 56.9 +00.0			175 31.2 +02.6	S 06 34.8 +00.0			14
15	110 42.7 +00.7	N 21 38.6 +00.3			106 25.8 +02.0	N 21 56.9 +00.1			190 33.8 +02.6	S 06 34.8 +00.1			15
16	125 43.4 +00.6	N 21 38.9 +00.2			121 27.8 +02.0	N 21 57.0 +00.0			205 36.4 +02.6	S 06 34.9 +00.1			16
17	140 44.0 +00.7	N 21 39.1 +00.3			136 29.8 +02.1	N 21 57.0 +00.0			220 39.0 +02.6	S 06 35.0 +00.0			17
18	155 44.7 +00.7	N 21 39.4 +00.3			151 31.9 +02.0	N 21 57.0 +00.1			235 41.6 +02.6	S 06 35.0 +00.1			18
19	170 45.4 +00.7	N 21 39.7 +00.2			166 33.9 +02.0	N 21 57.1 +00.0			250 44.2 +02.6	S 06 35.1 +00.1			19
20	185 46.1 +00.7	N 21 39.9 +00.3			181 35.9 +02.0	N 21 57.1 +00.1			265 46.8 +02.6	S 06 35.2 +00.0			20
21	200 46.8 +00.7	N 21 40.2 +00.3			196 37.9 +02.0	N 21 57.2 +00.0			280 49.4 +02.6	S 06 35.2 +00.1			21
22	215 47.5 +00.7	N 21 40.5 +00.2			211 39.9 +02.0	N 21 57.2 +00.1			295 52.0 +02.6	S 06 35.3 +00.0			22
23	230 48.2 +00.7	N 21 40.7 +00.3			226 41.9 +02.0	N 21 57.3 +00.0			310 54.6 +02.6	S 06 35.3 +00.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 290° 290° 290° 290° 290° 290°				SHA 286° 286° 286° 286° 286° 286°				SHA 010° 010° 010° 010° 010° 010°				
	Greenwich Culmination Time: 07:37				Greenwich Culmination Time: 07:55				Greenwich Culmination Time: 02:19				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 33.1 +00.0	N 16 20.2 -00.7	161 09.2 -00.5	N 12 01.6 -01.1	150 28.4 -24.4	N 08 28.1 -13.7	00						
01	193 33.1 +00.1	N 16 19.5 -00.7	176 08.7 -00.5	N 12 00.5 -01.1	165 04.0 -24.4	N 08 14.4 -13.8	01						
02	208 33.2 +00.1	N 16 18.8 -00.7	191 08.2 -00.4	N 11 59.4 -01.1	179 39.6 -24.3	N 08 00.6 -13.9	02						
03	223 33.3 +00.1	N 16 18.1 -00.7	206 07.8 -00.5	N 11 58.3 -01.1	194 15.3 -24.4	N 07 46.7 -13.8	03						
04	238 33.4 +00.1	N 16 17.4 -00.7	221 07.3 -00.4	N 11 57.2 -01.2	208 50.9 -24.2	N 07 32.9 -13.9	04						
05	253 33.5 +00.0	N 16 16.7 -00.7	236 06.9 -00.5	N 11 56.0 -01.1	223 26.7 -24.3	N 07 19.0 -13.9	05						
06	268 33.5 +00.1	N 16 16.0 -00.7	251 06.4 -00.5	N 11 54.9 -01.1	238 02.4 -24.1	N 07 05.1 -13.9	06						
07	283 33.6 +00.1	N 16 15.3 -00.7	266 05.9 -00.4	N 11 53.8 -01.1	252 38.3 -24.2	N 06 51.2 -13.9	07						
08	298 33.7 +00.1	N 16 14.6 -00.7	281 05.5 -00.5	N 11 52.7 -01.1	267 14.1 -24.1	N 06 37.3 -13.9	08						
09	313 33.8 +00.0	N 16 13.9 -00.7	296 05.0 -00.4	N 11 51.6 -01.2	281 50.0 -24.1	N 06 23.4 -14.0	09						
10	328 33.8 +00.1	N 16 13.2 -00.7	311 04.6 -00.5	N 11 50.4 -01.1	296 25.9 -24.1	N 06 09.4 -14.0	10						
11	343 33.9 +00.1	N 16 12.5 -00.7	326 04.1 -00.4	N 11 49.3 -01.1	311 01.8 -24.0	N 05 55.4 -14.0	11						
12	358 34.0 +00.1	N 16 11.8 -00.7	341 03.7 -00.5	N 11 48.2 -01.1	325 37.8 -24.0	N 05 41.4 -14.0	12						
13	13 34.1 +00.1	N 16 11.1 -00.7	356 03.2 -00.4	N 11 47.1 -01.1	340 13.8 -23.9	N 05 27.4 -14.0	13						
14	28 34.2 +00.0	N 16 10.4 -00.7	11 02.8 -00.5	N 11 46.0 -01.2	354 49.9 -23.9	N 05 13.4 -14.1	14						
15	43 34.2 +00.1	N 16 09.7 -00.7	26 02.3 -00.4	N 11 44.8 -01.1	9 26.0 -23.9	N 04 59.3 -14.0	15						
16	58 34.3 +00.1	N 16 09.0 -00.8	41 01.9 -00.5	N 11 43.7 -01.1	24 02.1 -23.9	N 04 45.3 -14.1	16						
17	73 34.4 +00.1	N 16 08.2 -00.7	56 01.4 -00.4	N 11 42.6 -01.1	38 38.2 -23.9	N 04 31.2 -14.0	17						
18	88 34.5 +00.1	N 16 07.5 -00.7	71 01.0 -00.5	N 11 41.5 -01.2	53 14.3 -23.8	N 04 17.2 -14.1	18						
19	103 34.6 +00.1	N 16 06.8 -00.7	86 00.5 -00.4	N 11 40.3 -01.1	67 50.5 -23.8	N 04 03.1 -14.1	19						
20	118 34.7 +00.0	N 16 06.1 -00.7	101 00.1 -00.5	N 11 39.2 -01.1	82 26.7 -23.7	N 03 49.0 -14.1	20						
21	133 34.7 +00.1	N 16 05.4 -00.7	115 59.6 -00.5	N 11 38.1 -01.1	97 03.0 -23.8	N 03 34.9 -14.1	21						
22	148 34.8 +00.1	N 16 04.7 -00.7	130 59.1 -00.4	N 11 37.0 -01.2	111 39.2 -23.7	N 03 20.8 -14.2	22						
23	163 34.9 +00.1	N 16 04.0 -00.7	145 58.7 -00.4	N 11 35.8 -01.1	126 15.5 -23.7	N 03 06.6 -14.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 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 54'3 54'3 54'2 54'2 54'2								
	SHA 222° 222° 222° 222° 222° 222°		SHA 205° 205° 205° 204° 204° 204°		SHA 194° 192° 190° 188° 186° 185°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 13:15		Greenwich Culmination Time: 14:21								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	245 48.9 +00.7	N 21 41.0 +00.2	241 43.9 +02.0	N 21 57.3 +00.1	325 57.2 +02.5	S 06 35.4 +00.1	00						
01	260 49.6 +00.7	N 21 41.2 +00.3	256 45.9 +02.1	N 21 57.4 +00.0	340 59.7 +02.6	S 06 35.5 +00.0	01						
02	275 50.3 +00.7	N 21 41.5 +00.3	271 48.0 +02.0	N 21 57.4 +00.1	356 02.3 +02.6	S 06 35.5 +00.1	02						
03	290 51.0 +00.7	N 21 41.8 +00.2	286 50.0 +02.0	N 21 57.5 +00.0	11 04.9 +02.6	S 06 35.6 +00.1	03						
04	305 51.7 +00.7	N 21 42.0 +00.3	301 52.0 +02.0	N 21 57.5 +00.0	26 07.5 +02.6	S 06 35.7 +00.0	04						
05	320 52.4 +00.7	N 21 42.3 +00.2	316 54.0 +02.0	N 21 57.5 +00.1	41 10.1 +02.6	S 06 35.7 +00.1	05						
06	335 53.1 +00.7	N 21 42.5 +00.3	331 56.0 +02.0	N 21 57.6 +00.0	56 12.7 +02.6	S 06 35.8 +00.0	06						
07	350 53.8 +00.7	N 21 42.8 +00.2	346 58.0 +02.0	N 21 57.6 +00.1	71 15.3 +02.6	S 06 35.8 +00.1	07						
08	5 54.5 +00.7	N 21 43.0 +00.3	2 00.0 +02.1	N 21 57.7 +00.0	86 17.9 +02.6	S 06 35.9 +00.1	08						
09	20 55.2 +00.7	N 21 43.3 +00.3	17 02.1 +02.0	N 21 57.7 +00.1	101 20.5 +02.6	S 06 36.0 +00.0	09						
10	35 55.9 +00.7	N 21 43.6 +00.2	32 04.1 +02.0	N 21 57.8 +00.0	116 23.1 +02.6	S 06 36.0 +00.1	10						
11	50 56.6 +00.7	N 21 43.8 +00.3	47 06.1 +02.0	N 21 57.8 +00.1	131 25.7 +02.6	S 06 36.1 +00.1	11						
12	65 57.3 +00.7	N 21 44.1 +00.2	62 08.1 +02.0	N 21 57.9 +00.0	146 28.3 +02.6	S 06 36.2 +00.0	12						
13	80 58.0 +00.7	N 21 44.3 +00.3	77 10.1 +02.0	N 21 57.9 +00.0	161 30.9 +02.6	S 06 36.2 +00.1	13						
14	95 58.7 +00.7	N 21 44.6 +00.2	92 12.1 +02.0	N 21 57.9 +00.1	176 33.5 +02.6	S 06 36.3 +00.1	14						
15	110 59.4 +00.7	N 21 44.8 +00.3	107 14.1 +02.1	N 21 58.0 +00.0	191 36.1 +02.6	S 06 36.4 +00.0	15						
16	126 00.1 +00.7	N 21 45.1 +00.3	122 16.2 +02.0	N 21 58.0 +00.1	206 38.7 +02.5	S 06 36.4 +00.1	16						
17	141 00.8 +00.7	N 21 45.4 +00.2	137 18.2 +02.0	N 21 58.1 +00.0	221 41.2 +02.6	S 06 36.5 +00.0	17						
18	156 01.5 +00.7	N 21 45.6 +00.3	152 20.2 +02.0	N 21 58.1 +00.1	236 43.8 +02.6	S 06 36.5 +00.1	18						
19	171 02.2 +00.7	N 21 45.9 +00.2	167 22.2 +02.0	N 21 58.2 +00.0	251 46.4 +02.6	S 06 36.6 +00.1	19						
20	186 02.9 +00.7	N 21 46.1 +00.3	182 24.2 +02.0	N 21 58.2 +00.1	266 49.0 +02.6	S 06 36.7 +00.0	20						
21	201 03.6 +00.7	N 21 46.4 +00.2	197 26.2 +02.1	N 21 58.3 +00.0	281 51.6 +02.6	S 06 36.7 +00.1	21						
22	216 04.3 +00.7	N 21 46.6 +00.3	212 28.3 +02.0	N 21 58.3 +00.0	296 54.2 +02.6	S 06 36.8 +00.1	22						
23	231 05.0 +00.7	N 21 46.9 +00.2	227 30.3 +02.0	N 21 58.3 +00.1	311 56.8 +02.6	S 06 36.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 290° 290° 290° 289° 289° 289°		SHA 286° 286° 286° 286° 286° 286°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:36		Greenwich Culmination Time: 07:52		Greenwich Culmination Time: 02:15								

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 35.0 +00.1	N 16 03.3 -00.7	160 58.3 -00.5	N 11 34.7 -01.1	140 51.8 -23.7	N 02 52.5 -14.1	00						
01	193 35.1 +00.0	N 16 02.6 -00.8	175 57.8 -00.4	N 11 33.6 -01.2	155 28.1 -23.7	N 02 38.4 -14.1	01						
02	208 35.1 +00.1	N 16 01.8 -00.7	190 57.4 -00.5	N 11 32.4 -01.1	170 04.4 -23.7	N 02 24.3 -14.2	02						
03	223 35.2 +00.1	N 16 01.1 -00.7	205 56.9 -00.4	N 11 31.3 -01.1	184 40.7 -23.6	N 02 10.1 -14.1	03						
04	238 35.3 +00.1	N 16 00.4 -00.7	220 56.5 -00.5	N 11 30.2 -01.2	199 17.1 -23.6	N 01 56.0 -14.2	04						
05	253 35.4 +00.1	N 15 59.7 -00.7	235 56.0 -00.4	N 11 29.0 -01.1	213 53.5 -23.6	N 01 41.8 -14.1	05						
06	268 35.5 +00.1	N 15 59.0 -00.7	250 55.6 -00.5	N 11 27.9 -01.1	228 29.9 -23.6	N 01 27.7 -14.2	06						
07	283 35.6 +00.1	N 15 58.3 -00.8	265 55.1 -00.4	N 11 26.8 -01.1	243 06.3 -23.6	N 01 13.5 -14.1	07						
08	298 35.7 +00.0	N 15 57.5 -00.7	280 54.7 -00.5	N 11 25.7 -01.2	257 42.7 -23.6	N 00 59.4 -14.2	08						
09	313 35.7 +00.1	N 15 56.8 -00.7	295 54.2 -00.4	N 11 24.5 -01.1	272 19.1 -23.6	N 00 45.2 -14.2	09						
10	328 35.8 +00.1	N 15 56.1 -00.7	310 53.8 -00.5	N 11 23.4 -01.1	286 55.5 -23.5	N 00 31.0 -14.1	10						
11	343 35.9 +00.1	N 15 55.4 -00.7	325 53.3 -00.4	N 11 22.3 -01.2	301 32.0 -23.6	N 00 16.9 -14.2	11						
12	358 36.0 +00.1	N 15 54.7 -00.7	340 52.9 -00.5	N 11 21.1 -01.1	316 08.4 -23.5	N 00 02.7 -14.1	12						
13	13 36.1 +00.1	N 15 54.0 -00.8	355 52.4 -00.4	N 11 20.0 -01.2	330 44.9 -23.6	S 00 11.4 +14.1	13						
14	28 36.2 +00.1	N 15 53.2 -00.7	10 52.0 -00.4	N 11 18.8 -01.1	345 21.3 -23.5	S 00 25.5 +14.2	14						
15	43 36.3 +00.0	N 15 52.5 -00.7	25 51.6 -00.5	N 11 17.7 -01.1	359 57.8 -23.6	S 00 39.7 +14.1	15						
16	58 36.3 +00.1	N 15 51.8 -00.7	40 51.1 -00.4	N 11 16.6 -01.2	14 34.2 -23.5	S 00 53.8 +14.2	16						
17	73 36.4 +00.1	N 15 51.1 -00.7	55 50.7 -00.5	N 11 15.4 -01.1	29 10.7 -23.6	S 01 08.0 +14.1	17						
18	88 36.5 +00.1	N 15 50.4 -00.8	70 50.2 -00.4	N 11 14.3 -01.1	43 47.1 -23.5	S 01 22.1 +14.1	18						
19	103 36.6 +00.1	N 15 49.6 -00.7	85 49.8 -00.5	N 11 13.2 -01.2	58 23.6 -23.5	S 01 36.2 +14.1	19						
20	118 36.7 +00.1	N 15 48.9 -00.7	100 49.3 -00.4	N 11 12.0 -01.1	73 00.1 -23.6	S 01 50.3 +14.1	20						
21	133 36.8 +00.1	N 15 48.2 -00.7	115 48.9 -00.4	N 11 10.9 -01.2	87 36.5 -23.5	S 02 04.4 +14.1	21						
22	148 36.9 +00.1	N 15 47.5 -00.8	130 48.5 -00.5	N 11 09.7 -01.1	102 13.0 -23.6	S 02 18.5 +14.1	22						
23	163 37.0 +00.0	N 15 46.7 -00.7	145 48.0 -00.4	N 11 08.6 -01.1	116 49.4 -23.6	S 02 32.6 +14.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 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 54'1 54'1								
	SHA 222° 221° 221° 221° 221° 221°		SHA 204° 204° 203° 203° 203° 203°		SHA 183° 181° 180° 178° 176° 174°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 13:16		Greenwich Culmination Time: 15:00								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 05.7 +00.7	N 21 47.1 +00.3	242 32.3 +02.0	N 21 58.4 +00.0	326 59.4 +02.6	S 06 36.9 +00.1	00						
01	261 06.4 +00.7	N 21 47.4 +00.2	257 34.3 +02.0	N 21 58.4 +00.1	342 02.0 +02.6	S 06 37.0 +00.1	01						
02	276 07.1 +00.6	N 21 47.6 +00.3	272 36.3 +02.1	N 21 58.5 +00.0	357 04.6 +02.6	S 06 37.1 +00.0	02						
03	291 07.7 +00.7	N 21 47.9 +00.2	287 38.4 +02.0	N 21 58.5 +00.1	12 07.2 +02.6	S 06 37.1 +00.1	03						
04	306 08.4 +00.7	N 21 48.1 +00.3	302 40.4 +02.0	N 21 58.6 +00.0	27 09.8 +02.6	S 06 37.2 +00.0	04						
05	321 09.1 +00.7	N 21 48.4 +00.2	317 42.4 +02.0	N 21 58.6 +00.0	42 12.4 +02.6	S 06 37.2 +00.1	05						
06	336 09.8 +00.7	N 21 48.6 +00.3	332 44.4 +02.0	N 21 58.6 +00.1	57 15.0 +02.6	S 06 37.3 +00.1	06						
07	351 10.5 +00.7	N 21 48.9 +00.2	347 46.4 +02.0	N 21 58.7 +00.0	72 17.6 +02.6	S 06 37.4 +00.0	07						
08	6 11.2 +00.7	N 21 49.1 +00.3	2 48.4 +02.1	N 21 58.7 +00.1	87 20.2 +02.6	S 06 37.4 +00.1	08						
09	21 11.9 +00.7	N 21 49.4 +00.2	17 50.5 +02.0	N 21 58.8 +00.0	102 22.8 +02.6	S 06 37.5 +00.1	09						
10	36 12.6 +00.7	N 21 49.6 +00.3	32 52.5 +02.0	N 21 58.8 +00.1	117 25.4 +02.6	S 06 37.6 +00.0	10						
11	51 13.3 +00.7	N 21 49.9 +00.2	47 54.5 +02.0	N 21 58.9 +00.0	132 28.0 +02.6	S 06 37.6 +00.1	11						
12	66 14.0 +00.7	N 21 50.1 +00.3	62 56.5 +02.0	N 21 58.9 +00.1	147 30.6 +02.6	S 06 37.7 +00.1	12						
13	81 14.7 +00.7	N 21 50.4 +00.2	77 58.5 +02.1	N 21 59.0 +00.0	162 33.2 +02.6	S 06 37.8 +00.0	13						
14	96 15.4 +00.7	N 21 50.6 +00.3	93 00.6 +02.0	N 21 59.0 +00.0	177 35.8 +02.6	S 06 37.8 +00.1	14						
15	111 16.1 +00.7	N 21 50.9 +00.2	108 02.6 +02.0	N 21 59.0 +00.1	192 38.4 +02.6	S 06 37.9 +00.1	15						
16	126 16.8 +00.7	N 21 51.1 +00.3	123 04.6 +02.0	N 21 59.1 +00.0	207 41.0 +02.6	S 06 38.0 +00.0	16						
17	141 17.5 +00.7	N 21 51.4 +00.2	138 06.6 +02.0	N 21 59.1 +00.1	222 43.6 +02.6	S 06 38.0 +00.1	17						
18	156 18.2 +00.7	N 21 51.6 +00.3	153 08.6 +02.1	N 21 59.2 +00.0	237 46.2 +02.5	S 06 38.1 +00.1	18						
19	171 18.9 +00.7	N 21 51.9 +00.2	168 10.7 +02.0	N 21 59.2 +00.1	252 48.7 +02.6	S 06 38.2 +00.0	19						
20	186 19.6 +00.7	N 21 52.1 +00.3	183 12.7 +02.0	N 21 59.3 +00.0	267 51.3 +02.6	S 06 38.2 +00.1	20						
21	201 20.3 +00.7	N 21 52.4 +00.2	198 14.7 +02.0	N 21 59.3 +00.0	282 53.9 +02.6	S 06 38.3 +00.0	21						
22	216 21.0 +00.7	N 21 52.6 +00.2	213 16.7 +02.1	N 21 59.3 +00.1	297 56.5 +02.6	S 06 38.3 +00.1	22						
23	231 21.7 +00.7	N 21 52.8 +00.3	228 18.8 +02.0	N 21 59.4 +00.0	312 59.1 +02.6	S 06 38.4 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 289° 289° 289° 289° 289° 288°		SHA 286° 285° 285° 285° 285° 285°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:35		Greenwich Culmination Time: 07:48		Greenwich Culmination Time: 02:11								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 37.0 +00.1	N 15 46.0 -00.7	160 47.6 -00.5	N 11 07.5 -01.2	131 25.8 -23.5	S 02 46.7 +14.0	00						
01	193 37.1 +00.1	N 15 45.3 -00.7	175 47.1 -00.4	N 11 06.3 -01.1	146 02.3 -23.6	S 03 00.7 +14.1	01						
02	208 37.2 +00.1	N 15 44.6 -00.8	190 46.7 -00.4	N 11 05.2 -01.2	160 38.7 -23.6	S 03 14.8 +14.0	02						
03	223 37.3 +00.1	N 15 43.8 -00.7	205 46.3 -00.5	N 11 04.0 -01.1	175 15.1 -23.6	S 03 28.8 +14.1	03						
04	238 37.4 +00.1	N 15 43.1 -00.7	220 45.8 -00.4	N 11 02.9 -01.1	189 51.5 -23.6	S 03 42.9 +14.0	04						
05	253 37.5 +00.1	N 15 42.4 -00.7	235 45.4 -00.4	N 11 01.8 -01.2	204 27.9 -23.6	S 03 56.9 +14.0	05						
06	268 37.6 +00.1	N 15 41.7 -00.8	250 45.0 -00.5	N 11 00.6 -01.1	219 04.3 -23.7	S 04 10.9 +14.0	06						
07	283 37.7 +00.1	N 15 40.9 -00.7	265 44.5 -00.4	N 10 59.5 -01.2	233 40.6 -23.6	S 04 24.9 +13.9	07						
08	298 37.8 +00.1	N 15 40.2 -00.7	280 44.1 -00.4	N 10 58.3 -01.1	248 17.0 -23.7	S 04 38.8 +14.0	08						
09	313 37.9 +00.1	N 15 39.5 -00.7	295 43.7 -00.5	N 10 57.2 -01.2	262 53.3 -23.7	S 04 52.8 +13.9	09						
10	328 38.0 +00.0	N 15 38.8 -00.8	310 43.2 -00.4	N 10 56.0 -01.1	277 29.6 -23.7	S 05 06.7 +13.9	10						
11	343 38.0 +00.1	N 15 38.0 -00.7	325 42.8 -00.5	N 10 54.9 -01.2	292 05.9 -23.7	S 05 20.6 +13.9	11						
12	358 38.1 +00.1	N 15 37.3 -00.7	340 42.3 -00.4	N 10 53.7 -01.1	306 42.2 -23.8	S 05 34.5 +13.9	12						
13	13 38.2 +00.1	N 15 36.6 -00.8	355 41.9 -00.4	N 10 52.6 -01.1	321 18.4 -23.7	S 05 48.4 +13.9	13						
14	28 38.3 +00.1	N 15 35.8 -00.7	10 41.5 -00.5	N 10 51.5 -01.2	335 54.7 -23.8	S 06 02.3 +13.8	14						
15	43 38.4 +00.1	N 15 35.1 -00.7	25 41.0 -00.4	N 10 50.3 -01.1	350 30.9 -23.9	S 06 16.1 +13.9	15						
16	58 38.5 +00.1	N 15 34.4 -00.7	40 40.6 -00.4	N 10 49.2 -01.2	5 07.0 -23.8	S 06 30.0 +13.8	16						
17	73 38.6 +00.1	N 15 33.7 -00.8	55 40.2 -00.5	N 10 48.0 -01.1	19 43.2 -23.9	S 06 43.8 +13.7	17						
18	88 38.7 +00.1	N 15 32.9 -00.7	70 39.7 -00.4	N 10 46.9 -01.2	34 19.3 -23.9	S 06 57.5 +13.8	18						
19	103 38.8 +00.1	N 15 32.2 -00.7	85 39.3 -00.4	N 10 45.7 -01.1	48 55.4 -23.9	S 07 11.3 +13.7	19						
20	118 38.9 +00.1	N 15 31.5 -00.8	100 38.9 -00.4	N 10 44.6 -01.2	63 31.5 -24.0	S 07 25.0 +13.7	20						
21	133 39.0 +00.1	N 15 30.7 -00.7	115 38.5 -00.5	N 10 43.4 -01.1	78 07.5 -23.9	S 07 38.7 +13.7	21						
22	148 39.1 +00.1	N 15 30.0 -00.7	130 38.0 -00.4	N 10 42.3 -01.2	92 43.6 -24.1	S 07 52.4 +13.7	22						
23	163 39.2 +00.1	N 15 29.3 -00.8	145 37.6 -00.4	N 10 41.1 -01.1	107 19.5 -24.0	S 08 06.1 +13.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'1 54'1								
	SHA 221° 220° 220° 220° 220° 220°		SHA 203° 203° 202° 202° 202° 202°		SHA 173° 171° 169° 167° 166° 164°								
	Greenwich Culmination Time: 12:05		Greenwich Culmination Time: 13:17		Greenwich Culmination Time: 15:38								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 22.4 +00.7	N 21 53.1 +00.2	243 20.8 +02.0	N 21 59.4 +00.1	328 01.7 +02.6	S 06 38.5 +00.0	00						
01	261 23.1 +00.7	N 21 53.3 +00.3	258 22.8 +02.0	N 21 59.5 +00.0	343 04.3 +02.6	S 06 38.5 +00.1	01						
02	276 23.8 +00.7	N 21 53.6 +00.2	273 24.8 +02.0	N 21 59.5 +00.1	358 06.9 +02.6	S 06 38.6 +00.1	02						
03	291 24.5 +00.8	N 21 53.8 +00.3	288 26.8 +02.1	N 21 59.6 +00.0	13 09.5 +02.6	S 06 38.7 +00.0	03						
04	306 25.3 +00.7	N 21 54.1 +00.2	303 28.9 +02.0	N 21 59.6 +00.0	28 12.1 +02.6	S 06 38.7 +00.1	04						
05	321 26.0 +00.7	N 21 54.3 +00.2	318 30.9 +02.0	N 21 59.6 +00.1	43 14.7 +02.6	S 06 38.8 +00.1	05						
06	336 26.7 +00.7	N 21 54.5 +00.3	333 32.9 +02.0	N 21 59.7 +00.0	58 17.3 +02.6	S 06 38.9 +00.0	06						
07	351 27.4 +00.7	N 21 54.8 +00.2	348 34.9 +02.1	N 21 59.7 +00.1	73 19.9 +02.6	S 06 38.9 +00.1	07						
08	6 28.1 +00.7	N 21 55.0 +00.3	3 37.0 +02.0	N 21 59.8 +00.0	88 22.5 +02.6	S 06 39.0 +00.1	08						
09	21 28.8 +00.7	N 21 55.3 +00.2	18 39.0 +02.0	N 21 59.8 +00.1	103 25.1 +02.6	S 06 39.1 +00.0	09						
10	36 29.5 +00.7	N 21 55.5 +00.3	33 41.0 +02.0	N 21 59.9 +00.0	118 27.7 +02.6	S 06 39.1 +00.1	10						
11	51 30.2 +00.7	N 21 55.8 +00.2	48 43.0 +02.1	N 21 59.9 +00.0	133 30.3 +02.6	S 06 39.2 +00.1	11						
12	66 30.9 +00.7	N 21 56.0 +00.2	63 45.1 +02.0	N 21 59.9 +00.1	148 32.9 +02.6	S 06 39.3 +00.0	12						
13	81 31.6 +00.7	N 21 56.2 +00.3	78 47.1 +02.0	N 21 60.0 +00.0	163 35.5 +02.6	S 06 39.3 +00.1	13						
14	96 32.3 +00.7	N 21 56.5 +00.2	93 49.1 +02.0	N 22 00.0 +00.1	178 38.1 +02.6	S 06 39.4 +00.1	14						
15	111 33.0 +00.7	N 21 56.7 +00.3	108 51.1 +02.1	N 22 00.1 +00.0	193 40.7 +02.6	S 06 39.5 +00.0	15						
16	126 33.7 +00.7	N 21 57.0 +00.2	123 53.2 +02.0	N 22 00.1 +00.0	208 43.3 +02.6	S 06 39.5 +00.1	16						
17	141 34.4 +00.7	N 21 57.2 +00.2	138 55.2 +02.0	N 22 00.1 +00.1	223 45.9 +02.6	S 06 39.6 +00.1	17						
18	156 35.1 +00.7	N 21 57.4 +00.3	153 57.2 +02.0	N 22 00.2 +00.0	238 48.5 +02.6	S 06 39.7 +00.0	18						
19	171 35.8 +00.7	N 21 57.7 +00.2	168 59.2 +02.1	N 22 00.2 +00.1	253 51.1 +02.6	S 06 39.7 +00.1	19						
20	186 36.5 +00.7	N 21 57.9 +00.2	184 01.3 +02.0	N 22 00.3 +00.0	268 53.7 +02.6	S 06 39.8 +00.0	20						
21	201 37.2 +00.7	N 21 58.1 +00.3	199 03.3 +02.0	N 22 00.3 +00.1	283 56.3 +02.6	S 06 39.8 +00.1	21						
22	216 37.9 +00.7	N 21 58.4 +00.2	214 05.3 +02.0	N 22 00.4 +00.0	298 58.9 +02.6	S 06 39.9 +00.1	22						
23	231 38.6 +00.7	N 21 58.6 +00.3	229 07.3 +02.1	N 22 00.4 +00.0	314 01.5 +02.6	S 06 40.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 288° 288° 288° 288° 288° 288°		SHA 285° 285° 285° 285° 285° 285°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:34		Greenwich Culmination Time: 07:45		Greenwich Culmination Time: 02:07								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	178 39.3 +00.1	N 15 28.5 -00.7	160 37.2 -00.5	N 10 40.0 -01.2	121 55.5 -24.1	S 08 19.7 +13.6	00								
01	193 39.4 +00.0	N 15 27.8 -00.7	175 36.7 -00.4	N 10 38.8 -01.2	136 31.4 -24.1	S 08 33.3 +13.6	01								
02	208 39.4 +00.1	N 15 27.1 -00.8	190 36.3 -00.4	N 10 37.6 -01.1	151 07.3 -24.2	S 08 46.9 +13.5	02								
03	223 39.5 +00.1	N 15 26.3 -00.7	205 35.9 -00.5	N 10 36.5 -01.2	165 43.1 -24.2	S 09 00.4 +13.5	03								
04	238 39.6 +00.1	N 15 25.6 -00.7	220 35.4 -00.4	N 10 35.3 -01.1	180 18.9 -24.2	S 09 13.9 +13.5	04								
05	253 39.7 +00.1	N 15 24.9 -00.8	235 35.0 -00.4	N 10 34.2 -01.2	194 54.7 -24.3	S 09 27.4 +13.5	05								
06	268 39.8 +00.1	N 15 24.1 -00.7	250 34.6 -00.4	N 10 33.0 -01.1	209 30.4 -24.3	S 09 40.9 +13.4	06								
07	283 39.9 +00.1	N 15 23.4 -00.8	265 34.2 -00.5	N 10 31.9 -01.2	224 06.1 -24.4	S 09 54.3 +13.4	07								
08	298 40.0 +00.1	N 15 22.6 -00.7	280 33.7 -00.4	N 10 30.7 -01.1	238 41.7 -24.4	S 10 07.7 +13.3	08								
09	313 40.1 +00.1	N 15 21.9 -00.7	295 33.3 -00.4	N 10 29.6 -01.2	253 17.3 -24.4	S 10 21.0 +13.4	09								
10	328 40.2 +00.1	N 15 21.2 -00.8	310 32.9 -00.4	N 10 28.4 -01.2	267 52.9 -24.5	S 10 34.4 +13.3	10								
11	343 40.3 +00.1	N 15 20.4 -00.7	325 32.5 -00.5	N 10 27.2 -01.1	282 28.4 -24.6	S 10 47.7 +13.2	11								
12	358 40.4 +00.1	N 15 19.7 -00.8	340 32.0 -00.4	N 10 26.1 -01.2	297 03.8 -24.6	S 11 00.9 +13.2	12								
13	13 40.5 +00.1	N 15 18.9 -00.7	355 31.6 -00.4	N 10 24.9 -01.1	311 39.2 -24.6	S 11 14.1 +13.2	13								
14	28 40.6 +00.1	N 15 18.2 -00.7	10 31.2 -00.4	N 10 23.8 -01.2	326 14.6 -24.7	S 11 27.3 +13.2	14								
15	43 40.7 +00.1	N 15 17.5 -00.8	25 30.8 -00.5	N 10 22.6 -01.1	340 49.9 -24.7	S 11 40.5 +13.1	15								
16	58 40.8 +00.1	N 15 16.7 -00.7	40 30.3 -00.4	N 10 21.5 -01.2	355 25.2 -24.8	S 11 53.6 +13.0	16								
17	73 40.9 +00.1	N 15 16.0 -00.8	55 29.9 -00.4	N 10 20.3 -01.2	10 00.4 -24.9	S 12 06.6 +13.1	17								
18	88 41.0 +00.1	N 15 15.2 -00.7	70 29.5 -00.4	N 10 19.1 -01.1	24 35.5 -24.9	S 12 19.7 +12.9	18								
19	103 41.1 +00.1	N 15 14.5 -00.7	85 29.1 -00.5	N 10 18.0 -01.2	39 10.6 -24.9	S 12 32.6 +13.0	19								
20	118 41.2 +00.1	N 15 13.8 -00.8	100 28.6 -00.4	N 10 16.8 -01.2	53 45.7 -25.0	S 12 45.6 +12.9	20								
21	133 41.3 +00.1	N 15 13.0 -00.7	115 28.2 -00.4	N 10 15.6 -01.1	68 20.7 -25.1	S 12 58.5 +12.8	21								
22	148 41.4 +00.1	N 15 12.3 -00.8	130 27.8 -00.4	N 10 14.5 -01.2	82 55.6 -25.1	S 13 11.3 +12.9	22								
23	163 41.5 +00.1	N 15 11.5 -00.7	145 27.4 -00.4	N 10 13.3 -01.1	97 30.5 -25.2	S 13 24.2 +12.7	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 220° 219° 219° 219° 219° 219°	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 202° 201° 201° 201° 201° 201°	Greenwich Culmination Time: 13:17	UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8	HP 54'2 54'2 54'2 54'2 54'3 54'3	SHA 162° 160° 159° 157° 155° 153°	Greenwich Culmination Time: 16:18

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	246 39.3 +00.7	N 21 58.9 +00.2	244 09.4 +02.0	N 22 00.4 +00.1	329 04.1 +02.6	S 06 40.0 +00.1	00								
01	261 40.0 +00.7	N 21 59.1 +00.2	259 11.4 +02.0	N 22 00.5 +00.0	344 06.7 +02.6	S 06 40.1 +00.1	01								
02	276 40.7 +00.7	N 21 59.3 +00.3	274 13.4 +02.1	N 22 00.5 +00.1	359 09.3 +02.6	S 06 40.2 +00.0	02								
03	291 41.4 +00.7	N 21 59.6 +00.2	289 15.5 +02.0	N 22 00.6 +00.0	14 11.9 +02.6	S 06 40.2 +00.1	03								
04	306 42.1 +00.7	N 21 59.8 +00.2	304 17.5 +02.0	N 22 00.6 +00.1	29 14.5 +02.6	S 06 40.3 +00.1	04								
05	321 42.8 +00.7	N 22 00.0 +00.3	319 19.5 +02.0	N 22 00.7 +00.0	44 17.1 +02.6	S 06 40.4 +00.0	05								
06	336 43.5 +00.7	N 22 00.3 +00.2	334 21.5 +02.1	N 22 00.7 +00.0	59 19.7 +02.6	S 06 40.4 +00.1	06								
07	351 44.2 +00.7	N 22 00.5 +00.2	349 23.6 +02.0	N 22 00.7 +00.1	74 22.3 +02.6	S 06 40.5 +00.1	07								
08	6 44.9 +00.7	N 22 00.7 +00.3	4 25.6 +02.0	N 22 00.8 +00.0	89 24.9 +02.6	S 06 40.6 +00.0	08								
09	21 45.6 +00.7	N 22 01.0 +00.2	19 27.6 +02.1	N 22 00.8 +00.1	104 27.5 +02.6	S 06 40.6 +00.1	09								
10	36 46.3 +00.7	N 22 01.2 +00.2	34 29.7 +02.0	N 22 00.9 +00.0	119 30.1 +02.6	S 06 40.7 +00.1	10								
11	51 47.0 +00.8	N 22 01.4 +00.3	49 31.7 +02.0	N 22 00.9 +00.0	134 32.7 +02.6	S 06 40.8 +00.0	11								
12	66 47.8 +00.7	N 22 01.7 +00.2	64 33.7 +02.0	N 22 00.9 +00.1	149 35.3 +02.6	S 06 40.8 +00.1	12								
13	81 48.5 +00.7	N 22 01.9 +00.2	79 35.7 +02.1	N 22 01.0 +00.0	164 37.9 +02.6	S 06 40.9 +00.1	13								
14	96 49.2 +00.7	N 22 02.1 +00.3	94 37.8 +02.0	N 22 01.0 +00.1	179 40.5 +02.6	S 06 41.0 +00.0	14								
15	111 49.9 +00.7	N 22 02.4 +00.2	109 39.8 +02.0	N 22 01.1 +00.0	194 43.1 +02.6	S 06 41.0 +00.1	15								
16	126 50.6 +00.7	N 22 02.6 +00.2	124 41.8 +02.1	N 22 01.1 +00.0	209 45.7 +02.7	S 06 41.1 +00.1	16								
17	141 51.3 +00.7	N 22 02.8 +00.3	139 43.9 +02.0	N 22 01.1 +00.1	224 48.4 +02.6	S 06 41.2 +00.0	17								
18	156 52.0 +00.7	N 22 03.1 +00.2	154 45.9 +02.0	N 22 01.2 +00.0	239 51.0 +02.6	S 06 41.2 +00.1	18								
19	171 52.7 +00.7	N 22 03.3 +00.2	169 47.9 +02.1	N 22 01.2 +00.1	254 53.6 +02.6	S 06 41.3 +00.1	19								
20	186 53.4 +00.7	N 22 03.5 +00.2	184 50.0 +02.0	N 22 01.3 +00.0	269 56.2 +02.6	S 06 41.4 +00.0	20								
21	201 54.1 +00.7	N 22 03.7 +00.3	199 52.0 +02.0	N 22 01.3 +00.1	284 58.8 +02.6	S 06 41.4 +00.1	21								
22	216 54.8 +00.7	N 22 04.0 +00.2	214 54.0 +02.1	N 22 01.4 +00.0	300 01.4 +02.6	S 06 41.5 +00.1	22								
23	231 55.5 +00.7	N 22 04.2 +00.2	229 56.1 +02.0	N 22 01.4 +00.0	315 04.0 +02.6	S 06 41.6 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 288° 288° 287° 287° 287° 287°	Greenwich Culmination Time: 07:33	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 285° 285° 285° 285° 285° 285°	Greenwich Culmination Time: 07:42	UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 010° 010° 010° 010° 010° 010°	Greenwich Culmination Time: 02:03

