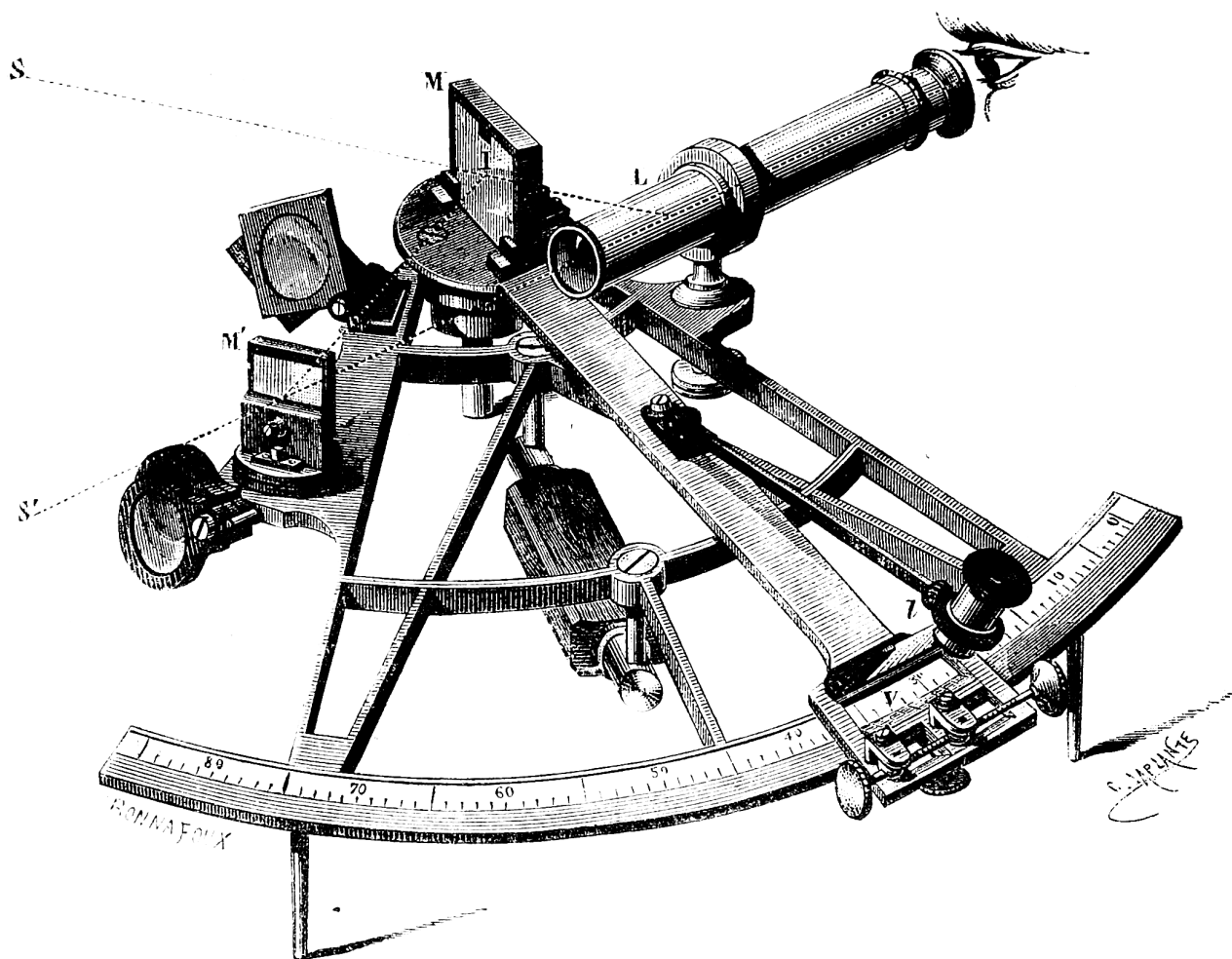




ALMANAQUE NÁUTICO PERSEIS 2012

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<http://www.xente.mundo-r.com/perseis/>

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Introducción

El Almanaque Náutico Perseis es un libro de validez anual que proporciona datos, efemérides astronómicas y tablas para la práctica de la navegación astronómica. La información se presentan en un formato similar al del Almanaque Náutico editado por el Real Observatorio de la Armada.

Su objetivo es didáctico; proporcionar información para la resolución de problemas y ejercicios de navegación astronómica así como familiarizarse con el uso del Almanaque Náutico del R.O.A.

El Almanaque está generado usando métodos matemáticos rigurosos y datos fiables, por lo que es de esperar que ofrezca una exactitud comparable a la de los almanaques oficiales.

Esta edición del Almanaque Náutico Perseis incluye páginas diarias con las efemérides tabuladas cada hora del punto Aries, el Sol, la Luna y de los cuatro planetas visibles a simple vista y útiles para la navegación astronómica: Venus, Marte, Júpiter y Saturno; además de datos útiles para la planificación de las observaciones. Incluye tablas anuales de la posición de 99 estrellas, tabuladas para el día 15 de cada mes; la hora de paso por el meridiano de Greenwich, para el día 1 de cada mes, de 50 estrellas seleccionadas; tabla anual para el cálculo de la latitud por observación de la altura de la estrella Polar; tabla del azimut de la estrella Polar y tablas de correcciones cuyos valores dependen de la fecha. Excepcionalmente se incluye una tabla de corrección por retardo y longitud, que es invariante con el año, con el único fin de mantener la numeración de las páginas como en el Almanaque Náutico del R.O.A.

Se mantiene el orden y numeración de páginas idéntico al Almanaque Náutico del R.O.A. porque, a veces, en la literatura didáctica española sobre navegación astronómica, se hace referencia a la tabla de una determinada página del Almanaque. Se recomienda la adquisición, al menos una vez, del Almanaque Náutico del Real Observatorio de la Armada, que incluye más tablas que pueden aplicarse para cualquier año, una extensa explicación de su uso, otros datos interesantes, tiene un precio asequible y además es el único permitido en los exámenes oficiales.

Advertencia: Este Almanaque se distribuye con la intención de que sea exacto y útil, pero sin ninguna garantía, por lo que no debe utilizarse en situaciones de navegación real o que pongan en riesgo vidas o bienes. Se declina cualquier responsabilidad por daños causados por el uso de este Almanaque.

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 03 ^m 3			Edad: 7 ^d 2 PHE { SD: 14'8 PMG: 18 ^h 09 ^m R ^o : 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	179	13.9	-23 03.8	95	27.2	+7 15.2	60 N	7 09	8 06	9 03	10 52	12	0 30	76			
1	194	13.6	03.6	110	01.6 ¹⁵⁴	26.1 ¹⁰⁹	58	7 02	7 54	8 46	10 58	13	26	73			
2	209	13.3	03.4	124	36.0 ¹⁵⁴	36.9 ¹⁰⁸	56	6 56	44	31	11 02	16	22	71			
3	224	13.0	03.2	139	10.5 ¹⁵⁵	47.7 ¹⁰⁸	54	50	36	19	06 18		19	68			
4	239	12.7	03.0	153	44.9 ¹⁵⁴	+7 58.5 ¹⁰⁸	52	44	28	8 08	10 20		16	66			
5	254	12.4	-23 02.8	168	19.3 ¹⁵⁴	+8 09.2 ¹⁰⁷	50	6 39	7 20	7 59	11 13	22	0 13	65			
6	269	12.1	-23 02.6	182	53.7 ¹⁵⁴	+8 19.9 ¹⁰⁷	45	6 28	7 05	7 38	11 21	25	0 07	61			
7	284	11.8	02.4	197	28.0 ¹⁵³	30.5 ¹⁰⁶	40	17	6 51	22	27 28		0 02	58			
8	299	11.5	02.2	212	02.4 ¹⁵⁴	41.2 ¹⁰⁷	35	08	40	7 08	32 31		** ** *				
9	314	11.2	02.0	226	36.7 ¹⁵³	+8 51.7 ¹⁰⁵	30	6 00	29	6 56	37 32		** ** *				
10	329	10.9	01.8	241	11.1 ¹⁵⁴	+9 02.3 ¹⁰⁶	20	5 44	6 11	35	45 36		** ** *				
11	344	10.6	-23 01.6	255	45.4 ¹⁵³	+9 12.8 ¹⁰⁵	10 N	5 28	5 54	6 17	11 52	40	** ** *				
12	359	10.3	-23 01.4	270	19.7 ¹⁵³	+9 23.2 ¹⁰⁴	0	5 11	5 37	6 00	11 59	43	** ** *				
13	14	10.0	01.2	284	53.9 ¹⁵²	33.6 ¹⁰⁴	10 S	4 52	5 19	5 42	12 06	46	** ** *				
14	29	09.7	01.0	299	28.2 ¹⁵³	44.0 ¹⁰⁴	20	30	4 59	24	13 50		** ** *				
15	44	09.4	00.8	314	02.4 ¹⁵²	+9 54.3 ¹⁰³	30	4 01	35	5 02	22 53		23 52	34			
16	59	09.1	00.6	328	36.6 ¹⁵²	+10 04.6 ¹⁰³	35	3 43	20	4 49	27 55		46 32				
17	74	08.8	-23 00.4	343	10.8 ¹⁵²	+10 14.9 ¹⁰³	40	3 20	4 02	4 34	12 32	58	23 39	30			
18	89	08.5	-23 00.2	357	45.0 ¹⁵²	+10 25.1 ¹⁰²	45	2 50	3 40	4 17	12 39	61	23 32	26			
19	104	08.2	-23 00.0	12	19.2 ¹⁵²	35.2 ¹⁰¹	50	2 06	3 11	3 55	47 64		22 24				
20	119	07.9	-22 59.8	26	53.3 ¹⁵¹	45.3 ¹⁰¹	52	1 40	2 56	44	50 67		18 22				
21	134	07.7	59.6	41	27.4 ¹⁵¹	+10 55.4 ¹⁰¹	54	0 59	38	32	54 69		14 19				
22	149	07.4	59.4	56	01.4 ¹⁵⁰	+11 05.4 ¹⁰⁰	56	** ** *	2 17	18	12 59	70	08 18				
23	164	07.1	59.2	70	35.5 ¹⁵¹	15.4 ¹⁰⁰	58	** ** *	1 49	3 02	13 04	73	23 03	15			
24	179	06.8	-22 59.0	85	09.5 ¹⁵⁰	+11 25.3 ⁹⁹	60 S	** ** *	1 04	2 42	13 10	75	22 56	13			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 16 ^m 9			Mag: -4.0 PMG: 14 ^h 28 ^m			Mag: +0.2 PMG: 4 ^h 47 ^m			Mag: -2.6 PMG: 19 ^h 12 ^m			Mag: +0.7 PMG: 7 ^h 07 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	100	03.9	143 13.2	-18 25.8	287 59.2	+6 37.2	71 18.3	+10 28.2	252 54.7	-8 36.2							
1	115	06.3	158 12.6	24.9	303 01.1	37.0	86 20.8	28.2	267 57.0	36.2							
2	130	08.8	173 12.0	24.0	318 03.0	36.8	101 23.2	28.2	282 59.3	36.3							
3	145	11.3	188 11.4	23.1	333 04.9	36.7	116 25.6	28.2	298 01.6	36.3							
4	160	13.7	203 10.8	22.2	348 06.8	36.5	131 28.0	28.3	313 03.9	36.4							
5	175	16.2	218 10.1	-18 21.3	3 08.6	+6 36.3	146 30.4	+10 28.3	328 06.2	-8 36.4							
6	190	18.7	233 09.5	-18 20.4	18 10.5	+6 36.1	161 32.8	+10 28.3	343 08.6	-8 36.4							
7	205	21.1	248 08.9	19.5	33 12.4	36.0	176 35.3	28.4	358 10.9	36.5							
8	220	23.6	263 08.3	18.6	48 14.3	35.8	191 37.7	28.4	13 13.2	36.5							
9	235	26.0	278 07.7	17.6	63 16.2	35.6	206 40.1	28.4	28 15.5	36.6							
10	250	28.5	293 07.0	16.7	78 18.1	35.4	221 42.5	28.5	43 17.8	36.6							
11	265	31.0	308 06.4	-18 15.8	93 19.9	+6 35.3	236 44.9	+10 28.5	58 20.1	-8 36.7							
12	280	33.4	323 05.8	-18 14.9	108 21.8	+6 35.1	251 47.3	+10 28.5	73 22.4	-8 36.7							
13	295	35.9	338 05.2	14.0	123 23.7	34.9	266 49.8	28.6	88 24.8	36.8							
14	310	38.4	353 04.6	13.1	138 25.6	34.8	281 52.2	28.6	103 27.1	36.8							
15	325	40.8	8 04.0	12.1	153 27.5	34.6	296 54.6	28.6	118 29.4	36.9							
16	340	43.3	23 03.3	11.2	168 29.4	34.4	311 57.0	28.7	133 31.7	36.9							
17	355	45.8	38 02.7	-18 10.3	183 31.3	+6 34.3	326 59.4	+10 28.7	148 34.0	-8 36.9							
18	10	48.2	53 02.1	-18 09.4	198 33.2	+6 34.1	342 01.8	+10 28.7	163 36.3	-8 37.0							
19	25	50.7	68 01.5	08.5	213 35.1	33.9	357 04.2	28.8	178 38.6	37.0							
20	40	53.2	83 00.9	07.5	228 37.0	33.7	12 06.6	28.8	193 41.0	37.1							
21	55	55.6	98 00.3	06.6	243 38.9	33.6	27 09.1	28.8	208 43.3	37.1							
22	70	58.1	112 59.7	05.7	258 40.8	33.4	42 11.5	28.9	223 45.6	37.2							
23	86	00.5	127 59.1	04.8	273 42.7	33.2	57 13.9	28.9	238 47.9	37.2							
24	101	03.0	142 58.5	-18 03.8	288 44.6	+6 33.1	72 16.3	+10 28.9	253 50.2	-8 37.3							
Dif	—		-6	+9	+19	-2	+24	0	+23	0							0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 8 ^d 2	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2										
	PMG: 12 ^h 03 ^m 8														
	hG ☉	Dec				hG ☾			Dif	Dec	Dif		Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	06.8	-22 59.0	85	09.5	+11 25.3	99	60 N	15 06	16 02	16 59	11 04 14	1 46 75		
1	194	06.5	58.8	99	43.5 ¹⁵⁰	35.2	99	58	23	14	17 06	11 17	39 73		
2	209	06.2	58.6	114	17.5 ¹⁵⁰	45.0	98	56	37	24	12	18 20	33 70		
3	224	05.9	58.3	128	51.4 ¹⁴⁹	+11 54.8	98	54	15 49	32	18	24 22	27 68		
4	239	05.6	58.1	143	25.3 ¹⁴⁹	+12 04.6	98	52	16 00	40	24	30 23	22 66		
5	254	05.3	-22 57.9	157	59.2 ¹⁴⁹	+12 14.2	96	50	16 09	16 47	17 29	11 35 25	1 18 64		
6	269	05.0	-22 57.7	172	33.1 ¹⁴⁹	+12 23.9	97	45	16 29	17 03	17 40	11 46 28	1 08 61		
7	284	04.7	57.5	187	06.9 ¹⁴⁸	33.5	96	40	16 46	16	50	11 55 31	1 00 58		
8	299	04.4	57.3	201	40.6 ¹⁴⁷	43.0	95	35	17 00	28	17 59	12 03 33	0 53 56		
9	314	04.1	57.1	216	14.4 ¹⁴⁸	+12 52.5	95	30	12	38	18 08	09 36	47 54		
10	329	03.8	56.8	230	48.1 ¹⁴⁷	+13 01.9	94	20	32	17 56	24	21 39	37 50		
11	344	03.5	-22 56.6	245	21.8 ¹⁴⁷	+13 11.3	94	10 N	17 50	18 13	18 40	12 32 42	0 28 46		
12	359	03.2	-22 56.4	259	55.4 ¹⁴⁶	+13 20.6	93	0	18 08	18 30	18 56	12 42 44	0 20 43		
13	14	03.0	56.2	274	29.1 ¹⁴⁷	29.8	92	10 S	25	18 48	19 15	12 52 47	11 41		
14	29	02.7	56.0	289	02.6 ¹⁴⁵	39.1	93	20	18 43	19 08	19 37	13 03 50	0 02 38		
15	44	02.4	55.7	303	36.2 ¹⁴⁶	48.2	91	30	19 05	32	20 05	15 53	** ** *		
16	59	02.1	55.5	318	09.7 ¹⁴⁵	+13 57.3	91	35	17	19 47	23	22 56	** ** *		
17	74	01.8	-22 55.3	332	43.1 ¹⁴⁴	+14 06.3	90	40	19 32	20 05	20 46	13 30 58	** ** *		
18	89	01.5	-22 55.1	347	16.6 ¹⁴⁵	+14 15.3	90	45	19 50	20 27	21 15	13 40 60	23 58 30		
19	104	01.2	54.8	1	49.9 ¹⁴³	24.2	89	50	20 11	20 55	21 59	51 65	46 26		
20	119	00.9	54.6	16	23.3 ¹⁴⁴	33.1	89	52	22	21 10	22 25	13 57 66	40 25		
21	134	00.6	54.4	30	56.6 ¹⁴³	41.9	88	54	34	27	23 03	14 03 68	33 24		
22	149	00.3	54.2	45	29.9 ¹⁴³	50.6	87	56	20 48	21 48	** ** *	09 70	26 21		
23	164	00.0	53.9	60	03.1 ¹⁴²	+14 59.3	87	58	21 04	22 16	** ** *	17 72	18 19		
24	178	59.8	-22 53.7	74	36.3 ¹⁴²	+15 07.9	86	60 S	21 23	22 58	** ** *	14 25 76	23 09 16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 13 ^m 0		Mag: -4.0 PMG: 14 ^h 29 ^m			Mag: +0.2 PMG: 4 ^h 44 ^m			Mag: -2.6 PMG: 19 ^h 08 ^m			Mag: +0.7 PMG: 7 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	101	03.0	142 58.5	-18 03.8	288 44.6	+6 33.1	72 16.3	+10 28.9	253 50.2	-8 37.3					
1	116	05.5	157 57.8	02.9	303 46.5	32.9	87 18.7	29.0	268 52.5	37.3					
2	131	07.9	172 57.2	02.0	318 48.4	32.7	102 21.1	29.0	283 54.8	37.4					
3	146	10.4	187 56.6	01.0	333 50.3	32.6	117 23.5	29.0	298 57.2	37.4					
4	161	12.9	202 56.0	-18 00.1	348 52.2	32.4	132 25.9	29.1	313 59.5	37.4					
5	176	15.3	217 55.4	-17 59.2	3 54.1	+6 32.3	147 28.3	+10 29.1	329 01.8	-8 37.5					
6	191	17.8	232 54.8	-17 58.2	18 56.0	+6 32.1	162 30.7	+10 29.1	344 04.1	-8 37.5					
7	206	20.3	247 54.2	57.3	33 57.9	31.9	177 33.1	29.2	359 06.4	37.6					
8	221	22.7	262 53.6	56.4	48 59.8	31.8	192 35.6	29.2	14 08.7	37.6					
9	236	25.2	277 53.0	55.4	64 01.7	31.6	207 38.0	29.2	29 11.1	37.7					
10	251	27.7	292 52.4	54.5	79 03.6	31.4	222 40.4	29.3	44 13.4	37.7					
11	266	30.1	307 51.8	-17 53.6	94 05.5	+6 31.3	237 42.8	+10 29.3	59 15.7	-8 37.8					
12	281	32.6	322 51.2	-17 52.6	109 07.4	+6 31.1	252 45.2	+10 29.3	74 18.0	-8 37.8					
13	296	35.0	337 50.6	51.7	124 09.3	30.9	267 47.6	29.4	89 20.3	37.8					
14	311	37.5	352 50.0	50.8	139 11.2	30.8	282 50.0	29.4	104 22.6	37.9					
15	326	40.0	7 49.4	49.8	154 13.1	30.6	297 52.4	29.4	119 25.0	37.9					
16	341	42.4	22 48.8	48.9	169 15.0	30.5	312 54.8	29.5	134 27.3	38.0					
17	356	44.9	37 48.2	-17 47.9	184 16.9	+6 30.3	327 57.2	+10 29.5	149 29.6	-8 38.0					
18	11	47.4	52 47.6	-17 47.0	199 18.9	+6 30.1	342 59.6	+10 29.5	164 31.9	-8 38.1					
19	26	49.8	67 47.0	46.1	214 20.8	30.0	358 02.0	29.6	179 34.2	38.1					
20	41	52.3	82 46.4	45.1	229 22.7	29.8	13 04.4	29.6	194 36.6	38.2					
21	56	54.8	97 45.8	44.2	244 24.6	29.7	28 06.8	29.7	209 38.9	38.2					
22	71	57.2	112 45.2	43.2	259 26.5	29.5	43 09.2	29.7	224 41.2	38.2					
23	86	59.7	127 44.6	42.3	274 28.4	29.3	58 11.6	29.7	239 43.5	38.3					
24	102	02.1	142 44.0	-17 41.3	289 30.3	+6 29.2	73 14.0	+10 29.8	254 45.8	-8 38.3					
Dif	—		-6	+9	+19	-2	+24	0	+23	0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 04 ^m 2			Edad: 9 ^d 2 PHE { SD: 14'8 PMG: 19 ^h 37 ^m												
				R ^e : 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	59.8	-22	53.7	74	36.3	+15 07.9	60 N	7 09	8 05	9 01	11 18	19	3 01	75	
1	193	59.5		53.5	89	09.4 ¹⁴¹	16.5 ⁸⁶	58	7 02	7 54	8 45	28	22	2 52	71	
2	208	59.2		53.3	103	42.5 ¹⁴¹	25.0 ⁸⁵	56	6 55	44	31	38	24	43	60	
3	223	58.9		53.0	118	15.6 ¹⁴¹	33.4 ⁸⁴	54	50	35	19	46	26	35	6	
4	238	58.6		52.8	132	48.6 ¹⁴⁰	41.8 ⁸⁴	52	44	27	8 08	11 53	28	28	66	
5	253	58.3	-22	52.6	147	21.5 ¹³⁹	+15 50.1 ⁸³	50	6 39	7 20	7 58	12 00	29	2 22	64	
6	268	58.0	-22	52.3	161	54.4 ¹³⁹	+15 58.3 ⁸²	45	6 28	7 05	7 38	12 14	33	2 09	60	
7	283	57.7		52.1	176	27.3 ¹³⁹	+16 06.5 ⁸²	40	18	6 52	22	26	35	1 58	58	
8	298	57.4		51.9	191	00.1 ¹³⁸	14.6 ⁸¹	35	09	40	7 08	36	37	49	55	
9	313	57.1		51.6	205	32.9 ¹³⁸	22.7 ⁸¹	30	6 00	30	6 56	12 45	39	41	53	
10	328	56.9		51.4	220	05.7 ¹³⁸	30.6 ⁷⁹	20	5 44	6 12	36	13 00	42	27	50	
11	343	56.6	-22	51.2	234	38.4 ¹³⁷	+16 38.5 ⁷⁹	10 N	5 29	5 55	6 18	13 14	44	1 14	48	
12	358	56.3	-22	50.9	249	11.0 ¹³⁶	+16 46.4 ⁷⁹	0	5 12	5 38	6 01	13 26	47	1 03	45	
13	13	56.0		50.7	263	43.6 ¹³⁶	+16 54.1 ⁷⁷	10 S	4 53	20	5 43	39	49	0 52	42	
14	28	55.7		50.4	278	16.1 ¹³⁵	+17 01.8 ⁷⁷	20	31	5 00	25	13 53	51	40	40	
15	43	55.4		50.2	292	48.6 ¹³⁵	09.5 ⁷⁷	30	4 03	4 36	5 03	14 08	54	26	37	
16	58	55.1		50.0	307	21.1 ¹³⁵	17.0 ⁷⁵	35	3 45	21	4 51	18	55	18	35	
17	73	54.8	-22	49.7	321	53.5 ¹³⁴	+17 24.5 ⁷⁵	40	3 22	4 04	4 36	14 28	58	0 09	33	
18	88	54.5	-22	49.5	336	25.8 ¹³³	+17 31.9 ⁷⁴	45	2 53	3 42	4 19	14 40	61	** ** *	**	
19	103	54.3		49.2	350	58.1 ¹³³	39.2 ⁷³	50	2 09	3 13	3 57	14 56	63	** ** *	**	
20	118	54.0		49.0	5	30.4 ¹³³	46.5 ⁷³	52	1 44	2 58	46	15 03	64	** ** *	**	
21	133	53.7		48.7	20	02.6 ¹³²	+17 53.7 ⁷²	54	1 05	41	34	11	66	23	57	29
22	148	53.4		48.5	34	34.7 ¹³¹	+18 00.8 ⁷¹	56	** ** *	2 20	21	19	69	47	28	
23	163	53.1		48.2	49	06.8 ¹³¹	07.8 ⁷⁰	58	** ** *	1 53	3 05	29	71	37	25	
24	178	52.8	-22	48.0	63	38.9 ¹³¹	+18 14.8 ⁷⁰	60 S	** ** *	1 11	2 45	15 41	74	23	25	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 09 ^m 0		Mag: -4.0 PMG: 14 ^h 30 ^m		Mag: +0.1 PMG: 4 ^h 41 ^m		Mag: -2.6 PMG: 19 ^h 04 ^m		Mag: +0.7 PMG: 7 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	102	02.1	142	44.0	-17	41.3	289	30.3	+6	29.2	73	14.0	+10	29.8	254	45.8	-8	38.3
1	117	04.6	157	43.4		40.4	304	32.3		29.0	88	16.4		29.8	269	48.1		38.4
2	132	07.1	172	42.9		39.4	319	34.2		28.9	103	18.8		29.8	284	50.5		38.4
3	147	09.5	187	42.3		38.5	334	36.1		28.7	118	21.2		29.9	299	52.8		38.5
4	162	12.0	202	41.7		37.5	349	38.0		28.6	133	23.6		29.9	314	55.1		38.5
5	177	14.5	217	41.1	-17	36.6	4	39.9	+6	28.4	148	26.0	+10	30.0	329	57.4	-8	38.5
6	192	16.9	232	40.5	-17	35.6	19	41.9	+6	28.3	163	28.4	+10	30.0	344	59.7	-8	38.6
7	207	19.4	247	39.9		34.7	34	43.8		28.1	178	30.8		30.0	0	02.1		38.6
8	222	21.9	262	39.3		33.7	49	45.7		27.9	193	33.2		30.1	15	04.4		38.7
9	237	24.3	277	38.7		32.8	64	47.6		27.8	208	35.6		30.1	30	06.7		38.7
10	252	26.8	292	38.1		31.8	79	49.6		27.6	223	38.0		30.1	45	09.0		38.8
11	267	29.3	307	37.6	-17	30.9	94	51.5	+6	27.5	238	40.4	+10	30.2	60	11.3	-8	38.8
12	282	31.7	322	37.0	-17	29.9	109	53.4	+6	27.3	253	42.8	+10	30.2	75	13.7	-8	38.8
13	297	34.2	337	36.4		28.9	124	55.4		27.2	268	45.2		30.3	90	16.0		38.9
14	312	36.6	352	35.8		28.0	139	57.3		27.0	283	47.6		30.3	105	18.3		38.9
15	327	39.1	7	35.2		27.0	154	59.2		26.9	298	50.0		30.3	120	20.6		39.0
16	342	41.6	22	34.6		26.1	170	01.1		26.7	313	52.4		30.4	135	23.0		39.0
17	357	44.0	37	34.0	-17	25.1	185	03.1	+6	26.6	328	54.8	+10	30.4	150	25.3	-8	39.1
18	12	46.5	52	33.5	-17	24.1	200	05.0	+6	26.4	343	57.2	+10	30.4	165	27.6	-8	39.1
19	27	49.0	67	32.9		23.2	215	06.9		26.3	358	59.6		30.5	180	29.9		39.1
20	42	51.4	82	32.3		22.2	230	08.9		26.1	14	02.0		30.5	195	32.2		39.2
21	57	53.9	97	31.7		21.2	245	10.8		26.0	29	04.4		30.6	210	34.6		39.2
22	72	56.4	112	31.1		20.3	260	12.7		25.8	44	06.8		30.6	225	36.9		39.3
23	87	58.8	127	30.6		19.3	275	14.7		25.7	59	09.2		30.6	240	39.2		39.3
24	103	01.3	142	30.0	-17	18.3	290	16.6	+6	25.5	74	11.6	+10	30.7	255	41.5	-8	39.4
Dif	—		-6		+10		+19		-2		+24		0		+23		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 04 ^m 7			Edad: 10 ^d 2 PHE { SD: 14/8 PMG: 20 ^h 24 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	52.8	-22 48.0	63	38.9	+18 14.8	60 N	15 09	16 05	17 01	11 37 27	4 16	72		
1	193	52.5		78	10.8 ¹²⁹		58	25	16	08	11 50 30	4 03	69		
2	208	52.3		92	42.8 ¹³⁰		56	39	26	14	12 02 32	3 52	67		
3	223	52.0		107	14.7 ¹²⁹		54	15 51	35	20	12 34	42	65		
4	238	51.7		121	46.5 ¹²⁸		52	16 02	42	26	21 35	34	63		
5	253	51.4	-22 46.8	136	18.3 ¹²⁸	+18 48.4	50	16 11	16 49	17 31	12 29 36	3 26	62		
6	268	51.1	-22 46.5	150	50.0 ¹²⁷	+18 54.9	45	16 31	17 05	17 42	12 47 38	3 09	60		
7	283	50.8		165	21.7 ¹²⁷	+19 01.3	40	16 47	18	17 52	13 01 40	2 56	57		
8	298	50.5		179	53.3 ¹²⁶		35	17 01	29	18 01	13 42	44	56		
9	313	50.3		194	24.9 ¹²⁶		30	13	39	09	24 43	34	54		
10	328	50.0		208	56.4 ¹²⁵		20	34	17 58	25	42 45	17	52		
11	343	49.7	-22 45.2	223	27.9 ¹²⁵	+19 26.0	10 N	17 52	18 14	18 41	13 58 47	2 02	50		
12	358	49.4	-22 45.0	237	59.3 ¹²⁴	+19 32.0	0	18 08	18 31	18 57	14 13 48	1 48	48		
13	13	49.1		252	30.7 ¹²⁴		10 S	25	18 48	19 15	28 50	34	46		
14	28	48.8		267	02.0 ¹²³		20	18 44	19 08	19 37	14 44 52	20	43		
15	43	48.6		281	33.2 ¹²²		30	19 05	32	20 05	15 02 54	1 03	41		
16	58	48.3		296	04.4 ¹²²	+19 55.1	35	18	19 47	23	13 55	0 53	39		
17	73	48.0	-22 43.7	310	35.6 ¹²²	+20 00.6	40	19 32	20 05	20 46	15 26 56	0 42	37		
18	88	47.7	-22 43.4	325	06.7 ¹²¹	+20 06.1	45	19 50	20 26	21 15	15 41 58	0 28	36		
19	103	47.4		339	37.7 ¹²⁰		50	20 11	20 55	21 57	15 59 60	12	33		
20	118	47.1		354	08.7 ¹²⁰		52	21	21 09	22 22	16 07 62	0 05	31		
21	133	46.9		8	39.7 ¹²⁰		54	33	26	22 59	17 63	** ** *	** ** *		
22	148	46.6		23	10.5 ¹¹⁸		56	20 47	21 46	** ** *	28 64	** ** *	** ** *		
23	163	46.3		37	41.4 ¹¹⁹		58	21 02	22 13	** ** *	40 67	** ** *	** ** *		
24	178	46.0	-22 41.8	52	12.2 ¹¹⁸	+20 36.9	60 S	21 21	22 53	** ** *	16 55 69	23 47	33		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 05 ^m 1		Mag: -4.0 PMG: 14 ^h 31 ^m			Mag: +0.1 PMG: 4 ^h 38 ^m			Mag: -2.6 PMG: 19 ^h 00 ^m			Mag: +0.7 PMG: 6 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	103	01.3	142	30.0	-17 18.3	290	16.6	+6 25.5	74	11.6	+10 30.7	255	41.5	-8 39.4	
1	118	03.8	157	29.4		305	18.6		89	14.0		270	43.9		
2	133	06.2	172	28.8		320	20.5		104	16.4		285	46.2		
3	148	08.7	187	28.3		335	22.4		119	18.8		300	48.5		
4	163	11.1	202	27.7		350	24.4		134	21.1		315	50.8		
5	178	13.6	217	27.1	-17 13.5	5	26.3	+6 24.8	149	23.5	+10 30.9	330	53.1	-8 39.6	
6	193	16.1	232	26.5	-17 12.5	20	28.3	+6 24.6	164	25.9	+10 30.9	345	55.5	-8 39.6	
7	208	18.5	247	26.0		35	30.2		179	28.3		0	57.8		
8	223	21.0	262	25.4		50	32.2		194	30.7		16	00.1		
9	238	23.5	277	24.8		65	34.1		209	33.1		31	02.4		
10	253	25.9	292	24.2		80	36.0		224	35.5		46	04.8		
11	268	28.4	307	23.7	-17 07.7	95	38.0	+6 23.9	239	37.9	+10 31.1	61	07.1	-8 39.8	
12	283	30.9	322	23.1	-17 06.7	110	39.9	+6 23.8	254	40.3	+10 31.2	76	09.4	-8 39.9	
13	298	33.3	337	22.5		125	41.9		269	42.7		91	11.7		
14	313	35.8	352	22.0		140	43.8		284	45.1		106	14.1		
15	328	38.2	7	21.4		155	45.8		299	47.4		121	16.4		
16	343	40.7	22	20.8		170	47.7		314	49.8		136	18.7		
17	358	43.2	37	20.3	-17 01.8	185	49.7	+6 23.0	329	52.2	+10 31.4	151	21.0	-8 40.1	
18	13	45.6	52	19.7	-17 00.8	200	51.7	+6 22.9	344	54.6	+10 31.4	166	23.4	-8 40.1	
19	28	48.1	67	19.1	-16 59.8	215	53.6		359	57.0		181	25.7		
20	43	50.6	82	18.6		230	55.6		14	59.4		196	28.0		
21	58	53.0	97	18.0		245	57.5		30	01.8		211	30.3		
22	73	55.5	112	17.4		260	59.5		45	04.2		226	32.7		
23	88	58.0	127	16.9		276	01.4		60	06.5		241	35.0		
24	104	00.4	142	16.3	-16 54.9	291	03.4	+6 22.1	75	08.9	+10 31.7	256	37.3	-8 40.4	
Dif	—		-6 +10			+19 -1			+24 0			+23 0			

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 2			Edad: 11 ^d 2 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9 PMG: 21 ^h 13 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m				
0	178	46.0	-22	52	12.2	+20 36.9	60 N	7 08	8 04	9 00	12 04	39	5 28	64				
1	193	45.7		66	42.9 ¹¹⁷	41.7 ⁴⁸	58	7 01	7 53	8 44	20 41		5 12	63				
2	208	45.4		81	13.6 ¹¹⁷	46.5 ⁴⁸	56	6 55	44	30	34 42		4 59	61				
3	223	45.2		95	44.2 ¹¹⁶	51.1 ⁴⁶	54	49	35	18	46 43		47	60				
4	238	44.9		110	14.7 ¹¹⁵	+20 55.6 ⁴⁵	52	44	27	8 07	12 56	44	37	59				
5	253	44.6	-22	124	45.3 ¹¹⁶	+21 00.1 ⁴⁵	50	6 39	7 20	7 58	13 05	45	4 28	58				
6	268	44.3	-22	139	15.7 ¹¹⁴	+21 04.4 ⁴³	45	6 28	7 05	7 38	13 25	46	4 09	56				
7	283	44.0		153	46.1 ¹¹⁴	08.7 ⁴³	40	18	6 52	22	41 47		3 53	55				
8	298	43.8		168	16.5 ¹¹⁴	12.8 ⁴¹	35	09	41	7 08	13 55	47	40	54				
9	313	43.5		182	46.8 ¹¹³	16.8 ⁴⁰	30	6 01	30	6 57	14 07	48	28	54				
10	328	43.2		197	17.1 ¹¹³	20.8 ⁴⁰	20	5 45	6 12	36	27 49		3 09	52				
11	343	42.9	-22	211	47.3 ¹¹²	+21 24.6 ³⁸	10 N	5 29	5 56	6 18	14 45	50	2 52	51				
12	358	42.6	-22	226	17.5 ¹¹²	+21 28.4 ³⁸	0	5 13	5 39	6 01	15 01	51	2 36	49				
13	13	42.4		240	47.6 ¹¹¹	32.0 ³⁶	10 S	4 55	22	5 44	18 51		20	48				
14	28	42.1		255	17.7 ¹¹¹	35.6 ³⁶	20	33	5 02	26	36 52		2 03	47				
15	43	41.8		269	47.7 ¹¹⁰	39.0 ³⁴	30	4 05	4 38	5 05	15 56	53	1 44	45				
16	58	41.5		284	17.6 ¹⁰⁹	42.4 ³⁴	35	3 47	23	4 52	16 08	54	32	45				
17	73	41.2	-22	298	47.6 ¹¹⁰	+21 45.6 ³²	40	3 24	4 05	4 38	16 22	54	1 19	44				
18	88	41.0	-22	313	17.4 ¹⁰⁸	+21 48.8 ³²	45	2 55	3 44	4 21	16 39	55	1 04	42				
19	103	40.7		327	47.3 ¹⁰⁹	51.8 ³⁰	50	2 13	15	3 59	16 59	56	0 45	40				
20	118	40.4		342	17.1 ¹⁰⁸	54.7 ²⁹	52	1 48	3 01	49	17 09	56	36	39				
21	133	40.1		356	46.8 ¹⁰⁷	+21 57.5 ²⁸	54	1 11	2 44	37	20 57		26	38				
22	148	39.8		11	16.5 ¹⁰⁷	+22 00.3 ²⁸	56	** **	2 24	23	32 58		15	36				
23	163	39.6		25	46.1 ¹⁰⁶	02.9 ²⁶	58	** **	1 57	3 08	17 47	58	0 02	35				
24	178	39.3	-22	40	15.7 ¹⁰⁶	+22 05.4 ²⁵	60 S	** **	1 17	2 49	18 04	59	** **	**				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 01 ^m 2		Mag: -4.0 PMG: 14 ^h 31 ^m			Mag: +0.1 PMG: 4 ^h 35 ^m			Mag: -2.6 PMG: 18 ^h 56 ^m			Mag: +0.7 PMG: 6 ^h 52 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	104	00.4	142	16.3	-16	54.9	291	03.4	+6	22.1	75	08.9	+10	31.7	256	37.3	-8	40.4
1	119	02.9	157	15.7		53.9	306	05.3		21.9	90	11.3		31.7	271	39.6		40.4
2	134	05.4	172	15.2		52.9	321	07.3		21.8	105	13.7		31.7	286	42.0		40.4
3	149	07.8	187	14.6		51.9	336	09.3		21.6	120	16.1		31.8	301	44.3		40.5
4	164	10.3	202	14.1		51.0	351	11.2		21.5	135	18.5		31.8	316	46.6		40.5
5	179	12.7	217	13.5	-16	50.0	6	13.2	+6	21.4	150	20.8	+10	31.9	331	48.9	-8	40.6
6	194	15.2	232	12.9	-16	49.0	21	15.2	+6	21.2	165	23.2	+10	31.9	346	51.3	-8	40.6
7	209	17.7	247	12.4		48.0	36	17.1		21.1	180	25.6		32.0	1	53.6		40.6
8	224	20.1	262	11.8		47.0	51	19.1		21.0	195	28.0		32.0	16	55.9		40.7
9	239	22.6	277	11.3		46.0	66	21.1		20.8	210	30.4		32.0	31	58.3		40.7
10	254	25.1	292	10.7		45.0	81	23.0		20.7	225	32.8		32.1	47	00.6		40.8
11	269	27.5	307	10.2	-16	44.0	96	25.0	+6	20.5	240	35.1	+10	32.1	62	02.9	-8	40.8
12	284	30.0	322	09.6	-16	43.0	111	27.0	+6	20.4	255	37.5	+10	32.2	77	05.2	-8	40.8
13	299	32.5	337	09.0		42.0	126	28.9		20.3	270	39.9		32.2	92	07.6		40.9
14	314	34.9	352	08.5		41.0	141	30.9		20.1	285	42.3		32.3	107	09.9		40.9
15	329	37.4	7	07.9		40.0	156	32.9		20.0	300	44.7		32.3	122	12.2		41.0
16	344	39.9	22	07.4		39.0	171	34.8		19.9	315	47.1		32.4	137	14.5		41.0
17	359	42.3	37	06.8	-16	38.0	186	36.8	+6	19.7	330	49.4	+10	32.4	152	16.9	-8	41.0
18	14	44.8	52	06.3	-16	37.0	201	38.8	+6	19.6	345	51.8	+10	32.4	167	19.2	-8	41.1
19	29	47.2	67	05.7		36.0	216	40.8		19.5	0	54.2		32.5	182	21.5		41.1
20	44	49.7	82	05.2		35.0	231	42.7		19.3	15	56.6		32.5	197	23.9		41.2
21	59	52.2	97	04.6		34.0	246	44.7		19.2	30	58.9		32.6	212	26.2		41.2
22	74	54.6	112	04.1		33.0	261	46.7		19.1	46	01.3		32.6	227	28.5		41.2
23	89	57.1	127	03.5		32.0	276	48.7		18.9	61	03.7		32.7	242	30.8		41.3
24	104	59.6	142	03.0	-16	31.0	291	50.7	+6	18.8	76	06.1	+10	32.7	257	33.2	-8	41.3
Dif	—		-6		+10		+20		-1		+24		0		+23		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 12 ^d 2 PHE {	4 ^h : 55:0 12 ^h : 55:2 20 ^h : 55:3										
	PMG: 12 ^h 05 ^m 6				R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	39.3	-22 35.2	40	15.7	+22 05.4	24	60 N	15 12	16 08	17 04	12 43	54	6 32	53
1	193	39.0		54	45.3 ¹⁰⁶	07.8	24	58	28	19	11	13 01	54	15	53
2	208	38.7		69	14.8 ¹⁰⁵	10.0	22	56	42	28	17	16 54		6 00	53
3	223	38.5		83	44.3 ¹⁰⁵	12.2	22	54	15 54	37	23	29 53		5 47	53
4	238	38.2		98	13.7 ¹⁰⁴	14.3	21	52	16 04	45	28	40 53		36	53
5	253	37.9	-22 33.8	112	43.1 ¹⁰⁴	+22 16.3	20	50	16 14	16 52	17 33	13 50	53	5 26	53
6	268	37.6	-22 33.5	127	12.4 ¹⁰³	+22 18.1	18	45	16 33	17 07	17 44	14 11	53	5 05	53
7	283	37.3		141	41.8 ¹⁰⁴	19.8	17	40	16 49	20	17 53	28 53		4 48	53
8	298	37.1		156	11.0 ¹⁰²	21.5	17	35	17 03	31	18 02	42 53		34	53
9	313	36.8		170	40.3 ¹⁰³	23.0	15	30	15	41	10	14 55	52	22	52
10	328	36.5		185	09.4 ¹⁰¹	24.4	14	20	35	17 59	26	15 16	53	4 01	52
11	343	36.2	-22 32.0	199	38.6 ¹⁰²	+22 25.7	13	10 N	17 53	18 15	18 42	15 35	52	3 43	51
12	358	36.0	-22 31.7	214	07.7 ¹⁰¹	+22 26.9	12	0	18 09	18 32	18 58	15 52	52	3 25	52
13	13	35.7		228	36.8 ¹⁰¹	27.9	10	10 S	26	18 49	19 16	16 09	52	3 08	51
14	28	35.4		243	05.9 ¹⁰¹	28.9	10	20	18 44	19 09	19 38	28 51		2 50	51
15	43	35.1		257	34.9 ¹⁰⁰	29.7	8	30	19 05	33	20 05	16 49	51	29	50
16	58	34.9		272	03.8 ⁹⁹	30.4	7	35	18	19 47	23	17 02	51	17	50
17	73	34.6	-22 30.3	286	32.8 ¹⁰⁰	+22 31.0	6	40	19 32	20 04	20 45	17 16	51	2 03	49
18	88	34.3	-22 30.0	301	01.7 ⁹⁹	+22 31.5	5	45	19 49	20 26	21 14	17 34	50	1 46	49
19	103	34.0		315	30.6 ⁹⁹	31.9	4	50	20 11	20 54	21 56	17 55	49	25	49
20	118	33.8		329	59.4 ⁹⁸	32.2	3	52	21	21 08	22 20	18 05	49	15	49
21	133	33.5		344	28.3 ⁹⁹	32.3	1	54	32	24	22 55	17 48		1 04	48
22	148	33.2		358	57.1 ⁹⁸	32.4	1	56	20 45	21 44	** **	30 48		0 51	48
23	163	33.0		13	25.8 ⁹⁷	32.3	1	58	21 01	22 10	** **	18 45	47	37	47
24	178	32.7	-22 28.2	27	54.6 ⁹⁸	+22 32.1	2	60 S	21 20	22 48	** **	19 03	47	0 20	46

