

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	178 59.8 +00.2	N 04 26.9 +01.0	222 16.7 -00.2	S 12 20.6 -00.6	180 32.6 -26.9	S 00 11.0 -14.9	00	00					
01	193 60.0 +00.1	N 04 27.9 +00.9	237 16.5 -00.2	S 12 20.0 -00.7	195 05.7 -26.8	N 00 03.9 +14.8	01	00					
02	209 00.1 +00.2	N 04 28.8 +01.0	252 16.3 -00.1	S 12 19.3 -00.6	209 38.9 -26.9	N 00 18.7 +14.8	02	00					
03	224 00.3 +00.2	N 04 29.8 +01.0	267 16.2 -00.2	S 12 18.7 -00.7	224 12.0 -26.8	N 00 33.5 +14.9	03	00					
04	239 00.5 +00.2	N 04 30.8 +00.9	282 16.0 -00.1	S 12 18.0 -00.6	238 45.2 -26.9	N 00 48.4 +14.8	04	00					
05	254 00.7 +00.2	N 04 31.7 +01.0	297 15.9 -00.2	S 12 17.4 -00.7	253 18.3 -26.8	N 01 03.2 +14.7	05	01					
06	269 00.9 +00.2	N 04 32.7 +01.0	312 15.7 -00.1	S 12 16.7 -00.7	267 51.5 -26.7	N 01 17.9 +14.8	06	01					
07	284 01.1 +00.2	N 04 33.7 +00.9	327 15.6 -00.2	S 12 16.0 -00.6	282 24.8 -26.8	N 01 32.7 +14.8	07	01					
08	299 01.3 +00.1	N 04 34.6 +01.0	342 15.4 -00.2	S 12 15.4 -00.7	296 58.0 -26.7	N 01 47.5 +14.7	08	01					
09	314 01.4 +00.2	N 04 35.6 +01.0	357 15.2 -00.1	S 12 14.7 -00.7	311 31.3 -26.8	N 02 02.2 +14.7	09	02					
10	329 01.6 +00.2	N 04 36.6 +00.9	12 15.1 -00.2	S 12 14.0 -00.6	326 04.5 -26.7	N 02 16.9 +14.7	10	02					
11	344 01.8 +00.2	N 04 37.5 +01.0	27 14.9 -00.1	S 12 13.4 -00.7	340 37.8 -26.7	N 02 31.6 +14.6	11	02					
12	359 02.0 +00.2	N 04 38.5 +01.0	42 14.8 -00.2	S 12 12.7 -00.6	355 11.1 -26.7	N 02 46.2 +14.7	12	02					
13	14 02.2 +00.2	N 04 39.5 +00.9	57 14.6 -00.1	S 12 12.1 -00.7	9 44.4 -26.6	N 03 00.9 +14.6	13	03					
14	29 02.4 +00.1	N 04 40.4 +01.0	72 14.5 -00.2	S 12 11.4 -00.7	24 17.8 -26.7	N 03 15.5 +14.6	14	03					
15	44 02.5 +00.2	N 04 41.4 +01.0	87 14.3 -00.2	S 12 10.7 -00.6	38 51.1 -26.7	N 03 30.1 +14.5	15	03					
16	59 02.7 +00.2	N 04 42.4 +00.9	102 14.1 -00.1	S 12 10.1 -00.7	53 24.4 -26.6	N 03 44.6 +14.6	16	03					
17	74 02.9 +00.2	N 04 43.3 +01.0	117 14.0 -00.2	S 12 09.4 -00.7	67 57.8 -26.7	N 03 59.2 +14.5	17	03					
18	89 03.1 +00.2	N 04 44.3 +00.9	132 13.8 -00.1	S 12 08.7 -00.7	82 31.1 -26.6	N 04 13.7 +14.4	18	04					
19	104 03.3 +00.2	N 04 45.2 +01.0	147 13.7 -00.2	S 12 08.0 -00.6	97 04.5 -26.6	N 04 28.1 +14.5	19	04					
20	119 03.5 +00.1	N 04 46.2 +01.0	162 13.5 -00.1	S 12 07.4 -00.7	111 37.9 -26.6	N 04 42.6 +14.4	20	04					
21	134 03.6 +00.2	N 04 47.2 +00.9	177 13.4 -00.2	S 12 06.7 -00.7	126 11.3 -26.7	N 04 57.0 +14.4	21	04					
22	149 03.8 +00.2	N 04 48.1 +01.0	192 13.2 -00.2	S 12 06.0 -00.6	140 44.6 -26.6	N 05 11.4 +14.3	22	05					
23	164 04.0 +00.2	N 04 49.1 +01.0	207 13.0 -00.1	S 12 05.4 -00.7	155 18.0 -26.6	N 05 25.7 +14.3	23	05					
	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 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'5 15'5 15'4 15'4 15'4 15'4								
	HP 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 56'8 56'8 56'7 56'6 56'5 56'4								
	SHA 350° 349° 349° 349° 349° 349°		SHA 033° 033° 033° 032° 032° 032°		SHA 350° 348° 346° 344° 342° 341°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:10		Greenwich Culmination Time: 12:19								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	227 11.6 +00.6	S 16 10.6 -00.6	196 55.8 +01.9	S 04 22.6 -00.2	224 36.9 +02.2	S 15 03.4 -00.1	00	00					
01	242 12.2 +00.6	S 16 10.0 -00.5	211 57.7 +01.9	S 04 22.4 -00.3	239 39.1 +02.2	S 15 03.3 -00.1	01	00					
02	257 12.8 +00.6	S 16 09.5 -00.6	226 59.6 +01.9	S 04 22.1 -00.2	254 41.3 +02.3	S 15 03.2 -00.1	02	00					
03	272 13.4 +00.6	S 16 08.9 -00.6	242 01.5 +01.9	S 04 21.9 -00.2	269 43.6 +02.2	S 15 03.1 +00.0	03	00					
04	287 14.0 +00.6	S 16 08.3 -00.5	257 03.4 +02.0	S 04 21.7 -00.2	284 45.8 +02.3	S 15 03.1 -00.1	04	00					
05	302 14.6 +00.6	S 16 07.8 -00.6	272 05.4 +01.9	S 04 21.5 -00.3	299 48.1 +02.2	S 15 03.0 -00.1	05	00					
06	317 15.2 +00.6	S 16 07.2 -00.6	287 07.3 +01.9	S 04 21.2 -00.2	314 50.3 +02.2	S 15 02.9 +00.0	06	00					
07	332 15.8 +00.6	S 16 06.6 -00.5	302 09.2 +01.9	S 04 21.0 -00.2	329 52.5 +02.3	S 15 02.9 -00.1	07	00					
08	347 16.4 +00.5	S 16 06.1 -00.6	317 11.1 +02.0	S 04 20.8 -00.3	344 54.8 +02.2	S 15 02.8 -00.1	08	00					
09	2 16.9 +00.6	S 16 05.5 -00.6	332 13.1 +01.9	S 04 20.5 -00.2	359 57.0 +02.2	S 15 02.7 +00.0	09	00					
10	17 17.5 +00.6	S 16 04.9 -00.5	347 15.0 +01.9	S 04 20.3 -00.2	14 59.2 +02.3	S 15 02.7 -00.1	10	00					
11	32 18.1 +00.6	S 16 04.4 -00.6	2 16.9 +01.9	S 04 20.1 -00.2	30 01.5 +02.2	S 15 02.6 -00.1	11	00					
12	47 18.7 +00.6	S 16 03.8 -00.6	17 18.8 +02.0	S 04 19.9 -00.3	45 03.7 +02.3	S 15 02.5 +00.0	12	00					
13	62 19.3 +00.6	S 16 03.2 -00.5	32 20.8 +01.9	S 04 19.6 -00.2	60 06.0 +02.2	S 15 02.5 -00.1	13	00					
14	77 19.9 +00.6	S 16 02.7 -00.6	47 22.7 +01.9	S 04 19.4 -00.2	75 08.2 +02.2	S 15 02.4 -00.1	14	00					
15	92 20.5 +00.6	S 16 02.1 -00.6	62 24.6 +01.9	S 04 19.2 -00.2	90 10.4 +02.3	S 15 02.3 +00.0	15	00					
16	107 21.1 +00.6	S 16 01.5 -00.5	77 26.5 +01.9	S 04 19.0 -00.3	105 12.7 +02.2	S 15 02.3 -00.1	16	00					
17	122 21.7 +00.6	S 16 01.0 -00.6	92 28.4 +02.0	S 04 18.7 -00.2	120 14.9 +02.3	S 15 02.2 -00.1	17	00					
18	137 22.3 +00.6	S 16 00.4 -00.6	107 30.4 +01.9	S 04 18.5 -00.2	135 17.2 +02.2	S 15 02.1 -00.1	18	00					
19	152 22.9 +00.6	S 15 59.8 -00.5	122 32.3 +01.9	S 04 18.3 -00.3	150 19.4 +02.2	S 15 02.0 +00.0	19	00					
20	167 23.5 +00.6	S 15 59.3 -00.6	137 34.2 +01.9	S 04 18.0 -00.2	165 21.6 +02.3	S 15 02.0 -00.1	20	00					
21	182 24.1 +00.5	S 15 58.7 -00.6	152 36.1 +02.0	S 04 17.8 -00.2	180 23.9 +02.2	S 15 01.9 -00.1	21	00					
22	197 24.6 +00.6	S 15 58.1 -00.6	167 38.1 +01.9	S 04 17.6 -00.2	195 26.1 +02.3	S 15 01.8 +00.0	22	00					
23	212 25.2 +00.6	S 15 57.5 -00.5	182 40.0 +01.9	S 04 17.4 -00.3	210 28.4 +02.2	S 15 01.8 -00.1	23	00					
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 038° 038° 038° 037° 037° 037°		SHA 008° 008° 008° 007° 007° 007°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:50		Greenwich Culmination Time: 10:50		Greenwich Culmination Time: 09:00								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 04.2 +00.2	N 04 50.1 +00.9	222 12.9 -00.2	S 12 04.7 -00.7	169 51.4 -26.6	N 05 40.0 +14.3	00						
01	194 04.4 +00.2	N 04 51.0 +01.0	237 12.7 -00.1	S 12 04.0 -00.7	184 24.8 -26.6	N 05 54.3 +14.2	01						
02	209 04.6 +00.1	N 04 52.0 +01.0	252 12.6 -00.2	S 12 03.3 -00.6	198 58.2 -26.6	N 06 08.5 +14.2	02						
03	224 04.7 +00.2	N 04 53.0 +00.9	267 12.4 -00.2	S 12 02.7 -00.7	213 31.6 -26.6	N 06 22.7 +14.2	03						
04	239 04.9 +00.2	N 04 53.9 +01.0	282 12.2 -00.1	S 12 02.0 -00.7	228 05.0 -26.6	N 06 36.9 +14.1	04						
05	254 05.1 +00.2	N 04 54.9 +00.9	297 12.1 -00.2	S 12 01.3 -00.7	242 38.4 -26.7	N 06 51.0 +14.1	05						
06	269 05.3 +00.2	N 04 55.8 +01.0	312 11.9 -00.1	S 12 00.6 -00.6	257 11.7 -26.6	N 07 05.1 +14.0	06						
07	284 05.5 +00.2	N 04 56.8 +01.0	327 11.8 -00.2	S 11 60.0 -00.7	271 45.1 -26.6	N 07 19.1 +14.0	07						
08	299 05.7 +00.2	N 04 57.8 +00.9	342 11.6 -00.2	S 11 59.3 -00.7	286 18.5 -26.6	N 07 33.1 +13.9	08						
09	314 05.9 +00.1	N 04 58.7 +01.0	357 11.4 -00.1	S 11 58.6 -00.7	300 51.9 -26.7	N 07 47.0 +13.9	09						
10	329 06.0 +00.2	N 04 59.7 +00.9	12 11.3 -00.2	S 11 57.9 -00.7	315 25.2 -26.6	N 08 00.9 +13.9	10						
11	344 06.2 +00.2	N 05 00.6 +01.0	27 11.1 -00.1	S 11 57.2 -00.6	329 58.6 -26.7	N 08 14.8 +13.8	11						
12	359 06.4 +00.2	N 05 01.6 +01.0	42 11.0 -00.2	S 11 56.6 -00.7	344 31.9 -26.7	N 08 28.6 +13.7	12						
13	14 06.6 +00.2	N 05 02.6 +00.9	57 10.8 -00.2	S 11 55.9 -00.7	359 05.2 -26.6	N 08 42.3 +13.7	13						
14	29 06.8 +00.1	N 05 03.5 +01.0	72 10.6 -00.1	S 11 55.2 -00.7	13 38.6 -26.7	N 08 56.0 +13.7	14						
15	44 06.9 +00.2	N 05 04.5 +00.9	87 10.5 -00.2	S 11 54.5 -00.7	28 11.9 -26.7	N 09 09.7 +13.6	15						
16	59 07.1 +00.2	N 05 05.4 +01.0	102 10.3 -00.1	S 11 53.8 -00.7	42 45.2 -26.7	N 09 23.3 +13.6	16						
17	74 07.3 +00.2	N 05 06.4 +01.0	117 10.2 -00.2	S 11 53.1 -00.6	57 18.5 -26.7	N 09 36.9 +13.5	17						
18	89 07.5 +00.2	N 05 07.4 +00.9	132 10.0 -00.2	S 11 52.5 -00.7	71 51.8 -26.8	N 09 50.4 +13.4	18						
19	104 07.7 +00.2	N 05 08.3 +01.0	147 09.8 -00.1	S 11 51.8 -00.7	86 25.0 -26.7	N 10 03.8 +13.4	19						
20	119 07.9 +00.1	N 05 09.3 +00.9	162 09.7 -00.2	S 11 51.1 -00.7	100 58.3 -26.8	N 10 17.2 +13.4	20						
21	134 08.0 +00.2	N 05 10.2 +01.0	177 09.5 -00.2	S 11 50.4 -00.7	115 31.5 -26.8	N 10 30.6 +13.3	21						
22	149 08.2 +00.2	N 05 11.2 +01.0	192 09.3 -00.1	S 11 49.7 -00.7	130 04.7 -26.8	N 10 43.9 +13.2	22						
23	164 08.4 +00.2	N 05 12.2 +00.9	207 09.2 -00.2	S 11 49.0 -00.7	144 37.9 -26.8	N 10 57.1 +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 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'3 15'3 15'3 15'3 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 56'3 56'2 56'1 56'0 55'9 55'8								
	SHA 349° 349° 348° 348° 348° 348°		SHA 032° 032° 031° 031° 031° 031°		SHA 339° 337° 335° 333° 331° 329°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:11		Greenwich Culmination Time: 13:03								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	227 25.8 +00.6	S 15 57.0 -00.6	197 41.9 +01.9	S 04 17.1 -00.2	225 30.6 +02.2	S 15 01.7 -00.1	00						
01	242 26.4 +00.6	S 15 56.4 -00.6	212 43.8 +02.0	S 04 16.9 -00.2	240 32.8 +02.3	S 15 01.6 +00.0	01						
02	257 27.0 +00.6	S 15 55.8 -00.5	227 45.8 +01.9	S 04 16.7 -00.2	255 35.1 +02.2	S 15 01.6 -00.1	02						
03	272 27.6 +00.6	S 15 55.3 -00.6	242 47.7 +01.9	S 04 16.5 -00.3	270 37.3 +02.3	S 15 01.5 -00.1	03						
04	287 28.2 +00.6	S 15 54.7 -00.6	257 49.6 +01.9	S 04 16.2 -00.2	285 39.6 +02.2	S 15 01.4 +00.0	04						
05	302 28.8 +00.6	S 15 54.1 -00.6	272 51.5 +02.0	S 04 16.0 -00.2	300 41.8 +02.2	S 15 01.4 -00.1	05						
06	317 29.4 +00.6	S 15 53.5 -00.5	287 53.5 +01.9	S 04 15.8 -00.3	315 44.0 +02.3	S 15 01.3 -00.1	06						
07	332 30.0 +00.6	S 15 53.0 -00.6	302 55.4 +01.9	S 04 15.5 -00.2	330 46.3 +02.2	S 15 01.2 +00.0	07						
08	347 30.6 +00.6	S 15 52.4 -00.6	317 57.3 +01.9	S 04 15.3 -00.2	345 48.5 +02.3	S 15 01.2 -00.1	08						
09	2 31.2 +00.6	S 15 51.8 -00.5	332 59.2 +01.9	S 04 15.1 -00.2	0 50.8 +02.2	S 15 01.1 -00.1	09						
10	17 31.8 +00.6	S 15 51.3 -00.6	348 01.1 +02.0	S 04 14.9 -00.3	15 53.0 +02.2	S 15 01.0 +00.0	10						
11	32 32.4 +00.6	S 15 50.7 -00.6	3 03.1 +01.9	S 04 14.6 -00.2	30 55.2 +02.3	S 15 01.0 -00.1	11						
12	47 33.0 +00.6	S 15 50.1 -00.6	18 05.0 +01.9	S 04 14.4 -00.2	45 57.5 +02.2	S 15 00.9 -00.1	12						
13	62 33.6 +00.6	S 15 49.5 -00.5	33 06.9 +01.9	S 04 14.2 -00.2	60 59.7 +02.3	S 15 00.8 -00.1	13						
14	77 34.2 +00.6	S 15 49.0 -00.6	48 08.8 +02.0	S 04 14.0 -00.3	76 02.0 +02.2	S 15 00.7 +00.0	14						
15	92 34.8 +00.6	S 15 48.4 -00.6	63 10.8 +01.9	S 04 13.7 -00.2	91 04.2 +02.2	S 15 00.7 -00.1	15						
16	107 35.4 +00.5	S 15 47.8 -00.6	78 12.7 +01.9	S 04 13.5 -00.2	106 06.4 +02.3	S 15 00.6 -00.1	16						
17	122 35.9 +00.6	S 15 47.2 -00.5	93 14.6 +01.9	S 04 13.3 -00.2	121 08.7 +02.2	S 15 00.5 +00.0	17						
18	137 36.5 +00.6	S 15 46.7 -00.6	108 16.5 +02.0	S 04 13.1 -00.3	136 10.9 +02.3	S 15 00.5 -00.1	18						
19	152 37.1 +00.6	S 15 46.1 -00.6	123 18.5 +01.9	S 04 12.8 -00.2	151 13.2 +02.2	S 15 00.4 -00.1	19						
20	167 37.7 +00.6	S 15 45.5 -00.6	138 20.4 +01.9	S 04 12.6 -00.2	166 15.4 +02.3	S 15 00.3 +00.0	20						
21	182 38.3 +00.6	S 15 44.9 -00.6	153 22.3 +01.9	S 04 12.4 -00.3	181 17.7 +02.2	S 15 00.3 -00.1	21						
22	197 38.9 +00.6	S 15 44.3 -00.5	168 24.2 +02.0	S 04 12.1 -00.2	196 19.9 +02.2	S 15 00.2 -00.1	22						
23	212 39.5 +00.6	S 15 43.8 -00.6	183 26.2 +01.9	S 04 11.9 -00.2	211 22.1 +02.3	S 15 00.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 037° 037° 037° 037° 037° 036°		SHA 007° 007° 007° 007° 007° 007°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:49		Greenwich Culmination Time: 10:47		Greenwich Culmination Time: 08:56								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 08.6 +00.2	N 05 13.1 +01.0	222 09.0 -00.1	S 11 48.3 -00.7	159 11.1 -26.8	N 11 10.3 +13.1	00						
01	194 08.8 +00.2	N 05 14.1 +00.9	237 08.9 -00.2	S 11 47.6 -00.6	173 44.3 -26.9	N 11 23.4 +13.0	01						
02	209 09.0 +00.1	N 05 15.0 +01.0	252 08.7 -00.2	S 11 47.0 -00.7	188 17.4 -26.9	N 11 36.4 +13.0	02						
03	224 09.1 +00.2	N 05 16.0 +01.0	267 08.5 -00.1	S 11 46.3 -00.7	202 50.5 -26.9	N 11 49.4 +13.0	03						
04	239 09.3 +00.2	N 05 17.0 +00.9	282 08.4 -00.2	S 11 45.6 -00.7	217 23.6 -26.9	N 12 02.4 +12.8	04						
05	254 09.5 +00.2	N 05 17.9 +01.0	297 08.2 -00.2	S 11 44.9 -00.7	231 56.7 -26.9	N 12 15.2 +12.8	05						
06	269 09.7 +00.2	N 05 18.9 +00.9	312 08.0 -00.1	S 11 44.2 -00.7	246 29.8 -27.0	N 12 28.0 +12.8	06						
07	284 09.9 +00.1	N 05 19.8 +01.0	327 07.9 -00.2	S 11 43.5 -00.7	261 02.8 -27.0	N 12 40.8 +12.7	07						
08	299 10.0 +00.2	N 05 20.8 +01.0	342 07.7 -00.1	S 11 42.8 -00.7	275 35.8 -27.0	N 12 53.5 +12.6	08						
09	314 10.2 +00.2	N 05 21.8 +00.9	357 07.6 -00.2	S 11 42.1 -00.7	290 08.8 -27.0	N 13 06.1 +12.5	09						
10	329 10.4 +00.2	N 05 22.7 +01.0	12 07.4 -00.2	S 11 41.4 -00.7	304 41.8 -27.1	N 13 18.6 +12.5	10						
11	344 10.6 +00.2	N 05 23.7 +00.9	27 07.2 -00.1	S 11 40.7 -00.7	319 14.7 -27.0	N 13 31.1 +12.4	11						
12	359 10.8 +00.2	N 05 24.6 +01.0	42 07.1 -00.2	S 11 40.0 -00.7	333 47.7 -27.1	N 13 43.5 +12.4	12						
13	14 11.0 +00.1	N 05 25.6 +00.9	57 06.9 -00.2	S 11 39.3 -00.7	348 20.6 -27.2	N 13 55.9 +12.2	13						
14	29 11.1 +00.2	N 05 26.5 +01.0	72 06.7 -00.1	S 11 38.6 -00.7	2 53.4 -27.1	N 14 08.1 +12.2	14						
15	44 11.3 +00.2	N 05 27.5 +00.9	87 06.6 -00.2	S 11 37.9 -00.7	17 26.3 -27.2	N 14 20.3 +12.2	15						
16	59 11.5 +00.2	N 05 28.4 +01.0	102 06.4 -00.2	S 11 37.2 -00.7	31 59.1 -27.3	N 14 32.5 +12.0	16						
17	74 11.7 +00.2	N 05 29.4 +01.0	117 06.2 -00.1	S 11 36.5 -00.7	46 31.8 -27.2	N 14 44.5 +12.0	17						
18	89 11.9 +00.1	N 05 30.4 +00.9	132 06.1 -00.2	S 11 35.8 -00.7	61 04.6 -27.3	N 14 56.5 +11.9	18						
19	104 12.0 +00.2	N 05 31.3 +01.0	147 05.9 -00.1	S 11 35.1 -00.7	75 37.3 -27.3	N 15 08.4 +11.9	19						
20	119 12.2 +00.2	N 05 32.3 +00.9	162 05.8 -00.2	S 11 34.4 -00.7	90 10.0 -27.4	N 15 20.3 +11.7	20						
21	134 12.4 +00.2	N 05 33.2 +01.0	177 05.6 -00.2	S 11 33.7 -00.7	104 42.6 -27.3	N 15 32.0 +11.7	21						
22	149 12.6 +00.2	N 05 34.2 +00.9	192 05.4 -00.1	S 11 33.0 -00.7	119 15.3 -27.4	N 15 43.7 +11.6	22						
23	164 12.8 +00.2	N 05 35.1 +01.0	207 05.3 -00.2	S 11 32.3 -00.7	133 47.9 -27.5	N 15 55.3 +11.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'2 15'2 15'1 15'1 15'1 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 55'7 55'6 55'5 55'5 55'4 55'3								
	SHA 348° 348° 347° 347° 347° 347°		SHA 031° 031° 030° 030° 030° 030°		SHA 327° 325° 323° 321° 319° 317°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:11		Greenwich Culmination Time: 13:48								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	227 40.1 +00.6	S 15 43.2 -00.6	198 28.1 +01.9	S 04 11.7 -00.2	226 24.4 +02.2	S 15 00.1 -00.1	00						
01	242 40.7 +00.6	S 15 42.6 -00.6	213 30.0 +01.9	S 04 11.5 -00.3	241 26.6 +02.3	S 15 00.0 -00.1	01						
02	257 41.3 +00.6	S 15 42.0 -00.5	228 31.9 +02.0	S 04 11.2 -00.2	256 28.9 +02.2	S 14 59.9 +00.0	02						
03	272 41.9 +00.6	S 15 41.5 -00.6	243 33.9 +01.9	S 04 11.0 -00.2	271 31.1 +02.3	S 14 59.9 -00.1	03						
04	287 42.5 +00.6	S 15 40.9 -00.6	258 35.8 +01.9	S 04 10.8 -00.2	286 33.4 +02.2	S 14 59.8 -00.1	04						
05	302 43.1 +00.6	S 15 40.3 -00.6	273 37.7 +01.9	S 04 10.6 -00.3	301 35.6 +02.2	S 14 59.7 +00.0	05						
06	317 43.7 +00.6	S 15 39.7 -00.6	288 39.6 +02.0	S 04 10.3 -00.2	316 37.8 +02.3	S 14 59.7 -00.1	06						
07	332 44.3 +00.6	S 15 39.1 -00.5	303 41.6 +01.9	S 04 10.1 -00.2	331 40.1 +02.2	S 14 59.6 -00.1	07						
08	347 44.9 +00.6	S 15 38.6 -00.6	318 43.5 +01.9	S 04 09.9 -00.2	346 42.3 +02.3	S 14 59.5 +00.0	08						
09	2 45.5 +00.6	S 15 38.0 -00.6	333 45.4 +01.9	S 04 09.7 -00.3	1 44.6 +02.2	S 14 59.5 -00.1	09						
10	17 46.1 +00.6	S 15 37.4 -00.6	348 47.3 +02.0	S 04 09.4 -00.2	16 46.8 +02.3	S 14 59.4 -00.1	10						
11	32 46.7 +00.6	S 15 36.8 -00.6	3 49.3 +01.9	S 04 09.2 -00.2	31 49.1 +02.2	S 14 59.3 +00.0	11						
12	47 47.3 +00.6	S 15 36.2 -00.5	18 51.2 +01.9	S 04 09.0 -00.3	46 51.3 +02.2	S 14 59.3 -00.1	12						
13	62 47.9 +00.6	S 15 35.7 -00.6	33 53.1 +01.9	S 04 08.7 -00.2	61 53.5 +02.3	S 14 59.2 -00.1	13						
14	77 48.5 +00.6	S 15 35.1 -00.6	48 55.0 +02.0	S 04 08.5 -00.2	76 55.8 +02.2	S 14 59.1 +00.0	14						
15	92 49.1 +00.6	S 15 34.5 -00.6	63 57.0 +01.9	S 04 08.3 -00.2	91 58.0 +02.3	S 14 59.1 -00.1	15						
16	107 49.7 +00.6	S 15 33.9 -00.6	78 58.9 +01.9	S 04 08.1 -00.3	107 00.3 +02.2	S 14 59.0 -00.1	16						
17	122 50.3 +00.6	S 15 33.3 -00.5	94 00.8 +01.9	S 04 07.8 -00.2	122 02.5 +02.3	S 14 58.9 +00.0	17						
18	137 50.9 +00.6	S 15 32.8 -00.6	109 02.7 +02.0	S 04 07.6 -00.2	137 04.8 +02.2	S 14 58.9 -00.1	18						
19	152 51.5 +00.6	S 15 32.2 -00.6	124 04.7 +01.9	S 04 07.4 -00.2	152 07.0 +02.3	S 14 58.8 -00.1	19						
20	167 52.1 +00.6	S 15 31.6 -00.6	139 06.6 +01.9	S 04 07.2 -00.3	167 09.3 +02.2	S 14 58.7 +00.0	20						
21	182 52.7 +00.6	S 15 31.0 -00.6	154 08.5 +02.0	S 04 06.9 -00.2	182 11.5 +02.2	S 14 58.7 -00.1	21						
22	197 53.3 +00.6	S 15 30.4 -00.5	169 10.5 +01.9	S 04 06.7 -00.2	197 13.7 +02.3	S 14 58.6 -00.1	22						
23	212 53.9 +00.6	S 15 29.9 -00.6	184 12.4 +01.9	S 04 06.5 -00.2	212 16.0 +02.2	S 14 58.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 036° 036° 036° 036° 036° 036°		SHA 007° 007° 007° 007° 007° 007°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:48		Greenwich Culmination Time: 10:44		Greenwich Culmination Time: 08:53								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> <span style="float: right;">A: 10%</span>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	179 13.0 +00.1	N 05	36.1 +01.0	222 05.1 -00.2	S 11	31.6 -00.7	148 20.4 -27.5	N 16	06.8 +11.5				
01	194 13.1 +00.2	N 05	37.1 +00.9	237 04.9 -00.1	S 11	30.9 -00.7	162 52.9 -27.5	N 16	18.3 +11.4				
02	209 13.3 +00.2	N 05	38.0 +01.0	252 04.8 -00.2	S 11	30.2 -00.7	177 25.4 -27.5	N 16	29.7 +11.3				
03	224 13.5 +00.2	N 05	39.0 +00.9	267 04.6 -00.2	S 11	29.5 -00.8	191 57.9 -27.6	N 16	41.0 +11.2				
04	239 13.7 +00.2	N 05	39.9 +01.0	282 04.4 -00.1	S 11	28.7 -00.7	206 30.3 -27.6	N 16	52.2 +11.1				
05	254 13.9 +00.1	N 05	40.9 +00.9	297 04.3 -00.2	S 11	28.0 -00.7	221 02.7 -27.6	N 17	03.3 +11.0				
06	269 14.0 +00.2	N 05	41.8 +01.0	312 04.1 -00.2	S 11	27.3 -00.7	235 35.1 -27.7	N 17	14.3 +11.0				
07	284 14.2 +00.2	N 05	42.8 +00.9	327 03.9 -00.1	S 11	26.6 -00.7	250 07.4 -27.7	N 17	25.3 +10.9				
08	299 14.4 +00.2	N 05	43.7 +01.0	342 03.8 -00.2	S 11	25.9 -00.7	264 39.7 -27.8	N 17	36.2 +10.8				
09	314 14.6 +00.2	N 05	44.7 +00.9	357 03.6 -00.2	S 11	25.2 -00.7	279 11.9 -27.8	N 17	47.0 +10.7				
10	329 14.8 +00.1	N 05	45.6 +01.0	12 03.4 -00.1	S 11	24.5 -00.7	293 44.1 -27.8	N 17	57.7 +10.6				
11	344 14.9 +00.2	N 05	46.6 +00.9	27 03.3 -00.2	S 11	23.8 -00.8	308 16.3 -27.9	N 18	08.3 +10.5				
12	359 15.1 +00.2	N 05	47.5 +01.0	42 03.1 -00.2	S 11	23.0 -00.7	322 48.4 -27.9	N 18	18.8 +10.5				
13	14 15.3 +00.2	N 05	48.5 +00.9	57 02.9 -00.1	S 11	22.3 -00.7	337 20.5 -27.9	N 18	29.3 +10.4				
14	29 15.5 +00.2	N 05	49.4 +01.0	72 02.8 -00.2	S 11	21.6 -00.7	351 52.6 -28.0	N 18	39.7 +10.2				
15	44 15.7 +00.1	N 05	50.4 +01.0	87 02.6 -00.2	S 11	20.9 -00.7	6 24.6 -28.0	N 18	49.9 +10.2				
16	59 15.8 +00.2	N 05	51.4 +00.9	102 02.4 -00.1	S 11	20.2 -00.7	20 56.6 -28.1	N 19	00.1 +10.1				
17	74 16.0 +00.2	N 05	52.3 +01.0	117 02.3 -00.2	S 11	19.5 -00.8	35 28.5 -28.1	N 19	10.2 +10.0				
18	89 16.2 +00.2	N 05	53.3 +00.9	132 02.1 -00.2	S 11	18.7 -00.7	50 00.4 -28.1	N 19	20.2 +09.9				
19	104 16.4 +00.2	N 05	54.2 +01.0	147 01.9 -00.1	S 11	18.0 -00.7	64 32.3 -28.2	N 19	30.1 +09.8				
20	119 16.6 +00.1	N 05	55.2 +00.9	162 01.8 -00.2	S 11	17.3 -00.7	79 04.1 -28.2	N 19	39.9 +09.7				
21	134 16.7 +00.2	N 05	56.1 +01.0	177 01.6 -00.2	S 11	16.6 -00.7	93 35.9 -28.3	N 19	49.6 +09.7				
22	149 16.9 +00.2	N 05	57.1 +00.9	192 01.4 -00.1	S 11	15.9 -00.8	108 07.6 -28.3	N 19	59.3 +09.5				
23	164 17.1 +00.2	N 05	58.0 +01.0	207 01.3 -00.2	S 11	15.1 -00.7	122 39.3 -28.3	N 20	08.8 +09.4				
	<b>UT 02 06 10 14 18 22</b> 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 347° 347° 347° 346° 346° 346° Greenwich Culmination Time: 12:02	<b>UT 02 06 10 14 18 22</b> 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 SHA 030° 030° 029° 029° 029° 029° Greenwich Culmination Time: 09:11	<b>UT 02 06 10 14 18 22</b> SD 15'0 15'0 15'0 15'0 15'0 14'9 HP 55'2 55'1 55'0 55'0 54'9 54'8 SHA 315° 313° 311° 309° 307° 305° Greenwich Culmination Time: 14:33										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	227 54.5 +00.6	S 15	29.3 -00.6	199 14.3 +01.9	S 04	06.3 -00.3	227 18.2 +02.3	S 14	58.5 -00.1				
01	242 55.1 +00.6	S 15	28.7 -00.6	214 16.2 +02.0	S 04	06.0 -00.2	242 20.5 +02.2	S 14	58.4 -00.1				
02	257 55.7 +00.6	S 15	28.1 -00.6	229 18.2 +01.9	S 04	05.8 -00.2	257 22.7 +02.3	S 14	58.3 +00.0				
03	272 56.3 +00.6	S 15	27.5 -00.6	244 20.1 +01.9	S 04	05.6 -00.2	272 25.0 +02.2	S 14	58.3 -00.1				
04	287 56.9 +00.6	S 15	26.9 -00.6	259 22.0 +01.9	S 04	05.4 -00.3	287 27.2 +02.3	S 14	58.2 -00.1				
05	302 57.5 +00.6	S 15	26.3 -00.5	274 23.9 +02.0	S 04	05.1 -00.2	302 29.5 +02.2	S 14	58.1 +00.0				
06	317 58.1 +00.6	S 15	25.8 -00.6	289 25.9 +01.9	S 04	04.9 -00.2	317 31.7 +02.3	S 14	58.1 -00.1				
07	332 58.7 +00.6	S 15	25.2 -00.6	304 27.8 +01.9	S 04	04.7 -00.2	332 34.0 +02.2	S 14	58.0 -00.1				
08	347 59.3 +00.6	S 15	24.6 -00.6	319 29.7 +01.9	S 04	04.5 -00.3	347 36.2 +02.2	S 14	57.9 +00.0				
09	2 59.9 +00.6	S 15	24.0 -00.6	334 31.6 +02.0	S 04	04.2 -00.2	2 38.4 +02.3	S 14	57.9 -00.1				
10	18 00.5 +00.6	S 15	23.4 -00.6	349 33.6 +01.9	S 04	04.0 -00.2	17 40.7 +02.2	S 14	57.8 -00.1				
11	33 01.1 +00.6	S 15	22.8 -00.5	4 35.5 +01.9	S 04	03.8 -00.3	32 42.9 +02.3	S 14	57.7 +00.0				
12	48 01.7 +00.6	S 15	22.3 -00.6	19 37.4 +02.0	S 04	03.5 -00.2	47 45.2 +02.2	S 14	57.7 -00.1				
13	63 02.3 +00.6	S 15	21.7 -00.6	34 39.4 +01.9	S 04	03.3 -00.2	62 47.4 +02.3	S 14	57.6 -00.1				
14	78 02.9 +00.7	S 15	21.1 -00.6	49 41.3 +01.9	S 04	03.1 -00.2	77 49.7 +02.2	S 14	57.5 +00.0				
15	93 03.6 +00.6	S 15	20.5 -00.6	64 43.2 +01.9	S 04	02.9 -00.3	92 51.9 +02.3	S 14	57.5 -00.1				
16	108 04.2 +00.6	S 15	19.9 -00.6	79 45.1 +02.0	S 04	02.6 -00.2	107 54.2 +02.2	S 14	57.4 -00.1				
17	123 04.8 +00.6	S 15	19.3 -00.6	94 47.1 +01.9	S 04	02.4 -00.2	122 56.4 +02.3	S 14	57.3 +00.0				
18	138 05.4 +00.6	S 15	18.7 -00.6	109 49.0 +01.9	S 04	02.2 -00.2	137 58.7 +02.2	S 14	57.3 -00.1				
19	153 06.0 +00.6	S 15	18.1 -00.5	124 50.9 +01.9	S 04	02.0 -00.3	153 00.9 +02.3	S 14	57.2 -00.1				
20	168 06.6 +00.6	S 15	17.6 -00.6	139 52.8 +02.0	S 04	01.7 -00.2	168 03.2 +02.2	S 14	57.1 +00.0				
21	183 07.2 +00.6	S 15	17.0 -00.6	154 54.8 +01.9	S 04	01.5 -00.2	183 05.4 +02.3	S 14	57.1 -00.1				
22	198 07.8 +00.6	S 15	16.4 -00.6	169 56.7 +01.9	S 04	01.3 -00.2	198 07.7 +02.2	S 14	57.0 -00.1				
23	213 08.4 +00.6	S 15	15.8 -00.6	184 58.6 +02.0	S 04	01.1 -00.3	213 09.9 +02.3	S 14	56.9 +00.0				
	<b>UT 02 06 10 14 18 22</b> SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 036° 035° 035° 035° 035° 035° Greenwich Culmination Time: 08:48	<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 007° 007° 007° 007° 007° 007° Greenwich Culmination Time: 10:41	<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: 08:49										

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179	17.3 +00.2	N 05 59.0 +00.9		222	01.1 -00.2	S 11 14.4 -00.7		137	11.0 -28.4	N 20 18.2 +09.4		00
01	194	17.5 +00.1	N 05 59.9 +01.0		237	00.9 -00.1	S 11 13.7 -00.7		151	42.6 -28.4	N 20 27.6 +09.2		01
02	209	17.6 +00.2	N 06 00.9 +00.9		252	00.8 -00.2	S 11 13.0 -00.7		166	14.2 -28.5	N 20 36.8 +09.1		02
03	224	17.8 +00.2	N 06 01.8 +01.0		267	00.6 -00.2	S 11 12.3 -00.8		180	45.7 -28.5	N 20 45.9 +09.1		03
04	239	18.0 +00.2	N 06 02.8 +00.9		282	00.4 -00.1	S 11 11.5 -00.7		195	17.2 -28.5	N 20 55.0 +08.9		04
05	254	18.2 +00.1	N 06 03.7 +01.0		297	00.3 -00.2	S 11 10.8 -00.7		209	48.7 -28.6	N 21 03.9 +08.9		05
06	269	18.3 +00.2	N 06 04.7 +00.9		312	00.1 -00.2	S 11 10.1 -00.8		224	20.1 -28.6	N 21 12.8 +08.7		06
07	284	18.5 +00.2	N 06 05.6 +01.0		326	59.9 -00.1	S 11 09.3 -00.7		238	51.5 -28.7	N 21 21.5 +08.7		07
08	299	18.7 +00.2	N 06 06.6 +00.9		341	59.8 -00.2	S 11 08.6 -00.7		253	22.8 -28.7	N 21 30.2 +08.5		08
09	314	18.9 +00.2	N 06 07.5 +01.0		356	59.6 -00.2	S 11 07.9 -00.7		267	54.1 -28.7	N 21 38.7 +08.5		09
10	329	19.1 +00.1	N 06 08.5 +00.9		11	59.4 -00.2	S 11 07.2 -00.8		282	25.4 -28.8	N 21 47.2 +08.3		10
11	344	19.2 +00.2	N 06 09.4 +01.0		26	59.2 -00.1	S 11 06.4 -00.7		296	56.6 -28.9	N 21 55.5 +08.2		11
12	359	19.4 +00.2	N 06 10.4 +00.9		41	59.1 -00.2	S 11 05.7 -00.7		311	27.7 -28.8	N 22 03.7 +08.2		12
13	14	19.6 +00.2	N 06 11.3 +01.0		56	58.9 -00.2	S 11 05.0 -00.8		325	58.9 -29.0	N 22 11.9 +08.0		13
14	29	19.8 +00.2	N 06 12.3 +00.9		71	58.7 -00.1	S 11 04.2 -00.7		340	29.9 -28.9	N 22 19.9 +07.9		14
15	44	20.0 +00.1	N 06 13.2 +01.0		86	58.6 -00.2	S 11 03.5 -00.7		355	01.0 -29.0	N 22 27.8 +07.8		15
16	59	20.1 +00.2	N 06 14.2 +00.9		101	58.4 -00.2	S 11 02.8 -00.8		9	32.0 -29.0	N 22 35.6 +07.7		16
17	74	20.3 +00.2	N 06 15.1 +01.0		116	58.2 -00.1	S 11 02.0 -00.7		24	03.0 -29.1	N 22 43.3 +07.6		17
18	89	20.5 +00.2	N 06 16.1 +00.9		131	58.1 -00.2	S 11 01.3 -00.7		38	33.9 -29.1	N 22 50.9 +07.5		18
19	104	20.7 +00.1	N 06 17.0 +00.9		146	57.9 -00.2	S 11 00.6 -00.8		53	04.8 -29.2	N 22 58.4 +07.4		19
20	119	20.8 +00.2	N 06 17.9 +01.0		161	57.7 -00.1	S 10 59.8 -00.7		67	35.6 -29.2	N 23 05.8 +07.3		20
21	134	21.0 +00.2	N 06 18.9 +00.9		176	57.6 -00.2	S 10 59.1 -00.7		82	06.4 -29.2	N 23 13.1 +07.2		21
22	149	21.2 +00.2	N 06 19.8 +01.0		191	57.4 -00.2	S 10 58.4 -00.8		96	37.2 -29.3	N 23 20.3 +07.0		22
23	164	21.4 +00.2	N 06 20.8 +00.9		206	57.2 -00.2	S 10 57.6 -00.7		111	07.9 -29.3	N 23 27.3 +07.0		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 16'0 16'0 16'0 16'0 16'0 16'0				SD 00'2 00'2 00'2 00'2 00'2 00'2				SD 14'9 14'9 14'9 14'9 14'9 14'8				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'2 00'2 00'2 00'2 00'2 00'2				HP 54'8 54'7 54'6 54'6 54'5 54'5				
	SHA 346° 346° 346° 345° 345° 345°				SHA 029° 028° 028° 028° 028° 028°				SHA 303° 301° 299° 297° 295° 292°				
	Greenwich Culmination Time: 12:02				Greenwich Culmination Time: 09:12				Greenwich Culmination Time: 15:20				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	228	09.0 +00.6	S 15 15.2 -00.6		200	00.6 +01.9	S 04 00.8 -00.2		228	12.2 +02.2	S 14 56.9 -00.1		00
01	243	09.6 +00.6	S 15 14.6 -00.6		215	02.5 +01.9	S 04 00.6 -00.2		243	14.4 +02.2	S 14 56.8 -00.1		01
02	258	10.2 +00.6	S 15 14.0 -00.6		230	04.4 +01.9	S 04 00.4 -00.2		258	16.6 +02.3	S 14 56.7 +00.0		02
03	273	10.8 +00.6	S 15 13.4 -00.6		245	06.3 +02.0	S 04 00.2 -00.3		273	18.9 +02.2	S 14 56.7 -00.1		03
04	288	11.4 +00.6	S 15 12.8 -00.6		260	08.3 +01.9	S 03 59.9 -00.2		288	21.1 +02.3	S 14 56.6 -00.1		04
05	303	12.0 +00.6	S 15 12.2 -00.5		275	10.2 +01.9	S 03 59.7 -00.2		303	23.4 +02.2	S 14 56.5 +00.0		05
06	318	12.6 +00.6	S 15 11.7 -00.6		290	12.1 +02.0	S 03 59.5 -00.2		318	25.6 +02.3	S 14 56.5 -00.1		06
07	333	13.2 +00.6	S 15 11.1 -00.6		305	14.1 +01.9	S 03 59.3 -00.3		333	27.9 +02.2	S 14 56.4 -00.1		07
08	348	13.8 +00.6	S 15 10.5 -00.6		320	16.0 +01.9	S 03 59.0 -00.2		348	30.1 +02.3	S 14 56.3 +00.0		08
09	3	14.4 +00.6	S 15 09.9 -00.6		335	17.9 +01.9	S 03 58.8 -00.2		3	32.4 +02.2	S 14 56.3 -00.1		09
10	18	15.0 +00.7	S 15 09.3 -00.6		350	19.8 +02.0	S 03 58.6 -00.2		18	34.6 +02.3	S 14 56.2 -00.1		10
11	33	15.7 +00.6	S 15 08.7 -00.6		5	21.8 +01.9	S 03 58.4 -00.3		33	36.9 +02.2	S 14 56.1 +00.0		11
12	48	16.3 +00.6	S 15 08.1 -00.6		20	23.7 +01.9	S 03 58.1 -00.2		48	39.1 +02.3	S 14 56.1 -00.1		12
13	63	16.9 +00.6	S 15 07.5 -00.6		35	25.6 +02.0	S 03 57.9 -00.2		63	41.4 +02.2	S 14 56.0 -00.1		13
14	78	17.5 +00.6	S 15 06.9 -00.6		50	27.6 +01.9	S 03 57.7 -00.2		78	43.6 +02.3	S 14 55.9 +00.0		14
15	93	18.1 +00.6	S 15 06.3 -00.6		65	29.5 +01.9	S 03 57.5 -00.3		93	45.9 +02.2	S 14 55.9 -00.1		15
16	108	18.7 +00.6	S 15 05.7 -00.6		80	31.4 +01.9	S 03 57.2 -00.2		108	48.1 +02.3	S 14 55.8 +00.0		16
17	123	19.3 +00.6	S 15 05.1 -00.5		95	33.3 +02.0	S 03 57.0 -00.2		123	50.4 +02.2	S 14 55.8 -00.1		17
18	138	19.9 +00.6	S 15 04.6 -00.6		110	35.3 +01.9	S 03 56.8 -00.2		138	52.6 +02.3	S 14 55.7 -00.1		18
19	153	20.5 +00.6	S 15 04.0 -00.6		125	37.2 +01.9	S 03 56.6 -00.3		153	54.9 +02.2	S 14 55.6 +00.0		19
20	168	21.1 +00.6	S 15 03.4 -00.6		140	39.1 +02.0	S 03 56.3 -00.2		168	57.1 +02.3	S 14 55.6 -00.1		20
21	183	21.7 +00.6	S 15 02.8 -00.6		155	41.1 +01.9	S 03 56.1 -00.2		183	59.4 +02.2	S 14 55.5 -00.1		21
22	198	22.3 +00.6	S 15 02.2 -00.6		170	43.0 +01.9	S 03 55.9 -00.2		199	01.6 +02.3	S 14 55.4 +00.0		22
23	213	22.9 +00.7	S 15 01.6 -00.6		185	44.9 +02.0	S 03 55.7 -00.3		214	03.9 +02.2	S 14 55.4 -00.1		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 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 035° 035° 035° 034° 034° 034°				SHA 007° 007° 007° 007° 007° 007°				SHA 035° 035° 035° 035° 035° 035°				
	Greenwich Culmination Time: 08:47				Greenwich Culmination Time: 10:38				Greenwich Culmination Time: 08:45				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 21.6 +00.1	N 06 21.7 +01.0	221 57.0 -00.1	S 10 56.9 -00.8	125 38.6 -29.4	N 23 34.3 +06.8	00						
01	194 21.7 +00.2	N 06 22.7 +00.9	236 56.9 -00.2	S 10 56.1 -00.7	140 09.2 -29.4	N 23 41.1 +06.7	01						
02	209 21.9 +00.2	N 06 23.6 +01.0	251 56.7 -00.2	S 10 55.4 -00.7	154 39.8 -29.4	N 23 47.8 +06.6	02						
03	224 22.1 +00.2	N 06 24.6 +00.9	266 56.5 -00.1	S 10 54.7 -00.8	169 10.4 -29.5	N 23 54.4 +06.5	03						
04	239 22.3 +00.1	N 06 25.5 +01.0	281 56.4 -00.2	S 10 53.9 -00.7	183 40.9 -29.5	N 24 00.9 +06.4	04						
05	254 22.4 +00.2	N 06 26.5 +00.9	296 56.2 -00.2	S 10 53.2 -00.8	198 11.4 -29.6	N 24 07.3 +06.3	05						
06	269 22.6 +00.2	N 06 27.4 +01.0	311 56.0 -00.1	S 10 52.4 -00.7	212 41.8 -29.6	N 24 13.6 +06.2	06						
07	284 22.8 +00.2	N 06 28.4 +00.9	326 55.9 -00.2	S 10 51.7 -00.7	227 12.2 -29.6	N 24 19.8 +06.0	07						
08	299 23.0 +00.1	N 06 29.3 +00.9	341 55.7 -00.2	S 10 51.0 -00.8	241 42.6 -29.6	N 24 25.8 +05.9	08						
09	314 23.1 +00.2	N 06 30.2 +01.0	356 55.5 -00.2	S 10 50.2 -00.7	256 13.0 -29.7	N 24 31.7 +05.8	09						
10	329 23.3 +00.2	N 06 31.2 +00.9	11 55.3 -00.1	S 10 49.5 -00.8	270 43.3 -29.8	N 24 37.5 +05.7	10						
11	344 23.5 +00.2	N 06 32.1 +01.0	26 55.2 -00.2	S 10 48.7 -00.7	285 13.5 -29.7	N 24 43.2 +05.6	11						
12	359 23.7 +00.2	N 06 33.1 +00.9	41 55.0 -00.2	S 10 48.0 -00.8	299 43.8 -29.9	N 24 48.8 +05.5	12						
13	14 23.9 +00.1	N 06 34.0 +01.0	56 54.8 -00.1	S 10 47.2 -00.7	314 13.9 -29.8	N 24 54.3 +05.3	13						
14	29 24.0 +00.2	N 06 35.0 +00.9	71 54.7 -00.2	S 10 46.5 -00.8	328 44.1 -29.9	N 24 59.6 +05.2	14						
15	44 24.2 +00.2	N 06 35.9 +01.0	86 54.5 -00.2	S 10 45.7 -00.7	343 14.2 -29.9	N 25 04.8 +05.1	15						
16	59 24.4 +00.2	N 06 36.9 +00.9	101 54.3 -00.1	S 10 45.0 -00.8	357 44.3 -29.9	N 25 09.9 +05.0	16						
17	74 24.6 +00.1	N 06 37.8 +00.9	116 54.2 -00.2	S 10 44.2 -00.7	12 14.4 -30.0	N 25 14.9 +04.9	17						
18	89 24.7 +00.2	N 06 38.7 +01.0	131 54.0 -00.2	S 10 43.5 -00.8	26 44.4 -30.0	N 25 19.8 +04.7	18						
19	104 24.9 +00.2	N 06 39.7 +00.9	146 53.8 -00.2	S 10 42.7 -00.7	41 14.4 -30.0	N 25 24.5 +04.7	19						
20	119 25.1 +00.2	N 06 40.6 +01.0	161 53.6 -00.1	S 10 42.0 -00.8	55 44.4 -30.1	N 25 29.2 +04.5	20						
21	134 25.3 +00.1	N 06 41.6 +00.9	176 53.5 -00.2	S 10 41.2 -00.7	70 14.3 -30.1	N 25 33.7 +04.4	21						
22	149 25.4 +00.2	N 06 42.5 +00.9	191 53.3 -00.2	S 10 40.5 -00.8	84 44.2 -30.1	N 25 38.1 +04.2	22						
23	164 25.6 +00.2	N 06 43.4 +01.0	206 53.1 -00.1	S 10 39.7 -00.7	99 14.1 -30.2	N 25 42.3 +04.2	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	16'0 16'0 16'0 16'0 16'0 16'0	SD	00'2 00'2 00'2 00'2 00'2 00'2	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	00'2 00'2 00'2 00'2 00'2 00'2	HP	54'4 54'4 54'3 54'3 54'3 54'3								
SHA	345° 345° 345° 345° 344° 344°	SHA	028° 027° 027° 027° 027° 027°	SHA	290° 288° 286° 284° 282° 280°								
Greenwich Culmination Time: 12:02			Greenwich Culmination Time: 09:12			Greenwich Culmination Time: 16:09							

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	228 23.6 +00.6	S 15 01.0 -00.6	200 46.9 +01.9	S 03 55.4 -00.2	229 06.1 +02.3	S 14 55.3 -00.1	00						
01	243 24.2 +00.6	S 15 00.4 -00.6	215 48.8 +01.9	S 03 55.2 -00.2	244 08.4 +02.2	S 14 55.2 +00.0	01						
02	258 24.8 +00.6	S 14 59.8 -00.6	230 50.7 +01.9	S 03 55.0 -00.2	259 10.6 +02.3	S 14 55.2 -00.1	02						
03	273 25.4 +00.6	S 14 59.2 -00.6	245 52.6 +02.0	S 03 54.8 -00.3	274 12.9 +02.2	S 14 55.1 -00.1	03						
04	288 26.0 +00.6	S 14 58.6 -00.6	260 54.6 +01.9	S 03 54.5 -00.2	289 15.1 +02.3	S 14 55.0 +00.0	04						
05	303 26.6 +00.6	S 14 58.0 -00.6	275 56.5 +01.9	S 03 54.3 -00.2	304 17.4 +02.2	S 14 55.0 -00.1	05						
06	318 27.2 +00.6	S 14 57.4 -00.6	290 58.4 +02.0	S 03 54.1 -00.2	319 19.6 +02.3	S 14 54.9 -00.1	06						
07	333 27.8 +00.6	S 14 56.8 -00.6	306 00.4 +01.9	S 03 53.9 -00.3	334 21.9 +02.2	S 14 54.8 +00.0	07						
08	348 28.4 +00.6	S 14 56.2 -00.6	321 02.3 +01.9	S 03 53.6 -00.2	349 24.1 +02.3	S 14 54.8 -00.1	08						
09	3 29.0 +00.7	S 14 55.6 -00.6	336 04.2 +02.0	S 03 53.4 -00.2	4 26.4 +02.2	S 14 54.7 -00.1	09						
10	18 29.7 +00.6	S 14 55.0 -00.6	351 06.2 +01.9	S 03 53.2 -00.2	19 28.6 +02.3	S 14 54.6 +00.0	10						
11	33 30.3 +00.6	S 14 54.4 -00.6	6 08.1 +01.9	S 03 53.0 -00.3	34 30.9 +02.2	S 14 54.6 -00.1	11						
12	48 30.9 +00.6	S 14 53.8 -00.6	21 10.0 +01.9	S 03 52.7 -00.2	49 33.1 +02.3	S 14 54.5 +00.0	12						
13	63 31.5 +00.6	S 14 53.2 -00.6	36 11.9 +02.0	S 03 52.5 -00.2	64 35.4 +02.2	S 14 54.5 -00.1	13						
14	78 32.1 +00.6	S 14 52.6 -00.6	51 13.9 +01.9	S 03 52.3 -00.2	79 37.6 +02.3	S 14 54.4 -00.1	14						
15	93 32.7 +00.6	S 14 52.0 -00.6	66 15.8 +01.9	S 03 52.1 -00.3	94 39.9 +02.3	S 14 54.3 +00.0	15						
16	108 33.3 +00.6	S 14 51.4 -00.6	81 17.7 +02.0	S 03 51.8 -00.2	109 42.2 +02.2	S 14 54.3 -00.1	16						
17	123 33.9 +00.6	S 14 50.8 -00.6	96 19.7 +01.9	S 03 51.6 -00.2	124 44.4 +02.3	S 14 54.2 -00.1	17						
18	138 34.5 +00.7	S 14 50.2 -00.6	111 21.6 +01.9	S 03 51.4 -00.2	139 46.7 +02.2	S 14 54.1 +00.0	18						
19	153 35.2 +00.6	S 14 49.6 -00.6	126 23.5 +02.0	S 03 51.2 -00.3	154 48.9 +02.3	S 14 54.1 -00.1	19						
20	168 35.8 +00.6	S 14 49.0 -00.6	141 25.5 +01.9	S 03 50.9 -00.2	169 51.2 +02.2	S 14 54.0 -00.1	20						
21	183 36.4 +00.6	S 14 48.4 -00.6	156 27.4 +01.9	S 03 50.7 -00.2	184 53.4 +02.3	S 14 53.9 +00.0	21						
22	198 37.0 +00.6	S 14 47.8 -00.6	171 29.3 +02.0	S 03 50.5 -00.2	199 55.7 +02.2	S 14 53.9 -00.1	22						
23	213 37.6 +00.6	S 14 47.2 -00.6	186 31.3 +01.9	S 03 50.3 -00.2	214 57.9 +02.3	S 14 53.8 -00.1	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'0 00'0 00'0 00'0 00'0 00'0	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'1 00'1 00'1 00'1 00'1 00'1								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	034° 034° 034° 034° 034° 033°	SHA	007° 006° 006° 006° 006° 006°	SHA	035° 035° 035° 035° 035° 035°								
Greenwich Culmination Time: 08:46			Greenwich Culmination Time: 10:35			Greenwich Culmination Time: 08:42							

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 25.8 +00.2	N 06 44.4 +00.9	221 53.0 -00.2	S 10 39.0 -00.8	113 43.9 -30.2	N 25 46.5 +04.0	00						
01	194 26.0 +00.1	N 06 45.3 +01.0	236 52.8 -00.2	S 10 38.2 -00.7	128 13.7 -30.2	N 25 50.5 +03.9	01						
02	209 26.1 +00.2	N 06 46.3 +00.9	251 52.6 -00.2	S 10 37.5 -00.8	142 43.5 -30.2	N 25 54.4 +03.8	02						
03	224 26.3 +00.2	N 06 47.2 +01.0	266 52.4 -00.1	S 10 36.7 -00.8	157 13.3 -30.3	N 25 58.2 +03.6	03						
04	239 26.5 +00.2	N 06 48.2 +00.9	281 52.3 -00.2	S 10 35.9 -00.7	171 43.0 -30.3	N 26 01.8 +03.5	04						
05	254 26.7 +00.1	N 06 49.1 +00.9	296 52.1 -00.2	S 10 35.2 -00.8	186 12.7 -30.3	N 26 05.3 +03.4	05						
06	269 26.8 +00.2	N 06 50.0 +01.0	311 51.9 -00.2	S 10 34.4 -00.7	200 42.4 -30.4	N 26 08.7 +03.3	06						
07	284 27.0 +00.2	N 06 51.0 +00.9	326 51.7 -00.1	S 10 33.7 -00.8	215 12.0 -30.3	N 26 12.0 +03.2	07						
08	299 27.2 +00.2	N 06 51.9 +01.0	341 51.6 -00.2	S 10 32.9 -00.7	229 41.7 -30.4	N 26 15.2 +03.0	08						
09	314 27.4 +00.1	N 06 52.9 +00.9	356 51.4 -00.2	S 10 32.2 -00.8	244 11.3 -30.4	N 26 18.2 +02.9	09						
10	329 27.5 +00.2	N 06 53.8 +00.9	11 51.2 -00.1	S 10 31.4 -00.8	258 40.9 -30.5	N 26 21.1 +02.8	10						
11	344 27.7 +00.2	N 06 54.7 +01.0	26 51.1 -00.2	S 10 30.6 -00.7	273 10.4 -30.4	N 26 23.9 +02.6	11						
12	359 27.9 +00.2	N 06 55.7 +00.9	41 50.9 -00.2	S 10 29.9 -00.8	287 40.0 -30.5	N 26 26.5 +02.6	12						
13	14 28.1 +00.1	N 06 56.6 +01.0	56 50.7 -00.2	S 10 29.1 -00.8	302 09.5 -30.5	N 26 29.1 +02.3	13						
14	29 28.2 +00.2	N 06 57.6 +00.9	71 50.5 -00.1	S 10 28.3 -00.7	316 39.0 -30.5	N 26 31.4 +02.3	14						
15	44 28.4 +00.2	N 06 58.5 +00.9	86 50.4 -00.2	S 10 27.6 -00.8	331 08.5 -30.5	N 26 33.7 +02.2	15						
16	59 28.6 +00.2	N 06 59.4 +01.0	101 50.2 -00.2	S 10 26.8 -00.7	345 38.0 -30.6	N 26 35.9 +02.0	16						
17	74 28.8 +00.1	N 07 00.4 +00.9	116 50.0 -00.1	S 10 26.1 -00.8	0 07.4 -30.6	N 26 37.9 +01.9	17						
18	89 28.9 +00.2	N 07 01.3 +00.9	131 49.9 -00.2	S 10 25.3 -00.8	14 36.8 -30.5	N 26 39.8 +01.7	18						
19	104 29.1 +00.2	N 07 02.2 +01.0	146 49.7 -00.2	S 10 24.5 -00.7	29 06.3 -30.6	N 26 41.5 +01.7	19						
20	119 29.3 +00.1	N 07 03.2 +00.9	161 49.5 -00.2	S 10 23.8 -00.8	43 35.7 -30.7	N 26 43.2 +01.5	20						
21	134 29.4 +00.2	N 07 04.1 +01.0	176 49.3 -00.1	S 10 23.0 -00.8	58 05.0 -30.6	N 26 44.7 +01.4	21						
22	149 29.6 +00.2	N 07 05.1 +00.9	191 49.2 -00.2	S 10 22.2 -00.8	72 34.4 -30.6	N 26 46.1 +01.2	22						
23	164 29.8 +00.2	N 07 06.0 +00.9	206 49.0 -00.2	S 10 21.4 -00.7	87 03.8 -30.7	N 26 47.3 +01.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		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 00'2 00'2 00'2 00'2 00'2 00'2		HP 54'2 54'2 54'2 54'2 54'2 54'2								
	SHA 344° 344° 344° 344° 343° 343°		SHA 027° 026° 026° 026° 026° 026°		SHA 277° 275° 273° 271° 269° 266°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 09:12		Greenwich Culmination Time: 16:59								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	228 38.2 +00.6	S 14 46.6 -00.6	201 33.2 +01.9	S 03 50.1 -00.3	230 00.2 +02.2	S 14 53.7 +00.0	00						
01	243 38.8 +00.6	S 14 46.0 -00.6	216 35.1 +01.9	S 03 49.8 -00.2	245 02.4 +02.3	S 14 53.7 -00.1	01						
02	258 39.4 +00.7	S 14 45.4 -00.6	231 37.0 +02.0	S 03 49.6 -00.2	260 04.7 +02.2	S 14 53.6 +00.0	02						
03	273 40.1 +00.6	S 14 44.8 -00.6	246 39.0 +01.9	S 03 49.4 -00.2	275 06.9 +02.3	S 14 53.6 -00.1	03						
04	288 40.7 +00.6	S 14 44.2 -00.6	261 40.9 +01.9	S 03 49.2 -00.3	290 09.2 +02.2	S 14 53.5 -00.1	04						
05	303 41.3 +00.6	S 14 43.6 -00.6	276 42.8 +02.0	S 03 48.9 -00.2	305 11.4 +02.3	S 14 53.4 +00.0	05						
06	318 41.9 +00.6	S 14 43.0 -00.6	291 44.8 +01.9	S 03 48.7 -00.2	320 13.7 +02.3	S 14 53.4 -00.1	06						
07	333 42.5 +00.6	S 14 42.4 -00.6	306 46.7 +01.9	S 03 48.5 -00.2	335 16.0 +02.2	S 14 53.3 -00.1	07						
08	348 43.1 +00.6	S 14 41.8 -00.6	321 48.6 +02.0	S 03 48.3 -00.3	350 18.2 +02.3	S 14 53.2 +00.0	08						
09	3 43.7 +00.6	S 14 41.2 -00.6	336 50.6 +01.9	S 03 48.0 -00.2	5 20.5 +02.2	S 14 53.2 -00.1	09						
10	18 44.3 +00.7	S 14 40.6 -00.6	351 52.5 +01.9	S 03 47.8 -00.2	20 22.7 +02.3	S 14 53.1 -00.1	10						
11	33 45.0 +00.6	S 14 40.0 -00.6	6 54.4 +02.0	S 03 47.6 -00.2	35 25.0 +02.2	S 14 53.0 +00.0	11						
12	48 45.6 +00.6	S 14 39.4 -00.6	21 56.4 +01.9	S 03 47.4 -00.3	50 27.2 +02.3	S 14 53.0 -00.1	12						
13	63 46.2 +00.6	S 14 38.8 -00.6	36 58.3 +01.9	S 03 47.1 -00.2	65 29.5 +02.2	S 14 52.9 +00.0	13						
14	78 46.8 +00.6	S 14 38.2 -00.6	52 00.2 +02.0	S 03 46.9 -00.2	80 31.7 +02.3	S 14 52.9 -00.1	14						
15	93 47.4 +00.6	S 14 37.6 -00.6	67 02.2 +01.9	S 03 46.7 -00.2	95 34.0 +02.2	S 14 52.8 -00.1	15						
16	108 48.0 +00.7	S 14 37.0 -00.6	82 04.1 +01.9	S 03 46.5 -00.3	110 36.2 +02.3	S 14 52.7 +00.0	16						
17	123 48.7 +00.6	S 14 36.4 -00.6	97 06.0 +02.0	S 03 46.2 -00.2	125 38.5 +02.3	S 14 52.7 -00.1	17						
18	138 49.3 +00.6	S 14 35.8 -00.6	112 08.0 +01.9	S 03 46.0 -00.2	140 40.8 +02.2	S 14 52.6 -00.1	18						
19	153 49.9 +00.6	S 14 35.2 -00.6	127 09.9 +01.9	S 03 45.8 -00.2	155 43.0 +02.3	S 14 52.5 +00.0	19						
20	168 50.5 +00.6	S 14 34.6 -00.6	142 11.8 +02.0	S 03 45.6 -00.2	170 45.3 +02.2	S 14 52.5 -00.1	20						
21	183 51.1 +00.6	S 14 34.0 -00.6	157 13.8 +01.9	S 03 45.4 -00.3	185 47.5 +02.3	S 14 52.4 -00.1	21						
22	198 51.7 +00.6	S 14 33.4 -00.6	172 15.7 +01.9	S 03 45.1 -00.2	200 49.8 +02.2	S 14 52.3 +00.0	22						
23	213 52.3 +00.7	S 14 32.8 -00.6	187 17.6 +02.0	S 03 44.9 -00.2	215 52.0 +02.3	S 14 52.3 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 033° 033° 033° 033° 033° 033°		SHA 006° 006° 006° 006° 006° 006°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:45		Greenwich Culmination Time: 10:32		Greenwich Culmination Time: 08:38								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 30.0 +00.1	N 07 06.9 +01.0	221 48.8 -00.2	S 10 20.7 -00.8	101 33.1 -30.6	N 26 48.5 +01.0	00						
01	194 30.1 +00.2	N 07 07.9 +00.9	236 48.6 -00.1	S 10 19.9 -00.8	116 02.5 -30.7	N 26 49.5 +00.8	01						
02	209 30.3 +00.2	N 07 08.8 +00.9	251 48.5 -00.2	S 10 19.1 -00.7	130 31.8 -30.7	N 26 50.3 +00.8	02						
03	224 30.5 +00.2	N 07 09.7 +01.0	266 48.3 -00.2	S 10 18.4 -00.8	145 01.1 -30.7	N 26 51.1 +00.6	03						
04	239 30.7 +00.1	N 07 10.7 +00.9	281 48.1 -00.2	S 10 17.6 -00.8	159 30.4 -30.6	N 26 51.7 +00.5	04						
05	254 30.8 +00.2	N 07 11.6 +00.9	296 47.9 -00.1	S 10 16.8 -00.7	173 59.8 -30.7	N 26 52.2 +00.3	05						
06	269 31.0 +00.2	N 07 12.5 +01.0	311 47.8 -00.2	S 10 16.1 -00.8	188 29.1 -30.8	N 26 52.5 +00.2	06						
07	284 31.2 +00.2	N 07 13.5 +00.9	326 47.6 -00.2	S 10 15.3 -00.8	202 58.3 -30.7	N 26 52.7 +00.1	07						
08	299 31.4 +00.1	N 07 14.4 +00.9	341 47.4 -00.1	S 10 14.5 -00.8	217 27.6 -30.7	N 26 52.8 +00.0	08						
09	314 31.5 +00.2	N 07 15.3 +01.0	356 47.3 -00.2	S 10 13.7 -00.7	231 56.9 -30.7	N 26 52.8 -00.2	09						
10	329 31.7 +00.2	N 07 16.3 +00.9	11 47.1 -00.2	S 10 13.0 -00.8	246 26.2 -30.7	N 26 52.6 -00.3	10						
11	344 31.9 +00.1	N 07 17.2 +01.0	26 46.9 -00.2	S 10 12.2 -00.8	260 55.5 -30.7	N 26 52.3 -00.4	11						
12	359 32.0 +00.2	N 07 18.2 +00.9	41 46.7 -00.1	S 10 11.4 -00.8	275 24.8 -30.8	N 26 51.9 -00.5	12						
13	14 32.2 +00.2	N 07 19.1 +00.9	56 46.6 -00.2	S 10 10.6 -00.8	289 54.0 -30.7	N 26 51.4 -00.7	13						
14	29 32.4 +00.2	N 07 20.0 +01.0	71 46.4 -00.2	S 10 09.8 -00.7	304 23.3 -30.7	N 26 50.7 -00.8	14						
15	44 32.6 +00.1	N 07 21.0 +00.9	86 46.2 -00.2	S 10 09.1 -00.8	318 52.6 -30.7	N 26 49.9 -01.0	15						
16	59 32.7 +00.2	N 07 21.9 +00.9	101 46.0 -00.1	S 10 08.3 -00.8	333 21.9 -30.7	N 26 48.9 -01.0	16						
17	74 32.9 +00.2	N 07 22.8 +01.0	116 45.9 -00.2	S 10 07.5 -00.8	347 51.2 -30.7	N 26 47.9 -01.2	17						
18	89 33.1 +00.1	N 07 23.8 +00.9	131 45.7 -00.2	S 10 06.7 -00.8	2 20.5 -30.7	N 26 46.7 -01.3	18						
19	104 33.2 +00.2	N 07 24.7 +00.9	146 45.5 -00.2	S 10 05.9 -00.7	16 49.8 -30.8	N 26 45.4 -01.5	19						
20	119 33.4 +00.2	N 07 25.6 +00.9	161 45.3 -00.1	S 10 05.2 -00.8	31 19.0 -30.6	N 26 43.9 -01.6	20						
21	134 33.6 +00.2	N 07 26.5 +01.0	176 45.2 -00.2	S 10 04.4 -00.8	45 48.4 -30.7	N 26 42.3 -01.7	21						
22	149 33.8 +00.1	N 07 27.5 +00.9	191 45.0 -00.2	S 10 03.6 -00.8	60 17.7 -30.7	N 26 40.6 -01.8	22						
23	164 33.9 +00.2	N 07 28.4 +00.9	206 44.8 -00.2	S 10 02.8 -00.8	74 47.0 -30.7	N 26 38.8 -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 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		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 00'2 00'2 00'2 00'2 00'2 00'2		HP 54'2 54'2 54'2 54'2 54'3 54'3								
	SHA 343° 343° 343° 343° 343° 342°		SHA 025° 025° 025° 025° 025° 025°		SHA 264° 262° 260° 258° 255° 253°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:12		Greenwich Culmination Time: 17:50								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	228 53.0 +00.6	S 14 32.2 -00.6	202 19.6 +01.9	S 03 44.7 -00.2	230 54.3 +02.2	S 14 52.2 +00.0	00						
01	243 53.6 +00.6	S 14 31.6 -00.7	217 21.5 +01.9	S 03 44.5 -00.3	245 56.5 +02.3	S 14 52.2 -00.1	01						
02	258 54.2 +00.6	S 14 30.9 -00.6	232 23.4 +02.0	S 03 44.2 -00.2	260 58.8 +02.3	S 14 52.1 -00.1	02						
03	273 54.8 +00.6	S 14 30.3 -00.6	247 25.4 +01.9	S 03 44.0 -00.2	276 01.1 +02.2	S 14 52.0 +00.0	03						
04	288 55.4 +00.6	S 14 29.7 -00.6	262 27.3 +01.9	S 03 43.8 -00.2	291 03.3 +02.3	S 14 52.0 -00.1	04						
05	303 56.0 +00.7	S 14 29.1 -00.6	277 29.2 +02.0	S 03 43.6 -00.3	306 05.6 +02.2	S 14 51.9 -00.1	05						
06	318 56.7 +00.6	S 14 28.5 -00.6	292 31.2 +01.9	S 03 43.3 -00.2	321 07.8 +02.3	S 14 51.8 +00.0	06						
07	333 57.3 +00.6	S 14 27.9 -00.6	307 33.1 +01.9	S 03 43.1 -00.2	336 10.1 +02.2	S 14 51.8 -00.1	07						
08	348 57.9 +00.6	S 14 27.3 -00.6	322 35.0 +02.0	S 03 42.9 -00.2	351 12.3 +02.3	S 14 51.7 -00.1	08						
09	3 58.5 +00.6	S 14 26.7 -00.6	337 37.0 +01.9	S 03 42.7 -00.3	6 14.6 +02.3	S 14 51.6 +00.0	09						
10	18 59.1 +00.6	S 14 26.1 -00.6	352 38.9 +01.9	S 03 42.4 -00.2	21 16.9 +02.2	S 14 51.6 -00.1	10						
11	33 59.7 +00.7	S 14 25.5 -00.6	7 40.8 +02.0	S 03 42.2 -00.2	36 19.1 +02.3	S 14 51.5 +00.0	11						
12	49 00.4 +00.6	S 14 24.9 -00.6	22 42.8 +01.9	S 03 42.0 -00.2	51 21.4 +02.2	S 14 51.5 -00.1	12						
13	64 01.0 +00.6	S 14 24.3 -00.6	37 44.7 +01.9	S 03 41.8 -00.2	66 23.6 +02.3	S 14 51.4 -00.1	13						
14	79 01.6 +00.6	S 14 23.7 -00.7	52 46.6 +02.0	S 03 41.6 -00.3	81 25.9 +02.2	S 14 51.3 +00.0	14						
15	94 02.2 +00.6	S 14 23.0 -00.6	67 48.6 +01.9	S 03 41.3 -00.2	96 28.1 +02.3	S 14 51.3 -00.1	15						
16	109 02.8 +00.7	S 14 22.4 -00.6	82 50.5 +01.9	S 03 41.1 -00.2	111 30.4 +02.3	S 14 51.2 -00.1	16						
17	124 03.5 +00.6	S 14 21.8 -00.6	97 52.4 +02.0	S 03 40.9 -00.2	126 32.7 +02.2	S 14 51.1 +00.0	17						
18	139 04.1 +00.6	S 14 21.2 -00.6	112 54.4 +01.9	S 03 40.7 -00.3	141 34.9 +02.3	S 14 51.1 -00.1	18						
19	154 04.7 +00.6	S 14 20.6 -00.6	127 56.3 +01.9	S 03 40.4 -00.2	156 37.2 +02.2	S 14 51.0 +00.0	19						
20	169 05.3 +00.6	S 14 20.0 -00.6	142 58.2 +02.0	S 03 40.2 -00.2	171 39.4 +02.3	S 14 51.0 -00.1	20						
21	184 05.9 +00.7	S 14 19.4 -00.6	158 00.2 +01.9	S 03 40.0 -00.2	186 41.7 +02.2	S 14 50.9 -00.1	21						
22	199 06.6 +00.6	S 14 18.8 -00.6	173 02.1 +01.9	S 03 39.8 -00.3	201 43.9 +02.3	S 14 50.8 +00.0	22						
23	214 07.2 +00.6	S 14 18.2 -00.7	188 04.0 +02.0	S 03 39.5 -00.2	216 46.2 +02.3	S 14 50.8 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 033° 032° 032° 032° 032° 032°		SHA 006° 006° 006° 006° 006° 006°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:44		Greenwich Culmination Time: 10:29		Greenwich Culmination Time: 08:35								



UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 34.1 +00.2	N 07 29.3 +01.0	221 44.6 -00.1	S 10 02.0 -00.8	89 16.3 -30.7	N 26 36.8 -02.1	00						
01	194 34.3 +00.1	N 07 30.3 +00.9	236 44.5 -00.2	S 10 01.2 -00.7	103 45.6 -30.6	N 26 34.7 -02.2	01						
02	209 34.4 +00.2	N 07 31.2 +00.9	251 44.3 -00.2	S 10 00.5 -00.8	118 15.0 -30.6	N 26 32.5 -02.4	02						
03	224 34.6 +00.2	N 07 32.1 +01.0	266 44.1 -00.2	S 09 59.7 -00.8	132 44.4 -30.7	N 26 30.1 -02.5	03						
04	239 34.8 +00.1	N 07 33.1 +00.9	281 43.9 -00.1	S 09 58.9 -00.8	147 13.7 -30.6	N 26 27.6 -02.6	04						
05	254 34.9 +00.2	N 07 34.0 +00.9	296 43.8 -00.2	S 09 58.1 -00.8	161 43.1 -30.6	N 26 25.0 -02.7	05						
06	269 35.1 +00.2	N 07 34.9 +01.0	311 43.6 -00.2	S 09 57.3 -00.8	176 12.5 -30.6	N 26 22.3 -02.9	06						
07	284 35.3 +00.2	N 07 35.9 +00.9	326 43.4 -00.2	S 09 56.5 -00.8	190 41.9 -30.6	N 26 19.4 -03.0	07						
08	299 35.5 +00.1	N 07 36.8 +00.9	341 43.2 -00.1	S 09 55.7 -00.8	205 11.3 -30.5	N 26 16.4 -03.1	08						
09	314 35.6 +00.2	N 07 37.7 +00.9	356 43.1 -00.2	S 09 54.9 -00.7	219 40.8 -30.6	N 26 13.3 -03.2	09						
10	329 35.8 +00.2	N 07 38.6 +01.0	11 42.9 -00.2	S 09 54.2 -00.8	234 10.2 -30.5	N 26 10.1 -03.4	10						
11	344 36.0 +00.1	N 07 39.6 +00.9	26 42.7 -00.2	S 09 53.4 -00.8	248 39.7 -30.5	N 26 06.7 -03.5	11						
12	359 36.1 +00.2	N 07 40.5 +00.9	41 42.5 -00.1	S 09 52.6 -00.8	263 09.2 -30.5	N 26 03.2 -03.6	12						
13	14 36.3 +00.2	N 07 41.4 +01.0	56 42.4 -00.2	S 09 51.8 -00.8	277 38.7 -30.5	N 25 59.6 -03.8	13						
14	29 36.5 +00.1	N 07 42.4 +00.9	71 42.2 -00.2	S 09 51.0 -00.8	292 08.2 -30.4	N 25 55.8 -03.9	14						
15	44 36.6 +00.2	N 07 43.3 +00.9	86 42.0 -00.2	S 09 50.2 -00.8	306 37.8 -30.4	N 25 51.9 -04.0	15						
16	59 36.8 +00.2	N 07 44.2 +00.9	101 41.8 -00.1	S 09 49.4 -00.8	321 07.4 -30.5	N 25 47.9 -04.1	16						
17	74 37.0 +00.2	N 07 45.1 +01.0	116 41.7 -00.2	S 09 48.6 -00.8	335 36.9 -30.3	N 25 43.8 -04.3	17						
18	89 37.2 +00.1	N 07 46.1 +00.9	131 41.5 -00.2	S 09 47.8 -00.8	350 06.6 -30.4	N 25 39.5 -04.3	18						
19	104 37.3 +00.2	N 07 47.0 +00.9	146 41.3 -00.2	S 09 47.0 -00.8	4 36.2 -30.3	N 25 35.2 -04.5	19						
20	119 37.5 +00.2	N 07 47.9 +01.0	161 41.1 -00.1	S 09 46.2 -00.8	19 05.9 -30.4	N 25 30.7 -04.7	20						
21	134 37.7 +00.1	N 07 48.9 +00.9	176 41.0 -00.2	S 09 45.4 -00.8	33 35.5 -30.3	N 25 26.0 -04.7	21						
22	149 37.8 +00.2	N 07 49.8 +00.9	191 40.8 -00.2	S 09 44.6 -00.8	48 05.2 -30.2	N 25 21.3 -04.9	22						
23	164 38.0 +00.2	N 07 50.7 +00.9	206 40.6 -00.2	S 09 43.8 -00.8	62 35.0 -30.3	N 25 16.4 -05.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 14'8 14'8 14'8 14'8 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 54'3 54'4 54'4 54'5 54'5 54'6								
	SHA 342° 342° 342° 342° 342° 342°		SHA 024° 024° 024° 024° 024° 024°		SHA 251° 249° 247° 244° 242° 240°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:13		Greenwich Culmination Time: 18:40								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	229 07.8 +00.6	S 14 17.5 -00.6	203 06.0 +01.9	S 03 39.3 -00.2	231 48.5 +02.2	S 14 50.7 -00.1	00						
01	244 08.4 +00.6	S 14 16.9 -00.6	218 07.9 +01.9	S 03 39.1 -00.2	246 50.7 +02.3	S 14 50.6 +00.0	01						
02	259 09.0 +00.7	S 14 16.3 -00.6	233 09.8 +02.0	S 03 38.9 -00.2	261 53.0 +02.2	S 14 50.6 -00.1	02						
03	274 09.7 +00.6	S 14 15.7 -00.6	248 11.8 +01.9	S 03 38.7 -00.3	276 55.2 +02.3	S 14 50.5 +00.0	03						
04	289 10.3 +00.6	S 14 15.1 -00.6	263 13.7 +01.9	S 03 38.4 -00.2	291 57.5 +02.3	S 14 50.5 -00.1	04						
05	304 10.9 +00.6	S 14 14.5 -00.6	278 15.6 +02.0	S 03 38.2 -00.2	306 59.8 +02.2	S 14 50.4 -00.1	05						
06	319 11.5 +00.6	S 14 13.9 -00.6	293 17.6 +01.9	S 03 38.0 -00.2	322 02.0 +02.3	S 14 50.3 +00.0	06						
07	334 12.1 +00.7	S 14 13.3 -00.7	308 19.5 +01.9	S 03 37.8 -00.3	337 04.3 +02.2	S 14 50.3 -00.1	07						
08	349 12.8 +00.6	S 14 12.6 -00.6	323 21.4 +02.0	S 03 37.5 -00.2	352 06.5 +02.3	S 14 50.2 -00.1	08						
09	4 13.4 +00.6	S 14 12.0 -00.6	338 23.4 +01.9	S 03 37.3 -00.2	7 08.8 +02.3	S 14 50.1 +00.0	09						
10	19 14.0 +00.6	S 14 11.4 -00.6	353 25.3 +02.0	S 03 37.1 -00.2	22 11.1 +02.2	S 14 50.1 -00.1	10						
11	34 14.6 +00.6	S 14 10.8 -00.6	8 27.3 +01.9	S 03 36.9 -00.2	37 13.3 +02.3	S 14 50.0 +00.0	11						
12	49 15.2 +00.7	S 14 10.2 -00.6	23 29.2 +01.9	S 03 36.7 -00.3	52 15.6 +02.2	S 14 50.0 -00.1	12						
13	64 15.9 +00.6	S 14 09.6 -00.6	38 31.1 +02.0	S 03 36.4 -00.2	67 17.8 +02.3	S 14 49.9 -00.1	13						
14	79 16.5 +00.6	S 14 09.0 -00.6	53 33.1 +01.9	S 03 36.2 -00.2	82 20.1 +02.3	S 14 49.8 +00.0	14						
15	94 17.1 +00.6	S 14 08.4 -00.7	68 35.0 +01.9	S 03 36.0 -00.2	97 22.4 +02.2	S 14 49.8 -00.1	15						
16	109 17.7 +00.7	S 14 07.7 -00.6	83 36.9 +02.0	S 03 35.8 -00.3	112 24.6 +02.3	S 14 49.7 +00.0	16						
17	124 18.4 +00.6	S 14 07.1 -00.6	98 38.9 +01.9	S 03 35.5 -00.2	127 26.9 +02.2	S 14 49.7 -00.1	17						
18	139 19.0 +00.6	S 14 06.5 -00.6	113 40.8 +01.9	S 03 35.3 -00.2	142 29.1 +02.3	S 14 49.6 -00.1	18						
19	154 19.6 +00.6	S 14 05.9 -00.6	128 42.7 +02.0	S 03 35.1 -00.2	157 31.4 +02.3	S 14 49.5 +00.0	19						
20	169 20.2 +00.7	S 14 05.3 -00.6	143 44.7 +01.9	S 03 34.9 -00.2	172 33.7 +02.2	S 14 49.5 -00.1	20						
21	184 20.9 +00.6	S 14 04.7 -00.7	158 46.6 +01.9	S 03 34.7 -00.3	187 35.9 +02.3	S 14 49.4 -00.1	21						
22	199 21.5 +00.6	S 14 04.0 -00.6	173 48.5 +02.0	S 03 34.4 -00.2	202 38.2 +02.2	S 14 49.3 +00.0	22						
23	214 22.1 +00.6	S 14 03.4 -00.6	188 50.5 +01.9	S 03 34.2 -00.2	217 40.4 +02.3	S 14 49.3 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 032° 032° 032° 031° 031° 031°		SHA 006° 006° 006° 006° 006° 006°		SHA 035° 035° 035° 035° 035° 035°								
	Greenwich Culmination Time: 08:43		Greenwich Culmination Time: 10:26		Greenwich Culmination Time: 08:31								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 38.2 +00.1	N 07 51.6 +01.0	221 40.4 -00.1	S 09 43.0 -00.8	77 04.7 -30.2	N 25 11.4 -05.1	00						
01	194 38.3 +00.2	N 07 52.6 +00.9	236 40.3 -00.2	S 09 42.2 -00.8	91 34.5 -30.2	N 25 06.3 -05.3	01						
02	209 38.5 +00.2	N 07 53.5 +00.9	251 40.1 -00.2	S 09 41.4 -00.8	106 04.3 -30.2	N 25 01.0 -05.3	02						
03	224 38.7 +00.1	N 07 54.4 +00.9	266 39.9 -00.2	S 09 40.6 -00.8	120 34.1 -30.1	N 24 55.7 -05.5	03						
04	239 38.8 +00.2	N 07 55.3 +01.0	281 39.7 -00.2	S 09 39.8 -00.8	135 04.0 -30.1	N 24 50.2 -05.6	04						
05	254 39.0 +00.2	N 07 56.3 +00.9	296 39.5 -00.1	S 09 39.0 -00.8	149 33.9 -30.1	N 24 44.6 -05.7	05						
06	269 39.2 +00.1	N 07 57.2 +00.9	311 39.4 -00.2	S 09 38.2 -00.8	164 03.8 -30.1	N 24 38.9 -05.9	06						
07	284 39.3 +00.2	N 07 58.1 +00.9	326 39.2 -00.2	S 09 37.4 -00.8	178 33.7 -30.0	N 24 33.0 -06.0	07						
08	299 39.5 +00.2	N 07 59.0 +01.0	341 39.0 -00.2	S 09 36.6 -00.8	193 03.7 -30.0	N 24 27.0 -06.1	08						
09	314 39.7 +00.1	N 07 60.0 +00.9	356 38.8 -00.1	S 09 35.8 -00.8	207 33.7 -30.0	N 24 20.9 -06.2	09						
10	329 39.8 +00.2	N 08 00.9 +00.9	11 38.7 -00.2	S 09 35.0 -00.8	222 03.7 -29.9	N 24 14.7 -06.3	10						
11	344 40.0 +00.2	N 08 01.8 +00.9	26 38.5 -00.2	S 09 34.2 -00.8	236 33.8 -29.9	N 24 08.4 -06.4	11						
12	359 40.2 +00.1	N 08 02.7 +00.9	41 38.3 -00.2	S 09 33.4 -00.8	251 03.9 -29.9	N 24 02.0 -06.6	12						
13	14 40.3 +00.2	N 08 03.6 +01.0	56 38.1 -00.1	S 09 32.6 -00.8	265 34.0 -29.8	N 23 55.4 -06.7	13						
14	29 40.5 +00.2	N 08 04.6 +00.9	71 38.0 -00.2	S 09 31.8 -00.8	280 04.2 -29.8	N 23 48.7 -06.8	14						
15	44 40.7 +00.1	N 08 05.5 +00.9	86 37.8 -00.2	S 09 31.0 -00.8	294 34.4 -29.8	N 23 41.9 -06.9	15						
16	59 40.8 +00.2	N 08 06.4 +00.9	101 37.6 -00.2	S 09 30.2 -00.8	309 04.6 -29.8	N 23 35.0 -07.1	16						
17	74 41.0 +00.2	N 08 07.3 +01.0	116 37.4 -00.1	S 09 29.4 -00.9	323 34.8 -29.7	N 23 27.9 -07.1	17						
18	89 41.2 +00.1	N 08 08.3 +00.9	131 37.3 -00.2	S 09 28.5 -00.8	338 05.1 -29.7	N 23 20.8 -07.3	18						
19	104 41.3 +00.2	N 08 09.2 +00.9	146 37.1 -00.2	S 09 27.7 -00.8	352 35.4 -29.6	N 23 13.5 -07.3	19						
20	119 41.5 +00.2	N 08 10.1 +00.9	161 36.9 -00.2	S 09 26.9 -00.8	7 05.8 -29.7	N 23 06.2 -07.5	20						
21	134 41.7 +00.1	N 08 11.0 +00.9	176 36.7 -00.2	S 09 26.1 -00.8	21 36.1 -29.6	N 22 58.7 -07.7	21						
22	149 41.8 +00.2	N 08 11.9 +01.0	191 36.5 -00.1	S 09 25.3 -00.8	36 06.5 -29.5	N 22 51.0 -07.7	22						
23	164 42.0 +00.2	N 08 12.9 +00.9	206 36.4 -00.2	S 09 24.5 -00.8	50 37.0 -29.5	N 22 43.3 -07.8	23						
UT	02 06 10 14 18 22	SD 16'0 16'0 16'0 16'0 16'0 16'0	UT	02 06 10 14 18 22	SD 00'2 00'2 00'2 00'2 00'2 00'2	UT	02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 15'0 15'0					
	HP 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 54'6 54'7 54'8 54'9 54'9 55'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 341° 341° 341° 341° 341° 341°		SHA 023° 023° 023° 023° 023° 023°		SHA 238° 236° 233° 231° 229° 227°		SHA 031° 031° 031° 031° 031° 030°						
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:13		Greenwich Culmination Time: 19:30		Greenwich Culmination Time: 08:42						

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	229 22.7 +00.6	S 14 02.8 -00.6	203 52.4 +02.0	S 03 34.0 -00.2	232 42.7 +02.3	S 14 49.2 +00.0	00						
01	244 23.3 +00.7	S 14 02.2 -00.6	218 54.4 +01.9	S 03 33.8 -00.3	247 45.0 +02.2	S 14 49.2 -00.1	01						
02	259 24.0 +00.6	S 14 01.6 -00.6	233 56.3 +01.9	S 03 33.5 -00.2	262 47.2 +02.3	S 14 49.1 -00.1	02						
03	274 24.6 +00.6	S 14 01.0 -00.7	248 58.2 +02.0	S 03 33.3 -00.2	277 49.5 +02.3	S 14 49.0 +00.0	03						
04	289 25.2 +00.6	S 14 00.3 -00.6	264 00.2 +01.9	S 03 33.1 -00.2	292 51.8 +02.2	S 14 49.0 -00.1	04						
05	304 25.8 +00.7	S 13 59.7 -00.6	279 02.1 +01.9	S 03 32.9 -00.2	307 54.0 +02.3	S 14 48.9 +00.0	05						
06	319 26.5 +00.6	S 13 59.1 -00.6	294 04.0 +02.0	S 03 32.7 -00.3	322 56.3 +02.2	S 14 48.9 -00.1	06						
07	334 27.1 +00.6	S 13 58.5 -00.6	309 06.0 +01.9	S 03 32.4 -00.2	337 58.5 +02.3	S 14 48.8 -00.1	07						
08	349 27.7 +00.6	S 13 57.9 -00.7	324 07.9 +02.0	S 03 32.2 -00.2	353 00.8 +02.3	S 14 48.7 +00.0	08						
09	4 28.3 +00.7	S 13 57.2 -00.6	339 09.9 +01.9	S 03 32.0 -00.2	8 03.1 +02.2	S 14 48.7 -00.1	09						
10	19 29.0 +00.6	S 13 56.6 -00.6	354 11.8 +01.9	S 03 31.8 -00.3	23 05.3 +02.3	S 14 48.6 -00.1	10						
11	34 29.6 +00.6	S 13 56.0 -00.6	9 13.7 +02.0	S 03 31.5 -00.2	38 07.6 +02.3	S 14 48.5 +00.0	11						
12	49 30.2 +00.6	S 13 55.4 -00.6	24 15.7 +01.9	S 03 31.3 -00.2	53 09.9 +02.2	S 14 48.5 -00.1	12						
13	64 30.8 +00.7	S 13 54.8 -00.6	39 17.6 +01.9	S 03 31.1 -00.2	68 12.1 +02.3	S 14 48.4 +00.0	13						
14	79 31.5 +00.6	S 13 54.2 -00.7	54 19.5 +02.0	S 03 30.9 -00.2	83 14.4 +02.2	S 14 48.4 -00.1	14						
15	94 32.1 +00.6	S 13 53.5 -00.6	69 21.5 +01.9	S 03 30.7 -00.3	98 16.6 +02.3	S 14 48.3 -00.1	15						
16	109 32.7 +00.6	S 13 52.9 -00.6	84 23.4 +02.0	S 03 30.4 -00.2	113 18.9 +02.3	S 14 48.2 +00.0	16						
17	124 33.3 +00.7	S 13 52.3 -00.6	99 25.4 +01.9	S 03 30.2 -00.2	128 21.2 +02.2	S 14 48.2 -00.1	17						
18	139 34.0 +00.6	S 13 51.7 -00.6	114 27.3 +01.9	S 03 30.0 -00.2	143 23.4 +02.3	S 14 48.1 +00.0	18						
19	154 34.6 +00.6	S 13 51.1 -00.7	129 29.2 +02.0	S 03 29.8 -00.2	158 25.7 +02.3	S 14 48.1 -00.1	19						
20	169 35.2 +00.7	S 13 50.4 -00.6	144 31.2 +01.9	S 03 29.6 -00.3	173 28.0 +02.2	S 14 48.0 -00.1	20						
21	184 35.9 +00.6	S 13 49.8 -00.6	159 33.1 +01.9	S 03 29.3 -00.2	188 30.2 +02.3	S 14 47.9 +00.0	21						
22	199 36.5 +00.6	S 13 49.2 -00.6	174 35.0 +02.0	S 03 29.1 -00.2	203 32.5 +02.3	S 14 47.9 -00.1	22						
23	214 37.1 +00.6	S 13 48.6 -00.7	189 37.0 +01.9	S 03 28.9 -00.2	218 34.8 +02.2	S 14 47.8 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 031° 031° 031° 031° 031° 030°		SHA 006° 006° 006° 006° 006° 005°		SHA 034° 034° 034° 034° 034° 034°		SHA 031° 031° 031° 031° 031° 030°						
	Greenwich Culmination Time: 08:42		Greenwich Culmination Time: 10:23		Greenwich Culmination Time: 08:27		Greenwich Culmination Time: 08:42						