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 41.6 +00.1	N 15 10.8 -00.8			160 27.0 -00.5	N 10 12.2 -01.2			112 05.3 -25.3	S 13 36.9 +12.7			00
01	193 41.7 +00.1	N 15 10.0 -00.7			175 26.5 -00.4	N 10 11.0 -01.2			126 40.0 -25.3	S 13 49.6 +12.7			01
02	208 41.8 +00.1	N 15 09.3 -00.7			190 26.1 -00.4	N 10 09.8 -01.1			141 14.7 -25.4	S 14 02.3 +12.7			02
03	223 41.9 +00.1	N 15 08.6 -00.8			205 25.7 -00.4	N 10 08.7 -01.2			155 49.3 -25.4	S 14 15.0 +12.5			03
04	238 42.0 +00.1	N 15 07.8 -00.7			220 25.3 -00.4	N 10 07.5 -01.2			170 23.9 -25.5	S 14 27.5 +12.6			04
05	253 42.1 +00.1	N 15 07.1 -00.8			235 24.9 -00.5	N 10 06.3 -01.1			184 58.4 -25.6	S 14 40.1 +12.4			05
06	268 42.2 +00.1	N 15 06.3 -00.7			250 24.4 -00.4	N 10 05.2 -01.2			199 32.8 -25.6	S 14 52.5 +12.5			06
07	283 42.3 +00.1	N 15 05.6 -00.8			265 24.0 -00.4	N 10 04.0 -01.2			214 07.2 -25.7	S 15 05.0 +12.4			07
08	298 42.4 +00.1	N 15 04.8 -00.7			280 23.6 -00.4	N 10 02.8 -01.1			228 41.5 -25.8	S 15 17.4 +12.3			08
09	313 42.5 +00.1	N 15 04.1 -00.8			295 23.2 -00.4	N 10 01.7 -01.2			243 15.7 -25.8	S 15 29.7 +12.3			09
10	328 42.6 +00.1	N 15 03.3 -00.7			310 22.8 -00.4	N 10 00.5 -01.2			257 49.9 -25.9	S 15 42.0 +12.2			10
11	343 42.7 +00.2	N 15 02.6 -00.8			325 22.4 -00.5	N 09 59.3 -01.1			272 24.0 -26.0	S 15 54.2 +12.1			11
12	358 42.9 +00.1	N 15 01.8 -00.7			340 21.9 -00.4	N 09 58.2 -01.2			286 58.0 -26.1	S 16 06.3 +12.1			12
13	13 43.0 +00.1	N 15 01.1 -00.8			355 21.5 -00.4	N 09 57.0 -01.2			301 31.9 -26.1	S 16 18.4 +12.1			13
14	28 43.1 +00.1	N 15 00.3 -00.7			10 21.1 -00.4	N 09 55.8 -01.2			316 05.8 -26.3	S 16 30.5 +12.0			14
15	43 43.2 +00.1	N 14 59.6 -00.8			25 20.7 -00.4	N 09 54.6 -01.1			330 39.5 -26.2	S 16 42.5 +11.9			15
16	58 43.3 +00.1	N 14 58.8 -00.7			40 20.3 -00.4	N 09 53.5 -01.2			345 13.3 -26.4	S 16 54.4 +11.9			16
17	73 43.4 +00.1	N 14 58.1 -00.8			55 19.9 -00.4	N 09 52.3 -01.2			359 46.9 -26.5	S 17 06.3 +11.8			17
18	88 43.5 +00.1	N 14 57.3 -00.7			70 19.5 -00.5	N 09 51.1 -01.1			14 20.4 -26.5	S 17 18.1 +11.8			18
19	103 43.6 +00.1	N 14 56.6 -00.8			85 19.0 -00.4	N 09 50.0 -01.2			28 53.9 -26.6	S 17 29.9 +11.6			19
20	118 43.7 +00.1	N 14 55.8 -00.7			100 18.6 -00.4	N 09 48.8 -01.2			43 27.3 -26.7	S 17 41.5 +11.7			20
21	133 43.8 +00.1	N 14 55.1 -00.8			115 18.2 -00.4	N 09 47.6 -01.2			58 00.6 -26.8	S 17 53.2 +11.5			21
22	148 43.9 +00.1	N 14 54.3 -00.7			130 17.8 -00.4	N 09 46.4 -01.1			72 33.8 -26.8	S 18 04.7 +11.5			22
23	163 44.0 +00.1	N 14 53.6 -00.8			145 17.4 -00.4	N 09 45.3 -01.2			87 07.0 -26.9	S 18 16.2 +11.4			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'8 14'8 14'8 14'9 14'9 14'9				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'4 54'4 54'5 54'6 54'6 54'7				
	SHA 219° 219° 218° 218° 218° 218°				SHA 200° 200° 200° 200° 200° 199°				SHA 151° 149° 147° 146° 144° 142°				
	Greenwich Culmination Time: 12:05				Greenwich Culmination Time: 13:18				Greenwich Culmination Time: 17:00				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 56.2 +00.7	N 22 04.4 +00.3			244 58.1 +02.0	N 22 01.4 +00.1			330 06.6 +02.6	S 06 41.6 +00.1			00
01	261 56.9 +00.7	N 22 04.7 +00.2			260 00.1 +02.0	N 22 01.5 +00.0			345 09.2 +02.6	S 06 41.7 +00.1			01
02	276 57.6 +00.7	N 22 04.9 +00.2			275 02.1 +02.1	N 22 01.5 +00.1			0 11.8 +02.6	S 06 41.8 +00.0			02
03	291 58.3 +00.7	N 22 05.1 +00.2			290 04.2 +02.0	N 22 01.6 +00.0			15 14.4 +02.6	S 06 41.8 +00.1			03
04	306 59.0 +00.8	N 22 05.3 +00.3			305 06.2 +02.0	N 22 01.6 +00.0			30 17.0 +02.6	S 06 41.9 +00.1			04
05	321 59.8 +00.7	N 22 05.6 +00.2			320 08.2 +02.1	N 22 01.6 +00.1			45 19.6 +02.6	S 06 42.0 +00.0			05
06	337 00.5 +00.7	N 22 05.8 +00.2			335 10.3 +02.0	N 22 01.7 +00.0			60 22.2 +02.6	S 06 42.0 +00.1			06
07	352 01.2 +00.7	N 22 06.0 +00.3			350 12.3 +02.0	N 22 01.7 +00.1			75 24.8 +02.6	S 06 42.1 +00.1			07
08	7 01.9 +00.7	N 22 06.3 +00.2			5 14.3 +02.1	N 22 01.8 +00.0			90 27.4 +02.6	S 06 42.2 +00.0			08
09	22 02.6 +00.7	N 22 06.5 +00.2			20 16.4 +02.0	N 22 01.8 +00.0			105 30.0 +02.6	S 06 42.2 +00.1			09
10	37 03.3 +00.7	N 22 06.7 +00.2			35 18.4 +02.0	N 22 01.8 +00.1			120 32.6 +02.6	S 06 42.3 +00.1			10
11	52 04.0 +00.7	N 22 06.9 +00.3			50 20.4 +02.1	N 22 01.9 +00.0			135 35.2 +02.6	S 06 42.4 +00.0			11
12	67 04.7 +00.7	N 22 07.2 +00.2			65 22.5 +02.0	N 22 01.9 +00.1			150 37.8 +02.6	S 06 42.4 +00.1			12
13	82 05.4 +00.7	N 22 07.4 +00.2			80 24.5 +02.1	N 22 02.0 +00.0			165 40.4 +02.6	S 06 42.5 +00.1			13
14	97 06.1 +00.7	N 22 07.6 +00.2			95 26.6 +02.0	N 22 02.0 +00.0			180 43.0 +02.6	S 06 42.6 +00.0			14
15	112 06.8 +00.7	N 22 07.8 +00.3			110 28.6 +02.0	N 22 02.0 +00.1			195 45.6 +02.6	S 06 42.6 +00.1			15
16	127 07.5 +00.7	N 22 08.1 +00.2			125 30.6 +02.1	N 22 02.1 +00.0			210 48.2 +02.6	S 06 42.7 +00.1			16
17	142 08.2 +00.7	N 22 08.3 +00.2			140 32.7 +02.0	N 22 02.1 +00.1			225 50.8 +02.6	S 06 42.8 +00.0			17
18	157 08.9 +00.8	N 22 08.5 +00.2			155 34.7 +02.0	N 22 02.2 +00.0			240 53.4 +02.7	S 06 42.8 +00.1			18
19	172 09.7 +00.7	N 22 08.7 +00.2			170 36.7 +02.1	N 22 02.2 +00.0			255 56.1 +02.6	S 06 42.9 +00.1			19
20	187 10.4 +00.7	N 22 08.9 +00.3			185 38.8 +02.0	N 22 02.2 +00.1			270 58.7 +02.6	S 06 43.0 +00.0			20
21	202 11.1 +00.7	N 22 09.2 +00.2			200 40.8 +02.0	N 22 02.3 +00.0			286 01.3 +02.6	S 06 43.0 +00.1			21
22	217 11.8 +00.7	N 22 09.4 +00.2			215 42.8 +02.1	N 22 02.3 +00.1			301 03.9 +02.6	S 06 43.1 +00.1			22
23	232 12.5 +00.7	N 22 09.6 +00.2			230 44.9 +02.0	N 22 02.4 +00.0			316 06.5 +02.6	S 06 43.2 +00.0			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 287° 287° 287° 287° 286° 286°				SHA 285° 285° 285° 285° 285° 285°				SHA 010° 010° 010° 010° 010° 010°				
	Greenwich Culmination Time: 07:31				Greenwich Culmination Time: 07:39				Greenwich Culmination Time: 01:59				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 44.1 +00.1	N 14 52.8 -00.8			160 17.0 -00.4	N 09 44.1 -01.2			101 40.1 -27.1	S 18 27.6 +11.4			00
01	193 44.2 +00.1	N 14 52.0 -00.7			175 16.6 -00.4	N 09 42.9 -01.2			116 13.0 -27.1	S 18 39.0 +11.3			01
02	208 44.3 +00.1	N 14 51.3 -00.8			190 16.2 -00.4	N 09 41.7 -01.1			130 45.9 -27.2	S 18 50.3 +11.2			02
03	223 44.4 +00.2	N 14 50.5 -00.7			205 15.8 -00.5	N 09 40.6 -01.2			145 18.7 -27.3	S 19 01.5 +11.2			03
04	238 44.6 +00.1	N 14 49.8 -00.8			220 15.3 -00.4	N 09 39.4 -01.2			159 51.4 -27.3	S 19 12.7 +11.0			04
05	253 44.7 +00.1	N 14 49.0 -00.7			235 14.9 -00.4	N 09 38.2 -01.2			174 24.1 -27.5	S 19 23.7 +11.0			05
06	268 44.8 +00.1	N 14 48.3 -00.8			250 14.5 -00.4	N 09 37.0 -01.1			188 56.6 -27.6	S 19 34.7 +11.0			06
07	283 44.9 +00.1	N 14 47.5 -00.7			265 14.1 -00.4	N 09 35.9 -01.2			203 29.0 -27.6	S 19 45.7 +10.8			07
08	298 45.0 +00.1	N 14 46.8 -00.8			280 13.7 -00.4	N 09 34.7 -01.2			218 01.4 -27.8	S 19 56.5 +10.8			08
09	313 45.1 +00.1	N 14 46.0 -00.8			295 13.3 -00.4	N 09 33.5 -01.2			232 33.6 -27.8	S 20 07.3 +10.7			09
10	328 45.2 +00.1	N 14 45.2 -00.7			310 12.9 -00.4	N 09 32.3 -01.2			247 05.8 -27.9	S 20 18.0 +10.6			10
11	343 45.3 +00.1	N 14 44.5 -00.8			325 12.5 -00.4	N 09 31.1 -01.1			261 37.9 -28.0	S 20 28.6 +10.6			11
12	358 45.4 +00.1	N 14 43.7 -00.7			340 12.1 -00.4	N 09 30.0 -01.2			276 09.9 -28.1	S 20 39.2 +10.4			12
13	13 45.5 +00.1	N 14 43.0 -00.8			355 11.7 -00.4	N 09 28.8 -01.2			290 41.8 -28.3	S 20 49.6 +10.4			13
14	28 45.6 +00.2	N 14 42.2 -00.8			10 11.3 -00.4	N 09 27.6 -01.2			305 13.5 -28.3	S 21 00.0 +10.3			14
15	43 45.8 +00.1	N 14 41.4 -00.7			25 10.9 -00.4	N 09 26.4 -01.2			319 45.2 -28.4	S 21 10.3 +10.2			15
16	58 45.9 +00.1	N 14 40.7 -00.8			40 10.5 -00.5	N 09 25.2 -01.1			334 16.8 -28.5	S 21 20.5 +10.1			16
17	73 46.0 +00.1	N 14 39.9 -00.7			55 10.0 -00.4	N 09 24.1 -01.2			348 48.3 -28.6	S 21 30.6 +10.1			17
18	88 46.1 +00.1	N 14 39.2 -00.8			70 09.6 -00.4	N 09 22.9 -01.2			3 19.7 -28.7	S 21 40.7 +09.9			18
19	103 46.2 +00.1	N 14 38.4 -00.8			85 09.2 -00.4	N 09 21.7 -01.2			17 51.0 -28.8	S 21 50.6 +09.9			19
20	118 46.3 +00.1	N 14 37.6 -00.7			100 08.8 -00.4	N 09 20.5 -01.2			32 22.2 -28.9	S 22 00.5 +09.8			20
21	133 46.4 +00.1	N 14 36.9 -00.8			115 08.4 -00.4	N 09 19.3 -01.2			46 53.3 -29.0	S 22 10.3 +09.6			21
22	148 46.5 +00.2	N 14 36.1 -00.8			130 08.0 -00.4	N 09 18.1 -01.1			61 24.3 -29.1	S 22 19.9 +09.6			22
23	163 46.7 +00.1	N 14 35.3 -00.7			145 07.6 -00.4	N 09 17.0 -01.2			75 55.2 -29.2	S 22 29.5 +09.5			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 15'0 15'0 15'0 15'0				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'8 54'9 54'9 55'0 55'1 55'2				
	SHA 218° 218° 217° 217° 217° 217°				SHA 199° 199° 199° 199° 198° 198°				SHA 140° 138° 136° 134° 132° 130°				
	Greenwich Culmination Time: 12:04				Greenwich Culmination Time: 13:19				Greenwich Culmination Time: 17:46				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 13.2 +00.7	N 22 09.8 +00.2			245 46.9 +02.1	N 22 02.4 +00.0			331 09.1 +02.6	S 06 43.2 +00.1			00
01	262 13.9 +00.7	N 22 10.0 +00.3			260 49.0 +02.0	N 22 02.4 +00.1			346 11.7 +02.6	S 06 43.3 +00.1			01
02	277 14.6 +00.7	N 22 10.3 +00.2			275 51.0 +02.0	N 22 02.5 +00.0			1 14.3 +02.6	S 06 43.4 +00.0			02
03	292 15.3 +00.7	N 22 10.5 +00.2			290 53.0 +02.1	N 22 02.5 +00.1			16 16.9 +02.6	S 06 43.4 +00.1			03
04	307 16.0 +00.7	N 22 10.7 +00.2			305 55.1 +02.0	N 22 02.6 +00.0			31 19.5 +02.6	S 06 43.5 +00.1			04
05	322 16.7 +00.8	N 22 10.9 +00.2			320 57.1 +02.0	N 22 02.6 +00.0			46 22.1 +02.6	S 06 43.6 +00.1			05
06	337 17.5 +00.7	N 22 11.1 +00.3			335 59.1 +02.1	N 22 02.6 +00.1			61 24.7 +02.6	S 06 43.7 +00.0			06
07	352 18.2 +00.7	N 22 11.4 +00.2			351 01.2 +02.0	N 22 02.7 +00.0			76 27.3 +02.6	S 06 43.7 +00.1			07
08	7 18.9 +00.7	N 22 11.6 +00.2			6 03.2 +02.1	N 22 02.7 +00.1			91 29.9 +02.6	S 06 43.8 +00.1			08
09	22 19.6 +00.7	N 22 11.8 +00.2			21 05.3 +02.0	N 22 02.8 +00.0			106 32.5 +02.6	S 06 43.9 +00.0			09
10	37 20.3 +00.7	N 22 12.0 +00.2			36 07.3 +02.0	N 22 02.8 +00.0			121 35.1 +02.6	S 06 43.9 +00.1			10
11	52 21.0 +00.7	N 22 12.2 +00.3			51 09.3 +02.1	N 22 02.8 +00.1			136 37.7 +02.7	S 06 44.0 +00.1			11
12	67 21.7 +00.7	N 22 12.5 +00.2			66 11.4 +02.0	N 22 02.9 +00.0			151 40.4 +02.6	S 06 44.1 +00.0			12
13	82 22.4 +00.7	N 22 12.7 +00.2			81 13.4 +02.1	N 22 02.9 +00.1			166 43.0 +02.6	S 06 44.1 +00.1			13
14	97 23.1 +00.8	N 22 12.9 +00.2			96 15.5 +02.0	N 22 03.0 +00.0			181 45.6 +02.6	S 06 44.2 +00.1			14
15	112 23.9 +00.7	N 22 13.1 +00.2			111 17.5 +02.0	N 22 03.0 +00.0			196 48.2 +02.6	S 06 44.3 +00.0			15
16	127 24.6 +00.7	N 22 13.3 +00.2			126 19.5 +02.1	N 22 03.0 +00.1			211 50.8 +02.6	S 06 44.3 +00.1			16
17	142 25.3 +00.7	N 22 13.5 +00.2			141 21.6 +02.0	N 22 03.1 +00.0			226 53.4 +02.6	S 06 44.4 +00.1			17
18	157 26.0 +00.7	N 22 13.7 +00.3			156 23.6 +02.1	N 22 03.1 +00.1			241 56.0 +02.6	S 06 44.5 +00.0			18
19	172 26.7 +00.7	N 22 14.0 +00.2			171 25.7 +02.0	N 22 03.2 +00.0			256 58.6 +02.6	S 06 44.5 +00.1			19
20	187 27.4 +00.7	N 22 14.2 +00.2			186 27.7 +02.0	N 22 03.2 +00.0			272 01.2 +02.6	S 06 44.6 +00.1			20
21	202 28.1 +00.7	N 22 14.4 +00.2			201 29.7 +02.1	N 22 03.2 +00.1			287 03.8 +02.6	S 06 44.7 +00.0			21
22	217 28.8 +00.7	N 22 14.6 +00.2			216 31.8 +02.0	N 22 03.3 +00.0			302 06.4 +02.6	S 06 44.7 +00.1			22
23	232 29.5 +00.8	N 22 14.8 +00.2			231 33.8 +02.1	N 22 03.3 +00.1			317 09.0 +02.6	S 06 44.8 +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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 286° 286° 286° 286° 286° 286°				SHA 285° 285° 285° 285° 285° 285°				SHA 010° 010° 010° 010° 010° 010°				
	Greenwich Culmination Time: 07:30				Greenwich Culmination Time: 07:35				Greenwich Culmination Time: 01:55				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 46.8 +00.1	N 14 34.6 -00.8	160 07.2 -00.4	N 09 15.8 -01.2	90 26.0 -29.3	S 22 39.0 +09.4	00						
01	193 46.9 +00.1	N 14 33.8 -00.7	175 06.8 -00.4	N 09 14.6 -01.2	104 56.7 -29.5	S 22 48.4 +09.3	01						
02	208 47.0 +00.1	N 14 33.1 -00.8	190 06.4 -00.4	N 09 13.4 -01.2	119 27.2 -29.5	S 22 57.7 +09.2	02						
03	223 47.1 +00.1	N 14 32.3 -00.8	205 06.0 -00.4	N 09 12.2 -01.2	133 57.7 -29.6	S 23 06.9 +09.1	03						
04	238 47.2 +00.1	N 14 31.5 -00.7	220 05.6 -00.4	N 09 11.0 -01.2	148 28.1 -29.7	S 23 16.0 +09.0	04						
05	253 47.3 +00.2	N 14 30.8 -00.8	235 05.2 -00.4	N 09 09.8 -01.1	162 58.4 -29.9	S 23 25.0 +08.9	05						
06	268 47.5 +00.1	N 14 30.0 -00.8	250 04.8 -00.4	N 09 08.7 -01.2	177 28.5 -29.9	S 23 33.9 +08.8	06						
07	283 47.6 +00.1	N 14 29.2 -00.7	265 04.4 -00.4	N 09 07.5 -01.2	191 58.6 -30.1	S 23 42.7 +08.7	07						
08	298 47.7 +00.1	N 14 28.5 -00.8	280 04.0 -00.4	N 09 06.3 -01.2	206 28.5 -30.1	S 23 51.4 +08.6	08						
09	313 47.8 +00.1	N 14 27.7 -00.8	295 03.6 -00.4	N 09 05.1 -01.2	220 58.4 -30.3	S 24 00.0 +08.5	09						
10	328 47.9 +00.1	N 14 26.9 -00.7	310 03.2 -00.4	N 09 03.9 -01.2	235 28.1 -30.3	S 24 08.5 +08.4	10						
11	343 48.0 +00.1	N 14 26.2 -00.8	325 02.8 -00.4	N 09 02.7 -01.2	249 57.8 -30.5	S 24 16.9 +08.3	11						
12	358 48.1 +00.2	N 14 25.4 -00.8	340 02.4 -00.4	N 09 01.5 -01.2	264 27.3 -30.6	S 24 25.2 +08.1	12						
13	13 48.3 +00.1	N 14 24.6 -00.7	355 02.0 -00.4	N 09 00.3 -01.2	278 56.7 -30.7	S 24 33.3 +08.1	13						
14	28 48.4 +00.1	N 14 23.9 -00.8	10 01.6 -00.4	N 08 59.1 -01.2	293 26.0 -30.8	S 24 41.4 +07.9	14						
15	43 48.5 +00.1	N 14 23.1 -00.8	25 01.2 -00.4	N 08 57.9 -01.1	307 55.2 -30.9	S 24 49.3 +07.8	15						
16	58 48.6 +00.1	N 14 22.3 -00.8	40 00.8 -00.4	N 08 56.8 -01.2	322 24.3 -31.0	S 24 57.1 +07.7	16						
17	73 48.7 +00.1	N 14 21.5 -00.7	55 00.4 -00.4	N 08 55.6 -01.2	336 53.3 -31.1	S 25 04.8 +07.6	17						
18	88 48.8 +00.2	N 14 20.8 -00.8	70 00.0 -00.4	N 08 54.4 -01.2	351 22.2 -31.2	S 25 12.4 +07.5	18						
19	103 49.0 +00.1	N 14 20.0 -00.8	84 59.6 -00.4	N 08 53.2 -01.2	5 51.0 -31.4	S 25 19.9 +07.3	19						
20	118 49.1 +00.1	N 14 19.2 -00.7	99 59.2 -00.4	N 08 52.0 -01.2	20 19.6 -31.4	S 25 27.2 +07.3	20						
21	133 49.2 +00.1	N 14 18.5 -00.8	114 58.8 -00.4	N 08 50.8 -01.2	34 48.2 -31.5	S 25 34.5 +07.1	21						
22	148 49.3 +00.1	N 14 17.7 -00.8	129 58.4 -00.3	N 08 49.6 -01.2	49 16.7 -31.7	S 25 41.6 +07.0	22						
23	163 49.4 +00.2	N 14 16.9 -00.8	144 58.1 -00.4	N 08 48.4 -01.2	63 45.0 -31.7	S 25 48.6 +06.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'3 55'4 55'6 55'7 55'8 55'9								
	SHA 217° 217° 216° 216° 216° 216°		SHA 198° 198° 198° 198° 197° 197°		SHA 127° 125° 123° 121° 119° 116°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 13:19		Greenwich Culmination Time: 18:35								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 30.3 +00.7	N 22 15.0 +00.2	246 35.9 +02.0	N 22 03.4 +00.0	332 11.6 +02.6	S 06 44.9 +00.0	00						
01	262 31.0 +00.7	N 22 15.2 +00.3	261 37.9 +02.1	N 22 03.4 +00.0	347 14.2 +02.7	S 06 44.9 +00.1	01						
02	277 31.7 +00.7	N 22 15.5 +00.2	276 40.0 +02.0	N 22 03.4 +00.1	2 16.9 +02.6	S 06 45.0 +00.1	02						
03	292 32.4 +00.7	N 22 15.7 +00.2	291 42.0 +02.0	N 22 03.5 +00.0	17 19.5 +02.6	S 06 45.1 +00.1	03						
04	307 33.1 +00.7	N 22 15.9 +00.2	306 44.0 +02.1	N 22 03.5 +00.0	32 22.1 +02.6	S 06 45.2 +00.0	04						
05	322 33.8 +00.7	N 22 16.1 +00.2	321 46.1 +02.0	N 22 03.5 +00.1	47 24.7 +02.6	S 06 45.2 +00.1	05						
06	337 34.5 +00.7	N 22 16.3 +00.2	336 48.1 +02.1	N 22 03.6 +00.0	62 27.3 +02.6	S 06 45.3 +00.1	06						
07	352 35.2 +00.8	N 22 16.5 +00.2	351 50.2 +02.0	N 22 03.6 +00.1	77 29.9 +02.6	S 06 45.4 +00.0	07						
08	7 36.0 +00.7	N 22 16.7 +00.2	6 52.2 +02.1	N 22 03.7 +00.0	92 32.5 +02.6	S 06 45.4 +00.1	08						
09	22 36.7 +00.7	N 22 16.9 +00.2	21 54.3 +02.0	N 22 03.7 +00.0	107 35.1 +02.6	S 06 45.5 +00.1	09						
10	37 37.4 +00.7	N 22 17.1 +00.3	36 56.3 +02.0	N 22 03.7 +00.1	122 37.7 +02.6	S 06 45.6 +00.0	10						
11	52 38.1 +00.7	N 22 17.4 +00.2	51 58.3 +02.1	N 22 03.8 +00.0	137 40.3 +02.6	S 06 45.6 +00.1	11						
12	67 38.8 +00.7	N 22 17.6 +00.2	67 00.4 +02.0	N 22 03.8 +00.1	152 42.9 +02.7	S 06 45.7 +00.1	12						
13	82 39.5 +00.7	N 22 17.8 +00.2	82 02.4 +02.1	N 22 03.9 +00.0	167 45.6 +02.6	S 06 45.8 +00.0	13						
14	97 40.2 +00.8	N 22 18.0 +00.2	97 04.5 +02.0	N 22 03.9 +00.0	182 48.2 +02.6	S 06 45.8 +00.1	14						
15	112 41.0 +00.7	N 22 18.2 +00.2	112 06.5 +02.1	N 22 03.9 +00.1	197 50.8 +02.6	S 06 45.9 +00.1	15						
16	127 41.7 +00.7	N 22 18.4 +00.2	127 08.6 +02.0	N 22 04.0 +00.0	212 53.4 +02.6	S 06 46.0 +00.0	16						
17	142 42.4 +00.7	N 22 18.6 +00.2	142 10.6 +02.1	N 22 04.0 +00.0	227 56.0 +02.6	S 06 46.0 +00.1	17						
18	157 43.1 +00.7	N 22 18.8 +00.2	157 12.7 +02.0	N 22 04.0 +00.1	242 58.6 +02.6	S 06 46.1 +00.1	18						
19	172 43.8 +00.7	N 22 19.0 +00.2	172 14.7 +02.1	N 22 04.1 +00.0	258 01.2 +02.6	S 06 46.2 +00.1	19						
20	187 44.5 +00.7	N 22 19.2 +00.2	187 16.8 +02.0	N 22 04.1 +00.1	273 03.8 +02.6	S 06 46.3 +00.0	20						
21	202 45.2 +00.8	N 22 19.4 +00.2	202 18.8 +02.0	N 22 04.2 +00.0	288 06.4 +02.6	S 06 46.3 +00.1	21						
22	217 46.0 +00.7	N 22 19.6 +00.2	217 20.8 +02.1	N 22 04.2 +00.0	303 09.0 +02.6	S 06 46.4 +00.1	22						
23	232 46.7 +00.7	N 22 19.8 +00.2	232 22.9 +02.0	N 22 04.2 +00.1	318 11.6 +02.7	S 06 46.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 286° 285° 285° 285° 285° 285°		SHA 285° 285° 285° 285° 285° 285°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:29		Greenwich Culmination Time: 07:32		Greenwich Culmination Time: 01:50								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 49.6 +00.1	N 14 16.1 -00.7	159 57.7 -00.4	N 08 47.2 -01.2	78 13.3 -31.9	S 25 55.4 +06.7	00						
01	193 49.7 +00.1	N 14 15.4 -00.8	174 57.3 -00.4	N 08 46.0 -01.2	92 41.4 -32.0	S 26 02.1 +06.6	01						
02	208 49.8 +00.1	N 14 14.6 -00.8	189 56.9 -00.4	N 08 44.8 -01.2	107 09.4 -32.1	S 26 08.7 +06.5	02						
03	223 49.9 +00.1	N 14 13.8 -00.8	204 56.5 -00.4	N 08 43.6 -01.2	121 37.3 -32.1	S 26 15.2 +06.4	03						
04	238 50.0 +00.2	N 14 13.0 -00.7	219 56.1 -00.4	N 08 42.4 -01.2	136 05.2 -32.3	S 26 21.6 +06.2	04						
05	253 50.2 +00.1	N 14 12.3 -00.8	234 55.7 -00.4	N 08 41.2 -01.2	150 32.9 -32.4	S 26 27.8 +06.0	05						
06	268 50.3 +00.1	N 14 11.5 -00.8	249 55.3 -00.4	N 08 40.0 -01.2	165 00.5 -32.5	S 26 33.8 +06.0	06						
07	283 50.4 +00.1	N 14 10.7 -00.8	264 54.9 -00.4	N 08 38.8 -01.2	179 28.0 -32.6	S 26 39.8 +05.8	07						
08	298 50.5 +00.1	N 14 09.9 -00.7	279 54.5 -00.4	N 08 37.6 -01.2	193 55.4 -32.7	S 26 45.6 +05.7	08						
09	313 50.6 +00.2	N 14 09.2 -00.8	294 54.1 -00.4	N 08 36.4 -01.2	208 22.7 -32.8	S 26 51.3 +05.5	09						
10	328 50.8 +00.1	N 14 08.4 -00.8	309 53.7 -00.4	N 08 35.2 -01.2	222 49.9 -32.9	S 26 56.8 +05.4	10						
11	343 50.9 +00.1	N 14 07.6 -00.8	324 53.3 -00.3	N 08 34.0 -01.2	237 17.0 -33.0	S 27 02.2 +05.2	11						
12	358 51.0 +00.1	N 14 06.8 -00.8	339 53.0 -00.4	N 08 32.8 -01.2	251 44.0 -33.1	S 27 07.4 +05.2	12						
13	13 51.1 +00.1	N 14 06.0 -00.7	354 52.6 -00.4	N 08 31.6 -01.2	266 10.9 -33.2	S 27 12.6 +04.9	13						
14	28 51.2 +00.2	N 14 05.3 -00.8	9 52.2 -00.4	N 08 30.4 -01.2	280 37.7 -33.3	S 27 17.5 +04.8	14						
15	43 51.4 +00.1	N 14 04.5 -00.8	24 51.8 -00.4	N 08 29.2 -01.2	295 04.4 -33.4	S 27 22.3 +04.7	15						
16	58 51.5 +00.1	N 14 03.7 -00.8	39 51.4 -00.4	N 08 28.0 -01.2	309 31.0 -33.5	S 27 27.0 +04.5	16						
17	73 51.6 +00.1	N 14 02.9 -00.7	54 51.0 -00.4	N 08 26.8 -01.2	323 57.5 -33.6	S 27 31.5 +04.4	17						
18	88 51.7 +00.2	N 14 02.2 -00.8	69 50.6 -00.4	N 08 25.6 -01.2	338 23.9 -33.7	S 27 35.9 +04.2	18						
19	103 51.9 +00.1	N 14 01.4 -00.8	84 50.2 -00.4	N 08 24.4 -01.2	352 50.2 -33.8	S 27 40.1 +04.1	19						
20	118 52.0 +00.1	N 14 00.6 -00.8	99 49.8 -00.3	N 08 23.2 -01.2	7 16.4 -33.8	S 27 44.2 +03.9	20						
21	133 52.1 +00.1	N 13 59.8 -00.8	114 49.5 -00.4	N 08 22.0 -01.2	21 42.6 -34.0	S 27 48.1 +03.8	21						
22	148 52.2 +00.2	N 13 59.0 -00.8	129 49.1 -00.4	N 08 20.8 -01.2	36 08.6 -34.0	S 27 51.9 +03.6	22						
23	163 52.4 +00.1	N 13 58.2 -00.7	144 48.7 -00.4	N 08 19.6 -01.2	50 34.6 -34.2	S 27 55.5 +03.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 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 56'0 56'2 56'3 56'4 56'6 56'7								
	SHA 216° 216° 216° 215° 215° 215°		SHA 197° 197° 197° 196° 196° 196°		SHA 114° 112° 110° 107° 105° 102°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 13:20		Greenwich Culmination Time: 19:29								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 47.4 +00.7	N 22 20.0 +00.3	247 24.9 +02.1	N 22 04.3 +00.0	333 14.3 +02.6	S 06 46.5 +00.1	00						
01	262 48.1 +00.7	N 22 20.3 +00.2	262 27.0 +02.0	N 22 04.3 +00.1	348 16.9 +02.6	S 06 46.6 +00.1	01						
02	277 48.8 +00.7	N 22 20.5 +00.2	277 29.0 +02.1	N 22 04.4 +00.0	3 19.5 +02.6	S 06 46.7 +00.0	02						
03	292 49.5 +00.7	N 22 20.7 +00.2	292 31.1 +02.0	N 22 04.4 +00.0	18 22.1 +02.6	S 06 46.7 +00.1	03						
04	307 50.2 +00.8	N 22 20.9 +00.2	307 33.1 +02.1	N 22 04.4 +00.1	33 24.7 +02.6	S 06 46.8 +00.1	04						
05	322 51.0 +00.7	N 22 21.1 +00.2	322 35.2 +02.0	N 22 04.5 +00.0	48 27.3 +02.6	S 06 46.9 +00.0	05						
06	337 51.7 +00.7	N 22 21.3 +00.2	337 37.2 +02.1	N 22 04.5 +00.0	63 29.9 +02.6	S 06 46.9 +00.1	06						
07	352 52.4 +00.7	N 22 21.5 +00.2	352 39.3 +02.0	N 22 04.5 +00.1	78 32.5 +02.6	S 06 47.0 +00.1	07						
08	7 53.1 +00.7	N 22 21.7 +00.2	7 41.3 +02.1	N 22 04.6 +00.0	93 35.1 +02.7	S 06 47.1 +00.0	08						
09	22 53.8 +00.7	N 22 21.9 +00.2	22 43.4 +02.0	N 22 04.6 +00.1	108 37.8 +02.6	S 06 47.1 +00.1	09						
10	37 54.5 +00.8	N 22 22.1 +00.2	37 45.4 +02.1	N 22 04.7 +00.0	123 40.4 +02.6	S 06 47.2 +00.1	10						
11	52 55.3 +00.7	N 22 22.3 +00.2	52 47.5 +02.0	N 22 04.7 +00.0	138 43.0 +02.6	S 06 47.3 +00.1	11						
12	67 56.0 +00.7	N 22 22.5 +00.2	67 49.5 +02.1	N 22 04.7 +00.1	153 45.6 +02.6	S 06 47.4 +00.0	12						
13	82 56.7 +00.7	N 22 22.7 +00.2	82 51.6 +02.0	N 22 04.8 +00.0	168 48.2 +02.6	S 06 47.4 +00.1	13						
14	97 57.4 +00.7	N 22 22.9 +00.2	97 53.6 +02.1	N 22 04.8 +00.0	183 50.8 +02.6	S 06 47.5 +00.1	14						
15	112 58.1 +00.7	N 22 23.1 +00.2	112 55.7 +02.0	N 22 04.8 +00.1	198 53.4 +02.6	S 06 47.6 +00.0	15						
16	127 58.8 +00.8	N 22 23.3 +00.2	127 57.7 +02.1	N 22 04.9 +00.0	213 56.0 +02.6	S 06 47.6 +00.1	16						
17	142 59.6 +00.7	N 22 23.5 +00.2	142 59.8 +02.0	N 22 04.9 +00.1	228 58.6 +02.7	S 06 47.7 +00.1	17						
18	158 00.3 +00.7	N 22 23.7 +00.2	158 01.8 +02.1	N 22 05.0 +00.0	244 01.3 +02.6	S 06 47.8 +00.0	18						
19	173 01.0 +00.7	N 22 23.9 +00.2	173 03.9 +02.0	N 22 05.0 +00.0	259 03.9 +02.6	S 06 47.8 +00.1	19						
20	188 01.7 +00.7	N 22 24.1 +00.2	188 05.9 +02.1	N 22 05.0 +00.1	274 06.5 +02.6	S 06 47.9 +00.1	20						
21	203 02.4 +00.7	N 22 24.3 +00.2	203 08.0 +02.0	N 22 05.1 +00.0	289 09.1 +02.6	S 06 48.0 +00.1	21						
22	218 03.1 +00.8	N 22 24.5 +00.2	218 10.0 +02.1	N 22 05.1 +00.0	304 11.7 +02.6	S 06 48.1 +00.0	22						
23	233 03.9 +00.7	N 22 24.7 +00.2	233 12.1 +02.0	N 22 05.1 +00.1	319 14.3 +02.6	S 06 48.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 285° 285° 285° 284° 284° 284°		SHA 284° 284° 284° 284° 284° 284°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:28		Greenwich Culmination Time: 07:29		Greenwich Culmination Time: 01:46								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 52.5 +00.1	N 13 57.5 -00.8	159 48.3 -00.4	N 08 18.4 -01.2	65 00.4 -34.2	S 27 59.0 +03.3	00						
01	193 52.6 +00.1	N 13 56.7 -00.8	174 47.9 -00.4	N 08 17.2 -01.2	79 26.2 -34.3	S 28 02.3 +03.1	01						
02	208 52.7 +00.2	N 13 55.9 -00.8	189 47.5 -00.4	N 08 16.0 -01.2	93 51.9 -34.4	S 28 05.4 +03.0	02						
03	223 52.9 +00.1	N 13 55.1 -00.8	204 47.1 -00.3	N 08 14.8 -01.2	108 17.5 -34.5	S 28 08.4 +02.8	03						
04	238 53.0 +00.1	N 13 54.3 -00.8	219 46.8 -00.4	N 08 13.6 -01.2	122 43.0 -34.6	S 28 11.2 +02.7	04						
05	253 53.1 +00.1	N 13 53.5 -00.7	234 46.4 -00.4	N 08 12.4 -01.2	137 08.4 -34.6	S 28 13.9 +02.5	05						
06	268 53.2 +00.2	N 13 52.8 -00.8	249 46.0 -00.4	N 08 11.2 -01.2	151 33.8 -34.7	S 28 16.4 +02.3	06						
07	283 53.4 +00.1	N 13 52.0 -00.8	264 45.6 -00.4	N 08 10.0 -01.2	165 59.1 -34.8	S 28 18.7 +02.2	07						
08	298 53.5 +00.1	N 13 51.2 -00.8	279 45.2 -00.4	N 08 08.8 -01.2	180 24.3 -34.9	S 28 20.9 +02.0	08						
09	313 53.6 +00.1	N 13 50.4 -00.8	294 44.8 -00.3	N 08 07.6 -01.2	194 49.4 -34.9	S 28 22.9 +01.8	09						
10	328 53.7 +00.2	N 13 49.6 -00.8	309 44.5 -00.4	N 08 06.4 -01.3	209 14.5 -35.1	S 28 24.7 +01.7	10						
11	343 53.9 +00.1	N 13 48.8 -00.8	324 44.1 -00.4	N 08 05.1 -01.2	223 39.4 -35.1	S 28 26.4 +01.5	11						
12	358 54.0 +00.1	N 13 48.0 -00.7	339 43.7 -00.4	N 08 03.9 -01.2	238 04.3 -35.1	S 28 27.9 +01.3	12						
13	13 54.1 +00.2	N 13 47.3 -00.8	354 43.3 -00.4	N 08 02.7 -01.2	252 29.2 -35.2	S 28 29.2 +01.1	13						
14	28 54.3 +00.1	N 13 46.5 -00.8	9 42.9 -00.4	N 08 01.5 -01.2	266 54.0 -35.3	S 28 30.3 +01.0	14						
15	43 54.4 +00.1	N 13 45.7 -00.8	24 42.5 -00.3	N 08 00.3 -01.2	281 18.7 -35.4	S 28 31.3 +00.8	15						
16	58 54.5 +00.1	N 13 44.9 -00.8	39 42.2 -00.4	N 07 59.1 -01.2	295 43.3 -35.4	S 28 32.1 +00.6	16						
17	73 54.6 +00.2	N 13 44.1 -00.8	54 41.8 -00.4	N 07 57.9 -01.2	310 07.9 -35.5	S 28 32.7 +00.5	17						
18	88 54.8 +00.1	N 13 43.3 -00.8	69 41.4 -00.4	N 07 56.7 -01.2	324 32.4 -35.5	S 28 33.2 +00.3	18						
19	103 54.9 +00.1	N 13 42.5 -00.8	84 41.0 -00.4	N 07 55.5 -01.2	338 56.9 -35.6	S 28 33.5 +00.1	19						
20	118 55.0 +00.2	N 13 41.7 -00.8	99 40.6 -00.3	N 07 54.3 -01.3	353 21.3 -35.6	S 28 33.6 -00.1	20						
21	133 55.2 +00.1	N 13 40.9 -00.7	114 40.3 -00.4	N 07 53.0 -01.2	7 45.7 -35.7	S 28 33.5 -00.2	21						
22	148 55.3 +00.1	N 13 40.2 -00.8	129 39.9 -00.4	N 07 51.8 -01.2	22 10.0 -35.8	S 28 33.3 -00.5	22						
23	163 55.4 +00.1	N 13 39.4 -00.8	144 39.5 -00.4	N 07 50.6 -01.2	36 34.2 -35.7	S 28 32.8 -00.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'5 15'5 15'6 15'6 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 56'9 57'0 57'2 57'3 57'5 57'6								
	SHA 215° 215° 215° 214° 214° 214°		SHA 196° 196° 195° 195° 195° 195°		SHA 100° 097° 095° 092° 090° 087°								
	Greenwich Culmination Time: 12:04		Greenwich Culmination Time: 13:21		Greenwich Culmination Time: 20:27								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	248 04.6 +00.7	N 22 24.9 +00.2	248 14.1 +02.1	N 22 05.2 +00.0	334 16.9 +02.6	S 06 48.2 +00.1	00						
01	263 05.3 +00.7	N 22 25.1 +00.2	263 16.2 +02.0	N 22 05.2 +00.0	349 19.5 +02.7	S 06 48.3 +00.0	01						
02	278 06.0 +00.7	N 22 25.3 +00.2	278 18.2 +02.1	N 22 05.2 +00.1	4 22.2 +02.6	S 06 48.3 +00.1	02						
03	293 06.7 +00.8	N 22 25.5 +00.2	293 20.3 +02.1	N 22 05.3 +00.0	19 24.8 +02.6	S 06 48.4 +00.1	03						
04	308 07.5 +00.7	N 22 25.7 +00.2	308 22.4 +02.0	N 22 05.3 +00.1	34 27.4 +02.6	S 06 48.5 +00.0	04						
05	323 08.2 +00.7	N 22 25.9 +00.2	323 24.4 +02.1	N 22 05.4 +00.0	49 30.0 +02.6	S 06 48.5 +00.1	05						
06	338 08.9 +00.7	N 22 26.1 +00.2	338 26.5 +02.0	N 22 05.4 +00.0	64 32.6 +02.6	S 06 48.6 +00.1	06						
07	353 09.6 +00.7	N 22 26.3 +00.1	353 28.5 +02.1	N 22 05.4 +00.1	79 35.2 +02.6	S 06 48.7 +00.1	07						
08	8 10.3 +00.8	N 22 26.4 +00.2	8 30.6 +02.0	N 22 05.5 +00.0	94 37.8 +02.6	S 06 48.8 +00.0	08						
09	23 11.1 +00.7	N 22 26.6 +00.2	23 32.6 +02.1	N 22 05.5 +00.0	109 40.4 +02.7	S 06 48.8 +00.1	09						
10	38 11.8 +00.7	N 22 26.8 +00.2	38 34.7 +02.0	N 22 05.5 +00.1	124 43.1 +02.6	S 06 48.9 +00.1	10						
11	53 12.5 +00.7	N 22 27.0 +00.2	53 36.7 +02.1	N 22 05.6 +00.0	139 45.7 +02.6	S 06 49.0 +00.0	11						
12	68 13.2 +00.7	N 22 27.2 +00.2	68 38.8 +02.0	N 22 05.6 +00.1	154 48.3 +02.6	S 06 49.0 +00.1	12						
13	83 13.9 +00.8	N 22 27.4 +00.2	83 40.8 +02.1	N 22 05.7 +00.0	169 50.9 +02.6	S 06 49.1 +00.1	13						
14	98 14.7 +00.7	N 22 27.6 +00.2	98 42.9 +02.1	N 22 05.7 +00.0	184 53.5 +02.6	S 06 49.2 +00.0	14						
15	113 15.4 +00.7	N 22 27.8 +00.2	113 45.0 +02.0	N 22 05.7 +00.1	199 56.1 +02.6	S 06 49.2 +00.1	15						
16	128 16.1 +00.7	N 22 28.0 +00.2	128 47.0 +02.1	N 22 05.8 +00.0	214 58.7 +02.7	S 06 49.3 +00.1	16						
17	143 16.8 +00.7	N 22 28.2 +00.2	143 49.1 +02.0	N 22 05.8 +00.0	230 01.4 +02.6	S 06 49.4 +00.1	17						
18	158 17.5 +00.8	N 22 28.4 +00.2	158 51.1 +02.1	N 22 05.8 +00.1	245 04.0 +02.6	S 06 49.5 +00.0	18						
19	173 18.3 +00.7	N 22 28.6 +00.2	173 53.2 +02.0	N 22 05.9 +00.0	260 06.6 +02.6	S 06 49.5 +00.1	19						
20	188 19.0 +00.7	N 22 28.8 +00.2	188 55.2 +02.1	N 22 05.9 +00.0	275 09.2 +02.6	S 06 49.6 +00.1	20						
21	203 19.7 +00.7	N 22 29.0 +00.1	203 57.3 +02.1	N 22 05.9 +00.1	290 11.8 +02.6	S 06 49.7 +00.0	21						
22	218 20.4 +00.7	N 22 29.1 +00.2	218 59.4 +02.0	N 22 06.0 +00.0	305 14.4 +02.6	S 06 49.7 +00.1	22						
23	233 21.1 +00.8	N 22 29.3 +00.2	234 01.4 +02.1	N 22 06.0 +00.1	320 17.0 +02.7	S 06 49.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 284° 284° 284° 284° 284° 284°		SHA 284° 284° 284° 284° 284° 284°		SHA 010° 010° 010° 010° 010° 010°								
	Greenwich Culmination Time: 07:27		Greenwich Culmination Time: 07:26		Greenwich Culmination Time: 01:42								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 37%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	178 55.5 +00.2	N 13	38.6 -00.8	159 39.1 -00.4	N 07	49.4 -01.2	50 58.5 -35.9	S 28	32.2 -00.8				
01	193 55.7 +00.1	N 13	37.8 -00.8	174 38.7 -00.3	N 07	48.2 -01.2	65 22.6 -35.9	S 28	31.4 -00.9				
02	208 55.8 +00.1	N 13	37.0 -00.8	189 38.4 -00.4	N 07	47.0 -01.2	79 46.7 -35.9	S 28	30.5 -01.2				
03	223 55.9 +00.2	N 13	36.2 -00.8	204 38.0 -00.4	N 07	45.8 -01.2	94 10.8 -35.9	S 28	29.3 -01.3				
04	238 56.1 +00.1	N 13	35.4 -00.8	219 37.6 -00.4	N 07	44.6 -01.3	108 34.9 -36.0	S 28	28.0 -01.5				
05	253 56.2 +00.1	N 13	34.6 -00.8	234 37.2 -00.3	N 07	43.3 -01.2	122 58.9 -36.0	S 28	26.5 -01.7				
06	268 56.3 +00.2	N 13	33.8 -00.8	249 36.9 -00.4	N 07	42.1 -01.2	137 22.9 -36.1	S 28	24.8 -01.9				
07	283 56.5 +00.1	N 13	33.0 -00.8	264 36.5 -00.4	N 07	40.9 -01.2	151 46.8 -36.1	S 28	22.9 -02.1				
08	298 56.6 +00.1	N 13	32.2 -00.8	279 36.1 -00.4	N 07	39.7 -01.2	166 10.7 -36.1	S 28	20.8 -02.2				
09	313 56.7 +00.2	N 13	31.4 -00.8	294 35.7 -00.3	N 07	38.5 -01.2	180 34.6 -36.1	S 28	18.6 -02.4				
10	328 56.9 +00.1	N 13	30.6 -00.8	309 35.4 -00.4	N 07	37.3 -01.3	194 58.5 -36.2	S 28	16.2 -02.7				
11	343 57.0 +00.1	N 13	29.8 -00.8	324 35.0 -00.4	N 07	36.0 -01.2	209 22.3 -36.2	S 28	13.5 -02.8				
12	358 57.1 +00.2	N 13	29.0 -00.8	339 34.6 -00.4	N 07	34.8 -01.2	223 46.1 -36.2	S 28	10.7 -03.0				
13	13 57.3 +00.1	N 13	28.2 -00.7	354 34.2 -00.3	N 07	33.6 -01.2	238 09.9 -36.2	S 28	07.7 -03.1				
14	28 57.4 +00.1	N 13	27.5 -00.8	9 33.9 -00.4	N 07	32.4 -01.2	252 33.7 -36.2	S 28	04.6 -03.4				
15	43 57.5 +00.2	N 13	26.7 -00.8	24 33.5 -00.4	N 07	31.2 -01.2	266 57.5 -36.3	S 28	01.2 -03.5				
16	58 57.7 +00.1	N 13	25.9 -00.8	39 33.1 -00.4	N 07	30.0 -01.3	281 21.2 -36.2	S 27	57.7 -03.8				
17	73 57.8 +00.1	N 13	25.1 -00.8	54 32.7 -00.3	N 07	28.7 -01.2	295 45.0 -36.3	S 27	53.9 -03.9				
18	88 57.9 +00.2	N 13	24.3 -00.8	69 32.4 -00.4	N 07	27.5 -01.2	310 08.7 -36.3	S 27	50.0 -04.1				
19	103 58.1 +00.1	N 13	23.5 -00.8	84 32.0 -00.4	N 07	26.3 -01.2	324 32.4 -36.3	S 27	45.9 -04.3				
20	118 58.2 +00.1	N 13	22.7 -00.8	99 31.6 -00.4	N 07	25.1 -01.2	338 56.1 -36.2	S 27	41.6 -04.4				
21	133 58.3 +00.2	N 13	21.9 -00.8	114 31.2 -00.3	N 07	23.9 -01.3	353 19.9 -36.3	S 27	37.2 -04.7				
22	148 58.5 +00.1	N 13	21.1 -00.8	129 30.9 -00.4	N 07	22.6 -01.2	7 43.6 -36.3	S 27	32.5 -04.8				
23	163 58.6 +00.1	N 13	20.3 -00.8	144 30.5 -00.4	N 07	21.4 -01.2	22 07.3 -36.2	S 27	27.7 -05.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'7 15'8 15'8 15'9 15'9 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 57'8 57'9 58'1 58'2 58'4 58'5						
	SHA 214° 214° 214° 214° 213° 213°			SHA 195° 194° 194° 194° 194° 194°			SHA 085° 082° 080° 077° 075° 072°						
	Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 13:21			Greenwich Culmination Time: 21:27						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	248 21.9 +00.7	N 22	29.5 +00.2	249 03.5 +02.0	N 22	06.1 +00.0	335 19.7 +02.6	S 06	49.9 +00.0				
01	263 22.6 +00.7	N 22	29.7 +00.2	264 05.5 +02.1	N 22	06.1 +00.0	350 22.3 +02.6	S 06	49.9 +00.1				
02	278 23.3 +00.7	N 22	29.9 +00.2	279 07.6 +02.0	N 22	06.1 +00.1	5 24.9 +02.6	S 06	50.0 +00.1				
03	293 24.0 +00.7	N 22	30.1 +00.2	294 09.6 +02.1	N 22	06.2 +00.0	20 27.5 +02.6	S 06	50.1 +00.1				
04	308 24.7 +00.8	N 22	30.3 +00.2	309 11.7 +02.1	N 22	06.2 +00.0	35 30.1 +02.6	S 06	50.2 +00.0				
05	323 25.5 +00.7	N 22	30.5 +00.2	324 13.8 +02.0	N 22	06.2 +00.1	50 32.7 +02.6	S 06	50.2 +00.1				
06	338 26.2 +00.7	N 22	30.7 +00.1	339 15.8 +02.1	N 22	06.3 +00.0	65 35.3 +02.7	S 06	50.3 +00.1				
07	353 26.9 +00.7	N 22	30.8 +00.2	354 17.9 +02.0	N 22	06.3 +00.0	80 38.0 +02.6	S 06	50.4 +00.0				
08	8 27.6 +00.8	N 22	31.0 +00.2	9 19.9 +02.1	N 22	06.3 +00.1	95 40.6 +02.6	S 06	50.4 +00.1				
09	23 28.4 +00.7	N 22	31.2 +00.2	24 22.0 +02.1	N 22	06.4 +00.0	110 43.2 +02.6	S 06	50.5 +00.1				
10	38 29.1 +00.7	N 22	31.4 +00.2	39 24.1 +02.0	N 22	06.4 +00.0	125 45.8 +02.6	S 06	50.6 +00.1				
11	53 29.8 +00.7	N 22	31.6 +00.2	54 26.1 +02.1	N 22	06.4 +00.1	140 48.4 +02.6	S 06	50.7 +00.0				
12	68 30.5 +00.8	N 22	31.8 +00.2	69 28.2 +02.0	N 22	06.5 +00.0	155 51.0 +02.7	S 06	50.7 +00.1				
13	83 31.3 +00.7	N 22	32.0 +00.1	84 30.2 +02.1	N 22	06.5 +00.1	170 53.7 +02.6	S 06	50.8 +00.1				
14	98 32.0 +00.7	N 22	32.1 +00.2	99 32.3 +02.1	N 22	06.6 +00.0	185 56.3 +02.6	S 06	50.9 +00.0				
15	113 32.7 +00.7	N 22	32.3 +00.2	114 34.4 +02.0	N 22	06.6 +00.0	200 58.9 +02.6	S 06	50.9 +00.1				
16	128 33.4 +00.7	N 22	32.5 +00.2	129 36.4 +02.1	N 22	06.6 +00.1	216 01.5 +02.6	S 06	51.0 +00.1				
17	143 34.1 +00.8	N 22	32.7 +00.2	144 38.5 +02.0	N 22	06.7 +00.0	231 04.1 +02.6	S 06	51.1 +00.1				
18	158 34.9 +00.7	N 22	32.9 +00.2	159 40.5 +02.1	N 22	06.7 +00.0	246 06.7 +02.6	S 06	51.2 +00.0				
19	173 35.6 +00.7	N 22	33.1 +00.2	174 42.6 +02.1	N 22	06.7 +00.1	261 09.3 +02.7	S 06	51.2 +00.1				
20	188 36.3 +00.7	N 22	33.3 +00.1	189 44.7 +02.0	N 22	06.8 +00.0	276 12.0 +02.6	S 06	51.3 +00.1				
21	203 37.0 +00.8	N 22	33.4 +00.2	204 46.7 +02.1	N 22	06.8 +00.0	291 14.6 +02.6	S 06	51.4 +00.0				
22	218 37.8 +00.7	N 22	33.6 +00.2	219 48.8 +02.1	N 22	06.8 +00.1	306 17.2 +02.6	S 06	51.4 +00.1				
23	233 38.5 +00.7	N 22	33.8 +00.2	234 50.9 +02.0	N 22	06.9 +00.0	321 19.8 +02.6	S 06	51.5 +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 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 283° 283° 283° 283° 283° 283°			SHA 284° 284° 284° 284° 284° 284°			SHA 010° 010° 010° 010° 010° 011°						
	Greenwich Culmination Time: 07:26			Greenwich Culmination Time: 07:22			Greenwich Culmination Time: 01:38						

UT	Sun				Venus				Moon				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	178 58.7 +00.2	N 13 19.5 -00.8	159 30.1 -00.3	N 07 20.2 -01.2	36 31.1 -36.3	S 27 22.6 -05.2	00										
01	193 58.9 +00.1	N 13 18.7 -00.8	174 29.8 -00.4	N 07 19.0 -01.3	50 54.8 -36.2	S 27 17.4 -05.4	01										
02	208 59.0 +00.2	N 13 17.9 -00.8	189 29.4 -00.4	N 07 17.7 -01.2	65 18.6 -36.3	S 27 12.0 -05.6	02										
03	223 59.2 +00.1	N 13 17.1 -00.8	204 29.0 -00.4	N 07 16.5 -01.2	79 42.3 -36.2	S 27 06.4 -05.7	03										
04	238 59.3 +00.1	N 13 16.3 -00.8	219 28.6 -00.3	N 07 15.3 -01.2	94 06.1 -36.2	S 27 00.7 -06.0	04										
05	253 59.4 +00.2	N 13 15.5 -00.8	234 28.3 -00.4	N 07 14.1 -01.2	108 29.9 -36.2	S 26 54.7 -06.1	05										
06	268 59.6 +00.1	N 13 14.7 -00.8	249 27.9 -00.4	N 07 12.9 -01.3	122 53.7 -36.1	S 26 48.6 -06.3	06										
07	283 59.7 +00.1	N 13 13.9 -00.9	264 27.5 -00.3	N 07 11.6 -01.2	137 17.6 -36.2	S 26 42.3 -06.6	07										
08	298 59.8 +00.2	N 13 13.0 -00.8	279 27.2 -00.4	N 07 10.4 -01.2	151 41.4 -36.1	S 26 35.7 -06.6	08										
09	313 60.0 +00.1	N 13 12.2 -00.8	294 26.8 -00.4	N 07 09.2 -01.2	166 05.3 -36.1	S 26 29.1 -06.9	09										
10	329 00.1 +00.2	N 13 11.4 -00.8	309 26.4 -00.3	N 07 08.0 -01.3	180 29.2 -36.0	S 26 22.2 -07.1	10										
11	344 00.3 +00.1	N 13 10.6 -00.8	324 26.1 -00.4	N 07 06.7 -01.2	194 53.2 -36.1	S 26 15.1 -07.2	11										
12	359 00.4 +00.1	N 13 09.8 -00.8	339 25.7 -00.4	N 07 05.5 -01.2	209 17.1 -36.0	S 26 07.9 -07.4	12										
13	14 00.5 +00.2	N 13 09.0 -00.8	354 25.3 -00.3	N 07 04.3 -01.2	223 41.1 -35.9	S 26 00.5 -07.6	13										
14	29 00.7 +00.1	N 13 08.2 -00.8	9 25.0 -00.4	N 07 03.1 -01.3	238 05.2 -36.0	S 25 52.9 -07.7	14										
15	44 00.8 +00.1	N 13 07.4 -00.8	24 24.6 -00.4	N 07 01.8 -01.2	252 29.2 -35.9	S 25 45.2 -08.0	15										
16	59 00.9 +00.2	N 13 06.6 -00.8	39 24.2 -00.3	N 07 00.6 -01.2	266 53.3 -35.8	S 25 37.2 -08.1	16										
17	74 01.1 +00.1	N 13 05.8 -00.8	54 23.9 -00.4	N 06 59.4 -01.2	281 17.5 -35.8	S 25 29.1 -08.3	17										
18	89 01.2 +00.2	N 13 05.0 -00.8	69 23.5 -00.4	N 06 58.2 -01.3	295 41.7 -35.8	S 25 20.8 -08.5	18										
19	104 01.4 +00.1	N 13 04.2 -00.8	84 23.1 -00.3	N 06 56.9 -01.2	310 05.9 -35.7	S 25 12.3 -08.6	19										
20	119 01.5 +00.1	N 13 03.4 -00.8	99 22.8 -00.4	N 06 55.7 -01.2	324 30.2 -35.7	S 25 03.7 -08.8	20										
21	134 01.6 +00.2	N 13 02.6 -00.8	114 22.4 -00.4	N 06 54.5 -01.3	338 54.5 -35.6	S 24 54.9 -09.0	21										
22	149 01.8 +00.1	N 13 01.8 -00.8	129 22.0 -00.3	N 06 53.2 -01.2	353 18.9 -35.6	S 24 45.9 -09.2	22										
23	164 01.9 +00.2	N 13 01.0 -00.9	144 21.7 -00.4	N 06 52.0 -01.2	7 43.3 -35.6	S 24 36.7 -09.3	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 213° 213° 213° 213° 212° 212°	Greenwich Culmination Time: 12:03		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 194° 193° 193° 193° 193° 193°	Greenwich Culmination Time: 13:22		UT 02 06 10 14 18 22	SD 16'0 16'0 16'1 16'1 16'1 16'2	HP 58'7 58'8 59'0 59'1 59'3 59'4	SHA 069° 067° 064° 062° 059° 057°	Greenwich Culmination Time: 22:27

UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	248 39.2 +00.7	N 22 34.0 +00.2	249 52.9 +02.1	N 22 06.9 +00.0	336 22.4 +02.6	S 06 51.6 +00.0	00										
01	263 39.9 +00.8	N 22 34.2 +00.1	264 55.0 +02.0	N 22 06.9 +00.1	351 25.0 +02.7	S 06 51.6 +00.1	01										
02	278 40.7 +00.7	N 22 34.3 +00.2	279 57.0 +02.1	N 22 07.0 +00.0	6 27.7 +02.6	S 06 51.7 +00.1	02										
03	293 41.4 +00.7	N 22 34.5 +00.2	294 59.1 +02.1	N 22 07.0 +00.1	21 30.3 +02.6	S 06 51.8 +00.1	03										
04	308 42.1 +00.7	N 22 34.7 +00.2	310 01.2 +02.0	N 22 07.1 +00.0	36 32.9 +02.6	S 06 51.9 +00.0	04										
05	323 42.8 +00.8	N 22 34.9 +00.2	325 03.2 +02.1	N 22 07.1 +00.0	51 35.5 +02.6	S 06 51.9 +00.1	05										
06	338 43.6 +00.7	N 22 35.1 +00.2	340 05.3 +02.1	N 22 07.1 +00.1	66 38.1 +02.6	S 06 52.0 +00.1	06										
07	353 44.3 +00.7	N 22 35.3 +00.1	355 07.4 +02.0	N 22 07.2 +00.0	81 40.7 +02.7	S 06 52.1 +00.0	07										
08	8 45.0 +00.7	N 22 35.4 +00.2	10 09.4 +02.1	N 22 07.2 +00.0	96 43.4 +02.6	S 06 52.1 +00.1	08										
09	23 45.7 +00.8	N 22 35.6 +00.2	25 11.5 +02.1	N 22 07.2 +00.1	111 46.0 +02.6	S 06 52.2 +00.1	09										
10	38 46.5 +00.7	N 22 35.8 +00.2	40 13.6 +02.0	N 22 07.3 +00.0	126 48.6 +02.6	S 06 52.3 +00.1	10										
11	53 47.2 +00.7	N 22 36.0 +00.1	55 15.6 +02.1	N 22 07.3 +00.0	141 51.2 +02.6	S 06 52.4 +00.0	11										
12	68 47.9 +00.8	N 22 36.1 +00.2	70 17.7 +02.1	N 22 07.3 +00.1	156 53.8 +02.6	S 06 52.4 +00.1	12										
13	83 48.7 +00.7	N 22 36.3 +00.2	85 19.8 +02.0	N 22 07.4 +00.0	171 56.4 +02.7	S 06 52.5 +00.1	13										
14	98 49.4 +00.7	N 22 36.5 +00.2	100 21.8 +02.1	N 22 07.4 +00.0	186 59.1 +02.6	S 06 52.6 +00.0	14										
15	113 50.1 +00.7	N 22 36.7 +00.2	115 23.9 +02.1	N 22 07.4 +00.1	202 01.7 +02.6	S 06 52.6 +00.1	15										
16	128 50.8 +00.8	N 22 36.9 +00.1	130 26.0 +02.0	N 22 07.5 +00.0	217 04.3 +02.6	S 06 52.7 +00.1	16										
17	143 51.6 +00.7	N 22 37.0 +00.2	145 28.0 +02.1	N 22 07.5 +00.0	232 06.9 +02.6	S 06 52.8 +00.1	17										
18	158 52.3 +00.7	N 22 37.2 +00.2	160 30.1 +02.1	N 22 07.5 +00.1	247 09.5 +02.7	S 06 52.9 +00.0	18										
19	173 53.0 +00.7	N 22 37.4 +00.2	175 32.2 +02.0	N 22 07.6 +00.0	262 12.2 +02.6	S 06 52.9 +00.1	19										
20	188 53.7 +00.8	N 22 37.6 +00.1	190 34.2 +02.1	N 22 07.6 +00.0	277 14.8 +02.6	S 06 53.0 +00.1	20										
21	203 54.5 +00.7	N 22 37.7 +00.2	205 36.3 +02.1	N 22 07.6 +00.1	292 17.4 +02.6	S 06 53.1 +00.1	21										
22	218 55.2 +00.7	N 22 37.9 +00.2	220 38.4 +02.0	N 22 07.7 +00.0	307 20.0 +02.6	S 06 53.2 +00.0	22										
23	233 55.9 +00.8	N 22 38.1 +00.2	235 40.4 +02.1	N 22 07.7 +00.0	322 22.6 +02.6	S 06 53.2 +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 283° 283° 282° 282° 282° 282°	Greenwich Culmination Time: 07:25		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 284° 284° 284° 284° 284° 284°	Greenwich Culmination Time: 07:19		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 011° 011° 011° 011° 011° 011°	Greenwich Culmination Time: 01:34

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 45%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	179 02.1 +00.1	N 13 00.1 -00.8	159 21.3 -00.4	N 06 50.8 -01.2	22 07.7 -35.5	S 24 27.4 -09.5							
01	194 02.2 +00.2	N 12 59.3 -00.8	174 20.9 -00.3	N 06 49.6 -01.3	36 32.2 -35.4	S 24 17.9 -09.7							
02	209 02.4 +00.1	N 12 58.5 -00.8	189 20.6 -00.4	N 06 48.3 -01.2	50 56.8 -35.4	S 24 08.2 -09.8							
03	224 02.5 +00.1	N 12 57.7 -00.8	204 20.2 -00.4	N 06 47.1 -01.2	65 21.4 -35.3	S 23 58.4 -10.0							
04	239 02.6 +00.2	N 12 56.9 -00.8	219 19.8 -00.3	N 06 45.9 -01.3	79 46.1 -35.3	S 23 48.4 -10.2							
05	254 02.8 +00.1	N 12 56.1 -00.8	234 19.5 -00.4	N 06 44.6 -01.2	94 10.8 -35.2	S 23 38.2 -10.3							
06	269 02.9 +00.2	N 12 55.3 -00.8	249 19.1 -00.3	N 06 43.4 -01.2	108 35.6 -35.2	S 23 27.9 -10.5							
07	284 03.1 +00.1	N 12 54.5 -00.8	264 18.8 -00.4	N 06 42.2 -01.3	123 00.4 -35.1	S 23 17.4 -10.7							
08	299 03.2 +00.2	N 12 53.7 -00.8	279 18.4 -00.4	N 06 40.9 -01.2	137 25.3 -35.0	S 23 06.7 -10.8							
09	314 03.4 +00.1	N 12 52.9 -00.9	294 18.0 -00.3	N 06 39.7 -01.2	151 50.3 -35.0	S 22 55.9 -11.0							
10	329 03.5 +00.1	N 12 52.0 -00.8	309 17.7 -00.4	N 06 38.5 -01.3	166 15.3 -34.9	S 22 44.9 -11.1							
11	344 03.6 +00.2	N 12 51.2 -00.8	324 17.3 -00.4	N 06 37.2 -01.2	180 40.4 -34.9	S 22 33.8 -11.3							
12	359 03.8 +00.1	N 12 50.4 -00.8	339 16.9 -00.3	N 06 36.0 -01.2	195 05.5 -34.8	S 22 22.5 -11.4							
13	14 03.9 +00.2	N 12 49.6 -00.8	354 16.6 -00.4	N 06 34.8 -01.3	209 30.7 -34.7	S 22 11.1 -11.6							
14	29 04.1 +00.1	N 12 48.8 -00.8	9 16.2 -00.3	N 06 33.5 -01.2	223 56.0 -34.7	S 21 59.5 -11.8							
15	44 04.2 +00.2	N 12 48.0 -00.8	24 15.9 -00.4	N 06 32.3 -01.2	238 21.3 -34.5	S 21 47.7 -11.9							
16	59 04.4 +00.1	N 12 47.2 -00.9	39 15.5 -00.4	N 06 31.1 -01.3	252 46.8 -34.6	S 21 35.8 -12.0							
17	74 04.5 +00.1	N 12 46.3 -00.8	54 15.1 -00.3	N 06 29.8 -01.2	267 12.2 -34.4	S 21 23.8 -12.2							
18	89 04.6 +00.2	N 12 45.5 -00.8	69 14.8 -00.4	N 06 28.6 -01.2	281 37.8 -34.4	S 21 11.6 -12.3							
19	104 04.8 +00.1	N 12 44.7 -00.8	84 14.4 -00.3	N 06 27.4 -01.3	296 03.4 -34.4	S 20 59.3 -12.5							
20	119 04.9 +00.2	N 12 43.9 -00.8	99 14.1 -00.4	N 06 26.1 -01.2	310 29.0 -34.2	S 20 46.8 -12.6							
21	134 05.1 +00.1	N 12 43.1 -00.8	114 13.7 -00.4	N 06 24.9 -01.2	324 54.8 -34.2	S 20 34.2 -12.8							
22	149 05.2 +00.2	N 12 42.3 -00.9	129 13.3 -00.3	N 06 23.7 -01.3	339 20.6 -34.1	S 20 21.4 -12.9							
23	164 05.4 +00.1	N 12 41.4 -00.8	144 13.0 -00.4	N 06 22.4 -01.2	353 46.5 -34.1	S 20 08.5 -13.0							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'2 16'3 16'3 16'3 16'3 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'5 59'7 59'8 59'9 60'0 60'1								
	SHA 212° 212° 212° 212° 211° 211°		SHA 192° 192° 192° 192° 192° 191°		SHA 054° 051° 049° 047° 044° 042°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 13:22		Greenwich Culmination Time: 23:25								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	248 56.7 +00.7	N 22 38.3 +00.1	250 42.5 +02.1	N 22 07.7 +00.1	337 25.2 +02.7	S 06 53.3 +00.1							
01	263 57.4 +00.7	N 22 38.4 +00.2	265 44.6 +02.0	N 22 07.8 +00.0	352 27.9 +02.6	S 06 53.4 +00.0							
02	278 58.1 +00.7	N 22 38.6 +00.2	280 46.6 +02.1	N 22 07.8 +00.0	7 30.5 +02.6	S 06 53.4 +00.1							
03	293 58.8 +00.8	N 22 38.8 +00.2	295 48.7 +02.1	N 22 07.8 +00.1	22 33.1 +02.6	S 06 53.5 +00.1							
04	308 59.6 +00.7	N 22 39.0 +00.1	310 50.8 +02.1	N 22 07.9 +00.0	37 35.7 +02.6	S 06 53.6 +00.1							
05	324 00.3 +00.7	N 22 39.1 +00.2	325 52.9 +02.0	N 22 07.9 +00.1	52 38.3 +02.7	S 06 53.7 +00.0							
06	339 01.0 +00.8	N 22 39.3 +00.2	340 54.9 +02.1	N 22 08.0 +00.0	67 41.0 +02.6	S 06 53.7 +00.1							
07	354 01.8 +00.7	N 22 39.5 +00.1	355 57.0 +02.1	N 22 08.0 +00.0	82 43.6 +02.6	S 06 53.8 +00.1							
08	9 02.5 +00.7	N 22 39.6 +00.2	10 59.1 +02.0	N 22 08.0 +00.1	97 46.2 +02.6	S 06 53.9 +00.0							
09	24 03.2 +00.8	N 22 39.8 +00.2	26 01.1 +02.1	N 22 08.1 +00.0	112 48.8 +02.6	S 06 53.9 +00.1							
10	39 04.0 +00.7	N 22 40.0 +00.2	41 03.2 +02.1	N 22 08.1 +00.0	127 51.4 +02.7	S 06 54.0 +00.1							
11	54 04.7 +00.7	N 22 40.2 +00.1	56 05.3 +02.0	N 22 08.1 +00.1	142 54.1 +02.6	S 06 54.1 +00.1							
12	69 05.4 +00.7	N 22 40.3 +00.2	71 07.3 +02.1	N 22 08.2 +00.0	157 56.7 +02.6	S 06 54.2 +00.0							
13	84 06.1 +00.8	N 22 40.5 +00.2	86 09.4 +02.1	N 22 08.2 +00.0	172 59.3 +02.6	S 06 54.2 +00.1							
14	99 06.9 +00.7	N 22 40.7 +00.1	101 11.5 +02.1	N 22 08.2 +00.1	188 01.9 +02.6	S 06 54.3 +00.1							
15	114 07.6 +00.7	N 22 40.8 +00.2	116 13.6 +02.0	N 22 08.3 +00.0	203 04.5 +02.7	S 06 54.4 +00.0							
16	129 08.3 +00.8	N 22 41.0 +00.2	131 15.6 +02.1	N 22 08.3 +00.0	218 07.2 +02.6	S 06 54.4 +00.1							
17	144 09.1 +00.7	N 22 41.2 +00.2	146 17.7 +02.1	N 22 08.3 +00.1	233 09.8 +02.6	S 06 54.5 +00.1							
18	159 09.8 +00.7	N 22 41.4 +00.1	161 19.8 +02.1	N 22 08.4 +00.0	248 12.4 +02.6	S 06 54.6 +00.1							
19	174 10.5 +00.8	N 22 41.5 +00.2	176 21.9 +02.0	N 22 08.4 +00.0	263 15.0 +02.6	S 06 54.7 +00.0							
20	189 11.3 +00.7	N 22 41.7 +00.2	191 23.9 +02.1	N 22 08.4 +00.1	278 17.6 +02.7	S 06 54.7 +00.1							
21	204 12.0 +00.7	N 22 41.9 +00.1	206 26.0 +02.1	N 22 08.5 +00.0	293 20.3 +02.6	S 06 54.8 +00.1							
22	219 12.7 +00.8	N 22 42.0 +00.2	221 28.1 +02.0	N 22 08.5 +00.0	308 22.9 +02.6	S 06 54.9 +00.1							
23	234 13.5 +00.7	N 22 42.2 +00.2	236 30.1 +02.1	N 22 08.5 +00.1	323 25.5 +02.6	S 06 55.0 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 282° 282° 282° 282° 282° 281°		SHA 284° 284° 284° 284° 284° 284°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:23		Greenwich Culmination Time: 07:16		Greenwich Culmination Time: 01:30								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 05.5 +00.2	N 12 40.6 -00.8			159 12.6 -00.3	N 06 21.2 -01.2			8 12.4 -34.0	S 19 55.5 -13.2			00
01	194 05.7 +00.1	N 12 39.8 -00.8			174 12.3 -00.4	N 06 20.0 -01.3			22 38.4 -33.9	S 19 42.3 -13.3			01
02	209 05.8 +00.2	N 12 39.0 -00.8			189 11.9 -00.3	N 06 18.7 -01.2			37 04.5 -33.8	S 19 29.0 -13.4			02
03	224 06.0 +00.1	N 12 38.2 -00.8			204 11.6 -00.4	N 06 17.5 -01.3			51 30.7 -33.8	S 19 15.6 -13.6			03
04	239 06.1 +00.2	N 12 37.4 -00.9			219 11.2 -00.4	N 06 16.2 -01.2			65 56.9 -33.7	S 19 02.0 -13.7			04
05	254 06.3 +00.1	N 12 36.5 -00.8			234 10.8 -00.3	N 06 15.0 -01.2			80 23.2 -33.6	S 18 48.3 -13.8			05
06	269 06.4 +00.2	N 12 35.7 -00.8			249 10.5 -00.4	N 06 13.8 -01.3			94 49.6 -33.6	S 18 34.5 -14.0			06
07	284 06.6 +00.1	N 12 34.9 -00.8			264 10.1 -00.3	N 06 12.5 -01.2			109 16.0 -33.5	S 18 20.5 -14.1			07
08	299 06.7 +00.2	N 12 34.1 -00.8			279 09.8 -00.4	N 06 11.3 -01.3			123 42.5 -33.4	S 18 06.4 -14.1			08
09	314 06.9 +00.1	N 12 33.3 -00.9			294 09.4 -00.3	N 06 10.0 -01.2			138 09.1 -33.4	S 17 52.3 -14.4			09
10	329 07.0 +00.1	N 12 32.4 -00.8			309 09.1 -00.4	N 06 08.8 -01.2			152 35.7 -33.2	S 17 37.9 -14.4			10
11	344 07.1 +00.2	N 12 31.6 -00.8			324 08.7 -00.3	N 06 07.6 -01.3			167 02.5 -33.2	S 17 23.5 -14.5			11
12	359 07.3 +00.1	N 12 30.8 -00.8			339 08.4 -00.4	N 06 06.3 -01.2			181 29.3 -33.2	S 17 09.0 -14.7			12
13	14 07.4 +00.2	N 12 30.0 -00.8			354 08.0 -00.4	N 06 05.1 -01.3			195 56.1 -33.1	S 16 54.3 -14.8			13
14	29 07.6 +00.1	N 12 29.2 -00.9			9 07.6 -00.3	N 06 03.8 -01.2			210 23.0 -33.0	S 16 39.5 -14.9			14
15	44 07.7 +00.2	N 12 28.3 -00.8			24 07.3 -00.4	N 06 02.6 -01.2			224 50.0 -32.9	S 16 24.6 -15.0			15
16	59 07.9 +00.1	N 12 27.5 -00.8			39 06.9 -00.3	N 06 01.4 -01.3			239 17.1 -32.9	S 16 09.6 -15.1			16
17	74 08.0 +00.2	N 12 26.7 -00.8			54 06.6 -00.4	N 06 00.1 -01.2			253 44.2 -32.8	S 15 54.5 -15.2			17
18	89 08.2 +00.1	N 12 25.9 -00.9			69 06.2 -00.3	N 05 58.9 -01.3			268 11.4 -32.7	S 15 39.3 -15.3			18
19	104 08.3 +00.2	N 12 25.0 -00.8			84 05.9 -00.4	N 05 57.6 -01.2			282 38.7 -32.6	S 15 24.0 -15.4			19
20	119 08.5 +00.1	N 12 24.2 -00.8			99 05.5 -00.3	N 05 56.4 -01.2			297 06.1 -32.6	S 15 08.6 -15.5			20
21	134 08.6 +00.2	N 12 23.4 -00.8			114 05.2 -00.4	N 05 55.2 -01.3			311 33.5 -32.6	S 14 53.1 -15.6			21
22	149 08.8 +00.1	N 12 22.6 -00.9			129 04.8 -00.3	N 05 53.9 -01.2			326 00.9 -32.4	S 14 37.5 -15.7			22
23	164 08.9 +00.2	N 12 21.7 -00.8			144 04.5 -00.4	N 05 52.7 -01.3			340 28.5 -32.4	S 14 21.8 -15.8			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'4 16'4 16'5 16'5 16'5 16'5				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'2 60'3 60'4 60'5 60'5 60'6				
	SHA 211° 211° 211° 211° 211° 210°				SHA 191° 191° 191° 191° 191° 190°				SHA 039° 037° 034° 032° 030° 027°				
	Greenwich Culmination Time: 12:03				Greenwich Culmination Time: 13:23				Greenwich Culmination Time: -1:00				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	249 14.2 +00.7	N 22 42.4 +00.1			251 32.2 +02.1	N 22 08.6 +00.0			338 28.1 +02.6	S 06 55.0 +00.1			00
01	264 14.9 +00.7	N 22 42.5 +00.2			266 34.3 +02.1	N 22 08.6 +00.0			353 30.7 +02.7	S 06 55.1 +00.1			01
02	279 15.6 +00.8	N 22 42.7 +00.2			281 36.4 +02.0	N 22 08.6 +00.1			8 33.4 +02.6	S 06 55.2 +00.0			02
03	294 16.4 +00.7	N 22 42.9 +00.1			296 38.4 +02.1	N 22 08.7 +00.0			23 36.0 +02.6	S 06 55.2 +00.1			03
04	309 17.1 +00.7	N 22 43.0 +00.2			311 40.5 +02.1	N 22 08.7 +00.0			38 38.6 +02.6	S 06 55.3 +00.1			04
05	324 17.8 +00.8	N 22 43.2 +00.2			326 42.6 +02.1	N 22 08.7 +00.1			53 41.2 +02.6	S 06 55.4 +00.1			05
06	339 18.6 +00.7	N 22 43.4 +00.1			341 44.7 +02.0	N 22 08.8 +00.0			68 43.8 +02.7	S 06 55.5 +00.0			06
07	354 19.3 +00.7	N 22 43.5 +00.2			356 46.7 +02.1	N 22 08.8 +00.0			83 46.5 +02.6	S 06 55.5 +00.1			07
08	9 20.0 +00.8	N 22 43.7 +00.1			11 48.8 +02.1	N 22 08.8 +00.1			98 49.1 +02.6	S 06 55.6 +00.1			08
09	24 20.8 +00.7	N 22 43.8 +00.2			26 50.9 +02.1	N 22 08.9 +00.0			113 51.7 +02.6	S 06 55.7 +00.1			09
10	39 21.5 +00.7	N 22 44.0 +00.2			41 53.0 +02.1	N 22 08.9 +00.0			128 54.3 +02.6	S 06 55.8 +00.0			10
11	54 22.2 +00.8	N 22 44.2 +00.1			56 55.1 +02.0	N 22 08.9 +00.1			143 56.9 +02.7	S 06 55.8 +00.1			11
12	69 23.0 +00.7	N 22 44.3 +00.2			71 57.1 +02.1	N 22 09.0 +00.0			158 59.6 +02.6	S 06 55.9 +00.1			12
13	84 23.7 +00.7	N 22 44.5 +00.2			86 59.2 +02.1	N 22 09.0 +00.0			174 02.2 +02.6	S 06 56.0 +00.0			13
14	99 24.4 +00.8	N 22 44.7 +00.1			102 01.3 +02.1	N 22 09.0 +00.1			189 04.8 +02.6	S 06 56.0 +00.1			14
15	114 25.2 +00.7	N 22 44.8 +00.2			117 03.4 +02.0	N 22 09.1 +00.0			204 07.4 +02.7	S 06 56.1 +00.1			15
16	129 25.9 +00.8	N 22 45.0 +00.1			132 05.4 +02.1	N 22 09.1 +00.0			219 10.1 +02.6	S 06 56.2 +00.1			16
17	144 26.7 +00.7	N 22 45.1 +00.2			147 07.5 +02.1	N 22 09.1 +00.1			234 12.7 +02.6	S 06 56.3 +00.0			17
18	159 27.4 +00.7	N 22 45.3 +00.2			162 09.6 +02.1	N 22 09.2 +00.0			249 15.3 +02.6	S 06 56.3 +00.1			18
19	174 28.1 +00.8	N 22 45.5 +00.1			177 11.7 +02.1	N 22 09.2 +00.0			264 17.9 +02.6	S 06 56.4 +00.1			19
20	189 28.9 +00.7	N 22 45.6 +00.2			192 13.8 +02.0	N 22 09.2 +00.1			279 20.5 +02.7	S 06 56.5 +00.1			20
21	204 29.6 +00.7	N 22 45.8 +00.2			207 15.8 +02.1	N 22 09.3 +00.0			294 23.2 +02.6	S 06 56.6 +00.0			21
22	219 30.3 +00.8	N 22 46.0 +00.1			222 17.9 +02.1	N 22 09.3 +00.0			309 25.8 +02.6	S 06 56.6 +00.1			22
23	234 31.1 +00.7	N 22 46.1 +00.2			237 20.0 +02.1	N 22 09.3 +00.1			324 28.4 +02.6	S 06 56.7 +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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 281° 281° 281° 281° 281° 281°				SHA 284° 284° 284° 284° 284° 284°				SHA 011° 011° 011° 011° 011° 011°				
	Greenwich Culmination Time: 07:22				Greenwich Culmination Time: 07:12				Greenwich Culmination Time: 01:25				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 09.1 +00.2	N 12 20.9 -00.8	159 04.1 -00.3	N 05 51.4 -01.2	354 56.1 -32.4	S 14 06.0 -15.9	00										
01	194 09.3 +00.1	N 12 20.1 -00.8	174 03.8 -00.4	N 05 50.2 -01.3	9 23.7 -32.2	S 13 50.1 -15.9	01										
02	209 09.4 +00.2	N 12 19.3 -00.9	189 03.4 -00.3	N 05 48.9 -01.2	23 51.5 -32.2	S 13 34.2 -16.1	02										
03	224 09.6 +00.1	N 12 18.4 -00.8	204 03.1 -00.4	N 05 47.7 -01.2	38 19.3 -32.2	S 13 18.1 -16.1	03										
04	239 09.7 +00.2	N 12 17.6 -00.8	219 02.7 -00.3	N 05 46.5 -01.3	52 47.1 -32.1	S 13 02.0 -16.3	04										
05	254 09.9 +00.1	N 12 16.8 -00.9	234 02.4 -00.4	N 05 45.2 -01.2	67 15.0 -32.0	S 12 45.7 -16.3	05										
06	269 10.0 +00.2	N 12 15.9 -00.8	249 02.0 -00.3	N 05 44.0 -01.3	81 43.0 -32.0	S 12 29.4 -16.4	06										
07	284 10.2 +00.1	N 12 15.1 -00.8	264 01.7 -00.4	N 05 42.7 -01.2	96 11.0 -31.9	S 12 13.0 -16.4	07										
08	299 10.3 +00.2	N 12 14.3 -00.8	279 01.3 -00.3	N 05 41.5 -01.3	110 39.1 -31.8	S 11 56.6 -16.6	08										
09	314 10.5 +00.1	N 12 13.5 -00.9	294 01.0 -00.4	N 05 40.2 -01.2	125 07.3 -31.8	S 11 40.0 -16.6	09										
10	329 10.6 +00.2	N 12 12.6 -00.8	309 00.6 -00.3	N 05 39.0 -01.3	139 35.5 -31.7	S 11 23.4 -16.7	10										
11	344 10.8 +00.1	N 12 11.8 -00.8	324 00.3 -00.4	N 05 37.7 -01.2	154 03.8 -31.7	S 11 06.7 -16.7	11										
12	359 10.9 +00.2	N 12 11.0 -00.9	338 59.9 -00.3	N 05 36.5 -01.3	168 32.1 -31.6	S 10 50.0 -16.8	12										
13	14 11.1 +00.1	N 12 10.1 -00.8	353 59.6 -00.4	N 05 35.2 -01.2	183 00.5 -31.6	S 10 33.2 -16.9	13										
14	29 11.2 +00.2	N 12 09.3 -00.8	8 59.2 -00.3	N 05 34.0 -01.3	197 28.9 -31.5	S 10 16.3 -17.0	14										
15	44 11.4 +00.1	N 12 08.5 -00.8	23 58.9 -00.4	N 05 32.7 -01.2	211 57.4 -31.4	S 09 59.3 -17.0	15										
16	59 11.5 +00.2	N 12 07.7 -00.9	38 58.5 -00.3	N 05 31.5 -01.3	226 26.0 -31.4	S 09 42.3 -17.0	16										
17	74 11.7 +00.2	N 12 06.8 -00.8	53 58.2 -00.4	N 05 30.2 -01.2	240 54.6 -31.4	S 09 25.3 -17.2	17										
18	89 11.9 +00.1	N 12 06.0 -00.8	68 57.8 -00.3	N 05 29.0 -01.2	255 23.2 -31.3	S 09 08.1 -17.1	18										
19	104 12.0 +00.2	N 12 05.2 -00.9	83 57.5 -00.4	N 05 27.8 -01.3	269 51.9 -31.3	S 08 51.0 -17.3	19										
20	119 12.2 +00.1	N 12 04.3 -00.8	98 57.1 -00.3	N 05 26.5 -01.2	284 20.6 -31.2	S 08 33.7 -17.3	20										
21	134 12.3 +00.2	N 12 03.5 -00.8	113 56.8 -00.4	N 05 25.3 -01.3	298 49.4 -31.1	S 08 16.4 -17.3	21										
22	149 12.5 +00.1	N 12 02.7 -00.9	128 56.4 -00.3	N 05 24.0 -01.2	313 18.3 -31.2	S 07 59.1 -17.4	22										
23	164 12.6 +00.2	N 12 01.8 -00.8	143 56.1 -00.4	N 05 22.8 -01.3	327 47.1 -31.0	S 07 41.7 -17.4	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 210° 210° 210° 210° 210° 209°	Greenwich Culmination Time: 12:03		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 190° 190° 190° 190° 189° 189°	Greenwich Culmination Time: 13:24		UT 02 06 10 14 18 22	SD 16'5 16'5 16'6 16'6 16'6 16'6	HP 60'7 60'7 60'8 60'8 60'8 60'8	SHA 025° 023° 020° 018° 016° 014°	Greenwich Culmination Time: 00:21
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	249 31.8 +00.7	N 22 46.3 +00.1	252 22.1 +02.0	N 22 09.4 +00.0	339 31.0 +02.7	S 06 56.8 +00.0	00										
01	264 32.5 +00.8	N 22 46.4 +00.2	267 24.1 +02.1	N 22 09.4 +00.0	354 33.7 +02.6	S 06 56.8 +00.1	01										
02	279 33.3 +00.7	N 22 46.6 +00.1	282 26.2 +02.1	N 22 09.4 +00.0	9 36.3 +02.6	S 06 56.9 +00.1	02										
03	294 34.0 +00.7	N 22 46.7 +00.2	297 28.3 +02.1	N 22 09.4 +00.1	24 38.9 +02.6	S 06 57.0 +00.1	03										
04	309 34.7 +00.8	N 22 46.9 +00.2	312 30.4 +02.1	N 22 09.5 +00.0	39 41.5 +02.6	S 06 57.1 +00.0	04										
05	324 35.5 +00.7	N 22 47.1 +00.1	327 32.5 +02.1	N 22 09.5 +00.0	54 44.1 +02.7	S 06 57.1 +00.1	05										
06	339 36.2 +00.8	N 22 47.2 +00.2	342 34.6 +02.0	N 22 09.5 +00.1	69 46.8 +02.6	S 06 57.2 +00.1	06										
07	354 37.0 +00.7	N 22 47.4 +00.1	357 36.6 +02.1	N 22 09.6 +00.0	84 49.4 +02.6	S 06 57.3 +00.1	07										
08	9 37.7 +00.7	N 22 47.5 +00.2	12 38.7 +02.1	N 22 09.6 +00.0	99 52.0 +02.6	S 06 57.4 +00.0	08										
09	24 38.4 +00.8	N 22 47.7 +00.1	27 40.8 +02.1	N 22 09.6 +00.1	114 54.6 +02.7	S 06 57.4 +00.1	09										
10	39 39.2 +00.7	N 22 47.8 +00.2	42 42.9 +02.1	N 22 09.7 +00.0	129 57.3 +02.6	S 06 57.5 +00.1	10										
11	54 39.9 +00.7	N 22 48.0 +00.2	57 45.0 +02.0	N 22 09.7 +00.0	144 59.9 +02.6	S 06 57.6 +00.1	11										
12	69 40.6 +00.8	N 22 48.2 +00.1	72 47.0 +02.1	N 22 09.7 +00.1	160 02.5 +02.6	S 06 57.7 +00.0	12										
13	84 41.4 +00.7	N 22 48.3 +00.2	87 49.1 +02.1	N 22 09.8 +00.0	175 05.1 +02.6	S 06 57.7 +00.1	13										
14	99 42.1 +00.8	N 22 48.5 +00.1	102 51.2 +02.1	N 22 09.8 +00.0	190 07.7 +02.7	S 06 57.8 +00.1	14										
15	114 42.9 +00.7	N 22 48.6 +00.2	117 53.3 +02.1	N 22 09.8 +00.1	205 10.4 +02.6	S 06 57.9 +00.0	15										
16	129 43.6 +00.7	N 22 48.8 +00.1	132 55.4 +02.1	N 22 09.9 +00.0	220 13.0 +02.6	S 06 57.9 +00.1	16										
17	144 44.3 +00.8	N 22 48.9 +00.2	147 57.5 +02.0	N 22 09.9 +00.0	235 15.6 +02.6	S 06 58.0 +00.1	17										
18	159 45.1 +00.7	N 22 49.1 +00.1	162 59.5 +02.1	N 22 09.9 +00.1	250 18.2 +02.7	S 06 58.1 +00.1	18										
19	174 45.8 +00.7	N 22 49.2 +00.2	178 01.6 +02.1	N 22 10.0 +00.0	265 20.9 +02.6	S 06 58.2 +00.0	19										
20	189 46.5 +00.8	N 22 49.4 +00.1	193 03.7 +02.1	N 22 10.0 +00.0	280 23.5 +02.6	S 06 58.2 +00.1	20										
21	204 47.3 +00.7	N 22 49.5 +00.2	208 05.8 +02.1	N 22 10.0 +00.1	295 26.1 +02.6	S 06 58.3 +00.1	21										
22	219 48.0 +00.8	N 22 49.7 +00.2	223 07.9 +02.1	N 22 10.1 +00.0	310 28.7 +02.7	S 06 58.4 +00.1	22										
23	234 48.8 +00.7	N 22 49.9 +00.1	238 10.0 +02.1	N 22 10.1 +00.0	325 31.4 +02.6	S 06 58.5 +00.0	23										
	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 281° 281° 280° 280° 280° 280°	Greenwich Culmination Time: 07:21		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 284° 284° 283° 283° 283° 283°	Greenwich Culmination Time: 07:09		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 011° 011° 011° 011° 011° 011°	Greenwich Culmination Time: 01:21

