



UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 37.3 +00.2	S	03 29.0 +01.0	187 04.4 -00.4	S	00 01.8 +01.3	105 42.0 -36.7	S	26 49.4 +03.5	00			
01	197 37.5 +00.2	S	03 30.0 +01.0	202 04.0 -00.4	S	00 03.1 +01.2	120 05.3 -36.8	S	26 52.9 +03.4	01			
02	212 37.7 +00.2	S	03 31.0 +00.9	217 03.6 -00.4	S	00 04.3 +01.3	134 28.5 -36.9	S	26 56.3 +03.1	02			
03	227 37.9 +00.2	S	03 31.9 +01.0	232 03.2 -00.4	S	00 05.6 +01.2	148 51.6 -36.9	S	26 59.4 +03.0	03			
04	242 38.1 +00.2	S	03 32.9 +01.0	247 02.8 -00.4	S	00 06.8 +01.3	163 14.7 -37.0	S	27 02.4 +02.8	04			
05	257 38.3 +00.2	S	03 33.9 +00.9	262 02.4 -00.4	S	00 08.1 +01.2	177 37.7 -36.9	S	27 05.2 +02.6	05			
06	272 38.5 +00.2	S	03 34.8 +01.0	277 02.0 -00.4	S	00 09.3 +01.3	192 00.8 -37.1	S	27 07.8 +02.4	06			
07	287 38.7 +00.2	S	03 35.8 +01.0	292 01.6 -00.4	S	00 10.6 +01.2	206 23.7 -37.0	S	27 10.2 +02.2	07			
08	302 38.9 +00.2	S	03 36.8 +00.9	307 01.2 -00.4	S	00 11.8 +01.3	220 46.7 -37.2	S	27 12.4 +02.1	08			
09	317 39.1 +00.2	S	03 37.7 +01.0	322 00.8 -00.4	S	00 13.1 +01.3	235 09.5 -37.1	S	27 14.5 +01.8	09			
10	332 39.3 +00.2	S	03 38.7 +01.0	337 00.4 -00.3	S	00 14.4 +01.2	249 32.4 -37.2	S	27 16.3 +01.7	10			
11	347 39.5 +00.2	S	03 39.7 +00.9	352 00.1 -00.4	S	00 15.6 +01.3	263 55.2 -37.2	S	27 18.0 +01.5	11			
12	2 39.7 +00.2	S	03 40.6 +01.0	6 59.7 -00.4	S	00 16.9 +01.2	278 18.0 -37.2	S	27 19.5 +01.3	12			
13	17 39.9 +00.2	S	03 41.6 +01.0	21 59.3 -00.4	S	00 18.1 +01.3	292 40.8 -37.2	S	27 20.8 +01.2	13			
14	32 40.1 +00.2	S	03 42.6 +00.9	36 58.9 -00.4	S	00 19.4 +01.2	307 03.6 -37.3	S	27 22.0 +00.9	14			
15	47 40.3 +00.2	S	03 43.5 +01.0	51 58.5 -00.4	S	00 20.6 +01.3	321 26.3 -37.3	S	27 22.9 +00.7	15			
16	62 40.5 +00.2	S	03 44.5 +01.0	66 58.1 -00.4	S	00 21.9 +01.2	335 49.0 -37.3	S	27 23.6 +00.6	16			
17	77 40.7 +00.2	S	03 45.5 +00.9	81 57.7 -00.4	S	00 23.1 +01.3	350 11.7 -37.3	S	27 24.2 +00.4	17			
18	92 40.9 +00.2	S	03 46.4 +01.0	96 57.3 -00.4	S	00 24.4 +01.2	4 34.4 -37.3	S	27 24.6 +00.2	18			
19	107 41.1 +00.2	S	03 47.4 +01.0	111 56.9 -00.4	S	00 25.6 +01.3	18 57.1 -37.4	S	27 24.8 +00.0	19			
20	122 41.3 +00.2	S	03 48.4 +00.9	126 56.5 -00.4	S	00 26.9 +01.3	33 19.7 -37.3	S	27 24.8 -00.2	20			
21	137 41.5 +00.2	S	03 49.3 +01.0	141 56.1 -00.3	S	00 28.2 +01.2	47 42.4 -37.4	S	27 24.6 -00.4	21			
22	152 41.7 +00.2	S	03 50.3 +01.0	156 55.8 -00.4	S	00 29.4 +01.3	62 05.0 -37.4	S	27 24.2 -00.6	22			
23	167 41.9 +00.2	S	03 51.3 +00.9	171 55.4 -00.4	S	00 30.7 +01.2	76 27.6 -37.3	S	27 23.6 -00.7	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'1 16'1 16'1 16'1 16'1 16'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'0 59'1 59'1 59'1 59'2 59'2						
	SHA 172° 172° 172° 171° 171° 171°			SHA 176° 176° 176° 176° 176° 175°			SHA 094° 091° 088° 086° 083° 080°						
	Greenwich Culmination Time: 11:49			Greenwich Culmination Time: 11:32			Greenwich Culmination Time: 17:40						
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	291 04.2 +01.5	N	22 28.7 +00.2	7 17.8 +02.7	S	00 17.6 +00.1	48 52.9 +02.5	S	16 23.4 +00.0	00			
01	306 05.7 +01.6	N	22 28.9 +00.1	22 20.5 +02.8	S	00 17.7 +00.2	63 55.4 +02.6	S	16 23.4 +00.1	01			
02	321 07.3 +01.6	N	22 29.0 +00.1	37 23.3 +02.8	S	00 17.9 +00.1	78 58.0 +02.5	S	16 23.5 +00.0	02			
03	336 08.9 +01.5	N	22 29.1 +00.2	52 26.1 +02.7	S	00 18.0 +00.1	94 00.5 +02.6	S	16 23.5 +00.0	03			
04	351 10.4 +01.6	N	22 29.3 +00.1	67 28.8 +02.8	S	00 18.1 +00.2	109 03.1 +02.5	S	16 23.5 +00.0	04			
05	6 12.0 +01.6	N	22 29.4 +00.1	82 31.6 +02.8	S	00 18.3 +00.1	124 05.6 +02.6	S	16 23.5 +00.1	05			
06	21 13.6 +01.6	N	22 29.5 +00.2	97 34.4 +02.7	S	00 18.4 +00.1	139 08.2 +02.5	S	16 23.6 +00.0	06			
07	36 15.2 +01.5	N	22 29.7 +00.1	112 37.1 +02.8	S	00 18.5 +00.2	154 10.7 +02.6	S	16 23.6 +00.0	07			
08	51 16.7 +01.6	N	22 29.8 +00.1	127 39.9 +02.8	S	00 18.7 +00.1	169 13.3 +02.5	S	16 23.6 +00.0	08			
09	66 18.3 +01.6	N	22 29.9 +00.1	142 42.7 +02.7	S	00 18.8 +00.1	184 15.8 +02.6	S	16 23.6 +00.1	09			
10	81 19.9 +01.5	N	22 30.0 +00.2	157 45.4 +02.8	S	00 18.9 +00.1	199 18.4 +02.5	S	16 23.7 +00.0	10			
11	96 21.4 +01.6	N	22 30.2 +00.1	172 48.2 +02.8	S	00 19.0 +00.2	214 20.9 +02.6	S	16 23.7 +00.0	11			
12	111 23.0 +01.6	N	22 30.3 +00.1	187 51.0 +02.8	S	00 19.2 +00.1	229 23.5 +02.5	S	16 23.7 +00.0	12			
13	126 24.6 +01.6	N	22 30.4 +00.2	202 53.8 +02.7	S	00 19.3 +00.1	244 26.0 +02.6	S	16 23.7 +00.1	13			
14	141 26.2 +01.6	N	22 30.6 +00.1	217 56.5 +02.8	S	00 19.4 +00.2	259 28.6 +02.5	S	16 23.8 +00.0	14			
15	156 27.8 +01.5	N	22 30.7 +00.1	232 59.3 +02.8	S	00 19.6 +00.1	274 31.1 +02.6	S	16 23.8 +00.0	15			
16	171 29.3 +01.6	N	22 30.8 +00.2	248 02.1 +02.7	S	00 19.7 +00.1	289 33.7 +02.5	S	16 23.8 +00.0	16			
17	186 30.9 +01.6	N	22 31.0 +00.1	263 04.8 +02.8	S	00 19.8 +00.2	304 36.2 +02.6	S	16 23.8 +00.1	17			
18	201 32.5 +01.6	N	22 31.1 +00.1	278 07.6 +02.8	S	00 20.0 +00.1	319 38.8 +02.5	S	16 23.9 +00.0	18			
19	216 34.1 +01.6	N	22 31.2 +00.2	293 10.4 +02.7	S	00 20.1 +00.1	334 41.3 +02.6	S	16 23.9 +00.0	19			
20	231 35.7 +01.6	N	22 31.4 +00.1	308 13.1 +02.8	S	00 20.2 +00.1	349 43.9 +02.5	S	16 23.9 +00.0	20			
21	246 37.3 +01.5	N	22 31.5 +00.1	323 15.9 +02.8	S	00 20.3 +00.2	4 46.4 +02.6	S	16 23.9 +00.1	21			
22	261 38.8 +01.6	N	22 31.6 +00.1	338 18.7 +02.7	S	00 20.5 +00.1	19 49.0 +02.5	S	16 24.0 +00.0	22			
23	276 40.4 +01.6	N	22 31.7 +00.2	353 21.4 +02.8	S	00 20.6 +00.1	34 51.5 +02.5	S	16 24.0 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'2 00'2 00'2 00'2 00'2 00'2						
	HP 00'2 00'2 00'2 00'2 00'2 00'2			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 280° 280° 280° 280° 280° 280°			SHA 357° 357° 357° 357° 357° 357°			SHA 038° 038° 038° 038° 038° 038°						
	Greenwich Culmination Time: 04:35			Greenwich Culmination Time: 23:26			Greenwich Culmination Time: 20:40						









Table with columns for Sun, Venus, Moon, Mars, Jupiter, and Saturn. Each section includes UT, GHA, ddGHA, Dec, dDec, and a summary row at the bottom for SD, HP, and SHA.

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 04.6 +00.2	S	05 47.5 +01.0	186 07.6 -00.4	S	03 02.4 +01.3	23 28.2 -29.1	S	07 29.3 -15.6	00			
01	198 04.8 +00.2	S	05 48.5 +00.9	201 07.2 -00.4	S	03 03.7 +01.2	37 59.1 -29.1	S	07 13.7 -15.6	01			
02	213 05.0 +00.2	S	05 49.4 +01.0	216 06.8 -00.4	S	03 04.9 +01.3	52 30.0 -29.0	S	06 58.1 -15.7	02			
03	228 05.2 +00.2	S	05 50.4 +00.9	231 06.4 -00.4	S	03 06.2 +01.2	67 01.0 -28.9	S	06 42.4 -15.7	03			
04	243 05.4 +00.1	S	05 51.3 +01.0	246 06.0 -00.4	S	03 07.4 +01.3	81 32.1 -28.9	S	06 26.7 -15.7	04			
05	258 05.5 +00.2	S	05 52.3 +00.9	261 05.6 -00.4	S	03 08.7 +01.2	96 03.2 -28.9	S	06 11.0 -15.7	05			
06	273 05.7 +00.2	S	05 53.2 +01.0	276 05.2 -00.4	S	03 09.9 +01.3	110 34.3 -28.8	S	05 55.3 -15.8	06			
07	288 05.9 +00.2	S	05 54.2 +00.9	291 04.8 -00.4	S	03 11.2 +01.2	125 05.5 -28.7	S	05 39.5 -15.8	07			
08	303 06.1 +00.1	S	05 55.1 +01.0	306 04.4 -00.4	S	03 12.4 +01.3	139 36.8 -28.8	S	05 23.7 -15.7	08			
09	318 06.2 +00.2	S	05 56.1 +00.9	321 04.0 -00.4	S	03 13.7 +01.2	154 08.0 -28.6	S	05 08.0 -15.8	09			
10	333 06.4 +00.2	S	05 57.0 +01.0	336 03.6 -00.4	S	03 14.9 +01.3	168 39.4 -28.6	S	04 52.2 -15.9	10			
11	348 06.6 +00.2	S	05 58.0 +00.9	351 03.2 -00.4	S	03 16.2 +01.2	183 10.8 -28.6	S	04 36.3 -15.8	11			
12	3 06.8 +00.1	S	05 58.9 +01.0	6 02.8 -00.4	S	03 17.4 +01.3	197 42.2 -28.6	S	04 20.5 -15.9	12			
13	18 06.9 +00.2	S	05 59.9 +01.0	21 02.4 -00.4	S	03 18.7 +01.2	212 13.6 -28.5	S	04 04.6 -15.8	13			
14	33 07.1 +00.2	S	06 00.9 +00.9	36 02.0 -00.4	S	03 19.9 +01.3	226 45.1 -28.4	S	03 48.8 -15.9	14			
15	48 07.3 +00.2	S	06 01.8 +01.0	51 01.6 -00.4	S	03 21.2 +01.2	241 16.7 -28.4	S	03 32.9 -15.8	15			
16	63 07.5 +00.1	S	06 02.8 +00.9	66 01.2 -00.4	S	03 22.4 +01.3	255 48.3 -28.4	S	03 17.1 -15.9	16			
17	78 07.6 +00.2	S	06 03.7 +01.0	81 00.8 -00.4	S	03 23.7 +01.2	270 19.9 -28.4	S	03 01.2 -15.9	17			
18	93 07.8 +00.2	S	06 04.7 +00.9	96 00.4 -00.4	S	03 24.9 +01.3	284 51.5 -28.3	S	02 45.3 -15.9	18			
19	108 08.0 +00.2	S	06 05.6 +01.0	110 60.0 -00.4	S	03 26.2 +01.2	299 23.2 -28.3	S	02 29.4 -15.9	19			
20	123 08.2 +00.1	S	06 06.6 +00.9	125 59.6 -00.4	S	03 27.4 +01.3	313 54.9 -28.2	S	02 13.5 -15.9	20			
21	138 08.3 +00.2	S	06 07.5 +01.0	140 59.2 -00.4	S	03 28.7 +01.2	328 26.7 -28.3	S	01 57.6 -15.9	21			
22	153 08.5 +00.2	S	06 08.5 +00.9	155 58.8 -00.5	S	03 29.9 +01.3	342 58.4 -28.2	S	01 41.7 -15.8	22			
23	168 08.7 +00.2	S	06 09.4 +01.0	170 58.3 -00.4	S	03 31.2 +01.2	357 30.2 -28.1	S	01 25.9 -15.9	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'0 16'0 15'9 15'9 15'9 15'9						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 58'7 58'6 58'5 58'4 58'4 58'3						
	SHA 166° 166° 166° 166° 166° 166°			SHA 169° 169° 169° 169° 169° 168°			SHA 006° 004° 002° 360° 358° 355°						
	Greenwich Culmination Time: 11:47			Greenwich Culmination Time: 11:35			Greenwich Culmination Time: 23:10						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	295 00.0 +01.8	N	22 46.9 +00.1	13 55.7 +02.8	S	00 36.0 +00.1	54 58.4 +02.6	S	16 26.5 +00.1	00			
01	310 01.8 +01.7	N	22 47.0 +00.1	28 58.5 +02.7	S	00 36.1 +00.1	70 01.0 +02.5	S	16 26.6 +00.0	01			
02	325 03.5 +01.7	N	22 47.1 +00.2	44 01.2 +02.8	S	00 36.2 +00.1	85 03.5 +02.5	S	16 26.6 +00.0	02			
03	340 05.2 +01.7	N	22 47.3 +00.1	59 04.0 +02.8	S	00 36.3 +00.2	100 06.0 +02.5	S	16 26.6 +00.0	03			
04	355 06.9 +01.7	N	22 47.4 +00.1	74 06.8 +02.7	S	00 36.5 +00.1	115 08.5 +02.6	S	16 26.6 +00.0	04			
05	10 08.6 +01.8	N	22 47.5 +00.1	89 09.5 +02.8	S	00 36.6 +00.1	130 11.1 +02.5	S	16 26.6 +00.1	05			
06	25 10.4 +01.7	N	22 47.6 +00.2	104 12.3 +02.7	S	00 36.7 +00.1	145 13.6 +02.5	S	16 26.7 +00.0	06			
07	40 12.1 +01.7	N	22 47.8 +00.1	119 15.0 +02.8	S	00 36.8 +00.1	160 16.1 +02.5	S	16 26.7 +00.0	07			
08	55 13.8 +01.7	N	22 47.9 +00.1	134 17.8 +02.7	S	00 36.9 +00.2	175 18.6 +02.6	S	16 26.7 +00.0	08			
09	70 15.5 +01.7	N	22 48.0 +00.1	149 20.5 +02.8	S	00 37.1 +00.1	190 21.2 +02.5	S	16 26.7 +00.0	09			
10	85 17.2 +01.8	N	22 48.1 +00.1	164 23.3 +02.8	S	00 37.2 +00.1	205 23.7 +02.5	S	16 26.7 +00.0	10			
11	100 19.0 +01.7	N	22 48.2 +00.2	179 26.1 +02.7	S	00 37.3 +00.1	220 26.2 +02.5	S	16 26.7 +00.1	11			
12	115 20.7 +01.7	N	22 48.4 +00.1	194 28.8 +02.8	S	00 37.4 +00.2	235 28.7 +02.6	S	16 26.8 +00.0	12			
13	130 22.4 +01.8	N	22 48.5 +00.1	209 31.6 +02.7	S	00 37.6 +00.1	250 31.3 +02.5	S	16 26.8 +00.0	13			
14	145 24.2 +01.7	N	22 48.6 +00.1	224 34.3 +02.8	S	00 37.7 +00.1	265 33.8 +02.5	S	16 26.8 +00.0	14			
15	160 25.9 +01.7	N	22 48.7 +00.1	239 37.1 +02.7	S	00 37.8 +00.1	280 36.3 +02.5	S	16 26.8 +00.0	15			
16	175 27.6 +01.7	N	22 48.8 +00.2	254 39.8 +02.8	S	00 37.9 +00.2	295 38.8 +02.6	S	16 26.8 +00.0	16			
17	190 29.3 +01.8	N	22 49.0 +00.1	269 42.6 +02.7	S	00 38.1 +00.1	310 41.4 +02.5	S	16 26.8 +00.1	17			
18	205 31.1 +01.7	N	22 49.1 +00.1	284 45.3 +02.8	S	00 38.2 +00.1	325 43.9 +02.5	S	16 26.9 +00.0	18			
19	220 32.8 +01.7	N	22 49.2 +00.1	299 48.1 +02.8	S	00 38.3 +00.1	340 46.4 +02.5	S	16 26.9 +00.0	19			
20	235 34.5 +01.8	N	22 49.3 +00.1	314 50.9 +02.7	S	00 38.4 +00.1	355 48.9 +02.6	S	16 26.9 +00.0	20			
21	250 36.3 +01.7	N	22 49.4 +00.2	329 53.6 +02.8	S	00 38.5 +00.2	10 51.5 +02.5	S	16 26.9 +00.0	21			
22	265 38.0 +01.8	N	22 49.6 +00.1	344 56.4 +02.7	S	00 38.7 +00.1	25 54.0 +02.5	S	16 26.9 +00.0	22			
23	280 39.8 +01.7	N	22 49.7 +00.1	359 59.1 +02.8	S	00 38.8 +00.1	40 56.5 +02.5	S	16 26.9 +00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'2 00'2 00'2 00'2 00'2 00'2			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 278° 278° 278° 278° 278° 278°			SHA 357° 357° 357° 357° 357° 357°			SHA 038° 038° 038° 038° 038° 038°						
	Greenwich Culmination Time: 04:19			Greenwich Culmination Time: 23:00			Greenwich Culmination Time: 20:16						















Table with columns for Sun, Venus, Moon, and UT. Rows include UT (00-23), GHA, ddGHA, Dec, dDec, and a summary row for SD, HP, and SHA. Greenwich Culmination Time: 11:45.

Table with columns for Mars, Jupiter, Saturn, and UT. Rows include UT (00-23), GHA, ddGHA, Dec, dDec, and a summary row for SD, HP, and SHA. Greenwich Culmination Time: 03:59.

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 72%				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "					
00	183 35.1 +00.1	S 08 47.7 +00.9	184 47.6 -00.4	S 07 00.1 +01.3	290 07.1 -31.1	N 27 25.8 +00.8	00										
01	198 35.2 +00.1	S 08 48.6 +00.9	199 47.2 -00.5	S 07 01.4 +01.2	304 36.0 -31.1	N 27 26.6 +00.6	01										
02	213 35.3 +00.2	S 08 49.5 +01.0	214 46.7 -00.4	S 07 02.6 +01.2	319 04.9 -31.1	N 27 27.2 +00.5	02										
03	228 35.5 +00.1	S 08 50.5 +00.9	229 46.3 -00.4	S 07 03.8 +01.2	333 33.8 -31.1	N 27 27.7 +00.4	03										
04	243 35.6 +00.1	S 08 51.4 +00.9	244 45.9 -00.5	S 07 05.0 +01.2	348 02.7 -31.0	N 27 28.1 +00.2	04										
05	258 35.7 +00.2	S 08 52.3 +00.9	259 45.4 -00.4	S 07 06.2 +01.2	2 31.7 -31.1	N 27 28.3 +00.1	05										
06	273 35.9 +00.1	S 08 53.2 +00.9	274 45.0 -00.4	S 07 07.4 +01.3	17 00.6 -31.0	N 27 28.4 +00.0	06										
07	288 36.0 +00.1	S 08 54.1 +01.0	289 44.6 -00.5	S 07 08.7 +01.2	31 29.6 -31.0	N 27 28.4 -00.2	07										
08	303 36.1 +00.2	S 08 55.1 +00.9	304 44.1 -00.4	S 07 09.9 +01.2	45 58.6 -31.0	N 27 28.2 -00.3	08										
09	318 36.3 +00.1	S 08 56.0 +00.9	319 43.7 -00.5	S 07 11.1 +01.2	60 27.6 -31.0	N 27 27.9 -00.4	09										
10	333 36.4 +00.1	S 08 56.9 +00.9	334 43.2 -00.4	S 07 12.3 +01.2	74 56.6 -31.0	N 27 27.5 -00.6	10										
11	348 36.5 +00.2	S 08 57.8 +00.9	349 42.8 -00.4	S 07 13.5 +01.2	89 25.6 -31.0	N 27 26.9 -00.7	11										
12	3 36.7 +00.1	S 08 58.7 +00.9	4 42.4 -00.5	S 07 14.7 +01.3	103 54.6 -30.9	N 27 26.2 -00.8	12										
13	18 36.8 +00.1	S 08 59.6 +01.0	19 41.9 -00.4	S 07 16.0 +01.2	118 23.7 -30.9	N 27 25.4 -01.0	13										
14	33 36.9 +00.2	S 09 00.6 +00.9	34 41.5 -00.5	S 07 17.2 +01.2	132 52.8 -31.0	N 27 24.4 -01.1	14										
15	48 37.1 +00.1	S 09 01.5 +00.9	49 41.0 -00.4	S 07 18.4 +01.2	147 21.8 -30.8	N 27 23.3 -01.2	15										
16	63 37.2 +00.1	S 09 02.4 +00.9	64 40.6 -00.5	S 07 19.6 +01.2	161 51.0 -30.9	N 27 22.1 -01.4	16										
17	78 37.3 +00.2	S 09 03.3 +00.9	79 40.1 -00.4	S 07 20.8 +01.2	176 20.1 -30.9	N 27 20.7 -01.5	17										
18	93 37.5 +00.1	S 09 04.2 +00.9	94 39.7 -00.4	S 07 22.0 +01.3	190 49.2 -30.8	N 27 19.2 -01.6	18										
19	108 37.6 +00.1	S 09 05.1 +01.0	109 39.3 -00.5	S 07 23.3 +01.2	205 18.4 -30.8	N 27 17.6 -01.7	19										
20	123 37.7 +00.2	S 09 06.1 +00.9	124 38.8 -00.4	S 07 24.5 +01.2	219 47.6 -30.8	N 27 15.9 -01.9	20										
21	138 37.9 +00.1	S 09 07.0 +00.9	139 38.4 -00.5	S 07 25.7 +01.2	234 16.8 -30.7	N 27 14.0 -02.0	21										
22	153 38.0 +00.1	S 09 07.9 +00.9	154 37.9 -00.4	S 07 26.9 +01.2	248 46.1 -30.7	N 27 12.0 -02.2	22										
23	168 38.1 +00.1	S 09 08.8 +00.9	169 37.5 -00.5	S 07 28.1 +01.2	263 15.4 -30.7	N 27 09.8 -02.3	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 159° 159° 159° 159° 158° 158°	Greenwich Culmination Time: 11:45		UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 160° 160° 160° 160° 159° 159°	Greenwich Culmination Time: 11:41		UT 02 06 10 14 18 22	SD 14'8 14'8 14'8 14'8 14'8 14'8	HP 54'4 54'3 54'3 54'3 54'2 54'2	SHA 265° 262° 260° 258° 256° 253°	Greenwich Culmination Time: 04:49
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "					
00	300 50.6 +02.0	N 23 09.2 +00.2	22 42.8 +02.7	S 00 58.5 +00.1	63 00.5 +02.5	S 16 29.0 +00.0	00										
01	315 52.6 +01.9	N 23 09.4 +00.1	37 45.5 +02.8	S 00 58.6 +00.1	78 03.0 +02.5	S 16 29.0 +00.0	01										
02	330 54.5 +01.9	N 23 09.5 +00.1	52 48.3 +02.7	S 00 58.7 +00.1	93 05.5 +02.5	S 16 29.0 +00.0	02										
03	345 56.4 +02.0	N 23 09.6 +00.1	67 51.0 +02.7	S 00 58.8 +00.1	108 08.0 +02.5	S 16 29.0 +00.0	03										
04	0 58.4 +01.9	N 23 09.7 +00.1	82 53.7 +02.7	S 00 58.9 +00.1	123 10.5 +02.5	S 16 29.0 +00.0	04										
05	16 00.3 +02.0	N 23 09.8 +00.1	97 56.4 +02.8	S 00 59.0 +00.1	138 13.0 +02.5	S 16 29.0 +00.0	05										
06	31 02.3 +02.0	N 23 09.9 +00.1	112 59.2 +02.7	S 00 59.1 +00.1	153 15.5 +02.5	S 16 29.0 +00.0	06										
07	46 04.3 +01.9	N 23 10.0 +00.2	128 01.9 +02.7	S 00 59.2 +00.1	168 18.0 +02.5	S 16 29.0 +00.0	07										
08	61 06.2 +02.0	N 23 10.2 +00.1	143 04.6 +02.8	S 00 59.3 +00.1	183 20.5 +02.5	S 16 29.0 +00.0	08										
09	76 08.2 +01.9	N 23 10.3 +00.1	158 07.4 +02.7	S 00 59.4 +00.1	198 23.0 +02.5	S 16 29.0 +00.0	09										
10	91 10.1 +02.0	N 23 10.4 +00.1	173 10.1 +02.7	S 00 59.5 +00.2	213 25.5 +02.5	S 16 29.0 +00.0	10										
11	106 12.1 +01.9	N 23 10.5 +00.1	188 12.8 +02.7	S 00 59.7 +00.1	228 28.0 +02.5	S 16 29.0 +00.1	11										
12	121 14.0 +02.0	N 23 10.6 +00.1	203 15.5 +02.8	S 00 59.8 +00.1	243 30.5 +02.4	S 16 29.1 +00.0	12										
13	136 16.0 +02.0	N 23 10.7 +00.1	218 18.3 +02.7	S 00 59.9 +00.1	258 32.9 +02.5	S 16 29.1 +00.0	13										
14	151 18.0 +01.9	N 23 10.8 +00.1	233 21.0 +02.7	S 00 60.0 +00.1	273 35.4 +02.5	S 16 29.1 +00.0	14										
15	166 19.9 +02.0	N 23 10.9 +00.2	248 23.7 +02.8	S 01 00.1 +00.1	288 37.9 +02.5	S 16 29.1 +00.0	15										
16	181 21.9 +02.0	N 23 11.1 +00.1	263 26.5 +02.7	S 01 00.2 +00.1	303 40.4 +02.5	S 16 29.1 +00.0	16										
17	196 23.9 +01.9	N 23 11.2 +00.1	278 29.2 +02.7	S 01 00.3 +00.1	318 42.9 +02.5	S 16 29.1 +00.0	17										
18	211 25.8 +02.0	N 23 11.3 +00.1	293 31.9 +02.7	S 01 00.4 +00.1	333 45.4 +02.5	S 16 29.1 +00.0	18										
19	226 27.8 +02.0	N 23 11.4 +00.1	308 34.6 +02.8	S 01 00.5 +00.1	348 47.9 +02.5	S 16 29.1 +00.0	19										
20	241 29.8 +01.9	N 23 11.5 +00.1	323 37.4 +02.7	S 01 00.6 +00.1	3 50.4 +02.5	S 16 29.1 +00.0	20										
21	256 31.7 +02.0	N 23 11.6 +00.1	338 40.1 +02.7	S 01 00.7 +00.1	18 52.9 +02.5	S 16 29.1 +00.0	21										
22	271 33.7 +02.0	N 23 11.7 +00.1	353 42.8 +02.7	S 01 00.8 +00.2	33 55.4 +02.5	S 16 29.1 +00.0	22										
23	286 35.7 +02.0	N 23 11.8 +00.2	8 45.5 +02.8	S 01 01.0 +00.1	48 57.9 +02.5	S 16 29.1 +00.0	23										
	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'2 00'2 00'2 00'2 00'2 00'2	SHA 276° 276° 276° 276° 276° 276°	Greenwich Culmination Time: 03:56		UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 358° 358° 358° 358° 358° 358°	Greenwich Culmination Time: 22:25		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 039° 039° 039° 039° 039° 039°	Greenwich Culmination Time: 19:44







UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 44.2 +00.1	S	09 53.4 +00.9	184 15.4 -00.5	S	08 27.2 +01.2	253 55.3 -28.7	N	22 54.2 -08.1	00			
01	198 44.3 +00.1	S	09 54.3 +00.9	199 14.9 -00.4	S	08 28.4 +01.2	268 26.6 -28.7	N	22 46.1 -08.2	01			
02	213 44.4 +00.1	S	09 55.2 +00.9	214 14.5 -00.5	S	08 29.6 +01.2	282 57.9 -28.6	N	22 37.9 -08.3	02			
03	228 44.5 +00.1	S	09 56.1 +00.9	229 14.0 -00.4	S	08 30.8 +01.2	297 29.3 -28.5	N	22 29.6 -08.4	03			
04	243 44.6 +00.2	S	09 57.0 +00.9	244 13.6 -00.5	S	08 32.0 +01.2	312 00.8 -28.5	N	22 21.2 -08.5	04			
05	258 44.8 +00.1	S	09 57.9 +00.9	259 13.1 -00.5	S	08 33.2 +01.2	326 32.3 -28.5	N	22 12.7 -08.5	05			
06	273 44.9 +00.1	S	09 58.8 +00.9	274 12.6 -00.4	S	08 34.4 +01.2	341 03.8 -28.4	N	22 04.2 -08.7	06			
07	288 45.0 +00.1	S	09 59.7 +00.9	289 12.2 -00.5	S	08 35.6 +01.2	355 35.4 -28.4	N	21 55.5 -08.8	07			
08	303 45.1 +00.1	S	10 00.6 +00.9	304 11.7 -00.4	S	08 36.8 +01.2	10 07.0 -28.3	N	21 46.7 -08.9	08			
09	318 45.2 +00.1	S	10 01.5 +00.9	319 11.3 -00.5	S	08 38.0 +01.2	24 38.7 -28.3	N	21 37.8 -09.0	09			
10	333 45.3 +00.1	S	10 02.4 +00.9	334 10.8 -00.5	S	08 39.2 +01.2	39 10.4 -28.2	N	21 28.8 -09.1	10			
11	348 45.4 +00.2	S	10 03.3 +00.9	349 10.3 -00.4	S	08 40.4 +01.2	53 42.2 -28.2	N	21 19.7 -09.2	11			
12	3 45.6 +00.1	S	10 04.2 +00.9	4 09.9 -00.5	S	08 41.6 +01.2	68 14.0 -28.1	N	21 10.5 -09.3	12			
13	18 45.7 +00.1	S	10 05.1 +00.9	19 09.4 -00.4	S	08 42.8 +01.2	82 45.9 -28.1	N	21 01.2 -09.4	13			
14	33 45.8 +00.1	S	10 06.0 +00.9	34 09.0 -00.5	S	08 44.0 +01.2	97 17.8 -28.0	N	20 51.8 -09.4	14			
15	48 45.9 +00.1	S	10 06.9 +00.9	49 08.5 -00.5	S	08 45.2 +01.2	111 49.8 -28.0	N	20 42.4 -09.6	15			
16	63 46.0 +00.1	S	10 07.8 +00.9	64 08.0 -00.4	S	08 46.4 +01.2	126 21.8 -28.0	N	20 32.8 -09.7	16			
17	78 46.1 +00.1	S	10 08.7 +00.9	79 07.6 -00.5	S	08 47.6 +01.2	140 53.8 -27.9	N	20 23.1 -09.8	17			
18	93 46.2 +00.2	S	10 09.6 +00.9	94 07.1 -00.5	S	08 48.8 +01.1	155 25.9 -27.9	N	20 13.3 -09.8	18			
19	108 46.4 +00.1	S	10 10.5 +00.9	109 06.6 -00.4	S	08 49.9 +01.2	169 58.0 -27.8	N	20 03.5 -10.0	19			
20	123 46.5 +00.1	S	10 11.4 +00.9	124 06.2 -00.5	S	08 51.1 +01.2	184 30.2 -27.8	N	19 53.5 -10.0	20			
21	138 46.6 +00.1	S	10 12.3 +00.9	139 05.7 -00.5	S	08 52.3 +01.2	199 02.4 -27.7	N	19 43.5 -10.1	21			
22	153 46.7 +00.1	S	10 13.2 +00.9	154 05.2 -00.4	S	08 53.5 +01.2	213 34.7 -27.7	N	19 33.4 -10.3	22			
23	168 46.8 +00.1	S	10 14.1 +00.9	169 04.8 -00.5	S	08 54.7 +01.2	228 07.0 -27.7	N	19 23.1 -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 16°1 16°1 16°1 16°1 16°1 16°1			SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 14°8 14°8 14°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°4 54°5 54°5 54°6 54°7 54°7						
	SHA 156° 156° 156° 156° 156° 155°			SHA 157° 157° 156° 156° 156° 156°			SHA 225° 223° 221° 219° 217° 215°						
	Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 11:43			Greenwich Culmination Time: 07:18						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	303 14.1 +02.1	N	23 17.3 +00.2	25 58.9 +02.7	S	01 06.1 +00.1	65 59.7 +02.5	S	16 29.4 +00.0	00			
01	318 16.2 +02.0	N	23 17.5 +00.1	41 01.6 +02.8	S	01 06.2 +00.1	81 02.2 +02.5	S	16 29.4 +00.0	01			
02	333 18.2 +02.1	N	23 17.6 +00.1	56 04.4 +02.7	S	01 06.3 +00.1	96 04.7 +02.5	S	16 29.4 +00.0	02			
03	348 20.3 +02.0	N	23 17.7 +00.1	71 07.1 +02.7	S	01 06.4 +00.1	111 07.2 +02.4	S	16 29.4 +00.0	03			
04	3 22.3 +02.0	N	23 17.8 +00.1	86 09.8 +02.7	S	01 06.5 +00.1	126 09.6 +02.5	S	16 29.4 +00.0	04			
05	18 24.3 +02.1	N	23 17.9 +00.1	101 12.5 +02.7	S	01 06.6 +00.1	141 12.1 +02.5	S	16 29.4 +00.0	05			
06	33 26.4 +02.0	N	23 18.0 +00.1	116 15.2 +02.7	S	01 06.7 +00.1	156 14.6 +02.5	S	16 29.4 +00.0	06			
07	48 28.4 +02.1	N	23 18.1 +00.1	131 17.9 +02.8	S	01 06.8 +00.1	171 17.1 +02.5	S	16 29.4 +00.0	07			
08	63 30.5 +02.1	N	23 18.2 +00.2	146 20.7 +02.7	S	01 06.9 +00.1	186 19.6 +02.4	S	16 29.4 +00.0	08			
09	78 32.6 +02.0	N	23 18.4 +00.1	161 23.4 +02.7	S	01 07.0 +00.1	201 22.0 +02.5	S	16 29.4 +00.0	09			
10	93 34.6 +02.1	N	23 18.5 +00.1	176 26.1 +02.7	S	01 07.1 +00.1	216 24.5 +02.5	S	16 29.4 +00.0	10			
11	108 36.7 +02.0	N	23 18.6 +00.1	191 28.8 +02.7	S	01 07.2 +00.1	231 27.0 +02.5	S	16 29.4 +00.0	11			
12	123 38.7 +02.1	N	23 18.7 +00.1	206 31.5 +02.7	S	01 07.3 +00.1	246 29.5 +02.5	S	16 29.4 +00.0	12			
13	138 40.8 +02.1	N	23 18.8 +00.1	221 34.2 +02.8	S	01 07.4 +00.2	261 32.0 +02.4	S	16 29.4 +00.0	13			
14	153 42.9 +02.0	N	23 18.9 +00.1	236 37.0 +02.7	S	01 07.6 +00.1	276 34.4 +02.5	S	16 29.4 +00.0	14			
15	168 44.9 +02.1	N	23 19.0 +00.1	251 39.7 +02.7	S	01 07.7 +00.1	291 36.9 +02.5	S	16 29.4 +00.0	15			
16	183 47.0 +02.0	N	23 19.1 +00.1	266 42.4 +02.7	S	01 07.8 +00.1	306 39.4 +02.5	S	16 29.4 +00.0	16			
17	198 49.0 +02.1	N	23 19.2 +00.2	281 45.1 +02.7	S	01 07.9 +00.1	321 41.9 +02.5	S	16 29.4 +00.0	17			
18	213 51.1 +02.1	N	23 19.4 +00.1	296 47.8 +02.7	S	01 08.0 +00.1	336 44.4 +02.4	S	16 29.4 +00.0	18			
19	228 53.2 +02.1	N	23 19.5 +00.1	311 50.5 +02.7	S	01 08.1 +00.1	351 46.8 +02.5	S	16 29.4 +00.0	19			
20	243 55.3 +02.0	N	23 19.6 +00.1	326 53.2 +02.8	S	01 08.2 +00.1	6 49.3 +02.5	S	16 29.4 +00.0	20			
21	258 57.3 +02.1	N	23 19.7 +00.1	341 56.0 +02.7	S	01 08.3 +00.1	21 51.8 +02.5	S	16 29.4 +00.0	21			
22	273 59.4 +02.1	N	23 19.8 +00.1	356 58.7 +02.7	S	01 08.4 +00.1	36 54.3 +02.5	S	16 29.4 +00.0	22			
23	289 01.5 +02.0	N	23 19.9 +00.1	12 01.4 +02.7	S	01 08.5 +00.1	51 56.8 +02.4	S	16 29.4 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 00°4 00°4 00°4 00°4 00°4 00°4			SD 00°1 00°1 00°1 00°1 00°1 00°1						
	HP 00°2 00°2 00°2 00°2 00°2 00°2			HP 00°0 00°0 00°0 00°0 00°0 00°0			HP 00°0 00°0 00°0 00°0 00°0 00°0						
	SHA 276° 276° 276° 276° 276° 276°			SHA 359° 359° 359° 359° 359° 359°			SHA 039° 039° 039° 039° 039° 039°						
	Greenwich Culmination Time: 03:46			Greenwich Culmination Time: 22:12			Greenwich Culmination Time: 19:32						

UT	Sun				Venus				Moon <span style="float:right">A: 85%</span>				UT								
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec									
00	183	46.9	+00.1	S 10 15.0	+00.9	184	04.3	-00.5	S 08 55.9	+01.2	242	39.3	-27.6	N 19 12.8	-10.4						
01	198	47.0	+00.1	S 10 15.9	+00.9	199	03.8	-00.4	S 08 57.1	+01.2	257	11.7	-27.6	N 19 02.4	-10.5						
02	213	47.1	+00.1	S 10 16.8	+00.9	214	03.4	-00.5	S 08 58.3	+01.2	271	44.1	-27.5	N 18 51.9	-10.6						
03	228	47.2	+00.1	S 10 17.7	+00.9	229	02.9	-00.5	S 08 59.5	+01.2	286	16.6	-27.5	N 18 41.3	-10.6						
04	243	47.3	+00.2	S 10 18.6	+00.9	244	02.4	-00.4	S 09 00.7	+01.2	300	49.1	-27.5	N 18 30.7	-10.8						
05	258	47.5	+00.1	S 10 19.5	+00.9	259	02.0	-00.5	S 09 01.9	+01.1	315	21.6	-27.4	N 18 19.9	-10.8						
06	273	47.6	+00.1	S 10 20.4	+00.9	274	01.5	-00.5	S 09 03.0	+01.2	329	54.2	-27.4	N 18 09.1	-10.9						
07	288	47.7	+00.1	S 10 21.3	+00.9	289	01.0	-00.4	S 09 04.2	+01.2	344	26.8	-27.3	N 17 58.2	-11.1						
08	303	47.8	+00.1	S 10 22.2	+00.9	304	00.6	-00.5	S 09 05.4	+01.2	358	59.5	-27.3	N 17 47.1	-11.1						
09	318	47.9	+00.1	S 10 23.1	+00.9	319	00.1	-00.5	S 09 06.6	+01.2	13	32.2	-27.3	N 17 36.0	-11.1						
10	333	48.0	+00.1	S 10 24.0	+00.9	333	59.6	-00.4	S 09 07.8	+01.2	28	04.9	-27.2	N 17 24.9	-11.3						
11	348	48.1	+00.1	S 10 24.9	+00.9	348	59.2	-00.5	S 09 09.0	+01.2	42	37.7	-27.2	N 17 13.6	-11.3						
12	3 48.2	+00.1	S 10 25.8	+00.9	3 58.7	-00.5	S 09 10.2	+01.2	57	10.5	-27.1	N 17 02.3	-11.5								
13	18	48.3	+00.1	S 10 26.7	+00.9	18 58.2	-00.4	S 09 11.4	+01.1	71	43.4	-27.1	N 16 50.8	-11.5							
14	33	48.4	+00.1	S 10 27.6	+00.9	33 57.8	-00.5	S 09 12.5	+01.2	86	16.3	-27.1	N 16 39.3	-11.5							
15	48	48.5	+00.1	S 10 28.5	+00.9	48 57.3	-00.5	S 09 13.7	+01.2	100	49.2	-27.1	N 16 27.8	-11.7							
16	63	48.6	+00.1	S 10 29.4	+00.9	63 56.8	-00.5	S 09 14.9	+01.2	115	22.1	-27.0	N 16 16.1	-11.7							
17	78	48.7	+00.1	S 10 30.3	+00.9	78 56.3	-00.4	S 09 16.1	+01.2	129	55.1	-27.0	N 16 04.4	-11.9							
18	93	48.8	+00.1	S 10 31.2	+00.8	93 55.9	-00.5	S 09 17.3	+01.2	144	28.1	-26.9	N 15 52.5	-11.9							
19	108	48.9	+00.2	S 10 32.0	+00.9	108 55.4	-00.5	S 09 18.5	+01.2	159	01.2	-27.0	N 15 40.6	-11.9							
20	123	49.1	+00.1	S 10 32.9	+00.9	123 54.9	-00.4	S 09 19.7	+01.1	173	34.2	-26.9	N 15 28.7	-12.1							
21	138	49.2	+00.1	S 10 33.8	+00.9	138 54.5	-00.5	S 09 20.8	+01.2	188	07.3	-26.8	N 15 16.6	-12.1							
22	153	49.3	+00.1	S 10 34.7	+00.9	153 54.0	-00.5	S 09 22.0	+01.2	202	40.5	-26.9	N 15 04.5	-12.2							
23	168	49.4	+00.1	S 10 35.6	+00.9	168 53.5	-00.5	S 09 23.2	+01.2	217	13.6	-26.8	N 14 52.3	-12.3							
	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
	SD	16'1	16'1	16'1	16'1	16'1	16'1	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	14'9	15'0	15'0	15'0	15'0	15'0
	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	54'8	54'9	55'0	55'0	55'1	55'2
	SHA	155°	155°	155°	155°	155°	154°	SHA	156°	155°	155°	155°	155°	155°	SHA	213°	211°	209°	207°	205°	203°
	Greenwich Culmination Time: 11:44							Greenwich Culmination Time: 11:44							Greenwich Culmination Time: 08:04						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 49.5 +00.1	S	10 36.5 +00.9	183 53.0 -00.4	S	09 24.4 +01.2	231 46.8 -26.7	N	14 40.0 -12.3				
01	198 49.6 +00.1	S	10 37.4 +00.9	198 52.6 -00.5	S	09 25.6 +01.2	246 20.1 -26.8	N	14 27.7 -12.4				
02	213 49.7 +00.1	S	10 38.3 +00.9	213 52.1 -00.5	S	09 26.8 +01.1	260 53.3 -26.7	N	14 15.3 -12.5				
03	228 49.8 +00.1	S	10 39.2 +00.9	228 51.6 -00.5	S	09 27.9 +01.2	275 26.6 -26.7	N	14 02.8 -12.6				
04	243 49.9 +00.1	S	10 40.1 +00.9	243 51.1 -00.4	S	09 29.1 +01.2	289 59.9 -26.7	N	13 50.2 -12.6				
05	258 50.0 +00.1	S	10 41.0 +00.9	258 50.7 -00.5	S	09 30.3 +01.2	304 33.2 -26.6	N	13 37.6 -12.7				
06	273 50.1 +00.1	S	10 41.9 +00.8	273 50.2 -00.5	S	09 31.5 +01.2	319 06.6 -26.7	N	13 24.9 -12.7				
07	288 50.2 +00.1	S	10 42.7 +00.9	288 49.7 -00.5	S	09 32.7 +01.1	333 39.9 -26.6	N	13 12.2 -12.9				
08	303 50.3 +00.1	S	10 43.6 +00.9	303 49.2 -00.5	S	09 33.8 +01.2	348 13.3 -26.6	N	12 59.3 -12.9				
09	318 50.4 +00.1	S	10 44.5 +00.9	318 48.7 -00.4	S	09 35.0 +01.2	2 46.7 -26.5	N	12 46.4 -12.9				
10	333 50.5 +00.1	S	10 45.4 +00.9	333 48.3 -00.5	S	09 36.2 +01.2	17 20.2 -26.6	N	12 33.5 -13.0				
11	348 50.6 +00.1	S	10 46.3 +00.9	348 47.8 -00.5	S	09 37.4 +01.2	31 53.6 -26.5	N	12 20.5 -13.1				
12	3 50.7 +00.1	S	10 47.2 +00.9	3 47.3 -00.5	S	09 38.6 +01.1	46 27.1 -26.5	N	12 07.4 -13.2				
13	18 50.8 +00.1	S	10 48.1 +00.9	18 46.8 -00.4	S	09 39.7 +01.2	61 00.6 -26.5	N	11 54.2 -13.2				
14	33 50.9 +00.1	S	10 49.0 +00.9	33 46.4 -00.5	S	09 40.9 +01.2	75 34.1 -26.5	N	11 41.0 -13.3				
15	48 51.0 +00.1	S	10 49.9 +00.8	48 45.9 -00.5	S	09 42.1 +01.2	90 07.6 -26.4	N	11 27.7 -13.3				
16	63 51.1 +00.1	S	10 50.7 +00.9	63 45.4 -00.5	S	09 43.3 +01.1	104 41.2 -26.4	N	11 14.4 -13.4				
17	78 51.2 +00.1	S	10 51.6 +00.9	78 44.9 -00.5	S	09 44.4 +01.2	119 14.8 -26.5	N	11 01.0 -13.5				
18	93 51.3 +00.1	S	10 52.5 +00.9	93 44.4 -00.4	S	09 45.6 +01.2	133 48.3 -26.4	N	10 47.5 -13.5				
19	108 51.4 +00.1	S	10 53.4 +00.9	108 44.0 -00.5	S	09 46.8 +01.2	148 21.9 -26.4	N	10 34.0 -13.6				
20	123 51.5 +00.1	S	10 54.3 +00.9	123 43.5 -00.5	S	09 48.0 +01.1	162 55.5 -26.4	N	10 20.4 -13.6				
21	138 51.6 +00.1	S	10 55.2 +00.9	138 43.0 -00.5	S	09 49.1 +01.2	177 29.1 -26.4	N	10 06.8 -13.7				
22	153 51.7 +00.1	S	10 56.1 +00.8	153 42.5 -00.5	S	09 50.3 +01.2	192 02.7 -26.3	N	09 53.1 -13.7				
23	168 51.8 +00.1	S	10 56.9 +00.9	168 42.0 -00.4	S	09 51.5 +01.2	206 36.4 -26.4	N	09 39.4 -13.8				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'1 16'1 16'1 16'1 16'1 16'1			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 15'1 15'1 15'1 15'2 15'2 15'2						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 55'3 55'4 55'5 55'6 55'7 55'8						
	SHA 154° 154° 154° 154° 154° 154°			SHA 154° 154° 154° 154° 154° 153°			SHA 201° 199° 198° 196° 194° 192°						
	Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 08:48						
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	304 53.8 +02.1	N	23 22.7 +00.1	28 09.1 +02.7	S	01 11.0 +00.1	67 58.7 +02.4	S	16 29.4 +00.0				
01	319 55.9 +02.1	N	23 22.8 +00.1	43 11.8 +02.7	S	01 11.1 +00.0	83 01.1 +02.5	S	16 29.4 +00.0				
02	334 58.0 +02.1	N	23 22.9 +00.2	58 14.5 +02.8	S	01 11.1 +00.1	98 03.6 +02.5	S	16 29.4 +00.0				
03	350 00.1 +02.1	N	23 23.1 +00.1	73 17.3 +02.7	S	01 11.2 +00.1	113 06.1 +02.5	S	16 29.4 +00.0				
04	5 02.2 +02.2	N	23 23.2 +00.1	88 20.0 +02.7	S	01 11.3 +00.1	128 08.6 +02.4	S	16 29.4 +00.0				
05	20 04.4 +02.1	N	23 23.3 +00.1	103 22.7 +02.7	S	01 11.4 +00.1	143 11.0 +02.5	S	16 29.4 +00.0				
06	35 06.5 +02.1	N	23 23.4 +00.1	118 25.4 +02.7	S	01 11.5 +00.1	158 13.5 +02.5	S	16 29.4 +00.0				
07	50 08.6 +02.1	N	23 23.5 +00.1	133 28.1 +02.7	S	01 11.6 +00.1	173 16.0 +02.4	S	16 29.4 +00.0				
08	65 10.7 +02.2	N	23 23.6 +00.1	148 30.8 +02.7	S	01 11.7 +00.1	188 18.4 +02.5	S	16 29.4 +00.1				
09	80 12.9 +02.1	N	23 23.7 +00.1	163 33.5 +02.7	S	01 11.8 +00.1	203 20.9 +02.5	S	16 29.5 +00.0				
10	95 15.0 +02.1	N	23 23.8 +00.1	178 36.2 +02.7	S	01 11.9 +00.1	218 23.4 +02.5	S	16 29.5 +00.0				
11	110 17.1 +02.1	N	23 23.9 +00.2	193 38.9 +02.7	S	01 12.0 +00.1	233 25.9 +02.4	S	16 29.5 +00.0				
12	125 19.2 +02.2	N	23 24.1 +00.1	208 41.6 +02.7	S	01 12.1 +00.1	248 28.3 +02.5	S	16 29.5 +00.0				
13	140 21.4 +02.1	N	23 24.2 +00.1	223 44.3 +02.7	S	01 12.2 +00.1	263 30.8 +02.5	S	16 29.5 +00.0				
14	155 23.5 +02.1	N	23 24.3 +00.1	238 47.0 +02.7	S	01 12.3 +00.1	278 33.3 +02.4	S	16 29.5 +00.0				
15	170 25.6 +02.2	N	23 24.4 +00.1	253 49.7 +02.7	S	01 12.4 +00.1	293 35.7 +02.5	S	16 29.5 -00.1				
16	185 27.8 +02.1	N	23 24.5 +00.1	268 52.4 +02.7	S	01 12.5 +00.1	308 38.2 +02.5	S	16 29.4 +00.0				
17	200 29.9 +02.1	N	23 24.6 +00.1	283 55.1 +02.7	S	01 12.6 +00.1	323 40.7 +02.5	S	16 29.4 +00.0				
18	215 32.0 +02.2	N	23 24.7 +00.1	298 57.8 +02.7	S	01 12.7 +00.1	338 43.2 +02.4	S	16 29.4 +00.0				
19	230 34.2 +02.1	N	23 24.8 +00.2	314 00.5 +02.7	S	01 12.8 +00.1	353 45.6 +02.5	S	16 29.4 +00.0				
20	245 36.3 +02.1	N	23 25.0 +00.1	329 03.2 +02.7	S	01 12.9 +00.1	8 48.1 +02.5	S	16 29.4 +00.0				
21	260 38.4 +02.2	N	23 25.1 +00.1	344 05.9 +02.7	S	01 13.0 +00.1	23 50.6 +02.4	S	16 29.4 +00.0				
22	275 40.6 +02.1	N	23 25.2 +00.1	359 08.6 +02.7	S	01 13.1 +00.1	38 53.0 +02.5	S	16 29.4 +00.0				
23	290 42.7 +02.2	N	23 25.3 +00.1	14 11.3 +02.8	S	01 13.2 +00.1	53 55.5 +02.5	S	16 29.4 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'2 00'2 00'2 00'2 00'2 00'2			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 275° 275° 275° 275° 275° 275°			SHA 359° 359° 359° 359° 359° 359°			SHA 039° 039° 039° 039° 039° 039°						
	Greenwich Culmination Time: 03:39			Greenwich Culmination Time: 22:03			Greenwich Culmination Time: 19:24						









UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 58.0 +00.1	S	12 00.8 +00.9	183 05.8 -00.5	S	11 16.1 +01.1	188 49.2 -28.5	S	08 30.1 +15.1				
01	198 58.1 +00.1	S	12 01.7 +00.8	198 05.3 -00.5	S	11 17.2 +01.2	203 20.7 -28.6	S	08 45.2 +15.0				
02	213 58.2 +00.0	S	12 02.5 +00.9	213 04.8 -00.5	S	11 18.4 +01.1	217 52.1 -28.7	S	09 00.2 +15.1				
03	228 58.2 +00.1	S	12 03.4 +00.9	228 04.3 -00.5	S	11 19.5 +01.1	232 23.4 -28.7	S	09 15.3 +15.0				
04	243 58.3 +00.1	S	12 04.3 +00.8	243 03.8 -00.5	S	11 20.6 +01.2	246 54.7 -28.9	S	09 30.3 +14.9				
05	258 58.4 +00.1	S	12 05.1 +00.9	258 03.3 -00.5	S	11 21.8 +01.1	261 25.8 -28.8	S	09 45.2 +14.9				
06	273 58.5 +00.0	S	12 06.0 +00.8	273 02.8 -00.5	S	11 22.9 +01.2	275 57.0 -29.0	S	10 00.1 +14.9				
07	288 58.5 +00.1	S	12 06.8 +00.9	288 02.3 -00.6	S	11 24.1 +01.1	290 28.0 -29.1	S	10 15.0 +14.9				
08	303 58.6 +00.1	S	12 07.7 +00.9	303 01.7 -00.5	S	11 25.2 +01.1	304 58.9 -29.1	S	10 29.9 +14.8				
09	318 58.7 +00.1	S	12 08.6 +00.8	318 01.2 -00.5	S	11 26.3 +01.2	319 29.8 -29.2	S	10 44.7 +14.8				
10	333 58.8 +00.0	S	12 09.4 +00.9	333 00.7 -00.5	S	11 27.5 +01.1	334 00.6 -29.3	S	10 59.5 +14.7				
11	348 58.8 +00.1	S	12 10.3 +00.8	348 00.2 -00.5	S	11 28.6 +01.2	348 31.3 -29.4	S	11 14.2 +14.7				
12	3 58.9 +00.1	S	12 11.1 +00.9	2 59.7 -00.5	S	11 29.8 +01.1	3 01.9 -29.4	S	11 28.9 +14.7				
13	18 59.0 +00.0	S	12 12.0 +00.9	17 59.2 -00.5	S	11 30.9 +01.1	17 32.5 -29.5	S	11 43.6 +14.6				
14	33 59.0 +00.1	S	12 12.9 +00.8	32 58.7 -00.6	S	11 32.0 +01.2	32 03.0 -29.7	S	11 58.2 +14.5				
15	48 59.1 +00.1	S	12 13.7 +00.9	47 58.1 -00.5	S	11 33.2 +01.1	46 33.3 -29.7	S	12 12.7 +14.5				
16	63 59.2 +00.0	S	12 14.6 +00.8	62 57.6 -00.5	S	11 34.3 +01.1	61 03.6 -29.7	S	12 27.2 +14.5				
17	78 59.2 +00.1	S	12 15.4 +00.9	77 57.1 -00.5	S	11 35.4 +01.2	75 33.9 -29.9	S	12 41.7 +14.4				
18	93 59.3 +00.1	S	12 16.3 +00.9	92 56.6 -00.5	S	11 36.6 +01.1	90 04.0 -30.0	S	12 56.1 +14.3				
19	108 59.4 +00.0	S	12 17.2 +00.8	107 56.1 -00.5	S	11 37.7 +01.1	104 34.0 -30.0	S	13 10.4 +14.3				
20	123 59.4 +00.1	S	12 18.0 +00.9	122 55.6 -00.6	S	11 38.8 +01.2	119 04.0 -30.2	S	13 24.7 +14.2				
21	138 59.5 +00.1	S	12 18.9 +00.8	137 55.0 -00.5	S	11 40.0 +01.1	133 33.8 -30.2	S	13 38.9 +14.2				
22	153 59.6 +00.1	S	12 19.7 +00.9	152 54.5 -00.5	S	11 41.1 +01.1	148 03.6 -30.3	S	13 53.1 +14.1				
23	168 59.7 +00.0	S	12 20.6 +00.8	167 54.0 -00.5	S	11 42.2 +01.2	162 33.3 -30.5	S	14 07.2 +14.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16°1 16°1 16°1 16°1 16°1 16°1			SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 15°8 15°8 15°9 15°9 15°9 15°9						
	HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 58°0 58°1 58°2 58°3 58°4 58°5						
	SHA 151° 150° 150° 150° 150° 150°			SHA 150° 149° 149° 149° 149° 149°			SHA 154° 152° 150° 148° 146° 144°						
	Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 11:48			Greenwich Culmination Time: 11:47						
UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	308 23.3 +02.3	N	23 33.5 +00.1	32 28.0 +02.7	S	01 19.9 +00.1	71 55.3 +02.5	S	16 29.2 +00.0				
01	323 25.6 +02.2	N	23 33.6 +00.1	47 30.7 +02.7	S	01 20.0 +00.1	86 57.8 +02.5	S	16 29.2 +00.0				
02	338 27.8 +02.3	N	23 33.7 +00.1	62 33.4 +02.7	S	01 20.1 +00.1	102 00.3 +02.4	S	16 29.2 +00.0				
03	353 30.1 +02.2	N	23 33.8 +00.1	77 36.1 +02.7	S	01 20.2 +00.0	117 02.7 +02.5	S	16 29.2 +00.0				
04	8 32.3 +02.3	N	23 33.9 +00.1	92 38.8 +02.7	S	01 20.2 +00.1	132 05.2 +02.4	S	16 29.2 +00.0				
05	23 34.6 +02.3	N	23 34.0 +00.1	107 41.5 +02.6	S	01 20.3 +00.1	147 07.6 +02.5	S	16 29.2 +00.0				
06	38 36.9 +02.2	N	23 34.1 +00.1	122 44.1 +02.7	S	01 20.4 +00.1	162 10.1 +02.4	S	16 29.2 +00.0				
07	53 39.1 +02.3	N	23 34.2 +00.1	137 46.8 +02.7	S	01 20.5 +00.1	177 12.5 +02.5	S	16 29.2 +00.0				
08	68 41.4 +02.3	N	23 34.3 +00.2	152 49.5 +02.7	S	01 20.6 +00.1	192 15.0 +02.5	S	16 29.2 +00.0				
09	83 43.7 +02.2	N	23 34.5 +00.1	167 52.2 +02.7	S	01 20.7 +00.1	207 17.5 +02.4	S	16 29.2 +00.0				
10	98 45.9 +02.3	N	23 34.6 +00.1	182 54.9 +02.7	S	01 20.8 +00.1	222 19.9 +02.5	S	16 29.2 +00.0				
11	113 48.2 +02.3	N	23 34.7 +00.1	197 57.6 +02.6	S	01 20.9 +00.0	237 22.4 +02.4	S	16 29.2 +00.0				
12	128 50.5 +02.3	N	23 34.8 +00.1	213 00.2 +02.7	S	01 20.9 +00.1	252 24.8 +02.5	S	16 29.2 +00.0				
13	143 52.8 +02.2	N	23 34.9 +00.1	228 02.9 +02.7	S	01 21.0 +00.1	267 27.3 +02.4	S	16 29.2 +00.0				
14	158 55.0 +02.3	N	23 35.0 +00.1	243 05.6 +02.7	S	01 21.1 +00.1	282 29.7 +02.5	S	16 29.2 +00.0				
15	173 57.3 +02.3	N	23 35.1 +00.1	258 08.3 +02.7	S	01 21.2 +00.1	297 32.2 +02.4	S	16 29.2 +00.0				
16	188 59.6 +02.3	N	23 35.2 +00.2	273 11.0 +02.7	S	01 21.3 +00.1	312 34.6 +02.5	S	16 29.2 +00.0				
17	204 01.9 +02.3	N	23 35.4 +00.1	288 13.7 +02.6	S	01 21.4 +00.1	327 37.1 +02.4	S	16 29.2 +00.0				
18	219 04.2 +02.2	N	23 35.5 +00.1	303 16.3 +02.7	S	01 21.5 +00.0	342 39.5 +02.5	S	16 29.2 -00.1				
19	234 06.4 +02.3	N	23 35.6 +00.1	318 19.0 +02.7	S	01 21.5 +00.1	357 42.0 +02.5	S	16 29.1 +00.0				
20	249 08.7 +02.3	N	23 35.7 +00.1	333 21.7 +02.7	S	01 21.6 +00.1	12 44.5 +02.4	S	16 29.1 +00.0				
21	264 11.0 +02.3	N	23 35.8 +00.1	348 24.4 +02.7	S	01 21.7 +00.1	27 46.9 +02.5	S	16 29.1 +00.0				
22	279 13.3 +02.3	N	23 35.9 +00.1	3 27.1 +02.6	S	01 21.8 +00.1	42 49.4 +02.4	S	16 29.1 +00.0				
23	294 15.6 +02.3	N	23 36.0 +00.1	18 29.7 +02.7	S	01 21.9 +00.1	57 51.8 +02.5	S	16 29.1 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 00°4 00°4 00°4 00°4 00°4 00°4			SD 00°1 00°1 00°1 00°1 00°1 00°1						
	HP 00°2 00°2 00°2 00°2 00°2 00°2			HP 00°0 00°0 00°0 00°0 00°0 00°0			HP 00°0 00°0 00°0 00°0 00°0 00°0						
	SHA 275° 275° 275° 275° 275° 275°			SHA 359° 359° 359° 359° 359° 359°			SHA 039° 039° 039° 039° 039° 039°						
	Greenwich Culmination Time: 03:25			Greenwich Culmination Time: 21:46			Greenwich Culmination Time: 19:09						

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 59.7 +00.1	S	12 21.4 +00.9	182 53.5 -00.5	S	11 43.4 +01.1	177 02.8 -30.5	S	14 21.2 +14.0				
01	198 59.8 +00.1	S	12 22.3 +00.8	197 53.0 -00.6	S	11 44.5 +01.1	191 32.3 -30.6	S	14 35.2 +13.9				
02	213 59.9 +00.0	S	12 23.1 +00.9	212 52.4 -00.5	S	11 45.6 +01.2	206 01.7 -30.7	S	14 49.1 +13.8				
03	228 59.9 +00.1	S	12 24.0 +00.9	227 51.9 -00.5	S	11 46.8 +01.1	220 31.0 -30.8	S	15 02.9 +13.8				
04	243 60.0 +00.0	S	12 24.9 +00.8	242 51.4 -00.5	S	11 47.9 +01.1	235 00.2 -30.8	S	15 16.7 +13.7				
05	259 00.0 +00.1	S	12 25.7 +00.9	257 50.9 -00.5	S	11 49.0 +01.2	249 29.4 -31.0	S	15 30.4 +13.6				
06	274 00.1 +00.1	S	12 26.6 +00.8	272 50.4 -00.6	S	11 50.2 +01.1	263 58.4 -31.1	S	15 44.0 +13.6				
07	289 00.2 +00.0	S	12 27.4 +00.9	287 49.8 -00.5	S	11 51.3 +01.1	278 27.3 -31.2	S	15 57.6 +13.4				
08	304 00.2 +00.1	S	12 28.3 +00.8	302 49.3 -00.5	S	11 52.4 +01.1	292 56.1 -31.3	S	16 11.0 +13.4				
09	319 00.3 +00.1	S	12 29.1 +00.9	317 48.8 -00.5	S	11 53.5 +01.2	307 24.8 -31.3	S	16 24.4 +13.3				
10	334 00.4 +00.0	S	12 30.0 +00.8	332 48.3 -00.6	S	11 54.7 +01.1	321 53.5 -31.5	S	16 37.7 +13.3				
11	349 00.4 +00.1	S	12 30.8 +00.9	347 47.7 -00.5	S	11 55.8 +01.1	336 22.0 -31.6	S	16 51.0 +13.1				
12	4 00.5 +00.1	S	12 31.7 +00.8	2 47.2 -00.5	S	11 56.9 +01.1	350 50.4 -31.7	S	17 04.1 +13.0				
13	19 00.6 +00.0	S	12 32.5 +00.9	17 46.7 -00.5	S	11 58.0 +01.2	5 18.7 -31.8	S	17 17.1 +13.0				
14	34 00.6 +00.1	S	12 33.4 +00.8	32 46.2 -00.6	S	11 59.2 +01.1	19 46.9 -31.9	S	17 30.1 +12.9				
15	49 00.7 +00.0	S	12 34.2 +00.9	47 45.6 -00.5	S	12 00.3 +01.1	34 15.0 -31.9	S	17 43.0 +12.8				
16	64 00.7 +00.1	S	12 35.1 +00.8	62 45.1 -00.5	S	12 01.4 +01.1	48 43.1 -32.1	S	17 55.8 +12.7				
17	79 00.8 +00.1	S	12 35.9 +00.9	77 44.6 -00.5	S	12 02.5 +01.2	63 11.0 -32.2	S	18 08.5 +12.5				
18	94 00.9 +00.0	S	12 36.8 +00.8	92 44.1 -00.6	S	12 03.7 +01.1	77 38.8 -32.3	S	18 21.0 +12.5				
19	109 00.9 +00.1	S	12 37.6 +00.9	107 43.5 -00.5	S	12 04.8 +01.1	92 06.5 -32.4	S	18 33.5 +12.4				
20	124 01.0 +00.1	S	12 38.5 +00.8	122 43.0 -00.5	S	12 05.9 +01.1	106 34.1 -32.5	S	18 45.9 +12.3				
21	139 01.1 +00.0	S	12 39.3 +00.9	137 42.5 -00.5	S	12 07.0 +01.1	121 01.6 -32.6	S	18 58.2 +12.2				
22	154 01.1 +00.1	S	12 40.2 +00.8	152 42.0 -00.6	S	12 08.1 +01.2	135 29.0 -32.8	S	19 10.4 +12.1				
23	169 01.2 +00.0	S	12 41.0 +00.9	167 41.4 -00.5	S	12 09.3 +01.1	149 56.2 -32.8	S	19 22.5 +12.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
	SD 16°1 16°1 16°1 16°1 16°1 16°1			SD 00°1 00°1 00°1 00°1 00°1 00°1				SD 16°0 16°0 16°0 16°0 16°0 16°1					
	HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 00°1 00°1 00°1 00°1 00°1 00°1				HP 58°6 58°7 58°8 58°8 58°9 59°0					
	SHA 150° 149° 149° 149° 149° 149°			SHA 148° 148° 148° 148° 148° 147°				SHA 142° 139° 137° 135° 133° 130°					
	Greenwich Culmination Time: 11:43			Greenwich Culmination Time: 11:48				Greenwich Culmination Time: 12:37					