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 42.2 +00.1	N 08 13.8 +00.9	221 36.2 -00.2	S 09 23.7 -00.8	65 07.5 -29.5	N 22 35.5 -08.0	00						
01	194 42.3 +00.2	N 08 14.7 +00.9	236 36.0 -00.2	S 09 22.9 -00.9	79 38.0 -29.5	N 22 27.5 -08.0	01						
02	209 42.5 +00.2	N 08 15.6 +00.9	251 35.8 -00.1	S 09 22.0 -00.8	94 08.5 -29.4	N 22 19.5 -08.2	02						
03	224 42.7 +00.1	N 08 16.5 +01.0	266 35.7 -00.2	S 09 21.2 -00.8	108 39.1 -29.4	N 22 11.3 -08.3	03						
04	239 42.8 +00.2	N 08 17.5 +00.9	281 35.5 -00.2	S 09 20.4 -00.8	123 09.7 -29.3	N 22 03.0 -08.4	04						
05	254 43.0 +00.2	N 08 18.4 +00.9	296 35.3 -00.2	S 09 19.6 -00.8	137 40.4 -29.4	N 21 54.6 -08.5	05						
06	269 43.2 +00.1	N 08 19.3 +00.9	311 35.1 -00.1	S 09 18.8 -00.8	152 11.0 -29.2	N 21 46.1 -08.6	06						
07	284 43.3 +00.2	N 08 20.2 +00.9	326 35.0 -00.2	S 09 18.0 -00.9	166 41.8 -29.3	N 21 37.5 -08.7	07						
08	299 43.5 +00.2	N 08 21.1 +01.0	341 34.8 -00.2	S 09 17.1 -00.8	181 12.5 -29.2	N 21 28.8 -08.8	08						
09	314 43.7 +00.1	N 08 22.1 +00.9	356 34.6 -00.2	S 09 16.3 -00.8	195 43.3 -29.2	N 21 20.0 -08.9	09						
10	329 43.8 +00.2	N 08 23.0 +00.9	11 34.4 -00.2	S 09 15.5 -00.8	210 14.1 -29.1	N 21 11.1 -09.1	10						
11	344 44.0 +00.2	N 08 23.9 +00.9	26 34.2 -00.1	S 09 14.7 -00.8	224 45.0 -29.2	N 21 02.0 -09.1	11						
12	359 44.2 +00.1	N 08 24.8 +00.9	41 34.1 -00.2	S 09 13.9 -00.9	239 15.8 -29.0	N 20 52.9 -09.3	12						
13	14 44.3 +00.2	N 08 25.7 +00.9	56 33.9 -00.2	S 09 13.0 -00.8	253 46.8 -29.1	N 20 43.6 -09.3	13						
14	29 44.5 +00.1	N 08 26.6 +01.0	71 33.7 -00.2	S 09 12.2 -00.8	268 17.7 -29.0	N 20 34.3 -09.5	14						
15	44 44.6 +00.2	N 08 27.6 +00.9	86 33.5 -00.1	S 09 11.4 -00.8	282 48.7 -29.0	N 20 24.8 -09.6	15						
16	59 44.8 +00.2	N 08 28.5 +00.9	101 33.4 -00.2	S 09 10.6 -00.8	297 19.7 -28.9	N 20 15.2 -09.6	16						
17	74 45.0 +00.1	N 08 29.4 +00.9	116 33.2 -00.2	S 09 09.8 -00.9	311 50.8 -29.0	N 20 05.6 -09.8	17						
18	89 45.1 +00.2	N 08 30.3 +00.9	131 33.0 -00.2	S 09 08.9 -00.8	326 21.8 -28.8	N 19 55.8 -09.9	18						
19	104 45.3 +00.2	N 08 31.2 +00.9	146 32.8 -00.2	S 09 08.1 -00.8	340 53.0 -28.9	N 19 45.9 -10.0	19						
20	119 45.5 +00.1	N 08 32.1 +01.0	161 32.6 -00.1	S 09 07.3 -00.8	355 24.1 -28.8	N 19 35.9 -10.0	20						
21	134 45.6 +00.2	N 08 33.1 +00.9	176 32.5 -00.2	S 09 06.5 -00.9	9 55.3 -28.8	N 19 25.9 -10.2	21						
22	149 45.8 +00.2	N 08 34.0 +00.9	191 32.3 -00.2	S 09 05.6 -00.8	24 26.5 -28.8	N 19 15.7 -10.3	22						
23	164 46.0 +00.1	N 08 34.9 +00.9	206 32.1 -00.2	S 09 04.8 -00.8	38 57.7 -28.7	N 19 05.4 -10.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'0 15'0 15'1 15'1 15'1 15'2								
	HP 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 55'1 55'2 55'3 55'4 55'5 55'6								
	SHA 340° 340° 340° 340° 340° 340°		SHA 022° 022° 022° 022° 022° 021°		SHA 225° 223° 221° 219° 216° 214°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:13		Greenwich Culmination Time: 20:19								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	229 37.7 +00.7	S 13 47.9 -00.6	204 38.9 +02.0	S 03 28.7 -00.3	233 37.0 +02.3	S 14 47.8 -00.1	00						
01	244 38.4 +00.6	S 13 47.3 -00.6	219 40.9 +01.9	S 03 28.4 -00.2	248 39.3 +02.2	S 14 47.7 -00.1	01						
02	259 39.0 +00.6	S 13 46.7 -00.6	234 42.8 +01.9	S 03 28.2 -00.2	263 41.5 +02.3	S 14 47.6 +00.0	02						
03	274 39.6 +00.6	S 13 46.1 -00.6	249 44.7 +02.0	S 03 28.0 -00.2	278 43.8 +02.3	S 14 47.6 -00.1	03						
04	289 40.2 +00.7	S 13 45.5 -00.7	264 46.7 +01.9	S 03 27.8 -00.2	293 46.1 +02.2	S 14 47.5 +00.0	04						
05	304 40.9 +00.6	S 13 44.8 -00.6	279 48.6 +01.9	S 03 27.6 -00.3	308 48.3 +02.3	S 14 47.5 -00.1	05						
06	319 41.5 +00.6	S 13 44.2 -00.6	294 50.5 +02.0	S 03 27.3 -00.2	323 50.6 +02.3	S 14 47.4 -00.1	06						
07	334 42.1 +00.7	S 13 43.6 -00.6	309 52.5 +01.9	S 03 27.1 -00.2	338 52.9 +02.2	S 14 47.3 +00.0	07						
08	349 42.8 +00.6	S 13 43.0 -00.7	324 54.4 +02.0	S 03 26.9 -00.2	353 55.1 +02.3	S 14 47.3 -00.1	08						
09	4 43.4 +00.6	S 13 42.3 -00.6	339 56.4 +01.9	S 03 26.7 -00.2	8 57.4 +02.3	S 14 47.2 +00.0	09						
10	19 44.0 +00.6	S 13 41.7 -00.6	354 58.3 +01.9	S 03 26.5 -00.3	23 59.7 +02.2	S 14 47.2 -00.1	10						
11	34 44.6 +00.7	S 13 41.1 -00.6	10 00.2 +02.0	S 03 26.2 -00.2	39 01.9 +02.3	S 14 47.1 -00.1	11						
12	49 45.3 +00.6	S 13 40.5 -00.7	25 02.2 +01.9	S 03 26.0 -00.2	54 04.2 +02.3	S 14 47.0 +00.0	12						
13	64 45.9 +00.6	S 13 39.8 -00.6	40 04.1 +02.0	S 03 25.8 -00.2	69 06.5 +02.2	S 14 47.0 -00.1	13						
14	79 46.5 +00.7	S 13 39.2 -00.6	55 06.1 +01.9	S 03 25.6 -00.2	84 08.7 +02.3	S 14 46.9 +00.0	14						
15	94 47.2 +00.6	S 13 38.6 -00.6	70 08.0 +01.9	S 03 25.4 -00.3	99 11.0 +02.3	S 14 46.9 -00.1	15						
16	109 47.8 +00.6	S 13 38.0 -00.7	85 09.9 +02.0	S 03 25.1 -00.2	114 13.3 +02.2	S 14 46.8 -00.1	16						
17	124 48.4 +00.7	S 13 37.3 -00.6	100 11.9 +01.9	S 03 24.9 -00.2	129 15.5 +02.3	S 14 46.7 +00.0	17						
18	139 49.1 +00.6	S 13 36.7 -00.6	115 13.8 +02.0	S 03 24.7 -00.2	144 17.8 +02.3	S 14 46.7 -00.1	18						
19	154 49.7 +00.6	S 13 36.1 -00.6	130 15.8 +01.9	S 03 24.5 -00.2	159 20.1 +02.2	S 14 46.6 +00.0	19						
20	169 50.3 +00.6	S 13 35.5 -00.7	145 17.7 +01.9	S 03 24.3 -00.3	174 22.3 +02.3	S 14 46.6 -00.1	20						
21	184 50.9 +00.7	S 13 34.8 -00.6	160 19.6 +02.0	S 03 24.0 -00.2	189 24.6 +02.3	S 14 46.5 -00.1	21						
22	199 51.6 +00.6	S 13 34.2 -00.6	175 21.6 +01.9	S 03 23.8 -00.2	204 26.9 +02.2	S 14 46.4 +00.0	22						
23	214 52.2 +00.6	S 13 33.6 -00.6	190 23.5 +02.0	S 03 23.6 -00.2	219 29.1 +02.3	S 14 46.4 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 030° 030° 030° 030° 030° 030°		SHA 005° 005° 005° 005° 005° 005°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:41		Greenwich Culmination Time: 10:20		Greenwich Culmination Time: 08:24								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 46.1 +00.2	N 08 35.8 +00.9	221 31.9 -00.1	S 09 04.0 -00.8	53 29.0 -28.7	N 18 55.0 -10.4	00						
01	194 46.3 +00.1	N 08 36.7 +00.9	236 31.8 -00.2	S 09 03.2 -00.9	68 00.3 -28.6	N 18 44.6 -10.6	01						
02	209 46.4 +00.2	N 08 37.6 +00.9	251 31.6 -00.2	S 09 02.3 -00.8	82 31.7 -28.7	N 18 34.0 -10.7	02						
03	224 46.6 +00.2	N 08 38.5 +01.0	266 31.4 -00.2	S 09 01.5 -00.8	97 03.0 -28.6	N 18 23.3 -10.7	03						
04	239 46.8 +00.1	N 08 39.5 +00.9	281 31.2 -00.2	S 09 00.7 -00.9	111 34.4 -28.5	N 18 12.6 -10.9	04						
05	254 46.9 +00.2	N 08 40.4 +00.9	296 31.0 -00.1	S 08 59.8 -00.8	126 05.9 -28.6	N 18 01.7 -10.9	05						
06	269 47.1 +00.1	N 08 41.3 +00.9	311 30.9 -00.2	S 08 59.0 -00.8	140 37.3 -28.5	N 17 50.8 -11.1	06						
07	284 47.2 +00.2	N 08 42.2 +00.9	326 30.7 -00.2	S 08 58.2 -00.9	155 08.8 -28.5	N 17 39.7 -11.1	07						
08	299 47.4 +00.2	N 08 43.1 +00.9	341 30.5 -00.2	S 08 57.3 -00.8	169 40.3 -28.4	N 17 28.6 -11.2	08						
09	314 47.6 +00.1	N 08 44.0 +00.9	356 30.3 -00.1	S 08 56.5 -00.8	184 11.9 -28.4	N 17 17.4 -11.4	09						
10	329 47.7 +00.2	N 08 44.9 +00.9	11 30.2 -00.2	S 08 55.7 -00.9	198 43.5 -28.4	N 17 06.0 -11.4	10						
11	344 47.9 +00.2	N 08 45.8 +01.0	26 30.0 -00.2	S 08 54.8 -00.8	213 15.1 -28.4	N 16 54.6 -11.5	11						
12	359 48.1 +00.1	N 08 46.8 +00.9	41 29.8 -00.2	S 08 54.0 -00.8	227 46.7 -28.3	N 16 43.1 -11.6	12						
13	14 48.2 +00.2	N 08 47.7 +00.9	56 29.6 -00.2	S 08 53.2 -00.9	242 18.4 -28.4	N 16 31.5 -11.6	13						
14	29 48.4 +00.1	N 08 48.6 +00.9	71 29.4 -00.1	S 08 52.3 -00.8	256 50.0 -28.3	N 16 19.9 -11.8	14						
15	44 48.5 +00.2	N 08 49.5 +00.9	86 29.3 -00.2	S 08 51.5 -00.8	271 21.7 -28.2	N 16 08.1 -11.9	15						
16	59 48.7 +00.2	N 08 50.4 +00.9	101 29.1 -00.2	S 08 50.7 -00.9	285 53.5 -28.3	N 15 56.2 -11.9	16						
17	74 48.9 +00.1	N 08 51.3 +00.9	116 28.9 -00.2	S 08 49.8 -00.8	300 25.2 -28.2	N 15 44.3 -12.0	17						
18	89 49.0 +00.2	N 08 52.2 +00.9	131 28.7 -00.2	S 08 49.0 -00.8	314 57.0 -28.2	N 15 32.3 -12.2	18						
19	104 49.2 +00.1	N 08 53.1 +00.9	146 28.5 -00.1	S 08 48.2 -00.9	329 28.8 -28.1	N 15 20.1 -12.2	19						
20	119 49.3 +00.2	N 08 54.0 +00.9	161 28.4 -00.2	S 08 47.3 -00.8	344 00.7 -28.2	N 15 07.9 -12.2	20						
21	134 49.5 +00.2	N 08 54.9 +00.9	176 28.2 -00.2	S 08 46.5 -00.9	358 32.5 -28.1	N 14 55.7 -12.4	21						
22	149 49.7 +00.1	N 08 55.8 +01.0	191 28.0 -00.2	S 08 45.6 -00.8	13 04.4 -28.1	N 14 43.3 -12.4	22						
23	164 49.8 +00.2	N 08 56.8 +00.9	206 27.8 -00.1	S 08 44.8 -00.8	27 36.3 -28.1	N 14 30.9 -12.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 16'0 16'0 16'0 16'0 16'0 16'0		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'2 15'2 15'2 15'3 15'3 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 55'7 55'8 56'0 56'1 56'2 56'3								
	SHA 340° 339° 339° 339° 339° 339°		SHA 021° 021° 021° 021° 021° 020°		SHA 212° 210° 208° 206° 204° 202°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:13		Greenwich Culmination Time: 21:06								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	229 52.8 +00.7	S 13 33.0 -00.7	205 25.5 +01.9	S 03 23.4 -00.3	234 31.4 +02.3	S 14 46.3 +00.0	00						
01	244 53.5 +00.6	S 13 32.3 -00.6	220 27.4 +01.9	S 03 23.1 -00.2	249 33.7 +02.2	S 14 46.3 -00.1	01						
02	259 54.1 +00.6	S 13 31.7 -00.6	235 29.3 +02.0	S 03 22.9 -00.2	264 35.9 +02.3	S 14 46.2 -00.1	02						
03	274 54.7 +00.7	S 13 31.1 -00.7	250 31.3 +01.9	S 03 22.7 -00.2	279 38.2 +02.3	S 14 46.1 +00.0	03						
04	289 55.4 +00.6	S 13 30.4 -00.6	265 33.2 +02.0	S 03 22.5 -00.2	294 40.5 +02.2	S 14 46.1 -00.1	04						
05	304 56.0 +00.6	S 13 29.8 -00.6	280 35.2 +01.9	S 03 22.3 -00.3	309 42.7 +02.3	S 14 46.0 +00.0	05						
06	319 56.6 +00.7	S 13 29.2 -00.6	295 37.1 +01.9	S 03 22.0 -00.2	324 45.0 +02.3	S 14 46.0 -00.1	06						
07	334 57.3 +00.6	S 13 28.6 -00.7	310 39.0 +02.0	S 03 21.8 -00.2	339 47.3 +02.2	S 14 45.9 -00.1	07						
08	349 57.9 +00.6	S 13 27.9 -00.6	325 41.0 +01.9	S 03 21.6 -00.2	354 49.5 +02.3	S 14 45.8 +00.0	08						
09	4 58.5 +00.7	S 13 27.3 -00.6	340 42.9 +02.0	S 03 21.4 -00.2	9 51.8 +02.3	S 14 45.8 -00.1	09						
10	19 59.2 +00.6	S 13 26.7 -00.7	355 44.9 +01.9	S 03 21.2 -00.3	24 54.1 +02.2	S 14 45.7 +00.0	10						
11	34 59.8 +00.6	S 13 26.0 -00.6	10 46.8 +01.9	S 03 20.9 -00.2	39 56.3 +02.3	S 14 45.7 -00.1	11						
12	50 00.4 +00.7	S 13 25.4 -00.6	25 48.7 +02.0	S 03 20.7 -00.2	54 58.6 +02.3	S 14 45.6 -00.1	12						
13	65 01.1 +00.6	S 13 24.8 -00.6	40 50.7 +01.9	S 03 20.5 -00.2	70 00.9 +02.2	S 14 45.5 +00.0	13						
14	80 01.7 +00.6	S 13 24.2 -00.7	55 52.6 +02.0	S 03 20.3 -00.2	85 03.1 +02.3	S 14 45.5 -00.1	14						
15	95 02.3 +00.7	S 13 23.5 -00.6	70 54.6 +01.9	S 03 20.1 -00.3	100 05.4 +02.3	S 14 45.4 +00.0	15						
16	110 03.0 +00.6	S 13 22.9 -00.6	85 56.5 +02.0	S 03 19.8 -00.2	115 07.7 +02.3	S 14 45.4 -00.1	16						
17	125 03.6 +00.6	S 13 22.3 -00.7	100 58.5 +01.9	S 03 19.6 -00.2	130 10.0 +02.2	S 14 45.3 +00.0	17						
18	140 04.2 +00.7	S 13 21.6 -00.6	116 00.4 +01.9	S 03 19.4 -00.2	145 12.2 +02.3	S 14 45.3 -00.1	18						
19	155 04.9 +00.6	S 13 21.0 -00.6	131 02.3 +02.0	S 03 19.2 -00.2	160 14.5 +02.3	S 14 45.2 -00.1	19						
20	170 05.5 +00.6	S 13 20.4 -00.7	146 04.3 +01.9	S 03 19.0 -00.3	175 16.8 +02.2	S 14 45.1 +00.0	20						
21	185 06.1 +00.7	S 13 19.7 -00.6	161 06.2 +02.0	S 03 18.7 -00.2	190 19.0 +02.3	S 14 45.1 -00.1	21						
22	200 06.8 +00.6	S 13 19.1 -00.6	176 08.2 +01.9	S 03 18.5 -00.2	205 21.3 +02.3	S 14 45.0 +00.0	22						
23	215 07.4 +00.6	S 13 18.5 -00.7	191 10.1 +01.9	S 03 18.3 -00.2	220 23.6 +02.2	S 14 45.0 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 030° 030° 029° 029° 029° 029°		SHA 005° 005° 005° 005° 005° 005°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:40		Greenwich Culmination Time: 10:16		Greenwich Culmination Time: 08:20								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 50.0 +00.1	N 08	57.7 +00.9	221 27.7 -00.2	S 08	44.0 -00.9	42 08.2 -28.1	N 14	18.3 -12.6	00			
01	194 50.1 +00.2	N 08	58.6 +00.9	236 27.5 -00.2	S 08	43.1 -00.8	56 40.1 -28.0	N 14	05.7 -12.7	01			
02	209 50.3 +00.2	N 08	59.5 +00.9	251 27.3 -00.2	S 08	42.3 -00.9	71 12.1 -28.0	N 13	53.0 -12.7	02			
03	224 50.5 +00.1	N 09	00.4 +00.9	266 27.1 -00.2	S 08	41.4 -00.8	85 44.1 -28.0	N 13	40.3 -12.9	03			
04	239 50.6 +00.2	N 09	01.3 +00.9	281 26.9 -00.1	S 08	40.6 -00.9	100 16.1 -28.0	N 13	27.4 -12.9	04			
05	254 50.8 +00.1	N 09	02.2 +00.9	296 26.8 -00.2	S 08	39.7 -00.8	114 48.1 -28.0	N 13	14.5 -13.0	05			
06	269 50.9 +00.2	N 09	03.1 +00.9	311 26.6 -00.2	S 08	38.9 -00.8	129 20.1 -27.9	N 13	01.5 -13.1	06			
07	284 51.1 +00.2	N 09	04.0 +00.9	326 26.4 -00.2	S 08	38.1 -00.9	143 52.2 -28.0	N 12	48.4 -13.1	07			
08	299 51.3 +00.1	N 09	04.9 +00.9	341 26.2 -00.2	S 08	37.2 -00.8	158 24.2 -27.9	N 12	35.3 -13.2	08			
09	314 51.4 +00.2	N 09	05.8 +00.9	356 26.0 -00.1	S 08	36.4 -00.9	172 56.3 -27.9	N 12	22.1 -13.3	09			
10	329 51.6 +00.1	N 09	06.7 +00.9	11 25.9 -00.2	S 08	35.5 -00.8	187 28.4 -27.9	N 12	08.8 -13.4	10			
11	344 51.7 +00.2	N 09	07.6 +00.9	26 25.7 -00.2	S 08	34.7 -00.9	202 00.5 -27.9	N 11	55.4 -13.4	11			
12	359 51.9 +00.1	N 09	08.5 +00.9	41 25.5 -00.2	S 08	33.8 -00.8	216 32.6 -27.9	N 11	42.0 -13.5	12			
13	14 52.0 +00.2	N 09	09.4 +01.0	56 25.3 -00.2	S 08	33.0 -00.9	231 04.7 -27.8	N 11	28.5 -13.6	13			
14	29 52.2 +00.2	N 09	10.4 +00.9	71 25.1 -00.1	S 08	32.1 -00.8	245 36.9 -27.9	N 11	14.9 -13.6	14			
15	44 52.4 +00.1	N 09	11.3 +00.9	86 25.0 -00.2	S 08	31.3 -00.9	260 09.0 -27.8	N 11	01.3 -13.7	15			
16	59 52.5 +00.2	N 09	12.2 +00.9	101 24.8 -00.2	S 08	30.4 -00.8	274 41.2 -27.8	N 10	47.6 -13.8	16			
17	74 52.7 +00.1	N 09	13.1 +00.9	116 24.6 -00.2	S 08	29.6 -00.9	289 13.4 -27.9	N 10	33.8 -13.9	17			
18	89 52.8 +00.2	N 09	14.0 +00.9	131 24.4 -00.1	S 08	28.7 -00.8	303 45.5 -27.8	N 10	19.9 -13.9	18			
19	104 53.0 +00.1	N 09	14.9 +00.9	146 24.3 -00.2	S 08	27.9 -00.9	318 17.7 -27.8	N 10	06.0 -13.9	19			
20	119 53.1 +00.2	N 09	15.8 +00.9	161 24.1 -00.2	S 08	27.0 -00.8	332 49.9 -27.8	N 09	52.1 -14.1	20			
21	134 53.3 +00.2	N 09	16.7 +00.9	176 23.9 -00.2	S 08	26.2 -00.9	347 22.1 -27.8	N 09	38.0 -14.1	21			
22	149 53.5 +00.1	N 09	17.6 +00.9	191 23.7 -00.2	S 08	25.3 -00.8	1 54.3 -27.8	N 09	23.9 -14.1	22			
23	164 53.6 +00.2	N 09	18.5 +00.9	206 23.5 -00.1	S 08	24.5 -00.9	16 26.5 -27.8	N 09	09.8 -14.2	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 16'0 16'0 16'0 16'0 16'0 16'0			SD 00'2 00'2 00'2 00'2 00'2 00'2			SD 15'4 15'4 15'5 15'5 15'5 15'6						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'2 00'2 00'2 00'2 00'2 00'2			HP 56'5 56'6 56'7 56'8 57'0 57'1						
	SHA 339° 338° 338° 338° 338° 338°			SHA 020° 020° 020° 020° 020° 019°			SHA 200° 198° 196° 194° 192° 190°						
	Greenwich Culmination Time: 12:00			Greenwich Culmination Time: 09:14			Greenwich Culmination Time: 21:52						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	230 08.0 +00.7	S 13	17.8 -00.6	206 12.0 +02.0	S 03	18.1 -00.2	235 25.8 +02.3	S 14	44.9 -00.1	00			
01	245 08.7 +00.6	S 13	17.2 -00.6	221 14.0 +01.9	S 03	17.9 -00.3	250 28.1 +02.3	S 14	44.8 +00.0	01			
02	260 09.3 +00.6	S 13	16.6 -00.7	236 15.9 +02.0	S 03	17.6 -00.2	265 30.4 +02.3	S 14	44.8 -00.1	02			
03	275 09.9 +00.7	S 13	15.9 -00.6	251 17.9 +01.9	S 03	17.4 -00.2	280 32.7 +02.2	S 14	44.7 +00.0	03			
04	290 10.6 +00.6	S 13	15.3 -00.6	266 19.8 +02.0	S 03	17.2 -00.2	295 34.9 +02.3	S 14	44.7 -00.1	04			
05	305 11.2 +00.6	S 13	14.7 -00.6	281 21.8 +01.9	S 03	17.0 -00.2	310 37.2 +02.3	S 14	44.6 -00.1	05			
06	320 11.8 +00.7	S 13	14.1 -00.7	296 23.7 +01.9	S 03	16.8 -00.2	325 39.5 +02.2	S 14	44.5 +00.0	06			
07	335 12.5 +00.6	S 13	13.4 -00.6	311 25.6 +02.0	S 03	16.6 -00.3	340 41.7 +02.3	S 14	44.5 -00.1	07			
08	350 13.1 +00.6	S 13	12.8 -00.6	326 27.6 +01.9	S 03	16.3 -00.2	355 44.0 +02.3	S 14	44.4 +00.0	08			
09	5 13.7 +00.7	S 13	12.2 -00.7	341 29.5 +02.0	S 03	16.1 -00.2	10 46.3 +02.3	S 14	44.4 -00.1	09			
10	20 14.4 +00.6	S 13	11.5 -00.6	356 31.5 +01.9	S 03	15.9 -00.2	25 48.6 +02.2	S 14	44.3 +00.0	10			
11	35 15.0 +00.6	S 13	10.9 -00.7	11 33.4 +02.0	S 03	15.7 -00.2	40 50.8 +02.3	S 14	44.3 -00.1	11			
12	50 15.6 +00.7	S 13	10.2 -00.6	26 35.4 +01.9	S 03	15.5 -00.3	55 53.1 +02.3	S 14	44.2 -00.1	12			
13	65 16.3 +00.6	S 13	09.6 -00.6	41 37.3 +01.9	S 03	15.2 -00.2	70 55.4 +02.2	S 14	44.1 +00.0	13			
14	80 16.9 +00.7	S 13	09.0 -00.7	56 39.2 +02.0	S 03	15.0 -00.2	85 57.6 +02.3	S 14	44.1 -00.1	14			
15	95 17.6 +00.6	S 13	08.3 -00.6	71 41.2 +01.9	S 03	14.8 -00.2	100 59.9 +02.3	S 14	44.0 +00.0	15			
16	110 18.2 +00.6	S 13	07.7 -00.6	86 43.1 +02.0	S 03	14.6 -00.2	116 02.2 +02.3	S 14	44.0 -00.1	16			
17	125 18.8 +00.7	S 13	07.1 -00.7	101 45.1 +01.9	S 03	14.4 -00.3	131 04.5 +02.2	S 14	43.9 -00.1	17			
18	140 19.5 +00.6	S 13	06.4 -00.6	116 47.0 +02.0	S 03	14.1 -00.2	146 06.7 +02.3	S 14	43.8 +00.0	18			
19	155 20.1 +00.6	S 13	05.8 -00.6	131 49.0 +01.9	S 03	13.9 -00.2	161 09.0 +02.3	S 14	43.8 -00.1	19			
20	170 20.7 +00.7	S 13	05.2 -00.7	146 50.9 +01.9	S 03	13.7 -00.2	176 11.3 +02.2	S 14	43.7 +00.0	20			
21	185 21.4 +00.6	S 13	04.5 -00.6	161 52.8 +02.0	S 03	13.5 -00.2	191 13.5 +02.3	S 14	43.7 -00.1	21			
22	200 22.0 +00.7	S 13	03.9 -00.6	176 54.8 +01.9	S 03	13.3 -00.3	206 15.8 +02.3	S 14	43.6 +00.0	22			
23	215 22.7 +00.6	S 13	03.3 -00.7	191 56.7 +02.0	S 03	13.0 -00.2	221 18.1 +02.3	S 14	43.6 -00.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 029° 029° 029° 029° 028° 028°			SHA 005° 005° 005° 005° 005° 005°			SHA 034° 034° 034° 034° 034° 034°						
	Greenwich Culmination Time: 08:39			Greenwich Culmination Time: 10:13			Greenwich Culmination Time: 08:17						

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 53.8 +00.1	N 09 19.4 +00.9	221 23.4 -00.2	S 08 23.6 -00.8	30 58.7 -27.8	N 08 55.6 -14.3	00						
01	194 53.9 +00.2	N 09 20.3 +00.9	236 23.2 -00.2	S 08 22.8 -00.9	45 30.9 -27.8	N 08 41.3 -14.3	01						
02	209 54.1 +00.1	N 09 21.2 +00.9	251 23.0 -00.2	S 08 21.9 -00.8	60 03.1 -27.8	N 08 27.0 -14.4	02						
03	224 54.2 +00.2	N 09 22.1 +00.9	266 22.8 -00.2	S 08 21.1 -00.9	74 35.3 -27.7	N 08 12.6 -14.4	03						
04	239 54.4 +00.2	N 09 23.0 +00.9	281 22.6 -00.1	S 08 20.2 -00.9	89 07.6 -27.8	N 07 58.2 -14.5	04						
05	254 54.6 +00.1	N 09 23.9 +00.9	296 22.5 -00.2	S 08 19.3 -00.8	103 39.8 -27.8	N 07 43.7 -14.6	05						
06	269 54.7 +00.2	N 09 24.8 +00.9	311 22.3 -00.2	S 08 18.5 -00.9	118 12.0 -27.8	N 07 29.1 -14.6	06						
07	284 54.9 +00.1	N 09 25.7 +00.9	326 22.1 -00.2	S 08 17.6 -00.8	132 44.2 -27.8	N 07 14.5 -14.6	07						
08	299 55.0 +00.2	N 09 26.6 +00.9	341 21.9 -00.2	S 08 16.8 -00.9	147 16.4 -27.8	N 06 59.9 -14.7	08						
09	314 55.2 +00.1	N 09 27.5 +00.9	356 21.7 -00.1	S 08 15.9 -00.9	161 48.6 -27.9	N 06 45.2 -14.8	09						
10	329 55.3 +00.2	N 09 28.4 +00.9	11 21.6 -00.2	S 08 15.0 -00.8	176 20.7 -27.8	N 06 30.4 -14.8	10						
11	344 55.5 +00.1	N 09 29.3 +00.9	26 21.4 -00.2	S 08 14.2 -00.9	190 52.9 -27.8	N 06 15.6 -14.8	11						
12	359 55.6 +00.2	N 09 30.2 +00.9	41 21.2 -00.2	S 08 13.3 -00.8	205 25.1 -27.8	N 06 00.8 -14.9	12						
13	14 55.8 +00.1	N 09 31.1 +00.9	56 21.0 -00.2	S 08 12.5 -00.9	219 57.3 -27.9	N 05 45.9 -15.0	13						
14	29 55.9 +00.2	N 09 32.0 +00.9	71 20.8 -00.1	S 08 11.6 -00.9	234 29.4 -27.9	N 05 30.9 -15.0	14						
15	44 56.1 +00.2	N 09 32.9 +00.9	86 20.7 -00.2	S 08 10.7 -00.8	249 01.5 -27.8	N 05 15.9 -15.0	15						
16	59 56.3 +00.1	N 09 33.8 +00.9	101 20.5 -00.2	S 08 09.9 -00.9	263 33.7 -27.9	N 05 00.9 -15.1	16						
17	74 56.4 +00.2	N 09 34.7 +00.9	116 20.3 -00.2	S 08 09.0 -00.8	278 05.8 -27.9	N 04 45.8 -15.1	17						
18	89 56.6 +00.1	N 09 35.6 +00.9	131 20.1 -00.2	S 08 08.2 -00.9	292 37.9 -27.9	N 04 30.7 -15.1	18						
19	104 56.7 +00.2	N 09 36.5 +00.9	146 19.9 -00.1	S 08 07.3 -00.9	307 10.0 -28.0	N 04 15.6 -15.2	19						
20	119 56.9 +00.1	N 09 37.4 +00.9	161 19.8 -00.2	S 08 06.4 -00.8	321 42.0 -27.9	N 04 00.4 -15.2	20						
21	134 57.0 +00.2	N 09 38.3 +00.8	176 19.6 -00.2	S 08 05.6 -00.9	336 14.1 -28.0	N 03 45.2 -15.3	21						
22	149 57.2 +00.1	N 09 39.1 +00.9	191 19.4 -00.2	S 08 04.7 -00.9	350 46.1 -28.0	N 03 29.9 -15.3	22						
23	164 57.3 +00.2	N 09 40.0 +00.9	206 19.2 -00.2	S 08 03.8 -00.8	5 18.1 -28.0	N 03 14.6 -15.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'6 15'6 15'7 15'7 15'7 15'8								
	HP 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 57'2 57'4 57'5 57'6 57'8 57'9								
	SHA 338° 338° 337° 337° 337° 337°		SHA 019° 019° 019° 019° 018° 018°		SHA 188° 186° 184° 182° 180° 178°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:14		Greenwich Culmination Time: 22:38								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	230 23.3 +00.6	S 13 02.6 -00.6	206 58.7 +01.9	S 03 12.8 -00.2	236 20.4 +02.2	S 14 43.5 -00.1	00						
01	245 23.9 +00.7	S 13 02.0 -00.7	222 00.6 +02.0	S 03 12.6 -00.2	251 22.6 +02.3	S 14 43.4 +00.0	01						
02	260 24.6 +00.6	S 13 01.3 -00.6	237 02.6 +01.9	S 03 12.4 -00.2	266 24.9 +02.3	S 14 43.4 -00.1	02						
03	275 25.2 +00.6	S 13 00.7 -00.6	252 04.5 +02.0	S 03 12.2 -00.2	281 27.2 +02.3	S 14 43.3 +00.0	03						
04	290 25.8 +00.7	S 13 00.1 -00.7	267 06.5 +01.9	S 03 12.0 -00.3	296 29.5 +02.2	S 14 43.3 -00.1	04						
05	305 26.5 +00.6	S 12 59.4 -00.6	282 08.4 +01.9	S 03 11.7 -00.2	311 31.7 +02.3	S 14 43.2 +00.0	05						
06	320 27.1 +00.7	S 12 58.8 -00.6	297 10.3 +02.0	S 03 11.5 -00.2	326 34.0 +02.3	S 14 43.2 -00.1	06						
07	335 27.8 +00.6	S 12 58.2 -00.7	312 12.3 +01.9	S 03 11.3 -00.2	341 36.3 +02.3	S 14 43.1 -00.1	07						
08	350 28.4 +00.6	S 12 57.5 -00.6	327 14.2 +02.0	S 03 11.1 -00.2	356 38.6 +02.2	S 14 43.0 +00.0	08						
09	5 29.0 +00.7	S 12 56.9 -00.7	342 16.2 +01.9	S 03 10.9 -00.3	11 40.8 +02.3	S 14 43.0 -00.1	09						
10	20 29.7 +00.6	S 12 56.2 -00.6	357 18.1 +02.0	S 03 10.6 -00.2	26 43.1 +02.3	S 14 42.9 +00.0	10						
11	35 30.3 +00.7	S 12 55.6 -00.6	12 20.1 +01.9	S 03 10.4 -00.2	41 45.4 +02.2	S 14 42.9 -00.1	11						
12	50 31.0 +00.6	S 12 55.0 -00.7	27 22.0 +02.0	S 03 10.2 -00.2	56 47.6 +02.3	S 14 42.8 +00.0	12						
13	65 31.6 +00.6	S 12 54.3 -00.6	42 24.0 +01.9	S 03 10.0 -00.2	71 49.9 +02.3	S 14 42.8 -00.1	13						
14	80 32.2 +00.7	S 12 53.7 -00.7	57 25.9 +01.9	S 03 09.8 -00.3	86 52.2 +02.3	S 14 42.7 -00.1	14						
15	95 32.9 +00.6	S 12 53.0 -00.6	72 27.8 +02.0	S 03 09.5 -00.2	101 54.5 +02.2	S 14 42.6 +00.0	15						
16	110 33.5 +00.7	S 12 52.4 -00.6	87 29.8 +01.9	S 03 09.3 -00.2	116 56.7 +02.3	S 14 42.6 -00.1	16						
17	125 34.2 +00.6	S 12 51.8 -00.7	102 31.7 +02.0	S 03 09.1 -00.2	131 59.0 +02.3	S 14 42.5 +00.0	17						
18	140 34.8 +00.6	S 12 51.1 -00.6	117 33.7 +01.9	S 03 08.9 -00.2	147 01.3 +02.3	S 14 42.5 -00.1	18						
19	155 35.4 +00.7	S 12 50.5 -00.7	132 35.6 +02.0	S 03 08.7 -00.2	162 03.6 +02.2	S 14 42.4 +00.0	19						
20	170 36.1 +00.6	S 12 49.8 -00.6	147 37.6 +01.9	S 03 08.5 -00.3	177 05.8 +02.3	S 14 42.4 -00.1	20						
21	185 36.7 +00.7	S 12 49.2 -00.6	162 39.5 +02.0	S 03 08.2 -00.2	192 08.1 +02.3	S 14 42.3 -00.1	21						
22	200 37.4 +00.6	S 12 48.6 -00.7	177 41.5 +01.9	S 03 08.0 -00.2	207 10.4 +02.3	S 14 42.2 +00.0	22						
23	215 38.0 +00.7	S 12 47.9 -00.6	192 43.4 +02.0	S 03 07.8 -00.2	222 12.7 +02.3	S 14 42.2 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 028° 028° 028° 028° 028° 028°		SHA 005° 005° 005° 005° 005° 005°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:38		Greenwich Culmination Time: 10:10		Greenwich Culmination Time: 08:13								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 57.5 +00.1	N 09 40.9 +00.9	221 19.0 -00.1	S 08 03.0 -00.9	19 50.1 -28.0	N 02 59.3 -15.3	00						
01	194 57.6 +00.2	N 09 41.8 +00.9	236 18.9 -00.2	S 08 02.1 -00.9	34 22.1 -28.0	N 02 44.0 -15.4	01						
02	209 57.8 +00.1	N 09 42.7 +00.9	251 18.7 -00.2	S 08 01.2 -00.8	48 54.1 -28.1	N 02 28.6 -15.5	02						
03	224 57.9 +00.2	N 09 43.6 +00.9	266 18.5 -00.2	S 08 00.4 -00.9	63 26.0 -28.1	N 02 13.1 -15.4	03						
04	239 58.1 +00.1	N 09 44.5 +00.9	281 18.3 -00.2	S 07 59.5 -00.9	77 57.9 -28.1	N 01 57.7 -15.5	04						
05	254 58.2 +00.2	N 09 45.4 +00.9	296 18.1 -00.1	S 07 58.6 -00.9	92 29.8 -28.2	N 01 42.2 -15.5	05						
06	269 58.4 +00.2	N 09 46.3 +00.9	311 18.0 -00.2	S 07 57.7 -00.8	107 01.6 -28.2	N 01 26.7 -15.5	06						
07	284 58.6 +00.1	N 09 47.2 +00.9	326 17.8 -00.2	S 07 56.9 -00.9	121 33.4 -28.2	N 01 11.2 -15.6	07						
08	299 58.7 +00.2	N 09 48.1 +00.9	341 17.6 -00.2	S 07 56.0 -00.9	136 05.2 -28.2	N 00 55.6 -15.5	08						
09	314 58.9 +00.1	N 09 49.0 +00.9	356 17.4 -00.2	S 07 55.1 -00.8	150 37.0 -28.3	N 00 40.1 -15.6	09						
10	329 59.0 +00.2	N 09 49.9 +00.9	11 17.2 -00.1	S 07 54.3 -00.9	165 08.7 -28.3	N 00 24.5 -15.6	10						
11	344 59.2 +00.1	N 09 50.8 +00.9	26 17.1 -00.2	S 07 53.4 -00.9	179 40.4 -28.3	N 00 08.9 -15.7	11						
12	359 59.3 +00.2	N 09 51.7 +00.9	41 16.9 -00.2	S 07 52.5 -00.9	194 12.1 -28.4	S 00 06.8 +15.6	12						
13	14 59.5 +00.1	N 09 52.6 +00.8	56 16.7 -00.2	S 07 51.6 -00.8	208 43.7 -28.4	S 00 22.4 +15.7	13						
14	29 59.6 +00.2	N 09 53.4 +00.9	71 16.5 -00.2	S 07 50.8 -00.9	223 15.3 -28.4	S 00 38.1 +15.6	14						
15	44 59.8 +00.1	N 09 54.3 +00.9	86 16.3 -00.1	S 07 49.9 -00.9	237 46.9 -28.5	S 00 53.7 +15.7	15						
16	59 59.9 +00.2	N 09 55.2 +00.9	101 16.2 -00.2	S 07 49.0 -00.9	252 18.4 -28.5	S 01 09.4 +15.7	16						
17	75 00.1 +00.1	N 09 56.1 +00.9	116 16.0 -00.2	S 07 48.1 -00.8	266 49.9 -28.5	S 01 25.1 +15.7	17						
18	90 00.2 +00.2	N 09 57.0 +00.9	131 15.8 -00.2	S 07 47.3 -00.9	281 21.4 -28.6	S 01 40.8 +15.7	18						
19	105 00.4 +00.1	N 09 57.9 +00.9	146 15.6 -00.2	S 07 46.4 -00.9	295 52.8 -28.7	S 01 56.5 +15.8	19						
20	120 00.5 +00.2	N 09 58.8 +00.9	161 15.4 -00.1	S 07 45.5 -00.9	310 24.1 -28.6	S 02 12.3 +15.7	20						
21	135 00.7 +00.1	N 09 59.7 +00.9	176 15.3 -00.2	S 07 44.6 -00.8	324 55.5 -28.8	S 02 28.0 +15.7	21						
22	150 00.8 +00.2	N 10 00.6 +00.8	191 15.1 -00.2	S 07 43.8 -00.9	339 26.7 -28.7	S 02 43.7 +15.8	22						
23	165 01.0 +00.1	N 10 01.4 +00.9	206 14.9 -00.2	S 07 42.9 -00.9	353 58.0 -28.9	S 02 59.5 +15.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 15'8 15'8 15'9 15'9 15'9 16'0								
	HP 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 58'0 58'2 58'3 58'4 58'5 58'6								
	SHA 337° 337° 336° 336° 336° 336°		SHA 018° 018° 018° 018° 017° 017°		SHA 176° 174° 172° 170° 167° 165°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:14		Greenwich Culmination Time: 23:24								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	230 38.7 +00.6	S 12 47.3 -00.7	207 45.4 +01.9	S 03 07.6 -00.2	237 15.0 +02.2	S 14 42.1 +00.0	00						
01	245 39.3 +00.6	S 12 46.6 -00.6	222 47.3 +01.9	S 03 07.4 -00.2	252 17.2 +02.3	S 14 42.1 -00.1	01						
02	260 39.9 +00.7	S 12 46.0 -00.6	237 49.2 +02.0	S 03 07.2 -00.3	267 19.5 +02.3	S 14 42.0 +00.0	02						
03	275 40.6 +00.6	S 12 45.4 -00.7	252 51.2 +01.9	S 03 06.9 -00.2	282 21.8 +02.3	S 14 42.0 -00.1	03						
04	290 41.2 +00.7	S 12 44.7 -00.6	267 53.1 +02.0	S 03 06.7 -00.2	297 24.1 +02.2	S 14 41.9 -00.1	04						
05	305 41.9 +00.6	S 12 44.1 -00.7	282 55.1 +01.9	S 03 06.5 -00.2	312 26.3 +02.3	S 14 41.8 +00.0	05						
06	320 42.5 +00.6	S 12 43.4 -00.6	297 57.0 +02.0	S 03 06.3 -00.2	327 28.6 +02.3	S 14 41.8 -00.1	06						
07	335 43.1 +00.7	S 12 42.8 -00.7	312 59.0 +01.9	S 03 06.1 -00.3	342 30.9 +02.3	S 14 41.7 +00.0	07						
08	350 43.8 +00.6	S 12 42.1 -00.6	328 00.9 +02.0	S 03 05.8 -00.2	357 33.2 +02.2	S 14 41.7 -00.1	08						
09	5 44.4 +00.7	S 12 41.5 -00.6	343 02.9 +01.9	S 03 05.6 -00.2	12 35.4 +02.3	S 14 41.6 +00.0	09						
10	20 45.1 +00.6	S 12 40.9 -00.7	358 04.8 +02.0	S 03 05.4 -00.2	27 37.7 +02.3	S 14 41.6 -00.1	10						
11	35 45.7 +00.7	S 12 40.2 -00.6	13 06.8 +01.9	S 03 05.2 -00.2	42 40.0 +02.3	S 14 41.5 +00.0	11						
12	50 46.4 +00.6	S 12 39.6 -00.7	28 08.7 +02.0	S 03 05.0 -00.2	57 42.3 +02.3	S 14 41.5 -00.1	12						
13	65 47.0 +00.6	S 12 38.9 -00.6	43 10.7 +01.9	S 03 04.8 -00.3	72 44.6 +02.2	S 14 41.4 -00.1	13						
14	80 47.6 +00.7	S 12 38.3 -00.7	58 12.6 +02.0	S 03 04.5 -00.2	87 46.8 +02.3	S 14 41.3 +00.0	14						
15	95 48.3 +00.6	S 12 37.6 -00.6	73 14.6 +01.9	S 03 04.3 -00.2	102 49.1 +02.3	S 14 41.3 -00.1	15						
16	110 48.9 +00.7	S 12 37.0 -00.7	88 16.5 +01.9	S 03 04.1 -00.2	117 51.4 +02.3	S 14 41.2 +00.0	16						
17	125 49.6 +00.6	S 12 36.3 -00.6	103 18.4 +02.0	S 03 03.9 -00.2	132 53.7 +02.2	S 14 41.2 -00.1	17						
18	140 50.2 +00.7	S 12 35.7 -00.6	118 20.4 +01.9	S 03 03.7 -00.2	147 55.9 +02.3	S 14 41.1 +00.0	18						
19	155 50.9 +00.6	S 12 35.1 -00.7	133 22.3 +02.0	S 03 03.5 -00.3	162 58.2 +02.3	S 14 41.1 -00.1	19						
20	170 51.5 +00.7	S 12 34.4 -00.6	148 24.3 +01.9	S 03 03.2 -00.2	178 00.5 +02.3	S 14 41.0 +00.0	20						
21	185 52.2 +00.6	S 12 33.8 -00.7	163 26.2 +02.0	S 03 03.0 -00.2	193 02.8 +02.3	S 14 41.0 -00.1	21						
22	200 52.8 +00.6	S 12 33.1 -00.6	178 28.2 +01.9	S 03 02.8 -00.2	208 05.1 +02.2	S 14 40.9 -00.1	22						
23	215 53.4 +00.7	S 12 32.5 -00.7	193 30.1 +02.0	S 03 02.6 -00.2	223 07.3 +02.3	S 14 40.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 027° 027° 027° 027° 027° 027°		SHA 005° 005° 005° 005° 004° 004°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:37		Greenwich Culmination Time: 10:07		Greenwich Culmination Time: 08:09								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 01.1 +00.2	N 10	02.3 +00.9	221 14.7 -00.2	S 07	42.0 -00.9	8 29.1 -28.8	S 03	15.2 +15.7	00			
01	195 01.3 +00.1	N 10	03.2 +00.9	236 14.5 -00.2	S 07	41.1 -00.9	23 00.3 -28.9	S 03	30.9 +15.8	01			
02	210 01.4 +00.2	N 10	04.1 +00.9	251 14.3 -00.1	S 07	40.2 -00.8	37 31.4 -29.0	S 03	46.7 +15.7	02			
03	225 01.6 +00.1	N 10	05.0 +00.9	266 14.2 -00.2	S 07	39.4 -00.9	52 02.4 -29.0	S 04	02.4 +15.7	03			
04	240 01.7 +00.2	N 10	05.9 +00.9	281 14.0 -00.2	S 07	38.5 -00.9	66 33.4 -29.1	S 04	18.1 +15.8	04			
05	255 01.9 +00.1	N 10	06.8 +00.9	296 13.8 -00.2	S 07	37.6 -00.9	81 04.3 -29.1	S 04	33.9 +15.7	05			
06	270 02.0 +00.2	N 10	07.7 +00.8	311 13.6 -00.2	S 07	36.7 -00.9	95 35.2 -29.1	S 04	49.6 +15.7	06			
07	285 02.2 +00.1	N 10	08.5 +00.9	326 13.4 -00.1	S 07	35.8 -00.9	110 06.1 -29.3	S 05	05.3 +15.7	07			
08	300 02.3 +00.1	N 10	09.4 +00.9	341 13.3 -00.2	S 07	34.9 -00.8	124 36.8 -29.2	S 05	21.0 +15.6	08			
09	315 02.4 +00.2	N 10	10.3 +00.9	356 13.1 -00.2	S 07	34.1 -00.9	139 07.6 -29.4	S 05	36.6 +15.7	09			
10	330 02.6 +00.1	N 10	11.2 +00.9	11 12.9 -00.2	S 07	33.2 -00.9	153 38.2 -29.4	S 05	52.3 +15.7	10			
11	345 02.7 +00.2	N 10	12.1 +00.9	26 12.7 -00.2	S 07	32.3 -00.9	168 08.8 -29.4	S 06	08.0 +15.6	11			
12	0 02.9 +00.1	N 10	13.0 +00.9	41 12.5 -00.1	S 07	31.4 -00.9	182 39.4 -29.5	S 06	23.6 +15.6	12			
13	15 03.0 +00.2	N 10	13.9 +00.8	56 12.4 -00.2	S 07	30.5 -00.9	197 09.9 -29.6	S 06	39.2 +15.6	13			
14	30 03.2 +00.1	N 10	14.7 +00.9	71 12.2 -00.2	S 07	29.6 -00.9	211 40.3 -29.7	S 06	54.8 +15.6	14			
15	45 03.3 +00.2	N 10	15.6 +00.9	86 12.0 -00.2	S 07	28.7 -00.8	226 10.6 -29.7	S 07	10.4 +15.5	15			
16	60 03.5 +00.1	N 10	16.5 +00.9	101 11.8 -00.2	S 07	27.9 -00.9	240 40.9 -29.7	S 07	25.9 +15.5	16			
17	75 03.6 +00.2	N 10	17.4 +00.9	116 11.6 -00.1	S 07	27.0 -00.9	255 11.2 -29.9	S 07	41.4 +15.5	17			
18	90 03.8 +00.1	N 10	18.3 +00.9	131 11.5 -00.2	S 07	26.1 -00.9	269 41.3 -29.9	S 07	56.9 +15.5	18			
19	105 03.9 +00.2	N 10	19.2 +00.8	146 11.3 -00.2	S 07	25.2 -00.9	284 11.4 -29.9	S 08	12.4 +15.4	19			
20	120 04.1 +00.1	N 10	20.0 +00.9	161 11.1 -00.2	S 07	24.3 -00.9	298 41.5 -30.1	S 08	27.8 +15.4	20			
21	135 04.2 +00.2	N 10	20.9 +00.9	176 10.9 -00.2	S 07	23.4 -00.9	313 11.4 -30.1	S 08	43.2 +15.4	21			
22	150 04.4 +00.1	N 10	21.8 +00.9	191 10.7 -00.2	S 07	22.5 -00.9	327 41.3 -30.2	S 08	58.6 +15.3	22			
23	165 04.5 +00.1	N 10	22.7 +00.9	206 10.5 -00.1	S 07	21.6 -00.9	342 11.1 -30.2	S 09	13.9 +15.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'2 00'2 00'2 00'2 00'2 00'2			SD 16'0 16'0 16'1 16'1 16'1 16'1						
	HP 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 58'8 58'9 59'0 59'1 59'2 59'3						
	SHA 336° 336° 336° 335° 335° 335°			SHA 017° 017° 017° 017° 016° 016°			SHA 163° 161° 159° 157° 155° 153°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 09:15			Greenwich Culmination Time: -1:00						

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	230 54.1 +00.6	S 12	31.8 -00.6	208 32.1 +01.9	S 03	02.4 -00.3	238 09.6 +02.3	S 14	40.8 -00.1	00			
01	245 54.7 +00.7	S 12	31.2 -00.7	223 34.0 +02.0	S 03	02.1 -00.2	253 11.9 +02.3	S 14	40.7 +00.0	01			
02	260 55.4 +00.6	S 12	30.5 -00.6	238 36.0 +01.9	S 03	01.9 -00.2	268 14.2 +02.3	S 14	40.7 -00.1	02			
03	275 56.0 +00.7	S 12	29.9 -00.7	253 37.9 +02.0	S 03	01.7 -00.2	283 16.5 +02.2	S 14	40.6 +00.0	03			
04	290 56.7 +00.6	S 12	29.2 -00.6	268 39.9 +01.9	S 03	01.5 -00.2	298 18.7 +02.3	S 14	40.6 -00.1	04			
05	305 57.3 +00.7	S 12	28.6 -00.7	283 41.8 +02.0	S 03	01.3 -00.2	313 21.0 +02.3	S 14	40.5 +00.0	05			
06	320 58.0 +00.6	S 12	27.9 -00.6	298 43.8 +01.9	S 03	01.1 -00.3	328 23.3 +02.3	S 14	40.5 -00.1	06			
07	335 58.6 +00.7	S 12	27.3 -00.6	313 45.7 +02.0	S 03	00.8 -00.2	343 25.6 +02.2	S 14	40.4 -00.1	07			
08	350 59.3 +00.6	S 12	26.7 -00.7	328 47.7 +01.9	S 03	00.6 -00.2	358 27.8 +02.3	S 14	40.3 +00.0	08			
09	5 59.9 +00.6	S 12	26.0 -00.6	343 49.6 +02.0	S 03	00.4 -00.2	13 30.1 +02.3	S 14	40.3 -00.1	09			
10	21 00.5 +00.7	S 12	25.4 -00.7	358 51.6 +01.9	S 03	00.2 -00.2	28 32.4 +02.3	S 14	40.2 +00.0	10			
11	36 01.2 +00.6	S 12	24.7 -00.6	13 53.5 +02.0	S 02	60.0 -00.2	43 34.7 +02.3	S 14	40.2 -00.1	11			
12	51 01.8 +00.7	S 12	24.1 -00.7	28 55.5 +01.9	S 02	59.8 -00.3	58 37.0 +02.3	S 14	40.1 +00.0	12			
13	66 02.5 +00.6	S 12	23.4 -00.6	43 57.4 +02.0	S 02	59.5 -00.2	73 39.3 +02.2	S 14	40.1 -00.1	13			
14	81 03.1 +00.7	S 12	22.8 -00.7	58 59.4 +01.9	S 02	59.3 -00.2	88 41.5 +02.3	S 14	40.0 +00.0	14			
15	96 03.8 +00.6	S 12	22.1 -00.6	74 01.3 +02.0	S 02	59.1 -00.2	103 43.8 +02.3	S 14	40.0 -00.1	15			
16	111 04.4 +00.7	S 12	21.5 -00.7	89 03.3 +01.9	S 02	58.9 -00.2	118 46.1 +02.3	S 14	39.9 -00.1	16			
17	126 05.1 +00.6	S 12	20.8 -00.6	104 05.2 +02.0	S 02	58.7 -00.2	133 48.4 +02.3	S 14	39.8 +00.0	17			
18	141 05.7 +00.7	S 12	20.2 -00.7	119 07.2 +01.9	S 02	58.5 -00.3	148 50.7 +02.2	S 14	39.8 -00.1	18			
19	156 06.4 +00.6	S 12	19.5 -00.6	134 09.1 +02.0	S 02	58.2 -00.2	163 52.9 +02.3	S 14	39.7 +00.0	19			
20	171 07.0 +00.7	S 12	18.9 -00.7	149 11.1 +01.9	S 02	58.0 -00.2	178 55.2 +02.3	S 14	39.7 -00.1	20			
21	186 07.7 +00.6	S 12	18.2 -00.6	164 13.0 +02.0	S 02	57.8 -00.2	193 57.5 +02.3	S 14	39.6 +00.0	21			
22	201 08.3 +00.7	S 12	17.6 -00.7	179 15.0 +01.9	S 02	57.6 -00.2	208 59.8 +02.3	S 14	39.6 -00.1	22			
23	216 09.0 +00.6	S 12	16.9 -00.6	194 16.9 +02.0	S 02	57.4 -00.2	224 02.1 +02.2	S 14	39.5 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 027° 027° 026° 026° 026° 026°			SHA 004° 004° 004° 004° 004° 004°			SHA 034° 034° 034° 034° 034° 034°						
	Greenwich Culmination Time: 08:36			Greenwich Culmination Time: 10:04			Greenwich Culmination Time: 08:06						



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 04.6 +00.2	N 10	23.6 +00.8	221 10.4 -00.2	S 07	20.7 -00.8	356 40.9 -30.3	S 09	29.2 +15.3	00			
01	195 04.8 +00.1	N 10	24.4 +00.9	236 10.2 -00.2	S 07	19.9 -00.9	11 10.6 -30.4	S 09	44.5 +15.2	01			
02	210 04.9 +00.2	N 10	25.3 +00.9	251 10.0 -00.2	S 07	19.0 -00.9	25 40.2 -30.5	S 09	59.7 +15.2	02			
03	225 05.1 +00.1	N 10	26.2 +00.9	266 09.8 -00.2	S 07	18.1 -00.9	40 09.7 -30.5	S 10	14.9 +15.1	03			
04	240 05.2 +00.2	N 10	27.1 +00.9	281 09.6 -00.1	S 07	17.2 -00.9	54 39.2 -30.7	S 10	30.0 +15.1	04			
05	255 05.4 +00.1	N 10	28.0 +00.8	296 09.5 -00.2	S 07	16.3 -00.9	69 08.5 -30.7	S 10	45.1 +15.0	05			
06	270 05.5 +00.2	N 10	28.8 +00.9	311 09.3 -00.2	S 07	15.4 -00.9	83 37.8 -30.7	S 11	00.1 +15.0	06			
07	285 05.7 +00.1	N 10	29.7 +00.9	326 09.1 -00.2	S 07	14.5 -00.9	98 07.1 -30.9	S 11	15.1 +14.9	07			
08	300 05.8 +00.1	N 10	30.6 +00.9	341 08.9 -00.2	S 07	13.6 -00.9	112 36.2 -30.9	S 11	30.0 +14.9	08			
09	315 05.9 +00.2	N 10	31.5 +00.9	356 08.7 -00.1	S 07	12.7 -00.9	127 05.3 -31.1	S 11	44.9 +14.8	09			
10	330 06.1 +00.1	N 10	32.4 +00.8	11 08.6 -00.2	S 07	11.8 -00.9	141 34.2 -31.1	S 11	59.7 +14.8	10			
11	345 06.2 +00.2	N 10	33.2 +00.9	26 08.4 -00.2	S 07	10.9 -00.9	156 03.1 -31.1	S 12	14.5 +14.7	11			
12	0 06.4 +00.1	N 10	34.1 +00.9	41 08.2 -00.2	S 07	10.0 -00.9	170 32.0 -31.3	S 12	29.2 +14.7	12			
13	15 06.5 +00.2	N 10	35.0 +00.9	56 08.0 -00.2	S 07	09.1 -00.9	185 00.7 -31.4	S 12	43.9 +14.5	13			
14	30 06.7 +00.1	N 10	35.9 +00.9	71 07.8 -00.2	S 07	08.2 -00.9	199 29.3 -31.4	S 12	58.4 +14.6	14			
15	45 06.8 +00.2	N 10	36.8 +00.8	86 07.6 -00.1	S 07	07.3 -00.9	213 57.9 -31.5	S 13	13.0 +14.4	15			
16	60 07.0 +00.1	N 10	37.6 +00.9	101 07.5 -00.2	S 07	06.4 -00.9	228 26.4 -31.6	S 13	27.4 +14.4	16			
17	75 07.1 +00.1	N 10	38.5 +00.9	116 07.3 -00.2	S 07	05.5 -00.9	242 54.8 -31.7	S 13	41.8 +14.3	17			
18	90 07.2 +00.2	N 10	39.4 +00.9	131 07.1 -00.2	S 07	04.6 -00.9	257 23.1 -31.8	S 13	56.1 +14.3	18			
19	105 07.4 +00.1	N 10	40.3 +00.8	146 06.9 -00.2	S 07	03.7 -00.9	271 51.3 -31.9	S 14	10.4 +14.1	19			
20	120 07.5 +00.2	N 10	41.1 +00.9	161 06.7 -00.1	S 07	02.8 -00.9	286 19.4 -32.0	S 14	24.5 +14.1	20			
21	135 07.7 +00.1	N 10	42.0 +00.9	176 06.6 -00.2	S 07	01.9 -00.9	300 47.4 -32.0	S 14	38.6 +14.0	21			
22	150 07.8 +00.1	N 10	42.9 +00.9	191 06.4 -00.2	S 07	01.0 -00.9	315 15.4 -32.2	S 14	52.6 +14.0	22			
23	165 07.9 +00.2	N 10	43.8 +00.8	206 06.2 -00.2	S 07	00.1 -00.9	329 43.2 -32.2	S 15	06.6 +13.8	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'2 00'2 00'2 00'2 00'2 00'2			SD 16'2 16'2 16'2 16'2 16'3 16'3						
	HP 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 59'4 59'4 59'5 59'6 59'7 59'7						
	SHA 335° 335° 335° 334° 334° 334°			SHA 016° 016° 016° 015° 015° 015°			SHA 150° 148° 146° 144° 142° 139°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 09:15			Greenwich Culmination Time: 00:13						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	231 09.6 +00.7	S 12	16.3 -00.7	209 18.9 +01.9	S 02	57.2 -00.2	239 04.3 +02.3	S 14	39.5 -00.1	00			
01	246 10.3 +00.6	S 12	15.6 -00.6	224 20.8 +02.0	S 02	57.0 -00.3	254 06.6 +02.3	S 14	39.4 -00.1	01			
02	261 10.9 +00.7	S 12	15.0 -00.7	239 22.8 +01.9	S 02	56.7 -00.2	269 08.9 +02.3	S 14	39.3 +00.0	02			
03	276 11.6 +00.6	S 12	14.3 -00.6	254 24.7 +02.0	S 02	56.5 -00.2	284 11.2 +02.3	S 14	39.3 -00.1	03			
04	291 12.2 +00.7	S 12	13.7 -00.7	269 26.7 +01.9	S 02	56.3 -00.2	299 13.5 +02.3	S 14	39.2 +00.0	04			
05	306 12.9 +00.6	S 12	13.0 -00.6	284 28.6 +02.0	S 02	56.1 -00.2	314 15.8 +02.2	S 14	39.2 -00.1	05			
06	321 13.5 +00.7	S 12	12.4 -00.7	299 30.6 +01.9	S 02	55.9 -00.2	329 18.0 +02.3	S 14	39.1 +00.0	06			
07	336 14.2 +00.6	S 12	11.7 -00.6	314 32.5 +02.0	S 02	55.7 -00.3	344 20.3 +02.3	S 14	39.1 -00.1	07			
08	351 14.8 +00.6	S 12	11.1 -00.7	329 34.5 +01.9	S 02	55.4 -00.2	359 22.6 +02.3	S 14	39.0 +00.0	08			
09	6 15.4 +00.7	S 12	10.4 -00.7	344 36.4 +02.0	S 02	55.2 -00.2	14 24.9 +02.3	S 14	39.0 -00.1	09			
10	21 16.1 +00.6	S 12	09.7 -00.6	359 38.4 +01.9	S 02	55.0 -00.2	29 27.2 +02.3	S 14	38.9 +00.0	10			
11	36 16.7 +00.7	S 12	09.1 -00.7	14 40.3 +02.0	S 02	54.8 -00.2	44 29.5 +02.2	S 14	38.9 -00.1	11			
12	51 17.4 +00.6	S 12	08.4 -00.6	29 42.3 +01.9	S 02	54.6 -00.2	59 31.7 +02.3	S 14	38.8 +00.0	12			
13	66 18.0 +00.7	S 12	07.8 -00.7	44 44.2 +02.0	S 02	54.4 -00.3	74 34.0 +02.3	S 14	38.8 -00.1	13			
14	81 18.7 +00.6	S 12	07.1 -00.6	59 46.2 +01.9	S 02	54.1 -00.2	89 36.3 +02.3	S 14	38.7 -00.1	14			
15	96 19.3 +00.7	S 12	06.5 -00.7	74 48.1 +02.0	S 02	53.9 -00.2	104 38.6 +02.3	S 14	38.6 +00.0	15			
16	111 20.0 +00.7	S 12	05.8 -00.6	89 50.1 +01.9	S 02	53.7 -00.2	119 40.9 +02.3	S 14	38.6 -00.1	16			
17	126 20.7 +00.6	S 12	05.2 -00.7	104 52.0 +02.0	S 02	53.5 -00.2	134 43.2 +02.2	S 14	38.5 +00.0	17			
18	141 21.3 +00.7	S 12	04.5 -00.6	119 54.0 +01.9	S 02	53.3 -00.2	149 45.4 +02.3	S 14	38.5 -00.1	18			
19	156 22.0 +00.6	S 12	03.9 -00.7	134 55.9 +02.0	S 02	53.1 -00.2	164 47.7 +02.3	S 14	38.4 +00.0	19			
20	171 22.6 +00.7	S 12	03.2 -00.6	149 57.9 +01.9	S 02	52.9 -00.3	179 50.0 +02.3	S 14	38.4 -00.1	20			
21	186 23.3 +00.6	S 12	02.6 -00.7	164 59.8 +02.0	S 02	52.6 -00.2	194 52.3 +02.3	S 14	38.3 +00.0	21			
22	201 23.9 +00.7	S 12	01.9 -00.6	180 01.8 +01.9	S 02	52.4 -00.2	209 54.6 +02.3	S 14	38.3 -00.1	22			
23	216 24.6 +00.6	S 12	01.3 -00.7	195 03.7 +02.0	S 02	52.2 -00.2	224 56.9 +02.3	S 14	38.2 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 026° 026° 026° 026° 026° 025°			SHA 004° 004° 004° 004° 004° 004°			SHA 034° 034° 034° 034° 034° 034°						
	Greenwich Culmination Time: 08:34			Greenwich Culmination Time: 10:01			Greenwich Culmination Time: 08:02						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 08.1 +00.1	N 10	44.6 +00.9	221 06.0 -00.2	S 06	59.2 -00.9	344 11.0 -32.3	S 15	20.4 +13.8	00			
01	195 08.2 +00.2	N 10	45.5 +00.9	236 05.8 -00.2	S 06	58.3 -00.9	358 38.7 -32.4	S 15	34.2 +13.7	01			
02	210 08.4 +00.1	N 10	46.4 +00.8	251 05.6 -00.1	S 06	57.4 -00.9	13 06.3 -32.6	S 15	47.9 +13.6	02			
03	225 08.5 +00.2	N 10	47.2 +00.9	266 05.5 -00.2	S 06	56.5 -00.9	27 33.7 -32.6	S 16	01.5 +13.5	03			
04	240 08.7 +00.1	N 10	48.1 +00.9	281 05.3 -00.2	S 06	55.6 -00.9	42 01.1 -32.7	S 16	15.0 +13.4	04			
05	255 08.8 +00.1	N 10	49.0 +00.9	296 05.1 -00.2	S 06	54.7 -00.9	56 28.4 -32.7	S 16	28.4 +13.3	05			
06	270 08.9 +00.2	N 10	49.9 +00.8	311 04.9 -00.2	S 06	53.8 -00.9	70 55.7 -32.9	S 16	41.7 +13.3	06			
07	285 09.1 +00.1	N 10	50.7 +00.9	326 04.7 -00.1	S 06	52.9 -00.9	85 22.8 -33.0	S 16	55.0 +13.1	07			
08	300 09.2 +00.2	N 10	51.6 +00.9	341 04.6 -00.2	S 06	52.0 -01.0	99 49.8 -33.1	S 17	08.1 +13.0	08			
09	315 09.4 +00.1	N 10	52.5 +00.9	356 04.4 -00.2	S 06	51.0 -00.9	114 16.7 -33.2	S 17	21.1 +13.0	09			
10	330 09.5 +00.1	N 10	53.4 +00.8	11 04.2 -00.2	S 06	50.1 -00.9	128 43.5 -33.2	S 17	34.1 +12.8	10			
11	345 09.6 +00.2	N 10	54.2 +00.9	26 04.0 -00.2	S 06	49.2 -00.9	143 10.3 -33.4	S 17	46.9 +12.7	11			
12	0 09.8 +00.1	N 10	55.1 +00.9	41 03.8 -00.2	S 06	48.3 -00.9	157 36.9 -33.4	S 17	59.6 +12.6	12			
13	15 09.9 +00.1	N 10	56.0 +00.8	56 03.6 -00.1	S 06	47.4 -00.9	172 03.5 -33.6	S 18	12.2 +12.5	13			
14	30 10.0 +00.2	N 10	56.8 +00.9	71 03.5 -00.2	S 06	46.5 -00.9	186 29.9 -33.6	S 18	24.7 +12.4	14			
15	45 10.2 +00.1	N 10	57.7 +00.9	86 03.3 -00.2	S 06	45.6 -00.9	200 56.3 -33.8	S 18	37.1 +12.3	15			
16	60 10.3 +00.2	N 10	58.6 +00.8	101 03.1 -00.2	S 06	44.7 -00.9	215 22.5 -33.8	S 18	49.4 +12.2	16			
17	75 10.5 +00.1	N 10	59.4 +00.9	116 02.9 -00.2	S 06	43.8 -00.9	229 48.7 -34.0	S 19	01.6 +12.1	17			
18	90 10.6 +00.1	N 11	00.3 +00.9	131 02.7 -00.2	S 06	42.9 -01.0	244 14.7 -34.0	S 19	13.7 +11.9	18			
19	105 10.7 +00.2	N 11	01.2 +00.8	146 02.5 -00.1	S 06	41.9 -00.9	258 40.7 -34.1	S 19	25.6 +11.8	19			
20	120 10.9 +00.1	N 11	02.0 +00.9	161 02.4 -00.2	S 06	41.0 -00.9	273 06.6 -34.3	S 19	37.4 +11.7	20			
21	135 11.0 +00.2	N 11	02.9 +00.9	176 02.2 -00.2	S 06	40.1 -00.9	287 32.3 -34.3	S 19	49.1 +11.6	21			
22	150 11.2 +00.1	N 11	03.8 +00.8	191 02.0 -00.2	S 06	39.2 -00.9	301 58.0 -34.4	S 20	00.7 +11.5	22			
23	165 11.3 +00.1	N 11	04.6 +00.9	206 01.8 -00.2	S 06	38.3 -00.9	316 23.6 -34.5	S 20	12.2 +11.3	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'9 15'9 15'9 15'9 15'9 15'9			SD 00'2 00'2 00'2 00'2 00'2 00'2			SD 16'3 16'3 16'3 16'3 16'3 16'3						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'2 00'2 00'2 00'2 00'2 00'2			HP 59'8 59'8 59'9 59'9 59'9 60'0						
	SHA 334° 334° 334° 334° 333° 333°			SHA 015° 015° 015° 014° 014° 014°			SHA 137° 135° 132° 130° 127° 125°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 09:15			Greenwich Culmination Time: 01:05						

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	231 25.2 +00.7	S 12	00.6 -00.7	210 05.7 +01.9	S 02	52.0 -00.2	239 59.2 +02.2	S 14	38.2 -00.1	00			
01	246 25.9 +00.6	S 11	59.9 -00.6	225 07.6 +02.0	S 02	51.8 -00.2	255 01.4 +02.3	S 14	38.1 +00.0	01			
02	261 26.5 +00.7	S 11	59.3 -00.7	240 09.6 +01.9	S 02	51.6 -00.3	270 03.7 +02.3	S 14	38.1 -00.1	02			
03	276 27.2 +00.6	S 11	58.6 -00.6	255 11.5 +02.0	S 02	51.3 -00.2	285 06.0 +02.3	S 14	38.0 -00.1	03			
04	291 27.8 +00.7	S 11	58.0 -00.7	270 13.5 +01.9	S 02	51.1 -00.2	300 08.3 +02.3	S 14	37.9 +00.0	04			
05	306 28.5 +00.6	S 11	57.3 -00.6	285 15.4 +02.0	S 02	50.9 -00.2	315 10.6 +02.3	S 14	37.9 -00.1	05			
06	321 29.1 +00.7	S 11	56.7 -00.7	300 17.4 +02.0	S 02	50.7 -00.2	330 12.9 +02.3	S 14	37.8 +00.0	06			
07	336 29.8 +00.6	S 11	56.0 -00.7	315 19.4 +01.9	S 02	50.5 -00.2	345 15.2 +02.2	S 14	37.8 -00.1	07			
08	351 30.4 +00.7	S 11	55.3 -00.6	330 21.3 +02.0	S 02	50.3 -00.2	0 17.4 +02.3	S 14	37.7 +00.0	08			
09	6 31.1 +00.6	S 11	54.7 -00.7	345 23.3 +01.9	S 02	50.1 -00.3	15 19.7 +02.3	S 14	37.7 -00.1	09			
10	21 31.7 +00.7	S 11	54.0 -00.6	0 25.2 +02.0	S 02	49.8 -00.2	30 22.0 +02.3	S 14	37.6 +00.0	10			
11	36 32.4 +00.6	S 11	53.4 -00.7	15 27.2 +01.9	S 02	49.6 -00.2	45 24.3 +02.3	S 14	37.6 -00.1	11			
12	51 33.0 +00.7	S 11	52.7 -00.6	30 29.1 +02.0	S 02	49.4 -00.2	60 26.6 +02.3	S 14	37.5 +00.0	12			
13	66 33.7 +00.6	S 11	52.1 -00.7	45 31.1 +01.9	S 02	49.2 -00.2	75 28.9 +02.3	S 14	37.5 -00.1	13			
14	81 34.3 +00.7	S 11	51.4 -00.7	60 33.0 +02.0	S 02	49.0 -00.2	90 31.2 +02.2	S 14	37.4 +00.0	14			
15	96 35.0 +00.7	S 11	50.7 -00.6	75 35.0 +01.9	S 02	48.8 -00.2	105 33.4 +02.3	S 14	37.4 -00.1	15			
16	111 35.7 +00.6	S 11	50.1 -00.7	90 36.9 +02.0	S 02	48.6 -00.3	120 35.7 +02.3	S 14	37.3 +00.0	16			
17	126 36.3 +00.7	S 11	49.4 -00.6	105 38.9 +01.9	S 02	48.3 -00.2	135 38.0 +02.3	S 14	37.3 -00.1	17			
18	141 37.0 +00.6	S 11	48.8 -00.7	120 40.8 +02.0	S 02	48.1 -00.2	150 40.3 +02.3	S 14	37.2 -00.1	18			
19	156 37.6 +00.7	S 11	48.1 -00.6	135 42.8 +01.9	S 02	47.9 -00.2	165 42.6 +02.3	S 14	37.1 +00.0	19			
20	171 38.3 +00.6	S 11	47.5 -00.7	150 44.7 +02.0	S 02	47.7 -00.2	180 44.9 +02.3	S 14	37.1 -00.1	20			
21	186 38.9 +00.7	S 11	46.8 -00.7	165 46.7 +02.0	S 02	47.5 -00.2	195 47.2 +02.3	S 14	37.0 +00.0	21			
22	201 39.6 +00.6	S 11	46.1 -00.6	180 48.7 +01.9	S 02	47.3 -00.3	210 49.5 +02.2	S 14	37.0 -00.1	22			
23	216 40.2 +00.7	S 11	45.5 -00.7	195 50.6 +02.0	S 02	47.0 -00.2	225 51.7 +02.3	S 14	36.9 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'0 00'0 00'0 00'0 00'0 00'0			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 025° 025° 025° 025° 025° 025°			SHA 004° 004° 004° 004° 004° 004°			SHA 034° 034° 034° 034° 034° 034°						
	Greenwich Culmination Time: 08:33			Greenwich Culmination Time: 09:58			Greenwich Culmination Time: 07:58						

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	11.4 +00.2	N 11 05.5 +00.9		221	01.6 -00.1	S 06 37.4 -00.9		330	49.1 -34.6	S 20 23.5 +11.2		00
01	195	11.6 +00.1	N 11 06.4 +00.8		236	01.5 -00.2	S 06 36.5 -01.0		345	14.5 -34.7	S 20 34.7 +11.1		01
02	210	11.7 +00.1	N 11 07.2 +00.9		251	01.3 -00.2	S 06 35.5 -00.9		359	39.8 -34.8	S 20 45.8 +10.9		02
03	225	11.8 +00.2	N 11 08.1 +00.9		266	01.1 -00.2	S 06 34.6 -00.9		14	05.0 -34.9	S 20 56.7 +10.8		03
04	240	12.0 +00.1	N 11 09.0 +00.8		281	00.9 -00.2	S 06 33.7 -00.9		28	30.1 -35.0	S 21 07.5 +10.7		04
05	255	12.1 +00.1	N 11 09.8 +00.9		296	00.7 -00.2	S 06 32.8 -00.9		42	55.1 -35.0	S 21 18.2 +10.5		05
06	270	12.2 +00.2	N 11 10.7 +00.9		311	00.5 -00.1	S 06 31.9 -00.9		57	20.1 -35.2	S 21 28.7 +10.4		06
07	285	12.4 +00.1	N 11 11.6 +00.8		326	00.4 -00.2	S 06 31.0 -01.0		71	44.9 -35.2	S 21 39.1 +10.2		07
08	300	12.5 +00.2	N 11 12.4 +00.9		341	00.2 -00.2	S 06 30.0 -00.9		86	09.7 -35.4	S 21 49.3 +10.1		08
09	315	12.7 +00.1	N 11 13.3 +00.9		355	60.0 -00.2	S 06 29.1 -00.9		100	34.3 -35.4	S 21 59.4 +10.0		09
10	330	12.8 +00.1	N 11 14.2 +00.8		10	59.8 -00.2	S 06 28.2 -00.9		114	58.9 -35.5	S 22 09.4 +09.8		10
11	345	12.9 +00.2	N 11 15.0 +00.9		25	59.6 -00.2	S 06 27.3 -00.9		129	23.4 -35.6	S 22 19.2 +09.7		11
12	0	13.1 +00.1	N 11 15.9 +00.8		40	59.4 -00.1	S 06 26.4 -01.0		143	47.8 -35.7	S 22 28.9 +09.5		12
13	15	13.2 +00.1	N 11 16.7 +00.9		55	59.3 -00.2	S 06 25.4 -00.9		158	12.1 -35.8	S 22 38.4 +09.4		13
14	30	13.3 +00.2	N 11 17.6 +00.9		70	59.1 -00.2	S 06 24.5 -00.9		172	36.3 -35.9	S 22 47.8 +09.2		14
15	45	13.5 +00.1	N 11 18.5 +00.8		85	58.9 -00.2	S 06 23.6 -00.9		187	00.4 -35.9	S 22 57.0 +09.0		15
16	60	13.6 +00.1	N 11 19.3 +00.9		100	58.7 -00.2	S 06 22.7 -01.0		201	24.5 -36.1	S 23 06.0 +08.9		16
17	75	13.7 +00.2	N 11 20.2 +00.9		115	58.5 -00.2	S 06 21.7 -00.9		215	48.4 -36.1	S 23 14.9 +08.8		17
18	90	13.9 +00.1	N 11 21.1 +00.8		130	58.3 -00.1	S 06 20.8 -00.9		230	12.3 -36.2	S 23 23.7 +08.6		18
19	105	14.0 +00.1	N 11 21.9 +00.9		145	58.2 -00.2	S 06 19.9 -00.9		244	36.1 -36.3	S 23 32.3 +08.4		19
20	120	14.1 +00.2	N 11 22.8 +00.8		160	58.0 -00.2	S 06 19.0 -00.9		258	59.8 -36.3	S 23 40.7 +08.2		20
21	135	14.3 +00.1	N 11 23.6 +00.9		175	57.8 -00.2	S 06 18.1 -01.0		273	23.5 -36.4	S 23 48.9 +08.2		21
22	150	14.4 +00.1	N 11 24.5 +00.9		190	57.6 -00.2	S 06 17.1 -00.9		287	47.1 -36.5	S 23 57.1 +07.9		22
23	165	14.5 +00.2	N 11 25.4 +00.8		205	57.4 -00.2	S 06 16.2 -00.9		302	10.6 -36.6	S 24 05.0 +07.8		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 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'2 00'2 00'2 00'2 00'2 00'2				SD 16'3 16'3 16'4 16'4 16'4 16'4				
	HP 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 60'0 60'0 60'0 60'0 60'0 60'0				
	SHA 333° 333° 333° 333° 332° 332°				SHA 014° 014° 014° 013° 013° 013°				SHA 123° 120° 117° 115° 112° 110°				
	Greenwich Culmination Time: 11:59				Greenwich Culmination Time: 09:16				Greenwich Culmination Time: 02:01				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	231	40.9 +00.6	S 11 44.8 -00.6		210	52.6 +01.9	S 02 46.8 -00.2		240	54.0 +02.3	S 14 36.9 -00.1		00
01	246	41.5 +00.7	S 11 44.2 -00.7		225	54.5 +02.0	S 02 46.6 -00.2		255	56.3 +02.3	S 14 36.8 +00.0		01
02	261	42.2 +00.7	S 11 43.5 -00.7		240	56.5 +01.9	S 02 46.4 -00.2		270	58.6 +02.3	S 14 36.8 -00.1		02
03	276	42.9 +00.6	S 11 42.8 -00.6		255	58.4 +02.0	S 02 46.2 -00.2		286	00.9 +02.3	S 14 36.7 +00.0		03
04	291	43.5 +00.7	S 11 42.2 -00.7		271	00.4 +01.9	S 02 46.0 -00.2		301	03.2 +02.3	S 14 36.7 -00.1		04
05	306	44.2 +00.6	S 11 41.5 -00.6		286	02.3 +02.0	S 02 45.8 -00.3		316	05.5 +02.3	S 14 36.6 +00.0		05
06	321	44.8 +00.7	S 11 40.9 -00.7		301	04.3 +01.9	S 02 45.5 -00.2		331	07.8 +02.3	S 14 36.6 -00.1		06
07	336	45.5 +00.6	S 11 40.2 -00.7		316	06.2 +02.0	S 02 45.3 -00.2		346	10.1 +02.2	S 14 36.5 +00.0		07
08	351	46.1 +00.7	S 11 39.5 -00.6		331	08.2 +02.0	S 02 45.1 -00.2		1	12.3 +02.3	S 14 36.5 -00.1		08
09	6	46.8 +00.6	S 11 38.9 -00.7		346	10.2 +01.9	S 02 44.9 -00.2		16	14.6 +02.3	S 14 36.4 +00.0		09
10	21	47.4 +00.7	S 11 38.2 -00.6		1	12.1 +02.0	S 02 44.7 -00.2		31	16.9 +02.3	S 14 36.4 -00.1		10
11	36	48.1 +00.7	S 11 37.6 -00.7		16	14.1 +01.9	S 02 44.5 -00.2		46	19.2 +02.3	S 14 36.3 +00.0		11
12	51	48.8 +00.6	S 11 36.9 -00.7		31	16.0 +02.0	S 02 44.3 -00.2		61	21.5 +02.3	S 14 36.3 -00.1		12
13	66	49.4 +00.7	S 11 36.2 -00.6		46	18.0 +01.9	S 02 44.1 -00.3		76	23.8 +02.3	S 14 36.2 -00.1		13
14	81	50.1 +00.6	S 11 35.6 -00.7		61	19.9 +02.0	S 02 43.8 -00.2		91	26.1 +02.3	S 14 36.1 +00.0		14
15	96	50.7 +00.7	S 11 34.9 -00.7		76	21.9 +01.9	S 02 43.6 -00.2		106	28.4 +02.3	S 14 36.1 -00.1		15
16	111	51.4 +00.6	S 11 34.2 -00.6		91	23.8 +02.0	S 02 43.4 -00.2		121	30.7 +02.3	S 14 36.0 +00.0		16
17	126	52.0 +00.7	S 11 33.6 -00.7		106	25.8 +02.0	S 02 43.2 -00.2		136	33.0 +02.2	S 14 36.0 -00.1		17
18	141	52.7 +00.7	S 11 32.9 -00.6		121	27.8 +01.9	S 02 43.0 -00.2		151	35.2 +02.3	S 14 35.9 +00.0		18
19	156	53.4 +00.6	S 11 32.3 -00.7		136	29.7 +02.0	S 02 42.8 -00.2		166	37.5 +02.3	S 14 35.9 -00.1		19
20	171	54.0 +00.7	S 11 31.6 -00.7		151	31.7 +01.9	S 02 42.6 -00.3		181	39.8 +02.3	S 14 35.8 +00.0		20
21	186	54.7 +00.6	S 11 30.9 -00.6		166	33.6 +02.0	S 02 42.3 -00.2		196	42.1 +02.3	S 14 35.8 -00.1		21
22	201	55.3 +00.7	S 11 30.3 -00.7		181	35.6 +01.9	S 02 42.1 -00.2		211	44.4 +02.3	S 14 35.7 +00.0		22
23	216	56.0 +00.6	S 11 29.6 -00.7		196	37.5 +02.0	S 02 41.9 -00.2		226	46.7 +02.3	S 14 35.7 -00.1		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 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 025° 024° 024° 024° 024° 024°				SHA 004° 004° 004° 004° 004° 004°				SHA 034° 034° 034° 034° 034° 034°				
	Greenwich Culmination Time: 08:32				Greenwich Culmination Time: 09:55				Greenwich Culmination Time: 07:55				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 14.7 +00.1	N 11 26.2 +00.9	220 57.2 -00.1	S 06 15.3 -01.0	316 34.0 -36.7	S 24 12.8 +07.6	00						
01	195 14.8 +00.1	N 11 27.1 +00.8	235 57.1 -00.2	S 06 14.3 -00.9	330 57.3 -36.7	S 24 20.4 +07.4	01						
02	210 14.9 +00.2	N 11 27.9 +00.9	250 56.9 -00.2	S 06 13.4 -00.9	345 20.6 -36.8	S 24 27.8 +07.3	02						
03	225 15.1 +00.1	N 11 28.8 +00.8	265 56.7 -00.2	S 06 12.5 -00.9	359 43.8 -36.8	S 24 35.1 +07.1	03						
04	240 15.2 +00.1	N 11 29.6 +00.9	280 56.5 -00.2	S 06 11.6 -01.0	14 07.0 -36.9	S 24 42.2 +06.9	04						
05	255 15.3 +00.2	N 11 30.5 +00.9	295 56.3 -00.2	S 06 10.6 -00.9	28 30.1 -37.0	S 24 49.1 +06.7	05						
06	270 15.5 +00.1	N 11 31.4 +00.8	310 56.1 -00.1	S 06 09.7 -00.9	42 53.1 -37.1	S 24 55.8 +06.6	06						
07	285 15.6 +00.1	N 11 32.2 +00.9	325 56.0 -00.2	S 06 08.8 -00.9	57 16.0 -37.1	S 25 02.4 +06.4	07						
08	300 15.7 +00.2	N 11 33.1 +00.8	340 55.8 -00.2	S 06 07.9 -01.0	71 38.9 -37.1	S 25 08.8 +06.2	08						
09	315 15.9 +00.1	N 11 33.9 +00.9	355 55.6 -00.2	S 06 06.9 -00.9	86 01.8 -37.2	S 25 15.0 +06.1	09						
10	330 16.0 +00.1	N 11 34.8 +00.8	10 55.4 -00.2	S 06 06.0 -00.9	100 24.6 -37.3	S 25 21.1 +05.8	10						
11	345 16.1 +00.1	N 11 35.6 +00.9	25 55.2 -00.2	S 06 05.1 -01.0	114 47.3 -37.3	S 25 26.9 +05.7	11						
12	0 16.2 +00.2	N 11 36.5 +00.8	40 55.0 -00.1	S 06 04.1 -00.9	129 10.0 -37.4	S 25 32.6 +05.5	12						
13	15 16.4 +00.1	N 11 37.3 +00.9	55 54.9 -00.2	S 06 03.2 -00.9	143 32.6 -37.4	S 25 38.1 +05.3	13						
14	30 16.5 +00.1	N 11 38.2 +00.9	70 54.7 -00.2	S 06 02.3 -01.0	157 55.2 -37.5	S 25 43.4 +05.2	14						
15	45 16.6 +00.2	N 11 39.1 +00.8	85 54.5 -00.2	S 06 01.3 -00.9	172 17.7 -37.5	S 25 48.6 +04.9	15						
16	60 16.8 +00.1	N 11 39.9 +00.9	100 54.3 -00.2	S 06 00.4 -00.9	186 40.2 -37.6	S 25 53.5 +04.8	16						
17	75 16.9 +00.1	N 11 40.8 +00.8	115 54.1 -00.2	S 05 59.5 -01.0	201 02.6 -37.6	S 25 58.3 +04.6	17						
18	90 17.0 +00.2	N 11 41.6 +00.9	130 53.9 -00.1	S 05 58.5 -00.9	215 25.0 -37.6	S 26 02.9 +04.4	18						
19	105 17.2 +00.1	N 11 42.5 +00.8	145 53.8 -00.2	S 05 57.6 -00.9	229 47.4 -37.7	S 26 07.3 +04.2	19						
20	120 17.3 +00.1	N 11 43.3 +00.9	160 53.6 -00.2	S 05 56.7 -01.0	244 09.7 -37.7	S 26 11.5 +04.0	20						
21	135 17.4 +00.1	N 11 44.2 +00.8	175 53.4 -00.2	S 05 55.7 -00.9	258 32.0 -37.7	S 26 15.5 +03.8	21						
22	150 17.5 +00.2	N 11 45.0 +00.9	190 53.2 -00.2	S 05 54.8 -00.9	272 54.3 -37.8	S 26 19.3 +03.7	22						
23	165 17.7 +00.1	N 11 45.9 +00.8	205 53.0 -00.2	S 05 53.9 -01.0	287 16.5 -37.7	S 26 23.0 +03.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'2 00'2 00'2 00'2 00'2 00'2		SD 16'3 16'3 16'3 16'3 16'3 16'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 60'0 60'0 60'0 59'9 59'9 59'9								
	SHA 332° 332° 332° 332° 331° 331°		SHA 013° 013° 012° 012° 012° 012°		SHA 107° 105° 102° 099° 097° 094°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 09:16		Greenwich Culmination Time: 03:01								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	231 56.6 +00.7	S 11 28.9 -00.6	211 39.5 +01.9	S 02 41.7 -00.2	241 49.0 +02.3	S 14 35.6 +00.0	00						
01	246 57.3 +00.7	S 11 28.3 -00.7	226 41.4 +02.0	S 02 41.5 -00.2	256 51.3 +02.3	S 14 35.6 -00.1	01						
02	261 58.0 +00.6	S 11 27.6 -00.6	241 43.4 +02.0	S 02 41.3 -00.2	271 53.6 +02.3	S 14 35.5 +00.0	02						
03	276 58.6 +00.7	S 11 27.0 -00.7	256 45.4 +01.9	S 02 41.1 -00.3	286 55.9 +02.3	S 14 35.5 -00.1	03						
04	291 59.3 +00.6	S 11 26.3 -00.7	271 47.3 +02.0	S 02 40.8 -00.2	301 58.2 +02.2	S 14 35.4 +00.0	04						
05	306 59.9 +00.7	S 11 25.6 -00.6	286 49.3 +01.9	S 02 40.6 -00.2	317 00.4 +02.3	S 14 35.4 -00.1	05						
06	322 00.6 +00.7	S 11 25.0 -00.7	301 51.2 +02.0	S 02 40.4 -00.2	332 02.7 +02.3	S 14 35.3 +00.0	06						
07	337 01.3 +00.6	S 11 24.3 -00.7	316 53.2 +01.9	S 02 40.2 -00.2	347 05.0 +02.3	S 14 35.3 -00.1	07						
08	352 01.9 +00.7	S 11 23.6 -00.6	331 55.1 +02.0	S 02 40.0 -00.2	2 07.3 +02.3	S 14 35.2 +00.0	08						
09	7 02.6 +00.6	S 11 23.0 -00.7	346 57.1 +02.0	S 02 39.8 -00.2	17 09.6 +02.3	S 14 35.2 -00.1	09						
10	22 03.2 +00.7	S 11 22.3 -00.7	1 59.1 +01.9	S 02 39.6 -00.2	32 11.9 +02.3	S 14 35.1 +00.0	10						
11	37 03.9 +00.7	S 11 21.6 -00.6	17 01.0 +02.0	S 02 39.4 -00.3	47 14.2 +02.3	S 14 35.1 -00.1	11						
12	52 04.6 +00.6	S 11 21.0 -00.7	32 03.0 +01.9	S 02 39.1 -00.2	62 16.5 +02.3	S 14 35.0 +00.0	12						
13	67 05.2 +00.7	S 11 20.3 -00.7	47 04.9 +02.0	S 02 38.9 -00.2	77 18.8 +02.3	S 14 35.0 -00.1	13						
14	82 05.9 +00.6	S 11 19.6 -00.6	62 06.9 +01.9	S 02 38.7 -00.2	92 21.1 +02.3	S 14 34.9 +00.0	14						
15	97 06.5 +00.7	S 11 19.0 -00.7	77 08.8 +02.0	S 02 38.5 -00.2	107 23.4 +02.3	S 14 34.9 -00.1	15						
16	112 07.2 +00.7	S 11 18.3 -00.7	92 10.8 +02.0	S 02 38.3 -00.2	122 25.7 +02.3	S 14 34.8 +00.0	16						
17	127 07.9 +00.6	S 11 17.6 -00.6	107 12.8 +01.9	S 02 38.1 -00.2	137 28.0 +02.3	S 14 34.8 -00.1	17						
18	142 08.5 +00.7	S 11 17.0 -00.7	122 14.7 +02.0	S 02 37.9 -00.2	152 30.3 +02.2	S 14 34.7 +00.0	18						
19	157 09.2 +00.6	S 11 16.3 -00.7	137 16.7 +01.9	S 02 37.7 -00.3	167 32.5 +02.3	S 14 34.7 -00.1	19						
20	172 09.8 +00.7	S 11 15.6 -00.6	152 18.6 +02.0	S 02 37.4 -00.2	182 34.8 +02.3	S 14 34.6 +00.0	20						
21	187 10.5 +00.7	S 11 15.0 -00.7	167 20.6 +02.0	S 02 37.2 -00.2	197 37.1 +02.3	S 14 34.6 -00.1	21						
22	202 11.2 +00.6	S 11 14.3 -00.7	182 22.6 +01.9	S 02 37.0 -00.2	212 39.4 +02.3	S 14 34.5 +00.0	22						
23	217 11.8 +00.7	S 11 13.6 -00.6	197 24.5 +02.0	S 02 36.8 -00.2	227 41.7 +02.3	S 14 34.5 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 024° 024° 024° 023° 023° 023°		SHA 004° 004° 004° 003° 003° 003°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:31		Greenwich Culmination Time: 09:52		Greenwich Culmination Time: 07:51								

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 17.8 +00.1	N 11 46.7 +00.9	220 52.8 -00.1	S 05 52.9 -00.9	301 38.8 -37.8	S 26 26.5 +03.2	00						
01	195 17.9 +00.2	N 11 47.6 +00.8	235 52.7 -00.2	S 05 52.0 -01.0	316 01.0 -37.9	S 26 29.7 +03.1	01						
02	210 18.1 +00.1	N 11 48.4 +00.9	250 52.5 -00.2	S 05 51.0 -00.9	330 23.1 -37.8	S 26 32.8 +02.9	02						
03	225 18.2 +00.1	N 11 49.3 +00.8	265 52.3 -00.2	S 05 50.1 -00.9	344 45.3 -37.9	S 26 35.7 +02.7	03						
04	240 18.3 +00.1	N 11 50.1 +00.9	280 52.1 -00.2	S 05 49.2 -01.0	359 07.4 -37.9	S 26 38.4 +02.5	04						
05	255 18.4 +00.2	N 11 51.0 +00.8	295 51.9 -00.2	S 05 48.2 -00.9	13 29.5 -37.8	S 26 40.9 +02.3	05						
06	270 18.6 +00.1	N 11 51.8 +00.9	310 51.7 -00.1	S 05 47.3 -00.9	27 51.7 -37.9	S 26 43.2 +02.2	06						
07	285 18.7 +00.1	N 11 52.7 +00.8	325 51.6 -00.2	S 05 46.4 -01.0	42 13.8 -37.9	S 26 45.4 +01.9	07						
08	300 18.8 +00.1	N 11 53.5 +00.9	340 51.4 -00.2	S 05 45.4 -00.9	56 35.9 -37.9	S 26 47.3 +01.7	08						
09	315 18.9 +00.2	N 11 54.4 +00.8	355 51.2 -00.2	S 05 44.5 -01.0	70 58.0 -37.9	S 26 49.0 +01.6	09						
10	330 19.1 +00.1	N 11 55.2 +00.9	10 51.0 -00.2	S 05 43.5 -00.9	85 20.1 -37.9	S 26 50.6 +01.4	10						
11	345 19.2 +00.1	N 11 56.1 +00.8	25 50.8 -00.2	S 05 42.6 -01.0	99 42.2 -37.9	S 26 52.0 +01.1	11						
12	0 19.3 +00.1	N 11 56.9 +00.9	40 50.6 -00.1	S 05 41.6 -00.9	114 04.3 -37.9	S 26 53.1 +01.0	12						
13	15 19.4 +00.2	N 11 57.8 +00.8	55 50.5 -00.2	S 05 40.7 -00.9	128 26.4 -37.9	S 26 54.1 +00.8	13						
14	30 19.6 +00.1	N 11 58.6 +00.9	70 50.3 -00.2	S 05 39.8 -01.0	142 48.5 -37.9	S 26 54.9 +00.6	14						
15	45 19.7 +00.1	N 11 59.5 +00.8	85 50.1 -00.2	S 05 38.8 -00.9	157 10.6 -37.8	S 26 55.5 +00.4	15						
16	60 19.8 +00.1	N 12 00.3 +00.8	100 49.9 -00.2	S 05 37.9 -01.0	171 32.8 -37.9	S 26 55.9 +00.2	16						
17	75 19.9 +00.2	N 12 01.1 +00.9	115 49.7 -00.2	S 05 36.9 -00.9	185 54.9 -37.8	S 26 56.1 +00.0	17						
18	90 20.1 +00.1	N 12 02.0 +00.8	130 49.5 -00.1	S 05 36.0 -01.0	200 17.1 -37.8	S 26 56.1 -00.1	18						
19	105 20.2 +00.1	N 12 02.8 +00.9	145 49.4 -00.2	S 05 35.0 -00.9	214 39.3 -37.8	S 26 56.0 -00.4	19						
20	120 20.3 +00.1	N 12 03.7 +00.8	160 49.2 -00.2	S 05 34.1 -00.9	229 01.5 -37.7	S 26 55.6 -00.5	20						
21	135 20.4 +00.2	N 12 04.5 +00.9	175 49.0 -00.2	S 05 33.2 -01.0	243 23.8 -37.7	S 26 55.1 -00.8	21						
22	150 20.6 +00.1	N 12 05.4 +00.8	190 48.8 -00.2	S 05 32.2 -00.9	257 46.1 -37.7	S 26 54.3 -00.9	22						
23	165 20.7 +00.1	N 12 06.2 +00.9	205 48.6 -00.2	S 05 31.3 -01.0	272 08.4 -37.7	S 26 53.4 -01.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'2 00'2 00'2 00'1 00'1 00'1		SD 16'3 16'3 16'3 16'3 16'2 16'2								
	HP 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 59'8 59'8 59'7 59'7 59'6 59'6								
	SHA 331° 331° 331° 331° 331° 330°		SHA 012° 012° 011° 011° 011° 011°		SHA 091° 089° 086° 083° 080° 078°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 09:16		Greenwich Culmination Time: 04:03								
UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	232 12.5 +00.6	S 11 13.0 -00.7	212 26.5 +01.9	S 02 36.6 -00.2	242 44.0 +02.3	S 14 34.4 +00.0	00						
01	247 13.1 +00.7	S 11 12.3 -00.7	227 28.4 +02.0	S 02 36.4 -00.2	257 46.3 +02.3	S 14 34.4 -00.1	01						
02	262 13.8 +00.7	S 11 11.6 -00.6	242 30.4 +01.9	S 02 36.2 -00.2	272 48.6 +02.3	S 14 34.3 +00.0	02						
03	277 14.5 +00.6	S 11 11.0 -00.7	257 32.3 +02.0	S 02 36.0 -00.3	287 50.9 +02.3	S 14 34.3 -00.1	03						
04	292 15.1 +00.7	S 11 10.3 -00.7	272 34.3 +02.0	S 02 35.7 -00.2	302 53.2 +02.3	S 14 34.2 +00.0	04						
05	307 15.8 +00.6	S 11 09.6 -00.6	287 36.3 +01.9	S 02 35.5 -00.2	317 55.5 +02.3	S 14 34.2 -00.1	05						
06	322 16.4 +00.7	S 11 09.0 -00.7	302 38.2 +02.0	S 02 35.3 -00.2	332 57.8 +02.3	S 14 34.1 -00.1	06						
07	337 17.1 +00.7	S 11 08.3 -00.7	317 40.2 +01.9	S 02 35.1 -00.2	348 00.1 +02.3	S 14 34.0 +00.0	07						
08	352 17.8 +00.6	S 11 07.6 -00.6	332 42.1 +02.0	S 02 34.9 -00.2	3 02.4 +02.3	S 14 34.0 -00.1	08						
09	7 18.4 +00.7	S 11 07.0 -00.7	347 44.1 +02.0	S 02 34.7 -00.2	18 04.7 +02.3	S 14 33.9 +00.0	09						
10	22 19.1 +00.7	S 11 06.3 -00.7	2 46.1 +01.9	S 02 34.5 -00.2	33 07.0 +02.3	S 14 33.9 -00.1	10						
11	37 19.8 +00.6	S 11 05.6 -00.6	17 48.0 +02.0	S 02 34.3 -00.3	48 09.3 +02.3	S 14 33.8 +00.0	11						
12	52 20.4 +00.7	S 11 05.0 -00.7	32 50.0 +01.9	S 02 34.0 -00.2	63 11.6 +02.3	S 14 33.8 -00.1	12						
13	67 21.1 +00.6	S 11 04.3 -00.7	47 51.9 +02.0	S 02 33.8 -00.2	78 13.9 +02.3	S 14 33.7 +00.0	13						
14	82 21.7 +00.7	S 11 03.6 -00.7	62 53.9 +02.0	S 02 33.6 -00.2	93 16.2 +02.3	S 14 33.7 -00.1	14						
15	97 22.4 +00.7	S 11 02.9 -00.6	77 55.9 +01.9	S 02 33.4 -00.2	108 18.5 +02.2	S 14 33.6 +00.0	15						
16	112 23.1 +00.6	S 11 02.3 -00.7	92 57.8 +02.0	S 02 33.2 -00.2	123 20.7 +02.3	S 14 33.6 -00.1	16						
17	127 23.7 +00.7	S 11 01.6 -00.7	107 59.8 +01.9	S 02 33.0 -00.2	138 23.0 +02.3	S 14 33.5 +00.0	17						
18	142 24.4 +00.7	S 11 00.9 -00.6	123 01.7 +02.0	S 02 32.8 -00.2	153 25.3 +02.3	S 14 33.5 +00.0	18						
19	157 25.1 +00.6	S 11 00.3 -00.7	138 03.7 +02.0	S 02 32.6 -00.3	168 27.6 +02.3	S 14 33.5 -00.1	19						
20	172 25.7 +00.7	S 10 59.6 -00.7	153 05.7 +01.9	S 02 32.3 -00.2	183 29.9 +02.3	S 14 33.4 +00.0	20						
21	187 26.4 +00.7	S 10 58.9 -00.7	168 07.6 +02.0	S 02 32.1 -00.2	198 32.2 +02.3	S 14 33.4 -00.1	21						
22	202 27.1 +00.6	S 10 58.2 -00.6	183 09.6 +01.9	S 02 31.9 -00.2	213 34.5 +02.3	S 14 33.3 +00.0	22						
23	217 27.7 +00.7	S 10 57.6 -00.7	198 11.5 +02.0	S 02 31.7 -00.2	228 36.8 +02.3	S 14 33.3 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 023° 023° 023° 023° 023° 022°		SHA 003° 003° 003° 003° 003° 003°		SHA 034° 034° 034° 034° 034° 034°								
	Greenwich Culmination Time: 08:30		Greenwich Culmination Time: 09:48		Greenwich Culmination Time: 07:47								

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	20.8 +00.1	N 12 07.1 +00.8		220	48.4 -00.2	S 05 30.3 -00.9		286	30.7 -37.6	S 26 52.3 -01.3		00
01	195	20.9 +00.2	N 12 07.9 +00.8		235	48.2 -00.1	S 05 29.4 -01.0		300	53.1 -37.5	S 26 51.0 -01.5		01
02	210	21.1 +00.1	N 12 08.7 +00.9		250	48.1 -00.2	S 05 28.4 -00.9		315	15.6 -37.6	S 26 49.5 -01.7		02
03	225	21.2 +00.1	N 12 09.6 +00.8		265	47.9 -00.2	S 05 27.5 -01.0		329	38.0 -37.5	S 26 47.8 -01.8		03
04	240	21.3 +00.1	N 12 10.4 +00.9		280	47.7 -00.2	S 05 26.5 -00.9		344	00.5 -37.4	S 26 46.0 -02.1		04
05	255	21.4 +00.1	N 12 11.3 +00.8		295	47.5 -00.2	S 05 25.6 -01.0		358	23.1 -37.4	S 26 43.9 -02.2		05
06	270	21.5 +00.2	N 12 12.1 +00.8		310	47.3 -00.2	S 05 24.6 -00.9		12	45.7 -37.3	S 26 41.7 -02.4		06
07	285	21.7 +00.1	N 12 12.9 +00.9		325	47.1 -00.1	S 05 23.7 -01.0		27	08.4 -37.3	S 26 39.3 -02.6		07
08	300	21.8 +00.1	N 12 13.8 +00.8		340	47.0 -00.2	S 05 22.7 -00.9		41	31.1 -37.3	S 26 36.7 -02.8		08
09	315	21.9 +00.1	N 12 14.6 +00.9		355	46.8 -00.2	S 05 21.8 -01.0		55	53.8 -37.1	S 26 33.9 -03.0		09
10	330	22.0 +00.2	N 12 15.5 +00.8		10	46.6 -00.2	S 05 20.8 -00.9		70	16.7 -37.2	S 26 30.9 -03.1		10
11	345	22.2 +00.1	N 12 16.3 +00.8		25	46.4 -00.2	S 05 19.9 -01.0		84	39.5 -37.0	S 26 27.8 -03.3		11
12	0	22.3 +00.1	N 12 17.1 +00.9		40	46.2 -00.2	S 05 18.9 -00.9		99	02.5 -37.0	S 26 24.5 -03.5		12
13	15	22.4 +00.1	N 12 18.0 +00.8		55	46.0 -00.1	S 05 18.0 -01.0		113	25.5 -37.0	S 26 21.0 -03.7		13
14	30	22.5 +00.1	N 12 18.8 +00.9		70	45.9 -00.2	S 05 17.0 -00.9		127	48.5 -36.8	S 26 17.3 -03.8		14
15	45	22.6 +00.2	N 12 19.7 +00.8		85	45.7 -00.2	S 05 16.1 -01.0		142	11.7 -36.8	S 26 13.5 -04.1		15
16	60	22.8 +00.1	N 12 20.5 +00.8		100	45.5 -00.2	S 05 15.1 -00.9		156	34.9 -36.7	S 26 09.4 -04.2		16
17	75	22.9 +00.1	N 12 21.3 +00.9		115	45.3 -00.2	S 05 14.2 -01.0		170	58.2 -36.7	S 26 05.2 -04.4		17
18	90	23.0 +00.1	N 12 22.2 +00.8		130	45.1 -00.2	S 05 13.2 -00.9		185	21.5 -36.6	S 26 00.8 -04.5		18
19	105	23.1 +00.1	N 12 23.0 +00.8		145	44.9 -00.2	S 05 12.3 -01.0		199	44.9 -36.5	S 25 56.3 -04.7		19
20	120	23.2 +00.2	N 12 23.8 +00.9		160	44.7 -00.1	S 05 11.3 -01.0		214	08.4 -36.4	S 25 51.6 -04.9		20
21	135	23.4 +00.1	N 12 24.7 +00.8		175	44.6 -00.2	S 05 10.3 -00.9		228	32.0 -36.3	S 25 46.7 -05.1		21
22	150	23.5 +00.1	N 12 25.5 +00.8		190	44.4 -00.2	S 05 09.4 -01.0		242	55.7 -36.3	S 25 41.6 -05.2		22
23	165	23.6 +00.1	N 12 26.3 +00.9		205	44.2 -00.2	S 05 08.4 -00.9		257	19.4 -36.2	S 25 36.4 -05.4		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 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'2 16'2 16'2 16'2 16'1 16'1				
	HP 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 59'5 59'5 59'4 59'3 59'2 59'2				
	SHA 330° 330° 330° 330° 330° 329°				SHA 011° 011° 010° 010° 010° 010°				SHA 075° 072° 070° 067° 065° 062°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 09:16				Greenwich Culmination Time: 05:06				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	232	28.4 +00.7	S 10 56.9 -00.7		213	13.5 +02.0	S 02 31.5 -00.2		243	39.1 +02.3	S 14 33.2 +00.0		00
01	247	29.1 +00.6	S 10 56.2 -00.6		228	15.5 +01.9	S 02 31.3 -00.2		258	41.4 +02.3	S 14 33.2 -00.1		01
02	262	29.7 +00.7	S 10 55.6 -00.7		243	17.4 +02.0	S 02 31.1 -00.2		273	43.7 +02.3	S 14 33.1 +00.0		02
03	277	30.4 +00.6	S 10 54.9 -00.7		258	19.4 +02.0	S 02 30.9 -00.2		288	46.0 +02.3	S 14 33.1 -00.1		03
04	292	31.0 +00.7	S 10 54.2 -00.7		273	21.4 +01.9	S 02 30.7 -00.3		303	48.3 +02.3	S 14 33.0 +00.0		04
05	307	31.7 +00.7	S 10 53.5 -00.6		288	23.3 +02.0	S 02 30.4 -00.2		318	50.6 +02.3	S 14 33.0 -00.1		05
06	322	32.4 +00.6	S 10 52.9 -00.7		303	25.3 +01.9	S 02 30.2 -00.2		333	52.9 +02.3	S 14 32.9 +00.0		06
07	337	33.0 +00.7	S 10 52.2 -00.7		318	27.2 +02.0	S 02 30.0 -00.2		348	55.2 +02.3	S 14 32.9 -00.1		07
08	352	33.7 +00.7	S 10 51.5 -00.6		333	29.2 +02.0	S 02 29.8 -00.2		3	57.5 +02.3	S 14 32.8 +00.0		08
09	7	34.4 +00.6	S 10 50.9 -00.7		348	31.2 +01.9	S 02 29.6 -00.2		18	59.8 +02.3	S 14 32.8 -00.1		09
10	22	35.0 +00.7	S 10 50.2 -00.7		3	33.1 +02.0	S 02 29.4 -00.2		34	02.1 +02.3	S 14 32.7 +00.0		10
11	37	35.7 +00.7	S 10 49.5 -00.7		18	35.1 +01.9	S 02 29.2 -00.2		49	04.4 +02.3	S 14 32.7 -00.1		11
12	52	36.4 +00.6	S 10 48.8 -00.6		33	37.0 +02.0	S 02 29.0 -00.2		64	06.7 +02.3	S 14 32.6 +00.0		12
13	67	37.0 +00.7	S 10 48.2 -00.7		48	39.0 +02.0	S 02 28.8 -00.3		79	09.0 +02.3	S 14 32.6 -00.1		13
14	82	37.7 +00.7	S 10 47.5 -00.7		63	41.0 +01.9	S 02 28.5 -00.2		94	11.3 +02.3	S 14 32.5 +00.0		14
15	97	38.4 +00.6	S 10 46.8 -00.7		78	42.9 +02.0	S 02 28.3 -00.2		109	13.6 +02.3	S 14 32.5 -00.1		15
16	112	39.0 +00.7	S 10 46.1 -00.6		93	44.9 +02.0	S 02 28.1 -00.2		124	15.9 +02.3	S 14 32.4 +00.0		16
17	127	39.7 +00.7	S 10 45.5 -00.7		108	46.9 +01.9	S 02 27.9 -00.2		139	18.2 +02.3	S 14 32.4 -00.1		17
18	142	40.4 +00.6	S 10 44.8 -00.7		123	48.8 +02.0	S 02 27.7 -00.2		154	20.5 +02.3	S 14 32.3 +00.0		18
19	157	41.0 +00.7	S 10 44.1 -00.7		138	50.8 +01.9	S 02 27.5 -00.2		169	22.8 +02.3	S 14 32.3 -00.1		19
20	172	41.7 +00.7	S 10 43.4 -00.6		153	52.7 +02.0	S 02 27.3 -00.2		184	25.1 +02.3	S 14 32.2 +00.0		20
21	187	42.4 +00.6	S 10 42.8 -00.7		168	54.7 +02.0	S 02 27.1 -00.2		199	27.4 +02.3	S 14 32.2 -00.1		21
22	202	43.0 +00.7	S 10 42.1 -00.7		183	56.7 +01.9	S 02 26.9 -00.2		214	29.7 +02.3	S 14 32.1 +00.0		22
23	217	43.7 +00.7	S 10 41.4 -00.7		198	58.6 +02.0	S 02 26.7 -00.3		229	32.0 +02.3	S 14 32.1 -00.1		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 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 022° 022° 022° 022° 022° 022°				SHA 003° 003° 003° 003° 003° 003°				SHA 034° 034° 034° 034° 034° 034°				
	Greenwich Culmination Time: 08:29				Greenwich Culmination Time: 09:45				Greenwich Culmination Time: 07:44				

