

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 58.4 +00.2	N 04 20.6 +01.0	210 43.5 -00.4	S 10 04.0 -01.0	223 09.8 -27.2	S 16 15.5 -07.6	00						
01	193 58.6 +00.2	N 04 21.6 +00.9	225 43.1 -00.4	S 10 03.0 -01.0	237 42.6 -27.2	S 16 07.9 -07.7	01						
02	208 58.8 +00.1	N 04 22.5 +01.0	240 42.7 -00.5	S 10 02.0 -01.0	252 15.4 -27.2	S 16 00.2 -07.7	02						
03	223 58.9 +00.2	N 04 23.5 +01.0	255 42.2 -00.4	S 10 01.0 -01.0	266 48.2 -27.2	S 15 52.5 -07.8	03						
04	238 59.1 +00.2	N 04 24.5 +00.9	270 41.8 -00.4	S 09 60.0 -01.1	281 21.0 -27.1	S 15 44.7 -07.9	04						
05	253 59.3 +00.2	N 04 25.4 +01.0	285 41.4 -00.4	S 09 58.9 -01.0	295 53.9 -27.1	S 15 36.8 -07.9	05						
06	268 59.5 +00.2	N 04 26.4 +01.0	300 41.0 -00.4	S 09 57.9 -01.0	310 26.8 -27.0	S 15 28.9 -08.0	06						
07	283 59.7 +00.2	N 04 27.4 +00.9	315 40.6 -00.5	S 09 56.9 -01.0	324 59.8 -27.0	S 15 20.9 -08.1	07						
08	298 59.9 +00.2	N 04 28.3 +01.0	330 40.1 -00.4	S 09 55.9 -01.0	339 32.8 -27.0	S 15 12.8 -08.1	08						
09	314 00.1 +00.1	N 04 29.3 +01.0	345 39.7 -00.4	S 09 54.9 -01.0	354 05.8 -26.9	S 15 04.7 -08.2	09						
10	329 00.2 +00.2	N 04 30.3 +00.9	0 39.3 -00.4	S 09 53.9 -01.1	8 38.9 -27.0	S 14 56.5 -08.3	10						
11	344 00.4 +00.2	N 04 31.2 +01.0	15 38.9 -00.4	S 09 52.8 -01.0	23 11.9 -26.8	S 14 48.2 -08.3	11						
12	359 00.6 +00.2	N 04 32.2 +01.0	30 38.5 -00.4	S 09 51.8 -01.0	37 45.1 -26.9	S 14 39.9 -08.4	12						
13	14 00.8 +00.2	N 04 33.2 +00.9	45 38.1 -00.4	S 09 50.8 -01.0	52 18.2 -26.8	S 14 31.5 -08.5	13						
14	29 01.0 +00.2	N 04 34.1 +01.0	60 37.7 -00.5	S 09 49.8 -01.0	66 51.4 -26.8	S 14 23.0 -08.5	14						
15	44 01.2 +00.2	N 04 35.1 +01.0	75 37.2 -00.4	S 09 48.8 -01.1	81 24.6 -26.7	S 14 14.5 -08.6	15						
16	59 01.4 +00.1	N 04 36.1 +00.9	90 36.8 -00.4	S 09 47.7 -01.0	95 57.9 -26.8	S 14 05.9 -08.6	16						
17	74 01.5 +00.2	N 04 37.0 +01.0	105 36.4 -00.4	S 09 46.7 -01.0	110 31.1 -26.7	S 13 57.3 -08.7	17						
18	89 01.7 +00.2	N 04 38.0 +01.0	120 36.0 -00.4	S 09 45.7 -01.0	125 04.4 -26.6	S 13 48.6 -08.8	18						
19	104 01.9 +00.2	N 04 39.0 +00.9	135 35.6 -00.4	S 09 44.7 -01.1	139 37.8 -26.7	S 13 39.8 -08.8	19						
20	119 02.1 +00.2	N 04 39.9 +01.0	150 35.2 -00.4	S 09 43.6 -01.0	154 11.1 -26.6	S 13 31.0 -08.9	20						
21	134 02.3 +00.2	N 04 40.9 +00.9	165 34.8 -00.5	S 09 42.6 -01.0	168 44.5 -26.5	S 13 22.1 -08.9	21						
22	149 02.5 +00.1	N 04 41.8 +01.0	180 34.3 -00.4	S 09 41.6 -01.0	183 18.0 -26.6	S 13 13.2 -09.0	22						
23	164 02.6 +00.2	N 04 42.8 +01.0	195 33.9 -00.4	S 09 40.6 -01.1	197 51.4 -26.5	S 13 04.2 -09.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 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 54'1 54'1 54'1								
	SHA 350° 350° 350° 349° 349° 349°		SHA 022° 021° 021° 021° 021° 021°		SHA 033° 031° 029° 027° 025° 023°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:57		Greenwich Culmination Time: 09:24								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	130 56.4 +00.7	N 21 09.0 +00.3	285 20.9 +02.4	S 22 40.6 +00.0	257 39.9 +02.4	S 21 33.8 +00.0	00						
01	145 57.1 +00.7	N 21 09.3 +00.4	300 23.3 +02.4	S 22 40.6 +00.0	272 42.3 +02.3	S 21 33.8 +00.0	01						
02	160 57.8 +00.8	N 21 09.7 +00.3	315 25.7 +02.4	S 22 40.6 +00.0	287 44.6 +02.3	S 21 33.8 +00.0	02						
03	175 58.6 +00.7	N 21 10.0 +00.4	330 28.1 +02.4	S 22 40.6 +00.0	302 46.9 +02.4	S 21 33.8 +00.0	03						
04	190 59.3 +00.7	N 21 10.4 +00.4	345 30.5 +02.4	S 22 40.6 +00.0	317 49.3 +02.3	S 21 33.8 +00.0	04						
05	206 00.0 +00.8	N 21 10.8 +00.3	0 32.9 +02.3	S 22 40.6 +00.0	332 51.6 +02.4	S 21 33.8 +00.0	05						
06	221 00.8 +00.7	N 21 11.1 +00.4	15 35.2 +02.4	S 22 40.6 +00.0	347 54.0 +02.3	S 21 33.8 -00.1	06						
07	236 01.5 +00.7	N 21 11.5 +00.4	30 37.6 +02.4	S 22 40.6 +00.0	2 56.3 +02.4	S 21 33.7 +00.0	07						
08	251 02.2 +00.8	N 21 11.9 +00.3	45 40.0 +02.4	S 22 40.6 +00.0	17 58.7 +02.3	S 21 33.7 +00.0	08						
09	266 03.0 +00.7	N 21 12.2 +00.4	60 42.4 +02.4	S 22 40.6 +00.0	33 01.0 +02.3	S 21 33.7 +00.0	09						
10	281 03.7 +00.7	N 21 12.6 +00.3	75 44.8 +02.4	S 22 40.6 +00.0	48 03.3 +02.4	S 21 33.7 +00.0	10						
11	296 04.4 +00.8	N 21 12.9 +00.4	90 47.2 +02.4	S 22 40.6 +00.1	63 05.7 +02.3	S 21 33.7 +00.0	11						
12	311 05.2 +00.7	N 21 13.3 +00.4	105 49.6 +02.3	S 22 40.7 +00.0	78 08.0 +02.4	S 21 33.7 -00.1	12						
13	326 05.9 +00.7	N 21 13.7 +00.3	120 51.9 +02.4	S 22 40.7 +00.0	93 10.4 +02.3	S 21 33.6 +00.0	13						
14	341 06.6 +00.8	N 21 14.0 +00.4	135 54.3 +02.4	S 22 40.7 +00.0	108 12.7 +02.3	S 21 33.6 +00.0	14						
15	356 07.4 +00.7	N 21 14.4 +00.3	150 56.7 +02.4	S 22 40.7 +00.0	123 15.0 +02.4	S 21 33.6 +00.0	15						
16	11 08.1 +00.7	N 21 14.7 +00.4	165 59.1 +02.4	S 22 40.7 +00.0	138 17.4 +02.3	S 21 33.6 +00.0	16						
17	26 08.8 +00.8	N 21 15.1 +00.4	181 01.5 +02.4	S 22 40.7 +00.0	153 19.7 +02.4	S 21 33.6 +00.0	17						
18	41 09.6 +00.7	N 21 15.5 +00.3	196 03.9 +02.4	S 22 40.7 +00.0	168 22.1 +02.3	S 21 33.6 +00.0	18						
19	56 10.3 +00.7	N 21 15.8 +00.4	211 06.3 +02.4	S 22 40.7 +00.0	183 24.4 +02.4	S 21 33.6 -00.1	19						
20	71 11.0 +00.8	N 21 16.2 +00.3	226 08.7 +02.3	S 22 40.7 +00.0	198 26.8 +02.3	S 21 33.5 +00.0	20						
21	86 11.8 +00.7	N 21 16.5 +00.4	241 11.0 +02.4	S 22 40.7 +00.0	213 29.1 +02.4	S 21 33.5 +00.0	21						
22	101 12.5 +00.7	N 21 16.9 +00.3	256 13.4 +02.4	S 22 40.7 +00.0	228 31.5 +02.3	S 21 33.5 +00.0	22						
23	116 13.2 +00.8	N 21 17.2 +00.4	271 15.8 +02.4	S 22 40.7 +00.0	243 33.8 +02.3	S 21 33.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 302° 302° 302° 301° 301° 301°		SHA 096° 096° 096° 096° 096° 096°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 15:15		Greenwich Culmination Time: 04:57		Greenwich Culmination Time: 06:48								

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 02.8 +00.2	N 04 43.8 +00.9	210 33.5 -00.4	S 09 39.5 -01.0	212 24.9 -26.5	S 12 55.1 -09.1	00						
01	194 03.0 +00.2	N 04 44.7 +01.0	225 33.1 -00.4	S 09 38.5 -01.0	226 58.4 -26.5	S 12 46.0 -09.1	01						
02	209 03.2 +00.2	N 04 45.7 +01.0	240 32.7 -00.4	S 09 37.5 -01.0	241 31.9 -26.4	S 12 36.9 -09.3	02						
03	224 03.4 +00.2	N 04 46.7 +00.9	255 32.3 -00.4	S 09 36.5 -01.1	256 05.5 -26.4	S 12 27.6 -09.2	03						
04	239 03.6 +00.2	N 04 47.6 +01.0	270 31.9 -00.4	S 09 35.4 -01.0	270 39.1 -26.4	S 12 18.4 -09.4	04						
05	254 03.8 +00.1	N 04 48.6 +01.0	285 31.5 -00.4	S 09 34.4 -01.0	285 12.7 -26.4	S 12 09.0 -09.3	05						
06	269 03.9 +00.2	N 04 49.6 +00.9	300 31.1 -00.5	S 09 33.4 -01.0	299 46.3 -26.3	S 11 59.7 -09.5	06						
07	284 04.1 +00.2	N 04 50.5 +01.0	315 30.6 -00.4	S 09 32.4 -01.1	314 20.0 -26.4	S 11 50.2 -09.5	07						
08	299 04.3 +00.2	N 04 51.5 +00.9	330 30.2 -00.4	S 09 31.3 -01.0	328 53.6 -26.3	S 11 40.7 -09.5	08						
09	314 04.5 +00.2	N 04 52.4 +01.0	345 29.8 -00.4	S 09 30.3 -01.0	343 27.3 -26.2	S 11 31.2 -09.6	09						
10	329 04.7 +00.2	N 04 53.4 +01.0	0 29.4 -00.4	S 09 29.3 -01.1	358 01.1 -26.3	S 11 21.6 -09.6	10						
11	344 04.9 +00.1	N 04 54.4 +00.9	15 29.0 -00.4	S 09 28.2 -01.0	12 34.8 -26.2	S 11 12.0 -09.7	11						
12	359 05.0 +00.2	N 04 55.3 +01.0	30 28.6 -00.4	S 09 27.2 -01.0	27 08.6 -26.2	S 11 02.3 -09.7	12						
13	14 05.2 +00.2	N 04 56.3 +00.9	45 28.2 -00.4	S 09 26.2 -01.1	41 42.4 -26.2	S 10 52.6 -09.8	13						
14	29 05.4 +00.2	N 04 57.2 +01.0	60 27.8 -00.4	S 09 25.1 -01.0	56 16.2 -26.2	S 10 42.8 -09.8	14						
15	44 05.6 +00.2	N 04 58.2 +01.0	75 27.4 -00.4	S 09 24.1 -01.0	70 50.0 -26.1	S 10 33.0 -09.9	15						
16	59 05.8 +00.2	N 04 59.2 +00.9	90 27.0 -00.4	S 09 23.1 -01.1	85 23.9 -26.1	S 10 23.1 -09.9	16						
17	74 06.0 +00.1	N 05 00.1 +01.0	105 26.6 -00.4	S 09 22.0 -01.0	99 57.8 -26.2	S 10 13.2 -10.0	17						
18	89 06.1 +00.2	N 05 01.1 +01.0	120 26.2 -00.5	S 09 21.0 -01.0	114 31.6 -26.0	S 10 03.2 -10.0	18						
19	104 06.3 +00.2	N 05 02.1 +00.9	135 25.7 -00.4	S 09 20.0 -01.1	129 05.6 -26.1	S 09 53.2 -10.1	19						
20	119 06.5 +00.2	N 05 03.0 +01.0	150 25.3 -00.4	S 09 18.9 -01.0	143 39.5 -26.1	S 09 43.1 -10.1	20						
21	134 06.7 +00.2	N 05 04.0 +00.9	165 24.9 -00.4	S 09 17.9 -01.0	158 13.4 -26.0	S 09 33.0 -10.1	21						
22	149 06.9 +00.2	N 05 04.9 +01.0	180 24.5 -00.4	S 09 16.9 -01.1	172 47.4 -26.0	S 09 22.9 -10.2	22						
23	164 07.1 +00.1	N 05 05.9 +01.0	195 24.1 -00.4	S 09 15.8 -01.0	187 21.4 -26.0	S 09 12.7 -10.2	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 349° 349° 349° 348° 348° 348° 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 020° 020° 020° 020° 020° 019° Greenwich Culmination Time: 09:58	UT 02 06 10 14 18 22 SD 14'7 14'8 14'8 14'8 14'8 14'8 HP 54'1 54'1 54'2 54'2 54'2 54'3 SHA 021° 019° 018° 016° 014° 012° Greenwich Culmination Time: 10:08										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	131 14.0 +00.7	N 21 17.6 +00.4	286 18.2 +02.4	S 22 40.7 +00.0	258 36.1 +02.4	S 21 33.5 +00.0	00						
01	146 14.7 +00.7	N 21 18.0 +00.3	301 20.6 +02.4	S 22 40.7 +00.0	273 38.5 +02.3	S 21 33.5 +00.0	01						
02	161 15.4 +00.7	N 21 18.3 +00.4	316 23.0 +02.4	S 22 40.7 +00.0	288 40.8 +02.4	S 21 33.5 -00.1	02						
03	176 16.1 +00.8	N 21 18.7 +00.3	331 25.4 +02.4	S 22 40.7 +00.0	303 43.2 +02.3	S 21 33.4 +00.0	03						
04	191 16.9 +00.7	N 21 19.0 +00.4	346 27.8 +02.4	S 22 40.7 +00.0	318 45.5 +02.4	S 21 33.4 +00.0	04						
05	206 17.6 +00.7	N 21 19.4 +00.3	1 30.2 +02.4	S 22 40.7 +00.0	333 47.9 +02.3	S 21 33.4 +00.0	05						
06	221 18.3 +00.8	N 21 19.7 +00.4	16 32.6 +02.4	S 22 40.7 +00.0	348 50.2 +02.4	S 21 33.4 +00.0	06						
07	236 19.1 +00.7	N 21 20.1 +00.3	31 35.0 +02.3	S 22 40.7 +00.0	3 52.6 +02.3	S 21 33.4 +00.0	07						
08	251 19.8 +00.7	N 21 20.4 +00.4	46 37.3 +02.4	S 22 40.7 +00.0	18 54.9 +02.4	S 21 33.4 +00.0	08						
09	266 20.5 +00.8	N 21 20.8 +00.3	61 39.7 +02.4	S 22 40.7 +00.0	33 57.3 +02.3	S 21 33.4 -00.1	09						
10	281 21.3 +00.7	N 21 21.1 +00.4	76 42.1 +02.4	S 22 40.7 +00.0	48 59.6 +02.3	S 21 33.3 +00.0	10						
11	296 22.0 +00.7	N 21 21.5 +00.4	91 44.5 +02.4	S 22 40.7 +00.0	64 01.9 +02.4	S 21 33.3 +00.0	11						
12	311 22.7 +00.7	N 21 21.9 +00.3	106 46.9 +02.4	S 22 40.7 +00.0	79 04.3 +02.3	S 21 33.3 +00.0	12						
13	326 23.4 +00.8	N 21 22.2 +00.4	121 49.3 +02.4	S 22 40.7 +00.0	94 06.6 +02.4	S 21 33.3 +00.0	13						
14	341 24.2 +00.7	N 21 22.6 +00.3	136 51.7 +02.4	S 22 40.7 +00.0	109 09.0 +02.3	S 21 33.3 +00.0	14						
15	356 24.9 +00.7	N 21 22.9 +00.4	151 54.1 +02.4	S 22 40.7 +00.0	124 11.3 +02.4	S 21 33.3 -00.1	15						
16	11 25.6 +00.8	N 21 23.3 +00.3	166 56.5 +02.4	S 22 40.7 +00.0	139 13.7 +02.3	S 21 33.2 +00.0	16						
17	26 26.4 +00.7	N 21 23.6 +00.4	181 58.9 +02.4	S 22 40.7 +00.0	154 16.0 +02.4	S 21 33.2 +00.0	17						
18	41 27.1 +00.7	N 21 24.0 +00.3	197 01.3 +02.4	S 22 40.7 +00.0	169 18.4 +02.3	S 21 33.2 +00.0	18						
19	56 27.8 +00.8	N 21 24.3 +00.4	212 03.7 +02.4	S 22 40.7 +00.0	184 20.7 +02.4	S 21 33.2 +00.0	19						
20	71 28.6 +00.7	N 21 24.7 +00.3	227 06.1 +02.4	S 22 40.7 +00.0	199 23.1 +02.3	S 21 33.2 +00.0	20						
21	86 29.3 +00.7	N 21 25.0 +00.4	242 08.5 +02.4	S 22 40.7 +00.0	214 25.4 +02.4	S 21 33.2 +00.0	21						
22	101 30.0 +00.7	N 21 25.4 +00.3	257 10.9 +02.4	S 22 40.7 +00.0	229 27.8 +02.3	S 21 33.2 -00.1	22						
23	116 30.7 +00.8	N 21 25.7 +00.4	272 13.3 +02.4	S 22 40.7 +00.0	244 30.1 +02.4	S 21 33.1 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 301° 301° 301° 301° 301° 301° Greenwich Culmination Time: 15:14	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 096° 096° 096° 096° 096° 096° Greenwich Culmination Time: 04:54	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 069° 069° 069° 069° 069° 069° Greenwich Culmination Time: 06:44										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 07.2 +00.2	N 05 06.9 +00.9	210 23.7 -00.4	S 09 14.8 -01.0	201 55.4 -26.0	S 09 02.5 -10.3	00						
01	194 07.4 +00.2	N 05 07.8 +01.0	225 23.3 -00.4	S 09 13.8 -01.1	216 29.4 -26.0	S 08 52.2 -10.3	01						
02	209 07.6 +00.2	N 05 08.8 +00.9	240 22.9 -00.4	S 09 12.7 -01.0	231 03.4 -26.0	S 08 41.9 -10.4	02						
03	224 07.8 +00.2	N 05 09.7 +01.0	255 22.5 -00.4	S 09 11.7 -01.0	245 37.4 -25.9	S 08 31.5 -10.4	03						
04	239 08.0 +00.2	N 05 10.7 +00.9	270 22.1 -00.4	S 09 10.7 -01.1	260 11.5 -26.0	S 08 21.1 -10.4	04						
05	254 08.2 +00.1	N 05 11.6 +01.0	285 21.7 -00.4	S 09 09.6 -01.0	274 45.5 -25.9	S 08 10.7 -10.4	05						
06	269 08.3 +00.2	N 05 12.6 +01.0	300 21.3 -00.4	S 09 08.6 -01.1	289 19.6 -25.9	S 08 00.3 -10.6	06						
07	284 08.5 +00.2	N 05 13.6 +00.9	315 20.9 -00.4	S 09 07.5 -01.0	303 53.7 -25.9	S 07 49.7 -10.5	07						
08	299 08.7 +00.2	N 05 14.5 +01.0	330 20.5 -00.4	S 09 06.5 -01.0	318 27.8 -25.9	S 07 39.2 -10.6	08						
09	314 08.9 +00.2	N 05 15.5 +00.9	345 20.1 -00.4	S 09 05.5 -01.1	333 01.9 -25.9	S 07 28.6 -10.6	09						
10	329 09.1 +00.2	N 05 16.4 +01.0	0 19.7 -00.4	S 09 04.4 -01.0	347 36.0 -25.9	S 07 18.0 -10.6	10						
11	344 09.3 +00.1	N 05 17.4 +01.0	15 19.3 -00.4	S 09 03.4 -01.1	2 10.1 -25.8	S 07 07.4 -10.7	11						
12	359 09.4 +00.2	N 05 18.4 +00.9	30 18.9 -00.4	S 09 02.3 -01.0	16 44.3 -25.9	S 06 56.7 -10.7	12						
13	14 09.6 +00.2	N 05 19.3 +01.0	45 18.5 -00.4	S 09 01.3 -01.1	31 18.4 -25.8	S 06 46.0 -10.8	13						
14	29 09.8 +00.2	N 05 20.3 +00.9	60 18.1 -00.4	S 09 00.2 -01.0	45 52.6 -25.9	S 06 35.2 -10.8	14						
15	44 10.0 +00.2	N 05 21.2 +01.0	75 17.7 -00.4	S 08 59.2 -01.0	60 26.7 -25.8	S 06 24.4 -10.8	15						
16	59 10.2 +00.1	N 05 22.2 +00.9	90 17.3 -00.4	S 08 58.2 -01.1	75 00.9 -25.8	S 06 13.6 -10.8	16						
17	74 10.3 +00.2	N 05 23.1 +01.0	105 16.9 -00.4	S 08 57.1 -01.0	89 35.1 -25.9	S 06 02.8 -10.9	17						
18	89 10.5 +00.2	N 05 24.1 +01.0	120 16.5 -00.4	S 08 56.1 -01.1	104 09.2 -25.8	S 05 51.9 -10.9	18						
19	104 10.7 +00.2	N 05 25.1 +00.9	135 16.1 -00.4	S 08 55.0 -01.0	118 43.4 -25.8	S 05 41.0 -10.9	19						
20	119 10.9 +00.2	N 05 26.0 +01.0	150 15.7 -00.4	S 08 54.0 -01.1	133 17.6 -25.8	S 05 30.1 -11.0	20						
21	134 11.1 +00.2	N 05 27.0 +00.9	165 15.3 -00.4	S 08 52.9 -01.0	147 51.8 -25.8	S 05 19.1 -11.0	21						
22	149 11.3 +00.1	N 05 27.9 +01.0	180 14.9 -00.4	S 08 51.9 -01.1	162 26.0 -25.9	S 05 08.1 -11.0	22						
23	164 11.4 +00.2	N 05 28.9 +00.9	195 14.5 -00.4	S 08 50.8 -01.0	177 00.1 -25.8	S 04 57.1 -11.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'8 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'3 54'3 54'4 54'4 54'5 54'5								
	SHA 348° 348° 348° 348° 347° 347°		SHA 019° 019° 019° 019° 018° 018°		SHA 010° 008° 006° 004° 002° 000°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:58		Greenwich Culmination Time: 10:51								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	131 31.5 +00.7	N 21 26.1 +00.3	287 15.7 +02.4	S 22 40.7 +00.0	259 32.5 +02.3	S 21 33.1 +00.0	00						
01	146 32.2 +00.7	N 21 26.4 +00.4	302 18.1 +02.4	S 22 40.7 +00.0	274 34.8 +02.4	S 21 33.1 +00.0	01						
02	161 32.9 +00.8	N 21 26.8 +00.3	317 20.5 +02.4	S 22 40.7 +00.0	289 37.2 +02.3	S 21 33.1 +00.0	02						
03	176 33.7 +00.7	N 21 27.1 +00.4	332 22.9 +02.4	S 22 40.7 +00.0	304 39.5 +02.4	S 21 33.1 +00.0	03						
04	191 34.4 +00.7	N 21 27.5 +00.3	347 25.3 +02.4	S 22 40.7 +00.0	319 41.9 +02.3	S 21 33.1 +00.0	04						
05	206 35.1 +00.7	N 21 27.8 +00.4	2 27.7 +02.4	S 22 40.7 +00.0	334 44.2 +02.4	S 21 33.1 -00.1	05						
06	221 35.8 +00.8	N 21 28.2 +00.3	17 30.1 +02.4	S 22 40.7 +00.1	349 46.6 +02.3	S 21 33.0 +00.0	06						
07	236 36.6 +00.7	N 21 28.5 +00.4	32 32.5 +02.4	S 22 40.8 +00.0	4 48.9 +02.4	S 21 33.0 +00.0	07						
08	251 37.3 +00.7	N 21 28.9 +00.3	47 34.9 +02.4	S 22 40.8 +00.0	19 51.3 +02.3	S 21 33.0 +00.0	08						
09	266 38.0 +00.7	N 21 29.2 +00.3	62 37.3 +02.4	S 22 40.8 +00.0	34 53.6 +02.4	S 21 33.0 +00.0	09						
10	281 38.7 +00.8	N 21 29.5 +00.4	77 39.7 +02.4	S 22 40.8 +00.0	49 56.0 +02.3	S 21 33.0 +00.0	10						
11	296 39.5 +00.7	N 21 29.9 +00.3	92 42.1 +02.4	S 22 40.8 +00.0	64 58.3 +02.4	S 21 33.0 +00.0	11						
12	311 40.2 +00.7	N 21 30.2 +00.4	107 44.5 +02.4	S 22 40.8 +00.0	80 00.7 +02.3	S 21 33.0 +00.0	12						
13	326 40.9 +00.8	N 21 30.6 +00.3	122 46.9 +02.4	S 22 40.8 +00.0	95 03.0 +02.4	S 21 33.0 -00.1	13						
14	341 41.7 +00.7	N 21 30.9 +00.4	137 49.3 +02.4	S 22 40.8 +00.0	110 05.4 +02.3	S 21 32.9 +00.0	14						
15	356 42.4 +00.7	N 21 31.3 +00.3	152 51.7 +02.4	S 22 40.8 +00.0	125 07.7 +02.4	S 21 32.9 +00.0	15						
16	11 43.1 +00.7	N 21 31.6 +00.4	167 54.1 +02.4	S 22 40.8 +00.0	140 10.1 +02.3	S 21 32.9 +00.0	16						
17	26 43.8 +00.8	N 21 32.0 +00.3	182 56.5 +02.4	S 22 40.8 +00.0	155 12.4 +02.4	S 21 32.9 +00.0	17						
18	41 44.6 +00.7	N 21 32.3 +00.3	197 58.9 +02.4	S 22 40.8 +00.0	170 14.8 +02.3	S 21 32.9 +00.0	18						
19	56 45.3 +00.7	N 21 32.6 +00.4	213 01.3 +02.4	S 22 40.8 +00.0	185 17.1 +02.4	S 21 32.9 +00.0	19						
20	71 46.0 +00.7	N 21 33.0 +00.3	228 03.7 +02.4	S 22 40.8 +00.0	200 19.5 +02.3	S 21 32.9 -00.1	20						
21	86 46.7 +00.8	N 21 33.3 +00.4	243 06.1 +02.4	S 22 40.8 +00.0	215 21.8 +02.4	S 21 32.8 +00.0	21						
22	101 47.5 +00.7	N 21 33.7 +00.3	258 08.5 +02.4	S 22 40.8 +00.0	230 24.2 +02.3	S 21 32.8 +00.0	22						
23	116 48.2 +00.7	N 21 34.0 +00.4	273 10.9 +02.5	S 22 40.8 +00.0	245 26.5 +02.4	S 21 32.8 +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 300° 300° 300° 300° 300° 300°		SHA 096° 096° 096° 096° 096° 096°		SHA 069° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:13		Greenwich Culmination Time: 04:50		Greenwich Culmination Time: 06:40								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 11.6 +00.2	N 05 29.8 +01.0	210 14.1 -00.4	S 08 49.8 -01.1	191 34.3 -25.8	S 04 46.1 -11.1	00						
01	194 11.8 +00.2	N 05 30.8 +00.9	225 13.7 -00.4	S 08 48.7 -01.0	206 08.5 -25.8	S 04 35.0 -11.1	01						
02	209 12.0 +00.2	N 05 31.7 +01.0	240 13.3 -00.4	S 08 47.7 -01.1	220 42.7 -25.8	S 04 23.9 -11.1	02						
03	224 12.2 +00.1	N 05 32.7 +01.0	255 12.9 -00.4	S 08 46.6 -01.0	235 16.9 -25.8	S 04 12.8 -11.2	03						
04	239 12.3 +00.2	N 05 33.7 +00.9	270 12.5 -00.4	S 08 45.6 -01.1	249 51.1 -25.8	S 04 01.6 -11.1	04						
05	254 12.5 +00.2	N 05 34.6 +01.0	285 12.1 -00.4	S 08 44.5 -01.0	264 25.3 -25.9	S 03 50.5 -11.2	05						
06	269 12.7 +00.2	N 05 35.6 +00.9	300 11.7 -00.4	S 08 43.5 -01.1	278 59.4 -25.8	S 03 39.3 -11.2	06						
07	284 12.9 +00.2	N 05 36.5 +01.0	315 11.3 -00.4	S 08 42.4 -01.0	293 33.6 -25.8	S 03 28.1 -11.2	07						
08	299 13.1 +00.1	N 05 37.5 +00.9	330 10.9 -00.4	S 08 41.4 -01.1	308 07.8 -25.8	S 03 16.9 -11.3	08						
09	314 13.2 +00.2	N 05 38.4 +01.0	345 10.5 -00.4	S 08 40.3 -01.0	322 42.0 -25.9	S 03 05.6 -11.3	09						
10	329 13.4 +00.2	N 05 39.4 +00.9	0 10.1 -00.4	S 08 39.3 -01.1	337 16.1 -25.8	S 02 54.3 -11.2	10						
11	344 13.6 +00.2	N 05 40.3 +01.0	15 09.7 -00.4	S 08 38.2 -01.0	351 50.3 -25.9	S 02 43.1 -11.3	11						
12	359 13.8 +00.2	N 05 41.3 +01.0	30 09.3 -00.4	S 08 37.2 -01.1	6 24.4 -25.8	S 02 31.8 -11.4	12						
13	14 14.0 +00.2	N 05 42.3 +00.9	45 08.9 -00.4	S 08 36.1 -01.0	20 58.6 -25.9	S 02 20.4 -11.3	13						
14	29 14.2 +00.1	N 05 43.2 +01.0	60 08.5 -00.4	S 08 35.1 -01.1	35 32.7 -25.9	S 02 09.1 -11.4	14						
15	44 14.3 +00.2	N 05 44.2 +00.9	75 08.1 -00.4	S 08 34.0 -01.0	50 06.8 -25.9	S 01 57.7 -11.3	15						
16	59 14.5 +00.2	N 05 45.1 +01.0	90 07.7 -00.4	S 08 33.0 -01.1	64 40.9 -25.9	S 01 46.4 -11.4	16						
17	74 14.7 +00.2	N 05 46.1 +00.9	105 07.3 -00.4	S 08 31.9 -01.0	79 15.0 -25.9	S 01 35.0 -11.4	17						
18	89 14.9 +00.2	N 05 47.0 +01.0	120 06.9 -00.4	S 08 30.9 -01.1	93 49.1 -25.9	S 01 23.6 -11.4	18						
19	104 15.1 +00.1	N 05 48.0 +00.9	135 06.5 -00.4	S 08 29.8 -01.0	108 23.2 -25.9	S 01 12.2 -11.4	19						
20	119 15.2 +00.2	N 05 48.9 +01.0	150 06.1 -00.3	S 08 28.8 -01.1	122 57.3 -26.0	S 01 00.8 -11.4	20						
21	134 15.4 +00.2	N 05 49.9 +00.9	165 05.8 -00.4	S 08 27.7 -01.1	137 31.3 -25.9	S 00 49.4 -11.5	21						
22	149 15.6 +00.2	N 05 50.8 +01.0	180 05.4 -00.4	S 08 26.6 -01.0	152 05.4 -26.0	S 00 37.9 -11.4	22						
23	164 15.8 +00.2	N 05 51.8 +00.9	195 05.0 -00.4	S 08 25.6 -01.1	166 39.4 -26.0	S 00 26.5 -11.5	23						
	UT 02 06 10 14 18 22	SD 16'0 16'0 16'0 16'0 16'0 16'0	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 14'9 15'0							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 54'6 54'6 54'7 54'8 54'8 54'9		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 347° 347° 347° 347° 346° 346°	SHA 018° 018° 018° 018° 017° 017°	SHA 018° 018° 018° 018° 017° 017°	SHA 359° 357° 355° 353° 351° 349°		SHA 068° 068° 068° 068° 068° 068°							
	Greenwich Culmination Time: 12:03	Greenwich Culmination Time: 09:59	Greenwich Culmination Time: 09:59	Greenwich Culmination Time: 11:33		Greenwich Culmination Time: 06:37							

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	131 48.9 +00.7	N 21 34.4 +00.3	288 13.4 +02.4	S 22 40.8 +00.0	260 28.9 +02.3	S 21 32.8 +00.0	00						
01	146 49.6 +00.8	N 21 34.7 +00.3	303 15.8 +02.4	S 22 40.8 +00.0	275 31.2 +02.4	S 21 32.8 +00.0	01						
02	161 50.4 +00.7	N 21 35.0 +00.4	318 18.2 +02.4	S 22 40.8 +00.0	290 33.6 +02.3	S 21 32.8 +00.0	02						
03	176 51.1 +00.7	N 21 35.4 +00.3	333 20.6 +02.4	S 22 40.8 +00.0	305 35.9 +02.4	S 21 32.8 -00.1	03						
04	191 51.8 +00.8	N 21 35.7 +00.4	348 23.0 +02.4	S 22 40.8 +00.0	320 38.3 +02.3	S 21 32.7 +00.0	04						
05	206 52.6 +00.7	N 21 36.1 +00.3	3 25.4 +02.4	S 22 40.8 +00.0	335 40.6 +02.4	S 21 32.7 +00.0	05						
06	221 53.3 +00.7	N 21 36.4 +00.3	18 27.8 +02.4	S 22 40.8 +00.0	350 43.0 +02.3	S 21 32.7 +00.0	06						
07	236 54.0 +00.7	N 21 36.7 +00.4	33 30.2 +02.4	S 22 40.8 +00.0	5 45.3 +02.4	S 21 32.7 +00.0	07						
08	251 54.7 +00.8	N 21 37.1 +00.3	48 32.6 +02.4	S 22 40.8 +00.0	20 47.7 +02.4	S 21 32.7 +00.0	08						
09	266 55.5 +00.7	N 21 37.4 +00.4	63 35.0 +02.4	S 22 40.8 +00.0	35 50.1 +02.3	S 21 32.7 +00.0	09						
10	281 56.2 +00.7	N 21 37.8 +00.3	78 37.4 +02.5	S 22 40.8 +00.0	50 52.4 +02.4	S 21 32.7 -00.1	10						
11	296 56.9 +00.7	N 21 38.1 +00.3	93 39.9 +02.4	S 22 40.8 +00.0	65 54.8 +02.3	S 21 32.6 +00.0	11						
12	311 57.6 +00.8	N 21 38.4 +00.4	108 42.3 +02.4	S 22 40.8 +00.0	80 57.1 +02.4	S 21 32.6 +00.0	12						
13	326 58.4 +00.7	N 21 38.8 +00.3	123 44.7 +02.4	S 22 40.8 +00.0	95 59.5 +02.3	S 21 32.6 +00.0	13						
14	341 59.1 +00.7	N 21 39.1 +00.4	138 47.1 +02.4	S 22 40.8 +00.0	111 01.8 +02.4	S 21 32.6 +00.0	14						
15	356 59.8 +00.7	N 21 39.5 +00.3	153 49.5 +02.4	S 22 40.8 +00.0	126 04.2 +02.3	S 21 32.6 +00.0	15						
16	12 00.5 +00.8	N 21 39.8 +00.3	168 51.9 +02.4	S 22 40.8 +00.0	141 06.5 +02.4	S 21 32.6 +00.0	16						
17	27 01.3 +00.7	N 21 40.1 +00.4	183 54.3 +02.4	S 22 40.8 +00.0	156 08.9 +02.4	S 21 32.6 +00.0	17						
18	42 02.0 +00.7	N 21 40.5 +00.3	198 56.7 +02.5	S 22 40.8 +00.0	171 11.3 +02.3	S 21 32.6 -00.1	18						
19	57 02.7 +00.7	N 21 40.8 +00.3	213 59.2 +02.4	S 22 40.8 +00.0	186 13.6 +02.4	S 21 32.5 +00.0	19						
20	72 03.4 +00.8	N 21 41.1 +00.4	229 01.6 +02.4	S 22 40.8 +00.0	201 16.0 +02.3	S 21 32.5 +00.0	20						
21	87 04.2 +00.7	N 21 41.5 +00.3	244 04.0 +02.4	S 22 40.8 +00.0	216 18.3 +02.4	S 21 32.5 +00.0	21						
22	102 04.9 +00.7	N 21 41.8 +00.3	259 06.4 +02.4	S 22 40.8 +00.0	231 20.7 +02.3	S 21 32.5 +00.0	22						
23	117 05.6 +00.7	N 21 42.1 +00.4	274 08.8 +02.4	S 22 40.8 +00.0	246 23.0 +02.4	S 21 32.5 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 300° 300° 300° 299° 299° 299°	SHA 096° 096° 096° 096° 096° 096°	SHA 096° 096° 096° 096° 096° 096°	SHA 068° 068° 068° 068° 068° 068°		SHA 068° 068° 068° 068° 068° 068°							
	Greenwich Culmination Time: 15:12	Greenwich Culmination Time: 04:46	Greenwich Culmination Time: 04:46	Greenwich Culmination Time: 06:37		Greenwich Culmination Time: 06:37							

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 16.0 +00.1	N 05 52.7 +01.0	210 04.6 -00.4	S 08 24.5 -01.0	181 13.4 -26.0	S 00 15.0 -11.5	00	00	00	00			
01	194 16.1 +00.2	N 05 53.7 +00.9	225 04.2 -00.4	S 08 23.5 -01.1	195 47.4 -26.0	S 00 03.5 -11.4	01	01	01	01			
02	209 16.3 +00.2	N 05 54.6 +01.0	240 03.8 -00.4	S 08 22.4 -01.0	210 21.4 -26.0	N 00 07.9 +11.5	02	02	02	02			
03	224 16.5 +00.2	N 05 55.6 +00.9	255 03.4 -00.4	S 08 21.4 -01.1	224 55.4 -26.1	N 00 19.4 +11.5	03	03	03	03			
04	239 16.7 +00.1	N 05 56.5 +01.0	270 03.0 -00.4	S 08 20.3 -01.1	239 29.3 -26.1	N 00 30.9 +11.5	04	04	04	04			
05	254 16.8 +00.2	N 05 57.5 +00.9	285 02.6 -00.4	S 08 19.2 -01.0	254 03.2 -26.1	N 00 42.4 +11.5	05	05	05	05			
06	269 17.0 +00.2	N 05 58.4 +01.0	300 02.2 -00.4	S 08 18.2 -01.1	268 37.1 -26.1	N 00 53.9 +11.5	06	06	06	06			
07	284 17.2 +00.2	N 05 59.4 +00.9	315 01.8 -00.4	S 08 17.1 -01.0	283 11.0 -26.1	N 01 05.4 +11.5	07	07	07	07			
08	299 17.4 +00.2	N 06 00.3 +01.0	330 01.4 -00.3	S 08 16.1 -01.1	297 44.9 -26.2	N 01 16.9 +11.5	08	08	08	08			
09	314 17.6 +00.1	N 06 01.3 +00.9	345 01.1 -00.4	S 08 15.0 -01.1	312 18.7 -26.1	N 01 28.4 +11.5	09	09	09	09			
10	329 17.7 +00.2	N 06 02.2 +01.0	0 00.7 -00.4	S 08 13.9 -01.0	326 52.6 -26.3	N 01 39.9 +11.5	10	10	10	10			
11	344 17.9 +00.2	N 06 03.2 +00.9	15 00.3 -00.4	S 08 12.9 -01.1	341 26.3 -26.2	N 01 51.4 +11.5	11	11	11	11			
12	359 18.1 +00.2	N 06 04.1 +01.0	29 59.9 -00.4	S 08 11.8 -01.1	356 00.1 -26.2	N 02 02.9 +11.5	12	12	12	12			
13	14 18.3 +00.2	N 06 05.1 +00.9	44 59.5 -00.4	S 08 10.7 -01.0	10 33.9 -26.3	N 02 14.4 +11.5	13	13	13	13			
14	29 18.5 +00.1	N 06 06.0 +01.0	59 59.1 -00.4	S 08 09.7 -01.1	25 07.6 -26.3	N 02 25.9 +11.6	14	14	14	14			
15	44 18.6 +00.2	N 06 07.0 +00.9	74 58.7 -00.4	S 08 08.6 -01.0	39 41.3 -26.3	N 02 37.5 +11.4	15	15	15	15			
16	59 18.8 +00.2	N 06 07.9 +01.0	89 58.3 -00.4	S 08 07.6 -01.1	54 15.0 -26.4	N 02 48.9 +11.5	16	16	16	16			
17	74 19.0 +00.2	N 06 08.9 +00.9	104 57.9 -00.3	S 08 06.5 -01.1	68 48.6 -26.4	N 03 00.4 +11.5	17	17	17	17			
18	89 19.2 +00.2	N 06 09.8 +01.0	119 57.6 -00.4	S 08 05.4 -01.0	83 22.2 -26.4	N 03 11.9 +11.5	18	18	18	18			
19	104 19.4 +00.1	N 06 10.8 +00.9	134 57.2 -00.4	S 08 04.4 -01.1	97 55.8 -26.4	N 03 23.4 +11.5	19	19	19	19			
20	119 19.5 +00.2	N 06 11.7 +01.0	149 56.8 -00.4	S 08 03.3 -01.1	112 29.4 -26.5	N 03 34.9 +11.5	20	20	20	20			
21	134 19.7 +00.2	N 06 12.7 +00.9	164 56.4 -00.4	S 08 02.2 -01.0	127 02.9 -26.5	N 03 46.4 +11.4	21	21	21	21			
22	149 19.9 +00.2	N 06 13.6 +01.0	179 56.0 -00.4	S 08 01.2 -01.1	141 36.4 -26.5	N 03 57.8 +11.5	22	22	22	22			
23	164 20.1 +00.1	N 06 14.6 +00.9	194 55.6 -00.4	S 08 00.1 -01.1	156 09.9 -26.6	N 04 09.3 +11.4	23	23	23	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 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 54'9 55'0 55'1 55'1 55'2 55'3								
	SHA 346° 346° 346° 346° 346° 345°		SHA 017° 017° 017° 016° 016° 016°		SHA 347° 345° 343° 342° 340° 338°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 09:59		Greenwich Culmination Time: 12:16								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	132 06.3 +00.7	N 21 42.5 +00.3	289 11.2 +02.4	S 22 40.8 +00.0	261 25.4 +02.3	S 21 32.5 +00.0	00	00	00	00			
01	147 07.0 +00.8	N 21 42.8 +00.4	304 13.6 +02.5	S 22 40.8 +00.0	276 27.7 +02.4	S 21 32.5 -00.1	01	01	01	01			
02	162 07.8 +00.7	N 21 43.2 +00.3	319 16.1 +02.4	S 22 40.8 +00.0	291 30.1 +02.4	S 21 32.4 +00.0	02	02	02	02			
03	177 08.5 +00.7	N 21 43.5 +00.3	334 18.5 +02.4	S 22 40.8 +00.0	306 32.5 +02.3	S 21 32.4 +00.0	03	03	03	03			
04	192 09.2 +00.7	N 21 43.8 +00.4	349 20.9 +02.4	S 22 40.8 +00.0	321 34.8 +02.4	S 21 32.4 +00.0	04	04	04	04			
05	207 09.9 +00.8	N 21 44.2 +00.3	4 23.3 +02.4	S 22 40.8 +00.0	336 37.2 +02.3	S 21 32.4 +00.0	05	05	05	05			
06	222 10.7 +00.7	N 21 44.5 +00.3	19 25.7 +02.4	S 22 40.8 +00.0	351 39.5 +02.4	S 21 32.4 +00.0	06	06	06	06			
07	237 11.4 +00.7	N 21 44.8 +00.3	34 28.1 +02.5	S 22 40.8 +00.0	6 41.9 +02.3	S 21 32.4 +00.0	07	07	07	07			
08	252 12.1 +00.7	N 21 45.1 +00.4	49 30.6 +02.4	S 22 40.8 +00.0	21 44.2 +02.4	S 21 32.4 +00.0	08	08	08	08			
09	267 12.8 +00.8	N 21 45.5 +00.3	64 33.0 +02.4	S 22 40.8 +00.0	36 46.6 +02.4	S 21 32.4 -00.1	09	09	09	09			
10	282 13.6 +00.7	N 21 45.8 +00.3	79 35.4 +02.4	S 22 40.8 +00.0	51 49.0 +02.3	S 21 32.3 +00.0	10	10	10	10			
11	297 14.3 +00.7	N 21 46.1 +00.4	94 37.8 +02.4	S 22 40.8 +00.0	66 51.3 +02.4	S 21 32.3 +00.0	11	11	11	11			
12	312 15.0 +00.7	N 21 46.5 +00.3	109 40.2 +02.5	S 22 40.8 +00.0	81 53.7 +02.3	S 21 32.3 +00.0	12	12	12	12			
13	327 15.7 +00.7	N 21 46.8 +00.3	124 42.7 +02.4	S 22 40.8 +00.0	96 56.0 +02.4	S 21 32.3 +00.0	13	13	13	13			
14	342 16.4 +00.8	N 21 47.1 +00.4	139 45.1 +02.4	S 22 40.8 +00.0	111 58.4 +02.4	S 21 32.3 +00.0	14	14	14	14			
15	357 17.2 +00.7	N 21 47.5 +00.3	154 47.5 +02.4	S 22 40.8 +00.0	127 00.8 +02.3	S 21 32.3 +00.0	15	15	15	15			
16	12 17.9 +00.7	N 21 47.8 +00.3	169 49.9 +02.4	S 22 40.8 +00.0	142 03.1 +02.4	S 21 32.3 +00.0	16	16	16	16			
17	27 18.6 +00.7	N 21 48.1 +00.4	184 52.3 +02.5	S 22 40.8 +00.0	157 05.5 +02.3	S 21 32.3 -00.1	17	17	17	17			
18	42 19.3 +00.8	N 21 48.5 +00.3	199 54.8 +02.4	S 22 40.8 +00.0	172 07.8 +02.4	S 21 32.2 +00.0	18	18	18	18			
19	57 20.1 +00.7	N 21 48.8 +00.3	214 57.2 +02.4	S 22 40.8 +00.0	187 10.2 +02.4	S 21 32.2 +00.0	19	19	19	19			
20	72 20.8 +00.7	N 21 49.1 +00.3	229 59.6 +02.4	S 22 40.8 +00.1	202 12.6 +02.3	S 21 32.2 +00.0	20	20	20	20			
21	87 21.5 +00.7	N 21 49.4 +00.4	245 02.0 +02.5	S 22 40.9 +00.0	217 14.9 +02.4	S 21 32.2 +00.0	21	21	21	21			
22	102 22.2 +00.7	N 21 49.8 +00.3	260 04.5 +02.4	S 22 40.9 +00.0	232 17.3 +02.3	S 21 32.2 +00.0	22	22	22	22			
23	117 22.9 +00.8	N 21 50.1 +00.3	275 06.9 +02.4	S 22 40.9 +00.0	247 19.6 +02.4	S 21 32.2 +00.0	23	23	23	23			
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 299° 299° 299° 299° 299° 298°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:10		Greenwich Culmination Time: 04:42		Greenwich Culmination Time: 06:33								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 20.2 +00.2	N 06 15.5 +01.0	209 55.2 -00.4	S 07 59.0 -01.0	170 43.3 -26.6	N 04 20.7 +11.4	00						
01	194 20.4 +00.2	N 06 16.5 +00.9	224 54.8 -00.3	S 07 58.0 -01.1	185 16.7 -26.6	N 04 32.1 +11.5	01						
02	209 20.6 +00.2	N 06 17.4 +01.0	239 54.5 -00.4	S 07 56.9 -01.1	199 50.1 -26.7	N 04 43.6 +11.4	02						
03	224 20.8 +00.2	N 06 18.4 +00.9	254 54.1 -00.4	S 07 55.8 -01.0	214 23.4 -26.7	N 04 55.0 +11.4	03						
04	239 21.0 +00.1	N 06 19.3 +01.0	269 53.7 -00.4	S 07 54.8 -01.1	228 56.7 -26.7	N 05 06.4 +11.3	04						
05	254 21.1 +00.2	N 06 20.3 +00.9	284 53.3 -00.4	S 07 53.7 -01.1	243 30.0 -26.8	N 05 17.7 +11.4	05						
06	269 21.3 +00.2	N 06 21.2 +00.9	299 52.9 -00.4	S 07 52.6 -01.1	258 03.2 -26.8	N 05 29.1 +11.3	06						
07	284 21.5 +00.2	N 06 22.1 +01.0	314 52.5 -00.4	S 07 51.5 -01.0	272 36.4 -26.8	N 05 40.4 +11.4	07						
08	299 21.7 +00.1	N 06 23.1 +00.9	329 52.1 -00.3	S 07 50.5 -01.1	287 09.6 -26.9	N 05 51.8 +11.3	08						
09	314 21.8 +00.2	N 06 24.0 +01.0	344 51.8 -00.4	S 07 49.4 -01.1	301 42.7 -26.9	N 06 03.1 +11.3	09						
10	329 22.0 +00.2	N 06 25.0 +00.9	359 51.4 -00.4	S 07 48.3 -01.0	316 15.8 -27.0	N 06 14.4 +11.3	10						
11	344 22.2 +00.2	N 06 25.9 +01.0	14 51.0 -00.4	S 07 47.3 -01.1	330 48.8 -27.0	N 06 25.7 +11.2	11						
12	359 22.4 +00.1	N 06 26.9 +00.9	29 50.6 -00.4	S 07 46.2 -01.1	345 21.8 -27.0	N 06 36.9 +11.2	12						
13	14 22.5 +00.2	N 06 27.8 +01.0	44 50.2 -00.4	S 07 45.1 -01.1	359 54.8 -27.1	N 06 48.1 +11.3	13						
14	29 22.7 +00.2	N 06 28.8 +00.9	59 49.8 -00.3	S 07 44.0 -01.0	14 27.7 -27.1	N 06 59.4 +11.1	14						
15	44 22.9 +00.2	N 06 29.7 +01.0	74 49.5 -00.4	S 07 43.0 -01.1	29 00.6 -27.2	N 07 10.5 +11.2	15						
16	59 23.1 +00.2	N 06 30.7 +00.9	89 49.1 -00.4	S 07 41.9 -01.1	43 33.4 -27.2	N 07 21.7 +11.1	16						
17	74 23.3 +00.1	N 06 31.6 +00.9	104 48.7 -00.4	S 07 40.8 -01.1	58 06.2 -27.3	N 07 32.8 +11.1	17						
18	89 23.4 +00.2	N 06 32.5 +01.0	119 48.3 -00.4	S 07 39.7 -01.0	72 38.9 -27.3	N 07 43.9 +11.1	18						
19	104 23.6 +00.2	N 06 33.5 +00.9	134 47.9 -00.3	S 07 38.7 -01.1	87 11.6 -27.3	N 07 55.0 +11.1	19						
20	119 23.8 +00.2	N 06 34.4 +01.0	149 47.6 -00.4	S 07 37.6 -01.1	101 44.3 -27.4	N 08 06.1 +11.0	20						
21	134 24.0 +00.1	N 06 35.4 +00.9	164 47.2 -00.4	S 07 36.5 -01.1	116 16.9 -27.5	N 08 17.1 +11.0	21						
22	149 24.1 +00.2	N 06 36.3 +01.0	179 46.8 -00.4	S 07 35.4 -01.0	130 49.4 -27.4	N 08 28.1 +11.0	22						
23	164 24.3 +00.2	N 06 37.3 +00.9	194 46.4 -00.4	S 07 34.4 -01.1	145 22.0 -27.6	N 08 39.1 +10.9	23						
	UT 02 06 10 14 18 22	SD 16'0 16'0 16'0 16'0 16'0 16'0	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 15'1 15'1 15'1 15'1 15'2 15'2							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	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 55'4 55'4 55'5 55'6 55'7 55'7								
	SHA 345° 345° 345° 345° 345° 345°	UT 02 06 10 14 18 22	SD 016° 016° 015° 015° 015° 015°	UT 02 06 10 14 18 22	SD 336° 334° 332° 330° 328° 326°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 10:00		Greenwich Culmination Time: 13:00								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	132 23.7 +00.7	N 21 50.4 +00.4	290 09.3 +02.4	S 22 40.9 +00.0	262 22.0 +02.4	S 21 32.2 +00.0	00						
01	147 24.4 +00.7	N 21 50.8 +00.3	305 11.7 +02.5	S 22 40.9 +00.0	277 24.4 +02.3	S 21 32.2 -00.1	01						
02	162 25.1 +00.7	N 21 51.1 +00.3	320 14.2 +02.4	S 22 40.9 +00.0	292 26.7 +02.4	S 21 32.1 +00.0	02						
03	177 25.8 +00.8	N 21 51.4 +00.3	335 16.6 +02.4	S 22 40.9 +00.0	307 29.1 +02.3	S 21 32.1 +00.0	03						
04	192 26.6 +00.7	N 21 51.7 +00.4	350 19.0 +02.4	S 22 40.9 +00.0	322 31.4 +02.4	S 21 32.1 +00.0	04						
05	207 27.3 +00.7	N 21 52.1 +00.3	5 21.4 +02.5	S 22 40.9 +00.0	337 33.8 +02.4	S 21 32.1 +00.0	05						
06	222 28.0 +00.7	N 21 52.4 +00.3	20 23.9 +02.4	S 22 40.9 +00.0	352 36.2 +02.3	S 21 32.1 +00.0	06						
07	237 28.7 +00.7	N 21 52.7 +00.3	35 26.3 +02.4	S 22 40.9 +00.0	7 38.5 +02.4	S 21 32.1 +00.0	07						
08	252 29.4 +00.8	N 21 53.0 +00.4	50 28.7 +02.4	S 22 40.9 +00.0	22 40.9 +02.4	S 21 32.1 +00.0	08						
09	267 30.2 +00.7	N 21 53.4 +00.3	65 31.1 +02.5	S 22 40.9 +00.0	37 43.3 +02.3	S 21 32.1 -00.1	09						
10	282 30.9 +00.7	N 21 53.7 +00.3	80 33.6 +02.4	S 22 40.9 +00.0	52 45.6 +02.4	S 21 32.0 +00.0	10						
11	297 31.6 +00.7	N 21 54.0 +00.3	95 36.0 +02.4	S 22 40.9 +00.0	67 48.0 +02.3	S 21 32.0 +00.0	11						
12	312 32.3 +00.7	N 21 54.3 +00.4	110 38.4 +02.4	S 22 40.9 +00.0	82 50.3 +02.4	S 21 32.0 +00.0	12						
13	327 33.0 +00.8	N 21 54.7 +00.3	125 40.8 +02.5	S 22 40.9 +00.0	97 52.7 +02.4	S 21 32.0 +00.0	13						
14	342 33.8 +00.7	N 21 55.0 +00.3	140 43.3 +02.4	S 22 40.9 +00.0	112 55.1 +02.3	S 21 32.0 +00.0	14						
15	357 34.5 +00.7	N 21 55.3 +00.3	155 45.7 +02.4	S 22 40.9 +00.0	127 57.4 +02.4	S 21 32.0 +00.0	15						
16	12 35.2 +00.7	N 21 55.6 +00.3	170 48.1 +02.5	S 22 40.9 +00.0	142 59.8 +02.4	S 21 32.0 +00.0	16						
17	27 35.9 +00.7	N 21 55.9 +00.4	185 50.6 +02.4	S 22 40.9 +00.0	158 02.2 +02.3	S 21 32.0 -00.1	17						
18	42 36.6 +00.8	N 21 56.3 +00.3	200 53.0 +02.4	S 22 40.9 +00.0	173 04.5 +02.4	S 21 31.9 +00.0	18						
19	57 37.4 +00.7	N 21 56.6 +00.3	215 55.4 +02.5	S 22 40.9 +00.0	188 06.9 +02.4	S 21 31.9 +00.0	19						
20	72 38.1 +00.7	N 21 56.9 +00.3	230 57.9 +02.4	S 22 40.9 +00.0	203 09.3 +02.3	S 21 31.9 +00.0	20						
21	87 38.8 +00.7	N 21 57.2 +00.3	246 00.3 +02.4	S 22 40.9 +00.0	218 11.6 +02.4	S 21 31.9 +00.0	21						
22	102 39.5 +00.7	N 21 57.5 +00.4	261 02.7 +02.5	S 22 40.9 +00.0	233 14.0 +02.3	S 21 31.9 +00.0	22						
23	117 40.2 +00.8	N 21 57.9 +00.3	276 05.2 +02.4	S 22 40.9 +00.0	248 16.3 +02.4	S 21 31.9 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	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 068° 068° 068° 068° 068° 068°								
	SHA 298° 298° 298° 298° 298° 298°	UT 02 06 10 14 18 22	SD 096° 096° 096° 096° 096° 096°	UT 02 06 10 14 18 22	SD 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:09		Greenwich Culmination Time: 04:38		Greenwich Culmination Time: 06:29								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 24.5 +00.2	N 06 38.2 +00.9	209 46.0 -00.4	S 07 33.3 -01.1	159 54.4 -27.6	N 08 50.0 +10.9	00						
01	194 24.7 +00.1	N 06 39.1 +01.0	224 45.6 -00.3	S 07 32.2 -01.1	174 26.8 -27.6	N 09 00.9 +10.9	01						
02	209 24.8 +00.2	N 06 40.1 +00.9	239 45.3 -00.4	S 07 31.1 -01.0	188 59.2 -27.7	N 09 11.8 +10.8	02						
03	224 25.0 +00.2	N 06 41.0 +01.0	254 44.9 -00.4	S 07 30.1 -01.1	203 31.5 -27.7	N 09 22.6 +10.8	03						
04	239 25.2 +00.2	N 06 42.0 +00.9	269 44.5 -00.4	S 07 29.0 -01.1	218 03.8 -27.8	N 09 33.4 +10.8	04						
05	254 25.4 +00.1	N 06 42.9 +01.0	284 44.1 -00.3	S 07 27.9 -01.1	232 36.0 -27.9	N 09 44.2 +10.7	05						
06	269 25.5 +00.2	N 06 43.9 +00.9	299 43.8 -00.4	S 07 26.8 -01.1	247 08.1 -27.9	N 09 54.9 +10.7	06						
07	284 25.7 +00.2	N 06 44.8 +00.9	314 43.4 -00.4	S 07 25.7 -01.0	261 40.2 -27.9	N 10 05.6 +10.7	07						
08	299 25.9 +00.2	N 06 45.7 +01.0	329 43.0 -00.4	S 07 24.7 -01.1	276 12.3 -28.0	N 10 16.3 +10.6	08						
09	314 26.1 +00.1	N 06 46.7 +00.9	344 42.6 -00.4	S 07 23.6 -01.1	290 44.3 -28.1	N 10 26.9 +10.6	09						
10	329 26.2 +00.2	N 06 47.6 +01.0	359 42.2 -00.3	S 07 22.5 -01.1	305 16.2 -28.1	N 10 37.5 +10.5	10						
11	344 26.4 +00.2	N 06 48.6 +00.9	14 41.9 -00.4	S 07 21.4 -01.1	319 48.1 -28.1	N 10 48.0 +10.5	11						
12	359 26.6 +00.2	N 06 49.5 +00.9	29 41.5 -00.4	S 07 20.3 -01.0	334 20.0 -28.2	N 10 58.5 +10.4	12						
13	14 26.8 +00.1	N 06 50.4 +01.0	44 41.1 -00.4	S 07 19.3 -01.1	348 51.8 -28.3	N 11 08.9 +10.4	13						
14	29 26.9 +00.2	N 06 51.4 +00.9	59 40.7 -00.4	S 07 18.2 -01.1	3 23.5 -28.4	N 11 19.3 +10.4	14						
15	44 27.1 +00.2	N 06 52.3 +01.0	74 40.3 -00.3	S 07 17.1 -01.1	17 55.1 -28.4	N 11 29.7 +10.3	15						
16	59 27.3 +00.2	N 06 53.3 +00.9	89 40.0 -00.4	S 07 16.0 -01.1	32 26.7 -28.4	N 11 40.0 +10.2	16						
17	74 27.5 +00.1	N 06 54.2 +00.9	104 39.6 -00.4	S 07 14.9 -01.1	46 58.3 -28.5	N 11 50.2 +10.2	17						
18	89 27.6 +00.2	N 06 55.1 +01.0	119 39.2 -00.4	S 07 13.8 -01.0	61 29.8 -28.6	N 12 00.4 +10.2	18						
19	104 27.8 +00.2	N 06 56.1 +00.9	134 38.8 -00.3	S 07 12.8 -01.1	76 01.2 -28.6	N 12 10.6 +10.1	19						
20	119 28.0 +00.2	N 06 57.0 +01.0	149 38.5 -00.4	S 07 11.7 -01.1	90 32.6 -28.7	N 12 20.7 +10.1	20						
21	134 28.2 +00.1	N 06 58.0 +00.9	164 38.1 -00.4	S 07 10.6 -01.1	105 03.9 -28.7	N 12 30.8 +10.0	21						
22	149 28.3 +00.2	N 06 58.9 +00.9	179 37.7 -00.4	S 07 09.5 -01.1	119 35.2 -28.9	N 12 40.8 +09.9	22						
23	164 28.5 +00.2	N 06 59.8 +01.0	194 37.3 -00.3	S 07 08.4 -01.1	134 06.3 -28.8	N 12 50.7 +09.9	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	16'0 16'0 16'0 16'0 16'0 16'0	SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	15'2 15'2 15'2 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	55'8 55'9 56'0 56'0 56'1 56'2								
SHA	344° 344° 344° 344° 344° 344°	SHA	015° 015° 014° 014° 014° 014°	SHA	324° 322° 320° 318° 316° 314°								
Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 10:01			Greenwich Culmination Time: 13:45							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	132 41.0 +00.7	N 21 58.2 +00.3	291 07.6 +02.4	S 22 40.9 +00.0	263 18.7 +02.4	S 21 31.9 +00.0	00						
01	147 41.7 +00.7	N 21 58.5 +00.3	306 10.0 +02.5	S 22 40.9 +00.0	278 21.1 +02.3	S 21 31.9 -00.1	01						
02	162 42.4 +00.7	N 21 58.8 +00.3	321 12.5 +02.4	S 22 40.9 +00.0	293 23.4 +02.4	S 21 31.8 +00.0	02						
03	177 43.1 +00.7	N 21 59.1 +00.4	336 14.9 +02.4	S 22 40.9 +00.0	308 25.8 +02.4	S 21 31.8 +00.0	03						
04	192 43.8 +00.7	N 21 59.5 +00.3	351 17.3 +02.5	S 22 40.9 +00.0	323 28.2 +02.3	S 21 31.8 +00.0	04						
05	207 44.5 +00.8	N 21 59.8 +00.3	6 19.8 +02.4	S 22 40.9 +00.0	338 30.5 +02.4	S 21 31.8 +00.0	05						
06	222 45.3 +00.7	N 22 00.1 +00.3	21 22.2 +02.4	S 22 40.9 +00.0	353 32.9 +02.4	S 21 31.8 +00.0	06						
07	237 46.0 +00.7	N 22 00.4 +00.3	36 24.6 +02.5	S 22 40.9 +00.0	8 35.3 +02.3	S 21 31.8 +00.0	07						
08	252 46.7 +00.7	N 22 00.7 +00.4	51 27.1 +02.4	S 22 40.9 +00.0	23 37.6 +02.4	S 21 31.8 +00.0	08						
09	267 47.4 +00.7	N 22 01.1 +00.3	66 29.5 +02.4	S 22 40.9 +00.0	38 40.0 +02.4	S 21 31.8 -00.1	09						
10	282 48.1 +00.8	N 22 01.4 +00.3	81 31.9 +02.5	S 22 40.9 +00.0	53 42.4 +02.3	S 21 31.7 +00.0	10						
11	297 48.9 +00.7	N 22 01.7 +00.3	96 34.4 +02.4	S 22 40.9 +00.0	68 44.7 +02.4	S 21 31.7 +00.0	11						
12	312 49.6 +00.7	N 22 02.0 +00.3	111 36.8 +02.4	S 22 40.9 +00.0	83 47.1 +02.4	S 21 31.7 +00.0	12						
13	327 50.3 +00.7	N 22 02.3 +00.3	126 39.2 +02.5	S 22 40.9 +00.0	98 49.5 +02.3	S 21 31.7 +00.0	13						
14	342 51.0 +00.7	N 22 02.6 +00.3	141 41.7 +02.4	S 22 40.9 +00.0	113 51.8 +02.4	S 21 31.7 +00.0	14						
15	357 51.7 +00.8	N 22 02.9 +00.4	156 44.1 +02.5	S 22 40.9 +00.0	128 54.2 +02.4	S 21 31.7 +00.0	15						
16	12 52.5 +00.7	N 22 03.3 +00.3	171 46.6 +02.4	S 22 40.9 +00.0	143 56.6 +02.3	S 21 31.7 +00.0	16						
17	27 53.2 +00.7	N 22 03.6 +00.3	186 49.0 +02.4	S 22 40.9 +00.0	158 58.9 +02.4	S 21 31.7 +00.0	17						
18	42 53.9 +00.7	N 22 03.9 +00.3	201 51.4 +02.5	S 22 40.9 +00.0	174 01.3 +02.4	S 21 31.7 -00.1	18						
19	57 54.6 +00.7	N 22 04.2 +00.3	216 53.9 +02.4	S 22 40.9 +00.0	189 03.7 +02.4	S 21 31.6 +00.0	19						
20	72 55.3 +00.7	N 22 04.5 +00.3	231 56.3 +02.4	S 22 40.9 +00.0	204 06.1 +02.3	S 21 31.6 +00.0	20						
21	87 56.0 +00.8	N 22 04.8 +00.3	246 58.7 +02.5	S 22 40.9 +00.0	219 08.4 +02.4	S 21 31.6 +00.0	21						
22	102 56.8 +00.7	N 22 05.1 +00.4	262 01.2 +02.4	S 22 40.9 +00.0	234 10.8 +02.4	S 21 31.6 +00.0	22						
23	117 57.5 +00.7	N 22 05.5 +00.3	277 03.6 +02.5	S 22 40.9 +00.0	249 13.2 +02.3	S 21 31.6 +00.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'0 00'0 00'0 00'0 00'0 00'0	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'1 00'1 00'1 00'1 00'1 00'1								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	298° 298° 297° 297° 297° 297°	SHA	096° 096° 096° 096° 096° 096°	SHA	068° 068° 068° 068° 068° 068°								
Greenwich Culmination Time: 15:08			Greenwich Culmination Time: 04:34			Greenwich Culmination Time: 06:25							