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 16 ^h 57 ^m 2		Mag: -4.0 PMG: 14 ^h 32 ^m		Mag: +0.1 PMG: 4 ^h 32 ^m		Mag: -2.6 PMG: 18 ^h 53 ^m			Mag: +0.7 PMG: 6 ^h 49 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	104	59.6	142	03.0	-16	31.0	291	50.7	+6	18.8	76	06.1	+10	32.7	257	33.2	-8	41.3
1	120	02.0	157	02.4		30.0	306	52.6		18.7	91	08.5		32.8	272	35.5		41.4
2	135	04.5	172	01.9		29.0	321	54.6		18.6	106	10.8		32.8	287	37.8		41.4
3	150	07.0	187	01.3		28.0	336	56.6		18.4	121	13.2		32.9	302	40.2		41.4
4	165	09.4	202	00.8		27.0	351	58.6		18.3	136	15.6		32.9	317	42.5		41.5
5	180	11.9	217	00.3	-16	26.0	7	00.6	+6	18.2	151	18.0	+10	32.9	332	44.8	-8	41.5
6	195	14.4	231	59.7	-16	25.0	22	02.5	+6	18.0	166	20.3	+10	33.0	347	47.2	-8	41.5
7	210	16.8	246	59.2		24.0	37	04.5		17.9	181	22.7		33.0	2	49.5		41.6
8	225	19.3	261	58.6		23.0	52	06.5		17.8	196	25.1		33.1	17	51.8		41.6
9	240	21.7	276	58.1		21.9	67	08.5		17.7	211	27.5		33.1	32	54.2		41.7
10	255	24.2	291	57.5		20.9	82	10.5		17.5	226	29.8		33.2	47	56.5		41.7
11	270	26.7	306	57.0	-16	19.9	97	12.5	+6	17.4	241	32.2	+10	33.2	62	58.8	-8	41.7
12	285	29.1	321	56.5	-16	18.9	112	14.5	+6	17.3	256	34.6	+10	33.3	78	01.1	-8	41.8
13	300	31.6	336	55.9		17.9	127	16.5		17.2	271	37.0		33.3	93	03.5		41.8
14	315	34.1	351	55.4		16.9	142	18.5		17.0	286	39.3		33.4	108	05.8		41.9
15	330	36.5	6	54.8		15.9	157	20.4		16.9	301	41.7		33.4	123	08.1		41.9
16	345	39.0	21	54.3		14.8	172	22.4		16.8	316	44.1		33.5	138	10.5		41.9
17	0	41.5	36	53.8	-16	13.8	187	24.4	+6	16.7	331	46.5	+10	33.5	153	12.8	-8	42.0
18	15	43.9	51	53.2	-16	12.8	202	26.4	+6	16.5	346	48.8	+10	33.6	168	15.1	-8	42.0
19	30	46.4	66	52.7		11.8	217	28.4		16.4	1	51.2		33.6	183	17.5		42.0
20	45	48.9	81	52.2		10.8	232	30.4		16.3	16	53.6		33.6	198	19.8		42.1
21	60	51.3	96	51.6		09.8	247	32.4		16.2	31	55.9		33.7	213	22.1		42.1
22	75	53.8	111	51.1		08.7	262	34.4		16.0	46	58.3		33.7	228	24.5		42.2
23	90	56.2	126	50.6		07.7	277	36.4		15.9	62	00.7		33.8	243	26.8		42.2
24	105	58.7	141	50.0	-16	06.7	292	38.4	+6	15.8	77	03.0	+10	33.8	258	29.1	-8	42.2
Dif	—		-5		+10		+20		-1		+24		0		+23			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3			Edad: 13 ^d 2	PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 55 ^s 9	SD: 15 ^h 1		PMG: 22 ^h 57 ^m	R ^o : 52 ^m							
	hG ☉	Dec	Dif								Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	32.7	-22 28.2	27	54.6	+22 32.1	3	60 N	7 07	8 03	8 58	13 37	69	7 25	40	
1	193	32.4	27.9	42	23.3	31.8	3	58	7 01	7 52	42	13 55	66	7 08	41	
2	208	32.1	27.6	56	52.0	31.3	5	56	6 54	43	29	14 10	65	6 53	43	
3	223	31.9	27.2	71	20.6	30.8	5	54	49	34	17	22 64		40	44	
4	238	31.6	26.9	85	49.3	30.1	7	52	43	27	8 07	33 63		29	45	
5	253	31.3	-22 26.6	100	17.9	+22 29.3	8	50	6 39	7 20	7 57	14 43	62	6 19	45	
6	268	31.1	-22 26.3	114	46.5	+22 28.4	9	45	6 28	7 05	7 38	15 04	60	5 58	47	
7	283	30.8	26.0	129	15.0	27.4	10	40	18	6 52	22	21 59		41	48	
8	298	30.5	25.7	143	43.6	26.2	12	35	09	41	7 09	35 58		27	48	
9	313	30.2	25.4	158	12.1	24.9	13	30	6 01	31	6 57	15 47	57	5 14	50	
10	328	30.0	25.1	172	40.6	23.6	13	20	5 45	6 13	37	16 09	55	4 53	50	
11	343	29.7	-22 24.8	187	09.1	+22 22.1	15	10 N	5 30	5 56	6 19	16 27	54	4 34	52	
12	358	29.4	-22 24.5	201	37.6	+22 20.4	17	0	5 14	5 40	6 02	16 44	52	4 17	52	
13	13	29.2	24.2	216	06.1	18.7	17	10 S	4 56	23	5 46	17 01	51	3 59	54	
14	28	28.9	23.8	230	34.5	16.8	19	20	34	5 03	27	19 50		41	54	
15	43	28.6	23.5	245	03.0	14.9	19	30	4 06	4 39	5 06	40 48		19	55	
16	58	28.3	23.2	259	31.4	12.8	21	35	3 49	25	4 54	17 53	47	3 07	55	
17	73	28.1	-22 22.9	273	59.8	+22 10.5	23	40	3 27	4 07	4 40	18 07	46	2 52	56	
18	88	27.8	-22 22.6	288	28.2	+22 08.2	23	45	2 58	3 46	4 23	18 24	44	2 35	57	
19	103	27.5	22.3	302	56.6	05.7	25	50	2 16	18	4 01	44 42		14	58	
20	118	27.3	21.9	317	25.0	03.2	25	52	1 52	3 04	3 51	18 54	41	2 04	58	
21	133	27.0	21.6	331	53.3	+22 00.5	27	54	1 17	2 48	40	19 05	40	1 52	59	
22	148	26.7	21.3	346	21.7	+21 57.6	29	56	** ** *	27	26	18 38		39	60	
23	163	26.5	21.0	0	50.1	54.7	29	58	** ** *	2 02	3 11	32 37		24	60	
24	178	26.2	-22 20.7	15	18.4	+21 51.6	31	60 S	** ** *	1 24	2 52	19 50	33	1 06	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 53 ^m 3		Mag: -4.0 PMG: 14 ^h 33 ^m		Mag: +0.1 PMG: 4 ^h 29 ^m		Mag: -2.6 PMG: 18 ^h 49 ^m		Mag: +0.7 PMG: 6 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	105	58.7	141	50.0	292	38.4	77	03.0	258	29.1
1	121	01.2	156	49.5	307	40.4	92	05.4	273	31.5
2	136	03.6	171	49.0	322	42.4	107	07.8	288	33.8
3	151	06.1	186	48.4	337	44.4	122	10.2	303	36.1
4	166	08.6	201	47.9	352	46.4	137	12.5	318	38.5
5	181	11.0	216	47.4	7	48.4	152	14.9	333	40.8
6	196	13.5	231	46.8	22	50.4	167	17.3	348	43.1
7	211	16.0	246	46.3	37	52.5	182	19.6	3	45.5
8	226	18.4	261	45.8	52	54.5	197	22.0	18	47.8
9	241	20.9	276	45.3	67	56.5	212	24.4	33	50.1
10	256	23.3	291	44.7	82	58.5	227	26.7	48	52.5
11	271	25.8	306	44.2	98	00.5	242	29.1	63	54.8
12	286	28.3	321	43.7	113	02.5	257	31.5	78	57.1
13	301	30.7	336	43.2	128	04.5	272	33.8	93	59.5
14	316	33.2	351	42.6	143	06.5	287	36.2	109	01.8
15	331	35.7	6	42.1	158	08.5	302	38.6	124	04.1
16	346	38.1	21	41.6	173	10.6	317	40.9	139	06.5
17	1	40.6	36	41.1	188	12.6	332	43.3	154	08.8
18	16	43.1	51	40.6	203	14.6	347	45.6	169	11.2
19	31	45.5	66	40.0	218	16.6	2	48.0	184	13.5
20	46	48.0	81	39.5	233	18.6	17	50.4	199	15.8
21	61	50.5	96	39.0	248	20.6	32	52.7	214	18.2
22	76	52.9	111	38.5	263	22.7	47	55.1	229	20.5
23	91	55.4	126	38.0	278	24.7	62	57.5	244	22.8
24	106	57.8	141	37.4	293	26.7	77	59.8	259	25.2
Dif	—		-5	+10	+20	-1	+24	0	+23	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 06 ^m 5			Edad: 14 ^d 2 PHE { SD: 15/2 PMG: 23 ^h 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	26.2	-22 20.7	15	18.4	+21 51.6	31	60 N	15 16	16 11	17 06	14 46 79	8 05 29	
1	193	25.9	20.3	29	46.8	94 48.5	31	58	32	22	13	15 01 77	7 49 32	
2	208	25.7	20.0	44	15.1	93 45.2	33	56	45	31	19	15 73	36 34	
3	223	25.4	19.7	58	43.4	93 41.7	35	54	15 57	39	25	26 72	24 36	
4	238	25.1	19.4	73	11.8	94 38.2	35	52	16 07	47	30	36 70	14 37	
5	253	24.9	-22 19.0	87	40.1	93 +21 34.6	36	50	16 16	16 54	17 35	15 45 69	7 04 39	
6	268	24.6	-22 18.7	102	08.4	93 +21 30.8	38	45	16 35	17 09	17 46	16 04 66	6 45 41	
7	283	24.3	18.4	116	36.8	94 26.9	39	40	16 51	21	17 55	20 63	29 43	
8	298	24.1	18.1	131	05.1	93 22.9	40	35	17 05	32	18 04	33 61	15 45	
9	313	23.8	17.7	145	33.4	93 18.8	41	30	16	17 42	12	16 44 60	6 04 46	
10	328	23.5	17.4	160	01.8	94 14.5	43	20	36	18 00	27	17 04 56	5 43 49	
11	343	23.3	-22 17.1	174	30.1	93 +21 10.1	44	10 N	17 54	18 16	18 42	17 21 54	5 26 50	
12	358	23.0	-22 16.7	188	58.5	94 +21 05.7	44	0	18 10	18 33	18 59	17 36 53	5 09 53	
13	13	22.7	16.4	203	26.8	93 +21 01.1	46	10 S	27	18 50	19 16	17 52 50	4 53 54	
14	28	22.5	16.1	217	55.2	94 +20 56.3	48	20	18 45	19 09	19 38	18 09 47	35 56	
15	43	22.2	15.7	232	23.6	94 51.5	48	30	19 05	33	20 05	28 45	14 59	
16	58	21.9	15.4	246	51.9	93 46.6	49	35	18	19 47	23	40 42	4 02 60	
17	73	21.7	-22 15.1	261	20.3	94 +20 41.5	51	40	19 32	20 04	20 45	18 53 40	3 48 61	
18	88	21.4	-22 14.7	275	48.7	94 +20 36.3	52	45	19 49	20 25	21 13	19 08 38	3 32 63	
19	103	21.2	14.4	290	17.1	94 31.0	53	50	20 10	20 53	21 54	26 36	12 65	
20	118	20.9	14.1	304	45.5	94 25.6	54	52	20	21 06	22 17	35 34	3 02 67	
21	133	20.6	13.7	319	14.0	95 20.1	55	54	31	23	22 50	45 32	2 51 68	
22	148	20.4	13.4	333	42.4	94 14.4	57	56	44	21 42	** **	19 56 30	39 69	
23	163	20.1	13.1	348	10.8	94 08.7	57	58	20 59	22 07	** **	20 09 27	24 72	
24	178	19.8	-22 12.7	2	39.3	95 +20 02.8	59	60 S	21 17	22 42	** **	20 23 24	2 07 75	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG 16 ^h 49 ^m 4		Mag: -4.0 PMG: 14 ^h 34 ^m		Mag: 0.0 PMG: 4 ^h 26 ^m		Mag: -2.6 PMG: 18 ^h 45 ^m		Mag: +0.7 PMG: 6 ^h 41 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	106	57.8	141 37.4	-15 41.9	293 26.7	+6 13.0	77 59.8	+10 35.0	259 25.2	-8 43.1				
1	122	00.3	156 36.9	40.9	308 28.7	12.9	93 02.2	35.1	274 27.5	43.2				
2	137	02.8	171 36.4	39.9	323 30.8	12.8	108 04.5	35.1	289 29.8	43.2				
3	152	05.2	186 35.9	38.8	338 32.8	12.7	123 06.9	35.2	304 32.2	43.2				
4	167	07.7	201 35.4	37.8	353 34.8	12.6	138 09.3	35.2	319 34.5	43.3				
5	182	10.2	216 34.9	-15 36.7	8 36.8	+6 12.5	153 11.6	+10 35.3	334 36.9	-8 43.3				
6	197	12.6	231 34.3	-15 35.7	23 38.9	+6 12.4	168 14.0	+10 35.3	349 39.2	-8 43.3				
7	212	15.1	246 33.8	34.6	38 40.9	12.2	183 16.3	35.4	4 41.5	43.4				
8	227	17.6	261 33.3	33.6	53 42.9	12.1	198 18.7	35.4	19 43.9	43.4				
9	242	20.0	276 32.8	32.6	68 45.0	12.0	213 21.1	35.5	34 46.2	43.5				
10	257	22.5	291 32.3	31.5	83 47.0	11.9	228 23.4	35.5	49 48.6	43.5				
11	272	25.0	306 31.8	-15 30.5	98 49.0	+6 11.8	243 25.8	+10 35.6	64 50.9	-8 43.5				
12	287	27.4	321 31.3	-15 29.4	113 51.1	+6 11.7	258 28.1	+10 35.7	79 53.2	-8 43.6				
13	302	29.9	336 30.8	28.4	128 53.1	11.6	273 30.5	35.7	94 55.6	43.6				
14	317	32.3	351 30.3	27.3	143 55.1	11.5	288 32.8	35.8	109 57.9	43.6				
15	332	34.8	6 29.7	26.3	158 57.2	11.4	303 35.2	35.8	125 00.2	43.7				
16	347	37.3	21 29.2	25.2	173 59.2	11.3	318 37.6	35.9	140 02.6	43.7				
17	2	39.7	36 28.7	-15 24.2	189 01.2	+6 11.2	333 39.9	+10 35.9	155 04.9	-8 43.7				
18	17	42.2	51 28.2	-15 23.1	204 03.3	+6 11.1	348 42.3	+10 36.0	170 07.3	-8 43.8				
19	32	44.7	66 27.7	22.1	219 05.3	11.0	3 44.6	36.0	185 09.6	43.8				
20	47	47.1	81 27.2	21.0	234 07.4	10.9	18 47.0	36.1	200 11.9	43.8				
21	62	49.6	96 26.7	19.9	249 09.4	10.8	33 49.3	36.1	215 14.3	43.9				
22	77	52.1	111 26.2	18.9	264 11.4	10.7	48 51.7	36.2	230 16.6	43.9				
23	92	54.5	126 25.7	17.8	279 13.5	10.6	63 54.0	36.2	245 19.0	44.0				
24	107	57.0	141 25.2	-15 16.8	294 15.5	+6 10.5	78 56.4	+10 36.3	260 21.3	-8 44.0				
Dif	—		-5	+10	+20	-1	+24	+1	+23	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 15 ^d 2	PHE	SD: 15 ^h 4		PMG: **h **m	R°: **m		R°		R°	
	hG ☉	Dec	Dif								Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	19.8	-22	2	39.3	+20	02.8	60 N	7 06	8 02	8 56	16 05 86	8 34 20	
1	193	19.6		17	07.8	+19	56.8	58	7 00	7 51	41	18 82	21 24	
2	208	19.3		31	36.3		50.7	56	6 54	42	27	28 80	10 26	
3	223	19.1		46	04.8		44.5	54	48	33	16	38 77	8 00 28	
4	238	18.8		60	33.3		38.2	52	43	26	8 06	46 75	7 51 30	
5	253	18.5	-22	75	01.9	+19	31.8	50	6 38	7 19	7 57	16 54 73	7 43 32	
6	268	18.3	-22	89	30.4	+19	25.3	45	6 27	7 04	7 37	17 10 69	7 26 36	
7	283	18.0		103	59.0		18.6	40	18	6 52	22	23 66	12 39	
8	298	17.7		118	27.6		11.9	35	09	41	7 09	34 63	7 00 41	
9	313	17.5		132	56.2	+19	05.0	30	6 01	31	6 57	17 44 61	6 50 43	
10	328	17.2		147	24.9	+18	58.0	20	5 46	6 13	37	18 00 58	32 46	
11	343	17.0	-22	161	53.5	+18	50.9	10 N	5 31	5 57	6 20	18 15 54	6 16 49	
12	358	16.7	-22	176	22.2	+18	43.7	0	5 15	5 41	6 03	18 29 51	6 02 51	
13	13	16.4		190	50.9		36.5	10 S	4 57	24	5 47	42 48	5 47 54	
14	28	16.2		205	19.6		29.1	20	36	5 04	29	18 56 45	31 57	
15	43	15.9		219	48.3		21.5	30	4 08	4 41	5 08	19 13 41	13 60	
16	58	15.7		234	17.1		13.9	35	3 51	27	4 56	22 39	5 02 62	
17	73	15.4	-22	248	45.9	+18	06.2	40	3 29	4 09	4 42	19 33 37	4 49 65	
18	88	15.2	-22	263	14.7	+17	58.4	45	3 01	3 48	4 25	19 46 34	4 35 67	
19	103	14.9		277	43.5		50.5	50	2 20	21	4 04	20 02 29	17 71	
20	118	14.6		292	12.4		42.5	52	1 57	3 07	3 54	09 28	4 09 72	
21	133	14.4		306	41.3		34.3	54	1 24	2 51	43	17 26	3 59 75	
22	148	14.1		321	10.2		26.1	56	** ** *	32	30	26 23	48 77	
23	163	13.9		335	39.1		17.8	58	** ** *	2 07	3 15	36 21	36 80	
24	178	13.6	-22	350	08.1	+17	09.4	60 S	** ** *	1 31	2 56	20 47 18	3 22 83	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 45 ^m 4		Mag: -4.0 PMG: 14 ^h 35 ^m		Mag: 0.0 PMG: 4 ^h 22 ^m		Mag: -2.6 PMG: 18 ^h 41 ^m		Mag: +0.7 PMG: 6 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	107	57.0	141	25.2	-15	16.8	294	15.5	+6	10.5
1	122	59.5	156	24.7		15.7	309	17.6		10.4
2	138	01.9	171	24.2		14.7	324	19.6		10.3
3	153	04.4	186	23.7		13.6	339	21.7		10.2
4	168	06.8	201	23.2		12.6	354	23.7		10.1
5	183	09.3	216	22.7	-15	11.5	9	25.8	+6	10.0
6	198	11.8	231	22.2	-15	10.4	24	27.8	+6	09.9
7	213	14.2	246	21.7		09.4	39	29.9		09.8
8	228	16.7	261	21.2		08.3	54	31.9		09.7
9	243	19.2	276	20.7		07.2	69	34.0		09.6
10	258	21.6	291	20.2		06.2	84	36.0		09.5
11	273	24.1	306	19.7	-15	05.1	99	38.1	+6	09.4
12	288	26.6	321	19.2	-15	04.1	114	40.1	+6	09.3
13	303	29.0	336	18.7		03.0	129	42.2		09.2
14	318	31.5	351	18.2		01.9	144	44.3		09.1
15	333	34.0	6	17.7	-15	00.9	159	46.3		09.0
16	348	36.4	21	17.2	-14	59.8	174	48.4		08.9
17	3	38.9	36	16.7	-14	58.7	189	50.4	+6	08.8
18	18	41.3	51	16.3	-14	57.7	204	52.5	+6	08.7
19	33	43.8	66	15.8		56.6	219	54.6		08.6
20	48	46.3	81	15.3		55.5	234	56.6		08.5
21	63	48.7	96	14.8		54.4	249	58.7		08.4
22	78	51.2	111	14.3		53.4	265	00.7		08.3
23	93	53.7	126	13.8		52.3	280	02.8		08.2
24	108	56.1	141	13.3	-14	51.2	295	04.9	+6	08.1
Dif	—		-5	+11			+21	-1		
										0