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 23.7 +00.1	N 12 27.2 +00.8	220 44.0 -00.2	S 05 07.5 -01.0	271 43.2 -36.1	S 25 31.0 -05.5	00						
01	195 23.8 +00.1	N 12 28.0 +00.8	235 43.8 -00.2	S 05 06.5 -00.9	286 07.1 -36.0	S 25 25.5 -05.8	01						
02	210 23.9 +00.2	N 12 28.8 +00.9	250 43.6 -00.2	S 05 05.6 -01.0	300 31.1 -35.9	S 25 19.7 -05.9	02						
03	225 24.1 +00.1	N 12 29.7 +00.8	265 43.4 -00.1	S 05 04.6 -01.0	314 55.2 -35.9	S 25 13.8 -06.0	03						
04	240 24.2 +00.1	N 12 30.5 +00.8	280 43.3 -00.2	S 05 03.6 -00.9	329 19.3 -35.7	S 25 07.8 -06.2	04						
05	255 24.3 +00.1	N 12 31.3 +00.9	295 43.1 -00.2	S 05 02.7 -01.0	343 43.6 -35.7	S 25 01.6 -06.4	05						
06	270 24.4 +00.1	N 12 32.2 +00.8	310 42.9 -00.2	S 05 01.7 -00.9	358 07.9 -35.6	S 24 55.2 -06.5	06						
07	285 24.5 +00.2	N 12 33.0 +00.8	325 42.7 -00.2	S 05 00.8 -01.0	12 32.3 -35.4	S 24 48.7 -06.7	07						
08	300 24.7 +00.1	N 12 33.8 +00.9	340 42.5 -00.2	S 04 59.8 -01.0	26 56.9 -35.4	S 24 42.0 -06.8	08						
09	315 24.8 +00.1	N 12 34.7 +00.8	355 42.3 -00.1	S 04 58.8 -00.9	41 21.5 -35.3	S 24 35.2 -07.0	09						
10	330 24.9 +00.1	N 12 35.5 +00.8	10 42.2 -00.2	S 04 57.9 -01.0	55 46.2 -35.2	S 24 28.2 -07.1	10						
11	345 25.0 +00.1	N 12 36.3 +00.9	25 42.0 -00.2	S 04 56.9 -00.9	70 11.0 -35.1	S 24 21.1 -07.3	11						
12	0 25.1 +00.1	N 12 37.2 +00.8	40 41.8 -00.2	S 04 56.0 -01.0	84 35.9 -35.0	S 24 13.8 -07.4	12						
13	15 25.2 +00.1	N 12 38.0 +00.8	55 41.6 -00.2	S 04 55.0 -01.0	99 00.9 -34.9	S 24 06.4 -07.6	13						
14	30 25.3 +00.2	N 12 38.8 +00.9	70 41.4 -00.2	S 04 54.0 -00.9	113 26.0 -34.8	S 23 58.8 -07.7	14						
15	45 25.5 +00.1	N 12 39.7 +00.8	85 41.2 -00.2	S 04 53.1 -01.0	127 51.2 -34.7	S 23 51.1 -07.9	15						
16	60 25.6 +00.1	N 12 40.5 +00.8	100 41.0 -00.1	S 04 52.1 -00.9	142 16.5 -34.6	S 23 43.2 -08.0	16						
17	75 25.7 +00.1	N 12 41.3 +00.8	115 40.9 -00.2	S 04 51.2 -01.0	156 41.9 -34.5	S 23 35.2 -08.1	17						
18	90 25.8 +00.1	N 12 42.1 +00.9	130 40.7 -00.2	S 04 50.2 -01.0	171 07.4 -34.4	S 23 27.1 -08.3	18						
19	105 25.9 +00.1	N 12 43.0 +00.8	145 40.5 -00.2	S 04 49.2 -00.9	185 33.0 -34.3	S 23 18.8 -08.5	19						
20	120 26.0 +00.2	N 12 43.8 +00.8	160 40.3 -00.2	S 04 48.3 -01.0	199 58.7 -34.2	S 23 10.3 -08.5	20						
21	135 26.2 +00.1	N 12 44.6 +00.8	175 40.1 -00.2	S 04 47.3 -01.0	214 24.5 -34.1	S 23 01.8 -08.7	21						
22	150 26.3 +00.1	N 12 45.4 +00.9	190 39.9 -00.2	S 04 46.3 -00.9	228 50.4 -33.9	S 22 53.1 -08.8	22						
23	165 26.4 +00.1	N 12 46.3 +00.8	205 39.7 -00.1	S 04 45.4 -01.0	243 16.5 -33.9	S 22 44.3 -09.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'1 16'1 16'0 16'0 16'0								
	HP 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 59'1 59'0 58'9 58'9 58'8 58'7								
	SHA 329° 329° 329° 329° 329° 329°		SHA 010° 009° 009° 009° 009° 009°		SHA 059° 057° 054° 052° 049° 047°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 09:17		Greenwich Culmination Time: 06:07								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	232 44.4 +00.6	S 10 40.7 -00.6	214 00.6 +02.0	S 02 26.4 -00.2	244 34.3 +02.3	S 14 32.0 +00.0	00						
01	247 45.0 +00.7	S 10 40.1 -00.7	229 02.6 +01.9	S 02 26.2 -00.2	259 36.6 +02.3	S 14 32.0 -00.1	01						
02	262 45.7 +00.7	S 10 39.4 -00.7	244 04.5 +02.0	S 02 26.0 -00.2	274 38.9 +02.3	S 14 31.9 +00.0	02						
03	277 46.4 +00.6	S 10 38.7 -00.7	259 06.5 +01.9	S 02 25.8 -00.2	289 41.2 +02.3	S 14 31.9 -00.1	03						
04	292 47.0 +00.7	S 10 38.0 -00.6	274 08.4 +02.0	S 02 25.6 -00.2	304 43.5 +02.3	S 14 31.8 +00.0	04						
05	307 47.7 +00.7	S 10 37.4 -00.7	289 10.4 +02.0	S 02 25.4 -00.2	319 45.8 +02.3	S 14 31.8 -00.1	05						
06	322 48.4 +00.7	S 10 36.7 -00.7	304 12.4 +01.9	S 02 25.2 -00.2	334 48.1 +02.3	S 14 31.7 +00.0	06						
07	337 49.1 +00.6	S 10 36.0 -00.7	319 14.3 +02.0	S 02 25.0 -00.2	349 50.4 +02.3	S 14 31.7 -00.1	07						
08	352 49.7 +00.7	S 10 35.3 -00.6	334 16.3 +02.0	S 02 24.8 -00.3	4 52.7 +02.3	S 14 31.6 +00.0	08						
09	7 50.4 +00.7	S 10 34.7 -00.7	349 18.3 +01.9	S 02 24.5 -00.2	19 55.0 +02.3	S 14 31.6 -00.1	09						
10	22 51.1 +00.6	S 10 34.0 -00.7	4 20.2 +02.0	S 02 24.3 -00.2	34 57.3 +02.3	S 14 31.5 +00.0	10						
11	37 51.7 +00.7	S 10 33.3 -00.7	19 22.2 +02.0	S 02 24.1 -00.2	49 59.6 +02.3	S 14 31.5 +00.0	11						
12	52 52.4 +00.7	S 10 32.6 -00.6	34 24.2 +01.9	S 02 23.9 -00.2	65 01.9 +02.3	S 14 31.5 -00.1	12						
13	67 53.1 +00.6	S 10 32.0 -00.7	49 26.1 +02.0	S 02 23.7 -00.2	80 04.2 +02.3	S 14 31.4 +00.0	13						
14	82 53.7 +00.7	S 10 31.3 -00.7	64 28.1 +02.0	S 02 23.5 -00.2	95 06.5 +02.3	S 14 31.4 -00.1	14						
15	97 54.4 +00.7	S 10 30.6 -00.7	79 30.1 +01.9	S 02 23.3 -00.2	110 08.8 +02.3	S 14 31.3 +00.0	15						
16	112 55.1 +00.6	S 10 29.9 -00.7	94 32.0 +02.0	S 02 23.1 -00.2	125 11.1 +02.3	S 14 31.3 -00.1	16						
17	127 55.7 +00.7	S 10 29.2 -00.6	109 34.0 +02.0	S 02 22.9 -00.2	140 13.4 +02.3	S 14 31.2 +00.0	17						
18	142 56.4 +00.7	S 10 28.6 -00.7	124 36.0 +01.9	S 02 22.7 -00.2	155 15.7 +02.4	S 14 31.2 -00.1	18						
19	157 57.1 +00.7	S 10 27.9 -00.7	139 37.9 +02.0	S 02 22.5 -00.3	170 18.1 +02.3	S 14 31.1 +00.0	19						
20	172 57.8 +00.6	S 10 27.2 -00.7	154 39.9 +01.9	S 02 22.2 -00.2	185 20.4 +02.3	S 14 31.1 -00.1	20						
21	187 58.4 +00.7	S 10 26.5 -00.6	169 41.8 +02.0	S 02 22.0 -00.2	200 22.7 +02.3	S 14 31.0 +00.0	21						
22	202 59.1 +00.7	S 10 25.9 -00.7	184 43.8 +02.0	S 02 21.8 -00.2	215 25.0 +02.3	S 14 31.0 -00.1	22						
23	217 59.8 +00.6	S 10 25.2 -00.7	199 45.8 +01.9	S 02 21.6 -00.2	230 27.3 +02.3	S 14 30.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 022° 022° 021° 021° 021° 021°		SHA 003° 003° 003° 003° 003° 003°		SHA 034° 034° 034° 034° 034° 033°								
	Greenwich Culmination Time: 08:28		Greenwich Culmination Time: 09:42		Greenwich Culmination Time: 07:40								

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 26.5 +00.1	N 12 47.1 +00.8	220 39.6 -00.2	S 04 44.4 -01.0	257 42.6 -33.8	S 22 35.3 -09.1	00						
01	195 26.6 +00.1	N 12 47.9 +00.9	235 39.4 -00.2	S 04 43.4 -00.9	272 08.8 -33.7	S 22 26.2 -09.2	01						
02	210 26.7 +00.1	N 12 48.8 +00.8	250 39.2 -00.2	S 04 42.5 -01.0	286 35.1 -33.5	S 22 17.0 -09.4	02						
03	225 26.8 +00.1	N 12 49.6 +00.8	265 39.0 -00.2	S 04 41.5 -01.0	301 01.6 -33.5	S 22 07.6 -09.4	03						
04	240 26.9 +00.2	N 12 50.4 +00.8	280 38.8 -00.2	S 04 40.5 -00.9	315 28.1 -33.4	S 21 58.2 -09.6	04						
05	255 27.1 +00.1	N 12 51.2 +00.8	295 38.6 -00.2	S 04 39.6 -01.0	329 54.7 -33.2	S 21 48.6 -09.7	05						
06	270 27.2 +00.1	N 12 52.0 +00.9	310 38.4 -00.1	S 04 38.6 -01.0	344 21.5 -33.2	S 21 38.9 -09.9	06						
07	285 27.3 +00.1	N 12 52.9 +00.8	325 38.3 -00.2	S 04 37.6 -00.9	358 48.3 -33.0	S 21 29.0 -09.9	07						
08	300 27.4 +00.1	N 12 53.7 +00.8	340 38.1 -00.2	S 04 36.7 -01.0	13 15.3 -33.0	S 21 19.1 -10.1	08						
09	315 27.5 +00.1	N 12 54.5 +00.8	355 37.9 -00.2	S 04 35.7 -01.0	27 42.3 -32.8	S 21 09.0 -10.2	09						
10	330 27.6 +00.1	N 12 55.3 +00.9	10 37.7 -00.2	S 04 34.7 -01.0	42 09.5 -32.7	S 20 58.8 -10.3	10						
11	345 27.7 +00.1	N 12 56.2 +00.8	25 37.5 -00.2	S 04 33.7 -00.9	56 36.8 -32.6	S 20 48.5 -10.4	11						
12	0 27.8 +00.1	N 12 57.0 +00.8	40 37.3 -00.2	S 04 32.8 -01.0	71 04.2 -32.6	S 20 38.1 -10.5	12						
13	15 27.9 +00.2	N 12 57.8 +00.8	55 37.1 -00.1	S 04 31.8 -01.0	85 31.6 -32.4	S 20 27.6 -10.7	13						
14	30 28.1 +00.1	N 12 58.6 +00.8	70 37.0 -00.2	S 04 30.8 -00.9	99 59.2 -32.3	S 20 16.9 -10.7	14						
15	45 28.2 +00.1	N 12 59.4 +00.9	85 36.8 -00.2	S 04 29.9 -01.0	114 26.9 -32.2	S 20 06.2 -10.8	15						
16	60 28.3 +00.1	N 13 00.3 +00.8	100 36.6 -00.2	S 04 28.9 -01.0	128 54.7 -32.1	S 19 55.4 -11.0	16						
17	75 28.4 +00.1	N 13 01.1 +00.8	115 36.4 -00.2	S 04 27.9 -01.0	143 22.6 -32.0	S 19 44.4 -11.0	17						
18	90 28.5 +00.1	N 13 01.9 +00.8	130 36.2 -00.2	S 04 26.9 -00.9	157 50.6 -31.9	S 19 33.4 -11.2	18						
19	105 28.6 +00.1	N 13 02.7 +00.8	145 36.0 -00.2	S 04 26.0 -01.0	172 18.7 -31.8	S 19 22.2 -11.2	19						
20	120 28.7 +00.1	N 13 03.5 +00.9	160 35.8 -00.1	S 04 25.0 -01.0	186 46.9 -31.7	S 19 11.0 -11.4	20						
21	135 28.8 +00.1	N 13 04.4 +00.8	175 35.7 -00.2	S 04 24.0 -00.9	201 15.2 -31.6	S 18 59.6 -11.4	21						
22	150 28.9 +00.1	N 13 05.2 +00.8	190 35.5 -00.2	S 04 23.1 -01.0	215 43.6 -31.5	S 18 48.2 -11.6	22						
23	165 29.0 +00.2	N 13 06.0 +00.8	205 35.3 -00.2	S 04 22.1 -01.0	230 12.1 -31.4	S 18 36.6 -11.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'0 15'9 15'9 15'9 15'9 15'9								
	HP 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 58'6 58'5 58'5 58'4 58'3 58'2								
	SHA 328° 328° 328° 328° 328° 328°		SHA 009° 008° 008° 008° 008° 008°		SHA 044° 042° 040° 037° 035° 033°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 09:17		Greenwich Culmination Time: 07:04								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	233 00.4 +00.7	S 10 24.5 -00.7	214 47.7 +02.0	S 02 21.4 -00.2	245 29.6 +02.3	S 14 30.9 -00.1	00						
01	248 01.1 +00.7	S 10 23.8 -00.7	229 49.7 +02.0	S 02 21.2 -00.2	260 31.9 +02.3	S 14 30.8 +00.0	01						
02	263 01.8 +00.6	S 10 23.1 -00.6	244 51.7 +01.9	S 02 21.0 -00.2	275 34.2 +02.3	S 14 30.8 -00.1	02						
03	278 02.4 +00.7	S 10 22.5 -00.7	259 53.6 +02.0	S 02 20.8 -00.2	290 36.5 +02.3	S 14 30.7 +00.0	03						
04	293 03.1 +00.7	S 10 21.8 -00.7	274 55.6 +02.0	S 02 20.6 -00.2	305 38.8 +02.3	S 14 30.7 -00.1	04						
05	308 03.8 +00.7	S 10 21.1 -00.7	289 57.6 +01.9	S 02 20.4 -00.3	320 41.1 +02.3	S 14 30.6 +00.0	05						
06	323 04.5 +00.6	S 10 20.4 -00.7	304 59.5 +02.0	S 02 20.1 -00.2	335 43.4 +02.3	S 14 30.6 +00.0	06						
07	338 05.1 +00.7	S 10 19.7 -00.6	320 01.5 +02.0	S 02 19.9 -00.2	350 45.7 +02.3	S 14 30.6 -00.1	07						
08	353 05.8 +00.7	S 10 19.1 -00.7	335 03.5 +01.9	S 02 19.7 -00.2	5 48.0 +02.3	S 14 30.5 +00.0	08						
09	8 06.5 +00.7	S 10 18.4 -00.7	350 05.4 +02.0	S 02 19.5 -00.2	20 50.3 +02.3	S 14 30.5 -00.1	09						
10	23 07.2 +00.6	S 10 17.7 -00.7	5 07.4 +02.0	S 02 19.3 -00.2	35 52.6 +02.3	S 14 30.4 +00.0	10						
11	38 07.8 +00.7	S 10 17.0 -00.7	20 09.4 +01.9	S 02 19.1 -00.2	50 54.9 +02.3	S 14 30.4 -00.1	11						
12	53 08.5 +00.7	S 10 16.3 -00.6	35 11.3 +02.0	S 02 18.9 -00.2	65 57.2 +02.3	S 14 30.3 +00.0	12						
13	68 09.2 +00.6	S 10 15.7 -00.7	50 13.3 +02.0	S 02 18.7 -00.2	80 59.5 +02.3	S 14 30.3 -00.1	13						
14	83 09.8 +00.7	S 10 15.0 -00.7	65 15.3 +01.9	S 02 18.5 -00.2	96 01.8 +02.3	S 14 30.2 +00.0	14						
15	98 10.5 +00.7	S 10 14.3 -00.7	80 17.2 +02.0	S 02 18.3 -00.2	111 04.1 +02.4	S 14 30.2 -00.1	15						
16	113 11.2 +00.7	S 10 13.6 -00.7	95 19.2 +02.0	S 02 18.1 -00.2	126 06.5 +02.3	S 14 30.1 +00.0	16						
17	128 11.9 +00.6	S 10 12.9 -00.6	110 21.2 +01.9	S 02 17.9 -00.3	141 08.8 +02.3	S 14 30.1 -00.1	17						
18	143 12.5 +00.7	S 10 12.3 -00.7	125 23.1 +02.0	S 02 17.6 -00.2	156 11.1 +02.3	S 14 30.0 +00.0	18						
19	158 13.2 +00.7	S 10 11.6 -00.7	140 25.1 +02.0	S 02 17.4 -00.2	171 13.4 +02.3	S 14 30.0 -00.1	19						
20	173 13.9 +00.7	S 10 10.9 -00.7	155 27.1 +01.9	S 02 17.2 -00.2	186 15.7 +02.3	S 14 29.9 +00.0	20						
21	188 14.6 +00.6	S 10 10.2 -00.7	170 29.0 +02.0	S 02 17.0 -00.2	201 18.0 +02.3	S 14 29.9 +00.0	21						
22	203 15.2 +00.7	S 10 09.5 -00.7	185 31.0 +02.0	S 02 16.8 -00.2	216 20.3 +02.3	S 14 29.9 -00.1	22						
23	218 15.9 +00.7	S 10 08.8 -00.6	200 33.0 +01.9	S 02 16.6 -00.2	231 22.6 +02.3	S 14 29.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 021° 021° 021° 021° 020° 020°		SHA 003° 003° 003° 003° 003° 003°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:27		Greenwich Culmination Time: 09:39		Greenwich Culmination Time: 07:36								



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 29.2 +00.1	N 13 06.8 +00.8	220 35.1 -00.2	S 04 21.1 -01.0	244 40.7 -31.3	S 18 25.0 -11.7	00						
01	195 29.3 +00.1	N 13 07.6 +00.8	235 34.9 -00.2	S 04 20.1 -00.9	259 09.4 -31.2	S 18 13.3 -11.9	01						
02	210 29.4 +00.1	N 13 08.4 +00.9	250 34.7 -00.2	S 04 19.2 -01.0	273 38.2 -31.1	S 18 01.4 -11.9	02						
03	225 29.5 +00.1	N 13 09.3 +00.8	265 34.5 -00.1	S 04 18.2 -01.0	288 07.1 -30.9	S 17 49.5 -12.0	03						
04	240 29.6 +00.1	N 13 10.1 +00.8	280 34.4 -00.2	S 04 17.2 -01.0	302 36.2 -30.9	S 17 37.5 -12.0	04						
05	255 29.7 +00.1	N 13 10.9 +00.8	295 34.2 -00.2	S 04 16.2 -01.0	317 05.3 -30.9	S 17 25.5 -12.2	05						
06	270 29.8 +00.1	N 13 11.7 +00.8	310 34.0 -00.2	S 04 15.2 -00.9	331 34.4 -30.7	S 17 13.3 -12.2	06						
07	285 29.9 +00.1	N 13 12.5 +00.8	325 33.8 -00.2	S 04 14.3 -01.0	346 03.7 -30.6	S 17 01.1 -12.4	07						
08	300 30.0 +00.1	N 13 13.3 +00.9	340 33.6 -00.2	S 04 13.3 -01.0	0 33.1 -30.5	S 16 48.7 -12.4	08						
09	315 30.1 +00.1	N 13 14.2 +00.8	355 33.4 -00.2	S 04 12.3 -01.0	15 02.6 -30.4	S 16 36.3 -12.4	09						
10	330 30.2 +00.1	N 13 15.0 +00.8	10 33.2 -00.1	S 04 11.3 -00.9	29 32.2 -30.3	S 16 23.9 -12.6	10						
11	345 30.3 +00.1	N 13 15.8 +00.8	25 33.1 -00.2	S 04 10.4 -01.0	44 01.9 -30.3	S 16 11.3 -12.6	11						
12	0 30.4 +00.1	N 13 16.6 +00.8	40 32.9 -00.2	S 04 09.4 -01.0	58 31.6 -30.1	S 15 58.7 -12.7	12						
13	15 30.5 +00.1	N 13 17.4 +00.8	55 32.7 -00.2	S 04 08.4 -01.0	73 01.5 -30.1	S 15 46.0 -12.8	13						
14	30 30.6 +00.2	N 13 18.2 +00.8	70 32.5 -00.2	S 04 07.4 -01.0	87 31.4 -29.9	S 15 33.2 -12.9	14						
15	45 30.8 +00.1	N 13 19.0 +00.8	85 32.3 -00.2	S 04 06.4 -00.9	102 01.5 -29.9	S 15 20.3 -12.9	15						
16	60 30.9 +00.1	N 13 19.8 +00.8	100 32.1 -00.2	S 04 05.5 -01.0	116 31.6 -29.8	S 15 07.4 -13.0	16						
17	75 31.0 +00.1	N 13 20.6 +00.9	115 31.9 -00.2	S 04 04.5 -01.0	131 01.8 -29.7	S 14 54.4 -13.0	17						
18	90 31.1 +00.1	N 13 21.5 +00.8	130 31.7 -00.1	S 04 03.5 -01.0	145 32.1 -29.6	S 14 41.4 -13.2	18						
19	105 31.2 +00.1	N 13 22.3 +00.8	145 31.6 -00.2	S 04 02.5 -01.0	160 02.5 -29.6	S 14 28.2 -13.1	19						
20	120 31.3 +00.1	N 13 23.1 +00.8	160 31.4 -00.2	S 04 01.5 -00.9	174 32.9 -29.4	S 14 15.1 -13.3	20						
21	135 31.4 +00.1	N 13 23.9 +00.8	175 31.2 -00.2	S 04 00.6 -01.0	189 03.5 -29.4	S 14 01.8 -13.3	21						
22	150 31.5 +00.1	N 13 24.7 +00.8	190 31.0 -00.2	S 03 59.6 -01.0	203 34.1 -29.3	S 13 48.5 -13.3	22						
23	165 31.6 +00.1	N 13 25.5 +00.8	205 30.8 -00.2	S 03 58.6 -01.0	218 04.8 -29.2	S 13 35.2 -13.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'8 15'8 15'7 15'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 58'1 58'0 57'9 57'9 57'8 57'7								
	SHA 327° 327° 327° 327° 327° 327°		SHA 008° 007° 007° 007° 007° 007°		SHA 031° 028° 026° 024° 022° 020°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:17		Greenwich Culmination Time: 07:57								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	233 16.6 +00.6	S 10 08.2 -00.7	215 34.9 +02.0	S 02 16.4 -00.2	246 24.9 +02.3	S 14 29.8 -00.1	00						
01	248 17.2 +00.7	S 10 07.5 -00.7	230 36.9 +02.0	S 02 16.2 -00.2	261 27.2 +02.3	S 14 29.7 +00.0	01						
02	263 17.9 +00.7	S 10 06.8 -00.7	245 38.9 +02.0	S 02 16.0 -00.2	276 29.5 +02.3	S 14 29.7 -00.1	02						
03	278 18.6 +00.7	S 10 06.1 -00.7	260 40.9 +01.9	S 02 15.8 -00.2	291 31.8 +02.3	S 14 29.6 +00.0	03						
04	293 19.3 +00.6	S 10 05.4 -00.7	275 42.8 +02.0	S 02 15.6 -00.2	306 34.1 +02.3	S 14 29.6 -00.1	04						
05	308 19.9 +00.7	S 10 04.7 -00.6	290 44.8 +02.0	S 02 15.4 -00.3	321 36.4 +02.4	S 14 29.5 +00.0	05						
06	323 20.6 +00.7	S 10 04.1 -00.7	305 46.8 +01.9	S 02 15.1 -00.2	336 38.8 +02.3	S 14 29.5 -00.1	06						
07	338 21.3 +00.7	S 10 03.4 -00.7	320 48.7 +02.0	S 02 14.9 -00.2	351 41.1 +02.3	S 14 29.4 +00.0	07						
08	353 22.0 +00.6	S 10 02.7 -00.7	335 50.7 +02.0	S 02 14.7 -00.2	6 43.4 +02.3	S 14 29.4 -00.1	08						
09	8 22.6 +00.7	S 10 02.0 -00.7	350 52.7 +01.9	S 02 14.5 -00.2	21 45.7 +02.3	S 14 29.3 +00.0	09						
10	23 23.3 +00.7	S 10 01.3 -00.7	5 54.6 +02.0	S 02 14.3 -00.2	36 48.0 +02.3	S 14 29.3 +00.0	10						
11	38 24.0 +00.7	S 10 00.6 -00.6	20 56.6 +02.0	S 02 14.1 -00.2	51 50.3 +02.3	S 14 29.3 -00.1	11						
12	53 24.7 +00.6	S 09 60.0 -00.7	35 58.6 +01.9	S 02 13.9 -00.2	66 52.6 +02.3	S 14 29.2 +00.0	12						
13	68 25.3 +00.7	S 09 59.3 -00.7	51 00.5 +02.0	S 02 13.7 -00.2	81 54.9 +02.3	S 14 29.2 -00.1	13						
14	83 26.0 +00.7	S 09 58.6 -00.7	66 02.5 +02.0	S 02 13.5 -00.2	96 57.2 +02.3	S 14 29.1 +00.0	14						
15	98 26.7 +00.7	S 09 57.9 -00.7	81 04.5 +01.9	S 02 13.3 -00.2	111 59.5 +02.3	S 14 29.1 -00.1	15						
16	113 27.4 +00.7	S 09 57.2 -00.7	96 06.4 +02.0	S 02 13.1 -00.2	127 01.8 +02.4	S 14 29.0 +00.0	16						
17	128 28.1 +00.6	S 09 56.5 -00.6	111 08.4 +02.0	S 02 12.9 -00.2	142 04.2 +02.3	S 14 29.0 -00.1	17						
18	143 28.7 +00.7	S 09 55.9 -00.7	126 10.4 +02.0	S 02 12.7 -00.3	157 06.5 +02.3	S 14 28.9 +00.0	18						
19	158 29.4 +00.7	S 09 55.2 -00.7	141 12.4 +01.9	S 02 12.4 -00.2	172 08.8 +02.3	S 14 28.9 -00.1	19						
20	173 30.1 +00.7	S 09 54.5 -00.7	156 14.3 +02.0	S 02 12.2 -00.2	187 11.1 +02.3	S 14 28.8 +00.0	20						
21	188 30.8 +00.6	S 09 53.8 -00.7	171 16.3 +02.0	S 02 12.0 -00.2	202 13.4 +02.3	S 14 28.8 +00.0	21						
22	203 31.4 +00.7	S 09 53.1 -00.7	186 18.3 +01.9	S 02 11.8 -00.2	217 15.7 +02.3	S 14 28.8 -00.1	22						
23	218 32.1 +00.7	S 09 52.4 -00.7	201 20.2 +02.0	S 02 11.6 -00.2	232 18.0 +02.3	S 14 28.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 020° 020° 020° 020° 020° 020°		SHA 003° 003° 003° 002° 002° 002°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:26		Greenwich Culmination Time: 09:36		Greenwich Culmination Time: 07:33								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 31.7 +00.1	N 13 26.3 +00.8	220 30.6 -00.2	S 03 57.6 -01.0	232 35.6 -29.1	S 13 21.7 -13.4	00						
01	195 31.8 +00.1	N 13 27.1 +00.8	235 30.4 -00.2	S 03 56.6 -01.0	247 06.5 -29.0	S 13 08.3 -13.6	01						
02	210 31.9 +00.1	N 13 27.9 +00.8	250 30.2 -00.1	S 03 55.6 -00.9	261 37.5 -29.0	S 12 54.7 -13.6	02						
03	225 32.0 +00.1	N 13 28.7 +00.8	265 30.1 -00.2	S 03 54.7 -01.0	276 08.5 -28.9	S 12 41.1 -13.6	03						
04	240 32.1 +00.1	N 13 29.5 +00.9	280 29.9 -00.2	S 03 53.7 -01.0	290 39.6 -28.8	S 12 27.5 -13.7	04						
05	255 32.2 +00.1	N 13 30.4 +00.8	295 29.7 -00.2	S 03 52.7 -01.0	305 10.8 -28.7	S 12 13.8 -13.7	05						
06	270 32.3 +00.1	N 13 31.2 +00.8	310 29.5 -00.2	S 03 51.7 -01.0	319 42.1 -28.7	S 12 00.1 -13.8	06						
07	285 32.4 +00.1	N 13 32.0 +00.8	325 29.3 -00.2	S 03 50.7 -01.0	334 13.4 -28.6	S 11 46.3 -13.8	07						
08	300 32.5 +00.1	N 13 32.8 +00.8	340 29.1 -00.2	S 03 49.7 -01.0	348 44.8 -28.5	S 11 32.5 -13.9	08						
09	315 32.6 +00.1	N 13 33.6 +00.8	355 28.9 -00.1	S 03 48.7 -00.9	3 16.3 -28.4	S 11 18.6 -13.9	09						
10	330 32.7 +00.1	N 13 34.4 +00.8	10 28.8 -00.2	S 03 47.8 -01.0	17 47.9 -28.4	S 11 04.7 -14.0	10						
11	345 32.8 +00.1	N 13 35.2 +00.8	25 28.6 -00.2	S 03 46.8 -01.0	32 19.5 -28.3	S 10 50.7 -14.0	11						
12	0 32.9 +00.1	N 13 36.0 +00.8	40 28.4 -00.2	S 03 45.8 -01.0	46 51.2 -28.3	S 10 36.7 -14.1	12						
13	15 33.0 +00.1	N 13 36.8 +00.8	55 28.2 -00.2	S 03 44.8 -01.0	61 22.9 -28.1	S 10 22.6 -14.1	13						
14	30 33.1 +00.1	N 13 37.6 +00.8	70 28.0 -00.2	S 03 43.8 -01.0	75 54.8 -28.2	S 10 08.5 -14.1	14						
15	45 33.2 +00.1	N 13 38.4 +00.8	85 27.8 -00.2	S 03 42.8 -01.0	90 26.6 -28.0	S 09 54.4 -14.1	15						
16	60 33.3 +00.1	N 13 39.2 +00.8	100 27.6 -00.2	S 03 41.8 -01.0	104 58.6 -28.0	S 09 40.3 -14.2	16						
17	75 33.4 +00.1	N 13 40.0 +00.8	115 27.4 -00.1	S 03 40.8 -01.0	119 30.6 -27.9	S 09 26.1 -14.3	17						
18	90 33.5 +00.1	N 13 40.8 +00.8	130 27.3 -00.2	S 03 39.8 -00.9	134 02.7 -27.8	S 09 11.8 -14.2	18						
19	105 33.6 +00.1	N 13 41.6 +00.8	145 27.1 -00.2	S 03 38.9 -01.0	148 34.9 -27.8	S 08 57.6 -14.3	19						
20	120 33.7 +00.1	N 13 42.4 +00.8	160 26.9 -00.2	S 03 37.9 -01.0	163 07.1 -27.8	S 08 43.3 -14.4	20						
21	135 33.8 +00.1	N 13 43.2 +00.8	175 26.7 -00.2	S 03 36.9 -01.0	177 39.3 -27.7	S 08 28.9 -14.3	21						
22	150 33.9 +00.1	N 13 44.0 +00.8	190 26.5 -00.2	S 03 35.9 -01.0	192 11.6 -27.6	S 08 14.6 -14.4	22						
23	165 34.0 +00.1	N 13 44.8 +00.8	205 26.3 -00.2	S 03 34.9 -01.0	206 44.0 -27.6	S 08 00.2 -14.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'7 15'7 15'6 15'6 15'6 15'6								
	HP 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 57'6 57'5 57'4 57'3 57'3 57'2								
	SHA 326° 326° 326° 326° 326° 326°		SHA 006° 006° 006° 006° 006° 006°		SHA 018° 015° 013° 011° 009° 007°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:18		Greenwich Culmination Time: 08:46								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	233 32.8 +00.7	S 09 51.7 -00.6	216 22.2 +02.0	S 02 11.4 -00.2	247 20.3 +02.3	S 14 28.7 -00.1	00						
01	248 33.5 +00.6	S 09 51.1 -00.7	231 24.2 +02.0	S 02 11.2 -00.2	262 22.6 +02.4	S 14 28.6 +00.0	01						
02	263 34.1 +00.7	S 09 50.4 -00.7	246 26.2 +01.9	S 02 11.0 -00.2	277 25.0 +02.3	S 14 28.6 -00.1	02						
03	278 34.8 +00.7	S 09 49.7 -00.7	261 28.1 +02.0	S 02 10.8 -00.2	292 27.3 +02.3	S 14 28.5 +00.0	03						
04	293 35.5 +00.7	S 09 49.0 -00.7	276 30.1 +02.0	S 02 10.6 -00.2	307 29.6 +02.3	S 14 28.5 -00.1	04						
05	308 36.2 +00.7	S 09 48.3 -00.7	291 32.1 +01.9	S 02 10.4 -00.2	322 31.9 +02.3	S 14 28.4 +00.0	05						
06	323 36.9 +00.6	S 09 47.6 -00.7	306 34.0 +02.0	S 02 10.2 -00.2	337 34.2 +02.3	S 14 28.4 +00.0	06						
07	338 37.5 +00.7	S 09 46.9 -00.6	321 36.0 +02.0	S 02 10.0 -00.2	352 36.5 +02.3	S 14 28.4 -00.1	07						
08	353 38.2 +00.7	S 09 46.3 -00.7	336 38.0 +01.9	S 02 09.8 -00.3	7 38.8 +02.3	S 14 28.3 +00.0	08						
09	8 38.9 +00.7	S 09 45.6 -00.7	351 39.9 +02.0	S 02 09.5 -00.2	22 41.1 +02.3	S 14 28.3 -00.1	09						
10	23 39.6 +00.6	S 09 44.9 -00.7	6 41.9 +02.0	S 02 09.3 -00.2	37 43.4 +02.4	S 14 28.2 +00.0	10						
11	38 40.2 +00.7	S 09 44.2 -00.7	21 43.9 +02.0	S 02 09.1 -00.2	52 45.8 +02.3	S 14 28.2 -00.1	11						
12	53 40.9 +00.7	S 09 43.5 -00.7	36 45.9 +01.9	S 02 08.9 -00.2	67 48.1 +02.3	S 14 28.1 +00.0	12						
13	68 41.6 +00.7	S 09 42.8 -00.7	51 47.8 +02.0	S 02 08.7 -00.2	82 50.4 +02.3	S 14 28.1 -00.1	13						
14	83 42.3 +00.7	S 09 42.1 -00.7	66 49.8 +02.0	S 02 08.5 -00.2	97 52.7 +02.3	S 14 28.0 +00.0	14						
15	98 43.0 +00.6	S 09 41.4 -00.6	81 51.8 +02.0	S 02 08.3 -00.2	112 55.0 +02.3	S 14 28.0 +00.0	15						
16	113 43.6 +00.7	S 09 40.8 -00.7	96 53.8 +01.9	S 02 08.1 -00.2	127 57.3 +02.3	S 14 28.0 -00.1	16						
17	128 44.3 +00.7	S 09 40.1 -00.7	111 55.7 +02.0	S 02 07.9 -00.2	142 59.6 +02.3	S 14 27.9 +00.0	17						
18	143 45.0 +00.7	S 09 39.4 -00.7	126 57.7 +02.0	S 02 07.7 -00.2	158 01.9 +02.4	S 14 27.9 -00.1	18						
19	158 45.7 +00.7	S 09 38.7 -00.7	141 59.7 +01.9	S 02 07.5 -00.2	173 04.3 +02.3	S 14 27.8 +00.0	19						
20	173 46.4 +00.6	S 09 38.0 -00.7	157 01.6 +02.0	S 02 07.3 -00.2	188 06.6 +02.3	S 14 27.8 -00.1	20						
21	188 47.0 +00.7	S 09 37.3 -00.7	172 03.6 +02.0	S 02 07.1 -00.2	203 08.9 +02.3	S 14 27.7 +00.0	21						
22	203 47.7 +00.7	S 09 36.6 -00.7	187 05.6 +02.0	S 02 06.9 -00.2	218 11.2 +02.3	S 14 27.7 -00.1	22						
23	218 48.4 +00.7	S 09 35.9 -00.6	202 07.6 +01.9	S 02 06.7 -00.2	233 13.5 +02.3	S 14 27.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 020° 019° 019° 019° 019° 019°		SHA 002° 002° 002° 002° 002° 002°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:25		Greenwich Culmination Time: 09:33		Greenwich Culmination Time: 07:29								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 34.1 +00.1	N 13 45.6 +00.8	220 26.1 -00.2	S 03 33.9 -01.0	221 16.4 -27.5	S 07 45.8 -14.4	00						
01	195 34.2 +00.1	N 13 46.4 +00.8	235 25.9 -00.1	S 03 32.9 -01.0	235 48.9 -27.4	S 07 31.4 -14.5	01						
02	210 34.3 +00.1	N 13 47.2 +00.8	250 25.8 -00.2	S 03 31.9 -01.0	250 21.5 -27.4	S 07 16.9 -14.5	02						
03	225 34.4 +00.1	N 13 48.0 +00.8	265 25.6 -00.2	S 03 30.9 -01.0	264 54.1 -27.4	S 07 02.4 -14.5	03						
04	240 34.5 +00.1	N 13 48.8 +00.8	280 25.4 -00.2	S 03 29.9 -01.0	279 26.7 -27.3	S 06 47.9 -14.5	04						
05	255 34.6 +00.1	N 13 49.6 +00.8	295 25.2 -00.2	S 03 28.9 -01.0	293 59.4 -27.3	S 06 33.4 -14.6	05						
06	270 34.7 +00.1	N 13 50.4 +00.8	310 25.0 -00.2	S 03 27.9 -00.9	308 32.1 -27.2	S 06 18.8 -14.5	06						
07	285 34.8 +00.1	N 13 51.2 +00.8	325 24.8 -00.2	S 03 27.0 -01.0	323 04.9 -27.1	S 06 04.3 -14.6	07						
08	300 34.9 +00.1	N 13 52.0 +00.8	340 24.6 -00.2	S 03 26.0 -01.0	337 37.8 -27.2	S 05 49.7 -14.6	08						
09	315 35.0 +00.1	N 13 52.8 +00.8	355 24.4 -00.1	S 03 25.0 -01.0	352 10.6 -27.0	S 05 35.1 -14.6	09						
10	330 35.1 +00.1	N 13 53.6 +00.8	10 24.3 -00.2	S 03 24.0 -01.0	6 43.6 -27.1	S 05 20.5 -14.6	10						
11	345 35.2 +00.0	N 13 54.4 +00.8	25 24.1 -00.2	S 03 23.0 -01.0	21 16.5 -27.0	S 05 05.9 -14.7	11						
12	0 35.2 +00.1	N 13 55.2 +00.7	40 23.9 -00.2	S 03 22.0 -01.0	35 49.5 -26.9	S 04 51.2 -14.6	12						
13	15 35.3 +00.1	N 13 55.9 +00.8	55 23.7 -00.2	S 03 21.0 -01.0	50 22.6 -26.9	S 04 36.6 -14.7	13						
14	30 35.4 +00.1	N 13 56.7 +00.8	70 23.5 -00.2	S 03 20.0 -01.0	64 55.7 -26.9	S 04 21.9 -14.7	14						
15	45 35.5 +00.1	N 13 57.5 +00.8	85 23.3 -00.2	S 03 19.0 -01.0	79 28.8 -26.8	S 04 07.2 -14.6	15						
16	60 35.6 +00.1	N 13 58.3 +00.8	100 23.1 -00.2	S 03 18.0 -01.0	94 02.0 -26.8	S 03 52.6 -14.7	16						
17	75 35.7 +00.1	N 13 59.1 +00.8	115 22.9 -00.2	S 03 17.0 -01.0	108 35.2 -26.8	S 03 37.9 -14.7	17						
18	90 35.8 +00.1	N 13 59.9 +00.8	130 22.7 -00.1	S 03 16.0 -01.0	123 08.4 -26.7	S 03 23.2 -14.7	18						
19	105 35.9 +00.1	N 14 00.7 +00.8	145 22.6 -00.2	S 03 15.0 -01.0	137 41.7 -26.7	S 03 08.5 -14.7	19						
20	120 36.0 +00.1	N 14 01.5 +00.8	160 22.4 -00.2	S 03 14.0 -01.0	152 15.0 -26.7	S 02 53.8 -14.7	20						
21	135 36.1 +00.1	N 14 02.3 +00.8	175 22.2 -00.2	S 03 13.0 -01.0	166 48.3 -26.6	S 02 39.1 -14.7	21						
22	150 36.2 +00.1	N 14 03.1 +00.8	190 22.0 -00.2	S 03 12.0 -01.0	181 21.7 -26.6	S 02 24.4 -14.7	22						
23	165 36.3 +00.1	N 14 03.9 +00.8	205 21.8 -00.2	S 03 11.0 -01.0	195 55.1 -26.6	S 02 09.7 -14.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'5 15'5 15'5 15'5 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'2 00'2 00'2 00'2 00'2 00'2		HP 57'1 57'0 56'9 56'8 56'7 56'7								
	SHA 326° 325° 325° 325° 325° 325°		SHA 005° 005° 005° 005° 005° 005°		SHA 005° 003° 001° 359° 357° 355°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:18		Greenwich Culmination Time: 09:32								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	233 49.1 +00.7	S 09 35.3 -00.7	217 09.5 +02.0	S 02 06.5 -00.3	248 15.8 +02.3	S 14 27.6 +00.0	00						
01	248 49.8 +00.6	S 09 34.6 -00.7	232 11.5 +02.0	S 02 06.2 -00.2	263 18.1 +02.4	S 14 27.6 -00.1	01						
02	263 50.4 +00.7	S 09 33.9 -00.7	247 13.5 +02.0	S 02 06.0 -00.2	278 20.5 +02.3	S 14 27.5 +00.0	02						
03	278 51.1 +00.7	S 09 33.2 -00.7	262 15.5 +01.9	S 02 05.8 -00.2	293 22.8 +02.3	S 14 27.5 -00.1	03						
04	293 51.8 +00.7	S 09 32.5 -00.7	277 17.4 +02.0	S 02 05.6 -00.2	308 25.1 +02.3	S 14 27.4 +00.0	04						
05	308 52.5 +00.7	S 09 31.8 -00.7	292 19.4 +02.0	S 02 05.4 -00.2	323 27.4 +02.3	S 14 27.4 -00.1	05						
06	323 53.2 +00.6	S 09 31.1 -00.7	307 21.4 +01.9	S 02 05.2 -00.2	338 29.7 +02.3	S 14 27.3 +00.0	06						
07	338 53.8 +00.7	S 09 30.4 -00.7	322 23.3 +02.0	S 02 05.0 -00.2	353 32.0 +02.3	S 14 27.3 +00.0	07						
08	353 54.5 +00.7	S 09 29.7 -00.7	337 25.3 +02.0	S 02 04.8 -00.2	8 34.3 +02.4	S 14 27.3 -00.1	08						
09	8 55.2 +00.7	S 09 29.0 -00.6	352 27.3 +02.0	S 02 04.6 -00.2	23 36.7 +02.3	S 14 27.2 +00.0	09						
10	23 55.9 +00.7	S 09 28.4 -00.7	7 29.3 +01.9	S 02 04.4 -00.2	38 39.0 +02.3	S 14 27.2 -00.1	10						
11	38 56.6 +00.6	S 09 27.7 -00.7	22 31.2 +02.0	S 02 04.2 -00.2	53 41.3 +02.3	S 14 27.1 +00.0	11						
12	53 57.2 +00.7	S 09 27.0 -00.7	37 33.2 +02.0	S 02 04.0 -00.2	68 43.6 +02.3	S 14 27.1 -00.1	12						
13	68 57.9 +00.7	S 09 26.3 -00.7	52 35.2 +02.0	S 02 03.8 -00.2	83 45.9 +02.3	S 14 27.0 +00.0	13						
14	83 58.6 +00.7	S 09 25.6 -00.7	67 37.2 +01.9	S 02 03.6 -00.2	98 48.2 +02.4	S 14 27.0 -00.1	14						
15	98 59.3 +00.7	S 09 24.9 -00.7	82 39.1 +02.0	S 02 03.4 -00.2	113 50.6 +02.3	S 14 26.9 +00.0	15						
16	113 60.0 +00.7	S 09 24.2 -00.7	97 41.1 +02.0	S 02 03.2 -00.2	128 52.9 +02.3	S 14 26.9 +00.0	16						
17	129 00.7 +00.6	S 09 23.5 -00.7	112 43.1 +02.0	S 02 03.0 -00.2	143 55.2 +02.3	S 14 26.9 -00.1	17						
18	144 01.3 +00.7	S 09 22.8 -00.7	127 45.1 +01.9	S 02 02.8 -00.3	158 57.5 +02.3	S 14 26.8 +00.0	18						
19	159 02.0 +00.7	S 09 22.1 -00.7	142 47.0 +02.0	S 02 02.5 -00.2	173 59.8 +02.3	S 14 26.8 -00.1	19						
20	174 02.7 +00.7	S 09 21.4 -00.6	157 49.0 +02.0	S 02 02.3 -00.2	189 02.1 +02.4	S 14 26.7 +00.0	20						
21	189 03.4 +00.7	S 09 20.8 -00.7	172 51.0 +02.0	S 02 02.1 -00.2	204 04.5 +02.3	S 14 26.7 -00.1	21						
22	204 04.1 +00.7	S 09 20.1 -00.7	187 53.0 +01.9	S 02 01.9 -00.2	219 06.8 +02.3	S 14 26.6 +00.0	22						
23	219 04.8 +00.6	S 09 19.4 -00.7	202 54.9 +02.0	S 02 01.7 -00.2	234 09.1 +02.3	S 14 26.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 019° 019° 019° 018° 018° 018°		SHA 002° 002° 002° 002° 002° 002°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:24		Greenwich Culmination Time: 09:30		Greenwich Culmination Time: 07:25								

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 36.4 +00.1	N 14 04.7 +00.7	220 21.6 -00.2	S 03 10.0 -01.0	210 28.5 -26.5	S 01 55.0 -14.7	00						
01	195 36.5 +00.1	N 14 05.4 +00.8	235 21.4 -00.2	S 03 09.0 -01.0	225 02.0 -26.5	S 01 40.3 -14.7	01						
02	210 36.6 +00.0	N 14 06.2 +00.8	250 21.2 -00.1	S 03 08.0 -01.0	239 35.5 -26.5	S 01 25.6 -14.7	02						
03	225 36.6 +00.1	N 14 07.0 +00.8	265 21.1 -00.2	S 03 07.0 -01.0	254 09.0 -26.5	S 01 10.9 -14.7	03						
04	240 36.7 +00.1	N 14 07.8 +00.8	280 20.9 -00.2	S 03 06.0 -01.0	268 42.5 -26.4	S 00 56.2 -14.7	04						
05	255 36.8 +00.1	N 14 08.6 +00.8	295 20.7 -00.2	S 03 05.0 -01.0	283 16.1 -26.5	S 00 41.5 -14.7	05						
06	270 36.9 +00.1	N 14 09.4 +00.8	310 20.5 -00.2	S 03 04.0 -01.0	297 49.6 -26.4	S 00 26.8 -14.7	06						
07	285 37.0 +00.1	N 14 10.2 +00.8	325 20.3 -00.2	S 03 03.0 -01.0	312 23.2 -26.4	S 00 12.1 -14.6	07						
08	300 37.1 +00.1	N 14 11.0 +00.7	340 20.1 -00.2	S 03 02.0 -01.0	326 56.8 -26.3	N 00 02.5 +14.7	08						
09	315 37.2 +00.1	N 14 11.7 +00.8	355 19.9 -00.2	S 03 01.0 -01.0	341 30.5 -26.4	N 00 17.2 +14.6	09						
10	330 37.3 +00.1	N 14 12.5 +00.8	10 19.7 -00.2	S 03 00.0 -01.0	356 04.1 -26.3	N 00 31.8 +14.7	10						
11	345 37.4 +00.1	N 14 13.3 +00.8	25 19.5 -00.1	S 02 59.0 -01.0	10 37.8 -26.3	N 00 46.5 +14.6	11						
12	0 37.5 +00.1	N 14 14.1 +00.8	40 19.4 -00.2	S 02 58.0 -01.0	25 11.5 -26.3	N 01 01.1 +14.6	12						
13	15 37.6 +00.0	N 14 14.9 +00.8	55 19.2 -00.2	S 02 57.0 -01.0	39 45.2 -26.3	N 01 15.7 +14.6	13						
14	30 37.6 +00.1	N 14 15.7 +00.7	70 19.0 -00.2	S 02 56.0 -01.0	54 18.9 -26.3	N 01 30.3 +14.6	14						
15	45 37.7 +00.1	N 14 16.4 +00.8	85 18.8 -00.2	S 02 55.0 -01.0	68 52.6 -26.2	N 01 44.9 +14.5	15						
16	60 37.8 +00.1	N 14 17.2 +00.8	100 18.6 -00.2	S 02 54.0 -01.0	83 26.4 -26.3	N 01 59.4 +14.6	16						
17	75 37.9 +00.1	N 14 18.0 +00.8	115 18.4 -00.2	S 02 53.0 -01.0	98 00.1 -26.2	N 02 14.0 +14.5	17						
18	90 38.0 +00.1	N 14 18.8 +00.8	130 18.2 -00.2	S 02 52.0 -01.0	112 33.9 -26.2	N 02 28.5 +14.5	18						
19	105 38.1 +00.1	N 14 19.6 +00.8	145 18.0 -00.2	S 02 51.0 -01.0	127 07.7 -26.3	N 02 43.0 +14.5	19						
20	120 38.2 +00.1	N 14 20.4 +00.7	160 17.8 -00.2	S 02 50.0 -01.0	141 41.4 -26.2	N 02 57.5 +14.4	20						
21	135 38.3 +00.0	N 14 21.1 +00.8	175 17.6 -00.1	S 02 49.0 -01.0	156 15.2 -26.2	N 03 11.9 +14.4	21						
22	150 38.3 +00.1	N 14 21.9 +00.8	190 17.5 -00.2	S 02 48.0 -01.0	170 49.0 -26.2	N 03 26.3 +14.5	22						
23	165 38.4 +00.1	N 14 22.7 +00.8	205 17.3 -00.2	S 02 47.0 -01.0	185 22.8 -26.2	N 03 40.8 +14.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 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 56'2								
	SHA 325° 324° 324° 324° 324° 324°		SHA 004° 004° 004° 004° 004° 003°		SHA 354° 352° 350° 348° 346° 344°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:18		Greenwich Culmination Time: 10:16								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	234 05.4 +00.7	S 09 18.7 -00.7	217 56.9 +02.0	S 02 01.5 -00.2	249 11.4 +02.3	S 14 26.6 -00.1	00						
01	249 06.1 +00.7	S 09 18.0 -00.7	232 58.9 +02.0	S 02 01.3 -00.2	264 13.7 +02.3	S 14 26.5 +00.0	01						
02	264 06.8 +00.7	S 09 17.3 -00.7	248 00.9 +01.9	S 02 01.1 -00.2	279 16.0 +02.4	S 14 26.5 -00.1	02						
03	279 07.5 +00.7	S 09 16.6 -00.7	263 02.8 +02.0	S 02 00.9 -00.2	294 18.4 +02.3	S 14 26.4 +00.0	03						
04	294 08.2 +00.7	S 09 15.9 -00.7	278 04.8 +02.0	S 02 00.7 -00.2	309 20.7 +02.3	S 14 26.4 -00.1	04						
05	309 08.9 +00.6	S 09 15.2 -00.7	293 06.8 +02.0	S 02 00.5 -00.2	324 23.0 +02.3	S 14 26.3 +00.0	05						
06	324 09.5 +00.7	S 09 14.5 -00.7	308 08.8 +02.0	S 02 00.3 -00.2	339 25.3 +02.3	S 14 26.3 +00.0	06						
07	339 10.2 +00.7	S 09 13.8 -00.7	323 10.8 +01.9	S 02 00.1 -00.2	354 27.6 +02.4	S 14 26.3 -00.1	07						
08	354 10.9 +00.7	S 09 13.1 -00.7	338 12.7 +02.0	S 01 59.9 -00.2	9 30.0 +02.3	S 14 26.2 +00.0	08						
09	9 11.6 +00.7	S 09 12.4 -00.6	353 14.7 +02.0	S 01 59.7 -00.2	24 32.3 +02.3	S 14 26.2 -00.1	09						
10	24 12.3 +00.7	S 09 11.8 -00.7	8 16.7 +02.0	S 01 59.5 -00.2	39 34.6 +02.3	S 14 26.1 +00.0	10						
11	39 13.0 +00.6	S 09 11.1 -00.7	23 18.7 +01.9	S 01 59.3 -00.2	54 36.9 +02.3	S 14 26.1 +00.0	11						
12	54 13.6 +00.7	S 09 10.4 -00.7	38 20.6 +02.0	S 01 59.1 -00.2	69 39.2 +02.4	S 14 26.1 -00.1	12						
13	69 14.3 +00.7	S 09 09.7 -00.7	53 22.6 +02.0	S 01 58.9 -00.2	84 41.6 +02.3	S 14 26.0 +00.0	13						
14	84 15.0 +00.7	S 09 09.0 -00.7	68 24.6 +02.0	S 01 58.7 -00.2	99 43.9 +02.3	S 14 26.0 -00.1	14						
15	99 15.7 +00.7	S 09 08.3 -00.7	83 26.6 +01.9	S 01 58.5 -00.2	114 46.2 +02.3	S 14 25.9 +00.0	15						
16	114 16.4 +00.7	S 09 07.6 -00.7	98 28.5 +02.0	S 01 58.3 -00.2	129 48.5 +02.3	S 14 25.9 -00.1	16						
17	129 17.1 +00.7	S 09 06.9 -00.7	113 30.5 +02.0	S 01 58.1 -00.3	144 50.8 +02.4	S 14 25.8 +00.0	17						
18	144 17.8 +00.6	S 09 06.2 -00.7	128 32.5 +02.0	S 01 57.8 -00.2	159 53.2 +02.3	S 14 25.8 +00.0	18						
19	159 18.4 +00.7	S 09 05.5 -00.7	143 34.5 +02.0	S 01 57.6 -00.2	174 55.5 +02.3	S 14 25.8 -00.1	19						
20	174 19.1 +00.7	S 09 04.8 -00.7	158 36.5 +01.9	S 01 57.4 -00.2	189 57.8 +02.3	S 14 25.7 +00.0	20						
21	189 19.8 +00.7	S 09 04.1 -00.7	173 38.4 +02.0	S 01 57.2 -00.2	205 00.1 +02.3	S 14 25.7 -00.1	21						
22	204 20.5 +00.7	S 09 03.4 -00.7	188 40.4 +02.0	S 01 57.0 -00.2	220 02.4 +02.4	S 14 25.6 +00.0	22						
23	219 21.2 +00.7	S 09 02.7 -00.7	203 42.4 +02.0	S 01 56.8 -00.2	235 04.8 +02.3	S 14 25.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 018° 018° 018° 018° 018° 017°		SHA 002° 002° 002° 002° 002° 002°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:23		Greenwich Culmination Time: 09:26		Greenwich Culmination Time: 07:22								

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 38.5 +00.1	N 14 23.5 +00.8	220 17.1 -00.2	S 02 46.0 -01.1	199 56.6 -26.2	N 03 55.1 +14.4	00						
01	195 38.6 +00.1	N 14 24.3 +00.7	235 16.9 -00.2	S 02 44.9 -01.0	214 30.4 -26.2	N 04 09.5 +14.3	01						
02	210 38.7 +00.1	N 14 25.0 +00.8	250 16.7 -00.2	S 02 43.9 -01.0	229 04.2 -26.2	N 04 23.8 +14.3	02						
03	225 38.8 +00.1	N 14 25.8 +00.8	265 16.5 -00.2	S 02 42.9 -01.0	243 38.0 -26.2	N 04 38.1 +14.3	03						
04	240 38.9 +00.1	N 14 26.6 +00.8	280 16.3 -00.2	S 02 41.9 -01.0	258 11.8 -26.2	N 04 52.4 +14.3	04						
05	255 39.0 +00.0	N 14 27.4 +00.7	295 16.1 -00.2	S 02 40.9 -01.0	272 45.6 -26.2	N 05 06.7 +14.2	05						
06	270 39.0 +00.1	N 14 28.1 +00.8	310 15.9 -00.1	S 02 39.9 -01.0	287 19.4 -26.2	N 05 20.9 +14.2	06						
07	285 39.1 +00.1	N 14 28.9 +00.8	325 15.8 -00.2	S 02 38.9 -01.0	301 53.2 -26.2	N 05 35.1 +14.1	07						
08	300 39.2 +00.1	N 14 29.7 +00.8	340 15.6 -00.2	S 02 37.9 -01.0	316 27.0 -26.2	N 05 49.2 +14.2	08						
09	315 39.3 +00.1	N 14 30.5 +00.7	355 15.4 -00.2	S 02 36.9 -01.0	331 00.8 -26.3	N 06 03.4 +14.0	09						
10	330 39.4 +00.1	N 14 31.2 +00.8	10 15.2 -00.2	S 02 35.9 -01.0	345 34.5 -26.2	N 06 17.4 +14.1	10						
11	345 39.5 +00.0	N 14 32.0 +00.8	25 15.0 -00.2	S 02 34.9 -01.0	0 08.3 -26.2	N 06 31.5 +14.0	11						
12	0 39.5 +00.1	N 14 32.8 +00.8	40 14.8 -00.2	S 02 33.9 -01.1	14 42.1 -26.3	N 06 45.5 +14.0	12						
13	15 39.6 +00.1	N 14 33.6 +00.7	55 14.6 -00.2	S 02 32.8 -01.0	29 15.8 -26.2	N 06 59.5 +13.9	13						
14	30 39.7 +00.1	N 14 34.3 +00.8	70 14.4 -00.2	S 02 31.8 -01.0	43 49.6 -26.3	N 07 13.4 +13.9	14						
15	45 39.8 +00.1	N 14 35.1 +00.8	85 14.2 -00.2	S 02 30.8 -01.0	58 23.3 -26.3	N 07 27.3 +13.9	15						
16	60 39.9 +00.1	N 14 35.9 +00.8	100 14.0 -00.1	S 02 29.8 -01.0	72 57.0 -26.2	N 07 41.2 +13.8	16						
17	75 40.0 +00.0	N 14 36.7 +00.7	115 13.9 -00.2	S 02 28.8 -01.0	87 30.8 -26.3	N 07 55.0 +13.8	17						
18	90 40.0 +00.1	N 14 37.4 +00.8	130 13.7 -00.2	S 02 27.8 -01.0	102 04.5 -26.4	N 08 08.8 +13.7	18						
19	105 40.1 +00.1	N 14 38.2 +00.8	145 13.5 -00.2	S 02 26.8 -01.0	116 38.1 -26.3	N 08 22.5 +13.7	19						
20	120 40.2 +00.1	N 14 39.0 +00.8	160 13.3 -00.2	S 02 25.8 -01.0	131 11.8 -26.3	N 08 36.2 +13.7	20						
21	135 40.3 +00.1	N 14 39.8 +00.7	175 13.1 -00.2	S 02 24.8 -01.1	145 45.5 -26.4	N 08 49.9 +13.6	21						
22	150 40.4 +00.1	N 14 40.5 +00.8	190 12.9 -00.2	S 02 23.7 -01.0	160 19.1 -26.4	N 09 03.5 +13.5	22						
23	165 40.5 +00.0	N 14 41.3 +00.8	205 12.7 -00.2	S 02 22.7 -01.0	174 52.7 -26.4	N 09 17.0 +13.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'3 15'2 15'2 15'2 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'1 56'0 55'9 55'8 55'8 55'7								
	SHA 324° 323° 323° 323° 323° 323°		SHA 003° 003° 003° 003° 003° 002°		SHA 342° 340° 338° 336° 334° 332°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:18		Greenwich Culmination Time: 10:59								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	234 21.9 +00.7	S 09 02.0 -00.7	218 44.4 +01.9	S 01 56.6 -00.2	250 07.1 +02.3	S 14 25.6 -00.1	00						
01	249 22.6 +00.6	S 09 01.3 -00.7	233 46.3 +02.0	S 01 56.4 -00.2	265 09.4 +02.3	S 14 25.5 +00.0	01						
02	264 23.2 +00.7	S 09 00.6 -00.6	248 48.3 +02.0	S 01 56.2 -00.2	280 11.7 +02.3	S 14 25.5 -00.1	02						
03	279 23.9 +00.7	S 08 60.0 -00.7	263 50.3 +02.0	S 01 56.0 -00.2	295 14.0 +02.4	S 14 25.4 +00.0	03						
04	294 24.6 +00.7	S 08 59.3 -00.7	278 52.3 +02.0	S 01 55.8 -00.2	310 16.4 +02.3	S 14 25.4 -00.1	04						
05	309 25.3 +00.7	S 08 58.6 -00.7	293 54.3 +01.9	S 01 55.6 -00.2	325 18.7 +02.3	S 14 25.3 +00.0	05						
06	324 26.0 +00.7	S 08 57.9 -00.7	308 56.2 +02.0	S 01 55.4 -00.2	340 21.0 +02.3	S 14 25.3 +00.0	06						
07	339 26.7 +00.7	S 08 57.2 -00.7	323 58.2 +02.0	S 01 55.2 -00.2	355 23.3 +02.3	S 14 25.3 -00.1	07						
08	354 27.4 +00.7	S 08 56.5 -00.7	339 00.2 +02.0	S 01 55.0 -00.2	10 25.6 +02.4	S 14 25.2 +00.0	08						
09	9 28.1 +00.6	S 08 55.8 -00.7	354 02.2 +02.0	S 01 54.8 -00.2	25 28.0 +02.3	S 14 25.2 -00.1	09						
10	24 28.7 +00.7	S 08 55.1 -00.7	9 04.2 +01.9	S 01 54.6 -00.2	40 30.3 +02.3	S 14 25.1 +00.0	10						
11	39 29.4 +00.7	S 08 54.4 -00.7	24 06.1 +02.0	S 01 54.4 -00.2	55 32.6 +02.3	S 14 25.1 +00.0	11						
12	54 30.1 +00.7	S 08 53.7 -00.7	39 08.1 +02.0	S 01 54.2 -00.2	70 34.9 +02.4	S 14 25.1 -00.1	12						
13	69 30.8 +00.7	S 08 53.0 -00.7	54 10.1 +02.0	S 01 54.0 -00.2	85 37.3 +02.3	S 14 25.0 +00.0	13						
14	84 31.5 +00.7	S 08 52.3 -00.7	69 12.1 +02.0	S 01 53.8 -00.2	100 39.6 +02.3	S 14 25.0 -00.1	14						
15	99 32.2 +00.7	S 08 51.6 -00.7	84 14.1 +01.9	S 01 53.6 -00.2	115 41.9 +02.3	S 14 24.9 +00.0	15						
16	114 32.9 +00.7	S 08 50.9 -00.7	99 16.0 +02.0	S 01 53.4 -00.2	130 44.2 +02.4	S 14 24.9 +00.0	16						
17	129 33.6 +00.6	S 08 50.2 -00.7	114 18.0 +02.0	S 01 53.2 -00.2	145 46.6 +02.3	S 14 24.9 -00.1	17						
18	144 34.2 +00.7	S 08 49.5 -00.7	129 20.0 +02.0	S 01 53.0 -00.2	160 48.9 +02.3	S 14 24.8 +00.0	18						
19	159 34.9 +00.7	S 08 48.8 -00.7	144 22.0 +02.0	S 01 52.8 -00.2	175 51.2 +02.3	S 14 24.8 -00.1	19						
20	174 35.6 +00.7	S 08 48.1 -00.7	159 24.0 +01.9	S 01 52.6 -00.2	190 53.5 +02.3	S 14 24.7 +00.0	20						
21	189 36.3 +00.7	S 08 47.4 -00.7	174 25.9 +02.0	S 01 52.4 -00.2	205 55.8 +02.4	S 14 24.7 -00.1	21						
22	204 37.0 +00.7	S 08 46.7 -00.7	189 27.9 +02.0	S 01 52.2 -00.2	220 58.2 +02.3	S 14 24.6 +00.0	22						
23	219 37.7 +00.7	S 08 46.0 -00.7	204 29.9 +02.0	S 01 52.0 -00.2	236 00.5 +02.3	S 14 24.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 017° 017° 017° 017° 017° 017°		SHA 002° 002° 002° 002° 002° 002°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:22		Greenwich Culmination Time: 09:23		Greenwich Culmination Time: 07:18								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	40.5 +00.1	N 14 42.1 +00.7		220	12.5 -00.2	S 02 21.7 -01.0		189	26.3 -26.4	N 09 30.5 +13.5		00
01	195	40.6 +00.1	N 14 42.8 +00.8		235	12.3 -00.2	S 02 20.7 -01.0		203	59.9 -26.4	N 09 44.0 +13.4		01
02	210	40.7 +00.1	N 14 43.6 +00.8		250	12.1 -00.1	S 02 19.7 -01.0		218	33.5 -26.5	N 09 57.4 +13.3		02
03	225	40.8 +00.1	N 14 44.4 +00.7		265	12.0 -00.2	S 02 18.7 -01.0		233	07.0 -26.4	N 10 10.7 +13.4		03
04	240	40.9 +00.0	N 14 45.1 +00.8		280	11.8 -00.2	S 02 17.7 -01.0		247	40.6 -26.5	N 10 24.1 +13.2		04
05	255	40.9 +00.1	N 14 45.9 +00.8		295	11.6 -00.2	S 02 16.7 -01.1		262	14.1 -26.6	N 10 37.3 +13.2		05
06	270	41.0 +00.1	N 14 46.7 +00.7		310	11.4 -00.2	S 02 15.6 -01.0		276	47.5 -26.5	N 10 50.5 +13.2		06
07	285	41.1 +00.1	N 14 47.4 +00.8		325	11.2 -00.2	S 02 14.6 -01.0		291	21.0 -26.6	N 11 03.7 +13.1		07
08	300	41.2 +00.1	N 14 48.2 +00.8		340	11.0 -00.2	S 02 13.6 -01.0		305	54.4 -26.6	N 11 16.8 +13.0		08
09	315	41.3 +00.0	N 14 49.0 +00.7		355	10.8 -00.2	S 02 12.6 -01.0		320	27.8 -26.6	N 11 29.8 +13.0		09
10	330	41.3 +00.1	N 14 49.7 +00.8		10	10.6 -00.2	S 02 11.6 -01.0		335	01.2 -26.6	N 11 42.8 +12.9		10
11	345	41.4 +00.1	N 14 50.5 +00.8		25	10.4 -00.2	S 02 10.6 -01.1		349	34.6 -26.7	N 11 55.7 +12.9		11
12	0	41.5 +00.1	N 14 51.3 +00.7		40	10.2 -00.2	S 02 09.5 -01.0		4	07.9 -26.7	N 12 08.6 +12.8		12
13	15	41.6 +00.1	N 14 52.0 +00.8		55	10.0 -00.1	S 02 08.5 -01.0		18	41.2 -26.7	N 12 21.4 +12.7		13
14	30	41.7 +00.0	N 14 52.8 +00.8		70	09.9 -00.2	S 02 07.5 -01.0		33	14.5 -26.8	N 12 34.1 +12.7		14
15	45	41.7 +00.1	N 14 53.6 +00.7		85	09.7 -00.2	S 02 06.5 -01.0		47	47.7 -26.8	N 12 46.8 +12.6		15
16	60	41.8 +00.1	N 14 54.3 +00.8		100	09.5 -00.2	S 02 05.5 -01.0		62	20.9 -26.8	N 12 59.4 +12.6		16
17	75	41.9 +00.1	N 14 55.1 +00.7		115	09.3 -00.2	S 02 04.5 -01.1		76	54.1 -26.8	N 13 12.0 +12.5		17
18	90	42.0 +00.0	N 14 55.8 +00.8		130	09.1 -00.2	S 02 03.4 -01.0		91	27.3 -26.9	N 13 24.5 +12.4		18
19	105	42.0 +00.1	N 14 56.6 +00.8		145	08.9 -00.2	S 02 02.4 -01.0		106	00.4 -26.9	N 13 36.9 +12.4		19
20	120	42.1 +00.1	N 14 57.4 +00.7		160	08.7 -00.2	S 02 01.4 -01.0		120	33.5 -27.0	N 13 49.3 +12.3		20
21	135	42.2 +00.1	N 14 58.1 +00.8		175	08.5 -00.2	S 02 00.4 -01.0		135	06.5 -26.9	N 14 01.6 +12.2		21
22	150	42.3 +00.0	N 14 58.9 +00.7		190	08.3 -00.2	S 01 59.4 -01.0		149	39.6 -27.0	N 14 13.8 +12.2		22
23	165	42.3 +00.1	N 14 59.6 +00.8		205	08.1 -00.2	S 01 58.4 -01.1		164	12.6 -27.1	N 14 26.0 +12.1		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 15'9 15'9 15'9 15'9 15'9 15'9				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'2 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 55'5 55'4 55'3 55'2				
	SHA 323° 323° 322° 322° 322° 322°				SHA 002° 002° 002° 002° 001° 001°				SHA 331° 329° 327° 325° 323° 321°				
	Greenwich Culmination Time: 11:57				Greenwich Culmination Time: 09:19				Greenwich Culmination Time: 11:42				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	234	38.4 +00.7	S 08 45.3 -00.7		219	31.9 +02.0	S 01 51.8 -00.2		251	02.8 +02.3	S 14 24.6 -00.1		00
01	249	39.1 +00.7	S 08 44.6 -00.7		234	33.9 +01.9	S 01 51.6 -00.3		266	05.1 +02.4	S 14 24.5 +00.0		01
02	264	39.8 +00.7	S 08 43.9 -00.7		249	35.8 +02.0	S 01 51.3 -00.2		281	07.5 +02.3	S 14 24.5 -00.1		02
03	279	40.5 +00.6	S 08 43.2 -00.7		264	37.8 +02.0	S 01 51.1 -00.2		296	09.8 +02.3	S 14 24.4 +00.0		03
04	294	41.1 +00.7	S 08 42.5 -00.7		279	39.8 +02.0	S 01 50.9 -00.2		311	12.1 +02.3	S 14 24.4 +00.0		04
05	309	41.8 +00.7	S 08 41.8 -00.7		294	41.8 +02.0	S 01 50.7 -00.2		326	14.4 +02.4	S 14 24.4 -00.1		05
06	324	42.5 +00.7	S 08 41.1 -00.7		309	43.8 +01.9	S 01 50.5 -00.2		341	16.8 +02.3	S 14 24.3 +00.0		06
07	339	43.2 +00.7	S 08 40.4 -00.7		324	45.7 +02.0	S 01 50.3 -00.2		356	19.1 +02.3	S 14 24.3 -00.1		07
08	354	43.9 +00.7	S 08 39.7 -00.7		339	47.7 +02.0	S 01 50.1 -00.2		11	21.4 +02.3	S 14 24.2 +00.0		08
09	9	44.6 +00.7	S 08 39.0 -00.7		354	49.7 +02.0	S 01 49.9 -00.2		26	23.7 +02.4	S 14 24.2 +00.0		09
10	24	45.3 +00.7	S 08 38.3 -00.7		9	51.7 +02.0	S 01 49.7 -00.2		41	26.1 +02.3	S 14 24.2 -00.1		10
11	39	46.0 +00.7	S 08 37.6 -00.7		24	53.7 +02.0	S 01 49.5 -00.2		56	28.4 +02.3	S 14 24.1 +00.0		11
12	54	46.7 +00.7	S 08 36.9 -00.7		39	55.7 +01.9	S 01 49.3 -00.2		71	30.7 +02.4	S 14 24.1 -00.1		12
13	69	47.4 +00.6	S 08 36.2 -00.7		54	57.6 +02.0	S 01 49.1 -00.2		86	33.1 +02.3	S 14 24.0 +00.0		13
14	84	48.0 +00.7	S 08 35.5 -00.7		69	59.6 +02.0	S 01 48.9 -00.2		101	35.4 +02.3	S 14 24.0 +00.0		14
15	99	48.7 +00.7	S 08 34.8 -00.7		85	01.6 +02.0	S 01 48.7 -00.2		116	37.7 +02.3	S 14 24.0 -00.1		15
16	114	49.4 +00.7	S 08 34.1 -00.7		100	03.6 +02.0	S 01 48.5 -00.2		131	40.0 +02.4	S 14 23.9 +00.0		16
17	129	50.1 +00.7	S 08 33.4 -00.7		115	05.6 +02.0	S 01 48.3 -00.2		146	42.4 +02.3	S 14 23.9 -00.1		17
18	144	50.8 +00.7	S 08 32.7 -00.7		130	07.6 +01.9	S 01 48.1 -00.2		161	44.7 +02.3	S 14 23.8 +00.0		18
19	159	51.5 +00.7	S 08 32.0 -00.7		145	09.5 +02.0	S 01 47.9 -00.2		176	47.0 +02.3	S 14 23.8 +00.0		19
20	174	52.2 +00.7	S 08 31.3 -00.7		160	11.5 +02.0	S 01 47.7 -00.2		191	49.3 +02.4	S 14 23.8 -00.1		20
21	189	52.9 +00.7	S 08 30.6 -00.7		175	13.5 +02.0	S 01 47.5 -00.2		206	51.7 +02.3	S 14 23.7 +00.0		21
22	204	53.6 +00.7	S 08 29.9 -00.7		190	15.5 +02.0	S 01 47.3 -00.2		221	54.0 +02.3	S 14 23.7 +00.0		22
23	219	54.3 +00.7	S 08 29.2 -00.7		205	17.5 +02.0	S 01 47.1 -00.2		236	56.3 +02.4	S 14 23.7 -00.1		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 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 017° 017° 016° 016° 016° 016°				SHA 002° 002° 002° 002° 001° 001°				SHA 033° 033° 033° 033° 033° 033°				
	Greenwich Culmination Time: 08:21				Greenwich Culmination Time: 09:20				Greenwich Culmination Time: 07:14				

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 42.4 +00.1	N 15 00.4 +00.8	220 07.9 -00.2	S 01 57.3 -01.0	178 45.5 -27.1	N 14 38.1 +12.0	00						
01	195 42.5 +00.1	N 15 01.2 +00.7	235 07.7 -00.1	S 01 56.3 -01.0	193 18.4 -27.1	N 14 50.1 +12.0	01						
02	210 42.6 +00.1	N 15 01.9 +00.8	250 07.6 -00.2	S 01 55.3 -01.0	207 51.3 -27.1	N 15 02.1 +11.9	02						
03	225 42.7 +00.0	N 15 02.7 +00.7	265 07.4 -00.2	S 01 54.3 -01.0	222 24.2 -27.2	N 15 14.0 +11.8	03						
04	240 42.7 +00.1	N 15 03.4 +00.8	280 07.2 -00.2	S 01 53.3 -01.1	236 57.0 -27.3	N 15 25.8 +11.7	04						
05	255 42.8 +00.1	N 15 04.2 +00.8	295 07.0 -00.2	S 01 52.2 -01.0	251 29.7 -27.2	N 15 37.5 +11.7	05						
06	270 42.9 +00.0	N 15 05.0 +00.7	310 06.8 -00.2	S 01 51.2 -01.0	266 02.5 -27.3	N 15 49.2 +11.6	06						
07	285 42.9 +00.1	N 15 05.7 +00.8	325 06.6 -00.2	S 01 50.2 -01.0	280 35.2 -27.4	N 16 00.8 +11.5	07						
08	300 43.0 +00.1	N 15 06.5 +00.7	340 06.4 -00.2	S 01 49.2 -01.0	295 07.8 -27.3	N 16 12.3 +11.5	08						
09	315 43.1 +00.1	N 15 07.2 +00.8	355 06.2 -00.2	S 01 48.2 -01.1	309 40.5 -27.5	N 16 23.8 +11.3	09						
10	330 43.2 +00.0	N 15 08.0 +00.7	10 06.0 -00.2	S 01 47.1 -01.0	324 13.0 -27.4	N 16 35.1 +11.3	10						
11	345 43.2 +00.1	N 15 08.7 +00.8	25 05.8 -00.2	S 01 46.1 -01.0	338 45.6 -27.5	N 16 46.4 +11.2	11						
12	0 43.3 +00.1	N 15 09.5 +00.7	40 05.6 -00.2	S 01 45.1 -01.0	353 18.1 -27.6	N 16 57.6 +11.2	12						
13	15 43.4 +00.1	N 15 10.2 +00.8	55 05.4 -00.2	S 01 44.1 -01.1	7 50.5 -27.5	N 17 08.8 +11.0	13						
14	30 43.5 +00.0	N 15 11.0 +00.7	70 05.2 -00.1	S 01 43.0 -01.0	22 23.0 -27.7	N 17 19.8 +11.0	14						
15	45 43.5 +00.1	N 15 11.7 +00.8	85 05.1 -00.2	S 01 42.0 -01.0	36 55.3 -27.6	N 17 30.8 +10.8	15						
16	60 43.6 +00.1	N 15 12.5 +00.8	100 04.9 -00.2	S 01 41.0 -01.0	51 27.7 -27.7	N 17 41.6 +10.8	16						
17	75 43.7 +00.1	N 15 13.3 +00.7	115 04.7 -00.2	S 01 40.0 -01.0	65 60.0 -27.8	N 17 52.4 +10.8	17						
18	90 43.8 +00.0	N 15 14.0 +00.8	130 04.5 -00.2	S 01 39.0 -01.1	80 32.2 -27.8	N 18 03.2 +10.6	18						
19	105 43.8 +00.1	N 15 14.8 +00.7	145 04.3 -00.2	S 01 37.9 -01.0	95 04.4 -27.8	N 18 13.8 +10.5	19						
20	120 43.9 +00.1	N 15 15.5 +00.8	160 04.1 -00.2	S 01 36.9 -01.0	109 36.6 -27.9	N 18 24.3 +10.5	20						
21	135 44.0 +00.0	N 15 16.3 +00.7	175 03.9 -00.2	S 01 35.9 -01.0	124 08.7 -27.9	N 18 34.8 +10.4	21						
22	150 44.0 +00.1	N 15 17.0 +00.8	190 03.7 -00.2	S 01 34.9 -01.1	138 40.8 -28.0	N 18 45.2 +10.2	22						
23	165 44.1 +00.1	N 15 17.8 +00.7	205 03.5 -00.2	S 01 33.8 -01.0	153 12.8 -28.0	N 18 55.4 +10.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'0 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 322° 322° 321° 321° 321° 321°		SHA 001° 001° 001° 001° 000° 000°		SHA 319° 317° 315° 313° 311° 309°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:19		Greenwich Culmination Time: 12:27								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	234 55.0 +00.7	S 08 28.5 -00.7	220 19.5 +01.9	S 01 46.9 -00.2	251 58.7 +02.3	S 14 23.6 +00.0	00						
01	249 55.7 +00.7	S 08 27.8 -00.7	235 21.4 +02.0	S 01 46.7 -00.2	267 01.0 +02.3	S 14 23.6 -00.1	01						
02	264 56.4 +00.6	S 08 27.1 -00.7	250 23.4 +02.0	S 01 46.5 -00.2	282 03.3 +02.3	S 14 23.5 +00.0	02						
03	279 57.0 +00.7	S 08 26.4 -00.7	265 25.4 +02.0	S 01 46.3 -00.2	297 05.6 +02.4	S 14 23.5 +00.0	03						
04	294 57.7 +00.7	S 08 25.7 -00.7	280 27.4 +02.0	S 01 46.1 -00.2	312 08.0 +02.3	S 14 23.5 -00.1	04						
05	309 58.4 +00.7	S 08 25.0 -00.7	295 29.4 +02.0	S 01 45.9 -00.2	327 10.3 +02.3	S 14 23.4 +00.0	05						
06	324 59.1 +00.7	S 08 24.3 -00.7	310 31.4 +01.9	S 01 45.7 -00.2	342 12.6 +02.3	S 14 23.4 -00.1	06						
07	339 59.8 +00.7	S 08 23.6 -00.7	325 33.3 +02.0	S 01 45.5 -00.2	357 14.9 +02.4	S 14 23.3 +00.0	07						
08	355 00.5 +00.7	S 08 22.9 -00.7	340 35.3 +02.0	S 01 45.3 -00.2	12 17.3 +02.3	S 14 23.3 +00.0	08						
09	10 01.2 +00.7	S 08 22.2 -00.7	355 37.3 +02.0	S 01 45.1 -00.2	27 19.6 +02.3	S 14 23.3 -00.1	09						
10	25 01.9 +00.7	S 08 21.5 -00.7	10 39.3 +02.0	S 01 44.9 -00.2	42 21.9 +02.4	S 14 23.2 +00.0	10						
11	40 02.6 +00.7	S 08 20.8 -00.7	25 41.3 +02.0	S 01 44.7 -00.2	57 24.3 +02.3	S 14 23.2 -00.1	11						
12	55 03.3 +00.7	S 08 20.1 -00.7	40 43.3 +02.0	S 01 44.5 -00.2	72 26.6 +02.3	S 14 23.1 +00.0	12						
13	70 04.0 +00.7	S 08 19.4 -00.7	55 45.3 +01.9	S 01 44.3 -00.2	87 28.9 +02.4	S 14 23.1 +00.0	13						
14	85 04.7 +00.7	S 08 18.7 -00.7	70 47.2 +02.0	S 01 44.1 -00.2	102 31.3 +02.3	S 14 23.1 -00.1	14						
15	100 05.4 +00.7	S 08 18.0 -00.7	85 49.2 +02.0	S 01 43.9 -00.2	117 33.6 +02.3	S 14 23.0 +00.0	15						
16	115 06.1 +00.7	S 08 17.3 -00.7	100 51.2 +02.0	S 01 43.7 -00.2	132 35.9 +02.3	S 14 23.0 +00.0	16						
17	130 06.8 +00.6	S 08 16.6 -00.7	115 53.2 +02.0	S 01 43.5 -00.2	147 38.2 +02.4	S 14 23.0 -00.1	17						
18	145 07.4 +00.7	S 08 15.9 -00.7	130 55.2 +02.0	S 01 43.3 -00.2	162 40.6 +02.3	S 14 22.9 +00.0	18						
19	160 08.1 +00.7	S 08 15.2 -00.7	145 57.2 +02.0	S 01 43.1 -00.2	177 42.9 +02.3	S 14 22.9 -00.1	19						
20	175 08.8 +00.7	S 08 14.5 -00.7	160 59.2 +01.9	S 01 42.9 -00.2	192 45.2 +02.4	S 14 22.8 +00.0	20						
21	190 09.5 +00.7	S 08 13.8 -00.7	176 01.1 +02.0	S 01 42.7 -00.2	207 47.6 +02.3	S 14 22.8 +00.0	21						
22	205 10.2 +00.7	S 08 13.1 -00.7	191 03.1 +02.0	S 01 42.5 -00.2	222 49.9 +02.3	S 14 22.8 -00.1	22						
23	220 10.9 +00.7	S 08 12.4 -00.7	206 05.1 +02.0	S 01 42.3 -00.2	237 52.2 +02.4	S 14 22.7 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 016° 016° 016° 016° 015° 015°		SHA 001° 001° 001° 001° 001° 001°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:19		Greenwich Culmination Time: 09:17		Greenwich Culmination Time: 07:10								

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 44.2 +00.0	N 15 18.5 +00.8	220 03.3 -00.2	S 01 32.8 -01.0	167 44.8 -28.0	N 19 05.6 +10.1	00								
01	195 44.2 +00.1	N 15 19.3 +00.7	235 03.1 -00.2	S 01 31.8 -01.0	182 16.8 -28.1	N 19 15.7 +10.1	01								
02	210 44.3 +00.1	N 15 20.0 +00.7	250 02.9 -00.2	S 01 30.8 -01.1	196 48.7 -28.2	N 19 25.8 +09.9	02								
03	225 44.4 +00.1	N 15 20.7 +00.8	265 02.7 -00.2	S 01 29.7 -01.0	211 20.5 -28.1	N 19 35.7 +09.8	03								
04	240 44.5 +00.0	N 15 21.5 +00.7	280 02.5 -00.1	S 01 28.7 -01.0	225 52.4 -28.3	N 19 45.5 +09.8	04								
05	255 44.5 +00.1	N 15 22.2 +00.8	295 02.4 -00.2	S 01 27.7 -01.0	240 24.1 -28.2	N 19 55.3 +09.6	05								
06	270 44.6 +00.1	N 15 23.0 +00.7	310 02.2 -00.2	S 01 26.7 -01.1	254 55.9 -28.4	N 20 04.9 +09.5	06								
07	285 44.7 +00.0	N 15 23.7 +00.8	325 02.0 -00.2	S 01 25.6 -01.0	269 27.5 -28.3	N 20 14.4 +09.5	07								
08	300 44.7 +00.1	N 15 24.5 +00.7	340 01.8 -00.2	S 01 24.6 -01.0	283 59.2 -28.4	N 20 23.9 +09.4	08								
09	315 44.8 +00.1	N 15 25.2 +00.8	355 01.6 -00.2	S 01 23.6 -01.1	298 30.8 -28.5	N 20 33.3 +09.2	09								
10	330 44.9 +00.0	N 15 26.0 +00.7	10 01.4 -00.2	S 01 22.5 -01.0	313 02.3 -28.5	N 20 42.5 +09.2	10								
11	345 44.9 +00.1	N 15 26.7 +00.8	25 01.2 -00.2	S 01 21.5 -01.0	327 33.8 -28.5	N 20 51.7 +09.1	11								
12	0 45.0 +00.1	N 15 27.5 +00.7	40 01.0 -00.2	S 01 20.5 -01.0	342 05.3 -28.6	N 21 00.8 +08.9	12								
13	15 45.1 +00.0	N 15 28.2 +00.7	55 00.8 -00.2	S 01 19.5 -01.1	356 36.7 -28.7	N 21 09.7 +08.9	13								
14	30 45.1 +00.1	N 15 28.9 +00.8	70 00.6 -00.2	S 01 18.4 -01.0	11 08.0 -28.6	N 21 18.6 +08.8	14								
15	45 45.2 +00.1	N 15 29.7 +00.7	85 00.4 -00.2	S 01 17.4 -01.0	25 39.4 -28.8	N 21 27.4 +08.6	15								
16	60 45.3 +00.0	N 15 30.4 +00.8	100 00.2 -00.2	S 01 16.4 -01.1	40 10.6 -28.7	N 21 36.0 +08.6	16								
17	75 45.3 +00.1	N 15 31.2 +00.7	115 00.0 -00.2	S 01 15.3 -01.0	54 41.9 -28.8	N 21 44.6 +08.5	17								
18	90 45.4 +00.1	N 15 31.9 +00.7	129 59.8 -00.2	S 01 14.3 -01.0	69 13.1 -28.9	N 21 53.1 +08.3	18								
19	105 45.5 +00.0	N 15 32.6 +00.8	144 59.6 -00.2	S 01 13.3 -01.0	83 44.2 -28.9	N 22 01.4 +08.3	19								
20	120 45.5 +00.1	N 15 33.4 +00.7	159 59.4 -00.1	S 01 12.3 -01.1	98 15.3 -28.9	N 22 09.7 +08.1	20								
21	135 45.6 +00.1	N 15 34.1 +00.8	174 59.3 -00.2	S 01 11.2 -01.0	112 46.4 -29.0	N 22 17.8 +08.1	21								
22	150 45.7 +00.0	N 15 34.9 +00.7	189 59.1 -00.2	S 01 10.2 -01.0	127 17.4 -29.1	N 22 25.9 +07.9	22								
23	165 45.7 +00.1	N 15 35.6 +00.7	204 58.9 -00.2	S 01 09.2 -01.1	141 48.3 -29.1	N 22 33.8 +07.9	23								
	UT 02 06 10 14 18 22	SD 15'9 15'9 15'9 15'9 15'9 15'9	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 321° 321° 320° 320° 320° 320°	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 000° 360° 360° 360° 359° 359°	Greenwich Culmination Time: 09:19	UT 02 06 10 14 18 22	SD 14'9 14'9 14'9 14'9 14'9 14'8	HP 54'8 54'7 54'7 54'6 54'6 54'5	SHA 307° 305° 303° 301° 299° 296°	Greenwich Culmination Time: 13:13

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	235 11.6 +00.7	S 08 11.7 -00.7	221 07.1 +02.0	S 01 42.1 -00.2	252 54.6 +02.3	S 14 22.7 +00.0	00								
01	250 12.3 +00.7	S 08 11.0 -00.7	236 09.1 +02.0	S 01 41.9 -00.2	267 56.9 +02.3	S 14 22.7 -00.1	01								
02	265 13.0 +00.7	S 08 10.3 -00.7	251 11.1 +02.0	S 01 41.7 -00.2	282 59.2 +02.4	S 14 22.6 +00.0	02								
03	280 13.7 +00.7	S 08 09.6 -00.7	266 13.1 +02.0	S 01 41.5 -00.2	298 01.6 +02.3	S 14 22.6 -00.1	03								
04	295 14.4 +00.7	S 08 08.9 -00.7	281 15.1 +01.9	S 01 41.3 -00.2	313 03.9 +02.3	S 14 22.5 +00.0	04								
05	310 15.1 +00.7	S 08 08.2 -00.7	296 17.0 +02.0	S 01 41.1 -00.2	328 06.2 +02.4	S 14 22.5 +00.0	05								
06	325 15.8 +00.7	S 08 07.5 -00.7	311 19.0 +02.0	S 01 40.9 -00.2	343 08.6 +02.3	S 14 22.5 -00.1	06								
07	340 16.5 +00.7	S 08 06.8 -00.7	326 21.0 +02.0	S 01 40.7 -00.2	358 10.9 +02.3	S 14 22.4 +00.0	07								
08	355 17.2 +00.7	S 08 06.1 -00.7	341 23.0 +02.0	S 01 40.5 -00.2	13 13.2 +02.4	S 14 22.4 -00.1	08								
09	10 17.9 +00.7	S 08 05.4 -00.7	356 25.0 +02.0	S 01 40.3 -00.2	28 15.6 +02.3	S 14 22.3 +00.0	09								
10	25 18.6 +00.7	S 08 04.7 -00.7	11 27.0 +02.0	S 01 40.1 -00.2	43 17.9 +02.3	S 14 22.3 +00.0	10								
11	40 19.3 +00.7	S 08 04.0 -00.7	26 29.0 +02.0	S 01 39.9 -00.2	58 20.2 +02.4	S 14 22.3 -00.1	11								
12	55 20.0 +00.7	S 08 03.3 -00.7	41 31.0 +01.9	S 01 39.7 -00.2	73 22.6 +02.3	S 14 22.2 +00.0	12								
13	70 20.7 +00.7	S 08 02.6 -00.7	56 32.9 +02.0	S 01 39.5 -00.2	88 24.9 +02.3	S 14 22.2 +00.0	13								
14	85 21.4 +00.7	S 08 01.9 -00.8	71 34.9 +02.0	S 01 39.3 -00.2	103 27.2 +02.4	S 14 22.2 -00.1	14								
15	100 22.1 +00.7	S 08 01.1 -00.7	86 36.9 +02.0	S 01 39.1 -00.2	118 29.6 +02.3	S 14 22.1 +00.0	15								
16	115 22.8 +00.7	S 08 00.4 -00.7	101 38.9 +02.0	S 01 38.9 -00.2	133 31.9 +02.3	S 14 22.1 +00.0	16								
17	130 23.5 +00.7	S 07 59.7 -00.7	116 40.9 +02.0	S 01 38.7 -00.2	148 34.2 +02.4	S 14 22.1 -00.1	17								
18	145 24.2 +00.7	S 07 59.0 -00.7	131 42.9 +02.0	S 01 38.5 -00.2	163 36.6 +02.3	S 14 22.0 +00.0	18								
19	160 24.9 +00.7	S 07 58.3 -00.7	146 44.9 +02.0	S 01 38.3 -00.2	178 38.9 +02.3	S 14 22.0 -00.1	19								
20	175 25.6 +00.7	S 07 57.6 -00.7	161 46.9 +01.9	S 01 38.1 -00.2	193 41.2 +02.4	S 14 21.9 +00.0	20								
21	190 26.3 +00.6	S 07 56.9 -00.7	176 48.8 +02.0	S 01 37.9 -00.2	208 43.6 +02.3	S 14 21.9 +00.0	21								
22	205 26.9 +00.7	S 07 56.2 -00.7	191 50.8 +02.0	S 01 37.7 -00.2	223 45.9 +02.3	S 14 21.9 -00.1	22								
23	220 27.6 +00.7	S 07 55.5 -00.7	206 52.8 +02.0	S 01 37.5 -00.2	238 48.2 +02.4	S 14 21.8 +00.0	23								
	UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 015° 015° 015° 015° 015° 015°	Greenwich Culmination Time: 08:18	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 001° 001° 001° 001° 001° 001°	Greenwich Culmination Time: 09:14	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 033° 033° 033° 033° 033° 033°	Greenwich Culmination Time: 07:07



UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 45.8 +00.1	N 15 36.3 +00.8	219 58.7 -00.2	S 01 08.1 -01.0	156 19.2 -29.1	N 22 41.7 +07.7	00						00
01	195 45.9 +00.0	N 15 37.1 +00.7	234 58.5 -00.2	S 01 07.1 -01.0	170 50.1 -29.1	N 22 49.4 +07.6	01						01
02	210 45.9 +00.1	N 15 37.8 +00.8	249 58.3 -00.2	S 01 06.1 -01.1	185 21.0 -29.3	N 22 57.0 +07.5	02						02
03	225 46.0 +00.0	N 15 38.6 +00.7	264 58.1 -00.2	S 01 05.0 -01.0	199 51.7 -29.2	N 23 04.5 +07.4	03						03
04	240 46.0 +00.1	N 15 39.3 +00.7	279 57.9 -00.2	S 01 04.0 -01.0	214 22.5 -29.3	N 23 11.9 +07.3	04						04
05	255 46.1 +00.1	N 15 40.0 +00.8	294 57.7 -00.2	S 01 03.0 -01.0	228 53.2 -29.3	N 23 19.2 +07.2	05						05
06	270 46.2 +00.0	N 15 40.8 +00.7	309 57.5 -00.2	S 01 02.0 -01.1	243 23.9 -29.4	N 23 26.4 +07.1	06						06
07	285 46.2 +00.1	N 15 41.5 +00.7	324 57.3 -00.2	S 01 00.9 -01.0	257 54.5 -29.4	N 23 33.5 +07.0	07						07
08	300 46.3 +00.1	N 15 42.2 +00.8	339 57.1 -00.2	S 00 59.9 -01.0	272 25.1 -29.5	N 23 40.5 +06.8	08						08
09	315 46.4 +00.0	N 15 43.0 +00.7	354 56.9 -00.2	S 00 58.9 -01.1	286 55.6 -29.5	N 23 47.3 +06.7	09						09
10	330 46.4 +00.1	N 15 43.7 +00.7	9 56.7 -00.2	S 00 57.8 -01.0	301 26.1 -29.5	N 23 54.0 +06.7	10						10
11	345 46.5 +00.1	N 15 44.4 +00.8	24 56.5 -00.2	S 00 56.8 -01.0	315 56.6 -29.6	N 24 00.7 +06.5	11						11
12	0 46.6 +00.0	N 15 45.2 +00.7	39 56.3 -00.2	S 00 55.8 -01.1	330 27.0 -29.6	N 24 07.2 +06.4	12						12
13	15 46.6 +00.1	N 15 45.9 +00.7	54 56.1 -00.2	S 00 54.7 -01.0	344 57.4 -29.7	N 24 13.6 +06.2	13						13
14	30 46.7 +00.0	N 15 46.6 +00.8	69 55.9 -00.2	S 00 53.7 -01.0	359 27.7 -29.7	N 24 19.8 +06.2	14						14
15	45 46.7 +00.1	N 15 47.4 +00.7	84 55.7 -00.2	S 00 52.7 -01.1	13 58.0 -29.7	N 24 26.0 +06.1	15						15
16	60 46.8 +00.1	N 15 48.1 +00.7	99 55.5 -00.2	S 00 51.6 -01.0	28 28.3 -29.8	N 24 32.1 +05.9	16						16
17	75 46.9 +00.0	N 15 48.8 +00.8	114 55.3 -00.1	S 00 50.6 -01.0	42 58.5 -29.8	N 24 38.0 +05.8	17						17
18	90 46.9 +00.1	N 15 49.6 +00.7	129 55.2 -00.2	S 00 49.6 -01.1	57 28.7 -29.9	N 24 43.8 +05.7	18						18
19	105 47.0 +00.0	N 15 50.3 +00.7	144 55.0 -00.2	S 00 48.5 -01.0	71 58.8 -29.8	N 24 49.5 +05.6	19						19
20	120 47.0 +00.1	N 15 51.0 +00.7	159 54.8 -00.2	S 00 47.5 -01.0	86 29.0 -30.0	N 24 55.1 +05.4	20						20
21	135 47.1 +00.1	N 15 51.7 +00.8	174 54.6 -00.2	S 00 46.5 -01.1	100 59.0 -29.9	N 25 00.5 +05.4	21						21
22	150 47.2 +00.0	N 15 52.5 +00.7	189 54.4 -00.2	S 00 45.4 -01.0	115 29.1 -30.0	N 25 05.9 +05.2	22						22
23	165 47.2 +00.1	N 15 53.2 +00.7	204 54.2 -00.2	S 00 44.4 -01.0	129 59.1 -30.0	N 25 11.1 +05.1	23						23
<b>UT 02 06 10 14 18 22</b> SD 15'9 15'9 15'9 15'9 15'9 15'9 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 320° 320° 319° 319° 319° 319° 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 359° 359° 359° 358° 358° 358° Greenwich Culmination Time: 09:20				<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 54'2 SHA 294° 292° 290° 288° 286° 284° Greenwich Culmination Time: 14:02					
UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	235 28.3 +00.7	S 07 54.8 -00.7	221 54.8 +02.0	S 01 37.3 -00.2	253 50.6 +02.3	S 14 21.8 +00.0	00						00
01	250 29.0 +00.7	S 07 54.1 -00.7	236 56.8 +02.0	S 01 37.1 -00.2	268 52.9 +02.3	S 14 21.8 -00.1	01						01
02	265 29.7 +00.7	S 07 53.4 -00.7	251 58.8 +02.0	S 01 36.9 -00.2	283 55.2 +02.4	S 14 21.7 +00.0	02						02
03	280 30.4 +00.7	S 07 52.7 -00.7	267 00.8 +02.0	S 01 36.7 -00.2	298 57.6 +02.3	S 14 21.7 -00.1	03						03
04	295 31.1 +00.7	S 07 52.0 -00.7	282 02.8 +02.0	S 01 36.5 -00.2	313 59.9 +02.3	S 14 21.6 +00.0	04						04
05	310 31.8 +00.7	S 07 51.3 -00.7	297 04.8 +02.0	S 01 36.3 -00.2	329 02.2 +02.4	S 14 21.6 +00.0	05						05
06	325 32.5 +00.7	S 07 50.6 -00.7	312 06.8 +01.9	S 01 36.1 -00.2	344 04.6 +02.3	S 14 21.6 -00.1	06						06
07	340 33.2 +00.7	S 07 49.9 -00.7	327 08.7 +02.0	S 01 35.9 -00.2	359 06.9 +02.3	S 14 21.5 +00.0	07						07
08	355 33.9 +00.7	S 07 49.2 -00.7	342 10.7 +02.0	S 01 35.7 -00.2	14 09.2 +02.4	S 14 21.5 +00.0	08						08
09	10 34.6 +00.7	S 07 48.5 -00.8	357 12.7 +02.0	S 01 35.5 -00.2	29 11.6 +02.3	S 14 21.5 -00.1	09						09
10	25 35.3 +00.7	S 07 47.7 -00.7	12 14.7 +02.0	S 01 35.3 -00.2	44 13.9 +02.4	S 14 21.4 +00.0	10						10
11	40 36.0 +00.7	S 07 47.0 -00.7	27 16.7 +02.0	S 01 35.1 -00.2	59 16.3 +02.3	S 14 21.4 +00.0	11						11
12	55 36.7 +00.7	S 07 46.3 -00.7	42 18.7 +02.0	S 01 34.9 -00.2	74 18.6 +02.3	S 14 21.4 -00.1	12						12
13	70 37.4 +00.7	S 07 45.6 -00.7	57 20.7 +02.0	S 01 34.7 -00.1	89 20.9 +02.4	S 14 21.3 +00.0	13						13
14	85 38.1 +00.7	S 07 44.9 -00.7	72 22.7 +02.0	S 01 34.6 -00.2	104 23.3 +02.3	S 14 21.3 -00.1	14						14
15	100 38.8 +00.7	S 07 44.2 -00.7	87 24.7 +02.0	S 01 34.4 -00.2	119 25.6 +02.3	S 14 21.2 +00.0	15						15
16	115 39.5 +00.7	S 07 43.5 -00.7	102 26.7 +02.0	S 01 34.2 -00.2	134 27.9 +02.4	S 14 21.2 +00.0	16						16
17	130 40.2 +00.7	S 07 42.8 -00.7	117 28.7 +01.9	S 01 34.0 -00.2	149 30.3 +02.3	S 14 21.2 -00.1	17						17
18	145 40.9 +00.7	S 07 42.1 -00.7	132 30.6 +02.0	S 01 33.8 -00.2	164 32.6 +02.4	S 14 21.1 +00.0	18						18
19	160 41.6 +00.7	S 07 41.4 -00.7	147 32.6 +02.0	S 01 33.6 -00.2	179 35.0 +02.3	S 14 21.1 +00.0	19						19
20	175 42.3 +00.7	S 07 40.7 -00.7	162 34.6 +02.0	S 01 33.4 -00.2	194 37.3 +02.3	S 14 21.1 -00.1	20						20
21	190 43.0 +00.7	S 07 40.0 -00.7	177 36.6 +02.0	S 01 33.2 -00.2	209 39.6 +02.4	S 14 21.0 +00.0	21						21
22	205 43.7 +00.7	S 07 39.3 -00.7	192 38.6 +02.0	S 01 33.0 -00.2	224 42.0 +02.3	S 14 21.0 +00.0	22						22
23	220 44.4 +00.7	S 07 38.6 -00.8	207 40.6 +02.0	S 01 32.8 -00.2	239 44.3 +02.3	S 14 21.0 -00.1	23						23
<b>UT 02 06 10 14 18 22</b> SD 00'0 00'0 00'0 00'0 00'0 00'0 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 015° 014° 014° 014° 014° 014° Greenwich Culmination Time: 08:17				<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 001° 001° 001° 001° 001° 001° Greenwich Culmination Time: 09:11				<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 033° 033° 033° 033° 033° 033° Greenwich Culmination Time: 07:03					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 47.3 +00.0	N 15 53.9 +00.8	219 54.0 -00.2	S 00 43.4 -01.1	144 29.1 -30.1	N 25 16.2 +05.0	00						00
01	195 47.3 +00.1	N 15 54.7 +00.7	234 53.8 -00.2	S 00 42.3 -01.0	158 59.0 -30.1	N 25 21.2 +04.9	01						01
02	210 47.4 +00.1	N 15 55.4 +00.7	249 53.6 -00.2	S 00 41.3 -01.1	173 28.9 -30.1	N 25 26.1 +04.7	02						02
03	225 47.5 +00.0	N 15 56.1 +00.7	264 53.4 -00.2	S 00 40.2 -01.0	187 58.8 -30.1	N 25 30.8 +04.6	03						03
04	240 47.5 +00.1	N 15 56.8 +00.8	279 53.2 -00.2	S 00 39.2 -01.0	202 28.7 -30.2	N 25 35.4 +04.5	04						04
05	255 47.6 +00.0	N 15 57.6 +00.7	294 53.0 -00.2	S 00 38.2 -01.1	216 58.5 -30.2	N 25 39.9 +04.4	05						05
06	270 47.6 +00.1	N 15 58.3 +00.7	309 52.8 -00.2	S 00 37.1 -01.0	231 28.3 -30.2	N 25 44.3 +04.2	06						06
07	285 47.7 +00.0	N 15 59.0 +00.7	324 52.6 -00.2	S 00 36.1 -01.0	245 58.1 -30.3	N 25 48.5 +04.2	07						07
08	300 47.7 +00.1	N 15 59.7 +00.8	339 52.4 -00.2	S 00 35.1 -01.1	260 27.8 -30.3	N 25 52.7 +04.0	08						08
09	315 47.8 +00.1	N 16 00.5 +00.7	354 52.2 -00.2	S 00 34.0 -01.0	274 57.5 -30.3	N 25 56.7 +03.8	09						09
10	330 47.9 +00.0	N 16 01.2 +00.7	9 52.0 -00.2	S 00 33.0 -01.0	289 27.2 -30.3	N 26 00.5 +03.8	10						10
11	345 47.9 +00.1	N 16 01.9 +00.7	24 51.8 -00.2	S 00 32.0 -01.1	303 56.9 -30.4	N 26 04.3 +03.6	11						11
12	0 48.0 +00.0	N 16 02.6 +00.7	39 51.6 -00.2	S 00 30.9 -01.0	318 26.5 -30.4	N 26 07.9 +03.5	12						12
13	15 48.0 +00.1	N 16 03.3 +00.8	54 51.4 -00.2	S 00 29.9 -01.1	332 56.1 -30.4	N 26 11.4 +03.4	13						13
14	30 48.1 +00.0	N 16 04.1 +00.7	69 51.2 -00.2	S 00 28.8 -01.0	347 25.7 -30.4	N 26 14.8 +03.3	14						14
15	45 48.1 +00.1	N 16 04.8 +00.7	84 51.0 -00.2	S 00 27.8 -01.0	1 55.3 -30.5	N 26 18.1 +03.1	15						15
16	60 48.2 +00.0	N 16 05.5 +00.7	99 50.8 -00.2	S 00 26.8 -01.1	16 24.8 -30.5	N 26 21.2 +03.0	16						16
17	75 48.2 +00.1	N 16 06.2 +00.7	114 50.6 -00.2	S 00 25.7 -01.0	30 54.3 -30.4	N 26 24.2 +02.9	17						17
18	90 48.3 +00.1	N 16 06.9 +00.8	129 50.4 -00.2	S 00 24.7 -01.1	45 23.9 -30.6	N 26 27.1 +02.7	18						18
19	105 48.4 +00.0	N 16 07.7 +00.7	144 50.2 -00.2	S 00 23.6 -01.0	59 53.3 -30.5	N 26 29.8 +02.6	19						19
20	120 48.4 +00.1	N 16 08.4 +00.7	159 50.0 -00.2	S 00 22.6 -01.0	74 22.8 -30.5	N 26 32.4 +02.5	20						20
21	135 48.5 +00.0	N 16 09.1 +00.7	174 49.8 -00.2	S 00 21.6 -01.1	88 52.3 -30.6	N 26 34.9 +02.4	21						21
22	150 48.5 +00.1	N 16 09.8 +00.7	189 49.6 -00.2	S 00 20.5 -01.0	103 21.7 -30.6	N 26 37.3 +02.2	22						22
23	165 48.6 +00.0	N 16 10.5 +00.7	204 49.4 -00.2	S 00 19.5 -01.0	117 51.1 -30.6	N 26 39.5 +02.2	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'7 14'7				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		HP 54'2 54'2 54'2 54'1 54'1 54'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 319° 319° 319° 318° 318° 318°		SHA 358° 358° 358° 357° 357° 357°		SHA 282° 279° 277° 275° 273° 271°				SHA 014° 014° 014° 013° 013° 013°				
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:20		Greenwich Culmination Time: 14:52				Greenwich Culmination Time: 08:16				

