

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 00.2 +00.2	N 04 27.6 +01.0	159 43.9 -00.4	N 11 37.7 +01.2	11 27.8 -25.9	S 01 00.5 +15.3	00						
01	194 00.4 +00.2	N 04 28.6 +01.0	174 43.5 -00.5	N 11 38.9 +01.1	26 01.9 -25.8	S 01 15.8 +15.2	01						
02	209 00.6 +00.2	N 04 29.6 +00.9	189 43.0 -00.4	N 11 40.0 +01.2	40 36.1 -25.8	S 01 31.0 +15.2	02						
03	224 00.8 +00.2	N 04 30.5 +01.0	204 42.6 -00.5	N 11 41.2 +01.1	55 10.3 -25.8	S 01 46.2 +15.2	03						
04	239 01.0 +00.2	N 04 31.5 +01.0	219 42.1 -00.4	N 11 42.3 +01.2	69 44.5 -25.7	S 02 01.4 +15.2	04						
05	254 01.2 +00.2	N 04 32.5 +00.9	234 41.7 -00.5	N 11 43.5 +01.2	84 18.8 -25.8	S 02 16.6 +15.1	05						
06	269 01.4 +00.2	N 04 33.4 +01.0	249 41.2 -00.4	N 11 44.7 +01.1	98 53.0 -25.8	S 02 31.7 +15.1	06						
07	284 01.6 +00.1	N 04 34.4 +01.0	264 40.8 -00.5	N 11 45.8 +01.2	113 27.2 -25.7	S 02 46.8 +15.1	07						
08	299 01.7 +00.2	N 04 35.4 +00.9	279 40.3 -00.4	N 11 47.0 +01.1	128 01.5 -25.7	S 03 01.9 +15.1	08						
09	314 01.9 +00.2	N 04 36.3 +01.0	294 39.9 -00.5	N 11 48.1 +01.2	142 35.8 -25.8	S 03 17.0 +15.1	09						
10	329 02.1 +00.2	N 04 37.3 +00.9	309 39.4 -00.4	N 11 49.3 +01.1	157 10.0 -25.7	S 03 32.1 +15.0	10						
11	344 02.3 +00.2	N 04 38.2 +01.0	324 39.0 -00.5	N 11 50.4 +01.2	171 44.3 -25.7	S 03 47.1 +15.0	11						
12	359 02.5 +00.2	N 04 39.2 +01.0	339 38.5 -00.4	N 11 51.6 +01.1	186 18.6 -25.8	S 04 02.1 +15.0	12						
13	14 02.7 +00.2	N 04 40.2 +00.9	354 38.1 -00.5	N 11 52.7 +01.2	200 52.8 -25.7	S 04 17.1 +15.0	13						
14	29 02.9 +00.1	N 04 41.1 +01.0	9 37.6 -00.4	N 11 53.9 +01.2	215 27.1 -25.7	S 04 32.1 +14.9	14						
15	44 03.0 +00.2	N 04 42.1 +01.0	24 37.2 -00.5	N 11 55.1 +01.1	230 01.4 -25.7	S 04 47.0 +14.9	15						
16	59 03.2 +00.2	N 04 43.1 +00.9	39 36.7 -00.4	N 11 56.2 +01.2	244 35.7 -25.8	S 05 01.9 +14.9	16						
17	74 03.4 +00.2	N 04 44.0 +01.0	54 36.3 -00.5	N 11 57.4 +01.1	259 09.9 -25.7	S 05 16.8 +14.8	17						
18	89 03.6 +00.2	N 04 45.0 +01.0	69 35.8 -00.5	N 11 58.5 +01.2	273 44.2 -25.7	S 05 31.6 +14.8	18						
19	104 03.8 +00.2	N 04 46.0 +00.9	84 35.3 -00.4	N 11 59.7 +01.1	288 18.5 -25.8	S 05 46.4 +14.8	19						
20	119 04.0 +00.2	N 04 46.9 +01.0	99 34.9 -00.5	N 12 00.8 +01.2	302 52.7 -25.7	S 06 01.2 +14.7	20						
21	134 04.2 +00.1	N 04 47.9 +00.9	114 34.4 -00.4	N 12 02.0 +01.1	317 27.0 -25.7	S 06 15.9 +14.7	21						
22	149 04.3 +00.2	N 04 48.8 +01.0	129 34.0 -00.5	N 12 03.1 +01.2	332 01.3 -25.8	S 06 30.6 +14.6	22						
23	164 04.5 +00.2	N 04 49.8 +01.0	144 33.5 -00.4	N 12 04.3 +01.1	346 35.5 -25.8	S 06 45.2 +14.7	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 15'3 15'3 15'3 15'2 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 56'2 56'1 56'0 55'9 55'8 55'8								
	SHA 350° 349° 349° 349° 349° 349°	UT 02 06 10 14 18 22	SD 330° 330° 330° 330° 329° 329°	UT 02 06 10 14 18 22	SD 181° 179° 177° 176° 174° 172°								
	Greenwich Culmination Time: 12:03	UT 02 06 10 14 18 22	SD 330° 330° 330° 330° 329° 329°	UT 02 06 10 14 18 22	SD 181° 179° 177° 176° 174° 172°								
		Greenwich Culmination Time: 13:21		Greenwich Culmination Time: 23:55									

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	195 16.6 +00.6	S 03 41.4 -00.7	82 12.2 +02.3	N 22 52.4 +00.0	183 26.1 +02.2	N 00 15.0 +00.1	00						
01	210 17.2 +00.7	S 03 40.7 -00.8	97 14.5 +02.3	N 22 52.4 +00.0	198 28.3 +02.2	N 00 15.1 +00.1	01						
02	225 17.9 +00.7	S 03 39.9 -00.8	112 16.8 +02.3	N 22 52.4 +00.0	213 30.5 +02.1	N 00 15.2 +00.1	02						
03	240 18.6 +00.6	S 03 39.1 -00.8	127 19.1 +02.3	N 22 52.4 +00.0	228 32.6 +02.2	N 00 15.3 +00.1	03						
04	255 19.2 +00.7	S 03 38.3 -00.8	142 21.4 +02.2	N 22 52.4 +00.0	243 34.8 +02.2	N 00 15.4 +00.2	04						
05	270 19.9 +00.7	S 03 37.5 -00.7	157 23.6 +02.3	N 22 52.4 -00.1	258 37.0 +02.2	N 00 15.6 +00.1	05						
06	285 20.6 +00.7	S 03 36.8 -00.8	172 25.9 +02.3	N 22 52.3 +00.0	273 39.2 +02.2	N 00 15.7 +00.1	06						
07	300 21.3 +00.6	S 03 36.0 -00.8	187 28.2 +02.3	N 22 52.3 +00.0	288 41.4 +02.1	N 00 15.8 +00.1	07						
08	315 21.9 +00.7	S 03 35.2 -00.8	202 30.5 +02.3	N 22 52.3 +00.0	303 43.5 +02.2	N 00 15.9 +00.2	08						
09	330 22.6 +00.7	S 03 34.4 -00.8	217 32.8 +02.3	N 22 52.3 +00.0	318 45.7 +02.2	N 00 16.1 +00.1	09						
10	345 23.3 +00.6	S 03 33.6 -00.8	232 35.1 +02.3	N 22 52.3 -00.1	333 47.9 +02.2	N 00 16.2 +00.1	10						
11	0 23.9 +00.7	S 03 32.8 -00.7	247 37.4 +02.2	N 22 52.2 +00.0	348 50.1 +02.1	N 00 16.3 +00.1	11						
12	15 24.6 +00.7	S 03 32.1 -00.8	262 39.6 +02.3	N 22 52.2 +00.0	3 52.2 +02.2	N 00 16.4 +00.1	12						
13	30 25.3 +00.6	S 03 31.3 -00.8	277 41.9 +02.3	N 22 52.2 +00.0	18 54.4 +02.2	N 00 16.5 +00.2	13						
14	45 25.9 +00.7	S 03 30.5 -00.8	292 44.2 +02.3	N 22 52.2 +00.0	33 56.6 +02.2	N 00 16.7 +00.1	14						
15	60 26.6 +00.7	S 03 29.7 -00.8	307 46.5 +02.3	N 22 52.2 +00.0	48 58.8 +02.2	N 00 16.8 +00.1	15						
16	75 27.3 +00.6	S 03 28.9 -00.8	322 48.8 +02.3	N 22 52.2 -00.1	64 01.0 +02.1	N 00 16.9 +00.1	16						
17	90 27.9 +00.7	S 03 28.1 -00.7	337 51.1 +02.2	N 22 52.1 +00.0	79 03.1 +02.2	N 00 17.0 +00.1	17						
18	105 28.6 +00.7	S 03 27.4 -00.8	352 53.3 +02.3	N 22 52.1 +00.0	94 05.3 +02.2	N 00 17.1 +00.2	18						
19	120 29.3 +00.7	S 03 26.6 -00.8	7 55.6 +02.3	N 22 52.1 +00.0	109 07.5 +02.2	N 00 17.3 +00.1	19						
20	135 30.0 +00.6	S 03 25.8 -00.8	22 57.9 +02.3	N 22 52.1 +00.0	124 09.7 +02.1	N 00 17.4 +00.1	20						
21	150 30.6 +00.7	S 03 25.0 -00.8	38 00.2 +02.3	N 22 52.1 -00.1	139 11.8 +02.2	N 00 17.5 +00.1	21						
22	165 31.3 +00.7	S 03 24.2 -00.7	53 02.5 +02.2	N 22 52.0 +00.0	154 14.0 +02.2	N 00 17.6 +00.1	22						
23	180 32.0 +00.6	S 03 23.5 -00.8	68 04.7 +02.3	N 22 52.0 +00.0	169 16.2 +02.2	N 00 17.7 +00.2	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 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 006° 006° 006° 005° 005° 005°	UT 02 06 10 14 18 22	SHA 253° 253° 253° 253° 253° 253°	UT 02 06 10 14 18 22	SHA 354° 354° 354° 354° 354° 354°								
	Greenwich Culmination Time: 10:58	UT 02 06 10 14 18 22	SHA 253° 253° 253° 253° 253° 253°	UT 02 06 10 14 18 22	SHA 354° 354° 354° 354° 354° 354°								
		Greenwich Culmination Time: 18:28		Greenwich Culmination Time: 11:44									

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 50%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	179 04.7 +00.2	N 04	50.8 +00.9	159 33.1 -00.5	N 12	05.4 +01.2	1 09.7 -25.7	S 06	59.9 +14.5	00			
01	194 04.9 +00.2	N 04	51.7 +01.0	174 32.6 -00.4	N 12	06.6 +01.1	15 44.0 -25.8	S 07	14.4 +14.6	01			
02	209 05.1 +00.2	N 04	52.7 +00.9	189 32.2 -00.5	N 12	07.7 +01.2	30 18.2 -25.8	S 07	29.0 +14.5	02			
03	224 05.3 +00.2	N 04	53.6 +01.0	204 31.7 -00.5	N 12	08.9 +01.1	44 52.4 -25.8	S 07	43.5 +14.4	03			
04	239 05.5 +00.1	N 04	54.6 +01.0	219 31.2 -00.4	N 12	10.0 +01.2	59 26.6 -25.8	S 07	57.9 +14.5	04			
05	254 05.6 +00.2	N 04	55.6 +00.9	234 30.8 -00.5	N 12	11.2 +01.1	74 00.8 -25.9	S 08	12.4 +14.3	05			
06	269 05.8 +00.2	N 04	56.5 +01.0	249 30.3 -00.4	N 12	12.3 +01.1	88 34.9 -25.8	S 08	26.7 +14.4	06			
07	284 06.0 +00.2	N 04	57.5 +01.0	264 29.9 -00.5	N 12	13.4 +01.2	103 09.1 -25.9	S 08	41.1 +14.2	07			
08	299 06.2 +00.2	N 04	58.5 +00.9	279 29.4 -00.5	N 12	14.6 +01.1	117 43.2 -25.9	S 08	55.3 +14.3	08			
09	314 06.4 +00.2	N 04	59.4 +01.0	294 28.9 -00.4	N 12	15.7 +01.2	132 17.3 -25.9	S 09	09.6 +14.2	09			
10	329 06.6 +00.1	N 05	00.4 +00.9	309 28.5 -00.5	N 12	16.9 +01.1	146 51.4 -25.9	S 09	23.8 +14.1	10			
11	344 06.7 +00.2	N 05	01.3 +01.0	324 28.0 -00.4	N 12	18.0 +01.2	161 25.5 -25.9	S 09	37.9 +14.1	11			
12	359 06.9 +00.2	N 05	02.3 +01.0	339 27.6 -00.5	N 12	19.2 +01.1	175 59.6 -26.0	S 09	52.0 +14.0	12			
13	14 07.1 +00.2	N 05	03.3 +00.9	354 27.1 -00.5	N 12	20.3 +01.1	190 33.6 -25.9	S 10	06.0 +14.0	13			
14	29 07.3 +00.2	N 05	04.2 +01.0	9 26.6 -00.4	N 12	21.4 +01.2	205 07.7 -26.0	S 10	20.0 +14.0	14			
15	44 07.5 +00.2	N 05	05.2 +00.9	24 26.2 -00.5	N 12	22.6 +01.1	219 41.7 -26.1	S 10	34.0 +13.9	15			
16	59 07.7 +00.2	N 05	06.1 +01.0	39 25.7 -00.4	N 12	23.7 +01.2	234 15.6 -26.0	S 10	47.9 +13.8	16			
17	74 07.9 +00.1	N 05	07.1 +01.0	54 25.3 -00.5	N 12	24.9 +01.1	248 49.6 -26.1	S 11	01.7 +13.8	17			
18	89 08.0 +00.2	N 05	08.1 +00.9	69 24.8 -00.5	N 12	26.0 +01.1	263 23.5 -26.1	S 11	15.5 +13.7	18			
19	104 08.2 +00.2	N 05	09.0 +01.0	84 24.3 -00.4	N 12	27.1 +01.2	277 57.4 -26.1	S 11	29.2 +13.7	19			
20	119 08.4 +00.2	N 05	10.0 +00.9	99 23.9 -00.5	N 12	28.3 +01.1	292 31.3 -26.2	S 11	42.9 +13.6	20			
21	134 08.6 +00.2	N 05	10.9 +01.0	114 23.4 -00.5	N 12	29.4 +01.2	307 05.1 -26.1	S 11	56.5 +13.5	21			
22	149 08.8 +00.2	N 05	11.9 +00.9	129 22.9 -00.4	N 12	30.6 +01.1	321 39.0 -26.2	S 12	10.0 +13.5	22			
23	164 09.0 +00.1	N 05	12.8 +01.0	144 22.5 -00.5	N 12	31.7 +01.1	336 12.8 -26.3	S 12	23.5 +13.5	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'2 15'2 15'1 15'1 15'1 15'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 55'7 55'6 55'5 55'5 55'4 55'3						
	SHA 349° 348° 348° 348° 348° 348°			SHA 329° 329° 329° 329° 328° 328°			SHA 170° 168° 166° 164° 162° 160°						
	Greenwich Culmination Time: 12:03			Greenwich Culmination Time: 13:22			Greenwich Culmination Time: -1:00						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	195 32.6 +00.7	S 03	22.7 -00.8	83 07.0 +02.3	N 22	52.0 +00.0	184 18.4 +02.2	N 00	17.9 +00.1	00			
01	210 33.3 +00.7	S 03	21.9 -00.8	98 09.3 +02.3	N 22	52.0 +00.0	199 20.6 +02.1	N 00	18.0 +00.1	01			
02	225 34.0 +00.6	S 03	21.1 -00.8	113 11.6 +02.3	N 22	52.0 +00.0	214 22.7 +02.2	N 00	18.1 +00.1	02			
03	240 34.6 +00.7	S 03	20.3 -00.8	128 13.9 +02.2	N 22	52.0 -00.1	229 24.9 +02.2	N 00	18.2 +00.2	03			
04	255 35.3 +00.7	S 03	19.5 -00.7	143 16.1 +02.3	N 22	51.9 +00.0	244 27.1 +02.2	N 00	18.4 +00.1	04			
05	270 36.0 +00.7	S 03	18.8 -00.8	158 18.4 +02.3	N 22	51.9 +00.0	259 29.3 +02.1	N 00	18.5 +00.1	05			
06	285 36.7 +00.6	S 03	18.0 -00.8	173 20.7 +02.3	N 22	51.9 +00.0	274 31.4 +02.2	N 00	18.6 +00.1	06			
07	300 37.3 +00.7	S 03	17.2 -00.8	188 23.0 +02.3	N 22	51.9 +00.0	289 33.6 +02.2	N 00	18.7 +00.1	07			
08	315 38.0 +00.7	S 03	16.4 -00.8	203 25.3 +02.2	N 22	51.9 -00.1	304 35.8 +02.2	N 00	18.8 +00.2	08			
09	330 38.7 +00.6	S 03	15.6 -00.8	218 27.5 +02.3	N 22	51.8 +00.0	319 38.0 +02.2	N 00	19.0 +00.1	09			
10	345 39.3 +00.7	S 03	14.8 -00.7	233 29.8 +02.3	N 22	51.8 +00.0	334 40.2 +02.1	N 00	19.1 +00.1	10			
11	0 40.0 +00.7	S 03	14.1 -00.8	248 32.1 +02.3	N 22	51.8 +00.0	349 42.3 +02.2	N 00	19.2 +00.1	11			
12	15 40.7 +00.6	S 03	13.3 -00.8	263 34.4 +02.3	N 22	51.8 +00.0	4 44.5 +02.2	N 00	19.3 +00.1	12			
13	30 41.3 +00.7	S 03	12.5 -00.8	278 36.7 +02.2	N 22	51.8 +00.0	19 46.7 +02.2	N 00	19.4 +00.2	13			
14	45 42.0 +00.7	S 03	11.7 -00.8	293 38.9 +02.3	N 22	51.8 -00.1	34 48.9 +02.2	N 00	19.6 +00.1	14			
15	60 42.7 +00.7	S 03	10.9 -00.8	308 41.2 +02.3	N 22	51.7 +00.0	49 51.1 +02.1	N 00	19.7 +00.1	15			
16	75 43.4 +00.6	S 03	10.1 -00.7	323 43.5 +02.3	N 22	51.7 +00.0	64 53.2 +02.2	N 00	19.8 +00.1	16			
17	90 44.0 +00.7	S 03	09.4 -00.8	338 45.8 +02.2	N 22	51.7 +00.0	79 55.4 +02.2	N 00	19.9 +00.1	17			
18	105 44.7 +00.7	S 03	08.6 -00.8	353 48.0 +02.3	N 22	51.7 +00.0	94 57.6 +02.2	N 00	20.0 +00.2	18			
19	120 45.4 +00.6	S 03	07.8 -00.8	8 50.3 +02.3	N 22	51.7 -00.1	109 59.8 +02.1	N 00	20.2 +00.1	19			
20	135 46.0 +00.7	S 03	07.0 -00.8	23 52.6 +02.3	N 22	51.6 +00.0	125 01.9 +02.2	N 00	20.3 +00.1	20			
21	150 46.7 +00.7	S 03	06.2 -00.8	38 54.9 +02.2	N 22	51.6 +00.0	140 04.1 +02.2	N 00	20.4 +00.1	21			
22	165 47.4 +00.7	S 03	05.4 -00.7	53 57.1 +02.3	N 22	51.6 +00.0	155 06.3 +02.2	N 00	20.5 +00.2	22			
23	180 48.1 +00.6	S 03	04.7 -00.8	68 59.4 +02.3	N 22	51.6 +00.0	170 08.5 +02.2	N 00	20.7 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 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 005° 005° 005° 005° 005° 005°			SHA 253° 253° 253° 253° 253° 253°			SHA 354° 354° 354° 354° 354° 354°						
	Greenwich Culmination Time: 10:57			Greenwich Culmination Time: 18:24			Greenwich Culmination Time: 11:41						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 09.1 +00.2	N 05 13.8 +01.0	159 22.0 -00.4	N 12 32.8 +01.2	350 46.5 -26.2	S 12 37.0 +13.3	00							
01	194 09.3 +00.2	N 05 14.8 +00.9	174 21.6 -00.5	N 12 34.0 +01.1	5 20.3 -26.3	S 12 50.3 +13.4	01							
02	209 09.5 +00.2	N 05 15.7 +01.0	189 21.1 -00.5	N 12 35.1 +01.1	19 54.0 -26.4	S 13 03.7 +13.2	02							
03	224 09.7 +00.2	N 05 16.7 +00.9	204 20.6 -00.4	N 12 36.2 +01.2	34 27.6 -26.3	S 13 16.9 +13.2	03							
04	239 09.9 +00.2	N 05 17.6 +01.0	219 20.2 -00.5	N 12 37.4 +01.1	49 01.3 -26.4	S 13 30.1 +13.1	04							
05	254 10.1 +00.2	N 05 18.6 +00.9	234 19.7 -00.5	N 12 38.5 +01.1	63 34.9 -26.4	S 13 43.2 +13.1	05							
06	269 10.3 +00.1	N 05 19.5 +01.0	249 19.2 -00.4	N 12 39.6 +01.2	78 08.5 -26.5	S 13 56.3 +13.0	06							
07	284 10.4 +00.2	N 05 20.5 +01.0	264 18.8 -00.5	N 12 40.8 +01.1	92 42.0 -26.5	S 14 09.3 +12.9	07							
08	299 10.6 +00.2	N 05 21.5 +00.9	279 18.3 -00.5	N 12 41.9 +01.1	107 15.5 -26.5	S 14 22.2 +12.8	08							
09	314 10.8 +00.2	N 05 22.4 +01.0	294 17.8 -00.4	N 12 43.0 +01.2	121 49.0 -26.6	S 14 35.0 +12.8	09							
10	329 11.0 +00.2	N 05 23.4 +00.9	309 17.4 -00.5	N 12 44.2 +01.1	136 22.4 -26.6	S 14 47.8 +12.7	10							
11	344 11.2 +00.2	N 05 24.3 +01.0	324 16.9 -00.5	N 12 45.3 +01.1	150 55.8 -26.6	S 15 00.5 +12.7	11							
12	359 11.4 +00.1	N 05 25.3 +00.9	339 16.4 -00.5	N 12 46.4 +01.2	165 29.2 -26.7	S 15 13.2 +12.6	12							
13	14 11.5 +00.2	N 05 26.2 +01.0	354 15.9 -00.4	N 12 47.6 +01.1	180 02.5 -26.7	S 15 25.8 +12.5	13							
14	29 11.7 +00.2	N 05 27.2 +01.0	9 15.5 -00.5	N 12 48.7 +01.1	194 35.8 -26.8	S 15 38.3 +12.4	14							
15	44 11.9 +00.2	N 05 28.2 +00.9	24 15.0 -00.5	N 12 49.8 +01.2	209 09.0 -26.8	S 15 50.7 +12.4	15							
16	59 12.1 +00.2	N 05 29.1 +01.0	39 14.5 -00.4	N 12 51.0 +01.1	223 42.2 -26.8	S 16 03.1 +12.2	16							
17	74 12.3 +00.2	N 05 30.1 +00.9	54 14.1 -00.5	N 12 52.1 +01.1	238 15.4 -26.9	S 16 15.3 +12.2	17							
18	89 12.5 +00.1	N 05 31.0 +01.0	69 13.6 -00.5	N 12 53.2 +01.1	252 48.5 -27.0	S 16 27.5 +12.2	18							
19	104 12.6 +00.2	N 05 32.0 +00.9	84 13.1 -00.5	N 12 54.3 +01.2	267 21.5 -26.9	S 16 39.7 +12.0	19							
20	119 12.8 +00.2	N 05 32.9 +01.0	99 12.6 -00.4	N 12 55.5 +01.1	281 54.6 -27.0	S 16 51.7 +12.0	20							
21	134 13.0 +00.2	N 05 33.9 +00.9	114 12.2 -00.5	N 12 56.6 +01.1	296 27.6 -27.1	S 17 03.7 +11.9	21							
22	149 13.2 +00.2	N 05 34.8 +01.0	129 11.7 -00.5	N 12 57.7 +01.1	311 00.5 -27.1	S 17 15.6 +11.8	22							
23	164 13.4 +00.1	N 05 35.8 +00.9	144 11.2 -00.4	N 12 58.8 +01.2	325 33.4 -27.1	S 17 27.4 +11.7	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 348° 348° 347° 347° 347° 347°	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 328° 328° 328° 327° 327° 327°	Greenwich Culmination Time: 13:22	UT 02 06 10 14 18 22	SD 15'0 15'0 15'0 15'0 15'0 15'0	HP 55'2 55'2 55'1 55'0 54'9 54'9	SHA 158° 157° 155° 153° 151° 149°	Greenwich Culmination Time: 00:38

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	195 48.7 +00.7	S 03 03.9 -00.8	84 01.7 +02.2	N 22 51.6 -00.1	185 10.7 +02.1	N 00 20.8 +00.1	00							
01	210 49.4 +00.7	S 03 03.1 -00.8	99 03.9 +02.3	N 22 51.5 +00.0	200 12.8 +02.2	N 00 20.9 +00.1	01							
02	225 50.1 +00.7	S 03 02.3 -00.8	114 06.2 +02.3	N 22 51.5 +00.0	215 15.0 +02.2	N 00 21.0 +00.1	02							
03	240 50.8 +00.6	S 03 01.5 -00.8	129 08.5 +02.3	N 22 51.5 +00.0	230 17.2 +02.2	N 00 21.1 +00.2	03							
04	255 51.4 +00.7	S 03 00.7 -00.7	144 10.8 +02.2	N 22 51.5 +00.0	245 19.4 +02.2	N 00 21.3 +00.1	04							
05	270 52.1 +00.7	S 02 60.0 -00.8	159 13.0 +02.3	N 22 51.5 -00.1	260 21.6 +02.1	N 00 21.4 +00.1	05							
06	285 52.8 +00.6	S 02 59.2 -00.8	174 15.3 +02.3	N 22 51.4 +00.0	275 23.7 +02.2	N 00 21.5 +00.1	06							
07	300 53.4 +00.7	S 02 58.4 -00.8	189 17.6 +02.2	N 22 51.4 +00.0	290 25.9 +02.2	N 00 21.6 +00.1	07							
08	315 54.1 +00.7	S 02 57.6 -00.8	204 19.8 +02.3	N 22 51.4 +00.0	305 28.1 +02.2	N 00 21.7 +00.2	08							
09	330 54.8 +00.7	S 02 56.8 -00.8	219 22.1 +02.3	N 22 51.4 +00.0	320 30.3 +02.1	N 00 21.9 +00.1	09							
10	345 55.5 +00.6	S 02 56.0 -00.7	234 24.4 +02.3	N 22 51.4 -00.1	335 32.4 +02.2	N 00 22.0 +00.1	10							
11	0 56.1 +00.7	S 02 55.3 -00.8	249 26.7 +02.2	N 22 51.3 +00.0	350 34.6 +02.2	N 00 22.1 +00.1	11							
12	15 56.8 +00.7	S 02 54.5 -00.8	264 28.9 +02.3	N 22 51.3 +00.0	5 36.8 +02.2	N 00 22.2 +00.1	12							
13	30 57.5 +00.7	S 02 53.7 -00.8	279 31.2 +02.3	N 22 51.3 +00.0	20 39.0 +02.2	N 00 22.3 +00.2	13							
14	45 58.2 +00.6	S 02 52.9 -00.8	294 33.5 +02.2	N 22 51.3 +00.0	35 41.2 +02.1	N 00 22.5 +00.1	14							
15	60 58.8 +00.7	S 02 52.1 -00.8	309 35.7 +02.3	N 22 51.3 -00.1	50 43.3 +02.2	N 00 22.6 +00.1	15							
16	75 59.5 +00.7	S 02 51.3 -00.7	324 38.0 +02.3	N 22 51.2 +00.0	65 45.5 +02.2	N 00 22.7 +00.1	16							
17	91 00.2 +00.6	S 02 50.6 -00.8	339 40.3 +02.2	N 22 51.2 +00.0	80 47.7 +02.2	N 00 22.8 +00.1	17							
18	106 00.8 +00.7	S 02 49.8 -00.8	354 42.5 +02.3	N 22 51.2 +00.0	95 49.9 +02.2	N 00 22.9 +00.2	18							
19	121 01.5 +00.7	S 02 49.0 -00.8	9 44.8 +02.3	N 22 51.2 +00.0	110 52.1 +02.1	N 00 23.1 +00.1	19							
20	136 02.2 +00.7	S 02 48.2 -00.8	24 47.1 +02.2	N 22 51.2 -00.1	125 54.2 +02.2	N 00 23.2 +00.1	20							
21	151 02.9 +00.6	S 02 47.4 -00.8	39 49.3 +02.3	N 22 51.1 +00.0	140 56.4 +02.2	N 00 23.3 +00.1	21							
22	166 03.5 +00.7	S 02 46.6 -00.7	54 51.6 +02.3	N 22 51.1 +00.0	155 58.6 +02.2	N 00 23.4 +00.2	22							
23	181 04.2 +00.7	S 02 45.9 -00.8	69 53.9 +02.2	N 22 51.1 +00.0	171 00.8 +02.1	N 00 23.6 +00.1	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 004° 004° 004° 004° 004° 004°	Greenwich Culmination Time: 10:56	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 253° 253° 253° 253° 253° 253°	Greenwich Culmination Time: 18:21	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 354° 354° 354° 354° 354° 354°	Greenwich Culmination Time: 11:37

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 56%				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	179 13.5 +00.2	N 05	36.7 +01.0	159 10.8 -00.5	N 12	60.0 +01.1	340 06.3 -27.2	S 17	39.1 +11.7	00			
01	194 13.7 +00.2	N 05	37.7 +01.0	174 10.3 -00.5	N 13	01.1 +01.1	354 39.1 -27.2	S 17	50.8 +11.6	01			
02	209 13.9 +00.2	N 05	38.7 +00.9	189 09.8 -00.5	N 13	02.2 +01.1	9 11.9 -27.3	S 18	02.4 +11.4	02			
03	224 14.1 +00.2	N 05	39.6 +01.0	204 09.3 -00.4	N 13	03.3 +01.2	23 44.6 -27.3	S 18	13.8 +11.4	03			
04	239 14.3 +00.2	N 05	40.6 +00.9	219 08.9 -00.5	N 13	04.5 +01.1	38 17.3 -27.4	S 18	25.2 +11.4	04			
05	254 14.5 +00.1	N 05	41.5 +01.0	234 08.4 -00.5	N 13	05.6 +01.1	52 49.9 -27.4	S 18	36.6 +11.2	05			
06	269 14.6 +00.2	N 05	42.5 +00.9	249 07.9 -00.5	N 13	06.7 +01.1	67 22.5 -27.5	S 18	47.8 +11.1	06			
07	284 14.8 +00.2	N 05	43.4 +01.0	264 07.4 -00.4	N 13	07.8 +01.1	81 55.0 -27.5	S 18	58.9 +11.1	07			
08	299 15.0 +00.2	N 05	44.4 +00.9	279 07.0 -00.5	N 13	08.9 +01.2	96 27.5 -27.6	S 19	10.0 +11.0	08			
09	314 15.2 +00.2	N 05	45.3 +01.0	294 06.5 -00.5	N 13	10.1 +01.1	110 59.9 -27.6	S 19	21.0 +10.8	09			
10	329 15.4 +00.2	N 05	46.3 +00.9	309 06.0 -00.5	N 13	11.2 +01.1	125 32.3 -27.7	S 19	31.8 +10.8	10			
11	344 15.6 +00.1	N 05	47.2 +01.0	324 05.5 -00.5	N 13	12.3 +01.1	140 04.6 -27.7	S 19	42.6 +10.7	11			
12	359 15.7 +00.2	N 05	48.2 +00.9	339 05.0 -00.4	N 13	13.4 +01.1	154 36.9 -27.7	S 19	53.3 +10.6	12			
13	14 15.9 +00.2	N 05	49.1 +01.0	354 04.6 -00.5	N 13	14.5 +01.1	169 09.2 -27.8	S 20	03.9 +10.6	13			
14	29 16.1 +00.2	N 05	50.1 +00.9	9 04.1 -00.5	N 13	15.6 +01.2	183 41.4 -27.9	S 20	14.5 +10.4	14			
15	44 16.3 +00.2	N 05	51.0 +01.0	24 03.6 -00.5	N 13	16.8 +01.1	198 13.5 -27.9	S 20	24.9 +10.3	15			
16	59 16.5 +00.1	N 05	52.0 +00.9	39 03.1 -00.5	N 13	17.9 +01.1	212 45.6 -28.0	S 20	35.2 +10.2	16			
17	74 16.6 +00.2	N 05	52.9 +01.0	54 02.6 -00.4	N 13	19.0 +01.1	227 17.6 -28.0	S 20	45.4 +10.2	17			
18	89 16.8 +00.2	N 05	53.9 +00.9	69 02.2 -00.5	N 13	20.1 +01.1	241 49.6 -28.1	S 20	55.6 +10.0	18			
19	104 17.0 +00.2	N 05	54.8 +01.0	84 01.7 -00.5	N 13	21.2 +01.1	256 21.5 -28.1	S 21	05.6 +10.0	19			
20	119 17.2 +00.2	N 05	55.8 +00.9	99 01.2 -00.5	N 13	22.3 +01.1	270 53.4 -28.1	S 21	15.6 +09.8	20			
21	134 17.4 +00.1	N 05	56.7 +01.0	114 00.7 -00.5	N 13	23.4 +01.2	285 25.3 -28.3	S 21	25.4 +09.8	21			
22	149 17.5 +00.2	N 05	57.7 +00.9	129 00.2 -00.4	N 13	24.6 +01.1	299 57.0 -28.2	S 21	35.2 +09.6	22			
23	164 17.7 +00.2	N 05	58.6 +01.0	143 59.8 -00.5	N 13	25.7 +01.1	314 28.8 -28.3	S 21	44.8 +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 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'9 14'9 14'9 14'9 14'9 14'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'8 54'7 54'7 54'6 54'6 54'5						
	SHA 347° 347° 347° 346° 346° 346°			SHA 327° 327° 326° 326° 326° 326°			SHA 147° 145° 143° 141° 139° 137°						
	Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 13:23			Greenwich Culmination Time: 01:22						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	196 04.9 +00.7	S 02	45.1 -00.8	84 56.1 +02.3	N 22	51.1 +00.0	186 02.9 +02.2	N 00	23.7 +00.1	00			
01	211 05.6 +00.6	S 02	44.3 -00.8	99 58.4 +02.3	N 22	51.1 -00.1	201 05.1 +02.2	N 00	23.8 +00.1	01			
02	226 06.2 +00.7	S 02	43.5 -00.8	115 00.7 +02.2	N 22	51.0 +00.0	216 07.3 +02.2	N 00	23.9 +00.1	02			
03	241 06.9 +00.7	S 02	42.7 -00.8	130 02.9 +02.3	N 22	51.0 +00.0	231 09.5 +02.2	N 00	24.0 +00.2	03			
04	256 07.6 +00.7	S 02	41.9 -00.8	145 05.2 +02.3	N 22	51.0 +00.0	246 11.7 +02.1	N 00	24.2 +00.1	04			
05	271 08.3 +00.6	S 02	41.1 -00.7	160 07.5 +02.2	N 22	51.0 +00.0	261 13.8 +02.2	N 00	24.3 +00.1	05			
06	286 08.9 +00.7	S 02	40.4 -00.8	175 09.7 +02.3	N 22	51.0 -00.1	276 16.0 +02.2	N 00	24.4 +00.1	06			
07	301 09.6 +00.7	S 02	39.6 -00.8	190 12.0 +02.2	N 22	50.9 +00.0	291 18.2 +02.2	N 00	24.5 +00.1	07			
08	316 10.3 +00.7	S 02	38.8 -00.8	205 14.2 +02.3	N 22	50.9 +00.0	306 20.4 +02.2	N 00	24.6 +00.2	08			
09	331 11.0 +00.6	S 02	38.0 -00.8	220 16.5 +02.3	N 22	50.9 +00.0	321 22.6 +02.1	N 00	24.8 +00.1	09			
10	346 11.6 +00.7	S 02	37.2 -00.8	235 18.8 +02.2	N 22	50.9 +00.0	336 24.7 +02.2	N 00	24.9 +00.1	10			
11	1 12.3 +00.7	S 02	36.4 -00.7	250 21.0 +02.3	N 22	50.9 -00.1	351 26.9 +02.2	N 00	25.0 +00.1	11			
12	16 13.0 +00.6	S 02	35.7 -00.8	265 23.3 +02.3	N 22	50.8 +00.0	6 29.1 +02.2	N 00	25.1 +00.1	12			
13	31 13.6 +00.7	S 02	34.9 -00.8	280 25.6 +02.2	N 22	50.8 +00.0	21 31.3 +02.1	N 00	25.2 +00.2	13			
14	46 14.3 +00.7	S 02	34.1 -00.8	295 27.8 +02.3	N 22	50.8 +00.0	36 33.4 +02.2	N 00	25.4 +00.1	14			
15	61 15.0 +00.7	S 02	33.3 -00.8	310 30.1 +02.2	N 22	50.8 +00.0	51 35.6 +02.2	N 00	25.5 +00.1	15			
16	76 15.7 +00.6	S 02	32.5 -00.8	325 32.3 +02.3	N 22	50.8 -00.1	66 37.8 +02.2	N 00	25.6 +00.1	16			
17	91 16.3 +00.7	S 02	31.7 -00.7	340 34.6 +02.3	N 22	50.7 +00.0	81 40.0 +02.2	N 00	25.7 +00.1	17			
18	106 17.0 +00.7	S 02	31.0 -00.8	355 36.9 +02.2	N 22	50.7 +00.0	96 42.2 +02.1	N 00	25.8 +00.2	18			
19	121 17.7 +00.7	S 02	30.2 -00.8	10 39.1 +02.3	N 22	50.7 +00.0	111 44.3 +02.2	N 00	26.0 +00.1	19			
20	136 18.4 +00.6	S 02	29.4 -00.8	25 41.4 +02.2	N 22	50.7 +00.0	126 46.5 +02.2	N 00	26.1 +00.1	20			
21	151 19.0 +00.7	S 02	28.6 -00.8	40 43.6 +02.3	N 22	50.7 -00.1	141 48.7 +02.2	N 00	26.2 +00.1	21			
22	166 19.7 +00.7	S 02	27.8 -00.8	55 45.9 +02.3	N 22	50.6 +00.0	156 50.9 +02.2	N 00	26.3 +00.1	22			
23	181 20.4 +00.7	S 02	27.0 -00.8	70 48.2 +02.2	N 22	50.6 +00.0	171 53.1 +02.1	N 00	26.4 +00.2	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 004° 004° 003° 003° 003° 003°			SHA 253° 253° 253° 253° 253° 253°			SHA 354° 354° 354° 354° 354° 354°						
	Greenwich Culmination Time: 10:55			Greenwich Culmination Time: 18:17			Greenwich Culmination Time: 11:34						

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	17.9	+00.2	N 05 59.6	+00.9	158	59.3	-00.5	N 13 26.8	+01.1	329	00.5	-28.4	S 21 54.4	+09.4	00
01	194	18.1	+00.2	N 06 00.5	+01.0	173	58.8	-00.5	N 13 27.9	+01.1	343	32.1	-28.4	S 22 03.8	+09.4	01
02	209	18.3	+00.1	N 06 01.5	+00.9	188	58.3	-00.5	N 13 29.0	+01.1	358	03.7	-28.5	S 22 13.2	+09.2	02
03	224	18.4	+00.2	N 06 02.4	+01.0	203	57.8	-00.5	N 13 30.1	+01.1	12	35.2	-28.5	S 22 22.4	+09.1	03
04	239	18.6	+00.2	N 06 03.4	+00.9	218	57.3	-00.4	N 13 31.2	+01.1	27	06.7	-28.6	S 22 31.5	+09.1	04
05	254	18.8	+00.2	N 06 04.3	+01.0	233	56.9	-00.5	N 13 32.3	+01.1	41	38.1	-28.7	S 22 40.6	+08.9	05
06	269	19.0	+00.2	N 06 05.3	+00.9	248	56.4	-00.5	N 13 33.4	+01.1	56	09.4	-28.6	S 22 49.5	+08.8	06
07	284	19.2	+00.1	N 06 06.2	+01.0	263	55.9	-00.5	N 13 34.5	+01.1	70	40.8	-28.8	S 22 58.3	+08.8	07
08	299	19.3	+00.2	N 06 07.2	+00.9	278	55.4	-00.5	N 13 35.6	+01.1	85	12.0	-28.8	S 23 07.1	+08.6	08
09	314	19.5	+00.2	N 06 08.1	+01.0	293	54.9	-00.5	N 13 36.7	+01.1	99	43.2	-28.8	S 23 15.7	+08.5	09
10	329	19.7	+00.2	N 06 09.1	+00.9	308	54.4	-00.5	N 13 37.8	+01.2	114	14.4	-28.9	S 23 24.2	+08.4	10
11	344	19.9	+00.2	N 06 10.0	+01.0	323	53.9	-00.4	N 13 39.0	+01.1	128	45.5	-29.0	S 23 32.6	+08.3	11
12	359	20.1	+00.1	N 06 11.0	+00.9	338	53.5	-00.5	N 13 40.1	+01.1	143	16.5	-29.0	S 23 40.9	+08.1	12
13	14	20.2	+00.2	N 06 11.9	+01.0	353	53.0	-00.5	N 13 41.2	+01.1	157	47.5	-29.0	S 23 49.0	+08.1	13
14	29	20.4	+00.2	N 06 12.9	+00.9	8	52.5	-00.5	N 13 42.3	+01.1	172	18.5	-29.1	S 23 57.1	+08.0	14
15	44	20.6	+00.2	N 06 13.8	+01.0	23	52.0	-00.5	N 13 43.4	+01.1	186	49.4	-29.2	S 24 05.1	+07.8	15
16	59	20.8	+00.2	N 06 14.8	+00.9	38	51.5	-00.5	N 13 44.5	+01.1	201	20.2	-29.2	S 24 12.9	+07.8	16
17	74	21.0	+00.1	N 06 15.7	+01.0	53	51.0	-00.5	N 13 45.6	+01.1	215	51.0	-29.2	S 24 20.7	+07.6	17
18	89	21.1	+00.2	N 06 16.7	+00.9	68	50.5	-00.5	N 13 46.7	+01.1	230	21.8	-29.3	S 24 28.3	+07.5	18
19	104	21.3	+00.2	N 06 17.6	+01.0	83	50.0	-00.5	N 13 47.8	+01.1	244	52.5	-29.4	S 24 35.8	+07.4	19
20	119	21.5	+00.2	N 06 18.6	+00.9	98	49.5	-00.4	N 13 48.9	+01.1	259	23.1	-29.4	S 24 43.2	+07.2	20
21	134	21.7	+00.2	N 06 19.5	+01.0	113	49.1	-00.5	N 13 50.0	+01.1	273	53.7	-29.4	S 24 50.4	+07.2	21
22	149	21.9	+00.1	N 06 20.5	+00.9	128	48.6	-00.5	N 13 51.1	+01.1	288	24.3	-29.5	S 24 57.6	+07.0	22
23	164	22.0	+00.2	N 06 21.4	+00.9	143	48.1	-00.5	N 13 52.2	+01.1	302	54.8	-29.6	S 25 04.6	+07.0	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 14'8					
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 54'5 54'4 54'4 54'3 54'3 54'3					
	SHA 346° 346° 346° 345° 345° 345°					SHA 326° 325° 325° 325° 325° 325°					SHA 135° 133° 131° 128° 126° 124°					
	Greenwich Culmination Time: 12:02					Greenwich Culmination Time: 13:24					Greenwich Culmination Time: 02:08					