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 07 ^m 3				Edad: 16 ^d 2 PHE { 4 ^h : 57:2 12 ^h : 57:3 20 ^h : 57:5 PMG: 0 ^h 41 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	178	13.6	-22	04.3	350	08.1	+17	09.4	60 N	15 20	16 14	17 09	17 31 87	8 54 16				
1	193	13.4		04.0	4	37.1 ¹⁰⁰	+17	00.9 ⁸⁵	58	35	25	16	40 84	45 18				
2	208	13.1		03.6	19	06.1 ¹⁰⁰	+16	52.2 ⁸⁷	56	15 48	34	22	48 81	36 21				
3	223	12.8		03.3	33	35.1 ¹⁰⁰		43.5 ⁸⁷	54	16 00	42	27	17 55 79	28 24				
4	238	12.6		02.9	48	04.2 ¹⁰¹		34.7 ⁸⁸	52	10	50	32	18 01 77	21 26				
5	253	12.3	-22	02.5	62	33.3 ¹⁰¹	+16	25.8 ⁸⁹	50	16 19	16 56	17 37	18 07 74	8 15 28				
6	268	12.1	-22	02.2	77	02.4 ¹⁰¹	+16	16.8 ⁹⁰	45	16 38	17 11	17 48	18 19 70	8 02 31				
7	283	11.8		01.8	91	31.5 ¹⁰¹	+16	07.7 ⁹¹	40	16 53	23	17 57	29 67	7 51 34				
8	298	11.6		01.4	106	00.7 ¹⁰²	+15	58.5 ⁹²	35	17 06	34	18 05	37 65	41 37				
9	313	11.3		01.1	120	29.9 ¹⁰²		49.3 ⁹²	30	18	17 44	13	45 62	33 39				
10	328	11.1		00.7	134	59.1 ¹⁰²		39.9 ⁹⁴	20	37	18 01	28	18 58 57	18 44				
11	343	10.8	-22	00.4	149	28.4 ¹⁰³	+15	30.4 ⁹⁵	10 N	17 55	18 17	18 43	19 09 54	7 05 47				
12	358	10.5	-22	00.0	163	57.7 ¹⁰³	+15	20.9 ⁹⁵	0	18 11	18 33	18 59	19 20 50	6 53 51				
13	13	10.3	-21	59.6	178	27.0 ¹⁰³		11.3 ⁹⁶	10 S	27	18 50	19 17	30 47	41 54				
14	28	10.0		59.2	192	56.3 ¹⁰³	+15	01.5 ⁹⁸	20	18 45	19 09	19 38	41 43	28 57				
15	43	09.8		58.9	207	25.7 ¹⁰⁴	+14	51.7 ⁹⁸	30	19 06	33	20 05	19 54 39	13 61				
16	58	09.5		58.5	221	55.1 ¹⁰⁴		41.8 ⁹⁹	35	18	19 47	23	20 01 36	6 04 64				
17	73	09.3	-21	58.1	236	24.5 ¹⁰⁴	+14	31.9 ⁹⁹	40	19 32	20 04	20 44	20 10 33	5 54 67				
18	88	09.0	-21	57.8	250	53.9 ¹⁰⁴	+14	21.8 ¹⁰¹	45	19 48	20 24	21 12	20 20 29	5 42 70				
19	103	08.8		57.4	265	23.4 ¹⁰⁵		11.7 ¹⁰¹	50	20 09	20 51	21 51	31 26	28 74				
20	118	08.5		57.0	279	52.9 ¹⁰⁵	+14	01.4 ¹⁰³	52	19	21 05	22 14	37 23	21 76				
21	133	08.3		56.7	294	22.4 ¹⁰⁵	+13	51.1 ¹⁰³	54	30	20	22 45	43 21	14 78				
22	148	08.0		56.3	308	52.0 ¹⁰⁶		40.8 ¹⁰³	56	42	21 39	** ** *	49 20	5 05 81				
23	163	07.8		55.9	323	21.6 ¹⁰⁶		30.3 ¹⁰⁵	58	20 57	22 03	** ** *	20 57 16	4 56 83				
24	178	07.5	-21	55.5	337	51.2 ¹⁰⁶	+13	19.8 ¹⁰⁵	60 S	21 15	22 37	** ** *	21 05 13	4 45 87				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 41 ^m 5		Mag: -4.0 PMG: 14 ^h 36 ^m				Mag: 0.0 PMG: 4 ^h 19 ^m				Mag: -2.6 PMG: 18 ^h 38 ^m				Mag: +0.7 PMG: 6 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	56.1	141	13.3	-14	51.2	295	04.9	+6	08.1	79	52.8	+10	37.6	261	17.5	-8	44.8
1	123	58.6	156	12.8		50.2	310	07.0		08.1	94	55.1		37.7	276	19.9		44.8
2	139	01.1	171	12.3		49.1	325	09.0		08.0	109	57.5		37.7	291	22.2		44.9
3	154	03.5	186	11.9		48.0	340	11.1		07.9	124	59.8		37.8	306	24.6		44.9
4	169	06.0	201	11.4		46.9	355	13.2		07.8	140	02.2		37.8	321	26.9		44.9
5	184	08.5	216	10.9	-14	45.9	10	15.2	+6	07.7	155	04.5	+10	37.9	336	29.2	-8	45.0
6	199	10.9	231	10.4	-14	44.8	25	17.3	+6	07.6	170	06.9	+10	38.0	351	31.6	-8	45.0
7	214	13.4	246	09.9		43.7	40	19.4		07.5	185	09.2		38.0	6	33.9		45.0
8	229	15.8	261	09.4		42.6	55	21.5		07.4	200	11.6		38.1	21	36.3		45.1
9	244	18.3	276	08.9		41.5	70	23.5		07.3	215	13.9		38.1	36	38.6		45.1
10	259	20.8	291	08.5		40.5	85	25.6		07.3	230	16.2		38.2	51	41.0		45.1
11	274	23.2	306	08.0	-14	39.4	100	27.7	+6	07.2	245	18.6	+10	38.2	66	43.3	-8	45.2
12	289	25.7	321	07.5	-14	38.3	115	29.8	+6	07.1	260	20.9	+10	38.3	81	45.7	-8	45.2
13	304	28.2	336	07.0		37.2	130	31.8		07.0	275	23.3		38.4	96	48.0		45.2
14	319	30.6	351	06.5		36.1	145	33.9		06.9	290	25.6		38.4	111	50.4		45.3
15	334	33.1	6	06.1		35.1	160	36.0		06.8	305	27.9		38.5	126	52.7		45.3
16	349	35.6	21	05.6		34.0	175	38.1		06.7	320	30.3		38.5	141	55.1		45.3
17	4	38.0	36	05.1	-14	32.9	190	40.2	+6	06.7	335	32.6	+10	38.6	156	57.4	-8	45.4
18	19	40.5	51	04.6	-14	31.8	205	42.3	+6	06.6	350	35.0	+10	38.7	171	59.7	-8	45.4
19	34	42.9	66	04.2		30.7	220	44.3		06.5	5	37.3		38.7	187	02.1		45.4
20	49	45.4	81	03.7		29.6	235	46.4		06.4	20	39.6		38.8	202	04.4		45.5
21	64	47.9	96	03.2		28.6	250	48.5		06.3	35	42.0		38.8	217	06.8		45.5
22	79	50.3	111	02.7		27.5	265	50.6		06.2	50	44.3		38.9	232	09.1		45.5
23	94	52.8	126	02.3		26.4	280	52.7		06.2	65	46.7		39.0	247	11.5		45.6
24	109	55.3	141	01.8	-14	25.3	295	54.8	+6	06.1	80	49.0	+10	39.0	262	13.8	-8	45.6
Dif	—		-5		+11		+21		-1		+23		+1		+23			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 17 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:8 20 ^h : 58:0													
	PMG: 12 ^h 07 ^m 7			SD: 15:7 PMG: 1 ^h 32 ^m R°: 49 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	07.5	-21	55.5	337	51.2	+13	19.8	60 N	7 05	8 00	8 54	18 58	89	9 10	12	
1	193	07.3		55.2	352	20.8 ¹⁰⁶	+13	09.1 ¹⁰⁷	58	6 58	7 49	39	19 04	86	9 03	15	
2	208	07.0		54.8	6	50.5 ¹⁰⁷	+12	58.4 ¹⁰⁷	56	53	40	26	09 83		8 57	18	
3	223	06.8		54.4	21	20.2 ¹⁰⁷		47.7 ¹⁰⁷	54	47	32	15	14 80		52	20	
4	238	06.5		54.0	35	49.9 ¹⁰⁷		36.8 ¹⁰⁹	52	42	25	8 05	18 78		47	23	
5	253	06.3	-21	53.6	50	19.6 ¹⁰⁷	+12	25.9 ¹⁰⁹	50	6 38	7 18	7 56	19 21	76	8 43	24	
6	268	06.0	-21	53.3	64	49.4 ¹⁰⁸	+12	14.9 ¹¹⁰	45	6 27	7 04	7 37	19 29	72	8 33	29	
7	283	05.8		52.9	79	19.2 ¹⁰⁸	+12	03.9 ¹¹⁰	40	18	6 51	21	36 68		25	32	
8	298	05.5		52.5	93	49.0 ¹⁰⁸	+11	52.7 ¹¹²	35	09	41	7 08	42 64		18	35	
9	313	05.3		52.1	108	18.8 ¹⁰⁸		41.5 ¹¹²	30	6 01	31	6 57	47 61		12	38	
10	328	05.0		51.7	122	48.7 ¹⁰⁹		30.3 ¹¹²	20	5 46	6 14	37	19 55	57	8 02	42	
11	343	04.8	-21	51.3	137	18.6 ¹⁰⁹	+11	18.9 ¹¹⁴	10 N	5 32	5 58	6 20	20 03	53	7 52	46	
12	358	04.5	-21	51.0	151	48.5 ¹⁰⁹	+11	07.5 ¹¹⁴	0	5 16	5 42	6 04	20 10	49	7 44	49	
13	13	04.3		50.6	166	18.4 ¹⁰⁹	+10	56.1 ¹¹⁴	10 S	4 58	25	5 48	17 45		35	53	
14	28	04.0		50.2	180	48.4 ¹¹⁰		44.6 ¹¹⁵	20	37	5 06	30	24 41		25	57	
15	43	03.8		49.8	195	18.4 ¹¹⁰		33.0 ¹¹⁶	30	4 10	4 43	5 10	33 36		14	62	
16	58	03.5		49.4	209	48.4 ¹¹⁰		21.3 ¹¹⁷	35	3 53	28	4 58	37 34		08	64	
17	73	03.3	-21	49.0	224	18.4 ¹¹⁰	+10	09.6 ¹¹⁷	40	3 31	4 12	4 44	20 43	31	7 01	67	
18	88	03.0	-21	48.6	238	48.5 ¹¹¹	+9	57.8 ¹¹⁸	45	3 04	3 51	4 27	20 49	28	6 52	71	
19	103	02.8		48.2	253	18.5 ¹¹⁰		46.0 ¹¹⁸	50	2 24	24	4 07	20 57	23	42	75	
20	118	02.5		47.9	267	48.6 ¹¹¹		34.1 ¹¹⁹	52	2 02	3 11	3 57	21 00	22	37	78	
21	133	02.3		47.5	282	18.7 ¹¹¹		22.2 ¹¹⁹	54	1 31	2 55	46	04 20		32	80	
22	148	02.1		47.1	296	48.9 ¹¹²	+9	10.2 ¹²⁰	56	** **	36	33	09 17		26	82	
23	163	01.8		46.7	311	19.0 ¹¹¹	+8	58.1 ¹²¹	58	** **	2 12	18	13 15		19	85	
24	178	01.6	-21	46.3	325	49.2 ¹¹²	+8	46.0 ¹²¹	60 S	** **	1 39	3 01	21 18	12	6 12	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 37 ^m 6		Mag: -4.0 PMG: 14 ^h 36 ^m		Mag: 0.0 PMG: 4 ^h 16 ^m		Mag: -2.5 PMG: 18 ^h 34 ^m		Mag: +0.7 PMG: 6 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	109	55.3	141	01.8	-14	25.3	295	54.8	+6	06.1
1	124	57.7	156	01.3		24.2	310	56.9		06.0
2	140	00.2	171	00.8		23.1	325	59.0		05.9
3	155	02.7	186	00.4		22.0	341	01.1		05.8
4	170	05.1	200	59.9		20.9	356	03.2		05.8
5	185	07.6	215	59.4	-14	19.8	11	05.3	+6	05.7
6	200	10.1	230	58.9	-14	18.8	26	07.3	+6	05.6
7	215	12.5	245	58.5		17.7	41	09.4		05.5
8	230	15.0	260	58.0		16.6	56	11.5		05.4
9	245	17.4	275	57.5		15.5	71	13.6		05.4
10	260	19.9	290	57.1		14.4	86	15.7		05.3
11	275	22.4	305	56.6	-14	13.3	101	17.8	+6	05.2
12	290	24.8	320	56.1	-14	12.2	116	19.9	+6	05.1
13	305	27.3	335	55.7		11.1	131	22.1		05.1
14	320	29.8	350	55.2		10.0	146	24.2		05.0
15	335	32.2	5	54.7		08.9	161	26.3		04.9
16	350	34.7	20	54.3		07.8	176	28.4		04.8
17	5	37.2	35	53.8	-14	06.7	191	30.5	+6	04.8
18	20	39.6	50	53.4	-14	05.6	206	32.6	+6	04.7
19	35	42.1	65	52.9		04.5	221	34.7		04.6
20	50	44.6	80	52.4		03.4	236	36.8		04.5
21	65	47.0	95	52.0		02.3	251	38.9		04.5
22	80	49.5	110	51.5		01.2	266	41.0		04.4
23	95	51.9	125	51.0	-14	00.1	281	43.1		04.3
24	110	54.4	140	50.6	-13	59.0	296	45.3	+6	04.2
Dif	—		-5		+11		+21		-1	
							+23		+1	
									+23	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 18 ^d 2 PHE { 4 ^h : 58 ^h /1 12 ^h : 58 ^h /2 20 ^h : 58 ^h /4												
	PMG: 12 ^h 08 ^m 1			SD: 15 ^h 8												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	178	01.6	-21 46.3	325	49.2	+8 46.0		60 N	15 24	16 18	17 13	20 27 89		9 22 11		
1	193	01.3	45.9	340	19.4 ¹¹²	33.9 ¹²¹		58	39	28	19	30 86		18 14		
2	208	01.1	45.5	354	49.6 ¹¹²	21.7 ¹²²		56	15 52	37	25	32 83		15 17		
3	223	00.8	45.1	9	19.8 ¹¹²	+8 09.4 ¹²³		54	16 03	45	30	34 81		12 19		
4	238	00.6	44.7	23	50.1 ¹¹³	+7 57.1 ¹²³		52	13	52	35	36 78		10 20		
5	253	00.3	-21 44.3	38	20.3 ¹¹²	+7 44.8 ¹²³		50	16 21	16 59	17 39	20 37 77		9 07 23		
6	268	00.1	-21 43.9	52	50.6 ¹¹³	+7 32.4 ¹²⁴		45	16 40	17 13	17 50	20 41 72		9 02 27		
7	282	59.9	43.5	67	20.9 ¹¹³	19.9 ¹²⁵		40	16 55	25	17 59	44 68		8 57 31		
8	297	59.6	43.1	81	51.2 ¹¹³	+7 07.4 ¹²⁵		35	17 08	36	18 07	46 65		53 34		
9	312	59.4	42.7	96	21.5 ¹¹³	+6 54.9 ¹²⁵		30	19	17 45	15	48 62		50 36		
10	327	59.1	42.3	110	51.8 ¹¹³	42.3 ¹²⁶		20	39	18 03	30	52 57		44 41		
11	342	58.9	-21 41.9	125	22.2 ¹¹⁴	+6 29.7 ¹²⁶		10 N	17 56	18 18	18 44	20 56 53		8 38 45		
12	357	58.6	-21 41.5	139	52.5 ¹¹³	+6 17.1 ¹²⁶		0	18 12	18 34	19 00	20 59 49		8 33 49		
13	12	58.4	41.1	154	22.9 ¹¹⁴	+6 04.4 ¹²⁷		10 S	28	18 51	17	21 02 45		28 53		
14	27	58.2	40.7	168	53.2 ¹¹³	+5 51.6 ¹²⁸		20	18 45	19 09	19 38	05 41		22 58		
15	42	57.9	40.3	183	23.6 ¹¹⁴	38.9 ¹²⁷		30	19 05	32	20 05	09 36		16 62		
16	57	57.7	39.9	197	54.0 ¹¹⁴	26.1 ¹²⁸		35	17	19 46	22	11 34		12 65		
17	72	57.4	-21 39.5	212	24.4 ¹¹⁴	+5 13.3 ¹²⁸		40	19 31	20 03	20 43	21 14 30		8 08 68		
18	87	57.2	-21 39.1	226	54.8 ¹¹⁴	+5 00.4 ¹²⁹		45	19 47	20 23	21 10	21 17 27		8 03 72		
19	102	57.0	38.7	241	25.2 ¹¹⁴	+4 47.5 ¹²⁹		50	20 07	20 50	21 49	20 23		7 57 76		
20	117	56.7	38.3	255	55.7 ¹¹⁵	34.6 ¹²⁹		52	17	21 03	22 10	22 20		55 78		
21	132	56.5	37.9	270	26.1 ¹¹⁴	21.6 ¹³⁰		54	28	18	22 40	24 18		52 80		
22	147	56.2	37.4	284	56.5 ¹¹⁴	+4 08.6 ¹³⁰		56	40	21 37	23 32	26 16		48 83		
23	162	56.0	37.0	299	27.0 ¹¹⁵	+3 55.6 ¹³⁰		58	20 55	22 00	** **	28 13		44 86		
24	177	55.8	-21 36.6	313	57.4 ¹¹⁴	+3 42.6 ¹³⁰		60 S	21 12	22 31	** **	21 30 11		7 40 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 33 ^m 7		Mag: -4.0 PMG: 14 ^h 37 ^m			Mag: -0.1 PMG: 4 ^h 12 ^m			Mag: -2.5 PMG: 18 ^h 30 ^m			Mag: +0.7 PMG: 6 ^h 26 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	110	54.4	140	50.6	-13 59.0	296	45.3	+6 04.2	81	45.0	+10 40.5	263	10.2	-8 46.3		
1	125	56.9	155	50.1	57.9	311	47.4	04.2	96	47.3	40.5	278	12.6	46.4		
2	140	59.3	170	49.7	56.8	326	49.5	04.1	111	49.7	40.6	293	14.9	46.4		
3	156	01.8	185	49.2	55.7	341	51.6	04.0	126	52.0	40.7	308	17.3	46.4		
4	171	04.3	200	48.8	54.6	356	53.7	04.0	141	54.3	40.7	323	19.6	46.5		
5	186	06.7	215	48.3	-13 53.5	11	55.8	+6 03.9	156	56.7	+10 40.8	338	22.0	-8 46.5		
6	201	09.2	230	47.8	-13 52.4	26	58.0	+6 03.8	171	59.0	+10 40.8	353	24.3	-8 46.5		
7	216	11.7	245	47.4	51.2	42	00.1	03.8	187	01.3	40.9	8	26.7	46.6		
8	231	14.1	260	46.9	50.1	57	02.2	03.7	202	03.7	41.0	23	29.0	46.6		
9	246	16.6	275	46.5	49.0	72	04.3	03.6	217	06.0	41.0	38	31.4	46.6		
10	261	19.0	290	46.0	47.9	87	06.4	03.6	232	08.3	41.1	53	33.8	46.6		
11	276	21.5	305	45.6	-13 46.8	102	08.6	+6 03.5	247	10.6	+10 41.2	68	36.1	-8 46.7		
12	291	24.0	320	45.1	-13 45.7	117	10.7	+6 03.4	262	13.0	+10 41.2	83	38.5	-8 46.7		
13	306	26.4	335	44.7	44.6	132	12.8	03.4	277	15.3	41.3	98	40.8	46.7		
14	321	28.9	350	44.2	43.5	147	15.0	03.3	292	17.6	41.4	113	43.2	46.8		
15	336	31.4	5	43.8	42.4	162	17.1	03.2	307	19.9	41.4	128	45.5	46.8		
16	351	33.8	20	43.3	41.2	177	19.2	03.2	322	22.3	41.5	143	47.9	46.8		
17	6	36.3	35	42.9	-13 40.1	192	21.3	+6 03.1	337	24.6	+10 41.5	158	50.2	-8 46.9		
18	21	38.8	50	42.4	-13 39.0	207	23.5	+6 03.0	352	26.9	+10 41.6	173	52.6	-8 46.9		
19	36	41.2	65	42.0	37.9	222	25.6	03.0	7	29.2	41.7	188	54.9	46.9		
20	51	43.7	80	41.5	36.8	237	27.7	02.9	22	31.6	41.7	203	57.3	46.9		
21	66	46.2	95	41.1	35.7	252	29.9	02.9	37	33.9	41.8	218	59.7	47.0		
22	81	48.6	110	40.6	34.6	267	32.0	02.8	52	36.2	41.9	234	02.0	47.0		
23	96	51.1	125	40.2	33.4	282	34.1	02.7	67	38.5	41.9	249	04.4	47.0		
24	111	53.5	140	39.7	-13 32.3	297	36.3	+6 02.7	82	40.9	+10 42.0	264	06.7	-8 47.1		
Dif	—		-5 +11		+21 -1		-1		+23		+1		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 19 ^d 2	PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 6 20 ^h : 58 ^m 7										
	PMG: 12 ^h 08 ^m 5					SD: 15 ^h 9		PMG: 3 ^h 10 ^m			R°: 49 ^m				
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	55.8	-21 36.6	313	57.4	+3 42.6	60 N	7 03	7 58	8 51	21 56	91	9 33	11	
1	192	55.5	36.2	328	27.8 ¹¹⁴	29.5 ¹³¹	58	6 57	48	37	56	87	32	14	
2	207	55.3	35.8	342	58.3 ¹¹⁵	16.5 ¹³⁰	56	51	39	24	55	84	32	16	
3	222	55.0	35.4	357	28.7 ¹¹⁴	+3 03.3 ¹³²	54	46	31	13	55	81	31	18	
4	237	54.8	35.0	11	59.2 ¹¹⁵	+2 50.2 ¹³¹	52	41	24	8 03	54	79	30	21	
5	252	54.6	-21 34.6	26	29.6 ¹¹⁴	+2 37.1 ¹³¹	50	6 37	7 17	7 54	21 54	77	9 30	22	
6	267	54.3	-21 34.1	41	00.1 ¹¹⁵	+2 23.9 ¹³²	45	6 27	7 03	7 36	21 53	72	9 29	26	
7	282	54.1	33.7	55	30.5 ¹¹⁴	+2 10.7 ¹³²	40	18	6 51	21	52	69	28	30	
8	297	53.9	33.3	70	00.9 ¹¹⁴	+1 57.5 ¹³²	35	09	40	7 08	51	66	27	33	
9	312	53.6	32.9	84	31.4 ¹¹⁵	44.3 ¹³²	30	6 02	31	6 57	50	63	26	36	
10	327	53.4	32.5	99	01.8 ¹¹⁴	31.1 ¹³²	20	5 47	6 14	38	49	58	25	40	
11	342	53.1	-21 32.1	113	32.2 ¹¹⁴	+1 17.9 ¹³²	10 N	5 32	5 58	6 21	21 49	53	9 23	45	
12	357	52.9	-21 31.6	128	02.6 ¹¹⁴	+1 04.6 ¹³³	0	5 17	5 43	6 05	21 48	49	9 22	49	
13	12	52.7	31.2	142	33.0 ¹¹⁴	+0 51.3 ¹³³	10 S	4 59	26	5 49	47	46	21	53	
14	27	52.4	30.8	157	03.4 ¹¹⁴	38.1 ¹³²	20	39	5 07	31	46	42	20	57	
15	42	52.2	30.4	171	33.8 ¹¹⁴	24.8 ¹³³	30	4 12	4 44	5 11	45	37	18	62	
16	57	52.0	30.0	186	04.2 ¹¹⁴	+0 11.5 ¹³³	35	3 55	30	4 59	45	34	17	65	
17	72	51.7	-21 29.5	200	34.6 ¹¹⁴	-0 01.8 ¹³³	40	3 34	4 14	4 46	21 44	31	9 16	69	
18	87	51.5	-21 29.1	215	05.0 ¹¹⁴	-0 15.1 ¹³³	45	3 07	3 54	4 30	21 44	27	9 15	72	
19	102	51.3	28.7	229	35.3 ¹¹³	28.4 ¹³³	50	2 28	27	09	43	23	13	77	
20	117	51.0	28.3	244	05.6 ¹¹³	41.7 ¹³³	52	2 07	3 14	4 00	42	22	13	79	
21	132	50.8	27.8	258	36.0 ¹¹⁴	-0 55.0 ¹³³	54	1 37	2 59	3 49	42	19	12	81	
22	147	50.6	27.4	273	06.3 ¹¹³	-1 08.3 ¹³³	56	0 45	40	37	42	16	11	84	
23	162	50.3	27.0	287	36.6 ¹¹³	21.6 ¹³³	58	** **	2 17	22	41	14	10	87	
24	177	50.1	-21 26.5	302	06.8 ¹¹²	-1 34.8 ¹³²	60 S	** **	1 46	3 05	21 41	11	9 09	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 29 ^m 7		Mag: -4.0 PMG: 14 ^h 38 ^m		Mag: -0.1 PMG: 4 ^h 09 ^m		Mag: -2.5 PMG: 18 ^h 26 ^m		Mag: +0.7 PMG: 6 ^h 23 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	111	53.5	140	39.7	297	36.3	+6 02.7	82	40.9	+10 42.0	264	06.7	-8 47.1	
1	126	56.0	155	39.3	312	38.4	02.6	97	43.2	42.1	279	09.1	47.1	
2	141	58.5	170	38.8	327	40.6	02.6	112	45.5	42.1	294	11.4	47.1	
3	157	00.9	185	38.4	342	42.7	02.5	127	47.8	42.2	309	13.8	47.1	
4	172	03.4	200	38.0	357	44.8	02.4	142	50.1	42.3	324	16.1	47.2	
5	187	05.9	215	37.5	12	47.0	+6 02.4	157	52.5	+10 42.3	339	18.5	-8 47.2	
6	202	08.3	230	37.1	27	49.1	+6 02.3	172	54.8	+10 42.4	354	20.9	-8 47.2	
7	217	10.8	245	36.6	42	51.3	02.3	187	57.1	42.5	9	23.2	47.3	
8	232	13.3	260	36.2	57	53.4	02.2	202	59.4	42.5	24	25.6	47.3	
9	247	15.7	275	35.8	72	55.6	02.2	218	01.7	42.6	39	27.9	47.3	
10	262	18.2	290	35.3	87	57.7	02.1	233	04.1	42.7	54	30.3	47.3	
11	277	20.7	305	34.9	102	59.9	+6 02.0	248	06.4	+10 42.7	69	32.6	-8 47.4	
12	292	23.1	320	34.4	118	02.0	+6 02.0	263	08.7	+10 42.8	84	35.0	-8 47.4	
13	307	25.6	335	34.0	133	04.2	01.9	278	11.0	42.9	99	37.4	47.4	
14	322	28.0	350	33.6	148	06.3	01.9	293	13.3	42.9	114	39.7	47.5	
15	337	30.5	5	33.1	163	08.5	01.8	308	15.7	43.0	129	42.1	47.5	
16	352	33.0	20	32.7	178	10.6	01.8	323	18.0	43.1	144	44.4	47.5	
17	7	35.4	35	32.3	193	12.8	+6 01.7	338	20.3	+10 43.1	159	46.8	-8 47.5	
18	22	37.9	50	31.8	208	14.9	+6 01.7	353	22.6	+10 43.2	174	49.1	-8 47.6	
19	37	40.4	65	31.4	223	17.1	01.6	8	24.9	43.3	189	51.5	47.6	
20	52	42.8	80	30.9	238	19.3	01.6	23	27.2	43.3	204	53.9	47.6	
21	67	45.3	95	30.5	253	21.4	01.5	38	29.6	43.4	219	56.2	47.7	
22	82	47.8	110	30.1	268	23.6	01.5	53	31.9	43.5	234	58.6	47.7	
23	97	50.2	125	29.7	283	25.7	01.4	68	34.2	43.5	250	00.9	47.7	
24	112	52.7	140	29.2	298	27.9	+6 01.4	83	36.5	+10 43.6	265	03.3	-8 47.7	
Dif	—		-4		+11		-1	+23		+1	+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 08 ^m 8			Edad: 20 ^d 2 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	177	50.1	-21	26.5	302	06.8	-1 34.8	60 N	15 28	16 21	17 16	23 27	91	9 44	11			
1	192	49.9		26.1	316	37.1 ¹¹³	-1 48.1 ¹³³	58	43	31	22	23	88	46	14			
2	207	49.6		25.7	331	07.3 ¹¹²	-2 01.4 ¹³³	56	15 55	40	28	19	86	48	17			
3	222	49.4		25.3	345	37.6 ¹¹³	14.7 ¹³³	54	16 06	48	33	16	83	49	20			
4	237	49.2		24.8	0	07.8 ¹¹²	28.0 ¹³³	52	16	16 55	37	13	81	51	22			
5	252	48.9	-21	24.4	14	38.0 ¹¹²	-2 41.2 ¹³²	50	16 24	17 01	17 42	23 11	78	9 52	24			
6	267	48.7	-21	24.0	29	08.1 ¹¹¹	-2 54.5 ¹³³	45	16 42	17 15	17 52	23 05	74	9 55	28			
7	282	48.5		23.5	43	38.3 ¹¹²	-3 07.7 ¹³²	40	16 57	27	18 01	23 01	70	9 58	31			
8	297	48.2		23.1	58	08.4 ¹¹¹	20.9 ¹³²	35	17 10	38	09	22 57	66	10 00	35			
9	312	48.0		22.7	72	38.5 ¹¹¹	34.2 ¹³³	30	21	17 47	16	53	64	02	37			
10	327	47.8		22.2	87	08.5 ¹¹⁰	-3 47.4 ¹³²	20	40	18 04	31	47	60	05	43			
11	342	47.6	-21	21.8	101	38.6 ¹¹¹	-4 00.5 ¹³¹	10 N	17 57	18 19	18 45	22 42	55	10 08	47			
12	357	47.3	-21	21.4	116	08.6 ¹¹⁰	-4 13.7 ¹³²	0	18 13	18 35	19 01	22 37	52	10 11	50			
13	12	47.1		20.9	130	38.6 ¹¹⁰	26.8 ¹³¹	10 S	28	18 51	18	33	47	14	54			
14	27	46.9		20.5	145	08.5 ¹⁰⁹	40.0 ¹³²	20	18 45	19 10	19 38	28	43	17	58			
15	42	46.6		20.0	159	38.4 ¹⁰⁹	-4 53.1 ¹³¹	30	19 05	32	20 04	22	39	20	64			
16	57	46.4		19.6	174	08.3 ¹⁰⁹	-5 06.1 ¹³⁰	35	17	19 46	21	19	36	22	66			
17	72	46.2	-21	19.2	188	38.2 ¹⁰⁹	-5 19.2 ¹³¹	40	19 30	20 02	20 42	22 15	33	10 25	69			
18	87	46.0	-21	18.7	203	08.0 ¹⁰⁸	-5 32.2 ¹³⁰	45	19 46	20 22	21 08	22 11	29	10 27	73			
19	102	45.7		18.3	217	37.8 ¹⁰⁸	45.2 ¹³⁰	50	20 06	20 48	21 46	06	25	30	78			
20	117	45.5		17.8	232	07.6 ¹⁰⁸	-5 58.2 ¹³⁰	52	15	21 01	22 07	04	23	32	79			
21	132	45.3		17.4	246	37.3 ¹⁰⁷	-6 11.2 ¹³⁰	54	26	16	22 34	22 01	21	33	82			
22	147	45.1		16.9	261	07.0 ¹⁰⁷	24.1 ¹²⁹	56	38	33	23 19	21 58	19	35	84			
23	162	44.8		16.5	275	36.7 ¹⁰⁷	37.0 ¹²⁹	58	20 52	21 55	** **	55	16	37	87			
24	177	44.6	-21	16.1	290	06.3 ¹⁰⁶	-6 49.8 ¹²⁸	60 S	21 09	22 25	** **	21 52	13	10 39	91			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 25 ^m 8			Mag: -4.0 PMG: 14 ^h 38 ^m			Mag: -0.1 PMG: 4 ^h 06 ^m			Mag: -2.5 PMG: 18 ^h 23 ^m			Mag: +0.7 PMG: 6 ^h 19 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	112	52.7	140	29.2	-13	05.3	298	27.9	+6	01.4	83	36.5	+10	43.6	265	03.3	-8	47.7
1	127	55.1	155	28.8		04.2	313	30.1		01.3	98	38.8		43.7	280	05.7		47.8
2	142	57.6	170	28.4		03.0	328	32.2		01.3	113	41.1		43.7	295	08.0		47.8
3	158	00.1	185	27.9		01.9	343	34.4		01.2	128	43.4		43.8	310	10.4		47.8
4	173	02.5	200	27.5	-13	00.8	358	36.6		01.2	143	45.8		43.9	325	12.7		47.8
5	188	05.0	215	27.1	-12	59.6	13	38.7	+6	01.1	158	48.1	+10	43.9	340	15.1	-8	47.9
6	203	07.5	230	26.6	-12	58.5	28	40.9	+6	01.1	173	50.4	+10	44.0	355	17.5	-8	47.9
7	218	09.9	245	26.2		57.4	43	43.1		01.0	188	52.7		44.1	10	19.8		47.9
8	233	12.4	260	25.8		56.2	58	45.2		01.0	203	55.0		44.1	25	22.2		48.0
9	248	14.9	275	25.4		55.1	73	47.4		00.9	218	57.3		44.2	40	24.5		48.0
10	263	17.3	290	24.9		54.0	88	49.6		00.9	233	59.6		44.3	55	26.9		48.0
11	278	19.8	305	24.5	-12	52.8	103	51.8	+6	00.8	249	01.9	+10	44.3	70	29.3	-8	48.0
12	293	22.3	320	24.1	-12	51.7	118	53.9	+6	00.8	264	04.3	+10	44.4	85	31.6	-8	48.1
13	308	24.7	335	23.7		50.5	133	56.1		00.7	279	06.6		44.5	100	34.0		48.1
14	323	27.2	350	23.2		49.4	148	58.3		00.7	294	08.9		44.5	115	36.3		48.1
15	338	29.6	5	22.8		48.3	164	00.5		00.7	309	11.2		44.6	130	38.7		48.1
16	353	32.1	20	22.4		47.1	179	02.6		00.6	324	13.5		44.7	145	41.1		48.2
17	8	34.6	35	22.0	-12	46.0	194	04.8	+6	00.6	339	15.8	+10	44.8	160	43.4	-8	48.2
18	23	37.0	50	21.5	-12	44.8	209	07.0	+6	00.5	354	18.1	+10	44.8	175	45.8	-8	48.2
19	38	39.5	65	21.1		43.7	224	09.2		00.5	9	20.4		44.9	190	48.2		48.2
20	53	42.0	80	20.7		42.6	239	11.4		00.5	24	22.7		45.0	205	50.5		48.3
21	68	44.4	95	20.3		41.4	254	13.6		00.4	39	25.0		45.0	220	52.9		48.3
22	83	46.9	110	19.9		40.3	269	15.7		00.4	54	27.3		45.1	235	55.2		48.3
23	98	49.4	125	19.4		39.1	284	17.9		00.3	69	29.7		45.2	250	57.6		48.3
24	113	51.8	140	19.0	-12	38.0	299	20.1	+6	00.3	84	32.0	+10	45.2	266	00.0	-8	48.4
Dif	—			-4 +11			+22 0			+23 +1			+24 0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 09 ^m 2				Edad: 21 ^d 2 PHE { SD: 16'1 PMG: 4 ^h 49 ^m R°: 52 ^m 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'1													
	hG ☉	Dec			hG ☾	Dif	Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	44.6	-21	16.1	290	06.3	-6	49.8	60 N	7 01	7 56	8 49	** ** *			9 55	15	
1	192	44.4		15.6	304	35.9	106	-7 02.6	58	6 55	46	34	** ** *			10 00	18	
2	207	44.1		15.2	319	05.5	106	15.4	56	50	37	22	** ** *			05	20	
3	222	43.9		14.7	333	35.0	105	28.2	54	45	29	11	** ** *			09	22	
4	237	43.7		14.3	348	04.4	104	40.9	52	40	22	8 02	** ** *			13	24	
5	252	43.5	-21	13.8	2	33.9	105	-7 53.5	50	6 36	7 16	7 53	** ** *			10 16	27	
6	267	43.2	-21	13.4	17	03.3	104	-8 06.2	45	6 26	7 02	7 35	** ** *			10 23	31	
7	282	43.0		12.9	31	32.6	103	18.8	40	17	6 50	20	** ** *			29	35	
8	297	42.8		12.5	46	01.9	103	31.3	35	09	40	7 08	** ** *			35	37	
9	312	42.6		12.0	60	31.2	103	43.8	30	6 01	31	6 57	23 57	65		39	41	
10	327	42.4		11.6	75	00.4	102	-8 56.3	20	5 47	6 14	38	47	60		48	44	
11	342	42.1	-21	11.1	89	29.6	102	-9 08.7	10 N	5 33	5 59	6 21	23 37	57		10 55	48	
12	357	41.9	-21	10.6	103	58.7	101	-9 21.0	0	5 18	5 43	6 06	23 29	53		11 01	53	
13	12	41.7		10.2	118	27.8	101	33.3	10 S	5 00	27	5 50	20	50		08	56	
14	27	41.5		09.7	132	56.8	100	45.6	20	4 40	5 09	33	11	46		15	60	
15	42	41.2		09.3	147	25.8	100	-9 57.8	30	4 14	4 46	13	23 01	42		24	64	
16	57	41.0		08.8	161	54.7	99	-10 10.0	35	3 57	33	5 01	22 55	39		28	68	
17	72	40.8	-21	08.4	176	23.6	99	-10 22.1	40	3 37	4 16	4 48	22 48	37		11 34	70	
18	87	40.6	-21	07.9	190	52.4	98	-10 34.1	45	3 10	3 56	4 32	22 40	33		11 40	74	
19	102	40.4		07.5	205	21.2	98	46.1	50	2 33	31	12	31	29		48	78	
20	117	40.1		07.0	219	49.9	97	-10 58.0	52	2 12	18	4 03	27	27		51	81	
21	132	39.9		06.5	234	18.6	97	-11 09.9	54	1 44	3 03	3 52	22	25		55	83	
22	147	39.7		06.1	248	47.2	96	21.7	56	1 00	2 45	40	17	22		11	59	86
23	162	39.5		05.6	263	15.8	96	33.5	58	** ** *	2 23	26	11	20		12	04	89
24	177	39.3	-21	05.1	277	44.3	95	-11 45.2	60 S	** ** *	1 53	3 10	22 05	16		12 10	92	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 21 ^m 9		Mag: -4.0 PMG: 14 ^h 39 ^m				Mag: -0.1 PMG: 4 ^h 02 ^m				Mag: -2.5 PMG: 18 ^h 19 ^m				Mag: +0.7 PMG: 6 ^h 15 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	113	51.8	140	19.0	-12	38.0	299	20.1	+6	00.3	84	32.0	+10	45.2	266	00.0	-8	48.4
1	128	54.3	155	18.6		36.8	314	22.3		00.3	99	34.3		45.3	281	02.3		48.4
2	143	56.8	170	18.2		35.7	329	24.5		00.2	114	36.6		45.4	296	04.7		48.4
3	158	59.2	185	17.8		34.5	344	26.7		00.2	129	38.9		45.5	311	07.1		48.5
4	174	01.7	200	17.4		33.4	359	28.9		00.1	144	41.2		45.5	326	09.4		48.5
5	189	04.1	215	16.9	-12	32.2	14	31.1	+6	00.1	159	43.5	+10	45.6	341	11.8	-8	48.5
6	204	06.6	230	16.5	-12	31.1	29	33.3	+6	00.1	174	45.8	+10	45.7	356	14.2	-8	48.5
7	219	09.1	245	16.1		29.9	44	35.5	+6	00.0	189	48.1		45.7	11	16.5		48.6
8	234	11.5	260	15.7		28.8	59	37.7		00.0	204	50.4		45.8	26	18.9		48.6
9	249	14.0	275	15.3		27.6	74	39.9	+6	00.0	219	52.7		45.9	41	21.2		48.6
10	264	16.5	290	14.9		26.5	89	42.0	+5	59.9	234	55.0		46.0	56	23.6		48.6
11	279	18.9	305	14.5	-12	25.3	104	44.2	+5	59.9	249	57.3	+10	46.0	71	26.0	-8	48.7
12	294	21.4	320	14.1	-12	24.2	119	46.4	+5	59.9	264	59.6	+10	46.1	86	28.3	-8	48.7
13	309	23.9	335	13.6		23.0	134	48.7		59.8	280	01.9		46.2	101	30.7		48.7
14	324	26.3	350	13.2		21.9	149	50.9		59.8	295	04.2		46.2	116	33.1		48.7
15	339	28.8	5	12.8		20.7	164	53.1		59.8	310	06.5		46.3	131	35.4		48.8
16	354	31.2	20	12.4		19.6	179	55.3		59.7	325	08.8		46.4	146	37.8		48.8
17	9	33.7	35	12.0	-12	18.4	194	57.5	+5	59.7	340	11.1	+10	46.5	161	40.2	-8	48.8
18	24	36.2	50	11.6	-12	17.3	209	59.7	+5	59.7	355	13.4	+10	46.5	176	42.5	-8	48.8
19	39	38.6	65	11.2		16.1	225	01.9		59.6	10	15.7		46.6	191	44.9		48.9
20	54	41.1	80	10.8		14.9	240	04.1		59.6	25	18.0		46.7	206	47.3		48.9
21	69	43.6	95	10.4		13.8	255	06.3		59.6	40	20.3		46.7	221	49.6		48.9
22	84	46.0	110	10.0		12.6	270	08.5		59.6	55	22.6		46.8	236	52.0		48.9
23	99	48.5	125	09.6		11.5	285	10.7		59.5	70	24.9		46.9	251	54.4		49.0
24	114	51.0	140	09.2	-12	10.3	300	12.9	+5	59.5	85	27.2	+10	47.0	266	56.7	-8	49.0
Dif	—		-4		+12		+22		0		+23		+1		+24			
	0																	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 09 ^m 6			Edad: 22 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 5 ^h 41 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	39.3	-21 05.1	277	44.3	-11 45.2	95	60 N	15 33	16 25	17 19	0 58 93	10 10 18	
1	192	39.0	04.7	292	12.8	-11 56.8	116	58	47	35	25	51 89	18 22	
2	207	38.8	04.2	306	41.2	-12 08.3	115	56	15 59	43	31	45 85	25 25	
3	222	38.6	03.8	321	09.5	19.8	115	54	16 09	51	36	39 83	32 27	
4	237	38.4	03.3	335	37.8	31.2	114	52	19	16 58	40	34 80	37 30	
5	252	38.2	-21 02.8	350	06.1	-12 42.6	114	50	16 27	17 04	17 44	0 29 78	10 43 32	
6	267	37.9	-21 02.4	4	34.3	-12 53.9	113	45	16 45	17 18	17 54	0 19 74	10 54 36	
7	282	37.7	01.9	19	02.4	-13 05.1	112	40	17 00	29	18 03	11 70	11 04 39	
8	297	37.5	01.4	33	30.5	16.2	111	35	12	39	11	0 03 68	12 42	
9	312	37.3	01.0	47	58.5	27.2	110	30	23	17 49	18	** ** *	20 44	
10	327	37.1	-21 00.5	62	26.4	38.2	110	20	41	18 05	32	** ** *	32 48	
11	342	36.9	-21 00.0	76	54.3	-13 49.1	109	10 N	17 58	18 20	18 46	** ** *	11 43 52	
12	357	36.6	-20 59.5	91	22.1	-13 59.9	108	0	18 13	18 35	19 01	** ** *	11 54 54	
13	12	36.4	59.1	105	49.9	-14 10.7	108	10 S	29	18 51	18	** ** *	12 04 58	
14	27	36.2	58.6	120	17.6	21.3	106	20	18 46	19 10	19 38	23 57 50	15 62	
15	42	36.0	58.1	134	45.3	31.9	106	30	19 05	32	20 04	43 46	28 65	
16	57	35.8	57.6	149	12.9	42.4	105	35	16	19 45	20	34 45	36 67	
17	72	35.6	-20 57.2	163	40.4	-14 52.8	104	40	19 29	20 01	20 40	23 25 42	12 44 70	
18	87	35.4	-20 56.7	178	07.9	-15 03.1	103	45	19 45	20 21	21 06	23 13 40	12 54 74	
19	102	35.1	56.2	192	35.3	13.4	103	50	20 04	46	21 43	23 00 35	13 06 78	
20	117	34.9	55.7	207	02.6	23.5	101	52	14	20 58	22 03	22 54 33	12 79	
21	132	34.7	55.3	221	29.9	33.6	101	54	24	21 13	22 29	47 31	18 82	
22	147	34.5	54.8	235	57.1	43.5	99	56	36	30	23 08	39 29	25 84	
23	162	34.3	54.3	250	24.3	-15 53.4	99	58	20 49	21 51	** ** *	31 26	33 87	
24	177	34.1	-20 53.8	264	51.4	-16 03.2	98	60 S	21 05	22 19	** ** *	22 21 23	13 42 91	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 17 ^m 9		Mag: -4.0 PMG: 14 ^h 40 ^m			Mag: -0.2 PMG: 3 ^h 59 ^m			Mag: -2.5 PMG: 18 ^h 15 ^m			Mag: +0.7 PMG: 6 ^h 11 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	114	51.0	140 09.2	-12 10.3		300 12.9	+5 59.5		85 27.2	+10 47.0		266 56.7	-8 49.0	
1	129	53.4	155 08.8	09.2		315 15.1	59.5		100 29.5	47.0		281 59.1	49.0	
2	144	55.9	170 08.4	08.0		330 17.4	59.4		115 31.8	47.1		297 01.5	49.0	
3	159	58.4	185 07.9	06.8		345 19.6	59.4		130 34.1	47.2		312 03.8	49.1	
4	175	00.8	200 07.5	05.7		0 21.8	59.4		145 36.4	47.3		327 06.2	49.1	
5	190	03.3	215 07.1	-12 04.5		15 24.0	+5 59.4		160 38.7	+10 47.3		342 08.6	-8 49.1	
6	205	05.7	230 06.7	-12 03.4		30 26.2	+5 59.3		175 41.0	+10 47.4		357 10.9	-8 49.1	
7	220	08.2	245 06.3	02.2		45 28.5	59.3		190 43.3	47.5		12 13.3	49.1	
8	235	10.7	260 05.9	-12 01.0		60 30.7	59.3		205 45.6	47.5		27 15.7	49.2	
9	250	13.1	275 05.5	-11 59.9		75 32.9	59.3		220 47.9	47.6		42 18.0	49.2	
10	265	15.6	290 05.1	58.7		90 35.1	59.2		235 50.2	47.7		57 20.4	49.2	
11	280	18.1	305 04.7	-11 57.5		105 37.4	+5 59.2		250 52.5	+10 47.8		72 22.8	-8 49.2	
12	295	20.5	320 04.3	-11 56.4		120 39.6	+5 59.2		265 54.8	+10 47.8		87 25.2	-8 49.3	
13	310	23.0	335 03.9	55.2		135 41.8	59.2		280 57.1	47.9		102 27.5	49.3	
14	325	25.5	350 03.5	54.0		150 44.0	59.2		295 59.4	48.0		117 29.9	49.3	
15	340	27.9	5 03.2	52.9		165 46.3	59.1		311 01.7	48.1		132 32.3	49.3	
16	355	30.4	20 02.8	51.7		180 48.5	59.1		326 04.0	48.1		147 34.6	49.4	
17	10	32.9	35 02.4	-11 50.5		195 50.7	+5 59.1		341 06.3	+10 48.2		162 37.0	-8 49.4	
18	25	35.3	50 02.0	-11 49.4		210 53.0	+5 59.1		356 08.6	+10 48.3		177 39.4	-8 49.4	
19	40	37.8	65 01.6	48.2		225 55.2	59.1		11 10.9	48.4		192 41.7	49.4	
20	55	40.2	80 01.2	47.0		240 57.4	59.0		26 13.2	48.4		207 44.1	49.5	
21	70	42.7	95 00.8	45.9		255 59.7	59.0		41 15.5	48.5		222 46.5	49.5	
22	85	45.2	110 00.4	44.7		271 01.9	59.0		56 17.8	48.6		237 48.9	49.5	
23	100	47.6	125 00.0	43.5		286 04.1	59.0		71 20.1	48.7		252 51.2	49.5	
24	115	50.1	139 59.6	-11 42.3		301 06.4	+5 59.0		86 22.3	+10 48.7		267 53.6	-8 49.5	
Dif	—		-4		+12	+22		0	+23		+1	+24		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 09 ^m 9			Edad: 23 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 PMG: 6 ^h 35 ^m R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	34.1	-20 53.8	264	51.4	-16 03.2	97	60 N	6 59	7 53	8 45	2 31	90	10 28	27	
1	192	33.9	53.4	279	18.4	12.9	97	58	54	44	31	20	86	40	31	
2	207	33.6	52.9	293	45.4	22.4	95	56	48	35	20	10	83	50	33	
3	222	33.4	52.4	308	12.3	31.9	95	54	43	28	09	2 02	80	10 59	36	
4	237	33.2	51.9	322	39.2	41.3	94	52	39	21	8 00	1 54	79	11 07	38	
5	252	33.0	-20 51.4	337	06.0	-16 50.6	93	50	6 35	7 15	7 52	1 47	77	11 15	39	
6	267	32.8	-20 50.9	351	32.7	-16 59.8	92	45	6 25	7 01	7 34	1 33	73	11 30	43	
7	282	32.6	50.5	5 59.4	77	-17 08.9	91	40	16	6 50	19	21	70	43	45	
8	297	32.4	50.0	20 26.0	76	17.8	89	35	09	40	7 07	11	68	11 54	47	
9	312	32.2	49.5	34 52.5	75	26.7	89	30	6 01	31	6 56	1 02	66	12 04	49	
10	327	32.0	49.0	49 19.0	75	35.5	88	20	5 47	6 14	38	0 47	62	20	52	
11	342	31.8	-20 48.5	63 45.4	74	-17 44.1	86	10 N	5 33	5 59	6 22	0 34	59	12 35	55	
12	357	31.5	-20 48.0	78 11.8	74	-17 52.7	86	0	5 18	5 44	6 06	0 22	56	12 48	58	
13	12	31.3	47.5	92 38.1	73	-18 01.1	84	10 S	5 02	28	5 51	0 10	53	13 02	60	
14	27	31.1	47.0	107 04.3	72	09.4	83	20	4 42	5 10	34	** ** *	**	17	62	
15	42	30.9	46.6	121 30.5	72	17.6	82	30	4 16	4 48	15	** ** *	**	33	66	
16	57	30.7	46.1	135 56.6	71	25.7	81	35	3 59	35	5 03	** ** *	**	43	67	
17	72	30.5	-20 45.6	150 22.7	71	-18 33.7	80	40	3 39	4 19	4 50	** ** *	**	13 54	69	
18	87	30.3	-20 45.1	164 48.7	70	-18 41.6	79	45	3 13	3 59	4 35	23 53	46	14 08	71	
19	102	30.1	44.6	179 14.6	69	49.3	77	50	2 37	34	15	35	44	24	75	
20	117	29.9	44.1	193 40.5	69	-18 57.0	77	52	2 17	22	4 06	27	43	31	77	
21	132	29.7	43.6	208 06.3	68	-19 04.5	75	54	1 51	3 07	3 56	18	41	40	78	
22	147	29.5	43.1	222 32.1	68	11.9	74	56	1 12	2 50	44	23 08	39	14 49	81	
23	162	29.3	42.6	236 57.8	67	19.1	72	58	** ** *	29	31	22 57	36	15 00	83	
24	177	29.1	-20 42.1	251 23.5	67	-19 26.3	72	60 S	** ** *	2 01	3 15	22 44	33	15 13	86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 16 ^h 14 ^m 0		Mag: -4.0 PMG: 14 ^h 40 ^m			Mag: -0.2 PMG: 3 ^h 55 ^m			Mag: -2.5 PMG: 18 ^h 12 ^m			Mag: +0.6 PMG: 6 ^h 07 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	115	50.1	139 59.6	-11 42.3	301 06.4	+5 59.0	86 22.3	+10 48.7	267 53.6	-8 49.5	282 56.0	49.6				
1	130	52.6	154 59.2	41.2	316 08.6	59.0	101 24.6	48.8	282 56.0	49.6	297 58.3	49.6				
2	145	55.0	169 58.8	40.0	331 10.9	58.9	116 26.9	48.9	297 58.3	49.6	313 00.7	49.6				
3	160	57.5	184 58.4	38.8	346 13.1	58.9	131 29.2	49.0	313 00.7	49.6	328 03.1	49.6				
4	176	00.0	199 58.0	37.7	1 15.3	58.9	146 31.5	49.0	328 03.1	49.6	343 05.5	-8 49.7				
5	191	02.4	214 57.7	-11 36.5	16 17.6	+5 58.9	161 33.8	+10 49.1	343 05.5	-8 49.7	358 07.8	-8 49.7				
6	206	04.9	229 57.3	-11 35.3	31 19.8	+5 58.9	176 36.1	+10 49.2	358 07.8	-8 49.7	13 10.2	49.7				
7	221	07.3	244 56.9	34.1	46 22.1	58.9	191 38.4	49.3	13 10.2	49.7	28 12.6	49.7				
8	236	09.8	259 56.5	33.0	61 24.3	58.9	206 40.7	49.3	28 12.6	49.7	43 14.9	49.7				
9	251	12.3	274 56.1	31.8	76 26.6	58.8	221 43.0	49.4	43 14.9	49.7	58 17.3	49.8				
10	266	14.7	289 55.7	30.6	91 28.8	58.8	236 45.3	49.5	58 17.3	49.8	73 19.7	-8 49.8				
11	281	17.2	304 55.3	-11 29.4	106 31.1	+5 58.8	251 47.5	+10 49.6	73 19.7	-8 49.8	88 22.1	-8 49.8				
12	296	19.7	319 54.9	-11 28.3	121 33.3	+5 58.8	266 49.8	+10 49.7	88 22.1	-8 49.8	103 24.4	49.8				
13	311	22.1	334 54.6	27.1	136 35.6	58.8	281 52.1	49.7	103 24.4	49.8	118 26.8	49.9				
14	326	24.6	349 54.2	25.9	151 37.8	58.8	296 54.4	49.8	118 26.8	49.9	133 29.2	49.9				
15	341	27.1	4 53.8	24.7	166 40.1	58.8	311 56.7	49.9	133 29.2	49.9	148 31.6	49.9				
16	356	29.5	19 53.4	23.5	181 42.3	58.8	326 59.0	50.0	148 31.6	49.9	163 33.9	-8 49.9				
17	11	32.0	34 53.0	-11 22.4	196 44.6	+5 58.8	342 01.3	+10 50.0	163 33.9	-8 49.9	178 36.3	-8 49.9				
18	26	34.5	49 52.6	-11 21.2	211 46.9	+5 58.8	357 03.6	+10 50.1	178 36.3	-8 49.9	193 38.7	50.0				
19	41	36.9	64 52.3	20.0	226 49.1	58.8	12 05.8	50.2	193 38.7	50.0	208 41.0	50.0				
20	56	39.4	79 51.9	18.8	241 51.4	58.7	27 08.1	50.3	208 41.0	50.0	223 43.4	50.0				
21	71	41.8	94 51.5	17.6	256 53.6	58.7	42 10.4	50.4	223 43.4	50.0	238 45.8	50.0				
22	86	44.3	109 51.1	16.5	271 55.9	58.7	57 12.7	50.4	238 45.8	50.0	253 48.2	50.1				
23	101	46.8	124 50.7	15.3	286 58.2	58.7	72 15.0	50.5	253 48.2	50.1	268 50.5	-8 50.1				
24	116	49.2	139 50.4	-11 14.1	302 00.4	+5 58.7	87 17.3	+10 50.6	268 50.5	-8 50.1						
Dif	—		-4	+12	+23		0	+23	+1	+24		0				