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 48.6 +00.1	N 16 11.2 +00.8	219 49.2 -00.2	S 00 18.5 -01.1	132 20.5 -30.6	N 26 41.7 +01.9	00						00
01	195 48.7 +00.0	N 16 12.0 +00.7	234 49.0 -00.2	S 00 17.4 -01.0	146 49.9 -30.6	N 26 43.6 +01.9	01						01
02	210 48.7 +00.1	N 16 12.7 +00.7	249 48.8 -00.2	S 00 16.4 -01.1	161 19.3 -30.6	N 26 45.5 +01.7	02						02
03	225 48.8 +00.0	N 16 13.4 +00.7	264 48.6 -00.1	S 00 15.3 -01.0	175 48.7 -30.6	N 26 47.2 +01.6	03						03
04	240 48.8 +00.1	N 16 14.1 +00.7	279 48.5 -00.2	S 00 14.3 -01.0	190 18.1 -30.7	N 26 48.8 +01.5	04						04
05	255 48.9 +00.0	N 16 14.8 +00.7	294 48.3 -00.2	S 00 13.3 -01.1	204 47.4 -30.7	N 26 50.3 +01.3	05						05
06	270 48.9 +00.1	N 16 15.5 +00.7	309 48.1 -00.2	S 00 12.2 -01.0	219 16.7 -30.6	N 26 51.6 +01.2	06						06
07	285 49.0 +00.0	N 16 16.2 +00.8	324 47.9 -00.2	S 00 11.2 -01.1	233 46.1 -30.7	N 26 52.8 +01.1	07						07
08	300 49.0 +00.1	N 16 17.0 +00.7	339 47.7 -00.2	S 00 10.1 -01.0	248 15.4 -30.7	N 26 53.9 +01.0	08						08
09	315 49.1 +00.0	N 16 17.7 +00.7	354 47.5 -00.2	S 00 09.1 -01.1	262 44.7 -30.6	N 26 54.9 +00.8	09						09
10	330 49.1 +00.1	N 16 18.4 +00.7	9 47.3 -00.2	S 00 08.0 -01.0	277 14.1 -30.7	N 26 55.7 +00.7	10						10
11	345 49.2 +00.0	N 16 19.1 +00.7	24 47.1 -00.2	S 00 07.0 -01.0	291 43.4 -30.7	N 26 56.4 +00.6	11						11
12	0 49.2 +00.1	N 16 19.8 +00.7	39 46.9 -00.2	S 00 06.0 -01.1	306 12.7 -30.7	N 26 57.0 +00.4	12						12
13	15 49.3 +00.0	N 16 20.5 +00.7	54 46.7 -00.2	S 00 04.9 -01.0	320 42.0 -30.7	N 26 57.4 +00.3	13						13
14	30 49.3 +00.1	N 16 21.2 +00.7	69 46.5 -00.2	S 00 03.9 -01.1	335 11.3 -30.7	N 26 57.7 +00.2	14						14
15	45 49.4 +00.0	N 16 21.9 +00.7	84 46.3 -00.2	S 00 02.8 -01.0	349 40.6 -30.7	N 26 57.9 +00.1	15						15
16	60 49.4 +00.1	N 16 22.6 +00.8	99 46.1 -00.2	S 00 01.8 -01.0	4 09.9 -30.7	N 26 58.0 -00.1	16						16
17	75 49.5 +00.0	N 16 23.4 +00.7	114 45.9 -00.2	S 00 00.8 -01.1	18 39.2 -30.6	N 26 57.9 -00.2	17						17
18	90 49.5 +00.1	N 16 24.1 +00.7	129 45.7 -00.2	N 00 00.3 +01.0	33 08.6 -30.7	N 26 57.7 -00.4	18						18
19	105 49.6 +00.0	N 16 24.8 +00.7	144 45.5 -00.2	N 00 01.3 +01.1	47 37.9 -30.7	N 26 57.3 -00.4	19						19
20	120 49.6 +00.1	N 16 25.5 +00.7	159 45.3 -00.2	N 00 02.4 +01.0	62 07.2 -30.7	N 26 56.9 -00.6	20						20
21	135 49.7 +00.0	N 16 26.2 +00.7	174 45.1 -00.2	N 00 03.4 +01.1	76 36.5 -30.6	N 26 56.3 -00.8	21						21
22	150 49.7 +00.1	N 16 26.9 +00.7	189 44.9 -00.2	N 00 04.5 +01.0	91 05.9 -30.7	N 26 55.5 -00.8	22						22
23	165 49.8 +00.0	N 16 27.6 +00.7	204 44.7 -00.2	N 00 05.5 +01.0	105 35.2 -30.6	N 26 54.7 -01.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7			SD 00'0 00'0 00'0 00'0 00'0 00'0					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'1 54'1			HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 318° 318° 318° 317° 317° 317°		SHA 357° 357° 357° 356° 356° 356°		SHA 268° 266° 264° 262° 260° 257°			SHA 013° 013° 013° 013° 013° 013°					
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:20		Greenwich Culmination Time: 15:42			Greenwich Culmination Time: 08:15					

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 49.8 +00.1	N 16 28.3 +00.7	219 44.5 -00.2	N 00 06.5 +01.1	120 04.6 -30.7	N 26 53.7 -01.1	00						00
01	195 49.9 +00.0	N 16 29.0 +00.7	234 44.3 -00.2	N 00 07.6 +01.0	134 33.9 -30.6	N 26 52.6 -01.2	01						01
02	210 49.9 +00.1	N 16 29.7 +00.7	249 44.1 -00.2	N 00 08.6 +01.1	149 03.3 -30.6	N 26 51.4 -01.4	02						02
03	225 50.0 +00.0	N 16 30.4 +00.7	264 43.9 -00.2	N 00 09.7 +01.0	163 32.7 -30.6	N 26 50.0 -01.5	03						03
04	240 50.0 +00.1	N 16 31.1 +00.7	279 43.7 -00.2	N 00 10.7 +01.1	178 02.1 -30.6	N 26 48.5 -01.6	04						04
05	255 50.1 +00.0	N 16 31.8 +00.7	294 43.5 -00.2	N 00 11.8 +01.0	192 31.5 -30.6	N 26 46.9 -01.8	05						05
06	270 50.1 +00.1	N 16 32.5 +00.7	309 43.3 -00.2	N 00 12.8 +01.1	207 00.9 -30.6	N 26 45.1 -01.9	06						06
07	285 50.2 +00.0	N 16 33.2 +00.7	324 43.1 -00.2	N 00 13.9 +01.0	221 30.3 -30.5	N 26 43.2 -02.0	07						07
08	300 50.2 +00.0	N 16 33.9 +00.7	339 42.9 -00.2	N 00 14.9 +01.0	235 59.8 -30.5	N 26 41.2 -02.1	08						08
09	315 50.2 +00.1	N 16 34.6 +00.7	354 42.7 -00.2	N 00 15.9 +01.1	250 29.3 -30.6	N 26 39.1 -02.3	09						09
10	330 50.3 +00.0	N 16 35.3 +00.7	9 42.5 -00.2	N 00 17.0 +01.0	264 58.7 -30.5	N 26 36.8 -02.3	10						10
11	345 50.3 +00.1	N 16 36.0 +00.7	24 42.3 -00.2	N 00 18.0 +01.1	279 28.2 -30.4	N 26 34.5 -02.6	11						11
12	0 50.4 +00.0	N 16 36.7 +00.7	39 42.1 -00.2	N 00 19.1 +01.0	293 57.8 -30.5	N 26 31.9 -02.6	12						12
13	15 50.4 +00.1	N 16 37.4 +00.7	54 41.9 -00.3	N 00 20.1 +01.1	308 27.3 -30.4	N 26 29.3 -02.8	13						13
14	30 50.5 +00.0	N 16 38.1 +00.7	69 41.6 -00.2	N 00 21.2 +01.0	322 56.9 -30.4	N 26 26.5 -02.9	14						14
15	45 50.5 +00.1	N 16 38.8 +00.7	84 41.4 -00.2	N 00 22.2 +01.1	337 26.5 -30.4	N 26 23.6 -03.0	15						15
16	60 50.6 +00.0	N 16 39.5 +00.7	99 41.2 -00.2	N 00 23.3 +01.0	351 56.1 -30.4	N 26 20.6 -03.1	16						16
17	75 50.6 +00.0	N 16 40.2 +00.7	114 41.0 -00.2	N 00 24.3 +01.1	6 25.7 -30.4	N 26 17.5 -03.3	17						17
18	90 50.6 +00.1	N 16 40.9 +00.7	129 40.8 -00.2	N 00 25.4 +01.0	20 55.3 -30.3	N 26 14.2 -03.4	18						18
19	105 50.7 +00.0	N 16 41.6 +00.7	144 40.6 -00.2	N 00 26.4 +01.1	35 25.0 -30.3	N 26 10.8 -03.5	19						19
20	120 50.7 +00.1	N 16 42.3 +00.7	159 40.4 -00.2	N 00 27.5 +01.0	49 54.7 -30.3	N 26 07.3 -03.6	20						20
21	135 50.8 +00.0	N 16 43.0 +00.7	174 40.2 -00.2	N 00 28.5 +01.0	64 24.4 -30.2	N 26 03.7 -03.8	21						21
22	150 50.8 +00.1	N 16 43.7 +00.7	189 40.0 -00.2	N 00 29.5 +01.1	78 54.2 -30.2	N 25 59.9 -03.9	22						22
23	165 50.9 +00.0	N 16 44.4 +00.7	204 39.8 -00.2	N 00 30.6 +01.0	93 24.0 -30.2	N 25 56.0 -04.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'9		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'2 54'2 54'2								
	SHA 317° 317° 317° 316° 316° 316°		SHA 356° 356° 355° 355° 355° 355°		SHA 255° 253° 251° 249° 246° 244°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:21		Greenwich Culmination Time: 16:33								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 18.9 +00.7	S 07 03.8 -00.7	224 18.4 +02.0	S 01 23.2 -00.2	256 39.1 +02.3	S 14 19.3 -00.1	00						00
01	251 19.6 +00.7	S 07 03.1 -00.7	239 20.4 +02.0	S 01 23.0 -00.2	271 41.4 +02.4	S 14 19.2 +00.0	01						01
02	266 20.3 +00.8	S 07 02.4 -00.8	254 22.4 +02.0	S 01 22.8 -00.2	286 43.8 +02.3	S 14 19.2 +00.0	02						02
03	281 21.1 +00.7	S 07 01.6 -00.7	269 24.4 +02.0	S 01 22.6 -00.2	301 46.1 +02.4	S 14 19.2 -00.1	03						03
04	296 21.8 +00.7	S 07 00.9 -00.7	284 26.4 +02.0	S 01 22.4 -00.2	316 48.5 +02.3	S 14 19.1 +00.0	04						04
05	311 22.5 +00.7	S 07 00.2 -00.7	299 28.4 +02.0	S 01 22.2 -00.2	331 50.8 +02.4	S 14 19.1 +00.0	05						05
06	326 23.2 +00.7	S 06 59.5 -00.7	314 30.4 +02.0	S 01 22.0 -00.2	346 53.2 +02.3	S 14 19.1 +00.0	06						06
07	341 23.9 +00.7	S 06 58.8 -00.7	329 32.4 +02.0	S 01 21.8 -00.2	1 55.5 +02.3	S 14 19.1 -00.1	07						07
08	356 24.6 +00.7	S 06 58.1 -00.7	344 34.4 +02.0	S 01 21.6 -00.2	16 57.8 +02.4	S 14 19.0 +00.0	08						08
09	11 25.3 +00.7	S 06 57.4 -00.7	359 36.4 +02.0	S 01 21.4 -00.2	32 00.2 +02.3	S 14 19.0 +00.0	09						09
10	26 26.0 +00.7	S 06 56.7 -00.8	14 38.4 +02.0	S 01 21.2 -00.2	47 02.5 +02.4	S 14 19.0 -00.1	10						10
11	41 26.7 +00.7	S 06 55.9 -00.7	29 40.4 +02.0	S 01 21.0 -00.1	62 04.9 +02.3	S 14 18.9 +00.0	11						11
12	56 27.4 +00.7	S 06 55.2 -00.7	44 42.4 +02.0	S 01 20.9 -00.2	77 07.2 +02.4	S 14 18.9 +00.0	12						12
13	71 28.1 +00.7	S 06 54.5 -00.7	59 44.4 +02.0	S 01 20.7 -00.2	92 09.6 +02.3	S 14 18.9 -00.1	13						13
14	86 28.8 +00.8	S 06 53.8 -00.7	74 46.4 +02.0	S 01 20.5 -00.2	107 11.9 +02.4	S 14 18.8 +00.0	14						14
15	101 29.6 +00.7	S 06 53.1 -00.7	89 48.4 +02.0	S 01 20.3 -00.2	122 14.3 +02.3	S 14 18.8 +00.0	15						15
16	116 30.3 +00.7	S 06 52.4 -00.7	104 50.4 +02.0	S 01 20.1 -00.2	137 16.6 +02.4	S 14 18.8 -00.1	16						16
17	131 31.0 +00.7	S 06 51.7 -00.8	119 52.4 +02.0	S 01 19.9 -00.2	152 19.0 +02.3	S 14 18.7 +00.0	17						17
18	146 31.7 +00.7	S 06 50.9 -00.7	134 54.4 +02.0	S 01 19.7 -00.2	167 21.3 +02.4	S 14 18.7 +00.0	18						18
19	161 32.4 +00.7	S 06 50.2 -00.7	149 56.4 +02.0	S 01 19.5 -00.2	182 23.7 +02.3	S 14 18.7 -00.1	19						19
20	176 33.1 +00.7	S 06 49.5 -00.7	164 58.4 +02.0	S 01 19.3 -00.2	197 26.0 +02.4	S 14 18.6 +00.0	20						20
21	191 33.8 +00.7	S 06 48.8 -00.7	180 00.4 +02.0	S 01 19.1 -00.2	212 28.4 +02.3	S 14 18.6 +00.0	21						21
22	206 34.5 +00.7	S 06 48.1 -00.7	195 02.4 +02.0	S 01 18.9 -00.2	227 30.7 +02.4	S 14 18.6 -00.1	22						22
23	221 35.2 +00.7	S 06 47.4 -00.7	210 04.4 +02.0	S 01 18.7 -00.2	242 33.1 +02.3	S 14 18.5 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 012° 012° 012° 012° 012° 012°		SHA 000° 000° 000° 000° 000° 000°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:14		Greenwich Culmination Time: 09:01		Greenwich Culmination Time: 06:52								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 50.9 +00.0	N 16 45.1 +00.7	219 39.6 -00.2	N 00 31.6 +01.1	107 53.8 -30.2	N 25 52.0 -04.1	00						00
01	195 50.9 +00.1	N 16 45.8 +00.7	234 39.4 -00.2	N 00 32.7 +01.0	122 23.6 -30.1	N 25 47.9 -04.3	01						01
02	210 51.0 +00.0	N 16 46.5 +00.6	249 39.2 -00.2	N 00 33.7 +01.1	136 53.5 -30.1	N 25 43.6 -04.4	02						02
03	225 51.0 +00.1	N 16 47.1 +00.7	264 39.0 -00.2	N 00 34.8 +01.0	151 23.4 -30.1	N 25 39.2 -04.5	03						03
04	240 51.1 +00.0	N 16 47.8 +00.7	279 38.8 -00.2	N 00 35.8 +01.1	165 53.3 -30.0	N 25 34.7 -04.6	04						04
05	255 51.1 +00.0	N 16 48.5 +00.7	294 38.6 -00.2	N 00 36.9 +01.0	180 23.3 -30.1	N 25 30.1 -04.8	05						05
06	270 51.1 +00.1	N 16 49.2 +00.7	309 38.4 -00.2	N 00 37.9 +01.1	194 53.2 -29.9	N 25 25.3 -04.8	06						06
07	285 51.2 +00.0	N 16 49.9 +00.7	324 38.2 -00.2	N 00 39.0 +01.0	209 23.3 -30.0	N 25 20.5 -05.0	07						07
08	300 51.2 +00.1	N 16 50.6 +00.7	339 38.0 -00.2	N 00 40.0 +01.1	223 53.3 -29.9	N 25 15.5 -05.1	08						08
09	315 51.3 +00.0	N 16 51.3 +00.7	354 37.8 -00.2	N 00 41.1 +01.0	238 23.4 -29.9	N 25 10.4 -05.2	09						09
10	330 51.3 +00.0	N 16 52.0 +00.7	9 37.6 -00.2	N 00 42.1 +01.1	252 53.5 -29.8	N 25 05.2 -05.4	10						10
11	345 51.3 +00.1	N 16 52.7 +00.7	24 37.4 -00.2	N 00 43.2 +01.0	267 23.7 -29.9	N 24 59.8 -05.4	11						11
12	0 51.4 +00.0	N 16 53.4 +00.6	39 37.2 -00.2	N 00 44.2 +01.1	281 53.8 -29.7	N 24 54.4 -05.6	12						12
13	15 51.4 +00.1	N 16 54.0 +00.7	54 37.0 -00.2	N 00 45.3 +01.0	296 24.1 -29.8	N 24 48.8 -05.7	13						13
14	30 51.5 +00.0	N 16 54.7 +00.7	69 36.8 -00.2	N 00 46.3 +01.1	310 54.3 -29.7	N 24 43.1 -05.8	14						14
15	45 51.5 +00.0	N 16 55.4 +00.7	84 36.6 -00.2	N 00 47.4 +01.0	325 24.6 -29.7	N 24 37.3 -06.0	15						15
16	60 51.5 +00.1	N 16 56.1 +00.7	99 36.4 -00.2	N 00 48.4 +01.1	339 54.9 -29.6	N 24 31.3 -06.0	16						16
17	75 51.6 +00.0	N 16 56.8 +00.7	114 36.2 -00.2	N 00 49.5 +01.0	354 25.3 -29.6	N 24 25.3 -06.2	17						17
18	90 51.6 +00.1	N 16 57.5 +00.7	129 36.0 -00.2	N 00 50.5 +01.1	8 55.7 -29.6	N 24 19.1 -06.2	18						18
19	105 51.7 +00.0	N 16 58.2 +00.6	144 35.8 -00.2	N 00 51.6 +01.0	23 26.1 -29.5	N 24 12.9 -06.4	19						19
20	120 51.7 +00.0	N 16 58.8 +00.7	159 35.6 -00.2	N 00 52.6 +01.1	37 56.6 -29.5	N 24 06.5 -06.5	20						20
21	135 51.7 +00.1	N 16 59.5 +00.7	174 35.4 -00.3	N 00 53.7 +01.0	52 27.1 -29.5	N 23 60.0 -06.7	21						21
22	150 51.8 +00.0	N 17 00.2 +00.7	189 35.1 -00.2	N 00 54.7 +01.1	66 57.6 -29.4	N 23 53.3 -06.7	22						22
23	165 51.8 +00.0	N 17 00.9 +00.7	204 34.9 -00.2	N 00 55.8 +01.0	81 28.2 -29.4	N 23 46.6 -06.8	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'9 15'9 15'9 15'9 15'9 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'8 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'3 54'3 54'3 54'4 54'5 54'5								
	SHA 316° 316° 316° 315° 315° 315°		SHA 355° 355° 354° 354° 354° 354°		SHA 242° 240° 238° 236° 233° 231°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:21		Greenwich Culmination Time: 17:23								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 35.9 +00.7	S 06 46.7 -00.7	225 06.4 +02.0	S 01 18.5 -00.2	257 35.4 +02.4	S 14 18.5 +00.0	00						00
01	251 36.6 +00.8	S 06 46.0 -00.8	240 08.4 +02.0	S 01 18.3 -00.2	272 37.8 +02.3	S 14 18.5 -00.1	01						01
02	266 37.4 +00.7	S 06 45.2 -00.7	255 10.4 +02.0	S 01 18.1 -00.1	287 40.1 +02.4	S 14 18.4 +00.0	02						02
03	281 38.1 +00.7	S 06 44.5 -00.7	270 12.4 +02.0	S 01 18.0 -00.2	302 42.5 +02.3	S 14 18.4 +00.0	03						03
04	296 38.8 +00.7	S 06 43.8 -00.7	285 14.4 +02.0	S 01 17.8 -00.2	317 44.8 +02.4	S 14 18.4 -00.1	04						04
05	311 39.5 +00.7	S 06 43.1 -00.7	300 16.4 +02.0	S 01 17.6 -00.2	332 47.2 +02.3	S 14 18.3 +00.0	05						05
06	326 40.2 +00.7	S 06 42.4 -00.7	315 18.4 +02.0	S 01 17.4 -00.2	347 49.5 +02.4	S 14 18.3 +00.0	06						06
07	341 40.9 +00.7	S 06 41.7 -00.7	330 20.4 +02.0	S 01 17.2 -00.2	2 51.9 +02.3	S 14 18.3 +00.0	07						07
08	356 41.6 +00.7	S 06 41.0 -00.8	345 22.4 +02.0	S 01 17.0 -00.2	17 54.2 +02.4	S 14 18.3 -00.1	08						08
09	11 42.3 +00.7	S 06 40.2 -00.7	0 24.4 +02.0	S 01 16.8 -00.2	32 56.6 +02.3	S 14 18.2 +00.0	09						09
10	26 43.0 +00.7	S 06 39.5 -00.7	15 26.4 +02.0	S 01 16.6 -00.2	47 58.9 +02.4	S 14 18.2 +00.0	10						10
11	41 43.7 +00.8	S 06 38.8 -00.7	30 28.4 +02.0	S 01 16.4 -00.2	63 01.3 +02.3	S 14 18.2 -00.1	11						11
12	56 44.5 +00.7	S 06 38.1 -00.7	45 30.4 +02.0	S 01 16.2 -00.2	78 03.6 +02.4	S 14 18.1 +00.0	12						12
13	71 45.2 +00.7	S 06 37.4 -00.7	60 32.4 +02.0	S 01 16.0 -00.2	93 06.0 +02.3	S 14 18.1 +00.0	13						13
14	86 45.9 +00.7	S 06 36.7 -00.7	75 34.4 +02.0	S 01 15.8 -00.2	108 08.3 +02.4	S 14 18.1 -00.1	14						14
15	101 46.6 +00.7	S 06 36.0 -00.8	90 36.4 +02.0	S 01 15.6 -00.1	123 10.7 +02.3	S 14 18.0 +00.0	15						15
16	116 47.3 +00.7	S 06 35.2 -00.7	105 38.4 +02.0	S 01 15.5 -00.2	138 13.0 +02.4	S 14 18.0 +00.0	16						16
17	131 48.0 +00.7	S 06 34.5 -00.7	120 40.4 +02.0	S 01 15.3 -00.2	153 15.4 +02.3	S 14 18.0 -00.1	17						17
18	146 48.7 +00.7	S 06 33.8 -00.7	135 42.4 +02.0	S 01 15.1 -00.2	168 17.7 +02.4	S 14 17.9 +00.0	18						18
19	161 49.4 +00.7	S 06 33.1 -00.7	150 44.4 +02.0	S 01 14.9 -00.2	183 20.1 +02.3	S 14 17.9 +00.0	19						19
20	176 50.1 +00.8	S 06 32.4 -00.7	165 46.4 +02.0	S 01 14.7 -00.2	198 22.4 +02.4	S 14 17.9 -00.1	20						20
21	191 50.9 +00.7	S 06 31.7 -00.8	180 48.4 +02.1	S 01 14.5 -00.2	213 24.8 +02.3	S 14 17.8 +00.0	21						21
22	206 51.6 +00.7	S 06 30.9 -00.7	195 50.5 +02.0	S 01 14.3 -00.2	228 27.1 +02.4	S 14 17.8 +00.0	22						22
23	221 52.3 +00.7	S 06 30.2 -00.7	210 52.5 +02.0	S 01 14.1 -00.2	243 29.5 +02.4	S 14 17.8 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 012° 012° 011° 011° 011° 011°		SHA 000° 000° 000° 000° 000° 000°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:13		Greenwich Culmination Time: 08:58		Greenwich Culmination Time: 06:48								

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 51.8 +00.1	N 17 01.6 +00.6	219 34.7 -00.2	N 00 56.8 +01.1	95 58.8 -29.3	N 23 39.8 -07.0	00						00
01	195 51.9 +00.0	N 17 02.2 +00.7	234 34.5 -00.2	N 00 57.9 +01.0	110 29.5 -29.3	N 23 32.8 -07.1	01						01
02	210 51.9 +00.0	N 17 02.9 +00.7	249 34.3 -00.2	N 00 58.9 +01.1	125 00.2 -29.3	N 23 25.7 -07.2	02						02
03	225 51.9 +00.1	N 17 03.6 +00.7	264 34.1 -00.2	N 00 60.0 +01.0	139 30.9 -29.2	N 23 18.5 -07.2	03						03
04	240 52.0 +00.0	N 17 04.3 +00.7	279 33.9 -00.2	N 01 01.0 +01.1	154 01.7 -29.2	N 23 11.3 -07.4	04						04
05	255 52.0 +00.0	N 17 05.0 +00.6	294 33.7 -00.2	N 01 02.1 +01.0	168 32.5 -29.2	N 23 03.9 -07.6	05						05
06	270 52.0 +00.1	N 17 05.6 +00.7	309 33.5 -00.2	N 01 03.1 +01.1	183 03.3 -29.1	N 22 56.3 -07.6	06						06
07	285 52.1 +00.0	N 17 06.3 +00.7	324 33.3 -00.2	N 01 04.2 +01.0	197 34.2 -29.1	N 22 48.7 -07.7	07						07
08	300 52.1 +00.1	N 17 07.0 +00.7	339 33.1 -00.2	N 01 05.2 +01.1	212 05.1 -29.0	N 22 41.0 -07.8	08						08
09	315 52.2 +00.0	N 17 07.7 +00.7	354 32.9 -00.2	N 01 06.3 +01.0	226 36.1 -29.0	N 22 33.2 -08.0	09						09
10	330 52.2 +00.0	N 17 08.4 +00.6	9 32.7 -00.2	N 01 07.3 +01.1	241 07.1 -28.9	N 22 25.2 -08.0	10						10
11	345 52.2 +00.1	N 17 09.0 +00.7	24 32.5 -00.2	N 01 08.4 +01.0	255 38.2 -29.0	N 22 17.2 -08.2	11						11
12	0 52.3 +00.0	N 17 09.7 +00.7	39 32.3 -00.2	N 01 09.4 +01.1	270 09.2 -28.8	N 22 09.0 -08.3	12						12
13	15 52.3 +00.0	N 17 10.4 +00.7	54 32.1 -00.2	N 01 10.5 +01.0	284 40.4 -28.9	N 22 00.7 -08.3	13						13
14	30 52.3 +00.0	N 17 11.1 +00.6	69 31.9 -00.3	N 01 11.5 +01.1	299 11.5 -28.8	N 21 52.4 -08.5	14						14
15	45 52.3 +00.1	N 17 11.7 +00.7	84 31.6 -00.2	N 01 12.6 +01.0	313 42.7 -28.7	N 21 43.9 -08.6	15						15
16	60 52.4 +00.0	N 17 12.4 +00.7	99 31.4 -00.2	N 01 13.6 +01.1	328 14.0 -28.8	N 21 35.3 -08.7	16						16
17	75 52.4 +00.0	N 17 13.1 +00.6	114 31.2 -00.2	N 01 14.7 +01.0	342 45.2 -28.7	N 21 26.6 -08.7	17						17
18	90 52.4 +00.1	N 17 13.7 +00.7	129 31.0 -00.2	N 01 15.7 +01.1	357 16.5 -28.6	N 21 17.9 -08.9	18						18
19	105 52.5 +00.0	N 17 14.4 +00.7	144 30.8 -00.2	N 01 16.8 +01.0	11 47.9 -28.6	N 21 09.0 -09.0	19						19
20	120 52.5 +00.0	N 17 15.1 +00.7	159 30.6 -00.2	N 01 17.8 +01.1	26 19.3 -28.6	N 20 60.0 -09.1	20						20
21	135 52.5 +00.1	N 17 15.8 +00.6	174 30.4 -00.2	N 01 18.9 +01.1	40 50.7 -28.5	N 20 50.9 -09.2	21						21
22	150 52.6 +00.0	N 17 16.4 +00.7	189 30.2 -00.2	N 01 20.0 +01.0	55 22.2 -28.5	N 20 41.7 -09.3	22						22
23	165 52.6 +00.0	N 17 17.1 +00.7	204 30.0 -00.2	N 01 21.0 +01.1	69 53.7 -28.5	N 20 32.4 -09.4	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 14'9 14'9 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 54'6 54'6 54'7 54'8 54'9 55'0								
	SHA 315° 315° 315° 314° 314° 314°		SHA 354° 354° 353° 353° 353° 353°		SHA 229° 227° 225° 223° 221° 219°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:21		Greenwich Culmination Time: 18:11								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	236 53.0 +00.7	S 06 29.5 -00.7	225 54.5 +02.0	S 01 13.9 -00.2	258 31.9 +02.3	S 14 17.8 -00.1	00						00
01	251 53.7 +00.7	S 06 28.8 -00.7	240 56.5 +02.0	S 01 13.7 -00.2	273 34.2 +02.4	S 14 17.7 +00.0	01						01
02	266 54.4 +00.7	S 06 28.1 -00.7	255 58.5 +02.0	S 01 13.5 -00.2	288 36.6 +02.3	S 14 17.7 +00.0	02						02
03	281 55.1 +00.7	S 06 27.4 -00.7	271 00.5 +02.0	S 01 13.3 -00.1	303 38.9 +02.4	S 14 17.7 -00.1	03						03
04	296 55.8 +00.8	S 06 26.7 -00.8	286 02.5 +02.0	S 01 13.2 -00.2	318 41.3 +02.3	S 14 17.6 +00.0	04						04
05	311 56.6 +00.7	S 06 25.9 -00.7	301 04.5 +02.0	S 01 13.0 -00.2	333 43.6 +02.4	S 14 17.6 +00.0	05						05
06	326 57.3 +00.7	S 06 25.2 -00.7	316 06.5 +02.0	S 01 12.8 -00.2	348 46.0 +02.3	S 14 17.6 -00.1	06						06
07	341 58.0 +00.7	S 06 24.5 -00.7	331 08.5 +02.0	S 01 12.6 -00.2	3 48.3 +02.4	S 14 17.5 +00.0	07						07
08	356 58.7 +00.7	S 06 23.8 -00.7	346 10.5 +02.0	S 01 12.4 -00.2	18 50.7 +02.3	S 14 17.5 +00.0	08						08
09	11 59.4 +00.7	S 06 23.1 -00.7	1 12.5 +02.0	S 01 12.2 -00.2	33 53.0 +02.4	S 14 17.5 +00.0	09						09
10	27 00.1 +00.7	S 06 22.4 -00.8	16 14.5 +02.0	S 01 12.0 -00.2	48 55.4 +02.3	S 14 17.5 -00.1	10						10
11	42 00.8 +00.7	S 06 21.6 -00.7	31 16.5 +02.0	S 01 11.8 -00.2	63 57.7 +02.4	S 14 17.4 +00.0	11						11
12	57 01.5 +00.8	S 06 20.9 -00.7	46 18.5 +02.0	S 01 11.6 -00.2	79 00.1 +02.4	S 14 17.4 +00.0	12						12
13	72 02.3 +00.7	S 06 20.2 -00.7	61 20.5 +02.0	S 01 11.4 -00.2	94 02.5 +02.3	S 14 17.4 -00.1	13						13
14	87 03.0 +00.7	S 06 19.5 -00.7	76 22.5 +02.0	S 01 11.2 -00.1	109 04.8 +02.4	S 14 17.3 +00.0	14						14
15	102 03.7 +00.7	S 06 18.8 -00.7	91 24.5 +02.1	S 01 11.1 -00.2	124 07.2 +02.3	S 14 17.3 +00.0	15						15
16	117 04.4 +00.7	S 06 18.1 -00.8	106 26.6 +02.0	S 01 10.9 -00.2	139 09.5 +02.4	S 14 17.3 -00.1	16						16
17	132 05.1 +00.7	S 06 17.3 -00.7	121 28.6 +02.0	S 01 10.7 -00.2	154 11.9 +02.3	S 14 17.2 +00.0	17						17
18	147 05.8 +00.7	S 06 16.6 -00.7	136 30.6 +02.0	S 01 10.5 -00.2	169 14.2 +02.4	S 14 17.2 +00.0	18						18
19	162 06.5 +00.8	S 06 15.9 -00.7	151 32.6 +02.0	S 01 10.3 -00.2	184 16.6 +02.3	S 14 17.2 +00.0	19						19
20	177 07.3 +00.7	S 06 15.2 -00.7	166 34.6 +02.0	S 01 10.1 -00.2	199 18.9 +02.4	S 14 17.2 -00.1	20						20
21	192 08.0 +00.7	S 06 14.5 -00.7	181 36.6 +02.0	S 01 09.9 -00.2	214 21.3 +02.4	S 14 17.1 +00.0	21						21
22	207 08.7 +00.7	S 06 13.8 -00.8	196 38.6 +02.0	S 01 09.7 -00.2	229 23.7 +02.3	S 14 17.1 +00.0	22						22
23	222 09.4 +00.7	S 06 13.0 -00.7	211 40.6 +02.0	S 01 09.5 -00.2	244 26.0 +02.4	S 14 17.1 -00.1	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 011° 011° 011° 011° 011° 010°		SHA 000° 000° 000° 360° 360° 360°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:12		Greenwich Culmination Time: 08:55		Greenwich Culmination Time: 06:44								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 52.6 +00.1		N 17 17.8 +00.6		219 29.8 -00.2		N 01 22.1 +01.0		84 25.2 -28.4		N 20 23.0 -09.5		00
01	195 52.7 +00.0		N 17 18.4 +00.7		234 29.6 -00.2		N 01 23.1 +01.1		98 56.8 -28.4		N 20 13.5 -09.5		01
02	210 52.7 +00.0		N 17 19.1 +00.7		249 29.4 -00.2		N 01 24.2 +01.0		113 28.4 -28.3		N 20 04.0 -09.7		02
03	225 52.7 +00.1		N 17 19.8 +00.6		264 29.2 -00.3		N 01 25.2 +01.1		128 00.1 -28.3		N 19 54.3 -09.8		03
04	240 52.8 +00.0		N 17 20.4 +00.7		279 28.9 -00.2		N 01 26.3 +01.0		142 31.8 -28.3		N 19 44.5 -09.9		04
05	255 52.8 +00.0		N 17 21.1 +00.7		294 28.7 -00.2		N 01 27.3 +01.1		157 03.5 -28.3		N 19 34.6 -09.9		05
06	270 52.8 +00.0		N 17 21.8 +00.6		309 28.5 -00.2		N 01 28.4 +01.0		171 35.2 -28.2		N 19 24.7 -10.1		06
07	285 52.8 +00.1		N 17 22.4 +00.7		324 28.3 -00.2		N 01 29.4 +01.1		186 07.0 -28.1		N 19 14.6 -10.2		07
08	300 52.9 +00.0		N 17 23.1 +00.7		339 28.1 -00.2		N 01 30.5 +01.0		200 38.9 -28.2		N 19 04.4 -10.2		08
09	315 52.9 +00.0		N 17 23.8 +00.6		354 27.9 -00.2		N 01 31.5 +01.1		215 10.7 -28.1		N 18 54.2 -10.4		09
10	330 52.9 +00.1		N 17 24.4 +00.7		9 27.7 -00.2		N 01 32.6 +01.0		229 42.6 -28.0		N 18 43.8 -10.4		10
11	345 53.0 +00.0		N 17 25.1 +00.7		24 27.5 -00.2		N 01 33.6 +01.1		244 14.6 -28.1		N 18 33.4 -10.5		11
12	0 53.0 +00.0		N 17 25.8 +00.6		39 27.3 -00.2		N 01 34.7 +01.1		258 46.5 -28.0		N 18 22.9 -10.7		12
13	15 53.0 +00.0		N 17 26.4 +00.7		54 27.1 -00.2		N 01 35.8 +01.0		273 18.5 -27.9		N 18 12.2 -10.7		13
14	30 53.0 +00.1		N 17 27.1 +00.7		69 26.9 -00.3		N 01 36.8 +01.1		287 50.6 -28.0		N 18 01.5 -10.8		14
15	45 53.1 +00.0		N 17 27.8 +00.6		84 26.6 -00.2		N 01 37.9 +01.0		302 22.6 -27.9		N 17 50.7 -10.9		15
16	60 53.1 +00.0		N 17 28.4 +00.7		99 26.4 -00.2		N 01 38.9 +01.1		316 54.7 -27.9		N 17 39.8 -10.9		16
17	75 53.1 +00.0		N 17 29.1 +00.6		114 26.2 -00.2		N 01 40.0 +01.0		331 26.8 -27.8		N 17 28.9 -11.1		17
18	90 53.1 +00.1		N 17 29.7 +00.7		129 26.0 -00.2		N 01 41.0 +01.1		345 59.0 -27.8		N 17 17.8 -11.2		18
19	105 53.2 +00.0		N 17 30.4 +00.7		144 25.8 -00.2		N 01 42.1 +01.0		0 31.2 -27.8		N 17 06.6 -11.2		19
20	120 53.2 +00.0		N 17 31.1 +00.6		159 25.6 -00.2		N 01 43.1 +01.1		15 03.4 -27.8		N 16 55.4 -11.3		20
21	135 53.2 +00.0		N 17 31.7 +00.7		174 25.4 -00.2		N 01 44.2 +01.1		29 35.6 -27.7		N 16 44.1 -11.4		21
22	150 53.2 +00.1		N 17 32.4 +00.6		189 25.2 -00.2		N 01 45.3 +01.0		44 07.9 -27.7		N 16 32.7 -11.5		22
23	165 53.3 +00.0		N 17 33.0 +00.7		204 25.0 -00.2		N 01 46.3 +01.1		58 40.2 -27.7		N 16 21.2 -11.6		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'0 15'0 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 55'1 55'2 55'3 55'4 55'5 55'6				
	SHA 314° 314° 314° 314° 313° 313°				SHA 353° 352° 352° 352° 352° 352°				SHA 217° 215° 213° 210° 208° 206°				
	Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 09:22				Greenwich Culmination Time: 18:57				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	237 10.1 +00.7		S 06 12.3 -00.7		226 42.6 +02.0		S 01 09.3 -00.1		259 28.4 +02.3		S 14 17.0 +00.0		00
01	252 10.8 +00.7		S 06 11.6 -00.7		241 44.6 +02.0		S 01 09.2 -00.2		274 30.7 +02.4		S 14 17.0 +00.0		01
02	267 11.5 +00.8		S 06 10.9 -00.7		256 46.6 +02.0		S 01 09.0 -00.2		289 33.1 +02.3		S 14 17.0 +00.0		02
03	282 12.3 +00.7		S 06 10.2 -00.7		271 48.6 +02.0		S 01 08.8 -00.2		304 35.4 +02.4		S 14 17.0 -00.1		03
04	297 13.0 +00.7		S 06 09.5 -00.8		286 50.6 +02.1		S 01 08.6 -00.2		319 37.8 +02.4		S 14 16.9 +00.0		04
05	312 13.7 +00.7		S 06 08.7 -00.7		301 52.7 +02.0		S 01 08.4 -00.2		334 40.2 +02.3		S 14 16.9 +00.0		05
06	327 14.4 +00.7		S 06 08.0 -00.7		316 54.7 +02.0		S 01 08.2 -00.2		349 42.5 +02.4		S 14 16.9 -00.1		06
07	342 15.1 +00.7		S 06 07.3 -00.7		331 56.7 +02.0		S 01 08.0 -00.2		4 44.9 +02.3		S 14 16.8 +00.0		07
08	357 15.8 +00.8		S 06 06.6 -00.7		346 58.7 +02.0		S 01 07.8 -00.2		19 47.2 +02.4		S 14 16.8 +00.0		08
09	12 16.6 +00.7		S 06 05.9 -00.8		2 00.7 +02.0		S 01 07.6 -00.2		34 49.6 +02.3		S 14 16.8 +00.0		09
10	27 17.3 +00.7		S 06 05.1 -00.7		17 02.7 +02.0		S 01 07.4 -00.1		49 51.9 +02.4		S 14 16.8 -00.1		10
11	42 18.0 +00.7		S 06 04.4 -00.7		32 04.7 +02.0		S 01 07.3 -00.2		64 54.3 +02.4		S 14 16.7 +00.0		11
12	57 18.7 +00.7		S 06 03.7 -00.7		47 06.7 +02.0		S 01 07.1 -00.2		79 56.7 +02.3		S 14 16.7 +00.0		12
13	72 19.4 +00.7		S 06 03.0 -00.7		62 08.7 +02.0		S 01 06.9 -00.2		94 59.0 +02.4		S 14 16.7 -00.1		13
14	87 20.1 +00.8		S 06 02.3 -00.7		77 10.7 +02.0		S 01 06.7 -00.2		110 01.4 +02.3		S 14 16.6 +00.0		14
15	102 20.9 +00.7		S 06 01.6 -00.8		92 12.7 +02.1		S 01 06.5 -00.2		125 03.7 +02.4		S 14 16.6 +00.0		15
16	117 21.6 +00.7		S 06 00.8 -00.7		107 14.8 +02.0		S 01 06.3 -00.2		140 06.1 +02.4		S 14 16.6 +00.0		16
17	132 22.3 +00.7		S 06 00.1 -00.7		122 16.8 +02.0		S 01 06.1 -00.2		155 08.5 +02.3		S 14 16.6 -00.1		17
18	147 23.0 +00.7		S 05 59.4 -00.7		137 18.8 +02.0		S 01 05.9 -00.2		170 10.8 +02.4		S 14 16.5 +00.0		18
19	162 23.7 +00.7		S 05 58.7 -00.7		152 20.8 +02.0		S 01 05.7 -00.1		185 13.2 +02.3		S 14 16.5 +00.0		19
20	177 24.4 +00.8		S 05 58.0 -00.8		167 22.8 +02.0		S 01 05.6 -00.2		200 15.5 +02.4		S 14 16.5 -00.1		20
21	192 25.2 +00.7		S 05 57.2 -00.7		182 24.8 +02.0		S 01 05.4 -00.2		215 17.9 +02.4		S 14 16.4 +00.0		21
22	207 25.9 +00.7		S 05 56.5 -00.7		197 26.8 +02.0		S 01 05.2 -00.2		230 20.3 +02.3		S 14 16.4 +00.0		22
23	222 26.6 +00.7		S 05 55.8 -00.7		212 28.8 +02.0		S 01 05.0 -00.2		245 22.6 +02.4		S 14 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 00'0 00'0 00'0 00'0 00'0 00'0				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 010° 010° 010° 010° 010° 010°				SHA 360° 360° 360° 360° 360° 360°				SHA 033° 033° 033° 033° 033° 033°				
	Greenwich Culmination Time: 08:10				Greenwich Culmination Time: 08:51				Greenwich Culmination Time: 06:41				

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	180 53.3 +00.0	N 17 33.7 +00.6	219 24.8 -00.3	N 01 47.4 +01.0	73 12.5 -27.6	N 16 09.6 -11.7	00							
01	195 53.3 +00.0	N 17 34.3 +00.7	234 24.5 -00.2	N 01 48.4 +01.1	87 44.9 -27.7	N 15 57.9 -11.7	01							
02	210 53.3 +00.1	N 17 35.0 +00.7	249 24.3 -00.2	N 01 49.5 +01.0	102 17.2 -27.6	N 15 46.2 -11.9	02							
03	225 53.4 +00.0	N 17 35.7 +00.6	264 24.1 -00.2	N 01 50.5 +01.1	116 49.6 -27.5	N 15 34.3 -11.9	03							
04	240 53.4 +00.0	N 17 36.3 +00.7	279 23.9 -00.2	N 01 51.6 +01.0	131 22.1 -27.6	N 15 22.4 -12.0	04							
05	255 53.4 +00.0	N 17 37.0 +00.6	294 23.7 -00.2	N 01 52.6 +01.1	145 54.5 -27.5	N 15 10.4 -12.0	05							
06	270 53.4 +00.1	N 17 37.6 +00.7	309 23.5 -00.2	N 01 53.7 +01.1	160 27.0 -27.5	N 14 58.4 -12.2	06							
07	285 53.5 +00.0	N 17 38.3 +00.6	324 23.3 -00.2	N 01 54.8 +01.0	174 59.5 -27.5	N 14 46.2 -12.2	07							
08	300 53.5 +00.0	N 17 38.9 +00.7	339 23.1 -00.3	N 01 55.8 +01.1	189 32.0 -27.5	N 14 34.0 -12.3	08							
09	315 53.5 +00.0	N 17 39.6 +00.6	354 22.8 -00.2	N 01 56.9 +01.0	204 04.5 -27.4	N 14 21.7 -12.4	09							
10	330 53.5 +00.0	N 17 40.2 +00.7	9 22.6 -00.2	N 01 57.9 +01.1	218 37.1 -27.4	N 14 09.3 -12.5	10							
11	345 53.5 +00.1	N 17 40.9 +00.6	24 22.4 -00.2	N 01 59.0 +01.0	233 09.7 -27.4	N 13 56.8 -12.5	11							
12	0 53.6 +00.0	N 17 41.5 +00.7	39 22.2 -00.2	N 02 00.0 +01.1	247 42.3 -27.4	N 13 44.3 -12.6	12							
13	15 53.6 +00.0	N 17 42.2 +00.6	54 22.0 -00.2	N 02 01.1 +01.0	262 14.9 -27.4	N 13 31.7 -12.7	13							
14	30 53.6 +00.0	N 17 42.8 +00.7	69 21.8 -00.2	N 02 02.1 +01.1	276 47.5 -27.4	N 13 19.0 -12.7	14							
15	45 53.6 +00.1	N 17 43.5 +00.6	84 21.6 -00.2	N 02 03.2 +01.1	291 20.1 -27.3	N 13 06.3 -12.9	15							
16	60 53.7 +00.0	N 17 44.1 +00.7	99 21.4 -00.3	N 02 04.3 +01.0	305 52.8 -27.3	N 12 53.4 -12.9	16							
17	75 53.7 +00.0	N 17 44.8 +00.6	114 21.1 -00.2	N 02 05.3 +01.1	320 25.5 -27.3	N 12 40.5 -12.9	17							
18	90 53.7 +00.0	N 17 45.4 +00.7	129 20.9 -00.2	N 02 06.4 +01.0	334 58.2 -27.3	N 12 27.6 -13.1	18							
19	105 53.7 +00.0	N 17 46.1 +00.6	144 20.7 -00.2	N 02 07.4 +01.1	349 30.9 -27.3	N 12 14.5 -13.1	19							
20	120 53.7 +00.1	N 17 46.7 +00.7	159 20.5 -00.2	N 02 08.5 +01.0	4 03.6 -27.3	N 12 01.4 -13.2	20							
21	135 53.8 +00.0	N 17 47.4 +00.6	174 20.3 -00.2	N 02 09.5 +01.1	18 36.3 -27.3	N 11 48.2 -13.2	21							
22	150 53.8 +00.0	N 17 48.0 +00.7	189 20.1 -00.2	N 02 10.6 +01.1	33 09.0 -27.2	N 11 35.0 -13.3	22							
23	165 53.8 +00.0	N 17 48.7 +00.6	204 19.9 -00.2	N 02 11.7 +01.0	47 41.8 -27.3	N 11 21.7 -13.4	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 313° 313° 313° 313° 312° 312°	Greenwich Culmination Time: 11:56	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 352° 351° 351° 351° 351° 351°	Greenwich Culmination Time: 09:22	UT 02 06 10 14 18 22	SD 15'2 15'2 15'2 15'3 15'3 15'4	HP 55'7 55'8 56'0 56'1 56'2 56'4	SHA 204° 202° 200° 198° 196° 194°	Greenwich Culmination Time: 19:43

  

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	237 27.3 +00.7	S 05 55.1 -00.7	227 30.8 +02.1	S 01 04.8 -00.2	260 25.0 +02.3	S 14 16.4 -00.1	00							
01	252 28.0 +00.7	S 05 54.4 -00.7	242 32.9 +02.0	S 01 04.6 -00.2	275 27.3 +02.4	S 14 16.3 +00.0	01							
02	267 28.7 +00.8	S 05 53.7 -00.8	257 34.9 +02.0	S 01 04.4 -00.2	290 29.7 +02.4	S 14 16.3 +00.0	02							
03	282 29.5 +00.7	S 05 52.9 -00.7	272 36.9 +02.0	S 01 04.2 -00.2	305 32.1 +02.3	S 14 16.3 -00.1	03							
04	297 30.2 +00.7	S 05 52.2 -00.7	287 38.9 +02.0	S 01 04.0 -00.1	320 34.4 +02.4	S 14 16.2 +00.0	04							
05	312 30.9 +00.7	S 05 51.5 -00.7	302 40.9 +02.0	S 01 03.9 -00.2	335 36.8 +02.3	S 14 16.2 +00.0	05							
06	327 31.6 +00.7	S 05 50.8 -00.7	317 42.9 +02.0	S 01 03.7 -00.2	350 39.1 +02.4	S 14 16.2 +00.0	06							
07	342 32.3 +00.7	S 05 50.1 -00.8	332 44.9 +02.0	S 01 03.5 -00.2	5 41.5 +02.4	S 14 16.2 -00.1	07							
08	357 33.0 +00.8	S 05 49.3 -00.7	347 46.9 +02.0	S 01 03.3 -00.2	20 43.9 +02.3	S 14 16.1 +00.0	08							
09	12 33.8 +00.7	S 05 48.6 -00.7	2 48.9 +02.1	S 01 03.1 -00.2	35 46.2 +02.4	S 14 16.1 +00.0	09							
10	27 34.5 +00.7	S 05 47.9 -00.7	17 51.0 +02.0	S 01 02.9 -00.2	50 48.6 +02.4	S 14 16.1 +00.0	10							
11	42 35.2 +00.7	S 05 47.2 -00.7	32 53.0 +02.0	S 01 02.7 -00.2	65 51.0 +02.3	S 14 16.1 -00.1	11							
12	57 35.9 +00.7	S 05 46.5 -00.8	47 55.0 +02.0	S 01 02.5 -00.1	80 53.3 +02.4	S 14 16.0 +00.0	12							
13	72 36.6 +00.8	S 05 45.7 -00.7	62 57.0 +02.0	S 01 02.4 -00.2	95 55.7 +02.3	S 14 16.0 +00.0	13							
14	87 37.4 +00.7	S 05 45.0 -00.7	77 59.0 +02.0	S 01 02.2 -00.2	110 58.0 +02.4	S 14 16.0 -00.1	14							
15	102 38.1 +00.7	S 05 44.3 -00.7	93 01.0 +02.0	S 01 02.0 -00.2	126 00.4 +02.4	S 14 15.9 +00.0	15							
16	117 38.8 +00.7	S 05 43.6 -00.7	108 03.0 +02.1	S 01 01.8 -00.2	141 02.8 +02.3	S 14 15.9 +00.0	16							
17	132 39.5 +00.7	S 05 42.9 -00.8	123 05.1 +02.0	S 01 01.6 -00.2	156 05.1 +02.4	S 14 15.9 +00.0	17							
18	147 40.2 +00.8	S 05 42.1 -00.7	138 07.1 +02.0	S 01 01.4 -00.2	171 07.5 +02.4	S 14 15.9 -00.1	18							
19	162 41.0 +00.7	S 05 41.4 -00.7	153 09.1 +02.0	S 01 01.2 -00.2	186 09.9 +02.3	S 14 15.8 +00.0	19							
20	177 41.7 +00.7	S 05 40.7 -00.7	168 11.1 +02.0	S 01 01.0 -00.1	201 12.2 +02.4	S 14 15.8 +00.0	20							
21	192 42.4 +00.7	S 05 40.0 -00.7	183 13.1 +02.0	S 01 00.9 -00.2	216 14.6 +02.3	S 14 15.8 +00.0	21							
22	207 43.1 +00.7	S 05 39.3 -00.8	198 15.1 +02.0	S 01 00.7 -00.2	231 16.9 +02.4	S 14 15.8 -00.1	22							
23	222 43.8 +00.8	S 05 38.5 -00.7	213 17.1 +02.0	S 01 00.5 -00.2	246 19.3 +02.4	S 14 15.7 +00.0	23							
UT 02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 010° 010° 009° 009° 009° 009°	Greenwich Culmination Time: 08:09	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 360° 360° 360° 360° 360° 360°	Greenwich Culmination Time: 08:48	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 033° 033° 033° 033° 033° 033°	Greenwich Culmination Time: 06:37

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UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.8 +00.0	N 17 49.3 +00.6	219 19.7 -00.3	N 02 12.7 +01.1	62 14.5 -27.2	N 11 08.3 -13.5	00						
01	195 53.8 +00.0	N 17 49.9 +00.7	234 19.4 -00.2	N 02 13.8 +01.0	76 47.3 -27.2	N 10 54.8 -13.5	01						
02	210 53.8 +00.1	N 17 50.6 +00.6	249 19.2 -00.2	N 02 14.8 +01.1	91 20.1 -27.3	N 10 41.3 -13.6	02						
03	225 53.9 +00.0	N 17 51.2 +00.7	264 19.0 -00.2	N 02 15.9 +01.0	105 52.8 -27.2	N 10 27.7 -13.6	03						
04	240 53.9 +00.0	N 17 51.9 +00.6	279 18.8 -00.2	N 02 16.9 +01.1	120 25.6 -27.2	N 10 14.1 -13.7	04						
05	255 53.9 +00.0	N 17 52.5 +00.7	294 18.6 -00.2	N 02 18.0 +01.1	134 58.4 -27.2	N 10 00.4 -13.8	05						
06	270 53.9 +00.0	N 17 53.2 +00.6	309 18.4 -00.3	N 02 19.1 +01.0	149 31.2 -27.2	N 09 46.6 -13.8	06						
07	285 53.9 +00.1	N 17 53.8 +00.6	324 18.1 -00.2	N 02 20.1 +01.1	164 04.0 -27.3	N 09 32.8 -13.9	07						
08	300 54.0 +00.0	N 17 54.4 +00.7	339 17.9 -00.2	N 02 21.2 +01.0	178 36.7 -27.2	N 09 18.9 -14.0	08						
09	315 54.0 +00.0	N 17 55.1 +00.6	354 17.7 -00.2	N 02 22.2 +01.1	193 09.5 -27.2	N 09 04.9 -14.0	09						
10	330 54.0 +00.0	N 17 55.7 +00.7	9 17.5 -00.2	N 02 23.3 +01.0	207 42.3 -27.2	N 08 50.9 -14.0	10						
11	345 54.0 +00.0	N 17 56.4 +00.6	24 17.3 -00.2	N 02 24.3 +01.1	222 15.1 -27.2	N 08 36.9 -14.1	11						
12	0 54.0 +00.0	N 17 57.0 +00.6	39 17.1 -00.2	N 02 25.4 +01.1	236 47.9 -27.2	N 08 22.8 -14.2	12						
13	15 54.0 +00.0	N 17 57.6 +00.7	54 16.9 -00.3	N 02 26.5 +01.0	251 20.7 -27.3	N 08 08.6 -14.3	13						
14	30 54.0 +00.1	N 17 58.3 +00.6	69 16.6 -00.2	N 02 27.5 +01.1	265 53.4 -27.2	N 07 54.3 -14.2	14						
15	45 54.1 +00.0	N 17 58.9 +00.7	84 16.4 -00.2	N 02 28.6 +01.0	280 26.2 -27.2	N 07 40.1 -14.4	15						
16	60 54.1 +00.0	N 17 59.6 +00.6	99 16.2 -00.2	N 02 29.6 +01.1	294 59.0 -27.3	N 07 25.7 -14.4	16						
17	75 54.1 +00.0	N 18 00.2 +00.6	114 16.0 -00.2	N 02 30.7 +01.1	309 31.7 -27.2	N 07 11.3 -14.4	17						
18	90 54.1 +00.0	N 18 00.8 +00.7	129 15.8 -00.2	N 02 31.8 +01.0	324 04.5 -27.3	N 06 56.9 -14.5	18						
19	105 54.1 +00.0	N 18 01.5 +00.6	144 15.6 -00.3	N 02 32.8 +01.1	338 37.2 -27.3	N 06 42.4 -14.5	19						
20	120 54.1 +00.1	N 18 02.1 +00.6	159 15.3 -00.2	N 02 33.9 +01.0	353 09.9 -27.3	N 06 27.9 -14.6	20						
21	135 54.2 +00.0	N 18 02.7 +00.7	174 15.1 -00.2	N 02 34.9 +01.1	7 42.6 -27.3	N 06 13.3 -14.7	21						
22	150 54.2 +00.0	N 18 03.4 +00.6	189 14.9 -00.2	N 02 36.0 +01.0	22 15.3 -27.3	N 05 58.6 -14.7	22						
23	165 54.2 +00.0	N 18 04.0 +00.6	204 14.7 -00.2	N 02 37.0 +01.1	36 48.0 -27.3	N 05 43.9 -14.7	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 15'4 15'4 15'5 15'5 15'5 15'6					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 56'5 56'6 56'8 56'9 57'1 57'2						
	SHA 312° 312° 312° 312° 311° 311°			SHA 350° 350° 350° 350° 350° 350°			SHA 192° 191° 189° 187° 185° 183°						
	Greenwich Culmination Time: 11:56			Greenwich Culmination Time: 09:22			Greenwich Culmination Time: 20:28						

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	237 44.6 +00.7	S 05 37.8 -00.7	228 19.1 +02.1	S 01 00.3 -00.2	261 21.7 +02.3	S 14 15.7 +00.0	00						
01	252 45.3 +00.7	S 05 37.1 -00.7	243 21.2 +02.0	S 01 00.1 -00.2	276 24.0 +02.4	S 14 15.7 +00.0	01						
02	267 46.0 +00.7	S 05 36.4 -00.7	258 23.2 +02.0	S 00 59.9 -00.2	291 26.4 +02.4	S 14 15.7 -00.1	02						
03	282 46.7 +00.7	S 05 35.7 -00.8	273 25.2 +02.0	S 00 59.7 -00.1	306 28.8 +02.3	S 14 15.6 +00.0	03						
04	297 47.4 +00.8	S 05 34.9 -00.7	288 27.2 +02.0	S 00 59.6 -00.2	321 31.1 +02.4	S 14 15.6 +00.0	04						
05	312 48.2 +00.7	S 05 34.2 -00.7	303 29.2 +02.0	S 00 59.4 -00.2	336 33.5 +02.4	S 14 15.6 -00.1	05						
06	327 48.9 +00.7	S 05 33.5 -00.7	318 31.2 +02.1	S 00 59.2 -00.2	351 35.9 +02.3	S 14 15.5 +00.0	06						
07	342 49.6 +00.7	S 05 32.8 -00.7	333 33.3 +02.0	S 00 59.0 -00.2	6 38.2 +02.4	S 14 15.5 +00.0	07						
08	357 50.3 +00.7	S 05 32.1 -00.8	348 35.3 +02.0	S 00 58.8 -00.2	21 40.6 +02.4	S 14 15.5 +00.0	08						
09	12 51.0 +00.8	S 05 31.3 -00.7	3 37.3 +02.0	S 00 58.6 -00.2	36 43.0 +02.3	S 14 15.5 -00.1	09						
10	27 51.8 +00.7	S 05 30.6 -00.7	18 39.3 +02.0	S 00 58.4 -00.2	51 45.3 +02.4	S 14 15.4 +00.0	10						
11	42 52.5 +00.7	S 05 29.9 -00.7	33 41.3 +02.0	S 00 58.2 -00.1	66 47.7 +02.4	S 14 15.4 +00.0	11						
12	57 53.2 +00.7	S 05 29.2 -00.7	48 43.3 +02.0	S 00 58.1 -00.2	81 50.1 +02.3	S 14 15.4 +00.0	12						
13	72 53.9 +00.7	S 05 28.5 -00.8	63 45.3 +02.1	S 00 57.9 -00.2	96 52.4 +02.4	S 14 15.4 -00.1	13						
14	87 54.6 +00.8	S 05 27.7 -00.7	78 47.4 +02.0	S 00 57.7 -00.2	111 54.8 +02.4	S 14 15.3 +00.0	14						
15	102 55.4 +00.7	S 05 27.0 -00.7	93 49.4 +02.0	S 00 57.5 -00.2	126 57.2 +02.3	S 14 15.3 +00.0	15						
16	117 56.1 +00.7	S 05 26.3 -00.7	108 51.4 +02.0	S 00 57.3 -00.2	141 59.5 +02.4	S 14 15.3 +00.0	16						
17	132 56.8 +00.7	S 05 25.6 -00.7	123 53.4 +02.0	S 00 57.1 -00.2	157 01.9 +02.4	S 14 15.3 -00.1	17						
18	147 57.5 +00.8	S 05 24.9 -00.8	138 55.4 +02.0	S 00 56.9 -00.1	172 04.3 +02.3	S 14 15.2 +00.0	18						
19	162 58.3 +00.7	S 05 24.1 -00.7	153 57.4 +02.1	S 00 56.8 -00.2	187 06.6 +02.4	S 14 15.2 +00.0	19						
20	177 59.0 +00.7	S 05 23.4 -00.7	168 59.5 +02.0	S 00 56.6 -00.2	202 09.0 +02.4	S 14 15.2 +00.0	20						
21	192 59.7 +00.7	S 05 22.7 -00.7	184 01.5 +02.0	S 00 56.4 -00.2	217 11.4 +02.3	S 14 15.2 -00.1	21						
22	208 00.4 +00.7	S 05 22.0 -00.8	199 03.5 +02.0	S 00 56.2 -00.2	232 13.7 +02.4	S 14 15.1 +00.0	22						
23	223 01.1 +00.8	S 05 21.2 -00.7	214 05.5 +02.0	S 00 56.0 -00.2	247 16.1 +02.4	S 14 15.1 +00.0	23						
UT	02 06 10 14 18 22	SD 00'0 00'0 00'0 00'0 00'0 00'0	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 009° 009° 009° 009° 008° 008°			SHA 360° 360° 359° 359° 359° 359°			SHA 033° 033° 033° 033° 033° 033°						
	Greenwich Culmination Time: 08:08			Greenwich Culmination Time: 08:45			Greenwich Culmination Time: 06:33						

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 54.2 +00.0	N 18 04.6 +00.7	219 14.5 -00.3	N 02 38.1 +01.1	51 20.7 -27.4	N 05 29.2 -14.8	00						
01	195 54.2 +00.0	N 18 05.3 +00.6	234 14.2 -00.2	N 02 39.2 +01.0	65 53.3 -27.4	N 05 14.4 -14.8	01						
02	210 54.2 +00.0	N 18 05.9 +00.6	249 14.0 -00.2	N 02 40.2 +01.1	80 25.9 -27.3	N 04 59.6 -14.9	02						
03	225 54.2 +00.0	N 18 06.5 +00.6	264 13.8 -00.2	N 02 41.3 +01.0	94 58.6 -27.5	N 04 44.7 -14.9	03						
04	240 54.2 +00.1	N 18 07.1 +00.7	279 13.6 -00.2	N 02 42.3 +01.1	109 31.1 -27.4	N 04 29.8 -14.9	04						
05	255 54.3 +00.0	N 18 07.8 +00.6	294 13.4 -00.2	N 02 43.4 +01.1	124 03.7 -27.4	N 04 14.9 -15.0	05						
06	270 54.3 +00.0	N 18 08.4 +00.6	309 13.2 -00.3	N 02 44.5 +01.0	138 36.3 -27.5	N 03 59.9 -15.0	06						
07	285 54.3 +00.0	N 18 09.0 +00.7	324 12.9 -00.2	N 02 45.5 +01.1	153 08.8 -27.5	N 03 44.9 -15.1	07						
08	300 54.3 +00.0	N 18 09.7 +00.6	339 12.7 -00.2	N 02 46.6 +01.0	167 41.3 -27.5	N 03 29.8 -15.1	08						
09	315 54.3 +00.0	N 18 10.3 +00.6	354 12.5 -00.2	N 02 47.6 +01.1	182 13.8 -27.6	N 03 14.7 -15.2	09						
10	330 54.3 +00.0	N 18 10.9 +00.6	9 12.3 -00.2	N 02 48.7 +01.1	196 46.2 -27.6	N 02 59.5 -15.1	10						
11	345 54.3 +00.0	N 18 11.5 +00.7	24 12.1 -00.3	N 02 49.8 +01.0	211 18.6 -27.6	N 02 44.4 -15.2	11						
12	0 54.3 +00.0	N 18 12.2 +00.6	39 11.8 -00.2	N 02 50.8 +01.1	225 51.0 -27.6	N 02 29.2 -15.3	12						
13	15 54.3 +00.0	N 18 12.8 +00.6	54 11.6 -00.2	N 02 51.9 +01.0	240 23.4 -27.7	N 02 13.9 -15.3	13						
14	30 54.3 +00.1	N 18 13.4 +00.6	69 11.4 -00.2	N 02 52.9 +01.1	254 55.7 -27.7	N 01 58.6 -15.3	14						
15	45 54.4 +00.0	N 18 14.0 +00.7	84 11.2 -00.2	N 02 54.0 +01.0	269 28.0 -27.7	N 01 43.3 -15.3	15						
16	60 54.4 +00.0	N 18 14.7 +00.6	99 11.0 -00.3	N 02 55.0 +01.1	284 00.3 -27.8	N 01 28.0 -15.3	16						
17	75 54.4 +00.0	N 18 15.3 +00.6	114 10.7 -00.2	N 02 56.1 +01.1	298 32.5 -27.8	N 01 12.7 -15.4	17						
18	90 54.4 +00.0	N 18 15.9 +00.6	129 10.5 -00.2	N 02 57.2 +01.0	313 04.7 -27.9	N 00 57.3 -15.4	18						
19	105 54.4 +00.0	N 18 16.5 +00.7	144 10.3 -00.2	N 02 58.2 +01.1	327 36.8 -27.9	N 00 41.9 -15.5	19						
20	120 54.4 +00.0	N 18 17.2 +00.6	159 10.1 -00.2	N 02 59.3 +01.0	342 08.9 -27.9	N 00 26.4 -15.4	20						
21	135 54.4 +00.0	N 18 17.8 +00.6	174 09.9 -00.3	N 03 00.3 +01.1	356 41.0 -28.0	N 00 11.0 -15.5	21						
22	150 54.4 +00.0	N 18 18.4 +00.6	189 09.6 -00.2	N 03 01.4 +01.1	11 13.0 -28.0	S 00 04.5 +15.5	22						
23	165 54.4 +00.0	N 18 19.0 +00.6	204 09.4 -00.2	N 03 02.5 +01.0	25 45.0 -28.0	S 00 20.0 +15.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'7 15'7 15'8 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'4 57'5 57'7 57'8 58'0 58'1								
	SHA 311° 311° 311° 311° 310° 310°		SHA 349° 349° 349° 349° 349° 349°		SHA 181° 179° 177° 175° 173° 171°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:23		Greenwich Culmination Time: 21:13								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 01.9 +00.7	S 05 20.5 -00.7	229 07.5 +02.1	S 00 55.8 -00.2	262 18.5 +02.3	S 14 15.1 +00.0	00						
01	253 02.6 +00.7	S 05 19.8 -00.7	244 09.6 +02.0	S 00 55.6 -00.1	277 20.8 +02.4	S 14 15.1 -00.1	01						
02	268 03.3 +00.7	S 05 19.1 -00.7	259 11.6 +02.0	S 00 55.5 -00.2	292 23.2 +02.4	S 14 15.0 +00.0	02						
03	283 04.0 +00.8	S 05 18.4 -00.8	274 13.6 +02.0	S 00 55.3 -00.2	307 25.6 +02.3	S 14 15.0 +00.0	03						
04	298 04.8 +00.7	S 05 17.6 -00.7	289 15.6 +02.0	S 00 55.1 -00.2	322 27.9 +02.4	S 14 15.0 +00.0	04						
05	313 05.5 +00.7	S 05 16.9 -00.7	304 17.6 +02.0	S 00 54.9 -00.2	337 30.3 +02.4	S 14 15.0 -00.1	05						
06	328 06.2 +00.7	S 05 16.2 -00.7	319 19.6 +02.1	S 00 54.7 -00.2	352 32.7 +02.3	S 14 14.9 +00.0	06						
07	343 06.9 +00.7	S 05 15.5 -00.7	334 21.7 +02.0	S 00 54.5 -00.2	7 35.0 +02.4	S 14 14.9 +00.0	07						
08	358 07.6 +00.8	S 05 14.8 -00.8	349 23.7 +02.0	S 00 54.3 -00.1	22 37.4 +02.4	S 14 14.9 +00.0	08						
09	13 08.4 +00.7	S 05 14.0 -00.7	4 25.7 +02.0	S 00 54.2 -00.2	37 39.8 +02.3	S 14 14.9 -00.1	09						
10	28 09.1 +00.7	S 05 13.3 -00.7	19 27.7 +02.0	S 00 54.0 -00.2	52 42.1 +02.4	S 14 14.8 +00.0	10						
11	43 09.8 +00.7	S 05 12.6 -00.7	34 29.7 +02.1	S 00 53.8 -00.2	67 44.5 +02.4	S 14 14.8 +00.0	11						
12	58 10.5 +00.8	S 05 11.9 -00.8	49 31.8 +02.0	S 00 53.6 -00.2	82 46.9 +02.4	S 14 14.8 +00.0	12						
13	73 11.3 +00.7	S 05 11.1 -00.7	64 33.8 +02.0	S 00 53.4 -00.2	97 49.3 +02.3	S 14 14.8 -00.1	13						
14	88 12.0 +00.7	S 05 10.4 -00.7	79 35.8 +02.0	S 00 53.2 -00.1	112 51.6 +02.4	S 14 14.7 +00.0	14						
15	103 12.7 +00.7	S 05 09.7 -00.7	94 37.8 +02.0	S 00 53.1 -00.2	127 54.0 +02.4	S 14 14.7 +00.0	15						
16	118 13.4 +00.8	S 05 09.0 -00.7	109 39.8 +02.1	S 00 52.9 -00.2	142 56.4 +02.3	S 14 14.7 +00.0	16						
17	133 14.2 +00.7	S 05 08.3 -00.8	124 41.9 +02.0	S 00 52.7 -00.2	157 58.7 +02.4	S 14 14.7 -00.1	17						
18	148 14.9 +00.7	S 05 07.5 -00.7	139 43.9 +02.0	S 00 52.5 -00.2	173 01.1 +02.4	S 14 14.6 +00.0	18						
19	163 15.6 +00.7	S 05 06.8 -00.7	154 45.9 +02.0	S 00 52.3 -00.2	188 03.5 +02.4	S 14 14.6 +00.0	19						
20	178 16.3 +00.7	S 05 06.1 -00.7	169 47.9 +02.0	S 00 52.1 -00.1	203 05.9 +02.3	S 14 14.6 +00.0	20						
21	193 17.0 +00.8	S 05 05.4 -00.8	184 49.9 +02.1	S 00 52.0 -00.2	218 08.2 +02.4	S 14 14.6 -00.1	21						
22	208 17.8 +00.7	S 05 04.6 -00.7	199 52.0 +02.0	S 00 51.8 -00.2	233 10.6 +02.4	S 14 14.5 +00.0	22						
23	223 18.5 +00.7	S 05 03.9 -00.7	214 54.0 +02.0	S 00 51.6 -00.2	248 13.0 +02.3	S 14 14.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'0 00'0 00'0 00'0 00'0 00'0		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 008° 008° 008° 008° 008° 008°		SHA 359° 359° 359° 359° 359° 359°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 08:07		Greenwich Culmination Time: 08:42		Greenwich Culmination Time: 06:29								

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 54.4 +00.0	N 18 19.6 +00.7	219 09.2 -00.2	N 03 03.5 +01.1	40 17.0 -28.1	S 00 35.6 +15.5	00	01							
01	195 54.4 +00.0	N 18 20.3 +00.6	234 09.0 -00.3	N 03 04.6 +01.0	54 48.9 -28.2	S 00 51.1 +15.6	01	02							
02	210 54.4 +00.1	N 18 20.9 +00.6	249 08.7 -00.2	N 03 05.6 +01.1	69 20.7 -28.2	S 01 06.7 +15.5	02	03							
03	225 54.5 +00.0	N 18 21.5 +00.6	264 08.5 -00.2	N 03 06.7 +01.1	83 52.5 -28.2	S 01 22.2 +15.6	03	04							
04	240 54.5 +00.0	N 18 22.1 +00.6	279 08.3 -00.2	N 03 07.8 +01.0	98 24.3 -28.3	S 01 37.8 +15.6	04	05							
05	255 54.5 +00.0	N 18 22.7 +00.6	294 08.1 -00.2	N 03 08.8 +01.1	112 56.0 -28.4	S 01 53.4 +15.7	05	06							
06	270 54.5 +00.0	N 18 23.3 +00.7	309 07.9 -00.3	N 03 09.9 +01.0	127 27.6 -28.4	S 02 09.1 +15.6	06	07							
07	285 54.5 +00.0	N 18 24.0 +00.6	324 07.6 -00.2	N 03 10.9 +01.1	141 59.2 -28.4	S 02 24.7 +15.6	07	08							
08	300 54.5 +00.0	N 18 24.6 +00.6	339 07.4 -00.2	N 03 12.0 +01.1	156 30.8 -28.5	S 02 40.3 +15.7	08	09							
09	315 54.5 +00.0	N 18 25.2 +00.6	354 07.2 -00.2	N 03 13.1 +01.0	171 02.3 -28.6	S 02 56.0 +15.6	09	10							
10	330 54.5 +00.0	N 18 25.8 +00.6	9 07.0 -00.3	N 03 14.1 +01.1	185 33.7 -28.6	S 03 11.6 +15.7	10	11							
11	345 54.5 +00.0	N 18 26.4 +00.6	24 06.7 -00.2	N 03 15.2 +01.0	200 05.1 -28.7	S 03 27.3 +15.6	11	12							
12	0 54.5 +00.0	N 18 27.0 +00.6	39 06.5 -00.2	N 03 16.2 +01.1	214 36.4 -28.7	S 03 42.9 +15.7	12	13							
13	15 54.5 +00.0	N 18 27.6 +00.7	54 06.3 -00.2	N 03 17.3 +01.1	229 07.7 -28.8	S 03 58.6 +15.7	13	14							
14	30 54.5 +00.0	N 18 28.3 +00.6	69 06.1 -00.3	N 03 18.4 +01.0	243 38.9 -28.9	S 04 14.3 +15.6	14	15							
15	45 54.5 +00.0	N 18 28.9 +00.6	84 05.8 -00.2	N 03 19.4 +01.1	258 10.0 -28.9	S 04 29.9 +15.7	15	16							
16	60 54.5 +00.0	N 18 29.5 +00.6	99 05.6 -00.2	N 03 20.5 +01.0	272 41.1 -29.0	S 04 45.6 +15.7	16	17							
17	75 54.5 +00.0	N 18 30.1 +00.6	114 05.4 -00.2	N 03 21.5 +01.1	287 12.1 -29.1	S 05 01.3 +15.6	17	18							
18	90 54.5 +00.0	N 18 30.7 +00.6	129 05.2 -00.3	N 03 22.6 +01.1	301 43.0 -29.1	S 05 16.9 +15.7	18	19							
19	105 54.5 +00.0	N 18 31.3 +00.6	144 04.9 -00.2	N 03 23.7 +01.0	316 13.9 -29.2	S 05 32.6 +15.6	19	20							
20	120 54.5 +00.0	N 18 31.9 +00.6	159 04.7 -00.2	N 03 24.7 +01.1	330 44.7 -29.2	S 05 48.2 +15.7	20	21							
21	135 54.5 +00.0	N 18 32.5 +00.6	174 04.5 -00.2	N 03 25.8 +01.0	345 15.5 -29.4	S 06 03.9 +15.6	21	22							
22	150 54.5 +00.0	N 18 33.1 +00.6	189 04.3 -00.3	N 03 26.8 +01.1	359 46.1 -29.4	S 06 19.5 +15.6	22	23							
23	165 54.5 +00.0	N 18 33.7 +00.6	204 04.0 -00.2	N 03 27.9 +01.1	14 16.7 -29.5	S 06 35.1 +15.6	23								
	UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 310° 310° 310° 310° 309° 309°	Greenwich Culmination Time: 11:56	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 348° 348° 348° 348° 348° 347°	Greenwich Culmination Time: 09:23	UT 02 06 10 14 18 22	SD 15'9 15'9 16'0 16'0 16'0 16'1	HP 58'3 58'4 58'6 58'7 58'9 59'0	SHA 169° 166° 164° 162° 160° 158°	Greenwich Culmination Time: 22:00

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT		
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec			
00	238 19.2 +00.7	S 05 03.2 -00.7	229 56.0 +02.0	S 00 51.4 -00.2	263 15.3 +02.4	S 14 14.5 +00.0	00	01							
01	253 19.9 +00.8	S 05 02.5 -00.7	244 58.0 +02.0	S 00 51.2 -00.2	278 17.7 +02.4	S 14 14.5 -00.1	01	02							
02	268 20.7 +00.7	S 05 01.8 -00.8	260 00.0 +02.1	S 00 51.0 -00.2	293 20.1 +02.4	S 14 14.4 +00.0	02	03							
03	283 21.4 +00.7	S 05 01.0 -00.7	275 02.1 +02.0	S 00 50.8 -00.1	308 22.5 +02.3	S 14 14.4 +00.0	03	04							
04	298 22.1 +00.7	S 05 00.3 -00.7	290 04.1 +02.0	S 00 50.7 -00.2	323 24.8 +02.4	S 14 14.4 +00.0	04	05							
05	313 22.8 +00.8	S 04 59.6 -00.7	305 06.1 +02.0	S 00 50.5 -00.2	338 27.2 +02.4	S 14 14.4 +00.0	05	06							
06	328 23.6 +00.7	S 04 58.9 -00.8	320 08.1 +02.1	S 00 50.3 -00.2	353 29.6 +02.3	S 14 14.4 -00.1	06	07							
07	343 24.3 +00.7	S 04 58.1 -00.7	335 10.2 +02.0	S 00 50.1 -00.2	8 31.9 +02.4	S 14 14.3 +00.0	07	08							
08	358 25.0 +00.7	S 04 57.4 -00.7	350 12.2 +02.0	S 00 49.9 -00.2	23 34.3 +02.4	S 14 14.3 +00.0	08	09							
09	13 25.7 +00.8	S 04 56.7 -00.7	5 14.2 +02.0	S 00 49.7 -00.1	38 36.7 +02.4	S 14 14.3 +00.0	09	10							
10	28 26.5 +00.7	S 04 56.0 -00.8	20 16.2 +02.0	S 00 49.6 -00.2	53 39.1 +02.3	S 14 14.3 -00.1	10	11							
11	43 27.2 +00.7	S 04 55.2 -00.7	35 18.2 +02.1	S 00 49.4 -00.2	68 41.4 +02.4	S 14 14.2 +00.0	11	12							
12	58 27.9 +00.8	S 04 54.5 -00.7	50 20.3 +02.0	S 00 49.2 -00.2	83 43.8 +02.4	S 14 14.2 +00.0	12	13							
13	73 28.7 +00.7	S 04 53.8 -00.7	65 22.3 +02.0	S 00 49.0 -00.2	98 46.2 +02.4	S 14 14.2 +00.0	13	14							
14	88 29.4 +00.7	S 04 53.1 -00.7	80 24.3 +02.0	S 00 48.8 -00.1	113 48.6 +02.3	S 14 14.2 -00.1	14	15							
15	103 30.1 +00.7	S 04 52.4 -00.8	95 26.3 +02.1	S 00 48.7 -00.2	128 50.9 +02.4	S 14 14.1 +00.0	15	16							
16	118 30.8 +00.8	S 04 51.6 -00.7	110 28.4 +02.0	S 00 48.5 -00.2	143 53.3 +02.4	S 14 14.1 +00.0	16	17							
17	133 31.6 +00.7	S 04 50.9 -00.7	125 30.4 +02.0	S 00 48.3 -00.2	158 55.7 +02.4	S 14 14.1 +00.0	17	18							
18	148 32.3 +00.7	S 04 50.2 -00.7	140 32.4 +02.0	S 00 48.1 -00.2	173 58.1 +02.3	S 14 14.1 -00.1	18	19							
19	163 33.0 +00.7	S 04 49.5 -00.8	155 34.4 +02.1	S 00 47.9 -00.2	189 00.4 +02.4	S 14 14.0 +00.0	19	20							
20	178 33.7 +00.8	S 04 48.7 -00.7	170 36.5 +02.0	S 00 47.7 -00.1	204 02.8 +02.4	S 14 14.0 +00.0	20	21							
21	193 34.5 +00.7	S 04 48.0 -00.7	185 38.5 +02.0	S 00 47.6 -00.2	219 05.2 +02.4	S 14 14.0 +00.0	21	22							
22	208 35.2 +00.7	S 04 47.3 -00.7	200 40.5 +02.0	S 00 47.4 -00.2	234 07.6 +02.3	S 14 14.0 +00.0	22	23							
23	223 35.9 +00.7	S 04 46.6 -00.8	215 42.5 +02.1	S 00 47.2 -00.2	249 09.9 +02.4	S 14 14.0 -00.1	23								
	UT 02 06 10 14 18 22	SD 00'0 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 008° 007° 007° 007° 007° 007°	Greenwich Culmination Time: 08:06	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 359° 359° 359° 359° 359° 359°	Greenwich Culmination Time: 08:39	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 033° 033° 033° 033° 032° 032°	Greenwich Culmination Time: 06:25

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.5 +00.0	N 18 34.3 +00.6	219 03.8 -00.2	N 03 29.0 +01.0	28 47.2 -29.5	S 06 50.7 +15.6	00						00
01	195 54.5 +00.0	N 18 34.9 +00.6	234 03.6 -00.2	N 03 30.0 +01.1	43 17.7 -29.7	S 07 06.3 +15.5	01						01
02	210 54.5 +00.0	N 18 35.5 +00.7	249 03.4 -00.3	N 03 31.1 +01.0	57 48.0 -29.7	S 07 21.8 +15.6	02						02
03	225 54.5 +00.0	N 18 36.2 +00.6	264 03.1 -00.2	N 03 32.1 +01.1	72 18.3 -29.7	S 07 37.4 +15.5	03						03
04	240 54.5 +00.0	N 18 36.8 +00.6	279 02.9 -00.2	N 03 33.2 +01.1	86 48.6 -29.9	S 07 52.9 +15.5	04						04
05	255 54.5 +00.0	N 18 37.4 +00.6	294 02.7 -00.2	N 03 34.3 +01.0	101 18.7 -30.0	S 08 08.4 +15.5	05						05
06	270 54.5 +00.0	N 18 38.0 +00.6	309 02.5 -00.3	N 03 35.3 +01.1	115 48.7 -30.0	S 08 23.9 +15.4	06						06
07	285 54.5 +00.0	N 18 38.6 +00.6	324 02.2 -00.2	N 03 36.4 +01.0	130 18.7 -30.1	S 08 39.3 +15.4	07						07
08	300 54.5 +00.0	N 18 39.2 +00.6	339 02.0 -00.2	N 03 37.4 +01.1	144 48.6 -30.2	S 08 54.7 +15.4	08						08
09	315 54.5 +00.0	N 18 39.8 +00.6	354 01.8 -00.2	N 03 38.5 +01.1	159 18.4 -30.3	S 09 10.1 +15.4	09						09
10	330 54.5 +00.0	N 18 40.4 +00.6	9 01.6 -00.3	N 03 39.6 +01.0	173 48.1 -30.4	S 09 25.5 +15.3	10						10
11	345 54.5 +00.0	N 18 41.0 +00.6	24 01.3 -00.2	N 03 40.6 +01.1	188 17.7 -30.4	S 09 40.8 +15.3	11						11
12	0 54.5 +00.0	N 18 41.6 +00.6	39 01.1 -00.2	N 03 41.7 +01.0	202 47.3 -30.6	S 09 56.1 +15.3	12						12
13	15 54.5 +00.0	N 18 42.2 +00.6	54 00.9 -00.3	N 03 42.7 +01.1	217 16.7 -30.6	S 10 11.4 +15.2	13						13
14	30 54.5 +00.0	N 18 42.8 +00.6	69 00.6 -00.2	N 03 43.8 +01.1	231 46.1 -30.7	S 10 26.6 +15.2	14						14
15	45 54.5 +00.0	N 18 43.4 +00.6	84 00.4 -00.2	N 03 44.9 +01.0	246 15.4 -30.8	S 10 41.8 +15.1	15						15
16	60 54.5 +00.0	N 18 44.0 +00.6	99 00.2 -00.2	N 03 45.9 +01.1	260 44.6 -30.9	S 10 56.9 +15.1	16						16
17	75 54.5 +00.0	N 18 44.6 +00.6	113 60.0 -00.3	N 03 47.0 +01.0	275 13.7 -31.1	S 11 12.0 +15.1	17						17
18	90 54.5 +00.0	N 18 45.2 +00.6	128 59.7 -00.2	N 03 48.0 +01.1	289 42.6 -31.1	S 11 27.1 +15.0	18						18
19	105 54.5 +00.0	N 18 45.8 +00.6	143 59.5 -00.2	N 03 49.1 +01.1	304 11.5 -31.2	S 11 42.1 +14.9	19						19
20	120 54.5 +00.0	N 18 46.4 +00.5	158 59.3 -00.3	N 03 50.2 +01.0	318 40.3 -31.2	S 11 57.0 +14.9	20						20
21	135 54.5 +00.0	N 18 46.9 +00.6	173 59.0 -00.2	N 03 51.2 +01.1	333 09.1 -31.4	S 12 11.9 +14.9	21						21
22	150 54.5 +00.0	N 18 47.5 +00.6	188 58.8 -00.2	N 03 52.3 +01.0	347 37.7 -31.5	S 12 26.8 +14.8	22						22
23	165 54.5 +00.0	N 18 48.1 +00.6	203 58.6 -00.3	N 03 53.3 +01.1	2 06.2 -31.6	S 12 41.6 +14.7	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'2 16'2 16'2 16'3 16'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'2 59'3 59'4 59'6 59'7 59'8								
	SHA 309° 309° 309° 309° 308° 308°		SHA 347° 347° 347° 347° 347° 346°		SHA 156° 154° 152° 149° 147° 145°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:23		Greenwich Culmination Time: 22:51								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 36.6 +00.8	S 04 45.8 -00.7	230 44.6 +02.0	S 00 47.0 -00.2	264 12.3 +02.4	S 14 13.9 +00.0	00						00
01	253 37.4 +00.7	S 04 45.1 -00.7	245 46.6 +02.0	S 00 46.8 -00.2	279 14.7 +02.4	S 14 13.9 +00.0	01						01
02	268 38.1 +00.7	S 04 44.4 -00.7	260 48.6 +02.0	S 00 46.6 -00.1	294 17.1 +02.3	S 14 13.9 +00.0	02						02
03	283 38.8 +00.7	S 04 43.7 -00.8	275 50.6 +02.1	S 00 46.5 -00.2	309 19.4 +02.4	S 14 13.9 -00.1	03						03
04	298 39.5 +00.8	S 04 42.9 -00.7	290 52.7 +02.0	S 00 46.3 -00.2	324 21.8 +02.4	S 14 13.8 +00.0	04						04
05	313 40.3 +00.7	S 04 42.2 -00.7	305 54.7 +02.0	S 00 46.1 -00.2	339 24.2 +02.4	S 14 13.8 +00.0	05						05
06	328 41.0 +00.7	S 04 41.5 -00.7	320 56.7 +02.0	S 00 45.9 -00.2	354 26.6 +02.3	S 14 13.8 +00.0	06						06
07	343 41.7 +00.8	S 04 40.8 -00.7	335 58.7 +02.1	S 00 45.7 -00.1	9 28.9 +02.4	S 14 13.8 +00.0	07						07
08	358 42.5 +00.7	S 04 40.1 -00.8	351 00.8 +02.0	S 00 45.6 -00.2	24 31.3 +02.4	S 14 13.8 -00.1	08						08
09	13 43.2 +00.7	S 04 39.3 -00.7	6 02.8 +02.0	S 00 45.4 -00.2	39 33.7 +02.4	S 14 13.7 +00.0	09						09
10	28 43.9 +00.7	S 04 38.6 -00.7	21 04.8 +02.0	S 00 45.2 -00.2	54 36.1 +02.3	S 14 13.7 +00.0	10						10
11	43 44.6 +00.8	S 04 37.9 -00.7	36 06.8 +02.1	S 00 45.0 -00.2	69 38.4 +02.4	S 14 13.7 +00.0	11						11
12	58 45.4 +00.7	S 04 37.2 -00.8	51 08.9 +02.0	S 00 44.8 -00.2	84 40.8 +02.4	S 14 13.7 -00.1	12						12
13	73 46.1 +00.7	S 04 36.4 -00.7	66 10.9 +02.0	S 00 44.6 -00.1	99 43.2 +02.4	S 14 13.6 +00.0	13						13
14	88 46.8 +00.8	S 04 35.7 -00.7	81 12.9 +02.0	S 00 44.5 -00.2	114 45.6 +02.4	S 14 13.6 +00.0	14						14
15	103 47.6 +00.7	S 04 35.0 -00.7	96 14.9 +02.1	S 00 44.3 -00.2	129 48.0 +02.3	S 14 13.6 +00.0	15						15
16	118 48.3 +00.7	S 04 34.3 -00.8	111 17.0 +02.0	S 00 44.1 -00.2	144 50.3 +02.4	S 14 13.6 +00.0	16						16
17	133 49.0 +00.7	S 04 33.5 -00.7	126 19.0 +02.0	S 00 43.9 -00.2	159 52.7 +02.4	S 14 13.6 -00.1	17						17
18	148 49.7 +00.8	S 04 32.8 -00.7	141 21.0 +02.0	S 00 43.7 -00.1	174 55.1 +02.4	S 14 13.5 +00.0	18						18
19	163 50.5 +00.7	S 04 32.1 -00.7	156 23.0 +02.1	S 00 43.6 -00.2	189 57.5 +02.3	S 14 13.5 +00.0	19						19
20	178 51.2 +00.7	S 04 31.4 -00.8	171 25.1 +02.0	S 00 43.4 -00.2	204 59.8 +02.4	S 14 13.5 +00.0	20						20
21	193 51.9 +00.8	S 04 30.6 -00.7	186 27.1 +02.0	S 00 43.2 -00.2	220 02.2 +02.4	S 14 13.5 -00.1	21						21
22	208 52.7 +00.7	S 04 29.9 -00.7	201 29.1 +02.1	S 00 43.0 -00.2	235 04.6 +02.4	S 14 13.4 +00.0	22						22
23	223 53.4 +00.7	S 04 29.2 -00.7	216 31.2 +02.0	S 00 42.8 -00.1	250 07.0 +02.4	S 14 13.4 +00.0	23						23
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 007° 007° 007° 006° 006° 006°		SHA 359° 359° 359° 359° 359° 359°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 08:05		Greenwich Culmination Time: 08:35		Greenwich Culmination Time: 06:22								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.5 +00.0	N 18 48.7 +00.6	218 58.3 -00.2	N 03 54.4 +01.1	16 34.6 -31.7	S 12 56.3 +14.7	00						
01	195 54.5 +00.0	N 18 49.3 +00.6	233 58.1 -00.2	N 03 55.5 +01.0	31 02.9 -31.8	S 13 11.0 +14.6	01						
02	210 54.5 +00.0	N 18 49.9 +00.6	248 57.9 -00.2	N 03 56.5 +01.1	45 31.1 -31.9	S 13 25.6 +14.5	02						
03	225 54.5 +00.0	N 18 50.5 +00.6	263 57.7 -00.3	N 03 57.6 +01.0	59 59.2 -32.0	S 13 40.1 +14.5	03						
04	240 54.5 +00.0	N 18 51.1 +00.6	278 57.4 -00.2	N 03 58.6 +01.1	74 27.2 -32.1	S 13 54.6 +14.5	04						
05	255 54.5 +00.0	N 18 51.7 +00.6	293 57.2 -00.2	N 03 59.7 +01.1	88 55.1 -32.2	S 14 09.1 +14.3	05						
06	270 54.5 +00.0	N 18 52.3 +00.6	308 57.0 -00.3	N 04 00.8 +01.0	103 22.9 -32.4	S 14 23.4 +14.3	06						
07	285 54.5 +00.0	N 18 52.9 +00.6	323 56.7 -00.2	N 04 01.8 +01.1	117 50.5 -32.4	S 14 37.7 +14.2	07						
08	300 54.5 -00.1	N 18 53.5 +00.5	338 56.5 -00.2	N 04 02.9 +01.0	132 18.1 -32.5	S 14 51.9 +14.1	08						
09	315 54.4 +00.0	N 18 54.0 +00.6	353 56.3 -00.3	N 04 03.9 +01.1	146 45.6 -32.6	S 15 06.0 +14.1	09						
10	330 54.4 +00.0	N 18 54.6 +00.6	8 56.0 -00.2	N 04 05.0 +01.1	161 13.0 -32.8	S 15 20.1 +13.9	10						
11	345 54.4 +00.0	N 18 55.2 +00.6	23 55.8 -00.2	N 04 06.1 +01.0	175 40.2 -32.9	S 15 34.0 +13.9	11						
12	0 54.4 +00.0	N 18 55.8 +00.6	38 55.6 -00.3	N 04 07.1 +01.1	190 07.3 -32.9	S 15 47.9 +13.8	12						
13	15 54.4 +00.0	N 18 56.4 +00.6	53 55.3 -00.2	N 04 08.2 +01.0	204 34.4 -33.1	S 16 01.7 +13.8	13						
14	30 54.4 +00.0	N 18 57.0 +00.6	68 55.1 -00.2	N 04 09.2 +01.1	219 01.3 -33.2	S 16 15.5 +13.6	14						
15	45 54.4 +00.0	N 18 57.6 +00.5	83 54.9 -00.3	N 04 10.3 +01.1	233 28.1 -33.3	S 16 29.1 +13.5	15						
16	60 54.4 +00.0	N 18 58.1 +00.6	98 54.6 -00.2	N 04 11.4 +01.0	247 54.8 -33.4	S 16 42.6 +13.5	16						
17	75 54.4 +00.0	N 18 58.7 +00.6	113 54.4 -00.2	N 04 12.4 +01.1	262 21.4 -33.5	S 16 56.1 +13.3	17						
18	90 54.4 +00.0	N 18 59.3 +00.6	128 54.2 -00.3	N 04 13.5 +01.0	276 47.9 -33.7	S 17 09.4 +13.3	18						
19	105 54.4 +00.0	N 18 59.9 +00.6	143 53.9 -00.2	N 04 14.5 +01.1	291 14.2 -33.7	S 17 22.7 +13.2	19						
20	120 54.4 +00.0	N 19 00.5 +00.6	158 53.7 -00.2	N 04 15.6 +01.1	305 40.5 -33.9	S 17 35.9 +13.0	20						
21	135 54.4 -00.1	N 19 01.1 +00.5	173 53.5 -00.3	N 04 16.7 +01.0	320 06.6 -34.0	S 17 48.9 +13.0	21						
22	150 54.3 +00.0	N 19 01.6 +00.6	188 53.2 -00.2	N 04 17.7 +01.1	334 32.6 -34.0	S 18 01.9 +12.8	22						
23	165 54.3 +00.0	N 19 02.2 +00.6	203 53.0 -00.2	N 04 18.8 +01.0	348 58.6 -34.3	S 18 14.7 +12.8	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	15'8 15'8 15'8 15'8 15'8 15'8	SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	16'3 16'4 16'4 16'4 16'4 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	59'9 60'0 60'1 60'2 60'3 60'4								
SHA	308° 308° 308° 308° 307° 307°	SHA	346° 346° 346° 346° 345° 345°	SHA	143° 140° 138° 136° 133° 131°								
Greenwich Culmination Time: 11:56			Greenwich Culmination Time: 09:24			Greenwich Culmination Time: 23:45							

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	238 54.1 +00.7	S 04 28.5 -00.8	231 33.2 +02.0	S 00 42.7 -00.2	265 09.4 +02.3	S 14 13.4 +00.0	00						
01	253 54.8 +00.8	S 04 27.7 -00.7	246 35.2 +02.0	S 00 42.5 -00.2	280 11.7 +02.4	S 14 13.4 +00.0	01						
02	268 55.6 +00.7	S 04 27.0 -00.7	261 37.2 +02.1	S 00 42.3 -00.2	295 14.1 +02.4	S 14 13.4 -00.1	02						
03	283 56.3 +00.7	S 04 26.3 -00.7	276 39.3 +02.0	S 00 42.1 -00.2	310 16.5 +02.4	S 14 13.3 +00.0	03						
04	298 57.0 +00.8	S 04 25.6 -00.8	291 41.3 +02.0	S 00 41.9 -00.1	325 18.9 +02.4	S 14 13.3 +00.0	04						
05	313 57.8 +00.7	S 04 24.8 -00.7	306 43.3 +02.1	S 00 41.8 -00.2	340 21.3 +02.3	S 14 13.3 +00.0	05						
06	328 58.5 +00.7	S 04 24.1 -00.7	321 45.4 +02.0	S 00 41.6 -00.2	355 23.6 +02.4	S 14 13.3 +00.0	06						
07	343 59.2 +00.7	S 04 23.4 -00.7	336 47.4 +02.0	S 00 41.4 -00.2	10 26.0 +02.4	S 14 13.3 -00.1	07						
08	358 59.9 +00.8	S 04 22.7 -00.8	351 49.4 +02.0	S 00 41.2 -00.2	25 28.4 +02.4	S 14 13.2 +00.0	08						
09	14 00.7 +00.7	S 04 21.9 -00.7	6 51.4 +02.1	S 00 41.0 -00.1	40 30.8 +02.4	S 14 13.2 +00.0	09						
10	29 01.4 +00.7	S 04 21.2 -00.7	21 53.5 +02.0	S 00 40.9 -00.2	55 33.2 +02.3	S 14 13.2 +00.0	10						
11	44 02.1 +00.8	S 04 20.5 -00.7	36 55.5 +02.0	S 00 40.7 -00.2	70 35.5 +02.4	S 14 13.2 +00.0	11						
12	59 02.9 +00.7	S 04 19.8 -00.8	51 57.5 +02.1	S 00 40.5 -00.2	85 37.9 +02.4	S 14 13.2 -00.1	12						
13	74 03.6 +00.7	S 04 19.0 -00.7	66 59.6 +02.0	S 00 40.3 -00.2	100 40.3 +02.4	S 14 13.1 +00.0	13						
14	89 04.3 +00.8	S 04 18.3 -00.7	82 01.6 +02.0	S 00 40.1 -00.1	115 42.7 +02.4	S 14 13.1 +00.0	14						
15	104 05.1 +00.7	S 04 17.6 -00.7	97 03.6 +02.1	S 00 40.0 -00.2	130 45.1 +02.4	S 14 13.1 +00.0	15						
16	119 05.8 +00.7	S 04 16.9 -00.8	112 05.7 +02.0	S 00 39.8 -00.2	145 47.5 +02.3	S 14 13.1 +00.0	16						
17	134 06.5 +00.7	S 04 16.1 -00.7	127 07.7 +02.0	S 00 39.6 -00.2	160 49.8 +02.4	S 14 13.1 -00.1	17						
18	149 07.2 +00.8	S 04 15.4 -00.7	142 09.7 +02.0	S 00 39.4 -00.2	175 52.2 +02.4	S 14 13.0 +00.0	18						
19	164 08.0 +00.7	S 04 14.7 -00.7	157 11.7 +02.1	S 00 39.2 -00.1	190 54.6 +02.4	S 14 13.0 +00.0	19						
20	179 08.7 +00.7	S 04 14.0 -00.8	172 13.8 +02.0	S 00 39.1 -00.2	205 57.0 +02.4	S 14 13.0 +00.0	20						
21	194 09.4 +00.8	S 04 13.2 -00.7	187 15.8 +02.0	S 00 38.9 -00.2	220 59.4 +02.3	S 14 13.0 -00.1	21						
22	209 10.2 +00.7	S 04 12.5 -00.7	202 17.8 +02.1	S 00 38.7 -00.2	236 01.7 +02.4	S 14 12.9 +00.0	22						
23	224 10.9 +00.7	S 04 11.8 -00.7	217 19.9 +02.0	S 00 38.5 -00.2	251 04.1 +02.4	S 14 12.9 +00.0	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'1 00'1 00'1 00'1 00'1 00'1								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	006° 006° 006° 006° 006° 006°	SHA	359° 359° 359° 359° 359° 359°	SHA	032° 032° 032° 032° 032° 032°								
Greenwich Culmination Time: 08:04			Greenwich Culmination Time: 08:32			Greenwich Culmination Time: 06:18							

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 54.3 +00.0	N 19 02.8 +00.6	218 52.8 -00.3	N 04 19.8 +01.1	3 24.3 -34.3	S 18 27.5 +12.6	00						
01	195 54.3 +00.0	N 19 03.4 +00.6	233 52.5 -00.2	N 04 20.9 +01.1	17 50.0 -34.4	S 18 40.1 +12.5	01						
02	210 54.3 +00.0	N 19 04.0 +00.5	248 52.3 -00.2	N 04 22.0 +01.0	32 15.6 -34.6	S 18 52.6 +12.4	02						
03	225 54.3 +00.0	N 19 04.5 +00.6	263 52.1 -00.3	N 04 23.0 +01.1	46 41.0 -34.6	S 19 05.0 +12.3	03						
04	240 54.3 +00.0	N 19 05.1 +00.6	278 51.8 -00.2	N 04 24.1 +01.0	61 06.4 -34.8	S 19 17.3 +12.2	04						
05	255 54.3 +00.0	N 19 05.7 +00.6	293 51.6 -00.3	N 04 25.1 +01.1	75 31.6 -34.9	S 19 29.5 +12.0	05						
06	270 54.3 -00.1	N 19 06.3 +00.5	308 51.3 -00.2	N 04 26.2 +01.1	89 56.7 -35.0	S 19 41.5 +12.0	06						
07	285 54.2 +00.0	N 19 06.8 +00.6	323 51.1 -00.2	N 04 27.3 +01.0	104 21.7 -35.1	S 19 53.5 +11.8	07						
08	300 54.2 +00.0	N 19 07.4 +00.6	338 50.9 -00.3	N 04 28.3 +01.1	118 46.6 -35.2	S 20 05.3 +11.7	08						
09	315 54.2 +00.0	N 19 08.0 +00.6	353 50.6 -00.2	N 04 29.4 +01.0	133 11.4 -35.4	S 20 17.0 +11.5	09						
10	330 54.2 +00.0	N 19 08.6 +00.5	8 50.4 -00.2	N 04 30.4 +01.1	147 36.0 -35.4	S 20 28.5 +11.4	10						
11	345 54.2 +00.0	N 19 09.1 +00.6	23 50.2 -00.3	N 04 31.5 +01.1	162 00.6 -35.6	S 20 39.9 +11.3	11						
12	0 54.2 +00.0	N 19 09.7 +00.6	38 49.9 -00.2	N 04 32.6 +01.0	176 25.0 -35.7	S 20 51.2 +11.2	12						
13	15 54.2 +00.0	N 19 10.3 +00.6	53 49.7 -00.3	N 04 33.6 +01.1	190 49.3 -35.8	S 21 02.4 +11.0	13						
14	30 54.2 -00.1	N 19 10.9 +00.5	68 49.4 -00.2	N 04 34.7 +01.0	205 13.5 -35.9	S 21 13.4 +10.8	14						
15	45 54.1 +00.0	N 19 11.4 +00.6	83 49.2 -00.2	N 04 35.7 +01.1	219 37.6 -36.0	S 21 24.2 +10.8	15						
16	60 54.1 +00.0	N 19 12.0 +00.6	98 49.0 -00.3	N 04 36.8 +01.1	234 01.6 -36.1	S 21 35.0 +10.5	16						
17	75 54.1 +00.0	N 19 12.6 +00.5	113 48.7 -00.2	N 04 37.9 +01.0	248 25.5 -36.2	S 21 45.5 +10.5	17						
18	90 54.1 +00.0	N 19 13.1 +00.6	128 48.5 -00.2	N 04 38.9 +01.1	262 49.3 -36.3	S 21 56.0 +10.3	18						
19	105 54.1 +00.0	N 19 13.7 +00.6	143 48.3 -00.3	N 04 40.0 +01.0	277 13.0 -36.5	S 22 06.3 +10.1	19						
20	120 54.1 +00.0	N 19 14.3 +00.5	158 48.0 -00.2	N 04 41.0 +01.1	291 36.5 -36.5	S 22 16.4 +10.0	20						
21	135 54.1 -00.1	N 19 14.8 +00.6	173 47.8 -00.3	N 04 42.1 +01.0	305 60.0 -36.7	S 22 26.4 +09.8	21						
22	150 54.0 +00.0	N 19 15.4 +00.6	188 47.5 -00.2	N 04 43.1 +01.1	320 23.3 -36.7	S 22 36.2 +09.7	22						
23	165 54.0 +00.0	N 19 16.0 +00.5	203 47.3 -00.2	N 04 44.2 +01.1	334 46.6 -36.9	S 22 45.9 +09.6	23						
UT	02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 16'5 16'5 16'5 16'5 16'5 16'6					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'5 60'6 60'6 60'7 60'7 60'8		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 307° 307° 307° 307° 306° 306°		SHA 345° 345° 345° 345° 344° 344°		SHA 128° 126° 124° 121° 118° 116°		SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:24		Greenwich Culmination Time: -1:00								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 11.6 +00.8	S 04 11.1 -00.8	232 21.9 +02.0	S 00 38.3 -00.1	266 06.5 +02.4	S 14 12.9 +00.0	00						
01	254 12.4 +00.7	S 04 10.3 -00.7	247 23.9 +02.1	S 00 38.2 -00.2	281 08.9 +02.4	S 14 12.9 +00.0	01						
02	269 13.1 +00.7	S 04 09.6 -00.7	262 26.0 +02.0	S 00 38.0 -00.2	296 11.3 +02.4	S 14 12.9 -00.1	02						
03	284 13.8 +00.8	S 04 08.9 -00.7	277 28.0 +02.0	S 00 37.8 -00.2	311 13.7 +02.3	S 14 12.8 +00.0	03						
04	299 14.6 +00.7	S 04 08.2 -00.8	292 30.0 +02.1	S 00 37.6 -00.2	326 16.0 +02.4	S 14 12.8 +00.0	04						
05	314 15.3 +00.7	S 04 07.4 -00.7	307 32.1 +02.0	S 00 37.4 -00.1	341 18.4 +02.4	S 14 12.8 +00.0	05						
06	329 16.0 +00.8	S 04 06.7 -00.7	322 34.1 +02.0	S 00 37.3 -00.2	356 20.8 +02.4	S 14 12.8 +00.0	06						
07	344 16.8 +00.7	S 04 06.0 -00.7	337 36.1 +02.1	S 00 37.1 -00.2	11 23.2 +02.4	S 14 12.8 -00.1	07						
08	359 17.5 +00.7	S 04 05.3 -00.8	352 38.2 +02.0	S 00 36.9 -00.2	26 25.6 +02.4	S 14 12.7 +00.0	08						
09	14 18.2 +00.7	S 04 04.5 -00.7	7 40.2 +02.0	S 00 36.7 -00.1	41 28.0 +02.3	S 14 12.7 +00.0	09						
10	29 18.9 +00.8	S 04 03.8 -00.7	22 42.2 +02.1	S 00 36.6 -00.2	56 30.3 +02.4	S 14 12.7 +00.0	10						
11	44 19.7 +00.7	S 04 03.1 -00.8	37 44.3 +02.0	S 00 36.4 -00.2	71 32.7 +02.4	S 14 12.7 +00.0	11						
12	59 20.4 +00.7	S 04 02.3 -00.7	52 46.3 +02.0	S 00 36.2 -00.2	86 35.1 +02.4	S 14 12.7 +00.0	12						
13	74 21.1 +00.8	S 04 01.6 -00.7	67 48.3 +02.1	S 00 36.0 -00.2	101 37.5 +02.4	S 14 12.7 -00.1	13						
14	89 21.9 +00.7	S 04 00.9 -00.7	82 50.4 +02.0	S 00 35.8 -00.1	116 39.9 +02.4	S 14 12.6 +00.0	14						
15	104 22.6 +00.7	S 04 00.2 -00.8	97 52.4 +02.0	S 00 35.7 -00.2	131 42.3 +02.4	S 14 12.6 +00.0	15						
16	119 23.3 +00.8	S 03 59.4 -00.7	112 54.4 +02.1	S 00 35.5 -00.2	146 44.7 +02.3	S 14 12.6 +00.0	16						
17	134 24.1 +00.7	S 03 58.7 -00.7	127 56.5 +02.0	S 00 35.3 -00.2	161 47.0 +02.4	S 14 12.6 +00.0	17						
18	149 24.8 +00.7	S 03 58.0 -00.7	142 58.5 +02.0	S 00 35.1 -00.1	176 49.4 +02.4	S 14 12.6 -00.1	18						
19	164 25.5 +00.8	S 03 57.3 -00.8	158 00.5 +02.1	S 00 35.0 -00.2	191 51.8 +02.4	S 14 12.5 +00.0	19						
20	179 26.3 +00.7	S 03 56.5 -00.7	173 02.6 +02.0	S 00 34.8 -00.2	206 54.2 +02.4	S 14 12.5 +00.0	20						
21	194 27.0 +00.7	S 03 55.8 -00.7	188 04.6 +02.0	S 00 34.6 -00.2	221 56.6 +02.4	S 14 12.5 +00.0	21						
22	209 27.7 +00.8	S 03 55.1 -00.7	203 06.6 +02.1	S 00 34.4 -00.2	236 59.0 +02.4	S 14 12.5 +00.0	22						
23	224 28.5 +00.7	S 03 54.4 -00.8	218 08.7 +02.0	S 00 34.2 -00.1	252 01.4 +02.3	S 14 12.5 -00.1	23						
UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	UT	02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	UT	02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 005° 005° 005° 005° 005° 005°		SHA 359° 359° 359° 359° 359° 359°		SHA 032° 032° 032° 032° 032° 032°		SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 08:02		Greenwich Culmination Time: 08:29		Greenwich Culmination Time: 06:14								