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
00	196	21.1	+00.7	S 02 26.2	-00.7	85	50.4	+02.3	N 22 50.6	+00.0	186	55.2	+02.2	N 00 26.6	+00.1	00
01	211	21.8	+00.6	S 02 25.5	-00.8	100	52.7	+02.2	N 22 50.6	-00.1	201	57.4	+02.2	N 00 26.7	+00.1	01
02	226	22.4	+00.7	S 02 24.7	-00.8	115	54.9	+02.3	N 22 50.5	+00.0	216	59.6	+02.2	N 00 26.8	+00.1	02
03	241	23.1	+00.7	S 02 23.9	-00.8	130	57.2	+02.2	N 22 50.5	+00.0	232	01.8	+02.2	N 00 26.9	+00.1	03
04	256	23.8	+00.7	S 02 23.1	-00.8	145	59.4	+02.3	N 22 50.5	+00.0	247	04.0	+02.1	N 00 27.0	+00.2	04
05	271	24.5	+00.6	S 02 22.3	-00.8	161	01.7	+02.3	N 22 50.5	+00.0	262	06.1	+02.2	N 00 27.2	+00.1	05
06	286	25.1	+00.7	S 02 21.5	-00.7	176	04.0	+02.2	N 22 50.5	-00.1	277	08.3	+02.2	N 00 27.3	+00.1	06
07	301	25.8	+00.7	S 02 20.8	-00.8	191	06.2	+02.3	N 22 50.4	+00.0	292	10.5	+02.2	N 00 27.4	+00.1	07
08	316	26.5	+00.7	S 02 20.0	-00.8	206	08.5	+02.2	N 22 50.4	+00.0	307	12.7	+02.2	N 00 27.5	+00.1	08
09	331	27.2	+00.6	S 02 19.2	-00.8	221	10.7	+02.3	N 22 50.4	+00.0	322	14.9	+02.1	N 00 27.6	+00.2	09
10	346	27.8	+00.7	S 02 18.4	-00.8	236	13.0	+02.2	N 22 50.4	+00.0	337	17.0	+02.2	N 00 27.8	+00.1	10
11	1	28.5	+00.7	S 02 17.6	-00.8	251	15.2	+02.3	N 22 50.4	-00.1	352	19.2	+02.2	N 00 27.9	+00.1	11
12	16	29.2	+00.7	S 02 16.8	-00.8	266	17.5	+02.2	N 22 50.3	+00.0	7	21.4	+02.2	N 00 28.0	+00.1	12
13	31	29.9	+00.6	S 02 16.0	-00.7	281	19.7	+02.3	N 22 50.3	+00.0	22	23.6	+02.1	N 00 28.1	+00.1	13
14	46	30.5	+00.7	S 02 15.3	-00.8	296	22.0	+02.2	N 22 50.3	+00.0	37	25.7	+02.2	N 00 28.2	+00.2	14
15	61	31.2	+00.7	S 02 14.5	-00.8	311	24.2	+02.3	N 22 50.3	-00.1	52	27.9	+02.2	N 00 28.4	+00.1	15
16	76	31.9	+00.7	S 02 13.7	-00.8	326	26.5	+02.2	N 22 50.2	+00.0	67	30.1	+02.2	N 00 28.5	+00.1	16
17	91	32.6	+00.6	S 02 12.9	-00.8	341	28.7	+02.3	N 22 50.2	+00.0	82	32.3	+02.2	N 00 28.6	+00.1	17
18	106	33.2	+00.7	S 02 12.1	-00.8	356	31.0	+02.3	N 22 50.2	+00.0	97	34.5	+02.1	N 00 28.7	+00.1	18
19	121	33.9	+00.7	S 02 11.3	-00.7	11	33.3	+02.2	N 22 50.2	+00.0	112	36.6	+02.2	N 00 28.8	+00.2	19
20	136	34.6	+00.7	S 02 10.6	-00.8	26	35.5	+02.3	N 22 50.2	-00.1	127	38.8	+02.2	N 00 29.0	+00.1	20
21	151	35.3	+00.7	S 02 09.8	-00.8	41	37.8	+02.2	N 22 50.1	+00.0	142	41.0	+02.2	N 00 29.1	+00.1	21
22	166	36.0	+00.6	S 02 09.0	-00.8	56	40.0	+02.3	N 22 50.1	+00.0	157	43.2	+02.2	N 00 29.2	+00.1	22
23	181	36.6	+00.7	S 02 08.2	-00.8	71	42.3	+02.2	N 22 50.1	+00.0	172	45.4	+02.1	N 00 29.3	+00.1	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					
	SD 00'0 00'0 00'0 00'0 00'0 00'0					SD 00'3 00'3 00'3 00'3 00'3 00'3					SD 00'1 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 003° 003° 003° 003° 003° 002°					SHA 253° 253° 252° 252° 252° 252°					SHA 354° 354° 354° 354° 354° 354°					
	Greenwich Culmination Time: 10:54					Greenwich Culmination Time: 18:13					Greenwich Culmination Time: 11:30					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 22.2 +00.2	N 06	22.3 +01.0	158 47.6 -00.5	N 13	53.3 +01.1	317 25.2 -29.5	S 25	11.6 +06.8				
01	194 22.4 +00.2	N 06	23.3 +00.9	173 47.1 -00.5	N 13	54.4 +01.1	331 55.7 -29.7	S 25	18.4 +06.7				
02	209 22.6 +00.2	N 06	24.2 +01.0	188 46.6 -00.5	N 13	55.5 +01.0	346 26.0 -29.7	S 25	25.1 +06.5				
03	224 22.8 +00.1	N 06	25.2 +00.9	203 46.1 -00.5	N 13	56.5 +01.1	0 56.3 -29.7	S 25	31.6 +06.5				
04	239 22.9 +00.2	N 06	26.1 +01.0	218 45.6 -00.5	N 13	57.6 +01.1	15 26.6 -29.8	S 25	38.1 +06.3				
05	254 23.1 +00.2	N 06	27.1 +00.9	233 45.1 -00.5	N 13	58.7 +01.1	29 56.8 -29.8	S 25	44.4 +06.2				
06	269 23.3 +00.2	N 06	28.0 +01.0	248 44.6 -00.5	N 13	59.8 +01.1	44 27.0 -29.9	S 25	50.6 +06.1				
07	284 23.5 +00.1	N 06	29.0 +00.9	263 44.1 -00.5	N 14	00.9 +01.1	58 57.1 -29.9	S 25	56.7 +06.0				
08	299 23.6 +00.2	N 06	29.9 +00.9	278 43.6 -00.5	N 14	02.0 +01.1	73 27.2 -30.0	S 26	02.7 +05.8				
09	314 23.8 +00.2	N 06	30.8 +01.0	293 43.1 -00.5	N 14	03.1 +01.1	87 57.2 -30.0	S 26	08.5 +05.8				
10	329 24.0 +00.2	N 06	31.8 +00.9	308 42.6 -00.5	N 14	04.2 +01.1	102 27.2 -30.1	S 26	14.3 +05.6				
11	344 24.2 +00.2	N 06	32.7 +01.0	323 42.1 -00.5	N 14	05.3 +01.1	116 57.1 -30.0	S 26	19.9 +05.4				
12	359 24.4 +00.1	N 06	33.7 +00.9	338 41.6 -00.4	N 14	06.4 +01.1	131 27.1 -30.2	S 26	25.3 +05.4				
13	14 24.5 +00.2	N 06	34.6 +01.0	353 41.2 -00.5	N 14	07.5 +01.1	145 56.9 -30.2	S 26	30.7 +05.2				
14	29 24.7 +00.2	N 06	35.6 +00.9	8 40.7 -00.5	N 14	08.6 +01.0	160 26.7 -30.2	S 26	35.9 +05.1				
15	44 24.9 +00.2	N 06	36.5 +01.0	23 40.2 -00.5	N 14	09.6 +01.1	174 56.5 -30.2	S 26	41.0 +05.0				
16	59 25.1 +00.1	N 06	37.5 +00.9	38 39.7 -00.5	N 14	10.7 +01.1	189 26.3 -30.3	S 26	46.0 +04.8				
17	74 25.2 +00.2	N 06	38.4 +00.9	53 39.2 -00.5	N 14	11.8 +01.1	203 56.0 -30.4	S 26	50.8 +04.7				
18	89 25.4 +00.2	N 06	39.3 +01.0	68 38.7 -00.5	N 14	12.9 +01.1	218 25.6 -30.3	S 26	55.5 +04.6				
19	104 25.6 +00.2	N 06	40.3 +00.9	83 38.2 -00.5	N 14	14.0 +01.1	232 55.3 -30.5	S 27	00.1 +04.5				
20	119 25.8 +00.1	N 06	41.2 +01.0	98 37.7 -00.5	N 14	15.1 +01.1	247 24.8 -30.4	S 27	04.6 +04.3				
21	134 25.9 +00.2	N 06	42.2 +00.9	113 37.2 -00.5	N 14	16.2 +01.0	261 54.4 -30.5	S 27	08.9 +04.2				
22	149 26.1 +00.2	N 06	43.1 +00.9	128 36.7 -00.5	N 14	17.2 +01.1	276 23.9 -30.5	S 27	13.1 +04.1				
23	164 26.3 +00.2	N 06	44.0 +01.0	143 36.2 -00.5	N 14	18.3 +01.1	290 53.4 -30.5	S 27	17.2 +03.9				
	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 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'2 54'2 54'2 54'2 54'1 54'1						
	SHA 345° 345° 345° 345° 344° 344°			SHA 324° 324° 324° 324° 324° 323°			SHA 122° 120° 118° 116° 113° 111°						
	Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 13:25			Greenwich Culmination Time: 02:56						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	196 37.3 +00.7	S 02	07.4 -00.8	86 44.5 +02.3	N 22	50.1 -00.1	187 47.5 +02.2	N 00	29.4 +00.2				
01	211 38.0 +00.7	S 02	06.6 -00.8	101 46.8 +02.2	N 22	50.0 +00.0	202 49.7 +02.2	N 00	29.6 +00.1				
02	226 38.7 +00.6	S 02	05.8 -00.7	116 49.0 +02.3	N 22	50.0 +00.0	217 51.9 +02.2	N 00	29.7 +00.1				
03	241 39.3 +00.7	S 02	05.1 -00.8	131 51.3 +02.2	N 22	50.0 +00.0	232 54.1 +02.2	N 00	29.8 +00.1				
04	256 40.0 +00.7	S 02	04.3 -00.8	146 53.5 +02.3	N 22	50.0 +00.0	247 56.3 +02.1	N 00	29.9 +00.1				
05	271 40.7 +00.7	S 02	03.5 -00.8	161 55.8 +02.2	N 22	50.0 -00.1	262 58.4 +02.2	N 00	30.0 +00.2				
06	286 41.4 +00.6	S 02	02.7 -00.8	176 58.0 +02.3	N 22	49.9 +00.0	278 00.6 +02.2	N 00	30.2 +00.1				
07	301 42.0 +00.7	S 02	01.9 -00.8	192 00.3 +02.2	N 22	49.9 +00.0	293 02.8 +02.2	N 00	30.3 +00.1				
08	316 42.7 +00.7	S 02	01.1 -00.7	207 02.5 +02.3	N 22	49.9 +00.0	308 05.0 +02.2	N 00	30.4 +00.1				
09	331 43.4 +00.7	S 02	00.4 -00.8	222 04.8 +02.2	N 22	49.9 -00.1	323 07.2 +02.1	N 00	30.5 +00.1				
10	346 44.1 +00.7	S 01	59.6 -00.8	237 07.0 +02.2	N 22	49.8 +00.0	338 09.3 +02.2	N 00	30.6 +00.2				
11	1 44.8 +00.6	S 01	58.8 -00.8	252 09.2 +02.3	N 22	49.8 +00.0	353 11.5 +02.2	N 00	30.8 +00.1				
12	16 45.4 +00.7	S 01	58.0 -00.8	267 11.5 +02.2	N 22	49.8 +00.0	8 13.7 +02.2	N 00	30.9 +00.1				
13	31 46.1 +00.7	S 01	57.2 -00.8	282 13.7 +02.3	N 22	49.8 +00.0	23 15.9 +02.2	N 00	31.0 +00.1				
14	46 46.8 +00.7	S 01	56.4 -00.8	297 16.0 +02.2	N 22	49.8 -00.1	38 18.1 +02.1	N 00	31.1 +00.1				
15	61 47.5 +00.6	S 01	55.6 -00.7	312 18.2 +02.3	N 22	49.7 +00.0	53 20.2 +02.2	N 00	31.2 +00.2				
16	76 48.1 +00.7	S 01	54.9 -00.8	327 20.5 +02.2	N 22	49.7 +00.0	68 22.4 +02.2	N 00	31.4 +00.1				
17	91 48.8 +00.7	S 01	54.1 -00.8	342 22.7 +02.3	N 22	49.7 +00.0	83 24.6 +02.2	N 00	31.5 +00.1				
18	106 49.5 +00.7	S 01	53.3 -00.8	357 25.0 +02.2	N 22	49.7 -00.1	98 26.8 +02.2	N 00	31.6 +00.1				
19	121 50.2 +00.7	S 01	52.5 -00.8	12 27.2 +02.3	N 22	49.6 +00.0	113 29.0 +02.1	N 00	31.7 +00.1				
20	136 50.9 +00.6	S 01	51.7 -00.8	27 29.5 +02.2	N 22	49.6 +00.0	128 31.1 +02.2	N 00	31.8 +00.2				
21	151 51.5 +00.7	S 01	50.9 -00.8	42 31.7 +02.2	N 22	49.6 +00.0	143 33.3 +02.2	N 00	32.0 +00.1				
22	166 52.2 +00.7	S 01	50.1 -00.7	57 33.9 +02.3	N 22	49.6 -00.1	158 35.5 +02.2	N 00	32.1 +00.1				
23	181 52.9 +00.7	S 01	49.4 -00.8	72 36.2 +02.2	N 22	49.5 +00.0	173 37.7 +02.2	N 00	32.2 +00.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 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 002° 002° 002° 002° 002° 002°			SHA 252° 252° 252° 252° 252° 252°			SHA 353° 353° 353° 353° 353° 353°						
	Greenwich Culmination Time: 10:53			Greenwich Culmination Time: 18:10			Greenwich Culmination Time: 11:27						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 26.5 +00.2	N 06 45.0 +00.9	158 35.7 -00.5	N 14 19.4 +01.1	305 22.9 -30.6	S 27 21.1 +03.9	00						
01	194 26.7 +00.1	N 06 45.9 +01.0	173 35.2 -00.5	N 14 20.5 +01.1	319 52.3 -30.7	S 27 25.0 +03.6	01						
02	209 26.8 +00.2	N 06 46.9 +00.9	188 34.7 -00.5	N 14 21.6 +01.1	334 21.6 -30.6	S 27 28.6 +03.6	02						
03	224 27.0 +00.2	N 06 47.8 +00.9	203 34.2 -00.6	N 14 22.7 +01.0	348 51.0 -30.7	S 27 32.2 +03.4	03						
04	239 27.2 +00.2	N 06 48.7 +01.0	218 33.6 -00.5	N 14 23.7 +01.1	3 20.3 -30.7	S 27 35.6 +03.3	04						
05	254 27.4 +00.1	N 06 49.7 +00.9	233 33.1 -00.5	N 14 24.8 +01.1	17 49.6 -30.7	S 27 38.9 +03.2	05						
06	269 27.5 +00.2	N 06 50.6 +01.0	248 32.6 -00.5	N 14 25.9 +01.1	32 18.9 -30.8	S 27 42.1 +03.0	06						
07	284 27.7 +00.2	N 06 51.6 +00.9	263 32.1 -00.5	N 14 27.0 +01.1	46 48.1 -30.8	S 27 45.1 +02.9	07						
08	299 27.9 +00.2	N 06 52.5 +00.9	278 31.6 -00.5	N 14 28.1 +01.0	61 17.3 -30.8	S 27 48.0 +02.7	08						
09	314 28.1 +00.1	N 06 53.4 +01.0	293 31.1 -00.5	N 14 29.1 +01.1	75 46.5 -30.8	S 27 50.7 +02.7	09						
10	329 28.2 +00.2	N 06 54.4 +00.9	308 30.6 -00.5	N 14 30.2 +01.1	90 15.7 -30.9	S 27 53.4 +02.4	10						
11	344 28.4 +00.2	N 06 55.3 +01.0	323 30.1 -00.5	N 14 31.3 +01.1	104 44.8 -30.9	S 27 55.8 +02.4	11						
12	359 28.6 +00.2	N 06 56.3 +00.9	338 29.6 -00.5	N 14 32.4 +01.0	119 13.9 -30.9	S 27 58.2 +02.2	12						
13	14 28.8 +00.1	N 06 57.2 +00.9	353 29.1 -00.5	N 14 33.4 +01.1	133 43.0 -30.9	S 28 00.4 +02.1	13						
14	29 28.9 +00.2	N 06 58.1 +01.0	8 28.6 -00.5	N 14 34.5 +01.1	148 12.1 -31.0	S 28 02.5 +02.0	14						
15	44 29.1 +00.2	N 06 59.1 +00.9	23 28.1 -00.5	N 14 35.6 +01.1	162 41.1 -31.0	S 28 04.5 +01.8	15						
16	59 29.3 +00.2	N 07 00.0 +01.0	38 27.6 -00.5	N 14 36.7 +01.0	177 10.1 -31.0	S 28 06.3 +01.7	16						
17	74 29.5 +00.1	N 07 01.0 +00.9	53 27.1 -00.5	N 14 37.7 +01.1	191 39.1 -31.0	S 28 08.0 +01.5	17						
18	89 29.6 +00.2	N 07 01.9 +00.9	68 26.6 -00.5	N 14 38.8 +01.1	206 08.1 -31.0	S 28 09.5 +01.4	18						
19	104 29.8 +00.2	N 07 02.8 +01.0	83 26.1 -00.6	N 14 39.9 +01.0	220 37.1 -31.0	S 28 10.9 +01.3	19						
20	119 30.0 +00.2	N 07 03.8 +00.9	98 25.5 -00.5	N 14 40.9 +01.1	235 06.1 -31.1	S 28 12.2 +01.1	20						
21	134 30.2 +00.1	N 07 04.7 +00.9	113 25.0 -00.5	N 14 42.0 +01.1	249 35.0 -31.1	S 28 13.3 +01.0	21						
22	149 30.3 +00.2	N 07 05.6 +01.0	128 24.5 -00.5	N 14 43.1 +01.0	264 03.9 -31.0	S 28 14.3 +00.9	22						
23	164 30.5 +00.2	N 07 06.6 +00.9	143 24.0 -00.5	N 14 44.1 +01.1	278 32.9 -31.1	S 28 15.2 +00.7	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 14'7 14'7 14'7 14'7 14'7 14'8					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'1 54'1		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 344° 344° 344° 344° 343° 343°		SHA 323° 323° 323° 323° 322° 322°		SHA 109° 107° 105° 102° 100° 098°		SHA 353° 353° 353° 353° 353° 353°						
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 13:26		Greenwich Culmination Time: 03:46								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	196 53.6 +00.7	S 01 48.6 -00.8	87 38.4 +02.3	N 22 49.5 +00.0	188 39.9 +02.1	N 00 32.3 +00.1	00						
01	211 54.3 +00.6	S 01 47.8 -00.8	102 40.7 +02.2	N 22 49.5 +00.0	203 42.0 +02.2	N 00 32.4 +00.2	01						
02	226 54.9 +00.7	S 01 47.0 -00.8	117 42.9 +02.3	N 22 49.5 +00.0	218 44.2 +02.2	N 00 32.6 +00.1	02						
03	241 55.6 +00.7	S 01 46.2 -00.8	132 45.2 +02.2	N 22 49.5 -00.1	233 46.4 +02.2	N 00 32.7 +00.1	03						
04	256 56.3 +00.7	S 01 45.4 -00.7	147 47.4 +02.2	N 22 49.4 +00.0	248 48.6 +02.2	N 00 32.8 +00.1	04						
05	271 57.0 +00.6	S 01 44.7 -00.8	162 49.6 +02.3	N 22 49.4 +00.0	263 50.8 +02.1	N 00 32.9 +00.1	05						
06	286 57.6 +00.7	S 01 43.9 -00.8	177 51.9 +02.2	N 22 49.4 +00.0	278 52.9 +02.2	N 00 33.0 +00.2	06						
07	301 58.3 +00.7	S 01 43.1 -00.8	192 54.1 +02.3	N 22 49.4 -00.1	293 55.1 +02.2	N 00 33.2 +00.1	07						
08	316 59.0 +00.7	S 01 42.3 -00.8	207 56.4 +02.2	N 22 49.3 +00.0	308 57.3 +02.2	N 00 33.3 +00.1	08						
09	331 59.7 +00.7	S 01 41.5 -00.8	222 58.6 +02.2	N 22 49.3 +00.0	323 59.5 +02.2	N 00 33.4 +00.1	09						
10	347 00.4 +00.6	S 01 40.7 -00.8	238 00.8 +02.3	N 22 49.3 +00.0	339 01.7 +02.1	N 00 33.5 +00.1	10						
11	2 01.0 +00.7	S 01 39.9 -00.7	253 03.1 +02.2	N 22 49.3 -00.1	354 03.8 +02.2	N 00 33.6 +00.2	11						
12	17 01.7 +00.7	S 01 39.2 -00.8	268 05.3 +02.3	N 22 49.2 +00.0	9 06.0 +02.2	N 00 33.8 +00.1	12						
13	32 02.4 +00.7	S 01 38.4 -00.8	283 07.6 +02.2	N 22 49.2 +00.0	24 08.2 +02.2	N 00 33.9 +00.1	13						
14	47 03.1 +00.7	S 01 37.6 -00.8	298 09.8 +02.2	N 22 49.2 +00.0	39 10.4 +02.2	N 00 34.0 +00.1	14						
15	62 03.8 +00.6	S 01 36.8 -00.8	313 12.0 +02.3	N 22 49.2 -00.1	54 12.6 +02.1	N 00 34.1 +00.1	15						
16	77 04.4 +00.7	S 01 36.0 -00.8	328 14.3 +02.2	N 22 49.1 +00.0	69 14.7 +02.2	N 00 34.2 +00.2	16						
17	92 05.1 +00.7	S 01 35.2 -00.8	343 16.5 +02.3	N 22 49.1 +00.0	84 16.9 +02.2	N 00 34.4 +00.1	17						
18	107 05.8 +00.7	S 01 34.4 -00.7	358 18.8 +02.2	N 22 49.1 +00.0	99 19.1 +02.2	N 00 34.5 +00.1	18						
19	122 06.5 +00.7	S 01 33.7 -00.8	13 21.0 +02.2	N 22 49.1 +00.0	114 21.3 +02.2	N 00 34.6 +00.1	19						
20	137 07.2 +00.6	S 01 32.9 -00.8	28 23.2 +02.3	N 22 49.1 -00.1	129 23.5 +02.1	N 00 34.7 +00.1	20						
21	152 07.8 +00.7	S 01 32.1 -00.8	43 25.5 +02.2	N 22 49.0 +00.0	144 25.6 +02.2	N 00 34.8 +00.1	21						
22	167 08.5 +00.7	S 01 31.3 -00.8	58 27.7 +02.2	N 22 49.0 +00.0	159 27.8 +02.2	N 00 34.9 +00.2	22						
23	182 09.2 +00.7	S 01 30.5 -00.8	73 29.9 +02.3	N 22 49.0 +00.0	174 30.0 +02.2	N 00 35.1 +00.1	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 002° 001° 001° 001° 001° 001°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:51		Greenwich Culmination Time: 18:06		Greenwich Culmination Time: 11:23								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 30.7 +00.2	N 07 07.5 +00.9	158 23.5 -00.5	N 14 45.2 +01.1	293 01.8 -31.1	S 28 15.9 +00.6	00						
01	194 30.9 +00.1	N 07 08.4 +01.0	173 23.0 -00.5	N 14 46.3 +01.1	307 30.7 -31.1	S 28 16.5 +00.5	01						
02	209 31.0 +00.2	N 07 09.4 +00.9	188 22.5 -00.5	N 14 47.4 +01.0	321 59.6 -31.2	S 28 17.0 +00.3	02						
03	224 31.2 +00.2	N 07 10.3 +01.0	203 22.0 -00.6	N 14 48.4 +01.1	336 28.4 -31.1	S 28 17.3 +00.2	03						
04	239 31.4 +00.1	N 07 11.3 +00.9	218 21.4 -00.5	N 14 49.5 +01.0	350 57.3 -31.1	S 28 17.5 +00.0	04						
05	254 31.5 +00.2	N 07 12.2 +00.9	233 20.9 -00.5	N 14 50.5 +01.1	5 26.2 -31.2	S 28 17.5 -00.1	05						
06	269 31.7 +00.2	N 07 13.1 +01.0	248 20.4 -00.5	N 14 51.6 +01.1	19 55.0 -31.1	S 28 17.4 -00.2	06						
07	284 31.9 +00.2	N 07 14.1 +00.9	263 19.9 -00.5	N 14 52.7 +01.0	34 23.9 -31.1	S 28 17.2 -00.4	07						
08	299 32.1 +00.1	N 07 15.0 +00.9	278 19.4 -00.5	N 14 53.7 +01.1	48 52.8 -31.2	S 28 16.8 -00.5	08						
09	314 32.2 +00.2	N 07 15.9 +01.0	293 18.9 -00.5	N 14 54.8 +01.1	63 21.6 -31.1	S 28 16.3 -00.6	09						
10	329 32.4 +00.2	N 07 16.9 +00.9	308 18.4 -00.6	N 14 55.9 +01.0	77 50.5 -31.2	S 28 15.7 -00.8	10						
11	344 32.6 +00.2	N 07 17.8 +00.9	323 17.8 -00.5	N 14 56.9 +01.1	92 19.3 -31.1	S 28 14.9 -00.9	11						
12	359 32.8 +00.1	N 07 18.7 +01.0	338 17.3 -00.5	N 14 58.0 +01.0	106 48.2 -31.1	S 28 14.0 -01.1	12						
13	14 32.9 +00.2	N 07 19.7 +00.9	353 16.8 -00.5	N 14 59.0 +01.1	121 17.1 -31.2	S 28 12.9 -01.1	13						
14	29 33.1 +00.2	N 07 20.6 +00.9	8 16.3 -00.5	N 15 00.1 +01.1	135 45.9 -31.1	S 28 11.8 -01.4	14						
15	44 33.3 +00.1	N 07 21.5 +01.0	23 15.8 -00.5	N 15 01.2 +01.0	150 14.8 -31.1	S 28 10.4 -01.4	15						
16	59 33.4 +00.2	N 07 22.5 +00.9	38 15.3 -00.6	N 15 02.2 +01.1	164 43.7 -31.1	S 28 09.0 -01.6	16						
17	74 33.6 +00.2	N 07 23.4 +00.9	53 14.7 -00.5	N 15 03.3 +01.0	179 12.6 -31.1	S 28 07.4 -01.8	17						
18	89 33.8 +00.2	N 07 24.3 +01.0	68 14.2 -00.5	N 15 04.3 +01.1	193 41.5 -31.1	S 28 05.6 -01.8	18						
19	104 34.0 +00.1	N 07 25.3 +00.9	83 13.7 -00.5	N 15 05.4 +01.0	208 10.4 -31.1	S 28 03.8 -02.1	19						
20	119 34.1 +00.2	N 07 26.2 +00.9	98 13.2 -00.5	N 15 06.4 +01.1	222 39.3 -31.1	S 28 01.7 -02.1	20						
21	134 34.3 +00.2	N 07 27.1 +01.0	113 12.7 -00.6	N 15 07.5 +01.1	237 08.2 -31.1	S 27 59.6 -02.3	21						
22	149 34.5 +00.1	N 07 28.1 +00.9	128 12.1 -00.5	N 15 08.6 +01.0	251 37.1 -31.0	S 27 57.3 -02.4	22						
23	164 34.6 +00.2	N 07 29.0 +00.9	143 11.6 -00.5	N 15 09.6 +01.1	266 06.1 -31.1	S 27 54.9 -02.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'2 54'2 54'2 54'2 54'3 54'3								
	SHA 343° 343° 343° 343° 343° 342°		SHA 322° 322° 322° 321° 321° 321°		SHA 096° 093° 091° 089° 087° 084°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 13:26		Greenwich Culmination Time: 04:37								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	197 09.9 +00.7	S 01 29.7 -00.7	88 32.2 +02.2	N 22 49.0 -00.1	189 32.2 +02.2	N 00 35.2 +00.1	00						
01	212 10.6 +00.6	S 01 29.0 -00.8	103 34.4 +02.2	N 22 48.9 +00.0	204 34.4 +02.1	N 00 35.3 +00.1	01						
02	227 11.2 +00.7	S 01 28.2 -00.8	118 36.6 +02.3	N 22 48.9 +00.0	219 36.5 +02.2	N 00 35.4 +00.1	02						
03	242 11.9 +00.7	S 01 27.4 -00.8	133 38.9 +02.2	N 22 48.9 +00.0	234 38.7 +02.2	N 00 35.5 +00.2	03						
04	257 12.6 +00.7	S 01 26.6 -00.8	148 41.1 +02.3	N 22 48.9 -00.1	249 40.9 +02.2	N 00 35.7 +00.1	04						
05	272 13.3 +00.7	S 01 25.8 -00.8	163 43.4 +02.2	N 22 48.8 +00.0	264 43.1 +02.2	N 00 35.8 +00.1	05						
06	287 14.0 +00.6	S 01 25.0 -00.8	178 45.6 +02.2	N 22 48.8 +00.0	279 45.3 +02.1	N 00 35.9 +00.1	06						
07	302 14.6 +00.7	S 01 24.2 -00.7	193 47.8 +02.3	N 22 48.8 +00.0	294 47.4 +02.2	N 00 36.0 +00.1	07						
08	317 15.3 +00.7	S 01 23.5 -00.8	208 50.1 +02.2	N 22 48.8 -00.1	309 49.6 +02.2	N 00 36.1 +00.2	08						
09	332 16.0 +00.7	S 01 22.7 -00.8	223 52.3 +02.2	N 22 48.7 +00.0	324 51.8 +02.2	N 00 36.3 +00.1	09						
10	347 16.7 +00.7	S 01 21.9 -00.8	238 54.5 +02.3	N 22 48.7 +00.0	339 54.0 +02.2	N 00 36.4 +00.1	10						
11	2 17.4 +00.6	S 01 21.1 -00.8	253 56.8 +02.2	N 22 48.7 +00.0	354 56.2 +02.1	N 00 36.5 +00.1	11						
12	17 18.0 +00.7	S 01 20.3 -00.8	268 59.0 +02.2	N 22 48.7 -00.1	9 58.3 +02.2	N 00 36.6 +00.1	12						
13	32 18.7 +00.7	S 01 19.5 -00.8	284 01.2 +02.2	N 22 48.6 +00.0	25 00.5 +02.2	N 00 36.7 +00.2	13						
14	47 19.4 +00.7	S 01 18.7 -00.7	299 03.4 +02.3	N 22 48.6 +00.0	40 02.7 +02.2	N 00 36.9 +00.1	14						
15	62 20.1 +00.7	S 01 18.0 -00.8	314 05.7 +02.2	N 22 48.6 +00.0	55 04.9 +02.2	N 00 37.0 +00.1	15						
16	77 20.8 +00.6	S 01 17.2 -00.8	329 07.9 +02.2	N 22 48.6 -00.1	70 07.1 +02.1	N 00 37.1 +00.1	16						
17	92 21.4 +00.7	S 01 16.4 -00.8	344 10.1 +02.3	N 22 48.5 +00.0	85 09.2 +02.2	N 00 37.2 +00.1	17						
18	107 22.1 +00.7	S 01 15.6 -00.8	359 12.4 +02.2	N 22 48.5 +00.0	100 11.4 +02.2	N 00 37.3 +00.2	18						
19	122 22.8 +00.7	S 01 14.8 -00.8	14 14.6 +02.2	N 22 48.5 +00.0	115 13.6 +02.2	N 00 37.5 +00.1	19						
20	137 23.5 +00.7	S 01 14.0 -00.7	29 16.8 +02.3	N 22 48.5 -00.1	130 15.8 +02.2	N 00 37.6 +00.1	20						
21	152 24.2 +00.7	S 01 13.3 -00.8	44 19.1 +02.2	N 22 48.4 +00.0	145 18.0 +02.2	N 00 37.7 +00.1	21						
22	167 24.9 +00.6	S 01 12.5 -00.8	59 21.3 +02.2	N 22 48.4 +00.0	160 20.2 +02.1	N 00 37.8 +00.1	22						
23	182 25.5 +00.7	S 01 11.7 -00.8	74 23.5 +02.2	N 22 48.4 +00.0	175 22.3 +02.2	N 00 37.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 001° 001° 001° 000° 000° 000°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:50		Greenwich Culmination Time: 18:03		Greenwich Culmination Time: 11:20								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 34.8 +00.2	N 07 29.9 +00.9	158 11.1 -00.5	N 15 10.7 +01.0	280 35.0 -31.0	S 27 52.3 -02.7	00						
01	194 35.0 +00.2	N 07 30.8 +01.0	173 10.6 -00.5	N 15 11.7 +01.1	295 04.0 -31.0	S 27 49.6 -02.8	01						
02	209 35.2 +00.1	N 07 31.8 +00.9	188 10.1 -00.6	N 15 12.8 +01.0	309 33.0 -31.0	S 27 46.8 -03.0	02						
03	224 35.3 +00.2	N 07 32.7 +00.9	203 09.5 -00.5	N 15 13.8 +01.1	324 02.0 -31.0	S 27 43.8 -03.1	03						
04	239 35.5 +00.2	N 07 33.6 +01.0	218 09.0 -00.5	N 15 14.9 +01.0	338 31.0 -31.0	S 27 40.7 -03.2	04						
05	254 35.7 +00.1	N 07 34.6 +00.9	233 08.5 -00.5	N 15 15.9 +01.1	353 00.0 -30.9	S 27 37.5 -03.4	05						
06	269 35.8 +00.2	N 07 35.5 +00.9	248 08.0 -00.6	N 15 17.0 +01.0	7 29.1 -30.9	S 27 34.1 -03.5	06						
07	284 36.0 +00.2	N 07 36.4 +01.0	263 07.4 -00.5	N 15 18.0 +01.1	21 58.2 -30.9	S 27 30.6 -03.6	07						
08	299 36.2 +00.2	N 07 37.4 +00.9	278 06.9 -00.5	N 15 19.1 +01.0	36 27.3 -30.9	S 27 27.0 -03.8	08						
09	314 36.4 +00.1	N 07 38.3 +00.9	293 06.4 -00.5	N 15 20.1 +01.1	50 56.4 -30.8	S 27 23.2 -03.9	09						
10	329 36.5 +00.2	N 07 39.2 +00.9	308 05.9 -00.6	N 15 21.2 +01.0	65 25.6 -30.9	S 27 19.3 -04.0	10						
11	344 36.7 +00.2	N 07 40.1 +01.0	323 05.3 -00.5	N 15 22.2 +01.0	79 54.7 -30.8	S 27 15.3 -04.2	11						
12	359 36.9 +00.1	N 07 41.1 +00.9	338 04.8 -00.5	N 15 23.2 +01.1	94 23.9 -30.8	S 27 11.1 -04.3	12						
13	14 37.0 +00.2	N 07 42.0 +00.9	353 04.3 -00.5	N 15 24.3 +01.0	108 53.1 -30.7	S 27 06.8 -04.4	13						
14	29 37.2 +00.2	N 07 42.9 +01.0	8 03.8 -00.6	N 15 25.3 +01.1	123 22.4 -30.7	S 27 02.4 -04.6	14						
15	44 37.4 +00.1	N 07 43.9 +00.9	23 03.2 -00.5	N 15 26.4 +01.0	137 51.7 -30.8	S 26 57.8 -04.7	15						
16	59 37.5 +00.2	N 07 44.8 +00.9	38 02.7 -00.5	N 15 27.4 +01.1	152 20.9 -30.6	S 26 53.1 -04.9	16						
17	74 37.7 +00.2	N 07 45.7 +00.9	53 02.2 -00.6	N 15 28.5 +01.0	166 50.3 -30.7	S 26 48.2 -04.9	17						
18	89 37.9 +00.1	N 07 46.6 +01.0	68 01.6 -00.5	N 15 29.5 +01.0	181 19.6 -30.6	S 26 43.3 -05.1	18						
19	104 38.0 +00.2	N 07 47.6 +00.9	83 01.1 -00.5	N 15 30.5 +01.1	195 49.0 -30.6	S 26 38.2 -05.3	19						
20	119 38.2 +00.2	N 07 48.5 +00.9	98 00.6 -00.5	N 15 31.6 +01.0	210 18.4 -30.5	S 26 32.9 -05.3	20						
21	134 38.4 +00.2	N 07 49.4 +00.9	113 00.1 -00.6	N 15 32.6 +01.1	224 47.9 -30.6	S 26 27.6 -05.5	21						
22	149 38.6 +00.1	N 07 50.3 +01.0	127 59.5 -00.5	N 15 33.7 +01.0	239 17.3 -30.4	S 26 22.1 -05.6	22						
23	164 38.7 +00.2	N 07 51.3 +00.9	142 59.0 -00.5	N 15 34.7 +01.0	253 46.9 -30.5	S 26 16.5 -05.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 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 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'4 54'4 54'5 54'5 54'6 54'7								
	SHA 342° 342° 342° 342° 342° 341°		SHA 321° 321° 320° 320° 320° 320°		SHA 082° 080° 078° 076° 073° 071°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 13:27		Greenwich Culmination Time: 05:28								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	197 26.2 +00.7	S 01 10.9 -00.8	89 25.7 +02.3	N 22 48.4 -00.1	190 24.5 +02.2	N 00 38.0 +00.2	00						
01	212 26.9 +00.7	S 01 10.1 -00.8	104 28.0 +02.2	N 22 48.3 +00.0	205 26.7 +02.2	N 00 38.2 +00.1	01						
02	227 27.6 +00.7	S 01 09.3 -00.8	119 30.2 +02.2	N 22 48.3 +00.0	220 28.9 +02.2	N 00 38.3 +00.1	02						
03	242 28.3 +00.6	S 01 08.5 -00.7	134 32.4 +02.3	N 22 48.3 +00.0	235 31.1 +02.1	N 00 38.4 +00.1	03						
04	257 28.9 +00.7	S 01 07.8 -00.8	149 34.7 +02.2	N 22 48.3 -00.1	250 33.2 +02.2	N 00 38.5 +00.1	04						
05	272 29.6 +00.7	S 01 07.0 -00.8	164 36.9 +02.2	N 22 48.2 +00.0	265 35.4 +02.2	N 00 38.6 +00.2	05						
06	287 30.3 +00.7	S 01 06.2 -00.8	179 39.1 +02.2	N 22 48.2 +00.0	280 37.6 +02.2	N 00 38.8 +00.1	06						
07	302 31.0 +00.7	S 01 05.4 -00.8	194 41.3 +02.3	N 22 48.2 +00.0	295 39.8 +02.2	N 00 38.9 +00.1	07						
08	317 31.7 +00.7	S 01 04.6 -00.8	209 43.6 +02.2	N 22 48.2 -00.1	310 42.0 +02.1	N 00 39.0 +00.1	08						
09	332 32.4 +00.6	S 01 03.8 -00.8	224 45.8 +02.2	N 22 48.1 +00.0	325 44.1 +02.2	N 00 39.1 +00.1	09						
10	347 33.0 +00.7	S 01 03.0 -00.7	239 48.0 +02.2	N 22 48.1 +00.0	340 46.3 +02.2	N 00 39.2 +00.2	10						
11	2 33.7 +00.7	S 01 02.3 -00.8	254 50.2 +02.3	N 22 48.1 +00.0	355 48.5 +02.2	N 00 39.4 +00.1	11						
12	17 34.4 +00.7	S 01 01.5 -00.8	269 52.5 +02.2	N 22 48.1 -00.1	10 50.7 +02.2	N 00 39.5 +00.1	12						
13	32 35.1 +00.7	S 01 00.7 -00.8	284 54.7 +02.2	N 22 48.0 +00.0	25 52.9 +02.2	N 00 39.6 +00.1	13						
14	47 35.8 +00.6	S 00 59.9 -00.8	299 56.9 +02.2	N 22 48.0 +00.0	40 55.1 +02.1	N 00 39.7 +00.1	14						
15	62 36.4 +00.7	S 00 59.1 -00.8	314 59.1 +02.3	N 22 48.0 +00.0	55 57.2 +02.2	N 00 39.8 +00.1	15						
16	77 37.1 +00.7	S 00 58.3 -00.7	330 01.4 +02.2	N 22 48.0 -00.1	70 59.4 +02.2	N 00 39.9 +00.2	16						
17	92 37.8 +00.7	S 00 57.6 -00.8	345 03.6 +02.2	N 22 47.9 +00.0	86 01.6 +02.2	N 00 40.1 +00.1	17						
18	107 38.5 +00.7	S 00 56.8 -00.8	0 05.8 +02.2	N 22 47.9 +00.0	101 03.8 +02.2	N 00 40.2 +00.1	18						
19	122 39.2 +00.7	S 00 56.0 -00.8	15 08.0 +02.3	N 22 47.9 +00.0	116 06.0 +02.1	N 00 40.3 +00.1	19						
20	137 39.9 +00.6	S 00 55.2 -00.8	30 10.3 +02.2	N 22 47.9 -00.1	131 08.1 +02.2	N 00 40.4 +00.1	20						
21	152 40.5 +00.7	S 00 54.4 -00.8	45 12.5 +02.2	N 22 47.8 +00.0	146 10.3 +02.2	N 00 40.5 +00.2	21						
22	167 41.2 +00.7	S 00 53.6 -00.8	60 14.7 +02.2	N 22 47.8 +00.0	161 12.5 +02.2	N 00 40.7 +00.1	22						
23	182 41.9 +00.7	S 00 52.8 -00.7	75 16.9 +02.2	N 22 47.8 +00.0	176 14.7 +02.2	N 00 40.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 000° 000° 360° 360° 360° 360°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:49		Greenwich Culmination Time: 17:59		Greenwich Culmination Time: 11:16								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 77%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	179 38.9 +00.2	N 07 52.2 +00.9	157 58.5 -00.6	N 15 35.7 +01.1	268 16.4 -30.4	S 26 10.7 -05.8							
01	194 39.1 +00.1	N 07 53.1 +01.0	172 57.9 -00.5	N 15 36.8 +01.0	282 46.0 -30.4	S 26 04.9 -06.0							
02	209 39.2 +00.2	N 07 54.1 +00.9	187 57.4 -00.5	N 15 37.8 +01.0	297 15.6 -30.4	S 25 58.9 -06.2							
03	224 39.4 +00.2	N 07 55.0 +00.9	202 56.9 -00.6	N 15 38.8 +01.1	311 45.2 -30.3	S 25 52.7 -06.2							
04	239 39.6 +00.1	N 07 55.9 +00.9	217 56.3 -00.5	N 15 39.9 +01.0	326 14.9 -30.3	S 25 46.5 -06.4							
05	254 39.7 +00.2	N 07 56.8 +01.0	232 55.8 -00.5	N 15 40.9 +01.0	340 44.6 -30.3	S 25 40.1 -06.5							
06	269 39.9 +00.2	N 07 57.8 +00.9	247 55.3 -00.6	N 15 41.9 +01.1	355 14.3 -30.2	S 25 33.6 -06.7							
07	284 40.1 +00.1	N 07 58.7 +00.9	262 54.7 -00.5	N 15 43.0 +01.0	9 44.1 -30.2	S 25 26.9 -06.7							
08	299 40.2 +00.2	N 07 59.6 +00.9	277 54.2 -00.5	N 15 44.0 +01.0	24 13.9 -30.1	S 25 20.2 -06.9							
09	314 40.4 +00.2	N 08 00.5 +00.9	292 53.7 -00.6	N 15 45.0 +01.1	38 43.8 -30.1	S 25 13.3 -07.0							
10	329 40.6 +00.1	N 08 01.4 +01.0	307 53.1 -00.5	N 15 46.1 +01.0	53 13.7 -30.1	S 25 06.3 -07.2							
11	344 40.7 +00.2	N 08 02.4 +00.9	322 52.6 -00.6	N 15 47.1 +01.0	67 43.6 -30.0	S 24 59.1 -07.2							
12	359 40.9 +00.2	N 08 03.3 +00.9	337 52.0 -00.5	N 15 48.1 +01.0	82 13.6 -30.0	S 24 51.9 -07.4							
13	14 41.1 +00.1	N 08 04.2 +00.9	352 51.5 -00.5	N 15 49.1 +01.1	96 43.6 -30.0	S 24 44.5 -07.5							
14	29 41.2 +00.2	N 08 05.1 +01.0	7 51.0 -00.6	N 15 50.2 +01.0	111 13.6 -29.9	S 24 37.0 -07.6							
15	44 41.4 +00.2	N 08 06.1 +00.9	22 50.4 -00.5	N 15 51.2 +01.0	125 43.7 -29.9	S 24 29.4 -07.8							
16	59 41.6 +00.1	N 08 07.0 +00.9	37 49.9 -00.5	N 15 52.2 +01.1	140 13.8 -29.8	S 24 21.6 -07.9							
17	74 41.7 +00.2	N 08 07.9 +00.9	52 49.4 -00.6	N 15 53.3 +01.0	154 44.0 -29.8	S 24 13.7 -07.9							
18	89 41.9 +00.2	N 08 08.8 +00.9	67 48.8 -00.5	N 15 54.3 +01.0	169 14.2 -29.8	S 24 05.8 -08.1							
19	104 42.1 +00.1	N 08 09.7 +01.0	82 48.3 -00.6	N 15 55.3 +01.0	183 44.4 -29.7	S 23 57.7 -08.3							
20	119 42.2 +00.2	N 08 10.7 +00.9	97 47.7 -00.5	N 15 56.3 +01.0	198 14.7 -29.7	S 23 49.4 -08.3							
21	134 42.4 +00.2	N 08 11.6 +00.9	112 47.2 -00.6	N 15 57.3 +01.1	212 45.0 -29.6	S 23 41.1 -08.5							
22	149 42.6 +00.1	N 08 12.5 +00.9	127 46.6 -00.5	N 15 58.4 +01.0	227 15.4 -29.6	S 23 32.6 -08.6							
23	164 42.7 +00.2	N 08 13.4 +01.0	142 46.1 -00.5	N 15 59.4 +01.0	241 45.8 -29.6	S 23 24.0 -08.7							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 15'0 15'0 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'7 54'8 54'9 55'0 55'1 55'2								
	SHA 341° 341° 341° 341° 341° 341°		SHA 320° 319° 319° 319° 319° 319°		SHA 069° 067° 065° 062° 060° 058°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 13:28		Greenwich Culmination Time: 06:19								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	197 42.6 +00.7	S 00 52.1 -00.8	90 19.1 +02.3	N 22 47.8 -00.1	191 16.9 +02.1	N 00 40.9 +00.1							
01	212 43.3 +00.7	S 00 51.3 -00.8	105 21.4 +02.2	N 22 47.7 +00.0	206 19.0 +02.2	N 00 41.0 +00.1							
02	227 44.0 +00.6	S 00 50.5 -00.8	120 23.6 +02.2	N 22 47.7 +00.0	221 21.2 +02.2	N 00 41.1 +00.1							
03	242 44.6 +00.7	S 00 49.7 -00.8	135 25.8 +02.2	N 22 47.7 +00.0	236 23.4 +02.2	N 00 41.2 +00.2							
04	257 45.3 +00.7	S 00 48.9 -00.8	150 28.0 +02.3	N 22 47.7 -00.1	251 25.6 +02.2	N 00 41.4 +00.1							
05	272 46.0 +00.7	S 00 48.1 -00.8	165 30.3 +02.2	N 22 47.6 +00.0	266 27.8 +02.2	N 00 41.5 +00.1							
06	287 46.7 +00.7	S 00 47.3 -00.7	180 32.5 +02.2	N 22 47.6 +00.0	281 30.0 +02.1	N 00 41.6 +00.1							
07	302 47.4 +00.6	S 00 46.6 -00.8	195 34.7 +02.2	N 22 47.6 -00.1	296 32.1 +02.2	N 00 41.7 +00.1							
08	317 48.0 +00.7	S 00 45.8 -00.8	210 36.9 +02.2	N 22 47.5 +00.0	311 34.3 +02.2	N 00 41.8 +00.2							
09	332 48.7 +00.7	S 00 45.0 -00.8	225 39.1 +02.2	N 22 47.5 +00.0	326 36.5 +02.2	N 00 42.0 +00.1							
10	347 49.4 +00.7	S 00 44.2 -00.8	240 41.3 +02.3	N 22 47.5 +00.0	341 38.7 +02.2	N 00 42.1 +00.1							
11	2 50.1 +00.7	S 00 43.4 -00.8	255 43.6 +02.2	N 22 47.5 -00.1	356 40.9 +02.1	N 00 42.2 +00.1							
12	17 50.8 +00.7	S 00 42.6 -00.7	270 45.8 +02.2	N 22 47.4 +00.0	11 43.0 +02.2	N 00 42.3 +00.1							
13	32 51.5 +00.6	S 00 41.9 -00.8	285 48.0 +02.2	N 22 47.4 +00.0	26 45.2 +02.2	N 00 42.4 +00.1							
14	47 52.1 +00.7	S 00 41.1 -00.8	300 50.2 +02.2	N 22 47.4 +00.0	41 47.4 +02.2	N 00 42.5 +00.2							
15	62 52.8 +00.7	S 00 40.3 -00.8	315 52.4 +02.3	N 22 47.4 -00.1	56 49.6 +02.2	N 00 42.7 +00.1							
16	77 53.5 +00.7	S 00 39.5 -00.8	330 54.7 +02.2	N 22 47.3 +00.0	71 51.8 +02.2	N 00 42.8 +00.1							
17	92 54.2 +00.7	S 00 38.7 -00.8	345 56.9 +02.2	N 22 47.3 +00.0	86 54.0 +02.1	N 00 42.9 +00.1							
18	107 54.9 +00.7	S 00 37.9 -00.8	0 59.1 +02.2	N 22 47.3 +00.0	101 56.1 +02.2	N 00 43.0 +00.1							
19	122 55.6 +00.7	S 00 37.1 -00.7	16 01.3 +02.2	N 22 47.3 -00.1	116 58.3 +02.2	N 00 43.1 +00.2							
20	137 56.3 +00.6	S 00 36.4 -00.8	31 03.5 +02.2	N 22 47.2 +00.0	132 00.5 +02.2	N 00 43.3 +00.1							
21	152 56.9 +00.7	S 00 35.6 -00.8	46 05.7 +02.2	N 22 47.2 +00.0	147 02.7 +02.2	N 00 43.4 +00.1							
22	167 57.6 +00.7	S 00 34.8 -00.8	61 07.9 +02.3	N 22 47.2 +00.0	162 04.9 +02.1	N 00 43.5 +00.1							
23	182 58.3 +00.7	S 00 34.0 -00.8	76 10.2 +02.2	N 22 47.2 -00.1	177 07.0 +02.2	N 00 43.6 +00.1							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 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 359° 359° 359° 359° 359° 359°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:48		Greenwich Culmination Time: 17:56		Greenwich Culmination Time: 11:13								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 42.9 +00.2	N 08 14.4 +00.9	157 45.6 -00.6	N 16 00.4 +01.0	256 16.2 -29.5	S 23 15.3 -08.8	00						
01	194 43.1 +00.1	N 08 15.3 +00.9	172 45.0 -00.5	N 16 01.4 +01.1	270 46.7 -29.5	S 23 06.5 -08.9	01						
02	209 43.2 +00.2	N 08 16.2 +00.9	187 44.5 -00.6	N 16 02.5 +01.0	285 17.2 -29.4	S 22 57.6 -09.1	02						
03	224 43.4 +00.2	N 08 17.1 +00.9	202 43.9 -00.5	N 16 03.5 +01.0	299 47.8 -29.4	S 22 48.5 -09.1	03						
04	239 43.6 +00.1	N 08 18.0 +01.0	217 43.4 -00.6	N 16 04.5 +01.0	314 18.4 -29.4	S 22 39.4 -09.3	04						
05	254 43.7 +00.2	N 08 19.0 +00.9	232 42.8 -00.5	N 16 05.5 +01.0	328 49.0 -29.3	S 22 30.1 -09.4	05						
06	269 43.9 +00.1	N 08 19.9 +00.9	247 42.3 -00.5	N 16 06.5 +01.0	343 19.7 -29.3	S 22 20.7 -09.5	06						
07	284 44.0 +00.2	N 08 20.8 +00.9	262 41.8 -00.6	N 16 07.5 +01.1	357 50.4 -29.2	S 22 11.2 -09.6	07						
08	299 44.2 +00.2	N 08 21.7 +00.9	277 41.2 -00.5	N 16 08.6 +01.0	12 21.2 -29.2	S 22 01.6 -09.7	08						
09	314 44.4 +00.1	N 08 22.6 +00.9	292 40.7 -00.6	N 16 09.6 +01.0	26 52.0 -29.2	S 21 51.9 -09.8	09						
10	329 44.5 +00.2	N 08 23.5 +01.0	307 40.1 -00.5	N 16 10.6 +01.0	41 22.8 -29.1	S 21 42.1 -10.0	10						
11	344 44.7 +00.2	N 08 24.5 +00.9	322 39.6 -00.6	N 16 11.6 +01.0	55 53.7 -29.1	S 21 32.1 -10.0	11						
12	359 44.9 +00.1	N 08 25.4 +00.9	337 39.0 -00.5	N 16 12.6 +01.0	70 24.6 -29.0	S 21 22.1 -10.2	12						
13	14 45.0 +00.2	N 08 26.3 +00.9	352 38.5 -00.6	N 16 13.6 +01.0	84 55.6 -29.0	S 21 11.9 -10.3	13						
14	29 45.2 +00.2	N 08 27.2 +00.9	7 37.9 -00.5	N 16 14.6 +01.0	99 26.6 -29.0	S 21 01.6 -10.3	14						
15	44 45.4 +00.1	N 08 28.1 +00.9	22 37.4 -00.6	N 16 15.6 +01.0	113 57.6 -28.9	S 20 51.3 -10.5	15						
16	59 45.5 +00.2	N 08 29.0 +01.0	37 36.8 -00.5	N 16 16.6 +01.1	128 28.7 -28.9	S 20 40.8 -10.6	16						
17	74 45.7 +00.1	N 08 30.0 +00.9	52 36.3 -00.6	N 16 17.7 +01.0	142 59.8 -28.8	S 20 30.2 -10.7	17						
18	89 45.8 +00.2	N 08 30.9 +00.9	67 35.7 -00.5	N 16 18.7 +01.0	157 31.0 -28.8	S 20 19.5 -10.8	18						
19	104 46.0 +00.2	N 08 31.8 +00.9	82 35.2 -00.6	N 16 19.7 +01.0	172 02.2 -28.8	S 20 08.7 -10.9	19						
20	119 46.2 +00.1	N 08 32.7 +00.9	97 34.6 -00.5	N 16 20.7 +01.0	186 33.4 -28.7	S 19 57.8 -11.0	20						
21	134 46.3 +00.2	N 08 33.6 +00.9	112 34.1 -00.6	N 16 21.7 +01.0	201 04.7 -28.7	S 19 46.8 -11.1	21						
22	149 46.5 +00.2	N 08 34.5 +01.0	127 33.5 -00.5	N 16 22.7 +01.0	215 36.0 -28.7	S 19 35.7 -11.2	22						
23	164 46.7 +00.1	N 08 35.5 +00.9	142 33.0 -00.6	N 16 23.7 +01.0	230 07.3 -28.6	S 19 24.5 -11.3	23						
	UT 02 06 10 14 18 22 SD 16'0 16'0 16'0 16'0 16'0 16'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 340° 340° 340° 340° 340° 340° 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 318° 318° 318° 318° 318° 317° Greenwich Culmination Time: 13:29	UT 02 06 10 14 18 22 SD 15'1 15'1 15'1 15'1 15'2 15'2 HP 55'3 55'4 55'5 55'6 55'7 55'8 SHA 056° 054° 052° 050° 048° 045° Greenwich Culmination Time: 07:08										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	197 59.0 +00.7	S 00 33.2 -00.8	91 12.4 +02.2	N 22 47.1 +00.0	192 09.2 +02.2	N 00 43.7 +00.1	00						
01	212 59.7 +00.7	S 00 32.4 -00.7	106 14.6 +02.2	N 22 47.1 +00.0	207 11.4 +02.2	N 00 43.8 +00.2	01						
02	228 00.4 +00.6	S 00 31.7 -00.8	121 16.8 +02.2	N 22 47.1 -00.1	222 13.6 +02.2	N 00 44.0 +00.1	02						
03	243 01.0 +00.7	S 00 30.9 -00.8	136 19.0 +02.2	N 22 47.0 +00.0	237 15.8 +02.2	N 00 44.1 +00.1	03						
04	258 01.7 +00.7	S 00 30.1 -00.8	151 21.2 +02.2	N 22 47.0 +00.0	252 18.0 +02.1	N 00 44.2 +00.1	04						
05	273 02.4 +00.7	S 00 29.3 -00.8	166 23.4 +02.3	N 22 47.0 +00.0	267 20.1 +02.2	N 00 44.3 +00.1	05						
06	288 03.1 +00.7	S 00 28.5 -00.8	181 25.7 +02.2	N 22 47.0 -00.1	282 22.3 +02.2	N 00 44.4 +00.2	06						
07	303 03.8 +00.7	S 00 27.7 -00.8	196 27.9 +02.2	N 22 46.9 +00.0	297 24.5 +02.2	N 00 44.6 +00.1	07						
08	318 04.5 +00.6	S 00 26.9 -00.7	211 30.1 +02.2	N 22 46.9 +00.0	312 26.7 +02.2	N 00 44.7 +00.1	08						
09	333 05.1 +00.7	S 00 26.2 -00.8	226 32.3 +02.2	N 22 46.9 +00.0	327 28.9 +02.1	N 00 44.8 +00.1	09						
10	348 05.8 +00.7	S 00 25.4 -00.8	241 34.5 +02.2	N 22 46.9 -00.1	342 31.0 +02.2	N 00 44.9 +00.1	10						
11	3 06.5 +00.7	S 00 24.6 -00.8	256 36.7 +02.2	N 22 46.8 +00.0	357 33.2 +02.2	N 00 45.0 +00.1	11						
12	18 07.2 +00.7	S 00 23.8 -00.8	271 38.9 +02.2	N 22 46.8 +00.0	12 35.4 +02.2	N 00 45.1 +00.2	12						
13	33 07.9 +00.7	S 00 23.0 -00.8	286 41.1 +02.2	N 22 46.8 -00.1	27 37.6 +02.2	N 00 45.3 +00.1	13						
14	48 08.6 +00.6	S 00 22.2 -00.7	301 43.3 +02.3	N 22 46.7 +00.0	42 39.8 +02.2	N 00 45.4 +00.1	14						
15	63 09.2 +00.7	S 00 21.5 -00.8	316 45.6 +02.2	N 22 46.7 +00.0	57 42.0 +02.1	N 00 45.5 +00.1	15						
16	78 09.9 +00.7	S 00 20.7 -00.8	331 47.8 +02.2	N 22 46.7 +00.0	72 44.1 +02.2	N 00 45.6 +00.1	16						
17	93 10.6 +00.7	S 00 19.9 -00.8	346 50.0 +02.2	N 22 46.7 -00.1	87 46.3 +02.2	N 00 45.7 +00.2	17						
18	108 11.3 +00.7	S 00 19.1 -00.8	1 52.2 +02.2	N 22 46.6 +00.0	102 48.5 +02.2	N 00 45.9 +00.1	18						
19	123 12.0 +00.7	S 00 18.3 -00.8	16 54.4 +02.2	N 22 46.6 +00.0	117 50.7 +02.2	N 00 46.0 +00.1	19						
20	138 12.7 +00.7	S 00 17.5 -00.7	31 56.6 +02.2	N 22 46.6 +00.0	132 52.9 +02.2	N 00 46.1 +00.1	20						
21	153 13.4 +00.6	S 00 16.8 -00.8	46 58.8 +02.2	N 22 46.6 -00.1	147 55.1 +02.1	N 00 46.2 +00.1	21						
22	168 14.0 +00.7	S 00 16.0 -00.8	62 01.0 +02.2	N 22 46.5 +00.0	162 57.2 +02.2	N 00 46.3 +00.1	22						
23	183 14.7 +00.7	S 00 15.2 -00.8	77 03.2 +02.2	N 22 46.5 +00.0	177 59.4 +02.2	N 00 46.4 +00.2	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 359° 359° 358° 358° 358° 358° Greenwich Culmination Time: 10:47	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 252° 252° 252° 252° 252° 252° Greenwich Culmination Time: 17:52	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 353° 353° 353° 353° 353° 353° Greenwich Culmination Time: 11:09										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 46.8 +00.2	N 08 36.4 +00.9	157 32.4 -00.5	N 16 24.7 +01.0	244 38.7 -28.6	S 19 13.2 -11.4	00						
01	194 47.0 +00.1	N 08 37.3 +00.9	172 31.9 -00.6	N 16 25.7 +01.0	259 10.1 -28.5	S 19 01.8 -11.5	01						
02	209 47.1 +00.2	N 08 38.2 +00.9	187 31.3 -00.5	N 16 26.7 +01.0	273 41.6 -28.6	S 18 50.3 -11.7	02						
03	224 47.3 +00.2	N 08 39.1 +00.9	202 30.8 -00.6	N 16 27.7 +01.0	288 13.0 -28.4	S 18 38.6 -11.7	03						
04	239 47.5 +00.1	N 08 40.0 +00.9	217 30.2 -00.6	N 16 28.7 +01.0	302 44.6 -28.5	S 18 26.9 -11.8	04						
05	254 47.6 +00.2	N 08 40.9 +01.0	232 29.6 -00.5	N 16 29.7 +01.0	317 16.1 -28.4	S 18 15.1 -11.9	05						
06	269 47.8 +00.1	N 08 41.9 +00.9	247 29.1 -00.6	N 16 30.7 +01.0	331 47.7 -28.4	S 18 03.2 -12.0	06						
07	284 47.9 +00.2	N 08 42.8 +00.9	262 28.5 -00.5	N 16 31.7 +01.0	346 19.3 -28.4	S 17 51.2 -12.1	07						
08	299 48.1 +00.2	N 08 43.7 +00.9	277 28.0 -00.6	N 16 32.7 +01.0	0 50.9 -28.3	S 17 39.1 -12.1	08						
09	314 48.3 +00.1	N 08 44.6 +00.9	292 27.4 -00.5	N 16 33.7 +01.0	15 22.6 -28.3	S 17 27.0 -12.3	09						
10	329 48.4 +00.2	N 08 45.5 +00.9	307 26.9 -00.6	N 16 34.7 +01.0	29 54.3 -28.2	S 17 14.7 -12.4	10						
11	344 48.6 +00.2	N 08 46.4 +00.9	322 26.3 -00.6	N 16 35.7 +01.0	44 26.1 -28.3	S 17 02.3 -12.5	11						
12	359 48.8 +00.1	N 08 47.3 +00.9	337 25.7 -00.5	N 16 36.7 +01.0	58 57.8 -28.2	S 16 49.8 -12.5	12						
13	14 48.9 +00.2	N 08 48.2 +00.9	352 25.2 -00.6	N 16 37.7 +01.0	73 29.6 -28.1	S 16 37.3 -12.7	13						
14	29 49.1 +00.1	N 08 49.1 +01.0	7 24.6 -00.5	N 16 38.7 +01.0	88 01.5 -28.2	S 16 24.6 -12.7	14						
15	44 49.2 +00.2	N 08 50.1 +00.9	22 24.1 -00.6	N 16 39.7 +01.0	102 33.3 -28.1	S 16 11.9 -12.8	15						
16	59 49.4 +00.2	N 08 51.0 +00.9	37 23.5 -00.5	N 16 40.7 +01.0	117 05.2 -28.1	S 15 59.1 -12.9	16						
17	74 49.6 +00.1	N 08 51.9 +00.9	52 23.0 -00.6	N 16 41.7 +00.9	131 37.1 -28.0	S 15 46.2 -13.0	17						
18	89 49.7 +00.2	N 08 52.8 +00.9	67 22.4 -00.6	N 16 42.6 +01.0	146 09.1 -28.1	S 15 33.2 -13.1	18						
19	104 49.9 +00.1	N 08 53.7 +00.9	82 21.8 -00.5	N 16 43.6 +01.0	160 41.0 -28.0	S 15 20.1 -13.2	19						
20	119 50.0 +00.2	N 08 54.6 +00.9	97 21.3 -00.6	N 16 44.6 +01.0	175 13.0 -28.0	S 15 06.9 -13.2	20						
21	134 50.2 +00.1	N 08 55.5 +00.9	112 20.7 -00.6	N 16 45.6 +01.0	189 45.0 -27.9	S 14 53.7 -13.4	21						
22	149 50.3 +00.2	N 08 56.4 +00.9	127 20.1 -00.5	N 16 46.6 +01.0	204 17.1 -28.0	S 14 40.3 -13.4	22						
23	164 50.5 +00.2	N 08 57.3 +00.9	142 19.6 -00.6	N 16 47.6 +01.0	218 49.1 -27.9	S 14 26.9 -13.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 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 15'3 15'3 15'3 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'9 56'1 56'2 56'3 56'5 56'6								
	SHA 339° 339° 339° 339° 339° 339°		SHA 317° 317° 317° 317° 316° 316°		SHA 043° 041° 039° 037° 035° 033°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:30		Greenwich Culmination Time: 07:56								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	198 15.4 +00.7	S 00 14.4 -00.8	92 05.4 +02.2	N 22 46.5 -00.1	193 01.6 +02.2	N 00 46.6 +00.1	00						
01	213 16.1 +00.7	S 00 13.6 -00.8	107 07.6 +02.2	N 22 46.4 +00.0	208 03.8 +02.2	N 00 46.7 +00.1	01						
02	228 16.8 +00.7	S 00 12.8 -00.8	122 09.8 +02.3	N 22 46.4 +00.0	223 06.0 +02.2	N 00 46.8 +00.1	02						
03	243 17.5 +00.7	S 00 12.0 -00.7	137 12.1 +02.2	N 22 46.4 +00.0	238 08.2 +02.1	N 00 46.9 +00.1	03						
04	258 18.2 +00.6	S 00 11.3 -00.8	152 14.3 +02.2	N 22 46.4 -00.1	253 10.3 +02.2	N 00 47.0 +00.1	04						
05	273 18.8 +00.7	S 00 10.5 -00.8	167 16.5 +02.2	N 22 46.3 +00.0	268 12.5 +02.2	N 00 47.1 +00.2	05						
06	288 19.5 +00.7	S 00 09.7 -00.8	182 18.7 +02.2	N 22 46.3 +00.0	283 14.7 +02.2	N 00 47.3 +00.1	06						
07	303 20.2 +00.7	S 00 08.9 -00.8	197 20.9 +02.2	N 22 46.3 -00.1	298 16.9 +02.2	N 00 47.4 +00.1	07						
08	318 20.9 +00.7	S 00 08.1 -00.8	212 23.1 +02.2	N 22 46.2 +00.0	313 19.1 +02.1	N 00 47.5 +00.1	08						
09	333 21.6 +00.7	S 00 07.3 -00.7	227 25.3 +02.2	N 22 46.2 +00.0	328 21.2 +02.2	N 00 47.6 +00.1	09						
10	348 22.3 +00.7	S 00 06.6 -00.8	242 27.5 +02.2	N 22 46.2 +00.0	343 23.4 +02.2	N 00 47.7 +00.2	10						
11	3 23.0 +00.6	S 00 05.8 -00.8	257 29.7 +02.2	N 22 46.2 -00.1	358 25.6 +02.2	N 00 47.9 +00.1	11						
12	18 23.6 +00.7	S 00 05.0 -00.8	272 31.9 +02.2	N 22 46.1 +00.0	13 27.8 +02.2	N 00 48.0 +00.1	12						
13	33 24.3 +00.7	S 00 04.2 -00.8	287 34.1 +02.2	N 22 46.1 +00.0	28 30.0 +02.2	N 00 48.1 +00.1	13						
14	48 25.0 +00.7	S 00 03.4 -00.8	302 36.3 +02.2	N 22 46.1 -00.1	43 32.2 +02.1	N 00 48.2 +00.1	14						
15	63 25.7 +00.7	S 00 02.6 -00.7	317 38.5 +02.2	N 22 46.0 +00.0	58 34.3 +02.2	N 00 48.3 +00.1	15						
16	78 26.4 +00.7	S 00 01.9 -00.8	332 40.7 +02.2	N 22 46.0 +00.0	73 36.5 +02.2	N 00 48.4 +00.2	16						
17	93 27.1 +00.7	S 00 01.1 -00.8	347 42.9 +02.2	N 22 46.0 +00.0	88 38.7 +02.2	N 00 48.6 +00.1	17						
18	108 27.8 +00.6	S 00 00.3 -00.8	2 45.1 +02.2	N 22 46.0 -00.1	103 40.9 +02.2	N 00 48.7 +00.1	18						
19	123 28.4 +00.7	N 00 00.5 +00.8	17 47.3 +02.2	N 22 45.9 +00.0	118 43.1 +02.2	N 00 48.8 +00.1	19						
20	138 29.1 +00.7	N 00 01.3 +00.8	32 49.5 +02.2	N 22 45.9 +00.0	133 45.3 +02.1	N 00 48.9 +00.1	20						
21	153 29.8 +00.7	N 00 02.1 +00.7	47 51.7 +02.2	N 22 45.9 -00.1	148 47.4 +02.2	N 00 49.0 +00.1	21						
22	168 30.5 +00.7	N 00 02.8 +00.8	62 53.9 +02.2	N 22 45.8 +00.0	163 49.6 +02.2	N 00 49.1 +00.2	22						
23	183 31.2 +00.7	N 00 03.6 +00.8	77 56.1 +02.2	N 22 45.8 +00.0	178 51.8 +02.2	N 00 49.3 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 358° 358° 358° 358° 358° 357°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:46		Greenwich Culmination Time: 17:49		Greenwich Culmination Time: 11:06								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 50.7 +00.1	N 08 58.2 +01.0	157 19.0 -00.6	N 16 48.6 +01.0	233 21.2 -27.9	S 14 13.4 -13.6	00						
01	194 50.8 +00.2	N 08 59.2 +00.9	172 18.4 -00.5	N 16 49.6 +00.9	247 53.3 -27.9	S 13 59.8 -13.7	01						
02	209 51.0 +00.1	N 09 00.1 +00.9	187 17.9 -00.6	N 16 50.5 +01.0	262 25.4 -27.9	S 13 46.1 -13.7	02						
03	224 51.1 +00.2	N 09 01.0 +00.9	202 17.3 -00.5	N 16 51.5 +01.0	276 57.5 -27.8	S 13 32.4 -13.9	03						
04	239 51.3 +00.2	N 09 01.9 +00.9	217 16.8 -00.6	N 16 52.5 +01.0	291 29.7 -27.8	S 13 18.5 -13.9	04						
05	254 51.5 +00.1	N 09 02.8 +00.9	232 16.2 -00.6	N 16 53.5 +01.0	306 01.9 -27.8	S 13 04.6 -13.9	05						
06	269 51.6 +00.2	N 09 03.7 +00.9	247 15.6 -00.5	N 16 54.5 +01.0	320 34.1 -27.8	S 12 50.7 -14.1	06						
07	284 51.8 +00.1	N 09 04.6 +00.9	262 15.1 -00.6	N 16 55.5 +00.9	335 06.3 -27.8	S 12 36.6 -14.1	07						
08	299 51.9 +00.2	N 09 05.5 +00.9	277 14.5 -00.6	N 16 56.4 +01.0	349 38.5 -27.8	S 12 22.5 -14.3	08						
09	314 52.1 +00.1	N 09 06.4 +00.9	292 13.9 -00.5	N 16 57.4 +01.0	4 10.7 -27.7	S 12 08.2 -14.2	09						
10	329 52.2 +00.2	N 09 07.3 +00.9	307 13.4 -00.6	N 16 58.4 +01.0	18 43.0 -27.8	S 11 54.0 -14.4	10						
11	344 52.4 +00.2	N 09 08.2 +00.9	322 12.8 -00.6	N 16 59.4 +01.0	33 15.2 -27.7	S 11 39.6 -14.4	11						
12	359 52.6 +00.1	N 09 09.1 +00.9	337 12.2 -00.6	N 17 00.4 +00.9	47 47.5 -27.7	S 11 25.2 -14.5	12						
13	14 52.7 +00.2	N 09 10.0 +00.9	352 11.6 -00.5	N 17 01.3 +01.0	62 19.8 -27.7	S 11 10.7 -14.6	13						
14	29 52.9 +00.1	N 09 10.9 +00.9	7 11.1 -00.6	N 17 02.3 +01.0	76 52.1 -27.7	S 10 56.1 -14.6	14						
15	44 53.0 +00.2	N 09 11.8 +00.9	22 10.5 -00.6	N 17 03.3 +01.0	91 24.4 -27.7	S 10 41.5 -14.7	15						
16	59 53.2 +00.1	N 09 12.7 +00.9	37 09.9 -00.5	N 17 04.3 +00.9	105 56.7 -27.7	S 10 26.8 -14.8	16						
17	74 53.3 +00.2	N 09 13.6 +01.0	52 09.4 -00.6	N 17 05.2 +01.0	120 29.0 -27.7	S 10 12.0 -14.8	17						
18	89 53.5 +00.2	N 09 14.6 +00.9	67 08.8 -00.6	N 17 06.2 +01.0	135 01.3 -27.6	S 09 57.2 -14.9	18						
19	104 53.7 +00.1	N 09 15.5 +00.9	82 08.2 -00.6	N 17 07.2 +00.9	149 33.7 -27.7	S 09 42.3 -15.0	19						
20	119 53.8 +00.2	N 09 16.4 +00.9	97 07.6 -00.5	N 17 08.1 +01.0	164 06.0 -27.7	S 09 27.3 -15.0	20						
21	134 54.0 +00.1	N 09 17.3 +00.9	112 07.1 -00.6	N 17 09.1 +01.0	178 38.3 -27.6	S 09 12.3 -15.1	21						
22	149 54.1 +00.2	N 09 18.2 +00.9	127 06.5 -00.6	N 17 10.1 +01.0	193 10.7 -27.7	S 08 57.2 -15.2	22						
23	164 54.3 +00.1	N 09 19.1 +00.9	142 05.9 -00.6	N 17 11.1 +00.9	207 43.0 -27.7	S 08 42.0 -15.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'5 15'5 15'5 15'6 15'6 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'7 56'9 57'0 57'2 57'3 57'5								
	SHA 339° 338° 338° 338° 338° 338°		SHA 316° 316° 316° 315° 315° 315°		SHA 031° 029° 027° 025° 023° 021°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:31		Greenwich Culmination Time: 08:42								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	198 31.9 +00.7	N 00 04.4 +00.8	92 58.3 +02.2	N 22 45.8 +00.0	193 54.0 +02.2	N 00 49.4 +00.1	00						
01	213 32.6 +00.6	N 00 05.2 +00.8	108 00.5 +02.2	N 22 45.8 -00.1	208 56.2 +02.2	N 00 49.5 +00.1	01						
02	228 33.2 +00.7	N 00 06.0 +00.8	123 02.7 +02.2	N 22 45.7 +00.0	223 58.4 +02.1	N 00 49.6 +00.1	02						
03	243 33.9 +00.7	N 00 06.8 +00.7	138 04.9 +02.2	N 22 45.7 +00.0	239 00.5 +02.2	N 00 49.7 +00.1	03						
04	258 34.6 +00.7	N 00 07.5 +00.8	153 07.1 +02.2	N 22 45.7 -00.1	254 02.7 +02.2	N 00 49.8 +00.2	04						
05	273 35.3 +00.7	N 00 08.3 +00.8	168 09.3 +02.2	N 22 45.6 +00.0	269 04.9 +02.2	N 00 50.0 +00.1	05						
06	288 36.0 +00.7	N 00 09.1 +00.8	183 11.5 +02.2	N 22 45.6 +00.0	284 07.1 +02.2	N 00 50.1 +00.1	06						
07	303 36.7 +00.7	N 00 09.9 +00.8	198 13.7 +02.2	N 22 45.6 +00.0	299 09.3 +02.2	N 00 50.2 +00.1	07						
08	318 37.4 +00.6	N 00 10.7 +00.8	213 15.9 +02.2	N 22 45.6 -00.1	314 11.5 +02.1	N 00 50.3 +00.1	08						
09	333 38.0 +00.7	N 00 11.5 +00.7	228 18.1 +02.2	N 22 45.5 +00.0	329 13.6 +02.2	N 00 50.4 +00.1	09						
10	348 38.7 +00.7	N 00 12.2 +00.8	243 20.3 +02.2	N 22 45.5 +00.0	344 15.8 +02.2	N 00 50.5 +00.2	10						
11	3 39.4 +00.7	N 00 13.0 +00.8	258 22.5 +02.2	N 22 45.5 -00.1	359 18.0 +02.2	N 00 50.7 +00.1	11						
12	18 40.1 +00.7	N 00 13.8 +00.8	273 24.7 +02.2	N 22 45.4 +00.0	14 20.2 +02.2	N 00 50.8 +00.1	12						
13	33 40.8 +00.7	N 00 14.6 +00.8	288 26.9 +02.2	N 22 45.4 +00.0	29 22.4 +02.2	N 00 50.9 +00.1	13						
14	48 41.5 +00.7	N 00 15.4 +00.8	303 29.1 +02.2	N 22 45.4 -00.1	44 24.6 +02.1	N 00 51.0 +00.1	14						
15	63 42.2 +00.6	N 00 16.2 +00.7	318 31.3 +02.2	N 22 45.3 +00.0	59 26.7 +02.2	N 00 51.1 +00.1	15						
16	78 42.8 +00.7	N 00 16.9 +00.8	333 33.5 +02.2	N 22 45.3 +00.0	74 28.9 +02.2	N 00 51.2 +00.2	16						
17	93 43.5 +00.7	N 00 17.7 +00.8	348 35.7 +02.2	N 22 45.3 +00.0	89 31.1 +02.2	N 00 51.4 +00.1	17						
18	108 44.2 +00.7	N 00 18.5 +00.8	3 37.9 +02.2	N 22 45.3 -00.1	104 33.3 +02.2	N 00 51.5 +00.1	18						
19	123 44.9 +00.7	N 00 19.3 +00.8	18 40.1 +02.2	N 22 45.2 +00.0	119 35.5 +02.2	N 00 51.6 +00.1	19						
20	138 45.6 +00.7	N 00 20.1 +00.8	33 42.3 +02.2	N 22 45.2 +00.0	134 37.7 +02.2	N 00 51.7 +00.1	20						
21	153 46.3 +00.7	N 00 20.9 +00.7	48 44.5 +02.2	N 22 45.2 -00.1	149 39.9 +02.1	N 00 51.8 +00.1	21						
22	168 47.0 +00.7	N 00 21.6 +00.8	63 46.7 +02.2	N 22 45.1 +00.0	164 42.0 +02.2	N 00 51.9 +00.2	22						
23	183 47.7 +00.6	N 00 22.4 +00.8	78 48.9 +02.2	N 22 45.1 +00.0	179 44.2 +02.2	N 00 52.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 357° 357° 357° 357° 357° 357°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 353°								
	Greenwich Culmination Time: 10:45		Greenwich Culmination Time: 17:45		Greenwich Culmination Time: 11:02								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 54.4 +00.2	N 09 20.0 +00.9	157 05.3 -00.5	N 17 12.0 +01.0	222 15.3 -27.6	S 08 26.8 -15.3	00						
01	194 54.6 +00.1	N 09 20.9 +00.9	172 04.8 -00.6	N 17 13.0 +01.0	236 47.7 -27.7	S 08 11.5 -15.3	01						
02	209 54.7 +00.2	N 09 21.8 +00.9	187 04.2 -00.6	N 17 14.0 +00.9	251 20.0 -27.7	S 07 56.2 -15.4	02						
03	224 54.9 +00.1	N 09 22.7 +00.9	202 03.6 -00.6	N 17 14.9 +01.0	265 52.3 -27.7	S 07 40.8 -15.4	03						
04	239 55.0 +00.2	N 09 23.6 +00.9	217 03.0 -00.5	N 17 15.9 +01.0	280 24.6 -27.7	S 07 25.4 -15.5	04						
05	254 55.2 +00.2	N 09 24.5 +00.9	232 02.5 -00.6	N 17 16.9 +00.9	294 56.9 -27.6	S 07 09.9 -15.6	05						
06	269 55.4 +00.1	N 09 25.4 +00.9	247 01.9 -00.6	N 17 17.8 +01.0	309 29.3 -27.7	S 06 54.3 -15.6	06						
07	284 55.5 +00.2	N 09 26.3 +00.9	262 01.3 -00.6	N 17 18.8 +00.9	324 01.6 -27.8	S 06 38.7 -15.6	07						
08	299 55.7 +00.1	N 09 27.2 +00.9	277 00.7 -00.5	N 17 19.7 +01.0	338 33.8 -27.7	S 06 23.1 -15.7	08						
09	314 55.8 +00.2	N 09 28.1 +00.9	292 00.2 -00.6	N 17 20.7 +01.0	353 06.1 -27.7	S 06 07.4 -15.8	09						
10	329 56.0 +00.1	N 09 29.0 +00.9	306 59.6 -00.6	N 17 21.7 +00.9	7 38.4 -27.7	S 05 51.6 -15.8	10						
11	344 56.1 +00.2	N 09 29.9 +00.9	321 59.0 -00.6	N 17 22.6 +01.0	22 10.7 -27.8	S 05 35.8 -15.8	11						
12	359 56.3 +00.1	N 09 30.8 +00.9	336 58.4 -00.6	N 17 23.6 +00.9	36 42.9 -27.8	S 05 20.0 -15.9	12						
13	14 56.4 +00.2	N 09 31.7 +00.9	351 57.8 -00.5	N 17 24.5 +01.0	51 15.1 -27.8	S 05 04.1 -16.0	13						
14	29 56.6 +00.1	N 09 32.6 +00.9	6 57.3 -00.6	N 17 25.5 +01.0	65 47.3 -27.8	S 04 48.1 -16.0	14						
15	44 56.7 +00.2	N 09 33.5 +00.9	21 56.7 -00.6	N 17 26.5 +00.9	80 19.5 -27.8	S 04 32.1 -16.0	15						
16	59 56.9 +00.1	N 09 34.4 +00.9	36 56.1 -00.6	N 17 27.4 +01.0	94 51.7 -27.8	S 04 16.1 -16.1	16						
17	74 57.0 +00.2	N 09 35.3 +00.9	51 55.5 -00.6	N 17 28.4 +00.9	109 23.9 -27.9	S 04 00.0 -16.1	17						
18	89 57.2 +00.1	N 09 36.2 +00.9	66 54.9 -00.6	N 17 29.3 +01.0	123 56.0 -27.9	S 03 43.9 -16.1	18						
19	104 57.3 +00.2	N 09 37.1 +00.9	81 54.3 -00.5	N 17 30.3 +00.9	138 28.1 -27.9	S 03 27.8 -16.2	19						
20	119 57.5 +00.2	N 09 38.0 +00.9	96 53.8 -00.6	N 17 31.2 +01.0	153 00.2 -27.9	S 03 11.6 -16.2	20						
21	134 57.7 +00.1	N 09 38.9 +00.8	111 53.2 -00.6	N 17 32.2 +00.9	167 32.3 -28.0	S 02 55.4 -16.3	21						
22	149 57.8 +00.2	N 09 39.7 +00.9	126 52.6 -00.6	N 17 33.1 +01.0	182 04.3 -28.0	S 02 39.1 -16.2	22						
23	164 58.0 +00.1	N 09 40.6 +00.9	141 52.0 -00.6	N 17 34.1 +00.9	196 36.3 -28.0	S 02 22.9 -16.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'7 15'8 15'8 15'9 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'6 57'8 57'9 58'1 58'2 58'4								
	SHA 338° 337° 337° 337° 337° 337°		SHA 315° 315° 314° 314° 314° 314°		SHA 019° 017° 015° 013° 011° 009°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:32		Greenwich Culmination Time: 09:28								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	198 48.3 +00.7	N 00 23.2 +00.8	93 51.1 +02.1	N 22 45.1 +00.0	194 46.4 +02.2	N 00 52.2 +00.1	00						
01	213 49.0 +00.7	N 00 24.0 +00.8	108 53.2 +02.2	N 22 45.1 -00.1	209 48.6 +02.2	N 00 52.3 +00.1	01						
02	228 49.7 +00.7	N 00 24.8 +00.7	123 55.4 +02.2	N 22 45.0 +00.0	224 50.8 +02.2	N 00 52.4 +00.1	02						
03	243 50.4 +00.7	N 00 25.5 +00.8	138 57.6 +02.2	N 22 45.0 +00.0	239 53.0 +02.1	N 00 52.5 +00.1	03						
04	258 51.1 +00.7	N 00 26.3 +00.8	153 59.8 +02.2	N 22 45.0 -00.1	254 55.1 +02.2	N 00 52.6 +00.2	04						
05	273 51.8 +00.7	N 00 27.1 +00.8	169 02.0 +02.2	N 22 44.9 +00.0	269 57.3 +02.2	N 00 52.8 +00.1	05						
06	288 52.5 +00.7	N 00 27.9 +00.8	184 04.2 +02.2	N 22 44.9 +00.0	284 59.5 +02.2	N 00 52.9 +00.1	06						
07	303 53.2 +00.6	N 00 28.7 +00.8	199 06.4 +02.2	N 22 44.9 -00.1	300 01.7 +02.2	N 00 53.0 +00.1	07						
08	318 53.8 +00.7	N 00 29.5 +00.7	214 08.6 +02.2	N 22 44.8 +00.0	315 03.9 +02.2	N 00 53.1 +00.1	08						
09	333 54.5 +00.7	N 00 30.2 +00.8	229 10.8 +02.2	N 22 44.8 +00.0	330 06.1 +02.1	N 00 53.2 +00.1	09						
10	348 55.2 +00.7	N 00 31.0 +00.8	244 13.0 +02.2	N 22 44.8 +00.0	345 08.2 +02.2	N 00 53.3 +00.2	10						
11	3 55.9 +00.7	N 00 31.8 +00.8	259 15.2 +02.2	N 22 44.8 -00.1	0 10.4 +02.2	N 00 53.5 +00.1	11						
12	18 56.6 +00.7	N 00 32.6 +00.8	274 17.4 +02.1	N 22 44.7 +00.0	15 12.6 +02.2	N 00 53.6 +00.1	12						
13	33 57.3 +00.7	N 00 33.4 +00.8	289 19.5 +02.2	N 22 44.7 +00.0	30 14.8 +02.2	N 00 53.7 +00.1	13						
14	48 58.0 +00.7	N 00 34.2 +00.7	304 21.7 +02.2	N 22 44.7 -00.1	45 17.0 +02.2	N 00 53.8 +00.1	14						
15	63 58.7 +00.6	N 00 34.9 +00.8	319 23.9 +02.2	N 22 44.6 +00.0	60 19.2 +02.2	N 00 53.9 +00.1	15						
16	78 59.3 +00.7	N 00 35.7 +00.8	334 26.1 +02.2	N 22 44.6 +00.0	75 21.4 +02.1	N 00 54.0 +00.2	16						
17	94 00.0 +00.7	N 00 36.5 +00.8	349 28.3 +02.2	N 22 44.6 -00.1	90 23.5 +02.2	N 00 54.2 +00.1	17						
18	109 00.7 +00.7	N 00 37.3 +00.8	4 30.5 +02.2	N 22 44.5 +00.0	105 25.7 +02.2	N 00 54.3 +00.1	18						
19	124 01.4 +00.7	N 00 38.1 +00.7	19 32.7 +02.2	N 22 44.5 +00.0	120 27.9 +02.2	N 00 54.4 +00.1	19						
20	139 02.1 +00.7	N 00 38.8 +00.8	34 34.9 +02.2	N 22 44.5 -00.1	135 30.1 +02.2	N 00 54.5 +00.1	20						
21	154 02.8 +00.7	N 00 39.6 +00.8	49 37.1 +02.1	N 22 44.4 +00.0	150 32.3 +02.2	N 00 54.6 +00.1	21						
22	169 03.5 +00.7	N 00 40.4 +00.8	64 39.2 +02.2	N 22 44.4 +00.0	165 34.5 +02.1	N 00 54.7 +00.2	22						
23	184 04.2 +00.6	N 00 41.2 +00.8	79 41.4 +02.2	N 22 44.4 +00.0	180 36.6 +02.2	N 00 54.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 357° 356° 356° 356° 356° 356°		SHA 252° 252° 252° 252° 252° 252°		SHA 353° 353° 353° 353° 353° 352°								
	Greenwich Culmination Time: 10:44		Greenwich Culmination Time: 17:42		Greenwich Culmination Time: 10:59								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 58.1 +00.2	N 09 41.5 +00.9	156 51.4 -00.6	N 17 35.0 +01.0	211 08.3 -28.0	S 02 06.5 -16.3	00						
01	194 58.3 +00.1	N 09 42.4 +00.9	171 50.8 -00.6	N 17 36.0 +00.9	225 40.3 -28.1	S 01 50.2 -16.4	01						
02	209 58.4 +00.2	N 09 43.3 +00.9	186 50.2 -00.5	N 17 36.9 +01.0	240 12.2 -28.1	S 01 33.8 -16.4	02						
03	224 58.6 +00.1	N 09 44.2 +00.9	201 49.7 -00.6	N 17 37.9 +00.9	254 44.1 -28.1	S 01 17.4 -16.4	03						
04	239 58.7 +00.2	N 09 45.1 +00.9	216 49.1 -00.6	N 17 38.8 +01.0	269 16.0 -28.2	S 01 01.0 -16.5	04						
05	254 58.9 +00.1	N 09 46.0 +00.9	231 48.5 -00.6	N 17 39.8 +00.9	283 47.8 -28.2	S 00 44.5 -16.5	05						
06	269 59.0 +00.2	N 09 46.9 +00.9	246 47.9 -00.6	N 17 40.7 +01.0	298 19.6 -28.3	S 00 28.0 -16.5	06						
07	284 59.2 +00.1	N 09 47.8 +00.9	261 47.3 -00.6	N 17 41.7 +00.9	312 51.3 -28.2	S 00 11.5 -16.5	07						
08	299 59.3 +00.2	N 09 48.7 +00.9	276 46.7 -00.6	N 17 42.6 +01.0	327 23.1 -28.4	N 00 05.0 +16.6	08						
09	314 59.5 +00.1	N 09 49.6 +00.9	291 46.1 -00.6	N 17 43.6 +00.9	341 54.7 -28.3	N 00 21.6 +16.5	09						
10	329 59.6 +00.2	N 09 50.5 +00.9	306 45.5 -00.6	N 17 44.5 +00.9	356 26.4 -28.4	N 00 38.1 +16.6	10						
11	344 59.8 +00.1	N 09 51.4 +00.9	321 44.9 -00.5	N 17 45.4 +01.0	10 58.0 -28.5	N 00 54.7 +16.6	11						
12	359 59.9 +00.2	N 09 52.3 +00.9	336 44.4 -00.6	N 17 46.4 +00.9	25 29.5 -28.4	N 01 11.3 +16.6	12						
13	15 00.1 +00.1	N 09 53.2 +00.9	351 43.8 -00.6	N 17 47.3 +01.0	40 01.1 -28.6	N 01 27.9 +16.7	13						
14	30 00.2 +00.2	N 09 54.1 +00.8	6 43.2 -00.6	N 17 48.3 +00.9	54 32.5 -28.6	N 01 44.6 +16.6	14						
15	45 00.4 +00.1	N 09 54.9 +00.9	21 42.6 -00.6	N 17 49.2 +00.9	69 03.9 -28.6	N 02 01.2 +16.6	15						
16	60 00.5 +00.2	N 09 55.8 +00.9	36 42.0 -00.6	N 17 50.1 +01.0	83 35.3 -28.7	N 02 17.8 +16.7	16						
17	75 00.7 +00.1	N 09 56.7 +00.9	51 41.4 -00.6	N 17 51.1 +00.9	98 06.6 -28.7	N 02 34.5 +16.7	17						
18	90 00.8 +00.2	N 09 57.6 +00.9	66 40.8 -00.6	N 17 52.0 +00.9	112 37.9 -28.8	N 02 51.2 +16.6	18						
19	105 01.0 +00.1	N 09 58.5 +00.9	81 40.2 -00.6	N 17 52.9 +01.0	127 09.1 -28.8	N 03 07.8 +16.7	19						
20	120 01.1 +00.1	N 09 59.4 +00.9	96 39.6 -00.6	N 17 53.9 +00.9	141 40.3 -28.9	N 03 24.5 +16.7	20						
21	135 01.2 +00.2	N 10 00.3 +00.9	111 39.0 -00.6	N 17 54.8 +00.9	156 11.4 -29.0	N 03 41.2 +16.7	21						
22	150 01.4 +00.1	N 10 01.2 +00.9	126 38.4 -00.6	N 17 55.7 +01.0	170 42.4 -29.0	N 03 57.9 +16.6	22						
23	165 01.5 +00.2	N 10 02.1 +00.9	141 37.8 -00.6	N 17 56.7 +00.9	185 13.4 -29.0	N 04 14.5 +16.7	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 15'9 16'0 16'0 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 58'5 58'6 58'8 58'9 59'0 59'2								
	SHA 337° 337° 336° 336° 336° 336°		SHA 314° 313° 313° 313° 313° 313°		SHA 007° 005° 003° 001° 359° 357°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 13:33		Greenwich Culmination Time: 10:14								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	199 04.8 +00.7	N 00 42.0 +00.8	94 43.6 +02.2	N 22 44.4 -00.1	195 38.8 +02.2	N 00 55.0 +00.1	00						
01	214 05.5 +00.7	N 00 42.8 +00.7	109 45.8 +02.2	N 22 44.3 +00.0	210 41.0 +02.2	N 00 55.1 +00.1	01						
02	229 06.2 +00.7	N 00 43.5 +00.8	124 48.0 +02.2	N 22 44.3 +00.0	225 43.2 +02.2	N 00 55.2 +00.1	02						
03	244 06.9 +00.7	N 00 44.3 +00.8	139 50.2 +02.2	N 22 44.3 -00.1	240 45.4 +02.2	N 00 55.3 +00.1	03						
04	259 07.6 +00.7	N 00 45.1 +00.8	154 52.4 +02.1	N 22 44.2 +00.0	255 47.6 +02.2	N 00 55.4 +00.2	04						
05	274 08.3 +00.7	N 00 45.9 +00.8	169 54.5 +02.2	N 22 44.2 +00.0	270 49.8 +02.1	N 00 55.6 +00.1	05						
06	289 09.0 +00.7	N 00 46.7 +00.7	184 56.7 +02.2	N 22 44.2 -00.1	285 51.9 +02.2	N 00 55.7 +00.1	06						
07	304 09.7 +00.6	N 00 47.4 +00.8	199 58.9 +02.2	N 22 44.1 +00.0	300 54.1 +02.2	N 00 55.8 +00.1	07						
08	319 10.3 +00.7	N 00 48.2 +00.8	215 01.1 +02.2	N 22 44.1 +00.0	315 56.3 +02.2	N 00 55.9 +00.1	08						
09	334 11.0 +00.7	N 00 49.0 +00.8	230 03.3 +02.2	N 22 44.1 -00.1	330 58.5 +02.2	N 00 56.0 +00.1	09						
10	349 11.7 +00.7	N 00 49.8 +00.8	245 05.5 +02.2	N 22 44.0 +00.0	346 00.7 +02.2	N 00 56.1 +00.1	10						
11	4 12.4 +00.7	N 00 50.6 +00.8	260 07.7 +02.1	N 22 44.0 +00.0	1 02.9 +02.2	N 00 56.2 +00.2	11						
12	19 13.1 +00.7	N 00 51.4 +00.7	275 09.8 +02.2	N 22 44.0 +00.0	16 05.1 +02.1	N 00 56.4 +00.1	12						
13	34 13.8 +00.7	N 00 52.1 +00.8	290 12.0 +02.2	N 22 44.0 -00.1	31 07.2 +02.2	N 00 56.5 +00.1	13						
14	49 14.5 +00.7	N 00 52.9 +00.8	305 14.2 +02.2	N 22 43.9 +00.0	46 09.4 +02.2	N 00 56.6 +00.1	14						
15	64 15.2 +00.7	N 00 53.7 +00.8	320 16.4 +02.2	N 22 43.9 +00.0	61 11.6 +02.2	N 00 56.7 +00.1	15						
16	79 15.9 +00.6	N 00 54.5 +00.8	335 18.6 +02.2	N 22 43.9 -00.1	76 13.8 +02.2	N 00 56.8 +00.1	16						
17	94 16.5 +00.7	N 00 55.3 +00.7	350 20.8 +02.1	N 22 43.8 +00.0	91 16.0 +02.2	N 00 56.9 +00.2	17						
18	109 17.2 +00.7	N 00 56.0 +00.8	5 22.9 +02.2	N 22 43.8 +00.0	106 18.2 +02.1	N 00 57.1 +00.1	18						
19	124 17.9 +00.7	N 00 56.8 +00.8	20 25.1 +02.2	N 22 43.8 -00.1	121 20.3 +02.2	N 00 57.2 +00.1	19						
20	139 18.6 +00.7	N 00 57.6 +00.8	35 27.3 +02.2	N 22 43.7 +00.0	136 22.5 +02.2	N 00 57.3 +00.1	20						
21	154 19.3 +00.7	N 00 58.4 +00.8	50 29.5 +02.2	N 22 43.7 +00.0	151 24.7 +02.2	N 00 57.4 +00.1	21						
22	169 20.0 +00.7	N 00 59.2 +00.7	65 31.7 +02.1	N 22 43.7 -00.1	166 26.9 +02.2	N 00 57.5 +00.1	22						
23	184 20.7 +00.7	N 00 59.9 +00.8	80 33.8 +02.2	N 22 43.6 +00.0	181 29.1 +02.2	N 00 57.6 +00.2	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 356° 356° 356° 355° 355° 355°		SHA 252° 252° 252° 251° 251° 251°		SHA 352° 352° 352° 352° 352° 352°								
	Greenwich Culmination Time: 10:43		Greenwich Culmination Time: 17:38		Greenwich Culmination Time: 10:55								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	01.7 +00.1	N 10 03.0 +00.8		156	37.2 -00.6	N 17 57.6 +00.9		199	44.4 -29.1	N 04 31.2 +16.7		00
01	195	01.8 +00.2	N 10 03.8 +00.9		171	36.6 -00.6	N 17 58.5 +01.0		214	15.3 -29.2	N 04 47.9 +16.6		01
02	210	02.0 +00.1	N 10 04.7 +00.9		186	36.0 -00.6	N 17 59.5 +00.9		228	46.1 -29.3	N 05 04.5 +16.7		02
03	225	02.1 +00.2	N 10 05.6 +00.9		201	35.4 -00.6	N 18 00.4 +00.9		243	16.8 -29.3	N 05 21.2 +16.6		03
04	240	02.3 +00.1	N 10 06.5 +00.9		216	34.8 -00.6	N 18 01.3 +01.0		257	47.5 -29.3	N 05 37.8 +16.7		04
05	255	02.4 +00.2	N 10 07.4 +00.9		231	34.2 -00.6	N 18 02.3 +00.9		272	18.2 -29.5	N 05 54.5 +16.6		05
06	270	02.6 +00.1	N 10 08.3 +00.9		246	33.6 -00.6	N 18 03.2 +00.9		286	48.7 -29.5	N 06 11.1 +16.6		06
07	285	02.7 +00.2	N 10 09.2 +00.9		261	33.0 -00.6	N 18 04.1 +00.9		301	19.2 -29.5	N 06 27.7 +16.6		07
08	300	02.9 +00.1	N 10 10.1 +00.8		276	32.4 -00.6	N 18 05.0 +01.0		315	49.7 -29.7	N 06 44.3 +16.5		08
09	315	03.0 +00.2	N 10 10.9 +00.9		291	31.8 -00.6	N 18 06.0 +00.9		330	20.0 -29.7	N 07 00.8 +16.6		09
10	330	03.2 +00.1	N 10 11.8 +00.9		306	31.2 -00.6	N 18 06.9 +00.9		344	50.3 -29.8	N 07 17.4 +16.5		10
11	345	03.3 +00.2	N 10 12.7 +00.9		321	30.6 -00.6	N 18 07.8 +00.9		359	20.5 -29.8	N 07 33.9 +16.5		11
12	0	03.5 +00.1	N 10 13.6 +00.9		336	30.0 -00.6	N 18 08.7 +00.9		13	50.7 -30.0	N 07 50.4 +16.5		12
13	15	03.6 +00.1	N 10 14.5 +00.9		351	29.4 -00.6	N 18 09.6 +01.0		28	20.7 -30.0	N 08 06.9 +16.5		13
14	30	03.7 +00.2	N 10 15.4 +00.9		6	28.8 -00.6	N 18 10.6 +00.9		42	50.7 -30.1	N 08 23.4 +16.4		14
15	45	03.9 +00.1	N 10 16.3 +00.8		21	28.2 -00.6	N 18 11.5 +00.9		57	20.6 -30.1	N 08 39.8 +16.4		15
16	60	04.0 +00.2	N 10 17.1 +00.9		36	27.6 -00.6	N 18 12.4 +00.9		71	50.5 -30.3	N 08 56.2 +16.3		16
17	75	04.2 +00.1	N 10 18.0 +00.9		51	27.0 -00.6	N 18 13.3 +00.9		86	20.2 -30.3	N 09 12.5 +16.4		17
18	90	04.3 +00.2	N 10 18.9 +00.9		66	26.4 -00.6	N 18 14.2 +01.0		100	49.9 -30.4	N 09 28.9 +16.3		18
19	105	04.5 +00.1	N 10 19.8 +00.9		81	25.8 -00.6	N 18 15.2 +00.9		115	19.5 -30.5	N 09 45.2 +16.2		19
20	120	04.6 +00.2	N 10 20.7 +00.9		96	25.2 -00.6	N 18 16.1 +00.9		129	49.0 -30.6	N 10 01.4 +16.2		20
21	135	04.8 +00.1	N 10 21.6 +00.8		111	24.6 -00.6	N 18 17.0 +00.9		144	18.4 -30.6	N 10 17.6 +16.2		21
22	150	04.9 +00.1	N 10 22.4 +00.9		126	24.0 -00.6	N 18 17.9 +00.9		158	47.8 -30.8	N 10 33.8 +16.1		22
23	165	05.0 +00.2	N 10 23.3 +00.9		141	23.4 -00.6	N 18 18.8 +00.9		173	17.0 -30.8	N 10 49.9 +16.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 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 59'3 59'4 59'5 59'7 59'8 59'9				
	SHA 336° 336° 335° 335° 335° 335°				SHA 312° 312° 312° 312° 312° 311°				SHA 355° 352° 350° 348° 346° 344°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 13:34				Greenwich Culmination Time: 11:02				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	199	21.4 +00.7	N 01 00.7 +00.8		95	36.0 +02.2	N 22 43.6 +00.0		196	31.3 +02.2	N 00 57.8 +00.1		00
01	214	22.1 +00.6	N 01 01.5 +00.8		110	38.2 +02.2	N 22 43.6 -00.1		211	33.5 +02.1	N 00 57.9 +00.1		01
02	229	22.7 +00.7	N 01 02.3 +00.8		125	40.4 +02.2	N 22 43.5 +00.0		226	35.6 +02.2	N 00 58.0 +00.1		02
03	244	23.4 +00.7	N 01 03.1 +00.8		140	42.6 +02.1	N 22 43.5 +00.0		241	37.8 +02.2	N 00 58.1 +00.1		03
04	259	24.1 +00.7	N 01 03.9 +00.7		155	44.7 +02.2	N 22 43.5 -00.1		256	40.0 +02.2	N 00 58.2 +00.1		04
05	274	24.8 +00.7	N 01 04.6 +00.8		170	46.9 +02.2	N 22 43.4 +00.0		271	42.2 +02.2	N 00 58.3 +00.1		05
06	289	25.5 +00.7	N 01 05.4 +00.8		185	49.1 +02.2	N 22 43.4 +00.0		286	44.4 +02.2	N 00 58.4 +00.2		06
07	304	26.2 +00.7	N 01 06.2 +00.8		200	51.3 +02.2	N 22 43.4 -00.1		301	46.6 +02.2	N 00 58.6 +00.1		07
08	319	26.9 +00.7	N 01 07.0 +00.8		215	53.5 +02.1	N 22 43.3 +00.0		316	48.8 +02.1	N 00 58.7 +00.1		08
09	334	27.6 +00.7	N 01 07.8 +00.7		230	55.6 +02.2	N 22 43.3 +00.0		331	50.9 +02.2	N 00 58.8 +00.1		09
10	349	28.3 +00.6	N 01 08.5 +00.8		245	57.8 +02.2	N 22 43.3 +00.0		346	53.1 +02.2	N 00 58.9 +00.1		10
11	4	28.9 +00.7	N 01 09.3 +00.8		260	60.0 +02.2	N 22 43.3 -00.1		1	55.3 +02.2	N 00 59.0 +00.1		11
12	19	29.6 +00.7	N 01 10.1 +00.8		276	02.2 +02.1	N 22 43.2 +00.0		16	57.5 +02.2	N 00 59.1 +00.2		12
13	34	30.3 +00.7	N 01 10.9 +00.8		291	04.3 +02.2	N 22 43.2 +00.0		31	59.7 +02.2	N 00 59.3 +00.1		13
14	49	31.0 +00.7	N 01 11.7 +00.7		306	06.5 +02.2	N 22 43.2 -00.1		47	01.9 +02.2	N 00 59.4 +00.1		14
15	64	31.7 +00.7	N 01 12.4 +00.8		321	08.7 +02.2	N 22 43.1 +00.0		62	04.1 +02.2	N 00 59.5 +00.1		15
16	79	32.4 +00.7	N 01 13.2 +00.8		336	10.9 +02.1	N 22 43.1 +00.0		77	06.3 +02.1	N 00 59.6 +00.1		16
17	94	33.1 +00.7	N 01 14.0 +00.8		351	13.0 +02.2	N 22 43.1 -00.1		92	08.4 +02.2	N 00 59.7 +00.1		17
18	109	33.8 +00.7	N 01 14.8 +00.8		6	15.2 +02.2	N 22 43.0 +00.0		107	10.6 +02.2	N 00 59.8 +00.1		18
19	124	34.5 +00.6	N 01 15.6 +00.7		21	17.4 +02.2	N 22 43.0 +00.0		122	12.8 +02.2	N 00 59.9 +00.2		19
20	139	35.1 +00.7	N 01 16.3 +00.8		36	19.6 +02.1	N 22 43.0 -00.1		137	15.0 +02.2	N 01 00.1 +00.1		20
21	154	35.8 +00.7	N 01 17.1 +00.8		51	21.7 +02.2	N 22 42.9 +00.0		152	17.2 +02.2	N 01 00.2 +00.1		21
22	169	36.5 +00.7	N 01 17.9 +00.8		66	23.9 +02.2	N 22 42.9 +00.0		167	19.4 +02.2	N 01 00.3 +00.1		22
23	184	37.2 +00.7	N 01 18.7 +00.8		81	26.1 +02.2	N 22 42.9 -00.1		182	21.6 +02.1	N 01 00.4 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 355° 355° 355° 355° 355° 355°				SHA 251° 251° 251° 251° 251° 251°				SHA 352° 352° 352° 352° 352° 352°				
	Greenwich Culmination Time: 10:42				Greenwich Culmination Time: 17:35				Greenwich Culmination Time: 10:52				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 05.2 +00.1	N 10	24.2 +00.9	156 22.8 -00.6	N 18	19.7 +00.9	187 46.2 -30.9	N 11	06.0 +16.0				
01	195 05.3 +00.2	N 10	25.1 +00.9	171 22.2 -00.7	N 18	20.6 +00.9	202 15.3 -31.1	N 11	22.0 +16.0				
02	210 05.5 +00.1	N 10	26.0 +00.8	186 21.5 -00.6	N 18	21.5 +00.9	216 44.2 -31.1	N 11	38.0 +15.9				
03	225 05.6 +00.2	N 10	26.8 +00.9	201 20.9 -00.6	N 18	22.4 +01.0	231 13.1 -31.1	N 11	53.9 +15.9				
04	240 05.8 +00.1	N 10	27.7 +00.9	216 20.3 -00.6	N 18	23.4 +00.9	245 42.0 -31.3	N 12	09.8 +15.8				
05	255 05.9 +00.1	N 10	28.6 +00.9	231 19.7 -00.6	N 18	24.3 +00.9	260 10.7 -31.4	N 12	25.6 +15.8				
06	270 06.0 +00.2	N 10	29.5 +00.9	246 19.1 -00.6	N 18	25.2 +00.9	274 39.3 -31.5	N 12	41.4 +15.7				
07	285 06.2 +00.1	N 10	30.4 +00.8	261 18.5 -00.6	N 18	26.1 +00.9	289 07.8 -31.6	N 12	57.1 +15.6				
08	300 06.3 +00.2	N 10	31.2 +00.9	276 17.9 -00.6	N 18	27.0 +00.9	303 36.2 -31.6	N 13	12.7 +15.6				
09	315 06.5 +00.1	N 10	32.1 +00.9	291 17.3 -00.6	N 18	27.9 +00.9	318 04.6 -31.8	N 13	28.3 +15.5				
10	330 06.6 +00.2	N 10	33.0 +00.9	306 16.7 -00.7	N 18	28.8 +00.9	332 32.8 -31.9	N 13	43.8 +15.4				
11	345 06.8 +00.1	N 10	33.9 +00.9	321 16.0 -00.6	N 18	29.7 +00.9	347 00.9 -31.9	N 13	59.2 +15.4				
12	0 06.9 +00.1	N 10	34.8 +00.8	336 15.4 -00.6	N 18	30.6 +00.9	1 29.0 -32.1	N 14	14.6 +15.3				
13	15 07.0 +00.2	N 10	35.6 +00.9	351 14.8 -00.6	N 18	31.5 +00.9	15 56.9 -32.2	N 14	29.9 +15.2				
14	30 07.2 +00.1	N 10	36.5 +00.9	6 14.2 -00.6	N 18	32.4 +00.9	30 24.7 -32.2	N 14	45.1 +15.1				
15	45 07.3 +00.2	N 10	37.4 +00.9	21 13.6 -00.6	N 18	33.3 +00.9	44 52.5 -32.4	N 15	00.2 +15.1				
16	60 07.5 +00.1	N 10	38.3 +00.8	36 13.0 -00.6	N 18	34.2 +00.9	59 20.1 -32.5	N 15	15.3 +15.0				
17	75 07.6 +00.1	N 10	39.1 +00.9	51 12.4 -00.7	N 18	35.1 +00.9	73 47.6 -32.6	N 15	30.3 +14.9				
18	90 07.7 +00.2	N 10	40.0 +00.9	66 11.7 -00.6	N 18	36.0 +00.9	88 15.0 -32.7	N 15	45.2 +14.8				
19	105 07.9 +00.1	N 10	40.9 +00.9	81 11.1 -00.6	N 18	36.9 +00.9	102 42.3 -32.7	N 15	60.0 +14.7				
20	120 08.0 +00.2	N 10	41.8 +00.8	96 10.5 -00.6	N 18	37.8 +00.9	117 09.6 -32.9	N 16	14.7 +14.6				
21	135 08.2 +00.1	N 10	42.6 +00.9	111 09.9 -00.6	N 18	38.7 +00.9	131 36.7 -33.0	N 16	29.3 +14.6				
22	150 08.3 +00.1	N 10	43.5 +00.9	126 09.3 -00.6	N 18	39.6 +00.9	146 03.7 -33.2	N 16	43.9 +14.4				
23	165 08.4 +00.2	N 10	44.4 +00.9	141 08.7 -00.7	N 18	40.5 +00.9	160 30.5 -33.2	N 16	58.3 +14.4				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'3 16'4 16'4 16'4 16'4 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 60'0 60'1 60'1 60'2 60'3 60'4						
	SHA 335° 335° 335° 334° 334° 334°			SHA 311° 311° 311° 311° 310° 310°			SHA 342° 339° 337° 335° 332° 330°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 13:35			Greenwich Culmination Time: 11:53						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	199 37.9 +00.7	N 01	19.5 +00.7	96 28.3 +02.1	N 22	42.8 +00.0	197 23.7 +02.2	N 01	00.5 +00.1				
01	214 38.6 +00.7	N 01	20.2 +00.8	111 30.4 +02.2	N 22	42.8 +00.0	212 25.9 +02.2	N 01	00.6 +00.1				
02	229 39.3 +00.7	N 01	21.0 +00.8	126 32.6 +02.2	N 22	42.8 -00.1	227 28.1 +02.2	N 01	00.7 +00.2				
03	244 40.0 +00.7	N 01	21.8 +00.8	141 34.8 +02.2	N 22	42.7 +00.0	242 30.3 +02.2	N 01	00.9 +00.1				
04	259 40.7 +00.7	N 01	22.6 +00.8	156 37.0 +02.1	N 22	42.7 +00.0	257 32.5 +02.2	N 01	01.0 +00.1				
05	274 41.4 +00.6	N 01	23.4 +00.7	171 39.1 +02.2	N 22	42.7 -00.1	272 34.7 +02.2	N 01	01.1 +00.1				
06	289 42.0 +00.7	N 01	24.1 +00.8	186 41.3 +02.2	N 22	42.6 +00.0	287 36.9 +02.1	N 01	01.2 +00.1				
07	304 42.7 +00.7	N 01	24.9 +00.8	201 43.5 +02.1	N 22	42.6 +00.0	302 39.0 +02.2	N 01	01.3 +00.1				
08	319 43.4 +00.7	N 01	25.7 +00.8	216 45.6 +02.2	N 22	42.6 -00.1	317 41.2 +02.2	N 01	01.4 +00.2				
09	334 44.1 +00.7	N 01	26.5 +00.7	231 47.8 +02.2	N 22	42.5 +00.0	332 43.4 +02.2	N 01	01.6 +00.1				
10	349 44.8 +00.7	N 01	27.2 +00.8	246 50.0 +02.2	N 22	42.5 +00.0	347 45.6 +02.2	N 01	01.7 +00.1				
11	4 45.5 +00.7	N 01	28.0 +00.8	261 52.2 +02.1	N 22	42.5 -00.1	2 47.8 +02.2	N 01	01.8 +00.1				
12	19 46.2 +00.7	N 01	28.8 +00.8	276 54.3 +02.2	N 22	42.4 +00.0	17 50.0 +02.2	N 01	01.9 +00.1				
13	34 46.9 +00.7	N 01	29.6 +00.8	291 56.5 +02.2	N 22	42.4 +00.0	32 52.2 +02.2	N 01	02.0 +00.1				
14	49 47.6 +00.7	N 01	30.4 +00.7	306 58.7 +02.1	N 22	42.4 -00.1	47 54.4 +02.1	N 01	02.1 +00.1				
15	64 48.3 +00.6	N 01	31.1 +00.8	322 00.8 +02.2	N 22	42.3 +00.0	62 56.5 +02.2	N 01	02.2 +00.2				
16	79 48.9 +00.7	N 01	31.9 +00.8	337 03.0 +02.2	N 22	42.3 +00.0	77 58.7 +02.2	N 01	02.4 +00.1				
17	94 49.6 +00.7	N 01	32.7 +00.8	352 05.2 +02.1	N 22	42.3 -00.1	93 00.9 +02.2	N 01	02.5 +00.1				
18	109 50.3 +00.7	N 01	33.5 +00.8	7 07.3 +02.2	N 22	42.2 +00.0	108 03.1 +02.2	N 01	02.6 +00.1				
19	124 51.0 +00.7	N 01	34.3 +00.7	22 09.5 +02.2	N 22	42.2 +00.0	123 05.3 +02.2	N 01	02.7 +00.1				
20	139 51.7 +00.7	N 01	35.0 +00.8	37 11.7 +02.1	N 22	42.2 -00.1	138 07.5 +02.2	N 01	02.8 +00.1				
21	154 52.4 +00.7	N 01	35.8 +00.8	52 13.8 +02.2	N 22	42.1 +00.0	153 09.7 +02.2	N 01	02.9 +00.1				
22	169 53.1 +00.7	N 01	36.6 +00.8	67 16.0 +02.2	N 22	42.1 +00.0	168 11.9 +02.1	N 01	03.0 +00.2				
23	184 53.8 +00.7	N 01	37.4 +00.8	82 18.2 +02.1	N 22	42.1 -00.1	183 14.0 +02.2	N 01	03.2 +00.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 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 354° 354° 354° 354° 354° 354°			SHA 251° 251° 251° 251° 251° 251°			SHA 352° 352° 352° 352° 352° 352°						
	Greenwich Culmination Time: 10:40			Greenwich Culmination Time: 17:31			Greenwich Culmination Time: 10:48						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	08.6 +00.1	N 10 45.3 +00.8		156	08.0 -00.6	N 18 41.4 +00.8		174	57.3 -33.3	N 17 12.7 +14.2		00
01	195	08.7 +00.2	N 10 46.1 +00.9		171	07.4 -00.6	N 18 42.2 +00.9		189	24.0 -33.4	N 17 26.9 +14.2		01
02	210	08.9 +00.1	N 10 47.0 +00.9		186	06.8 -00.6	N 18 43.1 +00.9		203	50.6 -33.6	N 17 41.1 +14.0		02
03	225	09.0 +00.1	N 10 47.9 +00.9		201	06.2 -00.6	N 18 44.0 +00.9		218	17.0 -33.6	N 17 55.1 +14.0		03
04	240	09.1 +00.2	N 10 48.8 +00.8		216	05.6 -00.7	N 18 44.9 +00.9		232	43.4 -33.8	N 18 09.1 +13.8		04
05	255	09.3 +00.1	N 10 49.6 +00.9		231	04.9 -00.6	N 18 45.8 +00.9		247	09.6 -33.9	N 18 22.9 +13.7		05
06	270	09.4 +00.2	N 10 50.5 +00.9		246	04.3 -00.6	N 18 46.7 +00.9		261	35.7 -34.0	N 18 36.6 +13.6		06
07	285	09.6 +00.1	N 10 51.4 +00.9		261	03.7 -00.6	N 18 47.6 +00.9		276	01.7 -34.1	N 18 50.2 +13.5		07
08	300	09.7 +00.1	N 10 52.3 +00.8		276	03.1 -00.7	N 18 48.5 +00.8		290	27.6 -34.2	N 19 03.7 +13.4		08
09	315	09.8 +00.2	N 10 53.1 +00.9		291	02.4 -00.6	N 18 49.3 +00.9		304	53.4 -34.3	N 19 17.1 +13.3		09
10	330	10.0 +00.1	N 10 54.0 +00.9		306	01.8 -00.6	N 18 50.2 +00.9		319	19.1 -34.4	N 19 30.4 +13.1		10
11	345	10.1 +00.1	N 10 54.9 +00.8		321	01.2 -00.6	N 18 51.1 +00.9		333	44.7 -34.6	N 19 43.5 +13.0		11
12	0	10.2 +00.2	N 10 55.7 +00.9		336	00.6 -00.7	N 18 52.0 +00.9		348	10.1 -34.6	N 19 56.5 +12.9		12
13	15	10.4 +00.1	N 10 56.6 +00.9		350	59.9 -00.6	N 18 52.9 +00.9		2	35.5 -34.8	N 20 09.4 +12.8		13
14	30	10.5 +00.2	N 10 57.5 +00.9		5	59.3 -00.6	N 18 53.8 +00.8		17	00.7 -34.9	N 20 22.2 +12.6		14
15	45	10.7 +00.1	N 10 58.4 +00.8		20	58.7 -00.6	N 18 54.6 +00.9		31	25.8 -34.9	N 20 34.8 +12.5		15
16	60	10.8 +00.1	N 10 59.2 +00.9		35	58.1 -00.7	N 18 55.5 +00.9		45	50.9 -35.1	N 20 47.3 +12.4		16
17	75	10.9 +00.2	N 11 00.1 +00.9		50	57.4 -00.6	N 18 56.4 +00.9		60	15.8 -35.2	N 20 59.7 +12.2		17
18	90	11.1 +00.1	N 11 01.0 +00.8		65	56.8 -00.6	N 18 57.3 +00.8		74	40.6 -35.4	N 21 11.9 +12.1		18
19	105	11.2 +00.1	N 11 01.8 +00.9		80	56.2 -00.6	N 18 58.1 +00.9		89	05.2 -35.4	N 21 24.0 +12.0		19
20	120	11.3 +00.2	N 11 02.7 +00.9		95	55.6 -00.7	N 18 59.0 +00.9		103	29.8 -35.5	N 21 36.0 +11.8		20
21	135	11.5 +00.1	N 11 03.6 +00.8		110	54.9 -00.6	N 18 59.9 +00.9		117	54.3 -35.7	N 21 47.8 +11.7		21
22	150	11.6 +00.1	N 11 04.4 +00.9		125	54.3 -00.6	N 19 00.8 +00.8		132	18.6 -35.7	N 21 59.5 +11.5		22
23	165	11.7 +00.2	N 11 05.3 +00.9		140	53.7 -00.7	N 19 01.6 +00.9		146	42.9 -35.9	N 22 11.0 +11.4		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'5 16'5 16'5 16'5 16'5 16'5				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'4 60'5 60'5 60'5 60'6 60'6				
	SHA 334° 334° 334° 333° 333° 333°				SHA 310° 310° 309° 309° 309° 309°				SHA 328° 325° 323° 320° 318° 315°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 13:36				Greenwich Culmination Time: 12:49				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	199	54.5 +00.7	N 01 38.2 +00.7		97	20.3 +02.2	N 22 42.0 +00.0		198	16.2 +02.2	N 01 03.3 +00.1		00
01	214	55.2 +00.6	N 01 38.9 +00.8		112	22.5 +02.2	N 22 42.0 +00.0		213	18.4 +02.2	N 01 03.4 +00.1		01
02	229	55.8 +00.7	N 01 39.7 +00.8		127	24.7 +02.1	N 22 42.0 -00.1		228	20.6 +02.2	N 01 03.5 +00.1		02
03	244	56.5 +00.7	N 01 40.5 +00.8		142	26.8 +02.2	N 22 41.9 +00.0		243	22.8 +02.2	N 01 03.6 +00.1		03
04	259	57.2 +00.7	N 01 41.3 +00.7		157	29.0 +02.2	N 22 41.9 +00.0		258	25.0 +02.2	N 01 03.7 +00.1		04
05	274	57.9 +00.7	N 01 42.0 +00.8		172	31.2 +02.1	N 22 41.9 -00.1		273	27.2 +02.2	N 01 03.8 +00.2		05
06	289	58.6 +00.7	N 01 42.8 +00.8		187	33.3 +02.2	N 22 41.8 +00.0		288	29.4 +02.1	N 01 04.0 +00.1		06
07	304	59.3 +00.7	N 01 43.6 +00.8		202	35.5 +02.2	N 22 41.8 +00.0		303	31.5 +02.2	N 01 04.1 +00.1		07
08	319	60.0 +00.7	N 01 44.4 +00.8		217	37.7 +02.1	N 22 41.8 -00.1		318	33.7 +02.2	N 01 04.2 +00.1		08
09	335	00.7 +00.7	N 01 45.2 +00.7		232	39.8 +02.2	N 22 41.7 +00.0		333	35.9 +02.2	N 01 04.3 +00.1		09
10	350	01.4 +00.7	N 01 45.9 +00.8		247	42.0 +02.2	N 22 41.7 +00.0		348	38.1 +02.2	N 01 04.4 +00.1		10
11	5	02.1 +00.7	N 01 46.7 +00.8		262	44.2 +02.1	N 22 41.7 -00.1		3	40.3 +02.2	N 01 04.5 +00.1		11
12	20	02.8 +00.6	N 01 47.5 +00.8		277	46.3 +02.2	N 22 41.6 +00.0		18	42.5 +02.2	N 01 04.6 +00.2		12
13	35	03.4 +00.7	N 01 48.3 +00.7		292	48.5 +02.2	N 22 41.6 -00.1		33	44.7 +02.2	N 01 04.8 +00.1		13
14	50	04.1 +00.7	N 01 49.0 +00.8		307	50.7 +02.1	N 22 41.5 +00.0		48	46.9 +02.1	N 01 04.9 +00.1		14
15	65	04.8 +00.7	N 01 49.8 +00.8		322	52.8 +02.2	N 22 41.5 +00.0		63	49.0 +02.2	N 01 05.0 +00.1		15
16	80	05.5 +00.7	N 01 50.6 +00.8		337	55.0 +02.1	N 22 41.5 -00.1		78	51.2 +02.2	N 01 05.1 +00.1		16
17	95	06.2 +00.7	N 01 51.4 +00.8		352	57.1 +02.2	N 22 41.4 +00.0		93	53.4 +02.2	N 01 05.2 +00.1		17
18	110	06.9 +00.7	N 01 52.2 +00.7		7	59.3 +02.2	N 22 41.4 +00.0		108	55.6 +02.2	N 01 05.3 +00.1		18
19	125	07.6 +00.7	N 01 52.9 +00.8		23	01.5 +02.1	N 22 41.4 -00.1		123	57.8 +02.2	N 01 05.4 +00.2		19
20	140	08.3 +00.7	N 01 53.7 +00.8		38	03.6 +02.2	N 22 41.3 +00.0		138	60.0 +02.2	N 01 05.6 +00.1		20
21	155	09.0 +00.7	N 01 54.5 +00.8		53	05.8 +02.2	N 22 41.3 +00.0		154	02.2 +02.2	N 01 05.7 +00.1		21
22	170	09.7 +00.7	N 01 55.3 +00.7		68	08.0 +02.1	N 22 41.3 -00.1		169	04.4 +02.1	N 01 05.8 +00.1		22
23	185	10.4 +00.6	N 01 56.0 +00.8		83	10.1 +02.2	N 22 41.2 +00.0		184	06.5 +02.2	N 01 05.9 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 354° 354° 353° 353° 353° 353°				SHA 251° 251° 251° 251° 251° 251°				SHA 352° 352° 352° 352° 352° 352°				
	Greenwich Culmination Time: 10:39				Greenwich Culmination Time: 17:28				Greenwich Culmination Time: 10:45				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	11.9 +00.1	N 11 06.2 +00.8		155	53.0 -00.6	N 19 02.5 +00.9		161	07.0 -35.9	N 22 22.4 +11.2		00
01	195	12.0 +00.2	N 11 07.0 +00.9		170	52.4 -00.6	N 19 03.4 +00.8		175	31.1 -36.1	N 22 33.6 +11.1		01
02	210	12.2 +00.1	N 11 07.9 +00.9		185	51.8 -00.7	N 19 04.2 +00.9		189	55.0 -36.2	N 22 44.7 +10.9		02
03	225	12.3 +00.1	N 11 08.8 +00.8		200	51.1 -00.6	N 19 05.1 +00.9		204	18.8 -36.2	N 22 55.6 +10.7		03
04	240	12.4 +00.2	N 11 09.6 +00.9		215	50.5 -00.6	N 19 06.0 +00.9		218	42.6 -36.4	N 23 06.3 +10.6		04
05	255	12.6 +00.1	N 11 10.5 +00.9		230	49.9 -00.7	N 19 06.9 +00.8		233	06.2 -36.5	N 23 16.9 +10.5		05
06	270	12.7 +00.1	N 11 11.4 +00.8		245	49.2 -00.6	N 19 07.7 +00.9		247	29.7 -36.6	N 23 27.4 +10.3		06
07	285	12.8 +00.2	N 11 12.2 +00.9		260	48.6 -00.6	N 19 08.6 +00.9		261	53.1 -36.6	N 23 37.7 +10.1		07
08	300	13.0 +00.1	N 11 13.1 +00.9		275	48.0 -00.7	N 19 09.5 +00.8		276	16.5 -36.8	N 23 47.8 +09.9		08
09	315	13.1 +00.1	N 11 14.0 +00.8		290	47.3 -00.6	N 19 10.3 +00.9		290	39.7 -36.9	N 23 57.7 +09.8		09
10	330	13.2 +00.2	N 11 14.8 +00.9		305	46.7 -00.6	N 19 11.2 +00.8		305	02.8 -37.0	N 24 07.5 +09.6		10
11	345	13.4 +00.1	N 11 15.7 +00.8		320	46.1 -00.7	N 19 12.0 +00.9		319	25.8 -37.0	N 24 17.1 +09.5		11
12	0	13.5 +00.1	N 11 16.5 +00.9		335	45.4 -00.6	N 19 12.9 +00.9		333	48.8 -37.2	N 24 26.6 +09.2		12
13	15	13.6 +00.2	N 11 17.4 +00.9		350	44.8 -00.6	N 19 13.8 +00.8		348	11.6 -37.2	N 24 35.8 +09.1		13
14	30	13.8 +00.1	N 11 18.3 +00.8		5	44.2 -00.7	N 19 14.6 +00.9		2	34.4 -37.4	N 24 44.9 +08.9		14
15	45	13.9 +00.1	N 11 19.1 +00.9		20	43.5 -00.6	N 19 15.5 +00.8		16	57.0 -37.4	N 24 53.8 +08.8		15
16	60	14.0 +00.2	N 11 20.0 +00.9		35	42.9 -00.6	N 19 16.3 +00.9		31	19.6 -37.5	N 25 02.6 +08.5		16
17	75	14.2 +00.1	N 11 20.9 +00.8		50	42.3 -00.7	N 19 17.2 +00.8		45	42.1 -37.6	N 25 11.1 +08.4		17
18	90	14.3 +00.1	N 11 21.7 +00.9		65	41.6 -00.6	N 19 18.0 +00.9		60	04.5 -37.7	N 25 19.5 +08.2		18
19	105	14.4 +00.2	N 11 22.6 +00.8		80	41.0 -00.7	N 19 18.9 +00.9		74	26.8 -37.7	N 25 27.7 +08.0		19
20	120	14.6 +00.1	N 11 23.4 +00.9		95	40.3 -00.6	N 19 19.8 +00.8		88	49.1 -37.9	N 25 35.7 +07.9		20
21	135	14.7 +00.1	N 11 24.3 +00.9		110	39.7 -00.6	N 19 20.6 +00.9		103	11.2 -37.9	N 25 43.6 +07.6		21
22	150	14.8 +00.2	N 11 25.2 +00.8		125	39.1 -00.7	N 19 21.5 +00.8		117	33.3 -38.0	N 25 51.2 +07.4		22
23	165	15.0 +00.1	N 11 26.0 +00.9		140	38.4 -00.6	N 19 22.3 +00.9		131	55.3 -38.0	N 25 58.6 +07.3		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'5 16'5 16'5 16'5 16'5 16'5				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'6 60'6 60'6 60'6 60'6 60'6				
	SHA 333° 333° 333° 333° 332° 332°				SHA 309° 308° 308° 308° 308° 308°				SHA 313° 310° 308° 305° 302° 300°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 13:37				Greenwich Culmination Time: 13:49				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	200	11.0 +00.7	N 01 56.8 +00.8		98	12.3 +02.1	N 22 41.2 +00.0		199	08.7 +02.2	N 01 06.0 +00.1		00
01	215	11.7 +00.7	N 01 57.6 +00.8		113	14.4 +02.2	N 22 41.2 -00.1		214	10.9 +02.2	N 01 06.1 +00.1		01
02	230	12.4 +00.7	N 01 58.4 +00.7		128	16.6 +02.2	N 22 41.1 +00.0		229	13.1 +02.2	N 01 06.2 +00.2		02
03	245	13.1 +00.7	N 01 59.1 +00.8		143	18.8 +02.1	N 22 41.1 +00.0		244	15.3 +02.2	N 01 06.4 +00.1		03
04	260	13.8 +00.7	N 01 59.9 +00.8		158	20.9 +02.2	N 22 41.1 -00.1		259	17.5 +02.2	N 01 06.5 +00.1		04
05	275	14.5 +00.7	N 02 00.7 +00.8		173	23.1 +02.1	N 22 41.0 +00.0		274	19.7 +02.2	N 01 06.6 +00.1		05
06	290	15.2 +00.7	N 02 01.5 +00.8		188	25.2 +02.2	N 22 41.0 +00.0		289	21.9 +02.2	N 01 06.7 +00.1		06
07	305	15.9 +00.7	N 02 02.3 +00.7		203	27.4 +02.2	N 22 41.0 -00.1		304	24.1 +02.1	N 01 06.8 +00.1		07
08	320	16.6 +00.7	N 02 03.0 +00.8		218	29.6 +02.1	N 22 40.9 +00.0		319	26.2 +02.2	N 01 06.9 +00.1		08
09	335	17.3 +00.7	N 02 03.8 +00.8		233	31.7 +02.2	N 22 40.9 +00.0		334	28.4 +02.2	N 01 07.0 +00.2		09
10	350	18.0 +00.6	N 02 04.6 +00.8		248	33.9 +02.1	N 22 40.9 -00.1		349	30.6 +02.2	N 01 07.2 +00.1		10
11	5	18.6 +00.7	N 02 05.4 +00.7		263	36.0 +02.2	N 22 40.8 +00.0		4	32.8 +02.2	N 01 07.3 +00.1		11
12	20	19.3 +00.7	N 02 06.1 +00.8		278	38.2 +02.1	N 22 40.8 -00.1		19	35.0 +02.2	N 01 07.4 +00.1		12
13	35	20.0 +00.7	N 02 06.9 +00.8		293	40.3 +02.2	N 22 40.7 +00.0		34	37.2 +02.2	N 01 07.5 +00.1		13
14	50	20.7 +00.7	N 02 07.7 +00.8		308	42.5 +02.2	N 22 40.7 +00.0		49	39.4 +02.2	N 01 07.6 +00.1		14
15	65	21.4 +00.7	N 02 08.5 +00.7		323	44.7 +02.1	N 22 40.7 -00.1		64	41.6 +02.2	N 01 07.7 +00.1		15
16	80	22.1 +00.7	N 02 09.2 +00.8		338	46.8 +02.2	N 22 40.6 +00.0		79	43.8 +02.1	N 01 07.8 +00.1		16
17	95	22.8 +00.7	N 02 10.0 +00.8		353	49.0 +02.1	N 22 40.6 +00.0		94	45.9 +02.2	N 01 07.9 +00.2		17
18	110	23.5 +00.7	N 02 10.8 +00.8		8	51.1 +02.2	N 22 40.6 -00.1		109	48.1 +02.2	N 01 08.1 +00.1		18
19	125	24.2 +00.7	N 02 11.6 +00.7		23	53.3 +02.1	N 22 40.5 +00.0		124	50.3 +02.2	N 01 08.2 +00.1		19
20	140	24.9 +00.7	N 02 12.3 +00.8		38	55.4 +02.2	N 22 40.5 +00.0		139	52.5 +02.2	N 01 08.3 +00.1		20
21	155	25.6 +00.7	N 02 13.1 +00.8		53	57.6 +02.1	N 22 40.5 -00.1		154	54.7 +02.2	N 01 08.4 +00.1		21
22	170	26.3 +00.6	N 02 13.9 +00.8		68	59.7 +02.2	N 22 40.4 +00.0		169	56.9 +02.2	N 01 08.5 +00.1		22
23	185	26.9 +00.7	N 02 14.7 +00.7		84	01.9 +02.2	N 22 40.4 +00.0		184	59.1 +02.2	N 01 08.6 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 353° 353° 353° 353° 353° 352°				SHA 251° 251° 251° 251° 251° 251°				SHA 352° 352° 352° 352° 352° 352°				
	Greenwich Culmination Time: 10:38				Greenwich Culmination Time: 17:24				Greenwich Culmination Time: 10:41				

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	15.1+00.1	N 11 26.9+00.8		155	37.8-00.7	N 19 23.2+00.8		146	17.3-38.2	N 26 05.9+07.1		00
01	195	15.2+00.1	N 11 27.7+00.9		170	37.1-00.6	N 19 24.0+00.9		160	39.1-38.2	N 26 13.0+06.8		01
02	210	15.3+00.2	N 11 28.6+00.9		185	36.5-00.6	N 19 24.9+00.8		175	00.9-38.2	N 26 19.8+06.7		02
03	225	15.5+00.1	N 11 29.5+00.8		200	35.9-00.7	N 19 25.7+00.9		189	22.7-38.4	N 26 26.5+06.5		03
04	240	15.6+00.1	N 11 30.3+00.9		215	35.2-00.6	N 19 26.6+00.8		203	44.3-38.3	N 26 33.0+06.3		04
05	255	15.7+00.2	N 11 31.2+00.8		230	34.6-00.7	N 19 27.4+00.9		218	06.0-38.5	N 26 39.3+06.1		05
06	270	15.9+00.1	N 11 32.0+00.9		245	33.9-00.6	N 19 28.3+00.8		232	27.5-38.5	N 26 45.4+05.9		06
07	285	16.0+00.1	N 11 32.9+00.8		260	33.3-00.7	N 19 29.1+00.8		246	49.0-38.5	N 26 51.3+05.7		07
08	300	16.1+00.2	N 11 33.7+00.9		275	32.6-00.6	N 19 29.9+00.9		261	10.5-38.7	N 26 57.0+05.4		08
09	315	16.3+00.1	N 11 34.6+00.9		290	32.0-00.7	N 19 30.8+00.8		275	31.8-38.6	N 27 02.4+05.3		09
10	330	16.4+00.1	N 11 35.5+00.8		305	31.3-00.6	N 19 31.6+00.9		289	53.2-38.7	N 27 07.7+05.1		10
11	345	16.5+00.1	N 11 36.3+00.9		320	30.7-00.7	N 19 32.5+00.8		304	14.5-38.7	N 27 12.8+04.9		11
12	0	16.6+00.2	N 11 37.2+00.8		335	30.0-00.6	N 19 33.3+00.8		318	35.8-38.8	N 27 17.7+04.7		12
13	15	16.8+00.1	N 11 38.0+00.9		350	29.4-00.6	N 19 34.1+00.9		332	57.0-38.8	N 27 22.4+04.5		13
14	30	16.9+00.1	N 11 38.9+00.8		5	28.8-00.7	N 19 35.0+00.8		347	18.2-38.9	N 27 26.9+04.2		14
15	45	17.0+00.2	N 11 39.7+00.9		20	28.1-00.6	N 19 35.8+00.9		1	39.3-38.9	N 27 31.1+04.1		15
16	60	17.2+00.1	N 11 40.6+00.8		35	27.5-00.7	N 19 36.7+00.8		16	00.4-38.9	N 27 35.2+03.9		16
17	75	17.3+00.1	N 11 41.4+00.9		50	26.8-00.6	N 19 37.5+00.8		30	21.5-38.9	N 27 39.1+03.6		17
18	90	17.4+00.1	N 11 42.3+00.8		65	26.2-00.7	N 19 38.3+00.9		44	42.6-39.0	N 27 42.7+03.4		18
19	105	17.5+00.2	N 11 43.1+00.9		80	25.5-00.6	N 19 39.2+00.8		59	03.6-39.0	N 27 46.1+03.3		19
20	120	17.7+00.1	N 11 44.0+00.8		95	24.9-00.7	N 19 40.0+00.8		73	24.6-39.0	N 27 49.4+03.0		20
21	135	17.8+00.1	N 11 44.8+00.9		110	24.2-00.6	N 19 40.8+00.9		87	45.6-39.0	N 27 52.4+02.8		21
22	150	17.9+00.2	N 11 45.7+00.8		125	23.6-00.7	N 19 41.7+00.8		102	06.6-39.0	N 27 55.2+02.6		22
23	165	18.1+00.1	N 11 46.5+00.9		140	22.9-00.6	N 19 42.5+00.8		116	27.6-39.0	N 27 57.8+02.4		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 16'5 16'5 16'5 16'5 16'4 16'4				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'5 60'5 60'4 60'4 60'3 60'3				
	SHA 332° 332° 332° 332° 331° 331°				SHA 307° 307° 307° 307° 307° 306°				SHA 297° 294° 291° 289° 286° 283°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 13:38				Greenwich Culmination Time: 14:53				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	200	27.6+00.7	N 02 15.4+00.8		99	04.1+02.1	N 22 40.4-00.1		200	01.3+02.2	N 01 08.7+00.2		00
01	215	28.3+00.7	N 02 16.2+00.8		114	06.2+02.2	N 22 40.3+00.0		215	03.5+02.1	N 01 08.9+00.1		01
02	230	29.0+00.7	N 02 17.0+00.8		129	08.4+02.1	N 22 40.3-00.1		230	05.6+02.2	N 01 09.0+00.1		02
03	245	29.7+00.7	N 02 17.8+00.7		144	10.5+02.2	N 22 40.2+00.0		245	07.8+02.2	N 01 09.1+00.1		03
04	260	30.4+00.7	N 02 18.5+00.8		159	12.7+02.1	N 22 40.2+00.0		260	10.0+02.2	N 01 09.2+00.1		04
05	275	31.1+00.7	N 02 19.3+00.8		174	14.8+02.2	N 22 40.2-00.1		275	12.2+02.2	N 01 09.3+00.1		05
06	290	31.8+00.7	N 02 20.1+00.8		189	17.0+02.1	N 22 40.1+00.0		290	14.4+02.2	N 01 09.4+00.1		06
07	305	32.5+00.7	N 02 20.9+00.7		204	19.1+02.2	N 22 40.1+00.0		305	16.6+02.2	N 01 09.5+00.1		07
08	320	33.2+00.7	N 02 21.6+00.8		219	21.3+02.1	N 22 40.1-00.1		320	18.8+02.2	N 01 09.6+00.2		08
09	335	33.9+00.7	N 02 22.4+00.8		234	23.4+02.2	N 22 40.0+00.0		335	21.0+02.2	N 01 09.8+00.1		09
10	350	34.6+00.6	N 02 23.2+00.8		249	25.6+02.1	N 22 40.0+00.0		350	23.2+02.2	N 01 09.9+00.1		10
11	5	35.2+00.7	N 02 24.0+00.7		264	27.7+02.2	N 22 40.0-00.1		5	25.4+02.1	N 01 10.0+00.1		11
12	20	35.9+00.7	N 02 24.7+00.8		279	29.9+02.1	N 22 39.9+00.0		20	27.5+02.2	N 01 10.1+00.1		12
13	35	36.6+00.7	N 02 25.5+00.8		294	32.0+02.2	N 22 39.9-00.1		35	29.7+02.2	N 01 10.2+00.1		13
14	50	37.3+00.7	N 02 26.3+00.8		309	34.2+02.1	N 22 39.8+00.0		50	31.9+02.2	N 01 10.3+00.1		14
15	65	38.0+00.7	N 02 27.1+00.7		324	36.3+02.2	N 22 39.8+00.0		65	34.1+02.2	N 01 10.4+00.2		15
16	80	38.7+00.7	N 02 27.8+00.8		339	38.5+02.1	N 22 39.8-00.1		80	36.3+02.2	N 01 10.6+00.1		16
17	95	39.4+00.7	N 02 28.6+00.8		354	40.6+02.2	N 22 39.7+00.0		95	38.5+02.2	N 01 10.7+00.1		17
18	110	40.1+00.7	N 02 29.4+00.8		9	42.8+02.1	N 22 39.7+00.0		110	40.7+02.2	N 01 10.8+00.1		18
19	125	40.8+00.7	N 02 30.2+00.7		24	44.9+02.2	N 22 39.7-00.1		125	42.9+02.2	N 01 10.9+00.1		19
20	140	41.5+00.7	N 02 30.9+00.8		39	47.1+02.1	N 22 39.6+00.0		140	45.1+02.2	N 01 11.0+00.1		20
21	155	42.2+00.7	N 02 31.7+00.8		54	49.2+02.2	N 22 39.6+00.0		155	47.3+02.1	N 01 11.1+00.1		21
22	170	42.9+00.6	N 02 32.5+00.8		69	51.4+02.1	N 22 39.6-00.1		170	49.4+02.2	N 01 11.2+00.1		22
23	185	43.5+00.7	N 02 33.3+00.7		84	53.5+02.2	N 22 39.5+00.0		185	51.6+02.2	N 01 11.3+00.2		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 352° 352° 352° 352° 352° 352°				SHA 251° 251° 251° 251° 251° 251°				SHA 352° 352° 352° 352° 352° 352°				
	Greenwich Culmination Time: 10:37				Greenwich Culmination Time: 17:21				Greenwich Culmination Time: 10:38				

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 15%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	180 18.2 +00.1	N 11	47.4 +00.9	155 22.3 -00.7	N 19	43.3 +00.8	130 48.6 -39.0	N 28	00.2 +02.2	00			
01	195 18.3 +00.1	N 11	48.3 +00.8	170 21.6 -00.7	N 19	44.1 +00.9	145 09.6 -39.1	N 28	02.4 +02.0	01			
02	210 18.4 +00.2	N 11	49.1 +00.9	185 20.9 -00.6	N 19	45.0 +00.8	159 30.5 -39.0	N 28	04.4 +01.8	02			
03	225 18.6 +00.1	N 11	50.0 +00.8	200 20.3 -00.7	N 19	45.8 +00.8	173 51.5 -39.0	N 28	06.2 +01.5	03			
04	240 18.7 +00.1	N 11	50.8 +00.9	215 19.6 -00.6	N 19	46.6 +00.8	188 12.5 -39.0	N 28	07.7 +01.4	04			
05	255 18.8 +00.1	N 11	51.7 +00.8	230 19.0 -00.7	N 19	47.4 +00.9	202 33.5 -39.0	N 28	09.1 +01.1	05			
06	270 18.9 +00.2	N 11	52.5 +00.8	245 18.3 -00.6	N 19	48.3 +00.8	216 54.5 -39.0	N 28	10.2 +01.0	06			
07	285 19.1 +00.1	N 11	53.3 +00.9	260 17.7 -00.7	N 19	49.1 +00.8	231 15.5 -39.0	N 28	11.2 +00.7	07			
08	300 19.2 +00.1	N 11	54.2 +00.8	275 17.0 -00.6	N 19	49.9 +00.8	245 36.5 -38.9	N 28	11.9 +00.5	08			
09	315 19.3 +00.1	N 11	55.0 +00.9	290 16.4 -00.7	N 19	50.7 +00.9	259 57.6 -39.0	N 28	12.4 +00.3	09			
10	330 19.4 +00.2	N 11	55.9 +00.8	305 15.7 -00.7	N 19	51.6 +00.8	274 18.6 -38.9	N 28	12.7 +00.1	10			
11	345 19.6 +00.1	N 11	56.7 +00.9	320 15.0 -00.6	N 19	52.4 +00.8	288 39.7 -38.8	N 28	12.8 -00.1	11			
12	0 19.7 +00.1	N 11	57.6 +00.8	335 14.4 -00.7	N 19	53.2 +00.8	303 00.9 -38.9	N 28	12.7 -00.3	12			
13	15 19.8 +00.1	N 11	58.4 +00.9	350 13.7 -00.6	N 19	54.0 +00.8	317 22.0 -38.8	N 28	12.4 -00.5	13			
14	30 19.9 +00.2	N 11	59.3 +00.8	5 13.1 -00.7	N 19	54.8 +00.8	331 43.2 -38.7	N 28	11.9 -00.8	14			
15	45 20.1 +00.1	N 12	00.1 +00.9	20 12.4 -00.6	N 19	55.6 +00.9	346 04.5 -38.7	N 28	11.1 -00.9	15			
16	60 20.2 +00.1	N 12	01.0 +00.8	35 11.8 -00.7	N 19	56.5 +00.8	0 25.8 -38.7	N 28	10.2 -01.1	16			
17	75 20.3 +00.1	N 12	01.8 +00.9	50 11.1 -00.7	N 19	57.3 +00.8	14 47.1 -38.6	N 28	09.1 -01.4	17			
18	90 20.4 +00.2	N 12	02.7 +00.8	65 10.4 -00.6	N 19	58.1 +00.8	29 08.5 -38.6	N 28	07.7 -01.5	18			
19	105 20.6 +00.1	N 12	03.5 +00.9	80 09.8 -00.7	N 19	58.9 +00.8	43 29.9 -38.5	N 28	06.2 -01.7	19			
20	120 20.7 +00.1	N 12	04.4 +00.8	95 09.1 -00.6	N 19	59.7 +00.8	57 51.4 -38.5	N 28	04.5 -02.0	20			
21	135 20.8 +00.1	N 12	05.2 +00.8	110 08.5 -00.7	N 20	00.5 +00.8	72 12.9 -38.4	N 28	02.5 -02.1	21			
22	150 20.9 +00.1	N 12	06.0 +00.9	125 07.8 -00.7	N 20	01.3 +00.8	86 34.5 -38.4	N 28	00.4 -02.4	22			
23	165 21.0 +00.2	N 12	06.9 +00.8	140 07.1 -00.6	N 20	02.1 +00.8	100 56.1 -38.3	N 27	58.0 -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 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'4 16'4 16'4 16'3 16'3 16'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 60'2 60'1 60'1 60'0 59'9 59'8						
	SHA 331° 331° 331° 331° 331° 330°			SHA 306° 306° 306° 306° 305° 305°			SHA 280° 278° 275° 272° 269° 267°						
	Greenwich Culmination Time: 11:58			Greenwich Culmination Time: 13:39			Greenwich Culmination Time: 15:58						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	200 44.2 +00.7	N 02	34.0 +00.8	99 55.7 +02.1	N 22	39.5 -00.1	200 53.8 +02.2	N 01	11.5 +00.1	00			
01	215 44.9 +00.7	N 02	34.8 +00.8	114 57.8 +02.2	N 22	39.4 +00.0	215 56.0 +02.2	N 01	11.6 +00.1	01			
02	230 45.6 +00.7	N 02	35.6 +00.8	129 60.0 +02.1	N 22	39.4 +00.0	230 58.2 +02.2	N 01	11.7 +00.1	02			
03	245 46.3 +00.7	N 02	36.4 +00.7	145 02.1 +02.2	N 22	39.4 -00.1	246 00.4 +02.2	N 01	11.8 +00.1	03			
04	260 47.0 +00.7	N 02	37.1 +00.8	160 04.3 +02.1	N 22	39.3 +00.0	261 02.6 +02.2	N 01	11.9 +00.1	04			
05	275 47.7 +00.7	N 02	37.9 +00.8	175 06.4 +02.2	N 22	39.3 +00.0	276 04.8 +02.2	N 01	12.0 +00.1	05			
06	290 48.4 +00.7	N 02	38.7 +00.8	190 08.6 +02.1	N 22	39.3 -00.1	291 07.0 +02.2	N 01	12.1 +00.1	06			
07	305 49.1 +00.7	N 02	39.5 +00.7	205 10.7 +02.2	N 22	39.2 +00.0	306 09.2 +02.2	N 01	12.2 +00.2	07			
08	320 49.8 +00.7	N 02	40.2 +00.8	220 12.9 +02.1	N 22	39.2 -00.1	321 11.4 +02.1	N 01	12.4 +00.1	08			
09	335 50.5 +00.7	N 02	41.0 +00.8	235 15.0 +02.1	N 22	39.1 +00.0	336 13.5 +02.2	N 01	12.5 +00.1	09			
10	350 51.2 +00.7	N 02	41.8 +00.7	250 17.1 +02.2	N 22	39.1 +00.0	351 15.7 +02.2	N 01	12.6 +00.1	10			
11	5 51.9 +00.6	N 02	42.5 +00.8	265 19.3 +02.1	N 22	39.1 -00.1	6 17.9 +02.2	N 01	12.7 +00.1	11			
12	20 52.5 +00.7	N 02	43.3 +00.8	280 21.4 +02.2	N 22	39.0 +00.0	21 20.1 +02.2	N 01	12.8 +00.1	12			
13	35 53.2 +00.7	N 02	44.1 +00.8	295 23.6 +02.1	N 22	39.0 +00.0	36 22.3 +02.2	N 01	12.9 +00.1	13			
14	50 53.9 +00.7	N 02	44.9 +00.7	310 25.7 +02.2	N 22	39.0 -00.1	51 24.5 +02.2	N 01	13.0 +00.1	14			
15	65 54.6 +00.7	N 02	45.6 +00.8	325 27.9 +02.1	N 22	38.9 +00.0	66 26.7 +02.2	N 01	13.1 +00.2	15			
16	80 55.3 +00.7	N 02	46.4 +00.8	340 30.0 +02.2	N 22	38.9 -00.1	81 28.9 +02.2	N 01	13.3 +00.1	16			
17	95 56.0 +00.7	N 02	47.2 +00.8	355 32.2 +02.1	N 22	38.8 +00.0	96 31.1 +02.2	N 01	13.4 +00.1	17			
18	110 56.7 +00.7	N 02	48.0 +00.7	10 34.3 +02.1	N 22	38.8 +00.0	111 33.3 +02.2	N 01	13.5 +00.1	18			
19	125 57.4 +00.7	N 02	48.7 +00.8	25 36.4 +02.2	N 22	38.8 -00.1	126 35.5 +02.1	N 01	13.6 +00.1	19			
20	140 58.1 +00.7	N 02	49.5 +00.8	40 38.6 +02.1	N 22	38.7 +00.0	141 37.6 +02.2	N 01	13.7 +00.1	20			
21	155 58.8 +00.7	N 02	50.3 +00.7	55 40.7 +02.2	N 22	38.7 +00.0	156 39.8 +02.2	N 01	13.8 +00.1	21			
22	170 59.5 +00.7	N 02	51.0 +00.8	70 42.9 +02.1	N 22	38.7 -00.1	171 42.0 +02.2	N 01	13.9 +00.1	22			
23	186 00.2 +00.7	N 02	51.8 +00.8	85 45.0 +02.2	N 22	38.6 +00.0	186 44.2 +02.2	N 01	14.0 +00.2	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 352° 351° 351° 351° 351° 351°			SHA 251° 251° 251° 251° 251° 251°			SHA 352° 352° 352° 352° 352° 352°						
	Greenwich Culmination Time: 10:36			Greenwich Culmination Time: 17:17			Greenwich Culmination Time: 10:34						

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 21.2 +00.1	N 12 07.7 +00.9	155 06.5 -00.7	N 20 02.9 +00.9	115 17.8 -38.2	N 27 55.5 -02.8	00						
01	195 21.3 +00.1	N 12 08.6 +00.8	170 05.8 -00.7	N 20 03.8 +00.8	129 39.6 -38.1	N 27 52.7 -02.9	01						
02	210 21.4 +00.1	N 12 09.4 +00.9	185 05.1 -00.6	N 20 04.6 +00.8	144 01.5 -38.1	N 27 49.8 -03.1	02						
03	225 21.5 +00.2	N 12 10.3 +00.8	200 04.5 -00.7	N 20 05.4 +00.8	158 23.4 -38.0	N 27 46.7 -03.4	03						
04	240 21.7 +00.1	N 12 11.1 +00.8	215 03.8 -00.7	N 20 06.2 +00.8	172 45.4 -37.9	N 27 43.3 -03.5	04						
05	255 21.8 +00.1	N 12 11.9 +00.9	230 03.1 -00.6	N 20 07.0 +00.8	187 07.5 -37.9	N 27 39.8 -03.7	05						
06	270 21.9 +00.1	N 12 12.8 +00.8	245 02.5 -00.7	N 20 07.8 +00.8	201 29.6 -37.7	N 27 36.1 -03.9	06						
07	285 22.0 +00.1	N 12 13.6 +00.9	260 01.8 -00.7	N 20 08.6 +00.8	215 51.9 -37.7	N 27 32.2 -04.1	07						
08	300 22.1 +00.2	N 12 14.5 +00.8	275 01.1 -00.6	N 20 09.4 +00.8	230 14.2 -37.6	N 27 28.1 -04.3	08						
09	315 22.3 +00.1	N 12 15.3 +00.8	290 00.5 -00.7	N 20 10.2 +00.8	244 36.6 -37.5	N 27 23.8 -04.4	09						
10	330 22.4 +00.1	N 12 16.1 +00.9	304 59.8 -00.7	N 20 11.0 +00.8	258 59.1 -37.4	N 27 19.4 -04.7	10						
11	345 22.5 +00.1	N 12 17.0 +00.8	319 59.1 -00.6	N 20 11.8 +00.8	273 21.7 -37.3	N 27 14.7 -04.8	11						
12	0 22.6 +00.1	N 12 17.8 +00.9	334 58.5 -00.7	N 20 12.6 +00.8	287 44.4 -37.3	N 27 09.9 -05.1	12						
13	15 22.7 +00.2	N 12 18.7 +00.8	349 57.8 -00.7	N 20 13.4 +00.8	302 07.1 -37.1	N 27 04.8 -05.1	13						
14	30 22.9 +00.1	N 12 19.5 +00.8	4 57.1 -00.6	N 20 14.2 +00.7	316 30.0 -37.1	N 26 59.7 -05.4	14						
15	45 23.0 +00.1	N 12 20.3 +00.9	19 56.5 -00.7	N 20 14.9 +00.8	330 52.9 -36.9	N 26 54.3 -05.6	15						
16	60 23.1 +00.1	N 12 21.2 +00.8	34 55.8 -00.7	N 20 15.7 +00.8	345 16.0 -36.8	N 26 48.7 -05.7	16						
17	75 23.2 +00.1	N 12 22.0 +00.8	49 55.1 -00.6	N 20 16.5 +00.8	359 39.2 -36.8	N 26 43.0 -05.9	17						
18	90 23.3 +00.2	N 12 22.8 +00.9	64 54.5 -00.7	N 20 17.3 +00.8	14 02.4 -36.6	N 26 37.1 -06.1	18						
19	105 23.5 +00.1	N 12 23.7 +00.8	79 53.8 -00.7	N 20 18.1 +00.8	28 25.8 -36.5	N 26 31.0 -06.3	19						
20	120 23.6 +00.1	N 12 24.5 +00.8	94 53.1 -00.7	N 20 18.9 +00.8	42 49.3 -36.4	N 26 24.7 -06.4	20						
21	135 23.7 +00.1	N 12 25.3 +00.9	109 52.4 -00.6	N 20 19.7 +00.8	57 12.9 -36.3	N 26 18.3 -06.6	21						
22	150 23.8 +00.1	N 12 26.2 +00.8	124 51.8 -00.7	N 20 20.5 +00.8	71 36.6 -36.2	N 26 11.7 -06.7	22						
23	165 23.9 +00.2	N 12 27.0 +00.8	139 51.1 -00.7	N 20 21.3 +00.7	86 00.4 -36.1	N 26 05.0 -07.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 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 330° 330° 330° 330° 330° 329°		SHA 305° 305° 305° 304° 304° 304°		SHA 264° 261° 259° 256° 253° 251°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 13:40		Greenwich Culmination Time: 17:01								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	201 00.9 +00.7	N 02 52.6 +00.8	100 47.2 +02.1	N 22 38.6 -00.1	201 46.4 +02.2	N 01 14.2 +00.1	00						
01	216 01.6 +00.6	N 02 53.4 +00.7	115 49.3 +02.1	N 22 38.5 +00.0	216 48.6 +02.2	N 01 14.3 +00.1	01						
02	231 02.2 +00.7	N 02 54.1 +00.8	130 51.4 +02.2	N 22 38.5 +00.0	231 50.8 +02.2	N 01 14.4 +00.1	02						
03	246 02.9 +00.7	N 02 54.9 +00.8	145 53.6 +02.1	N 22 38.5 -00.1	246 53.0 +02.2	N 01 14.5 +00.1	03						
04	261 03.6 +00.7	N 02 55.7 +00.7	160 55.7 +02.2	N 22 38.4 +00.0	261 55.2 +02.2	N 01 14.6 +00.1	04						
05	276 04.3 +00.7	N 02 56.4 +00.8	175 57.9 +02.1	N 22 38.4 +00.0	276 57.4 +02.2	N 01 14.7 +00.1	05						
06	291 05.0 +00.7	N 02 57.2 +00.8	190 60.0 +02.1	N 22 38.4 -00.1	291 59.6 +02.1	N 01 14.8 +00.1	06						
07	306 05.7 +00.7	N 02 58.0 +00.8	206 02.1 +02.2	N 22 38.3 +00.0	307 01.7 +02.2	N 01 14.9 +00.2	07						
08	321 06.4 +00.7	N 02 58.8 +00.7	221 04.3 +02.1	N 22 38.3 -00.1	322 03.9 +02.2	N 01 15.1 +00.1	08						
09	336 07.1 +00.7	N 02 59.5 +00.8	236 06.4 +02.2	N 22 38.2 +00.0	337 06.1 +02.2	N 01 15.2 +00.1	09						
10	351 07.8 +00.7	N 03 00.3 +00.8	251 08.6 +02.1	N 22 38.2 +00.0	352 08.3 +02.2	N 01 15.3 +00.1	10						
11	6 08.5 +00.7	N 03 01.1 +00.7	266 10.7 +02.1	N 22 38.2 -00.1	7 10.5 +02.2	N 01 15.4 +00.1	11						
12	21 09.2 +00.7	N 03 01.8 +00.8	281 12.8 +02.2	N 22 38.1 +00.0	22 12.7 +02.2	N 01 15.5 +00.1	12						
13	36 09.9 +00.7	N 03 02.6 +00.8	296 15.0 +02.1	N 22 38.1 -00.1	37 14.9 +02.2	N 01 15.6 +00.1	13						
14	51 10.6 +00.7	N 03 03.4 +00.8	311 17.1 +02.1	N 22 38.0 +00.0	52 17.1 +02.2	N 01 15.7 +00.1	14						
15	66 11.3 +00.6	N 03 04.2 +00.7	326 19.2 +02.2	N 22 38.0 +00.0	67 19.3 +02.2	N 01 15.8 +00.1	15						
16	81 11.9 +00.7	N 03 04.9 +00.8	341 21.4 +02.1	N 22 38.0 -00.1	82 21.5 +02.2	N 01 15.9 +00.2	16						
17	96 12.6 +00.7	N 03 05.7 +00.8	356 23.5 +02.2	N 22 37.9 +00.0	97 23.7 +02.2	N 01 16.1 +00.1	17						
18	111 13.3 +00.7	N 03 06.5 +00.7	11 25.7 +02.1	N 22 37.9 +00.0	112 25.9 +02.2	N 01 16.2 +00.1	18						
19	126 14.0 +00.7	N 03 07.2 +00.8	26 27.8 +02.1	N 22 37.9 -00.1	127 28.1 +02.1	N 01 16.3 +00.1	19						
20	141 14.7 +00.7	N 03 08.0 +00.8	41 29.9 +02.2	N 22 37.8 +00.0	142 30.2 +02.2	N 01 16.4 +00.1	20						
21	156 15.4 +00.7	N 03 08.8 +00.7	56 32.1 +02.1	N 22 37.8 -00.1	157 32.4 +02.2	N 01 16.5 +00.1	21						
22	171 16.1 +00.7	N 03 09.5 +00.8	71 34.2 +02.1	N 22 37.7 +00.0	172 34.6 +02.2	N 01 16.6 +00.1	22						
23	186 16.8 +00.7	N 03 10.3 +00.8	86 36.3 +02.2	N 22 37.7 +00.0	187 36.8 +02.2	N 01 16.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 351° 351° 351° 351° 350° 350°		SHA 251° 251° 251° 251° 251° 251°		SHA 352° 352° 352° 352° 352° 352°								
	Greenwich Culmination Time: 10:35		Greenwich Culmination Time: 17:14		Greenwich Culmination Time: 10:31								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 24.1 +00.1	N 12 27.8 +00.9	154 50.4 -00.7	N 20 22.0 +00.8	100 24.3 -36.0	N 25 58.0 -07.0	00						
01	195 24.2 +00.1	N 12 28.7 +00.8	169 49.7 -00.6	N 20 22.8 +00.8	114 48.3 -35.9	N 25 51.0 -07.3	01						
02	210 24.3 +00.1	N 12 29.5 +00.9	184 49.1 -00.7	N 20 23.6 +00.8	129 12.4 -35.7	N 25 43.7 -07.4	02						
03	225 24.4 +00.1	N 12 30.4 +00.8	199 48.4 -00.7	N 20 24.4 +00.8	143 36.7 -35.7	N 25 36.3 -07.6	03						
04	240 24.5 +00.1	N 12 31.2 +00.8	214 47.7 -00.7	N 20 25.2 +00.8	158 01.0 -35.5	N 25 28.7 -07.7	04						
05	255 24.6 +00.2	N 12 32.0 +00.8	229 47.0 -00.6	N 20 26.0 +00.7	172 25.5 -35.4	N 25 21.0 -07.9	05						
06	270 24.8 +00.1	N 12 32.8 +00.9	244 46.4 -00.7	N 20 26.7 +00.8	186 50.1 -35.3	N 25 13.1 -08.0	06						
07	285 24.9 +00.1	N 12 33.7 +00.8	259 45.7 -00.7	N 20 27.5 +00.8	201 14.8 -35.1	N 25 05.1 -08.2	07						
08	300 25.0 +00.1	N 12 34.5 +00.8	274 45.0 -00.7	N 20 28.3 +00.8	215 39.7 -35.1	N 24 56.9 -08.3	08						
09	315 25.1 +00.1	N 12 35.3 +00.9	289 44.3 -00.6	N 20 29.1 +00.7	230 04.6 -34.9	N 24 48.6 -08.5	09						
10	330 25.2 +00.1	N 12 36.2 +00.8	304 43.7 -00.7	N 20 29.8 +00.8	244 29.7 -34.8	N 24 40.1 -08.6	10						
11	345 25.3 +00.2	N 12 37.0 +00.8	319 43.0 -00.7	N 20 30.6 +00.8	258 54.9 -34.7	N 24 31.5 -08.8	11						
12	0 25.5 +00.1	N 12 37.8 +00.9	334 42.3 -00.7	N 20 31.4 +00.8	273 20.2 -34.5	N 24 22.7 -08.9	12						
13	15 25.6 +00.1	N 12 38.7 +00.8	349 41.6 -00.7	N 20 32.2 +00.7	287 45.7 -34.5	N 24 13.8 -09.0	13						
14	30 25.7 +00.1	N 12 39.5 +00.8	4 40.9 -00.6	N 20 32.9 +00.8	302 11.2 -34.3	N 24 04.8 -09.2	14						
15	45 25.8 +00.1	N 12 40.3 +00.9	19 40.3 -00.7	N 20 33.7 +00.8	316 36.9 -34.2	N 23 55.6 -09.3	15						
16	60 25.9 +00.1	N 12 41.2 +00.8	34 39.6 -00.7	N 20 34.5 +00.8	331 02.7 -34.0	N 23 46.3 -09.5	16						
17	75 26.0 +00.1	N 12 42.0 +00.8	49 38.9 -00.7	N 20 35.3 +00.7	345 28.7 -34.0	N 23 36.8 -09.6	17						
18	90 26.1 +00.2	N 12 42.8 +00.8	64 38.2 -00.7	N 20 36.0 +00.8	359 54.7 -33.8	N 23 27.2 -09.7	18						
19	105 26.3 +00.1	N 12 43.6 +00.9	79 37.5 -00.6	N 20 36.8 +00.8	14 20.9 -33.7	N 23 17.5 -09.8	19						
20	120 26.4 +00.1	N 12 44.5 +00.8	94 36.9 -00.7	N 20 37.6 +00.7	28 47.2 -33.6	N 23 07.7 -10.0	20						
21	135 26.5 +00.1	N 12 45.3 +00.8	109 36.2 -00.7	N 20 38.3 +00.8	43 13.6 -33.4	N 22 57.7 -10.1	21						
22	150 26.6 +00.1	N 12 46.1 +00.8	124 35.5 -00.7	N 20 39.1 +00.7	57 40.2 -33.3	N 22 47.6 -10.3	22						
23	165 26.7 +00.1	N 12 46.9 +00.9	139 34.8 -00.7	N 20 39.8 +00.8	72 06.9 -33.2	N 22 37.3 -10.3	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 16'1 16'1 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 59'1 59'0 58'9 58'8 58'7 58'6								
	SHA 329° 329° 329° 329° 329° 328°		SHA 304° 303° 303° 303° 303° 303°		SHA 248° 246° 243° 241° 238° 236°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 13:41		Greenwich Culmination Time: 18:00								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	201 17.5 +00.7	N 03 11.1 +00.8	101 38.5 +02.1	N 22 37.7 -00.1	202 39.0 +02.2	N 01 16.8 +00.1	00						
01	216 18.2 +00.7	N 03 11.9 +00.7	116 40.6 +02.2	N 22 37.6 +00.0	217 41.2 +02.2	N 01 16.9 +00.2	01						
02	231 18.9 +00.7	N 03 12.6 +00.8	131 42.8 +02.1	N 22 37.6 -00.1	232 43.4 +02.2	N 01 17.1 +00.1	02						
03	246 19.6 +00.7	N 03 13.4 +00.8	146 44.9 +02.1	N 22 37.5 +00.0	247 45.6 +02.2	N 01 17.2 +00.1	03						
04	261 20.3 +00.7	N 03 14.2 +00.7	161 47.0 +02.2	N 22 37.5 +00.0	262 47.8 +02.2	N 01 17.3 +00.1	04						
05	276 21.0 +00.6	N 03 14.9 +00.8	176 49.2 +02.1	N 22 37.5 -00.1	277 50.0 +02.2	N 01 17.4 +00.1	05						
06	291 21.6 +00.7	N 03 15.7 +00.8	191 51.3 +02.1	N 22 37.4 +00.0	292 52.2 +02.2	N 01 17.5 +00.1	06						
07	306 22.3 +00.7	N 03 16.5 +00.7	206 53.4 +02.2	N 22 37.4 -00.1	307 54.4 +02.2	N 01 17.6 +00.1	07						
08	321 23.0 +00.7	N 03 17.2 +00.8	221 55.6 +02.1	N 22 37.3 +00.0	322 56.6 +02.2	N 01 17.7 +00.1	08						
09	336 23.7 +00.7	N 03 18.0 +00.8	236 57.7 +02.1	N 22 37.3 +00.0	337 58.8 +02.1	N 01 17.8 +00.2	09						
10	351 24.4 +00.7	N 03 18.8 +00.8	251 59.8 +02.2	N 22 37.3 -00.1	353 00.9 +02.2	N 01 18.0 +00.1	10						
11	6 25.1 +00.7	N 03 19.6 +00.7	267 02.0 +02.1	N 22 37.2 +00.0	8 03.1 +02.2	N 01 18.1 +00.1	11						
12	21 25.8 +00.7	N 03 20.3 +00.8	282 04.1 +02.1	N 22 37.2 +00.0	23 05.3 +02.2	N 01 18.2 +00.1	12						
13	36 26.5 +00.7	N 03 21.1 +00.8	297 06.2 +02.2	N 22 37.2 -00.1	38 07.5 +02.2	N 01 18.3 +00.1	13						
14	51 27.2 +00.7	N 03 21.9 +00.7	312 08.4 +02.1	N 22 37.1 +00.0	53 09.7 +02.2	N 01 18.4 +00.1	14						
15	66 27.9 +00.7	N 03 22.6 +00.8	327 10.5 +02.1	N 22 37.1 -00.1	68 11.9 +02.2	N 01 18.5 +00.1	15						
16	81 28.6 +00.7	N 03 23.4 +00.8	342 12.6 +02.1	N 22 37.0 +00.0	83 14.1 +02.2	N 01 18.6 +00.1	16						
17	96 29.3 +00.7	N 03 24.2 +00.7	357 14.7 +02.2	N 22 37.0 +00.0	98 16.3 +02.2	N 01 18.7 +00.1	17						
18	111 30.0 +00.7	N 03 24.9 +00.8	12 16.9 +02.1	N 22 37.0 -00.1	113 18.5 +02.2	N 01 18.8 +00.2	18						
19	126 30.7 +00.7	N 03 25.7 +00.8	27 19.0 +02.1	N 22 36.9 +00.0	128 20.7 +02.2	N 01 19.0 +00.1	19						
20	141 31.4 +00.6	N 03 26.5 +00.7	42 21.1 +02.2	N 22 36.9 -00.1	143 22.9 +02.2	N 01 19.1 +00.1	20						
21	156 32.0 +00.7	N 03 27.2 +00.8	57 23.3 +02.1	N 22 36.8 +00.0	158 25.1 +02.2	N 01 19.2 +00.1	21						
22	171 32.7 +00.7	N 03 28.0 +00.8	72 25.4 +02.1	N 22 36.8 +00.0	173 27.3 +02.2	N 01 19.3 +00.1	22						
23	186 33.4 +00.7	N 03 28.8 +00.7	87 27.5 +02.2	N 22 36.8 -00.1	188 29.5 +02.2	N 01 19.4 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 350° 350° 350° 350° 350° 350°		SHA 251° 251° 251° 251° 250° 250°		SHA 352° 352° 352° 352° 352° 351°								
	Greenwich Culmination Time: 10:34		Greenwich Culmination Time: 17:10		Greenwich Culmination Time: 10:27								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 26.8 +00.1	N 12 47.8 +00.8	154 34.1 -00.7	N 20 40.6 +00.8	86 33.7 -33.1	N 22 27.0 -10.5	00						
01	195 26.9 +00.2	N 12 48.6 +00.8	169 33.4 -00.6	N 20 41.4 +00.7	101 00.6 -33.0	N 22 16.5 -10.6	01						
02	210 27.1 +00.1	N 12 49.4 +00.8	184 32.8 -00.7	N 20 42.1 +00.8	115 27.6 -32.8	N 22 05.9 -10.7	02						
03	225 27.2 +00.1	N 12 50.2 +00.9	199 32.1 -00.7	N 20 42.9 +00.7	129 54.8 -32.7	N 21 55.2 -10.8	03						
04	240 27.3 +00.1	N 12 51.1 +00.8	214 31.4 -00.7	N 20 43.6 +00.8	144 22.1 -32.6	N 21 44.4 -10.9	04						
05	255 27.4 +00.1	N 12 51.9 +00.8	229 30.7 -00.7	N 20 44.4 +00.8	158 49.5 -32.5	N 21 33.5 -11.1	05						
06	270 27.5 +00.1	N 12 52.7 +00.8	244 30.0 -00.7	N 20 45.2 +00.7	173 17.0 -32.3	N 21 22.4 -11.1	06						
07	285 27.6 +00.1	N 12 53.5 +00.9	259 29.3 -00.7	N 20 45.9 +00.8	187 44.7 -32.2	N 21 11.3 -11.3	07						
08	300 27.7 +00.1	N 12 54.4 +00.8	274 28.6 -00.7	N 20 46.7 +00.7	202 12.5 -32.1	N 21 00.0 -11.3	08						
09	315 27.8 +00.2	N 12 55.2 +00.8	289 27.9 -00.6	N 20 47.4 +00.8	216 40.4 -32.0	N 20 48.7 -11.5	09						
10	330 28.0 +00.1	N 12 56.0 +00.8	304 27.3 -00.7	N 20 48.2 +00.7	231 08.4 -31.9	N 20 37.2 -11.6	10						
11	345 28.1 +00.1	N 12 56.8 +00.8	319 26.6 -00.7	N 20 48.9 +00.8	245 36.5 -31.7	N 20 25.6 -11.7	11						
12	0 28.2 +00.1	N 12 57.6 +00.9	334 25.9 -00.7	N 20 49.7 +00.7	260 04.8 -31.7	N 20 13.9 -11.7	12						
13	15 28.3 +00.1	N 12 58.5 +00.8	349 25.2 -00.7	N 20 50.4 +00.8	274 33.1 -31.5	N 20 02.2 -11.9	13						
14	30 28.4 +00.1	N 12 59.3 +00.8	4 24.5 -00.7	N 20 51.2 +00.7	289 01.6 -31.4	N 19 50.3 -12.0	14						
15	45 28.5 +00.1	N 13 00.1 +00.8	19 23.8 -00.7	N 20 51.9 +00.8	303 30.2 -31.2	N 19 38.3 -12.0	15						
16	60 28.6 +00.1	N 13 00.9 +00.8	34 23.1 -00.7	N 20 52.7 +00.7	317 59.0 -31.2	N 19 26.3 -12.2	16						
17	75 28.7 +00.1	N 13 01.7 +00.9	49 22.4 -00.7	N 20 53.4 +00.8	332 27.8 -31.0	N 19 14.1 -12.2	17						
18	90 28.8 +00.1	N 13 02.6 +00.8	64 21.7 -00.7	N 20 54.2 +00.7	346 56.8 -31.0	N 19 01.9 -12.3	18						
19	105 28.9 +00.2	N 13 03.4 +00.8	79 21.0 -00.7	N 20 54.9 +00.8	1 25.8 -30.8	N 18 49.6 -12.5	19						
20	120 29.1 +00.1	N 13 04.2 +00.8	94 20.3 -00.6	N 20 55.7 +00.7	15 55.0 -30.7	N 18 37.1 -12.5	20						
21	135 29.2 +00.1	N 13 05.0 +00.8	109 19.7 -00.7	N 20 56.4 +00.7	30 24.3 -30.6	N 18 24.6 -12.6	21						
22	150 29.3 +00.1	N 13 05.8 +00.9	124 19.0 -00.7	N 20 57.1 +00.8	44 53.7 -30.5	N 18 12.0 -12.6	22						
23	165 29.4 +00.1	N 13 06.7 +00.8	139 18.3 -00.7	N 20 57.9 +00.7	59 23.2 -30.4	N 17 59.4 -12.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'9 15'8 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'5 58'3 58'2 58'1 58'0 57'9								
	SHA 328° 328° 328° 328° 328° 328°		SHA 302° 302° 302° 302° 302° 301°		SHA 233° 231° 229° 226° 224° 222°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 13:42		Greenwich Culmination Time: 18:54								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	201 34.1 +00.7	N 03 29.5 +00.8	102 29.7 +02.1	N 22 36.7 +00.0	203 31.7 +02.1	N 01 19.5 +00.1	00						
01	216 34.8 +00.7	N 03 30.3 +00.8	117 31.8 +02.1	N 22 36.7 -00.1	218 33.8 +02.2	N 01 19.6 +00.1	01						
02	231 35.5 +00.7	N 03 31.1 +00.7	132 33.9 +02.2	N 22 36.6 +00.0	233 36.0 +02.2	N 01 19.7 +00.1	02						
03	246 36.2 +00.7	N 03 31.8 +00.8	147 36.1 +02.1	N 22 36.6 +00.0	248 38.2 +02.2	N 01 19.8 +00.1	03						
04	261 36.9 +00.7	N 03 32.6 +00.8	162 38.2 +02.1	N 22 36.6 -00.1	263 40.4 +02.2	N 01 19.9 +00.2	04						
05	276 37.6 +00.7	N 03 33.4 +00.8	177 40.3 +02.1	N 22 36.5 +00.0	278 42.6 +02.2	N 01 20.1 +00.1	05						
06	291 38.3 +00.7	N 03 34.2 +00.7	192 42.4 +02.2	N 22 36.5 -00.1	293 44.8 +02.2	N 01 20.2 +00.1	06						
07	306 39.0 +00.7	N 03 34.9 +00.8	207 44.6 +02.1	N 22 36.4 +00.0	308 47.0 +02.2	N 01 20.3 +00.1	07						
08	321 39.7 +00.7	N 03 35.7 +00.8	222 46.7 +02.1	N 22 36.4 +00.0	323 49.2 +02.2	N 01 20.4 +00.1	08						
09	336 40.4 +00.7	N 03 36.5 +00.7	237 48.8 +02.1	N 22 36.4 -00.1	338 51.4 +02.2	N 01 20.5 +00.1	09						
10	351 41.1 +00.7	N 03 37.2 +00.8	252 50.9 +02.2	N 22 36.3 +00.0	353 53.6 +02.2	N 01 20.6 +00.1	10						
11	6 41.8 +00.6	N 03 38.0 +00.8	267 53.1 +02.1	N 22 36.3 -00.1	8 55.8 +02.2	N 01 20.7 +00.1	11						
12	21 42.4 +00.7	N 03 38.8 +00.7	282 55.2 +02.1	N 22 36.2 +00.0	23 58.0 +02.2	N 01 20.8 +00.1	12						
13	36 43.1 +00.7	N 03 39.5 +00.8	297 57.3 +02.2	N 22 36.2 +00.0	39 00.2 +02.2	N 01 20.9 +00.2	13						
14	51 43.8 +00.7	N 03 40.3 +00.8	312 59.5 +02.1	N 22 36.2 -00.1	54 02.4 +02.2	N 01 21.1 +00.1	14						
15	66 44.5 +00.7	N 03 41.1 +00.7	328 01.6 +02.1	N 22 36.1 +00.0	69 04.6 +02.2	N 01 21.2 +00.1	15						
16	81 45.2 +00.7	N 03 41.8 +00.8	343 03.7 +02.1	N 22 36.1 -00.1	84 06.8 +02.2	N 01 21.3 +00.1	16						
17	96 45.9 +00.7	N 03 42.6 +00.8	358 05.8 +02.2	N 22 36.0 +00.0	99 09.0 +02.1	N 01 21.4 +00.1	17						
18	111 46.6 +00.7	N 03 43.4 +00.7	13 08.0 +02.1	N 22 36.0 +00.0	114 11.1 +02.2	N 01 21.5 +00.1	18						
19	126 47.3 +00.7	N 03 44.1 +00.8	28 10.1 +02.1	N 22 36.0 -00.1	129 13.3 +02.2	N 01 21.6 +00.1	19						
20	141 48.0 +00.7	N 03 44.9 +00.8	43 12.2 +02.1	N 22 35.9 +00.0	144 15.5 +02.2	N 01 21.7 +00.1	20						
21	156 48.7 +00.7	N 03 45.7 +00.7	58 14.3 +02.2	N 22 35.9 -00.1	159 17.7 +02.2	N 01 21.8 +00.1	21						
22	171 49.4 +00.7	N 03 46.4 +00.8	73 16.5 +02.1	N 22 35.8 +00.0	174 19.9 +02.2	N 01 21.9 +00.1	22						
23	186 50.1 +00.7	N 03 47.2 +00.8	88 18.6 +02.1	N 22 35.8 -00.1	189 22.1 +02.2	N 01 22.0 +00.2	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 349° 349° 349° 349° 349° 349°		SHA 250° 250° 250° 250° 250° 250°		SHA 351° 351° 351° 351° 351° 351°								
	Greenwich Culmination Time: 10:33		Greenwich Culmination Time: 17:07		Greenwich Culmination Time: 10:24								