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	309 17.9 +02.3	N	23 36.1 +00.2	33 32.4 +02.7	S	01 22.0 +00.1	72 54.3 +02.4	S	16 29.1 +00.0				
01	324 20.2 +02.3	N	23 36.3 +00.1	48 35.1 +02.7	S	01 22.1 +00.0	87 56.7 +02.5	S	16 29.1 +00.0				
02	339 22.5 +02.3	N	23 36.4 +00.1	63 37.8 +02.7	S	01 22.1 +00.1	102 59.2 +02.4	S	16 29.1 +00.0				
03	354 24.8 +02.3	N	23 36.5 +00.1	78 40.5 +02.6	S	01 22.2 +00.1	118 01.6 +02.5	S	16 29.1 +00.0				
04	9 27.1 +02.3	N	23 36.6 +00.1	93 43.1 +02.7	S	01 22.3 +00.1	133 04.1 +02.4	S	16 29.1 +00.0				
05	24 29.4 +02.3	N	23 36.7 +00.1	108 45.8 +02.7	S	01 22.4 +00.1	148 06.5 +02.5	S	16 29.1 +00.0				
06	39 31.7 +02.3	N	23 36.8 +00.1	123 48.5 +02.7	S	01 22.5 +00.1	163 09.0 +02.4	S	16 29.1 +00.0				
07	54 34.0 +02.3	N	23 36.9 +00.1	138 51.2 +02.7	S	01 22.6 +00.0	178 11.4 +02.5	S	16 29.1 +00.0				
08	69 36.3 +02.3	N	23 37.0 +00.2	153 53.9 +02.6	S	01 22.6 +00.1	193 13.9 +02.4	S	16 29.1 +00.0				
09	84 38.6 +02.3	N	23 37.2 +00.1	168 56.5 +02.7	S	01 22.7 +00.1	208 16.3 +02.5	S	16 29.1 +00.0				
10	99 40.9 +02.3	N	23 37.3 +00.1	183 59.2 +02.7	S	01 22.8 +00.1	223 18.8 +02.4	S	16 29.1 -00.1				
11	114 43.2 +02.3	N	23 37.4 +00.1	199 01.9 +02.7	S	01 22.9 +00.1	238 21.2 +02.5	S	16 29.0 +00.0				
12	129 45.5 +02.3	N	23 37.5 +00.1	214 04.6 +02.6	S	01 23.0 +00.1	253 23.7 +02.4	S	16 29.0 +00.0				
13	144 47.8 +02.3	N	23 37.6 +00.1	229 07.2 +02.7	S	01 23.1 +00.1	268 26.1 +02.5	S	16 29.0 +00.0				
14	159 50.1 +02.3	N	23 37.7 +00.1	244 09.9 +02.7	S	01 23.2 +00.0	283 28.6 +02.4	S	16 29.0 +00.0				
15	174 52.4 +02.4	N	23 37.8 +00.1	259 12.6 +02.7	S	01 23.2 +00.1	298 31.0 +02.5	S	16 29.0 +00.0				
16	189 54.8 +02.3	N	23 37.9 +00.2	274 15.3 +02.6	S	01 23.3 +00.1	313 33.5 +02.4	S	16 29.0 +00.0				
17	204 57.1 +02.3	N	23 38.1 +00.1	289 17.9 +02.7	S	01 23.4 +00.1	328 35.9 +02.5	S	16 29.0 +00.0				
18	219 59.4 +02.3	N	23 38.2 +00.1	304 20.6 +02.7	S	01 23.5 +00.1	343 38.4 +02.4	S	16 29.0 +00.0				
19	235 01.7 +02.3	N	23 38.3 +00.1	319 23.3 +02.7	S	01 23.6 +00.1	358 40.8 +02.5	S	16 29.0 +00.0				
20	250 04.0 +02.4	N	23 38.4 +00.1	334 26.0 +02.6	S	01 23.7 +00.0	13 43.3 +02.4	S	16 29.0 +00.0				
21	265 06.4 +02.3	N	23 38.5 +00.1	349 28.6 +02.7	S	01 23.7 +00.1	28 45.7 +02.5	S	16 29.0 +00.0				
22	280 08.7 +02.3	N	23 38.6 +00.1	4 31.3 +02.7	S	01 23.8 +00.1	43 48.2 +02.4	S	16 29.0 +00.0				
23	295 11.0 +02.4	N	23 38.7 +00.1	19 34.0 +02.7	S	01 23.9 +00.1	58 50.6 +02.5	S	16 29.0 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
	SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 00°4 00°4 00°4 00°4 00°4 00°4				SD 00°1 00°1 00°1 00°1 00°1 00°1					
	HP 00°2 00°2 00°2 00°2 00°2 00°2			HP 00°0 00°0 00°0 00°0 00°0 00°0				HP 00°0 00°0 00°0 00°0 00°0 00°0					
	SHA 275° 275° 275° 275° 275° 275°			SHA 359° 359° 359° 359° 359° 359°				SHA 039° 039° 039° 039° 039° 039°					
	Greenwich Culmination Time: 03:22			Greenwich Culmination Time: 21:41				Greenwich Culmination Time: 19:05					









UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184 05.4 +00.1	S	14 01.6 +00.8	181 48.0 -00.6	S	13 55.4 +01.1	106 06.4 -37.1	S	26 39.9 -04.4	00			
01	199 05.5 +00.0	S	14 02.4 +00.8	196 47.4 -00.5	S	13 56.5 +01.0	120 29.3 -36.9	S	26 35.5 -04.6	01			
02	214 05.5 +00.0	S	14 03.2 +00.8	211 46.9 -00.6	S	13 57.5 +01.1	134 52.4 -37.0	S	26 30.9 -04.8	02			
03	229 05.5 +00.1	S	14 04.0 +00.9	226 46.3 -00.6	S	13 58.6 +01.1	149 15.4 -36.8	S	26 26.1 -05.0	03			
04	244 05.6 +00.0	S	14 04.9 +00.8	241 45.7 -00.6	S	13 59.7 +01.0	163 38.6 -36.8	S	26 21.1 -05.1	04			
05	259 05.6 +00.0	S	14 05.7 +00.8	256 45.1 -00.5	S	14 00.7 +01.1	178 01.8 -36.7	S	26 16.0 -05.4	05			
06	274 05.6 +00.0	S	14 06.5 +00.8	271 44.6 -00.6	S	14 01.8 +01.1	192 25.1 -36.7	S	26 10.6 -05.4	06			
07	289 05.6 +00.1	S	14 07.3 +00.8	286 44.0 -00.6	S	14 02.9 +01.0	206 48.4 -36.5	S	26 05.2 -05.7	07			
08	304 05.7 +00.0	S	14 08.1 +00.8	301 43.4 -00.6	S	14 03.9 +01.1	221 11.9 -36.5	S	25 59.5 -05.9	08			
09	319 05.7 +00.0	S	14 08.9 +00.8	316 42.8 -00.5	S	14 05.0 +01.0	235 35.4 -36.5	S	25 53.6 -06.0	09			
10	334 05.7 +00.0	S	14 09.7 +00.8	331 42.3 -00.6	S	14 06.0 +01.1	249 58.9 -36.3	S	25 47.6 -06.1	10			
11	349 05.7 +00.1	S	14 10.5 +00.8	346 41.7 -00.6	S	14 07.1 +01.1	264 22.6 -36.3	S	25 41.5 -06.4	11			
12	4 05.8 +00.0	S	14 11.3 +00.8	1 41.1 -00.6	S	14 08.2 +01.0	278 46.3 -36.1	S	25 35.1 -06.5	12			
13	19 05.8 +00.0	S	14 12.1 +00.8	16 40.5 -00.6	S	14 09.2 +01.1	293 10.2 -36.1	S	25 28.6 -06.7	13			
14	34 05.8 +00.0	S	14 12.9 +00.8	31 39.9 -00.5	S	14 10.3 +01.0	307 34.1 -36.1	S	25 21.9 -06.9	14			
15	49 05.8 +00.0	S	14 13.7 +00.9	46 39.4 -00.6	S	14 11.3 +01.1	321 58.0 -35.9	S	25 15.0 -07.0	15			
16	64 05.8 +00.1	S	14 14.6 +00.8	61 38.8 -00.6	S	14 12.4 +01.1	336 22.1 -35.8	S	25 08.0 -07.1	16			
17	79 05.9 +00.0	S	14 15.4 +00.8	76 38.2 -00.6	S	14 13.5 +01.0	350 46.3 -35.8	S	25 00.9 -07.4	17			
18	94 05.9 +00.0	S	14 16.2 +00.8	91 37.6 -00.6	S	14 14.5 +01.1	5 10.5 -35.7	S	24 53.5 -07.5	18			
19	109 05.9 +00.0	S	14 17.0 +00.8	106 37.0 -00.5	S	14 15.6 +01.0	19 34.8 -35.5	S	24 46.0 -07.6	19			
20	124 05.9 +00.1	S	14 17.8 +00.8	121 36.5 -00.6	S	14 16.6 +01.1	33 59.3 -35.5	S	24 38.4 -07.8	20			
21	139 06.0 +00.0	S	14 18.6 +00.8	136 35.9 -00.6	S	14 17.7 +01.0	48 23.8 -35.4	S	24 30.6 -08.0	21			
22	154 06.0 +00.0	S	14 19.4 +00.8	151 35.3 -00.6	S	14 18.7 +01.1	62 48.4 -35.3	S	24 22.6 -08.1	22			
23	169 06.0 +00.0	S	14 20.2 +00.8	166 34.7 -00.6	S	14 19.8 +01.0	77 13.1 -35.2	S	24 14.5 -08.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16°1 16°1 16°1 16°1 16°1 16°1			SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 16°2 16°2 16°2 16°2 16°1 16°1						
	HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 00°1 00°1 00°1 00°1 00°1 00°1			HP 59°4 59°4 59°3 59°3 59°3 59°2						
	SHA 145° 145° 144° 144° 144° 144°			SHA 142° 142° 142° 142° 142° 141°			SHA 066° 063° 060° 058° 055° 053°						
	Greenwich Culmination Time: 11:43			Greenwich Culmination Time: 11:53			Greenwich Culmination Time: 17:38						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	314 04.5 +02.5	N	23 49.7 +00.1	38 52.2 +02.6	S	01 31.3 +00.1	77 47.3 +02.5	S	16 28.0 +00.0	00			
01	329 07.0 +02.5	N	23 49.8 +00.1	53 54.8 +02.7	S	01 31.4 +00.0	92 49.8 +02.4	S	16 28.0 -00.1	01			
02	344 09.5 +02.5	N	23 49.9 +00.1	68 57.5 +02.6	S	01 31.4 +00.1	107 52.2 +02.4	S	16 27.9 +00.0	02			
03	359 12.0 +02.5	N	23 50.0 +00.1	84 00.1 +02.6	S	01 31.5 +00.1	122 54.6 +02.4	S	16 27.9 +00.0	03			
04	14 14.5 +02.4	N	23 50.1 +00.2	99 02.7 +02.7	S	01 31.6 +00.0	137 57.0 +02.5	S	16 27.9 +00.0	04			
05	29 16.9 +02.5	N	23 50.3 +00.1	114 05.4 +02.6	S	01 31.6 +00.1	152 59.5 +02.4	S	16 27.9 +00.0	05			
06	44 19.4 +02.5	N	23 50.4 +00.1	129 08.0 +02.7	S	01 31.7 +00.1	168 01.9 +02.4	S	16 27.9 +00.0	06			
07	59 21.9 +02.5	N	23 50.5 +00.1	144 10.7 +02.6	S	01 31.8 +00.1	183 04.3 +02.5	S	16 27.9 +00.0	07			
08	74 24.4 +02.5	N	23 50.6 +00.1	159 13.3 +02.7	S	01 31.9 +00.0	198 06.8 +02.4	S	16 27.9 +00.0	08			
09	89 26.9 +02.5	N	23 50.7 +00.1	174 16.0 +02.6	S	01 31.9 +00.1	213 09.2 +02.4	S	16 27.9 -00.1	09			
10	104 29.4 +02.5	N	23 50.8 +00.1	189 18.6 +02.7	S	01 32.0 +00.1	228 11.6 +02.5	S	16 27.8 +00.0	10			
11	119 31.9 +02.5	N	23 50.9 +00.2	204 21.3 +02.6	S	01 32.1 +00.0	243 14.1 +02.4	S	16 27.8 +00.0	11			
12	134 34.4 +02.5	N	23 51.1 +00.1	219 23.9 +02.7	S	01 32.1 +00.1	258 16.5 +02.4	S	16 27.8 +00.0	12			
13	149 36.9 +02.6	N	23 51.2 +00.1	234 26.6 +02.6	S	01 32.2 +00.1	273 18.9 +02.4	S	16 27.8 +00.0	13			
14	164 39.5 +02.5	N	23 51.3 +00.1	249 29.2 +02.7	S	01 32.3 +00.0	288 21.3 +02.5	S	16 27.8 +00.0	14			
15	179 42.0 +02.5	N	23 51.4 +00.1	264 31.9 +02.6	S	01 32.3 +00.1	303 23.8 +02.4	S	16 27.8 +00.0	15			
16	194 44.5 +02.5	N	23 51.5 +00.1	279 34.5 +02.6	S	01 32.4 +00.1	318 26.2 +02.4	S	16 27.8 -00.1	16			
17	209 47.0 +02.5	N	23 51.6 +00.1	294 37.1 +02.7	S	01 32.5 +00.0	333 28.6 +02.5	S	16 27.7 +00.0	17			
18	224 49.5 +02.5	N	23 51.7 +00.2	309 39.8 +02.6	S	01 32.5 +00.1	348 31.1 +02.4	S	16 27.7 +00.0	18			
19	239 52.0 +02.5	N	23 51.9 +00.1	324 42.4 +02.7	S	01 32.6 +00.1	3 33.5 +02.4	S	16 27.7 +00.0	19			
20	254 54.5 +02.6	N	23 52.0 +00.1	339 45.1 +02.6	S	01 32.7 +00.0	18 35.9 +02.4	S	16 27.7 +00.0	20			
21	269 57.1 +02.5	N	23 52.1 +00.1	354 47.7 +02.7	S	01 32.7 +00.1	33 38.3 +02.5	S	16 27.7 +00.0	21			
22	284 59.6 +02.5	N	23 52.2 +00.1	9 50.4 +02.6	S	01 32.8 +00.1	48 40.8 +02.4	S	16 27.7 +00.0	22			
23	300 02.1 +02.5	N	23 52.3 +00.1	24 53.0 +02.6	S	01 32.9 +00.0	63 43.2 +02.4	S	16 27.7 -00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00°1 00°1 00°1 00°1 00°1 00°1			SD 00°4 00°4 00°4 00°4 00°4 00°4			SD 00°1 00°1 00°1 00°1 00°1 00°1						
	HP 00°2 00°2 00°2 00°2 00°2 00°2			HP 00°0 00°0 00°0 00°0 00°0 00°0			HP 00°0 00°0 00°0 00°0 00°0 00°0						
	SHA 275° 275° 275° 275° 275° 275°			SHA 360° 360° 360° 360° 360° 360°			SHA 039° 039° 039° 039° 039° 038°						
	Greenwich Culmination Time: 03:03			Greenwich Culmination Time: 21:20			Greenwich Culmination Time: 18:45						







Table for Sun, Venus, and Moon observations. Columns include UT, GHA, ddGHA, Dec, dDec, and A: 34% for the Moon. Rows list observations from UT 00 to 23 with corresponding coordinates.

Table for Mars, Jupiter, and Saturn observations. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Rows list observations from UT 00 to 23 with corresponding coordinates.





Table with columns for UT, Sun, Venus, Moon (A: 43%), Mars, Jupiter, Saturn, and UT. Each planet section contains a grid of GHA, ddGHA, Dec, dDec values for each UT from 00 to 23. Summary statistics and Greenwich Culmination Time are provided at the bottom of each section.

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Table with 5 main columns: Sun, Venus, Moon, Mars, Jupiter, Saturn. Each column contains UT, GHA, ddGHA, Dec, dDec data for days 00-23. Includes summary rows for SD, HP, SHA and Greenwich Culmination Time.



UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	184	03.5	-00.1	S 16 47.2	+00.7	179	32.8	-00.7	S 17 30.2	+00.9	357	54.7	-29.2	N 19 19.9	+10.8	00				
01	199	03.4	+00.0	S 16 47.9	+00.7	194	32.1	-00.7	S 17 31.1	+00.9	12	25.5	-29.2	N 19 30.7	+10.7	01				
02	214	03.4	-00.1	S 16 48.6	+00.7	209	31.4	-00.6	S 17 32.0	+00.9	26	56.3	-29.2	N 19 41.4	+10.5	02				
03	229	03.3	+00.0	S 16 49.3	+00.7	224	30.8	-00.7	S 17 32.9	+00.9	41	27.1	-29.3	N 19 51.9	+10.5	03				
04	244	03.3	-00.1	S 16 50.0	+00.7	239	30.1	-00.7	S 17 33.8	+00.9	55	57.8	-29.3	N 20 02.4	+10.4	04				
05	259	03.2	+00.0	S 16 50.7	+00.7	254	29.4	-00.7	S 17 34.7	+00.9	70	28.5	-29.4	N 20 12.8	+10.2	05				
06	274	03.2	-00.1	S 16 51.4	+00.8	269	28.7	-00.7	S 17 35.6	+01.0	84	59.1	-29.4	N 20 23.0	+10.2	06				
07	289	03.1	+00.0	S 16 52.2	+00.7	284	28.0	-00.7	S 17 36.6	+00.9	99	29.7	-29.4	N 20 33.2	+10.0	07				
08	304	03.1	-00.1	S 16 52.9	+00.7	299	27.3	-00.6	S 17 37.5	+00.9	114	00.3	-29.5	N 20 43.2	+10.0	08				
09	319	03.0	+00.0	S 16 53.6	+00.7	314	26.7	-00.7	S 17 38.4	+00.9	128	30.8	-29.6	N 20 53.2	+09.8	09				
10	334	03.0	-00.1	S 16 54.3	+00.7	329	26.0	-00.7	S 17 39.3	+00.9	143	01.2	-29.6	N 21 03.0	+09.7	10				
11	349	02.9	+00.0	S 16 55.0	+00.7	344	25.3	-00.7	S 17 40.2	+00.9	157	31.6	-29.6	N 21 12.7	+09.6	11				
12	4	02.9	-00.1	S 16 55.7	+00.7	359	24.6	-00.7	S 17 41.1	+00.9	172	02.0	-29.7	N 21 22.3	+09.5	12				
13	19	02.8	+00.0	S 16 56.4	+00.7	14	23.9	-00.7	S 17 42.0	+00.9	186	32.3	-29.7	N 21 31.8	+09.4	13				
14	34	02.8	-00.1	S 16 57.1	+00.7	29	23.2	-00.7	S 17 42.9	+00.9	201	02.6	-29.8	N 21 41.2	+09.3	14				
15	49	02.7	+00.0	S 16 57.8	+00.8	44	22.5	-00.7	S 17 43.8	+00.9	215	32.8	-29.8	N 21 50.5	+09.2	15				
16	64	02.7	-00.1	S 16 58.6	+00.7	59	21.8	-00.7	S 17 44.7	+00.9	230	03.0	-29.9	N 21 59.7	+09.1	16				
17	79	02.6	-00.1	S 16 59.3	+00.7	74	21.1	-00.6	S 17 45.6	+00.9	244	33.1	-29.9	N 22 08.8	+08.9	17				
18	94	02.5	+00.0	S 16 60.0	+00.7	89	20.5	-00.7	S 17 46.5	+00.9	259	03.2	-29.9	N 22 17.7	+08.9	18				
19	109	02.5	-00.1	S 17 00.7	+00.7	104	19.8	-00.7	S 17 47.4	+00.9	273	33.3	-30.0	N 22 26.6	+08.7	19				
20	124	02.4	+00.0	S 17 01.4	+00.7	119	19.1	-00.7	S 17 48.3	+00.9	288	03.3	-30.0	N 22 35.3	+08.6	20				
21	139	02.4	-00.1	S 17 02.1	+00.7	134	18.4	-00.7	S 17 49.2	+00.9	302	33.3	-30.1	N 22 43.9	+08.5	21				
22	154	02.3	+00.0	S 17 02.8	+00.7	149	17.7	-00.7	S 17 50.1	+00.9	317	03.2	-30.1	N 22 52.4	+08.4	22				
23	169	02.3	-00.1	S 17 03.5	+00.7	164	17.0	-00.7	S 17 51.0	+00.9	331	33.1	-30.2	N 23 00.8	+08.2	23				
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	16°1	16°1	16°1	16°1	16°1	16°1	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	15°2	15°2	15°2	15°1	15°1	15°1
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	55°8	55°7	55°6	55°5	55°4	55°4
SHA	136°	136°	135°	135°	135°	135°	SHA	131°	131°	131°	131°	130°	130°	SHA	309°	307°	304°	302°	300°	298°
Greenwich Culmination Time: 11:43							Greenwich Culmination Time: 12:02							Greenwich Culmination Time: 00:08						



UT	Sun				Venus				Moon <span style="float: right;">A: 56%</span>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184 02.2 +00.0	S 17 04.2 +00.7	179 16.3 -00.7	S 17 51.9 +00.9	346 02.9 -30.2	N 23 09.0 +08.1							
01	199 02.2 -00.1	S 17 04.9 +00.7	194 15.6 -00.7	S 17 52.8 +00.9	0 32.7 -30.2	N 23 17.1 +08.1							
02	214 02.1 -00.1	S 17 05.6 +00.7	209 14.9 -00.7	S 17 53.7 +00.9	15 02.5 -30.3	N 23 25.2 +07.9							
03	229 02.0 +00.0	S 17 06.3 +00.7	224 14.2 -00.7	S 17 54.6 +00.9	29 32.2 -30.3	N 23 33.1 +07.7							
04	244 02.0 -00.1	S 17 07.0 +00.7	239 13.5 -00.7	S 17 55.5 +00.9	44 01.9 -30.4	N 23 40.8 +07.7							
05	259 01.9 +00.0	S 17 07.7 +00.7	254 12.8 -00.7	S 17 56.4 +00.8	58 31.5 -30.4	N 23 48.5 +07.5							
06	274 01.9 -00.1	S 17 08.4 +00.7	269 12.1 -00.7	S 17 57.2 +00.9	73 01.1 -30.4	N 23 56.0 +07.4							
07	289 01.8 +00.0	S 17 09.1 +00.7	284 11.4 -00.7	S 17 58.1 +00.9	87 30.7 -30.5	N 24 03.4 +07.3							
08	304 01.8 -00.1	S 17 09.8 +00.7	299 10.7 -00.7	S 17 59.0 +00.9	102 00.2 -30.5	N 24 10.7 +07.2							
09	319 01.7 -00.1	S 17 10.5 +00.7	314 10.0 -00.7	S 17 59.9 +00.9	116 29.7 -30.6	N 24 17.9 +07.0							
10	334 01.6 +00.0	S 17 11.2 +00.7	329 09.3 -00.7	S 18 00.8 +00.9	130 59.1 -30.5	N 24 24.9 +07.0							
11	349 01.6 -00.1	S 17 11.9 +00.7	344 08.6 -00.7	S 18 01.7 +00.9	145 28.6 -30.7	N 24 31.9 +06.7							
12	4 01.5 -00.1	S 17 12.6 +00.7	359 07.9 -00.7	S 18 02.6 +00.9	159 57.9 -30.6	N 24 38.6 +06.7							
13	19 01.4 +00.0	S 17 13.3 +00.7	14 07.2 -00.7	S 18 03.5 +00.8	174 27.3 -30.7	N 24 45.3 +06.6							
14	34 01.4 -00.1	S 17 14.0 +00.7	29 06.5 -00.7	S 18 04.3 +00.9	188 56.6 -30.7	N 24 51.9 +06.4							
15	49 01.3 +00.0	S 17 14.7 +00.7	44 05.8 -00.7	S 18 05.2 +00.9	203 25.9 -30.8	N 24 58.3 +06.3							
16	64 01.3 -00.1	S 17 15.4 +00.7	59 05.1 -00.7	S 18 06.1 +00.9	217 55.1 -30.8	N 25 04.6 +06.1							
17	79 01.2 -00.1	S 17 16.1 +00.7	74 04.4 -00.7	S 18 07.0 +00.9	232 24.3 -30.8	N 25 10.7 +06.0							
18	94 01.1 +00.0	S 17 16.8 +00.7	89 03.7 -00.7	S 18 07.9 +00.8	246 53.5 -30.8	N 25 16.7 +05.9							
19	109 01.1 -00.1	S 17 17.5 +00.7	104 03.0 -00.7	S 18 08.7 +00.9	261 22.7 -30.9	N 25 22.6 +05.8							
20	124 01.0 -00.1	S 17 18.2 +00.7	119 02.3 -00.7	S 18 09.6 +00.9	275 51.8 -30.9	N 25 28.4 +05.6							
21	139 00.9 +00.0	S 17 18.9 +00.7	134 01.6 -00.7	S 18 10.5 +00.9	290 20.9 -31.0	N 25 34.0 +05.6							
22	154 00.9 -00.1	S 17 19.6 +00.7	149 00.9 -00.7	S 18 11.4 +00.9	304 49.9 -30.9	N 25 39.6 +05.3							
23	169 00.8 +00.0	S 17 20.3 +00.7	164 00.2 -00.7	S 18 12.3 +00.8	319 19.0 -31.0	N 25 44.9 +05.3							

  

UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	16'1	16'1	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	15'1	15'0	15'0	15'0	15'0	15'0
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	55'3	55'2	55'1	55'1	55'0	54'9
SHA	135°	135°	134°	134°	134°	134°	SHA	130°	130°	130°	129°	129°	129°	SHA	296°	294°	291°	289°	287°	285°

Greenwich Culmination Time: 11:43      Greenwich Culmination Time: 12:03      Greenwich Culmination Time: 00:57

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	324 49.0 +02.9	N 24 16.9 +00.1	49 19.4 +02.6	S 01 44.3 +00.1	87 25.9 +02.4	S 16 23.3 -00.1							
01	339 51.9 +02.8	N 24 17.0 +00.1	64 22.0 +02.6	S 01 44.4 +00.0	102 28.3 +02.3	S 16 23.2 +00.0							
02	354 54.7 +02.9	N 24 17.1 +00.1	79 24.6 +02.6	S 01 44.4 +00.0	117 30.6 +02.4	S 16 23.2 +00.0							
03	9 57.6 +02.9	N 24 17.2 +00.1	94 27.2 +02.5	S 01 44.4 +00.1	132 33.0 +02.4	S 16 23.2 +00.0							
04	25 00.5 +02.9	N 24 17.3 +00.1	109 29.7 +02.6	S 01 44.5 +00.0	147 35.4 +02.4	S 16 23.2 -00.1							
05	40 03.4 +02.9	N 24 17.4 +00.1	124 32.3 +02.6	S 01 44.5 +00.0	162 37.8 +02.4	S 16 23.1 +00.0							
06	55 06.3 +02.9	N 24 17.5 +00.1	139 34.9 +02.6	S 01 44.5 +00.1	177 40.2 +02.4	S 16 23.1 +00.0							
07	70 09.2 +02.9	N 24 17.6 +00.2	154 37.5 +02.5	S 01 44.6 +00.0	192 42.6 +02.4	S 16 23.1 +00.0							
08	85 12.1 +02.9	N 24 17.8 +00.1	169 40.0 +02.6	S 01 44.6 +00.1	207 45.0 +02.4	S 16 23.1 -00.1							
09	100 15.0 +02.9	N 24 17.9 +00.1	184 42.6 +02.6	S 01 44.7 +00.0	222 47.4 +02.4	S 16 23.0 +00.0							
10	115 17.9 +02.9	N 24 18.0 +00.1	199 45.2 +02.6	S 01 44.7 +00.0	237 49.8 +02.3	S 16 23.0 +00.0							
11	130 20.8 +02.9	N 24 18.1 +00.1	214 47.8 +02.5	S 01 44.7 +00.1	252 52.1 +02.4	S 16 23.0 +00.0							
12	145 23.7 +02.9	N 24 18.2 +00.1	229 50.3 +02.6	S 01 44.8 +00.0	267 54.5 +02.4	S 16 23.0 -00.1							
13	160 26.6 +02.9	N 24 18.3 +00.1	244 52.9 +02.6	S 01 44.8 +00.0	282 56.9 +02.4	S 16 22.9 +00.0							
14	175 29.5 +02.9	N 24 18.4 +00.1	259 55.5 +02.5	S 01 44.8 +00.1	297 59.3 +02.4	S 16 22.9 +00.0							
15	190 32.4 +03.0	N 24 18.5 +00.1	274 58.0 +02.6	S 01 44.9 +00.0	313 01.7 +02.4	S 16 22.9 +00.0							
16	205 35.4 +02.9	N 24 18.6 +00.1	290 00.6 +02.6	S 01 44.9 +00.0	328 04.1 +02.4	S 16 22.9 -00.1							
17	220 38.3 +02.9	N 24 18.7 +00.2	305 03.2 +02.6	S 01 44.9 +00.1	343 06.5 +02.4	S 16 22.8 +00.0							
18	235 41.2 +02.9	N 24 18.9 +00.1	320 05.8 +02.5	S 01 45.0 +00.0	358 08.9 +02.3	S 16 22.8 +00.0							
19	250 44.1 +02.9	N 24 19.0 +00.1	335 08.3 +02.6	S 01 45.0 +00.0	13 11.2 +02.4	S 16 22.8 -00.1							
20	265 47.0 +02.9	N 24 19.1 +00.1	350 10.9 +02.6	S 01 45.0 +00.1	28 13.6 +02.4	S 16 22.7 +00.0							
21	280 49.9 +03.0	N 24 19.2 +00.1	5 13.5 +02.6	S 01 45.1 +00.0	43 16.0 +02.4	S 16 22.7 +00.0							
22	295 52.9 +02.9	N 24 19.3 +00.1	20 16.1 +02.5	S 01 45.1 +00.1	58 18.4 +02.4	S 16 22.7 +00.0							
23	310 55.8 +02.9	N 24 19.4 +00.1	35 18.6 +02.6	S 01 45.2 +00.0	73 20.8 +02.4	S 16 22.7 -00.1							

  

UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	276°	276°	276°	276°	276°	276°	SHA	000°	000°	000°	000°	000°	000°	SHA	038°	038°	038°	038°	038°	038°

Greenwich Culmination Time: 02:20      Greenwich Culmination Time: 20:39      Greenwich Culmination Time: 18:07

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	184 00.8 -00.1	S	17 21.0 +00.7	178 59.5 -00.7	S	18 13.1 +00.9	333 48.0 -31.0	N	25 50.2 +05.1	00			
01	199 00.7 -00.1	S	17 21.7 +00.7	193 58.8 -00.7	S	18 14.0 +00.9	348 17.0 -31.1	N	25 55.3 +05.0	01			
02	214 00.6 +00.0	S	17 22.4 +00.7	208 58.1 -00.7	S	18 14.9 +00.9	2 45.9 -31.0	N	26 00.3 +04.8	02			
03	229 00.6 -00.1	S	17 23.1 +00.6	223 57.4 -00.8	S	18 15.8 +00.8	17 14.9 -31.1	N	26 05.1 +04.8	03			
04	244 00.5 -00.1	S	17 23.7 +00.7	238 56.6 -00.7	S	18 16.6 +00.9	31 43.8 -31.1	N	26 09.9 +04.6	04			
05	259 00.4 +00.0	S	17 24.4 +00.7	253 55.9 -00.7	S	18 17.5 +00.9	46 12.7 -31.2	N	26 14.5 +04.4	05			
06	274 00.4 -00.1	S	17 25.1 +00.7	268 55.2 -00.7	S	18 18.4 +00.8	60 41.5 -31.1	N	26 18.9 +04.3	06			
07	289 00.3 -00.1	S	17 25.8 +00.7	283 54.5 -00.7	S	18 19.2 +00.9	75 10.4 -31.2	N	26 23.2 +04.2	07			
08	304 00.2 -00.1	S	17 26.5 +00.7	298 53.8 -00.7	S	18 20.1 +00.9	89 39.2 -31.2	N	26 27.4 +04.1	08			
09	319 00.1 +00.0	S	17 27.2 +00.7	313 53.1 -00.7	S	18 21.0 +00.8	104 08.0 -31.2	N	26 31.5 +03.9	09			
10	334 00.1 -00.1	S	17 27.9 +00.7	328 52.4 -00.7	S	18 21.8 +00.9	118 36.8 -31.2	N	26 35.4 +03.8	10			
11	349 00.0 -00.1	S	17 28.6 +00.7	343 51.7 -00.7	S	18 22.7 +00.9	133 05.6 -31.2	N	26 39.2 +03.6	11			
12	3 59.9 +00.0	S	17 29.3 +00.6	358 51.0 -00.8	S	18 23.6 +00.8	147 34.4 -31.3	N	26 42.8 +03.5	12			
13	18 59.9 -00.1	S	17 29.9 +00.7	13 50.2 -00.7	S	18 24.4 +00.9	162 03.1 -31.2	N	26 46.3 +03.4	13			
14	33 59.8 -00.1	S	17 30.6 +00.7	28 49.5 -00.7	S	18 25.3 +00.9	176 31.9 -31.3	N	26 49.7 +03.3	14			
15	48 59.7 +00.0	S	17 31.3 +00.7	43 48.8 -00.7	S	18 26.2 +00.8	191 00.6 -31.3	N	26 53.0 +03.1	15			
16	63 59.7 -00.1	S	17 32.0 +00.7	58 48.1 -00.7	S	18 27.0 +00.9	205 29.3 -31.3	N	26 56.1 +02.9	16			
17	78 59.6 -00.1	S	17 32.7 +00.7	73 47.4 -00.7	S	18 27.9 +00.8	219 58.0 -31.2	N	26 59.0 +02.9	17			
18	93 59.5 -00.1	S	17 33.4 +00.6	88 46.7 -00.8	S	18 28.7 +00.9	234 26.8 -31.4	N	27 01.9 +02.7	18			
19	108 59.4 +00.0	S	17 34.0 +00.7	103 45.9 -00.7	S	18 29.6 +00.9	248 55.4 -31.3	N	27 04.6 +02.5	19			
20	123 59.4 -00.1	S	17 34.7 +00.7	118 45.2 -00.7	S	18 30.5 +00.8	263 24.1 -31.3	N	27 07.1 +02.5	20			
21	138 59.3 -00.1	S	17 35.4 +00.7	133 44.5 -00.7	S	18 31.3 +00.9	277 52.8 -31.3	N	27 09.6 +02.3	21			
22	153 59.2 -00.1	S	17 36.1 +00.7	148 43.8 -00.7	S	18 32.2 +00.8	292 21.5 -31.3	N	27 11.9 +02.1	22			
23	168 59.1 +00.0	S	17 36.8 +00.7	163 43.1 -00.7	S	18 33.0 +00.9	306 50.2 -31.3	N	27 14.0 +02.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'2 16'2 16'2 16'2 16'2 16'2			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 54'8 54'7 54'6 54'6 54'5						
	SHA 134° 134° 133° 133° 133° 133°			SHA 129° 129° 128° 128° 128° 128°			SHA 283° 280° 278° 276° 274° 271°						
	Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 12:04			Greenwich Culmination Time: 01:48						

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	325 58.7 +02.9	N	24 19.5 +00.1	50 21.2 +02.6	S	01 45.2 +00.0	88 23.2 +02.4	S	16 22.6 +00.0	00			
01	341 01.6 +03.0	N	24 19.6 +00.1	65 23.8 +02.5	S	01 45.2 +00.1	103 25.6 +02.3	S	16 22.6 +00.0	01			
02	356 04.6 +02.9	N	24 19.7 +00.1	80 26.3 +02.6	S	01 45.3 +00.0	118 27.9 +02.4	S	16 22.6 -00.1	02			
03	11 07.5 +02.9	N	24 19.8 +00.2	95 28.9 +02.6	S	01 45.3 +00.0	133 30.3 +02.4	S	16 22.5 +00.0	03			
04	26 10.4 +03.0	N	24 20.0 +00.1	110 31.5 +02.5	S	01 45.3 +00.1	148 32.7 +02.4	S	16 22.5 +00.0	04			
05	41 13.4 +02.9	N	24 20.1 +00.1	125 34.0 +02.6	S	01 45.4 +00.0	163 35.1 +02.4	S	16 22.5 +00.0	05			
06	56 16.3 +02.9	N	24 20.2 +00.1	140 36.6 +02.6	S	01 45.4 +00.0	178 37.5 +02.4	S	16 22.5 -00.1	06			
07	71 19.2 +03.0	N	24 20.3 +00.1	155 39.2 +02.5	S	01 45.4 +00.1	193 39.9 +02.3	S	16 22.4 +00.0	07			
08	86 22.2 +02.9	N	24 20.4 +00.1	170 41.7 +02.6	S	01 45.5 +00.0	208 42.2 +02.4	S	16 22.4 +00.0	08			
09	101 25.1 +03.0	N	24 20.5 +00.1	185 44.3 +02.6	S	01 45.5 +00.0	223 44.6 +02.4	S	16 22.4 +00.0	09			
10	116 28.1 +02.9	N	24 20.6 +00.1	200 46.9 +02.5	S	01 45.5 +00.1	238 47.0 +02.4	S	16 22.4 -00.1	10			
11	131 31.0 +02.9	N	24 20.7 +00.1	215 49.4 +02.6	S	01 45.6 +00.0	253 49.4 +02.4	S	16 22.3 +00.0	11			
12	146 33.9 +03.0	N	24 20.8 +00.1	230 52.0 +02.6	S	01 45.6 +00.0	268 51.8 +02.4	S	16 22.3 +00.0	12			
13	161 36.9 +02.9	N	24 20.9 +00.1	245 54.6 +02.5	S	01 45.6 +00.1	283 54.2 +02.4	S	16 22.3 -00.1	13			
14	176 39.8 +03.0	N	24 21.0 +00.2	260 57.1 +02.6	S	01 45.7 +00.0	298 56.6 +02.3	S	16 22.2 +00.0	14			
15	191 42.8 +02.9	N	24 21.2 +00.1	275 59.7 +02.6	S	01 45.7 +00.0	313 58.9 +02.4	S	16 22.2 +00.0	15			
16	206 45.7 +03.0	N	24 21.3 +00.1	291 02.3 +02.5	S	01 45.7 +00.1	329 01.3 +02.4	S	16 22.2 +00.0	16			
17	221 48.7 +03.0	N	24 21.4 +00.1	306 04.8 +02.6	S	01 45.8 +00.0	344 03.7 +02.4	S	16 22.2 -00.1	17			
18	236 51.7 +02.9	N	24 21.5 +00.1	321 07.4 +02.6	S	01 45.8 +00.0	359 06.1 +02.4	S	16 22.1 +00.0	18			
19	251 54.6 +03.0	N	24 21.6 +00.1	336 10.0 +02.5	S	01 45.8 +00.0	14 08.5 +02.3	S	16 22.1 +00.0	19			
20	266 57.6 +02.9	N	24 21.7 +00.1	351 12.5 +02.6	S	01 45.8 +00.1	29 10.8 +02.4	S	16 22.1 -00.1	20			
21	282 00.5 +03.0	N	24 21.8 +00.1	6 15.1 +02.6	S	01 45.9 +00.0	44 13.2 +02.4	S	16 22.0 +00.0	21			
22	297 03.5 +03.0	N	24 21.9 +00.1	21 17.7 +02.5	S	01 45.9 +00.0	59 15.6 +02.4	S	16 22.0 +00.0	22			
23	312 06.5 +02.9	N	24 22.0 +00.1	36 20.2 +02.6	S	01 45.9 +00.1	74 18.0 +02.4	S	16 22.0 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'3 00'3 00'3 00'3 00'3 00'3			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 276° 276° 276° 276° 276° 276°			SHA 000° 000° 000° 000° 000° 000°			SHA 038° 038° 038° 038° 038° 038°						
	Greenwich Culmination Time: 02:15			Greenwich Culmination Time: 20:35			Greenwich Culmination Time: 18:03						

UT	Sun				Venus				Moon <span style="float:right">A: 63%</span>				UT									
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec										
00	183 59.1 -00.1	S	17 37.5 +00.6		178 42.4 -00.8	S	18 33.9 +00.8		321 18.9 -31.4	N	27 16.0 +01.9		00									
01	198 59.0 -00.1	S	17 38.1 +00.7		193 41.6 -00.7	S	18 34.7 +00.9		335 47.5 -31.3	N	27 17.9 +01.8		01									
02	213 58.9 -00.1	S	17 38.8 +00.7		208 40.9 -00.7	S	18 35.6 +00.8		350 16.2 -31.3	N	27 19.7 +01.6		02									
03	228 58.8 +00.0	S	17 39.5 +00.7		223 40.2 -00.7	S	18 36.4 +00.9		4 44.9 -31.3	N	27 21.3 +01.4		03									
04	243 58.8 -00.1	S	17 40.2 +00.6		238 39.5 -00.8	S	18 37.3 +00.8		19 13.6 -31.3	N	27 22.7 +01.4		04									
05	258 58.7 -00.1	S	17 40.8 +00.7		253 38.7 -00.7	S	18 38.1 +00.9		33 42.3 -31.3	N	27 24.1 +01.2		05									
06	273 58.6 -00.1	S	17 41.5 +00.7		268 38.0 -00.7	S	18 39.0 +00.8		48 11.0 -31.3	N	27 25.3 +01.0		06									
07	288 58.5 +00.0	S	17 42.2 +00.7		283 37.3 -00.7	S	18 39.8 +00.9		62 39.7 -31.3	N	27 26.3 +01.0		07									
08	303 58.5 -00.1	S	17 42.9 +00.7		298 36.6 -00.7	S	18 40.7 +00.8		77 08.4 -31.3	N	27 27.3 +00.8		08									
09	318 58.4 -00.1	S	17 43.6 +00.6		313 35.9 -00.8	S	18 41.5 +00.9		91 37.1 -31.3	N	27 28.1 +00.6		09									
10	333 58.3 -00.1	S	17 44.2 +00.7		328 35.1 -00.7	S	18 42.4 +00.8		106 05.8 -31.3	N	27 28.7 +00.5		10									
11	348 58.2 +00.0	S	17 44.9 +00.7		343 34.4 -00.7	S	18 43.2 +00.9		120 34.5 -31.2	N	27 29.2 +00.4		11									
12	3 58.2 -00.1	S	17 45.6 +00.7		358 33.7 -00.8	S	18 44.1 +00.8		135 03.3 -31.3	N	27 29.6 +00.3		12									
13	18 58.1 -00.1	S	17 46.3 +00.6		13 32.9 -00.7	S	18 44.9 +00.9		149 32.0 -31.2	N	27 29.9 +00.1		13									
14	33 58.0 -00.1	S	17 46.9 +00.7		28 32.2 -00.7	S	18 45.8 +00.8		164 00.8 -31.2	N	27 30.0 +00.0		14									
15	48 57.9 -00.1	S	17 47.6 +00.7		43 31.5 -00.7	S	18 46.6 +00.8		178 29.6 -31.2	N	27 30.0 -00.2		15									
16	63 57.8 +00.0	S	17 48.3 +00.6		58 30.8 -00.8	S	18 47.4 +00.9		192 58.4 -31.2	N	27 29.8 -00.3		16									
17	78 57.8 -00.1	S	17 48.9 +00.7		73 30.0 -00.7	S	18 48.3 +00.8		207 27.2 -31.1	N	27 29.5 -00.4		17									
18	93 57.7 -00.1	S	17 49.6 +00.7		88 29.3 -00.7	S	18 49.1 +00.9		221 56.1 -31.2	N	27 29.1 -00.6		18									
19	108 57.6 -00.1	S	17 50.3 +00.7		103 28.6 -00.8	S	18 50.0 +00.8		236 24.9 -31.1	N	27 28.5 -00.7		19									
20	123 57.5 -00.1	S	17 51.0 +00.6		118 27.8 -00.7	S	18 50.8 +00.8		250 53.8 -31.1	N	27 27.8 -00.8		20									
21	138 57.4 -00.1	S	17 51.6 +00.7		133 27.1 -00.7	S	18 51.6 +00.9		265 22.7 -31.0	N	27 27.0 -00.9		21									
22	153 57.3 +00.0	S	17 52.3 +00.7		148 26.4 -00.8	S	18 52.5 +00.8		279 51.7 -31.1	N	27 26.1 -01.1		22									
23	168 57.3 -00.1	S	17 53.0 +00.6		163 25.6 -00.7	S	18 53.3 +00.8		294 20.6 -31.0	N	27 25.0 -01.3		23									
<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	16'2	16'2	16'2	16'2	16'2	16'2		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	133°	133°	132°	132°	132°	132°		SHA	127°	127°	127°	127°	127°	126°		SHA	269°	267°	265°	262°	260°	258°
Greenwich Culmination Time: 11:44								Greenwich Culmination Time: 12:05								Greenwich Culmination Time: 02:40						

  

UT	Mars				Jupiter				Saturn				UT									
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec										
00	327 09.4 +03.0	N	24 22.1 +00.1		51 22.8 +02.5	S	01 46.0 +00.0		89 20.4 +02.4	S	16 22.0 -00.1		00									
01	342 12.4 +03.0	N	24 22.2 +00.1		66 25.3 +02.6	S	01 46.0 +00.0		104 22.8 +02.3	S	16 21.9 +00.0		01									
02	357 15.4 +02.9	N	24 22.3 +00.2		81 27.9 +02.6	S	01 46.0 +00.1		119 25.1 +02.4	S	16 21.9 +00.0		02									
03	12 18.3 +03.0	N	24 22.5 +00.1		96 30.5 +02.5	S	01 46.1 +00.0		134 27.5 +02.4	S	16 21.9 -00.1		03									
04	27 21.3 +03.0	N	24 22.6 +00.1		111 33.0 +02.6	S	01 46.1 +00.0		149 29.9 +02.4	S	16 21.8 +00.0		04									
05	42 24.3 +02.9	N	24 22.7 +00.1		126 35.6 +02.6	S	01 46.1 +00.1		164 32.3 +02.4	S	16 21.8 +00.0		05									
06	57 27.2 +03.0	N	24 22.8 +00.1		141 38.2 +02.5	S	01 46.2 +00.0		179 34.7 +02.3	S	16 21.8 +00.0		06									
07	72 30.2 +03.0	N	24 22.9 +00.1		156 40.7 +02.6	S	01 46.2 +00.0		194 37.0 +02.4	S	16 21.8 -00.1		07									
08	87 33.2 +03.0	N	24 23.0 +00.1		171 43.3 +02.5	S	01 46.2 +00.0		209 39.4 +02.4	S	16 21.7 +00.0		08									
09	102 36.2 +03.0	N	24 23.1 +00.1		186 45.8 +02.6	S	01 46.2 +00.1		224 41.8 +02.4	S	16 21.7 +00.0		09									
10	117 39.2 +02.9	N	24 23.2 +00.1		201 48.4 +02.5	S	01 46.3 +00.0		239 44.2 +02.4	S	16 21.7 -00.1		10									
11	132 42.1 +03.0	N	24 23.3 +00.1		216 50.9 +02.6	S	01 46.3 +00.0		254 46.6 +02.3	S	16 21.6 +00.0		11									
12	147 45.1 +03.0	N	24 23.4 +00.1		231 53.5 +02.6	S	01 46.3 +00.1		269 48.9 +02.4	S	16 21.6 +00.0		12									
13	162 48.1 +03.0	N	24 23.5 +00.1		246 56.1 +02.5	S	01 46.4 +00.0		284 51.3 +02.4	S	16 21.6 +00.0		13									
14	177 51.1 +03.0	N	24 23.6 +00.1		261 58.6 +02.6	S	01 46.4 +00.0		299 53.7 +02.4	S	16 21.6 -00.1		14									
15	192 54.1 +03.0	N	24 23.7 +00.1		277 01.2 +02.5	S	01 46.4 +00.0		314 56.1 +02.4	S	16 21.5 +00.0		15									
16	207 57.1 +03.0	N	24 23.8 +00.2		292 03.7 +02.6	S	01 46.4 +00.1		329 58.5 +02.3	S	16 21.5 +00.0		16									
17	223 00.1 +03.0	N	24 24.0 +00.1		307 06.3 +02.6	S	01 46.5 +00.0		345 00.8 +02.4	S	16 21.5 -00.1		17									
18	238 03.1 +03.0	N	24 24.1 +00.1		322 08.9 +02.5	S	01 46.5 +00.0		0 03.2 +02.4	S	16 21.4 +00.0		18									
19	253 06.1 +03.0	N	24 24.2 +00.1		337 11.4 +02.6	S	01 46.5 +00.1		15 05.6 +02.4	S	16 21.4 +00.0		19									
20	268 09.1 +03.0	N	24 24.3 +00.1		352 14.0 +02.5	S	01 46.6 +00.0		30 08.0 +02.4	S	16 21.4 -00.1		20									
21	283 12.1 +03.0	N	24 24.4 +00.1		7 16.5 +02.6	S	01 46.6 +00.0		45 10.4 +02.3	S	16 21.3 +00.0		21									
22	298 15.1 +03.0	N	24 24.5 +00.1		22 19.1 +02.5	S	01 46.6 +00.0		60 12.7 +02.4	S	16 21.3 +00.0		22									
23	313 18.1 +03.0	N	24 24.6 +00.1		37 21.6 +02.6	S	01 46.6 +00.1		75 15.1 +02.4	S	16 21.3 +00.0		23									
<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	00'4	00'4	00'4	00'4	00'4	00'4		SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3		HP	00'0	00'0	00'0	00'0	00'0	00'0		HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	276°	276°	276°	276°	276°	276°		SHA	000°	000°	000°	000°	000°	000°		SHA	038°	038°	038°	038°	038°	038°
Greenwich Culmination Time: 02:10								Greenwich Culmination Time: 20:30								Greenwich Culmination Time: 17:59						

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 57.2 -00.1 S 17 53.6 +00.7	178 24.9 -00.7 S 18 54.1 +00.9	308 49.6 -31.0 N 27 23.7 -01.3	00									
01	198 57.1 -00.1 S 17 54.3 +00.7	193 24.2 -00.8 S 18 55.0 +00.8	323 18.6 -31.0 N 27 22.4 -01.5	01									
02	213 57.0 -00.1 S 17 55.0 +00.6	208 23.4 -00.7 S 18 55.8 +00.8	337 47.6 -30.9 N 27 20.9 -01.6	02									
03	228 56.9 -00.1 S 17 55.6 +00.7	223 22.7 -00.7 S 18 56.6 +00.9	352 16.7 -30.9 N 27 19.3 -01.8	03									
04	243 56.8 +00.0 S 17 56.3 +00.7	238 22.0 -00.8 S 18 57.5 +00.8	6 45.8 -30.9 N 27 17.5 -01.9	04									
05	258 56.8 -00.1 S 17 57.0 +00.6	253 21.2 -00.7 S 18 58.3 +00.8	21 14.9 -30.9 N 27 15.6 -02.0	05									
06	273 56.7 -00.1 S 17 57.6 +00.7	268 20.5 -00.7 S 18 59.1 +00.8	35 44.0 -30.8 N 27 13.6 -02.2	06									
07	288 56.6 -00.1 S 17 58.3 +00.6	283 19.8 -00.8 S 18 59.9 +00.9	50 13.2 -30.8 N 27 11.4 -02.2	07									
08	303 56.5 -00.1 S 17 58.9 +00.7	298 19.0 -00.7 S 19 00.8 +00.8	64 42.4 -30.7 N 27 09.2 -02.4	08									
09	318 56.4 -00.1 S 17 59.6 +00.7	313 18.3 -00.7 S 19 01.6 +00.8	79 11.7 -30.8 N 27 06.8 -02.6	09									
10	333 56.3 -00.1 S 18 00.3 +00.6	328 17.6 -00.8 S 19 02.4 +00.8	93 40.9 -30.6 N 27 04.2 -02.7	10									
11	348 56.2 +00.0 S 18 00.9 +00.7	343 16.8 -00.7 S 19 03.2 +00.9	108 10.3 -30.7 N 27 01.5 -02.7	11									
12	3 56.2 -00.1 S 18 01.6 +00.7	358 16.1 -00.8 S 19 04.1 +00.8	122 39.6 -30.6 N 26 58.8 -03.0	12									
13	18 56.1 -00.1 S 18 02.3 +00.6	13 15.3 -00.7 S 19 04.9 +00.8	137 09.0 -30.6 N 26 55.8 -03.0	13									
14	33 56.0 -00.1 S 18 02.9 +00.7	28 14.6 -00.7 S 19 05.7 +00.8	151 38.4 -30.5 N 26 52.8 -03.2	14									
15	48 55.9 -00.1 S 18 03.6 +00.6	43 13.9 -00.8 S 19 06.5 +00.8	166 07.9 -30.5 N 26 49.6 -03.3	15									
16	63 55.8 -00.1 S 18 04.2 +00.7	58 13.1 -00.7 S 19 07.3 +00.9	180 37.4 -30.5 N 26 46.3 -03.4	16									
17	78 55.7 -00.1 S 18 04.9 +00.7	73 12.4 -00.8 S 19 08.2 +00.8	195 06.9 -30.4 N 26 42.9 -03.6	17									
18	93 55.6 -00.1 S 18 05.6 +00.6	88 11.6 -00.7 S 19 09.0 +00.8	209 36.5 -30.3 N 26 39.3 -03.7	18									
19	108 55.5 -00.1 S 18 06.2 +00.7	103 10.9 -00.8 S 19 09.8 +00.8	224 06.2 -30.4 N 26 35.6 -03.8	19									
20	123 55.4 -00.1 S 18 06.9 +00.6	118 10.1 -00.7 S 19 10.6 +00.8	238 35.8 -30.3 N 26 31.8 -03.9	20									
21	138 55.3 +00.0 S 18 07.5 +00.7	133 09.4 -00.7 S 19 11.4 +00.8	253 05.5 -30.2 N 26 27.9 -04.1	21									
22	153 55.3 -00.1 S 18 08.2 +00.6	148 08.7 -00.8 S 19 12.2 +00.8	267 35.3 -30.2 N 26 23.8 -04.2	22									
23	168 55.2 -00.1 S 18 08.8 +00.7	163 07.9 -00.7 S 19 13.0 +00.9	282 05.1 -30.2 N 26 19.6 -04.3	23									
UT 02 06 10 14 18 22	SD 16'2 16'2 16'2 16'2 16'2 16'2	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 14'7								
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 132° 132° 131° 131° 131° 131°	SHA 126° 126° 126° 126° 125° 125°	SHA 256° 253° 251° 249° 247° 245°								
Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 12:06			Greenwich Culmination Time: 03:31							

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	328 21.1 +03.0 N 24 24.7 +00.1	52 24.2 +02.5 S 01 46.7 +00.0	90 17.5 +02.4 S 16 21.3 -00.1	00									
01	343 24.1 +03.0 N 24 24.8 +00.1	67 26.7 +02.6 S 01 46.7 +00.0	105 19.9 +02.3 S 16 21.2 +00.0	01									
02	358 27.1 +03.0 N 24 24.9 +00.1	82 29.3 +02.6 S 01 46.7 +00.1	120 22.2 +02.4 S 16 21.2 +00.0	02									
03	13 30.1 +03.0 N 24 25.0 +00.1	97 31.9 +02.5 S 01 46.8 +00.0	135 24.6 +02.4 S 16 21.2 -00.1	03									
04	28 33.1 +03.0 N 24 25.1 +00.1	112 34.4 +02.6 S 01 46.8 +00.0	150 27.0 +02.4 S 16 21.1 +00.0	04									
05	43 36.1 +03.0 N 24 25.2 +00.1	127 37.0 +02.5 S 01 46.8 +00.0	165 29.4 +02.4 S 16 21.1 +00.0	05									
06	58 39.1 +03.0 N 24 25.3 +00.1	142 39.5 +02.6 S 01 46.8 +00.1	180 31.8 +02.3 S 16 21.1 -00.1	06									
07	73 42.1 +03.1 N 24 25.4 +00.1	157 42.1 +02.5 S 01 46.9 +00.0	195 34.1 +02.4 S 16 21.0 +00.0	07									
08	88 45.2 +03.0 N 24 25.5 +00.2	172 44.6 +02.6 S 01 46.9 +00.0	210 36.5 +02.4 S 16 21.0 +00.0	08									
09	103 48.2 +03.0 N 24 25.7 +00.1	187 47.2 +02.5 S 01 46.9 +00.0	225 38.9 +02.4 S 16 21.0 +00.0	09									
10	118 51.2 +03.0 N 24 25.8 +00.1	202 49.7 +02.6 S 01 46.9 +00.1	240 41.3 +02.3 S 16 21.0 -00.1	10									
11	133 54.2 +03.0 N 24 25.9 +00.1	217 52.3 +02.5 S 01 47.0 +00.0	255 43.6 +02.4 S 16 20.9 +00.0	11									
12	148 57.2 +03.1 N 24 26.0 +00.1	232 54.8 +02.6 S 01 47.0 +00.0	270 46.0 +02.4 S 16 20.9 +00.0	12									
13	164 00.3 +03.0 N 24 26.1 +00.1	247 57.4 +02.5 S 01 47.0 +00.0	285 48.4 +02.4 S 16 20.9 -00.1	13									
14	179 03.3 +03.0 N 24 26.2 +00.1	262 59.9 +02.6 S 01 47.0 +00.1	300 50.8 +02.3 S 16 20.8 +00.0	14									
15	194 06.3 +03.1 N 24 26.3 +00.1	278 02.5 +02.5 S 01 47.1 +00.0	315 53.1 +02.4 S 16 20.8 +00.0	15									
16	209 09.4 +03.0 N 24 26.4 +00.1	293 05.0 +02.6 S 01 47.1 +00.0	330 55.5 +02.4 S 16 20.8 -00.1	16									
17	224 12.4 +03.0 N 24 26.5 +00.1	308 07.6 +02.5 S 01 47.1 +00.0	345 57.9 +02.4 S 16 20.7 +00.0	17									
18	239 15.4 +03.1 N 24 26.6 +00.1	323 10.1 +02.6 S 01 47.1 +00.1	1 00.3 +02.3 S 16 20.7 +00.0	18									
19	254 18.5 +03.0 N 24 26.7 +00.1	338 12.7 +02.5 S 01 47.2 +00.0	16 02.6 +02.4 S 16 20.7 -00.1	19									
20	269 21.5 +03.0 N 24 26.8 +00.1	353 15.2 +02.6 S 01 47.2 +00.0	31 05.0 +02.4 S 16 20.6 +00.0	20									
21	284 24.5 +03.1 N 24 26.9 +00.1	8 17.8 +02.5 S 01 47.2 +00.0	46 07.4 +02.4 S 16 20.6 +00.0	21									
22	299 27.6 +03.0 N 24 27.0 +00.1	23 20.3 +02.6 S 01 47.2 +00.1	61 09.8 +02.3 S 16 20.6 -00.1	22									
23	314 30.6 +03.1 N 24 27.1 +00.1	38 22.9 +02.5 S 01 47.3 +00.0	76 12.1 +02.4 S 16 20.5 +00.0	23									
UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT 02 06 10 14 18 22	SD 00'4 00'4 00'4 00'4 00'4 00'4	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1								
HP 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 276° 276° 276° 276° 276° 276°	SHA 000° 000° 000° 000° 000° 000°	SHA 038° 038° 038° 038° 038° 038°								
Greenwich Culmination Time: 02:06			Greenwich Culmination Time: 20:26			Greenwich Culmination Time: 17:55							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 55.1 -00.1	S	18 09.5 +00.6	178 07.2 -00.8	S	19 13.9 +00.8	296 34.9 -30.1	N	26 15.3 -04.4	00			
01	198 55.0 -00.1	S	18 10.1 +00.7	193 06.4 -00.7	S	19 14.7 +00.8	311 04.8 -30.0	N	26 10.9 -04.5	01			
02	213 54.9 -00.1	S	18 10.8 +00.6	208 05.7 -00.8	S	19 15.5 +00.8	325 34.8 -30.1	N	26 06.4 -04.7	02			
03	228 54.8 -00.1	S	18 11.4 +00.7	223 04.9 -00.7	S	19 16.3 +00.8	340 04.7 -29.9	N	26 01.7 -04.8	03			
04	243 54.7 -00.1	S	18 12.1 +00.7	238 04.2 -00.8	S	19 17.1 +00.8	354 34.8 -29.9	N	25 56.9 -04.9	04			
05	258 54.6 -00.1	S	18 12.8 +00.6	253 03.4 -00.7	S	19 17.9 +00.8	9 04.9 -29.9	N	25 52.0 -05.0	05			
06	273 54.5 -00.1	S	18 13.4 +00.7	268 02.7 -00.8	S	19 18.7 +00.8	23 35.0 -29.8	N	25 47.0 -05.2	06			
07	288 54.4 -00.1	S	18 14.1 +00.6	283 01.9 -00.7	S	19 19.5 +00.8	38 05.2 -29.8	N	25 41.8 -05.2	07			
08	303 54.3 -00.1	S	18 14.7 +00.7	298 01.2 -00.8	S	19 20.3 +00.8	52 35.4 -29.7	N	25 36.6 -05.4	08			
09	318 54.2 -00.1	S	18 15.4 +00.6	313 00.4 -00.7	S	19 21.1 +00.8	67 05.7 -29.7	N	25 31.2 -05.5	09			
10	333 54.1 -00.1	S	18 16.0 +00.7	327 59.7 -00.8	S	19 21.9 +00.8	81 36.0 -29.7	N	25 25.7 -05.6	10			
11	348 54.0 -00.1	S	18 16.7 +00.6	342 58.9 -00.7	S	19 22.7 +00.8	96 06.3 -29.5	N	25 20.1 -05.7	11			
12	3 53.9 -00.1	S	18 17.3 +00.6	357 58.2 -00.8	S	19 23.5 +00.8	110 36.8 -29.5	N	25 14.4 -05.9	12			
13	18 53.8 -00.1	S	18 17.9 +00.7	12 57.4 -00.7	S	19 24.3 +00.8	125 07.3 -29.5	N	25 08.5 -05.9	13			
14	33 53.7 -00.1	S	18 18.6 +00.6	27 56.7 -00.8	S	19 25.1 +00.8	139 37.8 -29.4	N	25 02.6 -06.1	14			
15	48 53.6 -00.1	S	18 19.2 +00.7	42 55.9 -00.7	S	19 25.9 +00.8	154 08.4 -29.4	N	24 56.5 -06.2	15			
16	63 53.5 -00.1	S	18 19.9 +00.6	57 55.2 -00.8	S	19 26.7 +00.8	168 39.0 -29.3	N	24 50.3 -06.3	16			
17	78 53.4 -00.1	S	18 20.5 +00.7	72 54.4 -00.7	S	19 27.5 +00.8	183 09.7 -29.3	N	24 44.0 -06.4	17			
18	93 53.3 -00.1	S	18 21.2 +00.6	87 53.7 -00.8	S	19 28.3 +00.8	197 40.4 -29.2	N	24 37.6 -06.5	18			
19	108 53.2 -00.1	S	18 21.8 +00.7	102 52.9 -00.8	S	19 29.1 +00.8	212 11.2 -29.2	N	24 31.1 -06.6	19			
20	123 53.1 -00.1	S	18 22.5 +00.6	117 52.1 -00.7	S	19 29.9 +00.8	226 42.0 -29.1	N	24 24.5 -06.8	20			
21	138 53.0 -00.1	S	18 23.1 +00.7	132 51.4 -00.8	S	19 30.7 +00.8	241 12.9 -29.0	N	24 17.7 -06.8	21			
22	153 52.9 -00.1	S	18 23.8 +00.6	147 50.6 -00.7	S	19 31.5 +00.8	255 43.9 -29.0	N	24 10.9 -07.0	22			
23	168 52.8 -00.1	S	18 24.4 +00.6	162 49.9 -00.8	S	19 32.3 +00.8	270 14.9 -29.0	N	24 03.9 -07.0	23			

**UT 02 06 10 14 18 22**  
SD 16'2 16'2 16'2 16'2 16'2 16'2  
HP 00'1 00'1 00'1 00'1 00'1 00'1  
SHA 131° 131° 130° 130° 130° 130°  
Greenwich Culmination Time: 11:44

**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 125° 125° 125° 124° 124° 124°  
Greenwich Culmination Time: 12:08

**UT 02 06 10 14 18 22**  
SD 14'7 14'7 14'7 14'7 14'8 14'8  
HP 54'1 54'1 54'1 54'1 54'1 54'2  
SHA 242° 240° 238° 236° 234° 232°  
Greenwich Culmination Time: 04:22

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	329 33.7 +03.0	N	24 27.2 +00.1	53 25.4 +02.6	S	01 47.3 +00.0	91 14.5 +02.4	S	16 20.5 +00.0	00			
01	344 36.7 +03.0	N	24 27.3 +00.1	68 28.0 +02.5	S	01 47.3 +00.0	106 16.9 +02.4	S	16 20.5 +00.0	01			
02	359 39.7 +03.1	N	24 27.4 +00.1	83 30.5 +02.6	S	01 47.3 +00.1	121 19.3 +02.3	S	16 20.5 -00.1	02			
03	14 42.8 +03.0	N	24 27.5 +00.1	98 33.1 +02.5	S	01 47.4 +00.0	136 21.6 +02.4	S	16 20.4 +00.0	03			
04	29 45.8 +03.1	N	24 27.6 +00.2	113 35.6 +02.5	S	01 47.4 +00.0	151 24.0 +02.4	S	16 20.4 +00.0	04			
05	44 48.9 +03.0	N	24 27.8 +00.1	128 38.1 +02.6	S	01 47.4 +00.0	166 26.4 +02.3	S	16 20.4 -00.1	05			
06	59 51.9 +03.1	N	24 27.9 +00.1	143 40.7 +02.5	S	01 47.4 +00.1	181 28.7 +02.4	S	16 20.3 +00.0	06			
07	74 55.0 +03.1	N	24 28.0 +00.1	158 43.2 +02.6	S	01 47.5 +00.0	196 31.1 +02.4	S	16 20.3 +00.0	07			
08	89 58.1 +03.0	N	24 28.1 +00.1	173 45.8 +02.5	S	01 47.5 +00.0	211 33.5 +02.4	S	16 20.3 -00.1	08			
09	105 01.1 +03.1	N	24 28.2 +00.1	188 48.3 +02.6	S	01 47.5 +00.0	226 35.9 +02.3	S	16 20.2 +00.0	09			
10	120 04.2 +03.0	N	24 28.3 +00.1	203 50.9 +02.5	S	01 47.5 +00.1	241 38.2 +02.4	S	16 20.2 +00.0	10			
11	135 07.2 +03.1	N	24 28.4 +00.1	218 53.4 +02.6	S	01 47.6 +00.0	256 40.6 +02.4	S	16 20.2 -00.1	11			
12	150 10.3 +03.1	N	24 28.5 +00.1	233 56.0 +02.5	S	01 47.6 +00.0	271 43.0 +02.3	S	16 20.1 +00.0	12			
13	165 13.4 +03.0	N	24 28.6 +00.1	248 58.5 +02.5	S	01 47.6 +00.0	286 45.3 +02.4	S	16 20.1 +00.0	13			
14	180 16.4 +03.1	N	24 28.7 +00.1	264 01.0 +02.6	S	01 47.6 +00.0	301 47.7 +02.4	S	16 20.1 -00.1	14			
15	195 19.5 +03.1	N	24 28.8 +00.1	279 03.6 +02.5	S	01 47.6 +00.1	316 50.1 +02.4	S	16 20.0 +00.0	15			
16	210 22.6 +03.0	N	24 28.9 +00.1	294 06.1 +02.6	S	01 47.7 +00.0	331 52.5 +02.3	S	16 20.0 +00.0	16			
17	225 25.6 +03.1	N	24 29.0 +00.1	309 08.7 +02.5	S	01 47.7 +00.0	346 54.8 +02.4	S	16 20.0 -00.1	17			
18	240 28.7 +03.1	N	24 29.1 +00.1	324 11.2 +02.6	S	01 47.7 +00.0	1 57.2 +02.4	S	16 19.9 +00.0	18			
19	255 31.8 +03.0	N	24 29.2 +00.1	339 13.8 +02.5	S	01 47.7 +00.1	16 59.6 +02.3	S	16 19.9 +00.0	19			
20	270 34.8 +03.1	N	24 29.3 +00.1	354 16.3 +02.5	S	01 47.8 +00.0	32 01.9 +02.4	S	16 19.9 -00.1	20			
21	285 37.9 +03.1	N	24 29.4 +00.1	9 18.8 +02.6	S	01 47.8 +00.0	47 04.3 +02.4	S	16 19.8 +00.0	21			
22	300 41.0 +03.1	N	24 29.5 +00.1	24 21.4 +02.5	S	01 47.8 +00.0	62 06.7 +02.4	S	16 19.8 +00.0	22			
23	315 44.1 +03.1	N	24 29.6 +00.1	39 23.9 +02.6	S	01 47.8 +00.0	77 09.1 +02.3	S	16 19.8 +00.0	23			

**UT 02 06 10 14 18 22**  
SD 00'1 00'1 00'1 00'1 00'1 00'1  
HP 00'3 00'3 00'3 00'3 00'3 00'3  
SHA 277° 277° 277° 277° 277° 277°  
Greenwich Culmination Time: 02:01

**UT 02 06 10 14 18 22**  
SD 00'4 00'4 00'4 00'4 00'4 00'4  
HP 00'0 00'0 00'0 00'0 00'0 00'0  
SHA 000° 000° 000° 000° 000° 000°  
Greenwich Culmination Time: 20:22

**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 038° 038° 038° 038° 038° 038°  
Greenwich Culmination Time: 17:52