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 54.0 +00.0	N 19 16.5 +00.6	218 47.1 -00.3	N 04 45.3 +01.0	349 09.7 -36.9	S 22 55.5 +09.3	00						
01	195 54.0 +00.0	N 19 17.1 +00.6	233 46.8 -00.2	N 04 46.3 +01.1	3 32.8 -37.1	S 23 04.8 +09.2	01						
02	210 54.0 +00.0	N 19 17.7 +00.5	248 46.6 -00.3	N 04 47.4 +01.0	17 55.7 -37.1	S 23 14.0 +09.1	02						
03	225 54.0 -00.1	N 19 18.2 +00.6	263 46.3 -00.2	N 04 48.4 +01.1	32 18.6 -37.3	S 23 23.1 +08.8	03						
04	240 53.9 +00.0	N 19 18.8 +00.6	278 46.1 -00.2	N 04 49.5 +01.1	46 41.3 -37.3	S 23 31.9 +08.7	04						
05	255 53.9 +00.0	N 19 19.4 +00.5	293 45.9 -00.3	N 04 50.6 +01.0	61 04.0 -37.4	S 23 40.6 +08.6	05						
06	270 53.9 +00.0	N 19 19.9 +00.6	308 45.6 -00.2	N 04 51.6 +01.1	75 26.6 -37.6	S 23 49.2 +08.3	06						
07	285 53.9 +00.0	N 19 20.5 +00.6	323 45.4 -00.3	N 04 52.7 +01.0	89 49.0 -37.6	S 23 57.5 +08.2	07						
08	300 53.9 -00.1	N 19 21.1 +00.5	338 45.1 -00.2	N 04 53.7 +01.1	104 11.4 -37.7	S 24 05.7 +08.1	08						
09	315 53.8 +00.0	N 19 21.6 +00.6	353 44.9 -00.3	N 04 54.8 +01.1	118 33.7 -37.8	S 24 13.8 +07.8	09						
10	330 53.8 +00.0	N 19 22.2 +00.5	8 44.6 -00.2	N 04 55.9 +01.0	132 55.9 -37.8	S 24 21.6 +07.7	10						
11	345 53.8 +00.0	N 19 22.7 +00.6	23 44.4 -00.2	N 04 56.9 +01.1	147 18.1 -38.0	S 24 29.3 +07.5	11						
12	0 53.8 +00.0	N 19 23.3 +00.6	38 44.2 -00.3	N 04 58.0 +01.0	161 40.1 -38.0	S 24 36.8 +07.3	12						
13	15 53.8 +00.0	N 19 23.9 +00.5	53 43.9 -00.2	N 04 59.0 +01.1	176 02.1 -38.1	S 24 44.1 +07.1	13						
14	30 53.8 -00.1	N 19 24.4 +00.6	68 43.7 -00.3	N 05 00.1 +01.0	190 24.0 -38.2	S 24 51.2 +06.9	14						
15	45 53.7 +00.0	N 19 25.0 +00.5	83 43.4 -00.2	N 05 01.1 +01.1	204 45.8 -38.3	S 24 58.1 +06.8	15						
16	60 53.7 +00.0	N 19 25.5 +00.6	98 43.2 -00.3	N 05 02.2 +01.1	219 07.5 -38.3	S 25 04.9 +06.6	16						
17	75 53.7 +00.0	N 19 26.1 +00.5	113 42.9 -00.2	N 05 03.3 +01.0	233 29.2 -38.4	S 25 11.5 +06.4	17						
18	90 53.7 +00.0	N 19 26.6 +00.6	128 42.7 -00.2	N 05 04.3 +01.1	247 50.8 -38.5	S 25 17.9 +06.2	18						
19	105 53.7 -00.1	N 19 27.2 +00.6	143 42.5 -00.3	N 05 05.4 +01.0	262 12.3 -38.5	S 25 24.1 +06.0	19						
20	120 53.6 +00.0	N 19 27.8 +00.5	158 42.2 -00.2	N 05 06.4 +01.1	276 33.8 -38.6	S 25 30.1 +05.8	20						
21	135 53.6 +00.0	N 19 28.3 +00.6	173 42.0 -00.3	N 05 07.5 +01.1	290 55.2 -38.7	S 25 35.9 +05.6	21						
22	150 53.6 +00.0	N 19 28.9 +00.5	188 41.7 -00.2	N 05 08.6 +01.0	305 16.5 -38.7	S 25 41.5 +05.4	22						
23	165 53.6 -00.1	N 19 29.4 +00.6	203 41.5 -00.3	N 05 09.6 +01.1	319 37.8 -38.8	S 25 46.9 +05.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'6 16'6 16'6 16'6 16'6 16'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'8 60'8 60'8 60'8 60'8 60'8								
	SHA 306° 306° 306° 306° 305° 305°		SHA 344° 344° 344° 343° 343° 343°		SHA 113° 111° 108° 105° 102° 100°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:25		Greenwich Culmination Time: 00:45								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 29.2 +00.7	S 03 53.6 -00.7	233 10.7 +02.0	S 00 34.1 -00.2	267 03.7 +02.4	S 14 12.4 +00.0	00						
01	254 29.9 +00.8	S 03 52.9 -00.7	248 12.7 +02.1	S 00 33.9 -00.2	282 06.1 +02.4	S 14 12.4 +00.0	01						
02	269 30.7 +00.7	S 03 52.2 -00.7	263 14.8 +02.0	S 00 33.7 -00.2	297 08.5 +02.4	S 14 12.4 +00.0	02						
03	284 31.4 +00.7	S 03 51.5 -00.8	278 16.8 +02.0	S 00 33.5 -00.1	312 10.9 +02.4	S 14 12.4 +00.0	03						
04	299 32.1 +00.8	S 03 50.7 -00.7	293 18.8 +02.1	S 00 33.4 -00.2	327 13.3 +02.4	S 14 12.4 -00.1	04						
05	314 32.9 +00.7	S 03 50.0 -00.7	308 20.9 +02.0	S 00 33.2 -00.2	342 15.7 +02.4	S 14 12.3 +00.0	05						
06	329 33.6 +00.7	S 03 49.3 -00.7	323 22.9 +02.1	S 00 33.0 -00.2	357 18.1 +02.4	S 14 12.3 +00.0	06						
07	344 34.3 +00.8	S 03 48.6 -00.8	338 25.0 +02.0	S 00 32.8 -00.2	12 20.5 +02.3	S 14 12.3 +00.0	07						
08	359 35.1 +00.7	S 03 47.8 -00.7	353 27.0 +02.0	S 00 32.6 -00.1	27 22.8 +02.4	S 14 12.3 +00.0	08						
09	14 35.8 +00.7	S 03 47.1 -00.7	8 29.0 +02.1	S 00 32.5 -00.2	42 25.2 +02.4	S 14 12.3 +00.0	09						
10	29 36.5 +00.8	S 03 46.4 -00.8	23 31.1 +02.0	S 00 32.3 -00.2	57 27.6 +02.4	S 14 12.3 -00.1	10						
11	44 37.3 +00.7	S 03 45.6 -00.7	38 33.1 +02.0	S 00 32.1 -00.2	72 30.0 +02.4	S 14 12.2 +00.0	11						
12	59 38.0 +00.7	S 03 44.9 -00.7	53 35.1 +02.1	S 00 31.9 -00.1	87 32.4 +02.4	S 14 12.2 +00.0	12						
13	74 38.7 +00.8	S 03 44.2 -00.7	68 37.2 +02.0	S 00 31.8 -00.2	102 34.8 +02.4	S 14 12.2 +00.0	13						
14	89 39.5 +00.7	S 03 43.5 -00.8	83 39.2 +02.0	S 00 31.6 -00.2	117 37.2 +02.4	S 14 12.2 +00.0	14						
15	104 40.2 +00.7	S 03 42.7 -00.7	98 41.2 +02.1	S 00 31.4 -00.2	132 39.6 +02.4	S 14 12.2 -00.1	15						
16	119 40.9 +00.8	S 03 42.0 -00.7	113 43.3 +02.0	S 00 31.2 -00.1	147 42.0 +02.3	S 14 12.1 +00.0	16						
17	134 41.7 +00.7	S 03 41.3 -00.7	128 45.3 +02.1	S 00 31.1 -00.2	162 44.3 +02.4	S 14 12.1 +00.0	17						
18	149 42.4 +00.7	S 03 40.6 -00.8	143 47.4 +02.0	S 00 30.9 -00.2	177 46.7 +02.4	S 14 12.1 +00.0	18						
19	164 43.1 +00.8	S 03 39.8 -00.7	158 49.4 +02.0	S 00 30.7 -00.2	192 49.1 +02.4	S 14 12.1 +00.0	19						
20	179 43.9 +00.7	S 03 39.1 -00.7	173 51.4 +02.1	S 00 30.5 -00.1	207 51.5 +02.4	S 14 12.1 +00.0	20						
21	194 44.6 +00.8	S 03 38.4 -00.8	188 53.5 +02.0	S 00 30.4 -00.2	222 53.9 +02.4	S 14 12.1 -00.1	21						
22	209 45.4 +00.7	S 03 37.6 -00.7	203 55.5 +02.1	S 00 30.2 -00.2	237 56.3 +02.4	S 14 12.0 +00.0	22						
23	224 46.1 +00.7	S 03 36.9 -00.7	218 57.6 +02.0	S 00 30.0 -00.2	252 58.7 +02.4	S 14 12.0 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 005° 005° 005° 004° 004° 004°		SHA 358° 358° 358° 358° 358° 358°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 08:01		Greenwich Culmination Time: 08:26		Greenwich Culmination Time: 06:10								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 53.5 +00.0	N 19 30.0 +00.5	218 41.2 -00.2	N 05 10.7 +01.0	333 59.0 -38.8	S 25 52.2 +05.0	00						
01	195 53.5 +00.0	N 19 30.5 +00.6	233 41.0 -00.3	N 05 11.7 +01.1	348 20.2 -38.9	S 25 57.2 +04.9	01						
02	210 53.5 +00.0	N 19 31.1 +00.5	248 40.7 -00.2	N 05 12.8 +01.0	2 41.3 -38.9	S 26 02.1 +04.6	02						
03	225 53.5 +00.0	N 19 31.6 +00.6	263 40.5 -00.3	N 05 13.8 +01.1	17 02.4 -39.0	S 26 06.7 +04.5	03						
04	240 53.5 -00.1	N 19 32.2 +00.5	278 40.2 -00.2	N 05 14.9 +01.1	31 23.4 -39.0	S 26 11.2 +04.2	04						
05	255 53.4 +00.0	N 19 32.7 +00.6	293 40.0 -00.2	N 05 16.0 +01.0	45 44.4 -39.0	S 26 15.4 +04.1	05						
06	270 53.4 +00.0	N 19 33.3 +00.5	308 39.8 -00.3	N 05 17.0 +01.1	60 05.4 -39.1	S 26 19.5 +03.8	06						
07	285 53.4 +00.0	N 19 33.8 +00.6	323 39.5 -00.2	N 05 18.1 +01.0	74 26.3 -39.1	S 26 23.3 +03.7	07						
08	300 53.4 -00.1	N 19 34.4 +00.5	338 39.3 -00.3	N 05 19.1 +01.1	88 47.2 -39.1	S 26 27.0 +03.4	08						
09	315 53.3 +00.0	N 19 34.9 +00.6	353 39.0 -00.2	N 05 20.2 +01.0	103 08.1 -39.2	S 26 30.4 +03.2	09						
10	330 53.3 +00.0	N 19 35.5 +00.5	8 38.8 -00.3	N 05 21.2 +01.1	117 28.9 -39.2	S 26 33.6 +03.1	10						
11	345 53.3 +00.0	N 19 36.0 +00.6	23 38.5 -00.2	N 05 22.3 +01.1	131 49.7 -39.2	S 26 36.7 +02.8	11						
12	0 53.3 -00.1	N 19 36.6 +00.5	38 38.3 -00.3	N 05 23.4 +01.0	146 10.5 -39.2	S 26 39.5 +02.7	12						
13	15 53.2 +00.0	N 19 37.1 +00.5	53 38.0 -00.2	N 05 24.4 +01.1	160 31.3 -39.3	S 26 42.2 +02.4	13						
14	30 53.2 +00.0	N 19 37.6 +00.6	68 37.8 -00.3	N 05 25.5 +01.0	174 52.0 -39.2	S 26 44.6 +02.2	14						
15	45 53.2 +00.0	N 19 38.2 +00.5	83 37.5 -00.2	N 05 26.5 +01.1	189 12.8 -39.3	S 26 46.8 +02.0	15						
16	60 53.2 -00.1	N 19 38.7 +00.6	98 37.3 -00.3	N 05 27.6 +01.0	203 33.5 -39.2	S 26 48.8 +01.9	16						
17	75 53.1 +00.0	N 19 39.3 +00.5	113 37.0 -00.2	N 05 28.6 +01.1	217 54.3 -39.3	S 26 50.7 +01.6	17						
18	90 53.1 +00.0	N 19 39.8 +00.6	128 36.8 -00.3	N 05 29.7 +01.1	232 15.0 -39.3	S 26 52.3 +01.4	18						
19	105 53.1 +00.0	N 19 40.4 +00.5	143 36.5 -00.2	N 05 30.8 +01.0	246 35.7 -39.2	S 26 53.7 +01.2	19						
20	120 53.1 -00.1	N 19 40.9 +00.5	158 36.3 -00.3	N 05 31.8 +01.1	260 56.5 -39.3	S 26 54.9 +01.0	20						
21	135 53.0 +00.0	N 19 41.4 +00.6	173 36.0 -00.2	N 05 32.9 +01.0	275 17.2 -39.2	S 26 55.9 +00.8	21						
22	150 53.0 +00.0	N 19 42.0 +00.5	188 35.8 -00.3	N 05 33.9 +01.1	289 38.0 -39.3	S 26 56.7 +00.6	22						
23	165 53.0 -00.1	N 19 42.5 +00.6	203 35.5 -00.2	N 05 35.0 +01.0	303 58.7 -39.2	S 26 57.3 +00.3	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'8 15'8 15'8 15'8 15'8 15'8		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	16'6 16'6 16'6 16'5 16'5 16'5						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	60'8 60'8 60'7 60'7 60'7 60'6						
SHA	305° 305° 305° 305° 304° 304°		SHA	343° 343° 343° 342° 342° 342°		SHA	097° 094° 091° 089° 086° 083°						
Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 09:25				Greenwich Culmination Time: 01:48					

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	239 46.8 +00.8	S 03 36.2 -00.7	233 59.6 +02.0	S 00 29.8 -00.1	268 01.1 +02.4	S 14 12.0 +00.0	00						
01	254 47.6 +00.7	S 03 35.5 -00.8	249 01.6 +02.1	S 00 29.7 -00.2	283 03.5 +02.4	S 14 12.0 +00.0	01						
02	269 48.3 +00.7	S 03 34.7 -00.7	264 03.7 +02.0	S 00 29.5 -00.2	298 05.9 +02.4	S 14 12.0 +00.0	02						
03	284 49.0 +00.8	S 03 34.0 -00.7	279 05.7 +02.0	S 00 29.3 -00.2	313 08.3 +02.3	S 14 12.0 -00.1	03						
04	299 49.8 +00.7	S 03 33.3 -00.7	294 07.7 +02.1	S 00 29.1 -00.1	328 10.6 +02.4	S 14 11.9 +00.0	04						
05	314 50.5 +00.7	S 03 32.6 -00.8	309 09.8 +02.0	S 00 29.0 -00.2	343 13.0 +02.4	S 14 11.9 +00.0	05						
06	329 51.2 +00.8	S 03 31.8 -00.7	324 11.8 +02.1	S 00 28.8 -00.2	358 15.4 +02.4	S 14 11.9 +00.0	06						
07	344 52.0 +00.7	S 03 31.1 -00.7	339 13.9 +02.0	S 00 28.6 -00.2	13 17.8 +02.4	S 14 11.9 +00.0	07						
08	359 52.7 +00.7	S 03 30.4 -00.7	354 15.9 +02.0	S 00 28.4 -00.2	28 20.2 +02.4	S 14 11.9 +00.0	08						
09	14 53.4 +00.8	S 03 29.7 -00.8	9 17.9 +02.1	S 00 28.2 -00.1	43 22.6 +02.4	S 14 11.9 -00.1	09						
10	29 54.2 +00.7	S 03 28.9 -00.7	24 20.0 +02.0	S 00 28.1 -00.2	58 25.0 +02.4	S 14 11.8 +00.0	10						
11	44 54.9 +00.8	S 03 28.2 -00.7	39 22.0 +02.1	S 00 27.9 -00.2	73 27.4 +02.4	S 14 11.8 +00.0	11						
12	59 55.7 +00.7	S 03 27.5 -00.8	54 24.1 +02.0	S 00 27.7 -00.2	88 29.8 +02.4	S 14 11.8 +00.0	12						
13	74 56.4 +00.7	S 03 26.7 -00.7	69 26.1 +02.0	S 00 27.5 -00.1	103 32.2 +02.4	S 14 11.8 +00.0	13						
14	89 57.1 +00.8	S 03 26.0 -00.7	84 28.1 +02.1	S 00 27.4 -00.2	118 34.6 +02.4	S 14 11.8 +00.0	14						
15	104 57.9 +00.7	S 03 25.3 -00.7	99 30.2 +02.0	S 00 27.2 -00.2	133 37.0 +02.4	S 14 11.8 -00.1	15						
16	119 58.6 +00.7	S 03 24.6 -00.8	114 32.2 +02.1	S 00 27.0 -00.1	148 39.4 +02.3	S 14 11.7 +00.0	16						
17	134 59.3 +00.8	S 03 23.8 -00.7	129 34.3 +02.0	S 00 26.9 -00.2	163 41.7 +02.4	S 14 11.7 +00.0	17						
18	150 00.1 +00.7	S 03 23.1 -00.7	144 36.3 +02.1	S 00 26.7 -00.2	178 44.1 +02.4	S 14 11.7 +00.0	18						
19	165 00.8 +00.7	S 03 22.4 -00.7	159 38.4 +02.0	S 00 26.5 -00.2	193 46.5 +02.4	S 14 11.7 +00.0	19						
20	180 01.5 +00.8	S 03 21.7 -00.8	174 40.4 +02.0	S 00 26.3 -00.1	208 48.9 +02.4	S 14 11.7 +00.0	20						
21	195 02.3 +00.7	S 03 20.9 -00.7	189 42.4 +02.1	S 00 26.2 -00.2	223 51.3 +02.4	S 14 11.7 -00.1	21						
22	210 03.0 +00.8	S 03 20.2 -00.7	204 44.5 +02.0	S 00 26.0 -00.2	238 53.7 +02.4	S 14 11.6 +00.0	22						
23	225 03.8 +00.7	S 03 19.5 -00.8	219 46.5 +02.1	S 00 25.8 -00.2	253 56.1 +02.4	S 14 11.6 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	00'3 00'3 00'3 00'3 00'3 00'3		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	004° 004° 004° 004° 004° 003°		SHA	358° 358° 358° 358° 358° 358°		SHA	032° 032° 032° 032° 032° 032°						
Greenwich Culmination Time: 08:00				Greenwich Culmination Time: 08:22				Greenwich Culmination Time: 06:06					



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 52.9 +00.0	N 19 43.1 +00.5	218 35.3 -00.3	N 05 36.0 +01.1	318 19.5 -39.2	S 26 57.6 +00.2	00						
01	195 52.9 +00.0	N 19 43.6 +00.5	233 35.0 -00.2	N 05 37.1 +01.1	332 40.3 -39.2	S 26 57.8 +00.0	01						
02	210 52.9 +00.0	N 19 44.1 +00.6	248 34.8 -00.3	N 05 38.2 +01.0	347 01.1 -39.1	S 26 57.8 -00.2	02						
03	225 52.9 -00.1	N 19 44.7 +00.5	263 34.5 -00.2	N 05 39.2 +01.1	1 22.0 -39.1	S 26 57.6 -00.5	03						
04	240 52.8 +00.0	N 19 45.2 +00.5	278 34.3 -00.3	N 05 40.3 +01.0	15 42.9 -39.1	S 26 57.1 -00.6	04						
05	255 52.8 +00.0	N 19 45.7 +00.6	293 34.0 -00.2	N 05 41.3 +01.1	30 03.8 -39.1	S 26 56.5 -00.8	05						
06	270 52.8 -00.1	N 19 46.3 +00.5	308 33.8 -00.3	N 05 42.4 +01.0	44 24.7 -39.0	S 26 55.7 -01.1	06						
07	285 52.7 +00.0	N 19 46.8 +00.6	323 33.5 -00.2	N 05 43.4 +01.1	58 45.7 -38.9	S 26 54.6 -01.2	07						
08	300 52.7 +00.0	N 19 47.4 +00.5	338 33.3 -00.3	N 05 44.5 +01.0	73 06.8 -39.0	S 26 53.4 -01.5	08						
09	315 52.7 +00.0	N 19 47.9 +00.5	353 33.0 -00.3	N 05 45.5 +01.1	87 27.8 -38.9	S 26 51.9 -01.6	09						
10	330 52.7 -00.1	N 19 48.4 +00.6	8 32.7 -00.2	N 05 46.6 +01.1	101 48.9 -38.8	S 26 50.3 -01.8	10						
11	345 52.6 +00.0	N 19 49.0 +00.5	23 32.5 -00.3	N 05 47.7 +01.0	116 10.1 -38.8	S 26 48.5 -02.1	11						
12	0 52.6 +00.0	N 19 49.5 +00.5	38 32.2 -00.2	N 05 48.7 +01.1	130 31.3 -38.7	S 26 46.4 -02.2	12						
13	15 52.6 -00.1	N 19 50.0 +00.5	53 32.0 -00.3	N 05 49.8 +01.0	144 52.6 -38.7	S 26 44.2 -02.4	13						
14	30 52.5 +00.0	N 19 50.5 +00.6	68 31.7 -00.2	N 05 50.8 +01.1	159 13.9 -38.6	S 26 41.8 -02.7	14						
15	45 52.5 +00.0	N 19 51.1 +00.5	83 31.5 -00.3	N 05 51.9 +01.0	173 35.3 -38.5	S 26 39.1 -02.8	15						
16	60 52.5 -00.1	N 19 51.6 +00.5	98 31.2 -00.2	N 05 52.9 +01.1	187 56.8 -38.5	S 26 36.3 -03.0	16						
17	75 52.4 +00.0	N 19 52.1 +00.6	113 31.0 -00.3	N 05 54.0 +01.0	202 18.3 -38.4	S 26 33.3 -03.2	17						
18	90 52.4 +00.0	N 19 52.7 +00.5	128 30.7 -00.2	N 05 55.0 +01.1	216 39.9 -38.3	S 26 30.1 -03.4	18						
19	105 52.4 -00.1	N 19 53.2 +00.5	143 30.5 -00.3	N 05 56.1 +01.0	231 01.6 -38.3	S 26 26.7 -03.6	19						
20	120 52.3 +00.0	N 19 53.7 +00.5	158 30.2 -00.3	N 05 57.1 +01.1	245 23.3 -38.2	S 26 23.1 -03.8	20						
21	135 52.3 +00.0	N 19 54.2 +00.6	173 29.9 -00.2	N 05 58.2 +01.1	259 45.1 -38.1	S 26 19.3 -03.9	21						
22	150 52.3 -00.1	N 19 54.8 +00.5	188 29.7 -00.3	N 05 59.3 +01.0	274 07.0 -38.1	S 26 15.4 -04.2	22						
23	165 52.2 +00.0	N 19 55.3 +00.5	203 29.4 -00.2	N 06 00.3 +01.1	288 28.9 -37.9	S 26 11.2 -04.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'5 16'5 16'5 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'6 60'5 60'4 60'3 60'3 60'2								
	SHA 304° 304° 304° 304° 303° 303°		SHA 342° 342° 341° 341° 341° 341°		SHA 080° 078° 075° 072° 069° 067°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:25		Greenwich Culmination Time: 02:54								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 04.5 +00.7	S 03 18.7 -00.7	234 48.6 +02.0	S 00 25.6 -00.1	268 58.5 +02.4	S 14 11.6 +00.0	00						
01	255 05.2 +00.8	S 03 18.0 -00.7	249 50.6 +02.1	S 00 25.5 -00.2	284 00.9 +02.4	S 14 11.6 +00.0	01						
02	270 06.0 +00.7	S 03 17.3 -00.7	264 52.7 +02.0	S 00 25.3 -00.2	299 03.3 +02.4	S 14 11.6 +00.0	02						
03	285 06.7 +00.7	S 03 16.6 -00.8	279 54.7 +02.0	S 00 25.1 -00.2	314 05.7 +02.4	S 14 11.6 -00.1	03						
04	300 07.4 +00.8	S 03 15.8 -00.7	294 56.7 +02.1	S 00 24.9 -00.1	329 08.1 +02.4	S 14 11.5 +00.0	04						
05	315 08.2 +00.7	S 03 15.1 -00.7	309 58.8 +02.0	S 00 24.8 -00.2	344 10.5 +02.4	S 14 11.5 +00.0	05						
06	330 08.9 +00.7	S 03 14.4 -00.8	325 00.8 +02.1	S 00 24.6 -00.2	359 12.9 +02.4	S 14 11.5 +00.0	06						
07	345 09.6 +00.8	S 03 13.6 -00.7	340 02.9 +02.0	S 00 24.4 -00.2	14 15.3 +02.4	S 14 11.5 +00.0	07						
08	0 10.4 +00.7	S 03 12.9 -00.7	355 04.9 +02.1	S 00 24.2 -00.1	29 17.7 +02.4	S 14 11.5 +00.0	08						
09	15 11.1 +00.8	S 03 12.2 -00.7	10 07.0 +02.0	S 00 24.1 -00.2	44 20.1 +02.4	S 14 11.5 -00.1	09						
10	30 11.9 +00.7	S 03 11.5 -00.8	25 09.0 +02.0	S 00 23.9 -00.2	59 22.5 +02.4	S 14 11.4 +00.0	10						
11	45 12.6 +00.7	S 03 10.7 -00.7	40 11.0 +02.1	S 00 23.7 -00.2	74 24.9 +02.3	S 14 11.4 +00.0	11						
12	60 13.3 +00.8	S 03 10.0 -00.7	55 13.1 +02.0	S 00 23.5 -00.1	89 27.2 +02.4	S 14 11.4 +00.0	12						
13	75 14.1 +00.7	S 03 09.3 -00.7	70 15.1 +02.1	S 00 23.4 -00.2	104 29.6 +02.4	S 14 11.4 +00.0	13						
14	90 14.8 +00.8	S 03 08.6 -00.8	85 17.2 +02.0	S 00 23.2 -00.2	119 32.0 +02.4	S 14 11.4 +00.0	14						
15	105 15.6 +00.7	S 03 07.8 -00.7	100 19.2 +02.1	S 00 23.0 -00.1	134 34.4 +02.4	S 14 11.4 +00.0	15						
16	120 16.3 +00.7	S 03 07.1 -00.7	115 21.3 +02.0	S 00 22.9 -00.2	149 36.8 +02.4	S 14 11.4 -00.1	16						
17	135 17.0 +00.8	S 03 06.4 -00.8	130 23.3 +02.1	S 00 22.7 -00.2	164 39.2 +02.4	S 14 11.3 +00.0	17						
18	150 17.8 +00.7	S 03 05.6 -00.7	145 25.4 +02.0	S 00 22.5 -00.2	179 41.6 +02.4	S 14 11.3 +00.0	18						
19	165 18.5 +00.7	S 03 04.9 -00.7	160 27.4 +02.0	S 00 22.3 -00.1	194 44.0 +02.4	S 14 11.3 +00.0	19						
20	180 19.2 +00.8	S 03 04.2 -00.7	175 29.4 +02.1	S 00 22.2 -00.2	209 46.4 +02.4	S 14 11.3 +00.0	20						
21	195 20.0 +00.7	S 03 03.5 -00.8	190 31.5 +02.0	S 00 22.0 -00.2	224 48.8 +02.4	S 14 11.3 +00.0	21						
22	210 20.7 +00.8	S 03 02.7 -00.7	205 33.5 +02.1	S 00 21.8 -00.2	239 51.2 +02.4	S 14 11.3 +00.0	22						
23	225 21.5 +00.7	S 03 02.0 -00.7	220 35.6 +02.0	S 00 21.6 -00.1	254 53.6 +02.4	S 14 11.3 -00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 003° 003° 003° 003° 003° 003°		SHA 358° 358° 358° 358° 358° 358°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:59		Greenwich Culmination Time: 08:19		Greenwich Culmination Time: 06:03								

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 52.2 +00.0	N 19 55.8 +00.5	218 29.2 -00.3	N 06 01.4 +01.0	302 51.0 -37.9	S 26 06.9 -04.5	00						
01	195 52.2 -00.1	N 19 56.3 +00.6	233 28.9 -00.2	N 06 02.4 +01.1	317 13.1 -37.8	S 26 02.4 -04.7	01						
02	210 52.1 +00.0	N 19 56.9 +00.5	248 28.7 -00.3	N 06 03.5 +01.0	331 35.3 -37.6	S 25 57.7 -04.9	02						
03	225 52.1 +00.0	N 19 57.4 +00.5	263 28.4 -00.3	N 06 04.5 +01.1	345 57.7 -37.6	S 25 52.8 -05.1	03						
04	240 52.1 -00.1	N 19 57.9 +00.5	278 28.1 -00.2	N 06 05.6 +01.0	0 20.1 -37.6	S 25 47.7 -05.2	04						
05	255 52.0 +00.0	N 19 58.4 +00.6	293 27.9 -00.3	N 06 06.6 +01.1	14 42.5 -37.4	S 25 42.5 -05.4	05						
06	270 52.0 +00.0	N 19 59.0 +00.5	308 27.6 -00.2	N 06 07.7 +01.0	29 05.1 -37.3	S 25 37.1 -05.6	06						
07	285 52.0 -00.1	N 19 59.5 +00.5	323 27.4 -00.3	N 06 08.7 +01.1	43 27.8 -37.2	S 25 31.5 -05.8	07						
08	300 51.9 +00.0	N 19 60.0 +00.5	338 27.1 -00.3	N 06 09.8 +01.0	57 50.6 -37.1	S 25 25.7 -05.9	08						
09	315 51.9 +00.0	N 20 00.5 +00.5	353 26.8 -00.2	N 06 10.8 +01.1	72 13.5 -37.0	S 25 19.8 -06.1	09						
10	330 51.9 -00.1	N 20 01.0 +00.6	8 26.6 -00.3	N 06 11.9 +01.0	86 36.5 -37.0	S 25 13.7 -06.3	10						
11	345 51.8 +00.0	N 20 01.6 +00.5	23 26.3 -00.2	N 06 12.9 +01.1	100 59.5 -36.8	S 25 07.4 -06.5	11						
12	0 51.8 -00.1	N 20 02.1 +00.5	38 26.1 -00.3	N 06 14.0 +01.1	115 22.7 -36.7	S 25 00.9 -06.6	12						
13	15 51.7 +00.0	N 20 02.6 +00.5	53 25.8 -00.3	N 06 15.1 +01.0	129 46.0 -36.6	S 24 54.3 -06.7	13						
14	30 51.7 +00.0	N 20 03.1 +00.5	68 25.5 -00.2	N 06 16.1 +01.1	144 09.4 -36.5	S 24 47.6 -07.0	14						
15	45 51.7 -00.1	N 20 03.6 +00.5	83 25.3 -00.3	N 06 17.2 +01.0	158 32.9 -36.4	S 24 40.6 -07.1	15						
16	60 51.6 +00.0	N 20 04.1 +00.6	98 25.0 -00.2	N 06 18.2 +01.1	172 56.5 -36.2	S 24 33.5 -07.2	16						
17	75 51.6 +00.0	N 20 04.7 +00.5	113 24.8 -00.3	N 06 19.3 +01.0	187 20.3 -36.2	S 24 26.3 -07.4	17						
18	90 51.6 -00.1	N 20 05.2 +00.5	128 24.5 -00.3	N 06 20.3 +01.1	201 44.1 -36.0	S 24 18.9 -07.6	18						
19	105 51.5 +00.0	N 20 05.7 +00.5	143 24.2 -00.2	N 06 21.4 +01.0	216 08.1 -36.0	S 24 11.3 -07.7	19						
20	120 51.5 -00.1	N 20 06.2 +00.5	158 24.0 -00.3	N 06 22.4 +01.1	230 32.1 -35.8	S 24 03.6 -07.9	20						
21	135 51.4 +00.0	N 20 06.7 +00.5	173 23.7 -00.2	N 06 23.5 +01.0	244 56.3 -35.7	S 23 55.7 -08.0	21						
22	150 51.4 +00.0	N 20 07.2 +00.5	188 23.5 -00.3	N 06 24.5 +01.1	259 20.6 -35.5	S 23 47.7 -08.2	22						
23	165 51.4 -00.1	N 20 07.7 +00.5	203 23.2 -00.3	N 06 25.6 +01.0	273 45.1 -35.5	S 23 39.5 -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 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'4 16'3 16'3 16'3 16'3 16'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'1 60'0 59'9 59'8 59'7 59'6								
	SHA 303° 303° 303° 303° 302° 302°		SHA 341° 341° 340° 340° 340° 340°		SHA 064° 061° 059° 056° 053° 051°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:26		Greenwich Culmination Time: 03:58								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 22.2 +00.7	S 03 01.3 -00.8	235 37.6 +02.1	S 00 21.5 -00.2	269 56.0 +02.4	S 14 11.2 +00.0	00						
01	255 22.9 +00.8	S 03 00.5 -00.7	250 39.7 +02.0	S 00 21.3 -00.2	284 58.4 +02.4	S 14 11.2 +00.0	01						
02	270 23.7 +00.7	S 02 59.8 -00.7	265 41.7 +02.1	S 00 21.1 -00.1	300 00.8 +02.4	S 14 11.2 +00.0	02						
03	285 24.4 +00.8	S 02 59.1 -00.7	280 43.8 +02.0	S 00 21.0 -00.2	315 03.2 +02.4	S 14 11.2 +00.0	03						
04	300 25.2 +00.7	S 02 58.4 -00.8	295 45.8 +02.1	S 00 20.8 -00.2	330 05.6 +02.4	S 14 11.2 +00.0	04						
05	315 25.9 +00.7	S 02 57.6 -00.7	310 47.9 +02.0	S 00 20.6 -00.2	345 08.0 +02.4	S 14 11.2 +00.0	05						
06	330 26.6 +00.8	S 02 56.9 -00.7	325 49.9 +02.1	S 00 20.4 -00.1	0 10.4 +02.4	S 14 11.2 -00.1	06						
07	345 27.4 +00.7	S 02 56.2 -00.7	340 52.0 +02.0	S 00 20.3 -00.2	15 12.8 +02.4	S 14 11.1 +00.0	07						
08	0 28.1 +00.8	S 02 55.5 -00.8	355 54.0 +02.1	S 00 20.1 -00.2	30 15.2 +02.4	S 14 11.1 +00.0	08						
09	15 28.9 +00.7	S 02 54.7 -00.7	10 56.1 +02.0	S 00 19.9 -00.1	45 17.6 +02.4	S 14 11.1 +00.0	09						
10	30 29.6 +00.7	S 02 54.0 -00.7	25 58.1 +02.0	S 00 19.8 -00.2	60 20.0 +02.4	S 14 11.1 +00.0	10						
11	45 30.3 +00.8	S 02 53.3 -00.8	41 00.1 +02.1	S 00 19.6 -00.2	75 22.4 +02.4	S 14 11.1 +00.0	11						
12	60 31.1 +00.7	S 02 52.5 -00.7	56 02.2 +02.0	S 00 19.4 -00.2	90 24.8 +02.4	S 14 11.1 +00.0	12						
13	75 31.8 +00.8	S 02 51.8 -00.7	71 04.2 +02.1	S 00 19.2 -00.1	105 27.2 +02.4	S 14 11.1 -00.1	13						
14	90 32.6 +00.7	S 02 51.1 -00.7	86 06.3 +02.0	S 00 19.1 -00.2	120 29.6 +02.4	S 14 11.0 +00.0	14						
15	105 33.3 +00.7	S 02 50.4 -00.8	101 08.3 +02.1	S 00 18.9 -00.2	135 32.0 +02.4	S 14 11.0 +00.0	15						
16	120 34.0 +00.8	S 02 49.6 -00.7	116 10.4 +02.0	S 00 18.7 -00.1	150 34.4 +02.4	S 14 11.0 +00.0	16						
17	135 34.8 +00.7	S 02 48.9 -00.7	131 12.4 +02.1	S 00 18.6 -00.2	165 36.8 +02.4	S 14 11.0 +00.0	17						
18	150 35.5 +00.8	S 02 48.2 -00.8	146 14.5 +02.0	S 00 18.4 -00.2	180 39.2 +02.4	S 14 11.0 +00.0	18						
19	165 36.3 +00.7	S 02 47.4 -00.7	161 16.5 +02.1	S 00 18.2 -00.2	195 41.6 +02.4	S 14 11.0 +00.0	19						
20	180 37.0 +00.7	S 02 46.7 -00.7	176 18.6 +02.0	S 00 18.0 -00.1	210 44.0 +02.4	S 14 11.0 -00.1	20						
21	195 37.7 +00.8	S 02 46.0 -00.7	191 20.6 +02.1	S 00 17.9 -00.2	225 46.4 +02.4	S 14 10.9 +00.0	21						
22	210 38.5 +00.7	S 02 45.3 -00.8	206 22.7 +02.0	S 00 17.7 -00.2	240 48.8 +02.4	S 14 10.9 +00.0	22						
23	225 39.2 +00.8	S 02 44.5 -00.7	221 24.7 +02.1	S 00 17.5 -00.1	255 51.2 +02.4	S 14 10.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 003° 003° 002° 002° 002° 002°		SHA 358° 358° 358° 358° 358° 358°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:58		Greenwich Culmination Time: 08:16		Greenwich Culmination Time: 05:59								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 51.3 +00.0	N 20 08.2 +00.5	218 22.9 -00.2	N 06 26.6 +01.1	288 09.6 -35.4	S 23 31.2 -08.5	00						
01	195 51.3 -00.1	N 20 08.7 +00.6	233 22.7 -00.3	N 06 27.7 +01.0	302 34.2 -35.2	S 23 22.7 -08.6	01						
02	210 51.2 +00.0	N 20 09.3 +00.5	248 22.4 -00.3	N 06 28.7 +01.1	316 59.0 -35.1	S 23 14.1 -08.7	02						
03	225 51.2 +00.0	N 20 09.8 +00.5	263 22.1 -00.2	N 06 29.8 +01.0	331 23.9 -35.0	S 23 05.4 -08.9	03						
04	240 51.2 -00.1	N 20 10.3 +00.5	278 21.9 -00.3	N 06 30.8 +01.1	345 48.9 -34.8	S 22 56.5 -09.0	04						
05	255 51.1 +00.0	N 20 10.8 +00.5	293 21.6 -00.3	N 06 31.9 +01.0	0 14.1 -34.8	S 22 47.5 -09.2	05						
06	270 51.1 -00.1	N 20 11.3 +00.5	308 21.3 -00.2	N 06 32.9 +01.1	14 39.3 -34.6	S 22 38.3 -09.2	06						
07	285 51.0 +00.0	N 20 11.8 +00.5	323 21.1 -00.3	N 06 34.0 +01.0	29 04.7 -34.5	S 22 29.1 -09.5	07						
08	300 51.0 +00.0	N 20 12.3 +00.5	338 20.8 -00.3	N 06 35.0 +01.1	43 30.2 -34.4	S 22 19.6 -09.5	08						
09	315 51.0 -00.1	N 20 12.8 +00.5	353 20.5 -00.2	N 06 36.1 +01.0	57 55.8 -34.3	S 22 10.1 -09.7	09						
10	330 50.9 +00.0	N 20 13.3 +00.5	8 20.3 -00.3	N 06 37.1 +01.1	72 21.5 -34.1	S 22 00.4 -09.8	10						
11	345 50.9 -00.1	N 20 13.8 +00.5	23 20.0 -00.2	N 06 38.2 +01.0	86 47.4 -34.0	S 21 50.6 -09.9	11						
12	0 50.8 +00.0	N 20 14.3 +00.5	38 19.8 -00.3	N 06 39.2 +01.1	101 13.4 -33.9	S 21 40.7 -10.1	12						
13	15 50.8 +00.0	N 20 14.8 +00.5	53 19.5 -00.3	N 06 40.3 +01.0	115 39.5 -33.8	S 21 30.6 -10.1	13						
14	30 50.8 -00.1	N 20 15.3 +00.5	68 19.2 -00.3	N 06 41.3 +01.1	130 05.7 -33.6	S 21 20.5 -10.3	14						
15	45 50.7 +00.0	N 20 15.8 +00.5	83 18.9 -00.2	N 06 42.4 +01.0	144 32.1 -33.6	S 21 10.2 -10.4	15						
16	60 50.7 -00.1	N 20 16.3 +00.5	98 18.7 -00.3	N 06 43.4 +01.1	158 58.5 -33.4	S 20 59.8 -10.5	16						
17	75 50.6 +00.0	N 20 16.8 +00.5	113 18.4 -00.3	N 06 44.5 +01.0	173 25.1 -33.3	S 20 49.3 -10.7	17						
18	90 50.6 -00.1	N 20 17.3 +00.5	128 18.1 -00.2	N 06 45.5 +01.1	187 51.8 -33.1	S 20 38.6 -10.7	18						
19	105 50.5 +00.0	N 20 17.8 +00.5	143 17.9 -00.3	N 06 46.6 +01.0	202 18.7 -33.1	S 20 27.9 -10.8	19						
20	120 50.5 -00.1	N 20 18.3 +00.5	158 17.6 -00.3	N 06 47.6 +01.1	216 45.6 -32.9	S 20 17.1 -11.0	20						
21	135 50.4 +00.0	N 20 18.8 +00.5	173 17.3 -00.2	N 06 48.7 +01.0	231 12.7 -32.8	S 20 06.1 -11.1	21						
22	150 50.4 +00.0	N 20 19.3 +00.5	188 17.1 -00.3	N 06 49.7 +01.1	245 39.9 -32.7	S 19 55.0 -11.1	22						
23	165 50.4 -00.1	N 20 19.8 +00.5	203 16.8 -00.3	N 06 50.8 +01.0	260 07.2 -32.5	S 19 43.9 -11.3	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	15'8 15'8 15'8 15'8 15'8 15'8		SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	16'2 16'2 16'1 16'1 16'1 16'0						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	59'4 59'3 59'2 59'1 59'0 58'9						
SHA	302° 302° 302° 302° 301° 301°		SHA	340° 339° 339° 339° 339° 339°		SHA	048° 046° 043° 041° 039° 036°						
Greenwich Culmination Time: 11:56				Greenwich Culmination Time: 09:26				Greenwich Culmination Time: 04:59					

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 40.0 +00.7	S 02 43.8 -00.7	236 26.8 +02.0	S 00 17.4 -00.2	270 53.6 +02.4	S 14 10.9 +00.0	00						
01	255 40.7 +00.7	S 02 43.1 -00.8	251 28.8 +02.1	S 00 17.2 -00.2	285 56.0 +02.4	S 14 10.9 +00.0	01						
02	270 41.4 +00.8	S 02 42.3 -00.7	266 30.9 +02.0	S 00 17.0 -00.1	300 58.4 +02.4	S 14 10.9 +00.0	02						
03	285 42.2 +00.7	S 02 41.6 -00.7	281 32.9 +02.1	S 00 16.9 -00.2	316 00.8 +02.4	S 14 10.9 -00.1	03						
04	300 42.9 +00.8	S 02 40.9 -00.7	296 35.0 +02.0	S 00 16.7 -00.2	331 03.2 +02.4	S 14 10.8 +00.0	04						
05	315 43.7 +00.7	S 02 40.2 -00.8	311 37.0 +02.1	S 00 16.5 -00.2	346 05.6 +02.4	S 14 10.8 +00.0	05						
06	330 44.4 +00.7	S 02 39.4 -00.7	326 39.1 +02.0	S 00 16.3 -00.1	1 08.0 +02.4	S 14 10.8 +00.0	06						
07	345 45.1 +00.8	S 02 38.7 -00.7	341 41.1 +02.1	S 00 16.2 -00.2	16 10.4 +02.4	S 14 10.8 +00.0	07						
08	0 45.9 +00.7	S 02 38.0 -00.7	356 43.2 +02.0	S 00 16.0 -00.2	31 12.8 +02.5	S 14 10.8 +00.0	08						
09	15 46.6 +00.8	S 02 37.3 -00.8	11 45.2 +02.1	S 00 15.8 -00.1	46 15.3 +02.4	S 14 10.8 +00.0	09						
10	30 47.4 +00.7	S 02 36.5 -00.7	26 47.3 +02.0	S 00 15.7 -00.2	61 17.7 +02.4	S 14 10.8 +00.0	10						
11	45 48.1 +00.8	S 02 35.8 -00.7	41 49.3 +02.1	S 00 15.5 -00.2	76 20.1 +02.4	S 14 10.8 -00.1	11						
12	60 48.9 +00.7	S 02 35.1 -00.8	56 51.4 +02.0	S 00 15.3 -00.1	91 22.5 +02.4	S 14 10.7 +00.0	12						
13	75 49.6 +00.7	S 02 34.3 -00.7	71 53.4 +02.1	S 00 15.2 -00.2	106 24.9 +02.4	S 14 10.7 +00.0	13						
14	90 50.3 +00.8	S 02 33.6 -00.7	86 55.5 +02.1	S 00 15.0 -00.2	121 27.3 +02.4	S 14 10.7 +00.0	14						
15	105 51.1 +00.7	S 02 32.9 -00.7	101 57.6 +02.0	S 00 14.8 -00.2	136 29.7 +02.4	S 14 10.7 +00.0	15						
16	120 51.8 +00.8	S 02 32.2 -00.8	116 59.6 +02.1	S 00 14.6 -00.1	151 32.1 +02.4	S 14 10.7 +00.0	16						
17	135 52.6 +00.7	S 02 31.4 -00.7	132 01.7 +02.0	S 00 14.5 -00.2	166 34.5 +02.4	S 14 10.7 +00.0	17						
18	150 53.3 +00.7	S 02 30.7 -00.7	147 03.7 +02.1	S 00 14.3 -00.2	181 36.9 +02.4	S 14 10.7 +00.0	18						
19	165 54.0 +00.8	S 02 30.0 -00.8	162 05.8 +02.0	S 00 14.1 -00.1	196 39.3 +02.4	S 14 10.7 -00.1	19						
20	180 54.8 +00.7	S 02 29.2 -00.7	177 07.8 +02.1	S 00 14.0 -00.2	211 41.7 +02.4	S 14 10.6 +00.0	20						
21	195 55.5 +00.8	S 02 28.5 -00.7	192 09.9 +02.0	S 00 13.8 -00.2	226 44.1 +02.4	S 14 10.6 +00.0	21						
22	210 56.3 +00.7	S 02 27.8 -00.7	207 11.9 +02.1	S 00 13.6 -00.1	241 46.5 +02.4	S 14 10.6 +00.0	22						
23	225 57.0 +00.8	S 02 27.1 -00.8	222 14.0 +02.0	S 00 13.5 -00.2	256 48.9 +02.4	S 14 10.6 +00.0	23						
UT	02 06 10 14 18 22		UT	02 06 10 14 18 22		UT	02 06 10 14 18 22						
SD	00'1 00'1 00'1 00'1 00'1 00'1		SD	00'3 00'3 00'3 00'3 00'3 00'3		SD	00'1 00'1 00'1 00'1 00'1 00'1						
HP	00'1 00'1 00'1 00'1 00'1 00'1		HP	00'0 00'0 00'0 00'0 00'0 00'0		HP	00'0 00'0 00'0 00'0 00'0 00'0						
SHA	002° 002° 002° 002° 002° 001°		SHA	358° 358° 358° 358° 358° 358°		SHA	032° 032° 032° 032° 032° 032°						
Greenwich Culmination Time: 07:56				Greenwich Culmination Time: 08:13				Greenwich Culmination Time: 05:55					

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 50.3 +00.0	N 20 20.3 +00.5	218 16.5 -00.2	N 06 51.8 +01.1	274 34.7 -32.5	S 19 32.6 -11.4	00						
01	195 50.3 -00.1	N 20 20.8 +00.5	233 16.3 -00.3	N 06 52.9 +01.0	289 02.2 -32.3	S 19 21.2 -11.4	01						
02	210 50.2 +00.0	N 20 21.3 +00.5	248 16.0 -00.3	N 06 53.9 +01.1	303 29.9 -32.2	S 19 09.8 -11.6	02						
03	225 50.2 -00.1	N 20 21.8 +00.5	263 15.7 -00.2	N 06 55.0 +01.0	317 57.7 -32.1	S 18 58.2 -11.7	03						
04	240 50.1 +00.0	N 20 22.3 +00.5	278 15.5 -00.3	N 06 56.0 +01.1	332 25.6 -32.0	S 18 46.5 -11.7	04						
05	255 50.1 -00.1	N 20 22.8 +00.5	293 15.2 -00.3	N 06 57.1 +01.0	346 53.6 -31.8	S 18 34.8 -11.8	05						
06	270 50.0 +00.0	N 20 23.3 +00.5	308 14.9 -00.3	N 06 58.1 +01.1	1 21.8 -31.8	S 18 23.0 -12.0	06						
07	285 50.0 -00.1	N 20 23.8 +00.5	323 14.6 -00.2	N 06 59.2 +01.0	15 50.0 -31.6	S 18 11.0 -12.0	07						
08	300 49.9 +00.0	N 20 24.3 +00.5	338 14.4 -00.3	N 07 00.2 +01.1	30 18.4 -31.5	S 17 59.0 -12.1	08						
09	315 49.9 -00.1	N 20 24.8 +00.4	353 14.1 -00.3	N 07 01.3 +01.0	44 46.9 -31.4	S 17 46.9 -12.2	09						
10	330 49.8 +00.0	N 20 25.2 +00.5	8 13.8 -00.2	N 07 02.3 +01.0	59 15.5 -31.3	S 17 34.7 -12.3	10						
11	345 49.8 +00.0	N 20 25.7 +00.5	23 13.6 -00.3	N 07 03.3 +01.1	73 44.2 -31.2	S 17 22.4 -12.3	11						
12	0 49.8 -00.1	N 20 26.2 +00.5	38 13.3 -00.3	N 07 04.4 +01.0	88 13.0 -31.1	S 17 10.1 -12.4	12						
13	15 49.7 +00.0	N 20 26.7 +00.5	53 13.0 -00.3	N 07 05.4 +01.1	102 41.9 -30.9	S 16 57.7 -12.6	13						
14	30 49.7 -00.1	N 20 27.2 +00.5	68 12.7 -00.2	N 07 06.5 +01.0	117 11.0 -30.9	S 16 45.1 -12.5	14						
15	45 49.6 +00.0	N 20 27.7 +00.5	83 12.5 -00.3	N 07 07.5 +01.1	131 40.1 -30.7	S 16 32.6 -12.7	15						
16	60 49.6 -00.1	N 20 28.2 +00.5	98 12.2 -00.3	N 07 08.6 +01.0	146 09.4 -30.6	S 16 19.9 -12.7	16						
17	75 49.5 +00.0	N 20 28.7 +00.4	113 11.9 -00.3	N 07 09.6 +01.1	160 38.8 -30.6	S 16 07.2 -12.8	17						
18	90 49.5 -00.1	N 20 29.1 +00.5	128 11.6 -00.2	N 07 10.7 +01.0	175 08.2 -30.4	S 15 54.4 -12.9	18						
19	105 49.4 +00.0	N 20 29.6 +00.5	143 11.4 -00.3	N 07 11.7 +01.1	189 37.8 -30.3	S 15 41.5 -13.0	19						
20	120 49.4 -00.1	N 20 30.1 +00.5	158 11.1 -00.3	N 07 12.8 +01.0	204 07.5 -30.2	S 15 28.5 -13.0	20						
21	135 49.3 +00.0	N 20 30.6 +00.5	173 10.8 -00.3	N 07 13.8 +01.1	218 37.3 -30.1	S 15 15.5 -13.0	21						
22	150 49.3 -00.1	N 20 31.1 +00.5	188 10.5 -00.2	N 07 14.9 +01.0	233 07.2 -30.1	S 15 02.5 -13.2	22						
23	165 49.2 +00.0	N 20 31.6 +00.4	203 10.3 -00.3	N 07 15.9 +01.0	247 37.1 -29.9	S 14 49.3 -13.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'0 16'0 15'9 15'9 15'9 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'7 58'6 58'5 58'4 58'2 58'1								
	SHA 301° 301° 301° 301° 300° 300°		SHA 339° 338° 338° 338° 338° 338°		SHA 034° 032° 029° 027° 025° 023°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:27		Greenwich Culmination Time: 05:54								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	240 57.8 +00.7	S 02 26.3 -00.7	237 16.0 +02.1	S 00 13.3 -00.2	271 51.3 +02.4	S 14 10.6 +00.0	00						
01	255 58.5 +00.7	S 02 25.6 -00.7	252 18.1 +02.0	S 00 13.1 -00.1	286 53.7 +02.4	S 14 10.6 +00.0	01						
02	270 59.2 +00.8	S 02 24.9 -00.8	267 20.1 +02.1	S 00 13.0 -00.2	301 56.1 +02.4	S 14 10.6 +00.0	02						
03	285 60.0 +00.7	S 02 24.1 -00.7	282 22.2 +02.0	S 00 12.8 -00.2	316 58.5 +02.5	S 14 10.6 +00.0	03						
04	301 00.7 +00.8	S 02 23.4 -00.7	297 24.2 +02.1	S 00 12.6 -00.1	332 01.0 +02.4	S 14 10.6 -00.1	04						
05	316 01.5 +00.7	S 02 22.7 -00.7	312 26.3 +02.1	S 00 12.5 -00.2	347 03.4 +02.4	S 14 10.5 +00.0	05						
06	331 02.2 +00.8	S 02 22.0 -00.8	327 28.4 +02.0	S 00 12.3 -00.2	2 05.8 +02.4	S 14 10.5 +00.0	06						
07	346 03.0 +00.7	S 02 21.2 -00.7	342 30.4 +02.1	S 00 12.1 -00.2	17 08.2 +02.4	S 14 10.5 +00.0	07						
08	1 03.7 +00.7	S 02 20.5 -00.7	357 32.5 +02.0	S 00 11.9 -00.1	32 10.6 +02.4	S 14 10.5 +00.0	08						
09	16 04.4 +00.8	S 02 19.8 -00.8	12 34.5 +02.1	S 00 11.8 -00.2	47 13.0 +02.4	S 14 10.5 +00.0	09						
10	31 05.2 +00.7	S 02 19.0 -00.7	27 36.6 +02.0	S 00 11.6 -00.2	62 15.4 +02.4	S 14 10.5 +00.0	10						
11	46 05.9 +00.8	S 02 18.3 -00.7	42 38.6 +02.1	S 00 11.4 -00.1	77 17.8 +02.4	S 14 10.5 +00.0	11						
12	61 06.7 +00.7	S 02 17.6 -00.7	57 40.7 +02.0	S 00 11.3 -00.2	92 20.2 +02.4	S 14 10.5 -00.1	12						
13	76 07.4 +00.8	S 02 16.9 -00.8	72 42.7 +02.1	S 00 11.1 -00.2	107 22.6 +02.4	S 14 10.4 +00.0	13						
14	91 08.2 +00.7	S 02 16.1 -00.7	87 44.8 +02.1	S 00 10.9 -00.1	122 25.0 +02.4	S 14 10.4 +00.0	14						
15	106 08.9 +00.7	S 02 15.4 -00.7	102 46.9 +02.0	S 00 10.8 -00.2	137 27.4 +02.4	S 14 10.4 +00.0	15						
16	121 09.6 +00.8	S 02 14.7 -00.8	117 48.9 +02.1	S 00 10.6 -00.2	152 29.8 +02.5	S 14 10.4 +00.0	16						
17	136 10.4 +00.7	S 02 13.9 -00.7	132 51.0 +02.0	S 00 10.4 -00.1	167 32.3 +02.4	S 14 10.4 +00.0	17						
18	151 11.1 +00.8	S 02 13.2 -00.7	147 53.0 +02.1	S 00 10.3 -00.2	182 34.7 +02.4	S 14 10.4 +00.0	18						
19	166 11.9 +00.7	S 02 12.5 -00.7	162 55.1 +02.0	S 00 10.1 -00.2	197 37.1 +02.4	S 14 10.4 +00.0	19						
20	181 12.6 +00.8	S 02 11.8 -00.8	177 57.1 +02.1	S 00 09.9 -00.1	212 39.5 +02.4	S 14 10.4 +00.0	20						
21	196 13.4 +00.7	S 02 11.0 -00.7	192 59.2 +02.1	S 00 09.8 -00.2	227 41.9 +02.4	S 14 10.4 +00.0	21						
22	211 14.1 +00.8	S 02 10.3 -00.7	208 01.3 +02.0	S 00 09.6 -00.2	242 44.3 +02.4	S 14 10.4 -00.1	22						
23	226 14.9 +00.7	S 02 09.6 -00.7	223 03.3 +02.1	S 00 09.4 -00.1	257 46.7 +02.4	S 14 10.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 001° 001° 001° 001° 001° 001°		SHA 358° 358° 358° 358° 358° 358°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:55		Greenwich Culmination Time: 08:09		Greenwich Culmination Time: 05:51								

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 49.2 -00.1	N 20 32.0 +00.5	218 10.0 -00.3	N 07 16.9 +01.1	262 07.2 -29.8	S 14 36.1 -13.2	00						
01	195 49.1 +00.0	N 20 32.5 +00.5	233 09.7 -00.3	N 07 18.0 +01.0	276 37.4 -29.7	S 14 22.9 -13.4	01						
02	210 49.1 -00.1	N 20 33.0 +00.5	248 09.4 -00.2	N 07 19.0 +01.1	291 07.7 -29.6	S 14 09.5 -13.3	02						
03	225 49.0 +00.0	N 20 33.5 +00.5	263 09.2 -00.3	N 07 20.1 +01.0	305 38.1 -29.6	S 13 56.2 -13.5	03						
04	240 49.0 -00.1	N 20 34.0 +00.4	278 08.9 -00.3	N 07 21.1 +01.1	320 08.5 -29.4	S 13 42.7 -13.4	04						
05	255 48.9 -00.1	N 20 34.4 +00.5	293 08.6 -00.3	N 07 22.2 +01.0	334 39.1 -29.3	S 13 29.3 -13.6	05						
06	270 48.8 +00.0	N 20 34.9 +00.5	308 08.3 -00.3	N 07 23.2 +01.0	349 09.8 -29.3	S 13 15.7 -13.6	06						
07	285 48.8 -00.1	N 20 35.4 +00.5	323 08.0 -00.2	N 07 24.2 +01.1	3 40.5 -29.1	S 13 02.1 -13.6	07						
08	300 48.7 +00.0	N 20 35.9 +00.5	338 07.8 -00.3	N 07 25.3 +01.0	18 11.4 -29.1	S 12 48.5 -13.7	08						
09	315 48.7 -00.1	N 20 36.4 +00.4	353 07.5 -00.3	N 07 26.3 +01.1	32 42.3 -29.0	S 12 34.8 -13.7	09						
10	330 48.6 +00.0	N 20 36.8 +00.5	8 07.2 -00.3	N 07 27.4 +01.0	47 13.3 -28.9	S 12 21.1 -13.8	10						
11	345 48.6 -00.1	N 20 37.3 +00.5	23 06.9 -00.3	N 07 28.4 +01.1	61 44.4 -28.8	S 12 07.3 -13.9	11						
12	0 48.5 +00.0	N 20 37.8 +00.5	38 06.6 -00.2	N 07 29.5 +01.0	76 15.6 -28.7	S 11 53.4 -13.8	12						
13	15 48.5 -00.1	N 20 38.3 +00.4	53 06.4 -00.3	N 07 30.5 +01.1	90 46.9 -28.6	S 11 39.6 -13.9	13						
14	30 48.4 +00.0	N 20 38.7 +00.5	68 06.1 -00.3	N 07 31.6 +01.0	105 18.3 -28.6	S 11 25.7 -14.0	14						
15	45 48.4 -00.1	N 20 39.2 +00.5	83 05.8 -00.3	N 07 32.6 +01.0	119 49.7 -28.5	S 11 11.7 -14.0	15						
16	60 48.3 +00.0	N 20 39.7 +00.4	98 05.5 -00.3	N 07 33.6 +01.1	134 21.2 -28.4	S 10 57.7 -14.0	16						
17	75 48.3 -00.1	N 20 40.1 +00.5	113 05.2 -00.2	N 07 34.7 +01.0	148 52.8 -28.3	S 10 43.7 -14.1	17						
18	90 48.2 -00.1	N 20 40.6 +00.5	128 05.0 -00.3	N 07 35.7 +01.1	163 24.5 -28.2	S 10 29.6 -14.1	18						
19	105 48.1 +00.0	N 20 41.1 +00.5	143 04.7 -00.3	N 07 36.8 +01.0	177 56.3 -28.2	S 10 15.5 -14.1	19						
20	120 48.1 -00.1	N 20 41.6 +00.4	158 04.4 -00.3	N 07 37.8 +01.0	192 28.1 -28.1	S 10 01.4 -14.2	20						
21	135 48.0 +00.0	N 20 42.0 +00.5	173 04.1 -00.3	N 07 38.8 +01.1	207 00.0 -28.0	S 09 47.2 -14.2	21						
22	150 48.0 -00.1	N 20 42.5 +00.5	188 03.8 -00.3	N 07 39.9 +01.0	221 32.0 -27.9	S 09 33.0 -14.2	22						
23	165 47.9 +00.0	N 20 43.0 +00.4	203 03.5 -00.2	N 07 40.9 +01.1	236 04.1 -27.9	S 09 18.8 -14.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'7 15'7 15'7 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'0 57'9 57'8 57'6 57'5 57'4								
	SHA 300° 300° 300° 300° 299° 299°		SHA 337° 337° 337° 337° 337° 337°		SHA 020° 018° 016° 014° 012° 010°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:27		Greenwich Culmination Time: 06:44								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 15.6 +00.7	S 02 08.9 -00.8	238 05.4 +02.0	S 00 09.3 -00.2	272 49.1 +02.4	S 14 10.3 +00.0	00						
01	256 16.3 +00.8	S 02 08.1 -00.7	253 07.4 +02.1	S 00 09.1 -00.2	287 51.5 +02.4	S 14 10.3 +00.0	01						
02	271 17.1 +00.7	S 02 07.4 -00.7	268 09.5 +02.0	S 00 08.9 -00.1	302 53.9 +02.5	S 14 10.3 +00.0	02						
03	286 17.8 +00.8	S 02 06.7 -00.8	283 11.5 +02.1	S 00 08.8 -00.2	317 56.4 +02.4	S 14 10.3 +00.0	03						
04	301 18.6 +00.7	S 02 05.9 -00.7	298 13.6 +02.1	S 00 08.6 -00.2	332 58.8 +02.4	S 14 10.3 +00.0	04						
05	316 19.3 +00.8	S 02 05.2 -00.7	313 15.7 +02.0	S 00 08.4 -00.1	348 01.2 +02.4	S 14 10.3 +00.0	05						
06	331 20.1 +00.7	S 02 04.5 -00.7	328 17.7 +02.1	S 00 08.3 -00.2	3 03.6 +02.4	S 14 10.3 +00.0	06						
07	346 20.8 +00.8	S 02 03.8 -00.8	343 19.8 +02.0	S 00 08.1 -00.2	18 06.0 +02.4	S 14 10.3 -00.1	07						
08	1 21.6 +00.7	S 02 03.0 -00.7	358 21.8 +02.1	S 00 07.9 -00.1	33 08.4 +02.4	S 14 10.2 +00.0	08						
09	16 22.3 +00.7	S 02 02.3 -00.7	13 23.9 +02.1	S 00 07.8 -00.2	48 10.8 +02.4	S 14 10.2 +00.0	09						
10	31 23.0 +00.8	S 02 01.6 -00.8	28 26.0 +02.0	S 00 07.6 -00.2	63 13.2 +02.4	S 14 10.2 +00.0	10						
11	46 23.8 +00.7	S 02 00.8 -00.7	43 28.0 +02.1	S 00 07.4 -00.1	78 15.6 +02.5	S 14 10.2 +00.0	11						
12	61 24.5 +00.8	S 02 00.1 -00.7	58 30.1 +02.0	S 00 07.3 -00.2	93 18.1 +02.4	S 14 10.2 +00.0	12						
13	76 25.3 +00.7	S 01 59.4 -00.7	73 32.1 +02.1	S 00 07.1 -00.2	108 20.5 +02.4	S 14 10.2 +00.0	13						
14	91 26.0 +00.8	S 01 58.7 -00.8	88 34.2 +02.1	S 00 06.9 -00.1	123 22.9 +02.4	S 14 10.2 +00.0	14						
15	106 26.8 +00.7	S 01 57.9 -00.7	103 36.3 +02.0	S 00 06.8 -00.2	138 25.3 +02.4	S 14 10.2 +00.0	15						
16	121 27.5 +00.8	S 01 57.2 -00.7	118 38.3 +02.1	S 00 06.6 -00.2	153 27.7 +02.4	S 14 10.2 +00.0	16						
17	136 28.3 +00.7	S 01 56.5 -00.8	133 40.4 +02.0	S 00 06.4 -00.1	168 30.1 +02.4	S 14 10.2 -00.1	17						
18	151 29.0 +00.8	S 01 55.7 -00.7	148 42.4 +02.1	S 00 06.3 -00.2	183 32.5 +02.4	S 14 10.1 +00.0	18						
19	166 29.8 +00.7	S 01 55.0 -00.7	163 44.5 +02.1	S 00 06.1 -00.1	198 34.9 +02.5	S 14 10.1 +00.0	19						
20	181 30.5 +00.7	S 01 54.3 -00.7	178 46.6 +02.0	S 00 06.0 -00.2	213 37.4 +02.4	S 14 10.1 +00.0	20						
21	196 31.2 +00.8	S 01 53.6 -00.8	193 48.6 +02.1	S 00 05.8 -00.2	228 39.8 +02.4	S 14 10.1 +00.0	21						
22	211 32.0 +00.7	S 01 52.8 -00.7	208 50.7 +02.0	S 00 05.6 -00.1	243 42.2 +02.4	S 14 10.1 +00.0	22						
23	226 32.7 +00.8	S 01 52.1 -00.7	223 52.7 +02.1	S 00 05.5 -00.2	258 44.6 +02.4	S 14 10.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 001° 000° 000° 000° 000° 000°		SHA 357° 357° 357° 357° 357° 357°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:54		Greenwich Culmination Time: 08:06		Greenwich Culmination Time: 05:47								

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 47.9 -00.1	N 20 43.4 +00.5	218 03.3 -00.3	N 07 42.0 +01.0	250 36.2 -27.8	S 09 04.5 -14.2	00						
01	195 47.8 +00.0	N 20 43.9 +00.5	233 03.0 -00.3	N 07 43.0 +01.0	265 08.4 -27.7	S 08 50.3 -14.4	01						
02	210 47.8 -00.1	N 20 44.4 +00.4	248 02.7 -00.3	N 07 44.0 +01.1	279 40.7 -27.7	S 08 35.9 -14.3	02						
03	225 47.7 -00.1	N 20 44.8 +00.5	263 02.4 -00.3	N 07 45.1 +01.0	294 13.0 -27.6	S 08 21.6 -14.4	03						
04	240 47.6 +00.0	N 20 45.3 +00.5	278 02.1 -00.3	N 07 46.1 +01.1	308 45.4 -27.5	S 08 07.2 -14.3	04						
05	255 47.6 -00.1	N 20 45.8 +00.4	293 01.8 -00.2	N 07 47.2 +01.0	323 17.9 -27.5	S 07 52.9 -14.4	05						
06	270 47.5 +00.0	N 20 46.2 +00.5	308 01.6 -00.3	N 07 48.2 +01.0	337 50.4 -27.4	S 07 38.5 -14.5	06						
07	285 47.5 -00.1	N 20 46.7 +00.4	323 01.3 -00.3	N 07 49.2 +01.1	352 23.0 -27.4	S 07 24.0 -14.4	07						
08	300 47.4 +00.0	N 20 47.1 +00.5	338 01.0 -00.3	N 07 50.3 +01.0	6 55.6 -27.3	S 07 09.6 -14.5	08						
09	315 47.4 -00.1	N 20 47.6 +00.5	353 00.7 -00.3	N 07 51.3 +01.1	21 28.3 -27.2	S 06 55.1 -14.5	09						
10	330 47.3 -00.1	N 20 48.1 +00.4	8 00.4 -00.3	N 07 52.4 +01.0	36 01.1 -27.2	S 06 40.6 -14.5	10						
11	345 47.2 +00.0	N 20 48.5 +00.5	23 00.1 -00.3	N 07 53.4 +01.0	50 33.9 -27.1	S 06 26.1 -14.5	11						
12	0 47.2 -00.1	N 20 49.0 +00.4	37 59.8 -00.2	N 07 54.4 +01.1	65 06.8 -27.0	S 06 11.6 -14.5	12						
13	15 47.1 +00.0	N 20 49.4 +00.5	52 59.6 -00.3	N 07 55.5 +01.0	79 39.8 -27.1	S 05 57.1 -14.5	13						
14	30 47.1 -00.1	N 20 49.9 +00.5	67 59.3 -00.3	N 07 56.5 +01.1	94 12.7 -26.9	S 05 42.6 -14.6	14						
15	45 47.0 -00.1	N 20 50.4 +00.4	82 59.0 -00.3	N 07 57.6 +01.0	108 45.8 -26.9	S 05 28.0 -14.5	15						
16	60 46.9 +00.0	N 20 50.8 +00.5	97 58.7 -00.3	N 07 58.6 +01.0	123 18.9 -26.9	S 05 13.5 -14.6	16						
17	75 46.9 -00.1	N 20 51.3 +00.4	112 58.4 -00.3	N 07 59.6 +01.1	137 52.0 -26.8	S 04 58.9 -14.6	17						
18	90 46.8 +00.0	N 20 51.7 +00.5	127 58.1 -00.3	N 08 00.7 +01.0	152 25.2 -26.8	S 04 44.3 -14.6	18						
19	105 46.8 -00.1	N 20 52.2 +00.4	142 57.8 -00.3	N 08 01.7 +01.0	166 58.4 -26.7	S 04 29.7 -14.6	19						
20	120 46.7 -00.1	N 20 52.6 +00.5	157 57.5 -00.2	N 08 02.7 +01.1	181 31.7 -26.7	S 04 15.1 -14.6	20						
21	135 46.6 +00.0	N 20 53.1 +00.4	172 57.3 -00.3	N 08 03.8 +01.0	196 05.0 -26.6	S 04 00.5 -14.6	21						
22	150 46.6 -00.1	N 20 53.5 +00.5	187 57.0 -00.3	N 08 04.8 +01.1	210 38.4 -26.6	S 03 45.9 -14.6	22						
23	165 46.5 -00.1	N 20 54.0 +00.4	202 56.7 -00.3	N 08 05.9 +01.0	225 11.8 -26.5	S 03 31.3 -14.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'6 15'5 15'5 15'5 15'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'3 57'2 57'1 56'9 56'8 56'7								
	SHA 299° 299° 299° 299° 298° 298°		SHA 336° 336° 336° 336° 336° 335°		SHA 008° 006° 004° 002° 000° 358°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:27		Greenwich Culmination Time: 07:31								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 33.5 +00.7	S 01 51.4 -00.8	238 54.8 +02.1	S 00 05.3 -00.2	273 47.0 +02.4	S 14 10.1 +00.0	00						
01	256 34.2 +00.8	S 01 50.6 -00.7	253 56.9 +02.0	S 00 05.1 -00.1	288 49.4 +02.4	S 14 10.1 +00.0	01						
02	271 35.0 +00.7	S 01 49.9 -00.7	268 58.9 +02.1	S 00 05.0 -00.2	303 51.8 +02.5	S 14 10.1 +00.0	02						
03	286 35.7 +00.8	S 01 49.2 -00.7	284 01.0 +02.1	S 00 04.8 -00.2	318 54.3 +02.4	S 14 10.1 +00.0	03						
04	301 36.5 +00.7	S 01 48.5 -00.8	299 03.1 +02.0	S 00 04.6 -00.1	333 56.7 +02.4	S 14 10.1 -00.1	04						
05	316 37.2 +00.8	S 01 47.7 -00.7	314 05.1 +02.1	S 00 04.5 -00.2	348 59.1 +02.4	S 14 10.0 +00.0	05						
06	331 38.0 +00.7	S 01 47.0 -00.7	329 07.2 +02.0	S 00 04.3 -00.2	4 01.5 +02.4	S 14 10.0 +00.0	06						
07	346 38.7 +00.8	S 01 46.3 -00.7	344 09.2 +02.1	S 00 04.1 -00.1	19 03.9 +02.4	S 14 10.0 +00.0	07						
08	1 39.5 +00.7	S 01 45.6 -00.8	359 11.3 +02.1	S 00 04.0 -00.2	34 06.3 +02.4	S 14 10.0 +00.0	08						
09	16 40.2 +00.8	S 01 44.8 -00.7	14 13.4 +02.0	S 00 03.8 -00.2	49 08.7 +02.5	S 14 10.0 +00.0	09						
10	31 41.0 +00.7	S 01 44.1 -00.7	29 15.4 +02.1	S 00 03.6 -00.1	64 11.2 +02.4	S 14 10.0 +00.0	10						
11	46 41.7 +00.7	S 01 43.4 -00.8	44 17.5 +02.1	S 00 03.5 -00.2	79 13.6 +02.4	S 14 10.0 +00.0	11						
12	61 42.4 +00.8	S 01 42.6 -00.7	59 19.6 +02.0	S 00 03.3 -00.1	94 16.0 +02.4	S 14 10.0 +00.0	12						
13	76 43.2 +00.7	S 01 41.9 -00.7	74 21.6 +02.1	S 00 03.2 -00.2	109 18.4 +02.4	S 14 10.0 +00.0	13						
14	91 43.9 +00.8	S 01 41.2 -00.7	89 23.7 +02.1	S 00 03.0 -00.2	124 20.8 +02.4	S 14 10.0 +00.0	14						
15	106 44.7 +00.7	S 01 40.5 -00.8	104 25.8 +02.0	S 00 02.8 -00.1	139 23.2 +02.5	S 14 10.0 +00.0	15						
16	121 45.4 +00.8	S 01 39.7 -00.7	119 27.8 +02.1	S 00 02.7 -00.2	154 25.7 +02.4	S 14 10.0 -00.1	16						
17	136 46.2 +00.7	S 01 39.0 -00.7	134 29.9 +02.0	S 00 02.5 -00.2	169 28.1 +02.4	S 14 09.9 +00.0	17						
18	151 46.9 +00.8	S 01 38.3 -00.8	149 31.9 +02.1	S 00 02.3 -00.1	184 30.5 +02.4	S 14 09.9 +00.0	18						
19	166 47.7 +00.7	S 01 37.5 -00.7	164 34.0 +02.1	S 00 02.2 -00.2	199 32.9 +02.4	S 14 09.9 +00.0	19						
20	181 48.4 +00.8	S 01 36.8 -00.7	179 36.1 +02.0	S 00 02.0 -00.2	214 35.3 +02.4	S 14 09.9 +00.0	20						
21	196 49.2 +00.7	S 01 36.1 -00.7	194 38.1 +02.1	S 00 01.8 -00.1	229 37.7 +02.5	S 14 09.9 +00.0	21						
22	211 49.9 +00.8	S 01 35.4 -00.8	209 40.2 +02.1	S 00 01.7 -00.2	244 40.2 +02.4	S 14 09.9 +00.0	22						
23	226 50.7 +00.7	S 01 34.6 -00.7	224 42.3 +02.0	S 00 01.5 -00.1	259 42.6 +02.4	S 14 09.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 360° 360° 360° 360° 359° 359°		SHA 357° 357° 357° 357° 357° 357°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:53		Greenwich Culmination Time: 08:03		Greenwich Culmination Time: 05:43								

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 46.4 +00.0	N 20 54.4 +00.5	217 56.4 -00.3	N 08 06.9 +01.0	239 45.3 -26.6	S 03 16.7 -14.6	00						
01	195 46.4 -00.1	N 20 54.9 +00.5	232 56.1 -00.3	N 08 07.9 +01.1	254 18.7 -26.4	S 03 02.1 -14.6	01						
02	210 46.3 +00.0	N 20 55.4 +00.4	247 55.8 -00.3	N 08 09.0 +01.0	268 52.3 -26.5	S 02 47.5 -14.6	02						
03	225 46.3 -00.1	N 20 55.8 +00.5	262 55.5 -00.3	N 08 10.0 +01.0	283 25.8 -26.4	S 02 32.9 -14.6	03						
04	240 46.2 -00.1	N 20 56.3 +00.4	277 55.2 -00.3	N 08 11.0 +01.1	297 59.4 -26.3	S 02 18.3 -14.6	04						
05	255 46.1 +00.0	N 20 56.7 +00.4	292 54.9 -00.3	N 08 12.1 +01.0	312 33.1 -26.4	S 02 03.7 -14.6	05						
06	270 46.1 -00.1	N 20 57.1 +00.5	307 54.6 -00.3	N 08 13.1 +01.0	327 06.7 -26.3	S 01 49.1 -14.6	06						
07	285 46.0 -00.1	N 20 57.6 +00.4	322 54.3 -00.3	N 08 14.1 +01.1	341 40.4 -26.2	S 01 34.5 -14.6	07						
08	300 45.9 +00.0	N 20 58.0 +00.5	337 54.0 -00.2	N 08 15.2 +01.0	356 14.2 -26.3	S 01 19.9 -14.6	08						
09	315 45.9 -00.1	N 20 58.5 +00.4	352 53.8 -00.3	N 08 16.2 +01.0	10 47.9 -26.2	S 01 05.3 -14.6	09						
10	330 45.8 +00.0	N 20 58.9 +00.5	7 53.5 -00.3	N 08 17.2 +01.1	25 21.7 -26.2	S 00 50.7 -14.5	10						
11	345 45.8 -00.1	N 20 59.4 +00.4	22 53.2 -00.3	N 08 18.3 +01.0	39 55.5 -26.1	S 00 36.2 -14.6	11						
12	0 45.7 -00.1	N 20 59.8 +00.5	37 52.9 -00.3	N 08 19.3 +01.0	54 29.4 -26.2	S 00 21.6 -14.5	12						
13	15 45.6 +00.0	N 21 00.3 +00.4	52 52.6 -00.3	N 08 20.3 +01.1	69 03.2 -26.1	S 00 07.1 -14.6	13						
14	30 45.6 -00.1	N 21 00.7 +00.5	67 52.3 -00.3	N 08 21.4 +01.0	83 37.1 -26.1	N 00 07.5 +14.5	14						
15	45 45.5 -00.1	N 21 01.2 +00.4	82 52.0 -00.3	N 08 22.4 +01.0	98 11.0 -26.0	N 00 22.0 +14.5	15						
16	60 45.4 +00.0	N 21 01.6 +00.4	97 51.7 -00.3	N 08 23.4 +01.1	112 45.0 -26.1	N 00 36.5 +14.5	16						
17	75 45.4 -00.1	N 21 02.0 +00.5	112 51.4 -00.3	N 08 24.5 +01.0	127 18.9 -26.0	N 00 51.0 +14.5	17						
18	90 45.3 -00.1	N 21 02.5 +00.4	127 51.1 -00.3	N 08 25.5 +01.0	141 52.9 -26.0	N 01 05.5 +14.5	18						
19	105 45.2 +00.0	N 21 02.9 +00.5	142 50.8 -00.3	N 08 26.5 +01.1	156 26.9 -26.0	N 01 20.0 +14.4	19						
20	120 45.2 -00.1	N 21 03.4 +00.4	157 50.5 -00.3	N 08 27.6 +01.0	171 00.9 -26.0	N 01 34.4 +14.4	20						
21	135 45.1 -00.1	N 21 03.8 +00.4	172 50.2 -00.3	N 08 28.6 +01.0	185 34.9 -26.0	N 01 48.8 +14.4	21						
22	150 45.0 +00.0	N 21 04.2 +00.5	187 49.9 -00.3	N 08 29.6 +01.1	200 08.9 -25.9	N 02 03.2 +14.4	22						
23	165 45.0 -00.1	N 21 04.7 +00.4	202 49.6 -00.3	N 08 30.7 +01.0	214 43.0 -25.9	N 02 17.6 +14.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 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 298° 298° 298° 298° 297° 297°		SHA 335° 335° 335° 335° 335° 334°		SHA 356° 354° 352° 350° 349° 347°								
	Greenwich Culmination Time: 11:56		Greenwich Culmination Time: 09:28		Greenwich Culmination Time: 08:15								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	241 51.4 +00.8	S 01 33.9 -00.7	239 44.3 +02.1	S 00 01.4 -00.2	274 45.0 +02.4	S 14 09.9 +00.0	00						
01	256 52.2 +00.7	S 01 33.2 -00.7	254 46.4 +02.1	S 00 01.2 -00.2	289 47.4 +02.4	S 14 09.9 +00.0	01						
02	271 52.9 +00.8	S 01 32.5 -00.8	269 48.5 +02.0	S 00 01.0 -00.1	304 49.8 +02.4	S 14 09.9 +00.0	02						
03	286 53.7 +00.7	S 01 31.7 -00.7	284 50.5 +02.1	S 00 00.9 -00.2	319 52.2 +02.5	S 14 09.9 +00.0	03						
04	301 54.4 +00.8	S 01 31.0 -00.7	299 52.6 +02.1	S 00 00.7 -00.2	334 54.7 +02.4	S 14 09.9 +00.0	04						
05	316 55.2 +00.7	S 01 30.3 -00.8	314 54.7 +02.0	S 00 00.5 -00.1	349 57.1 +02.4	S 14 09.9 -00.1	05						
06	331 55.9 +00.8	S 01 29.5 -00.7	329 56.7 +02.1	S 00 00.4 -00.2	4 59.5 +02.4	S 14 09.8 +00.0	06						
07	346 56.7 +00.7	S 01 28.8 -00.7	344 58.8 +02.1	S 00 00.2 -00.1	20 01.9 +02.4	S 14 09.8 +00.0	07						
08	1 57.4 +00.7	S 01 28.1 -00.7	0 00.9 +02.0	S 00 00.1 -00.2	35 04.3 +02.5	S 14 09.8 +00.0	08						
09	16 58.1 +00.8	S 01 27.4 -00.8	15 02.9 +02.1	N 00 00.1 +00.2	50 06.8 +02.4	S 14 09.8 +00.0	09						
10	31 58.9 +00.7	S 01 26.6 -00.7	30 05.0 +02.1	N 00 00.3 +00.1	65 09.2 +02.4	S 14 09.8 +00.0	10						
11	46 59.6 +00.8	S 01 25.9 -00.7	45 07.1 +02.0	N 00 00.4 +00.2	80 11.6 +02.4	S 14 09.8 +00.0	11						
12	62 00.4 +00.7	S 01 25.2 -00.8	60 09.1 +02.1	N 00 00.6 +00.2	95 14.0 +02.4	S 14 09.8 +00.0	12						
13	77 01.1 +00.8	S 01 24.4 -00.7	75 11.2 +02.1	N 00 00.8 +00.1	110 16.4 +02.5	S 14 09.8 +00.0	13						
14	92 01.9 +00.7	S 01 23.7 -00.7	90 13.3 +02.0	N 00 00.9 +00.2	125 18.9 +02.4	S 14 09.8 +00.0	14						
15	107 02.6 +00.8	S 01 23.0 -00.7	105 15.3 +02.1	N 00 01.1 +00.1	140 21.3 +02.4	S 14 09.8 +00.0	15						
16	122 03.4 +00.7	S 01 22.3 -00.8	120 17.4 +02.1	N 00 01.2 +00.2	155 23.7 +02.4	S 14 09.8 +00.0	16						
17	137 04.1 +00.8	S 01 21.5 -00.7	135 19.5 +02.0	N 00 01.4 +00.2	170 26.1 +02.4	S 14 09.8 +00.0	17						
18	152 04.9 +00.7	S 01 20.8 -00.7	150 21.5 +02.1	N 00 01.6 +00.1	185 28.5 +02.5	S 14 09.8 +00.0	18						
19	167 05.6 +00.8	S 01 20.1 -00.7	165 23.6 +02.1	N 00 01.7 +00.2	200 31.0 +02.4	S 14 09.8 -00.1	19						
20	182 06.4 +00.7	S 01 19.4 -00.8	180 25.7 +02.1	N 00 01.9 +00.2	215 33.4 +02.4	S 14 09.7 +00.0	20						
21	197 07.1 +00.8	S 01 18.6 -00.7	195 27.8 +02.0	N 00 02.1 +00.1	230 35.8 +02.4	S 14 09.7 +00.0	21						
22	212 07.9 +00.7	S 01 17.9 -00.7	210 29.8 +02.1	N 00 02.2 +00.2	245 38.2 +02.5	S 14 09.7 +00.0	22						
23	227 08.6 +00.8	S 01 17.2 -00.8	225 31.9 +02.1	N 00 02.4 +00.1	260 40.7 +02.4	S 14 09.7 +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 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 359° 359° 359° 359° 359° 359°		SHA 357° 357° 357° 357° 357° 357°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:52		Greenwich Culmination Time: 07:59		Greenwich Culmination Time: 05:40								

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 44.9 -00.1	N 21 05.1 +00.4	217 49.3 -00.3	N 08 31.7 +01.0	229 17.1 -26.0	N 02 32.0 +14.4	00						
01	195 44.8 +00.0	N 21 05.5 +00.5	232 49.0 -00.3	N 08 32.7 +01.1	243 51.1 -25.9	N 02 46.4 +14.3	01						
02	210 44.8 -00.1	N 21 06.0 +00.4	247 48.7 -00.3	N 08 33.8 +01.0	258 25.2 -25.9	N 03 00.7 +14.3	02						
03	225 44.7 -00.1	N 21 06.4 +00.5	262 48.4 -00.3	N 08 34.8 +01.0	272 59.3 -25.9	N 03 15.0 +14.3	03						
04	240 44.6 +00.0	N 21 06.9 +00.4	277 48.1 -00.3	N 08 35.8 +01.0	287 33.4 -25.9	N 03 29.3 +14.2	04						
05	255 44.6 -00.1	N 21 07.3 +00.4	292 47.8 -00.3	N 08 36.8 +01.1	302 07.5 -25.9	N 03 43.5 +14.3	05						
06	270 44.5 -00.1	N 21 07.7 +00.5	307 47.5 -00.3	N 08 37.9 +01.0	316 41.6 -25.9	N 03 57.8 +14.2	06						
07	285 44.4 +00.0	N 21 08.2 +00.4	322 47.2 -00.3	N 08 38.9 +01.0	331 15.7 -25.8	N 04 12.0 +14.1	07						
08	300 44.4 -00.1	N 21 08.6 +00.4	337 46.9 -00.3	N 08 39.9 +01.1	345 49.9 -25.9	N 04 26.1 +14.2	08						
09	315 44.3 -00.1	N 21 09.0 +00.4	352 46.6 -00.3	N 08 41.0 +01.0	0 24.0 -25.9	N 04 40.3 +14.1	09						
10	330 44.2 -00.1	N 21 09.4 +00.5	7 46.3 -00.3	N 08 42.0 +01.0	14 58.1 -25.9	N 04 54.4 +14.1	10						
11	345 44.1 +00.0	N 21 09.9 +00.4	22 46.0 -00.3	N 08 43.0 +01.1	29 32.2 -25.8	N 05 08.5 +14.1	11						
12	0 44.1 -00.1	N 21 10.3 +00.4	37 45.7 -00.3	N 08 44.1 +01.0	44 06.4 -25.9	N 05 22.6 +14.0	12						
13	15 44.0 -00.1	N 21 10.7 +00.5	52 45.4 -00.3	N 08 45.1 +01.0	58 40.5 -25.9	N 05 36.6 +14.0	13						
14	30 43.9 +00.0	N 21 11.2 +00.4	67 45.1 -00.3	N 08 46.1 +01.0	73 14.6 -25.9	N 05 50.6 +13.9	14						
15	45 43.9 -00.1	N 21 11.6 +00.4	82 44.8 -00.3	N 08 47.1 +01.1	87 48.7 -25.9	N 06 04.5 +14.0	15						
16	60 43.8 -00.1	N 21 12.0 +00.4	97 44.5 -00.3	N 08 48.2 +01.0	102 22.8 -25.9	N 06 18.5 +13.9	16						
17	75 43.7 +00.0	N 21 12.4 +00.5	112 44.2 -00.3	N 08 49.2 +01.0	116 56.9 -25.9	N 06 32.4 +13.8	17						
18	90 43.7 -00.1	N 21 12.9 +00.4	127 43.9 -00.3	N 08 50.2 +01.0	131 31.0 -25.9	N 06 46.2 +13.8	18						
19	105 43.6 -00.1	N 21 13.3 +00.4	142 43.6 -00.3	N 08 51.2 +01.1	146 05.1 -25.9	N 07 00.0 +13.8	19						
20	120 43.5 -00.1	N 21 13.7 +00.4	157 43.3 -00.3	N 08 52.3 +01.0	160 39.2 -25.9	N 07 13.8 +13.7	20						
21	135 43.4 +00.0	N 21 14.1 +00.5	172 43.0 -00.3	N 08 53.3 +01.0	175 13.3 -26.0	N 07 27.5 +13.7	21						
22	150 43.4 -00.1	N 21 14.6 +00.4	187 42.7 -00.3	N 08 54.3 +01.1	189 47.3 -25.9	N 07 41.2 +13.7	22						
23	165 43.3 -00.1	N 21 15.0 +00.4	202 42.4 -00.3	N 08 55.4 +01.0	204 21.4 -26.0	N 07 54.9 +13.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'3 15'2 15'2 15'2 15'2 15'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'0 55'9 55'8 55'8 55'7 55'6								
	SHA 297° 297° 297° 297° 296° 296°		SHA 334° 334° 334° 334° 333° 333°		SHA 345° 343° 341° 339° 337° 335°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:28		Greenwich Culmination Time: 08:58								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	242 09.4 +00.7	S 01 16.4 -00.7	240 34.0 +02.0	N 00 02.5 +00.2	275 43.1 +02.4	S 14 09.7 +00.0	00						
01	257 10.1 +00.8	S 01 15.7 -00.7	255 36.0 +02.1	N 00 02.7 +00.2	290 45.5 +02.4	S 14 09.7 +00.0	01						
02	272 10.9 +00.7	S 01 15.0 -00.7	270 38.1 +02.1	N 00 02.9 +00.1	305 47.9 +02.4	S 14 09.7 +00.0	02						
03	287 11.6 +00.8	S 01 14.3 -00.8	285 40.2 +02.0	N 00 03.0 +00.2	320 50.3 +02.5	S 14 09.7 +00.0	03						
04	302 12.4 +00.7	S 01 13.5 -00.7	300 42.2 +02.1	N 00 03.2 +00.1	335 52.8 +02.4	S 14 09.7 +00.0	04						
05	317 13.1 +00.8	S 01 12.8 -00.7	315 44.3 +02.1	N 00 03.3 +00.2	350 55.2 +02.4	S 14 09.7 +00.0	05						
06	332 13.9 +00.7	S 01 12.1 -00.7	330 46.4 +02.1	N 00 03.5 +00.2	5 57.6 +02.4	S 14 09.7 +00.0	06						
07	347 14.6 +00.8	S 01 11.4 -00.8	345 48.5 +02.0	N 00 03.7 +00.1	21 00.0 +02.5	S 14 09.7 +00.0	07						
08	2 15.4 +00.7	S 01 10.6 -00.7	0 50.5 +02.1	N 00 03.8 +00.2	36 02.5 +02.4	S 14 09.7 +00.0	08						
09	17 16.1 +00.8	S 01 09.9 -00.7	15 52.6 +02.1	N 00 04.0 +00.1	51 04.9 +02.4	S 14 09.7 +00.0	09						
10	32 16.9 +00.7	S 01 09.2 -00.8	30 54.7 +02.0	N 00 04.1 +00.2	66 07.3 +02.4	S 14 09.7 +00.0	10						
11	47 17.6 +00.8	S 01 08.4 -00.7	45 56.7 +02.1	N 00 04.3 +00.2	81 09.7 +02.4	S 14 09.7 -00.1	11						
12	62 18.4 +00.7	S 01 07.7 -00.7	60 58.8 +02.1	N 00 04.5 +00.1	96 12.1 +02.5	S 14 09.6 +00.0	12						
13	77 19.1 +00.8	S 01 07.0 -00.7	76 00.9 +02.1	N 00 04.6 +00.2	111 14.6 +02.4	S 14 09.6 +00.0	13						
14	92 19.9 +00.7	S 01 06.3 -00.8	91 03.0 +02.0	N 00 04.8 +00.1	126 17.0 +02.4	S 14 09.6 +00.0	14						
15	107 20.6 +00.8	S 01 05.5 -00.7	106 05.0 +02.1	N 00 04.9 +00.2	141 19.4 +02.4	S 14 09.6 +00.0	15						
16	122 21.4 +00.7	S 01 04.8 -00.7	121 07.1 +02.1	N 00 05.1 +00.2	156 21.8 +02.5	S 14 09.6 +00.0	16						
17	137 22.1 +00.8	S 01 04.1 -00.7	136 09.2 +02.1	N 00 05.3 +00.1	171 24.3 +02.4	S 14 09.6 +00.0	17						
18	152 22.9 +00.7	S 01 03.4 -00.8	151 11.3 +02.0	N 00 05.4 +00.2	186 26.7 +02.4	S 14 09.6 +00.0	18						
19	167 23.6 +00.8	S 01 02.6 -00.7	166 13.3 +02.1	N 00 05.6 +00.1	201 29.1 +02.4	S 14 09.6 +00.0	19						
20	182 24.4 +00.7	S 01 01.9 -00.7	181 15.4 +02.1	N 00 05.7 +00.2	216 31.5 +02.5	S 14 09.6 +00.0	20						
21	197 25.1 +00.8	S 01 01.2 -00.8	196 17.5 +02.0	N 00 05.9 +00.2	231 34.0 +02.4	S 14 09.6 +00.0	21						
22	212 25.9 +00.7	S 01 00.4 -00.7	211 19.5 +02.1	N 00 06.1 +00.1	246 36.4 +02.4	S 14 09.6 +00.0	22						
23	227 26.6 +00.8	S 00 59.7 -00.7	226 21.6 +02.1	N 00 06.2 +00.2	261 38.8 +02.4	S 14 09.6 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 359° 358° 358° 358° 358° 358°		SHA 357° 357° 357° 357° 357° 357°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:50		Greenwich Culmination Time: 07:56		Greenwich Culmination Time: 05:36								



UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 43.2 +00.0	N 21 15.4 +00.4	217 42.1 -00.3	N 08 56.4 +01.0	218 55.4 -26.0	N 08 08.5 +13.6	00						
01	195 43.2 -00.1	N 21 15.8 +00.5	232 41.8 -00.3	N 08 57.4 +01.0	233 29.4 -26.0	N 08 22.1 +13.5	01						
02	210 43.1 -00.1	N 21 16.3 +00.4	247 41.5 -00.3	N 08 58.4 +01.1	248 03.4 -26.0	N 08 35.6 +13.5	02						
03	225 43.0 -00.1	N 21 16.7 +00.4	262 41.2 -00.3	N 08 59.5 +01.0	262 37.4 -26.0	N 08 49.1 +13.5	03						
04	240 42.9 +00.0	N 21 17.1 +00.4	277 40.9 -00.4	N 09 00.5 +01.0	277 11.4 -26.0	N 09 02.6 +13.4	04						
05	255 42.9 -00.1	N 21 17.5 +00.4	292 40.5 -00.3	N 09 01.5 +01.0	291 45.4 -26.1	N 09 16.0 +13.3	05						
06	270 42.8 -00.1	N 21 17.9 +00.4	307 40.2 -00.3	N 09 02.5 +01.1	306 19.3 -26.1	N 09 29.3 +13.4	06						
07	285 42.7 -00.1	N 21 18.3 +00.5	322 39.9 -00.3	N 09 03.6 +01.0	320 53.2 -26.1	N 09 42.7 +13.2	07						
08	300 42.6 +00.0	N 21 18.8 +00.4	337 39.6 -00.3	N 09 04.6 +01.0	335 27.1 -26.1	N 09 55.9 +13.2	08						
09	315 42.6 -00.1	N 21 19.2 +00.4	352 39.3 -00.3	N 09 05.6 +01.0	350 01.0 -26.1	N 10 09.1 +13.2	09						
10	330 42.5 -00.1	N 21 19.6 +00.4	7 39.0 -00.3	N 09 06.6 +01.0	4 34.9 -26.2	N 10 22.3 +13.1	10						
11	345 42.4 -00.1	N 21 20.0 +00.4	22 38.7 -00.3	N 09 07.6 +01.1	19 08.7 -26.2	N 10 35.4 +13.1	11						
12	0 42.3 +00.0	N 21 20.4 +00.4	37 38.4 -00.3	N 09 08.7 +01.0	33 42.5 -26.2	N 10 48.5 +13.0	12						
13	15 42.3 -00.1	N 21 20.8 +00.5	52 38.1 -00.3	N 09 09.7 +01.0	48 16.3 -26.2	N 11 01.5 +12.9	13						
14	30 42.2 -00.1	N 21 21.3 +00.4	67 37.8 -00.3	N 09 10.7 +01.0	62 50.1 -26.3	N 11 14.4 +12.9	14						
15	45 42.1 -00.1	N 21 21.7 +00.4	82 37.5 -00.4	N 09 11.7 +01.1	77 23.8 -26.3	N 11 27.3 +12.9	15						
16	60 42.0 +00.0	N 21 22.1 +00.4	97 37.1 -00.3	N 09 12.8 +01.0	91 57.5 -26.3	N 11 40.2 +12.8	16						
17	75 42.0 -00.1	N 21 22.5 +00.4	112 36.8 -00.3	N 09 13.8 +01.0	106 31.2 -26.3	N 11 53.0 +12.7	17						
18	90 41.9 -00.1	N 21 22.9 +00.4	127 36.5 -00.3	N 09 14.8 +01.0	121 04.9 -26.4	N 12 05.7 +12.7	18						
19	105 41.8 -00.1	N 21 23.3 +00.4	142 36.2 -00.3	N 09 15.8 +01.0	135 38.5 -26.4	N 12 18.4 +12.6	19						
20	120 41.7 +00.0	N 21 23.7 +00.4	157 35.9 -00.3	N 09 16.8 +01.1	150 12.1 -26.4	N 12 31.0 +12.6	20						
21	135 41.7 -00.1	N 21 24.1 +00.4	172 35.6 -00.3	N 09 17.9 +01.0	164 45.7 -26.5	N 12 43.6 +12.5	21						
22	150 41.6 -00.1	N 21 24.5 +00.4	187 35.3 -00.3	N 09 18.9 +01.0	179 19.2 -26.5	N 12 56.1 +12.4	22						
23	165 41.5 -00.1	N 21 24.9 +00.4	202 35.0 -00.3	N 09 19.9 +01.0	193 52.7 -26.5	N 13 08.5 +12.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'1 15'1 15'1 15'1 15'0 15'0								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'5 55'4 55'3 55'3 55'2 55'1								
	SHA 296° 296° 296° 296° 295° 295°		SHA 333° 333° 333° 333° 332° 332°		SHA 333° 332° 330° 328° 326° 324°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:29		Greenwich Culmination Time: 09:41								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	242 27.4 +00.8	S 00 59.0 -00.7	241 23.7 +02.1	N 00 06.4 +00.1	276 41.2 +02.5	S 14 09.6 +00.0	00						
01	257 28.2 +00.7	S 00 58.3 -00.8	256 25.8 +02.0	N 00 06.5 +00.2	291 43.7 +02.4	S 14 09.6 +00.0	01						
02	272 28.9 +00.8	S 00 57.5 -00.7	271 27.8 +02.1	N 00 06.7 +00.2	306 46.1 +02.4	S 14 09.6 +00.0	02						
03	287 29.7 +00.7	S 00 56.8 -00.7	286 29.9 +02.1	N 00 06.9 +00.1	321 48.5 +02.5	S 14 09.6 +00.0	03						
04	302 30.4 +00.8	S 00 56.1 -00.7	301 32.0 +02.1	N 00 07.0 +00.2	336 51.0 +02.4	S 14 09.6 +00.0	04						
05	317 31.2 +00.7	S 00 55.4 -00.8	316 34.1 +02.0	N 00 07.2 +00.1	351 53.4 +02.4	S 14 09.6 +00.0	05						
06	332 31.9 +00.8	S 00 54.6 -00.7	331 36.1 +02.1	N 00 07.3 +00.2	6 55.8 +02.4	S 14 09.6 -00.1	06						
07	347 32.7 +00.7	S 00 53.9 -00.7	346 38.2 +02.1	N 00 07.5 +00.2	21 58.2 +02.5	S 14 09.5 +00.0	07						
08	2 33.4 +00.8	S 00 53.2 -00.7	1 40.3 +02.1	N 00 07.7 +00.1	37 00.7 +02.4	S 14 09.5 +00.0	08						
09	17 34.2 +00.7	S 00 52.5 -00.8	16 42.4 +02.0	N 00 07.8 +00.2	52 03.1 +02.4	S 14 09.5 +00.0	09						
10	32 34.9 +00.8	S 00 51.7 -00.7	31 44.4 +02.1	N 00 08.0 +00.1	67 05.5 +02.4	S 14 09.5 +00.0	10						
11	47 35.7 +00.7	S 00 51.0 -00.7	46 46.5 +02.1	N 00 08.1 +00.2	82 07.9 +02.5	S 14 09.5 +00.0	11						
12	62 36.4 +00.8	S 00 50.3 -00.8	61 48.6 +02.1	N 00 08.3 +00.1	97 10.4 +02.4	S 14 09.5 +00.0	12						
13	77 37.2 +00.7	S 00 49.5 -00.7	76 50.7 +02.1	N 00 08.4 +00.2	112 12.8 +02.4	S 14 09.5 +00.0	13						
14	92 37.9 +00.8	S 00 48.8 -00.7	91 52.8 +02.0	N 00 08.6 +00.2	127 15.2 +02.5	S 14 09.5 +00.0	14						
15	107 38.7 +00.7	S 00 48.1 -00.7	106 54.8 +02.1	N 00 08.8 +00.1	142 17.7 +02.4	S 14 09.5 +00.0	15						
16	122 39.4 +00.8	S 00 47.4 -00.8	121 56.9 +02.1	N 00 08.9 +00.2	157 20.1 +02.4	S 14 09.5 +00.0	16						
17	137 40.2 +00.7	S 00 46.6 -00.7	136 59.0 +02.1	N 00 09.1 +00.1	172 22.5 +02.4	S 14 09.5 +00.0	17						
18	152 40.9 +00.8	S 00 45.9 -00.7	152 01.1 +02.0	N 00 09.2 +00.2	187 24.9 +02.5	S 14 09.5 +00.0	18						
19	167 41.7 +00.7	S 00 45.2 -00.7	167 03.1 +02.1	N 00 09.4 +00.1	202 27.4 +02.4	S 14 09.5 +00.0	19						
20	182 42.4 +00.8	S 00 44.5 -00.8	182 05.2 +02.1	N 00 09.5 +00.2	217 29.8 +02.4	S 14 09.5 +00.0	20						
21	197 43.2 +00.7	S 00 43.7 -00.7	197 07.3 +02.1	N 00 09.7 +00.2	232 32.2 +02.5	S 14 09.5 +00.0	21						
22	212 43.9 +00.8	S 00 43.0 -00.7	212 09.4 +02.0	N 00 09.9 +00.1	247 34.7 +02.4	S 14 09.5 +00.0	22						
23	227 44.7 +00.8	S 00 42.3 -00.7	227 11.4 +02.1	N 00 10.0 +00.2	262 37.1 +02.4	S 14 09.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 358° 358° 358° 358° 357° 357°		SHA 357° 357° 357° 357° 357° 357°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:49		Greenwich Culmination Time: 07:53		Greenwich Culmination Time: 05:32								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	180 41.4 +00.0	N 21 25.3 +00.5	217 34.7 -00.4	N 09 20.9 +01.0	208 26.2 -26.6	N 13 20.9 +12.3	00							
01	195 41.4 -00.1	N 21 25.8 +00.4	232 34.3 -00.3	N 09 21.9 +01.1	222 59.6 -26.6	N 13 33.2 +12.3	01							
02	210 41.3 -00.1	N 21 26.2 +00.4	247 34.0 -00.3	N 09 23.0 +01.0	237 33.0 -26.6	N 13 45.5 +12.2	02							
03	225 41.2 -00.1	N 21 26.6 +00.4	262 33.7 -00.3	N 09 24.0 +01.0	252 06.4 -26.7	N 13 57.7 +12.1	03							
04	240 41.1 -00.1	N 21 27.0 +00.4	277 33.4 -00.3	N 09 25.0 +01.0	266 39.7 -26.7	N 14 09.8 +12.1	04							
05	255 41.0 +00.0	N 21 27.4 +00.4	292 33.1 -00.3	N 09 26.0 +01.0	281 13.0 -26.7	N 14 21.9 +12.0	05							
06	270 41.0 -00.1	N 21 27.8 +00.4	307 32.8 -00.3	N 09 27.0 +01.1	295 46.3 -26.8	N 14 33.9 +11.9	06							
07	285 40.9 -00.1	N 21 28.2 +00.4	322 32.5 -00.4	N 09 28.1 +01.0	310 19.5 -26.8	N 14 45.8 +11.9	07							
08	300 40.8 -00.1	N 21 28.6 +00.4	337 32.1 -00.3	N 09 29.1 +01.0	324 52.7 -26.8	N 14 57.7 +11.8	08							
09	315 40.7 -00.1	N 21 29.0 +00.4	352 31.8 -00.3	N 09 30.1 +01.0	339 25.9 -26.9	N 15 09.5 +11.7	09							
10	330 40.6 +00.0	N 21 29.4 +00.4	7 31.5 -00.3	N 09 31.1 +01.0	353 59.0 -27.0	N 15 21.2 +11.6	10							
11	345 40.6 -00.1	N 21 29.8 +00.4	22 31.2 -00.3	N 09 32.1 +01.0	8 32.0 -26.9	N 15 32.8 +11.6	11							
12	0 40.5 -00.1	N 21 30.2 +00.4	37 30.9 -00.4	N 09 33.1 +01.1	23 05.1 -27.0	N 15 44.4 +11.5	12							
13	15 40.4 -00.1	N 21 30.6 +00.4	52 30.5 -00.3	N 09 34.2 +01.0	37 38.1 -27.1	N 15 55.9 +11.5	13							
14	30 40.3 +00.0	N 21 31.0 +00.4	67 30.2 -00.3	N 09 35.2 +01.0	52 11.0 -27.1	N 16 07.4 +11.3	14							
15	45 40.3 -00.1	N 21 31.4 +00.4	82 29.9 -00.3	N 09 36.2 +01.0	66 43.9 -27.1	N 16 18.7 +11.3	15							
16	60 40.2 -00.1	N 21 31.8 +00.4	97 29.6 -00.3	N 09 37.2 +01.0	81 16.8 -27.2	N 16 30.0 +11.2	16							
17	75 40.1 -00.1	N 21 32.2 +00.4	112 29.3 -00.3	N 09 38.2 +01.0	95 49.6 -27.2	N 16 41.2 +11.2	17							
18	90 40.0 -00.1	N 21 32.6 +00.3	127 29.0 -00.4	N 09 39.2 +01.0	110 22.4 -27.3	N 16 52.4 +11.0	18							
19	105 39.9 -00.1	N 21 32.9 +00.4	142 28.6 -00.3	N 09 40.2 +01.1	124 55.1 -27.3	N 17 03.4 +11.0	19							
20	120 39.8 +00.0	N 21 33.3 +00.4	157 28.3 -00.3	N 09 41.3 +01.0	139 27.8 -27.3	N 17 14.4 +10.9	20							
21	135 39.8 -00.1	N 21 33.7 +00.4	172 28.0 -00.3	N 09 42.3 +01.0	154 00.5 -27.4	N 17 25.3 +10.8	21							
22	150 39.7 -00.1	N 21 34.1 +00.4	187 27.7 -00.3	N 09 43.3 +01.0	168 33.1 -27.4	N 17 36.1 +10.8	22							
23	165 39.6 -00.1	N 21 34.5 +00.4	202 27.4 -00.4	N 09 44.3 +01.0	183 05.7 -27.5	N 17 46.9 +10.7	23							
UT 02 06 10 14 18 22	SD 15'8 15'8 15'8 15'8 15'8 15'8	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 295° 295° 295° 295° 294° 294°	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 332° 332° 332° 331° 331° 331°	Greenwich Culmination Time: 09:29	UT 02 06 10 14 18 22	SD 15'0 15'0 15'0 14'9 14'9 14'9	HP 55'1 55'0 54'9 54'9 54'8 54'7	SHA 322° 320° 318° 316° 314° 312°	Greenwich Culmination Time: 10:24