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 28.7 +00.2	N 07 00.8 +00.9	209 37.0 -00.4	S 07 07.3 -01.1	148 37.5 -29.0	N 13 00.6 +09.8	00							
01	194 28.9 +00.1	N 07 01.7 +00.9	224 36.6 -00.4	S 07 06.2 -01.0	163 08.5 -29.0	N 13 10.4 +09.8	01							
02	209 29.0 +00.2	N 07 02.6 +01.0	239 36.2 -00.4	S 07 05.2 -01.1	177 39.5 -29.0	N 13 20.2 +09.7	02							
03	224 29.2 +00.2	N 07 03.6 +00.9	254 35.8 -00.3	S 07 04.1 -01.1	192 10.5 -29.1	N 13 29.9 +09.7	03							
04	239 29.4 +00.1	N 07 04.5 +01.0	269 35.5 -00.4	S 07 03.0 -01.1	206 41.4 -29.2	N 13 39.6 +09.6	04							
05	254 29.5 +00.2	N 07 05.5 +00.9	284 35.1 -00.4	S 07 01.9 -01.1	221 12.2 -29.3	N 13 49.2 +09.6	05							
06	269 29.7 +00.2	N 07 06.4 +00.9	299 34.7 -00.4	S 07 00.8 -01.1	235 42.9 -29.3	N 13 58.8 +09.4	06							
07	284 29.9 +00.2	N 07 07.3 +01.0	314 34.3 -00.3	S 06 59.7 -01.1	250 13.6 -29.4	N 14 08.2 +09.5	07							
08	299 30.1 +00.1	N 07 08.3 +00.9	329 34.0 -00.4	S 06 58.6 -01.1	264 44.2 -29.4	N 14 17.7 +09.3	08							
09	314 30.2 +00.2	N 07 09.2 +00.9	344 33.6 -00.4	S 06 57.5 -01.0	279 14.8 -29.5	N 14 27.0 +09.3	09							
10	329 30.4 +00.2	N 07 10.1 +01.0	359 33.2 -00.3	S 06 56.5 -01.1	293 45.3 -29.6	N 14 36.3 +09.2	10							
11	344 30.6 +00.2	N 07 11.1 +00.9	14 32.9 -00.4	S 06 55.4 -01.1	308 15.7 -29.7	N 14 45.5 +09.2	11							
12	359 30.8 +00.1	N 07 12.0 +00.9	29 32.5 -00.4	S 06 54.3 -01.1	322 46.0 -29.7	N 14 54.7 +09.1	12							
13	14 30.9 +00.2	N 07 12.9 +01.0	44 32.1 -00.4	S 06 53.2 -01.1	337 16.3 -29.8	N 15 03.8 +09.0	13							
14	29 31.1 +00.2	N 07 13.9 +00.9	59 31.7 -00.3	S 06 52.1 -01.1	351 46.5 -29.8	N 15 12.8 +08.9	14							
15	44 31.3 +00.1	N 07 14.8 +01.0	74 31.4 -00.4	S 06 51.0 -01.1	6 16.7 -29.9	N 15 21.7 +08.9	15							
16	59 31.4 +00.2	N 07 15.8 +00.9	89 31.0 -00.4	S 06 49.9 -01.1	20 46.8 -30.0	N 15 30.6 +08.8	16							
17	74 31.6 +00.2	N 07 16.7 +00.9	104 30.6 -00.3	S 06 48.8 -01.1	35 16.8 -30.1	N 15 39.4 +08.7	17							
18	89 31.8 +00.2	N 07 17.6 +01.0	119 30.3 -00.4	S 06 47.7 -01.1	49 46.7 -30.1	N 15 48.1 +08.7	18							
19	104 32.0 +00.1	N 07 18.6 +00.9	134 29.9 -00.4	S 06 46.6 -01.1	64 16.6 -30.2	N 15 56.8 +08.6	19							
20	119 32.1 +00.2	N 07 19.5 +00.9	149 29.5 -00.4	S 06 45.5 -01.1	78 46.4 -30.2	N 16 05.4 +08.5	20							
21	134 32.3 +00.2	N 07 20.4 +01.0	164 29.1 -00.3	S 06 44.4 -01.1	93 16.2 -30.4	N 16 13.9 +08.4	21							
22	149 32.5 +00.1	N 07 21.4 +00.9	179 28.8 -00.4	S 06 43.3 -01.0	107 45.8 -30.4	N 16 22.3 +08.4	22							
23	164 32.6 +00.2	N 07 22.3 +00.9	194 28.4 -00.4	S 06 42.3 -01.1	122 15.4 -30.4	N 16 30.7 +08.2	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 343° 343° 343° 343° 343° 343°	Greenwich Culmination Time: 12:01	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 014° 013° 013° 013° 013° 013°	Greenwich Culmination Time: 10:01	UT 02 06 10 14 18 22	SD 15'3 15'4 15'4 15'4 15'4 15'5	HP 56'3 56'4 56'5 56'5 56'6 56'7	SHA 312° 310° 307° 305° 303° 301°	Greenwich Culmination Time: 14:34

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	132 58.2 +00.7	N 22 05.8 +00.3	292 06.1 +02.4	S 22 40.9 +00.0	264 15.5 +02.4	S 21 31.6 +00.0	00							
01	147 58.9 +00.7	N 22 06.1 +00.3	307 08.5 +02.5	S 22 40.9 +00.0	279 17.9 +02.4	S 21 31.6 +00.0	01							
02	162 59.6 +00.7	N 22 06.4 +00.3	322 11.0 +02.4	S 22 40.9 +00.0	294 20.3 +02.3	S 21 31.6 -00.1	02							
03	178 00.3 +00.8	N 22 06.7 +00.3	337 13.4 +02.4	S 22 40.9 +00.0	309 22.6 +02.4	S 21 31.5 +00.0	03							
04	193 01.1 +00.7	N 22 07.0 +00.3	352 15.8 +02.5	S 22 40.9 +00.0	324 25.0 +02.4	S 21 31.5 +00.0	04							
05	208 01.8 +00.7	N 22 07.3 +00.3	7 18.3 +02.4	S 22 40.9 +00.0	339 27.4 +02.3	S 21 31.5 +00.0	05							
06	223 02.5 +00.7	N 22 07.6 +00.4	22 20.7 +02.5	S 22 40.9 +00.0	354 29.7 +02.4	S 21 31.5 +00.0	06							
07	238 03.2 +00.7	N 22 08.0 +00.3	37 23.2 +02.4	S 22 40.9 +00.0	9 32.1 +02.4	S 21 31.5 +00.0	07							
08	253 03.9 +00.7	N 22 08.3 +00.3	52 25.6 +02.5	S 22 40.9 +00.0	24 34.5 +02.4	S 21 31.5 +00.0	08							
09	268 04.6 +00.8	N 22 08.6 +00.3	67 28.1 +02.4	S 22 40.9 +00.0	39 36.9 +02.3	S 21 31.5 +00.0	09							
10	283 05.4 +00.7	N 22 08.9 +00.3	82 30.5 +02.4	S 22 40.9 +00.0	54 39.2 +02.4	S 21 31.5 +00.0	10							
11	298 06.1 +00.7	N 22 09.2 +00.3	97 32.9 +02.5	S 22 40.9 +00.0	69 41.6 +02.4	S 21 31.5 -00.1	11							
12	313 06.8 +00.7	N 22 09.5 +00.3	112 35.4 +02.4	S 22 40.9 +00.0	84 44.0 +02.3	S 21 31.4 +00.0	12							
13	328 07.5 +00.7	N 22 09.8 +00.3	127 37.8 +02.5	S 22 40.9 +00.0	99 46.3 +02.4	S 21 31.4 +00.0	13							
14	343 08.2 +00.7	N 22 10.1 +00.3	142 40.3 +02.4	S 22 40.9 +00.0	114 48.7 +02.4	S 21 31.4 +00.0	14							
15	358 08.9 +00.8	N 22 10.4 +00.3	157 42.7 +02.5	S 22 40.9 +00.0	129 51.1 +02.4	S 21 31.4 +00.0	15							
16	13 09.7 +00.7	N 22 10.7 +00.3	172 45.2 +02.4	S 22 40.9 +00.0	144 53.5 +02.3	S 21 31.4 +00.0	16							
17	28 10.4 +00.7	N 22 11.0 +00.3	187 47.6 +02.5	S 22 40.9 +00.0	159 55.8 +02.4	S 21 31.4 +00.0	17							
18	43 11.1 +00.7	N 22 11.3 +00.3	202 50.1 +02.4	S 22 40.9 +00.0	174 58.2 +02.4	S 21 31.4 +00.0	18							
19	58 11.8 +00.7	N 22 11.6 +00.4	217 52.5 +02.5	S 22 40.9 +00.0	190 00.6 +02.3	S 21 31.4 +00.0	19							
20	73 12.5 +00.7	N 22 12.0 +00.3	232 55.0 +02.4	S 22 40.9 +00.0	205 02.9 +02.4	S 21 31.4 -00.1	20							
21	88 13.2 +00.7	N 22 12.3 +00.3	247 57.4 +02.5	S 22 40.9 +00.0	220 05.3 +02.4	S 21 31.3 +00.0	21							
22	103 13.9 +00.8	N 22 12.6 +00.3	262 59.9 +02.4	S 22 40.9 +00.0	235 07.7 +02.4	S 21 31.3 +00.0	22							
23	118 14.7 +00.7	N 22 12.9 +00.3	278 02.3 +02.5	S 22 40.9 +00.0	250 10.1 +02.3	S 21 31.3 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 297° 297° 297° 297° 296° 296°	Greenwich Culmination Time: 15:07	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 096° 096° 096° 096° 096° 096°	Greenwich Culmination Time: 04:30	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 068° 068° 068° 068° 068° 068°	Greenwich Culmination Time: 06:21

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	179 32.8 +00.2	N 07 23.2 +01.0	209 28.0 -00.3	S 06 41.2 -01.1	136 45.0 -30.6	N 16 38.9 +08.2	00										
01	194 33.0 +00.2	N 07 24.2 +00.9	224 27.7 -00.4	S 06 40.1 -01.1	151 14.4 -30.6	N 16 47.1 +08.1	01										
02	209 33.2 +00.1	N 07 25.1 +00.9	239 27.3 -00.4	S 06 39.0 -01.1	165 43.8 -30.6	N 16 55.2 +08.0	02										
03	224 33.3 +00.2	N 07 26.0 +01.0	254 26.9 -00.3	S 06 37.9 -01.1	180 13.2 -30.8	N 17 03.2 +08.0	03										
04	239 33.5 +00.2	N 07 27.0 +00.9	269 26.6 -00.4	S 06 36.8 -01.1	194 42.4 -30.8	N 17 11.2 +07.8	04										
05	254 33.7 +00.1	N 07 27.9 +00.9	284 26.2 -00.4	S 06 35.7 -01.1	209 11.6 -30.9	N 17 19.0 +07.8	05										
06	269 33.8 +00.2	N 07 28.8 +00.9	299 25.8 -00.3	S 06 34.6 -01.1	223 40.7 -30.9	N 17 26.8 +07.7	06										
07	284 34.0 +00.2	N 07 29.7 +01.0	314 25.5 -00.4	S 06 33.5 -01.1	238 09.8 -31.1	N 17 34.5 +07.6	07										
08	299 34.2 +00.2	N 07 30.7 +00.9	329 25.1 -00.4	S 06 32.4 -01.1	252 38.7 -31.1	N 17 42.1 +07.5	08										
09	314 34.4 +00.1	N 07 31.6 +00.9	344 24.7 -00.4	S 06 31.3 -01.1	267 07.6 -31.1	N 17 49.6 +07.4	09										
10	329 34.5 +00.2	N 07 32.5 +01.0	359 24.3 -00.3	S 06 30.2 -01.1	281 36.5 -31.3	N 17 57.0 +07.3	10										
11	344 34.7 +00.2	N 07 33.5 +00.9	14 24.0 -00.4	S 06 29.1 -01.1	296 05.2 -31.3	N 18 04.3 +07.2	11										
12	359 34.9 +00.1	N 07 34.4 +00.9	29 23.6 -00.4	S 06 28.0 -01.1	310 33.9 -31.3	N 18 11.5 +07.2	12										
13	14 35.0 +00.2	N 07 35.3 +01.0	44 23.2 -00.3	S 06 26.9 -01.1	325 02.6 -31.5	N 18 18.7 +07.0	13										
14	29 35.2 +00.2	N 07 36.3 +00.9	59 22.9 -00.4	S 06 25.8 -01.1	339 31.1 -31.5	N 18 25.7 +07.0	14										
15	44 35.4 +00.1	N 07 37.2 +00.9	74 22.5 -00.4	S 06 24.7 -01.1	353 59.6 -31.6	N 18 32.7 +06.8	15										
16	59 35.5 +00.2	N 07 38.1 +00.9	89 22.1 -00.3	S 06 23.6 -01.1	8 28.0 -31.6	N 18 39.5 +06.8	16										
17	74 35.7 +00.2	N 07 39.0 +01.0	104 21.8 -00.4	S 06 22.5 -01.1	22 56.4 -31.7	N 18 46.3 +06.6	17										
18	89 35.9 +00.1	N 07 40.0 +00.9	119 21.4 -00.4	S 06 21.4 -01.1	37 24.7 -31.8	N 18 52.9 +06.6	18										
19	104 36.0 +00.2	N 07 40.9 +00.9	134 21.0 -00.3	S 06 20.3 -01.1	51 52.9 -31.9	N 18 59.5 +06.4	19										
20	119 36.2 +00.2	N 07 41.8 +01.0	149 20.7 -00.4	S 06 19.2 -01.1	66 21.0 -31.9	N 19 05.9 +06.4	20										
21	134 36.4 +00.2	N 07 42.8 +00.9	164 20.3 -00.3	S 06 18.1 -01.1	80 49.1 -32.0	N 19 12.3 +06.2	21										
22	149 36.6 +00.1	N 07 43.7 +00.9	179 20.0 -00.4	S 06 17.0 -01.1	95 17.1 -32.1	N 19 18.5 +06.2	22										
23	164 36.7 +00.2	N 07 44.6 +00.9	194 19.6 -00.4	S 06 15.9 -01.1	109 45.0 -32.1	N 19 24.7 +06.0	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 343° 342° 342° 342° 342° 342°	Greenwich Culmination Time: 12:01		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 012° 012° 012° 012° 012° 011°	Greenwich Culmination Time: 10:02		UT 02 06 10 14 18 22	SD 15'5 15'5 15'5 15'5 15'6 15'6	HP 56'8 56'9 57'0 57'1 57'2 57'2	SHA 299° 296° 294° 292° 290° 287°	Greenwich Culmination Time: 15:24

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	133 15.4 +00.7	N 22 13.2 +00.3	293 04.8 +02.4	S 22 40.9 +00.0	265 12.4 +02.4	S 21 31.3 +00.0	00										
01	148 16.1 +00.7	N 22 13.5 +00.3	308 07.2 +02.5	S 22 40.9 +00.0	280 14.8 +02.4	S 21 31.3 +00.0	01										
02	163 16.8 +00.7	N 22 13.8 +00.3	323 09.7 +02.4	S 22 40.9 +00.0	295 17.2 +02.4	S 21 31.3 +00.0	02										
03	178 17.5 +00.7	N 22 14.1 +00.3	338 12.1 +02.5	S 22 40.9 +00.0	310 19.6 +02.3	S 21 31.3 +00.0	03										
04	193 18.2 +00.7	N 22 14.4 +00.3	353 14.6 +02.4	S 22 40.9 +00.0	325 21.9 +02.4	S 21 31.3 +00.0	04										
05	208 18.9 +00.8	N 22 14.7 +00.3	8 17.0 +02.5	S 22 40.9 +00.0	340 24.3 +02.4	S 21 31.3 -00.1	05										
06	223 19.7 +00.7	N 22 15.0 +00.3	23 19.5 +02.4	S 22 40.9 +00.0	355 26.7 +02.4	S 21 31.2 +00.0	06										
07	238 20.4 +00.7	N 22 15.3 +00.3	38 21.9 +02.5	S 22 40.9 +00.0	10 29.1 +02.3	S 21 31.2 +00.0	07										
08	253 21.1 +00.7	N 22 15.6 +00.3	53 24.4 +02.4	S 22 40.9 +00.0	25 31.4 +02.4	S 21 31.2 +00.0	08										
09	268 21.8 +00.7	N 22 15.9 +00.3	68 26.8 +02.5	S 22 40.9 +00.0	40 33.8 +02.4	S 21 31.2 +00.0	09										
10	283 22.5 +00.7	N 22 16.2 +00.3	83 29.3 +02.4	S 22 40.9 +00.0	55 36.2 +02.4	S 21 31.2 +00.0	10										
11	298 23.2 +00.7	N 22 16.5 +00.3	98 31.7 +02.5	S 22 40.9 +00.0	70 38.6 +02.3	S 21 31.2 +00.0	11										
12	313 23.9 +00.8	N 22 16.8 +00.3	113 34.2 +02.4	S 22 40.9 +00.0	85 40.9 +02.4	S 21 31.2 +00.0	12										
13	328 24.7 +00.7	N 22 17.1 +00.3	128 36.6 +02.5	S 22 40.9 +00.0	100 43.3 +02.4	S 21 31.2 +00.0	13										
14	343 25.4 +00.7	N 22 17.4 +00.3	143 39.1 +02.4	S 22 40.9 +00.0	115 45.7 +02.4	S 21 31.2 -00.1	14										
15	358 26.1 +00.7	N 22 17.7 +00.3	158 41.5 +02.5	S 22 40.9 +00.0	130 48.1 +02.3	S 21 31.1 +00.0	15										
16	13 26.8 +00.7	N 22 18.0 +00.3	173 44.0 +02.5	S 22 40.9 +00.0	145 50.4 +02.4	S 21 31.1 +00.0	16										
17	28 27.5 +00.7	N 22 18.3 +00.3	188 46.5 +02.4	S 22 40.9 +00.0	160 52.8 +02.4	S 21 31.1 +00.0	17										
18	43 28.2 +00.7	N 22 18.6 +00.3	203 48.9 +02.5	S 22 40.9 +00.0	175 55.2 +02.4	S 21 31.1 +00.0	18										
19	58 28.9 +00.8	N 22 18.9 +00.3	218 51.4 +02.4	S 22 40.9 +00.0	190 57.6 +02.3	S 21 31.1 +00.0	19										
20	73 29.7 +00.7	N 22 19.2 +00.3	233 53.8 +02.5	S 22 40.9 +00.0	205 59.9 +02.4	S 21 31.1 +00.0	20										
21	88 30.4 +00.7	N 22 19.5 +00.3	248 56.3 +02.4	S 22 40.9 +00.0	221 02.3 +02.4	S 21 31.1 +00.0	21										
22	103 31.1 +00.7	N 22 19.8 +00.3	263 58.7 +02.5	S 22 40.9 +00.0	236 04.7 +02.4	S 21 31.1 +00.0	22										
23	118 31.8 +00.7	N 22 20.1 +00.3	279 01.2 +02.5	S 22 40.9 +00.0	251 07.1 +02.4	S 21 31.1 +00.0	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 296° 296° 296° 296° 296° 296°	Greenwich Culmination Time: 15:06		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 096° 096° 096° 096° 096° 096°	Greenwich Culmination Time: 04:26		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 068° 068° 068° 068° 068° 068°	Greenwich Culmination Time: 06:18