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 2				Edad: 24 ^d 2 PHE { SD: 16:1 PMG: 7 ^h 32 ^m 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2 R°: 59 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	177	29.1	-20	42.1	251	23.5	-19	26.3	60 N	15 37	16 29	17 23	4 01	81	10 55	41	
1	192	28.9		41.6	265	49.1		33.3	58	15 51		39	29		3 46	79	
2	207	28.6		41.1	280	14.6		40.2	56	16 03		47	34		33	77	
3	222	28.4		40.6	294	40.1		47.0	54	13	16 54		38		22	75	
4	237	28.2		40.1	309	05.6		53.6	52	22	17 01		43		13	73	
5	252	28.0	-20	39.6	323	31.0	-20	00.2	50	16 30	17 07	17 47	3 04	72	11 54	49	
6	267	27.8	-20	39.1	337	56.3	-20	06.6	45	16 48	17 20	17 56	2 46	69	12 13	51	
7	282	27.6		38.6	352	21.6		12.8	40	17 02		31	18 05		31	68	
8	297	27.4		38.1	6	46.8		19.0	35	14	41	12	19	65	41	54	
9	312	27.2		37.6	21	12.0		25.0	30	24	17 50	19	2 08	64	12 53	55	
10	327	27.0		37.1	35	37.2		30.8	20	43	18 06	33	1 49	62	13 12	57	
11	342	26.8	-20	36.6	50	02.3	-20	36.6	10 N	17 59	18 21	18 47	1 33	60	13 30	57	
12	357	26.6	-20	36.1	64	27.3	-20	42.2	0	18 14	18 36	19 02	1 18	58	13 46	59	
13	12	26.4		35.6	78	52.3		47.6	10 S	29	18 52	18	1 03	57	14 02	60	
14	27	26.2		35.1	93	17.3		53.0	20	18 46	19 09	19 38	0 47	55	19	61	
15	42	26.0		34.6	107	42.2	-20	58.2	52	19 05	31	20 03	29	52	39	63	
16	57	25.8		34.1	122	07.1	-21	03.2	50	16	19 44	19	19	50	14 50	64	
17	72	25.6	-20	33.6	136	31.9	-21	08.2	40	19 29	20 00	20 39	0 07	48	15 03	66	
18	87	25.4	-20	33.1	150	56.7	-21	12.9	47	19 44	20 19	21 04	***	***	15 19	67	
19	102	25.2		32.6	165	21.5		17.6	47	20 03	44	40	***	***	39	68	
20	117	25.0		32.1	179	46.2		22.1	45	12	20 56	21 59	***	***	48	69	
21	132	24.8		31.6	194	10.9		26.4	43	22	21 10	22 23	23 59	53	15 58	70	
22	147	24.6		31.0	208	35.5		30.7	43	33	26	22 59	47	52	16 10	71	
23	162	24.4		30.5	223	00.1		34.7	40	20 46	21 47	***	***	33	51	23	73
24	177	24.2	-20	30.0	237	24.7	-21	38.7	40	21 02	22 13	***	***	23 17	49	16 39	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 10 ^m 1		Mag: -4.0 PMG: 14 ^h 41 ^m		Mag: -0.2 PMG: 3 ^h 51 ^m		Mag: -2.5 PMG: 18 ^h 08 ^m		Mag: +0.6 PMG: 6 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	116	49.2	139	50.4	-11	14.1	302	00.4	+5	58.7	87	17.3	+10	50.6	268	50.5	-8	50.1
1	131	51.7	154	50.0		12.9	317	02.7		58.7	102	19.6		50.7	283	52.9		50.1
2	146	54.2	169	49.6		11.7	332	05.0		58.7	117	21.8		50.7	298	55.3		50.1
3	161	56.6	184	49.2		10.5	347	07.2		58.7	132	24.1		50.8	313	57.7		50.1
4	176	59.1	199	48.8		09.4	2	09.5		58.7	147	26.4		50.9	329	00.0		50.2
5	192	01.6	214	48.5	-11	08.2	17	11.8	+5	58.7	162	28.7	+10	51.0	344	02.4	-8	50.2
6	207	04.0	229	48.1	-11	07.0	32	14.1	+5	58.7	177	31.0	+10	51.1	359	04.8	-8	50.2
7	222	06.5	244	47.7		05.8	47	16.3		58.7	192	33.3		51.1	14	07.2		50.2
8	237	09.0	259	47.3		04.6	62	18.6		58.7	207	35.5		51.2	29	09.6		50.2
9	252	11.4	274	47.0		03.4	77	20.9		58.7	222	37.8		51.3	44	11.9		50.3
10	267	13.9	289	46.6		02.2	92	23.2		58.7	237	40.1		51.4	59	14.3		50.3
11	282	16.3	304	46.2	-11	01.0	107	25.4	+5	58.7	252	42.4	+10	51.5	74	16.7	-8	50.3
12	297	18.8	319	45.8	-10	59.9	122	27.7	+5	58.7	267	44.7	+10	51.5	89	19.1	-8	50.3
13	312	21.3	334	45.5		58.7	137	30.0		58.7	282	46.9		51.6	104	21.4		50.3
14	327	23.7	349	45.1		57.5	152	32.3		58.7	297	49.2		51.7	119	23.8		50.4
15	342	26.2	4	44.7		56.3	167	34.6		58.7	312	51.5		51.8	134	26.2		50.4
16	357	28.7	19	44.4		55.1	182	36.8		58.7	327	53.8		51.9	149	28.6		50.4
17	12	31.1	34	44.0	-10	53.9	197	39.1	+5	58.7	342	56.1	+10	51.9	164	30.9	-8	50.4
18	27	33.6	49	43.6	-10	52.7	212	41.4	+5	58.7	357	58.3	+10	52.0	179	33.3	-8	50.5
19	42	36.1	64	43.3		51.5	227	43.7		58.7	13	00.6		52.1	194	35.7		50.5
20	57	38.5	79	42.9		50.3	242	46.0		58.7	28	02.9		52.2	209	38.1		50.5
21	72	41.0	94	42.5		49.1	257	48.3		58.7	43	05.2		52.3	224	40.5		50.5
22	87	43.5	109	42.1		47.9	272	50.6		58.7	58	07.5		52.3	239	42.8		50.5
23	102	45.9	124	41.8		46.7	287	52.9		58.7	73	09.7		52.4	254	45.2		50.6
24	117	48.4	139	41.4	-10	45.5	302	55.2	+5	58.7	88	12.0	+10	52.5	269	47.6	-8	50.6
Dif	—		-4		+12		+23		0		+23		+1		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 10 ^m 5			Edad: 25 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1 SD: 16:1 PMG: 8 ^h 31 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	24.2	-20 30.0	237	24.7	-21 38.7	60 N	6 57	7 50	8 42	5 22	66	11 36	58	
1	192	24.0	29.5	251	49.3	42.5	58	51	41	29	5 05	64	11 53	59	
2	207	23.8	29.0	266	13.8	46.1	56	46	33	17	4 50	64	12 08	59	
3	222	23.6	28.5	280	38.3	49.6	54	42	26	8 07	37	64	21	59	
4	237	23.4	28.0	295	02.8	53.0	52	37	19	7 58	26	64	32	59	
5	252	23.2	-20 27.4	309	27.2	56.2	50	6 33	7 13	7 50	4 16	63	12 43	59	
6	267	23.0	-20 26.9	323	51.6	59.3	45	6 24	7 00	7 33	3 55	63	13 04	59	
7	282	22.8	26.4	338	16.0	02.2	40	16	6 49	18	39	62	21	59	
8	297	22.6	25.9	352	40.4	05.0	35	08	39	7 06	24	62	35	59	
9	312	22.4	25.4	7	04.8	07.6	30	6 01	30	6 56	3 12	62	13 48	59	
10	327	22.2	24.9	21	29.1	10.1	20	5 47	14	38	2 51	61	14 09	59	
11	342	22.1	-20 24.3	35	53.4	12.4	10 N	5 34	6 00	6 22	2 33	60	14 27	60	
12	357	21.9	-20 23.8	50	17.7	14.6	0	5 19	5 45	6 07	2 16	60	14 45	59	
13	12	21.7	23.3	64	42.0	16.6	10 S	5 03	29	5 52	2 00	58	15 02	59	
14	27	21.5	22.8	79	06.3	18.5	20	4 43	5 11	35	1 42	58	20 60		
15	42	21.3	22.3	93	30.6	20.3	30	18	4 50	16	21	57	42	59	
16	57	21.1	21.7	107	54.9	21.8	35	4 02	37	5 05	1 09	57	15 54	59	
17	72	20.9	-20 21.2	122	19.1	23.3	40	3 42	4 21	4 53	0 55	56	16 09	58	
18	87	20.7	-20 20.7	136	43.4	24.6	45	3 17	4 02	4 37	0 39	55	16 26	58	
19	102	20.5	20.2	151	07.6	25.7	50	2 42	3 38	19	19	54	47	58	
20	117	20.3	19.6	165	31.9	26.7	52	2 22	26	10	0 10	53	16 57	58	
21	132	20.1	19.1	179	56.1	27.5	54	1 58	3 12	4 00	** ** *	**	17 08	58	
22	147	19.9	18.6	194	20.4	28.2	56	1 23	2 55	3 48	** ** *	**	21	57	
23	162	19.7	18.0	208	44.6	28.8	58	** ** *	35	35	** ** *	**	36	57	
24	177	19.5	-20 17.5	223	08.9	29.2	60 S	** ** *	2 09	3 20	** ** *	**	17 53	57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 06 ^m 1		Mag: -4.0 PMG: 14 ^h 42 ^m		Mag: -0.2 PMG: 3 ^h 48 ^m		Mag: -2.5 PMG: 18 ^h 04 ^m		Mag: +0.6 PMG: 6 ^h 00 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	°	°	°	°	°				
0	117	48.4	139	41.4	-10 45.5	302	55.2	+5 58.7	88	12.0	+10 52.5	269	47.6	-8 50.6
1	132	50.8	154	41.0	44.4	317	57.4	58.7	103	14.3	52.6	284	50.0	50.6
2	147	53.3	169	40.7	43.2	332	59.7	58.8	118	16.6	52.7	299	52.4	50.6
3	162	55.8	184	40.3	42.0	348	02.0	58.8	133	18.8	52.7	314	54.7	50.6
4	177	58.2	199	39.9	40.8	3	04.3	58.8	148	21.1	52.8	329	57.1	50.7
5	193	00.7	214	39.6	-10 39.6	18	06.6	+5 58.8	163	23.4	+10 52.9	344	59.5	-8 50.7
6	208	03.2	229	39.2	-10 38.4	33	08.9	+5 58.8	178	25.7	+10 53.0	0	01.9	-8 50.7
7	223	05.6	244	38.9	37.2	48	11.2	58.8	193	27.9	53.1	15	04.3	50.7
8	238	08.1	259	38.5	36.0	63	13.5	58.8	208	30.2	53.1	30	06.6	50.7
9	253	10.6	274	38.1	34.8	78	15.8	58.8	223	32.5	53.2	45	09.0	50.7
10	268	13.0	289	37.8	33.6	93	18.1	58.8	238	34.8	53.3	60	11.4	50.8
11	283	15.5	304	37.4	-10 32.4	108	20.4	+5 58.8	253	37.0	+10 53.4	75	13.8	-8 50.8
12	298	17.9	319	37.0	-10 31.2	123	22.7	+5 58.9	268	39.3	+10 53.5	90	16.2	-8 50.8
13	313	20.4	334	36.7	30.0	138	25.1	58.9	283	41.6	53.6	105	18.5	50.8
14	328	22.9	349	36.3	28.8	153	27.4	58.9	298	43.9	53.6	120	20.9	50.8
15	343	25.3	4	36.0	27.6	168	29.7	58.9	313	46.1	53.7	135	23.3	50.9
16	358	27.8	19	35.6	26.4	183	32.0	58.9	328	48.4	53.8	150	25.7	50.9
17	13	30.3	34	35.3	-10 25.2	198	34.3	+5 58.9	343	50.7	+10 53.9	165	28.1	-8 50.9
18	28	32.7	49	34.9	-10 24.0	213	36.6	+5 58.9	358	52.9	+10 54.0	180	30.4	-8 50.9
19	43	35.2	64	34.5	22.8	228	38.9	59.0	13	55.2	54.0	195	32.8	50.9
20	58	37.7	79	34.2	21.6	243	41.2	59.0	28	57.5	54.1	210	35.2	51.0
21	73	40.1	94	33.8	20.4	258	43.6	59.0	43	59.8	54.2	225	37.6	51.0
22	88	42.6	109	33.5	19.2	273	45.9	59.0	59	02.0	54.3	240	40.0	51.0
23	103	45.1	124	33.1	17.9	288	48.2	59.0	74	04.3	54.4	255	42.4	51.0
24	118	47.5	139	32.8	-10 16.7	303	50.5	+5 59.0	89	06.6	+10 54.5	270	44.7	-8 51.0
Dif	—		-4 +12		+23 0		+23 +1		+24 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 9			Edad: 26 ^d 2 PHE { 4 ^h : 59°0 12 ^h : 58°9 20 ^h : 58°8 PMG: 9 ^h 30 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	19.5	-20	17.5	223	08.9	-22 29.2	60 N	15 42	16 33	17 27	6 28 46	12 34 74		
1	192	19.4		17.0	237	33.2	53 29.4	58	15 55	42	32	6 09 49	12 52 72		
2	207	19.2		16.5	251	57.4	52 29.5	56	16 07	50	37	5 54 50	13 07 71		
3	222	19.0		15.9	266	21.7	53 29.4	54	17	16 57	42	41 51	20 70		
4	237	18.8		15.4	280	46.0	53 29.2	52	25	17 04	46	30 51	31 69		
5	252	18.6	-20	14.9	295	10.3	53 -22 28.9	50	16 33	17 10	17 50	5 19 53	13 42 67		
6	267	18.4	-20	14.3	309	34.6	53 -22 28.4	45	16 50	17 23	17 59	4 58 54	14 03 66		
7	282	18.2		13.8	323	59.0	54 27.7	40	17 04	34	18 07	41 55	20 65		
8	297	18.0		13.3	338	23.3	53 26.9	35	16	43	14	26 56	34 64		
9	312	17.8		12.7	352	47.7	54 25.9	30	26	17 52	21	4 14 56	14 47 63		
10	327	17.7		12.2	7	12.1	54 24.8	20	17 44	18 07	34	3 52 57	15 08 61		
11	342	17.5	-20	11.7	21	36.5	54 -22 23.6	10 N	18 00	18 22	18 48	3 33 58	15 27 59		
12	357	17.3	-20	11.1	36	00.9	54 -22 22.2	0	18 14	18 36	19 02	3 16 59	15 44 58		
13	12	17.1		10.6	50	25.4	55 20.7	10 S	29	18 52	18	2 58 60	16 01 57		
14	27	16.9		10.1	64	49.9	55 19.0	20	18 45	19 09	19 38	40 60	20 55		
15	42	16.7		09.5	79	14.4	55 17.1	30	19 04	30	20 02	18 62	41 53		
16	57	16.5		09.0	93	39.0	56 15.1	35	15	43	18	2 06 62	16 53 53		
17	72	16.4	-20	08.4	108	03.6	56 -22 13.0	40	19 27	19 59	20 37	1 51 63	17 07 51		
18	87	16.2	-20	07.9	122	28.2	56 -22 10.7	45	19 42	20 17	21 02	1 34 63	17 24 49		
19	102	16.0		07.4	136	52.8	56 08.3	50	20 01	41	36	13 64	45 47		
20	117	15.8		06.8	151	17.5	57 05.8	52	09	20 53	21 54	1 03 64	17 55 46		
21	132	15.6		06.3	165	42.3	58 03.1	54	19	21 06	22 18	0 52 64	18 06 44		
22	147	15.4		05.7	180	07.0	57 -22 00.2	56	30	22	22 50	39 65	18 43		
23	162	15.2		05.2	194	31.9	59 -21 57.2	58	43	21 42	** **	24 66	33 41		
24	177	15.1	-20	04.6	208	56.7	58 -21 54.1	60 S	20 58	22 07	** **	0 06 67	18 50 38		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 02 ^m 2		Mag: -4.0 PMG: 14 ^h 42 ^m		Mag: -0.3 PMG: 3 ^h 44 ^m		Mag: -2.5 PMG: 18 ^h 01 ^m		Mag: +0.6 PMG: 5 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	118	47.5	139	32.8	-10	16.7	303	50.5	+5	59.0
1	133	50.0	154	32.4		15.5	318	52.8		59.1
2	148	52.4	169	32.1		14.3	333	55.2		59.1
3	163	54.9	184	31.7		13.1	348	57.5		59.1
4	178	57.4	199	31.3		11.9	3	59.8		59.1
5	193	59.8	214	31.0	-10	10.7	19	02.1	+5	59.1
6	209	02.3	229	30.6	-10	09.5	34	04.5	+5	59.2
7	224	04.8	244	30.3		08.3	49	06.8		59.2
8	239	07.2	259	29.9		07.1	64	09.1		59.2
9	254	09.7	274	29.6		05.9	79	11.4		59.2
10	269	12.2	289	29.2		04.7	94	13.8		59.2
11	284	14.6	304	28.9	-10	03.5	109	16.1	+5	59.3
12	299	17.1	319	28.5	-10	02.2	124	18.4	+5	59.3
13	314	19.6	334	28.2	-10	01.0	139	20.8		59.3
14	329	22.0	349	27.8	-9	59.8	154	23.1		59.3
15	344	24.5	4	27.5		58.6	169	25.5		59.4
16	359	26.9	19	27.2		57.4	184	27.8		59.4
17	14	29.4	34	26.8	-9	56.2	199	30.1	+5	59.4
18	29	31.9	49	26.5	-9	55.0	214	32.5	+5	59.4
19	44	34.3	64	26.1		53.8	229	34.8		59.5
20	59	36.8	79	25.8		52.5	244	37.2		59.5
21	74	39.3	94	25.4		51.3	259	39.5		59.5
22	89	41.7	109	25.1		50.1	274	41.8		59.6
23	104	44.2	124	24.7		48.9	289	44.2		59.6
24	119	46.7	139	24.4	-9	47.7	304	46.5	+5	59.6
Dif	—		-3		+12		+23		0	
							+23		+1	
									+24	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 11 ^m 1			Edad: 27 ^d 2 PHE { 4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'4 R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	177	15.1	-20	04.6	208	56.7	-21	54.1	60 N	6 55	7 47	8 38	7 14	32	13 48	85		
1	192	14.9		04.1	223	21.6	59	50.8	58	49	39	25	6 58	34	14 04	82		
2	207	14.7		03.6	237	46.5	59	47.4	56	44	31	14	44	37	18 79			
3	222	14.5		03.0	252	11.5	60	43.9	54	40	24	8 04	32	39	30 76			
4	237	14.3		02.5	266	36.6	61	40.2	52	36	17	7 56	21	41	40 75			
5	252	14.1	-20	01.9	281	01.7	61	36.4	50	6 32	7 12	7 48	6 12	42	14 49	73		
6	267	14.0	-20	01.4	295	26.8	61	32.4	45	6 23	6 59	7 31	5 52	45	15 09	70		
7	282	13.8		00.8	309	52.0	62	28.3	40	15	48	17	36	47	25 67			
8	297	13.6	-20	00.3	324	17.2	62	24.1	35	08	38	7 06	22	49	38 65			
9	312	13.4	-19	59.7	338	42.5	63	19.7	30	6 01	30	6 55	5 10	50	15 50	63		
10	327	13.2		59.2	353	07.9	64	15.2	20	5 47	14	38	4 49	53	16 09	61		
11	342	13.1	-19	58.6	7	33.3	64	10.6	10 N	5 34	6 00	6 22	4 31	55	16 26	58		
12	357	12.9	-19	58.1	21	58.8	65	05.8	0	5 20	5 46	6 08	4 15	57	16 42	56		
13	12	12.7		57.5	36	24.3	65	00.9	10 S	5 04	30	5 53	3 58	59	16 58	53		
14	27	12.5		57.0	50	49.9	66	55.9	20	4 45	5 13	37	40	61	17 15	50		
15	42	12.4		56.4	65	15.6	67	50.7	30	20	4 52	18	20	63	34 48			
16	57	12.2		55.8	79	41.3	67	45.5	35	4 04	39	5 07	3 08	64	46 45			
17	72	12.0	-19	55.3	94	07.1	68	40.0	40	3 45	4 24	4 55	2 54	66	17 58	44		
18	87	11.8	-19	54.7	108	32.9	68	34.5	45	3 20	4 05	4 40	2 37	68	18 13	41		
19	102	11.6		54.2	122	58.8	69	28.9	50	2 46	3 41	22	17	71	32 38			
20	117	11.5		53.6	137	24.8	70	23.1	52	28	30	13	2 07	72	41 36			
21	132	11.3		53.1	151	50.8	70	17.2	54	2 05	16	4 03	1 56	74	18 50	34		
22	147	11.1		52.5	166	17.0	72	11.1	56	1 33	3 00	3 52	44	75	19 01	32		
23	162	10.9		52.0	180	43.1	71	05.0	58	** **	2 41	40	30	77	14 29			
24	177	10.8	-19	51.4	195	09.4	73	19 58.7	60 S	** **	2 16	3 25	1 13	80	19 28	26		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 58 ^m 3		Mag: -4.0 PMG: 14 ^h 43 ^m		Mag: -0.3 PMG: 3 ^h 40 ^m		Mag: -2.5 PMG: 17 ^h 57 ^m		Mag: +0.6 PMG: 5 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	119	46.7	139	24.4	-9	47.7	304	46.5	+5	59.6	90	01.0	+10	56.5	271	42.0	-8	51.5
1	134	49.1	154	24.1		46.5	319	48.9		59.7	105	03.2		56.6	286	44.4		51.5
2	149	51.6	169	23.7		45.2	334	51.2		59.7	120	05.5		56.7	301	46.8		51.5
3	164	54.1	184	23.4		44.0	349	53.6		59.7	135	07.7		56.7	316	49.1		51.5
4	179	56.5	199	23.0		42.8	4	55.9		59.7	150	10.0		56.8	331	51.5		51.5
5	194	59.0	214	22.7	-9	41.6	19	58.3	+5	59.8	165	12.3	+10	56.9	346	53.9	-8	51.5
6	210	01.4	229	22.3	-9	40.4	35	00.6	+5	59.8	180	14.5	+10	57.0	1	56.3	-8	51.6
7	225	03.9	244	22.0		39.2	50	03.0		59.8	195	16.8		57.1	16	58.7		51.6
8	240	06.4	259	21.7		37.9	65	05.4		59.9	210	19.0		57.2	32	01.1		51.6
9	255	08.8	274	21.3		36.7	80	07.7		59.9	225	21.3		57.3	47	03.5		51.6
10	270	11.3	289	21.0		35.5	95	10.1	+5	59.9	240	23.6		57.4	62	05.9		51.6
11	285	13.8	304	20.7	-9	34.3	110	12.4	+6	00.0	255	25.8	+10	57.4	77	08.3	-8	51.6
12	300	16.2	319	20.3	-9	33.1	125	14.8	+6	00.0	270	28.1	+10	57.5	92	10.6	-8	51.6
13	315	18.7	334	20.0		31.8	140	17.2	+6	00.1	285	30.3		57.6	107	13.0		51.7
14	330	21.2	349	19.6		30.6	155	19.5		00.1	300	32.6		57.7	122	15.4		51.7
15	345	23.6	4	19.3		29.4	170	21.9		00.1	315	34.9		57.8	137	17.8		51.7
16	0	26.1	19	19.0		28.2	185	24.3		00.2	330	37.1		57.9	152	20.2		51.7
17	15	28.6	34	18.6	-9	27.0	200	26.6	+6	00.2	345	39.4	+10	58.0	167	22.6	-8	51.7
18	30	31.0	49	18.3	-9	25.7	215	29.0	+6	00.2	0	41.6	+10	58.1	182	25.0	-8	51.7
19	45	33.5	64	18.0		24.5	230	31.4		00.3	15	43.9		58.1	197	27.4		51.8
20	60	35.9	79	17.6		23.3	245	33.7		00.3	30	46.1		58.2	212	29.8		51.8
21	75	38.4	94	17.3		22.1	260	36.1		00.4	45	48.4		58.3	227	32.2		51.8
22	90	40.9	109	17.0		20.8	275	38.5		00.4	60	50.7		58.4	242	34.5		51.8
23	105	43.3	124	16.6		19.6	290	40.9		00.4	75	52.9		58.5	257	36.9		51.8
24	120	45.8	139	16.3	-9	18.4	305	43.2	+6	00.5	90	55.2	+10	58.6	272	39.3	-8	51.8
Dif	—		-3 +12		+24		0		+23		+1		+24					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 4			Edad: 28 ^d 2 PHE { 4 ^h : 58 ^m 3 12 ^h : 58 ^m 1 20 ^h : 57 ^m 9 PMG: 11 ^h 25 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	10.8	-19 51.4	195	09.4	-19 58.7	60 N	15 47	16 38	17 30	7 46 21	15 13 88			
1	192	10.6		209	35.7	52.4	58	16 00	46	36	32 25	26 84			
2	207	10.4		224	02.1	45.9	56	11	16 54	40	21 27	37 81			
3	222	10.2		238	28.6	39.2	54	20	17 01	45	11 29	46 79			
4	237	10.1		252	55.1	32.5	52	29	07	49	7 02 32	15 55 76			
5	252	09.9	-19 48.6	267	21.7	-19 25.7	50	16 36	17 13	17 52	6 54 33	16 02 75			
6	267	09.7	-19 48.0	281	48.4	-19 18.7	45	16 53	17 25	18 01	6 37 37	16 19 70			
7	282	09.5		296	15.2	11.7	40	17 06	36	09	23 40	32 67			
8	297	09.4		310	42.0	-19 04.5	35	18	45	16	11 42	43 65			
9	312	09.2		325	08.9	-18 57.2	30	28	17 54	23	6 00 45	16 53 62			
10	327	09.0		339	35.9	49.8	20	17 45	18 09	36	5 42 48	17 10 58			
11	342	08.9	-19 45.2	354	03.0	-18 42.3	10 N	18 01	18 23	18 49	5 26 51	17 24 55			
12	357	08.7	-19 44.6	8	30.1	-18 34.7	0	18 15	18 37	19 03	5 12 53	17 38 52			
13	12	08.5		22	57.4	27.0	10 S	30	18 52	18	4 57 56	17 51 49			
14	27	08.3		37	24.7	19.2	20	18 45	19 09	19 37	41 59	18 05 46			
15	42	08.2		51	52.1	11.3	30	19 03	30	20 01	23 63	22 42			
16	57	08.0		66	19.5	-18 03.3	35	14	42	17	12 65	31 40			
17	72	07.8	-19 41.8	80	47.1	-17 55.2	40	19 26	19 57	20 36	4 00 67	18 42 37			
18	87	07.7	-19 41.2	95	14.7	-17 47.0	45	19 41	20 15	21 00	3 45 71	18 54 34			
19	102	07.5		109	42.4	38.7	50	19 58	39	33	28 74	19 10 30			
20	117	07.3		124	10.2	30.3	52	20 07	20 50	21 50	19 76	17 28			
21	132	07.1		138	38.0	21.8	54	16	21 03	22 12	3 10 78	24 27			
22	147	07.0		153	06.0	13.2	56	27	18	22 42	2 59 80	33 24			
23	162	06.8		167	34.0	-17 04.5	58	39	21 37	23 35	47 83	43 21			
24	177	06.6	-19 37.8	182	02.1	-16 55.8	60 S	20 54	22 00	** **	2 33 87	19 54 18			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 54 ^m 3		Mag: -4.0 PMG: 14 ^h 43 ^m			Mag: -0.3 PMG: 3 ^h 37 ^m			Mag: -2.5 PMG: 17 ^h 54 ^m			Mag: +0.6 PMG: 5 ^h 48 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	
0	120	45.8	139	16.3	-9 18.4	305	43.2	+6 00.5	90	55.2	+10 58.6	272	39.3	-8 51.8	
1	135	48.3	154	16.0	17.2	320	45.6	00.5	105	57.4	58.7	287	41.7	51.9	
2	150	50.7	169	15.6	15.9	335	48.0	00.6	120	59.7	58.8	302	44.1	51.9	
3	165	53.2	184	15.3	14.7	350	50.4	00.6	136	01.9	58.8	317	46.5	51.9	
4	180	55.7	199	15.0	13.5	5	52.8	00.7	151	04.2	58.9	332	48.9	51.9	
5	195	58.1	214	14.7	-9 12.2	20	55.1	+6 00.7	166	06.4	+10 59.0	347	51.3	-8 51.9	
6	211	00.6	229	14.3	-9 11.0	35	57.5	+6 00.7	181	08.7	+10 59.1	2	53.7	-8 51.9	
7	226	03.1	244	14.0	09.8	50	59.9	00.8	196	11.0	59.2	17	56.1	51.9	
8	241	05.5	259	13.7	08.6	66	02.3	00.8	211	13.2	59.3	32	58.5	52.0	
9	256	08.0	274	13.3	07.3	81	04.7	00.9	226	15.5	59.4	48	00.9	52.0	
10	271	10.4	289	13.0	06.1	96	07.1	00.9	241	17.7	59.5	63	03.2	52.0	
11	286	12.9	304	12.7	-9 04.9	111	09.4	+6 01.0	256	20.0	+10 59.6	78	05.6	-8 52.0	
12	301	15.4	319	12.4	-9 03.6	126	11.8	+6 01.0	271	22.2	+10 59.6	93	08.0	-8 52.0	
13	316	17.8	334	12.0	02.4	141	14.2	01.1	286	24.5	59.7	108	10.4	52.0	
14	331	20.3	349	11.7	-9 01.2	156	16.6	01.1	301	26.7	59.8	123	12.8	52.0	
15	346	22.8	4	11.4	-9 00.0	171	19.0	01.2	316	29.0	+10 59.9	138	15.2	52.1	
16	1	25.2	19	11.1	-8 58.7	186	21.4	01.2	331	31.2	+11 00.0	153	17.6	52.1	
17	16	27.7	34	10.7	-8 57.5	201	23.8	+6 01.3	346	33.5	+11 00.1	168	20.0	-8 52.1	
18	31	30.2	49	10.4	-8 56.3	216	26.2	+6 01.3	1	35.7	+11 00.2	183	22.4	-8 52.1	
19	46	32.6	64	10.1	55.0	231	28.6	01.4	16	38.0	00.3	198	24.8	52.1	
20	61	35.1	79	09.8	53.8	246	31.0	01.4	31	40.2	00.4	213	27.2	52.1	
21	76	37.5	94	09.5	52.6	261	33.4	01.5	46	42.5	00.5	228	29.6	52.1	
22	91	40.0	109	09.1	51.3	276	35.8	01.5	61	44.7	00.5	243	32.0	52.2	
23	106	42.5	124	08.8	50.1	291	38.2	01.6	76	47.0	00.6	258	34.4	52.2	
24	121	44.9	139	08.5	-8 48.9	306	40.6	+6 01.6	91	49.2	+11 00.7	273	36.8	-8 52.2	
Dif	—		-3		+12	+24		0	+23		+1	+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 11 ^m 7			Edad: 29 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:5 20 ^h : 57:3 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	06.6	-19 37.8	182	02.1	-16 55.8		60 N	6 52	7 44	8 35	8 07	15	16 41	86	
1	192	06.5		196	30.3	92 46.9	89	58	47	36	22	7 57	18	50	82	
2	207	06.3	36.6	210	58.5	92 38.0	90	56	42	28	11	48	21	16 58	79	
3	222	06.1	36.0	225	26.9	94 29.0	90	54	38	22	8 02	40	24	17 05	77	
4	237	06.0	35.5	239	55.3	94 19.9	91	52	34	15	7 53	34	25	11	75	
5	252	05.8	-19 34.9	254	23.8	95 -16 10.7	92	50	6 30	7 10	7 46	7 27	27	17 17	73	
6	267	05.6	-19 34.3	268	52.4	96 -16 01.4	93	45	6 22	6 57	7 30	7 14	31	17 29	69	
7	282	05.5	33.7	283	21.1	97 -15 52.1	94	40	14	47	16	7 03	34	39	66	
8	297	05.3	33.1	297	49.9	98 42.7	93	35	07	38	7 05	6 53	37	48	62	
9	312	05.2	32.6	312	18.7	98 33.2	95	30	6 00	29	6 55	45	39	17 55	60	
10	327	05.0	32.0	326	47.6	99 23.6	96	20	5 47	14	38	30	43	18 08	56	
11	342	04.8	-19 31.4	341	16.6	100 -15 13.9	97	10 N	5 34	6 00	6 22	6 17	47	18 19	52	
12	357	04.7	-19 30.8	355	45.7	101 -15 04.2	97	0	5 21	5 46	6 08	6 05	50	18 30	48	
13	12	04.5	30.2	10	14.8	101 -14 54.4	98	10 S	5 05	31	5 54	5 53	54	40	45	
14	27	04.3	29.7	24	44.1	103 44.5	99	20	4 46	5 14	38	40	57	18 51	42	
15	42	04.2	29.1	39	13.4	103 34.6	99	30	22	4 54	20	26	61	19 04	37	
16	57	04.0	28.5	53	42.8	104 24.6	100	35	4 07	41	5 09	17	64	11	35	
17	72	03.8	-19 27.9	68	12.3	105 -14 14.5	101	40	3 48	4 26	4 57	5 07	66	19 19	32	
18	87	03.7	-19 27.3	82	41.8	105 -14 04.4	101	45	3 24	4 08	4 43	4 56	69	19 28	29	
19	102	03.5	26.7	97	11.4	106 -13 54.2	102	50	2 51	3 45	25	42	73	40	25	
20	117	03.4	26.1	111	41.2	108 43.9	103	52	33	34	17	35	76	45	23	
21	132	03.2	25.5	126	10.9	107 33.6	103	54	2 12	21	4 07	28	78	51	21	
22	147	03.0	25.0	140	40.8	109 23.2	104	56	1 42	3 05	3 57	19	81	19 57	19	
23	162	02.9	24.4	155	10.8	110 12.7	105	58	0 48	2 47	44	10	83	20 04	17	
24	177	02.7	-19 23.8	169	40.8	110 -13 02.2	105	60 S	** **	2 23	3 30	4 00	86	20 12	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 15 ^h 50 ^m 4		Mag: -4.0 PMG: 14 ^h 44 ^m		Mag: -0.3 PMG: 3 ^h 33 ^m		Mag: -2.5 PMG: 17 ^h 50 ^m		Mag: +0.6 PMG: 5 ^h 45 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	121	44.9	139	08.5	-8 48.9		306	40.6	+6 01.6	91 49.2	+11 00.7	273 36.8	-8 52.2
1	136	47.4	154	08.2	47.6		321	43.0	01.7	106 51.5	00.8	288 39.2	52.2
2	151	49.9	169	07.9	46.4		336	45.4	01.7	121 53.7	00.9	303 41.6	52.2
3	166	52.3	184	07.5	45.1		351	47.8	01.8	136 56.0	01.0	318 43.9	52.2
4	181	54.8	199	07.2	43.9		6	50.2	01.9	151 58.2	01.1	333 46.3	52.2
5	196	57.3	214	06.9	-8 42.7		21	52.7	+6 01.9	167 00.4	+11 01.2	348 48.7	-8 52.3
6	211	59.7	229	06.6	-8 41.4		36	55.1	+6 02.0	182 02.7	+11 01.3	3 51.1	-8 52.3
7	227	02.2	244	06.3	40.2		51	57.5	02.0	197 04.9	01.4	18 53.5	52.3
8	242	04.7	259	06.0	39.0		66	59.9	02.1	212 07.2	01.5	33 55.9	52.3
9	257	07.1	274	05.6	37.7		82	02.3	02.1	227 09.4	01.5	48 58.3	52.3
10	272	09.6	289	05.3	36.5		97	04.7	02.2	242 11.7	01.6	64 00.7	52.3
11	287	12.0	304	05.0	-8 35.2		112	07.1	+6 02.3	257 13.9	+11 01.7	79 03.1	-8 52.3
12	302	14.5	319	04.7	-8 34.0		127	09.6	+6 02.3	272 16.2	+11 01.8	94 05.5	-8 52.3
13	317	17.0	334	04.4	32.8		142	12.0	02.4	287 18.4	01.9	109 07.9	52.4
14	332	19.4	349	04.1	31.5		157	14.4	02.4	302 20.7	02.0	124 10.3	52.4
15	347	21.9	4 03.8		30.3		172	16.8	02.5	317 22.9	02.1	139 12.7	52.4
16	2 24.4	19 03.4			29.0		187	19.3	02.6	332 25.1	02.2	154 15.1	52.4
17	17 26.8	34 03.1	-8 27.8		202 21.7	+6 02.6				347 27.4	+11 02.3	169 17.5	-8 52.4
18	32 29.3	49 02.8	-8 26.6		217 24.1	+6 02.7				2 29.6	+11 02.4	184 19.9	-8 52.4
19	47 31.8	64 02.5	25.3		232 26.5	02.8				17 31.9	02.5	199 22.3	52.4
20	62 34.2	79 02.2	24.1		247 29.0	02.8				32 34.1	02.6	214 24.7	52.4
21	77 36.7	94 01.9	22.8		262 31.4	02.9				47 36.4	02.7	229 27.1	52.5
22	92 39.2	109 01.6	21.6		277 33.8	02.9				62 38.6	02.7	244 29.5	52.5
23	107 41.6	124 01.3	20.4		292 36.3	03.0				77 40.8	02.8	259 31.9	52.5
24	122 44.1	139 01.0	-8 19.1		307 38.7	+6 03.1				92 43.1	+11 02.9	274 34.3	-8 52.5
Dif	—		-3	+12	+24		+1	+22		+1		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 30 ^d 2 PHE { 4 ^h : 57:1 12 ^h : 56:9 20 ^h : 56:7 R°: 47 ^m					Civil			Náutico		Hora R°	
	PMG: 12 ^h 11 ^m 9	hG ☉	Dec	hG ☾	Dif	Dec			Dif						
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	02.7	-19 23.8	169	40.8	-13 02.2		60 N	15 52	16 42	17 34	8 22 11	18 07 83		
1	192	02.6		184	10.9 ¹¹¹	-12 51.6 ¹⁰⁶		58	16 04	50	39	15 15	12 80		
2	207	02.4		198	41.0 ¹¹¹	41.0 ¹⁰⁶		56	15	16 58	44	09 17	17 78		
3	222	02.2		213	11.3 ¹¹³	30.3 ¹⁰⁷		54	24	17 04	48	8 04 19	22 75		
4	237	02.1		227	41.6 ¹¹³	19.6 ¹⁰⁷		52	32	10	52	7 59 21	26 73		
5	252	01.9	-19 20.8	242	12.0 ¹¹⁴	-12 08.8 ¹⁰⁸		50	16 40	17 16	17 55	7 54 24	18 30 71		
6	267	01.8	-19 20.2	256	42.5 ¹¹⁵	-11 58.0 ¹⁰⁸		45	16 56	17 28	18 03	7 45 27	18 38 67		
7	282	01.6		271	13.0 ¹¹⁵	47.1 ¹⁰⁹		40	17 09	38	11	37 30	45 63		
8	297	01.5		285	43.7 ¹¹⁷	36.2 ¹⁰⁹		35	20	47	18	30 33	50 61		
9	312	01.3		300	14.4 ¹¹⁷	25.2 ¹¹⁰		30	30	17 55	24	24 36	18 55 58		
10	327	01.1		314	45.1 ¹¹⁷	14.2 ¹¹⁰		20	17 47	18 10	37	13 40	19 04 53		