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	183 52.7 -00.1	S	18 25.0 +00.7	177 49.1 -00.7	S	19 33.1 +00.8	284 45.9 -28.9	N	23 56.9 -07.2				
01	198 52.6 -00.1	S	18 25.7 +00.6	192 48.4 -00.8	S	19 33.9 +00.7	299 17.0 -28.8	N	23 49.7 -07.3				
02	213 52.5 -00.1	S	18 26.3 +00.7	207 47.6 -00.8	S	19 34.6 +00.8	313 48.2 -28.8	N	23 42.4 -07.4				
03	228 52.4 -00.1	S	18 27.0 +00.6	222 46.8 -00.7	S	19 35.4 +00.8	328 19.4 -28.7	N	23 35.0 -07.5				
04	243 52.3 -00.1	S	18 27.6 +00.6	237 46.1 -00.8	S	19 36.2 +00.8	342 50.7 -28.7	N	23 27.5 -07.6				
05	258 52.2 -00.1	S	18 28.2 +00.7	252 45.3 -00.7	S	19 37.0 +00.8	357 22.0 -28.6	N	23 19.9 -07.7				
06	273 52.1 -00.1	S	18 28.9 +00.6	267 44.6 -00.8	S	19 37.8 +00.8	11 53.4 -28.6	N	23 12.2 -07.8				
07	288 52.0 -00.1	S	18 29.5 +00.6	282 43.8 -00.8	S	19 38.6 +00.7	26 24.8 -28.5	N	23 04.4 -07.9				
08	303 51.9 -00.1	S	18 30.1 +00.7	297 43.0 -00.7	S	19 39.3 +00.8	40 56.3 -28.5	N	22 56.5 -08.0				
09	318 51.8 -00.1	S	18 30.8 +00.6	312 42.3 -00.8	S	19 40.1 +00.8	55 27.8 -28.4	N	22 48.5 -08.1				
10	333 51.7 -00.1	S	18 31.4 +00.7	327 41.5 -00.8	S	19 40.9 +00.8	69 59.4 -28.3	N	22 40.4 -08.2				
11	348 51.6 -00.1	S	18 32.1 +00.6	342 40.7 -00.7	S	19 41.7 +00.8	84 31.1 -28.3	N	22 32.2 -08.3				
12	3 51.5 -00.1	S	18 32.7 +00.6	357 40.0 -00.8	S	19 42.5 +00.7	99 02.8 -28.3	N	22 23.9 -08.4				
13	18 51.4 -00.1	S	18 33.3 +00.7	12 39.2 -00.8	S	19 43.2 +00.8	113 34.5 -28.2	N	22 15.5 -08.5				
14	33 51.3 -00.1	S	18 34.0 +00.6	27 38.4 -00.7	S	19 44.0 +00.8	128 06.3 -28.1	N	22 07.0 -08.6				
15	48 51.2 -00.1	S	18 34.6 +00.6	42 37.7 -00.8	S	19 44.8 +00.8	142 38.2 -28.1	N	21 58.4 -08.7				
16	63 51.1 -00.1	S	18 35.2 +00.7	57 36.9 -00.8	S	19 45.6 +00.7	157 10.1 -28.1	N	21 49.7 -08.8				
17	78 51.0 -00.1	S	18 35.9 +00.6	72 36.1 -00.7	S	19 46.3 +00.8	171 42.0 -27.9	N	21 40.9 -08.9				
18	93 50.9 -00.1	S	18 36.5 +00.6	87 35.4 -00.8	S	19 47.1 +00.8	186 14.1 -28.0	N	21 32.0 -09.0				
19	108 50.8 -00.2	S	18 37.1 +00.6	102 34.6 -00.8	S	19 47.9 +00.8	200 46.1 -27.9	N	21 23.0 -09.1				
20	123 50.6 -00.1	S	18 37.7 +00.7	117 33.8 -00.7	S	19 48.7 +00.7	215 18.2 -27.8	N	21 13.9 -09.2				
21	138 50.5 -00.1	S	18 38.4 +00.6	132 33.1 -00.8	S	19 49.4 +00.8	229 50.4 -27.8	N	21 04.7 -09.2				
22	153 50.4 -00.1	S	18 39.0 +00.6	147 32.3 -00.8	S	19 50.2 +00.8	244 22.6 -27.7	N	20 55.5 -09.4				
23	168 50.3 -00.1	S	18 39.6 +00.7	162 31.5 -00.7	S	19 51.0 +00.7	258 54.9 -27.7	N	20 46.1 -09.4				
	<b>UT 02 06 10 14 18 22</b> SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 130° 130° 129° 129° 129° 129° Greenwich Culmination Time: 11:44	<b>UT 02 06 10 14 18 22</b> 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 124° 123° 123° 123° 123° 123° Greenwich Culmination Time: 12:09	<b>UT 02 06 10 14 18 22</b> SD 14'8 14'8 14'8 14'8 14'8 14'8 HP 54'2 54'2 54'2 54'3 54'3 54'4 SHA 230° 228° 226° 223° 221° 219° Greenwich Culmination Time: 05:10										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	330 47.2 +03.0	N	24 29.7 +00.1	54 26.5 +02.5	S	01 47.8 +00.1	92 11.4 +02.4	S	16 19.8 -00.1				
01	345 50.2 +03.1	N	24 29.8 +00.1	69 29.0 +02.5	S	01 47.9 +00.0	107 13.8 +02.4	S	16 19.7 +00.0				
02	0 53.3 +03.1	N	24 29.9 +00.1	84 31.5 +02.6	S	01 47.9 +00.0	122 16.2 +02.3	S	16 19.7 +00.0				
03	15 56.4 +03.1	N	24 30.0 +00.1	99 34.1 +02.5	S	01 47.9 +00.0	137 18.5 +02.4	S	16 19.7 -00.1				
04	30 59.5 +03.1	N	24 30.1 +00.1	114 36.6 +02.5	S	01 47.9 +00.0	152 20.9 +02.4	S	16 19.6 +00.0				
05	46 02.6 +03.1	N	24 30.2 +00.1	129 39.1 +02.6	S	01 47.9 +00.1	167 23.3 +02.3	S	16 19.6 +00.0				
06	61 05.7 +03.1	N	24 30.3 +00.1	144 41.7 +02.5	S	01 48.0 +00.0	182 25.6 +02.4	S	16 19.6 -00.1				
07	76 08.8 +03.1	N	24 30.4 +00.1	159 44.2 +02.6	S	01 48.0 +00.0	197 28.0 +02.4	S	16 19.5 +00.0				
08	91 11.9 +03.1	N	24 30.5 +00.1	174 46.8 +02.5	S	01 48.0 +00.0	212 30.4 +02.3	S	16 19.5 +00.0				
09	106 15.0 +03.1	N	24 30.6 +00.1	189 49.3 +02.5	S	01 48.0 +00.0	227 32.7 +02.4	S	16 19.5 -00.1				
10	121 18.1 +03.1	N	24 30.7 +00.1	204 51.8 +02.6	S	01 48.0 +00.1	242 35.1 +02.4	S	16 19.4 +00.0				
11	136 21.2 +03.1	N	24 30.8 +00.1	219 54.4 +02.5	S	01 48.1 +00.0	257 37.5 +02.3	S	16 19.4 +00.0				
12	151 24.3 +03.1	N	24 30.9 +00.1	234 56.9 +02.5	S	01 48.1 +00.0	272 39.8 +02.4	S	16 19.4 -00.1				
13	166 27.4 +03.1	N	24 31.0 +00.1	249 59.4 +02.6	S	01 48.1 +00.0	287 42.2 +02.4	S	16 19.3 +00.0				
14	181 30.5 +03.1	N	24 31.1 +00.1	265 02.0 +02.5	S	01 48.1 +00.0	302 44.6 +02.4	S	16 19.3 +00.0				
15	196 33.6 +03.1	N	24 31.2 +00.1	280 04.5 +02.5	S	01 48.1 +00.0	317 47.0 +02.3	S	16 19.3 -00.1				
16	211 36.7 +03.1	N	24 31.3 +00.1	295 07.0 +02.6	S	01 48.1 +00.1	332 49.3 +02.4	S	16 19.2 +00.0				
17	226 39.8 +03.1	N	24 31.4 +00.1	310 09.6 +02.5	S	01 48.2 +00.0	347 51.7 +02.4	S	16 19.2 +00.0				
18	241 42.9 +03.1	N	24 31.5 +00.1	325 12.1 +02.5	S	01 48.2 +00.0	2 54.1 +02.3	S	16 19.2 -00.1				
19	256 46.0 +03.1	N	24 31.6 +00.1	340 14.6 +02.6	S	01 48.2 +00.0	17 56.4 +02.4	S	16 19.1 +00.0				
20	271 49.1 +03.1	N	24 31.7 +00.1	355 17.2 +02.5	S	01 48.2 +00.0	32 58.8 +02.4	S	16 19.1 +00.0				
21	286 52.2 +03.1	N	24 31.8 +00.1	10 19.7 +02.5	S	01 48.2 +00.1	48 01.2 +02.3	S	16 19.1 -00.1				
22	301 55.3 +03.2	N	24 31.9 +00.1	25 22.2 +02.6	S	01 48.3 +00.0	63 03.5 +02.4	S	16 19.0 +00.0				
23	316 58.5 +03.1	N	24 32.0 +00.1	40 24.8 +02.5	S	01 48.3 +00.0	78 05.9 +02.3	S	16 19.0 +00.0				
	<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 277° 277° 277° 277° 277° 277° Greenwich Culmination Time: 01:56	<b>UT 02 06 10 14 18 22</b> SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 000° 000° 000° 000° 000° 000° Greenwich Culmination Time: 20:18	<b>UT 02 06 10 14 18 22</b> 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 038° 038° 038° 038° 038° 038° Greenwich Culmination Time: 17:48										

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b> <span style="float:right">A: 76%</span>				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	183	50.2	-00.1	S 18 40.3 +00.6	177	30.8	-00.8	S 19 51.7 +00.8	273	27.2	-27.6	N 20 36.7 -09.6	00							
01	198	50.1	-00.1	S 18 40.9 +00.6	192	30.0	-00.8	S 19 52.5 +00.8	287	59.6	-27.6	N 20 27.1 -09.6	01							
02	213	50.0	-00.1	S 18 41.5 +00.6	207	29.2	-00.8	S 19 53.3 +00.7	302	32.0	-27.6	N 20 17.5 -09.7	02							
03	228	49.9	-00.1	S 18 42.1 +00.7	222	28.4	-00.7	S 19 54.0 +00.8	317	04.4	-27.4	N 20 07.8 -09.9	03							
04	243	49.8	-00.1	S 18 42.8 +00.6	237	27.7	-00.8	S 19 54.8 +00.7	331	37.0	-27.5	N 19 57.9 -09.9	04							
05	258	49.7	-00.2	S 18 43.4 +00.6	252	26.9	-00.8	S 19 55.5 +00.8	346	09.5	-27.4	N 19 48.0 -10.0	05							
06	273	49.5	-00.1	S 18 44.0 +00.6	267	26.1	-00.8	S 19 56.3 +00.8	0	42.1	-27.3	N 19 38.0 -10.0	06							
07	288	49.4	-00.1	S 18 44.6 +00.7	282	25.3	-00.7	S 19 57.1 +00.7	15	14.8	-27.3	N 19 28.0 -10.2	07							
08	303	49.3	-00.1	S 18 45.3 +00.6	297	24.6	-00.8	S 19 57.8 +00.8	29	47.5	-27.3	N 19 17.8 -10.2	08							
09	318	49.2	-00.1	S 18 45.9 +00.6	312	23.8	-00.8	S 19 58.6 +00.7	44	20.2	-27.2	N 19 07.6 -10.4	09							
10	333	49.1	-00.1	S 18 46.5 +00.6	327	23.0	-00.8	S 19 59.3 +00.8	58	53.0	-27.1	N 18 57.2 -10.4	10							
11	348	49.0	-00.1	S 18 47.1 +00.6	342	22.2	-00.7	S 20 00.1 +00.8	73	25.9	-27.2	N 18 46.8 -10.5	11							
12	3	48.9	-00.2	S 18 47.7 +00.7	357	21.5	-00.8	S 20 00.9 +00.7	87	58.7	-27.0	N 18 36.3 -10.6	12							
13	18	48.7	-00.1	S 18 48.4 +00.6	12	20.7	-00.8	S 20 01.6 +00.8	102	31.7	-27.1	N 18 25.7 -10.6	13							
14	33	48.6	-00.1	S 18 49.0 +00.6	27	19.9	-00.8	S 20 02.4 +00.7	117	04.6	-26.9	N 18 15.1 -10.8	14							
15	48	48.5	-00.1	S 18 49.6 +00.6	42	19.1	-00.8	S 20 03.1 +00.8	131	37.7	-27.0	N 18 04.3 -10.8	15							
16	63	48.4	-00.1	S 18 50.2 +00.6	57	18.3	-00.7	S 20 03.9 +00.7	146	10.7	-26.9	N 17 53.5 -10.9	16							
17	78	48.3	-00.1	S 18 50.8 +00.7	72	17.6	-00.8	S 20 04.6 +00.8	160	43.8	-26.9	N 17 42.6 -11.0	17							
18	93	48.2	-00.2	S 18 51.5 +00.6	87	16.8	-00.8	S 20 05.4 +00.7	175	16.9	-26.8	N 17 31.6 -11.1	18							
19	108	48.0	-00.1	S 18 52.1 +00.6	102	16.0	-00.8	S 20 06.1 +00.8	189	50.1	-26.8	N 17 20.5 -11.1	19							
20	123	47.9	-00.1	S 18 52.7 +00.6	117	15.2	-00.8	S 20 06.9 +00.7	204	23.3	-26.7	N 17 09.4 -11.3	20							
21	138	47.8	-00.1	S 18 53.3 +00.6	132	14.4	-00.7	S 20 07.6 +00.8	218	56.6	-26.7	N 16 58.1 -11.3	21							
22	153	47.7	-00.1	S 18 53.9 +00.6	147	13.7	-00.8	S 20 08.4 +00.7	233	29.9	-26.7	N 16 46.8 -11.3	22							
23	168	47.6	-00.1	S 18 54.5 +00.7	162	12.9	-00.8	S 20 09.1 +00.7	248	03.2	-26.6	N 16 35.5 -11.5	23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	16'2	16'2	16'2	16'2	16'2	16'2			SD	00'1	00'1	00'1	00'1	00'1	00'1					
HP	00'1	00'1	00'1	00'1	00'1	00'1			HP	00'1	00'1	00'1	00'1	00'1	00'1					
SHA	129°	129°	128°	128°	128°	128°			SHA	122°	122°	122°	122°	121°	121°					
Greenwich Culmination Time: 11:44							Greenwich Culmination Time: 12:10							Greenwich Culmination Time: 05:57						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	332	01.6	+03.1	N 24 32.1 +00.1	55	27.3	+02.5	S 01 48.3 +00.0	93	08.2	+02.4	S 16 19.0 -00.1	00							
01	347	04.7	+03.1	N 24 32.2 +00.1	70	29.8	+02.6	S 01 48.3 +00.0	108	10.6	+02.4	S 16 18.9 +00.0	01							
02	2	07.8	+03.1	N 24 32.3 +00.1	85	32.4	+02.5	S 01 48.3 +00.0	123	13.0	+02.3	S 16 18.9 +00.0	02							
03	17	10.9	+03.2	N 24 32.4 +00.1	100	34.9	+02.5	S 01 48.3 +00.1	138	15.3	+02.4	S 16 18.9 -00.1	03							
04	32	14.1	+03.1	N 24 32.5 +00.1	115	37.4	+02.6	S 01 48.4 +00.0	153	17.7	+02.4	S 16 18.8 +00.0	04							
05	47	17.2	+03.1	N 24 32.6 +00.1	130	40.0	+02.5	S 01 48.4 +00.0	168	20.1	+02.3	S 16 18.8 +00.0	05							
06	62	20.3	+03.2	N 24 32.7 +00.1	145	42.5	+02.5	S 01 48.4 +00.0	183	22.4	+02.4	S 16 18.8 -00.1	06							
07	77	23.5	+03.1	N 24 32.8 +00.1	160	45.0	+02.6	S 01 48.4 +00.0	198	24.8	+02.4	S 16 18.7 +00.0	07							
08	92	26.6	+03.1	N 24 32.9 +00.1	175	47.6	+02.5	S 01 48.4 +00.0	213	27.2	+02.3	S 16 18.7 -00.1	08							
09	107	29.7	+03.2	N 24 33.0 +00.1	190	50.1	+02.5	S 01 48.4 +00.1	228	29.5	+02.4	S 16 18.6 +00.0	09							
10	122	32.9	+03.1	N 24 33.1 +00.1	205	52.6	+02.5	S 01 48.5 +00.0	243	31.9	+02.4	S 16 18.6 +00.0	10							
11	137	36.0	+03.1	N 24 33.2 +00.1	220	55.1	+02.6	S 01 48.5 +00.0	258	34.3	+02.3	S 16 18.6 -00.1	11							
12	152	39.1	+03.2	N 24 33.3 +00.1	235	57.7	+02.5	S 01 48.5 +00.0	273	36.6	+02.4	S 16 18.5 +00.0	12							
13	167	42.3	+03.1	N 24 33.4 +00.1	251	00.2	+02.5	S 01 48.5 +00.0	288	39.0	+02.4	S 16 18.5 +00.0	13							
14	182	45.4	+03.1	N 24 33.5 +00.1	266	02.7	+02.5	S 01 48.5 +00.0	303	41.4	+02.3	S 16 18.5 -00.1	14							
15	197	48.5	+03.2	N 24 33.6 +00.1	281	05.2	+02.6	S 01 48.5 +00.0	318	43.7	+02.4	S 16 18.4 +00.0	15							
16	212	51.7	+03.1	N 24 33.7 +00.1	296	07.8	+02.5	S 01 48.5 +00.1	333	46.1	+02.3	S 16 18.4 +00.0	16							
17	227	54.8	+03.2	N 24 33.8 +00.1	311	10.3	+02.5	S 01 48.6 +00.0	348	48.4	+02.4	S 16 18.4 -00.1	17							
18	242	58.0	+03.1	N 24 33.9 +00.1	326	12.8	+02.6	S 01 48.6 +00.0	3	50.8	+02.4	S 16 18.3 +00.0	18							
19	258	01.1	+03.2	N 24 34.0 +00.1	341	15.4	+02.5	S 01 48.6 +00.0	18	53.2	+02.3	S 16 18.3 +00.0	19							
20	273	04.3	+03.1	N 24 34.1 +00.1	356	17.9	+02.5	S 01 48.6 +00.0	33	55.5	+02.4	S 16 18.3 -00.1	20							
21	288	07.4	+03.2	N 24 34.2 +00.1	11	20.4	+02.5	S 01 48.6 +00.0	48	57.9	+02.4	S 16 18.2 +00.0	21							
22	303	10.6	+03.1	N 24 34.3 +00.1	26	22.9	+02.6	S 01 48.6 +00.1	64	00.3	+02.3	S 16 18.2 +00.0	22							
23	318	13.7	+03.2	N 24 34.4 +00.1	41	25.5	+02.5	S 01 48.7 +00.0	79	02.6	+02.4	S 16 18.2 -00.1	23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	00'1	00'1	00'1	00'1	00'1	00'1			SD	00'4	00'4	00'4	00'4	00'4	00'4					
HP	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	277°	277°	277°	277°	277°	277°			SHA	038°	038°	038°	038°	038°	038°					
Greenwich Culmination Time: 01:51							Greenwich Culmination Time: 20:14							Greenwich Culmination Time: 17:44						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 47.5 -00.2	S	18 55.2 +00.6	177 12.1 -00.8	S	20 09.8 +00.8	262 36.6 -26.6	N	16 24.0 -11.5	00			
01	198 47.3 -00.1	S	18 55.8 +00.6	192 11.3 -00.8	S	20 10.6 +00.7	277 10.0 -26.6	N	16 12.5 -11.6	01			
02	213 47.2 -00.1	S	18 56.4 +00.6	207 10.5 -00.8	S	20 11.3 +00.8	291 43.4 -26.5	N	16 00.9 -11.7	02			
03	228 47.1 -00.1	S	18 57.0 +00.6	222 09.7 -00.8	S	20 12.1 +00.7	306 16.9 -26.5	N	15 49.2 -11.8	03			
04	243 47.0 -00.1	S	18 57.6 +00.6	237 08.9 -00.7	S	20 12.8 +00.7	320 50.4 -26.4	N	15 37.4 -11.8	04			
05	258 46.9 -00.2	S	18 58.2 +00.6	252 08.2 -00.8	S	20 13.5 +00.8	335 24.0 -26.5	N	15 25.6 -11.9	05			
06	273 46.7 -00.1	S	18 58.8 +00.6	267 07.4 -00.8	S	20 14.3 +00.7	349 57.5 -26.4	N	15 13.7 -11.9	06			
07	288 46.6 -00.1	S	18 59.4 +00.6	282 06.6 -00.8	S	20 15.0 +00.8	4 31.1 -26.3	N	15 01.8 -12.1	07			
08	303 46.5 -00.1	S	19 00.0 +00.7	297 05.8 -00.8	S	20 15.8 +00.7	19 04.8 -26.4	N	14 49.7 -12.1	08			
09	318 46.4 -00.2	S	19 00.7 +00.6	312 05.0 -00.8	S	20 16.5 +00.7	33 38.4 -26.3	N	14 37.6 -12.1	09			
10	333 46.2 -00.1	S	19 01.3 +00.6	327 04.2 -00.8	S	20 17.2 +00.8	48 12.1 -26.2	N	14 25.5 -12.3	10			
11	348 46.1 -00.1	S	19 01.9 +00.6	342 03.4 -00.8	S	20 18.0 +00.7	62 45.9 -26.3	N	14 13.2 -12.3	11			
12	3 46.0 -00.1	S	19 02.5 +00.6	357 02.6 -00.7	S	20 18.7 +00.7	77 19.6 -26.2	N	14 00.9 -12.4	12			
13	18 45.9 -00.2	S	19 03.1 +00.6	12 01.9 -00.8	S	20 19.4 +00.7	91 53.4 -26.2	N	13 48.5 -12.4	13			
14	33 45.7 -00.1	S	19 03.7 +00.6	27 01.1 -00.8	S	20 20.1 +00.8	106 27.2 -26.2	N	13 36.1 -12.5	14			
15	48 45.6 -00.1	S	19 04.3 +00.6	42 00.3 -00.8	S	20 20.9 +00.7	121 01.0 -26.1	N	13 23.6 -12.6	15			
16	63 45.5 -00.1	S	19 04.9 +00.6	56 59.5 -00.8	S	20 21.6 +00.7	135 34.9 -26.1	N	13 11.0 -12.6	16			
17	78 45.4 -00.2	S	19 05.5 +00.6	71 58.7 -00.8	S	20 22.3 +00.8	150 08.8 -26.1	N	12 58.4 -12.7	17			
18	93 45.2 -00.1	S	19 06.1 +00.6	86 57.9 -00.8	S	20 23.1 +00.7	164 42.7 -26.1	N	12 45.7 -12.8	18			
19	108 45.1 -00.1	S	19 06.7 +00.6	101 57.1 -00.8	S	20 23.8 +00.7	179 16.6 -26.1	N	12 32.9 -12.8	19			
20	123 45.0 -00.1	S	19 07.3 +00.6	116 56.3 -00.8	S	20 24.5 +00.7	193 50.5 -26.0	N	12 20.1 -12.9	20			
21	138 44.9 -00.2	S	19 07.9 +00.6	131 55.5 -00.8	S	20 25.2 +00.7	208 24.5 -26.0	N	12 07.2 -12.9	21			
22	153 44.7 -00.1	S	19 08.5 +00.6	146 54.7 -00.8	S	20 25.9 +00.8	222 58.5 -26.0	N	11 54.3 -13.0	22			
23	168 44.6 -00.1	S	19 09.1 +00.6	161 53.9 -00.8	S	20 26.7 +00.7	237 32.5 -26.0	N	11 41.3 -13.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'2 16'2 16'2 16'2 16'2 16'2			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'9 15'0 15'0 15'0 15'0 15'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'8 54'9 55'0 55'1 55'2 55'3						
	SHA 128° 127° 127° 127° 127° 127°			SHA 121° 121° 121° 120° 120° 120°			SHA 206° 204° 202° 200° 198° 196°						
	Greenwich Culmination Time: 11:44			Greenwich Culmination Time: 12:11			Greenwich Culmination Time: 06:41						

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	333 16.9 +03.1	N	24 34.5 +00.1	56 28.0 +02.5	S	01 48.7 +00.0	94 05.0 +02.3	S	16 18.1 +00.0	00			
01	348 20.0 +03.2	N	24 34.6 +00.1	71 30.5 +02.5	S	01 48.7 +00.0	109 07.3 +02.4	S	16 18.1 +00.0	01			
02	3 23.2 +03.2	N	24 34.7 +00.1	86 33.0 +02.5	S	01 48.7 +00.0	124 09.7 +02.4	S	16 18.1 -00.1	02			
03	18 26.4 +03.1	N	24 34.8 +00.1	101 35.5 +02.6	S	01 48.7 +00.0	139 12.1 +02.3	S	16 18.0 +00.0	03			
04	33 29.5 +03.2	N	24 34.9 +00.1	116 38.1 +02.5	S	01 48.7 +00.0	154 14.4 +02.4	S	16 18.0 +00.0	04			
05	48 32.7 +03.1	N	24 35.0 +00.1	131 40.6 +02.5	S	01 48.7 +00.0	169 16.8 +02.3	S	16 18.0 -00.1	05			
06	63 35.8 +03.2	N	24 35.1 +00.1	146 43.1 +02.5	S	01 48.7 +00.1	184 19.1 +02.4	S	16 17.9 +00.0	06			
07	78 39.0 +03.2	N	24 35.2 +00.1	161 45.6 +02.6	S	01 48.8 +00.0	199 21.5 +02.4	S	16 17.9 -00.1	07			
08	93 42.2 +03.2	N	24 35.3 +00.1	176 48.2 +02.5	S	01 48.8 +00.0	214 23.9 +02.3	S	16 17.8 +00.0	08			
09	108 45.4 +03.1	N	24 35.4 +00.1	191 50.7 +02.5	S	01 48.8 +00.0	229 26.2 +02.4	S	16 17.8 +00.0	09			
10	123 48.5 +03.2	N	24 35.5 +00.1	206 53.2 +02.5	S	01 48.8 +00.0	244 28.6 +02.3	S	16 17.8 -00.1	10			
11	138 51.7 +03.2	N	24 35.6 +00.1	221 55.7 +02.5	S	01 48.8 +00.0	259 30.9 +02.4	S	16 17.7 +00.0	11			
12	153 54.9 +03.1	N	24 35.7 +00.1	236 58.2 +02.6	S	01 48.8 +00.0	274 33.3 +02.4	S	16 17.7 +00.0	12			
13	168 58.0 +03.2	N	24 35.8 +00.1	252 00.8 +02.5	S	01 48.8 +00.0	289 35.7 +02.3	S	16 17.7 -00.1	13			
14	184 01.2 +03.2	N	24 35.9 +00.0	267 03.3 +02.5	S	01 48.8 +00.1	304 38.0 +02.4	S	16 17.6 +00.0	14			
15	199 04.4 +03.2	N	24 35.9 +00.1	282 05.8 +02.5	S	01 48.9 +00.0	319 40.4 +02.3	S	16 17.6 +00.0	15			
16	214 07.6 +03.2	N	24 36.0 +00.1	297 08.3 +02.5	S	01 48.9 +00.0	334 42.7 +02.4	S	16 17.6 -00.1	16			
17	229 10.8 +03.1	N	24 36.1 +00.1	312 10.8 +02.6	S	01 48.9 +00.0	349 45.1 +02.4	S	16 17.5 +00.0	17			
18	244 13.9 +03.2	N	24 36.2 +00.1	327 13.4 +02.5	S	01 48.9 +00.0	4 47.5 +02.3	S	16 17.5 +00.0	18			
19	259 17.1 +03.2	N	24 36.3 +00.1	342 15.9 +02.5	S	01 48.9 +00.0	19 49.8 +02.4	S	16 17.5 -00.1	19			
20	274 20.3 +03.2	N	24 36.4 +00.1	357 18.4 +02.5	S	01 48.9 +00.0	34 52.2 +02.3	S	16 17.4 +00.0	20			
21	289 23.5 +03.2	N	24 36.5 +00.1	12 20.9 +02.5	S	01 48.9 +00.0	49 54.5 +02.4	S	16 17.4 -00.1	21			
22	304 26.7 +03.2	N	24 36.6 +00.1	27 23.4 +02.5	S	01 48.9 +00.0	64 56.9 +02.4	S	16 17.3 +00.0	22			
23	319 29.9 +03.2	N	24 36.7 +00.1	42 25.9 +02.6	S	01 48.9 +00.1	79 59.3 +02.3	S	16 17.3 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'3 00'3 00'3 00'3 00'3 00'3			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 277° 277° 277° 277° 277° 278°			SHA 000° 000° 000° 000° 000° 000°			SHA 038° 038° 038° 038° 038° 038°						
	Greenwich Culmination Time: 01:46			Greenwich Culmination Time: 20:10			Greenwich Culmination Time: 17:40						



<b>Sun</b>					<b>Venus</b>					<b>Moon</b>					A: 82%					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	183	44.5	-00.1	S 19 09.7	+00.6	176	53.1	-00.8	S 20 27.4	+00.7	252	06.5	-26.0	N 11 28.2	-13.1	00				
01	198	44.4	-00.2	S 19 10.3	+00.6	191	52.3	-00.8	S 20 28.1	+00.7	266	40.5	-25.9	N 11 15.1	-13.2	01				
02	213	44.2	-00.1	S 19 10.9	+00.6	206	51.5	-00.8	S 20 28.8	+00.7	281	14.6	-26.0	N 11 01.9	-13.3	02				
03	228	44.1	-00.1	S 19 11.5	+00.6	221	50.7	-00.8	S 20 29.5	+00.8	295	48.6	-25.9	N 10 48.6	-13.3	03				
04	243	44.0	-00.2	S 19 12.1	+00.6	236	49.9	-00.8	S 20 30.3	+00.7	310	22.7	-25.9	N 10 35.3	-13.3	04				
05	258	43.8	-00.1	S 19 12.7	+00.6	251	49.1	-00.8	S 20 31.0	+00.7	324	56.8	-25.9	N 10 22.0	-13.4	05				
06	273	43.7	-00.1	S 19 13.3	+00.6	266	48.3	-00.8	S 20 31.7	+00.7	339	30.9	-25.9	N 10 08.6	-13.5	06				
07	288	43.6	-00.2	S 19 13.9	+00.6	281	47.5	-00.8	S 20 32.4	+00.7	354	05.0	-25.9	N 09 55.1	-13.5	07				
08	303	43.4	-00.1	S 19 14.5	+00.6	296	46.7	-00.8	S 20 33.1	+00.7	8	39.1	-25.9	N 09 41.6	-13.6	08				
09	318	43.3	-00.1	S 19 15.1	+00.6	311	45.9	-00.8	S 20 33.8	+00.7	23	13.2	-25.9	N 09 28.0	-13.6	09				
10	333	43.2	-00.1	S 19 15.7	+00.6	326	45.1	-00.8	S 20 34.5	+00.7	37	47.3	-25.8	N 09 14.4	-13.7	10				
11	348	43.1	-00.2	S 19 16.3	+00.6	341	44.3	-00.8	S 20 35.2	+00.7	52	21.5	-25.9	N 09 00.7	-13.7	11				
12	3	42.9	-00.1	S 19 16.9	+00.6	356	43.5	-00.8	S 20 35.9	+00.8	66	55.6	-25.9	N 08 47.0	-13.8	12				
13	18	42.8	-00.1	S 19 17.5	+00.6	11	42.7	-00.8	S 20 36.7	+00.7	81	29.7	-25.8	N 08 33.2	-13.8	13				
14	33	42.7	-00.2	S 19 18.1	+00.5	26	41.9	-00.8	S 20 37.4	+00.7	96	03.9	-25.9	N 08 19.4	-13.9	14				
15	48	42.5	-00.1	S 19 18.6	+00.6	41	41.1	-00.8	S 20 38.1	+00.7	110	38.0	-25.8	N 08 05.5	-13.9	15				
16	63	42.4	-00.1	S 19 19.2	+00.6	56	40.3	-00.8	S 20 38.8	+00.7	125	12.2	-25.9	N 07 51.6	-14.0	16				
17	78	42.3	-00.2	S 19 19.8	+00.6	71	39.5	-00.8	S 20 39.5	+00.7	139	46.3	-25.8	N 07 37.6	-14.0	17				
18	93	42.1	-00.1	S 19 20.4	+00.6	86	38.7	-00.8	S 20 40.2	+00.7	154	20.5	-25.9	N 07 23.6	-14.1	18				
19	108	42.0	-00.2	S 19 21.0	+00.6	101	37.9	-00.8	S 20 40.9	+00.7	168	54.6	-25.8	N 07 09.5	-14.1	19				
20	123	41.8	-00.1	S 19 21.6	+00.6	116	37.1	-00.8	S 20 41.6	+00.7	183	28.8	-25.9	N 06 55.4	-14.1	20				
21	138	41.7	-00.1	S 19 22.2	+00.6	131	36.3	-00.8	S 20 42.3	+00.7	198	02.9	-25.9	N 06 41.3	-14.2	21				
22	153	41.6	-00.2	S 19 22.8	+00.5	146	35.5	-00.8	S 20 43.0	+00.7	212	37.0	-25.8	N 06 27.1	-14.2	22				
23	168	41.4	-00.1	S 19 23.3	+00.6	161	34.7	-00.8	S 20 43.7	+00.7	227	11.2	-25.9	N 06 12.9	-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	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	15'1	15'1	15'1	15'2	15'2	15'2
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	55'4	55'5	55'6	55'7	55'8	55'9
SHA	127°	126°	126°	126°	126°	126°	SHA	120°	120°	119°	119°	119°	119°	SHA	194°	192°	190°	188°	187°	185°
Greenwich Culmination Time: 11:45							Greenwich Culmination Time: 12:13							Greenwich Culmination Time: 07:24						

  

<b>Mars</b>					<b>Jupiter</b>					<b>Saturn</b>					UT					
UT	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	UT							
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "								
00	334	33.1	+03.2	N 24 36.8	+00.1	57	28.5	+02.5	S 01 49.0	+00.0	95	01.6	+02.4	S 16 17.3	-00.1	00				
01	349	36.3	+03.1	N 24 36.9	+00.1	72	31.0	+02.5	S 01 49.0	+00.0	110	04.0	+02.3	S 16 17.2	+00.0	01				
02	4	39.4	+03.2	N 24 37.0	+00.1	87	33.5	+02.5	S 01 49.0	+00.0	125	06.3	+02.4	S 16 17.2	+00.0	02				
03	19	42.6	+03.2	N 24 37.1	+00.1	102	36.0	+02.5	S 01 49.0	+00.0	140	08.7	+02.3	S 16 17.2	-00.1	03				
04	34	45.8	+03.2	N 24 37.2	+00.1	117	38.5	+02.5	S 01 49.0	+00.0	155	11.0	+02.4	S 16 17.1	+00.0	04				
05	49	49.0	+03.2	N 24 37.3	+00.1	132	41.0	+02.5	S 01 49.0	+00.0	170	13.4	+02.4	S 16 17.1	+00.0	05				
06	64	52.2	+03.2	N 24 37.4	+00.1	147	43.5	+02.6	S 01 49.0	+00.0	185	15.8	+02.3	S 16 17.1	-00.1	06				
07	79	55.4	+03.2	N 24 37.5	+00.0	162	46.1	+02.5	S 01 49.0	+00.0	200	18.1	+02.4	S 16 17.0	+00.0	07				
08	94	58.6	+03.2	N 24 37.5	+00.1	177	48.6	+02.5	S 01 49.0	+00.0	215	20.5	+02.3	S 16 17.0	-00.1	08				
09	110	01.8	+03.2	N 24 37.6	+00.1	192	51.1	+02.5	S 01 49.0	+00.1	230	22.8	+02.4	S 16 16.9	+00.0	09				
10	125	05.0	+03.3	N 24 37.7	+00.1	207	53.6	+02.5	S 01 49.1	+00.0	245	25.2	+02.3	S 16 16.9	+00.0	10				
11	140	08.3	+03.2	N 24 37.8	+00.1	222	56.1	+02.5	S 01 49.1	+00.0	260	27.5	+02.4	S 16 16.9	-00.1	11				
12	155	11.5	+03.2	N 24 37.9	+00.1	237	58.6	+02.5	S 01 49.1	+00.0	275	29.9	+02.3	S 16 16.8	+00.0	12				
13	170	14.7	+03.2	N 24 38.0	+00.1	253	01.1	+02.5	S 01 49.1	+00.0	290	32.2	+02.4	S 16 16.8	+00.0	13				
14	185	17.9	+03.2	N 24 38.1	+00.1	268	03.6	+02.6	S 01 49.1	+00.0	305	34.6	+02.4	S 16 16.8	-00.1	14				
15	200	21.1	+03.2	N 24 38.2	+00.1	283	06.2	+02.5	S 01 49.1	+00.0	320	37.0	+02.3	S 16 16.7	+00.0	15				
16	215	24.3	+03.2	N 24 38.3	+00.1	298	08.7	+02.5	S 01 49.1	+00.0	335	39.3	+02.4	S 16 16.7	-00.1	16				
17	230	27.5	+03.2	N 24 38.4	+00.1	313	11.2	+02.5	S 01 49.1	+00.0	350	41.7	+02.3	S 16 16.6	+00.0	17				
18	245	30.7	+03.3	N 24 38.5	+00.1	328	13.7	+02.5	S 01 49.1	+00.0	5	44.0	+02.4	S 16 16.6	+00.0	18				
19	260	34.0	+03.2	N 24 38.6	+00.1	343	16.2	+02.5	S 01 49.1	+00.0	20	46.4	+02.3	S 16 16.6	-00.1	19				
20	275	37.2	+03.2	N 24 38.7	+00.0	358	18.7	+02.5	S 01 49.1	+00.0	35	48.7	+02.4	S 16 16.5	+00.0	20				
21	290	40.4	+03.2	N 24 38.7	+00.1	13	21.2	+02.5	S 01 49.1	+00.0	50	51.1	+02.3	S 16 16.5	+00.0	21				
22	305	43.6	+03.3	N 24 38.8	+00.1	28	23.7	+02.5	S 01 49.1	+00.1	65	53.4	+02.4	S 16 16.5	-00.1	22				
23	320	46.9	+03.2	N 24 38.9	+00.1	43	26.2	+02.5	S 01 49.2	+00.0	80	55.8	+02.3	S 16 16.4	+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	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	278°	278°	278°	278°	278°	278°	SHA	000°	000°	000°	000°	000°	000°	SHA	038°	038°	038°	038°	038°	038°
Greenwich Culmination Time: 01:41							Greenwich Culmination Time: 20:06							Greenwich Culmination Time: 17:37						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 41.3 -00.1	S	19 23.9 +00.6	176 33.9 -00.9	S	20 44.4 +00.7	241 45.3 -25.9	N	05 58.6 -14.3				
01	198 41.2 -00.2	S	19 24.5 +00.6	191 33.0 -00.8	S	20 45.1 +00.6	256 19.4 -25.9	N	05 44.3 -14.4				
02	213 41.0 -00.1	S	19 25.1 +00.6	206 32.2 -00.8	S	20 45.7 +00.7	270 53.5 -25.9	N	05 29.9 -14.4				
03	228 40.9 -00.1	S	19 25.7 +00.6	221 31.4 -00.8	S	20 46.4 +00.7	285 27.6 -26.0	N	05 15.5 -14.5				
04	243 40.8 -00.2	S	19 26.3 +00.6	236 30.6 -00.8	S	20 47.1 +00.7	300 01.6 -25.9	N	05 01.0 -14.4				
05	258 40.6 -00.1	S	19 26.9 +00.5	251 29.8 -00.8	S	20 47.8 +00.7	314 35.7 -26.0	N	04 46.6 -14.5				
06	273 40.5 -00.2	S	19 27.4 +00.6	266 29.0 -00.8	S	20 48.5 +00.7	329 09.7 -26.0	N	04 32.1 -14.6				
07	288 40.3 -00.1	S	19 28.0 +00.6	281 28.2 -00.8	S	20 49.2 +00.7	343 43.7 -25.9	N	04 17.5 -14.6				
08	303 40.2 -00.1	S	19 28.6 +00.6	296 27.4 -00.8	S	20 49.9 +00.7	358 17.8 -26.1	N	04 02.9 -14.6				
09	318 40.1 -00.2	S	19 29.2 +00.6	311 26.6 -00.9	S	20 50.6 +00.7	12 51.7 -26.0	N	03 48.3 -14.7				
10	333 39.9 -00.1	S	19 29.8 +00.5	326 25.7 -00.8	S	20 51.3 +00.6	27 25.7 -26.0	N	03 33.6 -14.7				
11	348 39.8 -00.2	S	19 30.3 +00.6	341 24.9 -00.8	S	20 51.9 +00.7	41 59.7 -26.1	N	03 18.9 -14.7				
12	3 39.6 -00.1	S	19 30.9 +00.6	356 24.1 -00.8	S	20 52.6 +00.7	56 33.6 -26.1	N	03 04.2 -14.7				
13	18 39.5 -00.1	S	19 31.5 +00.6	11 23.3 -00.8	S	20 53.3 +00.7	71 07.5 -26.1	N	02 49.5 -14.8				
14	33 39.4 -00.2	S	19 32.1 +00.5	26 22.5 -00.8	S	20 54.0 +00.7	85 41.4 -26.2	N	02 34.7 -14.8				
15	48 39.2 -00.1	S	19 32.6 +00.6	41 21.7 -00.8	S	20 54.7 +00.6	100 15.2 -26.1	N	02 19.9 -14.9				
16	63 39.1 -00.2	S	19 33.2 +00.6	56 20.9 -00.9	S	20 55.3 +00.7	114 49.1 -26.2	N	02 05.0 -14.8				
17	78 38.9 -00.1	S	19 33.8 +00.6	71 20.0 -00.8	S	20 56.0 +00.7	129 22.9 -26.3	N	01 50.2 -14.9				
18	93 38.8 -00.2	S	19 34.4 +00.5	86 19.2 -00.8	S	20 56.7 +00.7	143 56.6 -26.2	N	01 35.3 -15.0				
19	108 38.6 -00.1	S	19 34.9 +00.6	101 18.4 -00.8	S	20 57.4 +00.7	158 30.4 -26.3	N	01 20.3 -14.9				
20	123 38.5 -00.2	S	19 35.5 +00.6	116 17.6 -00.8	S	20 58.1 +00.6	173 04.1 -26.3	N	01 05.4 -15.0				
21	138 38.3 -00.1	S	19 36.1 +00.6	131 16.8 -00.9	S	20 58.7 +00.7	187 37.8 -26.4	N	00 50.4 -15.0				
22	153 38.2 -00.1	S	19 36.7 +00.5	146 15.9 -00.8	S	20 59.4 +00.7	202 11.4 -26.4	N	00 35.4 -15.0				
23	168 38.1 -00.2	S	19 37.2 +00.6	161 15.1 -00.8	S	21 00.1 +00.6	216 45.0 -26.4	N	00 20.4 -15.0				
UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
SD 16'2 16'2 16'2 16'2 16'2 16'2				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'3 15'3 15'3 15'4 15'4 15'5					
HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 56'1 56'2 56'3 56'5 56'6 56'7					
SHA 126° 125° 125° 125° 125° 125°				SHA 118° 118° 118° 118° 118° 117°				SHA 183° 181° 179° 177° 175° 173°					
Greenwich Culmination Time: 11:45				Greenwich Culmination Time: 12:14				Greenwich Culmination Time: 08:07					
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	335 50.1 +03.2	N	24 39.0 +00.1	58 28.7 +02.6	S	01 49.2 +00.0	95 58.1 +02.4	S	16 16.4 +00.0				
01	350 53.3 +03.2	N	24 39.1 +00.1	73 31.3 +02.5	S	01 49.2 +00.0	111 00.5 +02.4	S	16 16.4 -00.1				
02	5 56.5 +03.3	N	24 39.2 +00.1	88 33.8 +02.5	S	01 49.2 +00.0	126 02.9 +02.3	S	16 16.3 +00.0				
03	20 59.8 +03.2	N	24 39.3 +00.1	103 36.3 +02.5	S	01 49.2 +00.0	141 05.2 +02.4	S	16 16.3 -00.1				
04	36 03.0 +03.2	N	24 39.4 +00.1	118 38.8 +02.5	S	01 49.2 +00.0	156 07.6 +02.3	S	16 16.2 +00.0				
05	51 06.2 +03.3	N	24 39.5 +00.1	133 41.3 +02.5	S	01 49.2 +00.0	171 09.9 +02.4	S	16 16.2 +00.0				
06	66 09.5 +03.2	N	24 39.6 +00.0	148 43.8 +02.5	S	01 49.2 +00.0	186 12.3 +02.3	S	16 16.2 -00.1				
07	81 12.7 +03.2	N	24 39.6 +00.1	163 46.3 +02.5	S	01 49.2 +00.0	201 14.6 +02.4	S	16 16.1 +00.0				
08	96 15.9 +03.3	N	24 39.7 +00.1	178 48.8 +02.5	S	01 49.2 +00.0	216 17.0 +02.3	S	16 16.1 -00.1				
09	111 19.2 +03.2	N	24 39.8 +00.1	193 51.3 +02.5	S	01 49.2 +00.0	231 19.3 +02.4	S	16 16.0 +00.0				
10	126 22.4 +03.3	N	24 39.9 +00.1	208 53.8 +02.5	S	01 49.2 +00.0	246 21.7 +02.3	S	16 16.0 +00.0				
11	141 25.7 +03.2	N	24 40.0 +00.1	223 56.3 +02.5	S	01 49.2 +00.0	261 24.0 +02.4	S	16 16.0 -00.1				
12	156 28.9 +03.2	N	24 40.1 +00.1	238 58.8 +02.5	S	01 49.2 +00.0	276 26.4 +02.3	S	16 15.9 +00.0				
13	171 32.1 +03.3	N	24 40.2 +00.1	254 01.3 +02.5	S	01 49.2 +00.0	291 28.7 +02.4	S	16 15.9 +00.0				
14	186 35.4 +03.2	N	24 40.3 +00.1	269 03.8 +02.5	S	01 49.2 +00.0	306 31.1 +02.3	S	16 15.9 -00.1				
15	201 38.6 +03.3	N	24 40.4 +00.0	284 06.3 +02.5	S	01 49.2 +00.1	321 33.4 +02.4	S	16 15.8 +00.0				
16	216 41.9 +03.2	N	24 40.4 +00.1	299 08.8 +02.5	S	01 49.3 +00.0	336 35.8 +02.3	S	16 15.8 -00.1				
17	231 45.1 +03.3	N	24 40.5 +00.1	314 11.3 +02.5	S	01 49.3 +00.0	351 38.1 +02.4	S	16 15.7 +00.0				
18	246 48.4 +03.2	N	24 40.6 +00.1	329 13.8 +02.5	S	01 49.3 +00.0	6 40.5 +02.3	S	16 15.7 +00.0				
19	261 51.6 +03.3	N	24 40.7 +00.1	344 16.3 +02.5	S	01 49.3 +00.0	21 42.8 +02.4	S	16 15.7 -00.1				
20	276 54.9 +03.2	N	24 40.8 +00.1	359 18.8 +02.5	S	01 49.3 +00.0	36 45.2 +02.3	S	16 15.6 +00.0				
21	291 58.1 +03.3	N	24 40.9 +00.1	14 21.3 +02.5	S	01 49.3 +00.0	51 47.5 +02.4	S	16 15.6 -00.1				
22	307 01.4 +03.3	N	24 41.0 +00.1	29 23.8 +02.5	S	01 49.3 +00.0	66 49.9 +02.3	S	16 15.5 +00.0				
23	322 04.7 +03.2	N	24 41.1 +00.1	44 26.3 +02.5	S	01 49.3 +00.0	81 52.2 +02.4	S	16 15.5 +00.0				
UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'4 00'4 00'4 00'4 00'4 00'4				SD 00'1 00'1 00'1 00'1 00'1 00'1					
HP 00'3 00'3 00'3 00'3 00'3 00'3				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0					
SHA 278° 278° 278° 278° 278° 278°				SHA 000° 000° 000° 000° 000° 000°				SHA 038° 038° 038° 038° 038° 038°					
Greenwich Culmination Time: 01:36				Greenwich Culmination Time: 20:02				Greenwich Culmination Time: 17:33					

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	183 37.9 -00.1	S	19 37.8 +00.6	176 14.3 -00.8	S	21 00.7 +00.7	231 18.6 -26.5	N	00 05.4 -15.1	00										
01	198 37.8 -00.2	S	19 38.4 +00.5	191 13.5 -00.8	S	21 01.4 +00.7	245 52.1 -26.5	S	00 09.7 +15.1	01										
02	213 37.6 -00.1	S	19 38.9 +00.6	206 12.7 -00.9	S	21 02.1 +00.6	260 25.6 -26.5	S	00 24.8 +15.1	02										
03	228 37.5 -00.2	S	19 39.5 +00.6	221 11.8 -00.8	S	21 02.7 +00.7	274 59.1 -26.6	S	00 39.9 +15.1	03										
04	243 37.3 -00.1	S	19 40.1 +00.5	236 11.0 -00.8	S	21 03.4 +00.7	289 32.5 -26.7	S	00 55.0 +15.1	04										
05	258 37.2 -00.2	S	19 40.6 +00.6	251 10.2 -00.8	S	21 04.1 +00.6	304 05.8 -26.6	S	01 10.1 +15.1	05										
06	273 37.0 -00.1	S	19 41.2 +00.6	266 09.4 -00.9	S	21 04.7 +00.7	318 39.2 -26.7	S	01 25.2 +15.2	06										
07	288 36.9 -00.2	S	19 41.8 +00.5	281 08.5 -00.8	S	21 05.4 +00.7	333 12.5 -26.8	S	01 40.4 +15.2	07										
08	303 36.7 -00.1	S	19 42.3 +00.6	296 07.7 -00.8	S	21 06.1 +00.6	347 45.7 -26.8	S	01 55.6 +15.2	08										
09	318 36.6 -00.2	S	19 42.9 +00.6	311 06.9 -00.8	S	21 06.7 +00.7	2 18.9 -26.9	S	02 10.8 +15.1	09										
10	333 36.4 -00.1	S	19 43.5 +00.5	326 06.1 -00.9	S	21 07.4 +00.6	16 52.0 -26.9	S	02 25.9 +15.2	10										
11	348 36.3 -00.2	S	19 44.0 +00.6	341 05.2 -00.8	S	21 08.0 +00.7	31 25.1 -27.0	S	02 41.1 +15.3	11										
12	3 36.1 -00.1	S	19 44.6 +00.6	356 04.4 -00.8	S	21 08.7 +00.7	45 58.1 -27.0	S	02 56.4 +15.2	12										
13	18 36.0 -00.2	S	19 45.2 +00.5	11 03.6 -00.8	S	21 09.4 +00.6	60 31.1 -27.1	S	03 11.6 +15.2	13										
14	33 35.8 -00.1	S	19 45.7 +00.6	26 02.8 -00.9	S	21 10.0 +00.7	75 04.0 -27.1	S	03 26.8 +15.2	14										
15	48 35.7 -00.2	S	19 46.3 +00.6	41 01.9 -00.8	S	21 10.7 +00.6	89 36.9 -27.2	S	03 42.0 +15.3	15										
16	63 35.5 -00.1	S	19 46.9 +00.5	56 01.1 -00.8	S	21 11.3 +00.7	104 09.7 -27.2	S	03 57.3 +15.2	16										
17	78 35.4 -00.2	S	19 47.4 +00.6	71 00.3 -00.9	S	21 12.0 +00.6	118 42.5 -27.3	S	04 12.5 +15.2	17										
18	93 35.2 -00.1	S	19 48.0 +00.5	85 59.4 -00.8	S	21 12.6 +00.7	133 15.2 -27.4	S	04 27.7 +15.3	18										
19	108 35.1 -00.2	S	19 48.5 +00.6	100 58.6 -00.8	S	21 13.3 +00.6	147 47.8 -27.4	S	04 43.0 +15.2	19										
20	123 34.9 -00.1	S	19 49.1 +00.6	115 57.8 -00.8	S	21 13.9 +00.7	162 20.4 -27.5	S	04 58.2 +15.2	20										
21	138 34.8 -00.2	S	19 49.7 +00.5	130 57.0 -00.9	S	21 14.6 +00.6	176 52.9 -27.5	S	05 13.4 +15.3	21										
22	153 34.6 -00.1	S	19 50.2 +00.6	145 56.1 -00.8	S	21 15.2 +00.7	191 25.4 -27.6	S	05 28.7 +15.2	22										
23	168 34.5 -00.2	S	19 50.8 +00.5	160 55.3 -00.8	S	21 15.9 +00.6	205 57.8 -27.7	S	05 43.9 +15.2	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	15'5	15'5	15'6	15'6	15'7	15'7
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	56'9	57'0	57'2	57'3	57'4	57'6
SHA	125°	124°	124°	124°	124°	124°	SHA	117°	117°	117°	116°	116°	116°	SHA	171°	169°	167°	166°	164°	162°
Greenwich Culmination Time: 11:45							Greenwich Culmination Time: 12:15							Greenwich Culmination Time: 08:50						

  

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	337 07.9 +03.3	N	24 41.2 +00.0	59 28.8 +02.5	S	01 49.3 +00.0	96 54.6 +02.3	S	16 15.5 -00.1	00										
01	352 11.2 +03.2	N	24 41.2 +00.1	74 31.3 +02.5	S	01 49.3 +00.0	111 56.9 +02.4	S	16 15.4 +00.0	01										
02	7 14.4 +03.3	N	24 41.3 +00.1	89 33.8 +02.5	S	01 49.3 +00.0	126 59.3 +02.3	S	16 15.4 +00.0	02										
03	22 17.7 +03.3	N	24 41.4 +00.1	104 36.3 +02.5	S	01 49.3 +00.0	142 01.6 +02.4	S	16 15.4 -00.1	03										
04	37 21.0 +03.2	N	24 41.5 +00.1	119 38.8 +02.5	S	01 49.3 +00.0	157 04.0 +02.3	S	16 15.3 +00.0	04										
05	52 24.2 +03.3	N	24 41.6 +00.1	134 41.3 +02.5	S	01 49.3 +00.0	172 06.3 +02.4	S	16 15.3 -00.1	05										
06	67 27.5 +03.3	N	24 41.7 +00.1	149 43.8 +02.5	S	01 49.3 +00.0	187 08.7 +02.3	S	16 15.2 +00.0	06										
07	82 30.8 +03.2	N	24 41.8 +00.0	164 46.3 +02.5	S	01 49.3 +00.0	202 11.0 +02.4	S	16 15.2 +00.0	07										
08	97 34.0 +03.3	N	24 41.8 +00.1	179 48.8 +02.5	S	01 49.3 +00.0	217 13.4 +02.3	S	16 15.2 -00.1	08										
09	112 37.3 +03.3	N	24 41.9 +00.1	194 51.3 +02.5	S	01 49.3 +00.0	232 15.7 +02.4	S	16 15.1 +00.0	09										
10	127 40.6 +03.2	N	24 42.0 +00.1	209 53.8 +02.5	S	01 49.3 +00.0	247 18.1 +02.3	S	16 15.1 -00.1	10										
11	142 43.8 +03.3	N	24 42.1 +00.1	224 56.3 +02.5	S	01 49.3 +00.0	262 20.4 +02.4	S	16 15.0 +00.0	11										
12	157 47.1 +03.3	N	24 42.2 +00.1	239 58.8 +02.5	S	01 49.3 +00.0	277 22.8 +02.3	S	16 15.0 +00.0	12										
13	172 50.4 +03.3	N	24 42.3 +00.1	255 01.3 +02.5	S	01 49.3 +00.0	292 25.1 +02.4	S	16 15.0 -00.1	13										
14	187 53.7 +03.3	N	24 42.4 +00.0	270 03.8 +02.5	S	01 49.3 +00.0	307 27.5 +02.3	S	16 14.9 +00.0	14										
15	202 57.0 +03.2	N	24 42.4 +00.1	285 06.3 +02.5	S	01 49.3 +00.0	322 29.8 +02.4	S	16 14.9 -00.1	15										
16	218 00.2 +03.3	N	24 42.5 +00.1	300 08.8 +02.5	S	01 49.3 +00.0	337 32.2 +02.3	S	16 14.8 +00.0	16										
17	233 03.5 +03.3	N	24 42.6 +00.1	315 11.3 +02.5	S	01 49.3 +00.0	352 34.5 +02.4	S	16 14.8 +00.0	17										
18	248 06.8 +03.3	N	24 42.7 +00.1	330 13.8 +02.5	S	01 49.3 +00.0	7 36.9 +02.3	S	16 14.8 -00.1	18										
19	263 10.1 +03.3	N	24 42.8 +00.1	345 16.3 +02.5	S	01 49.3 +00.0	22 39.2 +02.4	S	16 14.7 +00.0	19										
20	278 13.4 +03.3	N	24 42.9 +00.0	0 18.8 +02.5	S	01 49.3 +00.0	37 41.6 +02.3	S	16 14.7 -00.1	20										
21	293 16.7 +03.2	N	24 42.9 +00.1	15 21.3 +02.5	S	01 49.3 +00.0	52 43.9 +02.3	S	16 14.6 +00.0	21										
22	308 19.9 +03.3	N	24 43.0 +00.1	30 23.8 +02.5	S	01 49.3 +00.0	67 46.2 +02.4	S	16 14.6 +00.0	22										
23	323 23.2 +03.3	N	24 43.1 +00.1	45 26.3 +02.5	S	01 49.3 +00.0	82 48.6 +02.3	S	16 14.6 -00.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	278°	278°	278°	278°	278°	278°	SHA	000°	000°	000°	000°	000°	001°	SHA	038°	038°	038°	038°	038°	038°
Greenwich Culmination Time: 01:31							Greenwich Culmination Time: 19:58							Greenwich Culmination Time: 17:29						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	183 34.3 -00.1	S	19 51.3 +00.6	175 54.5 -00.9	S	21 16.5 +00.7	220 30.1 -27.8	S	05 59.1 +15.2	00			
01	198 34.2 -00.2	S	19 51.9 +00.5	190 53.6 -00.8	S	21 17.2 +00.6	235 02.3 -27.8	S	06 14.3 +15.2	01			
02	213 34.0 -00.1	S	19 52.4 +00.6	205 52.8 -00.8	S	21 17.8 +00.7	249 34.5 -27.9	S	06 29.5 +15.2	02			
03	228 33.9 -00.2	S	19 53.0 +00.5	220 52.0 -00.9	S	21 18.5 +00.6	264 06.6 -28.0	S	06 44.7 +15.2	03			
04	243 33.7 -00.2	S	19 53.5 +00.6	235 51.1 -00.8	S	21 19.1 +00.6	278 38.6 -28.0	S	06 59.9 +15.2	04			
05	258 33.5 -00.1	S	19 54.1 +00.5	250 50.3 -00.8	S	21 19.7 +00.7	293 10.6 -28.1	S	07 15.1 +15.1	05			
06	273 33.4 -00.2	S	19 54.6 +00.6	265 49.5 -00.9	S	21 20.4 +00.6	307 42.5 -28.2	S	07 30.2 +15.2	06			
07	288 33.2 -00.1	S	19 55.2 +00.5	280 48.6 -00.8	S	21 21.0 +00.6	322 14.3 -28.3	S	07 45.4 +15.1	07			
08	303 33.1 -00.2	S	19 55.7 +00.6	295 47.8 -00.9	S	21 21.6 +00.7	336 46.0 -28.3	S	08 00.5 +15.1	08			
09	318 32.9 -00.1	S	19 56.3 +00.5	310 46.9 -00.8	S	21 22.3 +00.6	351 17.7 -28.4	S	08 15.6 +15.1	09			
10	333 32.8 -00.2	S	19 56.8 +00.6	325 46.1 -00.8	S	21 22.9 +00.7	5 49.3 -28.5	S	08 30.7 +15.1	10			
11	348 32.6 -00.2	S	19 57.4 +00.5	340 45.3 -00.9	S	21 23.6 +00.6	20 20.8 -28.6	S	08 45.8 +15.0	11			
12	3 32.4 -00.1	S	19 57.9 +00.6	355 44.4 -00.8	S	21 24.2 +00.6	34 52.2 -28.7	S	09 00.8 +15.0	12			
13	18 32.3 -00.2	S	19 58.5 +00.5	10 43.6 -00.8	S	21 24.8 +00.6	49 23.5 -28.8	S	09 15.8 +15.0	13			
14	33 32.1 -00.1	S	19 59.0 +00.6	25 42.8 -00.9	S	21 25.4 +00.7	63 54.7 -28.8	S	09 30.8 +15.0	14			
15	48 32.0 -00.2	S	19 59.6 +00.5	40 41.9 -00.8	S	21 26.1 +00.6	78 25.9 -28.9	S	09 45.8 +14.9	15			
16	63 31.8 -00.2	S	20 00.1 +00.6	55 41.1 -00.9	S	21 26.7 +00.6	92 57.0 -29.1	S	10 00.7 +14.9	16			
17	78 31.6 -00.1	S	20 00.7 +00.5	70 40.2 -00.8	S	21 27.3 +00.7	107 27.9 -29.1	S	10 15.6 +14.9	17			
18	93 31.5 -00.2	S	20 01.2 +00.6	85 39.4 -00.8	S	21 28.0 +00.6	121 58.8 -29.2	S	10 30.5 +14.9	18			
19	108 31.3 -00.1	S	20 01.8 +00.5	100 38.6 -00.9	S	21 28.6 +00.6	136 29.6 -29.2	S	10 45.4 +14.8	19			
20	123 31.2 -00.2	S	20 02.3 +00.6	115 37.7 -00.8	S	21 29.2 +00.6	151 00.4 -29.4	S	11 00.2 +14.7	20			
21	138 31.0 -00.2	S	20 02.9 +00.5	130 36.9 -00.9	S	21 29.8 +00.7	165 31.0 -29.5	S	11 14.9 +14.8	21			
22	153 30.8 -00.1	S	20 03.4 +00.5	145 36.0 -00.8	S	21 30.5 +00.6	180 01.5 -29.6	S	11 29.7 +14.7	22			
23	168 30.7 -00.2	S	20 03.9 +00.6	160 35.2 -00.9	S	21 31.1 +00.6	194 31.9 -29.6	S	11 44.4 +14.6	23			
<b>UT 02 06 10 14 18 22</b> SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 124° 123° 123° 123° 123° 123° Greenwich Culmination Time: 11:45				<b>UT 02 06 10 14 18 22</b> 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 116° 116° 115° 115° 115° 115° Greenwich Culmination Time: 12:17				<b>UT 02 06 10 14 18 22</b> SD 15'7 15'8 15'8 15'8 15'9 15'9 HP 57'7 57'9 58'0 58'2 58'3 58'4 SHA 160° 157° 155° 153° 151° 149° Greenwich Culmination Time: 09:35					
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	338 26.5 +03.3	N	24 43.2 +00.1	60 28.8 +02.5	S	01 49.3 +00.0	97 50.9 +02.4	S	16 14.5 +00.0	00			
01	353 29.8 +03.3	N	24 43.3 +00.1	75 31.3 +02.4	S	01 49.3 +00.0	112 53.3 +02.3	S	16 14.5 -00.1	01			
02	8 33.1 +03.3	N	24 43.4 +00.0	90 33.7 +02.5	S	01 49.3 +00.0	127 55.6 +02.4	S	16 14.4 +00.0	02			
03	23 36.4 +03.3	N	24 43.4 +00.1	105 36.2 +02.5	S	01 49.3 +00.0	142 58.0 +02.3	S	16 14.4 +00.0	03			
04	38 39.7 +03.3	N	24 43.5 +00.1	120 38.7 +02.5	S	01 49.3 +00.0	158 00.3 +02.4	S	16 14.4 -00.1	04			
05	53 43.0 +03.3	N	24 43.6 +00.1	135 41.2 +02.5	S	01 49.3 +00.0	173 02.7 +02.3	S	16 14.3 +00.0	05			
06	68 46.3 +03.3	N	24 43.7 +00.1	150 43.7 +02.5	S	01 49.3 +00.0	188 05.0 +02.4	S	16 14.3 -00.1	06			
07	83 49.6 +03.3	N	24 43.8 +00.1	165 46.2 +02.5	S	01 49.3 +00.0	203 07.4 +02.3	S	16 14.2 +00.0	07			
08	98 52.9 +03.3	N	24 43.9 +00.0	180 48.7 +02.5	S	01 49.3 +00.0	218 09.7 +02.3	S	16 14.2 +00.0	08			
09	113 56.2 +03.3	N	24 43.9 +00.1	195 51.2 +02.5	S	01 49.3 +00.0	233 12.0 +02.4	S	16 14.2 -00.1	09			
10	128 59.5 +03.3	N	24 44.0 +00.1	210 53.7 +02.5	S	01 49.3 +00.0	248 14.4 +02.3	S	16 14.1 +00.0	10			
11	144 02.8 +03.3	N	24 44.1 +00.1	225 56.2 +02.4	S	01 49.3 +00.0	263 16.7 +02.4	S	16 14.1 -00.1	11			
12	159 06.1 +03.3	N	24 44.2 +00.1	240 58.6 +02.5	S	01 49.3 +00.0	278 19.1 +02.3	S	16 14.0 +00.0	12			
13	174 09.4 +03.3	N	24 44.3 +00.0	256 01.1 +02.5	S	01 49.3 +00.0	293 21.4 +02.4	S	16 14.0 +00.0	13			
14	189 12.7 +03.3	N	24 44.3 +00.1	271 03.6 +02.5	S	01 49.3 +00.0	308 23.8 +02.3	S	16 14.0 -00.1	14			
15	204 16.0 +03.4	N	24 44.4 +00.1	286 06.1 +02.5	S	01 49.3 +00.0	323 26.1 +02.4	S	16 13.9 +00.0	15			
16	219 19.4 +03.3	N	24 44.5 +00.1	301 08.6 +02.5	S	01 49.3 +00.0	338 28.5 +02.3	S	16 13.9 -00.1	16			
17	234 22.7 +03.3	N	24 44.6 +00.1	316 11.1 +02.5	S	01 49.3 +00.0	353 30.8 +02.3	S	16 13.8 +00.0	17			
18	249 26.0 +03.3	N	24 44.7 +00.0	331 13.6 +02.5	S	01 49.3 +00.0	8 33.1 +02.4	S	16 13.8 +00.0	18			
19	264 29.3 +03.3	N	24 44.7 +00.1	346 16.1 +02.4	S	01 49.3 +00.0	23 35.5 +02.3	S	16 13.8 -00.1	19			
20	279 32.6 +03.3	N	24 44.8 +00.1	1 18.5 +02.5	S	01 49.3 +00.0	38 37.8 +02.4	S	16 13.7 +00.0	20			
21	294 35.9 +03.4	N	24 44.9 +00.1	16 21.0 +02.5	S	01 49.3 +00.0	53 40.2 +02.3	S	16 13.7 -00.1	21			
22	309 39.3 +03.3	N	24 45.0 +00.1	31 23.5 +02.5	S	01 49.3 +00.0	68 42.5 +02.4	S	16 13.6 +00.0	22			
23	324 42.6 +03.3	N	24 45.1 +00.0	46 26.0 +02.5	S	01 49.3 +00.0	83 44.9 +02.3	S	16 13.6 -00.1	23			
<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 278° 279° 279° 279° 279° 279° Greenwich Culmination Time: 01:25				<b>UT 02 06 10 14 18 22</b> SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 001° 001° 001° 001° 001° 001° Greenwich Culmination Time: 19:54				<b>UT 02 06 10 14 18 22</b> 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 038° 038° 038° 038° 038° 038° Greenwich Culmination Time: 17:25					

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	183 30.5 -00.1	S	20 04.5 +00.5	175 34.3 -00.8	S	21 31.7 +00.6	209 02.3 -29.8	S	11 59.0 +14.6	00										
01	198 30.4 -00.2	S	20 05.0 +00.6	190 33.5 -00.9	S	21 32.3 +00.6	223 32.5 -29.9	S	12 13.6 +14.6	01										
02	213 30.2 -00.2	S	20 05.6 +00.5	205 32.6 -00.8	S	21 32.9 +00.6	238 02.6 -29.9	S	12 28.2 +14.5	02										
03	228 30.0 -00.1	S	20 06.1 +00.5	220 31.8 -00.8	S	21 33.5 +00.7	252 32.7 -30.1	S	12 42.7 +14.5	03										
04	243 29.9 -00.2	S	20 06.6 +00.6	235 31.0 -00.9	S	21 34.2 +00.6	267 02.6 -30.2	S	12 57.2 +14.4	04										
05	258 29.7 -00.2	S	20 07.2 +00.5	250 30.1 -00.8	S	21 34.8 +00.6	281 32.4 -30.3	S	13 11.6 +14.3	05										
06	273 29.5 -00.1	S	20 07.7 +00.5	265 29.3 -00.9	S	21 35.4 +00.6	296 02.1 -30.3	S	13 25.9 +14.3	06										
07	288 29.4 -00.2	S	20 08.2 +00.6	280 28.4 -00.8	S	21 36.0 +00.6	310 31.8 -30.5	S	13 40.2 +14.3	07										
08	303 29.2 -00.2	S	20 08.8 +00.5	295 27.6 -00.9	S	21 36.6 +00.6	325 01.3 -30.6	S	13 54.5 +14.2	08										
09	318 29.0 -00.1	S	20 09.3 +00.5	310 26.7 -00.8	S	21 37.2 +00.6	339 30.7 -30.7	S	14 08.7 +14.1	09										
10	333 28.9 -00.2	S	20 09.8 +00.6	325 25.9 -00.9	S	21 37.8 +00.6	353 60.0 -30.8	S	14 22.8 +14.1	10										
11	348 28.7 -00.2	S	20 10.4 +00.5	340 25.0 -00.8	S	21 38.4 +00.6	8 29.2 -30.9	S	14 36.9 +14.0	11										
12	3 28.5 -00.1	S	20 10.9 +00.5	355 24.2 -00.9	S	21 39.0 +00.7	22 58.3 -31.0	S	14 50.9 +14.0	12										
13	18 28.4 -00.2	S	20 11.4 +00.6	10 23.3 -00.8	S	21 39.7 +00.6	37 27.3 -31.2	S	15 04.9 +13.9	13										
14	33 28.2 -00.2	S	20 12.0 +00.5	25 22.5 -00.9	S	21 40.3 +00.6	51 56.1 -31.2	S	15 18.8 +13.8	14										
15	48 28.0 -00.1	S	20 12.5 +00.5	40 21.6 -00.8	S	21 40.9 +00.6	66 24.9 -31.4	S	15 32.6 +13.7	15										
16	63 27.9 -00.2	S	20 13.0 +00.6	55 20.8 -00.9	S	21 41.5 +00.6	80 53.5 -31.5	S	15 46.3 +13.7	16										
17	78 27.7 -00.2	S	20 13.6 +00.5	70 19.9 -00.8	S	21 42.1 +00.6	95 22.0 -31.5	S	15 60.0 +13.6	17										
18	93 27.5 -00.1	S	20 14.1 +00.5	85 19.1 -00.9	S	21 42.7 +00.6	109 50.5 -31.7	S	16 13.6 +13.5	18										
19	108 27.4 -00.2	S	20 14.6 +00.6	100 18.2 -00.8	S	21 43.3 +00.6	124 18.8 -31.9	S	16 27.1 +13.5	19										
20	123 27.2 -00.2	S	20 15.2 +00.5	115 17.4 -00.9	S	21 43.9 +00.6	138 46.9 -31.9	S	16 40.6 +13.3	20										
21	138 27.0 -00.2	S	20 15.7 +00.5	130 16.5 -00.8	S	21 44.5 +00.6	153 15.0 -32.0	S	16 53.9 +13.3	21										
22	153 26.8 -00.1	S	20 16.2 +00.5	145 15.7 -00.9	S	21 45.1 +00.6	167 43.0 -32.2	S	17 07.2 +13.2	22										
23	168 26.7 -00.2	S	20 16.7 +00.6	160 14.8 -00.9	S	21 45.7 +00.5	182 10.8 -32.3	S	17 20.4 +13.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	16'0	16'0	16'0	16'1	16'1	16'1
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	58'6	58'7	58'8	59'0	59'1	59'2
SHA	122°	122°	122°	122°	122°	122°	SHA	114°	114°	114°	114°	114°	113°	SHA	147°	145°	143°	140°	138°	136°
Greenwich Culmination Time: 11:46							Greenwich Culmination Time: 12:18							Greenwich Culmination Time: 10:24						