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 36.9 +00.2	N 07 45.5 +01.0	209 19.2 -00.3	S 06 14.8 -01.1	124 12.9 -32.2	N 19 30.7 +05.9	00						
01	194 37.1 +00.1	N 07 46.5 +00.9	224 18.9 -00.4	S 06 13.7 -01.1	138 40.7 -32.3	N 19 36.6 +05.9	01						
02	209 37.2 +00.2	N 07 47.4 +00.9	239 18.5 -00.4	S 06 12.6 -01.1	153 08.4 -32.3	N 19 42.5 +05.7	02						
03	224 37.4 +00.2	N 07 48.3 +01.0	254 18.1 -00.3	S 06 11.5 -01.1	167 36.1 -32.4	N 19 48.2 +05.6	03						
04	239 37.6 +00.1	N 07 49.3 +00.9	269 17.8 -00.4	S 06 10.4 -01.1	182 03.7 -32.5	N 19 53.8 +05.5	04						
05	254 37.7 +00.2	N 07 50.2 +00.9	284 17.4 -00.4	S 06 09.3 -01.1	196 31.2 -32.5	N 19 59.3 +05.4	05						
06	269 37.9 +00.2	N 07 51.1 +00.9	299 17.0 -00.3	S 06 08.2 -01.1	210 58.7 -32.6	N 20 04.7 +05.3	06						
07	284 38.1 +00.1	N 07 52.0 +01.0	314 16.7 -00.4	S 06 07.1 -01.1	225 26.1 -32.7	N 20 10.0 +05.2	07						
08	299 38.2 +00.2	N 07 53.0 +00.9	329 16.3 -00.3	S 06 06.0 -01.1	239 53.4 -32.7	N 20 15.2 +05.0	08						
09	314 38.4 +00.2	N 07 53.9 +00.9	344 16.0 -00.4	S 06 04.9 -01.1	254 20.7 -32.8	N 20 20.2 +05.0	09						
10	329 38.6 +00.1	N 07 54.8 +00.9	359 15.6 -00.4	S 06 03.8 -01.2	268 47.9 -32.8	N 20 25.2 +04.8	10						
11	344 38.7 +00.2	N 07 55.7 +01.0	14 15.2 -00.3	S 06 02.6 -01.1	283 15.1 -32.9	N 20 30.0 +04.7	11						
12	359 38.9 +00.2	N 07 56.7 +00.9	29 14.9 -00.4	S 06 01.5 -01.1	297 42.2 -33.0	N 20 34.7 +04.6	12						
13	14 39.1 +00.1	N 07 57.6 +00.9	44 14.5 -00.4	S 06 00.4 -01.1	312 09.2 -33.0	N 20 39.3 +04.5	13						
14	29 39.2 +00.2	N 07 58.5 +00.9	59 14.1 -00.3	S 05 59.3 -01.1	326 36.2 -33.1	N 20 43.8 +04.4	14						
15	44 39.4 +00.2	N 07 59.4 +01.0	74 13.8 -00.4	S 05 58.2 -01.1	341 03.1 -33.2	N 20 48.2 +04.2	15						
16	59 39.6 +00.1	N 08 00.4 +00.9	89 13.4 -00.3	S 05 57.1 -01.1	355 29.9 -33.2	N 20 52.4 +04.1	16						
17	74 39.7 +00.2	N 08 01.3 +00.9	104 13.1 -00.4	S 05 56.0 -01.1	9 56.7 -33.3	N 20 56.5 +04.1	17						
18	89 39.9 +00.2	N 08 02.2 +00.9	119 12.7 -00.4	S 05 54.9 -01.1	24 23.4 -33.3	N 21 00.6 +03.8	18						
19	104 40.1 +00.1	N 08 03.1 +00.9	134 12.3 -00.3	S 05 53.8 -01.1	38 50.1 -33.4	N 21 04.4 +03.8	19						
20	119 40.2 +00.2	N 08 04.0 +01.0	149 12.0 -00.4	S 05 52.7 -01.1	53 16.7 -33.4	N 21 08.2 +03.6	20						
21	134 40.4 +00.2	N 08 05.0 +00.9	164 11.6 -00.3	S 05 51.6 -01.1	67 43.3 -33.5	N 21 11.8 +03.6	21						
22	149 40.6 +00.1	N 08 05.9 +00.9	179 11.3 -00.4	S 05 50.5 -01.1	82 09.8 -33.6	N 21 15.4 +03.3	22						
23	164 40.7 +00.2	N 08 06.8 +00.9	194 10.9 -00.4	S 05 49.4 -01.2	96 36.2 -33.6	N 21 18.7 +03.3	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 15'6 15'6 15'7 15'7 15'7 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'3 57'4 57'5 57'6 57'7 57'8								
	SHA 342° 341° 341° 341° 341° 341°		SHA 011° 011° 011° 011° 011° 010°		SHA 285° 283° 280° 278° 276° 273°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 10:02		Greenwich Culmination Time: 16:18								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	133 32.5 +00.7	N 22 20.4 +00.3	294 03.7 +02.4	S 22 40.9 +00.0	266 09.5 +02.3	S 21 31.1 -00.1	00						
01	148 33.2 +00.7	N 22 20.7 +00.3	309 06.1 +02.5	S 22 40.9 +00.0	281 11.8 +02.4	S 21 31.0 +00.0	01						
02	163 33.9 +00.7	N 22 21.0 +00.3	324 08.6 +02.4	S 22 40.9 +00.0	296 14.2 +02.4	S 21 31.0 +00.0	02						
03	178 34.6 +00.8	N 22 21.3 +00.3	339 11.0 +02.5	S 22 40.9 +00.0	311 16.6 +02.4	S 21 31.0 +00.0	03						
04	193 35.4 +00.7	N 22 21.6 +00.3	354 13.5 +02.4	S 22 40.9 +00.0	326 19.0 +02.3	S 21 31.0 +00.0	04						
05	208 36.1 +00.7	N 22 21.9 +00.3	9 15.9 +02.5	S 22 40.9 +00.0	341 21.3 +02.4	S 21 31.0 +00.0	05						
06	223 36.8 +00.7	N 22 22.2 +00.3	24 18.4 +02.5	S 22 40.9 +00.0	356 23.7 +02.4	S 21 31.0 +00.0	06						
07	238 37.5 +00.7	N 22 22.5 +00.3	39 20.9 +02.4	S 22 40.9 +00.0	11 26.1 +02.4	S 21 31.0 +00.0	07						
08	253 38.2 +00.7	N 22 22.8 +00.3	54 23.3 +02.5	S 22 40.9 +00.0	26 28.5 +02.4	S 21 31.0 +00.0	08						
09	268 38.9 +00.7	N 22 23.1 +00.3	69 25.8 +02.4	S 22 40.9 +00.0	41 30.9 +02.3	S 21 31.0 -00.1	09						
10	283 39.6 +00.7	N 22 23.4 +00.2	84 28.2 +02.5	S 22 40.9 +00.0	56 33.2 +02.4	S 21 30.9 +00.0	10						
11	298 40.3 +00.8	N 22 23.6 +00.3	99 30.7 +02.5	S 22 40.9 +00.0	71 35.6 +02.4	S 21 30.9 +00.0	11						
12	313 41.1 +00.7	N 22 23.9 +00.3	114 33.2 +02.4	S 22 40.9 +00.0	86 38.0 +02.4	S 21 30.9 +00.0	12						
13	328 41.8 +00.7	N 22 24.2 +00.3	129 35.6 +02.5	S 22 40.9 +00.0	101 40.4 +02.4	S 21 30.9 +00.0	13						
14	343 42.5 +00.7	N 22 24.5 +00.3	144 38.1 +02.5	S 22 40.9 +00.0	116 42.8 +02.3	S 21 30.9 +00.0	14						
15	358 43.2 +00.7	N 22 24.8 +00.3	159 40.6 +02.4	S 22 40.9 +00.0	131 45.1 +02.4	S 21 30.9 +00.0	15						
16	13 43.9 +00.7	N 22 25.1 +00.3	174 43.0 +02.5	S 22 40.9 +00.0	146 47.5 +02.4	S 21 30.9 +00.0	16						
17	28 44.6 +00.7	N 22 25.4 +00.3	189 45.5 +02.5	S 22 40.9 +00.0	161 49.9 +02.4	S 21 30.9 +00.0	17						
18	43 45.3 +00.7	N 22 25.7 +00.3	204 48.0 +02.4	S 22 40.9 +00.0	176 52.3 +02.4	S 21 30.9 +00.0	18						
19	58 46.0 +00.8	N 22 26.0 +00.3	219 50.4 +02.5	S 22 40.9 +00.0	191 54.7 +02.3	S 21 30.9 -00.1	19						
20	73 46.8 +00.7	N 22 26.3 +00.3	234 52.9 +02.4	S 22 40.9 +00.0	206 57.0 +02.4	S 21 30.8 +00.0	20						
21	88 47.5 +00.7	N 22 26.6 +00.3	249 55.3 +02.5	S 22 40.9 +00.0	221 59.4 +02.4	S 21 30.8 +00.0	21						
22	103 48.2 +00.7	N 22 26.9 +00.3	264 57.8 +02.5	S 22 40.9 +00.0	237 01.8 +02.4	S 21 30.8 +00.0	22						
23	118 48.9 +00.7	N 22 27.2 +00.2	280 00.3 +02.4	S 22 40.9 +00.0	252 04.2 +02.4	S 21 30.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 296° 295° 295° 295° 295° 295°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:05		Greenwich Culmination Time: 04:23		Greenwich Culmination Time: 06:14								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 40.9 +00.2	N 08 07.7 +01.0	209 10.5 -00.3	S 05 48.2 -01.1	111 02.6 -33.6	N 21 22.0 +03.1	00						
01	194 41.1 +00.1	N 08 08.7 +00.9	224 10.2 -00.4	S 05 47.1 -01.1	125 29.0 -33.7	N 21 25.1 +03.1	01						
02	209 41.2 +00.2	N 08 09.6 +00.9	239 09.8 -00.3	S 05 46.0 -01.1	139 55.3 -33.8	N 21 28.2 +02.8	02						
03	224 41.4 +00.2	N 08 10.5 +00.9	254 09.5 -00.4	S 05 44.9 -01.1	154 21.5 -33.8	N 21 31.0 +02.8	03						
04	239 41.6 +00.1	N 08 11.4 +00.9	269 09.1 -00.4	S 05 43.8 -01.1	168 47.7 -33.9	N 21 33.8 +02.6	04						
05	254 41.7 +00.2	N 08 12.3 +01.0	284 08.7 -00.3	S 05 42.7 -01.1	183 13.8 -33.9	N 21 36.4 +02.5	05						
06	269 41.9 +00.2	N 08 13.3 +00.9	299 08.4 -00.4	S 05 41.6 -01.1	197 39.9 -33.9	N 21 38.9 +02.4	06						
07	284 42.1 +00.1	N 08 14.2 +00.9	314 08.0 -00.3	S 05 40.5 -01.1	212 06.0 -34.0	N 21 41.3 +02.2	07						
08	299 42.2 +00.2	N 08 15.1 +00.9	329 07.7 -00.4	S 05 39.4 -01.2	226 32.0 -34.1	N 21 43.5 +02.1	08						
09	314 42.4 +00.2	N 08 16.0 +00.9	344 07.3 -00.4	S 05 38.2 -01.1	240 57.9 -34.1	N 21 45.6 +02.0	09						
10	329 42.6 +00.1	N 08 16.9 +01.0	359 06.9 -00.3	S 05 37.1 -01.1	255 23.8 -34.1	N 21 47.6 +01.8	10						
11	344 42.7 +00.2	N 08 17.9 +00.9	14 06.6 -00.4	S 05 36.0 -01.1	269 49.7 -34.2	N 21 49.4 +01.8	11						
12	359 42.9 +00.2	N 08 18.8 +00.9	29 06.2 -00.3	S 05 34.9 -01.1	284 15.5 -34.2	N 21 51.2 +01.5	12						
13	14 43.1 +00.1	N 08 19.7 +00.9	44 05.9 -00.4	S 05 33.8 -01.1	298 41.3 -34.3	N 21 52.7 +01.5	13						
14	29 43.2 +00.2	N 08 20.6 +00.9	59 05.5 -00.3	S 05 32.7 -01.1	313 07.0 -34.3	N 21 54.2 +01.3	14						
15	44 43.4 +00.2	N 08 21.5 +01.0	74 05.2 -00.4	S 05 31.6 -01.2	327 32.7 -34.3	N 21 55.5 +01.1	15						
16	59 43.6 +00.1	N 08 22.5 +00.9	89 04.8 -00.4	S 05 30.4 -01.1	341 58.4 -34.4	N 21 56.6 +01.1	16						
17	74 43.7 +00.2	N 08 23.4 +00.9	104 04.4 -00.3	S 05 29.3 -01.1	356 24.0 -34.4	N 21 57.7 +00.9	17						
18	89 43.9 +00.1	N 08 24.3 +00.9	119 04.1 -00.4	S 05 28.2 -01.1	10 49.6 -34.5	N 21 58.6 +00.7	18						
19	104 44.0 +00.2	N 08 25.2 +00.9	134 03.7 -00.3	S 05 27.1 -01.1	25 15.1 -34.4	N 21 59.3 +00.7	19						
20	119 44.2 +00.2	N 08 26.1 +00.9	149 03.4 -00.4	S 05 26.0 -01.1	39 40.7 -34.6	N 21 60.0 +00.4	20						
21	134 44.4 +00.1	N 08 27.0 +01.0	164 03.0 -00.3	S 05 24.9 -01.2	54 06.1 -34.5	N 22 00.4 +00.4	21						
22	149 44.5 +00.2	N 08 28.0 +00.9	179 02.7 -00.4	S 05 23.7 -01.1	68 31.6 -34.6	N 22 00.8 +00.2	22						
23	164 44.7 +00.2	N 08 28.9 +00.9	194 02.3 -00.3	S 05 22.6 -01.1	82 57.0 -34.6	N 22 01.0 +00.1	23						
	UT 02 06 10 14 18 22	SD 16'0 16'0 16'0 16'0 16'0 16'0	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 15'8 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 00'1 00'1 00'1 00'1 00'1 00'1	HP 57'9 58'0 58'1 58'2 58'2 58'3		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 341° 341° 340° 340° 340° 340°	SHA 010° 010° 010° 010° 009° 009°	SHA 010° 010° 010° 010° 009° 009°	SHA 271° 268° 266° 264° 261° 259°		SHA 068° 068° 068° 068° 068° 068°							
	Greenwich Culmination Time: 12:01	Greenwich Culmination Time: 10:03	Greenwich Culmination Time: 17:14			Greenwich Culmination Time: 06:10							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	133 49.6 +00.7	N 22 27.4 +00.3	295 02.7 +02.5	S 22 40.9 +00.0	267 06.6 +02.3	S 21 30.8 +00.0	00						
01	148 50.3 +00.7	N 22 27.7 +00.3	310 05.2 +02.5	S 22 40.9 +00.0	282 08.9 +02.4	S 21 30.8 +00.0	01						
02	163 51.0 +00.7	N 22 28.0 +00.3	325 07.7 +02.4	S 22 40.9 +00.0	297 11.3 +02.4	S 21 30.8 +00.0	02						
03	178 51.7 +00.7	N 22 28.3 +00.3	340 10.1 +02.5	S 22 40.9 +00.0	312 13.7 +02.4	S 21 30.8 +00.0	03						
04	193 52.4 +00.8	N 22 28.6 +00.3	355 12.6 +02.5	S 22 40.9 +00.0	327 16.1 +02.4	S 21 30.8 +00.0	04						
05	208 53.2 +00.7	N 22 28.9 +00.3	10 15.1 +02.5	S 22 40.9 +00.0	342 18.5 +02.4	S 21 30.8 -00.1	05						
06	223 53.9 +00.7	N 22 29.2 +00.3	25 17.6 +02.4	S 22 40.9 +00.0	357 20.9 +02.3	S 21 30.7 +00.0	06						
07	238 54.6 +00.7	N 22 29.5 +00.2	40 20.0 +02.5	S 22 40.9 +00.0	12 23.2 +02.4	S 21 30.7 +00.0	07						
08	253 55.3 +00.7	N 22 29.7 +00.3	55 22.5 +02.5	S 22 40.9 +00.0	27 25.6 +02.4	S 21 30.7 +00.0	08						
09	268 56.0 +00.7	N 22 30.0 +00.3	70 25.0 +02.4	S 22 40.9 +00.0	42 28.0 +02.4	S 21 30.7 +00.0	09						
10	283 56.7 +00.7	N 22 30.3 +00.3	85 27.4 +02.5	S 22 40.9 +00.0	57 30.4 +02.4	S 21 30.7 +00.0	10						
11	298 57.4 +00.7	N 22 30.6 +00.3	100 29.9 +02.5	S 22 40.9 +00.0	72 32.8 +02.4	S 21 30.7 +00.0	11						
12	313 58.1 +00.7	N 22 30.9 +00.3	115 32.4 +02.4	S 22 40.9 +00.0	87 35.2 +02.3	S 21 30.7 +00.0	12						
13	328 58.8 +00.7	N 22 31.2 +00.3	130 34.8 +02.5	S 22 40.9 +00.0	102 37.5 +02.4	S 21 30.7 +00.0	13						
14	343 59.5 +00.8	N 22 31.5 +00.2	145 37.3 +02.5	S 22 40.9 +00.0	117 39.9 +02.4	S 21 30.7 +00.0	14						
15	359 00.3 +00.7	N 22 31.7 +00.3	160 39.8 +02.5	S 22 40.9 +00.0	132 42.3 +02.4	S 21 30.7 +00.0	15						
16	14 01.0 +00.7	N 22 32.0 +00.3	175 42.3 +02.4	S 22 40.9 +00.0	147 44.7 +02.4	S 21 30.7 -00.1	16						
17	29 01.7 +00.7	N 22 32.3 +00.3	190 44.7 +02.5	S 22 40.9 +00.0	162 47.1 +02.4	S 21 30.6 +00.0	17						
18	44 02.4 +00.7	N 22 32.6 +00.3	205 47.2 +02.5	S 22 40.9 +00.0	177 49.5 +02.4	S 21 30.6 +00.0	18						
19	59 03.1 +00.7	N 22 32.9 +00.3	220 49.7 +02.5	S 22 40.9 +00.0	192 51.9 +02.3	S 21 30.6 +00.0	19						
20	74 03.8 +00.7	N 22 33.2 +00.3	235 52.2 +02.4	S 22 40.9 +00.0	207 54.2 +02.4	S 21 30.6 +00.0	20						
21	89 04.5 +00.7	N 22 33.5 +00.2	250 54.6 +02.5	S 22 40.9 +00.0	222 56.6 +02.4	S 21 30.6 +00.0	21						
22	104 05.2 +00.7	N 22 33.7 +00.3	265 57.1 +02.5	S 22 40.9 +00.0	237 59.0 +02.4	S 21 30.6 +00.0	22						
23	119 05.9 +00.7	N 22 34.0 +00.3	280 59.6 +02.4	S 22 40.9 +00.0	253 01.4 +02.4	S 21 30.6 +00.0	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 295° 295° 295° 294° 294° 294°	SHA 096° 096° 096° 096° 096° 096°	SHA 096° 096° 096° 096° 096° 096°	SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°							
	Greenwich Culmination Time: 15:03	Greenwich Culmination Time: 04:19	Greenwich Culmination Time: 06:10			Greenwich Culmination Time: 06:10							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 44.9 +00.1	N 08 29.8 +00.9	209 02.0 -00.4	S 05 21.5 -01.1	97 22.4 -34.6	N 22 01.1 -00.1	00						
01	194 45.0 +00.2	N 08 30.7 +00.9	224 01.6 -00.4	S 05 20.4 -01.1	111 47.8 -34.7	N 22 01.0 -00.2	01						
02	209 45.2 +00.2	N 08 31.6 +00.9	239 01.2 -00.3	S 05 19.3 -01.1	126 13.1 -34.7	N 22 00.8 -00.3	02						
03	224 45.4 +00.1	N 08 32.5 +01.0	254 00.9 -00.4	S 05 18.2 -01.2	140 38.4 -34.7	N 22 00.5 -00.5	03						
04	239 45.5 +00.2	N 08 33.5 +00.9	269 00.5 -00.3	S 05 17.0 -01.1	155 03.7 -34.7	N 21 60.0 -00.7	04						
05	254 45.7 +00.1	N 08 34.4 +00.9	284 00.2 -00.4	S 05 15.9 -01.1	169 29.0 -34.8	N 21 59.3 -00.7	05						
06	269 45.8 +00.2	N 08 35.3 +00.9	298 59.8 -00.3	S 05 14.8 -01.1	183 54.2 -34.7	N 21 58.6 -00.9	06						
07	284 46.0 +00.2	N 08 36.2 +00.9	313 59.5 -00.4	S 05 13.7 -01.1	198 19.5 -34.8	N 21 57.7 -01.1	07						
08	299 46.2 +00.1	N 08 37.1 +00.9	328 59.1 -00.3	S 05 12.6 -01.2	212 44.7 -34.9	N 21 56.6 -01.2	08						
09	314 46.3 +00.2	N 08 38.0 +00.9	343 58.8 -00.4	S 05 11.4 -01.1	227 09.8 -34.8	N 21 55.4 -01.3	09						
10	329 46.5 +00.2	N 08 38.9 +01.0	358 58.4 -00.3	S 05 10.3 -01.1	241 35.0 -34.8	N 21 54.1 -01.5	10						
11	344 46.7 +00.1	N 08 39.9 +00.9	13 58.1 -00.4	S 05 09.2 -01.1	256 00.2 -34.9	N 21 52.6 -01.6	11						
12	359 46.8 +00.2	N 08 40.8 +00.9	28 57.7 -00.4	S 05 08.1 -01.1	270 25.3 -34.9	N 21 51.0 -01.7	12						
13	14 47.0 +00.1	N 08 41.7 +00.9	43 57.3 -00.3	S 05 07.0 -01.2	284 50.4 -34.9	N 21 49.3 -01.9	13						
14	29 47.1 +00.2	N 08 42.6 +00.9	58 57.0 -00.4	S 05 05.8 -01.1	299 15.5 -34.9	N 21 47.4 -02.1	14						
15	44 47.3 +00.2	N 08 43.5 +00.9	73 56.6 -00.3	S 05 04.7 -01.1	313 40.6 -34.9	N 21 45.3 -02.1	15						
16	59 47.5 +00.1	N 08 44.4 +00.9	88 56.3 -00.4	S 05 03.6 -01.1	328 05.7 -34.9	N 21 43.2 -02.4	16						
17	74 47.6 +00.2	N 08 45.3 +00.9	103 55.9 -00.3	S 05 02.5 -01.1	342 30.8 -34.9	N 21 40.8 -02.4	17						
18	89 47.8 +00.1	N 08 46.2 +00.9	118 55.6 -00.4	S 05 01.4 -01.2	356 55.9 -35.0	N 21 38.4 -02.6	18						
19	104 47.9 +00.2	N 08 47.1 +01.0	133 55.2 -00.3	S 05 00.2 -01.1	11 20.9 -34.9	N 21 35.8 -02.8	19						
20	119 48.1 +00.2	N 08 48.1 +00.9	148 54.9 -00.4	S 04 59.1 -01.1	25 46.0 -34.9	N 21 33.0 -02.8	20						
21	134 48.3 +00.1	N 08 49.0 +00.9	163 54.5 -00.3	S 04 58.0 -01.1	40 11.1 -35.0	N 21 30.2 -03.1	21						
22	149 48.4 +00.2	N 08 49.9 +00.9	178 54.2 -00.4	S 04 56.9 -01.2	54 36.1 -34.9	N 21 27.1 -03.1	22						
23	164 48.6 +00.1	N 08 50.8 +00.9	193 53.8 -00.3	S 04 55.7 -01.1	69 01.2 -35.0	N 21 24.0 -03.3	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 15'9 15'9 16'0 16'0 16'0 16'0								
	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 58'4 58'5 58'6 58'7 58'8 58'9								
	SHA 340° 340° 339° 339° 339° 339°		SHA 009° 009° 009° 008° 008° 008°		SHA 256° 254° 251° 249° 246° 244°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 10:04		Greenwich Culmination Time: 18:12								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	134 06.6 +00.7	N 22 34.3 +00.3	296 02.0 +02.5	S 22 40.9 +00.0	268 03.8 +02.4	S 21 30.6 +00.0	00						
01	149 07.3 +00.8	N 22 34.6 +00.3	311 04.5 +02.5	S 22 40.9 +00.0	283 06.2 +02.4	S 21 30.6 +00.0	01						
02	164 08.1 +00.7	N 22 34.9 +00.2	326 07.0 +02.5	S 22 40.9 +00.0	298 08.6 +02.3	S 21 30.6 -00.1	02						
03	179 08.8 +00.7	N 22 35.1 +00.3	341 09.5 +02.5	S 22 40.9 +00.0	313 10.9 +02.4	S 21 30.5 +00.0	03						
04	194 09.5 +00.7	N 22 35.4 +00.3	356 12.0 +02.4	S 22 40.9 +00.0	328 13.3 +02.4	S 21 30.5 +00.0	04						
05	209 10.2 +00.7	N 22 35.7 +00.3	11 14.4 +02.5	S 22 40.9 +00.0	343 15.7 +02.4	S 21 30.5 +00.0	05						
06	224 10.9 +00.7	N 22 36.0 +00.3	26 16.9 +02.5	S 22 40.9 +00.0	358 18.1 +02.4	S 21 30.5 +00.0	06						
07	239 11.6 +00.7	N 22 36.3 +00.2	41 19.4 +02.5	S 22 40.9 +00.0	13 20.5 +02.4	S 21 30.5 +00.0	07						
08	254 12.3 +00.7	N 22 36.5 +00.3	56 21.9 +02.4	S 22 40.9 +00.0	28 22.9 +02.4	S 21 30.5 +00.0	08						
09	269 13.0 +00.7	N 22 36.8 +00.3	71 24.3 +02.5	S 22 40.9 +00.0	43 25.3 +02.3	S 21 30.5 +00.0	09						
10	284 13.7 +00.7	N 22 37.1 +00.3	86 26.8 +02.5	S 22 40.9 +00.0	58 27.6 +02.4	S 21 30.5 +00.0	10						
11	299 14.4 +00.7	N 22 37.4 +00.3	101 29.3 +02.5	S 22 40.9 +00.0	73 30.0 +02.4	S 21 30.5 +00.0	11						
12	314 15.1 +00.8	N 22 37.7 +00.2	116 31.8 +02.5	S 22 40.9 +00.0	88 32.4 +02.4	S 21 30.5 +00.0	12						
13	329 15.9 +00.7	N 22 37.9 +00.3	131 34.3 +02.4	S 22 40.9 +00.0	103 34.8 +02.4	S 21 30.5 -00.1	13						
14	344 16.6 +00.7	N 22 38.2 +00.3	146 36.7 +02.5	S 22 40.9 +00.0	118 37.2 +02.4	S 21 30.4 +00.0	14						
15	359 17.3 +00.7	N 22 38.5 +00.3	161 39.2 +02.5	S 22 40.9 +00.0	133 39.6 +02.4	S 21 30.4 +00.0	15						
16	14 18.0 +00.7	N 22 38.8 +00.2	176 41.7 +02.5	S 22 40.9 +00.0	148 42.0 +02.4	S 21 30.4 +00.0	16						
17	29 18.7 +00.7	N 22 39.0 +00.3	191 44.2 +02.5	S 22 40.9 +00.0	163 44.4 +02.4	S 21 30.4 +00.0	17						
18	44 19.4 +00.7	N 22 39.3 +00.3	206 46.7 +02.4	S 22 40.9 +00.0	178 46.8 +02.3	S 21 30.4 +00.0	18						
19	59 20.1 +00.7	N 22 39.6 +00.3	221 49.1 +02.5	S 22 40.9 +00.0	193 49.1 +02.4	S 21 30.4 +00.0	19						
20	74 20.8 +00.7	N 22 39.9 +00.2	236 51.6 +02.5	S 22 40.9 +00.0	208 51.5 +02.4	S 21 30.4 +00.0	20						
21	89 21.5 +00.7	N 22 40.1 +00.3	251 54.1 +02.5	S 22 40.9 +00.0	223 53.9 +02.4	S 21 30.4 +00.0	21						
22	104 22.2 +00.7	N 22 40.4 +00.3	266 56.6 +02.5	S 22 40.9 +00.0	238 56.3 +02.4	S 21 30.4 +00.0	22						
23	119 22.9 +00.7	N 22 40.7 +00.3	281 59.1 +02.5	S 22 40.9 +00.0	253 58.7 +02.4	S 21 30.4 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 294° 294° 294° 294° 294° 294°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:02		Greenwich Culmination Time: 04:15		Greenwich Culmination Time: 06:06								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 48.7 +00.2	N 08 51.7 +00.9	208 53.5 -00.4	S 04 54.6 -01.1	83 26.2 -34.9	N 21 20.7 -03.5	00						
01	194 48.9 +00.2	N 08 52.6 +00.9	223 53.1 -00.3	S 04 53.5 -01.1	97 51.3 -35.0	N 21 17.2 -03.6	01						
02	209 49.1 +00.1	N 08 53.5 +00.9	238 52.8 -00.4	S 04 52.4 -01.2	112 16.3 -34.9	N 21 13.6 -03.7	02						
03	224 49.2 +00.2	N 08 54.4 +00.9	253 52.4 -00.3	S 04 51.2 -01.1	126 41.4 -35.0	N 21 09.9 -03.9	03						
04	239 49.4 +00.1	N 08 55.3 +00.9	268 52.1 -00.4	S 04 50.1 -01.1	141 06.4 -34.9	N 21 06.0 -04.0	04						
05	254 49.5 +00.2	N 08 56.2 +01.0	283 51.7 -00.3	S 04 49.0 -01.1	155 31.5 -34.9	N 21 02.0 -04.1	05						
06	269 49.7 +00.2	N 08 57.2 +00.9	298 51.4 -00.4	S 04 47.9 -01.2	169 56.6 -34.9	N 20 57.9 -04.3	06						
07	284 49.9 +00.1	N 08 58.1 +00.9	313 51.0 -00.3	S 04 46.7 -01.1	184 21.7 -34.9	N 20 53.6 -04.4	07						
08	299 50.0 +00.2	N 08 59.0 +00.9	328 50.7 -00.4	S 04 45.6 -01.1	198 46.8 -34.9	N 20 49.2 -04.6	08						
09	314 50.2 +00.1	N 08 59.9 +00.9	343 50.3 -00.3	S 04 44.5 -01.1	213 11.9 -34.9	N 20 44.6 -04.7	09						
10	329 50.3 +00.2	N 09 00.8 +00.9	358 50.0 -00.4	S 04 43.4 -01.2	227 37.0 -34.9	N 20 39.9 -04.8	10						
11	344 50.5 +00.2	N 09 01.7 +00.9	13 49.6 -00.3	S 04 42.2 -01.1	242 02.1 -34.9	N 20 35.1 -05.0	11						
12	359 50.7 +00.1	N 09 02.6 +00.9	28 49.3 -00.4	S 04 41.1 -01.1	256 27.2 -34.8	N 20 30.1 -05.1	12						
13	14 50.8 +00.2	N 09 03.5 +00.9	43 48.9 -00.3	S 04 40.0 -01.1	270 52.4 -34.8	N 20 25.0 -05.3	13						
14	29 51.0 +00.1	N 09 04.4 +00.9	58 48.6 -00.4	S 04 38.9 -01.2	285 17.6 -34.9	N 20 19.7 -05.3	14						
15	44 51.1 +00.2	N 09 05.3 +00.9	73 48.2 -00.3	S 04 37.7 -01.1	299 42.7 -34.8	N 20 14.4 -05.6	15						
16	59 51.3 +00.2	N 09 06.2 +00.9	88 47.9 -00.4	S 04 36.6 -01.1	314 07.9 -34.7	N 20 08.8 -05.6	16						
17	74 51.5 +00.1	N 09 07.1 +00.9	103 47.5 -00.3	S 04 35.5 -01.2	328 33.2 -34.8	N 20 03.2 -05.8	17						
18	89 51.6 +00.2	N 09 08.0 +00.9	118 47.2 -00.4	S 04 34.3 -01.1	342 58.4 -34.7	N 19 57.4 -05.9	18						
19	104 51.8 +00.1	N 09 08.9 +00.9	133 46.8 -00.3	S 04 33.2 -01.1	357 23.7 -34.8	N 19 51.5 -06.1	19						
20	119 51.9 +00.2	N 09 09.8 +01.0	148 46.5 -00.4	S 04 32.1 -01.1	11 48.9 -34.7	N 19 45.4 -06.2	20						
21	134 52.1 +00.1	N 09 10.8 +00.9	163 46.1 -00.3	S 04 31.0 -01.2	26 14.2 -34.6	N 19 39.2 -06.3	21						
22	149 52.2 +00.2	N 09 11.7 +00.9	178 45.8 -00.4	S 04 29.8 -01.1	40 39.6 -34.7	N 19 32.9 -06.4	22						
23	164 52.4 +00.2	N 09 12.6 +00.9	193 45.4 -00.3	S 04 28.7 -01.1	55 04.9 -34.6	N 19 26.5 -06.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'1 16'1 16'1 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 59'1 59'2 59'3 59'4								
	SHA 339° 339° 339° 338° 338° 338°		SHA 008° 008° 008° 007° 007° 007°		SHA 241° 239° 236° 234° 231° 229°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 10:04		Greenwich Culmination Time: 19:10								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	134 23.6 +00.7	N 22 41.0 +00.2	297 01.6 +02.4	S 22 40.9 +00.0	269 01.1 +02.4	S 21 30.4 +00.0	00						
01	149 24.3 +00.8	N 22 41.2 +00.3	312 04.0 +02.5	S 22 40.9 +00.0	284 03.5 +02.4	S 21 30.4 -00.1	01						
02	164 25.1 +00.7	N 22 41.5 +00.3	327 06.5 +02.5	S 22 40.9 +00.0	299 05.9 +02.4	S 21 30.3 +00.0	02						
03	179 25.8 +00.7	N 22 41.8 +00.3	342 09.0 +02.5	S 22 40.9 +00.0	314 08.3 +02.4	S 21 30.3 +00.0	03						
04	194 26.5 +00.7	N 22 42.1 +00.2	357 11.5 +02.5	S 22 40.9 +00.0	329 10.7 +02.3	S 21 30.3 +00.0	04						
05	209 27.2 +00.7	N 22 42.3 +00.3	12 14.0 +02.5	S 22 40.9 +00.0	344 13.0 +02.4	S 21 30.3 +00.0	05						
06	224 27.9 +00.7	N 22 42.6 +00.3	27 16.5 +02.4	S 22 40.9 +00.0	359 15.4 +02.4	S 21 30.3 +00.0	06						
07	239 28.6 +00.7	N 22 42.9 +00.3	42 18.9 +02.5	S 22 40.9 +00.0	14 17.8 +02.4	S 21 30.3 +00.0	07						
08	254 29.3 +00.7	N 22 43.2 +00.2	57 21.4 +02.5	S 22 40.9 +00.0	29 20.2 +02.4	S 21 30.3 +00.0	08						
09	269 30.0 +00.7	N 22 43.4 +00.3	72 23.9 +02.5	S 22 40.9 +00.0	44 22.6 +02.4	S 21 30.3 +00.0	09						
10	284 30.7 +00.7	N 22 43.7 +00.3	87 26.4 +02.5	S 22 40.9 +00.0	59 25.0 +02.4	S 21 30.3 +00.0	10						
11	299 31.4 +00.7	N 22 44.0 +00.2	102 28.9 +02.5	S 22 40.9 +00.0	74 27.4 +02.4	S 21 30.3 +00.0	11						
12	314 32.1 +00.7	N 22 44.2 +00.3	117 31.4 +02.5	S 22 40.9 +00.0	89 29.8 +02.4	S 21 30.3 +00.0	12						
13	329 32.8 +00.7	N 22 44.5 +00.3	132 33.9 +02.5	S 22 40.9 +00.0	104 32.2 +02.4	S 21 30.3 -00.1	13						
14	344 33.5 +00.7	N 22 44.8 +00.2	147 36.4 +02.4	S 22 40.9 +00.0	119 34.6 +02.4	S 21 30.2 +00.0	14						
15	359 34.2 +00.7	N 22 45.0 +00.3	162 38.8 +02.5	S 22 40.9 +00.0	134 37.0 +02.4	S 21 30.2 +00.0	15						
16	14 34.9 +00.8	N 22 45.3 +00.3	177 41.3 +02.5	S 22 40.9 +00.0	149 39.4 +02.4	S 21 30.2 +00.0	16						
17	29 35.7 +00.7	N 22 45.6 +00.3	192 43.8 +02.5	S 22 40.9 +00.0	164 41.8 +02.3	S 21 30.2 +00.0	17						
18	44 36.4 +00.7	N 22 45.9 +00.2	207 46.3 +02.5	S 22 40.9 +00.0	179 44.1 +02.4	S 21 30.2 +00.0	18						
19	59 37.1 +00.7	N 22 46.1 +00.3	222 48.8 +02.5	S 22 40.9 -00.1	194 46.5 +02.4	S 21 30.2 +00.0	19						
20	74 37.8 +00.7	N 22 46.4 +00.3	237 51.3 +02.5	S 22 40.8 +00.0	209 48.9 +02.4	S 21 30.2 +00.0	20						
21	89 38.5 +00.7	N 22 46.7 +00.2	252 53.8 +02.5	S 22 40.8 +00.0	224 51.3 +02.4	S 21 30.2 +00.0	21						
22	104 39.2 +00.7	N 22 46.9 +00.3	267 56.3 +02.5	S 22 40.8 +00.0	239 53.7 +02.4	S 21 30.2 +00.0	22						
23	119 39.9 +00.7	N 22 47.2 +00.3	282 58.8 +02.5	S 22 40.8 +00.0	254 56.1 +02.4	S 21 30.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 293° 293° 293° 293° 293° 293°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:01		Greenwich Culmination Time: 04:11		Greenwich Culmination Time: 06:02								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 52.6 +00.1	N 09 13.5 +00.9	208 45.1 -00.4	S 04 27.6 -01.2	69 30.3 -34.6	N 19 19.9 -06.7	00						
01	194 52.7 +00.2	N 09 14.4 +00.9	223 44.7 -00.3	S 04 26.4 -01.1	83 55.7 -34.6	N 19 13.2 -06.8	01						
02	209 52.9 +00.1	N 09 15.3 +00.9	238 44.4 -00.3	S 04 25.3 -01.1	98 21.1 -34.6	N 19 06.4 -07.0	02						
03	224 53.0 +00.2	N 09 16.2 +00.9	253 44.1 -00.4	S 04 24.2 -01.2	112 46.5 -34.5	N 18 59.4 -07.1	03						
04	239 53.2 +00.1	N 09 17.1 +00.9	268 43.7 -00.3	S 04 23.0 -01.1	127 12.0 -34.5	N 18 52.3 -07.2	04						
05	254 53.3 +00.2	N 09 18.0 +00.9	283 43.4 -00.4	S 04 21.9 -01.1	141 37.5 -34.4	N 18 45.1 -07.4	05						
06	269 53.5 +00.2	N 09 18.9 +00.9	298 43.0 -00.3	S 04 20.8 -01.1	156 03.1 -34.5	N 18 37.7 -07.4	06						
07	284 53.7 +00.1	N 09 19.8 +00.9	313 42.7 -00.4	S 04 19.7 -01.2	170 28.6 -34.4	N 18 30.3 -07.6	07						
08	299 53.8 +00.2	N 09 20.7 +00.9	328 42.3 -00.3	S 04 18.5 -01.1	184 54.2 -34.4	N 18 22.7 -07.7	08						
09	314 54.0 +00.1	N 09 21.6 +00.9	343 42.0 -00.4	S 04 17.4 -01.1	199 19.8 -34.3	N 18 15.0 -07.9	09						
10	329 54.1 +00.2	N 09 22.5 +00.9	358 41.6 -00.3	S 04 16.3 -01.2	213 45.5 -34.3	N 18 07.1 -07.9	10						
11	344 54.3 +00.1	N 09 23.4 +00.9	13 41.3 -00.4	S 04 15.1 -01.1	228 11.2 -34.3	N 17 59.2 -08.1	11						
12	359 54.4 +00.2	N 09 24.3 +00.9	28 40.9 -00.3	S 04 14.0 -01.1	242 36.9 -34.3	N 17 51.1 -08.2	12						
13	14 54.6 +00.1	N 09 25.2 +00.9	43 40.6 -00.4	S 04 12.9 -01.2	257 02.6 -34.2	N 17 42.9 -08.3	13						
14	29 54.7 +00.2	N 09 26.1 +00.9	58 40.2 -00.3	S 04 11.7 -01.1	271 28.4 -34.2	N 17 34.6 -08.5	14						
15	44 54.9 +00.2	N 09 27.0 +00.9	73 39.9 -00.3	S 04 10.6 -01.1	285 54.2 -34.1	N 17 26.1 -08.5	15						
16	59 55.1 +00.1	N 09 27.9 +00.9	88 39.6 -00.4	S 04 09.5 -01.2	300 20.1 -34.1	N 17 17.6 -08.7	16						
17	74 55.2 +00.2	N 09 28.8 +00.9	103 39.2 -00.3	S 04 08.3 -01.1	314 46.0 -34.1	N 17 08.9 -08.8	17						
18	89 55.4 +00.1	N 09 29.7 +00.9	118 38.9 -00.4	S 04 07.2 -01.1	329 11.9 -34.0	N 17 00.1 -08.9	18						
19	104 55.5 +00.2	N 09 30.6 +00.9	133 38.5 -00.3	S 04 06.1 -01.2	343 37.9 -34.0	N 16 51.2 -09.0	19						
20	119 55.7 +00.1	N 09 31.5 +00.9	148 38.2 -00.4	S 04 04.9 -01.1	358 03.9 -34.0	N 16 42.2 -09.1	20						
21	134 55.8 +00.2	N 09 32.4 +00.9	163 37.8 -00.3	S 04 03.8 -01.1	12 29.9 -33.9	N 16 33.1 -09.3	21						
22	149 56.0 +00.1	N 09 33.3 +00.9	178 37.5 -00.4	S 04 02.7 -01.2	26 56.0 -33.9	N 16 23.8 -09.3	22						
23	164 56.1 +00.2	N 09 34.2 +00.9	193 37.1 -00.3	S 04 01.5 -01.1	41 22.1 -33.8	N 16 14.5 -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 15'9 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 16'2 16'2 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 59'5 59'5 59'6 59'7 59'7 59'8								
	SHA 338° 338° 338° 337° 337° 337°		SHA 007° 007° 006° 006° 006° 006°		SHA 226° 224° 221° 219° 217° 214°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 10:05		Greenwich Culmination Time: 20:08								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	134 40.6 +00.7	N 22 47.5 +00.2	298 01.3 +02.5	S 22 40.8 +00.0	269 58.5 +02.4	S 21 30.2 +00.0	00						
01	149 41.3 +00.7	N 22 47.7 +00.3	313 03.8 +02.4	S 22 40.8 +00.0	285 00.9 +02.4	S 21 30.2 -00.1	01						
02	164 42.0 +00.7	N 22 48.0 +00.3	328 06.2 +02.5	S 22 40.8 +00.0	300 03.3 +02.4	S 21 30.1 +00.0	02						
03	179 42.7 +00.7	N 22 48.3 +00.2	343 08.7 +02.5	S 22 40.8 +00.0	315 05.7 +02.4	S 21 30.1 +00.0	03						
04	194 43.4 +00.7	N 22 48.5 +00.3	358 11.2 +02.5	S 22 40.8 +00.0	330 08.1 +02.4	S 21 30.1 +00.0	04						
05	209 44.1 +00.7	N 22 48.8 +00.3	13 13.7 +02.5	S 22 40.8 +00.0	345 10.5 +02.4	S 21 30.1 +00.0	05						
06	224 44.8 +00.7	N 22 49.1 +00.2	28 16.2 +02.5	S 22 40.8 +00.0	0 12.9 +02.4	S 21 30.1 +00.0	06						
07	239 45.5 +00.7	N 22 49.3 +00.3	43 18.7 +02.5	S 22 40.8 +00.0	15 15.3 +02.4	S 21 30.1 +00.0	07						
08	254 46.2 +00.7	N 22 49.6 +00.2	58 21.2 +02.5	S 22 40.8 +00.0	30 17.7 +02.4	S 21 30.1 +00.0	08						
09	269 46.9 +00.8	N 22 49.8 +00.3	73 23.7 +02.5	S 22 40.8 +00.0	45 20.1 +02.4	S 21 30.1 +00.0	09						
10	284 47.7 +00.7	N 22 50.1 +00.3	88 26.2 +02.5	S 22 40.8 +00.0	60 22.5 +02.4	S 21 30.1 +00.0	10						
11	299 48.4 +00.7	N 22 50.4 +00.2	103 28.7 +02.5	S 22 40.8 +00.0	75 24.9 +02.4	S 21 30.1 +00.0	11						
12	314 49.1 +00.7	N 22 50.6 +00.3	118 31.2 +02.5	S 22 40.8 +00.0	90 27.3 +02.4	S 21 30.1 +00.0	12						
13	329 49.8 +00.7	N 22 50.9 +00.3	133 33.7 +02.5	S 22 40.8 +00.0	105 29.7 +02.4	S 21 30.1 -00.1	13						
14	344 50.5 +00.7	N 22 51.2 +00.2	148 36.2 +02.5	S 22 40.8 +00.0	120 32.1 +02.4	S 21 30.0 +00.0	14						
15	359 51.2 +00.7	N 22 51.4 +00.3	163 38.7 +02.5	S 22 40.8 +00.0	135 34.5 +02.4	S 21 30.0 +00.0	15						
16	14 51.9 +00.7	N 22 51.7 +00.2	178 41.2 +02.5	S 22 40.8 +00.0	150 36.9 +02.3	S 21 30.0 +00.0	16						
17	29 52.6 +00.7	N 22 51.9 +00.3	193 43.7 +02.5	S 22 40.8 +00.0	165 39.2 +02.4	S 21 30.0 +00.0	17						
18	44 53.3 +00.7	N 22 52.2 +00.3	208 46.2 +02.5	S 22 40.8 +00.0	180 41.6 +02.4	S 21 30.0 +00.0	18						
19	59 54.0 +00.7	N 22 52.5 +00.2	223 48.7 +02.5	S 22 40.8 +00.0	195 44.0 +02.4	S 21 30.0 +00.0	19						
20	74 54.7 +00.7	N 22 52.7 +00.3	238 51.2 +02.5	S 22 40.8 +00.0	210 46.4 +02.4	S 21 30.0 +00.0	20						
21	89 55.4 +00.7	N 22 53.0 +00.2	253 53.7 +02.5	S 22 40.8 +00.0	225 48.8 +02.4	S 21 30.0 +00.0	21						
22	104 56.1 +00.7	N 22 53.2 +00.3	268 56.2 +02.5	S 22 40.8 +00.0	240 51.2 +02.4	S 21 30.0 +00.0	22						
23	119 56.8 +00.7	N 22 53.5 +00.3	283 58.7 +02.5	S 22 40.8 +00.0	255 53.6 +02.4	S 21 30.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 293° 293° 293° 292° 292° 292°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 15:00		Greenwich Culmination Time: 04:07		Greenwich Culmination Time: 05:59								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 56.3 +00.1	N 09 35.1 +00.9	208 36.8 -00.3	S 04 00.4 -01.2	55 48.3 -33.9	N 16 05.0 -09.5	00						
01	194 56.4 +00.2	N 09 36.0 +00.9	223 36.5 -00.4	S 03 59.2 -01.1	70 14.4 -33.7	N 15 55.5 -09.7	01						
02	209 56.6 +00.1	N 09 36.9 +00.9	238 36.1 -00.3	S 03 58.1 -01.1	84 40.7 -33.8	N 15 45.8 -09.8	02						
03	224 56.7 +00.2	N 09 37.8 +00.9	253 35.8 -00.4	S 03 57.0 -01.2	99 06.9 -33.7	N 15 36.0 -09.8	03						
04	239 56.9 +00.2	N 09 38.7 +00.8	268 35.4 -00.3	S 03 55.8 -01.1	113 33.2 -33.6	N 15 26.2 -10.0	04						
05	254 57.1 +00.1	N 09 39.5 +00.9	283 35.1 -00.4	S 03 54.7 -01.1	127 59.6 -33.6	N 15 16.2 -10.1	05						
06	269 57.2 +00.2	N 09 40.4 +00.9	298 34.7 -00.3	S 03 53.6 -01.2	142 26.0 -33.6	N 15 06.1 -10.2	06						
07	284 57.4 +00.1	N 09 41.3 +00.9	313 34.4 -00.3	S 03 52.4 -01.1	156 52.4 -33.6	N 14 55.9 -10.2	07						
08	299 57.5 +00.2	N 09 42.2 +00.9	328 34.1 -00.4	S 03 51.3 -01.1	171 18.8 -33.4	N 14 45.7 -10.4	08						
09	314 57.7 +00.1	N 09 43.1 +00.9	343 33.7 -00.3	S 03 50.2 -01.2	185 45.4 -33.5	N 14 35.3 -10.5	09						
10	329 57.8 +00.2	N 09 44.0 +00.9	358 33.4 -00.4	S 03 49.0 -01.1	200 11.9 -33.4	N 14 24.8 -10.6	10						
11	344 58.0 +00.1	N 09 44.9 +00.9	13 33.0 -00.3	S 03 47.9 -01.2	214 38.5 -33.4	N 14 14.2 -10.6	11						
12	359 58.1 +00.2	N 09 45.8 +00.9	28 32.7 -00.4	S 03 46.7 -01.1	229 05.1 -33.3	N 14 03.6 -10.8	12						
13	14 58.3 +00.1	N 09 46.7 +00.9	43 32.3 -00.3	S 03 45.6 -01.1	243 31.8 -33.3	N 13 52.8 -10.8	13						
14	29 58.4 +00.2	N 09 47.6 +00.9	58 32.0 -00.3	S 03 44.5 -01.2	257 58.5 -33.3	N 13 42.0 -11.0	14						
15	44 58.6 +00.1	N 09 48.5 +00.9	73 31.7 -00.4	S 03 43.3 -01.1	272 25.2 -33.2	N 13 31.0 -11.0	15						
16	59 58.7 +00.2	N 09 49.4 +00.9	88 31.3 -00.3	S 03 42.2 -01.2	286 52.0 -33.2	N 13 20.0 -11.1	16						
17	74 58.9 +00.1	N 09 50.3 +00.9	103 31.0 -00.4	S 03 41.0 -01.1	301 18.8 -33.1	N 13 08.9 -11.2	17						
18	89 59.0 +00.2	N 09 51.2 +00.9	118 30.6 -00.3	S 03 39.9 -01.1	315 45.7 -33.1	N 12 57.7 -11.3	18						
19	104 59.2 +00.1	N 09 52.1 +00.8	133 30.3 -00.3	S 03 38.8 -01.2	330 12.6 -33.1	N 12 46.4 -11.4	19						
20	119 59.3 +00.2	N 09 52.9 +00.9	148 30.0 -00.4	S 03 37.6 -01.1	344 39.5 -33.0	N 12 35.0 -11.4	20						
21	134 59.5 +00.1	N 09 53.8 +00.9	163 29.6 -00.3	S 03 36.5 -01.2	359 06.5 -33.0	N 12 23.6 -11.6	21						
22	149 59.6 +00.2	N 09 54.7 +00.9	178 29.3 -00.4	S 03 35.3 -01.1	13 33.5 -32.9	N 12 12.0 -11.6	22						
23	164 59.8 +00.1	N 09 55.6 +00.9	193 28.9 -00.3	S 03 34.2 -01.1	28 00.6 -32.9	N 12 00.4 -11.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 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 59'8 59'9 60'0 60'0 60'0 60'1								
	SHA 337° 337° 337° 337° 336° 336°		SHA 006° 005° 005° 005° 005° 005°		SHA 212° 209° 207° 205° 202° 200°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 10:05		Greenwich Culmination Time: 21:03								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	134 57.5 +00.7	N 22 53.8 +00.2	299 01.2 +02.5	S 22 40.8 +00.0	270 56.0 +02.4	S 21 30.0 +00.0	00						
01	149 58.2 +00.7	N 22 54.0 +00.3	314 03.7 +02.5	S 22 40.8 +00.0	285 58.4 +02.4	S 21 30.0 +00.0	01						
02	164 58.9 +00.7	N 22 54.3 +00.2	329 06.2 +02.5	S 22 40.8 +00.0	301 00.8 +02.4	S 21 30.0 +00.0	02						
03	179 59.6 +00.7	N 22 54.5 +00.3	344 08.7 +02.5	S 22 40.8 +00.0	316 03.2 +02.4	S 21 30.0 -00.1	03						
04	195 00.3 +00.7	N 22 54.8 +00.2	359 11.2 +02.5	S 22 40.8 +00.0	331 05.6 +02.4	S 21 29.9 +00.0	04						
05	210 01.0 +00.7	N 22 55.0 +00.3	14 13.7 +02.5	S 22 40.8 +00.0	346 08.0 +02.4	S 21 29.9 +00.0	05						
06	225 01.7 +00.7	N 22 55.3 +00.3	29 16.2 +02.5	S 22 40.8 +00.0	1 10.4 +02.4	S 21 29.9 +00.0	06						
07	240 02.4 +00.7	N 22 55.6 +00.2	44 18.7 +02.5	S 22 40.8 +00.0	16 12.8 +02.4	S 21 29.9 +00.0	07						
08	255 03.1 +00.8	N 22 55.8 +00.3	59 21.2 +02.5	S 22 40.8 +00.0	31 15.2 +02.4	S 21 29.9 +00.0	08						
09	270 03.9 +00.7	N 22 56.1 +00.2	74 23.7 +02.5	S 22 40.8 +00.0	46 17.6 +02.4	S 21 29.9 +00.0	09						
10	285 04.6 +00.7	N 22 56.3 +00.3	89 26.2 +02.5	S 22 40.8 +00.0	61 20.0 +02.4	S 21 29.9 +00.0	10						
11	300 05.3 +00.7	N 22 56.6 +00.2	104 28.7 +02.5	S 22 40.8 +00.0	76 22.4 +02.4	S 21 29.9 +00.0	11						
12	315 06.0 +00.7	N 22 56.8 +00.3	119 31.2 +02.5	S 22 40.8 +00.0	91 24.8 +02.4	S 21 29.9 +00.0	12						
13	330 06.7 +00.7	N 22 57.1 +00.2	134 33.7 +02.5	S 22 40.8 +00.0	106 27.2 +02.4	S 21 29.9 +00.0	13						
14	345 07.4 +00.7	N 22 57.3 +00.3	149 36.2 +02.5	S 22 40.8 +00.0	121 29.6 +02.4	S 21 29.9 +00.0	14						
15	0 08.1 +00.7	N 22 57.6 +00.3	164 38.7 +02.5	S 22 40.8 +00.0	136 32.0 +02.4	S 21 29.9 +00.0	15						
16	15 08.8 +00.7	N 22 57.9 +00.2	179 41.2 +02.5	S 22 40.8 +00.0	151 34.4 +02.4	S 21 29.9 -00.1	16						
17	30 09.5 +00.7	N 22 58.1 +00.3	194 43.7 +02.5	S 22 40.8 +00.0	166 36.8 +02.4	S 21 29.8 +00.0	17						
18	45 10.2 +00.7	N 22 58.4 +00.2	209 46.2 +02.5	S 22 40.8 +00.0	181 39.2 +02.4	S 21 29.8 +00.0	18						
19	60 10.9 +00.7	N 22 58.6 +00.3	224 48.7 +02.5	S 22 40.8 +00.0	196 41.6 +02.4	S 21 29.8 +00.0	19						
20	75 11.6 +00.7	N 22 58.9 +00.2	239 51.2 +02.6	S 22 40.8 +00.0	211 44.0 +02.4	S 21 29.8 +00.0	20						
21	90 12.3 +00.7	N 22 59.1 +00.3	254 53.8 +02.5	S 22 40.8 +00.0	226 46.4 +02.5	S 21 29.8 +00.0	21						
22	105 13.0 +00.7	N 22 59.4 +00.2	269 56.3 +02.5	S 22 40.8 +00.0	241 48.9 +02.4	S 21 29.8 +00.0	22						
23	120 13.7 +00.7	N 22 59.6 +00.3	284 58.8 +02.5	S 22 40.8 +00.0	256 51.3 +02.4	S 21 29.8 +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 292° 292° 292° 292° 292° 291°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:59		Greenwich Culmination Time: 04:03		Greenwich Culmination Time: 05:55								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 59.9 +00.2	N 09 56.5 +00.9	208 28.6 -00.4	S 03 33.1 -01.2	42 27.7 -32.9	N 11 48.7 -11.7	00						
01	195 00.1 +00.1	N 09 57.4 +00.9	223 28.2 -00.3	S 03 31.9 -01.1	56 54.8 -32.8	N 11 37.0 -11.9	01						
02	210 00.2 +00.2	N 09 58.3 +00.9	238 27.9 -00.3	S 03 30.8 -01.2	71 22.0 -32.8	N 11 25.1 -11.9	02						
03	225 00.4 +00.1	N 09 59.2 +00.9	253 27.6 -00.4	S 03 29.6 -01.1	85 49.2 -32.7	N 11 13.2 -12.0	03						
04	240 00.5 +00.2	N 10 00.1 +00.9	268 27.2 -00.3	S 03 28.5 -01.1	100 16.5 -32.8	N 11 01.2 -12.1	04						
05	255 00.7 +00.1	N 10 01.0 +00.8	283 26.9 -00.4	S 03 27.4 -01.2	114 43.7 -32.6	N 10 49.1 -12.1	05						
06	270 00.8 +00.2	N 10 01.8 +00.9	298 26.5 -00.3	S 03 26.2 -01.1	129 11.1 -32.7	N 10 37.0 -12.2	06						
07	285 01.0 +00.1	N 10 02.7 +00.9	313 26.2 -00.3	S 03 25.1 -01.2	143 38.4 -32.6	N 10 24.8 -12.3	07						
08	300 01.1 +00.2	N 10 03.6 +00.9	328 25.9 -00.4	S 03 23.9 -01.1	158 05.8 -32.5	N 10 12.5 -12.3	08						
09	315 01.3 +00.1	N 10 04.5 +00.9	343 25.5 -00.3	S 03 22.8 -01.2	172 33.3 -32.5	N 10 00.2 -12.4	09						
10	330 01.4 +00.2	N 10 05.4 +00.9	358 25.2 -00.4	S 03 21.6 -01.1	187 00.8 -32.5	N 09 47.8 -12.5	10						
11	345 01.6 +00.1	N 10 06.3 +00.9	13 24.8 -00.3	S 03 20.5 -01.1	201 28.3 -32.5	N 09 35.3 -12.5	11						
12	0 01.7 +00.2	N 10 07.2 +00.9	28 24.5 -00.3	S 03 19.4 -01.2	215 55.8 -32.4	N 09 22.8 -12.6	12						
13	15 01.9 +00.1	N 10 08.1 +00.8	43 24.2 -00.4	S 03 18.2 -01.1	230 23.4 -32.4	N 09 10.2 -12.6	13						
14	30 02.0 +00.2	N 10 08.9 +00.9	58 23.8 -00.3	S 03 17.1 -01.2	244 51.0 -32.3	N 08 57.6 -12.7	14						
15	45 02.2 +00.1	N 10 09.8 +00.9	73 23.5 -00.4	S 03 15.9 -01.1	259 18.7 -32.3	N 08 44.9 -12.7	15						
16	60 02.3 +00.2	N 10 10.7 +00.9	88 23.1 -00.3	S 03 14.8 -01.2	273 46.4 -32.3	N 08 32.2 -12.9	16						
17	75 02.5 +00.1	N 10 11.6 +00.9	103 22.8 -00.3	S 03 13.6 -01.1	288 14.1 -32.2	N 08 19.3 -12.8	17						
18	90 02.6 +00.2	N 10 12.5 +00.9	118 22.5 -00.4	S 03 12.5 -01.2	302 41.9 -32.2	N 08 06.5 -12.9	18						
19	105 02.8 +00.1	N 10 13.4 +00.9	133 22.1 -00.3	S 03 11.3 -01.1	317 09.7 -32.2	N 07 53.6 -13.0	19						
20	120 02.9 +00.2	N 10 14.3 +00.8	148 21.8 -00.3	S 03 10.2 -01.1	331 37.5 -32.2	N 07 40.6 -13.0	20						
21	135 03.1 +00.1	N 10 15.1 +00.9	163 21.5 -00.4	S 03 09.1 -01.2	346 05.3 -32.1	N 07 27.6 -13.0	21						
22	150 03.2 +00.2	N 10 16.0 +00.9	178 21.1 -00.3	S 03 07.9 -01.1	0 33.2 -32.1	N 07 14.6 -13.1	22						
23	165 03.4 +00.1	N 10 16.9 +00.9	193 20.8 -00.4	S 03 06.8 -01.2	15 01.1 -32.0	N 07 01.5 -13.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 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 16'4 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 60'2 60'2 60'2 60'2								
	SHA 336° 336° 336° 336° 335° 335°		SHA 005° 004° 004° 004° 004° 004°		SHA 197° 195° 193° 190° 188° 186°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 10:06		Greenwich Culmination Time: 21:57								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 14.4 +00.7	N 22 59.9 +00.2	300 01.3 +02.5	S 22 40.8 +00.0	271 53.7 +02.4	S 21 29.8 +00.0	00						
01	150 15.1 +00.7	N 23 00.1 +00.3	315 03.8 +02.5	S 22 40.8 +00.0	286 56.1 +02.4	S 21 29.8 +00.0	01						
02	165 15.8 +00.7	N 23 00.4 +00.2	330 06.3 +02.5	S 22 40.8 +00.0	301 58.5 +02.4	S 21 29.8 +00.0	02						
03	180 16.5 +00.7	N 23 00.6 +00.3	345 08.8 +02.5	S 22 40.8 +00.0	317 00.9 +02.4	S 21 29.8 +00.0	03						
04	195 17.2 +00.7	N 23 00.9 +00.2	0 11.3 +02.5	S 22 40.8 +00.0	332 03.3 +02.4	S 21 29.8 +00.0	04						
05	210 17.9 +00.7	N 23 01.1 +00.3	15 13.8 +02.5	S 22 40.8 +00.0	347 05.7 +02.4	S 21 29.8 +00.0	05						
06	225 18.6 +00.7	N 23 01.4 +00.2	30 16.3 +02.6	S 22 40.8 +00.0	2 08.1 +02.4	S 21 29.8 +00.0	06						
07	240 19.3 +00.7	N 23 01.6 +00.3	45 18.9 +02.5	S 22 40.8 +00.0	17 10.5 +02.4	S 21 29.8 -00.1	07						
08	255 20.0 +00.7	N 23 01.9 +00.2	60 21.4 +02.5	S 22 40.8 +00.0	32 12.9 +02.4	S 21 29.7 +00.0	08						
09	270 20.7 +00.7	N 23 02.1 +00.3	75 23.9 +02.5	S 22 40.8 +00.0	47 15.3 +02.4	S 21 29.7 +00.0	09						
10	285 21.4 +00.7	N 23 02.4 +00.2	90 26.4 +02.5	S 22 40.8 +00.0	62 17.7 +02.4	S 21 29.7 +00.0	10						
11	300 22.1 +00.7	N 23 02.6 +00.3	105 28.9 +02.5	S 22 40.8 +00.0	77 20.1 +02.4	S 21 29.7 +00.0	11						
12	315 22.8 +00.7	N 23 02.9 +00.2	120 31.4 +02.5	S 22 40.8 +00.0	92 22.5 +02.4	S 21 29.7 +00.0	12						
13	330 23.5 +00.7	N 23 03.1 +00.2	135 33.9 +02.5	S 22 40.8 -00.1	107 24.9 +02.4	S 21 29.7 +00.0	13						
14	345 24.2 +00.7	N 23 03.3 +00.3	150 36.4 +02.6	S 22 40.7 +00.0	122 27.3 +02.4	S 21 29.7 +00.0	14						
15	0 24.9 +00.7	N 23 03.6 +00.2	165 39.0 +02.5	S 22 40.7 +00.0	137 29.7 +02.4	S 21 29.7 +00.0	15						
16	15 25.6 +00.7	N 23 03.8 +00.3	180 41.5 +02.5	S 22 40.7 +00.0	152 32.1 +02.4	S 21 29.7 +00.0	16						
17	30 26.3 +00.7	N 23 04.1 +00.2	195 44.0 +02.5	S 22 40.7 +00.0	167 34.5 +02.4	S 21 29.7 +00.0	17						
18	45 27.0 +00.7	N 23 04.3 +00.3	210 46.5 +02.5	S 22 40.7 +00.0	182 36.9 +02.4	S 21 29.7 +00.0	18						
19	60 27.7 +00.7	N 23 04.6 +00.2	225 49.0 +02.5	S 22 40.7 +00.0	197 39.3 +02.5	S 21 29.7 +00.0	19						
20	75 28.4 +00.7	N 23 04.8 +00.3	240 51.5 +02.5	S 22 40.7 +00.0	212 41.8 +02.4	S 21 29.7 +00.0	20						
21	90 29.1 +00.7	N 23 05.1 +00.2	255 54.0 +02.6	S 22 40.7 +00.0	227 44.2 +02.4	S 21 29.7 +00.0	21						
22	105 29.8 +00.7	N 23 05.3 +00.3	270 56.6 +02.5	S 22 40.7 +00.0	242 46.6 +02.4	S 21 29.7 -00.1	22						
23	120 30.5 +00.7	N 23 05.6 +00.2	285 59.1 +02.5	S 22 40.7 +00.0	257 49.0 +02.4	S 21 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 00'0 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 291° 291° 291° 291° 291° 291°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:58		Greenwich Culmination Time: 03:59		Greenwich Culmination Time: 05:51								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 03.5 +00.1	N 10	17.8 +00.9	208 20.4 -00.3	S 03	05.6 -01.1	29 29.1 -32.0	N 06	48.3 -13.2	00			
01	195 03.6 +00.2	N 10	18.7 +00.9	223 20.1 -00.3	S 03	04.5 -01.2	43 57.1 -32.0	N 06	35.1 -13.2	01			
02	210 03.8 +00.1	N 10	19.6 +00.8	238 19.8 -00.4	S 03	03.3 -01.1	58 25.1 -32.0	N 06	21.9 -13.2	02			
03	225 03.9 +00.2	N 10	20.4 +00.9	253 19.4 -00.3	S 03	02.2 -01.2	72 53.1 -31.9	N 06	08.7 -13.3	03			
04	240 04.1 +00.1	N 10	21.3 +00.9	268 19.1 -00.3	S 03	01.0 -01.1	87 21.2 -31.9	N 05	55.4 -13.4	04			
05	255 04.2 +00.2	N 10	22.2 +00.9	283 18.8 -00.4	S 02	59.9 -01.2	101 49.3 -31.9	N 05	42.0 -13.3	05			
06	270 04.4 +00.1	N 10	23.1 +00.9	298 18.4 -00.3	S 02	58.7 -01.1	116 17.4 -31.9	N 05	28.7 -13.4	06			
07	285 04.5 +00.2	N 10	24.0 +00.8	313 18.1 -00.4	S 02	57.6 -01.2	130 45.5 -31.8	N 05	15.3 -13.5	07			
08	300 04.7 +00.1	N 10	24.8 +00.9	328 17.7 -00.3	S 02	56.4 -01.1	145 13.7 -31.8	N 05	01.8 -13.4	08			
09	315 04.8 +00.2	N 10	25.7 +00.9	343 17.4 -00.3	S 02	55.3 -01.2	159 41.9 -31.8	N 04	48.4 -13.5	09			
10	330 05.0 +00.1	N 10	26.6 +00.9	358 17.1 -00.4	S 02	54.1 -01.1	174 10.1 -31.7	N 04	34.9 -13.5	10			
11	345 05.1 +00.1	N 10	27.5 +00.9	13 16.7 -00.3	S 02	53.0 -01.1	188 38.4 -31.7	N 04	21.4 -13.6	11			
12	0 05.2 +00.2	N 10	28.4 +00.8	28 16.4 -00.3	S 02	51.9 -01.2	203 06.7 -31.7	N 04	07.8 -13.5	12			
13	15 05.4 +00.1	N 10	29.2 +00.9	43 16.1 -00.4	S 02	50.7 -01.1	217 35.0 -31.7	N 03	54.3 -13.6	13			
14	30 05.5 +00.2	N 10	30.1 +00.9	58 15.7 -00.3	S 02	49.6 -01.2	232 03.3 -31.7	N 03	40.7 -13.6	14			
15	45 05.7 +00.1	N 10	31.0 +00.9	73 15.4 -00.4	S 02	48.4 -01.1	246 31.6 -31.6	N 03	27.1 -13.6	15			
16	60 05.8 +00.2	N 10	31.9 +00.9	88 15.0 -00.3	S 02	47.3 -01.2	261 00.0 -31.6	N 03	13.5 -13.7	16			
17	75 06.0 +00.1	N 10	32.8 +00.8	103 14.7 -00.3	S 02	46.1 -01.1	275 28.4 -31.6	N 02	59.8 -13.6	17			
18	90 06.1 +00.2	N 10	33.6 +00.9	118 14.4 -00.4	S 02	45.0 -01.2	289 56.8 -31.6	N 02	46.2 -13.7	18			
19	105 06.3 +00.1	N 10	34.5 +00.9	133 14.0 -00.3	S 02	43.8 -01.1	304 25.2 -31.5	N 02	32.5 -13.7	19			
20	120 06.4 +00.1	N 10	35.4 +00.9	148 13.7 -00.3	S 02	42.7 -01.2	318 53.7 -31.5	N 02	18.8 -13.7	20			
21	135 06.5 +00.2	N 10	36.3 +00.8	163 13.4 -00.4	S 02	41.5 -01.1	333 22.2 -31.5	N 02	05.1 -13.6	21			
22	150 06.7 +00.1	N 10	37.1 +00.9	178 13.0 -00.3	S 02	40.4 -01.2	347 50.7 -31.5	N 01	51.5 -13.8	22			
23	165 06.8 +00.2	N 10	38.0 +00.9	193 12.7 -00.3	S 02	39.2 -01.1	2 19.2 -31.5	N 01	37.7 -13.7	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 335° 335° 335° 335° 335° 334° 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 003° 003° 003° 003° 003° 002° Greenwich Culmination Time: 10:06				UT 02 06 10 14 18 22 SD 16'4 16'4 16'4 16'4 16'4 16'4 HP 60'2 60'2 60'2 60'1 60'1 60'1 SHA 184° 181° 179° 177° 174° 172° Greenwich Culmination Time: 22:50					
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 31.2 +00.7	N 23	05.8 +00.2	301 01.6 +02.5	S 22	40.7 +00.0	272 51.4 +02.4	S 21	29.6 +00.0	00			
01	150 31.9 +00.7	N 23	06.0 +00.3	316 04.1 +02.5	S 22	40.7 +00.0	287 53.8 +02.4	S 21	29.6 +00.0	01			
02	165 32.6 +00.7	N 23	06.3 +00.2	331 06.6 +02.5	S 22	40.7 +00.0	302 56.2 +02.4	S 21	29.6 +00.0	02			
03	180 33.3 +00.7	N 23	06.5 +00.3	346 09.1 +02.6	S 22	40.7 +00.0	317 58.6 +02.4	S 21	29.6 +00.0	03			
04	195 34.0 +00.7	N 23	06.8 +00.2	1 11.7 +02.5	S 22	40.7 +00.0	333 01.0 +02.4	S 21	29.6 +00.0	04			
05	210 34.7 +00.7	N 23	07.0 +00.2	16 14.2 +02.5	S 22	40.7 +00.0	348 03.4 +02.4	S 21	29.6 +00.0	05			
06	225 35.4 +00.7	N 23	07.2 +00.3	31 16.7 +02.5	S 22	40.7 +00.0	3 05.8 +02.4	S 21	29.6 +00.0	06			
07	240 36.1 +00.7	N 23	07.5 +00.2	46 19.2 +02.5	S 22	40.7 +00.0	18 08.2 +02.4	S 21	29.6 +00.0	07			
08	255 36.8 +00.7	N 23	07.7 +00.3	61 21.7 +02.6	S 22	40.7 +00.0	33 10.6 +02.5	S 21	29.6 +00.0	08			
09	270 37.5 +00.7	N 23	08.0 +00.2	76 24.3 +02.5	S 22	40.7 +00.0	48 13.1 +02.4	S 21	29.6 +00.0	09			
10	285 38.2 +00.8	N 23	08.2 +00.2	91 26.8 +02.5	S 22	40.7 +00.0	63 15.5 +02.4	S 21	29.6 +00.0	10			
11	300 39.0 +00.7	N 23	08.4 +00.3	106 29.3 +02.5	S 22	40.7 +00.0	78 17.9 +02.4	S 21	29.6 +00.0	11			
12	315 39.7 +00.7	N 23	08.7 +00.2	121 31.8 +02.5	S 22	40.7 +00.0	93 20.3 +02.4	S 21	29.6 +00.0	12			
13	330 40.4 +00.7	N 23	08.9 +00.3	136 34.3 +02.6	S 22	40.7 +00.0	108 22.7 +02.4	S 21	29.6 +00.0	13			
14	345 41.1 +00.7	N 23	09.2 +00.2	151 36.9 +02.5	S 22	40.7 +00.0	123 25.1 +02.4	S 21	29.6 +00.0	14			
15	0 41.8 +00.7	N 23	09.4 +00.2	166 39.4 +02.5	S 22	40.7 +00.0	138 27.5 +02.4	S 21	29.6 -00.1	15			
16	15 42.5 +00.7	N 23	09.6 +00.3	181 41.9 +02.5	S 22	40.7 +00.0	153 29.9 +02.4	S 21	29.5 +00.0	16			
17	30 43.2 +00.7	N 23	09.9 +00.2	196 44.4 +02.6	S 22	40.7 +00.0	168 32.3 +02.4	S 21	29.5 +00.0	17			
18	45 43.9 +00.7	N 23	10.1 +00.3	211 47.0 +02.5	S 22	40.7 +00.0	183 34.7 +02.5	S 21	29.5 +00.0	18			
19	60 44.6 +00.7	N 23	10.4 +00.2	226 49.5 +02.5	S 22	40.7 +00.0	198 37.2 +02.4	S 21	29.5 +00.0	19			
20	75 45.3 +00.7	N 23	10.6 +00.2	241 52.0 +02.5	S 22	40.7 +00.0	213 39.6 +02.4	S 21	29.5 +00.0	20			
21	90 46.0 +00.7	N 23	10.8 +00.3	256 54.5 +02.6	S 22	40.7 +00.0	228 42.0 +02.4	S 21	29.5 +00.0	21			
22	105 46.7 +00.7	N 23	11.1 +00.2	271 57.1 +02.5	S 22	40.7 +00.0	243 44.4 +02.4	S 21	29.5 +00.0	22			
23	120 47.4 +00.7	N 23	11.3 +00.2	286 59.6 +02.5	S 22	40.7 +00.0	258 46.8 +02.4	S 21	29.5 +00.0	23			
UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 291° 291° 290° 290° 290° 290° Greenwich Culmination Time: 14:57				UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 096° 096° 096° 096° 096° 096° Greenwich Culmination Time: 03:55				UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 068° 068° 068° 068° 068° 068° Greenwich Culmination Time: 05:47					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 07.0 +00.1	N 10	38.9 +00.9	208 12.4 -00.4	S 02	38.1 -01.2	16 47.7 -31.5	N 01	24.0 -13.7	00			
01	195 07.1 +00.2	N 10	39.8 +00.8	223 12.0 -00.3	S 02	36.9 -01.1	31 16.2 -31.4	N 01	10.3 -13.7	01			
02	210 07.3 +00.1	N 10	40.6 +00.9	238 11.7 -00.3	S 02	35.8 -01.2	45 44.8 -31.5	N 00	56.6 -13.7	02			
03	225 07.4 +00.1	N 10	41.5 +00.9	253 11.4 -00.4	S 02	34.6 -01.1	60 13.3 -31.4	N 00	42.9 -13.8	03			
04	240 07.5 +00.2	N 10	42.4 +00.9	268 11.0 -00.3	S 02	33.5 -01.2	74 41.9 -31.4	N 00	29.1 -13.7	04			
05	255 07.7 +00.1	N 10	43.3 +00.8	283 10.7 -00.4	S 02	32.3 -01.1	89 10.5 -31.4	N 00	15.4 -13.7	05			
06	270 07.8 +00.2	N 10	44.1 +00.9	298 10.3 -00.3	S 02	31.2 -01.2	103 39.1 -31.3	N 00	01.7 -13.7	06			
07	285 08.0 +00.1	N 10	45.0 +00.9	313 10.0 -00.3	S 02	30.0 -01.1	118 07.8 -31.4	S 00	12.0 +13.7	07			
08	300 08.1 +00.2	N 10	45.9 +00.9	328 09.7 -00.4	S 02	28.9 -01.2	132 36.4 -31.3	S 00	25.7 +13.7	08			
09	315 08.3 +00.1	N 10	46.8 +00.8	343 09.3 -00.3	S 02	27.7 -01.1	147 05.1 -31.4	S 00	39.4 +13.7	09			
10	330 08.4 +00.1	N 10	47.6 +00.9	358 09.0 -00.3	S 02	26.6 -01.2	161 33.7 -31.3	S 00	53.1 +13.7	10			
11	345 08.5 +00.2	N 10	48.5 +00.9	13 08.7 -00.4	S 02	25.4 -01.2	176 02.4 -31.3	S 01	06.8 +13.7	11			
12	0 08.7 +00.1	N 10	49.4 +00.9	28 08.3 -00.3	S 02	24.2 -01.1	190 31.1 -31.3	S 01	20.5 +13.6	12			
13	15 08.8 +00.2	N 10	50.3 +00.8	43 08.0 -00.3	S 02	23.1 -01.2	204 59.8 -31.3	S 01	34.1 +13.6	13			
14	30 09.0 +00.1	N 10	51.1 +00.9	58 07.7 -00.4	S 02	21.9 -01.1	219 28.5 -31.3	S 01	47.7 +13.7	14			
15	45 09.1 +00.1	N 10	52.0 +00.9	73 07.3 -00.3	S 02	20.8 -01.2	233 57.2 -31.3	S 02	01.4 +13.6	15			
16	60 09.2 +00.2	N 10	52.9 +00.8	88 07.0 -00.3	S 02	19.6 -01.1	248 25.9 -31.3	S 02	15.0 +13.6	16			
17	75 09.4 +00.1	N 10	53.7 +00.9	103 06.7 -00.4	S 02	18.5 -01.2	262 54.6 -31.3	S 02	28.6 +13.5	17			
18	90 09.5 +00.2	N 10	54.6 +00.9	118 06.3 -00.3	S 02	17.3 -01.1	277 23.3 -31.2	S 02	42.1 +13.6	18			
19	105 09.7 +00.1	N 10	55.5 +00.8	133 06.0 -00.3	S 02	16.2 -01.2	291 52.1 -31.3	S 02	55.7 +13.5	19			
20	120 09.8 +00.1	N 10	56.3 +00.9	148 05.7 -00.4	S 02	15.0 -01.1	306 20.8 -31.2	S 03	09.2 +13.5	20			
21	135 09.9 +00.2	N 10	57.2 +00.9	163 05.3 -00.3	S 02	13.9 -01.2	320 49.6 -31.3	S 03	22.7 +13.4	21			
22	150 10.1 +00.1	N 10	58.1 +00.9	178 05.0 -00.3	S 02	12.7 -01.1	335 18.3 -31.2	S 03	36.1 +13.5	22			
23	165 10.2 +00.1	N 10	59.0 +00.8	193 04.7 -00.4	S 02	11.6 -01.2	349 47.1 -31.3	S 03	49.6 +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 15'9 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 16'3 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 59'7						
	SHA 334° 334° 334° 334° 334° 333°			SHA 002° 002° 002° 002° 002° 001°			SHA 170° 168° 165° 163° 161° 159°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 10:07			Greenwich Culmination Time: 23:42						

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	135 48.1 +00.7	N 23	11.5 +00.3	302 02.1 +02.5	S 22	40.7 +00.0	273 49.2 +02.4	S 21	29.5 +00.0	00			
01	150 48.8 +00.7	N 23	11.8 +00.2	317 04.6 +02.6	S 22	40.7 +00.0	288 51.6 +02.4	S 21	29.5 +00.0	01			
02	165 49.5 +00.7	N 23	12.0 +00.2	332 07.2 +02.5	S 22	40.7 +00.0	303 54.0 +02.4	S 21	29.5 +00.0	02			
03	180 50.2 +00.6	N 23	12.2 +00.3	347 09.7 +02.5	S 22	40.7 +00.0	318 56.4 +02.5	S 21	29.5 +00.0	03			
04	195 50.8 +00.7	N 23	12.5 +00.2	2 12.2 +02.5	S 22	40.7 +00.0	333 58.9 +02.4	S 21	29.5 +00.0	04			
05	210 51.5 +00.7	N 23	12.7 +00.2	17 14.7 +02.6	S 22	40.7 +00.0	349 01.3 +02.4	S 21	29.5 +00.0	05			
06	225 52.2 +00.7	N 23	12.9 +00.3	32 17.3 +02.5	S 22	40.7 +00.0	4 03.7 +02.4	S 21	29.5 +00.0	06			
07	240 52.9 +00.7	N 23	13.2 +00.2	47 19.8 +02.5	S 22	40.7 +00.0	19 06.1 +02.4	S 21	29.5 +00.0	07			
08	255 53.6 +00.7	N 23	13.4 +00.2	62 22.3 +02.6	S 22	40.7 +00.0	34 08.5 +02.4	S 21	29.5 -00.1	08			
09	270 54.3 +00.7	N 23	13.6 +00.3	77 24.9 +02.5	S 22	40.7 +00.0	49 10.9 +02.4	S 21	29.4 +00.0	09			
10	285 55.0 +00.7	N 23	13.9 +00.2	92 27.4 +02.5	S 22	40.7 -00.1	64 13.3 +02.5	S 21	29.4 +00.0	10			
11	300 55.7 +00.7	N 23	14.1 +00.2	107 29.9 +02.5	S 22	40.6 +00.0	79 15.8 +02.4	S 21	29.4 +00.0	11			
12	315 56.4 +00.7	N 23	14.3 +00.3	122 32.4 +02.6	S 22	40.6 +00.0	94 18.2 +02.4	S 21	29.4 +00.0	12			
13	330 57.1 +00.7	N 23	14.6 +00.2	137 35.0 +02.5	S 22	40.6 +00.0	109 20.6 +02.4	S 21	29.4 +00.0	13			
14	345 57.8 +00.7	N 23	14.8 +00.2	152 37.5 +02.5	S 22	40.6 +00.0	124 23.0 +02.4	S 21	29.4 +00.0	14			
15	0 58.5 +00.7	N 23	15.0 +00.2	167 40.0 +02.6	S 22	40.6 +00.0	139 25.4 +02.4	S 21	29.4 +00.0	15			
16	15 59.2 +00.7	N 23	15.2 +00.3	182 42.6 +02.5	S 22	40.6 +00.0	154 27.8 +02.4	S 21	29.4 +00.0	16			
17	30 59.9 +00.7	N 23	15.5 +00.2	197 45.1 +02.5	S 22	40.6 +00.0	169 30.2 +02.5	S 21	29.4 +00.0	17			
18	46 00.6 +00.7	N 23	15.7 +00.2	212 47.6 +02.6	S 22	40.6 +00.0	184 32.7 +02.4	S 21	29.4 +00.0	18			
19	61 01.3 +00.7	N 23	15.9 +00.3	227 50.2 +02.5	S 22	40.6 +00.0	199 35.1 +02.4	S 21	29.4 +00.0	19			
20	76 02.0 +00.7	N 23	16.2 +00.2	242 52.7 +02.5	S 22	40.6 +00.0	214 37.5 +02.4	S 21	29.4 +00.0	20			
21	91 02.7 +00.7	N 23	16.4 +00.2	257 55.2 +02.6	S 22	40.6 +00.0	229 39.9 +02.4	S 21	29.4 +00.0	21			
22	106 03.4 +00.7	N 23	16.6 +00.2	272 57.8 +02.5	S 22	40.6 +00.0	244 42.3 +02.4	S 21	29.4 +00.0	22			
23	121 04.1 +00.7	N 23	16.8 +00.3	288 00.3 +02.5	S 22	40.6 +00.0	259 44.7 +02.4	S 21	29.4 +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 00'4 00'4 00'4 00'4			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 290° 290° 290° 290° 289° 289°			SHA 096° 096° 096° 096° 096° 096°			SHA 068° 068° 068° 068° 068° 068°						
	Greenwich Culmination Time: 14:56			Greenwich Culmination Time: 03:51			Greenwich Culmination Time: 05:43						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 10.3 +00.2	N 10 59.8 +00.9	208 04.3 -00.3	S 02 10.4 -01.1	4 15.8 -31.2	S 04 03.0 +13.4	00						
01	195 10.5 +00.1	N 11 00.7 +00.9	223 04.0 -00.3	S 02 09.3 -01.2	18 44.6 -31.3	S 04 16.4 +13.3	01						
02	210 10.6 +00.2	N 11 01.6 +00.8	238 03.7 -00.4	S 02 08.1 -01.2	33 13.3 -31.2	S 04 29.7 +13.3	02						
03	225 10.8 +00.1	N 11 02.4 +00.9	253 03.3 -00.3	S 02 06.9 -01.1	47 42.1 -31.2	S 04 43.0 +13.3	03						
04	240 10.9 +00.1	N 11 03.3 +00.9	268 03.0 -00.3	S 02 05.8 -01.2	62 10.9 -31.3	S 04 56.3 +13.2	04						
05	255 11.0 +00.2	N 11 04.2 +00.8	283 02.7 -00.4	S 02 04.6 -01.1	76 39.6 -31.2	S 05 09.5 +13.2	05						
06	270 11.2 +00.1	N 11 05.0 +00.9	298 02.3 -00.3	S 02 03.5 -01.2	91 08.4 -31.3	S 05 22.7 +13.2	06						
07	285 11.3 +00.2	N 11 05.9 +00.9	313 02.0 -00.3	S 02 02.3 -01.1	105 37.1 -31.2	S 05 35.9 +13.1	07						
08	300 11.5 +00.1	N 11 06.8 +00.8	328 01.7 -00.4	S 02 01.2 -01.2	120 05.9 -31.2	S 05 49.0 +13.1	08						
09	315 11.6 +00.1	N 11 07.6 +00.9	343 01.3 -00.3	S 02 00.0 -01.1	134 34.7 -31.3	S 06 02.1 +13.0	09						
10	330 11.7 +00.2	N 11 08.5 +00.9	358 01.0 -00.3	S 01 58.9 -01.2	149 03.4 -31.2	S 06 15.1 +13.0	10						
11	345 11.9 +00.1	N 11 09.4 +00.8	13 00.7 -00.4	S 01 57.7 -01.1	163 32.2 -31.3	S 06 28.1 +12.9	11						
12	0 12.0 +00.1	N 11 10.2 +00.9	28 00.3 -00.3	S 01 56.6 -01.2	178 00.9 -31.2	S 06 41.0 +12.9	12						
13	15 12.1 +00.2	N 11 11.1 +00.8	42 60.0 -00.3	S 01 55.4 -01.2	192 29.7 -31.3	S 06 53.9 +12.9	13						
14	30 12.3 +00.1	N 11 11.9 +00.9	57 59.7 -00.4	S 01 54.2 -01.1	206 58.4 -31.2	S 07 06.8 +12.8	14						
15	45 12.4 +00.1	N 11 12.8 +00.9	72 59.3 -00.3	S 01 53.1 -01.2	221 27.2 -31.3	S 07 19.6 +12.7	15						
16	60 12.5 +00.2	N 11 13.7 +00.8	87 59.0 -00.3	S 01 51.9 -01.1	235 55.9 -31.3	S 07 32.3 +12.7	16						
17	75 12.7 +00.1	N 11 14.5 +00.9	102 58.7 -00.4	S 01 50.8 -01.2	250 24.6 -31.2	S 07 45.0 +12.6	17						
18	90 12.8 +00.2	N 11 15.4 +00.9	117 58.3 -00.3	S 01 49.6 -01.1	264 53.4 -31.3	S 07 57.6 +12.6	18						
19	105 13.0 +00.1	N 11 16.3 +00.8	132 58.0 -00.3	S 01 48.5 -01.2	279 22.1 -31.3	S 08 10.2 +12.5	19						
20	120 13.1 +00.1	N 11 17.1 +00.9	147 57.7 -00.4	S 01 47.3 -01.2	293 50.8 -31.3	S 08 22.7 +12.5	20						
21	135 13.2 +00.2	N 11 18.0 +00.8	162 57.3 -00.3	S 01 46.1 -01.1	308 19.5 -31.3	S 08 35.2 +12.4	21						
22	150 13.4 +00.1	N 11 18.8 +00.9	177 57.0 -00.3	S 01 45.0 -01.2	322 48.2 -31.3	S 08 47.6 +12.3	22						
23	165 13.5 +00.1	N 11 19.7 +00.9	192 56.7 -00.4	S 01 43.8 -01.1	337 16.9 -31.3	S 08 59.9 +12.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'2 16'2 16'2 16'2 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'7 59'6 59'5 59'4 59'3 59'2								
	SHA 333° 333° 333° 333° 333° 333°		SHA 001° 001° 001° 001° 000° 000°		SHA 156° 154° 152° 150° 147° 145°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 10:07		Greenwich Culmination Time: -1:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	136 04.8 +00.7	N 23 17.1 +00.2	303 02.8 +02.6	S 22 40.6 +00.0	274 47.1 +02.5	S 21 29.4 +00.0	00						
01	151 05.5 +00.7	N 23 17.3 +00.2	318 05.4 +02.5	S 22 40.6 +00.0	289 49.6 +02.4	S 21 29.4 +00.0	01						
02	166 06.2 +00.7	N 23 17.5 +00.3	333 07.9 +02.5	S 22 40.6 +00.0	304 52.0 +02.4	S 21 29.4 +00.0	02						
03	181 06.9 +00.7	N 23 17.8 +00.2	348 10.4 +02.6	S 22 40.6 +00.0	319 54.4 +02.4	S 21 29.4 -00.1	03						
04	196 07.6 +00.7	N 23 18.0 +00.2	3 13.0 +02.5	S 22 40.6 +00.0	334 56.8 +02.4	S 21 29.3 +00.0	04						
05	211 08.3 +00.7	N 23 18.2 +00.2	18 15.5 +02.5	S 22 40.6 +00.0	349 59.2 +02.4	S 21 29.3 +00.0	05						
06	226 09.0 +00.7	N 23 18.4 +00.3	33 18.0 +02.6	S 22 40.6 +00.0	5 01.6 +02.5	S 21 29.3 +00.0	06						
07	241 09.7 +00.7	N 23 18.7 +00.2	48 20.6 +02.5	S 22 40.6 +00.0	20 04.1 +02.4	S 21 29.3 +00.0	07						
08	256 10.4 +00.7	N 23 18.9 +00.2	63 23.1 +02.5	S 22 40.6 +00.0	35 06.5 +02.4	S 21 29.3 +00.0	08						
09	271 11.1 +00.7	N 23 19.1 +00.2	78 25.6 +02.6	S 22 40.6 +00.0	50 08.9 +02.4	S 21 29.3 +00.0	09						
10	286 11.8 +00.7	N 23 19.3 +00.3	93 28.2 +02.5	S 22 40.6 +00.0	65 11.3 +02.4	S 21 29.3 +00.0	10						
11	301 12.5 +00.7	N 23 19.6 +00.2	108 30.7 +02.6	S 22 40.6 +00.0	80 13.7 +02.4	S 21 29.3 +00.0	11						
12	316 13.2 +00.7	N 23 19.8 +00.2	123 33.3 +02.5	S 22 40.6 +00.0	95 16.1 +02.5	S 21 29.3 +00.0	12						
13	331 13.9 +00.7	N 23 20.0 +00.2	138 35.8 +02.5	S 22 40.6 +00.0	110 18.6 +02.4	S 21 29.3 +00.0	13						
14	346 14.6 +00.7	N 23 20.2 +00.2	153 38.3 +02.6	S 22 40.6 +00.0	125 21.0 +02.4	S 21 29.3 +00.0	14						
15	1 15.3 +00.7	N 23 20.4 +00.3	168 40.9 +02.5	S 22 40.6 +00.0	140 23.4 +02.4	S 21 29.3 +00.0	15						
16	16 16.0 +00.7	N 23 20.7 +00.2	183 43.4 +02.6	S 22 40.6 +00.0	155 25.8 +02.4	S 21 29.3 +00.0	16						
17	31 16.7 +00.7	N 23 20.9 +00.2	198 46.0 +02.5	S 22 40.6 +00.0	170 28.2 +02.5	S 21 29.3 +00.0	17						
18	46 17.4 +00.7	N 23 21.1 +00.2	213 48.5 +02.5	S 22 40.6 +00.0	185 30.7 +02.4	S 21 29.3 +00.0	18						
19	61 18.1 +00.7	N 23 21.3 +00.2	228 51.0 +02.6	S 22 40.6 +00.0	200 33.1 +02.4	S 21 29.3 +00.0	19						
20	76 18.8 +00.7	N 23 21.5 +00.3	243 53.6 +02.5	S 22 40.6 +00.0	215 35.5 +02.4	S 21 29.3 +00.0	20						
21	91 19.5 +00.7	N 23 21.8 +00.2	258 56.1 +02.6	S 22 40.6 +00.0	230 37.9 +02.4	S 21 29.3 +00.0	21						
22	106 20.2 +00.7	N 23 22.0 +00.2	273 58.7 +02.5	S 22 40.6 +00.0	245 40.3 +02.5	S 21 29.3 +00.0	22						
23	121 20.9 +00.7	N 23 22.2 +00.2	289 01.2 +02.5	S 22 40.6 -00.1	260 42.8 +02.4	S 21 29.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 289° 289° 289° 289° 289° 289°		SHA 096° 096° 096° 096° 096° 096°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:54		Greenwich Culmination Time: 03:47		Greenwich Culmination Time: 05:39								

Table with 5 main sections: Sun, Venus, Moon, Mars, and Jupiter. Each section contains astronomical data for 24 hours of UT, including GHA, ddGHA, Dec, dDec, and Greenwich Culmination Time.