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	29.5 +00.1	N 13 07.5 +00.8		154	17.6 -00.7	N 20 58.6 +00.8		73	52.8 -30.2	N 17 46.6 -12.8		00
01	195	29.6 +00.1	N 13 08.3 +00.8		169	16.9 -00.7	N 20 59.4 +00.7		88	22.6 -30.2	N 17 33.8 -12.9		01
02	210	29.7 +00.1	N 13 09.1 +00.8		184	16.2 -00.7	N 21 00.1 +00.7		102	52.4 -30.0	N 17 20.9 -13.0		02
03	225	29.8 +00.1	N 13 09.9 +00.8		199	15.5 -00.7	N 21 00.8 +00.8		117	22.4 -30.0	N 17 07.9 -13.0		03
04	240	29.9 +00.1	N 13 10.7 +00.8		214	14.8 -00.7	N 21 01.6 +00.7		131	52.4 -29.8	N 16 54.9 -13.2		04
05	255	30.0 +00.1	N 13 11.5 +00.9		229	14.1 -00.7	N 21 02.3 +00.7		146	22.6 -29.8	N 16 41.7 -13.2		05
06	270	30.1 +00.1	N 13 12.4 +00.8		244	13.4 -00.7	N 21 03.0 +00.8		160	52.8 -29.6	N 16 28.5 -13.2		06
07	285	30.2 +00.2	N 13 13.2 +00.8		259	12.7 -00.7	N 21 03.8 +00.7		175	23.2 -29.6	N 16 15.3 -13.4		07
08	300	30.4 +00.1	N 13 14.0 +00.8		274	12.0 -00.7	N 21 04.5 +00.7		189	53.6 -29.4	N 16 01.9 -13.4		08
09	315	30.5 +00.1	N 13 14.8 +00.8		289	11.3 -00.7	N 21 05.2 +00.8		204	24.2 -29.3	N 15 48.5 -13.5		09
10	330	30.6 +00.1	N 13 15.6 +00.8		304	10.6 -00.7	N 21 06.0 +00.7		218	54.9 -29.3	N 15 35.0 -13.5		10
11	345	30.7 +00.1	N 13 16.4 +00.8		319	09.9 -00.7	N 21 06.7 +00.7		233	25.6 -29.1	N 15 21.5 -13.6		11
12	0	30.8 +00.1	N 13 17.2 +00.9		334	09.2 -00.7	N 21 07.4 +00.7		247	56.5 -29.1	N 15 07.9 -13.6		12
13	15	30.9 +00.1	N 13 18.1 +00.8		349	08.5 -00.7	N 21 08.1 +00.8		262	27.4 -28.9	N 14 54.3 -13.8		13
14	30	31.0 +00.1	N 13 18.9 +00.8		4	07.8 -00.7	N 21 08.9 +00.7		276	58.5 -28.9	N 14 40.5 -13.7		14
15	45	31.1 +00.1	N 13 19.7 +00.8		19	07.1 -00.7	N 21 09.6 +00.7		291	29.6 -28.7	N 14 26.8 -13.9		15
16	60	31.2 +00.1	N 13 20.5 +00.8		34	06.4 -00.7	N 21 10.3 +00.7		306	00.9 -28.7	N 14 12.9 -13.9		16
17	75	31.3 +00.1	N 13 21.3 +00.8		49	05.7 -00.7	N 21 11.0 +00.8		320	32.2 -28.6	N 13 59.0 -13.9		17
18	90	31.4 +00.1	N 13 22.1 +00.8		64	05.0 -00.7	N 21 11.8 +00.7		335	03.6 -28.5	N 13 45.1 -14.0		18
19	105	31.5 +00.1	N 13 22.9 +00.8		79	04.3 -00.7	N 21 12.5 +00.7		349	35.1 -28.4	N 13 31.1 -14.0		19
20	120	31.6 +00.1	N 13 23.7 +00.8		94	03.6 -00.7	N 21 13.2 +00.7		4	06.7 -28.3	N 13 17.1 -14.1		20
21	135	31.7 +00.1	N 13 24.5 +00.8		109	02.9 -00.7	N 21 13.9 +00.7		18	38.4 -28.3	N 13 03.0 -14.2		21
22	150	31.8 +00.1	N 13 25.3 +00.8		124	02.2 -00.7	N 21 14.6 +00.7		33	10.1 -28.1	N 12 48.8 -14.1		22
23	165	31.9 +00.1	N 13 26.1 +00.9		139	01.5 -00.7	N 21 15.3 +00.8		47	42.0 -28.1	N 12 34.7 -14.3		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'7 15'7 15'7 15'7 15'6 15'6				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 57'8 57'7 57'6 57'5 57'4 57'3				
	SHA 327° 327° 327° 327° 327° 327°				SHA 301° 301° 301° 301° 300° 300°				SHA 220° 218° 215° 213° 211° 209°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:43				Greenwich Culmination Time: 19:43				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	201	50.8 +00.7	N 03 48.0 +00.7		103	20.7 +02.1	N 22 35.7 +00.0		204	24.3 +02.2	N 01 22.2 +00.1		00
01	216	51.5 +00.7	N 03 48.7 +00.8		118	22.8 +02.2	N 22 35.7 +00.0		219	26.5 +02.2	N 01 22.3 +00.1		01
02	231	52.2 +00.7	N 03 49.5 +00.7		133	25.0 +02.1	N 22 35.7 -00.1		234	28.7 +02.2	N 01 22.4 +00.1		02
03	246	52.9 +00.6	N 03 50.2 +00.8		148	27.1 +02.1	N 22 35.6 +00.0		249	30.9 +02.2	N 01 22.5 +00.1		03
04	261	53.5 +00.7	N 03 51.0 +00.8		163	29.2 +02.1	N 22 35.6 -00.1		264	33.1 +02.2	N 01 22.6 +00.1		04
05	276	54.2 +00.7	N 03 51.8 +00.7		178	31.3 +02.1	N 22 35.5 +00.0		279	35.3 +02.2	N 01 22.7 +00.1		05
06	291	54.9 +00.7	N 03 52.5 +00.8		193	33.4 +02.2	N 22 35.5 +00.0		294	37.5 +02.2	N 01 22.8 +00.1		06
07	306	55.6 +00.7	N 03 53.3 +00.8		208	35.6 +02.1	N 22 35.5 -00.1		309	39.7 +02.2	N 01 22.9 +00.1		07
08	321	56.3 +00.7	N 03 54.1 +00.7		223	37.7 +02.1	N 22 35.4 +00.0		324	41.9 +02.2	N 01 23.0 +00.1		08
09	336	57.0 +00.7	N 03 54.8 +00.8		238	39.8 +02.1	N 22 35.4 -00.1		339	44.1 +02.2	N 01 23.1 +00.2		09
10	351	57.7 +00.7	N 03 55.6 +00.8		253	41.9 +02.2	N 22 35.3 +00.0		354	46.3 +02.2	N 01 23.3 +00.1		10
11	6	58.4 +00.7	N 03 56.4 +00.7		268	44.1 +02.1	N 22 35.3 +00.0		9	48.5 +02.2	N 01 23.4 +00.1		11
12	21	59.1 +00.7	N 03 57.1 +00.8		283	46.2 +02.1	N 22 35.3 -00.1		24	50.7 +02.2	N 01 23.5 +00.1		12
13	36	59.8 +00.7	N 03 57.9 +00.8		298	48.3 +02.1	N 22 35.2 +00.0		39	52.9 +02.1	N 01 23.6 +00.1		13
14	52	00.5 +00.7	N 03 58.7 +00.7		313	50.4 +02.1	N 22 35.2 -00.1		54	55.0 +02.2	N 01 23.7 +00.1		14
15	67	01.2 +00.7	N 03 59.4 +00.8		328	52.5 +02.2	N 22 35.1 +00.0		69	57.2 +02.2	N 01 23.8 +00.1		15
16	82	01.9 +00.7	N 04 00.2 +00.8		343	54.7 +02.1	N 22 35.1 -00.1		84	59.4 +02.2	N 01 23.9 +00.1		16
17	97	02.6 +00.7	N 04 01.0 +00.7		358	56.8 +02.1	N 22 35.0 +00.0		100	01.6 +02.2	N 01 24.0 +00.1		17
18	112	03.3 +00.7	N 04 01.7 +00.8		13	58.9 +02.1	N 22 35.0 +00.0		115	03.8 +02.2	N 01 24.1 +00.1		18
19	127	04.0 +00.6	N 04 02.5 +00.7		29	01.0 +02.1	N 22 35.0 -00.1		130	06.0 +02.2	N 01 24.2 +00.2		19
20	142	04.6 +00.7	N 04 03.2 +00.8		44	03.1 +02.2	N 22 34.9 +00.0		145	08.2 +02.2	N 01 24.4 +00.1		20
21	157	05.3 +00.7	N 04 04.0 +00.8		59	05.3 +02.1	N 22 34.9 -00.1		160	10.4 +02.2	N 01 24.5 +00.1		21
22	172	06.0 +00.7	N 04 04.8 +00.7		74	07.4 +02.1	N 22 34.8 +00.0		175	12.6 +02.2	N 01 24.6 +00.1		22
23	187	06.7 +00.7	N 04 05.5 +00.8		89	09.5 +02.1	N 22 34.8 +00.0		190	14.8 +02.2	N 01 24.7 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 349° 349° 349° 348° 348° 348°				SHA 250° 250° 250° 250° 250° 250°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:32				Greenwich Culmination Time: 17:04				Greenwich Culmination Time: 10:20				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 34%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 32.0 +00.1	N 13	27.0 +00.8		154 00.8 -00.7	N 21	16.1 +00.7		62 13.9 -28.0	N 12	20.4 -14.2		00
01	195 32.1 +00.1	N 13	27.8 +00.8		169 00.1 -00.7	N 21	16.8 +00.7		76 45.9 -27.9	N 12	06.2 -14.4		01
02	210 32.2 +00.1	N 13	28.6 +00.8		183 59.4 -00.7	N 21	17.5 +00.7		91 18.0 -27.8	N 11	51.8 -14.3		02
03	225 32.3 +00.1	N 13	29.4 +00.8		198 58.7 -00.8	N 21	18.2 +00.7		105 50.2 -27.8	N 11	37.5 -14.4		03
04	240 32.4 +00.2	N 13	30.2 +00.8		213 57.9 -00.7	N 21	18.9 +00.7		120 22.4 -27.6	N 11	23.1 -14.5		04
05	255 32.6 +00.1	N 13	31.0 +00.8		228 57.2 -00.7	N 21	19.6 +00.7		134 54.8 -27.6	N 11	08.6 -14.4		05
06	270 32.7 +00.1	N 13	31.8 +00.8		243 56.5 -00.7	N 21	20.3 +00.7		149 27.2 -27.6	N 10	54.2 -14.6		06
07	285 32.8 +00.1	N 13	32.6 +00.8		258 55.8 -00.7	N 21	21.0 +00.7		163 59.6 -27.4	N 10	39.6 -14.5		07
08	300 32.9 +00.1	N 13	33.4 +00.8		273 55.1 -00.7	N 21	21.7 +00.8		178 32.2 -27.4	N 10	25.1 -14.6		08
09	315 33.0 +00.1	N 13	34.2 +00.8		288 54.4 -00.7	N 21	22.5 +00.7		193 04.8 -27.3	N 10	10.5 -14.6		09
10	330 33.1 +00.1	N 13	35.0 +00.8		303 53.7 -00.7	N 21	23.2 +00.7		207 37.5 -27.3	N 09	55.9 -14.6		10
11	345 33.2 +00.1	N 13	35.8 +00.8		318 53.0 -00.7	N 21	23.9 +00.7		222 10.2 -27.1	N 09	41.3 -14.7		11
12	0 33.3 +00.1	N 13	36.6 +00.8		333 52.3 -00.7	N 21	24.6 +00.7		236 43.1 -27.2	N 09	26.6 -14.7		12
13	15 33.4 +00.1	N 13	37.4 +00.8		348 51.6 -00.7	N 21	25.3 +00.7		251 15.9 -27.0	N 09	11.9 -14.8		13
14	30 33.5 +00.1	N 13	38.2 +00.8		3 50.9 -00.7	N 21	26.0 +00.7		265 48.9 -27.0	N 08	57.1 -14.7		14
15	45 33.6 +00.1	N 13	39.0 +00.8		18 50.2 -00.8	N 21	26.7 +00.7		280 21.9 -26.9	N 08	42.4 -14.8		15
16	60 33.7 +00.1	N 13	39.8 +00.8		33 49.4 -00.7	N 21	27.4 +00.7		294 55.0 -26.9	N 08	27.6 -14.8		16
17	75 33.8 +00.1	N 13	40.6 +00.8		48 48.7 -00.7	N 21	28.1 +00.7		309 28.1 -26.8	N 08	12.8 -14.9		17
18	90 33.9 +00.1	N 13	41.4 +00.8		63 48.0 -00.7	N 21	28.8 +00.7		324 01.3 -26.7	N 07	57.9 -14.8		18
19	105 34.0 +00.1	N 13	42.2 +00.8		78 47.3 -00.7	N 21	29.5 +00.7		338 34.6 -26.7	N 07	43.1 -14.9		19
20	120 34.1 +00.1	N 13	43.0 +00.8		93 46.6 -00.7	N 21	30.2 +00.7		353 07.9 -26.6	N 07	28.2 -14.9		20
21	135 34.2 +00.1	N 13	43.8 +00.8		108 45.9 -00.7	N 21	30.9 +00.6		7 41.3 -26.6	N 07	13.3 -14.9		21
22	150 34.3 +00.1	N 13	44.6 +00.8		123 45.2 -00.8	N 21	31.5 +00.7		22 14.7 -26.5	N 06	58.4 -14.9		22
23	165 34.4 +00.1	N 13	45.4 +00.8		138 44.4 -00.7	N 21	32.2 +00.7		36 48.2 -26.5	N 06	43.5 -15.0		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 15'6 15'5 15'5 15'5 15'5 15'4				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 57'1 57'0 56'9 56'8 56'7 56'6				
	SHA 326° 326° 326° 326° 326° 326°				SHA 300° 300° 299° 299° 299° 299°				SHA 207° 205° 203° 201° 199° 197°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:44				Greenwich Culmination Time: 20:28				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	202 07.4 +00.7	N 04	06.3 +00.8		104 11.6 +02.1	N 22	34.8 -00.1		205 17.0 +02.2	N 01	24.8 +00.1		00
01	217 08.1 +00.7	N 04	07.1 +00.7		119 13.7 +02.1	N 22	34.7 +00.0		220 19.2 +02.2	N 01	24.9 +00.1		01
02	232 08.8 +00.7	N 04	07.8 +00.8		134 15.8 +02.2	N 22	34.7 -00.1		235 21.4 +02.2	N 01	25.0 +00.1		02
03	247 09.5 +00.7	N 04	08.6 +00.8		149 18.0 +02.1	N 22	34.6 +00.0		250 23.6 +02.2	N 01	25.1 +00.1		03
04	262 10.2 +00.7	N 04	09.4 +00.7		164 20.1 +02.1	N 22	34.6 -00.1		265 25.8 +02.2	N 01	25.2 +00.1		04
05	277 10.9 +00.7	N 04	10.1 +00.8		179 22.2 +02.1	N 22	34.5 +00.0		280 28.0 +02.2	N 01	25.3 +00.1		05
06	292 11.6 +00.7	N 04	10.9 +00.7		194 24.3 +02.1	N 22	34.5 +00.0		295 30.2 +02.2	N 01	25.4 +00.2		06
07	307 12.3 +00.7	N 04	11.6 +00.8		209 26.4 +02.1	N 22	34.5 -00.1		310 32.4 +02.2	N 01	25.6 +00.1		07
08	322 13.0 +00.7	N 04	12.4 +00.8		224 28.5 +02.2	N 22	34.4 +00.0		325 34.6 +02.2	N 01	25.7 +00.1		08
09	337 13.7 +00.7	N 04	13.2 +00.7		239 30.7 +02.1	N 22	34.4 -00.1		340 36.8 +02.2	N 01	25.8 +00.1		09
10	352 14.4 +00.7	N 04	13.9 +00.8		254 32.8 +02.1	N 22	34.3 +00.0		355 39.0 +02.2	N 01	25.9 +00.1		10
11	7 15.1 +00.6	N 04	14.7 +00.8		269 34.9 +02.1	N 22	34.3 -00.1		10 41.2 +02.2	N 01	26.0 +00.1		11
12	22 15.7 +00.7	N 04	15.5 +00.7		284 37.0 +02.1	N 22	34.2 +00.0		25 43.4 +02.2	N 01	26.1 +00.1		12
13	37 16.4 +00.7	N 04	16.2 +00.8		299 39.1 +02.1	N 22	34.2 +00.0		40 45.6 +02.2	N 01	26.2 +00.1		13
14	52 17.1 +00.7	N 04	17.0 +00.7		314 41.2 +02.2	N 22	34.2 -00.1		55 47.8 +02.2	N 01	26.3 +00.1		14
15	67 17.8 +00.7	N 04	17.7 +00.8		329 43.4 +02.1	N 22	34.1 +00.0		70 50.0 +02.2	N 01	26.4 +00.1		15
16	82 18.5 +00.7	N 04	18.5 +00.8		344 45.5 +02.1	N 22	34.1 -00.1		85 52.2 +02.1	N 01	26.5 +00.1		16
17	97 19.2 +00.7	N 04	19.3 +00.7		359 47.6 +02.1	N 22	34.0 +00.0		100 54.3 +02.2	N 01	26.6 +00.2		17
18	112 19.9 +00.7	N 04	20.0 +00.8		14 49.7 +02.1	N 22	34.0 +00.0		115 56.5 +02.2	N 01	26.8 +00.1		18
19	127 20.6 +00.7	N 04	20.8 +00.8		29 51.8 +02.1	N 22	34.0 -00.1		130 58.7 +02.2	N 01	26.9 +00.1		19
20	142 21.3 +00.7	N 04	21.6 +00.7		44 53.9 +02.1	N 22	33.9 +00.0		146 00.9 +02.2	N 01	27.0 +00.1		20
21	157 22.0 +00.7	N 04	22.3 +00.8		59 56.0 +02.1	N 22	33.9 -00.1		161 03.1 +02.2	N 01	27.1 +00.1		21
22	172 22.7 +00.7	N 04	23.1 +00.7		74 58.1 +02.2	N 22	33.8 -00.0		176 05.3 +02.2	N 01	27.2 +00.1		22
23	187 23.4 +00.7	N 04	23.8 +00.8		90 00.3 +02.1	N 22	33.8 -00.1		191 07.5 +02.2	N 01	27.3 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 348° 348° 348° 348° 348° 347°				SHA 250° 250° 250° 250° 250° 250°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:31				Greenwich Culmination Time: 17:00				Greenwich Culmination Time: 10:17				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 37%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 34.5 +00.1	N 13	46.2 +00.8	153 43.7 -00.7	N 21	32.9 +00.7	51 21.7 -26.4	N 06	28.5 -15.0	00			
01	195 34.6 +00.1	N 13	47.0 +00.8	168 43.0 -00.7	N 21	33.6 +00.7	65 55.3 -26.4	N 06	13.5 -14.9	01			
02	210 34.7 +00.1	N 13	47.8 +00.8	183 42.3 -00.7	N 21	34.3 +00.7	80 28.9 -26.3	N 05	58.6 -15.0	02			
03	225 34.8 +00.1	N 13	48.6 +00.8	198 41.6 -00.7	N 21	35.0 +00.7	95 02.6 -26.3	N 05	43.6 -15.0	03			
04	240 34.9 +00.1	N 13	49.4 +00.8	213 40.9 -00.7	N 21	35.7 +00.7	109 36.3 -26.2	N 05	28.6 -15.1	04			
05	255 35.0 +00.1	N 13	50.2 +00.8	228 40.2 -00.8	N 21	36.4 +00.7	124 10.1 -26.2	N 05	13.5 -15.0	05			
06	270 35.1 +00.0	N 13	51.0 +00.8	243 39.4 -00.7	N 21	37.1 +00.6	138 43.9 -26.1	N 04	58.5 -15.0	06			
07	285 35.1 +00.1	N 13	51.8 +00.8	258 38.7 -00.7	N 21	37.7 +00.7	153 17.8 -26.1	N 04	43.5 -15.1	07			
08	300 35.2 +00.1	N 13	52.6 +00.8	273 38.0 -00.7	N 21	38.4 +00.7	167 51.7 -26.1	N 04	28.4 -15.0	08			
09	315 35.3 +00.1	N 13	53.4 +00.8	288 37.3 -00.7	N 21	39.1 +00.7	182 25.6 -26.0	N 04	13.4 -15.1	09			
10	330 35.4 +00.1	N 13	54.2 +00.8	303 36.6 -00.8	N 21	39.8 +00.7	196 59.6 -26.0	N 03	58.3 -15.0	10			
11	345 35.5 +00.1	N 13	55.0 +00.8	318 35.8 -00.7	N 21	40.5 +00.6	211 33.6 -25.9	N 03	43.3 -15.1	11			
12	0 35.6 +00.1	N 13	55.8 +00.8	333 35.1 -00.7	N 21	41.1 +00.7	226 07.7 -25.9	N 03	28.2 -15.1	12			
13	15 35.7 +00.1	N 13	56.6 +00.8	348 34.4 -00.7	N 21	41.8 +00.7	240 41.8 -25.9	N 03	13.1 -15.0	13			
14	30 35.8 +00.1	N 13	57.4 +00.7	3 33.7 -00.7	N 21	42.5 +00.7	255 15.9 -25.8	N 02	58.1 -15.1	14			
15	45 35.9 +00.1	N 13	58.1 +00.8	18 33.0 -00.8	N 21	43.2 +00.7	269 50.1 -25.8	N 02	43.0 -15.1	15			
16	60 36.0 +00.1	N 13	58.9 +00.8	33 32.2 -00.7	N 21	43.9 +00.6	284 24.3 -25.8	N 02	27.9 -15.0	16			
17	75 36.1 +00.1	N 13	59.7 +00.8	48 31.5 -00.7	N 21	44.5 +00.7	298 58.5 -25.8	N 02	12.9 -15.1	17			
18	90 36.2 +00.1	N 14	00.5 +00.8	63 30.8 -00.7	N 21	45.2 +00.7	313 32.7 -25.7	N 01	57.8 -15.1	18			
19	105 36.3 +00.1	N 14	01.3 +00.8	78 30.1 -00.7	N 21	45.9 +00.6	328 07.0 -25.7	N 01	42.7 -15.0	19			
20	120 36.4 +00.1	N 14	02.1 +00.8	93 29.4 -00.8	N 21	46.5 +00.7	342 41.3 -25.6	N 01	27.7 -15.1	20			
21	135 36.5 +00.1	N 14	02.9 +00.8	108 28.6 -00.7	N 21	47.2 +00.7	357 15.7 -25.7	N 01	12.6 -15.0	21			
22	150 36.6 +00.1	N 14	03.7 +00.8	123 27.9 -00.7	N 21	47.9 +00.6	11 50.0 -25.6	N 00	57.6 -15.1	22			
23	165 36.7 +00.1	N 14	04.5 +00.8	138 27.2 -00.7	N 21	48.5 +00.7	26 24.4 -25.6	N 00	42.5 -15.0	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 15'3 15'3 15'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'6 56'5 56'4 56'3 56'2 56'1						
	SHA 325° 325° 325° 325° 325° 325°			SHA 299° 298° 298° 298° 298° 298°			SHA 195° 193° 192° 190° 188° 186°						
	Greenwich Culmination Time: 11:57			Greenwich Culmination Time: 13:45			Greenwich Culmination Time: 21:11						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	202 24.1 +00.7	N 04	24.6 +00.8	105 02.4 +02.1	N 22	33.7 +00.0	206 09.7 +02.2	N 01	27.4 +00.1	00			
01	217 24.8 +00.7	N 04	25.4 +00.7	120 04.5 +02.1	N 22	33.7 +00.0	221 11.9 +02.2	N 01	27.5 +00.1	01			
02	232 25.5 +00.7	N 04	26.1 +00.8	135 06.6 +02.1	N 22	33.7 -00.1	236 14.1 +02.2	N 01	27.6 +00.1	02			
03	247 26.2 +00.7	N 04	26.9 +00.7	150 08.7 +02.1	N 22	33.6 +00.0	251 16.3 +02.2	N 01	27.7 +00.1	03			
04	262 26.9 +00.6	N 04	27.6 +00.8	165 10.8 +02.1	N 22	33.6 -00.1	266 18.5 +02.2	N 01	27.8 +00.1	04			
05	277 27.5 +00.7	N 04	28.4 +00.8	180 12.9 +02.1	N 22	33.5 +00.0	281 20.7 +02.2	N 01	27.9 +00.2	05			
06	292 28.2 +00.7	N 04	29.2 +00.7	195 15.0 +02.2	N 22	33.5 -00.1	296 22.9 +02.2	N 01	28.1 +00.1	06			
07	307 28.9 +00.7	N 04	29.9 +00.8	210 17.2 +02.1	N 22	33.4 +00.0	311 25.1 +02.2	N 01	28.2 +00.1	07			
08	322 29.6 +00.7	N 04	30.7 +00.7	225 19.3 +02.1	N 22	33.4 -00.1	326 27.3 +02.2	N 01	28.3 +00.1	08			
09	337 30.3 +00.7	N 04	31.4 +00.8	240 21.4 +02.1	N 22	33.3 +00.0	341 29.5 +02.2	N 01	28.4 +00.1	09			
10	352 31.0 +00.7	N 04	32.2 +00.8	255 23.5 +02.1	N 22	33.3 +00.0	356 31.7 +02.2	N 01	28.5 +00.1	10			
11	7 31.7 +00.7	N 04	33.0 +00.7	270 25.6 +02.1	N 22	33.3 -00.1	11 33.9 +02.2	N 01	28.6 +00.1	11			
12	22 32.4 +00.7	N 04	33.7 +00.8	285 27.7 +02.1	N 22	33.2 +00.0	26 36.1 +02.2	N 01	28.7 +00.1	12			
13	37 33.1 +00.7	N 04	34.5 +00.7	300 29.8 +02.1	N 22	33.2 -00.1	41 38.3 +02.2	N 01	28.8 +00.1	13			
14	52 33.8 +00.7	N 04	35.2 +00.8	315 31.9 +02.1	N 22	33.1 +00.0	56 40.5 +02.2	N 01	28.9 +00.1	14			
15	67 34.5 +00.7	N 04	36.0 +00.8	330 34.0 +02.1	N 22	33.1 -00.1	71 42.7 +02.2	N 01	29.0 +00.1	15			
16	82 35.2 +00.7	N 04	36.8 +00.7	345 36.1 +02.2	N 22	33.0 +00.0	86 44.9 +02.2	N 01	29.1 +00.1	16			
17	97 35.9 +00.7	N 04	37.5 +00.8	0 38.3 +02.1	N 22	33.0 +00.0	101 47.1 +02.2	N 01	29.2 +00.2	17			
18	112 36.6 +00.7	N 04	38.3 +00.7	15 40.4 +02.1	N 22	33.0 -00.1	116 49.3 +02.2	N 01	29.4 +00.1	18			
19	127 37.3 +00.7	N 04	39.0 +00.8	30 42.5 +02.1	N 22	32.9 +00.0	131 51.5 +02.2	N 01	29.5 +00.1	19			
20	142 38.0 +00.6	N 04	39.8 +00.8	45 44.6 +02.1	N 22	32.9 -00.1	146 53.7 +02.2	N 01	29.6 +00.1	20			
21	157 38.6 +00.7	N 04	40.6 +00.7	60 46.7 +02.1	N 22	32.8 +00.0	161 55.9 +02.2	N 01	29.7 +00.1	21			
22	172 39.3 +00.7	N 04	41.3 +00.8	75 48.8 +02.1	N 22	32.8 -00.1	176 58.1 +02.2	N 01	29.8 +00.1	22			
23	187 40.0 +00.7	N 04	42.1 +00.7	90 50.9 +02.1	N 22	32.7 +00.0	192 00.3 +02.2	N 01	29.9 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 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 347° 347° 347° 347° 347° 347°			SHA 250° 250° 250° 250° 250° 250°			SHA 351° 351° 351° 351° 351° 351°						
	Greenwich Culmination Time: 10:29			Greenwich Culmination Time: 16:57			Greenwich Culmination Time: 10:13						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 36.8 +00.1	N 14 05.3 +00.7	153 26.5 -00.8	N 21 49.2 +00.7	40 58.8 -25.6	N 00 27.5 -15.1	00	01					
01	195 36.9 +00.1	N 14 06.0 +00.8	168 25.7 -00.7	N 21 49.9 +00.6	55 33.2 -25.5	N 00 12.4 -15.0	01	02					
02	210 37.0 +00.0	N 14 06.8 +00.8	183 25.0 -00.7	N 21 50.5 +00.7	70 07.7 -25.5	S 00 02.6 +15.0	02	03					
03	225 37.0 +00.1	N 14 07.6 +00.8	198 24.3 -00.7	N 21 51.2 +00.7	84 42.2 -25.6	S 00 17.6 +15.0	03	04					
04	240 37.1 +00.1	N 14 08.4 +00.8	213 23.6 -00.8	N 21 51.9 +00.6	99 16.6 -25.5	S 00 32.6 +15.0	04	05					
05	255 37.2 +00.1	N 14 09.2 +00.8	228 22.8 -00.7	N 21 52.5 +00.7	113 51.1 -25.4	S 00 47.6 +14.9	05	06					
06	270 37.3 +00.1	N 14 10.0 +00.8	243 22.1 -00.7	N 21 53.2 +00.7	128 25.7 -25.5	S 01 02.5 +15.0	06	07					
07	285 37.4 +00.1	N 14 10.8 +00.7	258 21.4 -00.8	N 21 53.9 +00.6	143 00.2 -25.5	S 01 17.5 +14.9	07	08					
08	300 37.5 +00.1	N 14 11.5 +00.8	273 20.6 -00.7	N 21 54.5 +00.7	157 34.7 -25.4	S 01 32.4 +14.9	08	09					
09	315 37.6 +00.1	N 14 12.3 +00.8	288 19.9 -00.7	N 21 55.2 +00.6	172 09.3 -25.4	S 01 47.3 +14.9	09	10					
10	330 37.7 +00.1	N 14 13.1 +00.8	303 19.2 -00.7	N 21 55.8 +00.7	186 43.9 -25.5	S 02 02.2 +14.9	10	11					
11	345 37.8 +00.1	N 14 13.9 +00.8	318 18.5 -00.8	N 21 56.5 +00.6	201 18.4 -25.4	S 02 17.1 +14.9	11	12					
12	0 37.9 +00.1	N 14 14.7 +00.8	333 17.7 -00.7	N 21 57.1 +00.7	215 53.0 -25.4	S 02 32.0 +14.8	12	13					
13	15 38.0 +00.1	N 14 15.5 +00.7	348 17.0 -00.7	N 21 57.8 +00.6	230 27.6 -25.4	S 02 46.8 +14.9	13	14					
14	30 38.1 +00.0	N 14 16.2 +00.8	3 16.3 -00.8	N 21 58.4 +00.7	245 02.2 -25.4	S 03 01.7 +14.8	14	15					
15	45 38.1 +00.1	N 14 17.0 +00.8	18 15.5 -00.7	N 21 59.1 +00.6	259 36.8 -25.4	S 03 16.5 +14.8	15	16					
16	60 38.2 +00.1	N 14 17.8 +00.8	33 14.8 -00.7	N 21 59.7 +00.7	274 11.4 -25.4	S 03 31.3 +14.7	16	17					
17	75 38.3 +00.1	N 14 18.6 +00.8	48 14.1 -00.8	N 22 00.4 +00.6	288 46.0 -25.4	S 03 46.0 +14.7	17	18					
18	90 38.4 +00.1	N 14 19.4 +00.8	63 13.3 -00.7	N 22 01.0 +00.7	303 20.6 -25.3	S 04 00.7 +14.8	18	19					
19	105 38.5 +00.1	N 14 20.2 +00.7	78 12.6 -00.7	N 22 01.7 +00.6	317 55.3 -25.4	S 04 15.5 +14.6	19	20					
20	120 38.6 +00.1	N 14 20.9 +00.8	93 11.9 -00.8	N 22 02.3 +00.7	332 29.9 -25.4	S 04 30.1 +14.7	20	21					
21	135 38.7 +00.1	N 14 21.7 +00.8	108 11.1 -00.7	N 22 03.0 +00.6	347 04.5 -25.4	S 04 44.8 +14.6	21	22					
22	150 38.8 +00.1	N 14 22.5 +00.8	123 10.4 -00.7	N 22 03.6 +00.7	1 39.1 -25.4	S 04 59.4 +14.6	22	23					
23	165 38.9 +00.1	N 14 23.3 +00.8	138 09.7 -00.8	N 22 04.3 +00.6	16 13.7 -25.4	S 05 14.0 +14.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'2 15'2 15'2 15'2 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 55'9 55'8 55'8 55'7 55'6								
	SHA 325° 324° 324° 324° 324° 324°		SHA 297° 297° 297° 297° 297° 296°		SHA 184° 182° 180° 178° 177° 175°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 13:46		Greenwich Culmination Time: 21:53								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	202 40.7 +00.7	N 04 42.8 +00.8	105 53.0 +02.1	N 22 32.7 -00.1	207 02.5 +02.2	N 01 30.0 +00.1	00	01					
01	217 41.4 +00.7	N 04 43.6 +00.7	120 55.1 +02.1	N 22 32.6 +00.0	222 04.7 +02.2	N 01 30.1 +00.1	01	02					
02	232 42.1 +00.7	N 04 44.3 +00.8	135 57.2 +02.1	N 22 32.6 +00.0	237 06.9 +02.2	N 01 30.2 +00.1	02	03					
03	247 42.8 +00.7	N 04 45.1 +00.8	150 59.3 +02.1	N 22 32.6 -00.1	252 09.1 +02.2	N 01 30.3 +00.1	03	04					
04	262 43.5 +00.7	N 04 45.9 +00.7	166 01.4 +02.1	N 22 32.5 +00.0	267 11.3 +02.2	N 01 30.4 +00.1	04	05					
05	277 44.2 +00.7	N 04 46.6 +00.8	181 03.5 +02.1	N 22 32.5 -00.1	282 13.5 +02.2	N 01 30.5 +00.1	05	06					
06	292 44.9 +00.7	N 04 47.4 +00.7	196 05.6 +02.1	N 22 32.4 +00.0	297 15.7 +02.2	N 01 30.6 +00.2	06	07					
07	307 45.6 +00.7	N 04 48.1 +00.8	211 07.7 +02.2	N 22 32.4 -00.1	312 17.9 +02.2	N 01 30.8 +00.1	07	08					
08	322 46.3 +00.7	N 04 48.9 +00.8	226 09.9 +02.1	N 22 32.3 +00.0	327 20.1 +02.2	N 01 30.9 +00.1	08	09					
09	337 47.0 +00.7	N 04 49.7 +00.7	241 12.0 +02.1	N 22 32.3 +00.0	342 22.3 +02.2	N 01 31.0 +00.1	09	10					
10	352 47.7 +00.7	N 04 50.4 +00.8	256 14.1 +02.1	N 22 32.3 -00.1	357 24.5 +02.2	N 01 31.1 +00.1	10	11					
11	7 48.4 +00.7	N 04 51.2 +00.7	271 16.2 +02.1	N 22 32.2 +00.0	12 26.7 +02.2	N 01 31.2 +00.1	11	12					
12	22 49.1 +00.7	N 04 51.9 +00.8	286 18.3 +02.1	N 22 32.2 -00.1	27 28.9 +02.2	N 01 31.3 +00.1	12	13					
13	37 49.8 +00.6	N 04 52.7 +00.7	301 20.4 +02.1	N 22 32.1 +00.0	42 31.1 +02.2	N 01 31.4 +00.1	13	14					
14	52 50.4 +00.7	N 04 53.4 +00.8	316 22.5 +02.1	N 22 32.1 -00.1	57 33.3 +02.2	N 01 31.5 +00.1	14	15					
15	67 51.1 +00.7	N 04 54.2 +00.8	331 24.6 +02.1	N 22 32.0 +00.0	72 35.5 +02.2	N 01 31.6 +00.1	15	16					
16	82 51.8 +00.7	N 04 55.0 +00.7	346 26.7 +02.1	N 22 32.0 -00.1	87 37.7 +02.2	N 01 31.7 +00.1	16	17					
17	97 52.5 +00.7	N 04 55.7 +00.8	1 28.8 +02.1	N 22 31.9 +00.0	102 39.9 +02.2	N 01 31.8 +00.1	17	18					
18	112 53.2 +00.7	N 04 56.5 +00.7	16 30.9 +02.1	N 22 31.9 +00.0	117 42.1 +02.2	N 01 31.9 +00.1	18	19					
19	127 53.9 +00.7	N 04 57.2 +00.8	31 33.0 +02.1	N 22 31.9 -00.1	132 44.3 +02.2	N 01 32.0 +00.2	19	20					
20	142 54.6 +00.7	N 04 58.0 +00.7	46 35.1 +02.1	N 22 31.8 +00.0	147 46.5 +02.2	N 01 32.2 +00.1	20	21					
21	157 55.3 +00.7	N 04 58.7 +00.8	61 37.2 +02.1	N 22 31.8 -00.1	162 48.7 +02.2	N 01 32.3 +00.1	21	22					
22	172 56.0 +00.7	N 04 59.5 +00.7	76 39.3 +02.1	N 22 31.7 +00.0	177 50.9 +02.2	N 01 32.4 +00.1	22	23					
23	187 56.7 +00.7	N 05 00.2 +00.8	91 41.4 +02.1	N 22 31.7 -00.1	192 53.1 +02.2	N 01 32.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 347° 347° 346° 346° 346° 346°		SHA 250° 250° 250° 250° 250° 250°		SHA 351° 351° 351° 351° 351° 351°								
	Greenwich Culmination Time: 10:28		Greenwich Culmination Time: 16:54		Greenwich Culmination Time: 10:10								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	39.0 +00.0	N 14 24.1	+00.7	153	08.9 -00.7	N 22 04.9	+00.7	30	48.3 -25.4	S 05 28.6	+14.5	00
01	195	39.0 +00.1	N 14 24.8	+00.8	168	08.2 -00.7	N 22 05.6	+00.6	45	22.9 -25.4	S 05 43.1	+14.5	01
02	210	39.1 +00.1	N 14 25.6	+00.8	183	07.5 -00.8	N 22 06.2	+00.6	59	57.5 -25.4	S 05 57.6	+14.5	02
03	225	39.2 +00.1	N 14 26.4	+00.8	198	06.7 -00.7	N 22 06.8	+00.7	74	32.1 -25.5	S 06 12.1	+14.4	03
04	240	39.3 +00.1	N 14 27.2	+00.7	213	06.0 -00.7	N 22 07.5	+00.6	89	06.6 -25.4	S 06 26.5	+14.4	04
05	255	39.4 +00.1	N 14 27.9	+00.8	228	05.3 -00.8	N 22 08.1	+00.6	103	41.2 -25.4	S 06 40.9	+14.4	05
06	270	39.5 +00.1	N 14 28.7	+00.8	243	04.5 -00.7	N 22 08.7	+00.7	118	15.8 -25.5	S 06 55.3	+14.3	06
07	285	39.6 +00.0	N 14 29.5	+00.8	258	03.8 -00.7	N 22 09.4	+00.6	132	50.3 -25.5	S 07 09.6	+14.3	07
08	300	39.6 +00.1	N 14 30.3	+00.7	273	03.1 -00.8	N 22 10.0	+00.6	147	24.8 -25.4	S 07 23.9	+14.3	08
09	315	39.7 +00.1	N 14 31.0	+00.8	288	02.3 -00.7	N 22 10.6	+00.7	161	59.4 -25.5	S 07 38.2	+14.2	09
10	330	39.8 +00.1	N 14 31.8	+00.8	303	01.6 -00.8	N 22 11.3	+00.6	176	33.9 -25.6	S 07 52.4	+14.2	10
11	345	39.9 +00.1	N 14 32.6	+00.8	318	00.8 -00.7	N 22 11.9	+00.6	191	08.3 -25.5	S 08 06.6	+14.1	11
12	0	40.0 +00.1	N 14 33.4	+00.7	333	00.1 -00.7	N 22 12.5	+00.7	205	42.8 -25.5	S 08 20.7	+14.1	12
13	15	40.1 +00.1	N 14 34.1	+00.8	347	59.4 -00.8	N 22 13.2	+00.6	220	17.3 -25.6	S 08 34.8	+14.1	13
14	30	40.2 +00.0	N 14 34.9	+00.8	2	58.6 -00.7	N 22 13.8	+00.6	234	51.7 -25.6	S 08 48.9	+14.0	14
15	45	40.2 +00.1	N 14 35.7	+00.8	17	57.9 -00.7	N 22 14.4	+00.6	249	26.1 -25.6	S 09 02.9	+14.0	15
16	60	40.3 +00.1	N 14 36.5	+00.7	32	57.2 -00.8	N 22 15.0	+00.7	264	00.5 -25.6	S 09 16.9	+13.9	16
17	75	40.4 +00.1	N 14 37.2	+00.8	47	56.4 -00.7	N 22 15.7	+00.6	278	34.9 -25.7	S 09 30.8	+13.9	17
18	90	40.5 +00.1	N 14 38.0	+00.8	62	55.7 -00.8	N 22 16.3	+00.6	293	09.2 -25.6	S 09 44.7	+13.8	18
19	105	40.6 +00.1	N 14 38.8	+00.7	77	54.9 -00.7	N 22 16.9	+00.6	307	43.6 -25.7	S 09 58.5	+13.8	19
20	120	40.7 +00.1	N 14 39.5	+00.8	92	54.2 -00.8	N 22 17.5	+00.6	322	17.9 -25.7	S 10 12.3	+13.7	20
21	135	40.8 +00.0	N 14 40.3	+00.8	107	53.4 -00.7	N 22 18.1	+00.7	336	52.2 -25.8	S 10 26.0	+13.7	21
22	150	40.8 +00.1	N 14 41.1	+00.7	122	52.7 -00.7	N 22 18.8	+00.6	351	26.4 -25.8	S 10 39.7	+13.6	22
23	165	40.9 +00.1	N 14 41.8	+00.8	137	52.0 -00.8	N 22 19.4	+00.6	6	00.6 -25.8	S 10 53.3	+13.6	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 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 15'1 15'1 15'0 15'0				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 55'5 55'4 55'4 55'3 55'2 55'2				
	SHA 324° 323° 323° 323° 323° 323°				SHA 296° 296° 296° 295° 295° 295°				SHA 173° 171° 169° 167° 165° 164°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:48				Greenwich Culmination Time: 22:35				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	202	57.4 +00.7	N 05 01.0	+00.8	106	43.5 +02.1	N 22 31.6	+00.0	207	55.3 +02.2	N 01 32.6	+00.1	00
01	217	58.1 +00.7	N 05 01.8	+00.7	121	45.6 +02.1	N 22 31.6	-00.1	222	57.5 +02.2	N 01 32.7	+00.1	01
02	232	58.8 +00.7	N 05 02.5	+00.8	136	47.7 +02.1	N 22 31.5	+00.0	237	59.7 +02.2	N 01 32.8	+00.1	02
03	247	59.5 +00.7	N 05 03.3	+00.7	151	49.8 +02.1	N 22 31.5	-00.1	253	01.9 +02.2	N 01 32.9	+00.1	03
04	263	00.2 +00.7	N 05 04.0	+00.8	166	51.9 +02.1	N 22 31.4	+00.0	268	04.1 +02.2	N 01 33.0	+00.1	04
05	278	00.9 +00.6	N 05 04.8	+00.7	181	54.0 +02.1	N 22 31.4	+00.0	283	06.3 +02.2	N 01 33.1	+00.1	05
06	293	01.5 +00.7	N 05 05.5	+00.8	196	56.1 +02.1	N 22 31.4	-00.1	298	08.5 +02.2	N 01 33.2	+00.1	06
07	308	02.2 +00.7	N 05 06.3	+00.7	211	58.2 +02.1	N 22 31.3	+00.0	313	10.7 +02.2	N 01 33.3	+00.1	07
08	323	02.9 +00.7	N 05 07.0	+00.8	227	00.3 +02.1	N 22 31.3	-00.1	328	12.9 +02.2	N 01 33.4	+00.1	08
09	338	03.6 +00.7	N 05 07.8	+00.8	242	02.4 +02.1	N 22 31.2	+00.0	343	15.1 +02.2	N 01 33.5	+00.2	09
10	353	04.3 +00.7	N 05 08.6	+00.7	257	04.5 +02.1	N 22 31.2	-00.1	358	17.3 +02.2	N 01 33.7	+00.1	10
11	8	05.0 +00.7	N 05 09.3	+00.8	272	06.6 +02.1	N 22 31.1	+00.0	13	19.5 +02.2	N 01 33.8	+00.1	11
12	23	05.7 +00.7	N 05 10.1	+00.7	287	08.7 +02.1	N 22 31.1	-00.1	28	21.7 +02.2	N 01 33.9	+00.1	12
13	38	06.4 +00.7	N 05 10.8	+00.8	302	10.8 +02.1	N 22 31.0	+00.0	43	23.9 +02.2	N 01 34.0	+00.1	13
14	53	07.1 +00.7	N 05 11.6	+00.7	317	12.9 +02.1	N 22 31.0	-00.1	58	26.1 +02.2	N 01 34.1	+00.1	14
15	68	07.8 +00.7	N 05 12.3	+00.8	332	15.0 +02.1	N 22 30.9	+00.0	73	28.3 +02.2	N 01 34.2	+00.1	15
16	83	08.5 +00.7	N 05 13.1	+00.7	347	17.1 +02.1	N 22 30.9	+00.0	88	30.5 +02.2	N 01 34.3	+00.1	16
17	98	09.2 +00.7	N 05 13.8	+00.8	2	19.2 +02.1	N 22 30.9	-00.1	103	32.7 +02.2	N 01 34.4	+00.1	17
18	113	09.9 +00.7	N 05 14.6	+00.7	17	21.3 +02.1	N 22 30.8	+00.0	118	34.9 +02.2	N 01 34.5	+00.1	18
19	128	10.6 +00.7	N 05 15.3	+00.8	32	23.4 +02.1	N 22 30.8	-00.1	133	37.1 +02.2	N 01 34.6	+00.1	19
20	143	11.3 +00.7	N 05 16.1	+00.8	47	25.5 +02.1	N 22 30.7	+00.0	148	39.3 +02.2	N 01 34.7	+00.1	20
21	158	12.0 +00.6	N 05 16.9	+00.7	62	27.6 +02.1	N 22 30.7	-00.1	163	41.5 +02.2	N 01 34.8	+00.1	21
22	173	12.6 +00.7	N 05 17.6	+00.8	77	29.7 +02.1	N 22 30.6	+00.0	178	43.7 +02.2	N 01 34.9	+00.1	22
23	188	13.3 +00.7	N 05 18.4	+00.7	92	31.8 +02.1	N 22 30.6	-00.1	193	45.9 +02.2	N 01 35.0	+00.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 346° 346° 346° 346° 345° 345°				SHA 250° 250° 250° 250° 250° 250°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:27				Greenwich Culmination Time: 16:50				Greenwich Culmination Time: 10:06				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	41.0 +00.1	N 14 42.6 +00.8		152	51.2 -00.7	N 22 20.0 +00.6		20	34.8 -25.8	S 11 06.9 +13.6		00
01	195	41.1 +00.1	N 14 43.4 +00.8		167	50.5 -00.8	N 22 20.6 +00.6		35	09.0 -25.8	S 11 20.5 +13.4		01
02	210	41.2 +00.1	N 14 44.2 +00.7		182	49.7 -00.7	N 22 21.2 +00.6		49	43.2 -25.9	S 11 33.9 +13.5		02
03	225	41.3 +00.0	N 14 44.9 +00.8		197	49.0 -00.8	N 22 21.8 +00.7		64	17.3 -25.9	S 11 47.4 +13.3		03
04	240	41.3 +00.1	N 14 45.7 +00.8		212	48.2 -00.7	N 22 22.5 +00.6		78	51.4 -26.0	S 12 00.7 +13.4		04
05	255	41.4 +00.1	N 14 46.5 +00.7		227	47.5 -00.8	N 22 23.1 +00.6		93	25.4 -26.0	S 12 14.1 +13.2		05
06	270	41.5 +00.1	N 14 47.2 +00.8		242	46.7 -00.7	N 22 23.7 +00.6		107	59.4 -26.0	S 12 27.3 +13.2		06
07	285	41.6 +00.1	N 14 48.0 +00.8		257	46.0 -00.7	N 22 24.3 +00.6		122	33.4 -26.0	S 12 40.5 +13.2		07
08	300	41.7 +00.0	N 14 48.8 +00.7		272	45.3 -00.8	N 22 24.9 +00.6		137	07.4 -26.1	S 12 53.7 +13.0		08
09	315	41.7 +00.1	N 14 49.5 +00.8		287	44.5 -00.7	N 22 25.5 +00.6		151	41.3 -26.1	S 13 06.7 +13.1		09
10	330	41.8 +00.1	N 14 50.3 +00.7		302	43.8 -00.8	N 22 26.1 +00.6		166	15.2 -26.2	S 13 19.8 +12.9		10
11	345	41.9 +00.1	N 14 51.0 +00.8		317	43.0 -00.7	N 22 26.7 +00.6		180	49.0 -26.2	S 13 32.7 +12.9		11
12	0	42.0 +00.1	N 14 51.8 +00.8		332	42.3 -00.8	N 22 27.3 +00.6		195	22.8 -26.2	S 13 45.6 +12.9		12
13	15	42.1 +00.0	N 14 52.6 +00.7		347	41.5 -00.7	N 22 27.9 +00.6		209	56.6 -26.3	S 13 58.5 +12.8		13
14	30	42.1 +00.1	N 14 53.3 +00.8		2	40.8 -00.8	N 22 28.5 +00.6		224	30.3 -26.3	S 14 11.3 +12.7		14
15	45	42.2 +00.1	N 14 54.1 +00.8		17	40.0 -00.7	N 22 29.1 +00.6		239	04.0 -26.3	S 14 24.0 +12.6		15
16	60	42.3 +00.1	N 14 54.9 +00.7		32	39.3 -00.8	N 22 29.7 +00.6		253	37.7 -26.4	S 14 36.6 +12.6		16
17	75	42.4 +00.1	N 14 55.6 +00.8		47	38.5 -00.7	N 22 30.3 +00.6		268	11.3 -26.4	S 14 49.2 +12.5		17
18	90	42.5 +00.0	N 14 56.4 +00.7		62	37.8 -00.8	N 22 30.9 +00.6		282	44.9 -26.5	S 15 01.7 +12.5		18
19	105	42.5 +00.1	N 14 57.1 +00.8		77	37.0 -00.7	N 22 31.5 +00.6		297	18.4 -26.5	S 15 14.2 +12.3		19
20	120	42.6 +00.1	N 14 57.9 +00.8		92	36.3 -00.8	N 22 32.1 +00.6		311	51.9 -26.6	S 15 26.5 +12.4		20
21	135	42.7 +00.1	N 14 58.7 +00.7		107	35.5 -00.7	N 22 32.7 +00.6		326	25.3 -26.6	S 15 38.9 +12.2		21
22	150	42.8 +00.1	N 14 59.4 +00.8		122	34.8 -00.8	N 22 33.3 +00.6		340	58.7 -26.6	S 15 51.1 +12.2		22
23	165	42.9 +00.0	N 15 00.2 +00.7		137	34.0 -00.7	N 22 33.9 +00.6		355	32.1 -26.7	S 16 03.3 +12.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'0 15'0 15'0 15'0 14'9 14'9				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 55'1 55'0 55'0 54'9 54'8 54'8				
	SHA 323° 322° 322° 322° 322° 322°				SHA 295° 295° 294° 294° 294° 294°				SHA 162° 160° 158° 156° 154° 152°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:49				Greenwich Culmination Time: 23:18				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	203	14.0 +00.7	N 05 19.1 +00.8		107	33.9 +02.1	N 22 30.5 +00.0		208	48.1 +02.2	N 01 35.1 +00.2		00
01	218	14.7 +00.7	N 05 19.9 +00.7		122	36.0 +02.1	N 22 30.5 -00.1		223	50.3 +02.2	N 01 35.3 +00.1		01
02	233	15.4 +00.7	N 05 20.6 +00.8		137	38.1 +02.1	N 22 30.4 +00.0		238	52.5 +02.2	N 01 35.4 +00.1		02
03	248	16.1 +00.7	N 05 21.4 +00.7		152	40.2 +02.0	N 22 30.4 -00.1		253	54.7 +02.2	N 01 35.5 +00.1		03
04	263	16.8 +00.7	N 05 22.1 +00.8		167	42.2 +02.1	N 22 30.3 +00.0		268	56.9 +02.2	N 01 35.6 +00.1		04
05	278	17.5 +00.7	N 05 22.9 +00.7		182	44.3 +02.1	N 22 30.3 +00.0		283	59.1 +02.2	N 01 35.7 +00.1		05
06	293	18.2 +00.7	N 05 23.6 +00.8		197	46.4 +02.1	N 22 30.3 -00.1		299	01.3 +02.2	N 01 35.8 +00.1		06
07	308	18.9 +00.7	N 05 24.4 +00.7		212	48.5 +02.1	N 22 30.2 +00.0		314	03.5 +02.2	N 01 35.9 +00.1		07
08	323	19.6 +00.7	N 05 25.1 +00.8		227	50.6 +02.1	N 22 30.2 -00.1		329	05.7 +02.2	N 01 36.0 +00.1		08
09	338	20.3 +00.7	N 05 25.9 +00.7		242	52.7 +02.1	N 22 30.1 +00.0		344	07.9 +02.2	N 01 36.1 +00.1		09
10	353	21.0 +00.7	N 05 26.6 +00.8		257	54.8 +02.1	N 22 30.1 -00.1		359	10.1 +02.2	N 01 36.2 +00.1		10
11	8	21.7 +00.7	N 05 27.4 +00.7		272	56.9 +02.1	N 22 30.0 +00.0		14	12.3 +02.2	N 01 36.3 +00.1		11
12	23	22.4 +00.6	N 05 28.1 +00.8		287	59.0 +02.1	N 22 30.0 -00.1		29	14.5 +02.2	N 01 36.4 +00.1		12
13	38	23.0 +00.7	N 05 28.9 +00.7		303	01.1 +02.1	N 22 29.9 +00.0		44	16.7 +02.2	N 01 36.5 +00.1		13
14	53	23.7 +00.7	N 05 29.6 +00.8		318	03.2 +02.1	N 22 29.9 -00.1		59	18.9 +02.2	N 01 36.6 +00.1		14
15	68	24.4 +00.7	N 05 30.4 +00.8		333	05.3 +02.1	N 22 29.8 +00.0		74	21.1 +02.2	N 01 36.7 +00.1		15
16	83	25.1 +00.7	N 05 31.2 +00.7		348	07.4 +02.1	N 22 29.8 -00.1		89	23.3 +02.2	N 01 36.8 +00.2		16
17	98	25.8 +00.7	N 05 31.9 +00.8		3	09.5 +02.1	N 22 29.7 +00.0		104	25.5 +02.2	N 01 37.0 +00.1		17
18	113	26.5 +00.7	N 05 32.7 +00.7		18	11.6 +02.0	N 22 29.7 +00.0		119	27.7 +02.2	N 01 37.1 +00.1		18
19	128	27.2 +00.7	N 05 33.4 +00.8		33	13.6 +02.1	N 22 29.7 -00.1		134	29.9 +02.2	N 01 37.2 +00.1		19
20	143	27.9 +00.7	N 05 34.2 +00.7		48	15.7 +02.1	N 22 29.6 +00.0		149	32.1 +02.2	N 01 37.3 +00.1		20
21	158	28.6 +00.7	N 05 34.9 +00.8		63	17.8 +02.1	N 22 29.6 -00.1		164	34.3 +02.2	N 01 37.4 +00.1		21
22	173	29.3 +00.7	N 05 35.7 +00.7		78	19.9 +02.1	N 22 29.5 +00.0		179	36.5 +02.2	N 01 37.5 +00.1		22
23	188	30.0 +00.7	N 05 36.4 +00.8		93	22.0 +02.1	N 22 29.5 -00.1		194	38.7 +02.2	N 01 37.6 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 345° 345° 345° 345° 345° 345°				SHA 250° 250° 250° 250° 249° 249°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:26				Greenwich Culmination Time: 16:47				Greenwich Culmination Time: 10:03				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	42.9 +00.1	N 15 00.9 +00.8		152	33.3 -00.8	N 22 34.5 +00.6		10	05.4 -26.7	S 16 15.4 +12.0		00
01	195	43.0 +00.1	N 15 01.7 +00.8		167	32.5 -00.7	N 22 35.1 +00.6		24	38.7 -26.8	S 16 27.4 +11.9		01
02	210	43.1 +00.1	N 15 02.5 +00.7		182	31.8 -00.8	N 22 35.7 +00.5		39	11.9 -26.8	S 16 39.3 +11.9		02
03	225	43.2 +00.0	N 15 03.2 +00.8		197	31.0 -00.7	N 22 36.2 +00.6		53	45.1 -26.9	S 16 51.2 +11.8		03
04	240	43.2 +00.1	N 15 04.0 +00.7		212	30.3 -00.8	N 22 36.8 +00.6		68	18.2 -26.9	S 17 03.0 +11.7		04
05	255	43.3 +00.1	N 15 04.7 +00.8		227	29.5 -00.8	N 22 37.4 +00.6		82	51.3 -27.0	S 17 14.7 +11.7		05
06	270	43.4 +00.1	N 15 05.5 +00.7		242	28.7 -00.7	N 22 38.0 +00.6		97	24.3 -27.0	S 17 26.4 +11.5		06
07	285	43.5 +00.0	N 15 06.2 +00.8		257	28.0 -00.8	N 22 38.6 +00.6		111	57.3 -27.0	S 17 37.9 +11.5		07
08	300	43.5 +00.1	N 15 07.0 +00.7		272	27.2 -00.7	N 22 39.2 +00.5		126	30.3 -27.1	S 17 49.4 +11.4		08
09	315	43.6 +00.1	N 15 07.7 +00.8		287	26.5 -00.8	N 22 39.7 +00.6		141	03.2 -27.2	S 18 00.8 +11.4		09
10	330	43.7 +00.1	N 15 08.5 +00.8		302	25.7 -00.7	N 22 40.3 +00.6		155	36.0 -27.2	S 18 12.2 +11.2		10
11	345	43.8 +00.0	N 15 09.3 +00.7		317	25.0 -00.8	N 22 40.9 +00.6		170	08.8 -27.3	S 18 23.4 +11.2		11
12	0	43.8 +00.1	N 15 10.0 +00.8		332	24.2 -00.7	N 22 41.5 +00.6		184	41.5 -27.3	S 18 34.6 +11.1		12
13	15	43.9 +00.1	N 15 10.8 +00.7		347	23.5 -00.8	N 22 42.1 +00.5		199	14.2 -27.4	S 18 45.7 +11.0		13
14	30	44.0 +00.1	N 15 11.5 +00.8		2	22.7 -00.8	N 22 42.6 +00.6		213	46.8 -27.4	S 18 56.7 +10.9		14
15	45	44.1 +00.0	N 15 12.3 +00.7		17	21.9 -00.7	N 22 43.2 +00.6		228	19.4 -27.4	S 19 07.6 +10.8		15
16	60	44.1 +00.1	N 15 13.0 +00.8		32	21.2 -00.8	N 22 43.8 +00.6		242	52.0 -27.6	S 19 18.4 +10.7		16
17	75	44.2 +00.1	N 15 13.8 +00.7		47	20.4 -00.7	N 22 44.4 +00.5		257	24.4 -27.5	S 19 29.1 +10.7		17
18	90	44.3 +00.1	N 15 14.5 +00.8		62	19.7 -00.8	N 22 44.9 +00.6		271	56.9 -27.7	S 19 39.8 +10.6		18
19	105	44.4 +00.0	N 15 15.3 +00.7		77	18.9 -00.8	N 22 45.5 +00.6		286	29.2 -27.6	S 19 50.4 +10.4		19
20	120	44.4 +00.1	N 15 16.0 +00.8		92	18.1 -00.7	N 22 46.1 +00.5		301	01.6 -27.8	S 20 00.8 +10.4		20
21	135	44.5 +00.1	N 15 16.8 +00.7		107	17.4 -00.8	N 22 46.6 +00.6		315	33.8 -27.8	S 20 11.2 +10.3		21
22	150	44.6 +00.0	N 15 17.5 +00.8		122	16.6 -00.7	N 22 47.2 +00.6		330	06.0 -27.8	S 20 21.5 +10.2		22
23	165	44.6 +00.1	N 15 18.3 +00.7		137	15.9 -00.8	N 22 47.8 +00.5		344	38.2 -27.9	S 20 31.7 +10.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 14'9 14'9 14'9 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'7 54'7 54'6 54'6 54'5 54'5				
	SHA 322° 322° 321° 321° 321° 321°				SHA 294° 293° 293° 293° 293° 292°				SHA 150° 148° 146° 144° 142° 140°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 13:50				Greenwich Culmination Time: -1:00				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	203	30.7 +00.7	N 05 37.2 +00.7		108	24.1 +02.1	N 22 29.4 +00.0		209	40.9 +02.2	N 01 37.7 +00.1		00
01	218	31.4 +00.7	N 05 37.9 +00.8		123	26.2 +02.1	N 22 29.4 -00.1		224	43.1 +02.2	N 01 37.8 +00.1		01
02	233	32.1 +00.7	N 05 38.7 +00.7		138	28.3 +02.1	N 22 29.3 +00.0		239	45.3 +02.2	N 01 37.9 +00.1		02
03	248	32.8 +00.7	N 05 39.4 +00.8		153	30.4 +02.1	N 22 29.3 -00.1		254	47.5 +02.3	N 01 38.0 +00.1		03
04	263	33.5 +00.6	N 05 40.2 +00.7		168	32.5 +02.1	N 22 29.2 +00.0		269	49.8 +02.2	N 01 38.1 +00.1		04
05	278	34.1 +00.7	N 05 40.9 +00.8		183	34.6 +02.0	N 22 29.2 -00.1		284	52.0 +02.2	N 01 38.2 +00.1		05
06	293	34.8 +00.7	N 05 41.7 +00.7		198	36.6 +02.1	N 22 29.1 +00.0		299	54.2 +02.2	N 01 38.3 +00.1		06
07	308	35.5 +00.7	N 05 42.4 +00.8		213	38.7 +02.1	N 22 29.1 -00.1		314	56.4 +02.2	N 01 38.4 +00.1		07
08	323	36.2 +00.7	N 05 43.2 +00.7		228	40.8 +02.1	N 22 29.0 +00.0		329	58.6 +02.2	N 01 38.5 +00.1		08
09	338	36.9 +00.7	N 05 43.9 +00.8		243	42.9 +02.1	N 22 29.0 -00.1		345	00.8 +02.2	N 01 38.6 +00.1		09
10	353	37.6 +00.7	N 05 44.7 +00.7		258	45.0 +02.1	N 22 28.9 +00.0		0	03.0 +02.2	N 01 38.7 +00.2		10
11	8	38.3 +00.7	N 05 45.4 +00.8		273	47.1 +02.1	N 22 28.9 -00.1		15	05.2 +02.2	N 01 38.9 +00.1		11
12	23	39.0 +00.7	N 05 46.2 +00.7		288	49.2 +02.1	N 22 28.8 +00.0		30	07.4 +02.2	N 01 39.0 +00.1		12
13	38	39.7 +00.7	N 05 46.9 +00.8		303	51.3 +02.1	N 22 28.8 +00.0		45	09.6 +02.2	N 01 39.1 +00.1		13
14	53	40.4 +00.7	N 05 47.7 +00.7		318	53.4 +02.0	N 22 28.8 -00.1		60	11.8 +02.2	N 01 39.2 +00.1		14
15	68	41.1 +00.7	N 05 48.4 +00.7		333	55.4 +02.1	N 22 28.7 +00.0		75	14.0 +02.2	N 01 39.3 +00.1		15
16	83	41.8 +00.7	N 05 49.1 +00.8		348	57.5 +02.1	N 22 28.7 -00.1		90	16.2 +02.2	N 01 39.4 +00.1		16
17	98	42.5 +00.7	N 05 49.9 +00.7		3	59.6 +02.1	N 22 28.6 +00.0		105	18.4 +02.2	N 01 39.5 +00.1		17
18	113	43.2 +00.6	N 05 50.6 +00.8		19	01.7 +02.1	N 22 28.6 -00.1		120	20.6 +02.2	N 01 39.6 +00.1		18
19	128	43.8 +00.7	N 05 51.4 +00.7		34	03.8 +02.1	N 22 28.5 +00.0		135	22.8 +02.2	N 01 39.7 +00.1		19
20	143	44.5 +00.7	N 05 52.1 +00.8		49	05.9 +02.1	N 22 28.5 -00.1		150	25.0 +02.2	N 01 39.8 +00.1		20
21	158	45.2 +00.7	N 05 52.9 +00.7		64	08.0 +02.0	N 22 28.4 +00.0		165	27.2 +02.2	N 01 39.9 +00.1		21
22	173	45.9 +00.7	N 05 53.6 +00.8		79	10.0 +02.1	N 22 28.4 -00.1		180	29.4 +02.2	N 01 40.0 +00.1		22
23	188	46.6 +00.7	N 05 54.4 +00.7		94	12.1 +02.1	N 22 28.3 +00.0		195	31.6 +02.2	N 01 40.1 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 345° 344° 344° 344° 344° 344°				SHA 249° 249° 249° 249° 249° 249°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:25				Greenwich Culmination Time: 16:44				Greenwich Culmination Time: 09:59				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	44.7 +00.1	N 15 19.0 +00.8		152	15.1 -00.8	N 22 48.3 +00.6		359	10.3 -27.9	S 20 41.8 +10.0		00
01	195	44.8 +00.1	N 15 19.8 +00.7		167	14.3 -00.7	N 22 48.9 +00.6		13	42.4 -28.0	S 20 51.8 +10.0		01
02	210	44.9 +00.0	N 15 20.5 +00.8		182	13.6 -00.8	N 22 49.5 +00.5		28	14.4 -28.1	S 21 01.8 +09.8		02
03	225	44.9 +00.1	N 15 21.3 +00.7		197	12.8 -00.7	N 22 50.0 +00.6		42	46.3 -28.1	S 21 11.6 +09.7		03
04	240	45.0 +00.1	N 15 22.0 +00.7		212	12.1 -00.8	N 22 50.6 +00.5		57	18.2 -28.2	S 21 21.3 +09.6		04
05	255	45.1 +00.0	N 15 22.7 +00.8		227	11.3 -00.8	N 22 51.1 +00.6		71	50.0 -28.2	S 21 30.9 +09.6		05
06	270	45.1 +00.1	N 15 23.5 +00.7		242	10.5 -00.7	N 22 51.7 +00.6		86	21.8 -28.3	S 21 40.5 +09.4		06
07	285	45.2 +00.1	N 15 24.2 +00.8		257	09.8 -00.8	N 22 52.3 +00.5		100	53.5 -28.3	S 21 49.9 +09.3		07
08	300	45.3 +00.1	N 15 25.0 +00.7		272	09.0 -00.8	N 22 52.8 +00.6		115	25.2 -28.4	S 21 59.2 +09.3		08
09	315	45.4 +00.0	N 15 25.7 +00.8		287	08.2 -00.7	N 22 53.4 +00.5		129	56.8 -28.4	S 22 08.5 +09.1		09
10	330	45.4 +00.1	N 15 26.5 +00.7		302	07.5 -00.8	N 22 53.9 +00.6		144	28.4 -28.5	S 22 17.6 +09.1		10
11	345	45.5 +00.1	N 15 27.2 +00.8		317	06.7 -00.8	N 22 54.5 +00.5		158	59.9 -28.6	S 22 26.7 +08.9		11
12	0	45.6 +00.0	N 15 28.0 +00.7		332	05.9 -00.7	N 22 55.0 +00.6		173	31.3 -28.6	S 22 35.6 +08.8		12
13	15	45.6 +00.1	N 15 28.7 +00.7		347	05.2 -00.8	N 22 55.6 +00.5		188	02.7 -28.7	S 22 44.4 +08.7		13
14	30	45.7 +00.1	N 15 29.4 +00.8		2	04.4 -00.7	N 22 56.1 +00.6		202	34.0 -28.7	S 22 53.1 +08.7		14
15	45	45.8 +00.0	N 15 30.2 +00.7		17	03.7 -00.8	N 22 56.7 +00.5		217	05.3 -28.7	S 23 01.8 +08.5		15
16	60	45.8 +00.1	N 15 30.9 +00.8		32	02.9 -00.8	N 22 57.2 +00.6		231	36.6 -28.9	S 23 10.3 +08.4		16
17	75	45.9 +00.1	N 15 31.7 +00.7		47	02.1 -00.7	N 22 57.8 +00.5		246	07.7 -28.8	S 23 18.7 +08.3		17
18	90	46.0 +00.0	N 15 32.4 +00.7		62	01.4 -00.8	N 22 58.3 +00.6		260	38.9 -29.0	S 23 27.0 +08.2		18
19	105	46.0 +00.1	N 15 33.1 +00.8		77	00.6 -00.8	N 22 58.9 +00.5		275	09.9 -29.0	S 23 35.2 +08.1		19
20	120	46.1 +00.1	N 15 33.9 +00.7		91	59.8 -00.7	N 22 59.4 +00.5		289	40.9 -29.0	S 23 43.3 +07.9		20
21	135	46.2 +00.0	N 15 34.6 +00.8		106	59.1 -00.8	N 22 59.9 +00.6		304	11.9 -29.1	S 23 51.2 +07.9		21
22	150	46.2 +00.1	N 15 35.4 +00.7		121	58.3 -00.8	N 23 00.5 +00.5		318	42.8 -29.1	S 23 59.1 +07.7		22
23	165	46.3 +00.1	N 15 36.1 +00.7		136	57.5 -00.8	N 23 01.0 +00.6		333	13.7 -29.2	S 24 06.8 +07.7		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°4' 54°4' 54°3' 54°3' 54°3' 54°2'				
	SHA 321° 321° 320° 320° 320° 320°				SHA 292° 292° 292° 292° 291° 291°				SHA 138° 136° 134° 132° 130° 128°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 13:51				Greenwich Culmination Time: 00:03				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	203	47.3 +00.7	N 05 55.1 +00.8		109	14.2 +02.1	N 22 28.3 -00.1		210	33.8 +02.2	N 01 40.2 +00.1		00
01	218	48.0 +00.7	N 05 55.9 +00.7		124	16.3 +02.1	N 22 28.2 +00.0		225	36.0 +02.2	N 01 40.3 +00.1		01
02	233	48.7 +00.7	N 05 56.6 +00.8		139	18.4 +02.1	N 22 28.2 -00.1		240	38.2 +02.2	N 01 40.4 +00.1		02
03	248	49.4 +00.7	N 05 57.4 +00.7		154	20.5 +02.1	N 22 28.1 +00.0		255	40.4 +02.2	N 01 40.5 +00.1		03
04	263	50.1 +00.7	N 05 58.1 +00.8		169	22.6 +02.0	N 22 28.1 -00.1		270	42.6 +02.2	N 01 40.6 +00.1		04
05	278	50.8 +00.7	N 05 58.9 +00.7		184	24.6 +02.1	N 22 28.0 +00.0		285	44.8 +02.3	N 01 40.7 +00.1		05
06	293	51.5 +00.7	N 05 59.6 +00.8		199	26.7 +02.1	N 22 28.0 -00.1		300	47.1 +02.2	N 01 40.8 +00.2		06
07	308	52.2 +00.7	N 06 00.4 +00.7		214	28.8 +02.1	N 22 27.9 +00.0		315	49.3 +02.2	N 01 41.0 +00.1		07
08	323	52.9 +00.6	N 06 01.1 +00.8		229	30.9 +02.1	N 22 27.9 -00.1		330	51.5 +02.2	N 01 41.1 +00.1		08
09	338	53.5 +00.7	N 06 01.9 +00.7		244	33.0 +02.1	N 22 27.8 +00.0		345	53.7 +02.2	N 01 41.2 +00.1		09
10	353	54.2 +00.7	N 06 02.6 +00.7		259	35.1 +02.0	N 22 27.8 -00.1		0	55.9 +02.2	N 01 41.3 +00.1		10
11	8	54.9 +00.7	N 06 03.3 +00.8		274	37.1 +02.1	N 22 27.7 +00.0		15	58.1 +02.2	N 01 41.4 +00.1		11
12	23	55.6 +00.7	N 06 04.1 +00.7		289	39.2 +02.1	N 22 27.7 -00.1		31	00.3 +02.2	N 01 41.5 +00.1		12
13	38	56.3 +00.7	N 06 04.8 +00.8		304	41.3 +02.1	N 22 27.6 +00.0		46	02.5 +02.2	N 01 41.6 +00.1		13
14	53	57.0 +00.7	N 06 05.6 +00.7		319	43.4 +02.1	N 22 27.6 -00.1		61	04.7 +02.2	N 01 41.7 +00.1		14
15	68	57.7 +00.7	N 06 06.3 +00.8		334	45.5 +02.1	N 22 27.5 +00.0		76	06.9 +02.2	N 01 41.8 +00.1		15
16	83	58.4 +00.7	N 06 07.1 +00.7		349	47.6 +02.0	N 22 27.5 -00.1		91	09.1 +02.2	N 01 41.9 +00.1		16
17	98	59.1 +00.7	N 06 07.8 +00.8		4	49.6 +02.1	N 22 27.4 +00.0		106	11.3 +02.2	N 01 42.0 +00.1		17
18	113	59.8 +00.7	N 06 08.6 +00.7		19	51.7 +02.1	N 22 27.4 +00.0		121	13.5 +02.2	N 01 42.1 +00.1		18
19	129	00.5 +00.7	N 06 09.3 +00.8		34	53.8 +02.1	N 22 27.4 -00.1		136	15.7 +02.2	N 01 42.2 +00.1		19
20	144	01.2 +00.7	N 06 10.1 +00.7		49	55.9 +02.1	N 22 27.3 +00.0		151	17.9 +02.2	N 01 42.3 +00.1		20
21	159	01.9 +00.7	N 06 10.8 +00.7		64	58.0 +02.0	N 22 27.3 -00.1		166	20.1 +02.2	N 01 42.4 +00.1		21
22	174	02.6 +00.6	N 06 11.5 +00.8		80	00.0 +02.1	N 22 27.2 +00.0		181	22.3 +02.2	N 01 42.5 +00.1		22
23	189	03.2 +00.7	N 06 12.3 +00.7		95	02.1 +02.1	N 22 27.2 -00.1		196	24.5 +02.2	N 01 42.6 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00°0' 00°0' 00°0' 00°0' 00°0' 00°0'				SD 00°3' 00°3' 00°3' 00°3' 00°3' 00°3'				SD 00°1' 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 344° 344° 344° 343° 343° 343°				SHA 249° 249° 249° 249° 249° 249°				SHA 351° 351° 351° 351° 351° 351°				
	Greenwich Culmination Time: 10:24				Greenwich Culmination Time: 16:40				Greenwich Culmination Time: 09:56				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 46.4 +00.0	N 15 36.8 +00.8	151 56.7 -00.7	N 23 01.6 +00.5	347 44.5 -29.3	S 24 14.5 +07.5	00						
01	195 46.4 +00.1	N 15 37.6 +00.7	166 56.0 -00.8	N 23 02.1 +00.5	2 15.2 -29.3	S 24 22.0 +07.4	01						
02	210 46.5 +00.1	N 15 38.3 +00.7	181 55.2 -00.8	N 23 02.6 +00.6	16 45.9 -29.3	S 24 29.4 +07.3	02						
03	225 46.6 +00.0	N 15 39.0 +00.8	196 54.4 -00.7	N 23 03.2 +00.5	31 16.6 -29.4	S 24 36.7 +07.2	03						
04	240 46.6 +00.1	N 15 39.8 +00.7	211 53.7 -00.8	N 23 03.7 +00.5	45 47.2 -29.5	S 24 43.9 +07.1	04						
05	255 46.7 +00.1	N 15 40.5 +00.7	226 52.9 -00.8	N 23 04.2 +00.6	60 17.7 -29.5	S 24 51.0 +07.0	05						
06	270 46.8 +00.0	N 15 41.2 +00.8	241 52.1 -00.7	N 23 04.8 +00.5	74 48.2 -29.5	S 24 58.0 +06.8	06						
07	285 46.8 +00.1	N 15 42.0 +00.7	256 51.4 -00.8	N 23 05.3 +00.5	89 18.7 -29.7	S 25 04.8 +06.7	07						
08	300 46.9 +00.1	N 15 42.7 +00.7	271 50.6 -00.8	N 23 05.8 +00.6	103 49.0 -29.6	S 25 11.5 +06.6	08						
09	315 47.0 +00.0	N 15 43.4 +00.8	286 49.8 -00.8	N 23 06.4 +00.5	118 19.4 -29.7	S 25 18.1 +06.5	09						
10	330 47.0 +00.1	N 15 44.2 +00.7	301 49.0 -00.7	N 23 06.9 +00.5	132 49.7 -29.8	S 25 24.6 +06.4	10						
11	345 47.1 +00.1	N 15 44.9 +00.7	316 48.3 -00.8	N 23 07.4 +00.5	147 19.9 -29.7	S 25 31.0 +06.2	11						
12	0 47.2 +00.0	N 15 45.6 +00.8	331 47.5 -00.8	N 23 07.9 +00.6	161 50.2 -29.9	S 25 37.2 +06.2	12						
13	15 47.2 +00.1	N 15 46.4 +00.7	346 46.7 -00.8	N 23 08.5 +00.5	176 20.3 -29.9	S 25 43.4 +06.0	13						
14	30 47.3 +00.0	N 15 47.1 +00.7	1 45.9 -00.7	N 23 09.0 +00.5	190 50.4 -29.9	S 25 49.4 +05.9	14						
15	45 47.3 +00.1	N 15 47.8 +00.8	16 45.2 -00.8	N 23 09.5 +00.5	205 20.5 -30.0	S 25 55.3 +05.7	15						
16	60 47.4 +00.1	N 15 48.6 +00.7	31 44.4 -00.8	N 23 10.0 +00.6	219 50.5 -30.0	S 26 01.0 +05.7	16						
17	75 47.5 +00.0	N 15 49.3 +00.7	46 43.6 -00.8	N 23 10.6 +00.5	234 20.5 -30.1	S 26 06.7 +05.5	17						
18	90 47.5 +00.1	N 15 50.0 +00.8	61 42.8 -00.7	N 23 11.1 +00.5	248 50.4 -30.1	S 26 12.2 +05.4	18						
19	105 47.6 +00.0	N 15 50.8 +00.7	76 42.1 -00.8	N 23 11.6 +00.5	263 20.3 -30.1	S 26 17.6 +05.2	19						
20	120 47.6 +00.1	N 15 51.5 +00.7	91 41.3 -00.8	N 23 12.1 +00.5	277 50.2 -30.2	S 26 22.8 +05.2	20						
21	135 47.7 +00.1	N 15 52.2 +00.7	106 40.5 -00.8	N 23 12.6 +00.5	292 20.0 -30.3	S 26 28.0 +05.0	21						
22	150 47.8 +00.0	N 15 52.9 +00.8	121 39.7 -00.7	N 23 13.1 +00.5	306 49.7 -30.2	S 26 33.0 +04.9	22						
23	165 47.8 +00.1	N 15 53.7 +00.7	136 39.0 -00.8	N 23 13.6 +00.6	321 19.5 -30.3	S 26 37.9 +04.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'2 54'2 54'1 54'1 54'1 54'1								
	SHA 320° 320° 319° 319° 319° 319°		SHA 291° 291° 290° 290° 290° 290°		SHA 126° 124° 122° 119° 117° 115°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 13:52		Greenwich Culmination Time: 00:50								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	204 03.9 +00.7	N 06 13.0 +00.8	110 04.2 +02.1	N 22 27.1 +00.0	211 26.7 +02.3	N 01 42.7 +00.1	00						
01	219 04.6 +00.7	N 06 13.8 +00.7	125 06.3 +02.1	N 22 27.1 -00.1	226 29.0 +02.2	N 01 42.8 +00.1	01						
02	234 05.3 +00.7	N 06 14.5 +00.8	140 08.4 +02.0	N 22 27.0 +00.0	241 31.2 +02.2	N 01 42.9 +00.1	02						
03	249 06.0 +00.7	N 06 15.3 +00.7	155 10.4 +02.1	N 22 27.0 -00.1	256 33.4 +02.2	N 01 43.0 +00.1	03						
04	264 06.7 +00.7	N 06 16.0 +00.8	170 12.5 +02.1	N 22 26.9 +00.0	271 35.6 +02.2	N 01 43.1 +00.1	04						
05	279 07.4 +00.7	N 06 16.8 +00.7	185 14.6 +02.1	N 22 26.9 -00.1	286 37.8 +02.2	N 01 43.2 +00.1	05						
06	294 08.1 +00.7	N 06 17.5 +00.7	200 16.7 +02.1	N 22 26.8 +00.0	301 40.0 +02.2	N 01 43.3 +00.2	06						
07	309 08.8 +00.7	N 06 18.2 +00.8	215 18.8 +02.0	N 22 26.8 -00.1	316 42.2 +02.2	N 01 43.5 +00.1	07						
08	324 09.5 +00.7	N 06 19.0 +00.7	230 20.8 +02.1	N 22 26.7 +00.0	331 44.4 +02.2	N 01 43.6 +00.1	08						
09	339 10.2 +00.7	N 06 19.7 +00.8	245 22.9 +02.1	N 22 26.7 -00.1	346 46.6 +02.2	N 01 43.7 +00.1	09						
10	354 10.9 +00.7	N 06 20.5 +00.7	260 25.0 +02.1	N 22 26.6 +00.0	1 48.8 +02.2	N 01 43.8 +00.1	10						
11	9 11.6 +00.6	N 06 21.2 +00.8	275 27.1 +02.0	N 22 26.6 -00.1	16 51.0 +02.2	N 01 43.9 +00.1	11						
12	24 12.2 +00.7	N 06 22.0 +00.7	290 29.1 +02.1	N 22 26.5 +00.0	31 53.2 +02.2	N 01 44.0 +00.1	12						
13	39 12.9 +00.7	N 06 22.7 +00.7	305 31.2 +02.1	N 22 26.5 -00.1	46 55.4 +02.2	N 01 44.1 +00.1	13						
14	54 13.6 +00.7	N 06 23.4 +00.8	320 33.3 +02.1	N 22 26.4 +00.0	61 57.6 +02.2	N 01 44.2 +00.1	14						
15	69 14.3 +00.7	N 06 24.2 +00.7	335 35.4 +02.1	N 22 26.4 -00.1	76 59.8 +02.2	N 01 44.3 +00.1	15						
16	84 15.0 +00.7	N 06 24.9 +00.8	350 37.5 +02.0	N 22 26.3 +00.0	92 02.0 +02.3	N 01 44.4 +00.1	16						
17	99 15.7 +00.7	N 06 25.7 +00.7	5 39.5 +02.1	N 22 26.3 -00.1	107 04.3 +02.2	N 01 44.5 +00.1	17						
18	114 16.4 +00.7	N 06 26.4 +00.8	20 41.6 +02.1	N 22 26.2 +00.0	122 06.5 +02.2	N 01 44.6 +00.1	18						
19	129 17.1 +00.7	N 06 27.2 +00.7	35 43.7 +02.1	N 22 26.2 -00.1	137 08.7 +02.2	N 01 44.7 +00.1	19						
20	144 17.8 +00.7	N 06 27.9 +00.7	50 45.8 +02.0	N 22 26.1 +00.0	152 10.9 +02.2	N 01 44.8 +00.1	20						
21	159 18.5 +00.7	N 06 28.6 +00.8	65 47.8 +02.1	N 22 26.1 -00.1	167 13.1 +02.2	N 01 44.9 +00.1	21						
22	174 19.2 +00.7	N 06 29.4 +00.7	80 49.9 +02.1	N 22 26.0 +00.0	182 15.3 +02.2	N 01 45.0 +00.1	22						
23	189 19.9 +00.7	N 06 30.1 +00.8	95 52.0 +02.1	N 22 26.0 -00.1	197 17.5 +02.2	N 01 45.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 343° 343° 343° 343° 343° 343°		SHA 249° 249° 249° 249° 249° 249°		SHA 351° 351° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:23		Greenwich Culmination Time: 16:37		Greenwich Culmination Time: 09:52								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	47.9 +00.1	N 15 54.4 +00.7		151	38.2 -00.8	N 23 14.2 +00.5		335	49.2 -30.4	S 26 42.7 +04.6		00
01	195	48.0 +00.0	N 15 55.1 +00.7		166	37.4 -00.8	N 23 14.7 +00.5		350	18.8 -30.4	S 26 47.3 +04.5		01
02	210	48.0 +00.1	N 15 55.8 +00.8		181	36.6 -00.7	N 23 15.2 +00.5		4	48.4 -30.4	S 26 51.8 +04.4		02
03	225	48.1 +00.0	N 15 56.6 +00.7		196	35.9 -00.8	N 23 15.7 +00.5		19	18.0 -30.4	S 26 56.2 +04.2		03
04	240	48.1 +00.1	N 15 57.3 +00.7		211	35.1 -00.8	N 23 16.2 +00.5		33	47.6 -30.5	S 27 00.4 +04.2		04
05	255	48.2 +00.0	N 15 58.0 +00.7		226	34.3 -00.8	N 23 16.7 +00.5		48	17.1 -30.6	S 27 04.6 +04.0		05
06	270	48.2 +00.1	N 15 58.7 +00.8		241	33.5 -00.8	N 23 17.2 +00.5		62	46.5 -30.5	S 27 08.6 +03.8		06
07	285	48.3 +00.1	N 15 59.5 +00.7		256	32.7 -00.7	N 23 17.7 +00.5		77	16.0 -30.6	S 27 12.4 +03.8		07
08	300	48.4 +00.0	N 16 00.2 +00.7		271	32.0 -00.8	N 23 18.2 +00.5		91	45.4 -30.6	S 27 16.2 +03.6		08
09	315	48.4 +00.1	N 16 00.9 +00.7		286	31.2 -00.8	N 23 18.7 +00.5		106	14.8 -30.7	S 27 19.8 +03.5		09
10	330	48.5 +00.0	N 16 01.6 +00.8		301	30.4 -00.8	N 23 19.2 +00.5		120	44.1 -30.6	S 27 23.3 +03.3		10
11	345	48.5 +00.1	N 16 02.4 +00.7		316	29.6 -00.8	N 23 19.7 +00.5		135	13.5 -30.7	S 27 26.6 +03.2		11
12	0	48.6 +00.1	N 16 03.1 +00.7		331	28.8 -00.7	N 23 20.2 +00.5		149	42.8 -30.8	S 27 29.8 +03.1		12
13	15	48.7 +00.0	N 16 03.8 +00.7		346	28.1 -00.8	N 23 20.7 +00.5		164	12.0 -30.7	S 27 32.9 +02.9		13
14	30	48.7 +00.1	N 16 04.5 +00.7		1	27.3 -00.8	N 23 21.2 +00.5		178	41.3 -30.8	S 27 35.8 +02.9		14
15	45	48.8 +00.0	N 16 05.2 +00.8		16	26.5 -00.8	N 23 21.7 +00.5		193	10.5 -30.8	S 27 38.7 +02.6		15
16	60	48.8 +00.1	N 16 06.0 +00.7		31	25.7 -00.8	N 23 22.2 +00.5		207	39.7 -30.8	S 27 41.3 +02.6		16
17	75	48.9 +00.0	N 16 06.7 +00.7		46	24.9 -00.7	N 23 22.7 +00.5		222	08.9 -30.9	S 27 43.9 +02.4		17
18	90	48.9 +00.1	N 16 07.4 +00.7		61	24.2 -00.8	N 23 23.2 +00.5		236	38.0 -30.8	S 27 46.3 +02.3		18
19	105	49.0 +00.0	N 16 08.1 +00.7		76	23.4 -00.8	N 23 23.7 +00.5		251	07.2 -30.9	S 27 48.6 +02.1		19
20	120	49.0 +00.1	N 16 08.8 +00.7		91	22.6 -00.8	N 23 24.2 +00.4		265	36.3 -30.9	S 27 50.7 +02.0		20
21	135	49.1 +00.1	N 16 09.5 +00.8		106	21.8 -00.8	N 23 24.6 +00.5		280	05.4 -31.0	S 27 52.7 +01.9		21
22	150	49.2 +00.0	N 16 10.3 +00.7		121	21.0 -00.8	N 23 25.1 +00.5		294	34.4 -30.9	S 27 54.6 +01.8		22
23	165	49.2 +00.1	N 16 11.0 +00.7		136	20.2 -00.7	N 23 25.6 +00.5		309	03.5 -31.0	S 27 56.4 +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 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'7 14'7 14'7 14'7				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'0 54'0 54'0 54'0 54'0 54'0				
	SHA 319° 319° 319° 318° 318° 318°				SHA 290° 289° 289° 289° 289° 289°				SHA 113° 111° 108° 106° 104° 102°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 13:54				Greenwich Culmination Time: 01:40				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	204	20.6 +00.6	N 06 30.9 +00.7		110	54.1 +02.0	N 22 25.9 +00.0		212	19.7 +02.2	N 01 45.2 +00.1		00
01	219	21.2 +00.7	N 06 31.6 +00.7		125	56.1 +02.1	N 22 25.9 -00.1		227	21.9 +02.2	N 01 45.3 +00.1		01
02	234	21.9 +00.7	N 06 32.3 +00.8		140	58.2 +02.1	N 22 25.8 +00.0		242	24.1 +02.2	N 01 45.4 +00.1		02
03	249	22.6 +00.7	N 06 33.1 +00.7		156	00.3 +02.1	N 22 25.8 -00.1		257	26.3 +02.2	N 01 45.5 +00.1		03
04	264	23.3 +00.7	N 06 33.8 +00.8		171	02.4 +02.0	N 22 25.7 +00.0		272	28.5 +02.2	N 01 45.6 +00.1		04
05	279	24.0 +00.7	N 06 34.6 +00.7		186	04.4 +02.1	N 22 25.7 -00.1		287	30.7 +02.2	N 01 45.7 +00.1		05
06	294	24.7 +00.7	N 06 35.3 +00.7		201	06.5 +02.1	N 22 25.6 +00.0		302	32.9 +02.3	N 01 45.8 +00.1		06
07	309	25.4 +00.7	N 06 36.0 +00.8		216	08.6 +02.1	N 22 25.6 -00.1		317	35.2 +02.2	N 01 45.9 +00.1		07
08	324	26.1 +00.7	N 06 36.8 +00.7		231	10.7 +02.0	N 22 25.5 +00.0		332	37.4 +02.2	N 01 46.0 +00.1		08
09	339	26.8 +00.7	N 06 37.5 +00.8		246	12.7 +02.1	N 22 25.5 -00.1		347	39.6 +02.2	N 01 46.1 +00.1		09
10	354	27.5 +00.7	N 06 38.3 +00.7		261	14.8 +02.1	N 22 25.4 +00.0		2	41.8 +02.2	N 01 46.2 +00.1		10
11	9	28.2 +00.7	N 06 39.0 +00.7		276	16.9 +02.0	N 22 25.4 -00.1		17	44.0 +02.2	N 01 46.3 +00.1		11
12	24	28.9 +00.7	N 06 39.7 +00.8		291	18.9 +02.1	N 22 25.3 +00.0		32	46.2 +02.2	N 01 46.4 +00.2		12
13	39	29.6 +00.6	N 06 40.5 +00.7		306	21.0 +02.1	N 22 25.3 -00.1		47	48.4 +02.2	N 01 46.6 +00.1		13
14	54	30.2 +00.7	N 06 41.2 +00.8		321	23.1 +02.1	N 22 25.2 +00.0		62	50.6 +02.2	N 01 46.7 +00.1		14
15	69	30.9 +00.7	N 06 42.0 +00.7		336	25.2 +02.0	N 22 25.2 -00.1		77	52.8 +02.2	N 01 46.8 +00.1		15
16	84	31.6 +00.7	N 06 42.7 +00.7		351	27.2 +02.1	N 22 25.1 +00.0		92	55.0 +02.2	N 01 46.9 +00.1		16
17	99	32.3 +00.7	N 06 43.4 +00.8		6	29.3 +02.1	N 22 25.1 -00.1		107	57.2 +02.2	N 01 47.0 +00.1		17
18	114	33.0 +00.7	N 06 44.2 +00.7		21	31.4 +02.0	N 22 25.0 +00.0		122	59.4 +02.3	N 01 47.1 +00.1		18
19	129	33.7 +00.7	N 06 44.9 +00.8		36	33.4 +02.1	N 22 25.0 -00.1		138	01.7 +02.2	N 01 47.2 +00.1		19
20	144	34.4 +00.7	N 06 45.7 +00.7		51	35.5 +02.1	N 22 24.9 -00.1		153	03.9 +02.2	N 01 47.3 +00.1		20
21	159	35.1 +00.7	N 06 46.4 +00.7		66	37.6 +02.1	N 22 24.8 +00.0		168	06.1 +02.2	N 01 47.4 +00.1		21
22	174	35.8 +00.7	N 06 47.1 +00.8		81	39.7 +02.0	N 22 24.8 -00.1		183	08.3 +02.2	N 01 47.5 +00.1		22
23	189	36.5 +00.7	N 06 47.9 +00.7		96	41.7 +02.1	N 22 24.7 +00.0		198	10.5 +02.2	N 01 47.6 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 342° 342° 342° 342° 342° 342°				SHA 249° 249° 249° 249° 249° 249°				SHA 350° 350° 350° 350° 350° 350°				
	Greenwich Culmination Time: 10:22				Greenwich Culmination Time: 16:34				Greenwich Culmination Time: 09:49				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 49.3 +00.0	N 16 11.7 +00.7	151 19.5 -00.8	N 23 26.1 +00.5	323 32.5 -30.9	S 27 58.0 +01.5	00						
01	195 49.3 +00.1	N 16 12.4 +00.7	166 18.7 -00.8	N 23 26.6 +00.5	338 01.6 -31.0	S 27 59.5 +01.3	01						
02	210 49.4 +00.0	N 16 13.1 +00.7	181 17.9 -00.8	N 23 27.1 +00.5	352 30.6 -31.0	S 28 00.8 +01.2	02						
03	225 49.4 +00.1	N 16 13.8 +00.7	196 17.1 -00.8	N 23 27.6 +00.4	6 59.6 -31.0	S 28 02.0 +01.1	03						
04	240 49.5 +00.0	N 16 14.5 +00.8	211 16.3 -00.8	N 23 28.0 +00.5	21 28.6 -31.0	S 28 03.1 +00.9	04						
05	255 49.5 +00.1	N 16 15.3 +00.7	226 15.5 -00.8	N 23 28.5 +00.5	35 57.6 -31.0	S 28 04.0 +00.8	05						
06	270 49.6 +00.0	N 16 16.0 +00.7	241 14.7 -00.7	N 23 29.0 +00.5	50 26.6 -31.0	S 28 04.8 +00.7	06						
07	285 49.6 +00.1	N 16 16.7 +00.7	256 14.0 -00.8	N 23 29.5 +00.4	64 55.6 -31.1	S 28 05.5 +00.5	07						
08	300 49.7 +00.0	N 16 17.4 +00.7	271 13.2 -00.8	N 23 29.9 +00.5	79 24.5 -31.0	S 28 06.0 +00.4	08						
09	315 49.7 +00.1	N 16 18.1 +00.7	286 12.4 -00.8	N 23 30.4 +00.5	93 53.5 -31.0	S 28 06.4 +00.2	09						
10	330 49.8 +00.1	N 16 18.8 +00.7	301 11.6 -00.8	N 23 30.9 +00.5	108 22.5 -31.1	S 28 06.6 +00.2	10						
11	345 49.9 +00.0	N 16 19.5 +00.7	316 10.8 -00.8	N 23 31.4 +00.4	122 51.4 -31.0	S 28 06.8 -00.1	11						
12	0 49.9 +00.1	N 16 20.2 +00.8	331 10.0 -00.8	N 23 31.8 +00.5	137 20.4 -31.0	S 28 06.7 -00.1	12						
13	15 50.0 +00.0	N 16 21.0 +00.7	346 09.2 -00.8	N 23 32.3 +00.5	151 49.4 -31.1	S 28 06.6 -00.3	13						
14	30 50.0 +00.1	N 16 21.7 +00.7	1 08.4 -00.7	N 23 32.8 +00.4	166 18.3 -31.0	S 28 06.3 -00.4	14						
15	45 50.1 +00.0	N 16 22.4 +00.7	16 07.7 -00.8	N 23 33.2 +00.5	180 47.3 -31.1	S 28 05.9 -00.6	15						
16	60 50.1 +00.1	N 16 23.1 +00.7	31 06.9 -00.8	N 23 33.7 +00.5	195 16.2 -31.0	S 28 05.3 -00.7	16						
17	75 50.2 +00.0	N 16 23.8 +00.7	46 06.1 -00.8	N 23 34.2 +00.4	209 45.2 -31.0	S 28 04.6 -00.8	17						
18	90 50.2 +00.1	N 16 24.5 +00.7	61 05.3 -00.8	N 23 34.6 +00.5	224 14.2 -31.0	S 28 03.8 -01.0	18						
19	105 50.3 +00.0	N 16 25.2 +00.7	76 04.5 -00.8	N 23 35.1 +00.5	238 43.2 -31.0	S 28 02.8 -01.1	19						
20	120 50.3 +00.1	N 16 25.9 +00.7	91 03.7 -00.8	N 23 35.6 +00.4	253 12.2 -31.0	S 28 01.7 -01.2	20						
21	135 50.4 +00.0	N 16 26.6 +00.7	106 02.9 -00.8	N 23 36.0 +00.5	267 41.2 -31.0	S 28 00.5 -01.4	21						
22	150 50.4 +00.1	N 16 27.3 +00.7	121 02.1 -00.8	N 23 36.5 +00.4	282 10.2 -31.0	S 27 59.1 -01.5	22						
23	165 50.5 +00.0	N 16 28.0 +00.7	136 01.3 -00.8	N 23 36.9 +00.5	296 39.2 -30.9	S 27 57.6 -01.7	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 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'0 54'0 54'0 54'0 54'1								
	SHA 318° 318° 318° 317° 317° 317°		SHA 288° 288° 288° 288° 287° 287°		SHA 100° 097° 095° 093° 091° 088°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 13:55		Greenwich Culmination Time: 02:31								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	204 37.2 +00.7	N 06 48.6 +00.7	111 43.8 +02.1	N 22 24.7 -00.1	213 12.7 +02.2	N 01 47.7 +00.1	00						
01	219 37.9 +00.6	N 06 49.3 +00.8	126 45.9 +02.0	N 22 24.6 +00.0	228 14.9 +02.2	N 01 47.8 +00.1	01						
02	234 38.5 +00.7	N 06 50.1 +00.7	141 47.9 +02.1	N 22 24.6 -00.1	243 17.1 +02.2	N 01 47.9 +00.1	02						
03	249 39.2 +00.7	N 06 50.8 +00.8	156 50.0 +02.1	N 22 24.5 +00.0	258 19.3 +02.2	N 01 48.0 +00.1	03						
04	264 39.9 +00.7	N 06 51.6 +00.7	171 52.1 +02.0	N 22 24.5 -00.1	273 21.5 +02.2	N 01 48.1 +00.1	04						
05	279 40.6 +00.7	N 06 52.3 +00.7	186 54.1 +02.1	N 22 24.4 +00.0	288 23.7 +02.3	N 01 48.2 +00.1	05						
06	294 41.3 +00.7	N 06 53.0 +00.8	201 56.2 +02.1	N 22 24.4 -00.1	303 26.0 +02.2	N 01 48.3 +00.1	06						
07	309 42.0 +00.7	N 06 53.8 +00.7	216 58.3 +02.1	N 22 24.3 +00.0	318 28.2 +02.2	N 01 48.4 +00.1	07						
08	324 42.7 +00.7	N 06 54.5 +00.7	232 00.4 +02.0	N 22 24.3 -00.1	333 30.4 +02.2	N 01 48.5 +00.1	08						
09	339 43.4 +00.7	N 06 55.2 +00.8	247 02.4 +02.1	N 22 24.2 +00.0	348 32.6 +02.2	N 01 48.6 +00.1	09						
10	354 44.1 +00.7	N 06 56.0 +00.7	262 04.5 +02.1	N 22 24.2 -00.1	3 34.8 +02.2	N 01 48.7 +00.1	10						
11	9 44.8 +00.7	N 06 56.7 +00.8	277 06.6 +02.0	N 22 24.1 +00.0	18 37.0 +02.2	N 01 48.8 +00.1	11						
12	24 45.5 +00.6	N 06 57.5 +00.7	292 08.6 +02.1	N 22 24.1 -00.1	33 39.2 +02.2	N 01 48.9 +00.1	12						
13	39 46.1 +00.7	N 06 58.2 +00.7	307 10.7 +02.1	N 22 24.0 +00.0	48 41.4 +02.2	N 01 49.0 +00.1	13						
14	54 46.8 +00.7	N 06 58.9 +00.8	322 12.8 +02.0	N 22 24.0 -00.1	63 43.6 +02.2	N 01 49.1 +00.1	14						
15	69 47.5 +00.7	N 06 59.7 +00.7	337 14.8 +02.1	N 22 23.9 +00.0	78 45.8 +02.2	N 01 49.2 +00.1	15						
16	84 48.2 +00.7	N 07 00.4 +00.7	352 16.9 +02.1	N 22 23.9 -00.1	93 48.0 +02.3	N 01 49.3 +00.1	16						
17	99 48.9 +00.7	N 07 01.1 +00.8	7 19.0 +02.0	N 22 23.8 +00.0	108 50.3 +02.2	N 01 49.4 +00.1	17						
18	114 49.6 +00.7	N 07 01.9 +00.7	22 21.0 +02.1	N 22 23.8 -00.1	123 52.5 +02.2	N 01 49.5 +00.1	18						
19	129 50.3 +00.7	N 07 02.6 +00.7	37 23.1 +02.1	N 22 23.7 +00.0	138 54.7 +02.2	N 01 49.6 +00.1	19						
20	144 51.0 +00.7	N 07 03.3 +00.8	52 25.2 +02.0	N 22 23.7 -00.1	153 56.9 +02.2	N 01 49.7 +00.1	20						
21	159 51.7 +00.7	N 07 04.1 +00.7	67 27.2 +02.1	N 22 23.6 +00.0	168 59.1 +02.2	N 01 49.8 +00.1	21						
22	174 52.4 +00.7	N 07 04.8 +00.7	82 29.3 +02.1	N 22 23.6 -00.1	184 01.3 +02.2	N 01 49.9 +00.1	22						
23	189 53.1 +00.6	N 07 05.5 +00.8	97 31.4 +02.0	N 22 23.5 +00.0	199 03.5 +02.2	N 01 50.0 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 342° 342° 341° 341° 341° 341°		SHA 249° 249° 249° 249° 249° 249°		SHA 350° 350° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:21		Greenwich Culmination Time: 16:30		Greenwich Culmination Time: 09:45								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 50.5 +00.1	N 16 28.7 +00.7			151 00.5 -00.8	N 23 37.4 +00.5			311 08.3 -31.0	S 27 55.9 -01.8			00
01	195 50.6 +00.0	N 16 29.4 +00.7			165 59.7 -00.7	N 23 37.9 +00.4			325 37.3 -30.9	S 27 54.1 -01.9			01
02	210 50.6 +00.0	N 16 30.1 +00.7			180 59.0 -00.8	N 23 38.3 +00.5			340 06.4 -30.9	S 27 52.2 -02.0			02
03	225 50.6 +00.1	N 16 30.8 +00.7			195 58.2 -00.8	N 23 38.8 +00.4			354 35.5 -30.9	S 27 50.2 -02.2			03
04	240 50.7 +00.0	N 16 31.5 +00.7			210 57.4 -00.8	N 23 39.2 +00.5			9 04.6 -30.9	S 27 48.0 -02.3			04
05	255 50.7 +00.1	N 16 32.2 +00.7			225 56.6 -00.8	N 23 39.7 +00.4			23 33.7 -30.9	S 27 45.7 -02.5			05
06	270 50.8 +00.0	N 16 32.9 +00.7			240 55.8 -00.8	N 23 40.1 +00.5			38 02.8 -30.8	S 27 43.2 -02.6			06
07	285 50.8 +00.1	N 16 33.6 +00.7			255 55.0 -00.8	N 23 40.6 +00.4			52 32.0 -30.9	S 27 40.6 -02.7			07
08	300 50.9 +00.0	N 16 34.3 +00.7			270 54.2 -00.8	N 23 41.0 +00.5			67 01.1 -30.8	S 27 37.9 -02.8			08
09	315 50.9 +00.1	N 16 35.0 +00.7			285 53.4 -00.8	N 23 41.5 +00.4			81 30.3 -30.7	S 27 35.1 -03.0			09
10	330 51.0 +00.0	N 16 35.7 +00.7			300 52.6 -00.8	N 23 41.9 +00.5			95 59.6 -30.8	S 27 32.1 -03.2			10
11	345 51.0 +00.1	N 16 36.4 +00.7			315 51.8 -00.8	N 23 42.4 +00.4			110 28.8 -30.7	S 27 28.9 -03.2			11
12	0 51.1 +00.0	N 16 37.1 +00.7			330 51.0 -00.8	N 23 42.8 +00.4			124 58.1 -30.7	S 27 25.7 -03.4			12
13	15 51.1 +00.1	N 16 37.8 +00.7			345 50.2 -00.8	N 23 43.2 +00.5			139 27.4 -30.7	S 27 22.3 -03.5			13
14	30 51.2 +00.0	N 16 38.5 +00.7			0 49.4 -00.8	N 23 43.7 +00.4			153 56.7 -30.7	S 27 18.8 -03.6			14
15	45 51.2 +00.0	N 16 39.2 +00.7			15 48.6 -00.8	N 23 44.1 +00.5			168 26.0 -30.6	S 27 15.2 -03.8			15
16	60 51.2 +00.1	N 16 39.9 +00.7			30 47.8 -00.8	N 23 44.6 +00.4			182 55.4 -30.6	S 27 11.4 -03.9			16
17	75 51.3 +00.0	N 16 40.6 +00.7			45 47.0 -00.8	N 23 45.0 +00.4			197 24.8 -30.5	S 27 07.5 -04.1			17
18	90 51.3 +00.1	N 16 41.3 +00.7			60 46.2 -00.7	N 23 45.4 +00.5			211 54.3 -30.6	S 27 03.4 -04.1			18
19	105 51.4 +00.0	N 16 42.0 +00.7			75 45.5 -00.8	N 23 45.9 +00.4			226 23.7 -30.5	S 26 59.3 -04.3			19
20	120 51.4 +00.1	N 16 42.7 +00.7			90 44.7 -00.8	N 23 46.3 +00.4			240 53.2 -30.4	S 26 55.0 -04.5			20
21	135 51.5 +00.0	N 16 43.4 +00.7			105 43.9 -00.8	N 23 46.7 +00.5			255 22.8 -30.5	S 26 50.5 -04.5			21
22	150 51.5 +00.1	N 16 44.1 +00.7			120 43.1 -00.8	N 23 47.2 +00.4			269 52.3 -30.4	S 26 46.0 -04.7			22
23	165 51.6 +00.0	N 16 44.8 +00.7			135 42.3 -00.8	N 23 47.6 +00.4			284 21.9 -30.3	S 26 41.3 -04.8			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'8 14'8 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'1 54'1 54'1 54'2 54'2 54'3				
	SHA 317° 317° 317° 316° 316° 316°				SHA 287° 287° 287° 286° 286° 286°				SHA 086° 084° 082° 080° 077° 075°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 13:56				Greenwich Culmination Time: 03:22				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	204 53.7 +00.7	N 07 06.3 +00.7			112 33.4 +02.1	N 22 23.5 -00.1			214 05.7 +02.2	N 01 50.1 +00.1			00
01	219 54.4 +00.7	N 07 07.0 +00.7			127 35.5 +02.1	N 22 23.4 -00.1			229 07.9 +02.2	N 01 50.2 +00.1			01
02	234 55.1 +00.7	N 07 07.7 +00.8			142 37.6 +02.0	N 22 23.3 +00.0			244 10.1 +02.3	N 01 50.3 +00.1			02
03	249 55.8 +00.7	N 07 08.5 +00.7			157 39.6 +02.1	N 22 23.3 -00.1			259 12.4 +02.2	N 01 50.4 +00.1			03
04	264 56.5 +00.7	N 07 09.2 +00.7			172 41.7 +02.0	N 22 23.2 +00.0			274 14.6 +02.2	N 01 50.5 +00.1			04
05	279 57.2 +00.7	N 07 09.9 +00.8			187 43.7 +02.1	N 22 23.2 -00.1			289 16.8 +02.2	N 01 50.6 +00.1			05
06	294 57.9 +00.7	N 07 10.7 +00.7			202 45.8 +02.1	N 22 23.1 +00.0			304 19.0 +02.2	N 01 50.7 +00.1			06
07	309 58.6 +00.7	N 07 11.4 +00.7			217 47.9 +02.0	N 22 23.1 -00.1			319 21.2 +02.2	N 01 50.8 +00.1			07
08	324 59.3 +00.7	N 07 12.1 +00.8			232 49.9 +02.1	N 22 23.0 +00.0			334 23.4 +02.2	N 01 50.9 +00.1			08
09	339 60.0 +00.7	N 07 12.9 +00.7			247 52.0 +02.1	N 22 23.0 -00.1			349 25.6 +02.2	N 01 51.0 +00.1			09
10	355 00.7 +00.6	N 07 13.6 +00.7			262 54.1 +02.0	N 22 22.9 +00.0			4 27.8 +02.2	N 01 51.1 +00.1			10
11	10 01.3 +00.7	N 07 14.3 +00.8			277 56.1 +02.1	N 22 22.9 -00.1			19 30.0 +02.3	N 01 51.2 +00.1			11
12	25 02.0 +00.7	N 07 15.1 +00.7			292 58.2 +02.1	N 22 22.8 +00.0			34 32.3 +02.2	N 01 51.3 +00.1			12
13	40 02.7 +00.7	N 07 15.8 +00.7			308 00.3 +02.0	N 22 22.8 -00.1			49 34.5 +02.2	N 01 51.4 +00.1			13
14	55 03.4 +00.7	N 07 16.5 +00.8			323 02.3 +02.1	N 22 22.7 +00.0			64 36.7 +02.2	N 01 51.5 +00.1			14
15	70 04.1 +00.7	N 07 17.3 +00.7			338 04.4 +02.0	N 22 22.7 -00.1			79 38.9 +02.2	N 01 51.6 +00.2			15
16	85 04.8 +00.7	N 07 18.0 +00.7			353 06.4 +02.1	N 22 22.6 +00.0			94 41.1 +02.2	N 01 51.8 +00.1			16
17	100 05.5 +00.7	N 07 18.7 +00.8			8 08.5 +02.1	N 22 22.6 -00.1			109 43.3 +02.2	N 01 51.9 +00.1			17
18	115 06.2 +00.7	N 07 19.5 +00.7			23 10.6 +02.0	N 22 22.5 +00.0			124 45.5 +02.2	N 01 52.0 +00.1			18
19	130 06.9 +00.7	N 07 20.2 +00.7			38 12.6 +02.1	N 22 22.5 -00.1			139 47.7 +02.3	N 01 52.1 +00.1			19
20	145 07.6 +00.6	N 07 20.9 +00.8			53 14.7 +02.0	N 22 22.4 -00.1			154 50.0 +02.2	N 01 52.2 +00.1			20
21	160 08.2 +00.7	N 07 21.7 +00.7			68 16.7 +02.1	N 22 22.3 +00.0			169 52.2 +02.2	N 01 52.3 +00.1			21
22	175 08.9 +00.7	N 07 22.4 +00.7			83 18.8 +02.1	N 22 22.3 -00.1			184 54.4 +02.2	N 01 52.4 +00.1			22
23	190 09.6 +00.7	N 07 23.1 +00.8			98 20.9 +02.0	N 22 22.2 +00.0			199 56.6 +02.2	N 01 52.5 +00.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 341° 341° 341° 341° 340° 340°				SHA 249° 249° 249° 249° 249° 249°				SHA 350° 350° 350° 350° 350° 350°				
	Greenwich Culmination Time: 10:19				Greenwich Culmination Time: 16:27				Greenwich Culmination Time: 09:42				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 51.6 +00.0	N 16 45.5 +00.7	150 41.5 -00.8	N 23 48.0 +00.5	298 51.6 -30.4	S 26 36.5 -04.9	00						
01	195 51.6 +00.1	N 16 46.2 +00.7	165 40.7 -00.8	N 23 48.5 +00.4	313 21.2 -30.3	S 26 31.6 -05.1	01						
02	210 51.7 +00.0	N 16 46.9 +00.7	180 39.9 -00.8	N 23 48.9 +00.4	327 50.9 -30.2	S 26 26.5 -05.2	02						
03	225 51.7 +00.1	N 16 47.6 +00.6	195 39.1 -00.8	N 23 49.3 +00.4	342 20.7 -30.3	S 26 21.3 -05.3	03						
04	240 51.8 +00.0	N 16 48.2 +00.7	210 38.3 -00.8	N 23 49.7 +00.5	356 50.4 -30.1	S 26 16.0 -05.5	04						
05	255 51.8 +00.0	N 16 48.9 +00.7	225 37.5 -00.8	N 23 50.2 +00.4	11 20.3 -30.2	S 26 10.5 -05.5	05						
06	270 51.8 +00.1	N 16 49.6 +00.7	240 36.7 -00.8	N 23 50.6 +00.4	25 50.1 -30.1	S 26 05.0 -05.7	06						
07	285 51.9 +00.0	N 16 50.3 +00.7	255 35.9 -00.8	N 23 51.0 +00.4	40 20.0 -30.1	S 25 59.3 -05.8	07						
08	300 51.9 +00.1	N 16 51.0 +00.7	270 35.1 -00.8	N 23 51.4 +00.5	54 49.9 -30.0	S 25 53.5 -06.0	08						
09	315 52.0 +00.0	N 16 51.7 +00.7	285 34.3 -00.8	N 23 51.9 +00.4	69 19.9 -30.0	S 25 47.5 -06.0	09						
10	330 52.0 +00.0	N 16 52.4 +00.7	300 33.5 -00.8	N 23 52.3 +00.4	83 49.9 -29.9	S 25 41.5 -06.2	10						
11	345 52.0 +00.1	N 16 53.1 +00.7	315 32.7 -00.8	N 23 52.7 +00.4	98 20.0 -29.9	S 25 35.3 -06.3	11						
12	0 52.1 +00.0	N 16 53.8 +00.6	330 31.9 -00.8	N 23 53.1 +00.4	112 50.1 -29.9	S 25 29.0 -06.5	12						
13	15 52.1 +00.1	N 16 54.4 +00.7	345 31.1 -00.8	N 23 53.5 +00.4	127 20.2 -29.8	S 25 22.5 -06.5	13						
14	30 52.2 +00.0	N 16 55.1 +00.7	0 30.3 -00.8	N 23 53.9 +00.4	141 50.4 -29.8	S 25 16.0 -06.7	14						
15	45 52.2 +00.0	N 16 55.8 +00.7	15 29.5 -00.8	N 23 54.3 +00.5	156 20.6 -29.7	S 25 09.3 -06.8	15						
16	60 52.2 +00.1	N 16 56.5 +00.7	30 28.7 -00.8	N 23 54.8 +00.4	170 50.9 -29.7	S 25 02.5 -06.9	16						
17	75 52.3 +00.0	N 16 57.2 +00.7	45 27.9 -00.8	N 23 55.2 +00.4	185 21.2 -29.7	S 24 55.6 -07.0	17						
18	90 52.3 +00.1	N 16 57.9 +00.7	60 27.1 -00.8	N 23 55.6 +00.4	199 51.5 -29.6	S 24 48.6 -07.2	18						
19	105 52.4 +00.0	N 16 58.6 +00.6	75 26.3 -00.8	N 23 56.0 +00.4	214 21.9 -29.5	S 24 41.4 -07.2	19						
20	120 52.4 +00.0	N 16 59.2 +00.7	90 25.5 -00.8	N 23 56.4 +00.4	228 52.4 -29.5	S 24 34.2 -07.4	20						
21	135 52.4 +00.1	N 16 59.9 +00.7	105 24.7 -00.9	N 23 56.8 +00.4	243 22.9 -29.5	S 24 26.8 -07.5	21						
22	150 52.5 +00.0	N 17 00.6 +00.7	120 23.8 -00.8	N 23 57.2 +00.4	257 53.4 -29.4	S 24 19.3 -07.6	22						
23	165 52.5 +00.0	N 17 01.3 +00.7	135 23.0 -00.8	N 23 57.6 +00.4	272 24.0 -29.4	S 24 11.7 -07.7	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 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'3 54'4 54'4 54'5 54'5 54'6								
	SHA 316° 316° 316° 315° 315° 315°		SHA 286° 286° 285° 285° 285° 285°		SHA 073° 071° 069° 066° 064° 062°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 13:57		Greenwich Culmination Time: 04:13								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	205 10.3 +00.7	N 07 23.9 +00.7	113 22.9 +02.1	N 22 22.2 -00.1	214 58.8 +02.2	N 01 52.6 +00.1	00						
01	220 11.0 +00.7	N 07 24.6 +00.7	128 25.0 +02.0	N 22 22.1 +00.0	230 01.0 +02.2	N 01 52.7 +00.1	01						
02	235 11.7 +00.7	N 07 25.3 +00.8	143 27.0 +02.1	N 22 22.1 -00.1	245 03.2 +02.2	N 01 52.8 +00.1	02						
03	250 12.4 +00.7	N 07 26.1 +00.7	158 29.1 +02.1	N 22 22.0 +00.0	260 05.4 +02.2	N 01 52.9 +00.1	03						
04	265 13.1 +00.7	N 07 26.8 +00.7	173 31.2 +02.0	N 22 22.0 -00.1	275 07.6 +02.3	N 01 53.0 +00.1	04						
05	280 13.8 +00.7	N 07 27.5 +00.7	188 33.2 +02.1	N 22 21.9 +00.0	290 09.9 +02.2	N 01 53.1 +00.1	05						
06	295 14.5 +00.6	N 07 28.2 +00.8	203 35.3 +02.0	N 22 21.9 -00.1	305 12.1 +02.2	N 01 53.2 +00.1	06						
07	310 15.1 +00.7	N 07 29.0 +00.7	218 37.3 +02.1	N 22 21.8 +00.0	320 14.3 +02.2	N 01 53.3 +00.1	07						
08	325 15.8 +00.7	N 07 29.7 +00.7	233 39.4 +02.1	N 22 21.8 -00.1	335 16.5 +02.2	N 01 53.4 +00.1	08						
09	340 16.5 +00.7	N 07 30.4 +00.8	248 41.5 +02.0	N 22 21.7 +00.0	350 18.7 +02.2	N 01 53.5 +00.1	09						
10	355 17.2 +00.7	N 07 31.2 +00.7	263 43.5 +02.1	N 22 21.7 -00.1	5 20.9 +02.2	N 01 53.6 +00.1	10						
11	10 17.9 +00.7	N 07 31.9 +00.7	278 45.6 +02.0	N 22 21.6 -00.1	20 23.1 +02.2	N 01 53.7 +00.1	11						
12	25 18.6 +00.7	N 07 32.6 +00.8	293 47.6 +02.1	N 22 21.5 +00.0	35 25.3 +02.3	N 01 53.8 +00.1	12						
13	40 19.3 +00.7	N 07 33.4 +00.7	308 49.7 +02.0	N 22 21.5 -00.1	50 27.6 +02.2	N 01 53.9 +00.1	13						
14	55 20.0 +00.7	N 07 34.1 +00.7	323 51.7 +02.1	N 22 21.4 +00.0	65 29.8 +02.2	N 01 54.0 +00.1	14						
15	70 20.7 +00.7	N 07 34.8 +00.7	338 53.8 +02.1	N 22 21.4 -00.1	80 32.0 +02.2	N 01 54.1 +00.1	15						
16	85 21.4 +00.6	N 07 35.5 +00.8	353 55.9 +02.0	N 22 21.3 +00.0	95 34.2 +02.2	N 01 54.2 +00.1	16						
17	100 22.0 +00.7	N 07 36.3 +00.7	8 57.9 +02.1	N 22 21.3 -00.1	110 36.4 +02.2	N 01 54.3 +00.1	17						
18	115 22.7 +00.7	N 07 37.0 +00.7	23 60.0 +02.0	N 22 21.2 +00.0	125 38.6 +02.2	N 01 54.4 +00.1	18						
19	130 23.4 +00.7	N 07 37.7 +00.8	39 02.0 +02.1	N 22 21.2 -00.1	140 40.8 +02.3	N 01 54.5 +00.1	19						
20	145 24.1 +00.7	N 07 38.5 +00.7	54 04.1 +02.0	N 22 21.1 +00.0	155 43.1 +02.2	N 01 54.6 +00.1	20						
21	160 24.8 +00.7	N 07 39.2 +00.7	69 06.1 +02.1	N 22 21.1 -00.1	170 45.3 +02.2	N 01 54.7 +00.1	21						
22	175 25.5 +00.7	N 07 39.9 +00.7	84 08.2 +02.1	N 22 21.0 -00.1	185 47.5 +02.2	N 01 54.8 +00.1	22						
23	190 26.2 +00.7	N 07 40.6 +00.8	99 10.3 +02.0	N 22 20.9 +00.0	200 49.7 +02.2	N 01 54.9 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 340° 340° 340° 340° 340° 340°		SHA 249° 248° 248° 248° 248° 248°		SHA 350° 350° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:18		Greenwich Culmination Time: 16:24		Greenwich Culmination Time: 09:38								