  

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	339 45.9 +03.3	N	24 45.1 +00.1	61 28.5 +02.5	S	01 49.3 +00.0	98 47.2 +02.3	S	16 13.5 +00.0	00										
01	354 49.2 +03.3	N	24 45.2 +00.1	76 31.0 +02.4	S	01 49.3 +00.0	113 49.5 +02.4	S	16 13.5 +00.0	01										
02	9 52.5 +03.4	N	24 45.3 +00.1	91 33.4 +02.5	S	01 49.3 +00.0	128 51.9 +02.3	S	16 13.5 -00.1	02										
03	24 55.9 +03.3	N	24 45.4 +00.1	106 35.9 +02.5	S	01 49.3 +00.0	143 54.2 +02.4	S	16 13.4 +00.0	03										
04	39 59.2 +03.3	N	24 45.5 +00.0	121 38.4 +02.5	S	01 49.3 +00.0	158 56.6 +02.3	S	16 13.4 -00.1	04										
05	55 02.5 +03.4	N	24 45.5 +00.1	136 40.9 +02.5	S	01 49.3 +00.0	173 58.9 +02.3	S	16 13.3 +00.0	05										
06	70 05.9 +03.3	N	24 45.6 +00.1	151 43.4 +02.5	S	01 49.3 +00.0	189 01.2 +02.4	S	16 13.3 +00.0	06										
07	85 09.2 +03.3	N	24 45.7 +00.1	166 45.9 +02.4	S	01 49.3 -00.1	204 03.6 +02.3	S	16 13.3 -00.1	07										
08	100 12.5 +03.3	N	24 45.8 +00.1	181 48.3 +02.5	S	01 49.2 +00.0	219 05.9 +02.4	S	16 13.2 +00.0	08										
09	115 15.8 +03.4	N	24 45.9 +00.0	196 50.8 +02.5	S	01 49.2 +00.0	234 08.3 +02.3	S	16 13.2 -00.1	09										
10	130 19.2 +03.3	N	24 45.9 +00.1	211 53.3 +02.5	S	01 49.2 +00.0	249 10.6 +02.4	S	16 13.1 +00.0	10										
11	145 22.5 +03.4	N	24 46.0 +00.1	226 55.8 +02.5	S	01 49.2 +00.0	264 13.0 +02.3	S	16 13.1 -00.1	11										
12	160 25.9 +03.3	N	24 46.1 +00.1	241 58.3 +02.5	S	01 49.2 +00.0	279 15.3 +02.3	S	16 13.0 +00.0	12										
13	175 29.2 +03.3	N	24 46.2 +00.0	257 00.8 +02.4	S	01 49.2 +00.0	294 17.6 +02.4	S	16 13.0 +00.0	13										
14	190 32.5 +03.4	N	24 46.2 +00.1	272 03.2 +02.5	S	01 49.2 +00.0	309 20.0 +02.3	S	16 13.0 -00.1	14										
15	205 35.9 +03.3	N	24 46.3 +00.1	287 05.7 +02.5	S	01 49.2 +00.0	324 22.3 +02.4	S	16 12.9 +00.0	15										
16	220 39.2 +03.3	N	24 46.4 +00.1	302 08.2 +02.5	S	01 49.2 +00.0	339 24.7 +02.3	S	16 12.9 -00.1	16										
17	235 42.5 +03.4	N	24 46.5 +00.0	317 10.7 +02.4	S	01 49.2 +00.0	354 27.0 +02.3	S	16 12.8 +00.0	17										
18	250 45.9 +03.3	N	24 46.5 +00.1	332 13.1 +02.5	S	01 49.2 +00.0	9 29.3 +02.4	S	16 12.8 +00.0	18										
19	265 49.2 +03.4	N	24 46.6 +00.1	347 15.6 +02.5	S	01 49.2 +00.0	24 31.7 +02.3	S	16 12.8 -00.1	19										
20	280 52.6 +03.3	N	24 46.7 +00.1	2 18.1 +02.5	S	01 49.2 +00.0	39 34.0 +02.3	S	16 12.7 +00.0	20										
21	295 55.9 +03.4	N	24 46.8 +00.0	17 20.6 +02.5	S	01 49.2 +00.0	54 36.3 +02.4	S	16 12.7 -00.1	21										
22	310 59.3 +03.3	N	24 46.8 +00.1	32 23.1 +02.4	S	01 49.2 +00.0	69 38.7 +02.3	S	16 12.6 +00.0	22										
23	326 02.6 +03.4	N	24 46.9 +00.1	47 25.5 +02.5	S	01 49.2 +00.0	84 41.0 +02.4	S	16 12.6 -00.1	23										
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	279°	279°	279°	279°	279°	279°	SHA	001°	001°	001°	001°	001°	001°	SHA	038°	038°	038°	038°	038°	038°
Greenwich Culmination Time: 01:20							Greenwich Culmination Time: 19:50							Greenwich Culmination Time: 17:22						

UT	Sun				Venus				Moon <span style="float: right;">A: 98%</span>				UT										
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec											
00	183 26.5 -00.2	S	20 17.3 +00.5		175 13.9 -00.8	S	21 46.2 +00.6		196 38.5 -32.4	S	17 33.5 +13.0		00										
01	198 26.3 -00.1	S	20 17.8 +00.5		190 13.1 -00.9	S	21 46.8 +00.6		211 06.1 -32.5	S	17 46.5 +13.0		01										
02	213 26.2 -00.2	S	20 18.3 +00.5		205 12.2 -00.8	S	21 47.4 +00.6		225 33.6 -32.7	S	17 59.5 +12.8		02										
03	228 26.0 -00.2	S	20 18.8 +00.6		220 11.4 -00.9	S	21 48.0 +00.6		240 00.9 -32.7	S	18 12.3 +12.7		03										
04	243 25.8 -00.2	S	20 19.4 +00.5		235 10.5 -00.8	S	21 48.6 +00.6		254 28.2 -32.9	S	18 25.0 +12.7		04										
05	258 25.6 -00.1	S	20 19.9 +00.5		250 09.7 -00.9	S	21 49.2 +00.6		268 55.3 -33.0	S	18 37.7 +12.5		05										
06	273 25.5 -00.2	S	20 20.4 +00.5		265 08.8 -00.9	S	21 49.8 +00.6		283 22.3 -33.2	S	18 50.2 +12.5		06										
07	288 25.3 -00.2	S	20 20.9 +00.5		280 07.9 -00.8	S	21 50.4 +00.6		297 49.1 -33.2	S	19 02.7 +12.3		07										
08	303 25.1 -00.1	S	20 21.4 +00.6		295 07.1 -00.9	S	21 51.0 +00.5		312 15.9 -33.4	S	19 15.0 +12.3		08										
09	318 25.0 -00.2	S	20 22.0 +00.5		310 06.2 -00.8	S	21 51.5 +00.6		326 42.5 -33.5	S	19 27.3 +12.1		09										
10	333 24.8 -00.2	S	20 22.5 +00.5		325 05.4 -00.9	S	21 52.1 +00.6		341 09.0 -33.6	S	19 39.4 +12.0		10										
11	348 24.6 -00.2	S	20 23.0 +00.5		340 04.5 -00.9	S	21 52.7 +00.6		355 35.4 -33.8	S	19 51.4 +11.9		11										
12	3 24.4 -00.1	S	20 23.5 +00.5		355 03.6 -00.8	S	21 53.3 +00.6		10 01.6 -33.8	S	20 03.3 +11.8		12										
13	18 24.3 -00.2	S	20 24.0 +00.6		10 02.8 -00.9	S	21 53.9 +00.5		24 27.8 -34.0	S	20 15.1 +11.7		13										
14	33 24.1 -00.2	S	20 24.6 +00.5		25 01.9 -00.8	S	21 54.4 +00.6		38 53.8 -34.1	S	20 26.8 +11.6		14										
15	48 23.9 -00.2	S	20 25.1 +00.5		40 01.1 -00.9	S	21 55.0 +00.6		53 19.7 -34.3	S	20 38.4 +11.4		15										
16	63 23.7 -00.1	S	20 25.6 +00.5		55 00.2 -00.9	S	21 55.6 +00.6		67 45.4 -34.3	S	20 49.8 +11.4		16										
17	78 23.6 -00.2	S	20 26.1 +00.5		69 59.3 -00.8	S	21 56.2 +00.5		82 11.1 -34.5	S	21 01.2 +11.2		17										
18	93 23.4 -00.2	S	20 26.6 +00.5		84 58.5 -00.9	S	21 56.7 +00.6		96 36.6 -34.6	S	21 12.4 +11.0		18										
19	108 23.2 -00.2	S	20 27.1 +00.5		99 57.6 -00.9	S	21 57.3 +00.6		111 02.0 -34.7	S	21 23.4 +11.0		19										
20	123 23.0 -00.2	S	20 27.6 +00.5		114 56.7 -00.8	S	21 57.9 +00.6		125 27.3 -34.8	S	21 34.4 +10.8		20										
21	138 22.8 -00.1	S	20 28.1 +00.6		129 55.9 -00.9	S	21 58.5 +00.5		139 52.5 -35.0	S	21 45.2 +10.7		21										
22	153 22.7 -00.2	S	20 28.7 +00.5		144 55.0 -00.9	S	21 59.0 +00.6		154 17.5 -35.1	S	21 55.9 +10.6		22										
23	168 22.5 -00.2	S	20 29.2 +00.5		159 54.1 -00.8	S	21 59.6 +00.6		168 42.4 -35.2	S	22 06.5 +10.4		23										
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22								
SD	16'2	16'2	16'2	16'2	16'2	16'2			SD	00'1	00'1	00'1	00'1	00'1	00'1								
HP	00'1	00'1	00'1	00'1	00'1	00'1			HP	00'1	00'1	00'1	00'1	00'1	00'1								
SHA	121°	121°	121°	121°	121°	121°			SHA	113°	113°	113°	113°	112°	112°								
Greenwich Culmination Time: 11:46								Greenwich Culmination Time: 12:19								Greenwich Culmination Time: 11:18							

  

UT	Mars				Jupiter				Saturn				UT										
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec											
00	341 06.0 +03.3	N	24 47.0 +00.1		62 28.0 +02.5	S	01 49.2 -00.1		99 43.4 +02.3	S	16 12.5 +00.0		00										
01	356 09.3 +03.4	N	24 47.1 +00.0		77 30.5 +02.5	S	01 49.1 +00.0		114 45.7 +02.3	S	16 12.5 +00.0		01										
02	11 12.7 +03.3	N	24 47.1 +00.1		92 33.0 +02.4	S	01 49.1 +00.0		129 48.0 +02.4	S	16 12.5 -00.1		02										
03	26 16.0 +03.4	N	24 47.2 +00.1		107 35.4 +02.5	S	01 49.1 +00.0		144 50.4 +02.3	S	16 12.4 +00.0		03										
04	41 19.4 +03.3	N	24 47.3 +00.1		122 37.9 +02.5	S	01 49.1 +00.0		159 52.7 +02.4	S	16 12.4 -00.1		04										
05	56 22.7 +03.4	N	24 47.4 +00.0		137 40.4 +02.5	S	01 49.1 +00.0		174 55.1 +02.3	S	16 12.3 +00.0		05										
06	71 26.1 +03.4	N	24 47.4 +00.1		152 42.9 +02.4	S	01 49.1 +00.0		189 57.4 +02.3	S	16 12.3 -00.1		06										
07	86 29.5 +03.3	N	24 47.5 +00.1		167 45.3 +02.5	S	01 49.1 +00.0		204 59.7 +02.4	S	16 12.2 +00.0		07										
08	101 32.8 +03.4	N	24 47.6 +00.1		182 47.8 +02.5	S	01 49.1 +00.0		220 02.1 +02.3	S	16 12.2 +00.0		08										
09	116 36.2 +03.3	N	24 47.7 +00.0		197 50.3 +02.5	S	01 49.1 +00.0		235 04.4 +02.3	S	16 12.2 -00.1		09										
10	131 39.5 +03.4	N	24 47.7 +00.1		212 52.8 +02.4	S	01 49.1 +00.0		250 06.7 +02.4	S	16 12.1 +00.0		10										
11	146 42.9 +03.4	N	24 47.8 +00.1		227 55.2 +02.5	S	01 49.1 +00.0		265 09.1 +02.3	S	16 12.1 -00.1		11										
12	161 46.3 +03.3	N	24 47.9 +00.0		242 57.7 +02.5	S	01 49.1 -00.1		280 11.4 +02.3	S	16 12.0 +00.0		12										
13	176 49.6 +03.4	N	24 47.9 +00.1		258 00.2 +02.4	S	01 49.0 +00.0		295 13.7 +02.4	S	16 12.0 -00.1		13										
14	191 53.0 +03.4	N	24 48.0 +00.1		273 02.6 +02.5	S	01 49.0 +00.0		310 16.1 +02.3	S	16 11.9 +00.0		14										
15	206 56.4 +03.3	N	24 48.1 +00.1		288 05.1 +02.5	S	01 49.0 +00.0		325 18.4 +02.4	S	16 11.9 +00.0		15										
16	221 59.7 +03.4	N	24 48.2 +00.0		303 07.6 +02.5	S	01 49.0 +00.0		340 20.8 +02.3	S	16 11.9 -00.1		16										
17	237 03.1 +03.4	N	24 48.2 +00.1		318 10.1 +02.4	S	01 49.0 +00.0		355 23.1 +02.3	S	16 11.8 +00.0		17										
18	252 06.5 +03.4	N	24 48.3 +00.1		333 12.5 +02.5	S	01 49.0 +00.0		10 25.4 +02.4	S	16 11.8 -00.1		18										
19	267 09.9 +03.3	N	24 48.4 +00.1		348 15.0 +02.5	S	01 49.0 +00.0		25 27.8 +02.3	S	16 11.7 +00.0		19										
20	282 13.2 +03.4	N	24 48.5 +00.0		3 17.5 +02.4	S	01 49.0 +00.0		40 30.1 +02.3	S	16 11.7 -00.1		20										
21	297 16.6 +03.4	N	24 48.5 +00.1		18 19.9 +02.5	S	01 49.0 +00.0		55 32.4 +02.4	S	16 11.6 +00.0		21										
22	312 20.0 +03.4	N	24 48.6 +00.1		33 22.4 +02.5	S	01 49.0 -00.1		70 34.8 +02.3	S	16 11.6 +00.0		22										
23	327 23.4 +03.3	N	24 48.7 +00.0		48 24.9 +02.5	S	01 48.9 +00.0		85 37.1 +02.3	S	16 11.6 -00.1		23										
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22								
SD	00'1	00'1	00'1	00'1	00'1	00'1			SD	00'4	00'4	00'4	00'4	00'4	00'4								
HP	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	279°	279°	279°	279°	279°	279°			SHA	001°	001°	001°	001°	001°	001°								
Greenwich Culmination Time: 01:15								Greenwich Culmination Time: 19:46								Greenwich Culmination Time: 17:18							

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	183 22.3 -00.2	S	20 29.7 +00.5	174 53.3 -00.9	S	22 00.2 +00.5	183 07.2 -35.3	S	22 16.9 +10.3	00							
01	198 22.1 -00.2	S	20 30.2 +00.5	189 52.4 -00.9	S	22 00.7 +00.6	197 31.9 -35.5	S	22 27.2 +10.1	01							
02	213 21.9 -00.1	S	20 30.7 +00.5	204 51.5 -00.8	S	22 01.3 +00.6	211 56.4 -35.5	S	22 37.3 +10.0	02							
03	228 21.8 -00.2	S	20 31.2 +00.5	219 50.7 -00.9	S	22 01.9 +00.5	226 20.9 -35.7	S	22 47.3 +09.8	03							
04	243 21.6 -00.2	S	20 31.7 +00.5	234 49.8 -00.9	S	22 02.4 +00.6	240 45.2 -35.8	S	22 57.1 +09.7	04							
05	258 21.4 -00.2	S	20 32.2 +00.5	249 48.9 -00.8	S	22 03.0 +00.5	255 09.4 -35.9	S	23 06.8 +09.6	05							
06	273 21.2 -00.2	S	20 32.7 +00.5	264 48.1 -00.9	S	22 03.5 +00.6	269 33.5 -36.0	S	23 16.4 +09.4	06							
07	288 21.0 -00.1	S	20 33.2 +00.5	279 47.2 -00.9	S	22 04.1 +00.6	283 57.5 -36.2	S	23 25.8 +09.3	07							
08	303 20.9 -00.2	S	20 33.7 +00.5	294 46.3 -00.8	S	22 04.7 +00.5	298 21.3 -36.2	S	23 35.1 +09.1	08							
09	318 20.7 -00.2	S	20 34.2 +00.5	309 45.5 -00.9	S	22 05.2 +00.6	312 45.1 -36.4	S	23 44.2 +08.9	09							
10	333 20.5 -00.2	S	20 34.7 +00.5	324 44.6 -00.9	S	22 05.8 +00.5	327 08.7 -36.5	S	23 53.1 +08.8	10							
11	348 20.3 -00.2	S	20 35.2 +00.5	339 43.7 -00.8	S	22 06.3 +00.6	341 32.2 -36.5	S	24 01.9 +08.6	11							
12	3 20.1 -00.2	S	20 35.7 +00.5	354 42.9 -00.9	S	22 06.9 +00.5	355 55.7 -36.7	S	24 10.5 +08.5	12							
13	18 19.9 -00.1	S	20 36.2 +00.5	9 42.0 -00.9	S	22 07.4 +00.6	10 19.0 -36.8	S	24 19.0 +08.3	13							
14	33 19.8 -00.2	S	20 36.7 +00.5	24 41.1 -00.9	S	22 08.0 +00.5	24 42.2 -36.9	S	24 27.3 +08.1	14							
15	48 19.6 -00.2	S	20 37.2 +00.5	39 40.2 -00.8	S	22 08.5 +00.6	39 05.3 -37.0	S	24 35.4 +08.0	15							
16	63 19.4 -00.2	S	20 37.7 +00.5	54 39.4 -00.9	S	22 09.1 +00.5	53 28.3 -37.1	S	24 43.4 +07.8	16							
17	78 19.2 -00.2	S	20 38.2 +00.5	69 38.5 -00.9	S	22 09.6 +00.6	67 51.2 -37.2	S	24 51.2 +07.6	17							
18	93 19.0 -00.2	S	20 38.7 +00.5	84 37.6 -00.9	S	22 10.2 +00.5	82 14.0 -37.3	S	24 58.8 +07.5	18							
19	108 18.8 -00.1	S	20 39.2 +00.5	99 36.7 -00.8	S	22 10.7 +00.6	96 36.7 -37.4	S	25 06.3 +07.3	19							
20	123 18.7 -00.2	S	20 39.7 +00.5	114 35.9 -00.9	S	22 11.3 +00.5	110 59.3 -37.5	S	25 13.6 +07.1	20							
21	138 18.5 -00.2	S	20 40.2 +00.5	129 35.0 -00.9	S	22 11.8 +00.6	125 21.8 -37.6	S	25 20.7 +06.9	21							
22	153 18.3 -00.2	S	20 40.7 +00.5	144 34.1 -00.9	S	22 12.4 +00.5	139 44.2 -37.7	S	25 27.6 +06.7	22							
23	168 18.1 -00.2	S	20 41.2 +00.5	159 33.2 -00.8	S	22 12.9 +00.5	154 06.5 -37.8	S	25 34.3 +06.6	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT			
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	SD			
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	HP			
SHA	120°	120°	120°	120°	120°	119°	SHA	112°	112°	111°	111°	111°	111°	SHA			
Greenwich Culmination Time: 11:46						Greenwich Culmination Time: 12:21						Greenwich Culmination Time: 12:16					

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT				
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec					
00	342 26.7 +03.4	N	24 48.7 +00.1	63 27.4 +02.4	S	01 48.9 +00.0	100 39.4 +02.4	S	16 11.5 +00.0	00							
01	357 30.1 +03.4	N	24 48.8 +00.1	78 29.8 +02.5	S	01 48.9 +00.0	115 41.8 +02.3	S	16 11.5 -00.1	01							
02	12 33.5 +03.4	N	24 48.9 +00.0	93 32.3 +02.5	S	01 48.9 +00.0	130 44.1 +02.3	S	16 11.4 +00.0	02							
03	27 36.9 +03.4	N	24 48.9 +00.1	108 34.8 +02.4	S	01 48.9 +00.0	145 46.4 +02.4	S	16 11.4 -00.1	03							
04	42 40.3 +03.3	N	24 49.0 +00.1	123 37.2 +02.5	S	01 48.9 +00.0	160 48.8 +02.3	S	16 11.3 +00.0	04							
05	57 43.6 +03.4	N	24 49.1 +00.1	138 39.7 +02.5	S	01 48.9 +00.0	175 51.1 +02.3	S	16 11.3 -00.1	05							
06	72 47.0 +03.4	N	24 49.2 +00.0	153 42.2 +02.4	S	01 48.9 +00.0	190 53.4 +02.4	S	16 11.2 +00.0	06							
07	87 50.4 +03.4	N	24 49.2 +00.1	168 44.6 +02.5	S	01 48.9 -00.1	205 55.8 +02.3	S	16 11.2 +00.0	07							
08	102 53.8 +03.4	N	24 49.3 +00.1	183 47.1 +02.5	S	01 48.8 +00.0	220 58.1 +02.3	S	16 11.2 -00.1	08							
09	117 57.2 +03.4	N	24 49.4 +00.0	198 49.6 +02.4	S	01 48.8 +00.0	236 00.4 +02.4	S	16 11.1 +00.0	09							
10	133 00.6 +03.4	N	24 49.4 +00.1	213 52.0 +02.5	S	01 48.8 +00.0	251 02.8 +02.3	S	16 11.1 -00.1	10							
11	148 04.0 +03.3	N	24 49.5 +00.1	228 54.5 +02.4	S	01 48.8 +00.0	266 05.1 +02.3	S	16 11.0 +00.0	11							
12	163 07.3 +03.4	N	24 49.6 +00.0	243 56.9 +02.5	S	01 48.8 +00.0	281 07.4 +02.4	S	16 11.0 -00.1	12							
13	178 10.7 +03.4	N	24 49.6 +00.1	258 59.4 +02.5	S	01 48.8 +00.0	296 09.8 +02.3	S	16 10.9 +00.0	13							
14	193 14.1 +03.4	N	24 49.7 +00.1	274 01.9 +02.4	S	01 48.8 +00.0	311 12.1 +02.3	S	16 10.9 -00.1	14							
15	208 17.5 +03.4	N	24 49.8 +00.0	289 04.3 +02.5	S	01 48.8 -00.1	326 14.4 +02.4	S	16 10.8 +00.0	15							
16	223 20.9 +03.4	N	24 49.8 +00.1	304 06.8 +02.5	S	01 48.7 +00.0	341 16.8 +02.3	S	16 10.8 +00.0	16							
17	238 24.3 +03.4	N	24 49.9 +00.1	319 09.3 +02.4	S	01 48.7 +00.0	356 19.1 +02.3	S	16 10.8 -00.1	17							
18	253 27.7 +03.4	N	24 50.0 +00.0	334 11.7 +02.5	S	01 48.7 +00.0	11 21.4 +02.4	S	16 10.7 +00.0	18							
19	268 31.1 +03.4	N	24 50.0 +00.1	349 14.2 +02.5	S	01 48.7 +00.0	26 23.8 +02.3	S	16 10.7 -00.1	19							
20	283 34.5 +03.4	N	24 50.1 +00.1	4 16.7 +02.4	S	01 48.7 +00.0	41 26.1 +02.3	S	16 10.6 +00.0	20							
21	298 37.9 +03.4	N	24 50.2 +00.0	19 19.1 +02.5	S	01 48.7 +00.0	56 28.4 +02.4	S	16 10.6 -00.1	21							
22	313 41.3 +03.4	N	24 50.2 +00.1	34 21.6 +02.4	S	01 48.7 +00.0	71 30.8 +02.3	S	16 10.5 +00.0	22							
23	328 44.7 +03.4	N	24 50.3 +00.1	49 24.0 +02.5	S	01 48.7 -00.1	86 33.1 +02.3	S	16 10.5 -00.1	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT			
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD			
HP	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	HP			
SHA	280°	280°	280°	280°	280°	280°	SHA	001°	001°	001°	001°	001°	001°	SHA			
Greenwich Culmination Time: 01:09						Greenwich Culmination Time: 19:42						Greenwich Culmination Time: 17:14					

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	183	17.9 -00.2	S 20	41.7 +00.5	174	32.4 -00.9	S 22	13.4 +00.6	168	28.7 -37.8	S 25	40.9 +06.4	00							
01	198	17.7 -00.2	S 20	42.2 +00.5	189	31.5 -00.9	S 22	14.0 +00.5	182	50.9 -38.0	S 25	47.3 +06.2	01							
02	213	17.5 -00.2	S 20	42.7 +00.5	204	30.6 -00.9	S 22	14.5 +00.6	197	12.9 -38.0	S 25	53.5 +06.0	02							
03	228	17.3 -00.1	S 20	43.2 +00.5	219	29.7 -00.8	S 22	15.1 +00.5	211	34.9 -38.1	S 25	59.5 +05.8	03							
04	243	17.2 -00.2	S 20	43.7 +00.5	234	28.9 -00.9	S 22	15.6 +00.5	225	56.8 -38.1	S 26	05.3 +05.7	04							
05	258	17.0 -00.2	S 20	44.2 +00.5	249	28.0 -00.9	S 22	16.1 +00.6	240	18.7 -38.3	S 26	11.0 +05.4	05							
06	273	16.8 -00.2	S 20	44.7 +00.5	264	27.1 -00.9	S 22	16.7 +00.5	254	40.4 -38.3	S 26	16.4 +05.3	06							
07	288	16.6 -00.2	S 20	45.2 +00.4	279	26.2 -00.9	S 22	17.2 +00.5	269	02.1 -38.4	S 26	21.7 +05.1	07							
08	303	16.4 -00.2	S 20	45.6 +00.5	294	25.3 -00.8	S 22	17.7 +00.5	283	23.7 -38.5	S 26	26.8 +04.8	08							
09	318	16.2 -00.2	S 20	46.1 +00.5	309	24.5 -00.9	S 22	18.2 +00.6	297	45.2 -38.5	S 26	31.6 +04.7	09							
10	333	16.0 -00.2	S 20	46.6 +00.5	324	23.6 -00.9	S 22	18.8 +00.5	312	06.7 -38.6	S 26	36.3 +04.5	10							
11	348	15.8 -00.2	S 20	47.1 +00.5	339	22.7 -00.9	S 22	19.3 +00.5	326	28.1 -38.6	S 26	40.8 +04.3	11							
12	3	15.6 -00.2	S 20	47.6 +00.5	354	21.8 -00.9	S 22	19.8 +00.6	340	49.5 -38.7	S 26	45.1 +04.1	12							
13	18	15.4 -00.1	S 20	48.1 +00.5	9	20.9 -00.9	S 22	20.4 +00.5	355	10.8 -38.8	S 26	49.2 +03.9	13							
14	33	15.3 -00.2	S 20	48.6 +00.4	24	20.0 -00.8	S 22	20.9 +00.5	9	32.0 -38.8	S 26	53.1 +03.7	14							
15	48	15.1 -00.2	S 20	49.0 +00.5	39	19.2 -00.9	S 22	21.4 +00.5	23	53.2 -38.8	S 26	56.8 +03.5	15							
16	63	14.9 -00.2	S 20	49.5 +00.5	54	18.3 -00.9	S 22	21.9 +00.5	38	14.4 -38.9	S 27	00.3 +03.3	16							
17	78	14.7 -00.2	S 20	50.0 +00.5	69	17.4 -00.9	S 22	22.4 +00.6	52	35.5 -39.0	S 27	03.6 +03.1	17							
18	93	14.5 -00.2	S 20	50.5 +00.5	84	16.5 -00.9	S 22	23.0 +00.5	66	56.5 -39.0	S 27	06.7 +02.9	18							
19	108	14.3 -00.2	S 20	51.0 +00.5	99	15.6 -00.9	S 22	23.5 +00.5	81	17.5 -39.0	S 27	09.6 +02.7	19							
20	123	14.1 -00.2	S 20	51.5 +00.4	114	14.7 -00.8	S 22	24.0 +00.5	95	38.5 -39.0	S 27	12.3 +02.4	20							
21	138	13.9 -00.2	S 20	51.9 +00.5	129	13.9 -00.9	S 22	24.5 +00.5	109	59.5 -39.1	S 27	14.7 +02.3	21							
22	153	13.7 -00.2	S 20	52.4 +00.5	144	13.0 -00.9	S 22	25.0 +00.5	124	20.4 -39.1	S 27	17.0 +02.1	22							
23	168	13.5 -00.2	S 20	52.9 +00.5	159	12.1 -00.9	S 22	25.5 +00.6	138	41.3 -39.1	S 27	19.1 +01.9	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	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	00'1	00'1	00'1	00'1	00'1	00'1	HP	60'3	60'3	60'4	60'4	60'4	60'4
SHA	119°	119°	119°	119°	119°	118°	SHA	111°	110°	110°	110°	110°	109°	SHA	103°	101°	098°	095°	092°	090°
Greenwich Culmination Time: 11:46							Greenwich Culmination Time: 12:22							Greenwich Culmination Time: 13:20						

  

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	343	48.1 +03.4	N 24	50.4 +00.0	64	26.5 +02.5	S 01	48.6 +00.0	101	35.4 +02.4	S 16	10.4 +00.0	00							
01	358	51.5 +03.4	N 24	50.4 +00.1	79	29.0 +02.4	S 01	48.6 +00.0	116	37.8 +02.3	S 16	10.4 +00.0	01							
02	13	54.9 +03.4	N 24	50.5 +00.1	94	31.4 +02.5	S 01	48.6 +00.0	131	40.1 +02.3	S 16	10.4 -00.1	02							
03	28	58.3 +03.4	N 24	50.6 +00.0	109	33.9 +02.4	S 01	48.6 +00.0	146	42.4 +02.3	S 16	10.3 +00.0	03							
04	44	01.7 +03.4	N 24	50.6 +00.1	124	36.3 +02.5	S 01	48.6 +00.0	161	44.7 +02.4	S 16	10.3 -00.1	04							
05	59	05.1 +03.4	N 24	50.7 +00.0	139	38.8 +02.5	S 01	48.6 +00.0	176	47.1 +02.3	S 16	10.2 +00.0	05							
06	74	08.5 +03.5	N 24	50.7 +00.1	154	41.3 +02.4	S 01	48.6 -00.1	191	49.4 +02.3	S 16	10.2 -00.1	06							
07	89	12.0 +03.4	N 24	50.8 +00.1	169	43.7 +02.5	S 01	48.5 +00.0	206	51.7 +02.4	S 16	10.1 +00.0	07							
08	104	15.4 +03.4	N 24	50.9 +00.0	184	46.2 +02.4	S 01	48.5 +00.0	221	54.1 +02.3	S 16	10.1 -00.1	08							
09	119	18.8 +03.4	N 24	50.9 +00.1	199	48.6 +02.5	S 01	48.5 +00.0	236	56.4 +02.3	S 16	10.0 +00.0	09							
10	134	22.2 +03.4	N 24	51.0 +00.1	214	51.1 +02.4	S 01	48.5 +00.0	251	58.7 +02.4	S 16	10.0 -00.1	10							
11	149	25.6 +03.4	N 24	51.1 +00.0	229	53.5 +02.5	S 01	48.5 +00.0	267	01.1 +02.3	S 16	09.9 +00.0	11							
12	164	29.0 +03.4	N 24	51.1 +00.1	244	56.0 +02.5	S 01	48.5 -00.1	282	03.4 +02.3	S 16	09.9 +00.0	12							
13	179	32.4 +03.5	N 24	51.2 +00.1	259	58.5 +02.4	S 01	48.4 +00.0	297	05.7 +02.3	S 16	09.9 -00.1	13							
14	194	35.9 +03.4	N 24	51.3 +00.0	275	00.9 +02.5	S 01	48.4 +00.0	312	08.0 +02.4	S 16	09.8 +00.0	14							
15	209	39.3 +03.4	N 24	51.3 +00.1	290	03.4 +02.4	S 01	48.4 +00.0	327	10.4 +02.3	S 16	09.8 -00.1	15							
16	224	42.7 +03.4	N 24	51.4 +00.0	305	05.8 +02.5	S 01	48.4 +00.0	342	12.7 +02.3	S 16	09.7 +00.0	16							
17	239	46.1 +03.4	N 24	51.4 +00.1	320	08.3 +02.4	S 01	48.4 +00.0	357	15.0 +02.3	S 16	09.7 -00.1	17							
18	254	49.5 +03.5	N 24	51.5 +00.1	335	10.7 +02.5	S 01	48.4 -00.1	12	17.3 +02.4	S 16	09.6 +00.0	18							
19	269	53.0 +03.4	N 24	51.6 +00.0	350	13.2 +02.4	S 01	48.3 +00.0	27	19.7 +02.3	S 16	09.6 -00.1	19							
20	284	56.4 +03.4	N 24	51.6 +00.1	5	15.6 +02.5	S 01	48.3 +00.0	42	22.0 +02.3	S 16	09.5 +00.0	20							
21	299	59.8 +03.4	N 24	51.7 +00.0	20	18.1 +02.4	S 01	48.3 +00.0	57	24.3 +02.4	S 16	09.5 -00.1	21							
22	315	03.2 +03.4	N 24	51.7 +00.1	35	20.5 +02.5	S 01	48.3 +00.0	72	26.7 +02.3	S 16	09.4 +00.0	22							
23	330	06.6 +03.5	N 24	51.8 +00.1	50	23.0 +02.5	S 01	48.3 +00.0	87	29.0 +02.3	S 16	09.4 -00.1	23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4	SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0	HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	280°	280°	280°	280°	280°	280°	SHA	001°	001°	001°	001°	001°	001°	SHA	038°	038°	038°	038°	038°	038°
Greenwich Culmination Time: 01:04							Greenwich Culmination Time: 19:39							Greenwich Culmination Time: 17:10						



UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	183	13.3-00.2	S 20 53.4	+00.4	174	11.2-00.9	S 22 26.1	+00.5	153	02.2-39.2	S 27 21.0	+01.6	00	
01	198	13.1-00.2	S 20 53.8	+00.5	189	10.3-00.9	S 22 26.6	+00.5	167	23.0-39.2	S 27 22.6	+01.5	01	
02	213	12.9-00.2	S 20 54.3	+00.5	204	09.4-00.9	S 22 27.1	+00.5	181	43.8-39.1	S 27 24.1	+01.2	02	
03	228	12.7-00.2	S 20 54.8	+00.5	219	08.5-00.9	S 22 27.6	+00.5	196	04.7-39.2	S 27 25.3	+01.1	03	
04	243	12.5-00.2	S 20 55.3	+00.4	234	07.6-00.8	S 22 28.1	+00.5	210	25.5-39.2	S 27 26.4	+00.8	04	
05	258	12.3-00.1	S 20 55.7	+00.5	249	06.8-00.9	S 22 28.6	+00.5	224	46.3-39.2	S 27 27.2	+00.6	05	
06	273	12.2-00.2	S 20 56.2	+00.5	264	05.9-00.9	S 22 29.1	+00.5	239	07.1-39.2	S 27 27.8	+00.5	06	
07	288	12.0-00.2	S 20 56.7	+00.5	279	05.0-00.9	S 22 29.6	+00.5	253	27.9-39.2	S 27 28.3	+00.2	07	
08	303	11.8-00.2	S 20 57.2	+00.4	294	04.1-00.9	S 22 30.1	+00.5	267	48.7-39.2	S 27 28.5	+00.0	08	
09	318	11.6-00.2	S 20 57.6	+00.5	309	03.2-00.9	S 22 30.6	+00.5	282	09.5-39.2	S 27 28.5	-00.2	09	
10	333	11.4-00.2	S 20 58.1	+00.5	324	02.3-00.9	S 22 31.1	+00.5	296	30.3-39.2	S 27 28.3	-00.4	10	
11	348	11.2-00.2	S 20 58.6	+00.4	339	01.4-00.9	S 22 31.6	+00.5	310	51.1-39.2	S 27 27.9	-00.6	11	
12	3	11.0-00.2	S 20 59.0	+00.5	354	00.5-00.9	S 22 32.1	+00.5	325	11.9-39.1	S 27 27.3	-00.8	12	
13	18	10.8-00.2	S 20 59.5	+00.5	8	59.6-00.9	S 22 32.6	+00.5	339	32.8-39.1	S 27 26.5	-01.0	13	
14	33	10.6-00.2	S 20 60.0	+00.5	23	58.7-00.8	S 22 33.1	+00.5	353	53.7-39.1	S 27 25.5	-01.3	14	
15	48	10.4-00.2	S 21 00.5	+00.4	38	57.9-00.9	S 22 33.6	+00.5	8	14.6-39.1	S 27 24.2	-01.4	15	
16	63	10.2-00.2	S 21 00.9	+00.5	53	57.0-00.9	S 22 34.1	+00.5	22	35.5-39.0	S 27 22.8	-01.6	16	
17	78	10.0-00.2	S 21 01.4	+00.4	68	56.1-00.9	S 22 34.6	+00.5	36	56.5-39.1	S 27 21.2	-01.9	17	
18	93	09.8-00.2	S 21 01.8	+00.5	83	55.2-00.9	S 22 35.1	+00.5	51	17.4-38.9	S 27 19.3	-02.0	18	
19	108	09.6-00.2	S 21 02.3	+00.5	98	54.3-00.9	S 22 35.6	+00.5	65	38.5-39.0	S 27 17.3	-02.3	19	
20	123	09.4-00.2	S 21 02.8	+00.4	113	53.4-00.9	S 22 36.1	+00.5	79	59.5-38.9	S 27 15.0	-02.4	20	
21	138	09.2-00.2	S 21 03.2	+00.5	128	52.5-00.9	S 22 36.6	+00.4	94	20.6-38.8	S 27 12.6	-02.7	21	
22	153	09.0-00.2	S 21 03.7	+00.5	143	51.6-00.9	S 22 37.0	+00.5	108	41.8-38.8	S 27 09.9	-02.8	22	
23	168	08.8-00.2	S 21 04.2	+00.4	158	50.7-00.9	S 22 37.5	+00.5	123	03.0-38.7	S 27 07.1	-03.1	23	
	<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>								
	SD 16'2 16'2 16'2 16'2 16'2 16'2					SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1								
	SHA 118° 118° 118° 118° 118° 117°					SHA 109° 109° 109° 108° 108° 108°								
	Greenwich Culmination Time: 11:47					Greenwich Culmination Time: 12:23								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	345	10.1+03.4	N 24 51.9	+00.0	65	25.5+02.4	S 01 48.3	-00.1	102	31.3+02.3	S 16 09.3	+00.0	00	
01	0	13.5+03.4	N 24 51.9	+00.1	80	27.9+02.5	S 01 48.2	+00.0	117	33.6+02.4	S 16 09.3	+00.0	01	
02	15	16.9+03.5	N 24 52.0	+00.1	95	30.4+02.4	S 01 48.2	+00.0	132	36.0+02.3	S 16 09.3	-00.1	02	
03	30	20.4+03.4	N 24 52.1	+00.0	110	32.8+02.5	S 01 48.2	+00.0	147	38.3+02.3	S 16 09.2	+00.0	03	
04	45	23.8+03.4	N 24 52.1	+00.1	125	35.3+02.4	S 01 48.2	+00.0	162	40.6+02.3	S 16 09.2	-00.1	04	
05	60	27.2+03.4	N 24 52.2	+00.0	140	37.7+02.5	S 01 48.2	-00.1	177	42.9+02.4	S 16 09.1	+00.0	05	
06	75	30.6+03.5	N 24 52.2	+00.1	155	40.2+02.4	S 01 48.1	+00.0	192	45.3+02.3	S 16 09.1	-00.1	06	
07	90	34.1+03.4	N 24 52.3	+00.0	170	42.6+02.5	S 01 48.1	+00.0	207	47.6+02.3	S 16 09.0	+00.0	07	
08	105	37.5+03.4	N 24 52.3	+00.1	185	45.1+02.4	S 01 48.1	+00.0	222	49.9+02.4	S 16 09.0	-00.1	08	
09	120	40.9+03.5	N 24 52.4	+00.1	200	47.5+02.5	S 01 48.1	+00.0	237	52.3+02.3	S 16 08.9	+00.0	09	
10	135	44.4+03.4	N 24 52.5	+00.0	215	50.0+02.4	S 01 48.1	+00.0	252	54.6+02.3	S 16 08.9	-00.1	10	
11	150	47.8+03.5	N 24 52.5	+00.1	230	52.4+02.5	S 01 48.1	-00.1	267	56.9+02.3	S 16 08.8	+00.0	11	
12	165	51.3+03.4	N 24 52.6	+00.0	245	54.9+02.4	S 01 48.0	+00.0	282	59.2+02.4	S 16 08.8	-00.1	12	
13	180	54.7+03.4	N 24 52.6	+00.1	260	57.3+02.5	S 01 48.0	+00.0	298	01.6+02.3	S 16 08.7	+00.0	13	
14	195	58.1+03.5	N 24 52.7	+00.1	275	59.8+02.4	S 01 48.0	+00.0	313	03.9+02.3	S 16 08.7	-00.1	14	
15	211	01.6+03.4	N 24 52.8	+00.0	291	02.2+02.4	S 01 48.0	+00.0	328	06.2+02.3	S 16 08.6	+00.0	15	
16	226	05.0+03.5	N 24 52.8	+00.1	306	04.6+02.5	S 01 48.0	-00.1	343	08.5+02.4	S 16 08.6	+00.0	16	
17	241	08.5+03.4	N 24 52.9	+00.0	321	07.1+02.4	S 01 47.9	+00.0	358	10.9+02.3	S 16 08.6	-00.1	17	
18	256	11.9+03.4	N 24 52.9	+00.1	336	09.5+02.5	S 01 47.9	+00.0	13	13.2+02.3	S 16 08.5	+00.0	18	
19	271	15.3+03.5	N 24 53.0	+00.0	351	12.0+02.4	S 01 47.9	+00.0	28	15.5+02.3	S 16 08.5	-00.1	19	
20	286	18.8+03.4	N 24 53.0	+00.1	6	14.4+02.5	S 01 47.9	+00.0	43	17.8+02.3	S 16 08.4	+00.0	20	
21	301	22.2+03.5	N 24 53.1	+00.0	21	16.9+02.4	S 01 47.9	-00.1	58	20.1+02.4	S 16 08.4	-00.1	21	
22	316	25.7+03.4	N 24 53.1	+00.1	36	19.3+02.5	S 01 47.8	+00.0	73	22.5+02.3	S 16 08.3	+00.0	22	
23	331	29.1+03.5	N 24 53.2	+00.1	51	21.8+02.4	S 01 47.8	+00.0	88	24.8+02.3	S 16 08.3	-00.1	23	
	<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>								
	SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 00'4 00'4 00'4 00'4 00'4 00'4								
	HP 00'3 00'3 00'3 00'3 00'3 00'3					HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 280° 280° 280° 280° 281° 281°					SHA 001° 001° 001° 001° 001° 001°								
	Greenwich Culmination Time: 00:59					Greenwich Culmination Time: 19:35								

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Sun					Venus					Moon <span style="float: right;">A: 14%</span>					UT
UT	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "			
00	183 08.6 -00.2	S	21 04.6 +00.5		173 49.8 -00.9	S	22 38.0 +00.5		137 24.3 -38.7	S	27 04.0 -03.2		00		
01	198 08.4 -00.2	S	21 05.1 +00.4		188 48.9 -00.9	S	22 38.5 +00.5		151 45.6 -38.7	S	27 00.8 -03.5		01		
02	213 08.2 -00.3	S	21 05.5 +00.5		203 48.0 -00.9	S	22 39.0 +00.5		166 06.9 -38.6	S	26 57.3 -03.6		02		
03	228 07.9 -00.2	S	21 06.0 +00.5		218 47.1 -00.9	S	22 39.5 +00.4		180 28.3 -38.5	S	26 53.7 -03.9		03		
04	243 07.7 -00.2	S	21 06.5 +00.4		233 46.2 -00.9	S	22 39.9 +00.5		194 49.8 -38.4	S	26 49.8 -04.0		04		
05	258 07.5 -00.2	S	21 06.9 +00.5		248 45.3 -00.9	S	22 40.4 +00.5		209 11.4 -38.4	S	26 45.8 -04.2		05		
06	273 07.3 -00.2	S	21 07.4 +00.4		263 44.4 -00.9	S	22 40.9 +00.5		223 33.0 -38.3	S	26 41.6 -04.4		06		
07	288 07.1 -00.2	S	21 07.8 +00.5		278 43.5 -00.9	S	22 41.4 +00.5		237 54.7 -38.3	S	26 37.2 -04.6		07		
08	303 06.9 -00.2	S	21 08.3 +00.4		293 42.6 -00.9	S	22 41.9 +00.4		252 16.4 -38.1	S	26 32.6 -04.9		08		
09	318 06.7 -00.2	S	21 08.7 +00.5		308 41.7 -00.9	S	22 42.3 +00.5		266 38.3 -38.1	S	26 27.7 -04.9		09		
10	333 06.5 -00.2	S	21 09.2 +00.5		323 40.8 -00.9	S	22 42.8 +00.5		281 00.2 -38.0	S	26 22.8 -05.2		10		
11	348 06.3 -00.2	S	21 09.7 +00.4		338 39.9 -00.9	S	22 43.3 +00.4		295 22.2 -38.0	S	26 17.6 -05.4		11		
12	3 06.1 -00.2	S	21 10.1 +00.5		353 39.0 -00.9	S	22 43.7 +00.5		309 44.2 -37.8	S	26 12.2 -05.5		12		
13	18 05.9 -00.2	S	21 10.6 +00.4		8 38.1 -00.9	S	22 44.2 +00.5		324 06.4 -37.8	S	26 06.7 -05.8		13		
14	33 05.7 -00.2	S	21 11.0 +00.5		23 37.2 -00.9	S	22 44.7 +00.5		338 28.6 -37.6	S	26 00.9 -05.9		14		
15	48 05.5 -00.2	S	21 11.5 +00.4		38 36.3 -00.9	S	22 45.2 +00.4		352 51.0 -37.6	S	25 55.0 -06.1		15		
16	63 05.3 -00.2	S	21 11.9 +00.5		53 35.4 -00.9	S	22 45.6 +00.5		7 13.4 -37.5	S	25 48.9 -06.3		16		
17	78 05.1 -00.2	S	21 12.4 +00.4		68 34.5 -00.9	S	22 46.1 +00.5		21 35.9 -37.4	S	25 42.6 -06.4		17		
18	93 04.9 -00.2	S	21 12.8 +00.5		83 33.6 -00.9	S	22 46.6 +00.4		35 58.5 -37.3	S	25 36.2 -06.7		18		
19	108 04.7 -00.3	S	21 13.3 +00.4		98 32.7 -00.9	S	22 47.0 +00.5		50 21.2 -37.2	S	25 29.5 -06.8		19		
20	123 04.4 -00.2	S	21 13.7 +00.5		113 31.8 -00.9	S	22 47.5 +00.4		64 44.0 -37.1	S	25 22.7 -06.9		20		
21	138 04.2 -00.2	S	21 14.2 +00.4		128 30.9 -00.9	S	22 47.9 +00.5		79 06.9 -37.0	S	25 15.8 -07.2		21		
22	153 04.0 -00.2	S	21 14.6 +00.4		143 30.0 -00.9	S	22 48.4 +00.5		93 29.9 -36.9	S	25 08.6 -07.3		22		
23	168 03.8 -00.2	S	21 15.0 +00.5		158 29.1 -00.9	S	22 48.9 +00.4		107 53.0 -36.8	S	25 01.3 -07.5		23		
<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>					
SD 16'2 16'2 16'2 16'2 16'2 16'2					SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 16'4 16'4 16'4 16'4 16'4 16'4					
HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 60'3 60'2 60'2 60'1 60'1 60'0					
SHA 117° 117° 117° 117° 116° 116°					SHA 108° 108° 107° 107° 107° 107°					SHA 070° 067° 065° 062° 059° 057°					
Greenwich Culmination Time: 11:47					Greenwich Culmination Time: 12:25					Greenwich Culmination Time: 15:29					
Mars					Jupiter					Saturn					UT
UT	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "			
00	346 32.6 +03.4	N	24 53.3 +00.0		66 24.2 +02.5	S	01 47.8 +00.0		103 27.1 +02.3	S	16 08.2 +00.0		00		
01	1 36.0 +03.5	N	24 53.3 +00.1		81 26.7 +02.4	S	01 47.8 -00.1		118 29.4 +02.4	S	16 08.2 -00.1		01		
02	16 39.5 +03.4	N	24 53.4 +00.0		96 29.1 +02.4	S	01 47.7 +00.0		133 31.8 +02.3	S	16 08.1 +00.0		02		
03	31 42.9 +03.5	N	24 53.4 +00.1		111 31.5 +02.5	S	01 47.7 +00.0		148 34.1 +02.3	S	16 08.1 -00.1		03		
04	46 46.4 +03.4	N	24 53.5 +00.0		126 34.0 +02.4	S	01 47.7 +00.0		163 36.4 +02.3	S	16 08.0 +00.0		04		
05	61 49.8 +03.5	N	24 53.5 +00.1		141 36.4 +02.5	S	01 47.7 +00.0		178 38.7 +02.4	S	16 08.0 -00.1		05		
06	76 53.3 +03.4	N	24 53.6 +00.0		156 38.9 +02.4	S	01 47.7 -00.1		193 41.1 +02.3	S	16 07.9 +00.0		06		
07	91 56.7 +03.5	N	24 53.6 +00.1		171 41.3 +02.5	S	01 47.6 +00.0		208 43.4 +02.3	S	16 07.9 -00.1		07		
08	107 00.2 +03.4	N	24 53.7 +00.0		186 43.8 +02.4	S	01 47.6 +00.0		223 45.7 +02.3	S	16 07.8 +00.0		08		
09	122 03.6 +03.5	N	24 53.7 +00.1		201 46.2 +02.4	S	01 47.6 +00.0		238 48.0 +02.3	S	16 07.8 -00.1		09		
10	137 07.1 +03.4	N	24 53.8 +00.1		216 48.6 +02.5	S	01 47.6 -00.1		253 50.3 +02.4	S	16 07.7 +00.0		10		
11	152 10.5 +03.5	N	24 53.9 +00.0		231 51.1 +02.4	S	01 47.5 +00.0		268 52.7 +02.3	S	16 07.7 +00.0		11		
12	167 14.0 +03.5	N	24 53.9 +00.1		246 53.5 +02.5	S	01 47.5 +00.0		283 55.0 +02.3	S	16 07.7 -00.1		12		
13	182 17.5 +03.4	N	24 54.0 +00.0		261 56.0 +02.4	S	01 47.5 +00.0		298 57.3 +02.3	S	16 07.6 +00.0		13		
14	197 20.9 +03.5	N	24 54.0 +00.1		276 58.4 +02.4	S	01 47.5 +00.0		313 59.6 +02.4	S	16 07.6 -00.1		14		
15	212 24.4 +03.4	N	24 54.1 +00.0		292 00.8 +02.5	S	01 47.5 -00.1		329 02.0 +02.3	S	16 07.5 +00.0		15		
16	227 27.8 +03.5	N	24 54.1 +00.1		307 03.3 +02.4	S	01 47.4 +00.0		344 04.3 +02.3	S	16 07.5 -00.1		16		
17	242 31.3 +03.5	N	24 54.2 +00.0		322 05.7 +02.5	S	01 47.4 +00.0		359 06.6 +02.3	S	16 07.4 +00.0		17		
18	257 34.8 +03.4	N	24 54.2 +00.1		337 08.2 +02.4	S	01 47.4 +00.0		14 08.9 +02.3	S	16 07.4 -00.1		18		
19	272 38.2 +03.5	N	24 54.3 +00.0		352 10.6 +02.4	S	01 47.4 -00.1		29 11.2 +02.4	S	16 07.3 +00.0		19		
20	287 41.7 +03.4	N	24 54.3 +00.1		7 13.0 +02.5	S	01 47.3 +00.0		44 13.6 +02.3	S	16 07.3 -00.1		20		
21	302 45.1 +03.5	N	24 54.4 +00.0		22 15.5 +02.4	S	01 47.3 +00.0		59 15.9 +02.3	S	16 07.2 +00.0		21		
22	317 48.6 +03.5	N	24 54.4 +00.1		37 17.9 +02.5	S	01 47.3 +00.0		74 18.2 +02.3	S	16 07.2 -00.1		22		
23	332 52.1 +03.4	N	24 54.5 +00.0		52 20.4 +02.4	S	01 47.3 -00.1		89 20.5 +02.3	S	16 07.1 +00.0		23		
<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>					<b>UT 02 06 10 14 18 22</b>					
SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 00'4 00'4 00'4 00'4 00'4 00'4					SD 00'1 00'1 00'1 00'1 00'1 00'1					
HP 00'3 00'3 00'3 00'3 00'3 00'3					HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0					
SHA 281° 281° 281° 281° 281° 281°					SHA 001° 001° 001° 001° 001° 001°					SHA 038° 038° 038° 038° 038° 038°					
Greenwich Culmination Time: 00:53					Greenwich Culmination Time: 19:31					Greenwich Culmination Time: 17:03					

<b>Sun</b>					<b>Venus</b>					<b>Moon</b>						
<b>UT</b>	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	<b>A: 18%</b>		<b>UT</b>	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
00	183 03.6 -00.2	S	21 15.5 +00.4		173 28.2 -00.9	S	22 49.3 +00.5		122 16.2 -36.7	S	24 53.8 -07.7			00		
01	198 03.4 -00.2	S	21 15.9 +00.5		188 27.3 -00.9	S	22 49.8 +00.4		136 39.5 -36.6	S	24 46.1 -07.8			01		
02	213 03.2 -00.2	S	21 16.4 +00.4		203 26.4 -00.9	S	22 50.2 +00.5		151 02.9 -36.5	S	24 38.3 -07.9			02		
03	228 03.0 -00.2	S	21 16.8 +00.5		218 25.5 -01.0	S	22 50.7 +00.4		165 26.4 -36.4	S	24 30.4 -08.2			03		
04	243 02.8 -00.2	S	21 17.3 +00.4		233 24.5 -00.9	S	22 51.1 +00.5		179 50.0 -36.3	S	24 22.2 -08.3			04		
05	258 02.6 -00.3	S	21 17.7 +00.4		248 23.6 -00.9	S	22 51.6 +00.4		194 13.7 -36.1	S	24 13.9 -08.5			05		
06	273 02.3 -00.2	S	21 18.1 +00.5		263 22.7 -00.9	S	22 52.0 +00.5		208 37.6 -36.1	S	24 05.4 -08.6			06		
07	288 02.1 -00.2	S	21 18.6 +00.4		278 21.8 -00.9	S	22 52.5 +00.4		223 01.5 -35.9	S	23 56.8 -08.7			07		
08	303 01.9 -00.2	S	21 19.0 +00.5		293 20.9 -00.9	S	22 52.9 +00.5		237 25.6 -35.8	S	23 48.1 -09.0			08		
09	318 01.7 -00.2	S	21 19.5 +00.4		308 20.0 -00.9	S	22 53.4 +00.4		251 49.8 -35.7	S	23 39.1 -09.0			09		
10	333 01.5 -00.2	S	21 19.9 +00.4		323 19.1 -00.9	S	22 53.8 +00.5		266 14.1 -35.6	S	23 30.1 -09.2			10		
11	348 01.3 -00.2	S	21 20.3 +00.5		338 18.2 -00.9	S	22 54.3 +00.4		280 38.5 -35.5	S	23 20.9 -09.4			11		
12	3 01.1 -00.2	S	21 20.8 +00.4		353 17.3 -00.9	S	22 54.7 +00.4		295 03.0 -35.3	S	23 11.5 -09.5			12		
13	18 00.9 -00.3	S	21 21.2 +00.4		8 16.4 -00.9	S	22 55.1 +00.5		309 27.7 -35.3	S	23 02.0 -09.7			13		
14	33 00.6 -00.2	S	21 21.6 +00.5		23 15.5 -01.0	S	22 55.6 +00.4		323 52.4 -35.1	S	22 52.3 -09.8			14		
15	48 00.4 -00.2	S	21 22.1 +00.4		38 14.5 -00.9	S	22 56.0 +00.5		338 17.3 -35.0	S	22 42.5 -09.9			15		
16	63 00.2 -00.2	S	21 22.5 +00.4		53 13.6 -00.9	S	22 56.5 +00.4		352 42.3 -34.9	S	22 32.6 -10.1			16		
17	78 00.0 -00.2	S	21 22.9 +00.5		68 12.7 -00.9	S	22 56.9 +00.4		7 07.4 -34.8	S	22 22.5 -10.2			17		
18	92 59.8 -00.2	S	21 23.4 +00.4		83 11.8 -00.9	S	22 57.3 +00.5		21 32.6 -34.6	S	22 12.3 -10.3			18		
19	107 59.6 -00.2	S	21 23.8 +00.4		98 10.9 -00.9	S	22 57.8 +00.4		35 58.0 -34.6	S	22 02.0 -10.5			19		
20	122 59.4 -00.3	S	21 24.2 +00.5		113 10.0 -00.9	S	22 58.2 +00.4		50 23.4 -34.4	S	21 51.5 -10.6			20		
21	137 59.1 -00.2	S	21 24.7 +00.4		128 09.1 -00.9	S	22 58.6 +00.5		64 49.0 -34.3	S	21 40.9 -10.7			21		
22	152 58.9 -00.2	S	21 25.1 +00.4		143 08.2 -01.0	S	22 59.1 +00.4		79 14.7 -34.1	S	21 30.2 -10.8			22		
23	167 58.7 -00.2	S	21 25.5 +00.5		158 07.2 -00.9	S	22 59.5 +00.4		93 40.6 -34.1	S	21 19.4 -11.0			23		

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	16'2	16'2	16'2	16'2	16'2	16'2
HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	116°	116°	116°	116°	115°	115°
Greenwich Culmination Time: 11:47						

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
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	106°	106°	106°	106°	106°	105°
Greenwich Culmination Time: 12:26						

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	16'3	16'3	16'3	16'3	16'3	16'2
HP	60'0	59'9	59'8	59'7	59'7	59'6
SHA	054°	052°	049°	046°	044°	041°
Greenwich Culmination Time: 16:30						

  

<b>Mars</b>					<b>Jupiter</b>					<b>Saturn</b>						
<b>UT</b>	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			<b>UT</b>	
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
00	347 55.5 +03.5	N	24 54.5 +00.1		67 22.8 +02.4	S	01 47.2 +00.0		104 22.8 +02.4	S	16 07.1 -00.1			00		
01	2 59.0 +03.5	N	24 54.6 +00.0		82 25.2 +02.5	S	01 47.2 +00.0		119 25.2 +02.3	S	16 07.0 +00.0			01		
02	18 02.5 +03.4	N	24 54.6 +00.1		97 27.7 +02.4	S	01 47.2 +00.0		134 27.5 +02.3	S	16 07.0 -00.1			02		
03	33 05.9 +03.5	N	24 54.7 +00.0		112 30.1 +02.4	S	01 47.2 -00.1		149 29.8 +02.3	S	16 06.9 +00.0			03		
04	48 09.4 +03.5	N	24 54.7 +00.1		127 32.5 +02.5	S	01 47.1 +00.0		164 32.1 +02.3	S	16 06.9 -00.1			04		
05	63 12.9 +03.5	N	24 54.8 +00.0		142 35.0 +02.4	S	01 47.1 +00.0		179 34.4 +02.3	S	16 06.8 +00.0			05		
06	78 16.4 +03.4	N	24 54.8 +00.1		157 37.4 +02.4	S	01 47.1 +00.0		194 36.7 +02.4	S	16 06.8 -00.1			06		
07	93 19.8 +03.5	N	24 54.9 +00.0		172 39.8 +02.5	S	01 47.1 -00.1		209 39.1 +02.3	S	16 06.7 +00.0			07		
08	108 23.3 +03.5	N	24 54.9 +00.1		187 42.3 +02.4	S	01 47.0 +00.0		224 41.4 +02.3	S	16 06.7 -00.1			08		
09	123 26.8 +03.4	N	24 55.0 +00.0		202 44.7 +02.4	S	01 47.0 +00.0		239 43.7 +02.3	S	16 06.6 +00.0			09		
10	138 30.2 +03.5	N	24 55.0 +00.1		217 47.1 +02.5	S	01 47.0 +00.0		254 46.0 +02.3	S	16 06.6 -00.1			10		
11	153 33.7 +03.5	N	24 55.1 +00.0		232 49.6 +02.4	S	01 47.0 -00.1		269 48.3 +02.4	S	16 06.5 +00.0			11		
12	168 37.2 +03.5	N	24 55.1 +00.1		247 52.0 +02.4	S	01 46.9 +00.0		284 50.7 +02.3	S	16 06.5 -00.1			12		
13	183 40.7 +03.4	N	24 55.2 +00.0		262 54.4 +02.5	S	01 46.9 +00.0		299 53.0 +02.3	S	16 06.4 +00.0			13		
14	198 44.1 +03.5	N	24 55.2 +00.0		277 56.9 +02.4	S	01 46.9 +00.0		314 55.3 +02.3	S	16 06.4 -00.1			14		
15	213 47.6 +03.5	N	24 55.2 +00.1		292 59.3 +02.4	S	01 46.9 -00.1		329 57.6 +02.3	S	16 06.3 +00.0			15		
16	228 51.1 +03.5	N	24 55.3 +00.0		308 01.7 +02.5	S	01 46.8 +00.0		344 59.9 +02.3	S	16 06.3 -00.1			16		
17	243 54.6 +03.5	N	24 55.3 +00.1		323 04.2 +02.4	S	01 46.8 +00.0		0 02.2 +02.4	S	16 06.2 +00.0			17		
18	258 58.1 +03.4	N	24 55.4 +00.0		338 06.6 +02.4	S	01 46.8 -00.1		15 04.6 +02.3	S	16 06.2 -00.1			18		
19	274 01.5 +03.5	N	24 55.4 +00.1		353 09.0 +02.5	S	01 46.7 +00.0		30 06.9 +02.3	S	16 06.1 +00.0			19		
20	289 05.0 +03.5	N	24 55.5 +00.0		8 11.5 +02.4	S	01 46.7 +00.0		45 09.2 +02.3	S	16 06.1 -00.1			20		
21	304 08.5 +03.5	N	24 55.5 +00.1		23 13.9 +02.4	S	01 46.7 +00.0		60 11.5 +02.3	S	16 06.0 +00.0			21		
22	319 12.0 +03.5	N	24 55.6 +00.0		38 16.3 +02.4	S	01 46.7 -00.1		75 13.8 +02.3	S	16 06.0 -00.1			22		
23	334 15.5 +03.4	N	24 55.6 +00.1		53 18.7 +02.5	S	01 46.6 +00.0		90 16.1 +02.4	S	16 05.9 +00.0			23		

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'3	00'3	00'3	00'3	00'3	00'3
SHA	281°	281°	281°	281°	281°	281°
Greenwich Culmination Time: 00:48						

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
SD	00'4	00'4	00'4	00'4	00'4	00'4
HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	001°	001°	000°	000°	000°	000°
Greenwich Culmination Time: 19:27						

  

<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
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	037°	037°	037°	037°	037°	037°
Greenwich Culmination Time: 16:59						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> A: 22%				UT
	GHA °	ddGHA '	Dec °	dDec '	GHA °	ddGHA '	Dec °	dDec '	GHA °	ddGHA '	Dec °	dDec '	
00	182 58.5 -00.2	S	21 26.0 +00.4	173 06.3 -00.9	S	22 59.9 +00.4	108 06.5 -33.9	S	21 08.4 -11.1	00			
01	197 58.3 -00.2	S	21 26.4 +00.4	188 05.4 -00.9	S	23 00.3 +00.5	122 32.6 -33.9	S	20 57.3 -11.2	01			
02	212 58.1 -00.3	S	21 26.8 +00.4	203 04.5 -00.9	S	23 00.8 +00.4	136 58.7 -33.7	S	20 46.1 -11.3	02			
03	227 57.8 -00.2	S	21 27.2 +00.5	218 03.6 -00.9	S	23 01.2 +00.4	151 25.0 -33.5	S	20 34.8 -11.5	03			
04	242 57.6 -00.2	S	21 27.7 +00.4	233 02.7 -00.9	S	23 01.6 +00.4	165 51.5 -33.5	S	20 23.3 -11.5	04			
05	257 57.4 -00.2	S	21 28.1 +00.4	248 01.8 -01.0	S	23 02.0 +00.5	180 18.0 -33.4	S	20 11.8 -11.7	05			
06	272 57.2 -00.2	S	21 28.5 +00.4	263 00.8 -00.9	S	23 02.5 +00.4	194 44.6 -33.2	S	20 00.1 -11.8	06			
07	287 57.0 -00.3	S	21 28.9 +00.4	277 59.9 -00.9	S	23 02.9 +00.4	209 11.4 -33.1	S	19 48.3 -11.9	07			
08	302 56.7 -00.2	S	21 29.3 +00.5	292 59.0 -00.9	S	23 03.3 +00.4	223 38.3 -33.0	S	19 36.4 -12.0	08			
09	317 56.5 -00.2	S	21 29.8 +00.4	307 58.1 -00.9	S	23 03.7 +00.4	238 05.3 -32.9	S	19 24.4 -12.1	09			
10	332 56.3 -00.2	S	21 30.2 +00.4	322 57.2 -00.9	S	23 04.1 +00.5	252 32.4 -32.7	S	19 12.3 -12.2	10			
11	347 56.1 -00.2	S	21 30.6 +00.4	337 56.3 -01.0	S	23 04.6 +00.4	266 59.7 -32.7	S	19 00.1 -12.3	11			
12	2 55.9 -00.3	S	21 31.0 +00.4	352 55.3 -00.9	S	23 05.0 +00.4	281 27.0 -32.5	S	18 47.8 -12.4	12			
13	17 55.6 -00.2	S	21 31.4 +00.5	7 54.4 -00.9	S	23 05.4 +00.4	295 54.5 -32.4	S	18 35.4 -12.5	13			
14	32 55.4 -00.2	S	21 31.9 +00.4	22 53.5 -00.9	S	23 05.8 +00.4	310 22.1 -32.3	S	18 22.9 -12.6	14			
15	47 55.2 -00.2	S	21 32.3 +00.4	37 52.6 -00.9	S	23 06.2 +00.4	324 49.8 -32.2	S	18 10.3 -12.7	15			
16	62 55.0 -00.2	S	21 32.7 +00.4	52 51.7 -01.0	S	23 06.6 +00.4	339 17.6 -32.1	S	17 57.6 -12.8	16			
17	77 54.8 -00.3	S	21 33.1 +00.4	67 50.7 -00.9	S	23 07.0 +00.4	353 45.5 -32.0	S	17 44.8 -12.8	17			
18	92 54.5 -00.2	S	21 33.5 +00.4	82 49.8 -00.9	S	23 07.4 +00.4	8 13.5 -31.8	S	17 32.0 -13.0	18			
19	107 54.3 -00.2	S	21 33.9 +00.5	97 48.9 -00.9	S	23 07.8 +00.4	22 41.7 -31.8	S	17 19.0 -13.0	19			
20	122 54.1 -00.2	S	21 34.4 +00.4	112 48.0 -00.9	S	23 08.2 +00.4	37 09.9 -31.6	S	17 06.0 -13.2	20			
21	137 53.9 -00.2	S	21 34.8 +00.4	127 47.1 -01.0	S	23 08.6 +00.4	51 38.3 -31.5	S	16 52.8 -13.2	21			
22	152 53.7 -00.3	S	21 35.2 +00.4	142 46.1 -00.9	S	23 09.0 +00.4	66 06.8 -31.5	S	16 39.6 -13.3	22			
23	167 53.4 -00.2	S	21 35.6 +00.4	157 45.2 -00.9	S	23 09.4 +00.4	80 35.3 -31.3	S	16 26.3 -13.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'2 16'2 16'2 16'2 16'2 16'2			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'2 16'2 16'2 16'1 16'1 16'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 59'5 59'4 59'3 59'2 59'1 59'0						
	SHA 115° 115° 115° 114° 114° 114°			SHA 105° 105° 105° 104° 104° 104°			SHA 039° 037° 034° 032° 030° 027°						
	Greenwich Culmination Time: 11:48			Greenwich Culmination Time: 12:28			Greenwich Culmination Time: 17:25						

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA °	ddGHA '	Dec °	dDec '	GHA °	ddGHA '	Dec °	dDec '	GHA °	ddGHA '	Dec °	dDec '	
00	349 18.9 +03.5	N	24 55.7 +00.0	68 21.2 +02.4	S	01 46.6 +00.0	105 18.5 +02.3	S	16 05.9 -00.1	00			
01	4 22.4 +03.5	N	24 55.7 +00.0	83 23.6 +02.4	S	01 46.6 -00.1	120 20.8 +02.3	S	16 05.8 +00.0	01			
02	19 25.9 +03.5	N	24 55.7 +00.1	98 26.0 +02.5	S	01 46.5 +00.0	135 23.1 +02.3	S	16 05.8 -00.1	02			
03	34 29.4 +03.5	N	24 55.8 +00.0	113 28.5 +02.4	S	01 46.5 +00.0	150 25.4 +02.3	S	16 05.7 +00.0	03			
04	49 32.9 +03.5	N	24 55.8 +00.1	128 30.9 +02.4	S	01 46.5 +00.0	165 27.7 +02.3	S	16 05.7 -00.1	04			
05	64 36.4 +03.4	N	24 55.9 +00.0	143 33.3 +02.4	S	01 46.5 -00.1	180 30.0 +02.4	S	16 05.6 +00.0	05			
06	79 39.8 +03.5	N	24 55.9 +00.1	158 35.7 +02.5	S	01 46.4 +00.0	195 32.4 +02.3	S	16 05.6 -00.1	06			
07	94 43.3 +03.5	N	24 56.0 +00.0	173 38.2 +02.4	S	01 46.4 +00.0	210 34.7 +02.3	S	16 05.5 +00.0	07			
08	109 46.8 +03.5	N	24 56.0 +00.0	188 40.6 +02.4	S	01 46.4 -00.1	225 37.0 +02.3	S	16 05.5 -00.1	08			
09	124 50.3 +03.5	N	24 56.0 +00.1	203 43.0 +02.4	S	01 46.3 +00.0	240 39.3 +02.3	S	16 05.4 +00.0	09			
10	139 53.8 +03.5	N	24 56.1 +00.0	218 45.4 +02.5	S	01 46.3 +00.0	255 41.6 +02.3	S	16 05.4 -00.1	10			
11	154 57.3 +03.5	N	24 56.1 +00.1	233 47.9 +02.4	S	01 46.3 +00.0	270 43.9 +02.3	S	16 05.3 +00.0	11			
12	170 00.8 +03.5	N	24 56.2 +00.0	248 50.3 +02.4	S	01 46.3 -00.1	285 46.2 +02.4	S	16 05.3 -00.1	12			
13	185 04.3 +03.5	N	24 56.2 +00.1	263 52.7 +02.4	S	01 46.2 +00.0	300 48.6 +02.3	S	16 05.2 +00.0	13			
14	200 07.8 +03.5	N	24 56.3 +00.0	278 55.1 +02.5	S	01 46.2 +00.0	315 50.9 +02.3	S	16 05.2 -00.1	14			
15	215 11.3 +03.4	N	24 56.3 +00.0	293 57.6 +02.4	S	01 46.2 -00.1	330 53.2 +02.3	S	16 05.1 +00.0	15			
16	230 14.7 +03.5	N	24 56.3 +00.1	308 60.0 +02.4	S	01 46.1 +00.0	345 55.5 +02.3	S	16 05.1 -00.1	16			
17	245 18.2 +03.5	N	24 56.4 +00.0	324 02.4 +02.4	S	01 46.1 +00.0	0 57.8 +02.3	S	16 05.0 +00.0	17			
18	260 21.7 +03.5	N	24 56.4 +00.1	339 04.8 +02.5	S	01 46.1 -00.1	16 00.1 +02.3	S	16 05.0 -00.1	18			
19	275 25.2 +03.5	N	24 56.5 +00.0	354 07.3 +02.4	S	01 46.0 +00.0	31 02.4 +02.4	S	16 04.9 +00.0	19			
20	290 28.7 +03.5	N	24 56.5 +00.0	9 09.7 +02.4	S	01 46.0 +00.0	46 04.8 +02.3	S	16 04.9 -00.1	20			
21	305 32.2 +03.5	N	24 56.5 +00.1	24 12.1 +02.4	S	01 46.0 -00.1	61 07.1 +02.3	S	16 04.8 +00.0	21			
22	320 35.7 +03.5	N	24 56.6 +00.0	39 14.5 +02.4	S	01 45.9 +00.0	76 09.4 +02.3	S	16 04.8 -00.1	22			
23	335 39.2 +03.5	N	24 56.6 +00.1	54 16.9 +02.5	S	01 45.9 +00.0	91 11.7 +02.3	S	16 04.7 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'4 00'4 00'4 00'4 00'4 00'4			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'3 00'3 00'3 00'3 00'3 00'3			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 281° 282° 282° 282° 282° 282°			SHA 000° 000° 000° 000° 000° 000°			SHA 037° 037° 037° 037° 037° 037°						
	Greenwich Culmination Time: 00:42			Greenwich Culmination Time: 19:23			Greenwich Culmination Time: 16:56						

Table for Sun, Venus, and Moon observations. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Rows show data from 00 to 23 UT for each celestial body.