  

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	242 45.5 +00.7	S 00 41.6 -00.8	242 13.5 +02.1	N 00 10.2 +00.1	277 39.5 +02.4	S 14 09.5 +00.0	00							
01	257 46.2 +00.8	S 00 40.8 -00.7	257 15.6 +02.1	N 00 10.3 +00.2	292 41.9 +02.5	S 14 09.5 +00.0	01							
02	272 47.0 +00.7	S 00 40.1 -00.7	272 17.7 +02.1	N 00 10.5 +00.1	307 44.4 +02.4	S 14 09.5 +00.0	02							
03	287 47.7 +00.8	S 00 39.4 -00.7	287 19.8 +02.0	N 00 10.6 +00.2	322 46.8 +02.4	S 14 09.5 +00.0	03							
04	302 48.5 +00.7	S 00 38.7 -00.8	302 21.8 +02.1	N 00 10.8 +00.2	337 49.2 +02.5	S 14 09.5 +00.0	04							
05	317 49.2 +00.8	S 00 37.9 -00.7	317 23.9 +02.1	N 00 11.0 +00.1	352 51.7 +02.4	S 14 09.5 +00.0	05							
06	332 50.0 +00.7	S 00 37.2 -00.7	332 26.0 +02.1	N 00 11.1 +00.2	7 54.1 +02.4	S 14 09.5 +00.0	06							
07	347 50.7 +00.8	S 00 36.5 -00.7	347 28.1 +02.1	N 00 11.3 +00.1	22 56.5 +02.5	S 14 09.5 -00.1	07							
08	2 51.5 +00.7	S 00 35.8 -00.8	2 30.2 +02.0	N 00 11.4 +00.2	37 59.0 +02.4	S 14 09.4 +00.0	08							
09	17 52.2 +00.8	S 00 35.0 -00.7	17 32.2 +02.1	N 00 11.6 +00.1	53 01.4 +02.4	S 14 09.4 +00.0	09							
10	32 53.0 +00.7	S 00 34.3 -00.7	32 34.3 +02.1	N 00 11.7 +00.2	68 03.8 +02.5	S 14 09.4 +00.0	10							
11	47 53.7 +00.8	S 00 33.6 -00.8	47 36.4 +02.1	N 00 11.9 +00.2	83 06.3 +02.4	S 14 09.4 +00.0	11							
12	62 54.5 +00.8	S 00 32.8 -00.7	62 38.5 +02.1	N 00 12.1 +00.1	98 08.7 +02.4	S 14 09.4 +00.0	12							
13	77 55.3 +00.7	S 00 32.1 -00.7	77 40.6 +02.0	N 00 12.2 +00.2	113 11.1 +02.5	S 14 09.4 +00.0	13							
14	92 56.0 +00.8	S 00 31.4 -00.7	92 42.6 +02.1	N 00 12.4 +00.1	128 13.6 +02.4	S 14 09.4 +00.0	14							
15	107 56.8 +00.7	S 00 30.7 -00.8	107 44.7 +02.1	N 00 12.5 +00.2	143 16.0 +02.4	S 14 09.4 +00.0	15							
16	122 57.5 +00.8	S 00 29.9 -00.7	122 46.8 +02.1	N 00 12.7 +00.1	158 18.4 +02.4	S 14 09.4 +00.0	16							
17	137 58.3 +00.7	S 00 29.2 -00.7	137 48.9 +02.1	N 00 12.8 +00.2	173 20.8 +02.5	S 14 09.4 +00.0	17							
18	152 59.0 +00.8	S 00 28.5 -00.7	152 51.0 +02.1	N 00 13.0 +00.2	188 23.3 +02.4	S 14 09.4 +00.0	18							
19	167 59.8 +00.7	S 00 27.8 -00.8	167 53.1 +02.0	N 00 13.2 +00.1	203 25.7 +02.4	S 14 09.4 +00.0	19							
20	183 00.5 +00.8	S 00 27.0 -00.7	182 55.1 +02.1	N 00 13.3 +00.2	218 28.1 +02.5	S 14 09.4 +00.0	20							
21	198 01.3 +00.7	S 00 26.3 -00.7	197 57.2 +02.1	N 00 13.5 +00.1	233 30.6 +02.4	S 14 09.4 +00.0	21							
22	213 02.0 +00.8	S 00 25.6 -00.7	212 59.3 +02.1	N 00 13.6 +00.2	248 33.0 +02.4	S 14 09.4 +00.0	22							
23	228 02.8 +00.8	S 00 24.9 -00.8	228 01.4 +02.1	N 00 13.8 +00.1	263 35.4 +02.5	S 14 09.4 +00.0	23							
UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 357° 357° 357° 357° 357° 357°	Greenwich Culmination Time: 07:48	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 357° 357° 357° 357° 357° 357°	Greenwich Culmination Time: 07:50	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 032° 032° 032° 032° 032° 032°	Greenwich Culmination Time: 05:28

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 39.5 -00.1	N 21 34.9 +00.4	217 27.0 -00.3	N 09 45.3 +01.0	197 38.2 -27.6	N 17 57.6 +10.5							
01	195 39.4 +00.0	N 21 35.3 +00.4	232 26.7 -00.3	N 09 46.3 +01.0	212 10.6 -27.5	N 18 08.1 +10.5							
02	210 39.4 -00.1	N 21 35.7 +00.4	247 26.4 -00.3	N 09 47.3 +01.1	226 43.1 -27.6	N 18 18.6 +10.5							
03	225 39.3 -00.1	N 21 36.1 +00.4	262 26.1 -00.4	N 09 48.4 +01.0	241 15.5 -27.7	N 18 29.1 +10.3							
04	240 39.2 -00.1	N 21 36.5 +00.4	277 25.7 -00.3	N 09 49.4 +01.0	255 47.8 -27.7	N 18 39.4 +10.2							
05	255 39.1 -00.1	N 21 36.9 +00.3	292 25.4 -00.3	N 09 50.4 +01.0	270 20.1 -27.8	N 18 49.6 +10.2							
06	270 39.0 -00.1	N 21 37.2 +00.4	307 25.1 -00.3	N 09 51.4 +01.0	284 52.3 -27.8	N 18 59.8 +10.1							
07	285 38.9 +00.0	N 21 37.6 +00.4	322 24.8 -00.4	N 09 52.4 +01.0	299 24.5 -27.9	N 19 09.9 +10.0							
08	300 38.9 -00.1	N 21 38.0 +00.4	337 24.4 -00.3	N 09 53.4 +01.0	313 56.6 -27.9	N 19 19.9 +09.9							
09	315 38.8 -00.1	N 21 38.4 +00.4	352 24.1 -00.3	N 09 54.4 +01.0	328 28.7 -27.9	N 19 29.8 +09.8							
10	330 38.7 -00.1	N 21 38.8 +00.4	7 23.8 -00.3	N 09 55.4 +01.0	343 00.8 -28.0	N 19 39.6 +09.7							
11	345 38.6 -00.1	N 21 39.2 +00.3	22 23.5 -00.4	N 09 56.4 +01.1	357 32.8 -28.1	N 19 49.3 +09.6							
12	0 38.5 -00.1	N 21 39.5 +00.4	37 23.1 -00.3	N 09 57.5 +01.0	12 04.7 -28.1	N 19 58.9 +09.5							
13	15 38.4 +00.0	N 21 39.9 +00.4	52 22.8 -00.3	N 09 58.5 +01.0	26 36.6 -28.1	N 20 08.4 +09.5							
14	30 38.4 -00.1	N 21 40.3 +00.4	67 22.5 -00.3	N 09 59.5 +01.0	41 08.5 -28.2	N 20 17.9 +09.3							
15	45 38.3 -00.1	N 21 40.7 +00.4	82 22.2 -00.4	N 10 00.5 +01.0	55 40.3 -28.2	N 20 27.2 +09.3							
16	60 38.2 -00.1	N 21 41.1 +00.4	97 21.8 -00.3	N 10 01.5 +01.0	70 12.1 -28.3	N 20 36.5 +09.2							
17	75 38.1 -00.1	N 21 41.5 +00.3	112 21.5 -00.3	N 10 02.5 +01.0	84 43.8 -28.4	N 20 45.7 +09.0							
18	90 38.0 -00.1	N 21 41.8 +00.4	127 21.2 -00.3	N 10 03.5 +01.0	99 15.4 -28.4	N 20 54.7 +09.0							
19	105 37.9 -00.1	N 21 42.2 +00.4	142 20.9 -00.4	N 10 04.5 +01.0	113 47.0 -28.4	N 21 03.7 +08.9							
20	120 37.8 +00.0	N 21 42.6 +00.4	157 20.5 -00.3	N 10 05.5 +01.0	128 18.6 -28.5	N 21 12.6 +08.8							
21	135 37.8 -00.1	N 21 43.0 +00.3	172 20.2 -00.3	N 10 06.5 +01.0	142 50.1 -28.5	N 21 21.4 +08.6							
22	150 37.7 -00.1	N 21 43.3 +00.4	187 19.9 -00.4	N 10 07.5 +01.0	157 21.6 -28.6	N 21 30.0 +08.6							
23	165 37.6 -00.1	N 21 43.7 +00.4	202 19.5 -00.3	N 10 08.5 +01.0	171 53.0 -28.6	N 21 38.6 +08.5							
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'9 14'9 14'9 14'9 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'7 54'6 54'6 54'5 54'5 54'4								
	SHA 294° 294° 294° 294° 293° 293°		SHA 331° 331° 330° 330° 330° 330°		SHA 310° 308° 306° 304° 302° 300°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:30		Greenwich Culmination Time: 11:10								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 03.6 +00.7	S 00 24.1 -00.7	243 03.5 +02.0	N 00 13.9 +00.2	278 37.9 +02.4	S 14 09.4 +00.0							
01	258 04.3 +00.8	S 00 23.4 -00.7	258 05.5 +02.1	N 00 14.1 +00.1	293 40.3 +02.4	S 14 09.4 +00.0							
02	273 05.1 +00.7	S 00 22.7 -00.7	273 07.6 +02.1	N 00 14.2 +00.2	308 42.7 +02.5	S 14 09.4 +00.0							
03	288 05.8 +00.8	S 00 22.0 -00.8	288 09.7 +02.1	N 00 14.4 +00.1	323 45.2 +02.4	S 14 09.4 +00.0							
04	303 06.6 +00.7	S 00 21.2 -00.7	303 11.8 +02.1	N 00 14.5 +00.2	338 47.6 +02.5	S 14 09.4 +00.0							
05	318 07.3 +00.8	S 00 20.5 -00.7	318 13.9 +02.1	N 00 14.7 +00.2	353 50.1 +02.4	S 14 09.4 +00.0							
06	333 08.1 +00.7	S 00 19.8 -00.7	333 16.0 +02.0	N 00 14.9 +00.1	8 52.5 +02.4	S 14 09.4 +00.0							
07	348 08.8 +00.8	S 00 19.1 -00.8	348 18.0 +02.1	N 00 15.0 +00.2	23 54.9 +02.5	S 14 09.4 +00.0							
08	3 09.6 +00.7	S 00 18.3 -00.7	3 20.1 +02.1	N 00 15.2 +00.1	38 57.4 +02.4	S 14 09.4 +00.0							
09	18 10.3 +00.8	S 00 17.6 -00.7	18 22.2 +02.1	N 00 15.3 +00.2	53 59.8 +02.4	S 14 09.4 +00.0							
10	33 11.1 +00.8	S 00 16.9 -00.7	33 24.3 +02.1	N 00 15.5 +00.1	69 02.2 +02.5	S 14 09.4 +00.0							
11	48 11.9 +00.7	S 00 16.2 -00.8	48 26.4 +02.1	N 00 15.6 +00.2	84 04.7 +02.4	S 14 09.4 +00.0							
12	63 12.6 +00.8	S 00 15.4 -00.7	63 28.5 +02.1	N 00 15.8 +00.1	99 07.1 +02.4	S 14 09.4 +00.0							
13	78 13.4 +00.7	S 00 14.7 -00.7	78 30.6 +02.0	N 00 15.9 +00.2	114 09.5 +02.5	S 14 09.4 +00.0							
14	93 14.1 +00.8	S 00 14.0 -00.7	93 32.6 +02.1	N 00 16.1 +00.1	129 12.0 +02.4	S 14 09.4 +00.0							
15	108 14.9 +00.7	S 00 13.3 -00.8	108 34.7 +02.1	N 00 16.2 +00.2	144 14.4 +02.4	S 14 09.4 +00.0							
16	123 15.6 +00.8	S 00 12.5 -00.7	123 36.8 +02.1	N 00 16.4 +00.2	159 16.8 +02.5	S 14 09.4 +00.0							
17	138 16.4 +00.7	S 00 11.8 -00.7	138 38.9 +02.1	N 00 16.6 +00.1	174 19.3 +02.4	S 14 09.4 +00.0							
18	153 17.1 +00.8	S 00 11.1 -00.7	153 41.0 +02.1	N 00 16.7 +00.2	189 21.7 +02.5	S 14 09.4 +00.0							
19	168 17.9 +00.8	S 00 10.4 -00.8	168 43.1 +02.1	N 00 16.9 +00.1	204 24.2 +02.4	S 14 09.4 +00.0							
20	183 18.7 +00.7	S 00 09.6 -00.7	183 45.2 +02.0	N 00 17.0 +00.2	219 26.6 +02.4	S 14 09.4 +00.0							
21	198 19.4 +00.8	S 00 08.9 -00.7	198 47.2 +02.1	N 00 17.2 +00.1	234 29.0 +02.5	S 14 09.4 +00.0							
22	213 20.2 +00.7	S 00 08.2 -00.7	213 49.3 +02.1	N 00 17.3 +00.2	249 31.5 +02.4	S 14 09.4 +00.0							
23	228 20.9 +00.8	S 00 07.5 -00.8	228 51.4 +02.1	N 00 17.5 +00.1	264 33.9 +02.4	S 14 09.4 +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 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 357° 356° 356° 356° 356° 356°		SHA 357° 357° 356° 356° 356° 356°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:47		Greenwich Culmination Time: 07:46		Greenwich Culmination Time: 05:24								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 37.5 -00.1	N 21 44.1 +00.4	217 19.2 -00.3	N 10 09.5 +01.1	186 24.4 -28.7	N 21 47.1 +08.4	00						
01	195 37.4 -00.1	N 21 44.5 +00.3	232 18.9 -00.3	N 10 10.6 +01.0	200 55.7 -28.8	N 21 55.5 +08.3	01						
02	210 37.3 -00.1	N 21 44.8 +00.4	247 18.6 -00.4	N 10 11.6 +01.0	215 26.9 -28.7	N 22 03.8 +08.1	02						
03	225 37.2 -00.1	N 21 45.2 +00.4	262 18.2 -00.3	N 10 12.6 +01.0	229 58.2 -28.9	N 22 11.9 +08.1	03						
04	240 37.1 +00.0	N 21 45.6 +00.4	277 17.9 -00.3	N 10 13.6 +01.0	244 29.3 -28.8	N 22 20.0 +08.0	04						
05	255 37.1 -00.1	N 21 46.0 +00.3	292 17.6 -00.4	N 10 14.6 +01.0	259 00.5 -29.0	N 22 28.0 +07.8	05						
06	270 37.0 -00.1	N 21 46.3 +00.4	307 17.2 -00.3	N 10 15.6 +01.0	273 31.5 -28.9	N 22 35.8 +07.8	06						
07	285 36.9 -00.1	N 21 46.7 +00.4	322 16.9 -00.3	N 10 16.6 +01.0	288 02.6 -29.1	N 22 43.6 +07.7	07						
08	300 36.8 -00.1	N 21 47.1 +00.3	337 16.6 -00.4	N 10 17.6 +01.0	302 33.5 -29.0	N 22 51.3 +07.5	08						
09	315 36.7 -00.1	N 21 47.4 +00.4	352 16.2 -00.3	N 10 18.6 +01.0	317 04.5 -29.1	N 22 58.8 +07.4	09						
10	330 36.6 -00.1	N 21 47.8 +00.4	7 15.9 -00.3	N 10 19.6 +01.0	331 35.4 -29.2	N 23 06.2 +07.4	10						
11	345 36.5 -00.1	N 21 48.2 +00.3	22 15.6 -00.4	N 10 20.6 +01.0	346 06.2 -29.2	N 23 13.6 +07.2	11						
12	0 36.4 +00.0	N 21 48.5 +00.4	37 15.2 -00.3	N 10 21.6 +01.0	0 37.0 -29.2	N 23 20.8 +07.1	12						
13	15 36.4 -00.1	N 21 48.9 +00.4	52 14.9 -00.3	N 10 22.6 +01.0	15 07.8 -29.3	N 23 27.9 +07.0	13						
14	30 36.3 -00.1	N 21 49.3 +00.3	67 14.6 -00.4	N 10 23.6 +01.0	29 38.5 -29.4	N 23 34.9 +06.9	14						
15	45 36.2 -00.1	N 21 49.6 +00.4	82 14.2 -00.3	N 10 24.6 +01.0	44 09.1 -29.3	N 23 41.8 +06.8	15						
16	60 36.1 -00.1	N 21 50.0 +00.4	97 13.9 -00.3	N 10 25.6 +01.0	58 39.8 -29.5	N 23 48.6 +06.7	16						
17	75 36.0 -00.1	N 21 50.4 +00.3	112 13.6 -00.4	N 10 26.6 +01.0	73 10.3 -29.4	N 23 55.3 +06.6	17						
18	90 35.9 -00.1	N 21 50.7 +00.4	127 13.2 -00.3	N 10 27.6 +01.0	87 40.9 -29.6	N 24 01.9 +06.4	18						
19	105 35.8 -00.1	N 21 51.1 +00.4	142 12.9 -00.4	N 10 28.6 +01.0	102 11.3 -29.5	N 24 08.3 +06.3	19						
20	120 35.7 -00.1	N 21 51.5 +00.3	157 12.5 -00.3	N 10 29.6 +01.0	116 41.8 -29.6	N 24 14.6 +06.3	20						
21	135 35.6 -00.1	N 21 51.8 +00.4	172 12.2 -00.3	N 10 30.6 +01.0	131 12.2 -29.7	N 24 20.9 +06.1	21						
22	150 35.5 +00.0	N 21 52.2 +00.3	187 11.9 -00.4	N 10 31.6 +01.0	145 42.5 -29.6	N 24 27.0 +06.0	22						
23	165 35.5 -00.1	N 21 52.5 +00.4	202 11.5 -00.3	N 10 32.6 +01.0	160 12.9 -29.8	N 24 33.0 +05.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'4 54'3 54'3 54'3 54'2 54'2								
	SHA 293° 293° 293° 293° 292° 292°		SHA 330° 330° 329° 329° 329° 329°		SHA 298° 296° 294° 292° 289° 287°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:30		Greenwich Culmination Time: 11:57								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 21.7 +00.7	S 00 06.7 -00.7	243 53.5 +02.1	N 00 17.6 +00.2	279 36.3 +02.5	S 14 09.4 +00.0	00						
01	258 22.4 +00.8	S 00 06.0 -00.7	258 55.6 +02.1	N 00 17.8 +00.1	294 38.8 +02.4	S 14 09.4 +00.0	01						
02	273 23.2 +00.8	S 00 05.3 -00.7	273 57.7 +02.1	N 00 17.9 +00.2	309 41.2 +02.5	S 14 09.4 +00.0	02						
03	288 24.0 +00.7	S 00 04.6 -00.8	288 59.8 +02.1	N 00 18.1 +00.1	324 43.7 +02.4	S 14 09.4 +00.0	03						
04	303 24.7 +00.8	S 00 03.8 -00.7	304 01.9 +02.0	N 00 18.2 +00.2	339 46.1 +02.4	S 14 09.4 +00.0	04						
05	318 25.5 +00.7	S 00 03.1 -00.7	319 03.9 +02.1	N 00 18.4 +00.1	354 48.5 +02.5	S 14 09.4 +00.0	05						
06	333 26.2 +00.8	S 00 02.4 -00.7	334 06.0 +02.1	N 00 18.5 +00.2	9 51.0 +02.4	S 14 09.4 +00.0	06						
07	348 27.0 +00.7	S 00 01.7 -00.7	349 08.1 +02.1	N 00 18.7 +00.2	24 53.4 +02.5	S 14 09.4 +00.0	07						
08	3 27.7 +00.8	S 00 01.0 -00.8	4 10.2 +02.1	N 00 18.9 +00.1	39 55.9 +02.4	S 14 09.4 +00.0	08						
09	18 28.5 +00.8	S 00 00.2 -00.7	19 12.3 +02.1	N 00 19.0 +00.2	54 58.3 +02.4	S 14 09.4 +00.0	09						
10	33 29.3 +00.7	N 00 00.5 +00.7	34 14.4 +02.1	N 00 19.2 +00.1	70 00.7 +02.5	S 14 09.4 +00.0	10						
11	48 30.0 +00.8	N 00 01.2 +00.7	49 16.5 +02.1	N 00 19.3 +00.2	85 03.2 +02.4	S 14 09.4 +00.0	11						
12	63 30.8 +00.7	N 00 01.9 +00.8	64 18.6 +02.1	N 00 19.5 +00.1	100 05.6 +02.4	S 14 09.4 +00.0	12						
13	78 31.5 +00.8	N 00 02.7 +00.7	79 20.7 +02.0	N 00 19.6 +00.2	115 08.0 +02.5	S 14 09.4 +00.0	13						
14	93 32.3 +00.7	N 00 03.4 +00.7	94 22.7 +02.1	N 00 19.8 +00.1	130 10.5 +02.4	S 14 09.4 +00.0	14						
15	108 33.0 +00.8	N 00 04.1 +00.7	109 24.8 +02.1	N 00 19.9 +00.2	145 12.9 +02.5	S 14 09.4 +00.0	15						
16	123 33.8 +00.8	N 00 04.8 +00.8	124 26.9 +02.1	N 00 20.1 +00.1	160 15.4 +02.4	S 14 09.4 +00.0	16						
17	138 34.6 +00.7	N 00 05.6 +00.7	139 29.0 +02.1	N 00 20.2 +00.2	175 17.8 +02.5	S 14 09.4 +00.0	17						
18	153 35.3 +00.8	N 00 06.3 +00.7	154 31.1 +02.1	N 00 20.4 +00.1	190 20.3 +02.4	S 14 09.4 +00.0	18						
19	168 36.1 +00.7	N 00 07.0 +00.7	169 33.2 +02.1	N 00 20.5 +00.2	205 22.7 +02.4	S 14 09.4 +00.0	19						
20	183 36.8 +00.8	N 00 07.7 +00.8	184 35.3 +02.1	N 00 20.7 +00.1	220 25.1 +02.5	S 14 09.4 +00.0	20						
21	198 37.6 +00.7	N 00 08.5 +00.7	199 37.4 +02.1	N 00 20.8 +00.2	235 27.6 +02.4	S 14 09.4 +00.0	21						
22	213 38.3 +00.8	N 00 09.2 +00.7	214 39.5 +02.1	N 00 21.0 +00.1	250 30.0 +02.5	S 14 09.4 +00.0	22						
23	228 39.1 +00.8	N 00 09.9 +00.7	229 41.6 +02.0	N 00 21.1 +00.2	265 32.5 +02.4	S 14 09.4 +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 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 356° 356° 356° 355° 355° 355°		SHA 356° 356° 356° 356° 356° 356°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:46		Greenwich Culmination Time: 07:43		Greenwich Culmination Time: 05:20								

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 35.4 -00.1	N 21 52.9 +00.4	217 11.2 -00.3	N 10 33.6 +01.0	174 43.1 -29.7	N 24 38.8 +05.8	00						
01	195 35.3 -00.1	N 21 53.3 +00.3	232 10.9 -00.4	N 10 34.6 +01.0	189 13.4 -29.8	N 24 44.6 +05.6	01						
02	210 35.2 -00.1	N 21 53.6 +00.4	247 10.5 -00.3	N 10 35.6 +01.0	203 43.6 -29.9	N 24 50.2 +05.6	02						
03	225 35.1 -00.1	N 21 54.0 +00.3	262 10.2 -00.4	N 10 36.6 +01.0	218 13.7 -29.8	N 24 55.8 +05.4	03						
04	240 35.0 -00.1	N 21 54.3 +00.4	277 09.8 -00.3	N 10 37.6 +01.0	232 43.9 -30.0	N 25 01.2 +05.3	04						
05	255 34.9 -00.1	N 21 54.7 +00.3	292 09.5 -00.3	N 10 38.6 +01.0	247 13.9 -29.9	N 25 06.5 +05.1	05						
06	270 34.8 -00.1	N 21 55.0 +00.4	307 09.2 -00.4	N 10 39.6 +01.0	261 44.0 -30.0	N 25 11.6 +05.1	06						
07	285 34.7 -00.1	N 21 55.4 +00.4	322 08.8 -00.3	N 10 40.6 +01.0	276 14.0 -30.0	N 25 16.7 +04.9	07						
08	300 34.6 -00.1	N 21 55.8 +00.3	337 08.5 -00.4	N 10 41.6 +01.0	290 44.0 -30.1	N 25 21.6 +04.8	08						
09	315 34.5 -00.1	N 21 56.1 +00.4	352 08.1 -00.3	N 10 42.6 +01.0	305 13.9 -30.1	N 25 26.4 +04.7	09						
10	330 34.4 -00.1	N 21 56.5 +00.3	7 07.8 -00.4	N 10 43.6 +01.0	319 43.8 -30.1	N 25 31.1 +04.6	10						
11	345 34.3 +00.0	N 21 56.8 +00.4	22 07.4 -00.3	N 10 44.6 +01.0	334 13.7 -30.1	N 25 35.7 +04.4	11						
12	0 34.3 -00.1	N 21 57.2 +00.3	37 07.1 -00.3	N 10 45.6 +01.0	348 43.6 -30.2	N 25 40.1 +04.3	12						
13	15 34.2 -00.1	N 21 57.5 +00.4	52 06.8 -00.4	N 10 46.6 +01.0	3 13.4 -30.2	N 25 44.4 +04.2	13						
14	30 34.1 -00.1	N 21 57.9 +00.3	67 06.4 -00.3	N 10 47.6 +01.0	17 43.2 -30.3	N 25 48.6 +04.1	14						
15	45 34.0 -00.1	N 21 58.2 +00.4	82 06.1 -00.4	N 10 48.6 +00.9	32 12.9 -30.3	N 25 52.7 +04.0	15						
16	60 33.9 -00.1	N 21 58.6 +00.3	97 05.7 -00.3	N 10 49.5 +01.0	46 42.6 -30.3	N 25 56.7 +03.8	16						
17	75 33.8 -00.1	N 21 58.9 +00.4	112 05.4 -00.4	N 10 50.5 +01.0	61 12.3 -30.3	N 26 00.5 +03.7	17						
18	90 33.7 -00.1	N 21 59.3 +00.3	127 05.0 -00.3	N 10 51.5 +01.0	75 42.0 -30.4	N 26 04.2 +03.6	18						
19	105 33.6 -00.1	N 21 59.6 +00.4	142 04.7 -00.3	N 10 52.5 +01.0	90 11.6 -30.3	N 26 07.8 +03.5	19						
20	120 33.5 -00.1	N 21 60.0 +00.3	157 04.4 -00.4	N 10 53.5 +01.0	104 41.3 -30.4	N 26 11.3 +03.3	20						
21	135 33.4 -00.1	N 22 00.3 +00.3	172 04.0 -00.3	N 10 54.5 +01.0	119 10.9 -30.5	N 26 14.6 +03.2	21						
22	150 33.3 -00.1	N 22 00.6 +00.4	187 03.7 -00.4	N 10 55.5 +01.0	133 40.4 -30.4	N 26 17.8 +03.1	22						
23	165 33.2 -00.1	N 22 01.0 +00.3	202 03.3 -00.3	N 10 56.5 +01.0	148 10.0 -30.5	N 26 20.9 +02.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'1 54'0 54'0								
	SHA 292° 292° 292° 292° 291° 291°		SHA 329° 328° 328° 328° 328° 328°		SHA 285° 283° 281° 279° 276° 274°								
	Greenwich Culmination Time: 11:57		Greenwich Culmination Time: 09:31		Greenwich Culmination Time: 12:46								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 39.9 +00.7	N 00 10.6 +00.7	244 43.6 +02.1	N 00 21.3 +00.1	280 34.9 +02.4	S 14 09.4 +00.0	00						
01	258 40.6 +00.8	N 00 11.3 +00.8	259 45.7 +02.1	N 00 21.4 +00.2	295 37.3 +02.5	S 14 09.4 +00.0	01						
02	273 41.4 +00.7	N 00 12.1 +00.7	274 47.8 +02.1	N 00 21.6 +00.1	310 39.8 +02.4	S 14 09.4 +00.0	02						
03	288 42.1 +00.8	N 00 12.8 +00.7	289 49.9 +02.1	N 00 21.7 +00.2	325 42.2 +02.5	S 14 09.4 +00.0	03						
04	303 42.9 +00.8	N 00 13.5 +00.7	304 52.0 +02.1	N 00 21.9 +00.1	340 44.7 +02.4	S 14 09.4 +00.0	04						
05	318 43.7 +00.7	N 00 14.2 +00.8	319 54.1 +02.1	N 00 22.0 +00.2	355 47.1 +02.5	S 14 09.4 +00.0	05						
06	333 44.4 +00.8	N 00 15.0 +00.7	334 56.2 +02.1	N 00 22.2 +00.1	10 49.6 +02.4	S 14 09.4 +00.0	06						
07	348 45.2 +00.7	N 00 15.7 +00.7	349 58.3 +02.1	N 00 22.3 +00.2	25 52.0 +02.4	S 14 09.4 +00.0	07						
08	3 45.9 +00.8	N 00 16.4 +00.7	5 00.4 +02.1	N 00 22.5 +00.1	40 54.4 +02.5	S 14 09.4 +00.0	08						
09	18 46.7 +00.7	N 00 17.1 +00.8	20 02.5 +02.1	N 00 22.6 +00.2	55 56.9 +02.4	S 14 09.4 +00.0	09						
10	33 47.4 +00.8	N 00 17.9 +00.7	35 04.6 +02.1	N 00 22.8 +00.1	70 59.3 +02.5	S 14 09.4 +00.0	10						
11	48 48.2 +00.8	N 00 18.6 +00.7	50 06.7 +02.1	N 00 22.9 +00.2	86 01.8 +02.4	S 14 09.4 +00.0	11						
12	63 49.0 +00.7	N 00 19.3 +00.7	65 08.8 +02.1	N 00 23.1 +00.1	101 04.2 +02.5	S 14 09.4 +00.0	12						
13	78 49.7 +00.8	N 00 20.0 +00.7	80 10.9 +02.1	N 00 23.2 +00.2	116 06.7 +02.4	S 14 09.4 +00.0	13						
14	93 50.5 +00.7	N 00 20.7 +00.8	95 13.0 +02.0	N 00 23.4 +00.1	131 09.1 +02.4	S 14 09.4 +00.0	14						
15	108 51.2 +00.8	N 00 21.5 +00.7	110 15.0 +02.1	N 00 23.5 +00.2	146 11.5 +02.5	S 14 09.4 +00.0	15						
16	123 52.0 +00.8	N 00 22.2 +00.7	125 17.1 +02.1	N 00 23.7 +00.1	161 14.0 +02.4	S 14 09.4 +00.0	16						
17	138 52.8 +00.7	N 00 22.9 +00.7	140 19.2 +02.1	N 00 23.8 +00.2	176 16.4 +02.5	S 14 09.4 +00.0	17						
18	153 53.5 +00.8	N 00 23.6 +00.8	155 21.3 +02.1	N 00 24.0 +00.1	191 18.9 +02.4	S 14 09.4 +00.0	18						
19	168 54.3 +00.7	N 00 24.4 +00.7	170 23.4 +02.1	N 00 24.1 +00.2	206 21.3 +02.5	S 14 09.4 +00.0	19						
20	183 55.0 +00.8	N 00 25.1 +00.7	185 25.5 +02.1	N 00 24.3 +00.1	221 23.8 +02.4	S 14 09.4 +00.0	20						
21	198 55.8 +00.8	N 00 25.8 +00.7	200 27.6 +02.1	N 00 24.4 +00.2	236 26.2 +02.5	S 14 09.4 +00.0	21						
22	213 56.6 +00.7	N 00 26.5 +00.7	215 29.7 +02.1	N 00 24.6 +00.1	251 28.7 +02.4	S 14 09.4 +00.0	22						
23	228 57.3 +00.8	N 00 27.2 +00.8	230 31.8 +02.1	N 00 24.7 +00.2	266 31.1 +02.5	S 14 09.4 +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 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 355° 355° 355° 355° 355° 355°		SHA 356° 356° 356° 356° 356° 356°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:44		Greenwich Culmination Time: 07:40		Greenwich Culmination Time: 05:16								

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 33.1 -00.1	N	22 01.3 +00.4	217 03.0 -00.4	N	10 57.5 +01.0	162 39.5 -30.5	N	26 23.8 +02.9				
01	195 33.0 -00.1	N	22 01.7 +00.3	232 02.6 -00.3	N	10 58.5 +01.0	177 09.0 -30.5	N	26 26.7 +02.7				
02	210 32.9 -00.1	N	22 02.0 +00.4	247 02.3 -00.4	N	10 59.5 +01.0	191 38.5 -30.5	N	26 29.4 +02.5				
03	225 32.8 -00.1	N	22 02.4 +00.3	262 01.9 -00.3	N	11 00.5 +00.9	206 08.0 -30.6	N	26 31.9 +02.5				
04	240 32.7 -00.1	N	22 02.7 +00.3	277 01.6 -00.4	N	11 01.4 +01.0	220 37.4 -30.6	N	26 34.4 +02.3				
05	255 32.6 +00.0	N	22 03.0 +00.4	292 01.2 -00.3	N	11 02.4 +01.0	235 06.8 -30.5	N	26 36.7 +02.2				
06	270 32.6 -00.1	N	22 03.4 +00.3	307 00.9 -00.4	N	11 03.4 +01.0	249 36.3 -30.6	N	26 38.9 +02.0				
07	285 32.5 -00.1	N	22 03.7 +00.4	322 00.5 -00.3	N	11 04.4 +01.0	264 05.7 -30.7	N	26 40.9 +02.0				
08	300 32.4 -00.1	N	22 04.1 +00.3	337 00.2 -00.4	N	11 05.4 +01.0	278 35.0 -30.6	N	26 42.9 +01.8				
09	315 32.3 -00.1	N	22 04.4 +00.3	351 59.8 -00.3	N	11 06.4 +01.0	293 04.4 -30.6	N	26 44.7 +01.7				
10	330 32.2 -00.1	N	22 04.7 +00.4	6 59.5 -00.4	N	11 07.4 +01.0	307 33.8 -30.7	N	26 46.4 +01.5				
11	345 32.1 -00.1	N	22 05.1 +00.3	21 59.1 -00.3	N	11 08.4 +00.9	322 03.1 -30.6	N	26 47.9 +01.4				
12	0 32.0 -00.1	N	22 05.4 +00.3	36 58.8 -00.4	N	11 09.3 +01.0	336 32.5 -30.7	N	26 49.3 +01.3				
13	15 31.9 -00.1	N	22 05.7 +00.4	51 58.4 -00.3	N	11 10.3 +01.0	351 01.8 -30.6	N	26 50.6 +01.2				
14	30 31.8 -00.1	N	22 06.1 +00.3	66 58.1 -00.4	N	11 11.3 +01.0	5 31.2 -30.7	N	26 51.8 +01.0				
15	45 31.7 -00.1	N	22 06.4 +00.3	81 57.7 -00.3	N	11 12.3 +01.0	20 00.5 -30.7	N	26 52.8 +00.9				
16	60 31.6 -00.1	N	22 06.7 +00.4	96 57.4 -00.4	N	11 13.3 +01.0	34 29.8 -30.7	N	26 53.7 +00.8				
17	75 31.5 -00.1	N	22 07.1 +00.3	111 57.0 -00.3	N	11 14.3 +01.0	48 59.1 -30.7	N	26 54.5 +00.7				
18	90 31.4 -00.1	N	22 07.4 +00.3	126 56.7 -00.4	N	11 15.3 +00.9	63 28.4 -30.7	N	26 55.2 +00.5				
19	105 31.3 -00.1	N	22 07.7 +00.4	141 56.3 -00.4	N	11 16.2 +01.0	77 57.7 -30.6	N	26 55.7 +00.4				
20	120 31.2 -00.1	N	22 08.1 +00.3	156 55.9 -00.3	N	11 17.2 +01.0	92 27.1 -30.7	N	26 56.1 +00.2				
21	135 31.1 -00.1	N	22 08.4 +00.3	171 55.6 -00.4	N	11 18.2 +01.0	106 56.4 -30.7	N	26 56.3 +00.1				
22	150 31.0 -00.1	N	22 08.7 +00.4	186 55.2 -00.3	N	11 19.2 +01.0	121 25.7 -30.7	N	26 56.4 +00.0				
23	165 30.9 -00.1	N	22 09.1 +00.3	201 54.9 -00.4	N	11 20.2 +01.0	135 55.0 -30.7	N	26 56.4 -00.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22				UT 02 06 10 14 18 22					
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'7 14'7 14'7 14'7 14'7 14'7					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'0 54'0 54'0 54'0 54'0 54'0					
	SHA 291° 291° 291° 290° 290° 290°			SHA 327° 327° 327° 327° 327° 327°				SHA 272° 270° 268° 265° 263° 261°					
	Greenwich Culmination Time: 11:57			Greenwich Culmination Time: 09:32				Greenwich Culmination Time: 13:37					

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	243 58.1 +00.7	N	00 28.0 +00.7	245 33.9 +02.1	N	00 24.9 +00.1	281 33.6 +02.4	S	14 09.4 +00.0				
01	258 58.8 +00.8	N	00 28.7 +00.7	260 36.0 +02.1	N	00 25.0 +00.2	296 36.0 +02.4	S	14 09.4 +00.0				
02	273 59.6 +00.8	N	00 29.4 +00.7	275 38.1 +02.1	N	00 25.2 +00.1	311 38.4 +02.5	S	14 09.4 +00.0				
03	289 00.4 +00.7	N	00 30.1 +00.8	290 40.2 +02.1	N	00 25.3 +00.2	326 40.9 +02.4	S	14 09.4 +00.0				
04	304 01.1 +00.8	N	00 30.9 +00.7	305 42.3 +02.1	N	00 25.5 +00.1	341 43.3 +02.5	S	14 09.4 +00.0				
05	319 01.9 +00.7	N	00 31.6 +00.7	320 44.4 +02.1	N	00 25.6 +00.2	356 45.8 +02.4	S	14 09.4 +00.0				
06	334 02.6 +00.8	N	00 32.3 +00.7	335 46.5 +02.1	N	00 25.8 +00.1	11 48.2 +02.5	S	14 09.4 +00.0				
07	349 03.4 +00.8	N	00 33.0 +00.7	350 48.6 +02.1	N	00 25.9 +00.2	26 50.7 +02.4	S	14 09.4 +00.0				
08	4 04.2 +00.7	N	00 33.7 +00.8	5 50.7 +02.1	N	00 26.1 +00.1	41 53.1 +02.5	S	14 09.4 +00.0				
09	19 04.9 +00.8	N	00 34.5 +00.7	20 52.8 +02.1	N	00 26.2 +00.2	56 55.6 +02.4	S	14 09.4 +00.0				
10	34 05.7 +00.7	N	00 35.2 +00.7	35 54.9 +02.1	N	00 26.4 +00.1	71 58.0 +02.5	S	14 09.4 +00.0				
11	49 06.4 +00.8	N	00 35.9 +00.7	50 57.0 +02.1	N	00 26.5 +00.2	87 00.5 +02.4	S	14 09.4 +00.0				
12	64 07.2 +00.8	N	00 36.6 +00.8	65 59.1 +02.1	N	00 26.7 +00.1	102 02.9 +02.5	S	14 09.4 +00.0				
13	79 08.0 +00.7	N	00 37.4 +00.7	81 01.2 +02.1	N	00 26.8 +00.2	117 05.4 +02.4	S	14 09.4 +00.0				
14	94 08.7 +00.8	N	00 38.1 +00.7	96 03.3 +02.1	N	00 27.0 +00.1	132 07.8 +02.5	S	14 09.4 +00.0				
15	109 09.5 +00.7	N	00 38.8 +00.7	111 05.4 +02.1	N	00 27.1 +00.2	147 10.3 +02.4	S	14 09.4 +00.0				
16	124 10.2 +00.8	N	00 39.5 +00.7	126 07.5 +02.1	N	00 27.3 +00.1	162 12.7 +02.5	S	14 09.4 +00.0				
17	139 11.0 +00.8	N	00 40.2 +00.8	141 09.6 +02.1	N	00 27.4 +00.2	177 15.2 +02.4	S	14 09.4 +00.0				
18	154 11.8 +00.7	N	00 41.0 +00.7	156 11.7 +02.1	N	00 27.6 +00.1	192 17.6 +02.5	S	14 09.4 +00.0				
19	169 12.5 +00.8	N	00 41.7 +00.7	171 13.8 +02.1	N	00 27.7 +00.1	207 20.1 +02.4	S	14 09.4 +00.0				
20	184 13.3 +00.7	N	00 42.4 +00.7	186 15.9 +02.1	N	00 27.8 +00.2	222 22.5 +02.5	S	14 09.4 +00.0				
21	199 14.0 +00.8	N	00 43.1 +00.7	201 18.0 +02.1	N	00 28.0 +00.1	237 25.0 +02.4	S	14 09.4 +00.0				
22	214 14.8 +00.8	N	00 43.8 +00.8	216 20.1 +02.1	N	00 28.1 +00.2	252 27.4 +02.5	S	14 09.4 +00.0				
23	229 15.6 +00.7	N	00 44.6 +00.7	231 22.2 +02.1	N	00 28.3 +00.1	267 29.9 +02.4	S	14 09.4 +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 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1					
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0					
	SHA 354° 354° 354° 354° 354° 354°			SHA 356° 356° 356° 356° 356° 356°				SHA 032° 032° 032° 032° 032° 032°					
	Greenwich Culmination Time: 07:43			Greenwich Culmination Time: 07:36				Greenwich Culmination Time: 05:12					

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i> <span style="float:right">A: 10%</span>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	180 30.8 -00.1	N 22	09.4 +00.3	216 54.5 -00.3	N 11	21.2 +00.9	150 24.3 -30.7	N 26	56.3 -00.2	00			
01	195 30.7 -00.1	N 22	09.7 +00.3	231 54.2 -00.4	N 11	22.1 +01.0	164 53.6 -30.6	N 26	56.1 -00.4	01			
02	210 30.6 -00.1	N 22	10.0 +00.4	246 53.8 -00.3	N 11	23.1 +01.0	179 23.0 -30.7	N 26	55.7 -00.5	02			
03	225 30.5 -00.1	N 22	10.4 +00.3	261 53.5 -00.4	N 11	24.1 +01.0	193 52.3 -30.7	N 26	55.2 -00.7	03			
04	240 30.4 -00.1	N 22	10.7 +00.3	276 53.1 -00.4	N 11	25.1 +01.0	208 21.6 -30.6	N 26	54.5 -00.8	04			
05	255 30.3 -00.1	N 22	11.0 +00.3	291 52.7 -00.3	N 11	26.1 +01.0	222 51.0 -30.7	N 26	53.7 -00.9	05			
06	270 30.2 -00.1	N 22	11.3 +00.4	306 52.4 -00.4	N 11	27.1 +00.9	237 20.3 -30.6	N 26	52.8 -01.0	06			
07	285 30.1 -00.1	N 22	11.7 +00.3	321 52.0 -00.3	N 11	28.0 +01.0	251 49.7 -30.6	N 26	51.8 -01.2	07			
08	300 30.0 -00.1	N 22	12.0 +00.3	336 51.7 -00.4	N 11	29.0 +01.0	266 19.1 -30.6	N 26	50.6 -01.2	08			
09	315 29.9 -00.1	N 22	12.3 +00.3	351 51.3 -00.4	N 11	30.0 +01.0	280 48.5 -30.6	N 26	49.4 -01.5	09			
10	330 29.8 -00.1	N 22	12.6 +00.3	6 50.9 -00.3	N 11	31.0 +00.9	295 17.9 -30.6	N 26	47.9 -01.5	10			
11	345 29.7 -00.1	N 22	12.9 +00.4	21 50.6 -00.4	N 11	31.9 +01.0	309 47.3 -30.5	N 26	46.4 -01.7	11			
12	0 29.6 -00.1	N 22	13.3 +00.3	36 50.2 -00.3	N 11	32.9 +01.0	324 16.8 -30.6	N 26	44.7 -01.8	12			
13	15 29.5 -00.1	N 22	13.6 +00.3	51 49.9 -00.4	N 11	33.9 +01.0	338 46.2 -30.5	N 26	42.9 -01.9	13			
14	30 29.4 -00.1	N 22	13.9 +00.3	66 49.5 -00.4	N 11	34.9 +01.0	353 15.7 -30.5	N 26	41.0 -02.1	14			
15	45 29.3 -00.1	N 22	14.2 +00.3	81 49.1 -00.3	N 11	35.9 +00.9	7 45.2 -30.5	N 26	38.9 -02.1	15			
16	60 29.2 -00.1	N 22	14.5 +00.3	96 48.8 -00.4	N 11	36.8 +01.0	22 14.7 -30.5	N 26	36.8 -02.4	16			
17	75 29.1 -00.1	N 22	14.8 +00.4	111 48.4 -00.4	N 11	37.8 +01.0	36 44.2 -30.4	N 26	34.4 -02.4	17			
18	90 29.0 -00.1	N 22	15.2 +00.3	126 48.0 -00.3	N 11	38.8 +01.0	51 13.8 -30.4	N 26	32.0 -02.5	18			
19	105 28.9 -00.1	N 22	15.5 +00.3	141 47.7 -00.4	N 11	39.8 +00.9	65 43.4 -30.4	N 26	29.5 -02.7	19			
20	120 28.8 -00.1	N 22	15.8 +00.3	156 47.3 -00.3	N 11	40.7 +01.0	80 13.0 -30.4	N 26	26.8 -02.8	20			
21	135 28.7 -00.1	N 22	16.1 +00.3	171 47.0 -00.4	N 11	41.7 +01.0	94 42.6 -30.3	N 26	24.0 -03.0	21			
22	150 28.6 -00.1	N 22	16.4 +00.3	186 46.6 -00.4	N 11	42.7 +01.0	109 12.3 -30.4	N 26	21.0 -03.0	22			
23	165 28.5 -00.1	N 22	16.7 +00.3	201 46.2 -00.3	N 11	43.7 +00.9	123 41.9 -30.3	N 26	18.0 -03.2	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 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'7 14'7 14'7 14'7						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'0 54'0 54'0 54'0 54'0 54'0						
	SHA 290° 290° 290° 289° 289° 289°			SHA 326° 326° 326° 326° 326° 325°			SHA 259° 257° 254° 252° 250° 248°						
	Greenwich Culmination Time: 11:58			Greenwich Culmination Time: 09:32			Greenwich Culmination Time: 14:27						

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	GHA ° ' "	ddGHA	Dec ° ' "	dDec	
00	244 16.3 +00.8	N 00	45.3 +00.7	246 24.3 +02.1	N 00	28.4 +00.2	282 32.3 +02.5	S 14	09.4 +00.1	00			
01	259 17.1 +00.8	N 00	46.0 +00.7	261 26.4 +02.1	N 00	28.6 +00.1	297 34.8 +02.4	S 14	09.5 +00.0	01			
02	274 17.9 +00.7	N 00	46.7 +00.7	276 28.5 +02.1	N 00	28.7 +00.2	312 37.2 +02.5	S 14	09.5 +00.0	02			
03	289 18.6 +00.8	N 00	47.4 +00.8	291 30.6 +02.1	N 00	28.9 +00.1	327 39.7 +02.4	S 14	09.5 +00.0	03			
04	304 19.4 +00.7	N 00	48.2 +00.7	306 32.7 +02.1	N 00	29.0 +00.2	342 42.1 +02.5	S 14	09.5 +00.0	04			
05	319 20.1 +00.8	N 00	48.9 +00.7	321 34.8 +02.1	N 00	29.2 +00.1	357 44.6 +02.4	S 14	09.5 +00.0	05			
06	334 20.9 +00.8	N 00	49.6 +00.7	336 36.9 +02.1	N 00	29.3 +00.2	12 47.0 +02.5	S 14	09.5 +00.0	06			
07	349 21.7 +00.7	N 00	50.3 +00.8	351 39.0 +02.1	N 00	29.5 +00.1	27 49.5 +02.4	S 14	09.5 +00.0	07			
08	4 22.4 +00.8	N 00	51.1 +00.7	6 41.1 +02.1	N 00	29.6 +00.2	42 51.9 +02.5	S 14	09.5 +00.0	08			
09	19 23.2 +00.7	N 00	51.8 +00.7	21 43.2 +02.1	N 00	29.8 +00.1	57 54.4 +02.4	S 14	09.5 +00.0	09			
10	34 23.9 +00.8	N 00	52.5 +00.7	36 45.3 +02.1	N 00	29.9 +00.1	72 56.8 +02.5	S 14	09.5 +00.0	10			
11	49 24.7 +00.8	N 00	53.2 +00.7	51 47.4 +02.1	N 00	30.0 +00.2	87 59.3 +02.4	S 14	09.5 +00.0	11			
12	64 25.5 +00.7	N 00	53.9 +00.8	66 49.5 +02.1	N 00	30.2 +00.1	103 01.7 +02.5	S 14	09.5 +00.0	12			
13	79 26.2 +00.8	N 00	54.7 +00.7	81 51.6 +02.1	N 00	30.3 +00.2	118 04.2 +02.4	S 14	09.5 +00.0	13			
14	94 27.0 +00.8	N 00	55.4 +00.7	96 53.7 +02.1	N 00	30.5 +00.1	133 06.6 +02.5	S 14	09.5 +00.0	14			
15	109 27.8 +00.7	N 00	56.1 +00.7	111 55.8 +02.1	N 00	30.6 +00.2	148 09.1 +02.4	S 14	09.5 +00.0	15			
16	124 28.5 +00.8	N 00	56.8 +00.7	126 57.9 +02.1	N 00	30.8 +00.1	163 11.5 +02.5	S 14	09.5 +00.0	16			
17	139 29.3 +00.7	N 00	57.5 +00.8	142 00.0 +02.1	N 00	30.9 +00.2	178 14.0 +02.4	S 14	09.5 +00.0	17			
18	154 30.0 +00.8	N 00	58.3 +00.7	157 02.1 +02.1	N 00	31.1 +00.1	193 16.4 +02.5	S 14	09.5 +00.0	18			
19	169 30.8 +00.8	N 00	59.0 +00.7	172 04.2 +02.1	N 00	31.2 +00.2	208 18.9 +02.4	S 14	09.5 +00.0	19			
20	184 31.6 +00.7	N 00	59.7 +00.7	187 06.3 +02.1	N 00	31.4 +00.1	223 21.3 +02.5	S 14	09.5 +00.0	20			
21	199 32.3 +00.8	N 01	00.4 +00.7	202 08.4 +02.1	N 00	31.5 +00.1	238 23.8 +02.4	S 14	09.5 +00.0	21			
22	214 33.1 +00.8	N 01	01.1 +00.7	217 10.5 +02.1	N 00	31.6 +00.2	253 26.2 +02.5	S 14	09.5 +00.0	22			
23	229 33.9 +00.7	N 01	01.8 +00.8	232 12.6 +02.1	N 00	31.8 +00.1	268 28.7 +02.4	S 14	09.5 +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 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 354° 354° 354° 353° 353° 353°			SHA 356° 356° 356° 356° 356° 356°			SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 07:42			Greenwich Culmination Time: 07:33			Greenwich Culmination Time: 05:09						

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 28.4 -00.1	N	22 17.0 +00.3	216 45.9 -00.4	N	11 44.6 +01.0	138 11.6 -30.2	N	26 14.8 -03.3				
01	195 28.3 -00.1	N	22 17.3 +00.4	231 45.5 -00.4	N	11 45.6 +01.0	152 41.4 -30.3	N	26 11.5 -03.5				
02	210 28.2 -00.2	N	22 17.7 +00.3	246 45.1 -00.3	N	11 46.6 +01.0	167 11.1 -30.2	N	26 08.0 -03.5				
03	225 28.0 -00.1	N	22 18.0 +00.3	261 44.8 -00.4	N	11 47.6 +00.9	181 40.9 -30.2	N	26 04.5 -03.7				
04	240 27.9 -00.1	N	22 18.3 +00.3	276 44.4 -00.4	N	11 48.5 +01.0	196 10.7 -30.1	N	26 00.8 -03.8				
05	255 27.8 -00.1	N	22 18.6 +00.3	291 44.0 -00.3	N	11 49.5 +01.0	210 40.6 -30.1	N	25 57.0 -03.9				
06	270 27.7 -00.1	N	22 18.9 +00.3	306 43.7 -00.4	N	11 50.5 +00.9	225 10.5 -30.1	N	25 53.1 -04.1				
07	285 27.6 -00.1	N	22 19.2 +00.3	321 43.3 -00.4	N	11 51.4 +01.0	239 40.4 -30.1	N	25 49.0 -04.1				
08	300 27.5 -00.1	N	22 19.5 +00.3	336 42.9 -00.3	N	11 52.4 +01.0	254 10.3 -30.0	N	25 44.9 -04.3				
09	315 27.4 -00.1	N	22 19.8 +00.3	351 42.6 -00.4	N	11 53.4 +01.0	268 40.3 -30.0	N	25 40.6 -04.4				
10	330 27.3 -00.1	N	22 20.1 +00.3	6 42.2 -00.4	N	11 54.4 +00.9	283 10.3 -29.9	N	25 36.2 -04.6				
11	345 27.2 -00.1	N	22 20.4 +00.3	21 41.8 -00.4	N	11 55.3 +01.0	297 40.4 -29.9	N	25 31.6 -04.6				
12	0 27.1 -00.1	N	22 20.7 +00.3	36 41.4 -00.3	N	11 56.3 +01.0	312 10.5 -29.9	N	25 27.0 -04.8				
13	15 27.0 -00.1	N	22 21.0 +00.3	51 41.1 -00.4	N	11 57.3 +00.9	326 40.6 -29.9	N	25 22.2 -04.9				
14	30 26.9 -00.1	N	22 21.3 +00.3	66 40.7 -00.4	N	11 58.2 +01.0	341 10.7 -29.8	N	25 17.3 -05.0				
15	45 26.8 -00.1	N	22 21.6 +00.3	81 40.3 -00.3	N	11 59.2 +01.0	355 40.9 -29.7	N	25 12.3 -05.1				
16	60 26.7 -00.1	N	22 21.9 +00.3	96 40.0 -00.4	N	12 00.2 +00.9	10 11.2 -29.7	N	25 07.2 -05.3				
17	75 26.6 -00.1	N	22 22.2 +00.3	111 39.6 -00.4	N	12 01.1 +01.0	24 41.5 -29.7	N	25 01.9 -05.3				
18	90 26.5 -00.1	N	22 22.5 +00.3	126 39.2 -00.4	N	12 02.1 +01.0	39 11.8 -29.7	N	24 56.6 -05.5				
19	105 26.4 -00.1	N	22 22.8 +00.3	141 38.8 -00.3	N	12 03.1 +00.9	53 42.1 -29.6	N	24 51.1 -05.6				
20	120 26.3 -00.1	N	22 23.1 +00.3	156 38.5 -00.4	N	12 04.0 +01.0	68 12.5 -29.6	N	24 45.5 -05.7				
21	135 26.2 -00.1	N	22 23.4 +00.3	171 38.1 -00.4	N	12 05.0 +01.0	82 42.9 -29.5	N	24 39.8 -05.8				
22	150 26.1 -00.2	N	22 23.7 +00.3	186 37.7 -00.4	N	12 06.0 +00.9	97 13.4 -29.5	N	24 34.0 -05.9				
23	165 25.9 -00.1	N	22 24.0 +00.3	201 37.3 -00.3	N	12 06.9 +01.0	111 43.9 -29.4	N	24 28.1 -06.1				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'7 14'7 14'7 14'7 14'7 14'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'0 54'0 54'1 54'1 54'1 54'2						
	SHA 289° 289° 289° 288° 288° 288°			SHA 325° 325° 325° 325° 324° 324°			SHA 246° 243° 241° 239° 237° 235°						
	Greenwich Culmination Time: 11:58			Greenwich Culmination Time: 09:33			Greenwich Culmination Time: 15:17						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	244 34.6 +00.8	N	01 02.6 +00.7	247 14.7 +02.1	N	00 31.9 +00.2	283 31.1 +02.5	S	14 09.5 +00.0				
01	259 35.4 +00.7	N	01 03.3 +00.7	262 16.8 +02.2	N	00 32.1 +00.1	298 33.6 +02.5	S	14 09.5 +00.1				
02	274 36.1 +00.8	N	01 04.0 +00.7	277 19.0 +02.1	N	00 32.2 +00.2	313 36.1 +02.4	S	14 09.6 +00.0				
03	289 36.9 +00.8	N	01 04.7 +00.7	292 21.1 +02.1	N	00 32.4 +00.1	328 38.5 +02.5	S	14 09.6 +00.0				
04	304 37.7 +00.7	N	01 05.4 +00.8	307 23.2 +02.1	N	00 32.5 +00.2	343 41.0 +02.4	S	14 09.6 +00.0				
05	319 38.4 +00.8	N	01 06.2 +00.7	322 25.3 +02.1	N	00 32.7 +00.1	358 43.4 +02.5	S	14 09.6 +00.0				
06	334 39.2 +00.8	N	01 06.9 +00.7	337 27.4 +02.1	N	00 32.8 +00.2	13 45.9 +02.4	S	14 09.6 +00.0				
07	349 40.0 +00.7	N	01 07.6 +00.7	352 29.5 +02.1	N	00 33.0 +00.1	28 48.3 +02.5	S	14 09.6 +00.0				
08	4 40.7 +00.8	N	01 08.3 +00.7	7 31.6 +02.1	N	00 33.1 +00.1	43 50.8 +02.4	S	14 09.6 +00.0				
09	19 41.5 +00.8	N	01 09.0 +00.8	22 33.7 +02.1	N	00 33.2 +00.2	58 53.2 +02.5	S	14 09.6 +00.0				
10	34 42.3 +00.7	N	01 09.8 +00.7	37 35.8 +02.1	N	00 33.4 +00.1	73 55.7 +02.4	S	14 09.6 +00.0				
11	49 43.0 +00.8	N	01 10.5 +00.7	52 37.9 +02.1	N	00 33.5 +00.2	88 58.1 +02.5	S	14 09.6 +00.0				
12	64 43.8 +00.7	N	01 11.2 +00.7	67 40.0 +02.1	N	00 33.7 +00.1	104 00.6 +02.5	S	14 09.6 +00.0				
13	79 44.5 +00.8	N	01 11.9 +00.7	82 42.1 +02.1	N	00 33.8 +00.2	119 03.1 +02.4	S	14 09.6 +00.0				
14	94 45.3 +00.8	N	01 12.6 +00.8	97 44.2 +02.1	N	00 34.0 +00.1	134 05.5 +02.5	S	14 09.6 +00.0				
15	109 46.1 +00.7	N	01 13.4 +00.7	112 46.3 +02.2	N	00 34.1 +00.1	149 08.0 +02.4	S	14 09.6 +00.0				
16	124 46.8 +00.8	N	01 14.1 +00.7	127 48.5 +02.1	N	00 34.2 +00.2	164 10.4 +02.5	S	14 09.6 +00.0				
17	139 47.6 +00.8	N	01 14.8 +00.7	142 50.6 +02.1	N	00 34.4 +00.1	179 12.9 +02.4	S	14 09.6 +00.0				
18	154 48.4 +00.7	N	01 15.5 +00.7	157 52.7 +02.1	N	00 34.5 +00.2	194 15.3 +02.5	S	14 09.6 +00.0				
19	169 49.1 +00.8	N	01 16.2 +00.7	172 54.8 +02.1	N	00 34.7 +00.1	209 17.8 +02.5	S	14 09.6 +00.0				
20	184 49.9 +00.8	N	01 16.9 +00.8	187 56.9 +02.1	N	00 34.8 +00.2	224 20.3 +02.4	S	14 09.6 +00.1				
21	199 50.7 +00.7	N	01 17.7 +00.7	202 59.0 +02.1	N	00 35.0 +00.1	239 22.7 +02.5	S	14 09.7 +00.0				
22	214 51.4 +00.8	N	01 18.4 +00.7	218 01.1 +02.1	N	00 35.1 +00.1	254 25.2 +02.4	S	14 09.7 +00.0				
23	229 52.2 +00.7	N	01 19.1 +00.7	233 03.2 +02.1	N	00 35.2 +00.2	269 27.6 +02.5	S	14 09.7 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 353° 353° 353° 353° 353° 353°			SHA 356° 356° 356° 356° 356° 356°			SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 07:41			Greenwich Culmination Time: 07:29			Greenwich Culmination Time: 05:05						



UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 25.8 -00.1	N	22 24.3 +00.3	216 37.0 -00.4	N	12 07.9 +01.0	126 14.5 -29.4	N	24 22.0 -06.1				
01	195 25.7 -00.1	N	22 24.6 +00.3	231 36.6 -00.4	N	12 08.9 +00.9	140 45.1 -29.4	N	24 15.9 -06.3				
02	210 25.6 -00.1	N	22 24.9 +00.3	246 36.2 -00.4	N	12 09.8 +01.0	155 15.7 -29.3	N	24 09.6 -06.4				
03	225 25.5 -00.1	N	22 25.2 +00.3	261 35.8 -00.3	N	12 10.8 +00.9	169 46.4 -29.3	N	24 03.2 -06.5				
04	240 25.4 -00.1	N	22 25.5 +00.3	276 35.5 -00.4	N	12 11.7 +01.0	184 17.1 -29.2	N	23 56.7 -06.6				
05	255 25.3 -00.1	N	22 25.8 +00.3	291 35.1 -00.4	N	12 12.7 +01.0	198 47.9 -29.2	N	23 50.1 -06.7				
06	270 25.2 -00.1	N	22 26.1 +00.3	306 34.7 -00.4	N	12 13.7 +00.9	213 18.7 -29.1	N	23 43.4 -06.8				
07	285 25.1 -00.1	N	22 26.4 +00.2	321 34.3 -00.3	N	12 14.6 +01.0	227 49.6 -29.1	N	23 36.6 -07.0				
08	300 25.0 -00.1	N	22 26.6 +00.3	336 34.0 -00.4	N	12 15.6 +01.0	242 20.5 -29.1	N	23 29.6 -07.0				
09	315 24.9 -00.1	N	22 26.9 +00.3	351 33.6 -00.4	N	12 16.6 +00.9	256 51.4 -29.0	N	23 22.6 -07.2				
10	330 24.8 -00.1	N	22 27.2 +00.3	6 33.2 -00.4	N	12 17.5 +01.0	271 22.4 -28.9	N	23 15.4 -07.2				
11	345 24.7 -00.1	N	22 27.5 +00.3	21 32.8 -00.4	N	12 18.5 +00.9	285 53.5 -29.0	N	23 08.2 -07.4				
12	0 24.6 -00.2	N	22 27.8 +00.3	36 32.4 -00.3	N	12 19.4 +01.0	300 24.5 -28.8	N	23 00.8 -07.5				
13	15 24.4 -00.1	N	22 28.1 +00.3	51 32.1 -00.4	N	12 20.4 +00.9	314 55.7 -28.9	N	22 53.3 -07.5				
14	30 24.3 -00.1	N	22 28.4 +00.2	66 31.7 -00.4	N	12 21.3 +01.0	329 26.8 -28.7	N	22 45.8 -07.7				
15	45 24.2 -00.1	N	22 28.6 +00.3	81 31.3 -00.4	N	12 22.3 +01.0	343 58.1 -28.8	N	22 38.1 -07.8				
16	60 24.1 -00.1	N	22 28.9 +00.3	96 30.9 -00.4	N	12 23.3 +00.9	358 29.3 -28.7	N	22 30.3 -07.9				
17	75 24.0 -00.1	N	22 29.2 +00.3	111 30.5 -00.3	N	12 24.2 +01.0	13 00.6 -28.6	N	22 22.4 -08.0				
18	90 23.9 -00.1	N	22 29.5 +00.3	126 30.2 -00.4	N	12 25.2 +00.9	27 32.0 -28.6	N	22 14.4 -08.1				
19	105 23.8 -00.1	N	22 29.8 +00.3	141 29.8 -00.4	N	12 26.1 +01.0	42 03.4 -28.6	N	22 06.3 -08.2				
20	120 23.7 -00.1	N	22 30.1 +00.2	156 29.4 -00.4	N	12 27.1 +00.9	56 34.8 -28.5	N	21 58.1 -08.3				
21	135 23.6 -00.1	N	22 30.3 +00.3	171 29.0 -00.4	N	12 28.0 +01.0	71 06.3 -28.4	N	21 49.8 -08.4				
22	150 23.5 -00.2	N	22 30.6 +00.3	186 28.6 -00.4	N	12 29.0 +01.0	85 37.9 -28.5	N	21 41.4 -08.5				
23	165 23.3 -00.1	N	22 30.9 +00.3	201 28.2 -00.4	N	12 30.0 +00.9	100 09.4 -28.3	N	21 32.9 -08.5				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 14'8 14'8 14'8 14'8 14'8 14'8						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 54'2 54'2 54'3 54'3 54'4 54'5						
	SHA 288° 288° 288° 287° 287° 287°			SHA 324° 324° 324° 324° 323° 323°			SHA 233° 231° 229° 226° 224° 222°						
	Greenwich Culmination Time: 11:58			Greenwich Culmination Time: 09:33			Greenwich Culmination Time: 16:06						

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	244 52.9 +00.8	N	01 19.8 +00.7	248 05.3 +02.1	N	00 35.4 +00.1	284 30.1 +02.4	S	14 09.7 +00.0				
01	259 53.7 +00.8	N	01 20.5 +00.7	263 07.4 +02.1	N	00 35.5 +00.2	299 32.5 +02.5	S	14 09.7 +00.0				
02	274 54.5 +00.7	N	01 21.2 +00.8	278 09.5 +02.2	N	00 35.7 +00.1	314 35.0 +02.5	S	14 09.7 +00.0				
03	289 55.2 +00.8	N	01 22.0 +00.7	293 11.7 +02.1	N	00 35.8 +00.2	329 37.5 +02.4	S	14 09.7 +00.0				
04	304 56.0 +00.8	N	01 22.7 +00.7	308 13.8 +02.1	N	00 36.0 +00.1	344 39.9 +02.5	S	14 09.7 +00.0				
05	319 56.8 +00.7	N	01 23.4 +00.7	323 15.9 +02.1	N	00 36.1 +00.1	359 42.4 +02.4	S	14 09.7 +00.0				
06	334 57.5 +00.8	N	01 24.1 +00.7	338 18.0 +02.1	N	00 36.2 +00.2	14 44.8 +02.5	S	14 09.7 +00.0				
07	349 58.3 +00.8	N	01 24.8 +00.8	353 20.1 +02.1	N	00 36.4 +00.1	29 47.3 +02.5	S	14 09.7 +00.0				
08	4 59.1 +00.7	N	01 25.6 +00.7	8 22.2 +02.1	N	00 36.5 +00.2	44 49.8 +02.4	S	14 09.7 +00.0				
09	19 59.8 +00.8	N	01 26.3 +00.7	23 24.3 +02.1	N	00 36.7 +00.1	59 52.2 +02.5	S	14 09.7 +00.0				
10	35 00.6 +00.8	N	01 27.0 +00.7	38 26.4 +02.2	N	00 36.8 +00.2	74 54.7 +02.4	S	14 09.7 +00.0				
11	50 01.4 +00.7	N	01 27.7 +00.7	53 28.6 +02.1	N	00 37.0 +00.1	89 57.1 +02.5	S	14 09.7 +00.1				
12	65 02.1 +00.8	N	01 28.4 +00.7	68 30.7 +02.1	N	00 37.1 +00.1	104 59.6 +02.5	S	14 09.8 +00.0				
13	80 02.9 +00.8	N	01 29.1 +00.8	83 32.8 +02.1	N	00 37.2 +00.2	120 02.1 +02.4	S	14 09.8 +00.0				
14	95 03.7 +00.7	N	01 29.9 +00.7	98 34.9 +02.1	N	00 37.4 +00.1	135 04.5 +02.5	S	14 09.8 +00.0				
15	110 04.4 +00.8	N	01 30.6 +00.7	113 37.0 +02.1	N	00 37.5 +00.2	150 07.0 +02.4	S	14 09.8 +00.0				
16	125 05.2 +00.8	N	01 31.3 +00.7	128 39.1 +02.1	N	00 37.7 +00.1	165 09.4 +02.5	S	14 09.8 +00.0				
17	140 06.0 +00.7	N	01 32.0 +00.7	143 41.2 +02.1	N	00 37.8 +00.1	180 11.9 +02.5	S	14 09.8 +00.0				
18	155 06.7 +00.8	N	01 32.7 +00.7	158 43.3 +02.2	N	00 37.9 +00.2	195 14.4 +02.4	S	14 09.8 +00.0				
19	170 07.5 +00.7	N	01 33.4 +00.8	173 45.5 +02.1	N	00 38.1 +00.1	210 16.8 +02.5	S	14 09.8 +00.0				
20	185 08.2 +00.8	N	01 34.2 +00.7	188 47.6 +02.1	N	00 38.2 +00.2	225 19.3 +02.4	S	14 09.8 +00.0				
21	200 09.0 +00.8	N	01 34.9 +00.7	203 49.7 +02.1	N	00 38.4 +00.1	240 21.7 +02.5	S	14 09.8 +00.0				
22	215 09.8 +00.7	N	01 35.6 +00.7	218 51.8 +02.1	N	00 38.5 +00.1	255 24.2 +02.5	S	14 09.8 +00.0				
23	230 10.5 +00.8	N	01 36.3 +00.7	233 53.9 +02.1	N	00 38.6 +00.2	270 26.7 +02.4	S	14 09.8 +00.0				
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 352° 352° 352° 352° 352° 352°			SHA 356° 356° 356° 356° 356° 356°			SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 07:40			Greenwich Culmination Time: 07:26			Greenwich Culmination Time: 05:01						

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	23.2 -00.1	N 22 31.2 +00.3		216	27.8 -00.3	N 12 30.9 +01.0		114	41.1 -28.4	N 21 24.4 -08.7		00
01	195	23.1 -00.1	N 22 31.5 +00.2		231	27.5 -00.4	N 12 31.9 +00.9		129	12.7 -28.3	N 21 15.7 -08.8		01
02	210	23.0 -00.1	N 22 31.7 +00.3		246	27.1 -00.4	N 12 32.8 +01.0		143	44.4 -28.2	N 21 06.9 -08.9		02
03	225	22.9 -00.1	N 22 32.0 +00.3		261	26.7 -00.4	N 12 33.8 +00.9		158	16.2 -28.2	N 20 58.0 -09.0		03
04	240	22.8 -00.1	N 22 32.3 +00.3		276	26.3 -00.4	N 12 34.7 +01.0		172	48.0 -28.2	N 20 49.0 -09.1		04
05	255	22.7 -00.1	N 22 32.6 +00.2		291	25.9 -00.4	N 12 35.7 +00.9		187	19.8 -28.1	N 20 39.9 -09.2		05
06	270	22.6 -00.1	N 22 32.8 +00.3		306	25.5 -00.4	N 12 36.6 +01.0		201	51.7 -28.0	N 20 30.7 -09.2		06
07	285	22.5 -00.1	N 22 33.1 +00.3		321	25.1 -00.3	N 12 37.6 +00.9		216	23.7 -28.0	N 20 21.5 -09.4		07
08	300	22.4 -00.2	N 22 33.4 +00.3		336	24.8 -00.4	N 12 38.5 +01.0		230	55.7 -28.0	N 20 12.1 -09.5		08
09	315	22.2 -00.1	N 22 33.7 +00.2		351	24.4 -00.4	N 12 39.5 +00.9		245	27.7 -28.0	N 20 02.6 -09.5		09
10	330	22.1 -00.1	N 22 33.9 +00.3		6	24.0 -00.4	N 12 40.4 +01.0		259	59.7 -27.9	N 19 53.1 -09.6		10
11	345	22.0 -00.1	N 22 34.2 +00.3		21	23.6 -00.4	N 12 41.4 +00.9		274	31.8 -27.8	N 19 43.5 -09.8		11
12	0	21.9 -00.1	N 22 34.5 +00.2		36	23.2 -00.4	N 12 42.3 +01.0		289	04.0 -27.8	N 19 33.7 -09.8		12
13	15	21.8 -00.1	N 22 34.7 +00.3		51	22.8 -00.4	N 12 43.3 +00.9		303	36.2 -27.8	N 19 23.9 -09.9		13
14	30	21.7 -00.1	N 22 35.0 +00.3		66	22.4 -00.4	N 12 44.2 +01.0		318	08.4 -27.7	N 19 14.0 -10.0		14
15	45	21.6 -00.1	N 22 35.3 +00.2		81	22.0 -00.4	N 12 45.2 +00.9		332	40.7 -27.7	N 19 04.0 -10.1		15
16	60	21.5 -00.2	N 22 35.5 +00.3		96	21.6 -00.4	N 12 46.1 +01.0		347	13.0 -27.6	N 18 53.9 -10.2		16
17	75	21.3 -00.1	N 22 35.8 +00.3		111	21.2 -00.3	N 12 47.1 +00.9		1	45.4 -27.6	N 18 43.7 -10.3		17
18	90	21.2 -00.1	N 22 36.1 +00.2		126	20.9 -00.4	N 12 48.0 +01.0		16	17.8 -27.6	N 18 33.4 -10.3		18
19	105	21.1 -00.1	N 22 36.3 +00.3		141	20.5 -00.4	N 12 49.0 +00.9		30	50.2 -27.5	N 18 23.1 -10.4		19
20	120	21.0 -00.1	N 22 36.6 +00.3		156	20.1 -00.4	N 12 49.9 +01.0		45	22.7 -27.5	N 18 12.7 -10.6		20
21	135	20.9 -00.1	N 22 36.9 +00.2		171	19.7 -00.4	N 12 50.9 +00.9		59	55.2 -27.5	N 18 02.1 -10.6		21
22	150	20.8 -00.1	N 22 37.1 +00.3		186	19.3 -00.4	N 12 51.8 +00.9		74	27.7 -27.4	N 17 51.5 -10.7		22
23	165	20.7 -00.1	N 22 37.4 +00.3		201	18.9 -00.4	N 12 52.7 +01.0		89	00.3 -27.4	N 17 40.8 -10.7		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 14'9 14'9 14'9 14'9 14'9 15'0				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 54'5 54'6 54'7 54'7 54'8 54'9				
	SHA 287° 287° 287° 286° 286° 286°				SHA 323° 323° 323° 322° 322° 322°				SHA 220° 218° 216° 214° 212° 210°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 09:34				Greenwich Culmination Time: 16:52				

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	245	11.3 +00.8	N 01 37.0 +00.7		248	56.0 +02.1	N 00 38.8 +00.1		285	29.1 +02.5	S 14 09.8 +00.0		00
01	260	12.1 +00.7	N 01 37.7 +00.8		263	58.1 +02.2	N 00 38.9 +00.2		300	31.6 +02.4	S 14 09.8 +00.1		01
02	275	12.8 +00.8	N 01 38.5 +00.7		279	00.3 +02.1	N 00 39.1 +00.1		315	34.0 +02.5	S 14 09.9 +00.0		02
03	290	13.6 +00.8	N 01 39.2 +00.7		294	02.4 +02.1	N 00 39.2 +00.1		330	36.5 +02.5	S 14 09.9 +00.0		03
04	305	14.4 +00.7	N 01 39.9 +00.7		309	04.5 +02.1	N 00 39.3 +00.2		345	39.0 +02.4	S 14 09.9 +00.0		04
05	320	15.1 +00.8	N 01 40.6 +00.7		324	06.6 +02.1	N 00 39.5 +00.1		0	41.4 +02.5	S 14 09.9 +00.0		05
06	335	15.9 +00.8	N 01 41.3 +00.7		339	08.7 +02.1	N 00 39.6 +00.2		15	43.9 +02.5	S 14 09.9 +00.0		06
07	350	16.7 +00.7	N 01 42.0 +00.7		354	10.8 +02.2	N 00 39.8 +00.1		30	46.4 +02.4	S 14 09.9 +00.0		07
08	5	17.4 +00.8	N 01 42.7 +00.8		9	13.0 +02.1	N 00 39.9 +00.1		45	48.8 +02.5	S 14 09.9 +00.0		08
09	20	18.2 +00.8	N 01 43.5 +00.7		24	15.1 +02.1	N 00 40.0 +00.2		60	51.3 +02.4	S 14 09.9 +00.0		09
10	35	19.0 +00.7	N 01 44.2 +00.7		39	17.2 +02.1	N 00 40.2 +00.1		75	53.7 +02.5	S 14 09.9 +00.0		10
11	50	19.7 +00.8	N 01 44.9 +00.7		54	19.3 +02.1	N 00 40.3 +00.2		90	56.2 +02.5	S 14 09.9 +00.0		11
12	65	20.5 +00.8	N 01 45.6 +00.7		69	21.4 +02.1	N 00 40.5 +00.1		105	58.7 +02.4	S 14 09.9 +00.0		12
13	80	21.3 +00.7	N 01 46.3 +00.7		84	23.5 +02.2	N 00 40.6 +00.1		121	01.1 +02.5	S 14 09.9 +00.0		13
14	95	22.0 +00.8	N 01 47.0 +00.8		99	25.7 +02.1	N 00 40.7 +00.2		136	03.6 +02.5	S 14 09.9 +00.1		14
15	110	22.8 +00.8	N 01 47.8 +00.7		114	27.8 +02.1	N 00 40.9 +00.1		151	06.1 +02.4	S 14 10.0 +00.0		15
16	125	23.6 +00.7	N 01 48.5 +00.7		129	29.9 +02.1	N 00 41.0 +00.2		166	08.5 +02.5	S 14 10.0 +00.0		16
17	140	24.3 +00.8	N 01 49.2 +00.7		144	32.0 +02.1	N 00 41.2 +00.1		181	11.0 +02.5	S 14 10.0 +00.0		17
18	155	25.1 +00.8	N 01 49.9 +00.7		159	34.1 +02.1	N 00 41.3 +00.1		196	13.5 +02.4	S 14 10.0 +00.0		18
19	170	25.9 +00.7	N 01 50.6 +00.7		174	36.2 +02.2	N 00 41.4 +00.2		211	15.9 +02.5	S 14 10.0 +00.0		19
20	185	26.6 +00.8	N 01 51.3 +00.7		189	38.4 +02.1	N 00 41.6 +00.1		226	18.4 +02.5	S 14 10.0 +00.0		20
21	200	27.4 +00.8	N 01 52.0 +00.8		204	40.5 +02.1	N 00 41.7 +00.2		241	20.9 +02.4	S 14 10.0 +00.0		21
22	215	28.2 +00.7	N 01 52.8 +00.7		219	42.6 +02.1	N 00 41.9 +00.1		256	23.3 +02.5	S 14 10.0 +00.0		22
23	230	28.9 +00.8	N 01 53.5 +00.7		234	44.7 +02.1	N 00 42.0 +00.1		271	25.8 +02.5	S 14 10.0 +00.0		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 352° 352° 352° 351° 351° 351°				SHA 356° 355° 355° 355° 355° 355°				SHA 032° 032° 032° 032° 032° 032°				
	Greenwich Culmination Time: 07:38				Greenwich Culmination Time: 07:23				Greenwich Culmination Time: 04:57				

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UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180	20.6 -00.2	N 22 37.7 +00.2		216	18.5 -00.4	N 12 53.7 +00.9		103	32.9 -27.3	N 17 30.1 -10.9		00
01	195	20.4 -00.1	N 22 37.9 +00.3		231	18.1 -00.4	N 12 54.6 +01.0		118	05.6 -27.3	N 17 19.2 -10.9		01
02	210	20.3 -00.1	N 22 38.2 +00.2		246	17.7 -00.4	N 12 55.6 +00.9		132	38.3 -27.3	N 17 08.3 -11.1		02
03	225	20.2 -00.1	N 22 38.4 +00.3		261	17.3 -00.4	N 12 56.5 +01.0		147	11.0 -27.2	N 16 57.2 -11.1		03
04	240	20.1 -00.1	N 22 38.7 +00.3		276	16.9 -00.4	N 12 57.5 +00.9		161	43.8 -27.2	N 16 46.1 -11.1		04
05	255	20.0 -00.1	N 22 39.0 +00.2		291	16.5 -00.4	N 12 58.4 +00.9		176	16.6 -27.2	N 16 35.0 -11.3		05
06	270	19.9 -00.1	N 22 39.2 +00.3		306	16.1 -00.4	N 12 59.3 +01.0		190	49.4 -27.1	N 16 23.7 -11.3		06
07	285	19.8 -00.2	N 22 39.5 +00.2		321	15.7 -00.4	N 13 00.3 +00.9		205	22.3 -27.1	N 16 12.4 -11.5		07
08	300	19.6 -00.1	N 22 39.7 +00.3		336	15.3 -00.4	N 13 01.2 +01.0		219	55.2 -27.1	N 16 00.9 -11.4		08
09	315	19.5 -00.1	N 22 40.0 +00.2		351	14.9 -00.4	N 13 02.2 +00.9		234	28.1 -27.0	N 15 49.5 -11.6		09
10	330	19.4 -00.1	N 22 40.2 +00.3		6	14.5 -00.4	N 13 03.1 +00.9		249	01.1 -27.0	N 15 37.9 -11.7		10
11	345	19.3 -00.1	N 22 40.5 +00.3		21	14.1 -00.4	N 13 04.0 +01.0		263	34.1 -27.0	N 15 26.2 -11.7		11
12	0	19.2 -00.1	N 22 40.8 +00.2		36	13.7 -00.4	N 13 05.0 +00.9		278	07.1 -26.9	N 15 14.5 -11.8		12
13	15	19.1 -00.1	N 22 41.0 +00.3		51	13.3 -00.4	N 13 05.9 +01.0		292	40.2 -26.9	N 15 02.7 -11.8		13
14	30	19.0 -00.2	N 22 41.3 +00.2		66	12.9 -00.4	N 13 06.9 +00.9		307	13.3 -26.9	N 14 50.9 -12.0		14
15	45	18.8 -00.1	N 22 41.5 +00.3		81	12.5 -00.4	N 13 07.8 +00.9		321	46.4 -26.9	N 14 38.9 -12.0		15
16	60	18.7 -00.1	N 22 41.8 +00.2		96	12.1 -00.4	N 13 08.7 +01.0		336	19.5 -26.8	N 14 26.9 -12.1		16
17	75	18.6 -00.1	N 22 42.0 +00.3		111	11.7 -00.4	N 13 09.7 +00.9		350	52.7 -26.9	N 14 14.8 -12.1		17
18	90	18.5 -00.1	N 22 42.3 +00.2		126	11.3 -00.4	N 13 10.6 +00.9		5	25.8 -26.7	N 14 02.7 -12.3		18
19	105	18.4 -00.1	N 22 42.5 +00.3		141	10.9 -00.4	N 13 11.5 +01.0		19	59.1 -26.8	N 13 50.4 -12.3		19
20	120	18.3 -00.1	N 22 42.8 +00.2		156	10.5 -00.4	N 13 12.5 +00.9		34	32.3 -26.8	N 13 38.1 -12.3		20
21	135	18.2 -00.2	N 22 43.0 +00.3		171	10.1 -00.4	N 13 13.4 +00.9		49	05.5 -26.7	N 13 25.8 -12.5		21
22	150	18.0 -00.1	N 22 43.3 +00.2		186	09.7 -00.4	N 13 14.3 +01.0		63	38.8 -26.7	N 13 13.3 -12.5		22
23	165	17.9 -00.1	N 22 43.5 +00.2		201	09.3 -00.4	N 13 15.3 +00.9		78	12.1 -26.7	N 13 00.8 -12.5		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'8 15'8 15'8 15'8 15'8				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 15'0 15'0 15'0 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 55'0 55'1 55'2 55'3 55'4 55'5				
	SHA 286° 286° 286° 285° 285° 285°				SHA 322° 322° 321° 321° 321° 321°				SHA 208° 206° 204° 202° 200° 198°				
	Greenwich Culmination Time: 11:58				Greenwich Culmination Time: 09:35				Greenwich Culmination Time: 17:37				

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	245	29.7 +00.8	N 01 54.2 +00.7		249	46.8 +02.2	N 00 42.1 +00.2		286	28.3 +02.4	S 14 10.0 +00.0		00
01	260	30.5 +00.7	N 01 54.9 +00.7		264	49.0 +02.1	N 00 42.3 +00.1		301	30.7 +02.5	S 14 10.0 +00.0		01
02	275	31.2 +00.8	N 01 55.6 +00.7		279	51.1 +02.1	N 00 42.4 +00.1		316	33.2 +02.4	S 14 10.0 +00.1		02
03	290	32.0 +00.8	N 01 56.3 +00.7		294	53.2 +02.1	N 00 42.5 +00.2		331	35.6 +02.5	S 14 10.1 +00.0		03
04	305	32.8 +00.7	N 01 57.0 +00.8		309	55.3 +02.1	N 00 42.7 +00.1		346	38.1 +02.5	S 14 10.1 +00.0		04
05	320	33.5 +00.8	N 01 57.8 +00.7		324	57.4 +02.2	N 00 42.8 +00.2		1	40.6 +02.4	S 14 10.1 +00.0		05
06	335	34.3 +00.8	N 01 58.5 +00.7		339	59.6 +02.1	N 00 43.0 +00.1		16	43.0 +02.5	S 14 10.1 +00.0		06
07	350	35.1 +00.7	N 01 59.2 +00.7		355	01.7 +02.1	N 00 43.1 +00.1		31	45.5 +02.5	S 14 10.1 +00.0		07
08	5	35.8 +00.8	N 01 59.9 +00.7		10	03.8 +02.1	N 00 43.2 +00.2		46	48.0 +02.5	S 14 10.1 +00.0		08
09	20	36.6 +00.8	N 02 00.6 +00.7		25	05.9 +02.2	N 00 43.4 +00.1		61	50.5 +02.4	S 14 10.1 +00.0		09
10	35	37.4 +00.8	N 02 01.3 +00.7		40	08.1 +02.1	N 00 43.5 +00.1		76	52.9 +02.5	S 14 10.1 +00.0		10
11	50	38.2 +00.7	N 02 02.0 +00.8		55	10.2 +02.1	N 00 43.6 +00.2		91	55.4 +02.5	S 14 10.1 +00.0		11
12	65	38.9 +00.8	N 02 02.8 +00.7		70	12.3 +02.1	N 00 43.8 +00.1		106	57.9 +02.4	S 14 10.1 +00.1		12
13	80	39.7 +00.8	N 02 03.5 +00.7		85	14.4 +02.1	N 00 43.9 +00.2		122	00.3 +02.5	S 14 10.2 +00.0		13
14	95	40.5 +00.7	N 02 04.2 +00.7		100	16.5 +02.2	N 00 44.1 +00.1		137	02.8 +02.5	S 14 10.2 +00.0		14
15	110	41.2 +00.8	N 02 04.9 +00.7		115	18.7 +02.1	N 00 44.2 +00.1		152	05.3 +02.4	S 14 10.2 +00.0		15
16	125	42.0 +00.8	N 02 05.6 +00.7		130	20.8 +02.1	N 00 44.3 +00.2		167	07.7 +02.5	S 14 10.2 +00.0		16
17	140	42.8 +00.7	N 02 06.3 +00.7		145	22.9 +02.1	N 00 44.5 +00.1		182	10.2 +02.5	S 14 10.2 +00.0		17
18	155	43.5 +00.8	N 02 07.0 +00.7		160	25.0 +02.2	N 00 44.6 +00.1		197	12.7 +02.4	S 14 10.2 +00.0		18
19	170	44.3 +00.8	N 02 07.7 +00.8		175	27.2 +02.1	N 00 44.7 +00.2		212	15.1 +02.5	S 14 10.2 +00.0		19
20	185	45.1 +00.7	N 02 08.5 +00.7		190	29.3 +02.1	N 00 44.9 +00.1		227	17.6 +02.5	S 14 10.2 +00.0		20
21	200	45.8 +00.8	N 02 09.2 +00.7		205	31.4 +02.1	N 00 45.0 +00.1		242	20.1 +02.4	S 14 10.2 +00.0		21
22	215	46.6 +00.8	N 02 09.9 +00.7		220	33.5 +02.2	N 00 45.1 +00.2		257	22.5 +02.5	S 14 10.2 +00.1		22
23	230	47.4 +00.7	N 02 10.6 +00.7		235	35.7 +02.1	N 00 45.3 +00.1		272	25.0 +02.5	S 14 10.3 +00.0		23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 351° 351° 351° 351° 351° 350°				SHA 355° 355° 355° 355° 355° 355°				SHA 032° 032° 032° 032° 032° 032°				
	Greenwich Culmination Time: 07:37				Greenwich Culmination Time: 07:19				Greenwich Culmination Time: 04:53				

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 17.8 -00.1	N 22 43.7 +00.3	216 08.9 -00.4	N 13 16.2 +01.0	92 45.4 -26.6	N 12 48.3 -12.7	00						
01	195 17.7 -00.1	N 22 44.0 +00.2	231 08.5 -00.4	N 13 17.2 +00.9	107 18.8 -26.7	N 12 35.6 -12.7	01						
02	210 17.6 -00.1	N 22 44.2 +00.3	246 08.1 -00.4	N 13 18.1 +00.9	121 52.1 -26.6	N 12 22.9 -12.7	02						
03	225 17.5 -00.2	N 22 44.5 +00.2	261 07.7 -00.4	N 13 19.0 +00.9	136 25.5 -26.6	N 12 10.2 -12.8	03						
04	240 17.3 -00.1	N 22 44.7 +00.3	276 07.3 -00.4	N 13 19.9 +01.0	150 58.9 -26.6	N 11 57.4 -12.9	04						
05	255 17.2 -00.1	N 22 45.0 +00.2	291 06.9 -00.4	N 13 20.9 +00.9	165 32.3 -26.6	N 11 44.5 -13.0	05						
06	270 17.1 -00.1	N 22 45.2 +00.2	306 06.5 -00.4	N 13 21.8 +00.9	180 05.7 -26.5	N 11 31.5 -13.0	06						
07	285 17.0 -00.1	N 22 45.4 +00.3	321 06.1 -00.5	N 13 22.7 +01.0	194 39.2 -26.6	N 11 18.5 -13.1	07						
08	300 16.9 -00.1	N 22 45.7 +00.2	336 05.6 -00.4	N 13 23.7 +00.9	209 12.6 -26.5	N 11 05.4 -13.1	08						
09	315 16.8 -00.2	N 22 45.9 +00.3	351 05.2 -00.4	N 13 24.6 +00.9	223 46.1 -26.6	N 10 52.3 -13.2	09						
10	330 16.6 -00.1	N 22 46.2 +00.2	6 04.8 -00.4	N 13 25.5 +01.0	238 19.5 -26.5	N 10 39.1 -13.3	10						
11	345 16.5 -00.1	N 22 46.4 +00.2	21 04.4 -00.4	N 13 26.5 +00.9	252 53.0 -26.5	N 10 25.8 -13.3	11						
12	0 16.4 -00.1	N 22 46.6 +00.3	36 04.0 -00.4	N 13 27.4 +00.9	267 26.5 -26.5	N 10 12.5 -13.3	12						
13	15 16.3 -00.1	N 22 46.9 +00.2	51 03.6 -00.4	N 13 28.3 +00.9	282 00.0 -26.5	N 09 59.2 -13.5	13						
14	30 16.2 -00.1	N 22 47.1 +00.2	66 03.2 -00.4	N 13 29.2 +01.0	296 33.5 -26.5	N 09 45.7 -13.5	14						
15	45 16.1 -00.2	N 22 47.3 +00.3	81 02.8 -00.4	N 13 30.2 +00.9	311 07.0 -26.5	N 09 32.2 -13.5	15						
16	60 15.9 -00.1	N 22 47.6 +00.2	96 02.4 -00.4	N 13 31.1 +00.9	325 40.5 -26.4	N 09 18.7 -13.6	16						
17	75 15.8 -00.1	N 22 47.8 +00.2	111 02.0 -00.5	N 13 32.0 +00.9	340 14.1 -26.5	N 09 05.1 -13.6	17						
18	90 15.7 -00.1	N 22 48.0 +00.3	126 01.5 -00.4	N 13 32.9 +01.0	354 47.6 -26.5	N 08 51.5 -13.7	18						
19	105 15.6 -00.1	N 22 48.3 +00.2	141 01.1 -00.4	N 13 33.9 +00.9	9 21.1 -26.5	N 08 37.8 -13.8	19						
20	120 15.5 -00.2	N 22 48.5 +00.2	156 00.7 -00.4	N 13 34.8 +00.9	23 54.6 -26.4	N 08 24.0 -13.8	20						
21	135 15.3 -00.1	N 22 48.7 +00.3	171 00.3 -00.4	N 13 35.7 +00.9	38 28.2 -26.5	N 08 10.2 -13.8	21						
22	150 15.2 -00.1	N 22 49.0 +00.2	185 59.9 -00.4	N 13 36.6 +01.0	53 01.7 -26.5	N 07 56.4 -13.9	22						
23	165 15.1 -00.1	N 22 49.2 +00.2	200 59.5 -00.4	N 13 37.6 +00.9	67 35.2 -26.5	N 07 42.5 -14.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'2 15'2 15'2 15'3 15'3 15'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'6 55'7 55'9 56'0 56'1 56'2								
	SHA 285° 285° 284° 284° 284° 284°		SHA 321° 320° 320° 320° 320° 320°		SHA 196° 194° 193° 191° 189° 187°								
	Greenwich Culmination Time: 11:58		Greenwich Culmination Time: 09:35		Greenwich Culmination Time: 18:21								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	245 48.1 +00.8	N 02 11.3 +00.7	250 37.8 +02.1	N 00 45.4 +00.2	287 27.5 +02.4	S 14 10.3 +00.0	00						
01	260 48.9 +00.8	N 02 12.0 +00.7	265 39.9 +02.1	N 00 45.6 +00.1	302 29.9 +02.5	S 14 10.3 +00.0	01						
02	275 49.7 +00.7	N 02 12.7 +00.7	280 42.0 +02.2	N 00 45.7 +00.1	317 32.4 +02.5	S 14 10.3 +00.0	02						
03	290 50.4 +00.8	N 02 13.4 +00.8	295 44.2 +02.1	N 00 45.8 +00.2	332 34.9 +02.5	S 14 10.3 +00.0	03						
04	305 51.2 +00.8	N 02 14.2 +00.7	310 46.3 +02.1	N 00 46.0 +00.1	347 37.4 +02.4	S 14 10.3 +00.0	04						
05	320 52.0 +00.8	N 02 14.9 +00.7	325 48.4 +02.1	N 00 46.1 +00.1	2 39.8 +02.5	S 14 10.3 +00.0	05						
06	335 52.8 +00.7	N 02 15.6 +00.7	340 50.5 +02.2	N 00 46.2 +00.2	17 42.3 +02.5	S 14 10.3 +00.0	06						
07	350 53.5 +00.8	N 02 16.3 +00.7	355 52.7 +02.1	N 00 46.4 +00.1	32 44.8 +02.4	S 14 10.3 +00.0	07						
08	5 54.3 +00.8	N 02 17.0 +00.7	10 54.8 +02.1	N 00 46.5 +00.1	47 47.2 +02.5	S 14 10.3 +00.1	08						
09	20 55.1 +00.7	N 02 17.7 +00.7	25 56.9 +02.1	N 00 46.6 +00.2	62 49.7 +02.5	S 14 10.4 +00.0	09						
10	35 55.8 +00.8	N 02 18.4 +00.7	40 59.0 +02.2	N 00 46.8 +00.1	77 52.2 +02.5	S 14 10.4 +00.0	10						
11	50 56.6 +00.8	N 02 19.1 +00.8	56 01.2 +02.1	N 00 46.9 +00.1	92 54.7 +02.4	S 14 10.4 +00.0	11						
12	65 57.4 +00.7	N 02 19.9 +00.7	71 03.3 +02.1	N 00 47.0 +00.2	107 57.1 +02.5	S 14 10.4 +00.0	12						
13	80 58.1 +00.8	N 02 20.6 +00.7	86 05.4 +02.1	N 00 47.2 +00.1	122 59.6 +02.5	S 14 10.4 +00.0	13						
14	95 58.9 +00.8	N 02 21.3 +00.7	101 07.5 +02.2	N 00 47.3 +00.1	138 02.1 +02.4	S 14 10.4 +00.0	14						
15	110 59.7 +00.7	N 02 22.0 +00.7	116 09.7 +02.1	N 00 47.4 +00.2	153 04.5 +02.5	S 14 10.4 +00.0	15						
16	126 00.4 +00.8	N 02 22.7 +00.7	131 11.8 +02.1	N 00 47.6 +00.1	168 07.0 +02.5	S 14 10.4 +00.0	16						
17	141 01.2 +00.8	N 02 23.4 +00.7	146 13.9 +02.2	N 00 47.7 +00.1	183 09.5 +02.5	S 14 10.4 +00.1	17						
18	156 02.0 +00.8	N 02 24.1 +00.7	161 16.1 +02.1	N 00 47.8 +00.2	198 12.0 +02.4	S 14 10.5 +00.0	18						
19	171 02.8 +00.7	N 02 24.8 +00.7	176 18.2 +02.1	N 00 48.0 +00.1	213 14.4 +02.5	S 14 10.5 +00.0	19						
20	186 03.5 +00.8	N 02 25.5 +00.8	191 20.3 +02.1	N 00 48.1 +00.2	228 16.9 +02.5	S 14 10.5 +00.0	20						
21	201 04.3 +00.8	N 02 26.3 +00.7	206 22.4 +02.2	N 00 48.3 +00.1	243 19.4 +02.5	S 14 10.5 +00.0	21						
22	216 05.1 +00.7	N 02 27.0 +00.7	221 24.6 +02.1	N 00 48.4 +00.1	258 21.9 +02.4	S 14 10.5 +00.0	22						
23	231 05.8 +00.8	N 02 27.7 +00.7	236 26.7 +02.1	N 00 48.5 +00.2	273 24.3 +02.5	S 14 10.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 350° 350° 350° 350° 350° 350°		SHA 355° 355° 355° 355° 355° 355°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:36		Greenwich Culmination Time: 07:16		Greenwich Culmination Time: 04:49								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 15.0 -00.1	N 22 49.4 +00.3	215 59.1 -00.5	N 13 38.5 +00.9	82 08.7 -26.5	N 07 28.5 -14.0	00						
01	195 14.9 -00.2	N 22 49.7 +00.2	230 58.6 -00.4	N 13 39.4 +00.9	96 42.2 -26.4	N 07 14.5 -14.0	01						
02	210 14.7 -00.1	N 22 49.9 +00.2	245 58.2 -00.4	N 13 40.3 +00.9	111 15.8 -26.5	N 07 00.5 -14.1	02						
03	225 14.6 -00.1	N 22 50.1 +00.2	260 57.8 -00.4	N 13 41.2 +01.0	125 49.3 -26.6	N 06 46.4 -14.2	03						
04	240 14.5 -00.1	N 22 50.3 +00.3	275 57.4 -00.4	N 13 42.2 +00.9	140 22.7 -26.5	N 06 32.2 -14.2	04						
05	255 14.4 -00.1	N 22 50.6 +00.2	290 57.0 -00.4	N 13 43.1 +00.9	154 56.2 -26.5	N 06 18.0 -14.2	05						
06	270 14.3 -00.1	N 22 50.8 +00.2	305 56.6 -00.5	N 13 44.0 +00.9	169 29.7 -26.5	N 06 03.8 -14.3	06						
07	285 14.2 -00.2	N 22 51.0 +00.2	320 56.1 -00.4	N 13 44.9 +00.9	184 03.2 -26.6	N 05 49.5 -14.3	07						
08	300 14.0 -00.1	N 22 51.2 +00.2	335 55.7 -00.4	N 13 45.8 +01.0	198 36.6 -26.5	N 05 35.2 -14.4	08						
09	315 13.9 -00.1	N 22 51.4 +00.3	350 55.3 -00.4	N 13 46.8 +00.9	213 10.1 -26.6	N 05 20.8 -14.4	09						
10	330 13.8 -00.1	N 22 51.7 +00.2	5 54.9 -00.4	N 13 47.7 +00.9	227 43.5 -26.6	N 05 06.4 -14.4	10						
11	345 13.7 -00.1	N 22 51.9 +00.2	20 54.5 -00.5	N 13 48.6 +00.9	242 16.9 -26.6	N 04 52.0 -14.5	11						
12	0 13.6 -00.2	N 22 52.1 +00.2	35 54.0 -00.4	N 13 49.5 +00.9	256 50.3 -26.6	N 04 37.5 -14.5	12						
13	15 13.4 -00.1	N 22 52.3 +00.3	50 53.6 -00.4	N 13 50.4 +00.9	271 23.7 -26.7	N 04 23.0 -14.6	13						
14	30 13.3 -00.1	N 22 52.6 +00.2	65 53.2 -00.4	N 13 51.3 +01.0	285 57.0 -26.6	N 04 08.4 -14.6	14						
15	45 13.2 -00.1	N 22 52.8 +00.2	80 52.8 -00.4	N 13 52.3 +00.9	300 30.4 -26.7	N 03 53.8 -14.6	15						
16	60 13.1 -00.2	N 22 53.0 +00.2	95 52.4 -00.5	N 13 53.2 +00.9	315 03.7 -26.7	N 03 39.2 -14.7	16						
17	75 12.9 -00.1	N 22 53.2 +00.2	110 51.9 -00.4	N 13 54.1 +00.9	329 37.0 -26.8	N 03 24.5 -14.7	17						
18	90 12.8 -00.1	N 22 53.4 +00.2	125 51.5 -00.4	N 13 55.0 +00.9	344 10.2 -26.7	N 03 09.8 -14.7	18						
19	105 12.7 -00.1	N 22 53.6 +00.3	140 51.1 -00.4	N 13 55.9 +00.9	358 43.5 -26.8	N 02 55.1 -14.8	19						
20	120 12.6 -00.1	N 22 53.9 +00.2	155 50.7 -00.5	N 13 56.8 +00.9	13 16.7 -26.8	N 02 40.3 -14.8	20						
21	135 12.5 -00.2	N 22 54.1 +00.2	170 50.2 -00.4	N 13 57.7 +00.9	27 49.9 -26.9	N 02 25.5 -14.8	21						
22	150 12.3 -00.1	N 22 54.3 +00.2	185 49.8 -00.4	N 13 58.6 +01.0	42 23.0 -26.9	N 02 10.7 -14.9	22						
23	165 12.2 -00.1	N 22 54.5 +00.2	200 49.4 -00.4	N 13 59.6 +00.9	56 56.1 -26.9	N 01 55.8 -14.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 15'4 15'4 15'5 15'5 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'4 56'5 56'7 56'8 57'0 57'1								
	SHA 284° 284° 283° 283° 283° 283°		SHA 320° 319° 319° 319° 319° 319°		SHA 185° 183° 181° 179° 177° 175°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 09:36		Greenwich Culmination Time: 19:05								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 06.6 +00.8	N 02 28.4 +00.7	251 28.8 +02.2	N 00 48.7 +00.1	288 26.8 +02.5	S 14 10.5 +00.0	00						
01	261 07.4 +00.7	N 02 29.1 +00.7	266 31.0 +02.1	N 00 48.8 +00.1	303 29.3 +02.4	S 14 10.5 +00.0	01						
02	276 08.1 +00.8	N 02 29.8 +00.7	281 33.1 +02.1	N 00 48.9 +00.2	318 31.7 +02.5	S 14 10.5 +00.1	02						
03	291 08.9 +00.8	N 02 30.5 +00.7	296 35.2 +02.1	N 00 49.1 +00.1	333 34.2 +02.5	S 14 10.6 +00.0	03						
04	306 09.7 +00.8	N 02 31.2 +00.7	311 37.3 +02.2	N 00 49.2 +00.1	348 36.7 +02.5	S 14 10.6 +00.0	04						
05	321 10.5 +00.7	N 02 31.9 +00.7	326 39.5 +02.1	N 00 49.3 +00.2	3 39.2 +02.4	S 14 10.6 +00.0	05						
06	336 11.2 +00.8	N 02 32.6 +00.8	341 41.6 +02.1	N 00 49.5 +00.1	18 41.6 +02.5	S 14 10.6 +00.0	06						
07	351 12.0 +00.8	N 02 33.4 +00.7	356 43.7 +02.2	N 00 49.6 +00.1	33 44.1 +02.5	S 14 10.6 +00.0	07						
08	6 12.8 +00.7	N 02 34.1 +00.7	11 45.9 +02.1	N 00 49.7 +00.2	48 46.6 +02.5	S 14 10.6 +00.0	08						
09	21 13.5 +00.8	N 02 34.8 +00.7	26 48.0 +02.1	N 00 49.9 +00.1	63 49.1 +02.4	S 14 10.6 +00.0	09						
10	36 14.3 +00.8	N 02 35.5 +00.7	41 50.1 +02.2	N 00 50.0 +00.1	78 51.5 +02.5	S 14 10.6 +00.1	10						
11	51 15.1 +00.7	N 02 36.2 +00.7	56 52.3 +02.1	N 00 50.1 +00.1	93 54.0 +02.5	S 14 10.7 +00.0	11						
12	66 15.8 +00.8	N 02 36.9 +00.7	71 54.4 +02.1	N 00 50.2 +00.2	108 56.5 +02.5	S 14 10.7 +00.0	12						
13	81 16.6 +00.8	N 02 37.6 +00.7	86 56.5 +02.2	N 00 50.4 +00.1	123 59.0 +02.4	S 14 10.7 +00.0	13						
14	96 17.4 +00.8	N 02 38.3 +00.7	101 58.7 +02.1	N 00 50.5 +00.1	139 01.4 +02.5	S 14 10.7 +00.0	14						
15	111 18.2 +00.7	N 02 39.0 +00.7	117 00.8 +02.1	N 00 50.6 +00.2	154 03.9 +02.5	S 14 10.7 +00.0	15						
16	126 18.9 +00.8	N 02 39.7 +00.7	132 02.9 +02.2	N 00 50.8 +00.1	169 06.4 +02.5	S 14 10.7 +00.0	16						
17	141 19.7 +00.8	N 02 40.4 +00.8	147 05.1 +02.1	N 00 50.9 +00.1	184 08.9 +02.5	S 14 10.7 +00.0	17						
18	156 20.5 +00.7	N 02 41.2 +00.7	162 07.2 +02.1	N 00 51.0 +00.2	199 11.4 +02.4	S 14 10.7 +00.1	18						
19	171 21.2 +00.8	N 02 41.9 +00.7	177 09.3 +02.2	N 00 51.2 +00.1	214 13.8 +02.5	S 14 10.8 +00.0	19						
20	186 22.0 +00.8	N 02 42.6 +00.7	192 11.5 +02.1	N 00 51.3 +00.1	229 16.3 +02.5	S 14 10.8 +00.0	20						
21	201 22.8 +00.8	N 02 43.3 +00.7	207 13.6 +02.1	N 00 51.4 +00.2	244 18.8 +02.5	S 14 10.8 +00.0	21						
22	216 23.6 +00.7	N 02 44.0 +00.7	222 15.7 +02.2	N 00 51.6 +00.1	259 21.3 +02.4	S 14 10.8 +00.0	22						
23	231 24.3 +00.8	N 02 44.7 +00.7	237 17.9 +02.1	N 00 51.7 +00.1	274 23.7 +02.5	S 14 10.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 350° 350° 349° 349° 349° 349°		SHA 355° 355° 355° 355° 355° 355°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:35		Greenwich Culmination Time: 07:13		Greenwich Culmination Time: 04:45								