UT	Sun				Venus				Moon				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	180 33.4 +00.1	N 13 40.3 +00.8	207 00.9 -00.4	N 01 33.1 +01.2	264 40.2 -28.7	S 19 51.3 -05.2											
01	195 33.5 +00.1	N 13 41.1 +00.8	222 00.5 -00.3	N 01 34.3 +01.1	279 11.5 -28.7	S 19 46.1 -05.3											
02	210 33.6 +00.1	N 13 41.9 +00.8	237 00.2 -00.3	N 01 35.4 +01.2	293 42.8 -28.7	S 19 40.8 -05.4											
03	225 33.7 +00.1	N 13 42.7 +00.8	251 59.9 -00.4	N 01 36.6 +01.2	308 14.1 -28.6	S 19 35.4 -05.5											
04	240 33.8 +00.1	N 13 43.5 +00.8	266 59.5 -00.3	N 01 37.8 +01.1	322 45.5 -28.5	S 19 29.9 -05.5											
05	255 33.9 +00.1	N 13 44.3 +00.8	281 59.2 -00.3	N 01 38.9 +01.2	337 17.0 -28.5	S 19 24.4 -05.7											
06	270 34.0 +00.1	N 13 45.1 +00.8	296 58.9 -00.4	N 01 40.1 +01.2	351 48.5 -28.5	S 19 18.7 -05.7											
07	285 34.1 +00.1	N 13 45.9 +00.8	311 58.5 -00.3	N 01 41.3 +01.2	6 20.0 -28.4	S 19 13.0 -05.8											
08	300 34.2 +00.1	N 13 46.7 +00.8	326 58.2 -00.3	N 01 42.5 +01.1	20 51.6 -28.4	S 19 07.2 -05.9											
09	315 34.3 +00.1	N 13 47.5 +00.8	341 57.9 -00.4	N 01 43.6 +01.2	35 23.2 -28.3	S 19 01.3 -06.0											
10	330 34.4 +00.1	N 13 48.3 +00.8	356 57.5 -00.3	N 01 44.8 +01.2	49 54.9 -28.2	S 18 55.3 -06.0											
11	345 34.5 +00.1	N 13 49.1 +00.8	11 57.2 -00.3	N 01 46.0 +01.1	64 26.7 -28.3	S 18 49.3 -06.2											
12	0 34.6 +00.1	N 13 49.9 +00.8	26 56.9 -00.4	N 01 47.1 +01.2	78 58.4 -28.1	S 18 43.1 -06.2											
13	15 34.7 +00.1	N 13 50.7 +00.7	41 56.5 -00.3	N 01 48.3 +01.2	93 30.3 -28.1	S 18 36.9 -06.3											
14	30 34.8 +00.1	N 13 51.4 +00.8	56 56.2 -00.3	N 01 49.5 +01.1	108 02.2 -28.1	S 18 30.6 -06.4											
15	45 34.9 +00.1	N 13 52.2 +00.8	71 55.9 -00.4	N 01 50.6 +01.2	122 34.1 -28.1	S 18 24.2 -06.4											
16	60 35.0 +00.1	N 13 53.0 +00.8	86 55.5 -00.3	N 01 51.8 +01.2	137 06.0 -27.9	S 18 17.8 -06.6											
17	75 35.1 +00.1	N 13 53.8 +00.8	101 55.2 -00.3	N 01 53.0 +01.1	151 38.1 -28.0	S 18 11.2 -06.6											
18	90 35.2 +00.1	N 13 54.6 +00.8	116 54.9 -00.4	N 01 54.1 +01.2	166 10.1 -27.9	S 18 04.6 -06.7											
19	105 35.3 +00.1	N 13 55.4 +00.8	131 54.5 -00.3	N 01 55.3 +01.2	180 42.2 -27.8	S 17 57.9 -06.7											
20	120 35.4 +00.1	N 13 56.2 +00.8	146 54.2 -00.3	N 01 56.5 +01.2	195 14.4 -27.8	S 17 51.2 -06.9											
21	135 35.5 +00.0	N 13 57.0 +00.8	161 53.9 -00.3	N 01 57.7 +01.1	209 46.6 -27.8	S 17 44.3 -06.9											
22	150 35.5 +00.1	N 13 57.8 +00.8	176 53.6 -00.4	N 01 58.8 +01.2	224 18.8 -27.7	S 17 37.4 -07.0											
23	165 35.6 +00.1	N 13 58.6 +00.8	191 53.2 -00.3	N 01 60.0 +01.2	238 51.1 -27.7	S 17 30.4 -07.1											
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 326° 326° 325° 325° 325° 325°	Greenwich Culmination Time: 11:57		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 352° 352° 352° 352° 351° 351°	Greenwich Culmination Time: 10:12		UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8	HP 54'4 54'4 54'3 54'3 54'3 54'2	SHA 049° 047° 045° 043° 041° 039°	Greenwich Culmination Time: 06:33

UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	138 18.0 +00.7	N 23 54.5 +00.2	311 15.7 +02.6	S 22 39.9 +00.0	282 34.3 +02.5	S 21 28.9 +00.0											
01	153 18.7 +00.7	N 23 54.7 +00.2	326 18.3 +02.6	S 22 39.9 +00.0	297 36.8 +02.4	S 21 28.9 +00.0											
02	168 19.4 +00.7	N 23 54.9 +00.1	341 20.9 +02.6	S 22 39.9 +00.0	312 39.2 +02.5	S 21 28.9 +00.0											
03	183 20.1 +00.6	N 23 55.0 +00.2	356 23.5 +02.6	S 22 39.9 +00.0	327 41.7 +02.4	S 21 28.9 +00.0											
04	198 20.7 +00.7	N 23 55.2 +00.1	11 26.1 +02.6	S 22 39.9 +00.0	342 44.1 +02.5	S 21 28.9 +00.0											
05	213 21.4 +00.7	N 23 55.3 +00.2	26 28.7 +02.6	S 22 39.9 +00.0	357 46.6 +02.4	S 21 28.9 +00.0											
06	228 22.1 +00.7	N 23 55.5 +00.2	41 31.3 +02.6	S 22 39.9 +00.0	12 49.0 +02.5	S 21 28.9 +00.0											
07	243 22.8 +00.7	N 23 55.7 +00.1	56 33.9 +02.6	S 22 39.9 -00.1	27 51.5 +02.4	S 21 28.9 +00.0											
08	258 23.5 +00.7	N 23 55.8 +00.2	71 36.5 +02.6	S 22 39.8 +00.0	42 53.9 +02.5	S 21 28.9 +00.0											
09	273 24.2 +00.7	N 23 56.0 +00.1	86 39.1 +02.6	S 22 39.8 +00.0	57 56.4 +02.4	S 21 28.9 +00.0											
10	288 24.9 +00.7	N 23 56.1 +00.2	101 41.7 +02.6	S 22 39.8 +00.0	72 58.8 +02.5	S 21 28.9 +00.0											
11	303 25.6 +00.7	N 23 56.3 +00.2	116 44.3 +02.6	S 22 39.8 +00.0	88 01.3 +02.4	S 21 28.9 +00.0											
12	318 26.3 +00.6	N 23 56.5 +00.1	131 46.9 +02.6	S 22 39.8 +00.0	103 03.7 +02.5	S 21 28.9 +00.0											
13	333 26.9 +00.7	N 23 56.6 +00.2	146 49.5 +02.6	S 22 39.8 +00.0	118 06.2 +02.4	S 21 28.9 +00.0											
14	348 27.6 +00.7	N 23 56.8 +00.1	161 52.1 +02.6	S 22 39.8 +00.0	133 08.6 +02.5	S 21 28.9 +00.0											
15	3 28.3 +00.7	N 23 56.9 +00.2	176 54.7 +02.6	S 22 39.8 +00.0	148 11.1 +02.4	S 21 28.9 +00.0											
16	18 29.0 +00.7	N 23 57.1 +00.1	191 57.3 +02.6	S 22 39.8 +00.0	163 13.5 +02.5	S 21 28.9 +00.0											
17	33 29.7 +00.7	N 23 57.2 +00.2	206 59.9 +02.6	S 22 39.8 +00.0	178 16.0 +02.5	S 21 28.9 +00.0											
18	48 30.4 +00.7	N 23 57.4 +00.2	222 02.5 +02.6	S 22 39.8 +00.0	193 18.5 +02.4	S 21 28.9 +00.0											
19	63 31.1 +00.7	N 23 57.6 +00.1	237 05.1 +02.6	S 22 39.8 +00.0	208 20.9 +02.5	S 21 28.9 +00.0											
20	78 31.8 +00.6	N 23 57.7 +00.2	252 07.7 +02.6	S 22 39.8 +00.0	223 23.4 +02.4	S 21 28.9 +00.0											
21	93 32.4 +00.7	N 23 57.9 +00.1	267 10.3 +02.6	S 22 39.8 +00.0	238 25.8 +02.5	S 21 28.9 +00.0											
22	108 33.1 +00.7	N 23 58.0 +00.2	282 12.9 +02.6	S 22 39.8 +00.0	253 28.3 +02.4	S 21 28.9 +00.0											
23	123 33.8 +00.7	N 23 58.2 +00.1	297 15.5 +02.6	S 22 39.8 +00.0	268 30.7 +02.5	S 21 28.9 +00.0											
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 284° 283° 283° 283° 283° 283°	Greenwich Culmination Time: 14:46		UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 097° 097° 097° 097° 097° 097°	Greenwich Culmination Time: 03:14		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 068° 068° 068° 068° 068° 068°	Greenwich Culmination Time: 05:08

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 35.7 +00.1	N 13 59.4 +00.8	206 52.9 -00.3	N 02 01.2 +01.1	253 23.4 -27.6	S 17 23.3 -07.1	00						
01	195 35.8 +00.1	N 14 00.2 +00.8	221 52.6 -00.4	N 02 02.3 +01.2	267 55.8 -27.6	S 17 16.2 -07.3	01						
02	210 35.9 +00.1	N 14 01.0 +00.8	236 52.2 -00.3	N 02 03.5 +01.2	282 28.2 -27.5	S 17 08.9 -07.3	02						
03	225 36.0 +00.1	N 14 01.8 +00.7	251 51.9 -00.3	N 02 04.7 +01.1	297 00.7 -27.5	S 17 01.6 -07.3	03						
04	240 36.1 +00.1	N 14 02.5 +00.8	266 51.6 -00.4	N 02 05.8 +01.2	311 33.2 -27.5	S 16 54.3 -07.5	04						
05	255 36.2 +00.1	N 14 03.3 +00.8	281 51.2 -00.3	N 02 07.0 +01.2	326 05.7 -27.4	S 16 46.8 -07.5	05						
06	270 36.3 +00.1	N 14 04.1 +00.8	296 50.9 -00.3	N 02 08.2 +01.1	340 38.3 -27.3	S 16 39.3 -07.6	06						
07	285 36.4 +00.1	N 14 04.9 +00.8	311 50.6 -00.4	N 02 09.3 +01.2	355 11.0 -27.4	S 16 31.7 -07.6	07						
08	300 36.5 +00.1	N 14 05.7 +00.8	326 50.2 -00.3	N 02 10.5 +01.2	9 43.6 -27.3	S 16 24.1 -07.7	08						
09	315 36.6 +00.1	N 14 06.5 +00.8	341 49.9 -00.3	N 02 11.7 +01.1	24 16.3 -27.2	S 16 16.4 -07.8	09						
10	330 36.7 +00.1	N 14 07.3 +00.8	356 49.6 -00.4	N 02 12.8 +01.2	38 49.1 -27.2	S 16 08.6 -07.9	10						
11	345 36.8 +00.1	N 14 08.1 +00.8	11 49.2 -00.3	N 02 14.0 +01.2	53 21.9 -27.2	S 16 00.7 -07.9	11						
12	0 36.9 +00.0	N 14 08.9 +00.7	26 48.9 -00.3	N 02 15.2 +01.2	67 54.7 -27.1	S 15 52.8 -08.0	12						
13	15 36.9 +00.1	N 14 09.6 +00.8	41 48.6 -00.4	N 02 16.4 +01.1	82 27.6 -27.1	S 15 44.8 -08.0	13						
14	30 37.0 +00.1	N 14 10.4 +00.8	56 48.2 -00.3	N 02 17.5 +01.2	97 00.5 -27.0	S 15 36.8 -08.2	14						
15	45 37.1 +00.1	N 14 11.2 +00.8	71 47.9 -00.3	N 02 18.7 +01.2	111 33.5 -27.0	S 15 28.6 -08.2	15						
16	60 37.2 +00.1	N 14 12.0 +00.8	86 47.6 -00.4	N 02 19.9 +01.1	126 06.5 -27.0	S 15 20.4 -08.2	16						
17	75 37.3 +00.1	N 14 12.8 +00.8	101 47.2 -00.3	N 02 21.0 +01.2	140 39.5 -26.9	S 15 12.2 -08.3	17						
18	90 37.4 +00.1	N 14 13.6 +00.7	116 46.9 -00.3	N 02 22.2 +01.2	155 12.6 -26.9	S 15 03.9 -08.4	18						
19	105 37.5 +00.1	N 14 14.3 +00.8	131 46.6 -00.4	N 02 23.4 +01.1	169 45.7 -26.9	S 14 55.5 -08.5	19						
20	120 37.6 +00.1	N 14 15.1 +00.8	146 46.2 -00.3	N 02 24.5 +01.2	184 18.8 -26.8	S 14 47.0 -08.5	20						
21	135 37.7 +00.1	N 14 15.9 +00.8	161 45.9 -00.3	N 02 25.7 +01.2	198 52.0 -26.8	S 14 38.5 -08.5	21						
22	150 37.8 +00.1	N 14 16.7 +00.8	176 45.6 -00.4	N 02 26.9 +01.1	213 25.2 -26.8	S 14 30.0 -08.7	22						
23	165 37.9 +00.0	N 14 17.5 +00.8	191 45.2 -00.3	N 02 28.0 +01.2	227 58.4 -26.7	S 14 21.3 -08.7	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 14'8 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'2 54'2 54'2 54'2 54'2 54'2								
	SHA 325° 325° 325° 324° 324° 324°		SHA 351° 351° 351° 351° 350° 350°		SHA 037° 035° 033° 031° 029° 027°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 10:12		Greenwich Culmination Time: 07:19								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	138 34.5 +00.7	N 23 58.3 +00.2	312 18.1 +02.6	S 22 39.8 +00.0	283 33.2 +02.4	S 21 28.9 +00.0	00						
01	153 35.2 +00.7	N 23 58.5 +00.2	327 20.7 +02.7	S 22 39.8 +00.0	298 35.6 +02.5	S 21 28.9 +00.0	01						
02	168 35.9 +00.7	N 23 58.7 +00.1	342 23.4 +02.6	S 22 39.8 +00.0	313 38.1 +02.4	S 21 28.9 +00.0	02						
03	183 36.6 +00.7	N 23 58.8 +00.2	357 26.0 +02.6	S 22 39.8 -00.1	328 40.5 +02.5	S 21 28.9 +00.0	03						
04	198 37.3 +00.7	N 23 59.0 +00.1	12 28.6 +02.6	S 22 39.7 +00.0	343 43.0 +02.5	S 21 28.9 +00.0	04						
05	213 38.0 +00.6	N 23 59.1 +00.2	27 31.2 +02.6	S 22 39.7 +00.0	358 45.5 +02.4	S 21 28.9 +00.0	05						
06	228 38.6 +00.7	N 23 59.3 +00.1	42 33.8 +02.6	S 22 39.7 +00.0	13 47.9 +02.5	S 21 28.9 +00.0	06						
07	243 39.3 +00.7	N 23 59.4 +00.2	57 36.4 +02.6	S 22 39.7 +00.0	28 50.4 +02.4	S 21 28.9 +00.0	07						
08	258 40.0 +00.7	N 23 59.6 +00.1	72 39.0 +02.6	S 22 39.7 +00.0	43 52.8 +02.5	S 21 28.9 +00.0	08						
09	273 40.7 +00.7	N 23 59.7 +00.2	87 41.6 +02.6	S 22 39.7 +00.0	58 55.3 +02.4	S 21 28.9 +00.0	09						
10	288 41.4 +00.7	N 23 59.9 +00.1	102 44.2 +02.6	S 22 39.7 +00.0	73 57.7 +02.5	S 21 28.9 +00.0	10						
11	303 42.1 +00.7	N 24 00.0 +00.2	117 46.8 +02.6	S 22 39.7 +00.0	89 00.2 +02.5	S 21 28.9 +00.0	11						
12	318 42.8 +00.7	N 24 00.2 +00.1	132 49.4 +02.7	S 22 39.7 +00.0	104 02.7 +02.4	S 21 28.9 +00.0	12						
13	333 43.5 +00.6	N 24 00.3 +00.2	147 52.1 +02.6	S 22 39.7 +00.0	119 05.1 +02.5	S 21 28.9 +00.0	13						
14	348 44.1 +00.7	N 24 00.5 +00.1	162 54.7 +02.6	S 22 39.7 +00.0	134 07.6 +02.4	S 21 28.9 +00.0	14						
15	3 44.8 +00.7	N 24 00.6 +00.2	177 57.3 +02.6	S 22 39.7 +00.0	149 10.0 +02.5	S 21 28.9 +00.0	15						
16	18 45.5 +00.7	N 24 00.8 +00.1	192 59.9 +02.6	S 22 39.7 +00.0	164 12.5 +02.4	S 21 28.9 +00.0	16						
17	33 46.2 +00.7	N 24 00.9 +00.2	208 02.5 +02.6	S 22 39.7 +00.0	179 14.9 +02.5	S 21 28.9 +00.0	17						
18	48 46.9 +00.7	N 24 01.1 +00.1	223 05.1 +02.6	S 22 39.7 +00.0	194 17.4 +02.5	S 21 28.9 +00.0	18						
19	63 47.6 +00.7	N 24 01.2 +00.2	238 07.7 +02.6	S 22 39.7 +00.0	209 19.9 +02.4	S 21 28.9 +00.0	19						
20	78 48.3 +00.7	N 24 01.4 +00.1	253 10.3 +02.7	S 22 39.7 +00.0	224 22.3 +02.5	S 21 28.9 +00.0	20						
21	93 49.0 +00.7	N 24 01.5 +00.2	268 13.0 +02.6	S 22 39.7 -00.1	239 24.8 +02.4	S 21 28.9 +00.0	21						
22	108 49.7 +00.6	N 24 01.7 +00.1	283 15.6 +02.6	S 22 39.6 +00.0	254 27.2 +02.5	S 21 28.9 +00.0	22						
23	123 50.3 +00.7	N 24 01.8 +00.2	298 18.2 +02.6	S 22 39.6 +00.0	269 29.7 +02.5	S 21 28.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 283° 283° 283° 282° 282° 282°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:45		Greenwich Culmination Time: 03:10		Greenwich Culmination Time: 05:04								

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 37.9 +00.1	N 14 18.3 +00.7	206 44.9 -00.4	N 02 29.2 +01.2	242 31.7 -26.7	S 14 12.6 -08.7	00							
01	195 38.0 +00.1	N 14 19.0 +00.8	221 44.5 -00.3	N 02 30.4 +01.1	257 05.0 -26.6	S 14 03.9 -08.8	01							
02	210 38.1 +00.1	N 14 19.8 +00.8	236 44.2 -00.3	N 02 31.5 +01.2	271 38.4 -26.6	S 13 55.1 -08.9	02							
03	225 38.2 +00.1	N 14 20.6 +00.8	251 43.9 -00.4	N 02 32.7 +01.2	286 11.8 -26.6	S 13 46.2 -08.9	03							
04	240 38.3 +00.1	N 14 21.4 +00.8	266 43.5 -00.3	N 02 33.9 +01.1	300 45.2 -26.6	S 13 37.3 -09.0	04							
05	255 38.4 +00.1	N 14 22.2 +00.7	281 43.2 -00.3	N 02 35.0 +01.2	315 18.6 -26.5	S 13 28.3 -09.1	05							
06	270 38.5 +00.1	N 14 22.9 +00.8	296 42.9 -00.4	N 02 36.2 +01.2	329 52.1 -26.5	S 13 19.2 -09.1	06							
07	285 38.6 +00.0	N 14 23.7 +00.8	311 42.5 -00.3	N 02 37.4 +01.1	344 25.6 -26.5	S 13 10.1 -09.1	07							
08	300 38.6 +00.1	N 14 24.5 +00.8	326 42.2 -00.3	N 02 38.5 +01.2	358 59.1 -26.4	S 13 01.0 -09.2	08							
09	315 38.7 +00.1	N 14 25.3 +00.8	341 41.9 -00.4	N 02 39.7 +01.2	13 32.7 -26.4	S 12 51.8 -09.3	09							
10	330 38.8 +00.1	N 14 26.1 +00.7	356 41.5 -00.3	N 02 40.9 +01.2	28 06.3 -26.4	S 12 42.5 -09.3	10							
11	345 38.9 +00.1	N 14 26.8 +00.8	11 41.2 -00.3	N 02 42.1 +01.1	42 39.9 -26.3	S 12 33.2 -09.4	11							
12	0 39.0 +00.1	N 14 27.6 +00.8	26 40.9 -00.4	N 02 43.2 +01.2	57 13.6 -26.3	S 12 23.8 -09.4	12							
13	15 39.1 +00.1	N 14 28.4 +00.8	41 40.5 -00.3	N 02 44.4 +01.2	71 47.3 -26.3	S 12 14.4 -09.5	13							
14	30 39.2 +00.1	N 14 29.2 +00.7	56 40.2 -00.3	N 02 45.6 +01.1	86 21.0 -26.3	S 12 04.9 -09.5	14							
15	45 39.3 +00.0	N 14 29.9 +00.8	71 39.9 -00.4	N 02 46.7 +01.2	100 54.7 -26.2	S 11 55.4 -09.6	15							
16	60 39.3 +00.1	N 14 30.7 +00.8	86 39.5 -00.3	N 02 47.9 +01.2	115 28.5 -26.3	S 11 45.8 -09.7	16							
17	75 39.4 +00.1	N 14 31.5 +00.8	101 39.2 -00.4	N 02 49.1 +01.1	130 02.2 -26.1	S 11 36.1 -09.6	17							
18	90 39.5 +00.1	N 14 32.3 +00.7	116 38.8 -00.3	N 02 50.2 +01.2	144 36.1 -26.2	S 11 26.5 -09.8	18							
19	105 39.6 +00.1	N 14 33.0 +00.8	131 38.5 -00.3	N 02 51.4 +01.2	159 09.9 -26.2	S 11 16.7 -09.8	19							
20	120 39.7 +00.1	N 14 33.8 +00.8	146 38.2 -00.4	N 02 52.6 +01.1	173 43.7 -26.1	S 11 06.9 -09.8	20							
21	135 39.8 +00.0	N 14 34.6 +00.8	161 37.8 -00.3	N 02 53.7 +01.2	188 17.6 -26.1	S 10 57.1 -09.9	21							
22	150 39.8 +00.1	N 14 35.4 +00.7	176 37.5 -00.3	N 02 54.9 +01.2	202 51.5 -26.1	S 10 47.2 -09.9	22							
23	165 39.9 +00.1	N 14 36.1 +00.8	191 37.2 -00.4	N 02 56.1 +01.1	217 25.4 -26.0	S 10 37.3 -10.0	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 324° 324° 324° 323° 323° 323°	Greenwich Culmination Time: 11:57	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 350° 350° 350° 349° 349° 349°	Greenwich Culmination Time: 10:13	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 54'2 54'3	SHA 025° 023° 021° 019° 017° 015°	Greenwich Culmination Time: 08:04

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	138 51.0 +00.7	N 24 02.0 +00.1	313 20.8 +02.6	S 22 39.6 +00.0	284 32.2 +02.4	S 21 28.9 +00.0	00							
01	153 51.7 +00.7	N 24 02.1 +00.2	328 23.4 +02.6	S 22 39.6 +00.0	299 34.6 +02.5	S 21 28.9 +00.0	01							
02	168 52.4 +00.7	N 24 02.3 +00.1	343 26.0 +02.7	S 22 39.6 +00.0	314 37.1 +02.4	S 21 28.9 +00.0	02							
03	183 53.1 +00.7	N 24 02.4 +00.1	358 28.7 +02.6	S 22 39.6 +00.0	329 39.5 +02.5	S 21 28.9 +00.0	03							
04	198 53.8 +00.7	N 24 02.5 +00.2	13 31.3 +02.6	S 22 39.6 +00.0	344 42.0 +02.5	S 21 28.9 +00.0	04							
05	213 54.5 +00.7	N 24 02.7 +00.1	28 33.9 +02.6	S 22 39.6 +00.0	359 44.5 +02.4	S 21 28.9 +00.0	05							
06	228 55.2 +00.6	N 24 02.8 +00.2	43 36.5 +02.6	S 22 39.6 +00.0	14 46.9 +02.5	S 21 28.9 +00.0	06							
07	243 55.8 +00.7	N 24 03.0 +00.1	58 39.1 +02.6	S 22 39.6 +00.0	29 49.4 +02.4	S 21 28.9 +00.0	07							
08	258 56.5 +00.7	N 24 03.1 +00.2	73 41.7 +02.7	S 22 39.6 +00.0	44 51.8 +02.5	S 21 28.9 +00.0	08							
09	273 57.2 +00.7	N 24 03.3 +00.1	88 44.4 +02.6	S 22 39.6 +00.0	59 54.3 +02.5	S 21 28.9 +00.0	09							
10	288 57.9 +00.7	N 24 03.4 +00.2	103 47.0 +02.6	S 22 39.6 +00.0	74 56.8 +02.4	S 21 28.9 +00.0	10							
11	303 58.6 +00.7	N 24 03.6 +00.1	118 49.6 +02.6	S 22 39.6 +00.0	89 59.2 +02.5	S 21 28.9 +00.0	11							
12	318 59.3 +00.7	N 24 03.7 +00.1	133 52.2 +02.6	S 22 39.6 +00.0	105 01.7 +02.4	S 21 28.9 +00.0	12							
13	333 60.0 +00.7	N 24 03.8 +00.2	148 54.8 +02.7	S 22 39.6 +00.0	120 04.1 +02.5	S 21 28.9 +00.0	13							
14	349 00.7 +00.6	N 24 04.0 +00.1	163 57.5 +02.6	S 22 39.6 +00.0	135 06.6 +02.5	S 21 28.9 +00.0	14							
15	4 01.3 +00.7	N 24 04.1 +00.2	179 00.1 +02.6	S 22 39.6 -00.1	150 09.1 +02.4	S 21 28.9 +00.0	15							
16	19 02.0 +00.7	N 24 04.3 +00.1	194 02.7 +02.6	S 22 39.5 +00.0	165 11.5 +02.5	S 21 28.9 +00.0	16							
17	34 02.7 +00.7	N 24 04.4 +00.1	209 05.3 +02.6	S 22 39.5 +00.0	180 14.0 +02.4	S 21 28.9 +00.0	17							
18	49 03.4 +00.7	N 24 04.5 +00.2	224 07.9 +02.7	S 22 39.5 +00.0	195 16.4 +02.5	S 21 28.9 +00.0	18							
19	64 04.1 +00.7	N 24 04.7 +00.1	239 10.6 +02.6	S 22 39.5 +00.0	210 18.9 +02.5	S 21 28.9 +00.0	19							
20	79 04.8 +00.7	N 24 04.8 +00.2	254 13.2 +02.6	S 22 39.5 +00.0	225 21.4 +02.4	S 21 28.9 +00.0	20							
21	94 05.5 +00.6	N 24 05.0 +00.1	269 15.8 +02.6	S 22 39.5 +00.0	240 23.8 +02.5	S 21 28.9 +00.0	21							
22	109 06.1 +00.7	N 24 05.1 +00.1	284 18.4 +02.6	S 22 39.5 +00.0	255 26.3 +02.5	S 21 28.9 +00.0	22							
23	124 06.8 +00.7	N 24 05.2 +00.2	299 21.0 +02.7	S 22 39.5 +00.0	270 28.8 +02.4	S 21 28.9 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 282° 282° 282° 282° 282° 282°	Greenwich Culmination Time: 14:43	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 097° 097° 097° 097° 097° 097°	Greenwich Culmination Time: 03:06	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 068° 068° 068° 068° 068° 068°	Greenwich Culmination Time: 05:01