Table for Mars, Jupiter, and Saturn observations. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Rows show data from 00 to 23 UT for each celestial body.

	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>							
<b>UT</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>UT</b>			
	°	'	°	'	°	'	°	'	°	'	°	'				
00	182	47.8	-00.3	S 21 45.6	+00.4	172	22.1	-01.0	S 23 19.1	+00.3	83	01.6	-29.1	S 10 32.7	-14.8	00
01	197	47.5	-00.2	S 21 46.0	+00.4	187	21.1	-00.9	S 23 19.4	+00.4	97	32.5	-28.9	S 10 17.9	-14.9	01
02	212	47.3	-00.2	S 21 46.4	+00.4	202	20.2	-00.9	S 23 19.8	+00.4	112	03.6	-28.9	S 10 03.0	-14.9	02
03	227	47.1	-00.3	S 21 46.8	+00.4	217	19.3	-01.0	S 23 20.2	+00.3	126	34.7	-28.8	S 09 48.1	-14.9	03
04	242	46.8	-00.2	S 21 47.2	+00.4	232	18.3	-00.9	S 23 20.5	+00.4	141	05.9	-28.7	S 09 33.2	-15.0	04
05	257	46.6	-00.2	S 21 47.6	+00.4	247	17.4	-00.9	S 23 20.9	+00.4	155	37.2	-28.6	S 09 18.2	-14.9	05
06	272	46.4	-00.3	S 21 48.0	+00.4	262	16.5	-01.0	S 23 21.3	+00.3	170	08.6	-28.6	S 09 03.3	-15.1	06
07	287	46.1	-00.2	S 21 48.4	+00.4	277	15.5	-00.9	S 23 21.6	+00.4	184	40.0	-28.5	S 08 48.2	-15.0	07
08	302	45.9	-00.2	S 21 48.8	+00.4	292	14.6	-00.9	S 23 22.0	+00.3	199	11.5	-28.4	S 08 33.2	-15.1	08
09	317	45.7	-00.3	S 21 49.2	+00.3	307	13.7	-01.0	S 23 22.3	+00.4	213	43.1	-28.4	S 08 18.1	-15.1	09
10	332	45.4	-00.2	S 21 49.5	+00.4	322	12.7	-00.9	S 23 22.7	+00.4	228	14.7	-28.3	S 08 03.0	-15.1	10
11	347	45.2	-00.2	S 21 49.9	+00.4	337	11.8	-00.9	S 23 23.1	+00.3	242	46.4	-28.3	S 07 47.9	-15.2	11
12	2	45.0	-00.3	S 21 50.3	+00.4	352	10.9	-01.0	S 23 23.4	+00.4	257	18.1	-28.2	S 07 32.7	-15.2	12
13	17	44.7	-00.2	S 21 50.7	+00.4	7	09.9	-00.9	S 23 23.8	+00.3	271	49.9	-28.1	S 07 17.5	-15.2	13
14	32	44.5	-00.2	S 21 51.1	+00.4	22	09.0	-00.9	S 23 24.1	+00.4	286	21.8	-28.1	S 07 02.3	-15.2	14
15	47	44.3	-00.3	S 21 51.5	+00.3	37	08.1	-01.0	S 23 24.5	+00.3	300	53.7	-28.0	S 06 47.1	-15.2	15
16	62	44.0	-00.2	S 21 51.8	+00.4	52	07.1	-00.9	S 23 24.8	+00.4	315	25.7	-27.9	S 06 31.9	-15.3	16
17	77	43.8	-00.2	S 21 52.2	+00.4	67	06.2	-00.9	S 23 25.2	+00.3	329	57.8	-27.9	S 06 16.6	-15.2	17
18	92	43.6	-00.3	S 21 52.6	+00.4	82	05.3	-01.0	S 23 25.5	+00.4	344	29.9	-27.9	S 06 01.4	-15.3	18
19	107	43.3	-00.2	S 21 53.0	+00.4	97	04.3	-00.9	S 23 25.9	+00.3	359	02.0	-27.8	S 05 46.1	-15.3	19
20	122	43.1	-00.2	S 21 53.4	+00.3	112	03.4	-00.9	S 23 26.2	+00.4	13	34.2	-27.7	S 05 30.8	-15.3	20
21	137	42.9	-00.3	S 21 53.7	+00.4	127	02.5	-01.0	S 23 26.6	+00.3	28	06.5	-27.7	S 05 15.5	-15.4	21
22	152	42.6	-00.2	S 21 54.1	+00.4	142	01.5	-00.9	S 23 26.9	+00.3	42	38.8	-27.6	S 05 00.1	-15.3	22
23	167	42.4	-00.2	S 21 54.5	+00.4	157	00.6	-01.0	S 23 27.2	+00.4	57	11.2	-27.6	S 04 44.8	-15.3	23
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	
	SD	16'2	16'2	16'2	16'2	16'2	16'2		SD	00'1	00'1	00'1	00'1	00'1	00'1	
	HP	00'1	00'1	00'1	00'1	00'1	00'1		HP	00'1	00'1	00'1	00'1	00'1	00'1	
	SHA	113°	113°	113°	112°	112°	112°		SHA	102°	102°	102°	102°	102°	101°	
	Greenwich Culmination Time: 11:48								Greenwich Culmination Time: 12:31							

  

	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>							
<b>UT</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>GHA</b>	<b>ddGHA</b>	<b>Dec</b>	<b>dDec</b>	<b>UT</b>			
	°	'	°	'	°	'	°	'	°	'	°	'				
00	352	06.8	+03.5	N 24 57.5	+00.0	70	17.4	+02.4	S 01 45.1	+00.0	107	09.5	+02.3	S 16 03.5	-00.1	00
01	7	10.3	+03.5	N 24 57.5	+00.1	85	19.8	+02.4	S 01 45.1	-00.1	122	11.8	+02.3	S 16 03.4	+00.0	01
02	22	13.8	+03.5	N 24 57.6	+00.0	100	22.2	+02.4	S 01 45.0	+00.0	137	14.1	+02.3	S 16 03.4	-00.1	02
03	37	17.3	+03.5	N 24 57.6	+00.0	115	24.6	+02.4	S 01 45.0	-00.1	152	16.4	+02.3	S 16 03.3	-00.1	03
04	52	20.8	+03.5	N 24 57.6	+00.1	130	27.0	+02.4	S 01 44.9	+00.0	167	18.7	+02.3	S 16 03.2	+00.0	04
05	67	24.3	+03.6	N 24 57.7	+00.0	145	29.4	+02.4	S 01 44.9	+00.0	182	21.0	+02.3	S 16 03.2	-00.1	05
06	82	27.9	+03.5	N 24 57.7	+00.0	160	31.8	+02.4	S 01 44.9	-00.1	197	23.3	+02.3	S 16 03.1	+00.0	06
07	97	31.4	+03.5	N 24 57.7	+00.1	175	34.2	+02.4	S 01 44.8	+00.0	212	25.6	+02.3	S 16 03.1	-00.1	07
08	112	34.9	+03.5	N 24 57.8	+00.0	190	36.6	+02.5	S 01 44.8	+00.0	227	27.9	+02.3	S 16 03.0	+00.0	08
09	127	38.4	+03.5	N 24 57.8	+00.0	205	39.1	+02.4	S 01 44.8	-00.1	242	30.2	+02.3	S 16 03.0	-00.1	09
10	142	41.9	+03.5	N 24 57.8	+00.1	220	41.5	+02.4	S 01 44.7	+00.0	257	32.5	+02.4	S 16 02.9	+00.0	10
11	157	45.4	+03.5	N 24 57.9	+00.0	235	43.9	+02.4	S 01 44.7	+00.0	272	34.9	+02.3	S 16 02.9	-00.1	11
12	172	48.9	+03.6	N 24 57.9	+00.0	250	46.3	+02.4	S 01 44.7	-00.1	287	37.2	+02.3	S 16 02.8	+00.0	12
13	187	52.5	+03.5	N 24 57.9	+00.1	265	48.7	+02.4	S 01 44.6	+00.0	302	39.5	+02.3	S 16 02.8	-00.1	13
14	202	56.0	+03.5	N 24 58.0	+00.0	280	51.1	+02.4	S 01 44.6	-00.1	317	41.8	+02.3	S 16 02.7	+00.0	14
15	217	59.5	+03.5	N 24 58.0	+00.0	295	53.5	+02.4	S 01 44.5	+00.0	332	44.1	+02.3	S 16 02.7	-00.1	15
16	233	03.0	+03.5	N 24 58.0	+00.0	310	55.9	+02.4	S 01 44.5	+00.0	347	46.4	+02.3	S 16 02.6	+00.0	16
17	248	06.5	+03.5	N 24 58.0	+00.1	325	58.3	+02.4	S 01 44.5	-00.1	2	48.7	+02.3	S 16 02.6	-00.1	17
18	263	10.0	+03.6	N 24 58.1	+00.0	341	00.7	+02.4	S 01 44.4	+00.0	17	51.0	+02.3	S 16 02.5	+00.0	18
19	278	13.6	+03.5	N 24 58.1	+00.0	356	03.1	+02.4	S 01 44.4	+00.0	32	53.3	+02.3	S 16 02.5	-00.1	19
20	293	17.1	+03.5	N 24 58.1	+00.1	11	05.5	+02.5	S 01 44.4	-00.1	47	55.6	+02.3	S 16 02.4	+00.0	20
21	308	20.6	+03.5	N 24 58.2	+00.0	26	08.0	+02.4	S 01 44.3	+00.0	62	57.9	+02.3	S 16 02.4	-00.1	21
22	323	24.1	+03.5	N 24 58.2	+00.0	41	10.4	+02.4	S 01 44.3	-00.1	78	00.2	+02.3	S 16 02.3	-00.1	22
23	338	27.6	+03.5	N 24 58.2	+00.0	56	12.8	+02.4	S 01 44.2	+00.0	93	02.5	+02.3	S 16 02.2	+00.0	23
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	
	SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	00'4	00'4	00'4	00'4	00'4	00'4	
	HP	00'3	00'3	00'3	00'3	00'3	00'3		HP	00'0	00'0	00'0	00'0	00'0	00'0	
	SHA	282°	282°	282°	283°	283°	283°		SHA	000°	000°	000°	000°	000°	000°	
	Greenwich Culmination Time: 00:31								Greenwich Culmination Time: 19:15							

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

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT				
	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "					
00	182 36.4 -00.3	S	22 03.7 +00.3	171 37.1 -01.0	S	23 35.4 +00.3	60 51.9 -26.8	N	01 38.5 +15.2								
01	197 36.1 -00.2	S	22 04.0 +00.4	186 36.1 -00.9	S	23 35.7 +00.3	75 25.1 -26.9	N	01 53.7 +15.2								
02	212 35.9 -00.2	S	22 04.4 +00.3	201 35.2 -01.0	S	23 36.0 +00.3	89 58.2 -26.8	N	02 08.9 +15.2								
03	227 35.7 -00.3	S	22 04.7 +00.4	216 34.2 -00.9	S	23 36.3 +00.3	104 31.4 -26.8	N	02 24.1 +15.1								
04	242 35.4 -00.2	S	22 05.1 +00.4	231 33.3 -00.9	S	23 36.6 +00.3	119 04.6 -26.8	N	02 39.2 +15.1								
05	257 35.2 -00.3	S	22 05.5 +00.3	246 32.4 -01.0	S	23 36.9 +00.3	133 37.8 -26.8	N	02 54.3 +15.1								
06	272 34.9 -00.2	S	22 05.8 +00.4	261 31.4 -00.9	S	23 37.2 +00.3	148 11.0 -26.8	N	03 09.4 +15.1								
07	287 34.7 -00.3	S	22 06.2 +00.3	276 30.5 -01.0	S	23 37.5 +00.3	162 44.2 -26.7	N	03 24.5 +15.0								
08	302 34.4 -00.2	S	22 06.5 +00.4	291 29.5 -00.9	S	23 37.8 +00.3	177 17.5 -26.8	N	03 39.5 +15.0								
09	317 34.2 -00.3	S	22 06.9 +00.3	306 28.6 -01.0	S	23 38.1 +00.3	191 50.7 -26.8	N	03 54.5 +15.0								
10	332 33.9 -00.2	S	22 07.2 +00.4	321 27.6 -00.9	S	23 38.4 +00.3	206 23.9 -26.8	N	04 09.5 +15.0								
11	347 33.7 -00.2	S	22 07.6 +00.3	336 26.7 -01.0	S	23 38.7 +00.3	220 57.1 -26.7	N	04 24.5 +14.9								
12	2 33.5 -00.3	S	22 07.9 +00.4	351 25.7 -00.9	S	23 39.0 +00.3	235 30.4 -26.8	N	04 39.4 +14.9								
13	17 33.2 -00.2	S	22 08.3 +00.3	6 24.8 -01.0	S	23 39.3 +00.3	250 03.6 -26.7	N	04 54.3 +14.8								
14	32 33.0 -00.3	S	22 08.6 +00.4	21 23.8 -00.9	S	23 39.6 +00.3	264 36.9 -26.8	N	05 09.1 +14.9								
15	47 32.7 -00.2	S	22 09.0 +00.3	36 22.9 -01.0	S	23 39.9 +00.3	279 10.1 -26.8	N	05 24.0 +14.8								
16	62 32.5 -00.3	S	22 09.3 +00.4	51 21.9 -00.9	S	23 40.2 +00.3	293 43.3 -26.7	N	05 38.8 +14.7								
17	77 32.2 -00.2	S	22 09.7 +00.3	66 21.0 -01.0	S	23 40.5 +00.3	308 16.6 -26.8	N	05 53.5 +14.8								
18	92 32.0 -00.3	S	22 10.0 +00.3	81 20.0 -00.9	S	23 40.8 +00.3	322 49.8 -26.8	N	06 08.3 +14.6								
19	107 31.7 -00.2	S	22 10.3 +00.4	96 19.1 -00.9	S	23 41.1 +00.3	337 23.0 -26.8	N	06 22.9 +14.7								
20	122 31.5 -00.3	S	22 10.7 +00.3	111 18.2 -01.0	S	23 41.4 +00.2	351 56.2 -26.8	N	06 37.6 +14.6								
21	137 31.2 -00.2	S	22 11.0 +00.4	126 17.2 -00.9	S	23 41.6 +00.3	6 29.4 -26.8	N	06 52.2 +14.6								
22	152 31.0 -00.3	S	22 11.4 +00.3	141 16.3 -01.0	S	23 41.9 +00.3	21 02.6 -26.8	N	07 06.8 +14.5								
23	167 30.7 -00.2	S	22 11.7 +00.4	156 15.3 -00.9	S	23 42.2 +00.3	35 35.8 -26.8	N	07 21.3 +14.5								
<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>				
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1				
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1				
SHA	111°	111°	110°	110°	110°	110°	SHA	100°	099°	099°	099°	099°	099°				
Greenwich Culmination Time: 11:49						Greenwich Culmination Time: 12:34						Greenwich Culmination Time: 20:33					
UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT				
	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "	GHA ° / ' / "	ddGHA ' / "	Dec ° / ' / "	dDec ' / "					
00	354 55.7 +03.5	N	24 58.8 +00.1	72 12.8 +02.4	S	01 43.2 +00.0	109 00.1 +02.3	S	16 00.9 +00.0								
01	9 59.2 +03.6	N	24 58.9 +00.0	87 15.2 +02.4	S	01 43.2 +00.0	124 02.4 +02.3	S	16 00.9 -00.1								
02	25 02.8 +03.5	N	24 58.9 +00.0	102 17.6 +02.4	S	01 43.2 -00.1	139 04.7 +02.3	S	16 00.8 -00.1								
03	40 06.3 +03.5	N	24 58.9 +00.0	117 20.0 +02.4	S	01 43.1 +00.0	154 07.0 +02.3	S	16 00.7 +00.0								
04	55 09.8 +03.5	N	24 58.9 +00.0	132 22.4 +02.4	S	01 43.1 -00.1	169 09.3 +02.3	S	16 00.7 -00.1								
05	70 13.3 +03.6	N	24 58.9 +00.1	147 24.8 +02.4	S	01 43.0 +00.0	184 11.6 +02.3	S	16 00.6 +00.0								
06	85 16.9 +03.5	N	24 59.0 +00.0	162 27.2 +02.4	S	01 43.0 -00.1	199 13.9 +02.3	S	16 00.6 -00.1								
07	100 20.4 +03.5	N	24 59.0 +00.0	177 29.6 +02.4	S	01 42.9 +00.0	214 16.2 +02.3	S	16 00.5 +00.0								
08	115 23.9 +03.5	N	24 59.0 +00.0	192 32.0 +02.4	S	01 42.9 +00.0	229 18.5 +02.3	S	16 00.5 -00.1								
09	130 27.4 +03.6	N	24 59.0 +00.0	207 34.4 +02.3	S	01 42.9 -00.1	244 20.8 +02.3	S	16 00.4 +00.0								
10	145 31.0 +03.5	N	24 59.0 +00.1	222 36.7 +02.4	S	01 42.8 +00.0	259 23.1 +02.3	S	16 00.4 -00.1								
11	160 34.5 +03.5	N	24 59.1 +00.0	237 39.1 +02.4	S	01 42.8 -00.1	274 25.4 +02.3	S	16 00.3 +00.0								
12	175 38.0 +03.6	N	24 59.1 +00.0	252 41.5 +02.4	S	01 42.7 +00.0	289 27.7 +02.3	S	16 00.3 -00.1								
13	190 41.6 +03.5	N	24 59.1 +00.0	267 43.9 +02.4	S	01 42.7 -00.1	304 30.0 +02.3	S	16 00.2 -00.1								
14	205 45.1 +03.5	N	24 59.1 +00.0	282 46.3 +02.4	S	01 42.6 +00.0	319 32.3 +02.3	S	16 00.1 +00.0								
15	220 48.6 +03.6	N	24 59.1 +00.0	297 48.7 +02.4	S	01 42.6 +00.0	334 34.6 +02.3	S	16 00.1 -00.1								
16	235 52.2 +03.5	N	24 59.1 +00.1	312 51.1 +02.4	S	01 42.6 -00.1	349 36.9 +02.3	S	16 00.0 +00.0								
17	250 55.7 +03.5	N	24 59.2 +00.0	327 53.5 +02.4	S	01 42.5 +00.0	4 39.2 +02.3	S	15 60.0 -00.1								
18	265 59.2 +03.5	N	24 59.2 +00.0	342 55.9 +02.4	S	01 42.5 -00.1	19 41.5 +02.3	S	15 59.9 +00.0								
19	281 02.7 +03.6	N	24 59.2 +00.0	357 58.3 +02.4	S	01 42.4 +00.0	34 43.8 +02.3	S	15 59.9 -00.1								
20	296 06.3 +03.5	N	24 59.2 +00.0	13 00.7 +02.4	S	01 42.4 -00.1	49 46.1 +02.3	S	15 59.8 +00.0								
21	311 09.8 +03.5	N	24 59.2 +00.0	28 03.1 +02.3	S	01 42.3 +00.0	64 48.4 +02.3	S	15 59.8 -00.1								
22	326 13.3 +03.6	N	24 59.2 +00.1	43 05.4 +02.4	S	01 42.3 -00.1	79 50.7 +02.3	S	15 59.7 -00.1								
23	341 16.9 +03.5	N	24 59.3 +00.0	58 07.8 +02.4	S	01 42.2 +00.0	94 53.0 +02.3	S	15 59.6 +00.0								
<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>				
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4				
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0				
SHA	283°	283°	283°	283°	283°	284°	SHA	000°	000°	000°	000°	000°	000°				
Greenwich Culmination Time: 00:20						Greenwich Culmination Time: 19:08						Greenwich Culmination Time: 16:41					



UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182 30.5 -00.3	S	22 12.1 +00.3	171 14.4 -01.0	S	23 42.5 +00.3	50 09.0 -26.9	N	07 35.8 +14.4	00			
01	197 30.2 -00.2	S	22 12.4 +00.3	186 13.4 -00.9	S	23 42.8 +00.2	64 42.1 -26.8	N	07 50.2 +14.4	01			
02	212 30.0 -00.3	S	22 12.7 +00.4	201 12.5 -01.0	S	23 43.0 +00.3	79 15.3 -26.9	N	08 04.6 +14.4	02			
03	227 29.7 -00.2	S	22 13.1 +00.3	216 11.5 -00.9	S	23 43.3 +00.3	93 48.4 -26.9	N	08 19.0 +14.3	03			
04	242 29.5 -00.3	S	22 13.4 +00.3	231 10.6 -01.0	S	23 43.6 +00.3	108 21.5 -26.9	N	08 33.3 +14.3	04			
05	257 29.2 -00.2	S	22 13.7 +00.4	246 09.6 -00.9	S	23 43.9 +00.3	122 54.6 -26.9	N	08 47.6 +14.2	05			
06	272 29.0 -00.3	S	22 14.1 +00.3	261 08.7 -01.0	S	23 44.2 +00.2	137 27.7 -27.0	N	09 01.8 +14.1	06			
07	287 28.7 -00.2	S	22 14.4 +00.3	276 07.7 -01.0	S	23 44.4 +00.3	152 00.7 -26.9	N	09 15.9 +14.1	07			
08	302 28.5 -00.3	S	22 14.7 +00.4	291 06.7 -00.9	S	23 44.7 +00.3	166 33.8 -27.0	N	09 30.0 +14.1	08			
09	317 28.2 -00.2	S	22 15.1 +00.3	306 05.8 -01.0	S	23 45.0 +00.2	181 06.8 -27.0	N	09 44.1 +14.0	09			
10	332 28.0 -00.3	S	22 15.4 +00.3	321 04.8 -00.9	S	23 45.2 +00.3	195 39.8 -27.0	N	09 58.1 +14.0	10			
11	347 27.7 -00.2	S	22 15.7 +00.4	336 03.9 -01.0	S	23 45.5 +00.3	210 12.8 -27.1	N	10 12.1 +13.9	11			
12	2 27.5 -00.3	S	22 16.1 +00.3	351 02.9 -00.9	S	23 45.8 +00.2	224 45.7 -27.0	N	10 26.0 +13.8	12			
13	17 27.2 -00.2	S	22 16.4 +00.3	6 02.0 -01.0	S	23 46.0 +00.3	239 18.7 -27.1	N	10 39.8 +13.8	13			
14	32 27.0 -00.3	S	22 16.7 +00.4	21 01.0 -00.9	S	23 46.3 +00.3	253 51.6 -27.1	N	10 53.6 +13.8	14			
15	47 26.7 -00.2	S	22 17.1 +00.3	36 00.1 -01.0	S	23 46.6 +00.2	268 24.5 -27.2	N	11 07.4 +13.7	15			
16	62 26.5 -00.3	S	22 17.4 +00.3	50 59.1 -00.9	S	23 46.8 +00.3	282 57.3 -27.1	N	11 21.1 +13.6	16			
17	77 26.2 -00.2	S	22 17.7 +00.4	65 58.2 -01.0	S	23 47.1 +00.2	297 30.2 -27.3	N	11 34.7 +13.5	17			
18	92 26.0 -00.3	S	22 18.1 +00.3	80 57.2 -00.9	S	23 47.3 +00.3	312 02.9 -27.2	N	11 48.2 +13.5	18			
19	107 25.7 -00.2	S	22 18.4 +00.3	95 56.3 -01.0	S	23 47.6 +00.3	326 35.7 -27.2	N	12 01.7 +13.5	19			
20	122 25.5 -00.3	S	22 18.7 +00.3	110 55.3 -00.9	S	23 47.9 +00.2	341 08.5 -27.3	N	12 15.2 +13.4	20			
21	137 25.2 -00.3	S	22 19.0 +00.4	125 54.4 -01.0	S	23 48.1 +00.3	355 41.2 -27.4	N	12 28.6 +13.3	21			
22	152 24.9 -00.2	S	22 19.4 +00.3	140 53.4 -00.9	S	23 48.4 +00.2	10 13.8 -27.3	N	12 41.9 +13.2	22			
23	167 24.7 -00.3	S	22 19.7 +00.3	155 52.5 -01.0	S	23 48.6 +00.3	24 46.5 -27.4	N	12 55.1 +13.2	23			

  

UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22
SD 16'2 16'2 16'2 16'2 16'2 16'2	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 110° 109° 109° 109° 109° 109°	SHA 098° 098° 098° 098° 097° 097°	SHA 336° 334° 332° 330° 329° 327°
Greenwich Culmination Time: 11:50	Greenwich Culmination Time: 12:35	Greenwich Culmination Time: 21:17

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	356 20.4 +03.5	N	24 59.3 +00.0	73 10.2 +02.4	S	01 42.2 +00.0	109 55.3 +02.3	S	15 59.6 -00.1	00			
01	11 23.9 +03.6	N	24 59.3 +00.0	88 12.6 +02.4	S	01 42.2 -00.1	124 57.6 +02.3	S	15 59.5 +00.0	01			
02	26 27.5 +03.5	N	24 59.3 +00.0	103 15.0 +02.4	S	01 42.1 +00.0	139 59.9 +02.3	S	15 59.5 -00.1	02			
03	41 31.0 +03.5	N	24 59.3 +00.0	118 17.4 +02.4	S	01 42.1 -00.1	155 02.2 +02.3	S	15 59.4 +00.0	03			
04	56 34.5 +03.6	N	24 59.3 +00.1	133 19.8 +02.4	S	01 42.0 +00.0	170 04.5 +02.3	S	15 59.4 -00.1	04			
05	71 38.1 +03.5	N	24 59.4 +00.0	148 22.2 +02.4	S	01 42.0 -00.1	185 06.8 +02.3	S	15 59.3 +00.0	05			
06	86 41.6 +03.5	N	24 59.4 +00.0	163 24.6 +02.3	S	01 41.9 +00.0	200 09.1 +02.3	S	15 59.3 -00.1	06			
07	101 45.1 +03.6	N	24 59.4 +00.0	178 26.9 +02.4	S	01 41.9 -00.1	215 11.4 +02.3	S	15 59.2 -00.1	07			
08	116 48.7 +03.5	N	24 59.4 +00.0	193 29.3 +02.4	S	01 41.8 +00.0	230 13.7 +02.3	S	15 59.1 +00.0	08			
09	131 52.2 +03.5	N	24 59.4 +00.0	208 31.7 +02.4	S	01 41.8 -00.1	245 16.0 +02.3	S	15 59.1 -00.1	09			
10	146 55.7 +03.6	N	24 59.4 +00.0	223 34.1 +02.4	S	01 41.7 +00.0	260 18.3 +02.3	S	15 59.0 +00.0	10			
11	161 59.3 +03.5	N	24 59.4 +00.1	238 36.5 +02.4	S	01 41.7 -00.1	275 20.6 +02.3	S	15 59.0 -00.1	11			
12	177 02.8 +03.5	N	24 59.5 +00.0	253 38.9 +02.4	S	01 41.6 +00.0	290 22.9 +02.3	S	15 58.9 +00.0	12			
13	192 06.3 +03.6	N	24 59.5 +00.0	268 41.3 +02.3	S	01 41.6 +00.0	305 25.2 +02.3	S	15 58.9 -00.1	13			
14	207 09.9 +03.5	N	24 59.5 +00.0	283 43.6 +02.4	S	01 41.6 -00.1	320 27.5 +02.3	S	15 58.8 +00.0	14			
15	222 13.4 +03.5	N	24 59.5 +00.0	298 46.0 +02.4	S	01 41.5 +00.0	335 29.8 +02.3	S	15 58.8 -00.1	15			
16	237 16.9 +03.6	N	24 59.5 +00.0	313 48.4 +02.4	S	01 41.5 -00.1	350 32.1 +02.3	S	15 58.7 -00.1	16			
17	252 20.5 +03.5	N	24 59.5 +00.0	328 50.8 +02.4	S	01 41.4 +00.0	5 34.4 +02.3	S	15 58.6 +00.0	17			
18	267 24.0 +03.5	N	24 59.5 +00.0	343 53.2 +02.4	S	01 41.4 -00.1	20 36.7 +02.3	S	15 58.6 -00.1	18			
19	282 27.5 +03.6	N	24 59.5 +00.0	358 55.6 +02.4	S	01 41.3 +00.0	35 39.0 +02.3	S	15 58.5 +00.0	19			
20	297 31.1 +03.5	N	24 59.5 +00.1	13 58.0 +02.3	S	01 41.3 -00.1	50 41.3 +02.3	S	15 58.5 -00.1	20			
21	312 34.6 +03.5	N	24 59.6 +00.0	29 00.3 +02.4	S	01 41.2 +00.0	65 43.6 +02.3	S	15 58.4 +00.0	21			
22	327 38.1 +03.6	N	24 59.6 +00.0	44 02.7 +02.4	S	01 41.2 -00.1	80 45.9 +02.3	S	15 58.4 -00.1	22			
23	342 41.7 +03.5	N	24 59.6 +00.0	59 05.1 +02.4	S	01 41.1 +00.0	95 48.2 +02.3	S	15 58.3 -00.1	23			

  

UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22
SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 00'4 00'4 00'4 00'4 00'4 00'4	SD 00'1 00'1 00'1 00'1 00'1 00'1
HP 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0
SHA 284° 284° 284° 284° 284° 284°	SHA 000° 000° 000° 000° 000° 000°	SHA 037° 037° 037° 037° 037° 037°
Greenwich Culmination Time: 00:14	Greenwich Culmination Time: 19:04	Greenwich Culmination Time: 16:37

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	182	24.4 -00.2	S 22 20.0	+00.3	170	51.5 -01.0	S 23 48.9	+00.2	39	19.1 -27.4	N 13 08.3	+13.1	00
01	197	24.2 -00.3	S 22 20.3	+00.3	185	50.5 -00.9	S 23 49.1	+00.3	53	51.7 -27.5	N 13 21.4	+13.1	01
02	212	23.9 -00.2	S 22 20.6	+00.4	200	49.6 -01.0	S 23 49.4	+00.2	68	24.2 -27.5	N 13 34.5	+13.0	02
03	227	23.7 -00.3	S 22 21.0	+00.3	215	48.6 -00.9	S 23 49.6	+00.3	82	56.7 -27.5	N 13 47.5	+12.9	03
04	242	23.4 -00.2	S 22 21.3	+00.3	230	47.7 -01.0	S 23 49.9	+00.2	97	29.2 -27.6	N 14 00.4	+12.8	04
05	257	23.2 -00.3	S 22 21.6	+00.3	245	46.7 -00.9	S 23 50.1	+00.2	112	01.6 -27.6	N 14 13.2	+12.8	05
06	272	22.9 -00.3	S 22 21.9	+00.3	260	45.8 -01.0	S 23 50.3	+00.3	126	34.0 -27.6	N 14 26.0	+12.7	06
07	287	22.6 -00.2	S 22 22.2	+00.3	275	44.8 -01.0	S 23 50.6	+00.2	141	06.4 -27.7	N 14 38.7	+12.7	07
08	302	22.4 -00.3	S 22 22.5	+00.4	290	43.8 -00.9	S 23 50.8	+00.3	155	38.7 -27.7	N 14 51.4	+12.5	08
09	317	22.1 -00.2	S 22 22.9	+00.3	305	42.9 -01.0	S 23 51.1	+00.2	170	11.0 -27.8	N 15 03.9	+12.5	09
10	332	21.9 -00.3	S 22 23.2	+00.3	320	41.9 -00.9	S 23 51.3	+00.2	184	43.2 -27.8	N 15 16.4	+12.4	10
11	347	21.6 -00.2	S 22 23.5	+00.3	335	41.0 -01.0	S 23 51.5	+00.3	199	15.4 -27.8	N 15 28.8	+12.3	11
12	2	21.4 -00.3	S 22 23.8	+00.3	350	40.0 -00.9	S 23 51.8	+00.2	213	47.6 -27.9	N 15 41.1	+12.3	12
13	17	21.1 -00.3	S 22 24.1	+00.3	5	39.1 -01.0	S 23 52.0	+00.2	228	19.7 -27.9	N 15 53.4	+12.2	13
14	32	20.8 -00.2	S 22 24.4	+00.3	20	38.1 -01.0	S 23 52.2	+00.3	242	51.8 -28.0	N 16 05.6	+12.1	14
15	47	20.6 -00.3	S 22 24.7	+00.4	35	37.1 -00.9	S 23 52.5	+00.2	257	23.8 -28.0	N 16 17.7	+12.0	15
16	62	20.3 -00.2	S 22 25.1	+00.3	50	36.2 -01.0	S 23 52.7	+00.2	271	55.8 -28.1	N 16 29.7	+11.9	16
17	77	20.1 -00.3	S 22 25.4	+00.3	65	35.2 -00.9	S 23 52.9	+00.3	286	27.7 -28.1	N 16 41.6	+11.8	17
18	92	19.8 -00.2	S 22 25.7	+00.3	80	34.3 -01.0	S 23 53.2	+00.2	300	59.6 -28.1	N 16 53.4	+11.8	18
19	107	19.6 -00.3	S 22 26.0	+00.3	95	33.3 -00.9	S 23 53.4	+00.2	315	31.5 -28.2	N 17 05.2	+11.7	19
20	122	19.3 -00.3	S 22 26.3	+00.3	110	32.4 -01.0	S 23 53.6	+00.2	330	03.3 -28.3	N 17 16.9	+11.6	20
21	137	19.0 -00.2	S 22 26.6	+00.3	125	31.4 -01.0	S 23 53.8	+00.3	344	35.0 -28.3	N 17 28.5	+11.5	21
22	152	18.8 -00.3	S 22 26.9	+00.3	140	30.4 -00.9	S 23 54.1	+00.2	359	06.7 -28.3	N 17 40.0	+11.4	22
23	167	18.5 -00.2	S 22 27.2	+00.3	155	29.5 -01.0	S 23 54.3	+00.2	13	38.4 -28.4	N 17 51.4	+11.4	23
	UT 02 06 10 14 18 22								UT 02 06 10 14 18 22				
	SD 16'2 16'2 16'2 16'2 16'2 16'2								SD 15'3 15'3 15'2 15'2 15'2 15'2				
	HP 00'1 00'1 00'1 00'1 00'1 00'1								HP 56'1 56'0 55'9 55'8 55'7 55'7				
	SHA 109° 108° 108° 108° 108° 108°								SHA 325° 323° 321° 319° 316° 314°				
	Greenwich Culmination Time: 11:50								Greenwich Culmination Time: 22:03				

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	357	45.2 +03.5	N 24 59.6	+00.0	74	07.5 +02.4	S 01 41.1	-00.1	110	50.5 +02.3	S 15 58.2	+00.0	00
01	12	48.7 +03.6	N 24 59.6	+00.0	89	09.9 +02.3	S 01 41.0	+00.0	125	52.8 +02.3	S 15 58.2	-00.1	01
02	27	52.3 +03.5	N 24 59.6	+00.0	104	12.2 +02.4	S 01 41.0	-00.1	140	55.1 +02.2	S 15 58.1	+00.0	02
03	42	55.8 +03.5	N 24 59.6	+00.0	119	14.6 +02.4	S 01 40.9	+00.0	155	57.3 +02.3	S 15 58.1	-00.1	03
04	57	59.3 +03.6	N 24 59.6	+00.0	134	17.0 +02.4	S 01 40.9	-00.1	170	59.6 +02.3	S 15 58.0	+00.0	04
05	73	02.9 +03.5	N 24 59.6	+00.0	149	19.4 +02.4	S 01 40.8	+00.0	186	01.9 +02.3	S 15 58.0	-00.1	05
06	88	06.4 +03.5	N 24 59.6	+00.1	164	21.8 +02.3	S 01 40.8	-00.1	201	04.2 +02.3	S 15 57.9	+00.0	06
07	103	09.9 +03.6	N 24 59.7	+00.0	179	24.1 +02.4	S 01 40.7	+00.0	216	06.5 +02.3	S 15 57.9	-00.1	07
08	118	13.5 +03.5	N 24 59.7	+00.0	194	26.5 +02.4	S 01 40.7	-00.1	231	08.8 +02.3	S 15 57.8	-00.1	08
09	133	17.0 +03.5	N 24 59.7	+00.0	209	28.9 +02.4	S 01 40.6	+00.0	246	11.1 +02.3	S 15 57.7	+00.0	09
10	148	20.5 +03.6	N 24 59.7	+00.0	224	31.3 +02.4	S 01 40.6	-00.1	261	13.4 +02.3	S 15 57.7	-00.1	10
11	163	24.1 +03.5	N 24 59.7	+00.0	239	33.7 +02.3	S 01 40.5	+00.0	276	15.7 +02.3	S 15 57.6	+00.0	11
12	178	27.6 +03.6	N 24 59.7	+00.0	254	36.0 +02.4	S 01 40.5	-00.1	291	18.0 +02.3	S 15 57.6	-00.1	12
13	193	31.2 +03.5	N 24 59.7	+00.0	269	38.4 +02.4	S 01 40.4	+00.0	306	20.3 +02.3	S 15 57.5	+00.0	13
14	208	34.7 +03.5	N 24 59.7	+00.0	284	40.8 +02.4	S 01 40.4	-00.1	321	22.6 +02.3	S 15 57.5	-00.1	14
15	223	38.2 +03.6	N 24 59.7	+00.0	299	43.2 +02.3	S 01 40.3	+00.0	336	24.9 +02.3	S 15 57.4	-00.1	15
16	238	41.8 +03.5	N 24 59.7	+00.0	314	45.5 +02.4	S 01 40.3	-00.1	351	27.2 +02.3	S 15 57.3	+00.0	16
17	253	45.3 +03.5	N 24 59.7	+00.0	329	47.9 +02.4	S 01 40.2	+00.0	6	29.5 +02.3	S 15 57.3	-00.1	17
18	268	48.8 +03.6	N 24 59.7	+00.0	344	50.3 +02.4	S 01 40.2	-00.1	21	31.8 +02.2	S 15 57.2	+00.0	18
19	283	52.4 +03.5	N 24 59.7	+00.0	359	52.7 +02.3	S 01 40.1	+00.0	36	34.0 +02.3	S 15 57.2	-00.1	19
20	298	55.9 +03.5	N 24 59.7	+00.1	14	55.0 +02.4	S 01 40.1	-00.1	51	36.3 +02.3	S 15 57.1	+00.0	20
21	313	59.4 +03.6	N 24 59.8	+00.0	29	57.4 +02.4	S 01 40.0	+00.0	66	38.6 +02.3	S 15 57.1	-00.1	21
22	329	03.0 +03.5	N 24 59.8	+00.0	44	59.8 +02.4	S 01 40.0	-00.1	81	40.9 +02.3	S 15 57.0	-00.1	22
23	344	06.5 +03.5	N 24 59.8	+00.0	60	02.2 +02.3	S 01 39.9	+00.0	96	43.2 +02.3	S 15 56.9	+00.0	23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'4 00'4 00'4 00'4 00'4 00'4				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'3 00'3 00'3 00'3 00'3 00'3				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 284° 284° 284° 284° 284° 284°				SHA 000° 000° 000° 000° 000° 000°				SHA 037° 037° 037° 037° 037° 037°				
	Greenwich Culmination Time: 00:08				Greenwich Culmination Time: 19:00				Greenwich Culmination Time: 16:34				

UT	Sun				Venus				Moon <span style="float: right;">A: 44%</span>				UT											
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "												
00	182	18.3 -00.3	S 22 27.5 +00.3		170	28.5 -00.9	S 23 54.5 +00.2		28	10.0 -28.4	N 18 02.8 +11.2		00											
01	197	18.0 -00.3	S 22 27.8 +00.3		185	27.6 -01.0	S 23 54.7 +00.2		42	41.6 -28.5	N 18 14.0 +11.2		01											
02	212	17.7 -00.2	S 22 28.1 +00.3		200	26.6 -01.0	S 23 54.9 +00.3		57	13.1 -28.5	N 18 25.2 +11.0		02											
03	227	17.5 -00.3	S 22 28.4 +00.3		215	25.6 -00.9	S 23 55.2 +00.2		71	44.6 -28.6	N 18 36.2 +11.0		03											
04	242	17.2 -00.3	S 22 28.7 +00.3		230	24.7 -01.0	S 23 55.4 +00.2		86	16.0 -28.6	N 18 47.2 +10.9		04											
05	257	16.9 -00.2	S 22 29.0 +00.3		245	23.7 -00.9	S 23 55.6 +00.2		100	47.4 -28.6	N 18 58.1 +10.8		05											
06	272	16.7 -00.3	S 22 29.3 +00.3		260	22.8 -01.0	S 23 55.8 +00.2		115	18.8 -28.8	N 19 08.9 +10.7		06											
07	287	16.4 -00.2	S 22 29.6 +00.3		275	21.8 -01.0	S 23 56.0 +00.2		129	50.0 -28.7	N 19 19.6 +10.6		07											
08	302	16.2 -00.3	S 22 29.9 +00.3		290	20.8 -00.9	S 23 56.2 +00.2		144	21.3 -28.8	N 19 30.2 +10.5		08											
09	317	15.9 -00.3	S 22 30.2 +00.3		305	19.9 -01.0	S 23 56.4 +00.2		158	52.5 -28.9	N 19 40.7 +10.4		09											
10	332	15.6 -00.2	S 22 30.5 +00.3		320	18.9 -01.0	S 23 56.6 +00.2		173	23.6 -28.9	N 19 51.1 +10.3		10											
11	347	15.4 -00.3	S 22 30.8 +00.3		335	17.9 -00.9	S 23 56.8 +00.3		187	54.7 -29.0	N 20 01.4 +10.2		11											
12	2	15.1 -00.3	S 22 31.1 +00.3		350	17.0 -01.0	S 23 57.1 +00.2		202	25.7 -29.0	N 20 11.6 +10.1		12											
13	17	14.8 -00.2	S 22 31.4 +00.3		5	16.0 -00.9	S 23 57.3 +00.2		216	56.7 -29.1	N 20 21.7 +10.1		13											
14	32	14.6 -00.3	S 22 31.7 +00.3		20	15.1 -01.0	S 23 57.5 +00.2		231	27.6 -29.1	N 20 31.8 +09.9		14											
15	47	14.3 -00.2	S 22 32.0 +00.3		35	14.1 -01.0	S 23 57.7 +00.2		245	58.5 -29.1	N 20 41.7 +09.8		15											
16	62	14.1 -00.3	S 22 32.3 +00.3		50	13.1 -00.9	S 23 57.9 +00.2		260	29.4 -29.2	N 20 51.5 +09.7		16											
17	77	13.8 -00.3	S 22 32.6 +00.3		65	12.2 -01.0	S 23 58.1 +00.2		275	00.2 -29.3	N 21 01.2 +09.6		17											
18	92	13.5 -00.2	S 22 32.9 +00.2		80	11.2 -01.0	S 23 58.3 +00.2		289	30.9 -29.3	N 21 10.8 +09.5		18											
19	107	13.3 -00.3	S 22 33.1 +00.3		95	10.2 -00.9	S 23 58.5 +00.2		304	01.6 -29.4	N 21 20.3 +09.4		19											
20	122	13.0 -00.3	S 22 33.4 +00.3		110	09.3 -01.0	S 23 58.7 +00.1		318	32.2 -29.4	N 21 29.7 +09.3		20											
21	137	12.7 -00.2	S 22 33.7 +00.3		125	08.3 -00.9	S 23 58.8 +00.2		333	02.8 -29.5	N 21 39.0 +09.1		21											
22	152	12.5 -00.3	S 22 34.0 +00.3		140	07.4 -01.0	S 23 59.0 +00.2		347	33.3 -29.5	N 21 48.1 +09.1		22											
23	167	12.2 -00.3	S 22 34.3 +00.3		155	06.4 -01.0	S 23 59.2 +00.2		2	03.8 -29.5	N 21 57.2 +09.0		23											
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	
	SD	16'2	16'2	16'2	16'2	16'2	16'2		SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	15'1	15'1	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	55'6	55'5	55'4	55'4	55'3	55'2	
	SHA	107°	107°	107°	107°	107°	107°		SHA	096°	095°	095°	095°	095°	094°		SHA	312°	310°	308°	306°	304°	302°	
	Greenwich Culmination Time: 11:50									Greenwich Culmination Time: 12:38								Greenwich Culmination Time: 22:51						
UT	Mars				Jupiter				Saturn				UT											
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "												
00	359	10.0 +03.6	N 24 59.8 +00.0		75	04.5 +02.4	S 01 39.9 -00.1		111	45.5 +02.3	S 15 56.9 -00.1		00											
01	14	13.6 +03.5	N 24 59.8 +00.0		90	06.9 +02.4	S 01 39.8 +00.0		126	47.8 +02.3	S 15 56.8 +00.0		01											
02	29	17.1 +03.5	N 24 59.8 +00.0		105	09.3 +02.4	S 01 39.8 -00.1		141	50.1 +02.3	S 15 56.8 -00.1		02											
03	44	20.6 +03.6	N 24 59.8 +00.0		120	11.7 +02.3	S 01 39.7 +00.0		156	52.4 +02.3	S 15 56.7 -00.1		03											
04	59	24.2 +03.5	N 24 59.8 +00.0		135	14.0 +02.4	S 01 39.7 -00.1		171	54.7 +02.3	S 15 56.6 +00.0		04											
05	74	27.7 +03.5	N 24 59.8 +00.0		150	16.4 +02.4	S 01 39.6 +00.0		186	57.0 +02.3	S 15 56.6 -00.1		05											
06	89	31.2 +03.6	N 24 59.8 +00.0		165	18.8 +02.4	S 01 39.6 -00.1		201	59.3 +02.2	S 15 56.5 +00.0		06											
07	104	34.8 +03.5	N 24 59.8 +00.0		180	21.2 +02.3	S 01 39.5 +00.0		217	01.5 +02.3	S 15 56.5 -00.1		07											
08	119	38.3 +03.5	N 24 59.8 +00.0		195	23.5 +02.4	S 01 39.5 -00.1		232	03.8 +02.3	S 15 56.4 +00.0		08											
09	134	41.8 +03.6	N 24 59.8 +00.0		210	25.9 +02.4	S 01 39.4 -00.1		247	06.1 +02.3	S 15 56.4 -00.1		09											
10	149	45.4 +03.5	N 24 59.8 +00.0		225	28.3 +02.3	S 01 39.3 +00.0		262	08.4 +02.3	S 15 56.3 -00.1		10											
11	164	48.9 +03.5	N 24 59.8 +00.0		240	30.6 +02.4	S 01 39.3 -00.1		277	10.7 +02.3	S 15 56.2 +00.0		11											
12	179	52.4 +03.6	N 24 59.8 +00.0		255	33.0 +02.4	S 01 39.2 +00.0		292	13.0 +02.3	S 15 56.2 -00.1		12											
13	194	56.0 +03.5	N 24 59.8 +00.0		270	35.4 +02.3	S 01 39.2 -00.1		307	15.3 +02.3	S 15 56.1 +00.0		13											
14	209	59.5 +03.6	N 24 59.8 +00.0		285	37.7 +02.4	S 01 39.1 +00.0		322	17.6 +02.3	S 15 56.1 -00.1		14											
15	225	03.1 +03.5	N 24 59.8 +00.0		300	40.1 +02.4	S 01 39.1 -00.1		337	19.9 +02.3	S 15 56.0 +00.0		15											
16	240	06.6 +03.5	N 24 59.8 +00.0		315	42.5 +02.4	S 01 39.0 +00.0		352	22.2 +02.3	S 15 56.0 -00.1		16											
17	255	10.1 +03.6	N 24 59.8 +00.0		330	44.9 +02.3	S 01 39.0 -00.1		7	24.5 +02.2	S 15 55.9 -00.1		17											
18	270	13.7 +03.5	N 24 59.8 +00.0		345	47.2 +02.4	S 01 38.9 +00.0		22	26.7 +02.3	S 15 55.8 +00.0		18											
19	285	17.2 +03.5	N 24 59.8 +00.0		0	49.6 +02.4	S 01 38.9 -00.1		37	29.0 +02.3	S 15 55.8 -00.1		19											
20	300	20.7 +03.6	N 24 59.8 +00.0		15	52.0 +02.3	S 01 38.8 +00.0		52	31.3 +02.3	S 15 55.7 +00.0		20											
21	315	24.3 +03.5	N 24 59.8 +00.0		30	54.3 +02.4	S 01 38.8 -00.1		67	33.6 +02.3	S 15 55.7 -00.1		21											
22	330	27.8 +03.5	N 24 59.8 +00.0		45	56.7 +02.4	S 01 38.7 -00.1		82	35.9 +02.3	S 15 55.6 -00.1		22											
23	345	31.3 +03.6	N 24 59.8 +00.0		60	59.1 +02.3	S 01 38.6 +00.0		97	38.2 +02.3	S 15 55.5 +00.0		23											
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	
	SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	00'4	00'4	00'4	00'4	00'4	00'4		SD	00'1	00'1	00'1	00'1	00'1	00'1	
	HP	00'3	00'3	00'3	00'3	00'3	00'3		HP	00'0	00'0	00'0	00'0	00'0	00'0		HP	00'0	00'0	00'0	00'0	00'0	00'0	
	SHA	284°	285°	285°	285°	285°	285°		SHA	000°	000°	000°	000°	000°	000°		SHA	037°	037°	037°	037°	037°	037°	
	Greenwich Culmination Time: 00:03									Greenwich Culmination Time: 18:56								Greenwich Culmination Time: 16:30						

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UT	Sun				Venus				Moon				UT										
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec											
00	182	11.9	-00.2	S 22 34.6	+00.3	170	05.4	-00.9	S 23 59.4	+00.2	16	34.3	-29.6	N 22 06.2	+08.8	00							
01	197	11.7	-00.3	S 22 34.9	+00.3	185	04.5	-01.0	S 23 59.6	+00.2	31	04.7	-29.7	N 22 15.0	+08.8	01							
02	212	11.4	-00.3	S 22 35.2	+00.2	200	03.5	-01.0	S 23 59.8	+00.2	45	35.0	-29.7	N 22 23.8	+08.6	02							
03	227	11.1	-00.2	S 22 35.4	+00.3	215	02.5	-00.9	S 23 60.0	+00.2	60	05.3	-29.7	N 22 32.4	+08.5	03							
04	242	10.9	-00.3	S 22 35.7	+00.3	230	01.6	-01.0	S 24 00.2	+00.1	74	35.6	-29.9	N 22 40.9	+08.4	04							
05	257	10.6	-00.3	S 22 36.0	+00.3	245	00.6	-01.0	S 24 00.3	+00.2	89	05.7	-29.8	N 22 49.3	+08.3	05							
06	272	10.3	-00.2	S 22 36.3	+00.3	259	59.6	-00.9	S 24 00.5	+00.2	103	35.9	-29.9	N 22 57.6	+08.2	06							
07	287	10.1	-00.3	S 22 36.6	+00.2	274	58.7	-01.0	S 24 00.7	+00.2	118	06.0	-29.9	N 23 05.8	+08.1	07							
08	302	09.8	-00.3	S 22 36.8	+00.3	289	57.7	-01.0	S 24 00.9	+00.2	132	36.1	-30.0	N 23 13.9	+07.9	08							
09	317	09.5	-00.2	S 22 37.1	+00.3	304	56.7	-00.9	S 24 01.1	+00.1	147	06.1	-30.1	N 23 21.8	+07.9	09							
10	332	09.3	-00.3	S 22 37.4	+00.3	319	55.8	-01.0	S 24 01.2	+00.2	161	36.0	-30.1	N 23 29.7	+07.7	10							
11	347	09.0	-00.3	S 22 37.7	+00.3	334	54.8	-01.0	S 24 01.4	+00.2	176	05.9	-30.1	N 23 37.4	+07.6	11							
12		2	08.7	-00.2	S 22 38.0	+00.2	349	53.8	-00.9	S 24 01.6	+00.2	190	35.8	-30.2	N 23 45.0	+07.4	12						
13		17	08.5	-00.3	S 22 38.2	+00.3	4	52.9	-01.0	S 24 01.8	+00.1	205	05.6	-30.2	N 23 52.4	+07.4	13						
14		32	08.2	-00.3	S 22 38.5	+00.3	19	51.9	-01.0	S 24 01.9	+00.2	219	35.4	-30.2	N 23 59.8	+07.2	14						
15		47	07.9	-00.2	S 22 38.8	+00.3	34	50.9	-00.9	S 24 02.1	+00.2	234	05.2	-30.3	N 24 07.0	+07.2	15						
16		62	07.7	-00.3	S 22 39.1	+00.2	49	50.0	-01.0	S 24 02.3	+00.2	248	34.9	-30.4	N 24 14.2	+07.0	16						
17		77	07.4	-00.3	S 22 39.3	+00.3	64	49.0	-01.0	S 24 02.5	+00.1	263	04.5	-30.4	N 24 21.2	+06.8	17						
18		92	07.1	-00.3	S 22 39.6	+00.3	79	48.0	-00.9	S 24 02.6	+00.2	277	34.1	-30.4	N 24 28.0	+06.8	18						
19		107	06.8	-00.2	S 22 39.9	+00.2	94	47.1	-01.0	S 24 02.8	+00.2	292	03.7	-30.5	N 24 34.8	+06.6	19						
20		122	06.6	-00.3	S 22 40.1	+00.3	109	46.1	-01.0	S 24 03.0	+00.1	306	33.2	-30.5	N 24 41.4	+06.5	20						
21		137	06.3	-00.3	S 22 40.4	+00.3	124	45.1	-00.9	S 24 03.1	+00.2	321	02.7	-30.5	N 24 47.9	+06.4	21						
22		152	06.0	-00.2	S 22 40.7	+00.3	139	44.2	-01.0	S 24 03.3	+00.1	335	32.2	-30.6	N 24 54.3	+06.3	22						
23		167	05.8	-00.3	S 22 41.0	+00.2	154	43.2	-01.0	S 24 03.4	+00.2	350	01.6	-30.6	N 25 00.6	+06.1	23						
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>						
	SD	16'2	16'2	16'2	16'2	16'2	16'2		SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	15'0	15'0	15'0	15'0	15'0	14'9
	HP	00'1	00'1	00'1	00'1	00'1	00'1		HP	00'1	00'1	00'1	00'1	00'1	00'1		HP	55'2	55'1	55'0	55'0	54'9	54'8
	SHA	106°	106°	106°	106°	106°	105°		SHA	094°	094°	094°	094°	093°	093°		SHA	300°	298°	295°	293°	291°	289°
	Greenwich Culmination Time: 11:51								Greenwich Culmination Time: 12:40								Greenwich Culmination Time: 23:41						

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UT	Mars				Jupiter				Saturn				UT										
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec											
00	0	34.9	+03.5	N 24 59.8	+00.0	76	01.4	+02.4	S 01 38.6	-00.1	112	40.5	+02.3	S 15 55.5	-00.1	00							
01	15	38.4	+03.5	N 24 59.8	+00.0	91	03.8	+02.4	S 01 38.5	+00.0	127	42.8	+02.3	S 15 55.4	+00.0	01							
02	30	41.9	+03.5	N 24 59.8	+00.0	106	06.2	+02.3	S 01 38.5	-00.1	142	45.1	+02.2	S 15 55.4	-00.1	02							
03	45	45.4	+03.6	N 24 59.8	+00.0	121	08.5	+02.4	S 01 38.4	+00.0	157	47.3	+02.3	S 15 55.3	+00.0	03							
04	60	49.0	+03.5	N 24 59.8	+00.0	136	10.9	+02.4	S 01 38.4	-00.1	172	49.6	+02.3	S 15 55.3	-00.1	04							
05	75	52.5	+03.5	N 24 59.8	+00.0	151	13.3	+02.3	S 01 38.3	+00.0	187	51.9	+02.3	S 15 55.2	-00.1	05							
06	90	56.0	+03.6	N 24 59.8	+00.0	166	15.6	+02.4	S 01 38.3	-00.1	202	54.2	+02.3	S 15 55.1	+00.0	06							
07	105	59.6	+03.5	N 24 59.8	+00.0	181	18.0	+02.3	S 01 38.2	-00.1	217	56.5	+02.3	S 15 55.1	-00.1	07							
08	121	03.1	+03.5	N 24 59.8	+00.0	196	20.3	+02.4	S 01 38.1	+00.0	232	58.8	+02.3	S 15 55.0	+00.0	08							
09	136	06.6	+03.6	N 24 59.8	+00.0	211	22.7	+02.4	S 01 38.1	-00.1	248	01.1	+02.3	S 15 55.0	-00.1	09							
10	151	10.2	+03.5	N 24 59.8	+00.0	226	25.1	+02.3	S 01 38.0	+00.0	263	03.4	+02.2	S 15 54.9	-00.1	10							
11	166	13.7	+03.5	N 24 59.8	+00.0	241	27.4	+02.4	S 01 38.0	-00.1	278	05.6	+02.3	S 15 54.8	+00.0	11							
12	181	17.2	+03.6	N 24 59.8	+00.0	256	29.8	+02.4	S 01 37.9	+00.0	293	07.9	+02.3	S 15 54.8	-00.1	12							
13	196	20.8	+03.5	N 24 59.8	+00.0	271	32.2	+02.3	S 01 37.9	-00.1	308	10.2	+02.3	S 15 54.7	+00.0	13							
14	211	24.3	+03.5	N 24 59.8	+00.0	286	34.5	+02.4	S 01 37.8	-00.1	323	12.5	+02.3	S 15 54.7	-00.1	14							
15	226	27.8	+03.6	N 24 59.8	+00.0	301	36.9	+02.3	S 01 37.7	+00.0	338	14.8	+02.3	S 15 54.6	-00.1	15							
16	241	31.4	+03.5	N 24 59.8	+00.0	316	39.2	+02.4	S 01 37.7	-00.1	353	17.1	+02.3	S 15 54.5	+00.0	16							
17	256	34.9	+03.5	N 24 59.8	+00.0	331	41.6	+02.4	S 01 37.6	+00.0	8	19.4	+02.3	S 15 54.5	-00.1	17							
18	271	38.4	+03.5	N 24 59.8	-00.1	346	44.0	+02.3	S 01 37.6	-00.1	23	21.7	+02.2	S 15 54.4	+00.0	18							
19	286	41.9	+03.6	N 24 59.7	+00.0	1	46.3	+02.4	S 01 37.5	+00.0	38	23.9	+02.3	S 15 54.4	-00.1	19							
20	301	45.5	+03.5	N 24 59.7	+00.0	16	48.7	+02.3	S 01 37.5	-00.1	53	26.2	+02.3	S 15 54.3	-00.1	20							
21	316	49.0	+03.5	N 24 59.7	+00.0	31	51.0	+02.4	S 01 37.4	-00.1	68	28.5	+02.3	S 15 54.2	+00.0	21							
22	331	52.5	+03.6	N 24 59.7	+00.0	46	53.4	+02.4	S 01 37.3	+00.0	83	30.8	+02.3	S 15 54.2	-00.1	22							
23	346	56.1	+03.5	N 24 59.7	+00.0	61	55.8	+02.3	S 01 37.3	-00.1	98	33.1	+02.3	S 15 54.1	+00.0	23							
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>		<b>UT</b>						
	SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	00'4	00'4	00'4	00'4	00'4	00'4		SD	00'1	00'1	00'1	00'1	00'1	00'1
	HP	00'3	00'3	00'3	00'3	00'3	00'3		HP	00'0	00'0	00'0	00'0	00'0	00'0		HP	00'0	00'0	00'0	00'0	00'0	00'0
	SHA	285°	285°	285°	285°	285°	285°		SHA	000°	000°	000°	000°	000°	000°		SHA	037°	037°	037°	037°	037°	037°
	Greenwich Culmination Time: 23:52								Greenwich Culmination Time: 18:52								Greenwich Culmination Time: 16:26						

UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	182 05.5 -00.3	S	22 41.2 +00.3	169 42.2 -00.9	S	24 03.6 +00.2	4 31.0 -30.7	N	25 06.7 +06.0											
01	197 05.2 -00.3	S	22 41.5 +00.3	184 41.3 -01.0	S	24 03.8 +00.1	19 00.3 -30.7	N	25 12.7 +05.9											
02	212 04.9 -00.2	S	22 41.8 +00.2	199 40.3 -01.0	S	24 03.9 +00.2	33 29.6 -30.7	N	25 18.6 +05.7											
03	227 04.7 -00.3	S	22 42.0 +00.3	214 39.3 -00.9	S	24 04.1 +00.1	47 58.9 -30.8	N	25 24.3 +05.7											
04	242 04.4 -00.3	S	22 42.3 +00.2	229 38.4 -01.0	S	24 04.2 +00.2	62 28.1 -30.8	N	25 30.0 +05.5											
05	257 04.1 -00.2	S	22 42.5 +00.3	244 37.4 -01.0	S	24 04.4 +00.1	76 57.3 -30.9	N	25 35.5 +05.3											
06	272 03.9 -00.3	S	22 42.8 +00.3	259 36.4 -00.9	S	24 04.5 +00.2	91 26.4 -30.8	N	25 40.8 +05.3											
07	287 03.6 -00.3	S	22 43.1 +00.2	274 35.5 -01.0	S	24 04.7 +00.1	105 55.6 -30.9	N	25 46.1 +05.1											
08	302 03.3 -00.3	S	22 43.3 +00.3	289 34.5 -01.0	S	24 04.8 +00.2	120 24.7 -30.9	N	25 51.2 +04.9											
09	317 03.0 -00.2	S	22 43.6 +00.3	304 33.5 -00.9	S	24 05.0 +00.1	134 53.8 -31.0	N	25 56.1 +04.9											
10	332 02.8 -00.3	S	22 43.9 +00.2	319 32.6 -01.0	S	24 05.1 +00.2	149 22.8 -31.0	N	26 01.0 +04.7											
11	347 02.5 -00.3	S	22 44.1 +00.3	334 31.6 -01.0	S	24 05.3 +00.1	163 51.8 -31.0	N	26 05.7 +04.6											
12	2 02.2 -00.3	S	22 44.4 +00.2	349 30.6 -00.9	S	24 05.4 +00.2	178 20.8 -31.0	N	26 10.3 +04.5											
13	17 01.9 -00.2	S	22 44.6 +00.3	4 29.7 -01.0	S	24 05.6 +00.1	192 49.8 -31.1	N	26 14.8 +04.3											
14	32 01.7 -00.3	S	22 44.9 +00.2	19 28.7 -01.0	S	24 05.7 +00.1	207 18.7 -31.1	N	26 19.1 +04.2											
15	47 01.4 -00.3	S	22 45.1 +00.3	34 27.7 -01.0	S	24 05.8 +00.2	221 47.6 -31.1	N	26 23.3 +04.0											
16	62 01.1 -00.2	S	22 45.4 +00.3	49 26.7 -00.9	S	24 06.0 +00.1	236 16.5 -31.1	N	26 27.3 +03.9											
17	77 00.9 -00.3	S	22 45.7 +00.2	64 25.8 -01.0	S	24 06.1 +00.1	250 45.4 -31.2	N	26 31.2 +03.8											
18	92 00.6 -00.3	S	22 45.9 +00.3	79 24.8 -01.0	S	24 06.2 +00.2	265 14.2 -31.2	N	26 35.0 +03.7											
19	107 00.3 -00.3	S	22 46.2 +00.2	94 23.8 -00.9	S	24 06.4 +00.1	279 43.0 -31.2	N	26 38.7 +03.5											
20	122 00.0 -00.2	S	22 46.4 +00.3	109 22.9 -01.0	S	24 06.5 +00.1	294 11.8 -31.2	N	26 42.2 +03.4											
21	136 59.8 -00.3	S	22 46.7 +00.2	124 21.9 -01.0	S	24 06.6 +00.2	308 40.6 -31.2	N	26 45.6 +03.3											
22	151 59.5 -00.3	S	22 46.9 +00.3	139 20.9 -00.9	S	24 06.8 +00.1	323 09.4 -31.2	N	26 48.9 +03.1											
23	166 59.2 -00.3	S	22 47.2 +00.2	154 20.0 -01.0	S	24 06.9 +00.1	337 38.2 -31.3	N	26 52.0 +03.0											
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	16°2	16°2	16°2	16°2	16°2	16°2	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD						
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP						
SHA	105°	105°	105°	105°	105°	104°	SHA	093°	093°	092°	092°	092°	092°	SHA						
Greenwich Culmination Time: 11:51							Greenwich Culmination Time: 12:42							Greenwich Culmination Time: -1:00						