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 52.5 +00.1	N 17 02.0 +00.6			150 22.2 -00.8	N 23 58.0 +00.4			286 54.6 -29.4	S 24 04.0 -07.9			00
01	195 52.6 +00.0	N 17 02.6 +00.7			165 21.4 -00.8	N 23 58.4 +00.4			301 25.2 -29.2	S 23 56.1 -07.9			01
02	210 52.6 +00.0	N 17 03.3 +00.7			180 20.6 -00.8	N 23 58.8 +00.4			315 26.7 -29.2	S 23 48.2 -08.1			02
03	225 52.6 +00.1	N 17 04.0 +00.7			195 19.8 -00.8	N 23 59.2 +00.4			330 26.7 -29.2	S 23 40.1 -08.2			03
04	240 52.7 +00.0	N 17 04.7 +00.7			210 19.0 -00.8	N 23 59.6 +00.4			344 26.7 -29.2	S 23 31.9 -08.3			04
05	255 52.7 +00.1	N 17 05.4 +00.6			225 18.2 -00.8	N 23 60.0 +00.4			359 26.7 -29.2	S 23 23.6 -08.4			05
06	270 52.8 +00.0	N 17 06.0 +00.7			240 17.4 -00.8	N 24 00.4 +00.4			13 59.3 -29.1	S 23 15.2 -08.5			06
07	285 52.8 +00.0	N 17 06.7 +00.7			255 16.6 -00.8	N 24 00.8 +00.4			28 30.2 -29.0	S 23 06.7 -08.6			07
08	300 52.8 +00.1	N 17 07.4 +00.7			270 15.8 -00.8	N 24 01.2 +00.4			43 01.2 -29.0	S 22 58.1 -08.8			08
09	315 52.9 +00.0	N 17 08.1 +00.6			285 15.0 -00.8	N 24 01.6 +00.4			57 32.2 -28.9	S 22 49.3 -08.8			09
10	330 52.9 +00.0	N 17 08.7 +00.7			300 14.2 -00.8	N 24 02.0 +00.3			72 03.3 -28.9	S 22 40.5 -09.0			10
11	345 52.9 +00.1	N 17 09.4 +00.7			315 13.4 -00.8	N 24 02.3 +00.4			86 34.4 -28.8	S 22 31.5 -09.0			11
12	0 53.0 +00.0	N 17 10.1 +00.7			330 12.6 -00.8	N 24 02.7 +00.4			101 05.6 -28.8	S 22 22.5 -09.2			12
13	15 53.0 +00.0	N 17 10.8 +00.6			345 11.8 -00.8	N 24 03.1 +00.4			115 36.8 -28.7	S 22 13.3 -09.3			13
14	30 53.0 +00.1	N 17 11.4 +00.7			0 11.0 -00.8	N 24 03.5 +00.4			130 08.1 -28.7	S 22 04.0 -09.3			14
15	45 53.1 +00.0	N 17 12.1 +00.7			15 10.2 -00.9	N 24 03.9 +00.4			144 39.4 -28.7	S 21 54.7 -09.5			15
16	60 53.1 +00.0	N 17 12.8 +00.7			30 09.3 -00.8	N 24 04.3 +00.4			159 10.7 -28.6	S 21 45.2 -09.6			16
17	75 53.1 +00.1	N 17 13.5 +00.6			45 08.5 -00.8	N 24 04.7 +00.3			173 42.1 -28.5	S 21 35.6 -09.7			17
18	90 53.2 +00.0	N 17 14.1 +00.7			60 07.7 -00.8	N 24 05.0 +00.4			188 13.6 -28.6	S 21 25.9 -09.8			18
19	105 53.2 +00.0	N 17 14.8 +00.7			75 06.9 -00.8	N 24 05.4 +00.4			202 45.0 -28.4	S 21 16.1 -09.9			19
20	120 53.2 +00.0	N 17 15.5 +00.7			90 06.1 -00.8	N 24 05.8 +00.4			217 16.6 -28.5	S 21 06.2 -10.0			20
21	135 53.2 +00.1	N 17 16.2 +00.6			105 05.3 -00.8	N 24 06.2 +00.3			231 48.1 -28.3	S 20 56.2 -10.1			21
22	150 53.3 +00.0	N 17 16.8 +00.7			120 04.5 -00.8	N 24 06.5 +00.4			246 19.8 -28.4	S 20 46.1 -10.2			22
23	165 53.3 +00.0	N 17 17.5 +00.7			135 03.7 -00.8	N 24 06.9 +00.4			260 51.4 -28.3	S 20 35.9 -10.3			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 14'9 14'9 14'9 15'0 15'0 15'0				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'7 54'7 54'8 54'9 55'0 55'1				
	SHA 315° 315° 315° 314° 314° 314°				SHA 284° 284° 284° 284° 284° 283°				SHA 060° 058° 056° 054° 052° 050°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 13:59				Greenwich Culmination Time: 05:02				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	205 26.9 +00.7	N 07 41.4 +00.7			114 12.3 +02.1	N 22 20.9 -00.1			215 51.9 +02.2	N 01 55.0 +00.1			00
01	220 27.6 +00.7	N 07 42.1 +00.7			129 14.4 +02.0	N 22 20.8 +00.0			230 54.1 +02.2	N 01 55.1 +00.1			01
02	235 28.3 +00.6	N 07 42.8 +00.7			144 16.4 +02.1	N 22 20.8 -00.1			245 56.3 +02.3	N 01 55.2 +00.1			02
03	250 28.9 +00.7	N 07 43.5 +00.8			159 18.5 +02.0	N 22 20.7 +00.0			260 58.6 +02.2	N 01 55.3 +00.1			03
04	265 29.6 +00.7	N 07 44.3 +00.7			174 20.5 +02.1	N 22 20.7 -00.1			276 00.8 +02.2	N 01 55.4 +00.1			04
05	280 30.3 +00.7	N 07 45.0 +00.7			189 22.6 +02.0	N 22 20.6 +00.0			291 03.0 +02.2	N 01 55.5 +00.1			05
06	295 31.0 +00.7	N 07 45.7 +00.8			204 24.6 +02.1	N 22 20.6 -00.1			306 05.2 +02.2	N 01 55.6 +00.1			06
07	310 31.7 +00.7	N 07 46.5 +00.7			219 26.7 +02.0	N 22 20.5 +00.0			321 07.4 +02.2	N 01 55.7 +00.1			07
08	325 32.4 +00.7	N 07 47.2 +00.7			234 28.7 +02.1	N 22 20.5 -00.1			336 09.6 +02.2	N 01 55.8 +00.1			08
09	340 33.1 +00.7	N 07 47.9 +00.7			249 30.8 +02.1	N 22 20.4 -00.1			351 11.8 +02.3	N 01 55.9 +00.1			09
10	355 33.8 +00.7	N 07 48.6 +00.8			264 32.9 +02.0	N 22 20.3 +00.0			6 14.1 +02.2	N 01 56.0 +00.1			10
11	10 34.5 +00.6	N 07 49.4 +00.7			279 34.9 +02.1	N 22 20.3 -00.1			21 16.3 +02.2	N 01 56.1 +00.1			11
12	25 35.1 +00.7	N 07 50.1 +00.7			294 37.0 +02.0	N 22 20.2 +00.0			36 18.5 +02.2	N 01 56.2 +00.1			12
13	40 35.8 +00.7	N 07 50.8 +00.7			309 39.0 +02.1	N 22 20.2 -00.1			51 20.7 +02.2	N 01 56.3 +00.1			13
14	55 36.5 +00.7	N 07 51.5 +00.8			324 41.1 +02.0	N 22 20.1 +00.0			66 22.9 +02.2	N 01 56.4 +00.1			14
15	70 37.2 +00.7	N 07 52.3 +00.7			339 43.1 +02.1	N 22 20.1 -00.1			81 25.1 +02.2	N 01 56.5 +00.1			15
16	85 37.9 +00.7	N 07 53.0 +00.7			354 45.2 +02.0	N 22 20.0 +00.0			96 27.3 +02.3	N 01 56.6 +00.1			16
17	100 38.6 +00.7	N 07 53.7 +00.7			9 47.2 +02.1	N 22 20.0 -00.1			111 29.6 +02.2	N 01 56.7 +00.1			17
18	115 39.3 +00.7	N 07 54.4 +00.8			24 49.3 +02.0	N 22 19.9 +00.0			126 31.8 +02.2	N 01 56.8 +00.1			18
19	130 40.0 +00.7	N 07 55.2 +00.7			39 51.3 +02.1	N 22 19.9 -00.1			141 34.0 +02.2	N 01 56.9 +00.1			19
20	145 40.7 +00.6	N 07 55.9 +00.7			54 53.4 +02.0	N 22 19.8 -00.1			156 36.2 +02.2	N 01 57.0 +00.1			20
21	160 41.3 +00.7	N 07 56.6 +00.7			69 55.4 +02.1	N 22 19.7 +00.0			171 38.4 +02.2	N 01 57.1 +00.1			21
22	175 42.0 +00.7	N 07 57.3 +00.8			84 57.5 +02.0	N 22 19.7 -00.1			186 40.6 +02.2	N 01 57.2 +00.1			22
23	190 42.7 +00.7	N 07 58.1 +00.7			99 59.5 +02.1	N 22 19.6 +00.0			201 42.8 +02.3	N 01 57.3 +00.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 340° 339° 339° 339° 339° 339°				SHA 248° 248° 248° 248° 248° 248°				SHA 350° 350° 350° 350° 350° 350°				
	Greenwich Culmination Time: 10:17				Greenwich Culmination Time: 16:20				Greenwich Culmination Time: 09:35				

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 53.3 +00.1	N 17 18.2 +00.6	150 02.9 -00.8	N 24 07.3 +00.4	275 23.1 -28.2	S 20 25.6 -10.4	00						
01	195 53.4 +00.0	N 17 18.8 +00.7	165 02.1 -00.8	N 24 07.7 +00.3	289 54.9 -28.2	S 20 15.2 -10.5	01						
02	210 53.4 +00.0	N 17 19.5 +00.7	180 01.3 -00.9	N 24 08.0 +00.4	304 26.7 -28.2	S 20 04.7 -10.6	02						
03	225 53.4 +00.1	N 17 20.2 +00.6	195 00.4 -00.8	N 24 08.4 +00.4	318 58.5 -28.1	S 19 54.1 -10.7	03						
04	240 53.5 +00.0	N 17 20.8 +00.7	209 59.6 -00.8	N 24 08.8 +00.3	333 30.4 -28.1	S 19 43.4 -10.7	04						
05	255 53.5 +00.0	N 17 21.5 +00.7	224 58.8 -00.8	N 24 09.1 +00.4	348 02.3 -28.1	S 19 32.7 -10.9	05						
06	270 53.5 +00.0	N 17 22.2 +00.6	239 58.0 -00.8	N 24 09.5 +00.4	2 34.2 -28.0	S 19 21.8 -11.0	06						
07	285 53.5 +00.1	N 17 22.8 +00.7	254 57.2 -00.8	N 24 09.9 +00.3	17 06.2 -28.0	S 19 10.8 -11.1	07						
08	300 53.6 +00.0	N 17 23.5 +00.7	269 56.4 -00.8	N 24 10.2 +00.4	31 38.2 -27.9	S 18 59.7 -11.1	08						
09	315 53.6 +00.0	N 17 24.2 +00.6	284 55.6 -00.8	N 24 10.6 +00.4	46 10.3 -27.9	S 18 48.6 -11.3	09						
10	330 53.6 +00.1	N 17 24.8 +00.7	299 54.8 -00.8	N 24 11.0 +00.3	60 42.4 -27.8	S 18 37.3 -11.3	10						
11	345 53.7 +00.0	N 17 25.5 +00.7	314 54.0 -00.9	N 24 11.3 +00.4	75 14.6 -27.8	S 18 26.0 -11.5	11						
12	0 53.7 +00.0	N 17 26.2 +00.6	329 53.1 -00.8	N 24 11.7 +00.3	89 46.8 -27.8	S 18 14.5 -11.5	12						
13	15 53.7 +00.0	N 17 26.8 +00.7	344 52.3 -00.8	N 24 12.0 +00.4	104 19.0 -27.8	S 18 03.0 -11.6	13						
14	30 53.7 +00.1	N 17 27.5 +00.6	359 51.5 -00.8	N 24 12.4 +00.4	118 51.2 -27.7	S 17 51.4 -11.7	14						
15	45 53.8 +00.0	N 17 28.1 +00.7	14 50.7 -00.8	N 24 12.8 +00.3	133 23.5 -27.6	S 17 39.7 -11.8	15						
16	60 53.8 +00.0	N 17 28.8 +00.7	29 49.9 -00.8	N 24 13.1 +00.4	147 55.9 -27.7	S 17 27.9 -11.9	16						
17	75 53.8 +00.0	N 17 29.5 +00.6	44 49.1 -00.8	N 24 13.5 +00.3	162 28.2 -27.6	S 17 16.0 -12.0	17						
18	90 53.8 +00.1	N 17 30.1 +00.7	59 48.3 -00.8	N 24 13.8 +00.4	177 00.6 -27.5	S 17 04.0 -12.0	18						
19	105 53.9 +00.0	N 17 30.8 +00.6	74 47.5 -00.9	N 24 14.2 +00.3	191 33.1 -27.6	S 16 52.0 -12.2	19						
20	120 53.9 +00.0	N 17 31.4 +00.7	89 46.6 -00.8	N 24 14.5 +00.4	206 05.5 -27.5	S 16 39.8 -12.2	20						
21	135 53.9 +00.0	N 17 32.1 +00.7	104 45.8 -00.8	N 24 14.9 +00.3	220 38.0 -27.5	S 16 27.6 -12.3	21						
22	150 53.9 +00.1	N 17 32.8 +00.6	119 45.0 -00.8	N 24 15.2 +00.4	235 10.5 -27.4	S 16 15.3 -12.4	22						
23	165 54.0 +00.0	N 17 33.4 +00.7	134 44.2 -00.8	N 24 15.6 +00.3	249 43.1 -27.4	S 16 02.9 -12.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 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 15'1 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 314° 314° 314° 313° 313° 313°		SHA 283° 283° 283° 282° 282° 282°		SHA 048° 045° 043° 041° 039° 037°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:00		Greenwich Culmination Time: 05:49								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	205 43.4 +00.7	N 07 58.8 +00.7	115 01.6 +02.0	N 22 19.6 -00.1	216 45.1 +02.2	N 01 57.4 +00.0	00						
01	220 44.1 +00.7	N 07 59.5 +00.7	130 03.6 +02.1	N 22 19.5 +00.0	231 47.3 +02.2	N 01 57.4 +00.1	01						
02	235 44.8 +00.7	N 08 00.2 +00.7	145 05.7 +02.0	N 22 19.5 -00.1	246 49.5 +02.2	N 01 57.5 +00.1	02						
03	250 45.5 +00.7	N 08 00.9 +00.8	160 07.7 +02.1	N 22 19.4 +00.0	261 51.7 +02.2	N 01 57.6 +00.1	03						
04	265 46.2 +00.6	N 08 01.7 +00.7	175 09.8 +02.0	N 22 19.4 -00.1	276 53.9 +02.2	N 01 57.7 +00.1	04						
05	280 46.8 +00.7	N 08 02.4 +00.7	190 11.8 +02.1	N 22 19.3 -00.1	291 56.1 +02.3	N 01 57.8 +00.1	05						
06	295 47.5 +00.7	N 08 03.1 +00.7	205 13.9 +02.0	N 22 19.2 +00.0	306 58.4 +02.2	N 01 57.9 +00.1	06						
07	310 48.2 +00.7	N 08 03.8 +00.8	220 15.9 +02.1	N 22 19.2 -00.1	322 00.6 +02.2	N 01 58.0 +00.1	07						
08	325 48.9 +00.7	N 08 04.6 +00.7	235 18.0 +02.0	N 22 19.1 +00.0	337 02.8 +02.2	N 01 58.1 +00.1	08						
09	340 49.6 +00.7	N 08 05.3 +00.7	250 20.0 +02.1	N 22 19.1 -00.1	352 05.0 +02.2	N 01 58.2 +00.1	09						
10	355 50.3 +00.7	N 08 06.0 +00.7	265 22.1 +02.0	N 22 19.0 +00.0	7 07.2 +02.2	N 01 58.3 +00.1	10						
11	10 51.0 +00.7	N 08 06.7 +00.8	280 24.1 +02.1	N 22 19.0 -00.1	22 09.4 +02.3	N 01 58.4 +00.1	11						
12	25 51.7 +00.7	N 08 07.5 +00.7	295 26.2 +02.0	N 22 18.9 +00.0	37 11.7 +02.2	N 01 58.5 +00.1	12						
13	40 52.4 +00.6	N 08 08.2 +00.7	310 28.2 +02.1	N 22 18.9 -00.1	52 13.9 +02.2	N 01 58.6 +00.1	13						
14	55 53.0 +00.7	N 08 08.9 +00.7	325 30.3 +02.0	N 22 18.8 -00.1	67 16.1 +02.2	N 01 58.7 +00.1	14						
15	70 53.7 +00.7	N 08 09.6 +00.7	340 32.3 +02.1	N 22 18.7 +00.0	82 18.3 +02.2	N 01 58.8 +00.1	15						
16	85 54.4 +00.7	N 08 10.3 +00.8	355 34.4 +02.0	N 22 18.7 -00.1	97 20.5 +02.2	N 01 58.9 +00.1	16						
17	100 55.1 +00.7	N 08 11.1 +00.7	10 36.4 +02.1	N 22 18.6 +00.0	112 22.7 +02.3	N 01 59.0 +00.1	17						
18	115 55.8 +00.7	N 08 11.8 +00.7	25 38.5 +02.0	N 22 18.6 -00.1	127 25.0 +02.2	N 01 59.1 +00.1	18						
19	130 56.5 +00.7	N 08 12.5 +00.7	40 40.5 +02.1	N 22 18.5 +00.0	142 27.2 +02.2	N 01 59.2 +00.1	19						
20	145 57.2 +00.7	N 08 13.2 +00.7	55 42.6 +02.0	N 22 18.5 -00.1	157 29.4 +02.2	N 01 59.3 +00.1	20						
21	160 57.9 +00.6	N 08 13.9 +00.8	70 44.6 +02.1	N 22 18.4 -00.1	172 31.6 +02.2	N 01 59.4 +00.1	21						
22	175 58.5 +00.7	N 08 14.7 +00.7	85 46.7 +02.0	N 22 18.3 +00.0	187 33.8 +02.2	N 01 59.5 +00.1	22						
23	190 59.2 +00.7	N 08 15.4 +00.7	100 48.7 +02.0	N 22 18.3 -00.1	202 36.0 +02.3	N 01 59.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 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 339° 339° 339° 338° 338° 338°		SHA 248° 248° 248° 248° 248° 248°		SHA 350° 350° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:16		Greenwich Culmination Time: 16:17		Greenwich Culmination Time: 09:31								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.0 +00.0	N 17 34.1 +00.6	149 43.4 -00.8	N 24 15.9 +00.4	264 15.7 -27.4	S 15 50.4 -12.5	00						
01	195 54.0 +00.0	N 17 34.7 +00.7	164 42.6 -00.8	N 24 16.3 +00.3	278 48.3 -27.3	S 15 37.9 -12.7	01						
02	210 54.0 +00.1	N 17 35.4 +00.6	179 41.8 -00.9	N 24 16.6 +00.3	293 21.0 -27.4	S 15 25.2 -12.7	02						
03	225 54.1 +00.0	N 17 36.0 +00.7	194 40.9 -00.8	N 24 16.9 +00.4	307 53.6 -27.3	S 15 12.5 -12.8	03						
04	240 54.1 +00.0	N 17 36.7 +00.7	209 40.1 -00.8	N 24 17.3 +00.3	322 26.3 -27.3	S 14 59.7 -12.9	04						
05	255 54.1 +00.0	N 17 37.4 +00.6	224 39.3 -00.8	N 24 17.6 +00.4	336 59.0 -27.2	S 14 46.8 -12.9	05						
06	270 54.1 +00.1	N 17 38.0 +00.7	239 38.5 -00.8	N 24 18.0 +00.3	351 31.8 -27.2	S 14 33.9 -13.1	06						
07	285 54.2 +00.0	N 17 38.7 +00.6	254 37.7 -00.8	N 24 18.3 +00.3	6 04.6 -27.2	S 14 20.8 -13.1	07						
08	300 54.2 +00.0	N 17 39.3 +00.7	269 36.9 -00.9	N 24 18.6 +00.4	20 37.4 -27.2	S 14 07.7 -13.2	08						
09	315 54.2 +00.0	N 17 40.0 +00.6	284 36.0 -00.8	N 24 19.0 +00.3	35 10.2 -27.2	S 13 54.5 -13.2	09						
10	330 54.2 +00.0	N 17 40.6 +00.7	299 35.2 -00.8	N 24 19.3 +00.3	49 43.0 -27.1	S 13 41.3 -13.4	10						
11	345 54.2 +00.1	N 17 41.3 +00.6	314 34.4 -00.8	N 24 19.6 +00.4	64 15.9 -27.1	S 13 27.9 -13.4	11						
12	0 54.3 +00.0	N 17 41.9 +00.7	329 33.6 -00.8	N 24 20.0 +00.3	78 48.8 -27.1	S 13 14.5 -13.5	12						
13	15 54.3 +00.0	N 17 42.6 +00.6	344 32.8 -00.8	N 24 20.3 +00.3	93 21.7 -27.1	S 13 01.0 -13.5	13						
14	30 54.3 +00.0	N 17 43.2 +00.7	359 32.0 -00.9	N 24 20.6 +00.4	107 54.6 -27.1	S 12 47.5 -13.6	14						
15	45 54.3 +00.0	N 17 43.9 +00.6	14 31.1 -00.8	N 24 21.0 +00.3	122 27.5 -27.0	S 12 33.9 -13.7	15						
16	60 54.3 +00.1	N 17 44.5 +00.7	29 30.3 -00.8	N 24 21.3 +00.3	137 00.5 -27.1	S 12 20.2 -13.8	16						
17	75 54.4 +00.0	N 17 45.2 +00.6	44 29.5 -00.8	N 24 21.6 +00.3	151 33.4 -27.0	S 12 06.4 -13.8	17						
18	90 54.4 +00.0	N 17 45.8 +00.7	59 28.7 -00.8	N 24 21.9 +00.3	166 06.4 -27.0	S 11 52.6 -13.9	18						
19	105 54.4 +00.0	N 17 46.5 +00.6	74 27.9 -00.9	N 24 22.2 +00.4	180 39.4 -27.0	S 11 38.7 -14.0	19						
20	120 54.4 +00.0	N 17 47.1 +00.7	89 27.0 -00.8	N 24 22.6 +00.3	195 12.4 -27.0	S 11 24.7 -14.1	20						
21	135 54.4 +00.1	N 17 47.8 +00.6	104 26.2 -00.8	N 24 22.9 +00.3	209 45.4 -27.0	S 11 10.6 -14.1	21						
22	150 54.5 +00.0	N 17 48.4 +00.6	119 25.4 -00.8	N 24 23.2 +00.3	224 18.4 -26.9	S 10 56.5 -14.1	22						
23	165 54.5 +00.0	N 17 49.0 +00.7	134 24.6 -00.8	N 24 23.5 +00.3	238 51.5 -27.0	S 10 42.4 -14.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'3 15'3 15'3 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'9 56'0 56'1 56'2 56'4 56'5								
	SHA 313° 313° 313° 313° 312° 312°		SHA 282° 282° 281° 281° 281° 281°		SHA 035° 033° 031° 030° 028° 026°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:01		Greenwich Culmination Time: 06:34								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	205 59.9 +00.7	N 08 16.1 +00.7	115 50.7 +02.1	N 22 18.2 +00.0	217 38.3 +02.2	N 01 59.7 +00.1	00						
01	221 00.6 +00.7	N 08 16.8 +00.7	130 52.8 +02.0	N 22 18.2 -00.1	232 40.5 +02.2	N 01 59.8 +00.1	01						
02	236 01.3 +00.7	N 08 17.5 +00.8	145 54.8 +02.1	N 22 18.1 +00.0	247 42.7 +02.2	N 01 59.9 +00.1	02						
03	251 02.0 +00.7	N 08 18.3 +00.7	160 56.9 +02.0	N 22 18.1 -00.1	262 44.9 +02.2	N 02 00.0 +00.1	03						
04	266 02.7 +00.7	N 08 19.0 +00.7	175 58.9 +02.1	N 22 18.0 -00.1	277 47.1 +02.2	N 02 00.1 +00.1	04						
05	281 03.4 +00.6	N 08 19.7 +00.7	191 01.0 +02.0	N 22 17.9 +00.0	292 49.3 +02.3	N 02 00.2 +00.1	05						
06	296 04.0 +00.7	N 08 20.4 +00.7	206 03.0 +02.1	N 22 17.9 -00.1	307 51.6 +02.2	N 02 00.3 +00.1	06						
07	311 04.7 +00.7	N 08 21.1 +00.8	221 05.1 +02.0	N 22 17.8 +00.0	322 53.8 +02.2	N 02 00.4 +00.1	07						
08	326 05.4 +00.7	N 08 21.9 +00.7	236 07.1 +02.1	N 22 17.8 -00.1	337 56.0 +02.2	N 02 00.5 +00.1	08						
09	341 06.1 +00.7	N 08 22.6 +00.7	251 09.2 +02.0	N 22 17.7 +00.0	352 58.2 +02.2	N 02 00.6 +00.1	09						
10	356 06.8 +00.7	N 08 23.3 +00.7	266 11.2 +02.0	N 22 17.7 -00.1	8 00.4 +02.2	N 02 00.7 +00.1	10						
11	11 07.5 +00.7	N 08 24.0 +00.7	281 13.2 +02.1	N 22 17.6 +00.0	23 02.6 +02.3	N 02 00.8 +00.1	11						
12	26 08.2 +00.7	N 08 24.7 +00.7	296 15.3 +02.0	N 22 17.6 -00.1	38 04.9 +02.2	N 02 00.9 +00.1	12						
13	41 08.9 +00.6	N 08 25.4 +00.8	311 17.3 +02.1	N 22 17.5 -00.1	53 07.1 +02.2	N 02 01.0 +00.1	13						
14	56 09.5 +00.7	N 08 26.2 +00.7	326 19.4 +02.0	N 22 17.4 +00.0	68 09.3 +02.2	N 02 01.1 +00.1	14						
15	71 10.2 +00.7	N 08 26.9 +00.7	341 21.4 +02.1	N 22 17.4 -00.1	83 11.5 +02.2	N 02 01.2 +00.1	15						
16	86 10.9 +00.7	N 08 27.6 +00.7	356 23.5 +02.0	N 22 17.3 +00.0	98 13.7 +02.3	N 02 01.3 +00.1	16						
17	101 11.6 +00.7	N 08 28.3 +00.7	11 25.5 +02.0	N 22 17.3 -00.1	113 16.0 +02.2	N 02 01.4 +00.1	17						
18	116 12.3 +00.7	N 08 29.0 +00.7	26 27.5 +02.1	N 22 17.2 +00.0	128 18.2 +02.2	N 02 01.5 +00.1	18						
19	131 13.0 +00.7	N 08 29.7 +00.8	41 29.6 +02.0	N 22 17.2 -00.1	143 20.4 +02.2	N 02 01.6 +00.1	19						
20	146 13.7 +00.6	N 08 30.5 +00.7	56 31.6 +02.1	N 22 17.1 -00.1	158 22.6 +02.2	N 02 01.7 +00.1	20						
21	161 14.3 +00.7	N 08 31.2 +00.7	71 33.7 +02.0	N 22 17.0 +00.0	173 24.8 +02.3	N 02 01.8 +00.1	21						
22	176 15.0 +00.7	N 08 31.9 +00.7	86 35.7 +02.1	N 22 17.0 -00.1	188 27.1 +02.2	N 02 01.9 +00.1	22						
23	191 15.7 +00.7	N 08 32.6 +00.7	101 37.8 +02.0	N 22 16.9 +00.0	203 29.3 +02.2	N 02 02.0 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 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 338° 338° 338° 338° 338° 338°		SHA 248° 248° 248° 248° 248° 248°		SHA 350° 350° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:15		Greenwich Culmination Time: 16:14		Greenwich Culmination Time: 09:28								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.5 +00.0	N 17 49.7 +00.6	149 23.8 -00.8	N 24 23.8 +00.4	253 24.5 -26.9	S 10 28.1 -14.3	00						
01	195 54.5 +00.0	N 17 50.3 +00.7	164 23.0 -00.9	N 24 24.2 +00.3	267 57.6 -27.0	S 10 13.8 -14.3	01						
02	210 54.5 +00.1	N 17 51.0 +00.6	179 22.1 -00.8	N 24 24.5 +00.3	282 30.6 -26.9	S 09 59.5 -14.4	02						
03	225 54.6 +00.0	N 17 51.6 +00.7	194 21.3 -00.8	N 24 24.8 +00.3	297 03.7 -26.9	S 09 45.1 -14.5	03						
04	240 54.6 +00.0	N 17 52.3 +00.6	209 20.5 -00.8	N 24 25.1 +00.3	311 36.8 -27.0	S 09 30.6 -14.6	04						
05	255 54.6 +00.0	N 17 52.9 +00.7	224 19.7 -00.8	N 24 25.4 +00.3	326 09.8 -26.9	S 09 16.0 -14.6	05						
06	270 54.6 +00.0	N 17 53.6 +00.6	239 18.9 -00.9	N 24 25.7 +00.3	340 42.9 -26.9	S 09 01.4 -14.6	06						
07	285 54.6 +00.0	N 17 54.2 +00.6	254 18.0 -00.8	N 24 26.0 +00.3	355 16.0 -27.0	S 08 46.8 -14.7	07						
08	300 54.6 +00.1	N 17 54.8 +00.7	269 17.2 -00.8	N 24 26.3 +00.3	9 49.0 -26.9	S 08 32.1 -14.8	08						
09	315 54.7 +00.0	N 17 55.5 +00.6	284 16.4 -00.8	N 24 26.6 +00.3	24 22.1 -26.9	S 08 17.3 -14.8	09						
10	330 54.7 +00.0	N 17 56.1 +00.7	299 15.6 -00.8	N 24 26.9 +00.4	38 55.2 -27.0	S 08 02.5 -14.9	10						
11	345 54.7 +00.0	N 17 56.8 +00.6	314 14.8 -00.9	N 24 27.3 +00.3	53 28.2 -26.9	S 07 47.6 -15.0	11						
12	0 54.7 +00.0	N 17 57.4 +00.6	329 13.9 -00.8	N 24 27.6 +00.3	68 01.3 -27.0	S 07 32.6 -15.0	12						
13	15 54.7 +00.0	N 17 58.0 +00.7	344 13.1 -00.8	N 24 27.9 +00.3	82 34.3 -26.9	S 07 17.6 -15.0	13						
14	30 54.7 +00.0	N 17 58.7 +00.6	359 12.3 -00.8	N 24 28.2 +00.3	97 07.4 -27.0	S 07 02.6 -15.1	14						
15	45 54.7 +00.1	N 17 59.3 +00.6	14 11.5 -00.9	N 24 28.5 +00.2	111 40.4 -27.0	S 06 47.5 -15.1	15						
16	60 54.8 +00.0	N 17 59.9 +00.7	29 10.6 -00.8	N 24 28.7 +00.3	126 13.4 -27.0	S 06 32.4 -15.2	16						
17	75 54.8 +00.0	N 18 00.6 +00.6	44 09.8 -00.8	N 24 29.0 +00.3	140 46.4 -27.0	S 06 17.2 -15.3	17						
18	90 54.8 +00.0	N 18 01.2 +00.6	59 09.0 -00.8	N 24 29.3 +00.3	155 19.4 -27.0	S 06 01.9 -15.3	18						
19	105 54.8 +00.0	N 18 01.8 +00.7	74 08.2 -00.8	N 24 29.6 +00.3	169 52.4 -27.0	S 05 46.6 -15.3	19						
20	120 54.8 +00.0	N 18 02.5 +00.6	89 07.4 -00.9	N 24 29.9 +00.3	184 25.4 -27.1	S 05 31.3 -15.4	20						
21	135 54.8 +00.0	N 18 03.1 +00.6	104 06.5 -00.8	N 24 30.2 +00.3	198 58.3 -27.0	S 05 15.9 -15.4	21						
22	150 54.8 +00.0	N 18 03.7 +00.7	119 05.7 -00.8	N 24 30.5 +00.3	213 31.3 -27.1	S 05 00.5 -15.5	22						
23	165 54.8 +00.1	N 18 04.4 +00.6	134 04.9 -00.8	N 24 30.8 +00.3	228 04.2 -27.1	S 04 45.0 -15.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 15'5 15'5 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 56'7 56'8 57'0 57'1 57'3 57'4								
	SHA 312° 312° 312° 312° 311° 311°		SHA 280° 280° 280° 280° 280° 279°		SHA 024° 022° 020° 018° 016° 014°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:03		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	206 16.4 +00.7	N 08 33.3 +00.7	116 39.8 +02.0	N 22 16.9 -00.1	218 31.5 +02.2	N 02 02.1 +00.1	00						
01	221 17.1 +00.7	N 08 34.0 +00.8	131 41.8 +02.1	N 22 16.8 -00.1	233 33.7 +02.2	N 02 02.2 +00.0	01						
02	236 17.8 +00.7	N 08 34.8 +00.7	146 43.9 +02.0	N 22 16.7 +00.0	248 35.9 +02.2	N 02 02.2 +00.1	02						
03	251 18.5 +00.7	N 08 35.5 +00.7	161 45.9 +02.1	N 22 16.7 -00.1	263 38.1 +02.3	N 02 02.3 +00.1	03						
04	266 19.2 +00.6	N 08 36.2 +00.7	176 48.0 +02.0	N 22 16.6 +00.0	278 40.4 +02.2	N 02 02.4 +00.1	04						
05	281 19.8 +00.7	N 08 36.9 +00.7	191 50.0 +02.0	N 22 16.6 -00.1	293 42.6 +02.2	N 02 02.5 +00.1	05						
06	296 20.5 +00.7	N 08 37.6 +00.7	206 52.0 +02.1	N 22 16.5 +00.0	308 44.8 +02.2	N 02 02.6 +00.1	06						
07	311 21.2 +00.7	N 08 38.3 +00.7	221 54.1 +02.0	N 22 16.5 -00.1	323 47.0 +02.2	N 02 02.7 +00.1	07						
08	326 21.9 +00.7	N 08 39.0 +00.8	236 56.1 +02.1	N 22 16.4 -00.1	338 49.2 +02.3	N 02 02.8 +00.1	08						
09	341 22.6 +00.7	N 08 39.8 +00.7	251 58.2 +02.0	N 22 16.3 +00.0	353 51.5 +02.2	N 02 02.9 +00.1	09						
10	356 23.3 +00.7	N 08 40.5 +00.7	267 00.2 +02.0	N 22 16.3 -00.1	8 53.7 +02.2	N 02 03.0 +00.1	10						
11	11 24.0 +00.6	N 08 41.2 +00.7	282 02.2 +02.1	N 22 16.2 +00.0	23 55.9 +02.2	N 02 03.1 +00.1	11						
12	26 24.6 +00.7	N 08 41.9 +00.7	297 04.3 +02.0	N 22 16.2 -00.1	38 58.1 +02.2	N 02 03.2 +00.1	12						
13	41 25.3 +00.7	N 08 42.6 +00.7	312 06.3 +02.1	N 22 16.1 +00.0	54 00.3 +02.3	N 02 03.3 +00.1	13						
14	56 26.0 +00.7	N 08 43.3 +00.7	327 08.4 +02.0	N 22 16.1 -00.1	69 02.6 +02.2	N 02 03.4 +00.1	14						
15	71 26.7 +00.7	N 08 44.0 +00.8	342 10.4 +02.0	N 22 16.0 -00.1	84 04.8 +02.2	N 02 03.5 +00.1	15						
16	86 27.4 +00.7	N 08 44.8 +00.7	357 12.4 +02.1	N 22 15.9 +00.0	99 07.0 +02.2	N 02 03.6 +00.1	16						
17	101 28.1 +00.7	N 08 45.5 +00.7	12 14.5 +02.0	N 22 15.9 -00.1	114 09.2 +02.2	N 02 03.7 +00.1	17						
18	116 28.8 +00.6	N 08 46.2 +00.7	27 16.5 +02.0	N 22 15.8 +00.0	129 11.4 +02.3	N 02 03.8 +00.1	18						
19	131 29.4 +00.7	N 08 46.9 +00.7	42 18.5 +02.1	N 22 15.8 -00.1	144 13.7 +02.2	N 02 03.9 +00.1	19						
20	146 30.1 +00.7	N 08 47.6 +00.7	57 20.6 +02.0	N 22 15.7 -00.1	159 15.9 +02.2	N 02 04.0 +00.1	20						
21	161 30.8 +00.7	N 08 48.3 +00.7	72 22.6 +02.1	N 22 15.6 +00.0	174 18.1 +02.2	N 02 04.1 +00.1	21						
22	176 31.5 +00.7	N 08 49.0 +00.7	87 24.7 +02.0	N 22 15.6 -00.1	189 20.3 +02.2	N 02 04.2 +00.1	22						
23	191 32.2 +00.7	N 08 49.7 +00.8	102 26.7 +02.0	N 22 15.5 +00.0	204 22.5 +02.3	N 02 04.3 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 337° 337° 337° 337° 337° 337°		SHA 248° 248° 248° 248° 248° 248°		SHA 350° 350° 350° 350° 350° 350°								
	Greenwich Culmination Time: 10:14		Greenwich Culmination Time: 16:11		Greenwich Culmination Time: 09:24								

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 54.9 +00.0	N 18 05.0 +00.6	149 04.1 -00.9	N 24 31.1 +00.3	242 37.1 -27.1	S 04 29.5 -15.6	00								
01	195 54.9 +00.0	N 18 05.6 +00.7	164 03.2 -00.8	N 24 31.4 +00.3	257 10.0 -27.2	S 04 13.9 -15.6	01								
02	210 54.9 +00.0	N 18 06.3 +00.6	179 02.4 -00.8	N 24 31.7 +00.2	271 42.8 -27.2	S 03 58.3 -15.6	02								
03	225 54.9 +00.0	N 18 06.9 +00.6	194 01.6 -00.8	N 24 31.9 +00.3	286 15.6 -27.2	S 03 42.7 -15.7	03								
04	240 54.9 +00.0	N 18 07.5 +00.7	209 00.8 -00.9	N 24 32.2 +00.3	300 48.4 -27.2	S 03 27.0 -15.7	04								
05	255 54.9 +00.0	N 18 08.2 +00.6	223 59.9 -00.8	N 24 32.5 +00.3	315 21.2 -27.2	S 03 11.3 -15.7	05								
06	270 54.9 +00.0	N 18 08.8 +00.6	238 59.1 -00.8	N 24 32.8 +00.3	329 54.0 -27.3	S 02 55.6 -15.8	06								
07	285 54.9 +00.0	N 18 09.4 +00.7	253 58.3 -00.8	N 24 33.1 +00.2	344 26.7 -27.3	S 02 39.8 -15.8	07								
08	300 54.9 +00.1	N 18 10.1 +00.6	268 57.5 -00.9	N 24 33.3 +00.3	358 59.4 -27.3	S 02 24.0 -15.9	08								
09	315 55.0 +00.0	N 18 10.7 +00.6	283 56.6 -00.8	N 24 33.6 +00.3	13 32.1 -27.4	S 02 08.1 -15.9	09								
10	330 55.0 +00.0	N 18 11.3 +00.6	298 55.8 -00.8	N 24 33.9 +00.3	28 04.7 -27.4	S 01 52.2 -15.9	10								
11	345 55.0 +00.0	N 18 11.9 +00.7	313 55.0 -00.8	N 24 34.2 +00.2	42 37.3 -27.5	S 01 36.3 -15.9	11								
12	0 55.0 +00.0	N 18 12.6 +00.6	328 54.2 -00.8	N 24 34.4 +00.3	57 09.8 -27.4	S 01 20.4 -16.0	12								
13	15 55.0 +00.0	N 18 13.2 +00.6	343 53.4 -00.9	N 24 34.7 +00.3	71 42.4 -27.5	S 01 04.4 -16.0	13								
14	30 55.0 +00.0	N 18 13.8 +00.6	358 52.5 -00.8	N 24 35.0 +00.3	86 14.9 -27.6	S 00 48.4 -16.0	14								
15	45 55.0 +00.0	N 18 14.4 +00.7	13 51.7 -00.8	N 24 35.3 +00.2	100 47.3 -27.6	S 00 32.4 -16.1	15								
16	60 55.0 +00.0	N 18 15.1 +00.6	28 50.9 -00.9	N 24 35.5 +00.3	115 19.7 -27.6	S 00 16.3 -16.1	16								
17	75 55.0 +00.0	N 18 15.7 +00.6	43 50.0 -00.8	N 24 35.8 +00.3	129 52.1 -27.7	S 00 00.2 -16.1	17								
18	90 55.0 +00.0	N 18 16.3 +00.6	58 49.2 -00.8	N 24 36.1 +00.2	144 24.4 -27.7	N 00 15.9 +16.1	18								
19	105 55.0 +00.0	N 18 16.9 +00.6	73 48.4 -00.8	N 24 36.3 +00.3	158 56.7 -27.8	N 00 32.0 +16.1	19								
20	120 55.0 +00.0	N 18 17.5 +00.7	88 47.6 -00.9	N 24 36.6 +00.3	173 28.9 -27.8	N 00 48.1 +16.2	20								
21	135 55.0 +00.1	N 18 18.2 +00.6	103 46.7 -00.8	N 24 36.9 +00.2	188 01.1 -27.9	N 01 04.3 +16.2	21								
22	150 55.1 +00.0	N 18 18.8 +00.6	118 45.9 -00.8	N 24 37.1 +00.3	202 33.2 -27.9	N 01 20.5 +16.2	22								
23	165 55.1 +00.0	N 18 19.4 +00.6	133 45.1 -00.8	N 24 37.4 +00.2	217 05.3 -28.0	N 01 36.7 +16.2	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 311° 311° 311° 311° 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 279° 279° 279° 279° 278° 278°	Greenwich Culmination Time: 14:04	UT 02 06 10 14 18 22	SD 15'7 15'7 15'8 15'8 15'9 15'9	HP 57'6 57'7 57'9 58'1 58'2 58'4	SHA 012° 010° 008° 006° 004° 002°	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	206 32.9 +00.7	N 08 50.5 +00.7	117 28.7 +02.1	N 22 15.5 -00.1	219 24.8 +02.2	N 02 04.4 +00.1	00								
01	221 33.6 +00.6	N 08 51.2 +00.7	132 30.8 +02.0	N 22 15.4 +00.0	234 27.0 +02.2	N 02 04.5 +00.1	01								
02	236 34.2 +00.7	N 08 51.9 +00.7	147 32.8 +02.0	N 22 15.4 -00.1	249 29.2 +02.2	N 02 04.6 +00.1	02								
03	251 34.9 +00.7	N 08 52.6 +00.7	162 34.8 +02.1	N 22 15.3 -00.1	264 31.4 +02.3	N 02 04.7 +00.1	03								
04	266 35.6 +00.7	N 08 53.3 +00.7	177 36.9 +02.0	N 22 15.2 +00.0	279 33.7 +02.2	N 02 04.8 +00.1	04								
05	281 36.3 +00.7	N 08 54.0 +00.7	192 38.9 +02.1	N 22 15.2 -00.1	294 35.9 +02.2	N 02 04.9 +00.1	05								
06	296 37.0 +00.7	N 08 54.7 +00.7	207 41.0 +02.0	N 22 15.1 +00.0	309 38.1 +02.2	N 02 05.0 +00.0	06								
07	311 37.7 +00.7	N 08 55.4 +00.7	222 43.0 +02.0	N 22 15.1 -00.1	324 40.3 +02.2	N 02 05.0 +00.1	07								
08	326 38.4 +00.6	N 08 56.1 +00.8	237 45.0 +02.1	N 22 15.0 -00.1	339 42.5 +02.3	N 02 05.1 +00.1	08								
09	341 39.0 +00.7	N 08 56.9 +00.7	252 47.1 +02.0	N 22 14.9 +00.0	354 44.8 +02.2	N 02 05.2 +00.1	09								
10	356 39.7 +00.7	N 08 57.6 +00.7	267 49.1 +02.0	N 22 14.9 -00.1	9 47.0 +02.2	N 02 05.3 +00.1	10								
11	11 40.4 +00.7	N 08 58.3 +00.7	282 51.1 +02.1	N 22 14.8 +00.0	24 49.2 +02.2	N 02 05.4 +00.1	11								
12	26 41.1 +00.7	N 08 59.0 +00.7	297 53.2 +02.0	N 22 14.8 -00.1	39 51.4 +02.2	N 02 05.5 +00.1	12								
13	41 41.8 +00.7	N 08 59.7 +00.7	312 55.2 +02.0	N 22 14.7 -00.1	54 53.6 +02.3	N 02 05.6 +00.1	13								
14	56 42.5 +00.7	N 09 00.4 +00.7	327 57.2 +02.1	N 22 14.6 +00.0	69 55.9 +02.2	N 02 05.7 +00.1	14								
15	71 43.2 +00.6	N 09 01.1 +00.7	342 59.3 +02.0	N 22 14.6 -00.1	84 58.1 +02.2	N 02 05.8 +00.1	15								
16	86 43.8 +00.7	N 09 01.8 +00.7	358 01.3 +02.0	N 22 14.5 +00.0	100 00.3 +02.2	N 02 05.9 +00.1	16								
17	101 44.5 +00.7	N 09 02.5 +00.7	13 03.3 +02.1	N 22 14.5 -00.1	115 02.5 +02.3	N 02 06.0 +00.1	17								
18	116 45.2 +00.7	N 09 03.2 +00.7	28 05.4 +02.0	N 22 14.4 -00.1	130 04.8 +02.2	N 02 06.1 +00.1	18								
19	131 45.9 +00.7	N 09 03.9 +00.8	43 07.4 +02.0	N 22 14.3 +00.0	145 07.0 +02.2	N 02 06.2 +00.1	19								
20	146 46.6 +00.7	N 09 04.7 +00.7	58 09.4 +02.1	N 22 14.3 -00.1	160 09.2 +02.2	N 02 06.3 +00.1	20								
21	161 47.3 +00.6	N 09 05.4 +00.7	73 11.5 +02.0	N 22 14.2 +00.0	175 11.4 +02.2	N 02 06.4 +00.1	21								
22	176 47.9 +00.7	N 09 06.1 +00.7	88 13.5 +02.0	N 22 14.2 -00.1	190 13.6 +02.3	N 02 06.5 +00.1	22								
23	191 48.6 +00.7	N 09 06.8 +00.7	103 15.5 +02.1	N 22 14.1 -00.1	205 15.9 +02.2	N 02 06.6 +00.1	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 337° 337° 336° 336° 336° 336°	Greenwich Culmination Time: 10:13	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 248° 248° 248° 248° 248° 248°	Greenwich Culmination Time: 16:07	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 350° 350° 350° 350° 350° 350°	Greenwich Culmination Time: 09:20

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	55.1+00.0	N 18 20.0	+00.6	148	44.3-00.9	N 24 37.6	+00.3	231	37.3-28.0	N 01 52.9	+16.2	00
01	195	55.1+00.0	N 18 20.6	+00.7	163	43.4-00.8	N 24 37.9	+00.2	246	09.3-28.1	N 02 09.1	+16.3	01
02	210	55.1+00.0	N 18 21.3	+00.6	178	42.6-00.8	N 24 38.1	+00.3	260	41.2-28.1	N 02 25.4	+16.2	02
03	225	55.1+00.0	N 18 21.9	+00.6	193	41.8-00.8	N 24 38.4	+00.3	275	13.1-28.2	N 02 41.6	+16.3	03
04	240	55.1+00.0	N 18 22.5	+00.6	208	41.0-00.9	N 24 38.7	+00.2	289	44.9-28.3	N 02 57.9	+16.2	04
05	255	55.1+00.0	N 18 23.1	+00.6	223	40.1-00.8	N 24 38.9	+00.3	304	16.6-28.3	N 03 14.1	+16.3	05
06	270	55.1+00.0	N 18 23.7	+00.7	238	39.3-00.8	N 24 39.2	+00.2	318	48.3-28.3	N 03 30.4	+16.3	06
07	285	55.1+00.0	N 18 24.4	+00.6	253	38.5-00.8	N 24 39.4	+00.3	333	20.0-28.5	N 03 46.7	+16.3	07
08	300	55.1+00.0	N 18 25.0	+00.6	268	37.7-00.9	N 24 39.7	+00.2	347	51.5-28.5	N 04 03.0	+16.3	08
09	315	55.1+00.0	N 18 25.6	+00.6	283	36.8-00.8	N 24 39.9	+00.3	2	23.0-28.5	N 04 19.3	+16.3	09
10	330	55.1+00.0	N 18 26.2	+00.6	298	36.0-00.8	N 24 40.2	+00.2	16	54.5-28.7	N 04 35.6	+16.3	10
11	345	55.1+00.0	N 18 26.8	+00.6	313	35.2-00.9	N 24 40.4	+00.2	31	25.8-28.7	N 04 51.9	+16.3	11
12	0	55.1+00.0	N 18 27.4	+00.6	328	34.3-00.8	N 24 40.6	+00.3	45	57.1-28.7	N 05 08.2	+16.2	12
13	15	55.1+00.0	N 18 28.0	+00.6	343	33.5-00.8	N 24 40.9	+00.2	60	28.4-28.9	N 05 24.4	+16.3	13
14	30	55.1+00.0	N 18 28.6	+00.7	358	32.7-00.8	N 24 41.1	+00.3	74	59.5-28.9	N 05 40.7	+16.3	14
15	45	55.1+00.0	N 18 29.3	+00.6	13	31.9-00.9	N 24 41.4	+00.2	89	30.6-29.0	N 05 57.0	+16.3	15
16	60	55.1+00.0	N 18 29.9	+00.6	28	31.0-00.8	N 24 41.6	+00.2	104	01.6-29.1	N 06 13.3	+16.2	16
17	75	55.1+00.0	N 18 30.5	+00.6	43	30.2-00.8	N 24 41.8	+00.3	118	32.5-29.1	N 06 29.5	+16.3	17
18	90	55.1+00.0	N 18 31.1	+00.6	58	29.4-00.9	N 24 42.1	+00.2	133	03.4-29.2	N 06 45.8	+16.2	18
19	105	55.1+00.0	N 18 31.7	+00.6	73	28.5-00.8	N 24 42.3	+00.3	147	34.2-29.3	N 07 02.0	+16.3	19
20	120	55.1+00.0	N 18 32.3	+00.6	88	27.7-00.8	N 24 42.6	+00.2	162	04.9-29.4	N 07 18.3	+16.2	20
21	135	55.1+00.0	N 18 32.9	+00.6	103	26.9-00.8	N 24 42.8	+00.2	176	35.5-29.5	N 07 34.5	+16.2	21
22	150	55.1+00.0	N 18 33.5	+00.6	118	26.1-00.9	N 24 43.0	+00.3	191	06.0-29.5	N 07 50.7	+16.1	22
23	165	55.1+00.0	N 18 34.1	+00.6	133	25.2-00.8	N 24 43.3	+00.2	205	36.5-29.7	N 08 06.8	+16.2	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 15'9 16'0 16'0 16'1 16'1 16'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 58'5 58'7 58'8 59'0 59'2 59'3				
	SHA 310° 310° 310° 310° 309° 309°				SHA 278° 278° 277° 277° 277° 277°				SHA 360° 358° 356° 354° 352° 349°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 14:05				Greenwich Culmination Time: 08:50				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	206	49.3+00.7	N 09 07.5	+00.7	118	17.6+02.0	N 22 14.0	+00.0	220	18.1+02.2	N 02 06.7	+00.1	00
01	221	50.0+00.7	N 09 08.2	+00.7	133	19.6+02.0	N 22 14.0	-00.1	235	20.3+02.2	N 02 06.8	+00.1	01
02	236	50.7+00.7	N 09 08.9	+00.7	148	21.6+02.1	N 22 13.9	+00.0	250	22.5+02.3	N 02 06.9	+00.1	02
03	251	51.4+00.7	N 09 09.6	+00.7	163	23.7+02.0	N 22 13.9	-00.1	265	24.8+02.2	N 02 07.0	+00.0	03
04	266	52.1+00.6	N 09 10.3	+00.7	178	25.7+02.0	N 22 13.8	-00.1	280	27.0+02.2	N 02 07.0	+00.1	04
05	281	52.7+00.7	N 09 11.0	+00.7	193	27.7+02.1	N 22 13.7	+00.0	295	29.2+02.2	N 02 07.1	+00.1	05
06	296	53.4+00.7	N 09 11.7	+00.7	208	29.8+02.0	N 22 13.7	-00.1	310	31.4+02.3	N 02 07.2	+00.1	06
07	311	54.1+00.7	N 09 12.4	+00.7	223	31.8+02.0	N 22 13.6	+00.0	325	33.7+02.2	N 02 07.3	+00.1	07
08	326	54.8+00.7	N 09 13.1	+00.7	238	33.8+02.1	N 22 13.6	-00.1	340	35.9+02.2	N 02 07.4	+00.1	08
09	341	55.5+00.7	N 09 13.8	+00.8	253	35.9+02.0	N 22 13.5	-00.1	355	38.1+02.2	N 02 07.5	+00.1	09
10	356	56.2+00.6	N 09 14.6	+00.7	268	37.9+02.0	N 22 13.4	+00.0	10	40.3+02.2	N 02 07.6	+00.1	10
11	11	56.8+00.7	N 09 15.3	+00.7	283	39.9+02.0	N 22 13.4	-00.1	25	42.5+02.3	N 02 07.7	+00.1	11
12	26	57.5+00.7	N 09 16.0	+00.7	298	41.9+02.1	N 22 13.3	+00.0	40	44.8+02.2	N 02 07.8	+00.1	12
13	41	58.2+00.7	N 09 16.7	+00.7	313	44.0+02.0	N 22 13.3	-00.1	55	47.0+02.2	N 02 07.9	+00.1	13
14	56	58.9+00.7	N 09 17.4	+00.7	328	46.0+02.0	N 22 13.2	-00.1	70	49.2+02.2	N 02 08.0	+00.1	14
15	71	59.6+00.7	N 09 18.1	+00.7	343	48.0+02.1	N 22 13.1	+00.0	85	51.4+02.3	N 02 08.1	+00.1	15
16	87	00.3+00.7	N 09 18.8	+00.7	358	50.1+02.0	N 22 13.1	-00.1	100	53.7+02.2	N 02 08.2	+00.1	16
17	102	01.0+00.6	N 09 19.5	+00.7	13	52.1+02.0	N 22 13.0	+00.0	115	55.9+02.2	N 02 08.3	+00.1	17
18	117	01.6+00.7	N 09 20.2	+00.7	28	54.1+02.1	N 22 13.0	-00.1	130	58.1+02.2	N 02 08.4	+00.1	18
19	132	02.3+00.7	N 09 20.9	+00.7	43	56.2+02.0	N 22 12.9	-00.1	146	00.3+02.3	N 02 08.5	+00.1	19
20	147	03.0+00.7	N 09 21.6	+00.7	58	58.2+02.0	N 22 12.8	+00.0	161	02.6+02.2	N 02 08.6	+00.1	20
21	162	03.7+00.7	N 09 22.3	+00.7	74	00.2+02.0	N 22 12.8	-00.1	176	04.8+02.2	N 02 08.7	+00.1	21
22	177	04.4+00.7	N 09 23.0	+00.7	89	02.2+02.1	N 22 12.7	+00.0	191	07.0+02.2	N 02 08.8	+00.0	22
23	192	05.1+00.6	N 09 23.7	+00.7	104	04.3+02.0	N 22 12.7	-00.1	206	09.2+02.3	N 02 08.8	+00.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 336° 336° 336° 336° 336° 335°				SHA 248° 247° 247° 247° 247° 247°				SHA 350° 350° 349° 349° 349° 349°				
	Greenwich Culmination Time: 10:12				Greenwich Culmination Time: 16:04				Greenwich Culmination Time: 09:17				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	55.1+00.0	N 18 34.7	+00.6	148	24.4-00.8	N 24 43.5	+00.2	220	06.8-29.7	N 08 23.0	+16.1	00
01	195	55.1+00.0	N 18 35.3	+00.6	163	23.6-00.9	N 24 43.7	+00.2	234	37.1-29.8	N 08 39.1	+16.1	01
02	210	55.1+00.0	N 18 35.9	+00.7	178	22.7-00.8	N 24 43.9	+00.3	249	07.3-29.9	N 08 55.2	+16.1	02
03	225	55.1+00.0	N 18 36.6	+00.6	193	21.9-00.8	N 24 44.2	+00.2	263	37.4-30.0	N 09 11.3	+16.1	03
04	240	55.1+00.0	N 18 37.2	+00.6	208	21.1-00.9	N 24 44.4	+00.2	278	07.4-30.1	N 09 27.4	+16.0	04
05	255	55.1+00.0	N 18 37.8	+00.6	223	20.2-00.8	N 24 44.6	+00.2	292	37.3-30.2	N 09 43.4	+16.0	05
06	270	55.1+00.0	N 18 38.4	+00.6	238	19.4-00.8	N 24 44.8	+00.3	307	07.1-30.2	N 09 59.4	+15.9	06
07	285	55.1+00.0	N 18 39.0	+00.6	253	18.6-00.8	N 24 45.1	+00.2	321	36.9-30.4	N 10 15.3	+16.0	07
08	300	55.1+00.0	N 18 39.6	+00.6	268	17.8-00.9	N 24 45.3	+00.2	336	06.5-30.5	N 10 31.3	+15.8	08
09	315	55.1+00.0	N 18 40.2	+00.6	283	16.9-00.8	N 24 45.5	+00.2	350	36.0-30.5	N 10 47.1	+15.9	09
10	330	55.1+00.0	N 18 40.8	+00.6	298	16.1-00.8	N 24 45.7	+00.2	5	05.5-30.7	N 11 03.0	+15.8	10
11	345	55.1+00.0	N 18 41.4	+00.6	313	15.3-00.9	N 24 45.9	+00.2	19	34.8-30.8	N 11 18.8	+15.8	11
12	0	55.1+00.0	N 18 42.0	+00.6	328	14.4-00.8	N 24 46.1	+00.3	34	04.0-30.9	N 11 34.6	+15.7	12
13	15	55.1+00.0	N 18 42.6	+00.6	343	13.6-00.8	N 24 46.4	+00.2	48	33.1-30.9	N 11 50.3	+15.7	13
14	30	55.1+00.0	N 18 43.2	+00.6	358	12.8-00.9	N 24 46.6	+00.2	63	02.2-31.1	N 12 06.0	+15.6	14
15	45	55.1+00.0	N 18 43.8	+00.6	13	11.9-00.8	N 24 46.8	+00.2	77	31.1-31.2	N 12 21.6	+15.6	15
16	60	55.1+00.0	N 18 44.4	+00.6	28	11.1-00.8	N 24 47.0	+00.2	91	59.9-31.3	N 12 37.2	+15.5	16
17	75	55.1+00.0	N 18 45.0	+00.6	43	10.3-00.8	N 24 47.2	+00.2	106	28.6-31.4	N 12 52.7	+15.4	17
18	90	55.1+00.0	N 18 45.6	+00.6	58	09.5-00.9	N 24 47.4	+00.2	120	57.2-31.5	N 13 08.1	+15.4	18
19	105	55.1+00.0	N 18 46.2	+00.6	73	08.6-00.8	N 24 47.6	+00.2	135	25.7-31.6	N 13 23.5	+15.4	19
20	120	55.1+00.0	N 18 46.8	+00.5	88	07.8-00.8	N 24 47.8	+00.2	149	54.1-31.8	N 13 38.9	+15.3	20
21	135	55.1+00.0	N 18 47.3	+00.6	103	07.0-00.9	N 24 48.0	+00.2	164	22.3-31.8	N 13 54.2	+15.2	21
22	150	55.1-00.1	N 18 47.9	+00.6	118	06.1-00.8	N 24 48.2	+00.2	178	50.5-32.0	N 14 09.4	+15.2	22
23	165	55.0+00.0	N 18 48.5	+00.6	133	05.3-00.8	N 24 48.4	+00.2	193	18.5-32.1	N 14 24.6	+15.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 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 16'3 16'3 16'3 16'4				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 59'5 59'6 59'7 59'9 60'0 60'1				
	SHA 309° 309° 309° 309° 308° 308°				SHA 277° 276° 276° 276° 276° 275°				SHA 347° 345° 343° 341° 338° 336°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 14:07				Greenwich Culmination Time: 09:38				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	207	05.7+00.7	N 09 24.4	+00.7	119	06.3+02.0	N 22 12.6	-00.1	221	11.5+02.2	N 02 08.9	+00.1	00
01	222	06.4+00.7	N 09 25.1	+00.7	134	08.3+02.1	N 22 12.5	+00.0	236	13.7+02.2	N 02 09.0	+00.1	01
02	237	07.1+00.7	N 09 25.8	+00.7	149	10.4+02.0	N 22 12.5	-00.1	251	15.9+02.2	N 02 09.1	+00.1	02
03	252	07.8+00.7	N 09 26.5	+00.7	164	12.4+02.0	N 22 12.4	+00.0	266	18.1+02.3	N 02 09.2	+00.1	03
04	267	08.5+00.7	N 09 27.2	+00.7	179	14.4+02.0	N 22 12.4	-00.1	281	20.4+02.2	N 02 09.3	+00.1	04
05	282	09.2+00.6	N 09 27.9	+00.7	194	16.4+02.1	N 22 12.3	-00.1	296	22.6+02.2	N 02 09.4	+00.1	05
06	297	09.8+00.7	N 09 28.6	+00.7	209	18.5+02.0	N 22 12.2	+00.0	311	24.8+02.2	N 02 09.5	+00.1	06
07	312	10.5+00.7	N 09 29.3	+00.7	224	20.5+02.0	N 22 12.2	-00.1	326	27.0+02.3	N 02 09.6	+00.1	07
08	327	11.2+00.7	N 09 30.0	+00.7	239	22.5+02.0	N 22 12.1	+00.0	341	29.3+02.2	N 02 09.7	+00.1	08
09	342	11.9+00.7	N 09 30.7	+00.7	254	24.5+02.1	N 22 12.1	-00.1	356	31.5+02.2	N 02 09.8	+00.1	09
10	357	12.6+00.7	N 09 31.4	+00.7	269	26.6+02.0	N 22 12.0	-00.1	11	33.7+02.2	N 02 09.9	+00.1	10
11	12	13.3+00.6	N 09 32.1	+00.7	284	28.6+02.0	N 22 11.9	+00.0	26	35.9+02.3	N 02 10.0	+00.1	11
12	27	13.9+00.7	N 09 32.8	+00.7	299	30.6+02.1	N 22 11.9	-00.1	41	38.2+02.2	N 02 10.1	+00.1	12
13	42	14.6+00.7	N 09 33.5	+00.7	314	32.7+02.0	N 22 11.8	-00.1	56	40.4+02.2	N 02 10.2	+00.1	13
14	57	15.3+00.7	N 09 34.2	+00.7	329	34.7+02.0	N 22 11.7	+00.0	71	42.6+02.2	N 02 10.3	+00.0	14
15	72	16.0+00.7	N 09 34.9	+00.7	344	36.7+02.0	N 22 11.7	-00.1	86	44.8+02.3	N 02 10.3	+00.1	15
16	87	16.7+00.6	N 09 35.6	+00.7	359	38.7+02.1	N 22 11.6	+00.0	101	47.1+02.2	N 02 10.4	+00.1	16
17	102	17.3+00.7	N 09 36.3	+00.7	14	40.8+02.0	N 22 11.6	-00.1	116	49.3+02.2	N 02 10.5	+00.1	17
18	117	18.0+00.7	N 09 37.0	+00.7	29	42.8+02.0	N 22 11.5	-00.1	131	51.5+02.2	N 02 10.6	+00.1	18
19	132	18.7+00.7	N 09 37.7	+00.7	44	44.8+02.0	N 22 11.4	+00.0	146	53.7+02.3	N 02 10.7	+00.1	19
20	147	19.4+00.7	N 09 38.4	+00.7	59	46.8+02.1	N 22 11.4	-00.1	161	56.0+02.2	N 02 10.8	+00.1	20
21	162	20.1+00.7	N 09 39.1	+00.7	74	48.9+02.0	N 22 11.3	+00.0	176	58.2+02.2	N 02 10.9	+00.1	21
22	177	20.8+00.6	N 09 39.8	+00.7	89	50.9+02.0	N 22 11.3	-00.1	192	00.4+02.3	N 02 11.0	+00.1	22
23	192	21.4+00.7	N 09 40.5	+00.7	104	52.9+02.0	N 22 11.2	-00.1	207	02.7+02.2	N 02 11.1	+00.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 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 335° 335° 335° 335° 335° 335°				SHA 247° 247° 247° 247° 247° 247°				SHA 349° 349° 349° 349° 349° 349°				
	Greenwich Culmination Time: 10:11				Greenwich Culmination Time: 16:01				Greenwich Culmination Time: 09:13				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 55.0 +00.0	N 18 49.1 +00.6	148 04.5 -00.9	N 24 48.6 +00.2	207 46.4 -32.2	N 14 39.7 +15.0	00						
01	195 55.0 +00.0	N 18 49.7 +00.6	163 03.6 -00.8	N 24 48.8 +00.2	222 14.2 -32.3	N 14 54.7 +15.0	01						
02	210 55.0 +00.0	N 18 50.3 +00.6	178 02.8 -00.8	N 24 49.0 +00.2	236 41.9 -32.4	N 15 09.7 +14.8	02						
03	225 55.0 +00.0	N 18 50.9 +00.6	193 02.0 -00.9	N 24 49.2 +00.2	251 09.5 -32.6	N 15 24.5 +14.8	03						
04	240 55.0 +00.0	N 18 51.5 +00.6	208 01.1 -00.8	N 24 49.4 +00.2	265 36.9 -32.7	N 15 39.3 +14.8	04						
05	255 55.0 +00.0	N 18 52.1 +00.6	223 00.3 -00.8	N 24 49.6 +00.2	280 04.2 -32.8	N 15 54.1 +14.6	05						
06	270 55.0 +00.0	N 18 52.7 +00.6	237 59.5 -00.9	N 24 49.8 +00.2	294 31.4 -32.9	N 16 08.7 +14.6	06						
07	285 55.0 +00.0	N 18 53.3 +00.6	252 58.6 -00.8	N 24 50.0 +00.2	308 58.5 -33.0	N 16 23.3 +14.4	07						
08	300 55.0 +00.0	N 18 53.9 +00.5	267 57.8 -00.8	N 24 50.2 +00.2	323 25.5 -33.2	N 16 37.7 +14.4	08						
09	315 55.0 +00.0	N 18 54.4 +00.6	282 57.0 -00.8	N 24 50.4 +00.2	337 52.3 -33.3	N 16 52.1 +14.3	09						
10	330 55.0 +00.0	N 18 55.0 +00.6	297 56.2 -00.9	N 24 50.6 +00.1	352 19.0 -33.4	N 17 06.4 +14.2	10						
11	345 55.0 -00.1	N 18 55.6 +00.6	312 55.3 -00.8	N 24 50.7 +00.2	6 45.6 -33.5	N 17 20.6 +14.1	11						
12	0 54.9 +00.0	N 18 56.2 +00.6	327 54.5 -00.8	N 24 50.9 +00.2	21 12.1 -33.7	N 17 34.7 +14.1	12						
13	15 54.9 +00.0	N 18 56.8 +00.6	342 53.7 -00.9	N 24 51.1 +00.2	35 38.4 -33.8	N 17 48.8 +13.9	13						
14	30 54.9 +00.0	N 18 57.4 +00.6	357 52.8 -00.8	N 24 51.3 +00.2	50 04.6 -33.9	N 18 02.7 +13.8	14						
15	45 54.9 +00.0	N 18 58.0 +00.6	12 52.0 -00.8	N 24 51.5 +00.2	64 30.7 -34.0	N 18 16.5 +13.7	15						
16	60 54.9 +00.0	N 18 58.6 +00.5	27 51.2 -00.9	N 24 51.7 +00.1	78 56.7 -34.2	N 18 30.2 +13.6	16						
17	75 54.9 +00.0	N 18 59.1 +00.6	42 50.3 -00.8	N 24 51.8 +00.2	93 22.5 -34.3	N 18 43.8 +13.5	17						
18	90 54.9 +00.0	N 18 59.7 +00.6	57 49.5 -00.8	N 24 52.0 +00.2	107 48.2 -34.4	N 18 57.3 +13.4	18						
19	105 54.9 +00.0	N 19 00.3 +00.6	72 48.7 -00.9	N 24 52.2 +00.2	122 13.8 -34.6	N 19 10.7 +13.3	19						
20	120 54.9 -00.1	N 19 00.9 +00.6	87 47.8 -00.8	N 24 52.4 +00.1	136 39.2 -34.7	N 19 24.0 +13.1	20						
21	135 54.8 +00.0	N 19 01.5 +00.5	102 47.0 -00.8	N 24 52.5 +00.2	151 04.5 -34.8	N 19 37.1 +13.1	21						
22	150 54.8 +00.0	N 19 02.0 +00.6	117 46.2 -00.9	N 24 52.7 +00.2	165 29.7 -34.9	N 19 50.2 +12.9	22						
23	165 54.8 +00.0	N 19 02.6 +00.6	132 45.3 -00.8	N 24 52.9 +00.2	179 54.8 -35.1	N 20 03.1 +12.8	23						
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 16'4 16'4 16'5 16'5 16'5 16'6							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 60'3 60'4 60'5 60'6 60'7 60'8		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 308° 308° 308° 308° 307° 307°	SHA 275° 275° 275° 275° 274° 274°	SHA 275° 275° 275° 275° 274° 274°	SHA 334° 332° 329° 327° 324° 322°		SHA 335° 334° 334° 334° 334° 334°							
	Greenwich Culmination Time: 11:56	Greenwich Culmination Time: 14:08	Greenwich Culmination Time: 10:31			Greenwich Culmination Time: 09:10							

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	207 22.1 +00.7	N 09 41.2 +00.7	119 54.9 +02.0	N 22 11.1 +00.0	222 04.9 +02.2	N 02 11.2 +00.1	00						
01	222 22.8 +00.7	N 09 41.9 +00.7	134 56.9 +02.1	N 22 11.1 -00.1	237 07.1 +02.2	N 02 11.3 +00.1	01						
02	237 23.5 +00.7	N 09 42.6 +00.7	149 59.0 +02.0	N 22 11.0 -00.1	252 09.3 +02.3	N 02 11.4 +00.1	02						
03	252 24.2 +00.7	N 09 43.3 +00.7	165 01.0 +02.0	N 22 10.9 +00.0	267 11.6 +02.2	N 02 11.5 +00.1	03						
04	267 24.9 +00.6	N 09 44.0 +00.7	180 03.0 +02.0	N 22 10.9 -00.1	282 13.8 +02.2	N 02 11.6 +00.1	04						
05	282 25.5 +00.7	N 09 44.7 +00.7	195 05.0 +02.1	N 22 10.8 +00.0	297 16.0 +02.2	N 02 11.7 +00.0	05						
06	297 26.2 +00.7	N 09 45.4 +00.7	210 07.1 +02.0	N 22 10.8 -00.1	312 18.2 +02.3	N 02 11.7 +00.1	06						
07	312 26.9 +00.7	N 09 46.1 +00.7	225 09.1 +02.0	N 22 10.7 -00.1	327 20.5 +02.2	N 02 11.8 +00.1	07						
08	327 27.6 +00.7	N 09 46.8 +00.7	240 11.1 +02.0	N 22 10.6 +00.0	342 22.7 +02.2	N 02 11.9 +00.1	08						
09	342 28.3 +00.6	N 09 47.5 +00.7	255 13.1 +02.1	N 22 10.6 -00.1	357 24.9 +02.3	N 02 12.0 +00.1	09						
10	357 28.9 +00.7	N 09 48.2 +00.7	270 15.2 +02.0	N 22 10.5 -00.1	12 27.2 +02.2	N 02 12.1 +00.1	10						
11	12 29.6 +00.7	N 09 48.9 +00.7	285 17.2 +02.0	N 22 10.4 +00.0	27 29.4 +02.2	N 02 12.2 +00.1	11						
12	27 30.3 +00.7	N 09 49.6 +00.7	300 19.2 +02.0	N 22 10.4 -00.1	42 31.6 +02.2	N 02 12.3 +00.1	12						
13	42 31.0 +00.7	N 09 50.3 +00.7	315 21.2 +02.0	N 22 10.3 +00.0	57 33.8 +02.3	N 02 12.4 +00.1	13						
14	57 31.7 +00.7	N 09 51.0 +00.7	330 23.2 +02.1	N 22 10.3 -00.1	72 36.1 +02.2	N 02 12.5 +00.1	14						
15	72 32.4 +00.6	N 09 51.7 +00.7	345 25.3 +02.0	N 22 10.2 -00.1	87 38.3 +02.2	N 02 12.6 +00.1	15						
16	87 33.0 +00.7	N 09 52.4 +00.7	0 27.3 +02.0	N 22 10.1 +00.0	102 40.5 +02.2	N 02 12.7 +00.1	16						
17	102 33.7 +00.7	N 09 53.1 +00.7	15 29.3 +02.0	N 22 10.1 -00.1	117 42.7 +02.3	N 02 12.8 +00.1	17						
18	117 34.4 +00.7	N 09 53.8 +00.7	30 31.3 +02.0	N 22 10.0 -00.1	132 45.0 +02.2	N 02 12.9 +00.1	18						
19	132 35.1 +00.7	N 09 54.5 +00.7	45 33.3 +02.1	N 22 09.9 +00.0	147 47.2 +02.2	N 02 13.0 +00.0	19						
20	147 35.8 +00.6	N 09 55.2 +00.7	60 35.4 +02.0	N 22 09.9 -00.1	162 49.4 +02.3	N 02 13.0 +00.1	20						
21	162 36.4 +00.7	N 09 55.9 +00.7	75 37.4 +02.0	N 22 09.8 +00.0	177 51.7 +02.2	N 02 13.1 +00.1	21						
22	177 37.1 +00.7	N 09 56.6 +00.7	90 39.4 +02.0	N 22 09.8 -00.1	192 53.9 +02.2	N 02 13.2 +00.1	22						
23	192 37.8 +00.7	N 09 57.3 +00.6	105 41.4 +02.0	N 22 09.7 -00.1	207 56.1 +02.2	N 02 13.3 +00.1	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 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 335° 334° 334° 334° 334° 334°	SHA 247° 247° 247° 247° 247° 247°	SHA 247° 247° 247° 247° 247° 247°	SHA 349° 349° 349° 349° 349° 349°		SHA 349° 349° 349° 349° 349° 349°							
	Greenwich Culmination Time: 10:10	Greenwich Culmination Time: 15:58	Greenwich Culmination Time: 09:10			Greenwich Culmination Time: 09:10							

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.8 +00.0	N 19 03.2 +00.6	147 44.5 -00.8	N 24 53.1 +00.1	194 19.7 -35.2	N 20 15.9 +12.6	00						
01	195 54.8 +00.0	N 19 03.8 +00.6	162 43.7 -00.9	N 24 53.2 +00.2	208 44.5 -35.3	N 20 28.5 +12.6	01						
02	210 54.8 +00.0	N 19 04.4 +00.5	177 42.8 -00.8	N 24 53.4 +00.2	223 09.2 -35.5	N 20 41.1 +12.4	02						
03	225 54.8 +00.0	N 19 04.9 +00.6	192 42.0 -00.8	N 24 53.6 +00.1	237 33.7 -35.6	N 20 53.5 +12.3	03						
04	240 54.8 -00.1	N 19 05.5 +00.6	207 41.2 -00.9	N 24 53.7 +00.2	251 58.1 -35.7	N 21 05.8 +12.1	04						
05	255 54.7 +00.0	N 19 06.1 +00.6	222 40.3 -00.8	N 24 53.9 +00.2	266 22.4 -35.8	N 21 17.9 +12.0	05						
06	270 54.7 +00.0	N 19 06.7 +00.6	237 39.5 -00.8	N 24 54.1 +00.1	280 46.6 -36.0	N 21 29.9 +11.9	06						
07	285 54.7 +00.0	N 19 07.3 +00.5	252 38.7 -00.9	N 24 54.2 +00.2	295 10.6 -36.1	N 21 41.8 +11.7	07						
08	300 54.7 +00.0	N 19 07.8 +00.6	267 37.8 -00.8	N 24 54.4 +00.1	309 34.5 -36.2	N 21 53.5 +11.6	08						
09	315 54.7 +00.0	N 19 08.4 +00.6	282 37.0 -00.8	N 24 54.5 +00.2	323 58.3 -36.4	N 22 05.1 +11.4	09						
10	330 54.7 +00.0	N 19 09.0 +00.6	297 36.2 -00.9	N 24 54.7 +00.2	338 21.9 -36.5	N 22 16.5 +11.3	10						
11	345 54.7 -00.1	N 19 09.6 +00.5	312 35.3 -00.8	N 24 54.9 +00.1	352 45.4 -36.6	N 22 27.8 +11.2	11						
12	0 54.6 +00.0	N 19 10.1 +00.6	327 34.5 -00.8	N 24 55.0 +00.2	7 08.8 -36.7	N 22 39.0 +11.0	12						
13	15 54.6 +00.0	N 19 10.7 +00.6	342 33.7 -00.9	N 24 55.2 +00.1	21 32.1 -36.8	N 22 50.0 +10.8	13						
14	30 54.6 +00.0	N 19 11.3 +00.5	357 32.8 -00.8	N 24 55.3 +00.2	35 55.3 -37.0	N 23 00.8 +10.7	14						
15	45 54.6 +00.0	N 19 11.8 +00.6	12 32.0 -00.8	N 24 55.5 +00.1	50 18.3 -37.1	N 23 11.5 +10.5	15						
16	60 54.6 +00.0	N 19 12.4 +00.6	27 31.2 -00.9	N 24 55.6 +00.2	64 41.2 -37.2	N 23 22.0 +10.3	16						
17	75 54.6 -00.1	N 19 13.0 +00.6	42 30.3 -00.8	N 24 55.8 +00.1	79 04.0 -37.3	N 23 32.3 +10.2	17						
18	90 54.5 +00.0	N 19 13.6 +00.5	57 29.5 -00.8	N 24 55.9 +00.2	93 26.7 -37.5	N 23 42.5 +10.0	18						
19	105 54.5 +00.0	N 19 14.1 +00.6	72 28.7 -00.9	N 24 56.1 +00.1	107 49.2 -37.6	N 23 52.5 +09.9	19						
20	120 54.5 +00.0	N 19 14.7 +00.6	87 27.8 -00.8	N 24 56.2 +00.2	122 11.6 -37.6	N 24 02.4 +09.6	20						
21	135 54.5 +00.0	N 19 15.3 +00.5	102 27.0 -00.8	N 24 56.4 +00.1	136 34.0 -37.8	N 24 12.0 +09.5	21						
22	150 54.5 +00.0	N 19 15.8 +00.6	117 26.2 -00.9	N 24 56.5 +00.2	150 56.2 -37.9	N 24 21.5 +09.4	22						
23	165 54.5 -00.1	N 19 16.4 +00.6	132 25.3 -00.8	N 24 56.7 +00.1	165 18.3 -38.1	N 24 30.9 +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 16'6 16'6 16'6 16'6 16'6 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'9 60'9 61'0 61'0 61'1 61'1								
	SHA 307° 307° 307° 307° 306° 306°		SHA 274° 274° 273° 273° 273° 273°		SHA 319° 317° 314° 312° 309° 306°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:09		Greenwich Culmination Time: 11:30								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	207 38.5 +00.7	N 09 57.9 +00.7	120 43.4 +02.1	N 22 09.6 +00.0	222 58.3 +02.3	N 02 13.4 +00.1	00						
01	222 39.2 +00.7	N 09 58.6 +00.7	135 45.5 +02.0	N 22 09.6 -00.1	238 00.6 +02.2	N 02 13.5 +00.1	01						
02	237 39.9 +00.6	N 09 59.3 +00.7	150 47.5 +02.0	N 22 09.5 -00.1	253 02.8 +02.2	N 02 13.6 +00.1	02						
03	252 40.5 +00.7	N 10 00.0 +00.7	165 49.5 +02.0	N 22 09.4 +00.0	268 05.0 +02.3	N 02 13.7 +00.1	03						
04	267 41.2 +00.7	N 10 00.7 +00.7	180 51.5 +02.0	N 22 09.4 -00.1	283 07.3 +02.2	N 02 13.8 +00.1	04						
05	282 41.9 +00.7	N 10 01.4 +00.7	195 53.5 +02.1	N 22 09.3 -00.1	298 09.5 +02.2	N 02 13.9 +00.1	05						
06	297 42.6 +00.7	N 10 02.1 +00.7	210 55.6 +02.0	N 22 09.2 +00.0	313 11.7 +02.2	N 02 14.0 +00.1	06						
07	312 43.3 +00.6	N 10 02.8 +00.7	225 57.6 +02.0	N 22 09.2 -00.1	328 13.9 +02.3	N 02 14.1 +00.0	07						
08	327 43.9 +00.7	N 10 03.5 +00.7	240 59.6 +02.0	N 22 09.1 +00.0	343 16.2 +02.2	N 02 14.1 +00.1	08						
09	342 44.6 +00.7	N 10 04.2 +00.7	256 01.6 +02.0	N 22 09.1 -00.1	358 18.4 +02.2	N 02 14.2 +00.1	09						
10	357 45.3 +00.7	N 10 04.9 +00.7	271 03.6 +02.1	N 22 09.0 -00.1	13 20.6 +02.3	N 02 14.3 +00.1	10						
11	12 46.0 +00.7	N 10 05.6 +00.7	286 05.7 +02.0	N 22 08.9 +00.0	28 22.9 +02.2	N 02 14.4 +00.1	11						
12	27 46.7 +00.6	N 10 06.3 +00.7	301 07.7 +02.0	N 22 08.9 -00.1	43 25.1 +02.2	N 02 14.5 +00.1	12						
13	42 47.3 +00.7	N 10 07.0 +00.6	316 09.7 +02.0	N 22 08.8 -00.1	58 27.3 +02.3	N 02 14.6 +00.1	13						
14	57 48.0 +00.7	N 10 07.6 +00.7	331 11.7 +02.0	N 22 08.7 +00.0	73 29.6 +02.2	N 02 14.7 +00.1	14						
15	72 48.7 +00.7	N 10 08.3 +00.7	346 13.7 +02.0	N 22 08.7 -00.1	88 31.8 +02.2	N 02 14.8 +00.1	15						
16	87 49.4 +00.7	N 10 09.0 +00.7	1 15.7 +02.1	N 22 08.6 -00.1	103 34.0 +02.2	N 02 14.9 +00.1	16						
17	102 50.1 +00.6	N 10 09.7 +00.7	16 17.8 +02.0	N 22 08.5 +00.0	118 36.2 +02.3	N 02 15.0 +00.1	17						
18	117 50.7 +00.7	N 10 10.4 +00.7	31 19.8 +02.0	N 22 08.5 -00.1	133 38.5 +02.2	N 02 15.1 +00.1	18						
19	132 51.4 +00.7	N 10 11.1 +00.7	46 21.8 +02.0	N 22 08.4 +00.0	148 40.7 +02.2	N 02 15.2 +00.0	19						
20	147 52.1 +00.7	N 10 11.8 +00.7	61 23.8 +02.0	N 22 08.4 -00.1	163 42.9 +02.3	N 02 15.2 +00.1	20						
21	162 52.8 +00.7	N 10 12.5 +00.7	76 25.8 +02.0	N 22 08.3 -00.1	178 45.2 +02.2	N 02 15.3 +00.1	21						
22	177 53.5 +00.6	N 10 13.2 +00.7	91 27.8 +02.1	N 22 08.2 +00.0	193 47.4 +02.2	N 02 15.4 +00.1	22						
23	192 54.1 +00.7	N 10 13.9 +00.7	106 29.9 +02.0	N 22 08.2 -00.1	208 49.6 +02.3	N 02 15.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 334° 334° 334° 334° 333° 333°		SHA 247° 247° 247° 247° 247° 247°		SHA 349° 349° 349° 349° 349° 349°								
	Greenwich Culmination Time: 10:08		Greenwich Culmination Time: 15:54		Greenwich Culmination Time: 09:06								