11	342	01.0	-19 17.2	329	16.0 ¹¹⁹	-11 03.1 ¹¹¹		10 N	18 01	18 24	18 49	7 04 44	19 11 50		
12	357	00.8	-19 16.7	343	46.9 ¹¹⁹	-10 52.0 ¹¹¹		0	18 16	18 37	19 03	6 55 48	19 18 46		
13	12	00.7		358	17.8 ¹¹⁹	40.9 ¹¹¹		10 S	30	18 52	18	47 50	25 43		
14	27	00.5		15.5	12 48.9 ¹²¹	29.7 ¹¹²		20	18 45	19 09	19 37	37 55	33 38		
15	42	00.4		14.9	27 20.0 ¹²¹	18.4 ¹¹³		30	19 03	29	20 00	27 59	41 34		
16	57	00.2		14.3	41 51.2 ¹²²	-10 07.2 ¹¹²		35	13	41	15	21 61	46 32		
17	72	00.1	-19 13.7	56	22.4 ¹²²	-9 55.9 ¹¹³		40	19 25	19 56	20 34	6 13 65	19 51 29		
18	86	59.9	-19 13.1	70	53.8 ¹²⁴	-9 44.5 ¹¹⁴		45	19 39	20 13	20 57	6 05 68	19 57 26		
19	101	59.8		12.5	85 25.1 ¹²³	33.1 ¹¹⁴		50	19 56	36	21 29	5 55 72	20 05 22		
20	116	59.6		11.8	99 56.6 ¹²⁵	21.7 ¹¹⁴		52	20 04	47	21 46	51 73	08 20		
21	131	59.5		11.2	114 28.1 ¹²⁵	-9 10.3 ¹¹⁴		54	13	20 59	22 06	46 76	12 18		
22	146	59.3		10.6	128 59.7 ¹²⁶	-8 58.8 ¹¹⁵		56	24	21 14	22 34	40 78	16 16		
23	161	59.2		10.0	143 31.3 ¹²⁶	47.3 ¹¹⁵		58	36	32	23 17	33 82	21 13		
24	176	59.0	-19 09.4	158	03.0 ¹²⁷	-8 35.8 ¹¹⁵		60 S	20 49	21 54	** **	5 26 85	20 26 11		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 46 ^m 5			Mag: -4.0 PMG: 14 ^h 44 ^m			Mag: -0.4 PMG: 3 ^h 29 ^m			Mag: -2.5 PMG: 17 ^h 46 ^m			Mag: +0.6 PMG: 5 ^h 41 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	122	44.1	139 01.0	-8 19.1		307 38.7	+6 03.1		92 43.1	+11 02.9		274 34.3	-8 52.5		
1	137	46.5	154 00.6	17.9		322 41.1	03.1		107 45.3	03.0		289 36.7	52.5		
2	152	49.0	169 00.3	16.6		337 43.6	03.2		122 47.6	03.1		304 39.1	52.5		
3	167	51.5	184 00.0	15.4		352 46.0	03.3		137 49.8	03.2		319 41.5	52.5		
4	182	53.9	198 59.7	14.1		7 48.4	03.3		152 52.0	03.3		334 43.9	52.5		
5	197	56.4	213 59.4	-8 12.9		22 50.9	+6 03.4		167 54.3	+11 03.4		349 46.3	-8 52.6		
6	212	58.9	228 59.1	-8 11.6		37 53.3	+6 03.5		182 56.5	+11 03.5		4 48.7	-8 52.6		
7	228	01.3	243 58.8	10.4		52 55.8	03.6		197 58.8	03.6		19 51.1	52.6		
8	243	03.8	258 58.5	09.2		67 58.2	03.6		213 01.0	03.7		34 53.5	52.6		
9	258	06.3	273 58.2	07.9		83 00.6	03.7		228 03.2	03.8		49 55.9	52.6		
10	273	08.7	288 57.9	06.7		98 03.1	03.8		243 05.5	03.9		64 58.3	52.6		
11	288	11.2	303 57.6	-8 05.4		113 05.5	+6 03.8		258 07.7	+11 04.0		80 00.7	-8 52.6		
12	303	13.7	318 57.3	-8 04.2		128 08.0	+6 03.9		273 09.9	+11 04.1		95 03.1	-8 52.6		
13	318	16.1	333 57.0	02.9		143 10.4	04.0		288 12.2	04.1		110 05.5	52.6		
14	333	18.6	348 56.7	01.7		158 12.9	04.1		303 14.4	04.2		125 07.9	52.7		
15	348	21.0	3 56.4	-8 00.4		173 15.3	04.1		318 16.7	04.3		140 10.3	52.7		
16	3 23.5	18 56.1	-7 59.2	188 17.8		04.2	333 18.9		333 18.9	04.4		155 12.7	52.7		
17	18 26.0	33 55.8	-7 57.9	203 20.2	+6 04.3		348 21.1	+11 04.5		170 15.1	-8 52.7				
18	33 28.4	48 55.5	-7 56.7	218 22.7	+6 04.4		3 23.4	+11 04.6		185 17.5	-8 52.7				
19	48 30.9	63 55.2	55.4	233 25.2	04.4		18 25.6	04.7		200 19.9	52.7				
20	63 33.4	78 54.9	54.2	248 27.6	04.5		33 27.8	04.8		215 22.3	52.7				
21	78 35.8	93 54.6	52.9	263 30.1	04.6		48 30.1	04.9		230 24.7	52.7				
22	93 38.3	108 54.3	51.7	278 32.5	04.7		63 32.3	05.0		245 27.1	52.7				
23	108 40.8	123 54.0	50.4	293 35.0	04.7		78 34.5	05.1		260 29.5	52.8				
24	123 43.2	138 53.7	-7 49.2	308 37.5	+6 04.8		93 36.8	+11 05.2		275 31.9	-8 52.8				
Dif	—	-3	+12	+24	+1		+22	+1		+24					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2			Edad: 1 ^d 7	PHE { 4 ^h : 56:5 12 ^h : 56:3 20 ^h : 56:1			Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 12 ^m 2														SD: 15:4	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	59.0	-19 09.4	158	03.0	-8 35.8	116	60 N	6 49	7 41	8 31	8 33	10	19 30	80	
1	191	58.9	08.8	172	34.8	24.2	128	58	44	33	19	30	12	32	78	
2	206	58.7	08.2	187	06.7	12.6	116	56	40	26	8 08	26	15	35	75	
3	221	58.5	07.6	201	38.5	-8 01.0	116	54	36	19	7 59	23	17	37	73	
4	236	58.4	07.0	216	10.5	-7 49.3	117	52	32	13	51	20	19	39	71	
5	251	58.3	-19 06.4	230	42.5	-7 37.7	116	50	6 28	7 08	7 44	8 18	20	19 41	68	
6	266	58.1	-19 05.8	245	14.6	-7 26.0	117	45	6 20	6 56	7 28	8 12	25	19 45	64	
7	281	58.0	05.2	259	46.7	14.2	118	40	13	46	15	07	28	48	61	
8	296	57.8	04.6	274	18.9	-7 02.5	117	35	06	37	7 04	03	31	51	58	
9	311	57.7	04.0	288	51.1	-6 50.7	118	30	6 00	29	6 54	8 00	33	53	56	
10	326	57.5	03.4	303	23.4	39.0	117	20	5 47	14	37	7 53	38	19 57	52	
11	341	57.4	-19 02.7	317	55.8	-6 27.2	118	10 N	5 35	6 00	6 23	7 48	41	20 01	48	
12	356	57.2	-19 02.1	332	28.2	-6 15.4	118	0	5 21	5 47	6 09	7 43	44	20 04	44	
13	11	57.1	01.5	347	00.7	-6 03.5	119	10 S	5 06	32	5 55	37	49	08	40	
14	26	56.9	00.9	1	33.2	-5 51.7	118	20	4 48	5 16	39	32	52	11	37	
15	41	56.8	-19 00.3	16	05.7	39.8	119	30	24	4 56	22	26	56	15	33	
16	56	56.6	-18 59.7	30	38.3	28.0	118	35	4 09	43	12	22	59	18	30	
17	71	56.5	-18 59.1	45	11.0	-5 16.1	119	40	3 51	4 29	5 00	7 18	62	20 20	27	
18	86	56.3	-18 58.4	59	43.7	-5 04.2	119	45	3 28	4 11	4 46	7 13	66	20 23	24	
19	101	56.2	57.8	74	16.5	-4 52.3	119	50	2 56	3 49	28	07	70	27	20	
20	116	56.0	57.2	88	49.3	40.4	119	52	39	38	20	04	72	28	19	
21	131	55.9	56.6	103	22.2	28.5	119	54	2 18	25	11	7 02	73	30	17	
22	146	55.8	56.0	117	55.1	16.5	120	56	1 51	3 11	4 01	6 58	76	32	15	
23	161	55.6	55.4	132	28.0	-4 04.6	119	58	1 07	2 53	3 49	55	78	34	12	
24	176	55.5	-18 54.7	147	01.0	-3 52.7	119	60 S	** **	2 31	3 36	6 51	81	20 37	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.1		Mag: -0.4		Mag: -2.4		Mag: +0.6	
	15 ^h 42 ^m 5		PMG: 14 ^h 45 ^m		PMG: 3 ^h 25 ^m		PMG: 17 ^h 43 ^m		PMG: 5 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	123	43.2	138	53.7	308	37.5	93	36.8	275	31.9
1	138	45.7	153	53.4	323	39.9	108	39.0	290	34.3
2	153	48.1	168	53.1	338	42.4	123	41.2	305	36.7
3	168	50.6	183	52.8	353	44.9	138	43.5	320	39.1
4	183	53.1	198	52.5	8	47.3	153	45.7	335	41.5
5	198	55.5	213	52.2	23	49.8	168	47.9	350	44.0
6	213	58.0	228	51.9	38	52.3	183	50.2	5	46.4
7	229	00.5	243	51.6	53	54.7	198	52.4	20	48.8
8	244	02.9	258	51.3	68	57.2	213	54.6	35	51.2
9	259	05.4	273	51.0	83	59.7	228	56.9	50	53.6
10	274	07.9	288	50.7	99	02.2	243	59.1	65	56.0
11	289	10.3	303	50.4	114	04.6	259	01.3	80	58.4
12	304	12.8	318	50.1	129	07.1	274	03.6	96	00.8
13	319	15.3	333	49.8	144	09.6	289	05.8	111	03.2
14	334	17.7	348	49.5	159	12.1	304	08.0	126	05.6
15	349	20.2	3	49.2	174	14.5	319	10.2	141	08.0
16	4	22.6	18	49.0	189	17.0	334	12.5	156	10.4
17	19	25.1	33	48.7	204	19.5	349	14.7	171	12.8
18	34	27.6	48	48.4	219	22.0	4	16.9	186	15.2
19	49	30.0	63	48.1	234	24.5	19	19.2	201	17.6
20	64	32.5	78	47.8	249	27.0	34	21.4	216	20.0
21	79	35.0	93	47.5	264	29.5	49	23.6	231	22.4
22	94	37.4	108	47.2	279	31.9	64	25.8	246	24.9
23	109	39.9	123	46.9	294	34.4	79	28.1	261	27.3
24	124	42.4	138	46.6	309	36.9	94	30.3	276	29.7
Dif	—		-3	+13	+25	+1	+22	+1	+24	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 4			Edad: 2 ^d 7 PHE { SD: 15:2 PMG: 14 ^h 38 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m
0	176	55.5	-18	54.7	147	01.0	-3	52.7	60 N	15 57	16 46	17 38	8 43	9	20 50	78
1	191	55.3		54.1	161	34.0 ¹⁴⁰		40.7 ¹²⁰	58	16 09	16 54	43	42	12	50	75
2	206	55.2		53.5	176	07.1 ¹⁴¹		28.8 ¹¹⁹	56	19	17 01	47	41	14	50	73
3	221	55.0		52.9	190	40.2 ¹⁴¹		16.8 ¹²⁰	54	28	08	51	40	16	50	70
4	236	54.9		52.3	205	13.4 ¹⁴²		-3 04.9 ¹¹⁹	52	36	13	55	39	18	50	68
5	251	54.8	-18	51.6	219	46.6 ¹⁴²		-2 52.9 ¹²⁰	50	16 43	17 19	17 58	8 38	20	20 49	67
6	266	54.6	-18	51.0	234	19.8 ¹⁴²		-2 41.0 ¹¹⁹	45	16 58	17 30	18 06	8 37	23	20 49	63
7	281	54.5		50.4	248	53.1 ¹⁴³		29.0 ¹²⁰	40	17 11	40	13	35	27	49	60
8	296	54.3		49.8	263	26.4 ¹⁴³		17.1 ¹¹⁹	35	22	49	20	34	29	49	57
9	311	54.2		49.1	277	59.8 ¹⁴⁴		-2 05.1 ¹²⁰	30	31	17 57	26	33	32	49	54
10	326	54.1		48.5	292	33.2 ¹⁴⁴		-1 53.2 ¹¹⁹	20	17 48	18 11	38	31	36	49	50
11	341	53.9	-18	47.9	307	06.6 ¹⁴⁴		-1 41.2 ¹²⁰	10 N	18 02	18 24	18 50	8 29	40	20 49	46
12	356	53.8	-18	47.3	321	40.1 ¹⁴⁵		-1 29.3 ¹¹⁹	0	18 16	18 38	19 03	8 27	44	20 48	43
13	11	53.7		46.6	336	13.6 ¹⁴⁵		17.3 ¹²⁰	10 S	30	18 52	18	26	47	48	40
14	26	53.5		46.0	350	47.1 ¹⁴⁵		-1 05.4 ¹¹⁹	20	18 45	19 08	36	24	51	48	36
15	41	53.4		45.4	5	20.6 ¹⁴⁵		-0 53.5 ¹¹⁹	30	19 02	28	19 59	22	55	48	31
16	56	53.2		44.7	19	54.2 ¹⁴⁶		41.6 ¹¹⁹	35	12	40	20 14	21	58	48	29
17	71	53.1	-18	44.1	34	27.8 ¹⁴⁶		-0 29.7 ¹¹⁹	40	19 23	19 54	20 32	8 20	60	20 47	27
18	86	53.0	-18	43.5	49	01.5 ¹⁴⁷		-0 17.8 ¹¹⁹	45	19 37	20 11	20 54	8 19	63	20 47	24
19	101	52.8		42.9	63	35.2 ¹⁴⁷		-0 05.9 ¹¹⁹	50	19 54	33	21 25	17	67	47	20
20	116	52.7		42.2	78	08.9 ¹⁴⁷		+0 06.0 ¹¹⁹	52	20 02	44	21 41	16	69	47	18
21	131	52.6		41.6	92	42.6 ¹⁴⁷		17.8 ¹¹⁸	54	10	20 56	22 01	15	72	47	16
22	146	52.4		41.0	107	16.3 ¹⁴⁷		29.7 ¹¹⁹	56	20	21 10	22 26	14	74	47	14
23	161	52.3		40.3	121	50.1 ¹⁴⁸		41.5 ¹¹⁸	58	32	27	23 03	13	76	46	12
24	176	52.2	-18	39.7	136	23.9 ¹⁴⁸		+0 53.3 ¹¹⁸	60 S	20 45	21 47	** **	8 12	79	20 46	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 38 ^m 6		Mag: -4.1 PMG: 14 ^h 45 ^m		Mag: -0.4 PMG: 3 ^h 21 ^m		Mag: -2.4 PMG: 17 ^h 39 ^m		Mag: +0.6 PMG: 5 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	124	42.4	138	46.6	-7	19.0	309	36.9	94	30.3
1	139	44.8	153	46.3		17.8	324	39.4		07.5
2	154	47.3	168	46.1		16.5	339	41.9		07.6
3	169	49.7	183	45.8		15.3	354	44.4		07.7
4	184	52.2	198	45.5		14.0	9	46.9		07.8
5	199	54.7	213	45.2	-7	12.7	24	49.4	+6	07.3
6	214	57.1	228	44.9	-7	11.5	39	51.9	+6	07.4
7	229	59.6	243	44.6		10.2	54	54.4		07.5
8	245	02.1	258	44.3		09.0	69	56.9		07.6
9	260	04.5	273	44.1		07.7	84	59.4		07.7
10	275	07.0	288	43.8		06.4	100	01.9		07.8
11	290	09.5	303	43.5	-7	05.2	115	04.4	+6	07.9
12	305	11.9	318	43.2	-7	03.9	130	06.9	+6	08.0
13	320	14.4	333	42.9		02.6	145	09.4		08.0
14	335	16.9	348	42.6		01.4	160	12.0		08.1
15	350	19.3	3	42.4	-7	00.1	175	14.5		08.2
16	5	21.8	18	42.1	-6	58.8	190	17.0		08.3
17	20	24.2	33	41.8	-6	57.6	205	19.5	+6	08.4
18	35	26.7	48	41.5	-6	56.3	220	22.0	+6	08.5
19	50	29.2	63	41.2		55.1	235	24.5		08.6
20	65	31.6	78	41.0		53.8	250	27.0		08.7
21	80	34.1	93	40.7		52.5	265	29.6		08.8
22	95	36.6	108	40.4		51.3	280	32.1		08.9
23	110	39.0	123	40.1		50.0	295	34.6		09.0
24	125	41.5	138	39.8	-6	48.7	310	37.1	+6	09.1
Dif	—		-3		+13		+25		+1	
							+22		+1	
									+24	
									0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 12 ^m 6			Edad: 3 ^d 7 PHE { 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 54:9 PMG: 15 ^h 21 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	52.2	-18	39.7	136	23.9	+0 53.3	60 N	6 46	7 37	8 26	8 52	10	22 08	77
1	191	52.0		39.1	150	57.7 ¹⁴⁸	+1 05.1 ¹¹⁸	58	41	30	15	54	12	05	74
2	206	51.9		38.4	165	31.6 ¹⁴⁹	16.9 ¹¹⁸	56	37	23	8 05	55	14	03	71
3	221	51.8		37.8	180	05.5 ¹⁴⁹	28.7 ¹¹⁸	54	33	16	7 56	56	16	22 00	70
4	236	51.6		37.2	194	39.4 ¹⁴⁹	40.4 ¹¹⁷	52	30	11	48	57	18	21 58	68
5	251	51.5	-18	36.5	209	13.3 ¹⁴⁹	+1 52.2 ¹¹⁸	50	6 26	7 06	7 41	8 58	20	21 56	66
6	266	51.4	-18	35.9	223	47.2 ¹⁴⁹	+2 03.9 ¹¹⁷	45	6 19	6 54	7 26	9 00	23	21 52	62
7	281	51.2		35.2	238	21.1 ¹⁴⁹	15.6 ¹¹⁷	40	12	44	13	02	26	49	59
8	296	51.1		34.6	252	55.1 ¹⁵⁰	27.3 ¹¹⁷	35	6 05	36	7 03	03	29	46	56
9	311	51.0		34.0	267	29.1 ¹⁵⁰	38.9 ¹¹⁶	30	5 59	28	6 53	05	31	43	54
10	326	50.8		33.3	282	03.1 ¹⁵⁰	+2 50.6 ¹¹⁷	20	47	14	37	07	35	39	49
11	341	50.7	-18	32.7	296	37.1 ¹⁵⁰	+3 02.2 ¹¹⁶	10 N	5 35	6 01	6 23	9 09	39	21 35	46
12	356	50.6	-18	32.0	311	11.1 ¹⁵⁰	+3 13.8 ¹¹⁶	0	5 22	5 47	6 09	9 11	42	21 31	43
13	11	50.4		31.4	325	45.2 ¹⁵¹	25.4 ¹¹⁶	10 S	5 07	33	5 55	13	46	28	39
14	26	50.3		30.8	340	19.2 ¹⁵⁰	36.9 ¹¹⁵	20	4 49	5 17	41	15	50	24	36
15	41	50.2		30.1	354	53.3 ¹⁵¹	48.4 ¹¹⁵	30	26	4 57	24	17	54	19	32
16	56	50.1		29.5	9	27.3 ¹⁵⁰	+3 59.9 ¹¹⁵	35	4 12	46	14	19	56	17	29
17	71	49.9	-18	28.8	24	01.4 ¹⁵¹	+4 11.4 ¹¹⁵	40	3 54	4 32	5 02	9 20	59	21 14	27
18	86	49.8	-18	28.2	38	35.5 ¹⁵¹	+4 22.8 ¹¹⁴	45	3 31	4 14	4 49	9 22	62	21 11	23
19	101	49.7		27.5	53	09.6 ¹⁵¹	34.3 ¹¹⁵	50	3 01	3 53	32	24	67	07	20
20	116	49.5		26.9	67	43.7 ¹⁵¹	45.7 ¹¹⁴	52	2 45	42	24	25	68	05	18
21	131	49.4		26.3	82	17.8 ¹⁵¹	+4 57.0 ¹¹³	54	25	30	15	27	70	03	17
22	146	49.3		25.6	96	52.0 ¹⁵²	+5 08.3 ¹¹³	56	2 00	3 16	4 05	28	72	21 01	14
23	161	49.2		25.0	111	26.1 ¹⁵¹	19.6 ¹¹³	58	1 22	2 59	3 54	29	75	20 58	13
24	176	49.0	-18	24.3	126	00.2 ¹⁵¹	+5 30.9 ¹¹³	60 S	** **	2 38	3 41	9 31	77	20 55	10
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 34 ^m 7			Mag: -4.1 PMG: 14 ^h 46 ^m			Mag: -0.4 PMG: 3 ^h 17 ^m			Mag: -2.4 PMG: 17 ^h 36 ^m			Mag: +0.6 PMG: 5 ^h 29 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'
0	125	41.5	138	39.8	-6	48.7	310	37.1	+6 09.1	95	23.7	+11 09.9	277	27.5	-8 53.2
1	140	44.0	153	39.6		47.5	325	39.6	09.2	110	25.9	10.0	292	29.9	53.2
2	155	46.4	168	39.3		46.2	340	42.2	09.3	125	28.1	10.1	307	32.3	53.2
3	170	48.9	183	39.0		44.9	355	44.7	09.5	140	30.3	10.2	322	34.7	53.2
4	185	51.4	198	38.7		43.7	10	47.2	09.6	155	32.5	10.3	337	37.2	53.2
5	200	53.8	213	38.5	-6	42.4	25	49.7	+6 09.7	170	34.8	+11 10.4	352	39.6	-8 53.2
6	215	56.3	228	38.2	-6	41.1	40	52.3	+6 09.8	185	37.0	+11 10.5	7	42.0	-8 53.2
7	230	58.7	243	37.9		39.9	55	54.8	09.9	200	39.2	10.6	22	44.4	53.2
8	246	01.2	258	37.6		38.6	70	57.3	10.0	215	41.4	10.7	37	46.8	53.3
9	261	03.7	273	37.4		37.3	85	59.9	10.1	230	43.6	10.8	52	49.2	53.3
10	276	06.1	288	37.1		36.1	101	02.4	10.2	245	45.8	10.9	67	51.6	53.3
11	291	08.6	303	36.8	-6	34.8	116	04.9	+6 10.3	260	48.1	+11 11.0	82	54.0	-8 53.3
12	306	11.1	318	36.5	-6	33.5	131	07.5	+6 10.4	275	50.3	+11 11.1	97	56.5	-8 53.3
13	321	13.5	333	36.3		32.2	146	10.0	10.5	290	52.5	11.2	112	58.9	53.3
14	336	16.0	348	36.0		31.0	161	12.6	10.6	305	54.7	11.3	128	01.3	53.3
15	351	18.5	3	35.7		29.7	176	15.1	10.7	320	56.9	11.4	143	03.7	53.3
16	6	20.9	18	35.5		28.4	191	17.6	10.8	335	59.1	11.5	158	06.1	53.3
17	21	23.4	33	35.2	-6	27.2	206	20.2	+6 11.0	351	01.4	+11 11.6	173	08.5	-8 53.3
18	36	25.8	48	34.9	-6	25.9	221	22.7	+6 11.1	6	03.6	+11 11.7	188	10.9	-8 53.3
19	51	28.3	63	34.6		24.6	236	25.3	11.2	21	05.8	11.8	203	13.4	53.3
20	66	30.8	78	34.4		23.3	251	27.8	11.3	36	08.0	11.9	218	15.8	53.3
21	81	33.2	93	34.1		22.1	266	30.4	11.4	51	10.2	12.0	233	18.2	53.3
22	96	35.7	108	33.8		20.8	281	32.9	11.5	66	12.4	12.1	248	20.6	53.3
23	111	38.2	123	33.6		19.5	296	35.5	11.6	81	14.6	12.2	263	23.0	53.4
24	126	40.6	138	33.3	-6	18.3	311	38.0	+6 11.7	96	16.9	+11 12.3	278	25.4	-8 53.4
Dif	—		-3	+13		+25	+1		+22		+1		+24		0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2			Edad: 4 ^d 7	PHE {	4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:5			Civil			Náutico			Hora R°		
	PMG: 12 ^h 12 ^m 8								R°: 43 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	m
0	176	49.0	-18 24.3	126	00.2	+5 30.9	60 N	16 02	16 51	17 42	9 02	11	23 25	76			
1	191	48.9	23.7	140	34.3 ¹⁵¹	42.2 ¹¹³	58	13	16 58	47	06	13	19	73			
2	206	48.8	23.0	155	08.5 ¹⁵²	+5 53.4 ¹¹²	56	23	17 05	51	09	16	14	71			
3	221	48.7	22.4	169	42.6 ¹⁵¹	+6 04.5 ¹¹¹	54	32	11	54	12	18	10	68			
4	236	48.5	21.7	184	16.7 ¹⁵¹	15.7 ¹¹²	52	39	17	58	15	20	06	66			
5	251	48.4	-18 21.1	198	50.9 ¹⁵²	+6 26.8 ¹¹¹	50	16 46	17 22	18 01	9 18	21	23 02	65			
6	266	48.3	-18 20.4	213	25.0 ¹⁵¹	+6 37.9 ¹¹¹	45	17 01	17 33	18 08	9 23	25	22 54	61			
7	281	48.2	19.8	227	59.2 ¹⁵²	48.9 ¹¹⁰	40	13	42	15	28	28	48	58			
8	296	48.0	19.1	242	33.3 ¹⁵¹	+6 59.9 ¹¹⁰	35	24	51	21	32	31	42	56			
9	311	47.9	18.5	257	07.4 ¹⁵¹	+7 10.9 ¹¹⁰	30	33	17 58	27	36	32	37	53			
10	326	47.8	17.8	271	41.5 ¹⁵¹	21.8 ¹⁰⁹	20	17 49	18 12	39	42	37	28	50			
11	341	47.7	-18 17.2	286	15.7 ¹⁵²	+7 32.7 ¹⁰⁹	10 N	18 03	18 25	18 51	9 48	40	22 21	46			
12	356	47.6	-18 16.5	300	49.8 ¹⁵¹	+7 43.6 ¹⁰⁹	0	18 16	18 38	19 03	9 53	43	22 14	43			
13	11	47.4	15.8	315	23.9 ¹⁵¹	+7 54.4 ¹⁰⁸	10 S	30	18 52	18	9 59	46	07	40			
14	26	47.3	15.2	329	58.0 ¹⁵¹	+8 05.2 ¹⁰⁸	20	18 44	19 08	35	10 05	49	22 00	36			
15	41	47.2	14.5	344	32.1 ¹⁵¹	15.9 ¹⁰⁷	30	19 01	27	19 58	11	54	21 51	33			
16	56	47.1	13.9	359	06.2 ¹⁵¹	26.6 ¹⁰⁷	35	11	38	20 12	15	56	46	31			
17	71	46.9	-18 13.2	13	40.2 ¹⁵⁰	+8 37.3 ¹⁰⁷	40	19 22	19 52	20 29	10 19	59	21 41	28			
18	86	46.8	-18 12.6	28	14.3 ¹⁵¹	+8 47.9 ¹⁰⁶	45	19 35	20 09	20 51	10 24	62	21 34	26			
19	101	46.7	11.9	42	48.4 ¹⁵¹	+8 58.5 ¹⁰⁶	50	51	30	21 21	31	65	27	22			
20	116	46.6	11.2	57	22.4 ¹⁵⁰	+9 09.0 ¹⁰⁵	52	19 59	40	36	33	67	23	21			
21	131	46.5	10.6	71	56.4 ¹⁵⁰	19.5 ¹⁰⁵	54	20 07	20 52	21 55	37	69	20	18			
22	146	46.4	09.9	86	30.5 ¹⁵¹	30.0 ¹⁰⁵	56	17	21 05	22 18	40	71	15	17			
23	161	46.2	09.3	101	04.5 ¹⁵⁰	40.4 ¹⁰⁴	58	28	21	22 52	44	74	11	14			
24	176	46.1	-18 08.6	115	38.5 ¹⁵⁰	+9 50.8 ¹⁰⁴	60 S	20 40	21 41	** **	10 48	77	21 05	12			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 30 ^m 7		Mag: -4.1 PMG: 14 ^h 46 ^m		Mag: -0.5 PMG: 3 ^h 13 ^m		Mag: -2.4 PMG: 17 ^h 32 ^m		Mag: +0.6 PMG: 5 ^h 25 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	126	40.6	138	33.3	-6	18.3	311	38.0	+6	11.7	96	16.9	+11	12.3	278	25.4	-8	53.4
1	141	43.1	153	33.0		17.0	326	40.6		11.9	111	19.1		12.4	293	27.9		53.4
2	156	45.6	168	32.8		15.7	341	43.1		12.0	126	21.3		12.5	308	30.3		53.4
3	171	48.0	183	32.5		14.4	356	45.7		12.1	141	23.5		12.6	323	32.7		53.4
4	186	50.5	198	32.2		13.2	11	48.2		12.2	156	25.7		12.7	338	35.1		53.4
5	201	53.0	213	32.0	-6	11.9	26	50.8	+6	12.3	171	27.9	+11	12.8	353	37.5	-8	53.4
6	216	55.4	228	31.7	-6	10.6	41	53.4	+6	12.4	186	30.1	+11	12.9	8	39.9	-8	53.4
7	231	57.9	243	31.4		09.3	56	55.9		12.6	201	32.3		13.0	23	42.4		53.4
8	247	00.3	258	31.2		08.1	71	58.5		12.7	216	34.6		13.1	38	44.8		53.4
9	262	02.8	273	30.9		06.8	87	01.0		12.8	231	36.8		13.2	53	47.2		53.4
10	277	05.3	288	30.6		05.5	102	03.6		12.9	246	39.0		13.3	68	49.6		53.4
11	292	07.7	303	30.4	-6	04.2	117	06.2	+6	13.0	261	41.2	+11	13.4	83	52.0	-8	53.4
12	307	10.2	318	30.1	-6	03.0	132	08.7	+6	13.2	276	43.4	+11	13.5	98	54.4	-8	53.4
13	322	12.7	333	29.9		01.7	147	11.3		13.3	291	45.6		13.6	113	56.9		53.4
14	337	15.1	348	29.6	-6	00.4	162	13.9		13.4	306	47.8		13.7	128	59.3		53.4
15	352	17.6	3	29.3	-5	59.1	177	16.5		13.5	321	50.0		13.9	144	01.7		53.4
16	7	20.1	18	29.1		57.9	192	19.0		13.6	336	52.2		14.0	159	04.1		53.4
17	22	22.5	33	28.8	-5	56.6	207	21.6	+6	13.8	351	54.4	+11	14.1	174	06.5	-8	53.4
18	37	25.0	48	28.5	-5	55.3	222	24.2	+6	13.9	6	56.6	+11	14.2	189	09.0	-8	53.5
19	52	27.5	63	28.3		54.0	237	26.7		14.0	21	58.9		14.3	204	11.4		53.5
20	67	29.9	78	28.0		52.8	252	29.3		14.1	37	01.1		14.4	219	13.8		53.5
21	82	32.4	93	27.8		51.5	267	31.9		14.3	52	03.3		14.5	234	16.2		53.5
22	97	34.8	108	27.5		50.2	282	34.5		14.4	67	05.5		14.6	249	18.6		53.5
23	112	37.3	123	27.2		48.9	297	37.1		14.5	82	07.7		14.7	264	21.0		53.5
24	127	39.8	138	27.0	-5	47.6	312	39.6	+6	14.6	97	09.9	+11	14.8	279	23.5	-8	53.5
Dif	—		-3		+13		+26		+1		+22		+1		+24			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 5 ^d 7 SD: 14'8 PMG: 16 ^h 47 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 R°: 44 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	46.1	-18	08.6	115	38.5	+9	50.8	60 N	6 42	7 34	8 22	9 13	12	***	***	***
1	191	46.0		07.9	130	12.4 ¹⁴⁹	+10	01.1 ¹⁰³	58	38	26	11	19	16	***	***	***
2	206	45.9		07.3	144	46.4 ¹⁵⁰		11.3 ¹⁰²	56	34	20	8 01	25	18	***	***	***
3	221	45.8		06.6	159	20.3 ¹⁴⁹		21.6 ¹⁰³	54	31	14	7 53	30	20	***	***	***
4	236	45.7		06.0	173	54.3 ¹⁵⁰		31.7 ¹⁰¹	52	27	08	45	35	21	***	***	***
5	251	45.5	-18	05.3	188	28.2 ¹⁴⁹	+10	41.9 ¹⁰²	50	6 24	7 03	7 39	9 39	23	***	***	***
6	266	45.4	-18	04.6	203	02.1 ¹⁴⁹	+10	52.0 ¹⁰¹	45	6 17	6 52	7 24	9 48	27	23 55	61	
7	281	45.3		04.0	217	35.9 ¹⁴⁸	+11	02.0 ¹⁰⁰	40	10	43	12	9 56	30	46	58	
8	296	45.2		03.3	232	09.8 ¹⁴⁹		12.0 ¹⁰⁰	35	6 04	35	7 01	10 03	32	38	55	
9	311	45.1		02.6	246	43.6 ¹⁴⁸		21.9 ⁹⁹	30	5 58	27	6 52	08 35	30	54		
10	326	45.0		02.0	261	17.4 ¹⁴⁸		31.8 ⁹⁹	20	47	13	37	19 37	18	50		
11	341	44.9	-18	01.3	275	51.2 ¹⁴⁸	+11	41.6 ⁹⁸	10 N	5 35	6 01	6 23	10 28	41	23 07	47	
12	356	44.7	-18	00.6	290	25.0 ¹⁴⁸	+11	51.4 ⁹⁸	0	5 22	5 48	6 09	10 36	44	22 57	45	
13	11	44.6	-18	00.0	304	58.7 ¹⁴⁷	+12	01.1 ⁹⁷	10 S	5 08	34	5 56	45 47	47	42		
14	26	44.5	-17	59.3	319	32.4 ¹⁴⁷		10.8 ⁹⁷	20	4 51	5 18	42	10 54	50	36	39	
15	41	44.4		58.6	334	06.1 ¹⁴⁷		20.4 ⁹⁶	30	28	4 59	25	11 05	53	24	36	
16	56	44.3		58.0	348	39.8 ¹⁴⁷		30.0 ⁹⁶	35	4 14	48	16	11 55		17	34	
17	71	44.2	-17	57.3	3	13.4 ¹⁴⁶	+12	39.5 ⁹⁵	40	3 57	4 34	5 05	11 18	58	22 09	32	
18	86	44.1	-17	56.6	17	47.0 ¹⁴⁶	+12	49.0 ⁹⁵	45	3 35	4 18	4 51	11 26	61	22 00	29	
19	101	44.0		55.9	32	20.6 ¹⁴⁶	+12	58.4 ⁹⁴	50	3 05	3 57	35	36 64		21 49	25	
20	116	43.9		55.3	46	54.2 ¹⁴⁶	+13	07.7 ⁹³	52	2 50	46	28	40 67		44	23	
21	131	43.7		54.6	61	27.7 ¹⁴⁵		17.0 ⁹³	54	32	35	19	46 68		38	22	
22	146	43.6		53.9	76	01.2 ¹⁴⁵		26.3 ⁹³	56	2 08	21	4 10	51 70		32	20	
23	161	43.5		53.2	90	34.7 ¹⁴⁵		35.4 ⁹¹	58	1 35	3 05	3 59	11 58	72	25	17	
24	176	43.4	-17	52.6	105	08.1 ¹⁴⁴	+13	44.6 ⁹²	60 S	** **	2 46	3 46	12 05	75	21 17	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 26 ^m 8		Mag: -4.1 PMG: 14 ^h 46 ^m		Mag: -0.5 PMG: 3 ^h 09 ^m		Mag: -2.4 PMG: 17 ^h 29 ^m		Mag: +0.6 PMG: 5 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	127	39.8	138	27.0	-5	47.6	312	39.6	+6	14.6	97	09.9	+11	14.8	279	23.5	-8	53.5
1	142	42.2	153	26.7		46.4	327	42.2		14.8	112	12.1		14.9	294	25.9		53.5
2	157	44.7	168	26.5		45.1	342	44.8		14.9	127	14.3		15.0	309	28.3		53.5
3	172	47.2	183	26.2		43.8	357	47.4		15.0	142	16.5		15.1	324	30.7		53.5
4	187	49.6	198	26.0		42.5	12	50.0		15.2	157	18.7		15.2	339	33.1		53.5
5	202	52.1	213	25.7	-5	41.2	27	52.6	+6	15.3	172	20.9	+11	15.3	354	35.6	-8	53.5
6	217	54.6	228	25.4	-5	40.0	42	55.2	+6	15.4	187	23.1	+11	15.4	9	38.0	-8	53.5
7	232	57.0	243	25.2		38.7	57	57.8		15.5	202	25.3		15.5	24	40.4		53.5
8	247	59.5	258	24.9		37.4	73	00.4		15.7	217	27.5		15.6	39	42.8		53.5
9	263	01.9	273	24.7		36.1	88	02.9		15.8	232	29.7		15.7	54	45.3		53.5
10	278	04.4	288	24.4		34.8	103	05.5		15.9	247	31.9		15.8	69	47.7		53.5
11	293	06.9	303	24.2	-5	33.6	118	08.1	+6	16.1	262	34.1	+11	15.9	84	50.1	-8	53.5
12	308	09.3	318	23.9	-5	32.3	133	10.7	+6	16.2	277	36.3	+11	16.0	99	52.5	-8	53.5
13	323	11.8	333	23.7		31.0	148	13.3		16.3	292	38.5		16.2	114	54.9		53.5
14	338	14.3	348	23.4		29.7	163	15.9		16.5	307	40.7		16.3	129	57.4		53.5
15	353	16.7	3	23.2		28.4	178	18.5		16.6	322	43.0		16.4	144	59.8		53.5
16	8	19.2	18	22.9		27.2	193	21.1		16.7	337	45.2		16.5	160	02.2		53.5
17	23	21.7	33	22.6	-5	25.9	208	23.7	+6	16.9	352	47.4	+11	16.6	175	04.6	-8	53.5
18	38	24.1	48	22.4	-5	24.6	223	26.3	+6	17.0	7	49.6	+11	16.7	190	07.1	-8	53.5
19	53	26.6	63	22.1		23.3	238	29.0		17.1	22	51.8		16.8	205	09.5		53.5
20	68	29.1	78	21.9		22.0	253	31.6		17.3	37	54.0		16.9	220	11.9		53.6
21	83	31.5	93	21.6		20.7	268	34.2		17.4	52	56.2		17.0	235	14.3		53.6
22	98	34.0	108	21.4		19.5	283	36.8		17.5	67	58.4		17.1	250	16.8		53.6
23	113	36.4	123	21.1		18.2	298	39.4		17.7	83	00.6		17.2	265	19.2		53.6
24	128	38.9	138	20.9	-5	16.9	313	42.0	+6	17.8	98	02.8	+11	17.3	280	21.6	-8	53.6
Dif	—		-3 +13		+26 +1		+22 +1		+22 +1		+24 0		0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 2			Edad: 6 ^d 7 PHE { SD: 14/8 PMG: 17 ^h 31 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	43.4	-17	52.6	105	08.1	+13	44.6	60 N	16 07	16 55	17 47	9 25 17	0 41 75
1	191	43.3		51.9	119	41.6 ¹⁴⁵	+13	53.6	58	18	17 03	51	35 19	32 73
2	206	43.2		51.2	134	14.9 ¹⁴³	+14	02.6	56	27	09	54	43 22	25 70
3	221	43.1		50.5	148	48.3 ¹⁴⁴		11.6	54	36	15	17 58	50 24	18 68
4	236	43.0		49.9	163	21.6 ¹⁴³		20.4	52	43	20	18 01	9 56 26	12 66
5	251	42.9	-17	49.2	177	54.9 ¹⁴³	+14	29.3	50	16 50	17 25	18 04	10 02 28	0 07 64
6	266	42.8	-17	48.5	192	28.1 ¹⁴²	+14	38.0	45	17 04	17 36	18 11	10 15 31	** ** *
7	281	42.7		47.8	207	01.4 ¹⁴³		46.7	40	16	45	17	26 33	** ** *
8	296	42.6		47.2	221	34.5 ¹⁴¹	+14	55.4	35	26	17 53	23	35 35	** ** *
9	311	42.5		46.5	236	07.7 ¹⁴²	+15	03.9	30	35	18 00	29	43 37	** ** *
10	326	42.3		45.8	250	40.8 ¹⁴¹		12.4	20	17 50	13	40	10 56 41	** ** *
11	341	42.2	-17	45.1	265	13.9 ¹⁴¹	+15	20.9	10 N	18 04	18 26	18 51	11 09 42	23 54 49
12	356	42.1	-17	44.4	279	46.9 ¹⁴⁰	+15	29.2	0	18 17	18 38	19 04	11 20 45	23 42 46
13	11	42.0		43.7	294	19.9 ¹⁴⁰		37.6	10 S	30	18 52	18	32 47	29 44
14	26	41.9		43.1	308	52.9 ¹⁴⁰		45.8	20	18 44	19 07	35	44 50	15 42
15	41	41.8		42.4	323	25.8 ¹³⁹	+15	54.0	30	19 00	26	19 57	11 58 54	23 00 39
16	56	41.7		41.7	337	58.7 ¹³⁹	+16	02.1	35	09	37	20 10	12 06 56	22 51 37
17	71	41.6	-17	41.0	352	31.6 ¹³⁹	+16	10.1	40	19 20	19 50	20 27	12 16 57	22 41 35
18	86	41.5	-17	40.3	7	04.4 ¹³⁸	+16	18.1	45	19 33	20 06	20 48	12 27 60	22 29 32
19	101	41.4		39.6	21	37.1 ¹³⁷		26.0	50	48	27	21 17	40 64	14 30
20	116	41.3		39.0	36	09.9 ¹³⁸		33.8	52	19 56	37	32	47 65	07 29
21	131	41.2		38.3	50	42.6 ¹³⁷		41.6	54	20 04	20 48	21 49	12 54 66	22 00 27
22	146	41.1		37.6	65	15.2 ¹³⁶		49.3	56	13	21 01	22 11	13 01 69	21 52 24
23	161	41.0		36.9	79	47.8 ¹³⁶	+16	56.9	58	23	16	22 41	10 72	42 23