UT	Sun				Venus				Moon				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 12.8 +00.1	N 12 01.0 -00.8	158 55.7 -00.3	N 05 21.5 -01.2	342 16.1 -31.1	S 07 24.3 -17.5	00										
01	194 12.9 +00.2	N 12 00.2 -00.9	173 55.4 -00.4	N 05 20.3 -01.3	356 45.0 -31.0	S 07 06.8 -17.5	01										
02	209 13.1 +00.2	N 11 59.3 -00.8	188 55.0 -00.3	N 05 19.0 -01.2	11 14.0 -30.9	S 06 49.3 -17.5	02										
03	224 13.3 +00.1	N 11 58.5 -00.8	203 54.7 -00.3	N 05 17.8 -01.3	25 43.1 -30.9	S 06 31.8 -17.6	03										
04	239 13.4 +00.2	N 11 57.7 -00.9	218 54.4 -00.4	N 05 16.5 -01.2	40 12.2 -30.9	S 06 14.2 -17.6	04										
05	254 13.6 +00.1	N 11 56.8 -00.8	233 54.0 -00.3	N 05 15.3 -01.3	54 41.3 -30.8	S 05 56.6 -17.7	05										
06	269 13.7 +00.2	N 11 56.0 -00.8	248 53.7 -00.4	N 05 14.0 -01.2	69 10.5 -30.8	S 05 38.9 -17.7	06										
07	284 13.9 +00.1	N 11 55.2 -00.9	263 53.3 -00.3	N 05 12.8 -01.3	83 39.7 -30.8	S 05 21.2 -17.7	07										
08	299 14.0 +00.2	N 11 54.3 -00.8	278 53.0 -00.4	N 05 11.5 -01.3	98 08.9 -30.7	S 05 03.5 -17.7	08										
09	314 14.2 +00.2	N 11 53.5 -00.9	293 52.6 -00.3	N 05 10.2 -01.2	112 38.2 -30.7	S 04 45.8 -17.8	09										
10	329 14.4 +00.1	N 11 52.6 -00.8	308 52.3 -00.4	N 05 09.0 -01.3	127 07.5 -30.7	S 04 28.0 -17.8	10										
11	344 14.5 +00.2	N 11 51.8 -00.8	323 51.9 -00.3	N 05 07.7 -01.2	141 36.8 -30.7	S 04 10.2 -17.8	11										
12	359 14.7 +00.1	N 11 51.0 -00.9	338 51.6 -00.3	N 05 06.5 -01.3	156 06.1 -30.6	S 03 52.4 -17.8	12										
13	14 14.8 +00.2	N 11 50.1 -00.8	353 51.3 -00.4	N 05 05.2 -01.2	170 35.5 -30.5	S 03 34.6 -17.8	13										
14	29 15.0 +00.2	N 11 49.3 -00.8	8 50.9 -00.3	N 05 04.0 -01.3	185 05.0 -30.6	S 03 16.8 -17.9	14										
15	44 15.2 +00.1	N 11 48.5 -00.9	23 50.6 -00.4	N 05 02.7 -01.2	199 34.4 -30.5	S 02 58.9 -17.8	15										
16	59 15.3 +00.2	N 11 47.6 -00.8	38 50.2 -00.3	N 05 01.5 -01.3	214 03.9 -30.5	S 02 41.1 -17.9	16										
17	74 15.5 +00.1	N 11 46.8 -00.9	53 49.9 -00.4	N 05 00.2 -01.2	228 33.4 -30.5	S 02 23.2 -17.9	17										
18	89 15.6 +00.2	N 11 45.9 -00.8	68 49.5 -00.3	N 04 59.0 -01.3	243 02.9 -30.5	S 02 05.3 -17.9	18										
19	104 15.8 +00.2	N 11 45.1 -00.8	83 49.2 -00.3	N 04 57.7 -01.2	257 32.4 -30.4	S 01 47.4 -17.9	19										
20	119 16.0 +00.1	N 11 44.3 -00.9	98 48.9 -00.4	N 04 56.5 -01.3	272 02.0 -30.5	S 01 29.5 -17.9	20										
21	134 16.1 +00.2	N 11 43.4 -00.8	113 48.5 -00.3	N 04 55.2 -01.3	286 31.5 -30.4	S 01 11.6 -17.9	21										
22	149 16.3 +00.1	N 11 42.6 -00.9	128 48.2 -00.4	N 04 53.9 -01.2	301 01.1 -30.4	S 00 53.7 -17.9	22										
23	164 16.4 +00.2	N 11 41.7 -00.8	143 47.8 -00.3	N 04 52.7 -01.3	315 30.7 -30.3	S 00 35.8 -17.9	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 209° 209° 209° 209° 209° 209°	Greenwich Culmination Time: 12:03		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 189° 189° 189° 188° 188° 188°	Greenwich Culmination Time: 13:24		UT 02 06 10 14 18 22	SD 16'6 16'6 16'6 16'6 16'6 16'6	HP 60'8 60'8 60'8 60'8 60'8 60'8	SHA 011° 009° 007° 005° 003° 000°	Greenwich Culmination Time: 01:13
UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	249 49.5 +00.7	N 22 50.0 +00.2	253 12.1 +02.0	N 22 10.1 +00.1	340 34.0 +02.6	S 06 58.5 +00.1	00										
01	264 50.2 +00.8	N 22 50.2 +00.1	268 14.1 +02.1	N 22 10.2 +00.0	355 36.6 +02.6	S 06 58.6 +00.1	01										
02	279 51.0 +00.7	N 22 50.3 +00.2	283 16.2 +02.1	N 22 10.2 +00.0	10 39.2 +02.7	S 06 58.7 +00.1	02										
03	294 51.7 +00.8	N 22 50.5 +00.1	298 18.3 +02.1	N 22 10.2 +00.0	25 41.9 +02.6	S 06 58.8 +00.0	03										
04	309 52.5 +00.7	N 22 50.6 +00.2	313 20.4 +02.1	N 22 10.2 +00.1	40 44.5 +02.6	S 06 58.8 +00.1	04										
05	324 53.2 +00.7	N 22 50.8 +00.1	328 22.5 +02.1	N 22 10.3 +00.0	55 47.1 +02.6	S 06 58.9 +00.1	05										
06	339 53.9 +00.8	N 22 50.9 +00.2	343 24.6 +02.1	N 22 10.3 +00.0	70 49.7 +02.7	S 06 59.0 +00.0	06										
07	354 54.7 +00.7	N 22 51.1 +00.1	358 26.7 +02.0	N 22 10.3 +00.1	85 52.4 +02.6	S 06 59.0 +00.1	07										
08	9 55.4 +00.8	N 22 51.2 +00.2	13 28.7 +02.1	N 22 10.4 +00.0	100 55.0 +02.6	S 06 59.1 +00.1	08										
09	24 56.2 +00.7	N 22 51.4 +00.1	28 30.8 +02.1	N 22 10.4 +00.0	115 57.6 +02.6	S 06 59.2 +00.1	09										
10	39 56.9 +00.7	N 22 51.5 +00.2	43 32.9 +02.1	N 22 10.4 +00.1	131 00.2 +02.7	S 06 59.3 +00.0	10										
11	54 57.6 +00.8	N 22 51.7 +00.1	58 35.0 +02.1	N 22 10.5 +00.0	146 02.9 +02.6	S 06 59.3 +00.1	11										
12	69 58.4 +00.7	N 22 51.8 +00.1	73 37.1 +02.1	N 22 10.5 +00.0	161 05.5 +02.6	S 06 59.4 +00.1	12										
13	84 59.1 +00.8	N 22 51.9 +00.2	88 39.2 +02.1	N 22 10.5 +00.1	176 08.1 +02.6	S 06 59.5 +00.1	13										
14	99 59.9 +00.7	N 22 52.1 +00.1	103 41.3 +02.1	N 22 10.6 +00.0	191 10.7 +02.7	S 06 59.6 +00.0	14										
15	115 00.6 +00.8	N 22 52.2 +00.2	118 43.4 +02.1	N 22 10.6 +00.0	206 13.4 +02.6	S 06 59.6 +00.1	15										
16	130 01.4 +00.7	N 22 52.4 +00.1	133 45.5 +02.0	N 22 10.6 +00.1	221 16.0 +02.6	S 06 59.7 +00.1	16										
17	145 02.1 +00.7	N 22 52.5 +00.2	148 47.5 +02.1	N 22 10.7 +00.0	236 18.6 +02.6	S 06 59.8 +00.1	17										
18	160 02.8 +00.8	N 22 52.7 +00.1	163 49.6 +02.1	N 22 10.7 +00.0	251 21.2 +02.7	S 06 59.9 +00.0	18										
19	175 03.6 +00.7	N 22 52.8 +00.2	178 51.7 +02.1	N 22 10.7 +00.0	266 23.9 +02.6	S 06 59.9 +00.1	19										
20	190 04.3 +00.8	N 22 53.0 +00.1	193 53.8 +02.1	N 22 10.7 +00.1	281 26.5 +02.6	S 07 00.0 +00.1	20										
21	205 05.1 +00.7	N 22 53.1 +00.2	208 55.9 +02.1	N 22 10.8 +00.0	296 29.1 +02.6	S 07 00.1 +00.1	21										
22	220 05.8 +00.8	N 22 53.3 +00.1	223 58.0 +02.1	N 22 10.8 +00.0	311 31.7 +02.7	S 07 00.2 +00.0	22										
23	235 06.6 +00.7	N 22 53.4 +00.2	239 00.1 +02.1	N 22 10.8 +00.1	326 34.4 +02.6	S 07 00.2 +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 280° 280° 280° 280° 280° 279°	Greenwich Culmination Time: 07:20		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 283° 283° 283° 283° 283° 283°	Greenwich Culmination Time: 07:06		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 011° 011° 011° 011° 011° 011°	Greenwich Culmination Time: 01:17

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179	16.6+00.2	N 11 40.9	-00.8	158	47.5-00.3	N 04 51.4	-01.2	330	00.4-30.4	S 00 17.9	-17.9	00
01	194	16.8+00.1	N 11 40.1	-00.9	173	47.2-00.4	N 04 50.2	-01.3	344	30.0-30.4	N 00 00.0	+17.9	01
02	209	16.9+00.2	N 11 39.2	-00.8	188	46.8-00.3	N 04 48.9	-01.2	358	59.6-30.3	N 00 17.9	+17.9	02
03	224	17.1+00.1	N 11 38.4	-00.9	203	46.5-00.4	N 04 47.7	-01.3	13	29.3-30.3	N 00 35.8	+17.9	03
04	239	17.2+00.2	N 11 37.5	-00.8	218	46.1-00.3	N 04 46.4	-01.2	27	59.0-30.3	N 00 53.7	+17.8	04
05	254	17.4+00.2	N 11 36.7	-00.9	233	45.8-00.3	N 04 45.2	-01.3	42	28.7-30.4	N 01 11.5	+17.9	05
06	269	17.6+00.1	N 11 35.8	-00.8	248	45.5-00.4	N 04 43.9	-01.3	56	58.3-30.3	N 01 29.4	+17.8	06
07	284	17.7+00.2	N 11 35.0	-00.8	263	45.1-00.3	N 04 42.6	-01.2	71	28.0-30.3	N 01 47.2	+17.8	07
08	299	17.9+00.2	N 11 34.2	-00.9	278	44.8-00.4	N 04 41.4	-01.3	85	57.7-30.3	N 02 05.0	+17.8	08
09	314	18.1+00.1	N 11 33.3	-00.8	293	44.4-00.3	N 04 40.1	-01.2	100	27.4-30.3	N 02 22.8	+17.8	09
10	329	18.2+00.2	N 11 32.5	-00.9	308	44.1-00.3	N 04 38.9	-01.3	114	57.1-30.3	N 02 40.6	+17.7	10
11	344	18.4+00.1	N 11 31.6	-00.8	323	43.8-00.4	N 04 37.6	-01.2	129	26.8-30.3	N 02 58.3	+17.8	11
12	359	18.5+00.2	N 11 30.8	-00.9	338	43.4-00.3	N 04 36.4	-01.3	143	56.5-30.3	N 03 16.1	+17.6	12
13	14	18.7+00.2	N 11 29.9	-00.8	353	43.1-00.4	N 04 35.1	-01.3	158	26.2-30.3	N 03 33.7	+17.7	13
14	29	18.9+00.1	N 11 29.1	-00.9	8	42.7-00.3	N 04 33.8	-01.2	172	55.9-30.3	N 03 51.4	+17.6	14
15	44	19.0+00.2	N 11 28.2	-00.8	23	42.4-00.3	N 04 32.6	-01.3	187	25.6-30.3	N 04 09.0	+17.7	15
16	59	19.2+00.2	N 11 27.4	-00.9	38	42.1-00.4	N 04 31.3	-01.2	201	55.3-30.3	N 04 26.7	+17.5	16
17	74	19.4+00.1	N 11 26.5	-00.8	53	41.7-00.3	N 04 30.1	-01.3	216	25.0-30.3	N 04 44.2	+17.6	17
18	89	19.5+00.2	N 11 25.7	-00.9	68	41.4-00.3	N 04 28.8	-01.3	230	54.7-30.3	N 05 01.8	+17.4	18
19	104	19.7+00.2	N 11 24.8	-00.8	83	41.1-00.4	N 04 27.5	-01.2	245	24.4-30.4	N 05 19.2	+17.5	19
20	119	19.9+00.1	N 11 24.0	-00.9	98	40.7-00.3	N 04 26.3	-01.3	259	54.0-30.3	N 05 36.7	+17.4	20
21	134	20.0+00.2	N 11 23.1	-00.8	113	40.4-00.4	N 04 25.0	-01.2	274	23.7-30.4	N 05 54.1	+17.4	21
22	149	20.2+00.1	N 11 22.3	-00.8	128	40.0-00.3	N 04 23.8	-01.3	288	53.3-30.4	N 06 11.5	+17.3	22
23	164	20.3+00.2	N 11 21.5	-00.9	143	39.7-00.3	N 04 22.5	-01.3	303	22.9-30.4	N 06 28.8	+17.3	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'5 16'5 16'5 16'5 16'5 16'5				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'7 60'7 60'6 60'6 60'5 60'5				
	SHA 208° 208° 208° 208° 208° 208°				SHA 188° 188° 188° 187° 187° 187°				SHA 358° 356° 354° 352° 349° 347°				
	Greenwich Culmination Time: 12:02				Greenwich Culmination Time: 13:25				Greenwich Culmination Time: 02:04				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	250	07.3+00.7	N 22 53.6	+00.1	254	02.2+02.1	N 22 10.9	+00.0	341	37.0+02.6	S 07 00.3	+00.1	00
01	265	08.0+00.8	N 22 53.7	+00.1	269	04.3+02.1	N 22 10.9	+00.0	356	39.6+02.6	S 07 00.4	+00.1	01
02	280	08.8+00.7	N 22 53.8	+00.2	284	06.4+02.1	N 22 10.9	+00.1	11	42.2+02.7	S 07 00.5	+00.0	02
03	295	09.5+00.8	N 22 54.0	+00.1	299	08.5+02.0	N 22 11.0	+00.0	26	44.9+02.6	S 07 00.5	+00.1	03
04	310	10.3+00.7	N 22 54.1	+00.2	314	10.5+02.1	N 22 11.0	+00.0	41	47.5+02.6	S 07 00.6	+00.1	04
05	325	11.0+00.8	N 22 54.3	+00.1	329	12.6+02.1	N 22 11.0	+00.1	56	50.1+02.6	S 07 00.7	+00.1	05
06	340	11.8+00.7	N 22 54.4	+00.2	344	14.7+02.1	N 22 11.1	+00.0	71	52.7+02.7	S 07 00.8	+00.0	06
07	355	12.5+00.8	N 22 54.6	+00.1	359	16.8+02.1	N 22 11.1	+00.0	86	55.4+02.6	S 07 00.8	+00.1	07
08	10	13.3+00.7	N 22 54.7	+00.1	14	18.9+02.1	N 22 11.1	+00.0	101	58.0+02.6	S 07 00.9	+00.1	08
09	25	14.0+00.7	N 22 54.8	+00.2	29	21.0+02.1	N 22 11.1	+00.1	117	00.6+02.6	S 07 01.0	+00.0	09
10	40	14.7+00.8	N 22 55.0	+00.1	44	23.1+02.1	N 22 11.2	+00.0	132	03.2+02.7	S 07 01.0	+00.1	10
11	55	15.5+00.7	N 22 55.1	+00.2	59	25.2+02.1	N 22 11.2	+00.0	147	05.9+02.6	S 07 01.1	+00.1	11
12	70	16.2+00.8	N 22 55.3	+00.1	74	27.3+02.1	N 22 11.2	+00.1	162	08.5+02.6	S 07 01.2	+00.1	12
13	85	17.0+00.7	N 22 55.4	+00.1	89	29.4+02.1	N 22 11.3	+00.0	177	11.1+02.6	S 07 01.3	+00.0	13
14	100	17.7+00.8	N 22 55.5	+00.2	104	31.5+02.1	N 22 11.3	+00.0	192	13.7+02.7	S 07 01.3	+00.1	14
15	115	18.5+00.7	N 22 55.7	+00.1	119	33.6+02.1	N 22 11.3	+00.1	207	16.4+02.6	S 07 01.4	+00.1	15
16	130	19.2+00.8	N 22 55.8	+00.2	134	35.7+02.1	N 22 11.4	+00.0	222	19.0+02.6	S 07 01.5	+00.1	16
17	145	20.0+00.7	N 22 56.0	+00.1	149	37.8+02.1	N 22 11.4	+00.0	237	21.6+02.7	S 07 01.6	+00.0	17
18	160	20.7+00.8	N 22 56.1	+00.1	164	39.9+02.1	N 22 11.4	+00.0	252	24.3+02.6	S 07 01.6	+00.1	18
19	175	21.5+00.7	N 22 56.2	+00.2	179	42.0+02.1	N 22 11.4	+00.1	267	26.9+02.6	S 07 01.7	+00.1	19
20	190	22.2+00.8	N 22 56.4	+00.1	194	44.1+02.0	N 22 11.5	+00.0	282	29.5+02.6	S 07 01.8	+00.1	20
21	205	23.0+00.7	N 22 56.5	+00.2	209	46.1+02.1	N 22 11.5	+00.0	297	32.1+02.7	S 07 01.9	+00.0	21
22	220	23.7+00.7	N 22 56.7	+00.1	224	48.2+02.1	N 22 11.5	+00.1	312	34.8+02.6	S 07 01.9	+00.1	22
23	235	24.4+00.8	N 22 56.8	+00.1	239	50.3+02.1	N 22 11.6	+00.0	327	37.4+02.6	S 07 02.0	+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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 279° 279° 279° 279° 279° 279°				SHA 283° 283° 283° 283° 283° 283°				SHA 011° 011° 011° 011° 011° 011°				
	Greenwich Culmination Time: 07:19				Greenwich Culmination Time: 07:02				Greenwich Culmination Time: 01:13				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 20.5 +00.2	N 11 20.6 -00.8	158 39.4 -00.4	N 04 21.2 -01.2	317 52.5 -30.4	N 06 46.1 +17.2	00										
01	194 20.7 +00.1	N 11 19.8 -00.9	173 39.0 -00.3	N 04 20.0 -01.3	332 22.1 -30.4	N 07 03.3 +17.2	01										
02	209 20.8 +00.2	N 11 18.9 -00.8	188 38.7 -00.3	N 04 18.7 -01.3	346 51.7 -30.5	N 07 20.5 +17.1	02										
03	224 21.0 +00.2	N 11 18.1 -00.9	203 38.4 -00.4	N 04 17.4 -01.2	1 21.2 -30.5	N 07 37.6 +17.1	03										
04	239 21.2 +00.1	N 11 17.2 -00.8	218 38.0 -00.3	N 04 16.2 -01.3	15 50.7 -30.5	N 07 54.7 +17.0	04										
05	254 21.3 +00.2	N 11 16.4 -00.9	233 37.7 -00.3	N 04 14.9 -01.2	30 20.2 -30.5	N 08 11.7 +17.0	05										
06	269 21.5 +00.2	N 11 15.5 -00.8	248 37.4 -00.4	N 04 13.7 -01.3	44 49.7 -30.5	N 08 28.7 +16.9	06										
07	284 21.7 +00.1	N 11 14.7 -00.9	263 37.0 -00.3	N 04 12.4 -01.3	59 19.2 -30.6	N 08 45.6 +16.8	07										
08	299 21.8 +00.2	N 11 13.8 -00.9	278 36.7 -00.3	N 04 11.1 -01.2	73 48.6 -30.6	N 09 02.4 +16.8	08										
09	314 22.0 +00.2	N 11 12.9 -00.8	293 36.4 -00.4	N 04 09.9 -01.3	88 18.0 -30.6	N 09 19.2 +16.7	09										
10	329 22.2 +00.1	N 11 12.1 -00.9	308 36.0 -00.3	N 04 08.6 -01.3	102 47.4 -30.6	N 09 35.9 +16.7	10										
11	344 22.3 +00.2	N 11 11.2 -00.8	323 35.7 -00.4	N 04 07.3 -01.2	117 16.8 -30.7	N 09 52.6 +16.5	11										
12	359 22.5 +00.2	N 11 10.4 -00.9	338 35.3 -00.3	N 04 06.1 -01.3	131 46.1 -30.7	N 10 09.1 +16.6	12										
13	14 22.7 +00.1	N 11 09.5 -00.8	353 35.0 -00.3	N 04 04.8 -01.2	146 15.4 -30.7	N 10 25.7 +16.4	13										
14	29 22.8 +00.2	N 11 08.7 -00.9	8 34.7 -00.4	N 04 03.6 -01.3	160 44.7 -30.8	N 10 42.1 +16.4	14										
15	44 23.0 +00.2	N 11 07.8 -00.8	23 34.3 -00.3	N 04 02.3 -01.3	175 13.9 -30.8	N 10 58.5 +16.3	15										
16	59 23.2 +00.2	N 11 07.0 -00.9	38 34.0 -00.3	N 04 01.0 -01.2	189 43.1 -30.8	N 11 14.8 +16.2	16										
17	74 23.4 +00.1	N 11 06.1 -00.8	53 33.7 -00.4	N 03 59.8 -01.3	204 12.3 -30.9	N 11 31.0 +16.1	17										
18	89 23.5 +00.2	N 11 05.3 -00.9	68 33.3 -00.3	N 03 58.5 -01.3	218 41.4 -30.9	N 11 47.1 +16.1	18										
19	104 23.7 +00.2	N 11 04.4 -00.8	83 33.0 -00.3	N 03 57.2 -01.2	233 10.5 -30.9	N 12 03.2 +16.0	19										
20	119 23.9 +00.1	N 11 03.6 -00.9	98 32.7 -00.4	N 03 56.0 -01.3	247 39.6 -31.0	N 12 19.2 +15.9	20										
21	134 24.0 +00.2	N 11 02.7 -00.9	113 32.3 -00.3	N 03 54.7 -01.3	262 08.6 -31.0	N 12 35.1 +15.8	21										
22	149 24.2 +00.2	N 11 01.8 -00.8	128 32.0 -00.3	N 03 53.4 -01.2	276 37.6 -31.0	N 12 50.9 +15.8	22										
23	164 24.4 +00.1	N 11 01.0 -00.9	143 31.7 -00.3	N 03 52.2 -01.3	291 06.6 -31.1	N 13 06.7 +15.6	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 207° 207° 207° 207° 207° 207°	Greenwich Culmination Time: 12:02		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 187° 187° 186° 186° 186° 186°	Greenwich Culmination Time: 13:25		UT 02 06 10 14 18 22	SD 16'5 16'4 16'4 16'4 16'4 16'3	HP 60'4 60'3 60'2 60'1 60'0 59'9	SHA 345° 343° 341° 338° 336° 334°	Greenwich Culmination Time: 02:54
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	250 25.2 +00.7	N 22 56.9 +00.2	254 52.4 +02.1	N 22 11.6 +00.0	342 40.0 +02.6	S 07 02.1 +00.1	00										
01	265 25.9 +00.8	N 22 57.1 +00.1	269 54.5 +02.1	N 22 11.6 +00.1	357 42.6 +02.7	S 07 02.2 +00.0	01										
02	280 26.7 +00.7	N 22 57.2 +00.1	284 56.6 +02.1	N 22 11.7 +00.0	12 45.3 +02.6	S 07 02.2 +00.1	02										
03	295 27.4 +00.8	N 22 57.3 +00.2	299 58.7 +02.1	N 22 11.7 +00.0	27 47.9 +02.6	S 07 02.3 +00.1	03										
04	310 28.2 +00.7	N 22 57.5 +00.1	315 00.8 +02.1	N 22 11.7 +00.0	42 50.5 +02.7	S 07 02.4 +00.1	04										
05	325 28.9 +00.8	N 22 57.6 +00.1	330 02.9 +02.1	N 22 11.7 +00.1	57 53.2 +02.6	S 07 02.5 +00.0	05										
06	340 29.7 +00.7	N 22 57.7 +00.2	345 05.0 +02.1	N 22 11.8 +00.0	72 55.8 +02.6	S 07 02.5 +00.1	06										
07	355 30.4 +00.8	N 22 57.9 +00.1	0 07.1 +02.1	N 22 11.8 +00.0	87 58.4 +02.6	S 07 02.6 +00.1	07										
08	10 31.2 +00.7	N 22 58.0 +00.1	15 09.2 +02.1	N 22 11.8 +00.1	103 01.0 +02.7	S 07 02.7 +00.1	08										
09	25 31.9 +00.8	N 22 58.1 +00.2	30 11.3 +02.1	N 22 11.9 +00.0	118 03.7 +02.6	S 07 02.8 +00.0	09										
10	40 32.7 +00.7	N 22 58.3 +00.1	45 13.4 +02.1	N 22 11.9 +00.0	133 06.3 +02.6	S 07 02.8 +00.1	10										
11	55 33.4 +00.8	N 22 58.4 +00.1	60 15.5 +02.1	N 22 11.9 +00.1	148 08.9 +02.7	S 07 02.9 +00.1	11										
12	70 34.2 +00.7	N 22 58.5 +00.2	75 17.6 +02.1	N 22 12.0 +00.0	163 11.6 +02.6	S 07 03.0 +00.1	12										
13	85 34.9 +00.8	N 22 58.7 +00.1	90 19.7 +02.1	N 22 12.0 +00.0	178 14.2 +02.6	S 07 03.1 +00.0	13										
14	100 35.7 +00.7	N 22 58.8 +00.1	105 21.8 +02.1	N 22 12.0 +00.0	193 16.8 +02.6	S 07 03.1 +00.1	14										
15	115 36.4 +00.8	N 22 58.9 +00.2	120 23.9 +02.1	N 22 12.0 +00.1	208 19.4 +02.7	S 07 03.2 +00.1	15										
16	130 37.2 +00.7	N 22 59.1 +00.1	135 26.0 +02.1	N 22 12.1 +00.0	223 22.1 +02.6	S 07 03.3 +00.1	16										
17	145 37.9 +00.8	N 22 59.2 +00.1	150 28.1 +02.1	N 22 12.1 +00.0	238 24.7 +02.6	S 07 03.4 +00.0	17										
18	160 38.7 +00.7	N 22 59.3 +00.2	165 30.2 +02.1	N 22 12.1 +00.1	253 27.3 +02.6	S 07 03.4 +00.1	18										
19	175 39.4 +00.8	N 22 59.5 +00.1	180 32.3 +02.1	N 22 12.2 +00.0	268 29.9 +02.7	S 07 03.5 +00.1	19										
20	190 40.2 +00.7	N 22 59.6 +00.1	195 34.4 +02.1	N 22 12.2 +00.0	283 32.6 +02.6	S 07 03.6 +00.1	20										
21	205 40.9 +00.8	N 22 59.7 +00.2	210 36.5 +02.1	N 22 12.2 +00.0	298 35.2 +02.6	S 07 03.7 +00.0	21										
22	220 41.7 +00.7	N 22 59.9 +00.1	225 38.6 +02.1	N 22 12.2 +00.1	313 37.8 +02.7	S 07 03.7 +00.1	22										
23	235 42.4 +00.8	N 22 60.0 +00.1	240 40.7 +02.1	N 22 12.3 +00.0	328 40.5 +02.6	S 07 03.8 +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 279° 278° 278° 278° 278° 278°	Greenwich Culmination Time: 07:17		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 283° 283° 283° 283° 283° 283°	Greenwich Culmination Time: 06:59		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 011° 011° 011° 011° 011° 011°	Greenwich Culmination Time: 01:09

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 24.5 +00.2	N 11 00.1 -00.8	158 31.4 -00.4	N 03 50.9 -01.3	305 35.5 -31.2	N 13 22.3 +15.6	00										
01	194 24.7 +00.2	N 10 59.3 -00.9	173 31.0 -00.3	N 03 49.6 -01.2	320 04.3 -31.1	N 13 37.9 +15.4	01										
02	209 24.9 +00.1	N 10 58.4 -00.8	188 30.7 -00.3	N 03 48.4 -01.3	334 33.2 -31.3	N 13 53.3 +15.4	02										
03	224 25.0 +00.2	N 10 57.6 -00.9	203 30.4 -00.4	N 03 47.1 -01.3	349 01.9 -31.2	N 14 08.7 +15.3	03										
04	239 25.2 +00.2	N 10 56.7 -00.9	218 30.0 -00.3	N 03 45.8 -01.2	3 30.7 -31.3	N 14 24.0 +15.2	04										
05	254 25.4 +00.2	N 10 55.8 -00.8	233 29.7 -00.3	N 03 44.6 -01.3	17 59.4 -31.4	N 14 39.2 +15.1	05										
06	269 25.6 +00.1	N 10 55.0 -00.9	248 29.4 -00.4	N 03 43.3 -01.3	32 28.0 -31.4	N 14 54.3 +15.0	06										
07	284 25.7 +00.2	N 10 54.1 -00.8	263 29.0 -00.3	N 03 42.0 -01.2	46 56.6 -31.4	N 15 09.3 +14.9	07										
08	299 25.9 +00.2	N 10 53.3 -00.9	278 28.7 -00.3	N 03 40.8 -01.3	61 25.2 -31.5	N 15 24.2 +14.8	08										
09	314 26.1 +00.1	N 10 52.4 -00.8	293 28.4 -00.4	N 03 39.5 -01.3	75 53.7 -31.6	N 15 39.0 +14.7	09										
10	329 26.2 +00.2	N 10 51.6 -00.9	308 28.0 -00.3	N 03 38.2 -01.2	90 22.1 -31.6	N 15 53.7 +14.6	10										
11	344 26.4 +00.2	N 10 50.7 -00.9	323 27.7 -00.3	N 03 37.0 -01.3	104 50.5 -31.6	N 16 08.3 +14.5	11										
12	359 26.6 +00.2	N 10 49.8 -00.8	338 27.4 -00.3	N 03 35.7 -01.3	119 18.9 -31.7	N 16 22.8 +14.4	12										
13	14 26.8 +00.1	N 10 49.0 -00.9	353 27.1 -00.4	N 03 34.4 -01.2	133 47.2 -31.7	N 16 37.2 +14.2	13										
14	29 26.9 +00.2	N 10 48.1 -00.9	8 26.7 -00.3	N 03 33.2 -01.3	148 15.5 -31.8	N 16 51.4 +14.2	14										
15	44 27.1 +00.2	N 10 47.2 -00.8	23 26.4 -00.3	N 03 31.9 -01.3	162 43.7 -31.9	N 17 05.6 +14.1	15										
16	59 27.3 +00.1	N 10 46.4 -00.9	38 26.1 -00.4	N 03 30.6 -01.3	177 11.8 -31.9	N 17 19.7 +13.9	16										
17	74 27.4 +00.2	N 10 45.5 -00.8	53 25.7 -00.3	N 03 29.3 -01.2	191 39.9 -31.9	N 17 33.6 +13.9	17										
18	89 27.6 +00.2	N 10 44.7 -00.9	68 25.4 -00.3	N 03 28.1 -01.3	206 08.0 -32.0	N 17 47.5 +13.7	18										
19	104 27.8 +00.2	N 10 43.8 -00.9	83 25.1 -00.4	N 03 26.8 -01.3	220 36.0 -32.1	N 18 01.2 +13.6	19										
20	119 28.0 +00.1	N 10 42.9 -00.8	98 24.7 -00.3	N 03 25.5 -01.2	235 03.9 -32.1	N 18 14.8 +13.5	20										
21	134 28.1 +00.2	N 10 42.1 -00.9	113 24.4 -00.3	N 03 24.3 -01.3	249 31.8 -32.2	N 18 28.3 +13.3	21										
22	149 28.3 +00.2	N 10 41.2 -00.8	128 24.1 -00.3	N 03 23.0 -01.3	263 59.6 -32.2	N 18 41.6 +13.3	22										
23	164 28.5 +00.2	N 10 40.4 -00.9	143 23.8 -00.4	N 03 21.7 -01.2	278 27.4 -32.3	N 18 54.9 +13.1	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 207° 206° 206° 206° 206° 206°	Greenwich Culmination Time: 12:02		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 186° 185° 185° 185° 185° 185°	Greenwich Culmination Time: 13:26		UT 02 06 10 14 18 22	SD 16'3 16'3 16'2 16'2 16'2 16'1	HP 59'8 59'7 59'6 59'5 59'4 59'3	SHA 332° 329° 327° 325° 323° 320°	Greenwich Culmination Time: 03:45
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	250 43.2 +00.7	N 23 00.1 +00.1	255 42.8 +02.1	N 22 12.3 +00.0	343 43.1 +02.6	S 07 03.9 +00.1	00										
01	265 43.9 +00.8	N 23 00.2 +00.2	270 44.9 +02.1	N 22 12.3 +00.1	358 45.7 +02.7	S 07 04.0 +00.0	01										
02	280 44.7 +00.7	N 23 00.4 +00.1	285 47.0 +02.1	N 22 12.4 +00.0	13 48.4 +02.6	S 07 04.0 +00.1	02										
03	295 45.4 +00.8	N 23 00.5 +00.1	300 49.1 +02.2	N 22 12.4 +00.0	28 51.0 +02.6	S 07 04.1 +00.1	03										
04	310 46.2 +00.8	N 23 00.6 +00.2	315 51.3 +02.1	N 22 12.4 +00.0	43 53.6 +02.6	S 07 04.2 +00.1	04										
05	325 47.0 +00.7	N 23 00.8 +00.1	330 53.4 +02.1	N 22 12.4 +00.1	58 56.2 +02.7	S 07 04.3 +00.0	05										
06	340 47.7 +00.8	N 23 00.9 +00.1	345 55.5 +02.1	N 22 12.5 +00.0	73 58.9 +02.6	S 07 04.3 +00.1	06										
07	355 48.5 +00.7	N 23 01.0 +00.1	0 57.6 +02.1	N 22 12.5 +00.0	89 01.5 +02.6	S 07 04.4 +00.1	07										
08	10 49.2 +00.8	N 23 01.1 +00.2	15 59.7 +02.1	N 22 12.5 +00.1	104 04.1 +02.7	S 07 04.5 +00.1	08										
09	25 50.0 +00.7	N 23 01.3 +00.1	31 01.8 +02.1	N 22 12.6 +00.0	119 06.8 +02.6	S 07 04.6 +00.0	09										
10	40 50.7 +00.8	N 23 01.4 +00.1	46 03.9 +02.1	N 22 12.6 +00.0	134 09.4 +02.6	S 07 04.6 +00.1	10										
11	55 51.5 +00.7	N 23 01.5 +00.2	61 06.0 +02.1	N 22 12.6 +00.0	149 12.0 +02.6	S 07 04.7 +00.1	11										
12	70 52.2 +00.8	N 23 01.7 +00.1	76 08.1 +02.1	N 22 12.6 +00.1	164 14.6 +02.7	S 07 04.8 +00.1	12										
13	85 53.0 +00.7	N 23 01.8 +00.1	91 10.2 +02.1	N 22 12.7 +00.0	179 17.3 +02.6	S 07 04.9 +00.0	13										
14	100 53.7 +00.8	N 23 01.9 +00.1	106 12.3 +02.1	N 22 12.7 +00.0	194 19.9 +02.6	S 07 04.9 +00.1	14										
15	115 54.5 +00.7	N 23 02.0 +00.2	121 14.4 +02.1	N 22 12.7 +00.1	209 22.5 +02.7	S 07 05.0 +00.1	15										
16	130 55.2 +00.8	N 23 02.2 +00.1	136 16.5 +02.1	N 22 12.8 +00.0	224 25.2 +02.6	S 07 05.1 +00.1	16										
17	145 56.0 +00.8	N 23 02.3 +00.1	151 18.6 +02.1	N 22 12.8 +00.0	239 27.8 +02.6	S 07 05.2 +00.0	17										
18	160 56.8 +00.7	N 23 02.4 +00.1	166 20.7 +02.1	N 22 12.8 +00.0	254 30.4 +02.7	S 07 05.2 +00.1	18										
19	175 57.5 +00.8	N 23 02.5 +00.1	181 22.8 +02.2	N 22 12.8 +00.1	269 33.1 +02.6	S 07 05.3 +00.1	19										
20	190 58.3 +00.7	N 23 02.6 +00.2	196 25.0 +02.1	N 22 12.9 +00.0	284 35.7 +02.6	S 07 05.4 +00.1	20										
21	205 59.0 +00.8	N 23 02.8 +00.1	211 27.1 +02.1	N 22 12.9 +00.0	299 38.3 +02.6	S 07 05.5 +00.0	21										
22	220 59.8 +00.7	N 23 02.9 +00.1	226 29.2 +02.1	N 22 12.9 +00.1	314 40.9 +02.7	S 07 05.5 +00.1	22										
23	236 00.5 +00.8	N 23 03.0 +00.1	241 31.3 +02.1	N 22 13.0 +00.0	329 43.6 +02.6	S 07 05.6 +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° 277° 277°	Greenwich Culmination Time: 07:16		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 283° 283° 283° 283° 283° 283°	Greenwich Culmination Time: 06:56		UT 02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 011° 011° 011° 011° 011° 011°	Greenwich Culmination Time: 01:04