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	1 59.6 +03.5	N	24 59.7 +00.0	76 58.1 +02.4	S	01 37.2 +00.0	113 35.4 +02.3	S	15 54.1 -00.1											
01	17 03.1 +03.6	N	24 59.7 +00.0	92 00.5 +02.3	S	01 37.2 -00.1	128 37.7 +02.2	S	15 54.0 -00.1											
02	32 06.7 +03.5	N	24 59.7 +00.0	107 02.8 +02.4	S	01 37.1 +00.0	143 39.9 +02.3	S	15 53.9 +00.0											
03	47 10.2 +03.5	N	24 59.7 +00.0	122 05.2 +02.4	S	01 37.1 -00.1	158 42.2 +02.3	S	15 53.9 -00.1											
04	62 13.7 +03.5	N	24 59.7 +00.0	137 07.6 +02.3	S	01 37.0 -00.1	173 44.5 +02.3	S	15 53.8 +00.0											
05	77 17.2 +03.6	N	24 59.7 +00.0	152 09.9 +02.4	S	01 36.9 +00.0	188 46.8 +02.3	S	15 53.8 -00.1											
06	92 20.8 +03.5	N	24 59.7 +00.0	167 12.3 +02.3	S	01 36.9 -00.1	203 49.1 +02.3	S	15 53.7 -00.1											
07	107 24.3 +03.5	N	24 59.7 +00.0	182 14.6 +02.4	S	01 36.8 +00.0	218 51.4 +02.2	S	15 53.6 +00.0											
08	122 27.8 +03.5	N	24 59.7 -00.1	197 17.0 +02.3	S	01 36.8 -00.1	233 53.6 +02.3	S	15 53.6 -00.1											
09	137 31.3 +03.6	N	24 59.6 +00.0	212 19.3 +02.4	S	01 36.7 -00.1	248 55.9 +02.3	S	15 53.5 +00.0											
10	152 34.9 +03.5	N	24 59.6 +00.0	227 21.7 +02.3	S	01 36.6 +00.0	263 58.2 +02.3	S	15 53.5 -00.1											
11	167 38.4 +03.5	N	24 59.6 +00.0	242 24.0 +02.4	S	01 36.6 -00.1	279 00.5 +02.3	S	15 53.4 -00.1											
12	182 41.9 +03.5	N	24 59.6 +00.0	257 26.4 +02.4	S	01 36.5 +00.0	294 02.8 +02.3	S	15 53.3 +00.0											
13	197 45.4 +03.6	N	24 59.6 +00.0	272 28.8 +02.3	S	01 36.5 -00.1	309 05.1 +02.2	S	15 53.3 -00.1											
14	212 49.0 +03.5	N	24 59.6 +00.0	287 31.1 +02.4	S	01 36.4 -00.1	324 07.3 +02.3	S	15 53.2 +00.0											
15	227 52.5 +03.5	N	24 59.6 +00.0	302 33.5 +02.3	S	01 36.3 +00.0	339 09.6 +02.3	S	15 53.2 -00.1											
16	242 56.0 +03.5	N	24 59.6 +00.0	317 35.8 +02.4	S	01 36.3 -00.1	354 11.9 +02.3	S	15 53.1 -00.1											
17	257 59.5 +03.6	N	24 59.6 +00.0	332 38.2 +02.3	S	01 36.2 +00.0	9 14.2 +02.3	S	15 53.0 +00.0											
18	273 03.1 +03.5	N	24 59.6 +00.0	347 40.5 +02.4	S	01 36.2 -00.1	24 16.5 +02.3	S	15 53.0 -00.1											
19	288 06.6 +03.5	N	24 59.6 -00.1	2 42.9 +02.3	S	01 36.1 -00.1	39 18.8 +02.2	S	15 52.9 +00.0											
20	303 10.1 +03.5	N	24 59.5 +00.0	17 45.2 +02.4	S	01 36.0 +00.0	54 21.0 +02.3	S	15 52.9 -00.1											
21	318 13.6 +03.6	N	24 59.5 +00.0	32 47.6 +02.3	S	01 36.0 -00.1	69 23.3 +02.3	S	15 52.8 -00.1											
22	333 17.2 +03.5	N	24 59.5 +00.0	47 49.9 +02.4	S	01 35.9 -00.1	84 25.6 +02.3	S	15 52.7 +00.0											
23	348 20.7 +03.5	N	24 59.5 +00.0	62 52.3 +02.3	S	01 35.8 +00.0	99 27.9 +02.3	S	15 52.7 -00.1											
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT						
SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	00°4	00°4	00°4	00°4	00°4	00°4	SD						
HP	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	HP						
SHA	285°	285°	285°	286°	286°	286°	SHA	000°	000°	000°	000°	000°	000°	SHA						
Greenwich Culmination Time: 23:46							Greenwich Culmination Time: 18:49							Greenwich Culmination Time: 16:23						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 58.9 -00.2	S	22 47.4 +00.3	169 19.0 -01.0	S	24 07.0 +00.2	352 06.9 -31.3	N	26 55.0 +02.8	00			
01	196 58.7 -00.3	S	22 47.7 +00.2	184 18.0 -01.0	S	24 07.2 +00.1	6 35.6 -31.2	N	26 57.8 +02.7	01			
02	211 58.4 -00.3	S	22 47.9 +00.3	199 17.0 -00.9	S	24 07.3 +00.1	21 04.4 -31.3	N	27 00.5 +02.6	02			
03	226 58.1 -00.3	S	22 48.2 +00.2	214 16.1 -01.0	S	24 07.4 +00.1	35 33.1 -31.3	N	27 03.1 +02.4	03			
04	241 57.8 -00.3	S	22 48.4 +00.2	229 15.1 -01.0	S	24 07.5 +00.2	50 01.8 -31.3	N	27 05.5 +02.3	04			
05	256 57.5 -00.2	S	22 48.6 +00.3	244 14.1 -00.9	S	24 07.7 +00.1	64 30.5 -31.4	N	27 07.8 +02.2	05			
06	271 57.3 -00.3	S	22 48.9 +00.2	259 13.2 -01.0	S	24 07.8 +00.1	78 59.1 -31.3	N	27 10.0 +02.0	06			
07	286 57.0 -00.3	S	22 49.1 +00.3	274 12.2 -01.0	S	24 07.9 +00.1	93 27.8 -31.3	N	27 12.0 +01.9	07			
08	301 56.7 -00.3	S	22 49.4 +00.2	289 11.2 -01.0	S	24 08.0 +00.1	107 56.5 -31.3	N	27 13.9 +01.8	08			
09	316 56.4 -00.2	S	22 49.6 +00.3	304 10.2 -00.9	S	24 08.1 +00.1	122 25.2 -31.4	N	27 15.7 +01.6	09			
10	331 56.2 -00.3	S	22 49.9 +00.2	319 09.3 -01.0	S	24 08.2 +00.2	136 53.8 -31.3	N	27 17.3 +01.5	10			
11	346 55.9 -00.3	S	22 50.1 +00.2	334 08.3 -01.0	S	24 08.4 +00.1	151 22.5 -31.3	N	27 18.8 +01.4	11			
12	1 55.6 -00.3	S	22 50.3 +00.3	349 07.3 -00.9	S	24 08.5 +00.1	165 51.2 -31.3	N	27 20.2 +01.2	12			
13	16 55.3 -00.3	S	22 50.6 +00.2	4 06.4 -01.0	S	24 08.6 +00.1	180 19.9 -31.4	N	27 21.4 +01.1	13			
14	31 55.0 -00.2	S	22 50.8 +00.3	19 05.4 -01.0	S	24 08.7 +00.1	194 48.5 -31.3	N	27 22.5 +00.9	14			
15	46 54.8 -00.3	S	22 51.1 +00.2	34 04.4 -01.0	S	24 08.8 +00.1	209 17.2 -31.3	N	27 23.4 +00.8	15			
16	61 54.5 -00.3	S	22 51.3 +00.2	49 03.4 -00.9	S	24 08.9 +00.1	223 45.9 -31.3	N	27 24.2 +00.7	16			
17	76 54.2 -00.3	S	22 51.5 +00.3	64 02.5 -01.0	S	24 09.0 +00.1	238 14.6 -31.3	N	27 24.9 +00.5	17			
18	91 53.9 -00.3	S	22 51.8 +00.2	79 01.5 -01.0	S	24 09.1 +00.1	252 43.3 -31.3	N	27 25.4 +00.4	18			
19	106 53.6 -00.2	S	22 52.0 +00.2	94 00.5 -00.9	S	24 09.2 +00.1	267 12.0 -31.3	N	27 25.8 +00.3	19			
20	121 53.4 -00.3	S	22 52.2 +00.3	108 59.6 -01.0	S	24 09.3 +00.1	281 40.7 -31.2	N	27 26.1 +00.1	20			
21	136 53.1 -00.3	S	22 52.5 +00.2	123 58.6 -01.0	S	24 09.4 +00.1	296 09.5 -31.3	N	27 26.2 +00.0	21			
22	151 52.8 -00.3	S	22 52.7 +00.2	138 57.6 -01.0	S	24 09.5 +00.1	310 38.2 -31.2	N	27 26.2 -00.1	22			
23	166 52.5 -00.3	S	22 52.9 +00.3	153 56.6 -00.9	S	24 09.6 +00.1	325 07.0 -31.3	N	27 26.1 -00.3	23			
	<b>UT 02 06 10 14 18 22</b> SD 16'2 16'2 16'2 16'2 16'2 16'2 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 104° 104° 104° 104° 103° 103° Greenwich Culmination Time: 11:52	<b>UT 02 06 10 14 18 22</b> 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 091° 091° 091° 091° 091° 090° Greenwich Culmination Time: 12:43	<b>UT 02 06 10 14 18 22</b> SD 14'8 14'8 14'8 14'8 14'8 14'8 HP 54'5 54'4 54'4 54'3 54'3 54'3 SHA 273° 271° 269° 267° 264° 262° Greenwich Culmination Time: 00:32										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	3 24.2 +03.5	N	24 59.5 +00.0	77 54.6 +02.4	S	01 35.8 -00.1	114 30.2 +02.3	S	15 52.6 +00.0	00			
01	18 27.7 +03.6	N	24 59.5 +00.0	92 57.0 +02.3	S	01 35.7 +00.0	129 32.5 +02.2	S	15 52.6 -00.1	01			
02	33 31.3 +03.5	N	24 59.5 +00.0	107 59.3 +02.4	S	01 35.7 -00.1	144 34.7 +02.3	S	15 52.5 -00.1	02			
03	48 34.8 +03.5	N	24 59.5 -00.1	123 01.7 +02.3	S	01 35.6 -00.1	159 37.0 +02.3	S	15 52.4 +00.0	03			
04	63 38.3 +03.5	N	24 59.4 +00.0	138 04.0 +02.4	S	01 35.5 +00.0	174 39.3 +02.3	S	15 52.4 -00.1	04			
05	78 41.8 +03.5	N	24 59.4 +00.0	153 06.4 +02.3	S	01 35.5 -00.1	189 41.6 +02.3	S	15 52.3 +00.0	05			
06	93 45.3 +03.6	N	24 59.4 +00.0	168 08.7 +02.4	S	01 35.4 -00.1	204 43.9 +02.2	S	15 52.3 -00.1	06			
07	108 48.9 +03.5	N	24 59.4 +00.0	183 11.1 +02.3	S	01 35.3 +00.0	219 46.1 +02.3	S	15 52.2 -00.1	07			
08	123 52.4 +03.5	N	24 59.4 +00.0	198 13.4 +02.4	S	01 35.3 -00.1	234 48.4 +02.3	S	15 52.1 +00.0	08			
09	138 55.9 +03.5	N	24 59.4 +00.0	213 15.8 +02.3	S	01 35.2 +00.0	249 50.7 +02.3	S	15 52.1 -00.1	09			
10	153 59.4 +03.5	N	24 59.4 +00.0	228 18.1 +02.4	S	01 35.2 -00.1	264 53.0 +02.3	S	15 52.0 -00.1	10			
11	169 02.9 +03.6	N	24 59.4 -00.1	243 20.5 +02.3	S	01 35.1 -00.1	279 55.3 +02.3	S	15 51.9 +00.0	11			
12	184 06.5 +03.5	N	24 59.3 +00.0	258 22.8 +02.4	S	01 35.0 +00.0	294 57.6 +02.2	S	15 51.9 -00.1	12			
13	199 10.0 +03.5	N	24 59.3 +00.0	273 25.2 +02.3	S	01 35.0 -00.1	309 59.8 +02.3	S	15 51.8 +00.0	13			
14	214 13.5 +03.5	N	24 59.3 +00.0	288 27.5 +02.4	S	01 34.9 -00.1	325 02.1 +02.3	S	15 51.8 -00.1	14			
15	229 17.0 +03.5	N	24 59.3 +00.0	303 29.9 +02.3	S	01 34.8 +00.0	340 04.4 +02.3	S	15 51.7 -00.1	15			
16	244 20.5 +03.5	N	24 59.3 +00.0	318 32.2 +02.4	S	01 34.8 -00.1	355 06.7 +02.3	S	15 51.6 +00.0	16			
17	259 24.0 +03.6	N	24 59.3 +00.0	333 34.6 +02.3	S	01 34.7 +00.0	10 09.0 +02.2	S	15 51.6 -00.1	17			
18	274 27.6 +03.5	N	24 59.3 -00.1	348 36.9 +02.4	S	01 34.7 -00.1	25 11.2 +02.3	S	15 51.5 +00.0	18			
19	289 31.1 +03.5	N	24 59.2 +00.0	3 39.3 +02.3	S	01 34.6 -00.1	40 13.5 +02.3	S	15 51.5 -00.1	19			
20	304 34.6 +03.5	N	24 59.2 +00.0	18 41.6 +02.3	S	01 34.5 +00.0	55 15.8 +02.3	S	15 51.4 -00.1	20			
21	319 38.1 +03.5	N	24 59.2 +00.0	33 43.9 +02.4	S	01 34.5 -00.1	70 18.1 +02.3	S	15 51.3 +00.0	21			
22	334 41.6 +03.5	N	24 59.2 +00.0	48 46.3 +02.3	S	01 34.4 -00.1	85 20.4 +02.2	S	15 51.3 -00.1	22			
23	349 45.1 +03.5	N	24 59.2 +00.0	63 48.6 +02.4	S	01 34.3 +00.0	100 22.6 +02.3	S	15 51.2 -00.1	23			
	<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 286° 286° 286° 286° 286° 286° Greenwich Culmination Time: 23:40	<b>UT 02 06 10 14 18 22</b> SD 00'4 00'4 00'4 00'4 00'4 00'4 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 000° 000° 000° 000° 000° 000° Greenwich Culmination Time: 18:45	<b>UT 02 06 10 14 18 22</b> 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 037° 037° 037° 037° 037° 037° Greenwich Culmination Time: 16:19										

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT							
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "								
00	181 52.2 -00.2	S 22 53.2 +00.2			168 55.7 -01.0	S 24 09.7 +00.1			339 35.7 -31.2	N 27 25.8 -00.4			00							
01	196 52.0 -00.3	S 22 53.4 +00.2			183 54.7 -01.0	S 24 09.8 +00.1			354 04.5 -31.2	N 27 25.4 -00.6			01							
02	211 51.7 -00.3	S 22 53.6 +00.2			198 53.7 -01.0	S 24 09.9 +00.1			8 33.3 -31.1	N 27 24.8 -00.7			02							
03	226 51.4 -00.3	S 22 53.8 +00.3			213 52.7 -00.9	S 24 10.0 +00.1			23 02.2 -31.2	N 27 24.1 -00.8			03							
04	241 51.1 -00.3	S 22 54.1 +00.2			228 51.8 -01.0	S 24 10.1 +00.1			37 31.0 -31.1	N 27 23.3 -00.9			04							
05	256 50.8 -00.2	S 22 54.3 +00.2			243 50.8 -01.0	S 24 10.2 +00.1			51 59.9 -31.1	N 27 22.4 -01.1			05							
06	271 50.6 -00.3	S 22 54.5 +00.2			258 49.8 -01.0	S 24 10.3 +00.1			66 28.8 -31.1	N 27 21.3 -01.2			06							
07	286 50.3 -00.3	S 22 54.7 +00.3			273 48.8 -00.9	S 24 10.4 +00.1			80 57.7 -31.0	N 27 20.1 -01.4			07							
08	301 50.0 -00.3	S 22 55.0 +00.2			288 47.9 -01.0	S 24 10.5 +00.0			95 26.7 -31.1	N 27 18.7 -01.5			08							
09	316 49.7 -00.3	S 22 55.2 +00.2			303 46.9 -01.0	S 24 10.5 +00.1			109 55.6 -31.0	N 27 17.2 -01.6			09							
10	331 49.4 -00.2	S 22 55.4 +00.2			318 45.9 -00.9	S 24 10.6 +00.1			124 24.6 -31.0	N 27 15.6 -01.8			10							
11	346 49.2 -00.3	S 22 55.6 +00.3			333 45.0 -01.0	S 24 10.7 +00.1			138 53.6 -30.9	N 27 13.8 -01.8			11							
12	1 48.9 -00.3	S 22 55.9 +00.2			348 44.0 -01.0	S 24 10.8 +00.1			153 22.7 -30.9	N 27 12.0 -02.1			12							
13	16 48.6 -00.3	S 22 56.1 +00.2			3 43.0 -01.0	S 24 10.9 +00.1			167 51.8 -30.9	N 27 09.9 -02.1			13							
14	31 48.3 -00.3	S 22 56.3 +00.2			18 42.0 -00.9	S 24 11.0 +00.0			182 20.9 -30.8	N 27 07.8 -02.3			14							
15	46 48.0 -00.3	S 22 56.5 +00.2			33 41.1 -01.0	S 24 11.0 +00.1			196 50.1 -30.9	N 27 05.5 -02.4			15							
16	61 47.7 -00.2	S 22 56.7 +00.3			48 40.1 -01.0	S 24 11.1 +00.1			211 19.2 -30.7	N 27 03.1 -02.5			16							
17	76 47.5 -00.3	S 22 57.0 +00.2			63 39.1 -01.0	S 24 11.2 +00.1			225 48.5 -30.8	N 27 00.6 -02.7			17							
18	91 47.2 -00.3	S 22 57.2 +00.2			78 38.1 -00.9	S 24 11.3 +00.0			240 17.7 -30.7	N 26 57.9 -02.8			18							
19	106 46.9 -00.3	S 22 57.4 +00.2			93 37.2 -01.0	S 24 11.3 +00.1			254 47.0 -30.7	N 26 55.1 -02.9			19							
20	121 46.6 -00.3	S 22 57.6 +00.2			108 36.2 -01.0	S 24 11.4 +00.1			269 16.3 -30.6	N 26 52.2 -03.0			20							
21	136 46.3 -00.3	S 22 57.8 +00.2			123 35.2 -01.0	S 24 11.5 +00.0			283 45.7 -30.6	N 26 49.2 -03.2			21							
22	151 46.0 -00.3	S 22 58.0 +00.2			138 34.2 -00.9	S 24 11.5 +00.1			298 15.1 -30.5	N 26 46.0 -03.3			22							
23	166 45.7 -00.2	S 22 58.2 +00.3			153 33.3 -01.0	S 24 11.6 +00.1			312 44.6 -30.5	N 26 42.7 -03.5			23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	16'2	16'2	16'2	16'2	16'2	16'2	SD	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1					
HP	00'1	00'1	00'1	00'1	00'1	00'1	HP	00'1	00'1	00'1	00'1	00'1	00'1	00'1	00'1					
SHA	103°	103°	103°	103°	102°	102°	SHA	090°	090°	090°	089°	089°	089°	089°	089°					
Greenwich Culmination Time: 11:52							Greenwich Culmination Time: 12:45							Greenwich Culmination Time: 01:24						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT							
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "								
00	4 48.6 +03.6	N 24 59.2 -00.1			78 51.0 +02.3	S 01 34.3 -00.1			115 24.9 +02.3	S 15 51.1 +00.0			00							
01	19 52.2 +03.5	N 24 59.1 +00.0			93 53.3 +02.4	S 01 34.2 -00.1			130 27.2 +02.3	S 15 51.1 -00.1			01							
02	34 55.7 +03.5	N 24 59.1 +00.0			108 55.7 +02.3	S 01 34.1 +00.0			145 29.5 +02.2	S 15 51.0 +00.0			02							
03	49 59.2 +03.5	N 24 59.1 +00.0			123 58.0 +02.3	S 01 34.1 -00.1			160 31.7 +02.3	S 15 51.0 -00.1			03							
04	65 02.7 +03.5	N 24 59.1 +00.0			139 00.3 +02.4	S 01 34.0 -00.1			175 34.0 +02.3	S 15 50.9 -00.1			04							
05	80 06.2 +03.5	N 24 59.1 -00.1			154 02.7 +02.3	S 01 33.9 +00.0			190 36.3 +02.3	S 15 50.8 +00.0			05							
06	95 09.7 +03.5	N 24 59.0 +00.0			169 05.0 +02.4	S 01 33.9 -00.1			205 38.6 +02.3	S 15 50.8 -00.1			06							
07	110 13.2 +03.5	N 24 59.0 +00.0			184 07.4 +02.3	S 01 33.8 -00.1			220 40.9 +02.2	S 15 50.7 -00.1			07							
08	125 16.7 +03.5	N 24 59.0 +00.0			199 09.7 +02.4	S 01 33.7 +00.0			235 43.1 +02.3	S 15 50.6 +00.0			08							
09	140 20.2 +03.6	N 24 59.0 +00.0			214 12.1 +02.3	S 01 33.7 -00.1			250 45.4 +02.3	S 15 50.6 -00.1			09							
10	155 23.8 +03.5	N 24 59.0 +00.0			229 14.4 +02.3	S 01 33.6 -00.1			265 47.7 +02.3	S 15 50.5 +00.0			10							
11	170 27.3 +03.5	N 24 59.0 -00.1			244 16.7 +02.4	S 01 33.5 +00.0			280 50.0 +02.3	S 15 50.5 -00.1			11							
12	185 30.8 +03.5	N 24 58.9 +00.0			259 19.1 +02.3	S 01 33.5 -00.1			295 52.3 +02.2	S 15 50.4 -00.1			12							
13	200 34.3 +03.5	N 24 58.9 +00.0			274 21.4 +02.4	S 01 33.4 -00.1			310 54.5 +02.3	S 15 50.3 +00.0			13							
14	215 37.8 +03.5	N 24 58.9 +00.0			289 23.8 +02.3	S 01 33.3 +00.0			325 56.8 +02.3	S 15 50.3 -00.1			14							
15	230 41.3 +03.5	N 24 58.9 +00.0			304 26.1 +02.3	S 01 33.3 -00.1			340 59.1 +02.3	S 15 50.2 +00.0			15							
16	245 44.8 +03.5	N 24 58.9 -00.1			319 28.4 +02.4	S 01 33.2 -00.1			356 01.4 +02.2	S 15 50.2 -00.1			16							
17	260 48.3 +03.5	N 24 58.8 +00.0			334 30.8 +02.3	S 01 33.1 +00.0			11 03.6 +02.3	S 15 50.1 -00.1			17							
18	275 51.8 +03.5	N 24 58.8 +00.0			349 33.1 +02.3	S 01 33.1 -00.1			26 05.9 +02.3	S 15 50.0 +00.0			18							
19	290 55.3 +03.5	N 24 58.8 +00.0			4 35.4 +02.4	S 01 33.0 -00.1			41 08.2 +02.3	S 15 50.0 -00.1			19							
20	305 58.8 +03.5	N 24 58.8 +00.0			19 37.8 +02.3	S 01 32.9 +00.0			56 10.5 +02.2	S 15 49.9 -00.1			20							
21	321 02.3 +03.5	N 24 58.8 -00.1			34 40.1 +02.4	S 01 32.9 -00.1			71 12.7 +02.3	S 15 49.8 +00.0			21							
22	336 05.8 +03.5	N 24 58.7 +00.0			49 42.5 +02.3	S 01 32.8 -00.1			86 15.0 +02.3	S 15 49.8 -00.1			22							
23	351 09.3 +03.5	N 24 58.7 +00.0			64 44.8 +02.3	S 01 32.7 +00.0			101 17.3 +02.3	S 15 49.7 -00.1			23							
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22							
SD	00'1	00'1	00'1	00'1	00'1	00'1	SD	00'4	00'4	00'4	00'4	00'4	00'4							
HP	00'3	00'3	00'3	00'3	00'3	00'3	HP	00'0	00'0	00'0	00'0	00'0	00'0							
SHA	286°	286°	286°	286°	286°	286°	SHA	000°	000°	000°	000°	000°	000°							
Greenwich Culmination Time: 23:35							Greenwich Culmination Time: 18:41							Greenwich Culmination Time: 16:15						

UT	Sun				Venus				Moon				UT								
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec									
	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "									
00	181	45.5	-00.3	S 22 58.5	+00.2	168	32.3	-01.0	S 24 11.7	+00.0	327	14.1	-30.5	N 26 39.2	-03.5	00					
01	196	45.2	-00.3	S 22 58.7	+00.2	183	31.3	-01.0	S 24 11.7	+00.1	341	43.6	-30.4	N 26 35.7	-03.7	01					
02	211	44.9	-00.3	S 22 58.9	+00.2	198	30.3	-00.9	S 24 11.8	+00.1	356	13.2	-30.4	N 26 32.0	-03.8	02					
03	226	44.6	-00.3	S 22 59.1	+00.2	213	29.4	-01.0	S 24 11.9	+00.0	10	42.8	-30.3	N 26 28.2	-03.9	03					
04	241	44.3	-00.3	S 22 59.3	+00.2	228	28.4	-01.0	S 24 11.9	+00.1	25	12.5	-30.3	N 26 24.3	-04.1	04					
05	256	44.0	-00.2	S 22 59.5	+00.2	243	27.4	-01.0	S 24 12.0	+00.1	39	42.2	-30.3	N 26 20.2	-04.2	05					
06	271	43.8	-00.3	S 22 59.7	+00.2	258	26.4	-00.9	S 24 12.1	+00.0	54	11.9	-30.1	N 26 16.0	-04.3	06					
07	286	43.5	-00.3	S 22 59.9	+00.2	273	25.5	-01.0	S 24 12.1	+00.1	68	41.8	-30.2	N 26 11.7	-04.4	07					
08	301	43.2	-00.3	S 23 00.1	+00.2	288	24.5	-01.0	S 24 12.2	+00.0	83	11.6	-30.1	N 26 07.3	-04.5	08					
09	316	42.9	-00.3	S 23 00.3	+00.2	303	23.5	-01.0	S 24 12.2	+00.1	97	41.5	-30.0	N 26 02.8	-04.7	09					
10	331	42.6	-00.3	S 23 00.5	+00.2	318	22.5	-00.9	S 24 12.3	+00.0	112	11.5	-30.0	N 25 58.1	-04.8	10					
11	346	42.3	-00.3	S 23 00.7	+00.2	333	21.6	-01.0	S 24 12.3	+00.1	126	41.5	-30.0	N 25 53.3	-04.9	11					
12	1	42.0	-00.3	S 23 00.9	+00.2	348	20.6	-01.0	S 24 12.4	+00.0	141	11.5	-29.9	N 25 48.4	-05.0	12					
13	16	41.7	-00.2	S 23 01.1	+00.2	3	19.6	-01.0	S 24 12.4	+00.1	155	41.6	-29.8	N 25 43.4	-05.2	13					
14	31	41.5	-00.3	S 23 01.3	+00.2	18	18.6	-00.9	S 24 12.5	+00.0	170	11.8	-29.8	N 25 38.2	-05.2	14					
15	46	41.2	-00.3	S 23 01.5	+00.2	33	17.7	-01.0	S 24 12.5	+00.1	184	42.0	-29.7	N 25 33.0	-05.4	15					
16	61	40.9	-00.3	S 23 01.7	+00.2	48	16.7	-01.0	S 24 12.6	+00.0	199	12.3	-29.7	N 25 27.6	-05.5	16					
17	76	40.6	-00.3	S 23 01.9	+00.2	63	15.7	-01.0	S 24 12.6	+00.1	213	42.6	-29.7	N 25 22.1	-05.6	17					
18	91	40.3	-00.3	S 23 02.1	+00.2	78	14.7	-00.9	S 24 12.7	+00.0	228	12.9	-29.5	N 25 16.5	-05.7	18					
19	106	40.0	-00.3	S 23 02.3	+00.2	93	13.8	-01.0	S 24 12.7	+00.0	242	43.4	-29.6	N 25 10.8	-05.9	19					
20	121	39.7	-00.3	S 23 02.5	+00.2	108	12.8	-01.0	S 24 12.7	+00.1	257	13.8	-29.4	N 25 04.9	-05.9	20					
21	136	39.4	-00.2	S 23 02.7	+00.2	123	11.8	-01.0	S 24 12.8	+00.0	271	44.4	-29.4	N 24 59.0	-06.1	21					
22	151	39.2	-00.3	S 23 02.9	+00.2	138	10.8	-00.9	S 24 12.8	+00.1	286	15.0	-29.4	N 24 52.9	-06.1	22					
23	166	38.9	-00.3	S 23 03.1	+00.2	153	09.9	-01.0	S 24 12.9	+00.0	300	45.6	-29.3	N 24 46.8	-06.3	23					
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
	SD	16°2	16°2	16°2	16°2	16°2	16°2	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	14°7	14°7	14°7	14°7	14°7	14°7
	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	54°1	54°0	54°0	54°0	54°0	54°0
	SHA	102°	102°	102°	101°	101°	101°	SHA	089°	089°	088°	088°	088°	088°	SHA	246°	244°	242°	240°	238°	236°
	Greenwich Culmination Time: 11:53							Greenwich Culmination Time: 12:46							Greenwich Culmination Time: 02:15						

  

UT	Mars				Jupiter				Saturn				UT								
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec									
	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "	° / '	' / "									
00	6	12.8	+03.5	N 24 58.7	+00.0	79	47.1	+02.4	S 01 32.7	-00.1	116	19.6	+02.2	S 15 49.6	+00.0	00					
01	21	16.3	+03.5	N 24 58.7	-00.1	94	49.5	+02.3	S 01 32.6	-00.1	131	21.8	+02.3	S 15 49.6	-00.1	01					
02	36	19.8	+03.5	N 24 58.6	+00.0	109	51.8	+02.3	S 01 32.5	+00.0	146	24.1	+02.3	S 15 49.5	+00.0	02					
03	51	23.3	+03.5	N 24 58.6	+00.0	124	54.1	+02.4	S 01 32.5	-00.1	161	26.4	+02.3	S 15 49.5	-00.1	03					
04	66	26.8	+03.5	N 24 58.6	+00.0	139	56.5	+02.3	S 01 32.4	-00.1	176	28.7	+02.2	S 15 49.4	-00.1	04					
05	81	30.3	+03.5	N 24 58.6	+00.0	154	58.8	+02.3	S 01 32.3	+00.0	191	30.9	+02.3	S 15 49.3	+00.0	05					
06	96	33.8	+03.5	N 24 58.6	-00.1	170	01.1	+02.4	S 01 32.3	-00.1	206	33.2	+02.3	S 15 49.3	-00.1	06					
07	111	37.3	+03.5	N 24 58.5	+00.0	185	03.5	+02.3	S 01 32.2	-00.1	221	35.5	+02.3	S 15 49.2	-00.1	07					
08	126	40.8	+03.5	N 24 58.5	+00.0	200	05.8	+02.3	S 01 32.1	-00.1	236	37.8	+02.2	S 15 49.1	+00.0	08					
09	141	44.3	+03.5	N 24 58.5	+00.0	215	08.1	+02.4	S 01 32.0	+00.0	251	40.0	+02.3	S 15 49.1	-00.1	09					
10	156	47.8	+03.5	N 24 58.5	-00.1	230	10.5	+02.3	S 01 32.0	-00.1	266	42.3	+02.3	S 15 49.0	+00.0	10					
11	171	51.3	+03.5	N 24 58.4	+00.0	245	12.8	+02.3	S 01 31.9	-00.1	281	44.6	+02.3	S 15 49.0	-00.1	11					
12	186	54.8	+03.5	N 24 58.4	+00.0	260	15.1	+02.4	S 01 31.8	+00.0	296	46.9	+02.2	S 15 48.9	-00.1	12					
13	201	58.3	+03.5	N 24 58.4	+00.0	275	17.5	+02.3	S 01 31.8	-00.1	311	49.1	+02.3	S 15 48.8	+00.0	13					
14	217	01.8	+03.5	N 24 58.4	-00.1	290	19.8	+02.3	S 01 31.7	-00.1	326	51.4	+02.3	S 15 48.8	-00.1	14					
15	232	05.3	+03.5	N 24 58.3	+00.0	305	22.1	+02.4	S 01 31.6	+00.0	341	53.7	+02.3	S 15 48.7	-00.1	15					
16	247	08.8	+03.5	N 24 58.3	+00.0	320	24.5	+02.3	S 01 31.6	-00.1	356	56.0	+02.2	S 15 48.6	+00.0	16					
17	262	12.3	+03.5	N 24 58.3	+00.0	335	26.8	+02.3	S 01 31.5	-00.1	11	58.2	+02.3	S 15 48.6	-00.1	17					
18	277	15.8	+03.5	N 24 58.3	-00.1	350	29.1	+02.4	S 01 31.4	+00.0	27	00.5	+02.3	S 15 48.5	-00.1	18					
19	292	19.3	+03.5	N 24 58.2	+00.0	5	31.5	+02.3	S 01 31.4	-00.1	42	02.8	+02.3	S 15 48.4	+00.0	19					
20	307	22.8	+03.5	N 24 58.2	+00.0	20	33.8	+02.3	S 01 31.3	-00.1	57	05.1	+02.2	S 15 48.4	-00.1	20					
21	322	26.3	+03.5	N 24 58.2	+00.0	35	36.1	+02.3	S 01 31.2	-00.1	72	07.3	+02.3	S 15 48.3	+00.0	21					
22	337	29.8	+03.5	N 24 58.2	-00.1	50	38.4	+02.4	S 01 31.1	+00.0	87	09.6	+02.3	S 15 48.3	-00.1	22					
23	352	33.3	+03.5	N 24 58.1	+00.0	65	40.8	+02.3	S 01 31.1	-00.1	102	11.9	+02.3	S 15 48.2	-00.1	23					
	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>UT</b>	<b>02</b>	<b>06</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>
	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	00°4	00°4	00°4	00°4	00°4	00°4	SD	00°1	00°1	00°1	00°1	00°1	00°1
	HP	00°3	00°3	00°3	00°3	00°3	00°3	HP	00°0	00°0	00°0	00°0	00°0	00°0	HP	00°0	00°0	00°0	00°0	00°0	00°0
	SHA	287°	287°	287°	287°	287°	287°	SHA	000°	000°	000°	000°	000°	000°	SHA	037°	037°	037°	037°	037°	037°
	Greenwich Culmination Time: 23:29							Greenwich Culmination Time: 18:37							Greenwich Culmination Time: 16:12						

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 38.6 -00.3	S	23 03.3 +00.2	168 08.9 -01.0	S	24 12.9 +00.0	315 16.3 -29.2	N	24 40.5 -06.4	00			
01	196 38.3 -00.3	S	23 03.5 +00.2	183 07.9 -01.0	S	24 12.9 +00.1	329 47.1 -29.2	N	24 34.1 -06.5	01			
02	211 38.0 -00.3	S	23 03.7 +00.2	198 06.9 -00.9	S	24 13.0 +00.0	344 17.9 -29.1	N	24 27.6 -06.7	02			
03	226 37.7 -00.3	S	23 03.9 +00.2	213 06.0 -01.0	S	24 13.0 +00.0	358 48.8 -29.1	N	24 20.9 -06.7	03			
04	241 37.4 -00.3	S	23 04.1 +00.1	228 05.0 -01.0	S	24 13.0 +00.0	13 19.7 -29.0	N	24 14.2 -06.8	04			
05	256 37.1 -00.3	S	23 04.2 +00.2	243 04.0 -01.0	S	24 13.0 +00.1	27 50.7 -28.9	N	24 07.4 -07.0	05			
06	271 36.8 -00.2	S	23 04.4 +00.2	258 03.0 -00.9	S	24 13.1 +00.0	42 21.8 -28.9	N	24 00.4 -07.0	06			
07	286 36.6 -00.3	S	23 04.6 +00.2	273 02.1 -01.0	S	24 13.1 +00.0	56 52.9 -28.9	N	23 53.4 -07.2	07			
08	301 36.3 -00.3	S	23 04.8 +00.2	288 01.1 -01.0	S	24 13.1 +00.0	71 24.0 -28.7	N	23 46.2 -07.2	08			
09	316 36.0 -00.3	S	23 05.0 +00.2	303 00.1 -01.0	S	24 13.1 +00.1	85 55.3 -28.8	N	23 39.0 -07.4	09			
10	331 35.7 -00.3	S	23 05.2 +00.2	317 59.1 -00.9	S	24 13.2 +00.0	100 26.5 -28.6	N	23 31.6 -07.4	10			
11	346 35.4 -00.3	S	23 05.4 +00.1	332 58.2 -01.0	S	24 13.2 +00.0	114 57.9 -28.6	N	23 24.2 -07.6	11			
12	1 35.1 -00.3	S	23 05.5 +00.2	347 57.2 -01.0	S	24 13.2 +00.0	129 29.3 -28.6	N	23 16.6 -07.7	12			
13	16 34.8 -00.3	S	23 05.7 +00.2	2 56.2 -01.0	S	24 13.2 +00.0	144 00.7 -28.4	N	23 08.9 -07.7	13			
14	31 34.5 -00.3	S	23 05.9 +00.2	17 55.2 -00.9	S	24 13.2 +00.1	158 32.3 -28.5	N	23 01.2 -07.9	14			
15	46 34.2 -00.3	S	23 06.1 +00.2	32 54.3 -01.0	S	24 13.3 +00.0	173 03.8 -28.3	N	22 53.3 -08.0	15			
16	61 33.9 -00.3	S	23 06.3 +00.1	47 53.3 -01.0	S	24 13.3 +00.0	187 35.5 -28.3	N	22 45.3 -08.1	16			
17	76 33.6 -00.2	S	23 06.4 +00.2	62 52.3 -01.0	S	24 13.3 +00.0	202 07.2 -28.3	N	22 37.2 -08.1	17			
18	91 33.4 -00.3	S	23 06.6 +00.2	77 51.3 -00.9	S	24 13.3 +00.0	216 38.9 -28.1	N	22 29.1 -08.3	18			
19	106 33.1 -00.3	S	23 06.8 +00.2	92 50.4 -01.0	S	24 13.3 +00.0	231 10.8 -28.2	N	22 20.8 -08.4	19			
20	121 32.8 -00.3	S	23 07.0 +00.2	107 49.4 -01.0	S	24 13.3 +00.0	245 42.6 -28.0	N	22 12.4 -08.4	20			
21	136 32.5 -00.3	S	23 07.2 +00.1	122 48.4 -01.0	S	24 13.3 +00.0	260 14.6 -28.0	N	22 04.0 -08.6	21			
22	151 32.2 -00.3	S	23 07.3 +00.2	137 47.4 -00.9	S	24 13.3 +00.0	274 46.6 -28.0	N	21 55.4 -08.6	22			
23	166 31.9 -00.3	S	23 07.5 +00.2	152 46.5 -01.0	S	24 13.3 +00.0	289 18.6 -27.9	N	21 46.8 -08.8	23			
	<b>UT 02 06 10 14 18 22</b>			<b>UT 02 06 10 14 18 22</b>			<b>UT 02 06 10 14 18 22</b>						
	SD 16'2 16'2 16'2 16'2 16'2 16'2			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 101° 101° 101° 100° 100° 100°			SHA 087° 087° 087° 087° 086° 086°			SHA 234° 231° 229° 227° 225° 223°						
	Greenwich Culmination Time: 11:53			Greenwich Culmination Time: 12:48			Greenwich Culmination Time: 03:04						
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	7 36.8 +03.4	N	24 58.1 +00.0	80 43.1 +02.3	S	01 31.0 -00.1	117 14.2 +02.2	S	15 48.1 +00.0	00			
01	22 40.2 +03.5	N	24 58.1 +00.0	95 45.4 +02.4	S	01 30.9 +00.0	132 16.4 +02.3	S	15 48.1 -00.1	01			
02	37 43.7 +03.5	N	24 58.1 -00.1	110 47.8 +02.3	S	01 30.9 -00.1	147 18.7 +02.3	S	15 48.0 -00.1	02			
03	52 47.2 +03.5	N	24 58.0 +00.0	125 50.1 +02.3	S	01 30.8 -00.1	162 21.0 +02.2	S	15 47.9 +00.0	03			
04	67 50.7 +03.5	N	24 58.0 +00.0	140 52.4 +02.3	S	01 30.7 -00.1	177 23.2 +02.3	S	15 47.9 -00.1	04			
05	82 54.2 +03.5	N	24 58.0 +00.0	155 54.7 +02.4	S	01 30.6 +00.0	192 25.5 +02.3	S	15 47.8 -00.1	05			
06	97 57.7 +03.5	N	24 58.0 -00.1	170 57.1 +02.3	S	01 30.6 -00.1	207 27.8 +02.3	S	15 47.7 +00.0	06			
07	113 01.2 +03.5	N	24 57.9 +00.0	185 59.4 +02.3	S	01 30.5 -00.1	222 30.1 +02.2	S	15 47.7 -00.1	07			
08	128 04.7 +03.4	N	24 57.9 +00.0	201 01.7 +02.3	S	01 30.4 -00.1	237 32.3 +02.3	S	15 47.6 +00.0	08			
09	143 08.1 +03.5	N	24 57.9 -00.1	216 04.0 +02.4	S	01 30.3 +00.0	252 34.6 +02.3	S	15 47.6 -00.1	09			
10	158 11.6 +03.5	N	24 57.8 +00.0	231 06.4 +02.3	S	01 30.3 -00.1	267 36.9 +02.2	S	15 47.5 -00.1	10			
11	173 15.1 +03.5	N	24 57.8 +00.0	246 08.7 +02.3	S	01 30.2 -00.1	282 39.1 +02.3	S	15 47.4 +00.0	11			
12	188 18.6 +03.5	N	24 57.8 +00.0	261 11.0 +02.3	S	01 30.1 +00.0	297 41.4 +02.3	S	15 47.4 -00.1	12			
13	203 22.1 +03.5	N	24 57.8 -00.1	276 13.3 +02.4	S	01 30.1 -00.1	312 43.7 +02.3	S	15 47.3 -00.1	13			
14	218 25.6 +03.4	N	24 57.7 +00.0	291 15.7 +02.3	S	01 30.0 -00.1	327 46.0 +02.2	S	15 47.2 +00.0	14			
15	233 29.0 +03.5	N	24 57.7 +00.0	306 18.0 +02.3	S	01 29.9 -00.1	342 48.2 +02.3	S	15 47.2 -00.1	15			
16	248 32.5 +03.5	N	24 57.7 -00.1	321 20.3 +02.3	S	01 29.8 +00.0	357 50.5 +02.3	S	15 47.1 -00.1	16			
17	263 36.0 +03.5	N	24 57.6 +00.0	336 22.6 +02.4	S	01 29.8 -00.1	12 52.8 +02.2	S	15 47.0 +00.0	17			
18	278 39.5 +03.4	N	24 57.6 +00.0	351 25.0 +02.3	S	01 29.7 -00.1	27 55.0 +02.3	S	15 47.0 -00.1	18			
19	293 42.9 +03.5	N	24 57.6 +00.0	6 27.3 +02.3	S	01 29.6 -00.1	42 57.3 +02.3	S	15 46.9 -00.1	19			
20	308 46.4 +03.5	N	24 57.6 -00.1	21 29.6 +02.3	S	01 29.5 +00.0	57 59.6 +02.3	S	15 46.8 +00.0	20			
21	323 49.9 +03.5	N	24 57.5 +00.0	36 31.9 +02.4	S	01 29.5 -00.1	73 01.9 +02.2	S	15 46.8 -00.1	21			
22	338 53.4 +03.5	N	24 57.5 +00.0	51 34.3 +02.3	S	01 29.4 -00.1	88 04.1 +02.3	S	15 46.7 -00.1	22			
23	353 56.9 +03.4	N	24 57.5 -00.1	66 36.6 +02.3	S	01 29.3 -00.1	103 06.4 +02.3	S	15 46.6 +00.0	23			
	<b>UT 02 06 10 14 18 22</b>			<b>UT 02 06 10 14 18 22</b>			<b>UT 02 06 10 14 18 22</b>						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'3 00'3 00'3 00'3 00'3 00'3			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 287° 287° 287° 287° 287° 287°			SHA 000° 000° 000° 000° 000° 360°			SHA 037° 037° 037° 037° 037° 036°						
	Greenwich Culmination Time: 23:24			Greenwich Culmination Time: 18:34			Greenwich Culmination Time: 16:08						

<b>Sun</b>					<b>Venus</b>					<b>Moon</b>					A: 67%					
<b>UT</b>	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	<b>UT</b>							
00	181 31.6 -00.3		S 23 07.7 +00.2		167 45.5 -01.0		S 24 13.3 +00.0		303 50.7 -27.8		N 21 38.0 -08.8		00							
01	196 31.3 -00.3		S 23 07.9 +00.1		182 44.5 -01.0		S 24 13.3 +00.0		318 22.9 -27.8		N 21 29.2 -08.9		01							
02	211 31.0 -00.3		S 23 08.0 +00.2		197 43.5 -00.9		S 24 13.3 +00.0		332 55.1 -27.7		N 21 20.3 -09.0		02							
03	226 30.7 -00.3		S 23 08.2 +00.2		212 42.6 -01.0		S 24 13.3 +00.0		347 27.4 -27.7		N 21 11.3 -09.1		03							
04	241 30.4 -00.3		S 23 08.4 +00.1		227 41.6 -01.0		S 24 13.3 +00.0		1 59.7 -27.6		N 21 02.2 -09.2		04							
05	256 30.1 -00.3		S 23 08.5 +00.2		242 40.6 -01.0		S 24 13.3 +00.0		16 32.1 -27.5		N 20 53.0 -09.3		05							
06	271 29.8 -00.3		S 23 08.7 +00.2		257 39.6 -00.9		S 24 13.3 +00.0		31 04.6 -27.5		N 20 43.7 -09.4		06							
07	286 29.5 -00.2		S 23 08.9 +00.1		272 38.7 -01.0		S 24 13.3 +00.0		45 37.1 -27.5		N 20 34.3 -09.5		07							
08	301 29.3 -00.3		S 23 09.0 +00.2		287 37.7 -01.0		S 24 13.3 +00.0		60 09.6 -27.3		N 20 24.8 -09.5		08							
09	316 29.0 -00.3		S 23 09.2 +00.2		302 36.7 -01.0		S 24 13.3 +00.0		74 42.3 -27.4		N 20 15.3 -09.7		09							
10	331 28.7 -00.3		S 23 09.4 +00.1		317 35.7 -01.0		S 24 13.3 +00.0		89 14.9 -27.2		N 20 05.6 -09.7		10							
11	346 28.4 -00.3		S 23 09.5 +00.2		332 34.7 -00.9		S 24 13.3 +00.0		103 47.7 -27.2		N 19 55.9 -09.8		11							
12	1 28.1 -00.3		S 23 09.7 +00.2		347 33.8 -01.0		S 24 13.3 +00.0		118 20.5 -27.2		N 19 46.1 -09.9		12							
13	16 27.8 -00.3		S 23 09.9 +00.1		2 32.8 -01.0		S 24 13.3 +00.0		132 53.3 -27.1		N 19 36.2 -09.9		13							
14	31 27.5 -00.3		S 23 10.0 +00.2		17 31.8 -01.0		S 24 13.3 -00.1		147 26.2 -27.1		N 19 26.3 -10.1		14							
15	46 27.2 -00.3		S 23 10.2 +00.1		32 30.8 -00.9		S 24 13.2 +00.0		161 59.1 -27.0		N 19 16.2 -10.1		15							
16	61 26.9 -00.3		S 23 10.3 +00.2		47 29.9 -01.0		S 24 13.2 +00.0		176 32.1 -26.9		N 19 06.1 -10.3		16							
17	76 26.6 -00.3		S 23 10.5 +00.2		62 28.9 -01.0		S 24 13.2 +00.0		191 05.2 -26.9		N 18 55.8 -10.3		17							
18	91 26.3 -00.3		S 23 10.7 +00.1		77 27.9 -01.0		S 24 13.2 +00.0		205 38.3 -26.9		N 18 45.5 -10.3		18							
19	106 26.0 -00.3		S 23 10.8 +00.2		92 26.9 -00.9		S 24 13.2 +00.0		220 11.4 -26.8		N 18 35.2 -10.5		19							
20	121 25.7 -00.3		S 23 11.0 +00.1		107 26.0 -01.0		S 24 13.2 -00.1		234 44.6 -26.7		N 18 24.7 -10.5		20							
21	136 25.4 -00.3		S 23 11.1 +00.2		122 25.0 -01.0		S 24 13.1 +00.0		249 17.9 -26.7		N 18 14.2 -10.6		21							
22	151 25.1 -00.3		S 23 11.3 +00.2		137 24.0 -01.0		S 24 13.1 +00.0		263 51.2 -26.7		N 18 03.6 -10.7		22							
23	166 24.8 -00.3		S 23 11.5 +00.1		152 23.0 -00.9		S 24 13.1 -00.1		278 24.5 -26.6		N 17 52.9 -10.8		23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	16°2	16°2	16°2	16°2	16°2	16°2			SD	00°1	00°1	00°1	00°1	00°1	00°1					
HP	00°1	00°1	00°1	00°1	00°1	00°1			HP	00°1	00°1	00°1	00°1	00°1	00°1					
SHA	100°	100°	099°	099°	099°	099°			SHA	086°	086°	086°	085°	085°	085°					
Greenwich Culmination Time: 11:54							Greenwich Culmination Time: 12:49							Greenwich Culmination Time: 03:51						

  

<b>Mars</b>					<b>Jupiter</b>					<b>Saturn</b>										
<b>UT</b>	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	<b>UT</b>							
00	9 00.3 +03.5		N 24 57.4 +00.0		81 38.9 +02.3		S 01 29.2 +00.0		118 08.7 +02.2		S 15 46.6 -00.1		00							
01	24 03.8 +03.5		N 24 57.4 +00.0		96 41.2 +02.3		S 01 29.2 -00.1		133 10.9 +02.3		S 15 46.5 +00.0		01							
02	39 07.3 +03.4		N 24 57.4 -00.1		111 43.5 +02.4		S 01 29.1 -00.1		148 13.2 +02.3		S 15 46.5 -00.1		02							
03	54 10.7 +03.5		N 24 57.3 +00.0		126 45.9 +02.3		S 01 29.0 -00.1		163 15.5 +02.2		S 15 46.4 -00.1		03							
04	69 14.2 +03.5		N 24 57.3 +00.0		141 48.2 +02.3		S 01 28.9 +00.0		178 17.7 +02.3		S 15 46.3 +00.0		04							
05	84 17.7 +03.5		N 24 57.3 -00.1		156 50.5 +02.3		S 01 28.9 -00.1		193 20.0 +02.3		S 15 46.3 -00.1		05							
06	99 21.2 +03.4		N 24 57.2 +00.0		171 52.8 +02.3		S 01 28.8 -00.1		208 22.3 +02.3		S 15 46.2 -00.1		06							
07	114 24.6 +03.5		N 24 57.2 +00.0		186 55.1 +02.4		S 01 28.7 -00.1		223 24.6 +02.2		S 15 46.1 +00.0		07							
08	129 28.1 +03.5		N 24 57.2 +00.0		201 57.5 +02.3		S 01 28.6 +00.0		238 26.8 +02.3		S 15 46.1 -00.1		08							
09	144 31.6 +03.4		N 24 57.2 -00.1		216 59.8 +02.3		S 01 28.6 -00.1		253 29.1 +02.3		S 15 46.0 -00.1		09							
10	159 35.0 +03.5		N 24 57.1 +00.0		232 02.1 +02.3		S 01 28.5 -00.1		268 31.4 +02.2		S 15 45.9 +00.0		10							
11	174 38.5 +03.5		N 24 57.1 +00.0		247 04.4 +02.3		S 01 28.4 -00.1		283 33.6 +02.3		S 15 45.9 -00.1		11							
12	189 42.0 +03.4		N 24 57.1 -00.1		262 06.7 +02.3		S 01 28.3 +00.0		298 35.9 +02.3		S 15 45.8 -00.1		12							
13	204 45.4 +03.5		N 24 57.0 +00.0		277 09.0 +02.4		S 01 28.3 -00.1		313 38.2 +02.2		S 15 45.7 +00.0		13							
14	219 48.9 +03.5		N 24 57.0 +00.0		292 11.4 +02.3		S 01 28.2 -00.1		328 40.4 +02.3		S 15 45.7 -00.1		14							
15	234 52.4 +03.4		N 24 57.0 -00.1		307 13.7 +02.3		S 01 28.1 -00.1		343 42.7 +02.3		S 15 45.6 -00.1		15							
16	249 55.8 +03.5		N 24 56.9 +00.0		322 16.0 +02.3		S 01 28.0 +00.0		358 45.0 +02.2		S 15 45.5 +00.0		16							
17	264 59.3 +03.5		N 24 56.9 +00.0		337 18.3 +02.3		S 01 28.0 -00.1		13 47.2 +02.3		S 15 45.5 -00.1		17							
18	280 02.8 +03.4		N 24 56.9 -00.1		352 20.6 +02.3		S 01 27.9 -00.1		28 49.5 +02.3		S 15 45.4 -00.1		18							
19	295 06.2 +03.5		N 24 56.8 +00.0		7 22.9 +02.4		S 01 27.8 -00.1		43 51.8 +02.2		S 15 45.3 +00.0		19							
20	310 09.7 +03.4		N 24 56.8 +00.0		22 25.3 +02.3		S 01 27.7 +00.0		58 54.0 +02.3		S 15 45.3 -00.1		20							
21	325 13.1 +03.5		N 24 56.8 -00.1		37 27.6 +02.3		S 01 27.7 -00.1		73 56.3 +02.3		S 15 45.2 -00.1		21							
22	340 16.6 +03.5		N 24 56.7 +00.0		52 29.9 +02.3		S 01 27.6 -00.1		88 58.6 +02.2		S 15 45.1 +00.0		22							
23	355 20.1 +03.4		N 24 56.7 +00.0		67 32.2 +02.3		S 01 27.5 -00.1		104 00.8 +02.3		S 15 45.1 -00.1		23							
UT	02	06	10	14	18	22			UT	02	06	10	14	18	22					
SD	00°1	00°1	00°1	00°1	00°1	00°1			SD	00°3	00°3	00°3	00°3	00°3	00°3					
HP	00°3	00°3	00°3	00°3	00°3	00°3			HP	00°0	00°0	00°0	00°0	00°0	00°0					
SHA	287°	287°	288°	288°	288°	288°			SHA	360°	360°	360°	360°	360°	360°					
Greenwich Culmination Time: 23:18							Greenwich Culmination Time: 18:30							Greenwich Culmination Time: 16:04						

Table for Sun, Venus, and Moon celestial objects. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Each object section contains a 24-hour grid of data and a summary row for UT 02, 06, 10, 14, 18, 22. Summary rows include SD, HP, SHA, and Greenwich Culmination Time.

Table for Mars, Jupiter, and Saturn celestial objects. Columns include UT, GHA, ddGHA, Dec, dDec, and UT. Each object section contains a 24-hour grid of data and a summary row for UT 02, 06, 10, 14, 18, 22. Summary rows include SD, HP, SHA, and Greenwich Culmination Time.

UT	Sun				Venus				Moon <span style="float: right;">A: 73%</span>				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	181	17.4 -00.3	S 23	15.1 +00.1	166	58.7 -01.0	S 24	12.0 -00.1	282	32.2 -25.6	N 13	02.8 -12.4	00
01	196	17.1 -00.3	S 23	15.2 +00.1	181	57.7 -01.0	S 24	11.9 +00.0	297	06.6 -25.6	N 12	50.4 -12.5	01
02	211	16.8 -00.3	S 23	15.3 +00.2	196	56.7 -00.9	S 24	11.9 -00.1	311	41.0 -25.6	N 12	37.9 -12.6	02
03	226	16.5 -00.3	S 23	15.5 +00.1	211	55.8 -01.0	S 24	11.8 +00.0	326	15.4 -25.5	N 12	25.3 -12.6	03
04	241	16.2 -00.3	S 23	15.6 +00.1	226	54.8 -01.0	S 24	11.8 -00.1	340	49.9 -25.6	N 12	12.7 -12.6	04
05	256	15.9 -00.3	S 23	15.7 +00.2	241	53.8 -01.0	S 24	11.7 -00.1	355	24.3 -25.5	N 12	00.1 -12.8	05
06	271	15.6 -00.3	S 23	15.9 +00.1	256	52.8 -00.9	S 24	11.6 +00.0	9	58.8 -25.4	N 11	47.3 -12.7	06
07	286	15.3 -00.3	S 23	16.0 +00.1	271	51.9 -01.0	S 24	11.6 -00.1	24	33.4 -25.5	N 11	34.6 -12.9	07
08	301	15.0 -00.3	S 23	16.1 +00.2	286	50.9 -01.0	S 24	11.5 -00.1	39	07.9 -25.4	N 11	21.7 -12.8	08
09	316	14.7 -00.3	S 23	16.3 +00.1	301	49.9 -01.0	S 24	11.4 +00.0	53	42.5 -25.4	N 11	08.9 -13.0	09
10	331	14.4 -00.3	S 23	16.4 +00.1	316	48.9 -00.9	S 24	11.4 -00.1	68	17.1 -25.4	N 10	55.9 -12.9	10
11	346	14.1 -00.3	S 23	16.5 +00.1	331	48.0 -01.0	S 24	11.3 -00.1	82	51.7 -25.4	N 10	43.0 -13.1	11
12	1	13.8 -00.3	S 23	16.6 +00.2	346	47.0 -01.0	S 24	11.2 -00.1	97	26.3 -25.3	N 10	29.9 -13.1	12
13	16	13.5 -00.3	S 23	16.8 +00.1	1	46.0 -01.0	S 24	11.1 +00.0	112	01.0 -25.4	N 10	16.8 -13.1	13
14	31	13.2 -00.3	S 23	16.9 +00.1	16	45.0 -00.9	S 24	11.1 -00.1	126	35.6 -25.3	N 10	03.7 -13.2	14
15	46	12.9 -00.3	S 23	17.0 +00.1	31	44.1 -01.0	S 24	11.0 -00.1	141	10.3 -25.3	N 09	50.5 -13.2	15
16	61	12.6 -00.3	S 23	17.1 +00.1	46	43.1 -01.0	S 24	10.9 -00.1	155	45.0 -25.3	N 09	37.3 -13.3	16
17	76	12.3 -00.3	S 23	17.2 +00.2	61	42.1 -00.9	S 24	10.8 -00.1	170	19.7 -25.3	N 09	24.0 -13.3	17
18	91	12.0 -00.3	S 23	17.4 +00.1	76	41.2 -01.0	S 24	10.7 +00.0	184	54.4 -25.3	N 09	10.7 -13.4	18
19	106	11.7 -00.3	S 23	17.5 +00.1	91	40.2 -01.0	S 24	10.7 -00.1	199	29.1 -25.2	N 08	57.3 -13.4	19
20	121	11.4 -00.3	S 23	17.6 +00.1	106	39.2 -01.0	S 24	10.6 -00.1	214	03.9 -25.3	N 08	43.9 -13.5	20
21	136	11.1 -00.3	S 23	17.7 +00.1	121	38.2 -00.9	S 24	10.5 -00.1	228	38.6 -25.2	N 08	30.4 -13.5	21
22	151	10.8 -00.3	S 23	17.8 +00.2	136	37.3 -01.0	S 24	10.4 -00.1	243	13.4 -25.2	N 08	16.9 -13.6	22
23	166	10.5 -00.3	S 23	18.0 +00.1	151	36.3 -01.0	S 24	10.3 -00.1	257	48.2 -25.3	N 08	03.3 -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 16'2 16'2 16'2 16'2 16'2 16'2				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 54'8 54'9 55'0 55'1					
SHA 098° 097° 097° 097° 097° 097°				SHA 083° 083° 083° 083° 082° 082°				SHA 198° 196° 194° 192° 191° 189°					
Greenwich Culmination Time: 11:55				Greenwich Culmination Time: 12:52				Greenwich Culmination Time: 05:18					
UT	Mars				Jupiter				Saturn				UT
	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	GHA ° ' "	ddGHA ' "	Dec ° ' "	dDec ' "	
00	11	46.3 +03.4	N 24	55.8 -00.1	83	30.0 +02.3	S 01	25.5 -00.1	119	57.5 +02.2	S 15	43.4 +00.0	00
01	26	49.7 +03.4	N 24	55.7 +00.0	98	32.3 +02.3	S 01	25.4 +00.0	134	59.7 +02.3	S 15	43.4 -00.1	01
02	41	53.1 +03.5	N 24	55.7 +00.0	113	34.6 +02.3	S 01	25.4 -00.1	150	02.0 +02.3	S 15	43.3 -00.1	02
03	56	56.6 +03.4	N 24	55.7 -00.1	128	36.9 +02.3	S 01	25.3 -00.1	165	04.3 +02.2	S 15	43.2 +00.0	03
04	72	00.0 +03.4	N 24	55.6 +00.0	143	39.2 +02.3	S 01	25.2 -00.1	180	06.5 +02.3	S 15	43.2 -00.1	04
05	87	03.4 +03.5	N 24	55.6 -00.1	158	41.5 +02.3	S 01	25.1 -00.1	195	08.8 +02.3	S 15	43.1 -00.1	05
06	102	06.9 +03.4	N 24	55.5 +00.0	173	43.8 +02.3	S 01	25.0 +00.0	210	11.1 +02.2	S 15	43.0 +00.0	06
07	117	10.3 +03.4	N 24	55.5 +00.0	188	46.1 +02.3	S 01	25.0 -00.1	225	13.3 +02.3	S 15	43.0 -00.1	07
08	132	13.7 +03.5	N 24	55.5 -00.1	203	48.4 +02.3	S 01	24.9 -00.1	240	15.6 +02.2	S 15	42.9 -00.1	08
09	147	17.2 +03.4	N 24	55.4 +00.0	218	50.7 +02.3	S 01	24.8 -00.1	255	17.8 +02.3	S 15	42.8 -00.1	09
10	162	20.6 +03.4	N 24	55.4 -00.1	233	53.0 +02.3	S 01	24.7 -00.1	270	20.1 +02.3	S 15	42.7 +00.0	10
11	177	24.0 +03.5	N 24	55.3 +00.0	248	55.3 +02.3	S 01	24.6 -00.1	285	22.4 +02.2	S 15	42.7 -00.1	11
12	192	27.5 +03.4	N 24	55.3 +00.0	263	57.6 +02.3	S 01	24.5 +00.0	300	24.6 +02.3	S 15	42.6 -00.1	12
13	207	30.9 +03.4	N 24	55.3 -00.1	278	59.9 +02.3	S 01	24.5 -00.1	315	26.9 +02.3	S 15	42.5 +00.0	13
14	222	34.3 +03.4	N 24	55.2 +00.0	294	02.2 +02.3	S 01	24.4 -00.1	330	29.2 +02.2	S 15	42.5 -00.1	14
15	237	37.7 +03.5	N 24	55.2 -00.1	309	04.5 +02.3	S 01	24.3 -00.1	345	31.4 +02.3	S 15	42.4 -00.1	15
16	252	41.2 +03.4	N 24	55.1 +00.0	324	06.8 +02.3	S 01	24.2 -00.1	0	33.7 +02.2	S 15	42.3 +00.0	16
17	267	44.6 +03.4	N 24	55.1 +00.0	339	09.1 +02.3	S 01	24.1 +00.0	15	35.9 +02.3	S 15	42.3 -00.1	17
18	282	48.0 +03.4	N 24	55.1 -00.1	354	11.4 +02.3	S 01	24.1 -00.1	30	38.2 +02.3	S 15	42.2 -00.1	18
19	297	51.4 +03.5	N 24	55.0 +00.0	9	13.7 +02.3	S 01	24.0 -00.1	45	40.5 +02.2	S 15	42.1 +00.0	19
20	312	54.9 +03.4	N 24	55.0 -00.1	24	16.0 +02.3	S 01	23.9 -00.1	60	42.7 +02.3	S 15	42.1 -00.1	20
21	327	58.3 +03.4	N 24	54.9 +00.0	39	18.3 +02.3	S 01	23.8 -00.1	75	45.0 +02.2	S 15	42.0 -00.1	21
22	343	01.7 +03.4	N 24	54.9 +00.0	54	20.6 +02.3	S 01	23.7 -00.1	90	47.2 +02.3	S 15	41.9 +00.0	22
23	358	05.1 +03.4	N 24	54.9 -00.1	69	22.9 +02.3	S 01	23.6 +00.0	105	49.5 +02.3	S 15	41.9 -00.1	23
UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1					
HP 00'3 00'3 00'3 00'3 00'3 00'3				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0					
SHA 288° 288° 288° 288° 288° 288°				SHA 360° 360° 360° 360° 360° 360°				SHA 036° 036° 036° 036° 036° 036°					
Greenwich Culmination Time: 23:07				Greenwich Culmination Time: 18:23				Greenwich Culmination Time: 15:57					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> <span style="float: right;">A: 76%</span>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 10.2 -00.3	S 23	18.1 +00.1	166 35.3 -01.0	S 24	10.2 -00.1	272 22.9 -25.2	N 07	49.7 -13.6	00			
01	196 09.9 -00.3	S 23	18.2 +00.1	181 34.3 -00.9	S 24	10.1 -00.1	286 57.7 -25.2	N 07	36.1 -13.7	01			
02	211 09.6 -00.3	S 23	18.3 +00.1	196 33.4 -01.0	S 24	10.0 -00.1	301 32.5 -25.2	N 07	22.4 -13.7	02			
03	226 09.3 -00.3	S 23	18.4 +00.1	211 32.4 -01.0	S 24	09.9 -00.1	316 07.3 -25.3	N 07	08.7 -13.8	03			
04	241 09.0 -00.3	S 23	18.5 +00.1	226 31.4 -00.9	S 24	09.8 -00.1	330 42.0 -25.2	N 06	54.9 -13.8	04			
05	256 08.7 -00.3	S 23	18.6 +00.2	241 30.5 -01.0	S 24	09.7 +00.0	345 16.8 -25.2	N 06	41.1 -13.8	05			
06	271 08.4 -00.3	S 23	18.8 +00.1	256 29.5 -01.0	S 24	09.7 -00.1	359 51.6 -25.2	N 06	27.3 -13.9	06			
07	286 08.1 -00.3	S 23	18.9 +00.1	271 28.5 -01.0	S 24	09.6 -00.1	14 26.4 -25.2	N 06	13.4 -13.9	07			
08	301 07.8 -00.4	S 23	19.0 +00.1	286 27.5 -00.9	S 24	09.5 -00.1	29 01.2 -25.3	N 05	59.5 -14.0	08			
09	316 07.4 -00.3	S 23	19.1 +00.1	301 26.6 -01.0	S 24	09.4 -00.1	43 35.9 -25.2	N 05	45.5 -14.0	09			
10	331 07.1 -00.3	S 23	19.2 +00.1	316 25.6 -01.0	S 24	09.3 -00.2	58 10.7 -25.2	N 05	31.5 -14.0	10			
11	346 06.8 -00.3	S 23	19.3 +00.1	331 24.6 -00.9	S 24	09.1 -00.1	72 45.5 -25.3	N 05	17.5 -14.1	11			
12	1 06.5 -00.3	S 23	19.4 +00.1	346 23.7 -01.0	S 24	09.0 -00.1	87 20.2 -25.2	N 05	03.4 -14.1	12			
13	16 06.2 -00.3	S 23	19.5 +00.1	1 22.7 -01.0	S 24	08.9 -00.1	101 55.0 -25.3	N 04	49.3 -14.1	13			
14	31 05.9 -00.3	S 23	19.6 +00.1	16 21.7 -01.0	S 24	08.8 -00.1	116 29.7 -25.3	N 04	35.2 -14.2	14			
15	46 05.6 -00.3	S 23	19.7 +00.1	31 20.7 -00.9	S 24	08.7 -00.1	131 04.4 -25.3	N 04	21.0 -14.2	15			
16	61 05.3 -00.3	S 23	19.8 +00.1	46 19.8 -01.0	S 24	08.6 -00.1	145 39.1 -25.3	N 04	06.8 -14.2	16			
17	76 05.0 -00.3	S 23	19.9 +00.1	61 18.8 -01.0	S 24	08.5 -00.1	160 13.8 -25.3	N 03	52.6 -14.2	17			
18	91 04.7 -00.3	S 23	20.0 +00.1	76 17.8 -00.9	S 24	08.4 -00.1	174 48.5 -25.3	N 03	38.4 -14.3	18			
19	106 04.4 -00.3	S 23	20.1 +00.1	91 16.9 -01.0	S 24	08.3 -00.1	189 23.2 -25.4	N 03	24.1 -14.3	19			
20	121 04.1 -00.3	S 23	20.2 +00.1	106 15.9 -01.0	S 24	08.2 -00.2	203 57.8 -25.3	N 03	09.8 -14.4	20			
21	136 03.8 -00.3	S 23	20.3 +00.1	121 14.9 -01.0	S 24	08.0 -00.1	218 32.5 -25.4	N 02	55.4 -14.4	21			
22	151 03.5 -00.3	S 23	20.4 +00.1	136 13.9 -00.9	S 24	07.9 -00.1	233 07.1 -25.4	N 02	41.0 -14.4	22			
23	166 03.2 -00.3	S 23	20.5 +00.1	151 13.0 -01.0	S 24	07.8 -00.1	247 41.7 -25.5	N 02	26.6 -14.4	23			
<b>UT 02 06 10 14 18 22</b> SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 096° 096° 096° 096° 096° 096° Greenwich Culmination Time: 11:55				<b>UT 02 06 10 14 18 22</b> 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 082° 082° 081° 081° 081° 081° Greenwich Culmination Time: 12:54				<b>UT 02 06 10 14 18 22</b> SD 15'0 15'1 15'1 15'1 15'2 15'2 HP 55'2 55'3 55'4 55'6 55'7 55'8 SHA 187° 185° 183° 181° 179° 178° Greenwich Culmination Time: 06:00					
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	13 08.5 +03.5	N 24	54.8 +00.0	84 25.2 +02.3	S 01	23.6 -00.1	120 51.8 +02.2	S 15	41.8 -00.1	00			
01	28 12.0 +03.4	N 24	54.8 -00.1	99 27.5 +02.3	S 01	23.5 -00.1	135 54.0 +02.3	S 15	41.7 +00.0	01			
02	43 15.4 +03.4	N 24	54.7 +00.0	114 29.8 +02.3	S 01	23.4 -00.1	150 56.3 +02.2	S 15	41.7 -00.1	02			
03	58 18.8 +03.4	N 24	54.7 -00.1	129 32.1 +02.3	S 01	23.3 -00.1	165 58.5 +02.3	S 15	41.6 -00.1	03			
04	73 22.2 +03.4	N 24	54.6 +00.0	144 34.4 +02.3	S 01	23.2 -00.1	181 00.8 +02.3	S 15	41.5 +00.0	04			
05	88 25.6 +03.4	N 24	54.6 +00.0	159 36.7 +02.3	S 01	23.1 -00.1	196 03.1 +02.2	S 15	41.5 -00.1	05			
06	103 29.0 +03.4	N 24	54.6 -00.1	174 39.0 +02.3	S 01	23.0 +00.0	211 05.3 +02.3	S 15	41.4 -00.1	06			
07	118 32.4 +03.4	N 24	54.5 +00.0	189 41.3 +02.3	S 01	23.0 -00.1	226 07.6 +02.3	S 15	41.3 +00.0	07			
08	133 35.8 +03.5	N 24	54.5 -00.1	204 43.6 +02.3	S 01	22.9 -00.1	241 09.9 +02.2	S 15	41.3 -00.1	08			
09	148 39.3 +03.4	N 24	54.4 +00.0	219 45.9 +02.3	S 01	22.8 -00.1	256 12.1 +02.3	S 15	41.2 -00.1	09			
10	163 42.7 +03.4	N 24	54.4 -00.1	234 48.2 +02.3	S 01	22.7 -00.1	271 14.4 +02.2	S 15	41.1 +00.0	10			
11	178 46.1 +03.4	N 24	54.3 +00.0	249 50.5 +02.3	S 01	22.6 -00.1	286 16.6 +02.3	S 15	41.1 -00.1	11			
12	193 49.5 +03.4	N 24	54.3 +00.0	264 52.8 +02.3	S 01	22.5 +00.0	301 18.9 +02.2	S 15	41.0 -00.1	12			
13	208 52.9 +03.4	N 24	54.3 -00.1	279 55.1 +02.3	S 01	22.5 -00.1	316 21.1 +02.3	S 15	40.9 -00.1	13			
14	223 56.3 +03.4	N 24	54.2 +00.0	294 57.4 +02.3	S 01	22.4 -00.1	331 23.4 +02.3	S 15	40.8 +00.0	14			
15	238 59.7 +03.4	N 24	54.2 -00.1	309 59.7 +02.3	S 01	22.3 -00.1	346 25.7 +02.2	S 15	40.8 -00.1	15			
16	254 03.1 +03.4	N 24	54.1 +00.0	325 02.0 +02.3	S 01	22.2 -00.1	1 27.9 +02.3	S 15	40.7 -00.1	16			
17	269 06.5 +03.4	N 24	54.1 -00.1	340 04.3 +02.3	S 01	22.1 -00.1	16 30.2 +02.2	S 15	40.6 +00.0	17			
18	284 09.9 +03.4	N 24	54.0 +00.0	355 06.6 +02.3	S 01	22.0 -00.1	31 32.4 +02.3	S 15	40.6 -00.1	18			
19	299 13.3 +03.4	N 24	54.0 +00.0	10 08.9 +02.3	S 01	21.9 +00.0	46 34.7 +02.3	S 15	40.5 -00.1	19			
20	314 16.7 +03.4	N 24	54.0 -00.1	25 11.2 +02.3	S 01	21.9 -00.1	61 37.0 +02.2	S 15	40.4 +00.0	20			
21	329 20.1 +03.4	N 24	53.9 +00.0	40 13.5 +02.2	S 01	21.8 -00.1	76 39.2 +02.3	S 15	40.4 -00.1	21			
22	344 23.5 +03.4	N 24	53.9 -00.1	55 15.7 +02.3	S 01	21.7 -00.1	91 41.5 +02.2	S 15	40.3 -00.1	22			
23	359 26.9 +03.4	N 24	53.8 +00.0	70 18.0 +02.3	S 01	21.6 -00.1	106 43.7 +02.3	S 15	40.2 +00.0	23			
<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 289° 289° 289° 289° 289° 289° Greenwich Culmination Time: 23:02				<b>UT 02 06 10 14 18 22</b> 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 360° 360° 360° 360° 360° 360° Greenwich Culmination Time: 18:19				<b>UT 02 06 10 14 18 22</b> 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 036° 036° 036° 036° 036° 036° Greenwich Culmination Time: 15:54					