24	176	40.9	-17	36.2	94	20.4 ¹³⁶	+17	04.5	60 S	20 35	21 35	23 35	13 20 75	21 31 20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 22 ^m 9		Mag: -4.1 PMG: 14 ^h 47 ^m		Mag: -0.5 PMG: 3 ^h 05 ^m		Mag: -2.4 PMG: 17 ^h 25 ^m		Mag: +0.6 PMG: 5 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	128	38.9	138	20.9	-5	16.9	98	02.8	+11	17.3
1	143	41.4	153	20.6		15.6	113	05.0		17.4
2	158	43.8	168	20.4		14.3	128	07.2		17.5
3	173	46.3	183	20.1		13.0	143	09.4		17.6
4	188	48.8	198	19.9		11.7	158	11.6		17.7
5	203	51.2	213	19.7	-5	10.5	173	13.8	+11	17.9
6	218	53.7	228	19.4	-5	09.2	188	16.0	+11	18.0
7	233	56.2	243	19.2		07.9	203	18.1		18.1
8	248	58.6	258	18.9		06.6	218	20.3		18.2
9	264	01.1	273	18.7		05.3	233	22.5		18.3
10	279	03.5	288	18.4		04.0	248	24.7		18.4
11	294	06.0	303	18.2	-5	02.7	263	26.9	+11	18.5
12	309	08.5	318	17.9	-5	01.5	278	29.1	+11	18.6
13	324	10.9	333	17.7	-5	00.2	293	31.3		18.7
14	339	13.4	348	17.4	-4	58.9	308	33.5		18.8
15	354	15.9	3	17.2		57.6	323	35.7		18.9
16	9	18.3	18	17.0		56.3	338	37.9		19.0
17	24	20.8	33	16.7	-4	55.0	353	40.1	+11	19.1
18	39	23.3	48	16.5	-4	53.7	8	42.3	+11	19.3
19	54	25.7	63	16.2		52.4	23	44.5		19.4
20	69	28.2	78	16.0		51.2	38	46.7		19.5
21	84	30.7	93	15.7		49.9	53	48.9		19.6
22	99	33.1	108	15.5		48.6	68	51.1		19.7
23	114	35.6	123	15.3		47.3	83	53.3		19.8
24	129	38.0	138	15.0	-4	46.0	98	55.5	+11	19.9
Dif	—		-2		+13		+22		+1	
									+24	
									0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 4			Edad: 7 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 Rº: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	40.9	-17 36.2	94	20.4	+17 04.5	74	60 N	6 39	7 30	8 18	9 42	24	1 56	73	
1	191	40.8	35.5	108	52.9 ¹³⁵	11.9	74	58	35	23	8 07	9 54	26	45	69	
2	206	40.7	34.8	123	25.4 ¹³⁵	19.3	74	56	31	16	7 58	10 05	28	35	67	
3	221	40.6	34.1	137	57.8 ¹³⁴	26.7	74	54	28	11	50	14	30	26	65	
4	236	40.5	33.5	152	30.2 ¹³⁴	33.9	72	52	25	06	42	22	32	18	64	
5	251	40.4	-17 32.8	167	02.6 ¹³⁴	+17 41.1	72	50	6 22	7 01	7 36	10 30	33	1 11	62	
6	266	40.3	-17 32.1	181	34.9 ¹³³	+17 48.2	71	45	6 15	6 50	7 22	10 46	35	0 56	59	
7	281	40.2	31.4	196	07.1 ¹³²	+17 55.2	70	40	09	41	10	10 59	37	44	57	
8	296	40.1	30.7	210	39.4 ¹³³	+18 02.2	69	35	6 03	33	7 00	11 10	39	33	55	
9	311	40.0	30.0	225	11.5 ¹³¹	09.1	69	30	5 57	26	6 51	20	41	24	53	
10	326	39.9	29.3	239	43.7 ¹³²	15.9	68	20	46	13	36	37	43	0 08	51	
11	341	39.8	-17 28.6	254	15.7 ¹³⁰	+18 22.6	67	10 N	5 35	6 01	6 23	11 51	46	** ** *	**	
12	356	39.7	-17 27.9	268	47.8 ¹³¹	+18 29.2	66	0	5 23	5 48	6 10	12 05	48	** ** *	**	
13	11	39.6	27.2	283	19.8 ¹³⁰	35.8	66	10 S	5 09	35	5 57	19	49	** ** *	**	
14	26	39.6	26.5	297	51.7 ¹²⁹	42.3	65	20	4 52	20	43	34	52	23	57	45
15	41	39.5	25.8	312	23.6 ¹²⁹	48.7	64	30	30	5 01	27	12 52	53	39	43	
16	56	39.4	25.1	326	55.5 ¹²⁹	+18 55.0	63	35	17	4 50	18	13 02	55	28	42	
17	71	39.3	-17 24.4	341	27.3 ¹²⁸	+19 01.2	62	40	4 00	4 37	5 07	13 13	57	23	16	40
18	86	39.2	-17 23.7	355	59.0 ¹²⁷	+19 07.4	62	45	3 39	4 21	4 54	13 27	59	23	01	39
19	101	39.1	23.0	10	30.8 ¹²⁸	13.4	60	50	3 10	4 00	39	44	61	22	44	36
20	116	39.0	22.3	25	02.4 ¹²⁶	19.4	60	52	2 56	3 51	32	13 52	62	36	35	
21	131	38.9	21.6	39	34.0 ¹²⁶	25.3	59	54	38	39	23	14 00	64	27	33	
22	146	38.8	20.9	54	05.6 ¹²⁶	31.2	59	56	2 16	26	14	10	66	16	32	
23	161	38.7	20.2	68	37.1 ¹²⁵	36.9	57	58	1 46	3 11	4 04	22	68	22	05	30
24	176	38.6	-17 19.5	83	08.6 ¹²⁵	+19 42.5	56	60 S	0 52	2 53	3 52	14 35	71	21	51	27
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 18 ^m 9			Mag: -4.1 PMG: 14 ^h 47 ^m			Mag: -0.5 PMG: 3 ^h 00 ^m			Mag: -2.4 PMG: 17 ^h 22 ^m			Mag: +0.6 PMG: 5 ^h 14 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	129	38.0	138	15.0	-4 46.0	314	45.1	+6 21.3	98	55.5	+11 19.9	281	19.8	-8 53.6		
1	144	40.5	153	14.8	44.7	329	47.7	21.4	113	57.7	20.0	296	22.3	53.6		
2	159	43.0	168	14.5	43.4	344	50.4	21.6	128	59.9	20.1	311	24.7	53.6		
3	174	45.4	183	14.3	42.1	359	53.0	21.7	144	02.0	20.2	326	27.1	53.6		
4	189	47.9	198	14.1	40.8	14	55.7	21.9	159	04.2	20.3	341	29.5	53.6		
5	204	50.4	213	13.8	-4 39.6	29	58.3	+6 22.1	174	06.4	+11 20.4	356	32.0	-8 53.6		
6	219	52.8	228	13.6	-4 38.3	45	01.0	+6 22.2	189	08.6	+11 20.6	11	34.4	-8 53.6		
7	234	55.3	243	13.3	37.0	60	03.6	22.4	204	10.8	20.7	26	36.8	53.6		
8	249	57.8	258	13.1	35.7	75	06.3	22.5	219	13.0	20.8	41	39.3	53.6		
9	265	00.2	273	12.9	34.4	90	08.9	22.7	234	15.2	20.9	56	41.7	53.6		
10	280	02.7	288	12.6	33.1	105	11.6	22.8	249	17.4	21.0	71	44.1	53.6		
11	295	05.2	303	12.4	-4 31.8	120	14.2	+6 23.0	264	19.6	+11 21.1	86	46.6	-8 53.6		
12	310	07.6	318	12.2	-4 30.5	135	16.9	+6 23.1	279	21.8	+11 21.2	101	49.0	-8 53.6		
13	325	10.1	333	11.9	29.2	150	19.6	23.3	294	24.0	21.3	116	51.4	53.6		
14	340	12.5	348	11.7	27.9	165	22.2	23.5	309	26.1	21.4	131	53.9	53.6		
15	355	15.0	3	11.5	26.6	180	24.9	23.6	324	28.3	21.5	146	56.3	53.6		
16	10	17.5	18	11.2	25.4	195	27.6	23.8	339	30.5	21.7	161	58.7	53.6		
17	25	19.9	33	11.0	-4 24.1	210	30.2	+6 23.9	354	32.7	+11 21.8	177	01.1	-8 53.6		
18	40	22.4	48	10.7	-4 22.8	225	32.9	+6 24.1	9	34.9	+11 21.9	192	03.6	-8 53.6		
19	55	24.9	63	10.5	21.5	240	35.6	24.2	24	37.1	22.0	207	06.0	53.6		
20	70	27.3	78	10.3	20.2	255	38.2	24.4	39	39.3	22.1	222	08.4	53.6		
21	85	29.8	93	10.0	18.9	270	40.9	24.6	54	41.5	22.2	237	10.9	53.6		
22	100	32.3	108	09.8	17.6	285	43.6	24.7	69	43.7	22.3	252	13.3	53.6		
23	115	34.7	123	09.6	16.3	300	46.2	24.9	84	45.8	22.4	267	15.7	53.6		
24	130	37.2	138	09.4	-4 15.0	315	48.9	+6 25.1	99	48.0	+11 22.5	282	18.2	-8 53.6		
Dif	—		-2	+13		+27	+2		+22		+1		+24		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 5				Edad: 8 ^d 7 PHE { SD: 14:8 PMG: 19 ^h 04 ^m 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6 R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	38.6	-17	19.5	83	08.6	+19	42.5	60 N	16 13	17 00	17 51	10 06 33		3 09 67			
1	191	38.5		18.8	97	40.0 ¹²⁴		48.1 ⁵⁶	58	23	07	55	20 36		2 54 65			
2	206	38.4		18.1	112	11.4 ¹²⁴		53.6 ⁵⁵	56	32	13	17 58	33 37		42 63			
3	221	38.4		17.4	126	42.8 ¹²⁴	+19	58.9 ⁵³	54	40	18	18 01	44 38		31 62			
4	236	38.3		16.7	141	14.0 ¹²²	+20	04.2 ⁵³	52	47	23	04	10 54 39		22 60			
5	251	38.2	-17	16.0	155	45.3 ¹²³	+20	09.4 ⁵²	50	16 53	17 28	18 07	11 03 40		2 13 60			
6	266	38.1	-17	15.3	170	16.5 ¹²²	+20	14.6 ⁵²	45	17 07	17 38	18 13	11 21 42		1 55 58			
7	281	38.0		14.6	184	47.6 ¹²¹		19.6 ⁵⁰	40	18	47	19	36 44		41 55			
8	296	37.9		13.9	199	18.7 ¹²¹		24.5 ⁴⁹	35	28	17 55	25	11 49 45		28 55			
9	311	37.8		13.2	213	49.8 ¹²¹		29.4 ⁴⁹	30	37	18 02	30	12 01 45		1 17 54			
10	326	37.7		12.5	228	20.8 ¹²⁰		34.1 ⁴⁷	20	17 52	15	41	20 47		0 59 51			
11	341	37.6	-17	11.8	242	51.7 ¹¹⁹	+20	38.8 ⁴⁷	10 N	18 05	18 27	18 52	12 37 48		0 43 50			
12	356	37.6	-17	11.1	257	22.6 ¹¹⁹	+20	43.3 ⁴⁵	0	18 17	18 39	19 04	12 53 49		0 28 48			
13	11	37.5		10.4	271	53.5 ¹¹⁹		47.8 ⁴⁵	10 S	30	18 52	17	13 08 51		0 13 47			
14	26	37.4		09.7	286	24.3 ¹¹⁸		52.2 ⁴⁴	20	43	19 06	34	26 51		*** ** *			
15	41	37.3		09.0	300	55.0 ¹¹⁷	+20	56.5 ⁴³	30	18 59	24	19 55	45 53		*** ** *			
16	56	37.2		08.3	315	25.7 ¹¹⁷	+21	00.7 ⁴²	35	19 08	35	20 08	13 57 54		*** ** *			
17	71	37.1	-17	07.6	329	56.4 ¹¹⁷	+21	04.8 ⁴¹	40	19 18	19 48	20 25	14 10 55		23 56 46			
18	86	37.0	-17	06.8	344	27.0 ¹¹⁶	+21	08.8 ⁴⁰	45	19 30	20 04	20 45	14 26 56		23 40 45			
19	101	37.0		06.1	358	57.6 ¹¹⁶		12.7 ³⁹	50	45	23	21 13	45 57		20 44			
20	116	36.9		05.4	13	28.1 ¹¹⁵		16.5 ³⁸	52	19 52	33	27	14 54 58		11 43			
21	131	36.8		04.7	27	58.6 ¹¹⁵		20.2 ³⁷	54	20 00	44	21 43	15 04 60		23 00 43			
22	146	36.7		04.0	42	29.0 ¹¹⁴		23.8 ³⁶	56	09	20 56	22 04	16 60		22 48 42			
23	161	36.6		03.3	56	59.4 ¹¹⁴		27.3 ³⁵	58	19	21 11	22 31	30 61		35 40			
24	176	36.5	-17	02.6	71	29.8 ¹¹⁴	+21	30.7 ³⁴	60 S	20 31	21 28	23 14	15 46 63		22 18 39			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 15 ^m 0		Mag: -4.1 PMG: 14 ^h 48 ^m				Mag: -0.6 PMG: 2 ^h 56 ^m				Mag: -2.4 PMG: 17 ^h 18 ^m				Mag: +0.6 PMG: 5 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	130	37.2	138	09.4	-4	15.0	315	48.9	+6	25.1	99	48.0	+11	22.5	282	18.2	-8	53.6
1	145	39.6	153	09.1		13.7	330	51.6		25.2	114	50.2		22.7	297	20.6		53.6
2	160	42.1	168	08.9		12.4	345	54.3		25.4	129	52.4		22.8	312	23.0		53.6
3	175	44.6	183	08.7		11.1	0	56.9		25.5	144	54.6		22.9	327	25.5		53.6
4	190	47.0	198	08.4		09.8	15	59.6		25.7	159	56.8		23.0	342	27.9		53.6
5	205	49.5	213	08.2	-4	08.5	31	02.3	+6	25.9	174	59.0	+11	23.1	357	30.3	-8	53.6
6	220	52.0	228	08.0	-4	07.2	46	05.0	+6	26.0	190	01.1	+11	23.2	12	32.8	-8	53.6
7	235	54.4	243	07.7		06.0	61	07.7		26.2	205	03.3		23.3	27	35.2		53.6
8	250	56.9	258	07.5		04.7	76	10.3		26.4	220	05.5		23.4	42	37.6		53.6
9	265	59.4	273	07.3		03.4	91	13.0		26.5	235	07.7		23.5	57	40.1		53.6
10	281	01.8	288	07.0		02.1	106	15.7		26.7	250	09.9		23.7	72	42.5		53.6
11	296	04.3	303	06.8	-4	00.8	121	18.4	+6	26.9	265	12.1	+11	23.8	87	44.9	-8	53.6
12	311	06.8	318	06.6	-3	59.5	136	21.1	+6	27.0	280	14.2	+11	23.9	102	47.4	-8	53.6
13	326	09.2	333	06.4		58.2	151	23.8		27.2	295	16.4		24.0	117	49.8		53.6
14	341	11.7	348	06.1		56.9	166	26.5		27.4	310	18.6		24.1	132	52.2		53.6
15	356	14.1	3	05.9		55.6	181	29.2		27.6	325	20.8		24.2	147	54.7		53.6
16	11	16.6	18	05.7		54.3	196	31.9		27.7	340	23.0		24.3	162	57.1		53.6
17	26	19.1	33	05.5	-3	53.0	211	34.6	+6	27.9	355	25.2	+11	24.4	177	59.5	-8	53.6
18	41	21.5	48	05.2	-3	51.7	226	37.3	+6	28.1	10	27.3	+11	24.5	193	02.0	-8	53.6
19	56	24.0	63	05.0		50.4	241	40.0		28.2	25	29.5		24.7	208	04.4		53.6
20	71	26.5	78	04.8		49.1	256	42.7		28.4	40	31.7		24.8	223	06.9		53.6
21	86	28.9	93	04.6		47.8	271	45.4		28.6	55	33.9		24.9	238	09.3		53.6
22	101	31.4	108	04.3		46.5	286	48.1		28.8	70	36.1		25.0	253	11.7		53.6
23	116	33.9	123	04.1		45.2	301	50.8		28.9	85	38.2		25.1	268	14.2		53.6
24	131	36.3	138	03.9	-3	43.9	316	53.5	+6	29.1	100	40.4	+11	25.2	283	16.6	-8	53.6
Dif	—		-2		+13		+27		+2		+22		+1		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 6			Edad: 9 ^d 7 PHE { SD: 14'9 PMG: 19 ^h 54 ^m											
				R ^o : 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	36.5	-17	02.6		71	29.8	6	35	7	26	8	13	10	39
1	191	36.5		01.9		86	00.0 ¹¹²	31	19	8	03	10	56	47	3
2	206	36.4		01.1		100	30.3 ¹¹³	28	13	7	54	11	10	47	45
3	221	36.3	-17	00.4		115	00.5 ¹¹²	25	08		46	22	48		33
4	236	36.2	-16	59.7		129	30.7 ¹¹²	22	7	03	39	33	48		22
5	251	36.1	-16	59.0		144	00.8 ¹¹¹	6	19	6	58	7	33		3
6	266	36.1	-16	58.3		158	30.8 ¹¹⁰	6	13	6	48	7	19	12	03
7	281	36.0		57.6		173	00.9 ¹¹¹	07	40	7	08	20	49		36
8	296	35.9		56.9		187	30.9 ¹¹⁰	6	02	32	6	59	34	50	23
9	311	35.8		56.1		202	00.8 ¹⁰⁹	5	56	25	50	12	46	50	2
10	326	35.7		55.4		216	30.7 ¹⁰⁹	46	12		35	13	07	50	1
11	341	35.7	-16	54.7		231	00.5 ¹⁰⁸	5	35	6	00	6	22	13	25
12	356	35.6	-16	54.0		245	30.4 ¹⁰⁹	5	23	5	48	6	10	13	42
13	11	35.5		53.3		260	00.1 ¹⁰⁷	5	10	36	5	58	13	59	51
14	26	35.4		52.5		274	29.9 ¹⁰⁸	4	53	21	44	14	17	51	0
15	41	35.3		51.8		288	59.5 ¹⁰⁶	32	5	03	29	38	52		22
16	56	35.3		51.1		303	29.2 ¹⁰⁷	19	4	52	20	14	51	51	0
17	71	35.2	-16	50.4		317	58.8 ¹⁰⁶	4	03	4	40	5	09	15	05
18	86	35.1	-16	49.7		332	28.4 ¹⁰⁶	3	42	4	24	4	57	15	22
19	101	35.0		48.9		346	57.9 ¹⁰⁵	15	4	04	42		51		
20	116	35.0		48.2		1	27.4 ¹⁰⁵	3	01	3	55	35	15	52	53
21	131	34.9		47.5		15	56.8 ¹⁰⁴	2	44	44	28	16	04	52	43
22	146	34.8		46.8		30	26.3 ¹⁰⁵	2	24	32	19	16	53		30
23	161	34.7		46.0		44	55.6 ¹⁰³	1	57	17	4	09	31	52	23
24	176	34.7	-16	45.3		59	25.0 ¹⁰⁴	1	14	3	00	3	57	16	49
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 11 ^m 1		Mag: -4.1 PMG: 14 ^h 48 ^m			Mag: -0.6 PMG: 2 ^h 52 ^m			Mag: -2.4 PMG: 17 ^h 15 ^m			Mag: +0.6 PMG: 5 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	131	36.3	138	03.9	-3	43.9	316	53.5	+6	29.1	100	40.4	+11	25.2	283
1	146	38.8	153	03.7		42.6	331	56.2		29.3	115	42.6		25.3	298
2	161	41.3	168	03.4		41.3	346	58.9		29.5	130	44.8		25.5	313
3	176	43.7	183	03.2		40.0	2	01.6		29.6	145	47.0		25.6	328
4	191	46.2	198	03.0		38.7	17	04.3		29.8	160	49.1		25.7	343
5	206	48.6	213	02.8	-3	37.4	32	07.0	+6	30.0	175	51.3	+11	25.8	358
6	221	51.1	228	02.6	-3	36.1	47	09.7	+6	30.2	190	53.5	+11	25.9	13
7	236	53.6	243	02.3		34.8	62	12.4		30.3	205	55.7		26.0	28
8	251	56.0	258	02.1		33.5	77	15.2		30.5	220	57.9		26.1	43
9	266	58.5	273	01.9		32.2	92	17.9		30.7	236	00.0		26.2	58
10	282	01.0	288	01.7		30.9	107	20.6		30.9	251	02.2		26.4	73
11	297	03.4	303	01.4	-3	29.6	122	23.3	+6	31.1	266	04.4	+11	26.5	88
12	312	05.9	318	01.2	-3	28.3	137	26.0	+6	31.2	281	06.6	+11	26.6	103
13	327	08.4	333	01.0		27.0	152	28.7		31.4	296	08.7		26.7	118
14	342	10.8	348	00.8		25.7	167	31.5		31.6	311	10.9		26.8	133
15	357	13.3	3	00.6		24.4	182	34.2		31.8	326	13.1		26.9	148
16	12	15.8	18	00.4		23.1	197	36.9		32.0	341	15.3		27.0	163
17	27	18.2	33	00.1	-3	21.8	212	39.6	+6	32.1	356	17.4	+11	27.2	178
18	42	20.7	47	59.9	-3	20.5	227	42.4	+6	32.3	11	19.6	+11	27.3	194
19	57	23.1	62	59.7		19.2	242	45.1		32.5	26	21.8		27.4	209
20	72	25.6	77	59.5		17.9	257	47.8		32.7	41	24.0		27.5	224
21	87	28.1	92	59.3		16.6	272	50.6		32.9	56	26.1		27.6	239
22	102	30.5	107	59.0		15.3	287	53.3		33.1	71	28.3		27.7	254
23	117	33.0	122	58.8		14.0	302	56.0		33.2	86	30.5		27.8	269
24	132	35.5	137	58.6	-3	12.7	317	58.8	+6	33.4	101	32.7	+11	28.0	284
Dif	—		-2	+13		+27	+2		+22		+1		+24		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 10 ^d 7 PHE { SD: 15:0 PMG: 20 ^h 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	34.7	-16 45.3	59	25.0	+22 21.2	8	60 N	16 18	17 05	17 55	11 25 62	5 14 46		
1	191	34.6	44.6	73	54.3 ¹⁰³	22.0	6	58	28	11	17 59	43 60	4 56 47		
2	206	34.5	43.9	88	23.6 ¹⁰³	22.6	6	56	36	17	18 02	11 57 60	42 47		
3	221	34.4	43.1	102	52.8 ¹⁰²	23.2	6	54	44	22	05	12 10 59	29 48		
4	236	34.4	42.4	117	22.0 ¹⁰²	23.6	4	52	50	27	07	21 59	18 48		
5	251	34.3	-16 41.7	131	51.2 ¹⁰²	+22 23.9	3	50	16 57	17 31	18 10	12 31 58	4 08 48		
6	266	34.2	-16 40.9	146	20.3 ¹⁰¹	+22 24.1	2	45	17 10	17 41	18 16	12 52 57	3 47 49		
7	281	34.2	40.2	160	49.4 ¹⁰¹	24.2	1	40	21	49	22	13 09 56	30 50		
8	296	34.1	39.5	175	18.5 ¹⁰¹	24.1	1	35	30	17 57	27	24 55	15 51		
9	311	34.0	38.8	189	47.5 ¹⁰⁰	24.0	1	30	38	18 03	32	36 55	3 03 51		
10	326	33.9	38.0	204	16.6 ¹⁰¹	23.7	3	20	17 53	16	42	13 57 54	2 42 51		
11	341	33.9	-16 37.3	218	45.5 ⁹⁹	+22 23.3	4	10 N	18 05	18 27	18 52	14 16 52	2 23 52		
12	356	33.8	-16 36.6	233	14.5 ¹⁰⁰	+22 22.8	5	0	18 17	18 39	19 04	14 33 52	2 06 52		
13	11	33.7	35.8	247	43.4 ⁹⁹	22.2	6	10 S	29	18 51	17	14 50 51	1 49 52		
14	26	33.7	35.1	262	12.3 ⁹⁹	21.5	7	20	42	19 06	33	15 08 51	30 53		
15	41	33.6	34.4	276	41.2 ⁹⁹	20.7	8	30	18 57	23	19 54	30 49	1 09 53		
16	56	33.5	33.6	291	10.0 ⁹⁸	19.7	10	35	19 06	33	20 07	42 49	0 57 52		
17	71	33.5	-16 32.9	305	38.9 ⁹⁹	+22 18.6	11	40	19 16	19 46	20 22	15 56 48	0 42 53		
18	86	33.4	-16 32.2	320	07.7 ⁹⁸	+22 17.4	12	45	19 28	20 01	20 42	16 13 47	0 25 53		
19	101	33.3	31.4	334	36.4 ⁹⁷	16.1	13	50	42	20	21 08	35 45	0 04 53		
20	116	33.3	30.7	349	05.2 ⁹⁸	14.7	14	52	49	29	22	45 44	** ** *		
21	131	33.2	30.0	3	33.9 ⁹⁷	13.2	15	54	19 57	39	38	16 56 43	** ** *		
22	146	33.1	29.2	18	02.6 ⁹⁷	11.5	17	56	20 05	20 51	21 57	17 09 42	** ** *		
23	161	33.1	28.5	32	31.3 ⁹⁷	09.7	18	58	15	21 05	22 22	23 42	** ** *		
24	176	33.0	-16 27.7	46	59.9 ⁹⁶	+22 07.8	19	60 S	20 25	21 22	22 58	17 41 40	23 51 69		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 07 ^m 2		Mag: -4.1 PMG: 14 ^h 48 ^m		Mag: -0.6 PMG: 2 ^h 48 ^m		Mag: -2.4 PMG: 17 ^h 11 ^m		Mag: +0.6 PMG: 5 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	132	35.5	137	58.6	317	58.8	101	32.7	284	15.1
1	147	37.9	152	58.4	333	01.5	116	34.8	299	17.6
2	162	40.4	167	58.2	348	04.2	131	37.0	314	20.0
3	177	42.9	182	58.0	3	07.0	146	39.2	329	22.5
4	192	45.3	197	57.8	18	09.7	161	41.4	344	24.9
5	207	47.8	212	57.5	33	12.5	176	43.5	359	27.3
6	222	50.2	227	57.3	48	15.2	191	45.7	14	29.8
7	237	52.7	242	57.1	63	18.0	206	47.9	29	32.2
8	252	55.2	257	56.9	78	20.7	221	50.0	44	34.7
9	267	57.6	272	56.7	93	23.4	236	52.2	59	37.1
10	283	00.1	287	56.5	108	26.2	251	54.4	74	39.6
11	298	02.6	302	56.3	123	28.9	266	56.6	89	42.0
12	313	05.0	317	56.1	138	31.7	281	58.7	104	44.4
13	328	07.5	332	55.8	153	34.4	297	00.9	119	46.9
14	343	10.0	347	55.6	168	37.2	312	03.1	134	49.3
15	358	12.4	2	55.4	183	40.0	327	05.2	149	51.8
16	13	14.9	17	55.2	198	42.7	342	07.4	164	54.2
17	28	17.4	32	55.0	213	45.5	357	09.6	179	56.7
18	43	19.8	47	54.8	228	48.2	12	11.7	194	59.1
19	58	22.3	62	54.6	243	51.0	27	13.9	210	01.5
20	73	24.7	77	54.4	258	53.7	42	16.1	225	04.0
21	88	27.2	92	54.2	273	56.5	57	18.3	240	06.4
22	103	29.7	107	53.9	288	59.3	72	20.4	255	08.9
23	118	32.1	122	53.7	304	02.0	87	22.6	270	11.3
24	133	34.6	137	53.5	319	04.8	102	24.8	285	13.8
Dif	—		-2	+13	+28	+2	+22	+1	+24	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 9			Edad: 11 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 56/1 20 ^h : 56/3 R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	33.0	-16	27.7	46	59.9	+22	07.8	60 N	6 31	7 21	8 08	12 27	74	6 00	33
1	191	32.9		27.0	61	28.6	97	05.8	58	28	15	7 59	43	72	5 43	36
2	206	32.9		26.3	75	57.2	96	03.7	56	25	10	50	12 57	70	29	38
3	221	32.8		25.5	90	25.8	96	+22 01.4	54	22	04	43	13 09	68	17	39
4	236	32.7		24.8	104	54.4	96	+21 59.1	52	19	7 00	36	20	66	5 06	41
5	251	32.7	-16	24.0	119	23.0	96	+21 56.6	50	6 17	6 55	7 30	13 29	66	4 56	42
6	266	32.6	-16	23.3	133	51.5	95	+21 54.0	45	6 11	6 46	7 17	13 49	63	4 36	44
7	281	32.6		22.6	148	20.1	96	51.3	40	06	38	7 06	14 05	61	20	45
8	296	32.5		21.8	162	48.6	95	48.4	35	6 00	31	6 57	19	59	4 06	46
9	311	32.4		21.1	177	17.1	95	45.5	30	5 55	24	49	31	58	3 54	47
10	326	32.4		20.3	191	45.6	95	42.4	20	45	12	35	14 51	56	33	49
11	341	32.3	-16	19.6	206	14.1	95	+21 39.2	10 N	5 35	6 00	6 22	15 08	55	3 15	51
12	356	32.2	-16	18.9	220	42.5	94	+21 35.9	0	5 24	5 49	6 10	15 25	52	2 58	52
13	11	32.2		18.1	235	11.0	95	32.5	10 S	5 11	36	5 58	41	51	41	53
14	26	32.1		17.4	249	39.4	94	28.9	20	4 55	22	46	15 59	48	23	55
15	41	32.1		16.6	264	07.9	95	25.2	30	34	5 05	31	16 19	46	2 02	56
16	56	32.0		15.9	278	36.3	94	21.4	35	21	4 55	22	31	45	1 49	58
17	71	31.9	-16	15.1	293	04.7	94	+21 17.5	40	4 06	4 42	5 12	16 44	43	1 35	59
18	86	31.9	-16	14.4	307	33.1	94	+21 13.5	45	3 46	4 27	5 00	17 00	41	1 18	60
19	101	31.8		13.6	322	01.6	95	09.4	50	20	4 08	4 46	20	38	0 57	62
20	116	31.8		12.9	336	30.0	94	05.1	52	3 06	3 59	39	29	37	47	63
21	131	31.7		12.1	350	58.4	94	+21 00.7	54	2 51	49	32	39	36	36	64
22	146	31.7		11.4	5	26.8	94	+20 56.2	56	32	37	23	17 51	34	24	64
23	161	31.6		10.6	19	55.1	93	51.6	58	2 07	23	14	18 05	31	0 09	66
24	176	31.5	-16	09.9	34	23.5	94	+20 46.9	60 S	1 30	3 07	4 03	18 21	28	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 03 ^m 2		Mag: -4.1 PMG: 14 ^h 49 ^m			Mag: -0.6 PMG: 2 ^h 43 ^m			Mag: -2.4 PMG: 17 ^h 08 ^m			Mag: +0.6 PMG: 4 ^h 58 ^m				
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♀	Dec		hG ♂	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	34.6	137	53.5	-2	41.5	319	04.8	+6	38.0	102	24.8	+11	30.7	285	13.8
1	148	37.1	152	53.3		40.2	334	07.6		38.2	117	26.9		30.9	300	16.2
2	163	39.5	167	53.1		38.9	349	10.3		38.4	132	29.1		31.0	315	18.7
3	178	42.0	182	52.9		37.6	4	13.1		38.6	147	31.3		31.1	330	21.1
4	193	44.5	197	52.7		36.3	19	15.9		38.8	162	33.4		31.2	345	23.6
5	208	46.9	212	52.5	-2	35.0	34	18.7	+6	39.0	177	35.6	+11	31.3	0	26.0
6	223	49.4	227	52.3	-2	33.7	49	21.4	+6	39.2	192	37.8	+11	31.4	15	28.4
7	238	51.9	242	52.1		32.4	64	24.2		39.4	207	39.9		31.6	30	30.9
8	253	54.3	257	51.9		31.1	79	27.0		39.6	222	42.1		31.7	45	33.3
9	268	56.8	272	51.7		29.8	94	29.8		39.8	237	44.3		31.8	60	35.8
10	283	59.2	287	51.5		28.4	109	32.5		40.0	252	46.4		31.9	75	38.2
11	299	01.7	302	51.3	-2	27.1	124	35.3	+6	40.2	267	48.6	+11	32.0	90	40.7
12	314	04.2	317	51.1	-2	25.8	139	38.1	+6	40.5	282	50.7	+11	32.2	105	43.1
13	329	06.6	332	50.9		24.5	154	40.9		40.7	297	52.9		32.3	120	45.6
14	344	09.1	347	50.6		23.2	169	43.7		40.9	312	55.1		32.4	135	48.0
15	359	11.6	2	50.4		21.9	184	46.5		41.1	327	57.2		32.5	150	50.5
16	14	14.0	17	50.2		20.6	199	49.2		41.3	342	59.4		32.6	165	52.9
17	29	16.5	32	50.0	-2	19.3	214	52.0	+6	41.5	358	01.6	+11	32.7	180	55.4
18	44	19.0	47	49.8	-2	18.0	229	54.8	+6	41.7	13	03.7	+11	32.9	195	57.8
19	59	21.4	62	49.6		16.7	244	57.6		41.9	28	05.9		33.0	211	00.3
20	74	23.9	77	49.4		15.4	260	00.4		42.1	43	08.1		33.1	226	02.7
21	89	26.4	92	49.2		14.1	275	03.2		42.3	58	10.2		33.2	241	05.2
22	104	28.8	107	49.0		12.8	290	06.0		42.5	73	12.4		33.3	256	07.6
23	119	31.3	122	48.8		11.5	305	08.8		42.7	88	14.5		33.5	271	10.1
24	134	33.7	137	48.6	-2	10.2	320	11.6	+6	42.9	103	16.7	+11	33.6	286	12.5
Dif	—		-2		+13		+28		+2		+22		+1		+24	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 9			Edad: 12 ^d 7 PHE { 4 ^h : 56:5 12 ^h : 56:8 20 ^h : 57:0 PMG: 22 ^h 30 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	31.5	-16 09.9	34	23.5	+20 46.9	48	60 N	16 23	17 09	18 00	13 41	84	6 33	25
1	191	31.5	09.1	48	51.9	42.1	50	58	32	16	03	13 55	80	19	28
2	206	31.4	08.4	63	20.3	37.1	51	56	40	21	06	14 07	77	6 07	30
3	221	31.4	07.6	77	48.7	32.0	51	54	48	26	08	17 76		5 56	32
4	236	31.3	06.9	92	17.1	26.8	52	52	16 54	30	11	26 74		47	33
5	251	31.3	-16 06.1	106	45.4	+20 21.5	53	50	17 00	17 34	18 13	14 35	71	5 38	35
6	266	31.2	-16 05.4	121	13.8	+20 16.1	54	45	17 13	17 44	18 19	14 52	68	5 20	38
7	281	31.2	04.6	135	42.2	10.5	56	40	23	52	24	15 06	66	5 05	41
8	296	31.1	03.9	150	10.6	+20 04.9	56	35	32	17 59	29	18 63		4 52	43
9	311	31.0	03.1	164	39.0	+19 59.1	58	30	40	18 05	33	29 61		41	45
10	326	31.0	02.4	179	07.4	53.2	59	20	17 54	17	43	15 47	58	22	48
11	341	30.9	-16 01.6	193	35.8	+19 47.2	60	10 N	18 06	18 28	18 53	16 03	54	4 06	50
12	356	30.9	-16 00.9	208	04.2	+19 41.1	61	0	18 17	18 39	19 04	16 17	52	3 50	52
13	11	30.8	-16 00.1	222	32.6	34.8	63	10 S	29	18 51	17	32 49		34	55
14	26	30.8	-15 59.4	237	01.0	28.5	63	20	42	19 05	32	16 47	47	3 18	57
15	41	30.7	58.6	251	29.4	22.0	65	30	18 56	21	19 52	17 05	44	2 58	60
16	56	30.7	57.8	265	57.8	15.5	65	35	19 04	32	20 04	16 41		47	61
17	71	30.6	-15 57.1	280	26.2	+19 08.8	67	40	19 14	19 44	20 20	17 27	39	2 34	63
18	86	30.6	-15 56.3	294	54.7	+19 02.0	68	45	19 25	19 58	20 39	17 41	37	2 18	66
19	101	30.5	55.6	309	23.1	+18 55.1	69	50	39	20 16	21 04	17 58	33	1 59	69
20	116	30.5	54.8	323	51.6	48.1	70	52	46	25	17	18 06	31	50	70
21	131	30.4	54.1	338	20.0	40.9	72	54	19 53	35	32	15 29		40	72
22	146	30.4	53.3	352	48.5	33.7	72	56	20 01	46	21 50	25 27		28	75
23	161	30.3	52.5	7	17.0	26.4	73	58	10	20 59	22 13	36 24		15	77
24	176	30.3	-15 51.8	21	45.5	+18 18.9	75	60 S	20 20	21 15	22 45	18 49	21	1 00	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 59 ^m 3		Mag: -4.1 PMG: 14 ^h 49 ^m		Mag: -0.7 PMG: 2 ^h 39 ^m		Mag: -2.4 PMG: 17 ^h 04 ^m		Mag: +0.6 PMG: 4 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	134	33.7	137 48.6	-2 10.2	320 11.6	+6 42.9	103 16.7	+11 33.6	286 12.5	-8 53.3
1	149	36.2	152 48.4	08.9	335 14.4	43.1	118 18.9	33.7	301 15.0	53.3
2	164	38.7	167 48.2	07.6	350 17.2	43.4	133 21.0	33.8	316 17.4	53.3
3	179	41.1	182 48.0	06.3	5 20.0	43.6	148 23.2	33.9	331 19.9	53.3
4	194	43.6	197 47.8	04.9	20 22.8	43.8	163 25.3	34.0	346 22.3	53.3
5	209	46.1	212 47.6	-2 03.6	35 25.6	+6 44.0	178 27.5	+11 34.2	1 24.8	-8 53.3
6	224	48.5	227 47.4	-2 02.3	50 28.4	+6 44.2	193 29.7	+11 34.3	16 27.2	-8 53.3
7	239	51.0	242 47.2	-2 01.0	65 31.2	44.4	208 31.8	34.4	31 29.7	53.3
8	254	53.5	257 47.0	-1 59.7	80 34.0	44.6	223 34.0	34.5	46 32.1	53.2
9	269	55.9	272 46.8	58.4	95 36.8	44.8	238 36.1	34.6	61 34.6	53.2
10	284	58.4	287 46.6	57.1	110 39.6	45.0	253 38.3	34.8	76 37.0	53.2
11	300	00.9	302 46.4	-1 55.8	125 42.4	+6 45.3	268 40.5	+11 34.9	91 39.5	-8 53.2
12	315	03.3	317 46.2	-1 54.5	140 45.3	+6 45.5	283 42.6	+11 35.0	106 41.9	-8 53.2
13	330	05.8	332 46.0	53.2	155 48.1	45.7	298 44.8	35.1	121 44.4	53.2
14	345	08.2	347 45.8	51.9	170 50.9	45.9	313 46.9	35.2	136 46.8	53.2
15	0	10.7	2 45.6	50.6	185 53.7	46.1	328 49.1	35.4	151 49.3	53.2
16	15	13.2	17 45.4	49.3	200 56.5	46.3	343 51.2	35.5	166 51.7	53.2
17	30	15.6	32 45.3	-1 48.0	215 59.3	+6 46.6	358 53.4	+11 35.6	181 54.2	-8 53.2
18	45	18.1	47 45.1	-1 46.6	231 02.2	+6 46.8	13 55.6	+11 35.7	196 56.6	-8 53.2
19	60	20.6	62 44.9	45.3	246 05.0	47.0	28 57.7	35.8	211 59.1	53.2
20	75	23.0	77 44.7	44.0	261 07.8	47.2	43 59.9	36.0	227 01.5	53.2
21	90	25.5	92 44.5	42.7	276 10.6	47.4	59 02.0	36.1	242 04.0	53.2
22	105	28.0	107 44.3	41.4	291 13.4	47.7	74 04.2	36.2	257 06.4	53.1
23	120	30.4	122 44.1	40.1	306 16.3	47.9	89 06.3	36.3	272 08.9	53.1
24	135	32.9	137 43.9	-1 38.8	321 19.1	+6 48.1	104 08.5	+11 36.4	287 11.3	-8 53.1