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 28.7 +00.1	N 10	39.5 -00.9	158 23.4 -00.3	N 03	20.5 -01.3	292 55.1 -32.3	N 19	08.0 +13.0	00			
01	194 28.8 +00.2	N 10	38.6 -00.8	173 23.1 -00.3	N 03	19.2 -01.3	307 22.8 -32.4	N 19	21.0 +12.9	01			
02	209 29.0 +00.2	N 10	37.8 -00.9	188 22.8 -00.4	N 03	17.9 -01.3	321 50.4 -32.4	N 19	33.9 +12.8	02			
03	224 29.2 +00.2	N 10	36.9 -00.9	203 22.4 -00.3	N 03	16.6 -01.2	336 18.0 -32.5	N 19	46.7 +12.6	03			
04	239 29.4 +00.1	N 10	36.0 -00.8	218 22.1 -00.3	N 03	15.4 -01.3	350 45.5 -32.6	N 19	59.3 +12.5	04			
05	254 29.5 +00.2	N 10	35.2 -00.9	233 21.8 -00.3	N 03	14.1 -01.3	5 12.9 -32.6	N 20	11.8 +12.4	05			
06	269 29.7 +00.2	N 10	34.3 -00.9	248 21.5 -00.4	N 03	12.8 -01.2	19 40.3 -32.6	N 20	24.2 +12.2	06			
07	284 29.9 +00.1	N 10	33.4 -00.8	263 21.1 -00.3	N 03	11.6 -01.3	34 07.7 -32.8	N 20	36.4 +12.1	07			
08	299 30.0 +00.2	N 10	32.6 -00.9	278 20.8 -00.3	N 03	10.3 -01.3	48 34.9 -32.7	N 20	48.5 +12.0	08			
09	314 30.2 +00.2	N 10	31.7 -00.9	293 20.5 -00.3	N 03	09.0 -01.3	63 02.2 -32.9	N 21	00.5 +11.9	09			
10	329 30.4 +00.2	N 10	30.8 -00.8	308 20.2 -00.4	N 03	07.7 -01.2	77 29.3 -32.9	N 21	12.4 +11.7	10			
11	344 30.6 +00.2	N 10	30.0 -00.9	323 19.8 -00.3	N 03	06.5 -01.3	91 56.4 -32.9	N 21	24.1 +11.5	11			
12	359 30.8 +00.1	N 10	29.1 -00.9	338 19.5 -00.3	N 03	05.2 -01.3	106 23.5 -33.0	N 21	35.6 +11.5	12			
13	14 30.9 +00.2	N 10	28.2 -00.8	353 19.2 -00.3	N 03	03.9 -01.2	120 50.5 -33.1	N 21	47.1 +11.3	13			
14	29 31.1 +00.2	N 10	27.4 -00.9	8 18.9 -00.4	N 03	02.7 -01.3	135 17.4 -33.1	N 21	58.4 +11.1	14			
15	44 31.3 +00.2	N 10	26.5 -00.9	23 18.5 -00.3	N 03	01.4 -01.3	149 44.3 -33.2	N 22	09.5 +11.1	15			
16	59 31.5 +00.1	N 10	25.6 -00.8	38 18.2 -00.3	N 03	00.1 -01.3	164 11.1 -33.2	N 22	20.6 +10.8	16			
17	74 31.6 +00.2	N 10	24.8 -00.9	53 17.9 -00.3	N 02	58.8 -01.2	178 37.9 -33.3	N 22	31.4 +10.8	17			
18	89 31.8 +00.2	N 10	23.9 -00.9	68 17.6 -00.4	N 02	57.6 -01.3	193 04.6 -33.3	N 22	42.2 +10.6	18			
19	104 32.0 +00.2	N 10	23.0 -00.8	83 17.2 -00.3	N 02	56.3 -01.3	207 31.3 -33.4	N 22	52.8 +10.4	19			
20	119 32.2 +00.1	N 10	22.2 -00.9	98 16.9 -00.3	N 02	55.0 -01.3	221 57.9 -33.4	N 23	03.2 +10.3	20			
21	134 32.3 +00.2	N 10	21.3 -00.9	113 16.6 -00.3	N 02	53.7 -01.2	236 24.5 -33.5	N 23	13.5 +10.1	21			
22	149 32.5 +00.2	N 10	20.4 -00.9	128 16.3 -00.4	N 02	52.5 -01.3	250 51.0 -33.6	N 23	23.6 +10.1	22			
23	164 32.7 +00.2	N 10	19.5 -00.8	143 15.9 -00.3	N 02	51.2 -01.3	265 17.4 -33.6	N 23	33.7 +09.8	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'1 16'1 16'0 16'0 16'0 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'1 59'0 58'9 58'8 58'7 58'5						
	SHA 206° 205° 205° 205° 205° 205°			SHA 185° 184° 184° 184° 184° 184°			SHA 318° 316° 313° 311° 309° 306°						
	Greenwich Culmination Time: 12:01			Greenwich Culmination Time: 13:26			Greenwich Culmination Time: 04:38						
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251 01.3 +00.7	N 23	03.1 +00.2	256 33.4 +02.1	N 22	13.0 +00.0	344 46.2 +02.6	S 07	05.7 +00.1	00			
01	266 02.0 +00.8	N 23	03.3 +00.1	271 35.5 +02.1	N 22	13.0 +00.0	359 48.8 +02.7	S 07	05.8 +00.0	01			
02	281 02.8 +00.8	N 23	03.4 +00.1	286 37.6 +02.1	N 22	13.0 +00.1	14 51.5 +02.6	S 07	05.8 +00.1	02			
03	296 03.6 +00.7	N 23	03.5 +00.1	301 39.7 +02.1	N 22	13.1 +00.0	29 54.1 +02.6	S 07	05.9 +00.1	03			
04	311 04.3 +00.8	N 23	03.6 +00.1	316 41.8 +02.1	N 22	13.1 +00.0	44 56.7 +02.7	S 07	06.0 +00.1	04			
05	326 05.1 +00.7	N 23	03.7 +00.2	331 43.9 +02.1	N 22	13.1 +00.1	59 59.4 +02.6	S 07	06.1 +00.0	05			
06	341 05.8 +00.8	N 23	03.9 +00.1	346 46.0 +02.2	N 22	13.2 +00.0	75 02.0 +02.6	S 07	06.1 +00.1	06			
07	356 06.6 +00.7	N 23	04.0 +00.1	1 48.2 +02.1	N 22	13.2 +00.0	90 04.6 +02.6	S 07	06.2 +00.1	07			
08	11 07.3 +00.8	N 23	04.1 +00.1	16 50.3 +02.1	N 22	13.2 +00.0	105 07.2 +02.7	S 07	06.3 +00.1	08			
09	26 08.1 +00.8	N 23	04.2 +00.1	31 52.4 +02.1	N 22	13.2 +00.1	120 09.9 +02.6	S 07	06.4 +00.0	09			
10	41 08.9 +00.7	N 23	04.3 +00.2	46 54.5 +02.1	N 22	13.3 +00.0	135 12.5 +02.6	S 07	06.4 +00.1	10			
11	56 09.6 +00.8	N 23	04.5 +00.1	61 56.6 +02.1	N 22	13.3 +00.0	150 15.1 +02.7	S 07	06.5 +00.1	11			
12	71 10.4 +00.7	N 23	04.6 +00.1	76 58.7 +02.1	N 22	13.3 +00.0	165 17.8 +02.6	S 07	06.6 +00.1	12			
13	86 11.1 +00.8	N 23	04.7 +00.1	92 00.8 +02.1	N 22	13.3 +00.1	180 20.4 +02.6	S 07	06.7 +00.0	13			
14	101 11.9 +00.8	N 23	04.8 +00.1	107 02.9 +02.1	N 22	13.4 +00.0	195 23.0 +02.7	S 07	06.7 +00.1	14			
15	116 12.7 +00.7	N 23	04.9 +00.2	122 05.0 +02.2	N 22	13.4 +00.0	210 25.7 +02.6	S 07	06.8 +00.1	15			
16	131 13.4 +00.8	N 23	05.1 +00.1	137 07.2 +02.1	N 22	13.4 +00.1	225 28.3 +02.6	S 07	06.9 +00.1	16			
17	146 14.2 +00.7	N 23	05.2 +00.1	152 09.3 +02.1	N 22	13.5 +00.0	240 30.9 +02.7	S 07	07.0 +00.0	17			
18	161 14.9 +00.8	N 23	05.3 +00.1	167 11.4 +02.1	N 22	13.5 +00.0	255 33.6 +02.6	S 07	07.0 +00.1	18			
19	176 15.7 +00.8	N 23	05.4 +00.1	182 13.5 +02.1	N 22	13.5 +00.0	270 36.2 +02.6	S 07	07.1 +00.1	19			
20	191 16.5 +00.7	N 23	05.5 +00.1	197 15.6 +02.1	N 22	13.5 +00.1	285 38.8 +02.7	S 07	07.2 +00.1	20			
21	206 17.2 +00.8	N 23	05.6 +00.1	212 17.7 +02.1	N 22	13.6 +00.0	300 41.5 +02.6	S 07	07.3 +00.1	21			
22	221 18.0 +00.7	N 23	05.7 +00.2	227 19.8 +02.2	N 22	13.6 +00.0	315 44.1 +02.6	S 07	07.4 +00.0	22			
23	236 18.7 +00.8	N 23	05.9 +00.1	242 22.0 +02.1	N 22	13.6 +00.1	330 46.7 +02.6	S 07	07.4 +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 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 277° 277° 277° 277° 277° 277°			SHA 283° 283° 283° 283° 283° 283°			SHA 011° 011° 011° 011° 011° 011°						
	Greenwich Culmination Time: 07:15			Greenwich Culmination Time: 06:52			Greenwich Culmination Time: 01:00						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 32.9 +00.1	N 10 18.7 -00.9	158 15.6 -00.3	N 02 49.9 -01.3	279 43.8 -33.6	N 23 43.5 +09.7	00						
01	194 33.0 +00.2	N 10 17.8 -00.9	173 15.3 -00.3	N 02 48.6 -01.2	294 10.2 -33.7	N 23 53.2 +09.6	01						
02	209 33.2 +00.2	N 10 16.9 -00.8	188 15.0 -00.4	N 02 47.4 -01.3	308 36.5 -33.8	N 24 02.8 +09.4	02						
03	224 33.4 +00.2	N 10 16.1 -00.9	203 14.6 -00.3	N 02 46.1 -01.3	323 02.7 -33.8	N 24 12.2 +09.2	03						
04	239 33.6 +00.2	N 10 15.2 -00.9	218 14.3 -00.3	N 02 44.8 -01.3	337 28.9 -33.8	N 24 21.4 +09.1	04						
05	254 33.8 +00.1	N 10 14.3 -00.9	233 14.0 -00.3	N 02 43.5 -01.2	351 55.1 -33.9	N 24 30.5 +09.0	05						
06	269 33.9 +00.2	N 10 13.4 -00.8	248 13.7 -00.4	N 02 42.3 -01.3	6 21.2 -34.0	N 24 39.5 +08.7	06						
07	284 34.1 +00.2	N 10 12.6 -00.9	263 13.3 -00.3	N 02 41.0 -01.3	20 47.2 -33.9	N 24 48.2 +08.7	07						
08	299 34.3 +00.2	N 10 11.7 -00.9	278 13.0 -00.3	N 02 39.7 -01.3	35 13.3 -34.1	N 24 56.9 +08.4	08						
09	314 34.5 +00.2	N 10 10.8 -00.9	293 12.7 -00.3	N 02 38.4 -01.2	49 39.2 -34.1	N 25 05.3 +08.4	09						
10	329 34.7 +00.1	N 10 09.9 -00.8	308 12.4 -00.4	N 02 37.2 -01.3	64 05.1 -34.1	N 25 13.7 +08.1	10						
11	344 34.8 +00.2	N 10 09.1 -00.9	323 12.0 -00.3	N 02 35.9 -01.3	78 31.0 -34.2	N 25 21.8 +08.0	11						
12	359 35.0 +00.2	N 10 08.2 -00.9	338 11.7 -00.3	N 02 34.6 -01.3	92 56.8 -34.2	N 25 29.8 +07.8	12						
13	14 35.2 +00.2	N 10 07.3 -00.9	353 11.4 -00.3	N 02 33.3 -01.2	107 22.6 -34.2	N 25 37.6 +07.7	13						
14	29 35.4 +00.2	N 10 06.4 -00.8	8 11.1 -00.4	N 02 32.1 -01.3	121 48.4 -34.3	N 25 45.3 +07.5	14						
15	44 35.6 +00.1	N 10 05.6 -00.9	23 10.7 -00.3	N 02 30.8 -01.3	136 14.1 -34.3	N 25 52.8 +07.4	15						
16	59 35.7 +00.2	N 10 04.7 -00.9	38 10.4 -00.3	N 02 29.5 -01.3	150 39.8 -34.4	N 26 00.2 +07.2	16						
17	74 35.9 +00.2	N 10 03.8 -00.9	53 10.1 -00.3	N 02 28.2 -01.3	165 05.4 -34.4	N 26 07.4 +07.0	17						
18	89 36.1 +00.2	N 10 02.9 -00.8	68 09.8 -00.3	N 02 26.9 -01.2	179 31.0 -34.4	N 26 14.4 +06.9	18						
19	104 36.3 +00.2	N 10 02.1 -00.9	83 09.5 -00.4	N 02 25.7 -01.3	193 56.6 -34.5	N 26 21.3 +06.6	19						
20	119 36.5 +00.1	N 10 01.2 -00.9	98 09.1 -00.3	N 02 24.4 -01.3	208 22.1 -34.5	N 26 27.9 +06.6	20						
21	134 36.6 +00.2	N 10 00.3 -00.9	113 08.8 -00.3	N 02 23.1 -01.3	222 47.6 -34.5	N 26 34.5 +06.3	21						
22	149 36.8 +00.2	N 09 59.4 -00.8	128 08.5 -00.3	N 02 21.8 -01.2	237 13.1 -34.6	N 26 40.8 +06.2	22						
23	164 37.0 +00.2	N 09 58.6 -00.9	143 08.2 -00.4	N 02 20.6 -01.3	251 38.5 -34.6	N 26 47.0 +06.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'8 15'8 15'8 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 58'4 58'3 58'2 58'0 57'9 57'8								
	SHA 205° 205° 204° 204° 204° 204°		SHA 183° 183° 183° 183° 183° 183°		SHA 304° 301° 299° 296° 294° 292°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 13:27		Greenwich Culmination Time: 05:33								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251 19.5 +00.8	N 23 06.0 +00.1	257 24.1 +02.1	N 22 13.7 +00.0	345 49.3 +02.7	S 07 07.5 +00.1	00						
01	266 20.3 +00.7	N 23 06.1 +00.1	272 26.2 +02.1	N 22 13.7 +00.0	0 52.0 +02.6	S 07 07.6 +00.1	01						
02	281 21.0 +00.8	N 23 06.2 +00.1	287 28.3 +02.1	N 22 13.7 +00.0	15 54.6 +02.6	S 07 07.7 +00.0	02						
03	296 21.8 +00.7	N 23 06.3 +00.1	302 30.4 +02.1	N 22 13.7 +00.1	30 57.2 +02.7	S 07 07.7 +00.1	03						
04	311 22.5 +00.8	N 23 06.4 +00.1	317 32.5 +02.2	N 22 13.8 +00.0	45 59.9 +02.6	S 07 07.8 +00.1	04						
05	326 23.3 +00.8	N 23 06.5 +00.2	332 34.7 +02.1	N 22 13.8 +00.0	61 02.5 +02.6	S 07 07.9 +00.1	05						
06	341 24.1 +00.7	N 23 06.7 +00.1	347 36.8 +02.1	N 22 13.8 +00.0	76 05.1 +02.7	S 07 08.0 +00.0	06						
07	356 24.8 +00.8	N 23 06.8 +00.1	2 38.9 +02.1	N 22 13.8 +00.1	91 07.8 +02.6	S 07 08.0 +00.1	07						
08	11 25.6 +00.8	N 23 06.9 +00.1	17 41.0 +02.1	N 22 13.9 +00.0	106 10.4 +02.6	S 07 08.1 +00.1	08						
09	26 26.4 +00.7	N 23 07.0 +00.1	32 43.1 +02.1	N 22 13.9 +00.0	121 13.0 +02.7	S 07 08.2 +00.1	09						
10	41 27.1 +00.8	N 23 07.1 +00.1	47 45.2 +02.2	N 22 13.9 +00.0	136 15.7 +02.6	S 07 08.3 +00.0	10						
11	56 27.9 +00.7	N 23 07.2 +00.1	62 47.4 +02.1	N 22 13.9 +00.1	151 18.3 +02.6	S 07 08.3 +00.1	11						
12	71 28.6 +00.8	N 23 07.3 +00.1	77 49.5 +02.1	N 22 14.0 +00.0	166 20.9 +02.7	S 07 08.4 +00.1	12						
13	86 29.4 +00.8	N 23 07.4 +00.2	92 51.6 +02.1	N 22 14.0 +00.0	181 23.6 +02.6	S 07 08.5 +00.1	13						
14	101 30.2 +00.7	N 23 07.6 +00.1	107 53.7 +02.1	N 22 14.0 +00.1	196 26.2 +02.6	S 07 08.6 +00.0	14						
15	116 30.9 +00.8	N 23 07.7 +00.1	122 55.8 +02.2	N 22 14.1 +00.0	211 28.8 +02.7	S 07 08.6 +00.1	15						
16	131 31.7 +00.8	N 23 07.8 +00.1	137 58.0 +02.1	N 22 14.1 +00.0	226 31.5 +02.6	S 07 08.7 +00.1	16						
17	146 32.5 +00.7	N 23 07.9 +00.1	153 00.1 +02.1	N 22 14.1 +00.0	241 34.1 +02.6	S 07 08.8 +00.1	17						
18	161 33.2 +00.8	N 23 08.0 +00.1	168 02.2 +02.1	N 22 14.1 +00.1	256 36.7 +02.7	S 07 08.9 +00.0	18						
19	176 34.0 +00.8	N 23 08.1 +00.1	183 04.3 +02.1	N 22 14.2 +00.0	271 39.4 +02.6	S 07 08.9 +00.1	19						
20	191 34.8 +00.7	N 23 08.2 +00.1	198 06.4 +02.2	N 22 14.2 +00.0	286 42.0 +02.6	S 07 09.0 +00.1	20						
21	206 35.5 +00.8	N 23 08.3 +00.1	213 08.6 +02.1	N 22 14.2 +00.0	301 44.6 +02.7	S 07 09.1 +00.1	21						
22	221 36.3 +00.8	N 23 08.4 +00.1	228 10.7 +02.1	N 22 14.2 +00.1	316 47.3 +02.6	S 07 09.2 +00.0	22						
23	236 37.1 +00.7	N 23 08.5 +00.1	243 12.8 +02.1	N 22 14.3 +00.0	331 49.9 +02.6	S 07 09.2 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 277° 276° 276° 276° 276° 276°		SHA 283° 283° 283° 283° 283° 283°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:14		Greenwich Culmination Time: 06:49		Greenwich Culmination Time: 00:56								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 37.2 +00.2	N 09 57.7 -00.9	158 07.8 -00.3	N 02 19.3 -01.3	266 03.9 -34.6	N 26 53.1 +05.8	00						
01	194 37.4 +00.1	N 09 56.8 -00.9	173 07.5 -00.3	N 02 18.0 -01.3	280 29.3 -34.6	N 26 58.9 +05.7	01						
02	209 37.5 +00.2	N 09 55.9 -00.8	188 07.2 -00.3	N 02 16.7 -01.3	294 54.7 -34.7	N 27 04.6 +05.6	02						
03	224 37.7 +00.2	N 09 55.1 -00.9	203 06.9 -00.3	N 02 15.4 -01.2	309 20.0 -34.7	N 27 10.2 +05.3	03						
04	239 37.9 +00.2	N 09 54.2 -00.9	218 06.6 -00.4	N 02 14.2 -01.3	323 45.3 -34.7	N 27 15.5 +05.2	04						
05	254 38.1 +00.2	N 09 53.3 -00.9	233 06.2 -00.3	N 02 12.9 -01.3	338 10.6 -34.7	N 27 20.7 +05.0	05						
06	269 38.3 +00.2	N 09 52.4 -00.9	248 05.9 -00.3	N 02 11.6 -01.3	352 35.9 -34.8	N 27 25.7 +04.9	06						
07	284 38.5 +00.1	N 09 51.5 -00.8	263 05.6 -00.3	N 02 10.3 -01.3	7 01.1 -34.8	N 27 30.6 +04.7	07						
08	299 38.6 +00.2	N 09 50.7 -00.9	278 05.3 -00.3	N 02 09.0 -01.2	21 26.3 -34.7	N 27 35.3 +04.5	08						
09	314 38.8 +00.2	N 09 49.8 -00.9	293 05.0 -00.4	N 02 07.8 -01.3	35 51.6 -34.8	N 27 39.8 +04.3	09						
10	329 39.0 +00.2	N 09 48.9 -00.9	308 04.6 -00.3	N 02 06.5 -01.3	50 16.8 -34.8	N 27 44.1 +04.2	10						
11	344 39.2 +00.2	N 09 48.0 -00.9	323 04.3 -00.3	N 02 05.2 -01.3	64 42.0 -34.8	N 27 48.3 +04.0	11						
12	359 39.4 +00.2	N 09 47.1 -00.8	338 04.0 -00.3	N 02 03.9 -01.3	79 07.2 -34.9	N 27 52.3 +03.8	12						
13	14 39.6 +00.1	N 09 46.3 -00.9	353 03.7 -00.3	N 02 02.6 -01.2	93 32.3 -34.8	N 27 56.1 +03.7	13						
14	29 39.7 +00.2	N 09 45.4 -00.9	8 03.4 -00.4	N 02 01.4 -01.3	107 57.5 -34.8	N 27 59.8 +03.4	14						
15	44 39.9 +00.2	N 09 44.5 -00.9	23 03.0 -00.3	N 02 00.1 -01.3	122 22.7 -34.9	N 28 03.2 +03.4	15						
16	59 40.1 +00.2	N 09 43.6 -00.9	38 02.7 -00.3	N 01 58.8 -01.3	136 47.8 -34.8	N 28 06.6 +03.1	16						
17	74 40.3 +00.2	N 09 42.7 -00.9	53 02.4 -00.3	N 01 57.5 -01.3	151 13.0 -34.8	N 28 09.7 +03.0	17						
18	89 40.5 +00.2	N 09 41.8 -00.8	68 02.1 -00.3	N 01 56.2 -01.2	165 38.2 -34.9	N 28 12.7 +02.8	18						
19	104 40.7 +00.1	N 09 41.0 -00.9	83 01.8 -00.4	N 01 55.0 -01.3	180 03.3 -34.8	N 28 15.5 +02.6	19						
20	119 40.8 +00.2	N 09 40.1 -00.9	98 01.4 -00.3	N 01 53.7 -01.3	194 28.5 -34.8	N 28 18.1 +02.5	20						
21	134 41.0 +00.2	N 09 39.2 -00.9	113 01.1 -00.3	N 01 52.4 -01.3	208 53.7 -34.8	N 28 20.6 +02.2	21						
22	149 41.2 +00.2	N 09 38.3 -00.9	128 00.8 -00.3	N 01 51.1 -01.3	223 18.9 -34.9	N 28 22.8 +02.2	22						
23	164 41.4 +00.2	N 09 37.4 -00.9	143 00.5 -00.3	N 01 49.8 -01.2	237 44.0 -34.7	N 28 25.0 +01.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'7 15'6 15'6 15'6 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'7 57'6 57'4 57'3 57'2 57'1								
	SHA 204° 204° 204° 203° 203° 203°		SHA 182° 182° 182° 182° 182° 181°		SHA 289° 287° 284° 282° 279° 277°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 13:27		Greenwich Culmination Time: 06:30								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251 37.8 +00.8	N 23 08.6 +00.2	258 14.9 +02.1	N 22 14.3 +00.0	346 52.5 +02.7	S 07 09.3 +00.1	00						
01	266 38.6 +00.8	N 23 08.8 +00.1	273 17.0 +02.2	N 22 14.3 +00.0	1 55.2 +02.6	S 07 09.4 +00.1	01						
02	281 39.4 +00.7	N 23 08.9 +00.1	288 19.2 +02.1	N 22 14.3 +00.1	16 57.8 +02.6	S 07 09.5 +00.1	02						
03	296 40.1 +00.8	N 23 09.0 +00.1	303 21.3 +02.1	N 22 14.4 +00.0	32 00.4 +02.7	S 07 09.6 +00.0	03						
04	311 40.9 +00.8	N 23 09.1 +00.1	318 23.4 +02.1	N 22 14.4 +00.0	47 03.1 +02.6	S 07 09.6 +00.1	04						
05	326 41.7 +00.7	N 23 09.2 +00.1	333 25.5 +02.1	N 22 14.4 +00.1	62 05.7 +02.6	S 07 09.7 +00.1	05						
06	341 42.4 +00.8	N 23 09.3 +00.1	348 27.6 +02.2	N 22 14.5 +00.0	77 08.3 +02.7	S 07 09.8 +00.1	06						
07	356 43.2 +00.8	N 23 09.4 +00.1	3 29.8 +02.1	N 22 14.5 +00.0	92 11.0 +02.6	S 07 09.9 +00.0	07						
08	11 44.0 +00.7	N 23 09.5 +00.1	18 31.9 +02.1	N 22 14.5 +00.0	107 13.6 +02.6	S 07 09.9 +00.1	08						
09	26 44.7 +00.8	N 23 09.6 +00.1	33 34.0 +02.1	N 22 14.5 +00.1	122 16.2 +02.7	S 07 10.0 +00.1	09						
10	41 45.5 +00.8	N 23 09.7 +00.1	48 36.1 +02.2	N 22 14.6 +00.0	137 18.9 +02.6	S 07 10.1 +00.1	10						
11	56 46.3 +00.7	N 23 09.8 +00.1	63 38.3 +02.1	N 22 14.6 +00.0	152 21.5 +02.6	S 07 10.2 +00.0	11						
12	71 47.0 +00.8	N 23 09.9 +00.1	78 40.4 +02.1	N 22 14.6 +00.0	167 24.1 +02.7	S 07 10.2 +00.1	12						
13	86 47.8 +00.8	N 23 10.0 +00.1	93 42.5 +02.1	N 22 14.6 +00.1	182 26.8 +02.6	S 07 10.3 +00.1	13						
14	101 48.6 +00.7	N 23 10.1 +00.1	108 44.6 +02.2	N 22 14.7 +00.0	197 29.4 +02.6	S 07 10.4 +00.1	14						
15	116 49.3 +00.8	N 23 10.2 +00.1	123 46.8 +02.1	N 22 14.7 +00.0	212 32.0 +02.7	S 07 10.5 +00.0	15						
16	131 50.1 +00.8	N 23 10.3 +00.1	138 48.9 +02.1	N 22 14.7 +00.0	227 34.7 +02.6	S 07 10.5 +00.1	16						
17	146 50.9 +00.7	N 23 10.4 +00.1	153 51.0 +02.1	N 22 14.7 +00.1	242 37.3 +02.6	S 07 10.6 +00.1	17						
18	161 51.6 +00.8	N 23 10.5 +00.1	168 53.1 +02.2	N 22 14.8 +00.0	257 39.9 +02.7	S 07 10.7 +00.1	18						
19	176 52.4 +00.8	N 23 10.6 +00.1	183 55.3 +02.1	N 22 14.8 +00.0	272 42.6 +02.6	S 07 10.8 +00.0	19						
20	191 53.2 +00.8	N 23 10.7 +00.1	198 57.4 +02.1	N 22 14.8 +00.0	287 45.2 +02.6	S 07 10.8 +00.1	20						
21	206 54.0 +00.7	N 23 10.8 +00.1	213 59.5 +02.2	N 22 14.8 +00.1	302 47.8 +02.7	S 07 10.9 +00.1	21						
22	221 54.7 +00.8	N 23 10.9 +00.1	229 01.7 +02.1	N 22 14.9 +00.0	317 50.5 +02.6	S 07 11.0 +00.1	22						
23	236 55.5 +00.8	N 23 11.0 +00.1	244 03.8 +02.1	N 22 14.9 +00.0	332 53.1 +02.6	S 07 11.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 276° 276° 276° 276° 275° 275°		SHA 283° 282° 282° 282° 282° 282°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:13		Greenwich Culmination Time: 06:46		Greenwich Culmination Time: 00:52								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179	41.6+00.2	N 09 36.5	-00.8	158	00.2-00.4	N 01 48.6	-01.3	252	09.3-34.8	N 28 26.9	+01.8	00
01	194	41.8+00.2	N 09 35.7	-00.9	172	59.8-00.3	N 01 47.3	-01.3	266	34.5-34.8	N 28 28.7	+01.6	01
02	209	42.0+00.1	N 09 34.8	-00.9	187	59.5-00.3	N 01 46.0	-01.3	280	59.7-34.8	N 28 30.3	+01.4	02
03	224	42.1+00.2	N 09 33.9	-00.9	202	59.2-00.3	N 01 44.7	-01.3	295	24.9-34.7	N 28 31.7	+01.3	03
04	239	42.3+00.2	N 09 33.0	-00.9	217	58.9-00.3	N 01 43.4	-01.2	309	50.2-34.7	N 28 33.0	+01.1	04
05	254	42.5+00.2	N 09 32.1	-00.9	232	58.6-00.4	N 01 42.2	-01.3	324	15.5-34.7	N 28 34.1	+00.9	05
06	269	42.7+00.2	N 09 31.2	-00.9	247	58.2-00.3	N 01 40.9	-01.3	338	40.8-34.7	N 28 35.0	+00.7	06
07	284	42.9+00.2	N 09 30.3	-00.8	262	57.9-00.3	N 01 39.6	-01.3	353	06.1-34.6	N 28 35.7	+00.6	07
08	299	43.1+00.2	N 09 29.5	-00.9	277	57.6-00.3	N 01 38.3	-01.3	7	31.5-34.6	N 28 36.3	+00.4	08
09	314	43.3+00.1	N 09 28.6	-00.9	292	57.3-00.3	N 01 37.0	-01.3	21	56.9-34.6	N 28 36.7	+00.3	09
10	329	43.4+00.2	N 09 27.7	-00.9	307	57.0-00.3	N 01 35.7	-01.2	36	22.3-34.5	N 28 37.0	+00.1	10
11	344	43.6+00.2	N 09 26.8	-00.9	322	56.7-00.4	N 01 34.5	-01.3	50	47.8-34.6	N 28 37.1	-00.1	11
12	359	43.8+00.2	N 09 25.9	-00.9	337	56.3-00.3	N 01 33.2	-01.3	65	13.2-34.4	N 28 37.0	-00.3	12
13	14	44.0+00.2	N 09 25.0	-00.9	352	56.0-00.3	N 01 31.9	-01.3	79	38.8-34.5	N 28 36.7	-00.4	13
14	29	44.2+00.2	N 09 24.1	-00.9	7	55.7-00.3	N 01 30.6	-01.3	94	04.3-34.4	N 28 36.3	-00.6	14
15	44	44.4+00.2	N 09 23.2	-00.8	22	55.4-00.3	N 01 29.3	-01.3	108	29.9-34.4	N 28 35.7	-00.8	15
16	59	44.6+00.1	N 09 22.4	-00.9	37	55.1-00.4	N 01 28.0	-01.2	122	55.5-34.3	N 28 34.9	-00.9	16
17	74	44.7+00.2	N 09 21.5	-00.9	52	54.7-00.3	N 01 26.8	-01.3	137	21.2-34.3	N 28 34.0	-01.1	17
18	89	44.9+00.2	N 09 20.6	-00.9	67	54.4-00.3	N 01 25.5	-01.3	151	46.9-34.2	N 28 32.9	-01.2	18
19	104	45.1+00.2	N 09 19.7	-00.9	82	54.1-00.3	N 01 24.2	-01.3	166	12.7-34.2	N 28 31.7	-01.4	19
20	119	45.3+00.2	N 09 18.8	-00.9	97	53.8-00.3	N 01 22.9	-01.3	180	38.5-34.2	N 28 30.3	-01.6	20
21	134	45.5+00.2	N 09 17.9	-00.9	112	53.5-00.3	N 01 21.6	-01.3	195	04.3-34.1	N 28 28.7	-01.7	21
22	149	45.7+00.2	N 09 17.0	-00.9	127	53.2-00.4	N 01 20.3	-01.2	209	30.2-34.0	N 28 27.0	-01.9	22
23	164	45.9+00.2	N 09 16.1	-00.9	142	52.8-00.3	N 01 19.1	-01.3	223	56.2-34.0	N 28 25.1	-02.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'5 15'5 15'5 15'4 15'4 15'4				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 57'0 56'9 56'8 56'6 56'5 56'4				
	SHA 203° 203° 203° 202° 202° 202°				SHA 181° 181° 181° 181° 180° 180°				SHA 274° 272° 269° 267° 264° 262°				
	Greenwich Culmination Time: 12:01				Greenwich Culmination Time: 13:28				Greenwich Culmination Time: 07:28				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251	56.3+00.7	N 23 11.1	+00.1	259	05.9+02.1	N 22 14.9	+00.0	347	55.7+02.7	S 07 11.2	+00.0	00
01	266	57.0+00.8	N 23 11.2	+00.1	274	08.0+02.2	N 22 14.9	+00.1	2	58.4+02.6	S 07 11.2	+00.1	01
02	281	57.8+00.8	N 23 11.3	+00.1	289	10.2+02.1	N 22 15.0	+00.0	18	01.0+02.6	S 07 11.3	+00.1	02
03	296	58.6+00.8	N 23 11.4	+00.1	304	12.3+02.1	N 22 15.0	+00.0	33	03.6+02.7	S 07 11.4	+00.1	03
04	311	59.4+00.7	N 23 11.5	+00.1	319	14.4+02.1	N 22 15.0	+00.0	48	06.3+02.6	S 07 11.5	+00.0	04
05	327	00.1+00.8	N 23 11.6	+00.1	334	16.5+02.2	N 22 15.0	+00.1	63	08.9+02.6	S 07 11.5	+00.1	05
06	342	00.9+00.8	N 23 11.7	+00.1	349	18.7+02.1	N 22 15.1	+00.0	78	11.5+02.7	S 07 11.6	+00.1	06
07	357	01.7+00.7	N 23 11.8	+00.1	4	20.8+02.1	N 22 15.1	+00.0	93	14.2+02.6	S 07 11.7	+00.1	07
08	12	02.4+00.8	N 23 11.9	+00.1	19	22.9+02.2	N 22 15.1	+00.1	108	16.8+02.6	S 07 11.8	+00.0	08
09	27	03.2+00.8	N 23 12.0	+00.1	34	25.1+02.1	N 22 15.2	+00.0	123	19.4+02.7	S 07 11.8	+00.1	09
10	42	04.0+00.8	N 23 12.1	+00.1	49	27.2+02.1	N 22 15.2	+00.0	138	22.1+02.6	S 07 11.9	+00.1	10
11	57	04.8+00.7	N 23 12.2	+00.1	64	29.3+02.2	N 22 15.2	+00.0	153	24.7+02.6	S 07 12.0	+00.1	11
12	72	05.5+00.8	N 23 12.3	+00.1	79	31.5+02.1	N 22 15.2	+00.1	168	27.3+02.7	S 07 12.1	+00.0	12
13	87	06.3+00.8	N 23 12.4	+00.1	94	33.6+02.1	N 22 15.3	+00.0	183	30.0+02.6	S 07 12.1	+00.1	13
14	102	07.1+00.8	N 23 12.5	+00.1	109	35.7+02.2	N 22 15.3	+00.0	198	32.6+02.6	S 07 12.2	+00.1	14
15	117	07.9+00.7	N 23 12.6	+00.1	124	37.9+02.1	N 22 15.3	+00.0	213	35.2+02.7	S 07 12.3	+00.1	15
16	132	08.6+00.8	N 23 12.7	+00.1	139	40.0+02.1	N 22 15.3	+00.1	228	37.9+02.6	S 07 12.4	+00.1	16
17	147	09.4+00.8	N 23 12.8	+00.1	154	42.1+02.1	N 22 15.4	+00.0	243	40.5+02.7	S 07 12.5	+00.0	17
18	162	10.2+00.8	N 23 12.9	+00.1	169	44.2+02.2	N 22 15.4	+00.0	258	43.2+02.6	S 07 12.5	+00.1	18
19	177	11.0+00.7	N 23 13.0	+00.1	184	46.4+02.1	N 22 15.4	+00.0	273	45.8+02.6	S 07 12.6	+00.1	19
20	192	11.7+00.8	N 23 13.1	+00.1	199	48.5+02.1	N 22 15.4	+00.1	288	48.4+02.7	S 07 12.7	+00.1	20
21	207	12.5+00.8	N 23 13.2	+00.1	214	50.6+02.2	N 22 15.5	+00.0	303	51.1+02.6	S 07 12.8	+00.0	21
22	222	13.3+00.8	N 23 13.3	+00.1	229	52.8+02.1	N 22 15.5	+00.0	318	53.7+02.6	S 07 12.8	+00.1	22
23	237	14.1+00.7	N 23 13.4	+00.1	244	54.9+02.1	N 22 15.5	+00.0	333	56.3+02.7	S 07 12.9	+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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 275° 275° 275° 275° 275° 275°				SHA 282° 282° 282° 282° 282° 282°				SHA 011° 011° 011° 011° 011° 011°				
	Greenwich Culmination Time: 07:11				Greenwich Culmination Time: 06:42				Greenwich Culmination Time: 00:48				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 46.1 +00.2	N 09 15.2 -00.8	157 52.5 -00.3	N 01 17.8 -01.3	238 22.2 -33.9	N 28 23.0 -02.2	00						
01	194 46.3 +00.1	N 09 14.4 -00.9	172 52.2 -00.3	N 01 16.5 -01.3	252 48.3 -33.9	N 28 20.8 -02.4	01						
02	209 46.4 +00.2	N 09 13.5 -00.9	187 51.9 -00.3	N 01 15.2 -01.3	267 14.4 -33.9	N 28 18.4 -02.5	02						
03	224 46.6 +00.2	N 09 12.6 -00.9	202 51.6 -00.3	N 01 13.9 -01.3	281 40.5 -33.7	N 28 15.9 -02.7	03						
04	239 46.8 +00.2	N 09 11.7 -00.9	217 51.3 -00.4	N 01 12.6 -01.2	296 06.8 -33.7	N 28 13.2 -02.9	04						
05	254 47.0 +00.2	N 09 10.8 -00.9	232 50.9 -00.3	N 01 11.4 -01.3	310 33.1 -33.7	N 28 10.3 -03.0	05						
06	269 47.2 +00.2	N 09 09.9 -00.9	247 50.6 -00.3	N 01 10.1 -01.3	324 59.4 -33.5	N 28 07.3 -03.1	06						
07	284 47.4 +00.2	N 09 09.0 -00.9	262 50.3 -00.3	N 01 08.8 -01.3	339 25.9 -33.6	N 28 04.2 -03.3	07						
08	299 47.6 +00.2	N 09 08.1 -00.9	277 50.0 -00.3	N 01 07.5 -01.3	353 52.3 -33.4	N 28 00.9 -03.5	08						
09	314 47.8 +00.2	N 09 07.2 -00.9	292 49.7 -00.3	N 01 06.2 -01.3	8 18.9 -33.4	N 27 57.4 -03.6	09						
10	329 48.0 +00.1	N 09 06.3 -00.9	307 49.4 -00.4	N 01 04.9 -01.2	22 45.5 -33.3	N 27 53.8 -03.8	10						
11	344 48.1 +00.2	N 09 05.4 -00.9	322 49.0 -00.3	N 01 03.7 -01.3	37 12.2 -33.2	N 27 50.0 -03.9	11						
12	359 48.3 +00.2	N 09 04.5 -00.9	337 48.7 -00.3	N 01 02.4 -01.3	51 39.0 -33.2	N 27 46.1 -04.1	12						
13	14 48.5 +00.2	N 09 03.6 -00.8	352 48.4 -00.3	N 01 01.1 -01.3	66 05.8 -33.1	N 27 42.0 -04.2	13						
14	29 48.7 +00.2	N 09 02.8 -00.9	7 48.1 -00.3	N 00 59.8 -01.3	80 32.7 -33.0	N 27 37.8 -04.4	14						
15	44 48.9 +00.2	N 09 01.9 -00.9	22 47.8 -00.3	N 00 58.5 -01.3	94 59.7 -33.0	N 27 33.4 -04.5	15						
16	59 49.1 +00.2	N 09 01.0 -00.9	37 47.5 -00.4	N 00 57.2 -01.3	109 26.7 -32.9	N 27 28.9 -04.7	16						
17	74 49.3 +00.2	N 09 00.1 -00.9	52 47.1 -00.3	N 00 55.9 -01.2	123 53.8 -32.8	N 27 24.2 -04.8	17						
18	89 49.5 +00.2	N 08 59.2 -00.9	67 46.8 -00.3	N 00 54.7 -01.3	138 21.0 -32.7	N 27 19.4 -04.9	18						
19	104 49.7 +00.2	N 08 58.3 -00.9	82 46.5 -00.3	N 00 53.4 -01.3	152 48.3 -32.6	N 27 14.5 -05.1	19						
20	119 49.9 +00.2	N 08 57.4 -00.9	97 46.2 -00.3	N 00 52.1 -01.3	167 15.7 -32.6	N 27 09.4 -05.3	20						
21	134 50.1 +00.1	N 08 56.5 -00.9	112 45.9 -00.3	N 00 50.8 -01.3	181 43.1 -32.5	N 27 04.1 -05.3	21						
22	149 50.2 +00.2	N 08 55.6 -00.9	127 45.6 -00.3	N 00 49.5 -01.3	196 10.6 -32.4	N 26 58.8 -05.5	22						
23	164 50.4 +00.2	N 08 54.7 -00.9	142 45.3 -00.4	N 00 48.2 -01.3	210 38.2 -32.3	N 26 53.3 -05.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'3 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'3 56'2 56'1 56'0 56'0 55'9								
	SHA 202° 202° 202° 202° 201° 201°		SHA 180° 180° 180° 180° 179° 179°		SHA 259° 257° 255° 252° 250° 248°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:28		Greenwich Culmination Time: 08:25								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 14.8 +00.8	N 23 13.5 +00.1	259 57.0 +02.2	N 22 15.5 +00.1	348 59.0 +02.6	S 07 13.0 +00.1	00						
01	267 15.6 +00.8	N 23 13.6 +00.1	274 59.2 +02.1	N 22 15.6 +00.0	4 01.6 +02.6	S 07 13.1 +00.0	01						
02	282 16.4 +00.8	N 23 13.7 +00.0	290 01.3 +02.2	N 22 15.6 +00.0	19 04.2 +02.7	S 07 13.1 +00.1	02						
03	297 17.2 +00.7	N 23 13.7 +00.1	305 03.5 +02.1	N 22 15.6 +00.0	34 06.9 +02.6	S 07 13.2 +00.1	03						
04	312 17.9 +00.8	N 23 13.8 +00.1	320 05.6 +02.1	N 22 15.6 +00.1	49 09.5 +02.6	S 07 13.3 +00.1	04						
05	327 18.7 +00.8	N 23 13.9 +00.1	335 07.7 +02.2	N 22 15.7 +00.0	64 12.1 +02.7	S 07 13.4 +00.0	05						
06	342 19.5 +00.8	N 23 14.0 +00.1	350 09.9 +02.1	N 22 15.7 +00.0	79 14.8 +02.6	S 07 13.4 +00.1	06						
07	357 20.3 +00.7	N 23 14.1 +00.1	5 12.0 +02.1	N 22 15.7 +00.0	94 17.4 +02.6	S 07 13.5 +00.1	07						
08	12 21.0 +00.8	N 23 14.2 +00.1	20 14.1 +02.2	N 22 15.7 +00.1	109 20.0 +02.7	S 07 13.6 +00.1	08						
09	27 21.8 +00.8	N 23 14.3 +00.1	35 16.3 +02.1	N 22 15.8 +00.0	124 22.7 +02.6	S 07 13.7 +00.1	09						
10	42 22.6 +00.8	N 23 14.4 +00.1	50 18.4 +02.1	N 22 15.8 +00.0	139 25.3 +02.7	S 07 13.8 +00.0	10						
11	57 23.4 +00.8	N 23 14.5 +00.1	65 20.5 +02.2	N 22 15.8 +00.0	154 28.0 +02.6	S 07 13.8 +00.1	11						
12	72 24.2 +00.7	N 23 14.6 +00.1	80 22.7 +02.1	N 22 15.8 +00.0	169 30.6 +02.6	S 07 13.9 +00.1	12						
13	87 24.9 +00.8	N 23 14.7 +00.0	95 24.8 +02.2	N 22 15.8 +00.1	184 33.2 +02.7	S 07 14.0 +00.1	13						
14	102 25.7 +00.8	N 23 14.7 +00.1	110 27.0 +02.1	N 22 15.9 +00.0	199 35.9 +02.6	S 07 14.1 +00.0	14						
15	117 26.5 +00.8	N 23 14.8 +00.1	125 29.1 +02.1	N 22 15.9 +00.0	214 38.5 +02.6	S 07 14.1 +00.1	15						
16	132 27.3 +00.8	N 23 14.9 +00.1	140 31.2 +02.2	N 22 15.9 +00.0	229 41.1 +02.7	S 07 14.2 +00.1	16						
17	147 28.1 +00.7	N 23 15.0 +00.1	155 33.4 +02.1	N 22 15.9 +00.1	244 43.8 +02.6	S 07 14.3 +00.1	17						
18	162 28.8 +00.8	N 23 15.1 +00.1	170 35.5 +02.1	N 22 16.0 +00.0	259 46.4 +02.6	S 07 14.4 +00.0	18						
19	177 29.6 +00.8	N 23 15.2 +00.1	185 37.6 +02.2	N 22 16.0 +00.0	274 49.0 +02.7	S 07 14.4 +00.1	19						
20	192 30.4 +00.8	N 23 15.3 +00.1	200 39.8 +02.1	N 22 16.0 +00.0	289 51.7 +02.6	S 07 14.5 +00.1	20						
21	207 31.2 +00.8	N 23 15.4 +00.0	215 41.9 +02.2	N 22 16.0 +00.1	304 54.3 +02.6	S 07 14.6 +00.1	21						
22	222 32.0 +00.7	N 23 15.4 +00.1	230 44.1 +02.1	N 22 16.1 +00.0	319 56.9 +02.7	S 07 14.7 +00.1	22						
23	237 32.7 +00.8	N 23 15.5 +00.1	245 46.2 +02.1	N 22 16.1 +00.0	334 59.6 +02.6	S 07 14.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 274° 274° 274° 274° 274° 274°		SHA 282° 282° 282° 282° 282° 282°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:10		Greenwich Culmination Time: 06:39		Greenwich Culmination Time: 00:43								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 50.6 +00.2	N 08 53.8 -00.9	157 44.9 -00.3	N 00 46.9 -01.2	225 05.9 -32.2	N 26 47.6 -05.8	00						
01	194 50.8 +00.2	N 08 52.9 -00.9	172 44.6 -00.3	N 00 45.7 -01.3	239 33.7 -32.2	N 26 41.8 -05.9	01						
02	209 51.0 +00.2	N 08 52.0 -00.9	187 44.3 -00.3	N 00 44.4 -01.3	254 01.5 -32.0	N 26 35.9 -06.1	02						
03	224 51.2 +00.2	N 08 51.1 -00.9	202 44.0 -00.3	N 00 43.1 -01.3	268 29.5 -32.0	N 26 29.8 -06.2	03						
04	239 51.4 +00.2	N 08 50.2 -00.9	217 43.7 -00.3	N 00 41.8 -01.3	282 57.5 -31.9	N 26 23.6 -06.3	04						
05	254 51.6 +00.2	N 08 49.3 -00.9	232 43.4 -00.4	N 00 40.5 -01.3	297 25.6 -31.8	N 26 17.3 -06.5	05						
06	269 51.8 +00.2	N 08 48.4 -00.9	247 43.0 -00.3	N 00 39.2 -01.3	311 53.8 -31.7	N 26 10.8 -06.5	06						
07	284 52.0 +00.2	N 08 47.5 -00.9	262 42.7 -00.3	N 00 37.9 -01.2	326 22.1 -31.7	N 26 04.3 -06.8	07						
08	299 52.2 +00.2	N 08 46.6 -00.9	277 42.4 -00.3	N 00 36.7 -01.3	340 50.4 -31.5	N 25 57.5 -06.8	08						
09	314 52.4 +00.2	N 08 45.7 -00.9	292 42.1 -00.3	N 00 35.4 -01.3	355 18.9 -31.5	N 25 50.7 -07.0	09						
10	329 52.6 +00.2	N 08 44.8 -00.9	307 41.8 -00.3	N 00 34.1 -01.3	9 47.4 -31.3	N 25 43.7 -07.1	10						
11	344 52.8 +00.1	N 08 43.9 -00.9	322 41.5 -00.3	N 00 32.8 -01.3	24 16.1 -31.3	N 25 36.6 -07.2	11						
12	359 52.9 +00.2	N 08 43.0 -00.9	337 41.2 -00.4	N 00 31.5 -01.3	38 44.8 -31.2	N 25 29.4 -07.4	12						
13	14 53.1 +00.2	N 08 42.1 -00.9	352 40.8 -00.3	N 00 30.2 -01.3	53 13.6 -31.1	N 25 22.0 -07.4	13						
14	29 53.3 +00.2	N 08 41.2 -00.9	7 40.5 -00.3	N 00 28.9 -01.2	67 42.5 -31.0	N 25 14.6 -07.6	14						
15	44 53.5 +00.2	N 08 40.3 -00.9	22 40.2 -00.3	N 00 27.7 -01.3	82 11.5 -30.9	N 25 07.0 -07.7	15						
16	59 53.7 +00.2	N 08 39.4 -00.9	37 39.9 -00.3	N 00 26.4 -01.3	96 40.6 -30.8	N 24 59.3 -07.9	16						
17	74 53.9 +00.2	N 08 38.5 -00.9	52 39.6 -00.3	N 00 25.1 -01.3	111 09.8 -30.7	N 24 51.4 -07.9	17						
18	89 54.1 +00.2	N 08 37.6 -00.9	67 39.3 -00.3	N 00 23.8 -01.3	125 39.1 -30.7	N 24 43.5 -08.1	18						
19	104 54.3 +00.2	N 08 36.7 -00.9	82 39.0 -00.4	N 00 22.5 -01.3	140 08.4 -30.5	N 24 35.4 -08.2	19						
20	119 54.5 +00.2	N 08 35.8 -00.9	97 38.6 -00.3	N 00 21.2 -01.3	154 37.9 -30.5	N 24 27.2 -08.3	20						
21	134 54.7 +00.2	N 08 34.9 -00.9	112 38.3 -00.3	N 00 19.9 -01.3	169 07.4 -30.3	N 24 18.9 -08.4	21						
22	149 54.9 +00.2	N 08 34.0 -00.9	127 38.0 -00.3	N 00 18.6 -01.2	183 37.1 -30.3	N 24 10.5 -08.5	22						
23	164 55.1 +00.2	N 08 33.1 -00.9	142 37.7 -00.3	N 00 17.4 -01.3	198 06.8 -30.2	N 24 02.0 -08.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'2 15'1 15'1 15'1 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'8 55'7 55'6 55'5 55'4 55'4								
	SHA 201° 201° 201° 201° 200° 200°		SHA 179° 179° 179° 178° 178° 178°		SHA 245° 243° 241° 238° 236° 234°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:29		Greenwich Culmination Time: 09:19								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 33.5 +00.8	N 23 15.6 +00.1	260 48.3 +02.2	N 22 16.1 +00.0	350 02.2 +02.7	S 07 14.8 +00.1	00						
01	267 34.3 +00.8	N 23 15.7 +00.1	275 50.5 +02.1	N 22 16.1 +00.1	5 04.9 +02.6	S 07 14.9 +00.1	01						
02	282 35.1 +00.8	N 23 15.8 +00.1	290 52.6 +02.2	N 22 16.2 +00.0	20 07.5 +02.6	S 07 15.0 +00.1	02						
03	297 35.9 +00.8	N 23 15.9 +00.1	305 54.8 +02.1	N 22 16.2 +00.0	35 10.1 +02.7	S 07 15.1 +00.0	03						
04	312 36.7 +00.7	N 23 16.0 +00.0	320 56.9 +02.2	N 22 16.2 +00.0	50 12.8 +02.6	S 07 15.1 +00.1	04						
05	327 37.4 +00.8	N 23 16.0 +00.1	335 59.1 +02.1	N 22 16.2 +00.1	65 15.4 +02.6	S 07 15.2 +00.1	05						
06	342 38.2 +00.8	N 23 16.1 +00.1	351 01.2 +02.1	N 22 16.3 +00.0	80 18.0 +02.7	S 07 15.3 +00.1	06						
07	357 39.0 +00.8	N 23 16.2 +00.1	6 03.3 +02.2	N 22 16.3 +00.0	95 20.7 +02.6	S 07 15.4 +00.0	07						
08	12 39.8 +00.8	N 23 16.3 +00.1	21 05.5 +02.1	N 22 16.3 +00.0	110 23.3 +02.6	S 07 15.4 +00.1	08						
09	27 40.6 +00.8	N 23 16.4 +00.1	36 07.6 +02.2	N 22 16.3 +00.1	125 25.9 +02.7	S 07 15.5 +00.1	09						
10	42 41.4 +00.7	N 23 16.5 +00.1	51 09.8 +02.1	N 22 16.4 +00.0	140 28.6 +02.6	S 07 15.6 +00.1	10						
11	57 42.1 +00.8	N 23 16.6 +00.0	66 11.9 +02.2	N 22 16.4 +00.0	155 31.2 +02.7	S 07 15.7 +00.0	11						
12	72 42.9 +00.8	N 23 16.6 +00.1	81 14.1 +02.1	N 22 16.4 +00.0	170 33.9 +02.6	S 07 15.7 +00.1	12						
13	87 43.7 +00.8	N 23 16.7 +00.1	96 16.2 +02.1	N 22 16.4 +00.0	185 36.5 +02.6	S 07 15.8 +00.1	13						
14	102 44.5 +00.8	N 23 16.8 +00.1	111 18.3 +02.2	N 22 16.4 +00.1	200 39.1 +02.7	S 07 15.9 +00.1	14						
15	117 45.3 +00.8	N 23 16.9 +00.1	126 20.5 +02.1	N 22 16.5 +00.0	215 41.8 +02.6	S 07 16.0 +00.1	15						
16	132 46.1 +00.7	N 23 17.0 +00.0	141 22.6 +02.2	N 22 16.5 +00.0	230 44.4 +02.6	S 07 16.1 +00.0	16						
17	147 46.8 +00.8	N 23 17.0 +00.1	156 24.8 +02.1	N 22 16.5 +00.0	245 47.0 +02.7	S 07 16.1 +00.1	17						
18	162 47.6 +00.8	N 23 17.1 +00.1	171 26.9 +02.2	N 22 16.5 +00.1	260 49.7 +02.6	S 07 16.2 +00.1	18						
19	177 48.4 +00.8	N 23 17.2 +00.1	186 29.1 +02.1	N 22 16.6 +00.0	275 52.3 +02.7	S 07 16.3 +00.1	19						
20	192 49.2 +00.8	N 23 17.3 +00.1	201 31.2 +02.2	N 22 16.6 +00.0	290 55.0 +02.6	S 07 16.4 +00.0	20						
21	207 50.0 +00.8	N 23 17.4 +00.1	216 33.4 +02.1	N 22 16.6 +00.0	305 57.6 +02.6	S 07 16.4 +00.1	21						
22	222 50.8 +00.8	N 23 17.5 +00.0	231 35.5 +02.2	N 22 16.6 +00.1	321 00.2 +02.7	S 07 16.5 +00.1	22						
23	237 51.6 +00.7	N 23 17.5 +00.1	246 37.7 +02.1	N 22 16.7 +00.0	336 02.9 +02.6	S 07 16.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 274° 274° 274° 273° 273° 273°		SHA 282° 282° 282° 282° 282° 282°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:09		Greenwich Culmination Time: 06:35		Greenwich Culmination Time: 00:39								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 55.3 +00.2	N 08 32.2 -00.9	157 37.4 -00.3	N 00 16.1 -01.3	212 36.6 -30.1	N 23 53.4 -08.8	00						
01	194 55.5 +00.2	N 08 31.3 -00.9	172 37.1 -00.3	N 00 14.8 -01.3	227 06.5 -29.9	N 23 44.6 -08.8	01						
02	209 55.7 +00.2	N 08 30.4 -00.9	187 36.8 -00.4	N 00 13.5 -01.3	241 36.6 -29.9	N 23 35.8 -09.0	02						
03	224 55.9 +00.2	N 08 29.5 -00.9	202 36.4 -00.3	N 00 12.2 -01.3	256 06.7 -29.8	N 23 26.8 -09.0	03						
04	239 56.1 +00.2	N 08 28.6 -00.9	217 36.1 -00.3	N 00 10.9 -01.3	270 36.9 -29.7	N 23 17.8 -09.2	04						
05	254 56.3 +00.2	N 08 27.7 -00.9	232 35.8 -00.3	N 00 09.6 -01.3	285 07.2 -29.7	N 23 08.6 -09.3	05						
06	269 56.5 +00.1	N 08 26.8 -00.9	247 35.5 -00.3	N 00 08.3 -01.2	299 37.5 -29.5	N 22 59.3 -09.3	06						
07	284 56.6 +00.2	N 08 25.9 -00.9	262 35.2 -00.3	N 00 07.1 -01.3	314 08.0 -29.4	N 22 50.0 -09.5	07						
08	299 56.8 +00.2	N 08 25.0 -00.9	277 34.9 -00.3	N 00 05.8 -01.3	328 38.6 -29.3	N 22 40.5 -09.6	08						
09	314 57.0 +00.2	N 08 24.1 -00.9	292 34.6 -00.4	N 00 04.5 -01.3	343 09.3 -29.3	N 22 30.9 -09.7	09						
10	329 57.2 +00.2	N 08 23.2 -00.9	307 34.2 -00.3	N 00 03.2 -01.3	357 40.0 -29.1	N 22 21.2 -09.7	10						
11	344 57.4 +00.2	N 08 22.3 -00.9	322 33.9 -00.3	N 00 01.9 -01.3	12 10.9 -29.1	N 22 11.5 -09.9	11						
12	359 57.6 +00.2	N 08 21.4 -00.9	337 33.6 -00.3	N 00 00.6 -01.3	26 41.8 -29.0	N 22 01.6 -09.9	12						
13	14 57.8 +00.2	N 08 20.5 -01.0	352 33.3 -00.3	S 00 00.7 +01.3	41 12.8 -28.9	N 21 51.7 -10.1	13						
14	29 58.0 +00.2	N 08 19.5 -00.9	7 33.0 -00.3	S 00 02.0 +01.2	55 43.9 -28.8	N 21 41.6 -10.1	14						
15	44 58.2 +00.2	N 08 18.6 -00.9	22 32.7 -00.3	S 00 03.2 +01.3	70 15.1 -28.6	N 21 31.5 -10.3	15						
16	59 58.4 +00.2	N 08 17.7 -00.9	37 32.4 -00.3	S 00 04.5 +01.3	84 46.5 -28.7	N 21 21.2 -10.3	16						
17	74 58.6 +00.2	N 08 16.8 -00.9	52 32.1 -00.4	S 00 05.8 +01.3	99 17.8 -28.5	N 21 10.9 -10.4	17						
18	89 58.8 +00.2	N 08 15.9 -00.9	67 31.7 -00.3	S 00 07.1 +01.3	113 49.3 -28.4	N 21 00.5 -10.5	18						
19	104 59.0 +00.2	N 08 15.0 -00.9	82 31.4 -00.3	S 00 08.4 +01.3	128 20.9 -28.4	N 20 50.0 -10.6	19						
20	119 59.2 +00.2	N 08 14.1 -00.9	97 31.1 -00.3	S 00 09.7 +01.3	142 52.5 -28.2	N 20 39.4 -10.7	20						
21	134 59.4 +00.2	N 08 13.2 -00.9	112 30.8 -00.3	S 00 11.0 +01.3	157 24.3 -28.2	N 20 28.7 -10.7	21						
22	149 59.6 +00.2	N 08 12.3 -00.9	127 30.5 -00.3	S 00 12.3 +01.3	171 56.1 -28.1	N 20 18.0 -10.9	22						
23	164 59.8 +00.2	N 08 11.4 -00.9	142 30.2 -00.3	S 00 13.6 +01.2	186 28.0 -27.9	N 20 07.1 -10.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'0 15'0 15'0 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'3 55'2 55'1 55'1 55'0 54'9								
	SHA 200° 200° 200° 200° 200° 199°		SHA 178° 178° 177° 177° 177° 177°		SHA 232° 230° 228° 225° 223° 221°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:29		Greenwich Culmination Time: 10:09								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 52.3 +00.8	N 23 17.6 +00.1	261 39.8 +02.1	N 22 16.7 +00.0	351 05.5 +02.6	S 07 16.7 +00.0	00						
01	267 53.1 +00.8	N 23 17.7 +00.1	276 41.9 +02.2	N 22 16.7 +00.0	6 08.1 +02.7	S 07 16.7 +00.1	01						
02	282 53.9 +00.8	N 23 17.8 +00.0	291 44.1 +02.1	N 22 16.7 +00.1	21 10.8 +02.6	S 07 16.8 +00.1	02						
03	297 54.7 +00.8	N 23 17.8 +00.1	306 46.2 +02.2	N 22 16.8 +00.0	36 13.4 +02.7	S 07 16.9 +00.1	03						
04	312 55.5 +00.8	N 23 17.9 +00.1	321 48.4 +02.1	N 22 16.8 +00.0	51 16.1 +02.6	S 07 17.0 +00.1	04						
05	327 56.3 +00.8	N 23 18.0 +00.1	336 50.5 +02.2	N 22 16.8 +00.0	66 18.7 +02.6	S 07 17.1 +00.0	05						
06	342 57.1 +00.8	N 23 18.1 +00.1	351 52.7 +02.1	N 22 16.8 +00.0	81 21.3 +02.7	S 07 17.1 +00.1	06						
07	357 57.9 +00.8	N 23 18.2 +00.0	6 54.8 +02.2	N 22 16.8 +00.1	96 24.0 +02.6	S 07 17.2 +00.1	07						
08	12 58.7 +00.7	N 23 18.2 +00.1	21 57.0 +02.1	N 22 16.9 +00.0	111 26.6 +02.6	S 07 17.3 +00.1	08						
09	27 59.4 +00.8	N 23 18.3 +00.1	36 59.1 +02.2	N 22 16.9 +00.0	126 29.2 +02.7	S 07 17.4 +00.0	09						
10	43 00.2 +00.8	N 23 18.4 +00.1	52 01.3 +02.1	N 22 16.9 +00.0	141 31.9 +02.6	S 07 17.4 +00.1	10						
11	58 01.0 +00.8	N 23 18.5 +00.0	67 03.4 +02.2	N 22 16.9 +00.1	156 34.5 +02.7	S 07 17.5 +00.1	11						
12	73 01.8 +00.8	N 23 18.5 +00.1	82 05.6 +02.1	N 22 17.0 +00.0	171 37.2 +02.6	S 07 17.6 +00.1	12						
13	88 02.6 +00.8	N 23 18.6 +00.1	97 07.7 +02.2	N 22 17.0 +00.0	186 39.8 +02.6	S 07 17.7 +00.0	13						
14	103 03.4 +00.8	N 23 18.7 +00.1	112 09.9 +02.1	N 22 17.0 +00.0	201 42.4 +02.7	S 07 17.7 +00.1	14						
15	118 04.2 +00.8	N 23 18.8 +00.0	127 12.0 +02.2	N 22 17.0 +00.1	216 45.1 +02.6	S 07 17.8 +00.1	15						
16	133 05.0 +00.8	N 23 18.8 +00.1	142 14.2 +02.1	N 22 17.1 +00.0	231 47.7 +02.6	S 07 17.9 +00.1	16						
17	148 05.8 +00.8	N 23 18.9 +00.1	157 16.3 +02.2	N 22 17.1 +00.0	246 50.3 +02.7	S 07 18.0 +00.1	17						
18	163 06.6 +00.7	N 23 19.0 +00.1	172 18.5 +02.1	N 22 17.1 +00.0	261 53.0 +02.6	S 07 18.1 +00.0	18						
19	178 07.3 +00.8	N 23 19.1 +00.0	187 20.6 +02.2	N 22 17.1 +00.0	276 55.6 +02.7	S 07 18.1 +00.1	19						
20	193 08.1 +00.8	N 23 19.1 +00.1	202 22.8 +02.2	N 22 17.1 +00.1	291 58.3 +02.6	S 07 18.2 +00.1	20						
21	208 08.9 +00.8	N 23 19.2 +00.1	217 25.0 +02.1	N 22 17.2 +00.0	307 00.9 +02.6	S 07 18.3 +00.1	21						
22	223 09.7 +00.8	N 23 19.3 +00.1	232 27.1 +02.2	N 22 17.2 +00.0	322 03.5 +02.7	S 07 18.4 +00.0	22						
23	238 10.5 +00.8	N 23 19.4 +00.0	247 29.3 +02.1	N 22 17.2 +00.0	337 06.2 +02.6	S 07 18.4 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 273° 273° 273° 273° 273° 273°		SHA 282° 282° 282° 282° 282° 282°		SHA 011° 011° 011° 011° 011° 011°								
	Greenwich Culmination Time: 07:08		Greenwich Culmination Time: 06:32		Greenwich Culmination Time: 00:35								

UT	Sun				Venus				Moon				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	180	00.0	+00.2	N 08 10.5	-00.9	157	29.9	-00.4	S 00 14.8	+01.3	201	00.1	-27.9	N 19 56.2	-11.0	00
01	195	00.2	+00.2	N 08 09.6	-00.9	172	29.5	-00.3	S 00 16.1	+01.3	215	32.2	-27.9	N 19 45.2	-11.1	01
02	210	00.4	+00.2	N 08 08.7	-00.9	187	29.2	-00.3	S 00 17.4	+01.3	230	04.3	-27.7	N 19 34.1	-11.1	02
03	225	00.6	+00.2	N 08 07.8	-01.0	202	28.9	-00.3	S 00 18.7	+01.3	244	36.6	-27.7	N 19 23.0	-11.3	03
04	240	00.8	+00.2	N 08 06.8	-00.9	217	28.6	-00.3	S 00 20.0	+01.3	259	08.9	-27.5	N 19 11.7	-11.3	04
05	255	01.0	+00.2	N 08 05.9	-00.9	232	28.3	-00.3	S 00 21.3	+01.3	273	41.4	-27.5	N 19 00.4	-11.4	05
06	270	01.2	+00.2	N 08 05.0	-00.9	247	28.0	-00.3	S 00 22.6	+01.3	288	13.9	-27.4	N 18 49.0	-11.5	06
07	285	01.4	+00.2	N 08 04.1	-00.9	262	27.7	-00.3	S 00 23.9	+01.2	302	46.5	-27.3	N 18 37.5	-11.5	07
08	300	01.6	+00.2	N 08 03.2	-00.9	277	27.4	-00.4	S 00 25.1	+01.3	317	19.2	-27.3	N 18 26.0	-11.6	08
09	315	01.8	+00.2	N 08 02.3	-00.9	292	27.0	-00.3	S 00 26.4	+01.3	331	51.9	-27.1	N 18 14.4	-11.7	09
10	330	02.0	+00.2	N 08 01.4	-00.9	307	26.7	-00.3	S 00 27.7	+01.3	346	24.8	-27.1	N 18 02.7	-11.7	10
11	345	02.2	+00.2	N 08 00.5	-00.9	322	26.4	-00.3	S 00 29.0	+01.3	0	57.7	-27.0	N 17 51.0	-11.8	11
12	0	02.4	+00.2	N 07 59.6	-00.9	337	26.1	-00.3	S 00 30.3	+01.3	15	30.7	-26.9	N 17 39.2	-11.9	12
13	15	02.6	+00.2	N 07 58.7	-01.0	352	25.8	-00.3	S 00 31.6	+01.3	30	03.8	-26.8	N 17 27.3	-12.0	13
14	30	02.8	+00.2	N 07 57.7	-00.9	7	25.5	-00.3	S 00 32.9	+01.3	44	37.0	-26.8	N 17 15.3	-12.0	14
15	45	03.0	+00.2	N 07 56.8	-00.9	22	25.2	-00.3	S 00 34.2	+01.3	59	10.2	-26.7	N 17 03.3	-12.1	15
16	60	03.2	+00.2	N 07 55.9	-00.9	37	24.9	-00.4	S 00 35.5	+01.2	73	43.5	-26.6	N 16 51.2	-12.1	16
17	75	03.4	+00.2	N 07 55.0	-00.9	52	24.5	-00.3	S 00 36.7	+01.3	88	16.9	-26.5	N 16 39.1	-12.2	17
18	90	03.6	+00.2	N 07 54.1	-00.9	67	24.2	-00.3	S 00 38.0	+01.3	102	50.4	-26.5	N 16 26.9	-12.3	18
19	105	03.8	+00.2	N 07 53.2	-00.9	82	23.9	-00.3	S 00 39.3	+01.3	117	23.9	-26.4	N 16 14.6	-12.3	19
20	120	04.0	+00.2	N 07 52.3	-00.9	97	23.6	-00.3	S 00 40.6	+01.3	131	57.5	-26.3	N 16 02.3	-12.4	20
21	135	04.2	+00.2	N 07 51.4	-01.0	112	23.3	-00.3	S 00 41.9	+01.3	146	31.2	-26.2	N 15 49.9	-12.4	21
22	150	04.4	+00.2	N 07 50.4	-00.9	127	23.0	-00.3	S 00 43.2	+01.3	161	05.0	-26.2	N 15 37.5	-12.5	22
23	165	04.6	+00.2	N 07 49.5	-00.9	142	22.7	-00.4	S 00 44.5	+01.3	175	38.8	-26.1	N 15 25.0	-12.6	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22										
	SD 15'8 15'8 15'8 15'8 15'9 15'9					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 199° 199° 199° 199° 199° 199°					SHA 177° 177° 176° 176° 176° 176°										
	Greenwich Culmination Time: 11:59					Greenwich Culmination Time: 13:30										
UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	253	11.3	+00.8	N 23 19.4	+00.1	262	31.4	+02.2	N 22 17.2	+00.1	352	08.8	+02.6	S 07 18.5	+00.1	00
01	268	12.1	+00.8	N 23 19.5	+00.1	277	33.6	+02.1	N 22 17.3	+00.0	7	11.4	+02.7	S 07 18.6	+00.1	01
02	283	12.9	+00.8	N 23 19.6	+00.0	292	35.7	+02.2	N 22 17.3	+00.0	22	14.1	+02.6	S 07 18.7	+00.1	02
03	298	13.7	+00.8	N 23 19.6	+00.1	307	37.9	+02.1	N 22 17.3	+00.0	37	16.7	+02.7	S 07 18.8	+00.0	03
04	313	14.5	+00.8	N 23 19.7	+00.1	322	40.0	+02.2	N 22 17.3	+00.0	52	19.4	+02.6	S 07 18.8	+00.1	04
05	328	15.3	+00.8	N 23 19.8	+00.1	337	42.2	+02.1	N 22 17.3	+00.1	67	22.0	+02.6	S 07 18.9	+00.1	05
06	343	16.1	+00.8	N 23 19.9	+00.0	352	44.3	+02.2	N 22 17.4	+00.0	82	24.6	+02.7	S 07 19.0	+00.1	06
07	358	16.9	+00.8	N 23 19.9	+00.1	7	46.5	+02.2	N 22 17.4	+00.0	97	27.3	+02.6	S 07 19.1	+00.0	07
08	13	17.7	+00.8	N 23 20.0	+00.1	22	48.7	+02.1	N 22 17.4	+00.0	112	29.9	+02.6	S 07 19.1	+00.1	08
09	28	18.5	+00.8	N 23 20.1	+00.0	37	50.8	+02.2	N 22 17.4	+00.1	127	32.5	+02.7	S 07 19.2	+00.1	09
10	43	19.3	+00.7	N 23 20.1	+00.1	52	53.0	+02.1	N 22 17.5	+00.0	142	35.2	+02.6	S 07 19.3	+00.1	10
11	58	20.0	+00.8	N 23 20.2	+00.1	67	55.1	+02.2	N 22 17.5	+00.0	157	37.8	+02.7	S 07 19.4	+00.0	11
12	73	20.8	+00.8	N 23 20.3	+00.0	82	57.3	+02.1	N 22 17.5	+00.0	172	40.5	+02.6	S 07 19.4	+00.1	12
13	88	21.6	+00.8	N 23 20.3	+00.1	97	59.4	+02.2	N 22 17.5	+00.0	187	43.1	+02.6	S 07 19.5	+00.1	13
14	103	22.4	+00.8	N 23 20.4	+00.1	113	01.6	+02.2	N 22 17.5	+00.1	202	45.7	+02.7	S 07 19.6	+00.1	14
15	118	23.2	+00.8	N 23 20.5	+00.1	128	03.8	+02.1	N 22 17.6	+00.0	217	48.4	+02.6	S 07 19.7	+00.1	15
16	133	24.0	+00.8	N 23 20.6	+00.0	143	05.9	+02.2	N 22 17.6	+00.0	232	51.0	+02.7	S 07 19.8	+00.0	16
17	148	24.8	+00.8	N 23 20.6	+00.1	158	08.1	+02.1	N 22 17.6	+00.0	247	53.7	+02.6	S 07 19.8	+00.1	17
18	163	25.6	+00.8	N 23 20.7	+00.1	173	10.2	+02.2	N 22 17.6	+00.1	262	56.3	+02.6	S 07 19.9	+00.1	18
19	178	26.4	+00.8	N 23 20.8	+00.0	188	12.4	+02.1	N 22 17.7	+00.0	277	58.9	+02.7	S 07 20.0	+00.1	19
20	193	27.2	+00.8	N 23 20.8	+00.1	203	14.5	+02.2	N 22 17.7	+00.0	293	01.6	+02.6	S 07 20.1	+00.0	20
21	208	28.0	+00.8	N 23 20.9	+00.1	218	16.7	+02.2	N 22 17.7	+00.0	308	04.2	+02.6	S 07 20.1	+00.1	21
22	223	28.8	+00.8	N 23 21.0	+00.0	233	18.9	+02.1	N 22 17.7	+00.0	323	06.8	+02.7	S 07 20.2	+00.1	22
23	238	29.6	+00.8	N 23 21.0	+00.1	248	21.0	+02.2	N 22 17.7	+00.1	338	09.5	+02.6	S 07 20.3	+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 272° 272° 272° 272° 272° 272°					SHA 282° 282° 282° 282° 282° 282°										
	Greenwich Culmination Time: 07:06					Greenwich Culmination Time: 06:28										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	04.8 +00.2	N 07 48.6	-00.9	157	22.3 -00.3	S 00 45.8	+01.3	190	12.7 -26.0	N 15 12.4	-12.6	00
01	195	05.0 +00.2	N 07 47.7	-00.9	172	22.0 -00.3	S 00 47.1	+01.2	204	46.7 -26.0	N 14 59.8	-12.6	01
02	210	05.2 +00.2	N 07 46.8	-00.9	187	21.7 -00.3	S 00 48.3	+01.3	219	20.7 -25.9	N 14 47.2	-12.8	02
03	225	05.4 +00.2	N 07 45.9	-00.9	202	21.4 -00.3	S 00 49.6	+01.3	233	54.8 -25.8	N 14 34.4	-12.7	03
04	240	05.6 +00.2	N 07 45.0	-01.0	217	21.1 -00.3	S 00 50.9	+01.3	248	29.0 -25.8	N 14 21.7	-12.8	04
05	255	05.8 +00.2	N 07 44.0	-00.9	232	20.8 -00.3	S 00 52.2	+01.3	263	03.2 -25.7	N 14 08.9	-12.9	05
06	270	06.0 +00.2	N 07 43.1	-00.9	247	20.5 -00.3	S 00 53.5	+01.3	277	37.5 -25.6	N 13 56.0	-12.9	06
07	285	06.2 +00.2	N 07 42.2	-00.9	262	20.2 -00.4	S 00 54.8	+01.3	292	11.9 -25.6	N 13 43.1	-13.0	07
08	300	06.4 +00.2	N 07 41.3	-00.9	277	19.8 -00.3	S 00 56.1	+01.3	306	46.3 -25.5	N 13 30.1	-13.0	08
09	315	06.6 +00.2	N 07 40.4	-00.9	292	19.5 -00.3	S 00 57.4	+01.3	321	20.8 -25.4	N 13 17.1	-13.0	09
10	330	06.8 +00.2	N 07 39.5	-00.9	307	19.2 -00.3	S 00 58.7	+01.2	335	55.4 -25.4	N 13 04.1	-13.1	10
11	345	07.0 +00.2	N 07 38.6	-01.0	322	18.9 -00.3	S 00 59.9	+01.3	350	30.0 -25.3	N 12 51.0	-13.2	11
12	0	07.2 +00.2	N 07 37.6	-00.9	337	18.6 -00.3	S 01 01.2	+01.3	5	04.7 -25.3	N 12 37.8	-13.2	12
13	15	07.4 +00.2	N 07 36.7	-00.9	352	18.3 -00.3	S 01 02.5	+01.3	19	39.4 -25.2	N 12 24.6	-13.2	13
14	30	07.6 +00.2	N 07 35.8	-00.9	7	18.0 -00.3	S 01 03.8	+01.3	34	14.2 -25.2	N 12 11.4	-13.3	14
15	45	07.8 +00.2	N 07 34.9	-00.9	22	17.7 -00.4	S 01 05.1	+01.3	48	49.0 -25.1	N 11 58.1	-13.3	15
16	60	08.0 +00.2	N 07 34.0	-00.9	37	17.3 -00.3	S 01 06.4	+01.3	63	23.9 -25.0	N 11 44.8	-13.3	16
17	75	08.2 +00.2	N 07 33.1	-01.0	52	17.0 -00.3	S 01 07.7	+01.3	77	58.9 -25.0	N 11 31.5	-13.4	17
18	90	08.4 +00.2	N 07 32.1	-00.9	67	16.7 -00.3	S 01 09.0	+01.3	92	33.9 -24.9	N 11 18.1	-13.4	18
19	105	08.6 +00.2	N 07 31.2	-00.9	82	16.4 -00.3	S 01 10.3	+01.2	107	09.0 -24.9	N 11 04.7	-13.5	19
20	120	08.8 +00.2	N 07 30.3	-00.9	97	16.1 -00.3	S 01 11.5	+01.3	121	44.1 -24.8	N 10 51.2	-13.5	20
21	135	09.0 +00.2	N 07 29.4	-00.9	112	15.8 -00.3	S 01 12.8	+01.3	136	19.3 -24.8	N 10 37.7	-13.5	21
22	150	09.2 +00.3	N 07 28.5	-01.0	127	15.5 -00.3	S 01 14.1	+01.3	150	54.5 -24.7	N 10 24.2	-13.6	22
23	165	09.5 +00.2	N 07 27.5	-00.9	142	15.2 -00.4	S 01 15.4	+01.3	165	29.8 -24.7	N 10 10.6	-13.6	23
	UT 02 06 10 14 18 22												
	SD 15'9 15'9 15'9 15'9 15'9 15'9												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 198° 198° 198° 198° 198° 198°												
	Greenwich Culmination Time: 11:59												
	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 176° 175° 175° 175° 175° 175°												
	Greenwich Culmination Time: 13:30												
	UT 02 06 10 14 18 22												
	SD 14'9 14'8 14'8 14'8 14'8 14'8												
	HP 54'5 54'5 54'4 54'4 54'3 54'3												
	SHA 208° 206° 204° 202° 200° 198°												
	Greenwich Culmination Time: 11:39												