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 45.4 +00.1	N 15 31.4 +00.7	206 12.3 -00.3	N 04 21.1 +01.1	200 51.8 -26.5	N 02 53.8 +11.7	00						
01	195 45.5 +00.0	N 15 32.1 +00.8	221 12.0 -00.4	N 04 22.2 +01.2	215 25.3 -26.5	N 03 05.5 +11.6	01						
02	210 45.5 +00.1	N 15 32.9 +00.7	236 11.6 -00.3	N 04 23.4 +01.1	229 58.8 -26.6	N 03 17.1 +11.7	02						
03	225 45.6 +00.1	N 15 33.6 +00.7	251 11.3 -00.4	N 04 24.5 +01.2	244 32.2 -26.6	N 03 28.8 +11.7	03						
04	240 45.7 +00.0	N 15 34.3 +00.8	266 10.9 -00.3	N 04 25.7 +01.2	259 05.6 -26.6	N 03 40.5 +11.6	04						
05	255 45.7 +00.1	N 15 35.1 +00.7	281 10.6 -00.3	N 04 26.9 +01.1	273 39.0 -26.7	N 03 52.1 +11.7	05						
06	270 45.8 +00.1	N 15 35.8 +00.7	296 10.3 -00.4	N 04 28.0 +01.2	288 12.3 -26.7	N 04 03.8 +11.6	06						
07	285 45.9 +00.0	N 15 36.5 +00.8	311 09.9 -00.3	N 04 29.2 +01.1	302 45.6 -26.7	N 04 15.4 +11.7	07						
08	300 45.9 +00.1	N 15 37.3 +00.7	326 09.6 -00.4	N 04 30.3 +01.2	317 18.9 -26.8	N 04 27.1 +11.6	08						
09	315 46.0 +00.1	N 15 38.0 +00.8	341 09.2 -00.3	N 04 31.5 +01.2	331 52.1 -26.9	N 04 38.7 +11.6	09						
10	330 46.1 +00.0	N 15 38.8 +00.7	356 08.9 -00.4	N 04 32.7 +01.1	346 25.2 -26.8	N 04 50.3 +11.6	10						
11	345 46.1 +00.1	N 15 39.5 +00.7	11 08.5 -00.3	N 04 33.8 +01.2	0 58.4 -26.9	N 05 01.9 +11.6	11						
12	0 46.2 +00.0	N 15 40.2 +00.8	26 08.2 -00.4	N 04 35.0 +01.1	15 31.5 -27.0	N 05 13.5 +11.6	12						
13	15 46.2 +00.1	N 15 41.0 +00.7	41 07.8 -00.3	N 04 36.1 +01.2	30 04.5 -27.0	N 05 25.1 +11.6	13						
14	30 46.3 +00.1	N 15 41.7 +00.7	56 07.5 -00.4	N 04 37.3 +01.2	44 37.5 -27.0	N 05 36.7 +11.5	14						
15	45 46.4 +00.0	N 15 42.4 +00.8	71 07.1 -00.3	N 04 38.5 +01.1	59 10.5 -27.1	N 05 48.2 +11.6	15						
16	60 46.4 +00.1	N 15 43.2 +00.7	86 06.8 -00.4	N 04 39.6 +01.2	73 43.4 -27.1	N 05 59.8 +11.5	16						
17	75 46.5 +00.1	N 15 43.9 +00.7	101 06.4 -00.3	N 04 40.8 +01.1	88 16.3 -27.2	N 06 11.3 +11.5	17						
18	90 46.6 +00.0	N 15 44.6 +00.8	116 06.1 -00.4	N 04 41.9 +01.2	102 49.1 -27.3	N 06 22.8 +11.5	18						
19	105 46.6 +00.1	N 15 45.4 +00.7	131 05.7 -00.3	N 04 43.1 +01.1	117 21.8 -27.2	N 06 34.3 +11.4	19						
20	120 46.7 +00.0	N 15 46.1 +00.7	146 05.4 -00.3	N 04 44.2 +01.2	131 54.6 -27.3	N 06 45.7 +11.5	20						
21	135 46.7 +00.1	N 15 46.8 +00.8	161 05.1 -00.4	N 04 45.4 +01.2	146 27.3 -27.4	N 06 57.2 +11.4	21						
22	150 46.8 +00.1	N 15 47.6 +00.7	176 04.7 -00.3	N 04 46.6 +01.1	160 59.9 -27.4	N 07 08.6 +11.4	22						
23	165 46.9 +00.0	N 15 48.3 +00.7	191 04.4 -00.4	N 04 47.7 +01.2	175 32.5 -27.5	N 07 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 15'1 15'1 15'2 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 320° 320° 320° 320° 319° 319°		SHA 346° 345° 345° 345° 345° 345°		SHA 339° 337° 335° 333° 331° 329°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:15		Greenwich Culmination Time: 10:55								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	139 56.9 +00.7	N 24 14.5 +00.1	317 33.3 +02.7	S 22 39.0 +00.0	288 29.1 +02.5	S 21 29.1 +00.0	00						
01	154 57.6 +00.7	N 24 14.6 +00.1	332 36.0 +02.6	S 22 39.0 +00.0	303 31.6 +02.4	S 21 29.1 +00.0	01						
02	169 58.3 +00.7	N 24 14.7 +00.1	347 38.6 +02.7	S 22 39.0 +00.0	318 34.0 +02.5	S 21 29.1 +00.0	02						
03	184 59.0 +00.7	N 24 14.8 +00.1	2 41.3 +02.6	S 22 39.0 +00.0	333 36.5 +02.5	S 21 29.1 +00.0	03						
04	199 59.7 +00.6	N 24 14.9 +00.1	17 43.9 +02.7	S 22 39.0 +00.0	348 39.0 +02.5	S 21 29.1 +00.0	04						
05	215 00.3 +00.7	N 24 15.0 +00.2	32 46.6 +02.6	S 22 39.0 +00.0	3 41.5 +02.4	S 21 29.1 +00.0	05						
06	230 01.0 +00.7	N 24 15.2 +00.1	47 49.2 +02.7	S 22 39.0 +00.0	18 43.9 +02.5	S 21 29.1 +00.0	06						
07	245 01.7 +00.7	N 24 15.3 +00.1	62 51.9 +02.6	S 22 39.0 +00.0	33 46.4 +02.5	S 21 29.1 +00.0	07						
08	260 02.4 +00.7	N 24 15.4 +00.1	77 54.5 +02.7	S 22 39.0 +00.0	48 48.9 +02.5	S 21 29.1 +00.0	08						
09	275 03.1 +00.7	N 24 15.5 +00.1	92 57.2 +02.6	S 22 39.0 +00.0	63 51.4 +02.5	S 21 29.1 +00.0	09						
10	290 03.8 +00.6	N 24 15.6 +00.1	107 59.8 +02.7	S 22 39.0 +00.0	78 53.9 +02.4	S 21 29.1 +00.0	10						
11	305 04.4 +00.7	N 24 15.7 +00.1	123 02.5 +02.6	S 22 39.0 +00.0	93 56.3 +02.5	S 21 29.1 +00.0	11						
12	320 05.1 +00.7	N 24 15.8 +00.1	138 05.1 +02.7	S 22 39.0 -00.1	108 58.8 +02.5	S 21 29.1 +00.1	12						
13	335 05.8 +00.7	N 24 15.9 +00.1	153 07.8 +02.6	S 22 38.9 +00.0	124 01.3 +02.5	S 21 29.2 +00.0	13						
14	350 06.5 +00.7	N 24 16.0 +00.2	168 10.4 +02.7	S 22 38.9 +00.0	139 03.8 +02.4	S 21 29.2 +00.0	14						
15	5 07.2 +00.7	N 24 16.2 +00.1	183 13.1 +02.6	S 22 38.9 +00.0	154 06.2 +02.5	S 21 29.2 +00.0	15						
16	20 07.9 +00.7	N 24 16.3 +00.1	198 15.7 +02.7	S 22 38.9 +00.0	169 08.7 +02.5	S 21 29.2 +00.0	16						
17	35 08.6 +00.6	N 24 16.4 +00.1	213 18.4 +02.6	S 22 38.9 +00.0	184 11.2 +02.5	S 21 29.2 +00.0	17						
18	50 09.2 +00.7	N 24 16.5 +00.1	228 21.0 +02.7	S 22 38.9 +00.0	199 13.7 +02.5	S 21 29.2 +00.0	18						
19	65 09.9 +00.7	N 24 16.6 +00.1	243 23.7 +02.6	S 22 38.9 +00.0	214 16.2 +02.4	S 21 29.2 +00.0	19						
20	80 10.6 +00.7	N 24 16.7 +00.1	258 26.3 +02.7	S 22 38.9 +00.0	229 18.6 +02.5	S 21 29.2 +00.0	20						
21	95 11.3 +00.7	N 24 16.8 +00.1	273 29.0 +02.6	S 22 38.9 +00.0	244 21.1 +02.5	S 21 29.2 +00.0	21						
22	110 12.0 +00.7	N 24 16.9 +00.1	288 31.6 +02.7	S 22 38.9 +00.0	259 23.6 +02.5	S 21 29.2 +00.0	22						
23	125 12.7 +00.7	N 24 17.0 +00.1	303 34.3 +02.6	S 22 38.9 +00.0	274 26.1 +02.5	S 21 29.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 279° 279° 279° 279° 279° 279°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:39		Greenwich Culmination Time: 02:49		Greenwich Culmination Time: 04:45								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 46.9 +00.1	N 15 49.0 +00.7	206 04.0 -00.3	N 04 48.9 +01.1	190 05.0 -27.5	N 07 31.4 +11.3	00						
01	195 47.0 +00.1	N 15 49.7 +00.8	221 03.7 -00.4	N 04 50.0 +01.2	204 37.5 -27.6	N 07 42.7 +11.4	01						
02	210 47.1 +00.0	N 15 50.5 +00.7	236 03.3 -00.3	N 04 51.2 +01.2	219 09.9 -27.6	N 07 54.1 +11.3	02						
03	225 47.1 +00.1	N 15 51.2 +00.7	251 03.0 -00.4	N 04 52.4 +01.1	233 42.3 -27.7	N 08 05.4 +11.3	03						
04	240 47.2 +00.0	N 15 51.9 +00.8	266 02.6 -00.3	N 04 53.5 +01.2	248 14.6 -27.7	N 08 16.7 +11.2	04						
05	255 47.2 +00.1	N 15 52.7 +00.7	281 02.3 -00.4	N 04 54.7 +01.1	262 46.9 -27.8	N 08 27.9 +11.2	05						
06	270 47.3 +00.0	N 15 53.4 +00.7	296 01.9 -00.3	N 04 55.8 +01.2	277 19.1 -27.9	N 08 39.1 +11.2	06						
07	285 47.3 +00.1	N 15 54.1 +00.7	311 01.6 -00.4	N 04 57.0 +01.1	291 51.2 -27.9	N 08 50.3 +11.2	07						
08	300 47.4 +00.1	N 15 54.8 +00.8	326 01.2 -00.3	N 04 58.1 +01.2	306 23.3 -27.9	N 09 01.5 +11.1	08						
09	315 47.5 +00.0	N 15 55.6 +00.7	341 00.9 -00.4	N 04 59.3 +01.1	320 55.4 -28.0	N 09 12.6 +11.1	09						
10	330 47.5 +00.1	N 15 56.3 +00.7	356 00.5 -00.3	N 05 00.4 +01.2	335 27.4 -28.1	N 09 23.7 +11.1	10						
11	345 47.6 +00.0	N 15 57.0 +00.7	11 00.2 -00.4	N 05 01.6 +01.2	349 59.3 -28.1	N 09 34.8 +11.0	11						
12	0 47.6 +00.1	N 15 57.7 +00.8	25 59.8 -00.3	N 05 02.8 +01.1	4 31.2 -28.2	N 09 45.8 +11.0	12						
13	15 47.7 +00.1	N 15 58.5 +00.7	40 59.5 -00.4	N 05 03.9 +01.2	19 03.0 -28.2	N 09 56.8 +11.0	13						
14	30 47.8 +00.0	N 15 59.2 +00.7	55 59.1 -00.3	N 05 05.1 +01.1	33 34.8 -28.4	N 10 07.8 +10.9	14						
15	45 47.8 +00.1	N 15 59.9 +00.7	70 58.8 -00.4	N 05 06.2 +01.2	48 06.4 -28.3	N 10 18.7 +10.8	15						
16	60 47.9 +00.0	N 16 00.6 +00.8	85 58.4 -00.3	N 05 07.4 +01.1	62 38.1 -28.4	N 10 29.5 +10.9	16						
17	75 47.9 +00.1	N 16 01.4 +00.7	100 58.1 -00.4	N 05 08.5 +01.2	77 09.7 -28.5	N 10 40.4 +10.8	17						
18	90 48.0 +00.0	N 16 02.1 +00.7	115 57.7 -00.3	N 05 09.7 +01.1	91 41.2 -28.6	N 10 51.2 +10.7	18						
19	105 48.0 +00.1	N 16 02.8 +00.7	130 57.4 -00.4	N 05 10.8 +01.2	106 12.6 -28.6	N 11 01.9 +10.7	19						
20	120 48.1 +00.0	N 16 03.5 +00.7	145 57.0 -00.3	N 05 12.0 +01.2	120 44.0 -28.7	N 11 12.6 +10.7	20						
21	135 48.1 +00.1	N 16 04.2 +00.8	160 56.7 -00.4	N 05 13.2 +01.1	135 15.3 -28.7	N 11 23.3 +10.6	21						
22	150 48.2 +00.1	N 16 05.0 +00.7	175 56.3 -00.3	N 05 14.3 +01.2	149 46.6 -28.8	N 11 33.9 +10.6	22						
23	165 48.3 +00.0	N 16 05.7 +00.7	190 56.0 -00.4	N 05 15.5 +01.1	164 17.8 -28.9	N 11 44.5 +10.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'3 15'3 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 56'1 56'2 56'2 56'3 56'4								
	SHA 319° 319° 319° 319° 318° 318°		SHA 344° 344° 344° 344° 344° 343°		SHA 327° 325° 323° 321° 319° 317°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:15		Greenwich Culmination Time: 11:41								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	140 13.4 +00.6	N 24 17.1 +00.1	318 36.9 +02.7	S 22 38.9 +00.0	289 28.6 +02.4	S 21 29.2 +00.0	00						
01	155 14.0 +00.7	N 24 17.2 +00.1	333 39.6 +02.6	S 22 38.9 -00.1	304 31.0 +02.5	S 21 29.2 +00.0	01						
02	170 14.7 +00.7	N 24 17.3 +00.1	348 42.2 +02.7	S 22 38.8 +00.0	319 33.5 +02.5	S 21 29.2 +00.0	02						
03	185 15.4 +00.7	N 24 17.4 +00.1	3 44.9 +02.7	S 22 38.8 +00.0	334 36.0 +02.5	S 21 29.2 +00.0	03						
04	200 16.1 +00.7	N 24 17.5 +00.1	18 47.6 +02.6	S 22 38.8 +00.0	349 38.5 +02.5	S 21 29.2 +00.0	04						
05	215 16.8 +00.7	N 24 17.6 +00.2	33 50.2 +02.7	S 22 38.8 +00.0	4 41.0 +02.5	S 21 29.2 +00.0	05						
06	230 17.5 +00.6	N 24 17.8 +00.1	48 52.9 +02.6	S 22 38.8 +00.0	19 43.5 +02.4	S 21 29.2 +00.0	06						
07	245 18.1 +00.7	N 24 17.9 +00.1	63 55.5 +02.7	S 22 38.8 +00.0	34 45.9 +02.5	S 21 29.2 +00.0	07						
08	260 18.8 +00.7	N 24 18.0 +00.1	78 58.2 +02.6	S 22 38.8 +00.0	49 48.4 +02.5	S 21 29.2 +00.0	08						
09	275 19.5 +00.7	N 24 18.1 +00.1	94 00.8 +02.7	S 22 38.8 +00.0	64 50.9 +02.5	S 21 29.2 +00.0	09						
10	290 20.2 +00.7	N 24 18.2 +00.1	109 03.5 +02.6	S 22 38.8 +00.0	79 53.4 +02.5	S 21 29.2 +00.0	10						
11	305 20.9 +00.7	N 24 18.3 +00.1	124 06.1 +02.7	S 22 38.8 +00.0	94 55.9 +02.5	S 21 29.2 +00.0	11						
12	320 21.6 +00.7	N 24 18.4 +00.1	139 08.8 +02.7	S 22 38.8 +00.0	109 58.4 +02.4	S 21 29.2 +00.1	12						
13	335 22.3 +00.6	N 24 18.5 +00.1	154 11.5 +02.6	S 22 38.8 +00.0	125 00.8 +02.5	S 21 29.3 +00.0	13						
14	350 22.9 +00.7	N 24 18.6 +00.1	169 14.1 +02.7	S 22 38.8 +00.0	140 03.3 +02.5	S 21 29.3 +00.0	14						
15	5 23.6 +00.7	N 24 18.7 +00.1	184 16.8 +02.6	S 22 38.8 -00.1	155 05.8 +02.5	S 21 29.3 +00.0	15						
16	20 24.3 +00.7	N 24 18.8 +00.1	199 19.4 +02.7	S 22 38.7 +00.0	170 08.3 +02.5	S 21 29.3 +00.0	16						
17	35 25.0 +00.7	N 24 18.9 +00.1	214 22.1 +02.6	S 22 38.7 +00.0	185 10.8 +02.5	S 21 29.3 +00.0	17						
18	50 25.7 +00.7	N 24 19.0 +00.1	229 24.7 +02.7	S 22 38.7 +00.0	200 13.3 +02.4	S 21 29.3 +00.0	18						
19	65 26.4 +00.6	N 24 19.1 +00.1	244 27.4 +02.7	S 22 38.7 +00.0	215 15.7 +02.5	S 21 29.3 +00.0	19						
20	80 27.0 +00.7	N 24 19.2 +00.1	259 30.1 +02.6	S 22 38.7 +00.0	230 18.2 +02.5	S 21 29.3 +00.0	20						
21	95 27.7 +00.7	N 24 19.3 +00.1	274 32.7 +02.7	S 22 38.7 +00.0	245 20.7 +02.5	S 21 29.3 +00.0	21						
22	110 28.4 +00.7	N 24 19.4 +00.1	289 35.4 +02.6	S 22 38.7 +00.0	260 23.2 +02.5	S 21 29.3 +00.0	22						
23	125 29.1 +00.7	N 24 19.5 +00.1	304 38.0 +02.7	S 22 38.7 +00.0	275 25.7 +02.5	S 21 29.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 279° 278° 278° 278° 278° 278°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:38		Greenwich Culmination Time: 02:45		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	180 48.3 +00.1	N 16 06.4 +00.7	205 55.6 -00.3	N 05 16.6 +01.2	178 48.9 -29.0	N 11 55.0 +10.5	00						
01	195 48.4 +00.0	N 16 07.1 +00.7	220 55.3 -00.4	N 05 17.8 +01.1	193 19.9 -29.0	N 12 05.5 +10.4	01						
02	210 48.4 +00.1	N 16 07.8 +00.8	235 54.9 -00.4	N 05 18.9 +01.2	207 50.9 -29.0	N 12 15.9 +10.4	02						
03	225 48.5 +00.0	N 16 08.6 +00.7	250 54.5 -00.3	N 05 20.1 +01.1	222 21.9 -29.2	N 12 26.3 +10.3	03						
04	240 48.5 +00.1	N 16 09.3 +00.7	265 54.2 -00.4	N 05 21.2 +01.2	236 52.7 -29.2	N 12 36.6 +10.3	04						
05	255 48.6 +00.0	N 16 10.0 +00.7	280 53.8 -00.3	N 05 22.4 +01.1	251 23.5 -29.3	N 12 46.9 +10.2	05						
06	270 48.6 +00.1	N 16 10.7 +00.7	295 53.5 -00.4	N 05 23.5 +01.2	265 54.2 -29.3	N 12 57.1 +10.2	06						
07	285 48.7 +00.0	N 16 11.4 +00.7	310 53.1 -00.3	N 05 24.7 +01.1	280 24.9 -29.4	N 13 07.3 +10.1	07						
08	300 48.7 +00.1	N 16 12.1 +00.8	325 52.8 -00.4	N 05 25.8 +01.2	294 55.5 -29.5	N 13 17.4 +10.0	08						
09	315 48.8 +00.0	N 16 12.9 +00.7	340 52.4 -00.3	N 05 27.0 +01.2	309 26.0 -29.5	N 13 27.4 +10.0	09						
10	330 48.8 +00.1	N 16 13.6 +00.7	355 52.1 -00.4	N 05 28.2 +01.1	323 56.5 -29.7	N 13 37.4 +09.9	10						
11	345 48.9 +00.1	N 16 14.3 +00.7	10 51.7 -00.3	N 05 29.3 +01.2	338 26.8 -29.7	N 13 47.3 +09.9	11						
12	0 49.0 +00.0	N 16 15.0 +00.7	25 51.4 -00.4	N 05 30.5 +01.1	352 57.1 -29.7	N 13 57.2 +09.8	12						
13	15 49.0 +00.1	N 16 15.7 +00.7	40 51.0 -00.3	N 05 31.6 +01.2	7 27.4 -29.8	N 14 07.0 +09.7	13						
14	30 49.1 +00.0	N 16 16.4 +00.7	55 50.7 -00.4	N 05 32.8 +01.1	21 57.6 -29.9	N 14 16.7 +09.7	14						
15	45 49.1 +00.1	N 16 17.1 +00.8	70 50.3 -00.4	N 05 33.9 +01.2	36 27.7 -30.0	N 14 26.4 +09.6	15						
16	60 49.2 +00.0	N 16 17.9 +00.7	85 49.9 -00.3	N 05 35.1 +01.1	50 57.7 -30.1	N 14 36.0 +09.5	16						
17	75 49.2 +00.1	N 16 18.6 +00.7	100 49.6 -00.4	N 05 36.2 +01.2	65 27.6 -30.1	N 14 45.5 +09.5	17						
18	90 49.3 +00.0	N 16 19.3 +00.7	115 49.2 -00.3	N 05 37.4 +01.1	79 57.5 -30.2	N 14 55.0 +09.4	18						
19	105 49.3 +00.1	N 16 20.0 +00.7	130 48.9 -00.4	N 05 38.5 +01.2	94 27.3 -30.2	N 15 04.4 +09.3	19						
20	120 49.4 +00.0	N 16 20.7 +00.7	145 48.5 -00.3	N 05 39.7 +01.1	108 57.1 -30.4	N 15 13.7 +09.3	20						
21	135 49.4 +00.1	N 16 21.4 +00.7	160 48.2 -00.4	N 05 40.8 +01.2	123 26.7 -30.4	N 15 23.0 +09.2	21						
22	150 49.5 +00.0	N 16 22.1 +00.7	175 47.8 -00.3	N 05 42.0 +01.1	137 56.3 -30.5	N 15 32.2 +09.1	22						
23	165 49.5 +00.1	N 16 22.8 +00.7	190 47.5 -00.4	N 05 43.1 +01.2	152 25.8 -30.5	N 15 41.3 +09.0	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 15'4 15'4 15'4 15'5 15'5 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'5 56'6 56'7 56'8 56'9 57'0								
	SHA 318° 318° 318° 318° 318° 317°		SHA 343° 343° 343° 343° 343° 342°		SHA 315° 313° 311° 309° 307° 304°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:16		Greenwich Culmination Time: 12:29								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	140 29.8 +00.7	N 24 19.6 +00.1	319 40.7 +02.7	S 22 38.7 +00.0	290 28.2 +02.4	S 21 29.3 +00.0	00						
01	155 30.5 +00.7	N 24 19.7 +00.1	334 43.4 +02.6	S 22 38.7 +00.0	305 30.6 +02.5	S 21 29.3 +00.0	01						
02	170 31.2 +00.6	N 24 19.8 +00.1	349 46.0 +02.7	S 22 38.7 +00.0	320 33.1 +02.5	S 21 29.3 +00.0	02						
03	185 31.8 +00.7	N 24 19.9 +00.1	4 48.7 +02.7	S 22 38.7 +00.0	335 35.6 +02.5	S 21 29.3 +00.0	03						
04	200 32.5 +00.7	N 24 20.0 +00.1	19 51.4 +02.6	S 22 38.7 -00.1	350 38.1 +02.5	S 21 29.3 +00.0	04						
05	215 33.2 +00.7	N 24 20.1 +00.0	34 54.0 +02.7	S 22 38.6 +00.0	5 40.6 +02.5	S 21 29.3 +00.0	05						
06	230 33.9 +00.7	N 24 20.1 +00.1	49 56.7 +02.6	S 22 38.6 +00.0	20 43.1 +02.5	S 21 29.3 +00.0	06						
07	245 34.6 +00.7	N 24 20.2 +00.1	64 59.3 +02.7	S 22 38.6 +00.0	35 45.6 +02.5	S 21 29.3 +00.0	07						
08	260 35.3 +00.6	N 24 20.3 +00.1	80 02.0 +02.7	S 22 38.6 +00.0	50 48.1 +02.4	S 21 29.3 +00.0	08						
09	275 35.9 +00.7	N 24 20.4 +00.1	95 04.7 +02.6	S 22 38.6 +00.0	65 50.5 +02.5	S 21 29.3 +00.1	09						
10	290 36.6 +00.7	N 24 20.5 +00.1	110 07.3 +02.7	S 22 38.6 +00.0	80 53.0 +02.5	S 21 29.4 +00.0	10						
11	305 37.3 +00.7	N 24 20.6 +00.1	125 10.0 +02.7	S 22 38.6 +00.0	95 55.5 +02.5	S 21 29.4 +00.0	11						
12	320 38.0 +00.7	N 24 20.7 +00.1	140 12.7 +02.6	S 22 38.6 +00.0	110 58.0 +02.5	S 21 29.4 +00.0	12						
13	335 38.7 +00.7	N 24 20.8 +00.1	155 15.3 +02.7	S 22 38.6 +00.0	126 00.5 +02.5	S 21 29.4 +00.0	13						
14	350 39.4 +00.7	N 24 20.9 +00.1	170 18.0 +02.7	S 22 38.6 +00.0	141 03.0 +02.5	S 21 29.4 +00.0	14						
15	5 40.1 +00.6	N 24 21.0 +00.1	185 20.7 +02.6	S 22 38.6 +00.0	156 05.5 +02.5	S 21 29.4 +00.0	15						
16	20 40.7 +00.7	N 24 21.1 +00.1	200 23.3 +02.7	S 22 38.6 +00.0	171 08.0 +02.4	S 21 29.4 +00.0	16						
17	35 41.4 +00.7	N 24 21.2 +00.1	215 26.0 +02.6	S 22 38.6 -00.1	186 10.4 +02.5	S 21 29.4 +00.0	17						
18	50 42.1 +00.7	N 24 21.3 +00.1	230 28.6 +02.7	S 22 38.5 +00.0	201 12.9 +02.5	S 21 29.4 +00.0	18						
19	65 42.8 +00.7	N 24 21.4 +00.1	245 31.3 +02.7	S 22 38.5 +00.0	216 15.4 +02.5	S 21 29.4 +00.0	19						
20	80 43.5 +00.7	N 24 21.5 +00.0	260 34.0 +02.6	S 22 38.5 +00.0	231 17.9 +02.5	S 21 29.4 +00.0	20						
21	95 44.2 +00.6	N 24 21.5 +00.1	275 36.6 +02.7	S 22 38.5 +00.0	246 20.4 +02.5	S 21 29.4 +00.0	21						
22	110 44.8 +00.7	N 24 21.6 +00.1	290 39.3 +02.7	S 22 38.5 +00.0	261 22.9 +02.5	S 21 29.4 +00.0	22						
23	125 45.5 +00.7	N 24 21.7 +00.1	305 42.0 +02.6	S 22 38.5 +00.0	276 25.4 +02.5	S 21 29.4 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 278° 278° 278° 278° 277° 277°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:37		Greenwich Culmination Time: 02:40		Greenwich Culmination Time: 04:37								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 50.7 +00.0	N 16 40.4 +00.7	205 38.5 -00.4	N 06 11.8 +01.2	154 19.9 -32.4	N 19 01.6 +06.8	00						
01	195 50.7 +00.0	N 16 41.1 +00.7	220 38.1 -00.3	N 06 13.0 +01.1	168 47.5 -32.4	N 19 08.4 +06.7	01						
02	210 50.7 +00.1	N 16 41.8 +00.7	235 37.8 -00.4	N 06 14.1 +01.2	183 15.1 -32.6	N 19 15.1 +06.5	02						
03	225 50.8 +00.0	N 16 42.5 +00.7	250 37.4 -00.3	N 06 15.3 +01.1	197 42.5 -32.5	N 19 21.6 +06.5	03						
04	240 50.8 +00.1	N 16 43.2 +00.7	265 37.1 -00.4	N 06 16.4 +01.1	212 10.0 -32.7	N 19 28.1 +06.3	04						
05	255 50.9 +00.0	N 16 43.9 +00.6	280 36.7 -00.4	N 06 17.5 +01.2	226 37.3 -32.7	N 19 34.4 +06.3	05						
06	270 50.9 +00.1	N 16 44.5 +00.7	295 36.3 -00.3	N 06 18.7 +01.1	241 04.6 -32.8	N 19 40.7 +06.1	06						
07	285 51.0 +00.0	N 16 45.2 +00.7	310 36.0 -00.4	N 06 19.8 +01.2	255 31.8 -32.9	N 19 46.8 +06.0	07						
08	300 51.0 +00.0	N 16 45.9 +00.7	325 35.6 -00.4	N 06 21.0 +01.1	269 58.9 -32.9	N 19 52.8 +05.9	08						
09	315 51.0 +00.1	N 16 46.6 +00.7	340 35.2 -00.3	N 06 22.1 +01.2	284 26.0 -33.0	N 19 58.7 +05.8	09						
10	330 51.1 +00.0	N 16 47.3 +00.7	355 34.9 -00.4	N 06 23.3 +01.1	298 53.0 -33.0	N 20 04.5 +05.7	10						
11	345 51.1 +00.1	N 16 48.0 +00.7	10 34.5 -00.3	N 06 24.4 +01.2	313 20.0 -33.1	N 20 10.2 +05.6	11						
12	0 51.2 +00.0	N 16 48.7 +00.7	25 34.2 -00.4	N 06 25.6 +01.1	327 46.9 -33.2	N 20 15.8 +05.4	12						
13	15 51.2 +00.0	N 16 49.4 +00.7	40 33.8 -00.4	N 06 26.7 +01.1	342 13.7 -33.2	N 20 21.2 +05.4	13						
14	30 51.2 +00.1	N 16 50.1 +00.7	55 33.4 -00.3	N 06 27.8 +01.2	356 40.5 -33.3	N 20 26.6 +05.2	14						
15	45 51.3 +00.0	N 16 50.8 +00.7	70 33.1 -00.4	N 06 29.0 +01.1	11 07.2 -33.4	N 20 31.8 +05.1	15						
16	60 51.3 +00.1	N 16 51.5 +00.6	85 32.7 -00.4	N 06 30.1 +01.2	25 33.8 -33.4	N 20 36.9 +05.0	16						
17	75 51.4 +00.0	N 16 52.1 +00.7	100 32.3 -00.3	N 06 31.3 +01.1	40 00.4 -33.5	N 20 41.9 +04.8	17						
18	90 51.4 +00.0	N 16 52.8 +00.7	115 32.0 -00.4	N 06 32.4 +01.1	54 26.9 -33.6	N 20 46.7 +04.8	18						
19	105 51.4 +00.1	N 16 53.5 +00.7	130 31.6 -00.4	N 06 33.5 +01.2	68 53.3 -33.6	N 20 51.5 +04.6	19						
20	120 51.5 +00.0	N 16 54.2 +00.7	145 31.2 -00.3	N 06 34.7 +01.1	83 19.7 -33.6	N 20 56.1 +04.5	20						
21	135 51.5 +00.1	N 16 54.9 +00.7	160 30.9 -00.4	N 06 35.8 +01.2	97 46.1 -33.7	N 21 00.6 +04.3	21						
22	150 51.6 +00.0	N 16 55.6 +00.7	175 30.5 -00.4	N 06 37.0 +01.1	112 12.4 -33.8	N 21 04.9 +04.3	22						
23	165 51.6 +00.0	N 16 56.3 +00.6	190 30.1 -00.3	N 06 38.1 +01.2	126 38.6 -33.8	N 21 09.2 +04.1	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 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'7 15'7 15'7 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'6 57'6 57'7 57'8 57'9 57'9								
	SHA 316° 316° 316° 316° 316° 315°		SHA 341° 341° 341° 340° 340° 340°		SHA 289° 286° 284° 282° 279° 277°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:17		Greenwich Culmination Time: 14:13								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	141 02.6 +00.7	N 24 23.9 +00.0	321 48.8 +02.6	S 22 38.3 +00.0	292 27.7 +02.5	S 21 29.6 +00.0	00						
01	156 03.3 +00.7	N 24 23.9 +00.1	336 51.4 +02.7	S 22 38.3 +00.0	307 30.2 +02.5	S 21 29.6 +00.0	01						
02	171 04.0 +00.7	N 24 24.0 +00.1	351 54.1 +02.7	S 22 38.3 +00.0	322 32.7 +02.4	S 21 29.6 +00.0	02						
03	186 04.7 +00.7	N 24 24.1 +00.1	6 56.8 +02.7	S 22 38.3 +00.0	337 35.1 +02.5	S 21 29.6 +00.0	03						
04	201 05.4 +00.7	N 24 24.2 +00.1	21 59.5 +02.6	S 22 38.3 +00.0	352 37.6 +02.5	S 21 29.6 +00.0	04						
05	216 06.1 +00.6	N 24 24.3 +00.0	37 02.1 +02.7	S 22 38.3 +00.0	7 40.1 +02.5	S 21 29.6 +00.0	05						
06	231 06.7 +00.7	N 24 24.3 +00.1	52 04.8 +02.7	S 22 38.3 -00.1	22 42.6 +02.5	S 21 29.6 +00.0	06						
07	246 07.4 +00.7	N 24 24.4 +00.1	67 07.5 +02.7	S 22 38.2 +00.0	37 45.1 +02.5	S 21 29.6 +00.0	07						
08	261 08.1 +00.7	N 24 24.5 +00.1	82 10.2 +02.6	S 22 38.2 +00.0	52 47.6 +02.5	S 21 29.6 +00.0	08						
09	276 08.8 +00.7	N 24 24.6 +00.1	97 12.8 +02.7	S 22 38.2 +00.0	67 50.1 +02.5	S 21 29.6 +00.0	09						
10	291 09.5 +00.7	N 24 24.7 +00.0	112 15.5 +02.7	S 22 38.2 +00.0	82 52.6 +02.5	S 21 29.6 +00.0	10						
11	306 10.2 +00.6	N 24 24.7 +00.1	127 18.2 +02.7	S 22 38.2 +00.0	97 55.1 +02.5	S 21 29.6 +00.0	11						
12	321 10.8 +00.7	N 24 24.8 +00.1	142 20.9 +02.7	S 22 38.2 +00.0	112 57.6 +02.5	S 21 29.6 +00.0	12						
13	336 11.5 +00.7	N 24 24.9 +00.1	157 23.6 +02.6	S 22 38.2 +00.0	128 00.1 +02.5	S 21 29.6 +00.1	13						
14	351 12.2 +00.7	N 24 25.0 +00.0	172 26.2 +02.7	S 22 38.2 +00.0	143 02.6 +02.5	S 21 29.7 +00.0	14						
15	6 12.9 +00.7	N 24 25.0 +00.1	187 28.9 +02.7	S 22 38.2 +00.0	158 05.1 +02.5	S 21 29.7 +00.0	15						
16	21 13.6 +00.7	N 24 25.1 +00.1	202 31.6 +02.7	S 22 38.2 +00.0	173 07.6 +02.5	S 21 29.7 +00.0	16						
17	36 14.3 +00.7	N 24 25.2 +00.1	217 34.3 +02.7	S 22 38.2 -00.1	188 10.1 +02.5	S 21 29.7 +00.0	17						
18	51 15.0 +00.6	N 24 25.3 +00.1	232 37.0 +02.6	S 22 38.1 +00.0	203 12.6 +02.5	S 21 29.7 +00.0	18						
19	66 15.6 +00.7	N 24 25.4 +00.0	247 39.6 +02.7	S 22 38.1 +00.0	218 15.1 +02.5	S 21 29.7 +00.0	19						
20	81 16.3 +00.7	N 24 25.4 +00.1	262 42.3 +02.7	S 22 38.1 +00.0	233 17.6 +02.5	S 21 29.7 +00.0	20						
21	96 17.0 +00.7	N 24 25.5 +00.1	277 45.0 +02.7	S 22 38.1 +00.0	248 20.1 +02.5	S 21 29.7 +00.0	21						
22	111 17.7 +00.7	N 24 25.6 +00.0	292 47.7 +02.7	S 22 38.1 +00.0	263 22.6 +02.5	S 21 29.7 +00.0	22						
23	126 18.4 +00.7	N 24 25.6 +00.1	307 50.4 +02.6	S 22 38.1 +00.0	278 25.1 +02.5	S 21 29.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		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 276° 276° 276° 276° 276° 276°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:35		Greenwich Culmination Time: 02:32		Greenwich Culmination Time: 04:29								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 12%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 51.6 +00.1	N 16 56.9 +00.7	205 29.8 -00.4	N 06 39.3 +01.1	141 04.8 -33.9	N 21 13.3 +04.0							
01	195 51.7 +00.0	N 16 57.6 +00.7	220 29.4 -00.3	N 06 40.4 +01.1	155 30.9 -33.9	N 21 17.3 +03.8							
02	210 51.7 +00.0	N 16 58.3 +00.7	235 29.1 -00.4	N 06 41.5 +01.2	169 57.0 -34.0	N 21 21.1 +03.8							
03	225 51.7 +00.1	N 16 59.0 +00.7	250 28.7 -00.4	N 06 42.7 +01.1	184 23.0 -34.0	N 21 24.9 +03.6							
04	240 51.8 +00.0	N 16 59.7 +00.7	265 28.3 -00.3	N 06 43.8 +01.2	198 49.0 -34.1	N 21 28.5 +03.4							
05	255 51.8 +00.0	N 17 00.4 +00.6	280 28.0 -00.4	N 06 45.0 +01.1	213 14.9 -34.1	N 21 31.9 +03.4							
06	270 51.8 +00.1	N 17 01.0 +00.7	295 27.6 -00.4	N 06 46.1 +01.1	227 40.8 -34.2	N 21 35.3 +03.2							
07	285 51.9 +00.0	N 17 01.7 +00.7	310 27.2 -00.3	N 06 47.2 +01.2	242 06.6 -34.2	N 21 38.5 +03.0							
08	300 51.9 +00.1	N 17 02.4 +00.7	325 26.9 -00.4	N 06 48.4 +01.1	256 32.4 -34.3	N 21 41.5 +03.0							
09	315 52.0 +00.0	N 17 03.1 +00.7	340 26.5 -00.4	N 06 49.5 +01.1	270 58.1 -34.3	N 21 44.5 +02.8							
10	330 52.0 +00.0	N 17 03.8 +00.6	355 26.1 -00.4	N 06 50.6 +01.2	285 23.8 -34.3	N 21 47.3 +02.7							
11	345 52.0 +00.1	N 17 04.4 +00.7	10 25.7 -00.3	N 06 51.8 +01.1	299 49.5 -34.4	N 21 50.0 +02.5							
12	0 52.1 +00.0	N 17 05.1 +00.7	25 25.4 -00.4	N 06 52.9 +01.2	314 15.1 -34.5	N 21 52.5 +02.4							
13	15 52.1 +00.0	N 17 05.8 +00.7	40 25.0 -00.4	N 06 54.1 +01.1	328 40.6 -34.4	N 21 54.9 +02.3							
14	30 52.1 +00.1	N 17 06.5 +00.7	55 24.6 -00.3	N 06 55.2 +01.1	343 06.2 -34.5	N 21 57.2 +02.1							
15	45 52.2 +00.0	N 17 07.2 +00.6	70 24.3 -00.4	N 06 56.3 +01.2	357 31.7 -34.6	N 21 59.3 +02.0							
16	60 52.2 +00.0	N 17 07.8 +00.7	85 23.9 -00.4	N 06 57.5 +01.1	11 57.1 -34.5	N 22 01.3 +01.9							
17	75 52.2 +00.1	N 17 08.5 +00.7	100 23.5 -00.3	N 06 58.6 +01.1	26 22.6 -34.6	N 22 03.2 +01.7							
18	90 52.3 +00.0	N 17 09.2 +00.7	115 23.2 -00.4	N 06 59.7 +01.2	40 48.0 -34.7	N 22 04.9 +01.6							
19	105 52.3 +00.0	N 17 09.9 +00.6	130 22.8 -00.4	N 07 00.9 +01.1	55 13.3 -34.7	N 22 06.5 +01.4							
20	120 52.3 +00.1	N 17 10.5 +00.7	145 22.4 -00.3	N 07 02.0 +01.2	69 38.6 -34.7	N 22 07.9 +01.3							
21	135 52.4 +00.0	N 17 11.2 +00.7	160 22.1 -00.4	N 07 03.2 +01.1	84 03.9 -34.7	N 22 09.2 +01.2							
22	150 52.4 +00.0	N 17 11.9 +00.7	175 21.7 -00.4	N 07 04.3 +01.1	98 29.2 -34.8	N 22 10.4 +01.0							
23	165 52.4 +00.1	N 17 12.6 +00.6	190 21.3 -00.4	N 07 05.4 +01.2	112 54.4 -34.7	N 22 11.4 +00.9							
	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 15'8 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 58'0 58'1 58'2 58'2 58'3 58'4								
	SHA 315° 315° 315° 315° 315° 314°		SHA 340° 340° 339° 339° 339° 339°		SHA 274° 272° 269° 267° 265° 262°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:18		Greenwich Culmination Time: 15:10								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	141 19.1 +00.6	N 24 25.7 +00.1	322 53.0 +02.7	S 22 38.1 +00.0	293 27.6 +02.5	S 21 29.7 +00.0							
01	156 19.7 +00.7	N 24 25.8 +00.1	337 55.7 +02.7	S 22 38.1 +00.0	308 30.1 +02.5	S 21 29.7 +00.0							
02	171 20.4 +00.7	N 24 25.9 +00.0	352 58.4 +02.7	S 22 38.1 +00.0	323 32.6 +02.5	S 21 29.7 +00.0							
03	186 21.1 +00.7	N 24 25.9 +00.1	8 01.1 +02.7	S 22 38.1 +00.0	338 35.1 +02.5	S 21 29.7 +00.0							
04	201 21.8 +00.7	N 24 26.0 +00.1	23 03.8 +02.7	S 22 38.1 +00.0	353 37.6 +02.5	S 21 29.7 +00.1							
05	216 22.5 +00.7	N 24 26.1 +00.1	38 06.5 +02.6	S 22 38.1 -00.1	8 40.1 +02.5	S 21 29.8 +00.0							
06	231 23.2 +00.6	N 24 26.2 +00.0	53 09.1 +02.7	S 22 38.0 +00.0	23 42.6 +02.5	S 21 29.8 +00.0							
07	246 23.8 +00.7	N 24 26.2 +00.1	68 11.8 +02.7	S 22 38.0 +00.0	38 45.1 +02.5	S 21 29.8 +00.0							
08	261 24.5 +00.7	N 24 26.3 +00.1	83 14.5 +02.7	S 22 38.0 +00.0	53 47.6 +02.5	S 21 29.8 +00.0							
09	276 25.2 +00.7	N 24 26.4 +00.0	98 17.2 +02.7	S 22 38.0 +00.0	68 50.1 +02.5	S 21 29.8 +00.0							
10	291 25.9 +00.7	N 24 26.4 +00.1	113 19.9 +02.7	S 22 38.0 +00.0	83 52.6 +02.5	S 21 29.8 +00.0							
11	306 26.6 +00.7	N 24 26.5 +00.1	128 22.6 +02.6	S 22 38.0 +00.0	98 55.1 +02.5	S 21 29.8 +00.0							
12	321 27.3 +00.7	N 24 26.6 +00.0	143 25.2 +02.7	S 22 38.0 +00.0	113 57.6 +02.5	S 21 29.8 +00.0							
13	336 28.0 +00.6	N 24 26.6 +00.1	158 27.9 +02.7	S 22 38.0 +00.0	129 00.1 +02.5	S 21 29.8 +00.0							
14	351 28.6 +00.7	N 24 26.7 +00.1	173 30.6 +02.7	S 22 38.0 +00.0	144 02.6 +02.5	S 21 29.8 +00.0							
15	6 29.3 +00.7	N 24 26.8 +00.0	188 33.3 +02.7	S 22 38.0 +00.0	159 05.1 +02.5	S 21 29.8 +00.0							
16	21 30.0 +00.7	N 24 26.8 +00.1	203 36.0 +02.7	S 22 38.0 -00.1	174 07.6 +02.5	S 21 29.8 +00.0							
17	36 30.7 +00.7	N 24 26.9 +00.1	218 38.7 +02.7	S 22 37.9 +00.0	189 10.1 +02.5	S 21 29.8 +00.0							
18	51 31.4 +00.7	N 24 27.0 +00.1	233 41.4 +02.6	S 22 37.9 +00.0	204 12.6 +02.5	S 21 29.8 +00.0							
19	66 32.1 +00.6	N 24 27.1 +00.0	248 44.0 +02.7	S 22 37.9 +00.0	219 15.1 +02.5	S 21 29.8 +00.1							
20	81 32.7 +00.7	N 24 27.1 +00.1	263 46.7 +02.7	S 22 37.9 +00.0	234 17.6 +02.5	S 21 29.9 +00.0							
21	96 33.4 +00.7	N 24 27.2 +00.1	278 49.4 +02.7	S 22 37.9 +00.0	249 20.1 +02.5	S 21 29.9 +00.0							
22	111 34.1 +00.7	N 24 27.3 +00.0	293 52.1 +02.7	S 22 37.9 +00.0	264 22.6 +02.5	S 21 29.9 +00.0							
23	126 34.8 +00.7	N 24 27.3 +00.1	308 54.8 +02.7	S 22 37.9 +00.0	279 25.1 +02.5	S 21 29.9 +00.0							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		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 276° 276° 275° 275° 275° 275°		SHA 097° 097° 097° 097° 097° 097°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:34		Greenwich Culmination Time: 02:28		Greenwich Culmination Time: 04:25								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 52.5 +00.0	N 17 13.2 +00.7	205 20.9 -00.3	N 07 06.6 +01.1	127 19.7 -34.8	N 22 12.3 +00.8	00						
01	195 52.5 +00.0	N 17 13.9 +00.7	220 20.6 -00.4	N 07 07.7 +01.1	141 44.9 -34.9	N 22 13.1 +00.6	01						
02	210 52.5 +00.1	N 17 14.6 +00.7	235 20.2 -00.4	N 07 08.8 +01.2	156 10.0 -34.8	N 22 13.7 +00.4	02						
03	225 52.6 +00.0	N 17 15.3 +00.6	250 19.8 -00.3	N 07 10.0 +01.1	170 35.2 -34.9	N 22 14.1 +00.4	03						
04	240 52.6 +00.0	N 17 15.9 +00.7	265 19.5 -00.4	N 07 11.1 +01.1	185 00.3 -34.9	N 22 14.5 +00.1	04						
05	255 52.6 +00.0	N 17 16.6 +00.7	280 19.1 -00.4	N 07 12.2 +01.2	199 25.4 -34.9	N 22 14.6 +00.1	05						
06	270 52.6 +00.1	N 17 17.3 +00.6	295 18.7 -00.4	N 07 13.4 +01.1	213 50.5 -34.9	N 22 14.7 -00.1	06						
07	285 52.7 +00.0	N 17 17.9 +00.7	310 18.3 -00.3	N 07 14.5 +01.1	228 15.6 -35.0	N 22 14.6 -00.3	07						
08	300 52.7 +00.0	N 17 18.6 +00.7	325 18.0 -00.4	N 07 15.6 +01.2	242 40.6 -34.9	N 22 14.3 -00.4	08						
09	315 52.7 +00.1	N 17 19.3 +00.6	340 17.6 -00.4	N 07 16.8 +01.1	257 05.7 -35.0	N 22 13.9 -00.5	09						
10	330 52.8 +00.0	N 17 19.9 +00.7	355 17.2 -00.3	N 07 17.9 +01.1	271 30.7 -34.9	N 22 13.4 -00.7	10						
11	345 52.8 +00.0	N 17 20.6 +00.7	10 16.9 -00.4	N 07 19.0 +01.2	285 55.8 -35.0	N 22 12.7 -00.8	11						
12	0 52.8 +00.0	N 17 21.3 +00.6	25 16.5 -00.4	N 07 20.2 +01.1	300 20.8 -35.0	N 22 11.9 -01.0	12						
13	15 52.8 +00.1	N 17 21.9 +00.7	40 16.1 -00.4	N 07 21.3 +01.1	314 45.8 -35.0	N 22 10.9 -01.1	13						
14	30 52.9 +00.0	N 17 22.6 +00.7	55 15.7 -00.3	N 07 22.4 +01.2	329 10.8 -35.0	N 22 09.8 -01.2	14						
15	45 52.9 +00.0	N 17 23.3 +00.6	70 15.4 -00.4	N 07 23.6 +01.1	343 35.8 -35.0	N 22 08.6 -01.4	15						
16	60 52.9 +00.1	N 17 23.9 +00.7	85 15.0 -00.4	N 07 24.7 +01.1	358 00.8 -35.0	N 22 07.2 -01.5	16						
17	75 53.0 +00.0	N 17 24.6 +00.7	100 14.6 -00.4	N 07 25.8 +01.2	12 25.8 -35.0	N 22 05.7 -01.7	17						
18	90 53.0 +00.0	N 17 25.3 +00.6	115 14.2 -00.3	N 07 27.0 +01.1	26 50.8 -35.1	N 22 04.0 -01.8	18						
19	105 53.0 +00.0	N 17 25.9 +00.7	130 13.9 -00.4	N 07 28.1 +01.1	41 15.7 -35.0	N 22 02.2 -02.0	19						
20	120 53.0 +00.1	N 17 26.6 +00.7	145 13.5 -00.4	N 07 29.2 +01.1	55 40.7 -35.0	N 22 00.2 -02.1	20						
21	135 53.1 +00.0	N 17 27.3 +00.6	160 13.1 -00.4	N 07 30.3 +01.2	70 05.7 -35.0	N 21 58.1 -02.2	21						
22	150 53.1 +00.0	N 17 27.9 +00.7	175 12.7 -00.3	N 07 31.5 +01.1	84 30.7 -35.0	N 21 55.9 -02.4	22						
23	165 53.1 +00.0	N 17 28.6 +00.6	190 12.4 -00.4	N 07 32.6 +01.1	98 55.7 -34.9	N 21 53.5 -02.5	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 15'9 15'9 15'9 16'0 16'0 16'0								
	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 58'4 58'5 58'5 58'6 58'7 58'7								
	SHA 314° 314° 314° 314° 314° 313°		SHA 339° 339° 338° 338° 338° 338°		SHA 260° 257° 255° 252° 250° 247°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:18		Greenwich Culmination Time: 16:08								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	141 35.5 +00.7	N 24 27.4 +00.0	323 57.5 +02.7	S 22 37.9 +00.0	294 27.6 +02.5	S 21 29.9 +00.0	00						
01	156 36.2 +00.6	N 24 27.4 +00.1	339 00.2 +02.7	S 22 37.9 +00.0	309 30.1 +02.5	S 21 29.9 +00.0	01						
02	171 36.8 +00.7	N 24 27.5 +00.1	354 02.9 +02.7	S 22 37.9 +00.0	324 32.6 +02.5	S 21 29.9 +00.0	02						
03	186 37.5 +00.7	N 24 27.6 +00.0	9 05.6 +02.6	S 22 37.9 -00.1	339 35.1 +02.5	S 21 29.9 +00.0	03						
04	201 38.2 +00.7	N 24 27.6 +00.1	24 08.2 +02.7	S 22 37.8 +00.0	354 37.6 +02.5	S 21 29.9 +00.0	04						
05	216 38.9 +00.7	N 24 27.7 +00.1	39 10.9 +02.7	S 22 37.8 +00.0	9 40.1 +02.5	S 21 29.9 +00.0	05						
06	231 39.6 +00.7	N 24 27.8 +00.0	54 13.6 +02.7	S 22 37.8 +00.0	24 42.6 +02.5	S 21 29.9 +00.0	06						
07	246 40.3 +00.7	N 24 27.8 +00.1	69 16.3 +02.7	S 22 37.8 +00.0	39 45.1 +02.5	S 21 29.9 +00.0	07						
08	261 41.0 +00.6	N 24 27.9 +00.1	84 19.0 +02.7	S 22 37.8 +00.0	54 47.6 +02.5	S 21 29.9 +00.1	08						
09	276 41.6 +00.7	N 24 28.0 +00.0	99 21.7 +02.7	S 22 37.8 +00.0	69 50.1 +02.5	S 21 30.0 +00.0	09						
10	291 42.3 +00.7	N 24 28.0 +00.1	114 24.4 +02.7	S 22 37.8 +00.0	84 52.6 +02.5	S 21 30.0 +00.0	10						
11	306 43.0 +00.7	N 24 28.1 +00.0	129 27.1 +02.7	S 22 37.8 +00.0	99 55.1 +02.5	S 21 30.0 +00.0	11						
12	321 43.7 +00.7	N 24 28.1 +00.1	144 29.8 +02.7	S 22 37.8 +00.0	114 57.6 +02.5	S 21 30.0 +00.0	12						
13	336 44.4 +00.7	N 24 28.2 +00.1	159 32.5 +02.7	S 22 37.8 +00.0	130 00.1 +02.5	S 21 30.0 +00.0	13						
14	351 45.1 +00.6	N 24 28.3 +00.0	174 35.2 +02.6	S 22 37.8 -00.1	145 02.6 +02.5	S 21 30.0 +00.0	14						
15	6 45.7 +00.7	N 24 28.3 +00.1	189 37.8 +02.7	S 22 37.7 +00.0	160 05.1 +02.5	S 21 30.0 +00.0	15						
16	21 46.4 +00.7	N 24 28.4 +00.0	204 40.5 +02.7	S 22 37.7 +00.0	175 07.6 +02.5	S 21 30.0 +00.0	16						
17	36 47.1 +00.7	N 24 28.4 +00.1	219 43.2 +02.7	S 22 37.7 +00.0	190 10.1 +02.5	S 21 30.0 +00.0	17						
18	51 47.8 +00.7	N 24 28.5 +00.1	234 45.9 +02.7	S 22 37.7 +00.0	205 12.6 +02.5	S 21 30.0 +00.0	18						
19	66 48.5 +00.7	N 24 28.6 +00.0	249 48.6 +02.7	S 22 37.7 +00.0	220 15.1 +02.6	S 21 30.0 +00.0	19						
20	81 49.2 +00.7	N 24 28.6 +00.1	264 51.3 +02.7	S 22 37.7 +00.0	235 17.7 +02.5	S 21 30.0 +00.0	20						
21	96 49.9 +00.6	N 24 28.7 +00.0	279 54.0 +02.7	S 22 37.7 +00.0	250 20.2 +02.5	S 21 30.0 +00.1	21						
22	111 50.5 +00.7	N 24 28.7 +00.1	294 56.7 +02.7	S 22 37.7 +00.0	265 22.7 +02.5	S 21 30.1 +00.0	22						
23	126 51.2 +00.7	N 24 28.8 +00.0	309 59.4 +02.7	S 22 37.7 +00.0	280 25.2 +02.5	S 21 30.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 275° 275° 275° 275° 275° 274°		SHA 097° 097° 097° 097° 098° 098°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:32		Greenwich Culmination Time: 02:23		Greenwich Culmination Time: 04:21								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.7 +00.0	N 17 44.9 +00.7	205 02.9 -00.4	N 08 00.8 +01.1	99 26.4 -34.4	N 20 08.6 -05.9	00						
01	195 53.7 +00.0	N 17 45.6 +00.6	220 02.5 -00.4	N 08 01.9 +01.1	113 52.0 -34.4	N 20 02.7 -06.1	01						
02	210 53.7 +00.1	N 17 46.2 +00.7	235 02.1 -00.4	N 08 03.0 +01.1	128 17.6 -34.4	N 19 56.6 -06.2	02						
03	225 53.8 +00.0	N 17 46.9 +00.6	250 01.7 -00.4	N 08 04.1 +01.1	142 43.2 -34.3	N 19 50.4 -06.4	03						
04	240 53.8 +00.0	N 17 47.5 +00.7	265 01.3 -00.3	N 08 05.2 +01.2	157 08.9 -34.3	N 19 44.0 -06.4	04						
05	255 53.8 +00.0	N 17 48.2 +00.6	280 01.0 -00.4	N 08 06.4 +01.1	171 34.6 -34.2	N 19 37.6 -06.6	05						
06	270 53.8 +00.0	N 17 48.8 +00.7	295 00.6 -00.4	N 08 07.5 +01.1	186 00.4 -34.2	N 19 31.0 -06.7	06						
07	285 53.8 +00.0	N 17 49.5 +00.6	310 00.2 -00.4	N 08 08.6 +01.1	200 26.2 -34.2	N 19 24.3 -06.9	07						
08	300 53.8 +00.1	N 17 50.1 +00.7	324 59.8 -00.4	N 08 09.7 +01.1	214 52.0 -34.1	N 19 17.4 -06.9	08						
09	315 53.9 +00.0	N 17 50.8 +00.6	339 59.4 -00.4	N 08 10.8 +01.2	229 17.9 -34.1	N 19 10.5 -07.1	09						
10	330 53.9 +00.0	N 17 51.4 +00.6	354 59.0 -00.3	N 08 12.0 +01.1	243 43.8 -34.0	N 19 03.4 -07.2	10						
11	345 53.9 +00.0	N 17 52.0 +00.7	9 58.7 -00.4	N 08 13.1 +01.1	258 09.8 -34.0	N 18 56.2 -07.3	11						
12	0 53.9 +00.0	N 17 52.7 +00.6	24 58.3 -00.4	N 08 14.2 +01.1	272 35.8 -33.9	N 18 48.9 -07.5	12						
13	15 53.9 +00.1	N 17 53.3 +00.7	39 57.9 -00.4	N 08 15.3 +01.1	287 01.9 -33.9	N 18 41.4 -07.5	13						
14	30 54.0 +00.0	N 17 54.0 +00.6	54 57.5 -00.4	N 08 16.4 +01.2	301 28.0 -33.9	N 18 33.9 -07.7	14						
15	45 54.0 +00.0	N 17 54.6 +00.6	69 57.1 -00.4	N 08 17.6 +01.1	315 54.1 -33.8	N 18 26.2 -07.8	15						
16	60 54.0 +00.0	N 17 55.2 +00.7	84 56.7 -00.4	N 08 18.7 +01.1	330 20.3 -33.8	N 18 18.4 -07.9	16						
17	75 54.0 +00.0	N 17 55.9 +00.6	99 56.3 -00.3	N 08 19.8 +01.1	344 46.5 -33.7	N 18 10.5 -08.0	17						
18	90 54.0 +00.0	N 17 56.5 +00.7	114 56.0 -00.4	N 08 20.9 +01.1	359 12.8 -33.7	N 18 02.5 -08.2	18						
19	105 54.0 +00.1	N 17 57.2 +00.6	129 55.6 -00.4	N 08 22.0 +01.2	13 39.1 -33.6	N 17 54.3 -08.2	19						
20	120 54.1 +00.0	N 17 57.8 +00.6	144 55.2 -00.4	N 08 23.2 +01.1	28 05.5 -33.6	N 17 46.1 -08.4	20						
21	135 54.1 +00.0	N 17 58.4 +00.7	159 54.8 -00.4	N 08 24.3 +01.1	42 31.9 -33.5	N 17 37.7 -08.5	21						
22	150 54.1 +00.0	N 17 59.1 +00.6	174 54.4 -00.4	N 08 25.4 +01.1	56 58.4 -33.5	N 17 29.2 -08.6	22						
23	165 54.1 +00.0	N 17 59.7 +00.6	189 54.0 -00.4	N 08 26.5 +01.1	71 24.9 -33.5	N 17 20.6 -08.7	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 16'1 16'1 16'1 16'1 16'1 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'0 59'1 59'1 59'1 59'2 59'2								
	SHA 312° 312° 312° 312° 312° 312°		SHA 336° 336° 336° 336° 336° 336°		SHA 230° 227° 225° 222° 220° 218°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:20		Greenwich Culmination Time: 18:03								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	142 08.3 +00.7	N 24 30.1 +00.1	326 06.9 +02.7	S 22 37.4 +00.0	296 27.9 +02.5	S 21 30.3 +00.0	00						
01	157 09.0 +00.7	N 24 30.2 +00.0	341 09.6 +02.7	S 22 37.4 +00.0	311 30.4 +02.5	S 21 30.3 +00.0	01						
02	172 09.7 +00.7	N 24 30.2 +00.1	356 12.3 +02.7	S 22 37.4 +00.0	326 32.9 +02.5	S 21 30.3 +00.0	02						
03	187 10.4 +00.7	N 24 30.3 +00.0	11 15.0 +02.7	S 22 37.4 +00.0	341 35.4 +02.5	S 21 30.3 +00.0	03						
04	202 11.1 +00.7	N 24 30.3 +00.0	26 17.7 +02.7	S 22 37.4 +00.0	356 37.9 +02.5	S 21 30.3 +00.0	04						
05	217 11.8 +00.7	N 24 30.3 +00.1	41 20.4 +02.7	S 22 37.4 +00.0	11 40.4 +02.6	S 21 30.3 +00.0	05						
06	232 12.5 +00.6	N 24 30.4 +00.0	56 23.1 +02.7	S 22 37.4 +00.0	26 43.0 +02.5	S 21 30.3 +00.0	06						
07	247 13.1 +00.7	N 24 30.4 +00.1	71 25.8 +02.7	S 22 37.4 +00.0	41 45.5 +02.5	S 21 30.3 +00.0	07						
08	262 13.8 +00.7	N 24 30.5 +00.0	86 28.5 +02.7	S 22 37.4 -00.1	56 48.0 +02.5	S 21 30.3 +00.0	08						
09	277 14.5 +00.7	N 24 30.5 +00.1	101 31.2 +02.7	S 22 37.3 +00.0	71 50.5 +02.5	S 21 30.3 +00.1	09						
10	292 15.2 +00.7	N 24 30.6 +00.0	116 33.9 +02.7	S 22 37.3 +00.0	86 53.0 +02.5	S 21 30.4 +00.0	10						
11	307 15.9 +00.7	N 24 30.6 +00.1	131 36.6 +02.7	S 22 37.3 +00.0	101 55.5 +02.5	S 21 30.4 +00.0	11						
12	322 16.6 +00.7	N 24 30.7 +00.0	146 39.3 +02.7	S 22 37.3 +00.0	116 58.0 +02.5	S 21 30.4 +00.0	12						
13	337 17.3 +00.6	N 24 30.7 +00.1	161 42.0 +02.7	S 22 37.3 +00.0	132 00.5 +02.6	S 21 30.4 +00.0	13						
14	352 17.9 +00.7	N 24 30.8 +00.0	176 44.7 +02.7	S 22 37.3 +00.0	147 03.1 +02.5	S 21 30.4 +00.0	14						
15	7 18.6 +00.7	N 24 30.8 +00.0	191 47.4 +02.7	S 22 37.3 +00.0	162 05.6 +02.5	S 21 30.4 +00.0	15						
16	22 19.3 +00.7	N 24 30.8 +00.1	206 50.1 +02.7	S 22 37.3 +00.0	177 08.1 +02.5	S 21 30.4 +00.0	16						
17	37 20.0 +00.7	N 24 30.9 +00.0	221 52.8 +02.7	S 22 37.3 +00.0	192 10.6 +02.5	S 21 30.4 +00.0	17						
18	52 20.7 +00.7	N 24 30.9 +00.1	236 55.5 +02.7	S 22 37.3 -00.1	207 13.1 +02.5	S 21 30.4 +00.0	18						
19	67 21.4 +00.6	N 24 31.0 +00.0	251 58.2 +02.7	S 22 37.2 +00.0	222 15.6 +02.5	S 21 30.4 +00.0	19						
20	82 22.0 +00.7	N 24 31.0 +00.1	267 00.9 +02.7	S 22 37.2 +00.0	237 18.1 +02.6	S 21 30.4 +00.0	20						
21	97 22.7 +00.7	N 24 31.1 +00.0	282 03.6 +02.8	S 22 37.2 +00.0	252 20.7 +02.5	S 21 30.4 +00.1	21						
22	112 23.4 +00.7	N 24 31.1 +00.0	297 06.4 +02.7	S 22 37.2 +00.0	267 23.2 +02.5	S 21 30.5 +00.0	22						
23	127 24.1 +00.7	N 24 31.1 +00.1	312 09.1 +02.7	S 22 37.2 +00.0	282 25.7 +02.5	S 21 30.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 274° 273° 273° 273° 273° 273°		SHA 098° 098° 098° 098° 098° 098°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:30		Greenwich Culmination Time: 02:15		Greenwich Culmination Time: 04:13								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 31%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	180 54.4 +00.0	N 18 15.4 +00.7	204 44.2 -00.4	N 08 54.3 +01.1	72 43.3 -32.2	N 13 13.4 -11.1							
01	195 54.4 +00.0	N 18 16.1 +00.6	219 43.8 -00.4	N 08 55.4 +01.1	87 11.1 -32.2	N 13 02.3 -11.1							
02	210 54.4 +00.0	N 18 16.7 +00.6	234 43.4 -00.4	N 08 56.5 +01.1	101 38.9 -32.2	N 12 51.2 -11.2							
03	225 54.4 +00.0	N 18 17.3 +00.6	249 43.0 -00.4	N 08 57.6 +01.1	116 06.7 -32.1	N 12 40.0 -11.3							
04	240 54.4 +00.0	N 18 17.9 +00.7	264 42.6 -00.4	N 08 58.7 +01.1	130 34.6 -32.0	N 12 28.7 -11.4							
05	255 54.4 +00.0	N 18 18.6 +00.6	279 42.2 -00.4	N 08 59.8 +01.1	145 02.6 -32.0	N 12 17.3 -11.4							
06	270 54.4 +00.0	N 18 19.2 +00.6	294 41.8 -00.4	N 09 00.9 +01.2	159 30.6 -32.0	N 12 05.9 -11.5							
07	285 54.4 +00.0	N 18 19.8 +00.6	309 41.4 -00.4	N 09 02.1 +01.1	173 58.6 -31.9	N 11 54.4 -11.6							
08	300 54.4 +00.1	N 18 20.4 +00.6	324 41.0 -00.3	N 09 03.2 +01.1	188 26.7 -31.9	N 11 42.8 -11.6							
09	315 54.5 +00.0	N 18 21.0 +00.6	339 40.7 -00.4	N 09 04.3 +01.1	202 54.8 -31.8	N 11 31.2 -11.7							
10	330 54.5 +00.0	N 18 21.6 +00.7	354 40.3 -00.4	N 09 05.4 +01.1	217 23.0 -31.8	N 11 19.5 -11.8							
11	345 54.5 +00.0	N 18 22.3 +00.6	9 39.9 -00.4	N 09 06.5 +01.1	231 51.2 -31.7	N 11 07.7 -11.9							
12	0 54.5 +00.0	N 18 22.9 +00.6	24 39.5 -00.4	N 09 07.6 +01.1	246 19.5 -31.7	N 10 55.8 -11.9							
13	15 54.5 +00.0	N 18 23.5 +00.6	39 39.1 -00.4	N 09 08.7 +01.1	260 47.8 -31.7	N 10 43.9 -12.0							
14	30 54.5 +00.0	N 18 24.1 +00.6	54 38.7 -00.4	N 09 09.8 +01.1	275 16.1 -31.6	N 10 31.9 -12.0							
15	45 54.5 +00.0	N 18 24.7 +00.6	69 38.3 -00.4	N 09 10.9 +01.1	289 44.5 -31.6	N 10 19.9 -12.1							
16	60 54.5 +00.0	N 18 25.3 +00.7	84 37.9 -00.4	N 09 12.0 +01.1	304 12.9 -31.5	N 10 07.8 -12.2							
17	75 54.5 +00.0	N 18 26.0 +00.6	99 37.5 -00.4	N 09 13.1 +01.1	318 41.4 -31.5	N 09 55.6 -12.2							
18	90 54.5 +00.0	N 18 26.6 +00.6	114 37.1 -00.4	N 09 14.2 +01.1	333 09.9 -31.5	N 09 43.4 -12.3							
19	105 54.5 +00.0	N 18 27.2 +00.6	129 36.7 -00.4	N 09 15.3 +01.1	347 38.4 -31.4	N 09 31.1 -12.3							
20	120 54.5 +00.0	N 18 27.8 +00.6	144 36.3 -00.4	N 09 16.4 +01.1	2 07.0 -31.4	N 09 18.8 -12.4							
21	135 54.5 +00.0	N 18 28.4 +00.6	159 35.9 -00.4	N 09 17.5 +01.1	16 35.6 -31.4	N 09 06.4 -12.4							
22	150 54.5 +00.0	N 18 29.0 +00.6	174 35.5 -00.4	N 09 18.6 +01.1	31 04.2 -31.3	N 08 54.0 -12.5							
23	165 54.5 +00.0	N 18 29.6 +00.6	189 35.1 -00.4	N 09 19.7 +01.1	45 32.9 -31.2	N 08 41.5 -12.5							
	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 310° 310° 310° 310° 310° 310° 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 334° 334° 334° 334° 333° 333° Greenwich Culmination Time: 10:21	UT 02 06 10 14 18 22 SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 59'4 59'4 59'4 59'4 59'4 59'4 SHA 201° 199° 197° 194° 192° 190° Greenwich Culmination Time: 19:51										

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	142 41.2 +00.7	N 24 32.1 +00.0	328 16.8 +02.7	S 22 37.0 -00.1	298 28.6 +02.5	S 21 30.7 +00.0							
01	157 41.9 +00.7	N 24 32.1 +00.0	343 19.5 +02.8	S 22 36.9 +00.0	313 31.1 +02.5	S 21 30.7 +00.0							
02	172 42.6 +00.7	N 24 32.1 +00.0	358 22.3 +02.7	S 22 36.9 +00.0	328 33.6 +02.6	S 21 30.7 +00.0							
03	187 43.3 +00.7	N 24 32.1 +00.1	13 25.0 +02.7	S 22 36.9 +00.0	343 36.2 +02.5	S 21 30.7 +00.0							
04	202 44.0 +00.7	N 24 32.2 +00.0	28 27.7 +02.7	S 22 36.9 +00.0	358 38.7 +02.5	S 21 30.7 +00.1							
05	217 44.7 +00.7	N 24 32.2 +00.0	43 30.4 +02.7	S 22 36.9 +00.0	13 41.2 +02.5	S 21 30.8 +00.0							
06	232 45.4 +00.6	N 24 32.2 +00.1	58 33.1 +02.7	S 22 36.9 +00.0	28 43.7 +02.5	S 21 30.8 +00.0							
07	247 46.0 +00.7	N 24 32.3 +00.0	73 35.8 +02.8	S 22 36.9 +00.0	43 46.2 +02.6	S 21 30.8 +00.0							
08	262 46.7 +00.7	N 24 32.3 +00.0	88 38.6 +02.7	S 22 36.9 +00.0	58 48.8 +02.5	S 21 30.8 +00.0							
09	277 47.4 +00.7	N 24 32.3 +00.1	103 41.3 +02.7	S 22 36.9 -00.1	73 51.3 +02.5	S 21 30.8 +00.0							
10	292 48.1 +00.7	N 24 32.4 +00.0	118 44.0 +02.7	S 22 36.8 +00.0	88 53.8 +02.5	S 21 30.8 +00.0							
11	307 48.8 +00.7	N 24 32.4 +00.0	133 46.7 +02.7	S 22 36.8 +00.0	103 56.3 +02.5	S 21 30.8 +00.0							
12	322 49.5 +00.7	N 24 32.4 +00.0	148 49.4 +02.7	S 22 36.8 +00.0	118 58.8 +02.6	S 21 30.8 +00.0							
13	337 50.2 +00.7	N 24 32.4 +00.1	163 52.1 +02.8	S 22 36.8 +00.0	134 01.4 +02.5	S 21 30.8 +00.0							
14	352 50.9 +00.6	N 24 32.5 +00.0	178 54.9 +02.7	S 22 36.8 +00.0	149 03.9 +02.5	S 21 30.8 +00.1							
15	7 51.5 +00.7	N 24 32.5 +00.0	193 57.6 +02.7	S 22 36.8 +00.0	164 06.4 +02.5	S 21 30.9 +00.0							
16	22 52.2 +00.7	N 24 32.5 +00.1	209 00.3 +02.7	S 22 36.8 +00.0	179 08.9 +02.6	S 21 30.9 +00.0							
17	37 52.9 +00.7	N 24 32.6 +00.0	224 03.0 +02.7	S 22 36.8 +00.0	194 11.5 +02.5	S 21 30.9 +00.0							
18	52 53.6 +00.7	N 24 32.6 +00.0	239 05.7 +02.7	S 22 36.8 +00.0	209 14.0 +02.5	S 21 30.9 +00.0							
19	67 54.3 +00.7	N 24 32.6 +00.0	254 08.4 +02.8	S 22 36.8 -00.1	224 16.5 +02.5	S 21 30.9 +00.0							
20	82 55.0 +00.7	N 24 32.6 +00.1	269 11.2 +02.7	S 22 36.7 +00.0	239 19.0 +02.5	S 21 30.9 +00.0							
21	97 55.7 +00.6	N 24 32.7 +00.0	284 13.9 +02.7	S 22 36.7 +00.0	254 21.5 +02.6	S 21 30.9 +00.0							
22	112 56.3 +00.7	N 24 32.7 +00.0	299 16.6 +02.7	S 22 36.7 +00.0	269 24.1 +02.5	S 21 30.9 +00.0							
23	127 57.0 +00.7	N 24 32.7 +00.0	314 19.3 +02.7	S 22 36.7 +00.0	284 26.6 +02.5	S 21 30.9 +00.0							
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 272° 272° 272° 272° 272° 272° Greenwich Culmination Time: 14:28	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 098° 098° 098° 098° 098° 098° Greenwich Culmination Time: 02:06	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 068° 068° 068° 068° 068° 068° Greenwich Culmination Time: 04:05										

Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each planet's section includes UT, GHA, ddGHA, Dec, dDec, and a summary row with SD, HP, SHA, and Greenwich Culmination Time.

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 54.4 +00.0	N 18 58.9 +00.6	204 15.0 -00.4	N 10 13.2 +01.1	35 29.1 -30.3	S 02 05.9 +13.4	00						
01	195 54.4 +00.0	N 18 59.5 +00.5	219 14.6 -00.4	N 10 14.3 +01.1	49 58.8 -30.4	S 02 19.3 +13.4	01						
02	210 54.4 +00.0	N 19 00.0 +00.6	234 14.2 -00.5	N 10 15.4 +01.1	64 28.4 -30.4	S 02 32.7 +13.3	02						
03	225 54.4 -00.1	N 19 00.6 +00.6	249 13.7 -00.4	N 10 16.5 +01.1	78 58.0 -30.4	S 02 46.0 +13.3	03						
04	240 54.3 +00.0	N 19 01.2 +00.6	264 13.3 -00.4	N 10 17.6 +01.0	93 27.6 -30.4	S 02 59.3 +13.3	04						
05	255 54.3 +00.0	N 19 01.8 +00.6	279 12.9 -00.4	N 10 18.6 +01.1	107 57.2 -30.4	S 03 12.6 +13.3	05						
06	270 54.3 +00.0	N 19 02.4 +00.5	294 12.5 -00.4	N 10 19.7 +01.1	122 26.8 -30.4	S 03 25.9 +13.2	06						
07	285 54.3 +00.0	N 19 02.9 +00.6	309 12.1 -00.5	N 10 20.8 +01.1	136 56.4 -30.3	S 03 39.1 +13.2	07						
08	300 54.3 +00.0	N 19 03.5 +00.6	324 11.6 -00.4	N 10 21.9 +01.1	151 26.1 -30.5	S 03 52.3 +13.2	08						
09	315 54.3 +00.0	N 19 04.1 +00.6	339 11.2 -00.4	N 10 23.0 +01.0	165 55.6 -30.4	S 04 05.5 +13.2	09						
10	330 54.3 +00.0	N 19 04.7 +00.6	354 10.8 -00.4	N 10 24.0 +01.1	180 25.2 -30.4	S 04 18.7 +13.2	10						
11	345 54.3 +00.0	N 19 05.3 +00.5	9 10.4 -00.4	N 10 25.1 +01.1	194 54.8 -30.4	S 04 31.9 +13.1	11						
12	0 54.3 -00.1	N 19 05.8 +00.6	24 10.0 -00.5	N 10 26.2 +01.1	209 24.4 -30.4	S 04 45.0 +13.1	12						
13	15 54.2 +00.0	N 19 06.4 +00.6	39 09.5 -00.4	N 10 27.3 +01.0	223 54.0 -30.5	S 04 58.1 +13.0	13						
14	30 54.2 +00.0	N 19 07.0 +00.6	54 09.1 -00.4	N 10 28.3 +01.1	238 23.5 -30.4	S 05 11.1 +13.0	14						
15	45 54.2 +00.0	N 19 07.6 +00.5	69 08.7 -00.4	N 10 29.4 +01.1	252 53.1 -30.5	S 05 24.1 +13.0	15						
16	60 54.2 +00.0	N 19 08.1 +00.6	84 08.3 -00.4	N 10 30.5 +01.1	267 22.6 -30.4	S 05 37.1 +13.0	16						
17	75 54.2 +00.0	N 19 08.7 +00.6	99 07.9 -00.5	N 10 31.6 +01.1	281 52.2 -30.5	S 05 50.1 +12.9	17						
18	90 54.2 +00.0	N 19 09.3 +00.6	114 07.4 -00.4	N 10 32.7 +01.0	296 21.7 -30.5	S 06 03.0 +12.8	18						
19	105 54.2 +00.0	N 19 09.9 +00.5	129 07.0 -00.4	N 10 33.7 +01.1	310 51.2 -30.5	S 06 15.8 +12.9	19						
20	120 54.2 -00.1	N 19 10.4 +00.6	144 06.6 -00.4	N 10 34.8 +01.1	325 20.7 -30.5	S 06 28.7 +12.8	20						
21	135 54.1 +00.0	N 19 11.0 +00.6	159 06.2 -00.5	N 10 35.9 +01.1	339 50.2 -30.5	S 06 41.5 +12.7	21						
22	150 54.1 +00.0	N 19 11.6 +00.5	174 05.7 -00.4	N 10 37.0 +01.0	354 19.7 -30.6	S 06 54.2 +12.7	22						
23	165 54.1 +00.0	N 19 12.1 +00.6	189 05.3 -00.4	N 10 38.0 +01.1	8 49.1 -30.5	S 07 06.9 +12.7	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 16'1 16'1 16'1 16'1 16'0 16'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'1 59'1 59'0 59'0 58'9 58'8								
	SHA 307° 307° 307° 307° 307° 307°		SHA 331° 331° 330° 330° 330° 330°		SHA 161° 159° 157° 154° 152° 150°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:23		Greenwich Culmination Time: 22:23								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	143 30.7 +00.7	N 24 33.5 +00.0	331 32.9 +02.7	S 22 36.2 +00.0	301 30.4 +02.5	S 21 31.5 +00.0	00						
01	158 31.4 +00.7	N 24 33.5 +00.0	346 35.6 +02.8	S 22 36.2 -00.1	316 32.9 +02.6	S 21 31.5 +00.0	01						
02	173 32.1 +00.7	N 24 33.5 +00.0	1 38.4 +02.7	S 22 36.1 +00.0	331 35.5 +02.5	S 21 31.5 +00.0	02						
03	188 32.8 +00.7	N 24 33.5 +00.0	16 41.1 +02.7	S 22 36.1 +00.0	346 38.0 +02.5	S 21 31.5 +00.0	03						
04	203 33.5 +00.7	N 24 33.5 +00.0	31 43.8 +02.8	S 22 36.1 +00.0	1 40.5 +02.6	S 21 31.5 +00.0	04						
05	218 34.2 +00.6	N 24 33.5 +00.0	46 46.6 +02.7	S 22 36.1 +00.0	16 43.1 +02.5	S 21 31.5 +00.0	05						
06	233 34.8 +00.7	N 24 33.5 +00.0	61 49.3 +02.7	S 22 36.1 +00.0	31 45.6 +02.5	S 21 31.5 +00.0	06						
07	248 35.5 +00.7	N 24 33.5 +00.0	76 52.0 +02.7	S 22 36.1 +00.0	46 48.1 +02.6	S 21 31.5 +00.1	07						
08	263 36.2 +00.7	N 24 33.5 +00.1	91 54.7 +02.8	S 22 36.1 +00.0	61 50.7 +02.5	S 21 31.6 +00.0	08						
09	278 36.9 +00.7	N 24 33.6 +00.0	106 57.5 +02.7	S 22 36.1 -00.1	76 53.2 +02.5	S 21 31.6 +00.0	09						
10	293 37.6 +00.7	N 24 33.6 +00.0	122 00.2 +02.8	S 22 36.0 +00.0	91 55.7 +02.6	S 21 31.6 +00.0	10						
11	308 38.3 +00.7	N 24 33.6 +00.0	137 03.0 +02.7	S 22 36.0 +00.0	106 58.3 +02.5	S 21 31.6 +00.0	11						
12	323 39.0 +00.7	N 24 33.6 +00.0	152 05.7 +02.7	S 22 36.0 +00.0	122 00.8 +02.5	S 21 31.6 +00.0	12						
13	338 39.7 +00.6	N 24 33.6 +00.0	167 08.4 +02.8	S 22 36.0 +00.0	137 03.3 +02.6	S 21 31.6 +00.0	13						
14	353 40.3 +00.7	N 24 33.6 +00.0	182 11.2 +02.7	S 22 36.0 +00.0	152 05.9 +02.5	S 21 31.6 +00.0	14						
15	8 41.0 +00.7	N 24 33.6 +00.0	197 13.9 +02.7	S 22 36.0 +00.0	167 08.4 +02.5	S 21 31.6 +00.1	15						
16	23 41.7 +00.7	N 24 33.6 +00.0	212 16.6 +02.8	S 22 36.0 +00.0	182 10.9 +02.6	S 21 31.7 +00.0	16						
17	38 42.4 +00.7	N 24 33.6 +00.0	227 19.4 +02.7	S 22 36.0 +00.0	197 13.5 +02.5	S 21 31.7 +00.0	17						
18	53 43.1 +00.7	N 24 33.6 +00.0	242 22.1 +02.7	S 22 36.0 -00.1	212 16.0 +02.5	S 21 31.7 +00.0	18						
19	68 43.8 +00.7	N 24 33.6 +00.0	257 24.8 +02.8	S 22 35.9 +00.0	227 18.5 +02.6	S 21 31.7 +00.0	19						
20	83 44.5 +00.7	N 24 33.6 +00.0	272 27.6 +02.7	S 22 35.9 +00.0	242 21.1 +02.5	S 21 31.7 +00.0	20						
21	98 45.2 +00.7	N 24 33.6 +00.0	287 30.3 +02.7	S 22 35.9 +00.0	257 23.6 +02.5	S 21 31.7 +00.0	21						
22	113 45.9 +00.6	N 24 33.6 +00.0	302 33.0 +02.8	S 22 35.9 +00.0	272 26.1 +02.6	S 21 31.7 +00.0	22						
23	128 46.5 +00.7	N 24 33.6 +00.0	317 35.8 +02.7	S 22 35.9 +00.0	287 28.7 +02.5	S 21 31.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 270° 270° 270° 270° 270° 269°		SHA 098° 098° 098° 098° 098° 098°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:25		Greenwich Culmination Time: 01:53		Greenwich Culmination Time: 03:53								