Dif	—	-2	+13	+28	+2	+22	+1	+25

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 13 ^d 7 PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7 PMG: 23 ^h 22 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	30.3	-15	21	45.5	+18	18.9	6	27	7	17	8	03	15	05
1	191	30.2		36	14.0		11.4	24	11	7	54	15	85	47	21
2	206	30.2		50	42.5	+18	03.7	21	06	46		24	82	37	24
3	221	30.1		65	11.0	+17	55.9	19	7	01	39	33	79	28	26
4	236	30.1		79	39.6		48.0	16	6	57	33	40	77	20	29
5	251	30.1	-15	94	08.1	+17	40.0	6	14	6	53	7	27	15	46
6	266	30.0	-15	108	36.7	+17	31.9	6	09	6	44	7	15	16	00
7	281	30.0		123	05.3		23.7	6	04	36	7	04	12	67	46
8	296	29.9		137	33.9		15.4	5	59	29	6	55	21	65	35
9	311	29.9		152	02.5	+17	07.0	54	23	48	30	63	26	42	26
10	326	29.8		166	31.1	+16	58.5	45	11	34	45	58	5	10	45
11	341	29.8	-15	180	59.8	+16	49.9	5	35	6	00	6	22	16	57
12	356	29.7	-15	195	28.4	+16	41.2	5	24	5	49	6	11	17	09
13	11	29.7		209	57.1		32.4	5	12	37	5	59	21	48	29
14	26	29.7		224	25.8		23.5	4	56	24	47	34	45	4	15
15	41	29.6		238	54.5		14.5	36	5	07	32	49	40	3	58
16	56	29.6		253	23.2	+16	05.4	24	4	57	24	17	57	38	48
17	71	29.5	-15	267	51.9	+15	56.2	4	09	4	45	5	14	18	06
18	86	29.5	-15	282	20.7	+15	46.9	3	50	4	30	5	03	18	18
19	101	29.4		296	49.4		37.5	25	12	4	49	31	28	08	74
20	116	29.4		311	18.2		28.0	3	12	4	04	37	26	3	00
21	131	29.4		325	47.0		18.4	2	57	3	54	44	24	2	52
22	146	29.3		340	15.8	+15	08.7	39	42	28		18	52	21	43
23	161	29.3		354	44.7	+14	58.9	2	16	29	19	19	00	19	32
24	176	29.2	-15	9	13.5	+14	49.1	1	44	3	14	4	08	19	10
															87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 55 ^m 4		Mag: -4.1 PMG: 14 ^h 49 ^m		Mag: -0.7 PMG: 2 ^h 34 ^m		Mag: -2.4 PMG: 17 ^h 01 ^m		Mag: +0.6 PMG: 4 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	32.9	137	43.9	-1	38.8	321	19.1	+6	48.1
1	150	35.3	152	43.7		37.5	336	21.9		48.3
2	165	37.8	167	43.5		36.2	351	24.8		48.5
3	180	40.3	182	43.3		34.9	6	27.6		48.8
4	195	42.7	197	43.1		33.6	21	30.4		49.0
5	210	45.2	212	42.9	-1	32.3	36	33.3	+6	49.2
6	225	47.7	227	42.7	-1	31.0	51	36.1	+6	49.4
7	240	50.1	242	42.5		29.6	66	38.9		49.7
8	255	52.6	257	42.3		28.3	81	41.8		49.9
9	270	55.1	272	42.2		27.0	96	44.6		50.1
10	285	57.5	287	42.0		25.7	111	47.5		50.3
11	301	00.0	302	41.8	-1	24.4	126	50.3	+6	50.6
12	316	02.5	317	41.6	-1	23.1	141	53.1	+6	50.8
13	331	04.9	332	41.4		21.8	156	56.0		51.0
14	346	07.4	347	41.2		20.5	171	58.8		51.2
15	1	09.8	2	41.0		19.2	187	01.7		51.5
16	16	12.3	17	40.8		17.9	202	04.5		51.7
17	31	14.8	32	40.6	-1	16.6	217	07.4	+6	51.9
18	46	17.2	47	40.4	-1	15.3	232	10.2	+6	52.1
19	61	19.7	62	40.3		13.9	247	13.1		52.4
20	76	22.2	77	40.1		12.6	262	15.9		52.6
21	91	24.6	92	39.9		11.3	277	18.8		52.8
22	106	27.1	107	39.7		10.0	292	21.6		53.1
23	121	29.6	122	39.5		08.7	307	24.5		53.3
24	136	32.0	137	39.3	-1	07.4	322	27.4	+6	53.5
Dif	—		-2		+13		+28		+2	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 14 ^d 7 PHE { 4 ^h : 58'0 12 ^h : 58'2 20 ^h : 58'4 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	29.2	-15	33.4	9	13.5	+14 49.1	60 N	16 28	17 14	18 04	16 33	90	7 16	14
1	191	29.2		32.6	23	42.4	99 39.1	58	37	20	07	40	87	08	17
2	206	29.2		31.8	38	11.3	99 29.1	56	45	25	09	46	85	7 01	20
3	221	29.1		31.1	52	40.2	99 18.9	54	52	30	12	52	82	6 54	23
4	236	29.1		30.3	67	09.1	99 +14 08.7	52	16 58	34	14	16 57	79	49	24
5	251	29.0	-15	29.5	81	38.0	99 +13 58.4	50	17 03	17 38	18 16	17 02	77	6 44	26
6	266	29.0	-15	28.7	96	07.0	100 +13 48.0	45	17 16	17 46	18 21	17 11	73	6 32	31
7	281	29.0		28.0	110	35.9	99 37.5	40	26	17 54	26	19	70	23	34
8	296	28.9		27.2	125	04.9	100 27.0	35	34	18 00	30	26	67	15	37
9	311	28.9		26.4	139	33.9	100 16.3	30	42	07	35	33	63	6 08	39
10	326	28.9		25.6	154	03.0	101 +13 05.6	20	17 55	18	44	43	59	5 55	44
11	341	28.8	-15	24.9	168	32.0	100 +12 54.8	10 N	18 07	18 28	18 53	17 52	55	5 44	48
12	356	28.8	-15	24.1	183	01.1	101 +12 43.9	0	18 18	18 39	19 04	18 01	51	5 34	51
13	11	28.8		23.3	197	30.1	100 32.9	10 S	29	18 51	16	09	48	24	54
14	26	28.7		22.5	211	59.2	101 21.8	20	41	19 04	31	19	43	13	58
15	41	28.7		21.7	226	28.3	101 +12 10.7	30	18 55	20	19 50	29	38	5 00	63
16	56	28.7		21.0	240	57.4	101 +11 59.5	35	19 03	30	20 02	35	36	4 52	66
17	71	28.6	-15	20.2	255	26.6	102 +11 48.2	40	19 12	19 41	20 17	18 42	33	4 44	68
18	86	28.6	-15	19.4	269	55.7	101 +11 36.9	45	19 23	19 55	20 35	18 50	29	4 34	72
19	101	28.6		18.6	284	24.9	102 25.4	50	36	20 13	21 00	18 59	25	22	76
20	116	28.5		17.8	298	54.1	102 13.9	52	42	21	12	19 03	24	16	78
21	131	28.5		17.1	313	23.3	102 +11 02.4	54	49	31	26	08	21	10	80
22	146	28.5		16.3	327	52.5	102 +10 50.7	56	19 57	41	21 43	13	19	4 03	83
23	161	28.4		15.5	342	21.8	103 39.0	58	20 05	20 54	22 04	19	16	3 55	86
24	176	28.4	-15	14.7	356	51.0	102 +10 27.2	60 S	20 15	21 09	22 33	19 26	13	3 46	89
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 51 ^m 4		Mag: -4.1 PMG: 14 ^h 50 ^m			Mag: -0.7 PMG: 2 ^h 30 ^m			Mag: -2.4 PMG: 16 ^h 58 ^m			Mag: +0.6 PMG: 4 ^h 47 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'
0	136	32.0	137	39.3	-1 07.4	322	27.4	+6 53.5	105	00.1	+11 39.4	288	10.3	-8 52.9	
1	151	34.5	152	39.1	06.1	337	30.2	53.8	120	02.3	39.5	303	12.7	52.9	
2	166	37.0	167	38.9	04.8	352	33.1	54.0	135	04.4	39.6	318	15.2	52.9	
3	181	39.4	182	38.8	03.5	7	35.9	54.2	150	06.6	39.7	333	17.7	52.9	
4	196	41.9	197	38.6	02.2	22	38.8	54.5	165	08.7	39.9	348	20.1	52.9	
5	211	44.3	212	38.4	-1 00.8	37	41.7	+6 54.7	180	10.9	+11 40.0	3	22.6	-8 52.9	
6	226	46.8	227	38.2	-0 59.5	52	44.5	+6 54.9	195	13.0	+11 40.1	18	25.0	-8 52.9	
7	241	49.3	242	38.0	58.2	67	47.4	55.2	210	15.2	40.2	33	27.5	52.9	
8	256	51.7	257	37.8	56.9	82	50.3	55.4	225	17.3	40.3	48	29.9	52.8	
9	271	54.2	272	37.6	55.6	97	53.1	55.6	240	19.5	40.5	63	32.4	52.8	
10	286	56.7	287	37.5	54.3	112	56.0	55.9	255	21.6	40.6	78	34.9	52.8	
11	301	59.1	302	37.3	-0 53.0	127	58.9	+6 56.1	270	23.8	+11 40.7	93	37.3	-8 52.8	
12	317	01.6	317	37.1	-0 51.7	143	01.8	+6 56.3	285	25.9	+11 40.8	108	39.8	-8 52.8	
13	332	04.1	332	36.9	50.4	158	04.6	56.6	300	28.1	41.0	123	42.2	52.8	
14	347	06.5	347	36.7	49.1	173	07.5	56.8	315	30.2	41.1	138	44.7	52.8	
15	2	09.0	2	36.5	47.8	188	10.4	57.1	330	32.4	41.2	153	47.2	52.8	
16	17	11.5	17	36.4	46.4	203	13.3	57.3	345	34.5	41.3	168	49.6	52.8	
17	32	13.9	32	36.2	-0 45.1	218	16.1	+6 57.5	0	36.6	+11 41.5	183	52.1	-8 52.8	
18	47	16.4	47	36.0	-0 43.8	233	19.0	+6 57.8	15	38.8	+11 41.6	198	54.5	-8 52.7	
19	62	18.8	62	35.8	42.5	248	21.9	58.0	30	40.9	41.7	213	57.0	52.7	
20	77	21.3	77	35.6	41.2	263	24.8	58.3	45	43.1	41.8	228	59.5	52.7	
21	92	23.8	92	35.4	39.9	278	27.7	58.5	60	45.2	42.0	244	01.9	52.7	
22	107	26.2	107	35.3	38.6	293	30.6	58.7	75	47.4	42.1	259	04.4	52.7	
23	122	28.7	122	35.1	37.3	308	33.5	59.0	90	49.5	42.2	274	06.9	52.7	
24	137	31.2	137	34.9	-0 36.0	323	36.3	+6 59.2	105	51.7	+11 42.3	289	09.3	-8 52.7	
Dif	—		-2		+13	+29		+2	+21		+1	+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 15 ^d 7 PHE { SD: 15:9 PMG: 0 ^h 13 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	28.4	-15	14.7	356	51.0	+10	27.2	60 N	6 23	7 13	7 58	18 03	92	7 30	12
1	191	28.4		13.9	11	20.3 ¹⁰³		15.4 ¹¹⁸	58	20	07	50	07	89	25	15
2	206	28.3		13.1	25	49.5 ¹⁰²	+10	03.5 ¹¹⁹	56	18	7 02	42	11	85	21	17
3	221	28.3		12.4	40	18.8 ¹⁰³	+9	51.5 ¹²⁰	54	16	6 58	35	14	82	17	20
4	236	28.3		11.6	54	48.1 ¹⁰³		39.5 ¹²⁰	52	13	53	29	16	81	13	22
5	251	28.2	-15	10.8	69	17.5 ¹⁰⁴	+9	27.4 ¹²¹	50	6 11	6 50	7 24	18 19	78	7 10	24
6	266	28.2	-15	10.0	83	46.8 ¹⁰³	+9	15.2 ¹²²	45	6 06	6 41	7 12	18 24	74	7 03	28
7	281	28.2		09.2	98	16.1 ¹⁰³	+9	03.0 ¹²²	40	6 02	34	7 02	29	70	6 57	32
8	296	28.2		08.4	112	45.5 ¹⁰⁴	+8	50.7 ¹²³	35	5 57	27	6 54	33	66	52	35
9	311	28.1		07.7	127	14.9 ¹⁰⁴		38.4 ¹²³	30	53	21	46	36	64	47	38
10	326	28.1		06.9	141	44.2 ¹⁰³		26.0 ¹²⁴	20	44	10	33	42	59	39	42
11	341	28.1	-15	06.1	156	13.6 ¹⁰⁴	+8	13.6 ¹²⁴	10 N	5 35	6 00	6 22	18 47	54	6 32	47
12	356	28.0	-15	05.3	170	43.0 ¹⁰⁴	+8	01.1 ¹²⁵	0	5 24	5 49	6 11	18 52	50	6 25	51
13	11	28.0		04.5	185	12.4 ¹⁰⁴	+7	48.5 ¹²⁶	10 S	5 12	38	6 00	18 57	46	18	55
14	26	28.0		03.7	199	41.9 ¹⁰⁵		35.9 ¹²⁶	20	4 58	25	5 48	19 02	42	11	59
15	41	28.0		02.9	214	11.3 ¹⁰⁴		23.2 ¹²⁷	30	38	5 09	34	07	38	6 03	63
16	56	27.9		02.1	228	40.7 ¹⁰⁴	+7	10.5 ¹²⁷	35	26	4 59	26	11	34	5 58	66
17	71	27.9	-15	01.3	243	10.2 ¹⁰⁵	+6	57.8 ¹²⁷	40	4 12	4 47	5 17	19 15	31	5 52	70
18	86	27.9	-15	00.5	257	39.6 ¹⁰⁴	+6	45.0 ¹²⁸	45	3 53	4 34	5 06	19 19	28	5 46	73
19	101	27.9	-14	59.8	272	09.1 ¹⁰⁵		32.2 ¹²⁸	50	29	16	4 53	24	24	38	78
20	116	27.8		59.0	286	38.6 ¹⁰⁵		19.3 ¹²⁹	52	17	4 08	47	27	21	34	80
21	131	27.8		58.2	301	08.0 ¹⁰⁴	+6	06.3 ¹³⁰	54	3 03	3 58	40	29	20	30	83
22	146	27.8		57.4	315	37.5 ¹⁰⁵	+5	53.4 ¹²⁹	56	2 46	48	32	32	17	26	85
23	161	27.8		56.6	330	07.0 ¹⁰⁵		40.4 ¹³⁰	58	2 25	35	24	35	15	21	88
24	176	27.7	-14	55.8	344	36.5 ¹⁰⁵	+5	27.3 ¹³¹	60 S	1 56	3 20	4 14	19 39	11	5 15	92
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 14 ^h 47 ^m 5		Mag: -4.1 PMG: 14 ^h 50 ^m			Mag: -0.7 PMG: 2 ^h 25 ^m			Mag: -2.3 PMG: 16 ^h 54 ^m			Mag: +0.6 PMG: 4 ^h 43 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	137	31.2	137	34.9	-0	36.0	323	36.3	+6	59.2	105	51.7	+11	42.3	289	09.3
1	152	33.6	152	34.7		34.7	338	39.2		59.5	120	53.8		42.5	304	11.8
2	167	36.1	167	34.5		33.3	353	42.1	+6	59.7	135	55.9		42.6	319	14.2
3	182	38.6	182	34.4		32.0	8	45.0	+7	00.0	150	58.1		42.7	334	16.7
4	197	41.0	197	34.2		30.7	23	47.9	+7	00.2	166	00.2		42.8	349	19.2
5	212	43.5	212	34.0	-0	29.4	38	50.8	+7	00.4	181	02.4	+11	43.0	4	21.6
6	227	45.9	227	33.8	-0	28.1	53	53.7	+7	00.7	196	04.5	+11	43.1	19	24.1
7	242	48.4	242	33.6		26.8	68	56.6		00.9	211	06.6		43.2	34	26.6
8	257	50.9	257	33.5		25.5	83	59.5		01.2	226	08.8		43.3	49	29.0
9	272	53.3	272	33.3		24.2	99	02.4		01.4	241	10.9		43.5	64	31.5
10	287	55.8	287	33.1		22.9	114	05.3		01.7	256	13.1		43.6	79	33.9
11	302	58.3	302	32.9	-0	21.6	129	08.2	+7	01.9	271	15.2	+11	43.7	94	36.4
12	318	00.7	317	32.7	-0	20.2	144	11.1	+7	02.2	286	17.3	+11	43.8	109	38.9
13	333	03.2	332	32.6		18.9	159	14.0		02.4	301	19.5		44.0	124	41.3
14	348	05.7	347	32.4		17.6	174	16.9		02.7	316	21.6		44.1	139	43.8
15	3	08.1	2	32.2		16.3	189	19.8		02.9	331	23.8		44.2	154	46.3
16	18	10.6	17	32.0		15.0	204	22.7		03.2	346	25.9		44.3	169	48.7
17	33	13.1	32	31.9	-0	13.7	219	25.7	+7	03.4	1	28.0	+11	44.5	184	51.2
18	48	15.5	47	31.7	-0	12.4	234	28.6	+7	03.7	16	30.2	+11	44.6	199	53.7
19	63	18.0	62	31.5		11.1	249	31.5		03.9	31	32.3		44.7	214	56.1
20	78	20.4	77	31.3		09.8	264	34.4		04.2	46	34.5		44.8	229	58.6
21	93	22.9	92	31.2		08.4	279	37.3		04.4	61	36.6		45.0	245	01.1
22	108	25.4	107	31.0		07.1	294	40.2		04.7	76	38.7		45.1	260	03.5
23	123	27.8	122	30.8		05.8	309	43.1		04.9	91	40.9		45.2	275	06.0
24	138	30.3	137	30.6	-0	04.5	324	46.1	+7	05.2	106	43.0	+11	45.3	290	08.4
Dif	—		-2		+13		+29		+2		+21		+1		+25	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 16 ^d 7 PHE { 4 ^h : 59:1 12 ^h : 59:2 20 ^h : 59:3 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	27.7	-14	55.8	344	36.5	+5 27.3	60 N	16 34	17 19	18 09	19 35 92	7 42 12		
1	191	27.7		55.0	359	06.0 ¹⁰⁵	14.2 ¹³¹	58	42	24	11	36 89	40 15		
2	206	27.7		54.2	13	35.5 ¹⁰⁵	+5 01.1 ¹³¹	56	49	29	13	36 86	38 17		
3	221	27.7		53.4	28	05.0 ¹⁰⁵	+4 48.0 ¹³¹	54	16 56	33	15	36 84	37 19		
4	236	27.7		52.6	42	34.5 ¹⁰⁵	34.8 ¹³²	52	17 02	37	17	37 81	35 22		
5	251	27.6	-14	51.8	57	04.0 ¹⁰⁵	+4 21.6 ¹³²	50	17 07	17 41	18 19	19 37 79	7 34 24		
6	266	27.6	-14	51.0	71	33.5 ¹⁰⁵	+4 08.3 ¹³³	45	17 18	17 49	18 24	19 38 75	7 31 28		
7	281	27.6		50.2	86	03.1 ¹⁰⁶	+3 55.0 ¹³³	40	28	17 56	28	39 70	29 31		
8	296	27.6		49.4	100	32.6 ¹⁰⁵	41.7 ¹³³	35	36	18 02	32	39 68	27 34		
9	311	27.5		48.6	115	02.1 ¹⁰⁵	28.4 ¹³³	30	43	08	36	40 64	25 37		
10	326	27.5		47.8	129	31.6 ¹⁰⁵	15.0 ¹³⁴	20	17 56	19	45	41 59	21 43		
11	341	27.5	-14	47.0	144	01.1 ¹⁰⁵	+3 01.7 ¹³³	10 N	18 07	18 29	18 54	19 41 55	7 19 46		
12	356	27.5	-14	46.2	158	30.6 ¹⁰⁵	+2 48.2 ¹³⁵	0	18 18	18 39	19 04	19 42 51	7 16 50		
13	11	27.5		45.4	173	00.1 ¹⁰⁵	34.8 ¹³⁴	10 S	28	18 50	15	43 47	13 55		
14	26	27.5		44.6	187	29.6 ¹⁰⁵	21.4 ¹³⁴	20	40	19 03	30	44 42	10 59		
15	41	27.4		43.8	201	59.1 ¹⁰⁵	+2 07.9 ¹³⁵	30	18 53	18	19 48	45 37	06 64		
16	56	27.4		43.0	216	28.6 ¹⁰⁵	+1 54.4 ¹³⁵	35	19 01	28	20 00	45 35	04 67		
17	71	27.4	-14	42.2	230	58.1 ¹⁰⁵	+1 40.9 ¹³⁵	40	19 10	19 39	20 14	19 46 32	7 02 70		
18	86	27.4	-14	41.4	245	27.6 ¹⁰⁵	+1 27.4 ¹³⁵	45	19 20	19 52	20 32	19 47 28	6 59 74		
19	101	27.4		40.6	259	57.0 ¹⁰⁴	13.9 ¹³⁵	50	33	20 09	20 55	48 23	56 79		
20	116	27.3		39.8	274	26.5 ¹⁰⁵	+1 00.4 ¹³⁵	52	38	17	21 07	48 22	54 81		
21	131	27.3		39.0	288	56.0 ¹⁰⁵	+0 46.8 ¹³⁶	54	45	26	20	49 19	53 83		
22	146	27.3		38.2	303	25.4 ¹⁰⁴	33.3 ¹³⁵	56	19 52	36	36	49 17	51 86		
23	161	27.3		37.4	317	54.9 ¹⁰⁵	19.7 ¹³⁶	58	20 00	20 48	21 56	50 14	49 89		
24	176	27.3	-14	36.6	332	24.3 ¹⁰⁴	+0 06.1 ¹³⁶	60 S	20 10	21 02	22 22	19 50 12	6 47 91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 43 ^m 6		Mag: -4.1 PMG: 14 ^h 50 ^m		Mag: -0.8 PMG: 2 ^h 20 ^m		Mag: -2.3 PMG: 16 ^h 51 ^m		Mag: +0.5 PMG: 4 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	138	30.3	137	30.6	-0	04.5	324	46.1	+7	05.2	106	43.0	+11	45.3	290	08.4	-8	52.4
1	153	32.8	152	30.4		03.2	339	49.0		05.4	121	45.2		45.5	305	10.9		52.4
2	168	35.2	167	30.3		01.9	354	51.9		05.7	136	47.3		45.6	320	13.4		52.4
3	183	37.7	182	30.1	-0	00.6	9	54.8		05.9	151	49.4		45.7	335	15.8		52.4
4	198	40.2	197	29.9	+0	00.7	24	57.8		06.2	166	51.6		45.8	350	18.3		52.3
5	213	42.6	212	29.8	+0	02.0	40	00.7	+7	06.5	181	53.7	+11	46.0	5	20.8	-8	52.3
6	228	45.1	227	29.6	+0	03.3	55	03.6	+7	06.7	196	55.8	+11	46.1	20	23.2	-8	52.3
7	243	47.5	242	29.4		04.7	70	06.5		07.0	211	58.0		46.2	35	25.7		52.3
8	258	50.0	257	29.2		06.0	85	09.5		07.2	227	00.1		46.3	50	28.2		52.3
9	273	52.5	272	29.1		07.3	100	12.4		07.5	242	02.2		46.5	65	30.7		52.3
10	288	54.9	287	28.9		08.6	115	15.3		07.7	257	04.4		46.6	80	33.1		52.3
11	303	57.4	302	28.7	+0	09.9	130	18.3	+7	08.0	272	06.5	+11	46.7	95	35.6	-8	52.3
12	318	59.9	317	28.5	+0	11.2	145	21.2	+7	08.3	287	08.6	+11	46.9	110	38.1	-8	52.2
13	334	02.3	332	28.4		12.5	160	24.1		08.5	302	10.8		47.0	125	40.5		52.2
14	349	04.8	347	28.2		13.8	175	27.1		08.8	317	12.9		47.1	140	43.0		52.2
15	4	07.3	2	28.0		15.1	190	30.0		09.0	332	15.0		47.2	155	45.5		52.2
16	19	09.7	17	27.9		16.5	205	33.0		09.3	347	17.2		47.4	170	47.9		52.2
17	34	12.2	32	27.7	+0	17.8	220	35.9	+7	09.6	2	19.3	+11	47.5	185	50.4	-8	52.2
18	49	14.7	47	27.5	+0	19.1	235	38.8	+7	09.8	17	21.4	+11	47.6	200	52.9	-8	52.2
19	64	17.1	62	27.3		20.4	250	41.8		10.1	32	23.6		47.7	215	55.3		52.1
20	79	19.6	77	27.2		21.7	265	44.7		10.3	47	25.7		47.9	230	57.8		52.1
21	94	22.0	92	27.0		23.0	280	47.7		10.6	62	27.8		48.0	246	00.3		52.1
22	109	24.5	107	26.8		24.3	295	50.6		10.9	77	30.0		48.1	261	02.7		52.1
23	124	27.0	122	26.7		25.6	310	53.6		11.1	92	32.1		48.3	276	05.2		52.1
24	139	29.4	137	26.5	+0	26.9	325	56.5	+7	11.4	107	34.2	+11	48.4	291	07.7	-8	52.1
Dif	—		-2 +13		+29 +3		+21 +1		+25									

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 17 ^d 7 PHE { 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/5 SD: 16:2 PMG: 1 ^h 54 ^m R°: 51 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	176	27.3	-14	36.6	332	24.3	+0	06.1	60 N	6	19	7	08	7	53	21	07				
1	191	27.3		35.8	346	53.7 ¹⁰⁴	-0	07.5 ¹³⁶	58	16	7	03	45	05	90	55	14				
2	206	27.3		35.0	1	23.1 ¹⁰⁴		21.0 ¹³⁵	56	14	6	58	38	02	87	55	18				
3	221	27.2		34.2	15	52.5 ¹⁰⁴		34.6 ¹³⁶	54	12	5	54	31	21	00	84	56	20			
4	236	27.2		33.4	30	21.9 ¹⁰⁴	-0	48.2 ¹³⁶	52	10	5	50	26	20	58	82	57	22			
5	251	27.2	-14	32.6	44	51.3 ¹⁰⁴	-1	01.8 ¹³⁶	50	6	08	6	47	7	20	20	56	80			
6	266	27.2	-14	31.8	59	20.6 ¹⁰³	-1	15.4 ¹³⁶	45	6	04	6	39	7	09	20	53	75			
7	281	27.2		31.0	73	50.0 ¹⁰⁴		28.9 ¹³⁵	40	6	00	32	7	00	49	72	8	00			
8	296	27.2		30.2	88	19.3 ¹⁰³		42.5 ¹³⁶	35	5	56	26	6	52	47	68	01	35			
9	311	27.2		29.4	102	48.6 ¹⁰³	-1	56.1 ¹³⁶	30	5	52	20	45	44	65	02	38				
10	326	27.2		28.6	117	17.9 ¹⁰³	-2	09.6 ¹³⁵	20	4	43	09	32	40	60	04	43				
11	341	27.1	-14	27.8	131	47.2 ¹⁰³	-2	23.2 ¹³⁶	10 N	5	34	6	00	6	21	20	36	56			
12	356	27.1	-14	26.9	146	16.4 ¹⁰²	-2	36.7 ¹³⁵	0	5	25	5	49	6	11	20	33	52			
13	11	27.1		26.1	160	45.7 ¹⁰³	-2	50.2 ¹³⁵	10 S	5	13	38	6	00	30	48	08	55			
14	26	27.1		25.3	175	14.9 ¹⁰²	-3	03.7 ¹³⁵	20	4	59	26	5	49	26	44	09	60			
15	41	27.1		24.5	189	44.1 ¹⁰²		17.2 ¹³⁵	30	4	50	10	36	22	39	10	65				
16	56	27.1		23.7	204	13.3 ¹⁰²		30.7 ¹³⁵	35	2	29	5	01	28	20	36	11	68			
17	71	27.1	-14	22.9	218	42.4 ¹⁰¹	-3	44.1 ¹³⁴	40	4	15	4	50	5	19	20	18	33			
18	86	27.1	-14	22.1	233	11.6 ¹⁰²	-3	57.6 ¹³⁵	45	3	57	4	37	5	09	20	15	29			
19	101	27.1		21.3	247	40.7 ¹⁰¹	-4	11.0 ¹³⁴	50	3	48	4	30	4	56	11	26	15	79		
20	116	27.1		20.5	262	09.7 ¹⁰⁰		24.4 ¹³⁴	52	2	40	4	22	5	51	10	23	15	82		
21	131	27.0		19.6	276	38.8 ¹⁰¹		37.8 ¹³⁴	54	3	09	4	03	4	44	08	21	16	84		
22	146	27.0		18.8	291	07.8 ¹⁰⁰	-4	51.1 ¹³³	56	2	53	3	53	3	37	06	19	17	86		
23	161	27.0		18.0	305	36.9 ¹⁰¹	-5	04.4 ¹³³	58	2	44	3	41	2	29	04	16	18	89		
24	176	27.0	-14	17.2	320	05.8 ⁹⁹	-5	17.7 ¹³³	60 S	2	07	3	27	4	20	20	02	13	8	18	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 39 ^m 6		Mag: -4.1 PMG: 14 ^h 50 ^m		Mag: -0.8 PMG: 2 ^h 16 ^m		Mag: -2.3 PMG: 16 ^h 47 ^m		Mag: +0.5 PMG: 4 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	29.4	137	26.5	+0	26.9	325	56.5	+7	11.4
1	154	31.9	152	26.3		28.2	340	59.5		11.7
2	169	34.4	167	26.2		29.6	356	02.4		11.9
3	184	36.8	182	26.0		30.9	11	05.4		12.2
4	199	39.3	197	25.8		32.2	26	08.3		12.5
5	214	41.8	212	25.6	+0	33.5	41	11.3	+7	12.7
6	229	44.2	227	25.5	+0	34.8	56	14.2	+7	13.0
7	244	46.7	242	25.3		36.1	71	17.2		13.3
8	259	49.2	257	25.1		37.4	86	20.2		13.5
9	274	51.6	272	25.0		38.7	101	23.1		13.8
10	289	54.1	287	24.8		40.0	116	26.1		14.1
11	304	56.5	302	24.6	+0	41.4	131	29.0	+7	14.3
12	319	59.0	317	24.5	+0	42.7	146	32.0	+7	14.6
13	335	01.5	332	24.3		44.0	161	35.0		14.9
14	350	03.9	347	24.1		45.3	176	37.9		15.1
15	5	06.4	2	24.0		46.6	191	40.9		15.4
16	20	08.9	17	23.8		47.9	206	43.9		15.7
17	35	11.3	32	23.6	+0	49.2	221	46.8	+7	15.9
18	50	13.8	47	23.5	+0	50.5	236	49.8	+7	16.2
19	65	16.3	62	23.3		51.8	251	52.8		16.5
20	80	18.7	77	23.1		53.1	266	55.8		16.8
21	95	21.2	92	23.0		54.5	281	58.7		17.0
22	110	23.6	107	22.8		55.8	297	01.7		17.3
23	125	26.1	122	22.7		57.1	312	04.7		17.6
24	140	28.6	137	22.5	+0	58.4	327	07.7	+7	17.9
Dif	—		-2		+13		+30		+3	
							+21		+1	
									+25	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 14 ^m 2			Edad: 18 ^d 7 PHE { SD: 16/2 PMG: 2 ^h 45 ^m 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/6 R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	176	27.0	-14	17.2	320	05.8	-5	17.7	60 N	16 39	17 24	18 13	22 41	93	8 06	13		
1	191	27.0		16.4	334	34.8		31.0	58	47	29	15	35	89	09	17		
2	206	27.0		15.6	349	03.7		44.2	56	16 54	33	17	29	87	13	20		
3	221	27.0		14.8	3	32.6		57.4	54	17 00	37	19	24	84	16	22		
4	236	27.0		13.9	18	01.5		10.6	52	05	41	21	20	82	19	24		
5	251	27.0	-14	13.1	32	30.3		23.8	50	17 10	17 44	18 22	22 16	80	8 22	26		
6	266	27.0	-14	12.3	46	59.2		36.9	45	17 21	17 52	18 26	22 08	75	8 27	31		
7	281	27.0		11.5	61	27.9		49.9	40	30	17 58	30	22 01	71	32	35		
8	296	27.0		10.7	75	56.7		02.9	35	38	18 04	34	21 55	68	36	38		
9	311	27.0		09.9	90	25.4		15.9	30	45	10	38	49	66	40	40		
10	326	27.0		09.0	104	54.1		28.9	20	17 57	20	46	40	61	47	44		
11	341	27.0	-14	08.2	119	22.7		41.8	10 N	18 08	18 29	18 54	21 32	58	8 52	49		
12	356	27.0	-14	07.4	133	51.4		54.6	0	18 18	18 39	19 04	21 25	54	8 58	52		
13	11	27.0		06.6	148	19.9		07.4	10 S	28	18 50	15	18	50	9 03	56		
14	26	27.0		05.8	162	48.5		20.2	20	39	19 02	29	10	46	09	60		
15	41	27.0		04.9	177	17.0		32.9	30	51	17	46	21	01	42	15	66	
16	56	27.0		04.1	191	45.5		45.5	35	18 59	26	19 58	20	56	39	19	68	
17	71	27.0	-14	03.3	206	13.9		58.1	40	19 07	19 36	20 11	20	51	36	9	23	72
18	86	27.0	-14	02.5	220	42.3		10.7	45	19 17	19 49	20 28	20	44	33	9	28	75
19	101	27.0		01.7	235	10.7		23.2	50	29	20 05	20 51	37	28	34	80		
20	116	27.0	-14	00.8	249	39.0		35.6	52	35	13	21 02	33	26	37	82		
21	131	27.0	-14	00.0	264	07.3		48.0	54	41	21	14	29	24	40	84		
22	146	27.0	-13	59.2	278	35.6		00.4	56	48	31	29	25	22	43	87		
23	161	27.0		58.4	293	03.8		12.6	58	19 55	42	21 48	20	19	47	90		
24	176	27.0	-13	57.5	307	31.9		24.8	60 S	20 04	20 56	22 11	20	15	15	9	51	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 35 ^m 7		Mag: -4.1 PMG: 14 ^h 51 ^m		Mag: -0.8 PMG: 2 ^h 11 ^m		Mag: -2.3 PMG: 16 ^h 44 ^m		Mag: +0.5 PMG: 4 ^h 31 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	140	28.6	137	22.5	+0	58.4	327	07.7	+7	17.9	108	25.3	+11	51.5	292	07.0	-8	51.7
1	155	31.0	152	22.3	+0	59.7	342	10.7		18.1	123	27.4		51.6	307	09.5		51.7
2	170	33.5	167	22.2	+1	01.0	357	13.6		18.4	138	29.6		51.7	322	12.0		51.7
3	185	36.0	182	22.0		02.3	12	16.6		18.7	153	31.7		51.9	337	14.4		51.7
4	200	38.4	197	21.8		03.6	27	19.6		19.0	168	33.8		52.0	352	16.9		51.7
5	215	40.9	212	21.7	+1	04.9	42	22.6	+7	19.2	183	35.9	+11	52.1	7	19.4	-8	51.6
6	230	43.4	227	21.5	+1	06.2	57	25.6	+7	19.5	198	38.1	+11	52.3	22	21.9	-8	51.6
7	245	45.8	242	21.3		07.5	72	28.6		19.8	213	40.2		52.4	37	24.3		51.6
8	260	48.3	257	21.2		08.9	87	31.6		20.1	228	42.3		52.5	52	26.8		51.6
9	275	50.8	272	21.0		10.2	102	34.6		20.3	243	44.4		52.6	67	29.3		51.6
10	290	53.2	287	20.9		11.5	117	37.5		20.6	258	46.6		52.8	82	31.8		51.6
11	305	55.7	302	20.7	+1	12.8	132	40.5	+7	20.9	273	48.7	+11	52.9	97	34.3	-8	51.5
12	320	58.1	317	20.5	+1	14.1	147	43.5	+7	21.2	288	50.8	+11	53.0	112	36.7	-8	51.5
13	336	00.6	332	20.4		15.4	162	46.5		21.5	303	52.9		53.2	127	39.2		51.5
14	351	03.1	347	20.2		16.7	177	49.5		21.7	318	55.1		53.3	142	41.7		51.5
15	6	05.5	2	20.0		18.0	192	52.5		22.0	333	57.2		53.4	157	44.2		51.5
16	21	08.0	17	19.9		19.3	207	55.5		22.3	348	59.3		53.6	172	46.6		51.5
17	36	10.5	32	19.7	+1	20.6	222	58.5	+7	22.6	4	01.4	+11	53.7	187	49.1	-8	51.4
18	51	12.9	47	19.6	+1	22.0	238	01.5	+7	22.9	19	03.5	+11	53.8	202	51.6	-8	51.4
19	66	15.4	62	19.4		23.3	253	04.5		23.1	34	05.7		54.0	217	54.1		51.4
20	81	17.9	77	19.2		24.6	268	07.5		23.4	49	07.8		54.1	232	56.5		51.4
21	96	20.3	92	19.1		25.9	283	10.5		23.7	64	09.9		54.2	247	59.0		51.4
22	111	22.8	107	18.9		27.2	298	13.5		24.0	79	12.0		54.3	263	01.5		51.4
23	126	25.2	122	18.8		28.5	313	16.5		24.3	94	14.1		54.5	278	04.0		51.3
24	141	27.7	137	18.6	+1	29.8	328	19.6	+7	24.6	109	16.3	+11	54.6	293	06.5	-8	51.3
Dif	—		-2		+13		+30		+3		+21		+1		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 19 ^d 7 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/5 PMG: 3 ^h 38 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	27.0	-13	57.5	307	31.9	-10	24.8	60 N	6	14	7	03	7	48	*** ** *
1	191	27.0		56.7	322	00.1	92	37.0	58	12	6	58	40	*** ** *	26	21
2	206	27.0		55.9	336	28.1	90	-10	56	10	54	33	23	56	84	33
3	221	27.0		55.1	350	56.2	91	-11	54	09	50	27	48	82	38	24
4	236	27.0		54.2	5	24.2	90	13.0	52	07	47	22	42	79	43	29
5	251	27.0	-13	53.4	19	52.1	89	-11	50	6	05	6	43	7	17	23
6	266	27.0	-13	52.6	34	20.1	90	-11	45	6	01	6	36	7	06	23
7	281	27.0		51.8	48	47.9	88	-11	40	5	58	29	6	57	12	71
8	296	27.0		50.9	63	15.8	89	-12	35	54	24	50	23	03	68	14
9	311	27.0		50.1	77	43.5	87	11.7	30	50	18	43	22	55	66	20
10	326	27.0		49.3	92	11.3	88	23.3	20	42	6	09	31	41	62	31
11	341	27.0	-13	48.5	106	39.0	87	-12	10 N	5	34	5	59	6	21	22
12	356	27.0	-13	47.6	121	06.6	86	-12	0	5	25	5	49	6	11	22
13	11	27.0		46.8	135	34.2	86	-12	10 S	14	39	6	01	22	08	52
14	26	27.0		46.0	150	01.8	86	-13	20	5	00	27	5	50	21	56
15	41	27.0		45.1	164	29.3	85	19.7	30	4	42	12	37	43	45	21
16	56	27.0		44.3	178	56.8	85	30.8	35	31	5	03	30	35	44	27
17	71	27.0	-13	43.5	193	24.2	84	-13	40	4	18	4	53	5	22	21
18	86	27.0	-13	42.7	207	51.6	84	-13	45	4	01	4	40	5	12	21
19	101	27.0		41.8	222	18.9	83	-14	50	3	38	24	5	00	21	05
20	116	27.0		41.0	236	46.2	83	14.1	52	27	16	4	54	20	59	32
21	131	27.0		40.2	251	13.4	82	24.7	54	15	4	08	48	53	30	11
22	146	27.1		39.3	265	40.6	82	35.2	56	3	00	3	58	42	47	27
23	161	27.1		38.5	280	07.8	82	45.7	58	2	41	47	34	39	24	17
24	176	27.1	-13	37.7	294	34.9	81	-14	60 S	2	18	3	34	4	25	20
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 31 ^m 8			Mag: -4.2 PMG: 14 ^h 51 ^m			Mag: -0.8 PMG: 2 ^h 06 ^m			Mag: -2.3 PMG: 16 ^h 41 ^m			Mag: +0.5 PMG: 4 ^h 27 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	141	27.7	137	18.6	+1	29.8	328	19.6	+7	24.6	109	16.3	+11	54.6	293	06.5
1	156	30.2	152	18.4		31.1	343	22.6		24.8	124	18.4		54.7	308	08.9
2	171	32.6	167	18.3		32.4	358	25.6		25.1	139	20.5		54.9	323	11.4
3	186	35.1	182	18.1		33.7	13	28.6		25.4	154	22.6		55.0	338	13.9
4	201	37.6	197	18.0		35.0	28	31.6		25.7	169	24.7		55.1	353	16.4
5	216	40.0	212	17.8	+1	36.4	43	34.6	+7	26.0	184	26.9	+11	55.3	8	18.9
6	231	42.5	227	17.6	+1	37.7	58	37.6	+7	26.3	199	29.0	+11	55.4	23	21.3
7	246	45.0	242	17.5		39.0	73	40.7		26.6	214	31.1		55.5	38	23.8
8	261	47.4	257	17.3		40.3	88	43.7		26.8	229	33.2		55.7	53	26.3
9	276	49.9	272	17.2		41.6	103	46.7		27.1	244	35.3		55.8	68	28.8
10	291	52.4	287	17.0		42.9	118	49.7		27.4	259	37.4		55.9	83	31.3
11	306	54.8	302	16.9	+1	44.2	133	52.7	+7	27.7	274	39.6	+11	56.1	98	33.7
12	321	57.3	317	16.7	+1	45.5	148	55.8	+7	28.0	289	41.7	+11	56.2	113	36.2
13	336	59.7	332	16.5		46.8	163	58.8		28.3	304	43.8		56.3	128	38.7
14	352	02.2	347	16.4		48.1	179	01.8		28.6	319	45.9		56.5	143	41.2
15	7	04.7	2	16.2		49.4	194	04.8		28.9	334	48.0		56.6	158	43.7
16	22	07.1	17	16.1		50.7	209	07.9		29.1	349	50.1		56.7	173	46.1
17	37	09.6	32	15.9	+1	52.1	224	10.9	+7	29.4	4	52.3	+11	56.9	188	48.6
18	52	12.1	47	15.8	+1	53.4	239	13.9	+7	29.7	19	54.4	+11	57.0	203	51.1
19	67	14.5	62	15.6		54.7	254	17.0		30.0	34	56.5		57.1	218	53.6
20	82	17.0	77	15.5		56.0	269	20.0		30.3	49	58.6		57.2	233	56.1
21	97	19.5	92	15.3		57.3	284	23.0		30.6	65	00.7		57.4	248	58.5
22	112	21.9	107	15.1		58.6	299	26.1		30.9	80	02.8		57.5	264	01.0
23	127	24.4	122	15.0	+1	59.9	314	29.1		31.2	95	05.0		57.6	279	03.5
24	142	26.9	137	14.8	+2	01.2	329	32.1	+7	31.5	110	07.1	+11	57.8	294	06.0
Dif	—		-2	+13			+30	+3			+21	+1			+25	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 20 ^d 7 PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'3 SD: 16'2 PMG: 4 ^h 32 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	27.1	-13 37.7	294	34.9	-14 56.0		60 N	16 44	17 29	18 18	0 14 91	8 37 24		
1	191	27.1	36.8	309	01.9	-15 06.3	103	58	52	33	19	0 04 88	47 28		
2	206	27.1	36.0	323	28.9	16.4	101	56	16 58	37	21	** ** *	8 57 30		
3	221	27.1	35.2	337	55.9	26.5	101	54	17 04	41	23	** ** *	9 05 30		
4	236	27.1	34.3	352	22.8	36.4	99	52	09	44	24	** ** *	12 35		
5	251	27.1	-13 33.5	6	49.7	-15 46.3	99	50	17 14	17 47	18 25	** ** *	9 19 37		
6	266	27.1	-13 32.6	21	16.5	-15 56.1	98	45	17 24	17 54	18 29	** ** *	9 33 40		
7	281	27.1	31.8	35	43.2	-16 05.7	96	40	33	18 01	32	** ** *	45 43		
8	296	27.1	31.0	50	10.0	15.3	96	35	40	06	36	** ** *	9 55 45		
9	311	27.2	30.1	64	36.6	24.7	94	30	47	11	39	** ** *	10 04 47		
10	326	27.2	29.3	79	03.3	34.1	94	20	17 58	21	47	23 43 62	19 51		
11	341	27.2	-13 28.5	93	29.8	-16 43.3	92	10 N	18 08	18 30	18 55	23 28 60	10 32 54		
12	356	27.2	-13 27.6	107	56.4	-16 52.5	92	0	18 18	18 39	19 04	23 14 57	10 45 56		
13	11	27.2	26.8	122	22.9	-17 01.5	90	10 S	27	18 49	14	23 00 55	10 57 60		
14	26	27.2	25.9	136	49.3	10.4	89	20	38	19 01	27	22 45 53	11 11 62		
15	41	27.2	25.1	151	15.7	19.3	89	30	50	15	44	28 50	26 66		
16	56	27.2	24.3	165	42.1	28.0	87	35	18 57	23	19 55	19 48	35 68		
17	71	27.3	-13 23.4	180	08.4	-17 36.5	85	40	19 05	19 34	20 08	22 07 47	11 46 69		
18	86	27.3	-13 22.6	194	34.6	-17 45.0	85	45	19 14	19 46	20 25	21 54 44	11 58 72		
19	101	27.3	21.8	209	00.8	-17 53.4	84	50	26	20 01	46	38 41	12 13 75		
20	116	27.3	20.9	223	27.0	-18 01.6	82	52	31	08	20 56	31 39	20 77		
21	131	27.3	20.1	237	53.1	09.8	82	54	37	17	21 09	23 37	27 80		
22	146	27.3	19.2	252	19.2	17.8	80	56	43	26	23	14 35	36 82		
23	161	27.4	18.4	266	45.3	25.7	79	58	50	37	21 40	21 03 33	46 84		
24	176	27.4	-13 17.5	281	11.3	-18 33.5	78	60 S	19 59	20 49	22 02	20 51 30	12 57 88		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 14 ^h 27 ^m 8		Mag: -4.2 PMG: 14 ^h 51 ^m			Mag: -0.9 PMG: 2 ^h 01 ^m			Mag: -2.3 PMG: 16 ^h 37 ^m			Mag: +0.5 PMG: 4 ^h 23 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	142	26.9	137 14.8	+2 01.2	329 32.1	+7 31.5	110 07.1	+11 57.8	294 06.0	-8 50.9					
1	157	29.3	152 14.7	02.5	344 35.2	31.8	125 09.2	57.9	309 08.5	50.9					
2	172	31.8	167 14.5	03.8	359 38.2	32.1	140 11.3	58.0	324 11.0	50.9					
3	187	34.2	182 14.4	05.1	14 41.3	32.4	155 13.4	58.2	339 13.4	50.9					
4	202	36.7	197 14.2	06.4	29 44.3	32.7	170 15.5	58.3	354 15.9	50.8					
5	217	39.2	212 14.1	+2 07.7	44 47.4	+7 33.0	185 17.6	+11 58.4	9 18.4	-8 50.8					
6	232	41.6	227 13.9	+2 09.0	59 50.4	+7 33.3	200 19.7	+11 58.6	24 20.9	-8 50.8					
7	247	44.1	242 13.8	10.4	74 53.4	33.5	215 21.9	58.7	39 23.4	50.8					
8	262	46.6	257 13.6	11.7	89 56.5	33.8	230 24.0	58.8	54 25.9	50.8					
9	277	49.0	272 13.4	13.0	104 59.5	34.1	245 26.1	59.0	69 28.3	50.7					
10	292	51.5	287 13.3	14.3	120 02.6	34.4	260 28.2	59.1	84 30.8	50.7					
11	307	54.0	302 13.1	+2 15.6	135 05.6	+7 34.7	275 30.3	+11 59.2	99 33.3	-8 50.7					
12	322	56.4	317 13.0	+2 16.9	150 08.7	+7 35.0	290 32.4	+11 59.4	114 35.8	-8 50.7					
13	337	58.9	332 12.8	18.2	165 11.7	35.3	305 34.5	59.5	129 38.3	50.7					
14	353	01.3	347 12.7	19.5	180 14.8	35.6	320 36.6	59.6	144 40.8	50.6					
15	8	03.8	2 12.5	20.8	195 17.9	35.9	335 38.8	59.8	159 43.3	50.6					
16	23	06.3	17 12.4	22.1	210 20.9	36.2	350 40.9	+11 59.9	174 45.7	50.6					
17	38	08.7	32 12.2	+2 23.4	225 24.0	+7 36.5	5 43.0	+12 00.0	189 48.2	-8 50.6					
18	53	11.2	47 12.1	+2 24.7	240 27.0	+7 36.8	20 45.1	+12 00.2	204 50.7	-8 50.6					
19	68	13.7	62 11.9	26.0	255 30.1	37.1	35 47.2	00.3	219 53.2	50.5					
20	83	16.1	77 11.8	27.3	270 33.2	37.4	50 49.3	00.5	234 55.7	50.5					
21	98	18.6	92 11.6	28.6	285 36.2	37.7	65 51.4	00.6	249 58.2	50.5					
22	113	21.1	107 11.5	29.9	300 39.3	38.0	80 53.5	00.7	265 00.7	50.5					
23	128	23.5	122 11.3	31.3	315 42.4	38.3	95 55.6	00.9	280 03.1	50.5					
24	143	26.0	137 11.2	+2 32.6	330 45.4	+7 38.6	110 57.7	+12 01.0	295 05.6	-8 50.4					
Dif	—		-2 +13		+31 +3		+21 +1		+25	0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 21 ^d 7 PHE { 4 ^h : 59:3 12 ^h : 59:2 20 ^h : 59:1 SD: 16:1 PMG: 5 ^h 28 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	27.4	-13	17.5	281	11.3	-18	33.5	6 09	6 58	7 42	1 45	84	9 01	36
1	191	27.4		16.7	295	37.2		41.1	08	54	35	32	81	15	39
2	206	27.4		15.9	310	03.2		48.7	06	50	29	20	79	27	41
3	221	27.4		15.0	324	29.0		56.1	05	46	23	10	77	38	42
4	236	27.4		14.2	338	54.9		03.4	04	43	18	1 01	75	47	44
5	251	27.5	-13	13.3	353	20.7		10.6	6 02	6 40	7 14	0 53	73	9 56	45
6	266	27.5	-13	12.5	7	46.4		17.6	5 59	6 33	7 03	0 36	71	10 13	48
7	281	27.5		11.6	22	12.2		24.5	55	27	6 55	23	68	28	50
8	296	27.5		10.8	36	37.9		31.3	52	22	48	11	66	40	51
9	311	27.5		09.9	51	03.5		38.0	49	17	41	0 01	64	10 51	53
10	326	27.5		09.1	65	29.1		44.6	42	6 08	30	** ** *	**	11 10	54
11	341	27.6	-13	08.2	79	54.7		51.0	5 34	5 59	6 20	** ** *	**	11 26	56
12	356	27.6	-13	07.4	94	20.2		57.3	5 25	5 50	6 11	** ** *	**	11 41	58
13	11	27.6		06.6	108	45.8		03.4	14	40	6 01	23	55	57	59
14	26	27.6		05.7	123	11.2		09.4	5 01	28	5 51	38	56	12	13
15	41	27.6		04.9	137	36.7		15.3	4 44	14	39	18	55	32	63
16	56	27.7		04.0	152	02.1		21.1	33	5 05	32	23	07	54	64
17	71	27.7	-13	03.2	166	27.5		26.7	4 20	4 55	5 24	22	54	53	66
18	86	27.7	-13	02.3	180	52.8		32.2	4 04	4 43	5 15	22	38	52	68
19	101	27.7		01.5	195	18.2		37.6	3 43	28	5 04	19	50	28	70
20	116	27.8	-13	00.6	209	43.5		42.8	33	21	4 58	10	49	37	71
21	131	27.8	-12	59.8	224	08.7		47.9	33	12	53	22	00	48	72
22	146	27.8		58.9	238	34.0		52.9	3 06	4 03	46	21	49	47	73
23	161	27.8		58.1	252	59.2		57.7	2 49	3 53	39	36	45	14	10
24	176	27.8	-12	57.2	267	24.4		02.4	2 28	3 40	4 31	21	21	43	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 23 ^m 9		Mag: -4.2 PMG: 14 ^h 51 ^m		Mag: -0.9 PMG: 1 ^h 57 ^m		Mag: -2.3 PMG: 16 ^h 34 ^m		Mag: +0.5 PMG: 4 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	26.0	137	11.2	+2	32.6	330	45.4	+7	38.6
1	158	28.5	152	11.0		33.9	345	48.5		38.9
2	173	30.9	167	10.9		35.2	0	51.6		39.2
3	188	33.4	182	10.7		36.5	15	54.6		39.5
4	203	35.8	197	10.6		37.8	30	57.7		39.8
5	218	38.3	212	10.4	+2	39.1	46	00.8	+7	40.2
6	233	40.8	227	10.3	+2	40.4	61	03.8	+7	40.5
7	248	43.2	242	10.1		41.7	76	06.9		40.8
8	263	45.7	257	10.0		43.0	91	10.0		41.1
9	278	48.2	272	09.8		44.3	106	13.1		41.4
10	293	50.6	287	09.7		45.6	121	16.2		41.7
11	308	53.1	302	09.5	+2	46.9	136	19.2	+7	42.0
12	323	55.6	317	09.4	+2	48.2	151	22.3	+7	42.3
13	338	58.0	332	09.2		49.5	166	25.4		42.6
14	354	00.5	347	09.1		50.8	181	28.5		42.9
15	9	03.0	2	08.9		52.1	196	31.6		43.2
16	24	05.4	17	08.8		53.4	211	34.6		43.5
17	39	07.9	32	08.6	+2	54.7	226	37.7	+7	43.8
18	54	10.3	47	08.5	+2	56.0	241	40.8	+7	44.1
19	69	12.8	62	08.3		57.3	256	43.9		44.4
20	84	15.3	77	08.2	+2	58.6	271	47.0		44.8
21	99	17.7	92	08.0	+3	00.0	286	50.1		45.1
22	114	20.2	107	07.9	+3	01.3	301	53.2		45.4
23	129	22.7	122	07.7		02.6	316	56.3		45.7
24	144	25.1	137	07.6	+3	03.9	331	59.4	+7	46.0
Dif	—		-1 +13		+31 +3		+21 +1		+25 0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 22 ^d 7 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'7					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 14 ^m 1			SD: 16:1 PMG: 6 ^h 25 ^m R°: 59 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	27.8	-12 57.2	267	24.4	-21 02.4	62	60 N	16 49	17 34	18 22	3 09 70		9 37 51	
1	191	27.9	56.4	281	49.6	06.9	45	58	16 56	38	24	2 53 68		9 54 52	
2	206	27.9	55.5	296	14.7	11.3	44	56	17 02	41	25	39 67		10 08 53	
3	221	27.9	54.6	310	39.9	15.6	43	54	08	45	26	27 66		20 54	
4	236	27.9	53.8	325	05.0	19.7	41	52	13	48	27	16 66		31 54	
5	251	28.0	-12 52.9	339	30.1	-21 23.7	40	50	17 17	17 51	18 29	2 06 66		10 41 54	
6	266	28.0	-12 52.1	353	55.2	-21 27.6	39	45	17 27	17 57	18 32	1 47 64		11 01 55	
7	281	28.0	51.2	8	20.2	31.3	37	40	35	18 03	35	31 63		18 56	
8	296	28.0	50.4	22	45.3	34.9	36	35	42	08	38	17 62		31 57	
9	311	28.1	49.5	37	10.3	38.3	34	30	48	13	41	1 05 62		11 44 56	
10	326	28.1	48.7	51	35.3	41.6	33	20	17 59	21	47	0 45 60		12 04 58	
11	341	28.1	-12 47.8	66	00.4	-21 44.7	31	10 N	18 08	18 30	18 55	0 28 59		12 22 58	
12	356	28.2	-12 47.0	80	25.4	-21 47.8	31	0	18 18	18 39	19 03	0 11 59		12 39 58	
13	11	28.2	46.1	94	50.4	50.6	28	10 S	27	48	13	** ** *		12 56 59	
14	26	28.2	45.2	109	15.3	53.3	27	20	37	18 59	26	** ** *		13 14 59	
15	41	28.2	44.4	123	40.3	55.9	26	30	48	19 13	42	** ** *		35 59	
16	56	28.3	43.5	138	05.3	-21 58.4	25	35	18 55	21	19 53	** ** *		13 47 60	
17	71	28.3	-12 42.7	152	30.3	-22 00.7	23	40	19 02	19 31	20 05	23 47 58		14 01 60	
18	86	28.3	-12 41.8	166	55.2	-22 02.8	21	45	19 11	19 43	20 21	23 30 59		14 18 60	
19	101	28.4	41.0	181	20.2	04.8	20	50	22	19 57	41	23 09 59		38 60	
20	116	28.4	40.1	195	45.2	06.7	19	52	27	20 04	20 51	22 59 59		48 60	
21	131	28.4	39.2	210	10.1	08.4	17	54	32	12	21 03	48 59		14 59 60	
22	146	28.4	38.4	224	35.1	10.0	16	56	39	21	16	36 59		15 11 61	
23	161	28.5	37.5	239	00.1	11.4	14	58	45	31	32	21 59		25 61	
24	176	28.5	-12 36.7	253	25.1	-22 12.7	13	60 S	19 53	20 43	21 52	22 04 59		15 42 62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 20 ^m 0		Mag: -4.2 PMG: 14 ^h 52 ^m		Mag: -0.9 PMG: 1 ^h 52 ^m		Mag: -2.3 PMG: 16 ^h 30 ^m		Mag: +0.5 PMG: 4 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	144	25.1	137 07.6	+3 03.9	331 59.4	+7 46.0	111 48.3	+12 04.2	296 05.4	-8 49.9
1	159	27.6	152 07.4	05.2	347 02.5	46.3	126 50.4	04.4	311 07.9	49.9
2	174	30.1	167 07.3	06.5	2 05.6	46.6	141 52.5	04.5	326 10.3	49.9
3	189	32.5	182 07.2	07.8	17 08.7	46.9	156 54.6	04.6	341 12.8	49.9
4	204	35.0	197 07.0	09.1	32 11.8	47.2	171 56.7	04.8	356 15.3	49.9
5	219	37.4	212 06.9	+3 10.4	47 14.9	+7 47.6	186 58.8	+12 04.9	11 17.8	-8 49.8
6	234	39.9	227 06.7	+3 11.7	62 18.0	+7 47.9	202 00.9	+12 05.1	26 20.3	-8 49.8
7	249	42.4	242 06.6	13.0	77 21.1	48.2	217 03.0	05.2	41 22.8	49.8
8	264	44.8	257 06.4	14.3	92 24.2	48.5	232 05.1	05.3	56 25.3	49.8
9	279	47.3	272 06.3	15.6	107 27.3	48.8	247 07.2	05.5	71 27.8	49.8
10	294	49.8	287 06.1	16.9	122 30.4	49.1	262 09.3	05.6	86 30.3	49.7
11	309	52.2	302 06.0	+3 18.2	137 33.5	+7 49.4	277 11.4	+12 05.7	101 32.8	-8 49.7
12	324	54.7	317 05.8	+3 19.5	152 36.6	+7 49.8	292 13.5	+12 05.9	116 35.3	-8 49.7
13	339	57.2	332 05.7	20.8	167 39.7	50.1	307 15.6	06.0	131 37.8	49.7
14	354	59.6	347 05.6	22.1	182 42.8	50.4	322 17.7	06.2	146 40.3	49.6
15	10	02.1	2 05.4	23.4	197 45.9	50.7	337 19.8	06.3	161 42.7	49.6
16	25	04.6	17 05.3	24.7	212 49.0	51.0	352 21.9	06.4	176 45.2	49.6
17	40	07.0	32 05.1	+3 26.0	227 52.2	+7 51.3	7 24.0	+12 06.6	191 47.7	-8 49.6
18	55	09.5	47 05.0	+3 27.3	242 55.3	+7 51.7	22 26.1	+12 06.7	206 50.2	-8 49.6
19	70	11.9	62 04.8	28.6	257 58.4	52.0	37 28.2	06.8	221 52.7	49.5
20	85	14.4	77 04.7	29.9	273 01.5	52.3	52 30.3	07.0	236 55.2	49.5
21	100	16.9	92 04.5	31.2	288 04.6	52.6	67 32.4	07.1	251 57.7	49.5
22	115	19.3	107 04.4	32.5	303 07.8	52.9	82 34.5	07.3	267 00.2	49.5
23	130	21.8	122 04.3	33.8	318 10.9	53.2	97 36.6	07.4	282 02.7	49.4
24	145	24.3	137 04.1	+3 35.1	333 14.0	+7 53.6	112 38.7	+12 07.5	297 05.2	-8 49.4
Dif	—		-1	+13	+31	+3	+21	+1	+25	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 23 ^d 7 PHE { 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'4 PMG: 7 ^h 24 ^m R ^o : 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	28.5	-12	36.7	253	25.1	-22	12.7	10	60 N	6 05	6 53	7 37	4 19	52	10 28	67
1	191	28.5		35.8	267	50.1		13.9	12	58	03	49	30	4 01	53	10 46	66
2	206	28.6		34.9	282	15.1		14.9	8	56	02	46	24	3 46	54	11 01	65
3	221	28.6		34.1	296	40.1		15.7	10	54	01	42	19	33	54	14	64
4	236	28.6		33.2	311	05.1		16.4	7	52	6 00	39	14	22	54	25	64
5	251	28.7	-12	32.4	325	30.1	-22	17.0	6	50	5 59	6 37	7 10	3 12	55	11 35	64
6	266	28.7	-12	31.5	339	55.1	-22	17.5	5	45	5 56	6 30	7 00	2 51	55	11 56	63
7	281	28.7		30.6	354	20.2		17.7	2	40	53	25	6 52	34	56	12 14	61
8	296	28.8		29.8	8	45.3		17.9	2	35	50	20	46	19	57	28	61
9	311	28.8		28.9	23	10.4		17.9	0	30	47	15	40	2 07	56	12 40	60
10	326	28.8		28.0	37	35.5		17.8	1	20	41	6 06	29	1 45	58	13 02	59
11	341	28.9	-12	27.2	52	00.6	-22	17.5	3	10 N	5 33	5 58	6 20	1 27	57	13 20	58
12	356	28.9	-12	26.3	66	25.7	-22	17.1	4	0	5 25	5 49	6 11	1 10	58	13 37	58
13	11	28.9		25.4	80	50.9		16.5	6	10 S	15	40	6 02	0 52	59	13 55	56
14	26	29.0		24.6	95	16.1		15.8	7	20	5 02	29	5 52	34	58	14 13	55
15	41	29.0		23.7	109	41.3		14.9	9	30	4 46	16	41	13	59	34	54
16	56	29.0		22.8	124	06.6		13.9	10	35	36	5 08	34	0 01	58	14 47	53
17	71	29.1	-12	22.0	138	31.8	-22	12.8	11	40	4 23	4 58	5 27	** *	**	15 01	52
18	86	29.1	-12	21.1	152	57.1	-22	11.6	12	45	4 08	4 46	5 18	** *	**	15 18	51
19	101	29.2		20.2	167	22.5		10.1	15	50	3 48	32	07	** *	**	38	50
20	116	29.2		19.4	181	47.8		08.6	15	52	38	25	5 02	23	58	68	48
21	131	29.2		18.5	196	13.2		06.9	17	54	26	17	4 57	47	69	15	59
22	146	29.3		17.6	210	38.7		05.1	18	56	3 13	4 08	51	35	70	16	12
23	161	29.3		16.8	225	04.1		03.1	20	58	2 57	3 58	44	20	72	26	46
24	176	29.3	-12	15.9	239	29.6	-22	01.0	21	60 S	2 37	3 47	4 36	23 03	74	16 44	43