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	253	30.4 +00.8	N 23 21.1	+00.1	263	23.2 +02.1	N 22 17.8	+00.0	353	12.1 +02.7	S 07 20.4	+00.0	00
01	268	31.2 +00.8	N 23 21.2	+00.0	278	25.3 +02.2	N 22 17.8	+00.0	8	14.8 +02.6	S 07 20.4	+00.1	01
02	283	32.0 +00.8	N 23 21.2	+00.1	293	27.5 +02.2	N 22 17.8	+00.0	23	17.4 +02.6	S 07 20.5	+00.1	02
03	298	32.8 +00.8	N 23 21.3	+00.0	308	29.7 +02.1	N 22 17.8	+00.1	38	20.0 +02.7	S 07 20.6	+00.1	03
04	313	33.6 +00.8	N 23 21.3	+00.1	323	31.8 +02.2	N 22 17.9	+00.0	53	22.7 +02.6	S 07 20.7	+00.1	04
05	328	34.4 +00.8	N 23 21.4	+00.1	338	34.0 +02.2	N 22 17.9	+00.0	68	25.3 +02.7	S 07 20.8	+00.0	05
06	343	35.2 +00.8	N 23 21.5	+00.0	353	36.2 +02.1	N 22 17.9	+00.0	83	28.0 +02.6	S 07 20.8	+00.1	06
07	358	36.0 +00.8	N 23 21.5	+00.1	8	38.3 +02.2	N 22 17.9	+00.0	98	30.6 +02.6	S 07 20.9	+00.1	07
08	13	36.8 +00.8	N 23 21.6	+00.1	23	40.5 +02.1	N 22 17.9	+00.1	113	33.2 +02.7	S 07 21.0	+00.1	08
09	28	37.6 +00.8	N 23 21.7	+00.0	38	42.6 +02.2	N 22 18.0	+00.0	128	35.9 +02.6	S 07 21.1	+00.0	09
10	43	38.4 +00.8	N 23 21.7	+00.1	53	44.8 +02.2	N 22 18.0	+00.0	143	38.5 +02.7	S 07 21.1	+00.1	10
11	58	39.2 +00.8	N 23 21.8	+00.1	68	47.0 +02.1	N 22 18.0	+00.0	158	41.2 +02.6	S 07 21.2	+00.1	11
12	73	40.0 +00.8	N 23 21.9	+00.0	83	49.1 +02.2	N 22 18.0	+00.0	173	43.8 +02.6	S 07 21.3	+00.1	12
13	88	40.8 +00.8	N 23 21.9	+00.1	98	51.3 +02.2	N 22 18.0	+00.1	188	46.4 +02.7	S 07 21.4	+00.1	13
14	103	41.6 +00.8	N 23 22.0	+00.0	113	53.5 +02.1	N 22 18.1	+00.0	203	49.1 +02.6	S 07 21.5	+00.0	14
15	118	42.4 +00.8	N 23 22.0	+00.1	128	55.6 +02.2	N 22 18.1	+00.0	218	51.7 +02.6	S 07 21.5	+00.1	15
16	133	43.2 +00.8	N 23 22.1	+00.1	143	57.8 +02.2	N 22 18.1	+00.0	233	54.3 +02.7	S 07 21.6	+00.1	16
17	148	44.0 +00.8	N 23 22.2	+00.0	158	60.0 +02.1	N 22 18.1	+00.1	248	57.0 +02.6	S 07 21.7	+00.1	17
18	163	44.8 +00.8	N 23 22.2	+00.1	174	02.1 +02.2	N 22 18.2	+00.0	263	59.6 +02.7	S 07 21.8	+00.0	18
19	178	45.6 +00.8	N 23 22.3	+00.0	189	04.3 +02.2	N 22 18.2	+00.0	279	02.3 +02.6	S 07 21.8	+00.1	19
20	193	46.4 +00.8	N 23 22.3	+00.1	204	06.5 +02.1	N 22 18.2	+00.0	294	04.9 +02.6	S 07 21.9	+00.1	20
21	208	47.2 +00.8	N 23 22.4	+00.1	219	08.6 +02.2	N 22 18.2	+00.0	309	07.5 +02.7	S 07 22.0	+00.1	21
22	223	48.0 +00.9	N 23 22.5	+00.0	234	10.8 +02.2	N 22 18.2	+00.1	324	10.2 +02.6	S 07 22.1	+00.0	22
23	238	48.9 +00.8	N 23 22.5	+00.1	249	13.0 +02.1	N 22 18.3	+00.0	339	12.8 +02.7	S 07 22.1	+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 272° 272° 272° 271° 271° 271°												
	Greenwich Culmination Time: 07:05												
	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 282° 282° 282° 282° 282° 282°												
	Greenwich Culmination Time: 06:25												
	UT 02 06 10 14 18 22												
	SD 00'2 00'2 00'2 00'2 00'2 00'2												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 012° 012° 012° 012° 012° 012°												
	Greenwich Culmination Time: 00:27												

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 09.7 +00.2	N 07 26.6 -00.9	157 14.8 -00.3	S 01 16.7 +01.3	180 05.1 -24.6	N 09 57.0 -13.6	00						
01	195 09.9 +00.2	N 07 25.7 -00.9	172 14.5 -00.3	S 01 18.0 +01.3	194 40.5 -24.6	N 09 43.4 -13.6	01						
02	210 10.1 +00.2	N 07 24.8 -00.9	187 14.2 -00.3	S 01 19.3 +01.3	209 15.9 -24.6	N 09 29.8 -13.7	02						
03	225 10.3 +00.2	N 07 23.9 -00.9	202 13.9 -00.3	S 01 20.6 +01.3	223 51.3 -24.5	N 09 16.1 -13.7	03						
04	240 10.5 +00.2	N 07 23.0 -01.0	217 13.6 -00.3	S 01 21.9 +01.2	238 26.8 -24.4	N 09 02.4 -13.8	04						
05	255 10.7 +00.2	N 07 22.0 -00.9	232 13.3 -00.3	S 01 23.1 +01.3	253 02.4 -24.4	N 08 48.6 -13.7	05						
06	270 10.9 +00.2	N 07 21.1 -00.9	247 13.0 -00.3	S 01 24.4 +01.3	267 38.0 -24.4	N 08 34.9 -13.8	06						
07	285 11.1 +00.2	N 07 20.2 -00.9	262 12.7 -00.4	S 01 25.7 +01.3	282 13.6 -24.3	N 08 21.1 -13.9	07						
08	300 11.3 +00.2	N 07 19.3 -00.9	277 12.3 -00.3	S 01 27.0 +01.3	296 49.3 -24.3	N 08 07.2 -13.8	08						
09	315 11.5 +00.2	N 07 18.4 -01.0	292 12.0 -00.3	S 01 28.3 +01.3	311 25.0 -24.2	N 07 53.4 -13.9	09						
10	330 11.7 +00.2	N 07 17.4 -00.9	307 11.7 -00.3	S 01 29.6 +01.3	326 00.8 -24.3	N 07 39.5 -13.9	10						
11	345 11.9 +00.2	N 07 16.5 -00.9	322 11.4 -00.3	S 01 30.9 +01.3	340 36.5 -24.1	N 07 25.6 -13.9	11						
12	0 12.1 +00.2	N 07 15.6 -00.9	337 11.1 -00.3	S 01 32.2 +01.3	355 12.4 -24.2	N 07 11.7 -13.9	12						
13	15 12.3 +00.2	N 07 14.7 -01.0	352 10.8 -00.3	S 01 33.5 +01.2	9 48.2 -24.1	N 06 57.8 -14.0	13						
14	30 12.5 +00.2	N 07 13.7 -00.9	7 10.5 -00.4	S 01 34.7 +01.3	24 24.1 -24.0	N 06 43.8 -14.0	14						
15	45 12.7 +00.2	N 07 12.8 -00.9	22 10.1 -00.3	S 01 36.0 +01.3	39 00.1 -24.1	N 06 29.8 -14.0	15						
16	60 12.9 +00.2	N 07 11.9 -00.9	37 09.8 -00.3	S 01 37.3 +01.3	53 36.0 -24.0	N 06 15.8 -14.0	16						
17	75 13.1 +00.2	N 07 11.0 -00.9	52 09.5 -00.3	S 01 38.6 +01.3	68 12.0 -24.0	N 06 01.8 -14.0	17						
18	90 13.3 +00.3	N 07 10.1 -01.0	67 09.2 -00.3	S 01 39.9 +01.3	82 48.0 -23.9	N 05 47.8 -14.1	18						
19	105 13.6 +00.2	N 07 09.1 -00.9	82 08.9 -00.3	S 01 41.2 +01.3	97 24.1 -23.9	N 05 33.7 -14.0	19						
20	120 13.8 +00.2	N 07 08.2 -00.9	97 08.6 -00.3	S 01 42.5 +01.3	112 00.2 -23.9	N 05 19.7 -14.1	20						
21	135 14.0 +00.2	N 07 07.3 -00.9	112 08.3 -00.3	S 01 43.8 +01.3	126 36.3 -23.9	N 05 05.6 -14.1	21						
22	150 14.2 +00.2	N 07 06.4 -01.0	127 08.0 -00.4	S 01 45.1 +01.2	141 12.4 -23.8	N 04 51.5 -14.1	22						
23	165 14.4 +00.2	N 07 05.4 -00.9	142 07.6 -00.3	S 01 46.3 +01.3	155 48.6 -23.8	N 04 37.4 -14.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'7 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 54'3 54'2 54'2 54'2 54'1 54'1								
	SHA 197° 197° 197° 197° 197° 197°		SHA 175° 174° 174° 174° 174° 174°		SHA 197° 195° 193° 191° 189° 188°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 13:31		Greenwich Culmination Time: 12:19								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	253 49.7 +00.8	N 23 22.6 +00.0	264 15.1 +02.2	N 22 18.3 +00.0	354 15.5 +02.6	S 07 22.2 +00.1	00						
01	268 50.5 +00.8	N 23 22.6 +00.1	279 17.3 +02.2	N 22 18.3 +00.0	9 18.1 +02.6	S 07 22.3 +00.1	01						
02	283 51.3 +00.8	N 23 22.7 +00.1	294 19.5 +02.1	N 22 18.3 +00.0	24 20.7 +02.7	S 07 22.4 +00.1	02						
03	298 52.1 +00.8	N 23 22.8 +00.0	309 21.6 +02.2	N 22 18.3 +00.1	39 23.4 +02.6	S 07 22.5 +00.0	03						
04	313 52.9 +00.8	N 23 22.8 +00.1	324 23.8 +02.2	N 22 18.4 +00.0	54 26.0 +02.7	S 07 22.5 +00.1	04						
05	328 53.7 +00.8	N 23 22.9 +00.0	339 26.0 +02.1	N 22 18.4 +00.0	69 28.7 +02.6	S 07 22.6 +00.1	05						
06	343 54.5 +00.8	N 23 22.9 +00.1	354 28.1 +02.2	N 22 18.4 +00.0	84 31.3 +02.6	S 07 22.7 +00.1	06						
07	358 55.3 +00.8	N 23 23.0 +00.0	9 30.3 +02.2	N 22 18.4 +00.0	99 33.9 +02.7	S 07 22.8 +00.0	07						
08	13 56.1 +00.8	N 23 23.0 +00.1	24 32.5 +02.1	N 22 18.4 +00.1	114 36.6 +02.6	S 07 22.8 +00.1	08						
09	28 56.9 +00.8	N 23 23.1 +00.1	39 34.6 +02.2	N 22 18.5 +00.0	129 39.2 +02.7	S 07 22.9 +00.1	09						
10	43 57.7 +00.8	N 23 23.2 +00.0	54 36.8 +02.2	N 22 18.5 +00.0	144 41.9 +02.6	S 07 23.0 +00.1	10						
11	58 58.5 +00.8	N 23 23.2 +00.1	69 39.0 +02.2	N 22 18.5 +00.0	159 44.5 +02.6	S 07 23.1 +00.1	11						
12	73 59.3 +00.8	N 23 23.3 +00.0	84 41.2 +02.1	N 22 18.5 +00.0	174 47.1 +02.7	S 07 23.2 +00.0	12						
13	89 00.1 +00.9	N 23 23.3 +00.1	99 43.3 +02.2	N 22 18.5 +00.1	189 49.8 +02.6	S 07 23.2 +00.1	13						
14	104 01.0 +00.8	N 23 23.4 +00.0	114 45.5 +02.2	N 22 18.6 +00.0	204 52.4 +02.7	S 07 23.3 +00.1	14						
15	119 01.8 +00.8	N 23 23.4 +00.1	129 47.7 +02.1	N 22 18.6 +00.0	219 55.1 +02.6	S 07 23.4 +00.1	15						
16	134 02.6 +00.8	N 23 23.5 +00.0	144 49.8 +02.2	N 22 18.6 +00.0	234 57.7 +02.6	S 07 23.5 +00.0	16						
17	149 03.4 +00.8	N 23 23.5 +00.1	159 52.0 +02.2	N 22 18.6 +00.0	250 00.3 +02.7	S 07 23.5 +00.1	17						
18	164 04.2 +00.8	N 23 23.6 +00.1	174 54.2 +02.2	N 22 18.6 +00.1	265 03.0 +02.6	S 07 23.6 +00.1	18						
19	179 05.0 +00.8	N 23 23.7 +00.0	189 56.4 +02.1	N 22 18.7 +00.0	280 05.6 +02.7	S 07 23.7 +00.1	19						
20	194 05.8 +00.8	N 23 23.7 +00.1	204 58.5 +02.2	N 22 18.7 +00.0	295 08.3 +02.6	S 07 23.8 +00.0	20						
21	209 06.6 +00.8	N 23 23.8 +00.0	220 00.7 +02.2	N 22 18.7 +00.0	310 10.9 +02.6	S 07 23.8 +00.1	21						
22	224 07.4 +00.8	N 23 23.8 +00.1	235 02.9 +02.2	N 22 18.7 +00.1	325 13.5 +02.7	S 07 23.9 +00.1	22						
23	239 08.2 +00.9	N 23 23.9 +00.0	250 05.1 +02.1	N 22 18.8 +00.0	340 16.2 +02.6	S 07 24.0 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 271° 271° 271° 271° 271° 271°		SHA 282° 282° 282° 282° 282° 282°		SHA 012° 012° 012° 012° 012° 012°								
	Greenwich Culmination Time: 07:04		Greenwich Culmination Time: 06:22		Greenwich Culmination Time: 00:22								

UT	Sun				Venus				Moon				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	180	14.6	+00.2	N 07 04.5	-00.9	157	07.3	-00.3	S 01 47.6	+01.3	170	24.8	-23.8	N 04 23.3	-14.2	00
01	195	14.8	+00.2	N 07 03.6	-00.9	172	07.0	-00.3	S 01 48.9	+01.3	185	01.0	-23.8	N 04 09.1	-14.1	01
02	210	15.0	+00.2	N 07 02.7	-01.0	187	06.7	-00.3	S 01 50.2	+01.3	199	37.2	-23.7	N 03 55.0	-14.1	02
03	225	15.2	+00.2	N 07 01.7	-00.9	202	06.4	-00.3	S 01 51.5	+01.3	214	13.5	-23.7	N 03 40.9	-14.2	03
04	240	15.4	+00.2	N 07 00.8	-00.9	217	06.1	-00.3	S 01 52.8	+01.3	228	49.8	-23.7	N 03 26.7	-14.2	04
05	255	15.6	+00.2	N 06 59.9	-00.9	232	05.8	-00.4	S 01 54.1	+01.3	243	26.1	-23.7	N 03 12.5	-14.2	05
06	270	15.8	+00.2	N 06 59.0	-00.9	247	05.4	-00.3	S 01 55.4	+01.2	258	02.4	-23.7	N 02 58.3	-14.1	06
07	285	16.0	+00.2	N 06 58.1	-01.0	262	05.1	-00.3	S 01 56.6	+01.3	272	38.7	-23.6	N 02 44.2	-14.2	07
08	300	16.2	+00.2	N 06 57.1	-00.9	277	04.8	-00.3	S 01 57.9	+01.3	287	15.1	-23.7	N 02 30.0	-14.2	08
09	315	16.4	+00.3	N 06 56.2	-00.9	292	04.5	-00.3	S 01 59.2	+01.3	301	51.4	-23.6	N 02 15.8	-14.2	09
10	330	16.7	+00.2	N 06 55.3	-01.0	307	04.2	-00.3	S 02 00.5	+01.3	316	27.8	-23.6	N 02 01.6	-14.2	10
11	345	16.9	+00.2	N 06 54.3	-00.9	322	03.9	-00.3	S 02 01.8	+01.3	331	04.2	-23.6	N 01 47.4	-14.2	11
12	0	17.1	+00.2	N 06 53.4	-00.9	337	03.6	-00.3	S 02 03.1	+01.3	345	40.6	-23.6	N 01 33.2	-14.2	12
13	15	17.3	+00.2	N 06 52.5	-00.9	352	03.3	-00.4	S 02 04.4	+01.3	0	17.0	-23.5	N 01 19.0	-14.3	13
14	30	17.5	+00.2	N 06 51.6	-01.0	7	02.9	-00.3	S 02 05.7	+01.3	14	53.5	-23.6	N 01 04.7	-14.2	14
15	45	17.7	+00.2	N 06 50.6	-00.9	22	02.6	-00.3	S 02 07.0	+01.2	29	29.9	-23.5	N 00 50.5	-14.2	15
16	60	17.9	+00.2	N 06 49.7	-00.9	37	02.3	-00.3	S 02 08.2	+01.3	44	06.4	-23.6	N 00 36.3	-14.2	16
17	75	18.1	+00.2	N 06 48.8	-00.9	52	02.0	-00.3	S 02 09.5	+01.3	58	42.8	-23.5	N 00 22.1	-14.2	17
18	90	18.3	+00.2	N 06 47.9	-01.0	67	01.7	-00.3	S 02 10.8	+01.3	73	19.3	-23.6	N 00 07.9	-14.2	18
19	105	18.5	+00.2	N 06 46.9	-00.9	82	01.4	-00.3	S 02 12.1	+01.3	87	55.7	-23.5	S 00 06.3	+14.2	19
20	120	18.7	+00.2	N 06 46.0	-00.9	97	01.1	-00.4	S 02 13.4	+01.3	102	32.2	-23.5	S 00 20.5	+14.2	20
21	135	18.9	+00.3	N 06 45.1	-00.9	112	00.7	-00.3	S 02 14.7	+01.3	117	08.7	-23.5	S 00 34.7	+14.2	21
22	150	19.2	+00.2	N 06 44.2	-01.0	127	00.4	-00.3	S 02 16.0	+01.3	131	45.2	-23.6	S 00 48.9	+14.2	22
23	165	19.4	+00.2	N 06 43.2	-00.9	142	00.1	-00.3	S 02 17.3	+01.2	146	21.6	-23.5	S 01 03.1	+14.2	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					
	SD 15'9 15'9 15'9 15'9 15'9 15'9					SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 14'7 14'7 14'7 14'7 14'7 14'7					
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 54'1 54'0 54'0 54'0 54'0 54'0					
	SHA 197° 196° 196° 196° 196° 196°					SHA 173° 173° 173° 173° 173° 172°					SHA 186° 184° 182° 181° 179° 177°					
	Greenwich Culmination Time: 11:58					Greenwich Culmination Time: 13:31					Greenwich Culmination Time: 12:58					

UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	254	09.1	+00.8	N 23 23.9	+00.1	265	07.2	+02.2	N 22 18.8	+00.0	355	18.8	+02.7	S 07 24.1	+00.1	00
01	269	09.9	+00.8	N 23 24.0	+00.0	280	09.4	+02.2	N 22 18.8	+00.0	10	21.5	+02.6	S 07 24.2	+00.0	01
02	284	10.7	+00.8	N 23 24.0	+00.1	295	11.6	+02.2	N 22 18.8	+00.0	25	24.1	+02.6	S 07 24.2	+00.1	02
03	299	11.5	+00.8	N 23 24.1	+00.0	310	13.8	+02.1	N 22 18.8	+00.1	40	26.7	+02.7	S 07 24.3	+00.1	03
04	314	12.3	+00.8	N 23 24.1	+00.1	325	15.9	+02.2	N 22 18.9	+00.0	55	29.4	+02.6	S 07 24.4	+00.1	04
05	329	13.1	+00.8	N 23 24.2	+00.0	340	18.1	+02.2	N 22 18.9	+00.0	70	32.0	+02.7	S 07 24.5	+00.0	05
06	344	13.9	+00.8	N 23 24.2	+00.1	355	20.3	+02.2	N 22 18.9	+00.0	85	34.7	+02.6	S 07 24.5	+00.1	06
07	359	14.7	+00.8	N 23 24.3	+00.0	10	22.5	+02.1	N 22 18.9	+00.0	100	37.3	+02.6	S 07 24.6	+00.1	07
08	14	15.5	+00.9	N 23 24.3	+00.1	25	24.6	+02.2	N 22 18.9	+00.1	115	39.9	+02.7	S 07 24.7	+00.1	08
09	29	16.4	+00.8	N 23 24.4	+00.0	40	26.8	+02.2	N 22 19.0	+00.0	130	42.6	+02.6	S 07 24.8	+00.0	09
10	44	17.2	+00.8	N 23 24.4	+00.1	55	29.0	+02.2	N 22 19.0	+00.0	145	45.2	+02.7	S 07 24.8	+00.1	10
11	59	18.0	+00.8	N 23 24.5	+00.0	70	31.2	+02.1	N 22 19.0	+00.0	160	47.9	+02.6	S 07 24.9	+00.1	11
12	74	18.8	+00.8	N 23 24.5	+00.1	85	33.3	+02.2	N 22 19.0	+00.0	175	50.5	+02.6	S 07 25.0	+00.1	12
13	89	19.6	+00.8	N 23 24.6	+00.0	100	35.5	+02.2	N 22 19.0	+00.1	190	53.1	+02.7	S 07 25.1	+00.1	13
14	104	20.4	+00.8	N 23 24.6	+00.1	115	37.7	+02.2	N 22 19.1	+00.0	205	55.8	+02.6	S 07 25.2	+00.0	14
15	119	21.2	+00.9	N 23 24.7	+00.0	130	39.9	+02.2	N 22 19.1	+00.0	220	58.4	+02.7	S 07 25.2	+00.1	15
16	134	22.1	+00.8	N 23 24.7	+00.1	145	42.1	+02.1	N 22 19.1	+00.0	236	01.1	+02.6	S 07 25.3	+00.1	16
17	149	22.9	+00.8	N 23 24.8	+00.0	160	44.2	+02.2	N 22 19.1	+00.0	251	03.7	+02.6	S 07 25.4	+00.1	17
18	164	23.7	+00.8	N 23 24.8	+00.1	175	46.4	+02.2	N 22 19.1	+00.0	266	06.3	+02.7	S 07 25.5	+00.0	18
19	179	24.5	+00.8	N 23 24.9	+00.0	190	48.6	+02.2	N 22 19.1	+00.1	281	09.0	+02.6	S 07 25.5	+00.1	19
20	194	25.3	+00.8	N 23 24.9	+00.1	205	50.8	+02.2	N 22 19.2	+00.0	296	11.6	+02.7	S 07 25.6	+00.1	20
21	209	26.1	+00.9	N 23 25.0	+00.0	220	53.0	+02.1	N 22 19.2	+00.0	311	14.3	+02.6	S 07 25.7	+00.1	21
22	224	27.0	+00.8	N 23 25.0	+00.0	235	55.1	+02.2	N 22 19.2	+00.0	326	16.9	+02.6	S 07 25.8	+00.1	22
23	239	27.8	+00.8	N 23 25.0	+00.1	250	57.3	+02.2	N 22 19.2	+00.0	341	19.5	+02.7	S 07 25.9	+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 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 270° 270° 270° 270° 270° 270°					SHA 282° 281° 281° 281° 281° 281°					SHA 012° 012° 012° 012° 012° 012°					
	Greenwich Culmination Time: 07:03					Greenwich Culmination Time: 06:18					Greenwich Culmination Time: 00:18					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	19.6+00.2	N 06 42.3	-00.9	156	59.8-00.3	S 02 18.5	+01.3	160	58.1-23.5	S 01 17.3	+14.2	00
01	195	19.8+00.2	N 06 41.4	-01.0	171	59.5-00.3	S 02 19.8	+01.3	175	34.6-23.5	S 01 31.5	+14.2	01
02	210	20.0+00.2	N 06 40.4	-00.9	186	59.2-00.3	S 02 21.1	+01.3	190	11.1-23.5	S 01 45.7	+14.1	02
03	225	20.2+00.2	N 06 39.5	-00.9	201	58.9-00.4	S 02 22.4	+01.3	204	47.6-23.6	S 01 59.8	+14.2	03
04	240	20.4+00.2	N 06 38.6	-00.9	216	58.5-00.3	S 02 23.7	+01.3	219	24.0-23.5	S 02 14.0	+14.1	04
05	255	20.6+00.2	N 06 37.7	-01.0	231	58.2-00.3	S 02 25.0	+01.3	234	00.5-23.6	S 02 28.1	+14.2	05
06	270	20.8+00.2	N 06 36.7	-00.9	246	57.9-00.3	S 02 26.3	+01.3	248	36.9-23.5	S 02 42.3	+14.1	06
07	285	21.0+00.2	N 06 35.8	-00.9	261	57.6-00.3	S 02 27.6	+01.2	263	13.4-23.6	S 02 56.4	+14.1	07
08	300	21.2+00.3	N 06 34.9	-01.0	276	57.3-00.3	S 02 28.8	+01.3	277	49.8-23.5	S 03 10.5	+14.1	08
09	315	21.5+00.2	N 06 33.9	-00.9	291	57.0-00.3	S 02 30.1	+01.3	292	26.3-23.6	S 03 24.6	+14.1	09
10	330	21.7+00.2	N 06 33.0	-00.9	306	56.7-00.4	S 02 31.4	+01.3	307	02.7-23.6	S 03 38.7	+14.1	10
11	345	21.9+00.2	N 06 32.1	-01.0	321	56.3-00.3	S 02 32.7	+01.3	321	39.1-23.6	S 03 52.8	+14.0	11
12	0	22.1+00.2	N 06 31.1	-00.9	336	56.0-00.3	S 02 34.0	+01.3	336	15.5-23.6	S 04 06.8	+14.1	12
13	15	22.3+00.2	N 06 30.2	-00.9	351	55.7-00.3	S 02 35.3	+01.3	350	51.9-23.6	S 04 20.9	+14.0	13
14	30	22.5+00.2	N 06 29.3	-00.9	6	55.4-00.3	S 02 36.6	+01.2	5	28.3-23.6	S 04 34.9	+14.0	14
15	45	22.7+00.2	N 06 28.4	-01.0	21	55.1-00.3	S 02 37.8	+01.3	20	04.7-23.7	S 04 48.9	+14.0	15
16	60	22.9+00.2	N 06 27.4	-00.9	36	54.8-00.3	S 02 39.1	+01.3	34	41.0-23.7	S 05 02.9	+14.0	16
17	75	23.1+00.3	N 06 26.5	-00.9	51	54.5-00.4	S 02 40.4	+01.3	49	17.3-23.7	S 05 16.9	+14.0	17
18	90	23.4+00.2	N 06 25.6	-01.0	66	54.1-00.3	S 02 41.7	+01.3	63	53.6-23.7	S 05 30.9	+13.9	18
19	105	23.6+00.2	N 06 24.6	-00.9	81	53.8-00.3	S 02 43.0	+01.3	78	29.9-23.7	S 05 44.8	+13.9	19
20	120	23.8+00.2	N 06 23.7	-00.9	96	53.5-00.3	S 02 44.3	+01.3	93	06.2-23.7	S 05 58.7	+13.9	20
21	135	24.0+00.2	N 06 22.8	-01.0	111	53.2-00.3	S 02 45.6	+01.3	107	42.5-23.8	S 06 12.6	+13.9	21
22	150	24.2+00.2	N 06 21.8	-00.9	126	52.9-00.3	S 02 46.9	+01.2	122	18.7-23.8	S 06 26.5	+13.8	22
23	165	24.4+00.2	N 06 20.9	-00.9	141	52.6-00.4	S 02 48.1	+01.3	136	54.9-23.8	S 06 40.3	+13.9	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'7 14'7 14'7 14'7				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'0 54'0 54'0 54'0 54'0 54'0				
	SHA 196° 196° 195° 195° 195° 195°				SHA 172° 172° 172° 172° 172° 171°				SHA 176° 174° 172° 170° 169° 167°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 13:32				Greenwich Culmination Time: 13:37				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	254	28.6+00.8	N 23 25.1	+00.0	265	59.5+02.2	N 22 19.2	+00.1	356	22.2+02.6	S 07 25.9	+00.1	00
01	269	29.4+00.8	N 23 25.1	+00.1	281	01.7+02.2	N 22 19.3	+00.0	11	24.8+02.7	S 07 26.0	+00.1	01
02	284	30.2+00.9	N 23 25.2	+00.0	296	03.9+02.2	N 22 19.3	+00.0	26	27.5+02.6	S 07 26.1	+00.1	02
03	299	31.1+00.8	N 23 25.2	+00.1	311	06.1+02.1	N 22 19.3	+00.0	41	30.1+02.6	S 07 26.2	+00.0	03
04	314	31.9+00.8	N 23 25.3	+00.0	326	08.2+02.2	N 22 19.3	+00.0	56	32.7+02.7	S 07 26.2	+00.1	04
05	329	32.7+00.8	N 23 25.3	+00.1	341	10.4+02.2	N 22 19.3	+00.1	71	35.4+02.6	S 07 26.3	+00.1	05
06	344	33.5+00.8	N 23 25.4	+00.0	356	12.6+02.2	N 22 19.4	+00.0	86	38.0+02.7	S 07 26.4	+00.1	06
07	359	34.3+00.8	N 23 25.4	+00.1	11	14.8+02.2	N 22 19.4	+00.0	101	40.7+02.6	S 07 26.5	+00.0	07
08	14	35.1+00.9	N 23 25.5	+00.0	26	17.0+02.2	N 22 19.4	+00.0	116	43.3+02.6	S 07 26.5	+00.1	08
09	29	36.0+00.8	N 23 25.5	+00.0	41	19.2+02.1	N 22 19.4	+00.0	131	45.9+02.7	S 07 26.6	+00.1	09
10	44	36.8+00.8	N 23 25.5	+00.1	56	21.3+02.2	N 22 19.4	+00.1	146	48.6+02.6	S 07 26.7	+00.1	10
11	59	37.6+00.8	N 23 25.6	+00.0	71	23.5+02.2	N 22 19.5	+00.0	161	51.2+02.7	S 07 26.8	+00.1	11
12	74	38.4+00.9	N 23 25.6	+00.1	86	25.7+02.2	N 22 19.5	+00.0	176	53.9+02.6	S 07 26.9	+00.0	12
13	89	39.3+00.8	N 23 25.7	+00.0	101	27.9+02.2	N 22 19.5	+00.0	191	56.5+02.6	S 07 26.9	+00.1	13
14	104	40.1+00.8	N 23 25.7	+00.0	116	30.1+02.2	N 22 19.5	+00.0	206	59.1+02.7	S 07 27.0	+00.1	14
15	119	40.9+00.8	N 23 25.7	+00.1	131	32.3+02.1	N 22 19.5	+00.1	222	01.8+02.6	S 07 27.1	+00.1	15
16	134	41.7+00.8	N 23 25.8	+00.0	146	34.4+02.2	N 22 19.6	+00.0	237	04.4+02.7	S 07 27.2	+00.0	16
17	149	42.5+00.9	N 23 25.8	+00.1	161	36.6+02.2	N 22 19.6	+00.0	252	07.1+02.6	S 07 27.2	+00.1	17
18	164	43.4+00.8	N 23 25.9	+00.0	176	38.8+02.2	N 22 19.6	+00.0	267	09.7+02.7	S 07 27.3	+00.1	18
19	179	44.2+00.8	N 23 25.9	+00.1	191	41.0+02.2	N 22 19.6	+00.0	282	12.4+02.6	S 07 27.4	+00.1	19
20	194	45.0+00.8	N 23 26.0	+00.0	206	43.2+02.2	N 22 19.6	+00.0	297	15.0+02.6	S 07 27.5	+00.0	20
21	209	45.8+00.9	N 23 26.0	+00.0	221	45.4+02.2	N 22 19.6	+00.1	312	17.6+02.7	S 07 27.5	+00.1	21
22	224	46.7+00.8	N 23 26.0	+00.1	236	47.6+02.2	N 22 19.7	+00.0	327	20.3+02.6	S 07 27.6	+00.1	22
23	239	47.5+00.8	N 23 26.1	+00.0	251	49.8+02.1	N 22 19.7	+00.0	342	22.9+02.7	S 07 27.7	+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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 270° 270° 270° 270° 269° 269°				SHA 281° 281° 281° 281° 281° 281°				SHA 012° 012° 012° 012° 012° 012°				
	Greenwich Culmination Time: 07:01				Greenwich Culmination Time: 06:15				Greenwich Culmination Time: 00:14				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	24.6+00.2	N 06 20.0	-01.0	156	52.2-00.3	S 02 49.4	+01.3	151	31.1-23.9	S 06 54.2	+13.8	00
01	195	24.8+00.2	N 06 19.0	-00.9	171	51.9-00.3	S 02 50.7	+01.3	166	07.2-23.8	S 07 08.0	+13.8	01
02	210	25.0+00.3	N 06 18.1	-00.9	186	51.6-00.3	S 02 52.0	+01.3	180	43.4-23.9	S 07 21.8	+13.7	02
03	225	25.3+00.2	N 06 17.2	-01.0	201	51.3-00.3	S 02 53.3	+01.3	195	19.5-24.0	S 07 35.5	+13.7	03
04	240	25.5+00.2	N 06 16.2	-00.9	216	51.0-00.3	S 02 54.6	+01.3	209	55.5-23.9	S 07 49.2	+13.7	04
05	255	25.7+00.2	N 06 15.3	-00.9	231	50.7-00.3	S 02 55.9	+01.2	224	31.6-24.0	S 08 02.9	+13.7	05
06	270	25.9+00.2	N 06 14.4	-01.0	246	50.4-00.4	S 02 57.1	+01.3	239	07.6-24.0	S 08 16.6	+13.7	06
07	285	26.1+00.2	N 06 13.4	-00.9	261	50.0-00.3	S 02 58.4	+01.3	253	43.6-24.1	S 08 30.3	+13.6	07
08	300	26.3+00.2	N 06 12.5	-00.9	276	49.7-00.3	S 02 59.7	+01.3	268	19.5-24.0	S 08 43.9	+13.6	08
09	315	26.5+00.2	N 06 11.6	-01.0	291	49.4-00.3	S 03 01.0	+01.3	282	55.5-24.2	S 08 57.5	+13.5	09
10	330	26.7+00.2	N 06 10.6	-00.9	306	49.1-00.3	S 03 02.3	+01.3	297	31.3-24.1	S 09 11.0	+13.6	10
11	345	26.9+00.3	N 06 09.7	-00.9	321	48.8-00.3	S 03 03.6	+01.2	312	07.2-24.2	S 09 24.6	+13.4	11
12	0	27.2+00.2	N 06 08.8	-01.0	336	48.5-00.4	S 03 04.8	+01.3	326	43.0-24.2	S 09 38.0	+13.5	12
13	15	27.4+00.2	N 06 07.8	-00.9	351	48.1-00.3	S 03 06.1	+01.3	341	18.8-24.3	S 09 51.5	+13.4	13
14	30	27.6+00.2	N 06 06.9	-00.9	6	47.8-00.3	S 03 07.4	+01.3	355	54.5-24.3	S 10 04.9	+13.4	14
15	45	27.8+00.2	N 06 06.0	-01.0	21	47.5-00.3	S 03 08.7	+01.3	10	30.2-24.3	S 10 18.3	+13.4	15
16	60	28.0+00.2	N 06 05.0	-00.9	36	47.2-00.3	S 03 10.0	+01.3	25	05.9-24.4	S 10 31.7	+13.3	16
17	75	28.2+00.2	N 06 04.1	-01.0	51	46.9-00.3	S 03 11.3	+01.3	39	41.5-24.4	S 10 45.0	+13.3	17
18	90	28.4+00.2	N 06 03.1	-00.9	66	46.6-00.4	S 03 12.6	+01.2	54	17.1-24.5	S 10 58.3	+13.2	18
19	105	28.6+00.3	N 06 02.2	-00.9	81	46.2-00.3	S 03 13.8	+01.3	68	52.6-24.5	S 11 11.5	+13.2	19
20	120	28.9+00.2	N 06 01.3	-01.0	96	45.9-00.3	S 03 15.1	+01.3	83	28.1-24.6	S 11 24.7	+13.2	20
21	135	29.1+00.2	N 06 00.3	-00.9	111	45.6-00.3	S 03 16.4	+01.3	98	03.5-24.6	S 11 37.9	+13.1	21
22	150	29.3+00.2	N 05 59.4	-00.9	126	45.3-00.3	S 03 17.7	+01.3	112	38.9-24.6	S 11 51.0	+13.1	22
23	165	29.5+00.2	N 05 58.5	-01.0	141	45.0-00.3	S 03 19.0	+01.3	127	14.3-24.7	S 12 04.1	+13.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 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 195° 195° 194° 194° 194° 194°				SHA 171° 171° 171° 171° 170° 170°				SHA 165° 163° 162° 160° 158° 156°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 13:32				Greenwich Culmination Time: 14:16				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	254	48.3+00.8	N 23 26.1	+00.1	266	51.9+02.2	N 22 19.7	+00.0	357	25.6+02.6	S 07 27.8	+00.1	00
01	269	49.1+00.9	N 23 26.2	+00.0	281	54.1+02.2	N 22 19.7	+00.0	12	28.2+02.6	S 07 27.9	+00.0	01
02	284	50.0+00.8	N 23 26.2	+00.0	296	56.3+02.2	N 22 19.7	+00.1	27	30.8+02.7	S 07 27.9	+00.1	02
03	299	50.8+00.8	N 23 26.2	+00.1	311	58.5+02.2	N 22 19.8	+00.0	42	33.5+02.6	S 07 28.0	+00.1	03
04	314	51.6+00.8	N 23 26.3	+00.0	327	00.7+02.2	N 22 19.8	+00.0	57	36.1+02.7	S 07 28.1	+00.1	04
05	329	52.4+00.9	N 23 26.3	+00.0	342	02.9+02.2	N 22 19.8	+00.0	72	38.8+02.6	S 07 28.2	+00.0	05
06	344	53.3+00.8	N 23 26.3	+00.1	357	05.1+02.2	N 22 19.8	+00.0	87	41.4+02.6	S 07 28.2	+00.1	06
07	359	54.1+00.8	N 23 26.4	+00.0	12	07.3+02.2	N 22 19.8	+00.1	102	44.0+02.7	S 07 28.3	+00.1	07
08	14	54.9+00.8	N 23 26.4	+00.1	27	09.5+02.2	N 22 19.9	+00.0	117	46.7+02.6	S 07 28.4	+00.1	08
09	29	55.7+00.9	N 23 26.5	+00.0	42	11.7+02.2	N 22 19.9	+00.0	132	49.3+02.7	S 07 28.5	+00.1	09
10	44	56.6+00.8	N 23 26.5	+00.0	57	13.9+02.1	N 22 19.9	+00.0	147	52.0+02.6	S 07 28.6	+00.0	10
11	59	57.4+00.8	N 23 26.5	+00.1	72	16.0+02.2	N 22 19.9	+00.0	162	54.6+02.6	S 07 28.6	+00.1	11
12	74	58.2+00.8	N 23 26.6	+00.0	87	18.2+02.2	N 22 19.9	+00.0	177	57.2+02.7	S 07 28.7	+00.1	12
13	89	59.0+00.9	N 23 26.6	+00.0	102	20.4+02.2	N 22 19.9	+00.1	192	59.9+02.6	S 07 28.8	+00.1	13
14	104	59.9+00.8	N 23 26.6	+00.1	117	22.6+02.2	N 22 20.0	+00.0	208	02.5+02.7	S 07 28.9	+00.0	14
15	120	00.7+00.8	N 23 26.7	+00.0	132	24.8+02.2	N 22 20.0	+00.0	223	05.2+02.6	S 07 28.9	+00.1	15
16	135	01.5+00.9	N 23 26.7	+00.0	147	27.0+02.2	N 22 20.0	+00.0	238	07.8+02.6	S 07 29.0	+00.1	16
17	150	02.4+00.8	N 23 26.7	+00.1	162	29.2+02.2	N 22 20.0	+00.0	253	10.4+02.7	S 07 29.1	+00.1	17
18	165	03.2+00.8	N 23 26.8	+00.0	177	31.4+02.2	N 22 20.0	+00.1	268	13.1+02.6	S 07 29.2	+00.0	18
19	180	04.0+00.8	N 23 26.8	+00.0	192	33.6+02.2	N 22 20.1	+00.0	283	15.7+02.7	S 07 29.2	+00.1	19
20	195	04.8+00.9	N 23 26.8	+00.1	207	35.8+02.2	N 22 20.1	+00.0	298	18.4+02.6	S 07 29.3	+00.1	20
21	210	05.7+00.8	N 23 26.9	+00.0	222	38.0+02.2	N 22 20.1	+00.0	313	21.0+02.7	S 07 29.4	+00.1	21
22	225	06.5+00.8	N 23 26.9	+00.0	237	40.2+02.2	N 22 20.1	+00.0	328	23.7+02.6	S 07 29.5	+00.1	22
23	240	07.3+00.9	N 23 26.9	+00.1	252	42.4+02.2	N 22 20.1	+00.0	343	26.3+02.6	S 07 29.6	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 269° 269° 269° 269° 269° 269°				SHA 281° 281° 281° 281° 281° 281°				SHA 012° 012° 012° 012° 012° 012°				
	Greenwich Culmination Time: 07:00				Greenwich Culmination Time: 06:11				Greenwich Culmination Time: 00:10				

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	29.7 +00.2	N 05 57.5 -00.9		156	44.7 -00.4	S 03 20.3 +01.2		141	49.6 -24.8	S 12 17.2 +13.0		00
01	195	29.9 +00.2	N 05 56.6 -00.9		171	44.3 -00.3	S 03 21.5 +01.3		156	24.8 -24.8	S 12 30.2 +12.9		01
02	210	30.1 +00.3	N 05 55.7 -01.0		186	44.0 -00.3	S 03 22.8 +01.3		171	00.0 -24.8	S 12 43.1 +12.9		02
03	225	30.4 +00.2	N 05 54.7 -00.9		201	43.7 -00.3	S 03 24.1 +01.3		185	35.2 -25.0	S 12 56.0 +12.9		03
04	240	30.6 +00.2	N 05 53.8 -01.0		216	43.4 -00.3	S 03 25.4 +01.3		200	10.2 -24.9	S 13 08.9 +12.8		04
05	255	30.8 +00.2	N 05 52.8 -00.9		231	43.1 -00.3	S 03 26.7 +01.3		214	45.3 -25.0	S 13 21.7 +12.8		05
06	270	31.0 +00.2	N 05 51.9 -00.9		246	42.8 -00.4	S 03 28.0 +01.2		229	20.3 -25.1	S 13 34.5 +12.7		06
07	285	31.2 +00.2	N 05 51.0 -01.0		261	42.4 -00.3	S 03 29.2 +01.3		243	55.2 -25.1	S 13 47.2 +12.7		07
08	300	31.4 +00.2	N 05 50.0 -00.9		276	42.1 -00.3	S 03 30.5 +01.3		258	30.1 -25.2	S 13 59.9 +12.6		08
09	315	31.6 +00.3	N 05 49.1 -00.9		291	41.8 -00.3	S 03 31.8 +01.3		273	04.9 -25.2	S 14 12.5 +12.6		09
10	330	31.9 +00.2	N 05 48.2 -01.0		306	41.5 -00.3	S 03 33.1 +01.3		287	39.7 -25.3	S 14 25.1 +12.6		10
11	345	32.1 +00.2	N 05 47.2 -00.9		321	41.2 -00.4	S 03 34.4 +01.3		302	14.4 -25.4	S 14 37.7 +12.4		11
12	0	32.3 +00.2	N 05 46.3 -01.0		336	40.8 -00.3	S 03 35.7 +01.2		316	49.0 -25.4	S 14 50.1 +12.5		12
13	15	32.5 +00.2	N 05 45.3 -00.9		351	40.5 -00.3	S 03 36.9 +01.3		331	23.6 -25.5	S 15 02.6 +12.3		13
14	30	32.7 +00.2	N 05 44.4 -00.9		6	40.2 -00.3	S 03 38.2 +01.3		345	58.1 -25.5	S 15 14.9 +12.4		14
15	45	32.9 +00.2	N 05 43.5 -01.0		21	39.9 -00.3	S 03 39.5 +01.3		0	32.6 -25.6	S 15 27.3 +12.2		15
16	60	33.1 +00.3	N 05 42.5 -00.9		36	39.6 -00.3	S 03 40.8 +01.3		15	07.0 -25.7	S 15 39.5 +12.2		16
17	75	33.4 +00.2	N 05 41.6 -01.0		51	39.3 -00.4	S 03 42.1 +01.3		29	41.3 -25.7	S 15 51.7 +12.2		17
18	90	33.6 +00.2	N 05 40.6 -00.9		66	38.9 -00.3	S 03 43.4 +01.2		44	15.6 -25.8	S 16 03.9 +12.1		18
19	105	33.8 +00.2	N 05 39.7 -00.9		81	38.6 -00.3	S 03 44.6 +01.3		58	49.8 -25.9	S 16 16.0 +12.0		19
20	120	34.0 +00.2	N 05 38.8 -01.0		96	38.3 -00.3	S 03 45.9 +01.3		73	23.9 -25.9	S 16 28.0 +12.0		20
21	135	34.2 +00.2	N 05 37.8 -00.9		111	38.0 -00.3	S 03 47.2 +01.3		87	58.0 -26.0	S 16 40.0 +11.9		21
22	150	34.4 +00.2	N 05 36.9 -01.0		126	37.7 -00.4	S 03 48.5 +01.3		102	32.0 -26.1	S 16 51.9 +11.9		22
23	165	34.6 +00.3	N 05 35.9 -00.9		141	37.3 -00.3	S 03 49.8 +01.2		117	05.9 -26.2	S 17 03.8 +11.8		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'8 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 54'1 54'2 54'2 54'3				
	SHA 194° 194° 194° 193° 193° 193°				SHA 170° 170° 170° 170° 169° 169°				SHA 154° 153° 151° 149° 147° 145°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:33				Greenwich Culmination Time: 14:57				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	255	08.2 +00.8	N 23 27.0 +00.0		267	44.6 +02.2	N 22 20.1 +00.1		358	28.9 +02.7	S 07 29.6 +00.1		00
01	270	09.0 +00.8	N 23 27.0 +00.0		282	46.8 +02.2	N 22 20.2 +00.0		13	31.6 +02.6	S 07 29.7 +00.1		01
02	285	09.8 +00.9	N 23 27.0 +00.1		297	49.0 +02.2	N 22 20.2 +00.0		28	34.2 +02.7	S 07 29.8 +00.1		02
03	300	10.7 +00.8	N 23 27.1 +00.0		312	51.2 +02.1	N 22 20.2 +00.0		43	36.9 +02.6	S 07 29.9 +00.0		03
04	315	11.5 +00.8	N 23 27.1 +00.0		327	53.3 +02.2	N 22 20.2 +00.0		58	39.5 +02.6	S 07 29.9 +00.1		04
05	330	12.3 +00.9	N 23 27.1 +00.1		342	55.5 +02.2	N 22 20.2 +00.1		73	42.1 +02.7	S 07 30.0 +00.1		05
06	345	13.2 +00.8	N 23 27.2 +00.0		357	57.7 +02.2	N 22 20.3 +00.0		88	44.8 +02.6	S 07 30.1 +00.1		06
07	0	14.0 +00.8	N 23 27.2 +00.0		12	59.9 +02.2	N 22 20.3 +00.0		103	47.4 +02.7	S 07 30.2 +00.0		07
08	15	14.8 +00.9	N 23 27.2 +00.1		28	02.1 +02.2	N 22 20.3 +00.0		118	50.1 +02.6	S 07 30.2 +00.1		08
09	30	15.7 +00.8	N 23 27.3 +00.0		43	04.3 +02.2	N 22 20.3 +00.0		133	52.7 +02.6	S 07 30.3 +00.1		09
10	45	16.5 +00.8	N 23 27.3 +00.0		58	06.5 +02.2	N 22 20.3 +00.0		148	55.3 +02.7	S 07 30.4 +00.1		10
11	60	17.3 +00.9	N 23 27.3 +00.1		73	08.7 +02.2	N 22 20.3 +00.1		163	58.0 +02.6	S 07 30.5 +00.1		11
12	75	18.2 +00.8	N 23 27.4 +00.0		88	10.9 +02.2	N 22 20.4 +00.0		179	00.6 +02.7	S 07 30.6 +00.0		12
13	90	19.0 +00.8	N 23 27.4 +00.0		103	13.1 +02.2	N 22 20.4 +00.0		194	03.3 +02.6	S 07 30.6 +00.1		13
14	105	19.8 +00.9	N 23 27.4 +00.0		118	15.3 +02.2	N 22 20.4 +00.0		209	05.9 +02.7	S 07 30.7 +00.1		14
15	120	20.7 +00.8	N 23 27.4 +00.1		133	17.5 +02.2	N 22 20.4 +00.0		224	08.6 +02.6	S 07 30.8 +00.1		15
16	135	21.5 +00.8	N 23 27.5 +00.0		148	19.7 +02.2	N 22 20.4 +00.0		239	11.2 +02.6	S 07 30.9 +00.0		16
17	150	22.3 +00.9	N 23 27.5 +00.0		163	21.9 +02.2	N 22 20.4 +00.1		254	13.8 +02.7	S 07 30.9 +00.1		17
18	165	23.2 +00.8	N 23 27.5 +00.1		178	24.1 +02.2	N 22 20.5 +00.0		269	16.5 +02.6	S 07 31.0 +00.1		18
19	180	24.0 +00.8	N 23 27.6 +00.0		193	26.3 +02.2	N 22 20.5 +00.0		284	19.1 +02.7	S 07 31.1 +00.1		19
20	195	24.8 +00.9	N 23 27.6 +00.0		208	28.5 +02.2	N 22 20.5 +00.0		299	21.8 +02.6	S 07 31.2 +00.0		20
21	210	25.7 +00.8	N 23 27.6 +00.0		223	30.7 +02.2	N 22 20.5 +00.0		314	24.4 +02.6	S 07 31.2 +00.1		21
22	225	26.5 +00.9	N 23 27.6 +00.1		238	32.9 +02.2	N 22 20.5 +00.0		329	27.0 +02.7	S 07 31.3 +00.1		22
23	240	27.4 +00.8	N 23 27.7 +00.0		253	35.1 +02.3	N 22 20.5 +00.1		344	29.7 +02.6	S 07 31.4 +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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 269° 268° 268° 268° 268° 268°				SHA 281° 281° 281° 281° 281° 281°				SHA 012° 012° 012° 012° 012° 012°				
	Greenwich Culmination Time: 06:59				Greenwich Culmination Time: 06:08				Greenwich Culmination Time: 00:06				