UT	Sun				Venus				Moon				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	180 54.4 +00.0	N 19 17.0 +00.5	147 24.5 -00.8	N 24 56.8 +00.1	179 40.2 -38.1	N 24 40.0 +09.0	00										
01	195 54.4 +00.0	N 19 17.5 +00.6	162 23.7 -00.9	N 24 56.9 +00.2	194 02.1 -38.2	N 24 49.0 +08.8	01										
02	210 54.4 +00.0	N 19 18.1 +00.6	177 22.8 -00.8	N 24 57.1 +00.1	208 23.9 -38.3	N 24 57.8 +08.6	02										
03	225 54.4 +00.0	N 19 18.7 +00.5	192 22.0 -00.8	N 24 57.2 +00.1	222 45.6 -38.5	N 25 06.4 +08.4	03										
04	240 54.4 -00.1	N 19 19.2 +00.6	207 21.2 -00.9	N 24 57.3 +00.2	237 07.1 -38.5	N 25 14.8 +08.2	04										
05	255 54.3 +00.0	N 19 19.8 +00.5	222 20.3 -00.8	N 24 57.5 +00.1	251 28.6 -38.7	N 25 23.0 +08.1	05										
06	270 54.3 +00.0	N 19 20.3 +00.6	237 19.5 -00.8	N 24 57.6 +00.1	265 49.9 -38.7	N 25 31.1 +07.8	06										
07	285 54.3 +00.0	N 19 20.9 +00.6	252 18.7 -00.9	N 24 57.7 +00.2	280 11.2 -38.8	N 25 38.9 +07.7	07										
08	300 54.3 +00.0	N 19 21.5 +00.5	267 17.8 -00.8	N 24 57.9 +00.1	294 32.4 -38.9	N 25 46.6 +07.4	08										
09	315 54.3 -00.1	N 19 22.0 +00.6	282 17.0 -00.8	N 24 58.0 +00.1	308 53.5 -39.0	N 25 54.0 +07.3	09										
10	330 54.2 +00.0	N 19 22.6 +00.6	297 16.2 -00.9	N 24 58.1 +00.2	323 14.5 -39.1	N 26 01.3 +07.1	10										
11	345 54.2 +00.0	N 19 23.2 +00.5	312 15.3 -00.8	N 24 58.3 +00.1	337 35.4 -39.2	N 26 08.4 +06.9	11										
12	0 54.2 +00.0	N 19 23.7 +00.6	327 14.5 -00.8	N 24 58.4 +00.1	351 56.2 -39.3	N 26 15.3 +06.6	12										
13	15 54.2 +00.0	N 19 24.3 +00.5	342 13.7 -00.9	N 24 58.5 +00.1	6 16.9 -39.3	N 26 21.9 +06.5	13										
14	30 54.2 -00.1	N 19 24.8 +00.6	357 12.8 -00.8	N 24 58.6 +00.2	20 37.6 -39.4	N 26 28.4 +06.3	14										
15	45 54.1 +00.0	N 19 25.4 +00.5	12 12.0 -00.8	N 24 58.8 +00.1	34 58.2 -39.5	N 26 34.7 +06.0	15										
16	60 54.1 +00.0	N 19 25.9 +00.6	27 11.2 -00.9	N 24 58.9 +00.1	49 18.7 -39.6	N 26 40.7 +05.9	16										
17	75 54.1 +00.0	N 19 26.5 +00.6	42 10.3 -00.8	N 24 59.0 +00.1	63 39.1 -39.6	N 26 46.6 +05.6	17										
18	90 54.1 -00.1	N 19 27.1 +00.5	57 09.5 -00.8	N 24 59.1 +00.1	77 59.5 -39.7	N 26 52.2 +05.5	18										
19	105 54.0 +00.0	N 19 27.6 +00.6	72 08.7 -00.9	N 24 59.2 +00.2	92 19.8 -39.7	N 26 57.7 +05.2	19										
20	120 54.0 +00.0	N 19 28.2 +00.5	87 07.8 -00.8	N 24 59.4 +00.1	106 40.1 -39.8	N 27 02.9 +05.0	20										
21	135 54.0 +00.0	N 19 28.7 +00.6	102 07.0 -00.8	N 24 59.5 +00.1	121 00.3 -39.9	N 27 07.9 +04.8	21										
22	150 54.0 +00.0	N 19 29.3 +00.5	117 06.2 -00.9	N 24 59.6 +00.1	135 20.4 -39.9	N 27 12.7 +04.6	22										
23	165 54.0 -00.1	N 19 29.8 +00.6	132 05.3 -00.8	N 24 59.7 +00.1	149 40.5 -40.0	N 27 17.3 +04.4	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 306° 306° 306° 306° 305° 305°	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 273° 272° 272° 272° 272° 271°	Greenwich Culmination Time: 14:11		UT 02 06 10 14 18 22	SD 16'7 16'7 16'7 16'7 16'7 16'7	HP 61'2 61'2 61'2 61'2 61'2 61'2	SHA 304° 301° 298° 295° 293° 290°	Greenwich Culmination Time: 12:33

UT	Mars				Jupiter				Saturn				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	207 54.8 +00.7	N 10 14.6 +00.6	121 31.9 +02.0	N 22 08.1 -00.1	223 51.9 +02.2	N 02 15.6 +00.1	00										
01	222 55.5 +00.7	N 10 15.2 +00.7	136 33.9 +02.0	N 22 08.0 +00.0	238 54.1 +02.2	N 02 15.7 +00.1	01										
02	237 56.2 +00.7	N 10 15.9 +00.7	151 35.9 +02.0	N 22 08.0 -00.1	253 56.3 +02.3	N 02 15.8 +00.1	02										
03	252 56.9 +00.6	N 10 16.6 +00.7	166 37.9 +02.0	N 22 07.9 -00.1	268 58.6 +02.2	N 02 15.9 +00.1	03										
04	267 57.5 +00.7	N 10 17.3 +00.7	181 39.9 +02.0	N 22 07.8 +00.0	284 00.8 +02.2	N 02 16.0 +00.1	04										
05	282 58.2 +00.7	N 10 18.0 +00.7	196 41.9 +02.1	N 22 07.8 -00.1	299 03.0 +02.2	N 02 16.1 +00.1	05										
06	297 58.9 +00.7	N 10 18.7 +00.7	211 44.0 +02.0	N 22 07.7 -00.1	314 05.2 +02.3	N 02 16.2 +00.1	06										
07	312 59.6 +00.7	N 10 19.4 +00.7	226 46.0 +02.0	N 22 07.6 +00.0	329 07.5 +02.2	N 02 16.3 +00.0	07										
08	328 00.3 +00.6	N 10 20.1 +00.7	241 48.0 +02.0	N 22 07.6 -00.1	344 09.7 +02.2	N 02 16.3 +00.1	08										
09	343 00.9 +00.7	N 10 20.8 +00.6	256 50.0 +02.0	N 22 07.5 +00.0	359 11.9 +02.3	N 02 16.4 +00.1	09										
10	358 01.6 +00.7	N 10 21.4 +00.7	271 52.0 +02.0	N 22 07.5 -00.1	14 14.2 +02.2	N 02 16.5 +00.1	10										
11	13 02.3 +00.7	N 10 22.1 +00.7	286 54.0 +02.0	N 22 07.4 -00.1	29 16.4 +02.2	N 02 16.6 +00.1	11										
12	28 03.0 +00.7	N 10 22.8 +00.7	301 56.0 +02.1	N 22 07.3 +00.0	44 18.6 +02.3	N 02 16.7 +00.1	12										
13	43 03.7 +00.6	N 10 23.5 +00.7	316 58.1 +02.0	N 22 07.3 -00.1	59 20.9 +02.2	N 02 16.8 +00.1	13										
14	58 04.3 +00.7	N 10 24.2 +00.7	332 00.1 +02.0	N 22 07.2 -00.1	74 23.1 +02.2	N 02 16.9 +00.1	14										
15	73 05.0 +00.7	N 10 24.9 +00.7	347 02.1 +02.0	N 22 07.1 +00.0	89 25.3 +02.3	N 02 17.0 +00.1	15										
16	88 05.7 +00.7	N 10 25.6 +00.6	2 04.1 +02.0	N 22 07.1 -00.1	104 27.6 +02.2	N 02 17.1 +00.1	16										
17	103 06.4 +00.7	N 10 26.2 +00.7	17 06.1 +02.0	N 22 07.0 -00.1	119 29.8 +02.2	N 02 17.2 +00.0	17										
18	118 07.1 +00.6	N 10 26.9 +00.7	32 08.1 +02.0	N 22 06.9 +00.0	134 32.0 +02.3	N 02 17.2 +00.1	18										
19	133 07.7 +00.7	N 10 27.6 +00.7	47 10.1 +02.1	N 22 06.9 -00.1	149 34.3 +02.2	N 02 17.3 +00.1	19										
20	148 08.4 +00.7	N 10 28.3 +00.7	62 12.2 +02.0	N 22 06.8 -00.1	164 36.5 +02.2	N 02 17.4 +00.1	20										
21	163 09.1 +00.7	N 10 29.0 +00.7	77 14.2 +02.0	N 22 06.7 +00.0	179 38.7 +02.3	N 02 17.5 +00.1	21										
22	178 09.8 +00.7	N 10 29.7 +00.7	92 16.2 +02.0	N 22 06.7 -00.1	194 41.0 +02.2	N 02 17.6 +00.1	22										
23	193 10.5 +00.6	N 10 30.4 +00.6	107 18.2 +02.0	N 22 06.6 -00.1	209 43.2 +02.2	N 02 17.7 +00.1	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 333° 333° 333° 333° 333° 333°	Greenwich Culmination Time: 10:07		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 247° 247° 247° 247° 247° 247°	Greenwich Culmination Time: 15:51		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 349° 349° 349° 349° 349° 349°	Greenwich Culmination Time: 09:03

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.9 +00.0	N 19 30.4 +00.5	147 04.5 -00.8	N 24 59.8 +00.1	164 00.5 -40.0	N 27 21.7 +04.1	00						
01	195 53.9 +00.0	N 19 30.9 +00.6	162 03.7 -00.9	N 24 59.9 +00.1	178 20.5 -40.0	N 27 25.8 +04.0	01						
02	210 53.9 +00.0	N 19 31.5 +00.5	177 02.8 -00.8	N 25 00.0 +00.1	192 40.5 -40.1	N 27 29.8 +03.7	02						
03	225 53.9 -00.1	N 19 32.0 +00.6	192 02.0 -00.8	N 25 00.1 +00.1	207 00.4 -40.1	N 27 33.5 +03.5	03						
04	240 53.8 +00.0	N 19 32.6 +00.5	207 01.2 -00.9	N 25 00.2 +00.2	221 20.3 -40.2	N 27 37.0 +03.3	04						
05	255 53.8 +00.0	N 19 33.1 +00.6	222 00.3 -00.8	N 25 00.4 +00.1	235 40.1 -40.2	N 27 40.3 +03.1	05						
06	270 53.8 +00.0	N 19 33.7 +00.5	236 59.5 -00.8	N 25 00.5 +00.1	249 59.9 -40.2	N 27 43.4 +02.8	06						
07	285 53.8 -00.1	N 19 34.2 +00.6	251 58.7 -00.9	N 25 00.6 +00.1	264 19.7 -40.2	N 27 46.2 +02.7	07						
08	300 53.7 +00.0	N 19 34.8 +00.5	266 57.8 -00.8	N 25 00.7 +00.1	278 39.5 -40.2	N 27 48.9 +02.4	08						
09	315 53.7 +00.0	N 19 35.3 +00.6	281 57.0 -00.8	N 25 00.8 +00.1	292 59.3 -40.3	N 27 51.3 +02.2	09						
10	330 53.7 -00.1	N 19 35.9 +00.5	296 56.2 -00.9	N 25 00.9 +00.1	307 19.0 -40.3	N 27 53.5 +01.9	10						
11	345 53.6 +00.0	N 19 36.4 +00.6	311 55.3 -00.8	N 25 01.0 +00.1	321 38.7 -40.2	N 27 55.4 +01.8	11						
12	0 53.6 +00.0	N 19 37.0 +00.5	326 54.5 -00.8	N 25 01.1 +00.1	335 58.5 -40.3	N 27 57.2 +01.5	12						
13	15 53.6 +00.0	N 19 37.5 +00.6	341 53.7 -00.9	N 25 01.2 +00.0	350 18.2 -40.3	N 27 58.7 +01.3	13						
14	30 53.6 -00.1	N 19 38.1 +00.5	356 52.8 -00.8	N 25 01.2 +00.1	4 37.9 -40.3	N 28 00.0 +01.1	14						
15	45 53.5 +00.0	N 19 38.6 +00.6	11 52.0 -00.8	N 25 01.3 +00.1	18 57.6 -40.2	N 28 01.1 +00.9	15						
16	60 53.5 +00.0	N 19 39.2 +00.5	26 51.2 -00.9	N 25 01.4 +00.1	33 17.4 -40.3	N 28 02.0 +00.6	16						
17	75 53.5 +00.0	N 19 39.7 +00.5	41 50.3 -00.8	N 25 01.5 +00.1	47 37.1 -40.2	N 28 02.6 +00.4	17						
18	90 53.5 -00.1	N 19 40.2 +00.6	56 49.5 -00.8	N 25 01.6 +00.1	61 56.9 -40.2	N 28 03.0 +00.2	18						
19	105 53.4 +00.0	N 19 40.8 +00.5	71 48.7 -00.9	N 25 01.7 +00.1	76 16.7 -40.2	N 28 03.2 +00.0	19						
20	120 53.4 +00.0	N 19 41.3 +00.6	86 47.8 -00.8	N 25 01.8 +00.1	90 36.5 -40.2	N 28 03.2 -00.2	20						
21	135 53.4 -00.1	N 19 41.9 +00.5	101 47.0 -00.8	N 25 01.9 +00.1	104 56.3 -40.1	N 28 03.0 -00.5	21						
22	150 53.3 +00.0	N 19 42.4 +00.5	116 46.2 -00.9	N 25 02.0 +00.0	119 16.2 -40.1	N 28 02.5 -00.7	22						
23	165 53.3 +00.0	N 19 42.9 +00.6	131 45.3 -00.8	N 25 02.0 +00.1	133 36.1 -40.1	N 28 01.8 -00.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'6 16'6 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'2 61'1 61'1 61'0 61'0 60'9								
	SHA 305° 305° 305° 305° 304° 304°		SHA 271° 271° 271° 271° 270° 270°		SHA 287° 284° 281° 278° 276° 273°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:12		Greenwich Culmination Time: 13:40								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	208 11.1 +00.7	N 10 31.0 +00.7	122 20.2 +02.0	N 22 06.5 +00.0	224 45.4 +02.3	N 02 17.8 +00.1	00						
01	223 11.8 +00.7	N 10 31.7 +00.7	137 22.2 +02.0	N 22 06.5 -00.1	239 47.7 +02.2	N 02 17.9 +00.1	01						
02	238 12.5 +00.7	N 10 32.4 +00.7	152 24.2 +02.0	N 22 06.4 -00.1	254 49.9 +02.2	N 02 18.0 +00.1	02						
03	253 13.2 +00.7	N 10 33.1 +00.7	167 26.2 +02.0	N 22 06.3 +00.0	269 52.1 +02.3	N 02 18.1 +00.0	03						
04	268 13.9 +00.6	N 10 33.8 +00.7	182 28.2 +02.1	N 22 06.3 -00.1	284 54.4 +02.2	N 02 18.1 +00.1	04						
05	283 14.5 +00.7	N 10 34.5 +00.6	197 30.3 +02.0	N 22 06.2 +00.0	299 56.6 +02.2	N 02 18.2 +00.1	05						
06	298 15.2 +00.7	N 10 35.1 +00.7	212 32.3 +02.0	N 22 06.2 -00.1	314 58.8 +02.3	N 02 18.3 +00.1	06						
07	313 15.9 +00.7	N 10 35.8 +00.7	227 34.3 +02.0	N 22 06.1 -00.1	330 01.1 +02.2	N 02 18.4 +00.1	07						
08	328 16.6 +00.6	N 10 36.5 +00.7	242 36.3 +02.0	N 22 06.0 +00.0	345 03.3 +02.2	N 02 18.5 +00.1	08						
09	343 17.2 +00.7	N 10 37.2 +00.7	257 38.3 +02.0	N 22 06.0 -00.1	0 05.5 +02.3	N 02 18.6 +00.1	09						
10	358 17.9 +00.7	N 10 37.9 +00.7	272 40.3 +02.0	N 22 05.9 -00.1	15 07.8 +02.2	N 02 18.7 +00.1	10						
11	13 18.6 +00.7	N 10 38.6 +00.6	287 42.3 +02.0	N 22 05.8 +00.0	30 10.0 +02.2	N 02 18.8 +00.1	11						
12	28 19.3 +00.7	N 10 39.2 +00.7	302 44.3 +02.0	N 22 05.8 -00.1	45 12.2 +02.3	N 02 18.9 +00.1	12						
13	43 20.0 +00.6	N 10 39.9 +00.7	317 46.3 +02.0	N 22 05.7 -00.1	60 14.5 +02.2	N 02 19.0 +00.0	13						
14	58 20.6 +00.7	N 10 40.6 +00.7	332 48.3 +02.1	N 22 05.6 +00.0	75 16.7 +02.2	N 02 19.0 +00.1	14						
15	73 21.3 +00.7	N 10 41.3 +00.7	347 50.4 +02.0	N 22 05.6 -00.1	90 18.9 +02.3	N 02 19.1 +00.1	15						
16	88 22.0 +00.7	N 10 42.0 +00.7	2 52.4 +02.0	N 22 05.5 -00.1	105 21.2 +02.2	N 02 19.2 +00.1	16						
17	103 22.7 +00.7	N 10 42.7 +00.6	17 54.4 +02.0	N 22 05.4 +00.0	120 23.4 +02.2	N 02 19.3 +00.1	17						
18	118 23.4 +00.6	N 10 43.3 +00.7	32 56.4 +02.0	N 22 05.4 -00.1	135 25.6 +02.3	N 02 19.4 +00.1	18						
19	133 24.0 +00.7	N 10 44.0 +00.7	47 58.4 +02.0	N 22 05.3 -00.1	150 27.9 +02.2	N 02 19.5 +00.1	19						
20	148 24.7 +00.7	N 10 44.7 +00.7	63 00.4 +02.0	N 22 05.2 +00.0	165 30.1 +02.2	N 02 19.6 +00.1	20						
21	163 25.4 +00.7	N 10 45.4 +00.7	78 02.4 +02.0	N 22 05.2 -00.1	180 32.3 +02.3	N 02 19.7 +00.1	21						
22	178 26.1 +00.6	N 10 46.1 +00.6	93 04.4 +02.0	N 22 05.1 -00.1	195 34.6 +02.2	N 02 19.8 +00.1	22						
23	193 26.7 +00.7	N 10 46.7 +00.7	108 06.4 +02.0	N 22 05.0 +00.0	210 36.8 +02.2	N 02 19.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 332° 332° 332° 332° 332° 332°		SHA 247° 247° 247° 247° 247° 246°		SHA 349° 349° 349° 349° 349° 349°								
	Greenwich Culmination Time: 10:06		Greenwich Culmination Time: 15:48		Greenwich Culmination Time: 08:59								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	180 53.3 +00.0	N 19 43.5 +00.5	146 44.5 -00.8	N 25 02.1 +00.1	147 56.0 -40.0	N 28 00.9 -01.1	00										
01	195 53.3 -00.1	N 19 44.0 +00.6	161 43.7 -00.9	N 25 02.2 +00.1	162 16.0 -40.0	N 27 59.8 -01.3	01										
02	210 53.2 +00.0	N 19 44.6 +00.5	176 42.8 -00.8	N 25 02.3 +00.1	176 36.0 -39.9	N 27 58.5 -01.5	02										
03	225 53.2 +00.0	N 19 45.1 +00.5	191 42.0 -00.8	N 25 02.4 +00.0	190 56.1 -39.9	N 27 57.0 -01.8	03										
04	240 53.2 -00.1	N 19 45.6 +00.6	206 41.2 -00.9	N 25 02.4 +00.1	205 16.2 -39.9	N 27 55.2 -02.0	04										
05	255 53.1 +00.0	N 19 46.2 +00.5	221 40.3 -00.8	N 25 02.5 +00.1	219 36.3 -39.7	N 27 53.2 -02.2	05										
06	270 53.1 +00.0	N 19 46.7 +00.5	236 39.5 -00.8	N 25 02.6 +00.1	233 56.6 -39.7	N 27 51.0 -02.4	06										
07	285 53.1 -00.1	N 19 47.2 +00.6	251 38.7 -00.9	N 25 02.7 +00.0	248 16.9 -39.7	N 27 48.6 -02.6	07										
08	300 53.0 +00.0	N 19 47.8 +00.5	266 37.8 -00.8	N 25 02.7 +00.1	262 37.2 -39.6	N 27 46.0 -02.8	08										
09	315 53.0 +00.0	N 19 48.3 +00.5	281 37.0 -00.8	N 25 02.8 +00.1	276 57.6 -39.5	N 27 43.2 -03.0	09										
10	330 53.0 -00.1	N 19 48.8 +00.6	296 36.2 -00.9	N 25 02.9 +00.0	291 18.1 -39.4	N 27 40.2 -03.3	10										
11	345 52.9 +00.0	N 19 49.4 +00.5	311 35.3 -00.8	N 25 02.9 +00.1	305 38.7 -39.4	N 27 36.9 -03.4	11										
12	0 52.9 +00.0	N 19 49.9 +00.5	326 34.5 -00.8	N 25 03.0 +00.1	319 59.3 -39.2	N 27 33.5 -03.7	12										
13	15 52.9 -00.1	N 19 50.4 +00.6	341 33.7 -00.9	N 25 03.1 +00.0	334 20.1 -39.2	N 27 29.8 -03.8	13										
14	30 52.8 +00.0	N 19 51.0 +00.5	356 32.8 -00.8	N 25 03.1 +00.1	348 40.9 -39.1	N 27 26.0 -04.1	14										
15	45 52.8 +00.0	N 19 51.5 +00.5	11 32.0 -00.8	N 25 03.2 +00.1	3 01.8 -39.1	N 27 21.9 -04.3	15										
16	60 52.8 -00.1	N 19 52.0 +00.6	26 31.2 -00.9	N 25 03.3 +00.0	17 22.7 -38.9	N 27 17.6 -04.4	16										
17	75 52.7 +00.0	N 19 52.6 +00.5	41 30.3 -00.8	N 25 03.3 +00.1	31 43.8 -38.8	N 27 13.2 -04.7	17										
18	90 52.7 +00.0	N 19 53.1 +00.5	56 29.5 -00.8	N 25 03.4 +00.0	46 05.0 -38.8	N 27 08.5 -04.9	18										
19	105 52.7 -00.1	N 19 53.6 +00.5	71 28.7 -00.9	N 25 03.4 +00.1	60 26.2 -38.6	N 27 03.6 -05.0	19										
20	120 52.6 +00.0	N 19 54.1 +00.6	86 27.8 -00.8	N 25 03.5 +00.1	74 47.6 -38.6	N 26 58.6 -05.3	20										
21	135 52.6 +00.0	N 19 54.7 +00.5	101 27.0 -00.8	N 25 03.6 +00.0	89 09.0 -38.4	N 26 53.3 -05.4	21										
22	150 52.6 -00.1	N 19 55.2 +00.5	116 26.2 -00.9	N 25 03.6 +00.1	103 30.6 -38.3	N 26 47.9 -05.6	22										
23	165 52.5 +00.0	N 19 55.7 +00.5	131 25.3 -00.8	N 25 03.7 +00.0	117 52.3 -38.3	N 26 42.3 -05.8	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 304° 304° 304° 304° 303° 303°	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 270° 270° 270° 269° 269° 269°	Greenwich Culmination Time: 14:13		UT 02 06 10 14 18 22	SD 16'6 16'6 16'5 16'5 16'5 16'5	HP 60'9 60'8 60'7 60'6 60'5 60'4	SHA 270° 267° 264° 261° 259° 256°	Greenwich Culmination Time: 14:47
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	208 27.4 +00.7	N 10 47.4 +00.7	123 08.4 +02.0	N 22 05.0 -00.1	225 39.0 +02.3	N 02 19.9 +00.1	00										
01	223 28.1 +00.7	N 10 48.1 +00.7	138 10.4 +02.0	N 22 04.9 -00.1	240 41.3 +02.2	N 02 20.0 +00.1	01										
02	238 28.8 +00.7	N 10 48.8 +00.7	153 12.4 +02.1	N 22 04.8 +00.0	255 43.5 +02.2	N 02 20.1 +00.1	02										
03	253 29.5 +00.6	N 10 49.5 +00.6	168 14.5 +02.0	N 22 04.8 -00.1	270 45.7 +02.3	N 02 20.2 +00.1	03										
04	268 30.1 +00.7	N 10 50.1 +00.7	183 16.5 +02.0	N 22 04.7 -00.1	285 48.0 +02.2	N 02 20.3 +00.1	04										
05	283 30.8 +00.7	N 10 50.8 +00.7	198 18.5 +02.0	N 22 04.6 +00.0	300 50.2 +02.2	N 02 20.4 +00.1	05										
06	298 31.5 +00.7	N 10 51.5 +00.7	213 20.5 +02.0	N 22 04.6 -00.1	315 52.4 +02.3	N 02 20.5 +00.1	06										
07	313 32.2 +00.6	N 10 52.2 +00.7	228 22.5 +02.0	N 22 04.5 -00.1	330 54.7 +02.2	N 02 20.6 +00.1	07										
08	328 32.8 +00.7	N 10 52.9 +00.6	243 24.5 +02.0	N 22 04.4 +00.0	345 56.9 +02.3	N 02 20.7 +00.0	08										
09	343 33.5 +00.7	N 10 53.5 +00.7	258 26.5 +02.0	N 22 04.4 -00.1	0 59.2 +02.2	N 02 20.7 +00.1	09										
10	358 34.2 +00.7	N 10 54.2 +00.7	273 28.5 +02.0	N 22 04.3 -00.1	16 01.4 +02.2	N 02 20.8 +00.1	10										
11	13 34.9 +00.6	N 10 54.9 +00.7	288 30.5 +02.0	N 22 04.2 +00.0	31 03.6 +02.3	N 02 20.9 +00.1	11										
12	28 35.5 +00.7	N 10 55.6 +00.6	303 32.5 +02.0	N 22 04.2 -00.1	46 05.9 +02.2	N 02 21.0 +00.1	12										
13	43 36.2 +00.7	N 10 56.2 +00.7	318 34.5 +02.0	N 22 04.1 -00.1	61 08.1 +02.2	N 02 21.1 +00.1	13										
14	58 36.9 +00.7	N 10 56.9 +00.7	333 36.5 +02.0	N 22 04.0 +00.0	76 10.3 +02.3	N 02 21.2 +00.1	14										
15	73 37.6 +00.7	N 10 57.6 +00.7	348 38.5 +02.0	N 22 04.0 -00.1	91 12.6 +02.2	N 02 21.3 +00.1	15										
16	88 38.3 +00.6	N 10 58.3 +00.6	3 40.5 +02.0	N 22 03.9 -00.1	106 14.8 +02.2	N 02 21.4 +00.0	16										
17	103 38.9 +00.7	N 10 58.9 +00.7	18 42.5 +02.0	N 22 03.8 +00.0	121 17.0 +02.3	N 02 21.4 +00.1	17										
18	118 39.6 +00.7	N 10 59.6 +00.7	33 44.5 +02.0	N 22 03.8 -00.1	136 19.3 +02.2	N 02 21.5 +00.1	18										
19	133 40.3 +00.7	N 11 00.3 +00.7	48 46.5 +02.1	N 22 03.7 -00.1	151 21.5 +02.3	N 02 21.6 +00.1	19										
20	148 41.0 +00.6	N 11 01.0 +00.6	63 48.6 +02.0	N 22 03.6 +00.0	166 23.8 +02.2	N 02 21.7 +00.1	20										
21	163 41.6 +00.7	N 11 01.6 +00.7	78 50.6 +02.0	N 22 03.6 -00.1	181 26.0 +02.2	N 02 21.8 +00.1	21										
22	178 42.3 +00.7	N 11 02.3 +00.7	93 52.6 +02.0	N 22 03.5 -00.1	196 28.2 +02.3	N 02 21.9 +00.1	22										
23	193 43.0 +00.7	N 11 03.0 +00.7	108 54.6 +02.0	N 22 03.4 +00.0	211 30.5 +02.2	N 02 22.0 +00.1	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 332° 332° 331° 331° 331° 331°	Greenwich Culmination Time: 10:05		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 246° 246° 246° 246° 246° 246°	Greenwich Culmination Time: 15:45		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 349° 349° 349° 349° 349° 349°	Greenwich Culmination Time: 08:56

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 15%				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	180 52.5 +00.0	N 19 56.2 +00.6	146 24.5 -00.8	N 25 03.7 +00.1	132 14.0 -38.1	N 26 36.5 -06.0	00								
01	195 52.5 -00.1	N 19 56.8 +00.5	161 23.7 -00.8	N 25 03.8 +00.0	146 35.9 -38.0	N 26 30.5 -06.2	01								
02	210 52.4 +00.0	N 19 57.3 +00.5	176 22.9 -00.9	N 25 03.8 +00.1	160 57.9 -37.9	N 26 24.3 -06.4	02								
03	225 52.4 +00.0	N 19 57.8 +00.5	191 22.0 -00.8	N 25 03.9 +00.0	175 20.0 -37.7	N 26 17.9 -06.6	03								
04	240 52.4 -00.1	N 19 58.3 +00.6	206 21.2 -00.8	N 25 03.9 +00.1	189 42.3 -37.7	N 26 11.3 -06.7	04								
05	255 52.3 +00.0	N 19 58.9 +00.5	221 20.4 -00.9	N 25 04.0 +00.0	204 04.6 -37.5	N 26 04.6 -06.9	05								
06	270 52.3 -00.1	N 19 59.4 +00.5	236 19.5 -00.8	N 25 04.0 +00.0	218 27.1 -37.5	N 25 57.7 -07.1	06								
07	285 52.2 +00.0	N 19 59.9 +00.5	251 18.7 -00.8	N 25 04.0 +00.1	232 49.6 -37.3	N 25 50.6 -07.3	07								
08	300 52.2 +00.0	N 20 00.4 +00.5	266 17.9 -00.9	N 25 04.1 +00.0	247 12.3 -37.1	N 25 43.3 -07.4	08								
09	315 52.2 -00.1	N 20 00.9 +00.6	281 17.0 -00.8	N 25 04.1 +00.1	261 35.2 -37.1	N 25 35.9 -07.6	09								
10	330 52.1 +00.0	N 20 01.5 +00.5	296 16.2 -00.8	N 25 04.2 +00.0	275 58.1 -36.9	N 25 28.3 -07.8	10								
11	345 52.1 +00.0	N 20 02.0 +00.5	311 15.4 -00.9	N 25 04.2 +00.0	290 21.2 -36.8	N 25 20.5 -07.9	11								
12	0 52.1 -00.1	N 20 02.5 +00.5	326 14.5 -00.8	N 25 04.2 +00.1	304 44.4 -36.7	N 25 12.6 -08.1	12								
13	15 52.0 +00.0	N 20 03.0 +00.5	341 13.7 -00.8	N 25 04.3 +00.0	319 07.7 -36.5	N 25 04.5 -08.3	13								
14	30 52.0 -00.1	N 20 03.5 +00.5	356 12.9 -00.8	N 25 04.3 +00.1	333 31.2 -36.4	N 24 56.2 -08.4	14								
15	45 51.9 +00.0	N 20 04.0 +00.6	11 12.1 -00.9	N 25 04.4 +00.0	347 54.8 -36.3	N 24 47.8 -08.6	15								
16	60 51.9 +00.0	N 20 04.6 +00.5	26 11.2 -00.8	N 25 04.4 +00.0	2 18.5 -36.1	N 24 39.2 -08.7	16								
17	75 51.9 -00.1	N 20 05.1 +00.5	41 10.4 -00.8	N 25 04.4 +00.0	16 42.4 -36.0	N 24 30.5 -08.9	17								
18	90 51.8 +00.0	N 20 05.6 +00.5	56 09.6 -00.9	N 25 04.4 +00.1	31 06.4 -35.9	N 24 21.6 -09.0	18								
19	105 51.8 -00.1	N 20 06.1 +00.5	71 08.7 -00.8	N 25 04.5 +00.0	45 30.5 -35.7	N 24 12.6 -09.2	19								
20	120 51.7 +00.0	N 20 06.6 +00.5	86 07.9 -00.8	N 25 04.5 +00.0	59 54.8 -35.6	N 24 03.4 -09.4	20								
21	135 51.7 +00.0	N 20 07.1 +00.5	101 07.1 -00.9	N 25 04.5 +00.1	74 19.2 -35.5	N 23 54.0 -09.5	21								
22	150 51.7 -00.1	N 20 07.6 +00.5	116 06.2 -00.8	N 25 04.6 +00.0	88 43.7 -35.3	N 23 44.5 -09.6	22								
23	165 51.6 +00.0	N 20 08.1 +00.6	131 05.4 -00.8	N 25 04.6 +00.0	103 08.4 -35.2	N 23 34.9 -09.7	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 303° 303° 303° 303° 302° 302°	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 269° 268° 268° 268° 268° 268°	Greenwich Culmination Time: 14:15	UT 02 06 10 14 18 22	SD 16'4 16'4 16'4 16'3 16'3 16'3	HP 60'3 60'2 60'1 59'9 59'8 59'7	SHA 253° 251° 248° 245° 243° 240°	Greenwich Culmination Time: 15:50

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	208 43.7 +00.6	N 11 03.7 +00.6	123 56.6 +02.0	N 22 03.4 -00.1	226 32.7 +02.2	N 02 22.1 +00.1	00								
01	223 44.3 +00.7	N 11 04.3 +00.7	138 58.6 +02.0	N 22 03.3 -00.1	241 34.9 +02.3	N 02 22.2 +00.0	01								
02	238 45.0 +00.7	N 11 05.0 +00.7	154 00.6 +02.0	N 22 03.2 +00.0	256 37.2 +02.2	N 02 22.2 +00.1	02								
03	253 45.7 +00.7	N 11 05.7 +00.7	169 02.6 +02.0	N 22 03.2 -00.1	271 39.4 +02.3	N 02 22.3 +00.1	03								
04	268 46.4 +00.7	N 11 06.4 +00.6	184 04.6 +02.0	N 22 03.1 -00.1	286 41.7 +02.2	N 02 22.4 +00.1	04								
05	283 47.1 +00.6	N 11 07.0 +00.7	199 06.6 +02.0	N 22 03.0 +00.0	301 43.9 +02.2	N 02 22.5 +00.1	05								
06	298 47.7 +00.7	N 11 07.7 +00.7	214 08.6 +02.0	N 22 03.0 -00.1	316 46.1 +02.3	N 02 22.6 +00.1	06								
07	313 48.4 +00.7	N 11 08.4 +00.7	229 10.6 +02.0	N 22 02.9 -00.1	331 48.4 +02.2	N 02 22.7 +00.1	07								
08	328 49.1 +00.7	N 11 09.1 +00.6	244 12.6 +02.0	N 22 02.8 +00.0	346 50.6 +02.2	N 02 22.8 +00.1	08								
09	343 49.8 +00.6	N 11 09.7 +00.7	259 14.6 +02.0	N 22 02.8 -00.1	1 52.8 +02.3	N 02 22.9 +00.0	09								
10	358 50.4 +00.7	N 11 10.4 +00.7	274 16.6 +02.0	N 22 02.7 -00.1	16 55.1 +02.2	N 02 22.9 +00.1	10								
11	13 51.1 +00.7	N 11 11.1 +00.7	289 18.6 +02.0	N 22 02.6 -00.1	31 57.3 +02.3	N 02 23.0 +00.1	11								
12	28 51.8 +00.7	N 11 11.8 +00.6	304 20.6 +02.0	N 22 02.5 +00.0	46 59.6 +02.2	N 02 23.1 +00.1	12								
13	43 52.5 +00.6	N 11 12.4 +00.7	319 22.6 +02.0	N 22 02.5 -00.1	62 01.8 +02.2	N 02 23.2 +00.1	13								
14	58 53.1 +00.7	N 11 13.1 +00.7	334 24.6 +02.0	N 22 02.4 -00.1	77 04.0 +02.3	N 02 23.3 +00.1	14								
15	73 53.8 +00.7	N 11 13.8 +00.6	349 26.6 +02.0	N 22 02.3 +00.0	92 06.3 +02.2	N 02 23.4 +00.1	15								
16	88 54.5 +00.7	N 11 14.4 +00.7	4 28.6 +02.0	N 22 02.3 -00.1	107 08.5 +02.2	N 02 23.5 +00.1	16								
17	103 55.2 +00.6	N 11 15.1 +00.7	19 30.6 +02.0	N 22 02.2 -00.1	122 10.7 +02.3	N 02 23.6 +00.0	17								
18	118 55.8 +00.7	N 11 15.8 +00.7	34 32.6 +02.0	N 22 02.1 +00.0	137 13.0 +02.2	N 02 23.6 +00.1	18								
19	133 56.5 +00.7	N 11 16.5 +00.6	49 34.6 +02.0	N 22 02.1 -00.1	152 15.2 +02.3	N 02 23.7 +00.1	19								
20	148 57.2 +00.7	N 11 17.1 +00.7	64 36.6 +02.0	N 22 02.0 -00.1	167 17.5 +02.2	N 02 23.8 +00.1	20								
21	163 57.9 +00.6	N 11 17.8 +00.7	79 38.6 +02.0	N 22 01.9 +00.0	182 19.7 +02.2	N 02 23.9 +00.1	21								
22	178 58.5 +00.7	N 11 18.5 +00.6	94 40.6 +02.0	N 22 01.9 -00.1	197 21.9 +02.3	N 02 24.0 +00.1	22								
23	193 59.2 +00.7	N 11 19.1 +00.7	109 42.6 +02.0	N 22 01.8 -00.1	212 24.2 +02.2	N 02 24.1 +00.1	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 331° 331° 331° 331° 331° 330°	Greenwich Culmination Time: 10:04	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 246° 246° 246° 246° 246° 246°	Greenwich Culmination Time: 15:42	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 349° 349° 349° 349° 349° 349°	Greenwich Culmination Time: 08:52

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 51.6 -00.1	N 20	08.7 +00.5	146 04.6 -00.8	N 25	04.6 +00.0	117 33.2 -35.0	N 23	25.2 -09.9	00			
01	195 51.5 +00.0	N 20	09.2 +00.5	161 03.8 -00.9	N 25	04.6 +00.0	131 58.2 -34.9	N 23	15.3 -10.1	01			
02	210 51.5 +00.0	N 20	09.7 +00.5	176 02.9 -00.8	N 25	04.6 +00.1	146 23.3 -34.8	N 23	05.2 -10.2	02			
03	225 51.5 -00.1	N 20	10.2 +00.5	191 02.1 -00.8	N 25	04.7 +00.0	160 48.5 -34.7	N 22	55.0 -10.3	03			
04	240 51.4 +00.0	N 20	10.7 +00.5	206 01.3 -00.9	N 25	04.7 +00.0	175 13.8 -34.4	N 22	44.7 -10.4	04			
05	255 51.4 -00.1	N 20	11.2 +00.5	221 00.4 -00.8	N 25	04.7 +00.0	189 39.4 -34.4	N 22	34.3 -10.6	05			
06	270 51.3 +00.0	N 20	11.7 +00.5	235 59.6 -00.8	N 25	04.7 +00.0	204 05.0 -34.2	N 22	23.7 -10.6	06			
07	285 51.3 -00.1	N 20	12.2 +00.5	250 58.8 -00.8	N 25	04.7 +00.0	218 30.8 -34.1	N 22	13.1 -10.9	07			
08	300 51.2 +00.0	N 20	12.7 +00.5	265 58.0 -00.9	N 25	04.7 +00.0	232 56.7 -34.0	N 22	02.2 -10.9	08			
09	315 51.2 +00.0	N 20	13.2 +00.5	280 57.1 -00.8	N 25	04.7 +00.1	247 22.7 -33.8	N 21	51.3 -11.0	09			
10	330 51.2 -00.1	N 20	13.7 +00.5	295 56.3 -00.8	N 25	04.8 +00.0	261 48.9 -33.6	N 21	40.3 -11.2	10			
11	345 51.1 +00.0	N 20	14.2 +00.5	310 55.5 -00.9	N 25	04.8 +00.0	276 15.3 -33.6	N 21	29.1 -11.3	11			
12	0 51.1 -00.1	N 20	14.7 +00.5	325 54.6 -00.8	N 25	04.8 +00.0	290 41.7 -33.4	N 21	17.8 -11.4	12			
13	15 51.0 +00.0	N 20	15.2 +00.5	340 53.8 -00.8	N 25	04.8 +00.0	305 08.3 -33.2	N 21	06.4 -11.5	13			
14	30 51.0 -00.1	N 20	15.7 +00.5	355 53.0 -00.8	N 25	04.8 +00.0	319 35.1 -33.1	N 20	54.9 -11.6	14			
15	45 50.9 +00.0	N 20	16.2 +00.5	10 52.2 -00.9	N 25	04.8 +00.0	334 02.0 -33.0	N 20	43.3 -11.8	15			
16	60 50.9 +00.0	N 20	16.7 +00.5	25 51.3 -00.8	N 25	04.8 +00.0	348 29.0 -32.9	N 20	31.5 -11.8	16			
17	75 50.9 -00.1	N 20	17.2 +00.5	40 50.5 -00.8	N 25	04.8 +00.0	2 56.1 -32.7	N 20	19.7 -11.9	17			
18	90 50.8 +00.0	N 20	17.7 +00.5	55 49.7 -00.9	N 25	04.8 +00.0	17 23.4 -32.6	N 20	07.8 -12.1	18			
19	105 50.8 -00.1	N 20	18.2 +00.5	70 48.8 -00.8	N 25	04.8 +00.0	31 50.8 -32.4	N 19	55.7 -12.1	19			
20	120 50.7 +00.0	N 20	18.7 +00.5	85 48.0 -00.8	N 25	04.8 +00.0	46 18.4 -32.4	N 19	43.6 -12.2	20			
21	135 50.7 -00.1	N 20	19.2 +00.5	100 47.2 -00.8	N 25	04.8 +00.0	60 46.0 -32.2	N 19	31.4 -12.4	21			
22	150 50.6 +00.0	N 20	19.7 +00.5	115 46.4 -00.9	N 25	04.8 +00.0	75 13.8 -32.0	N 19	19.0 -12.4	22			
23	165 50.6 -00.1	N 20	20.2 +00.5	130 45.5 -00.8	N 25	04.8 +00.0	89 41.8 -31.9	N 19	06.6 -12.5	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 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 16'1 16'1 16'1 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 59'5 59'4 59'3 59'1 59'0 58'8						
	SHA 302° 302° 302° 302° 301° 301°			SHA 267° 267° 267° 267° 266° 266°			SHA 238° 235° 233° 230° 228° 226°						
	Greenwich Culmination Time: 11:56			Greenwich Culmination Time: 14:16			Greenwich Culmination Time: 16:47						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	208 59.9 +00.7	N 11	19.8 +00.7	124 44.6 +02.0	N 22	01.7 +00.0	227 26.4 +02.3	N 02	24.2 +00.0	00			
01	224 00.6 +00.6	N 11	20.5 +00.6	139 46.6 +02.0	N 22	01.7 -00.1	242 28.7 +02.2	N 02	24.2 +00.1	01			
02	239 01.2 +00.7	N 11	21.1 +00.7	154 48.6 +02.0	N 22	01.6 -00.1	257 30.9 +02.2	N 02	24.3 +00.1	02			
03	254 01.9 +00.7	N 11	21.8 +00.7	169 50.6 +02.0	N 22	01.5 +00.0	272 33.1 +02.3	N 02	24.4 +00.1	03			
04	269 02.6 +00.7	N 11	22.5 +00.7	184 52.6 +02.0	N 22	01.5 -00.1	287 35.4 +02.2	N 02	24.5 +00.1	04			
05	284 03.3 +00.6	N 11	23.2 +00.6	199 54.6 +02.0	N 22	01.4 -00.1	302 37.6 +02.3	N 02	24.6 +00.1	05			
06	299 03.9 +00.7	N 11	23.8 +00.7	214 56.6 +02.0	N 22	01.3 +00.0	317 39.9 +02.2	N 02	24.7 +00.1	06			
07	314 04.6 +00.7	N 11	24.5 +00.7	229 58.6 +02.0	N 22	01.3 -00.1	332 42.1 +02.2	N 02	24.8 +00.1	07			
08	329 05.3 +00.7	N 11	25.2 +00.6	245 00.6 +02.0	N 22	01.2 -00.1	347 44.3 +02.3	N 02	24.9 +00.0	08			
09	344 06.0 +00.6	N 11	25.8 +00.7	260 02.6 +02.0	N 22	01.1 -00.1	2 46.6 +02.2	N 02	24.9 +00.1	09			
10	359 06.6 +00.7	N 11	26.5 +00.7	275 04.6 +02.0	N 22	01.0 +00.0	17 48.8 +02.3	N 02	25.0 +00.1	10			
11	14 07.3 +00.7	N 11	27.2 +00.6	290 06.6 +02.0	N 22	01.0 -00.1	32 51.1 +02.2	N 02	25.1 +00.1	11			
12	29 08.0 +00.7	N 11	27.8 +00.7	305 08.6 +02.0	N 22	00.9 -00.1	47 53.3 +02.2	N 02	25.2 +00.1	12			
13	44 08.7 +00.6	N 11	28.5 +00.7	320 10.6 +02.0	N 22	00.8 +00.0	62 55.5 +02.3	N 02	25.3 +00.1	13			
14	59 09.3 +00.7	N 11	29.2 +00.6	335 12.6 +02.0	N 22	00.8 -00.1	77 57.8 +02.2	N 02	25.4 +00.1	14			
15	74 10.0 +00.7	N 11	29.8 +00.7	350 14.6 +02.0	N 22	00.7 -00.1	93 00.0 +02.3	N 02	25.5 +00.0	15			
16	89 10.7 +00.7	N 11	30.5 +00.7	5 16.6 +02.0	N 22	00.6 +00.0	108 02.3 +02.2	N 02	25.5 +00.1	16			
17	104 11.4 +00.6	N 11	31.2 +00.6	20 18.6 +02.0	N 22	00.6 -00.1	123 04.5 +02.2	N 02	25.6 +00.1	17			
18	119 12.0 +00.7	N 11	31.8 +00.7	35 20.6 +02.0	N 22	00.5 -00.1	138 06.7 +02.3	N 02	25.7 +00.1	18			
19	134 12.7 +00.7	N 11	32.5 +00.7	50 22.6 +02.0	N 22	00.4 +00.0	153 09.0 +02.2	N 02	25.8 +00.1	19			
20	149 13.4 +00.7	N 11	33.2 +00.6	65 24.6 +02.0	N 22	00.4 -00.1	168 11.2 +02.3	N 02	25.9 +00.1	20			
21	164 14.1 +00.6	N 11	33.8 +00.7	80 26.6 +02.0	N 22	00.3 -00.1	183 13.5 +02.2	N 02	26.0 +00.1	21			
22	179 14.7 +00.7	N 11	34.5 +00.7	95 28.6 +02.0	N 22	00.2 -00.1	198 15.7 +02.3	N 02	26.1 +00.0	22			
23	194 15.4 +00.7	N 11	35.2 +00.6	110 30.6 +02.0	N 22	00.1 +00.0	213 18.0 +02.2	N 02	26.1 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 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 330° 330° 330° 330° 330° 330°			SHA 246° 246° 246° 246° 246° 246°			SHA 349° 349° 349° 349° 349° 349°						
	Greenwich Culmination Time: 10:03			Greenwich Culmination Time: 15:38			Greenwich Culmination Time: 08:48						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	180 50.5 +00.0	N 20 20.7 +00.5	145 44.7 -00.8	N 25 04.8 +00.0	104 09.9 -31.8	N 18 54.1 -12.6	00										
01	195 50.5 -00.1	N 20 21.2 +00.5	160 43.9 -00.8	N 25 04.8 +00.0	118 38.1 -31.7	N 18 41.5 -12.7	01										
02	210 50.4 +00.0	N 20 21.7 +00.5	175 43.1 -00.9	N 25 04.8 -00.1	133 06.4 -31.5	N 18 28.8 -12.8	02										
03	225 50.4 +00.0	N 20 22.2 +00.5	190 42.2 -00.8	N 25 04.7 +00.0	147 34.9 -31.5	N 18 16.0 -12.8	03										
04	240 50.4 -00.1	N 20 22.7 +00.5	205 41.4 -00.8	N 25 04.7 +00.0	162 03.4 -31.3	N 18 03.2 -12.9	04										
05	255 50.3 +00.0	N 20 23.2 +00.5	220 40.6 -00.8	N 25 04.7 +00.0	176 32.1 -31.1	N 17 50.3 -13.1	05										
06	270 50.3 -00.1	N 20 23.7 +00.5	235 39.8 -00.9	N 25 04.7 +00.0	191 01.0 -31.1	N 17 37.2 -13.1	06										
07	285 50.2 +00.0	N 20 24.2 +00.5	250 38.9 -00.8	N 25 04.7 +00.0	205 29.9 -30.9	N 17 24.1 -13.1	07										
08	300 50.2 -00.1	N 20 24.7 +00.5	265 38.1 -00.8	N 25 04.7 +00.0	219 59.0 -30.8	N 17 11.0 -13.3	08										
09	315 50.1 +00.0	N 20 25.2 +00.4	280 37.3 -00.8	N 25 04.7 -00.1	234 28.2 -30.7	N 16 57.7 -13.3	09										
10	330 50.1 -00.1	N 20 25.6 +00.5	295 36.5 -00.9	N 25 04.6 +00.0	248 57.5 -30.5	N 16 44.4 -13.4	10										
11	345 50.0 +00.0	N 20 26.1 +00.5	310 35.6 -00.8	N 25 04.6 +00.0	263 27.0 -30.5	N 16 31.0 -13.5	11										
12	0 50.0 -00.1	N 20 26.6 +00.5	325 34.8 -00.8	N 25 04.6 +00.0	277 56.5 -30.3	N 16 17.5 -13.5	12										
13	15 49.9 +00.0	N 20 27.1 +00.5	340 34.0 -00.8	N 25 04.6 -00.1	292 26.2 -30.2	N 16 04.0 -13.6	13										
14	30 49.9 -00.1	N 20 27.6 +00.5	355 33.2 -00.9	N 25 04.5 +00.0	306 56.0 -30.1	N 15 50.4 -13.6	14										
15	45 49.8 +00.0	N 20 28.1 +00.5	10 32.3 -00.8	N 25 04.5 +00.0	321 25.9 -30.0	N 15 36.8 -13.8	15										
16	60 49.8 -00.1	N 20 28.6 +00.5	25 31.5 -00.8	N 25 04.5 +00.0	335 55.9 -29.8	N 15 23.0 -13.8	16										
17	75 49.7 +00.0	N 20 29.1 +00.4	40 30.7 -00.8	N 25 04.5 -00.1	350 26.1 -29.8	N 15 09.2 -13.8	17										
18	90 49.7 -00.1	N 20 29.5 +00.5	55 29.9 -00.9	N 25 04.4 +00.0	4 56.3 -29.6	N 14 55.4 -13.9	18										
19	105 49.6 +00.0	N 20 30.0 +00.5	70 29.0 -00.8	N 25 04.4 +00.0	19 26.7 -29.6	N 14 41.5 -14.0	19										
20	120 49.6 -00.1	N 20 30.5 +00.5	85 28.2 -00.8	N 25 04.4 -00.1	33 57.1 -29.4	N 14 27.5 -14.0	20										
21	135 49.5 +00.0	N 20 31.0 +00.5	100 27.4 -00.8	N 25 04.3 +00.0	48 27.7 -29.3	N 14 13.5 -14.0	21										
22	150 49.5 -00.1	N 20 31.5 +00.5	115 26.6 -00.9	N 25 04.3 +00.0	62 58.4 -29.3	N 13 59.5 -14.1	22										
23	165 49.4 +00.0	N 20 32.0 +00.4	130 25.7 -00.8	N 25 04.3 -00.1	77 29.1 -29.1	N 13 45.4 -14.2	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 301° 301° 301° 301° 300° 300°	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 266° 266° 266° 265° 265° 265°	Greenwich Culmination Time: 14:17		UT 02 06 10 14 18 22	SD 16'0 16'0 15'9 15'9 15'8 15'8	HP 58'7 58'6 58'4 58'3 58'1 58'0	SHA 223° 221° 219° 217° 215° 212°	Greenwich Culmination Time: 17:39

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	209 16.1 +00.7	N 11 35.8 +00.7	125 32.6 +02.0	N 22 00.1 -00.1	228 20.2 +02.2	N 02 26.2 +00.1	00										
01	224 16.8 +00.6	N 11 36.5 +00.6	140 34.6 +02.0	N 22 00.0 -00.1	243 22.4 +02.3	N 02 26.3 +00.1	01										
02	239 17.4 +00.7	N 11 37.1 +00.7	155 36.6 +02.0	N 21 59.9 +00.0	258 24.7 +02.2	N 02 26.4 +00.1	02										
03	254 18.1 +00.7	N 11 37.8 +00.7	170 38.6 +02.0	N 21 59.9 -00.1	273 26.9 +02.3	N 02 26.5 +00.1	03										
04	269 18.8 +00.7	N 11 38.5 +00.6	185 40.6 +01.9	N 21 59.8 -00.1	288 29.2 +02.2	N 02 26.6 +00.1	04										
05	284 19.5 +00.6	N 11 39.1 +00.7	200 42.5 +02.0	N 21 59.7 +00.0	303 31.4 +02.2	N 02 26.7 +00.0	05										
06	299 20.1 +00.7	N 11 39.8 +00.7	215 44.5 +02.0	N 21 59.7 -00.1	318 33.6 +02.3	N 02 26.7 +00.1	06										
07	314 20.8 +00.7	N 11 40.5 +00.6	230 46.5 +02.0	N 21 59.6 -00.1	333 35.9 +02.2	N 02 26.8 +00.1	07										
08	329 21.5 +00.7	N 11 41.1 +00.7	245 48.5 +02.0	N 21 59.5 -00.1	348 38.1 +02.3	N 02 26.9 +00.1	08										
09	344 22.2 +00.6	N 11 41.8 +00.7	260 50.5 +02.0	N 21 59.4 +00.0	3 40.4 +02.2	N 02 27.0 +00.1	09										
10	359 22.8 +00.7	N 11 42.5 +00.6	275 52.5 +02.0	N 21 59.4 -00.1	18 42.6 +02.3	N 02 27.1 +00.1	10										
11	14 23.5 +00.7	N 11 43.1 +00.7	290 54.5 +02.0	N 21 59.3 -00.1	33 44.9 +02.2	N 02 27.2 +00.1	11										
12	29 24.2 +00.6	N 11 43.8 +00.6	305 56.5 +02.0	N 21 59.2 +00.0	48 47.1 +02.2	N 02 27.3 +00.0	12										
13	44 24.8 +00.7	N 11 44.4 +00.7	320 58.5 +02.0	N 21 59.2 -00.1	63 49.3 +02.3	N 02 27.3 +00.1	13										
14	59 25.5 +00.7	N 11 45.1 +00.7	336 00.5 +02.0	N 21 59.1 -00.1	78 51.6 +02.2	N 02 27.4 +00.1	14										
15	74 26.2 +00.7	N 11 45.8 +00.6	351 02.5 +02.0	N 21 59.0 +00.0	93 53.8 +02.3	N 02 27.5 +00.1	15										
16	89 26.9 +00.6	N 11 46.4 +00.7	6 04.5 +02.0	N 21 59.0 -00.1	108 56.1 +02.2	N 02 27.6 +00.1	16										
17	104 27.5 +00.7	N 11 47.1 +00.6	21 06.5 +02.0	N 21 58.9 -00.1	123 58.3 +02.3	N 02 27.7 +00.1	17										
18	119 28.2 +00.7	N 11 47.7 +00.7	36 08.5 +02.0	N 21 58.8 -00.1	139 00.6 +02.2	N 02 27.8 +00.1	18										
19	134 28.9 +00.7	N 11 48.4 +00.7	51 10.5 +02.0	N 21 58.7 +00.0	154 02.8 +02.2	N 02 27.9 +00.0	19										
20	149 29.6 +00.6	N 11 49.1 +00.6	66 12.5 +02.0	N 21 58.7 -00.1	169 05.0 +02.3	N 02 27.9 +00.1	20										
21	164 30.2 +00.7	N 11 49.7 +00.7	81 14.5 +02.0	N 21 58.6 -00.1	184 07.3 +02.2	N 02 28.0 +00.1	21										
22	179 30.9 +00.7	N 11 50.4 +00.6	96 16.5 +01.9	N 21 58.5 +00.0	199 09.5 +02.3	N 02 28.1 +00.1	22										
23	194 31.6 +00.6	N 11 51.0 +00.7	111 18.4 +02.0	N 21 58.5 -00.1	214 11.8 +02.2	N 02 28.2 +00.1	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 330° 329° 329° 329° 329° 329°	Greenwich Culmination Time: 10:02		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 246° 246° 246° 246° 246° 246°	Greenwich Culmination Time: 15:35		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 349° 349° 349° 349° 349° 349°	Greenwich Culmination Time: 08:45

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 49.4 -00.1	N 20 32.4 +00.5	145 24.9 -00.8	N 25 04.2 +00.0	92 00.0 -29.0	N 13 31.2 -14.2	00						
01	195 49.3 +00.0	N 20 32.9 +00.5	160 24.1 -00.8	N 25 04.2 +00.0	106 31.0 -28.9	N 13 17.0 -14.3	01						
02	210 49.3 -00.1	N 20 33.4 +00.5	175 23.3 -00.9	N 25 04.2 -00.1	121 02.1 -28.9	N 13 02.7 -14.3	02						
03	225 49.2 +00.0	N 20 33.9 +00.5	190 22.4 -00.8	N 25 04.1 +00.0	135 33.2 -28.7	N 12 48.4 -14.3	03						
04	240 49.2 -00.1	N 20 34.4 +00.4	205 21.6 -00.8	N 25 04.1 -00.1	150 04.5 -28.6	N 12 34.1 -14.4	04						
05	255 49.1 +00.0	N 20 34.8 +00.5	220 20.8 -00.8	N 25 04.0 +00.0	164 35.9 -28.5	N 12 19.7 -14.5	05						
06	270 49.1 -00.1	N 20 35.3 +00.5	235 20.0 -00.8	N 25 04.0 -00.1	179 07.4 -28.5	N 12 05.2 -14.4	06						
07	285 49.0 +00.0	N 20 35.8 +00.5	250 19.2 -00.9	N 25 03.9 +00.0	193 38.9 -28.3	N 11 50.8 -14.5	07						
08	300 49.0 -00.1	N 20 36.3 +00.4	265 18.3 -00.8	N 25 03.9 -00.1	208 10.6 -28.3	N 11 36.3 -14.6	08						
09	315 48.9 -00.1	N 20 36.7 +00.5	280 17.5 -00.8	N 25 03.8 +00.0	222 42.3 -28.1	N 11 21.7 -14.6	09						
10	330 48.8 +00.0	N 20 37.2 +00.5	295 16.7 -00.8	N 25 03.8 -00.1	237 14.2 -28.1	N 11 07.1 -14.6	10						
11	345 48.8 -00.1	N 20 37.7 +00.5	310 15.9 -00.9	N 25 03.7 +00.0	251 46.1 -28.0	N 10 52.5 -14.6	11						
12	0 48.7 +00.0	N 20 38.2 +00.4	325 15.0 -00.8	N 25 03.7 -00.1	266 18.1 -27.9	N 10 37.9 -14.7	12						
13	15 48.7 -00.1	N 20 38.6 +00.5	340 14.2 -00.8	N 25 03.6 +00.0	280 50.2 -27.8	N 10 23.2 -14.7	13						
14	30 48.6 +00.0	N 20 39.1 +00.5	355 13.4 -00.8	N 25 03.6 -00.1	295 22.4 -27.8	N 10 08.5 -14.7	14						
15	45 48.6 -00.1	N 20 39.6 +00.5	10 12.6 -00.8	N 25 03.5 +00.0	309 54.6 -27.6	N 09 53.8 -14.8	15						
16	60 48.5 +00.0	N 20 40.1 +00.4	25 11.8 -00.9	N 25 03.5 -00.1	324 27.0 -27.6	N 09 39.0 -14.8	16						
17	75 48.5 -00.1	N 20 40.5 +00.5	40 10.9 -00.8	N 25 03.4 +00.0	338 59.4 -27.5	N 09 24.2 -14.8	17						
18	90 48.4 +00.0	N 20 41.0 +00.5	55 10.1 -00.8	N 25 03.4 -00.1	353 31.9 -27.5	N 09 09.4 -14.9	18						
19	105 48.4 -00.1	N 20 41.5 +00.4	70 09.3 -00.8	N 25 03.3 -00.1	8 04.4 -27.3	N 08 54.5 -14.8	19						
20	120 48.3 -00.1	N 20 41.9 +00.5	85 08.5 -00.8	N 25 03.2 +00.0	22 37.1 -27.3	N 08 39.7 -14.9	20						
21	135 48.2 +00.0	N 20 42.4 +00.5	100 07.7 -00.9	N 25 03.2 -00.1	37 09.8 -27.2	N 08 24.8 -14.9	21						
22	150 48.2 -00.1	N 20 42.9 +00.4	115 06.8 -00.8	N 25 03.1 -00.1	51 42.6 -27.1	N 08 09.9 -14.9	22						
23	165 48.1 +00.0	N 20 43.3 +00.5	130 06.0 -00.8	N 25 03.0 +00.0	66 15.5 -27.1	N 07 55.0 -15.0	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 15'8 15'7 15'7 15'6 15'6 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'8 57'7 57'6 57'4 57'3 57'2								
	SHA 300° 300° 300° 300° 299° 299°		SHA 265° 264° 264° 264° 264° 264°		SHA 210° 208° 206° 204° 202° 200°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:19		Greenwich Culmination Time: 18:26								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	209 32.2 +00.7	N 11 51.7 +00.7	126 20.4 +02.0	N 21 58.4 -00.1	229 14.0 +02.3	N 02 28.3 +00.1	00						
01	224 32.9 +00.7	N 11 52.4 +00.6	141 22.4 +02.0	N 21 58.3 +00.0	244 16.3 +02.2	N 02 28.4 +00.0	01						
02	239 33.6 +00.7	N 11 53.0 +00.7	156 24.4 +02.0	N 21 58.3 -00.1	259 18.5 +02.3	N 02 28.4 +00.1	02						
03	254 34.3 +00.6	N 11 53.7 +00.6	171 26.4 +02.0	N 21 58.2 -00.1	274 20.8 +02.2	N 02 28.5 +00.1	03						
04	269 34.9 +00.7	N 11 54.3 +00.7	186 28.4 +02.0	N 21 58.1 -00.1	289 23.0 +02.2	N 02 28.6 +00.1	04						
05	284 35.6 +00.7	N 11 55.0 +00.7	201 30.4 +02.0	N 21 58.0 +00.0	304 25.2 +02.3	N 02 28.7 +00.1	05						
06	299 36.3 +00.7	N 11 55.7 +00.6	216 32.4 +02.0	N 21 58.0 -00.1	319 27.5 +02.2	N 02 28.8 +00.1	06						
07	314 37.0 +00.6	N 11 56.3 +00.7	231 34.4 +02.0	N 21 57.9 -00.1	334 29.7 +02.3	N 02 28.9 +00.1	07						
08	329 37.6 +00.7	N 11 57.0 +00.6	246 36.4 +02.0	N 21 57.8 +00.0	349 32.0 +02.2	N 02 29.0 +00.0	08						
09	344 38.3 +00.7	N 11 57.6 +00.7	261 38.4 +02.0	N 21 57.8 -00.1	4 34.2 +02.3	N 02 29.0 +00.1	09						
10	359 39.0 +00.6	N 11 58.3 +00.6	276 40.4 +01.9	N 21 57.7 -00.1	19 36.5 +02.2	N 02 29.1 +00.1	10						
11	14 39.6 +00.7	N 11 58.9 +00.7	291 42.3 +02.0	N 21 57.6 -00.1	34 38.7 +02.3	N 02 29.2 +00.1	11						
12	29 40.3 +00.7	N 11 59.6 +00.7	306 44.3 +02.0	N 21 57.5 +00.0	49 41.0 +02.2	N 02 29.3 +00.1	12						
13	44 41.0 +00.7	N 12 00.3 +00.6	321 46.3 +02.0	N 21 57.5 -00.1	64 43.2 +02.3	N 02 29.4 +00.1	13						
14	59 41.7 +00.6	N 12 00.9 +00.7	336 48.3 +02.0	N 21 57.4 -00.1	79 45.5 +02.2	N 02 29.5 +00.0	14						
15	74 42.3 +00.7	N 12 01.6 +00.6	351 50.3 +02.0	N 21 57.3 +00.0	94 47.7 +02.2	N 02 29.5 +00.1	15						
16	89 43.0 +00.7	N 12 02.2 +00.7	6 52.3 +02.0	N 21 57.3 -00.1	109 49.9 +02.3	N 02 29.6 +00.1	16						
17	104 43.7 +00.6	N 12 02.9 +00.6	21 54.3 +02.0	N 21 57.2 -00.1	124 52.2 +02.2	N 02 29.7 +00.1	17						
18	119 44.3 +00.7	N 12 03.5 +00.7	36 56.3 +02.0	N 21 57.1 -00.1	139 54.4 +02.3	N 02 29.8 +00.1	18						
19	134 45.0 +00.7	N 12 04.2 +00.6	51 58.3 +02.0	N 21 57.0 +00.0	154 56.7 +02.2	N 02 29.9 +00.1	19						
20	149 45.7 +00.7	N 12 04.8 +00.7	67 00.3 +02.0	N 21 57.0 -00.1	169 58.9 +02.3	N 02 30.0 +00.0	20						
21	164 46.4 +00.6	N 12 05.5 +00.7	82 02.3 +01.9	N 21 56.9 -00.1	185 01.2 +02.2	N 02 30.0 +00.1	21						
22	179 47.0 +00.7	N 12 06.2 +00.6	97 04.2 +02.0	N 21 56.8 +00.0	200 03.4 +02.3	N 02 30.1 +00.1	22						
23	194 47.7 +00.7	N 12 06.8 +00.7	112 06.2 +02.0	N 21 56.8 -00.1	215 05.7 +02.2	N 02 30.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 329° 329° 329° 328° 328° 328°		SHA 246° 246° 246° 246° 246° 246°		SHA 349° 349° 349° 349° 349° 349°								
	Greenwich Culmination Time: 10:01		Greenwich Culmination Time: 15:32		Greenwich Culmination Time: 08:41								

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 48.1 -00.1	N 20 43.8 +00.5	145 05.2 -00.8	N 25 03.0 -00.1	80 48.4 -27.0	N 07 40.0 -14.9	00										
01	195 48.0 +00.0	N 20 44.3 +00.4	160 04.4 -00.8	N 25 02.9 -00.1	95 21.4 -26.9	N 07 25.1 -15.0	01										
02	210 48.0 -00.1	N 20 44.7 +00.5	175 03.6 -00.8	N 25 02.8 +00.0	109 54.5 -26.9	N 07 10.1 -15.0	02										
03	225 47.9 -00.1	N 20 45.2 +00.5	190 02.8 -00.9	N 25 02.8 -00.1	124 27.6 -26.8	N 06 55.1 -15.0	03										
04	240 47.8 +00.0	N 20 45.7 +00.4	205 01.9 -00.8	N 25 02.7 -00.1	139 00.8 -26.7	N 06 40.1 -15.0	04										
05	255 47.8 -00.1	N 20 46.1 +00.5	220 01.1 -00.8	N 25 02.6 +00.0	153 34.1 -26.7	N 06 25.1 -15.0	05										
06	270 47.7 +00.0	N 20 46.6 +00.5	235 00.3 -00.8	N 25 02.6 -00.1	168 07.4 -26.6	N 06 10.1 -15.0	06										
07	285 47.7 -00.1	N 20 47.1 +00.4	249 59.5 -00.8	N 25 02.5 -00.1	182 40.8 -26.6	N 05 55.1 -15.1	07										
08	300 47.6 +00.0	N 20 47.5 +00.5	264 58.7 -00.9	N 25 02.4 -00.1	197 14.2 -26.5	N 05 40.0 -15.0	08										
09	315 47.6 -00.1	N 20 48.0 +00.4	279 57.8 -00.8	N 25 02.3 -00.1	211 47.7 -26.5	N 05 25.0 -15.1	09										
10	330 47.5 -00.1	N 20 48.4 +00.5	294 57.0 -00.8	N 25 02.2 +00.0	226 21.2 -26.4	N 05 09.9 -15.0	10										
11	345 47.4 +00.0	N 20 48.9 +00.5	309 56.2 -00.8	N 25 02.2 -00.1	240 54.8 -26.3	N 04 54.9 -15.1	11										
12	0 47.4 -00.1	N 20 49.4 +00.4	324 55.4 -00.8	N 25 02.1 -00.1	255 28.5 -26.3	N 04 39.8 -15.1	12										
13	15 47.3 +00.0	N 20 49.8 +00.5	339 54.6 -00.8	N 25 02.0 -00.1	270 02.2 -26.2	N 04 24.7 -15.0	13										
14	30 47.3 -00.1	N 20 50.3 +00.4	354 53.8 -00.9	N 25 01.9 -00.1	284 36.0 -26.2	N 04 09.7 -15.1	14										
15	45 47.2 -00.1	N 20 50.7 +00.5	9 52.9 -00.8	N 25 01.8 -00.1	299 09.8 -26.2	N 03 54.6 -15.1	15										
16	60 47.1 +00.0	N 20 51.2 +00.4	24 52.1 -00.8	N 25 01.7 +00.0	313 43.6 -26.1	N 03 39.5 -15.1	16										
17	75 47.1 -00.1	N 20 51.6 +00.5	39 51.3 -00.8	N 25 01.7 -00.1	328 17.5 -26.0	N 03 24.4 -15.0	17										
18	90 47.0 +00.0	N 20 52.1 +00.4	54 50.5 -00.8	N 25 01.6 -00.1	342 51.5 -26.0	N 03 09.4 -15.1	18										
19	105 47.0 -00.1	N 20 52.5 +00.5	69 49.7 -00.8	N 25 01.5 -00.1	357 25.5 -26.0	N 02 54.3 -15.1	19										
20	120 46.9 -00.1	N 20 53.0 +00.5	84 48.9 -00.8	N 25 01.4 -00.1	11 59.5 -26.0	N 02 39.2 -15.0	20										
21	135 46.8 +00.0	N 20 53.5 +00.4	99 48.1 -00.9	N 25 01.3 -00.1	26 33.5 -25.8	N 02 24.2 -15.1	21										
22	150 46.8 -00.1	N 20 53.9 +00.5	114 47.2 -00.8	N 25 01.2 -00.1	41 07.7 -25.9	N 02 09.1 -15.0	22										
23	165 46.7 +00.0	N 20 54.4 +00.4	129 46.4 -00.8	N 25 01.1 -00.1	55 41.8 -25.8	N 01 54.1 -15.1	23										
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 299° 299° 299° 299° 298° 298°	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 263° 263° 263° 263° 262° 262°	Greenwich Culmination Time: 14:20		UT 02 06 10 14 18 22	SD 15'5 15'5 15'5 15'4 15'4 15'4	HP 57'0 56'9 56'8 56'6 56'5 56'4	SHA 198° 196° 194° 192° 191° 189°	Greenwich Culmination Time: 19:10

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	209 48.4 +00.6	N 12 07.5 +00.6	127 08.2 +02.0	N 21 56.7 -00.1	230 07.9 +02.3	N 02 30.3 +00.1	00										
01	224 49.0 +00.7	N 12 08.1 +00.7	142 10.2 +02.0	N 21 56.6 -00.1	245 10.2 +02.2	N 02 30.4 +00.1	01										
02	239 49.7 +00.7	N 12 08.8 +00.6	157 12.2 +02.0	N 21 56.5 +00.0	260 12.4 +02.2	N 02 30.5 +00.0	02										
03	254 50.4 +00.7	N 12 09.4 +00.7	172 14.2 +02.0	N 21 56.5 -00.1	275 14.6 +02.3	N 02 30.5 +00.1	03										
04	269 51.1 +00.6	N 12 10.1 +00.6	187 16.2 +02.0	N 21 56.4 -00.1	290 16.9 +02.2	N 02 30.6 +00.1	04										
05	284 51.7 +00.7	N 12 10.7 +00.7	202 18.2 +02.0	N 21 56.3 +00.0	305 19.1 +02.3	N 02 30.7 +00.1	05										
06	299 52.4 +00.7	N 12 11.4 +00.6	217 20.2 +01.9	N 21 56.3 -00.1	320 21.4 +02.2	N 02 30.8 +00.1	06										
07	314 53.1 +00.6	N 12 12.0 +00.7	232 22.1 +02.0	N 21 56.2 -00.1	335 23.6 +02.3	N 02 30.9 +00.1	07										
08	329 53.7 +00.7	N 12 12.7 +00.6	247 24.1 +02.0	N 21 56.1 -00.1	350 25.9 +02.2	N 02 31.0 +00.0	08										
09	344 54.4 +00.7	N 12 13.3 +00.7	262 26.1 +02.0	N 21 56.0 +00.0	5 28.1 +02.3	N 02 31.0 +00.1	09										
10	359 55.1 +00.7	N 12 14.0 +00.6	277 28.1 +02.0	N 21 56.0 -00.1	20 30.4 +02.2	N 02 31.1 +00.1	10										
11	14 55.8 +00.6	N 12 14.6 +00.7	292 30.1 +02.0	N 21 55.9 -00.1	35 32.6 +02.3	N 02 31.2 +00.1	11										
12	29 56.4 +00.7	N 12 15.3 +00.6	307 32.1 +02.0	N 21 55.8 -00.1	50 34.9 +02.2	N 02 31.3 +00.1	12										
13	44 57.1 +00.7	N 12 15.9 +00.7	322 34.1 +02.0	N 21 55.7 +00.0	65 37.1 +02.3	N 02 31.4 +00.1	13										
14	59 57.8 +00.6	N 12 16.6 +00.6	337 36.1 +01.9	N 21 55.7 -00.1	80 39.4 +02.2	N 02 31.5 +00.0	14										
15	74 58.4 +00.7	N 12 17.2 +00.7	352 38.0 +02.0	N 21 55.6 -00.1	95 41.6 +02.3	N 02 31.5 +00.1	15										
16	89 59.1 +00.7	N 12 17.9 +00.6	7 40.0 +02.0	N 21 55.5 +00.0	110 43.9 +02.2	N 02 31.6 +00.1	16										
17	104 59.8 +00.7	N 12 18.5 +00.7	22 42.0 +02.0	N 21 55.5 -00.1	125 46.1 +02.3	N 02 31.7 +00.1	17										
18	120 00.5 +00.6	N 12 19.2 +00.6	37 44.0 +02.0	N 21 55.4 -00.1	140 48.4 +02.2	N 02 31.8 +00.1	18										
19	135 01.1 +00.7	N 12 19.8 +00.7	52 46.0 +02.0	N 21 55.3 -00.1	155 50.6 +02.3	N 02 31.9 +00.1	19										
20	150 01.8 +00.7	N 12 20.5 +00.6	67 48.0 +02.0	N 21 55.2 +00.0	170 52.9 +02.2	N 02 32.0 +00.0	20										
21	165 02.5 +00.6	N 12 21.1 +00.7	82 50.0 +02.0	N 21 55.2 -00.1	185 55.1 +02.3	N 02 32.0 +00.1	21										
22	180 03.1 +00.7	N 12 21.8 +00.6	97 52.0 +01.9	N 21 55.1 -00.1	200 57.4 +02.2	N 02 32.1 +00.1	22										
23	195 03.8 +00.7	N 12 22.4 +00.7	112 53.9 +02.0	N 21 55.0 -00.1	215 59.6 +02.2	N 02 32.2 +00.1	23										
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 328° 328° 328° 328° 328° 328°	Greenwich Culmination Time: 10:00		UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 246° 245° 245° 245° 245° 245°	Greenwich Culmination Time: 15:29		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 349° 348° 348° 348° 348° 348°	Greenwich Culmination Time: 08:38

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 46.7 -00.1	N 20 54.8 +00.5	144 45.6 -00.8	N 25 01.0 -00.1	70 16.0 -25.8	N 01 39.0 -15.0	00						
01	195 46.6 -00.1	N 20 55.3 +00.4	159 44.8 -00.8	N 25 00.9 -00.1	84 50.2 -25.8	N 01 24.0 -15.0	01						
02	210 46.5 +00.0	N 20 55.7 +00.5	174 44.0 -00.8	N 25 00.8 -00.1	99 24.4 -25.7	N 01 09.0 -15.0	02						
03	225 46.5 -00.1	N 20 56.2 +00.4	189 43.2 -00.8	N 25 00.7 -00.1	113 58.7 -25.7	N 00 54.0 -15.0	03						
04	240 46.4 +00.0	N 20 56.6 +00.5	204 42.4 -00.9	N 25 00.6 -00.1	128 33.0 -25.6	N 00 39.0 -15.0	04						
05	255 46.4 -00.1	N 20 57.1 +00.4	219 41.5 -00.8	N 25 00.5 -00.1	143 07.4 -25.6	N 00 24.0 -15.0	05						
06	270 46.3 -00.1	N 20 57.5 +00.5	234 40.7 -00.8	N 25 00.4 -00.1	157 41.8 -25.7	N 00 09.0 -14.9	06						
07	285 46.2 +00.0	N 20 58.0 +00.4	249 39.9 -00.8	N 25 00.3 -00.1	172 16.1 -25.5	S 00 05.9 +15.0	07						
08	300 46.2 -00.1	N 20 58.4 +00.4	264 39.1 -00.8	N 25 00.2 -00.1	186 50.6 -25.6	S 00 20.9 +14.9	08						
09	315 46.1 -00.1	N 20 58.8 +00.5	279 38.3 -00.8	N 25 00.1 -00.1	201 25.0 -25.5	S 00 35.8 +14.9	09						
10	330 46.0 +00.0	N 20 59.3 +00.4	294 37.5 -00.8	N 24 60.0 -00.1	215 59.5 -25.5	S 00 50.7 +14.9	10						
11	345 46.0 -00.1	N 20 59.7 +00.5	309 36.7 -00.8	N 24 59.9 -00.1	230 34.0 -25.5	S 01 05.6 +14.9	11						
12	0 45.9 -00.1	N 21 00.2 +00.4	324 35.9 -00.8	N 24 59.8 -00.1	245 08.5 -25.5	S 01 20.5 +14.9	12						
13	15 45.8 +00.0	N 21 00.6 +00.5	339 35.1 -00.9	N 24 59.7 -00.2	259 43.0 -25.4	S 01 35.4 +14.8	13						
14	30 45.8 -00.1	N 21 01.1 +00.4	354 34.2 -00.8	N 24 59.5 -00.1	274 17.6 -25.4	S 01 50.2 +14.8	14						
15	45 45.7 +00.0	N 21 01.5 +00.4	9 33.4 -00.8	N 24 59.4 -00.1	288 52.2 -25.5	S 02 05.0 +14.8	15						
16	60 45.7 -00.1	N 21 01.9 +00.5	24 32.6 -00.8	N 24 59.3 -00.1	303 26.7 -25.4	S 02 19.8 +14.8	16						
17	75 45.6 -00.1	N 21 02.4 +00.4	39 31.8 -00.8	N 24 59.2 -00.1	318 01.3 -25.3	S 02 34.6 +14.8	17						
18	90 45.5 +00.0	N 21 02.8 +00.5	54 31.0 -00.8	N 24 59.1 -00.1	332 36.0 -25.4	S 02 49.4 +14.7	18						
19	105 45.5 -00.1	N 21 03.3 +00.4	69 30.2 -00.8	N 24 59.0 -00.2	347 10.6 -25.4	S 03 04.1 +14.7	19						
20	120 45.4 -00.1	N 21 03.7 +00.4	84 29.4 -00.8	N 24 58.8 -00.1	1 45.2 -25.3	S 03 18.8 +14.7	20						
21	135 45.3 +00.0	N 21 04.1 +00.5	99 28.6 -00.8	N 24 58.7 -00.1	16 19.9 -25.4	S 03 33.5 +14.6	21						
22	150 45.3 -00.1	N 21 04.6 +00.4	114 27.8 -00.8	N 24 58.6 -00.1	30 54.5 -25.3	S 03 48.1 +14.7	22						
23	165 45.2 -00.1	N 21 05.0 +00.5	129 27.0 -00.9	N 24 58.5 -00.2	45 29.2 -25.4	S 04 02.8 +14.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'3 56'2 56'1 56'0 55'8 55'7								
	SHA 298° 298° 298° 298° 297° 297°		SHA 262° 262° 262° 261° 261° 261°		SHA 187° 185° 183° 181° 179° 177°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 14:21		Greenwich Culmination Time: 19:52								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	210 04.5 +00.6	N 12 23.1 +00.6	127 55.9 +02.0	N 21 54.9 +00.0	231 01.8 +02.3	N 02 32.3 +00.1	00						
01	225 05.1 +00.7	N 12 23.7 +00.7	142 57.9 +02.0	N 21 54.9 -00.1	246 04.1 +02.2	N 02 32.4 +00.0	01						
02	240 05.8 +00.7	N 12 24.4 +00.6	157 59.9 +02.0	N 21 54.8 -00.1	261 06.3 +02.3	N 02 32.4 +00.1	02						
03	255 06.5 +00.7	N 12 25.0 +00.7	173 01.9 +02.0	N 21 54.7 +00.0	276 08.6 +02.2	N 02 32.5 +00.1	03						
04	270 07.2 +00.6	N 12 25.7 +00.6	188 03.9 +02.0	N 21 54.7 -00.1	291 10.8 +02.3	N 02 32.6 +00.1	04						
05	285 07.8 +00.7	N 12 26.3 +00.7	203 05.9 +01.9	N 21 54.6 -00.1	306 13.1 +02.2	N 02 32.7 +00.1	05						
06	300 08.5 +00.7	N 12 27.0 +00.6	218 07.8 +02.0	N 21 54.5 -00.1	321 15.3 +02.3	N 02 32.8 +00.1	06						
07	315 09.2 +00.6	N 12 27.6 +00.7	233 09.8 +02.0	N 21 54.4 +00.0	336 17.6 +02.2	N 02 32.9 +00.0	07						
08	330 09.8 +00.7	N 12 28.3 +00.6	248 11.8 +02.0	N 21 54.4 -00.1	351 19.8 +02.3	N 02 32.9 +00.1	08						
09	345 10.5 +00.7	N 12 28.9 +00.7	263 13.8 +02.0	N 21 54.3 -00.1	6 22.1 +02.2	N 02 33.0 +00.1	09						
10	0 11.2 +00.6	N 12 29.6 +00.6	278 15.8 +02.0	N 21 54.2 -00.1	21 24.3 +02.3	N 02 33.1 +00.1	10						
11	15 11.8 +00.7	N 12 30.2 +00.6	293 17.8 +01.9	N 21 54.1 +00.0	36 26.6 +02.2	N 02 33.2 +00.1	11						
12	30 12.5 +00.7	N 12 30.8 +00.7	308 19.7 +02.0	N 21 54.1 -00.1	51 28.8 +02.3	N 02 33.3 +00.0	12						
13	45 13.2 +00.6	N 12 31.5 +00.6	323 21.7 +02.0	N 21 54.0 -00.1	66 31.1 +02.2	N 02 33.3 +00.1	13						
14	60 13.8 +00.7	N 12 32.1 +00.7	338 23.7 +02.0	N 21 53.9 +00.0	81 33.3 +02.3	N 02 33.4 +00.1	14						
15	75 14.5 +00.7	N 12 32.8 +00.6	353 25.7 +02.0	N 21 53.9 -00.1	96 35.6 +02.2	N 02 33.5 +00.1	15						
16	90 15.2 +00.7	N 12 33.4 +00.7	8 27.7 +02.0	N 21 53.8 -00.1	111 37.8 +02.3	N 02 33.6 +00.1	16						
17	105 15.9 +00.6	N 12 34.1 +00.6	23 29.7 +01.9	N 21 53.7 -00.1	126 40.1 +02.2	N 02 33.7 +00.1	17						
18	120 16.5 +00.7	N 12 34.7 +00.7	38 31.6 +02.0	N 21 53.6 +00.0	141 42.3 +02.3	N 02 33.8 +00.0	18						
19	135 17.2 +00.7	N 12 35.4 +00.6	53 33.6 +02.0	N 21 53.6 -00.1	156 44.6 +02.2	N 02 33.8 +00.1	19						
20	150 17.9 +00.6	N 12 36.0 +00.6	68 35.6 +02.0	N 21 53.5 -00.1	171 46.8 +02.3	N 02 33.9 +00.1	20						
21	165 18.5 +00.7	N 12 36.6 +00.7	83 37.6 +02.0	N 21 53.4 -00.1	186 49.1 +02.2	N 02 34.0 +00.1	21						
22	180 19.2 +00.7	N 12 37.3 +00.6	98 39.6 +02.0	N 21 53.3 +00.0	201 51.3 +02.3	N 02 34.1 +00.1	22						
23	195 19.9 +00.6	N 12 37.9 +00.7	113 41.6 +01.9	N 21 53.3 -00.1	216 53.6 +02.2	N 02 34.2 +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 327° 327° 327° 327° 327° 327°		SHA 245° 245° 245° 245° 245° 245°		SHA 348° 348° 348° 348° 348° 348°								
	Greenwich Culmination Time: 09:59		Greenwich Culmination Time: 15:26		Greenwich Culmination Time: 08:34								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 45.1 +00.0	N 21 05.5 +00.4	144 26.1 -00.8	N 24 58.3 -00.1	60 03.8 -25.3	S 04 17.4 +14.5	00						
01	195 45.1 -00.1	N 21 05.9 +00.4	159 25.3 -00.8	N 24 58.2 -00.1	74 38.5 -25.3	S 04 31.9 +14.6	01						
02	210 45.0 -00.1	N 21 06.3 +00.5	174 24.5 -00.8	N 24 58.1 -00.1	89 13.2 -25.3	S 04 46.5 +14.5	02						
03	225 44.9 +00.0	N 21 06.8 +00.4	189 23.7 -00.8	N 24 58.0 -00.2	103 47.9 -25.4	S 05 01.0 +14.5	03						
04	240 44.9 -00.1	N 21 07.2 +00.4	204 22.9 -00.8	N 24 57.8 -00.1	118 22.5 -25.3	S 05 15.5 +14.4	04						
05	255 44.8 -00.1	N 21 07.6 +00.5	219 22.1 -00.8	N 24 57.7 -00.1	132 57.2 -25.3	S 05 29.9 +14.4	05						
06	270 44.7 +00.0	N 21 08.1 +00.4	234 21.3 -00.8	N 24 57.6 -00.2	147 31.9 -25.3	S 05 44.3 +14.4	06						
07	285 44.7 -00.1	N 21 08.5 +00.4	249 20.5 -00.8	N 24 57.4 -00.1	162 06.6 -25.3	S 05 58.7 +14.3	07						
08	300 44.6 -00.1	N 21 08.9 +00.5	264 19.7 -00.8	N 24 57.3 -00.1	176 41.3 -25.4	S 06 13.0 +14.4	08						
09	315 44.5 +00.0	N 21 09.4 +00.4	279 18.9 -00.8	N 24 57.2 -00.2	191 15.9 -25.3	S 06 27.4 +14.2	09						
10	330 44.5 -00.1	N 21 09.8 +00.4	294 18.1 -00.8	N 24 57.0 -00.1	205 50.6 -25.3	S 06 41.6 +14.3	10						
11	345 44.4 -00.1	N 21 10.2 +00.4	309 17.3 -00.8	N 24 56.9 -00.1	220 25.3 -25.4	S 06 55.9 +14.2	11						
12	0 44.3 -00.1	N 21 10.6 +00.5	324 16.5 -00.8	N 24 56.8 -00.2	234 59.9 -25.3	S 07 10.1 +14.1	12						
13	15 44.2 +00.0	N 21 11.1 +00.4	339 15.7 -00.8	N 24 56.6 -00.1	249 34.6 -25.4	S 07 24.2 +14.1	13						
14	30 44.2 -00.1	N 21 11.5 +00.4	354 14.9 -00.8	N 24 56.5 -00.2	264 09.2 -25.4	S 07 38.3 +14.1	14						
15	45 44.1 -00.1	N 21 11.9 +00.5	9 14.1 -00.8	N 24 56.3 -00.1	278 43.8 -25.4	S 07 52.4 +14.1	15						
16	60 44.0 +00.0	N 21 12.4 +00.4	24 13.3 -00.9	N 24 56.2 -00.2	293 18.4 -25.4	S 08 06.5 +14.0	16						
17	75 44.0 -00.1	N 21 12.8 +00.4	39 12.4 -00.8	N 24 56.0 -00.1	307 53.0 -25.4	S 08 20.5 +13.9	17						
18	90 43.9 -00.1	N 21 13.2 +00.4	54 11.6 -00.8	N 24 55.9 -00.2	322 27.6 -25.4	S 08 34.4 +13.9	18						
19	105 43.8 +00.0	N 21 13.6 +00.4	69 10.8 -00.8	N 24 55.7 -00.1	337 02.2 -25.5	S 08 48.3 +13.9	19						
20	120 43.8 -00.1	N 21 14.0 +00.5	84 10.0 -00.8	N 24 55.6 -00.2	351 36.7 -25.4	S 09 02.2 +13.8	20						
21	135 43.7 -00.1	N 21 14.5 +00.4	99 09.2 -00.8	N 24 55.4 -00.1	6 11.3 -25.5	S 09 16.0 +13.8	21						
22	150 43.6 -00.1	N 21 14.9 +00.4	114 08.4 -00.8	N 24 55.3 -00.2	20 45.8 -25.5	S 09 29.8 +13.7	22						
23	165 43.5 +00.0	N 21 15.3 +00.4	129 07.6 -00.8	N 24 55.1 -00.1	35 20.3 -25.5	S 09 43.5 +13.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'1 15'1 15'1 15'1 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'6 55'6 55'5 55'4 55'3 55'2								
	SHA 297° 297° 297° 297° 296° 296°		SHA 261° 261° 260° 260° 260° 260°		SHA 176° 174° 172° 170° 168° 166°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 14:23		Greenwich Culmination Time: 20:34								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	210 20.5 +00.7	N 12 38.6 +00.6	128 43.5 +02.0	N 21 53.2 -00.1	231 55.8 +02.3	N 02 34.2 +00.1	00						
01	225 21.2 +00.7	N 12 39.2 +00.7	143 45.5 +02.0	N 21 53.1 -00.1	246 58.1 +02.2	N 02 34.3 +00.1	01						
02	240 21.9 +00.6	N 12 39.9 +00.6	158 47.5 +02.0	N 21 53.0 +00.0	262 00.3 +02.3	N 02 34.4 +00.1	02						
03	255 22.5 +00.7	N 12 40.5 +00.6	173 49.5 +02.0	N 21 53.0 -00.1	277 02.6 +02.3	N 02 34.5 +00.1	03						
04	270 23.2 +00.7	N 12 41.1 +00.7	188 51.5 +02.0	N 21 52.9 -00.1	292 04.9 +02.2	N 02 34.6 +00.0	04						
05	285 23.9 +00.6	N 12 41.8 +00.6	203 53.5 +01.9	N 21 52.8 -00.1	307 07.1 +02.3	N 02 34.6 +00.1	05						
06	300 24.5 +00.7	N 12 42.4 +00.7	218 55.4 +02.0	N 21 52.7 +00.0	322 09.4 +02.2	N 02 34.7 +00.1	06						
07	315 25.2 +00.7	N 12 43.1 +00.6	233 57.4 +02.0	N 21 52.7 -00.1	337 11.6 +02.3	N 02 34.8 +00.1	07						
08	330 25.9 +00.6	N 12 43.7 +00.6	248 59.4 +02.0	N 21 52.6 -00.1	352 13.9 +02.2	N 02 34.9 +00.1	08						
09	345 26.5 +00.7	N 12 44.3 +00.7	264 01.4 +02.0	N 21 52.5 -00.1	7 16.1 +02.3	N 02 35.0 +00.1	09						
10	0 27.2 +00.7	N 12 45.0 +00.6	279 03.4 +01.9	N 21 52.4 +00.0	22 18.4 +02.2	N 02 35.1 +00.0	10						
11	15 27.9 +00.7	N 12 45.6 +00.7	294 05.3 +02.0	N 21 52.4 -00.1	37 20.6 +02.3	N 02 35.1 +00.1	11						
12	30 28.6 +00.6	N 12 46.3 +00.6	309 07.3 +02.0	N 21 52.3 -00.1	52 22.9 +02.2	N 02 35.2 +00.1	12						
13	45 29.2 +00.7	N 12 46.9 +00.6	324 09.3 +02.0	N 21 52.2 -00.1	67 25.1 +02.3	N 02 35.3 +00.1	13						
14	60 29.9 +00.7	N 12 47.5 +00.7	339 11.3 +02.0	N 21 52.1 +00.0	82 27.4 +02.2	N 02 35.4 +00.1	14						
15	75 30.6 +00.6	N 12 48.2 +00.6	354 13.3 +01.9	N 21 52.1 -00.1	97 29.6 +02.3	N 02 35.5 +00.0	15						
16	90 31.2 +00.7	N 12 48.8 +00.7	9 15.2 +02.0	N 21 52.0 -00.1	112 31.9 +02.2	N 02 35.5 +00.1	16						
17	105 31.9 +00.7	N 12 49.5 +00.6	24 17.2 +02.0	N 21 51.9 -00.1	127 34.1 +02.3	N 02 35.6 +00.1	17						
18	120 32.6 +00.6	N 12 50.1 +00.6	39 19.2 +02.0	N 21 51.8 +00.0	142 36.4 +02.2	N 02 35.7 +00.1	18						
19	135 33.2 +00.7	N 12 50.7 +00.7	54 21.2 +02.0	N 21 51.8 -00.1	157 38.6 +02.3	N 02 35.8 +00.1	19						
20	150 33.9 +00.7	N 12 51.4 +00.6	69 23.2 +01.9	N 21 51.7 -00.1	172 40.9 +02.2	N 02 35.9 +00.0	20						
21	165 34.6 +00.6	N 12 52.0 +00.7	84 25.1 +02.0	N 21 51.6 -00.1	187 43.1 +02.3	N 02 35.9 +00.1	21						
22	180 35.2 +00.7	N 12 52.7 +00.6	99 27.1 +02.0	N 21 51.5 +00.0	202 45.4 +02.2	N 02 36.0 +00.1	22						
23	195 35.9 +00.7	N 12 53.3 +00.6	114 29.1 +02.0	N 21 51.5 -00.1	217 47.6 +02.3	N 02 36.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 327° 327° 326° 326° 326° 326°		SHA 245° 245° 245° 245° 245° 245°		SHA 348° 348° 348° 348° 348° 348°								
	Greenwich Culmination Time: 09:58		Greenwich Culmination Time: 15:23		Greenwich Culmination Time: 08:30								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 37%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 43.5 -00.1	N 21 15.7 +00.5	144 06.8 -00.8	N 24 55.0 -00.2	49 54.8 -25.6	S 09 57.2 +13.6	00						
01	195 43.4 -00.1	N 21 16.2 +00.4	159 06.0 -00.8	N 24 54.8 -00.1	64 29.2 -25.5	S 10 10.8 +13.6	01						
02	210 43.3 +00.0	N 21 16.6 +00.4	174 05.2 -00.8	N 24 54.7 -00.2	79 03.7 -25.6	S 10 24.4 +13.6	02						
03	225 43.3 -00.1	N 21 17.0 +00.4	189 04.4 -00.8	N 24 54.5 -00.2	93 38.1 -25.6	S 10 38.0 +13.4	03						
04	240 43.2 -00.1	N 21 17.4 +00.4	204 03.6 -00.8	N 24 54.3 -00.1	108 12.5 -25.6	S 10 51.4 +13.5	04						
05	255 43.1 -00.1	N 21 17.8 +00.4	219 02.8 -00.8	N 24 54.2 -00.2	122 46.9 -25.7	S 11 04.9 +13.4	05						
06	270 43.0 +00.0	N 21 18.2 +00.5	234 02.0 -00.8	N 24 54.0 -00.1	137 21.2 -25.7	S 11 18.3 +13.3	06						
07	285 43.0 -00.1	N 21 18.7 +00.4	249 01.2 -00.8	N 24 53.9 -00.2	151 55.5 -25.7	S 11 31.6 +13.3	07						
08	300 42.9 -00.1	N 21 19.1 +00.4	264 00.4 -00.8	N 24 53.7 -00.2	166 29.8 -25.7	S 11 44.9 +13.2	08						
09	315 42.8 +00.0	N 21 19.5 +00.4	278 59.6 -00.8	N 24 53.5 -00.1	181 04.1 -25.8	S 11 58.1 +13.2	09						
10	330 42.8 -00.1	N 21 19.9 +00.4	293 58.8 -00.8	N 24 53.4 -00.2	195 38.3 -25.8	S 12 11.3 +13.1	10						
11	345 42.7 -00.1	N 21 20.3 +00.4	308 58.0 -00.8	N 24 53.2 -00.2	210 12.5 -25.8	S 12 24.4 +13.0	11						
12	0 42.6 -00.1	N 21 20.7 +00.5	323 57.2 -00.8	N 24 53.0 -00.1	224 46.7 -25.9	S 12 37.4 +13.0	12						
13	15 42.5 +00.0	N 21 21.2 +00.4	338 56.4 -00.8	N 24 52.9 -00.2	239 20.8 -25.9	S 12 50.4 +13.0	13						
14	30 42.5 -00.1	N 21 21.6 +00.4	353 55.6 -00.8	N 24 52.7 -00.2	253 54.9 -25.9	S 13 03.4 +12.8	14						
15	45 42.4 -00.1	N 21 22.0 +00.4	8 54.8 -00.8	N 24 52.5 -00.2	268 29.0 -26.0	S 13 16.2 +12.9	15						
16	60 42.3 -00.1	N 21 22.4 +00.4	23 54.0 -00.8	N 24 52.3 -00.1	283 03.0 -26.0	S 13 29.1 +12.7	16						
17	75 42.2 +00.0	N 21 22.8 +00.4	38 53.2 -00.8	N 24 52.2 -00.2	297 37.0 -26.0	S 13 41.8 +12.7	17						
18	90 42.2 -00.1	N 21 23.2 +00.4	53 52.4 -00.8	N 24 52.0 -00.2	312 11.0 -26.1	S 13 54.5 +12.7	18						
19	105 42.1 -00.1	N 21 23.6 +00.4	68 51.6 -00.8	N 24 51.8 -00.2	326 44.9 -26.1	S 14 07.2 +12.5	19						
20	120 42.0 -00.1	N 21 24.0 +00.4	83 50.8 -00.8	N 24 51.6 -00.1	341 18.8 -26.1	S 14 19.7 +12.5	20						
21	135 41.9 +00.0	N 21 24.4 +00.4	98 50.0 -00.7	N 24 51.5 -00.2	355 52.7 -26.2	S 14 32.2 +12.5	21						
22	150 41.9 -00.1	N 21 24.8 +00.4	113 49.3 -00.8	N 24 51.3 -00.2	10 26.5 -26.3	S 14 44.7 +12.4	22						
23	165 41.8 -00.1	N 21 25.2 +00.4	128 48.5 -00.8	N 24 51.1 -00.2	25 00.2 -26.2	S 14 57.1 +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 15'8 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 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'1 55'0 55'0 54'9 54'8 54'8								
	SHA 296° 296° 296° 296° 295° 295°		SHA 259° 259° 259° 259° 259° 258°		SHA 164° 163° 161° 159° 157° 155°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 14:24		Greenwich Culmination Time: 21:16								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	210 36.6 +00.6	N 12 53.9 +00.7	129 31.1 +02.0	N 21 51.4 -00.1	232 49.9 +02.3	N 02 36.2 +00.1	00						
01	225 37.2 +00.7	N 12 54.6 +00.6	144 33.1 +01.9	N 21 51.3 -00.1	247 52.2 +02.2	N 02 36.3 +00.0	01						
02	240 37.9 +00.7	N 12 55.2 +00.6	159 35.0 +02.0	N 21 51.2 +00.0	262 54.4 +02.3	N 02 36.3 +00.1	02						
03	255 38.6 +00.6	N 12 55.8 +00.7	174 37.0 +02.0	N 21 51.2 -00.1	277 56.7 +02.2	N 02 36.4 +00.1	03						
04	270 39.2 +00.7	N 12 56.5 +00.6	189 39.0 +02.0	N 21 51.1 -00.1	292 58.9 +02.3	N 02 36.5 +00.1	04						
05	285 39.9 +00.7	N 12 57.1 +00.6	204 41.0 +02.0	N 21 51.0 -00.1	308 01.2 +02.2	N 02 36.6 +00.1	05						
06	300 40.6 +00.6	N 12 57.7 +00.7	219 43.0 +01.9	N 21 50.9 +00.0	323 03.4 +02.3	N 02 36.7 +00.0	06						
07	315 41.2 +00.7	N 12 58.4 +00.6	234 44.9 +02.0	N 21 50.9 -00.1	338 05.7 +02.2	N 02 36.7 +00.1	07						
08	330 41.9 +00.7	N 12 59.0 +00.7	249 46.9 +02.0	N 21 50.8 -00.1	353 07.9 +02.3	N 02 36.8 +00.1	08						
09	345 42.6 +00.6	N 12 59.7 +00.6	264 48.9 +02.0	N 21 50.7 -00.1	8 10.2 +02.2	N 02 36.9 +00.1	09						
10	0 43.2 +00.7	N 13 00.3 +00.6	279 50.9 +01.9	N 21 50.6 +00.0	23 12.4 +02.3	N 02 37.0 +00.1	10						
11	15 43.9 +00.7	N 13 00.9 +00.7	294 52.8 +02.0	N 21 50.6 -00.1	38 14.7 +02.3	N 02 37.1 +00.0	11						
12	30 44.6 +00.6	N 13 01.6 +00.6	309 54.8 +02.0	N 21 50.5 -00.1	53 17.0 +02.2	N 02 37.1 +00.1	12						
13	45 45.2 +00.7	N 13 02.2 +00.6	324 56.8 +02.0	N 21 50.4 -00.1	68 19.2 +02.3	N 02 37.2 +00.1	13						
14	60 45.9 +00.7	N 13 02.8 +00.7	339 58.8 +02.0	N 21 50.3 +00.0	83 21.5 +02.2	N 02 37.3 +00.1	14						
15	75 46.6 +00.6	N 13 03.5 +00.6	355 00.8 +01.9	N 21 50.3 -00.1	98 23.7 +02.3	N 02 37.4 +00.0	15						
16	90 47.2 +00.7	N 13 04.1 +00.6	10 02.7 +02.0	N 21 50.2 -00.1	113 26.0 +02.2	N 02 37.4 +00.1	16						
17	105 47.9 +00.7	N 13 04.7 +00.7	25 04.7 +02.0	N 21 50.1 -00.1	128 28.2 +02.3	N 02 37.5 +00.1	17						
18	120 48.6 +00.6	N 13 05.4 +00.6	40 06.7 +02.0	N 21 50.0 +00.0	143 30.5 +02.2	N 02 37.6 +00.1	18						
19	135 49.2 +00.7	N 13 06.0 +00.6	55 08.7 +01.9	N 21 50.0 -00.1	158 32.7 +02.3	N 02 37.7 +00.1	19						
20	150 49.9 +00.7	N 13 06.6 +00.7	70 10.6 +02.0	N 21 49.9 -00.1	173 35.0 +02.2	N 02 37.8 +00.0	20						
21	165 50.6 +00.6	N 13 07.3 +00.6	85 12.6 +02.0	N 21 49.8 -00.1	188 37.2 +02.3	N 02 37.8 +00.1	21						
22	180 51.2 +00.7	N 13 07.9 +00.6	100 14.6 +02.0	N 21 49.7 +00.0	203 39.5 +02.3	N 02 37.9 +00.1	22						
23	195 51.9 +00.6	N 13 08.5 +00.7	115 16.6 +01.9	N 21 49.7 -00.1	218 41.8 +02.2	N 02 38.0 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 326° 326° 326° 326° 326° 325°		SHA 245° 245° 245° 245° 245° 245°		SHA 348° 348° 348° 348° 348° 348°								
	Greenwich Culmination Time: 09:57		Greenwich Culmination Time: 15:19		Greenwich Culmination Time: 08:27								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	41.7 -00.1	N 21 25.6 +00.5		143	47.7 -00.8	N 24 50.9 -00.2		39	34.0 -26.3	S 15 09.4 +12.2		00
01	195	41.6 +00.0	N 21 26.1 +00.4		158	46.9 -00.8	N 24 50.7 -00.2		54	07.7 -26.4	S 15 21.6 +12.2		01
02	210	41.6 -00.1	N 21 26.5 +00.4		173	46.1 -00.8	N 24 50.5 -00.2		68	41.3 -26.4	S 15 33.8 +12.1		02
03	225	41.5 -00.1	N 21 26.9 +00.4		188	45.3 -00.8	N 24 50.3 -00.1		83	14.9 -26.4	S 15 45.9 +12.0		03
04	240	41.4 -00.1	N 21 27.3 +00.4		203	44.5 -00.8	N 24 50.2 -00.2		97	48.5 -26.5	S 15 57.9 +12.0		04
05	255	41.3 -00.1	N 21 27.7 +00.4		218	43.7 -00.8	N 24 50.0 -00.2		112	22.0 -26.5	S 16 09.9 +11.9		05
06	270	41.2 +00.0	N 21 28.1 +00.4		233	42.9 -00.8	N 24 49.8 -00.2		126	55.5 -26.6	S 16 21.8 +11.8		06
07	285	41.2 -00.1	N 21 28.5 +00.4		248	42.1 -00.8	N 24 49.6 -00.2		141	28.9 -26.6	S 16 33.6 +11.8		07
08	300	41.1 -00.1	N 21 28.9 +00.4		263	41.3 -00.8	N 24 49.4 -00.2		156	02.3 -26.7	S 16 45.4 +11.7		08
09	315	41.0 -00.1	N 21 29.3 +00.4		278	40.5 -00.8	N 24 49.2 -00.2		170	35.6 -26.7	S 16 57.1 +11.6		09
10	330	40.9 +00.0	N 21 29.7 +00.4		293	39.7 -00.8	N 24 49.0 -00.2		185	08.9 -26.7	S 17 08.7 +11.5		10
11	345	40.9 -00.1	N 21 30.1 +00.4		308	38.9 -00.8	N 24 48.8 -00.2		199	42.2 -26.8	S 17 20.2 +11.4		11
12	0	40.8 -00.1	N 21 30.5 +00.4		323	38.1 -00.7	N 24 48.6 -00.2		214	15.4 -26.9	S 17 31.6 +11.4		12
13	15	40.7 -00.1	N 21 30.9 +00.4		338	37.4 -00.8	N 24 48.4 -00.2		228	48.5 -26.9	S 17 43.0 +11.3		13
14	30	40.6 -00.1	N 21 31.3 +00.4		353	36.6 -00.8	N 24 48.2 -00.2		243	21.6 -26.9	S 17 54.3 +11.2		14
15	45	40.5 +00.0	N 21 31.7 +00.4		8	35.8 -00.8	N 24 48.0 -00.2		257	54.7 -27.0	S 18 05.5 +11.2		15
16	60	40.5 -00.1	N 21 32.1 +00.3		23	35.0 -00.8	N 24 47.8 -00.2		272	27.7 -27.1	S 18 16.7 +11.0		16
17	75	40.4 -00.1	N 21 32.4 +00.4		38	34.2 -00.8	N 24 47.6 -00.2		287	00.6 -27.1	S 18 27.7 +11.0		17
18	90	40.3 -00.1	N 21 32.8 +00.4		53	33.4 -00.8	N 24 47.4 -00.2		301	33.5 -27.2	S 18 38.7 +10.9		18
19	105	40.2 -00.1	N 21 33.2 +00.4		68	32.6 -00.8	N 24 47.2 -00.2		316	06.3 -27.2	S 18 49.6 +10.8		19
20	120	40.1 +00.0	N 21 33.6 +00.4		83	31.8 -00.8	N 24 47.0 -00.2		330	39.1 -27.2	S 19 00.4 +10.7		20
21	135	40.1 -00.1	N 21 34.0 +00.4		98	31.0 -00.8	N 24 46.8 -00.2		345	11.9 -27.3	S 19 11.1 +10.7		21
22	150	40.0 -00.1	N 21 34.4 +00.4		113	30.2 -00.7	N 24 46.6 -00.3		359	44.6 -27.4	S 19 21.8 +10.5		22
23	165	39.9 -00.1	N 21 34.8 +00.4		128	29.5 -00.8	N 24 46.3 -00.2		14	17.2 -27.4	S 19 32.3 +10.5		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 14'9 14'9 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'7 54'6 54'6 54'5 54'5 54'4				
	SHA 295° 295° 295° 295° 294° 294°				SHA 258° 258° 258° 257° 257° 257°				SHA 153° 151° 149° 147° 145° 143°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 14:25				Greenwich Culmination Time: 22:01				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	210	52.5 +00.7	N 13 09.2 +00.6		130	18.5 +02.0	N 21 49.6 -00.1		233	44.0 +02.3	N 02 38.1 +00.1		00
01	225	53.2 +00.7	N 13 09.8 +00.6		145	20.5 +02.0	N 21 49.5 -00.1		248	46.3 +02.2	N 02 38.2 +00.0		01
02	240	53.9 +00.6	N 13 10.4 +00.6		160	22.5 +02.0	N 21 49.4 +00.0		263	48.5 +02.3	N 02 38.2 +00.1		02
03	255	54.5 +00.7	N 13 11.0 +00.7		175	24.5 +01.9	N 21 49.4 -00.1		278	50.8 +02.2	N 02 38.3 +00.1		03
04	270	55.2 +00.7	N 13 11.7 +00.6		190	26.4 +02.0	N 21 49.3 -00.1		293	53.0 +02.3	N 02 38.4 +00.1		04
05	285	55.9 +00.6	N 13 12.3 +00.6		205	28.4 +02.0	N 21 49.2 -00.1		308	55.3 +02.3	N 02 38.5 +00.1		05
06	300	56.5 +00.7	N 13 12.9 +00.7		220	30.4 +02.0	N 21 49.1 +00.0		323	57.6 +02.2	N 02 38.6 +00.0		06
07	315	57.2 +00.7	N 13 13.6 +00.6		235	32.4 +01.9	N 21 49.1 -00.1		338	59.8 +02.3	N 02 38.6 +00.1		07
08	330	57.9 +00.6	N 13 14.2 +00.6		250	34.3 +02.0	N 21 49.0 -00.1		354	02.1 +02.2	N 02 38.7 +00.1		08
09	345	58.5 +00.7	N 13 14.8 +00.7		265	36.3 +02.0	N 21 48.9 -00.1		9	04.3 +02.3	N 02 38.8 +00.1		09
10	0	59.2 +00.7	N 13 15.5 +00.6		280	38.3 +02.0	N 21 48.8 -00.1		24	06.6 +02.2	N 02 38.9 +00.0		10
11	15	59.9 +00.6	N 13 16.1 +00.6		295	40.3 +01.9	N 21 48.7 +00.0		39	08.8 +02.3	N 02 38.9 +00.1		11
12	31	00.5 +00.7	N 13 16.7 +00.6		310	42.2 +02.0	N 21 48.7 -00.1		54	11.1 +02.3	N 02 39.0 +00.1		12
13	46	01.2 +00.7	N 13 17.3 +00.7		325	44.2 +02.0	N 21 48.6 -00.1		69	13.4 +02.2	N 02 39.1 +00.1		13
14	61	01.9 +00.6	N 13 18.0 +00.6		340	46.2 +02.0	N 21 48.5 -00.1		84	15.6 +02.3	N 02 39.2 +00.1		14
15	76	02.5 +00.7	N 13 18.6 +00.6		355	48.2 +01.9	N 21 48.4 +00.0		99	17.9 +02.2	N 02 39.3 +00.0		15
16	91	03.2 +00.7	N 13 19.2 +00.6		10	50.1 +02.0	N 21 48.4 -00.1		114	20.1 +02.3	N 02 39.3 +00.1		16
17	106	03.9 +00.6	N 13 19.8 +00.7		25	52.1 +02.0	N 21 48.3 -00.1		129	22.4 +02.2	N 02 39.4 +00.1		17
18	121	04.5 +00.7	N 13 20.5 +00.6		40	54.1 +02.0	N 21 48.2 -00.1		144	24.6 +02.3	N 02 39.5 +00.1		18
19	136	05.2 +00.6	N 13 21.1 +00.6		55	56.1 +01.9	N 21 48.1 +00.0		159	26.9 +02.3	N 02 39.6 +00.0		19
20	151	05.8 +00.7	N 13 21.7 +00.7		70	58.0 +02.0	N 21 48.1 -00.1		174	29.2 +02.2	N 02 39.6 +00.1		20
21	166	06.5 +00.7	N 13 22.4 +00.6		86	00.0 +02.0	N 21 48.0 -00.1		189	31.4 +02.3	N 02 39.7 +00.1		21
22	181	07.2 +00.6	N 13 23.0 +00.6		101	02.0 +02.0	N 21 47.9 -00.1		204	33.7 +02.2	N 02 39.8 +00.1		22
23	196	07.8 +00.7	N 13 23.6 +00.6		116	04.0 +01.9	N 21 47.8 -00.1		219	35.9 +02.3	N 02 39.9 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 325° 325° 325° 325° 325° 325°				SHA 245° 245° 245° 245° 245° 245°				SHA 348° 348° 348° 348° 348° 348°				
	Greenwich Culmination Time: 09:56				Greenwich Culmination Time: 15:16				Greenwich Culmination Time: 08:23				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 39.8 -00.1	N 21 35.2 +00.4	143 28.7 -00.8	N 24 46.1 -00.2	28 49.8 -27.5	S 19 42.8 +10.4	00						
01	195 39.7 +00.0	N 21 35.6 +00.4	158 27.9 -00.8	N 24 45.9 -00.2	43 22.3 -27.5	S 19 53.2 +10.3	01						
02	210 39.7 -00.1	N 21 36.0 +00.4	173 27.1 -00.8	N 24 45.7 -00.2	57 54.8 -27.6	S 20 03.5 +10.2	02						
03	225 39.6 -00.1	N 21 36.4 +00.3	188 26.3 -00.8	N 24 45.5 -00.2	72 27.2 -27.7	S 20 13.7 +10.1	03						
04	240 39.5 -00.1	N 21 36.7 +00.4	203 25.5 -00.8	N 24 45.3 -00.2	86 59.5 -27.7	S 20 23.8 +10.0	04						
05	255 39.4 -00.1	N 21 37.1 +00.4	218 24.7 -00.8	N 24 45.1 -00.3	101 31.8 -27.7	S 20 33.8 +10.0	05						
06	270 39.3 +00.0	N 21 37.5 +00.4	233 23.9 -00.7	N 24 44.8 -00.2	116 04.1 -27.8	S 20 43.8 +09.8	06						
07	285 39.3 -00.1	N 21 37.9 +00.4	248 23.2 -00.8	N 24 44.6 -00.2	130 36.3 -27.9	S 20 53.6 +09.8	07						
08	300 39.2 -00.1	N 21 38.3 +00.4	263 22.4 -00.8	N 24 44.4 -00.2	145 08.4 -27.9	S 21 03.4 +09.6	08						
09	315 39.1 -00.1	N 21 38.7 +00.4	278 21.6 -00.8	N 24 44.2 -00.3	159 40.5 -28.0	S 21 13.0 +09.6	09						
10	330 39.0 -00.1	N 21 39.1 +00.3	293 20.8 -00.8	N 24 43.9 -00.2	174 12.5 -28.0	S 21 22.6 +09.5	10						
11	345 38.9 -00.1	N 21 39.4 +00.4	308 20.0 -00.8	N 24 43.7 -00.2	188 44.5 -28.1	S 21 32.1 +09.4	11						
12	0 38.8 +00.0	N 21 39.8 +00.4	323 19.2 -00.7	N 24 43.5 -00.2	203 16.4 -28.1	S 21 41.5 +09.2	12						
13	15 38.8 -00.1	N 21 40.2 +00.4	338 18.5 -00.8	N 24 43.3 -00.3	217 48.3 -28.2	S 21 50.7 +09.2	13						
14	30 38.7 -00.1	N 21 40.6 +00.4	353 17.7 -00.8	N 24 43.0 -00.2	232 20.1 -28.3	S 21 59.9 +09.1	14						
15	45 38.6 -00.1	N 21 41.0 +00.3	8 16.9 -00.8	N 24 42.8 -00.2	246 51.8 -28.3	S 22 09.0 +09.0	15						
16	60 38.5 -00.1	N 21 41.3 +00.4	23 16.1 -00.8	N 24 42.6 -00.3	261 23.5 -28.4	S 22 18.0 +08.9	16						
17	75 38.4 -00.1	N 21 41.7 +00.4	38 15.3 -00.8	N 24 42.3 -00.2	275 55.1 -28.4	S 22 26.9 +08.8	17						
18	90 38.3 +00.0	N 21 42.1 +00.4	53 14.5 -00.7	N 24 42.1 -00.2	290 26.7 -28.5	S 22 35.7 +08.6	18						
19	105 38.3 -00.1	N 21 42.5 +00.4	68 13.8 -00.8	N 24 41.9 -00.3	304 58.2 -28.5	S 22 44.3 +08.6	19						
20	120 38.2 -00.1	N 21 42.9 +00.3	83 13.0 -00.8	N 24 41.6 -00.2	319 29.7 -28.6	S 22 52.9 +08.5	20						
21	135 38.1 -00.1	N 21 43.2 +00.4	98 12.2 -00.8	N 24 41.4 -00.2	334 01.1 -28.7	S 23 01.4 +08.4	21						
22	150 38.0 -00.1	N 21 43.6 +00.4	113 11.4 -00.8	N 24 41.2 -00.3	348 32.4 -28.7	S 23 09.8 +08.2	22						
23	165 37.9 -00.1	N 21 44.0 +00.4	128 10.6 -00.7	N 24 40.9 -00.2	3 03.7 -28.7	S 23 18.0 +08.2	23						
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8							
	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 54'4 54'3 54'3 54'2 54'2 54'2		HP 00'0 00'0 00'0 00'0 00'0 00'0							
	SHA 294° 294° 294° 294° 293° 293°	SHA 257° 257° 256° 256° 256° 256°	SHA 257° 257° 256° 256° 256° 256°	SHA 141° 139° 137° 135° 133° 131°		SHA 325° 324° 324° 324° 324° 324°							
	Greenwich Culmination Time: 11:57	Greenwich Culmination Time: 14:26	Greenwich Culmination Time: 14:26	Greenwich Culmination Time: 22:47		Greenwich Culmination Time: 09:54							