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	181 02.9 -00.3 S 23 20.6 +00.1	166 12.0 -01.0 S 24 07.7 -00.1	262 16.2 -25.4 N 02 12.2 -14.5	00									
01	196 02.6 -00.3 S 23 20.7 +00.1	181 11.0 -00.9 S 24 07.6 -00.2	276 50.8 -25.5 N 01 57.7 -14.4	01									
02	211 02.3 -00.3 S 23 20.8 +00.1	196 10.1 -01.0 S 24 07.4 -00.1	291 25.3 -25.5 N 01 43.3 -14.5	02									
03	226 02.0 -00.3 S 23 20.9 +00.1	211 09.1 -01.0 S 24 07.3 -00.1	305 59.8 -25.5 N 01 28.8 -14.6	03									
04	241 01.7 -00.3 S 23 21.0 +00.1	226 08.1 -00.9 S 24 07.2 -00.1	320 34.3 -25.6 N 01 14.2 -14.5	04									
05	256 01.4 -00.3 S 23 21.1 +00.1	241 07.2 -01.0 S 24 07.1 -00.2	335 08.7 -25.6 N 00 59.7 -14.6	05									
06	271 01.1 -00.3 S 23 21.2 +00.1	256 06.2 -01.0 S 24 06.9 -00.1	349 43.1 -25.6 N 00 45.1 -14.6	06									
07	286 00.8 -00.3 S 23 21.3 +00.1	271 05.2 -00.9 S 24 06.8 -00.1	4 17.5 -25.7 N 00 30.5 -14.6	07									
08	301 00.5 -00.4 S 23 21.4 +00.0	286 04.3 -01.0 S 24 06.7 -00.2	18 51.8 -25.7 N 00 15.9 -14.6	08									
09	316 00.1 -00.3 S 23 21.4 +00.1	301 03.3 -01.0 S 24 06.5 -00.1	33 26.1 -25.7 N 00 01.3 -14.6	09									
10	330 59.8 -00.3 S 23 21.5 +00.1	316 02.3 -01.0 S 24 06.4 -00.1	48 00.4 -25.7 S 00 13.3 +14.7	10									
11	345 59.5 -00.3 S 23 21.6 +00.1	331 01.3 -00.9 S 24 06.3 -00.2	62 34.7 -25.8 S 00 28.0 +14.7	11									
12	0 59.2 -00.3 S 23 21.7 +00.1	346 00.4 -01.0 S 24 06.1 -00.1	77 08.9 -25.9 S 00 42.7 +14.7	12									
13	15 58.9 -00.3 S 23 21.8 +00.1	0 59.4 -01.0 S 24 06.0 -00.1	91 43.0 -25.8 S 00 57.4 +14.7	13									
14	30 58.6 -00.3 S 23 21.9 +00.1	15 58.4 -00.9 S 24 05.9 -00.2	106 17.2 -26.0 S 01 12.1 +14.7	14									
15	45 58.3 -00.3 S 23 22.0 +00.1	30 57.5 -01.0 S 24 05.7 -00.1	120 51.2 -25.9 S 01 26.8 +14.8	15									
16	60 58.0 -00.3 S 23 22.1 +00.0	45 56.5 -01.0 S 24 05.6 -00.2	135 25.3 -26.0 S 01 41.6 +14.7	16									
17	75 57.7 -00.3 S 23 22.1 +00.1	60 55.5 -00.9 S 24 05.4 -00.1	149 59.3 -26.1 S 01 56.3 +14.8	17									
18	90 57.4 -00.3 S 23 22.2 +00.1	75 54.6 -01.0 S 24 05.3 -00.2	164 33.2 -26.1 S 02 11.1 +14.7	18									
19	105 57.1 -00.3 S 23 22.3 +00.1	90 53.6 -01.0 S 24 05.1 -00.1	179 07.1 -26.1 S 02 25.8 +14.8	19									
20	120 56.8 -00.3 S 23 22.4 +00.1	105 52.6 -00.9 S 24 05.0 -00.2	193 41.0 -26.2 S 02 40.6 +14.8	20									
21	135 56.5 -00.3 S 23 22.5 +00.0	120 51.7 -01.0 S 24 04.8 -00.1	208 14.8 -26.3 S 02 55.4 +14.8	21									
22	150 56.2 -00.3 S 23 22.5 +00.1	135 50.7 -01.0 S 24 04.7 -00.2	222 48.5 -26.3 S 03 10.2 +14.8	22									
23	165 55.9 -00.3 S 23 22.6 +00.1	150 49.7 -00.9 S 24 04.5 -00.1	237 22.2 -26.3 S 03 25.0 +14.8	23									
	<b>UT 02 06 10 14 18 22</b> SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 095° 095° 095° 095° 095° 094° Greenwich Culmination Time: 11:56	<b>UT 02 06 10 14 18 22</b> 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 080° 080° 080° 080° 080° 079° Greenwich Culmination Time: 12:56	<b>UT 02 06 10 14 18 22</b> SD 15'2 15'3 15'3 15'3 15'4 15'4 HP 55'9 56'1 56'2 56'3 56'5 56'6 SHA 176° 174° 172° 170° 168° 166° Greenwich Culmination Time: 06:42										

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	14 30.3 +03.4 N 24 53.8 -00.1	85 20.3 +02.3 S 01 21.5 -00.1	121 46.0 +02.3 S 15 40.2 -00.1	00									
01	29 33.7 +03.4 N 24 53.7 +00.0	100 22.6 +02.3 S 01 21.4 -00.1	136 48.3 +02.2 S 15 40.1 -00.1	01									
02	44 37.1 +03.4 N 24 53.7 -00.1	115 24.9 +02.3 S 01 21.3 -00.1	151 50.5 +02.3 S 15 40.0 +00.0	02									
03	59 40.5 +03.4 N 24 53.6 +00.0	130 27.2 +02.3 S 01 21.2 +00.0	166 52.8 +02.2 S 15 40.0 -00.1	03									
04	74 43.9 +03.3 N 24 53.6 +00.0	145 29.5 +02.3 S 01 21.2 -00.1	181 55.0 +02.3 S 15 39.9 -00.1	04									
05	89 47.2 +03.4 N 24 53.6 -00.1	160 31.8 +02.3 S 01 21.1 -00.1	196 57.3 +02.2 S 15 39.8 -00.1	05									
06	104 50.6 +03.4 N 24 53.5 +00.0	175 34.1 +02.3 S 01 21.0 -00.1	211 59.5 +02.3 S 15 39.7 +00.0	06									
07	119 54.0 +03.4 N 24 53.5 -00.1	190 36.4 +02.3 S 01 20.9 -00.1	227 01.8 +02.3 S 15 39.7 -00.1	07									
08	134 57.4 +03.4 N 24 53.4 +00.0	205 38.7 +02.3 S 01 20.8 -00.1	242 04.1 +02.2 S 15 39.6 -00.1	08									
09	150 00.8 +03.4 N 24 53.4 -00.1	220 41.0 +02.2 S 01 20.7 -00.1	257 06.3 +02.3 S 15 39.5 +00.0	09									
10	165 04.2 +03.4 N 24 53.3 +00.0	235 43.2 +02.3 S 01 20.6 -00.1	272 08.6 +02.2 S 15 39.5 -00.1	10									
11	180 07.6 +03.3 N 24 53.3 -00.1	250 45.5 +02.3 S 01 20.5 +00.0	287 10.8 +02.3 S 15 39.4 -00.1	11									
12	195 10.9 +03.4 N 24 53.2 +00.0	265 47.8 +02.3 S 01 20.5 -00.1	302 13.1 +02.2 S 15 39.3 +00.0	12									
13	210 14.3 +03.4 N 24 53.2 -00.1	280 50.1 +02.3 S 01 20.4 -00.1	317 15.3 +02.3 S 15 39.3 -00.1	13									
14	225 17.7 +03.4 N 24 53.1 +00.0	295 52.4 +02.3 S 01 20.3 -00.1	332 17.6 +02.2 S 15 39.2 -00.1	14									
15	240 21.1 +03.4 N 24 53.1 -00.1	310 54.7 +02.3 S 01 20.2 -00.1	347 19.8 +02.3 S 15 39.1 +00.0	15									
16	255 24.5 +03.3 N 24 53.0 +00.0	325 57.0 +02.3 S 01 20.1 -00.1	2 22.1 +02.3 S 15 39.1 -00.1	16									
17	270 27.8 +03.4 N 24 53.0 +00.0	340 59.3 +02.2 S 01 20.0 -00.1	17 24.4 +02.2 S 15 39.0 -00.1	17									
18	285 31.2 +03.4 N 24 53.0 -00.1	356 01.5 +02.3 S 01 19.9 -00.1	32 26.6 +02.3 S 15 38.9 -00.1	18									
19	300 34.6 +03.4 N 24 52.9 +00.0	11 03.8 +02.3 S 01 19.8 -00.1	47 28.9 +02.2 S 15 38.8 +00.0	19									
20	315 38.0 +03.3 N 24 52.9 -00.1	26 06.1 +02.3 S 01 19.7 +00.0	62 31.1 +02.3 S 15 38.8 -00.1	20									
21	330 41.3 +03.4 N 24 52.8 +00.0	41 08.4 +02.3 S 01 19.7 -00.1	77 33.4 +02.2 S 15 38.7 -00.1	21									
22	345 44.7 +03.4 N 24 52.8 -00.1	56 10.7 +02.3 S 01 19.6 -00.1	92 35.6 +02.3 S 15 38.6 +00.0	22									
23	0 48.1 +03.4 N 24 52.7 +00.0	71 13.0 +02.3 S 01 19.5 -00.1	107 37.9 +02.3 S 15 38.6 -00.1	23									
	<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 289° 289° 289° 289° 289° 289° Greenwich Culmination Time: 22:56	<b>UT 02 06 10 14 18 22</b> 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 360° 360° 360° 360° 360° 360° Greenwich Culmination Time: 18:15	<b>UT 02 06 10 14 18 22</b> 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 036° 036° 036° 036° 036° 036° Greenwich Culmination Time: 15:50										

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UT	Sun				Venus				Moon				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	180	55.6	-00.4	S 23 22.7	+00.1	165	48.8	-01.0	S 24 04.4	-00.2	251	55.9	-26.4	S 03 39.8	+14.8					
01	195	55.2	-00.3	S 23 22.8	+00.0	180	47.8	-01.0	S 24 04.2	-00.1	266	29.5	-26.5	S 03 54.6	+14.9					
02	210	54.9	-00.3	S 23 22.8	+00.1	195	46.8	-00.9	S 24 04.1	-00.2	281	03.0	-26.5	S 04 09.5	+14.8					
03	225	54.6	-00.3	S 23 22.9	+00.1	210	45.9	-01.0	S 24 03.9	-00.1	295	36.5	-26.6	S 04 24.3	+14.8					
04	240	54.3	-00.3	S 23 23.0	+00.1	225	44.9	-01.0	S 24 03.8	-00.2	310	09.9	-26.6	S 04 39.1	+14.8					
05	255	54.0	-00.3	S 23 23.1	+00.0	240	43.9	-00.9	S 24 03.6	-00.1	324	43.3	-26.8	S 04 53.9	+14.8					
06	270	53.7	-00.3	S 23 23.1	+00.1	255	43.0	-01.0	S 24 03.5	-00.2	339	16.5	-26.7	S 05 08.7	+14.9					
07	285	53.4	-00.3	S 23 23.2	+00.1	270	42.0	-01.0	S 24 03.3	-00.2	353	49.8	-26.9	S 05 23.6	+14.8					
08	300	53.1	-00.3	S 23 23.3	+00.0	285	41.0	-00.9	S 24 03.1	-00.1	8	22.9	-26.9	S 05 38.4	+14.8					
09	315	52.8	-00.3	S 23 23.3	+00.1	300	40.1	-01.0	S 24 03.0	-00.2	22	56.0	-26.9	S 05 53.2	+14.8					
10	330	52.5	-00.3	S 23 23.4	+00.1	315	39.1	-01.0	S 24 02.8	-00.2	37	29.1	-27.1	S 06 08.0	+14.8					
11	345	52.2	-00.3	S 23 23.5	+00.0	330	38.1	-00.9	S 24 02.6	-00.1	52	02.0	-27.1	S 06 22.8	+14.8					
12	0	51.9	-00.3	S 23 23.5	+00.1	345	37.2	-01.0	S 24 02.5	-00.2	66	34.9	-27.1	S 06 37.6	+14.8					
13	15	51.6	-00.3	S 23 23.6	+00.1	0	36.2	-01.0	S 24 02.3	-00.2	81	07.8	-27.3	S 06 52.4	+14.8					
14	30	51.3	-00.4	S 23 23.7	+00.0	15	35.2	-00.9	S 24 02.1	-00.1	95	40.5	-27.3	S 07 07.2	+14.7					
15	45	50.9	-00.3	S 23 23.7	+00.1	30	34.3	-01.0	S 24 02.0	-00.2	110	13.2	-27.4	S 07 21.9	+14.8					
16	60	50.6	-00.3	S 23 23.8	+00.1	45	33.3	-00.9	S 24 01.8	-00.2	124	45.8	-27.5	S 07 36.7	+14.7					
17	75	50.3	-00.3	S 23 23.9	+00.0	60	32.4	-01.0	S 24 01.6	-00.2	139	18.3	-27.6	S 07 51.4	+14.8					
18	90	50.0	-00.3	S 23 23.9	+00.1	75	31.4	-01.0	S 24 01.4	-00.1	153	50.7	-27.6	S 08 06.2	+14.7					
19	105	49.7	-00.3	S 23 24.0	+00.1	90	30.4	-00.9	S 24 01.3	-00.2	168	23.1	-27.7	S 08 20.9	+14.7					
20	120	49.4	-00.3	S 23 24.1	+00.0	105	29.5	-01.0	S 24 01.1	-00.2	182	55.4	-27.8	S 08 35.6	+14.6					
21	135	49.1	-00.3	S 23 24.1	+00.1	120	28.5	-01.0	S 24 00.9	-00.2	197	27.6	-27.9	S 08 50.2	+14.7					
22	150	48.8	-00.3	S 23 24.2	+00.0	135	27.5	-00.9	S 24 00.7	-00.2	211	59.7	-28.0	S 09 04.9	+14.6					
23	165	48.5	-00.3	S 23 24.2	+00.1	150	26.6	-01.0	S 24 00.5	-00.1	226	31.7	-28.0	S 09 19.5	+14.7					
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	16°3	16°3	16°3	16°3	16°3	16°3	SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	15°5	15°5	15°6	15°6	15°6	15°7
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	56°8	56°9	57°1	57°2	57°4	57°5
SHA	094°	094°	094°	094°	094°	093°	SHA	079°	079°	079°	078°	078°	078°	SHA	164°	162°	160°	159°	157°	155°
Greenwich Culmination Time: 11:56						Greenwich Culmination Time: 12:57						Greenwich Culmination Time: 07:25								

  

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
00	15	51.5	+03.3	N 24 52.7	-00.1	86	15.3	+02.2	S 01 19.4	-00.1	122	40.2	+02.2	S 15 38.5	-00.1					
01	30	54.8	+03.4	N 24 52.6	+00.0	101	17.5	+02.3	S 01 19.3	-00.1	137	42.4	+02.3	S 15 38.4	+00.0					
02	45	58.2	+03.4	N 24 52.6	-00.1	116	19.8	+02.3	S 01 19.2	-00.1	152	44.7	+02.2	S 15 38.4	-00.1					
03	61	01.6	+03.3	N 24 52.5	+00.0	131	22.1	+02.3	S 01 19.1	-00.1	167	46.9	+02.3	S 15 38.3	-00.1					
04	76	04.9	+03.4	N 24 52.5	-00.1	146	24.4	+02.3	S 01 19.0	-00.1	182	49.2	+02.2	S 15 38.2	-00.1					
05	91	08.3	+03.4	N 24 52.4	+00.0	161	26.7	+02.3	S 01 18.9	-00.1	197	51.4	+02.3	S 15 38.1	+00.0					
06	106	11.7	+03.3	N 24 52.4	-00.1	176	29.0	+02.2	S 01 18.8	+00.0	212	53.7	+02.2	S 15 38.1	-00.1					
07	121	15.0	+03.4	N 24 52.3	+00.0	191	31.2	+02.3	S 01 18.8	-00.1	227	55.9	+02.3	S 15 38.0	-00.1					
08	136	18.4	+03.3	N 24 52.3	-00.1	206	33.5	+02.3	S 01 18.7	-00.1	242	58.2	+02.2	S 15 37.9	+00.0					
09	151	21.7	+03.4	N 24 52.2	+00.0	221	35.8	+02.3	S 01 18.6	-00.1	258	00.4	+02.3	S 15 37.9	-00.1					
10	166	25.1	+03.4	N 24 52.2	-00.1	236	38.1	+02.3	S 01 18.5	-00.1	273	02.7	+02.2	S 15 37.8	-00.1					
11	181	28.5	+03.3	N 24 52.1	+00.0	251	40.4	+02.3	S 01 18.4	-00.1	288	04.9	+02.3	S 15 37.7	+00.0					
12	196	31.8	+03.4	N 24 52.1	-00.1	266	42.7	+02.2	S 01 18.3	-00.1	303	07.2	+02.3	S 15 37.7	-00.1					
13	211	35.2	+03.3	N 24 52.0	+00.0	281	44.9	+02.3	S 01 18.2	-00.1	318	09.5	+02.2	S 15 37.6	-00.1					
14	226	38.5	+03.4	N 24 52.0	-00.1	296	47.2	+02.3	S 01 18.1	-00.1	333	11.7	+02.3	S 15 37.5	-00.1					
15	241	41.9	+03.3	N 24 51.9	+00.0	311	49.5	+02.3	S 01 18.0	-00.1	348	14.0	+02.2	S 15 37.4	+00.0					
16	256	45.2	+03.4	N 24 51.9	+00.0	326	51.8	+02.3	S 01 17.9	-00.1	3	16.2	+02.3	S 15 37.4	-00.1					
17	271	48.6	+03.3	N 24 51.9	-00.1	341	54.1	+02.2	S 01 17.8	-00.1	18	18.5	+02.2	S 15 37.3	-00.1					
18	286	51.9	+03.4	N 24 51.8	+00.0	356	56.3	+02.3	S 01 17.7	+00.0	33	20.7	+02.3	S 15 37.2	+00.0					
19	301	55.3	+03.3	N 24 51.8	-00.1	11	58.6	+02.3	S 01 17.7	-00.1	48	23.0	+02.2	S 15 37.2	-00.1					
20	316	58.6	+03.4	N 24 51.7	+00.0	27	00.9	+02.3	S 01 17.6	-00.1	63	25.2	+02.3	S 15 37.1	-00.1					
21	332	02.0	+03.3	N 24 51.7	-00.1	42	03.2	+02.3	S 01 17.5	-00.1	78	27.5	+02.2	S 15 37.0	+00.0					
22	347	05.3	+03.4	N 24 51.6	+00.0	57	05.5	+02.2	S 01 17.4	-00.1	93	29.7	+02.3	S 15 37.0	-00.1					
23	2	08.7	+03.3	N 24 51.6	-00.1	72	07.7	+02.3	S 01 17.3	-00.1	108	32.0	+02.2	S 15 36.9	-00.1					
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22	UT	02	06	10	14	18	22
SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	00°3	00°3	00°3	00°3	00°3	00°3	SD	00°1	00°1	00°1	00°1	00°1	00°1
HP	00°3	00°3	00°3	00°3	00°3	00°3	HP	00°0	00°0	00°0	00°0	00°0	00°0	HP	00°0	00°0	00°0	00°0	00°0	00°0
SHA	289°	289°	289°	289°	290°	290°	SHA	360°	360°	360°	360°	360°	360°	SHA	036°	036°	036°	036°	036°	036°
Greenwich Culmination Time: 22:51						Greenwich Culmination Time: 18:12						Greenwich Culmination Time: 15:46								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 48.2 -00.3	S	23 24.3 +00.0	165 25.6 -01.0	S	24 00.4 -00.2	241 03.7 -28.2	S	09 34.2 +14.5	00			
01	195 47.9 -00.3	S	23 24.3 +00.1	180 24.6 -00.9	S	24 00.2 -00.2	255 35.5 -28.2	S	09 48.7 +14.6	01			
02	210 47.6 -00.4	S	23 24.4 +00.1	195 23.7 -01.0	S	23 60.0 -00.2	270 07.3 -28.4	S	10 03.3 +14.6	02			
03	225 47.2 -00.3	S	23 24.5 +00.0	210 22.7 -00.9	S	23 59.8 -00.2	284 38.9 -28.4	S	10 17.9 +14.5	03			
04	240 46.9 -00.3	S	23 24.5 +00.1	225 21.8 -01.0	S	23 59.6 -00.2	299 10.5 -28.5	S	10 32.4 +14.5	04			
05	255 46.6 -00.3	S	23 24.6 +00.0	240 20.8 -01.0	S	23 59.4 -00.2	313 42.0 -28.6	S	10 46.9 +14.4	05			
06	270 46.3 -00.3	S	23 24.6 +00.1	255 19.8 -00.9	S	23 59.2 -00.2	328 13.4 -28.7	S	11 01.3 +14.4	06			
07	285 46.0 -00.3	S	23 24.7 +00.0	270 18.9 -01.0	S	23 59.0 -00.1	342 44.7 -28.8	S	11 15.7 +14.4	07			
08	300 45.7 -00.3	S	23 24.7 +00.1	285 17.9 -01.0	S	23 58.9 -00.2	357 15.9 -28.9	S	11 30.1 +14.4	08			
09	315 45.4 -00.3	S	23 24.8 +00.0	300 16.9 -00.9	S	23 58.7 -00.2	11 47.0 -29.0	S	11 44.5 +14.3	09			
10	330 45.1 -00.3	S	23 24.8 +00.1	315 16.0 -01.0	S	23 58.5 -00.2	26 18.0 -29.1	S	11 58.8 +14.3	10			
11	345 44.8 -00.3	S	23 24.9 +00.0	330 15.0 -00.9	S	23 58.3 -00.2	40 48.9 -29.3	S	12 13.1 +14.2	11			
12	0 44.5 -00.3	S	23 24.9 +00.1	345 14.1 -01.0	S	23 58.1 -00.2	55 19.6 -29.3	S	12 27.3 +14.2	12			
13	15 44.2 -00.4	S	23 25.0 +00.0	0 13.1 -01.0	S	23 57.9 -00.2	69 50.3 -29.4	S	12 41.5 +14.2	13			
14	30 43.8 -00.3	S	23 25.0 +00.1	15 12.1 -00.9	S	23 57.7 -00.2	84 20.9 -29.5	S	12 55.7 +14.1	14			
15	45 43.5 -00.3	S	23 25.1 +00.0	30 11.2 -01.0	S	23 57.5 -00.2	98 51.4 -29.7	S	13 09.8 +14.0	15			
16	60 43.2 -00.3	S	23 25.1 +00.0	45 10.2 -00.9	S	23 57.3 -00.2	113 21.7 -29.7	S	13 23.8 +14.1	16			
17	75 42.9 -00.3	S	23 25.1 +00.1	60 09.3 -01.0	S	23 57.1 -00.2	127 52.0 -29.9	S	13 37.9 +13.9	17			
18	90 42.6 -00.3	S	23 25.2 +00.0	75 08.3 -01.0	S	23 56.9 -00.3	142 22.1 -29.9	S	13 51.8 +14.0	18			
19	105 42.3 -00.3	S	23 25.2 +00.1	90 07.3 -00.9	S	23 56.6 -00.2	156 52.2 -30.1	S	14 05.8 +13.8	19			
20	120 42.0 -00.3	S	23 25.3 +00.0	105 06.4 -01.0	S	23 56.4 -00.2	171 22.1 -30.2	S	14 19.6 +13.8	20			
21	135 41.7 -00.3	S	23 25.3 +00.1	120 05.4 -00.9	S	23 56.2 -00.2	185 51.9 -30.3	S	14 33.4 +13.8	21			
22	150 41.4 -00.3	S	23 25.4 +00.0	135 04.5 -01.0	S	23 56.0 -00.2	200 21.6 -30.5	S	14 47.2 +13.7	22			
23	165 41.1 -00.4	S	23 25.4 +00.0	150 03.5 -01.0	S	23 55.8 -00.2	214 51.1 -30.5	S	15 00.9 +13.6	23			
UT	02 06 10 14 18 22	SD	16'3 16'3 16'3 16'3 16'3 16'3	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	15'7 15'8 15'8 15'9 15'9 15'9		
		HP	00'1 00'1 00'1 00'1 00'1 00'1			HP	00'1 00'1 00'1 00'1 00'1 00'1			HP	57'7 57'9 58'0 58'2 58'4 58'5		
		SHA	093° 093° 093° 093° 092° 092°			SHA	078° 078° 077° 077° 077° 077°			SHA	152° 150° 148° 146° 144° 142°		
			Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 12:59				Greenwich Culmination Time: 08:11		
UT	Mars				Jupiter				Saturn				UT
00	17 12.0 +03.4	N	24 51.5 +00.0	87 10.0 +02.3	S	01 17.2 -00.1	123 34.2 +02.3	S	15 36.8 -00.1	00			
01	32 15.4 +03.3	N	24 51.5 -00.1	102 12.3 +02.3	S	01 17.1 -00.1	138 36.5 +02.2	S	15 36.7 +00.0	01			
02	47 18.7 +03.4	N	24 51.4 +00.0	117 14.6 +02.2	S	01 17.0 -00.1	153 38.7 +02.3	S	15 36.7 -00.1	02			
03	62 22.1 +03.3	N	24 51.4 -00.1	132 16.8 +02.3	S	01 16.9 -00.1	168 41.0 +02.2	S	15 36.6 -00.1	03			
04	77 25.4 +03.3	N	24 51.3 +00.0	147 19.1 +02.3	S	01 16.8 -00.1	183 43.2 +02.3	S	15 36.5 +00.0	04			
05	92 28.7 +03.4	N	24 51.3 -00.1	162 21.4 +02.3	S	01 16.7 -00.1	198 45.5 +02.3	S	15 36.5 -00.1	05			
06	107 32.1 +03.3	N	24 51.2 +00.0	177 23.7 +02.3	S	01 16.6 -00.1	213 47.8 +02.2	S	15 36.4 -00.1	06			
07	122 35.4 +03.3	N	24 51.2 -00.1	192 26.0 +02.2	S	01 16.5 -00.1	228 50.0 +02.3	S	15 36.3 -00.1	07			
08	137 38.7 +03.4	N	24 51.1 +00.0	207 28.2 +02.3	S	01 16.4 +00.0	243 52.3 +02.2	S	15 36.2 +00.0	08			
09	152 42.1 +03.3	N	24 51.1 -00.1	222 30.5 +02.3	S	01 16.4 -00.1	258 54.5 +02.3	S	15 36.2 -00.1	09			
10	167 45.4 +03.3	N	24 51.0 +00.0	237 32.8 +02.3	S	01 16.3 -00.1	273 56.8 +02.2	S	15 36.1 -00.1	10			
11	182 48.7 +03.4	N	24 51.0 -00.1	252 35.1 +02.2	S	01 16.2 -00.1	288 59.0 +02.3	S	15 36.0 +00.0	11			
12	197 52.1 +03.3	N	24 50.9 +00.0	267 37.3 +02.3	S	01 16.1 -00.1	304 01.3 +02.2	S	15 36.0 -00.1	12			
13	212 55.4 +03.3	N	24 50.9 -00.1	282 39.6 +02.3	S	01 16.0 -00.1	319 03.5 +02.3	S	15 35.9 -00.1	13			
14	227 58.7 +03.4	N	24 50.8 +00.0	297 41.9 +02.3	S	01 15.9 -00.1	334 05.8 +02.2	S	15 35.8 -00.1	14			
15	243 02.1 +03.3	N	24 50.8 -00.1	312 44.2 +02.2	S	01 15.8 -00.1	349 08.0 +02.3	S	15 35.7 +00.0	15			
16	258 05.4 +03.3	N	24 50.7 +00.0	327 46.4 +02.3	S	01 15.7 -00.1	4 10.3 +02.2	S	15 35.7 -00.1	16			
17	273 08.7 +03.3	N	24 50.7 -00.1	342 48.7 +02.3	S	01 15.6 -00.1	19 12.5 +02.3	S	15 35.6 -00.1	17			
18	288 12.0 +03.4	N	24 50.6 -00.1	357 51.0 +02.2	S	01 15.5 -00.1	34 14.8 +02.2	S	15 35.5 +00.0	18			
19	303 15.4 +03.3	N	24 50.5 +00.0	12 53.2 +02.3	S	01 15.4 -00.1	49 17.0 +02.3	S	15 35.5 -00.1	19			
20	318 18.7 +03.3	N	24 50.5 -00.1	27 55.5 +02.3	S	01 15.3 -00.1	64 19.3 +02.2	S	15 35.4 -00.1	20			
21	333 22.0 +03.3	N	24 50.4 +00.0	42 57.8 +02.3	S	01 15.2 -00.1	79 21.5 +02.3	S	15 35.3 -00.1	21			
22	348 25.3 +03.3	N	24 50.4 -00.1	58 00.1 +02.2	S	01 15.1 -00.1	94 23.8 +02.2	S	15 35.2 +00.0	22			
23	3 28.6 +03.3	N	24 50.3 +00.0	73 02.3 +02.3	S	01 15.0 -00.1	109 26.0 +02.3	S	15 35.2 -00.1	23			
UT	02 06 10 14 18 22	SD	00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD	00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD	00'1 00'1 00'1 00'1 00'1 00'1		
		HP	00'3 00'3 00'3 00'3 00'3 00'3			HP	00'0 00'0 00'0 00'0 00'0 00'0			HP	00'0 00'0 00'0 00'0 00'0 00'0		
		SHA	290° 290° 290° 290° 290° 290°			SHA	360° 360° 360° 360° 360° 360°			SHA	036° 036° 036° 036° 036° 036°		
			Greenwich Culmination Time: 22:46				Greenwich Culmination Time: 18:08				Greenwich Culmination Time: 15:43		



UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 40.7 -00.3 S 23 25.4 +00.1	165 02.5 -00.9 S 23 55.6 -00.2	229 20.6 -30.7 S 15 14.5 +13.6	00									
01	195 40.4 -00.3 S 23 25.5 +00.0	180 01.6 -01.0 S 23 55.4 -00.2	243 49.9 -30.8 S 15 28.1 +13.5	01									
02	210 40.1 -00.3 S 23 25.5 +00.0	195 00.6 -00.9 S 23 55.2 -00.3	258 19.1 -30.9 S 15 41.6 +13.5	02									
03	225 39.8 -00.3 S 23 25.5 +00.1	209 59.7 -01.0 S 23 54.9 -00.2	272 48.2 -31.0 S 15 55.1 +13.4	03									
04	240 39.5 -00.3 S 23 25.6 +00.0	224 58.7 -00.9 S 23 54.7 -00.2	287 17.2 -31.2 S 16 08.5 +13.3	04									
05	255 39.2 -00.3 S 23 25.6 +00.0	239 57.8 -01.0 S 23 54.5 -00.2	301 46.0 -31.3 S 16 21.8 +13.2	05									
06	270 38.9 -00.3 S 23 25.6 +00.1	254 56.8 -01.0 S 23 54.3 -00.2	316 14.7 -31.4 S 16 35.0 +13.2	06									
07	285 38.6 -00.3 S 23 25.7 +00.0	269 55.8 -00.9 S 23 54.1 -00.3	330 43.3 -31.5 S 16 48.2 +13.1	07									
08	300 38.3 -00.3 S 23 25.7 +00.0	284 54.9 -01.0 S 23 53.8 -00.2	345 11.8 -31.7 S 17 01.3 +13.0	08									
09	315 38.0 -00.4 S 23 25.7 +00.1	299 53.9 -00.9 S 23 53.6 -00.2	359 40.1 -31.8 S 17 14.3 +13.0	09									
10	330 37.6 -00.3 S 23 25.8 +00.0	314 53.0 -01.0 S 23 53.4 -00.2	14 08.3 -31.9 S 17 27.3 +12.8	10									
11	345 37.3 -00.3 S 23 25.8 +00.0	329 52.0 -00.9 S 23 53.2 -00.3	28 36.4 -32.1 S 17 40.1 +12.8	11									
12	0 37.0 -00.3 S 23 25.8 +00.0	344 51.1 -01.0 S 23 52.9 -00.2	43 04.3 -32.1 S 17 52.9 +12.7	12									
13	15 36.7 -00.3 S 23 25.8 +00.1	359 50.1 -01.0 S 23 52.7 -00.2	57 32.2 -32.4 S 18 05.6 +12.6	13									
14	30 36.4 -00.3 S 23 25.9 +00.0	14 49.1 -00.9 S 23 52.5 -00.3	71 59.8 -32.4 S 18 18.2 +12.5	14									
15	45 36.1 -00.3 S 23 25.9 +00.0	29 48.2 -01.0 S 23 52.2 -00.2	86 27.4 -32.6 S 18 30.7 +12.5	15									
16	60 35.8 -00.3 S 23 25.9 +00.0	44 47.2 -00.9 S 23 52.0 -00.2	100 54.8 -32.7 S 18 43.2 +12.3	16									
17	75 35.5 -00.3 S 23 25.9 +00.1	59 46.3 -01.0 S 23 51.8 -00.3	115 22.1 -32.8 S 18 55.5 +12.3	17									
18	90 35.2 -00.4 S 23 26.0 +00.0	74 45.3 -00.9 S 23 51.5 -00.2	129 49.3 -33.0 S 19 07.8 +12.1	18									
19	105 34.8 -00.3 S 23 26.0 +00.0	89 44.4 -01.0 S 23 51.3 -00.3	144 16.3 -33.1 S 19 19.9 +12.1	19									
20	120 34.5 -00.3 S 23 26.0 +00.0	104 43.4 -00.9 S 23 51.0 -00.2	158 43.2 -33.3 S 19 32.0 +11.9	20									
21	135 34.2 -00.3 S 23 26.0 +00.1	119 42.5 -01.0 S 23 50.8 -00.2	173 09.9 -33.4 S 19 43.9 +11.9	21									
22	150 33.9 -00.3 S 23 26.1 +00.0	134 41.5 -00.9 S 23 50.6 -00.3	187 36.5 -33.5 S 19 55.8 +11.7	22									
23	165 33.6 -00.3 S 23 26.1 +00.0	149 40.6 -01.0 S 23 50.3 -00.2	202 03.0 -33.7 S 20 07.5 +11.6	23									
	UT 02 06 10 14 18 22 SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 092° 092° 092° 091° 091° 091° 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 076° 076° 076° 076° 075° 075° Greenwich Culmination Time: 13:00	UT 02 06 10 14 18 22 SD 16'0 16'0 16'1 16'1 16'2 16'2 HP 58'7 58'8 59'0 59'1 59'3 59'4 SHA 140° 137° 135° 133° 131° 128° Greenwich Culmination Time: 09:01										

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	18 31.9 +03.4 N 24 50.3 -00.1	88 04.6 +02.3 S 01 14.9 -00.1	124 28.3 +02.2 S 15 35.1 -00.1	00									
01	33 35.3 +03.3 N 24 50.2 +00.0	103 06.9 +02.2 S 01 14.8 -00.1	139 30.5 +02.3 S 15 35.0 +00.0	01									
02	48 38.6 +03.3 N 24 50.2 -00.1	118 09.1 +02.3 S 01 14.7 -00.1	154 32.8 +02.2 S 15 35.0 -00.1	02									
03	63 41.9 +03.3 N 24 50.1 +00.0	133 11.4 +02.3 S 01 14.6 -00.1	169 35.0 +02.3 S 15 34.9 -00.1	03									
04	78 45.2 +03.3 N 24 50.1 -00.1	148 13.7 +02.3 S 01 14.5 -00.1	184 37.3 +02.2 S 15 34.8 -00.1	04									
05	93 48.5 +03.3 N 24 50.0 +00.0	163 16.0 +02.2 S 01 14.4 -00.1	199 39.5 +02.3 S 15 34.7 +00.0	05									
06	108 51.8 +03.3 N 24 50.0 -00.1	178 18.2 +02.3 S 01 14.3 +00.0	214 41.8 +02.2 S 15 34.7 -00.1	06									
07	123 55.1 +03.3 N 24 49.9 +00.0	193 20.5 +02.3 S 01 14.3 -00.1	229 44.0 +02.3 S 15 34.6 -00.1	07									
08	138 58.4 +03.3 N 24 49.9 -00.1	208 22.8 +02.2 S 01 14.2 -00.1	244 46.3 +02.2 S 15 34.5 -00.1	08									
09	154 01.7 +03.3 N 24 49.8 +00.0	223 25.0 +02.3 S 01 14.1 -00.1	259 48.5 +02.3 S 15 34.4 +00.0	09									
10	169 05.0 +03.3 N 24 49.8 -00.1	238 27.3 +02.3 S 01 14.0 -00.1	274 50.8 +02.2 S 15 34.4 -00.1	10									
11	184 08.3 +03.4 N 24 49.7 +00.0	253 29.6 +02.2 S 01 13.9 -00.1	289 53.0 +02.2 S 15 34.3 -00.1	11									
12	199 11.7 +03.3 N 24 49.7 -00.1	268 31.8 +02.3 S 01 13.8 -00.1	304 55.2 +02.3 S 15 34.2 +00.0	12									
13	214 15.0 +03.3 N 24 49.6 +00.0	283 34.1 +02.3 S 01 13.7 -00.1	319 57.5 +02.2 S 15 34.2 -00.1	13									
14	229 18.3 +03.2 N 24 49.6 -00.1	298 36.4 +02.2 S 01 13.6 -00.1	334 59.7 +02.3 S 15 34.1 -00.1	14									
15	244 21.5 +03.3 N 24 49.5 +00.0	313 38.6 +02.3 S 01 13.5 -00.1	350 02.0 +02.2 S 15 34.0 -00.1	15									
16	259 24.8 +03.3 N 24 49.5 -00.1	328 40.9 +02.3 S 01 13.4 -00.1	5 04.2 +02.3 S 15 33.9 +00.0	16									
17	274 28.1 +03.3 N 24 49.4 +00.0	343 43.2 +02.2 S 01 13.3 -00.1	20 06.5 +02.2 S 15 33.9 -00.1	17									
18	289 31.4 +03.3 N 24 49.4 -00.1	358 45.4 +02.3 S 01 13.2 -00.1	35 08.7 +02.3 S 15 33.8 -00.1	18									
19	304 34.7 +03.3 N 24 49.3 +00.0	13 47.7 +02.3 S 01 13.1 -00.1	50 11.0 +02.2 S 15 33.7 +00.0	19									
20	319 38.0 +03.3 N 24 49.3 -00.1	28 50.0 +02.2 S 01 13.0 -00.1	65 13.2 +02.3 S 15 33.7 -00.1	20									
21	334 41.3 +03.3 N 24 49.2 -00.1	43 52.2 +02.3 S 01 12.9 -00.1	80 15.5 +02.2 S 15 33.6 -00.1	21									
22	349 44.6 +03.3 N 24 49.1 +00.0	58 54.5 +02.3 S 01 12.8 -00.1	95 17.7 +02.3 S 15 33.5 -00.1	22									
23	4 47.9 +03.3 N 24 49.1 -00.1	73 56.8 +02.2 S 01 12.7 -00.1	110 20.0 +02.2 S 15 33.4 +00.0	23									
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'3 00'3 00'3 00'3 00'3 00'3 SHA 290° 290° 290° 290° 290° 290° Greenwich Culmination Time: 22:40	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 360° 359° 359° 359° 359° 359° Greenwich Culmination Time: 18:04	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 036° 036° 036° 036° 036° 036° Greenwich Culmination Time: 15:39										

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 33.3 -00.3	S	23 26.1 +00.0	164 39.6 -01.0	S	23 50.1 -00.3	216 29.3 -33.8	S	20 19.1 +11.6	00			
01	195 33.0 -00.3	S	23 26.1 +00.0	179 38.6 -00.9	S	23 49.8 -00.2	230 55.5 -33.9	S	20 30.7 +11.4	01			
02	210 32.7 -00.3	S	23 26.1 +00.0	194 37.7 -01.0	S	23 49.6 -00.3	245 21.6 -34.1	S	20 42.1 +11.3	02			
03	225 32.4 -00.3	S	23 26.1 +00.1	209 36.7 -00.9	S	23 49.3 -00.2	259 47.5 -34.2	S	20 53.4 +11.2	03			
04	240 32.1 -00.4	S	23 26.2 +00.0	224 35.8 -01.0	S	23 49.1 -00.3	274 13.3 -34.4	S	21 04.6 +11.0	04			
05	255 31.7 -00.3	S	23 26.2 +00.0	239 34.8 -00.9	S	23 48.8 -00.2	288 38.9 -34.4	S	21 15.6 +11.0	05			
06	270 31.4 -00.3	S	23 26.2 +00.0	254 33.9 -01.0	S	23 48.6 -00.3	303 04.5 -34.7	S	21 26.6 +10.8	06			
07	285 31.1 -00.3	S	23 26.2 +00.0	269 32.9 -00.9	S	23 48.3 -00.2	317 29.8 -34.7	S	21 37.4 +10.7	07			
08	300 30.8 -00.3	S	23 26.2 +00.0	284 32.0 -01.0	S	23 48.1 -00.3	331 55.1 -34.9	S	21 48.1 +10.6	08			
09	315 30.5 -00.3	S	23 26.2 +00.0	299 31.0 -00.9	S	23 47.8 -00.2	346 20.2 -35.1	S	21 58.7 +10.4	09			
10	330 30.2 -00.3	S	23 26.2 +00.0	314 30.1 -01.0	S	23 47.6 -00.3	0 45.1 -35.2	S	22 09.1 +10.3	10			
11	345 29.9 -00.3	S	23 26.2 +00.0	329 29.1 -00.9	S	23 47.3 -00.3	15 09.9 -35.3	S	22 19.4 +10.2	11			
12	0 29.6 -00.4	S	23 26.2 +00.1	344 28.2 -01.0	S	23 47.0 -00.2	29 34.6 -35.4	S	22 29.6 +10.0	12			
13	15 29.2 -00.3	S	23 26.3 +00.0	359 27.2 -00.9	S	23 46.8 -00.3	43 59.2 -35.6	S	22 39.6 +09.9	13			
14	30 28.9 -00.3	S	23 26.3 +00.0	14 26.3 -01.0	S	23 46.5 -00.2	58 23.6 -35.7	S	22 49.5 +09.8	14			
15	45 28.6 -00.3	S	23 26.3 +00.0	29 25.3 -00.9	S	23 46.3 -00.3	72 47.9 -35.9	S	22 59.3 +09.6	15			
16	60 28.3 -00.3	S	23 26.3 +00.0	44 24.4 -01.0	S	23 46.0 -00.3	87 12.0 -36.0	S	23 08.9 +09.5	16			
17	75 28.0 -00.3	S	23 26.3 +00.0	59 23.4 -00.9	S	23 45.7 -00.2	101 36.0 -36.1	S	23 18.4 +09.3	17			
18	90 27.7 -00.3	S	23 26.3 +00.0	74 22.5 -01.0	S	23 45.5 -00.3	115 59.9 -36.3	S	23 27.7 +09.2	18			
19	105 27.4 -00.3	S	23 26.3 +00.0	89 21.5 -00.9	S	23 45.2 -00.3	130 23.6 -36.3	S	23 36.9 +09.0	19			
20	120 27.1 -00.3	S	23 26.3 +00.0	104 20.6 -01.0	S	23 44.9 -00.2	144 47.3 -36.6	S	23 45.9 +08.9	20			
21	135 26.8 -00.4	S	23 26.3 +00.0	119 19.6 -00.9	S	23 44.7 -00.3	159 10.7 -36.6	S	23 54.8 +08.7	21			
22	150 26.4 -00.3	S	23 26.3 +00.0	134 18.7 -01.0	S	23 44.4 -00.3	173 34.1 -36.8	S	24 03.5 +08.6	22			
23	165 26.1 -00.3	S	23 26.3 +00.0	149 17.7 -00.9	S	23 44.1 -00.3	187 57.3 -36.9	S	24 12.1 +08.4	23			

  

UT		02	06	10	14	18	22	UT	
SD		16'3	16'3	16'3	16'3	16'3	16'3	SD	
HP		00'1	00'1	00'1	00'1	00'1	00'1	HP	
SHA		091°	091°	091°	090°	090°	090°	SHA	
Greenwich Culmination Time: 11:58								Greenwich Culmination Time: 13:02	

  

UT		02	06	10	14	18	22	UT	
SD		16'2	16'3	16'3	16'3	16'4	16'4	SD	
HP		59'6	59'7	59'9	60'0	60'1	60'3	HP	
SHA		126°	123°	121°	118°	116°	113°	SHA	
Greenwich Culmination Time: 09:56								Greenwich Culmination Time: 09:56	

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	19 51.2 +03.3	N	24 49.0 +00.0	88 59.0 +02.3	S	01 12.6 -00.1	125 22.2 +02.3	S	15 33.4 -00.1	00			
01	34 54.5 +03.3	N	24 49.0 -00.1	104 01.3 +02.2	S	01 12.5 -00.1	140 24.5 +02.2	S	15 33.3 -00.1	01			
02	49 57.8 +03.2	N	24 48.9 +00.0	119 03.5 +02.3	S	01 12.4 -00.1	155 26.7 +02.3	S	15 33.2 -00.1	02			
03	65 01.0 +03.3	N	24 48.9 -00.1	134 05.8 +02.3	S	01 12.3 -00.1	170 29.0 +02.2	S	15 33.1 +00.0	03			
04	80 04.3 +03.3	N	24 48.8 +00.0	149 08.1 +02.2	S	01 12.2 -00.1	185 31.2 +02.2	S	15 33.1 -00.1	04			
05	95 07.6 +03.3	N	24 48.8 -00.1	164 10.3 +02.3	S	01 12.1 -00.1	200 33.4 +02.3	S	15 33.0 -00.1	05			
06	110 10.9 +03.3	N	24 48.7 +00.0	179 12.6 +02.3	S	01 12.0 -00.1	215 35.7 +02.2	S	15 32.9 +00.0	06			
07	125 14.2 +03.2	N	24 48.7 -00.1	194 14.9 +02.2	S	01 11.9 -00.1	230 37.9 +02.3	S	15 32.9 -00.1	07			
08	140 17.4 +03.3	N	24 48.6 +00.0	209 17.1 +02.3	S	01 11.8 -00.1	245 40.2 +02.2	S	15 32.8 -00.1	08			
09	155 20.7 +03.3	N	24 48.6 -00.1	224 19.4 +02.2	S	01 11.7 -00.1	260 42.4 +02.3	S	15 32.7 -00.1	09			
10	170 24.0 +03.3	N	24 48.5 +00.0	239 21.6 +02.3	S	01 11.6 -00.1	275 44.7 +02.2	S	15 32.6 +00.0	10			
11	185 27.3 +03.2	N	24 48.5 -00.1	254 23.9 +02.3	S	01 11.5 -00.1	290 46.9 +02.3	S	15 32.6 -00.1	11			
12	200 30.5 +03.3	N	24 48.4 -00.1	269 26.2 +02.2	S	01 11.4 -00.1	305 49.2 +02.2	S	15 32.5 -00.1	12			
13	215 33.8 +03.3	N	24 48.3 +00.0	284 28.4 +02.3	S	01 11.3 -00.1	320 51.4 +02.3	S	15 32.4 -00.1	13			
14	230 37.1 +03.2	N	24 48.3 -00.1	299 30.7 +02.2	S	01 11.2 -00.1	335 53.7 +02.2	S	15 32.3 +00.0	14			
15	245 40.3 +03.3	N	24 48.2 +00.0	314 32.9 +02.3	S	01 11.1 -00.1	350 55.9 +02.3	S	15 32.3 -00.1	15			
16	260 43.6 +03.3	N	24 48.2 -00.1	329 35.2 +02.3	S	01 11.0 -00.1	5 58.2 +02.2	S	15 32.2 -00.1	16			
17	275 46.9 +03.2	N	24 48.1 +00.0	344 37.5 +02.2	S	01 10.9 -00.1	21 00.4 +02.2	S	15 32.1 -00.1	17			
18	290 50.1 +03.3	N	24 48.1 -00.1	359 39.7 +02.3	S	01 10.8 -00.1	36 02.6 +02.3	S	15 32.0 +00.0	18			
19	305 53.4 +03.3	N	24 48.0 +00.0	14 42.0 +02.2	S	01 10.7 -00.1	51 04.9 +02.2	S	15 32.0 -00.1	19			
20	320 56.7 +03.2	N	24 48.0 -00.1	29 44.2 +02.3	S	01 10.6 -00.1	66 07.1 +02.3	S	15 31.9 -00.1	20			
21	335 59.9 +03.3	N	24 47.9 +00.0	44 46.5 +02.3	S	01 10.5 -00.1	81 09.4 +02.2	S	15 31.8 +00.0	21			
22	351 03.2 +03.2	N	24 47.9 -00.1	59 48.8 +02.2	S	01 10.4 -00.1	96 11.6 +02.3	S	15 31.8 -00.1	22			
23	6 06.4 +03.3	N	24 47.8 +00.0	74 51.0 +02.3	S	01 10.3 -00.1	111 13.9 +02.2	S	15 31.7 -00.1	23			

  

UT		02	06	10	14	18	22	UT	
SD		00'1	00'1	00'1	00'1	00'1	00'1	SD	
HP		00'3	00'3	00'3	00'2	00'2	00'2	HP	
SHA		290°	290°	290°	290°	291°	291°	SHA	
Greenwich Culmination Time: 22:35								Greenwich Culmination Time: 18:01	

  

UT		02	06	10	14	18	22	UT	
SD		00'1	00'1	00'1	00'1	00'1	00'1	SD	
HP		00'0	00'0	00'0	00'0	00'0	00'0	HP	
SHA		036°	036°	036°	036°	036°	036°	SHA	
Greenwich Culmination Time: 15:36								Greenwich Culmination Time: 15:36	

UT	Sun				Venus				Moon <span style="float: right;">A: 95%</span>				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /								
00	180	25.8	-00.3	S 23 26.3 +00.0	164	16.8	-01.0	S 23 43.8 -00.2	202	20.4	-37.0	S 24 20.5 +08.2	00							
01	195	25.5	-00.3	S 23 26.3 +00.0	179	15.8	-00.9	S 23 43.6 -00.3	216	43.4	-37.2	S 24 28.7 +08.1	01							
02	210	25.2	-00.3	S 23 26.3 +00.0	194	14.9	-01.0	S 23 43.3 -00.3	231	06.2	-37.3	S 24 36.8 +07.9	02							
03	225	24.9	-00.3	S 23 26.3 +00.0	209	13.9	-00.9	S 23 43.0 -00.3	245	28.9	-37.4	S 24 44.7 +07.8	03							
04	240	24.6	-00.3	S 23 26.3 +00.0	224	13.0	-01.0	S 23 42.7 -00.3	259	51.5	-37.5	S 24 52.5 +07.5	04							
05	255	24.3	-00.3	S 23 26.3 +00.0	239	12.0	-00.9	S 23 42.4 -00.2	274	14.0	-37.6	S 25 00.0 +07.4	05							
06	270	24.0	-00.4	S 23 26.3 +00.0	254	11.1	-00.9	S 23 42.2 -00.3	288	36.4	-37.8	S 25 07.4 +07.3	06							
07	285	23.6	-00.3	S 23 26.3 -00.1	269	10.2	-01.0	S 23 41.9 -00.3	302	58.6	-37.9	S 25 14.7 +07.0	07							
08	300	23.3	-00.3	S 23 26.2 +00.0	284	09.2	-00.9	S 23 41.6 -00.3	317	20.7	-37.9	S 25 21.7 +06.9	08							
09	315	23.0	-00.3	S 23 26.2 +00.0	299	08.3	-01.0	S 23 41.3 -00.3	331	42.8	-38.1	S 25 28.6 +06.7	09							
10	330	22.7	-00.3	S 23 26.2 +00.0	314	07.3	-00.9	S 23 41.0 -00.3	346	04.7	-38.2	S 25 35.3 +06.5	10							
11	345	22.4	-00.3	S 23 26.2 +00.0	329	06.4	-01.0	S 23 40.7 -00.3	0	26.5	-38.3	S 25 41.8 +06.3	11							
12	0	22.1	-00.3	S 23 26.2 +00.0	344	05.4	-00.9	S 23 40.4 -00.3	14	48.2	-38.5	S 25 48.1 +06.2	12							
13	15	21.8	-00.3	S 23 26.2 +00.0	359	04.5	-01.0	S 23 40.1 -00.2	29	09.7	-38.5	S 25 54.3 +05.9	13							
14	30	21.5	-00.4	S 23 26.2 +00.0	14	03.5	-00.9	S 23 39.9 -00.3	43	31.2	-38.6	S 26 00.2 +05.8	14							
15	45	21.1	-00.3	S 23 26.2 +00.0	29	02.6	-00.9	S 23 39.6 -00.3	57	52.6	-38.7	S 26 06.0 +05.6	15							
16	60	20.8	-00.3	S 23 26.2 -00.1	44	01.7	-01.0	S 23 39.3 -00.3	72	13.9	-38.8	S 26 11.6 +05.4	16							
17	75	20.5	-00.3	S 23 26.1 +00.0	59	00.7	-00.9	S 23 39.0 -00.3	86	35.1	-38.9	S 26 17.0 +05.1	17							
18	90	20.2	-00.3	S 23 26.1 +00.0	73	59.8	-01.0	S 23 38.7 -00.3	100	56.2	-39.0	S 26 22.1 +05.0	18							
19	105	19.9	-00.3	S 23 26.1 +00.0	88	58.8	-00.9	S 23 38.4 -00.3	115	17.2	-39.1	S 26 27.1 +04.8	19							
20	120	19.6	-00.3	S 23 26.1 +00.0	103	57.9	-01.0	S 23 38.1 -00.3	129	38.1	-39.2	S 26 31.9 +04.6	20							
21	135	19.3	-00.3	S 23 26.1 +00.0	118	56.9	-00.9	S 23 37.8 -00.3	143	58.9	-39.3	S 26 36.5 +04.4	21							
22	150	19.0	-00.4	S 23 26.1 -00.1	133	56.0	-00.9	S 23 37.5 -00.3	158	19.6	-39.3	S 26 40.9 +04.2	22							
23	165	18.6	-00.3	S 23 26.0 +00.0	148	55.1	-01.0	S 23 37.2 -00.3	172	40.3	-39.4	S 26 45.1 +04.0	23							
UT	02	06	10	14	18	22					UT	02	06	10	14	18	22			
SD	16°3	16°3	16°3	16°3	16°3	16°3					SD	16°4	16°5	16°5	16°5	16°6	16°6			
HP	00°1	00°1	00°1	00°1	00°1	00°1					HP	60°4	60°5	60°6	60°7	60°8	60°8			
SHA	090°	090°	089°	089°	089°	089°					SHA	110°	108°	105°	102°	100°	097°			
Greenwich Culmination Time: 11:58							Greenwich Culmination Time: 13:03							Greenwich Culmination Time: 10:58						

  

UT	Mars				Jupiter				Saturn				UT							
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec								
	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /	° ' /	' /								
00	21	09.7	+03.3	N 24 47.8 -00.1	89	53.3	+02.2	S 01 10.2 -00.1	126	16.1	+02.3	S 15 31.6 -00.1	00							
01	36	13.0	+03.2	N 24 47.7 -00.1	104	55.5	+02.3	S 01 10.1 -00.1	141	18.4	+02.2	S 15 31.5 +00.0	01							
02	51	16.2	+03.3	N 24 47.6 +00.0	119	57.8	+02.2	S 01 10.0 -00.1	156	20.6	+02.2	S 15 31.5 -00.1	02							
03	66	19.5	+03.2	N 24 47.6 -00.1	135	00.0	+02.3	S 01 09.9 -00.1	171	22.8	+02.3	S 15 31.4 -00.1	03							
04	81	22.7	+03.3	N 24 47.5 +00.0	150	02.3	+02.2	S 01 09.8 -00.1	186	25.1	+02.2	S 15 31.3 -00.1	04							
05	96	26.0	+03.2	N 24 47.5 -00.1	165	04.5	+02.3	S 01 09.7 -00.1	201	27.3	+02.3	S 15 31.2 +00.0	05							
06	111	29.2	+03.3	N 24 47.4 +00.0	180	06.8	+02.3	S 01 09.6 -00.1	216	29.6	+02.2	S 15 31.2 -00.1	06							
07	126	32.5	+03.2	N 24 47.4 -00.1	195	09.1	+02.2	S 01 09.5 -00.1	231	31.8	+02.3	S 15 31.1 -00.1	07							
08	141	35.7	+03.2	N 24 47.3 +00.0	210	11.3	+02.3	S 01 09.4 -00.1	246	34.1	+02.2	S 15 31.0 -00.1	08							
09	156	38.9	+03.3	N 24 47.3 -00.1	225	13.6	+02.2	S 01 09.3 -00.1	261	36.3	+02.2	S 15 30.9 +00.0	09							
10	171	42.2	+03.2	N 24 47.2 +00.0	240	15.8	+02.3	S 01 09.2 -00.1	276	38.5	+02.3	S 15 30.9 -00.1	10							
11	186	45.4	+03.3	N 24 47.2 -00.1	255	18.1	+02.2	S 01 09.1 -00.1	291	40.8	+02.2	S 15 30.8 -00.1	11							
12	201	48.7	+03.2	N 24 47.1 +00.0	270	20.3	+02.3	S 01 09.0 -00.2	306	43.0	+02.3	S 15 30.7 -00.1	12							
13	216	51.9	+03.3	N 24 47.1 -00.1	285	22.6	+02.2	S 01 08.8 -00.1	321	45.3	+02.2	S 15 30.6 +00.0	13							
14	231	55.2	+03.2	N 24 47.0 -00.1	300	24.8	+02.3	S 01 08.7 -00.1	336	47.5	+02.3	S 15 30.6 -00.1	14							
15	246	58.4	+03.2	N 24 46.9 +00.0	315	27.1	+02.2	S 01 08.6 -00.1	351	49.8	+02.2	S 15 30.5 -00.1	15							
16	262	01.6	+03.3	N 24 46.9 -00.1	330	29.3	+02.3	S 01 08.5 -00.1	6	52.0	+02.2	S 15 30.4 -00.1	16							
17	277	04.9	+03.2	N 24 46.8 +00.0	345	31.6	+02.2	S 01 08.4 -00.1	21	54.2	+02.3	S 15 30.3 +00.0	17							
18	292	08.1	+03.2	N 24 46.8 -00.1	0	33.8	+02.3	S 01 08.3 -00.1	36	56.5	+02.2	S 15 30.3 -00.1	18							
19	307	11.3	+03.3	N 24 46.7 +00.0	15	36.1	+02.2	S 01 08.2 -00.1	51	58.7	+02.3	S 15 30.2 -00.1	19							
20	322	14.6	+03.2	N 24 46.7 -00.1	30	38.3	+02.3	S 01 08.1 -00.1	67	01.0	+02.2	S 15 30.1 +00.0	20							
21	337	17.8	+03.2	N 24 46.6 +00.0	45	40.6	+02.3	S 01 08.0 -00.1	82	03.2	+02.3	S 15 30.1 -00.1	21							
22	352	21.0	+03.2	N 24 46.6 -00.1	60	42.9	+02.2	S 01 07.9 -00.1	97	05.5	+02.2	S 15 30.0 -00.1	22							
23	7	24.2	+03.3	N 24 46.5 +00.0	75	45.1	+02.3	S 01 07.8 -00.1	112	07.7	+02.2	S 15 29.9 -00.1	23							
UT	02	06	10	14	18	22					UT	02	06	10	14	18	22			
SD	00°1	00°1	00°1	00°1	00°1	00°1					SD	00°1	00°1	00°1	00°1	00°1	00°1			
HP	00°2	00°2	00°2	00°2	00°2	00°2					HP	00°0	00°0	00°0	00°0	00°0	00°0			
SHA	291°	291°	291°	291°	291°	291°					SHA	036°	036°	036°	036°	036°	036°			
Greenwich Culmination Time: 22:30							Greenwich Culmination Time: 17:57							Greenwich Culmination Time: 15:32						

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UT	Sun				Venus				Moon <span style="float: right;">A: 00%</span>				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
00	180	18.3 -00.3	S 23 26.0 +00.0		163	54.1 -00.9	S 23 36.9 -00.4		187	00.9 -39.5	S 26 49.1 +03.8		00	
01	195	18.0 -00.3	S 23 26.0 +00.0		178	53.2 -01.0	S 23 36.5 -00.3		201	21.4 -39.5	S 26 52.9 +03.6		01	
02	210	17.7 -00.3	S 23 26.0 -00.1		193	52.2 -00.9	S 23 36.2 -00.3		215	41.9 -39.6	S 26 56.5 +03.4		02	
03	225	17.4 -00.3	S 23 25.9 +00.0		208	51.3 -00.9	S 23 35.9 -00.3		230	02.3 -39.7	S 26 59.9 +03.2		03	
04	240	17.1 -00.3	S 23 25.9 +00.0		223	50.4 -01.0	S 23 35.6 -00.3		244	22.6 -39.8	S 27 03.1 +02.9		04	
05	255	16.8 -00.3	S 23 25.9 +00.0		238	49.4 -00.9	S 23 35.3 -00.3		258	42.8 -39.8	S 27 06.0 +02.8		05	
06	270	16.5 -00.3	S 23 25.9 -00.1		253	48.5 -01.0	S 23 35.0 -00.3		273	03.0 -39.8	S 27 08.8 +02.5		06	
07	285	16.2 -00.4	S 23 25.8 +00.0		268	47.5 -00.9	S 23 34.7 -00.3		287	23.2 -39.9	S 27 11.3 +02.4		07	
08	300	15.8 -00.3	S 23 25.8 +00.0		283	46.6 -00.9	S 23 34.4 -00.3		301	43.3 -40.0	S 27 13.7 +02.1		08	
09	315	15.5 -00.3	S 23 25.8 +00.0		298	45.7 -01.0	S 23 34.1 -00.4		316	03.3 -40.0	S 27 15.8 +01.9		09	
10	330	15.2 -00.3	S 23 25.8 -00.1		313	44.7 -00.9	S 23 33.7 -00.3		330	23.3 -40.0	S 27 17.7 +01.7		10	
11	345	14.9 -00.3	S 23 25.7 +00.0		328	43.8 -01.0	S 23 33.4 -00.3		344	43.3 -40.1	S 27 19.4 +01.5		11	
12	0	14.6 -00.3	S 23 25.7 +00.0		343	42.8 -00.9	S 23 33.1 -00.3		359	03.2 -40.1	S 27 20.9 +01.3		12	
13	15	14.3 -00.3	S 23 25.7 -00.1		358	41.9 -00.9	S 23 32.8 -00.3		13	23.1 -40.1	S 27 22.2 +01.0		13	
14	30	14.0 -00.3	S 23 25.6 +00.0		13	41.0 -01.0	S 23 32.5 -00.4		27	43.0 -40.2	S 27 23.2 +00.9		14	
15	45	13.7 -00.4	S 23 25.6 +00.0		28	40.0 -00.9	S 23 32.1 -00.3		42	02.8 -40.2	S 27 24.1 +00.6		15	
16	60	13.3 -00.3	S 23 25.6 -00.1		43	39.1 -00.9	S 23 31.8 -00.3		56	22.6 -40.2	S 27 24.7 +00.4		16	
17	75	13.0 -00.3	S 23 25.5 +00.0		58	38.2 -01.0	S 23 31.5 -00.4		70	42.4 -40.2	S 27 25.1 +00.2		17	
18	90	12.7 -00.3	S 23 25.5 +00.0		73	37.2 -00.9	S 23 31.1 -00.3		85	02.2 -40.2	S 27 25.3 -00.1		18	
19	105	12.4 -00.3	S 23 25.5 -00.1		88	36.3 -01.0	S 23 30.8 -00.3		99	22.0 -40.3	S 27 25.2 -00.2		19	
20	120	12.1 -00.3	S 23 25.4 +00.0		103	35.3 -00.9	S 23 30.5 -00.3		113	41.7 -40.2	S 27 25.0 -00.5		20	
21	135	11.8 -00.3	S 23 25.4 -00.1		118	34.4 -00.9	S 23 30.2 -00.4		128	01.5 -40.3	S 27 24.5 -00.7		21	
22	150	11.5 -00.3	S 23 25.3 +00.0		133	33.5 -01.0	S 23 29.8 -00.3		142	21.2 -40.2	S 27 23.8 -00.9		22	
23	165	11.2 -00.3	S 23 25.3 +00.0		148	32.5 -00.9	S 23 29.5 -00.3		156	41.0 -40.3	S 27 22.9 -01.1		23	
UT	02	06	10	14	18	22		UT	02	06	10	14	18	22
SD	16'3	16'3	16'3	16'3	16'3	16'3		SD	00'1	00'1	00'1	00'1	00'1	00'1
HP	00'1	00'1	00'1	00'1	00'1	00'1		HP	00'1	00'1	00'1	00'1	00'1	00'1
SHA	089°	089°	088°	088°	088°	088°		SHA	072°	072°	072°	072°	071°	071°
Greenwich Culmination Time: 11:59								Greenwich Culmination Time: 13:05						