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	180 54.1 +00.0	N 19 12.7 +00.6	204 04.9 -00.4	N 10 39.1 +01.1	23 18.6 -30.6	S 07 19.6 +12.6							
01	195 54.1 +00.0	N 19 13.3 +00.6	219 04.5 -00.5	N 10 40.2 +01.1	37 48.0 -30.6	S 07 32.2 +12.5							
02	210 54.1 +00.0	N 19 13.9 +00.5	234 04.0 -00.4	N 10 41.3 +01.0	52 17.4 -30.6	S 07 44.7 +12.6							
03	225 54.1 -00.1	N 19 14.4 +00.6	249 03.6 -00.4	N 10 42.3 +01.1	66 46.8 -30.6	S 07 57.3 +12.4							
04	240 54.0 +00.0	N 19 15.0 +00.6	264 03.2 -00.4	N 10 43.4 +01.1	81 16.2 -30.6	S 08 09.7 +12.4							
05	255 54.0 +00.0	N 19 15.6 +00.5	279 02.8 -00.5	N 10 44.5 +01.0	95 45.6 -30.7	S 08 22.1 +12.4							
06	270 54.0 +00.0	N 19 16.1 +00.6	294 02.3 -00.4	N 10 45.5 +01.1	110 14.9 -30.6	S 08 34.5 +12.3							
07	285 54.0 +00.0	N 19 16.7 +00.6	309 01.9 -00.4	N 10 46.6 +01.1	124 44.3 -30.7	S 08 46.8 +12.3							
08	300 54.0 +00.0	N 19 17.3 +00.5	324 01.5 -00.5	N 10 47.7 +01.1	139 13.6 -30.7	S 08 59.1 +12.2							
09	315 54.0 -00.1	N 19 17.8 +00.6	339 01.0 -00.4	N 10 48.8 +01.0	153 42.9 -30.7	S 09 11.3 +12.1							
10	330 53.9 +00.0	N 19 18.4 +00.5	354 00.6 -00.4	N 10 49.8 +01.1	168 12.2 -30.8	S 09 23.4 +12.1							
11	345 53.9 +00.0	N 19 18.9 +00.6	9 00.2 -00.4	N 10 50.9 +01.1	182 41.4 -30.7	S 09 35.5 +12.0							
12	0 53.9 +00.0	N 19 19.5 +00.6	23 59.8 -00.5	N 10 52.0 +01.0	197 10.7 -30.8	S 09 47.5 +12.0							
13	15 53.9 +00.0	N 19 20.1 +00.5	38 59.3 -00.4	N 10 53.0 +01.1	211 39.9 -30.8	S 09 59.5 +11.9							
14	30 53.9 +00.0	N 19 20.6 +00.6	53 58.9 -00.4	N 10 54.1 +01.1	226 09.1 -30.8	S 10 11.4 +11.8							
15	45 53.9 -00.1	N 19 21.2 +00.6	68 58.5 -00.5	N 10 55.2 +01.0	240 38.3 -30.9	S 10 23.2 +11.8							
16	60 53.8 +00.0	N 19 21.8 +00.5	83 58.0 -00.4	N 10 56.2 +01.1	255 07.4 -30.8	S 10 35.0 +11.7							
17	75 53.8 +00.0	N 19 22.3 +00.6	98 57.6 -00.4	N 10 57.3 +01.1	269 36.6 -30.9	S 10 46.7 +11.6							
18	90 53.8 +00.0	N 19 22.9 +00.5	113 57.2 -00.5	N 10 58.4 +01.0	284 05.7 -30.9	S 10 58.3 +11.6							
19	105 53.8 +00.0	N 19 23.4 +00.6	128 56.7 -00.4	N 10 59.4 +01.1	298 34.8 -30.9	S 11 09.9 +11.5							
20	120 53.8 +00.0	N 19 24.0 +00.6	143 56.3 -00.4	N 11 00.5 +01.1	313 03.9 -31.0	S 11 21.4 +11.5							
21	135 53.8 -00.1	N 19 24.6 +00.5	158 55.9 -00.5	N 11 01.6 +01.0	327 32.9 -31.0	S 11 32.9 +11.3							
22	150 53.7 +00.0	N 19 25.1 +00.6	173 55.4 -00.4	N 11 02.6 +01.1	342 01.9 -30.9	S 11 44.2 +11.3							
23	165 53.7 +00.0	N 19 25.7 +00.5	188 55.0 -00.4	N 11 03.7 +01.1	356 31.0 -31.1	S 11 55.5 +11.2							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'0 16'0 16'0 16'0 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 58'8 58'7 58'6 58'6 58'5 58'4								
	SHA 306° 306° 306° 306° 306° 306°		SHA 330° 329° 329° 329° 329° 329°		SHA 148° 146° 143° 141° 139° 137°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:23		Greenwich Culmination Time: 23:14								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	GHA ° ' "	ddGHA ° ' "	Dec ° ' "	dDec ° ' "	
00	143 47.2 +00.7	N 24 33.6 +00.0	332 38.5 +02.8	S 22 35.9 +00.0	302 31.2 +02.5	S 21 31.7 +00.1							
01	158 47.9 +00.7	N 24 33.6 +00.0	347 41.3 +02.7	S 22 35.9 +00.0	317 33.7 +02.6	S 21 31.8 +00.0							
02	173 48.6 +00.7	N 24 33.6 +00.0	2 44.0 +02.7	S 22 35.9 -00.1	332 36.3 +02.5	S 21 31.8 +00.0							
03	188 49.3 +00.7	N 24 33.6 +00.0	17 46.7 +02.8	S 22 35.8 +00.0	347 38.8 +02.6	S 21 31.8 +00.0							
04	203 50.0 +00.7	N 24 33.6 +00.0	32 49.5 +02.7	S 22 35.8 +00.0	2 41.4 +02.5	S 21 31.8 +00.0							
05	218 50.7 +00.7	N 24 33.6 +00.0	47 52.2 +02.7	S 22 35.8 +00.0	17 43.9 +02.5	S 21 31.8 +00.0							
06	233 51.4 +00.7	N 24 33.6 +00.0	62 54.9 +02.8	S 22 35.8 +00.0	32 46.4 +02.6	S 21 31.8 +00.0							
07	248 52.1 +00.7	N 24 33.6 +00.0	77 57.7 +02.7	S 22 35.8 +00.0	47 49.0 +02.5	S 21 31.8 +00.0							
08	263 52.8 +00.6	N 24 33.6 +00.0	93 00.4 +02.8	S 22 35.8 +00.0	62 51.5 +02.5	S 21 31.8 +00.1							
09	278 53.4 +00.7	N 24 33.6 +00.0	108 03.2 +02.7	S 22 35.8 +00.0	77 54.0 +02.6	S 21 31.9 +00.0							
10	293 54.1 +00.7	N 24 33.6 +00.0	123 05.9 +02.7	S 22 35.8 -00.1	92 56.6 +02.5	S 21 31.9 +00.0							
11	308 54.8 +00.7	N 24 33.6 +00.0	138 08.6 +02.8	S 22 35.7 +00.0	107 59.1 +02.5	S 21 31.9 +00.0							
12	323 55.5 +00.7	N 24 33.6 -00.1	153 11.4 +02.7	S 22 35.7 +00.0	123 01.6 +02.6	S 21 31.9 +00.0							
13	338 56.2 +00.7	N 24 33.5 +00.0	168 14.1 +02.8	S 22 35.7 +00.0	138 04.2 +02.5	S 21 31.9 +00.0							
14	353 56.9 +00.7	N 24 33.5 +00.0	183 16.9 +02.7	S 22 35.7 +00.0	153 06.7 +02.6	S 21 31.9 +00.0							
15	8 57.6 +00.7	N 24 33.5 +00.0	198 19.6 +02.7	S 22 35.7 +00.0	168 09.3 +02.5	S 21 31.9 +00.0							
16	23 58.3 +00.7	N 24 33.5 +00.0	213 22.3 +02.8	S 22 35.7 +00.0	183 11.8 +02.5	S 21 31.9 +00.1							
17	38 59.0 +00.6	N 24 33.5 +00.0	228 25.1 +02.7	S 22 35.7 +00.0	198 14.3 +02.6	S 21 32.0 +00.0							
18	53 59.6 +00.7	N 24 33.5 +00.0	243 27.8 +02.8	S 22 35.7 +00.0	213 16.9 +02.5	S 21 32.0 +00.0							
19	69 00.3 +00.7	N 24 33.5 +00.0	258 30.6 +02.7	S 22 35.7 -00.1	228 19.4 +02.5	S 21 32.0 +00.0							
20	84 01.0 +00.7	N 24 33.5 +00.0	273 33.3 +02.7	S 22 35.6 +00.0	243 21.9 +02.6	S 21 32.0 +00.0							
21	99 01.7 +00.7	N 24 33.5 +00.0	288 36.0 +02.8	S 22 35.6 +00.0	258 24.5 +02.5	S 21 32.0 +00.0							
22	114 02.4 +00.7	N 24 33.5 +00.0	303 38.8 +02.7	S 22 35.6 +00.0	273 27.0 +02.6	S 21 32.0 +00.0							
23	129 03.1 +00.7	N 24 33.5 +00.0	318 41.5 +02.8	S 22 35.6 +00.0	288 29.6 +02.5	S 21 32.0 +00.0							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 269° 269° 269° 269° 269° 269°		SHA 098° 098° 098° 098° 098° 098°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:24		Greenwich Culmination Time: 01:49		Greenwich Culmination Time: 03:49								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.7 +00.0	N 19 26.2 +00.6	203 54.6 -00.5	N 11 04.8 +01.0	10 59.9 -31.0	S 12 06.7 +11.2	00						
01	195 53.7 +00.0	N 19 26.8 +00.5	218 54.1 -00.4	N 11 05.8 +01.1	25 28.9 -31.1	S 12 17.9 +11.0	01						
02	210 53.7 -00.1	N 19 27.3 +00.6	233 53.7 -00.4	N 11 06.9 +01.1	39 57.8 -31.0	S 12 28.9 +11.0	02						
03	225 53.6 +00.0	N 19 27.9 +00.5	248 53.3 -00.5	N 11 08.0 +01.0	54 26.8 -31.1	S 12 39.9 +10.9	03						
04	240 53.6 +00.0	N 19 28.4 +00.6	263 52.8 -00.4	N 11 09.0 +01.1	68 55.7 -31.2	S 12 50.8 +10.9	04						
05	255 53.6 +00.0	N 19 29.0 +00.6	278 52.4 -00.4	N 11 10.1 +01.0	83 24.5 -31.1	S 13 01.7 +10.7	05						
06	270 53.6 -00.1	N 19 29.6 +00.5	293 52.0 -00.5	N 11 11.1 +01.1	97 53.4 -31.2	S 13 12.4 +10.7	06						
07	285 53.5 +00.0	N 19 30.1 +00.6	308 51.5 -00.4	N 11 12.2 +01.1	112 22.2 -31.2	S 13 23.1 +10.6	07						
08	300 53.5 +00.0	N 19 30.7 +00.5	323 51.1 -00.4	N 11 13.3 +01.0	126 51.0 -31.2	S 13 33.7 +10.5	08						
09	315 53.5 +00.0	N 19 31.2 +00.6	338 50.7 -00.5	N 11 14.3 +01.1	141 19.8 -31.3	S 13 44.2 +10.4	09						
10	330 53.5 +00.0	N 19 31.8 +00.5	353 50.2 -00.4	N 11 15.4 +01.0	155 48.5 -31.3	S 13 54.6 +10.4	10						
11	345 53.5 -00.1	N 19 32.3 +00.6	8 49.8 -00.4	N 11 16.4 +01.1	170 17.2 -31.3	S 14 05.0 +10.2	11						
12	0 53.4 +00.0	N 19 32.9 +00.5	23 49.4 -00.5	N 11 17.5 +01.1	184 45.9 -31.3	S 14 15.2 +10.2	12						
13	15 53.4 +00.0	N 19 33.4 +00.6	38 48.9 -00.4	N 11 18.6 +01.0	199 14.6 -31.3	S 14 25.4 +10.1	13						
14	30 53.4 +00.0	N 19 34.0 +00.5	53 48.5 -00.5	N 11 19.6 +01.1	213 43.3 -31.4	S 14 35.5 +10.0	14						
15	45 53.4 -00.1	N 19 34.5 +00.5	68 48.0 -00.4	N 11 20.7 +01.0	228 11.9 -31.4	S 14 45.5 +09.9	15						
16	60 53.3 +00.0	N 19 35.0 +00.6	83 47.6 -00.4	N 11 21.7 +01.1	242 40.5 -31.4	S 14 55.4 +09.8	16						
17	75 53.3 +00.0	N 19 35.6 +00.5	98 47.2 -00.5	N 11 22.8 +01.0	257 09.1 -31.5	S 15 05.2 +09.7	17						
18	90 53.3 +00.0	N 19 36.1 +00.6	113 46.7 -00.4	N 11 23.8 +01.1	271 37.6 -31.4	S 15 14.9 +09.6	18						
19	105 53.3 -00.1	N 19 36.7 +00.5	128 46.3 -00.5	N 11 24.9 +01.1	286 06.2 -31.5	S 15 24.5 +09.5	19						
20	120 53.2 +00.0	N 19 37.2 +00.6	143 45.8 -00.4	N 11 26.0 +01.0	300 34.7 -31.5	S 15 34.0 +09.5	20						
21	135 53.2 +00.0	N 19 37.8 +00.5	158 45.4 -00.4	N 11 27.0 +01.1	315 03.2 -31.6	S 15 43.5 +09.3	21						
22	150 53.2 +00.0	N 19 38.3 +00.6	173 45.0 -00.5	N 11 28.1 +01.0	329 31.6 -31.5	S 15 52.8 +09.3	22						
23	165 53.2 -00.1	N 19 38.9 +00.5	188 44.5 -00.4	N 11 29.1 +01.1	344 00.1 -31.6	S 16 02.1 +09.1	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 15'8						
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	58'3 58'2 58'1 58'0 57'9 57'8						
SHA	305° 305° 305° 305° 305° 305°		SHA	328° 328° 328° 328° 328° 327°		SHA	134° 132° 130° 128° 125° 123°						
Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 10:24				Greenwich Culmination Time: -1:00					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 03.8 +00.7	N 24 33.5 +00.0	333 44.3 +02.7	S 22 35.6 +00.0	303 32.1 +02.5	S 21 32.0 +00.1	00						
01	159 04.5 +00.7	N 24 33.5 +00.0	348 47.0 +02.8	S 22 35.6 +00.0	318 34.6 +02.6	S 21 32.1 +00.0	01						
02	174 05.2 +00.7	N 24 33.5 -00.1	3 49.8 +02.7	S 22 35.6 +00.0	333 37.2 +02.5	S 21 32.1 +00.0	02						
03	189 05.9 +00.6	N 24 33.4 +00.0	18 52.5 +02.7	S 22 35.6 -00.1	348 39.7 +02.6	S 21 32.1 +00.0	03						
04	204 06.5 +00.7	N 24 33.4 +00.0	33 55.2 +02.8	S 22 35.5 +00.0	3 42.3 +02.5	S 21 32.1 +00.0	04						
05	219 07.2 +00.7	N 24 33.4 +00.0	48 58.0 +02.7	S 22 35.5 +00.0	18 44.8 +02.5	S 21 32.1 +00.0	05						
06	234 07.9 +00.7	N 24 33.4 +00.0	64 00.7 +02.8	S 22 35.5 +00.0	33 47.3 +02.6	S 21 32.1 +00.0	06						
07	249 08.6 +00.7	N 24 33.4 +00.0	79 03.5 +02.7	S 22 35.5 +00.0	48 49.9 +02.5	S 21 32.1 +00.0	07						
08	264 09.3 +00.7	N 24 33.4 +00.0	94 06.2 +02.8	S 22 35.5 +00.0	63 52.4 +02.6	S 21 32.1 +00.1	08						
09	279 10.0 +00.7	N 24 33.4 +00.0	109 09.0 +02.7	S 22 35.5 +00.0	78 55.0 +02.5	S 21 32.2 +00.0	09						
10	294 10.7 +00.7	N 24 33.4 +00.0	124 11.7 +02.7	S 22 35.5 +00.0	93 57.5 +02.5	S 21 32.2 +00.0	10						
11	309 11.4 +00.7	N 24 33.4 -00.1	139 14.4 +02.8	S 22 35.5 -00.1	109 00.0 +02.6	S 21 32.2 +00.0	11						
12	324 12.1 +00.7	N 24 33.3 +00.0	154 17.2 +02.7	S 22 35.4 +00.0	124 02.6 +02.5	S 21 32.2 +00.0	12						
13	339 12.8 +00.7	N 24 33.3 +00.0	169 19.9 +02.8	S 22 35.4 +00.0	139 05.1 +02.6	S 21 32.2 +00.0	13						
14	354 13.5 +00.6	N 24 33.3 +00.0	184 22.7 +02.7	S 22 35.4 +00.0	154 07.7 +02.5	S 21 32.2 +00.0	14						
15	9 14.1 +00.7	N 24 33.3 +00.0	199 25.4 +02.8	S 22 35.4 +00.0	169 10.2 +02.6	S 21 32.2 +00.0	15						
16	24 14.8 +00.7	N 24 33.3 +00.0	214 28.2 +02.7	S 22 35.4 +00.0	184 12.8 +02.5	S 21 32.2 +00.1	16						
17	39 15.5 +00.7	N 24 33.3 +00.0	229 30.9 +02.8	S 22 35.4 +00.0	199 15.3 +02.5	S 21 32.3 +00.0	17						
18	54 16.2 +00.7	N 24 33.3 +00.0	244 33.7 +02.7	S 22 35.4 +00.0	214 17.8 +02.6	S 21 32.3 +00.0	18						
19	69 16.9 +00.7	N 24 33.3 -00.1	259 36.4 +02.8	S 22 35.4 -00.1	229 20.4 +02.5	S 21 32.3 +00.0	19						
20	84 17.6 +00.7	N 24 33.2 +00.0	274 39.2 +02.7	S 22 35.3 +00.0	244 22.9 +02.6	S 21 32.3 +00.0	20						
21	99 18.3 +00.7	N 24 33.2 +00.0	289 41.9 +02.8	S 22 35.3 +00.0	259 25.5 +02.5	S 21 32.3 +00.0	21						
22	114 19.0 +00.7	N 24 33.2 +00.0	304 44.7 +02.7	S 22 35.3 +00.0	274 28.0 +02.5	S 21 32.3 +00.0	22						
23	129 19.7 +00.7	N 24 33.2 +00.0	319 47.4 +02.8	S 22 35.3 +00.0	289 30.5 +02.6	S 21 32.3 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'0 00'0 00'0 00'0 00'0 00'0		SD	00'4 00'4 00'4 00'4 00'4 00'4		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	269° 268° 268° 268° 268° 268°		SHA	098° 098° 098° 098° 098° 098°		SHA	068° 068° 068° 068° 068° 068°						
Greenwich Culmination Time: 14:23				Greenwich Culmination Time: 01:44				Greenwich Culmination Time: 03:45					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.1 +00.0	N 19 39.4 +00.5	203 44.1 -00.5	N 11 30.2 +01.0	358 28.5 -31.6	S 16 11.2 +09.1	00						
01	195 53.1 +00.0	N 19 39.9 +00.6	218 43.6 -00.4	N 11 31.2 +01.1	12 56.9 -31.6	S 16 20.3 +08.9	01						
02	210 53.1 +00.0	N 19 40.5 +00.5	233 43.2 -00.5	N 11 32.3 +01.0	27 25.3 -31.7	S 16 29.2 +08.9	02						
03	225 53.1 -00.1	N 19 41.0 +00.6	248 42.7 -00.4	N 11 33.3 +01.1	41 53.6 -31.6	S 16 38.1 +08.7	03						
04	240 53.0 +00.0	N 19 41.6 +00.5	263 42.3 -00.4	N 11 34.4 +01.0	56 22.0 -31.7	S 16 46.8 +08.7	04						
05	255 53.0 +00.0	N 19 42.1 +00.5	278 41.9 -00.5	N 11 35.4 +01.1	70 50.3 -31.7	S 16 55.5 +08.5	05						
06	270 53.0 +00.0	N 19 42.6 +00.6	293 41.4 -00.4	N 11 36.5 +01.0	85 18.6 -31.8	S 17 04.0 +08.5	06						
07	285 53.0 -00.1	N 19 43.2 +00.5	308 41.0 -00.5	N 11 37.5 +01.1	99 46.8 -31.7	S 17 12.5 +08.3	07						
08	300 52.9 +00.0	N 19 43.7 +00.6	323 40.5 -00.4	N 11 38.6 +01.0	114 15.1 -31.8	S 17 20.8 +08.2	08						
09	315 52.9 +00.0	N 19 44.3 +00.5	338 40.1 -00.5	N 11 39.6 +01.1	128 43.3 -31.8	S 17 29.0 +08.2	09						
10	330 52.9 -00.1	N 19 44.8 +00.5	353 39.6 -00.4	N 11 40.7 +01.0	143 11.5 -31.8	S 17 37.2 +08.0	10						
11	345 52.8 +00.0	N 19 45.3 +00.6	8 39.2 -00.5	N 11 41.7 +01.1	157 39.7 -31.8	S 17 45.2 +07.9	11						
12	0 52.8 +00.0	N 19 45.9 +00.5	23 38.7 -00.4	N 11 42.8 +01.0	172 07.9 -31.8	S 17 53.1 +07.8	12						
13	15 52.8 +00.0	N 19 46.4 +00.5	38 38.3 -00.5	N 11 43.8 +01.1	186 36.1 -31.9	S 18 00.9 +07.7	13						
14	30 52.8 -00.1	N 19 46.9 +00.6	53 37.8 -00.4	N 11 44.9 +01.0	201 04.2 -31.9	S 18 08.6 +07.6	14						
15	45 52.7 +00.0	N 19 47.5 +00.5	68 37.4 -00.4	N 11 45.9 +01.1	215 32.3 -31.9	S 18 16.2 +07.5	15						
16	60 52.7 +00.0	N 19 48.0 +00.5	83 37.0 -00.5	N 11 47.0 +01.0	230 00.4 -31.9	S 18 23.7 +07.4	16						
17	75 52.7 -00.1	N 19 48.5 +00.6	98 36.5 -00.4	N 11 48.0 +01.1	244 28.5 -31.9	S 18 31.1 +07.3	17						
18	90 52.6 +00.0	N 19 49.1 +00.5	113 36.1 -00.5	N 11 49.1 +01.0	258 56.6 -32.0	S 18 38.4 +07.1	18						
19	105 52.6 +00.0	N 19 49.6 +00.5	128 35.6 -00.4	N 11 50.1 +01.1	273 24.6 -31.9	S 18 45.5 +07.1	19						
20	120 52.6 -00.1	N 19 50.1 +00.6	143 35.2 -00.5	N 11 51.2 +01.0	287 52.7 -32.0	S 18 52.6 +06.9	20						
21	135 52.5 +00.0	N 19 50.7 +00.5	158 34.7 -00.4	N 11 52.2 +01.0	302 20.7 -32.0	S 18 59.5 +06.8	21						
22	150 52.5 +00.0	N 19 51.2 +00.5	173 34.3 -00.5	N 11 53.2 +01.1	316 48.7 -32.0	S 19 06.3 +06.7	22						
23	165 52.5 -00.1	N 19 51.7 +00.6	188 33.8 -00.4	N 11 54.3 +01.0	331 16.7 -32.0	S 19 13.0 +06.6	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 15'7 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 57'7 57'6 57'5 57'4 57'3 57'2								
	SHA 304° 304° 304° 304° 304° 304°		SHA 327° 327° 327° 327° 326° 326°		SHA 121° 119° 116° 114° 112° 110°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:25		Greenwich Culmination Time: 00:06								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 20.4 +00.6	N 24 33.2 +00.0	334 50.2 +02.7	S 22 35.3 +00.0	304 33.1 +02.5	S 21 32.3 +00.1	00						
01	159 21.0 +00.7	N 24 33.2 -00.1	349 52.9 +02.7	S 22 35.3 +00.0	319 35.6 +02.6	S 21 32.4 +00.0	01						
02	174 21.7 +00.7	N 24 33.1 +00.0	4 55.6 +02.8	S 22 35.3 +00.0	334 38.2 +02.5	S 21 32.4 +00.0	02						
03	189 22.4 +00.7	N 24 33.1 +00.0	19 58.4 +02.7	S 22 35.3 -00.1	349 40.7 +02.6	S 21 32.4 +00.0	03						
04	204 23.1 +00.7	N 24 33.1 +00.0	35 01.1 +02.8	S 22 35.2 +00.0	4 43.3 +02.5	S 21 32.4 +00.0	04						
05	219 23.8 +00.7	N 24 33.1 +00.0	50 03.9 +02.7	S 22 35.2 +00.0	19 45.8 +02.6	S 21 32.4 +00.0	05						
06	234 24.5 +00.7	N 24 33.1 -00.1	65 06.6 +02.8	S 22 35.2 +00.0	34 48.4 +02.5	S 21 32.4 +00.0	06						
07	249 25.2 +00.7	N 24 33.0 +00.0	80 09.4 +02.7	S 22 35.2 +00.0	49 50.9 +02.5	S 21 32.4 +00.1	07						
08	264 25.9 +00.7	N 24 33.0 +00.0	95 12.1 +02.8	S 22 35.2 +00.0	64 53.4 +02.6	S 21 32.5 +00.0	08						
09	279 26.6 +00.7	N 24 33.0 +00.0	110 14.9 +02.7	S 22 35.2 +00.0	79 56.0 +02.5	S 21 32.5 +00.0	09						
10	294 27.3 +00.7	N 24 33.0 +00.0	125 17.6 +02.8	S 22 35.2 +00.0	94 58.5 +02.6	S 21 32.5 +00.0	10						
11	309 28.0 +00.7	N 24 33.0 -00.1	140 20.4 +02.7	S 22 35.2 -00.1	110 01.1 +02.5	S 21 32.5 +00.0	11						
12	324 28.7 +00.6	N 24 32.9 +00.0	155 23.1 +02.8	S 22 35.1 +00.0	125 03.6 +02.6	S 21 32.5 +00.0	12						
13	339 29.3 +00.7	N 24 32.9 +00.0	170 25.9 +02.7	S 22 35.1 +00.0	140 06.2 +02.5	S 21 32.5 +00.0	13						
14	354 30.0 +00.7	N 24 32.9 +00.0	185 28.6 +02.8	S 22 35.1 +00.0	155 08.7 +02.6	S 21 32.5 +00.0	14						
15	9 30.7 +00.7	N 24 32.9 +00.0	200 31.4 +02.7	S 22 35.1 +00.0	170 11.3 +02.5	S 21 32.5 +00.1	15						
16	24 31.4 +00.7	N 24 32.9 -00.1	215 34.1 +02.8	S 22 35.1 +00.0	185 13.8 +02.5	S 21 32.6 +00.0	16						
17	39 32.1 +00.7	N 24 32.8 +00.0	230 36.9 +02.7	S 22 35.1 +00.0	200 16.3 +02.6	S 21 32.6 +00.0	17						
18	54 32.8 +00.7	N 24 32.8 +00.0	245 39.6 +02.8	S 22 35.1 -00.1	215 18.9 +02.5	S 21 32.6 +00.0	18						
19	69 33.5 +00.7	N 24 32.8 +00.0	260 42.4 +02.7	S 22 35.0 +00.0	230 21.4 +02.6	S 21 32.6 +00.0	19						
20	84 34.2 +00.7	N 24 32.8 -00.1	275 45.1 +02.8	S 22 35.0 +00.0	245 24.0 +02.5	S 21 32.6 +00.0	20						
21	99 34.9 +00.7	N 24 32.7 +00.0	290 47.9 +02.7	S 22 35.0 +00.0	260 26.5 +02.6	S 21 32.6 +00.0	21						
22	114 35.6 +00.7	N 24 32.7 +00.0	305 50.6 +02.8	S 22 35.0 +00.0	275 29.1 +02.5	S 21 32.6 +00.1	22						
23	129 36.3 +00.7	N 24 32.7 +00.0	320 53.4 +02.8	S 22 35.0 +00.0	290 31.6 +02.6	S 21 32.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 268° 268° 268° 268° 267° 267°		SHA 098° 098° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:21		Greenwich Culmination Time: 01:40		Greenwich Culmination Time: 03:41								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 52.4 +00.0	N 19 52.3 +00.5	203 33.4 -00.5	N 11 55.3 +01.1	345 44.7 -32.0	S 19 19.6 +06.5	00						
01	195 52.4 +00.0	N 19 52.8 +00.5	218 32.9 -00.4	N 11 56.4 +01.0	0 12.7 -32.0	S 19 26.1 +06.4	01						
02	210 52.4 +00.0	N 19 53.3 +00.5	233 32.5 -00.5	N 11 57.4 +01.1	14 40.7 -32.1	S 19 32.5 +06.2	02						
03	225 52.4 -00.1	N 19 53.8 +00.6	248 32.0 -00.5	N 11 58.5 +01.0	29 08.6 -32.0	S 19 38.7 +06.1	03						
04	240 52.3 +00.0	N 19 54.4 +00.5	263 31.5 -00.4	N 11 59.5 +01.0	43 36.6 -32.1	S 19 44.8 +06.1	04						
05	255 52.3 +00.0	N 19 54.9 +00.5	278 31.1 -00.5	N 12 00.5 +01.1	58 04.5 -32.1	S 19 50.9 +05.9	05						
06	270 52.3 -00.1	N 19 55.4 +00.5	293 30.6 -00.4	N 12 01.6 +01.0	72 32.4 -32.0	S 19 56.8 +05.7	06						
07	285 52.2 +00.0	N 19 55.9 +00.6	308 30.2 -00.5	N 12 02.6 +01.1	87 00.4 -32.1	S 20 02.5 +05.7	07						
08	300 52.2 +00.0	N 19 56.5 +00.5	323 29.7 -00.4	N 12 03.7 +01.0	101 28.3 -32.1	S 20 08.2 +05.6	08						
09	315 52.2 -00.1	N 19 57.0 +00.5	338 29.3 -00.5	N 12 04.7 +01.0	115 56.2 -32.1	S 20 13.8 +05.4	09						
10	330 52.1 +00.0	N 19 57.5 +00.5	353 28.8 -00.4	N 12 05.7 +01.1	130 24.1 -32.1	S 20 19.2 +05.3	10						
11	345 52.1 +00.0	N 19 58.0 +00.5	8 28.4 -00.5	N 12 06.8 +01.0	144 52.0 -32.1	S 20 24.5 +05.2	11						
12	0 52.1 -00.1	N 19 58.5 +00.6	23 27.9 -00.4	N 12 07.8 +01.1	159 19.9 -32.1	S 20 29.7 +05.1	12						
13	15 52.0 +00.0	N 19 59.1 +00.5	38 27.5 -00.5	N 12 08.9 +01.0	173 47.8 -32.1	S 20 34.8 +04.9	13						
14	30 52.0 -00.1	N 19 59.6 +00.5	53 27.0 -00.5	N 12 09.9 +01.0	188 15.7 -32.1	S 20 39.7 +04.9	14						
15	45 51.9 +00.0	N 20 00.1 +00.5	68 26.5 -00.4	N 12 10.9 +01.1	202 43.6 -32.1	S 20 44.6 +04.7	15						
16	60 51.9 +00.0	N 20 00.6 +00.5	83 26.1 -00.5	N 12 12.0 +01.0	217 11.5 -32.2	S 20 49.3 +04.6	16						
17	75 51.9 -00.1	N 20 01.1 +00.6	98 25.6 -00.4	N 12 13.0 +01.0	231 39.3 -32.1	S 20 53.9 +04.5	17						
18	90 51.8 +00.0	N 20 01.7 +00.5	113 25.2 -00.5	N 12 14.0 +01.1	246 07.2 -32.1	S 20 58.4 +04.3	18						
19	105 51.8 +00.0	N 20 02.2 +00.5	128 24.7 -00.4	N 12 15.1 +01.0	260 35.1 -32.1	S 21 02.7 +04.3	19						
20	120 51.8 -00.1	N 20 02.7 +00.5	143 24.3 -00.5	N 12 16.1 +01.0	275 03.0 -32.1	S 21 07.0 +04.1	20						
21	135 51.7 +00.0	N 20 03.2 +00.5	158 23.8 -00.5	N 12 17.1 +01.1	289 30.9 -32.1	S 21 11.1 +04.0	21						
22	150 51.7 +00.0	N 20 03.7 +00.5	173 23.3 -00.4	N 12 18.2 +01.0	303 58.8 -32.1	S 21 15.1 +03.8	22						
23	165 51.7 -00.1	N 20 04.2 +00.6	188 22.9 -00.5	N 12 19.2 +01.0	318 26.7 -32.0	S 21 18.9 +03.8	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 15'6 15'5 15'5 15'5 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 57'1 57'0 56'9 56'8 56'7 56'5								
	SHA 303° 303° 303° 303° 303° 303°		SHA 326° 326° 326° 326° 325° 325°		SHA 107° 105° 103° 100° 098° 096°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:26		Greenwich Culmination Time: 00:59								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 37.0 +00.6	N 24 32.7 +00.0	335 56.2 +02.7	S 22 35.0 +00.0	305 34.2 +02.5	S 21 32.7 +00.0	00						
01	159 37.6 +00.7	N 24 32.7 -00.1	350 58.9 +02.8	S 22 35.0 +00.0	320 36.7 +02.6	S 21 32.7 +00.0	01						
02	174 38.3 +00.7	N 24 32.6 +00.0	6 01.7 +02.7	S 22 35.0 -00.1	335 39.3 +02.5	S 21 32.7 +00.0	02						
03	189 39.0 +00.7	N 24 32.6 +00.0	21 04.4 +02.8	S 22 34.9 +00.0	350 41.8 +02.6	S 21 32.7 +00.0	03						
04	204 39.7 +00.7	N 24 32.6 -00.1	36 07.2 +02.7	S 22 34.9 +00.0	5 44.4 +02.5	S 21 32.7 +00.0	04						
05	219 40.4 +00.7	N 24 32.5 +00.0	51 09.9 +02.8	S 22 34.9 +00.0	20 46.9 +02.6	S 21 32.7 +00.1	05						
06	234 41.1 +00.7	N 24 32.5 +00.0	66 12.7 +02.7	S 22 34.9 +00.0	35 49.5 +02.5	S 21 32.8 +00.0	06						
07	249 41.8 +00.7	N 24 32.5 +00.0	81 15.4 +02.8	S 22 34.9 +00.0	50 52.0 +02.6	S 21 32.8 +00.0	07						
08	264 42.5 +00.7	N 24 32.5 -00.1	96 18.2 +02.7	S 22 34.9 +00.0	65 54.6 +02.5	S 21 32.8 +00.0	08						
09	279 43.2 +00.7	N 24 32.4 +00.0	111 20.9 +02.8	S 22 34.9 +00.0	80 57.1 +02.6	S 21 32.8 +00.0	09						
10	294 43.9 +00.7	N 24 32.4 +00.0	126 23.7 +02.7	S 22 34.9 -00.1	95 59.7 +02.5	S 21 32.8 +00.0	10						
11	309 44.6 +00.7	N 24 32.4 +00.0	141 26.4 +02.8	S 22 34.8 +00.0	111 02.2 +02.5	S 21 32.8 +00.0	11						
12	324 45.3 +00.7	N 24 32.4 -00.1	156 29.2 +02.8	S 22 34.8 +00.0	126 04.7 +02.6	S 21 32.8 +00.1	12						
13	339 46.0 +00.6	N 24 32.3 +00.0	171 32.0 +02.7	S 22 34.8 +00.0	141 07.3 +02.5	S 21 32.9 +00.0	13						
14	354 46.6 +00.7	N 24 32.3 +00.0	186 34.7 +02.8	S 22 34.8 +00.0	156 09.8 +02.6	S 21 32.9 +00.0	14						
15	9 47.3 +00.7	N 24 32.3 -00.1	201 37.5 +02.7	S 22 34.8 +00.0	171 12.4 +02.5	S 21 32.9 +00.0	15						
16	24 48.0 +00.7	N 24 32.2 +00.0	216 40.2 +02.8	S 22 34.8 +00.0	186 14.9 +02.6	S 21 32.9 +00.0	16						
17	39 48.7 +00.7	N 24 32.2 +00.0	231 43.0 +02.7	S 22 34.8 -00.1	201 17.5 +02.5	S 21 32.9 +00.0	17						
18	54 49.4 +00.7	N 24 32.2 -00.1	246 45.7 +02.8	S 22 34.7 +00.0	216 20.0 +02.6	S 21 32.9 +00.0	18						
19	69 50.1 +00.7	N 24 32.1 +00.0	261 48.5 +02.7	S 22 34.7 +00.0	231 22.6 +02.5	S 21 32.9 +00.0	19						
20	84 50.8 +00.7	N 24 32.1 +00.0	276 51.2 +02.8	S 22 34.7 +00.0	246 25.1 +02.6	S 21 32.9 +00.1	20						
21	99 51.5 +00.7	N 24 32.1 +00.0	291 54.0 +02.8	S 22 34.7 +00.0	261 27.7 +02.5	S 21 33.0 +00.0	21						
22	114 52.2 +00.7	N 24 32.1 -00.1	306 56.8 +02.7	S 22 34.7 +00.0	276 30.2 +02.6	S 21 33.0 +00.0	22						
23	129 52.9 +00.7	N 24 32.0 +00.0	321 59.5 +02.8	S 22 34.7 +00.0	291 32.8 +02.5	S 21 33.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 267° 267° 267° 267° 267° 267°		SHA 099° 099° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:20		Greenwich Culmination Time: 01:35		Greenwich Culmination Time: 03:37								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 51.6 +00.0	N 20 04.8 +00.5	203 22.4 -00.4	N 12 20.2 +01.1	332 54.7 -32.1	S 21 22.7 +03.6	00						
01	195 51.6 -00.1	N 20 05.3 +00.5	218 22.0 -00.5	N 12 21.3 +01.0	347 22.6 -32.1	S 21 26.3 +03.5	01						
02	210 51.5 +00.0	N 20 05.8 +00.5	233 21.5 -00.5	N 12 22.3 +01.0	1 50.5 -32.0	S 21 29.8 +03.4	02						
03	225 51.5 +00.0	N 20 06.3 +00.5	248 21.0 -00.4	N 12 23.3 +01.1	16 18.5 -32.1	S 21 33.2 +03.3	03						
04	240 51.5 -00.1	N 20 06.8 +00.5	263 20.6 -00.5	N 12 24.4 +01.0	30 46.4 -32.0	S 21 36.5 +03.1	04						
05	255 51.4 +00.0	N 20 07.3 +00.5	278 20.1 -00.5	N 12 25.4 +01.0	45 14.4 -32.1	S 21 39.6 +03.0	05						
06	270 51.4 +00.0	N 20 07.8 +00.5	293 19.6 -00.4	N 12 26.4 +01.0	59 42.3 -32.0	S 21 42.6 +02.9	06						
07	285 51.4 -00.1	N 20 08.3 +00.6	308 19.2 -00.5	N 12 27.4 +01.1	74 10.3 -32.0	S 21 45.5 +02.8	07						
08	300 51.3 +00.0	N 20 08.9 +00.5	323 18.7 -00.4	N 12 28.5 +01.0	88 38.3 -32.0	S 21 48.3 +02.7	08						
09	315 51.3 -00.1	N 20 09.4 +00.5	338 18.3 -00.5	N 12 29.5 +01.0	103 06.3 -32.0	S 21 51.0 +02.5	09						
10	330 51.2 +00.0	N 20 09.9 +00.5	353 17.8 -00.5	N 12 30.5 +01.1	117 34.3 -31.9	S 21 53.5 +02.4	10						
11	345 51.2 +00.0	N 20 10.4 +00.5	8 17.3 -00.4	N 12 31.6 +01.0	132 02.4 -32.0	S 21 55.9 +02.3	11						
12	0 51.2 -00.1	N 20 10.9 +00.5	23 16.9 -00.5	N 12 32.6 +01.0	146 30.4 -31.9	S 21 58.2 +02.2	12						
13	15 51.1 +00.0	N 20 11.4 +00.5	38 16.4 -00.5	N 12 33.6 +01.0	160 58.5 -31.9	S 22 00.4 +02.0	13						
14	30 51.1 -00.1	N 20 11.9 +00.5	53 15.9 -00.4	N 12 34.6 +01.1	175 26.6 -31.9	S 22 02.4 +02.0	14						
15	45 51.0 +00.0	N 20 12.4 +00.5	68 15.5 -00.5	N 12 35.7 +01.0	189 54.7 -31.8	S 22 04.4 +01.8	15						
16	60 51.0 +00.0	N 20 12.9 +00.5	83 15.0 -00.5	N 12 36.7 +01.0	204 22.9 -31.9	S 22 06.2 +01.7	16						
17	75 51.0 -00.1	N 20 13.4 +00.5	98 14.5 -00.4	N 12 37.7 +01.0	218 51.0 -31.8	S 22 07.9 +01.5	17						
18	90 50.9 +00.0	N 20 13.9 +00.5	113 14.1 -00.5	N 12 38.7 +01.1	233 19.2 -31.8	S 22 09.4 +01.5	18						
19	105 50.9 -00.1	N 20 14.4 +00.5	128 13.6 -00.5	N 12 39.8 +01.0	247 47.4 -31.8	S 22 10.9 +01.3	19						
20	120 50.8 +00.0	N 20 14.9 +00.5	143 13.1 -00.4	N 12 40.8 +01.0	262 15.6 -31.7	S 22 12.2 +01.2	20						
21	135 50.8 -00.1	N 20 15.4 +00.5	158 12.7 -00.5	N 12 41.8 +01.0	276 43.9 -31.8	S 22 13.4 +01.1	21						
22	150 50.7 +00.0	N 20 15.9 +00.5	173 12.2 -00.5	N 12 42.8 +01.0	291 12.1 -31.7	S 22 14.5 +00.9	22						
23	165 50.7 +00.0	N 20 16.4 +00.5	188 11.7 -00.4	N 12 43.8 +01.1	305 40.4 -31.6	S 22 15.4 +00.9	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'8 15'8 15'8 15'8 15'8 15'8		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	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	56'4 56'3 56'2 56'1 56'0 55'9						
SHA	302° 302° 302° 302° 302° 302°		SHA	325° 325° 325° 324° 324° 324°		SHA	093° 091° 089° 087° 084° 082°						
Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 10:26				Greenwich Culmination Time: 01:52					

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	144 53.6 +00.7	N 24 32.0 +00.0	337 02.3 +02.7	S 22 34.7 +00.0	306 35.3 +02.6	S 21 33.0 +00.0	00						
01	159 54.3 +00.7	N 24 32.0 -00.1	352 05.0 +02.8	S 22 34.7 -00.1	321 37.9 +02.6	S 21 33.0 +00.0	01						
02	174 55.0 +00.7	N 24 31.9 +00.0	7 07.8 +02.7	S 22 34.6 +00.0	336 40.5 +02.5	S 21 33.0 +00.0	02						
03	189 55.7 +00.7	N 24 31.9 +00.0	22 10.5 +02.8	S 22 34.6 +00.0	351 43.0 +02.6	S 21 33.0 +00.1	03						
04	204 56.4 +00.6	N 24 31.9 -00.1	37 13.3 +02.8	S 22 34.6 +00.0	6 45.6 +02.5	S 21 33.1 +00.0	04						
05	219 57.0 +00.7	N 24 31.8 +00.0	52 16.1 +02.7	S 22 34.6 +00.0	21 48.1 +02.6	S 21 33.1 +00.0	05						
06	234 57.7 +00.7	N 24 31.8 -00.1	67 18.8 +02.8	S 22 34.6 +00.0	36 50.7 +02.5	S 21 33.1 +00.0	06						
07	249 58.4 +00.7	N 24 31.7 +00.0	82 21.6 +02.7	S 22 34.6 +00.0	51 53.2 +02.6	S 21 33.1 +00.0	07						
08	264 59.1 +00.7	N 24 31.7 +00.0	97 24.3 +02.8	S 22 34.6 -00.1	66 55.8 +02.5	S 21 33.1 +00.0	08						
09	279 59.8 +00.7	N 24 31.7 -00.1	112 27.1 +02.8	S 22 34.5 +00.0	81 58.3 +02.6	S 21 33.1 +00.0	09						
10	295 00.5 +00.7	N 24 31.6 +00.0	127 29.9 +02.7	S 22 34.5 +00.0	97 00.9 +02.5	S 21 33.1 +00.1	10						
11	310 01.2 +00.7	N 24 31.6 +00.0	142 32.6 +02.8	S 22 34.5 +00.0	112 03.4 +02.6	S 21 33.2 +00.0	11						
12	325 01.9 +00.7	N 24 31.6 -00.1	157 35.4 +02.7	S 22 34.5 +00.0	127 06.0 +02.5	S 21 33.2 +00.0	12						
13	340 02.6 +00.7	N 24 31.5 +00.0	172 38.1 +02.8	S 22 34.5 +00.0	142 08.5 +02.6	S 21 33.2 +00.0	13						
14	355 03.3 +00.7	N 24 31.5 +00.0	187 40.9 +02.8	S 22 34.5 +00.0	157 11.1 +02.5	S 21 33.2 +00.0	14						
15	10 04.0 +00.7	N 24 31.5 -00.1	202 43.7 +02.7	S 22 34.5 +00.0	172 13.6 +02.6	S 21 33.2 +00.0	15						
16	25 04.7 +00.7	N 24 31.4 +00.0	217 46.4 +02.8	S 22 34.5 -00.1	187 16.2 +02.5	S 21 33.2 +00.1	16						
17	40 05.4 +00.7	N 24 31.4 -00.1	232 49.2 +02.7	S 22 34.4 +00.0	202 18.7 +02.6	S 21 33.3 +00.0	17						
18	55 06.1 +00.7	N 24 31.3 +00.0	247 51.9 +02.8	S 22 34.4 +00.0	217 21.3 +02.5	S 21 33.3 +00.0	18						
19	70 06.8 +00.7	N 24 31.3 +00.0	262 54.7 +02.8	S 22 34.4 +00.0	232 23.8 +02.6	S 21 33.3 +00.0	19						
20	85 07.5 +00.6	N 24 31.3 -00.1	277 57.5 +02.7	S 22 34.4 +00.0	247 26.4 +02.6	S 21 33.3 +00.0	20						
21	100 08.1 +00.7	N 24 31.2 +00.0	293 00.2 +02.8	S 22 34.4 +00.0	262 29.0 +02.5	S 21 33.3 +00.0	21						
22	115 08.8 +00.7	N 24 31.2 -00.1	308 03.0 +02.7	S 22 34.4 +00.0	277 31.5 +02.6	S 21 33.3 +00.0	22						
23	130 09.5 +00.7	N 24 31.1 +00.0	323 05.7 +02.8	S 22 34.4 -00.1	292 34.1 +02.5	S 21 33.3 +00.1	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'0 00'0 00'0 00'0 00'0 00'0		SD	00'4 00'4 00'4 00'4 00'4 00'4		SD	00'1 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	266° 266° 266° 266° 266° 266°		SHA	099° 099° 099° 099° 099° 099°		SHA	068° 068° 068° 068° 068° 068°						
Greenwich Culmination Time: 14:19				Greenwich Culmination Time: 01:31				Greenwich Culmination Time: 03:33					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 50.7 -00.1	N 20 16.9 +00.5	203 11.3 -00.5	N 12 44.9 +01.0	320 08.8 -31.7	S 22 16.3 +00.7	00						
01	195 50.6 +00.0	N 20 17.4 +00.5	218 10.8 -00.5	N 12 45.9 +01.0	334 37.1 -31.6	S 22 17.0 +00.6	01						
02	210 50.6 -00.1	N 20 17.9 +00.5	233 10.3 -00.5	N 12 46.9 +01.0	349 05.5 -31.6	S 22 17.6 +00.5	02						
03	225 50.5 +00.0	N 20 18.4 +00.5	248 09.8 -00.4	N 12 47.9 +01.0	3 33.9 -31.5	S 22 18.1 +00.4	03						
04	240 50.5 -00.1	N 20 18.9 +00.5	263 09.4 -00.5	N 12 48.9 +01.1	18 02.4 -31.6	S 22 18.5 +00.2	04						
05	255 50.4 +00.0	N 20 19.4 +00.5	278 08.9 -00.5	N 12 50.0 +01.0	32 30.8 -31.4	S 22 18.7 +00.2	05						
06	270 50.4 +00.0	N 20 19.9 +00.5	293 08.4 -00.4	N 12 51.0 +01.0	46 59.4 -31.5	S 22 18.9 +00.0	06						
07	285 50.4 -00.1	N 20 20.4 +00.5	308 08.0 -00.5	N 12 52.0 +01.0	61 27.9 -31.4	S 22 18.9 -00.1	07						
08	300 50.3 +00.0	N 20 20.9 +00.5	323 07.5 -00.5	N 12 53.0 +01.0	75 56.5 -31.4	S 22 18.8 -00.2	08						
09	315 50.3 -00.1	N 20 21.4 +00.5	338 07.0 -00.5	N 12 54.0 +01.0	90 25.1 -31.4	S 22 18.6 -00.4	09						
10	330 50.2 +00.0	N 20 21.9 +00.5	353 06.5 -00.4	N 12 55.0 +01.0	104 53.7 -31.3	S 22 18.2 -00.4	10						
11	345 50.2 -00.1	N 20 22.4 +00.5	8 06.1 -00.5	N 12 56.0 +01.1	119 22.4 -31.3	S 22 17.8 -00.6	11						
12	0 50.1 +00.0	N 20 22.9 +00.5	23 05.6 -00.5	N 12 57.1 +01.0	133 51.1 -31.2	S 22 17.2 -00.7	12						
13	15 50.1 -00.1	N 20 23.4 +00.5	38 05.1 -00.5	N 12 58.1 +01.0	148 19.9 -31.2	S 22 16.5 -00.8	13						
14	30 50.0 +00.0	N 20 23.9 +00.5	53 04.6 -00.4	N 12 59.1 +01.0	162 48.7 -31.2	S 22 15.7 -00.9	14						
15	45 50.0 -00.1	N 20 24.4 +00.4	68 04.2 -00.5	N 13 00.1 +01.0	177 17.5 -31.1	S 22 14.8 -01.0	15						
16	60 49.9 +00.0	N 20 24.8 +00.5	83 03.7 -00.5	N 13 01.1 +01.0	191 46.4 -31.1	S 22 13.8 -01.1	16						
17	75 49.9 -00.1	N 20 25.3 +00.5	98 03.2 -00.5	N 13 02.1 +01.0	206 15.3 -31.1	S 22 12.7 -01.3	17						
18	90 49.8 +00.0	N 20 25.8 +00.5	113 02.7 -00.4	N 13 03.1 +01.0	220 44.2 -31.0	S 22 11.4 -01.4	18						
19	105 49.8 +00.0	N 20 26.3 +00.5	128 02.3 -00.5	N 13 04.1 +01.1	235 13.2 -31.0	S 22 10.0 -01.4	19						
20	120 49.8 -00.1	N 20 26.8 +00.5	143 01.8 -00.5	N 13 05.2 +01.0	249 42.2 -30.9	S 22 08.6 -01.6	20						
21	135 49.7 +00.0	N 20 27.3 +00.5	158 01.3 -00.5	N 13 06.2 +01.0	264 11.3 -30.9	S 22 07.0 -01.7	21						
22	150 49.7 -00.1	N 20 27.8 +00.5	173 00.8 -00.5	N 13 07.2 +01.0	278 40.4 -30.8	S 22 05.3 -01.8	22						
23	165 49.6 +00.0	N 20 28.3 +00.4	188 00.3 -00.4	N 13 08.2 +01.0	293 09.6 -30.8	S 22 03.5 -02.0	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 15'2 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 55'3								
	SHA 301° 301° 301° 301° 301° 301°		SHA 324° 324° 323° 323° 323° 323°		SHA 080° 077° 075° 073° 071° 068°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:27		Greenwich Culmination Time: 02:45								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	145 10.2 +00.7	N 24 31.1 +00.0	338 08.5 +02.8	S 22 34.3 +00.0	307 36.6 +02.6	S 21 33.4 +00.0	00						
01	160 10.9 +00.7	N 24 31.1 -00.1	353 11.3 +02.7	S 22 34.3 +00.0	322 39.2 +02.5	S 21 33.4 +00.0	01						
02	175 11.6 +00.7	N 24 31.0 +00.0	8 14.0 +02.8	S 22 34.3 +00.0	337 41.7 +02.6	S 21 33.4 +00.0	02						
03	190 12.3 +00.7	N 24 31.0 -00.1	23 16.8 +02.8	S 22 34.3 +00.0	352 44.3 +02.5	S 21 33.4 +00.0	03						
04	205 13.0 +00.7	N 24 30.9 +00.0	38 19.6 +02.7	S 22 34.3 +00.0	7 46.8 +02.6	S 21 33.4 +00.0	04						
05	220 13.7 +00.7	N 24 30.9 -00.1	53 22.3 +02.8	S 22 34.3 +00.0	22 49.4 +02.5	S 21 33.4 +00.0	05						
06	235 14.4 +00.7	N 24 30.8 +00.0	68 25.1 +02.7	S 22 34.3 -00.1	37 51.9 +02.6	S 21 33.4 +00.1	06						
07	250 15.1 +00.7	N 24 30.8 +00.0	83 27.8 +02.8	S 22 34.2 +00.0	52 54.5 +02.6	S 21 33.5 +00.0	07						
08	265 15.8 +00.7	N 24 30.8 -00.1	98 30.6 +02.8	S 22 34.2 +00.0	67 57.1 +02.5	S 21 33.5 +00.0	08						
09	280 16.5 +00.7	N 24 30.7 +00.0	113 33.4 +02.7	S 22 34.2 +00.0	82 59.6 +02.6	S 21 33.5 +00.0	09						
10	295 17.2 +00.7	N 24 30.7 -00.1	128 36.1 +02.8	S 22 34.2 +00.0	98 02.2 +02.5	S 21 33.5 +00.0	10						
11	310 17.9 +00.7	N 24 30.6 +00.0	143 38.9 +02.8	S 22 34.2 +00.0	113 04.7 +02.6	S 21 33.5 +00.0	11						
12	325 18.6 +00.7	N 24 30.6 -00.1	158 41.7 +02.7	S 22 34.2 +00.0	128 07.3 +02.5	S 21 33.5 +00.0	12						
13	340 19.3 +00.7	N 24 30.5 +00.0	173 44.4 +02.8	S 22 34.2 -00.1	143 09.8 +02.6	S 21 33.5 +00.1	13						
14	355 20.0 +00.6	N 24 30.5 +00.0	188 47.2 +02.8	S 22 34.1 +00.0	158 12.4 +02.6	S 21 33.6 +00.0	14						
15	10 20.6 +00.7	N 24 30.5 -00.1	203 50.0 +02.7	S 22 34.1 +00.0	173 15.0 +02.5	S 21 33.6 +00.0	15						
16	25 21.3 +00.7	N 24 30.4 +00.0	218 52.7 +02.8	S 22 34.1 +00.0	188 17.5 +02.6	S 21 33.6 +00.0	16						
17	40 22.0 +00.7	N 24 30.4 -00.1	233 55.5 +02.8	S 22 34.1 +00.0	203 20.1 +02.5	S 21 33.6 +00.0	17						
18	55 22.7 +00.7	N 24 30.3 +00.0	248 58.3 +02.7	S 22 34.1 +00.0	218 22.6 +02.6	S 21 33.6 +00.0	18						
19	70 23.4 +00.7	N 24 30.3 -00.1	264 01.0 +02.8	S 22 34.1 +00.0	233 25.2 +02.5	S 21 33.6 +00.1	19						
20	85 24.1 +00.7	N 24 30.2 +00.0	279 03.8 +02.8	S 22 34.1 -00.1	248 27.7 +02.6	S 21 33.7 +00.0	20						
21	100 24.8 +00.7	N 24 30.2 -00.1	294 06.6 +02.7	S 22 34.0 +00.0	263 30.3 +02.6	S 21 33.7 +00.0	21						
22	115 25.5 +00.7	N 24 30.1 +00.0	309 09.3 +02.8	S 22 34.0 +00.0	278 32.9 +02.5	S 21 33.7 +00.0	22						
23	130 26.2 +00.7	N 24 30.1 -00.1	324 12.1 +02.8	S 22 34.0 +00.0	293 35.4 +02.6	S 21 33.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 266° 266° 266° 265° 265° 265°		SHA 099° 099° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:18		Greenwich Culmination Time: 01:27		Greenwich Culmination Time: 03:28								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 49.6 -00.1	N 20 28.7 +00.5	202 59.9 -00.5	N 13 09.2 +01.0	307 38.8 -30.7	S 22 01.5 -02.0	00						
01	195 49.5 +00.0	N 20 29.2 +00.5	217 59.4 -00.5	N 13 10.2 +01.0	322 08.1 -30.7	S 21 59.5 -02.1	01						
02	210 49.5 -00.1	N 20 29.7 +00.5	232 58.9 -00.5	N 13 11.2 +01.0	336 37.4 -30.7	S 21 57.4 -02.3	02						
03	225 49.4 +00.0	N 20 30.2 +00.5	247 58.4 -00.5	N 13 12.2 +01.0	351 06.7 -30.6	S 21 55.1 -02.3	03						
04	240 49.4 -00.1	N 20 30.7 +00.5	262 57.9 -00.4	N 13 13.2 +01.0	5 36.1 -30.6	S 21 52.8 -02.5	04						
05	255 49.3 +00.0	N 20 31.2 +00.4	277 57.5 -00.5	N 13 14.2 +01.0	20 05.5 -30.5	S 21 50.3 -02.6	05						
06	270 49.3 -00.1	N 20 31.6 +00.5	292 57.0 -00.5	N 13 15.2 +01.0	34 35.0 -30.5	S 21 47.7 -02.7	06						
07	285 49.2 +00.0	N 20 32.1 +00.5	307 56.5 -00.5	N 13 16.2 +01.0	49 04.5 -30.4	S 21 45.0 -02.7	07						
08	300 49.2 -00.1	N 20 32.6 +00.5	322 56.0 -00.5	N 13 17.2 +01.0	63 34.1 -30.3	S 21 42.3 -02.9	08						
09	315 49.1 +00.0	N 20 33.1 +00.5	337 55.5 -00.5	N 13 18.2 +01.0	78 03.8 -30.4	S 21 39.4 -03.0	09						
10	330 49.1 -00.1	N 20 33.6 +00.4	352 55.0 -00.4	N 13 19.2 +01.0	92 33.4 -30.2	S 21 36.4 -03.1	10						
11	345 49.0 +00.0	N 20 34.0 +00.5	7 54.6 -00.5	N 13 20.2 +01.1	107 03.2 -30.3	S 21 33.3 -03.2	11						
12	0 49.0 -00.1	N 20 34.5 +00.5	22 54.1 -00.5	N 13 21.3 +01.0	121 32.9 -30.1	S 21 30.1 -03.3	12						
13	15 48.9 +00.0	N 20 35.0 +00.5	37 53.6 -00.5	N 13 22.3 +01.0	136 02.8 -30.1	S 21 26.8 -03.4	13						
14	30 48.9 -00.1	N 20 35.5 +00.5	52 53.1 -00.5	N 13 23.3 +01.0	150 32.7 -30.1	S 21 23.4 -03.5	14						
15	45 48.8 +00.0	N 20 36.0 +00.4	67 52.6 -00.5	N 13 24.3 +01.0	165 02.6 -30.0	S 21 19.9 -03.6	15						
16	60 48.8 -00.1	N 20 36.4 +00.5	82 52.1 -00.5	N 13 25.3 +01.0	179 32.6 -30.0	S 21 16.3 -03.8	16						
17	75 48.7 -00.1	N 20 36.9 +00.5	97 51.6 -00.4	N 13 26.3 +01.0	194 02.6 -29.9	S 21 12.5 -03.8	17						
18	90 48.6 +00.0	N 20 37.4 +00.5	112 51.2 -00.5	N 13 27.3 +00.9	208 32.7 -29.9	S 21 08.7 -03.9	18						
19	105 48.6 -00.1	N 20 37.9 +00.4	127 50.7 -00.5	N 13 28.2 +01.0	223 02.8 -29.8	S 21 04.8 -04.0	19						
20	120 48.5 +00.0	N 20 38.3 +00.5	142 50.2 -00.5	N 13 29.2 +01.0	237 33.0 -29.7	S 21 00.8 -04.1	20						
21	135 48.5 -00.1	N 20 38.8 +00.5	157 49.7 -00.5	N 13 30.2 +01.0	252 03.3 -29.7	S 20 56.7 -04.2	21						
22	150 48.4 +00.0	N 20 39.3 +00.4	172 49.2 -00.5	N 13 31.2 +01.0	266 33.6 -29.7	S 20 52.5 -04.3	22						
23	165 48.4 -00.1	N 20 39.7 +00.5	187 48.7 -00.5	N 13 32.2 +01.0	281 03.9 -29.6	S 20 48.2 -04.4	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 15'0 15'0 15'0 15'0 15'0 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'2 55'1 55'0 55'0 54'9 54'8								
	SHA 300° 300° 300° 300° 300° 300°		SHA 323° 322° 322° 322° 322° 322°		SHA 066° 064° 062° 060° 057° 055°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:28		Greenwich Culmination Time: 03:36								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	145 26.9 +00.7	N 24 30.0 +00.0	339 14.9 +02.7	S 22 34.0 +00.0	308 38.0 +02.5	S 21 33.7 +00.0	00						
01	160 27.6 +00.7	N 24 30.0 -00.1	354 17.6 +02.8	S 22 34.0 +00.0	323 40.5 +02.6	S 21 33.7 +00.0	01						
02	175 28.3 +00.7	N 24 29.9 +00.0	9 20.4 +02.8	S 22 34.0 +00.0	338 43.1 +02.6	S 21 33.7 +00.1	02						
03	190 29.0 +00.7	N 24 29.9 -00.1	24 23.2 +02.7	S 22 34.0 +00.0	353 45.7 +02.5	S 21 33.8 +00.0	03						
04	205 29.7 +00.7	N 24 29.8 +00.0	39 25.9 +02.8	S 22 34.0 -00.1	8 48.2 +02.6	S 21 33.8 +00.0	04						
05	220 30.4 +00.7	N 24 29.8 -00.1	54 28.7 +02.8	S 22 33.9 +00.0	23 50.8 +02.5	S 21 33.8 +00.0	05						
06	235 31.1 +00.7	N 24 29.7 +00.0	69 31.5 +02.7	S 22 33.9 +00.0	38 53.3 +02.6	S 21 33.8 +00.0	06						
07	250 31.8 +00.7	N 24 29.7 -00.1	84 34.2 +02.8	S 22 33.9 +00.0	53 55.9 +02.5	S 21 33.8 +00.0	07						
08	265 32.5 +00.7	N 24 29.6 +00.0	99 37.0 +02.8	S 22 33.9 +00.0	68 58.4 +02.6	S 21 33.8 +00.1	08						
09	280 33.2 +00.7	N 24 29.6 -00.1	114 39.8 +02.7	S 22 33.9 +00.0	84 01.0 +02.6	S 21 33.9 +00.0	09						
10	295 33.9 +00.7	N 24 29.5 +00.0	129 42.5 +02.8	S 22 33.9 +00.0	99 03.6 +02.5	S 21 33.9 +00.0	10						
11	310 34.6 +00.7	N 24 29.5 -00.1	144 45.3 +02.8	S 22 33.9 -00.1	114 06.1 +02.6	S 21 33.9 +00.0	11						
12	325 35.3 +00.7	N 24 29.4 +00.0	159 48.1 +02.7	S 22 33.8 +00.0	129 08.7 +02.5	S 21 33.9 +00.0	12						
13	340 36.0 +00.7	N 24 29.4 -00.1	174 50.8 +02.8	S 22 33.8 +00.0	144 11.2 +02.6	S 21 33.9 +00.0	13						
14	355 36.7 +00.6	N 24 29.3 +00.0	189 53.6 +02.8	S 22 33.8 +00.0	159 13.8 +02.6	S 21 33.9 +00.0	14						
15	10 37.3 +00.7	N 24 29.3 -00.1	204 56.4 +02.7	S 22 33.8 +00.0	174 16.4 +02.5	S 21 33.9 +00.1	15						
16	25 38.0 +00.7	N 24 29.2 -00.1	219 59.1 +02.8	S 22 33.8 +00.0	189 18.9 +02.6	S 21 34.0 +00.0	16						
17	40 38.7 +00.7	N 24 29.1 +00.0	235 01.9 +02.8	S 22 33.8 +00.0	204 21.5 +02.6	S 21 34.0 +00.0	17						
18	55 39.4 +00.7	N 24 29.1 -00.1	250 04.7 +02.7	S 22 33.8 -00.1	219 24.1 +02.5	S 21 34.0 +00.0	18						
19	70 40.1 +00.7	N 24 29.0 +00.0	265 07.4 +02.8	S 22 33.7 +00.0	234 26.6 +02.6	S 21 34.0 +00.0	19						
20	85 40.8 +00.7	N 24 29.0 -00.1	280 10.2 +02.8	S 22 33.7 +00.0	249 29.2 +02.5	S 21 34.0 +00.0	20						
21	100 41.5 +00.7	N 24 28.9 +00.0	295 13.0 +02.8	S 22 33.7 +00.0	264 31.7 +02.6	S 21 34.0 +00.1	21						
22	115 42.2 +00.7	N 24 28.9 -00.1	310 15.8 +02.7	S 22 33.7 +00.0	279 34.3 +02.6	S 21 34.1 +00.0	22						
23	130 42.9 +00.7	N 24 28.8 +00.0	325 18.5 +02.8	S 22 33.7 +00.0	294 36.9 +02.5	S 21 34.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 265° 265° 265° 265° 265° 264°		SHA 099° 099° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:17		Greenwich Culmination Time: 01:22		Greenwich Culmination Time: 03:24								