UT	Sun				Venus				Moon				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	180	34.9	+00.2	N 05 35.0	-00.9	156	37.0	-00.3	S 03 51.0	+01.3	131	39.7	-26.2	S 17 15.6	+11.7	00
01	195	35.1	+00.2	N 05 34.1	-01.0	171	36.7	-00.3	S 03 52.3	+01.3	146	13.5	-26.3	S 17 27.3	+11.7	01
02	210	35.3	+00.2	N 05 33.1	-00.9	186	36.4	-00.3	S 03 53.6	+01.3	160	47.2	-26.3	S 17 39.0	+11.6	02
03	225	35.5	+00.2	N 05 32.2	-01.0	201	36.1	-00.4	S 03 54.9	+01.3	175	20.9	-26.5	S 17 50.6	+11.5	03
04	240	35.7	+00.2	N 05 31.2	-00.9	216	35.7	-00.3	S 03 56.2	+01.3	189	54.4	-26.5	S 18 02.1	+11.5	04
05	255	35.9	+00.3	N 05 30.3	-01.0	231	35.4	-00.3	S 03 57.5	+01.2	204	27.9	-26.6	S 18 13.6	+11.4	05
06	270	36.2	+00.2	N 05 29.3	-00.9	246	35.1	-00.3	S 03 58.7	+01.3	219	01.3	-26.6	S 18 25.0	+11.3	06
07	285	36.4	+00.2	N 05 28.4	-00.9	261	34.8	-00.3	S 04 00.0	+01.3	233	34.7	-26.8	S 18 36.3	+11.3	07
08	300	36.6	+00.2	N 05 27.5	-01.0	276	34.5	-00.4	S 04 01.3	+01.3	248	07.9	-26.8	S 18 47.6	+11.2	08
09	315	36.8	+00.2	N 05 26.5	-00.9	291	34.1	-00.3	S 04 02.6	+01.3	262	41.1	-26.9	S 18 58.8	+11.1	09
10	330	37.0	+00.2	N 05 25.6	-01.0	306	33.8	-00.3	S 04 03.9	+01.2	277	14.2	-27.0	S 19 09.9	+11.0	10
11	345	37.2	+00.3	N 05 24.6	-00.9	321	33.5	-00.3	S 04 05.1	+01.3	291	47.2	-27.0	S 19 20.9	+11.0	11
12	0	37.5	+00.2	N 05 23.7	-00.9	336	33.2	-00.3	S 04 06.4	+01.3	306	20.2	-27.2	S 19 31.9	+10.9	12
13	15	37.7	+00.2	N 05 22.8	-01.0	351	32.9	-00.4	S 04 07.7	+01.3	320	53.0	-27.2	S 19 42.8	+10.8	13
14	30	37.9	+00.2	N 05 21.8	-00.9	6	32.5	-00.3	S 04 09.0	+01.3	335	25.8	-27.3	S 19 53.6	+10.8	14
15	45	38.1	+00.2	N 05 20.9	-01.0	21	32.2	-00.3	S 04 10.3	+01.2	349	58.5	-27.4	S 20 04.4	+10.6	15
16	60	38.3	+00.2	N 05 19.9	-00.9	36	31.9	-00.3	S 04 11.5	+01.3	4	31.1	-27.5	S 20 15.0	+10.6	16
17	75	38.5	+00.3	N 05 19.0	-01.0	51	31.6	-00.3	S 04 12.8	+01.3	19	03.6	-27.5	S 20 25.6	+10.5	17
18	90	38.8	+00.2	N 05 18.0	-00.9	66	31.3	-00.4	S 04 14.1	+01.3	33	36.1	-27.7	S 20 36.1	+10.5	18
19	105	39.0	+00.2	N 05 17.1	-01.0	81	30.9	-00.3	S 04 15.4	+01.3	48	08.4	-27.7	S 20 46.6	+10.3	19
20	120	39.2	+00.2	N 05 16.1	-00.9	96	30.6	-00.3	S 04 16.7	+01.2	62	40.7	-27.8	S 20 56.9	+10.3	20
21	135	39.4	+00.2	N 05 15.2	-00.9	111	30.3	-00.3	S 04 17.9	+01.3	77	12.9	-27.9	S 21 07.2	+10.2	21
22	150	39.6	+00.2	N 05 14.3	-01.0	126	30.0	-00.4	S 04 19.2	+01.3	91	45.0	-28.0	S 21 17.4	+10.0	22
23	165	39.8	+00.3	N 05 13.3	-00.9	141	29.6	-00.3	S 04 20.5	+01.3	106	17.0	-28.1	S 21 27.4	+10.1	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22										
	SD 15'9 15'9 15'9 15'9 15'9 15'9					SD 00'1 00'1 00'1 00'1 00'1 00'1										
	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 193° 193° 193° 193° 192° 192°					SHA 169° 169° 169° 168° 168° 168°										
	Greenwich Culmination Time: 11:57					Greenwich Culmination Time: 13:33										
UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	255	28.2	+00.8	N 23 27.7	+00.0	268	37.4	+02.2	N 22 20.6	+00.0	359	32.3	+02.7	S 07 31.5	+00.0	00
01	270	29.0	+00.9	N 23 27.7	+00.0	283	39.6	+02.2	N 22 20.6	+00.0	14	35.0	+02.6	S 07 31.5	+00.1	01
02	285	29.9	+00.8	N 23 27.7	+00.1	298	41.8	+02.2	N 22 20.6	+00.0	29	37.6	+02.6	S 07 31.6	+00.1	02
03	300	30.7	+00.9	N 23 27.8	+00.0	313	44.0	+02.2	N 22 20.6	+00.0	44	40.2	+02.7	S 07 31.7	+00.1	03
04	315	31.6	+00.8	N 23 27.8	+00.0	328	46.2	+02.2	N 22 20.6	+00.1	59	42.9	+02.6	S 07 31.8	+00.1	04
05	330	32.4	+00.8	N 23 27.8	+00.0	343	48.4	+02.2	N 22 20.7	+00.0	74	45.5	+02.7	S 07 31.9	+00.0	05
06	345	33.2	+00.9	N 23 27.8	+00.1	358	50.6	+02.2	N 22 20.7	+00.0	89	48.2	+02.6	S 07 31.9	+00.1	06
07	0	34.1	+00.8	N 23 27.9	+00.0	13	52.8	+02.2	N 22 20.7	+00.0	104	50.8	+02.7	S 07 32.0	+00.1	07
08	15	34.9	+00.9	N 23 27.9	+00.0	28	55.0	+02.2	N 22 20.7	+00.0	119	53.5	+02.6	S 07 32.1	+00.1	08
09	30	35.8	+00.8	N 23 27.9	+00.0	43	57.2	+02.2	N 22 20.7	+00.0	134	56.1	+02.6	S 07 32.2	+00.0	09
10	45	36.6	+00.8	N 23 27.9	+00.1	58	59.4	+02.2	N 22 20.7	+00.1	149	58.7	+02.7	S 07 32.2	+00.1	10
11	60	37.4	+00.9	N 23 28.0	+00.0	74	01.6	+02.2	N 22 20.8	+00.0	165	01.4	+02.6	S 07 32.3	+00.1	11
12	75	38.3	+00.8	N 23 28.0	+00.0	89	03.8	+02.2	N 22 20.8	+00.0	180	04.0	+02.7	S 07 32.4	+00.1	12
13	90	39.1	+00.9	N 23 28.0	+00.0	104	06.0	+02.2	N 22 20.8	+00.0	195	06.7	+02.6	S 07 32.5	+00.0	13
14	105	40.0	+00.8	N 23 28.0	+00.1	119	08.2	+02.2	N 22 20.8	+00.0	210	09.3	+02.6	S 07 32.5	+00.1	14
15	120	40.8	+00.8	N 23 28.1	+00.0	134	10.4	+02.2	N 22 20.8	+00.0	225	11.9	+02.7	S 07 32.6	+00.1	15
16	135	41.6	+00.9	N 23 28.1	+00.0	149	12.6	+02.2	N 22 20.8	+00.1	240	14.6	+02.6	S 07 32.7	+00.1	16
17	150	42.5	+00.8	N 23 28.1	+00.0	164	14.8	+02.3	N 22 20.9	+00.0	255	17.2	+02.7	S 07 32.8	+00.1	17
18	165	43.3	+00.9	N 23 28.1	+00.1	179	17.1	+02.2	N 22 20.9	+00.0	270	19.9	+02.6	S 07 32.9	+00.0	18
19	180	44.2	+00.8	N 23 28.2	+00.0	194	19.3	+02.2	N 22 20.9	+00.0	285	22.5	+02.6	S 07 32.9	+00.1	19
20	195	45.0	+00.9	N 23 28.2	+00.0	209	21.5	+02.2	N 22 20.9	+00.0	300	25.1	+02.7	S 07 33.0	+00.1	20
21	210	45.9	+00.8	N 23 28.2	+00.0	224	23.7	+02.2	N 22 20.9	+00.0	315	27.8	+02.6	S 07 33.1	+00.1	21
22	225	46.7	+00.8	N 23 28.2	+00.0	239	25.9	+02.2	N 22 20.9	+00.1	330	30.4	+02.7	S 07 33.2	+00.0	22
23	240	47.5	+00.9	N 23 28.2	+00.1	254	28.1	+02.2	N 22 21.0	+00.0	345	33.1	+02.6	S 07 33.2	+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 268° 268° 268° 268° 267° 267°					SHA 281° 281° 281° 281° 281° 281°										
	Greenwich Culmination Time: 06:57					Greenwich Culmination Time: 06:04										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	40.1+00.2	N 05 12.4	-01.0	156	29.3-00.3	S 04 21.8	+01.2	120	48.9-28.2	S 21 37.5	+09.9	00
01	195	40.3+00.2	N 05 11.4	-00.9	171	29.0-00.3	S 04 23.0	+01.3	135	20.7-28.2	S 21 47.4	+09.8	01
02	210	40.5+00.2	N 05 10.5	-01.0	186	28.7-00.3	S 04 24.3	+01.3	149	52.5-28.4	S 21 57.2	+09.8	02
03	225	40.7+00.2	N 05 09.5	-00.9	201	28.4-00.4	S 04 25.6	+01.3	164	24.1-28.4	S 22 07.0	+09.6	03
04	240	40.9+00.2	N 05 08.6	-01.0	216	28.0-00.3	S 04 26.9	+01.3	178	55.7-28.5	S 22 16.6	+09.6	04
05	255	41.1+00.3	N 05 07.6	-00.9	231	27.7-00.3	S 04 28.2	+01.2	193	27.2-28.7	S 22 26.2	+09.5	05
06	270	41.4+00.2	N 05 06.7	-00.9	246	27.4-00.3	S 04 29.4	+01.3	207	58.5-28.7	S 22 35.7	+09.3	06
07	285	41.6+00.2	N 05 05.8	-01.0	261	27.1-00.4	S 04 30.7	+01.3	222	29.8-28.8	S 22 45.0	+09.3	07
08	300	41.8+00.2	N 05 04.8	-00.9	276	26.7-00.3	S 04 32.0	+01.3	237	01.0-28.9	S 22 54.3	+09.2	08
09	315	42.0+00.2	N 05 03.9	-01.0	291	26.4-00.3	S 04 33.3	+01.2	251	32.1-29.0	S 23 03.5	+09.1	09
10	330	42.2+00.3	N 05 02.9	-00.9	306	26.1-00.3	S 04 34.5	+01.3	266	03.1-29.1	S 23 12.6	+09.0	10
11	345	42.5+00.2	N 05 02.0	-01.0	321	25.8-00.3	S 04 35.8	+01.3	280	34.0-29.1	S 23 21.6	+08.9	11
12	0	42.7+00.2	N 05 01.0	-00.9	336	25.5-00.4	S 04 37.1	+01.3	295	04.9-29.3	S 23 30.5	+08.8	12
13	15	42.9+00.2	N 05 00.1	-01.0	351	25.1-00.3	S 04 38.4	+01.3	309	35.6-29.4	S 23 39.3	+08.7	13
14	30	43.1+00.2	N 04 59.1	-00.9	6	24.8-00.3	S 04 39.7	+01.2	324	06.2-29.4	S 23 48.0	+08.5	14
15	45	43.3+00.2	N 04 58.2	-01.0	21	24.5-00.3	S 04 40.9	+01.3	338	36.8-29.6	S 23 56.5	+08.5	15
16	60	43.5+00.3	N 04 57.2	-00.9	36	24.2-00.4	S 04 42.2	+01.3	353	07.2-29.7	S 24 05.0	+08.4	16
17	75	43.8+00.2	N 04 56.3	-01.0	51	23.8-00.3	S 04 43.5	+01.3	7	37.5-29.7	S 24 13.4	+08.3	17
18	90	44.0+00.2	N 04 55.3	-00.9	66	23.5-00.3	S 04 44.8	+01.2	22	07.8-29.8	S 24 21.7	+08.2	18
19	105	44.2+00.2	N 04 54.4	-00.9	81	23.2-00.3	S 04 46.0	+01.3	36	38.0-30.0	S 24 29.9	+08.0	19
20	120	44.4+00.2	N 04 53.5	-01.0	96	22.9-00.4	S 04 47.3	+01.3	51	08.0-30.0	S 24 37.9	+08.0	20
21	135	44.6+00.3	N 04 52.5	-00.9	111	22.5-00.3	S 04 48.6	+01.3	65	38.0-30.2	S 24 45.9	+07.8	21
22	150	44.9+00.2	N 04 51.6	-01.0	126	22.2-00.3	S 04 49.9	+01.2	80	07.8-30.2	S 24 53.7	+07.7	22
23	165	45.1+00.2	N 04 50.6	-00.9	141	21.9-00.3	S 04 51.1	+01.3	94	37.6-30.3	S 25 01.4	+07.6	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 14'9 15'0 15'0 15'0				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'7 54'8 54'9 54'9 55'0 55'1				
	SHA 192° 192° 192° 192° 191° 191°				SHA 168° 168° 167° 167° 167° 167°				SHA 131° 129° 127° 125° 123° 121°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:34				Greenwich Culmination Time: 16:28				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	255	48.4+00.8	N 23 28.3	+00.0	269	30.3+02.2	N 22 21.0	+00.0	0	35.7+02.7	S 07 33.3	+00.1	00
01	270	49.2+00.9	N 23 28.3	+00.0	284	32.5+02.2	N 22 21.0	+00.0	15	38.4+02.6	S 07 33.4	+00.1	01
02	285	50.1+00.8	N 23 28.3	+00.0	299	34.7+02.2	N 22 21.0	+00.0	30	41.0+02.6	S 07 33.5	+00.0	02
03	300	50.9+00.9	N 23 28.3	+00.0	314	36.9+02.3	N 22 21.0	+00.0	45	43.6+02.7	S 07 33.5	+00.1	03
04	315	51.8+00.8	N 23 28.3	+00.1	329	39.2+02.2	N 22 21.0	+00.1	60	46.3+02.6	S 07 33.6	+00.1	04
05	330	52.6+00.9	N 23 28.4	+00.0	344	41.4+02.2	N 22 21.1	+00.0	75	48.9+02.7	S 07 33.7	+00.1	05
06	345	53.5+00.8	N 23 28.4	+00.0	359	43.6+02.2	N 22 21.1	+00.0	90	51.6+02.6	S 07 33.8	+00.0	06
07	0	54.3+00.9	N 23 28.4	+00.0	14	45.8+02.2	N 22 21.1	+00.0	105	54.2+02.6	S 07 33.8	+00.1	07
08	15	55.2+00.8	N 23 28.4	+00.0	29	48.0+02.2	N 22 21.1	+00.0	120	56.8+02.7	S 07 33.9	+00.1	08
09	30	56.0+00.9	N 23 28.4	+00.0	44	50.2+02.2	N 22 21.1	+00.0	135	59.5+02.6	S 07 34.0	+00.1	09
10	45	56.9+00.8	N 23 28.4	+00.1	59	52.4+02.2	N 22 21.1	+00.1	151	02.1+02.7	S 07 34.1	+00.1	10
11	60	57.7+00.9	N 23 28.5	+00.0	74	54.6+02.3	N 22 21.2	+00.0	166	04.8+02.6	S 07 34.2	+00.0	11
12	75	58.6+00.8	N 23 28.5	+00.0	89	56.9+02.2	N 22 21.2	+00.0	181	07.4+02.6	S 07 34.2	+00.1	12
13	90	59.4+00.9	N 23 28.5	+00.0	104	59.1+02.2	N 22 21.2	+00.0	196	10.0+02.7	S 07 34.3	+00.1	13
14	106	00.3+00.8	N 23 28.5	+00.0	120	01.3+02.2	N 22 21.2	+00.0	211	12.7+02.6	S 07 34.4	+00.1	14
15	121	01.1+00.9	N 23 28.5	+00.1	135	03.5+02.2	N 22 21.2	+00.0	226	15.3+02.7	S 07 34.5	+00.0	15
16	136	02.0+00.8	N 23 28.6	+00.0	150	05.7+02.2	N 22 21.2	+00.1	241	18.0+02.6	S 07 34.5	+00.1	16
17	151	02.8+00.9	N 23 28.6	+00.0	165	07.9+02.3	N 22 21.3	+00.0	256	20.6+02.7	S 07 34.6	+00.1	17
18	166	03.7+00.8	N 23 28.6	+00.0	180	10.2+02.2	N 22 21.3	+00.0	271	23.3+02.6	S 07 34.7	+00.1	18
19	181	04.5+00.9	N 23 28.6	+00.0	195	12.4+02.2	N 22 21.3	+00.0	286	25.9+02.6	S 07 34.8	+00.0	19
20	196	05.4+00.8	N 23 28.6	+00.0	210	14.6+02.2	N 22 21.3	+00.0	301	28.5+02.7	S 07 34.8	+00.1	20
21	211	06.2+00.9	N 23 28.6	+00.0	225	16.8+02.2	N 22 21.3	+00.0	316	31.2+02.6	S 07 34.9	+00.1	21
22	226	07.1+00.8	N 23 28.6	+00.1	240	19.0+02.2	N 22 21.3	+00.0	331	33.8+02.7	S 07 35.0	+00.1	22
23	241	07.9+00.9	N 23 28.7	+00.0	255	21.2+02.3	N 22 21.3	+00.1	346	36.5+02.6	S 07 35.1	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 267° 267° 267° 267° 267° 267°				SHA 281° 281° 281° 281° 281° 281°				SHA 012° 012° 012° 012° 012° 012°				
	Greenwich Culmination Time: 06:56				Greenwich Culmination Time: 06:01				Greenwich Culmination Time: 23:53				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	180	45.3+00.2	N 04 49.7	-01.0	156	21.6-00.4	S 04 52.4	+01.3	109	07.3	-30.4	S 25 09.0	+07.5	00
01	195	45.5+00.2	N 04 48.7	-00.9	171	21.2-00.3	S 04 53.7	+01.3	123	36.9	-30.5	S 25 16.5	+07.4	01
02	210	45.7+00.2	N 04 47.8	-01.0	186	20.9-00.3	S 04 55.0	+01.2	138	06.4	-30.6	S 25 23.9	+07.3	02
03	225	45.9+00.3	N 04 46.8	-00.9	201	20.6-00.3	S 04 56.2	+01.3	152	35.8	-30.8	S 25 31.2	+07.1	03
04	240	46.2+00.2	N 04 45.9	-01.0	216	20.3-00.4	S 04 57.5	+01.3	167	05.0	-30.8	S 25 38.3	+07.1	04
05	255	46.4+00.2	N 04 44.9	-00.9	231	19.9-00.3	S 04 58.8	+01.3	181	34.2	-30.9	S 25 45.4	+06.9	05
06	270	46.6+00.2	N 04 44.0	-01.0	246	19.6-00.3	S 05 00.1	+01.2	196	03.3	-31.0	S 25 52.3	+06.8	06
07	285	46.8+00.2	N 04 43.0	-00.9	261	19.3-00.3	S 05 01.3	+01.3	210	32.3	-31.0	S 25 59.1	+06.6	07
08	300	47.0+00.3	N 04 42.1	-01.0	276	19.0-00.4	S 05 02.6	+01.3	225	01.3	-31.2	S 26 05.7	+06.6	08
09	315	47.3+00.2	N 04 41.1	-00.9	291	18.6-00.3	S 05 03.9	+01.3	239	30.1	-31.3	S 26 12.3	+06.4	09
10	330	47.5+00.2	N 04 40.2	-01.0	306	18.3-00.3	S 05 05.2	+01.2	253	58.8	-31.4	S 26 18.7	+06.3	10
11	345	47.7+00.2	N 04 39.2	-00.9	321	18.0-00.3	S 05 06.4	+01.3	268	27.4	-31.4	S 26 25.0	+06.2	11
12	0	47.9+00.2	N 04 38.3	-01.0	336	17.7-00.4	S 05 07.7	+01.3	282	56.0	-31.6	S 26 31.2	+06.0	12
13	15	48.1+00.3	N 04 37.3	-00.9	351	17.3-00.3	S 05 09.0	+01.2	297	24.4	-31.7	S 26 37.2	+05.9	13
14	30	48.4+00.2	N 04 36.4	-01.0	6	17.0-00.3	S 05 10.2	+01.3	311	52.7	-31.7	S 26 43.1	+05.8	14
15	45	48.6+00.2	N 04 35.4	-00.9	21	16.7-00.3	S 05 11.5	+01.3	326	21.0	-31.8	S 26 48.9	+05.6	15
16	60	48.8+00.2	N 04 34.5	-01.0	36	16.4-00.4	S 05 12.8	+01.3	340	49.2	-32.0	S 26 54.5	+05.6	16
17	75	49.0+00.2	N 04 33.5	-00.9	51	16.0-00.3	S 05 14.1	+01.2	355	17.2	-32.0	S 27 00.1	+05.3	17
18	90	49.2+00.3	N 04 32.6	-01.0	66	15.7-00.3	S 05 15.3	+01.3	9	45.2	-32.1	S 27 05.4	+05.3	18
19	105	49.5+00.2	N 04 31.6	-00.9	81	15.4-00.4	S 05 16.6	+01.3	24	13.1	-32.2	S 27 10.7	+05.1	19
20	120	49.7+00.2	N 04 30.7	-01.0	96	15.0-00.3	S 05 17.9	+01.3	38	40.9	-32.3	S 27 15.8	+05.0	20
21	135	49.9+00.2	N 04 29.7	-00.9	111	14.7-00.3	S 05 19.2	+01.2	53	08.6	-32.4	S 27 20.8	+04.8	21
22	150	50.1+00.2	N 04 28.8	-01.0	126	14.4-00.3	S 05 20.4	+01.3	67	36.2	-32.4	S 27 25.6	+04.7	22
23	165	50.3+00.3	N 04 27.8	-00.9	141	14.1-00.4	S 05 21.7	+01.3	82	03.8	-32.6	S 27 30.3	+04.6	23
	UT 02 06 10 14 18 22								UT 02 06 10 14 18 22					
	SD 15'9 15'9 15'9 15'9 15'9 15'9								SD 15'0 15'1 15'1 15'1 15'2 15'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1								HP 55'2 55'3 55'4 55'6 55'7 55'8					
	SHA 191° 191° 191° 191° 191° 190°								SHA 119° 116° 114° 112° 109° 107°					
	Greenwich Culmination Time: 11:56								Greenwich Culmination Time: 13:34					
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	256	08.8+00.8	N 23 28.7	+00.0	270	23.5+02.2	N 22 21.4	+00.0	1	39.1	+02.6	S 07 35.1	+00.1	00
01	271	09.6+00.9	N 23 28.7	+00.0	285	25.7+02.2	N 22 21.4	+00.0	16	41.7	+02.7	S 07 35.2	+00.1	01
02	286	10.5+00.8	N 23 28.7	+00.0	300	27.9+02.2	N 22 21.4	+00.0	31	44.4	+02.6	S 07 35.3	+00.1	02
03	301	11.3+00.9	N 23 28.7	+00.0	315	30.1+02.2	N 22 21.4	+00.0	46	47.0	+02.7	S 07 35.4	+00.0	03
04	316	12.2+00.8	N 23 28.7	+00.0	330	32.3+02.2	N 22 21.4	+00.0	61	49.7	+02.6	S 07 35.4	+00.1	04
05	331	13.0+00.9	N 23 28.7	+00.1	345	34.5+02.3	N 22 21.4	+00.1	76	52.3	+02.6	S 07 35.5	+00.1	05
06	346	13.9+00.8	N 23 28.8	+00.0	0	36.8+02.2	N 22 21.5	+00.0	91	54.9	+02.7	S 07 35.6	+00.1	06
07	1	14.7+00.9	N 23 28.8	+00.0	15	39.0+02.2	N 22 21.5	+00.0	106	57.6	+02.6	S 07 35.7	+00.1	07
08	16	15.6+00.8	N 23 28.8	+00.0	30	41.2+02.2	N 22 21.5	+00.0	122	00.2	+02.7	S 07 35.8	+00.0	08
09	31	16.4+00.9	N 23 28.8	+00.0	45	43.4+02.2	N 22 21.5	+00.0	137	02.9	+02.6	S 07 35.8	+00.1	09
10	46	17.3+00.9	N 23 28.8	+00.0	60	45.6+02.3	N 22 21.5	+00.0	152	05.5	+02.7	S 07 35.9	+00.1	10
11	61	18.2+00.8	N 23 28.8	+00.0	75	47.9+02.2	N 22 21.5	+00.1	167	08.2	+02.6	S 07 36.0	+00.1	11
12	76	19.0+00.9	N 23 28.8	+00.0	90	50.1+02.2	N 22 21.6	+00.0	182	10.8	+02.6	S 07 36.1	+00.0	12
13	91	19.9+00.8	N 23 28.8	+00.1	105	52.3+02.2	N 22 21.6	+00.0	197	13.4	+02.7	S 07 36.1	+00.1	13
14	106	20.7+00.9	N 23 28.9	+00.0	120	54.5+02.3	N 22 21.6	+00.0	212	16.1	+02.6	S 07 36.2	+00.1	14
15	121	21.6+00.8	N 23 28.9	+00.0	135	56.8+02.2	N 22 21.6	+00.0	227	18.7	+02.7	S 07 36.3	+00.1	15
16	136	22.4+00.9	N 23 28.9	+00.0	150	59.0+02.2	N 22 21.6	+00.0	242	21.4	+02.6	S 07 36.4	+00.0	16
17	151	23.3+00.9	N 23 28.9	+00.0	166	01.2+02.2	N 22 21.6	+00.0	257	24.0	+02.6	S 07 36.4	+00.1	17
18	166	24.2+00.8	N 23 28.9	+00.0	181	03.4+02.3	N 22 21.6	+00.1	272	26.6	+02.7	S 07 36.5	+00.1	18
19	181	25.0+00.9	N 23 28.9	+00.0	196	05.7+02.2	N 22 21.7	+00.0	287	29.3	+02.6	S 07 36.6	+00.1	19
20	196	25.9+00.8	N 23 28.9	+00.0	211	07.9+02.2	N 22 21.7	+00.0	302	31.9	+02.7	S 07 36.7	+00.0	20
21	211	26.7+00.9	N 23 28.9	+00.0	226	10.1+02.2	N 22 21.7	+00.0	317	34.6	+02.6	S 07 36.7	+00.1	21
22	226	27.6+00.8	N 23 28.9	+00.0	241	12.3+02.2	N 22 21.7	+00.0	332	37.2	+02.6	S 07 36.8	+00.1	22
23	241	28.4+00.9	N 23 28.9	+00.0	256	14.5+02.3	N 22 21.7	+00.0	347	39.8	+02.7	S 07 36.9	+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 00'2 00'2 00'2 00'2 00'2 00'2					
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 267° 266° 266° 266° 266° 266°				SHA 281° 281° 281° 281° 281° 281°				SHA 012° 012° 012° 012° 012° 012°					
	Greenwich Culmination Time: 06:55				Greenwich Culmination Time: 05:57				Greenwich Culmination Time: 23:49					

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	180	55.9+00.2	N 04 04.0	-01.0	156	05.8-00.3	S 05 53.4	+01.3	83	06.4-34.4	S 28 39.2	+00.7	00	
01	195	56.1+00.2	N 04 03.0	-00.9	171	05.5-00.4	S 05 54.7	+01.3	97	32.0-34.4	S 28 39.9	+00.5	01	
02	210	56.3+00.2	N 04 02.1	-01.0	186	05.1-00.3	S 05 56.0	+01.2	111	57.6-34.5	S 28 40.4	+00.4	02	
03	225	56.5+00.3	N 04 01.1	-00.9	201	04.8-00.3	S 05 57.2	+01.3	126	23.1-34.5	S 28 40.8	+00.2	03	
04	240	56.8+00.2	N 04 00.2	-01.0	216	04.5-00.4	S 05 58.5	+01.2	140	48.6-34.6	S 28 41.0	+00.0	04	
05	255	57.0+00.2	N 03 59.2	-00.9	231	04.1-00.3	S 05 59.7	+01.3	155	14.0-34.7	S 28 41.0	-00.1	05	
06	270	57.2+00.2	N 03 58.3	-01.0	246	03.8-00.3	S 06 01.0	+01.3	169	39.3-34.7	S 28 40.9	-00.3	06	
07	285	57.4+00.2	N 03 57.3	-00.9	261	03.5-00.4	S 06 02.3	+01.2	184	04.6-34.7	S 28 40.6	-00.5	07	
08	300	57.6+00.3	N 03 56.4	-01.0	276	03.1-00.3	S 06 03.5	+01.3	198	29.9-34.8	S 28 40.1	-00.6	08	
09	315	57.9+00.2	N 03 55.4	-00.9	291	02.8-00.3	S 06 04.8	+01.3	212	55.1-34.8	S 28 39.5	-00.8	09	
10	330	58.1+00.2	N 03 54.5	-01.0	306	02.5-00.4	S 06 06.1	+01.2	227	20.3-34.8	S 28 38.7	-01.0	10	
11	345	58.3+00.2	N 03 53.5	-01.0	321	02.1-00.3	S 06 07.3	+01.3	241	45.5-34.9	S 28 37.7	-01.1	11	
12	0	58.5+00.2	N 03 52.5	-00.9	336	01.8-00.3	S 06 08.6	+01.3	256	10.6-35.0	S 28 36.6	-01.4	12	
13	15	58.7+00.3	N 03 51.6	-01.0	351	01.5-00.4	S 06 09.9	+01.2	270	35.6-34.9	S 28 35.2	-01.5	13	
14	30	59.0+00.2	N 03 50.6	-00.9	6	01.1-00.3	S 06 11.1	+01.3	285	00.7-35.0	S 28 33.7	-01.7	14	
15	45	59.2+00.2	N 03 49.7	-01.0	21	00.8-00.3	S 06 12.4	+01.3	299	25.7-35.1	S 28 32.0	-01.8	15	
16	60	59.4+00.2	N 03 48.7	-00.9	36	00.5-00.4	S 06 13.7	+01.2	313	50.6-35.0	S 28 30.2	-02.0	16	
17	75	59.6+00.3	N 03 47.8	-01.0	51	00.1-00.3	S 06 14.9	+01.3	328	15.6-35.1	S 28 28.2	-02.2	17	
18	90	59.9+00.2	N 03 46.8	-01.0	65	59.8-00.3	S 06 16.2	+01.2	342	40.5-35.1	S 28 26.0	-02.4	18	
19	106	00.1+00.2	N 03 45.8	-00.9	80	59.5-00.4	S 06 17.4	+01.3	357	05.4-35.2	S 28 23.6	-02.5	19	
20	121	00.3+00.2	N 03 44.9	-01.0	95	59.1-00.3	S 06 18.7	+01.3	11	30.2-35.1	S 28 21.1	-02.8	20	
21	136	00.5+00.2	N 03 43.9	-00.9	110	58.8-00.3	S 06 20.0	+01.2	25	55.1-35.2	S 28 18.3	-02.9	21	
22	151	00.7+00.3	N 03 43.0	-01.0	125	58.5-00.4	S 06 21.2	+01.3	40	19.9-35.2	S 28 15.4	-03.0	22	
23	166	01.0+00.2	N 03 42.0	-00.9	140	58.1-00.3	S 06 22.5	+01.3	54	44.7-35.2	S 28 12.4	-03.3	23	
	UT 02 06 10 14 18 22													
	SD 15'9 15'9 15'9 15'9 15'9 15'9													
	HP 00'1 00'1 00'1 00'1 00'1 00'1													
	SHA 189° 189° 189° 189° 189° 189°													
	Greenwich Culmination Time: 11:56													
	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 165° 164° 164° 164° 164° 164°													
	Greenwich Culmination Time: 13:35													
	UT 02 06 10 14 18 22													
	SD 15'5 15'5 15'5 15'6 15'6 15'7													
	HP 56'7 56'9 57'0 57'2 57'3 57'5													
	SHA 090° 088° 085° 083° 080° 078°													
	Greenwich Culmination Time: 19:12													

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	256	50.0+00.9	N 23 29.1	+00.0	272	10.3+02.2	N 22 22.1	+00.0	3	45.9+02.6	S 07 38.8	+00.1	00	
01	271	50.9+00.9	N 23 29.1	+00.0	287	12.5+02.2	N 22 22.1	+00.0	18	48.5+02.6	S 07 38.9	+00.0	01	
02	286	51.8+00.8	N 23 29.1	+00.0	302	14.7+02.3	N 22 22.1	+00.0	33	51.1+02.7	S 07 38.9	+00.1	02	
03	301	52.6+00.9	N 23 29.1	+00.0	317	17.0+02.2	N 22 22.1	+00.1	48	53.8+02.6	S 07 39.0	+00.1	03	
04	316	53.5+00.9	N 23 29.1	+00.0	332	19.2+02.2	N 22 22.2	+00.0	63	56.4+02.7	S 07 39.1	+00.1	04	
05	331	54.4+00.8	N 23 29.1	+00.0	347	21.4+02.3	N 22 22.2	+00.0	78	59.1+02.6	S 07 39.2	+00.0	05	
06	346	55.2+00.9	N 23 29.1	+00.0	2	23.7+02.2	N 22 22.2	+00.0	94	01.7+02.7	S 07 39.2	+00.1	06	
07	1	56.1+00.9	N 23 29.1	+00.0	17	25.9+02.2	N 22 22.2	+00.0	109	04.4+02.6	S 07 39.3	+00.1	07	
08	16	57.0+00.8	N 23 29.1	+00.0	32	28.1+02.3	N 22 22.2	+00.0	124	07.0+02.6	S 07 39.4	+00.1	08	
09	31	57.8+00.9	N 23 29.1	+00.0	47	30.4+02.2	N 22 22.2	+00.0	139	09.6+02.7	S 07 39.5	+00.0	09	
10	46	58.7+00.9	N 23 29.1	+00.0	62	32.6+02.3	N 22 22.2	+00.1	154	12.3+02.6	S 07 39.5	+00.1	10	
11	61	59.6+00.9	N 23 29.1	+00.0	77	34.9+02.2	N 22 22.3	+00.0	169	14.9+02.7	S 07 39.6	+00.1	11	
12	77	00.5+00.8	N 23 29.1	+00.0	92	37.1+02.2	N 22 22.3	+00.0	184	17.6+02.6	S 07 39.7	+00.1	12	
13	92	01.3+00.9	N 23 29.1	+00.0	107	39.3+02.3	N 22 22.3	+00.0	199	20.2+02.6	S 07 39.8	+00.0	13	
14	107	02.2+00.9	N 23 29.1	+00.0	122	41.6+02.2	N 22 22.3	+00.0	214	22.8+02.7	S 07 39.8	+00.1	14	
15	122	03.1+00.8	N 23 29.1	+00.0	137	43.8+02.2	N 22 22.3	+00.0	229	25.5+02.6	S 07 39.9	+00.1	15	
16	137	03.9+00.9	N 23 29.1	+00.0	152	46.0+02.3	N 22 22.3	+00.0	244	28.1+02.7	S 07 40.0	+00.1	16	
17	152	04.8+00.9	N 23 29.1	+00.0	167	48.3+02.2	N 22 22.3	+00.1	259	30.8+02.6	S 07 40.1	+00.0	17	
18	167	05.7+00.9	N 23 29.1	+00.0	182	50.5+02.3	N 22 22.4	+00.0	274	33.4+02.6	S 07 40.1	+00.1	18	
19	182	06.6+00.8	N 23 29.1	+00.0	197	52.8+02.2	N 22 22.4	+00.0	289	36.0+02.7	S 07 40.2	+00.1	19	
20	197	07.4+00.9	N 23 29.1	+00.0	212	55.0+02.2	N 22 22.4	+00.0	304	38.7+02.6	S 07 40.3	+00.1	20	
21	212	08.3+00.9	N 23 29.1	+00.0	227	57.2+02.3	N 22 22.4	+00.0	319	41.3+02.7	S 07 40.4	+00.0	21	
22	227	09.2+00.8	N 23 29.1	+00.0	242	59.5+02.2	N 22 22.4	+00.0	334	44.0+02.6	S 07 40.4	+00.1	22	
23	242	10.0+00.9	N 23 29.1	+00.0	258	01.7+02.3	N 22 22.4	+00.0	349	46.6+02.6	S 07 40.5	+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 265° 265° 265° 265° 265° 265°													
	Greenwich Culmination Time: 06:52													
	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 281° 281° 281° 281° 281° 281°													
	Greenwich Culmination Time: 05:50													
	UT 02 06 10 14 18 22													
	SD 00'2 00'2 00'2 00'2 00'2 00'2													
	HP 00'0 00'0 00'0 00'0 00'0 00'0													
	SHA 012° 012° 012° 012° 012° 012°													
	Greenwich Culmination Time: 23:40													

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 01.2 +00.2	N 03 41.1 -01.0	155 57.8 -00.3	S 06 23.8 +01.2	69 09.5 -35.2	S 28 09.1 -03.4	00						
01	196 01.4 +00.2	N 03 40.1 -01.0	170 57.5 -00.4	S 06 25.0 +01.3	83 34.3 -35.3	S 28 05.7 -03.6	01						
02	211 01.6 +00.3	N 03 39.1 -00.9	185 57.1 -00.3	S 06 26.3 +01.2	97 59.0 -35.2	S 28 02.1 -03.8	02						
03	226 01.9 +00.2	N 03 38.2 -01.0	200 56.8 -00.4	S 06 27.5 +01.3	112 23.8 -35.3	S 27 58.3 -04.0	03						
04	241 02.1 +00.2	N 03 37.2 -00.9	215 56.4 -00.3	S 06 28.8 +01.3	126 48.5 -35.3	S 27 54.3 -04.1	04						
05	256 02.3 +00.2	N 03 36.3 -01.0	230 56.1 -00.3	S 06 30.1 +01.2	141 13.2 -35.2	S 27 50.2 -04.3	05						
06	271 02.5 +00.3	N 03 35.3 -00.9	245 55.8 -00.4	S 06 31.3 +01.3	155 38.0 -35.3	S 27 45.9 -04.5	06						
07	286 02.8 +00.2	N 03 34.4 -01.0	260 55.4 -00.3	S 06 32.6 +01.2	170 02.7 -35.3	S 27 41.4 -04.7	07						
08	301 03.0 +00.2	N 03 33.4 -01.0	275 55.1 -00.3	S 06 33.8 +01.3	184 27.4 -35.3	S 27 36.7 -04.8	08						
09	316 03.2 +00.2	N 03 32.4 -00.9	290 54.8 -00.4	S 06 35.1 +01.3	198 52.1 -35.2	S 27 31.9 -05.1	09						
10	331 03.4 +00.2	N 03 31.5 -01.0	305 54.4 -00.3	S 06 36.4 +01.2	213 16.9 -35.3	S 27 26.8 -05.2	10						
11	346 03.6 +00.3	N 03 30.5 -00.9	320 54.1 -00.4	S 06 37.6 +01.3	227 41.6 -35.3	S 27 21.6 -05.3	11						
12	1 03.9 +00.2	N 03 29.6 -01.0	335 53.7 -00.3	S 06 38.9 +01.2	242 06.3 -35.2	S 27 16.3 -05.6	12						
13	16 04.1 +00.2	N 03 28.6 -00.9	350 53.4 -00.3	S 06 40.1 +01.3	256 31.1 -35.3	S 27 10.7 -05.7	13						
14	31 04.3 +00.2	N 03 27.7 -01.0	5 53.1 -00.4	S 06 41.4 +01.3	270 55.8 -35.2	S 27 05.0 -05.9	14						
15	46 04.5 +00.3	N 03 26.7 -01.0	20 52.7 -00.3	S 06 42.7 +01.2	285 20.6 -35.2	S 26 59.1 -06.1	15						
16	61 04.8 +00.2	N 03 25.7 -00.9	35 52.4 -00.3	S 06 43.9 +01.3	299 45.4 -35.2	S 26 53.0 -06.3	16						
17	76 05.0 +00.2	N 03 24.8 -01.0	50 52.1 -00.4	S 06 45.2 +01.2	314 10.2 -35.2	S 26 46.7 -06.4	17						
18	91 05.2 +00.2	N 03 23.8 -00.9	65 51.7 -00.3	S 06 46.4 +01.3	328 35.0 -35.2	S 26 40.3 -06.6	18						
19	106 05.4 +00.3	N 03 22.9 -01.0	80 51.4 -00.4	S 06 47.7 +01.2	342 59.8 -35.2	S 26 33.7 -06.8	19						
20	121 05.7 +00.2	N 03 21.9 -01.0	95 51.0 -00.3	S 06 48.9 +01.3	357 24.6 -35.1	S 26 26.9 -06.9	20						
21	136 05.9 +00.2	N 03 20.9 -00.9	110 50.7 -00.3	S 06 50.2 +01.3	11 49.5 -35.1	S 26 20.0 -07.2	21						
22	151 06.1 +00.2	N 03 20.0 -01.0	125 50.4 -00.4	S 06 51.5 +01.2	26 14.4 -35.1	S 26 12.8 -07.3	22						
23	166 06.3 +00.2	N 03 19.0 -00.9	140 50.0 -00.3	S 06 52.7 +01.3	40 39.3 -35.1	S 26 05.5 -07.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'8 15'8 15'8 15'9 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'6 57'8 58'0 58'1 58'3 58'5								
	SHA 188° 188° 188° 188° 188° 188°		SHA 163° 163° 163° 163° 163° 162°		SHA 075° 073° 070° 068° 065° 063°								
	Greenwich Culmination Time: 11:55		Greenwich Culmination Time: 13:36		Greenwich Culmination Time: 20:10								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	257 10.9 +00.9	N 23 29.1 +00.0	273 04.0 +02.2	N 22 22.4 +00.1	4 49.2 +02.7	S 07 40.6 +00.1	00						
01	272 11.8 +00.9	N 23 29.1 +00.0	288 06.2 +02.2	N 22 22.5 +00.0	19 51.9 +02.6	S 07 40.7 +00.0	01						
02	287 12.7 +00.8	N 23 29.1 +00.0	303 08.4 +02.3	N 22 22.5 +00.0	34 54.5 +02.7	S 07 40.7 +00.1	02						
03	302 13.5 +00.9	N 23 29.1 +00.0	318 10.7 +02.2	N 22 22.5 +00.0	49 57.2 +02.6	S 07 40.8 +00.1	03						
04	317 14.4 +00.9	N 23 29.1 +00.0	333 12.9 +02.3	N 22 22.5 +00.0	64 59.8 +02.6	S 07 40.9 +00.1	04						
05	332 15.3 +00.9	N 23 29.1 +00.0	348 15.2 +02.2	N 22 22.5 +00.0	80 02.4 +02.7	S 07 41.0 +00.0	05						
06	347 16.2 +00.9	N 23 29.1 -00.1	3 17.4 +02.2	N 22 22.5 +00.0	95 05.1 +02.6	S 07 41.0 +00.1	06						
07	2 17.1 +00.8	N 23 29.0 +00.0	18 19.6 +02.3	N 22 22.5 +00.0	110 07.7 +02.7	S 07 41.1 +00.1	07						
08	17 17.9 +00.9	N 23 29.0 +00.0	33 21.9 +02.2	N 22 22.5 +00.1	125 10.4 +02.6	S 07 41.2 +00.1	08						
09	32 18.8 +00.9	N 23 29.0 +00.0	48 24.1 +02.3	N 22 22.6 +00.0	140 13.0 +02.6	S 07 41.3 +00.0	09						
10	47 19.7 +00.9	N 23 29.0 +00.0	63 26.4 +02.2	N 22 22.6 +00.0	155 15.6 +02.7	S 07 41.3 +00.1	10						
11	62 20.6 +00.8	N 23 29.0 +00.0	78 28.6 +02.3	N 22 22.6 +00.0	170 18.3 +02.6	S 07 41.4 +00.1	11						
12	77 21.4 +00.9	N 23 29.0 +00.0	93 30.9 +02.2	N 22 22.6 +00.0	185 20.9 +02.7	S 07 41.5 +00.1	12						
13	92 22.3 +00.9	N 23 29.0 +00.0	108 33.1 +02.3	N 22 22.6 +00.0	200 23.6 +02.6	S 07 41.6 +00.0	13						
14	107 23.2 +00.9	N 23 29.0 +00.0	123 35.4 +02.2	N 22 22.6 +00.0	215 26.2 +02.6	S 07 41.6 +00.1	14						
15	122 24.1 +00.9	N 23 29.0 +00.0	138 37.6 +02.2	N 22 22.6 +00.1	230 28.8 +02.7	S 07 41.7 +00.1	15						
16	137 25.0 +00.8	N 23 29.0 +00.0	153 39.8 +02.3	N 22 22.7 +00.0	245 31.5 +02.6	S 07 41.8 +00.1	16						
17	152 25.8 +00.9	N 23 29.0 +00.0	168 42.1 +02.2	N 22 22.7 +00.0	260 34.1 +02.7	S 07 41.9 +00.0	17						
18	167 26.7 +00.9	N 23 29.0 +00.0	183 44.3 +02.3	N 22 22.7 +00.0	275 36.8 +02.6	S 07 41.9 +00.1	18						
19	182 27.6 +00.9	N 23 29.0 +00.0	198 46.6 +02.2	N 22 22.7 +00.0	290 39.4 +02.6	S 07 42.0 +00.1	19						
20	197 28.5 +00.9	N 23 29.0 +00.0	213 48.8 +02.3	N 22 22.7 +00.0	305 42.0 +02.7	S 07 42.1 +00.1	20						
21	212 29.4 +00.8	N 23 29.0 +00.0	228 51.1 +02.2	N 22 22.7 +00.0	320 44.7 +02.6	S 07 42.2 +00.0	21						
22	227 30.2 +00.9	N 23 29.0 -00.1	243 53.3 +02.3	N 22 22.7 +00.1	335 47.3 +02.7	S 07 42.2 +00.1	22						
23	242 31.1 +00.9	N 23 28.9 +00.0	258 55.6 +02.2	N 22 22.8 +00.0	350 50.0 +02.6	S 07 42.3 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 265° 265° 264° 264° 264° 264°		SHA 281° 281° 281° 281° 281° 281°		SHA 012° 012° 012° 012° 012° 012°								
	Greenwich Culmination Time: 06:50		Greenwich Culmination Time: 05:46		Greenwich Culmination Time: 23:36								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 36%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 06.5 +00.3	N 03	18.1 -01.0	155 49.7 -00.4	S 06	54.0 +01.2	55 04.2 -35.1	S 25	58.0 -07.6	00			
01	196 06.8 +00.2	N 03	17.1 -01.0	170 49.3 -00.3	S 06	55.2 +01.3	69 29.1 -35.0	S 25	50.4 -07.8	01			
02	211 07.0 +00.2	N 03	16.1 -00.9	185 49.0 -00.4	S 06	56.5 +01.2	83 54.1 -35.0	S 25	42.6 -08.0	02			
03	226 07.2 +00.2	N 03	15.2 -01.0	200 48.6 -00.3	S 06	57.7 +01.3	98 19.1 -34.9	S 25	34.6 -08.2	03			
04	241 07.4 +00.3	N 03	14.2 -00.9	215 48.3 -00.3	S 06	59.0 +01.2	112 44.2 -34.9	S 25	26.4 -08.3	04			
05	256 07.7 +00.2	N 03	13.3 -01.0	230 48.0 -00.4	S 07	00.2 +01.3	127 09.3 -34.9	S 25	18.1 -08.5	05			
06	271 07.9 +00.2	N 03	12.3 -01.0	245 47.6 -00.3	S 07	01.5 +01.3	141 34.4 -34.9	S 25	09.6 -08.7	06			
07	286 08.1 +00.2	N 03	11.3 -00.9	260 47.3 -00.4	S 07	02.8 +01.2	155 59.5 -34.8	S 25	00.9 -08.8	07			
08	301 08.3 +00.3	N 03	10.4 -01.0	275 46.9 -00.3	S 07	04.0 +01.3	170 24.7 -34.8	S 24	52.1 -09.0	08			
09	316 08.6 +00.2	N 03	09.4 -00.9	290 46.6 -00.3	S 07	05.3 +01.2	184 49.9 -34.8	S 24	43.1 -09.2	09			
10	331 08.8 +00.2	N 03	08.5 -01.0	305 46.3 -00.4	S 07	06.5 +01.3	199 15.1 -34.7	S 24	33.9 -09.3	10			
11	346 09.0 +00.2	N 03	07.5 -01.0	320 45.9 -00.3	S 07	07.8 +01.2	213 40.4 -34.7	S 24	24.6 -09.5	11			
12	1 09.2 +00.3	N 03	06.5 -00.9	335 45.6 -00.4	S 07	09.0 +01.3	228 05.7 -34.6	S 24	15.1 -09.7	12			
13	16 09.5 +00.2	N 03	05.6 -01.0	350 45.2 -00.3	S 07	10.3 +01.2	242 31.1 -34.6	S 24	05.4 -09.8	13			
14	31 09.7 +00.2	N 03	04.6 -00.9	5 44.9 -00.4	S 07	11.5 +01.3	256 56.5 -34.5	S 23	55.6 -10.0	14			
15	46 09.9 +00.2	N 03	03.7 -01.0	20 44.5 -00.3	S 07	12.8 +01.2	271 22.0 -34.5	S 23	45.6 -10.2	15			
16	61 10.1 +00.2	N 03	02.7 -01.0	35 44.2 -00.4	S 07	14.0 +01.3	285 47.5 -34.5	S 23	35.4 -10.3	16			
17	76 10.3 +00.3	N 03	01.7 -00.9	50 43.8 -00.3	S 07	15.3 +01.2	300 13.0 -34.4	S 23	25.1 -10.4	17			
18	91 10.6 +00.2	N 03	00.8 -01.0	65 43.5 -00.3	S 07	16.5 +01.3	314 38.6 -34.4	S 23	14.7 -10.7	18			
19	106 10.8 +00.2	N 02	59.8 -00.9	80 43.2 -00.4	S 07	17.8 +01.2	329 04.2 -34.3	S 23	04.0 -10.7	19			
20	121 11.0 +00.2	N 02	58.9 -01.0	95 42.8 -00.3	S 07	19.0 +01.3	343 29.9 -34.2	S 22	53.3 -11.0	20			
21	136 11.2 +00.3	N 02	57.9 -01.0	110 42.5 -00.4	S 07	20.3 +01.2	357 55.7 -34.3	S 22	42.3 -11.1	21			
22	151 11.5 +00.2	N 02	56.9 -00.9	125 42.1 -00.3	S 07	21.5 +01.3	12 21.4 -34.1	S 22	31.2 -11.2	22			
23	166 11.7 +00.2	N 02	56.0 -01.0	140 41.8 -00.4	S 07	22.8 +01.2	26 47.3 -34.2	S 22	20.0 -11.4	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'0 16'0 16'1 16'1 16'1 16'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 58'6 58'8 58'9 59'1 59'2 59'4						
	SHA 188° 187° 187° 187° 187° 187°			SHA 162° 162° 162° 162° 162° 161°			SHA 060° 058° 055° 053° 050° 048°						
	Greenwich Culmination Time: 11:55			Greenwich Culmination Time: 13:36			Greenwich Culmination Time: 21:08						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	257 32.0 +00.9	N 23	28.9 +00.0	273 57.8 +02.3	N 22	22.8 +00.0	5 52.6 +02.6	S 07	42.4 +00.1	00			
01	272 32.9 +00.9	N 23	28.9 +00.0	289 00.1 +02.2	N 22	22.8 +00.0	20 55.2 +02.7	S 07	42.5 +00.0	01			
02	287 33.8 +00.9	N 23	28.9 +00.0	304 02.3 +02.3	N 22	22.8 +00.0	35 57.9 +02.6	S 07	42.5 +00.1	02			
03	302 34.7 +00.8	N 23	28.9 +00.0	319 04.6 +02.2	N 22	22.8 +00.0	51 00.5 +02.7	S 07	42.6 +00.1	03			
04	317 35.5 +00.9	N 23	28.9 +00.0	334 06.8 +02.3	N 22	22.8 +00.0	66 03.2 +02.6	S 07	42.7 +00.1	04			
05	332 36.4 +00.9	N 23	28.9 +00.0	349 09.1 +02.2	N 22	22.8 +00.0	81 05.8 +02.6	S 07	42.8 +00.0	05			
06	347 37.3 +00.9	N 23	28.9 +00.0	4 11.3 +02.3	N 22	22.8 +00.1	96 08.4 +02.7	S 07	42.8 +00.1	06			
07	2 38.2 +00.9	N 23	28.9 +00.0	19 13.6 +02.2	N 22	22.9 +00.0	111 11.1 +02.6	S 07	42.9 +00.1	07			
08	17 39.1 +00.9	N 23	28.9 -00.1	34 15.8 +02.3	N 22	22.9 +00.0	126 13.7 +02.7	S 07	43.0 +00.1	08			
09	32 40.0 +00.8	N 23	28.8 +00.0	49 18.1 +02.2	N 22	22.9 +00.0	141 16.4 +02.6	S 07	43.1 +00.0	09			
10	47 40.8 +00.9	N 23	28.8 +00.0	64 20.3 +02.3	N 22	22.9 +00.0	156 19.0 +02.6	S 07	43.1 +00.1	10			
11	62 41.7 +00.9	N 23	28.8 +00.0	79 22.6 +02.2	N 22	22.9 +00.0	171 21.6 +02.7	S 07	43.2 +00.1	11			
12	77 42.6 +00.9	N 23	28.8 +00.0	94 24.8 +02.3	N 22	22.9 +00.0	186 24.3 +02.6	S 07	43.3 +00.1	12			
13	92 43.5 +00.9	N 23	28.8 +00.0	109 27.1 +02.2	N 22	22.9 +00.0	201 26.9 +02.7	S 07	43.4 +00.0	13			
14	107 44.4 +00.9	N 23	28.8 +00.0	124 29.3 +02.3	N 22	22.9 +00.1	216 29.6 +02.6	S 07	43.4 +00.1	14			
15	122 45.3 +00.9	N 23	28.8 +00.0	139 31.6 +02.2	N 22	23.0 +00.0	231 32.2 +02.6	S 07	43.5 +00.1	15			
16	137 46.2 +00.9	N 23	28.8 +00.0	154 33.8 +02.3	N 22	23.0 +00.0	246 34.8 +02.7	S 07	43.6 +00.1	16			
17	152 47.1 +00.8	N 23	28.8 -00.1	169 36.1 +02.2	N 22	23.0 +00.0	261 37.5 +02.6	S 07	43.7 +00.0	17			
18	167 47.9 +00.9	N 23	28.7 +00.0	184 38.3 +02.3	N 22	23.0 +00.0	276 40.1 +02.7	S 07	43.7 +00.1	18			
19	182 48.8 +00.9	N 23	28.7 +00.0	199 40.6 +02.2	N 22	23.0 +00.0	291 42.8 +02.6	S 07	43.8 +00.1	19			
20	197 49.7 +00.9	N 23	28.7 +00.0	214 42.8 +02.3	N 22	23.0 +00.0	306 45.4 +02.6	S 07	43.9 +00.1	20			
21	212 50.6 +00.9	N 23	28.7 +00.0	229 45.1 +02.3	N 22	23.0 +00.1	321 48.0 +02.7	S 07	44.0 +00.0	21			
22	227 51.5 +00.9	N 23	28.7 +00.0	244 47.4 +02.2	N 22	23.1 +00.0	336 50.7 +02.6	S 07	44.0 +00.1	22			
23	242 52.4 +00.9	N 23	28.7 +00.0	259 49.6 +02.3	N 22	23.1 +00.0	351 53.3 +02.7	S 07	44.1 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 264° 264° 264° 264° 264° 263°			SHA 280° 280° 280° 280° 280° 280°			SHA 012° 012° 012° 012° 012° 012°						
	Greenwich Culmination Time: 06:49			Greenwich Culmination Time: 05:43			Greenwich Culmination Time: 23:32						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT					
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec						
00	181	11.9	+00.2	N 02 55.0	-01.0	155	41.4	-00.3	S 07 24.0	+01.3	41	13.1	-34.0	S 22 08.6	-11.6	00		
01	196	12.1	+00.3	N 02 54.0	-00.9	170	41.1	-00.4	S 07 25.3	+01.2	55	39.1	-34.1	S 21 57.0	-11.7	01		
02	211	12.4	+00.2	N 02 53.1	-01.0	185	40.7	-00.3	S 07 26.5	+01.3	70	05.0	-33.9	S 21 45.3	-11.8	02		
03	226	12.6	+00.2	N 02 52.1	-00.9	200	40.4	-00.4	S 07 27.8	+01.2	84	31.1	-34.0	S 21 33.5	-12.0	03		
04	241	12.8	+00.2	N 02 51.2	-01.0	215	40.0	-00.3	S 07 29.0	+01.3	98	57.1	-33.8	S 21 21.5	-12.1	04		
05	256	13.0	+00.3	N 02 50.2	-01.0	230	39.7	-00.3	S 07 30.3	+01.2	113	23.3	-33.8	S 21 09.4	-12.3	05		
06	271	13.3	+00.2	N 02 49.2	-00.9	245	39.4	-00.4	S 07 31.5	+01.3	127	49.5	-33.8	S 20 57.1	-12.5	06		
07	286	13.5	+00.2	N 02 48.3	-01.0	260	39.0	-00.3	S 07 32.8	+01.2	142	15.7	-33.7	S 20 44.6	-12.5	07		
08	301	13.7	+00.2	N 02 47.3	-01.0	275	38.7	-00.4	S 07 34.0	+01.3	156	42.0	-33.7	S 20 32.1	-12.8	08		
09	316	13.9	+00.3	N 02 46.3	-00.9	290	38.3	-00.3	S 07 35.3	+01.2	171	08.3	-33.6	S 20 19.3	-12.8	09		
10	331	14.2	+00.2	N 02 45.4	-01.0	305	38.0	-00.4	S 07 36.5	+01.3	185	34.7	-33.5	S 20 06.5	-13.0	10		
11	346	14.4	+00.2	N 02 44.4	-00.9	320	37.6	-00.3	S 07 37.8	+01.2	200	01.2	-33.5	S 19 53.5	-13.1	11		
12	1	14.6	+00.2	N 02 43.5	-01.0	335	37.3	-00.4	S 07 39.0	+01.3	214	27.7	-33.4	S 19 40.4	-13.3	12		
13	16	14.8	+00.2	N 02 42.5	-01.0	350	36.9	-00.3	S 07 40.3	+01.2	228	54.3	-33.4	S 19 27.1	-13.4	13		
14	31	15.0	+00.3	N 02 41.5	-00.9	5	36.6	-00.4	S 07 41.5	+01.3	243	20.9	-33.4	S 19 13.7	-13.5	14		
15	46	15.3	+00.2	N 02 40.6	-01.0	20	36.2	-00.3	S 07 42.8	+01.2	257	47.5	-33.2	S 19 00.2	-13.7	15		
16	61	15.5	+00.2	N 02 39.6	-01.0	35	35.9	-00.4	S 07 44.0	+01.2	272	14.3	-33.2	S 18 46.5	-13.8	16		
17	76	15.7	+00.2	N 02 38.6	-00.9	50	35.5	-00.3	S 07 45.2	+01.3	286	41.1	-33.2	S 18 32.7	-13.9	17		
18	91	15.9	+00.3	N 02 37.7	-01.0	65	35.2	-00.4	S 07 46.5	+01.2	301	07.9	-33.1	S 18 18.8	-14.1	18		
19	106	16.2	+00.2	N 02 36.7	-01.0	80	34.8	-00.3	S 07 47.7	+01.3	315	34.8	-33.1	S 18 04.7	-14.1	19		
20	121	16.4	+00.2	N 02 35.7	-00.9	95	34.5	-00.4	S 07 49.0	+01.2	330	01.7	-33.0	S 17 50.6	-14.3	20		
21	136	16.6	+00.2	N 02 34.8	-01.0	110	34.1	-00.3	S 07 50.2	+01.3	344	28.7	-32.9	S 17 36.3	-14.4	21		
22	151	16.8	+00.3	N 02 33.8	-00.9	125	33.8	-00.4	S 07 51.5	+01.2	358	55.8	-32.9	S 17 21.9	-14.6	22		
23	166	17.1	+00.2	N 02 32.9	-01.0	140	33.4	-00.3	S 07 52.7	+01.3	13	22.9	-32.9	S 17 07.3	-14.6	23		
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22								UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9					SD 00'1 00'1 00'1 00'1 00'1 00'1								SD 16'2 16'3 16'3 16'3 16'4 16'4				
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1								HP 59'6 59'7 59'8 60'0 60'1 60'2				
	SHA 187° 187° 186° 186° 186° 186°					SHA 161° 161° 161° 161° 160° 160°								SHA 046° 043° 041° 038° 036° 034°				
	Greenwich Culmination Time: 11:55					Greenwich Culmination Time: 13:37								Greenwich Culmination Time: 22:04				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT					
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec						
00	257	53.3	+00.9	N 23 28.7	-00.1	274	51.9	+02.2	N 22 23.1	+00.0	6	56.0	+02.6	S 07 44.2	+00.1	00		
01	272	54.2	+00.9	N 23 28.6	+00.0	289	54.1	+02.3	N 22 23.1	+00.0	21	58.6	+02.6	S 07 44.3	+00.0	01		
02	287	55.1	+00.9	N 23 28.6	+00.0	304	56.4	+02.2	N 22 23.1	+00.0	37	01.2	+02.7	S 07 44.3	+00.1	02		
03	302	56.0	+00.8	N 23 28.6	+00.0	319	58.6	+02.3	N 22 23.1	+00.0	52	03.9	+02.6	S 07 44.4	+00.1	03		
04	317	56.8	+00.9	N 23 28.6	+00.0	335	00.9	+02.3	N 22 23.1	+00.0	67	06.5	+02.7	S 07 44.5	+00.1	04		
05	332	57.7	+00.9	N 23 28.6	+00.0	350	03.2	+02.2	N 22 23.1	+00.1	82	09.2	+02.6	S 07 44.6	+00.0	05		
06	347	58.6	+00.9	N 23 28.6	+00.0	5	05.4	+02.3	N 22 23.2	+00.0	97	11.8	+02.6	S 07 44.6	+00.1	06		
07	2	59.5	+00.9	N 23 28.6	-00.1	20	07.7	+02.2	N 22 23.2	+00.0	112	14.4	+02.7	S 07 44.7	+00.1	07		
08	18	00.4	+00.9	N 23 28.5	+00.0	35	09.9	+02.3	N 22 23.2	+00.0	127	17.1	+02.6	S 07 44.8	+00.1	08		
09	33	01.3	+00.9	N 23 28.5	+00.0	50	12.2	+02.2	N 22 23.2	+00.0	142	19.7	+02.7	S 07 44.9	+00.0	09		
10	48	02.2	+00.9	N 23 28.5	+00.0	65	14.4	+02.3	N 22 23.2	+00.0	157	22.4	+02.6	S 07 44.9	+00.1	10		
11	63	03.1	+00.9	N 23 28.5	+00.0	80	16.7	+02.3	N 22 23.2	+00.0	172	25.0	+02.6	S 07 45.0	+00.1	11		
12	78	04.0	+00.9	N 23 28.5	+00.0	95	19.0	+02.2	N 22 23.2	+00.0	187	27.6	+02.7	S 07 45.1	+00.1	12		
13	93	04.9	+00.9	N 23 28.5	-00.1	110	21.2	+02.3	N 22 23.2	+00.1	202	30.3	+02.6	S 07 45.2	+00.0	13		
14	108	05.8	+00.9	N 23 28.4	+00.0	125	23.5	+02.2	N 22 23.3	+00.0	217	32.9	+02.7	S 07 45.2	+00.1	14		
15	123	06.7	+00.9	N 23 28.4	+00.0	140	25.7	+02.3	N 22 23.3	+00.0	232	35.6	+02.6	S 07 45.3	+00.1	15		
16	138	07.6	+00.9	N 23 28.4	+00.0	155	28.0	+02.3	N 22 23.3	+00.0	247	38.2	+02.6	S 07 45.4	+00.0	16		
17	153	08.5	+00.9	N 23 28.4	+00.0	170	30.3	+02.2	N 22 23.3	+00.0	262	40.8	+02.7	S 07 45.4	+00.1	17		
18	168	09.4	+00.9	N 23 28.4	-00.1	185	32.5	+02.3	N 22 23.3	+00.0	277	43.5	+02.6	S 07 45.5	+00.1	18		
19	183	10.3	+00.9	N 23 28.3	+00.0	200	34.8	+02.3	N 22 23.3	+00.0	292	46.1	+02.6	S 07 45.6	+00.1	19		
20	198	11.2	+00.9	N 23 28.3	+00.0	215	37.1	+02.2	N 22 23.3	+00.0	307	48.7	+02.7	S 07 45.7	+00.0	20		
21	213	12.1	+00.8	N 23 28.3	+00.0	230	39.3	+02.3	N 22 23.3	+00.1	322	51.4	+02.6	S 07 45.7	+00.1	21		
22	228	12.9	+00.9	N 23 28.3	+00.0	245	41.6	+02.2	N 22 23.4	+00.0	337	54.0	+02.7	S 07 45.8	+00.1	22		
23	243	13.8	+00.9	N 23 28.3	-00.1	260	43.8	+02.3	N 22 23.4	+00.0	352	56.7	+02.6	S 07 45.9	+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 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'0 00'0 00'0 00'0 00'0 00'0								HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 263° 263° 263° 263° 263° 263°					SHA 280° 280° 280° 280° 280° 280°								SHA 012° 013° 013° 013° 013° 013°				
	Greenwich Culmination Time: 06:48					Greenwich Culmination Time: 05:39								Greenwich Culmination Time: 23:28				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181	17.3 +00.2	N 02 31.9	-01.0	155	33.1 -00.4	S 07 54.0	+01.2	27	50.0 -32.8	S 16 52.7	-14.8	00
01	196	17.5 +00.2	N 02 30.9	-00.9	170	32.7 -00.3	S 07 55.2	+01.2	42	17.2 -32.7	S 16 37.9	-14.9	01
02	211	17.7 +00.3	N 02 30.0	-01.0	185	32.4 -00.4	S 07 56.4	+01.3	56	44.5 -32.7	S 16 23.0	-15.0	02
03	226	18.0 +00.2	N 02 29.0	-01.0	200	32.0 -00.3	S 07 57.7	+01.2	71	11.8 -32.6	S 16 08.0	-15.1	03
04	241	18.2 +00.2	N 02 28.0	-00.9	215	31.7 -00.4	S 07 58.9	+01.3	85	39.2 -32.6	S 15 52.9	-15.2	04
05	256	18.4 +00.2	N 02 27.1	-01.0	230	31.3 -00.3	S 08 00.2	+01.2	100	06.6 -32.5	S 15 37.7	-15.3	05
06	271	18.6 +00.3	N 02 26.1	-01.0	245	31.0 -00.4	S 08 01.4	+01.3	114	34.1 -32.5	S 15 22.4	-15.5	06
07	286	18.9 +00.2	N 02 25.1	-00.9	260	30.6 -00.3	S 08 02.7	+01.2	129	01.6 -32.4	S 15 06.9	-15.5	07
08	301	19.1 +00.2	N 02 24.2	-01.0	275	30.3 -00.4	S 08 03.9	+01.2	143	29.2 -32.4	S 14 51.4	-15.7	08
09	316	19.3 +00.2	N 02 23.2	-01.0	290	29.9 -00.4	S 08 05.1	+01.3	157	56.8 -32.4	S 14 35.7	-15.7	09
10	331	19.5 +00.3	N 02 22.2	-00.9	305	29.5 -00.3	S 08 06.4	+01.2	172	24.4 -32.2	S 14 20.0	-15.9	10
11	346	19.8 +00.2	N 02 21.3	-01.0	320	29.2 -00.4	S 08 07.6	+01.3	186	52.2 -32.3	S 14 04.1	-15.9	11
12	1	20.0 +00.2	N 02 20.3	-00.9	335	28.8 -00.3	S 08 08.9	+01.2	201	19.9 -32.2	S 13 48.2	-16.0	12
13	16	20.2 +00.2	N 02 19.4	-01.0	350	28.5 -00.4	S 08 10.1	+01.2	215	47.7 -32.1	S 13 32.2	-16.2	13
14	31	20.4 +00.3	N 02 18.4	-01.0	5	28.1 -00.3	S 08 11.3	+01.3	230	15.6 -32.1	S 13 16.0	-16.2	14
15	46	20.7 +00.2	N 02 17.4	-00.9	20	27.8 -00.4	S 08 12.6	+01.2	244	43.5 -32.0	S 12 59.8	-16.3	15
16	61	20.9 +00.2	N 02 16.5	-01.0	35	27.4 -00.3	S 08 13.8	+01.3	259	11.5 -32.0	S 12 43.5	-16.4	16
17	76	21.1 +00.2	N 02 15.5	-01.0	50	27.1 -00.4	S 08 15.1	+01.2	273	39.5 -32.0	S 12 27.1	-16.5	17
18	91	21.3 +00.3	N 02 14.5	-00.9	65	26.7 -00.3	S 08 16.3	+01.2	288	07.5 -31.9	S 12 10.6	-16.6	18
19	106	21.6 +00.2	N 02 13.6	-01.0	80	26.4 -00.4	S 08 17.5	+01.3	302	35.6 -31.9	S 11 54.0	-16.6	19
20	121	21.8 +00.2	N 02 12.6	-01.0	95	26.0 -00.4	S 08 18.8	+01.2	317	03.7 -31.8	S 11 37.4	-16.8	20
21	136	22.0 +00.2	N 02 11.6	-00.9	110	25.6 -00.3	S 08 20.0	+01.2	331	31.9 -31.8	S 11 20.6	-16.8	21
22	151	22.2 +00.3	N 02 10.7	-01.0	125	25.3 -00.4	S 08 21.2	+01.3	346	00.1 -31.8	S 11 03.8	-16.9	22
23	166	22.5 +00.2	N 02 09.7	-01.0	140	24.9 -00.3	S 08 22.5	+01.2	0	28.3 -31.7	S 10 46.9	-17.0	23
	UT 02 06 10 14 18 22												
	SD 15'9 15'9 15'9 15'9 15'9 15'9												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 186° 186° 185° 185° 185° 185°												
	Greenwich Culmination Time: 11:54												
	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 160° 160° 160° 159° 159° 159°												
	Greenwich Culmination Time: 13:38												
	UT 02 06 10 14 18 22												
	SD 16'4 16'5 16'5 16'5 16'6 16'6												
	HP 60'4 60'5 60'6 60'7 60'8 60'9												
	SHA 031° 029° 027° 024° 022° 020°												
	Greenwich Culmination Time: 22:58												