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	211 08.5 +00.7	N 13 24.2 +00.7	131 05.9 +02.0	N 21 47.7 +00.0	234 38.2 +02.2	N 02 40.0 +00.0	00						
01	226 09.2 +00.6	N 13 24.9 +00.6	146 07.9 +02.0	N 21 47.7 -00.1	249 40.4 +02.3	N 02 40.0 +00.1	01						
02	241 09.8 +00.7	N 13 25.5 +00.6	161 09.9 +01.9	N 21 47.6 -00.1	264 42.7 +02.3	N 02 40.1 +00.1	02						
03	256 10.5 +00.7	N 13 26.1 +00.6	176 11.8 +02.0	N 21 47.5 -00.1	279 45.0 +02.2	N 02 40.2 +00.1	03						
04	271 11.2 +00.6	N 13 26.7 +00.7	191 13.8 +02.0	N 21 47.4 +00.0	294 47.2 +02.3	N 02 40.3 +00.0	04						
05	286 11.8 +00.7	N 13 27.4 +00.6	206 15.8 +02.0	N 21 47.4 -00.1	309 49.5 +02.2	N 02 40.3 +00.1	05						
06	301 12.5 +00.6	N 13 28.0 +00.6	221 17.8 +01.9	N 21 47.3 -00.1	324 51.7 +02.3	N 02 40.4 +00.1	06						
07	316 13.1 +00.7	N 13 28.6 +00.6	236 19.7 +02.0	N 21 47.2 -00.1	339 54.0 +02.3	N 02 40.5 +00.1	07						
08	331 13.8 +00.7	N 13 29.2 +00.6	251 21.7 +02.0	N 21 47.1 -00.1	354 56.3 +02.2	N 02 40.6 +00.1	08						
09	346 14.5 +00.6	N 13 29.8 +00.7	266 23.7 +02.0	N 21 47.0 +00.0	9 58.5 +02.3	N 02 40.7 +00.0	09						
10	1 15.1 +00.7	N 13 30.5 +00.6	281 25.7 +01.9	N 21 47.0 -00.1	25 00.8 +02.2	N 02 40.7 +00.1	10						
11	16 15.8 +00.7	N 13 31.1 +00.6	296 27.6 +02.0	N 21 46.9 -00.1	40 03.0 +02.3	N 02 40.8 +00.1	11						
12	31 16.5 +00.6	N 13 31.7 +00.6	311 29.6 +02.0	N 21 46.8 -00.1	55 05.3 +02.3	N 02 40.9 +00.1	12						
13	46 17.1 +00.7	N 13 32.3 +00.7	326 31.6 +01.9	N 21 46.7 +00.0	70 07.6 +02.2	N 02 41.0 +00.0	13						
14	61 17.8 +00.7	N 13 33.0 +00.6	341 33.5 +02.0	N 21 46.7 -00.1	85 09.8 +02.3	N 02 41.0 +00.1	14						
15	76 18.5 +00.6	N 13 33.6 +00.6	356 35.5 +02.0	N 21 46.6 -00.1	100 12.1 +02.2	N 02 41.1 +00.1	15						
16	91 19.1 +00.7	N 13 34.2 +00.6	11 37.5 +02.0	N 21 46.5 -00.1	115 14.3 +02.3	N 02 41.2 +00.1	16						
17	106 19.8 +00.6	N 13 34.8 +00.6	26 39.5 +01.9	N 21 46.4 -00.1	130 16.6 +02.3	N 02 41.3 +00.0	17						
18	121 20.4 +00.7	N 13 35.4 +00.7	41 41.4 +02.0	N 21 46.3 +00.0	145 18.9 +02.2	N 02 41.3 +00.1	18						
19	136 21.1 +00.7	N 13 36.1 +00.6	56 43.4 +02.0	N 21 46.3 -00.1	160 21.1 +02.3	N 02 41.4 +00.1	19						
20	151 21.8 +00.6	N 13 36.7 +00.6	71 45.4 +01.9	N 21 46.2 -00.1	175 23.4 +02.2	N 02 41.5 +00.1	20						
21	166 22.4 +00.7	N 13 37.3 +00.6	86 47.3 +02.0	N 21 46.1 -00.1	190 25.6 +02.3	N 02 41.6 +00.1	21						
22	181 23.1 +00.7	N 13 37.9 +00.7	101 49.3 +02.0	N 21 46.0 +00.0	205 27.9 +02.3	N 02 41.7 +00.0	22						
23	196 23.8 +00.6	N 13 38.6 +00.6	116 51.3 +01.9	N 21 46.0 -00.1	220 30.2 +02.2	N 02 41.7 +00.1	23						
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT 02 06 10 14 18 22	SD 00'1 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 325° 324° 324° 324° 324° 324°	SHA 245° 245° 244° 244° 244° 244°	SHA 245° 245° 244° 244° 244° 244°	SHA 348° 348° 348° 348° 348° 348°		SHA 325° 324° 324° 324° 324° 324°							
	Greenwich Culmination Time: 09:54	Greenwich Culmination Time: 15:13	Greenwich Culmination Time: 15:13	Greenwich Culmination Time: 08:20		Greenwich Culmination Time: 09:54							

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 37.8 +00.0	N 21 44.4 +00.3	143 09.9 -00.8	N 24 40.7 -00.3	17 35.0 -28.9	S 23 26.2 +08.1	00						
01	195 37.8 -00.1	N 21 44.7 +00.4	158 09.1 -00.8	N 24 40.4 -00.2	32 06.1 -28.8	S 23 34.3 +07.9	01						
02	210 37.7 -00.1	N 21 45.1 +00.4	173 08.3 -00.8	N 24 40.2 -00.3	46 37.3 -29.0	S 23 42.2 +07.8	02						
03	225 37.6 -00.1	N 21 45.5 +00.4	188 07.5 -00.7	N 24 39.9 -00.2	61 08.3 -29.0	S 23 50.0 +07.8	03						
04	240 37.5 -00.1	N 21 45.9 +00.3	203 06.8 -00.8	N 24 39.7 -00.2	75 39.3 -29.0	S 23 57.8 +07.6	04						
05	255 37.4 -00.1	N 21 46.2 +00.4	218 06.0 -00.8	N 24 39.5 -00.3	90 10.3 -29.1	S 24 05.4 +07.5	05						
06	270 37.3 -00.1	N 21 46.6 +00.4	233 05.2 -00.8	N 24 39.2 -00.2	104 41.2 -29.2	S 24 12.9 +07.4	06						
07	285 37.2 +00.0	N 21 47.0 +00.3	248 04.4 -00.8	N 24 39.0 -00.3	119 12.0 -29.2	S 24 20.3 +07.3	07						
08	300 37.2 -00.1	N 21 47.3 +00.4	263 03.6 -00.7	N 24 38.7 -00.2	133 42.8 -29.2	S 24 27.6 +07.2	08						
09	315 37.1 -00.1	N 21 47.7 +00.4	278 02.9 -00.8	N 24 38.5 -00.3	148 13.6 -29.3	S 24 34.8 +07.1	09						
10	330 37.0 -00.1	N 21 48.1 +00.3	293 02.1 -00.8	N 24 38.2 -00.3	162 44.3 -29.4	S 24 41.9 +06.9	10						
11	345 36.9 -00.1	N 21 48.4 +00.4	308 01.3 -00.8	N 24 37.9 -00.2	177 14.9 -29.4	S 24 48.8 +06.8	11						
12	0 36.8 -00.1	N 21 48.8 +00.4	323 00.5 -00.7	N 24 37.7 -00.3	191 45.5 -29.5	S 24 55.6 +06.8	12						
13	15 36.7 -00.1	N 21 49.2 +00.3	337 59.8 -00.8	N 24 37.4 -00.2	206 16.0 -29.5	S 25 02.4 +06.6	13						
14	30 36.6 -00.1	N 21 49.5 +00.4	352 59.0 -00.8	N 24 37.2 -00.3	220 46.5 -29.6	S 25 09.0 +06.5	14						
15	45 36.5 +00.0	N 21 49.9 +00.4	7 58.2 -00.8	N 24 36.9 -00.2	235 16.9 -29.6	S 25 15.5 +06.3	15						
16	60 36.5 -00.1	N 21 50.3 +00.3	22 57.4 -00.7	N 24 36.7 -00.3	249 47.3 -29.7	S 25 21.8 +06.3	16						
17	75 36.4 -00.1	N 21 50.6 +00.4	37 56.7 -00.8	N 24 36.4 -00.3	264 17.6 -29.7	S 25 28.1 +06.1	17						
18	90 36.3 -00.1	N 21 51.0 +00.4	52 55.9 -00.8	N 24 36.1 -00.2	278 47.9 -29.8	S 25 34.2 +06.1	18						
19	105 36.2 -00.1	N 21 51.4 +00.3	67 55.1 -00.8	N 24 35.9 -00.3	293 18.1 -29.8	S 25 40.3 +05.9	19						
20	120 36.1 -00.1	N 21 51.7 +00.4	82 54.3 -00.7	N 24 35.6 -00.3	307 48.3 -29.9	S 25 46.2 +05.7	20						
21	135 36.0 -00.1	N 21 52.1 +00.3	97 53.6 -00.8	N 24 35.3 -00.2	322 18.4 -29.9	S 25 51.9 +05.7	21						
22	150 35.9 -00.1	N 21 52.4 +00.4	112 52.8 -00.8	N 24 35.1 -00.3	336 48.5 -30.0	S 25 57.6 +05.5	22						
23	165 35.8 -00.1	N 21 52.8 +00.4	127 52.0 -00.7	N 24 34.8 -00.3	351 18.5 -30.0	S 26 03.1 +05.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'0 54'0 54'0								
	SHA 293° 293° 293° 293° 292° 292°		SHA 256° 255° 255° 255° 255° 254°		SHA 129° 127° 125° 123° 121° 118°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 14:28		Greenwich Culmination Time: 23:35								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	211 24.4 +00.7	N 13 39.2 +00.6	131 53.2 +02.0	N 21 45.9 -00.1	235 32.4 +02.3	N 02 41.8 +00.1	00						
01	226 25.1 +00.6	N 13 39.8 +00.6	146 55.2 +02.0	N 21 45.8 -00.1	250 34.7 +02.2	N 02 41.9 +00.1	01						
02	241 25.7 +00.7	N 13 40.4 +00.6	161 57.2 +02.0	N 21 45.7 -00.1	265 36.9 +02.3	N 02 42.0 +00.0	02						
03	256 26.4 +00.7	N 13 41.0 +00.6	176 59.2 +01.9	N 21 45.6 +00.0	280 39.2 +02.3	N 02 42.0 +00.1	03						
04	271 27.1 +00.6	N 13 41.6 +00.7	192 01.1 +02.0	N 21 45.6 -00.1	295 41.5 +02.2	N 02 42.1 +00.1	04						
05	286 27.7 +00.7	N 13 42.3 +00.6	207 03.1 +02.0	N 21 45.5 -00.1	310 43.7 +02.3	N 02 42.2 +00.1	05						
06	301 28.4 +00.7	N 13 42.9 +00.6	222 05.1 +01.9	N 21 45.4 -00.1	325 46.0 +02.3	N 02 42.3 +00.0	06						
07	316 29.1 +00.6	N 13 43.5 +00.6	237 07.0 +02.0	N 21 45.3 -00.1	340 48.3 +02.2	N 02 42.3 +00.1	07						
08	331 29.7 +00.7	N 13 44.1 +00.6	252 09.0 +02.0	N 21 45.2 +00.0	355 50.5 +02.3	N 02 42.4 +00.1	08						
09	346 30.4 +00.6	N 13 44.7 +00.7	267 11.0 +01.9	N 21 45.2 -00.1	10 52.8 +02.2	N 02 42.5 +00.1	09						
10	1 31.0 +00.7	N 13 45.4 +00.6	282 12.9 +02.0	N 21 45.1 -00.1	25 55.0 +02.3	N 02 42.6 +00.0	10						
11	16 31.7 +00.7	N 13 46.0 +00.6	297 14.9 +02.0	N 21 45.0 -00.1	40 57.3 +02.3	N 02 42.6 +00.1	11						
12	31 32.4 +00.6	N 13 46.6 +00.6	312 16.9 +01.9	N 21 44.9 +00.0	55 59.6 +02.2	N 02 42.7 +00.1	12						
13	46 33.0 +00.7	N 13 47.2 +00.6	327 18.8 +02.0	N 21 44.9 -00.1	71 01.8 +02.3	N 02 42.8 +00.1	13						
14	61 33.7 +00.6	N 13 47.8 +00.6	342 20.8 +02.0	N 21 44.8 -00.1	86 04.1 +02.3	N 02 42.9 +00.0	14						
15	76 34.3 +00.7	N 13 48.4 +00.7	357 22.8 +01.9	N 21 44.7 -00.1	101 06.4 +02.2	N 02 42.9 +00.1	15						
16	91 35.0 +00.7	N 13 49.1 +00.6	12 24.7 +02.0	N 21 44.6 -00.1	116 08.6 +02.3	N 02 43.0 +00.1	16						
17	106 35.7 +00.6	N 13 49.7 +00.6	27 26.7 +02.0	N 21 44.5 +00.0	131 10.9 +02.2	N 02 43.1 +00.1	17						
18	121 36.3 +00.7	N 13 50.3 +00.6	42 28.7 +01.9	N 21 44.5 -00.1	146 13.1 +02.3	N 02 43.2 +00.0	18						
19	136 37.0 +00.6	N 13 50.9 +00.6	57 30.6 +02.0	N 21 44.4 -00.1	161 15.4 +02.3	N 02 43.2 +00.1	19						
20	151 37.6 +00.7	N 13 51.5 +00.6	72 32.6 +02.0	N 21 44.3 -00.1	176 17.7 +02.2	N 02 43.3 +00.1	20						
21	166 38.3 +00.7	N 13 52.1 +00.6	87 34.6 +01.9	N 21 44.2 -00.1	191 19.9 +02.3	N 02 43.4 +00.1	21						
22	181 39.0 +00.6	N 13 52.7 +00.7	102 36.5 +02.0	N 21 44.1 +00.0	206 22.2 +02.3	N 02 43.5 +00.0	22						
23	196 39.6 +00.7	N 13 53.4 +00.6	117 38.5 +02.0	N 21 44.1 -00.1	221 24.5 +02.2	N 02 43.5 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 324° 324° 324° 323° 323° 323°		SHA 244° 244° 244° 244° 244° 244°		SHA 348° 348° 348° 348° 348° 348°								
	Greenwich Culmination Time: 09:53		Greenwich Culmination Time: 15:10		Greenwich Culmination Time: 08:16								

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 50%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 35.7 +00.0	N 21 53.2 +00.3	142 51.3 -00.8	N 24 34.5 -00.2	5 48.5 -30.0	S 26 08.5 +05.3							
01	195 35.7 -00.1	N 21 53.5 +00.4	157 50.5 -00.8	N 24 34.3 -00.3	20 18.5 -30.1	S 26 13.8 +05.2							
02	210 35.6 -00.1	N 21 53.9 +00.3	172 49.7 -00.7	N 24 34.0 -00.3	34 48.4 -30.2	S 26 19.0 +05.0							
03	225 35.5 -00.1	N 21 54.2 +00.4	187 49.0 -00.8	N 24 33.7 -00.3	49 18.2 -30.2	S 26 24.0 +05.0							
04	240 35.4 -00.1	N 21 54.6 +00.3	202 48.2 -00.8	N 24 33.4 -00.2	63 48.0 -30.2	S 26 29.0 +04.8							
05	255 35.3 -00.1	N 21 54.9 +00.4	217 47.4 -00.8	N 24 33.2 -00.3	78 17.8 -30.3	S 26 33.8 +04.6							
06	270 35.2 -00.1	N 21 55.3 +00.3	232 46.6 -00.7	N 24 32.9 -00.3	92 47.5 -30.3	S 26 38.4 +04.6							
07	285 35.1 -00.1	N 21 55.6 +00.4	247 45.9 -00.8	N 24 32.6 -00.3	107 17.2 -30.3	S 26 43.0 +04.4							
08	300 35.0 -00.1	N 21 56.0 +00.3	262 45.1 -00.8	N 24 32.3 -00.3	121 46.9 -30.4	S 26 47.4 +04.3							
09	315 34.9 -00.1	N 21 56.3 +00.4	277 44.3 -00.7	N 24 32.0 -00.2	136 16.5 -30.4	S 26 51.7 +04.1							
10	330 34.8 +00.0	N 21 56.7 +00.4	292 43.6 -00.8	N 24 31.8 -00.3	150 46.1 -30.5	S 26 55.8 +04.1							
11	345 34.8 -00.1	N 21 57.1 +00.3	307 42.8 -00.8	N 24 31.5 -00.3	165 15.6 -30.5	S 26 59.9 +03.9							
12	0 34.7 -00.1	N 21 57.4 +00.4	322 42.0 -00.7	N 24 31.2 -00.3	179 45.1 -30.5	S 27 03.8 +03.8							
13	15 34.6 -00.1	N 21 57.8 +00.3	337 41.3 -00.8	N 24 30.9 -00.3	194 14.6 -30.5	S 27 07.6 +03.6							
14	30 34.5 -00.1	N 21 58.1 +00.4	352 40.5 -00.8	N 24 30.6 -00.3	208 44.1 -30.6	S 27 11.2 +03.5							
15	45 34.4 -00.1	N 21 58.5 +00.3	7 39.7 -00.7	N 24 30.3 -00.2	223 13.5 -30.7	S 27 14.7 +03.4							
16	60 34.3 -00.1	N 21 58.8 +00.3	22 39.0 -00.8	N 24 30.1 -00.3	237 42.8 -30.6	S 27 18.1 +03.3							
17	75 34.2 -00.1	N 21 59.1 +00.4	37 38.2 -00.7	N 24 29.8 -00.3	252 12.2 -30.7	S 27 21.4 +03.1							
18	90 34.1 -00.1	N 21 59.5 +00.3	52 37.5 -00.8	N 24 29.5 -00.3	266 41.5 -30.7	S 27 24.5 +03.0							
19	105 34.0 -00.1	N 21 59.8 +00.4	67 36.7 -00.8	N 24 29.2 -00.3	281 10.8 -30.8	S 27 27.5 +02.9							
20	120 33.9 -00.1	N 22 00.2 +00.3	82 35.9 -00.7	N 24 28.9 -00.3	295 40.0 -30.7	S 27 30.4 +02.7							
21	135 33.8 -00.1	N 22 00.5 +00.4	97 35.2 -00.8	N 24 28.6 -00.3	310 09.3 -30.8	S 27 33.1 +02.6							
22	150 33.7 -00.1	N 22 00.9 +00.3	112 34.4 -00.8	N 24 28.3 -00.3	324 38.5 -30.8	S 27 35.7 +02.4							
23	165 33.6 -00.1	N 22 01.2 +00.4	127 33.6 -00.7	N 24 28.0 -00.3	339 07.7 -30.9	S 27 38.1 +02.4							
	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 292° 292° 292° 291° 291° 291° 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 254° 254° 254° 254° 253° 253° Greenwich Culmination Time: 14:29	UT 02 06 10 14 18 22 SD 14'7 14'7 14'7 14'7 14'7 14'7 HP 54'0 54'0 54'0 53'9 53'9 53'9 SHA 116° 114° 112° 110° 107° 105° Greenwich Culmination Time: -1:00										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	211 40.3 +00.7	N 13 54.0 +00.6	132 40.5 +01.9	N 21 44.0 -00.1	236 26.7 +02.3	N 02 43.6 +00.1							
01	226 41.0 +00.6	N 13 54.6 +00.6	147 42.4 +02.0	N 21 43.9 -00.1	251 29.0 +02.2	N 02 43.7 +00.1							
02	241 41.6 +00.7	N 13 55.2 +00.6	162 44.4 +02.0	N 21 43.8 -00.1	266 31.2 +02.3	N 02 43.8 +00.0							
03	256 42.3 +00.6	N 13 55.8 +00.6	177 46.4 +01.9	N 21 43.7 +00.0	281 33.5 +02.3	N 02 43.8 +00.1							
04	271 42.9 +00.7	N 13 56.4 +00.6	192 48.3 +02.0	N 21 43.7 -00.1	296 35.8 +02.2	N 02 43.9 +00.1							
05	286 43.6 +00.7	N 13 57.0 +00.6	207 50.3 +02.0	N 21 43.6 -00.1	311 38.0 +02.3	N 02 44.0 +00.1							
06	301 44.3 +00.6	N 13 57.6 +00.7	222 52.3 +01.9	N 21 43.5 -00.1	326 40.3 +02.3	N 02 44.1 +00.0							
07	316 44.9 +00.7	N 13 58.3 +00.6	237 54.2 +02.0	N 21 43.4 -00.1	341 42.6 +02.2	N 02 44.1 +00.1							
08	331 45.6 +00.6	N 13 58.9 +00.6	252 56.2 +02.0	N 21 43.3 +00.0	356 44.8 +02.3	N 02 44.2 +00.1							
09	346 46.2 +00.7	N 13 59.5 +00.6	267 58.2 +01.9	N 21 43.3 -00.1	11 47.1 +02.3	N 02 44.3 +00.1							
10	1 46.9 +00.7	N 14 00.1 +00.6	283 00.1 +02.0	N 21 43.2 -00.1	26 49.4 +02.2	N 02 44.4 +00.0							
11	16 47.6 +00.6	N 14 00.7 +00.6	298 02.1 +02.0	N 21 43.1 -00.1	41 51.6 +02.3	N 02 44.4 +00.1							
12	31 48.2 +00.7	N 14 01.3 +00.6	313 04.1 +01.9	N 21 43.0 -00.1	56 53.9 +02.3	N 02 44.5 +00.1							
13	46 48.9 +00.6	N 14 01.9 +00.6	328 06.0 +02.0	N 21 42.9 +00.0	71 56.2 +02.2	N 02 44.6 +00.1							
14	61 49.5 +00.7	N 14 02.5 +00.6	343 08.0 +02.0	N 21 42.9 -00.1	86 58.4 +02.3	N 02 44.7 +00.0							
15	76 50.2 +00.7	N 14 03.1 +00.6	358 10.0 +01.9	N 21 42.8 -00.1	102 00.7 +02.3	N 02 44.7 +00.1							
16	91 50.9 +00.6	N 14 03.7 +00.7	13 11.9 +02.0	N 21 42.7 -00.1	117 03.0 +02.2	N 02 44.8 +00.1							
17	106 51.5 +00.7	N 14 04.4 +00.6	28 13.9 +02.0	N 21 42.6 -00.1	132 05.2 +02.3	N 02 44.9 +00.1							
18	121 52.2 +00.6	N 14 05.0 +00.6	43 15.9 +01.9	N 21 42.5 +00.0	147 07.5 +02.2	N 02 45.0 +00.0							
19	136 52.8 +00.7	N 14 05.6 +00.6	58 17.8 +02.0	N 21 42.5 -00.1	162 09.7 +02.3	N 02 45.0 +00.1							
20	151 53.5 +00.6	N 14 06.2 +00.6	73 19.8 +02.0	N 21 42.4 -00.1	177 12.0 +02.3	N 02 45.1 +00.1							
21	166 54.1 +00.7	N 14 06.8 +00.6	88 21.8 +01.9	N 21 42.3 -00.1	192 14.3 +02.2	N 02 45.2 +00.1							
22	181 54.8 +00.7	N 14 07.4 +00.6	103 23.7 +02.0	N 21 42.2 -00.1	207 16.5 +02.3	N 02 45.3 +00.0							
23	196 55.5 +00.6	N 14 08.0 +00.6	118 25.7 +01.9	N 21 42.1 +00.0	222 18.8 +02.3	N 02 45.3 +00.1							
	UT 02 06 10 14 18 22 SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 323° 323° 323° 323° 323° 323° Greenwich Culmination Time: 09:52	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 244° 244° 244° 244° 244° 244° Greenwich Culmination Time: 15:07	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 348° 348° 348° 348° 348° 348° Greenwich Culmination Time: 08:12										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 53%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 33.5 +00.0	N 22	01.6 +00.3	142 32.9 -00.8	N 24	27.7 -00.3	353 36.8 -30.8	S 27	40.5 +02.2	00			
01	195 33.5 -00.1	N 22	01.9 +00.3	157 32.1 -00.7	N 24	27.4 -00.3	8 06.0 -30.9	S 27	42.7 +02.0	01			
02	210 33.4 -00.1	N 22	02.2 +00.4	172 31.4 -00.8	N 24	27.1 -00.3	22 35.1 -30.9	S 27	44.7 +02.0	02			
03	225 33.3 -00.1	N 22	02.6 +00.3	187 30.6 -00.8	N 24	26.8 -00.3	37 04.2 -30.9	S 27	46.7 +01.8	03			
04	240 33.2 -00.1	N 22	02.9 +00.4	202 29.8 -00.7	N 24	26.5 -00.3	51 33.3 -30.9	S 27	48.5 +01.6	04			
05	255 33.1 -00.1	N 22	03.3 +00.3	217 29.1 -00.8	N 24	26.2 -00.3	66 02.4 -31.0	S 27	50.1 +01.6	05			
06	270 33.0 -00.1	N 22	03.6 +00.3	232 28.3 -00.7	N 24	25.9 -00.3	80 31.4 -31.0	S 27	51.7 +01.4	06			
07	285 32.9 -00.1	N 22	03.9 +00.4	247 27.6 -00.8	N 24	25.6 -00.3	95 00.4 -30.9	S 27	53.1 +01.2	07			
08	300 32.8 -00.1	N 22	04.3 +00.3	262 26.8 -00.8	N 24	25.3 -00.3	109 29.5 -31.0	S 27	54.3 +01.1	08			
09	315 32.7 -00.1	N 22	04.6 +00.4	277 26.0 -00.7	N 24	25.0 -00.3	123 58.5 -31.0	S 27	55.4 +01.0	09			
10	330 32.6 -00.1	N 22	05.0 +00.3	292 25.3 -00.8	N 24	24.7 -00.4	138 27.5 -31.0	S 27	56.4 +00.9	10			
11	345 32.5 -00.1	N 22	05.3 +00.3	307 24.5 -00.7	N 24	24.3 -00.3	152 56.5 -31.0	S 27	57.3 +00.7	11			
12	0 32.4 -00.1	N 22	05.6 +00.4	322 23.8 -00.8	N 24	24.0 -00.3	167 25.5 -31.1	S 27	58.0 +00.6	12			
13	15 32.3 -00.1	N 22	06.0 +00.3	337 23.0 -00.7	N 24	23.7 -00.3	181 54.4 -31.0	S 27	58.6 +00.4	13			
14	30 32.2 -00.1	N 22	06.3 +00.3	352 22.3 -00.8	N 24	23.4 -00.3	196 23.4 -31.0	S 27	59.0 +00.3	14			
15	45 32.1 -00.1	N 22	06.6 +00.4	7 21.5 -00.7	N 24	23.1 -00.3	210 52.4 -31.1	S 27	59.3 +00.2	15			
16	60 32.0 -00.1	N 22	07.0 +00.3	22 20.8 -00.8	N 24	22.8 -00.3	225 21.3 -31.0	S 27	59.5 +00.1	16			
17	75 31.9 -00.1	N 22	07.3 +00.3	37 20.0 -00.8	N 24	22.5 -00.4	239 50.3 -31.0	S 27	59.6 -00.1	17			
18	90 31.8 -00.1	N 22	07.6 +00.3	52 19.2 -00.7	N 24	22.1 -00.3	254 19.3 -31.1	S 27	59.5 -00.3	18			
19	105 31.7 -00.1	N 22	07.9 +00.4	67 18.5 -00.8	N 24	21.8 -00.3	268 48.2 -31.0	S 27	59.2 -00.3	19			
20	120 31.6 -00.1	N 22	08.3 +00.3	82 17.7 -00.7	N 24	21.5 -00.3	283 17.2 -31.0	S 27	58.9 -00.5	20			
21	135 31.5 -00.1	N 22	08.6 +00.3	97 17.0 -00.8	N 24	21.2 -00.4	297 46.2 -31.1	S 27	58.4 -00.7	21			
22	150 31.4 -00.1	N 22	08.9 +00.4	112 16.2 -00.7	N 24	20.8 -00.3	312 15.1 -31.0	S 27	57.7 -00.7	22			
23	165 31.3 -00.1	N 22	09.3 +00.3	127 15.5 -00.8	N 24	20.5 -00.3	326 44.1 -31.0	S 27	57.0 -01.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 53'9 53'9 53'9 53'9 53'9 54'0						
	SHA 291° 291° 291° 290° 290° 290°			SHA 253° 253° 253° 252° 252° 252°			SHA 103° 101° 099° 096° 094° 092°						
	Greenwich Culmination Time: 11:57			Greenwich Culmination Time: 14:30			Greenwich Culmination Time: 00:26						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	211 56.1 +00.7	N 14	08.6 +00.6	133 27.6 +02.0	N 21	42.1 -00.1	237 21.1 +02.2	N 02	45.4 +00.1	00			
01	226 56.8 +00.6	N 14	09.2 +00.6	148 29.6 +02.0	N 21	42.0 -00.1	252 23.3 +02.3	N 02	45.5 +00.1	01			
02	241 57.4 +00.7	N 14	09.8 +00.6	163 31.6 +01.9	N 21	41.9 -00.1	267 25.6 +02.3	N 02	45.6 +00.0	02			
03	256 58.1 +00.7	N 14	10.4 +00.6	178 33.5 +02.0	N 21	41.8 -00.1	282 27.9 +02.2	N 02	45.6 +00.1	03			
04	271 58.8 +00.6	N 14	11.0 +00.7	193 35.5 +02.0	N 21	41.7 +00.0	297 30.1 +02.3	N 02	45.7 +00.1	04			
05	286 59.4 +00.7	N 14	11.7 +00.6	208 37.5 +01.9	N 21	41.7 -00.1	312 32.4 +02.3	N 02	45.8 +00.1	05			
06	302 00.1 +00.6	N 14	12.3 +00.6	223 39.4 +02.0	N 21	41.6 -00.1	327 34.7 +02.2	N 02	45.9 +00.0	06			
07	317 00.7 +00.7	N 14	12.9 +00.6	238 41.4 +02.0	N 21	41.5 -00.1	342 36.9 +02.3	N 02	45.9 +00.1	07			
08	332 01.4 +00.7	N 14	13.5 +00.6	253 43.4 +01.9	N 21	41.4 -00.1	357 39.2 +02.3	N 02	46.0 +00.1	08			
09	347 02.1 +00.6	N 14	14.1 +00.6	268 45.3 +02.0	N 21	41.3 +00.0	12 41.5 +02.2	N 02	46.1 +00.0	09			
10	2 02.7 +00.7	N 14	14.7 +00.6	283 47.3 +01.9	N 21	41.3 -00.1	27 43.7 +02.3	N 02	46.1 +00.1	10			
11	17 03.4 +00.6	N 14	15.3 +00.6	298 49.2 +02.0	N 21	41.2 -00.1	42 46.0 +02.3	N 02	46.2 +00.1	11			
12	32 04.0 +00.7	N 14	15.9 +00.6	313 51.2 +02.0	N 21	41.1 -00.1	57 48.3 +02.2	N 02	46.3 +00.1	12			
13	47 04.7 +00.6	N 14	16.5 +00.6	328 53.2 +01.9	N 21	41.0 -00.1	72 50.5 +02.3	N 02	46.4 +00.0	13			
14	62 05.3 +00.7	N 14	17.1 +00.6	343 55.1 +02.0	N 21	40.9 +00.0	87 52.8 +02.3	N 02	46.4 +00.1	14			
15	77 06.0 +00.7	N 14	17.7 +00.6	358 57.1 +02.0	N 21	40.9 -00.1	102 55.1 +02.2	N 02	46.5 +00.1	15			
16	92 06.7 +00.6	N 14	18.3 +00.6	13 59.1 +01.9	N 21	40.8 -00.1	117 57.3 +02.3	N 02	46.6 +00.1	16			
17	107 07.3 +00.7	N 14	18.9 +00.6	29 01.0 +02.0	N 21	40.7 -00.1	132 59.6 +02.3	N 02	46.7 +00.0	17			
18	122 08.0 +00.6	N 14	19.5 +00.6	44 03.0 +01.9	N 21	40.6 -00.1	148 01.9 +02.3	N 02	46.7 +00.1	18			
19	137 08.6 +00.7	N 14	20.1 +00.6	59 04.9 +02.0	N 21	40.5 -00.1	163 04.2 +02.2	N 02	46.8 +00.1	19			
20	152 09.3 +00.6	N 14	20.7 +00.6	74 06.9 +02.0	N 21	40.4 +00.0	178 06.4 +02.3	N 02	46.9 +00.1	20			
21	167 09.9 +00.7	N 14	21.3 +00.6	89 08.9 +01.9	N 21	40.4 -00.1	193 08.7 +02.3	N 02	47.0 +00.0	21			
22	182 10.6 +00.7	N 14	21.9 +00.6	104 10.8 +02.0	N 21	40.3 -00.1	208 11.0 +02.2	N 02	47.0 +00.1	22			
23	197 11.3 +00.6	N 14	22.5 +00.6	119 12.8 +01.9	N 21	40.2 -00.1	223 13.2 +02.3	N 02	47.1 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 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 322° 322° 322° 322° 322° 322°			SHA 244° 244° 244° 244° 244° 244°			SHA 348° 348° 348° 348° 348° 348°						
	Greenwich Culmination Time: 09:51			Greenwich Culmination Time: 15:04			Greenwich Culmination Time: 08:09						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	31.2 +00.0	N 22 09.6	+00.3	142	14.7 -00.7	N 24 20.2	-00.3	341	13.1 -31.0	S 27 56.0	-01.0	00
01	195	31.2 -00.1	N 22 09.9	+00.3	157	14.0 -00.8	N 24 19.9	-00.4	355	42.1 -31.0	S 27 55.0	-01.2	01
02	210	31.1 -00.1	N 22 10.2	+00.4	172	13.2 -00.7	N 24 19.5	-00.3	10	11.1 -31.0	S 27 53.8	-01.3	02
03	225	31.0 -00.1	N 22 10.6	+00.3	187	12.5 -00.8	N 24 19.2	-00.3	24	40.1 -31.0	S 27 52.5	-01.4	03
04	240	30.9 -00.1	N 22 10.9	+00.3	202	11.7 -00.7	N 24 18.9	-00.4	39	09.1 -31.0	S 27 51.1	-01.6	04
05	255	30.8 -00.1	N 22 11.2	+00.3	217	11.0 -00.8	N 24 18.5	-00.3	53	38.1 -30.9	S 27 49.5	-01.7	05
06	270	30.7 -00.1	N 22 11.5	+00.4	232	10.2 -00.7	N 24 18.2	-00.3	68	07.2 -31.0	S 27 47.8	-01.9	06
07	285	30.6 -00.1	N 22 11.9	+00.3	247	09.5 -00.8	N 24 17.9	-00.4	82	36.2 -30.9	S 27 45.9	-02.0	07
08	300	30.5 -00.1	N 22 12.2	+00.3	262	08.7 -00.7	N 24 17.5	-00.3	97	05.3 -30.9	S 27 43.9	-02.1	08
09	315	30.4 -00.1	N 22 12.5	+00.3	277	08.0 -00.8	N 24 17.2	-00.3	111	34.4 -30.9	S 27 41.8	-02.3	09
10	330	30.3 -00.1	N 22 12.8	+00.3	292	07.2 -00.7	N 24 16.9	-00.4	126	03.5 -30.8	S 27 39.5	-02.4	10
11	345	30.2 -00.1	N 22 13.1	+00.4	307	06.5 -00.8	N 24 16.5	-00.3	140	32.7 -30.9	S 27 37.1	-02.5	11
12	0	30.1 -00.1	N 22 13.5	+00.3	322	05.7 -00.7	N 24 16.2	-00.4	155	01.8 -30.8	S 27 34.6	-02.6	12
13	15	30.0 -00.1	N 22 13.8	+00.3	337	05.0 -00.7	N 24 15.8	-00.3	169	31.0 -30.8	S 27 32.0	-02.8	13
14	30	29.9 -00.1	N 22 14.1	+00.3	352	04.3 -00.8	N 24 15.5	-00.3	184	00.2 -30.8	S 27 29.2	-03.0	14
15	45	29.8 -00.1	N 22 14.4	+00.3	7	03.5 -00.7	N 24 15.2	-00.4	198	29.4 -30.7	S 27 26.2	-03.0	15
16	60	29.7 -00.1	N 22 14.7	+00.3	22	02.8 -00.8	N 24 14.8	-00.3	212	58.7 -30.8	S 27 23.2	-03.2	16
17	75	29.6 -00.1	N 22 15.0	+00.4	37	02.0 -00.7	N 24 14.5	-00.4	227	27.9 -30.7	S 27 20.0	-03.3	17
18	90	29.5 -00.1	N 22 15.4	+00.3	52	01.3 -00.8	N 24 14.1	-00.3	241	57.2 -30.6	S 27 16.7	-03.5	18
19	105	29.4 -00.1	N 22 15.7	+00.3	67	00.5 -00.7	N 24 13.8	-00.4	256	26.6 -30.7	S 27 13.2	-03.5	19
20	120	29.3 -00.1	N 22 16.0	+00.3	81	59.8 -00.8	N 24 13.4	-00.3	270	55.9 -30.6	S 27 09.7	-03.7	20
21	135	29.2 -00.1	N 22 16.3	+00.3	96	59.0 -00.7	N 24 13.1	-00.4	285	25.3 -30.6	S 27 06.0	-03.9	21
22	150	29.1 -00.1	N 22 16.6	+00.3	111	58.3 -00.7	N 24 12.7	-00.3	299	54.7 -30.5	S 27 02.1	-04.0	22
23	165	29.0 -00.1	N 22 16.9	+00.3	126	57.6 -00.8	N 24 12.4	-00.4	314	24.2 -30.5	S 26 58.1	-04.1	23
	UT 02 06 10 14 18 22												
	SD 15'8 15'8 15'8 15'8 15'8 15'8												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 290° 290° 290° 289° 289° 289°												
	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 252° 251° 251° 251° 251° 251°												
	Greenwich Culmination Time: 14:31												
	UT 02 06 10 14 18 22												
	SD 14'7 14'7 14'7 14'7 14'7 14'7												
	HP 54'0 54'0 54'0 54'0 54'0 54'1												
	SHA 090° 087° 085° 083° 081° 079°												
	Greenwich Culmination Time: 01:17												

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	212	11.9 +00.7	N 14 23.1	+00.6	134	14.7 +02.0	N 21 40.1	-00.1	238	15.5 +02.3	N 02 47.2	+00.0	00
01	227	12.6 +00.6	N 14 23.7	+00.6	149	16.7 +02.0	N 21 40.0	+00.0	253	17.8 +02.2	N 02 47.2	+00.1	01
02	242	13.2 +00.7	N 14 24.3	+00.6	164	18.7 +01.9	N 21 40.0	-00.1	268	20.0 +02.3	N 02 47.3	+00.1	02
03	257	13.9 +00.7	N 14 24.9	+00.6	179	20.6 +02.0	N 21 39.9	-00.1	283	22.3 +02.3	N 02 47.4	+00.1	03
04	272	14.6 +00.6	N 14 25.5	+00.6	194	22.6 +01.9	N 21 39.8	-00.1	298	24.6 +02.2	N 02 47.5	+00.0	04
05	287	15.2 +00.7	N 14 26.1	+00.6	209	24.5 +02.0	N 21 39.7	-00.1	313	26.8 +02.3	N 02 47.5	+00.1	05
06	302	15.9 +00.6	N 14 26.7	+00.6	224	26.5 +02.0	N 21 39.6	-00.1	328	29.1 +02.3	N 02 47.6	+00.1	06
07	317	16.5 +00.7	N 14 27.3	+00.6	239	28.5 +01.9	N 21 39.5	+00.0	343	31.4 +02.3	N 02 47.7	+00.1	07
08	332	17.2 +00.6	N 14 27.9	+00.6	254	30.4 +02.0	N 21 39.5	-00.1	358	33.7 +02.2	N 02 47.8	+00.0	08
09	347	17.8 +00.7	N 14 28.5	+00.6	269	32.4 +01.9	N 21 39.4	-00.1	13	35.9 +02.3	N 02 47.8	+00.1	09
10	2	18.5 +00.6	N 14 29.1	+00.6	284	34.3 +02.0	N 21 39.3	-00.1	28	38.2 +02.3	N 02 47.9	+00.1	10
11	17	19.1 +00.7	N 14 29.7	+00.6	299	36.3 +02.0	N 21 39.2	-00.1	43	40.5 +02.2	N 02 48.0	+00.0	11
12	32	19.8 +00.7	N 14 30.3	+00.6	314	38.3 +01.9	N 21 39.1	+00.0	58	42.7 +02.3	N 02 48.0	+00.1	12
13	47	20.5 +00.6	N 14 30.9	+00.6	329	40.2 +02.0	N 21 39.1	-00.1	73	45.0 +02.3	N 02 48.1	+00.1	13
14	62	21.1 +00.7	N 14 31.5	+00.6	344	42.2 +01.9	N 21 39.0	-00.1	88	47.3 +02.2	N 02 48.2	+00.1	14
15	77	21.8 +00.6	N 14 32.1	+00.6	359	44.1 +02.0	N 21 38.9	-00.1	103	49.5 +02.3	N 02 48.3	+00.0	15
16	92	22.4 +00.7	N 14 32.7	+00.6	14	46.1 +02.0	N 21 38.8	-00.1	118	51.8 +02.3	N 02 48.3	+00.1	16
17	107	23.1 +00.6	N 14 33.3	+00.6	29	48.1 +01.9	N 21 38.7	-00.1	133	54.1 +02.3	N 02 48.4	+00.1	17
18	122	23.7 +00.7	N 14 33.9	+00.6	44	50.0 +02.0	N 21 38.6	+00.0	148	56.4 +02.2	N 02 48.5	+00.0	18
19	137	24.4 +00.7	N 14 34.5	+00.6	59	52.0 +01.9	N 21 38.6	-00.1	163	58.6 +02.3	N 02 48.5	+00.1	19
20	152	25.1 +00.6	N 14 35.1	+00.6	74	53.9 +02.0	N 21 38.5	-00.1	179	00.9 +02.3	N 02 48.6	+00.1	20
21	167	25.7 +00.7	N 14 35.7	+00.6	89	55.9 +02.0	N 21 38.4	-00.1	194	03.2 +02.2	N 02 48.7	+00.1	21
22	182	26.4 +00.6	N 14 36.3	+00.6	104	57.9 +01.9	N 21 38.3	-00.1	209	05.4 +02.3	N 02 48.8	+00.0	22
23	197	27.0 +00.7	N 14 36.9	+00.6	119	59.8 +02.0	N 21 38.2	+00.0	224	07.7 +02.3	N 02 48.8	+00.1	23
	UT 02 06 10 14 18 22												
	SD 00'0 00'0 00'0 00'0 00'0 00'0												
	HP 00'1 00'1 00'1 00'1 00'1 00'1												
	SHA 322° 322° 321° 321° 321° 321°												
	Greenwich Culmination Time: 09:50												
	UT 02 06 10 14 18 22												
	SD 00'3 00'3 00'3 00'3 00'3 00'3												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 244° 244° 244° 244° 244° 244°												
	Greenwich Culmination Time: 15:01												
	UT 02 06 10 14 18 22												
	SD 00'1 00'1 00'1 00'1 00'1 00'1												
	HP 00'0 00'0 00'0 00'0 00'0 00'0												
	SHA 348° 348° 348° 348° 348° 348°												
	Greenwich Culmination Time: 08:05												

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 60%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	28.9 -00.1	N 22 17.2 +00.3		141	56.8 -00.7	N 24 12.0 -00.3		328	53.7 -30.5	S 26 54.0 -04.2		00
01	195	28.8 -00.2	N 22 17.5 +00.4		156	56.1 -00.8	N 24 11.7 -00.4		343	23.2 -30.5	S 26 49.8 -04.3		01
02	210	28.6 -00.1	N 22 17.9 +00.3		171	55.3 -00.7	N 24 11.3 -00.3		357	52.7 -30.4	S 26 45.5 -04.5		02
03	225	28.5 -00.1	N 22 18.2 +00.3		186	54.6 -00.7	N 24 11.0 -00.4		12	22.3 -30.4	S 26 41.0 -04.6		03
04	240	28.4 -00.1	N 22 18.5 +00.3		201	53.9 -00.8	N 24 10.6 -00.4		26	51.9 -30.3	S 26 36.4 -04.8		04
05	255	28.3 -00.1	N 22 18.8 +00.3		216	53.1 -00.7	N 24 10.2 -00.3		41	21.6 -30.3	S 26 31.6 -04.8		05
06	270	28.2 -00.1	N 22 19.1 +00.3		231	52.4 -00.8	N 24 09.9 -00.4		55	51.3 -30.3	S 26 26.8 -05.0		06
07	285	28.1 -00.1	N 22 19.4 +00.3		246	51.6 -00.7	N 24 09.5 -00.4		70	21.0 -30.2	S 26 21.8 -05.1		07
08	300	28.0 -00.1	N 22 19.7 +00.3		261	50.9 -00.7	N 24 09.1 -00.3		84	50.8 -30.2	S 26 16.7 -05.3		08
09	315	27.9 -00.1	N 22 20.0 +00.3		276	50.2 -00.8	N 24 08.8 -00.4		99	20.6 -30.1	S 26 11.4 -05.4		09
10	330	27.8 -00.1	N 22 20.3 +00.3		291	49.4 -00.7	N 24 08.4 -00.3		113	50.5 -30.1	S 26 06.0 -05.4		10
11	345	27.7 -00.1	N 22 20.6 +00.3		306	48.7 -00.7	N 24 08.1 -00.4		128	20.4 -30.1	S 26 00.6 -05.7		11
12	0	27.6 -00.1	N 22 20.9 +00.3		321	48.0 -00.8	N 24 07.7 -00.4		142	50.3 -30.0	S 25 54.9 -05.7		12
13	15	27.5 -00.1	N 22 21.2 +00.3		336	47.2 -00.7	N 24 07.3 -00.4		157	20.3 -29.9	S 25 49.2 -05.8		13
14	30	27.4 -00.1	N 22 21.5 +00.3		351	46.5 -00.7	N 24 06.9 -00.3		171	50.4 -30.0	S 25 43.4 -06.0		14
15	45	27.3 -00.1	N 22 21.8 +00.3		6	45.8 -00.8	N 24 06.6 -00.4		186	20.4 -29.8	S 25 37.4 -06.1		15
16	60	27.2 -00.1	N 22 22.1 +00.3		21	45.0 -00.7	N 24 06.2 -00.4		200	50.6 -29.9	S 25 31.3 -06.2		16
17	75	27.1 -00.1	N 22 22.4 +00.3		36	44.3 -00.7	N 24 05.8 -00.3		215	20.7 -29.8	S 25 25.1 -06.4		17
18	90	27.0 -00.1	N 22 22.7 +00.3		51	43.6 -00.8	N 24 05.5 -00.4		229	50.9 -29.7	S 25 18.7 -06.4		18
19	105	26.9 -00.1	N 22 23.0 +00.3		66	42.8 -00.7	N 24 05.1 -00.4		244	21.2 -29.7	S 25 12.3 -06.6		19
20	120	26.8 -00.1	N 22 23.3 +00.3		81	42.1 -00.7	N 24 04.7 -00.4		258	51.5 -29.6	S 25 05.7 -06.7		20
21	135	26.7 -00.1	N 22 23.6 +00.3		96	41.4 -00.8	N 24 04.3 -00.4		273	21.9 -29.6	S 24 59.0 -06.8		21
22	150	26.6 -00.1	N 22 23.9 +00.3		111	40.6 -00.7	N 24 03.9 -00.3		287	52.3 -29.6	S 24 52.2 -07.0		22
23	165	26.5 -00.1	N 22 24.2 +00.3		126	39.9 -00.7	N 24 03.6 -00.4		302	22.7 -29.5	S 24 45.2 -07.0		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 14'7 14'8 14'8 14'8 14'8 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'1 54'1 54'2 54'2 54'3 54'3				
	SHA 289° 289° 289° 288° 288° 288°				SHA 250° 250° 250° 250° 250° 249°				SHA 076° 074° 072° 070° 068° 066°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 14:32				Greenwich Culmination Time: 02:08				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	212	27.7 +00.6	N 14 37.5 +00.6		135	01.8 +01.9	N 21 38.2 -00.1		239	10.0 +02.3	N 02 48.9 +00.1		00
01	227	28.3 +00.7	N 14 38.1 +00.6		150	03.7 +02.0	N 21 38.1 -00.1		254	12.3 +02.2	N 02 49.0 +00.0		01
02	242	29.0 +00.6	N 14 38.7 +00.6		165	05.7 +01.9	N 21 38.0 -00.1		269	14.5 +02.3	N 02 49.0 +00.1		02
03	257	29.6 +00.7	N 14 39.3 +00.6		180	07.6 +02.0	N 21 37.9 -00.1		284	16.8 +02.3	N 02 49.1 +00.1		03
04	272	30.3 +00.7	N 14 39.9 +00.5		195	09.6 +02.0	N 21 37.8 -00.1		299	19.1 +02.2	N 02 49.2 +00.1		04
05	287	31.0 +00.6	N 14 40.4 +00.6		210	11.6 +01.9	N 21 37.7 +00.0		314	21.3 +02.3	N 02 49.3 +00.0		05
06	302	31.6 +00.7	N 14 41.0 +00.6		225	13.5 +02.0	N 21 37.7 -00.1		329	23.6 +02.3	N 02 49.3 +00.1		06
07	317	32.3 +00.6	N 14 41.6 +00.6		240	15.5 +01.9	N 21 37.6 -00.1		344	25.9 +02.3	N 02 49.4 +00.1		07
08	332	32.9 +00.7	N 14 42.2 +00.6		255	17.4 +02.0	N 21 37.5 -00.1		359	28.2 +02.2	N 02 49.5 +00.0		08
09	347	33.6 +00.6	N 14 42.8 +00.6		270	19.4 +01.9	N 21 37.4 -00.1		14	30.4 +02.3	N 02 49.5 +00.1		09
10	2	34.2 +00.7	N 14 43.4 +00.6		285	21.3 +02.0	N 21 37.3 -00.1		29	32.7 +02.3	N 02 49.6 +00.1		10
11	17	34.9 +00.6	N 14 44.0 +00.6		300	23.3 +02.0	N 21 37.2 +00.0		44	35.0 +02.2	N 02 49.7 +00.1		11
12	32	35.5 +00.7	N 14 44.6 +00.6		315	25.3 +01.9	N 21 37.2 -00.1		59	37.2 +02.3	N 02 49.8 +00.0		12
13	47	36.2 +00.6	N 14 45.2 +00.6		330	27.2 +02.0	N 21 37.1 -00.1		74	39.5 +02.3	N 02 49.8 +00.1		13
14	62	36.8 +00.7	N 14 45.8 +00.6		345	29.2 +01.9	N 21 37.0 -00.1		89	41.8 +02.3	N 02 49.9 +00.1		14
15	77	37.5 +00.7	N 14 46.4 +00.6		0	31.1 +02.0	N 21 36.9 -00.1		104	44.1 +02.2	N 02 50.0 +00.0		15
16	92	38.2 +00.6	N 14 47.0 +00.6		15	33.1 +01.9	N 21 36.8 -00.1		119	46.3 +02.3	N 02 50.0 +00.1		16
17	107	38.8 +00.7	N 14 47.6 +00.5		30	35.0 +02.0	N 21 36.7 +00.0		134	48.6 +02.3	N 02 50.1 +00.1		17
18	122	39.5 +00.6	N 14 48.1 +00.6		45	37.0 +02.0	N 21 36.7 -00.1		149	50.9 +02.3	N 02 50.2 +00.0		18
19	137	40.1 +00.7	N 14 48.7 +00.6		60	39.0 +01.9	N 21 36.6 -00.1		164	53.2 +02.2	N 02 50.2 +00.1		19
20	152	40.8 +00.6	N 14 49.3 +00.6		75	40.9 +02.0	N 21 36.5 -00.1		179	55.4 +02.3	N 02 50.3 +00.1		20
21	167	41.4 +00.7	N 14 49.9 +00.6		90	42.9 +01.9	N 21 36.4 -00.1		194	57.7 +02.3	N 02 50.4 +00.1		21
22	182	42.1 +00.6	N 14 50.5 +00.6		105	44.8 +02.0	N 21 36.3 -00.1		209	60.0 +02.3	N 02 50.5 +00.0		22
23	197	42.7 +00.7	N 14 51.1 +00.6		120	46.8 +01.9	N 21 36.2 +00.0		225	02.3 +02.2	N 02 50.5 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 321° 321° 321° 321° 320° 320°				SHA 244° 244° 243° 243° 243° 243°				SHA 348° 348° 348° 348° 348° 348°				
	Greenwich Culmination Time: 09:49				Greenwich Culmination Time: 14:57				Greenwich Culmination Time: 08:02				

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 63%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	180 26.4 -00.1	N 22	24.5 +00.3		141 39.2 -00.8	N 24	03.2 -00.4		316 53.2 -29.5	S 24	38.2 -07.2		00
01	195 26.3 -00.1	N 22	24.8 +00.3		156 38.4 -00.7	N 24	02.8 -00.4		331 23.7 -29.4	S 24	31.0 -07.2		01
02	210 26.2 -00.2	N 22	25.1 +00.3		171 37.7 -00.7	N 24	02.4 -00.4		345 54.3 -29.3	S 24	23.8 -07.4		02
03	225 26.0 -00.1	N 22	25.4 +00.3		186 37.0 -00.7	N 24	02.0 -00.4		0 25.0 -29.3	S 24	16.4 -07.5		03
04	240 25.9 -00.1	N 22	25.7 +00.2		201 36.3 -00.8	N 24	01.6 -00.3		14 55.7 -29.3	S 24	08.9 -07.6		04
05	255 25.8 -00.1	N 22	25.9 +00.3		216 35.5 -00.7	N 24	01.3 -00.4		29 26.4 -29.2	S 24	01.3 -07.8		05
06	270 25.7 -00.1	N 22	26.2 +00.3		231 34.8 -00.7	N 24	00.9 -00.4		43 57.2 -29.1	S 23	53.5 -07.8		06
07	285 25.6 -00.1	N 22	26.5 +00.3		246 34.1 -00.8	N 24	00.5 -00.4		58 28.1 -29.1	S 23	45.7 -08.0		07
08	300 25.5 -00.1	N 22	26.8 +00.3		261 33.3 -00.7	N 24	00.1 -00.4		72 59.0 -29.1	S 23	37.7 -08.0		08
09	315 25.4 -00.1	N 22	27.1 +00.3		276 32.6 -00.7	N 23	59.7 -00.4		87 29.9 -29.0	S 23	29.7 -08.2		09
10	330 25.3 -00.1	N 22	27.4 +00.3		291 31.9 -00.7	N 23	59.3 -00.4		102 00.9 -28.9	S 23	21.5 -08.3		10
11	345 25.2 -00.1	N 22	27.7 +00.3		306 31.2 -00.8	N 23	58.9 -00.4		116 32.0 -28.9	S 23	13.2 -08.4		11
12	0 25.1 -00.1	N 22	28.0 +00.3		321 30.4 -00.7	N 23	58.5 -00.4		131 03.1 -28.9	S 23	04.8 -08.4		12
13	15 25.0 -00.1	N 22	28.3 +00.2		336 29.7 -00.7	N 23	58.1 -00.4		145 34.2 -28.8	S 22	56.4 -08.6		13
14	30 24.9 -00.1	N 22	28.5 +00.3		351 29.0 -00.7	N 23	57.7 -00.4		160 05.4 -28.7	S 22	47.8 -08.7		14
15	45 24.8 -00.1	N 22	28.8 +00.3		6 28.3 -00.8	N 23	57.3 -00.4		174 36.7 -28.7	S 22	39.1 -08.9		15
16	60 24.7 -00.2	N 22	29.1 +00.3		21 27.5 -00.7	N 23	56.9 -00.4		189 08.0 -28.6	S 22	30.2 -08.9		16
17	75 24.5 -00.1	N 22	29.4 +00.3		36 26.8 -00.7	N 23	56.5 -00.4		203 39.4 -28.6	S 22	21.3 -09.0		17
18	90 24.4 -00.1	N 22	29.7 +00.3		51 26.1 -00.7	N 23	56.1 -00.4		218 10.8 -28.6	S 22	12.3 -09.1		18
19	105 24.3 -00.1	N 22	30.0 +00.2		66 25.4 -00.7	N 23	55.7 -00.4		232 42.2 -28.4	S 22	03.2 -09.2		19
20	120 24.2 -00.1	N 22	30.2 +00.3		81 24.7 -00.8	N 23	55.3 -00.4		247 13.8 -28.5	S 21	54.0 -09.4		20
21	135 24.1 -00.1	N 22	30.5 +00.3		96 23.9 -00.7	N 23	54.9 -00.4		261 45.3 -28.4	S 21	44.6 -09.4		21
22	150 24.0 -00.1	N 22	30.8 +00.3		111 23.2 -00.7	N 23	54.5 -00.4		276 16.9 -28.3	S 21	35.2 -09.5		22
23	165 23.9 -00.1	N 22	31.1 +00.2		126 22.5 -00.7	N 23	54.1 -00.4		290 48.6 -28.3	S 21	25.7 -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 14'9 14'9 14'9				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'3 54'4 54'5 54'5 54'6 54'6				
	SHA 288° 288° 288° 287° 287° 287°				SHA 249° 249° 249° 248° 248° 248°				SHA 063° 061° 059° 057° 055° 053°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 14:34				Greenwich Culmination Time: 02:58				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	212 43.4 +00.6	N 14	51.7 +00.6		135 48.7 +02.0	N 21	36.2 -00.1		240 04.5 +02.3	N 02	50.6 +00.1		00
01	227 44.0 +00.7	N 14	52.3 +00.6		150 50.7 +01.9	N 21	36.1 -00.1		255 06.8 +02.3	N 02	50.7 +00.0		01
02	242 44.7 +00.7	N 14	52.9 +00.5		165 52.6 +02.0	N 21	36.0 -00.1		270 09.1 +02.3	N 02	50.7 +00.1		02
03	257 45.4 +00.6	N 14	53.4 +00.6		180 54.6 +02.0	N 21	35.9 -00.1		285 11.4 +02.2	N 02	50.8 +00.1		03
04	272 46.0 +00.7	N 14	54.0 +00.6		195 56.6 +01.9	N 21	35.8 -00.1		300 13.6 +02.3	N 02	50.9 +00.1		04
05	287 46.7 +00.6	N 14	54.6 +00.6		210 58.5 +02.0	N 21	35.7 +00.0		315 15.9 +02.3	N 02	51.0 +00.0		05
06	302 47.3 +00.7	N 14	55.2 +00.6		226 00.5 +01.9	N 21	35.7 -00.1		330 18.2 +02.3	N 02	51.0 +00.1		06
07	317 48.0 +00.6	N 14	55.8 +00.6		241 02.4 +02.0	N 21	35.6 -00.1		345 20.5 +02.2	N 02	51.1 +00.1		07
08	332 48.6 +00.7	N 14	56.4 +00.6		256 04.4 +01.9	N 21	35.5 -00.1		0 22.7 +02.3	N 02	51.2 +00.0		08
09	347 49.3 +00.6	N 14	57.0 +00.6		271 06.3 +02.0	N 21	35.4 -00.1		15 25.0 +02.3	N 02	51.2 +00.1		09
10	2 49.9 +00.7	N 14	57.6 +00.5		286 08.3 +01.9	N 21	35.3 -00.1		30 27.3 +02.3	N 02	51.3 +00.1		10
11	17 50.6 +00.6	N 14	58.1 +00.6		301 10.2 +02.0	N 21	35.2 -00.1		45 29.6 +02.2	N 02	51.4 +00.0		11
12	32 51.2 +00.7	N 14	58.7 +00.6		316 12.2 +01.9	N 21	35.1 +00.0		60 31.8 +02.3	N 02	51.4 +00.1		12
13	47 51.9 +00.6	N 14	59.3 +00.6		331 14.1 +02.0	N 21	35.1 -00.1		75 34.1 +02.3	N 02	51.5 +00.1		13
14	62 52.5 +00.7	N 14	59.9 +00.6		346 16.1 +02.0	N 21	35.0 -00.1		90 36.4 +02.3	N 02	51.6 +00.0		14
15	77 53.2 +00.6	N 15	00.5 +00.6		1 18.1 +01.9	N 21	34.9 -00.1		105 38.7 +02.2	N 02	51.6 +00.1		15
16	92 53.8 +00.7	N 15	01.1 +00.5		16 20.0 +02.0	N 21	34.8 -00.1		120 40.9 +02.3	N 02	51.7 +00.1		16
17	107 54.5 +00.6	N 15	01.6 +00.6		31 22.0 +01.9	N 21	34.7 -00.1		135 43.2 +02.3	N 02	51.8 +00.1		17
18	122 55.1 +00.7	N 15	02.2 +00.6		46 23.9 +02.0	N 21	34.6 +00.0		150 45.5 +02.3	N 02	51.9 +00.0		18
19	137 55.8 +00.7	N 15	02.8 +00.6		61 25.9 +01.9	N 21	34.6 -00.1		165 47.8 +02.2	N 02	51.9 +00.1		19
20	152 56.5 +00.6	N 15	03.4 +00.6		76 27.8 +02.0	N 21	34.5 -00.1		180 50.0 +02.3	N 02	52.0 +00.1		20
21	167 57.1 +00.7	N 15	04.0 +00.6		91 29.8 +01.9	N 21	34.4 -00.1		195 52.3 +02.3	N 02	52.1 +00.0		21
22	182 57.8 +00.6	N 15	04.6 +00.5		106 31.7 +02.0	N 21	34.3 -00.1		210 54.6 +02.3	N 02	52.1 +00.1		22
23	197 58.4 +00.7	N 15	05.1 +00.6		121 33.7 +01.9	N 21	34.2 -00.1		225 56.9 +02.2	N 02	52.2 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 320° 320° 320° 320° 320° 320°				SHA 243° 243° 243° 243° 243° 243°				SHA 348° 348° 348° 348° 348° 348°				
	Greenwich Culmination Time: 09:48				Greenwich Culmination Time: 14:54				Greenwich Culmination Time: 07:58				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 23.8 -00.1	N 22 31.3 +00.3	141 21.8 -00.7	N 23 53.7 -00.4	305 20.3 -28.2	S 21 16.1 -09.7	00						
01	195 23.7 -00.1	N 22 31.6 +00.3	156 21.1 -00.7	N 23 53.3 -00.4	319 52.1 -28.2	S 21 06.4 -09.9	01						
02	210 23.6 -00.1	N 22 31.9 +00.3	171 20.4 -00.8	N 23 52.9 -00.4	334 23.9 -28.1	S 20 56.5 -09.9	02						
03	225 23.5 -00.2	N 22 32.2 +00.3	186 19.6 -00.7	N 23 52.5 -00.5	348 55.8 -28.1	S 20 46.6 -10.0	03						
04	240 23.3 -00.1	N 22 32.5 +00.2	201 18.9 -00.7	N 23 52.0 -00.4	3 27.7 -28.0	S 20 36.6 -10.1	04						
05	255 23.2 -00.1	N 22 32.7 +00.3	216 18.2 -00.7	N 23 51.6 -00.4	17 59.7 -28.0	S 20 26.5 -10.2	05						
06	270 23.1 -00.1	N 22 33.0 +00.3	231 17.5 -00.7	N 23 51.2 -00.4	32 31.7 -27.9	S 20 16.3 -10.3	06						
07	285 23.0 -00.1	N 22 33.3 +00.2	246 16.8 -00.7	N 23 50.8 -00.4	47 03.8 -27.9	S 20 06.0 -10.4	07						
08	300 22.9 -00.1	N 22 33.5 +00.3	261 16.1 -00.8	N 23 50.4 -00.4	61 35.9 -27.9	S 19 55.6 -10.5	08						
09	315 22.8 -00.1	N 22 33.8 +00.3	276 15.3 -00.7	N 23 50.0 -00.5	76 08.0 -27.7	S 19 45.1 -10.5	09						
10	330 22.7 -00.1	N 22 34.1 +00.3	291 14.6 -00.7	N 23 49.5 -00.4	90 40.3 -27.8	S 19 34.6 -10.7	10						
11	345 22.6 -00.1	N 22 34.4 +00.2	306 13.9 -00.7	N 23 49.1 -00.4	105 12.5 -27.7	S 19 23.9 -10.7	11						
12	0 22.5 -00.1	N 22 34.6 +00.3	321 13.2 -00.7	N 23 48.7 -00.4	119 44.8 -27.6	S 19 13.2 -10.9	12						
13	15 22.4 -00.2	N 22 34.9 +00.3	336 12.5 -00.7	N 23 48.3 -00.5	134 17.2 -27.6	S 19 02.3 -10.9	13						
14	30 22.2 -00.1	N 22 35.2 +00.2	351 11.8 -00.7	N 23 47.8 -00.4	148 49.6 -27.6	S 18 51.4 -11.0	14						
15	45 22.1 -00.1	N 22 35.4 +00.3	6 11.1 -00.7	N 23 47.4 -00.4	163 22.0 -27.5	S 18 40.4 -11.1	15						
16	60 22.0 -00.1	N 22 35.7 +00.3	21 10.4 -00.8	N 23 47.0 -00.4	177 54.5 -27.5	S 18 29.3 -11.2	16						
17	75 21.9 -00.1	N 22 36.0 +00.2	36 09.6 -00.7	N 23 46.6 -00.5	192 27.0 -27.4	S 18 18.1 -11.3	17						
18	90 21.8 -00.1	N 22 36.2 +00.3	51 08.9 -00.7	N 23 46.1 -00.4	206 59.6 -27.3	S 18 06.8 -11.4	18						
19	105 21.7 -00.1	N 22 36.5 +00.3	66 08.2 -00.7	N 23 45.7 -00.4	221 32.3 -27.4	S 17 55.4 -11.4	19						
20	120 21.6 -00.1	N 22 36.8 +00.2	81 07.5 -00.7	N 23 45.3 -00.5	236 04.9 -27.3	S 17 44.0 -11.6	20						
21	135 21.5 -00.2	N 22 37.0 +00.3	96 06.8 -00.7	N 23 44.8 -00.4	250 37.6 -27.2	S 17 32.4 -11.6	21						
22	150 21.3 -00.1	N 22 37.3 +00.3	111 06.1 -00.7	N 23 44.4 -00.4	265 10.4 -27.2	S 17 20.8 -11.7	22						
23	165 21.2 -00.1	N 22 37.6 +00.2	126 05.4 -00.7	N 23 44.0 -00.5	279 43.2 -27.2	S 17 09.1 -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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 14'9 15'0 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'7 54'8 54'9 54'9 55'0 55'1								
	SHA 287° 287° 287° 286° 286° 286°		SHA 248° 248° 247° 247° 247° 247°		SHA 051° 049° 047° 045° 043° 041°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 14:35		Greenwich Culmination Time: 03:45								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	212 59.1 +00.6	N 15 05.7 +00.6	136 35.6 +02.0	N 21 34.1 -00.1	240 59.1 +02.3	N 02 52.3 +00.0	00						
01	227 59.7 +00.7	N 15 06.3 +00.6	151 37.6 +01.9	N 21 34.0 +00.0	256 01.4 +02.3	N 02 52.3 +00.1	01						
02	243 00.4 +00.6	N 15 06.9 +00.6	166 39.5 +02.0	N 21 34.0 -00.1	271 03.7 +02.3	N 02 52.4 +00.1	02						
03	258 01.0 +00.7	N 15 07.5 +00.6	181 41.5 +01.9	N 21 33.9 -00.1	286 06.0 +02.3	N 02 52.5 +00.0	03						
04	273 01.7 +00.6	N 15 08.1 +00.5	196 43.4 +02.0	N 21 33.8 -00.1	301 08.3 +02.2	N 02 52.5 +00.1	04						
05	288 02.3 +00.7	N 15 08.6 +00.6	211 45.4 +01.9	N 21 33.7 -00.1	316 10.5 +02.3	N 02 52.6 +00.1	05						
06	303 03.0 +00.6	N 15 09.2 +00.6	226 47.3 +02.0	N 21 33.6 -00.1	331 12.8 +02.3	N 02 52.7 +00.0	06						
07	318 03.6 +00.7	N 15 09.8 +00.6	241 49.3 +02.0	N 21 33.5 +00.0	346 15.1 +02.3	N 02 52.7 +00.1	07						
08	333 04.3 +00.6	N 15 10.4 +00.6	256 51.3 +01.9	N 21 33.5 -00.1	1 17.4 +02.2	N 02 52.8 +00.1	08						
09	348 04.9 +00.7	N 15 11.0 +00.5	271 53.2 +02.0	N 21 33.4 -00.1	16 19.6 +02.3	N 02 52.9 +00.1	09						
10	3 05.6 +00.6	N 15 11.5 +00.6	286 55.2 +01.9	N 21 33.3 -00.1	31 21.9 +02.3	N 02 53.0 +00.0	10						
11	18 06.2 +00.7	N 15 12.1 +00.6	301 57.1 +02.0	N 21 33.2 -00.1	46 24.2 +02.3	N 02 53.0 +00.1	11						
12	33 06.9 +00.6	N 15 12.7 +00.6	316 59.1 +01.9	N 21 33.1 -00.1	61 26.5 +02.3	N 02 53.1 +00.1	12						
13	48 07.5 +00.7	N 15 13.3 +00.5	332 01.0 +02.0	N 21 33.0 -00.1	76 28.8 +02.2	N 02 53.2 +00.0	13						
14	63 08.2 +00.6	N 15 13.8 +00.6	347 03.0 +01.9	N 21 32.9 +00.0	91 31.0 +02.3	N 02 53.2 +00.1	14						
15	78 08.8 +00.7	N 15 14.4 +00.6	2 04.9 +02.0	N 21 32.9 -00.1	106 33.3 +02.3	N 02 53.3 +00.1	15						
16	93 09.5 +00.6	N 15 15.0 +00.6	17 06.9 +01.9	N 21 32.8 -00.1	121 35.6 +02.3	N 02 53.4 +00.0	16						
17	108 10.1 +00.7	N 15 15.6 +00.6	32 08.8 +02.0	N 21 32.7 -00.1	136 37.9 +02.2	N 02 53.4 +00.1	17						
18	123 10.8 +00.6	N 15 16.2 +00.5	47 10.8 +01.9	N 21 32.6 -00.1	151 40.1 +02.3	N 02 53.5 +00.1	18						
19	138 11.4 +00.7	N 15 16.7 +00.6	62 12.7 +02.0	N 21 32.5 -00.1	166 42.4 +02.3	N 02 53.6 +00.0	19						
20	153 12.1 +00.6	N 15 17.3 +00.6	77 14.7 +01.9	N 21 32.4 -00.1	181 44.7 +02.3	N 02 53.6 +00.1	20						
21	168 12.7 +00.7	N 15 17.9 +00.6	92 16.6 +02.0	N 21 32.3 +00.0	196 47.0 +02.3	N 02 53.7 +00.1	21						
22	183 13.4 +00.6	N 15 18.5 +00.5	107 18.6 +01.9	N 21 32.3 -00.1	211 49.3 +02.2	N 02 53.8 +00.0	22						
23	198 14.0 +00.7	N 15 19.0 +00.6	122 20.5 +02.0	N 21 32.2 -00.1	226 51.5 +02.3	N 02 53.8 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 319° 319° 319° 319° 319° 319°		SHA 243° 243° 243° 243° 243° 243°		SHA 348° 348° 348° 348° 347° 347°								
	Greenwich Culmination Time: 09:47		Greenwich Culmination Time: 14:51		Greenwich Culmination Time: 07:54								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	21.1 -00.1	N 22 37.8 +00.3		141	04.7 -00.7	N 23 43.5 -00.4		294	16.0 -27.1	S 16 57.4 -11.9		00
01	195	21.0 -00.1	N 22 38.1 +00.2		156	04.0 -00.7	N 23 43.1 -00.4		308	48.9 -27.1	S 16 45.5 -11.9		01
02	210	20.9 -00.1	N 22 38.3 +00.3		171	03.3 -00.7	N 23 42.7 -00.5		323	21.8 -27.1	S 16 33.6 -12.0		02
03	225	20.8 -00.1	N 22 38.6 +00.3		186	02.6 -00.7	N 23 42.2 -00.4		337	54.7 -27.0	S 16 21.6 -12.1		03
04	240	20.7 -00.1	N 22 38.9 +00.2		201	01.9 -00.7	N 23 41.8 -00.5		352	27.7 -27.0	S 16 09.5 -12.2		04
05	255	20.6 -00.2	N 22 39.1 +00.3		216	01.2 -00.7	N 23 41.3 -00.4		7	00.7 -26.9	S 15 57.3 -12.2		05
06	270	20.4 -00.1	N 22 39.4 +00.2		231	00.5 -00.7	N 23 40.9 -00.4		21	33.8 -26.9	S 15 45.1 -12.4		06
07	285	20.3 -00.1	N 22 39.6 +00.3		245	59.8 -00.8	N 23 40.5 -00.5		36	06.9 -26.9	S 15 32.7 -12.4		07
08	300	20.2 -00.1	N 22 39.9 +00.2		260	59.0 -00.7	N 23 40.0 -00.4		50	40.0 -26.8	S 15 20.3 -12.4		08
09	315	20.1 -00.1	N 22 40.1 +00.3		275	58.3 -00.7	N 23 39.6 -00.5		65	13.2 -26.8	S 15 07.9 -12.6		09
10	330	20.0 -00.1	N 22 40.4 +00.3		290	57.6 -00.7	N 23 39.1 -00.4		79	46.4 -26.8	S 14 55.3 -12.6		10
11	345	19.9 -00.1	N 22 40.7 +00.2		305	56.9 -00.7	N 23 38.7 -00.5		94	19.6 -26.7	S 14 42.7 -12.7		11
12	0	19.8 -00.2	N 22 40.9 +00.3		320	56.2 -00.7	N 23 38.2 -00.4		108	52.9 -26.7	S 14 30.0 -12.7		12
13	15	19.6 -00.1	N 22 41.2 +00.2		335	55.5 -00.7	N 23 37.8 -00.5		123	26.2 -26.7	S 14 17.3 -12.9		13
14	30	19.5 -00.1	N 22 41.4 +00.3		350	54.8 -00.7	N 23 37.3 -00.4		137	59.5 -26.6	S 14 04.4 -12.9		14
15	45	19.4 -00.1	N 22 41.7 +00.2		5	54.1 -00.7	N 23 36.9 -00.5		152	32.9 -26.7	S 13 51.5 -12.9		15
16	60	19.3 -00.1	N 22 41.9 +00.3		20	53.4 -00.7	N 23 36.4 -00.4		167	06.2 -26.5	S 13 38.6 -13.1		16
17	75	19.2 -00.1	N 22 42.2 +00.2		35	52.7 -00.7	N 23 36.0 -00.5		181	39.7 -26.6	S 13 25.5 -13.1		17
18	90	19.1 -00.1	N 22 42.4 +00.3		50	52.0 -00.6	N 23 35.5 -00.4		196	13.1 -26.5	S 13 12.4 -13.1		18
19	105	19.0 -00.2	N 22 42.7 +00.2		65	51.4 -00.7	N 23 35.1 -00.5		210	46.6 -26.6	S 12 59.3 -13.3		19
20	120	18.8 -00.1	N 22 42.9 +00.3		80	50.7 -00.7	N 23 34.6 -00.5		225	20.0 -26.4	S 12 46.0 -13.3		20
21	135	18.7 -00.1	N 22 43.2 +00.2		95	50.0 -00.7	N 23 34.1 -00.4		239	53.6 -26.5	S 12 32.7 -13.3		21
22	150	18.6 -00.1	N 22 43.4 +00.2		110	49.3 -00.7	N 23 33.7 -00.5		254	27.1 -26.5	S 12 19.4 -13.5		22
23	165	18.5 -00.1	N 22 43.6 +00.3		125	48.6 -00.7	N 23 33.2 -00.4		269	00.6 -26.4	S 12 05.9 -13.4		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'0 15'1 15'1 15'1 15'1 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 286° 286° 285° 285° 285° 285°				SHA 247° 246° 246° 246° 246° 245°				SHA 039° 037° 035° 033° 031° 029°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 14:36				Greenwich Culmination Time: 04:31				

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	213	14.7 +00.6	N 15 19.6 +00.6		137	22.5 +01.9	N 21 32.1 -00.1		241	53.8 +02.3	N 02 53.9 +00.1		00
01	228	15.3 +00.7	N 15 20.2 +00.6		152	24.4 +02.0	N 21 32.0 -00.1		256	56.1 +02.3	N 02 54.0 +00.0		01
02	243	16.0 +00.6	N 15 20.8 +00.5		167	26.4 +01.9	N 21 31.9 -00.1		271	58.4 +02.3	N 02 54.0 +00.1		02
03	258	16.6 +00.7	N 15 21.3 +00.6		182	28.3 +02.0	N 21 31.8 -00.1		287	00.7 +02.2	N 02 54.1 +00.1		03
04	273	17.3 +00.6	N 15 21.9 +00.6		197	30.3 +01.9	N 21 31.7 +00.0		302	02.9 +02.3	N 02 54.2 +00.0		04
05	288	17.9 +00.7	N 15 22.5 +00.6		212	32.2 +02.0	N 21 31.7 -00.1		317	05.2 +02.3	N 02 54.2 +00.1		05
06	303	18.6 +00.6	N 15 23.1 +00.5		227	34.2 +01.9	N 21 31.6 -00.1		332	07.5 +02.3	N 02 54.3 +00.1		06
07	318	19.2 +00.7	N 15 23.6 +00.6		242	36.1 +02.0	N 21 31.5 -00.1		347	09.8 +02.3	N 02 54.4 +00.0		07
08	333	19.9 +00.6	N 15 24.2 +00.6		257	38.1 +01.9	N 21 31.4 -00.1		2	12.1 +02.2	N 02 54.4 +00.1		08
09	348	20.5 +00.7	N 15 24.8 +00.6		272	40.0 +02.0	N 21 31.3 -00.1		17	14.3 +02.3	N 02 54.5 +00.1		09
10	3	21.2 +00.6	N 15 25.4 +00.5		287	42.0 +01.9	N 21 31.2 -00.1		32	16.6 +02.3	N 02 54.6 +00.0		10
11	18	21.8 +00.7	N 15 25.9 +00.6		302	43.9 +02.0	N 21 31.1 +00.0		47	18.9 +02.3	N 02 54.6 +00.1		11
12	33	22.5 +00.6	N 15 26.5 +00.6		317	45.9 +01.9	N 21 31.1 -00.1		62	21.2 +02.3	N 02 54.7 +00.1		12
13	48	23.1 +00.7	N 15 27.1 +00.6		332	47.8 +02.0	N 21 31.0 -00.1		77	23.5 +02.3	N 02 54.8 +00.0		13
14	63	23.8 +00.6	N 15 27.7 +00.5		347	49.8 +01.9	N 21 30.9 -00.1		92	25.8 +02.2	N 02 54.8 +00.1		14
15	78	24.4 +00.7	N 15 28.2 +00.6		2	51.7 +02.0	N 21 30.8 -00.1		107	28.0 +02.3	N 02 54.9 +00.1		15
16	93	25.1 +00.6	N 15 28.8 +00.6		17	53.7 +01.9	N 21 30.7 -00.1		122	30.3 +02.3	N 02 55.0 +00.0		16
17	108	25.7 +00.7	N 15 29.4 +00.5		32	55.6 +01.9	N 21 30.6 -00.1		137	32.6 +02.3	N 02 55.0 +00.1		17
18	123	26.4 +00.6	N 15 29.9 +00.6		47	57.5 +02.0	N 21 30.5 -00.1		152	34.9 +02.3	N 02 55.1 +00.1		18
19	138	27.0 +00.7	N 15 30.5 +00.6		62	59.5 +01.9	N 21 30.4 +00.0		167	37.2 +02.2	N 02 55.2 +00.0		19
20	153	27.7 +00.6	N 15 31.1 +00.5		78	01.4 +02.0	N 21 30.4 -00.1		182	39.4 +02.3	N 02 55.2 +00.1		20
21	168	28.3 +00.7	N 15 31.6 +00.6		93	03.4 +01.9	N 21 30.3 -00.1		197	41.7 +02.3	N 02 55.3 +00.1		21
22	183	29.0 +00.6	N 15 32.2 +00.6		108	05.3 +02.0	N 21 30.2 -00.1		212	44.0 +02.3	N 02 55.4 +00.0		22
23	198	29.6 +00.7	N 15 32.8 +00.6		123	07.3 +01.9	N 21 30.1 -00.1		227	46.3 +02.3	N 02 55.4 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 319° 319° 319° 318° 318° 318°				SHA 243° 243° 243° 243° 243° 243°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:46				Greenwich Culmination Time: 14:48				Greenwich Culmination Time: 07:51				

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	18.4 -00.1	N 22 43.9 +00.2		140	47.9 -00.7	N 23 32.8 -00.5		283	34.2 -26.4	S 11 52.5 -13.6		00
01	195	18.3 -00.2	N 22 44.1 +00.3		155	47.2 -00.7	N 23 32.3 -00.5		298	07.8 -26.4	S 11 38.9 -13.6		01
02	210	18.1 -00.1	N 22 44.4 +00.2		170	46.5 -00.7	N 23 31.8 -00.4		312	41.4 -26.3	S 11 25.3 -13.7		02
03	225	18.0 -00.1	N 22 44.6 +00.3		185	45.8 -00.7	N 23 31.4 -00.5		327	15.1 -26.4	S 11 11.6 -13.7		03
04	240	17.9 -00.1	N 22 44.9 +00.2		200	45.1 -00.7	N 23 30.9 -00.5		341	48.7 -26.3	S 10 57.9 -13.8		04
05	255	17.8 -00.1	N 22 45.1 +00.2		215	44.4 -00.7	N 23 30.4 -00.4		356	22.4 -26.3	S 10 44.1 -13.9		05
06	270	17.7 -00.1	N 22 45.3 +00.3		230	43.7 -00.7	N 23 30.0 -00.5		10	56.1 -26.3	S 10 30.2 -13.9		06
07	285	17.6 -00.2	N 22 45.6 +00.2		245	43.0 -00.7	N 23 29.5 -00.5		25	29.8 -26.3	S 10 16.3 -13.9		07
08	300	17.4 -00.1	N 22 45.8 +00.3		260	42.3 -00.7	N 23 29.0 -00.5		40	03.5 -26.3	S 10 02.4 -14.1		08
09	315	17.3 -00.1	N 22 46.1 +00.2		275	41.6 -00.6	N 23 28.5 -00.4		54	37.2 -26.3	S 09 48.3 -14.0		09
10	330	17.2 -00.1	N 22 46.3 +00.2		290	41.0 -00.7	N 23 28.1 -00.5		69	10.9 -26.2	S 09 34.3 -14.2		10
11	345	17.1 -00.1	N 22 46.5 +00.3		305	40.3 -00.7	N 23 27.6 -00.5		83	44.7 -26.3	S 09 20.1 -14.1		11
12	0	17.0 -00.1	N 22 46.8 +00.2		320	39.6 -00.7	N 23 27.1 -00.5		98	18.4 -26.2	S 09 06.0 -14.3		12
13	15	16.9 -00.2	N 22 47.0 +00.2		335	38.9 -00.7	N 23 26.6 -00.4		112	52.2 -26.2	S 08 51.7 -14.3		13
14	30	16.7 -00.1	N 22 47.2 +00.3		350	38.2 -00.7	N 23 26.2 -00.5		127	26.0 -26.3	S 08 37.4 -14.3		14
15	45	16.6 -00.1	N 22 47.5 +00.2		5	37.5 -00.7	N 23 25.7 -00.5		141	59.7 -26.2	S 08 23.1 -14.4		15
16	60	16.5 -00.1	N 22 47.7 +00.3		20	36.8 -00.6	N 23 25.2 -00.5		156	33.5 -26.2	S 08 08.7 -14.4		16
17	75	16.4 -00.1	N 22 48.0 +00.2		35	36.2 -00.7	N 23 24.7 -00.4		171	07.3 -26.2	S 07 54.3 -14.5		17
18	90	16.3 -00.2	N 22 48.2 +00.2		50	35.5 -00.7	N 23 24.3 -00.5		185	41.1 -26.3	S 07 39.8 -14.5		18
19	105	16.1 -00.1	N 22 48.4 +00.2		65	34.8 -00.7	N 23 23.8 -00.5		200	14.8 -26.2	S 07 25.3 -14.6		19
20	120	16.0 -00.1	N 22 48.6 +00.3		80	34.1 -00.7	N 23 23.3 -00.5		214	48.6 -26.2	S 07 10.7 -14.7		20
21	135	15.9 -00.1	N 22 48.9 +00.2		95	33.4 -00.7	N 23 22.8 -00.5		229	22.4 -26.2	S 06 56.0 -14.6		21
22	150	15.8 -00.1	N 22 49.1 +00.2		110	32.7 -00.7	N 23 22.3 -00.5		243	56.2 -26.3	S 06 41.4 -14.7		22
23	165	15.7 -00.2	N 22 49.3 +00.3		125	32.0 -00.6	N 23 21.8 -00.5		258	29.9 -26.2	S 06 26.7 -14.8		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'2 15'2 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 55'8 55'9 56'0 56'2 56'3 56'4				
	SHA 285° 285° 284° 284° 284° 284°				SHA 245° 245° 245° 245° 244° 244°				SHA 027° 025° 023° 021° 020° 018°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 14:37				Greenwich Culmination Time: 05:14				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	213	30.3 +00.6	N 15 33.4 +00.5		138	09.2 +02.0	N 21 30.0 -00.1		242	48.6 +02.3	N 02 55.5 +00.1		00
01	228	30.9 +00.7	N 15 33.9 +00.6		153	11.2 +01.9	N 21 29.9 -00.1		257	50.9 +02.2	N 02 55.6 +00.0		01
02	243	31.6 +00.6	N 15 34.5 +00.6		168	13.1 +02.0	N 21 29.8 +00.0		272	53.1 +02.3	N 02 55.6 +00.1		02
03	258	32.2 +00.7	N 15 35.1 +00.5		183	15.1 +01.9	N 21 29.8 -00.1		287	55.4 +02.3	N 02 55.7 +00.1		03
04	273	32.9 +00.6	N 15 35.6 +00.6		198	17.0 +02.0	N 21 29.7 -00.1		302	57.7 +02.3	N 02 55.8 +00.0		04
05	288	33.5 +00.7	N 15 36.2 +00.6		213	19.0 +01.9	N 21 29.6 -00.1		317	60.0 +02.3	N 02 55.8 +00.1		05
06	303	34.2 +00.6	N 15 36.8 +00.5		228	20.9 +02.0	N 21 29.5 -00.1		333	02.3 +02.3	N 02 55.9 +00.1		06
07	318	34.8 +00.7	N 15 37.3 +00.6		243	22.9 +01.9	N 21 29.4 -00.1		348	04.6 +02.2	N 02 56.0 +00.0		07
08	333	35.5 +00.6	N 15 37.9 +00.6		258	24.8 +02.0	N 21 29.3 -00.1		3	06.8 +02.3	N 02 56.0 +00.1		08
09	348	36.1 +00.7	N 15 38.5 +00.5		273	26.8 +01.9	N 21 29.2 -00.1		18	09.1 +02.3	N 02 56.1 +00.1		09
10	3	36.8 +00.6	N 15 39.0 +00.6		288	28.7 +02.0	N 21 29.1 +00.0		33	11.4 +02.3	N 02 56.2 +00.0		10
11	18	37.4 +00.7	N 15 39.6 +00.6		303	30.7 +01.9	N 21 29.1 -00.1		48	13.7 +02.3	N 02 56.2 +00.1		11
12	33	38.1 +00.6	N 15 40.2 +00.5		318	32.6 +01.9	N 21 29.0 -00.1		63	16.0 +02.3	N 02 56.3 +00.1		12
13	48	38.7 +00.6	N 15 40.7 +00.6		333	34.5 +02.0	N 21 28.9 -00.1		78	18.3 +02.2	N 02 56.4 +00.0		13
14	63	39.3 +00.7	N 15 41.3 +00.6		348	36.5 +01.9	N 21 28.8 -00.1		93	20.5 +02.3	N 02 56.4 +00.1		14
15	78	40.0 +00.6	N 15 41.9 +00.5		3	38.4 +02.0	N 21 28.7 -00.1		108	22.8 +02.3	N 02 56.5 +00.1		15
16	93	40.6 +00.7	N 15 42.4 +00.6		18	40.4 +01.9	N 21 28.6 -00.1		123	25.1 +02.3	N 02 56.6 +00.0		16
17	108	41.3 +00.6	N 15 43.0 +00.6		33	42.3 +02.0	N 21 28.5 -00.1		138	27.4 +02.3	N 02 56.6 +00.1		17
18	123	41.9 +00.7	N 15 43.6 +00.5		48	44.3 +01.9	N 21 28.4 +00.0		153	29.7 +02.3	N 02 56.7 +00.1		18
19	138	42.6 +00.6	N 15 44.1 +00.6		63	46.2 +02.0	N 21 28.4 -00.1		168	32.0 +02.2	N 02 56.8 +00.0		19
20	153	43.2 +00.7	N 15 44.7 +00.5		78	48.2 +01.9	N 21 28.3 -00.1		183	34.2 +02.3	N 02 56.8 +00.1		20
21	168	43.9 +00.6	N 15 45.2 +00.6		93	50.1 +02.0	N 21 28.2 -00.1		198	36.5 +02.3	N 02 56.9 +00.1		21
22	183	44.5 +00.7	N 15 45.8 +00.6		108	52.1 +01.9	N 21 28.1 -00.1		213	38.8 +02.3	N 02 57.0 +00.0		22
23	198	45.2 +00.6	N 15 46.4 +00.5		123	54.0 +01.9	N 21 28.0 -00.1		228	41.1 +02.3	N 02 57.0 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 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 318° 318° 318° 318° 318° 317°				SHA 243° 243° 243° 243° 243° 243°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:45				Greenwich Culmination Time: 14:45				Greenwich Culmination Time: 07:47				