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 47.0 -00.1	N 20 51.3 +00.5	202 36.4 -00.5	N 13 57.0 +00.9	284 00.4 -28.3	S 18 31.1 -06.6	00						
01	195 46.9 -00.1	N 20 51.8 +00.4	217 35.9 -00.6	N 13 57.9 +01.0	298 32.1 -28.2	S 18 24.5 -06.6	01						
02	210 46.8 +00.0	N 20 52.2 +00.5	232 35.3 -00.5	N 13 58.9 +01.0	313 03.9 -28.1	S 18 17.9 -06.8	02						
03	225 46.8 -00.1	N 20 52.7 +00.4	247 34.8 -00.5	N 13 59.9 +01.0	327 35.8 -28.1	S 18 11.1 -06.8	03						
04	240 46.7 +00.0	N 20 53.1 +00.5	262 34.3 -00.5	N 14 00.9 +01.0	342 07.7 -28.0	S 18 04.3 -06.9	04						
05	255 46.7 -00.1	N 20 53.6 +00.4	277 33.8 -00.5	N 14 01.9 +00.9	356 39.7 -28.0	S 17 57.4 -07.0	05						
06	270 46.6 -00.1	N 20 54.0 +00.5	292 33.3 -00.5	N 14 02.8 +01.0	11 11.7 -27.9	S 17 50.4 -07.0	06						
07	285 46.5 +00.0	N 20 54.5 +00.5	307 32.8 -00.5	N 14 03.8 +01.0	25 43.8 -27.9	S 17 43.4 -07.2	07						
08	300 46.5 -00.1	N 20 55.0 +00.4	322 32.3 -00.5	N 14 04.8 +01.0	40 15.9 -27.8	S 17 36.2 -07.2	08						
09	315 46.4 +00.0	N 20 55.4 +00.5	337 31.8 -00.5	N 14 05.8 +00.9	54 48.1 -27.8	S 17 29.0 -07.2	09						
10	330 46.4 -00.1	N 20 55.9 +00.4	352 31.3 -00.5	N 14 06.7 +01.0	69 20.3 -27.7	S 17 21.8 -07.4	10						
11	345 46.3 -00.1	N 20 56.3 +00.4	7 30.8 -00.5	N 14 07.7 +01.0	83 52.6 -27.7	S 17 14.4 -07.4	11						
12	0 46.2 +00.0	N 20 56.7 +00.5	22 30.3 -00.5	N 14 08.7 +01.0	98 24.9 -27.6	S 17 07.0 -07.5	12						
13	15 46.2 -00.1	N 20 57.2 +00.4	37 29.8 -00.5	N 14 09.7 +00.9	112 57.3 -27.6	S 16 59.5 -07.6	13						
14	30 46.1 -00.1	N 20 57.6 +00.5	52 29.3 -00.5	N 14 10.6 +01.0	127 29.7 -27.5	S 16 51.9 -07.6	14						
15	45 46.0 +00.0	N 20 58.1 +00.4	67 28.8 -00.5	N 14 11.6 +01.0	142 02.2 -27.5	S 16 44.3 -07.7	15						
16	60 46.0 -00.1	N 20 58.5 +00.5	82 28.3 -00.5	N 14 12.6 +01.0	156 34.7 -27.4	S 16 36.6 -07.8	16						
17	75 45.9 +00.0	N 20 59.0 +00.4	97 27.8 -00.5	N 14 13.6 +00.9	171 07.3 -27.4	S 16 28.8 -07.8	17						
18	90 45.9 -00.1	N 20 59.4 +00.5	112 27.3 -00.5	N 14 14.5 +01.0	185 39.9 -27.3	S 16 21.0 -07.9	18						
19	105 45.8 -00.1	N 20 59.9 +00.4	127 26.8 -00.5	N 14 15.5 +01.0	200 12.6 -27.3	S 16 13.1 -08.0	19						
20	120 45.7 +00.0	N 21 00.3 +00.5	142 26.3 -00.5	N 14 16.5 +01.0	214 45.3 -27.3	S 16 05.1 -08.0	20						
21	135 45.7 -00.1	N 21 00.8 +00.4	157 25.8 -00.6	N 14 17.5 +00.9	229 18.0 -27.1	S 15 57.1 -08.2	21						
22	150 45.6 -00.1	N 21 01.2 +00.4	172 25.2 -00.5	N 14 18.4 +01.0	243 50.9 -27.2	S 15 48.9 -08.1	22						
23	165 45.5 +00.0	N 21 01.6 +00.5	187 24.7 -00.5	N 14 19.4 +01.0	258 23.7 -27.1	S 15 40.8 -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 15'8 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 54'4 54'4 54'3 54'3 54'3 54'3								
	SHA 298° 298° 298° 298° 298° 298°		SHA 320° 320° 320° 320° 319° 319°		SHA 041° 039° 037° 035° 033° 031°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 10:29		Greenwich Culmination Time: 05:13								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	146 00.4 +00.7	N 24 27.3 -00.1	341 27.8 +02.8	S 22 33.3 +00.0	310 41.0 +02.5	S 21 34.5 +00.0	00						
01	161 01.1 +00.7	N 24 27.2 +00.0	356 30.6 +02.8	S 22 33.3 +00.0	325 43.5 +02.6	S 21 34.5 +00.0	01						
02	176 01.8 +00.7	N 24 27.2 -00.1	11 33.4 +02.8	S 22 33.3 +00.0	340 46.1 +02.6	S 21 34.5 +00.0	02						
03	191 02.5 +00.7	N 24 27.1 -00.1	26 36.2 +02.7	S 22 33.3 +00.0	355 48.7 +02.5	S 21 34.5 +00.0	03						
04	206 03.2 +00.7	N 24 27.0 +00.0	41 38.9 +02.8	S 22 33.3 -00.1	10 51.2 +02.6	S 21 34.5 +00.1	04						
05	221 03.9 +00.7	N 24 27.0 -00.1	56 41.7 +02.8	S 22 33.2 +00.0	25 53.8 +02.6	S 21 34.6 +00.0	05						
06	236 04.6 +00.7	N 24 26.9 -00.1	71 44.5 +02.8	S 22 33.2 +00.0	40 56.4 +02.5	S 21 34.6 +00.0	06						
07	251 05.3 +00.7	N 24 26.8 +00.0	86 47.3 +02.7	S 22 33.2 +00.0	55 58.9 +02.6	S 21 34.6 +00.0	07						
08	266 06.0 +00.7	N 24 26.8 -00.1	101 50.0 +02.8	S 22 33.2 +00.0	71 01.5 +02.6	S 21 34.6 +00.0	08						
09	281 06.7 +00.6	N 24 26.7 -00.1	116 52.8 +02.8	S 22 33.2 +00.0	86 04.1 +02.5	S 21 34.6 +00.0	09						
10	296 07.3 +00.7	N 24 26.6 +00.0	131 55.6 +02.8	S 22 33.2 -00.1	101 06.6 +02.6	S 21 34.6 +00.1	10						
11	311 08.0 +00.7	N 24 26.6 -00.1	146 58.4 +02.8	S 22 33.1 +00.0	116 09.2 +02.6	S 21 34.7 +00.0	11						
12	326 08.7 +00.7	N 24 26.5 -00.1	162 01.2 +02.7	S 22 33.1 +00.0	131 11.8 +02.5	S 21 34.7 +00.0	12						
13	341 09.4 +00.7	N 24 26.4 +00.0	177 03.9 +02.8	S 22 33.1 +00.0	146 14.3 +02.6	S 21 34.7 +00.0	13						
14	356 10.1 +00.7	N 24 26.4 -00.1	192 06.7 +02.8	S 22 33.1 +00.0	161 16.9 +02.6	S 21 34.7 +00.0	14						
15	11 10.8 +00.7	N 24 26.3 -00.1	207 09.5 +02.8	S 22 33.1 +00.0	176 19.5 +02.5	S 21 34.7 +00.0	15						
16	26 11.5 +00.7	N 24 26.2 -00.1	222 12.3 +02.7	S 22 33.1 +00.0	191 22.0 +02.6	S 21 34.7 +00.1	16						
17	41 12.2 +00.7	N 24 26.1 +00.0	237 15.0 +02.8	S 22 33.1 -00.1	206 24.6 +02.6	S 21 34.8 +00.0	17						
18	56 12.9 +00.7	N 24 26.1 -00.1	252 17.8 +02.8	S 22 33.0 +00.0	221 27.2 +02.5	S 21 34.8 +00.0	18						
19	71 13.6 +00.7	N 24 26.0 -00.1	267 20.6 +02.8	S 22 33.0 +00.0	236 29.7 +02.6	S 21 34.8 +00.0	19						
20	86 14.3 +00.7	N 24 25.9 +00.0	282 23.4 +02.8	S 22 33.0 +00.0	251 32.3 +02.6	S 21 34.8 +00.0	20						
21	101 15.0 +00.7	N 24 25.9 -00.1	297 26.2 +02.7	S 22 33.0 +00.0	266 34.9 +02.6	S 21 34.8 +00.0	21						
22	116 15.7 +00.7	N 24 25.8 -00.1	312 28.9 +02.8	S 22 33.0 +00.0	281 37.5 +02.5	S 21 34.8 +00.1	22						
23	131 16.4 +00.7	N 24 25.7 -00.1	327 31.7 +02.8	S 22 33.0 +00.0	296 40.0 +02.6	S 21 34.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 264° 264° 263° 263° 263° 263°		SHA 099° 099° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:15		Greenwich Culmination Time: 01:13		Greenwich Culmination Time: 03:16								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 45.5 -00.1	N 21 02.1 +00.4	202 24.2 -00.5	N 14 20.4 +00.9	272 56.6 -27.1	S 15 32.5 -08.3	00						
01	195 45.4 -00.1	N 21 02.5 +00.5	217 23.7 -00.5	N 14 21.3 +01.0	287 29.5 -27.0	S 15 24.2 -08.3	01						
02	210 45.3 +00.0	N 21 03.0 +00.4	232 23.2 -00.5	N 14 22.3 +01.0	302 02.5 -26.9	S 15 15.9 -08.5	02						
03	225 45.3 -00.1	N 21 03.4 +00.4	247 22.7 -00.5	N 14 23.3 +00.9	316 35.6 -27.0	S 15 07.4 -08.5	03						
04	240 45.2 -00.1	N 21 03.8 +00.5	262 22.2 -00.5	N 14 24.2 +01.0	331 08.6 -26.9	S 14 58.9 -08.5	04						
05	255 45.1 +00.0	N 21 04.3 +00.4	277 21.7 -00.5	N 14 25.2 +01.0	345 41.7 -26.8	S 14 50.4 -08.6	05						
06	270 45.1 -00.1	N 21 04.7 +00.5	292 21.2 -00.6	N 14 26.2 +00.9	0 14.9 -26.8	S 14 41.8 -08.7	06						
07	285 45.0 -00.1	N 21 05.2 +00.4	307 20.6 -00.5	N 14 27.1 +01.0	14 48.1 -26.8	S 14 33.1 -08.7	07						
08	300 44.9 +00.0	N 21 05.6 +00.4	322 20.1 -00.5	N 14 28.1 +01.0	29 21.3 -26.7	S 14 24.4 -08.8	08						
09	315 44.9 -00.1	N 21 06.0 +00.5	337 19.6 -00.5	N 14 29.1 +00.9	43 54.6 -26.7	S 14 15.6 -08.9	09						
10	330 44.8 -00.1	N 21 06.5 +00.4	352 19.1 -00.5	N 14 30.0 +01.0	58 27.9 -26.6	S 14 06.7 -08.9	10						
11	345 44.7 +00.0	N 21 06.9 +00.4	7 18.6 -00.5	N 14 31.0 +00.9	73 01.3 -26.6	S 13 57.8 -09.0	11						
12	0 44.7 -00.1	N 21 07.3 +00.5	22 18.1 -00.5	N 14 31.9 +01.0	87 34.7 -26.6	S 13 48.8 -09.0	12						
13	15 44.6 -00.1	N 21 07.8 +00.4	37 17.6 -00.6	N 14 32.9 +01.0	102 08.1 -26.5	S 13 39.8 -09.1	13						
14	30 44.5 +00.0	N 21 08.2 +00.4	52 17.0 -00.5	N 14 33.9 +00.9	116 41.6 -26.5	S 13 30.7 -09.1	14						
15	45 44.5 -00.1	N 21 08.6 +00.5	67 16.5 -00.5	N 14 34.8 +01.0	131 15.1 -26.4	S 13 21.6 -09.2	15						
16	60 44.4 -00.1	N 21 09.1 +00.4	82 16.0 -00.5	N 14 35.8 +00.9	145 48.7 -26.5	S 13 12.4 -09.2	16						
17	75 44.3 +00.0	N 21 09.5 +00.4	97 15.5 -00.5	N 14 36.7 +01.0	160 22.2 -26.3	S 13 03.2 -09.3	17						
18	90 44.3 -00.1	N 21 09.9 +00.4	112 15.0 -00.6	N 14 37.7 +01.0	174 55.9 -26.4	S 12 53.9 -09.4	18						
19	105 44.2 -00.1	N 21 10.3 +00.5	127 14.4 -00.5	N 14 38.7 +00.9	189 29.5 -26.3	S 12 44.5 -09.4	19						
20	120 44.1 +00.0	N 21 10.8 +00.4	142 13.9 -00.5	N 14 39.6 +01.0	204 03.2 -26.3	S 12 35.1 -09.5	20						
21	135 44.1 -00.1	N 21 11.2 +00.4	157 13.4 -00.5	N 14 40.6 +00.9	218 36.9 -26.2	S 12 25.6 -09.5	21						
22	150 44.0 -00.1	N 21 11.6 +00.5	172 12.9 -00.5	N 14 41.5 +01.0	233 10.7 -26.3	S 12 16.1 -09.5	22						
23	165 43.9 +00.0	N 21 12.1 +00.4	187 12.4 -00.6	N 14 42.5 +00.9	247 44.4 -26.1	S 12 06.6 -09.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 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 54'2 54'2 54'2 54'2 54'2								
	SHA 297° 297° 297° 297° 297° 297°		SHA 319° 319° 319° 318° 318° 318°		SHA 029° 027° 025° 023° 021° 019°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 10:30		Greenwich Culmination Time: 05:58								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	146 17.1 +00.7	N 24 25.6 +00.0	342 34.5 +02.8	S 22 33.0 -00.1	311 42.6 +02.6	S 21 34.9 +00.0	00						
01	161 17.8 +00.7	N 24 25.6 -00.1	357 37.3 +02.7	S 22 32.9 +00.0	326 45.2 +02.5	S 21 34.9 +00.0	01						
02	176 18.5 +00.7	N 24 25.5 -00.1	12 40.0 +02.8	S 22 32.9 +00.0	341 47.7 +02.6	S 21 34.9 +00.0	02						
03	191 19.2 +00.7	N 24 25.4 -00.1	27 42.8 +02.8	S 22 32.9 +00.0	356 50.3 +02.6	S 21 34.9 +00.0	03						
04	206 19.9 +00.7	N 24 25.3 +00.0	42 45.6 +02.8	S 22 32.9 +00.0	11 52.9 +02.5	S 21 34.9 +00.1	04						
05	221 20.6 +00.7	N 24 25.3 -00.1	57 48.4 +02.8	S 22 32.9 +00.0	26 55.4 +02.6	S 21 35.0 +00.0	05						
06	236 21.3 +00.7	N 24 25.2 -00.1	72 51.2 +02.7	S 22 32.9 -00.1	41 58.0 +02.6	S 21 35.0 +00.0	06						
07	251 22.0 +00.7	N 24 25.1 -00.1	87 53.9 +02.8	S 22 32.8 +00.0	57 00.6 +02.6	S 21 35.0 +00.0	07						
08	266 22.7 +00.7	N 24 25.0 +00.0	102 56.7 +02.8	S 22 32.8 +00.0	72 03.2 +02.5	S 21 35.0 +00.0	08						
09	281 23.4 +00.7	N 24 25.0 -00.1	117 59.5 +02.8	S 22 32.8 +00.0	87 05.7 +02.6	S 21 35.0 +00.0	09						
10	296 24.1 +00.7	N 24 24.9 -00.1	133 02.3 +02.8	S 22 32.8 +00.0	102 08.3 +02.6	S 21 35.0 +00.1	10						
11	311 24.8 +00.7	N 24 24.8 -00.1	148 05.1 +02.7	S 22 32.8 +00.0	117 10.9 +02.5	S 21 35.1 +00.0	11						
12	326 25.5 +00.7	N 24 24.7 +00.0	163 07.8 +02.8	S 22 32.8 +00.0	132 13.4 +02.6	S 21 35.1 +00.0	12						
13	341 26.2 +00.7	N 24 24.7 -00.1	178 10.6 +02.8	S 22 32.8 -00.1	147 16.0 +02.6	S 21 35.1 +00.0	13						
14	356 26.9 +00.7	N 24 24.6 -00.1	193 13.4 +02.8	S 22 32.7 +00.0	162 18.6 +02.6	S 21 35.1 +00.0	14						
15	11 27.6 +00.7	N 24 24.5 -00.1	208 16.2 +02.8	S 22 32.7 +00.0	177 21.2 +02.5	S 21 35.1 +00.0	15						
16	26 28.3 +00.7	N 24 24.4 +00.0	223 19.0 +02.7	S 22 32.7 +00.0	192 23.7 +02.6	S 21 35.1 +00.1	16						
17	41 29.0 +00.7	N 24 24.4 -00.1	238 21.7 +02.8	S 22 32.7 +00.0	207 26.3 +02.6	S 21 35.2 +00.0	17						
18	56 29.7 +00.7	N 24 24.3 -00.1	253 24.5 +02.8	S 22 32.7 +00.0	222 28.9 +02.5	S 21 35.2 +00.0	18						
19	71 30.4 +00.7	N 24 24.2 -00.1	268 27.3 +02.8	S 22 32.7 -00.1	237 31.4 +02.6	S 21 35.2 +00.0	19						
20	86 31.1 +00.7	N 24 24.1 -00.1	283 30.1 +02.8	S 22 32.6 +00.0	252 34.0 +02.6	S 21 35.2 +00.0	20						
21	101 31.8 +00.8	N 24 24.0 +00.0	298 32.9 +02.8	S 22 32.6 +00.0	267 36.6 +02.6	S 21 35.2 +00.0	21						
22	116 32.6 +00.7	N 24 24.0 -00.1	313 35.7 +02.7	S 22 32.6 +00.0	282 39.2 +02.5	S 21 35.2 +00.1	22						
23	131 33.3 +00.7	N 24 23.9 -00.1	328 38.4 +02.8	S 22 32.6 +00.0	297 41.7 +02.6	S 21 35.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 263° 263° 263° 263° 262° 262°		SHA 099° 099° 099° 099° 099° 099°		SHA 068° 068° 068° 068° 068° 068°								
	Greenwich Culmination Time: 14:14		Greenwich Culmination Time: 01:09		Greenwich Culmination Time: 03:12								

Table with columns for Sun, Venus, Moon, Mars, Jupiter, Saturn and rows for UT from 00 to 23. Each planet section includes GHA, ddGHA, Dec, dDec and a summary row for UT, SD, HP, SHA.

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 81%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 42.1 -00.1	N 21 22.5 +00.4	201 59.2 -00.5	N 15 06.1 +01.0	251 57.2 -25.6	S 07 52.8 -10.6	00						
01	195 42.0 +00.0	N 21 22.9 +00.4	216 58.7 -00.6	N 15 07.1 +00.9	266 31.6 -25.7	S 07 42.2 -10.7	01						
02	210 42.0 -00.1	N 21 23.3 +00.4	231 58.1 -00.5	N 15 08.0 +01.0	281 05.9 -25.6	S 07 31.5 -10.8	02						
03	225 41.9 -00.1	N 21 23.7 +00.4	246 57.6 -00.5	N 15 09.0 +00.9	295 40.3 -25.6	S 07 20.7 -10.8	03						
04	240 41.8 -00.1	N 21 24.1 +00.4	261 57.1 -00.6	N 15 09.9 +00.9	310 14.7 -25.6	S 07 09.9 -10.8	04						
05	255 41.7 +00.0	N 21 24.5 +00.5	276 56.5 -00.5	N 15 10.8 +01.0	324 49.1 -25.6	S 06 59.1 -10.8	05						
06	270 41.7 -00.1	N 21 25.0 +00.4	291 56.0 -00.5	N 15 11.8 +00.9	339 23.5 -25.6	S 06 48.3 -10.9	06						
07	285 41.6 -00.1	N 21 25.4 +00.4	306 55.5 -00.6	N 15 12.7 +00.9	353 57.9 -25.6	S 06 37.4 -10.9	07						
08	300 41.5 -00.1	N 21 25.8 +00.4	321 54.9 -00.5	N 15 13.6 +01.0	8 32.3 -25.6	S 06 26.5 -10.9	08						
09	315 41.4 +00.0	N 21 26.2 +00.4	336 54.4 -00.5	N 15 14.6 +00.9	23 06.7 -25.5	S 06 15.6 -11.0	09						
10	330 41.4 -00.1	N 21 26.6 +00.4	351 53.9 -00.6	N 15 15.5 +00.9	37 41.2 -25.6	S 06 04.6 -11.0	10						
11	345 41.3 -00.1	N 21 27.0 +00.4	6 53.3 -00.5	N 15 16.4 +01.0	52 15.6 -25.6	S 05 53.6 -11.0	11						
12	0 41.2 -00.1	N 21 27.4 +00.4	21 52.8 -00.5	N 15 17.4 +00.9	66 50.0 -25.5	S 05 42.6 -11.1	12						
13	15 41.1 -00.1	N 21 27.8 +00.4	36 52.3 -00.6	N 15 18.3 +00.9	81 24.5 -25.6	S 05 31.5 -11.1	13						
14	30 41.0 +00.0	N 21 28.2 +00.4	51 51.7 -00.5	N 15 19.2 +01.0	95 58.9 -25.5	S 05 20.4 -11.1	14						
15	45 41.0 -00.1	N 21 28.6 +00.4	66 51.2 -00.6	N 15 20.2 +00.9	110 33.4 -25.6	S 05 09.3 -11.1	15						
16	60 40.9 -00.1	N 21 29.0 +00.4	81 50.6 -00.5	N 15 21.1 +00.9	125 07.8 -25.6	S 04 58.2 -11.2	16						
17	75 40.8 -00.1	N 21 29.4 +00.4	96 50.1 -00.5	N 15 22.0 +01.0	139 42.2 -25.5	S 04 47.0 -11.2	17						
18	90 40.7 -00.1	N 21 29.8 +00.4	111 49.6 -00.6	N 15 23.0 +00.9	154 16.7 -25.6	S 04 35.8 -11.2	18						
19	105 40.6 +00.0	N 21 30.2 +00.4	126 49.0 -00.5	N 15 23.9 +00.9	168 51.1 -25.6	S 04 24.6 -11.3	19						
20	120 40.6 -00.1	N 21 30.6 +00.4	141 48.5 -00.6	N 15 24.8 +00.9	183 25.5 -25.5	S 04 13.3 -11.2	20						
21	135 40.5 -00.1	N 21 31.0 +00.4	156 47.9 -00.5	N 15 25.7 +01.0	197 60.0 -25.6	S 04 02.1 -11.3	21						
22	150 40.4 -00.1	N 21 31.4 +00.4	171 47.4 -00.5	N 15 26.7 +00.9	212 34.4 -25.6	S 03 50.8 -11.3	22						
23	165 40.3 +00.0	N 21 31.8 +00.4	186 46.9 -00.6	N 15 27.6 +00.9	227 08.8 -25.6	S 03 39.5 -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 295° 295° 295° 295° 295° 295° Greenwich Culmination Time: 11:57	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 317° 316° 316° 316° 316° 316° Greenwich Culmination Time: 10:32	UT 02 06 10 14 18 22 SD 14'8 14'8 14'9 14'9 14'9 14'9 HP 54'4 54'5 54'5 54'6 54'6 54'7 SHA 006° 004° 002° 000° 358° 356° Greenwich Culmination Time: 07:24										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	146 50.8 +00.7	N 24 21.8 -00.1	344 48.0 +02.8	S 22 32.2 +00.0	313 46.1 +02.6	S 21 35.7 +00.0	00						
01	161 51.5 +00.7	N 24 21.7 -00.1	359 50.8 +02.8	S 22 32.2 +00.0	328 48.7 +02.6	S 21 35.7 +00.0	01						
02	176 52.2 +00.7	N 24 21.6 -00.1	14 53.6 +02.8	S 22 32.2 +00.0	343 51.3 +02.5	S 21 35.7 +00.1	02						
03	191 52.9 +00.7	N 24 21.5 -00.1	29 56.4 +02.8	S 22 32.2 -00.1	358 53.8 +02.6	S 21 35.8 +00.0	03						
04	206 53.6 +00.7	N 24 21.4 -00.1	44 59.2 +02.8	S 22 32.1 +00.0	13 56.4 +02.6	S 21 35.8 +00.0	04						
05	221 54.3 +00.7	N 24 21.3 -00.1	60 02.0 +02.8	S 22 32.1 +00.0	28 59.0 +02.6	S 21 35.8 +00.0	05						
06	236 55.0 +00.7	N 24 21.2 -00.1	75 04.8 +02.7	S 22 32.1 +00.0	44 01.6 +02.6	S 21 35.8 +00.0	06						
07	251 55.7 +00.7	N 24 21.1 -00.1	90 07.5 +02.8	S 22 32.1 +00.0	59 04.2 +02.5	S 21 35.8 +00.1	07						
08	266 56.4 +00.7	N 24 21.0 +00.0	105 10.3 +02.8	S 22 32.1 +00.0	74 06.7 +02.6	S 21 35.9 +00.0	08						
09	281 57.1 +00.7	N 24 21.0 -00.1	120 13.1 +02.8	S 22 32.1 -00.1	89 09.3 +02.6	S 21 35.9 +00.0	09						
10	296 57.8 +00.7	N 24 20.9 -00.1	135 15.9 +02.8	S 22 32.0 +00.0	104 11.9 +02.6	S 21 35.9 +00.0	10						
11	311 58.5 +00.7	N 24 20.8 -00.1	150 18.7 +02.8	S 22 32.0 +00.0	119 14.5 +02.5	S 21 35.9 +00.0	11						
12	326 59.2 +00.7	N 24 20.7 -00.1	165 21.5 +02.8	S 22 32.0 +00.0	134 17.0 +02.6	S 21 35.9 +00.0	12						
13	341 59.9 +00.7	N 24 20.6 -00.1	180 24.3 +02.8	S 22 32.0 +00.0	149 19.6 +02.6	S 21 35.9 +00.1	13						
14	357 00.6 +00.8	N 24 20.5 -00.1	195 27.1 +02.7	S 22 32.0 +00.0	164 22.2 +02.6	S 21 36.0 +00.0	14						
15	12 01.4 +00.7	N 24 20.4 -00.1	210 29.8 +02.8	S 22 32.0 -00.1	179 24.8 +02.6	S 21 36.0 +00.0	15						
16	27 02.1 +00.7	N 24 20.3 -00.1	225 32.6 +02.8	S 22 31.9 +00.0	194 27.4 +02.5	S 21 36.0 +00.0	16						
17	42 02.8 +00.7	N 24 20.2 -00.1	240 35.4 +02.8	S 22 31.9 +00.0	209 29.9 +02.6	S 21 36.0 +00.0	17						
18	57 03.5 +00.7	N 24 20.1 -00.1	255 38.2 +02.8	S 22 31.9 +00.0	224 32.5 +02.6	S 21 36.0 +00.0	18						
19	72 04.2 +00.7	N 24 20.0 -00.1	270 41.0 +02.8	S 22 31.9 +00.0	239 35.1 +02.6	S 21 36.0 +00.1	19						
20	87 04.9 +00.7	N 24 19.9 -00.1	285 43.8 +02.8	S 22 31.9 +00.0	254 37.7 +02.6	S 21 36.1 +00.0	20						
21	102 05.6 +00.7	N 24 19.8 -00.1	300 46.6 +02.8	S 22 31.9 -00.1	269 40.3 +02.5	S 21 36.1 +00.0	21						
22	117 06.3 +00.7	N 24 19.7 -00.1	315 49.4 +02.7	S 22 31.8 +00.0	284 42.8 +02.6	S 21 36.1 +00.0	22						
23	132 07.0 +00.7	N 24 19.6 -00.1	330 52.1 +02.8	S 22 31.8 +00.0	299 45.4 +02.6	S 21 36.1 +00.0	23						
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 262° 261° 261° 261° 261° 261° Greenwich Culmination Time: 14:11	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 100° 100° 100° 100° 100° 100° Greenwich Culmination Time: 01:00	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 069° 069° 069° 069° 069° 069° Greenwich Culmination Time: 03:04										

UT	Sun				Venus				Moon				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 38.3 -00.1	N 21 41.5 +00.3	201 33.2 -00.6	N 15 50.5 +00.9	231 24.8 -26.1	N 01 09.0 +11.6	00						
01	195 38.2 -00.1	N 21 41.8 +00.4	216 32.6 -00.6	N 15 51.4 +00.9	245 58.7 -26.1	N 01 20.6 +11.7	01						
02	210 38.1 -00.1	N 21 42.2 +00.4	231 32.0 -00.5	N 15 52.3 +00.9	260 32.6 -26.1	N 01 32.3 +11.7	02						
03	225 38.0 -00.1	N 21 42.6 +00.4	246 31.5 -00.6	N 15 53.2 +00.9	275 06.5 -26.1	N 01 44.0 +11.7	03						
04	240 37.9 -00.1	N 21 43.0 +00.3	261 30.9 -00.5	N 15 54.1 +00.9	289 40.4 -26.2	N 01 55.7 +11.7	04						
05	255 37.8 +00.0	N 21 43.3 +00.4	276 30.4 -00.6	N 15 55.0 +00.9	304 14.2 -26.2	N 02 07.4 +11.7	05						
06	270 37.8 -00.1	N 21 43.7 +00.4	291 29.8 -00.5	N 15 55.9 +00.9	318 48.0 -26.2	N 02 19.1 +11.7	06						
07	285 37.7 -00.1	N 21 44.1 +00.4	306 29.3 -00.6	N 15 56.8 +01.0	333 21.8 -26.3	N 02 30.8 +11.7	07						
08	300 37.6 -00.1	N 21 44.5 +00.3	321 28.7 -00.6	N 15 57.8 +00.9	347 55.5 -26.3	N 02 42.5 +11.7	08						
09	315 37.5 -00.1	N 21 44.8 +00.4	336 28.1 -00.5	N 15 58.7 +00.9	2 29.2 -26.3	N 02 54.2 +11.7	09						
10	330 37.4 -00.1	N 21 45.2 +00.4	351 27.6 -00.6	N 15 59.6 +00.9	17 02.9 -26.4	N 03 05.9 +11.7	10						
11	345 37.3 -00.1	N 21 45.6 +00.4	6 27.0 -00.5	N 16 00.5 +00.9	31 36.5 -26.4	N 03 17.6 +11.7	11						
12	0 37.2 +00.0	N 21 46.0 +00.3	21 26.5 -00.6	N 16 01.4 +00.9	46 10.1 -26.5	N 03 29.3 +11.7	12						
13	15 37.2 -00.1	N 21 46.3 +00.4	36 25.9 -00.5	N 16 02.3 +00.9	60 43.6 -26.5	N 03 41.0 +11.7	13						
14	30 37.1 -00.1	N 21 46.7 +00.4	51 25.4 -00.6	N 16 03.2 +00.9	75 17.1 -26.6	N 03 52.7 +11.7	14						
15	45 37.0 -00.1	N 21 47.1 +00.3	66 24.8 -00.6	N 16 04.1 +00.9	89 50.5 -26.5	N 04 04.4 +11.7	15						
16	60 36.9 -00.1	N 21 47.4 +00.4	81 24.2 -00.5	N 16 05.0 +00.9	104 24.0 -26.7	N 04 16.1 +11.6	16						
17	75 36.8 -00.1	N 21 47.8 +00.4	96 23.7 -00.6	N 16 05.9 +00.8	118 57.3 -26.7	N 04 27.7 +11.7	17						
18	90 36.7 -00.1	N 21 48.2 +00.3	111 23.1 -00.6	N 16 06.7 +00.9	133 30.6 -26.7	N 04 39.4 +11.6	18						
19	105 36.6 -00.1	N 21 48.5 +00.4	126 22.5 -00.5	N 16 07.6 +00.9	148 03.9 -26.7	N 04 51.0 +11.7	19						
20	120 36.5 -00.1	N 21 48.9 +00.4	141 22.0 -00.6	N 16 08.5 +00.9	162 37.2 -26.8	N 05 02.7 +11.6	20						
21	135 36.4 +00.0	N 21 49.3 +00.3	156 21.4 -00.5	N 16 09.4 +00.9	177 10.4 -26.9	N 05 14.3 +11.7	21						
22	150 36.4 -00.1	N 21 49.6 +00.4	171 20.9 -00.6	N 16 10.3 +00.9	191 43.5 -26.9	N 05 26.0 +11.6	22						
23	165 36.3 -00.1	N 21 50.0 +00.4	186 20.3 -00.6	N 16 11.2 +00.9	206 16.6 -27.0	N 05 37.6 +11.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'1 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'2 55'3 55'4 55'5 55'6 55'7								
	SHA 293° 293° 293° 293° 293° 292°		SHA 314° 314° 314° 314° 313° 313°		SHA 343° 341° 339° 337° 336° 334°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 10:34		Greenwich Culmination Time: 08:49								

UT	Mars				Jupiter				Saturn				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	147 24.6 +00.7	N 24 17.1 -00.1	347 01.9 +02.8	S 22 31.4 +00.0	315 50.0 +02.6	S 21 36.6 +00.0	00						
01	162 25.3 +00.7	N 24 17.0 -00.1	2 04.7 +02.8	S 22 31.4 +00.0	330 52.6 +02.5	S 21 36.6 +00.0	01						
02	177 26.0 +00.7	N 24 16.9 -00.1	17 07.5 +02.8	S 22 31.4 +00.0	345 55.1 +02.6	S 21 36.6 +00.0	02						
03	192 26.7 +00.7	N 24 16.8 -00.1	32 10.3 +02.8	S 22 31.4 +00.0	0 57.7 +02.6	S 21 36.6 +00.1	03						
04	207 27.4 +00.8	N 24 16.7 -00.1	47 13.1 +02.8	S 22 31.4 -00.1	16 00.3 +02.6	S 21 36.7 +00.0	04						
05	222 28.2 +00.7	N 24 16.6 -00.1	62 15.9 +02.8	S 22 31.3 +00.0	31 02.9 +02.6	S 21 36.7 +00.0	05						
06	237 28.9 +00.7	N 24 16.5 -00.1	77 18.7 +02.8	S 22 31.3 +00.0	46 05.5 +02.6	S 21 36.7 +00.0	06						
07	252 29.6 +00.7	N 24 16.4 -00.1	92 21.5 +02.7	S 22 31.3 +00.0	61 08.1 +02.5	S 21 36.7 +00.0	07						
08	267 30.3 +00.7	N 24 16.3 -00.1	107 24.2 +02.8	S 22 31.3 +00.0	76 10.6 +02.6	S 21 36.7 +00.1	08						
09	282 31.0 +00.7	N 24 16.2 -00.1	122 27.0 +02.8	S 22 31.3 +00.0	91 13.2 +02.6	S 21 36.8 +00.0	09						
10	297 31.7 +00.7	N 24 16.1 -00.1	137 29.8 +02.8	S 22 31.3 -00.1	106 15.8 +02.6	S 21 36.8 +00.0	10						
11	312 32.4 +00.7	N 24 16.0 -00.2	152 32.6 +02.8	S 22 31.2 +00.0	121 18.4 +02.6	S 21 36.8 +00.0	11						
12	327 33.1 +00.7	N 24 15.8 -00.1	167 35.4 +02.8	S 22 31.2 +00.0	136 21.0 +02.6	S 21 36.8 +00.0	12						
13	342 33.8 +00.7	N 24 15.7 -00.1	182 38.2 +02.8	S 22 31.2 +00.0	151 23.6 +02.6	S 21 36.8 +00.0	13						
14	357 34.5 +00.7	N 24 15.6 -00.1	197 41.0 +02.8	S 22 31.2 +00.0	166 26.2 +02.5	S 21 36.8 +00.1	14						
15	12 35.2 +00.7	N 24 15.5 -00.1	212 43.8 +02.8	S 22 31.2 +00.0	181 28.7 +02.6	S 21 36.9 +00.0	15						
16	27 35.9 +00.7	N 24 15.4 -00.1	227 46.6 +02.8	S 22 31.2 -00.1	196 31.3 +02.6	S 21 36.9 +00.0	16						
17	42 36.6 +00.7	N 24 15.3 -00.1	242 49.4 +02.8	S 22 31.1 +00.0	211 33.9 +02.6	S 21 36.9 +00.0	17						
18	57 37.3 +00.8	N 24 15.2 -00.1	257 52.2 +02.8	S 22 31.1 +00.0	226 36.5 +02.6	S 21 36.9 +00.0	18						
19	72 38.1 +00.7	N 24 15.1 -00.1	272 55.0 +02.8	S 22 31.1 +00.0	241 39.1 +02.6	S 21 36.9 +00.1	19						
20	87 38.8 +00.7	N 24 15.0 -00.1	287 57.8 +02.8	S 22 31.1 +00.0	256 41.7 +02.6	S 21 37.0 +00.0	20						
21	102 39.5 +00.7	N 24 14.9 -00.2	303 00.6 +02.8	S 22 31.1 +00.0	271 44.3 +02.5	S 21 37.0 +00.0	21						
22	117 40.2 +00.7	N 24 14.7 -00.1	318 03.4 +02.7	S 22 31.1 -00.1	286 46.8 +02.6	S 21 37.0 +00.0	22						
23	132 40.9 +00.7	N 24 14.6 -00.1	333 06.1 +02.8	S 22 31.0 +00.0	301 49.4 +02.6	S 21 37.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'1 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 260° 260° 260° 260° 260° 260°		SHA 100° 100° 100° 100° 100° 100°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 14:09		Greenwich Culmination Time: 00:51		Greenwich Culmination Time: 02:56								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 34.0 -00.1	N 21 58.9 +00.3	201 06.0 -00.6	N 16 33.3 +00.9	209 45.7 -28.5	N 10 21.4 +11.0	00						
01	195 33.9 -00.1	N 21 59.2 +00.4	216 05.4 -00.5	N 16 34.2 +00.9	224 17.2 -28.5	N 10 32.4 +11.0	01						
02	210 33.8 -00.1	N 21 59.6 +00.3	231 04.9 -00.6	N 16 35.1 +00.9	238 48.7 -28.6	N 10 43.4 +10.9	02						
03	225 33.7 -00.1	N 21 59.9 +00.4	246 04.3 -00.6	N 16 36.0 +00.8	253 20.1 -28.7	N 10 54.3 +10.8	03						
04	240 33.6 -00.1	N 22 00.3 +00.3	261 03.7 -00.6	N 16 36.8 +00.9	267 51.4 -28.7	N 11 05.1 +10.9	04						
05	255 33.5 -00.1	N 22 00.6 +00.4	276 03.1 -00.5	N 16 37.7 +00.9	282 22.7 -28.8	N 11 16.0 +10.7	05						
06	270 33.4 -00.1	N 22 01.0 +00.3	291 02.6 -00.6	N 16 38.6 +00.8	296 53.9 -28.9	N 11 26.7 +10.8	06						
07	285 33.3 -00.1	N 22 01.3 +00.4	306 02.0 -00.6	N 16 39.4 +00.9	311 25.0 -29.0	N 11 37.5 +10.7	07						
08	300 33.2 -00.1	N 22 01.7 +00.3	321 01.4 -00.6	N 16 40.3 +00.9	325 56.0 -29.0	N 11 48.2 +10.6	08						
09	315 33.1 -00.1	N 22 02.0 +00.3	336 00.8 -00.6	N 16 41.2 +00.9	340 27.0 -29.1	N 11 58.8 +10.6	09						
10	330 33.0 -00.1	N 22 02.3 +00.4	351 00.2 -00.6	N 16 42.1 +00.8	354 57.9 -29.2	N 12 09.4 +10.6	10						
11	345 32.9 -00.1	N 22 02.7 +00.3	5 59.6 -00.5	N 16 42.9 +00.9	9 28.7 -29.3	N 12 20.0 +10.5	11						
12	0 32.8 -00.1	N 22 03.0 +00.4	20 59.1 -00.6	N 16 43.8 +00.9	23 59.4 -29.3	N 12 30.5 +10.4	12						
13	15 32.7 -00.1	N 22 03.4 +00.3	35 58.5 -00.6	N 16 44.7 +00.8	38 30.1 -29.4	N 12 40.9 +10.4	13						
14	30 32.6 +00.0	N 22 03.7 +00.3	50 57.9 -00.6	N 16 45.5 +00.9	53 00.7 -29.5	N 12 51.3 +10.3	14						
15	45 32.6 -00.1	N 22 04.0 +00.4	65 57.3 -00.6	N 16 46.4 +00.8	67 31.2 -29.6	N 13 01.6 +10.3	15						
16	60 32.5 -00.1	N 22 04.4 +00.3	80 56.7 -00.5	N 16 47.2 +00.9	82 01.6 -29.7	N 13 11.9 +10.3	16						
17	75 32.4 -00.1	N 22 04.7 +00.3	95 56.2 -00.6	N 16 48.1 +00.9	96 31.9 -29.7	N 13 22.2 +10.1	17						
18	90 32.3 -00.1	N 22 05.0 +00.4	110 55.6 -00.6	N 16 49.0 +00.8	111 02.2 -29.8	N 13 32.3 +10.2	18						
19	105 32.2 -00.1	N 22 05.4 +00.3	125 55.0 -00.6	N 16 49.8 +00.9	125 32.4 -29.9	N 13 42.5 +10.0	19						
20	120 32.1 -00.1	N 22 05.7 +00.3	140 54.4 -00.6	N 16 50.7 +00.9	140 02.5 -30.0	N 13 52.5 +10.0	20						
21	135 32.0 -00.1	N 22 06.0 +00.4	155 53.8 -00.6	N 16 51.6 +00.8	154 32.5 -30.0	N 14 02.5 +10.0	21						
22	150 31.9 -00.1	N 22 06.4 +00.3	170 53.2 -00.6	N 16 52.4 +00.9	169 02.5 -30.2	N 14 12.5 +09.8	22						
23	165 31.8 -00.1	N 22 06.7 +00.3	185 52.6 -00.6	N 16 53.3 +00.8	183 32.3 -30.2	N 14 22.3 +09.9	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	15'8 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 15'4 15'5 15'5 15'5 15'6								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	56'5 56'6 56'7 56'8 57'0 57'1								
SHA	291° 291° 291° 291° 291° 290°	SHA	312° 312° 311° 311° 311° 311°	SHA	320° 317° 315° 313° 311° 309°								
Greenwich Culmination Time: 11:57			Greenwich Culmination Time: 10:36			Greenwich Culmination Time: 10:20							

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	147 58.6 +00.7	N 24 11.7 -00.1	349 16.0 +02.8	S 22 30.6 +00.0	317 54.2 +02.6	S 21 37.5 +00.0	00						
01	162 59.3 +00.7	N 24 11.6 -00.1	4 18.8 +02.8	S 22 30.6 +00.0	332 56.8 +02.5	S 21 37.5 +00.0	01						
02	178 00.0 +00.7	N 24 11.5 -00.1	19 21.6 +02.8	S 22 30.6 +00.0	347 59.3 +02.6	S 21 37.5 +00.1	02						
03	193 00.7 +00.7	N 24 11.4 -00.1	34 24.4 +02.8	S 22 30.6 -00.1	3 01.9 +02.6	S 21 37.6 +00.0	03						
04	208 01.4 +00.8	N 24 11.3 -00.2	49 27.2 +02.8	S 22 30.5 +00.0	18 04.5 +02.6	S 21 37.6 +00.0	04						
05	223 02.2 +00.7	N 24 11.1 -00.1	64 30.0 +02.8	S 22 30.5 +00.0	33 07.1 +02.6	S 21 37.6 +00.0	05						
06	238 02.9 +00.7	N 24 11.0 -00.1	79 32.8 +02.8	S 22 30.5 +00.0	48 09.7 +02.6	S 21 37.6 +00.0	06						
07	253 03.6 +00.7	N 24 10.9 -00.1	94 35.6 +02.8	S 22 30.5 +00.0	63 12.3 +02.6	S 21 37.6 +00.1	07						
08	268 04.3 +00.7	N 24 10.8 -00.2	109 38.4 +02.8	S 22 30.5 -00.1	78 14.9 +02.6	S 21 37.7 +00.0	08						
09	283 05.0 +00.7	N 24 10.6 -00.1	124 41.2 +02.8	S 22 30.4 +00.0	93 17.5 +02.6	S 21 37.7 +00.0	09						
10	298 05.7 +00.7	N 24 10.5 -00.1	139 44.0 +02.8	S 22 30.4 +00.0	108 20.1 +02.6	S 21 37.7 +00.0	10						
11	313 06.4 +00.7	N 24 10.4 -00.1	154 46.8 +02.8	S 22 30.4 +00.0	123 22.7 +02.6	S 21 37.7 +00.0	11						
12	328 07.1 +00.7	N 24 10.3 -00.2	169 49.6 +02.8	S 22 30.4 +00.0	138 25.3 +02.6	S 21 37.7 +00.1	12						
13	343 07.8 +00.8	N 24 10.1 -00.1	184 52.4 +02.8	S 22 30.4 +00.0	153 27.9 +02.5	S 21 37.8 +00.0	13						
14	358 08.6 +00.7	N 24 10.0 -00.1	199 55.2 +02.8	S 22 30.4 -00.1	168 30.4 +02.6	S 21 37.8 +00.0	14						
15	13 09.3 +00.7	N 24 09.9 -00.1	214 58.0 +02.8	S 22 30.3 +00.0	183 33.0 +02.6	S 21 37.8 +00.0	15						
16	28 10.0 +00.7	N 24 09.8 -00.2	230 00.8 +02.8	S 22 30.3 +00.0	198 35.6 +02.6	S 21 37.8 +00.0	16						
17	43 10.7 +00.7	N 24 09.6 -00.1	245 03.6 +02.8	S 22 30.3 +00.0	213 38.2 +02.6	S 21 37.8 +00.1	17						
18	58 11.4 +00.7	N 24 09.5 -00.1	260 06.4 +02.8	S 22 30.3 +00.0	228 40.8 +02.6	S 21 37.9 +00.0	18						
19	73 12.1 +00.7	N 24 09.4 -00.1	275 09.2 +02.8	S 22 30.3 +00.0	243 43.4 +02.6	S 21 37.9 +00.0	19						
20	88 12.8 +00.7	N 24 09.3 -00.2	290 12.0 +02.8	S 22 30.3 -00.1	258 46.0 +02.6	S 21 37.9 +00.0	20						
21	103 13.5 +00.7	N 24 09.1 -00.1	305 14.8 +02.8	S 22 30.2 +00.0	273 48.6 +02.6	S 21 37.9 +00.0	21						
22	118 14.2 +00.8	N 24 09.0 -00.1	320 17.6 +02.8	S 22 30.2 +00.0	288 51.2 +02.6	S 21 37.9 +00.1	22						
23	133 15.0 +00.7	N 24 08.9 -00.1	335 20.4 +02.8	S 22 30.2 +00.0	303 53.8 +02.6	S 21 38.0 +00.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'0 00'0 00'0 00'0 00'0 00'0	SD	00'4 00'4 00'4 00'4 00'4 00'4	SD	00'1 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	259° 259° 258° 258° 258° 258°	SHA	100° 100° 100° 100° 100° 100°	SHA	069° 069° 069° 069° 069° 069°								
Greenwich Culmination Time: 14:07			Greenwich Culmination Time: 00:42			Greenwich Culmination Time: 02:47							