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	258	14.7 +00.9	N 23 28.2	+00.0	275	46.1 +02.3	N 22 23.4	+00.0	7	59.3 +02.6	S 07 46.0	+00.0	00
01	273	15.6 +00.9	N 23 28.2	+00.0	290	48.4 +02.2	N 22 23.4	+00.0	23	01.9 +02.7	S 07 46.0	+00.1	01
02	288	16.5 +00.9	N 23 28.2	+00.0	305	50.6 +02.3	N 22 23.4	+00.0	38	04.6 +02.6	S 07 46.1	+00.1	02
03	303	17.4 +00.9	N 23 28.2	+00.0	320	52.9 +02.3	N 22 23.4	+00.0	53	07.2 +02.7	S 07 46.2	+00.1	03
04	318	18.3 +00.9	N 23 28.2	-00.1	335	55.2 +02.2	N 22 23.4	+00.0	68	09.9 +02.6	S 07 46.3	+00.0	04
05	333	19.2 +00.9	N 23 28.1	+00.0	350	57.4 +02.3	N 22 23.4	+00.0	83	12.5 +02.6	S 07 46.3	+00.1	05
06	348	20.1 +00.9	N 23 28.1	+00.0	5	59.7 +02.3	N 22 23.4	+00.1	98	15.1 +02.7	S 07 46.4	+00.1	06
07	3	21.0 +00.9	N 23 28.1	+00.0	21	02.0 +02.2	N 22 23.5	+00.0	113	17.8 +02.6	S 07 46.5	+00.1	07
08	18	21.9 +00.9	N 23 28.1	+00.0	36	04.2 +02.3	N 22 23.5	+00.0	128	20.4 +02.7	S 07 46.6	+00.0	08
09	33	22.8 +00.9	N 23 28.1	-00.1	51	06.5 +02.3	N 22 23.5	+00.0	143	23.1 +02.6	S 07 46.6	+00.1	09
10	48	23.7 +00.9	N 23 28.0	+00.0	66	08.8 +02.2	N 22 23.5	+00.0	158	25.7 +02.6	S 07 46.7	+00.1	10
11	63	24.6 +00.9	N 23 28.0	+00.0	81	11.0 +02.3	N 22 23.5	+00.0	173	28.3 +02.7	S 07 46.8	+00.1	11
12	78	25.5 +01.0	N 23 28.0	+00.0	96	13.3 +02.3	N 22 23.5	+00.0	188	31.0 +02.6	S 07 46.9	+00.0	12
13	93	26.5 +00.9	N 23 28.0	+00.0	111	15.6 +02.2	N 22 23.5	+00.0	203	33.6 +02.6	S 07 46.9	+00.1	13
14	108	27.4 +00.9	N 23 28.0	-00.1	126	17.8 +02.3	N 22 23.5	+00.1	218	36.2 +02.7	S 07 47.0	+00.1	14
15	123	28.3 +00.9	N 23 27.9	+00.0	141	20.1 +02.3	N 22 23.6	+00.0	233	38.9 +02.6	S 07 47.1	+00.0	15
16	138	29.2 +00.9	N 23 27.9	+00.0	156	22.4 +02.2	N 22 23.6	+00.0	248	41.5 +02.7	S 07 47.1	+00.1	16
17	153	30.1 +00.9	N 23 27.9	+00.0	171	24.6 +02.3	N 22 23.6	+00.0	263	44.2 +02.6	S 07 47.2	+00.1	17
18	168	31.0 +00.9	N 23 27.9	-00.1	186	26.9 +02.3	N 22 23.6	+00.0	278	46.8 +02.6	S 07 47.3	+00.1	18
19	183	31.9 +00.9	N 23 27.8	+00.0	201	29.2 +02.2	N 22 23.6	+00.0	293	49.4 +02.7	S 07 47.4	+00.0	19
20	198	32.8 +00.9	N 23 27.8	+00.0	216	31.4 +02.3	N 22 23.6	+00.0	308	52.1 +02.6	S 07 47.4	+00.1	20
21	213	33.7 +00.9	N 23 27.8	+00.0	231	33.7 +02.3	N 22 23.6	+00.0	323	54.7 +02.7	S 07 47.5	+00.1	21
22	228	34.6 +00.9	N 23 27.8	-00.1	246	36.0 +02.3	N 22 23.6	+00.0	338	57.4 +02.6	S 07 47.6	+00.1	22
23	243	35.5 +00.9	N 23 27.7	+00.0	261	38.3 +02.2	N 22 23.6	+00.1	353	60.0 +02.6	S 07 47.7	+00.0	23
	UT 02 06 10 14 18 22												
	SD 00'1 00'1 00'1 00'1 00'1 00'1												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 263° 263° 263° 262° 262° 262°												
	Greenwich Culmination Time: 06:46												
	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 280° 280° 280° 280° 280° 280°												
	Greenwich Culmination Time: 05:36												
	UT 02 06 10 14 18 22												
	SD 00'2 00'2 00'2 00'2 00'2 00'2												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 013° 013° 013° 013° 013° 013°												
	Greenwich Culmination Time: 23:23												

UT	Sun				Venus				Moon				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	181	22.7	+00.2	N 02 08.7	-00.9	155	24.6	-00.4	S 08 23.7	+01.3	14	56.6	-31.7	S 10 29.9	-17.0	00
01	196	22.9	+00.2	N 02 07.8	-01.0	170	24.2	-00.3	S 08 25.0	+01.2	29	24.9	-31.6	S 10 12.9	-17.1	01
02	211	23.1	+00.2	N 02 06.8	-01.0	185	23.9	-00.4	S 08 26.2	+01.2	43	53.3	-31.6	S 09 55.8	-17.2	02
03	226	23.3	+00.3	N 02 05.8	-00.9	200	23.5	-00.4	S 08 27.4	+01.3	58	21.7	-31.6	S 09 38.6	-17.3	03
04	241	23.6	+00.2	N 02 04.9	-01.0	215	23.1	-00.3	S 08 28.7	+01.2	72	50.1	-31.5	S 09 21.3	-17.3	04
05	256	23.8	+00.2	N 02 03.9	-01.0	230	22.8	-00.4	S 08 29.9	+01.2	87	18.6	-31.5	S 09 04.0	-17.4	05
06	271	24.0	+00.2	N 02 02.9	-00.9	245	22.4	-00.3	S 08 31.1	+01.3	101	47.1	-31.5	S 08 46.6	-17.4	06
07	286	24.2	+00.3	N 02 02.0	-01.0	260	22.1	-00.4	S 08 32.4	+01.2	116	15.6	-31.4	S 08 29.2	-17.5	07
08	301	24.5	+00.2	N 02 01.0	-01.0	275	21.7	-00.4	S 08 33.6	+01.2	130	44.2	-31.4	S 08 11.7	-17.5	08
09	316	24.7	+00.2	N 02 00.0	-00.9	290	21.3	-00.3	S 08 34.8	+01.3	145	12.8	-31.4	S 07 54.2	-17.7	09
10	331	24.9	+00.2	N 01 59.1	-01.0	305	21.0	-00.4	S 08 36.1	+01.2	159	41.4	-31.3	S 07 36.5	-17.6	10
11	346	25.1	+00.3	N 01 58.1	-01.0	320	20.6	-00.3	S 08 37.3	+01.2	174	10.1	-31.4	S 07 18.9	-17.7	11
12	1	25.4	+00.2	N 01 57.1	-00.9	335	20.3	-00.4	S 08 38.5	+01.3	188	38.7	-31.2	S 07 01.2	-17.8	12
13	16	25.6	+00.2	N 01 56.2	-01.0	350	19.9	-00.4	S 08 39.8	+01.2	203	07.5	-31.3	S 06 43.4	-17.8	13
14	31	25.8	+00.2	N 01 55.2	-01.0	5	19.5	-00.3	S 08 41.0	+01.2	217	36.2	-31.3	S 06 25.6	-17.9	14
15	46	26.0	+00.3	N 01 54.2	-00.9	20	19.2	-00.4	S 08 42.2	+01.3	232	04.9	-31.2	S 06 07.7	-17.9	15
16	61	26.3	+00.2	N 01 53.3	-01.0	35	18.8	-00.3	S 08 43.5	+01.2	246	33.7	-31.2	S 05 49.8	-17.9	16
17	76	26.5	+00.2	N 01 52.3	-01.0	50	18.5	-00.4	S 08 44.7	+01.2	261	02.5	-31.2	S 05 31.9	-18.0	17
18	91	26.7	+00.2	N 01 51.3	-00.9	65	18.1	-00.4	S 08 45.9	+01.2	275	31.3	-31.1	S 05 13.9	-18.0	18
19	106	26.9	+00.3	N 01 50.4	-01.0	80	17.7	-00.3	S 08 47.1	+01.3	290	00.2	-31.2	S 04 55.9	-18.1	19
20	121	27.2	+00.2	N 01 49.4	-01.0	95	17.4	-00.4	S 08 48.4	+01.2	304	29.0	-31.1	S 04 37.8	-18.1	20
21	136	27.4	+00.2	N 01 48.4	-00.9	110	17.0	-00.3	S 08 49.6	+01.2	318	57.9	-31.1	S 04 19.7	-18.1	21
22	151	27.6	+00.2	N 01 47.5	-01.0	125	16.7	-00.4	S 08 50.8	+01.3	333	26.8	-31.1	S 04 01.6	-18.1	22
23	166	27.8	+00.3	N 01 46.5	-01.0	140	16.3	-00.4	S 08 52.1	+01.2	347	55.7	-31.1	S 03 43.5	-18.2	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22										
	SD 15'9 15'9 15'9 15'9 15'9 15'9					SD 00'1 00'1 00'1 00'1 00'1 00'1										
	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 185° 185° 185° 184° 184° 184°					SHA 159° 159° 159° 158° 158° 158°										
	Greenwich Culmination Time: 11:54					Greenwich Culmination Time: 13:38										
UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	258	36.4	+00.9	N 23 27.7	+00.0	276	40.5	+02.3	N 22 23.7	+00.0	9	02.6	+02.7	S 07 47.7	+00.1	00
01	273	37.3	+00.9	N 23 27.7	+00.0	291	42.8	+02.3	N 22 23.7	+00.0	24	05.3	+02.6	S 07 47.8	+00.1	01
02	288	38.2	+00.9	N 23 27.7	-00.1	306	45.1	+02.2	N 22 23.7	+00.0	39	07.9	+02.6	S 07 47.9	+00.1	02
03	303	39.1	+00.9	N 23 27.6	+00.0	321	47.3	+02.3	N 22 23.7	+00.0	54	10.5	+02.7	S 07 48.0	+00.0	03
04	318	40.0	+00.9	N 23 27.6	+00.0	336	49.6	+02.3	N 22 23.7	+00.0	69	13.2	+02.6	S 07 48.0	+00.1	04
05	333	40.9	+00.9	N 23 27.6	+00.0	351	51.9	+02.3	N 22 23.7	+00.0	84	15.8	+02.7	S 07 48.1	+00.1	05
06	348	41.8	+01.0	N 23 27.6	-00.1	6	54.2	+02.2	N 22 23.7	+00.0	99	18.5	+02.6	S 07 48.2	+00.0	06
07	3	42.8	+00.9	N 23 27.5	+00.0	21	56.4	+02.3	N 22 23.7	+00.0	114	21.1	+02.6	S 07 48.2	+00.1	07
08	18	43.7	+00.9	N 23 27.5	+00.0	36	58.7	+02.3	N 22 23.7	+00.1	129	23.7	+02.7	S 07 48.3	+00.1	08
09	33	44.6	+00.9	N 23 27.5	+00.0	52	01.0	+02.3	N 22 23.8	+00.0	144	26.4	+02.6	S 07 48.4	+00.1	09
10	48	45.5	+00.9	N 23 27.5	-00.1	67	03.3	+02.2	N 22 23.8	+00.0	159	29.0	+02.6	S 07 48.5	+00.0	10
11	63	46.4	+00.9	N 23 27.4	+00.0	82	05.5	+02.3	N 22 23.8	+00.0	174	31.6	+02.7	S 07 48.5	+00.1	11
12	78	47.3	+00.9	N 23 27.4	+00.0	97	07.8	+02.3	N 22 23.8	+00.0	189	34.3	+02.6	S 07 48.6	+00.1	12
13	93	48.2	+00.9	N 23 27.4	-00.1	112	10.1	+02.3	N 22 23.8	+00.0	204	36.9	+02.7	S 07 48.7	+00.1	13
14	108	49.1	+00.9	N 23 27.3	+00.0	127	12.4	+02.2	N 22 23.8	+00.0	219	39.6	+02.6	S 07 48.8	+00.0	14
15	123	50.0	+00.9	N 23 27.3	+00.0	142	14.6	+02.3	N 22 23.8	+00.0	234	42.2	+02.6	S 07 48.8	+00.1	15
16	138	50.9	+01.0	N 23 27.3	+00.0	157	16.9	+02.3	N 22 23.8	+00.0	249	44.8	+02.7	S 07 48.9	+00.1	16
17	153	51.9	+00.9	N 23 27.3	-00.1	172	19.2	+02.3	N 22 23.8	+00.1	264	47.5	+02.6	S 07 49.0	+00.1	17
18	168	52.8	+00.9	N 23 27.2	+00.0	187	21.5	+02.3	N 22 23.9	+00.0	279	50.1	+02.6	S 07 49.1	+00.0	18
19	183	53.7	+00.9	N 23 27.2	+00.0	202	23.8	+02.2	N 22 23.9	+00.0	294	52.7	+02.7	S 07 49.1	+00.1	19
20	198	54.6	+00.9	N 23 27.2	-00.1	217	26.0	+02.3	N 22 23.9	+00.0	309	55.4	+02.6	S 07 49.2	+00.1	20
21	213	55.5	+00.9	N 23 27.1	+00.0	232	28.3	+02.3	N 22 23.9	+00.0	324	58.0	+02.7	S 07 49.3	+00.0	21
22	228	56.4	+00.9	N 23 27.1	+00.0	247	30.6	+02.3	N 22 23.9	+00.0	340	00.7	+02.6	S 07 49.3	+00.1	22
23	243	57.3	+01.0	N 23 27.1	-00.1	262	32.9	+02.2	N 22 23.9	+00.0	355	03.3	+02.6	S 07 49.4	+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 262° 262° 262° 262° 262° 262°					SHA 280° 280° 280° 280° 280° 280°										
	Greenwich Culmination Time: 06:45					Greenwich Culmination Time: 05:32										

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 28.1 +00.2	N 01 45.5 -00.9	155 15.9 -00.3	S 08 53.3 +01.2	2 24.6 -31.0	S 03 25.3 -18.2	00						
01	196 28.3 +00.2	N 01 44.6 -01.0	170 15.6 -00.4	S 08 54.5 +01.3	16 53.6 -31.1	S 03 07.1 -18.2	01						
02	211 28.5 +00.2	N 01 43.6 -01.0	185 15.2 -00.4	S 08 55.8 +01.2	31 22.5 -31.0	S 02 48.9 -18.2	02						
03	226 28.7 +00.3	N 01 42.6 -00.9	200 14.8 -00.3	S 08 57.0 +01.2	45 51.5 -31.1	S 02 30.7 -18.3	03						
04	241 29.0 +00.2	N 01 41.7 -01.0	215 14.5 -00.4	S 08 58.2 +01.2	60 20.4 -31.0	S 02 12.4 -18.3	04						
05	256 29.2 +00.2	N 01 40.7 -01.0	230 14.1 -00.4	S 08 59.4 +01.3	74 49.4 -31.0	S 01 54.1 -18.2	05						
06	271 29.4 +00.2	N 01 39.7 -00.9	245 13.7 -00.3	S 09 00.7 +01.2	89 18.4 -31.0	S 01 35.9 -18.3	06						
07	286 29.6 +00.3	N 01 38.8 -01.0	260 13.4 -00.4	S 09 01.9 +01.2	103 47.4 -31.1	S 01 17.6 -18.3	07						
08	301 29.9 +00.2	N 01 37.8 -01.0	275 13.0 -00.4	S 09 03.1 +01.2	118 16.3 -31.0	S 00 59.3 -18.4	08						
09	316 30.1 +00.2	N 01 36.8 -00.9	290 12.6 -00.3	S 09 04.3 +01.3	132 45.3 -31.0	S 00 40.9 -18.3	09						
10	331 30.3 +00.2	N 01 35.9 -01.0	305 12.3 -00.4	S 09 05.6 +01.2	147 14.3 -31.0	S 00 22.6 -18.3	10						
11	346 30.5 +00.2	N 01 34.9 -01.0	320 11.9 -00.4	S 09 06.8 +01.2	161 43.3 -31.0	S 00 04.3 -18.3	11						
12	1 30.7 +00.3	N 01 33.9 -01.0	335 11.5 -00.3	S 09 08.0 +01.2	176 12.3 -31.0	N 00 14.0 +18.3	12						
13	16 31.0 +00.2	N 01 32.9 -00.9	350 11.2 -00.4	S 09 09.2 +01.3	190 41.3 -31.0	N 00 32.3 +18.4	13						
14	31 31.2 +00.2	N 01 32.0 -01.0	5 10.8 -00.4	S 09 10.5 +01.2	205 10.3 -31.0	N 00 50.7 +18.3	14						
15	46 31.4 +00.2	N 01 31.0 -01.0	20 10.4 -00.3	S 09 11.7 +01.2	219 39.3 -31.0	N 01 09.0 +18.3	15						
16	61 31.6 +00.3	N 01 30.0 -00.9	35 10.1 -00.4	S 09 12.9 +01.2	234 08.3 -31.1	N 01 27.3 +18.3	16						
17	76 31.9 +00.2	N 01 29.1 -01.0	50 09.7 -00.4	S 09 14.1 +01.3	248 37.2 -31.0	N 01 45.6 +18.3	17						
18	91 32.1 +00.2	N 01 28.1 -01.0	65 09.3 -00.3	S 09 15.4 +01.2	263 06.2 -31.1	N 02 03.9 +18.2	18						
19	106 32.3 +00.2	N 01 27.1 -00.9	80 09.0 -00.4	S 09 16.6 +01.2	277 35.1 -31.0	N 02 22.1 +18.3	19						
20	121 32.5 +00.3	N 01 26.2 -01.0	95 08.6 -00.4	S 09 17.8 +01.2	292 04.1 -31.1	N 02 40.4 +18.2	20						
21	136 32.8 +00.2	N 01 25.2 -01.0	110 08.2 -00.3	S 09 19.0 +01.3	306 33.0 -31.1	N 02 58.6 +18.2	21						
22	151 33.0 +00.2	N 01 24.2 -00.9	125 07.9 -00.4	S 09 20.3 +01.2	321 01.9 -31.1	N 03 16.8 +18.2	22						
23	166 33.2 +00.2	N 01 23.3 -01.0	140 07.5 -00.4	S 09 21.5 +01.2	335 30.8 -31.1	N 03 35.0 +18.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'3 61'3 61'3 61'3 61'3 61'3								
	SHA 184° 184° 184° 184° 183° 183°		SHA 158° 158° 157° 157° 157° 157°		SHA 004° 002° 359° 357° 355° 353°								
	Greenwich Culmination Time: 11:53		Greenwich Culmination Time: 13:39		Greenwich Culmination Time: -1:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	258 58.3 +00.9	N 23 27.0 +00.0	277 35.1 +02.3	N 22 23.9 +00.0	10 05.9 +02.7	S 07 49.5 +00.1	00						
01	273 59.2 +00.9	N 23 27.0 +00.0	292 37.4 +02.3	N 22 23.9 +00.0	25 08.6 +02.6	S 07 49.6 +00.0	01						
02	289 00.1 +00.9	N 23 27.0 +00.0	307 39.7 +02.3	N 22 23.9 +00.1	40 11.2 +02.6	S 07 49.6 +00.1	02						
03	304 01.0 +00.9	N 23 27.0 -00.1	322 42.0 +02.3	N 22 24.0 +00.0	55 13.8 +02.7	S 07 49.7 +00.1	03						
04	319 01.9 +00.9	N 23 26.9 +00.0	337 44.3 +02.2	N 22 24.0 +00.0	70 16.5 +02.6	S 07 49.8 +00.1	04						
05	334 02.8 +00.9	N 23 26.9 +00.0	352 46.5 +02.3	N 22 24.0 +00.0	85 19.1 +02.7	S 07 49.9 +00.0	05						
06	349 03.7 +01.0	N 23 26.9 -00.1	7 48.8 +02.3	N 22 24.0 +00.0	100 21.8 +02.6	S 07 49.9 +00.1	06						
07	4 04.7 +00.9	N 23 26.8 +00.0	22 51.1 +02.3	N 22 24.0 +00.0	115 24.4 +02.6	S 07 50.0 +00.1	07						
08	19 05.6 +00.9	N 23 26.8 +00.0	37 53.4 +02.3	N 22 24.0 +00.0	130 27.0 +02.7	S 07 50.1 +00.0	08						
09	34 06.5 +00.9	N 23 26.8 -00.1	52 55.7 +02.3	N 22 24.0 +00.0	145 29.7 +02.6	S 07 50.1 +00.1	09						
10	49 07.4 +00.9	N 23 26.7 +00.0	67 58.0 +02.2	N 22 24.0 +00.0	160 32.3 +02.6	S 07 50.2 +00.1	10						
11	64 08.3 +01.0	N 23 26.7 +00.0	83 00.2 +02.3	N 22 24.0 +00.1	175 34.9 +02.7	S 07 50.3 +00.1	11						
12	79 09.3 +00.9	N 23 26.7 -00.1	98 02.5 +02.3	N 22 24.1 +00.0	190 37.6 +02.6	S 07 50.4 +00.0	12						
13	94 10.2 +00.9	N 23 26.6 +00.0	113 04.8 +02.3	N 22 24.1 +00.0	205 40.2 +02.7	S 07 50.4 +00.1	13						
14	109 11.1 +00.9	N 23 26.6 +00.0	128 07.1 +02.3	N 22 24.1 +00.0	220 42.9 +02.6	S 07 50.5 +00.1	14						
15	124 12.0 +00.9	N 23 26.6 -00.1	143 09.4 +02.3	N 22 24.1 +00.0	235 45.5 +02.6	S 07 50.6 +00.1	15						
16	139 12.9 +01.0	N 23 26.5 +00.0	158 11.7 +02.2	N 22 24.1 +00.0	250 48.1 +02.7	S 07 50.7 +00.0	16						
17	154 13.9 +00.9	N 23 26.5 +00.0	173 13.9 +02.3	N 22 24.1 +00.0	265 50.8 +02.6	S 07 50.7 +00.1	17						
18	169 14.8 +00.9	N 23 26.5 -00.1	188 16.2 +02.3	N 22 24.1 +00.0	280 53.4 +02.6	S 07 50.8 +00.1	18						
19	184 15.7 +00.9	N 23 26.4 +00.0	203 18.5 +02.3	N 22 24.1 +00.0	295 56.0 +02.7	S 07 50.9 +00.0	19						
20	199 16.6 +00.9	N 23 26.4 +00.0	218 20.8 +02.3	N 22 24.1 +00.0	310 58.7 +02.6	S 07 50.9 +00.1	20						
21	214 17.5 +01.0	N 23 26.4 -00.1	233 23.1 +02.3	N 22 24.1 +00.1	326 01.3 +02.7	S 07 51.0 +00.1	21						
22	229 18.5 +00.9	N 23 26.3 +00.0	248 25.4 +02.3	N 22 24.2 +00.0	341 04.0 +02.6	S 07 51.1 +00.1	22						
23	244 19.4 +00.9	N 23 26.3 +00.0	263 27.7 +02.3	N 22 24.2 +00.0	356 06.6 +02.6	S 07 51.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 262° 261° 261° 261° 261° 261°		SHA 280° 280° 280° 280° 280° 280°		SHA 013° 013° 013° 013° 013° 013°								
	Greenwich Culmination Time: 06:43		Greenwich Culmination Time: 05:28		Greenwich Culmination Time: 23:15								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 33.4 +00.3	N 01 22.3 -01.0	155 07.1 -00.3	S 09 22.7 +01.2	349 59.7 -31.1	N 03 53.2 +18.2	00						
01	196 33.7 +00.2	N 01 21.3 -00.9	170 06.8 -00.4	S 09 23.9 +01.2	4 28.6 -31.1	N 04 11.4 +18.1	01						
02	211 33.9 +00.2	N 01 20.4 -01.0	185 06.4 -00.4	S 09 25.1 +01.3	18 57.5 -31.2	N 04 29.5 +18.1	02						
03	226 34.1 +00.2	N 01 19.4 -01.0	200 06.0 -00.4	S 09 26.4 +01.2	33 26.3 -31.2	N 04 47.6 +18.0	03						
04	241 34.3 +00.3	N 01 18.4 -01.0	215 05.6 -00.3	S 09 27.6 +01.2	47 55.1 -31.2	N 05 05.6 +18.0	04						
05	256 34.6 +00.2	N 01 17.4 -00.9	230 05.3 -00.4	S 09 28.8 +01.2	62 23.9 -31.2	N 05 23.6 +18.0	05						
06	271 34.8 +00.2	N 01 16.5 -01.0	245 04.9 -00.4	S 09 30.0 +01.2	76 52.7 -31.3	N 05 41.6 +18.0	06						
07	286 35.0 +00.2	N 01 15.5 -01.0	260 04.5 -00.3	S 09 31.2 +01.2	91 21.4 -31.2	N 05 59.6 +17.9	07						
08	301 35.2 +00.3	N 01 14.5 -00.9	275 04.2 -00.4	S 09 32.4 +01.3	105 50.2 -31.3	N 06 17.5 +17.8	08						
09	316 35.5 +00.2	N 01 13.6 -01.0	290 03.8 -00.4	S 09 33.7 +01.2	120 18.9 -31.4	N 06 35.3 +17.8	09						
10	331 35.7 +00.2	N 01 12.6 -01.0	305 03.4 -00.4	S 09 34.9 +01.2	134 47.5 -31.3	N 06 53.1 +17.8	10						
11	346 35.9 +00.2	N 01 11.6 -00.9	320 03.0 -00.3	S 09 36.1 +01.2	149 16.2 -31.4	N 07 10.9 +17.7	11						
12	1 36.1 +00.2	N 01 10.7 -01.0	335 02.7 -00.4	S 09 37.3 +01.2	163 44.8 -31.4	N 07 28.6 +17.7	12						
13	16 36.3 +00.3	N 01 09.7 -01.0	350 02.3 -00.4	S 09 38.5 +01.2	178 13.4 -31.5	N 07 46.3 +17.6	13						
14	31 36.6 +00.2	N 01 08.7 -01.0	5 01.9 -00.4	S 09 39.7 +01.3	192 41.9 -31.4	N 08 03.9 +17.6	14						
15	46 36.8 +00.2	N 01 07.7 -00.9	20 01.5 -00.3	S 09 41.0 +01.2	207 10.5 -31.5	N 08 21.5 +17.5	15						
16	61 37.0 +00.2	N 01 06.8 -01.0	35 01.2 -00.4	S 09 42.2 +01.2	221 39.0 -31.6	N 08 39.0 +17.4	16						
17	76 37.2 +00.3	N 01 05.8 -01.0	50 00.8 -00.4	S 09 43.4 +01.2	236 07.4 -31.6	N 08 56.4 +17.4	17						
18	91 37.5 +00.2	N 01 04.8 -00.9	65 00.4 -00.4	S 09 44.6 +01.2	250 35.8 -31.6	N 09 13.8 +17.3	18						
19	106 37.7 +00.2	N 01 03.9 -01.0	80 00.0 -00.3	S 09 45.8 +01.2	265 04.2 -31.6	N 09 31.1 +17.3	19						
20	121 37.9 +00.2	N 01 02.9 -01.0	94 59.7 -00.4	S 09 47.0 +01.3	279 32.6 -31.7	N 09 48.4 +17.1	20						
21	136 38.1 +00.3	N 01 01.9 -00.9	109 59.3 -00.4	S 09 48.3 +01.2	294 00.9 -31.7	N 10 05.5 +17.2	21						
22	151 38.4 +00.2	N 01 01.0 -01.0	124 58.9 -00.4	S 09 49.5 +01.2	308 29.2 -31.8	N 10 22.7 +17.0	22						
23	166 38.6 +00.2	N 00 60.0 -01.0	139 58.5 -00.3	S 09 50.7 +01.2	322 57.4 -31.8	N 10 39.7 +17.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'3 61'3 61'2 61'2 61'1 61'0								
	SHA 183° 183° 183° 183° 182° 182°		SHA 157° 156° 156° 156° 156° 156°		SHA 350° 348° 346° 344° 341° 339°								
	Greenwich Culmination Time: 11:53		Greenwich Culmination Time: 13:39		Greenwich Culmination Time: 00:41								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	259 20.3 +00.9	N 23 26.3 -00.1	278 30.0 +02.2	N 22 24.2 +00.0	11 09.2 +02.7	S 07 51.2 +00.1	00						
01	274 21.2 +01.0	N 23 26.2 +00.0	293 32.2 +02.3	N 22 24.2 +00.0	26 11.9 +02.6	S 07 51.3 +00.1	01						
02	289 22.2 +00.9	N 23 26.2 +00.0	308 34.5 +02.3	N 22 24.2 +00.0	41 14.5 +02.6	S 07 51.4 +00.0	02						
03	304 23.1 +00.9	N 23 26.2 -00.1	323 36.8 +02.3	N 22 24.2 +00.0	56 17.1 +02.7	S 07 51.4 +00.1	03						
04	319 24.0 +00.9	N 23 26.1 +00.0	338 39.1 +02.3	N 22 24.2 +00.0	71 19.8 +02.6	S 07 51.5 +00.1	04						
05	334 24.9 +01.0	N 23 26.1 -00.1	353 41.4 +02.3	N 22 24.2 +00.0	86 22.4 +02.6	S 07 51.6 +00.1	05						
06	349 25.9 +00.9	N 23 26.0 +00.0	8 43.7 +02.3	N 22 24.2 +00.0	101 25.0 +02.7	S 07 51.7 +00.0	06						
07	4 26.8 +00.9	N 23 26.0 +00.0	23 46.0 +02.3	N 22 24.2 +00.1	116 27.7 +02.6	S 07 51.7 +00.1	07						
08	19 27.7 +00.9	N 23 26.0 -00.1	38 48.3 +02.3	N 22 24.3 +00.0	131 30.3 +02.7	S 07 51.8 +00.1	08						
09	34 28.6 +01.0	N 23 25.9 +00.0	53 50.6 +02.2	N 22 24.3 +00.0	146 33.0 +02.6	S 07 51.9 +00.0	09						
10	49 29.6 +00.9	N 23 25.9 +00.0	68 52.8 +02.3	N 22 24.3 +00.0	161 35.6 +02.6	S 07 51.9 +00.1	10						
11	64 30.5 +00.9	N 23 25.9 -00.1	83 55.1 +02.3	N 22 24.3 +00.0	176 38.2 +02.7	S 07 52.0 +00.1	11						
12	79 31.4 +00.9	N 23 25.8 +00.0	98 57.4 +02.3	N 22 24.3 +00.0	191 40.9 +02.6	S 07 52.1 +00.1	12						
13	94 32.3 +01.0	N 23 25.8 -00.1	113 59.7 +02.3	N 22 24.3 +00.0	206 43.5 +02.6	S 07 52.2 +00.0	13						
14	109 33.3 +00.9	N 23 25.7 +00.0	129 02.0 +02.3	N 22 24.3 +00.0	221 46.1 +02.7	S 07 52.2 +00.1	14						
15	124 34.2 +00.9	N 23 25.7 +00.0	144 04.3 +02.3	N 22 24.3 +00.0	236 48.8 +02.6	S 07 52.3 +00.1	15						
16	139 35.1 +00.9	N 23 25.7 -00.1	159 06.6 +02.3	N 22 24.3 +00.0	251 51.4 +02.6	S 07 52.4 +00.1	16						
17	154 36.0 +01.0	N 23 25.6 +00.0	174 08.9 +02.3	N 22 24.3 +00.1	266 54.0 +02.7	S 07 52.5 +00.0	17						
18	169 37.0 +00.9	N 23 25.6 +00.0	189 11.2 +02.3	N 22 24.4 +00.0	281 56.7 +02.6	S 07 52.5 +00.1	18						
19	184 37.9 +00.9	N 23 25.6 -00.1	204 13.5 +02.3	N 22 24.4 +00.0	296 59.3 +02.6	S 07 52.6 +00.1	19						
20	199 38.8 +01.0	N 23 25.5 +00.0	219 15.8 +02.3	N 22 24.4 +00.0	312 01.9 +02.7	S 07 52.7 +00.0	20						
21	214 39.8 +00.9	N 23 25.5 -00.1	234 18.1 +02.3	N 22 24.4 +00.0	327 04.6 +02.6	S 07 52.7 +00.1	21						
22	229 40.7 +00.9	N 23 25.4 +00.0	249 20.4 +02.3	N 22 24.4 +00.0	342 07.2 +02.7	S 07 52.8 +00.1	22						
23	244 41.6 +01.0	N 23 25.4 +00.0	264 22.7 +02.3	N 22 24.4 +00.0	357 09.9 +02.6	S 07 52.9 +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 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 261° 261° 261° 261° 260° 260°		SHA 280° 280° 280° 280° 280° 280°		SHA 013° 013° 013° 013° 013° 013°								
	Greenwich Culmination Time: 06:42		Greenwich Culmination Time: 05:25		Greenwich Culmination Time: 23:11								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 38.8 +00.2	N 00	59.0 -01.0	154 58.2 -00.4	S 09	51.9 +01.2	337 25.6 -31.9	N 10	56.7 +16.9	00			
01	196 39.0 +00.2	N 00	58.0 -00.9	169 57.8 -00.4	S 09	53.1 +01.2	351 53.7 -31.9	N 11	13.6 +16.8	01			
02	211 39.2 +00.3	N 00	57.1 -01.0	184 57.4 -00.4	S 09	54.3 +01.2	6 21.8 -31.9	N 11	30.4 +16.7	02			
03	226 39.5 +00.2	N 00	56.1 -01.0	199 57.0 -00.4	S 09	55.5 +01.2	20 49.9 -32.0	N 11	47.1 +16.7	03			
04	241 39.7 +00.2	N 00	55.1 -00.9	214 56.6 -00.3	S 09	56.7 +01.2	35 17.9 -32.0	N 12	03.8 +16.6	04			
05	256 39.9 +00.2	N 00	54.2 -01.0	229 56.3 -00.4	S 09	57.9 +01.3	49 45.9 -32.1	N 12	20.4 +16.5	05			
06	271 40.1 +00.3	N 00	53.2 -01.0	244 55.9 -00.4	S 09	59.2 +01.2	64 13.8 -32.1	N 12	36.9 +16.4	06			
07	286 40.4 +00.2	N 00	52.2 -00.9	259 55.5 -00.4	S 10	00.4 +01.2	78 41.7 -32.2	N 12	53.3 +16.3	07			
08	301 40.6 +00.2	N 00	51.3 -01.0	274 55.1 -00.3	S 10	01.6 +01.2	93 09.5 -32.2	N 13	09.6 +16.2	08			
09	316 40.8 +00.2	N 00	50.3 -01.0	289 54.8 -00.4	S 10	02.8 +01.2	107 37.3 -32.3	N 13	25.8 +16.1	09			
10	331 41.0 +00.3	N 00	49.3 -01.0	304 54.4 -00.4	S 10	04.0 +01.2	122 05.0 -32.3	N 13	41.9 +16.1	10			
11	346 41.3 +00.2	N 00	48.3 -00.9	319 54.0 -00.4	S 10	05.2 +01.2	136 32.7 -32.4	N 13	58.0 +15.9	11			
12	1 41.5 +00.2	N 00	47.4 -01.0	334 53.6 -00.4	S 10	06.4 +01.2	151 00.3 -32.4	N 14	13.9 +15.9	12			
13	16 41.7 +00.2	N 00	46.4 -01.0	349 53.2 -00.4	S 10	07.6 +01.2	165 27.9 -32.5	N 14	29.8 +15.7	13			
14	31 41.9 +00.2	N 00	45.4 -00.9	4 52.8 -00.3	S 10	08.8 +01.2	179 55.4 -32.5	N 14	45.5 +15.6	14			
15	46 42.1 +00.3	N 00	44.5 -01.0	19 52.5 -00.4	S 10	10.0 +01.2	194 22.9 -32.6	N 15	01.1 +15.6	15			
16	61 42.4 +00.2	N 00	43.5 -01.0	34 52.1 -00.4	S 10	11.2 +01.2	208 50.3 -32.6	N 15	16.7 +15.4	16			
17	76 42.6 +00.2	N 00	42.5 -01.0	49 51.7 -00.4	S 10	12.4 +01.2	223 17.7 -32.7	N 15	32.1 +15.3	17			
18	91 42.8 +00.2	N 00	41.5 -00.9	64 51.3 -00.4	S 10	13.6 +01.3	237 45.0 -32.7	N 15	47.4 +15.3	18			
19	106 43.0 +00.3	N 00	40.6 -01.0	79 50.9 -00.3	S 10	14.9 +01.2	252 12.3 -32.8	N 16	02.7 +15.1	19			
20	121 43.3 +00.2	N 00	39.6 -01.0	94 50.6 -00.4	S 10	16.1 +01.2	266 39.5 -32.9	N 16	17.8 +15.0	20			
21	136 43.5 +00.2	N 00	38.6 -00.9	109 50.2 -00.4	S 10	17.3 +01.2	281 06.6 -32.9	N 16	32.8 +14.8	21			
22	151 43.7 +00.2	N 00	37.7 -01.0	124 49.8 -00.4	S 10	18.5 +01.2	295 33.7 -33.0	N 16	47.6 +14.8	22			
23	166 43.9 +00.2	N 00	36.7 -01.0	139 49.4 -00.4	S 10	19.7 +01.2	310 00.7 -33.0	N 17	02.4 +14.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'6 16'6 16'6 16'5 16'5 16'5						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 61'0 60'9 60'8 60'7 60'6 60'5						
	SHA 182° 182° 182° 182° 182° 181°			SHA 155° 155° 155° 155° 155° 155°			SHA 337° 335° 332° 330° 328° 325°						
	Greenwich Culmination Time: 11:53			Greenwich Culmination Time: 13:40			Greenwich Culmination Time: 01:33						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	259 42.6 +00.9	N 23	25.4 -00.1	279 25.0 +02.3	N 22	24.4 +00.0	12 12.5 +02.6	S 07	53.0 +00.0	00			
01	274 43.5 +00.9	N 23	25.3 +00.0	294 27.3 +02.2	N 22	24.4 +00.0	27 15.1 +02.7	S 07	53.0 +00.1	01			
02	289 44.4 +01.0	N 23	25.3 -00.1	309 29.5 +02.3	N 22	24.4 +00.0	42 17.8 +02.6	S 07	53.1 +00.1	02			
03	304 45.4 +00.9	N 23	25.2 +00.0	324 31.8 +02.3	N 22	24.4 +00.1	57 20.4 +02.6	S 07	53.2 +00.0	03			
04	319 46.3 +00.9	N 23	25.2 -00.1	339 34.1 +02.3	N 22	24.5 +00.0	72 23.0 +02.7	S 07	53.2 +00.1	04			
05	334 47.2 +01.0	N 23	25.1 +00.0	354 36.4 +02.3	N 22	24.5 +00.0	87 25.7 +02.6	S 07	53.3 +00.1	05			
06	349 48.2 +00.9	N 23	25.1 +00.0	9 38.7 +02.3	N 22	24.5 +00.0	102 28.3 +02.6	S 07	53.4 +00.1	06			
07	4 49.1 +00.9	N 23	25.1 -00.1	24 41.0 +02.3	N 22	24.5 +00.0	117 30.9 +02.7	S 07	53.5 +00.0	07			
08	19 50.0 +01.0	N 23	25.0 +00.0	39 43.3 +02.3	N 22	24.5 +00.0	132 33.6 +02.6	S 07	53.5 +00.1	08			
09	34 51.0 +00.9	N 23	25.0 -00.1	54 45.6 +02.3	N 22	24.5 +00.0	147 36.2 +02.6	S 07	53.6 +00.1	09			
10	49 51.9 +00.9	N 23	24.9 +00.0	69 47.9 +02.3	N 22	24.5 +00.0	162 38.8 +02.7	S 07	53.7 +00.0	10			
11	64 52.8 +01.0	N 23	24.9 +00.0	84 50.2 +02.3	N 22	24.5 +00.0	177 41.5 +02.6	S 07	53.7 +00.1	11			
12	79 53.8 +00.9	N 23	24.9 -00.1	99 52.5 +02.3	N 22	24.5 +00.0	192 44.1 +02.7	S 07	53.8 +00.1	12			
13	94 54.7 +00.9	N 23	24.8 +00.0	114 54.8 +02.3	N 22	24.5 +00.0	207 46.8 +02.6	S 07	53.9 +00.1	13			
14	109 55.6 +01.0	N 23	24.8 -00.1	129 57.1 +02.3	N 22	24.5 +00.1	222 49.4 +02.6	S 07	54.0 +00.0	14			
15	124 56.6 +00.9	N 23	24.7 +00.0	144 59.4 +02.3	N 22	24.6 +00.0	237 52.0 +02.7	S 07	54.0 +00.1	15			
16	139 57.5 +01.0	N 23	24.7 -00.1	160 01.7 +02.3	N 22	24.6 +00.0	252 54.7 +02.6	S 07	54.1 +00.1	16			
17	154 58.5 +00.9	N 23	24.6 +00.0	175 04.0 +02.3	N 22	24.6 +00.0	267 57.3 +02.6	S 07	54.2 +00.0	17			
18	169 59.4 +00.9	N 23	24.6 -00.1	190 06.3 +02.3	N 22	24.6 +00.0	282 59.9 +02.7	S 07	54.2 +00.1	18			
19	185 00.3 +01.0	N 23	24.5 +00.0	205 08.6 +02.3	N 22	24.6 +00.0	298 02.6 +02.6	S 07	54.3 +00.1	19			
20	200 01.3 +00.9	N 23	24.5 +00.0	220 10.9 +02.3	N 22	24.6 +00.0	313 05.2 +02.6	S 07	54.4 +00.1	20			
21	215 02.2 +00.9	N 23	24.5 -00.1	235 13.2 +02.3	N 22	24.6 +00.0	328 07.8 +02.7	S 07	54.5 +00.0	21			
22	230 03.1 +01.0	N 23	24.4 +00.0	250 15.5 +02.3	N 22	24.6 +00.0	343 10.5 +02.6	S 07	54.5 +00.1	22			
23	245 04.1 +00.9	N 23	24.4 -00.1	265 17.8 +02.4	N 22	24.6 +00.0	358 13.1 +02.6	S 07	54.6 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 260° 260° 260° 260° 260° 260°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:40			Greenwich Culmination Time: 05:21			Greenwich Culmination Time: 23:07						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 44.1 +00.3	N 00	35.7 -01.0	154 49.0 -00.4	S 10	20.9 +01.2	324 27.7 -33.1	N 17	17.1 +14.5	00			
01	196 44.4 +00.2	N 00	34.7 -00.9	169 48.6 -00.4	S 10	22.1 +01.2	338 54.6 -33.1	N 17	31.6 +14.4	01			
02	211 44.6 +00.2	N 00	33.8 -01.0	184 48.2 -00.3	S 10	23.3 +01.2	353 21.5 -33.2	N 17	46.0 +14.3	02			
03	226 44.8 +00.2	N 00	32.8 -01.0	199 47.9 -00.4	S 10	24.5 +01.2	7 48.3 -33.3	N 18	00.3 +14.1	03			
04	241 45.0 +00.3	N 00	31.8 -00.9	214 47.5 -00.4	S 10	25.7 +01.2	22 15.0 -33.3	N 18	14.4 +14.1	04			
05	256 45.3 +00.2	N 00	30.9 -01.0	229 47.1 -00.4	S 10	26.9 +01.2	36 41.7 -33.3	N 18	28.5 +13.9	05			
06	271 45.5 +00.2	N 00	29.9 -01.0	244 46.7 -00.4	S 10	28.1 +01.2	51 08.4 -33.5	N 18	42.4 +13.8	06			
07	286 45.7 +00.2	N 00	28.9 -01.0	259 46.3 -00.4	S 10	29.3 +01.2	65 34.9 -33.5	N 18	56.2 +13.6	07			
08	301 45.9 +00.2	N 00	27.9 -00.9	274 45.9 -00.4	S 10	30.5 +01.2	80 01.4 -33.5	N 19	09.8 +13.5	08			
09	316 46.1 +00.3	N 00	27.0 -01.0	289 45.5 -00.3	S 10	31.7 +01.2	94 27.9 -33.6	N 19	23.3 +13.4	09			
10	331 46.4 +00.2	N 00	26.0 -01.0	304 45.2 -00.4	S 10	32.9 +01.2	108 54.3 -33.7	N 19	36.7 +13.3	10			
11	346 46.6 +00.2	N 00	25.0 -00.9	319 44.8 -00.4	S 10	34.1 +01.2	123 20.6 -33.7	N 19	50.0 +13.1	11			
12	1 46.8 +00.2	N 00	24.1 -01.0	334 44.4 -00.4	S 10	35.3 +01.2	137 46.9 -33.8	N 20	03.1 +13.0	12			
13	16 47.0 +00.3	N 00	23.1 -01.0	349 44.0 -00.4	S 10	36.5 +01.2	152 13.1 -33.8	N 20	16.1 +12.8	13			
14	31 47.3 +00.2	N 00	22.1 -01.0	4 43.6 -00.4	S 10	37.7 +01.2	166 39.3 -33.9	N 20	28.9 +12.7	14			
15	46 47.5 +00.2	N 00	21.1 -00.9	19 43.2 -00.4	S 10	38.9 +01.2	181 05.4 -34.0	N 20	41.6 +12.5	15			
16	61 47.7 +00.2	N 00	20.2 -01.0	34 42.8 -00.4	S 10	40.1 +01.2	195 31.4 -34.0	N 20	54.1 +12.5	16			
17	76 47.9 +00.2	N 00	19.2 -01.0	49 42.4 -00.4	S 10	41.3 +01.2	209 57.4 -34.0	N 21	06.6 +12.2	17			
18	91 48.1 +00.3	N 00	18.2 -01.0	64 42.0 -00.3	S 10	42.5 +01.2	224 23.4 -34.2	N 21	18.8 +12.1	18			
19	106 48.4 +00.2	N 00	17.2 -00.9	79 41.7 -00.4	S 10	43.7 +01.2	238 49.2 -34.2	N 21	30.9 +12.0	19			
20	121 48.6 +00.2	N 00	16.3 -01.0	94 41.3 -00.4	S 10	44.9 +01.2	253 15.0 -34.2	N 21	42.9 +11.8	20			
21	136 48.8 +00.2	N 00	15.3 -01.0	109 40.9 -00.4	S 10	46.1 +01.2	267 40.8 -34.3	N 21	54.7 +11.7	21			
22	151 49.0 +00.2	N 00	14.3 -00.9	124 40.5 -00.4	S 10	47.3 +01.1	282 06.5 -34.3	N 22	06.4 +11.5	22			
23	166 49.2 +00.3	N 00	13.4 -01.0	139 40.1 -00.4	S 10	48.4 +01.2	296 32.2 -34.4	N 22	17.9 +11.4	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 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 60'4 60'2 60'1 60'0 59'9 59'7						
	SHA 181° 181° 181° 181° 181° 181°			SHA 154° 154° 154° 154° 154° 153°			SHA 323° 321° 318° 316° 313° 311°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 13:41			Greenwich Culmination Time: 02:27						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	260 05.0 +01.0	N 23	24.3 +00.0	280 20.2 +02.3	N 22	24.6 +00.0	13 15.7 +02.7	S 07	54.7 +00.0	00			
01	275 06.0 +00.9	N 23	24.3 -00.1	295 22.5 +02.3	N 22	24.6 +00.1	28 18.4 +02.6	S 07	54.7 +00.1	01			
02	290 06.9 +01.0	N 23	24.2 +00.0	310 24.8 +02.3	N 22	24.7 +00.0	43 21.0 +02.6	S 07	54.8 +00.1	02			
03	305 07.9 +00.9	N 23	24.2 -00.1	325 27.1 +02.3	N 22	24.7 +00.0	58 23.6 +02.7	S 07	54.9 +00.0	03			
04	320 08.8 +00.9	N 23	24.1 +00.0	340 29.4 +02.3	N 22	24.7 +00.0	73 26.3 +02.6	S 07	54.9 +00.1	04			
05	335 09.7 +01.0	N 23	24.1 -00.1	355 31.7 +02.3	N 22	24.7 +00.0	88 28.9 +02.6	S 07	55.0 +00.1	05			
06	350 10.7 +00.9	N 23	24.0 +00.0	10 34.0 +02.3	N 22	24.7 +00.0	103 31.5 +02.7	S 07	55.1 +00.1	06			
07	5 11.6 +01.0	N 23	24.0 +00.0	25 36.3 +02.3	N 22	24.7 +00.0	118 34.2 +02.6	S 07	55.2 +00.0	07			
08	20 12.6 +00.9	N 23	24.0 -00.1	40 38.6 +02.3	N 22	24.7 +00.0	133 36.8 +02.6	S 07	55.2 +00.1	08			
09	35 13.5 +01.0	N 23	23.9 +00.0	55 40.9 +02.3	N 22	24.7 +00.0	148 39.4 +02.7	S 07	55.3 +00.1	09			
10	50 14.5 +00.9	N 23	23.9 -00.1	70 43.2 +02.3	N 22	24.7 +00.0	163 42.1 +02.6	S 07	55.4 +00.0	10			
11	65 15.4 +00.9	N 23	23.8 +00.0	85 45.5 +02.3	N 22	24.7 +00.0	178 44.7 +02.6	S 07	55.4 +00.1	11			
12	80 16.3 +01.0	N 23	23.8 -00.1	100 47.8 +02.3	N 22	24.7 +00.1	193 47.3 +02.7	S 07	55.5 +00.1	12			
13	95 17.3 +00.9	N 23	23.7 +00.0	115 50.1 +02.3	N 22	24.8 +00.0	208 50.0 +02.6	S 07	55.6 +00.1	13			
14	110 18.2 +01.0	N 23	23.7 -00.1	130 52.4 +02.3	N 22	24.8 +00.0	223 52.6 +02.7	S 07	55.7 +00.0	14			
15	125 19.2 +00.9	N 23	23.6 +00.0	145 54.7 +02.4	N 22	24.8 +00.0	238 55.3 +02.6	S 07	55.7 +00.1	15			
16	140 20.1 +01.0	N 23	23.6 -00.1	160 57.1 +02.3	N 22	24.8 +00.0	253 57.9 +02.6	S 07	55.8 +00.1	16			
17	155 21.1 +00.9	N 23	23.5 +00.0	175 59.4 +02.3	N 22	24.8 +00.0	269 00.5 +02.7	S 07	55.9 +00.0	17			
18	170 22.0 +01.0	N 23	23.5 -00.1	191 01.7 +02.3	N 22	24.8 +00.0	284 03.2 +02.6	S 07	55.9 +00.1	18			
19	185 23.0 +00.9	N 23	23.4 +00.0	206 04.0 +02.3	N 22	24.8 +00.0	299 05.8 +02.6	S 07	56.0 +00.1	19			
20	200 23.9 +01.0	N 23	23.4 -00.1	221 06.3 +02.3	N 22	24.8 +00.0	314 08.4 +02.7	S 07	56.1 +00.0	20			
21	215 24.9 +00.9	N 23	23.3 +00.0	236 08.6 +02.3	N 22	24.8 +00.0	329 11.1 +02.6	S 07	56.1 +00.1	21			
22	230 25.8 +01.0	N 23	23.3 -00.1	251 10.9 +02.3	N 22	24.8 +00.0	344 13.7 +02.6	S 07	56.2 +00.1	22			
23	245 26.8 +00.9	N 23	23.2 +00.0	266 13.2 +02.3	N 22	24.8 +00.0	359 16.3 +02.7	S 07	56.3 +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 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 260° 260° 259° 259° 259° 259°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:39			Greenwich Culmination Time: 05:17			Greenwich Culmination Time: 23:02						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 54.8 +00.2	S	00 11.0 +00.9	154 30.2 -00.4	S	11 18.2 +01.2	296 57.7 -35.5	N	26 13.4 +07.2	00			
01	196 55.0 +00.2	S	00 11.9 +01.0	169 29.8 -00.4	S	11 19.4 +01.1	311 22.2 -35.5	N	26 20.6 +07.1	01			
02	211 55.2 +00.2	S	00 12.9 +01.0	184 29.4 -00.4	S	11 20.5 +01.2	325 46.7 -35.5	N	26 27.7 +06.8	02			
03	226 55.4 +00.2	S	00 13.9 +00.9	199 29.0 -00.4	S	11 21.7 +01.2	340 11.2 -35.6	N	26 34.5 +06.7	03			
04	241 55.6 +00.2	S	00 14.8 +01.0	214 28.6 -00.4	S	11 22.9 +01.2	354 35.6 -35.5	N	26 41.2 +06.5	04			
05	256 55.8 +00.3	S	00 15.8 +01.0	229 28.2 -00.4	S	11 24.1 +01.2	9 00.1 -35.6	N	26 47.7 +06.4	05			
06	271 56.1 +00.2	S	00 16.8 +01.0	244 27.8 -00.4	S	11 25.3 +01.1	23 24.5 -35.7	N	26 54.1 +06.1	06			
07	286 56.3 +00.2	S	00 17.8 +00.9	259 27.4 -00.4	S	11 26.4 +01.2	37 48.8 -35.6	N	27 00.2 +06.0	07			
08	301 56.5 +00.2	S	00 18.7 +01.0	274 27.0 -00.4	S	11 27.6 +01.2	52 13.2 -35.7	N	27 06.2 +05.8	08			
09	316 56.7 +00.2	S	00 19.7 +01.0	289 26.6 -00.5	S	11 28.8 +01.2	66 37.5 -35.6	N	27 12.0 +05.6	09			
10	331 56.9 +00.3	S	00 20.7 +01.0	304 26.1 -00.4	S	11 30.0 +01.2	81 01.9 -35.7	N	27 17.6 +05.4	10			
11	346 57.2 +00.2	S	00 21.7 +00.9	319 25.7 -00.4	S	11 31.2 +01.1	95 26.2 -35.7	N	27 23.0 +05.3	11			
12	1 57.4 +00.2	S	00 22.6 +01.0	334 25.3 -00.4	S	11 32.3 +01.2	109 50.5 -35.7	N	27 28.3 +05.0	12			
13	16 57.6 +00.2	S	00 23.6 +01.0	349 24.9 -00.4	S	11 33.5 +01.2	124 14.8 -35.7	N	27 33.3 +04.9	13			
14	31 57.8 +00.2	S	00 24.6 +01.0	4 24.5 -00.4	S	11 34.7 +01.2	138 39.1 -35.7	N	27 38.2 +04.7	14			
15	46 58.0 +00.3	S	00 25.6 +00.9	19 24.1 -00.4	S	11 35.9 +01.2	153 03.4 -35.7	N	27 42.9 +04.6	15			
16	61 58.3 +00.2	S	00 26.5 +01.0	34 23.7 -00.4	S	11 37.1 +01.1	167 27.7 -35.7	N	27 47.5 +04.3	16			
17	76 58.5 +00.2	S	00 27.5 +01.0	49 23.3 -00.4	S	11 38.2 +01.2	181 52.0 -35.7	N	27 51.8 +04.2	17			
18	91 58.7 +00.2	S	00 28.5 +00.9	64 22.9 -00.4	S	11 39.4 +01.2	196 16.3 -35.8	N	27 56.0 +04.0	18			
19	106 58.9 +00.2	S	00 29.4 +01.0	79 22.5 -00.4	S	11 40.6 +01.2	210 40.5 -35.7	N	27 60.0 +03.8	19			
20	121 59.1 +00.2	S	00 30.4 +01.0	94 22.1 -00.4	S	11 41.8 +01.1	225 04.8 -35.7	N	28 03.8 +03.6	20			
21	136 59.3 +00.3	S	00 31.4 +01.0	109 21.7 -00.4	S	11 42.9 +01.2	239 29.1 -35.6	N	28 07.4 +03.5	21			
22	151 59.6 +00.2	S	00 32.4 +00.9	124 21.3 -00.4	S	11 44.1 +01.2	253 53.5 -35.7	N	28 10.9 +03.2	22			
23	166 59.8 +00.2	S	00 33.3 +01.0	139 20.9 -00.4	S	11 45.3 +01.2	268 17.8 -35.7	N	28 14.1 +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 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'0 15'9 15'9 15'9 15'8 15'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 58'7 58'5 58'4 58'2 58'1 57'9						
	SHA 180° 179° 179° 179° 179° 179°			SHA 152° 152° 152° 151° 151° 151°			SHA 293° 291° 288° 286° 283° 281°						
	Greenwich Culmination Time: 11:52			Greenwich Culmination Time: 13:42			Greenwich Culmination Time: 04:22						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	260 50.6 +01.0	N	23 21.9 +00.0	282 11.1 +02.4	N	22 25.0 +00.1	15 22.1 +02.7	S	07 58.0 +00.1	00			
01	275 51.6 +00.9	N	23 21.9 -00.1	297 13.5 +02.3	N	22 25.1 +00.0	30 24.8 +02.6	S	07 58.1 +00.1	01			
02	290 52.5 +01.0	N	23 21.8 +00.0	312 15.8 +02.3	N	22 25.1 +00.0	45 27.4 +02.6	S	07 58.2 +00.0	02			
03	305 53.5 +00.9	N	23 21.8 -00.1	327 18.1 +02.3	N	22 25.1 +00.0	60 30.0 +02.7	S	07 58.2 +00.1	03			
04	320 54.4 +01.0	N	23 21.7 +00.0	342 20.4 +02.3	N	22 25.1 +00.0	75 32.7 +02.6	S	07 58.3 +00.1	04			
05	335 55.4 +01.0	N	23 21.7 -00.1	357 22.7 +02.4	N	22 25.1 +00.0	90 35.3 +02.6	S	07 58.4 +00.0	05			
06	350 56.4 +00.9	N	23 21.6 -00.1	12 25.1 +02.3	N	22 25.1 +00.0	105 37.9 +02.7	S	07 58.4 +00.1	06			
07	5 57.3 +01.0	N	23 21.5 +00.0	27 27.4 +02.3	N	22 25.1 +00.0	120 40.6 +02.6	S	07 58.5 +00.1	07			
08	20 58.3 +00.9	N	23 21.5 -00.1	42 29.7 +02.3	N	22 25.1 +00.0	135 43.2 +02.6	S	07 58.6 +00.1	08			
09	35 59.2 +01.0	N	23 21.4 +00.0	57 32.0 +02.4	N	22 25.1 +00.0	150 45.8 +02.7	S	07 58.7 +00.0	09			
10	51 00.2 +01.0	N	23 21.4 -00.1	72 34.4 +02.3	N	22 25.1 +00.0	165 48.5 +02.6	S	07 58.7 +00.1	10			
11	66 01.2 +00.9	N	23 21.3 +00.0	87 36.7 +02.3	N	22 25.1 +00.0	180 51.1 +02.6	S	07 58.8 +00.1	11			
12	81 02.1 +01.0	N	23 21.3 -00.1	102 39.0 +02.3	N	22 25.1 +00.0	195 53.7 +02.7	S	07 58.9 +00.0	12			
13	96 03.1 +01.0	N	23 21.2 -00.1	117 41.3 +02.4	N	22 25.1 +00.1	210 56.4 +02.6	S	07 58.9 +00.1	13			
14	111 04.1 +00.9	N	23 21.1 +00.0	132 43.7 +02.3	N	22 25.2 +00.0	225 59.0 +02.6	S	07 59.0 +00.1	14			
15	126 05.0 +01.0	N	23 21.1 -00.1	147 46.0 +02.3	N	22 25.2 +00.0	241 01.6 +02.7	S	07 59.1 +00.0	15			
16	141 06.0 +01.0	N	23 21.0 +00.0	162 48.3 +02.3	N	22 25.2 +00.0	256 04.3 +02.6	S	07 59.1 +00.1	16			
17	156 07.0 +00.9	N	23 21.0 -00.1	177 50.6 +02.4	N	22 25.2 +00.0	271 06.9 +02.6	S	07 59.2 +00.1	17			
18	171 07.9 +01.0	N	23 20.9 +00.0	192 53.0 +02.3	N	22 25.2 +00.0	286 09.5 +02.6	S	07 59.3 +00.0	18			
19	186 08.9 +00.9	N	23 20.9 -00.1	207 55.3 +02.3	N	22 25.2 +00.0	301 12.1 +02.7	S	07 59.3 +00.1	19			
20	201 09.8 +01.0	N	23 20.8 -00.1	222 57.6 +02.3	N	22 25.2 +00.0	316 14.8 +02.6	S	07 59.4 +00.1	20			
21	216 10.8 +01.0	N	23 20.7 +00.0	237 59.9 +02.4	N	22 25.2 +00.0	331 17.4 +02.6	S	07 59.5 +00.1	21			
22	231 11.8 +01.0	N	23 20.7 -00.1	253 02.3 +02.3	N	22 25.2 +00.0	346 20.0 +02.7	S	07 59.6 +00.0	22			
23	246 12.8 +00.9	N	23 20.6 +00.0	268 04.6 +02.3	N	22 25.2 +00.0	1 22.7 +02.6	S	07 59.6 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 258° 258° 258° 258° 258° 258°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:36			Greenwich Culmination Time: 05:10			Greenwich Culmination Time: 22:54						