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	15.5 -00.1	N 22 49.6 +00.2		140	31.4 -00.7	N 23 21.3 -00.5		273	03.7 -26.2	S 06 11.9 -14.8		00
01	195	15.4 -00.1	N 22 49.8 +00.2		155	30.7 -00.7	N 23 20.8 -00.4		287	37.5 -26.3	S 05 57.1 -14.8		01
02	210	15.3 -00.1	N 22 50.0 +00.2		170	30.0 -00.7	N 23 20.4 -00.5		302	11.2 -26.2	S 05 42.3 -14.9		02
03	225	15.2 -00.1	N 22 50.2 +00.3		185	29.3 -00.7	N 23 19.9 -00.5		316	45.0 -26.3	S 05 27.4 -15.0		03
04	240	15.1 -00.2	N 22 50.5 +00.2		200	28.6 -00.6	N 23 19.4 -00.5		331	18.7 -26.3	S 05 12.4 -14.9		04
05	255	14.9 -00.1	N 22 50.7 +00.2		215	28.0 -00.7	N 23 18.9 -00.5		345	52.4 -26.3	S 04 57.5 -15.0		05
06	270	14.8 -00.1	N 22 50.9 +00.2		230	27.3 -00.7	N 23 18.4 -00.5		0	26.1 -26.3	S 04 42.5 -15.1		06
07	285	14.7 -00.1	N 22 51.1 +00.3		245	26.6 -00.7	N 23 17.9 -00.5		14	59.8 -26.3	S 04 27.4 -15.0		07
08	300	14.6 -00.1	N 22 51.4 +00.2		260	25.9 -00.6	N 23 17.4 -00.5		29	33.5 -26.3	S 04 12.4 -15.2		08
09	315	14.5 -00.2	N 22 51.6 +00.2		275	25.3 -00.7	N 23 16.9 -00.5		44	07.2 -26.4	S 03 57.2 -15.1		09
10	330	14.3 -00.1	N 22 51.8 +00.2		290	24.6 -00.7	N 23 16.4 -00.5		58	40.8 -26.3	S 03 42.1 -15.2		10
11	345	14.2 -00.1	N 22 52.0 +00.3		305	23.9 -00.7	N 23 15.9 -00.5		73	14.5 -26.4	S 03 26.9 -15.2		11
12	0	14.1 -00.1	N 22 52.3 +00.2		320	23.2 -00.6	N 23 15.4 -00.5		87	48.1 -26.4	S 03 11.7 -15.3		12
13	15	14.0 -00.1	N 22 52.5 +00.2		335	22.6 -00.7	N 23 14.9 -00.5		102	21.7 -26.5	S 02 56.4 -15.2		13
14	30	13.9 -00.2	N 22 52.7 +00.2		350	21.9 -00.7	N 23 14.4 -00.5		116	55.2 -26.4	S 02 41.2 -15.3		14
15	45	13.7 -00.1	N 22 52.9 +00.2		5	21.2 -00.7	N 23 13.9 -00.5		131	28.8 -26.5	S 02 25.9 -15.4		15
16	60	13.6 -00.1	N 22 53.1 +00.2		20	20.5 -00.6	N 23 13.4 -00.5		146	02.3 -26.5	S 02 10.5 -15.4		16
17	75	13.5 -00.1	N 22 53.3 +00.3		35	19.9 -00.7	N 23 12.9 -00.5		160	35.8 -26.5	S 01 55.1 -15.4		17
18	90	13.4 -00.1	N 22 53.6 +00.2		50	19.2 -00.7	N 23 12.4 -00.5		175	09.3 -26.6	S 01 39.7 -15.4		18
19	105	13.3 -00.2	N 22 53.8 +00.2		65	18.5 -00.6	N 23 11.9 -00.6		189	42.7 -26.6	S 01 24.3 -15.4		19
20	120	13.1 -00.1	N 22 54.0 +00.2		80	17.9 -00.7	N 23 11.3 -00.5		204	16.1 -26.6	S 01 08.9 -15.5		20
21	135	13.0 -00.1	N 22 54.2 +00.2		95	17.2 -00.7	N 23 10.8 -00.5		218	49.5 -26.7	S 00 53.4 -15.5		21
22	150	12.9 -00.1	N 22 54.4 +00.2		110	16.5 -00.7	N 23 10.3 -00.5		233	22.8 -26.7	S 00 37.9 -15.5		22
23	165	12.8 -00.1	N 22 54.6 +00.2		125	15.8 -00.6	N 23 09.8 -00.5		247	56.1 -26.7	S 00 22.4 -15.6		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 15'4 15'4 15'5 15'5 15'6 15'6				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 56'6 56'7 56'8 57'0 57'1 57'3				
	SHA 284° 284° 283° 283° 283° 283°				SHA 244° 244° 244° 243° 243° 243°				SHA 016° 014° 012° 010° 008° 006°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 14:38				Greenwich Culmination Time: 05:58				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	213	45.8 +00.7	N 15 46.9 +00.6		138	55.9 +02.0	N 21 27.9 -00.1		243	43.4 +02.3	N 02 57.1 +00.0		00
01	228	46.5 +00.6	N 15 47.5 +00.6		153	57.9 +01.9	N 21 27.8 -00.1		258	45.7 +02.3	N 02 57.1 +00.1		01
02	243	47.1 +00.7	N 15 48.1 +00.5		168	59.8 +02.0	N 21 27.7 +00.0		273	48.0 +02.2	N 02 57.2 +00.1		02
03	258	47.8 +00.6	N 15 48.6 +00.6		184	01.8 +01.9	N 21 27.7 -00.1		288	50.2 +02.3	N 02 57.3 +00.0		03
04	273	48.4 +00.7	N 15 49.2 +00.5		199	03.7 +02.0	N 21 27.6 -00.1		303	52.5 +02.3	N 02 57.3 +00.1		04
05	288	49.1 +00.6	N 15 49.7 +00.6		214	05.7 +01.9	N 21 27.5 -00.1		318	54.8 +02.3	N 02 57.4 +00.1		05
06	303	49.7 +00.6	N 15 50.3 +00.6		229	07.6 +02.0	N 21 27.4 -00.1		333	57.1 +02.3	N 02 57.5 +00.0		06
07	318	50.3 +00.7	N 15 50.9 +00.5		244	09.6 +01.9	N 21 27.3 -00.1		348	59.4 +02.3	N 02 57.5 +00.1		07
08	333	51.0 +00.6	N 15 51.4 +00.6		259	11.5 +01.9	N 21 27.2 -00.1		4	01.7 +02.3	N 02 57.6 +00.1		08
09	348	51.6 +00.7	N 15 52.0 +00.5		274	13.4 +02.0	N 21 27.1 -00.1		19	04.0 +02.2	N 02 57.7 +00.0		09
10	3	52.3 +00.6	N 15 52.5 +00.6		289	15.4 +01.9	N 21 27.0 -00.1		34	06.2 +02.3	N 02 57.7 +00.1		10
11	18	52.9 +00.7	N 15 53.1 +00.6		304	17.3 +02.0	N 21 26.9 +00.0		49	08.5 +02.3	N 02 57.8 +00.1		11
12	33	53.6 +00.6	N 15 53.7 +00.5		319	19.3 +01.9	N 21 26.9 -00.1		64	10.8 +02.3	N 02 57.9 +00.0		12
13	48	54.2 +00.7	N 15 54.2 +00.6		334	21.2 +02.0	N 21 26.8 -00.1		79	13.1 +02.3	N 02 57.9 +00.1		13
14	63	54.9 +00.6	N 15 54.8 +00.5		349	23.2 +01.9	N 21 26.7 -00.1		94	15.4 +02.3	N 02 58.0 +00.1		14
15	78	55.5 +00.7	N 15 55.3 +00.6		4	25.1 +02.0	N 21 26.6 -00.1		109	17.7 +02.3	N 02 58.1 +00.0		15
16	93	56.2 +00.6	N 15 55.9 +00.5		19	27.1 +01.9	N 21 26.5 -00.1		124	20.0 +02.3	N 02 58.1 +00.1		16
17	108	56.8 +00.7	N 15 56.4 +00.6		34	29.0 +01.9	N 21 26.4 -00.1		139	22.3 +02.2	N 02 58.2 +00.0		17
18	123	57.5 +00.6	N 15 57.0 +00.6		49	30.9 +02.0	N 21 26.3 -00.1		154	24.5 +02.3	N 02 58.2 +00.1		18
19	138	58.1 +00.6	N 15 57.6 +00.5		64	32.9 +01.9	N 21 26.2 -00.1		169	26.8 +02.3	N 02 58.3 +00.1		19
20	153	58.7 +00.7	N 15 58.1 +00.6		79	34.8 +02.0	N 21 26.1 +00.0		184	29.1 +02.3	N 02 58.4 +00.0		20
21	168	59.4 +00.6	N 15 58.7 +00.5		94	36.8 +01.9	N 21 26.1 -00.1		199	31.4 +02.3	N 02 58.4 +00.1		21
22	184	00.0 +00.7	N 15 59.2 +00.6		109	38.7 +02.0	N 21 26.0 -00.1		214	33.7 +02.3	N 02 58.5 +00.1		22
23	199	00.7 +00.6	N 15 59.8 +00.5		124	40.7 +01.9	N 21 25.9 -00.1		229	36.0 +02.3	N 02 58.6 +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 317° 317° 317° 317° 317° 317°				SHA 243° 242° 242° 242° 242° 242°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:44				Greenwich Culmination Time: 14:42				Greenwich Culmination Time: 07:43				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	12.7 -00.2	N 22 54.8 +00.2		140	15.2 -00.7	N 23 09.3 -00.5		262	29.4 -26.8	S 00 06.8 -15.5		00
01	195	12.5 -00.1	N 22 55.0 +00.3		155	14.5 -00.7	N 23 08.8 -00.5		277	02.6 -26.8	N 00 08.7 +15.6		01
02	210	12.4 -00.1	N 22 55.3 +00.2		170	13.8 -00.6	N 23 08.3 -00.6		291	35.8 -26.9	N 00 24.3 +15.6		02
03	225	12.3 -00.1	N 22 55.5 +00.2		185	13.2 -00.7	N 23 07.7 -00.5		306	08.9 -26.9	N 00 39.9 +15.6		03
04	240	12.2 -00.2	N 22 55.7 +00.2		200	12.5 -00.7	N 23 07.2 -00.5		320	42.0 -26.9	N 00 55.5 +15.6		04
05	255	12.0 -00.1	N 22 55.9 +00.2		215	11.8 -00.6	N 23 06.7 -00.5		335	15.1 -27.0	N 01 11.1 +15.7		05
06	270	11.9 -00.1	N 22 56.1 +00.2		230	11.2 -00.7	N 23 06.2 -00.5		349	48.1 -27.0	N 01 26.8 +15.7		06
07	285	11.8 -00.1	N 22 56.3 +00.2		245	10.5 -00.7	N 23 05.7 -00.6		4	21.1 -27.1	N 01 42.5 +15.6		07
08	300	11.7 -00.2	N 22 56.5 +00.2		260	09.8 -00.6	N 23 05.1 -00.5		18	54.0 -27.1	N 01 58.1 +15.7		08
09	315	11.5 -00.1	N 22 56.7 +00.2		275	09.2 -00.7	N 23 04.6 -00.5		33	26.9 -27.2	N 02 13.8 +15.7		09
10	330	11.4 -00.1	N 22 56.9 +00.2		290	08.5 -00.6	N 23 04.1 -00.5		47	59.7 -27.2	N 02 29.5 +15.7		10
11	345	11.3 -00.1	N 22 57.1 +00.2		305	07.9 -00.7	N 23 03.6 -00.6		62	32.5 -27.3	N 02 45.2 +15.8		11
12	0	11.2 -00.1	N 22 57.3 +00.2		320	07.2 -00.7	N 23 03.0 -00.5		77	05.2 -27.3	N 03 01.0 +15.7		12
13	15	11.1 -00.2	N 22 57.5 +00.2		335	06.5 -00.6	N 23 02.5 -00.5		91	37.9 -27.4	N 03 16.7 +15.7		13
14	30	10.9 -00.1	N 22 57.7 +00.2		350	05.9 -00.7	N 23 02.0 -00.6		106	10.5 -27.4	N 03 32.4 +15.8		14
15	45	10.8 -00.1	N 22 57.9 +00.2		5	05.2 -00.6	N 23 01.4 -00.5		120	43.1 -27.5	N 03 48.2 +15.7		15
16	60	10.7 -00.1	N 22 58.1 +00.2		20	04.6 -00.7	N 23 00.9 -00.5		135	15.6 -27.6	N 04 03.9 +15.7		16
17	75	10.6 -00.2	N 22 58.3 +00.2		35	03.9 -00.7	N 23 00.4 -00.5		149	48.0 -27.6	N 04 19.6 +15.8		17
18	90	10.4 -00.1	N 22 58.5 +00.2		50	03.2 -00.6	N 22 59.9 -00.6		164	20.4 -27.7	N 04 35.4 +15.7		18
19	105	10.3 -00.1	N 22 58.7 +00.2		65	02.6 -00.7	N 22 59.3 -00.5		178	52.7 -27.8	N 04 51.1 +15.8		19
20	120	10.2 -00.1	N 22 58.9 +00.2		80	01.9 -00.6	N 22 58.8 -00.6		193	24.9 -27.8	N 05 06.9 +15.7		20
21	135	10.1 -00.2	N 22 59.1 +00.2		95	01.3 -00.7	N 22 58.2 -00.5		207	57.1 -27.9	N 05 22.6 +15.8		21
22	150	09.9 -00.1	N 22 59.3 +00.2		110	00.6 -00.6	N 22 57.7 -00.5		222	29.2 -27.9	N 05 38.4 +15.7		22
23	165	09.8 -00.1	N 22 59.5 +00.2		124	60.0 -00.7	N 22 57.2 -00.6		237	01.3 -28.1	N 05 54.1 +15.7		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'6 15'7 15'7 15'8 15'8 15'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 57'4 57'6 57'7 57'9 58'0 58'2				
	SHA 283° 283° 282° 282° 282° 282°				SHA 243° 243° 242° 242° 242° 242°				SHA 004° 002° 000° 358° 356° 354°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 14:39				Greenwich Culmination Time: 06:42				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	214	01.3 +00.7	N 16 00.3 +00.6		139	42.6 +01.9	N 21 25.8 -00.1		244	38.3 +02.3	N 02 58.6 +00.1		00
01	229	02.0 +00.6	N 16 00.9 +00.6		154	44.5 +02.0	N 21 25.7 -00.1		259	40.6 +02.2	N 02 58.7 +00.1		01
02	244	02.6 +00.7	N 16 01.5 +00.5		169	46.5 +01.9	N 21 25.6 -00.1		274	42.8 +02.3	N 02 58.8 +00.0		02
03	259	03.3 +00.6	N 16 02.0 +00.6		184	48.4 +02.0	N 21 25.5 -00.1		289	45.1 +02.3	N 02 58.8 +00.1		03
04	274	03.9 +00.6	N 16 02.6 +00.5		199	50.4 +01.9	N 21 25.4 -00.1		304	47.4 +02.3	N 02 58.9 +00.0		04
05	289	04.5 +00.7	N 16 03.1 +00.6		214	52.3 +01.9	N 21 25.3 +00.0		319	49.7 +02.3	N 02 58.9 +00.1		05
06	304	05.2 +00.6	N 16 03.7 +00.5		229	54.2 +02.0	N 21 25.3 -00.1		334	52.0 +02.3	N 02 59.0 +00.1		06
07	319	05.8 +00.7	N 16 04.2 +00.6		244	56.2 +01.9	N 21 25.2 -00.1		349	54.3 +02.3	N 02 59.1 +00.0		07
08	334	06.5 +00.6	N 16 04.8 +00.5		259	58.1 +02.0	N 21 25.1 -00.1		4	56.6 +02.3	N 02 59.1 +00.1		08
09	349	07.1 +00.7	N 16 05.3 +00.6		275	00.1 +01.9	N 21 25.0 -00.1		19	58.9 +02.3	N 02 59.2 +00.1		09
10	4	07.8 +00.6	N 16 05.9 +00.5		290	02.0 +02.0	N 21 24.9 -00.1		35	01.2 +02.3	N 02 59.3 +00.0		10
11	19	08.4 +00.7	N 16 06.4 +00.6		305	04.0 +01.9	N 21 24.8 -00.1		50	03.5 +02.2	N 02 59.3 +00.1		11
12	34	09.1 +00.6	N 16 07.0 +00.5		320	05.9 +01.9	N 21 24.7 -00.1		65	05.7 +02.3	N 02 59.4 +00.0		12
13	49	09.7 +00.6	N 16 07.5 +00.6		335	07.8 +02.0	N 21 24.6 -00.1		80	08.0 +02.3	N 02 59.4 +00.1		13
14	64	10.3 +00.7	N 16 08.1 +00.5		350	09.8 +01.9	N 21 24.5 -00.1		95	10.3 +02.3	N 02 59.5 +00.1		14
15	79	11.0 +00.6	N 16 08.6 +00.6		5	11.7 +02.0	N 21 24.4 +00.0		110	12.6 +02.3	N 02 59.6 +00.0		15
16	94	11.6 +00.7	N 16 09.2 +00.5		20	13.7 +01.9	N 21 24.4 -00.1		125	14.9 +02.3	N 02 59.6 +00.1		16
17	109	12.3 +00.6	N 16 09.7 +00.6		35	15.6 +01.9	N 21 24.3 -00.1		140	17.2 +02.3	N 02 59.7 +00.1		17
18	124	12.9 +00.7	N 16 10.3 +00.5		50	17.5 +02.0	N 21 24.2 -00.1		155	19.5 +02.3	N 02 59.8 +00.0		18
19	139	13.6 +00.6	N 16 10.8 +00.6		65	19.5 +01.9	N 21 24.1 -00.1		170	21.8 +02.3	N 02 59.8 +00.1		19
20	154	14.2 +00.7	N 16 11.4 +00.5		80	21.4 +02.0	N 21 24.0 -00.1		185	24.1 +02.3	N 02 59.9 +00.0		20
21	169	14.9 +00.6	N 16 11.9 +00.6		95	23.4 +01.9	N 21 23.9 -00.1		200	26.4 +02.2	N 02 59.9 +00.1		21
22	184	15.5 +00.6	N 16 12.5 +00.5		110	25.3 +01.9	N 21 23.8 -00.1		215	28.6 +02.3	N 03 00.0 +00.1		22
23	199	16.1 +00.7	N 16 13.0 +00.6		125	27.2 +02.0	N 21 23.7 -00.1		230	30.9 +02.3	N 03 00.1 +00.0		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 317° 316° 316° 316° 316° 316°				SHA 242° 242° 242° 242° 242° 242°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:43				Greenwich Culmination Time: 14:39				Greenwich Culmination Time: 07:40				

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	09.7 -00.1	N 22 59.7 +00.2		139	59.3 -00.7	N 22 56.6 -00.5		251	33.2 -28.1	N 06 09.8 +15.8		00
01	195	09.6 -00.2	N 22 59.9 +00.2		154	58.6 -00.6	N 22 56.1 -00.6		266	05.1 -28.1	N 06 25.6 +15.7		01
02	210	09.4 -00.1	N 23 00.1 +00.2		169	58.0 -00.7	N 22 55.5 -00.5		280	37.0 -28.3	N 06 41.3 +15.7		02
03	225	09.3 -00.1	N 23 00.3 +00.2		184	57.3 -00.6	N 22 55.0 -00.5		295	08.7 -28.3	N 06 57.0 +15.7		03
04	240	09.2 -00.1	N 23 00.5 +00.2		199	56.7 -00.7	N 22 54.5 -00.6		309	40.4 -28.4	N 07 12.7 +15.7		04
05	255	09.1 -00.2	N 23 00.7 +00.2		214	56.0 -00.6	N 22 53.9 -00.5		324	12.0 -28.5	N 07 28.4 +15.6		05
06	270	08.9 -00.1	N 23 00.9 +00.2		229	55.4 -00.7	N 22 53.4 -00.6		338	43.5 -28.6	N 07 44.0 +15.7		06
07	285	08.8 -00.1	N 23 01.1 +00.1		244	54.7 -00.6	N 22 52.8 -00.5		353	14.9 -28.6	N 07 59.7 +15.6		07
08	300	08.7 -00.1	N 23 01.2 +00.2		259	54.1 -00.7	N 22 52.3 -00.6		7	46.3 -28.8	N 08 15.3 +15.6		08
09	315	08.6 -00.2	N 23 01.4 +00.2		274	53.4 -00.6	N 22 51.7 -00.5		22	17.5 -28.8	N 08 30.9 +15.6		09
10	330	08.4 -00.1	N 23 01.6 +00.2		289	52.8 -00.7	N 22 51.2 -00.6		36	48.7 -28.9	N 08 46.5 +15.6		10
11	345	08.3 -00.1	N 23 01.8 +00.2		304	52.1 -00.6	N 22 50.6 -00.5		51	19.8 -29.0	N 09 02.1 +15.5		11
12	0	08.2 -00.1	N 23 02.0 +00.2		319	51.5 -00.7	N 22 50.1 -00.6		65	50.8 -29.1	N 09 17.6 +15.5		12
13	15	08.1 -00.2	N 23 02.2 +00.2		334	50.8 -00.6	N 22 49.5 -00.5		80	21.7 -29.1	N 09 33.1 +15.5		13
14	30	07.9 -00.1	N 23 02.4 +00.1		349	50.2 -00.7	N 22 49.0 -00.6		94	52.6 -29.3	N 09 48.6 +15.5		14
15	45	07.8 -00.1	N 23 02.5 +00.2		4	49.5 -00.6	N 22 48.4 -00.6		109	23.3 -29.4	N 10 04.1 +15.4		15
16	60	07.7 -00.2	N 23 02.7 +00.2		19	48.9 -00.6	N 22 47.8 -00.5		123	53.9 -29.4	N 10 19.5 +15.5		16
17	75	07.5 -00.1	N 23 02.9 +00.2		34	48.3 -00.7	N 22 47.3 -00.6		138	24.5 -29.6	N 10 35.0 +15.3		17
18	90	07.4 -00.1	N 23 03.1 +00.2		49	47.6 -00.6	N 22 46.7 -00.5		152	54.9 -29.6	N 10 50.3 +15.4		18
19	105	07.3 -00.1	N 23 03.3 +00.2		64	47.0 -00.7	N 22 46.2 -00.6		167	25.3 -29.8	N 11 05.7 +15.3		19
20	120	07.2 -00.2	N 23 03.5 +00.1		79	46.3 -00.6	N 22 45.6 -00.6		181	55.5 -29.8	N 11 21.0 +15.2		20
21	135	07.0 -00.1	N 23 03.6 +00.2		94	45.7 -00.7	N 22 45.0 -00.5		196	25.7 -30.0	N 11 36.2 +15.3		21
22	150	06.9 -00.1	N 23 03.8 +00.2		109	45.0 -00.6	N 22 44.5 -00.6		210	55.7 -30.1	N 11 51.5 +15.2		22
23	165	06.8 -00.1	N 23 04.0 +00.2		124	44.4 -00.6	N 22 43.9 -00.5		225	25.6 -30.1	N 12 06.7 +15.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 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 16'1 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 58'3 58'5 58'6 58'8 58'9 59'1				
	SHA 282° 282° 281° 281° 281° 281°				SHA 242° 241° 241° 241° 241° 240°				SHA 352° 350° 348° 346° 344° 342°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 14:40				Greenwich Culmination Time: 07:27				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	214	16.8 +00.6	N 16 13.6 +00.5		140	29.2 +01.9	N 21 23.6 -00.1		245	33.2 +02.3	N 03 00.1 +00.1		00
01	229	17.4 +00.7	N 16 14.1 +00.6		155	31.1 +02.0	N 21 23.5 +00.0		260	35.5 +02.3	N 03 00.2 +00.1		01
02	244	18.1 +00.6	N 16 14.7 +00.5		170	33.1 +01.9	N 21 23.5 -00.1		275	37.8 +02.3	N 03 00.3 +00.0		02
03	259	18.7 +00.7	N 16 15.2 +00.6		185	35.0 +01.9	N 21 23.4 -00.1		290	40.1 +02.3	N 03 00.3 +00.1		03
04	274	19.4 +00.6	N 16 15.8 +00.5		200	36.9 +02.0	N 21 23.3 -00.1		305	42.4 +02.3	N 03 00.4 +00.0		04
05	289	20.0 +00.6	N 16 16.3 +00.6		215	38.9 +01.9	N 21 23.2 -00.1		320	44.7 +02.3	N 03 00.4 +00.1		05
06	304	20.6 +00.7	N 16 16.9 +00.5		230	40.8 +02.0	N 21 23.1 -00.1		335	47.0 +02.3	N 03 00.5 +00.1		06
07	319	21.3 +00.6	N 16 17.4 +00.6		245	42.8 +01.9	N 21 23.0 -00.1		350	49.3 +02.3	N 03 00.6 +00.0		07
08	334	21.9 +00.7	N 16 18.0 +00.5		260	44.7 +01.9	N 21 22.9 -00.1		5	51.6 +02.3	N 03 00.6 +00.1		08
09	349	22.6 +00.6	N 16 18.5 +00.6		275	46.6 +02.0	N 21 22.8 -00.1		20	53.9 +02.2	N 03 00.7 +00.1		09
10	4	23.2 +00.7	N 16 19.1 +00.5		290	48.6 +01.9	N 21 22.7 -00.1		35	56.1 +02.3	N 03 00.8 +00.0		10
11	19	23.9 +00.6	N 16 19.6 +00.6		305	50.5 +02.0	N 21 22.6 +00.0		50	58.4 +02.3	N 03 00.8 +00.1		11
12	34	24.5 +00.6	N 16 20.2 +00.5		320	52.5 +01.9	N 21 22.6 -00.1		66	00.7 +02.3	N 03 00.9 +00.0		12
13	49	25.1 +00.7	N 16 20.7 +00.5		335	54.4 +01.9	N 21 22.5 -00.1		81	03.0 +02.3	N 03 00.9 +00.1		13
14	64	25.8 +00.6	N 16 21.2 +00.6		350	56.3 +02.0	N 21 22.4 -00.1		96	05.3 +02.3	N 03 01.0 +00.1		14
15	79	26.4 +00.7	N 16 21.8 +00.5		5	58.3 +01.9	N 21 22.3 -00.1		111	07.6 +02.3	N 03 01.1 +00.0		15
16	94	27.1 +00.6	N 16 22.3 +00.6		21	00.2 +02.0	N 21 22.2 -00.1		126	09.9 +02.3	N 03 01.1 +00.1		16
17	109	27.7 +00.7	N 16 22.9 +00.5		36	02.2 +01.9	N 21 22.1 -00.1		141	12.2 +02.3	N 03 01.2 +00.0		17
18	124	28.4 +00.6	N 16 23.4 +00.6		51	04.1 +01.9	N 21 22.0 -00.1		156	14.5 +02.3	N 03 01.2 +00.1		18
19	139	29.0 +00.6	N 16 24.0 +00.5		66	06.0 +02.0	N 21 21.9 -00.1		171	16.8 +02.3	N 03 01.3 +00.1		19
20	154	29.6 +00.7	N 16 24.5 +00.5		81	08.0 +01.9	N 21 21.8 -00.1		186	19.1 +02.3	N 03 01.4 +00.0		20
21	169	30.3 +00.6	N 16 25.0 +00.6		96	09.9 +01.9	N 21 21.7 -00.1		201	21.4 +02.3	N 03 01.4 +00.1		21
22	184	30.9 +00.7	N 16 25.6 +00.5		111	11.8 +02.0	N 21 21.6 -00.1		216	23.7 +02.3	N 03 01.5 +00.0		22
23	199	31.6 +00.6	N 16 26.1 +00.6		126	13.8 +01.9	N 21 21.5 +00.0		231	26.0 +02.3	N 03 01.5 +00.1		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 316° 316° 316° 315° 315° 315°				SHA 242° 242° 242° 242° 242° 242°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:42				Greenwich Culmination Time: 14:36				Greenwich Culmination Time: 07:36				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 06.7 -00.2	N 23 04.2 +00.1	139 43.8 -00.7	N 22 43.4 -00.6	239 55.5 -30.3	N 12 21.8 +15.1	00						
01	195 06.5 -00.1	N 23 04.3 +00.2	154 43.1 -00.6	N 22 42.8 -00.6	254 25.2 -30.4	N 12 36.9 +15.0	01						
02	210 06.4 -00.1	N 23 04.5 +00.2	169 42.5 -00.7	N 22 42.2 -00.5	268 54.8 -30.5	N 12 51.9 +15.0	02						
03	225 06.3 -00.2	N 23 04.7 +00.2	184 41.8 -00.6	N 22 41.7 -00.6	283 24.3 -30.6	N 13 06.9 +15.0	03						
04	240 06.1 -00.1	N 23 04.9 +00.1	199 41.2 -00.6	N 22 41.1 -00.6	297 53.7 -30.7	N 13 21.9 +14.9	04						
05	255 06.0 -00.1	N 23 05.0 +00.2	214 40.6 -00.7	N 22 40.5 -00.6	312 23.0 -30.8	N 13 36.8 +14.8	05						
06	270 05.9 -00.1	N 23 05.2 +00.2	229 39.9 -00.6	N 22 39.9 -00.5	326 52.2 -31.0	N 13 51.6 +14.8	06						
07	285 05.8 -00.2	N 23 05.4 +00.2	244 39.3 -00.6	N 22 39.4 -00.6	341 21.2 -31.0	N 14 06.4 +14.8	07						
08	300 05.6 -00.1	N 23 05.6 +00.1	259 38.7 -00.7	N 22 38.8 -00.6	355 50.2 -31.2	N 14 21.2 +14.6	08						
09	315 05.5 -00.1	N 23 05.7 +00.2	274 38.0 -00.6	N 22 38.2 -00.6	10 19.0 -31.3	N 14 35.8 +14.6	09						
10	330 05.4 -00.1	N 23 05.9 +00.2	289 37.4 -00.6	N 22 37.6 -00.5	24 47.7 -31.4	N 14 50.4 +14.6	10						
11	345 05.3 -00.2	N 23 06.1 +00.2	304 36.8 -00.7	N 22 37.1 -00.6	39 16.3 -31.6	N 15 05.0 +14.5	11						
12	0 05.1 -00.1	N 23 06.3 +00.1	319 36.1 -00.6	N 22 36.5 -00.6	53 44.7 -31.6	N 15 19.5 +14.4	12						
13	15 05.0 -00.1	N 23 06.4 +00.2	334 35.5 -00.6	N 22 35.9 -00.6	68 13.1 -31.8	N 15 33.9 +14.3	13						
14	30 04.9 -00.2	N 23 06.6 +00.2	349 34.9 -00.7	N 22 35.3 -00.5	82 41.3 -31.9	N 15 48.2 +14.3	14						
15	45 04.7 -00.1	N 23 06.8 +00.1	4 34.2 -00.6	N 22 34.8 -00.6	97 09.4 -32.0	N 16 02.5 +14.2	15						
16	60 04.6 -00.1	N 23 06.9 +00.2	19 33.6 -00.6	N 22 34.2 -00.6	111 37.4 -32.2	N 16 16.7 +14.1	16						
17	75 04.5 -00.2	N 23 07.1 +00.2	34 33.0 -00.7	N 22 33.6 -00.6	126 05.2 -32.3	N 16 30.8 +14.1	17						
18	90 04.3 -00.1	N 23 07.3 +00.1	49 32.3 -00.6	N 22 33.0 -00.6	140 32.9 -32.4	N 16 44.9 +13.9	18						
19	105 04.2 -00.1	N 23 07.4 +00.2	64 31.7 -00.6	N 22 32.4 -00.6	155 00.5 -32.6	N 16 58.8 +13.9	19						
20	120 04.1 -00.1	N 23 07.6 +00.1	79 31.1 -00.7	N 22 31.8 -00.6	169 27.9 -32.6	N 17 12.7 +13.8	20						
21	135 04.0 -00.2	N 23 07.7 +00.2	94 30.4 -00.6	N 22 31.2 -00.5	183 55.3 -32.8	N 17 26.5 +13.7	21						
22	150 03.8 -00.1	N 23 07.9 +00.2	109 29.8 -00.6	N 22 30.7 -00.6	198 22.5 -33.0	N 17 40.2 +13.6	22						
23	165 03.7 -00.1	N 23 08.1 +00.1	124 29.2 -00.6	N 22 30.1 -00.6	212 49.5 -33.0	N 17 53.8 +13.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 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 59'2 59'4 59'5 59'7 59'8 60'0								
	SHA 281° 280° 280° 280° 280° 280°		SHA 240° 240° 240° 240° 239° 239°		SHA 339° 337° 335° 333° 330° 328°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 14:41		Greenwich Culmination Time: 08:17								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	214 32.2 +00.6	N 16 26.7 +00.5	141 15.7 +02.0	N 21 21.5 -00.1	246 28.3 +02.2	N 03 01.6 +00.1	00						
01	229 32.8 +00.7	N 16 27.2 +00.6	156 17.7 +01.9	N 21 21.4 -00.1	261 30.5 +02.3	N 03 01.7 +00.0	01						
02	244 33.5 +00.6	N 16 27.8 +00.5	171 19.6 +01.9	N 21 21.3 -00.1	276 32.8 +02.3	N 03 01.7 +00.1	02						
03	259 34.1 +00.7	N 16 28.3 +00.5	186 21.5 +02.0	N 21 21.2 -00.1	291 35.1 +02.3	N 03 01.8 +00.1	03						
04	274 34.8 +00.6	N 16 28.8 +00.6	201 23.5 +01.9	N 21 21.1 -00.1	306 37.4 +02.3	N 03 01.9 +00.0	04						
05	289 35.4 +00.7	N 16 29.4 +00.5	216 25.4 +01.9	N 21 21.0 -00.1	321 39.7 +02.3	N 03 01.9 +00.1	05						
06	304 36.1 +00.6	N 16 29.9 +00.6	231 27.3 +02.0	N 21 20.9 -00.1	336 42.0 +02.3	N 03 02.0 +00.0	06						
07	319 36.7 +00.6	N 16 30.5 +00.5	246 29.3 +01.9	N 21 20.8 -00.1	351 44.3 +02.3	N 03 02.0 +00.1	07						
08	334 37.3 +00.7	N 16 31.0 +00.5	261 31.2 +02.0	N 21 20.7 -00.1	6 46.6 +02.3	N 03 02.1 +00.1	08						
09	349 38.0 +00.6	N 16 31.5 +00.6	276 33.2 +01.9	N 21 20.6 -00.1	21 48.9 +02.3	N 03 02.2 +00.0	09						
10	4 38.6 +00.7	N 16 32.1 +00.5	291 35.1 +01.9	N 21 20.5 +00.0	36 51.2 +02.3	N 03 02.2 +00.1	10						
11	19 39.3 +00.6	N 16 32.6 +00.5	306 37.0 +02.0	N 21 20.5 -00.1	51 53.5 +02.3	N 03 02.3 +00.0	11						
12	34 39.9 +00.6	N 16 33.1 +00.6	321 39.0 +01.9	N 21 20.4 -00.1	66 55.8 +02.3	N 03 02.3 +00.1	12						
13	49 40.5 +00.7	N 16 33.7 +00.5	336 40.9 +01.9	N 21 20.3 -00.1	81 58.1 +02.3	N 03 02.4 +00.1	13						
14	64 41.2 +00.6	N 16 34.2 +00.6	351 42.8 +02.0	N 21 20.2 -00.1	97 00.4 +02.3	N 03 02.5 +00.0	14						
15	79 41.8 +00.7	N 16 34.8 +00.5	6 44.8 +01.9	N 21 20.1 -00.1	112 02.7 +02.3	N 03 02.5 +00.1	15						
16	94 42.5 +00.6	N 16 35.3 +00.5	21 46.7 +02.0	N 21 20.0 -00.1	127 05.0 +02.3	N 03 02.6 +00.0	16						
17	109 43.1 +00.6	N 16 35.8 +00.6	36 48.7 +01.9	N 21 19.9 -00.1	142 07.3 +02.3	N 03 02.6 +00.1	17						
18	124 43.7 +00.7	N 16 36.4 +00.5	51 50.6 +01.9	N 21 19.8 -00.1	157 09.6 +02.3	N 03 02.7 +00.1	18						
19	139 44.4 +00.6	N 16 36.9 +00.5	66 52.5 +02.0	N 21 19.7 -00.1	172 11.9 +02.3	N 03 02.8 +00.0	19						
20	154 45.0 +00.7	N 16 37.4 +00.6	81 54.5 +01.9	N 21 19.6 -00.1	187 14.2 +02.3	N 03 02.8 +00.1	20						
21	169 45.7 +00.6	N 16 38.0 +00.5	96 56.4 +01.9	N 21 19.5 -00.1	202 16.5 +02.3	N 03 02.9 +00.0	21						
22	184 46.3 +00.6	N 16 38.5 +00.5	111 58.3 +02.0	N 21 19.4 -00.1	217 18.8 +02.3	N 03 02.9 +00.1	22						
23	199 46.9 +00.7	N 16 39.0 +00.6	127 00.3 +01.9	N 21 19.3 +00.0	232 21.1 +02.2	N 03 03.0 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 315° 315° 315° 315° 315° 315°		SHA 242° 242° 242° 242° 242° 242°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:41		Greenwich Culmination Time: 14:33		Greenwich Culmination Time: 07:32								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	03.6 -00.2	N 23 08.2	+00.2	139	28.6 -00.7	N 22 29.5	-00.6	227	16.5 -33.2	N 18 07.3	+13.5	00
01	195	03.4 -00.1	N 23 08.4	+00.1	154	27.9 -00.6	N 22 28.9	-00.6	241	43.3 -33.4	N 18 20.8	+13.3	01
02	210	03.3 -00.1	N 23 08.5	+00.2	169	27.3 -00.6	N 22 28.3	-00.6	256	09.9 -33.5	N 18 34.1	+13.3	02
03	225	03.2 -00.1	N 23 08.7	+00.2	184	26.7 -00.6	N 22 27.7	-00.6	270	36.4 -33.6	N 18 47.4	+13.1	03
04	240	03.1 -00.2	N 23 08.9	+00.1	199	26.1 -00.7	N 22 27.1	-00.6	285	02.8 -33.7	N 19 00.5	+13.0	04
05	255	02.9 -00.1	N 23 09.0	+00.2	214	25.4 -00.6	N 22 26.5	-00.6	299	29.1 -33.9	N 19 13.5	+13.0	05
06	270	02.8 -00.1	N 23 09.2	+00.1	229	24.8 -00.6	N 22 25.9	-00.6	313	55.2 -34.0	N 19 26.5	+12.8	06
07	285	02.7 -00.2	N 23 09.3	+00.2	244	24.2 -00.6	N 22 25.3	-00.6	328	21.2 -34.2	N 19 39.3	+12.7	07
08	300	02.5 -00.1	N 23 09.5	+00.1	259	23.6 -00.7	N 22 24.7	-00.6	342	47.0 -34.3	N 19 52.0	+12.6	08
09	315	02.4 -00.1	N 23 09.6	+00.2	274	22.9 -00.6	N 22 24.1	-00.6	357	12.7 -34.4	N 20 04.6	+12.5	09
10	330	02.3 -00.2	N 23 09.8	+00.2	289	22.3 -00.6	N 22 23.5	-00.6	11	38.3 -34.6	N 20 17.1	+12.4	10
11	345	02.1 -00.1	N 23 10.0	+00.1	304	21.7 -00.6	N 22 22.9	-00.6	26	03.7 -34.7	N 20 29.5	+12.3	11
12	0	02.0 -00.1	N 23 10.1	+00.2	319	21.1 -00.6	N 22 22.3	-00.6	40	29.0 -34.8	N 20 41.8	+12.1	12
13	15	01.9 -00.2	N 23 10.3	+00.1	334	20.5 -00.6	N 22 21.7	-00.6	54	54.2 -35.0	N 20 53.9	+12.0	13
14	30	01.7 -00.1	N 23 10.4	+00.2	349	19.9 -00.7	N 22 21.1	-00.6	69	19.2 -35.1	N 21 05.9	+11.9	14
15	45	01.6 -00.1	N 23 10.6	+00.1	4	19.2 -00.6	N 22 20.5	-00.6	83	44.1 -35.3	N 21 17.8	+11.8	15
16	60	01.5 -00.1	N 23 10.7	+00.2	19	18.6 -00.6	N 22 19.9	-00.6	98	08.8 -35.4	N 21 29.6	+11.6	16
17	75	01.4 -00.2	N 23 10.9	+00.1	34	18.0 -00.6	N 22 19.3	-00.6	112	33.4 -35.5	N 21 41.2	+11.5	17
18	90	01.2 -00.1	N 23 11.0	+00.2	49	17.4 -00.6	N 22 18.7	-00.6	126	57.9 -35.7	N 21 52.7	+11.3	18
19	105	01.1 -00.1	N 23 11.2	+00.1	64	16.8 -00.6	N 22 18.1	-00.6	141	22.2 -35.9	N 22 04.0	+11.3	19
20	120	01.0 -00.2	N 23 11.3	+00.1	79	16.2 -00.7	N 22 17.5	-00.6	155	46.3 -35.9	N 22 15.3	+11.0	20
21	135	00.8 -00.1	N 23 11.4	+00.2	94	15.5 -00.6	N 22 16.9	-00.7	170	10.4 -36.1	N 22 26.3	+11.0	21
22	150	00.7 -00.1	N 23 11.6	+00.1	109	14.9 -00.6	N 22 16.2	-00.6	184	34.3 -36.2	N 22 37.3	+10.8	22
23	165	00.6 -00.2	N 23 11.7	+00.2	124	14.3 -00.6	N 22 15.6	-00.6	198	58.1 -36.4	N 22 48.1	+10.6	23
	UT 02 06 10 14 18 22								UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8								SD 16'4 16'4 16'4 16'5 16'5 16'5				
	HP 00'1 00'1 00'1 00'1 00'1 00'1								HP 60'1 60'2 60'3 60'5 60'6 60'7				
	SHA 280° 279° 279° 279° 279° 279°								SHA 326° 323° 321° 318° 316° 313°				
	Greenwich Culmination Time: 11:59								Greenwich Culmination Time: 09:11				

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	214	47.6 +00.6	N 16 39.6	+00.5	142	02.2 +01.9	N 21 19.3	-00.1	247	23.3 +02.3	N 03 03.1	+00.0	00
01	229	48.2 +00.7	N 16 40.1	+00.6	157	04.1 +02.0	N 21 19.2	-00.1	262	25.6 +02.3	N 03 03.1	+00.1	01
02	244	48.9 +00.6	N 16 40.7	+00.5	172	06.1 +01.9	N 21 19.1	-00.1	277	27.9 +02.3	N 03 03.2	+00.0	02
03	259	49.5 +00.6	N 16 41.2	+00.5	187	08.0 +01.9	N 21 19.0	-00.1	292	30.2 +02.3	N 03 03.2	+00.1	03
04	274	50.1 +00.7	N 16 41.7	+00.6	202	09.9 +02.0	N 21 18.9	-00.1	307	32.5 +02.3	N 03 03.3	+00.1	04
05	289	50.8 +00.6	N 16 42.3	+00.5	217	11.9 +01.9	N 21 18.8	-00.1	322	34.8 +02.3	N 03 03.4	+00.0	05
06	304	51.4 +00.7	N 16 42.8	+00.5	232	13.8 +01.9	N 21 18.7	-00.1	337	37.1 +02.3	N 03 03.4	+00.1	06
07	319	52.1 +00.6	N 16 43.3	+00.6	247	15.7 +02.0	N 21 18.6	-00.1	352	39.4 +02.3	N 03 03.5	+00.0	07
08	334	52.7 +00.6	N 16 43.9	+00.5	262	17.7 +01.9	N 21 18.5	-00.1	7	41.7 +02.3	N 03 03.5	+00.1	08
09	349	53.3 +00.7	N 16 44.4	+00.5	277	19.6 +02.0	N 21 18.4	-00.1	22	44.0 +02.3	N 03 03.6	+00.0	09
10	4	54.0 +00.6	N 16 44.9	+00.5	292	21.6 +01.9	N 21 18.3	-00.1	37	46.3 +02.3	N 03 03.6	+00.1	10
11	19	54.6 +00.7	N 16 45.4	+00.6	307	23.5 +01.9	N 21 18.2	-00.1	52	48.6 +02.3	N 03 03.7	+00.1	11
12	34	55.3 +00.6	N 16 46.0	+00.5	322	25.4 +02.0	N 21 18.1	-00.1	67	50.9 +02.3	N 03 03.8	+00.0	12
13	49	55.9 +00.6	N 16 46.5	+00.5	337	27.4 +01.9	N 21 18.0	+00.0	82	53.2 +02.3	N 03 03.8	+00.1	13
14	64	56.5 +00.7	N 16 47.0	+00.6	352	29.3 +01.9	N 21 18.0	-00.1	97	55.5 +02.3	N 03 03.9	+00.0	14
15	79	57.2 +00.6	N 16 47.6	+00.5	7	31.2 +02.0	N 21 17.9	-00.1	112	57.8 +02.3	N 03 03.9	+00.1	15
16	94	57.8 +00.7	N 16 48.1	+00.5	22	33.2 +01.9	N 21 17.8	-00.1	128	00.1 +02.3	N 03 04.0	+00.1	16
17	109	58.5 +00.6	N 16 48.6	+00.6	37	35.1 +01.9	N 21 17.7	-00.1	143	02.4 +02.3	N 03 04.1	+00.0	17
18	124	59.1 +00.6	N 16 49.2	+00.5	52	37.0 +02.0	N 21 17.6	-00.1	158	04.7 +02.3	N 03 04.1	+00.1	18
19	139	59.7 +00.7	N 16 49.7	+00.5	67	39.0 +01.9	N 21 17.5	-00.1	173	07.0 +02.3	N 03 04.2	+00.0	19
20	155	00.4 +00.6	N 16 50.2	+00.5	82	40.9 +01.9	N 21 17.4	-00.1	188	09.3 +02.3	N 03 04.2	+00.1	20
21	170	01.0 +00.6	N 16 50.7	+00.6	97	42.8 +02.0	N 21 17.3	-00.1	203	11.6 +02.3	N 03 04.3	+00.0	21
22	185	01.6 +00.7	N 16 51.3	+00.5	112	44.8 +01.9	N 21 17.2	-00.1	218	13.9 +02.3	N 03 04.3	+00.1	22
23	200	02.3 +00.6	N 16 51.8	+00.5	127	46.7 +01.9	N 21 17.1	-00.1	233	16.2 +02.3	N 03 04.4	+00.1	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'0 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 314° 314° 314° 314° 314° 314°				SHA 242° 242° 242° 242° 242° 242°				SHA 347° 347° 347° 347° 347° 347°				
	Greenwich Culmination Time: 09:40				Greenwich Culmination Time: 14:29				Greenwich Culmination Time: 07:29				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 00.4 -00.1	N 23 11.9 +00.1	139 13.7 -00.6	N 22 15.0 -00.6	213 21.7 -36.5	N 22 58.7 +10.5	00						
01	195 00.3 -00.1	N 23 12.0 +00.2	154 13.1 -00.6	N 22 14.4 -00.6	227 45.2 -36.7	N 23 09.2 +10.4	01						
02	210 00.2 -00.2	N 23 12.2 +00.1	169 12.5 -00.6	N 22 13.8 -00.6	242 08.5 -36.7	N 23 19.6 +10.2	02						
03	225 00.0 -00.1	N 23 12.3 +00.1	184 11.9 -00.6	N 22 13.2 -00.6	256 31.8 -36.9	N 23 29.8 +10.0	03						
04	239 59.9 -00.1	N 23 12.4 +00.2	199 11.3 -00.6	N 22 12.6 -00.7	270 54.9 -37.1	N 23 39.8 +09.9	04						
05	254 59.8 -00.2	N 23 12.6 +00.1	214 10.7 -00.7	N 22 11.9 -00.6	285 17.8 -37.2	N 23 49.7 +09.7	05						
06	269 59.6 -00.1	N 23 12.7 +00.2	229 10.0 -00.6	N 22 11.3 -00.6	299 40.6 -37.3	N 23 59.4 +09.6	06						
07	284 59.5 -00.1	N 23 12.9 +00.1	244 09.4 -00.6	N 22 10.7 -00.6	314 03.3 -37.4	N 24 09.0 +09.4	07						
08	299 59.4 -00.1	N 23 13.0 +00.1	259 08.8 -00.6	N 22 10.1 -00.7	328 25.9 -37.6	N 24 18.4 +09.2	08						
09	314 59.3 -00.2	N 23 13.1 +00.2	274 08.2 -00.6	N 22 09.4 -00.6	342 48.3 -37.6	N 24 27.6 +09.1	09						
10	329 59.1 -00.1	N 23 13.3 +00.1	289 07.6 -00.6	N 22 08.8 -00.6	357 10.7 -37.9	N 24 36.7 +08.8	10						
11	344 59.0 -00.1	N 23 13.4 +00.1	304 07.0 -00.6	N 22 08.2 -00.6	11 32.8 -37.9	N 24 45.5 +08.7	11						
12	359 58.9 -00.2	N 23 13.5 +00.2	319 06.4 -00.6	N 22 07.6 -00.7	25 54.9 -38.1	N 24 54.2 +08.6	12						
13	14 58.7 -00.1	N 23 13.7 +00.1	334 05.8 -00.6	N 22 06.9 -00.6	40 16.8 -38.1	N 25 02.8 +08.3	13						
14	29 58.6 -00.1	N 23 13.8 +00.1	349 05.2 -00.6	N 22 06.3 -00.6	54 38.7 -38.3	N 25 11.1 +08.2	14						
15	44 58.5 -00.2	N 23 13.9 +00.2	4 04.6 -00.6	N 22 05.7 -00.6	69 00.4 -38.4	N 25 19.3 +08.0	15						
16	59 58.3 -00.1	N 23 14.1 +00.1	19 04.0 -00.6	N 22 05.1 -00.7	83 22.0 -38.6	N 25 27.3 +07.8	16						
17	74 58.2 -00.1	N 23 14.2 +00.1	34 03.4 -00.6	N 22 04.4 -00.6	97 43.4 -38.6	N 25 35.1 +07.6	17						
18	89 58.1 -00.2	N 23 14.3 +00.2	49 02.8 -00.6	N 22 03.8 -00.6	112 04.8 -38.8	N 25 42.7 +07.4	18						
19	104 57.9 -00.1	N 23 14.5 +00.1	64 02.2 -00.6	N 22 03.2 -00.7	126 26.0 -38.8	N 25 50.1 +07.3	19						
20	119 57.8 -00.1	N 23 14.6 +00.1	79 01.6 -00.6	N 22 02.5 -00.6	140 47.2 -39.0	N 25 57.4 +07.0	20						
21	134 57.7 -00.2	N 23 14.7 +00.2	94 01.0 -00.6	N 22 01.9 -00.6	155 08.2 -39.1	N 26 04.4 +06.9	21						
22	149 57.5 -00.1	N 23 14.9 +00.1	109 00.4 -00.6	N 22 01.3 -00.7	169 29.1 -39.1	N 26 11.3 +06.6	22						
23	164 57.4 -00.1	N 23 15.0 +00.1	123 59.8 -00.6	N 22 00.6 -00.6	183 50.0 -39.3	N 26 17.9 +06.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'6 16'6 16'6 16'6 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'8 60'9 61'0 61'0 61'1 61'2								
	SHA 279° 278° 278° 278° 278° 278°		SHA 238° 238° 237° 237° 237° 237°		SHA 311° 308° 305° 303° 300° 297°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 14:43		Greenwich Culmination Time: 10:11								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	215 02.9 +00.7	N 16 52.3 +00.6	142 48.6 +02.0	N 21 17.0 -00.1	248 18.5 +02.3	N 03 04.5 +00.0	00						
01	230 03.6 +00.6	N 16 52.9 +00.5	157 50.6 +01.9	N 21 16.9 -00.1	263 20.8 +02.3	N 03 04.5 +00.1	01						
02	245 04.2 +00.6	N 16 53.4 +00.5	172 52.5 +01.9	N 21 16.8 -00.1	278 23.1 +02.3	N 03 04.6 +00.0	02						
03	260 04.8 +00.7	N 16 53.9 +00.5	187 54.4 +02.0	N 21 16.7 -00.1	293 25.4 +02.3	N 03 04.6 +00.1	03						
04	275 05.5 +00.6	N 16 54.4 +00.6	202 56.4 +01.9	N 21 16.6 +00.0	308 27.7 +02.3	N 03 04.7 +00.1	04						
05	290 06.1 +00.7	N 16 55.0 +00.5	217 58.3 +01.9	N 21 16.6 -00.1	323 30.0 +02.3	N 03 04.8 +00.0	05						
06	305 06.8 +00.6	N 16 55.5 +00.5	233 00.2 +02.0	N 21 16.5 -00.1	338 32.3 +02.3	N 03 04.8 +00.1	06						
07	320 07.4 +00.6	N 16 56.0 +00.5	248 02.2 +01.9	N 21 16.4 -00.1	353 34.6 +02.3	N 03 04.9 +00.0	07						
08	335 08.0 +00.7	N 16 56.5 +00.6	263 04.1 +01.9	N 21 16.3 -00.1	8 36.9 +02.3	N 03 04.9 +00.1	08						
09	350 08.7 +00.6	N 16 57.1 +00.5	278 06.0 +02.0	N 21 16.2 -00.1	23 39.2 +02.3	N 03 05.0 +00.0	09						
10	5 09.3 +00.6	N 16 57.6 +00.5	293 08.0 +01.9	N 21 16.1 -00.1	38 41.5 +02.3	N 03 05.0 +00.1	10						
11	20 09.9 +00.7	N 16 58.1 +00.5	308 09.9 +01.9	N 21 16.0 -00.1	53 43.8 +02.3	N 03 05.1 +00.1	11						
12	35 10.6 +00.6	N 16 58.6 +00.6	323 11.8 +02.0	N 21 15.9 -00.1	68 46.1 +02.3	N 03 05.2 +00.0	12						
13	50 11.2 +00.7	N 16 59.2 +00.5	338 13.8 +01.9	N 21 15.8 -00.1	83 48.4 +02.3	N 03 05.2 +00.1	13						
14	65 11.9 +00.6	N 16 59.7 +00.5	353 15.7 +01.9	N 21 15.7 -00.1	98 50.7 +02.3	N 03 05.3 +00.0	14						
15	80 12.5 +00.6	N 17 00.2 +00.5	8 17.6 +01.9	N 21 15.6 -00.1	113 53.0 +02.3	N 03 05.3 +00.1	15						
16	95 13.1 +00.7	N 17 00.7 +00.5	23 19.5 +02.0	N 21 15.5 -00.1	128 55.3 +02.3	N 03 05.4 +00.0	16						
17	110 13.8 +00.6	N 17 01.2 +00.6	38 21.5 +01.9	N 21 15.4 -00.1	143 57.6 +02.3	N 03 05.4 +00.1	17						
18	125 14.4 +00.6	N 17 01.8 +00.5	53 23.4 +01.9	N 21 15.3 -00.1	158 59.9 +02.3	N 03 05.5 +00.1	18						
19	140 15.0 +00.7	N 17 02.3 +00.5	68 25.3 +02.0	N 21 15.2 -00.1	174 02.2 +02.4	N 03 05.6 +00.0	19						
20	155 15.7 +00.6	N 17 02.8 +00.5	83 27.3 +01.9	N 21 15.1 -00.1	189 04.6 +02.3	N 03 05.6 +00.1	20						
21	170 16.3 +00.6	N 17 03.3 +00.6	98 29.2 +01.9	N 21 15.0 +00.0	204 06.9 +02.3	N 03 05.7 +00.0	21						
22	185 16.9 +00.7	N 17 03.9 +00.5	113 31.1 +02.0	N 21 15.0 -00.1	219 09.2 +02.3	N 03 05.7 +00.1	22						
23	200 17.6 +00.6	N 17 04.4 +00.5	128 33.1 +01.9	N 21 14.9 -00.1	234 11.5 +02.3	N 03 05.8 +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 314° 314° 313° 313° 313° 313°		SHA 241° 241° 241° 241° 241° 241°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:39		Greenwich Culmination Time: 14:26		Greenwich Culmination Time: 07:25								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 57.3 -00.2	N 23 15.1 +00.1	138 59.2 -00.6	N 21 60.0 -00.7	198 10.7 -39.4	N 26 24.4 +06.3	00						
01	194 57.1 -00.1	N 23 15.2 +00.2	153 58.6 -00.6	N 21 59.3 -00.6	212 31.3 -39.5	N 26 30.7 +06.0	01						
02	209 57.0 -00.1	N 23 15.4 +00.1	168 58.0 -00.6	N 21 58.7 -00.6	226 51.8 -39.5	N 26 36.7 +05.9	02						
03	224 56.9 -00.2	N 23 15.5 +00.1	183 57.4 -00.6	N 21 58.1 -00.7	241 12.3 -39.6	N 26 42.6 +05.6	03						
04	239 56.7 -00.1	N 23 15.6 +00.1	198 56.8 -00.6	N 21 57.4 -00.6	255 32.7 -39.8	N 26 48.2 +05.5	04						
05	254 56.6 -00.1	N 23 15.7 +00.2	213 56.2 -00.6	N 21 56.8 -00.7	269 52.9 -39.8	N 26 53.7 +05.2	05						
06	269 56.5 -00.2	N 23 15.9 +00.1	228 55.6 -00.6	N 21 56.1 -00.6	284 13.1 -39.9	N 26 58.9 +05.0	06						
07	284 56.3 -00.1	N 23 16.0 +00.1	243 55.0 -00.5	N 21 55.5 -00.7	298 33.2 -39.9	N 27 03.9 +04.8	07						
08	299 56.2 -00.1	N 23 16.1 +00.1	258 54.5 -00.6	N 21 54.8 -00.6	312 53.3 -40.1	N 27 08.7 +04.7	08						
09	314 56.1 -00.2	N 23 16.2 +00.1	273 53.9 -00.6	N 21 54.2 -00.7	327 13.2 -40.1	N 27 13.4 +04.3	09						
10	329 55.9 -00.1	N 23 16.3 +00.2	288 53.3 -00.6	N 21 53.5 -00.6	341 33.1 -40.2	N 27 17.7 +04.2	10						
11	344 55.8 -00.1	N 23 16.5 +00.1	303 52.7 -00.6	N 21 52.9 -00.7	355 52.9 -40.2	N 27 21.9 +04.0	11						
12	359 55.7 -00.2	N 23 16.6 +00.1	318 52.1 -00.6	N 21 52.2 -00.6	10 12.7 -40.3	N 27 25.9 +03.7	12						
13	14 55.5 -00.1	N 23 16.7 +00.1	333 51.5 -00.6	N 21 51.6 -00.7	24 32.4 -40.4	N 27 29.6 +03.6	13						
14	29 55.4 -00.1	N 23 16.8 +00.1	348 50.9 -00.6	N 21 50.9 -00.6	38 52.0 -40.4	N 27 33.2 +03.3	14						
15	44 55.3 -00.2	N 23 16.9 +00.1	3 50.3 -00.6	N 21 50.3 -00.7	53 11.6 -40.4	N 27 36.5 +03.0	15						
16	59 55.1 -00.1	N 23 17.0 +00.2	18 49.7 -00.5	N 21 49.6 -00.6	67 31.2 -40.5	N 27 39.5 +02.9	16						
17	74 55.0 -00.2	N 23 17.2 +00.1	33 49.2 -00.6	N 21 49.0 -00.7	81 50.7 -40.6	N 27 42.4 +02.7	17						
18	89 54.8 -00.1	N 23 17.3 +00.1	48 48.6 -00.6	N 21 48.3 -00.6	96 10.1 -40.6	N 27 45.1 +02.4	18						
19	104 54.7 -00.1	N 23 17.4 +00.1	63 48.0 -00.6	N 21 47.7 -00.7	110 29.5 -40.6	N 27 47.5 +02.2	19						
20	119 54.6 -00.2	N 23 17.5 +00.1	78 47.4 -00.6	N 21 47.0 -00.6	124 48.9 -40.6	N 27 49.7 +02.0	20						
21	134 54.4 -00.1	N 23 17.6 +00.1	93 46.8 -00.6	N 21 46.4 -00.7	139 08.3 -40.7	N 27 51.7 +01.7	21						
22	149 54.3 -00.1	N 23 17.7 +00.1	108 46.2 -00.5	N 21 45.7 -00.7	153 27.6 -40.7	N 27 53.4 +01.6	22						
23	164 54.2 -00.2	N 23 17.8 +00.1	123 45.7 -00.6	N 21 45.0 -00.6	167 46.9 -40.7	N 27 55.0 +01.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'2 61'3 61'3 61'3 61'3 61'4								
	SHA 278° 277° 277° 277° 277° 277°		SHA 237° 236° 236° 236° 236° 236°		SHA 294° 292° 289° 286° 283° 280°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 14:44		Greenwich Culmination Time: 11:17								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	215 18.2 +00.7	N 17 04.9 +00.5	143 35.0 +01.9	N 21 14.8 -00.1	249 13.8 +02.3	N 03 05.8 +00.1	00						
01	230 18.9 +00.6	N 17 05.4 +00.5	158 36.9 +02.0	N 21 14.7 -00.1	264 16.1 +02.3	N 03 05.9 +00.1	01						
02	245 19.5 +00.6	N 17 05.9 +00.6	173 38.9 +01.9	N 21 14.6 -00.1	279 18.4 +02.3	N 03 06.0 +00.0	02						
03	260 20.1 +00.7	N 17 06.5 +00.5	188 40.8 +01.9	N 21 14.5 -00.1	294 20.7 +02.3	N 03 06.0 +00.1	03						
04	275 20.8 +00.6	N 17 07.0 +00.5	203 42.7 +02.0	N 21 14.4 -00.1	309 23.0 +02.3	N 03 06.1 +00.0	04						
05	290 21.4 +00.6	N 17 07.5 +00.5	218 44.7 +01.9	N 21 14.3 -00.1	324 25.3 +02.3	N 03 06.1 +00.1	05						
06	305 22.0 +00.7	N 17 08.0 +00.5	233 46.6 +01.9	N 21 14.2 -00.1	339 27.6 +02.3	N 03 06.2 +00.0	06						
07	320 22.7 +00.6	N 17 08.5 +00.5	248 48.5 +01.9	N 21 14.1 -00.1	354 29.9 +02.3	N 03 06.2 +00.1	07						
08	335 23.3 +00.6	N 17 09.0 +00.6	263 50.4 +02.0	N 21 14.0 -00.1	9 32.2 +02.3	N 03 06.3 +00.0	08						
09	350 23.9 +00.7	N 17 09.6 +00.5	278 52.4 +01.9	N 21 13.9 -00.1	24 34.5 +02.3	N 03 06.3 +00.1	09						
10	5 24.6 +00.6	N 17 10.1 +00.5	293 54.3 +01.9	N 21 13.8 -00.1	39 36.8 +02.3	N 03 06.4 +00.1	10						
11	20 25.2 +00.7	N 17 10.6 +00.5	308 56.2 +02.0	N 21 13.7 -00.1	54 39.1 +02.3	N 03 06.5 +00.0	11						
12	35 25.9 +00.6	N 17 11.1 +00.5	323 58.2 +01.9	N 21 13.6 -00.1	69 41.4 +02.3	N 03 06.5 +00.1	12						
13	50 26.5 +00.6	N 17 11.6 +00.6	339 00.1 +01.9	N 21 13.5 -00.1	84 43.7 +02.3	N 03 06.6 +00.0	13						
14	65 27.1 +00.7	N 17 12.2 +00.5	354 02.0 +02.0	N 21 13.4 -00.1	99 46.0 +02.3	N 03 06.6 +00.1	14						
15	80 27.8 +00.6	N 17 12.7 +00.5	9 04.0 +01.9	N 21 13.3 -00.1	114 48.3 +02.3	N 03 06.7 +00.0	15						
16	95 28.4 +00.6	N 17 13.2 +00.5	24 05.9 +01.9	N 21 13.2 +00.0	129 50.6 +02.3	N 03 06.7 +00.1	16						
17	110 29.0 +00.7	N 17 13.7 +00.5	39 07.8 +01.9	N 21 13.2 -00.1	144 52.9 +02.3	N 03 06.8 +00.1	17						
18	125 29.7 +00.6	N 17 14.2 +00.5	54 09.7 +02.0	N 21 13.1 -00.1	159 55.2 +02.4	N 03 06.9 +00.0	18						
19	140 30.3 +00.6	N 17 14.7 +00.5	69 11.7 +01.9	N 21 13.0 -00.1	174 57.6 +02.3	N 03 06.9 +00.1	19						
20	155 30.9 +00.7	N 17 15.2 +00.6	84 13.6 +01.9	N 21 12.9 -00.1	189 59.9 +02.3	N 03 07.0 +00.0	20						
21	170 31.6 +00.6	N 17 15.8 +00.5	99 15.5 +02.0	N 21 12.8 -00.1	205 02.2 +02.3	N 03 07.0 +00.1	21						
22	185 32.2 +00.6	N 17 16.3 +00.5	114 17.5 +01.9	N 21 12.7 -00.1	220 04.5 +02.3	N 03 07.1 +00.0	22						
23	200 32.8 +00.7	N 17 16.8 +00.5	129 19.4 +01.9	N 21 12.6 -00.1	235 06.8 +02.3	N 03 07.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 313° 313° 313° 313° 312° 312°		SHA 241° 241° 241° 241° 241° 241°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:38		Greenwich Culmination Time: 14:23		Greenwich Culmination Time: 07:21								

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 54.0 -00.1	N 23 17.9 +00.2	138 45.1 -00.6	N 21 44.4 -00.7	182 06.2 -40.8	N 27 56.3 +01.0	00						
01	194 53.9 -00.1	N 23 18.1 +00.1	153 44.5 -00.6	N 21 43.7 -00.7	196 25.4 -40.7	N 27 57.3 +00.9	01						
02	209 53.8 -00.2	N 23 18.2 +00.1	168 43.9 -00.6	N 21 43.0 -00.6	210 44.7 -40.7	N 27 58.2 +00.6	02						
03	224 53.6 -00.1	N 23 18.3 +00.1	183 43.3 -00.5	N 21 42.4 -00.7	225 04.0 -40.8	N 27 58.8 +00.4	03						
04	239 53.5 -00.1	N 23 18.4 +00.1	198 42.8 -00.6	N 21 41.7 -00.7	239 23.2 -40.8	N 27 59.2 +00.2	04						
05	254 53.4 -00.2	N 23 18.5 +00.1	213 42.2 -00.6	N 21 41.0 -00.6	253 42.4 -40.7	N 27 59.4 +00.0	05						
06	269 53.2 -00.1	N 23 18.6 +00.1	228 41.6 -00.6	N 21 40.4 -00.7	268 01.7 -40.8	N 27 59.4 -00.3	06						
07	284 53.1 -00.1	N 23 18.7 +00.1	243 41.0 -00.6	N 21 39.7 -00.7	282 20.9 -40.7	N 27 59.1 -00.5	07						
08	299 53.0 -00.2	N 23 18.8 +00.1	258 40.4 -00.5	N 21 39.0 -00.6	296 40.2 -40.7	N 27 58.6 -00.7	08						
09	314 52.8 -00.1	N 23 18.9 +00.1	273 39.9 -00.6	N 21 38.4 -00.7	310 59.5 -40.7	N 27 57.9 -01.0	09						
10	329 52.7 -00.1	N 23 19.0 +00.1	288 39.3 -00.6	N 21 37.7 -00.7	325 18.8 -40.7	N 27 56.9 -01.2	10						
11	344 52.6 -00.2	N 23 19.1 +00.1	303 38.7 -00.6	N 21 37.0 -00.6	339 38.1 -40.6	N 27 55.7 -01.4	11						
12	359 52.4 -00.1	N 23 19.2 +00.1	318 38.1 -00.5	N 21 36.4 -00.7	353 57.5 -40.7	N 27 54.3 -01.6	12						
13	14 52.3 -00.1	N 23 19.3 +00.1	333 37.6 -00.6	N 21 35.7 -00.7	8 16.8 -40.5	N 27 52.7 -01.8	13						
14	29 52.2 -00.2	N 23 19.4 +00.1	348 37.0 -00.6	N 21 35.0 -00.7	22 36.3 -40.6	N 27 50.9 -02.1	14						
15	44 52.0 -00.1	N 23 19.5 +00.1	3 36.4 -00.5	N 21 34.3 -00.7	36 55.7 -40.5	N 27 48.8 -02.3	15						
16	59 51.9 -00.2	N 23 19.6 +00.1	18 35.9 -00.6	N 21 33.6 -00.6	51 15.2 -40.4	N 27 46.5 -02.5	16						
17	74 51.7 -00.1	N 23 19.7 +00.1	33 35.3 -00.6	N 21 33.0 -00.7	65 34.8 -40.4	N 27 44.0 -02.7	17						
18	89 51.6 -00.1	N 23 19.8 +00.1	48 34.7 -00.5	N 21 32.3 -00.7	79 54.4 -40.4	N 27 41.3 -02.9	18						
19	104 51.5 -00.2	N 23 19.9 +00.1	63 34.2 -00.6	N 21 31.6 -00.7	94 14.0 -40.3	N 27 38.4 -03.2	19						
20	119 51.3 -00.1	N 23 20.0 +00.1	78 33.6 -00.6	N 21 30.9 -00.7	108 33.7 -40.2	N 27 35.2 -03.4	20						
21	134 51.2 -00.1	N 23 20.1 +00.1	93 33.0 -00.6	N 21 30.2 -00.6	122 53.5 -40.2	N 27 31.8 -03.6	21						
22	149 51.1 -00.2	N 23 20.2 +00.1	108 32.4 -00.5	N 21 29.6 -00.7	137 13.3 -40.1	N 27 28.2 -03.8	22						
23	164 50.9 -00.1	N 23 20.3 +00.1	123 31.9 -00.6	N 21 28.9 -00.7	151 33.2 -40.1	N 27 24.4 -04.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'4 61'3 61'3 61'3 61'3 61'2								
	SHA 277° 276° 276° 276° 276° 276°		SHA 235° 235° 235° 235° 235° 234°		SHA 277° 274° 272° 269° 266° 263°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 14:45		Greenwich Culmination Time: 12:25								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	215 33.5 +00.6	N 17 17.3 +00.5	144 21.3 +02.0	N 21 12.5 -00.1	250 09.1 +02.3	N 03 07.2 +00.0	00						
01	230 34.1 +00.7	N 17 17.8 +00.5	159 23.3 +01.9	N 21 12.4 -00.1	265 11.4 +02.3	N 03 07.2 +00.1	01						
02	245 34.8 +00.6	N 17 18.3 +00.5	174 25.2 +01.9	N 21 12.3 -00.1	280 13.7 +02.3	N 03 07.3 +00.0	02						
03	260 35.4 +00.6	N 17 18.8 +00.5	189 27.1 +01.9	N 21 12.2 -00.1	295 16.0 +02.3	N 03 07.3 +00.1	03						
04	275 36.0 +00.7	N 17 19.3 +00.6	204 29.0 +02.0	N 21 12.1 -00.1	310 18.3 +02.3	N 03 07.4 +00.1	04						
05	290 36.7 +00.6	N 17 19.9 +00.5	219 31.0 +01.9	N 21 12.0 -00.1	325 20.6 +02.3	N 03 07.5 +00.0	05						
06	305 37.3 +00.6	N 17 20.4 +00.5	234 32.9 +01.9	N 21 11.9 -00.1	340 22.9 +02.3	N 03 07.5 +00.1	06						
07	320 37.9 +00.7	N 17 20.9 +00.5	249 34.8 +02.0	N 21 11.8 -00.1	355 25.2 +02.3	N 03 07.6 +00.0	07						
08	335 38.6 +00.6	N 17 21.4 +00.5	264 36.8 +01.9	N 21 11.7 -00.1	10 27.5 +02.3	N 03 07.6 +00.1	08						
09	350 39.2 +00.6	N 17 21.9 +00.5	279 38.7 +01.9	N 21 11.6 -00.1	25 29.8 +02.4	N 03 07.7 +00.0	09						
10	5 39.8 +00.7	N 17 22.4 +00.5	294 40.6 +01.9	N 21 11.5 -00.1	40 32.2 +02.3	N 03 07.7 +00.1	10						
11	20 40.5 +00.6	N 17 22.9 +00.5	309 42.5 +02.0	N 21 11.4 -00.1	55 34.5 +02.3	N 03 07.8 +00.0	11						
12	35 41.1 +00.6	N 17 23.4 +00.5	324 44.5 +01.9	N 21 11.3 -00.1	70 36.8 +02.3	N 03 07.8 +00.1	12						
13	50 41.7 +00.7	N 17 23.9 +00.5	339 46.4 +01.9	N 21 11.2 -00.1	85 39.1 +02.3	N 03 07.9 +00.1	13						
14	65 42.4 +00.6	N 17 24.4 +00.6	354 48.3 +02.0	N 21 11.1 -00.1	100 41.4 +02.3	N 03 08.0 +00.0	14						
15	80 43.0 +00.6	N 17 25.0 +00.5	9 50.3 +01.9	N 21 11.0 -00.1	115 43.7 +02.3	N 03 08.0 +00.1	15						
16	95 43.6 +00.7	N 17 25.5 +00.5	24 52.2 +01.9	N 21 10.9 +00.0	130 46.0 +02.3	N 03 08.1 +00.0	16						
17	110 44.3 +00.6	N 17 26.0 +00.5	39 54.1 +01.9	N 21 10.9 -00.1	145 48.3 +02.3	N 03 08.1 +00.1	17						
18	125 44.9 +00.6	N 17 26.5 +00.5	54 56.0 +02.0	N 21 10.8 -00.1	160 50.6 +02.3	N 03 08.2 +00.0	18						
19	140 45.5 +00.7	N 17 27.0 +00.5	69 58.0 +01.9	N 21 10.7 -00.1	175 52.9 +02.3	N 03 08.2 +00.1	19						
20	155 46.2 +00.6	N 17 27.5 +00.5	84 59.9 +01.9	N 21 10.6 -00.1	190 55.2 +02.3	N 03 08.3 +00.0	20						
21	170 46.8 +00.6	N 17 28.0 +00.5	100 01.8 +01.9	N 21 10.5 -00.1	205 57.5 +02.4	N 03 08.3 +00.1	21						
22	185 47.4 +00.7	N 17 28.5 +00.5	115 03.7 +02.0	N 21 10.4 -00.1	220 59.9 +02.3	N 03 08.4 +00.0	22						
23	200 48.1 +00.6	N 17 29.0 +00.5	130 05.7 +01.9	N 21 10.3 -00.1	236 02.2 +02.3	N 03 08.4 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 312° 312° 312° 312° 312° 312°		SHA 241° 241° 241° 241° 241° 241°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:37		Greenwich Culmination Time: 14:20		Greenwich Culmination Time: 07:18								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 50.8 -00.1	N 23 20.4 +00.1	138 31.3 -00.6	N 21 28.2 -00.7	165 53.1 -39.9	N 27 20.4 -04.3	00						
01	194 50.7 -00.2	N 23 20.5 +00.0	153 30.7 -00.5	N 21 27.5 -00.7	180 13.2 -39.9	N 27 16.1 -04.4	01						
02	209 50.5 -00.1	N 23 20.5 +00.1	168 30.2 -00.6	N 21 26.8 -00.7	194 33.3 -39.8	N 27 11.7 -04.7	02						
03	224 50.4 -00.1	N 23 20.6 +00.1	183 29.6 -00.5	N 21 26.1 -00.7	208 53.5 -39.7	N 27 07.0 -04.8	03						
04	239 50.3 -00.2	N 23 20.7 +00.1	198 29.1 -00.6	N 21 25.4 -00.6	223 13.8 -39.7	N 27 02.2 -05.1	04						
05	254 50.1 -00.1	N 23 20.8 +00.1	213 28.5 -00.6	N 21 24.8 -00.7	237 34.1 -39.5	N 26 57.1 -05.3	05						
06	269 50.0 -00.2	N 23 20.9 +00.1	228 27.9 -00.5	N 21 24.1 -00.7	251 54.6 -39.5	N 26 51.8 -05.5	06						
07	284 49.8 -00.1	N 23 21.0 +00.1	243 27.4 -00.6	N 21 23.4 -00.7	266 15.1 -39.3	N 26 46.3 -05.7	07						
08	299 49.7 -00.1	N 23 21.1 +00.1	258 26.8 -00.5	N 21 22.7 -00.7	280 35.8 -39.3	N 26 40.6 -05.9	08						
09	314 49.6 -00.2	N 23 21.2 +00.0	273 26.3 -00.6	N 21 22.0 -00.7	294 56.5 -39.2	N 26 34.7 -06.0	09						
10	329 49.4 -00.1	N 23 21.2 +00.1	288 25.7 -00.6	N 21 21.3 -00.7	309 17.3 -39.0	N 26 28.7 -06.3	10						
11	344 49.3 -00.1	N 23 21.3 +00.1	303 25.1 -00.5	N 21 20.6 -00.7	323 38.3 -39.0	N 26 22.4 -06.5	11						
12	359 49.2 -00.2	N 23 21.4 +00.1	318 24.6 -00.6	N 21 19.9 -00.7	337 59.3 -38.8	N 26 15.9 -06.7	12						
13	14 49.0 -00.1	N 23 21.5 +00.1	333 24.0 -00.5	N 21 19.2 -00.7	352 20.5 -38.8	N 26 09.2 -06.8	13						
14	29 48.9 -00.1	N 23 21.6 +00.1	348 23.5 -00.6	N 21 18.5 -00.7	6 41.7 -38.6	N 26 02.4 -07.1	14						
15	44 48.8 -00.2	N 23 21.7 +00.0	3 22.9 -00.5	N 21 17.8 -00.7	21 03.1 -38.5	N 25 55.3 -07.2	15						
16	59 48.6 -00.1	N 23 21.7 +00.1	18 22.4 -00.6	N 21 17.1 -00.7	35 24.6 -38.4	N 25 48.1 -07.4	16						
17	74 48.5 -00.2	N 23 21.8 +00.1	33 21.8 -00.6	N 21 16.4 -00.7	49 46.2 -38.3	N 25 40.7 -07.6	17						
18	89 48.3 -00.1	N 23 21.9 +00.1	48 21.2 -00.5	N 21 15.7 -00.7	64 07.9 -38.1	N 25 33.1 -07.8	18						
19	104 48.2 -00.1	N 23 22.0 +00.1	63 20.7 -00.6	N 21 15.0 -00.7	78 29.8 -38.1	N 25 25.3 -08.0	19						
20	119 48.1 -00.2	N 23 22.1 +00.0	78 20.1 -00.5	N 21 14.3 -00.7	92 51.7 -37.9	N 25 17.3 -08.1	20						
21	134 47.9 -00.1	N 23 22.1 +00.1	93 19.6 -00.6	N 21 13.6 -00.7	107 13.8 -37.8	N 25 09.2 -08.4	21						
22	149 47.8 -00.1	N 23 22.2 +00.1	108 19.0 -00.5	N 21 12.9 -00.7	121 36.0 -37.6	N 25 00.8 -08.4	22						
23	164 47.7 -00.2	N 23 22.3 +00.1	123 18.5 -00.6	N 21 12.2 -00.7	135 58.4 -37.6	N 24 52.4 -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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'6 16'6 16'6 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'2 61'1 61'0 60'9 60'8 60'7								
	SHA 275° 275° 275° 275° 275° 275°		SHA 234° 234° 234° 234° 233° 233°		SHA 260° 257° 255° 252° 249° 246°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 14:46		Greenwich Culmination Time: 13:32								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	215 48.7 +00.6	N 17 29.5 +00.5	145 07.6 +01.9	N 21 10.2 -00.1	251 04.5 +02.3	N 03 08.5 +00.0	00						
01	230 49.3 +00.7	N 17 30.0 +00.5	160 09.5 +02.0	N 21 10.1 -00.1	266 06.8 +02.3	N 03 08.5 +00.1	01						
02	245 50.0 +00.6	N 17 30.5 +00.5	175 11.5 +01.9	N 21 10.0 -00.1	281 09.1 +02.3	N 03 08.6 +00.1	02						
03	260 50.6 +00.6	N 17 31.0 +00.5	190 13.4 +01.9	N 21 09.9 -00.1	296 11.4 +02.3	N 03 08.7 +00.0	03						
04	275 51.2 +00.7	N 17 31.5 +00.5	205 15.3 +01.9	N 21 09.8 -00.1	311 13.7 +02.3	N 03 08.7 +00.1	04						
05	290 51.9 +00.6	N 17 32.0 +00.5	220 17.2 +02.0	N 21 09.7 -00.1	326 16.0 +02.3	N 03 08.8 +00.0	05						
06	305 52.5 +00.6	N 17 32.5 +00.5	235 19.2 +01.9	N 21 09.6 -00.1	341 18.3 +02.3	N 03 08.8 +00.1	06						
07	320 53.1 +00.7	N 17 33.0 +00.6	250 21.1 +01.9	N 21 09.5 -00.1	356 20.6 +02.4	N 03 08.9 +00.0	07						
08	335 53.8 +00.6	N 17 33.6 +00.5	265 23.0 +01.9	N 21 09.4 -00.1	11 23.0 +02.3	N 03 08.9 +00.1	08						
09	350 54.4 +00.6	N 17 34.1 +00.5	280 24.9 +02.0	N 21 09.3 -00.1	26 25.3 +02.3	N 03 09.0 +00.0	09						
10	5 55.0 +00.7	N 17 34.6 +00.5	295 26.9 +01.9	N 21 09.2 -00.1	41 27.6 +02.3	N 03 09.0 +00.1	10						
11	20 55.7 +00.6	N 17 35.1 +00.5	310 28.8 +01.9	N 21 09.1 -00.1	56 29.9 +02.3	N 03 09.1 +00.0	11						
12	35 56.3 +00.6	N 17 35.6 +00.5	325 30.7 +01.9	N 21 09.0 -00.1	71 32.2 +02.3	N 03 09.1 +00.1	12						
13	50 56.9 +00.7	N 17 36.1 +00.5	340 32.6 +02.0	N 21 08.9 -00.1	86 34.5 +02.3	N 03 09.2 +00.0	13						
14	65 57.6 +00.6	N 17 36.6 +00.5	355 34.6 +01.9	N 21 08.8 -00.1	101 36.8 +02.3	N 03 09.2 +00.1	14						
15	80 58.2 +00.6	N 17 37.1 +00.5	10 36.5 +01.9	N 21 08.7 -00.1	116 39.1 +02.4	N 03 09.3 +00.0	15						
16	95 58.8 +00.7	N 17 37.6 +00.5	25 38.4 +01.9	N 21 08.6 -00.1	131 41.5 +02.3	N 03 09.3 +00.1	16						
17	110 59.5 +00.6	N 17 38.1 +00.5	40 40.3 +02.0	N 21 08.5 -00.1	146 43.8 +02.3	N 03 09.4 +00.1	17						
18	126 00.1 +00.6	N 17 38.6 +00.5	55 42.3 +01.9	N 21 08.4 -00.1	161 46.1 +02.3	N 03 09.5 +00.0	18						
19	141 00.7 +00.7	N 17 39.1 +00.5	70 44.2 +01.9	N 21 08.3 -00.1	176 48.4 +02.3	N 03 09.5 +00.1	19						
20	156 01.4 +00.6	N 17 39.6 +00.5	85 46.1 +02.0	N 21 08.2 -00.1	191 50.7 +02.3	N 03 09.6 +00.0	20						
21	171 02.0 +00.6	N 17 40.1 +00.5	100 48.1 +01.9	N 21 08.1 -00.1	206 53.0 +02.3	N 03 09.6 +00.1	21						
22	186 02.6 +00.7	N 17 40.6 +00.5	115 50.0 +01.9	N 21 08.0 -00.1	221 55.3 +02.3	N 03 09.7 +00.0	22						
23	201 03.3 +00.6	N 17 41.1 +00.5	130 51.9 +01.9	N 21 07.9 -00.1	236 57.6 +02.3	N 03 09.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 311° 311° 311° 311° 311° 311°		SHA 241° 241° 241° 241° 241° 241°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:36		Greenwich Culmination Time: 14:17		Greenwich Culmination Time: 07:14								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 47.5 -00.1	N 23 22.4 +00.0	138 17.9 -00.5	N 21 11.5 -00.7	150 20.8 -37.4	N 24 43.7 -08.8	00						
01	194 47.4 -00.1	N 23 22.4 +00.1	153 17.4 -00.6	N 21 10.8 -00.7	164 43.4 -37.2	N 24 34.9 -09.0	01						
02	209 47.3 -00.2	N 23 22.5 +00.1	168 16.8 -00.5	N 21 10.1 -00.7	179 06.2 -37.2	N 24 25.9 -09.2	02						
03	224 47.1 -00.1	N 23 22.6 +00.1	183 16.3 -00.6	N 21 09.4 -00.8	193 29.0 -37.0	N 24 16.7 -09.3	03						
04	239 47.0 -00.2	N 23 22.7 +00.0	198 15.7 -00.5	N 21 08.6 -00.7	207 52.0 -36.8	N 24 07.4 -09.5	04						
05	254 46.8 -00.1	N 23 22.7 +00.1	213 15.2 -00.6	N 21 07.9 -00.7	222 15.2 -36.8	N 23 57.9 -09.7	05						
06	269 46.7 -00.1	N 23 22.8 +00.1	228 14.6 -00.5	N 21 07.2 -00.7	236 38.4 -36.6	N 23 48.2 -09.8	06						
07	284 46.6 -00.2	N 23 22.9 +00.0	243 14.1 -00.5	N 21 06.5 -00.7	251 01.8 -36.4	N 23 38.4 -09.9	07						
08	299 46.4 -00.1	N 23 22.9 +00.1	258 13.6 -00.6	N 21 05.8 -00.7	265 25.4 -36.3	N 23 28.5 -10.1	08						
09	314 46.3 -00.1	N 23 23.0 +00.1	273 13.0 -00.5	N 21 05.1 -00.7	279 49.1 -36.2	N 23 18.4 -10.3	09						
10	329 46.2 -00.2	N 23 23.1 +00.0	288 12.5 -00.6	N 21 04.4 -00.8	294 12.9 -36.1	N 23 08.1 -10.3	10						
11	344 46.0 -00.1	N 23 23.1 +00.1	303 11.9 -00.5	N 21 03.6 -00.7	308 36.8 -35.9	N 22 57.8 -10.6	11						
12	359 45.9 -00.1	N 23 23.2 +00.1	318 11.4 -00.6	N 21 02.9 -00.7	323 00.9 -35.7	N 22 47.2 -10.7	12						
13	14 45.8 -00.2	N 23 23.3 +00.0	333 10.8 -00.5	N 21 02.2 -00.7	337 25.2 -35.7	N 22 36.5 -10.8	13						
14	29 45.6 -00.1	N 23 23.3 +00.1	348 10.3 -00.5	N 21 01.5 -00.7	351 49.5 -35.4	N 22 25.7 -10.9	14						
15	44 45.5 -00.2	N 23 23.4 +00.1	3 09.8 -00.6	N 21 00.8 -00.8	6 14.1 -35.4	N 22 14.8 -11.1	15						
16	59 45.3 -00.1	N 23 23.5 +00.0	18 09.2 -00.5	N 21 00.0 -00.7	20 38.7 -35.2	N 22 03.7 -11.3	16						
17	74 45.2 -00.1	N 23 23.5 +00.1	33 08.7 -00.6	N 20 59.3 -00.7	35 03.5 -35.0	N 21 52.4 -11.3	17						
18	89 45.1 -00.2	N 23 23.6 +00.1	48 08.1 -00.5	N 20 58.6 -00.7	49 28.5 -34.9	N 21 41.1 -11.5	18						
19	104 44.9 -00.1	N 23 23.7 +00.0	63 07.6 -00.5	N 20 57.9 -00.8	63 53.6 -34.8	N 21 29.6 -11.6	19						
20	119 44.8 -00.1	N 23 23.7 +00.1	78 07.1 -00.6	N 20 57.1 -00.7	78 18.8 -34.6	N 21 18.0 -11.7	20						
21	134 44.7 -00.2	N 23 23.8 +00.0	93 06.5 -00.5	N 20 56.4 -00.7	92 44.2 -34.5	N 21 06.3 -11.9	21						
22	149 44.5 -00.1	N 23 23.8 +00.1	108 06.0 -00.5	N 20 55.7 -00.7	107 09.7 -34.4	N 20 54.4 -11.9	22						
23	164 44.4 -00.2	N 23 23.9 +00.1	123 05.5 -00.6	N 20 55.0 -00.8	121 35.3 -34.2	N 20 42.5 -12.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'5 16'5 16'5 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'6 60'5 60'4 60'3 60'2 60'0								
	SHA 274° 274° 274° 274° 274° 274°		SHA 233° 233° 233° 232° 232° 232°		SHA 244° 241° 239° 236° 233° 231°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 14:47		Greenwich Culmination Time: 14:34								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	216 03.9 +00.6	N 17 41.6 +00.5	145 53.8 +02.0	N 21 07.8 -00.1	251 59.9 +02.4	N 03 09.8 +00.0	00						
01	231 04.5 +00.7	N 17 42.1 +00.5	160 55.8 +01.9	N 21 07.7 -00.1	267 02.3 +02.3	N 03 09.8 +00.1	01						
02	246 05.2 +00.6	N 17 42.6 +00.5	175 57.7 +01.9	N 21 07.6 +00.0	282 04.6 +02.3	N 03 09.9 +00.0	02						
03	261 05.8 +00.6	N 17 43.1 +00.5	190 59.6 +01.9	N 21 07.6 -00.1	297 06.9 +02.3	N 03 09.9 +00.1	03						
04	276 06.4 +00.7	N 17 43.6 +00.4	206 01.5 +02.0	N 21 07.5 -00.1	312 09.2 +02.3	N 03 10.0 +00.0	04						
05	291 07.1 +00.6	N 17 44.0 +00.5	221 03.5 +01.9	N 21 07.4 -00.1	327 11.5 +02.3	N 03 10.0 +00.1	05						
06	306 07.7 +00.6	N 17 44.5 +00.5	236 05.4 +01.9	N 21 07.3 -00.1	342 13.8 +02.3	N 03 10.1 +00.0	06						
07	321 08.3 +00.7	N 17 45.0 +00.5	251 07.3 +01.9	N 21 07.2 -00.1	357 16.1 +02.4	N 03 10.1 +00.1	07						
08	336 09.0 +00.6	N 17 45.5 +00.5	266 09.2 +01.9	N 21 07.1 -00.1	12 18.5 +02.3	N 03 10.2 +00.0	08						
09	351 09.6 +00.6	N 17 46.0 +00.5	281 11.1 +02.0	N 21 07.0 -00.1	27 20.8 +02.3	N 03 10.2 +00.1	09						
10	6 10.2 +00.7	N 17 46.5 +00.5	296 13.1 +01.9	N 21 06.9 -00.1	42 23.1 +02.3	N 03 10.3 +00.0	10						
11	21 10.9 +00.6	N 17 47.0 +00.5	311 15.0 +01.9	N 21 06.8 -00.1	57 25.4 +02.3	N 03 10.3 +00.1	11						
12	36 11.5 +00.6	N 17 47.5 +00.5	326 16.9 +01.9	N 21 06.7 -00.1	72 27.7 +02.3	N 03 10.4 +00.0	12						
13	51 12.1 +00.6	N 17 48.0 +00.5	341 18.8 +02.0	N 21 06.6 -00.1	87 30.0 +02.3	N 03 10.4 +00.1	13						
14	66 12.7 +00.7	N 17 48.5 +00.5	356 20.8 +01.9	N 21 06.5 -00.1	102 32.3 +02.4	N 03 10.5 +00.0	14						
15	81 13.4 +00.6	N 17 49.0 +00.5	11 22.7 +01.9	N 21 06.4 -00.1	117 34.7 +02.3	N 03 10.5 +00.1	15						
16	96 14.0 +00.6	N 17 49.5 +00.5	26 24.6 +01.9	N 21 06.3 -00.1	132 37.0 +02.3	N 03 10.6 +00.0	16						
17	111 14.6 +00.7	N 17 50.0 +00.5	41 26.5 +02.0	N 21 06.2 -00.1	147 39.3 +02.3	N 03 10.6 +00.1	17						
18	126 15.3 +00.6	N 17 50.5 +00.5	56 28.5 +01.9	N 21 06.1 -00.1	162 41.6 +02.3	N 03 10.7 +00.0	18						
19	141 15.9 +00.6	N 17 51.0 +00.5	71 30.4 +01.9	N 21 06.0 -00.1	177 43.9 +02.3	N 03 10.7 +00.1	19						
20	156 16.5 +00.7	N 17 51.5 +00.5	86 32.3 +01.9	N 21 05.9 -00.1	192 46.2 +02.3	N 03 10.8 +00.1	20						
21	171 17.2 +00.6	N 17 52.0 +00.4	101 34.2 +02.0	N 21 05.8 -00.1	207 48.5 +02.4	N 03 10.9 +00.0	21						
22	186 17.8 +00.6	N 17 52.4 +00.5	116 36.2 +01.9	N 21 05.7 -00.1	222 50.9 +02.3	N 03 10.9 +00.1	22						
23	201 18.4 +00.7	N 17 52.9 +00.5	131 38.1 +01.9	N 21 05.6 -00.1	237 53.2 +02.3	N 03 11.0 +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 311° 311° 310° 310° 310° 310°		SHA 241° 241° 241° 241° 240° 240°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:35		Greenwich Culmination Time: 14:14		Greenwich Culmination Time: 07:10								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 44.2 -00.1	N 23 24.0 +00.0	138 04.9 -00.5	N 20 54.2 -00.7	136 01.1 -34.0	N 20 30.4 -12.2	00						
01	194 44.1 -00.1	N 23 24.0 +00.1	153 04.4 -00.5	N 20 53.5 -00.7	150 27.1 -34.0	N 20 18.2 -12.3	01						
02	209 44.0 -00.2	N 23 24.1 +00.0	168 03.9 -00.6	N 20 52.8 -00.8	164 53.1 -33.7	N 20 05.9 -12.4	02						
03	224 43.8 -00.1	N 23 24.1 +00.1	183 03.3 -00.5	N 20 52.0 -00.7	179 19.4 -33.7	N 19 53.5 -12.5	03						
04	239 43.7 -00.1	N 23 24.2 +00.0	198 02.8 -00.5	N 20 51.3 -00.7	193 45.7 -33.5	N 19 41.0 -12.7	04						
05	254 43.6 -00.2	N 23 24.2 +00.1	213 02.3 -00.6	N 20 50.6 -00.8	208 12.2 -33.3	N 19 28.3 -12.7	05						
06	269 43.4 -00.1	N 23 24.3 +00.0	228 01.7 -00.5	N 20 49.8 -00.7	222 38.9 -33.3	N 19 15.6 -12.8	06						
07	284 43.3 -00.1	N 23 24.3 +00.1	243 01.2 -00.5	N 20 49.1 -00.7	237 05.6 -33.1	N 19 02.8 -12.9	07						
08	299 43.2 -00.2	N 23 24.4 +00.0	258 00.7 -00.5	N 20 48.4 -00.8	251 32.5 -32.9	N 18 49.9 -13.0	08						
09	314 43.0 -00.1	N 23 24.4 +00.1	273 00.2 -00.6	N 20 47.6 -00.7	265 59.6 -32.8	N 18 36.9 -13.2	09						
10	329 42.9 -00.2	N 23 24.5 +00.1	287 59.6 -00.5	N 20 46.9 -00.8	280 26.8 -32.7	N 18 23.7 -13.2	10						
11	344 42.7 -00.1	N 23 24.6 +00.0	302 59.1 -00.5	N 20 46.1 -00.7	294 54.1 -32.5	N 18 10.5 -13.3	11						
12	359 42.6 -00.1	N 23 24.6 +00.0	317 58.6 -00.5	N 20 45.4 -00.7	309 21.6 -32.5	N 17 57.2 -13.3	12						
13	14 42.5 -00.2	N 23 24.6 +00.1	332 58.1 -00.6	N 20 44.7 -00.8	323 49.1 -32.2	N 17 43.9 -13.5	13						
14	29 42.3 -00.1	N 23 24.7 +00.0	347 57.5 -00.5	N 20 43.9 -00.7	338 16.9 -32.2	N 17 30.4 -13.6	14						
15	44 42.2 -00.1	N 23 24.7 +00.1	2 57.0 -00.5	N 20 43.2 -00.8	352 44.7 -32.0	N 17 16.8 -13.6	15						
16	59 42.1 -00.2	N 23 24.8 +00.0	17 56.5 -00.5	N 20 42.4 -00.7	7 12.7 -31.9	N 17 03.2 -13.7	16						
17	74 41.9 -00.1	N 23 24.8 +00.1	32 56.0 -00.6	N 20 41.7 -00.8	21 40.8 -31.7	N 16 49.5 -13.8	17						
18	89 41.8 -00.2	N 23 24.9 +00.0	47 55.4 -00.5	N 20 40.9 -00.7	36 09.1 -31.7	N 16 35.7 -13.8	18						
19	104 41.6 -00.1	N 23 24.9 +00.1	62 54.9 -00.5	N 20 40.2 -00.8	50 37.4 -31.5	N 16 21.9 -14.0	19						
20	119 41.5 -00.1	N 23 25.0 +00.0	77 54.4 -00.5	N 20 39.4 -00.7	65 05.9 -31.3	N 16 07.9 -14.0	20						
21	134 41.4 -00.2	N 23 25.0 +00.1	92 53.9 -00.5	N 20 38.7 -00.8	79 34.6 -31.3	N 15 53.9 -14.0	21						
22	149 41.2 -00.1	N 23 25.1 +00.0	107 53.4 -00.6	N 20 37.9 -00.7	94 03.3 -31.1	N 15 39.9 -14.2	22						
23	164 41.1 -00.1	N 23 25.1 +00.0	122 52.8 -00.5	N 20 37.2 -00.8	108 32.2 -31.0	N 15 25.7 -14.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'2 16'2 16'2 16'1								
	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 59'9 59'8 59'6 59'5 59'3 59'2								
	SHA 273° 273° 273° 273° 273° 273°		SHA 232° 232° 231° 231° 231° 231°		SHA 229° 226° 224° 221° 219° 217°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 14:48		Greenwich Culmination Time: 15:30								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	216 19.1 +00.6	N 17 53.4 +00.5	146 40.0 +01.9	N 21 05.5 -00.1	252 55.5 +02.3	N 03 11.0 +00.1	00						
01	231 19.7 +00.6	N 17 53.9 +00.5	161 41.9 +02.0	N 21 05.4 -00.1	267 57.8 +02.3	N 03 11.1 +00.0	01						
02	246 20.3 +00.7	N 17 54.4 +00.5	176 43.9 +01.9	N 21 05.3 -00.1	283 00.1 +02.3	N 03 11.1 +00.1	02						
03	261 21.0 +00.6	N 17 54.9 +00.5	191 45.8 +01.9	N 21 05.2 -00.1	298 02.4 +02.4	N 03 11.2 +00.0	03						
04	276 21.6 +00.6	N 17 55.4 +00.5	206 47.7 +01.9	N 21 05.1 -00.1	313 04.8 +02.3	N 03 11.2 +00.1	04						
05	291 22.2 +00.6	N 17 55.9 +00.5	221 49.6 +01.9	N 21 05.0 -00.1	328 07.1 +02.3	N 03 11.3 +00.0	05						
06	306 22.8 +00.7	N 17 56.4 +00.5	236 51.5 +02.0	N 21 04.9 -00.1	343 09.4 +02.3	N 03 11.3 +00.1	06						
07	321 23.5 +00.6	N 17 56.9 +00.4	251 53.5 +01.9	N 21 04.8 -00.1	358 11.7 +02.3	N 03 11.4 +00.0	07						
08	336 24.1 +00.6	N 17 57.3 +00.5	266 55.4 +01.9	N 21 04.7 -00.1	13 14.0 +02.3	N 03 11.4 +00.1	08						
09	351 24.7 +00.7	N 17 57.8 +00.5	281 57.3 +01.9	N 21 04.6 -00.1	28 16.3 +02.4	N 03 11.5 +00.0	09						
10	6 25.4 +00.6	N 17 58.3 +00.5	296 59.2 +02.0	N 21 04.5 -00.1	43 18.7 +02.3	N 03 11.5 +00.1	10						
11	21 26.0 +00.6	N 17 58.8 +00.5	312 01.2 +01.9	N 21 04.4 -00.1	58 21.0 +02.3	N 03 11.6 +00.0	11						
12	36 26.6 +00.7	N 17 59.3 +00.5	327 03.1 +01.9	N 21 04.3 -00.1	73 23.3 +02.3	N 03 11.6 +00.1	12						
13	51 27.3 +00.6	N 17 59.8 +00.5	342 05.0 +01.9	N 21 04.2 -00.1	88 25.6 +02.3	N 03 11.7 +00.0	13						
14	66 27.9 +00.6	N 18 00.3 +00.5	357 06.9 +01.9	N 21 04.1 -00.1	103 27.9 +02.4	N 03 11.7 +00.1	14						
15	81 28.5 +00.6	N 18 00.8 +00.4	12 08.8 +02.0	N 21 04.0 -00.1	118 30.3 +02.3	N 03 11.8 +00.0	15						
16	96 29.1 +00.7	N 18 01.2 +00.5	27 10.8 +01.9	N 21 03.9 -00.1	133 32.6 +02.3	N 03 11.8 +00.1	16						
17	111 29.8 +00.6	N 18 01.7 +00.5	42 12.7 +01.9	N 21 03.8 -00.1	148 34.9 +02.3	N 03 11.9 +00.0	17						
18	126 30.4 +00.6	N 18 02.2 +00.5	57 14.6 +01.9	N 21 03.7 -00.1	163 37.2 +02.3	N 03 11.9 +00.1	18						
19	141 31.0 +00.7	N 18 02.7 +00.5	72 16.5 +02.0	N 21 03.6 -00.1	178 39.5 +02.3	N 03 12.0 +00.0	19						
20	156 31.7 +00.6	N 18 03.2 +00.5	87 18.5 +01.9	N 21 03.5 -00.1	193 41.8 +02.4	N 03 12.0 +00.1	20						
21	171 32.3 +00.6	N 18 03.7 +00.4	102 20.4 +01.9	N 21 03.4 -00.1	208 44.2 +02.3	N 03 12.1 +00.0	21						
22	186 32.9 +00.7	N 18 04.1 +00.5	117 22.3 +01.9	N 21 03.3 -00.1	223 46.5 +02.3	N 03 12.1 +00.1	22						
23	201 33.6 +00.6	N 18 04.6 +00.5	132 24.2 +01.9	N 21 03.2 -00.1	238 48.8 +02.3	N 03 12.2 +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 310° 310° 310° 310° 310° 309°		SHA 240° 240° 240° 240° 240° 240°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:34		Greenwich Culmination Time: 14:11		Greenwich Culmination Time: 07:07								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 41.0 -00.2	N 23 25.1 +00.1	137 52.3 -00.5	N 20 36.4 -00.7	123 01.2 -30.9	N 15 11.5 -14.2	00						
01	194 40.8 -00.1	N 23 25.2 +00.0	152 51.8 -00.5	N 20 35.7 -00.8	137 30.3 -30.8	N 14 57.3 -14.3	01						
02	209 40.7 -00.2	N 23 25.2 +00.1	167 51.3 -00.5	N 20 34.9 -00.7	151 59.5 -30.6	N 14 43.0 -14.4	02						
03	224 40.5 -00.1	N 23 25.3 +00.0	182 50.8 -00.5	N 20 34.2 -00.8	166 28.9 -30.5	N 14 28.6 -14.5	03						
04	239 40.4 -00.1	N 23 25.3 +00.0	197 50.3 -00.5	N 20 33.4 -00.7	180 58.4 -30.4	N 14 14.1 -14.5	04						
05	254 40.3 -00.2	N 23 25.3 +00.1	212 49.8 -00.6	N 20 32.7 -00.8	195 28.0 -30.3	N 13 59.6 -14.5	05						
06	269 40.1 -00.1	N 23 25.4 +00.0	227 49.2 -00.5	N 20 31.9 -00.7	209 57.7 -30.2	N 13 45.1 -14.6	06						
07	284 40.0 -00.1	N 23 25.4 +00.0	242 48.7 -00.5	N 20 31.2 -00.8	224 27.5 -30.1	N 13 30.5 -14.7	07						
08	299 39.9 -00.2	N 23 25.4 +00.1	257 48.2 -00.5	N 20 30.4 -00.8	238 57.4 -29.9	N 13 15.8 -14.7	08						
09	314 39.7 -00.1	N 23 25.5 +00.0	272 47.7 -00.5	N 20 29.6 -00.7	253 27.5 -29.9	N 13 01.1 -14.7	09						
10	329 39.6 -00.2	N 23 25.5 +00.0	287 47.2 -00.5	N 20 28.9 -00.8	267 57.6 -29.7	N 12 46.4 -14.8	10						
11	344 39.4 -00.1	N 23 25.5 +00.1	302 46.7 -00.5	N 20 28.1 -00.7	282 27.9 -29.7	N 12 31.6 -14.8	11						
12	359 39.3 -00.1	N 23 25.6 +00.0	317 46.2 -00.5	N 20 27.4 -00.8	296 58.2 -29.5	N 12 16.8 -14.9	12						
13	14 39.2 -00.2	N 23 25.6 +00.0	332 45.7 -00.5	N 20 26.6 -00.8	311 28.7 -29.4	N 12 01.9 -14.9	13						
14	29 39.0 -00.1	N 23 25.6 +00.1	347 45.2 -00.5	N 20 25.8 -00.7	325 59.3 -29.3	N 11 47.0 -15.0	14						
15	44 38.9 -00.1	N 23 25.7 +00.0	2 44.7 -00.6	N 20 25.1 -00.8	340 30.0 -29.2	N 11 32.0 -14.9	15						
16	59 38.8 -00.2	N 23 25.7 +00.0	17 44.1 -00.5	N 20 24.3 -00.8	355 00.8 -29.2	N 11 17.1 -15.1	16						
17	74 38.6 -00.1	N 23 25.7 +00.0	32 43.6 -00.5	N 20 23.5 -00.7	9 31.6 -29.0	N 11 02.0 -15.0	17						
18	89 38.5 -00.1	N 23 25.7 +00.1	47 43.1 -00.5	N 20 22.8 -00.8	24 02.6 -28.9	N 10 47.0 -15.1	18						
19	104 38.4 -00.2	N 23 25.8 +00.0	62 42.6 -00.5	N 20 22.0 -00.8	38 33.7 -28.8	N 10 31.9 -15.1	19						
20	119 38.2 -00.1	N 23 25.8 +00.0	77 42.1 -00.5	N 20 21.2 -00.7	53 04.9 -28.8	N 10 16.8 -15.2	20						
21	134 38.1 -00.2	N 23 25.8 +00.1	92 41.6 -00.5	N 20 20.5 -00.8	67 36.1 -28.6	N 10 01.6 -15.1	21						
22	149 37.9 -00.1	N 23 25.9 +00.0	107 41.1 -00.5	N 20 19.7 -00.8	82 07.5 -28.6	N 09 46.5 -15.2	22						
23	164 37.8 -00.1	N 23 25.9 +00.0	122 40.6 -00.5	N 20 18.9 -00.7	96 38.9 -28.4	N 09 31.3 -15.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'0 16'0 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 59'0 58'8 58'7 58'5 58'4 58'2								
	SHA 272° 272° 272° 272° 272° 271°		SHA 231° 230° 230° 230° 230° 230°		SHA 215° 212° 210° 208° 206° 204°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 14:49		Greenwich Culmination Time: 16:20								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	216 34.2 +00.6	N 18 05.1 +00.5	147 26.1 +02.0	N 21 03.1 -00.1	253 51.1 +02.3	N 03 12.2 +00.1	00						
01	231 34.8 +00.6	N 18 05.6 +00.5	162 28.1 +01.9	N 21 03.0 -00.1	268 53.4 +02.4	N 03 12.3 +00.0	01						
02	246 35.4 +00.7	N 18 06.1 +00.5	177 30.0 +01.9	N 21 02.9 -00.1	283 55.8 +02.3	N 03 12.3 +00.1	02						
03	261 36.1 +00.6	N 18 06.6 +00.4	192 31.9 +01.9	N 21 02.8 -00.1	298 58.1 +02.3	N 03 12.4 +00.0	03						
04	276 36.7 +00.6	N 18 07.0 +00.5	207 33.8 +02.0	N 21 02.7 -00.1	314 00.4 +02.3	N 03 12.4 +00.1	04						
05	291 37.3 +00.7	N 18 07.5 +00.5	222 35.8 +01.9	N 21 02.6 -00.1	329 02.7 +02.3	N 03 12.5 +00.0	05						
06	306 38.0 +00.6	N 18 08.0 +00.5	237 37.7 +01.9	N 21 02.5 -00.1	344 05.0 +02.4	N 03 12.5 +00.1	06						
07	321 38.6 +00.6	N 18 08.5 +00.5	252 39.6 +01.9	N 21 02.4 -00.1	359 07.4 +02.3	N 03 12.6 +00.0	07						
08	336 39.2 +00.6	N 18 09.0 +00.4	267 41.5 +01.9	N 21 02.3 -00.1	14 09.7 +02.3	N 03 12.6 +00.0	08						
09	351 39.8 +00.7	N 18 09.4 +00.5	282 43.4 +02.0	N 21 02.2 -00.1	29 12.0 +02.3	N 03 12.6 +00.1	09						
10	6 40.5 +00.6	N 18 09.9 +00.5	297 45.4 +01.9	N 21 02.1 -00.1	44 14.3 +02.3	N 03 12.7 +00.0	10						
11	21 41.1 +00.6	N 18 10.4 +00.5	312 47.3 +01.9	N 21 02.0 -00.1	59 16.6 +02.4	N 03 12.7 +00.1	11						
12	36 41.7 +00.7	N 18 10.9 +00.5	327 49.2 +01.9	N 21 01.9 -00.1	74 19.0 +02.3	N 03 12.8 +00.0	12						
13	51 42.4 +00.6	N 18 11.4 +00.4	342 51.1 +01.9	N 21 01.8 -00.1	89 21.3 +02.3	N 03 12.8 +00.1	13						
14	66 43.0 +00.6	N 18 11.8 +00.5	357 53.0 +02.0	N 21 01.7 -00.1	104 23.6 +02.3	N 03 12.9 +00.0	14						
15	81 43.6 +00.6	N 18 12.3 +00.5	12 55.0 +01.9	N 21 01.6 -00.1	119 25.9 +02.4	N 03 12.9 +00.1	15						
16	96 44.2 +00.7	N 18 12.8 +00.5	27 56.9 +01.9	N 21 01.5 -00.1	134 28.3 +02.3	N 03 13.0 +00.0	16						
17	111 44.9 +00.6	N 18 13.3 +00.5	42 58.8 +01.9	N 21 01.4 -00.1	149 30.6 +02.3	N 03 13.0 +00.1	17						
18	126 45.5 +00.6	N 18 13.8 +00.4	58 00.7 +01.9	N 21 01.3 -00.1	164 32.9 +02.3	N 03 13.1 +00.0	18						
19	141 46.1 +00.7	N 18 14.2 +00.5	73 02.6 +02.0	N 21 01.2 -00.1	179 35.2 +02.3	N 03 13.1 +00.1	19						
20	156 46.8 +00.6	N 18 14.7 +00.5	88 04.6 +01.9	N 21 01.1 -00.1	194 37.5 +02.4	N 03 13.2 +00.0	20						
21	171 47.4 +00.6	N 18 15.2 +00.5	103 06.5 +01.9	N 21 01.0 -00.1	209 39.9 +02.3	N 03 13.2 +00.1	21						
22	186 48.0 +00.6	N 18 15.7 +00.4	118 08.4 +01.9	N 21 00.9 -00.1	224 42.2 +02.3	N 03 13.3 +00.0	22						
23	201 48.6 +00.7	N 18 16.1 +00.5	133 10.3 +01.9	N 21 00.8 -00.1	239 44.5 +02.3	N 03 13.3 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 309° 309° 309° 309° 309° 309°		SHA 240° 240° 240° 240° 240° 240°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:33		Greenwich Culmination Time: 14:08		Greenwich Culmination Time: 07:03								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 20%				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 37.7 -00.2	N 23 25.9 +00.0	137 40.1 -00.5	N 20 18.2 -00.8	111 10.5 -28.4	N 09 16.0 -15.2	00						
01	194 37.5 -00.1	N 23 25.9 +00.0	152 39.6 -00.5	N 20 17.4 -00.8	125 42.1 -28.3	N 09 00.8 -15.3	01						
02	209 37.4 -00.1	N 23 25.9 +00.1	167 39.1 -00.5	N 20 16.6 -00.8	140 13.8 -28.2	N 08 45.5 -15.3	02						
03	224 37.3 -00.2	N 23 26.0 +00.0	182 38.6 -00.5	N 20 15.8 -00.7	154 45.6 -28.1	N 08 30.2 -15.3	03						
04	239 37.1 -00.1	N 23 26.0 +00.0	197 38.1 -00.5	N 20 15.1 -00.8	169 17.5 -28.0	N 08 14.9 -15.3	04						
05	254 37.0 -00.2	N 23 26.0 +00.0	212 37.6 -00.5	N 20 14.3 -00.8	183 49.5 -28.0	N 07 59.6 -15.3	05						
06	269 36.8 -00.1	N 23 26.0 +00.0	227 37.1 -00.5	N 20 13.5 -00.8	198 21.5 -27.8	N 07 44.3 -15.4	06						
07	284 36.7 -00.1	N 23 26.0 +00.1	242 36.6 -00.5	N 20 12.7 -00.8	212 53.7 -27.8	N 07 28.9 -15.3	07						
08	299 36.6 -00.2	N 23 26.1 +00.0	257 36.1 -00.5	N 20 11.9 -00.7	227 25.9 -27.7	N 07 13.6 -15.4	08						
09	314 36.4 -00.1	N 23 26.1 +00.0	272 35.6 -00.4	N 20 11.2 -00.8	241 58.2 -27.7	N 06 58.2 -15.4	09						
10	329 36.3 -00.1	N 23 26.1 +00.0	287 35.2 -00.5	N 20 10.4 -00.8	256 30.5 -27.5	N 06 42.8 -15.4	10						
11	344 36.2 -00.2	N 23 26.1 +00.0	302 34.7 -00.5	N 20 09.6 -00.8	271 03.0 -27.5	N 06 27.4 -15.4	11						
12	359 36.0 -00.1	N 23 26.1 +00.0	317 34.2 -00.5	N 20 08.8 -00.8	285 35.5 -27.5	N 06 12.0 -15.4	12						
13	14 35.9 -00.2	N 23 26.1 +00.1	332 33.7 -00.5	N 20 08.0 -00.8	300 08.0 -27.3	N 05 56.6 -15.4	13						
14	29 35.7 -00.1	N 23 26.2 +00.0	347 33.2 -00.5	N 20 07.2 -00.7	314 40.7 -27.3	N 05 41.2 -15.4	14						
15	44 35.6 -00.1	N 23 26.2 +00.0	2 32.7 -00.5	N 20 06.5 -00.8	329 13.4 -27.2	N 05 25.8 -15.5	15						
16	59 35.5 -00.2	N 23 26.2 +00.0	17 32.2 -00.5	N 20 05.7 -00.8	343 46.2 -27.2	N 05 10.3 -15.4	16						
17	74 35.3 -00.1	N 23 26.2 +00.0	32 31.7 -00.5	N 20 04.9 -00.8	358 19.0 -27.1	N 04 54.9 -15.4	17						
18	89 35.2 -00.1	N 23 26.2 +00.0	47 31.2 -00.5	N 20 04.1 -00.8	12 51.9 -27.0	N 04 39.5 -15.4	18						
19	104 35.1 -00.2	N 23 26.2 +00.0	62 30.7 -00.4	N 20 03.3 -00.8	27 24.9 -27.0	N 04 24.1 -15.5	19						
20	119 34.9 -00.1	N 23 26.2 +00.0	77 30.3 -00.5	N 20 02.5 -00.8	41 57.9 -26.9	N 04 08.6 -15.4	20						
21	134 34.8 -00.1	N 23 26.2 +00.0	92 29.8 -00.5	N 20 01.7 -00.8	56 31.0 -26.8	N 03 53.2 -15.4	21						
22	149 34.7 -00.2	N 23 26.2 +00.0	107 29.3 -00.5	N 20 00.9 -00.7	71 04.2 -26.8	N 03 37.8 -15.4	22						
23	164 34.5 -00.1	N 23 26.2 +00.1	122 28.8 -00.5	N 20 00.2 -00.8	85 37.4 -26.8	N 03 22.4 -15.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'7 15'7 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 58'1 57'9 57'7 57'6 57'4 57'3								
	SHA 271° 271° 271° 271° 271° 270°		SHA 229° 229° 229° 229° 229° 228°		SHA 202° 200° 198° 196° 194° 192°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 14:49		Greenwich Culmination Time: 17:06								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	216 49.3 +00.6	N 18 16.6 +00.5	148 12.2 +02.0	N 21 00.7 -00.1	254 46.8 +02.4	N 03 13.4 +00.0	00						
01	231 49.9 +00.6	N 18 17.1 +00.5	163 14.2 +01.9	N 21 00.6 -00.1	269 49.2 +02.3	N 03 13.4 +00.1	01						
02	246 50.5 +00.7	N 18 17.6 +00.4	178 16.1 +01.9	N 21 00.5 -00.1	284 51.5 +02.3	N 03 13.5 +00.0	02						
03	261 51.2 +00.6	N 18 18.0 +00.5	193 18.0 +01.9	N 21 00.4 -00.1	299 53.8 +02.3	N 03 13.5 +00.1	03						
04	276 51.8 +00.6	N 18 18.5 +00.5	208 19.9 +01.9	N 21 00.3 -00.1	314 56.1 +02.3	N 03 13.6 +00.0	04						
05	291 52.4 +00.6	N 18 19.0 +00.5	223 21.8 +02.0	N 21 00.2 -00.1	329 58.4 +02.4	N 03 13.6 +00.1	05						
06	306 53.0 +00.7	N 18 19.5 +00.4	238 23.8 +01.9	N 21 00.1 -00.1	345 00.8 +02.3	N 03 13.7 +00.0	06						
07	321 53.7 +00.6	N 18 19.9 +00.5	253 25.7 +01.9	N 20 60.0 -00.1	0 03.1 +02.3	N 03 13.7 +00.1	07						
08	336 54.3 +00.6	N 18 20.4 +00.5	268 27.6 +01.9	N 20 59.9 -00.1	15 05.4 +02.3	N 03 13.8 +00.0	08						
09	351 54.9 +00.7	N 18 20.9 +00.4	283 29.5 +01.9	N 20 59.8 -00.1	30 07.7 +02.4	N 03 13.8 +00.1	09						
10	6 55.6 +00.6	N 18 21.3 +00.5	298 31.4 +02.0	N 20 59.7 -00.1	45 10.1 +02.3	N 03 13.9 +00.0	10						
11	21 56.2 +00.6	N 18 21.8 +00.5	313 33.4 +01.9	N 20 59.6 -00.1	60 12.4 +02.3	N 03 13.9 +00.0	11						
12	36 56.8 +00.6	N 18 22.3 +00.5	328 35.3 +01.9	N 20 59.5 -00.1	75 14.7 +02.3	N 03 13.9 +00.1	12						
13	51 57.4 +00.7	N 18 22.8 +00.4	343 37.2 +01.9	N 20 59.4 -00.1	90 17.0 +02.4	N 03 14.0 +00.0	13						
14	66 58.1 +00.6	N 18 23.2 +00.5	358 39.1 +01.9	N 20 59.3 -00.1	105 19.4 +02.3	N 03 14.0 +00.1	14						
15	81 58.7 +00.6	N 18 23.7 +00.5	13 41.0 +02.0	N 20 59.2 -00.1	120 21.7 +02.3	N 03 14.1 +00.0	15						
16	96 59.3 +00.6	N 18 24.2 +00.4	28 43.0 +01.9	N 20 59.1 -00.1	135 24.0 +02.3	N 03 14.1 +00.1	16						
17	111 59.9 +00.7	N 18 24.6 +00.5	43 44.9 +01.9	N 20 59.0 -00.1	150 26.3 +02.4	N 03 14.2 +00.0	17						
18	127 00.6 +00.6	N 18 25.1 +00.5	58 46.8 +01.9	N 20 58.9 -00.1	165 28.7 +02.3	N 03 14.2 +00.1	18						
19	142 01.2 +00.6	N 18 25.6 +00.5	73 48.7 +01.9	N 20 58.8 -00.1	180 31.0 +02.3	N 03 14.3 +00.0	19						
20	157 01.8 +00.7	N 18 26.1 +00.4	88 50.6 +01.9	N 20 58.7 -00.1	195 33.3 +02.3	N 03 14.3 +00.1	20						
21	172 02.5 +00.6	N 18 26.5 +00.5	103 52.5 +02.0	N 20 58.6 -00.1	210 35.6 +02.4	N 03 14.4 +00.0	21						
22	187 03.1 +00.6	N 18 27.0 +00.5	118 54.5 +01.9	N 20 58.5 -00.1	225 38.0 +02.3	N 03 14.4 +00.1	22						
23	202 03.7 +00.6	N 18 27.5 +00.4	133 56.4 +01.9	N 20 58.4 -00.1	240 40.3 +02.3	N 03 14.5 +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 309° 308° 308° 308° 308° 308°		SHA 240° 240° 240° 240° 240° 240°		SHA 347° 347° 347° 347° 347° 347°								
	Greenwich Culmination Time: 09:32		Greenwich Culmination Time: 14:05		Greenwich Culmination Time: 06:59								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 34.4 -00.2	N 23 26.3 +00.0	137 28.3 -00.5	N 19 59.4 -00.8	100 10.6 -26.7	N 03 07.0 -15.4	00						
01	194 34.2 -00.1	N 23 26.3 +00.0	152 27.8 -00.5	N 19 58.6 -00.8	114 43.9 -26.6	N 02 51.6 -15.4	01						
02	209 34.1 -00.1	N 23 26.3 +00.0	167 27.3 -00.4	N 19 57.8 -00.8	129 17.3 -26.6	N 02 36.2 -15.4	02						
03	224 34.0 -00.2	N 23 26.3 +00.0	182 26.9 -00.5	N 19 57.0 -00.8	143 50.7 -26.5	N 02 20.8 -15.4	03						
04	239 33.8 -00.1	N 23 26.3 +00.0	197 26.4 -00.5	N 19 56.2 -00.8	158 24.2 -26.5	N 02 05.4 -15.3	04						
05	254 33.7 -00.1	N 23 26.3 +00.0	212 25.9 -00.5	N 19 55.4 -00.8	172 57.7 -26.5	N 01 50.1 -15.4	05						
06	269 33.6 -00.2	N 23 26.3 +00.0	227 25.4 -00.5	N 19 54.6 -00.8	187 31.2 -26.4	N 01 34.7 -15.3	06						
07	284 33.4 -00.1	N 23 26.3 +00.0	242 24.9 -00.4	N 19 53.8 -00.8	202 04.8 -26.3	N 01 19.4 -15.3	07						
08	299 33.3 -00.1	N 23 26.3 +00.0	257 24.5 -00.5	N 19 53.0 -00.8	216 38.5 -26.3	N 01 04.1 -15.3	08						
09	314 33.2 -00.2	N 23 26.3 +00.0	272 24.0 -00.5	N 19 52.2 -00.8	231 12.2 -26.3	N 00 48.8 -15.3	09						
10	329 33.0 -00.1	N 23 26.3 +00.0	287 23.5 -00.5	N 19 51.4 -00.8	245 45.9 -26.2	N 00 33.5 -15.3	10						
11	344 32.9 -00.2	N 23 26.3 +00.0	302 23.0 -00.4	N 19 50.6 -00.8	260 19.7 -26.2	N 00 18.2 -15.3	11						
12	359 32.7 -00.1	N 23 26.3 +00.0	317 22.6 -00.5	N 19 49.8 -00.8	274 53.5 -26.2	N 00 02.9 -15.2	12						
13	14 32.6 -00.1	N 23 26.3 +00.0	332 22.1 -00.5	N 19 49.0 -00.8	289 27.3 -26.1	S 00 12.3 +15.2	13						
14	29 32.5 -00.2	N 23 26.3 +00.0	347 21.6 -00.5	N 19 48.2 -00.8	304 01.2 -26.1	S 00 27.5 +15.2	14						
15	44 32.3 -00.1	N 23 26.3 +00.0	2 21.1 -00.4	N 19 47.4 -00.8	318 35.1 -26.1	S 00 42.7 +15.2	15						
16	59 32.2 -00.1	N 23 26.3 -00.1	17 20.7 -00.5	N 19 46.6 -00.9	333 09.0 -26.0	S 00 57.9 +15.1	16						
17	74 32.1 -00.2	N 23 26.2 +00.0	32 20.2 -00.5	N 19 45.7 -00.8	347 43.0 -26.0	S 01 13.0 +15.1	17						
18	89 31.9 -00.1	N 23 26.2 +00.0	47 19.7 -00.4	N 19 44.9 -00.8	2 17.0 -26.0	S 01 28.1 +15.1	18						
19	104 31.8 -00.1	N 23 26.2 +00.0	62 19.3 -00.5	N 19 44.1 -00.8	16 51.0 -25.9	S 01 43.2 +15.1	19						
20	119 31.7 -00.2	N 23 26.2 +00.0	77 18.8 -00.5	N 19 43.3 -00.8	31 25.1 -25.9	S 01 58.3 +15.1	20						
21	134 31.5 -00.1	N 23 26.2 +00.0	92 18.3 -00.5	N 19 42.5 -00.8	45 59.2 -25.9	S 02 13.4 +15.0	21						
22	149 31.4 -00.2	N 23 26.2 +00.0	107 17.8 -00.4	N 19 41.7 -00.8	60 33.3 -25.9	S 02 28.4 +15.0	22						
23	164 31.2 -00.1	N 23 26.2 +00.0	122 17.4 -00.5	N 19 40.9 -00.8	75 07.4 -25.8	S 02 43.4 +15.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'5 15'5 15'4 15'4 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'1 57'0 56'8 56'7 56'6 56'4								
	SHA 270° 270° 270° 270° 270° 269°		SHA 228° 228° 228° 228° 227° 227°		SHA 190° 188° 186° 184° 182° 180°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 14:50		Greenwich Culmination Time: 17:50								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	217 04.3 +00.7	N 18 27.9 +00.5	148 58.3 +01.9	N 20 58.3 -00.1	255 42.6 +02.3	N 03 14.5 +00.1	00						
01	232 05.0 +00.6	N 18 28.4 +00.5	164 00.2 +01.9	N 20 58.2 -00.1	270 44.9 +02.4	N 03 14.6 +00.0	01						
02	247 05.6 +00.6	N 18 28.9 +00.4	179 02.1 +02.0	N 20 58.1 -00.1	285 47.3 +02.3	N 03 14.6 +00.0	02						
03	262 06.2 +00.6	N 18 29.3 +00.5	194 04.1 +01.9	N 20 58.0 -00.1	300 49.6 +02.3	N 03 14.6 +00.1	03						
04	277 06.8 +00.7	N 18 29.8 +00.5	209 06.0 +01.9	N 20 57.9 -00.1	315 51.9 +02.3	N 03 14.7 +00.0	04						
05	292 07.5 +00.6	N 18 30.3 +00.4	224 07.9 +01.9	N 20 57.8 -00.1	330 54.2 +02.4	N 03 14.7 +00.1	05						
06	307 08.1 +00.6	N 18 30.7 +00.5	239 09.8 +01.9	N 20 57.7 -00.1	345 56.6 +02.3	N 03 14.8 +00.0	06						
07	322 08.7 +00.6	N 18 31.2 +00.5	254 11.7 +01.9	N 20 57.6 -00.1	0 58.9 +02.3	N 03 14.8 +00.1	07						
08	337 09.3 +00.7	N 18 31.7 +00.4	269 13.6 +02.0	N 20 57.5 -00.1	16 01.2 +02.4	N 03 14.9 +00.0	08						
09	352 10.0 +00.6	N 18 32.1 +00.5	284 15.6 +01.9	N 20 57.4 -00.2	31 03.6 +02.3	N 03 14.9 +00.1	09						
10	7 10.6 +00.6	N 18 32.6 +00.5	299 17.5 +01.9	N 20 57.2 -00.1	46 05.9 +02.3	N 03 15.0 +00.0	10						
11	22 11.2 +00.7	N 18 33.1 +00.4	314 19.4 +01.9	N 20 57.1 -00.1	61 08.2 +02.3	N 03 15.0 +00.1	11						
12	37 11.9 +00.6	N 18 33.5 +00.5	329 21.3 +01.9	N 20 57.0 -00.1	76 10.5 +02.4	N 03 15.1 +00.0	12						
13	52 12.5 +00.6	N 18 34.0 +00.4	344 23.2 +01.9	N 20 56.9 -00.1	91 12.9 +02.3	N 03 15.1 +00.1	13						
14	67 13.1 +00.6	N 18 34.4 +00.5	359 25.1 +02.0	N 20 56.8 -00.1	106 15.2 +02.3	N 03 15.2 +00.0	14						
15	82 13.7 +00.7	N 18 34.9 +00.5	14 27.1 +01.9	N 20 56.7 -00.1	121 17.5 +02.3	N 03 15.2 +00.0	15						
16	97 14.4 +00.6	N 18 35.4 +00.4	29 29.0 +01.9	N 20 56.6 -00.1	136 19.8 +02.4	N 03 15.2 +00.1	16						
17	112 15.0 +00.6	N 18 35.8 +00.5	44 30.9 +01.9	N 20 56.5 -00.1	151 22.2 +02.3	N 03 15.3 +00.0	17						
18	127 15.6 +00.6	N 18 36.3 +00.5	59 32.8 +01.9	N 20 56.4 -00.1	166 24.5 +02.3	N 03 15.3 +00.1	18						
19	142 16.2 +00.7	N 18 36.8 +00.4	74 34.7 +02.0	N 20 56.3 -00.1	181 26.8 +02.4	N 03 15.4 +00.0	19						
20	157 16.9 +00.6	N 18 37.2 +00.5	89 36.7 +01.9	N 20 56.2 -00.1	196 29.2 +02.3	N 03 15.4 +00.1	20						
21	172 17.5 +00.6	N 18 37.7 +00.4	104 38.6 +01.9	N 20 56.1 -00.1	211 31.5 +02.3	N 03 15.5 +00.0	21						
22	187 18.1 +00.6	N 18 38.1 +00.5	119 40.5 +01.9	N 20 56.0 -00.1	226 33.8 +02.3	N 03 15.5 +00.1	22						
23	202 18.7 +00.7	N 18 38.6 +00.5	134 42.4 +01.9	N 20 55.9 -00.1	241 36.1 +02.4	N 03 15.6 +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 308° 308° 308° 307° 307° 307°		SHA 240° 240° 240° 240° 240° 240°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:31		Greenwich Culmination Time: 14:02		Greenwich Culmination Time: 06:56								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 31.1 -00.1	N 23 26.2 +00.0	137 16.9 -00.5	N 19 40.1 -00.8	89 41.6 -25.9	S 02 58.4 +14.9	00						
01	194 31.0 -00.2	N 23 26.2 +00.0	152 16.4 -00.4	N 19 39.3 -00.9	104 15.7 -25.8	S 03 13.3 +14.9	01						
02	209 30.8 -00.1	N 23 26.2 +00.0	167 16.0 -00.5	N 19 38.4 -00.8	118 49.9 -25.8	S 03 28.2 +14.9	02						
03	224 30.7 -00.1	N 23 26.2 -00.1	182 15.5 -00.4	N 19 37.6 -00.8	133 24.1 -25.7	S 03 43.1 +14.8	03						
04	239 30.6 -00.2	N 23 26.1 +00.0	197 15.1 -00.5	N 19 36.8 -00.8	147 58.4 -25.8	S 03 57.9 +14.8	04						
05	254 30.4 -00.1	N 23 26.1 +00.0	212 14.6 -00.5	N 19 36.0 -00.8	162 32.6 -25.7	S 04 12.7 +14.8	05						
06	269 30.3 -00.1	N 23 26.1 +00.0	227 14.1 -00.4	N 19 35.2 -00.8	177 06.9 -25.8	S 04 27.5 +14.7	06						
07	284 30.2 -00.2	N 23 26.1 +00.0	242 13.7 -00.5	N 19 34.4 -00.9	191 41.1 -25.7	S 04 42.2 +14.7	07						
08	299 30.0 -00.1	N 23 26.1 +00.0	257 13.2 -00.5	N 19 33.5 -00.8	206 15.4 -25.7	S 04 56.9 +14.7	08						
09	314 29.9 -00.2	N 23 26.1 -00.1	272 12.7 -00.4	N 19 32.7 -00.8	220 49.7 -25.7	S 05 11.6 +14.6	09						
10	329 29.7 -00.1	N 23 26.0 +00.0	287 12.3 -00.5	N 19 31.9 -00.8	235 24.0 -25.7	S 05 26.2 +14.6	10						
11	344 29.6 -00.1	N 23 26.0 +00.0	302 11.8 -00.4	N 19 31.1 -00.9	249 58.3 -25.7	S 05 40.8 +14.6	11						
12	359 29.5 -00.2	N 23 26.0 +00.0	317 11.4 -00.5	N 19 30.2 -00.8	264 32.6 -25.6	S 05 55.4 +14.5	12						
13	14 29.3 -00.1	N 23 26.0 +00.0	332 10.9 -00.5	N 19 29.4 -00.8	279 07.0 -25.7	S 06 09.9 +14.5	13						
14	29 29.2 -00.1	N 23 26.0 -00.1	347 10.4 -00.4	N 19 28.6 -00.8	293 41.3 -25.7	S 06 24.4 +14.4	14						
15	44 29.1 -00.2	N 23 25.9 +00.0	2 10.0 -00.5	N 19 27.8 -00.9	308 15.6 -25.6	S 06 38.8 +14.4	15						
16	59 28.9 -00.1	N 23 25.9 +00.0	17 09.5 -00.4	N 19 26.9 -00.8	322 50.0 -25.7	S 06 53.2 +14.4	16						
17	74 28.8 -00.1	N 23 25.9 +00.0	32 09.1 -00.5	N 19 26.1 -00.8	337 24.3 -25.7	S 07 07.6 +14.3	17						
18	89 28.7 -00.2	N 23 25.9 -00.1	47 08.6 -00.4	N 19 25.3 -00.8	351 58.6 -25.6	S 07 21.9 +14.2	18						
19	104 28.5 -00.1	N 23 25.8 +00.0	62 08.2 -00.5	N 19 24.5 -00.9	6 33.0 -25.7	S 07 36.1 +14.2	19						
20	119 28.4 -00.1	N 23 25.8 +00.0	77 07.7 -00.4	N 19 23.6 -00.8	21 07.3 -25.7	S 07 50.3 +14.2	20						
21	134 28.3 -00.2	N 23 25.8 +00.0	92 07.3 -00.5	N 19 22.8 -00.8	35 41.6 -25.7	S 08 04.5 +14.1	21						
22	149 28.1 -00.1	N 23 25.8 -00.1	107 06.8 -00.4	N 19 22.0 -00.9	50 15.9 -25.7	S 08 18.6 +14.1	22						
23	164 28.0 -00.2	N 23 25.7 +00.0	122 06.4 -00.5	N 19 21.1 -00.8	64 50.2 -25.6	S 08 32.7 +14.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'3 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'3 56'2 56'0 55'9 55'8 55'7								
	SHA 269° 269° 269° 269° 269° 268°		SHA 227° 227° 227° 226° 226° 226°		SHA 179° 177° 175° 173° 171° 169°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 14:51		Greenwich Culmination Time: 18:33								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	217 19.4 +00.6	N 18 39.1 +00.4	149 44.3 +01.9	N 20 55.8 -00.1	256 38.5 +02.3	N 03 15.6 +00.0	00						
01	232 20.0 +00.6	N 18 39.5 +00.5	164 46.2 +02.0	N 20 55.7 -00.1	271 40.8 +02.3	N 03 15.6 +00.1	01						
02	247 20.6 +00.6	N 18 40.0 +00.4	179 48.2 +01.9	N 20 55.6 -00.1	286 43.1 +02.4	N 03 15.7 +00.0	02						
03	262 21.2 +00.7	N 18 40.4 +00.5	194 50.1 +01.9	N 20 55.5 -00.1	301 45.5 +02.3	N 03 15.7 +00.1	03						
04	277 21.9 +00.6	N 18 40.9 +00.5	209 52.0 +01.9	N 20 55.4 -00.1	316 47.8 +02.3	N 03 15.8 +00.0	04						
05	292 22.5 +00.6	N 18 41.4 +00.4	224 53.9 +01.9	N 20 55.3 -00.1	331 50.1 +02.4	N 03 15.8 +00.1	05						
06	307 23.1 +00.6	N 18 41.8 +00.5	239 55.8 +01.9	N 20 55.2 -00.1	346 52.5 +02.3	N 03 15.9 +00.0	06						
07	322 23.7 +00.7	N 18 42.3 +00.4	254 57.7 +01.9	N 20 55.1 -00.1	1 54.8 +02.3	N 03 15.9 +00.1	07						
08	337 24.4 +00.6	N 18 42.7 +00.5	269 59.6 +02.0	N 20 55.0 -00.1	16 57.1 +02.3	N 03 16.0 +00.0	08						
09	352 25.0 +00.6	N 18 43.2 +00.4	285 01.6 +01.9	N 20 54.9 -00.1	31 59.4 +02.4	N 03 16.0 +00.0	09						
10	7 25.6 +00.6	N 18 43.6 +00.5	300 03.5 +01.9	N 20 54.8 -00.1	47 01.8 +02.3	N 03 16.0 +00.1	10						
11	22 26.2 +00.7	N 18 44.1 +00.5	315 05.4 +01.9	N 20 54.7 -00.1	62 04.1 +02.3	N 03 16.1 +00.0	11						
12	37 26.9 +00.6	N 18 44.6 +00.4	330 07.3 +01.9	N 20 54.6 -00.1	77 06.4 +02.4	N 03 16.1 +00.1	12						
13	52 27.5 +00.6	N 18 45.0 +00.5	345 09.2 +01.9	N 20 54.5 -00.1	92 08.8 +02.3	N 03 16.2 +00.0	13						
14	67 28.1 +00.6	N 18 45.5 +00.4	0 11.1 +02.0	N 20 54.4 -00.1	107 11.1 +02.3	N 03 16.2 +00.1	14						
15	82 28.7 +00.7	N 18 45.9 +00.5	15 13.1 +01.9	N 20 54.3 -00.1	122 13.4 +02.4	N 03 16.3 +00.0	15						
16	97 29.4 +00.6	N 18 46.4 +00.4	30 15.0 +01.9	N 20 54.2 -00.1	137 15.8 +02.3	N 03 16.3 +00.1	16						
17	112 30.0 +00.6	N 18 46.8 +00.5	45 16.9 +01.9	N 20 54.1 -00.1	152 18.1 +02.3	N 03 16.4 +00.0	17						
18	127 30.6 +00.6	N 18 47.3 +00.4	60 18.8 +01.9	N 20 54.0 -00.1	167 20.4 +02.4	N 03 16.4 +00.0	18						
19	142 31.2 +00.7	N 18 47.7 +00.5	75 20.7 +01.9	N 20 53.9 -00.2	182 22.8 +02.3	N 03 16.4 +00.1	19						
20	157 31.9 +00.6	N 18 48.2 +00.4	90 22.6 +02.0	N 20 53.7 -00.1	197 25.1 +02.3	N 03 16.5 +00.0	20						
21	172 32.5 +00.6	N 18 48.6 +00.5	105 24.6 +01.9	N 20 53.6 -00.1	212 27.4 +02.4	N 03 16.5 +00.1	21						
22	187 33.1 +00.6	N 18 49.1 +00.4	120 26.5 +01.9	N 20 53.5 -00.1	227 29.8 +02.3	N 03 16.6 +00.0	22						
23	202 33.7 +00.7	N 18 49.5 +00.5	135 28.4 +01.9	N 20 53.4 -00.1	242 32.1 +02.3	N 03 16.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 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 307° 307° 307° 307° 307° 306°		SHA 240° 239° 239° 239° 239° 239°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:30		Greenwich Culmination Time: 13:59		Greenwich Culmination Time: 06:52								