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 12.1 -00.1	N 22 54.7 +00.2	215 49.0 -00.5	N 14 00.5 +00.9	71 29.2 -26.9	N 01 41.0 -15.0	00						
01	195 12.0 -00.1	N 22 54.9 +00.2	230 48.5 -00.4	N 14 01.4 +00.9	86 02.3 -27.0	N 01 26.0 -14.9	01						
02	210 11.9 -00.2	N 22 55.1 +00.2	245 48.1 -00.4	N 14 02.3 +00.9	100 35.3 -27.0	N 01 11.1 -15.0	02						
03	225 11.7 -00.1	N 22 55.3 +00.2	260 47.7 -00.4	N 14 03.2 +00.9	115 08.3 -27.0	N 00 56.1 -15.0	03						
04	240 11.6 -00.1	N 22 55.5 +00.3	275 47.3 -00.5	N 14 04.1 +00.9	129 41.3 -27.1	N 00 41.1 -15.0	04						
05	255 11.5 -00.1	N 22 55.8 +00.2	290 46.8 -00.4	N 14 05.0 +00.9	144 14.2 -27.2	N 00 26.1 -15.0	05						
06	270 11.4 -00.2	N 22 56.0 +00.2	305 46.4 -00.4	N 14 05.9 +00.9	158 47.0 -27.1	N 00 11.1 -15.1	06						
07	285 11.2 -00.1	N 22 56.2 +00.2	320 46.0 -00.4	N 14 06.8 +00.9	173 19.9 -27.2	S 00 04.0 +15.1	07						
08	300 11.1 -00.1	N 22 56.4 +00.2	335 45.6 -00.5	N 14 07.7 +00.9	187 52.7 -27.3	S 00 19.1 +15.1	08						
09	315 11.0 -00.1	N 22 56.6 +00.2	350 45.1 -00.4	N 14 08.6 +00.9	202 25.4 -27.3	S 00 34.2 +15.1	09						
10	330 10.9 -00.1	N 22 56.8 +00.2	5 44.7 -00.4	N 14 09.5 +00.9	216 58.1 -27.3	S 00 49.3 +15.1	10						
11	345 10.8 -00.2	N 22 57.0 +00.2	20 44.3 -00.5	N 14 10.4 +00.9	231 30.8 -27.4	S 01 04.4 +15.2	11						
12	0 10.6 -00.1	N 22 57.2 +00.2	35 43.8 -00.4	N 14 11.3 +00.9	246 03.4 -27.4	S 01 19.6 +15.2	12						
13	15 10.5 -00.1	N 22 57.4 +00.2	50 43.4 -00.4	N 14 12.2 +01.0	260 36.0 -27.5	S 01 34.8 +15.2	13						
14	30 10.4 -00.1	N 22 57.6 +00.2	65 43.0 -00.5	N 14 13.2 +00.9	275 08.5 -27.6	S 01 50.0 +15.2	14						
15	45 10.3 -00.2	N 22 57.8 +00.2	80 42.5 -00.4	N 14 14.1 +00.9	289 40.9 -27.6	S 02 05.2 +15.2	15						
16	60 10.1 -00.1	N 22 58.0 +00.2	95 42.1 -00.4	N 14 15.0 +00.9	304 13.3 -27.6	S 02 20.4 +15.2	16						
17	75 10.0 -00.1	N 22 58.2 +00.2	110 41.7 -00.5	N 14 15.9 +00.9	318 45.7 -27.7	S 02 35.6 +15.2	17						
18	90 09.9 -00.1	N 22 58.4 +00.2	125 41.2 -00.4	N 14 16.8 +00.9	333 18.0 -27.8	S 02 50.8 +15.3	18						
19	105 09.8 -00.1	N 22 58.6 +00.2	140 40.8 -00.4	N 14 17.7 +00.9	347 50.2 -27.8	S 03 06.1 +15.2	19						
20	120 09.7 -00.2	N 22 58.8 +00.2	155 40.4 -00.5	N 14 18.6 +00.9	2 22.4 -27.9	S 03 21.3 +15.3	20						
21	135 09.5 -00.1	N 22 59.0 +00.2	170 39.9 -00.4	N 14 19.5 +00.9	16 54.5 -27.9	S 03 36.6 +15.2	21						
22	150 09.4 -00.1	N 22 59.2 +00.2	185 39.5 -00.4	N 14 20.4 +00.9	31 26.6 -28.0	S 03 51.8 +15.3	22						
23	165 09.3 -00.1	N 22 59.4 +00.2	200 39.1 -00.5	N 14 21.3 +00.9	45 58.6 -28.1	S 04 07.1 +15.3	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'6 15'7 15'7 15'8 15'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'3 57'4 57'6 57'7 57'9 58'0								
	SHA 283° 283° 282° 282° 282° 282°		SHA 318° 318° 318° 318° 318° 317°		SHA 173° 171° 169° 167° 165° 163°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 09:37		Greenwich Culmination Time: 19:50								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 25.1 +00.8	N 02 45.4 +00.7	252 20.0 +02.1	N 00 51.8 +00.2	289 26.2 +02.5	S 14 10.8 +00.0	00						
01	261 25.9 +00.7	N 02 46.1 +00.7	267 22.1 +02.2	N 00 52.0 +00.1	304 28.7 +02.5	S 14 10.8 +00.0	01						
02	276 26.6 +00.8	N 02 46.8 +00.7	282 24.3 +02.1	N 00 52.1 +00.1	319 31.2 +02.4	S 14 10.8 +00.1	02						
03	291 27.4 +00.8	N 02 47.5 +00.7	297 26.4 +02.1	N 00 52.2 +00.2	334 33.6 +02.5	S 14 10.9 +00.0	03						
04	306 28.2 +00.8	N 02 48.2 +00.7	312 28.5 +02.2	N 00 52.4 +00.1	349 36.1 +02.5	S 14 10.9 +00.0	04						
05	321 29.0 +00.7	N 02 48.9 +00.8	327 30.7 +02.1	N 00 52.5 +00.1	4 38.6 +02.5	S 14 10.9 +00.0	05						
06	336 29.7 +00.8	N 02 49.7 +00.7	342 32.8 +02.1	N 00 52.6 +00.2	19 41.1 +02.5	S 14 10.9 +00.0	06						
07	351 30.5 +00.8	N 02 50.4 +00.7	357 34.9 +02.2	N 00 52.8 +00.1	34 43.6 +02.4	S 14 10.9 +00.0	07						
08	6 31.3 +00.7	N 02 51.1 +00.7	12 37.1 +02.1	N 00 52.9 +00.1	49 46.0 +02.5	S 14 10.9 +00.0	08						
09	21 32.0 +00.8	N 02 51.8 +00.7	27 39.2 +02.2	N 00 53.0 +00.1	64 48.5 +02.5	S 14 10.9 +00.0	09						
10	36 32.8 +00.8	N 02 52.5 +00.7	42 41.4 +02.1	N 00 53.1 +00.2	79 51.0 +02.5	S 14 10.9 +00.1	10						
11	51 33.6 +00.8	N 02 53.2 +00.7	57 43.5 +02.1	N 00 53.3 +00.1	94 53.5 +02.5	S 14 11.0 +00.0	11						
12	66 34.4 +00.7	N 02 53.9 +00.7	72 45.6 +02.2	N 00 53.4 +00.1	109 56.0 +02.4	S 14 11.0 +00.0	12						
13	81 35.1 +00.8	N 02 54.6 +00.7	87 47.8 +02.1	N 00 53.5 +00.2	124 58.4 +02.5	S 14 11.0 +00.0	13						
14	96 35.9 +00.8	N 02 55.3 +00.7	102 49.9 +02.1	N 00 53.7 +00.1	140 00.9 +02.5	S 14 11.0 +00.0	14						
15	111 36.7 +00.7	N 02 56.0 +00.7	117 52.0 +02.2	N 00 53.8 +00.1	155 03.4 +02.5	S 14 11.0 +00.0	15						
16	126 37.4 +00.8	N 02 56.7 +00.7	132 54.2 +02.1	N 00 53.9 +00.2	170 05.9 +02.5	S 14 11.0 +00.0	16						
17	141 38.2 +00.8	N 02 57.4 +00.7	147 56.3 +02.2	N 00 54.1 +00.1	185 08.4 +02.4	S 14 11.0 +00.1	17						
18	156 39.0 +00.8	N 02 58.1 +00.8	162 58.5 +02.1	N 00 54.2 +00.1	200 10.8 +02.5	S 14 11.1 +00.0	18						
19	171 39.8 +00.7	N 02 58.9 +00.7	178 00.6 +02.1	N 00 54.3 +00.1	215 13.3 +02.5	S 14 11.1 +00.0	19						
20	186 40.5 +00.8	N 02 59.6 +00.7	193 02.7 +02.2	N 00 54.4 +00.2	230 15.8 +02.5	S 14 11.1 +00.0	20						
21	201 41.3 +00.8	N 03 00.3 +00.7	208 04.9 +02.1	N 00 54.6 +00.1	245 18.3 +02.5	S 14 11.1 +00.0	21						
22	216 42.1 +00.7	N 03 01.0 +00.7	223 07.0 +02.1	N 00 54.7 +00.1	260 20.8 +02.4	S 14 11.1 +00.0	22						
23	231 42.8 +00.8	N 03 01.7 +00.7	238 09.1 +02.2	N 00 54.8 +00.2	275 23.2 +02.5	S 14 11.1 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 349° 349° 349° 349° 349° 348°		SHA 355° 355° 355° 355° 355° 355°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:33		Greenwich Culmination Time: 07:09		Greenwich Culmination Time: 04:41								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	180 09.2 -00.2	N 22 59.6 +00.2	215 38.6 -00.4	N 14 22.2 +00.9	60 30.5 -28.1	S 04 22.4 +15.2	00						
01	195 09.0 -00.1	N 22 59.8 +00.2	230 38.2 -00.4	N 14 23.1 +00.9	75 02.4 -28.2	S 04 37.6 +15.3	01						
02	210 08.9 -00.1	N 22 60.0 +00.2	245 37.8 -00.5	N 14 24.0 +00.8	89 34.2 -28.2	S 04 52.9 +15.3	02						
03	225 08.8 -00.1	N 23 00.2 +00.1	260 37.3 -00.4	N 14 24.8 +00.9	104 06.0 -28.4	S 05 08.2 +15.2	03						
04	240 08.7 -00.2	N 23 00.3 +00.2	275 36.9 -00.5	N 14 25.7 +00.9	118 37.6 -28.4	S 05 23.4 +15.3	04						
05	255 08.5 -00.1	N 23 00.5 +00.2	290 36.4 -00.4	N 14 26.6 +00.9	133 09.2 -28.4	S 05 38.7 +15.2	05						
06	270 08.4 -00.1	N 23 00.7 +00.2	305 36.0 -00.4	N 14 27.5 +00.9	147 40.8 -28.6	S 05 53.9 +15.3	06						
07	285 08.3 -00.1	N 23 00.9 +00.2	320 35.6 -00.5	N 14 28.4 +00.9	162 12.2 -28.6	S 06 09.2 +15.2	07						
08	300 08.2 -00.2	N 23 01.1 +00.2	335 35.1 -00.4	N 14 29.3 +00.9	176 43.6 -28.7	S 06 24.4 +15.2	08						
09	315 08.0 -00.1	N 23 01.3 +00.2	350 34.7 -00.5	N 14 30.2 +00.9	191 14.9 -28.8	S 06 39.6 +15.3	09						
10	330 07.9 -00.1	N 23 01.5 +00.2	5 34.2 -00.4	N 14 31.1 +00.9	205 46.1 -28.8	S 06 54.9 +15.2	10						
11	345 07.8 -00.1	N 23 01.7 +00.2	20 33.8 -00.4	N 14 32.0 +00.9	220 17.3 -29.0	S 07 10.1 +15.2	11						
12	0 07.7 -00.2	N 23 01.9 +00.1	35 33.4 -00.5	N 14 32.9 +00.9	234 48.3 -29.0	S 07 25.3 +15.1	12						
13	15 07.5 -00.1	N 23 02.0 +00.2	50 32.9 -00.4	N 14 33.8 +00.9	249 19.3 -29.1	S 07 40.4 +15.2	13						
14	30 07.4 -00.1	N 23 02.2 +00.2	65 32.5 -00.5	N 14 34.7 +00.9	263 50.2 -29.1	S 07 55.6 +15.2	14						
15	45 07.3 -00.1	N 23 02.4 +00.2	80 32.0 -00.4	N 14 35.6 +00.9	278 21.1 -29.3	S 08 10.8 +15.1	15						
16	60 07.2 -00.2	N 23 02.6 +00.2	95 31.6 -00.5	N 14 36.5 +00.8	292 51.8 -29.4	S 08 25.9 +15.1	16						
17	75 07.0 -00.1	N 23 02.8 +00.2	110 31.1 -00.4	N 14 37.3 +00.9	307 22.4 -29.4	S 08 41.0 +15.1	17						
18	90 06.9 -00.1	N 23 03.0 +00.1	125 30.7 -00.4	N 14 38.2 +00.9	321 53.0 -29.5	S 08 56.1 +15.0	18						
19	105 06.8 -00.1	N 23 03.1 +00.2	140 30.3 -00.5	N 14 39.1 +00.9	336 23.5 -29.6	S 09 11.1 +15.0	19						
20	120 06.7 -00.2	N 23 03.3 +00.2	155 29.8 -00.4	N 14 40.0 +00.9	350 53.9 -29.8	S 09 26.1 +15.0	20						
21	135 06.5 -00.1	N 23 03.5 +00.2	170 29.4 -00.5	N 14 40.9 +00.9	5 24.1 -29.8	S 09 41.1 +15.0	21						
22	150 06.4 -00.1	N 23 03.7 +00.2	185 28.9 -00.4	N 14 41.8 +00.9	19 54.3 -29.9	S 09 56.1 +15.0	22						
23	165 06.3 -00.1	N 23 03.9 +00.1	200 28.5 -00.5	N 14 42.7 +00.9	34 24.4 -29.9	S 10 11.1 +14.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'9 15'9 15'9 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 58'2 58'4 58'5 58'7 58'9 59'0								
	SHA 282° 282° 281° 281° 281° 281°		SHA 317° 317° 317° 317° 316° 316°		SHA 161° 159° 157° 155° 153° 151°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 09:37		Greenwich Culmination Time: 20:37								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	246 43.6 +00.8	N 03 02.4 +00.7	253 11.3 +02.1	N 00 55.0 +00.1	290 25.7 +02.5	S 14 11.1 +00.1	00						
01	261 44.4 +00.8	N 03 03.1 +00.7	268 13.4 +02.2	N 00 55.1 +00.1	305 28.2 +02.5	S 14 11.2 +00.0	01						
02	276 45.2 +00.7	N 03 03.8 +00.7	283 15.6 +02.1	N 00 55.2 +00.1	320 30.7 +02.5	S 14 11.2 +00.0	02						
03	291 45.9 +00.8	N 03 04.5 +00.7	298 17.7 +02.1	N 00 55.3 +00.2	335 33.2 +02.5	S 14 11.2 +00.0	03						
04	306 46.7 +00.8	N 03 05.2 +00.7	313 19.8 +02.2	N 00 55.5 +00.1	350 35.7 +02.4	S 14 11.2 +00.0	04						
05	321 47.5 +00.8	N 03 05.9 +00.7	328 22.0 +02.1	N 00 55.6 +00.1	5 38.1 +02.5	S 14 11.2 +00.0	05						
06	336 48.3 +00.7	N 03 06.6 +00.7	343 24.1 +02.2	N 00 55.7 +00.2	20 40.6 +02.5	S 14 11.2 +00.0	06						
07	351 49.0 +00.8	N 03 07.3 +00.7	358 26.3 +02.1	N 00 55.9 +00.1	35 43.1 +02.5	S 14 11.2 +00.1	07						
08	6 49.8 +00.8	N 03 08.0 +00.7	13 28.4 +02.2	N 00 56.0 +00.1	50 45.6 +02.5	S 14 11.3 +00.0	08						
09	21 50.6 +00.7	N 03 08.7 +00.7	28 30.6 +02.1	N 00 56.1 +00.1	65 48.1 +02.5	S 14 11.3 +00.0	09						
10	36 51.3 +00.8	N 03 09.4 +00.7	43 32.7 +02.1	N 00 56.2 +00.2	80 50.6 +02.4	S 14 11.3 +00.0	10						
11	51 52.1 +00.8	N 03 10.1 +00.7	58 34.8 +02.2	N 00 56.4 +00.1	95 53.0 +02.5	S 14 11.3 +00.0	11						
12	66 52.9 +00.8	N 03 10.8 +00.8	73 37.0 +02.1	N 00 56.5 +00.1	110 55.5 +02.5	S 14 11.3 +00.0	12						
13	81 53.7 +00.7	N 03 11.6 +00.7	88 39.1 +02.2	N 00 56.6 +00.2	125 58.0 +02.5	S 14 11.3 +00.0	13						
14	96 54.4 +00.8	N 03 12.3 +00.7	103 41.3 +02.1	N 00 56.8 +00.1	141 00.5 +02.5	S 14 11.3 +00.1	14						
15	111 55.2 +00.8	N 03 13.0 +00.7	118 43.4 +02.2	N 00 56.9 +00.1	156 03.0 +02.5	S 14 11.4 +00.0	15						
16	126 56.0 +00.8	N 03 13.7 +00.7	133 45.6 +02.1	N 00 57.0 +00.1	171 05.5 +02.4	S 14 11.4 +00.0	16						
17	141 56.8 +00.7	N 03 14.4 +00.7	148 47.7 +02.1	N 00 57.1 +00.2	186 07.9 +02.5	S 14 11.4 +00.0	17						
18	156 57.5 +00.8	N 03 15.1 +00.7	163 49.8 +02.2	N 00 57.3 +00.1	201 10.4 +02.5	S 14 11.4 +00.0	18						
19	171 58.3 +00.8	N 03 15.8 +00.7	178 52.0 +02.1	N 00 57.4 +00.1	216 12.9 +02.5	S 14 11.4 +00.0	19						
20	186 59.1 +00.8	N 03 16.5 +00.7	193 54.1 +02.2	N 00 57.5 +00.1	231 15.4 +02.5	S 14 11.4 +00.1	20						
21	201 59.9 +00.7	N 03 17.2 +00.7	208 56.3 +02.1	N 00 57.6 +00.2	246 17.9 +02.5	S 14 11.5 +00.0	21						
22	217 00.6 +00.8	N 03 17.9 +00.7	223 58.4 +02.2	N 00 57.8 +00.1	261 20.4 +02.4	S 14 11.5 +00.0	22						
23	232 01.4 +00.8	N 03 18.6 +00.7	239 00.6 +02.1	N 00 57.9 +00.1	276 22.8 +02.5	S 14 11.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 348° 348° 348° 348° 348° 348°		SHA 355° 355° 355° 355° 355° 355°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:32		Greenwich Culmination Time: 07:06		Greenwich Culmination Time: 04:37								

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 06.2 -00.2	N 23 04.0 +00.2	215 28.0 -00.4	N 14 43.6 +00.8	48 54.5 -30.1	S 10 26.0 +14.9	00						
01	195 06.0 -00.1	N 23 04.2 +00.2	230 27.6 -00.5	N 14 44.4 +00.9	63 24.4 -30.2	S 10 40.9 +14.8	01						
02	210 05.9 -00.1	N 23 04.4 +00.2	245 27.1 -00.4	N 14 45.3 +00.9	77 54.2 -30.3	S 10 55.7 +14.8	02						
03	225 05.8 -00.1	N 23 04.6 +00.2	260 26.7 -00.5	N 14 46.2 +00.9	92 23.9 -30.4	S 11 10.5 +14.8	03						
04	240 05.7 -00.2	N 23 04.8 +00.1	275 26.2 -00.4	N 14 47.1 +00.9	106 53.5 -30.5	S 11 25.3 +14.7	04						
05	255 05.5 -00.1	N 23 04.9 +00.2	290 25.8 -00.5	N 14 48.0 +00.9	121 23.0 -30.6	S 11 40.0 +14.7	05						
06	270 05.4 -00.1	N 23 05.1 +00.2	305 25.3 -00.4	N 14 48.9 +00.8	135 52.4 -30.7	S 11 54.7 +14.6	06						
07	285 05.3 -00.1	N 23 05.3 +00.1	320 24.9 -00.5	N 14 49.7 +00.9	150 21.7 -30.8	S 12 09.3 +14.6	07						
08	300 05.2 -00.2	N 23 05.4 +00.2	335 24.4 -00.4	N 14 50.6 +00.9	164 50.9 -30.9	S 12 23.9 +14.5	08						
09	315 05.0 -00.1	N 23 05.6 +00.2	350 24.0 -00.5	N 14 51.5 +00.9	179 20.0 -31.0	S 12 38.4 +14.5	09						
10	330 04.9 -00.1	N 23 05.8 +00.2	5 23.5 -00.4	N 14 52.4 +00.9	193 49.0 -31.2	S 12 52.9 +14.4	10						
11	345 04.8 -00.1	N 23 06.0 +00.1	20 23.1 -00.5	N 14 53.3 +00.8	208 17.8 -31.2	S 13 07.3 +14.4	11						
12	0 04.7 -00.2	N 23 06.1 +00.2	35 22.6 -00.4	N 14 54.1 +00.9	222 46.6 -31.4	S 13 21.7 +14.4	12						
13	15 04.5 -00.1	N 23 06.3 +00.2	50 22.2 -00.5	N 14 55.0 +00.9	237 15.2 -31.4	S 13 36.1 +14.2	13						
14	30 04.4 -00.1	N 23 06.5 +00.1	65 21.7 -00.4	N 14 55.9 +00.9	251 43.8 -31.6	S 13 50.3 +14.2	14						
15	45 04.3 -00.2	N 23 06.6 +00.2	80 21.3 -00.5	N 14 56.8 +00.8	266 12.2 -31.7	S 14 04.5 +14.2	15						
16	60 04.1 -00.1	N 23 06.8 +00.2	95 20.8 -00.4	N 14 57.6 +00.9	280 40.5 -31.8	S 14 18.7 +14.1	16						
17	75 04.0 -00.1	N 23 07.0 +00.1	110 20.4 -00.5	N 14 58.5 +00.9	295 08.7 -31.9	S 14 32.8 +14.0	17						
18	90 03.9 -00.1	N 23 07.1 +00.2	125 19.9 -00.5	N 14 59.4 +00.9	309 36.8 -32.1	S 14 46.8 +13.9	18						
19	105 03.8 -00.2	N 23 07.3 +00.2	140 19.4 -00.4	N 15 00.3 +00.8	324 04.7 -32.1	S 15 00.7 +13.9	19						
20	120 03.6 -00.1	N 23 07.5 +00.1	155 19.0 -00.5	N 15 01.1 +00.9	338 32.6 -32.3	S 15 14.6 +13.8	20						
21	135 03.5 -00.1	N 23 07.6 +00.2	170 18.5 -00.4	N 15 02.0 +00.9	353 00.3 -32.4	S 15 28.4 +13.8	21						
22	150 03.4 -00.1	N 23 07.8 +00.1	185 18.1 -00.5	N 15 02.9 +00.9	7 27.9 -32.5	S 15 42.2 +13.6	22						
23	165 03.3 -00.2	N 23 07.9 +00.2	200 17.6 -00.4	N 15 03.8 +00.8	21 55.4 -32.7	S 15 55.8 +13.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'8 15'8 15'8 15'8 15'8 15'8		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'2 16'2 16'2 16'3 16'3								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'2 59'3 59'5 59'6 59'8 59'9								
	SHA 281° 281° 280° 280° 280° 280°		SHA 316° 316° 316° 315° 315° 315°		SHA 149° 146° 144° 142° 140° 137°								
	Greenwich Culmination Time: 11:59		Greenwich Culmination Time: 09:38		Greenwich Culmination Time: 21:29								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 02.2 +00.7	N 03 19.3 +00.7	254 02.7 +02.1	N 00 58.0 +00.2	291 25.3 +02.5	S 14 11.5 +00.0	00						
01	262 02.9 +00.8	N 03 20.0 +00.7	269 04.8 +02.2	N 00 58.2 +00.1	306 27.8 +02.5	S 14 11.5 +00.0	01						
02	277 03.7 +00.8	N 03 20.7 +00.7	284 07.0 +02.1	N 00 58.3 +00.1	321 30.3 +02.5	S 14 11.5 +00.0	02						
03	292 04.5 +00.8	N 03 21.4 +00.7	299 09.1 +02.2	N 00 58.4 +00.1	336 32.8 +02.5	S 14 11.5 +00.1	03						
04	307 05.3 +00.7	N 03 22.1 +00.7	314 11.3 +02.1	N 00 58.5 +00.2	351 35.3 +02.5	S 14 11.6 +00.0	04						
05	322 06.0 +00.8	N 03 22.8 +00.7	329 13.4 +02.2	N 00 58.7 +00.1	6 37.8 +02.4	S 14 11.6 +00.0	05						
06	337 06.8 +00.8	N 03 23.5 +00.7	344 15.6 +02.1	N 00 58.8 +00.1	21 40.2 +02.5	S 14 11.6 +00.0	06						
07	352 07.6 +00.8	N 03 24.2 +00.7	359 17.7 +02.2	N 00 58.9 +00.1	36 42.7 +02.5	S 14 11.6 +00.0	07						
08	7 08.4 +00.7	N 03 24.9 +00.7	14 19.9 +02.1	N 00 59.0 +00.2	51 45.2 +02.5	S 14 11.6 +00.0	08						
09	22 09.1 +00.8	N 03 25.6 +00.7	29 22.0 +02.2	N 00 59.2 +00.1	66 47.7 +02.5	S 14 11.6 +00.1	09						
10	37 09.9 +00.8	N 03 26.3 +00.7	44 24.2 +02.1	N 00 59.3 +00.1	81 50.2 +02.5	S 14 11.7 +00.0	10						
11	52 10.7 +00.8	N 03 27.0 +00.7	59 26.3 +02.2	N 00 59.4 +00.1	96 52.7 +02.5	S 14 11.7 +00.0	11						
12	67 11.5 +00.7	N 03 27.7 +00.7	74 28.5 +02.1	N 00 59.5 +00.2	111 55.2 +02.5	S 14 11.7 +00.0	12						
13	82 12.2 +00.8	N 03 28.4 +00.7	89 30.6 +02.2	N 00 59.7 +00.1	126 57.7 +02.4	S 14 11.7 +00.0	13						
14	97 13.0 +00.8	N 03 29.1 +00.7	104 32.8 +02.1	N 00 59.8 +00.1	142 00.1 +02.5	S 14 11.7 +00.0	14						
15	112 13.8 +00.8	N 03 29.8 +00.8	119 34.9 +02.1	N 00 59.9 +00.1	157 02.6 +02.5	S 14 11.7 +00.1	15						
16	127 14.6 +00.7	N 03 30.6 +00.7	134 37.0 +02.2	N 01 00.0 +00.2	172 05.1 +02.5	S 14 11.8 +00.0	16						
17	142 15.3 +00.8	N 03 31.3 +00.7	149 39.2 +02.1	N 01 00.2 +00.1	187 07.6 +02.5	S 14 11.8 +00.0	17						
18	157 16.1 +00.8	N 03 32.0 +00.7	164 41.3 +02.2	N 01 00.3 +00.1	202 10.1 +02.5	S 14 11.8 +00.0	18						
19	172 16.9 +00.8	N 03 32.7 +00.7	179 43.5 +02.1	N 01 00.4 +00.1	217 12.6 +02.5	S 14 11.8 +00.0	19						
20	187 17.7 +00.7	N 03 33.4 +00.7	194 45.6 +02.2	N 01 00.5 +00.2	232 15.1 +02.5	S 14 11.8 +00.0	20						
21	202 18.4 +00.8	N 03 34.1 +00.7	209 47.8 +02.1	N 01 00.7 +00.1	247 17.6 +02.5	S 14 11.8 +00.1	21						
22	217 19.2 +00.8	N 03 34.8 +00.7	224 49.9 +02.2	N 01 00.8 +00.1	262 20.1 +02.4	S 14 11.9 +00.0	22						
23	232 20.0 +00.8	N 03 35.5 +00.7	239 52.1 +02.1	N 01 00.9 +00.1	277 22.5 +02.5	S 14 11.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 348° 348° 347° 347° 347° 347°		SHA 355° 355° 355° 355° 355° 355°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:31		Greenwich Culmination Time: 07:02		Greenwich Culmination Time: 04:33								



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 03.1 -00.1	N 23	08.1 +00.2	215 17.2 -00.5	N 15	04.6 +00.9	36 22.7 -32.8	S 16	09.4 +13.5	00			
01	195 03.0 -00.1	N 23	08.3 +00.1	230 16.7 -00.5	N 15	05.5 +00.9	50 49.9 -32.8	S 16	22.9 +13.4	01			
02	210 02.9 -00.2	N 23	08.4 +00.2	245 16.2 -00.4	N 15	06.4 +00.9	65 17.1 -33.1	S 16	36.3 +13.4	02			
03	225 02.7 -00.1	N 23	08.6 +00.1	260 15.8 -00.5	N 15	07.3 +00.8	79 44.0 -33.1	S 16	49.7 +13.2	03			
04	240 02.6 -00.1	N 23	08.7 +00.2	275 15.3 -00.4	N 15	08.1 +00.9	94 10.9 -33.3	S 17	02.9 +13.2	04			
05	255 02.5 -00.1	N 23	08.9 +00.2	290 14.9 -00.5	N 15	09.0 +00.9	108 37.6 -33.3	S 17	16.1 +13.1	05			
06	270 02.4 -00.2	N 23	09.1 +00.1	305 14.4 -00.5	N 15	09.9 +00.8	123 04.3 -33.6	S 17	29.2 +12.9	06			
07	285 02.2 -00.1	N 23	09.2 +00.2	320 13.9 -00.4	N 15	10.7 +00.9	137 30.7 -33.6	S 17	42.1 +12.9	07			
08	300 02.1 -00.1	N 23	09.4 +00.1	335 13.5 -00.5	N 15	11.6 +00.9	151 57.1 -33.8	S 17	55.0 +12.8	08			
09	315 02.0 -00.2	N 23	09.5 +00.2	350 13.0 -00.4	N 15	12.5 +00.8	166 23.3 -33.9	S 18	07.8 +12.7	09			
10	330 01.8 -00.1	N 23	09.7 +00.1	5 12.6 -00.5	N 15	13.3 +00.9	180 49.4 -34.0	S 18	20.5 +12.6	10			
11	345 01.7 -00.1	N 23	09.8 +00.2	20 12.1 -00.5	N 15	14.2 +00.9	195 15.4 -34.2	S 18	33.1 +12.4	11			
12	0 01.6 -00.1	N 23	10.0 +00.1	35 11.6 -00.4	N 15	15.1 +00.8	209 41.2 -34.2	S 18	45.5 +12.4	12			
13	15 01.5 -00.2	N 23	10.1 +00.2	50 11.2 -00.5	N 15	15.9 +00.9	224 07.0 -34.5	S 18	57.9 +12.3	13			
14	30 01.3 -00.1	N 23	10.3 +00.1	65 10.7 -00.5	N 15	16.8 +00.9	238 32.5 -34.5	S 19	10.2 +12.1	14			
15	45 01.2 -00.1	N 23	10.4 +00.2	80 10.2 -00.4	N 15	17.7 +00.8	252 58.0 -34.7	S 19	22.3 +12.1	15			
16	60 01.1 -00.2	N 23	10.6 +00.1	95 09.8 -00.5	N 15	18.5 +00.9	267 23.3 -34.8	S 19	34.4 +11.9	16			
17	75 00.9 -00.1	N 23	10.7 +00.2	110 09.3 -00.5	N 15	19.4 +00.8	281 48.5 -34.9	S 19	46.3 +11.8	17			
18	90 00.8 -00.1	N 23	10.9 +00.1	125 08.8 -00.4	N 15	20.2 +00.9	296 13.6 -35.1	S 19	58.1 +11.7	18			
19	105 00.7 -00.1	N 23	11.0 +00.2	140 08.4 -00.5	N 15	21.1 +00.9	310 38.5 -35.2	S 20	09.8 +11.6	19			
20	120 00.6 -00.2	N 23	11.2 +00.1	155 07.9 -00.5	N 15	22.0 +00.8	325 03.3 -35.3	S 20	21.4 +11.4	20			
21	135 00.4 -00.1	N 23	11.3 +00.2	170 07.4 -00.4	N 15	22.8 +00.9	339 28.0 -35.4	S 20	32.8 +11.3	21			
22	150 00.3 -00.1	N 23	11.5 +00.1	185 07.0 -00.5	N 15	23.7 +00.8	353 52.6 -35.6	S 20	44.1 +11.2	22			
23	165 00.2 -00.2	N 23	11.6 +00.2	200 06.5 -00.5	N 15	24.5 +00.9	8 17.0 -35.7	S 20	55.3 +11.1	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 15'8 15'8 15'8 15'8 15'8 15'8			SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 16'4 16'4 16'4 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 60'0 60'2 60'3 60'4 60'5 60'6						
	SHA 280° 279° 279° 279° 279° 279°			SHA 315° 315° 314° 314° 314° 314°			SHA 135° 133° 130° 128° 125° 123°						
	Greenwich Culmination Time: 11:59			Greenwich Culmination Time: 09:39			Greenwich Culmination Time: 22:25						

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 20.8 +00.7	N 03	36.2 +00.7	254 54.2 +02.2	N 01	01.0 +00.2	292 25.0 +02.5	S 14	11.9 +00.0	00			
01	262 21.5 +00.8	N 03	36.9 +00.7	269 56.4 +02.1	N 01	01.2 +00.1	307 27.5 +02.5	S 14	11.9 +00.0	01			
02	277 22.3 +00.8	N 03	37.6 +00.7	284 58.5 +02.2	N 01	01.3 +00.1	322 30.0 +02.5	S 14	11.9 +00.0	02			
03	292 23.1 +00.8	N 03	38.3 +00.7	300 00.7 +02.1	N 01	01.4 +00.1	337 32.5 +02.5	S 14	11.9 +00.1	03			
04	307 23.9 +00.7	N 03	39.0 +00.7	315 02.8 +02.2	N 01	01.5 +00.2	352 35.0 +02.5	S 14	12.0 +00.0	04			
05	322 24.6 +00.8	N 03	39.7 +00.7	330 05.0 +02.1	N 01	01.7 +00.1	7 37.5 +02.5	S 14	12.0 +00.0	05			
06	337 25.4 +00.8	N 03	40.4 +00.7	345 07.1 +02.2	N 01	01.8 +00.1	22 40.0 +02.5	S 14	12.0 +00.0	06			
07	352 26.2 +00.8	N 03	41.1 +00.7	0 09.3 +02.1	N 01	01.9 +00.1	37 42.5 +02.5	S 14	12.0 +00.0	07			
08	7 27.0 +00.7	N 03	41.8 +00.7	15 11.4 +02.2	N 01	02.0 +00.2	52 45.0 +02.4	S 14	12.0 +00.0	08			
09	22 27.7 +00.8	N 03	42.5 +00.7	30 13.6 +02.1	N 01	02.2 +00.1	67 47.4 +02.5	S 14	12.0 +00.1	09			
10	37 28.5 +00.8	N 03	43.2 +00.7	45 15.7 +02.2	N 01	02.3 +00.1	82 49.9 +02.5	S 14	12.1 +00.0	10			
11	52 29.3 +00.8	N 03	43.9 +00.7	60 17.9 +02.2	N 01	02.4 +00.1	97 52.4 +02.5	S 14	12.1 +00.0	11			
12	67 30.1 +00.7	N 03	44.6 +00.7	75 20.1 +02.1	N 01	02.5 +00.1	112 54.9 +02.5	S 14	12.1 +00.0	12			
13	82 30.8 +00.8	N 03	45.3 +00.7	90 22.2 +02.2	N 01	02.6 +00.2	127 57.4 +02.5	S 14	12.1 +00.0	13			
14	97 31.6 +00.8	N 03	46.0 +00.7	105 24.4 +02.1	N 01	02.8 +00.1	142 59.9 +02.5	S 14	12.1 +00.1	14			
15	112 32.4 +00.8	N 03	46.7 +00.7	120 26.5 +02.2	N 01	02.9 +00.1	158 02.4 +02.5	S 14	12.2 +00.0	15			
16	127 33.2 +00.7	N 03	47.4 +00.7	135 28.7 +02.1	N 01	03.0 +00.1	173 04.9 +02.5	S 14	12.2 +00.0	16			
17	142 33.9 +00.8	N 03	48.1 +00.7	150 30.8 +02.2	N 01	03.1 +00.2	188 07.4 +02.5	S 14	12.2 +00.0	17			
18	157 34.7 +00.8	N 03	48.8 +00.7	165 33.0 +02.1	N 01	03.3 +00.1	203 09.9 +02.5	S 14	12.2 +00.0	18			
19	172 35.5 +00.8	N 03	49.5 +00.7	180 35.1 +02.2	N 01	03.4 +00.1	218 12.4 +02.5	S 14	12.2 +00.0	19			
20	187 36.3 +00.7	N 03	50.2 +00.7	195 37.3 +02.1	N 01	03.5 +00.1	233 14.9 +02.4	S 14	12.2 +00.1	20			
21	202 37.0 +00.8	N 03	50.9 +00.7	210 39.4 +02.2	N 01	03.6 +00.2	248 17.3 +02.5	S 14	12.3 +00.0	21			
22	217 37.8 +00.8	N 03	51.6 +00.7	225 41.6 +02.1	N 01	03.8 +00.1	263 19.8 +02.5	S 14	12.3 +00.0	22			
23	232 38.6 +00.8	N 03	52.3 +00.7	240 43.7 +02.2	N 01	03.9 +00.1	278 22.3 +02.5	S 14	12.3 +00.0	23			
	UT 02 06 10 14 18 22			UT 02 06 10 14 18 22			UT 02 06 10 14 18 22						
	SD 00'1 00'1 00'1 00'1 00'1 00'1			SD 00'3 00'3 00'3 00'3 00'3 00'3			SD 00'1 00'1 00'1 00'1 00'1 00'1						
	HP 00'1 00'1 00'1 00'1 00'1 00'1			HP 00'0 00'0 00'0 00'0 00'0 00'0			HP 00'0 00'0 00'0 00'0 00'0 00'0						
	SHA 347° 347° 347° 347° 347° 346°			SHA 355° 355° 355° 355° 355° 354°			SHA 032° 032° 032° 032° 032° 032°						
	Greenwich Culmination Time: 07:30			Greenwich Culmination Time: 06:59			Greenwich Culmination Time: 04:29						

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 00.0 -00.1	N 23 11.8 +00.1			215 06.0 -00.4	N 15 25.4 +00.9			22 41.3 -35.8	S 21 06.4 +10.9			00
01	194 59.9 -00.1	N 23 11.9 +00.1			230 05.6 -00.5	N 15 26.3 +00.8			37 05.5 -36.0	S 21 17.3 +10.8			01
02	209 59.8 -00.1	N 23 12.0 +00.2			245 05.1 -00.5	N 15 27.1 +00.9			51 29.5 -36.1	S 21 28.1 +10.6			02
03	224 59.7 -00.2	N 23 12.2 +00.1			260 04.6 -00.5	N 15 28.0 +00.8			65 53.4 -36.2	S 21 38.7 +10.5			03
04	239 59.5 -00.1	N 23 12.3 +00.2			275 04.1 -00.4	N 15 28.8 +00.9			80 17.2 -36.3	S 21 49.2 +10.4			04
05	254 59.4 -00.1	N 23 12.5 +00.1			290 03.7 -00.5	N 15 29.7 +00.8			94 40.9 -36.5	S 21 59.6 +10.2			05
06	269 59.3 -00.2	N 23 12.6 +00.2			305 03.2 -00.5	N 15 30.5 +00.9			109 04.4 -36.6	S 22 09.8 +10.1			06
07	284 59.1 -00.1	N 23 12.8 +00.1			320 02.7 -00.4	N 15 31.4 +00.8			123 27.8 -36.7	S 22 19.9 +09.9			07
08	299 59.0 -00.1	N 23 12.9 +00.1			335 02.3 -00.5	N 15 32.2 +00.9			137 51.1 -36.8	S 22 29.8 +09.8			08
09	314 58.9 -00.2	N 23 13.0 +00.2			350 01.8 -00.5	N 15 33.1 +00.9			152 14.3 -37.0	S 22 39.6 +09.6			09
10	329 58.7 -00.1	N 23 13.2 +00.1			5 01.3 -00.5	N 15 34.0 +00.8			166 37.3 -37.1	S 22 49.2 +09.5			10
11	344 58.6 -00.1	N 23 13.3 +00.1			20 00.8 -00.4	N 15 34.8 +00.9			181 00.2 -37.2	S 22 58.7 +09.3			11
12	359 58.5 -00.1	N 23 13.4 +00.2			35 00.4 -00.5	N 15 35.7 +00.8			195 23.0 -37.3	S 23 08.0 +09.1			12
13	14 58.4 -00.2	N 23 13.6 +00.1			49 59.9 -00.5	N 15 36.5 +00.9			209 45.7 -37.4	S 23 17.1 +09.0			13
14	29 58.2 -00.1	N 23 13.7 +00.1			64 59.4 -00.5	N 15 37.4 +00.8			224 08.3 -37.6	S 23 26.1 +08.8			14
15	44 58.1 -00.1	N 23 13.8 +00.2			79 58.9 -00.4	N 15 38.2 +00.9			238 30.7 -37.6	S 23 34.9 +08.7			15
16	59 58.0 -00.2	N 23 14.0 +00.1			94 58.5 -00.5	N 15 39.1 +00.8			252 53.1 -37.8	S 23 43.6 +08.5			16
17	74 57.8 -00.1	N 23 14.1 +00.1			109 58.0 -00.5	N 15 39.9 +00.9			267 15.3 -37.9	S 23 52.1 +08.3			17
18	89 57.7 -00.1	N 23 14.2 +00.2			124 57.5 -00.5	N 15 40.8 +00.8			281 37.4 -38.0	S 24 00.4 +08.1			18
19	104 57.6 -00.2	N 23 14.4 +00.1			139 57.0 -00.5	N 15 41.6 +00.9			295 59.4 -38.1	S 24 08.5 +08.0			19
20	119 57.4 -00.1	N 23 14.5 +00.1			154 56.5 -00.4	N 15 42.5 +00.8			310 21.3 -38.2	S 24 16.5 +07.8			20
21	134 57.3 -00.1	N 23 14.6 +00.2			169 56.1 -00.5	N 15 43.3 +00.8			324 43.1 -38.3	S 24 24.3 +07.6			21
22	149 57.2 -00.2	N 23 14.8 +00.1			184 55.6 -00.5	N 15 44.1 +00.9			339 04.8 -38.4	S 24 31.9 +07.5			22
23	164 57.0 -00.1	N 23 14.9 +00.1			199 55.1 -00.5	N 15 45.0 +00.8			353 26.4 -38.5	S 24 39.4 +07.2			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 15'8 15'7 15'7 15'7 15'7 15'7				SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 16'5 16'6 16'6 16'6 16'6 16'7				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 60'7 60'8 60'9 61'0 61'1 61'1				
	SHA 279° 278° 278° 278° 278° 278°				SHA 314° 314° 313° 313° 313° 313°				SHA 120° 118° 115° 112° 110° 107°				
	Greenwich Culmination Time: 12:00				Greenwich Culmination Time: 09:39				Greenwich Culmination Time: 23:27				

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 39.4 +00.7	N 03 53.0 +00.7			255 45.9 +02.2	N 01 04.0 +00.1			293 24.8 +02.5	S 14 12.3 +00.0			00
01	262 40.1 +00.8	N 03 53.7 +00.7			270 48.1 +02.1	N 01 04.1 +00.1			308 27.3 +02.5	S 14 12.3 +00.1			01
02	277 40.9 +00.8	N 03 54.4 +00.7			285 50.2 +02.2	N 01 04.2 +00.2			323 29.8 +02.5	S 14 12.4 +00.0			02
03	292 41.7 +00.8	N 03 55.1 +00.7			300 52.4 +02.1	N 01 04.4 +00.1			338 32.3 +02.5	S 14 12.4 +00.0			03
04	307 42.5 +00.7	N 03 55.8 +00.7			315 54.5 +02.2	N 01 04.5 +00.1			353 34.8 +02.5	S 14 12.4 +00.0			04
05	322 43.2 +00.8	N 03 56.5 +00.7			330 56.7 +02.1	N 01 04.6 +00.1			8 37.3 +02.5	S 14 12.4 +00.0			05
06	337 44.0 +00.8	N 03 57.2 +00.7			345 58.8 +02.2	N 01 04.7 +00.1			23 39.8 +02.5	S 14 12.4 +00.0			06
07	352 44.8 +00.8	N 03 57.9 +00.7			1 01.0 +02.1	N 01 04.8 +00.2			38 42.3 +02.5	S 14 12.4 +00.1			07
08	7 45.6 +00.7	N 03 58.6 +00.7			16 03.1 +02.2	N 01 05.0 +00.1			53 44.8 +02.5	S 14 12.5 +00.0			08
09	22 46.3 +00.8	N 03 59.3 +00.7			31 05.3 +02.2	N 01 05.1 +00.1			68 47.3 +02.5	S 14 12.5 +00.0			09
10	37 47.1 +00.8	N 03 60.0 +00.7			46 07.5 +02.1	N 01 05.2 +00.1			83 49.8 +02.5	S 14 12.5 +00.0			10
11	52 47.9 +00.8	N 04 00.7 +00.7			61 09.6 +02.2	N 01 05.3 +00.2			98 52.3 +02.5	S 14 12.5 +00.0			11
12	67 48.7 +00.7	N 04 01.4 +00.7			76 11.8 +02.1	N 01 05.5 +00.1			113 54.8 +02.4	S 14 12.5 +00.1			12
13	82 49.4 +00.8	N 04 02.1 +00.7			91 13.9 +02.2	N 01 05.6 +00.1			128 57.2 +02.5	S 14 12.6 +00.0			13
14	97 50.2 +00.8	N 04 02.8 +00.6			106 16.1 +02.2	N 01 05.7 +00.1			143 59.7 +02.5	S 14 12.6 +00.0			14
15	112 51.0 +00.8	N 04 03.4 +00.7			121 18.3 +02.1	N 01 05.8 +00.1			159 02.2 +02.5	S 14 12.6 +00.0			15
16	127 51.8 +00.8	N 04 04.1 +00.7			136 20.4 +02.2	N 01 05.9 +00.2			174 04.7 +02.5	S 14 12.6 +00.0			16
17	142 52.6 +00.7	N 04 04.8 +00.7			151 22.6 +02.1	N 01 06.1 +00.1			189 07.2 +02.5	S 14 12.6 +00.1			17
18	157 53.3 +00.8	N 04 05.5 +00.7			166 24.7 +02.2	N 01 06.2 +00.1			204 09.7 +02.5	S 14 12.7 +00.0			18
19	172 54.1 +00.8	N 04 06.2 +00.7			181 26.9 +02.1	N 01 06.3 +00.1			219 12.2 +02.5	S 14 12.7 +00.0			19
20	187 54.9 +00.8	N 04 06.9 +00.7			196 29.0 +02.2	N 01 06.4 +00.1			234 14.7 +02.5	S 14 12.7 +00.0			20
21	202 55.7 +00.7	N 04 07.6 +00.7			211 31.2 +02.2	N 01 06.5 +00.2			249 17.2 +02.5	S 14 12.7 +00.0			21
22	217 56.4 +00.8	N 04 08.3 +00.7			226 33.4 +02.1	N 01 06.7 +00.1			264 19.7 +02.5	S 14 12.7 +00.0			22
23	232 57.2 +00.8	N 04 09.0 +00.7			241 35.5 +02.2	N 01 06.8 +00.1			279 22.2 +02.5	S 14 12.7 +00.1			23
	UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				UT 02 06 10 14 18 22				
	SD 00'1 00'1 00'1 00'1 00'1 00'1				SD 00'3 00'3 00'3 00'3 00'3 00'3				SD 00'1 00'1 00'1 00'1 00'1 00'1				
	HP 00'1 00'1 00'1 00'1 00'1 00'1				HP 00'0 00'0 00'0 00'0 00'0 00'0				HP 00'0 00'0 00'0 00'0 00'0 00'0				
	SHA 346° 346° 346° 346° 346° 346°				SHA 354° 354° 354° 354° 354° 354°				SHA 032° 032° 032° 032° 032° 032°				
	Greenwich Culmination Time: 07:28				Greenwich Culmination Time: 06:55				Greenwich Culmination Time: 04:25				

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 56.9 -00.1	N 23 15.0 +00.1	214 54.6 -00.5	N 15 45.8 +00.9	7 47.9 -38.6	S 24 46.6 +07.1	00						
01	194 56.8 -00.1	N 23 15.1 +00.2	229 54.1 -00.4	N 15 46.7 +00.8	22 09.3 -38.7	S 24 53.7 +06.9	01						
02	209 56.7 -00.2	N 23 15.3 +00.1	244 53.7 -00.5	N 15 47.5 +00.9	36 30.6 -38.8	S 25 00.6 +06.7	02						
03	224 56.5 -00.1	N 23 15.4 +00.1	259 53.2 -00.5	N 15 48.4 +00.8	50 51.8 -38.9	S 25 07.3 +06.5	03						
04	239 56.4 -00.1	N 23 15.5 +00.1	274 52.7 -00.5	N 15 49.2 +00.8	65 12.9 -39.0	S 25 13.8 +06.3	04						
05	254 56.3 -00.2	N 23 15.6 +00.2	289 52.2 -00.5	N 15 50.0 +00.9	79 33.9 -39.0	S 25 20.1 +06.2	05						
06	269 56.1 -00.1	N 23 15.8 +00.1	304 51.7 -00.5	N 15 50.9 +00.8	93 54.9 -39.2	S 25 26.3 +05.9	06						
07	284 56.0 -00.1	N 23 15.9 +00.1	319 51.2 -00.4	N 15 51.7 +00.9	108 15.7 -39.2	S 25 32.2 +05.7	07						
08	299 55.9 -00.2	N 23 16.0 +00.1	334 50.8 -00.5	N 15 52.6 +00.8	122 36.5 -39.3	S 25 37.9 +05.6	08						
09	314 55.7 -00.1	N 23 16.1 +00.1	349 50.3 -00.5	N 15 53.4 +00.8	136 57.2 -39.4	S 25 43.5 +05.3	09						
10	329 55.6 -00.1	N 23 16.2 +00.2	4 49.8 -00.5	N 15 54.2 +00.9	151 17.8 -39.4	S 25 48.8 +05.2	10						
11	344 55.5 -00.2	N 23 16.4 +00.1	19 49.3 -00.5	N 15 55.1 +00.8	165 38.4 -39.5	S 25 54.0 +04.9	11						
12	359 55.3 -00.1	N 23 16.5 +00.1	34 48.8 -00.5	N 15 55.9 +00.9	179 58.9 -39.6	S 25 58.9 +04.8	12						
13	14 55.2 -00.1	N 23 16.6 +00.1	49 48.3 -00.5	N 15 56.8 +00.8	194 19.3 -39.7	S 26 03.7 +04.5	13						
14	29 55.1 -00.2	N 23 16.7 +00.1	64 47.8 -00.4	N 15 57.6 +00.8	208 39.6 -39.7	S 26 08.2 +04.4	14						
15	44 54.9 -00.1	N 23 16.8 +00.1	79 47.4 -00.5	N 15 58.4 +00.9	222 59.9 -39.7	S 26 12.6 +04.1	15						
16	59 54.8 -00.1	N 23 16.9 +00.2	94 46.9 -00.5	N 15 59.3 +00.8	237 20.2 -39.9	S 26 16.7 +04.0	16						
17	74 54.7 -00.1	N 23 17.1 +00.1	109 46.4 -00.5	N 16 00.1 +00.8	251 40.3 -39.8	S 26 20.7 +03.7	17						
18	89 54.6 -00.2	N 23 17.2 +00.1	124 45.9 -00.5	N 16 00.9 +00.9	266 00.5 -40.0	S 26 24.4 +03.5	18						
19	104 54.4 -00.1	N 23 17.3 +00.1	139 45.4 -00.5	N 16 01.8 +00.8	280 20.5 -39.9	S 26 27.9 +03.3	19						
20	119 54.3 -00.1	N 23 17.4 +00.1	154 44.9 -00.5	N 16 02.6 +00.8	294 40.6 -40.0	S 26 31.2 +03.1	20						
21	134 54.2 -00.2	N 23 17.5 +00.1	169 44.4 -00.5	N 16 03.4 +00.9	309 00.6 -40.1	S 26 34.3 +02.9	21						
22	149 54.0 -00.1	N 23 17.6 +00.1	184 43.9 -00.5	N 16 04.3 +00.8	323 20.5 -40.1	S 26 37.2 +02.7	22						
23	164 53.9 -00.1	N 23 17.7 +00.1	199 43.4 -00.5	N 16 05.1 +00.8	337 40.4 -40.1	S 26 39.9 +02.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'2 61'2 61'3 61'3 61'3 61'3								
	SHA 278° 277° 277° 277° 277° 277°		SHA 313° 312° 312° 312° 312° 312°		SHA 104° 101° 099° 096° 093° 090°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:40		Greenwich Culmination Time: -1:00								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	247 58.0 +00.8	N 04 09.7 +00.7	256 37.7 +02.1	N 01 06.9 +00.1	294 24.7 +02.5	S 14 12.8 +00.0	00						
01	262 58.8 +00.7	N 04 10.4 +00.7	271 39.8 +02.2	N 01 07.0 +00.1	309 27.2 +02.5	S 14 12.8 +00.0	01						
02	277 59.5 +00.8	N 04 11.1 +00.7	286 42.0 +02.2	N 01 07.1 +00.2	324 29.7 +02.5	S 14 12.8 +00.0	02						
03	293 00.3 +00.8	N 04 11.8 +00.7	301 44.2 +02.1	N 01 07.3 +00.1	339 32.2 +02.5	S 14 12.8 +00.0	03						
04	308 01.1 +00.8	N 04 12.5 +00.7	316 46.3 +02.2	N 01 07.4 +00.1	354 34.7 +02.5	S 14 12.8 +00.1	04						
05	323 01.9 +00.8	N 04 13.2 +00.7	331 48.5 +02.2	N 01 07.5 +00.1	9 37.2 +02.5	S 14 12.9 +00.0	05						
06	338 02.7 +00.7	N 04 13.9 +00.7	346 50.7 +02.1	N 01 07.6 +00.1	24 39.7 +02.5	S 14 12.9 +00.0	06						
07	353 03.4 +00.8	N 04 14.6 +00.7	1 52.8 +02.2	N 01 07.7 +00.2	39 42.2 +02.5	S 14 12.9 +00.0	07						
08	8 04.2 +00.8	N 04 15.3 +00.7	16 55.0 +02.1	N 01 07.9 +00.1	54 44.7 +02.5	S 14 12.9 +00.0	08						
09	23 05.0 +00.8	N 04 16.0 +00.7	31 57.1 +02.2	N 01 08.0 +00.1	69 47.2 +02.5	S 14 12.9 +00.1	09						
10	38 05.8 +00.7	N 04 16.7 +00.7	46 59.3 +02.2	N 01 08.1 +00.1	84 49.7 +02.5	S 14 13.0 +00.0	10						
11	53 06.5 +00.8	N 04 17.4 +00.7	62 01.5 +02.1	N 01 08.2 +00.1	99 52.2 +02.5	S 14 13.0 +00.0	11						
12	68 07.3 +00.8	N 04 18.1 +00.7	77 03.6 +02.2	N 01 08.3 +00.1	114 54.7 +02.5	S 14 13.0 +00.0	12						
13	83 08.1 +00.8	N 04 18.8 +00.7	92 05.8 +02.2	N 01 08.4 +00.2	129 57.2 +02.5	S 14 13.0 +00.0	13						
14	98 08.9 +00.7	N 04 19.5 +00.7	107 08.0 +02.1	N 01 08.6 +00.1	144 59.7 +02.5	S 14 13.0 +00.1	14						
15	113 09.6 +00.8	N 04 20.2 +00.7	122 10.1 +02.2	N 01 08.7 +00.1	160 02.2 +02.5	S 14 13.1 +00.0	15						
16	128 10.4 +00.8	N 04 20.9 +00.6	137 12.3 +02.1	N 01 08.8 +00.1	175 04.7 +02.5	S 14 13.1 +00.0	16						
17	143 11.2 +00.8	N 04 21.5 +00.7	152 14.4 +02.2	N 01 08.9 +00.1	190 07.2 +02.5	S 14 13.1 +00.0	17						
18	158 12.0 +00.8	N 04 22.2 +00.7	167 16.6 +02.2	N 01 09.0 +00.2	205 09.7 +02.5	S 14 13.1 +00.1	18						
19	173 12.8 +00.7	N 04 22.9 +00.7	182 18.8 +02.1	N 01 09.2 +00.1	220 12.2 +02.5	S 14 13.2 +00.0	19						
20	188 13.5 +00.8	N 04 23.6 +00.7	197 20.9 +02.2	N 01 09.3 +00.1	235 14.7 +02.5	S 14 13.2 +00.0	20						
21	203 14.3 +00.8	N 04 24.3 +00.7	212 23.1 +02.2	N 01 09.4 +00.1	250 17.2 +02.5	S 14 13.2 +00.0	21						
22	218 15.1 +00.8	N 04 25.0 +00.7	227 25.3 +02.1	N 01 09.5 +00.1	265 19.7 +02.5	S 14 13.2 +00.0	22						
23	233 15.9 +00.7	N 04 25.7 +00.7	242 27.4 +02.2	N 01 09.6 +00.1	280 22.2 +02.5	S 14 13.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 346° 346° 345° 345° 345° 345°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:27		Greenwich Culmination Time: 06:52		Greenwich Culmination Time: 04:21								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 53.8 -00.2	N 23 17.8 +00.2	214 42.9 -00.5	N 16 05.9 +00.8	352 00.3 -40.1	S 26 42.3 +02.3	00						
01	194 53.6 -00.1	N 23 18.0 +00.1	229 42.4 -00.4	N 16 06.7 +00.9	6 20.2 -40.2	S 26 44.6 +02.0	01						
02	209 53.5 -00.1	N 23 18.1 +00.1	244 42.0 -00.5	N 16 07.6 +00.8	20 40.0 -40.2	S 26 46.6 +01.9	02						
03	224 53.4 -00.2	N 23 18.2 +00.1	259 41.5 -00.5	N 16 08.4 +00.8	34 59.8 -40.2	S 26 48.5 +01.6	03						
04	239 53.2 -00.1	N 23 18.3 +00.1	274 41.0 -00.5	N 16 09.2 +00.9	49 19.6 -40.2	S 26 50.1 +01.4	04						
05	254 53.1 -00.1	N 23 18.4 +00.1	289 40.5 -00.5	N 16 10.1 +00.8	63 39.4 -40.3	S 26 51.5 +01.2	05						
06	269 53.0 -00.2	N 23 18.5 +00.1	304 40.0 -00.5	N 16 10.9 +00.8	77 59.1 -40.2	S 26 52.7 +00.9	06						
07	284 52.8 -00.1	N 23 18.6 +00.1	319 39.5 -00.5	N 16 11.7 +00.8	92 18.9 -40.2	S 26 53.6 +00.8	07						
08	299 52.7 -00.1	N 23 18.7 +00.1	334 39.0 -00.5	N 16 12.5 +00.9	106 38.7 -40.3	S 26 54.4 +00.5	08						
09	314 52.6 -00.2	N 23 18.8 +00.1	349 38.5 -00.5	N 16 13.4 +00.8	120 58.4 -40.2	S 26 54.9 +00.4	09						
10	329 52.4 -00.1	N 23 18.9 +00.1	4 38.0 -00.5	N 16 14.2 +00.8	135 18.2 -40.3	S 26 55.3 +00.1	10						
11	344 52.3 -00.1	N 23 19.0 +00.1	19 37.5 -00.5	N 16 15.0 +00.8	149 37.9 -40.2	S 26 55.4 -00.1	11						
12	359 52.2 -00.2	N 23 19.1 +00.1	34 37.0 -00.5	N 16 15.8 +00.9	163 57.7 -40.2	S 26 55.3 -00.3	12						
13	14 52.0 -00.1	N 23 19.2 +00.1	49 36.5 -00.5	N 16 16.7 +00.8	178 17.5 -40.2	S 26 55.0 -00.5	13						
14	29 51.9 -00.1	N 23 19.3 +00.1	64 36.0 -00.5	N 16 17.5 +00.8	192 37.3 -40.2	S 26 54.5 -00.8	14						
15	44 51.8 -00.2	N 23 19.4 +00.1	79 35.5 -00.5	N 16 18.3 +00.8	206 57.1 -40.1	S 26 53.7 -00.9	15						
16	59 51.6 -00.1	N 23 19.5 +00.1	94 35.0 -00.5	N 16 19.1 +00.8	221 17.0 -40.1	S 26 52.8 -01.2	16						
17	74 51.5 -00.1	N 23 19.6 +00.1	109 34.5 -00.5	N 16 19.9 +00.9	235 36.9 -40.1	S 26 51.6 -01.4	17						
18	89 51.4 -00.2	N 23 19.7 +00.1	124 34.0 -00.5	N 16 20.8 +00.8	249 56.8 -40.1	S 26 50.2 -01.6	18						
19	104 51.2 -00.1	N 23 19.8 +00.1	139 33.5 -00.5	N 16 21.6 +00.8	264 16.7 -40.0	S 26 48.6 -01.8	19						
20	119 51.1 -00.1	N 23 19.9 +00.1	154 33.0 -00.5	N 16 22.4 +00.8	278 36.7 -39.9	S 26 46.8 -02.0	20						
21	134 51.0 -00.2	N 23 20.0 +00.1	169 32.5 -00.5	N 16 23.2 +00.8	292 56.8 -40.0	S 26 44.8 -02.2	21						
22	149 50.8 -00.1	N 23 20.1 +00.1	184 32.0 -00.5	N 16 24.0 +00.8	307 16.8 -39.8	S 26 42.6 -02.4	22						
23	164 50.7 -00.1	N 23 20.2 +00.1	199 31.5 -00.5	N 16 24.8 +00.9	321 37.0 -39.9	S 26 40.2 -02.7	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'7 16'7 16'7 16'7 16'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'3 61'3 61'3 61'3 61'2 61'2								
	SHA 277° 276° 276° 276° 276° 276°		SHA 311° 311° 311° 311° 311° 310°		SHA 087° 084° 082° 079° 076° 073°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:41		Greenwich Culmination Time: 00:33								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	248 16.6 +00.8	N 04 26.4 +00.7	257 29.6 +02.2	N 01 09.7 +00.2	295 24.7 +02.5	S 14 13.3 +00.0	00						
01	263 17.4 +00.8	N 04 27.1 +00.7	272 31.8 +02.1	N 01 09.9 +00.1	310 27.2 +02.5	S 14 13.3 +00.0	01						
02	278 18.2 +00.8	N 04 27.8 +00.7	287 33.9 +02.2	N 01 10.0 +00.1	325 29.7 +02.5	S 14 13.3 +00.0	02						
03	293 19.0 +00.8	N 04 28.5 +00.7	302 36.1 +02.2	N 01 10.1 +00.1	340 32.2 +02.5	S 14 13.3 +00.0	03						
04	308 19.8 +00.7	N 04 29.2 +00.7	317 38.3 +02.1	N 01 10.2 +00.1	355 34.7 +02.5	S 14 13.3 +00.1	04						
05	323 20.5 +00.8	N 04 29.9 +00.7	332 40.4 +02.2	N 01 10.3 +00.1	10 37.2 +02.5	S 14 13.4 +00.0	05						
06	338 21.3 +00.8	N 04 30.6 +00.7	347 42.6 +02.2	N 01 10.4 +00.2	25 39.7 +02.5	S 14 13.4 +00.0	06						
07	353 22.1 +00.8	N 04 31.3 +00.7	2 44.8 +02.1	N 01 10.6 +00.1	40 42.2 +02.5	S 14 13.4 +00.0	07						
08	8 22.9 +00.7	N 04 32.0 +00.6	17 46.9 +02.2	N 01 10.7 +00.1	55 44.7 +02.5	S 14 13.4 +00.0	08						
09	23 23.6 +00.8	N 04 32.6 +00.7	32 49.1 +02.2	N 01 10.8 +00.1	70 47.2 +02.5	S 14 13.4 +00.1	09						
10	38 24.4 +00.8	N 04 33.3 +00.7	47 51.3 +02.1	N 01 10.9 +00.1	85 49.7 +02.5	S 14 13.5 +00.0	10						
11	53 25.2 +00.8	N 04 34.0 +00.7	62 53.4 +02.2	N 01 11.0 +00.1	100 52.2 +02.5	S 14 13.5 +00.0	11						
12	68 26.0 +00.8	N 04 34.7 +00.7	77 55.6 +02.2	N 01 11.1 +00.2	115 54.7 +02.5	S 14 13.5 +00.0	12						
13	83 26.8 +00.7	N 04 35.4 +00.7	92 57.8 +02.1	N 01 11.3 +00.1	130 57.2 +02.5	S 14 13.5 +00.1	13						
14	98 27.5 +00.8	N 04 36.1 +00.7	107 59.9 +02.2	N 01 11.4 +00.1	145 59.7 +02.5	S 14 13.6 +00.0	14						
15	113 28.3 +00.8	N 04 36.8 +00.7	123 02.1 +02.2	N 01 11.5 +00.1	161 02.2 +02.5	S 14 13.6 +00.0	15						
16	128 29.1 +00.8	N 04 37.5 +00.7	138 04.3 +02.2	N 01 11.6 +00.1	176 04.7 +02.5	S 14 13.6 +00.0	16						
17	143 29.9 +00.8	N 04 38.2 +00.7	153 06.5 +02.1	N 01 11.7 +00.1	191 07.2 +02.5	S 14 13.6 +00.0	17						
18	158 30.7 +00.7	N 04 38.9 +00.7	168 08.6 +02.2	N 01 11.8 +00.1	206 09.7 +02.5	S 14 13.6 +00.1	18						
19	173 31.4 +00.8	N 04 39.6 +00.7	183 10.8 +02.2	N 01 11.9 +00.2	221 12.2 +02.5	S 14 13.7 +00.0	19						
20	188 32.2 +00.8	N 04 40.3 +00.6	198 13.0 +02.1	N 01 12.1 +00.1	236 14.7 +02.5	S 14 13.7 +00.0	20						
21	203 33.0 +00.8	N 04 40.9 +00.7	213 15.1 +02.2	N 01 12.2 +00.1	251 17.2 +02.5	S 14 13.7 +00.0	21						
22	218 33.8 +00.7	N 04 41.6 +00.7	228 17.3 +02.2	N 01 12.3 +00.1	266 19.7 +02.5	S 14 13.7 +00.0	22						
23	233 34.5 +00.8	N 04 42.3 +00.7	243 19.5 +02.1	N 01 12.4 +00.1	281 22.2 +02.6	S 14 13.7 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 345° 345° 345° 345° 345° 344°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:26		Greenwich Culmination Time: 06:49		Greenwich Culmination Time: 04:17								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 50.6 -00.2	N 23 20.3 +00.1	214 31.0 -00.5	N 16 25.7 +00.8	335 57.1 -39.7	S 26 37.5 -02.8	00						
01	194 50.4 -00.1	N 23 20.4 +00.1	229 30.5 -00.5	N 16 26.5 +00.8	350 17.4 -39.8	S 26 34.7 -03.1	01						
02	209 50.3 -00.1	N 23 20.5 +00.0	244 30.0 -00.5	N 16 27.3 +00.8	4 37.6 -39.6	S 26 31.6 -03.2	02						
03	224 50.2 -00.2	N 23 20.5 +00.1	259 29.5 -00.5	N 16 28.1 +00.8	18 58.0 -39.6	S 26 28.4 -03.5	03						
04	239 50.0 -00.1	N 23 20.6 +00.1	274 29.0 -00.5	N 16 28.9 +00.8	33 18.4 -39.5	S 26 24.9 -03.7	04						
05	254 49.9 -00.1	N 23 20.7 +00.1	289 28.5 -00.6	N 16 29.7 +00.8	47 38.9 -39.5	S 26 21.2 -03.8	05						
06	269 49.8 -00.2	N 23 20.8 +00.1	304 27.9 -00.5	N 16 30.5 +00.8	61 59.4 -39.4	S 26 17.4 -04.1	06						
07	284 49.6 -00.1	N 23 20.9 +00.1	319 27.4 -00.5	N 16 31.3 +00.9	76 20.0 -39.3	S 26 13.3 -04.2	07						
08	299 49.5 -00.1	N 23 21.0 +00.1	334 26.9 -00.5	N 16 32.2 +00.8	90 40.7 -39.2	S 26 09.1 -04.5	08						
09	314 49.4 -00.2	N 23 21.1 +00.1	349 26.4 -00.5	N 16 33.0 +00.8	105 01.5 -39.1	S 26 04.6 -04.7	09						
10	329 49.2 -00.1	N 23 21.2 +00.0	4 25.9 -00.5	N 16 33.8 +00.8	119 22.4 -39.1	S 25 59.9 -04.8	10						
11	344 49.1 -00.1	N 23 21.2 +00.1	19 25.4 -00.5	N 16 34.6 +00.8	133 43.3 -39.0	S 25 55.1 -05.1	11						
12	359 49.0 -00.2	N 23 21.3 +00.1	34 24.9 -00.5	N 16 35.4 +00.8	148 04.3 -38.9	S 25 50.0 -05.2	12						
13	14 48.8 -00.1	N 23 21.4 +00.1	49 24.4 -00.5	N 16 36.2 +00.8	162 25.4 -38.7	S 25 44.8 -05.4	13						
14	29 48.7 -00.1	N 23 21.5 +00.1	64 23.9 -00.5	N 16 37.0 +00.8	176 46.7 -38.7	S 25 39.4 -05.7	14						
15	44 48.6 -00.2	N 23 21.6 +00.1	79 23.4 -00.5	N 16 37.8 +00.8	191 08.0 -38.7	S 25 33.7 -05.8	15						
16	59 48.4 -00.1	N 23 21.7 +00.0	94 22.9 -00.6	N 16 38.6 +00.8	205 29.3 -38.5	S 25 27.9 -06.0	16						
17	74 48.3 -00.1	N 23 21.7 +00.1	109 22.3 -00.5	N 16 39.4 +00.8	219 50.8 -38.4	S 25 21.9 -06.1	17						
18	89 48.2 -00.2	N 23 21.8 +00.1	124 21.8 -00.5	N 16 40.2 +00.8	234 12.4 -38.3	S 25 15.8 -06.4	18						
19	104 48.0 -00.1	N 23 21.9 +00.1	139 21.3 -00.5	N 16 41.0 +00.8	248 34.1 -38.2	S 25 09.4 -06.5	19						
20	119 47.9 -00.1	N 23 22.0 +00.1	154 20.8 -00.5	N 16 41.8 +00.8	262 55.9 -38.0	S 25 02.9 -06.7	20						
21	134 47.8 -00.2	N 23 22.1 +00.0	169 20.3 -00.5	N 16 42.6 +00.8	277 17.9 -38.0	S 24 56.2 -06.9	21						
22	149 47.6 -00.1	N 23 22.1 +00.1	184 19.8 -00.5	N 16 43.4 +00.8	291 39.9 -37.9	S 24 49.3 -07.1	22						
23	164 47.5 -00.1	N 23 22.2 +00.1	199 19.3 -00.6	N 16 44.2 +00.8	306 02.0 -37.8	S 24 42.2 -07.2	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'7 16'6 16'6 16'6 16'6 16'5								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 61'1 61'1 61'0 60'9 60'8 60'7								
	SHA 276° 275° 275° 275° 275° 275°		SHA 310° 310° 310° 310° 309° 309°		SHA 070° 067° 065° 062° 059° 057°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:42		Greenwich Culmination Time: 01:40								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	248 35.3 +00.8	N 04 43.0 +00.7	258 21.6 +02.2	N 01 12.5 +00.1	296 24.8 +02.5	S 14 13.8 +00.0	00						
01	263 36.1 +00.8	N 04 43.7 +00.7	273 23.8 +02.2	N 01 12.6 +00.2	311 27.3 +02.5	S 14 13.8 +00.0	01						
02	278 36.9 +00.8	N 04 44.4 +00.7	288 26.0 +02.2	N 01 12.8 +00.1	326 29.8 +02.5	S 14 13.8 +00.0	02						
03	293 37.7 +00.7	N 04 45.1 +00.7	303 28.2 +02.1	N 01 12.9 +00.1	341 32.3 +02.5	S 14 13.8 +00.1	03						
04	308 38.4 +00.8	N 04 45.8 +00.7	318 30.3 +02.2	N 01 13.0 +00.1	356 34.8 +02.5	S 14 13.9 +00.0	04						
05	323 39.2 +00.8	N 04 46.5 +00.7	333 32.5 +02.2	N 01 13.1 +00.1	11 37.3 +02.5	S 14 13.9 +00.0	05						
06	338 40.0 +00.8	N 04 47.2 +00.7	348 34.7 +02.2	N 01 13.2 +00.1	26 39.8 +02.5	S 14 13.9 +00.0	06						
07	353 40.8 +00.8	N 04 47.9 +00.6	3 36.9 +02.1	N 01 13.3 +00.1	41 42.3 +02.5	S 14 13.9 +00.1	07						
08	8 41.6 +00.7	N 04 48.5 +00.7	18 39.0 +02.2	N 01 13.4 +00.2	56 44.8 +02.5	S 14 14.0 +00.0	08						
09	23 42.3 +00.8	N 04 49.2 +00.7	33 41.2 +02.2	N 01 13.6 +00.1	71 47.3 +02.5	S 14 14.0 +00.0	09						
10	38 43.1 +00.8	N 04 49.9 +00.7	48 43.4 +02.1	N 01 13.7 +00.1	86 49.8 +02.5	S 14 14.0 +00.0	10						
11	53 43.9 +00.8	N 04 50.6 +00.7	63 45.5 +02.2	N 01 13.8 +00.1	101 52.3 +02.5	S 14 14.0 +00.0	11						
12	68 44.7 +00.7	N 04 51.3 +00.7	78 47.7 +02.2	N 01 13.9 +00.1	116 54.8 +02.5	S 14 14.0 +00.1	12						
13	83 45.4 +00.8	N 04 52.0 +00.7	93 49.9 +02.2	N 01 14.0 +00.1	131 57.3 +02.5	S 14 14.1 +00.0	13						
14	98 46.2 +00.8	N 04 52.7 +00.7	108 52.1 +02.1	N 01 14.1 +00.1	146 59.8 +02.5	S 14 14.1 +00.0	14						
15	113 47.0 +00.8	N 04 53.4 +00.7	123 54.2 +02.2	N 01 14.2 +00.1	162 02.3 +02.6	S 14 14.1 +00.0	15						
16	128 47.8 +00.8	N 04 54.1 +00.7	138 56.4 +02.2	N 01 14.3 +00.2	177 04.9 +02.5	S 14 14.1 +00.1	16						
17	143 48.6 +00.7	N 04 54.8 +00.6	153 58.6 +02.2	N 01 14.5 +00.1	192 07.4 +02.5	S 14 14.2 +00.0	17						
18	158 49.3 +00.8	N 04 55.4 +00.7	169 00.8 +02.1	N 01 14.6 +00.1	207 09.9 +02.5	S 14 14.2 +00.0	18						
19	173 50.1 +00.8	N 04 56.1 +00.7	184 02.9 +02.2	N 01 14.7 +00.1	222 12.4 +02.5	S 14 14.2 +00.0	19						
20	188 50.9 +00.8	N 04 56.8 +00.7	199 05.1 +02.2	N 01 14.8 +00.1	237 14.9 +02.5	S 14 14.2 +00.1	20						
21	203 51.7 +00.8	N 04 57.5 +00.7	214 07.3 +02.2	N 01 14.9 +00.1	252 17.4 +02.5	S 14 14.3 +00.0	21						
22	218 52.5 +00.7	N 04 58.2 +00.7	229 09.5 +02.1	N 01 15.0 +00.1	267 19.9 +02.5	S 14 14.3 +00.0	22						
23	233 53.2 +00.8	N 04 58.9 +00.7	244 11.6 +02.2	N 01 15.1 +00.1	282 22.4 +02.5	S 14 14.3 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 344° 344° 344° 344° 344° 344°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:25		Greenwich Culmination Time: 06:45		Greenwich Culmination Time: 04:13								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 47.4 -00.2	N 23 22.3 +00.1	214 18.7 -00.5	N 16 45.0 +00.8	320 24.2 -37.6	S 24 35.0 -07.5	00						
01	194 47.2 -00.1	N 23 22.4 +00.0	229 18.2 -00.5	N 16 45.8 +00.8	334 46.6 -37.5	S 24 27.5 -07.5	01						
02	209 47.1 -00.1	N 23 22.4 +00.1	244 17.7 -00.5	N 16 46.6 +00.8	349 09.1 -37.4	S 24 20.0 -07.8	02						
03	224 47.0 -00.2	N 23 22.5 +00.1	259 17.2 -00.5	N 16 47.4 +00.8	3 31.7 -37.3	S 24 12.2 -07.9	03						
04	239 46.8 -00.1	N 23 22.6 +00.1	274 16.7 -00.5	N 16 48.2 +00.8	17 54.4 -37.2	S 24 04.3 -08.1	04						
05	254 46.7 -00.1	N 23 22.7 +00.0	289 16.2 -00.6	N 16 49.0 +00.8	32 17.2 -37.1	S 23 56.2 -08.2	05						
06	269 46.6 -00.2	N 23 22.7 +00.1	304 15.6 -00.5	N 16 49.8 +00.8	46 40.1 -36.9	S 23 48.0 -08.4	06						
07	284 46.4 -00.1	N 23 22.8 +00.1	319 15.1 -00.5	N 16 50.6 +00.8	61 03.2 -36.8	S 23 39.6 -08.6	07						
08	299 46.3 -00.2	N 23 22.9 +00.0	334 14.6 -00.5	N 16 51.4 +00.8	75 26.4 -36.7	S 23 31.0 -08.7	08						
09	314 46.1 -00.1	N 23 22.9 +00.1	349 14.1 -00.5	N 16 52.2 +00.8	89 49.7 -36.5	S 23 22.3 -08.9	09						
10	329 46.0 -00.1	N 23 23.0 +00.1	4 13.6 -00.6	N 16 53.0 +00.8	104 13.2 -36.5	S 23 13.4 -09.0	10						
11	344 45.9 -00.2	N 23 23.1 +00.0	19 13.0 -00.5	N 16 53.8 +00.8	118 36.7 -36.3	S 23 04.4 -09.1	11						
12	359 45.7 -00.1	N 23 23.1 +00.1	34 12.5 -00.5	N 16 54.6 +00.8	133 00.4 -36.1	S 22 55.3 -09.4	12						
13	14 45.6 -00.1	N 23 23.2 +00.1	49 12.0 -00.5	N 16 55.4 +00.7	147 24.3 -36.1	S 22 45.9 -09.4	13						
14	29 45.5 -00.2	N 23 23.3 +00.0	64 11.5 -00.5	N 16 56.1 +00.8	161 48.2 -35.9	S 22 36.5 -09.6	14						
15	44 45.3 -00.1	N 23 23.3 +00.1	79 11.0 -00.6	N 16 56.9 +00.8	176 12.3 -35.8	S 22 26.9 -09.8	15						
16	59 45.2 -00.1	N 23 23.4 +00.1	94 10.4 -00.5	N 16 57.7 +00.8	190 36.5 -35.7	S 22 17.1 -09.8	16						
17	74 45.1 -00.2	N 23 23.5 +00.0	109 09.9 -00.5	N 16 58.5 +00.8	205 00.8 -35.5	S 22 07.3 -10.0	17						
18	89 44.9 -00.1	N 23 23.5 +00.1	124 09.4 -00.5	N 16 59.3 +00.8	219 25.3 -35.4	S 21 57.3 -10.2	18						
19	104 44.8 -00.1	N 23 23.6 +00.1	139 08.9 -00.6	N 17 00.1 +00.8	233 49.9 -35.2	S 21 47.1 -10.3	19						
20	119 44.7 -00.2	N 23 23.7 +00.0	154 08.3 -00.5	N 17 00.9 +00.8	248 14.7 -35.2	S 21 36.8 -10.4	20						
21	134 44.5 -00.1	N 23 23.7 +00.1	169 07.8 -00.5	N 17 01.7 +00.7	262 39.5 -35.0	S 21 26.4 -10.5	21						
22	149 44.4 -00.1	N 23 23.8 +00.0	184 07.3 -00.6	N 17 02.4 +00.8	277 04.5 -34.8	S 21 15.9 -10.7	22						
23	164 44.3 -00.2	N 23 23.8 +00.1	199 06.7 -00.5	N 17 03.2 +00.8	291 29.7 -34.8	S 21 05.2 -10.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'5 16'5 16'5 16'4 16'4 16'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 60'6 60'5 60'4 60'3 60'2 60'0								
	SHA 274° 274° 274° 274° 274° 274°		SHA 309° 309° 309° 308° 308° 308°		SHA 054° 051° 049° 046° 043° 041°								
	Greenwich Culmination Time: 12:00		Greenwich Culmination Time: 09:43		Greenwich Culmination Time: 02:45								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	248 54.0 +00.8	N 04 59.6 +00.7	259 13.8 +02.2	N 01 15.2 +00.2	297 24.9 +02.5	S 14 14.3 +00.0	00						
01	263 54.8 +00.8	N 05 00.3 +00.7	274 16.0 +02.2	N 01 15.4 +00.1	312 27.4 +02.5	S 14 14.3 +00.1	01						
02	278 55.6 +00.8	N 05 01.0 +00.6	289 18.2 +02.2	N 01 15.5 +00.1	327 29.9 +02.5	S 14 14.4 +00.0	02						
03	293 56.4 +00.7	N 05 01.6 +00.7	304 20.4 +02.1	N 01 15.6 +00.1	342 32.4 +02.6	S 14 14.4 +00.0	03						
04	308 57.1 +00.8	N 05 02.3 +00.7	319 22.5 +02.2	N 01 15.7 +00.1	357 35.0 +02.5	S 14 14.4 +00.0	04						
05	323 57.9 +00.8	N 05 03.0 +00.7	334 24.7 +02.2	N 01 15.8 +00.1	12 37.5 +02.5	S 14 14.4 +00.1	05						
06	338 58.7 +00.8	N 05 03.7 +00.7	349 26.9 +02.2	N 01 15.9 +00.1	27 40.0 +02.5	S 14 14.5 +00.0	06						
07	353 59.5 +00.8	N 05 04.4 +00.7	4 29.1 +02.1	N 01 16.0 +00.1	42 42.5 +02.5	S 14 14.5 +00.0	07						
08	9 00.3 +00.7	N 05 05.1 +00.7	19 31.2 +02.2	N 01 16.1 +00.2	57 45.0 +02.5	S 14 14.5 +00.0	08						
09	24 01.0 +00.8	N 05 05.8 +00.7	34 33.4 +02.2	N 01 16.3 +00.1	72 47.5 +02.5	S 14 14.5 +00.1	09						
10	39 01.8 +00.8	N 05 06.5 +00.6	49 35.6 +02.2	N 01 16.4 +00.1	87 50.0 +02.5	S 14 14.6 +00.0	10						
11	54 02.6 +00.8	N 05 07.1 +00.7	64 37.8 +02.2	N 01 16.5 +00.1	102 52.5 +02.5	S 14 14.6 +00.0	11						
12	69 03.4 +00.8	N 05 07.8 +00.7	79 40.0 +02.1	N 01 16.6 +00.1	117 55.0 +02.5	S 14 14.6 +00.0	12						
13	84 04.2 +00.7	N 05 08.5 +00.7	94 42.1 +02.2	N 01 16.7 +00.1	132 57.5 +02.6	S 14 14.6 +00.1	13						
14	99 04.9 +00.8	N 05 09.2 +00.7	109 44.3 +02.2	N 01 16.8 +00.1	148 00.1 +02.5	S 14 14.7 +00.0	14						
15	114 05.7 +00.8	N 05 09.9 +00.7	124 46.5 +02.2	N 01 16.9 +00.1	163 02.6 +02.5	S 14 14.7 +00.0	15						
16	129 06.5 +00.8	N 05 10.6 +00.7	139 48.7 +02.2	N 01 17.0 +00.1	178 05.1 +02.5	S 14 14.7 +00.0	16						
17	144 07.3 +00.8	N 05 11.3 +00.6	154 50.9 +02.1	N 01 17.1 +00.2	193 07.6 +02.5	S 14 14.7 +00.1	17						
18	159 08.1 +00.7	N 05 11.9 +00.7	169 53.0 +02.2	N 01 17.3 +00.1	208 10.1 +02.5	S 14 14.8 +00.0	18						
19	174 08.8 +00.8	N 05 12.6 +00.7	184 55.2 +02.2	N 01 17.4 +00.1	223 12.6 +02.5	S 14 14.8 +00.0	19						
20	189 09.6 +00.8	N 05 13.3 +00.7	199 57.4 +02.2	N 01 17.5 +00.1	238 15.1 +02.5	S 14 14.8 +00.0	20						
21	204 10.4 +00.8	N 05 14.0 +00.7	214 59.6 +02.2	N 01 17.6 +00.1	253 17.6 +02.5	S 14 14.8 +00.1	21						
22	219 11.2 +00.8	N 05 14.7 +00.7	230 01.8 +02.1	N 01 17.7 +00.1	268 20.1 +02.6	S 14 14.9 +00.0	22						
23	234 12.0 +00.7	N 05 15.4 +00.7	245 03.9 +02.2	N 01 17.8 +00.1	283 22.7 +02.5	S 14 14.9 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 344° 344° 343° 343° 343° 343°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:24		Greenwich Culmination Time: 06:42		Greenwich Culmination Time: 04:09								

UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 44.1 -00.1	N 23 23.9 +00.1	214 06.2 -00.5	N 17 04.0 +00.8	305 54.9 -34.6	S 20 54.4 -10.9	00						
01	194 44.0 -00.1	N 23 24.0 +00.0	229 05.7 -00.5	N 17 04.8 +00.8	320 20.3 -34.4	S 20 43.5 -11.0	01						
02	209 43.9 -00.2	N 23 24.0 +00.1	244 05.2 -00.6	N 17 05.6 +00.8	334 45.9 -34.4	S 20 32.5 -11.2	02						
03	224 43.7 -00.1	N 23 24.1 +00.0	259 04.6 -00.5	N 17 06.4 +00.7	349 11.5 -34.2	S 20 21.3 -11.2	03						
04	239 43.6 -00.2	N 23 24.1 +00.1	274 04.1 -00.5	N 17 07.1 +00.8	3 37.3 -34.0	S 20 10.1 -11.4	04						
05	254 43.4 -00.1	N 23 24.2 +00.0	289 03.6 -00.6	N 17 07.9 +00.8	18 03.3 -34.0	S 19 58.7 -11.5	05						
06	269 43.3 -00.1	N 23 24.2 +00.1	304 03.0 -00.5	N 17 08.7 +00.8	32 29.3 -33.8	S 19 47.2 -11.6	06						
07	284 43.2 -00.2	N 23 24.3 +00.0	319 02.5 -00.5	N 17 09.5 +00.8	46 55.5 -33.6	S 19 35.6 -11.7	07						
08	299 43.0 -00.1	N 23 24.3 +00.1	334 02.0 -00.5	N 17 10.3 +00.7	61 21.9 -33.6	S 19 23.9 -11.8	08						
09	314 42.9 -00.1	N 23 24.4 +00.0	349 01.5 -00.6	N 17 11.0 +00.8	75 48.3 -33.4	S 19 12.1 -11.9	09						
10	329 42.8 -00.2	N 23 24.4 +00.1	4 00.9 -00.5	N 17 11.8 +00.8	90 14.9 -33.3	S 19 00.2 -12.0	10						
11	344 42.6 -00.1	N 23 24.5 +00.0	19 00.4 -00.5	N 17 12.6 +00.8	104 41.6 -33.1	S 18 48.2 -12.1	11						
12	359 42.5 -00.1	N 23 24.5 +00.1	33 59.9 -00.6	N 17 13.4 +00.7	119 08.5 -33.1	S 18 36.1 -12.2	12						
13	14 42.4 -00.2	N 23 24.6 +00.0	48 59.3 -00.5	N 17 14.1 +00.8	133 35.4 -32.9	S 18 23.9 -12.3	13						
14	29 42.2 -00.1	N 23 24.6 +00.1	63 58.8 -00.5	N 17 14.9 +00.8	148 02.5 -32.7	S 18 11.6 -12.4	14						
15	44 42.1 -00.1	N 23 24.7 +00.0	78 58.3 -00.6	N 17 15.7 +00.8	162 29.8 -32.7	S 17 59.2 -12.4	15						
16	59 42.0 -00.2	N 23 24.7 +00.1	93 57.7 -00.5	N 17 16.5 +00.7	176 57.1 -32.5	S 17 46.8 -12.6	16						
17	74 41.8 -00.1	N 23 24.8 +00.0	108 57.2 -00.6	N 17 17.2 +00.8	191 24.6 -32.4	S 17 34.2 -12.7	17						
18	89 41.7 -00.1	N 23 24.8 +00.1	123 56.6 -00.5	N 17 18.0 +00.8	205 52.2 -32.2	S 17 21.5 -12.7	18						
19	104 41.6 -00.2	N 23 24.9 +00.0	138 56.1 -00.5	N 17 18.8 +00.7	220 20.0 -32.2	S 17 08.8 -12.8	19						
20	119 41.4 -00.1	N 23 24.9 +00.1	153 55.6 -00.6	N 17 19.5 +00.8	234 47.8 -32.0	S 16 56.0 -12.9	20						
21	134 41.3 -00.2	N 23 25.0 +00.0	168 55.0 -00.5	N 17 20.3 +00.8	249 15.8 -31.9	S 16 43.1 -13.0	21						
22	149 41.1 -00.1	N 23 25.0 +00.0	183 54.5 -00.5	N 17 21.1 +00.7	263 43.9 -31.8	S 16 30.1 -13.0	22						
23	164 41.0 -00.1	N 23 25.0 +00.1	198 54.0 -00.6	N 17 21.8 +00.8	278 12.1 -31.6	S 16 17.1 -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 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'3 16'3 16'2 16'2 16'2 16'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'9 59'8 59'6 59'5 59'4 59'2								
	SHA 273° 273° 273° 273° 273° 273°		SHA 308° 308° 307° 307° 307° 307°		SHA 038° 036° 034° 031° 029° 027°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:43		Greenwich Culmination Time: 03:44								

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	249 12.7 +00.8	N 05 16.1 +00.6	260 06.1 +02.2	N 01 17.9 +00.1	298 25.2 +02.5	S 14 14.9 +00.0	00						
01	264 13.5 +00.8	N 05 16.7 +00.7	275 08.3 +02.2	N 01 18.0 +00.1	313 27.7 +02.5	S 14 14.9 +00.1	01						
02	279 14.3 +00.8	N 05 17.4 +00.7	290 10.5 +02.2	N 01 18.1 +00.1	328 30.2 +02.5	S 14 15.0 +00.0	02						
03	294 15.1 +00.8	N 05 18.1 +00.7	305 12.7 +02.2	N 01 18.2 +00.2	343 32.7 +02.5	S 14 15.0 +00.0	03						
04	309 15.9 +00.7	N 05 18.8 +00.7	320 14.9 +02.1	N 01 18.4 +00.1	358 35.2 +02.5	S 14 15.0 +00.0	04						
05	324 16.6 +00.8	N 05 19.5 +00.7	335 17.0 +02.2	N 01 18.5 +00.1	13 37.7 +02.5	S 14 15.0 +00.1	05						
06	339 17.4 +00.8	N 05 20.2 +00.6	350 19.2 +02.2	N 01 18.6 +00.1	28 40.2 +02.6	S 14 15.1 +00.0	06						
07	354 18.2 +00.8	N 05 20.8 +00.7	5 21.4 +02.2	N 01 18.7 +00.1	43 42.8 +02.5	S 14 15.1 +00.0	07						
08	9 19.0 +00.8	N 05 21.5 +00.7	20 23.6 +02.2	N 01 18.8 +00.1	58 45.3 +02.5	S 14 15.1 +00.0	08						
09	24 19.8 +00.8	N 05 22.2 +00.7	35 25.8 +02.2	N 01 18.9 +00.1	73 47.8 +02.5	S 14 15.1 +00.1	09						
10	39 20.6 +00.7	N 05 22.9 +00.7	50 28.0 +02.1	N 01 19.0 +00.1	88 50.3 +02.5	S 14 15.2 +00.0	10						
11	54 21.3 +00.8	N 05 23.6 +00.7	65 30.1 +02.2	N 01 19.1 +00.1	103 52.8 +02.5	S 14 15.2 +00.0	11						
12	69 22.1 +00.8	N 05 24.3 +00.7	80 32.3 +02.2	N 01 19.2 +00.1	118 55.3 +02.5	S 14 15.2 +00.0	12						
13	84 22.9 +00.8	N 05 25.0 +00.6	95 34.5 +02.2	N 01 19.3 +00.1	133 57.8 +02.6	S 14 15.2 +00.1	13						
14	99 23.7 +00.8	N 05 25.6 +00.7	110 36.7 +02.2	N 01 19.4 +00.1	149 00.4 +02.5	S 14 15.3 +00.0	14						
15	114 24.5 +00.7	N 05 26.3 +00.7	125 38.9 +02.2	N 01 19.5 +00.2	164 02.9 +02.5	S 14 15.3 +00.0	15						
16	129 25.2 +00.8	N 05 27.0 +00.7	140 41.1 +02.2	N 01 19.7 +00.1	179 05.4 +02.5	S 14 15.3 +00.0	16						
17	144 26.0 +00.8	N 05 27.7 +00.7	155 43.3 +02.1	N 01 19.8 +00.1	194 07.9 +02.5	S 14 15.3 +00.1	17						
18	159 26.8 +00.8	N 05 28.4 +00.7	170 45.4 +02.2	N 01 19.9 +00.1	209 10.4 +02.5	S 14 15.4 +00.0	18						
19	174 27.6 +00.8	N 05 29.1 +00.6	185 47.6 +02.2	N 01 20.0 +00.1	224 12.9 +02.6	S 14 15.4 +00.0	19						
20	189 28.4 +00.7	N 05 29.7 +00.7	200 49.8 +02.2	N 01 20.1 +00.1	239 15.5 +02.5	S 14 15.4 +00.0	20						
21	204 29.1 +00.8	N 05 30.4 +00.7	215 52.0 +02.2	N 01 20.2 +00.1	254 18.0 +02.5	S 14 15.4 +00.1	21						
22	219 29.9 +00.8	N 05 31.1 +00.7	230 54.2 +02.2	N 01 20.3 +00.1	269 20.5 +02.5	S 14 15.5 +00.0	22						
23	234 30.7 +00.8	N 05 31.8 +00.7	245 56.4 +02.2	N 01 20.4 +00.1	284 23.0 +02.5	S 14 15.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 343° 343° 343° 343° 342° 342°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:22		Greenwich Culmination Time: 06:38		Greenwich Culmination Time: 04:05								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 40.9 -00.2	N 23 25.1 +00.0	213 53.4 -00.5	N 17 22.6 +00.8	292 40.5 -31.6	S 16 03.9 -13.2	00						
01	194 40.7 -00.1	N 23 25.1 +00.1	228 52.9 -00.6	N 17 23.4 +00.7	307 08.9 -31.4	S 15 50.7 -13.2	01						
02	209 40.6 -00.1	N 23 25.2 +00.0	243 52.3 -00.5	N 17 24.1 +00.8	321 37.5 -31.3	S 15 37.5 -13.4	02						
03	224 40.5 -00.2	N 23 25.2 +00.0	258 51.8 -00.5	N 17 24.9 +00.8	336 06.2 -31.2	S 15 24.1 -13.4	03						
04	239 40.3 -00.1	N 23 25.2 +00.1	273 51.3 -00.6	N 17 25.7 +00.7	350 35.0 -31.0	S 15 10.7 -13.5	04						
05	254 40.2 -00.1	N 23 25.3 +00.0	288 50.7 -00.5	N 17 26.4 +00.8	5 04.0 -31.0	S 14 57.2 -13.5	05						
06	269 40.1 -00.2	N 23 25.3 +00.1	303 50.2 -00.6	N 17 27.2 +00.8	19 33.0 -30.8	S 14 43.7 -13.6	06						
07	284 39.9 -00.1	N 23 25.4 +00.0	318 49.6 -00.5	N 17 28.0 +00.7	34 02.2 -30.7	S 14 30.1 -13.6	07						
08	299 39.8 -00.1	N 23 25.4 +00.0	333 49.1 -00.6	N 17 28.7 +00.8	48 31.5 -30.7	S 14 16.5 -13.8	08						
09	314 39.7 -00.2	N 23 25.4 +00.1	348 48.5 -00.5	N 17 29.5 +00.7	63 00.8 -30.5	S 14 02.7 -13.7	09						
10	329 39.5 -00.1	N 23 25.5 +00.0	3 48.0 -00.5	N 17 30.2 +00.8	77 30.3 -30.4	S 13 49.0 -13.9	10						
11	344 39.4 -00.2	N 23 25.5 +00.0	18 47.5 -00.6	N 17 31.0 +00.8	91 59.9 -30.3	S 13 35.1 -13.8	11						
12	359 39.2 -00.1	N 23 25.5 +00.1	33 46.9 -00.5	N 17 31.8 +00.7	106 29.6 -30.1	S 13 21.3 -14.0	12						
13	14 39.1 -00.1	N 23 25.6 +00.0	48 46.4 -00.6	N 17 32.5 +00.8	120 59.5 -30.1	S 13 07.3 -14.0	13						
14	29 39.0 -00.2	N 23 25.6 +00.0	63 45.8 -00.5	N 17 33.3 +00.7	135 29.4 -30.0	S 12 53.3 -14.0	14						
15	44 38.8 -00.1	N 23 25.6 +00.1	78 45.3 -00.6	N 17 34.0 +00.8	149 59.4 -29.9	S 12 39.3 -14.1	15						
16	59 38.7 -00.1	N 23 25.7 +00.0	93 44.7 -00.5	N 17 34.8 +00.7	164 29.5 -29.8	S 12 25.2 -14.1	16						
17	74 38.6 -00.2	N 23 25.7 +00.0	108 44.2 -00.6	N 17 35.5 +00.8	178 59.7 -29.6	S 12 11.1 -14.2	17						
18	89 38.4 -00.1	N 23 25.7 +00.0	123 43.6 -00.5	N 17 36.3 +00.7	193 30.1 -29.6	S 11 56.9 -14.2	18						
19	104 38.3 -00.1	N 23 25.7 +00.1	138 43.1 -00.6	N 17 37.0 +00.8	208 00.5 -29.5	S 11 42.7 -14.2	19						
20	119 38.2 -00.2	N 23 25.8 +00.0	153 42.5 -00.5	N 17 37.8 +00.8	222 31.0 -29.4	S 11 28.5 -14.3	20						
21	134 38.0 -00.1	N 23 25.8 +00.0	168 42.0 -00.6	N 17 38.6 +00.7	237 01.6 -29.2	S 11 14.2 -14.3	21						
22	149 37.9 -00.1	N 23 25.8 +00.0	183 41.4 -00.5	N 17 39.3 +00.8	251 32.4 -29.2	S 10 59.9 -14.4	22						
23	164 37.8 -00.2	N 23 25.8 +00.1	198 40.9 -00.6	N 17 40.1 +00.7	266 03.2 -29.1	S 10 45.5 -14.4	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 16'1 16'1 16'0 16'0 15'9 15'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 59'1 58'9 58'8 58'6 58'5 58'3								
	SHA 272° 272° 272° 272° 272° 272°		SHA 307° 306° 306° 306° 306° 306°		SHA 024° 022° 020° 018° 016° 013°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:44		Greenwich Culmination Time: 04:39								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	249 31.5 +00.8	N 05 32.5 +00.6	260 58.6 +02.2	N 01 20.5 +00.1	299 25.5 +02.5	S 14 15.5 +00.0	00						
01	264 32.3 +00.8	N 05 33.1 +00.7	276 00.8 +02.1	N 01 20.6 +00.1	314 28.0 +02.5	S 14 15.5 +00.1	01						
02	279 33.1 +00.7	N 05 33.8 +00.7	291 02.9 +02.2	N 01 20.7 +00.1	329 30.5 +02.6	S 14 15.6 +00.0	02						
03	294 33.8 +00.8	N 05 34.5 +00.7	306 05.1 +02.2	N 01 20.8 +00.1	344 33.1 +02.5	S 14 15.6 +00.0	03						
04	309 34.6 +00.8	N 05 35.2 +00.7	321 07.3 +02.2	N 01 20.9 +00.2	359 35.6 +02.5	S 14 15.6 +00.0	04						
05	324 35.4 +00.8	N 05 35.9 +00.7	336 09.5 +02.2	N 01 21.1 +00.1	14 38.1 +02.5	S 14 15.6 +00.1	05						
06	339 36.2 +00.8	N 05 36.6 +00.6	351 11.7 +02.2	N 01 21.2 +00.1	29 40.6 +02.5	S 14 15.7 +00.0	06						
07	354 37.0 +00.7	N 05 37.2 +00.7	6 13.9 +02.2	N 01 21.3 +00.1	44 43.1 +02.5	S 14 15.7 +00.0	07						
08	9 37.7 +00.8	N 05 37.9 +00.7	21 16.1 +02.2	N 01 21.4 +00.1	59 45.6 +02.6	S 14 15.7 +00.1	08						
09	24 38.5 +00.8	N 05 38.6 +00.7	36 18.3 +02.2	N 01 21.5 +00.1	74 48.2 +02.5	S 14 15.8 +00.0	09						
10	39 39.3 +00.8	N 05 39.3 +00.7	51 20.5 +02.1	N 01 21.6 +00.1	89 50.7 +02.5	S 14 15.8 +00.0	10						
11	54 40.1 +00.8	N 05 40.0 +00.6	66 22.6 +02.2	N 01 21.7 +00.1	104 53.2 +02.5	S 14 15.8 +00.0	11						
12	69 40.9 +00.8	N 05 40.6 +00.7	81 24.8 +02.2	N 01 21.8 +00.1	119 55.7 +02.5	S 14 15.8 +00.1	12						
13	84 41.7 +00.7	N 05 41.3 +00.7	96 27.0 +02.2	N 01 21.9 +00.1	134 58.2 +02.6	S 14 15.9 +00.0	13						
14	99 42.4 +00.8	N 05 42.0 +00.7	111 29.2 +02.2	N 01 22.0 +00.1	150 00.8 +02.5	S 14 15.9 +00.0	14						
15	114 43.2 +00.8	N 05 42.7 +00.7	126 31.4 +02.2	N 01 22.1 +00.1	165 03.3 +02.5	S 14 15.9 +00.0	15						
16	129 44.0 +00.8	N 05 43.4 +00.6	141 33.6 +02.2	N 01 22.2 +00.1	180 05.8 +02.5	S 14 15.9 +00.1	16						
17	144 44.8 +00.8	N 05 44.0 +00.7	156 35.8 +02.2	N 01 22.3 +00.1	195 08.3 +02.5	S 14 16.0 +00.0	17						
18	159 45.6 +00.7	N 05 44.7 +00.7	171 38.0 +02.2	N 01 22.4 +00.1	210 10.8 +02.6	S 14 16.0 +00.0	18						
19	174 46.3 +00.8	N 05 45.4 +00.7	186 40.2 +02.2	N 01 22.5 +00.1	225 13.4 +02.5	S 14 16.0 +00.0	19						
20	189 47.1 +00.8	N 05 46.1 +00.7	201 42.4 +02.2	N 01 22.6 +00.1	240 15.9 +02.5	S 14 16.0 +00.1	20						
21	204 47.9 +00.8	N 05 46.8 +00.6	216 44.6 +02.2	N 01 22.7 +00.1	255 18.4 +02.5	S 14 16.1 +00.0	21						
22	219 48.7 +00.8	N 05 47.4 +00.7	231 46.8 +02.2	N 01 22.8 +00.2	270 20.9 +02.5	S 14 16.1 +00.0	22						
23	234 49.5 +00.8	N 05 48.1 +00.7	246 49.0 +02.1	N 01 23.0 +00.1	285 23.4 +02.6	S 14 16.1 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 342° 342° 342° 342° 342° 342°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:21		Greenwich Culmination Time: 06:35		Greenwich Culmination Time: 04:01								



UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 37.6 -00.1	N 23 25.9 +00.0	213 40.3 -00.5	N 17 40.8 +00.8	280 34.1 -29.0	S 10 31.1 -14.4	00						
01	194 37.5 -00.2	N 23 25.9 +00.0	228 39.8 -00.6	N 17 41.6 +00.7	295 05.1 -29.0	S 10 16.7 -14.5	01						
02	209 37.3 -00.1	N 23 25.9 +00.0	243 39.2 -00.5	N 17 42.3 +00.8	309 36.1 -28.8	S 10 02.2 -14.5	02						
03	224 37.2 -00.1	N 23 25.9 +00.1	258 38.7 -00.6	N 17 43.1 +00.7	324 07.3 -28.7	S 09 47.7 -14.5	03						
04	239 37.1 -00.2	N 23 26.0 +00.0	273 38.1 -00.5	N 17 43.8 +00.7	338 38.6 -28.7	S 09 33.2 -14.5	04						
05	254 36.9 -00.1	N 23 26.0 +00.0	288 37.6 -00.6	N 17 44.5 +00.8	353 09.9 -28.6	S 09 18.7 -14.6	05						
06	269 36.8 -00.1	N 23 26.0 +00.0	303 37.0 -00.5	N 17 45.3 +00.7	7 41.3 -28.5	S 09 04.1 -14.6	06						
07	284 36.7 -00.2	N 23 26.0 +00.0	318 36.5 -00.6	N 17 46.0 +00.8	22 12.8 -28.4	S 08 49.5 -14.6	07						
08	299 36.5 -00.1	N 23 26.0 +00.1	333 35.9 -00.6	N 17 46.8 +00.7	36 44.4 -28.3	S 08 34.9 -14.6	08						
09	314 36.4 -00.1	N 23 26.1 +00.0	348 35.3 -00.5	N 17 47.5 +00.8	51 16.1 -28.3	S 08 20.3 -14.7	09						
10	329 36.3 -00.2	N 23 26.1 +00.0	3 34.8 -00.6	N 17 48.3 +00.7	65 47.8 -28.2	S 08 05.6 -14.7	10						
11	344 36.1 -00.1	N 23 26.1 +00.0	18 34.2 -00.5	N 17 49.0 +00.8	80 19.6 -28.1	S 07 50.9 -14.7	11						
12	359 36.0 -00.2	N 23 26.1 +00.0	33 33.7 -00.6	N 17 49.8 +00.7	94 51.5 -28.0	S 07 36.2 -14.7	12						
13	14 35.8 -00.1	N 23 26.1 +00.0	48 33.1 -00.5	N 17 50.5 +00.7	109 23.5 -27.9	S 07 21.5 -14.7	13						
14	29 35.7 -00.1	N 23 26.1 +00.0	63 32.6 -00.6	N 17 51.2 +00.8	123 55.6 -27.9	S 07 06.8 -14.8	14						
15	44 35.6 -00.2	N 23 26.1 +00.1	78 32.0 -00.6	N 17 52.0 +00.7	138 27.7 -27.8	S 06 52.0 -14.7	15						
16	59 35.4 -00.1	N 23 26.2 +00.0	93 31.4 -00.5	N 17 52.7 +00.7	152 59.9 -27.8	S 06 37.3 -14.8	16						
17	74 35.3 -00.1	N 23 26.2 +00.0	108 30.9 -00.6	N 17 53.4 +00.8	167 32.1 -27.7	S 06 22.5 -14.8	17						
18	89 35.2 -00.2	N 23 26.2 +00.0	123 30.3 -00.5	N 17 54.2 +00.7	182 04.4 -27.6	S 06 07.7 -14.8	18						
19	104 35.0 -00.1	N 23 26.2 +00.0	138 29.8 -00.6	N 17 54.9 +00.8	196 36.8 -27.5	S 05 52.9 -14.8	19						
20	119 34.9 -00.1	N 23 26.2 +00.0	153 29.2 -00.6	N 17 55.7 +00.7	211 09.3 -27.5	S 05 38.1 -14.8	20						
21	134 34.8 -00.2	N 23 26.2 +00.0	168 28.6 -00.5	N 17 56.4 +00.7	225 41.8 -27.4	S 05 23.3 -14.8	21						
22	149 34.6 -00.1	N 23 26.2 +00.0	183 28.1 -00.6	N 17 57.1 +00.8	240 14.4 -27.4	S 05 08.5 -14.8	22						
23	164 34.5 -00.2	N 23 26.2 +00.0	198 27.5 -00.5	N 17 57.9 +00.7	254 47.0 -27.3	S 04 53.7 -14.8	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'8 15'8 15'8 15'7 15'7 15'6								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 58'2 58'0 57'9 57'7 57'6 57'4								
	SHA 271° 271° 271° 271° 271° 270°		SHA 305° 305° 305° 305° 305° 304°		SHA 011° 009° 007° 005° 003° 001°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:45		Greenwich Culmination Time: 05:28								
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	249 50.3 +00.7	N 05 48.8 +00.7	261 51.1 +02.2	N 01 23.1 +00.1	300 26.0 +02.5	S 14 16.2 +00.0	00						
01	264 51.0 +00.8	N 05 49.5 +00.7	276 53.3 +02.2	N 01 23.2 +00.1	315 28.5 +02.5	S 14 16.2 +00.0	01						
02	279 51.8 +00.8	N 05 50.2 +00.6	291 55.5 +02.2	N 01 23.3 +00.1	330 31.0 +02.5	S 14 16.2 +00.0	02						
03	294 52.6 +00.8	N 05 50.8 +00.7	306 57.7 +02.2	N 01 23.4 +00.1	345 33.5 +02.5	S 14 16.2 +00.1	03						
04	309 53.4 +00.8	N 05 51.5 +00.7	321 59.9 +02.2	N 01 23.5 +00.1	0 36.0 +02.6	S 14 16.3 +00.0	04						
05	324 54.2 +00.8	N 05 52.2 +00.7	337 02.1 +02.2	N 01 23.6 +00.1	15 38.6 +02.5	S 14 16.3 +00.0	05						
06	339 55.0 +00.7	N 05 52.9 +00.6	352 04.3 +02.2	N 01 23.7 +00.1	30 41.1 +02.5	S 14 16.3 +00.0	06						
07	354 55.7 +00.8	N 05 53.5 +00.7	7 06.5 +02.2	N 01 23.8 +00.1	45 43.6 +02.5	S 14 16.3 +00.1	07						
08	9 56.5 +00.8	N 05 54.2 +00.7	22 08.7 +02.2	N 01 23.9 +00.1	60 46.1 +02.5	S 14 16.4 +00.0	08						
09	24 57.3 +00.8	N 05 54.9 +00.7	37 10.9 +02.2	N 01 24.0 +00.1	75 48.6 +02.6	S 14 16.4 +00.0	09						
10	39 58.1 +00.8	N 05 55.6 +00.7	52 13.1 +02.2	N 01 24.1 +00.1	90 51.2 +02.5	S 14 16.4 +00.1	10						
11	54 58.9 +00.8	N 05 56.3 +00.6	67 15.3 +02.2	N 01 24.2 +00.1	105 53.7 +02.5	S 14 16.5 +00.0	11						
12	69 59.7 +00.7	N 05 56.9 +00.7	82 17.5 +02.2	N 01 24.3 +00.1	120 56.2 +02.5	S 14 16.5 +00.0	12						
13	85 00.4 +00.8	N 05 57.6 +00.7	97 19.7 +02.2	N 01 24.4 +00.1	135 58.7 +02.5	S 14 16.5 +00.0	13						
14	100 01.2 +00.8	N 05 58.3 +00.7	112 21.9 +02.2	N 01 24.5 +00.1	151 01.2 +02.6	S 14 16.5 +00.1	14						
15	115 02.0 +00.8	N 05 59.0 +00.6	127 24.1 +02.2	N 01 24.6 +00.1	166 03.8 +02.5	S 14 16.6 +00.0	15						
16	130 02.8 +00.8	N 05 59.6 +00.7	142 26.3 +02.2	N 01 24.7 +00.1	181 06.3 +02.5	S 14 16.6 +00.0	16						
17	145 03.6 +00.8	N 06 00.3 +00.7	157 28.5 +02.2	N 01 24.8 +00.1	196 08.8 +02.5	S 14 16.6 +00.1	17						
18	160 04.4 +00.7	N 06 01.0 +00.7	172 30.7 +02.2	N 01 24.9 +00.1	211 11.3 +02.6	S 14 16.7 +00.0	18						
19	175 05.1 +00.8	N 06 01.7 +00.6	187 32.9 +02.2	N 01 25.0 +00.1	226 13.9 +02.5	S 14 16.7 +00.0	19						
20	190 05.9 +00.8	N 06 02.3 +00.7	202 35.1 +02.2	N 01 25.1 +00.1	241 16.4 +02.5	S 14 16.7 +00.0	20						
21	205 06.7 +00.8	N 06 03.0 +00.7	217 37.3 +02.2	N 01 25.2 +00.1	256 18.9 +02.5	S 14 16.7 +00.1	21						
22	220 07.5 +00.8	N 06 03.7 +00.7	232 39.5 +02.2	N 01 25.3 +00.1	271 21.4 +02.6	S 14 16.8 +00.0	22						
23	235 08.3 +00.8	N 06 04.4 +00.6	247 41.7 +02.2	N 01 25.4 +00.1	286 24.0 +02.5	S 14 16.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 342° 341° 341° 341° 341° 341°		SHA 354° 354° 354° 354° 354° 354°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:20		Greenwich Culmination Time: 06:31		Greenwich Culmination Time: 03:57								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 34.3 -00.1	N 23 26.2 +00.0	213 27.0 -00.6	N 17 58.6 +00.7	269 19.7 -27.2	S 04 38.9 -14.8	00						
01	194 34.2 -00.1	N 23 26.2 +00.0	228 26.4 -00.6	N 17 59.3 +00.8	283 52.5 -27.2	S 04 24.1 -14.8	01						
02	209 34.1 -00.2	N 23 26.2 +00.1	243 25.8 -00.5	N 18 00.1 +00.7	298 25.3 -27.1	S 04 09.3 -14.9	02						
03	224 33.9 -00.1	N 23 26.3 +00.0	258 25.3 -00.6	N 18 00.8 +00.7	312 58.2 -27.1	S 03 54.4 -14.8	03						
04	239 33.8 -00.1	N 23 26.3 +00.0	273 24.7 -00.6	N 18 01.5 +00.7	327 31.1 -27.0	S 03 39.6 -14.8	04						
05	254 33.7 -00.2	N 23 26.3 +00.0	288 24.1 -00.5	N 18 02.2 +00.8	342 04.1 -27.0	S 03 24.8 -14.8	05						
06	269 33.5 -00.1	N 23 26.3 +00.0	303 23.6 -00.6	N 18 03.0 +00.7	356 37.1 -26.9	S 03 10.0 -14.8	06						
07	284 33.4 -00.1	N 23 26.3 +00.0	318 23.0 -00.6	N 18 03.7 +00.7	11 10.2 -26.9	S 02 55.2 -14.8	07						
08	299 33.3 -00.2	N 23 26.3 +00.0	333 22.4 -00.5	N 18 04.4 +00.8	25 43.3 -26.8	S 02 40.4 -14.8	08						
09	314 33.1 -00.1	N 23 26.3 +00.0	348 21.9 -00.6	N 18 05.2 +00.7	40 16.5 -26.8	S 02 25.6 -14.8	09						
10	329 33.0 -00.1	N 23 26.3 +00.0	3 21.3 -00.6	N 18 05.9 +00.7	54 49.7 -26.8	S 02 10.8 -14.8	10						
11	344 32.9 -00.2	N 23 26.3 +00.0	18 20.7 -00.5	N 18 06.6 +00.7	69 22.9 -26.7	S 01 56.0 -14.8	11						
12	359 32.7 -00.1	N 23 26.3 +00.0	33 20.2 -00.6	N 18 07.3 +00.7	83 56.2 -26.6	S 01 41.2 -14.7	12						
13	14 32.6 -00.2	N 23 26.3 +00.0	48 19.6 -00.6	N 18 08.0 +00.8	98 29.6 -26.6	S 01 26.5 -14.8	13						
14	29 32.4 -00.1	N 23 26.3 +00.0	63 19.0 -00.5	N 18 08.8 +00.7	113 03.0 -26.6	S 01 11.7 -14.7	14						
15	44 32.3 -00.1	N 23 26.3 +00.0	78 18.5 -00.6	N 18 09.5 +00.7	127 36.4 -26.5	S 00 57.0 -14.8	15						
16	59 32.2 -00.2	N 23 26.3 -00.1	93 17.9 -00.6	N 18 10.2 +00.7	142 09.9 -26.5	S 00 42.2 -14.7	16						
17	74 32.0 -00.1	N 23 26.2 +00.0	108 17.3 -00.6	N 18 10.9 +00.8	156 43.4 -26.5	S 00 27.5 -14.7	17						
18	89 31.9 -00.1	N 23 26.2 +00.0	123 16.7 -00.5	N 18 11.7 +00.7	171 16.9 -26.4	S 00 12.8 -14.7	18						
19	104 31.8 -00.2	N 23 26.2 +00.0	138 16.2 -00.6	N 18 12.4 +00.7	185 50.5 -26.4	N 00 01.9 +14.6	19						
20	119 31.6 -00.1	N 23 26.2 +00.0	153 15.6 -00.6	N 18 13.1 +00.7	200 24.1 -26.4	N 00 16.5 +14.7	20						
21	134 31.5 -00.1	N 23 26.2 +00.0	168 15.0 -00.6	N 18 13.8 +00.7	214 57.7 -26.3	N 00 31.2 +14.6	21						
22	149 31.4 -00.2	N 23 26.2 +00.0	183 14.4 -00.5	N 18 14.5 +00.7	229 31.4 -26.4	N 00 45.8 +14.6	22						
23	164 31.2 -00.1	N 23 26.2 +00.0	198 13.9 -00.6	N 18 15.2 +00.8	244 05.0 -26.2	N 01 00.4 +14.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'6 15'6 15'5 15'5 15'5 15'4								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 57'3 57'2 57'0 56'9 56'7 56'6								
	SHA 270° 270° 270° 270° 270° 269°		SHA 304° 304° 304° 304° 303° 303°		SHA 359° 357° 355° 353° 351° 349°								
	Greenwich Culmination Time: 12:01		Greenwich Culmination Time: 09:46		Greenwich Culmination Time: 06:13								

  

UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	250 09.1 +00.7	N 06 05.0 +00.7	262 43.9 +02.2	N 01 25.5 +00.1	301 26.5 +02.5	S 14 16.8 +00.1	00						
01	265 09.8 +00.8	N 06 05.7 +00.7	277 46.1 +02.2	N 01 25.6 +00.1	316 29.0 +02.5	S 14 16.9 +00.0	01						
02	280 10.6 +00.8	N 06 06.4 +00.7	292 48.3 +02.2	N 01 25.7 +00.1	331 31.5 +02.5	S 14 16.9 +00.0	02						
03	295 11.4 +00.8	N 06 07.1 +00.6	307 50.5 +02.2	N 01 25.8 +00.1	346 34.0 +02.6	S 14 16.9 +00.0	03						
04	310 12.2 +00.8	N 06 07.7 +00.7	322 52.7 +02.2	N 01 25.9 +00.1	1 36.6 +02.5	S 14 16.9 +00.1	04						
05	325 13.0 +00.8	N 06 08.4 +00.7	337 54.9 +02.2	N 01 26.0 +00.1	16 39.1 +02.5	S 14 17.0 +00.0	05						
06	340 13.8 +00.7	N 06 09.1 +00.7	352 57.1 +02.2	N 01 26.1 +00.2	31 41.6 +02.5	S 14 17.0 +00.0	06						
07	355 14.5 +00.8	N 06 09.8 +00.6	7 59.3 +02.2	N 01 26.3 +00.1	46 44.1 +02.6	S 14 17.0 +00.1	07						
08	10 15.3 +00.8	N 06 10.4 +00.7	23 01.5 +02.2	N 01 26.4 +00.1	61 46.7 +02.5	S 14 17.1 +00.0	08						
09	25 16.1 +00.8	N 06 11.1 +00.7	38 03.7 +02.2	N 01 26.5 +00.1	76 49.2 +02.5	S 14 17.1 +00.0	09						
10	40 16.9 +00.8	N 06 11.8 +00.7	53 05.9 +02.2	N 01 26.6 +00.1	91 51.7 +02.5	S 14 17.1 +00.0	10						
11	55 17.7 +00.8	N 06 12.5 +00.6	68 08.1 +02.2	N 01 26.7 +00.1	106 54.2 +02.6	S 14 17.1 +00.1	11						
12	70 18.5 +00.7	N 06 13.1 +00.7	83 10.3 +02.2	N 01 26.8 +00.1	121 56.8 +02.5	S 14 17.2 +00.0	12						
13	85 19.2 +00.8	N 06 13.8 +00.7	98 12.5 +02.2	N 01 26.9 +00.1	136 59.3 +02.5	S 14 17.2 +00.0	13						
14	100 20.0 +00.8	N 06 14.5 +00.7	113 14.7 +02.2	N 01 27.0 +00.1	152 01.8 +02.6	S 14 17.2 +00.1	14						
15	115 20.8 +00.8	N 06 15.2 +00.6	128 16.9 +02.2	N 01 27.1 +00.1	167 04.4 +02.5	S 14 17.3 +00.0	15						
16	130 21.6 +00.8	N 06 15.8 +00.7	143 19.1 +02.2	N 01 27.2 +00.1	182 06.9 +02.5	S 14 17.3 +00.0	16						
17	145 22.4 +00.8	N 06 16.5 +00.7	158 21.3 +02.2	N 01 27.3 +00.1	197 09.4 +02.5	S 14 17.3 +00.1	17						
18	160 23.2 +00.7	N 06 17.2 +00.7	173 23.5 +02.2	N 01 27.4 +00.1	212 11.9 +02.6	S 14 17.4 +00.0	18						
19	175 23.9 +00.8	N 06 17.9 +00.6	188 25.7 +02.2	N 01 27.5 +00.1	227 14.5 +02.5	S 14 17.4 +00.0	19						
20	190 24.7 +00.8	N 06 18.5 +00.7	203 27.9 +02.2	N 01 27.6 +00.1	242 17.0 +02.5	S 14 17.4 +00.0	20						
21	205 25.5 +00.8	N 06 19.2 +00.7	218 30.1 +02.2	N 01 27.7 +00.1	257 19.5 +02.5	S 14 17.4 +00.1	21						
22	220 26.3 +00.8	N 06 19.9 +00.6	233 32.3 +02.2	N 01 27.8 +00.1	272 22.0 +02.6	S 14 17.5 +00.0	22						
23	235 27.1 +00.8	N 06 20.5 +00.7	248 34.5 +02.2	N 01 27.9 +00.1	287 24.6 +02.5	S 14 17.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 341° 341° 341° 341° 340° 340°		SHA 354° 354° 354° 353° 353° 353°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:19		Greenwich Culmination Time: 06:28		Greenwich Culmination Time: 03:53								

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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	
00	179 31.1 -00.2	N 23 26.2 +00.0	213 13.3 -00.6	N 18 16.0 +00.7	258 38.8 -26.3	N 01 15.0 +14.6	00						
01	194 30.9 -00.1	N 23 26.2 +00.0	228 12.7 -00.5	N 18 16.7 +00.7	273 12.5 -26.2	N 01 29.6 +14.5	01						
02	209 30.8 -00.1	N 23 26.2 +00.0	243 12.2 -00.6	N 18 17.4 +00.7	287 46.3 -26.2	N 01 44.1 +14.5	02						
03	224 30.7 -00.2	N 23 26.2 -00.1	258 11.6 -00.6	N 18 18.1 +00.7	302 20.1 -26.2	N 01 58.6 +14.5	03						
04	239 30.5 -00.1	N 23 26.1 +00.0	273 11.0 -00.6	N 18 18.8 +00.7	316 53.9 -26.2	N 02 13.1 +14.5	04						
05	254 30.4 -00.1	N 23 26.1 +00.0	288 10.4 -00.6	N 18 19.5 +00.7	331 27.7 -26.1	N 02 27.6 +14.5	05						
06	269 30.3 -00.2	N 23 26.1 +00.0	303 09.8 -00.5	N 18 20.2 +00.7	346 01.6 -26.1	N 02 42.1 +14.4	06						
07	284 30.1 -00.1	N 23 26.1 +00.0	318 09.3 -00.6	N 18 20.9 +00.7	0 35.5 -26.1	N 02 56.5 +14.4	07						
08	299 30.0 -00.1	N 23 26.1 +00.0	333 08.7 -00.6	N 18 21.6 +00.8	15 09.4 -26.1	N 03 10.9 +14.3	08						
09	314 29.9 -00.2	N 23 26.1 -00.1	348 08.1 -00.6	N 18 22.4 +00.7	29 43.3 -26.1	N 03 25.2 +14.4	09						
10	329 29.7 -00.1	N 23 26.0 +00.0	3 07.5 -00.6	N 18 23.1 +00.7	44 17.2 -26.1	N 03 39.6 +14.3	10						
11	344 29.6 -00.1	N 23 26.0 +00.0	18 06.9 -00.5	N 18 23.8 +00.7	58 51.1 -26.0	N 03 53.9 +14.3	11						
12	359 29.5 -00.2	N 23 26.0 +00.0	33 06.4 -00.6	N 18 24.5 +00.7	73 25.1 -26.0	N 04 08.2 +14.2	12						
13	14 29.3 -00.1	N 23 26.0 +00.0	48 05.8 -00.6	N 18 25.2 +00.7	87 59.1 -26.1	N 04 22.4 +14.2	13						
14	29 29.2 -00.2	N 23 26.0 +00.0	63 05.2 -00.6	N 18 25.9 +00.7	102 33.0 -26.0	N 04 36.6 +14.2	14						
15	44 29.0 -00.1	N 23 26.0 -00.1	78 04.6 -00.6	N 18 26.6 +00.7	117 07.0 -26.0	N 04 50.8 +14.1	15						
16	59 28.9 -00.1	N 23 25.9 +00.0	93 04.0 -00.5	N 18 27.3 +00.7	131 41.0 -26.0	N 05 04.9 +14.2	16						
17	74 28.8 -00.2	N 23 25.9 +00.0	108 03.5 -00.6	N 18 28.0 +00.7	146 15.0 -26.0	N 05 19.1 +14.0	17						
18	89 28.6 -00.1	N 23 25.9 +00.0	123 02.9 -00.6	N 18 28.7 +00.7	160 49.0 -26.0	N 05 33.1 +14.1	18						
19	104 28.5 -00.1	N 23 25.9 -00.1	138 02.3 -00.6	N 18 29.4 +00.7	175 23.0 -25.9	N 05 47.2 +14.0	19						
20	119 28.4 -00.2	N 23 25.8 +00.0	153 01.7 -00.6	N 18 30.1 +00.7	189 57.1 -26.0	N 06 01.2 +13.9	20						
21	134 28.2 -00.1	N 23 25.8 +00.0	168 01.1 -00.6	N 18 30.8 +00.7	204 31.1 -26.0	N 06 15.1 +14.0	21						
22	149 28.1 -00.1	N 23 25.8 +00.0	183 00.5 -00.6	N 18 31.5 +00.7	219 05.1 -26.0	N 06 29.1 +13.8	22						
23	164 28.0 -00.2	N 23 25.8 -00.1	197 59.9 -00.5	N 18 32.2 +00.7	233 39.1 -26.0	N 06 42.9 +13.9	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'4 15'4 15'3 15'3 15'3 15'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 56'5 56'4 56'2 56'1 56'0 55'9								
	SHA 269° 269° 269° 269° 269° 268°		SHA 303° 303° 303° 302° 302° 302°		SHA 348° 346° 344° 342° 340° 338°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 09:47		Greenwich Culmination Time: 06:57								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	250 27.9 +00.8	N 06 21.2 +00.7	263 36.7 +02.2	N 01 28.0 +00.1	302 27.1 +02.5	S 14 17.5 +00.1	00						
01	265 28.7 +00.7	N 06 21.9 +00.7	278 38.9 +02.2	N 01 28.1 +00.1	317 29.6 +02.5	S 14 17.6 +00.0	01						
02	280 29.4 +00.8	N 06 22.6 +00.6	293 41.1 +02.2	N 01 28.2 +00.1	332 32.1 +02.6	S 14 17.6 +00.0	02						
03	295 30.2 +00.8	N 06 23.2 +00.7	308 43.3 +02.2	N 01 28.3 +00.1	347 34.7 +02.5	S 14 17.6 +00.1	03						
04	310 31.0 +00.8	N 06 23.9 +00.7	323 45.5 +02.2	N 01 28.4 +00.1	2 37.2 +02.5	S 14 17.7 +00.0	04						
05	325 31.8 +00.8	N 06 24.6 +00.6	338 47.7 +02.2	N 01 28.5 +00.1	17 39.7 +02.6	S 14 17.7 +00.0	05						
06	340 32.6 +00.8	N 06 25.2 +00.7	353 49.9 +02.3	N 01 28.6 +00.0	32 42.3 +02.5	S 14 17.7 +00.0	06						
07	355 33.4 +00.7	N 06 25.9 +00.7	8 52.2 +02.2	N 01 28.6 +00.1	47 44.8 +02.5	S 14 17.7 +00.1	07						
08	10 34.1 +00.8	N 06 26.6 +00.7	23 54.4 +02.2	N 01 28.7 +00.1	62 47.3 +02.5	S 14 17.8 +00.0	08						
09	25 34.9 +00.8	N 06 27.3 +00.6	38 56.6 +02.2	N 01 28.8 +00.1	77 49.8 +02.6	S 14 17.8 +00.0	09						
10	40 35.7 +00.8	N 06 27.9 +00.7	53 58.8 +02.2	N 01 28.9 +00.1	92 52.4 +02.5	S 14 17.8 +00.1	10						
11	55 36.5 +00.8	N 06 28.6 +00.7	69 01.0 +02.2	N 01 29.0 +00.1	107 54.9 +02.5	S 14 17.9 +00.0	11						
12	70 37.3 +00.8	N 06 29.3 +00.6	84 03.2 +02.2	N 01 29.1 +00.1	122 57.4 +02.6	S 14 17.9 +00.0	12						
13	85 38.1 +00.8	N 06 29.9 +00.7	99 05.4 +02.2	N 01 29.2 +00.1	137 60.0 +02.5	S 14 17.9 +00.1	13						
14	100 38.9 +00.7	N 06 30.6 +00.7	114 07.6 +02.2	N 01 29.3 +00.1	153 02.5 +02.5	S 14 18.0 +00.0	14						
15	115 39.6 +00.8	N 06 31.3 +00.6	129 09.8 +02.2	N 01 29.4 +00.1	168 05.0 +02.6	S 14 18.0 +00.0	15						
16	130 40.4 +00.8	N 06 31.9 +00.7	144 12.0 +02.2	N 01 29.5 +00.1	183 07.6 +02.5	S 14 18.0 +00.0	16						
17	145 41.2 +00.8	N 06 32.6 +00.7	159 14.2 +02.2	N 01 29.6 +00.1	198 10.1 +02.5	S 14 18.0 +00.1	17						
18	160 42.0 +00.8	N 06 33.3 +00.7	174 16.4 +02.3	N 01 29.7 +00.1	213 12.6 +02.5	S 14 18.1 +00.0	18						
19	175 42.8 +00.8	N 06 34.0 +00.6	189 18.7 +02.2	N 01 29.8 +00.1	228 15.1 +02.6	S 14 18.1 +00.0	19						
20	190 43.6 +00.8	N 06 34.6 +00.7	204 20.9 +02.2	N 01 29.9 +00.1	243 17.7 +02.5	S 14 18.1 +00.1	20						
21	205 44.4 +00.7	N 06 35.3 +00.7	219 23.1 +02.2	N 01 30.0 +00.1	258 20.2 +02.5	S 14 18.2 +00.0	21						
22	220 45.1 +00.8	N 06 36.0 +00.6	234 25.3 +02.2	N 01 30.1 +00.1	273 22.7 +02.6	S 14 18.2 +00.0	22						
23	235 45.9 +00.8	N 06 36.6 +00.7	249 27.5 +02.2	N 01 30.2 +00.1	288 25.3 +02.5	S 14 18.2 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'1 00'1 00'1 00'1 00'1 00'1								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 340° 340° 340° 340° 340° 340°		SHA 353° 353° 353° 353° 353° 353°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:17		Greenwich Culmination Time: 06:24		Greenwich Culmination Time: 03:49								

UT	Sun				Venus				Moon				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	179 27.8 -00.1	N 23 25.7 +00.0	212 59.4 -00.6	N 18 32.9 +00.7	248 13.1 -26.0	N 06 56.8 +13.8	00							
01	194 27.7 -00.1	N 23 25.7 +00.0	227 58.8 -00.6	N 18 33.6 +00.7	262 47.1 -25.9	N 07 10.6 +13.8	01							
02	209 27.6 -00.2	N 23 25.7 -00.1	242 58.2 -00.6	N 18 34.3 +00.7	277 21.2 -26.0	N 07 24.4 +13.7	02							
03	224 27.4 -00.1	N 23 25.6 +00.0	257 57.6 -00.6	N 18 35.0 +00.7	291 55.2 -26.0	N 07 38.1 +13.7	03							
04	239 27.3 -00.2	N 23 25.6 +00.0	272 57.0 -00.6	N 18 35.7 +00.7	306 29.2 -26.0	N 07 51.8 +13.6	04							
05	254 27.1 -00.1	N 23 25.6 +00.0	287 56.4 -00.6	N 18 36.4 +00.6	321 03.2 -26.0	N 08 05.4 +13.6	05							
06	269 27.0 -00.1	N 23 25.6 -00.1	302 55.8 -00.6	N 18 37.0 +00.7	335 37.2 -26.0	N 08 19.0 +13.5	06							
07	284 26.9 -00.2	N 23 25.5 +00.0	317 55.2 -00.5	N 18 37.7 +00.7	350 11.2 -26.1	N 08 32.5 +13.5	07							
08	299 26.7 -00.1	N 23 25.5 +00.0	332 54.7 -00.6	N 18 38.4 +00.7	4 45.1 -26.0	N 08 46.0 +13.5	08							
09	314 26.6 -00.1	N 23 25.5 -00.1	347 54.1 -00.6	N 18 39.1 +00.7	19 19.1 -26.0	N 08 59.5 +13.4	09							
10	329 26.5 -00.2	N 23 25.4 +00.0	2 53.5 -00.6	N 18 39.8 +00.7	33 53.1 -26.1	N 09 12.9 +13.3	10							
11	344 26.3 -00.1	N 23 25.4 -00.1	17 52.9 -00.6	N 18 40.5 +00.7	48 27.0 -26.1	N 09 26.2 +13.3	11							
12	359 26.2 -00.1	N 23 25.3 +00.0	32 52.3 -00.6	N 18 41.2 +00.7	63 00.9 -26.0	N 09 39.5 +13.3	12							
13	14 26.1 -00.2	N 23 25.3 +00.0	47 51.7 -00.6	N 18 41.9 +00.6	77 34.9 -26.1	N 09 52.8 +13.2	13							
14	29 25.9 -00.1	N 23 25.3 -00.1	62 51.1 -00.6	N 18 42.5 +00.7	92 08.8 -26.2	N 10 06.0 +13.1	14							
15	44 25.8 -00.1	N 23 25.2 +00.0	77 50.5 -00.6	N 18 43.2 +00.7	106 42.6 -26.1	N 10 19.1 +13.1	15							
16	59 25.7 -00.2	N 23 25.2 +00.0	92 49.9 -00.6	N 18 43.9 +00.7	121 16.5 -26.1	N 10 32.2 +13.0	16							
17	74 25.5 -00.1	N 23 25.2 -00.1	107 49.3 -00.6	N 18 44.6 +00.7	135 50.4 -26.2	N 10 45.2 +13.0	17							
18	89 25.4 -00.1	N 23 25.1 +00.0	122 48.7 -00.6	N 18 45.3 +00.7	150 24.2 -26.2	N 10 58.2 +13.0	18							
19	104 25.3 -00.2	N 23 25.1 -00.1	137 48.1 -00.6	N 18 46.0 +00.6	164 58.0 -26.2	N 11 11.2 +12.8	19							
20	119 25.1 -00.1	N 23 25.0 +00.0	152 47.5 -00.6	N 18 46.6 +00.7	179 31.8 -26.2	N 11 24.0 +12.9	20							
21	134 25.0 -00.2	N 23 25.0 -00.1	167 46.9 -00.6	N 18 47.3 +00.7	194 05.6 -26.3	N 11 36.9 +12.7	21							
22	149 24.8 -00.1	N 23 24.9 +00.0	182 46.3 -00.6	N 18 48.0 +00.7	208 39.3 -26.2	N 11 49.6 +12.7	22							
23	164 24.7 -00.1	N 23 24.9 +00.0	197 45.7 -00.6	N 18 48.7 +00.7	223 13.1 -26.3	N 12 02.3 +12.7	23							
UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 268° 268° 268° 268° 268° 267°	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 302° 302° 301° 301° 301° 301°	Greenwich Culmination Time: 09:48	UT 02 06 10 14 18 22	SD 15'2 15'2 15'1 15'1 15'1 15'1	HP 55'8 55'7 55'6 55'5 55'4 55'3	SHA 336° 334° 332° 330° 329° 327°	Greenwich Culmination Time: 07:40

  

UT	Mars				Jupiter				Saturn				UT	
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec		
00	250 46.7 +00.8	N 06 37.3 +00.7	264 29.7 +02.2	N 01 30.3 +00.1	303 27.8 +02.5	S 14 18.3 +00.0	00							
01	265 47.5 +00.8	N 06 38.0 +00.6	279 31.9 +02.2	N 01 30.4 +00.1	318 30.3 +02.6	S 14 18.3 +00.0	01							
02	280 48.3 +00.8	N 06 38.6 +00.7	294 34.1 +02.2	N 01 30.5 +00.1	333 32.9 +02.5	S 14 18.3 +00.1	02							
03	295 49.1 +00.8	N 06 39.3 +00.7	309 36.3 +02.3	N 01 30.6 +00.1	348 35.4 +02.5	S 14 18.4 +00.0	03							
04	310 49.9 +00.7	N 06 40.0 +00.6	324 38.6 +02.2	N 01 30.7 +00.1	3 37.9 +02.6	S 14 18.4 +00.0	04							
05	325 50.6 +00.8	N 06 40.6 +00.7	339 40.8 +02.2	N 01 30.8 +00.1	18 40.5 +02.5	S 14 18.4 +00.1	05							
06	340 51.4 +00.8	N 06 41.3 +00.7	354 43.0 +02.2	N 01 30.9 +00.1	33 43.0 +02.5	S 14 18.5 +00.0	06							
07	355 52.2 +00.8	N 06 42.0 +00.6	9 45.2 +02.2	N 01 31.0 +00.1	48 45.5 +02.6	S 14 18.5 +00.0	07							
08	10 53.0 +00.8	N 06 42.6 +00.7	24 47.4 +02.2	N 01 31.1 +00.1	63 48.1 +02.5	S 14 18.5 +00.0	08							
09	25 53.8 +00.8	N 06 43.3 +00.7	39 49.6 +02.2	N 01 31.2 +00.1	78 50.6 +02.5	S 14 18.5 +00.1	09							
10	40 54.6 +00.8	N 06 44.0 +00.6	54 51.8 +02.2	N 01 31.3 +00.1	93 53.1 +02.6	S 14 18.6 +00.0	10							
11	55 55.4 +00.7	N 06 44.6 +00.7	69 54.0 +02.3	N 01 31.4 +00.1	108 55.7 +02.5	S 14 18.6 +00.0	11							
12	70 56.1 +00.8	N 06 45.3 +00.7	84 56.3 +02.2	N 01 31.5 +00.1	123 58.2 +02.5	S 14 18.6 +00.1	12							
13	85 56.9 +00.8	N 06 46.0 +00.6	99 58.5 +02.2	N 01 31.6 +00.1	139 00.7 +02.6	S 14 18.7 +00.0	13							
14	100 57.7 +00.8	N 06 46.6 +00.7	115 00.7 +02.2	N 01 31.7 +00.1	154 03.3 +02.5	S 14 18.7 +00.0	14							
15	115 58.5 +00.8	N 06 47.3 +00.7	130 02.9 +02.2	N 01 31.8 +00.0	169 05.8 +02.5	S 14 18.7 +00.1	15							
16	130 59.3 +00.8	N 06 48.0 +00.6	145 05.1 +02.2	N 01 31.8 +00.1	184 08.3 +02.6	S 14 18.8 +00.0	16							
17	146 00.1 +00.8	N 06 48.6 +00.7	160 07.3 +02.2	N 01 31.9 +00.1	199 10.9 +02.5	S 14 18.8 +00.0	17							
18	161 00.9 +00.7	N 06 49.3 +00.7	175 09.5 +02.3	N 01 32.0 +00.1	214 13.4 +02.5	S 14 18.8 +00.1	18							
19	176 01.6 +00.8	N 06 50.0 +00.6	190 11.8 +02.2	N 01 32.1 +00.1	229 15.9 +02.6	S 14 18.9 +00.0	19							
20	191 02.4 +00.8	N 06 50.6 +00.7	205 14.0 +02.2	N 01 32.2 +00.1	244 18.5 +02.5	S 14 18.9 +00.0	20							
21	206 03.2 +00.8	N 06 51.3 +00.7	220 16.2 +02.2	N 01 32.3 +00.1	259 21.0 +02.5	S 14 18.9 +00.1	21							
22	221 04.0 +00.8	N 06 52.0 +00.6	235 18.4 +02.2	N 01 32.4 +00.1	274 23.5 +02.6	S 14 19.0 +00.0	22							
23	236 04.8 +00.8	N 06 52.6 +00.7	250 20.6 +02.2	N 01 32.5 +00.1	289 26.1 +02.5	S 14 19.0 +00.0	23							
UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	SHA 340° 339° 339° 339° 339° 339°	Greenwich Culmination Time: 07:16	UT 02 06 10 14 18 22	SD 00'3 00'3 00'3 00'3 00'3 00'3	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 353° 353° 353° 353° 353° 353°	Greenwich Culmination Time: 06:21	UT 02 06 10 14 18 22	SD 00'1 00'1 00'1 00'1 00'2 00'2	HP 00'0 00'0 00'0 00'0 00'0 00'0	SHA 032° 032° 032° 032° 032° 032°	Greenwich Culmination Time: 03:45

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 24.6 -00.2	N 23 24.9 -00.1	212 45.1 -00.6	N 18 49.4 +00.6	237 46.8 -26.4	N 12 15.0 +12.6	00						
01	194 24.4 -00.1	N 23 24.8 +00.0	227 44.5 -00.6	N 18 50.0 +00.7	252 20.4 -26.3	N 12 27.6 +12.5	01						
02	209 24.3 -00.1	N 23 24.8 -00.1	242 43.9 -00.6	N 18 50.7 +00.7	266 54.1 -26.4	N 12 40.1 +12.5	02						
03	224 24.2 -00.2	N 23 24.7 +00.0	257 43.3 -00.6	N 18 51.4 +00.7	281 27.7 -26.4	N 12 52.6 +12.4	03						
04	239 24.0 -00.1	N 23 24.7 -00.1	272 42.7 -00.6	N 18 52.1 +00.6	296 01.3 -26.4	N 13 05.0 +12.3	04						
05	254 23.9 -00.1	N 23 24.6 +00.0	287 42.1 -00.6	N 18 52.7 +00.7	310 34.9 -26.5	N 13 17.3 +12.3	05						
06	269 23.8 -00.2	N 23 24.6 -00.1	302 41.5 -00.6	N 18 53.4 +00.7	325 08.4 -26.4	N 13 29.6 +12.2	06						
07	284 23.6 -00.1	N 23 24.5 +00.0	317 40.9 -00.6	N 18 54.1 +00.7	339 42.0 -26.6	N 13 41.8 +12.2	07						
08	299 23.5 -00.1	N 23 24.5 -00.1	332 40.3 -00.6	N 18 54.8 +00.6	354 15.4 -26.5	N 13 54.0 +12.0	08						
09	314 23.4 -00.2	N 23 24.4 +00.0	347 39.7 -00.6	N 18 55.4 +00.7	8 48.9 -26.6	N 14 06.0 +12.1	09						
10	329 23.2 -00.1	N 23 24.4 -00.1	2 39.1 -00.6	N 18 56.1 +00.7	23 22.3 -26.6	N 14 18.1 +11.9	10						
11	344 23.1 -00.1	N 23 24.3 +00.0	17 38.5 -00.6	N 18 56.8 +00.6	37 55.7 -26.6	N 14 30.0 +11.9	11						
12	359 23.0 -00.2	N 23 24.3 -00.1	32 37.9 -00.6	N 18 57.4 +00.7	52 29.1 -26.7	N 14 41.9 +11.8	12						
13	14 22.8 -00.1	N 23 24.2 +00.0	47 37.3 -00.6	N 18 58.1 +00.7	67 02.4 -26.7	N 14 53.7 +11.8	13						
14	29 22.7 -00.1	N 23 24.2 -00.1	62 36.7 -00.6	N 18 58.8 +00.6	81 35.7 -26.8	N 15 05.5 +11.6	14						
15	44 22.6 -00.2	N 23 24.1 -00.1	77 36.1 -00.6	N 18 59.4 +00.7	96 08.9 -26.8	N 15 17.1 +11.6	15						
16	59 22.4 -00.1	N 23 24.0 +00.0	92 35.5 -00.6	N 19 00.1 +00.7	110 42.1 -26.8	N 15 28.7 +11.6	16						
17	74 22.3 -00.1	N 23 24.0 -00.1	107 34.9 -00.6	N 19 00.8 +00.6	125 15.3 -26.9	N 15 40.3 +11.4	17						
18	89 22.2 -00.2	N 23 23.9 +00.0	122 34.3 -00.6	N 19 01.4 +00.7	139 48.4 -26.9	N 15 51.7 +11.4	18						
19	104 22.0 -00.1	N 23 23.9 -00.1	137 33.7 -00.6	N 19 02.1 +00.6	154 21.5 -26.9	N 16 03.1 +11.4	19						
20	119 21.9 -00.1	N 23 23.8 +00.0	152 33.1 -00.6	N 19 02.7 +00.7	168 54.6 -27.0	N 16 14.5 +11.2	20						
21	134 21.8 -00.2	N 23 23.8 -00.1	167 32.5 -00.6	N 19 03.4 +00.7	183 27.6 -27.0	N 16 25.7 +11.2	21						
22	149 21.6 -00.1	N 23 23.7 -00.1	182 31.9 -00.6	N 19 04.1 +00.6	198 00.6 -27.0	N 16 36.9 +11.1	22						
23	164 21.5 -00.1	N 23 23.6 +00.0	197 31.3 -00.7	N 19 04.7 +00.7	212 33.6 -27.1	N 16 48.0 +11.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 15'0 15'0 15'0 15'0 14'9 14'9								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 55'2 55'1 55'0 54'9 54'9 54'8								
	SHA 267° 267° 267° 267° 267° 266°		SHA 301° 300° 300° 300° 300° 299°		SHA 325° 323° 321° 319° 317° 315°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 09:49		Greenwich Culmination Time: 08:23								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251 05.6 +00.8	N 06 53.3 +00.7	265 22.8 +02.3	N 01 32.6 +00.1	304 28.6 +02.5	S 14 19.0 +00.1	00						
01	266 06.4 +00.8	N 06 54.0 +00.6	280 25.1 +02.2	N 01 32.7 +00.1	319 31.1 +02.6	S 14 19.1 +00.0	01						
02	281 07.2 +00.7	N 06 54.6 +00.7	295 27.3 +02.2	N 01 32.8 +00.1	334 33.7 +02.5	S 14 19.1 +00.0	02						
03	296 07.9 +00.8	N 06 55.3 +00.7	310 29.5 +02.2	N 01 32.9 +00.1	349 36.2 +02.5	S 14 19.1 +00.1	03						
04	311 08.7 +00.8	N 06 56.0 +00.6	325 31.7 +02.2	N 01 33.0 +00.1	4 38.7 +02.6	S 14 19.2 +00.0	04						
05	326 09.5 +00.8	N 06 56.6 +00.7	340 33.9 +02.2	N 01 33.1 +00.1	19 41.3 +02.5	S 14 19.2 +00.0	05						
06	341 10.3 +00.8	N 06 57.3 +00.6	355 36.1 +02.3	N 01 33.2 +00.1	34 43.8 +02.5	S 14 19.2 +00.1	06						
07	356 11.1 +00.8	N 06 57.9 +00.7	10 38.4 +02.2	N 01 33.3 +00.1	49 46.3 +02.6	S 14 19.3 +00.0	07						
08	11 11.9 +00.8	N 06 58.6 +00.7	25 40.6 +02.2	N 01 33.4 +00.0	64 48.9 +02.5	S 14 19.3 +00.0	08						
09	26 12.7 +00.7	N 06 59.3 +00.6	40 42.8 +02.2	N 01 33.4 +00.1	79 51.4 +02.6	S 14 19.3 +00.1	09						
10	41 13.4 +00.8	N 06 59.9 +00.7	55 45.0 +02.2	N 01 33.5 +00.1	94 54.0 +02.5	S 14 19.4 +00.0	10						
11	56 14.2 +00.8	N 07 00.6 +00.7	70 47.2 +02.3	N 01 33.6 +00.1	109 56.5 +02.5	S 14 19.4 +00.0	11						
12	71 15.0 +00.8	N 07 01.3 +00.6	85 49.5 +02.2	N 01 33.7 +00.1	124 59.0 +02.6	S 14 19.4 +00.1	12						
13	86 15.8 +00.8	N 07 01.9 +00.7	100 51.7 +02.2	N 01 33.8 +00.1	140 01.6 +02.5	S 14 19.5 +00.0	13						
14	101 16.6 +00.8	N 07 02.6 +00.7	115 53.9 +02.2	N 01 33.9 +00.1	155 04.1 +02.5	S 14 19.5 +00.0	14						
15	116 17.4 +00.8	N 07 03.3 +00.6	130 56.1 +02.2	N 01 34.0 +00.1	170 06.6 +02.6	S 14 19.5 +00.1	15						
16	131 18.2 +00.8	N 07 03.9 +00.7	145 58.3 +02.3	N 01 34.1 +00.1	185 09.2 +02.5	S 14 19.6 +00.0	16						
17	146 19.0 +00.7	N 07 04.6 +00.6	161 00.6 +02.2	N 01 34.2 +00.1	200 11.7 +02.6	S 14 19.6 +00.0	17						
18	161 19.7 +00.8	N 07 05.2 +00.7	176 02.8 +02.2	N 01 34.3 +00.1	215 14.3 +02.5	S 14 19.6 +00.1	18						
19	176 20.5 +00.8	N 07 05.9 +00.7	191 05.0 +02.2	N 01 34.4 +00.1	230 16.8 +02.5	S 14 19.7 +00.0	19						
20	191 21.3 +00.8	N 07 06.6 +00.6	206 07.2 +02.3	N 01 34.5 +00.1	245 19.3 +02.6	S 14 19.7 +00.0	20						
21	206 22.1 +00.8	N 07 07.2 +00.7	221 09.5 +02.2	N 01 34.6 +00.0	260 21.9 +02.5	S 14 19.7 +00.1	21						
22	221 22.9 +00.8	N 07 07.9 +00.6	236 11.7 +02.2	N 01 34.6 +00.1	275 24.4 +02.5	S 14 19.8 +00.0	22						
23	236 23.7 +00.8	N 07 08.5 +00.7	251 13.9 +02.2	N 01 34.7 +00.1	290 26.9 +02.6	S 14 19.8 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 339° 339° 339° 339° 338° 338°		SHA 353° 353° 353° 353° 353° 353°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:15		Greenwich Culmination Time: 06:17		Greenwich Culmination Time: 03:41								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 21.4 -00.2	N 23 23.6 -00.1	212 30.6 -00.6	N 19 05.4 +00.6	227 06.5 -27.2	N 16 59.0 +10.9	00						
01	194 21.2 -00.1	N 23 23.5 -00.1	227 30.0 -00.6	N 19 06.0 +00.7	241 39.3 -27.1	N 17 09.9 +10.9	01						
02	209 21.1 -00.1	N 23 23.4 +00.0	242 29.4 -00.6	N 19 06.7 +00.7	256 12.2 -27.3	N 17 20.8 +10.7	02						
03	224 21.0 -00.2	N 23 23.4 -00.1	257 28.8 -00.6	N 19 07.4 +00.6	270 44.9 -27.2	N 17 31.5 +10.7	03						
04	239 20.8 -00.1	N 23 23.3 +00.0	272 28.2 -00.6	N 19 08.0 +00.7	285 17.7 -27.3	N 17 42.2 +10.7	04						
05	254 20.7 -00.2	N 23 23.3 -00.1	287 27.6 -00.6	N 19 08.7 +00.6	299 50.4 -27.4	N 17 52.9 +10.5	05						
06	269 20.5 -00.1	N 23 23.2 -00.1	302 27.0 -00.6	N 19 09.3 +00.7	314 23.0 -27.4	N 18 03.4 +10.5	06						
07	284 20.4 -00.1	N 23 23.1 +00.0	317 26.4 -00.7	N 19 10.0 +00.6	328 55.6 -27.4	N 18 13.9 +10.3	07						
08	299 20.3 -00.2	N 23 23.1 -00.1	332 25.7 -00.6	N 19 10.6 +00.7	343 28.2 -27.5	N 18 24.2 +10.3	08						
09	314 20.1 -00.1	N 23 23.0 -00.1	347 25.1 -00.6	N 19 11.3 +00.6	358 00.7 -27.5	N 18 34.5 +10.2	09						
10	329 20.0 -00.1	N 23 22.9 -00.1	2 24.5 -00.6	N 19 11.9 +00.7	12 33.2 -27.6	N 18 44.7 +10.2	10						
11	344 19.9 -00.2	N 23 22.8 +00.0	17 23.9 -00.6	N 19 12.6 +00.6	27 05.6 -27.6	N 18 54.9 +10.0	11						
12	359 19.7 -00.1	N 23 22.8 -00.1	32 23.3 -00.6	N 19 13.2 +00.7	41 38.0 -27.7	N 19 04.9 +09.9	12						
13	14 19.6 -00.1	N 23 22.7 -00.1	47 22.7 -00.6	N 19 13.9 +00.6	56 10.3 -27.7	N 19 14.8 +09.9	13						
14	29 19.5 -00.2	N 23 22.6 +00.0	62 22.1 -00.7	N 19 14.5 +00.7	70 42.6 -27.8	N 19 24.7 +09.8	14						
15	44 19.3 -00.1	N 23 22.6 -00.1	77 21.4 -00.6	N 19 15.2 +00.6	85 14.8 -27.8	N 19 34.5 +09.7	15						
16	59 19.2 -00.1	N 23 22.5 -00.1	92 20.8 -00.6	N 19 15.8 +00.7	99 47.0 -27.8	N 19 44.2 +09.6	16						
17	74 19.1 -00.2	N 23 22.4 -00.1	107 20.2 -00.6	N 19 16.5 +00.6	114 19.2 -27.9	N 19 53.8 +09.5	17						
18	89 18.9 -00.1	N 23 22.3 +00.0	122 19.6 -00.6	N 19 17.1 +00.6	128 51.3 -28.0	N 20 03.3 +09.4	18						
19	104 18.8 -00.1	N 23 22.3 -00.1	137 19.0 -00.6	N 19 17.7 +00.7	143 23.3 -28.0	N 20 12.7 +09.3	19						
20	119 18.7 -00.1	N 23 22.2 -00.1	152 18.4 -00.7	N 19 18.4 +00.6	157 55.3 -28.0	N 20 22.0 +09.2	20						
21	134 18.6 -00.2	N 23 22.1 -00.1	167 17.7 -00.6	N 19 19.0 +00.7	172 27.3 -28.1	N 20 31.2 +09.2	21						
22	149 18.4 -00.1	N 23 22.0 +00.0	182 17.1 -00.6	N 19 19.7 +00.6	186 59.2 -28.2	N 20 40.4 +09.0	22						
23	164 18.3 -00.1	N 23 22.0 -00.1	197 16.5 -00.6	N 19 20.3 +00.6	201 31.0 -28.2	N 20 49.4 +09.0	23						
	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	UT 02 06 10 14 18 22	SD 15'7 15'7 15'7 15'7 15'7 15'7	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 14'9 14'9 14'9 14'9 14'8 14'8	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 00'1 00'1 00'1 00'1 00'1 00'1	SD 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 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 54'7 54'7 54'6 54'5 54'5 54'4	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'0 00'0 00'0 00'0 00'0 00'0	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 00'1 00'1 00'1 00'1 00'1	HP 00'1 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 266° 266° 266° 266° 265° 265°	SHA 299° 299° 299° 299° 298° 298°	SHA 299° 299° 299° 299° 298° 298°	SHA 299° 299° 299° 299° 298° 298°	SHA 313° 311° 309° 307° 305° 303°	SHA 353° 353° 353° 353° 353° 353°	SHA 353° 353° 353° 353° 353° 353°	SHA 338° 338° 338° 338° 338° 338°	SHA 338° 338° 338° 338° 338° 338°	SHA 338° 338° 338° 338° 338° 338°	SHA 338° 338° 338° 338° 338° 338°	SHA 338° 338° 338° 338° 338° 338°	SHA 338° 338° 338° 338° 338° 338°
	Greenwich Culmination Time: 12:02	Greenwich Culmination Time: 09:50	Greenwich Culmination Time: 09:50	Greenwich Culmination Time: 09:08		Greenwich Culmination Time: 06:14	Greenwich Culmination Time: 06:14	Greenwich Culmination Time: 07:13	Greenwich Culmination Time: 07:13	Greenwich Culmination Time: 07:13	Greenwich Culmination Time: 07:13	Greenwich Culmination Time: 07:13	Greenwich Culmination Time: 07:13

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 18.2 -00.2	N 23 21.9 -00.1	212 15.9 -00.7	N 19 20.9 +00.7	216 02.8 -28.2	N 20 58.4 +08.8	00						
01	194 18.0 -00.1	N 23 21.8 -00.1	227 15.2 -00.6	N 19 21.6 +00.6	230 34.6 -28.3	N 21 07.2 +08.8	01						
02	209 17.9 -00.1	N 23 21.7 -00.1	242 14.6 -00.6	N 19 22.2 +00.7	245 06.3 -28.3	N 21 16.0 +08.6	02						
03	224 17.8 -00.2	N 23 21.6 +00.0	257 14.0 -00.6	N 19 22.9 +00.6	259 38.0 -28.4	N 21 24.6 +08.6	03						
04	239 17.6 -00.1	N 23 21.6 -00.1	272 13.4 -00.6	N 19 23.5 +00.6	274 09.6 -28.5	N 21 33.2 +08.5	04						
05	254 17.5 -00.1	N 23 21.5 -00.1	287 12.8 -00.7	N 19 24.1 +00.7	288 41.1 -28.5	N 21 41.7 +08.3	05						
06	269 17.4 -00.2	N 23 21.4 -00.1	302 12.1 -00.6	N 19 24.8 +00.6	303 12.6 -28.5	N 21 50.0 +08.3	06						
07	284 17.2 -00.1	N 23 21.3 -00.1	317 11.5 -00.6	N 19 25.4 +00.6	317 44.1 -28.6	N 21 58.3 +08.2	07						
08	299 17.1 -00.1	N 23 21.2 -00.1	332 10.9 -00.6	N 19 26.0 +00.7	332 15.5 -28.6	N 22 06.5 +08.0	08						
09	314 17.0 -00.2	N 23 21.1 -00.1	347 10.3 -00.7	N 19 26.7 +00.6	346 46.9 -28.7	N 22 14.5 +08.0	09						
10	329 16.8 -00.1	N 23 21.0 +00.0	2 09.6 -00.6	N 19 27.3 +00.6	1 18.2 -28.7	N 22 22.5 +07.9	10						
11	344 16.7 -00.1	N 23 21.0 -00.1	17 09.0 -00.6	N 19 27.9 +00.6	15 49.5 -28.8	N 22 30.4 +07.7	11						
12	359 16.6 -00.2	N 23 20.9 -00.1	32 08.4 -00.6	N 19 28.5 +00.7	30 20.7 -28.8	N 22 38.1 +07.7	12						
13	14 16.4 -00.1	N 23 20.8 -00.1	47 07.8 -00.7	N 19 29.2 +00.6	44 51.9 -28.9	N 22 45.8 +07.5	13						
14	29 16.3 -00.1	N 23 20.7 -00.1	62 07.1 -00.6	N 19 29.8 +00.6	59 23.0 -28.9	N 22 53.3 +07.5	14						
15	44 16.2 -00.2	N 23 20.6 -00.1	77 06.5 -00.6	N 19 30.4 +00.6	73 54.1 -29.0	N 23 00.8 +07.3	15						
16	59 16.0 -00.1	N 23 20.5 -00.1	92 05.9 -00.7	N 19 31.0 +00.7	88 25.1 -29.0	N 23 08.1 +07.3	16						
17	74 15.9 -00.1	N 23 20.4 -00.1	107 05.2 -00.6	N 19 31.7 +00.6	102 56.1 -29.1	N 23 15.4 +07.1	17						
18	89 15.8 -00.2	N 23 20.3 -00.1	122 04.6 -00.6	N 19 32.3 +00.6	117 27.0 -29.1	N 23 22.5 +07.0	18						
19	104 15.6 -00.1	N 23 20.2 -00.1	137 04.0 -00.7	N 19 32.9 +00.6	131 57.9 -29.1	N 23 29.5 +06.9	19						
20	119 15.5 -00.1	N 23 20.1 +00.0	152 03.3 -00.6	N 19 33.5 +00.7	146 28.8 -29.3	N 23 36.4 +06.8	20						
21	134 15.4 -00.2	N 23 20.1 -00.1	167 02.7 -00.6	N 19 34.2 +00.6	160 59.5 -29.2	N 23 43.2 +06.7	21						
22	149 15.2 -00.1	N 23 20.0 -00.1	182 02.1 -00.6	N 19 34.8 +00.6	175 30.3 -29.3	N 23 49.9 +06.6	22						
23	164 15.1 -00.1	N 23 19.9 -00.1	197 01.5 -00.7	N 19 35.4 +00.6	190 01.0 -29.3	N 23 56.5 +06.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'8 14'8 14'8 14'8 14'8 14'8								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'4 54'3 54'3 54'2 54'2 54'2								
	SHA 265° 265° 265° 265° 264° 264°		SHA 298° 298° 298° 297° 297° 297°		SHA 301° 299° 297° 295° 293° 291°								
	Greenwich Culmination Time: 12:02		Greenwich Culmination Time: 09:51		Greenwich Culmination Time: 09:54								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	251 43.4 +00.8	N 07 25.0 +00.7	267 09.6 +02.2	N 01 37.0 +00.1	306 30.5 +02.5	S 14 20.6 +00.1	00						
01	266 44.2 +00.8	N 07 25.7 +00.6	282 11.8 +02.2	N 01 37.1 +00.1	321 33.0 +02.5	S 14 20.7 +00.0	01						
02	281 45.0 +00.8	N 07 26.3 +00.7	297 14.0 +02.2	N 01 37.2 +00.1	336 35.5 +02.6	S 14 20.7 +00.0	02						
03	296 45.8 +00.7	N 07 27.0 +00.7	312 16.2 +02.3	N 01 37.3 +00.0	351 38.1 +02.5	S 14 20.7 +00.1	03						
04	311 46.5 +00.8	N 07 27.7 +00.6	327 18.5 +02.2	N 01 37.3 +00.1	6 40.6 +02.6	S 14 20.8 +00.0	04						
05	326 47.3 +00.8	N 07 28.3 +00.7	342 20.7 +02.2	N 01 37.4 +00.1	21 43.2 +02.5	S 14 20.8 +00.0	05						
06	341 48.1 +00.8	N 07 29.0 +00.6	357 22.9 +02.3	N 01 37.5 +00.1	36 45.7 +02.6	S 14 20.8 +00.1	06						
07	356 48.9 +00.8	N 07 29.6 +00.7	12 25.2 +02.2	N 01 37.6 +00.1	51 48.3 +02.5	S 14 20.9 +00.0	07						
08	11 49.7 +00.8	N 07 30.3 +00.6	27 27.4 +02.2	N 01 37.7 +00.1	66 50.8 +02.5	S 14 20.9 +00.1	08						
09	26 50.5 +00.8	N 07 30.9 +00.7	42 29.6 +02.3	N 01 37.8 +00.1	81 53.3 +02.6	S 14 21.0 +00.0	09						
10	41 51.3 +00.8	N 07 31.6 +00.6	57 31.9 +02.2	N 01 37.9 +00.1	96 55.9 +02.5	S 14 21.0 +00.0	10						
11	56 52.1 +00.8	N 07 32.2 +00.7	72 34.1 +02.2	N 01 38.0 +00.0	111 58.4 +02.6	S 14 21.0 +00.1	11						
12	71 52.9 +00.7	N 07 32.9 +00.7	87 36.3 +02.3	N 01 38.0 +00.1	127 01.0 +02.5	S 14 21.1 +00.0	12						
13	86 53.6 +00.8	N 07 33.6 +00.6	102 38.6 +02.2	N 01 38.1 +00.1	142 03.5 +02.6	S 14 21.1 +00.0	13						
14	101 54.4 +00.8	N 07 34.2 +00.7	117 40.8 +02.2	N 01 38.2 +00.1	157 06.1 +02.5	S 14 21.1 +00.1	14						
15	116 55.2 +00.8	N 07 34.9 +00.6	132 43.0 +02.3	N 01 38.3 +00.1	172 08.6 +02.5	S 14 21.2 +00.0	15						
16	131 56.0 +00.8	N 07 35.5 +00.7	147 45.3 +02.2	N 01 38.4 +00.1	187 11.1 +02.6	S 14 21.2 +00.0	16						
17	146 56.8 +00.8	N 07 36.2 +00.6	162 47.5 +02.2	N 01 38.5 +00.1	202 13.7 +02.5	S 14 21.2 +00.1	17						
18	161 57.6 +00.8	N 07 36.8 +00.7	177 49.7 +02.3	N 01 38.6 +00.1	217 16.2 +02.6	S 14 21.3 +00.0	18						
19	176 58.4 +00.8	N 07 37.5 +00.6	192 52.0 +02.2	N 01 38.7 +00.0	232 18.8 +02.5	S 14 21.3 +00.0	19						
20	191 59.2 +00.8	N 07 38.1 +00.7	207 54.2 +02.2	N 01 38.7 +00.1	247 21.3 +02.6	S 14 21.3 +00.1	20						
21	206 60.0 +00.8	N 07 38.8 +00.6	222 56.4 +02.3	N 01 38.8 +00.1	262 23.9 +02.5	S 14 21.4 +00.0	21						
22	222 00.8 +00.7	N 07 39.4 +00.7	237 58.7 +02.2	N 01 38.9 +00.1	277 26.4 +02.6	S 14 21.4 +00.1	22						
23	237 01.5 +00.8	N 07 40.1 +00.6	253 00.9 +02.2	N 01 39.0 +00.1	292 29.0 +02.5	S 14 21.5 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 338° 337° 337° 337° 337° 337°		SHA 353° 353° 353° 353° 353° 353°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:12		Greenwich Culmination Time: 06:10		Greenwich Culmination Time: 03:33								

UT	<b>Sun</b>				<b>Venus</b>				<b>Moon</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 15.0 -00.1	N 23 19.8 -00.1	212 00.8 -00.6	N 19 36.0 +00.6	204 31.7 -29.4	N 24 03.0 +06.3	00						
01	194 14.9 -00.2	N 23 19.7 -00.1	227 00.2 -00.6	N 19 36.6 +00.7	219 02.3 -29.5	N 24 09.3 +06.3	01						
02	209 14.7 -00.1	N 23 19.6 -00.1	241 59.6 -00.7	N 19 37.3 +00.6	233 32.8 -29.4	N 24 15.6 +06.1	02						
03	224 14.6 -00.1	N 23 19.5 -00.1	256 58.9 -00.6	N 19 37.9 +00.6	248 03.4 -29.6	N 24 21.7 +06.0	03						
04	239 14.5 -00.2	N 23 19.4 -00.1	271 58.3 -00.6	N 19 38.5 +00.6	262 33.8 -29.5	N 24 27.7 +05.9	04						
05	254 14.3 -00.1	N 23 19.3 -00.1	286 57.7 -00.7	N 19 39.1 +00.6	277 04.3 -29.6	N 24 33.6 +05.8	05						
06	269 14.2 -00.1	N 23 19.2 -00.1	301 57.0 -00.6	N 19 39.7 +00.6	291 34.7 -29.7	N 24 39.4 +05.7	06						
07	284 14.1 -00.2	N 23 19.1 -00.1	316 56.4 -00.7	N 19 40.3 +00.6	306 05.0 -29.7	N 24 45.1 +05.5	07						
08	299 13.9 -00.1	N 23 19.0 -00.1	331 55.7 -00.6	N 19 40.9 +00.6	320 35.3 -29.7	N 24 50.6 +05.5	08						
09	314 13.8 -00.1	N 23 18.9 -00.1	346 55.1 -00.6	N 19 41.5 +00.7	335 05.6 -29.8	N 24 56.1 +05.3	09						
10	329 13.7 -00.2	N 23 18.8 -00.1	1 54.5 -00.7	N 19 42.2 +00.6	349 35.8 -29.8	N 25 01.4 +05.2	10						
11	344 13.5 -00.1	N 23 18.7 -00.1	16 53.8 -00.6	N 19 42.8 +00.6	4 06.0 -29.8	N 25 06.6 +05.1	11						
12	359 13.4 -00.1	N 23 18.6 -00.1	31 53.2 -00.6	N 19 43.4 +00.6	18 36.2 -29.9	N 25 11.7 +05.0	12						
13	14 13.3 -00.1	N 23 18.5 -00.2	46 52.6 -00.7	N 19 44.0 +00.6	33 06.3 -29.9	N 25 16.7 +04.8	13						
14	29 13.2 -00.2	N 23 18.3 -00.1	61 51.9 -00.6	N 19 44.6 +00.6	47 36.4 -30.0	N 25 21.5 +04.8	14						
15	44 13.0 -00.1	N 23 18.2 -00.1	76 51.3 -00.7	N 19 45.2 +00.6	62 06.4 -30.0	N 25 26.3 +04.6	15						
16	59 12.9 -00.1	N 23 18.1 -00.1	91 50.6 -00.6	N 19 45.8 +00.6	76 36.4 -30.0	N 25 30.9 +04.5	16						
17	74 12.8 -00.2	N 23 18.0 -00.1	106 50.0 -00.6	N 19 46.4 +00.6	91 06.4 -30.1	N 25 35.4 +04.4	17						
18	89 12.6 -00.1	N 23 17.9 -00.1	121 49.4 -00.7	N 19 47.0 +00.6	105 36.3 -30.1	N 25 39.8 +04.2	18						
19	104 12.5 -00.1	N 23 17.8 -00.1	136 48.7 -00.6	N 19 47.6 +00.6	120 06.2 -30.1	N 25 44.0 +04.1	19						
20	119 12.4 -00.2	N 23 17.7 -00.1	151 48.1 -00.7	N 19 48.2 +00.6	134 36.1 -30.2	N 25 48.1 +04.0	20						
21	134 12.2 -00.1	N 23 17.6 -00.1	166 47.4 -00.6	N 19 48.8 +00.6	149 05.9 -30.1	N 25 52.1 +03.9	21						
22	149 12.1 -00.1	N 23 17.5 -00.1	181 46.8 -00.7	N 19 49.4 +00.6	163 35.8 -30.3	N 25 56.0 +03.8	22						
23	164 12.0 -00.1	N 23 17.4 -00.2	196 46.1 -00.6	N 19 50.0 +00.6	178 05.5 -30.2	N 25 59.8 +03.6	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 54'1 54'1 54'1 54'0 54'0 54'0								
	SHA 264° 264° 264° 264° 263° 263°		SHA 297° 297° 296° 296° 296° 296°		SHA 288° 286° 284° 282° 280° 278°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:52		Greenwich Culmination Time: 10:43								

  

UT	<b>Mars</b>				<b>Jupiter</b>				<b>Saturn</b>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 02.3 +00.8	N 07 40.7 +00.7	268 03.1 +02.3	N 01 39.1 +00.1	307 31.5 +02.6	S 14 21.5 +00.0	00						
01	267 03.1 +00.8	N 07 41.4 +00.7	283 05.4 +02.2	N 01 39.2 +00.1	322 34.1 +02.5	S 14 21.5 +00.1	01						
02	282 03.9 +00.8	N 07 42.1 +00.6	298 07.6 +02.2	N 01 39.3 +00.0	337 36.6 +02.5	S 14 21.6 +00.0	02						
03	297 04.7 +00.8	N 07 42.7 +00.7	313 09.8 +02.3	N 01 39.3 +00.1	352 39.1 +02.6	S 14 21.6 +00.0	03						
04	312 05.5 +00.8	N 07 43.4 +00.6	328 12.1 +02.2	N 01 39.4 +00.1	7 41.7 +02.5	S 14 21.6 +00.1	04						
05	327 06.3 +00.8	N 07 44.0 +00.7	343 14.3 +02.2	N 01 39.5 +00.1	22 44.2 +02.6	S 14 21.7 +00.0	05						
06	342 07.1 +00.8	N 07 44.7 +00.6	358 16.5 +02.3	N 01 39.6 +00.1	37 46.8 +02.5	S 14 21.7 +00.0	06						
07	357 07.9 +00.8	N 07 45.3 +00.7	13 18.8 +02.2	N 01 39.7 +00.1	52 49.3 +02.6	S 14 21.7 +00.1	07						
08	12 08.7 +00.8	N 07 46.0 +00.6	28 21.0 +02.3	N 01 39.8 +00.1	67 51.9 +02.5	S 14 21.8 +00.0	08						
09	27 09.5 +00.7	N 07 46.6 +00.7	43 23.3 +02.2	N 01 39.9 +00.0	82 54.4 +02.6	S 14 21.8 +00.0	09						
10	42 10.2 +00.8	N 07 47.3 +00.6	58 25.5 +02.2	N 01 39.9 +00.1	97 57.0 +02.5	S 14 21.8 +00.1	10						
11	57 11.0 +00.8	N 07 47.9 +00.7	73 27.7 +02.3	N 01 40.0 +00.1	112 59.5 +02.6	S 14 21.9 +00.0	11						
12	72 11.8 +00.8	N 07 48.6 +00.6	88 30.0 +02.2	N 01 40.1 +00.1	128 02.1 +02.5	S 14 21.9 +00.1	12						
13	87 12.6 +00.8	N 07 49.2 +00.7	103 32.2 +02.2	N 01 40.2 +00.1	143 04.6 +02.6	S 14 22.0 +00.0	13						
14	102 13.4 +00.8	N 07 49.9 +00.6	118 34.4 +02.3	N 01 40.3 +00.1	158 07.2 +02.5	S 14 22.0 +00.0	14						
15	117 14.2 +00.8	N 07 50.5 +00.7	133 36.7 +02.2	N 01 40.4 +00.0	173 09.7 +02.6	S 14 22.0 +00.1	15						
16	132 15.0 +00.8	N 07 51.2 +00.6	148 38.9 +02.3	N 01 40.4 +00.1	188 12.3 +02.5	S 14 22.1 +00.0	16						
17	147 15.8 +00.8	N 07 51.8 +00.7	163 41.2 +02.2	N 01 40.5 +00.1	203 14.8 +02.6	S 14 22.1 +00.0	17						
18	162 16.6 +00.8	N 07 52.5 +00.6	178 43.4 +02.2	N 01 40.6 +00.1	218 17.4 +02.5	S 14 22.1 +00.1	18						
19	177 17.4 +00.7	N 07 53.1 +00.7	193 45.6 +02.3	N 01 40.7 +00.1	233 19.9 +02.6	S 14 22.2 +00.0	19						
20	192 18.1 +00.8	N 07 53.8 +00.6	208 47.9 +02.2	N 01 40.8 +00.1	248 22.5 +02.5	S 14 22.2 +00.1	20						
21	207 18.9 +00.8	N 07 54.4 +00.7	223 50.1 +02.3	N 01 40.9 +00.0	263 25.0 +02.6	S 14 22.3 +00.0	21						
22	222 19.7 +00.8	N 07 55.1 +00.6	238 52.4 +02.2	N 01 40.9 +00.1	278 27.6 +02.5	S 14 22.3 +00.0	22						
23	237 20.5 +00.8	N 07 55.7 +00.7	253 54.6 +02.3	N 01 41.0 +00.1	293 30.1 +02.6	S 14 22.3 +00.1	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 337° 337° 337° 337° 336° 336°		SHA 353° 353° 353° 353° 353° 353°		SHA 032° 032° 032° 032° 032° 032°								
	Greenwich Culmination Time: 07:11		Greenwich Culmination Time: 06:06		Greenwich Culmination Time: 03:29								



UT	Sun				Venus				Moon				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 11.9 -00.2	N 23 17.2 -00.1	211 45.5 -00.6	N 19 50.6 +00.6	192 35.3 -30.3	N 26 03.4 +03.5	00						
01	194 11.7 -00.1	N 23 17.1 -00.1	226 44.9 -00.7	N 19 51.2 +00.6	207 05.0 -30.3	N 26 06.9 +03.4	01						
02	209 11.6 -00.1	N 23 17.0 -00.1	241 44.2 -00.6	N 19 51.8 +00.6	221 34.7 -30.4	N 26 10.3 +03.3	02						
03	224 11.5 -00.2	N 23 16.9 -00.1	256 43.6 -00.7	N 19 52.4 +00.6	236 04.3 -30.3	N 26 13.6 +03.1	03						
04	239 11.3 -00.1	N 23 16.8 -00.1	271 42.9 -00.6	N 19 53.0 +00.6	250 34.0 -30.4	N 26 16.7 +03.1	04						
05	254 11.2 -00.1	N 23 16.7 -00.1	286 42.3 -00.7	N 19 53.6 +00.6	265 03.6 -30.4	N 26 19.8 +02.9	05						
06	269 11.1 -00.1	N 23 16.6 -00.2	301 41.6 -00.6	N 19 54.2 +00.6	279 33.2 -30.5	N 26 22.7 +02.7	06						
07	284 11.0 -00.2	N 23 16.4 -00.1	316 41.0 -00.7	N 19 54.8 +00.6	294 02.7 -30.4	N 26 25.4 +02.7	07						
08	299 10.8 -00.1	N 23 16.3 -00.1	331 40.3 -00.6	N 19 55.4 +00.6	308 32.3 -30.5	N 26 28.1 +02.5	08						
09	314 10.7 -00.1	N 23 16.2 -00.1	346 39.7 -00.7	N 19 56.0 +00.5	323 01.8 -30.5	N 26 30.6 +02.4	09						
10	329 10.6 -00.2	N 23 16.1 -00.1	1 39.0 -00.6	N 19 56.5 +00.6	337 31.3 -30.5	N 26 33.0 +02.2	10						
11	344 10.4 -00.1	N 23 16.0 -00.2	16 38.4 -00.7	N 19 57.1 +00.6	352 00.8 -30.6	N 26 35.2 +02.2	11						
12	359 10.3 -00.1	N 23 15.8 -00.1	31 37.7 -00.6	N 19 57.7 +00.6	6 30.2 -30.5	N 26 37.4 +02.0	12						
13	14 10.2 -00.1	N 23 15.7 -00.1	46 37.1 -00.7	N 19 58.3 +00.6	20 59.7 -30.6	N 26 39.4 +01.8	13						
14	29 10.1 -00.2	N 23 15.6 -00.1	61 36.4 -00.6	N 19 58.9 +00.6	35 29.1 -30.6	N 26 41.2 +01.8	14						
15	44 09.9 -00.1	N 23 15.5 -00.2	76 35.8 -00.7	N 19 59.5 +00.6	49 58.5 -30.6	N 26 43.0 +01.6	15						
16	59 09.8 -00.1	N 23 15.3 -00.1	91 35.1 -00.6	N 20 00.1 +00.5	64 27.9 -30.6	N 26 44.6 +01.5	16						
17	74 09.7 -00.2	N 23 15.2 -00.1	106 34.5 -00.7	N 20 00.6 +00.6	78 57.3 -30.6	N 26 46.1 +01.4	17						
18	89 09.5 -00.1	N 23 15.1 -00.1	121 33.8 -00.6	N 20 01.2 +00.6	93 26.7 -30.6	N 26 47.5 +01.2	18						
19	104 09.4 -00.1	N 23 15.0 -00.2	136 33.2 -00.7	N 20 01.8 +00.6	107 56.1 -30.7	N 26 48.7 +01.1	19						
20	119 09.3 -00.1	N 23 14.8 -00.1	151 32.5 -00.6	N 20 02.4 +00.6	122 25.4 -30.6	N 26 49.8 +01.0	20						
21	134 09.2 -00.2	N 23 14.7 -00.1	166 31.9 -00.7	N 20 03.0 +00.5	136 54.8 -30.7	N 26 50.8 +00.8	21						
22	149 09.0 -00.1	N 23 14.6 -00.1	181 31.2 -00.6	N 20 03.5 +00.6	151 24.1 -30.7	N 26 51.6 +00.7	22						
23	164 08.9 -00.1	N 23 14.5 -00.2	196 30.6 -00.7	N 20 04.1 +00.6	165 53.4 -30.6	N 26 52.3 +00.6	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	15'7 15'7 15'7 15'7 15'7 15'7	SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	14'7 14'7 14'7 14'7 14'7 14'7								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	54'0 54'0 53'9 53'9 53'9 53'9								
SHA	263° 263° 263° 263° 262° 262°	SHA	296° 295° 295° 295° 295° 295°	SHA	275° 273° 271° 269° 267° 264°								
Greenwich Culmination Time: 12:03			Greenwich Culmination Time: 09:53			Greenwich Culmination Time: 11:33							

  

UT	Mars				Jupiter				Saturn				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 21.3 +00.8	N 07 56.4 +00.6	268 56.9 +02.2	N 01 41.1 +00.1	308 32.7 +02.5	S 14 22.4 +00.0	00						
01	267 22.1 +00.8	N 07 57.0 +00.7	283 59.1 +02.2	N 01 41.2 +00.1	323 35.2 +02.6	S 14 22.4 +00.0	01						
02	282 22.9 +00.8	N 07 57.7 +00.6	299 01.3 +02.3	N 01 41.3 +00.1	338 37.8 +02.5	S 14 22.4 +00.1	02						
03	297 23.7 +00.8	N 07 58.3 +00.7	314 03.6 +02.2	N 01 41.4 +00.0	353 40.3 +02.6	S 14 22.5 +00.0	03						
04	312 24.5 +00.8	N 07 59.0 +00.6	329 05.8 +02.3	N 01 41.4 +00.1	8 42.9 +02.5	S 14 22.5 +00.1	04						
05	327 25.3 +00.8	N 07 59.6 +00.7	344 08.1 +02.2	N 01 41.5 +00.1	23 45.4 +02.6	S 14 22.6 +00.0	05						
06	342 26.1 +00.8	N 08 00.3 +00.6	359 10.3 +02.2	N 01 41.6 +00.1	38 48.0 +02.5	S 14 22.6 +00.0	06						
07	357 26.9 +00.7	N 08 00.9 +00.7	14 12.5 +02.3	N 01 41.7 +00.1	53 50.5 +02.6	S 14 22.6 +00.1	07						
08	12 27.6 +00.8	N 08 01.6 +00.6	29 14.8 +02.2	N 01 41.8 +00.1	68 53.1 +02.5	S 14 22.7 +00.0	08						
09	27 28.4 +00.8	N 08 02.2 +00.7	44 17.0 +02.3	N 01 41.9 +00.0	83 55.6 +02.6	S 14 22.7 +00.0	09						
10	42 29.2 +00.8	N 08 02.9 +00.6	59 19.3 +02.2	N 01 41.9 +00.1	98 58.2 +02.5	S 14 22.7 +00.1	10						
11	57 30.0 +00.8	N 08 03.5 +00.6	74 21.5 +02.3	N 01 42.0 +00.1	114 00.7 +02.6	S 14 22.8 +00.0	11						
12	72 30.8 +00.8	N 08 04.1 +00.7	89 23.8 +02.2	N 01 42.1 +00.1	129 03.3 +02.5	S 14 22.8 +00.1	12						
13	87 31.6 +00.8	N 08 04.8 +00.6	104 26.0 +02.3	N 01 42.2 +00.1	144 05.8 +02.6	S 14 22.9 +00.0	13						
14	102 32.4 +00.8	N 08 05.4 +00.7	119 28.3 +02.2	N 01 42.3 +00.0	159 08.4 +02.5	S 14 22.9 +00.0	14						
15	117 33.2 +00.8	N 08 06.1 +00.6	134 30.5 +02.3	N 01 42.3 +00.1	174 10.9 +02.6	S 14 22.9 +00.1	15						
16	132 34.0 +00.8	N 08 06.7 +00.7	149 32.8 +02.2	N 01 42.4 +00.1	189 13.5 +02.5	S 14 23.0 +00.0	16						
17	147 34.8 +00.8	N 08 07.4 +00.6	164 35.0 +02.2	N 01 42.5 +00.1	204 16.0 +02.6	S 14 23.0 +00.0	17						
18	162 35.6 +00.8	N 08 08.0 +00.7	179 37.2 +02.3	N 01 42.6 +00.1	219 18.6 +02.5	S 14 23.0 +00.1	18						
19	177 36.4 +00.7	N 08 08.7 +00.6	194 39.5 +02.2	N 01 42.7 +00.1	234 21.1 +02.6	S 14 23.1 +00.0	19						
20	192 37.1 +00.8	N 08 09.3 +00.7	209 41.7 +02.3	N 01 42.8 +00.0	249 23.7 +02.5	S 14 23.1 +00.1	20						
21	207 37.9 +00.8	N 08 10.0 +00.6	224 44.0 +02.2	N 01 42.8 +00.1	264 26.2 +02.6	S 14 23.2 +00.0	21						
22	222 38.7 +00.8	N 08 10.6 +00.6	239 46.2 +02.3	N 01 42.9 +00.1	279 28.8 +02.5	S 14 23.2 +00.0	22						
23	237 39.5 +00.8	N 08 11.2 +00.7	254 48.5 +02.2	N 01 43.0 +00.1	294 31.3 +02.6	S 14 23.2 +00.1	23						
UT	02 06 10 14 18 22	UT	02 06 10 14 18 22	UT	02 06 10 14 18 22								
SD	00'1 00'1 00'1 00'1 00'1 00'1	SD	00'3 00'3 00'3 00'3 00'3 00'3	SD	00'2 00'2 00'2 00'2 00'2 00'2								
HP	00'1 00'1 00'1 00'1 00'1 00'1	HP	00'0 00'0 00'0 00'0 00'0 00'0	HP	00'0 00'0 00'0 00'0 00'0 00'0								
SHA	336° 336° 336° 336° 336° 336°	SHA	353° 353° 353° 353° 353° 353°	SHA	032° 032° 032° 032° 032° 033°								
Greenwich Culmination Time: 07:10			Greenwich Culmination Time: 06:03			Greenwich Culmination Time: 03:25							

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 08.8 -00.2	N 23 14.3 -00.1	211 29.9 -00.6	N 20 04.7 +00.6	180 22.8 -30.7	N 26 52.9 +00.5	00						
01	194 08.6 -00.1	N 23 14.2 -00.1	226 29.3 -00.7	N 20 05.3 +00.5	194 52.1 -30.7	N 26 53.4 +00.3	01						
02	209 08.5 -00.1	N 23 14.1 -00.2	241 28.6 -00.6	N 20 05.8 +00.6	209 21.4 -30.7	N 26 53.7 +00.2	02						
03	224 08.4 -00.1	N 23 13.9 -00.1	256 28.0 -00.7	N 20 06.4 +00.6	223 50.7 -30.6	N 26 53.9 +00.1	03						
04	239 08.3 -00.2	N 23 13.8 -00.1	271 27.3 -00.7	N 20 07.0 +00.6	238 20.1 -30.7	N 26 54.0 -00.1	04						
05	254 08.1 -00.1	N 23 13.7 -00.2	286 26.6 -00.6	N 20 07.6 +00.5	252 49.4 -30.7	N 26 53.9 -00.1	05						
06	269 08.0 -00.1	N 23 13.5 -00.1	301 26.0 -00.7	N 20 08.1 +00.6	267 18.7 -30.7	N 26 53.8 -00.3	06						
07	284 07.9 -00.1	N 23 13.4 -00.1	316 25.3 -00.6	N 20 08.7 +00.6	281 48.0 -30.7	N 26 53.5 -00.5	07						
08	299 07.8 -00.2	N 23 13.3 -00.2	331 24.7 -00.7	N 20 09.3 +00.6	296 17.3 -30.6	N 26 53.0 -00.6	08						
09	314 07.6 -00.1	N 23 13.1 -00.1	346 24.0 -00.6	N 20 09.9 +00.5	310 46.7 -30.7	N 26 52.4 -00.7	09						
10	329 07.5 -00.1	N 23 13.0 -00.2	1 23.4 -00.7	N 20 10.4 +00.6	325 16.0 -30.6	N 26 51.7 -00.8	10						
11	344 07.4 -00.1	N 23 12.8 -00.1	16 22.7 -00.7	N 20 11.0 +00.6	339 45.4 -30.7	N 26 50.9 -01.0	11						
12	359 07.3 -00.2	N 23 12.7 -00.1	31 22.0 -00.6	N 20 11.6 +00.5	354 14.7 -30.6	N 26 49.9 -01.0	12						
13	14 07.1 -00.1	N 23 12.6 -00.2	46 21.4 -00.7	N 20 12.1 +00.6	8 44.1 -30.7	N 26 48.9 -01.3	13						
14	29 07.0 -00.1	N 23 12.4 -00.1	61 20.7 -00.6	N 20 12.7 +00.5	23 13.4 -30.6	N 26 47.6 -01.3	14						
15	44 06.9 -00.2	N 23 12.3 -00.2	76 20.1 -00.7	N 20 13.2 +00.6	37 42.8 -30.6	N 26 46.3 -01.5	15						
16	59 06.7 -00.1	N 23 12.1 -00.1	91 19.4 -00.7	N 20 13.8 +00.6	52 12.2 -30.6	N 26 44.8 -01.6	16						
17	74 06.6 -00.1	N 23 12.0 -00.1	106 18.7 -00.6	N 20 14.4 +00.5	66 41.6 -30.5	N 26 43.2 -01.7	17						
18	89 06.5 -00.1	N 23 11.9 -00.2	121 18.1 -00.7	N 20 14.9 +00.6	81 11.1 -30.6	N 26 41.5 -01.9	18						
19	104 06.4 -00.2	N 23 11.7 -00.1	136 17.4 -00.7	N 20 15.5 +00.6	95 40.5 -30.5	N 26 39.6 -02.0	19						
20	119 06.2 -00.1	N 23 11.6 -00.2	151 16.7 -00.6	N 20 16.1 +00.5	110 10.0 -30.6	N 26 37.6 -02.1	20						
21	134 06.1 -00.1	N 23 11.4 -00.1	166 16.1 -00.7	N 20 16.6 +00.6	124 39.4 -30.5	N 26 35.5 -02.2	21						
22	149 06.0 -00.1	N 23 11.3 -00.2	181 15.4 -00.7	N 20 17.2 +00.5	139 08.9 -30.5	N 26 33.3 -02.4	22						
23	164 05.9 -00.2	N 23 11.1 -00.1	196 14.7 -00.6	N 20 17.7 +00.6	153 38.4 -30.4	N 26 30.9 -02.5	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 15'7 15'7 15'7 15'7 15'7 15'7		SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 14'7 14'7 14'7 14'7 14'7 14'7								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 53'9 53'9 53'9 53'9 53'9 53'9								
	SHA 262° 262° 262° 261° 261° 261°		SHA 294° 294° 294° 294° 294° 293°		SHA 262° 260° 258° 256° 253° 251°								
	Greenwich Culmination Time: 12:03		Greenwich Culmination Time: 09:54		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	252 40.3 +00.8	N 08 11.9 +00.6	269 50.7 +02.3	N 01 43.1 +00.1	309 33.9 +02.5	S 14 23.3 +00.0	00						
01	267 41.1 +00.8	N 08 12.5 +00.7	284 53.0 +02.2	N 01 43.2 +00.0	324 36.4 +02.6	S 14 23.3 +00.0	01						
02	282 41.9 +00.8	N 08 13.2 +00.6	299 55.2 +02.3	N 01 43.2 +00.1	339 39.0 +02.5	S 14 23.3 +00.1	02						
03	297 42.7 +00.8	N 08 13.8 +00.7	314 57.5 +02.2	N 01 43.3 +00.1	354 41.5 +02.6	S 14 23.4 +00.0	03						
04	312 43.5 +00.8	N 08 14.5 +00.6	329 59.7 +02.3	N 01 43.4 +00.1	9 44.1 +02.5	S 14 23.4 +00.1	04						
05	327 44.3 +00.8	N 08 15.1 +00.7	345 02.0 +02.2	N 01 43.5 +00.1	24 46.6 +02.6	S 14 23.5 +00.0	05						
06	342 45.1 +00.8	N 08 15.8 +00.6	0 04.2 +02.3	N 01 43.6 +00.0	39 49.2 +02.6	S 14 23.5 +00.0	06						
07	357 45.9 +00.8	N 08 16.4 +00.6	15 06.5 +02.2	N 01 43.6 +00.1	54 51.8 +02.5	S 14 23.5 +00.1	07						
08	12 46.7 +00.8	N 08 17.0 +00.7	30 08.7 +02.3	N 01 43.7 +00.1	69 54.3 +02.6	S 14 23.6 +00.0	08						
09	27 47.5 +00.7	N 08 17.7 +00.6	45 11.0 +02.2	N 01 43.8 +00.1	84 56.9 +02.5	S 14 23.6 +00.1	09						
10	42 48.2 +00.8	N 08 18.3 +00.7	60 13.2 +02.3	N 01 43.9 +00.1	99 59.4 +02.6	S 14 23.7 +00.0	10						
11	57 49.0 +00.8	N 08 19.0 +00.6	75 15.5 +02.2	N 01 44.0 +00.0	115 02.0 +02.5	S 14 23.7 +00.0	11						
12	72 49.8 +00.8	N 08 19.6 +00.7	90 17.7 +02.3	N 01 44.0 +00.1	130 04.5 +02.6	S 14 23.7 +00.1	12						
13	87 50.6 +00.8	N 08 20.3 +00.6	105 20.0 +02.2	N 01 44.1 +00.1	145 07.1 +02.5	S 14 23.8 +00.0	13						
14	102 51.4 +00.8	N 08 20.9 +00.6	120 22.2 +02.3	N 01 44.2 +00.1	160 09.6 +02.6	S 14 23.8 +00.0	14						
15	117 52.2 +00.8	N 08 21.5 +00.7	135 24.5 +02.2	N 01 44.3 +00.0	175 12.2 +02.5	S 14 23.8 +00.1	15						
16	132 53.0 +00.8	N 08 22.2 +00.6	150 26.7 +02.3	N 01 44.3 +00.1	190 14.7 +02.6	S 14 23.9 +00.0	16						
17	147 53.8 +00.8	N 08 22.8 +00.7	165 29.0 +02.2	N 01 44.4 +00.1	205 17.3 +02.6	S 14 23.9 +00.1	17						
18	162 54.6 +00.8	N 08 23.5 +00.6	180 31.2 +02.3	N 01 44.5 +00.1	220 19.9 +02.5	S 14 24.0 +00.0	18						
19	177 55.4 +00.8	N 08 24.1 +00.7	195 33.5 +02.2	N 01 44.6 +00.1	235 22.4 +02.6	S 14 24.0 +00.0	19						
20	192 56.2 +00.8	N 08 24.8 +00.6	210 35.7 +02.3	N 01 44.7 +00.0	250 25.0 +02.5	S 14 24.0 +00.1	20						
21	207 57.0 +00.8	N 08 25.4 +00.6	225 38.0 +02.2	N 01 44.7 +00.1	265 27.5 +02.6	S 14 24.1 +00.0	21						
22	222 57.8 +00.8	N 08 26.0 +00.7	240 40.2 +02.3	N 01 44.8 +00.1	280 30.1 +02.5	S 14 24.1 +00.1	22						
23	237 58.6 +00.8	N 08 26.7 +00.6	255 42.5 +02.3	N 01 44.9 +00.1	295 32.6 +02.6	S 14 24.2 +00.0	23						
	UT 02 06 10 14 18 22		UT 02 06 10 14 18 22		UT 02 06 10 14 18 22								
	SD 00'1 00'1 00'1 00'1 00'1 00'1		SD 00'3 00'3 00'3 00'3 00'3 00'3		SD 00'2 00'2 00'2 00'2 00'2 00'2								
	HP 00'1 00'1 00'1 00'1 00'1 00'1		HP 00'0 00'0 00'0 00'0 00'0 00'0		HP 00'0 00'0 00'0 00'0 00'0 00'0								
	SHA 336° 335° 335° 335° 335° 335°		SHA 353° 353° 353° 353° 353° 353°		SHA 033° 033° 033° 033° 033° 033°								
	Greenwich Culmination Time: 07:08		Greenwich Culmination Time: 05:59		Greenwich Culmination Time: 03:21								

UT	<i>Sun</i>				<i>Venus</i>				<i>Moon</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	179 05.7 -00.1	N 23 11.0 -00.2	211 14.1 -00.7	N 20 18.3 +00.5	168 08.0 -30.5	N 26 28.4 -02.6	00						
01	194 05.6 -00.1	N 23 10.8 -00.1	226 13.4 -00.6	N 20 18.8 +00.6	182 37.5 -30.4	N 26 25.8 -02.7	01						
02	209 05.5 -00.1	N 23 10.7 -00.2	241 12.8 -00.7	N 20 19.4 +00.5	197 07.1 -30.4	N 26 23.1 -02.9	02						
03	224 05.4 -00.2	N 23 10.5 -00.1	256 12.1 -00.7	N 20 19.9 +00.6	211 36.7 -30.4	N 26 20.2 -03.0	03						
04	239 05.2 -00.1	N 23 10.4 -00.2	271 11.4 -00.6	N 20 20.5 +00.5	226 06.3 -30.3	N 26 17.2 -03.1	04						
05	254 05.1 -00.1	N 23 10.2 -00.1	286 10.8 -00.7	N 20 21.0 +00.6	240 36.0 -30.3	N 26 14.1 -03.3	05						
06	269 05.0 -00.1	N 23 10.1 -00.2	301 10.1 -00.7	N 20 21.6 +00.5	255 05.7 -30.3	N 26 10.8 -03.3	06						
07	284 04.9 -00.2	N 23 09.9 -00.1	316 09.4 -00.7	N 20 22.1 +00.6	269 35.4 -30.3	N 26 07.5 -03.5	07						
08	299 04.7 -00.1	N 23 09.8 -00.2	331 08.7 -00.6	N 20 22.7 +00.5	284 05.1 -30.2	N 26 04.0 -03.6	08						
09	314 04.6 -00.1	N 23 09.6 -00.1	346 08.1 -00.7	N 20 23.2 +00.6	298 34.9 -30.2	N 26 00.4 -03.8	09						
10	329 04.5 -00.1	N 23 09.5 -00.2	1 07.4 -00.7	N 20 23.8 +00.5	313 04.7 -30.2	N 25 56.6 -03.8	10						
11	344 04.4 -00.2	N 23 09.3 -00.1	16 06.7 -00.6	N 20 24.3 +00.6	327 34.5 -30.1	N 25 52.8 -04.0	11						
12	359 04.2 -00.1	N 23 09.2 -00.2	31 06.1 -00.7	N 20 24.9 +00.5	342 04.4 -30.1	N 25 48.8 -04.1	12						
13	14 04.1 -00.1	N 23 09.0 -00.1	46 05.4 -00.7	N 20 25.4 +00.6	356 34.3 -30.1	N 25 44.7 -04.3	13						
14	29 04.0 -00.1	N 23 08.9 -00.2	61 04.7 -00.6	N 20 26.0 +00.5	11 04.2 -30.0	N 25 40.4 -04.3	14						
15	44 03.9 -00.1	N 23 08.7 -00.2	76 04.1 -00.7	N 20 26.5 +00.5	25 34.2 -30.0	N 25 36.1 -04.5	15						
16	59 03.8 -00.2	N 23 08.5 -00.1	91 03.4 -00.7	N 20 27.0 +00.6	40 04.2 -30.0	N 25 31.6 -04.6	16						
17	74 03.6 -00.1	N 23 08.4 -00.2	106 02.7 -00.7	N 20 27.6 +00.5	54 34.2 -29.9	N 25 27.0 -04.7	17						
18	89 03.5 -00.1	N 23 08.2 -00.1	121 02.0 -00.6	N 20 28.1 +00.6	69 04.3 -29.9	N 25 22.3 -04.8	18						
19	104 03.4 -00.1	N 23 08.1 -00.2	136 01.4 -00.7	N 20 28.7 +00.5	83 34.4 -29.9	N 25 17.5 -05.0	19						
20	119 03.3 -00.2	N 23 07.9 -00.2	151 00.7 -00.7	N 20 29.2 +00.5	98 04.5 -29.8	N 25 12.5 -05.0	20						
21	134 03.1 -00.1	N 23 07.7 -00.1	166 00.0 -00.7	N 20 29.7 +00.6	112 34.7 -29.8	N 25 07.5 -05.2	21						
22	149 03.0 -00.1	N 23 07.6 -00.2	180 59.3 -00.6	N 20 30.3 +00.5	127 04.9 -29.7	N 25 02.3 -05.3	22						
23	164 02.9 -00.1	N 23 07.4 -00.2	195 58.7 -00.7	N 20 30.8 +00.5	141 35.2 -29.7	N 24 57.0 -05.4	23						
	UT 02 06 10 14 18 22 SD 15'7 15'7 15'7 15'7 15'7 15'7 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 261° 261° 261° 260° 260° 260° Greenwich Culmination Time: 12:03	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 293° 293° 293° 292° 292° 292° Greenwich Culmination Time: 09:55	UT 02 06 10 14 18 22 SD 14'7 14'7 14'7 14'7 14'7 14'7 HP 53'9 53'9 54'0 54'0 54'0 54'0 SHA 249° 247° 245° 242° 240° 238° Greenwich Culmination Time: 13:14										
UT	<i>Mars</i>				<i>Jupiter</i>				<i>Saturn</i>				UT
	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	GHA	ddGHA	Dec	dDec	
00	252 59.4 +00.7	N 08 27.3 +00.7	270 44.8 +02.2	N 01 45.0 +00.0	310 35.2 +02.6	S 14 24.2 +00.0	00						
01	268 00.1 +00.8	N 08 28.0 +00.6	285 47.0 +02.3	N 01 45.0 +00.1	325 37.8 +02.5	S 14 24.2 +00.1	01						
02	283 00.9 +00.8	N 08 28.6 +00.6	300 49.3 +02.2	N 01 45.1 +00.1	340 40.3 +02.6	S 14 24.3 +00.0	02						
03	298 01.7 +00.8	N 08 29.2 +00.7	315 51.5 +02.3	N 01 45.2 +00.1	355 42.9 +02.5	S 14 24.3 +00.1	03						
04	313 02.5 +00.8	N 08 29.9 +00.6	330 53.8 +02.2	N 01 45.3 +00.1	10 45.4 +02.6	S 14 24.4 +00.0	04						
05	328 03.3 +00.8	N 08 30.5 +00.7	345 56.0 +02.3	N 01 45.4 +00.0	25 48.0 +02.5	S 14 24.4 +00.0	05						
06	343 04.1 +00.8	N 08 31.2 +00.6	0 58.3 +02.2	N 01 45.4 +00.1	40 50.5 +02.6	S 14 24.4 +00.1	06						
07	358 04.9 +00.8	N 08 31.8 +00.6	16 00.5 +02.3	N 01 45.5 +00.1	55 53.1 +02.6	S 14 24.5 +00.0	07						
08	13 05.7 +00.8	N 08 32.4 +00.7	31 02.8 +02.3	N 01 45.6 +00.1	70 55.7 +02.5	S 14 24.5 +00.1	08						
09	28 06.5 +00.8	N 08 33.1 +00.6	46 05.1 +02.2	N 01 45.7 +00.0	85 58.2 +02.6	S 14 24.6 +00.0	09						
10	43 07.3 +00.8	N 08 33.7 +00.6	61 07.3 +02.3	N 01 45.7 +00.1	101 00.8 +02.5	S 14 24.6 +00.0	10						
11	58 08.1 +00.8	N 08 34.3 +00.7	76 09.6 +02.2	N 01 45.8 +00.1	116 03.3 +02.6	S 14 24.6 +00.1	11						
12	73 08.9 +00.8	N 08 35.0 +00.6	91 11.8 +02.3	N 01 45.9 +00.1	131 05.9 +02.5	S 14 24.7 +00.0	12						
13	88 09.7 +00.8	N 08 35.6 +00.7	106 14.1 +02.2	N 01 46.0 +00.0	146 08.4 +02.6	S 14 24.7 +00.1	13						
14	103 10.5 +00.8	N 08 36.3 +00.6	121 16.3 +02.3	N 01 46.0 +00.1	161 11.0 +02.6	S 14 24.8 +00.0	14						
15	118 11.3 +00.8	N 08 36.9 +00.6	136 18.6 +02.3	N 01 46.1 +00.1	176 13.6 +02.5	S 14 24.8 +00.0	15						
16	133 12.1 +00.8	N 08 37.5 +00.7	151 20.9 +02.2	N 01 46.2 +00.1	191 16.1 +02.6	S 14 24.8 +00.1	16						
17	148 12.9 +00.8	N 08 38.2 +00.6	166 23.1 +02.3	N 01 46.3 +00.0	206 18.7 +02.5	S 14 24.9 +00.0	17						
18	163 13.7 +00.7	N 08 38.8 +00.7	181 25.4 +02.2	N 01 46.3 +00.1	221 21.2 +02.6	S 14 24.9 +00.1	18						
19	178 14.4 +00.8	N 08 39.5 +00.6	196 27.6 +02.3	N 01 46.4 +00.1	236 23.8 +02.6	S 14 25.0 +00.0	19						
20	193 15.2 +00.8	N 08 40.1 +00.6	211 29.9 +02.3	N 01 46.5 +00.1	251 26.4 +02.5	S 14 25.0 +00.0	20						
21	208 16.0 +00.8	N 08 40.7 +00.7	226 32.2 +02.2	N 01 46.6 +00.0	266 28.9 +02.6	S 14 25.0 +00.1	21						
22	223 16.8 +00.8	N 08 41.4 +00.6	241 34.4 +02.3	N 01 46.6 +00.1	281 31.5 +02.5	S 14 25.1 +00.0	22						
23	238 17.6 +00.8	N 08 42.0 +00.6	256 36.7 +02.2	N 01 46.7 +00.1	296 34.0 +02.6	S 14 25.1 +00.1	23						
	UT 02 06 10 14 18 22 SD 00'1 00'1 00'1 00'1 00'1 00'1 HP 00'1 00'1 00'1 00'1 00'1 00'1 SHA 335° 335° 335° 335° 334° 334° Greenwich Culmination Time: 07:07	UT 02 06 10 14 18 22 SD 00'3 00'3 00'3 00'3 00'3 00'3 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 353° 353° 353° 353° 353° 353° Greenwich Culmination Time: 05:56	UT 02 06 10 14 18 22 SD 00'2 00'2 00'2 00'2 00'2 00'2 HP 00'0 00'0 00'0 00'0 00'0 00'0 SHA 033° 033° 033° 033° 033° 033° Greenwich Culmination Time: 03:17										