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	180 31.7 -00.1	N 22 07.0 +00.4	200 52.0 -00.5	N 16 54.1 +00.9	198 02.1 -30.3	N 14 32.2 +09.7	00													
01	195 31.6 -00.1	N 22 07.4 +00.3	215 51.5 -00.6	N 16 55.0 +00.9	212 31.8 -30.4	N 14 41.9 +09.7	01													
02	210 31.5 -00.1	N 22 07.7 +00.3	230 50.9 -00.6	N 16 55.9 +00.8	227 01.4 -30.4	N 14 51.6 +09.6	02													
03	225 31.4 -00.1	N 22 08.0 +00.4	245 50.3 -00.6	N 16 56.7 +00.9	241 31.0 -30.6	N 15 01.2 +09.6	03													
04	240 31.3 -00.1	N 22 08.4 +00.3	260 49.7 -00.6	N 16 57.6 +00.8	256 00.4 -30.6	N 15 10.8 +09.4	04													
05	255 31.2 -00.1	N 22 08.7 +00.3	275 49.1 -00.6	N 16 58.4 +00.9	270 29.8 -30.7	N 15 20.2 +09.4	05													
06	270 31.1 -00.1	N 22 09.0 +00.4	290 48.5 -00.6	N 16 59.3 +00.8	284 59.1 -30.8	N 15 29.6 +09.4	06													
07	285 31.0 -00.1	N 22 09.4 +00.3	305 47.9 -00.6	N 17 00.1 +00.9	299 28.3 -30.9	N 15 39.0 +09.2	07													
08	300 30.9 -00.1	N 22 09.7 +00.3	320 47.3 -00.6	N 17 01.0 +00.8	313 57.4 -31.0	N 15 48.2 +09.2	08													
09	315 30.8 -00.1	N 22 10.0 +00.3	335 46.7 -00.6	N 17 01.8 +00.9	328 26.4 -31.0	N 15 57.4 +09.1	09													
10	330 30.7 -00.1	N 22 10.3 +00.4	350 46.1 -00.5	N 17 02.7 +00.8	342 55.4 -31.2	N 16 06.5 +09.0	10													
11	345 30.6 -00.1	N 22 10.7 +00.3	5 45.6 -00.6	N 17 03.5 +00.9	357 24.2 -31.2	N 16 15.5 +09.0	11													
12	0 30.5 -00.1	N 22 11.0 +00.3	20 45.0 -00.6	N 17 04.4 +00.8	11 53.0 -31.3	N 16 24.5 +08.8	12													
13	15 30.4 -00.1	N 22 11.3 +00.3	35 44.4 -00.6	N 17 05.2 +00.9	26 21.7 -31.4	N 16 33.3 +08.8	13													
14	30 30.3 -00.1	N 22 11.6 +00.3	50 43.8 -00.6	N 17 06.1 +00.8	40 50.3 -31.5	N 16 42.1 +08.7	14													
15	45 30.2 -00.1	N 22 11.9 +00.4	65 43.2 -00.6	N 17 06.9 +00.9	55 18.8 -31.5	N 16 50.8 +08.6	15													
16	60 30.1 -00.1	N 22 12.3 +00.3	80 42.6 -00.6	N 17 07.8 +00.8	69 47.3 -31.7	N 16 59.4 +08.6	16													
17	75 30.0 -00.1	N 22 12.6 +00.3	95 42.0 -00.6	N 17 08.6 +00.9	84 15.6 -31.7	N 17 08.0 +08.4	17													
18	90 29.9 -00.1	N 22 12.9 +00.3	110 41.4 -00.6	N 17 09.5 +00.8	98 43.9 -31.8	N 17 16.4 +08.4	18													
19	105 29.8 -00.1	N 22 13.2 +00.3	125 40.8 -00.6	N 17 10.3 +00.9	113 12.1 -31.9	N 17 24.8 +08.2	19													
20	120 29.7 -00.1	N 22 13.5 +00.4	140 40.2 -00.6	N 17 11.2 +00.8	127 40.2 -32.0	N 17 33.0 +08.2	20													
21	135 29.6 -00.1	N 22 13.9 +00.3	155 39.6 -00.6	N 17 12.0 +00.8	142 08.2 -32.1	N 17 41.2 +08.1	21													
22	150 29.5 -00.1	N 22 14.2 +00.3	170 39.0 -00.6	N 17 12.8 +00.9	156 36.1 -32.2	N 17 49.3 +08.0	22													
23	165 29.4 -00.1	N 22 14.5 +00.3	185 38.4 -00.6	N 17 13.7 +00.8	171 03.9 -32.2	N 17 57.3 +07.9	23													
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
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						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP						
SHA	290°	290°	290°	290°	290°	289°	SHA	311°	310°	310°	310°	310°	310°	SHA						
Greenwich Culmination Time: 11:57							Greenwich Culmination Time: 10:36							Greenwich Culmination Time: 11:10						
UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	148 15.7 +00.7	N 24 08.8 -00.2	350 23.2 +02.8	S 22 30.2 +00.0	318 56.4 +02.6	S 21 38.0 +00.0	00													
01	163 16.4 +00.7	N 24 08.6 -00.1	5 26.0 +02.8	S 22 30.2 -00.1	333 59.0 +02.6	S 21 38.0 +00.0	01													
02	178 17.1 +00.7	N 24 08.5 -00.1	20 28.8 +02.8	S 22 30.1 +00.0	349 01.6 +02.6	S 21 38.0 +00.0	02													
03	193 17.8 +00.7	N 24 08.4 -00.2	35 31.6 +02.8	S 22 30.1 +00.0	4 04.2 +02.6	S 21 38.0 +00.1	03													
04	208 18.5 +00.7	N 24 08.2 -00.1	50 34.4 +02.8	S 22 30.1 +00.0	19 06.8 +02.5	S 21 38.1 +00.0	04													
05	223 19.2 +00.7	N 24 08.1 -00.1	65 37.2 +02.8	S 22 30.1 +00.0	34 09.3 +02.6	S 21 38.1 +00.0	05													
06	238 19.9 +00.8	N 24 08.0 -00.1	80 40.0 +02.8	S 22 30.1 +00.0	49 11.9 +02.6	S 21 38.1 +00.0	06													
07	253 20.7 +00.7	N 24 07.9 -00.2	95 42.8 +02.8	S 22 30.1 -00.1	64 14.5 +02.6	S 21 38.1 +00.0	07													
08	268 21.4 +00.7	N 24 07.7 -00.1	110 45.6 +02.8	S 22 30.0 +00.0	79 17.1 +02.6	S 21 38.1 +00.1	08													
09	283 22.1 +00.7	N 24 07.6 -00.1	125 48.4 +02.8	S 22 30.0 +00.0	94 19.7 +02.6	S 21 38.2 +00.0	09													
10	298 22.8 +00.7	N 24 07.5 -00.2	140 51.2 +02.8	S 22 30.0 +00.0	109 22.3 +02.6	S 21 38.2 +00.0	10													
11	313 23.5 +00.7	N 24 07.3 -00.1	155 54.0 +02.8	S 22 30.0 +00.0	124 24.9 +02.6	S 21 38.2 +00.0	11													
12	328 24.2 +00.7	N 24 07.2 -00.1	170 56.8 +02.8	S 22 30.0 +00.0	139 27.5 +02.6	S 21 38.2 +00.0	12													
13	343 24.9 +00.7	N 24 07.1 -00.2	185 59.6 +02.8	S 22 30.0 -00.1	154 30.1 +02.6	S 21 38.2 +00.1	13													
14	358 25.6 +00.8	N 24 06.9 -00.1	201 02.4 +02.8	S 22 29.9 +00.0	169 32.7 +02.6	S 21 38.3 +00.0	14													
15	13 26.4 +00.7	N 24 06.8 -00.1	216 05.2 +02.8	S 22 29.9 +00.0	184 35.3 +02.6	S 21 38.3 +00.0	15													
16	28 27.1 +00.7	N 24 06.7 -00.2	231 08.0 +02.8	S 22 29.9 +00.0	199 37.9 +02.6	S 21 38.3 +00.0	16													
17	43 27.8 +00.7	N 24 06.5 -00.1	246 10.8 +02.8	S 22 29.9 +00.0	214 40.5 +02.6	S 21 38.3 +00.0	17													
18	58 28.5 +00.7	N 24 06.4 -00.1	261 13.6 +02.8	S 22 29.9 -00.1	229 43.1 +02.6	S 21 38.3 +00.1	18													
19	73 29.2 +00.7	N 24 06.3 -00.2	276 16.4 +02.8	S 22 29.8 +00.0	244 45.7 +02.6	S 21 38.4 +00.0	19													
20	88 29.9 +00.7	N 24 06.1 -00.1	291 19.2 +02.8	S 22 29.8 +00.0	259 48.3 +02.6	S 21 38.4 +00.0	20													
21	103 30.6 +00.7	N 24 06.0 -00.1	306 22.0 +02.8	S 22 29.8 +00.0	274 50.9 +02.6	S 21 38.4 +00.0	21													
22	118 31.3 +00.8	N 24 05.9 -00.2	321 24.8 +02.8	S 22 29.8 +00.0	289 53.5 +02.6	S 21 38.4 +00.1	22													
23	133 32.1 +00.7	N 24 05.7 -00.1	336 27.6 +02.8	S 22 29.8 +00.0	304 56.1 +02.6	S 21 38.5 +00.0	23													
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'0	00'0	00'0	00'0	00'0	00'0	SD	00'1	00'1	00'1	00'2	00'2	00'2	SD						
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP						
SHA	258°	258°	258°	258°	258°	257°	SHA	100°	100°	100°	100°	100°	100°	SHA						
Greenwich Culmination Time: 14:06							Greenwich Culmination Time: 00:38							Greenwich Culmination Time: 02:43						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 29.3 -00.1	N 22 14.8 +00.3	200 37.8 -00.6	N 17 14.5 +00.9	185 31.7 -32.3	N 18 05.2 +07.8	00						
01	195 29.2 -00.1	N 22 15.1 +00.3	215 37.2 -00.6	N 17 15.4 +00.8	199 59.4 -32.5	N 18 13.0 +07.7	01						
02	210 29.1 -00.1	N 22 15.4 +00.4	230 36.6 -00.6	N 17 16.2 +00.9	214 26.9 -32.4	N 18 20.7 +07.6	02						
03	225 29.0 -00.1	N 22 15.8 +00.3	245 36.0 -00.6	N 17 17.1 +00.8	228 54.5 -32.6	N 18 28.3 +07.5	03						
04	240 28.9 -00.1	N 22 16.1 +00.3	260 35.4 -00.6	N 17 17.9 +00.8	243 21.9 -32.7	N 18 35.8 +07.4	04						
05	255 28.8 -00.1	N 22 16.4 +00.3	275 34.8 -00.6	N 17 18.7 +00.9	257 49.2 -32.7	N 18 43.2 +07.3	05						
06	270 28.7 -00.1	N 22 16.7 +00.3	290 34.2 -00.6	N 17 19.6 +00.8	272 16.5 -32.9	N 18 50.5 +07.2	06						
07	285 28.6 -00.1	N 22 17.0 +00.3	305 33.6 -00.6	N 17 20.4 +00.8	286 43.6 -32.9	N 18 57.7 +07.1	07						
08	300 28.5 -00.2	N 22 17.3 +00.3	320 33.0 -00.6	N 17 21.2 +00.9	301 10.7 -33.0	N 19 04.8 +07.0	08						
09	315 28.3 -00.1	N 22 17.6 +00.3	335 32.4 -00.6	N 17 22.1 +00.8	315 37.7 -33.0	N 19 11.8 +06.8	09						
10	330 28.2 -00.1	N 22 17.9 +00.3	350 31.8 -00.6	N 17 22.9 +00.8	330 04.7 -33.2	N 19 18.6 +06.8	10						
11	345 28.1 -00.1	N 22 18.2 +00.3	5 31.2 -00.6	N 17 23.7 +00.9	344 31.5 -33.2	N 19 25.4 +06.7	11						
12	0 28.0 -00.1	N 22 18.5 +00.4	20 30.6 -00.6	N 17 24.6 +00.8	358 58.3 -33.3	N 19 32.1 +06.5	12						
13	15 27.9 -00.1	N 22 18.9 +00.3	35 30.0 -00.6	N 17 25.4 +00.8	13 25.0 -33.4	N 19 38.6 +06.4	13						
14	30 27.8 -00.1	N 22 19.2 +00.3	50 29.4 -00.6	N 17 26.2 +00.9	27 51.6 -33.5	N 19 45.0 +06.4	14						
15	45 27.7 -00.1	N 22 19.5 +00.3	65 28.8 -00.7	N 17 27.1 +00.8	42 18.1 -33.5	N 19 51.4 +06.2	15						
16	60 27.6 -00.1	N 22 19.8 +00.3	80 28.1 -00.6	N 17 27.9 +00.8	56 44.6 -33.6	N 19 57.6 +06.1	16						
17	75 27.5 -00.1	N 22 20.1 +00.3	95 27.5 -00.6	N 17 28.7 +00.8	71 11.0 -33.7	N 20 03.7 +05.9	17						
18	90 27.4 -00.1	N 22 20.4 +00.3	110 26.9 -00.6	N 17 29.5 +00.9	85 37.3 -33.8	N 20 09.6 +05.9	18						
19	105 27.3 -00.1	N 22 20.7 +00.3	125 26.3 -00.6	N 17 30.4 +00.8	100 03.5 -33.8	N 20 15.5 +05.7	19						
20	120 27.2 -00.1	N 22 21.0 +00.3	140 25.7 -00.6	N 17 31.2 +00.8	114 29.7 -33.9	N 20 21.2 +05.6	20						
21	135 27.1 -00.1	N 22 21.3 +00.3	155 25.1 -00.6	N 17 32.0 +00.8	128 55.8 -34.0	N 20 26.8 +05.5	21						
22	150 27.0 -00.1	N 22 21.6 +00.3	170 24.5 -00.6	N 17 32.8 +00.9	143 21.8 -34.1	N 20 32.3 +05.4	22						
23	165 26.9 -00.1	N 22 21.9 +00.3	185 23.9 -00.6	N 17 33.7 +00.8	157 47.7 -34.1	N 20 37.7 +05.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 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 57'9 58'0 58'1 58'2 58'3 58'3								
	SHA 289° 289° 289° 289° 289° 288°		SHA 309° 309° 309° 309° 309° 308°		SHA 293° 291° 289° 286° 284° 281°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 10:37		Greenwich Culmination Time: 12:04								
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	148 32.8 +00.7	N 24 05.6 -00.1	351 30.4 +02.8	S 22 29.8 -00.1	319 58.7 +02.6	S 21 38.5 +00.0	00						
01	163 33.5 +00.7	N 24 05.5 -00.2	6 33.2 +02.8	S 22 29.7 +00.0	335 01.3 +02.6	S 21 38.5 +00.0	01						
02	178 34.2 +00.7	N 24 05.3 -00.1	21 36.0 +02.8	S 22 29.7 +00.0	350 03.9 +02.6	S 21 38.5 +00.0	02						
03	193 34.9 +00.7	N 24 05.2 -00.1	36 38.8 +02.8	S 22 29.7 +00.0	5 06.5 +02.6	S 21 38.5 +00.1	03						
04	208 35.6 +00.7	N 24 05.1 -00.2	51 41.6 +02.8	S 22 29.7 +00.0	20 09.1 +02.6	S 21 38.6 +00.0	04						
05	223 36.3 +00.8	N 24 04.9 -00.1	66 44.4 +02.8	S 22 29.7 -00.1	35 11.7 +02.6	S 21 38.6 +00.0	05						
06	238 37.1 +00.7	N 24 04.8 -00.2	81 47.2 +02.8	S 22 29.6 +00.0	50 14.3 +02.6	S 21 38.6 +00.0	06						
07	253 37.8 +00.7	N 24 04.6 -00.1	96 50.0 +02.8	S 22 29.6 +00.0	65 16.9 +02.6	S 21 38.6 +00.0	07						
08	268 38.5 +00.7	N 24 04.5 -00.1	111 52.8 +02.8	S 22 29.6 +00.0	80 19.5 +02.6	S 21 38.6 +00.1	08						
09	283 39.2 +00.7	N 24 04.4 -00.2	126 55.6 +02.8	S 22 29.6 +00.0	95 22.1 +02.6	S 21 38.7 +00.0	09						
10	298 39.9 +00.7	N 24 04.2 -00.1	141 58.4 +02.8	S 22 29.6 +00.0	110 24.7 +02.6	S 21 38.7 +00.0	10						
11	313 40.6 +00.7	N 24 04.1 -00.2	157 01.2 +02.8	S 22 29.6 -00.1	125 27.3 +02.6	S 21 38.7 +00.0	11						
12	328 41.3 +00.8	N 24 03.9 -00.1	172 04.0 +02.8	S 22 29.5 +00.0	140 29.9 +02.5	S 21 38.7 +00.0	12						
13	343 42.1 +00.7	N 24 03.8 -00.1	187 06.8 +02.8	S 22 29.5 +00.0	155 32.4 +02.6	S 21 38.7 +00.1	13						
14	358 42.8 +00.7	N 24 03.7 -00.2	202 09.6 +02.8	S 22 29.5 +00.0	170 35.0 +02.6	S 21 38.8 +00.0	14						
15	13 43.5 +00.7	N 24 03.5 -00.1	217 12.4 +02.9	S 22 29.5 +00.0	185 37.6 +02.6	S 21 38.8 +00.0	15						
16	28 44.2 +00.7	N 24 03.4 -00.2	232 15.3 +02.8	S 22 29.5 -00.1	200 40.2 +02.6	S 21 38.8 +00.0	16						
17	43 44.9 +00.7	N 24 03.2 -00.1	247 18.1 +02.8	S 22 29.4 +00.0	215 42.8 +02.6	S 21 38.8 +00.0	17						
18	58 45.6 +00.8	N 24 03.1 -00.1	262 20.9 +02.8	S 22 29.4 +00.0	230 45.4 +02.6	S 21 38.8 +00.1	18						
19	73 46.4 +00.7	N 24 03.0 -00.2	277 23.7 +02.8	S 22 29.4 +00.0	245 48.0 +02.6	S 21 38.9 +00.0	19						
20	88 47.1 +00.7	N 24 02.8 -00.1	292 26.5 +02.8	S 22 29.4 +00.0	260 50.6 +02.6	S 21 38.9 +00.0	20						
21	103 47.8 +00.7	N 24 02.7 -00.2	307 29.3 +02.8	S 22 29.4 +00.0	275 53.2 +02.6	S 21 38.9 +00.0	21						
22	118 48.5 +00.7	N 24 02.5 -00.1	322 32.1 +02.8	S 22 29.4 -00.1	290 55.8 +02.6	S 21 38.9 +00.0	22						
23	133 49.2 +00.7	N 24 02.4 -00.1	337 34.9 +02.8	S 22 29.3 +00.0	305 58.4 +02.6	S 21 38.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 257° 257° 257° 257° 257° 257°		SHA 100° 100° 100° 100° 100° 100°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 14:05		Greenwich Culmination Time: 00:33		Greenwich Culmination Time: 02:39								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 26.8 -00.1	N 22 22.2 +00.3	200 23.3 -00.6	N 17 34.5 +00.8	172 13.6 -34.2	N 20 42.9 +05.2	00						
01	195 26.7 -00.1	N 22 22.5 +00.3	215 22.7 -00.6	N 17 35.3 +00.8	186 39.4 -34.3	N 20 48.1 +05.0	01						
02	210 26.6 -00.1	N 22 22.8 +00.3	230 22.1 -00.7	N 17 36.1 +00.9	201 05.1 -34.3	N 20 53.1 +04.8	02						
03	225 26.5 -00.1	N 22 23.1 +00.3	245 21.4 -00.6	N 17 37.0 +00.8	215 30.8 -34.4	N 20 57.9 +04.8	03						
04	240 26.4 -00.2	N 22 23.4 +00.3	260 20.8 -00.6	N 17 37.8 +00.8	229 56.4 -34.5	N 21 02.7 +04.6	04						
05	255 26.2 -00.1	N 22 23.7 +00.3	275 20.2 -00.6	N 17 38.6 +00.8	244 21.9 -34.5	N 21 07.3 +04.5	05						
06	270 26.1 -00.1	N 22 24.0 +00.3	290 19.6 -00.6	N 17 39.4 +00.8	258 47.4 -34.6	N 21 11.8 +04.3	06						
07	285 26.0 -00.1	N 22 24.3 +00.3	305 19.0 -00.6	N 17 40.2 +00.9	273 12.8 -34.7	N 21 16.1 +04.2	07						
08	300 25.9 -00.1	N 22 24.6 +00.3	320 18.4 -00.6	N 17 41.1 +00.8	287 38.1 -34.7	N 21 20.3 +04.1	08						
09	315 25.8 -00.1	N 22 24.9 +00.2	335 17.8 -00.7	N 17 41.9 +00.8	302 03.4 -34.8	N 21 24.4 +04.0	09						
10	330 25.7 -00.1	N 22 25.1 +00.3	350 17.1 -00.6	N 17 42.7 +00.8	316 28.6 -34.8	N 21 28.4 +03.8	10						
11	345 25.6 -00.1	N 22 25.4 +00.3	5 16.5 -00.6	N 17 43.5 +00.8	330 53.8 -34.9	N 21 32.2 +03.7	11						
12	0 25.5 -00.1	N 22 25.7 +00.3	20 15.9 -00.6	N 17 44.3 +00.8	345 18.9 -34.9	N 21 35.9 +03.5	12						
13	15 25.4 -00.1	N 22 26.0 +00.3	35 15.3 -00.6	N 17 45.1 +00.8	359 44.0 -35.0	N 21 39.4 +03.4	13						
14	30 25.3 -00.1	N 22 26.3 +00.3	50 14.7 -00.6	N 17 45.9 +00.8	14 09.0 -35.1	N 21 42.8 +03.3	14						
15	45 25.2 -00.1	N 22 26.6 +00.3	65 14.1 -00.7	N 17 46.7 +00.9	28 33.9 -35.1	N 21 46.1 +03.1	15						
16	60 25.1 -00.1	N 22 26.9 +00.3	80 13.4 -00.6	N 17 47.6 +00.8	42 58.8 -35.1	N 21 49.2 +03.0	16						
17	75 25.0 -00.2	N 22 27.2 +00.3	95 12.8 -00.6	N 17 48.4 +00.8	57 23.7 -35.2	N 21 52.2 +02.9	17						
18	90 24.8 -00.1	N 22 27.5 +00.2	110 12.2 -00.6	N 17 49.2 +00.8	71 48.5 -35.3	N 21 55.1 +02.7	18						
19	105 24.7 -00.1	N 22 27.7 +00.3	125 11.6 -00.6	N 17 50.0 +00.8	86 13.2 -35.3	N 21 57.8 +02.5	19						
20	120 24.6 -00.1	N 22 28.0 +00.3	140 11.0 -00.7	N 17 50.8 +00.8	100 37.9 -35.3	N 22 00.3 +02.5	20						
21	135 24.5 -00.1	N 22 28.3 +00.3	155 10.3 -00.6	N 17 51.6 +00.8	115 02.6 -35.4	N 22 02.8 +02.2	21						
22	150 24.4 -00.1	N 22 28.6 +00.3	170 09.7 -00.6	N 17 52.4 +00.8	129 27.2 -35.4	N 22 05.0 +02.2	22						
23	165 24.3 -00.1	N 22 28.9 +00.3	185 09.1 -00.6	N 17 53.2 +00.8	143 51.8 -35.5	N 22 07.2 +02.0	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 15'9 15'9 16'0 16'0 16'0 16'0								
	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 58'4 58'5 58'6 58'7 58'8 58'8								
	SHA 288° 288° 288° 288° 288° 287°		SHA 308° 308° 308° 308° 307° 307°		SHA 279° 276° 274° 271° 269° 266°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 10:38		Greenwich Culmination Time: 13:01								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	148 49.9 +00.7	N 24 02.3 -00.2	352 37.7 +02.8	S 22 29.3 +00.0	321 01.0 +02.6	S 21 39.0 +00.0	00						
01	163 50.6 +00.8	N 24 02.1 -00.1	7 40.5 +02.8	S 22 29.3 +00.0	336 03.6 +02.6	S 21 39.0 +00.0	01						
02	178 51.4 +00.7	N 24 02.0 -00.2	22 43.3 +02.8	S 22 29.3 +00.0	351 06.2 +02.6	S 21 39.0 +00.0	02						
03	193 52.1 +00.7	N 24 01.8 -00.1	37 46.1 +02.8	S 22 29.3 -00.1	6 08.8 +02.6	S 21 39.0 +00.1	03						
04	208 52.8 +00.7	N 24 01.7 -00.2	52 48.9 +02.8	S 22 29.2 +00.0	21 11.4 +02.7	S 21 39.1 +00.0	04						
05	223 53.5 +00.7	N 24 01.5 -00.1	67 51.7 +02.8	S 22 29.2 +00.0	36 14.1 +02.6	S 21 39.1 +00.0	05						
06	238 54.2 +00.7	N 24 01.4 -00.2	82 54.5 +02.8	S 22 29.2 +00.0	51 16.7 +02.6	S 21 39.1 +00.0	06						
07	253 54.9 +00.8	N 24 01.2 -00.1	97 57.3 +02.8	S 22 29.2 +00.0	66 19.3 +02.6	S 21 39.1 +00.0	07						
08	268 55.7 +00.7	N 24 01.1 -00.1	113 00.1 +02.8	S 22 29.2 +00.0	81 21.9 +02.6	S 21 39.1 +00.1	08						
09	283 56.4 +00.7	N 24 01.0 -00.2	128 02.9 +02.8	S 22 29.2 -00.1	96 24.5 +02.6	S 21 39.2 +00.0	09						
10	298 57.1 +00.7	N 24 00.8 -00.1	143 05.7 +02.8	S 22 29.1 +00.0	111 27.1 +02.6	S 21 39.2 +00.0	10						
11	313 57.8 +00.7	N 24 00.7 -00.2	158 08.5 +02.8	S 22 29.1 +00.0	126 29.7 +02.6	S 21 39.2 +00.0	11						
12	328 58.5 +00.7	N 24 00.5 -00.1	173 11.3 +02.8	S 22 29.1 +00.0	141 32.3 +02.6	S 21 39.2 +00.0	12						
13	343 59.2 +00.8	N 24 00.4 -00.2	188 14.1 +02.8	S 22 29.1 +00.0	156 34.9 +02.6	S 21 39.2 +00.1	13						
14	358 60.0 +00.7	N 24 00.2 -00.1	203 16.9 +02.8	S 22 29.1 -00.1	171 37.5 +02.6	S 21 39.3 +00.0	14						
15	14 00.7 +00.7	N 24 00.1 -00.2	218 19.7 +02.8	S 22 29.0 +00.0	186 40.1 +02.6	S 21 39.3 +00.0	15						
16	29 01.4 +00.7	N 23 59.9 -00.1	233 22.5 +02.8	S 22 29.0 +00.0	201 42.7 +02.6	S 21 39.3 +00.0	16						
17	44 02.1 +00.7	N 23 59.8 -00.2	248 25.3 +02.8	S 22 29.0 +00.0	216 45.3 +02.6	S 21 39.3 +00.0	17						
18	59 02.8 +00.7	N 23 59.6 -00.1	263 28.1 +02.8	S 22 29.0 +00.0	231 47.9 +02.6	S 21 39.3 +00.1	18						
19	74 03.5 +00.8	N 23 59.5 -00.2	278 30.9 +02.9	S 22 29.0 +00.0	246 50.5 +02.6	S 21 39.4 +00.0	19						
20	89 04.3 +00.7	N 23 59.3 -00.1	293 33.8 +02.8	S 22 29.0 -00.1	261 53.1 +02.6	S 21 39.4 +00.0	20						
21	104 05.0 +00.7	N 23 59.2 -00.2	308 36.6 +02.8	S 22 28.9 +00.0	276 55.7 +02.6	S 21 39.4 +00.0	21						
22	119 05.7 +00.7	N 23 59.0 -00.1	323 39.4 +02.8	S 22 28.9 +00.0	291 58.3 +02.6	S 21 39.4 +00.1	22						
23	134 06.4 +00.7	N 23 58.9 -00.2	338 42.2 +02.8	S 22 28.9 +00.0	307 00.9 +02.6	S 21 39.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 257° 257° 256° 256° 256° 256°		SHA 100° 101° 101° 101° 101° 101°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 14:03		Greenwich Culmination Time: 00:29		Greenwich Culmination Time: 02:35								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 24.2 -00.1	N 22 29.2 +00.3	200 08.5 -00.6	N 17 54.0 +00.8	158 16.3 -35.5	N 22 09.2 +01.8	00						
01	195 24.1 -00.1	N 22 29.5 +00.2	215 07.9 -00.7	N 17 54.8 +00.8	172 40.8 -35.5	N 22 11.0 +01.7	01						
02	210 24.0 -00.1	N 22 29.7 +00.3	230 07.2 -00.6	N 17 55.6 +00.8	187 05.3 -35.6	N 22 12.7 +01.6	02						
03	225 23.9 -00.1	N 22 30.0 +00.3	245 06.6 -00.6	N 17 56.4 +00.8	201 29.7 -35.6	N 22 14.3 +01.4	03						
04	240 23.8 -00.2	N 22 30.3 +00.3	260 06.0 -00.6	N 17 57.2 +00.8	215 54.1 -35.6	N 22 15.7 +01.2	04						
05	255 23.6 -00.1	N 22 30.6 +00.3	275 05.4 -00.7	N 17 58.0 +00.8	230 18.5 -35.7	N 22 16.9 +01.2	05						
06	270 23.5 -00.1	N 22 30.9 +00.2	290 04.7 -00.6	N 17 58.8 +00.8	244 42.8 -35.7	N 22 18.1 +00.9	06						
07	285 23.4 -00.1	N 22 31.1 +00.3	305 04.1 -00.6	N 17 59.6 +00.8	259 07.1 -35.7	N 22 19.0 +00.8	07						
08	300 23.3 -00.1	N 22 31.4 +00.3	320 03.5 -00.6	N 18 00.4 +00.8	273 31.4 -35.7	N 22 19.8 +00.7	08						
09	315 23.2 -00.1	N 22 31.7 +00.3	335 02.9 -00.7	N 18 01.2 +00.8	287 55.7 -35.8	N 22 20.5 +00.5	09						
10	330 23.1 -00.1	N 22 32.0 +00.2	350 02.2 -00.6	N 18 02.0 +00.8	302 19.9 -35.8	N 22 21.0 +00.4	10						
11	345 23.0 -00.1	N 22 32.2 +00.3	5 01.6 -00.6	N 18 02.8 +00.8	316 44.1 -35.8	N 22 21.4 +00.2	11						
12	0 22.9 -00.1	N 22 32.5 +00.3	20 01.0 -00.7	N 18 03.6 +00.8	331 08.3 -35.8	N 22 21.6 +00.1	12						
13	15 22.8 -00.2	N 22 32.8 +00.3	35 00.3 -00.6	N 18 04.4 +00.8	345 32.5 -35.8	N 22 21.7 -00.1	13						
14	30 22.6 -00.1	N 22 33.1 +00.2	49 59.7 -00.6	N 18 05.2 +00.8	359 56.7 -35.9	N 22 21.6 -00.2	14						
15	45 22.5 -00.1	N 22 33.3 +00.3	64 59.1 -00.6	N 18 06.0 +00.8	14 20.8 -35.9	N 22 21.4 -00.4	15						
16	60 22.4 -00.1	N 22 33.6 +00.3	79 58.5 -00.7	N 18 06.8 +00.8	28 44.9 -35.8	N 22 21.0 -00.5	16						
17	75 22.3 -00.1	N 22 33.9 +00.3	94 57.8 -00.6	N 18 07.6 +00.8	43 09.1 -35.9	N 22 20.5 -00.7	17						
18	90 22.2 -00.1	N 22 34.2 +00.2	109 57.2 -00.6	N 18 08.4 +00.7	57 33.2 -35.9	N 22 19.8 -00.8	18						
19	105 22.1 -00.1	N 22 34.4 +00.3	124 56.6 -00.7	N 18 09.1 +00.8	71 57.3 -35.9	N 22 19.0 -01.0	19						
20	120 22.0 -00.1	N 22 34.7 +00.3	139 55.9 -00.6	N 18 09.9 +00.8	86 21.4 -35.9	N 22 18.0 -01.1	20						
21	135 21.9 -00.1	N 22 35.0 +00.2	154 55.3 -00.6	N 18 10.7 +00.8	100 45.5 -35.9	N 22 16.9 -01.3	21						
22	150 21.8 -00.2	N 22 35.2 +00.3	169 54.7 -00.7	N 18 11.5 +00.8	115 09.6 -35.9	N 22 15.6 -01.4	22						
23	165 21.6 -00.1	N 22 35.5 +00.3	184 54.0 -00.6	N 18 12.3 +00.8	129 33.7 -35.9	N 22 14.2 -01.6	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 16'0 16'1 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 58'9 59'0 59'0 59'1 59'1 59'2								
	SHA 287° 287° 287° 287° 286° 286°		SHA 307° 307° 306° 306° 306° 306°		SHA 264° 261° 259° 256° 254° 251°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 10:39		Greenwich Culmination Time: 14:00								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	149 07.1 +00.8	N 23 58.7 -00.1	353 45.0 +02.8	S 22 28.9 +00.0	322 03.5 +02.6	S 21 39.5 +00.0	00						
01	164 07.9 +00.7	N 23 58.6 -00.2	8 47.8 +02.8	S 22 28.9 -00.1	337 06.1 +02.6	S 21 39.5 +00.0	01						
02	179 08.6 +00.7	N 23 58.4 -00.1	23 50.6 +02.8	S 22 28.8 +00.0	352 08.7 +02.6	S 21 39.5 +00.0	02						
03	194 09.3 +00.7	N 23 58.3 -00.2	38 53.4 +02.8	S 22 28.8 +00.0	7 11.3 +02.6	S 21 39.5 +00.1	03						
04	209 10.0 +00.7	N 23 58.1 -00.1	53 56.2 +02.8	S 22 28.8 +00.0	22 13.9 +02.6	S 21 39.6 +00.0	04						
05	224 10.7 +00.7	N 23 58.0 -00.2	68 59.0 +02.8	S 22 28.8 +00.0	37 16.5 +02.6	S 21 39.6 +00.0	05						
06	239 11.4 +00.8	N 23 57.8 -00.1	84 01.8 +02.8	S 22 28.8 -00.1	52 19.1 +02.6	S 21 39.6 +00.0	06						
07	254 12.2 +00.7	N 23 57.7 -00.2	99 04.6 +02.8	S 22 28.7 +00.0	67 21.7 +02.6	S 21 39.6 +00.0	07						
08	269 12.9 +00.7	N 23 57.5 -00.1	114 07.4 +02.8	S 22 28.7 +00.0	82 24.3 +02.6	S 21 39.6 +00.1	08						
09	284 13.6 +00.7	N 23 57.4 -00.2	129 10.2 +02.8	S 22 28.7 +00.0	97 26.9 +02.6	S 21 39.7 +00.0	09						
10	299 14.3 +00.7	N 23 57.2 -00.2	144 13.0 +02.8	S 22 28.7 +00.0	112 29.5 +02.6	S 21 39.7 +00.0	10						
11	314 15.0 +00.8	N 23 57.0 -00.1	159 15.8 +02.8	S 22 28.7 +00.0	127 32.1 +02.6	S 21 39.7 +00.0	11						
12	329 15.8 +00.7	N 23 56.9 -00.2	174 18.6 +02.8	S 22 28.7 -00.1	142 34.7 +02.7	S 21 39.7 +00.1	12						
13	344 16.5 +00.7	N 23 56.7 -00.1	189 21.4 +02.8	S 22 28.6 +00.0	157 37.4 +02.6	S 21 39.8 +00.0	13						
14	359 17.2 +00.7	N 23 56.6 -00.2	204 24.2 +02.8	S 22 28.6 +00.0	172 40.0 +02.6	S 21 39.8 +00.0	14						
15	14 17.9 +00.7	N 23 56.4 -00.1	219 27.0 +02.9	S 22 28.6 +00.0	187 42.6 +02.6	S 21 39.8 +00.0	15						
16	29 18.6 +00.8	N 23 56.3 -00.2	234 29.9 +02.8	S 22 28.6 +00.0	202 45.2 +02.6	S 21 39.8 +00.0	16						
17	44 19.4 +00.7	N 23 56.1 -00.1	249 32.7 +02.8	S 22 28.6 -00.1	217 47.8 +02.6	S 21 39.8 +00.1	17						
18	59 20.1 +00.7	N 23 56.0 -00.2	264 35.5 +02.8	S 22 28.5 +00.0	232 50.4 +02.6	S 21 39.9 +00.0	18						
19	74 20.8 +00.7	N 23 55.8 -00.2	279 38.3 +02.8	S 22 28.5 +00.0	247 53.0 +02.6	S 21 39.9 +00.0	19						
20	89 21.5 +00.7	N 23 55.6 -00.1	294 41.1 +02.8	S 22 28.5 +00.0	262 55.6 +02.6	S 21 39.9 +00.0	20						
21	104 22.2 +00.8	N 23 55.5 -00.2	309 43.9 +02.8	S 22 28.5 +00.0	277 58.2 +02.6	S 21 39.9 +00.0	21						
22	119 23.0 +00.7	N 23 55.3 -00.1	324 46.7 +02.8	S 22 28.5 -00.1	293 00.8 +02.6	S 21 39.9 +00.1	22						
23	134 23.7 +00.7	N 23 55.2 -00.2	339 49.5 +02.8	S 22 28.4 +00.0	308 03.4 +02.6	S 21 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 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 256° 256° 256° 256° 255° 255°		SHA 101° 101° 101° 101° 101° 101°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 14:02		Greenwich Culmination Time: 00:24		Greenwich Culmination Time: 02:31								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 21.5 -00.1	N 22 35.8 +00.2	199 53.4 -00.6	N 18 13.1 +00.8	143 57.8 -35.9	N 22 12.6 -01.7	00						
01	195 21.4 -00.1	N 22 36.0 +00.3	214 52.8 -00.7	N 18 13.9 +00.8	158 21.9 -35.9	N 22 10.9 -01.9	01						
02	210 21.3 -00.1	N 22 36.3 +00.3	229 52.1 -00.6	N 18 14.7 +00.7	172 46.0 -35.9	N 22 09.0 -02.0	02						
03	225 21.2 -00.1	N 22 36.6 +00.2	244 51.5 -00.6	N 18 15.4 +00.8	187 10.1 -35.9	N 22 07.0 -02.2	03						
04	240 21.1 -00.1	N 22 36.8 +00.3	259 50.9 -00.7	N 18 16.2 +00.8	201 34.2 -35.9	N 22 04.8 -02.4	04						
05	255 21.0 -00.2	N 22 37.1 +00.2	274 50.2 -00.6	N 18 17.0 +00.8	215 58.3 -35.8	N 22 02.4 -02.4	05						
06	270 20.8 -00.1	N 22 37.3 +00.3	289 49.6 -00.6	N 18 17.8 +00.8	230 22.5 -35.9	N 21 60.0 -02.7	06						
07	285 20.7 -00.1	N 22 37.6 +00.3	304 49.0 -00.7	N 18 18.6 +00.7	244 46.6 -35.8	N 21 57.3 -02.7	07						
08	300 20.6 -00.1	N 22 37.9 +00.2	319 48.3 -00.6	N 18 19.3 +00.8	259 10.8 -35.8	N 21 54.6 -03.0	08						
09	315 20.5 -00.1	N 22 38.1 +00.3	334 47.7 -00.7	N 18 20.1 +00.8	273 35.0 -35.8	N 21 51.6 -03.0	09						
10	330 20.4 -00.1	N 22 38.4 +00.3	349 47.0 -00.6	N 18 20.9 +00.8	287 59.2 -35.8	N 21 48.6 -03.2	10						
11	345 20.3 -00.1	N 22 38.7 +00.2	4 46.4 -00.6	N 18 21.7 +00.7	302 23.4 -35.8	N 21 45.4 -03.4	11						
12	0 20.2 -00.1	N 22 38.9 +00.3	19 45.8 -00.7	N 18 22.4 +00.8	316 47.6 -35.7	N 21 42.0 -03.5	12						
13	15 20.1 -00.2	N 22 39.2 +00.2	34 45.1 -00.6	N 18 23.2 +00.8	331 11.9 -35.7	N 21 38.5 -03.7	13						
14	30 19.9 -00.1	N 22 39.4 +00.3	49 44.5 -00.7	N 18 24.0 +00.8	345 36.2 -35.7	N 21 34.8 -03.8	14						
15	45 19.8 -00.1	N 22 39.7 +00.2	64 43.8 -00.6	N 18 24.8 +00.7	0 00.5 -35.7	N 21 31.0 -03.9	15						
16	60 19.7 -00.1	N 22 39.9 +00.3	79 43.2 -00.6	N 18 25.5 +00.8	14 24.8 -35.6	N 21 27.1 -04.1	16						
17	75 19.6 -00.1	N 22 40.2 +00.2	94 42.6 -00.7	N 18 26.3 +00.8	28 49.2 -35.6	N 21 23.0 -04.3	17						
18	90 19.5 -00.1	N 22 40.4 +00.3	109 41.9 -00.6	N 18 27.1 +00.8	43 13.6 -35.6	N 21 18.7 -04.3	18						
19	105 19.4 -00.2	N 22 40.7 +00.3	124 41.3 -00.7	N 18 27.9 +00.7	57 38.0 -35.5	N 21 14.4 -04.6	19						
20	120 19.2 -00.1	N 22 41.0 +00.2	139 40.6 -00.6	N 18 28.6 +00.8	72 02.5 -35.5	N 21 09.8 -04.6	20						
21	135 19.1 -00.1	N 22 41.2 +00.3	154 40.0 -00.7	N 18 29.4 +00.8	86 27.0 -35.5	N 21 05.2 -04.8	21						
22	150 19.0 -00.1	N 22 41.5 +00.2	169 39.3 -00.6	N 18 30.2 +00.7	100 51.5 -35.4	N 21 00.4 -05.0	22						
23	165 18.9 -00.1	N 22 41.7 +00.3	184 38.7 -00.6	N 18 30.9 +00.8	115 16.1 -35.4	N 20 55.4 -05.1	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 16'1 16'2 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 59'2 59'3 59'3 59'3 59'4 59'4								
	SHA 286° 286° 286° 286° 285° 285°		SHA 306° 305° 305° 305° 305° 305°		SHA 249° 246° 243° 241° 238° 236°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 10:40		Greenwich Culmination Time: 14:59								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	149 24.4 +00.7	N 23 55.0 -00.1	354 52.3 +02.8	S 22 28.4 +00.0	323 06.0 +02.6	S 21 40.0 +00.0	00						
01	164 25.1 +00.7	N 23 54.9 -00.2	9 55.1 +02.8	S 22 28.4 +00.0	338 08.6 +02.6	S 21 40.0 +00.0	01						
02	179 25.8 +00.8	N 23 54.7 -00.2	24 57.9 +02.8	S 22 28.4 +00.0	353 11.2 +02.6	S 21 40.0 +00.1	02						
03	194 26.6 +00.7	N 23 54.5 -00.1	40 00.7 +02.8	S 22 28.4 +00.0	8 13.8 +02.6	S 21 40.1 +00.0	03						
04	209 27.3 +00.7	N 23 54.4 -00.2	55 03.5 +02.8	S 22 28.4 -00.1	23 16.4 +02.7	S 21 40.1 +00.0	04						
05	224 28.0 +00.7	N 23 54.2 -00.1	70 06.3 +02.8	S 22 28.3 +00.0	38 19.1 +02.6	S 21 40.1 +00.0	05						
06	239 28.7 +00.7	N 23 54.1 -00.2	85 09.1 +02.8	S 22 28.3 +00.0	53 21.7 +02.6	S 21 40.1 +00.0	06						
07	254 29.4 +00.8	N 23 53.9 -00.2	100 11.9 +02.8	S 22 28.3 +00.0	68 24.3 +02.6	S 21 40.1 +00.1	07						
08	269 30.2 +00.7	N 23 53.7 -00.1	115 14.7 +02.9	S 22 28.3 +00.0	83 26.9 +02.6	S 21 40.2 +00.0	08						
09	284 30.9 +00.7	N 23 53.6 -00.2	130 17.6 +02.8	S 22 28.3 -00.1	98 29.5 +02.6	S 21 40.2 +00.0	09						
10	299 31.6 +00.7	N 23 53.4 -00.2	145 20.4 +02.8	S 22 28.2 +00.0	113 32.1 +02.6	S 21 40.2 +00.0	10						
11	314 32.3 +00.8	N 23 53.2 -00.1	160 23.2 +02.8	S 22 28.2 +00.0	128 34.7 +02.6	S 21 40.2 +00.1	11						
12	329 33.1 +00.7	N 23 53.1 -00.2	175 26.0 +02.8	S 22 28.2 +00.0	143 37.3 +02.6	S 21 40.3 +00.0	12						
13	344 33.8 +00.7	N 23 52.9 -00.1	190 28.8 +02.8	S 22 28.2 +00.0	158 39.9 +02.6	S 21 40.3 +00.0	13						
14	359 34.5 +00.7	N 23 52.8 -00.2	205 31.6 +02.8	S 22 28.2 -00.1	173 42.5 +02.6	S 21 40.3 +00.0	14						
15	14 35.2 +00.7	N 23 52.6 -00.2	220 34.4 +02.8	S 22 28.1 +00.0	188 45.1 +02.6	S 21 40.3 +00.0	15						
16	29 35.9 +00.8	N 23 52.4 -00.1	235 37.2 +02.8	S 22 28.1 +00.0	203 47.7 +02.6	S 21 40.3 +00.1	16						
17	44 36.7 +00.7	N 23 52.3 -00.2	250 40.0 +02.8	S 22 28.1 +00.0	218 50.3 +02.7	S 21 40.4 +00.0	17						
18	59 37.4 +00.7	N 23 52.1 -00.2	265 42.8 +02.8	S 22 28.1 +00.0	233 53.0 +02.6	S 21 40.4 +00.0	18						
19	74 38.1 +00.7	N 23 51.9 -00.1	280 45.6 +02.8	S 22 28.1 -00.1	248 55.6 +02.6	S 21 40.4 +00.0	19						
20	89 38.8 +00.8	N 23 51.8 -00.2	295 48.4 +02.8	S 22 28.0 +00.0	263 58.2 +02.6	S 21 40.4 +00.1	20						
21	104 39.6 +00.7	N 23 51.6 -00.2	310 51.2 +02.8	S 22 28.0 +00.0	279 00.8 +02.6	S 21 40.5 +00.0	21						
22	119 40.3 +00.7	N 23 51.4 -00.1	325 54.0 +02.9	S 22 28.0 +00.0	294 03.4 +02.6	S 21 40.5 +00.0	22						
23	134 41.0 +00.7	N 23 51.3 -00.2	340 56.9 +02.8	S 22 28.0 +00.0	309 06.0 +02.6	S 21 40.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 255° 255° 255° 255° 255° 255°		SHA 101° 101° 101° 101° 101° 101°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 14:01		Greenwich Culmination Time: 00:20		Greenwich Culmination Time: 02:27								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 16.0 -00.1	N 22 47.8 +00.2	199 22.4 -00.6	N 18 49.8 +00.8	115 45.3 -34.1	N 18 08.7 -08.3	00						
01	195 15.9 -00.2	N 22 48.0 +00.2	214 21.8 -00.7	N 18 50.6 +00.7	130 11.2 -34.0	N 18 00.4 -08.3	01						
02	210 15.7 -00.1	N 22 48.2 +00.3	229 21.1 -00.6	N 18 51.3 +00.8	144 37.2 -34.1	N 17 52.1 -08.5	02						
03	225 15.6 -00.1	N 22 48.5 +00.2	244 20.5 -00.7	N 18 52.1 +00.7	159 03.1 -33.9	N 17 43.6 -08.7	03						
04	240 15.5 -00.1	N 22 48.7 +00.2	259 19.8 -00.7	N 18 52.8 +00.7	173 29.2 -33.9	N 17 34.9 -08.7	04						
05	255 15.4 -00.1	N 22 48.9 +00.2	274 19.1 -00.6	N 18 53.5 +00.8	187 55.3 -33.8	N 17 26.2 -08.8	05						
06	270 15.3 -00.2	N 22 49.1 +00.3	289 18.5 -00.7	N 18 54.3 +00.7	202 21.5 -33.7	N 17 17.4 -09.0	06						
07	285 15.1 -00.1	N 22 49.4 +00.2	304 17.8 -00.6	N 18 55.0 +00.8	216 47.8 -33.7	N 17 08.4 -09.0	07						
08	300 15.0 -00.1	N 22 49.6 +00.2	319 17.2 -00.7	N 18 55.8 +00.7	231 14.1 -33.7	N 16 59.4 -09.1	08						
09	315 14.9 -00.1	N 22 49.8 +00.3	334 16.5 -00.7	N 18 56.5 +00.7	245 40.4 -33.5	N 16 50.3 -09.3	09						
10	330 14.8 -00.1	N 22 50.1 +00.2	349 15.8 -00.6	N 18 57.2 +00.8	260 06.9 -33.5	N 16 41.0 -09.4	10						
11	345 14.7 -00.2	N 22 50.3 +00.2	4 15.2 -00.7	N 18 58.0 +00.7	274 33.4 -33.5	N 16 31.6 -09.4	11						
12	0 14.5 -00.1	N 22 50.5 +00.2	19 14.5 -00.6	N 18 58.7 +00.7	288 59.9 -33.4	N 16 22.2 -09.6	12						
13	15 14.4 -00.1	N 22 50.7 +00.3	34 13.9 -00.7	N 18 59.4 +00.8	303 26.5 -33.3	N 16 12.6 -09.6	13						
14	30 14.3 -00.1	N 22 51.0 +00.2	49 13.2 -00.7	N 19 00.2 +00.7	317 53.2 -33.2	N 16 03.0 -09.8	14						
15	45 14.2 -00.1	N 22 51.2 +00.2	64 12.5 -00.6	N 19 00.9 +00.7	332 20.0 -33.2	N 15 53.2 -09.8	15						
16	60 14.1 -00.2	N 22 51.4 +00.2	79 11.9 -00.7	N 19 01.6 +00.8	346 46.8 -33.1	N 15 43.4 -10.0	16						
17	75 13.9 -00.1	N 22 51.6 +00.2	94 11.2 -00.7	N 19 02.4 +00.7	1 13.7 -33.1	N 15 33.4 -10.0	17						
18	90 13.8 -00.1	N 22 51.8 +00.3	109 10.5 -00.6	N 19 03.1 +00.7	15 40.6 -33.0	N 15 23.4 -10.1	18						
19	105 13.7 -00.1	N 22 52.1 +00.2	124 09.9 -00.7	N 19 03.8 +00.8	30 07.6 -32.9	N 15 13.3 -10.2	19						
20	120 13.6 -00.1	N 22 52.3 +00.2	139 09.2 -00.7	N 19 04.6 +00.7	44 34.7 -32.9	N 15 03.1 -10.3	20						
21	135 13.5 -00.2	N 22 52.5 +00.2	154 08.5 -00.6	N 19 05.3 +00.7	59 01.8 -32.8	N 14 52.8 -10.4	21						
22	150 13.3 -00.1	N 22 52.7 +00.2	169 07.9 -00.7	N 19 06.0 +00.7	73 29.0 -32.8	N 14 42.4 -10.5	22						
23	165 13.2 -00.1	N 22 52.9 +00.2	184 07.2 -00.7	N 19 06.7 +00.8	87 56.2 -32.6	N 14 31.9 -10.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 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 16'2 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 59'5 59'5 59'5 59'5 59'4 59'4								
	SHA 284° 284° 284° 284° 283° 283°		SHA 303° 303° 303° 303° 302° 302°		SHA 218° 216° 214° 211° 209° 206°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 10:42		Greenwich Culmination Time: 16:54								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	149 59.1 +00.7	N 23 47.0 -00.1	357 07.0 +02.8	S 22 27.5 +00.0	325 11.3 +02.6	S 21 41.1 +00.0	00						
01	164 59.8 +00.7	N 23 46.9 -00.2	12 09.8 +02.9	S 22 27.5 +00.0	340 13.9 +02.6	S 21 41.1 +00.0	01						
02	180 00.5 +00.8	N 23 46.7 -00.2	27 12.7 +02.8	S 22 27.5 +00.0	355 16.5 +02.6	S 21 41.1 +00.0	02						
03	195 01.3 +00.7	N 23 46.5 -00.2	42 15.5 +02.8	S 22 27.5 -00.1	10 19.1 +02.6	S 21 41.1 +00.0	03						
04	210 02.0 +00.7	N 23 46.3 -00.1	57 18.3 +02.8	S 22 27.4 +00.0	25 21.7 +02.6	S 21 41.1 +00.1	04						
05	225 02.7 +00.7	N 23 46.2 -00.2	72 21.1 +02.8	S 22 27.4 +00.0	40 24.3 +02.7	S 21 41.2 +00.0	05						
06	240 03.4 +00.8	N 23 46.0 -00.2	87 23.9 +02.8	S 22 27.4 +00.0	55 27.0 +02.6	S 21 41.2 +00.0	06						
07	255 04.2 +00.7	N 23 45.8 -00.2	102 26.7 +02.8	S 22 27.4 +00.0	70 29.6 +02.6	S 21 41.2 +00.0	07						
08	270 04.9 +00.7	N 23 45.6 -00.1	117 29.5 +02.8	S 22 27.4 -00.1	85 32.2 +02.6	S 21 41.2 +00.1	08						
09	285 05.6 +00.8	N 23 45.5 -00.2	132 32.3 +02.8	S 22 27.3 +00.0	100 34.8 +02.6	S 21 41.3 +00.0	09						
10	300 06.4 +00.7	N 23 45.3 -00.2	147 35.1 +02.8	S 22 27.3 +00.0	115 37.4 +02.6	S 21 41.3 +00.0	10						
11	315 07.1 +00.7	N 23 45.1 -00.2	162 37.9 +02.8	S 22 27.3 +00.0	130 40.0 +02.6	S 21 41.3 +00.0	11						
12	330 07.8 +00.7	N 23 44.9 -00.1	177 40.7 +02.8	S 22 27.3 +00.0	145 42.6 +02.6	S 21 41.3 +00.0	12						
13	345 08.5 +00.8	N 23 44.8 -00.2	192 43.5 +02.8	S 22 27.3 -00.1	160 45.2 +02.7	S 21 41.3 +00.1	13						
14	0 09.3 +00.7	N 23 44.6 -00.2	207 46.3 +02.9	S 22 27.2 +00.0	175 47.9 +02.6	S 21 41.4 +00.0	14						
15	15 10.0 +00.7	N 23 44.4 -00.2	222 49.2 +02.8	S 22 27.2 +00.0	190 50.5 +02.6	S 21 41.4 +00.0	15						
16	30 10.7 +00.7	N 23 44.2 -00.2	237 52.0 +02.8	S 22 27.2 +00.0	205 53.1 +02.6	S 21 41.4 +00.0	16						
17	45 11.4 +00.8	N 23 44.0 -00.1	252 54.8 +02.8	S 22 27.2 +00.0	220 55.7 +02.6	S 21 41.4 +00.1	17						
18	60 12.2 +00.7	N 23 43.9 -00.2	267 57.6 +02.8	S 22 27.2 -00.1	235 58.3 +02.6	S 21 41.5 +00.0	18						
19	75 12.9 +00.7	N 23 43.7 -00.2	283 00.4 +02.8	S 22 27.1 +00.0	251 00.9 +02.6	S 21 41.5 +00.0	19						
20	90 13.6 +00.7	N 23 43.5 -00.2	298 03.2 +02.8	S 22 27.1 +00.0	266 03.5 +02.7	S 21 41.5 +00.0	20						
21	105 14.3 +00.8	N 23 43.3 -00.2	313 06.0 +02.8	S 22 27.1 +00.0	281 06.2 +02.6	S 21 41.5 +00.1	21						
22	120 15.1 +00.7	N 23 43.1 -00.1	328 08.8 +02.8	S 22 27.1 +00.0	296 08.8 +02.6	S 21 41.6 +00.0	22						
23	135 15.8 +00.7	N 23 43.0 -00.2	343 11.6 +02.8	S 22 27.1 -00.1	311 11.4 +02.6	S 21 41.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'4 00'4 00'4 00'4 00'4 00'4		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 254° 254° 254° 253° 253° 253°		SHA 101° 101° 101° 101° 101° 101°		SHA 069° 069° 069° 069° 069° 069°								
	Greenwich Culmination Time: 13:59		Greenwich Culmination Time: 00:11		Greenwich Culmination Time: 02:18								

UT	Sun				Venus				Moon A: 40%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
	° / ' / ''		° / ' / ''	' / ''	° / ' / ''		° / ' / ''	' / ''	° / ' / ''		° / ' / ''	' / ''	
00	179 57.9 -00.1	N 23 14.0 +00.2			197 43.0 -00.7	N 20 28.0 +00.6			41 30.8 -30.1	S 10 41.5 +11.5			00
01	194 57.8 -00.1	N 23 14.2 +00.1			212 42.3 -00.7	N 20 28.6 +00.6			56 00.7 -30.2	S 10 53.0 +11.4			01
02	209 57.7 -00.1	N 23 14.3 +00.1			227 41.6 -00.7	N 20 29.2 +00.6			70 30.5 -30.1	S 11 04.4 +11.3			02
03	224 57.6 -00.2	N 23 14.4 +00.2			242 40.9 -00.8	N 20 29.8 +00.6			85 00.4 -30.2	S 11 15.7 +11.3			03
04	239 57.4 -00.1	N 23 14.6 +00.1			257 40.1 -00.7	N 20 30.4 +00.7			99 30.2 -30.2	S 11 27.0 +11.2			04
05	254 57.3 -00.1	N 23 14.7 +00.1			272 39.4 -00.7	N 20 31.1 +00.6			113 60.0 -30.3	S 11 38.2 +11.2			05
06	269 57.2 -00.2	N 23 14.8 +00.1			287 38.7 -00.7	N 20 31.7 +00.6			128 29.7 -30.3	S 11 49.4 +11.0			06
07	284 57.0 -00.1	N 23 14.9 +00.2			302 38.0 -00.8	N 20 32.3 +00.6			142 59.4 -30.3	S 12 00.4 +11.0			07
08	299 56.9 -00.1	N 23 15.1 +00.1			317 37.2 -00.7	N 20 32.9 +00.6			157 29.1 -30.3	S 12 11.4 +11.0			08
09	314 56.8 -00.2	N 23 15.2 +00.1			332 36.5 -00.7	N 20 33.5 +00.6			171 58.8 -30.3	S 12 22.4 +10.8			09
10	329 56.6 -00.1	N 23 15.3 +00.1			347 35.8 -00.7	N 20 34.1 +00.6			186 28.5 -30.4	S 12 33.2 +10.8			10
11	344 56.5 -00.1	N 23 15.4 +00.2			2 35.1 -00.8	N 20 34.7 +00.6			200 58.1 -30.4	S 12 44.0 +10.7			11
12	359 56.4 -00.2	N 23 15.6 +00.1			17 34.3 -00.7	N 20 35.3 +00.6			215 27.7 -30.4	S 12 54.7 +10.7			12
13	14 56.2 -00.1	N 23 15.7 +00.1			32 33.6 -00.7	N 20 35.9 +00.6			229 57.3 -30.5	S 13 05.4 +10.5			13
14	29 56.1 -00.1	N 23 15.8 +00.1			47 32.9 -00.8	N 20 36.5 +00.6			244 26.8 -30.5	S 13 15.9 +10.5			14
15	44 56.0 -00.2	N 23 15.9 +00.1			62 32.1 -00.7	N 20 37.1 +00.6			258 56.3 -30.5	S 13 26.4 +10.4			15
16	59 55.8 -00.1	N 23 16.0 +00.2			77 31.4 -00.7	N 20 37.7 +00.6			273 25.8 -30.5	S 13 36.8 +10.4			16
17	74 55.7 -00.1	N 23 16.2 +00.1			92 30.7 -00.7	N 20 38.3 +00.6			287 55.3 -30.6	S 13 47.2 +10.2			17
18	89 55.6 -00.1	N 23 16.3 +00.1			107 30.0 -00.8	N 20 38.9 +00.6			302 24.7 -30.6	S 13 57.4 +10.2			18
19	104 55.5 -00.2	N 23 16.4 +00.1			122 29.2 -00.7	N 20 39.5 +00.6			316 54.1 -30.6	S 14 07.6 +10.1			19
20	119 55.3 -00.1	N 23 16.5 +00.1			137 28.5 -00.7	N 20 40.1 +00.6			331 23.5 -30.7	S 14 17.7 +10.0			20
21	134 55.2 -00.1	N 23 16.6 +00.2			152 27.8 -00.8	N 20 40.7 +00.6			345 52.8 -30.7	S 14 27.7 +09.9			21
22	149 55.1 -00.2	N 23 16.8 +00.1			167 27.0 -00.7	N 20 41.3 +00.6			0 22.1 -30.7	S 14 37.6 +09.8			22
23	164 54.9 -00.1	N 23 16.9 +00.1			182 26.3 -00.7	N 20 41.9 +00.6			14 51.4 -30.7	S 14 47.4 +09.8			23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		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 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'7 15'7 15'7 15'7		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 00'2 00'2 00'2 00'2 00'2 00'2		
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'9 57'8 57'7 57'7 57'6 57'5		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		
	SHA 278° 278° 278° 277° 277° 277°		SHA 296° 295° 295° 295° 295° 295°		SHA 296° 295° 295° 295° 295° 295°		SHA 138° 136° 134° 132° 130° 127°		SHA 069° 069° 070° 070° 070° 070°		SHA 069° 069° 070° 070° 070° 070°		
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 10:49		Greenwich Culmination Time: 10:49		Greenwich Culmination Time: 21:58		Greenwich Culmination Time: 01:53		Greenwich Culmination Time: 01:53		

Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each column contains UT, GHA, ddGHA, Dec, and dDec for each hour of the day. Includes sub-tables for SD, HP, and SHA with Greenwich Culmination Times.

Table with columns for UT, Sun, Venus, Moon, Mars, Jupiter, Saturn, and UT. It contains astronomical data such as GHA, ddGHA, Dec, and dDec for each planet and moon, along with SD, HP, and SHA values and Greenwich Culmination Times. The Moon's phase is noted as A: 57%.

Table with columns for planet names (Sun, Venus, Moon, Mars, Jupiter, Saturn), UT, GHA, ddGHA, Dec, dDec, and UT. Each planet section includes a 24-hour data grid and summary statistics.

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 10.0 -00.1	N 23 15.0 -00.1	192 57.3 -00.8	N 23 02.8 +00.3	229 35.8 -29.3	N 12 55.6 +10.2							
01	194 09.9 -00.2	N 23 14.9 -00.1	207 56.5 -00.9	N 23 03.1 +00.2	244 06.5 -29.3	N 13 05.8 +10.2							
02	209 09.7 -00.1	N 23 14.8 -00.1	222 55.6 -00.8	N 23 03.3 +00.2	258 37.2 -29.4	N 13 16.0 +10.2							
03	224 09.6 -00.1	N 23 14.7 -00.2	237 54.8 -00.9	N 23 03.5 +00.3	273 07.8 -29.5	N 13 26.2 +10.1							
04	239 09.5 -00.2	N 23 14.5 -00.1	252 53.9 -00.8	N 23 03.8 +00.2	287 38.3 -29.6	N 13 36.3 +10.0							
05	254 09.3 -00.1	N 23 14.4 -00.1	267 53.1 -00.9	N 23 04.0 +00.2	302 08.7 -29.7	N 13 46.3 +10.0							
06	269 09.2 -00.1	N 23 14.3 -00.2	282 52.2 -00.8	N 23 04.2 +00.2	316 39.0 -29.8	N 13 56.3 +09.9							
07	284 09.1 -00.1	N 23 14.1 -00.1	297 51.4 -00.9	N 23 04.4 +00.3	331 09.2 -29.8	N 14 06.2 +09.9							
08	299 09.0 -00.2	N 23 14.0 -00.1	312 50.5 -00.8	N 23 04.7 +00.2	345 39.4 -29.9	N 14 16.1 +09.8							
09	314 08.8 -00.1	N 23 13.9 -00.2	327 49.7 -00.9	N 23 04.9 +00.2	0 09.5 -30.1	N 14 25.9 +09.8							
10	329 08.7 -00.1	N 23 13.7 -00.1	342 48.8 -00.8	N 23 05.1 +00.2	14 39.4 -30.1	N 14 35.7 +09.7							
11	344 08.6 -00.1	N 23 13.6 -00.1	357 48.0 -00.9	N 23 05.3 +00.2	29 09.3 -30.2	N 14 45.4 +09.6							
12	359 08.5 -00.2	N 23 13.5 -00.2	12 47.1 -00.8	N 23 05.5 +00.3	43 39.1 -30.3	N 14 55.0 +09.5							
13	14 08.3 -00.1	N 23 13.3 -00.1	27 46.3 -00.9	N 23 05.8 +00.2	58 08.8 -30.4	N 15 04.5 +09.5							
14	29 08.2 -00.1	N 23 13.2 -00.1	42 45.4 -00.8	N 23 06.0 +00.2	72 38.4 -30.5	N 15 14.0 +09.4							
15	44 08.1 -00.1	N 23 13.1 -00.2	57 44.6 -00.9	N 23 06.2 +00.2	87 07.9 -30.5	N 15 23.4 +09.4							
16	59 08.0 -00.2	N 23 12.9 -00.1	72 43.7 -00.8	N 23 06.4 +00.2	101 37.4 -30.7	N 15 32.8 +09.3							
17	74 07.8 -00.1	N 23 12.8 -00.1	87 42.9 -00.9	N 23 06.6 +00.2	116 06.7 -30.8	N 15 42.1 +09.2							
18	89 07.7 -00.1	N 23 12.7 -00.2	102 42.0 -00.9	N 23 06.8 +00.2	130 35.9 -30.8	N 15 51.3 +09.1							
19	104 07.6 -00.2	N 23 12.5 -00.1	117 41.1 -00.8	N 23 07.0 +00.2	145 05.1 -31.0	N 16 00.4 +09.1							
20	119 07.4 -00.1	N 23 12.4 -00.2	132 40.3 -00.9	N 23 07.2 +00.3	159 34.1 -31.0	N 16 09.5 +09.0							
21	134 07.3 -00.1	N 23 12.2 -00.1	147 39.4 -00.8	N 23 07.5 +00.2	174 03.1 -31.1	N 16 18.5 +08.9							
22	149 07.2 -00.1	N 23 12.1 -00.1	162 38.6 -00.9	N 23 07.7 +00.2	188 32.0 -31.3	N 16 27.4 +08.8							
23	164 07.1 -00.2	N 23 12.0 -00.2	177 37.7 -00.8	N 23 07.9 +00.2	203 00.7 -31.3	N 16 36.2 +08.8							
	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 262° 262° 262° 262° 262° 261° 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 276° 276° 276° 275° 275° 275° Greenwich Culmination Time: 11:08	UT 02 06 10 14 18 22 SD 15'5 15'5 15'6 15'6 15'6 15'7 HP 56'8 56'9 57'1 57'2 57'4 57'5 SHA 312° 310° 307° 305° 303° 301° Greenwich Culmination Time: 08:59										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	156 19.6 +00.8	N 21 41.5 -00.3	20 36.8 +02.8	S 22 17.2 +00.0	347 20.2 +02.6	S 21 53.8 +00.0							
01	171 20.4 +00.8	N 21 41.2 -00.3	35 39.6 +02.8	S 22 17.2 -00.1	2 22.8 +02.7	S 21 53.8 +00.0							
02	186 21.2 +00.8	N 21 40.9 -00.3	50 42.4 +02.7	S 22 17.1 +00.0	17 25.5 +02.6	S 21 53.8 +00.0							
03	201 22.0 +00.7	N 21 40.6 -00.3	65 45.1 +02.8	S 22 17.1 +00.0	32 28.1 +02.7	S 21 53.8 +00.1							
04	216 22.7 +00.8	N 21 40.3 -00.4	80 47.9 +02.8	S 22 17.1 +00.0	47 30.8 +02.6	S 21 53.9 +00.0							
05	231 23.5 +00.8	N 21 39.9 -00.3	95 50.7 +02.7	S 22 17.1 +00.0	62 33.4 +02.7	S 21 53.9 +00.0							
06	246 24.3 +00.8	N 21 39.6 -00.3	110 53.4 +02.8	S 22 17.1 -00.1	77 36.1 +02.6	S 21 53.9 +00.1							
07	261 25.1 +00.8	N 21 39.3 -00.3	125 56.2 +02.8	S 22 17.0 +00.0	92 38.7 +02.7	S 21 54.0 +00.0							
08	276 25.9 +00.8	N 21 39.0 -00.4	140 59.0 +02.7	S 22 17.0 +00.0	107 41.4 +02.7	S 21 54.0 +00.0							
09	291 26.7 +00.8	N 21 38.6 -00.3	156 01.7 +02.8	S 22 17.0 +00.0	122 44.1 +02.6	S 21 54.0 +00.0							
10	306 27.5 +00.8	N 21 38.3 -00.3	171 04.5 +02.8	S 22 17.0 +00.0	137 46.7 +02.7	S 21 54.0 +00.1							
11	321 28.3 +00.8	N 21 38.0 -00.3	186 07.3 +02.7	S 22 17.0 -00.1	152 49.4 +02.6	S 21 54.1 +00.0							
12	336 29.1 +00.7	N 21 37.7 -00.4	201 10.0 +02.8	S 22 16.9 +00.0	167 52.0 +02.7	S 21 54.1 +00.0							
13	351 29.8 +00.8	N 21 37.3 -00.3	216 12.8 +02.8	S 22 16.9 +00.0	182 54.7 +02.6	S 21 54.1 +00.0							
14	6 30.6 +00.8	N 21 37.0 -00.3	231 15.6 +02.8	S 22 16.9 +00.0	197 57.3 +02.7	S 21 54.1 +00.1							
15	21 31.4 +00.8	N 21 36.7 -00.3	246 18.4 +02.7	S 22 16.9 +00.0	212 60.0 +02.6	S 21 54.2 +00.0							
16	36 32.2 +00.8	N 21 36.4 -00.4	261 21.1 +02.8	S 22 16.9 -00.1	228 02.6 +02.7	S 21 54.2 +00.0							
17	51 33.0 +00.8	N 21 36.0 -00.3	276 23.9 +02.8	S 22 16.8 +00.0	243 05.3 +02.6	S 21 54.2 +00.0							
18	66 33.8 +00.8	N 21 35.7 -00.3	291 26.7 +02.7	S 22 16.8 +00.0	258 07.9 +02.7	S 21 54.2 +00.1							
19	81 34.6 +00.8	N 21 35.4 -00.3	306 29.4 +02.8	S 22 16.8 +00.0	273 10.6 +02.7	S 21 54.3 +00.0							
20	96 35.4 +00.8	N 21 35.1 -00.4	321 32.2 +02.8	S 22 16.8 +00.0	288 13.3 +02.6	S 21 54.3 +00.0							
21	111 36.2 +00.7	N 21 34.7 -00.3	336 35.0 +02.7	S 22 16.8 -00.1	303 15.9 +02.7	S 21 54.3 +00.1							
22	126 36.9 +00.8	N 21 34.4 -00.3	351 37.7 +02.8	S 22 16.7 +00.0	318 18.6 +02.6	S 21 54.4 +00.0							
23	141 37.7 +00.8	N 21 34.1 -00.3	6 40.5 +02.8	S 22 16.7 +00.0	333 21.2 +02.7	S 21 54.4 +00.0							
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 239° 239° 239° 239° 239° 239° Greenwich Culmination Time: 13:33	UT 02 06 10 14 18 22 SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 104° 104° 104° 104° 104° 104° Greenwich Culmination Time: 22:33	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 071° 071° 071° 071° 071° 071° Greenwich Culmination Time: 00:50										