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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	182 00.0 +00.2	S 00	34.3 +01.0	154 20.5 -00.5	S 11	46.5 +01.1	282 42.1 -35.6	N 28	17.2 +02.9	00			
01	197 00.2 +00.2	S 00	35.3 +01.0	169 20.0 -00.4	S 11	47.6 +01.2	297 06.5 -35.7	N 28	20.1 +02.7	01			
02	212 00.4 +00.3	S 00	36.3 +00.9	184 19.6 -00.4	S 11	48.8 +01.2	311 30.8 -35.6	N 28	22.8 +02.6	02			
03	227 00.7 +00.2	S 00	37.2 +01.0	199 19.2 -00.4	S 11	50.0 +01.1	325 55.2 -35.6	N 28	25.4 +02.3	03			
04	242 00.9 +00.2	S 00	38.2 +01.0	214 18.8 -00.4	S 11	51.1 +01.2	340 19.6 -35.6	N 28	27.7 +02.2	04			
05	257 01.1 +00.2	S 00	39.2 +01.0	229 18.4 -00.4	S 11	52.3 +01.2	354 44.0 -35.5	N 28	29.9 +02.0	05			
06	272 01.3 +00.2	S 00	40.2 +00.9	244 18.0 -00.4	S 11	53.5 +01.2	9 08.5 -35.6	N 28	31.9 +01.9	06			
07	287 01.5 +00.2	S 00	41.1 +01.0	259 17.6 -00.4	S 11	54.7 +01.1	23 32.9 -35.5	N 28	33.8 +01.6	07			
08	302 01.7 +00.3	S 00	42.1 +01.0	274 17.2 -00.4	S 11	55.8 +01.2	37 57.4 -35.4	N 28	35.4 +01.5	08			
09	317 02.0 +00.2	S 00	43.1 +01.0	289 16.8 -00.5	S 11	57.0 +01.2	52 22.0 -35.5	N 28	36.9 +01.3	09			
10	332 02.2 +00.2	S 00	44.1 +00.9	304 16.3 -00.4	S 11	58.2 +01.1	66 46.5 -35.4	N 28	38.2 +01.1	10			
11	347 02.4 +00.2	S 00	45.0 +01.0	319 15.9 -00.4	S 11	59.3 +01.2	81 11.1 -35.3	N 28	39.3 +00.9	11			
12	2 02.6 +00.2	S 00	46.0 +01.0	334 15.5 -00.4	S 12	00.5 +01.2	95 35.8 -35.4	N 28	40.2 +00.8	12			
13	17 02.8 +00.2	S 00	47.0 +00.9	349 15.1 -00.4	S 12	01.7 +01.1	110 00.4 -35.2	N 28	41.0 +00.6	13			
14	32 03.0 +00.3	S 00	47.9 +01.0	4 14.7 -00.4	S 12	02.8 +01.2	124 25.2 -35.3	N 28	41.6 +00.4	14			
15	47 03.3 +00.2	S 00	48.9 +01.0	19 14.3 -00.4	S 12	04.0 +01.2	138 49.9 -35.2	N 28	42.0 +00.2	15			
16	62 03.5 +00.2	S 00	49.9 +01.0	34 13.9 -00.5	S 12	05.2 +01.1	153 14.7 -35.2	N 28	42.2 +00.1	16			
17	77 03.7 +00.2	S 00	50.9 +00.9	49 13.4 -00.4	S 12	06.3 +01.2	167 39.5 -35.1	N 28	42.3 -00.1	17			
18	92 03.9 +00.2	S 00	51.8 +01.0	64 13.0 -00.4	S 12	07.5 +01.2	182 04.4 -35.0	N 28	42.2 -00.3	18			
19	107 04.1 +00.2	S 00	52.8 +01.0	79 12.6 -00.4	S 12	08.7 +01.1	196 29.4 -35.1	N 28	41.9 -00.5	19			
20	122 04.3 +00.3	S 00	53.8 +01.0	94 12.2 -00.4	S 12	09.8 +01.2	210 54.3 -34.9	N 28	41.4 -00.6	20			
21	137 04.6 +00.2	S 00	54.8 +00.9	109 11.8 -00.4	S 12	11.0 +01.2	225 19.4 -34.9	N 28	40.8 -00.8	21			
22	152 04.8 +00.2	S 00	55.7 +01.0	124 11.4 -00.5	S 12	12.2 +01.1	239 44.5 -34.9	N 28	40.0 -00.9	22			
23	167 05.0 +00.2	S 00	56.7 +01.0	139 10.9 -00.4	S 12	13.3 +01.2	254 09.6 -34.8	N 28	39.1 -01.2	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'7 15'7 15'7 15'6 15'6 15'5						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 57'8 57'6 57'5 57'3 57'2 57'1						
	SHA 179° 178° 178° 178° 178° 178°			SHA 151° 151° 151° 150° 150° 150°			SHA 278° 276° 273° 271° 268° 266°						
	Greenwich Culmination Time: 11:51			Greenwich Culmination Time: 13:43			Greenwich Culmination Time: 05:21						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	261 13.7 +01.0	N 23	20.6 -00.1	283 06.9 +02.4	N 22	25.2 +00.0	16 25.3 +02.6	S 07	59.7 +00.1	00			
01	276 14.7 +01.0	N 23	20.5 -00.1	298 09.3 +02.3	N 22	25.2 +00.0	31 27.9 +02.7	S 07	59.8 +00.0	01			
02	291 15.7 +00.9	N 23	20.4 +00.0	313 11.6 +02.3	N 22	25.2 +00.0	46 30.6 +02.6	S 07	59.8 +00.1	02			
03	306 16.6 +01.0	N 23	20.4 -00.1	328 13.9 +02.3	N 22	25.2 +00.1	61 33.2 +02.6	S 07	59.9 +00.1	03			
04	321 17.6 +01.0	N 23	20.3 +00.0	343 16.2 +02.4	N 22	25.3 +00.0	76 35.8 +02.7	S 07	60.0 +00.0	04			
05	336 18.6 +00.9	N 23	20.3 -00.1	358 18.6 +02.3	N 22	25.3 +00.0	91 38.5 +02.6	S 08	00.0 +00.1	05			
06	351 19.5 +01.0	N 23	20.2 -00.1	13 20.9 +02.3	N 22	25.3 +00.0	106 41.1 +02.6	S 08	00.1 +00.1	06			
07	6 20.5 +01.0	N 23	20.1 +00.0	28 23.2 +02.4	N 22	25.3 +00.0	121 43.7 +02.6	S 08	00.2 +00.0	07			
08	21 21.5 +00.9	N 23	20.1 -00.1	43 25.6 +02.3	N 22	25.3 +00.0	136 46.3 +02.7	S 08	00.2 +00.1	08			
09	36 22.4 +01.0	N 23	20.0 +00.0	58 27.9 +02.3	N 22	25.3 +00.0	151 49.0 +02.6	S 08	00.3 +00.1	09			
10	51 23.4 +01.0	N 23	20.0 -00.1	73 30.2 +02.4	N 22	25.3 +00.0	166 51.6 +02.6	S 08	00.4 +00.0	10			
11	66 24.4 +01.0	N 23	19.9 -00.1	88 32.6 +02.3	N 22	25.3 +00.0	181 54.2 +02.7	S 08	00.4 +00.1	11			
12	81 25.4 +00.9	N 23	19.8 +00.0	103 34.9 +02.3	N 22	25.3 +00.0	196 56.9 +02.6	S 08	00.5 +00.1	12			
13	96 26.3 +01.0	N 23	19.8 -00.1	118 37.2 +02.4	N 22	25.3 +00.0	211 59.5 +02.6	S 08	00.6 +00.0	13			
14	111 27.3 +01.0	N 23	19.7 +00.0	133 39.6 +02.3	N 22	25.3 +00.0	227 02.1 +02.7	S 08	00.6 +00.1	14			
15	126 28.3 +01.0	N 23	19.7 -00.1	148 41.9 +02.3	N 22	25.3 +00.0	242 04.8 +02.6	S 08	00.7 +00.1	15			
16	141 29.3 +00.9	N 23	19.6 -00.1	163 44.2 +02.4	N 22	25.3 +00.0	257 07.4 +02.6	S 08	00.8 +00.1	16			
17	156 30.2 +01.0	N 23	19.5 +00.0	178 46.6 +02.3	N 22	25.3 +00.1	272 10.0 +02.7	S 08	00.9 +00.0	17			
18	171 31.2 +01.0	N 23	19.5 -00.1	193 48.9 +02.3	N 22	25.4 +00.0	287 12.7 +02.6	S 08	00.9 +00.1	18			
19	186 32.2 +01.0	N 23	19.4 -00.1	208 51.2 +02.4	N 22	25.4 +00.0	302 15.3 +02.6	S 08	01.0 +00.1	19			
20	201 33.2 +00.9	N 23	19.3 +00.0	223 53.6 +02.3	N 22	25.4 +00.0	317 17.9 +02.6	S 08	01.1 +00.0	20			
21	216 34.1 +01.0	N 23	19.3 -00.1	238 55.9 +02.3	N 22	25.4 +00.0	332 20.5 +02.7	S 08	01.1 +00.1	21			
22	231 35.1 +01.0	N 23	19.2 +00.0	253 58.2 +02.4	N 22	25.4 +00.0	347 23.2 +02.6	S 08	01.2 +00.1	22			
23	246 36.1 +01.0	N 23	19.2 -00.1	269 00.6 +02.3	N 22	25.4 +00.0	2 25.8 +02.6	S 08	01.3 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 258° 258° 258° 258° 257° 257°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:34			Greenwich Culmination Time: 05:06			Greenwich Culmination Time: 22:50						

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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	182 05.2 +00.2	S	00 57.7 +01.0	154 10.5 -00.4	S	12 14.5 +01.1	268 34.8 -34.7	N	28 37.9 -01.3	00			
01	197 05.4 +00.2	S	00 58.7 +00.9	169 10.1 -00.4	S	12 15.6 +01.2	283 00.1 -34.7	N	28 36.6 -01.4	01			
02	212 05.6 +00.3	S	00 59.6 +01.0	184 09.7 -00.4	S	12 16.8 +01.2	297 25.4 -34.6	N	28 35.2 -01.7	02			
03	227 05.9 +00.2	S	01 00.6 +01.0	199 09.3 -00.5	S	12 18.0 +01.1	311 50.8 -34.5	N	28 33.5 -01.8	03			
04	242 06.1 +00.2	S	01 01.6 +00.9	214 08.8 -00.4	S	12 19.1 +01.2	326 16.3 -34.5	N	28 31.7 -01.9	04			
05	257 06.3 +00.2	S	01 02.5 +01.0	229 08.4 -00.4	S	12 20.3 +01.1	340 41.8 -34.4	N	28 29.8 -02.2	05			
06	272 06.5 +00.2	S	01 03.5 +01.0	244 08.0 -00.4	S	12 21.4 +01.2	355 07.4 -34.4	N	28 27.6 -02.3	06			
07	287 06.7 +00.2	S	01 04.5 +01.0	259 07.6 -00.4	S	12 22.6 +01.2	9 33.0 -34.3	N	28 25.3 -02.4	07			
08	302 06.9 +00.3	S	01 05.5 +00.9	274 07.2 -00.5	S	12 23.8 +01.1	23 58.7 -34.2	N	28 22.9 -02.6	08			
09	317 07.2 +00.2	S	01 06.4 +01.0	289 06.7 -00.4	S	12 24.9 +01.2	38 24.5 -34.1	N	28 20.3 -02.8	09			
10	332 07.4 +00.2	S	01 07.4 +01.0	304 06.3 -00.4	S	12 26.1 +01.1	52 50.4 -34.1	N	28 17.5 -03.0	10			
11	347 07.6 +00.2	S	01 08.4 +01.0	319 05.9 -00.4	S	12 27.2 +01.2	67 16.3 -34.0	N	28 14.5 -03.0	11			
12	2 07.8 +00.2	S	01 09.4 +00.9	334 05.5 -00.5	S	12 28.4 +01.1	81 42.3 -33.9	N	28 11.5 -03.3	12			
13	17 08.0 +00.2	S	01 10.3 +01.0	349 05.0 -00.4	S	12 29.5 +01.2	96 08.4 -33.8	N	28 08.2 -03.4	13			
14	32 08.2 +00.2	S	01 11.3 +01.0	4 04.6 -00.4	S	12 30.7 +01.2	110 34.6 -33.7	N	28 04.8 -03.6	14			
15	47 08.4 +00.3	S	01 12.3 +01.0	19 04.2 -00.4	S	12 31.9 +01.1	125 00.9 -33.7	N	28 01.2 -03.7	15			
16	62 08.7 +00.2	S	01 13.3 +00.9	34 03.8 -00.5	S	12 33.0 +01.2	139 27.2 -33.6	N	27 57.5 -03.8	16			
17	77 08.9 +00.2	S	01 14.2 +01.0	49 03.3 -00.4	S	12 34.2 +01.1	153 53.6 -33.5	N	27 53.7 -04.1	17			
18	92 09.1 +00.2	S	01 15.2 +01.0	64 02.9 -00.4	S	12 35.3 +01.2	168 20.1 -33.4	N	27 49.6 -04.1	18			
19	107 09.3 +00.2	S	01 16.2 +01.0	79 02.5 -00.4	S	12 36.5 +01.1	182 46.7 -33.4	N	27 45.5 -04.4	19			
20	122 09.5 +00.2	S	01 17.2 +00.9	94 02.1 -00.5	S	12 37.6 +01.2	197 13.3 -33.2	N	27 41.1 -04.4	20			
21	137 09.7 +00.2	S	01 18.1 +01.0	109 01.6 -00.4	S	12 38.8 +01.1	211 40.1 -33.2	N	27 36.7 -04.6	21			
22	152 09.9 +00.3	S	01 19.1 +01.0	124 01.2 -00.4	S	12 39.9 +01.2	226 06.9 -33.1	N	27 32.1 -04.8	22			
23	167 10.2 +00.2	S	01 20.1 +00.9	139 00.8 -00.4	S	12 41.1 +01.1	240 33.8 -33.0	N	27 27.3 -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 15'9 15'9 15'9 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'5 15'5 15'4 15'4 15'4 15'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'9 56'8 56'7 56'5 56'4 56'3						
	SHA 178° 178° 177° 177° 177° 177°			SHA 150° 150° 149° 149° 149° 149°			SHA 263° 261° 258° 256° 253° 251°						
	Greenwich Culmination Time: 11:51			Greenwich Culmination Time: 13:43			Greenwich Culmination Time: 06:20						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	261 37.1 +00.9	N	23 19.1 -00.1	284 02.9 +02.4	N	22 25.4 +00.0	17 28.4 +02.7	S	08 01.3 +00.1	00			
01	276 38.0 +01.0	N	23 19.0 +00.0	299 05.3 +02.3	N	22 25.4 +00.0	32 31.1 +02.6	S	08 01.4 +00.1	01			
02	291 39.0 +01.0	N	23 19.0 -00.1	314 07.6 +02.3	N	22 25.4 +00.0	47 33.7 +02.6	S	08 01.5 +00.0	02			
03	306 40.0 +01.0	N	23 18.9 -00.1	329 09.9 +02.4	N	22 25.4 +00.0	62 36.3 +02.6	S	08 01.5 +00.1	03			
04	321 41.0 +01.0	N	23 18.8 +00.0	344 12.3 +02.3	N	22 25.4 +00.0	77 38.9 +02.7	S	08 01.6 +00.1	04			
05	336 42.0 +00.9	N	23 18.8 -00.1	359 14.6 +02.4	N	22 25.4 +00.0	92 41.6 +02.6	S	08 01.7 +00.0	05			
06	351 42.9 +01.0	N	23 18.7 -00.1	14 17.0 +02.3	N	22 25.4 +00.0	107 44.2 +02.6	S	08 01.7 +00.1	06			
07	6 43.9 +01.0	N	23 18.6 +00.0	29 19.3 +02.3	N	22 25.4 +00.0	122 46.8 +02.7	S	08 01.8 +00.1	07			
08	21 44.9 +01.0	N	23 18.6 -00.1	44 21.6 +02.4	N	22 25.4 +00.1	137 49.5 +02.6	S	08 01.9 +00.0	08			
09	36 45.9 +01.0	N	23 18.5 -00.1	59 24.0 +02.3	N	22 25.5 +00.0	152 52.1 +02.6	S	08 01.9 +00.1	09			
10	51 46.9 +00.9	N	23 18.4 +00.0	74 26.3 +02.4	N	22 25.5 +00.0	167 54.7 +02.7	S	08 02.0 +00.1	10			
11	66 47.8 +01.0	N	23 18.4 -00.1	89 28.7 +02.3	N	22 25.5 +00.0	182 57.4 +02.6	S	08 02.1 +00.0	11			
12	81 48.8 +01.0	N	23 18.3 +00.0	104 31.0 +02.3	N	22 25.5 +00.0	197 60.0 +02.6	S	08 02.1 +00.1	12			
13	96 49.8 +01.0	N	23 18.3 -00.1	119 33.3 +02.4	N	22 25.5 +00.0	213 02.6 +02.6	S	08 02.2 +00.1	13			
14	111 50.8 +01.0	N	23 18.2 -00.1	134 35.7 +02.3	N	22 25.5 +00.0	228 05.2 +02.7	S	08 02.3 +00.0	14			
15	126 51.8 +01.0	N	23 18.1 +00.0	149 38.0 +02.4	N	22 25.5 +00.0	243 07.9 +02.6	S	08 02.3 +00.1	15			
16	141 52.8 +00.9	N	23 18.1 -00.1	164 40.4 +02.3	N	22 25.5 +00.0	258 10.5 +02.6	S	08 02.4 +00.1	16			
17	156 53.7 +01.0	N	23 18.0 -00.1	179 42.7 +02.4	N	22 25.5 +00.0	273 13.1 +02.7	S	08 02.5 +00.0	17			
18	171 54.7 +01.0	N	23 17.9 +00.0	194 45.1 +02.3	N	22 25.5 +00.0	288 15.8 +02.6	S	08 02.5 +00.1	18			
19	186 55.7 +01.0	N	23 17.9 -00.1	209 47.4 +02.3	N	22 25.5 +00.0	303 18.4 +02.6	S	08 02.6 +00.1	19			
20	201 56.7 +01.0	N	23 17.8 -00.1	224 49.7 +02.4	N	22 25.5 +00.0	318 21.0 +02.6	S	08 02.7 +00.0	20			
21	216 57.7 +01.0	N	23 17.7 +00.0	239 52.1 +02.3	N	22 25.5 +00.0	333 23.6 +02.7	S	08 02.7 +00.1	21			
22	231 58.7 +01.0	N	23 17.7 -00.1	254 54.4 +02.4	N	22 25.5 +00.0	348 26.3 +02.6	S	08 02.8 +00.1	22			
23	246 59.7 +00.9	N	23 17.6 -00.1	269 56.8 +02.3	N	22 25.5 +00.1	3 28.9 +02.6	S	08 02.9 +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 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 257° 257° 257° 257° 257° 257°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:33			Greenwich Culmination Time: 05:03			Greenwich Culmination Time: 22:46						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182	10.4 +00.2	S 01 21.0	+01.0	154	00.4 -00.5	S 12 42.2	+01.2	255	00.8 -32.8	N 27 22.4	-05.1	00
01	197	10.6 +00.2	S 01 22.0	+01.0	168	59.9 -00.4	S 12 43.4	+01.1	269	28.0 -32.9	N 27 17.3	-05.1	01
02	212	10.8 +00.2	S 01 23.0	+01.0	183	59.5 -00.4	S 12 44.5	+01.2	283	55.1 -32.7	N 27 12.2	-05.4	02
03	227	11.0 +00.2	S 01 24.0	+00.9	198	59.1 -00.5	S 12 45.7	+01.1	298	22.4 -32.6	N 27 06.8	-05.5	03
04	242	11.2 +00.2	S 01 24.9	+01.0	213	58.6 -00.4	S 12 46.8	+01.2	312	49.8 -32.5	N 27 01.3	-05.6	04
05	257	11.4 +00.3	S 01 25.9	+01.0	228	58.2 -00.4	S 12 48.0	+01.1	327	17.3 -32.5	N 26 55.7	-05.7	05
06	272	11.7 +00.2	S 01 26.9	+01.0	243	57.8 -00.4	S 12 49.1	+01.2	341	44.8 -32.3	N 26 50.0	-05.9	06
07	287	11.9 +00.2	S 01 27.9	+00.9	258	57.4 -00.5	S 12 50.3	+01.1	356	12.5 -32.3	N 26 44.1	-06.0	07
08	302	12.1 +00.2	S 01 28.8	+01.0	273	56.9 -00.4	S 12 51.4	+01.2	10	40.2 -32.1	N 26 38.1	-06.2	08
09	317	12.3 +00.2	S 01 29.8	+01.0	288	56.5 -00.4	S 12 52.6	+01.1	25	08.1 -32.1	N 26 31.9	-06.3	09
10	332	12.5 +00.2	S 01 30.8	+01.0	303	56.1 -00.5	S 12 53.7	+01.2	39	36.0 -31.9	N 26 25.6	-06.4	10
11	347	12.7 +00.2	S 01 31.8	+00.9	318	55.6 -00.4	S 12 54.9	+01.1	54	04.1 -31.9	N 26 19.2	-06.6	11
12	2	12.9 +00.3	S 01 32.7	+01.0	333	55.2 -00.4	S 12 56.0	+01.1	68	32.2 -31.8	N 26 12.6	-06.6	12
13	17	13.2 +00.2	S 01 33.7	+01.0	348	54.8 -00.5	S 12 57.1	+01.2	83	00.4 -31.6	N 26 06.0	-06.8	13
14	32	13.4 +00.2	S 01 34.7	+00.9	3	54.3 -00.4	S 12 58.3	+01.1	97	28.8 -31.6	N 25 59.2	-07.0	14
15	47	13.6 +00.2	S 01 35.6	+01.0	18	53.9 -00.4	S 12 59.4	+01.2	111	57.2 -31.5	N 25 52.2	-07.0	15
16	62	13.8 +00.2	S 01 36.6	+01.0	33	53.5 -00.5	S 13 00.6	+01.1	126	25.7 -31.4	N 25 45.2	-07.2	16
17	77	14.0 +00.2	S 01 37.6	+01.0	48	53.0 -00.4	S 13 01.7	+01.2	140	54.3 -31.2	N 25 38.0	-07.3	17
18	92	14.2 +00.2	S 01 38.6	+00.9	63	52.6 -00.4	S 13 02.9	+01.1	155	23.1 -31.2	N 25 30.7	-07.5	18
19	107	14.4 +00.2	S 01 39.5	+01.0	78	52.2 -00.5	S 13 04.0	+01.1	169	51.9 -31.1	N 25 23.2	-07.5	19
20	122	14.6 +00.3	S 01 40.5	+01.0	93	51.7 -00.4	S 13 05.1	+01.2	184	20.8 -31.0	N 25 15.7	-07.7	20
21	137	14.9 +00.2	S 01 41.5	+01.0	108	51.3 -00.4	S 13 06.3	+01.1	198	49.8 -30.9	N 25 08.0	-07.8	21
22	152	15.1 +00.2	S 01 42.5	+00.9	123	50.9 -00.5	S 13 07.4	+01.2	213	18.9 -30.7	N 25 00.2	-07.9	22
23	167	15.3 +00.2	S 01 43.4	+01.0	138	50.4 -00.4	S 13 08.6	+01.1	227	48.2 -30.7	N 24 52.3	-08.0	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 177° 177° 177° 176° 176° 176°												
	Greenwich Culmination Time: 11:51												
	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 149° 148° 148° 148° 148° 148°												
	Greenwich Culmination Time: 13:44												
	UT 02 06 10 14 18 22												
	SD 15'3 15'3 15'2 15'2 15'2 15'1												
	HP 56'2 56'0 55'9 55'8 55'7 55'6												
	SHA 249° 246° 244° 242° 239° 237°												
	Greenwich Culmination Time: 07:15												
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	262	00.6 +01.0	N 23 17.5	+00.0	284	59.1 +02.4	N 22 25.6	+00.0	18	31.5 +02.7	S 08 02.9	+00.1	00
01	277	01.6 +01.0	N 23 17.5	-00.1	300	01.5 +02.3	N 22 25.6	+00.0	33	34.2 +02.6	S 08 03.0	+00.1	01
02	292	02.6 +01.0	N 23 17.4	-00.1	315	03.8 +02.4	N 22 25.6	+00.0	48	36.8 +02.6	S 08 03.1	+00.0	02
03	307	03.6 +01.0	N 23 17.3	-00.1	330	06.2 +02.3	N 22 25.6	+00.0	63	39.4 +02.6	S 08 03.1	+00.1	03
04	322	04.6 +01.0	N 23 17.2	+00.0	345	08.5 +02.4	N 22 25.6	+00.0	78	42.0 +02.7	S 08 03.2	+00.1	04
05	337	05.6 +01.0	N 23 17.2	-00.1	0	10.9 +02.3	N 22 25.6	+00.0	93	44.7 +02.6	S 08 03.3	+00.0	05
06	352	06.6 +01.0	N 23 17.1	-00.1	15	13.2 +02.4	N 22 25.6	+00.0	108	47.3 +02.6	S 08 03.3	+00.1	06
07	7	07.6 +01.0	N 23 17.0	+00.0	30	15.6 +02.3	N 22 25.6	+00.0	123	49.9 +02.6	S 08 03.4	+00.1	07
08	22	08.6 +00.9	N 23 17.0	-00.1	45	17.9 +02.4	N 22 25.6	+00.0	138	52.5 +02.7	S 08 03.5	+00.0	08
09	37	09.5 +01.0	N 23 16.9	-00.1	60	20.3 +02.3	N 22 25.6	+00.0	153	55.2 +02.6	S 08 03.5	+00.1	09
10	52	10.5 +01.0	N 23 16.8	+00.0	75	22.6 +02.3	N 22 25.6	+00.0	168	57.8 +02.6	S 08 03.6	+00.1	10
11	67	11.5 +01.0	N 23 16.8	-00.1	90	24.9 +02.4	N 22 25.6	+00.0	184	00.4 +02.7	S 08 03.7	+00.0	11
12	82	12.5 +01.0	N 23 16.7	-00.1	105	27.3 +02.4	N 22 25.6	+00.0	199	03.1 +02.6	S 08 03.7	+00.1	12
13	97	13.5 +01.0	N 23 16.6	+00.0	120	29.7 +02.3	N 22 25.6	+00.0	214	05.7 +02.6	S 08 03.8	+00.1	13
14	112	14.5 +01.0	N 23 16.6	-00.1	135	32.0 +02.4	N 22 25.6	+00.0	229	08.3 +02.6	S 08 03.9	+00.0	14
15	127	15.5 +01.0	N 23 16.5	-00.1	150	34.4 +02.3	N 22 25.6	+00.0	244	10.9 +02.7	S 08 03.9	+00.1	15
16	142	16.5 +01.0	N 23 16.4	-00.1	165	36.7 +02.4	N 22 25.6	+00.1	259	13.6 +02.6	S 08 04.0	+00.1	16
17	157	17.5 +01.0	N 23 16.3	+00.0	180	39.1 +02.3	N 22 25.7	+00.0	274	16.2 +02.6	S 08 04.1	+00.0	17
18	172	18.5 +01.0	N 23 16.3	-00.1	195	41.4 +02.4	N 22 25.7	+00.0	289	18.8 +02.6	S 08 04.1	+00.1	18
19	187	19.5 +01.0	N 23 16.2	-00.1	210	43.8 +02.3	N 22 25.7	+00.0	304	21.4 +02.7	S 08 04.2	+00.1	19
20	202	20.5 +01.0	N 23 16.1	+00.0	225	46.1 +02.4	N 22 25.7	+00.0	319	24.1 +02.6	S 08 04.3	+00.0	20
21	217	21.5 +01.0	N 23 16.1	-00.1	240	48.5 +02.3	N 22 25.7	+00.0	334	26.7 +02.6	S 08 04.3	+00.1	21
22	232	22.5 +01.0	N 23 16.0	-00.1	255	50.8 +02.4	N 22 25.7	+00.0	349	29.3 +02.7	S 08 04.4	+00.1	22
23	247	23.5 +01.0	N 23 15.9	-00.1	270	53.2 +02.3	N 22 25.7	+00.0	4	32.0 +02.6	S 08 04.5	+00.0	23
	UT 02 06 10 14 18 22												
	SD 00'1 00'1 00'1 00'1 00'1 00'1												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 257° 257° 256° 256° 256° 256°												
	Greenwich Culmination Time: 06:31												
	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 280° 280° 280° 280° 280° 280°												
	Greenwich Culmination Time: 04:59												
	UT 02 06 10 14 18 22												
	SD 00'2 00'2 00'2 00'2 00'2 00'2												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 013° 013° 013° 013° 013° 013°												
	Greenwich Culmination Time: 22:41												

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182	20.5 +00.3	S 02 07.8 +00.9		153	39.4 -00.5	S 13 36.9 +01.1		230	30.6 -28.3	N 21 00.3 -10.5		00
01	197	20.8 +00.2	S 02 08.7 +01.0		168	38.9 -00.4	S 13 38.0 +01.1		245	02.3 -28.2	N 20 49.8 -10.6		01
02	212	21.0 +00.2	S 02 09.7 +01.0		183	38.5 -00.5	S 13 39.1 +01.2		259	34.1 -28.1	N 20 39.2 -10.7		02
03	227	21.2 +00.2	S 02 10.7 +00.9		198	38.0 -00.4	S 13 40.3 +01.1		274	06.0 -27.9	N 20 28.5 -10.7		03
04	242	21.4 +00.2	S 02 11.6 +01.0		213	37.6 -00.5	S 13 41.4 +01.1		288	38.1 -27.9	N 20 17.8 -10.9		04
05	257	21.6 +00.2	S 02 12.6 +01.0		228	37.1 -00.4	S 13 42.5 +01.1		303	10.2 -27.9	N 20 06.9 -10.9		05
06	272	21.8 +00.2	S 02 13.6 +01.0		243	36.7 -00.5	S 13 43.6 +01.1		317	42.3 -27.7	N 19 56.0 -11.0		06
07	287	22.0 +00.2	S 02 14.6 +00.9		258	36.2 -00.4	S 13 44.7 +01.2		332	14.6 -27.6	N 19 45.0 -11.1		07
08	302	22.2 +00.2	S 02 15.5 +01.0		273	35.8 -00.5	S 13 45.9 +01.1		346	47.0 -27.6	N 19 33.9 -11.2		08
09	317	22.4 +00.2	S 02 16.5 +01.0		288	35.3 -00.4	S 13 47.0 +01.1		1	19.4 -27.4	N 19 22.7 -11.2		09
10	332	22.6 +00.2	S 02 17.5 +01.0		303	34.9 -00.5	S 13 48.1 +01.1		15	52.0 -27.4	N 19 11.5 -11.3		10
11	347	22.8 +00.2	S 02 18.5 +00.9		318	34.4 -00.4	S 13 49.2 +01.1		30	24.6 -27.3	N 19 00.2 -11.4		11
12	2	23.0 +00.3	S 02 19.4 +01.0		333	34.0 -00.5	S 13 50.3 +01.2		44	57.3 -27.2	N 18 48.8 -11.4		12
13	17	23.3 +00.2	S 02 20.4 +01.0		348	33.5 -00.4	S 13 51.5 +01.1		59	30.1 -27.1	N 18 37.4 -11.5		13
14	32	23.5 +00.2	S 02 21.4 +00.9		3	33.1 -00.5	S 13 52.6 +01.1		74	03.0 -27.1	N 18 25.9 -11.6		14
15	47	23.7 +00.2	S 02 22.3 +01.0		18	32.6 -00.5	S 13 53.7 +01.1		88	35.9 -26.9	N 18 14.3 -11.7		15
16	62	23.9 +00.2	S 02 23.3 +01.0		33	32.1 -00.4	S 13 54.8 +01.1		103	09.0 -26.9	N 18 02.6 -11.7		16
17	77	24.1 +00.2	S 02 24.3 +01.0		48	31.7 -00.5	S 13 55.9 +01.2		117	42.1 -26.8	N 17 50.9 -11.8		17
18	92	24.3 +00.2	S 02 25.3 +00.9		63	31.2 -00.4	S 13 57.1 +01.1		132	15.3 -26.7	N 17 39.1 -11.9		18
19	107	24.5 +00.2	S 02 26.2 +01.0		78	30.8 -00.5	S 13 58.2 +01.1		146	48.6 -26.7	N 17 27.2 -11.9		19
20	122	24.7 +00.2	S 02 27.2 +01.0		93	30.3 -00.4	S 13 59.3 +01.1		161	21.9 -26.6	N 17 15.3 -12.0		20
21	137	24.9 +00.2	S 02 28.2 +00.9		108	29.9 -00.5	S 14 00.4 +01.1		175	55.3 -26.5	N 17 03.3 -12.0		21
22	152	25.1 +00.2	S 02 29.1 +01.0		123	29.4 -00.4	S 14 01.5 +01.1		190	28.8 -26.4	N 16 51.3 -12.1		22
23	167	25.3 +00.2	S 02 30.1 +01.0		138	29.0 -00.5	S 14 02.6 +01.1		205	02.4 -26.3	N 16 39.2 -12.2		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 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 15'0 15'0 14'9 14'9 14'9 14'9				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 55'0 54'9 54'8 54'7 54'7 54'6				
	SHA 175° 175° 175° 175° 174° 174°				SHA 146° 146° 146° 146° 146° 145°				SHA 222° 220° 218° 216° 214° 212°				
	Greenwich Culmination Time: 11:50				Greenwich Culmination Time: 13:45				Greenwich Culmination Time: 08:54				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	262	48.5 +01.0	N 23 14.1 -00.1		286	52.1 +02.4	N 22 25.8 +00.0		20	37.6 +02.6	S 08 06.1 +00.1		00
01	277	49.5 +01.0	N 23 14.0 -00.1		301	54.5 +02.4	N 22 25.8 +00.0		35	40.2 +02.6	S 08 06.2 +00.1		01
02	292	50.5 +01.1	N 23 13.9 +00.0		316	56.9 +02.3	N 22 25.8 +00.0		50	42.8 +02.7	S 08 06.3 +00.0		02
03	307	51.6 +01.0	N 23 13.9 -00.1		331	59.2 +02.4	N 22 25.8 +00.0		65	45.5 +02.6	S 08 06.3 +00.1		03
04	322	52.6 +01.0	N 23 13.8 -00.1		347	01.6 +02.4	N 22 25.8 +00.1		80	48.1 +02.6	S 08 06.4 +00.0		04
05	337	53.6 +01.0	N 23 13.7 -00.1		2	04.0 +02.3	N 22 25.9 +00.0		95	50.7 +02.6	S 08 06.4 +00.1		05
06	352	54.6 +01.0	N 23 13.6 +00.0		17	06.3 +02.4	N 22 25.9 +00.0		110	53.3 +02.7	S 08 06.5 +00.1		06
07	7	55.6 +01.0	N 23 13.6 -00.1		32	08.7 +02.4	N 22 25.9 +00.0		125	56.0 +02.6	S 08 06.6 +00.0		07
08	22	56.6 +01.0	N 23 13.5 -00.1		47	11.1 +02.3	N 22 25.9 +00.0		140	58.6 +02.6	S 08 06.6 +00.1		08
09	37	57.6 +01.0	N 23 13.4 -00.1		62	13.4 +02.4	N 22 25.9 +00.0		156	01.2 +02.6	S 08 06.7 +00.1		09
10	52	58.6 +01.0	N 23 13.3 -00.1		77	15.8 +02.4	N 22 25.9 +00.0		171	03.8 +02.7	S 08 06.8 +00.0		10
11	67	59.6 +01.0	N 23 13.2 +00.0		92	18.2 +02.3	N 22 25.9 +00.0		186	06.5 +02.6	S 08 06.8 +00.1		11
12	83	00.6 +01.1	N 23 13.2 -00.1		107	20.5 +02.4	N 22 25.9 +00.0		201	09.1 +02.6	S 08 06.9 +00.1		12
13	98	01.7 +01.0	N 23 13.1 -00.1		122	22.9 +02.4	N 22 25.9 +00.0		216	11.7 +02.6	S 08 07.0 +00.0		13
14	113	02.7 +01.0	N 23 13.0 -00.1		137	25.3 +02.3	N 22 25.9 +00.0		231	14.3 +02.7	S 08 07.0 +00.1		14
15	128	03.7 +01.0	N 23 12.9 +00.0		152	27.6 +02.4	N 22 25.9 +00.0		246	17.0 +02.6	S 08 07.1 +00.1		15
16	143	04.7 +01.0	N 23 12.9 -00.1		167	30.0 +02.4	N 22 25.9 +00.0		261	19.6 +02.6	S 08 07.2 +00.0		16
17	158	05.7 +01.0	N 23 12.8 -00.1		182	32.4 +02.3	N 22 25.9 +00.0		276	22.2 +02.6	S 08 07.2 +00.1		17
18	173	06.7 +01.1	N 23 12.7 -00.1		197	34.7 +02.4	N 22 25.9 +00.0		291	24.8 +02.7	S 08 07.3 +00.1		18
19	188	07.8 +01.0	N 23 12.6 -00.1		212	37.1 +02.4	N 22 25.9 +00.0		306	27.5 +02.6	S 08 07.4 +00.0		19
20	203	08.8 +01.0	N 23 12.5 +00.0		227	39.5 +02.3	N 22 25.9 +00.0		321	30.1 +02.6	S 08 07.4 +00.1		20
21	218	09.8 +01.0	N 23 12.5 -00.1		242	41.8 +02.4	N 22 25.9 +00.0		336	32.7 +02.6	S 08 07.5 +00.0		21
22	233	10.8 +01.0	N 23 12.4 -00.1		257	44.2 +02.4	N 22 25.9 +00.0		351	35.3 +02.6	S 08 07.5 +00.1		22
23	248	11.8 +01.0	N 23 12.3 -00.1		272	46.6 +02.4	N 22 25.9 +00.0		6	37.9 +02.7	S 08 07.6 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'2 00'2 00'2 00'2 00'2 00'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 255° 255° 255° 255° 255° 255°				SHA 280° 280° 280° 280° 280° 280°				SHA 013° 013° 013° 013° 013° 013°				
	Greenwich Culmination Time: 06:28				Greenwich Culmination Time: 04:51				Greenwich Culmination Time: 22:33				

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 25.5 +00.2	S	02 31.1 +01.0	153 28.5 -00.5	S	14 03.7 +01.2	219 36.1 -26.3	N	16 27.0 -12.3	00			
01	197 25.7 +00.2	S	02 32.1 +00.9	168 28.0 -00.4	S	14 04.9 +01.1	234 09.8 -26.2	N	16 14.7 -12.2	01			
02	212 25.9 +00.3	S	02 33.0 +01.0	183 27.6 -00.5	S	14 06.0 +01.1	248 43.6 -26.1	N	16 02.5 -12.4	02			
03	227 26.2 +00.2	S	02 34.0 +01.0	198 27.1 -00.4	S	14 07.1 +01.1	263 17.5 -26.0	N	15 50.1 -12.4	03			
04	242 26.4 +00.2	S	02 35.0 +01.0	213 26.7 -00.5	S	14 08.2 +01.1	277 51.5 -26.0	N	15 37.7 -12.5	04			
05	257 26.6 +00.2	S	02 36.0 +00.9	228 26.2 -00.5	S	14 09.3 +01.1	292 25.5 -25.9	N	15 25.2 -12.5	05			
06	272 26.8 +00.2	S	02 36.9 +01.0	243 25.7 -00.4	S	14 10.4 +01.1	306 59.6 -25.9	N	15 12.7 -12.5	06			
07	287 27.0 +00.2	S	02 37.9 +01.0	258 25.3 -00.5	S	14 11.5 +01.1	321 33.7 -25.7	N	15 00.2 -12.7	07			
08	302 27.2 +00.2	S	02 38.9 +00.9	273 24.8 -00.4	S	14 12.6 +01.1	336 08.0 -25.7	N	14 47.5 -12.6	08			
09	317 27.4 +00.2	S	02 39.8 +01.0	288 24.4 -00.5	S	14 13.7 +01.1	350 42.3 -25.7	N	14 34.9 -12.8	09			
10	332 27.6 +00.2	S	02 40.8 +01.0	303 23.9 -00.5	S	14 14.8 +01.1	5 16.6 -25.6	N	14 22.1 -12.7	10			
11	347 27.8 +00.2	S	02 41.8 +01.0	318 23.4 -00.4	S	14 15.9 +01.2	19 51.0 -25.5	N	14 09.4 -12.9	11			
12	2 28.0 +00.2	S	02 42.8 +00.9	333 23.0 -00.5	S	14 17.1 +01.1	34 25.5 -25.4	N	13 56.5 -12.8	12			
13	17 28.2 +00.2	S	02 43.7 +01.0	348 22.5 -00.4	S	14 18.2 +01.1	49 00.1 -25.4	N	13 43.7 -13.0	13			
14	32 28.4 +00.2	S	02 44.7 +01.0	3 22.1 -00.5	S	14 19.3 +01.1	63 34.7 -25.3	N	13 30.7 -12.9	14			
15	47 28.6 +00.2	S	02 45.7 +00.9	18 21.6 -00.5	S	14 20.4 +01.1	78 09.4 -25.3	N	13 17.8 -13.0	15			
16	62 28.8 +00.2	S	02 46.6 +01.0	33 21.1 -00.4	S	14 21.5 +01.1	92 44.1 -25.2	N	13 04.8 -13.1	16			
17	77 29.0 +00.2	S	02 47.6 +01.0	48 20.7 -00.5	S	14 22.6 +01.1	107 18.9 -25.2	N	12 51.7 -13.1	17			
18	92 29.2 +00.2	S	02 48.6 +00.9	63 20.2 -00.5	S	14 23.7 +01.1	121 53.7 -25.1	N	12 38.6 -13.1	18			
19	107 29.4 +00.2	S	02 49.5 +01.0	78 19.7 -00.4	S	14 24.8 +01.1	136 28.6 -25.0	N	12 25.5 -13.2	19			
20	122 29.6 +00.2	S	02 50.5 +01.0	93 19.3 -00.5	S	14 25.9 +01.1	151 03.6 -25.0	N	12 12.3 -13.2	20			
21	137 29.8 +00.3	S	02 51.5 +01.0	108 18.8 -00.5	S	14 27.0 +01.1	165 38.6 -24.9	N	11 59.1 -13.3	21			
22	152 30.1 +00.2	S	02 52.5 +00.9	123 18.3 -00.4	S	14 28.1 +01.1	180 13.7 -24.9	N	11 45.8 -13.3	22			
23	167 30.3 +00.2	S	02 53.4 +01.0	138 17.9 -00.5	S	14 29.2 +01.1	194 48.8 -24.8	N	11 32.5 -13.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 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 14'9 14'8 14'8 14'8 14'8 14'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'6 54'5 54'4 54'4 54'3 54'3						
	SHA 174° 174° 174° 174° 173° 173°			SHA 145° 145° 145° 145° 144° 144°			SHA 210° 208° 207° 205° 203° 201°						
	Greenwich Culmination Time: 11:50			Greenwich Culmination Time: 13:46			Greenwich Culmination Time: 09:38						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	263 12.8 +01.1	N	23 12.2 -00.1	287 49.0 +02.3	N	22 25.9 +00.0	21 40.6 +02.6	S	08 07.7 +00.0	00			
01	278 13.9 +01.0	N	23 12.1 +00.0	302 51.3 +02.4	N	22 25.9 +00.1	36 43.2 +02.6	S	08 07.7 +00.1	01			
02	293 14.9 +01.0	N	23 12.1 -00.1	317 53.7 +02.4	N	22 26.0 +00.0	51 45.8 +02.6	S	08 07.8 +00.1	02			
03	308 15.9 +01.0	N	23 12.0 -00.1	332 56.1 +02.4	N	22 26.0 +00.0	66 48.4 +02.7	S	08 07.9 +00.0	03			
04	323 16.9 +01.0	N	23 11.9 -00.1	347 58.5 +02.3	N	22 26.0 +00.0	81 51.1 +02.6	S	08 07.9 +00.1	04			
05	338 17.9 +01.1	N	23 11.8 -00.1	3 00.8 +02.4	N	22 26.0 +00.0	96 53.7 +02.6	S	08 08.0 +00.1	05			
06	353 19.0 +01.0	N	23 11.7 +00.0	18 03.2 +02.4	N	22 26.0 +00.0	111 56.3 +02.6	S	08 08.1 +00.0	06			
07	8 20.0 +01.0	N	23 11.7 -00.1	33 05.6 +02.4	N	22 26.0 +00.0	126 58.9 +02.7	S	08 08.1 +00.1	07			
08	23 21.0 +01.0	N	23 11.6 -00.1	48 08.0 +02.3	N	22 26.0 +00.0	142 01.6 +02.6	S	08 08.2 +00.1	08			
09	38 22.0 +01.0	N	23 11.5 -00.1	63 10.3 +02.4	N	22 26.0 +00.0	157 04.2 +02.6	S	08 08.3 +00.0	09			
10	53 23.0 +01.1	N	23 11.4 -00.1	78 12.7 +02.4	N	22 26.0 +00.0	172 06.8 +02.6	S	08 08.3 +00.1	10			
11	68 24.1 +01.0	N	23 11.3 +00.0	93 15.1 +02.4	N	22 26.0 +00.0	187 09.4 +02.6	S	08 08.4 +00.0	11			
12	83 25.1 +01.0	N	23 11.3 -00.1	108 17.5 +02.3	N	22 26.0 +00.0	202 12.0 +02.7	S	08 08.4 +00.1	12			
13	98 26.1 +01.0	N	23 11.2 -00.1	123 19.8 +02.4	N	22 26.0 +00.0	217 14.7 +02.6	S	08 08.5 +00.1	13			
14	113 27.1 +01.1	N	23 11.1 -00.1	138 22.2 +02.4	N	22 26.0 +00.0	232 17.3 +02.6	S	08 08.6 +00.0	14			
15	128 28.2 +01.0	N	23 11.0 -00.1	153 24.6 +02.4	N	22 26.0 +00.0	247 19.9 +02.6	S	08 08.6 +00.1	15			
16	143 29.2 +01.0	N	23 10.9 +00.0	168 27.0 +02.3	N	22 26.0 +00.0	262 22.5 +02.7	S	08 08.7 +00.1	16			
17	158 30.2 +01.0	N	23 10.9 -00.1	183 29.3 +02.4	N	22 26.0 +00.0	277 25.2 +02.6	S	08 08.8 +00.0	17			
18	173 31.2 +01.1	N	23 10.8 -00.1	198 31.7 +02.4	N	22 26.0 +00.0	292 27.8 +02.6	S	08 08.8 +00.1	18			
19	188 32.3 +01.0	N	23 10.7 -00.1	213 34.1 +02.4	N	22 26.0 +00.0	307 30.4 +02.6	S	08 08.9 +00.1	19			
20	203 33.3 +01.0	N	23 10.6 -00.1	228 36.5 +02.4	N	22 26.0 +00.0	322 33.0 +02.6	S	08 09.0 +00.0	20			
21	218 34.3 +01.0	N	23 10.5 -00.1	243 38.9 +02.3	N	22 26.0 +00.0	337 35.6 +02.7	S	08 09.0 +00.1	21			
22	233 35.3 +01.1	N	23 10.4 +00.0	258 41.2 +02.4	N	22 26.0 +00.0	352 38.3 +02.6	S	08 09.1 +00.0	22			
23	248 36.4 +01.0	N	23 10.4 -00.1	273 43.6 +02.4	N	22 26.0 +00.0	7 40.9 +02.6	S	08 09.1 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'4 00'4 00'4 00'4 00'4			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 255° 255° 255° 255° 255° 254°			SHA 280° 280° 280° 280° 280° 280°			SHA 013° 013° 013° 013° 013° 013°						
	Greenwich Culmination Time: 06:26			Greenwich Culmination Time: 04:47			Greenwich Culmination Time: 22:29						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182	30.5 +00.2	S 02 54.4	+01.0	153	17.4 -00.5	S 14 30.3	+01.1	209	24.0 -24.8	N 11 19.2	-13.4	00
01	197	30.7 +00.2	S 02 55.4	+00.9	168	16.9 -00.4	S 14 31.4	+01.1	223	59.2 -24.7	N 11 05.8	-13.4	01
02	212	30.9 +00.2	S 02 56.3	+01.0	183	16.5 -00.5	S 14 32.5	+01.1	238	34.5 -24.7	N 10 52.4	-13.5	02
03	227	31.1 +00.2	S 02 57.3	+01.0	198	16.0 -00.5	S 14 33.6	+01.1	253	09.8 -24.6	N 10 38.9	-13.5	03
04	242	31.3 +00.2	S 02 58.3	+01.0	213	15.5 -00.5	S 14 34.7	+01.1	267	45.2 -24.6	N 10 25.4	-13.5	04
05	257	31.5 +00.2	S 02 59.3	+00.9	228	15.0 -00.4	S 14 35.8	+01.1	282	20.6 -24.5	N 10 11.9	-13.5	05
06	272	31.7 +00.2	S 03 00.2	+01.0	243	14.6 -00.5	S 14 36.9	+01.1	296	56.1 -24.5	N 09 58.4	-13.6	06
07	287	31.9 +00.2	S 03 01.2	+01.0	258	14.1 -00.5	S 14 38.0	+01.1	311	31.6 -24.4	N 09 44.8	-13.6	07
08	302	32.1 +00.2	S 03 02.2	+00.9	273	13.6 -00.4	S 14 39.1	+01.0	326	07.2 -24.4	N 09 31.2	-13.7	08
09	317	32.3 +00.2	S 03 03.1	+01.0	288	13.2 -00.5	S 14 40.1	+01.1	340	42.8 -24.4	N 09 17.5	-13.7	09
10	332	32.5 +00.2	S 03 04.1	+01.0	303	12.7 -00.5	S 14 41.2	+01.1	355	18.4 -24.3	N 09 03.8	-13.7	10
11	347	32.7 +00.2	S 03 05.1	+00.9	318	12.2 -00.5	S 14 42.3	+01.1	9	54.1 -24.3	N 08 50.1	-13.7	11
12	2	32.9 +00.2	S 03 06.0	+01.0	333	11.7 -00.4	S 14 43.4	+01.1	24	29.8 -24.2	N 08 36.4	-13.8	12
13	17	33.1 +00.2	S 03 07.0	+01.0	348	11.3 -00.5	S 14 44.5	+01.1	39	05.6 -24.2	N 08 22.6	-13.7	13
14	32	33.3 +00.2	S 03 08.0	+01.0	3	10.8 -00.5	S 14 45.6	+01.1	53	41.4 -24.2	N 08 08.9	-13.9	14
15	47	33.5 +00.2	S 03 09.0	+00.9	18	10.3 -00.5	S 14 46.7	+01.1	68	17.2 -24.1	N 07 55.0	-13.8	15
16	62	33.7 +00.2	S 03 09.9	+01.0	33	09.8 -00.4	S 14 47.8	+01.1	82	53.1 -24.1	N 07 41.2	-13.9	16
17	77	33.9 +00.2	S 03 10.9	+01.0	48	09.4 -00.5	S 14 48.9	+01.1	97	29.0 -24.0	N 07 27.3	-13.8	17
18	92	34.1 +00.2	S 03 11.9	+00.9	63	08.9 -00.5	S 14 50.0	+01.1	112	05.0 -24.0	N 07 13.5	-13.9	18
19	107	34.3 +00.2	S 03 12.8	+01.0	78	08.4 -00.5	S 14 51.1	+01.0	126	41.0 -24.0	N 06 59.6	-14.0	19
20	122	34.5 +00.2	S 03 13.8	+01.0	93	07.9 -00.4	S 14 52.1	+01.1	141	17.0 -24.0	N 06 45.6	-13.9	20
21	137	34.7 +00.2	S 03 14.8	+00.9	108	07.5 -00.5	S 14 53.2	+01.1	155	53.0 -23.9	N 06 31.7	-14.0	21
22	152	34.9 +00.2	S 03 15.7	+01.0	123	07.0 -00.5	S 14 54.3	+01.1	170	29.1 -23.9	N 06 17.7	-14.0	22
23	167	35.1 +00.2	S 03 16.7	+01.0	138	06.5 -00.5	S 14 55.4	+01.1	185	05.2 -23.9	N 06 03.7	-14.0	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 173° 173° 173° 173° 173° 172°												
	Greenwich Culmination Time: 11:49												
	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 144° 144° 144° 143° 143° 143°												
	Greenwich Culmination Time: 13:47												
	UT 02 06 10 14 18 22												
	SD 14'8 14'8 14'8 14'7 14'7 14'7												
	HP 54'2 54'2 54'2 54'1 54'1 54'1												
	SHA 199° 197° 196° 194° 192° 190°												
	Greenwich Culmination Time: 10:19												
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	263	37.4 +01.0	N 23 10.3	-00.1	288	46.0 +02.4	N 22 26.0	+00.0	22	43.5 +02.6	S 08 09.2	+00.1	00
01	278	38.4 +01.1	N 23 10.2	-00.1	303	48.4 +02.4	N 22 26.0	+00.1	37	46.1 +02.6	S 08 09.3	+00.0	01
02	293	39.5 +01.0	N 23 10.1	-00.1	318	50.8 +02.3	N 22 26.1	+00.0	52	48.7 +02.7	S 08 09.3	+00.1	02
03	308	40.5 +01.0	N 23 10.0	-00.1	333	53.1 +02.4	N 22 26.1	+00.0	67	51.4 +02.6	S 08 09.4	+00.1	03
04	323	41.5 +01.1	N 23 09.9	+00.0	348	55.5 +02.4	N 22 26.1	+00.0	82	54.0 +02.6	S 08 09.5	+00.0	04
05	338	42.6 +01.0	N 23 09.9	-00.1	3	57.9 +02.4	N 22 26.1	+00.0	97	56.6 +02.6	S 08 09.5	+00.1	05
06	353	43.6 +01.0	N 23 09.8	-00.1	19	00.3 +02.4	N 22 26.1	+00.0	112	59.2 +02.7	S 08 09.6	+00.1	06
07	8	44.6 +01.1	N 23 09.7	-00.1	34	02.7 +02.4	N 22 26.1	+00.0	128	01.9 +02.6	S 08 09.7	+00.0	07
08	23	45.7 +01.0	N 23 09.6	-00.1	49	05.1 +02.3	N 22 26.1	+00.0	143	04.5 +02.6	S 08 09.7	+00.1	08
09	38	46.7 +01.0	N 23 09.5	-00.1	64	07.4 +02.4	N 22 26.1	+00.0	158	07.1 +02.6	S 08 09.8	+00.0	09
10	53	47.7 +01.0	N 23 09.4	+00.0	79	09.8 +02.4	N 22 26.1	+00.0	173	09.7 +02.6	S 08 09.8	+00.1	10
11	68	48.7 +01.1	N 23 09.4	-00.1	94	12.2 +02.4	N 22 26.1	+00.0	188	12.3 +02.7	S 08 09.9	+00.1	11
12	83	49.8 +01.0	N 23 09.3	-00.1	109	14.6 +02.4	N 22 26.1	+00.0	203	15.0 +02.6	S 08 10.0	+00.0	12
13	98	50.8 +01.1	N 23 09.2	-00.1	124	17.0 +02.4	N 22 26.1	+00.0	218	17.6 +02.6	S 08 10.0	+00.1	13
14	113	51.9 +01.0	N 23 09.1	-00.1	139	19.4 +02.3	N 22 26.1	+00.0	233	20.2 +02.6	S 08 10.1	+00.1	14
15	128	52.9 +01.0	N 23 09.0	-00.1	154	21.7 +02.4	N 22 26.1	+00.0	248	22.8 +02.6	S 08 10.2	+00.0	15
16	143	53.9 +01.1	N 23 08.9	-00.1	169	24.1 +02.4	N 22 26.1	+00.0	263	25.4 +02.7	S 08 10.2	+00.1	16
17	158	55.0 +01.0	N 23 08.8	+00.0	184	26.5 +02.4	N 22 26.1	+00.0	278	28.1 +02.6	S 08 10.3	+00.0	17
18	173	56.0 +01.0	N 23 08.8	-00.1	199	28.9 +02.4	N 22 26.1	+00.0	293	30.7 +02.6	S 08 10.3	+00.1	18
19	188	57.0 +01.1	N 23 08.7	-00.1	214	31.3 +02.4	N 22 26.1	+00.0	308	33.3 +02.6	S 08 10.4	+00.1	19
20	203	58.1 +01.0	N 23 08.6	-00.1	229	33.7 +02.4	N 22 26.1	+00.0	323	35.9 +02.6	S 08 10.5	+00.0	20
21	218	59.1 +01.1	N 23 08.5	-00.1	244	36.1 +02.4	N 22 26.1	+00.0	338	38.5 +02.7	S 08 10.5	+00.1	21
22	234	00.2 +01.0	N 23 08.4	-00.1	259	38.5 +02.4	N 22 26.1	+00.0	353	41.2 +02.6	S 08 10.6	+00.1	22
23	249	01.2 +01.0	N 23 08.3	-00.1	274	40.9 +02.3	N 22 26.1	+00.0	8	43.8 +02.6	S 08 10.7	+00.0	23
	UT 02 06 10 14 18 22												
	SD 00'1 00'1 00'1 00'1 00'1 00'1												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 254° 254° 254° 254° 254° 254°												
	Greenwich Culmination Time: 06:25												
	UT 02 06 10 14 18 22												
	SD 00'4 00'4 00'4 00'4 00'4 00'4												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 280° 280° 280° 280° 280° 280°												
	Greenwich Culmination Time: 04:44												
	UT 02 06 10 14 18 22												
	SD 00'2 00'2 00'2 00'2 00'2 00'2												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 013° 014° 014° 014° 014° 014°												
	Greenwich Culmination Time: 22:25												