  

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
00	22	27.5 +03.2	N 24 46.5 -00.1		90	47.4 +02.2	S 01 07.7 -00.1		127	09.9 +02.3	S 15 29.8 +00.0		00	
01	37	30.7 +03.2	N 24 46.4 -00.1		105	49.6 +02.3	S 01 07.6 -00.1		142	12.2 +02.2	S 15 29.8 -00.1		01	
02	52	33.9 +03.2	N 24 46.3 +00.0		120	51.9 +02.2	S 01 07.5 -00.1		157	14.4 +02.3	S 15 29.7 -00.1		02	
03	67	37.1 +03.2	N 24 46.3 -00.1		135	54.1 +02.2	S 01 07.4 -00.1		172	16.7 +02.2	S 15 29.6 -00.1		03	
04	82	40.3 +03.3	N 24 46.2 +00.0		150	56.3 +02.3	S 01 07.3 -00.1		187	18.9 +02.2	S 15 29.5 +00.0		04	
05	97	43.6 +03.2	N 24 46.2 -00.1		165	58.6 +02.2	S 01 07.2 -00.1		202	21.1 +02.3	S 15 29.5 -00.1		05	
06	112	46.8 +03.2	N 24 46.1 +00.0		181	00.8 +02.3	S 01 07.1 -00.1		217	23.4 +02.2	S 15 29.4 -00.1		06	
07	127	50.0 +03.2	N 24 46.1 -00.1		196	03.1 +02.2	S 01 07.0 -00.1		232	25.6 +02.3	S 15 29.3 -00.1		07	
08	142	53.2 +03.2	N 24 46.0 +00.0		211	05.3 +02.3	S 01 06.9 -00.1		247	27.9 +02.2	S 15 29.2 +00.0		08	
09	157	56.4 +03.2	N 24 46.0 -00.1		226	07.6 +02.2	S 01 06.8 -00.2		262	30.1 +02.2	S 15 29.2 -00.1		09	
10	172	59.6 +03.2	N 24 45.9 +00.0		241	09.8 +02.3	S 01 06.6 -00.1		277	32.3 +02.3	S 15 29.1 -00.1		10	
11	188	02.8 +03.3	N 24 45.9 -00.1		256	12.1 +02.2	S 01 06.5 -00.1		292	34.6 +02.2	S 15 29.0 -00.1		11	
12	203	06.1 +03.2	N 24 45.8 -00.1		271	14.3 +02.3	S 01 06.4 -00.1		307	36.8 +02.3	S 15 28.9 +00.0		12	
13	218	09.3 +03.2	N 24 45.7 +00.0		286	16.6 +02.2	S 01 06.3 -00.1		322	39.1 +02.2	S 15 28.9 -00.1		13	
14	233	12.5 +03.2	N 24 45.7 -00.1		301	18.8 +02.3	S 01 06.2 -00.1		337	41.3 +02.2	S 15 28.8 -00.1		14	
15	248	15.7 +03.2	N 24 45.6 +00.0		316	21.1 +02.2	S 01 06.1 -00.1		352	43.5 +02.3	S 15 28.7 -00.1		15	
16	263	18.9 +03.2	N 24 45.6 -00.1		331	23.3 +02.3	S 01 06.0 -00.1		7	45.8 +02.2	S 15 28.6 +00.0		16	
17	278	22.1 +03.2	N 24 45.5 +00.0		346	25.6 +02.2	S 01 05.9 -00.1		22	48.0 +02.3	S 15 28.6 -00.1		17	
18	293	25.3 +03.2	N 24 45.5 -00.1		1	27.8 +02.3	S 01 05.8 -00.1		37	50.3 +02.2	S 15 28.5 -00.1		18	
19	308	28.5 +03.2	N 24 45.4 +00.0		16	30.1 +02.2	S 01 05.7 -00.1		52	52.5 +02.2	S 15 28.4 -00.1		19	
20	323	31.7 +03.2	N 24 45.4 -00.1		31	32.3 +02.2	S 01 05.6 -00.1		67	54.7 +02.3	S 15 28.3 +00.0		20	
21	338	34.9 +03.2	N 24 45.3 -00.1		46	34.5 +02.3	S 01 05.5 -00.1		82	57.0 +02.2	S 15 28.3 -00.1		21	
22	353	38.1 +03.2	N 24 45.2 +00.0		61	36.8 +02.2	S 01 05.4 -00.1		97	59.2 +02.3	S 15 28.2 -00.1		22	
23	8	41.3 +03.1	N 24 45.2 -00.1		76	39.0 +02.3	S 01 05.3 -00.1		113	01.5 +02.2	S 15 28.1 -00.1		23	
UT	02	06	10	14	18	22		UT	02	06	10	14	18	22
SD	00'1	00'1	00'1	00'1	00'1	00'1		SD	00'3	00'3	00'3	00'3	00'3	00'3
HP	00'2	00'2	00'2	00'2	00'2	00'2		HP	00'0	00'0	00'0	00'0	00'0	00'0
SHA	291°	291°	291°	291°	291°	291°		SHA	359°	359°	359°	359°	359°	359°
Greenwich Culmination Time: 22:25								Greenwich Culmination Time: 17:54						

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UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
<b>00</b>	180 10.9 -00.4	S	23 25.3 -00.1	163 31.6 -00.9	S	23 29.2 -00.4	171 00.7 -40.2	S	27 21.8 -01.3	<b>00</b>			
<b>01</b>	195 10.5 -00.3	S	23 25.2 +00.0	178 30.7 -01.0	S	23 28.8 -00.3	185 20.5 -40.2	S	27 20.5 -01.6	<b>01</b>			
<b>02</b>	210 10.2 -00.3	S	23 25.2 -00.1	193 29.7 -00.9	S	23 28.5 -00.4	199 40.3 -40.2	S	27 18.9 -01.7	<b>02</b>			
<b>03</b>	225 09.9 -00.3	S	23 25.1 +00.0	208 28.8 -00.9	S	23 28.1 -00.3	214 00.1 -40.2	S	27 17.2 -02.0	<b>03</b>			
<b>04</b>	240 09.6 -00.3	S	23 25.1 -00.1	223 27.9 -01.0	S	23 27.8 -00.3	228 19.9 -40.1	S	27 15.2 -02.2	<b>04</b>			
<b>05</b>	255 09.3 -00.3	S	23 25.0 +00.0	238 26.9 -00.9	S	23 27.5 -00.4	242 39.8 -40.1	S	27 13.0 -02.4	<b>05</b>			
<b>06</b>	270 09.0 -00.3	S	23 25.0 +00.0	253 26.0 -00.9	S	23 27.1 -00.3	256 59.7 -40.1	S	27 10.6 -02.6	<b>06</b>			
<b>07</b>	285 08.7 -00.3	S	23 25.0 -00.1	268 25.1 -01.0	S	23 26.8 -00.4	271 19.6 -40.1	S	27 08.0 -02.9	<b>07</b>			
<b>08</b>	300 08.4 -00.4	S	23 24.9 +00.0	283 24.1 -00.9	S	23 26.4 -00.3	285 39.5 -40.0	S	27 05.1 -03.0	<b>08</b>			
<b>09</b>	315 08.0 -00.3	S	23 24.9 -00.1	298 23.2 -00.9	S	23 26.1 -00.4	299 59.5 -40.0	S	27 02.1 -03.3	<b>09</b>			
<b>10</b>	330 07.7 -00.3	S	23 24.8 +00.0	313 22.3 -01.0	S	23 25.7 -00.3	314 19.5 -39.9	S	26 58.8 -03.5	<b>10</b>			
<b>11</b>	345 07.4 -00.3	S	23 24.8 -00.1	328 21.3 -00.9	S	23 25.4 -00.4	328 39.6 -39.9	S	26 55.3 -03.7	<b>11</b>			
<b>12</b>	0 07.1 -00.3	S	23 24.7 +00.0	343 20.4 -00.9	S	23 25.0 -00.3	342 59.7 -39.8	S	26 51.6 -03.9	<b>12</b>			
<b>13</b>	15 06.8 -00.3	S	23 24.7 -00.1	358 19.5 -00.9	S	23 24.7 -00.4	357 19.9 -39.8	S	26 47.7 -04.1	<b>13</b>			
<b>14</b>	30 06.5 -00.3	S	23 24.6 +00.0	13 18.6 -01.0	S	23 24.3 -00.3	11 40.1 -39.7	S	26 43.6 -04.3	<b>14</b>			
<b>15</b>	45 06.2 -00.3	S	23 24.6 -00.1	28 17.6 -00.9	S	23 24.0 -00.4	26 00.4 -39.7	S	26 39.3 -04.5	<b>15</b>			
<b>16</b>	60 05.9 -00.3	S	23 24.5 -00.1	43 16.7 -00.9	S	23 23.6 -00.3	40 20.7 -39.6	S	26 34.8 -04.8	<b>16</b>			
<b>17</b>	75 05.6 -00.4	S	23 24.4 +00.0	58 15.8 -01.0	S	23 23.3 -00.4	54 41.1 -39.5	S	26 30.0 -04.9	<b>17</b>			
<b>18</b>	90 05.2 -00.3	S	23 24.4 -00.1	73 14.8 -00.9	S	23 22.9 -00.4	69 01.6 -39.5	S	26 25.1 -05.1	<b>18</b>			
<b>19</b>	105 04.9 -00.3	S	23 24.3 +00.0	88 13.9 -00.9	S	23 22.5 -00.3	83 22.1 -39.3	S	26 20.0 -05.4	<b>19</b>			
<b>20</b>	120 04.6 -00.3	S	23 24.3 -00.1	103 13.0 -00.9	S	23 22.2 -00.4	97 42.8 -39.3	S	26 14.6 -05.5	<b>20</b>			
<b>21</b>	135 04.3 -00.3	S	23 24.2 +00.0	118 12.1 -01.0	S	23 21.8 -00.3	112 03.5 -39.3	S	26 09.1 -05.7	<b>21</b>			
<b>22</b>	150 04.0 -00.3	S	23 24.2 -00.1	133 11.1 -00.9	S	23 21.5 -00.4	126 24.2 -39.1	S	26 03.4 -06.0	<b>22</b>			
<b>23</b>	165 03.7 -00.3	S	23 24.1 -00.1	148 10.2 -00.9	S	23 21.1 -00.4	140 45.1 -39.1	S	25 57.4 -06.1	<b>23</b>			
<b>UT</b>	<b>02 06 10 14 18 22</b>			<b>UT</b>	<b>02 06 10 14 18 22</b>			<b>UT</b>	<b>02 06 10 14 18 22</b>				
	SD 16'3 16'3 16'3 16'3 16'3 16'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 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 61'2 61'2 61'2 61'1 61'1				
	SHA 088° 087° 087° 087° 087° 087°				SHA 071° 071° 070° 070° 070° 070°				SHA 077° 074° 071° 069° 066° 063°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 13:06				Greenwich Culmination Time: 13:11				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
<b>00</b>	23 44.4 +03.2	N	24 45.1 +00.0	91 41.3 +02.2	S	01 05.2 -00.2	128 03.7 +02.2	S	15 28.0 +00.0	<b>00</b>			
<b>01</b>	38 47.6 +03.2	N	24 45.1 -00.1	106 43.5 +02.3	S	01 05.0 -00.1	143 05.9 +02.3	S	15 28.0 -00.1	<b>01</b>			
<b>02</b>	53 50.8 +03.2	N	24 45.0 +00.0	121 45.8 +02.2	S	01 04.9 -00.1	158 08.2 +02.2	S	15 27.9 -00.1	<b>02</b>			
<b>03</b>	68 54.0 +03.2	N	24 45.0 -00.1	136 48.0 +02.2	S	01 04.8 -00.1	173 10.4 +02.3	S	15 27.8 -00.1	<b>03</b>			
<b>04</b>	83 57.2 +03.2	N	24 44.9 +00.0	151 50.2 +02.3	S	01 04.7 -00.1	188 12.7 +02.2	S	15 27.7 -00.1	<b>04</b>			
<b>05</b>	99 00.4 +03.2	N	24 44.9 -00.1	166 52.5 +02.2	S	01 04.6 -00.1	203 14.9 +02.2	S	15 27.6 +00.0	<b>05</b>			
<b>06</b>	114 03.6 +03.1	N	24 44.8 +00.0	181 54.7 +02.3	S	01 04.5 -00.1	218 17.1 +02.3	S	15 27.6 -00.1	<b>06</b>			
<b>07</b>	129 06.7 +03.2	N	24 44.8 -00.1	196 57.0 +02.2	S	01 04.4 -00.1	233 19.4 +02.2	S	15 27.5 -00.1	<b>07</b>			
<b>08</b>	144 09.9 +03.2	N	24 44.7 -00.1	211 59.2 +02.2	S	01 04.3 -00.1	248 21.6 +02.2	S	15 27.4 -00.1	<b>08</b>			
<b>09</b>	159 13.1 +03.2	N	24 44.6 +00.0	227 01.4 +02.3	S	01 04.2 -00.1	263 23.8 +02.3	S	15 27.3 +00.0	<b>09</b>			
<b>10</b>	174 16.3 +03.2	N	24 44.6 -00.1	242 03.7 +02.2	S	01 04.1 -00.1	278 26.1 +02.2	S	15 27.3 -00.1	<b>10</b>			
<b>11</b>	189 19.5 +03.1	N	24 44.5 +00.0	257 05.9 +02.3	S	01 04.0 -00.1	293 28.3 +02.3	S	15 27.2 -00.1	<b>11</b>			
<b>12</b>	204 22.6 +03.2	N	24 44.5 -00.1	272 08.2 +02.2	S	01 03.9 -00.2	308 30.6 +02.2	S	15 27.1 -00.1	<b>12</b>			
<b>13</b>	219 25.8 +03.2	N	24 44.4 +00.0	287 10.4 +02.2	S	01 03.7 -00.1	323 32.8 +02.2	S	15 27.0 +00.0	<b>13</b>			
<b>14</b>	234 29.0 +03.2	N	24 44.4 -00.1	302 12.6 +02.3	S	01 03.6 -00.1	338 35.0 +02.3	S	15 27.0 -00.1	<b>14</b>			
<b>15</b>	249 32.2 +03.1	N	24 44.3 +00.0	317 14.9 +02.2	S	01 03.5 -00.1	353 37.3 +02.2	S	15 26.9 -00.1	<b>15</b>			
<b>16</b>	264 35.3 +03.2	N	24 44.3 -00.1	332 17.1 +02.3	S	01 03.4 -00.1	8 39.5 +02.2	S	15 26.8 -00.1	<b>16</b>			
<b>17</b>	279 38.5 +03.2	N	24 44.2 +00.0	347 19.4 +02.2	S	01 03.3 -00.1	23 41.7 +02.3	S	15 26.7 +00.0	<b>17</b>			
<b>18</b>	294 41.7 +03.1	N	24 44.2 -00.1	2 21.6 +02.2	S	01 03.2 -00.1	38 44.0 +02.2	S	15 26.7 -00.1	<b>18</b>			
<b>19</b>	309 44.8 +03.2	N	24 44.1 -00.1	17 23.8 +02.3	S	01 03.1 -00.1	53 46.2 +02.3	S	15 26.6 -00.1	<b>19</b>			
<b>20</b>	324 48.0 +03.1	N	24 44.0 +00.0	32 26.1 +02.2	S	01 03.0 -00.1	68 48.5 +02.2	S	15 26.5 -00.1	<b>20</b>			
<b>21</b>	339 51.1 +03.2	N	24 44.0 -00.1	47 28.3 +02.3	S	01 02.9 -00.1	83 50.7 +02.2	S	15 26.4 +00.0	<b>21</b>			
<b>22</b>	354 54.3 +03.2	N	24 43.9 +00.0	62 30.6 +02.2	S	01 02.8 -00.2	98 52.9 +02.3	S	15 26.4 -00.1	<b>22</b>			
<b>23</b>	9 57.5 +03.1	N	24 43.9 -00.1	77 32.8 +02.2	S	01 02.6 -00.1	113 55.2 +02.2	S	15 26.3 -00.1	<b>23</b>			
<b>UT</b>	<b>02 06 10 14 18 22</b>			<b>UT</b>	<b>02 06 10 14 18 22</b>			<b>UT</b>	<b>02 06 10 14 18 22</b>				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'2 00'2 00'2 00'2 00'2 00'2				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 291° 291° 291° 291° 291° 291°				SHA 359° 359° 359° 359° 359° 359°				SHA 036° 036° 036° 036° 035° 035°				
	Greenwich Culmination Time: 22:20				Greenwich Culmination Time: 17:50				Greenwich Culmination Time: 15:25				

UT	Sun				Venus				Moon <span style="float:right">A: 09%</span>				UT	
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec		
00	180 03.4 -00.3	S	23 24.0 +00.0	163 09.3 -01.0	S	23 20.7 -00.3	155 06.0 -39.0	S	25 51.3 -06.3					
01	195 03.1 -00.3	S	23 24.0 -00.1	178 08.3 -00.9	S	23 20.4 -00.4	169 27.0 -38.8	S	25 45.0 -06.6					
02	210 02.8 -00.4	S	23 23.9 +00.0	193 07.4 -00.9	S	23 20.0 -00.4	183 48.2 -38.8	S	25 38.4 -06.7					
03	225 02.4 -00.3	S	23 23.9 -00.1	208 06.5 -00.9	S	23 19.6 -00.3	198 09.4 -38.7	S	25 31.7 -06.9					
04	240 02.1 -00.3	S	23 23.8 -00.1	223 05.6 -01.0	S	23 19.3 -00.4	212 30.7 -38.6	S	25 24.8 -07.1					
05	255 01.8 -00.3	S	23 23.7 +00.0	238 04.6 -00.9	S	23 18.9 -00.4	226 52.1 -38.6	S	25 17.7 -07.3					
06	270 01.5 -00.3	S	23 23.7 -00.1	253 03.7 -00.9	S	23 18.5 -00.4	241 13.5 -38.4	S	25 10.4 -07.4					
07	285 01.2 -00.3	S	23 23.6 -00.1	268 02.8 -00.9	S	23 18.1 -00.3	255 35.1 -38.3	S	25 03.0 -07.7					
08	300 00.9 -00.3	S	23 23.5 +00.0	283 01.9 -01.0	S	23 17.8 -00.4	269 56.8 -38.2	S	24 55.3 -07.8					
09	315 00.6 -00.3	S	23 23.5 -00.1	298 00.9 -00.9	S	23 17.4 -00.4	284 18.6 -38.1	S	24 47.5 -08.0					
10	330 00.3 -00.3	S	23 23.4 -00.1	313 00.0 -00.9	S	23 17.0 -00.4	298 40.5 -37.9	S	24 39.5 -08.2					
11	344 60.0 -00.4	S	23 23.3 +00.0	327 59.1 -00.9	S	23 16.6 -00.3	313 02.6 -37.9	S	24 31.3 -08.3					
12	359 59.6 -00.3	S	23 23.3 -00.1	342 58.2 -00.9	S	23 16.3 -00.4	327 24.7 -37.8	S	24 23.0 -08.6					
13	14 59.3 -00.3	S	23 23.2 -00.1	357 57.3 -01.0	S	23 15.9 -00.4	341 46.9 -37.6	S	24 14.4 -08.7					
14	29 59.0 -00.3	S	23 23.1 -00.1	12 56.3 -00.9	S	23 15.5 -00.4	356 09.3 -37.6	S	24 05.7 -08.8					
15	44 58.7 -00.3	S	23 23.0 +00.0	27 55.4 -00.9	S	23 15.1 -00.4	10 31.7 -37.4	S	23 56.9 -09.1					
16	59 58.4 -00.3	S	23 23.0 -00.1	42 54.5 -00.9	S	23 14.7 -00.4	24 54.3 -37.3	S	23 47.8 -09.2					
17	74 58.1 -00.3	S	23 22.9 -00.1	57 53.6 -01.0	S	23 14.3 -00.3	39 17.0 -37.2	S	23 38.6 -09.3					
18	89 57.8 -00.3	S	23 22.8 -00.1	72 52.6 -00.9	S	23 14.0 -00.4	53 39.8 -37.0	S	23 29.3 -09.6					
19	104 57.5 -00.3	S	23 22.7 +00.0	87 51.7 -00.9	S	23 13.6 -00.4	68 02.8 -37.0	S	23 19.7 -09.7					
20	119 57.2 -00.3	S	23 22.7 -00.1	102 50.8 -00.9	S	23 13.2 -00.4	82 25.8 -36.8	S	23 10.0 -09.8					
21	134 56.9 -00.4	S	23 22.6 -00.1	117 49.9 -00.9	S	23 12.8 -00.4	96 49.0 -36.7	S	23 00.2 -10.0					
22	149 56.5 -00.3	S	23 22.5 -00.1	132 49.0 -01.0	S	23 12.4 -00.4	111 12.3 -36.5	S	22 50.2 -10.1					
23	164 56.2 -00.3	S	23 22.4 +00.0	147 48.0 -00.9	S	23 12.0 -00.4	125 35.8 -36.5	S	22 40.1 -10.3					
<b>UT 02 06 10 14 18 22</b>	<b>SD 16'3 16'3 16'3 16'3 16'3 16'3</b>	<b>HP 00'1 00'1 00'1 00'1 00'1 00'1</b>	<b>SHA 086° 086° 086° 086° 086° 086°</b>	<b>Greenwich Culmination Time: 12:00</b>	<b>UT 02 06 10 14 18 22</b>	<b>SD 00'1 00'1 00'1 00'1 00'1 00'1</b>	<b>HP 00'1 00'1 00'1 00'1 00'1 00'1</b>	<b>SHA 070° 069° 069° 069° 069° 068°</b>	<b>Greenwich Culmination Time: 13:08</b>	<b>UT 02 06 10 14 18 22</b>	<b>SD 16'6 16'6 16'6 16'6 16'6 16'6</b>	<b>HP 61'1 61'0 61'0 60'9 60'9 60'8</b>	<b>SHA 060° 057° 055° 052° 049° 047°</b>	<b>Greenwich Culmination Time: 14:16</b>
<b>UT</b>	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				<b>UT</b>	
	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec	GHA ° / ' / "	ddGHA	Dec ° / ' / "	dDec		
00	25 00.6 +03.2	N	24 43.8 +00.0	92 35.0 +02.3	S	01 02.5 -00.1	128 57.4 +02.2	S	15 26.2 -00.1					
01	40 03.8 +03.1	N	24 43.8 -00.1	107 37.3 +02.2	S	01 02.4 -00.1	143 59.6 +02.3	S	15 26.1 +00.0					
02	55 06.9 +03.2	N	24 43.7 +00.0	122 39.5 +02.2	S	01 02.3 -00.1	159 01.9 +02.2	S	15 26.1 -00.1					
03	70 10.1 +03.1	N	24 43.7 -00.1	137 41.7 +02.3	S	01 02.2 -00.1	174 04.1 +02.2	S	15 26.0 -00.1					
04	85 13.2 +03.2	N	24 43.6 +00.0	152 44.0 +02.2	S	01 02.1 -00.1	189 06.3 +02.3	S	15 25.9 -00.1					
05	100 16.4 +03.1	N	24 43.6 -00.1	167 46.2 +02.2	S	01 02.0 -00.1	204 08.6 +02.2	S	15 25.8 -00.1					
06	115 19.5 +03.2	N	24 43.5 -00.1	182 48.4 +02.3	S	01 01.9 -00.1	219 10.8 +02.3	S	15 25.7 +00.0					
07	130 22.7 +03.1	N	24 43.4 +00.0	197 50.7 +02.2	S	01 01.8 -00.2	234 13.1 +02.2	S	15 25.7 -00.1					
08	145 25.8 +03.2	N	24 43.4 -00.1	212 52.9 +02.2	S	01 01.6 -00.1	249 15.3 +02.2	S	15 25.6 -00.1					
09	160 29.0 +03.1	N	24 43.3 +00.0	227 55.1 +02.3	S	01 01.5 -00.1	264 17.5 +02.3	S	15 25.5 -00.1					
10	175 32.1 +03.2	N	24 43.3 -00.1	242 57.4 +02.2	S	01 01.4 -00.1	279 19.8 +02.2	S	15 25.4 +00.0					
11	190 35.3 +03.1	N	24 43.2 +00.0	257 59.6 +02.2	S	01 01.3 -00.1	294 22.0 +02.2	S	15 25.4 -00.1					
12	205 38.4 +03.1	N	24 43.2 -00.1	273 01.8 +02.3	S	01 01.2 -00.1	309 24.2 +02.3	S	15 25.3 -00.1					
13	220 41.5 +03.2	N	24 43.1 +00.0	288 04.1 +02.2	S	01 01.1 -00.1	324 26.5 +02.2	S	15 25.2 -00.1					
14	235 44.7 +03.1	N	24 43.1 -00.1	303 06.3 +02.2	S	01 01.0 -00.1	339 28.7 +02.2	S	15 25.1 +00.0					
15	250 47.8 +03.2	N	24 43.0 +00.0	318 08.5 +02.3	S	01 00.9 -00.1	354 30.9 +02.3	S	15 25.1 -00.1					
16	265 51.0 +03.1	N	24 43.0 -00.1	333 10.8 +02.2	S	01 00.8 -00.2	9 33.2 +02.2	S	15 25.0 -00.1					
17	280 54.1 +03.1	N	24 42.9 -00.1	348 13.0 +02.2	S	01 00.6 -00.1	24 35.4 +02.2	S	15 24.9 -00.1					
18	295 57.2 +03.1	N	24 42.8 +00.0	3 15.2 +02.3	S	01 00.5 -00.1	39 37.6 +02.3	S	15 24.8 -00.1					
19	311 00.3 +03.2	N	24 42.8 -00.1	18 17.5 +02.2	S	01 00.4 -00.1	54 39.9 +02.2	S	15 24.7 +00.0					
20	326 03.5 +03.1	N	24 42.7 +00.0	33 19.7 +02.2	S	01 00.3 -00.1	69 42.1 +02.2	S	15 24.7 -00.1					
21	341 06.6 +03.1	N	24 42.7 -00.1	48 21.9 +02.3	S	01 00.2 -00.1	84 44.3 +02.3	S	15 24.6 -00.1					
22	356 09.7 +03.2	N	24 42.6 +00.0	63 24.2 +02.2	S	01 00.1 -00.1	99 46.6 +02.2	S	15 24.5 -00.1					
23	11 12.9 +03.1	N	24 42.6 -00.1	78 26.4 +02.2	S	00 60.0 -00.1	114 48.8 +02.2	S	15 24.4 +00.0					
<b>UT 02 06 10 14 18 22</b>	<b>SD 00'1 00'1 00'1 00'1 00'1 00'1</b>	<b>HP 00'2 00'2 00'2 00'2 00'2 00'2</b>	<b>SHA 292° 292° 292° 292° 292° 292°</b>	<b>Greenwich Culmination Time: 22:15</b>	<b>UT 02 06 10 14 18 22</b>	<b>SD 00'3 00'3 00'3 00'3 00'3 00'3</b>	<b>HP 00'0 00'0 00'0 00'0 00'0 00'0</b>	<b>SHA 359° 359° 359° 359° 359° 359°</b>	<b>Greenwich Culmination Time: 17:47</b>	<b>UT 02 06 10 14 18 22</b>	<b>SD 00'1 00'1 00'1 00'1 00'1 00'1</b>	<b>HP 00'0 00'0 00'0 00'0 00'0 00'0</b>	<b>SHA 035° 035° 035° 035° 035° 035°</b>	<b>Greenwich Culmination Time: 15:21</b>

Table with columns for Sun, Venus, and Moon. Each planet section includes UT, GHA, ddGHA, Dec, dDec, and a summary row with SD, HP, and SHA values. A: 13%

Table with columns for Mars, Jupiter, and Saturn. Each planet section includes UT, GHA, ddGHA, Dec, dDec, and a summary row with SD, HP, and SHA values. Greenwich Culmination Time: 22:10, 17:43, and 15:18 respectively.

UT	Sun				Venus				Moon <span style="float: right;">A: 16%</span>				UT				
	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec					
00	179 48.5 -00.3	S	23 20.2 -00.1		162 25.2 -00.9	S	23 01.8 -00.5		126 03.0 -33.2	S	17 43.3 -13.3		00				
01	194 48.2 -00.3	S	23 20.1 -00.1		177 24.3 -00.9	S	23 01.3 -00.4		140 29.8 -33.1	S	17 30.0 -13.4		01				
02	209 47.9 -00.3	S	23 20.0 -00.1		192 23.4 -00.9	S	23 00.9 -00.4		154 56.7 -33.0	S	17 16.6 -13.5		02				
03	224 47.6 -00.3	S	23 19.9 -00.1		207 22.5 -00.9	S	23 00.5 -00.4		169 23.7 -32.9	S	17 03.1 -13.6		03				
04	239 47.3 -00.3	S	23 19.8 -00.1		222 21.6 -00.9	S	23 00.1 -00.5		183 50.8 -32.8	S	16 49.5 -13.7		04				
05	254 47.0 -00.4	S	23 19.7 -00.1		237 20.7 -01.0	S	22 59.6 -00.4		198 18.0 -32.6	S	16 35.8 -13.8		05				
06	269 46.6 -00.3	S	23 19.6 -00.1		252 19.7 -00.9	S	22 59.2 -00.4		212 45.4 -32.5	S	16 22.0 -13.8		06				
07	284 46.3 -00.3	S	23 19.5 -00.1		267 18.8 -00.9	S	22 58.8 -00.5		227 12.9 -32.4	S	16 08.2 -13.9		07				
08	299 46.0 -00.3	S	23 19.4 -00.1		282 17.9 -00.9	S	22 58.3 -00.4		241 40.5 -32.3	S	15 54.3 -14.1		08				
09	314 45.7 -00.3	S	23 19.3 -00.1		297 17.0 -00.9	S	22 57.9 -00.4		256 08.2 -32.1	S	15 40.2 -14.0		09				
10	329 45.4 -00.3	S	23 19.2 -00.2		312 16.1 -00.9	S	22 57.5 -00.5		270 36.1 -32.1	S	15 26.2 -14.2		10				
11	344 45.1 -00.3	S	23 19.0 -00.1		327 15.2 -00.9	S	22 57.0 -00.4		285 04.0 -31.9	S	15 12.0 -14.2		11				
12	359 44.8 -00.3	S	23 18.9 -00.1		342 14.3 -00.9	S	22 56.6 -00.5		299 32.1 -31.8	S	14 57.8 -14.3		12				
13	14 44.5 -00.3	S	23 18.8 -00.1		357 13.4 -00.9	S	22 56.1 -00.4		314 00.3 -31.7	S	14 43.5 -14.4		13				
14	29 44.2 -00.3	S	23 18.7 -00.1		12 12.5 -00.9	S	22 55.7 -00.4		328 28.6 -31.6	S	14 29.1 -14.4		14				
15	44 43.9 -00.3	S	23 18.6 -00.1		27 11.6 -00.9	S	22 55.3 -00.5		342 57.0 -31.5	S	14 14.7 -14.5		15				
16	59 43.6 -00.3	S	23 18.5 -00.1		42 10.7 -00.9	S	22 54.8 -00.4		357 25.5 -31.3	S	14 00.2 -14.6		16				
17	74 43.3 -00.3	S	23 18.4 -00.1		57 09.8 -00.9	S	22 54.4 -00.5		11 54.2 -31.3	S	13 45.6 -14.6		17				
18	89 43.0 -00.4	S	23 18.3 -00.2		72 08.9 -00.9	S	22 53.9 -00.4		26 22.9 -31.1	S	13 31.0 -14.7		18				
19	104 42.6 -00.3	S	23 18.1 -00.1		87 08.0 -00.9	S	22 53.5 -00.5		40 51.8 -31.1	S	13 16.3 -14.7		19				
20	119 42.3 -00.3	S	23 18.0 -00.1		102 07.1 -00.9	S	22 53.0 -00.4		55 20.7 -30.9	S	13 01.6 -14.8		20				
21	134 42.0 -00.3	S	23 17.9 -00.1		117 06.2 -00.9	S	22 52.6 -00.5		69 49.8 -30.8	S	12 46.8 -14.8		21				
22	149 41.7 -00.3	S	23 17.8 -00.1		132 05.3 -00.9	S	22 52.1 -00.4		84 19.0 -30.7	S	12 32.0 -14.9		22				
23	164 41.4 -00.3	S	23 17.7 -00.1		147 04.4 -00.9	S	22 51.7 -00.5		98 48.3 -30.7	S	12 17.1 -15.0		23				
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22				
SD	16°3	16°3	16°3	16°3	16°3	16°3	SD	00°1	00°1	00°1	00°1	00°1	00°1				
HP	00°1	00°1	00°1	00°1	00°1	00°1	HP	00°1	00°1	00°1	00°1	00°1	00°1				
SHA	084°	084°	084°	084°	084°	083°	SHA	067°	067°	066°	066°	066°	066°				
Greenwich Culmination Time: 12:01						Greenwich Culmination Time: 13:11						Greenwich Culmination Time: 16:10					

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UT	Mars				Jupiter				Saturn				UT				
	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec	GHA ° / ' / ''	ddGHA	Dec ° / ' / ''	dDec					
00	27 30.5 +03.1	N	24 41.2 +00.0		94 22.1 +02.2	S	00 57.1 -00.1		130 44.6 +02.3	S	15 22.5 -00.1		00				
01	42 33.6 +03.0	N	24 41.2 -00.1		109 24.3 +02.2	S	00 57.0 -00.1		145 46.9 +02.2	S	15 22.4 -00.1		01				
02	57 36.6 +03.1	N	24 41.1 +00.0		124 26.5 +02.2	S	00 56.9 -00.1		160 49.1 +02.2	S	15 22.3 +00.0		02				
03	72 39.7 +03.1	N	24 41.1 -00.1		139 28.7 +02.3	S	00 56.8 -00.2		175 51.3 +02.3	S	15 22.3 -00.1		03				
04	87 42.8 +03.1	N	24 41.0 +00.0		154 31.0 +02.2	S	00 56.6 -00.1		190 53.6 +02.2	S	15 22.2 -00.1		04				
05	102 45.9 +03.1	N	24 41.0 -00.1		169 33.2 +02.2	S	00 56.5 -00.1		205 55.8 +02.2	S	15 22.1 -00.1		05				
06	117 49.0 +03.0	N	24 40.9 +00.0		184 35.4 +02.2	S	00 56.4 -00.1		220 58.0 +02.2	S	15 22.0 +00.0		06				
07	132 52.0 +03.1	N	24 40.9 -00.1		199 37.6 +02.2	S	00 56.3 -00.1		236 00.2 +02.3	S	15 22.0 -00.1		07				
08	147 55.1 +03.1	N	24 40.8 +00.0		214 39.8 +02.3	S	00 56.2 -00.1		251 02.5 +02.2	S	15 21.9 -00.1		08				
09	162 58.2 +03.1	N	24 40.8 -00.1		229 42.1 +02.2	S	00 56.1 -00.2		266 04.7 +02.2	S	15 21.8 -00.1		09				
10	178 01.3 +03.0	N	24 40.7 -00.1		244 44.3 +02.2	S	00 55.9 -00.1		281 06.9 +02.3	S	15 21.7 -00.1		10				
11	193 04.3 +03.1	N	24 40.6 +00.0		259 46.5 +02.2	S	00 55.8 -00.1		296 09.2 +02.2	S	15 21.6 +00.0		11				
12	208 07.4 +03.1	N	24 40.6 -00.1		274 48.7 +02.2	S	00 55.7 -00.1		311 11.4 +02.2	S	15 21.6 -00.1		12				
13	223 10.5 +03.0	N	24 40.5 +00.0		289 50.9 +02.3	S	00 55.6 -00.1		326 13.6 +02.3	S	15 21.5 -00.1		13				
14	238 13.5 +03.1	N	24 40.5 -00.1		304 53.2 +02.2	S	00 55.5 -00.2		341 15.9 +02.2	S	15 21.4 -00.1		14				
15	253 16.6 +03.1	N	24 40.4 +00.0		319 55.4 +02.2	S	00 55.3 -00.1		356 18.1 +02.2	S	15 21.3 -00.1		15				
16	268 19.7 +03.0	N	24 40.4 -00.1		334 57.6 +02.2	S	00 55.2 -00.1		11 20.3 +02.2	S	15 21.2 +00.0		16				
17	283 22.7 +03.1	N	24 40.3 +00.0		349 59.8 +02.2	S	00 55.1 -00.1		26 22.5 +02.3	S	15 21.2 -00.1		17				
18	298 25.8 +03.0	N	24 40.3 -00.1		5 02.0 +02.3	S	00 55.0 -00.1		41 24.8 +02.2	S	15 21.1 -00.1		18				
19	313 28.8 +03.1	N	24 40.2 +00.0		20 04.3 +02.2	S	00 54.9 -00.1		56 27.0 +02.2	S	15 21.0 -00.1		19				
20	328 31.9 +03.1	N	24 40.2 -00.1		35 06.5 +02.2	S	00 54.8 -00.2		71 29.2 +02.3	S	15 20.9 +00.0		20				
21	343 35.0 +03.0	N	24 40.1 +00.0		50 08.7 +02.2	S	00 54.6 -00.1		86 31.5 +02.2	S	15 20.9 -00.1		21				
22	358 38.0 +03.1	N	24 40.1 -00.1		65 10.9 +02.2	S	00 54.5 -00.1		101 33.7 +02.2	S	15 20.8 -00.1		22				
23	13 41.1 +03.0	N	24 40.0 +00.0		80 13.1 +02.2	S	00 54.4 -00.1		116 35.9 +02.3	S	15 20.7 -00.1		23				
UT	02	06	10	14	18	22	UT	02	06	10	14	18	22				
SD	00°1	00°1	00°1	00°1	00°1	00°1	SD	00°3	00°3	00°3	00°3	00°3	00°3				
HP	00°2	00°2	00°2	00°2	00°2	00°2	HP	00°0	00°0	00°0	00°0	00°0	00°0				
SHA	292°	292°	292°	292°	292°	292°	SHA	359°	359°	359°	359°	359°	359°				
Greenwich Culmination Time: 22:05						Greenwich Culmination Time: 17:39						Greenwich Culmination Time: 15:14					



Table with columns for Sun, Venus, Mars, Jupiter, Saturn, and Moon. Each column contains UT, GHA, ddGHA, Dec, dDec, and a 24-hour data table for SD, HP, and SHA. Includes Greenwich Culmination Time for each planet.

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 33.8 -00.3	S 23 14.5 -00.2	161 42.0 -00.9	S 22 40.0 -00.5	101 29.8 -28.5	S 05 53.3 -15.6	00						
01	194 33.5 -00.3	S 23 14.3 -00.1	176 41.1 -00.9	S 22 39.5 -00.5	116 01.3 -28.4	S 05 37.7 -15.6	01						
02	209 33.2 -00.3	S 23 14.2 -00.2	191 40.2 -00.9	S 22 39.0 -00.5	130 32.9 -28.4	S 05 22.1 -15.7	02						
03	224 32.9 -00.3	S 23 14.0 -00.1	206 39.3 -00.9	S 22 38.5 -00.5	145 04.5 -28.3	S 05 06.4 -15.6	03						
04	239 32.6 -00.3	S 23 13.9 -00.1	221 38.4 -00.9	S 22 38.0 -00.4	159 36.2 -28.3	S 04 50.8 -15.7	04						
05	254 32.3 -00.3	S 23 13.8 -00.2	236 37.5 -00.8	S 22 37.6 -00.5	174 07.9 -28.2	S 04 35.1 -15.6	05						
06	269 32.0 -00.4	S 23 13.6 -00.1	251 36.7 -00.9	S 22 37.1 -00.5	188 39.7 -28.1	S 04 19.5 -15.7	06						
07	284 31.6 -00.3	S 23 13.5 -00.2	266 35.8 -00.9	S 22 36.6 -00.5	203 11.6 -28.1	S 04 03.8 -15.6	07						
08	299 31.3 -00.3	S 23 13.3 -00.1	281 34.9 -00.9	S 22 36.1 -00.5	217 43.5 -28.1	S 03 48.2 -15.7	08						
09	314 31.0 -00.3	S 23 13.2 -00.2	296 34.0 -00.9	S 22 35.6 -00.5	232 15.4 -27.9	S 03 32.5 -15.6	09						
10	329 30.7 -00.3	S 23 13.0 -00.1	311 33.1 -00.9	S 22 35.1 -00.5	246 47.5 -28.0	S 03 16.9 -15.7	10						
11	344 30.4 -00.3	S 23 12.9 -00.2	326 32.2 -00.9	S 22 34.6 -00.5	261 19.5 -27.8	S 03 01.2 -15.6	11						
12	359 30.1 -00.3	S 23 12.7 -00.1	341 31.3 -00.8	S 22 34.1 -00.5	275 51.7 -27.8	S 02 45.6 -15.7	12						
13	14 29.8 -00.3	S 23 12.6 -00.2	356 30.5 -00.9	S 22 33.6 -00.5	290 23.9 -27.8	S 02 29.9 -15.6	13						
14	29 29.5 -00.3	S 23 12.4 -00.1	11 29.6 -00.9	S 22 33.1 -00.5	304 56.1 -27.7	S 02 14.3 -15.6	14						
15	44 29.2 -00.3	S 23 12.3 -00.2	26 28.7 -00.9	S 22 32.6 -00.5	319 28.4 -27.7	S 01 58.7 -15.6	15						
16	59 28.9 -00.3	S 23 12.1 -00.1	41 27.8 -00.9	S 22 32.1 -00.5	334 00.7 -27.6	S 01 43.1 -15.6	16						
17	74 28.6 -00.3	S 23 12.0 -00.2	56 26.9 -00.9	S 22 31.6 -00.5	348 33.1 -27.6	S 01 27.5 -15.6	17						
18	89 28.3 -00.3	S 23 11.8 -00.1	71 26.0 -00.8	S 22 31.1 -00.5	3 05.5 -27.6	S 01 11.9 -15.6	18						
19	104 28.0 -00.3	S 23 11.7 -00.2	86 25.2 -00.9	S 22 30.6 -00.5	17 37.9 -27.5	S 00 56.3 -15.5	19						
20	119 27.7 -00.3	S 23 11.5 -00.1	101 24.3 -00.9	S 22 30.1 -00.5	32 10.4 -27.4	S 00 40.8 -15.6	20						
21	134 27.4 -00.3	S 23 11.4 -00.2	116 23.4 -00.9	S 22 29.6 -00.5	46 43.0 -27.5	S 00 25.2 -15.5	21						
22	149 27.1 -00.3	S 23 11.2 -00.1	131 22.5 -00.9	S 22 29.1 -00.5	61 15.5 -27.4	S 00 09.7 -15.5	22						
23	164 26.8 -00.3	S 23 11.1 -00.2	146 21.6 -00.9	S 22 28.6 -00.5	75 48.1 -27.3	N 00 05.8 +15.5	23						
<b>UT 02 06 10 14 18 22</b> SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 082° 082° 082° 081° 081° 081° Greenwich Culmination Time: 12:01				<b>UT 02 06 10 14 18 22</b> 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 064° 064° 064° 063° 063° 063° Greenwich Culmination Time: 13:13				<b>UT 02 06 10 14 18 22</b> SD 15'9 15'9 15'9 15'8 15'8 15'8 HP 58'5 58'4 58'2 58'1 58'0 57'8 SHA 003° 001° 359° 357° 355° 353° Greenwich Culmination Time: 17:47					
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	29 56.9 +03.0	N 24 38.7 +00.0	96 08.5 +02.2	S 00 51.4 -00.1	132 31.6 +02.3	S 15 18.7 -00.1	00						
01	44 59.9 +03.0	N 24 38.7 -00.1	111 10.7 +02.2	S 00 51.3 -00.1	147 33.9 +02.2	S 15 18.6 +00.0	01						
02	60 02.9 +03.0	N 24 38.6 +00.0	126 12.9 +02.2	S 00 51.2 -00.2	162 36.1 +02.2	S 15 18.6 -00.1	02						
03	75 05.9 +03.0	N 24 38.6 -00.1	141 15.1 +02.2	S 00 51.0 -00.1	177 38.3 +02.2	S 15 18.5 -00.1	03						
04	90 08.9 +03.0	N 24 38.5 +00.0	156 17.3 +02.2	S 00 50.9 -00.1	192 40.5 +02.3	S 15 18.4 -00.1	04						
05	105 11.9 +03.0	N 24 38.5 -00.1	171 19.5 +02.2	S 00 50.8 -00.1	207 42.8 +02.2	S 15 18.3 -00.1	05						
06	120 14.9 +03.0	N 24 38.4 +00.0	186 21.7 +02.2	S 00 50.7 -00.2	222 45.0 +02.2	S 15 18.2 +00.0	06						
07	135 17.9 +03.0	N 24 38.4 -00.1	201 23.9 +02.2	S 00 50.5 -00.1	237 47.2 +02.2	S 15 18.2 -00.1	07						
08	150 20.9 +03.0	N 24 38.3 +00.0	216 26.1 +02.3	S 00 50.4 -00.1	252 49.4 +02.3	S 15 18.1 -00.1	08						
09	165 23.9 +03.0	N 24 38.3 -00.1	231 28.4 +02.2	S 00 50.3 -00.1	267 51.7 +02.2	S 15 18.0 -00.1	09						
10	180 26.9 +03.0	N 24 38.2 +00.0	246 30.6 +02.2	S 00 50.2 -00.1	282 53.9 +02.2	S 15 17.9 -00.1	10						
11	195 29.9 +03.0	N 24 38.2 -00.1	261 32.8 +02.2	S 00 50.1 -00.2	297 56.1 +02.2	S 15 17.8 +00.0	11						
12	210 32.9 +03.0	N 24 38.1 +00.0	276 35.0 +02.2	S 00 49.9 -00.1	312 58.3 +02.3	S 15 17.8 -00.1	12						
13	225 35.9 +03.0	N 24 38.1 -00.1	291 37.2 +02.2	S 00 49.8 -00.1	328 00.6 +02.2	S 15 17.7 -00.1	13						
14	240 38.9 +03.0	N 24 38.0 +00.0	306 39.4 +02.2	S 00 49.7 -00.1	343 02.8 +02.2	S 15 17.6 -00.1	14						
15	255 41.9 +03.0	N 24 38.0 -00.1	321 41.6 +02.2	S 00 49.6 -00.2	358 05.0 +02.2	S 15 17.5 -00.1	15						
16	270 44.9 +03.0	N 24 37.9 +00.0	336 43.8 +02.2	S 00 49.4 -00.1	13 07.2 +02.3	S 15 17.4 +00.0	16						
17	285 47.9 +02.9	N 24 37.9 -00.1	351 46.0 +02.2	S 00 49.3 -00.1	28 09.5 +02.2	S 15 17.4 -00.1	17						
18	300 50.8 +03.0	N 24 37.8 +00.0	6 48.2 +02.2	S 00 49.2 -00.1	43 11.7 +02.2	S 15 17.3 -00.1	18						
19	315 53.8 +03.0	N 24 37.8 -00.1	21 50.4 +02.2	S 00 49.1 -00.1	58 13.9 +02.2	S 15 17.2 -00.1	19						
20	330 56.8 +03.0	N 24 37.7 +00.0	36 52.6 +02.2	S 00 49.0 -00.2	73 16.1 +02.3	S 15 17.1 -00.1	20						
21	345 59.8 +03.0	N 24 37.7 -00.1	51 54.8 +02.2	S 00 48.8 -00.1	88 18.4 +02.2	S 15 17.0 +00.0	21						
22	1 02.8 +02.9	N 24 37.6 +00.0	66 57.0 +02.2	S 00 48.7 -00.1	103 20.6 +02.2	S 15 17.0 -00.1	22						
23	16 05.7 +03.0	N 24 37.6 -00.1	81 59.2 +02.2	S 00 48.6 -00.1	118 22.8 +02.2	S 15 16.9 -00.1	23						
<b>UT 02 06 10 14 18 22</b> SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 293° 293° 293° 293° 293° 293° Greenwich Culmination Time: 21:55				<b>UT 02 06 10 14 18 22</b> 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 359° 359° 359° 359° 359° 359° Greenwich Culmination Time: 17:32				<b>UT 02 06 10 14 18 22</b> 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 035° 035° 035° 035° 035° 035° Greenwich Culmination Time: 15:07					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 26.5 -00.3	S	23 10.9 -00.2	161 20.7 -00.8	S	22 28.1 -00.5	90 20.8 -27.3	N	00 21.3 +15.5				
01	194 26.2 -00.3	S	23 10.7 -00.1	176 19.9 -00.9	S	22 27.6 -00.6	104 53.5 -27.3	N	00 36.8 +15.4				
02	209 25.9 -00.3	S	23 10.6 -00.2	191 19.0 -00.9	S	22 27.0 -00.5	119 26.2 -27.3	N	00 52.2 +15.4				
03	224 25.6 -00.3	S	23 10.4 -00.1	206 18.1 -00.9	S	22 26.5 -00.5	133 58.9 -27.2	N	01 07.6 +15.5				
04	239 25.3 -00.3	S	23 10.3 -00.2	221 17.2 -00.8	S	22 26.0 -00.5	148 31.7 -27.2	N	01 23.1 +15.3				
05	254 25.0 -00.3	S	23 10.1 -00.2	236 16.4 -00.9	S	22 25.5 -00.5	163 04.5 -27.2	N	01 38.4 +15.4				
06	269 24.7 -00.3	S	23 09.9 -00.1	251 15.5 -00.9	S	22 25.0 -00.5	177 37.3 -27.2	N	01 53.8 +15.3				
07	284 24.4 -00.3	S	23 09.8 -00.2	266 14.6 -00.9	S	22 24.5 -00.6	192 10.1 -27.1	N	02 09.1 +15.3				
08	299 24.1 -00.3	S	23 09.6 -00.2	281 13.7 -00.9	S	22 23.9 -00.5	206 43.0 -27.1	N	02 24.4 +15.3				
09	314 23.8 -00.3	S	23 09.4 -00.1	296 12.8 -00.8	S	22 23.4 -00.5	221 15.9 -27.1	N	02 39.7 +15.2				
10	329 23.5 -00.3	S	23 09.3 -00.2	311 12.0 -00.9	S	22 22.9 -00.5	235 48.8 -27.0	N	02 54.9 +15.3				
11	344 23.2 -00.3	S	23 09.1 -00.2	326 11.1 -00.9	S	22 22.4 -00.5	250 21.8 -27.1	N	03 10.2 +15.1				
12	359 22.9 -00.3	S	23 08.9 -00.1	341 10.2 -00.9	S	22 21.9 -00.6	264 54.7 -27.0	N	03 25.3 +15.2				
13	14 22.6 -00.3	S	23 08.8 -00.2	356 09.3 -00.8	S	22 21.3 -00.5	279 27.7 -27.0	N	03 40.5 +15.1				
14	29 22.3 -00.3	S	23 08.6 -00.2	11 08.5 -00.9	S	22 20.8 -00.5	294 00.7 -27.0	N	03 55.6 +15.1				
15	44 22.0 -00.3	S	23 08.4 -00.1	26 07.6 -00.9	S	22 20.3 -00.6	308 33.7 -27.0	N	04 10.7 +15.0				
16	59 21.7 -00.3	S	23 08.3 -00.2	41 06.7 -00.8	S	22 19.7 -00.5	323 06.7 -27.0	N	04 25.7 +15.0				
17	74 21.4 -00.3	S	23 08.1 -00.2	56 05.9 -00.9	S	22 19.2 -00.5	337 39.7 -26.9	N	04 40.7 +15.0				
18	89 21.1 -00.3	S	23 07.9 -00.1	71 05.0 -00.9	S	22 18.7 -00.5	352 12.8 -27.0	N	04 55.7 +15.0				
19	104 20.8 -00.3	S	23 07.8 -00.2	86 04.1 -00.9	S	22 18.2 -00.6	6 45.8 -26.9	N	05 10.7 +14.9				
20	119 20.5 -00.3	S	23 07.6 -00.2	101 03.2 -00.8	S	22 17.6 -00.5	21 18.9 -26.9	N	05 25.6 +14.8				
21	134 20.2 -00.3	S	23 07.4 -00.2	116 02.4 -00.9	S	22 17.1 -00.5	35 52.0 -27.0	N	05 40.4 +14.8				
22	149 19.9 -00.3	S	23 07.2 -00.1	131 01.5 -00.9	S	22 16.6 -00.6	50 25.0 -26.9	N	05 55.2 +14.8				
23	164 19.6 -00.3	S	23 07.1 -00.2	146 00.6 -00.8	S	22 16.0 -00.5	64 58.1 -26.9	N	06 10.0 +14.7				
	UT 02 06 10 14 18 22 SD 16'3 16'3 16'3 16'3 16'3 16'3 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 081° 081° 081° 080° 080° 080° Greenwich Culmination Time: 12:02	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 063° 063° 062° 062° 062° 062° Greenwich Culmination Time: 13:15	UT 02 06 10 14 18 22 SD 15'7 15'7 15'6 15'6 15'6 15'5 HP 57'7 57'6 57'4 57'3 57'2 57'0 SHA 351° 349° 347° 345° 343° 341° Greenwich Culmination Time: 18:32										
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	31 08.7 +03.0	N	24 37.5 +00.0	97 01.4 +02.2	S	00 48.5 -00.2	133 25.0 +02.3	S	15 16.8 -00.1				
01	46 11.7 +03.0	N	24 37.5 -00.1	112 03.6 +02.3	S	00 48.3 -00.1	148 27.3 +02.2	S	15 16.7 -00.1				
02	61 14.7 +02.9	N	24 37.4 +00.0	127 05.9 +02.2	S	00 48.2 -00.1	163 29.5 +02.2	S	15 16.6 +00.0				
03	76 17.6 +03.0	N	24 37.4 -00.1	142 08.1 +02.2	S	00 48.1 -00.1	178 31.7 +02.2	S	15 16.6 -00.1				
04	91 20.6 +03.0	N	24 37.3 +00.0	157 10.3 +02.2	S	00 48.0 -00.2	193 33.9 +02.3	S	15 16.5 -00.1				
05	106 23.6 +02.9	N	24 37.3 +00.0	172 12.5 +02.2	S	00 47.8 -00.1	208 36.2 +02.2	S	15 16.4 -00.1				
06	121 26.5 +03.0	N	24 37.3 -00.1	187 14.7 +02.2	S	00 47.7 -00.1	223 38.4 +02.2	S	15 16.3 -00.1				
07	136 29.5 +03.0	N	24 37.2 +00.0	202 16.9 +02.2	S	00 47.6 -00.1	238 40.6 +02.2	S	15 16.2 -00.1				
08	151 32.5 +02.9	N	24 37.2 -00.1	217 19.1 +02.2	S	00 47.5 -00.2	253 42.8 +02.3	S	15 16.1 +00.0				
09	166 35.4 +03.0	N	24 37.1 +00.0	232 21.3 +02.2	S	00 47.3 -00.1	268 45.1 +02.2	S	15 16.1 -00.1				
10	181 38.4 +03.0	N	24 37.1 -00.1	247 23.5 +02.2	S	00 47.2 -00.1	283 47.3 +02.2	S	15 16.0 -00.1				
11	196 41.4 +02.9	N	24 37.0 +00.0	262 25.7 +02.2	S	00 47.1 -00.1	298 49.5 +02.2	S	15 15.9 -00.1				
12	211 44.3 +03.0	N	24 37.0 -00.1	277 27.9 +02.2	S	00 47.0 -00.2	313 51.7 +02.3	S	15 15.8 -00.1				
13	226 47.3 +02.9	N	24 36.9 +00.0	292 30.1 +02.2	S	00 46.8 -00.1	328 54.0 +02.2	S	15 15.7 +00.0				
14	241 50.2 +03.0	N	24 36.9 -00.1	307 32.3 +02.2	S	00 46.7 -00.1	343 56.2 +02.2	S	15 15.7 -00.1				
15	256 53.2 +02.9	N	24 36.8 +00.0	322 34.5 +02.2	S	00 46.6 -00.1	358 58.4 +02.2	S	15 15.6 -00.1				
16	271 56.1 +03.0	N	24 36.8 -00.1	337 36.7 +02.2	S	00 46.5 -00.2	14 00.6 +02.2	S	15 15.5 -00.1				
17	286 59.1 +02.9	N	24 36.7 +00.0	352 38.9 +02.2	S	00 46.3 -00.1	29 02.8 +02.3	S	15 15.4 -00.1				
18	302 02.0 +03.0	N	24 36.7 -00.1	7 41.1 +02.2	S	00 46.2 -00.1	44 05.1 +02.2	S	15 15.3 +00.0				
19	317 05.0 +02.9	N	24 36.6 +00.0	22 43.3 +02.2	S	00 46.1 -00.1	59 07.3 +02.2	S	15 15.3 -00.1				
20	332 07.9 +03.0	N	24 36.6 -00.1	37 45.5 +02.2	S	00 46.0 -00.2	74 09.5 +02.2	S	15 15.2 -00.1				
21	347 10.9 +02.9	N	24 36.5 +00.0	52 47.7 +02.2	S	00 45.8 -00.1	89 11.7 +02.3	S	15 15.1 -00.1				
22	2 13.8 +02.9	N	24 36.5 -00.1	67 49.9 +02.2	S	00 45.7 -00.1	104 14.0 +02.2	S	15 15.0 -00.1				
23	17 16.7 +03.0	N	24 36.4 +00.0	82 52.1 +02.2	S	00 45.6 -00.2	119 16.2 +02.2	S	15 14.9 +00.0				
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'2 00'2 00'2 00'2 00'2 00'2 SHA 293° 293° 293° 293° 293° 293° Greenwich Culmination Time: 21:51	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 359° 359° 359° 359° 359° 359° Greenwich Culmination Time: 17:29	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 035° 035° 035° 035° 035° 035° Greenwich Culmination Time: 15:04										

UT	Sun				Venus				Moon <span style="float: right;">A: 29%</span>				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	179	19.3	-00.3	S 23 06.9	-00.2	160	59.8	-00.9	S 22 15.5	-00.6	79	31.2	-26.9	N 06 24.7	+14.7	00
01	194	19.0	-00.3	S 23 06.7	-00.2	175	58.9	-00.9	S 22 14.9	-00.5	94	04.3	-26.9	N 06 39.4	+14.7	01
02	209	18.7	-00.3	S 23 06.5	-00.2	190	58.0	-00.8	S 22 14.4	-00.5	108	37.4	-26.9	N 06 54.1	+14.6	02
03	224	18.4	-00.3	S 23 06.3	-00.1	205	57.2	-00.9	S 22 13.9	-00.6	123	10.5	-26.9	N 07 08.7	+14.5	03
04	239	18.1	-00.3	S 23 06.2	-00.2	220	56.3	-00.9	S 22 13.3	-00.5	137	43.6	-26.9	N 07 23.2	+14.5	04
05	254	17.8	-00.3	S 23 06.0	-00.2	235	55.4	-00.8	S 22 12.8	-00.6	152	16.7	-27.0	N 07 37.7	+14.5	05
06	269	17.5	-00.3	S 23 05.8	-00.2	250	54.6	-00.9	S 22 12.2	-00.5	166	49.7	-26.9	N 07 52.2	+14.4	06
07	284	17.2	-00.3	S 23 05.6	-00.2	265	53.7	-00.9	S 22 11.7	-00.6	181	22.8	-26.9	N 08 06.6	+14.4	07
08	299	16.9	-00.3	S 23 05.4	-00.2	280	52.8	-00.8	S 22 11.1	-00.5	195	55.9	-26.9	N 08 21.0	+14.3	08
09	314	16.6	-00.3	S 23 05.2	-00.1	295	52.0	-00.9	S 22 10.6	-00.6	210	29.0	-27.0	N 08 35.3	+14.2	09
10	329	16.3	-00.3	S 23 05.1	-00.2	310	51.1	-00.9	S 22 10.0	-00.5	225	02.0	-26.9	N 08 49.5	+14.2	10
11	344	16.0	-00.3	S 23 04.9	-00.2	325	50.2	-00.8	S 22 09.5	-00.6	239	35.1	-27.0	N 09 03.7	+14.2	11
12	359	15.7	-00.3	S 23 04.7	-00.2	340	49.4	-00.9	S 22 08.9	-00.5	254	08.1	-26.9	N 09 17.9	+14.1	12
13	14	15.4	-00.3	S 23 04.5	-00.2	355	48.5	-00.9	S 22 08.4	-00.6	268	41.2	-27.0	N 09 32.0	+14.0	13
14	29	15.1	-00.3	S 23 04.3	-00.2	10	47.6	-00.8	S 22 07.8	-00.5	283	14.2	-27.0	N 09 46.0	+14.0	14
15	44	14.8	-00.3	S 23 04.1	-00.2	25	46.8	-00.9	S 22 07.3	-00.6	297	47.2	-27.0	N 10 00.0	+13.9	15
16	59	14.5	-00.3	S 23 03.9	-00.2	40	45.9	-00.9	S 22 06.7	-00.5	312	20.2	-27.0	N 10 13.9	+13.9	16
17	74	14.2	-00.3	S 23 03.7	-00.2	55	45.0	-00.8	S 22 06.2	-00.6	326	53.2	-27.0	N 10 27.8	+13.8	17
18	89	13.9	-00.3	S 23 03.5	-00.1	70	44.2	-00.9	S 22 05.6	-00.6	341	26.2	-27.1	N 10 41.6	+13.8	18
19	104	13.6	-00.3	S 23 03.4	-00.2	85	43.3	-00.8	S 22 05.0	-00.5	355	59.1	-27.1	N 10 55.4	+13.7	19
20	119	13.3	-00.3	S 23 03.2	-00.2	100	42.5	-00.9	S 22 04.5	-00.6	10	32.0	-27.0	N 11 09.1	+13.6	20
21	134	13.0	-00.3	S 23 03.0	-00.2	115	41.6	-00.9	S 22 03.9	-00.6	25	05.0	-27.1	N 11 22.7	+13.6	21
22	149	12.7	-00.3	S 23 02.8	-00.2	130	40.7	-00.8	S 22 03.3	-00.5	39	37.9	-27.2	N 11 36.3	+13.5	22
23	164	12.4	-00.3	S 23 02.6	-00.2	145	39.9	-00.9	S 22 02.8	-00.6	54	10.7	-27.1	N 11 49.8	+13.4	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					
	SD 16'3 16'3 16'3 16'3 16'3 16'3					SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 15'5 15'5 15'4 15'4 15'4 15'3					
	HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 00'1 00'1 00'1 00'1 00'1 00'1					HP 56'9 56'8 56'7 56'5 56'4 56'3					
	SHA 080° 080° 079° 079° 079° 079°					SHA 061° 061° 061° 061° 061° 060°					SHA 339° 337° 335° 333° 331° 329°					
	Greenwich Culmination Time: 12:02					Greenwich Culmination Time: 13:16					Greenwich Culmination Time: 19:16					
UT	Mars				Jupiter				Saturn				UT			
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec				
	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "				
00	32	19.7	+02.9	N 24 36.4	-00.1	97	54.3	+02.2	S 00 45.4	-00.1	134	18.4	+02.2	S 15 14.9	-00.1	00
01	47	22.6	+03.0	N 24 36.3	+00.0	112	56.5	+02.2	S 00 45.3	-00.1	149	20.6	+02.2	S 15 14.8	-00.1	01
02	62	25.6	+02.9	N 24 36.3	+00.0	127	58.7	+02.2	S 00 45.2	-00.1	164	22.8	+02.3	S 15 14.7	-00.1	02
03	77	28.5	+02.9	N 24 36.3	-00.1	143	00.9	+02.2	S 00 45.1	-00.2	179	25.1	+02.2	S 15 14.6	-00.1	03
04	92	31.4	+03.0	N 24 36.2	+00.0	158	03.1	+02.2	S 00 44.9	-00.1	194	27.3	+02.2	S 15 14.5	-00.1	04
05	107	34.4	+02.9	N 24 36.2	-00.1	173	05.3	+02.1	S 00 44.8	-00.1	209	29.5	+02.2	S 15 14.4	+00.0	05
06	122	37.3	+02.9	N 24 36.1	+00.0	188	07.4	+02.2	S 00 44.7	-00.1	224	31.7	+02.3	S 15 14.4	-00.1	06
07	137	40.2	+02.9	N 24 36.1	-00.1	203	09.6	+02.2	S 00 44.6	-00.2	239	34.0	+02.2	S 15 14.3	-00.1	07
08	152	43.1	+03.0	N 24 36.0	+00.0	218	11.8	+02.2	S 00 44.4	-00.1	254	36.2	+02.2	S 15 14.2	-00.1	08
09	167	46.1	+02.9	N 24 36.0	-00.1	233	14.0	+02.2	S 00 44.3	-00.1	269	38.4	+02.2	S 15 14.1	-00.1	09
10	182	49.0	+02.9	N 24 35.9	+00.0	248	16.2	+02.2	S 00 44.2	-00.2	284	40.6	+02.2	S 15 14.0	+00.0	10
11	197	51.9	+02.9	N 24 35.9	-00.1	263	18.4	+02.2	S 00 44.0	-00.1	299	42.8	+02.3	S 15 14.0	-00.1	11
12	212	54.8	+02.9	N 24 35.8	+00.0	278	20.6	+02.2	S 00 43.9	-00.1	314	45.1	+02.2	S 15 13.9	-00.1	12
13	227	57.7	+03.0	N 24 35.8	-00.1	293	22.8	+02.2	S 00 43.8	-00.1	329	47.3	+02.2	S 15 13.8	-00.1	13
14	243	00.7	+02.9	N 24 35.7	+00.0	308	25.0	+02.2	S 00 43.7	-00.2	344	49.5	+02.2	S 15 13.7	-00.1	14
15	258	03.6	+02.9	N 24 35.7	+00.0	323	27.2	+02.2	S 00 43.5	-00.1	359	51.7	+02.2	S 15 13.6	-00.1	15
16	273	06.5	+02.9	N 24 35.7	-00.1	338	29.4	+02.2	S 00 43.4	-00.1	14	53.9	+02.3	S 15 13.5	+00.0	16
17	288	09.4	+02.9	N 24 35.6	+00.0	353	31.6	+02.2	S 00 43.3	-00.2	29	56.2	+02.2	S 15 13.5	-00.1	17
18	303	12.3	+02.9	N 24 35.6	-00.1	8	33.8	+02.2	S 00 43.1	-00.1	44	58.4	+02.2	S 15 13.4	-00.1	18
19	318	15.2	+02.9	N 24 35.5	+00.0	23	36.0	+02.2	S 00 43.0	-00.1	60	00.6	+02.2	S 15 13.3	-00.1	19
20	333	18.1	+02.9	N 24 35.5	-00.1	38	38.2	+02.2	S 00 42.9	-00.1	75	02.8	+02.3	S 15 13.2	-00.1	20
21	348	21.0	+02.9	N 24 35.4	+00.0	53	40.4	+02.2	S 00 42.8	-00.2	90	05.1	+02.2	S 15 13.1	+00.0	21
22	3	23.9	+02.9	N 24 35.4	-00.1	68	42.6	+02.1	S 00 42.6	-00.1	105	07.3	+02.2	S 15 13.1	-00.1	22
23	18	26.8	+02.9	N 24 35.3	+00.0	83	44.7	+02.2	S 00 42.5	-00.1	120	09.5	+02.2	S 15 13.0	-00.1	23
	UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					UT 02 06 10 14 18 22					
	SD 00'1 00'1 00'1 00'1 00'1 00'1					SD 00'3 00'3 00'3 00'3 00'3 00'3					SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'2 00'2 00'2 00'2 00'2 00'2					HP 00'0 00'0 00'0 00'0 00'0 00'0					HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 293° 293° 293° 293° 293° 293°					SHA 358° 358° 358° 358° 358° 358°					SHA 035° 035° 035° 035° 035° 035°					
	Greenwich Culmination Time: 21:46					Greenwich Culmination Time: 17:25					Greenwich Culmination Time: 15:00					