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 27.8 -00.1	N 23 25.7 +00.0	137 05.9 -00.4	N 19 20.3 -00.8	79 24.6 -25.7	S 08 46.8 +13.9	00						
01	194 27.7 -00.1	N 23 25.7 +00.0	152 05.5 -00.5	N 19 19.5 -00.9	93 58.9 -25.8	S 09 00.7 +14.0	01						
02	209 27.6 -00.2	N 23 25.7 -00.1	167 05.0 -00.4	N 19 18.6 -00.8	108 33.1 -25.7	S 09 14.7 +13.9	02						
03	224 27.4 -00.1	N 23 25.6 +00.0	182 04.6 -00.5	N 19 17.8 -00.8	123 07.4 -25.7	S 09 28.6 +13.8	03						
04	239 27.3 -00.1	N 23 25.6 +00.0	197 04.1 -00.4	N 19 17.0 -00.9	137 41.7 -25.8	S 09 42.4 +13.8	04						
05	254 27.2 -00.2	N 23 25.6 -00.1	212 03.7 -00.5	N 19 16.1 -00.8	152 15.9 -25.7	S 09 56.2 +13.7	05						
06	269 27.0 -00.1	N 23 25.5 +00.0	227 03.2 -00.4	N 19 15.3 -00.9	166 50.2 -25.8	S 10 09.9 +13.7	06						
07	284 26.9 -00.1	N 23 25.5 +00.0	242 02.8 -00.5	N 19 14.4 -00.8	181 24.4 -25.8	S 10 23.6 +13.6	07						
08	299 26.8 -00.2	N 23 25.5 -00.1	257 02.3 -00.4	N 19 13.6 -00.8	195 58.6 -25.8	S 10 37.2 +13.6	08						
09	314 26.6 -00.1	N 23 25.4 +00.0	272 01.9 -00.4	N 19 12.8 -00.9	210 32.8 -25.8	S 10 50.8 +13.5	09						
10	329 26.5 -00.1	N 23 25.4 +00.0	287 01.5 -00.5	N 19 11.9 -00.8	225 07.0 -25.8	S 11 04.3 +13.4	10						
11	344 26.4 -00.2	N 23 25.4 -00.1	302 01.0 -00.4	N 19 11.1 -00.9	239 41.2 -25.9	S 11 17.7 +13.4	11						
12	359 26.2 -00.1	N 23 25.3 +00.0	317 00.6 -00.5	N 19 10.2 -00.8	254 15.3 -25.9	S 11 31.1 +13.4	12						
13	14 26.1 -00.1	N 23 25.3 -00.1	332 00.1 -00.4	N 19 09.4 -00.8	268 49.4 -25.9	S 11 44.5 +13.3	13						
14	29 26.0 -00.2	N 23 25.2 +00.0	346 59.7 -00.4	N 19 08.6 -00.9	283 23.5 -25.9	S 11 57.8 +13.2	14						
15	44 25.8 -00.1	N 23 25.2 +00.0	1 59.3 -00.5	N 19 07.7 -00.8	297 57.6 -26.0	S 12 11.0 +13.2	15						
16	59 25.7 -00.1	N 23 25.2 -00.1	16 58.8 -00.4	N 19 06.9 -00.9	312 31.6 -25.9	S 12 24.2 +13.1	16						
17	74 25.6 -00.2	N 23 25.1 +00.0	31 58.4 -00.5	N 19 06.0 -00.8	327 05.7 -26.0	S 12 37.3 +13.0	17						
18	89 25.4 -00.1	N 23 25.1 -00.1	46 57.9 -00.4	N 19 05.2 -00.9	341 39.7 -26.1	S 12 50.3 +13.0	18						
19	104 25.3 -00.1	N 23 25.0 +00.0	61 57.5 -00.4	N 19 04.3 -00.8	356 13.6 -26.0	S 13 03.3 +12.9	19						
20	119 25.2 -00.2	N 23 25.0 +00.0	76 57.1 -00.5	N 19 03.5 -00.9	10 47.6 -26.1	S 13 16.2 +12.9	20						
21	134 25.0 -00.1	N 23 25.0 -00.1	91 56.6 -00.4	N 19 02.6 -00.8	25 21.5 -26.1	S 13 29.1 +12.8	21						
22	149 24.9 -00.2	N 23 24.9 +00.0	106 56.2 -00.4	N 19 01.8 -00.9	39 55.4 -26.1	S 13 41.9 +12.7	22						
23	164 24.7 -00.1	N 23 24.9 -00.1	121 55.8 -00.5	N 19 00.9 -00.8	54 29.3 -26.2	S 13 54.6 +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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'1 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'6 55'5 55'4 55'3 55'2 55'1								
	SHA 268° 268° 268° 268° 268° 267°		SHA 226° 226° 225° 225° 225° 225°		SHA 167° 165° 164° 162° 160° 158°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 14:52		Greenwich Culmination Time: 19:15								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	217 34.4 +00.6	N 18 50.0 +00.5	150 30.3 +01.9	N 20 53.3 -00.1	257 34.4 +02.4	N 03 16.7 +00.0	00						
01	232 35.0 +00.6	N 18 50.5 +00.4	165 32.2 +01.9	N 20 53.2 -00.1	272 36.8 +02.3	N 03 16.7 +00.0	01						
02	247 35.6 +00.6	N 18 50.9 +00.5	180 34.1 +01.9	N 20 53.1 -00.1	287 39.1 +02.3	N 03 16.7 +00.1	02						
03	262 36.2 +00.7	N 18 51.4 +00.4	195 36.0 +02.0	N 20 53.0 -00.1	302 41.4 +02.4	N 03 16.8 +00.0	03						
04	277 36.9 +00.6	N 18 51.8 +00.5	210 38.0 +01.9	N 20 52.9 -00.1	317 43.8 +02.3	N 03 16.8 +00.1	04						
05	292 37.5 +00.6	N 18 52.3 +00.4	225 39.9 +01.9	N 20 52.8 -00.1	332 46.1 +02.3	N 03 16.9 +00.0	05						
06	307 38.1 +00.6	N 18 52.7 +00.5	240 41.8 +01.9	N 20 52.7 -00.1	347 48.4 +02.4	N 03 16.9 +00.1	06						
07	322 38.7 +00.7	N 18 53.2 +00.4	255 43.7 +01.9	N 20 52.6 -00.1	2 50.8 +02.3	N 03 17.0 +00.0	07						
08	337 39.4 +00.6	N 18 53.6 +00.5	270 45.6 +01.9	N 20 52.5 -00.1	17 53.1 +02.3	N 03 17.0 +00.0	08						
09	352 40.0 +00.6	N 18 54.1 +00.4	285 47.5 +01.9	N 20 52.4 -00.1	32 55.4 +02.4	N 03 17.0 +00.1	09						
10	7 40.6 +00.6	N 18 54.5 +00.5	300 49.4 +02.0	N 20 52.3 -00.1	47 57.8 +02.3	N 03 17.1 +00.0	10						
11	22 41.2 +00.6	N 18 55.0 +00.4	315 51.4 +01.9	N 20 52.2 -00.1	63 00.1 +02.3	N 03 17.1 +00.1	11						
12	37 41.8 +00.7	N 18 55.4 +00.4	330 53.3 +01.9	N 20 52.1 -00.1	78 02.4 +02.4	N 03 17.2 +00.0	12						
13	52 42.5 +00.6	N 18 55.8 +00.5	345 55.2 +01.9	N 20 52.0 -00.1	93 04.8 +02.3	N 03 17.2 +00.1	13						
14	67 43.1 +00.6	N 18 56.3 +00.4	0 57.1 +01.9	N 20 51.9 -00.1	108 07.1 +02.3	N 03 17.3 +00.0	14						
15	82 43.7 +00.6	N 18 56.7 +00.5	15 59.0 +01.9	N 20 51.8 -00.1	123 09.4 +02.4	N 03 17.3 +00.0	15						
16	97 44.3 +00.7	N 18 57.2 +00.4	31 00.9 +01.9	N 20 51.7 -00.1	138 11.8 +02.3	N 03 17.3 +00.1	16						
17	112 45.0 +00.6	N 18 57.6 +00.5	46 02.8 +02.0	N 20 51.6 -00.1	153 14.1 +02.3	N 03 17.4 +00.0	17						
18	127 45.6 +00.6	N 18 58.1 +00.4	61 04.8 +01.9	N 20 51.5 -00.1	168 16.4 +02.4	N 03 17.4 +00.1	18						
19	142 46.2 +00.6	N 18 58.5 +00.5	76 06.7 +01.9	N 20 51.4 -00.2	183 18.8 +02.3	N 03 17.5 +00.0	19						
20	157 46.8 +00.7	N 18 59.0 +00.4	91 08.6 +01.9	N 20 51.2 -00.1	198 21.1 +02.3	N 03 17.5 +00.1	20						
21	172 47.5 +00.6	N 18 59.4 +00.5	106 10.5 +01.9	N 20 51.1 -00.1	213 23.4 +02.4	N 03 17.6 +00.0	21						
22	187 48.1 +00.6	N 18 59.9 +00.4	121 12.4 +01.9	N 20 51.0 -00.1	228 25.8 +02.3	N 03 17.6 +00.0	22						
23	202 48.7 +00.6	N 19 00.3 +00.5	136 14.3 +01.9	N 20 50.9 -00.1	243 28.1 +02.3	N 03 17.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 306° 306° 306° 306° 306° 306°		SHA 239° 239° 239° 239° 239° 239°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:29		Greenwich Culmination Time: 13:56		Greenwich Culmination Time: 06:48								

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 24.6 -00.1	N 23 24.8 +00.0	136 55.3 -00.4	N 19 00.1 -00.9	69 03.1 -26.2	S 14 07.3 +12.6	00						
01	194 24.5 -00.2	N 23 24.8 -00.1	151 54.9 -00.4	N 18 59.2 -00.8	83 36.9 -26.2	S 14 19.9 +12.5	01						
02	209 24.3 -00.1	N 23 24.7 +00.0	166 54.5 -00.5	N 18 58.4 -00.9	98 10.7 -26.3	S 14 32.4 +12.5	02						
03	224 24.2 -00.1	N 23 24.7 -00.1	181 54.0 -00.4	N 18 57.5 -00.8	112 44.4 -26.3	S 14 44.9 +12.4	03						
04	239 24.1 -00.2	N 23 24.6 +00.0	196 53.6 -00.4	N 18 56.7 -00.9	127 18.1 -26.3	S 14 57.3 +12.3	04						
05	254 23.9 -00.1	N 23 24.6 -00.1	211 53.2 -00.4	N 18 55.8 -00.9	141 51.8 -26.4	S 15 09.6 +12.3	05						
06	269 23.8 -00.1	N 23 24.5 +00.0	226 52.8 -00.5	N 18 54.9 -00.8	156 25.4 -26.4	S 15 21.9 +12.2	06						
07	284 23.7 -00.2	N 23 24.5 -00.1	241 52.3 -00.4	N 18 54.1 -00.9	170 59.0 -26.5	S 15 34.1 +12.1	07						
08	299 23.5 -00.1	N 23 24.4 +00.0	256 51.9 -00.4	N 18 53.2 -00.8	185 32.5 -26.5	S 15 46.2 +12.0	08						
09	314 23.4 -00.1	N 23 24.4 -00.1	271 51.5 -00.5	N 18 52.4 -00.9	200 06.0 -26.5	S 15 58.2 +12.0	09						
10	329 23.3 -00.2	N 23 24.3 +00.0	286 51.0 -00.4	N 18 51.5 -00.9	214 39.5 -26.6	S 16 10.2 +11.9	10						
11	344 23.1 -00.1	N 23 24.3 -00.1	301 50.6 -00.4	N 18 50.6 -00.8	229 12.9 -26.6	S 16 22.1 +11.8	11						
12	359 23.0 -00.1	N 23 24.2 +00.0	316 50.2 -00.4	N 18 49.8 -00.9	243 46.3 -26.6	S 16 33.9 +11.8	12						
13	14 22.9 -00.2	N 23 24.2 -00.1	331 49.8 -00.4	N 18 48.9 -00.8	258 19.7 -26.7	S 16 45.7 +11.7	13						
14	29 22.7 -00.1	N 23 24.1 +00.0	346 49.4 -00.5	N 18 48.1 -00.9	272 53.0 -26.7	S 16 57.4 +11.6	14						
15	44 22.6 -00.1	N 23 24.1 -00.1	1 48.9 -00.4	N 18 47.2 -00.9	287 26.3 -26.8	S 17 09.0 +11.5	15						
16	59 22.5 -00.2	N 23 24.0 -00.1	16 48.5 -00.4	N 18 46.3 -00.8	301 59.5 -26.8	S 17 20.5 +11.4	16						
17	74 22.3 -00.1	N 23 23.9 +00.0	31 48.1 -00.4	N 18 45.5 -00.9	316 32.7 -26.9	S 17 31.9 +11.4	17						
18	89 22.2 -00.1	N 23 23.9 -00.1	46 47.7 -00.4	N 18 44.6 -00.9	331 05.8 -26.9	S 17 43.3 +11.3	18						
19	104 22.1 -00.2	N 23 23.8 +00.0	61 47.3 -00.5	N 18 43.7 -00.8	345 38.9 -26.9	S 17 54.6 +11.2	19						
20	119 21.9 -00.1	N 23 23.8 -00.1	76 46.8 -00.4	N 18 42.9 -00.9	0 12.0 -27.0	S 18 05.8 +11.1	20						
21	134 21.8 -00.1	N 23 23.7 -00.1	91 46.4 -00.4	N 18 42.0 -00.9	14 45.0 -27.1	S 18 16.9 +11.0	21						
22	149 21.7 -00.2	N 23 23.6 +00.0	106 46.0 -00.4	N 18 41.1 -00.8	29 17.9 -27.1	S 18 27.9 +11.0	22						
23	164 21.5 -00.1	N 23 23.6 -00.1	121 45.6 -00.4	N 18 40.3 -00.9	43 50.8 -27.1	S 18 38.9 +10.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'0 15'0 14'9 14'9 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'0 54'9 54'8 54'7 54'7 54'6								
	SHA 267° 267° 267° 267° 266° 266°		SHA 225° 224° 224° 224° 224° 224°		SHA 156° 154° 152° 150° 148° 146°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 14:52		Greenwich Culmination Time: 19:59								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	217 49.3 +00.7	N 19 00.8 +00.4	151 16.2 +02.0	N 20 50.8 -00.1	258 30.4 +02.4	N 03 17.7 +00.0	00						
01	232 50.0 +00.6	N 19 01.2 +00.4	166 18.2 +01.9	N 20 50.7 -00.1	273 32.8 +02.3	N 03 17.7 +00.1	01						
02	247 50.6 +00.6	N 19 01.6 +00.5	181 20.1 +01.9	N 20 50.6 -00.1	288 35.1 +02.4	N 03 17.8 +00.0	02						
03	262 51.2 +00.6	N 19 02.1 +00.4	196 22.0 +01.9	N 20 50.5 -00.1	303 37.5 +02.3	N 03 17.8 +00.1	03						
04	277 51.8 +00.6	N 19 02.5 +00.5	211 23.9 +01.9	N 20 50.4 -00.1	318 39.8 +02.3	N 03 17.9 +00.0	04						
05	292 52.4 +00.7	N 19 03.0 +00.4	226 25.8 +01.9	N 20 50.3 -00.1	333 42.1 +02.4	N 03 17.9 +00.0	05						
06	307 53.1 +00.6	N 19 03.4 +00.5	241 27.7 +01.9	N 20 50.2 -00.1	348 44.5 +02.3	N 03 17.9 +00.1	06						
07	322 53.7 +00.6	N 19 03.9 +00.4	256 29.6 +02.0	N 20 50.1 -00.1	3 46.8 +02.3	N 03 18.0 +00.0	07						
08	337 54.3 +00.6	N 19 04.3 +00.4	271 31.6 +01.9	N 20 50.0 -00.1	18 49.1 +02.4	N 03 18.0 +00.1	08						
09	352 54.9 +00.7	N 19 04.7 +00.5	286 33.5 +01.9	N 20 49.9 -00.1	33 51.5 +02.3	N 03 18.1 +00.0	09						
10	7 55.6 +00.6	N 19 05.2 +00.4	301 35.4 +01.9	N 20 49.8 -00.1	48 53.8 +02.4	N 03 18.1 +00.0	10						
11	22 56.2 +00.6	N 19 05.6 +00.5	316 37.3 +01.9	N 20 49.7 -00.1	63 56.2 +02.3	N 03 18.1 +00.1	11						
12	37 56.8 +00.6	N 19 06.1 +00.4	331 39.2 +01.9	N 20 49.6 -00.1	78 58.5 +02.3	N 03 18.2 +00.0	12						
13	52 57.4 +00.6	N 19 06.5 +00.4	346 41.1 +01.9	N 20 49.5 -00.1	94 00.8 +02.4	N 03 18.2 +00.1	13						
14	67 58.0 +00.7	N 19 06.9 +00.5	1 43.0 +01.9	N 20 49.4 -00.2	109 03.2 +02.3	N 03 18.3 +00.0	14						
15	82 58.7 +00.6	N 19 07.4 +00.4	16 44.9 +02.0	N 20 49.2 -00.1	124 05.5 +02.3	N 03 18.3 +00.0	15						
16	97 59.3 +00.6	N 19 07.8 +00.5	31 46.9 +01.9	N 20 49.1 -00.1	139 07.8 +02.4	N 03 18.3 +00.1	16						
17	112 59.9 +00.6	N 19 08.3 +00.4	46 48.8 +01.9	N 20 49.0 -00.1	154 10.2 +02.3	N 03 18.4 +00.0	17						
18	128 00.5 +00.7	N 19 08.7 +00.4	61 50.7 +01.9	N 20 48.9 -00.1	169 12.5 +02.4	N 03 18.4 +00.1	18						
19	143 01.2 +00.6	N 19 09.1 +00.5	76 52.6 +01.9	N 20 48.8 -00.1	184 14.9 +02.3	N 03 18.5 +00.0	19						
20	158 01.8 +00.6	N 19 09.6 +00.4	91 54.5 +01.9	N 20 48.7 -00.1	199 17.2 +02.3	N 03 18.5 +00.1	20						
21	173 02.4 +00.6	N 19 10.0 +00.4	106 56.4 +01.9	N 20 48.6 -00.1	214 19.5 +02.4	N 03 18.6 +00.0	21						
22	188 03.0 +00.6	N 19 10.4 +00.5	121 58.3 +01.9	N 20 48.5 -00.1	229 21.9 +02.3	N 03 18.6 +00.0	22						
23	203 03.6 +00.7	N 19 10.9 +00.4	137 00.2 +02.0	N 20 48.4 -00.1	244 24.2 +02.4	N 03 18.6 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 306° 305° 305° 305° 305° 305°		SHA 239° 239° 239° 239° 239° 239°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:28		Greenwich Culmination Time: 13:53		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 21.4 -00.1	N 23 23.5 +00.0	136 45.2 -00.4	N 18 39.4 -00.9	58 23.7 -27.2	S 18 49.8 +10.8	00						
01	194 21.3 -00.2	N 23 23.5 -00.1	151 44.8 -00.5	N 18 38.5 -00.9	72 56.5 -27.2	S 19 00.6 +10.7	01						
02	209 21.1 -00.1	N 23 23.4 -00.1	166 44.3 -00.4	N 18 37.6 -00.8	87 29.3 -27.3	S 19 11.3 +10.6	02						
03	224 21.0 -00.1	N 23 23.3 +00.0	181 43.9 -00.4	N 18 36.8 -00.9	102 02.0 -27.4	S 19 21.9 +10.5	03						
04	239 20.9 -00.2	N 23 23.3 -00.1	196 43.5 -00.4	N 18 35.9 -00.9	116 34.6 -27.3	S 19 32.4 +10.5	04						
05	254 20.7 -00.1	N 23 23.2 -00.1	211 43.1 -00.4	N 18 35.0 -00.9	131 07.3 -27.5	S 19 42.9 +10.4	05						
06	269 20.6 -00.1	N 23 23.1 +00.0	226 42.7 -00.4	N 18 34.1 -00.8	145 39.8 -27.5	S 19 53.3 +10.2	06						
07	284 20.5 -00.2	N 23 23.1 -00.1	241 42.3 -00.4	N 18 33.3 -00.9	160 12.3 -27.5	S 20 03.5 +10.2	07						
08	299 20.3 -00.1	N 23 23.0 -00.1	256 41.9 -00.4	N 18 32.4 -00.9	174 44.8 -27.6	S 20 13.7 +10.1	08						
09	314 20.2 -00.1	N 23 22.9 +00.0	271 41.5 -00.4	N 18 31.5 -00.9	189 17.2 -27.6	S 20 23.8 +10.0	09						
10	329 20.1 -00.2	N 23 22.9 -00.1	286 41.1 -00.5	N 18 30.6 -00.9	203 49.6 -27.7	S 20 33.8 +09.9	10						
11	344 19.9 -00.1	N 23 22.8 -00.1	301 40.6 -00.4	N 18 29.7 -00.8	218 21.9 -27.8	S 20 43.7 +09.9	11						
12	359 19.8 -00.1	N 23 22.7 -00.1	316 40.2 -00.4	N 18 28.9 -00.9	232 54.1 -27.8	S 20 53.6 +09.7	12						
13	14 19.7 -00.1	N 23 22.6 +00.0	331 39.8 -00.4	N 18 28.0 -00.9	247 26.3 -27.9	S 21 03.3 +09.6	13						
14	29 19.6 -00.2	N 23 22.6 -00.1	346 39.4 -00.4	N 18 27.1 -00.9	261 58.4 -27.9	S 21 12.9 +09.6	14						
15	44 19.4 -00.1	N 23 22.5 -00.1	1 39.0 -00.4	N 18 26.2 -00.9	276 30.5 -27.9	S 21 22.5 +09.4	15						
16	59 19.3 -00.1	N 23 22.4 -00.1	16 38.6 -00.4	N 18 25.3 -00.8	291 02.6 -28.0	S 21 31.9 +09.4	16						
17	74 19.2 -00.2	N 23 22.3 +00.0	31 38.2 -00.4	N 18 24.5 -00.9	305 34.6 -28.1	S 21 41.3 +09.2	17						
18	89 19.0 -00.1	N 23 22.3 -00.1	46 37.8 -00.4	N 18 23.6 -00.9	320 06.5 -28.1	S 21 50.5 +09.2	18						
19	104 18.9 -00.1	N 23 22.2 -00.1	61 37.4 -00.4	N 18 22.7 -00.9	334 38.4 -28.2	S 21 59.7 +09.0	19						
20	119 18.8 -00.2	N 23 22.1 -00.1	76 37.0 -00.4	N 18 21.8 -00.9	349 10.2 -28.3	S 22 08.7 +09.0	20						
21	134 18.6 -00.1	N 23 22.0 +00.0	91 36.6 -00.4	N 18 20.9 -00.9	3 41.9 -28.3	S 22 17.7 +08.8	21						
22	149 18.5 -00.1	N 23 22.0 -00.1	106 36.2 -00.4	N 18 20.0 -00.9	18 13.6 -28.3	S 22 26.5 +08.8	22						
23	164 18.4 -00.2	N 23 21.9 -00.1	121 35.8 -00.4	N 18 19.1 -00.9	32 45.3 -28.4	S 22 35.3 +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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'5 54'5 54'4 54'4 54'3 54'3								
	SHA 266° 266° 266° 266° 265° 265°		SHA 224° 223° 223° 223° 223° 223°		SHA 144° 142° 140° 138° 136° 134°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 14:53		Greenwich Culmination Time: 20:44								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	218 04.3 +00.6	N 19 11.3 +00.5	152 02.2 +01.9	N 20 48.3 -00.1	259 26.6 +02.3	N 03 18.7 +00.0	00						
01	233 04.9 +00.6	N 19 11.8 +00.4	167 04.1 +01.9	N 20 48.2 -00.1	274 28.9 +02.3	N 03 18.7 +00.1	01						
02	248 05.5 +00.6	N 19 12.2 +00.4	182 06.0 +01.9	N 20 48.1 -00.1	289 31.2 +02.4	N 03 18.8 +00.0	02						
03	263 06.1 +00.7	N 19 12.6 +00.5	197 07.9 +01.9	N 20 48.0 -00.1	304 33.6 +02.3	N 03 18.8 +00.0	03						
04	278 06.8 +00.6	N 19 13.1 +00.4	212 09.8 +01.9	N 20 47.9 -00.1	319 35.9 +02.4	N 03 18.8 +00.1	04						
05	293 07.4 +00.6	N 19 13.5 +00.4	227 11.7 +01.9	N 20 47.8 -00.1	334 38.3 +02.3	N 03 18.9 +00.0	05						
06	308 08.0 +00.6	N 19 13.9 +00.5	242 13.6 +01.9	N 20 47.7 -00.1	349 40.6 +02.3	N 03 18.9 +00.1	06						
07	323 08.6 +00.6	N 19 14.4 +00.4	257 15.5 +01.9	N 20 47.6 -00.2	4 42.9 +02.4	N 03 19.0 +00.0	07						
08	338 09.2 +00.7	N 19 14.8 +00.4	272 17.4 +02.0	N 20 47.4 -00.1	19 45.3 +02.3	N 03 19.0 +00.0	08						
09	353 09.9 +00.6	N 19 15.2 +00.5	287 19.4 +01.9	N 20 47.3 -00.1	34 47.6 +02.4	N 03 19.0 +00.1	09						
10	8 10.5 +00.6	N 19 15.7 +00.4	302 21.3 +01.9	N 20 47.2 -00.1	49 50.0 +02.3	N 03 19.1 +00.0	10						
11	23 11.1 +00.6	N 19 16.1 +00.4	317 23.2 +01.9	N 20 47.1 -00.1	64 52.3 +02.3	N 03 19.1 +00.1	11						
12	38 11.7 +00.6	N 19 16.5 +00.5	332 25.1 +01.9	N 20 47.0 -00.1	79 54.6 +02.4	N 03 19.2 +00.0	12						
13	53 12.3 +00.7	N 19 17.0 +00.4	347 27.0 +01.9	N 20 46.9 -00.1	94 57.0 +02.3	N 03 19.2 +00.0	13						
14	68 13.0 +00.6	N 19 17.4 +00.4	2 28.9 +01.9	N 20 46.8 -00.1	109 59.3 +02.4	N 03 19.2 +00.1	14						
15	83 13.6 +00.6	N 19 17.8 +00.5	17 30.8 +01.9	N 20 46.7 -00.1	125 01.7 +02.3	N 03 19.3 +00.0	15						
16	98 14.2 +00.6	N 19 18.3 +00.4	32 32.7 +02.0	N 20 46.6 -00.1	140 04.0 +02.3	N 03 19.3 +00.1	16						
17	113 14.8 +00.7	N 19 18.7 +00.4	47 34.7 +01.9	N 20 46.5 -00.1	155 06.3 +02.4	N 03 19.4 +00.0	17						
18	128 15.5 +00.6	N 19 19.1 +00.4	62 36.6 +01.9	N 20 46.4 -00.1	170 08.7 +02.3	N 03 19.4 +00.0	18						
19	143 16.1 +00.6	N 19 19.5 +00.5	77 38.5 +01.9	N 20 46.3 -00.1	185 11.0 +02.4	N 03 19.4 +00.1	19						
20	158 16.7 +00.6	N 19 20.0 +00.4	92 40.4 +01.9	N 20 46.2 -00.1	200 13.4 +02.3	N 03 19.5 +00.0	20						
21	173 17.3 +00.6	N 19 20.4 +00.4	107 42.3 +01.9	N 20 46.1 -00.1	215 15.7 +02.4	N 03 19.5 +00.0	21						
22	188 17.9 +00.7	N 19 20.8 +00.5	122 44.2 +01.9	N 20 46.0 -00.1	230 18.1 +02.3	N 03 19.5 +00.1	22						
23	203 18.6 +00.6	N 19 21.3 +00.4	137 46.1 +01.9	N 20 45.9 -00.2	245 20.4 +02.3	N 03 19.6 +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 305° 305° 305° 304° 304° 304°		SHA 239° 239° 239° 239° 239° 239°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:27		Greenwich Culmination Time: 13:50		Greenwich Culmination Time: 06:41								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 38%				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	179 18.2 -00.1	N 23	21.8 -00.1	136 35.4 -00.4	N 18	18.2 -00.8	47 16.9 -28.5	S 22	44.0 +08.5	00			
01	194 18.1 -00.1	N 23	21.7 -00.1	151 35.0 -00.4	N 18	17.4 -00.9	61 48.4 -28.5	S 22	52.5 +08.5	01			
02	209 18.0 -00.2	N 23	21.6 +00.0	166 34.6 -00.4	N 18	16.5 -00.9	76 19.9 -28.5	S 23	01.0 +08.3	02			
03	224 17.8 -00.1	N 23	21.6 -00.1	181 34.2 -00.4	N 18	15.6 -00.9	90 51.4 -28.7	S 23	09.3 +08.3	03			
04	239 17.7 -00.1	N 23	21.5 -00.1	196 33.8 -00.4	N 18	14.7 -00.9	105 22.7 -28.7	S 23	17.6 +08.1	04			
05	254 17.6 -00.2	N 23	21.4 -00.1	211 33.4 -00.4	N 18	13.8 -00.9	119 54.0 -28.7	S 23	25.7 +08.0	05			
06	269 17.4 -00.1	N 23	21.3 -00.1	226 33.0 -00.4	N 18	12.9 -00.9	134 25.3 -28.8	S 23	33.7 +08.0	06			
07	284 17.3 -00.1	N 23	21.2 -00.1	241 32.6 -00.3	N 18	12.0 -00.9	148 56.5 -28.8	S 23	41.7 +07.8	07			
08	299 17.2 -00.1	N 23	21.1 +00.0	256 32.3 -00.4	N 18	11.1 -00.9	163 27.7 -28.9	S 23	49.5 +07.7	08			
09	314 17.1 -00.2	N 23	21.1 -00.1	271 31.9 -00.4	N 18	10.2 -00.9	177 58.8 -29.0	S 23	57.2 +07.6	09			
10	329 16.9 -00.1	N 23	21.0 -00.1	286 31.5 -00.4	N 18	09.3 -00.9	192 29.8 -29.0	S 24	04.8 +07.5	10			
11	344 16.8 -00.1	N 23	20.9 -00.1	301 31.1 -00.4	N 18	08.4 -00.9	207 00.8 -29.0	S 24	12.3 +07.4	11			
12	359 16.7 -00.2	N 23	20.8 -00.1	316 30.7 -00.4	N 18	07.5 -00.9	221 31.8 -29.2	S 24	19.7 +07.3	12			
13	14 16.5 -00.1	N 23	20.7 -00.1	331 30.3 -00.4	N 18	06.6 -00.9	236 02.6 -29.1	S 24	27.0 +07.1	13			
14	29 16.4 -00.1	N 23	20.6 -00.1	346 29.9 -00.4	N 18	05.7 -00.9	250 33.5 -29.2	S 24	34.1 +07.1	14			
15	44 16.3 -00.2	N 23	20.5 -00.1	1 29.5 -00.4	N 18	04.8 -00.9	265 04.3 -29.3	S 24	41.2 +06.9	15			
16	59 16.1 -00.1	N 23	20.4 -00.1	16 29.1 -00.3	N 18	03.9 -00.9	279 35.0 -29.3	S 24	48.1 +06.8	16			
17	74 16.0 -00.1	N 23	20.3 +00.0	31 28.8 -00.4	N 18	03.0 -00.9	294 05.7 -29.4	S 24	54.9 +06.8	17			
18	89 15.9 -00.2	N 23	20.3 -00.1	46 28.4 -00.4	N 18	02.1 -00.9	308 36.3 -29.5	S 25	01.7 +06.6	18			
19	104 15.7 -00.1	N 23	20.2 -00.1	61 28.0 -00.4	N 18	01.2 -00.9	323 06.8 -29.4	S 25	08.3 +06.4	19			
20	119 15.6 -00.1	N 23	20.1 -00.1	76 27.6 -00.4	N 18	00.3 -00.9	337 37.4 -29.6	S 25	14.7 +06.4	20			
21	134 15.5 -00.1	N 23	20.0 -00.1	91 27.2 -00.4	N 17	59.4 -00.9	352 07.8 -29.6	S 25	21.1 +06.3	21			
22	149 15.4 -00.2	N 23	19.9 -00.1	106 26.8 -00.3	N 17	58.5 -00.9	6 38.2 -29.6	S 25	27.4 +06.1	22			
23	164 15.2 -00.1	N 23	19.8 -00.1	121 26.5 -00.4	N 17	57.6 -00.9	21 08.6 -29.7	S 25	33.5 +06.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'7 15'7 15'7 15'7 15'7 15'7			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'8 14'8 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'2 54'2 54'1 54'1 54'1 54'0						
	SHA 265° 265° 265° 265° 264° 264°			SHA 222° 222° 222° 222° 222° 221°			SHA 132° 130° 128° 126° 124° 122°						
	Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 14:54			Greenwich Culmination Time: 21:32						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	
00	218 19.2 +00.6	N 19	21.7 +00.4	152 48.0 +01.9	N 20	45.7 -00.1	260 22.7 +02.4	N 03	19.6 +00.1	00			
01	233 19.8 +00.6	N 19	22.1 +00.5	167 49.9 +02.0	N 20	45.6 -00.1	275 25.1 +02.3	N 03	19.7 +00.0	01			
02	248 20.4 +00.6	N 19	22.6 +00.4	182 51.9 +01.9	N 20	45.5 -00.1	290 27.4 +02.4	N 03	19.7 +00.0	02			
03	263 21.0 +00.7	N 19	23.0 +00.4	197 53.8 +01.9	N 20	45.4 -00.1	305 29.8 +02.3	N 03	19.7 +00.1	03			
04	278 21.7 +00.6	N 19	23.4 +00.4	212 55.7 +01.9	N 20	45.3 -00.1	320 32.1 +02.4	N 03	19.8 +00.0	04			
05	293 22.3 +00.6	N 19	23.8 +00.5	227 57.6 +01.9	N 20	45.2 -00.1	335 34.5 +02.3	N 03	19.8 +00.1	05			
06	308 22.9 +00.6	N 19	24.3 +00.4	242 59.5 +01.9	N 20	45.1 -00.1	350 36.8 +02.4	N 03	19.9 +00.0	06			
07	323 23.5 +00.6	N 19	24.7 +00.4	258 01.4 +01.9	N 20	45.0 -00.1	5 39.2 +02.3	N 03	19.9 +00.0	07			
08	338 24.1 +00.7	N 19	25.1 +00.4	273 03.3 +01.9	N 20	44.9 -00.1	20 41.5 +02.3	N 03	19.9 +00.1	08			
09	353 24.8 +00.6	N 19	25.5 +00.5	288 05.2 +01.9	N 20	44.8 -00.1	35 43.8 +02.4	N 03	20.0 +00.0	09			
10	8 25.4 +00.6	N 19	26.0 +00.4	303 07.1 +01.9	N 20	44.7 -00.1	50 46.2 +02.3	N 03	20.0 +00.0	10			
11	23 26.0 +00.6	N 19	26.4 +00.4	318 09.0 +02.0	N 20	44.6 -00.1	65 48.5 +02.4	N 03	20.0 +00.1	11			
12	38 26.6 +00.6	N 19	26.8 +00.4	333 11.0 +01.9	N 20	44.5 -00.1	80 50.9 +02.3	N 03	20.1 +00.0	12			
13	53 27.2 +00.7	N 19	27.2 +00.5	348 12.9 +01.9	N 20	44.4 -00.2	95 53.2 +02.4	N 03	20.1 +00.1	13			
14	68 27.9 +00.6	N 19	27.7 +00.4	3 14.8 +01.9	N 20	44.2 -00.1	110 55.6 +02.3	N 03	20.2 +00.0	14			
15	83 28.5 +00.6	N 19	28.1 +00.4	18 16.7 +01.9	N 20	44.1 -00.1	125 57.9 +02.4	N 03	20.2 +00.0	15			
16	98 29.1 +00.6	N 19	28.5 +00.4	33 18.6 +01.9	N 20	44.0 -00.1	141 00.3 +02.3	N 03	20.2 +00.1	16			
17	113 29.7 +00.6	N 19	28.9 +00.4	48 20.5 +01.9	N 20	43.9 -00.1	156 02.6 +02.3	N 03	20.3 +00.0	17			
18	128 30.3 +00.7	N 19	29.3 +00.5	63 22.4 +01.9	N 20	43.8 -00.1	171 04.9 +02.4	N 03	20.3 +00.1	18			
19	143 31.0 +00.6	N 19	29.8 +00.4	78 24.3 +01.9	N 20	43.7 -00.1	186 07.3 +02.3	N 03	20.4 +00.0	19			
20	158 31.6 +00.6	N 19	30.2 +00.4	93 26.2 +01.9	N 20	43.6 -00.1	201 09.6 +02.4	N 03	20.4 +00.0	20			
21	173 32.2 +00.6	N 19	30.6 +00.4	108 28.1 +02.0	N 20	43.5 -00.1	216 12.0 +02.3	N 03	20.4 +00.1	21			
22	188 32.8 +00.6	N 19	31.0 +00.5	123 30.1 +01.9	N 20	43.4 -00.1	231 14.3 +02.4	N 03	20.5 +00.0	22			
23	203 33.4 +00.7	N 19	31.5 +00.4	138 32.0 +01.9	N 20	43.3 -00.1	246 16.7 +02.3	N 03	20.5 +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 304° 304° 304° 304° 304° 304°			SHA 239° 239° 239° 239° 238° 238°			SHA 346° 346° 346° 346° 346° 346°						
	Greenwich Culmination Time: 09:26			Greenwich Culmination Time: 13:47			Greenwich Culmination Time: 06:37						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 15.1 -00.1	N 23 19.7 -00.1	136 26.1 -00.4	N 17 56.7 -00.9	35 38.9 -29.7	S 25 39.5 +05.9	00						
01	194 15.0 -00.2	N 23 19.6 -00.1	151 25.7 -00.4	N 17 55.8 -00.9	50 09.2 -29.8	S 25 45.4 +05.8	01						
02	209 14.8 -00.1	N 23 19.5 -00.1	166 25.3 -00.4	N 17 54.9 -00.9	64 39.4 -29.8	S 25 51.2 +05.6	02						
03	224 14.7 -00.1	N 23 19.4 -00.1	181 24.9 -00.3	N 17 54.0 -01.0	79 09.6 -29.9	S 25 56.8 +05.6	03						
04	239 14.6 -00.1	N 23 19.3 -00.1	196 24.6 -00.4	N 17 53.0 -00.9	93 39.7 -29.9	S 26 02.4 +05.4	04						
05	254 14.5 -00.2	N 23 19.2 -00.1	211 24.2 -00.4	N 17 52.1 -00.9	108 09.8 -30.0	S 26 07.8 +05.3	05						
06	269 14.3 -00.1	N 23 19.1 -00.1	226 23.8 -00.4	N 17 51.2 -00.9	122 39.8 -30.0	S 26 13.1 +05.1	06						
07	284 14.2 -00.1	N 23 19.0 -00.1	241 23.4 -00.3	N 17 50.3 -00.9	137 09.8 -30.1	S 26 18.2 +05.1	07						
08	299 14.1 -00.2	N 23 18.9 -00.1	256 23.1 -00.4	N 17 49.4 -00.9	151 39.7 -30.1	S 26 23.3 +04.9	08						
09	314 13.9 -00.1	N 23 18.8 -00.1	271 22.7 -00.4	N 17 48.5 -00.9	166 09.6 -30.2	S 26 28.2 +04.8	09						
10	329 13.8 -00.1	N 23 18.7 -00.1	286 22.3 -00.4	N 17 47.6 -00.9	180 39.4 -30.2	S 26 33.0 +04.7	10						
11	344 13.7 -00.2	N 23 18.6 -00.1	301 21.9 -00.3	N 17 46.7 -01.0	195 09.2 -30.2	S 26 37.7 +04.5	11						
12	359 13.5 -00.1	N 23 18.5 -00.1	316 21.6 -00.4	N 17 45.7 -00.9	209 39.0 -30.3	S 26 42.2 +04.5	12						
13	14 13.4 -00.1	N 23 18.4 -00.1	331 21.2 -00.4	N 17 44.8 -00.9	224 08.7 -30.3	S 26 46.7 +04.3	13						
14	29 13.3 -00.1	N 23 18.3 -00.2	346 20.8 -00.3	N 17 43.9 -00.9	238 38.4 -30.3	S 26 51.0 +04.1	14						
15	44 13.2 -00.2	N 23 18.1 -00.1	1 20.5 -00.4	N 17 43.0 -00.9	253 08.1 -30.4	S 26 55.1 +04.1	15						
16	59 13.0 -00.1	N 23 18.0 -00.1	16 20.1 -00.4	N 17 42.1 -00.9	267 37.7 -30.5	S 26 59.2 +03.9	16						
17	74 12.9 -00.1	N 23 17.9 -00.1	31 19.7 -00.4	N 17 41.2 -01.0	282 07.2 -30.4	S 27 03.1 +03.8	17						
18	89 12.8 -00.2	N 23 17.8 -00.1	46 19.3 -00.3	N 17 40.2 -00.9	296 36.8 -30.5	S 27 06.9 +03.6	18						
19	104 12.6 -00.1	N 23 17.7 -00.1	61 19.0 -00.4	N 17 39.3 -00.9	311 06.3 -30.6	S 27 10.5 +03.6	19						
20	119 12.5 -00.1	N 23 17.6 -00.1	76 18.6 -00.4	N 17 38.4 -00.9	325 35.7 -30.6	S 27 14.1 +03.4	20						
21	134 12.4 -00.1	N 23 17.5 -00.1	91 18.2 -00.3	N 17 37.5 -01.0	340 05.1 -30.6	S 27 17.5 +03.3	21						
22	149 12.3 -00.2	N 23 17.4 -00.1	106 17.9 -00.4	N 17 36.5 -00.9	354 34.5 -30.6	S 27 20.8 +03.1	22						
23	164 12.1 -00.1	N 23 17.3 -00.2	121 17.5 -00.3	N 17 35.6 -00.9	9 03.9 -30.7	S 27 23.9 +03.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'0 54'0 54'0 54'0 54'0 54'0								
	SHA 264° 264° 264° 264° 263° 263°		SHA 221° 221° 221° 221° 220° 220°		SHA 119° 117° 115° 113° 111° 109°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 14:54		Greenwich Culmination Time: 22:22								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	218 34.1 +00.6	N 19 31.9 +00.4	153 33.9 +01.9	N 20 43.2 -00.1	261 19.0 +02.4	N 03 20.5 +00.1	00						
01	233 34.7 +00.6	N 19 32.3 +00.4	168 35.8 +01.9	N 20 43.1 -00.1	276 21.4 +02.3	N 03 20.6 +00.0	01						
02	248 35.3 +00.6	N 19 32.7 +00.4	183 37.7 +01.9	N 20 43.0 -00.2	291 23.7 +02.4	N 03 20.6 +00.1	02						
03	263 35.9 +00.6	N 19 33.1 +00.5	198 39.6 +01.9	N 20 42.8 -00.1	306 26.1 +02.3	N 03 20.7 +00.0	03						
04	278 36.5 +00.7	N 19 33.6 +00.4	213 41.5 +01.9	N 20 42.7 -00.1	321 28.4 +02.4	N 03 20.7 +00.0	04						
05	293 37.2 +00.6	N 19 34.0 +00.4	228 43.4 +01.9	N 20 42.6 -00.1	336 30.8 +02.3	N 03 20.7 +00.1	05						
06	308 37.8 +00.6	N 19 34.4 +00.4	243 45.3 +01.9	N 20 42.5 -00.1	351 33.1 +02.3	N 03 20.8 +00.0	06						
07	323 38.4 +00.6	N 19 34.8 +00.4	258 47.2 +02.0	N 20 42.4 -00.1	6 35.4 +02.4	N 03 20.8 +00.0	07						
08	338 39.0 +00.6	N 19 35.2 +00.4	273 49.2 +01.9	N 20 42.3 -00.1	21 37.8 +02.3	N 03 20.8 +00.1	08						
09	353 39.6 +00.7	N 19 35.6 +00.5	288 51.1 +01.9	N 20 42.2 -00.1	36 40.1 +02.4	N 03 20.9 +00.0	09						
10	8 40.3 +00.6	N 19 36.1 +00.4	303 53.0 +01.9	N 20 42.1 -00.1	51 42.5 +02.3	N 03 20.9 +00.0	10						
11	23 40.9 +00.6	N 19 36.5 +00.4	318 54.9 +01.9	N 20 42.0 -00.1	66 44.8 +02.4	N 03 20.9 +00.1	11						
12	38 41.5 +00.6	N 19 36.9 +00.4	333 56.8 +01.9	N 20 41.9 -00.1	81 47.2 +02.3	N 03 21.0 +00.0	12						
13	53 42.1 +00.6	N 19 37.3 +00.4	348 58.7 +01.9	N 20 41.8 -00.1	96 49.5 +02.4	N 03 21.0 +00.1	13						
14	68 42.7 +00.6	N 19 37.7 +00.4	4 00.6 +01.9	N 20 41.7 -00.2	111 51.9 +02.3	N 03 21.1 +00.0	14						
15	83 43.3 +00.7	N 19 38.1 +00.5	19 02.5 +01.9	N 20 41.5 -00.1	126 54.2 +02.4	N 03 21.1 +00.0	15						
16	98 44.0 +00.6	N 19 38.6 +00.4	34 04.4 +01.9	N 20 41.4 -00.1	141 56.6 +02.3	N 03 21.1 +00.1	16						
17	113 44.6 +00.6	N 19 39.0 +00.4	49 06.3 +01.9	N 20 41.3 -00.1	156 58.9 +02.4	N 03 21.2 +00.0	17						
18	128 45.2 +00.6	N 19 39.4 +00.4	64 08.2 +02.0	N 20 41.2 -00.1	172 01.3 +02.3	N 03 21.2 +00.0	18						
19	143 45.8 +00.6	N 19 39.8 +00.4	79 10.2 +01.9	N 20 41.1 -00.1	187 03.6 +02.4	N 03 21.2 +00.1	19						
20	158 46.4 +00.7	N 19 40.2 +00.4	94 12.1 +01.9	N 20 41.0 -00.1	202 06.0 +02.3	N 03 21.3 +00.0	20						
21	173 47.1 +00.6	N 19 40.6 +00.4	109 14.0 +01.9	N 20 40.9 -00.1	217 08.3 +02.4	N 03 21.3 +00.0	21						
22	188 47.7 +00.6	N 19 41.0 +00.5	124 15.9 +01.9	N 20 40.8 -00.1	232 10.7 +02.3	N 03 21.3 +00.1	22						
23	203 48.3 +00.6	N 19 41.5 +00.4	139 17.8 +01.9	N 20 40.7 -00.1	247 13.0 +02.4	N 03 21.4 +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 303° 303° 303° 303° 303° 303°		SHA 238° 238° 238° 238° 238° 238°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:25		Greenwich Culmination Time: 13:43		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 12.0 -00.1	N 23 17.1 -00.1	136 17.2 -00.4	N 17 34.7 -00.9	23 33.2 -30.7	S 27 26.9 +02.9	00						
01	194 11.9 -00.1	N 23 17.0 -00.1	151 16.8 -00.4	N 17 33.8 -01.0	38 02.5 -30.7	S 27 29.8 +02.7	01						
02	209 11.8 -00.2	N 23 16.9 -00.1	166 16.4 -00.3	N 17 32.8 -00.9	52 31.8 -30.8	S 27 32.5 +02.7	02						
03	224 11.6 -00.1	N 23 16.8 -00.1	181 16.1 -00.4	N 17 31.9 -00.9	67 01.0 -30.7	S 27 35.2 +02.4	03						
04	239 11.5 -00.1	N 23 16.7 -00.1	196 15.7 -00.4	N 17 31.0 -00.9	81 30.3 -30.8	S 27 37.6 +02.4	04						
05	254 11.4 -00.2	N 23 16.6 -00.1	211 15.3 -00.3	N 17 30.1 -01.0	95 59.5 -30.9	S 27 40.0 +02.2	05						
06	269 11.2 -00.1	N 23 16.5 -00.2	226 15.0 -00.4	N 17 29.1 -00.9	110 28.6 -30.8	S 27 42.2 +02.1	06						
07	284 11.1 -00.1	N 23 16.3 -00.1	241 14.6 -00.3	N 17 28.2 -00.9	124 57.8 -30.9	S 27 44.3 +01.9	07						
08	299 11.0 -00.1	N 23 16.2 -00.1	256 14.3 -00.4	N 17 27.3 -01.0	139 26.9 -30.9	S 27 46.2 +01.9	08						
09	314 10.9 -00.2	N 23 16.1 -00.1	271 13.9 -00.3	N 17 26.3 -00.9	153 56.0 -30.9	S 27 48.1 +01.7	09						
10	329 10.7 -00.1	N 23 16.0 -00.1	286 13.6 -00.4	N 17 25.4 -00.9	168 25.1 -31.0	S 27 49.8 +01.5	10						
11	344 10.6 -00.1	N 23 15.9 -00.2	301 13.2 -00.3	N 17 24.5 -00.9	182 54.1 -30.9	S 27 51.3 +01.4	11						
12	359 10.5 -00.1	N 23 15.7 -00.1	316 12.9 -00.4	N 17 23.6 -01.0	197 23.2 -31.0	S 27 52.7 +01.3	12						
13	14 10.4 -00.2	N 23 15.6 -00.1	331 12.5 -00.4	N 17 22.6 -00.9	211 52.2 -31.0	S 27 54.0 +01.2	13						
14	29 10.2 -00.1	N 23 15.5 -00.1	346 12.1 -00.3	N 17 21.7 -01.0	226 21.2 -31.0	S 27 55.2 +01.0	14						
15	44 10.1 -00.1	N 23 15.4 -00.2	1 11.8 -00.4	N 17 20.7 -00.9	240 50.2 -31.0	S 27 56.2 +00.8	15						
16	59 10.0 -00.2	N 23 15.2 -00.1	16 11.4 -00.3	N 17 19.8 -00.9	255 19.2 -31.0	S 27 57.0 +00.8	16						
17	74 09.8 -00.1	N 23 15.1 -00.1	31 11.1 -00.4	N 17 18.9 -01.0	269 48.2 -31.1	S 27 57.8 +00.6	17						
18	89 09.7 -00.1	N 23 15.0 -00.1	46 10.7 -00.3	N 17 17.9 -00.9	284 17.1 -31.0	S 27 58.4 +00.5	18						
19	104 09.6 -00.1	N 23 14.9 -00.2	61 10.4 -00.4	N 17 17.0 -00.9	298 46.1 -31.1	S 27 58.9 +00.3	19						
20	119 09.5 -00.2	N 23 14.7 -00.1	76 10.0 -00.3	N 17 16.1 -01.0	313 15.0 -31.0	S 27 59.2 +00.2	20						
21	134 09.3 -00.1	N 23 14.6 -00.1	91 09.7 -00.4	N 17 15.1 -00.9	327 44.0 -31.1	S 27 59.4 +00.1	21						
22	149 09.2 -00.1	N 23 14.5 -00.2	106 09.3 -00.3	N 17 14.2 -01.0	342 12.9 -31.1	S 27 59.5 -00.1	22						
23	164 09.1 -00.1	N 23 14.3 -00.1	121 09.0 -00.4	N 17 13.2 -00.9	356 41.8 -31.1	S 27 59.4 -00.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 53'9 53'9 53'9 54'0 54'0 54'0								
	SHA 263° 263° 263° 262° 262° 262°		SHA 220° 220° 220° 220° 219° 219°		SHA 106° 104° 102° 100° 097° 095°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 14:55		Greenwich Culmination Time: 23:13								

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	218 48.9 +00.6	N 19 41.9 +00.4	154 19.7 +01.9	N 20 40.6 -00.1	262 15.4 +02.3	N 03 21.4 +00.1	00						
01	233 49.5 +00.7	N 19 42.3 +00.4	169 21.6 +01.9	N 20 40.5 -00.2	277 17.7 +02.4	N 03 21.5 +00.0	01						
02	248 50.2 +00.6	N 19 42.7 +00.4	184 23.5 +01.9	N 20 40.3 -00.1	292 20.1 +02.3	N 03 21.5 +00.0	02						
03	263 50.8 +00.6	N 19 43.1 +00.4	199 25.4 +01.9	N 20 40.2 -00.1	307 22.4 +02.4	N 03 21.5 +00.1	03						
04	278 51.4 +00.6	N 19 43.5 +00.4	214 27.3 +01.9	N 20 40.1 -00.1	322 24.8 +02.3	N 03 21.6 +00.0	04						
05	293 52.0 +00.6	N 19 43.9 +00.4	229 29.2 +01.9	N 20 40.0 -00.1	337 27.1 +02.4	N 03 21.6 +00.0	05						
06	308 52.6 +00.6	N 19 44.3 +00.4	244 31.1 +01.9	N 20 39.9 -00.1	352 29.5 +02.3	N 03 21.6 +00.1	06						
07	323 53.2 +00.7	N 19 44.7 +00.5	259 33.0 +02.0	N 20 39.8 -00.1	7 31.8 +02.4	N 03 21.7 +00.0	07						
08	338 53.9 +00.6	N 19 45.2 +00.4	274 35.0 +01.9	N 20 39.7 -00.1	22 34.2 +02.3	N 03 21.7 +00.0	08						
09	353 54.5 +00.6	N 19 45.6 +00.4	289 36.9 +01.9	N 20 39.6 -00.1	37 36.5 +02.4	N 03 21.7 +00.1	09						
10	8 55.1 +00.6	N 19 46.0 +00.4	304 38.8 +01.9	N 20 39.5 -00.1	52 38.9 +02.3	N 03 21.8 +00.0	10						
11	23 55.7 +00.6	N 19 46.4 +00.4	319 40.7 +01.9	N 20 39.4 -00.1	67 41.2 +02.4	N 03 21.8 +00.0	11						
12	38 56.3 +00.7	N 19 46.8 +00.4	334 42.6 +01.9	N 20 39.3 -00.2	82 43.6 +02.3	N 03 21.8 +00.1	12						
13	53 57.0 +00.6	N 19 47.2 +00.4	349 44.5 +01.9	N 20 39.1 -00.1	97 45.9 +02.4	N 03 21.9 +00.0	13						
14	68 57.6 +00.6	N 19 47.6 +00.4	4 46.4 +01.9	N 20 39.0 -00.1	112 48.3 +02.3	N 03 21.9 +00.0	14						
15	83 58.2 +00.6	N 19 48.0 +00.4	19 48.3 +01.9	N 20 38.9 -00.1	127 50.6 +02.4	N 03 21.9 +00.1	15						
16	98 58.8 +00.6	N 19 48.4 +00.4	34 50.2 +01.9	N 20 38.8 -00.1	142 53.0 +02.3	N 03 22.0 +00.0	16						
17	113 59.4 +00.6	N 19 48.8 +00.4	49 52.1 +01.9	N 20 38.7 -00.1	157 55.3 +02.4	N 03 22.0 +00.1	17						
18	129 00.0 +00.7	N 19 49.2 +00.4	64 54.0 +01.9	N 20 38.6 -00.1	172 57.7 +02.4	N 03 22.1 +00.0	18						
19	144 00.7 +00.6	N 19 49.6 +00.4	79 55.9 +01.9	N 20 38.5 -00.1	188 00.1 +02.3	N 03 22.1 +00.0	19						
20	159 01.3 +00.6	N 19 50.0 +00.5	94 57.8 +02.0	N 20 38.4 -00.1	203 02.4 +02.4	N 03 22.1 +00.1	20						
21	174 01.9 +00.6	N 19 50.5 +00.4	109 59.8 +01.9	N 20 38.3 -00.1	218 04.8 +02.3	N 03 22.2 +00.0	21						
22	189 02.5 +00.6	N 19 50.9 +00.4	125 01.7 +01.9	N 20 38.2 -00.1	233 07.1 +02.4	N 03 22.2 +00.0	22						
23	204 03.1 +00.6	N 19 51.3 +00.4	140 03.6 +01.9	N 20 38.1 -00.2	248 09.5 +02.3	N 03 22.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 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 303° 303° 302° 302° 302° 302°		SHA 238° 238° 238° 238° 238° 238°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:24		Greenwich Culmination Time: 13:40		Greenwich Culmination Time: 06:29								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 48%				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	179 09.0 -00.2	N 23	14.2 -00.1	136 08.6 -00.3	N 17	12.3 -00.9	11 10.7 -31.0	S 27	59.2 -00.4	00			
01	194 08.8 -00.1	N 23	14.1 -00.2	151 08.3 -00.3	N 17	11.4 -01.0	25 39.7 -31.1	S 27	58.8 -00.4	01			
02	209 08.7 -00.1	N 23	13.9 -00.1	166 08.0 -00.4	N 17	10.4 -00.9	40 08.6 -31.1	S 27	58.4 -00.7	02			
03	224 08.6 -00.1	N 23	13.8 -00.1	181 07.6 -00.3	N 17	09.5 -01.0	54 37.5 -31.1	S 27	57.7 -00.7	03			
04	239 08.5 -00.2	N 23	13.7 -00.2	196 07.3 -00.4	N 17	08.5 -00.9	69 06.4 -31.0	S 27	57.0 -00.9	04			
05	254 08.3 -00.1	N 23	13.5 -00.1	211 06.9 -00.3	N 17	07.6 -01.0	83 35.4 -31.1	S 27	56.1 -01.0	05			
06	269 08.2 -00.1	N 23	13.4 -00.1	226 06.6 -00.4	N 17	06.6 -00.9	98 04.3 -31.1	S 27	55.1 -01.2	06			
07	284 08.1 -00.1	N 23	13.3 -00.2	241 06.2 -00.3	N 17	05.7 -00.9	112 33.2 -31.0	S 27	53.9 -01.3	07			
08	299 08.0 -00.2	N 23	13.1 -00.1	256 05.9 -00.3	N 17	04.8 -01.0	127 02.2 -31.1	S 27	52.6 -01.4	08			
09	314 07.8 -00.1	N 23	13.0 -00.1	271 05.6 -00.4	N 17	03.8 -00.9	141 31.1 -31.0	S 27	51.2 -01.6	09			
10	329 07.7 -00.1	N 23	12.9 -00.2	286 05.2 -00.3	N 17	02.9 -01.0	156 00.1 -31.0	S 27	49.6 -01.7	10			
11	344 07.6 -00.1	N 23	12.7 -00.1	301 04.9 -00.3	N 17	01.9 -00.9	170 29.1 -31.0	S 27	47.9 -01.8	11			
12	359 07.5 -00.2	N 23	12.6 -00.2	316 04.6 -00.4	N 17	01.0 -01.0	184 58.1 -31.0	S 27	46.1 -02.0	12			
13	14 07.3 -00.1	N 23	12.4 -00.1	331 04.2 -00.3	N 17	00.0 -00.9	199 27.1 -31.0	S 27	44.1 -02.1	13			
14	29 07.2 -00.1	N 23	12.3 -00.1	346 03.9 -00.4	N 16	59.1 -01.0	213 56.1 -31.0	S 27	42.0 -02.2	14			
15	44 07.1 -00.1	N 23	12.2 -00.2	1 03.5 -00.3	N 16	58.1 -00.9	228 25.1 -30.9	S 27	39.8 -02.4	15			
16	59 07.0 -00.2	N 23	12.0 -00.1	16 03.2 -00.3	N 16	57.2 -01.0	242 54.2 -31.0	S 27	37.4 -02.5	16			
17	74 06.8 -00.1	N 23	11.9 -00.2	31 02.9 -00.4	N 16	56.2 -01.0	257 23.2 -30.9	S 27	34.9 -02.7	17			
18	89 06.7 -00.1	N 23	11.7 -00.1	46 02.5 -00.3	N 16	55.2 -00.9	271 52.3 -30.9	S 27	32.2 -02.7	18			
19	104 06.6 -00.1	N 23	11.6 -00.2	61 02.2 -00.3	N 16	54.3 -01.0	286 21.4 -30.8	S 27	29.5 -02.9	19			
20	119 06.5 -00.2	N 23	11.4 -00.1	76 01.9 -00.4	N 16	53.3 -00.9	300 50.6 -30.9	S 27	26.6 -03.1	20			
21	134 06.3 -00.1	N 23	11.3 -00.1	91 01.5 -00.3	N 16	52.4 -01.0	315 19.7 -30.8	S 27	23.5 -03.2	21			
22	149 06.2 -00.1	N 23	11.2 -00.2	106 01.2 -00.3	N 16	51.4 -00.9	329 48.9 -30.8	S 27	20.3 -03.3	22			
23	164 06.1 -00.1	N 23	11.0 -00.1	121 00.9 -00.3	N 16	50.5 -01.0	344 18.1 -30.8	S 27	17.0 -03.4	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'7 15'7 15'7 15'7 15'7 15'7			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'0 54'0 54'0 54'0 54'0 54'1						
	SHA 262° 262° 262° 261° 261° 261°			SHA 219° 219° 219° 218° 218° 218°			SHA 093° 091° 088° 086° 084° 082°						
	Greenwich Culmination Time: 12:03			Greenwich Culmination Time: 14:55			Greenwich Culmination Time: -1:00						

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	219 03.7 +00.7	N 19	51.7 +00.4	155 05.5 +01.9	N 20	37.9 -00.1	263 11.8 +02.4	N 03	22.3 +00.0	00			
01	234 04.4 +00.6	N 19	52.1 +00.4	170 07.4 +01.9	N 20	37.8 -00.1	278 14.2 +02.3	N 03	22.3 +00.0	01			
02	249 05.0 +00.6	N 19	52.5 +00.4	185 09.3 +01.9	N 20	37.7 -00.1	293 16.5 +02.4	N 03	22.3 +00.1	02			
03	264 05.6 +00.6	N 19	52.9 +00.4	200 11.2 +01.9	N 20	37.6 -00.1	308 18.9 +02.3	N 03	22.4 +00.0	03			
04	279 06.2 +00.6	N 19	53.3 +00.4	215 13.1 +01.9	N 20	37.5 -00.1	323 21.2 +02.4	N 03	22.4 +00.0	04			
05	294 06.8 +00.7	N 19	53.7 +00.4	230 15.0 +01.9	N 20	37.4 -00.1	338 23.6 +02.3	N 03	22.4 +00.1	05			
06	309 07.5 +00.6	N 19	54.1 +00.4	245 16.9 +01.9	N 20	37.3 -00.1	353 25.9 +02.4	N 03	22.5 +00.0	06			
07	324 08.1 +00.6	N 19	54.5 +00.4	260 18.8 +01.9	N 20	37.2 -00.1	8 28.3 +02.3	N 03	22.5 +00.0	07			
08	339 08.7 +00.6	N 19	54.9 +00.4	275 20.7 +01.9	N 20	37.1 -00.1	23 30.6 +02.4	N 03	22.5 +00.1	08			
09	354 09.3 +00.6	N 19	55.3 +00.4	290 22.6 +01.9	N 20	37.0 -00.2	38 33.0 +02.4	N 03	22.6 +00.0	09			
10	9 09.9 +00.6	N 19	55.7 +00.4	305 24.5 +02.0	N 20	36.8 -00.1	53 35.4 +02.3	N 03	22.6 +00.0	10			
11	24 10.5 +00.7	N 19	56.1 +00.4	320 26.5 +01.9	N 20	36.7 -00.1	68 37.7 +02.4	N 03	22.6 +00.1	11			
12	39 11.2 +00.6	N 19	56.5 +00.4	335 28.4 +01.9	N 20	36.6 -00.1	83 40.1 +02.3	N 03	22.7 +00.0	12			
13	54 11.8 +00.6	N 19	56.9 +00.4	350 30.3 +01.9	N 20	36.5 -00.1	98 42.4 +02.4	N 03	22.7 +00.0	13			
14	69 12.4 +00.6	N 19	57.3 +00.4	5 32.2 +01.9	N 20	36.4 -00.1	113 44.8 +02.3	N 03	22.7 +00.1	14			
15	84 13.0 +00.6	N 19	57.7 +00.4	20 34.1 +01.9	N 20	36.3 -00.1	128 47.1 +02.4	N 03	22.8 +00.0	15			
16	99 13.6 +00.6	N 19	58.1 +00.4	35 36.0 +01.9	N 20	36.2 -00.1	143 49.5 +02.3	N 03	22.8 +00.0	16			
17	114 14.2 +00.7	N 19	58.5 +00.4	50 37.9 +01.9	N 20	36.1 -00.1	158 51.8 +02.4	N 03	22.8 +00.1	17			
18	129 14.9 +00.6	N 19	58.9 +00.4	65 39.8 +01.9	N 20	36.0 -00.2	173 54.2 +02.4	N 03	22.9 +00.0	18			
19	144 15.5 +00.6	N 19	59.3 +00.4	80 41.7 +01.9	N 20	35.8 -00.1	188 56.6 +02.3	N 03	22.9 +00.0	19			
20	159 16.1 +00.6	N 19	59.7 +00.4	95 43.6 +01.9	N 20	35.7 -00.1	203 58.9 +02.4	N 03	22.9 +00.1	20			
21	174 16.7 +00.6	N 20	00.1 +00.4	110 45.5 +01.9	N 20	35.6 -00.1	219 01.3 +02.3	N 03	23.0 +00.0	21			
22	189 17.3 +00.6	N 20	00.5 +00.4	125 47.4 +01.9	N 20	35.5 -00.1	234 03.6 +02.4	N 03	23.0 +00.0	22			
23	204 17.9 +00.7	N 20	00.9 +00.4	140 49.3 +01.9	N 20	35.4 -00.1	249 06.0 +02.3	N 03	23.0 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 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° 302° 301° 301°			SHA 238° 238° 238° 238° 238° 238°			SHA 346° 346° 346° 346° 346° 346°						
	Greenwich Culmination Time: 09:23			Greenwich Culmination Time: 13:37			Greenwich Culmination Time: 06:26						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 06.0 -00.1	N 23 10.9 -00.2	136 00.6 -00.4	N 16 49.5 -00.9	358 47.3 -30.7	S 27 13.6 -03.6	00						
01	194 05.9 -00.2	N 23 10.7 -00.1	151 00.2 -00.3	N 16 48.6 -01.0	13 16.6 -30.8	S 27 10.0 -03.7	01						
02	209 05.7 -00.1	N 23 10.6 -00.2	165 59.9 -00.3	N 16 47.6 -01.0	27 45.8 -30.6	S 27 06.3 -03.8	02						
03	224 05.6 -00.1	N 23 10.4 -00.1	180 59.6 -00.4	N 16 46.6 -00.9	42 15.2 -30.7	S 27 02.5 -04.0	03						
04	239 05.5 -00.1	N 23 10.3 -00.2	195 59.2 -00.3	N 16 45.7 -01.0	56 44.5 -30.6	S 26 58.5 -04.1	04						
05	254 05.4 -00.2	N 23 10.1 -00.1	210 58.9 -00.3	N 16 44.7 -00.9	71 13.9 -30.6	S 26 54.4 -04.2	05						
06	269 05.2 -00.1	N 23 10.0 -00.2	225 58.6 -00.3	N 16 43.8 -01.0	85 43.3 -30.6	S 26 50.2 -04.4	06						
07	284 05.1 -00.1	N 23 09.8 -00.1	240 58.3 -00.3	N 16 42.8 -01.0	100 12.7 -30.5	S 26 45.8 -04.5	07						
08	299 05.0 -00.1	N 23 09.7 -00.2	255 58.0 -00.4	N 16 41.8 -00.9	114 42.2 -30.5	S 26 41.3 -04.6	08						
09	314 04.9 -00.2	N 23 09.5 -00.2	270 57.6 -00.3	N 16 40.9 -01.0	129 11.7 -30.5	S 26 36.7 -04.7	09						
10	329 04.7 -00.1	N 23 09.3 -00.1	285 57.3 -00.3	N 16 39.9 -01.0	143 41.2 -30.4	S 26 32.0 -04.9	10						
11	344 04.6 -00.1	N 23 09.2 -00.2	300 57.0 -00.3	N 16 38.9 -00.9	158 10.8 -30.4	S 26 27.1 -05.0	11						
12	359 04.5 -00.1	N 23 09.0 -00.1	315 56.7 -00.4	N 16 38.0 -01.0	172 40.4 -30.3	S 26 22.1 -05.1	12						
13	14 04.4 -00.1	N 23 08.9 -00.2	330 56.3 -00.3	N 16 37.0 -01.0	187 10.1 -30.4	S 26 17.0 -05.3	13						
14	29 04.3 -00.2	N 23 08.7 -00.1	345 56.0 -00.3	N 16 36.0 -00.9	201 39.7 -30.2	S 26 11.7 -05.3	14						
15	44 04.1 -00.1	N 23 08.6 -00.2	0 55.7 -00.3	N 16 35.1 -01.0	216 09.5 -30.2	S 26 06.4 -05.5	15						
16	59 04.0 -00.1	N 23 08.4 -00.2	15 55.4 -00.3	N 16 34.1 -01.0	230 39.3 -30.2	S 26 00.9 -05.7	16						
17	74 03.9 -00.1	N 23 08.2 -00.1	30 55.1 -00.3	N 16 33.1 -00.9	245 09.1 -30.2	S 25 55.2 -05.7	17						
18	89 03.8 -00.1	N 23 08.1 -00.2	45 54.8 -00.4	N 16 32.2 -01.0	259 38.9 -30.1	S 25 49.5 -05.9	18						
19	104 03.7 -00.2	N 23 07.9 -00.1	60 54.4 -00.3	N 16 31.2 -01.0	274 08.8 -30.0	S 25 43.6 -06.0	19						
20	119 03.5 -00.1	N 23 07.8 -00.2	75 54.1 -00.3	N 16 30.2 -00.9	288 38.8 -30.0	S 25 37.6 -06.1	20						
21	134 03.4 -00.1	N 23 07.6 -00.2	90 53.8 -00.3	N 16 29.3 -01.0	303 08.8 -30.0	S 25 31.5 -06.2	21						
22	149 03.3 -00.1	N 23 07.4 -00.1	105 53.5 -00.3	N 16 28.3 -01.0	317 38.8 -29.9	S 25 25.3 -06.4	22						
23	164 03.2 -00.2	N 23 07.3 -00.2	120 53.2 -00.3	N 16 27.3 -01.0	332 08.9 -29.9	S 25 18.9 -06.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'2 54'2 54'2 54'3								
	SHA 261° 261° 261° 260° 260° 260°		SHA 218° 218° 217° 217° 217° 217°		SHA 080° 077° 075° 073° 071° 069°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 14:56		Greenwich Culmination Time: 00:05								

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	219 18.6 +00.6	N 20 01.3 +00.4	155 51.2 +01.9	N 20 35.3 -00.1	264 08.3 +02.4	N 03 23.1 +00.0	00						
01	234 19.2 +00.6	N 20 01.7 +00.4	170 53.1 +01.9	N 20 35.2 -00.1	279 10.7 +02.4	N 03 23.1 +00.0	01						
02	249 19.8 +00.6	N 20 02.1 +00.4	185 55.0 +02.0	N 20 35.1 -00.1	294 13.1 +02.3	N 03 23.1 +00.1	02						
03	264 20.4 +00.6	N 20 02.5 +00.4	200 57.0 +01.9	N 20 35.0 -00.1	309 15.4 +02.4	N 03 23.2 +00.0	03						
04	279 21.0 +00.6	N 20 02.9 +00.3	215 58.9 +01.9	N 20 34.9 -00.2	324 17.8 +02.3	N 03 23.2 +00.0	04						
05	294 21.6 +00.7	N 20 03.2 +00.4	231 00.8 +01.9	N 20 34.7 -00.1	339 20.1 +02.4	N 03 23.2 +00.1	05						
06	309 22.3 +00.6	N 20 03.6 +00.4	246 02.7 +01.9	N 20 34.6 -00.1	354 22.5 +02.3	N 03 23.3 +00.0	06						
07	324 22.9 +00.6	N 20 04.0 +00.4	261 04.6 +01.9	N 20 34.5 -00.1	9 24.8 +02.4	N 03 23.3 +00.0	07						
08	339 23.5 +00.6	N 20 04.4 +00.4	276 06.5 +01.9	N 20 34.4 -00.1	24 27.2 +02.4	N 03 23.3 +00.1	08						
09	354 24.1 +00.6	N 20 04.8 +00.4	291 08.4 +01.9	N 20 34.3 -00.1	39 29.6 +02.3	N 03 23.4 +00.0	09						
10	9 24.7 +00.6	N 20 05.2 +00.4	306 10.3 +01.9	N 20 34.2 -00.1	54 31.9 +02.4	N 03 23.4 +00.0	10						
11	24 25.3 +00.6	N 20 05.6 +00.4	321 12.2 +01.9	N 20 34.1 -00.1	69 34.3 +02.3	N 03 23.4 +00.1	11						
12	39 25.9 +00.7	N 20 06.0 +00.4	336 14.1 +01.9	N 20 34.0 -00.1	84 36.6 +02.4	N 03 23.5 +00.0	12						
13	54 26.6 +00.6	N 20 06.4 +00.4	351 16.0 +01.9	N 20 33.9 -00.2	99 39.0 +02.4	N 03 23.5 +00.0	13						
14	69 27.2 +00.6	N 20 06.8 +00.4	6 17.9 +01.9	N 20 33.7 -00.1	114 41.4 +02.3	N 03 23.5 +00.0	14						
15	84 27.8 +00.6	N 20 07.2 +00.4	21 19.8 +01.9	N 20 33.6 -00.1	129 43.7 +02.4	N 03 23.5 +00.1	15						
16	99 28.4 +00.6	N 20 07.6 +00.4	36 21.7 +01.9	N 20 33.5 -00.1	144 46.1 +02.3	N 03 23.6 +00.0	16						
17	114 29.0 +00.6	N 20 08.0 +00.3	51 23.6 +01.9	N 20 33.4 -00.1	159 48.4 +02.4	N 03 23.6 +00.0	17						
18	129 29.6 +00.7	N 20 08.3 +00.4	66 25.5 +01.9	N 20 33.3 -00.1	174 50.8 +02.4	N 03 23.6 +00.1	18						
19	144 30.3 +00.6	N 20 08.7 +00.4	81 27.4 +01.9	N 20 33.2 -00.1	189 53.2 +02.3	N 03 23.7 +00.0	19						
20	159 30.9 +00.6	N 20 09.1 +00.4	96 29.3 +02.0	N 20 33.1 -00.1	204 55.5 +02.4	N 03 23.7 +00.0	20						
21	174 31.5 +00.6	N 20 09.5 +00.4	111 31.3 +01.9	N 20 33.0 -00.2	219 57.9 +02.3	N 03 23.7 +00.1	21						
22	189 32.1 +00.6	N 20 09.9 +00.4	126 33.2 +01.9	N 20 32.8 -00.1	235 00.2 +02.4	N 03 23.8 +00.0	22						
23	204 32.7 +00.6	N 20 10.3 +00.4	141 35.1 +01.9	N 20 32.7 -00.1	250 02.6 +02.4	N 03 23.8 +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 301° 301° 301° 301° 301° 301°		SHA 238° 238° 238° 238° 238° 238°		SHA 346° 346° 346° 346° 346° 346°								
	Greenwich Culmination Time: 09:22		Greenwich Culmination Time: 13:34		Greenwich Culmination Time: 06:22								