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 14 ^h 16 ^m 0		Mag: -4.2 PMG: 14 ^h 52 ^m			Mag: -0.9 PMG: 1 ^h 47 ^m			Mag: -2.3 PMG: 16 ^h 27 ^m			Mag: +0.5 PMG: 4 ^h 11 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	145	24.3	137	04.1	+3	35.1	333	14.0	+7	53.6	112	38.7	+12	07.5		
1	160	26.7	152	04.0		36.4	348	17.1		53.9	127	40.8		07.7		
2	175	29.2	167	03.8		37.7	3	20.2		54.2	142	42.9		07.8		
3	190	31.7	182	03.7		39.0	18	23.4		54.5	157	45.0		07.9		
4	205	34.1	197	03.5		40.3	33	26.5		54.8	172	47.1		08.1		
5	220	36.6	212	03.4	+3	41.6	48	29.6	+7	55.2	187	49.2	+12	08.2		
6	235	39.1	227	03.3	+3	42.9	63	32.8	+7	55.5	202	51.3	+12	08.4		
7	250	41.5	242	03.1		44.2	78	35.9		55.8	217	53.4		08.5		
8	265	44.0	257	03.0		45.5	93	39.0		56.1	232	55.5		08.6		
9	280	46.4	272	02.8		46.8	108	42.1		56.4	247	57.6		08.8		
10	295	48.9	287	02.7		48.1	123	45.3		56.8	262	59.7		08.9		
11	310	51.4	302	02.5	+3	49.4	138	48.4	+7	57.1	278	01.7	+12	09.0		
12	325	53.8	317	02.4	+3	50.7	153	51.5	+7	57.4	293	03.8	+12	09.2		
13	340	56.3	332	02.3		52.0	168	54.7		57.7	308	05.9		09.3		
14	355	58.8	347	02.1		53.3	183	57.8		58.1	323	08.0		09.5		
15	11	01.2	2	02.0		54.6	199	01.0		58.4	338	10.1		09.6		
16	26	03.7	17	01.8		55.9	214	04.1		58.7	353	12.2		09.7		
17	41	06.2	32	01.7	+3	57.2	229	07.2	+7	59.0	8	14.3	+12	09.9		
18	56	08.6	47	01.6	+3	58.5	244	10.4	+7	59.4	23	16.4	+12	10.0		
19	71	11.1	62	01.4	+3	59.8	259	13.5	+7	59.7	38	18.5		10.2		
20	86	13.6	77	01.3	+4	01.1	274	16.7	+8	00.0	53	20.6		10.3		
21	101	16.0	92	01.1		02.4	289	19.8	+8	00.3	68	22.7		10.4		
22	116	18.5	107	01.0		03.7	304	23.0		00.7	83	24.8		10.6		
23	131	20.9	122	00.9		05.0	319	26.1		01.0	98	26.9		10.7		
24	146	23.4	137	00.7	+4	06.3	334	29.3	+8	01.3	113	29.0	+12	10.8		
Dif	—		-1		+13		+31		+3		+21		+1		+25	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 24 ^d 7 PHE { 4 ^h : 58/2 12 ^h : 58/1 20 ^h : 58/0 PMG: 8 ^h 21 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m
0	176	29.3	-12	15.9	239	29.6	-22	01.0	60 N	16 55	17 38	18 27	5 11 36	11 35 80	
1	191	29.4		15.0	253	55.2	-21	58.8	58	17 01		42	4 54 38	11 52 76	
2	206	29.4		14.2	268	20.7		56.4	56	07	45	29	40 40	12 06 74	
3	221	29.5		13.3	282	46.4		53.9	54	12	49	30	27 42	18 73	
4	236	29.5		12.4	297	12.0		51.3	52	17	51	31	16 44	29 71	
5	251	29.5	-12	11.6	311	37.7	-21	48.5	50	17 21	17 54	18 32	4 07 44	12 39 69	
6	266	29.6	-12	10.7	326	03.5	-21	45.6	45	17 30	18 00	18 34	3 46 47	12 59 66	
7	281	29.6		09.8	340	29.2		42.6	40	37	05	37	30 48	13 15 64	
8	296	29.7		08.9	354	55.1		39.4	35	44	10	39	16 50	29 62	
9	311	29.7		08.1	9	20.9		36.1	30	17 50	14	42	3 03 52	13 40 62	
10	326	29.7		07.2	23	46.9		32.6	20	18 00	22	48	2 43 53	14 01 59	
11	341	29.8	-12	06.3	38	12.8	-21	29.1	10 N	18 09	18 30	18 55	2 24 55	14 18 57	
12	356	29.8	-12	05.5	52	38.9	-21	25.4	0	18 17	18 39	19 03	2 08 56	14 35 55	
13	11	29.9		04.6	67	04.9		21.5	10 S	26	48	13	1 51 57	14 51 53	
14	26	29.9		03.7	81	31.1		17.6	20	35	18 58	25	32 60	15 08 51	
15	41	29.9		02.8	95	57.2		13.5	30	46	19 11	40	1 12 61	28 49	
16	56	30.0		02.0	110	23.5		09.3	35	18 52	19	19 50	0 59 62	40 47	
17	71	30.0	-12	01.1	124	49.7	-21	05.0	40	19 00	19 28	20 02	0 45 64	15 53 45	
18	86	30.1	-12	00.2	139	16.1	-21	00.5	45	19 08	19 39	20 17	0 29 64	16 09 43	
19	101	30.1	-11	59.3	153	42.5	-20	55.9	50	18	19 53	37	0 08 67	28 40	
20	116	30.2		58.5	168	08.9		51.2	52	23	20 00	46	** ** *	37 39	
21	131	30.2		57.6	182	35.4		46.4	54	28	07	20 57	** ** *	47 37	
22	146	30.3		56.7	197	02.0		41.4	56	34	15	21 10	** ** *	16 59 35	
23	161	30.3		55.8	211	28.6		36.4	58	40	25	25	** ** *	17 12 33	
24	176	30.3	-11	55.0	225	55.3	-20	31.2	60 S	19 48	20 36	21 43	** ** *	17 27 30	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 12 ^m 1		Mag: -4.2 PMG: 14 ^h 52 ^m		Mag: -1.0 PMG: 1 ^h 42 ^m		Mag: -2.3 PMG: 16 ^h 24 ^m		Mag: +0.5 PMG: 4 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	146	23.4	137	00.7	334	29.3	+8	01.3	113	29.0					
1	161	25.9	152	00.6		07.6	349	32.4		01.6					
2	176	28.3	167	00.4		08.9	4	35.6		02.0					
3	191	30.8	182	00.3		10.2	19	38.7		02.3					
4	206	33.3	197	00.2		11.5	34	41.9		02.6					
5	221	35.7	212	00.0	+4	12.7	49	45.0	+8	03.0					
6	236	38.2	226	59.9	+4	14.0	64	48.2	+8	03.3					
7	251	40.7	241	59.7		15.3	79	51.3		03.6					
8	266	43.1	256	59.6		16.6	94	54.5		03.9					
9	281	45.6	271	59.5		17.9	109	57.7		04.3					
10	296	48.1	286	59.3		19.2	125	00.8		04.6					
11	311	50.5	301	59.2	+4	20.5	140	04.0	+8	04.9					
12	326	53.0	316	59.0	+4	21.8	155	07.1	+8	05.3					
13	341	55.4	331	58.9		23.1	170	10.3		05.6					
14	356	57.9	346	58.8		24.4	185	13.5		05.9					
15	12	00.4	1	58.6		25.7	200	16.6		06.2					
16	27	02.8	16	58.5		27.0	215	19.8		06.6					
17	42	05.3	31	58.4	+4	28.3	230	23.0	+8	06.9					
18	57	07.8	46	58.2	+4	29.6	245	26.1	+8	07.2					
19	72	10.2	61	58.1		30.9	260	29.3		07.6					
20	87	12.7	76	57.9		32.2	275	32.5		07.9					
21	102	15.2	91	57.8		33.5	290	35.6		08.2					
22	117	17.6	106	57.7		34.8	305	38.8		08.6					
23	132	20.1	121	57.5		36.1	320	42.0		08.9					
24	147	22.5	136	57.4	+4	37.3	335	45.2	+8	09.2					
Dif	—		-1		+13		+32		+3						
									+21						
									+1						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 9				Edad: 25 ^d 7 PHE { 4 ^h : 57/8 12 ^h : 57/7 20 ^h : 57/5 PMG: 9 ^h 17 ^m R°: 53 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	30.3	-11	55.0	225	55.3	-20	31.2	60 N	6 00	6 48	7 32	5 47 24	12 55 84		
1	191	30.4		54.1	240	22.0	77	25.9	58	5 59	45	25	32 28	13 08 81		
2	206	30.4		53.2	254	48.8	78	20.4	56	58	41	20	20 30	20 78		
3	221	30.5		52.3	269	15.7	79	14.9	55	57	38	15	09 33	31 77		
4	236	30.5		51.4	283	42.6	79	09.2	52	56	36	10	5 00 34	40 74		
5	251	30.6	-11	50.6	298	09.6	80	-20 03.4	50	5 55	6 33	7 06	4 51 36	13 48 72		
6	266	30.6	-11	49.7	312	36.6	80	-19 57.6	45	5 53	6 27	6 57	4 33 39	14 05 69		
7	281	30.7		48.8	327	03.8	82	51.5	40	51	22	50	18 42	19 66		
8	296	30.7		47.9	341	30.9	81	45.4	35	48	18	43	4 06 43	31 64		
9	311	30.8		47.1	355	58.2	83	39.2	30	45	13	38	3 55 45	14 42 61		
10	326	30.8		46.2	10	25.5	83	32.9	20	39	6 05	28	36 48	15 00 58		
11	341	30.9	-11	45.3	24	52.9	84	-19 26.4	10 N	5 33	5 58	6 19	3 19 51	15 15 55		
12	356	30.9	-11	44.4	39	20.3	84	-19 19.9	0	5 25	5 49	6 11	3 04 53	15 30 52		
13	11	31.0		43.5	53	47.8	85	13.2	10 S	15	41	6 02	2 48 56	44 49		
14	26	31.0		42.6	68	15.4	86	-19 06.4	20	5 04	30	5 53	32 58	15 59 47		
15	41	31.1		41.8	82	43.0	86	-18 59.6	30	4 48	17	42	13 61	16 17 43		
16	56	31.1		40.9	97	10.8	88	52.6	35	38	10	36	2 01 64	27 41		
17	71	31.2	-11	40.0	111	38.5	87	-18 45.5	40	4 26	5 00	5 29	1 49 65	16 38 39		
18	86	31.2	-11	39.1	126	06.4	89	-18 38.3	45	4 11	4 49	5 21	1 33 68	16 52 36		
19	101	31.3		38.2	140	34.3	89	31.0	50	3 52	36	11	15 71	17 08 33		
20	116	31.3		37.4	155	02.3	90	23.6	52	42	29	06	1 06 72	16 30		
21	131	31.4		36.5	169	30.3	90	16.2	54	32	22	5 01	0 56 74	24 29		
22	146	31.4		35.6	183	58.5	92	08.6	56	19	13	4 55	45 76	34 26		
23	161	31.5		34.7	198	26.7	92	-18 00.9	58	3 04	4 04	49	32 79	45 24		
24	176	31.5	-11	33.8	212	54.9	92	-17 53.1	60 S	2 46	3 53	4 41	0 17 82	17 57 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 08 ^m 2		Mag: -4.2 PMG: 14 ^h 52 ^m		Mag: -1.0 PMG: 1 ^h 37 ^m		Mag: -2.3 PMG: 16 ^h 20 ^m		Mag: +0.5 PMG: 4 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	147	22.5	136	57.4	+4	37.3	335	45.2	+8	09.2	114	19.1	+12	14.2	299	05.2	-8	48.3
1	162	25.0	151	57.3		38.6	350	48.3		09.6	129	21.2		14.3	314	07.7		48.2
2	177	27.5	166	57.1		39.9	5	51.5		09.9	144	23.3		14.5	329	10.2		48.2
3	192	29.9	181	57.0		41.2	20	54.7		10.2	159	25.4		14.6	344	12.7		48.2
4	207	32.4	196	56.9		42.5	35	57.9		10.6	174	27.5		14.8	359	15.2		48.1
5	222	34.9	211	56.7	+4	43.8	51	01.0	+8	10.9	189	29.5	+12	14.9	14	17.7	-8	48.1
6	237	37.3	226	56.6	+4	45.1	66	04.2	+8	11.2	204	31.6	+12	15.1	29	20.2	-8	48.1
7	252	39.8	241	56.4		46.4	81	07.4		11.6	219	33.7		15.2	44	22.7		48.1
8	267	42.3	256	56.3		47.7	96	10.6		11.9	234	35.8		15.3	59	25.2		48.0
9	282	44.7	271	56.2		49.0	111	13.8		12.3	249	37.9		15.5	74	27.7		48.0
10	297	47.2	286	56.0		50.3	126	17.0		12.6	264	40.0		15.6	89	30.2		48.0
11	312	49.7	301	55.9	+4	51.6	141	20.1	+8	12.9	279	42.1	+12	15.8	104	32.7	-8	48.0
12	327	52.1	316	55.8	+4	52.8	156	23.3	+8	13.3	294	44.1	+12	15.9	119	35.2	-8	47.9
13	342	54.6	331	55.6		54.1	171	26.5		13.6	309	46.2		16.0	134	37.7		47.9
14	357	57.0	346	55.5		55.4	186	29.7		13.9	324	48.3		16.2	149	40.2		47.9
15	12	59.5	1	55.4		56.7	201	32.9		14.3	339	50.4		16.3	164	42.7		47.9
16	28	02.0	16	55.2		58.0	216	36.1		14.6	354	52.5		16.5	179	45.2		47.8
17	43	04.4	31	55.1	+4	59.3	231	39.3	+8	15.0	9	54.6	+12	16.6	194	47.7	-8	47.8
18	58	06.9	46	55.0	+5	00.6	246	42.5	+8	15.3	24	56.6	+12	16.8	209	50.2	-8	47.8
19	73	09.4	61	54.8		01.9	261	45.7		15.6	39	58.7		16.9	224	52.8		47.8
20	88	11.8	76	54.7		03.2	276	48.9		16.0	55	00.8		17.0	239	55.3		47.7
21	103	14.3	91	54.5		04.5	291	52.1		16.3	70	02.9		17.2	254	57.8		47.7
22	118	16.8	106	54.4		05.7	306	55.3		16.7	85	05.0		17.3	270	00.3		47.7
23	133	19.2	121	54.3		07.0	321	58.5		17.0	100	07.1		17.5	285	02.8		47.6
24	148	21.7	136	54.1	+5	08.3	337	01.7	+8	17.3	115	09.1	+12	17.6	300	05.3	-8	47.6
Dif	—		-1 +13		+32 +3		+21 +1		+25 0									

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 9				Edad: 26 ^d 7 PHE { 4 ^h : 57:4 12 ^h : 57:2 20 ^h : 57:0 R°: 49 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	31.5	-11	33.8	212	54.9	-17	53.1	60 N	17 00	17 43	18 32	6 11	17	14	19	85
1	191	31.6		32.9	227	23.3	94	45.3	58	06	47	32	6 00	20	29	82	
2	206	31.6		32.0	241	51.7	94	37.3	56	11	50	33	5 50	23	38	79	
3	221	31.7		31.2	256	20.2	95	29.3	54	16	52	34	42	25	46	77	
4	236	31.7		30.3	270	48.7	95	21.1	52	20	55	34	34	27	14	54	74
5	251	31.8	-11	29.4	285	17.3	96	-17 12.9	50	17 24	17 57	18 35	5 27	29	15	00	72
6	266	31.8	-11	28.5	299	46.0	97	-17 04.6	45	17 33	18 03	18 37	5 12	33	15	14	68
7	281	31.9		27.6	314	14.8	98	-16 56.2	40	40	07	39	5 00	36	25	65	
8	296	32.0		26.7	328	43.6	98	47.7	35	46	12	41	4 49	39	35	62	
9	311	32.0		25.8	343	12.5	99	39.1	30	17 51	16	44	40	41	43	60	
10	326	32.1		25.0	357	41.5	100	30.4	20	18 01	23	49	24	45	15	58	55
11	341	32.1	-11	24.1	12	10.5	100	-16 21.7	10 N	18 09	18 31	18 55	4 10	48	16	10	52
12	356	32.2	-11	23.2	26	39.7	102	-16 12.9	0	18 17	18 38	19 03	3 57	51	16	22	49
13	11	32.2		22.3	41	08.8	101	-16 03.9	10 S	25	47	12	44	54	33	46	
14	26	32.3		21.4	55	38.1	103	-15 55.0	20	34	18 57	23	30	57	16	46	42
15	41	32.3		20.5	70	07.4	103	45.9	30	44	19 09	38	14	60	17	00	38
16	56	32.4		19.6	84	36.8	104	36.7	35	50	16	48	3 05	62	08	36	
17	71	32.5	-11	18.7	99	06.3	105	-15 27.5	40	18 57	19 25	19 59	2 54	65	17	17	34
18	86	32.5	-11	17.8	113	35.8	105	-15 18.2	45	19 05	19 36	20 14	2 41	69	17	28	30
19	101	32.6		17.0	128	05.4	106	-15 08.9	50	14	49	32	26	72	41	26	
20	116	32.6		16.1	142	35.1	107	-14 59.4	52	19	19 55	41	18	75	46	25	
21	131	32.7		15.2	157	04.9	108	49.9	54	24	20 02	20 51	10	77	17	53	23
22	146	32.7		14.3	171	34.7	108	40.3	56	29	10	21 03	2 01	79	18	00	21
23	161	32.8		13.4	186	04.6	109	30.7	58	35	19	17	1 51	81	09	18	
24	176	32.9	-11	12.5	200	34.5	109	-14 21.0	60 S	19 42	20 29	21 35	1 39	85	18	18	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 04 ^m 2		Mag: -4.2 PMG: 14 ^h 53 ^m		Mag: -1.0 PMG: 1 ^h 32 ^m		Mag: -2.3 PMG: 16 ^h 17 ^m		Mag: +0.5 PMG: 3 ^h 59 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	148	21.7	136	54.1	+5	08.3	337	01.7	+8	17.3
1	163	24.2	151	54.0		09.6	352	04.9		17.7
2	178	26.6	166	53.9		10.9	7	08.1		18.0
3	193	29.1	181	53.7		12.2	22	11.3		18.4
4	208	31.5	196	53.6		13.5	37	14.5		18.7
5	223	34.0	211	53.5	+5	14.8	52	17.7	+8	19.0
6	238	36.5	226	53.3	+5	16.1	67	20.9	+8	19.4
7	253	38.9	241	53.2		17.3	82	24.1		19.7
8	268	41.4	256	53.1		18.6	97	27.3		20.1
9	283	43.9	271	52.9		19.9	112	30.5		20.4
10	298	46.3	286	52.8		21.2	127	33.7		20.7
11	313	48.8	301	52.7	+5	22.5	142	36.9	+8	21.1
12	328	51.3	316	52.5	+5	23.8	157	40.1	+8	21.4
13	343	53.7	331	52.4		25.1	172	43.3		21.8
14	358	56.2	346	52.3		26.3	187	46.6		22.1
15	13	58.7	1	52.1		27.6	202	49.8		22.5
16	29	01.1	16	52.0		28.9	217	53.0		22.8
17	44	03.6	31	51.9	+5	30.2	232	56.2	+8	23.1
18	59	06.0	46	51.7	+5	31.5	247	59.4	+8	23.5
19	74	08.5	61	51.6		32.8	263	02.6		23.8
20	89	11.0	76	51.5		34.1	278	05.9		24.2
21	104	13.4	91	51.3		35.3	293	09.1		24.5
22	119	15.9	106	51.2		36.6	308	12.3		24.9
23	134	18.4	121	51.1		37.9	323	15.5		25.2
24	149	20.8	136	51.0	+5	39.2	338	18.7	+8	25.6

Dif	—	-1	+13	+32	+3	+21	+1	+25

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 27 ^d 7	PHE {										
	PMG: 12 ^h 13 ^m 8					4 ^h : 56'9		12 ^h : 56'7	20 ^h : 56'6						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	32.9	-11	12.5	200	34.5	-14	21.0	60 N	5 55	6 43	7 26	6 28	13	15 44 83
1	191	32.9		11.6	215	04.5 ¹¹⁰		11.2 ⁹⁸	58	54	40	20	20	16	51 80
2	206	33.0		10.7	229	34.6 ¹¹¹	-14	01.3 ⁹⁹	56	54	37	15	13	19	15 57 77
3	221	33.0		09.8	244	04.8 ¹¹²	-13	51.4 ⁹⁹	54	53	34	10	07	21	16 03 75
4	236	33.1		08.9	258	35.0 ¹¹²		41.4 ¹⁰⁰	52	53	32	06	6 01	23	08 72
5	251	33.2	-11	08.0	273	05.3 ¹¹³	-13	31.4 ¹⁰⁰	50	5 52	6 29	7 02	5 56	25	16 12 71
6	266	33.2	-11	07.1	287	35.7 ¹¹⁴	-13	21.3 ¹⁰¹	45	5 50	6 24	6 54	5 45	28	16 22 67
7	281	33.3		06.2	302	06.1 ¹¹⁴		11.1 ¹⁰²	40	48	20	47	36	31	30 64
8	296	33.4		05.3	316	36.6 ¹¹⁵	-13	00.9 ¹⁰²	35	46	16	41	28	34	37 61
9	311	33.4		04.5	331	07.1 ¹¹⁵	-12	50.6 ¹⁰³	30	44	12	36	21	36	43 58
10	326	33.5		03.6	345	37.7 ¹¹⁶		40.3 ¹⁰³	20	38	6 04	27	5 09	40	16 53 54
11	341	33.5	-11	02.7	0	08.4 ¹¹⁷	-12	29.9 ¹⁰⁴	10 N	5 32	5 57	6 18	4 58	44	17 02 51
12	356	33.6	-11	01.8	14	39.2 ¹¹⁸	-12	19.4 ¹⁰⁵	0	5 25	5 49	6 10	4 48	48	17 11 47
13	11	33.7	-11	00.9	29	10.0 ¹¹⁸	-12	08.9 ¹⁰⁵	10 S	16	41	6 02	38	51	19 43
14	26	33.7	-11	00.0	43	40.9 ¹¹⁹	-11	58.4 ¹⁰⁵	20	5 05	31	5 54	27	55	28 40
15	41	33.8	-10	59.1	58	11.8 ¹¹⁹		47.8 ¹⁰⁶	30	4 50	19	44	14	59	38 36
16	56	33.9		58.2	72	42.8 ¹²⁰		37.1 ¹⁰⁷	35	40	12	38	4 07	62	44 33
17	71	33.9	-10	57.3	87	13.9 ¹²¹	-11	26.4 ¹⁰⁷	40	4 29	5 03	5 31	3 59	64	17 51 30
18	86	34.0	-10	56.4	101	45.0 ¹²¹	-11	15.7 ¹⁰⁷	45	4 15	4 52	5 23	3 50	67	17 58 27
19	101	34.0		55.5	116	16.2 ¹²²	-11	04.9 ¹⁰⁸	50	3 56	39	14	38	71	18 07 23
20	116	34.1		54.6	130	47.4 ¹²²	-10	54.0 ¹⁰⁹	52	47	33	10	33	73	11 22
21	131	34.2		53.7	145	18.7 ¹²³		43.2 ¹⁰⁸	54	37	26	05	27	75	16 19
22	146	34.2		52.8	159	50.1 ¹²⁴		32.2 ¹¹⁰	56	25	18	5 00	20	78	21 17
23	161	34.3		51.9	174	21.5 ¹²⁴		21.2 ¹¹⁰	58	3 11	4 09	4 54	12	81	27 14
24	176	34.4	-10	51.0	188	53.0 ¹²⁵	-10	10.2 ¹¹⁰	60 S	2 54	3 59	4 47	3 04	84	18 33 12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 00 ^m 3		Mag: -4.2 PMG: 14 ^h 53 ^m		Mag: -1.0 PMG: 1 ^h 26 ^m		Mag: -2.3 PMG: 16 ^h 14 ^m		Mag: +0.5 PMG: 3 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	20.8	136	51.0	+5 39.2	338	18.7	+8 25.6	115	59.0
1	164	23.3	151	50.8	40.5	353	22.0	25.9	131	01.1
2	179	25.8	166	50.7	41.8	8	25.2	26.3	146	03.2
3	194	28.2	181	50.6	43.0	23	28.4	26.6	161	05.3
4	209	30.7	196	50.4	44.3	38	31.6	26.9	176	07.3
5	224	33.1	211	50.3	+5 45.6	53	34.9	+8 27.3	191	09.4
6	239	35.6	226	50.2	+5 46.9	68	38.1	+8 27.6	206	11.5
7	254	38.1	241	50.0	48.2	83	41.3	28.0	221	13.6
8	269	40.5	256	49.9	49.5	98	44.6	28.3	236	15.6
9	284	43.0	271	49.8	50.7	113	47.8	28.7	251	17.7
10	299	45.5	286	49.6	52.0	128	51.0	29.0	266	19.8
11	314	47.9	301	49.5	+5 53.3	143	54.3	+8 29.4	281	21.9
12	329	50.4	316	49.4	+5 54.6	158	57.5	+8 29.7	296	23.9
13	344	52.9	331	49.3	55.9	174	00.7	30.1	311	26.0
14	359	55.3	346	49.1	57.1	189	04.0	30.4	326	28.1
15	14	57.8	1	49.0	58.4	204	07.2	30.8	341	30.2
16	30	00.3	16	48.9	+5 59.7	219	10.4	31.1	356	32.2
17	45	02.7	31	48.7	+6 01.0	234	13.7	+8 31.5	11	34.3
18	60	05.2	46	48.6	+6 02.3	249	16.9	+8 31.8	26	36.4
19	75	07.6	61	48.5	03.5	264	20.2	32.2	41	38.4
20	90	10.1	76	48.3	04.8	279	23.4	32.5	56	40.5
21	105	12.6	91	48.2	06.1	294	26.6	32.9	71	42.6
22	120	15.0	106	48.1	07.4	309	29.9	33.2	86	44.7
23	135	17.5	121	48.0	08.7	324	33.1	33.6	101	46.7
24	150	20.0	136	47.8	+6 09.9	339	36.4	+8 33.9	116	48.8
Dif	—		-1	+13		+32	+3		+21	+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 28 ^d 7 PHE { SD: 15/4 PMG: 11 ^h 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	34.4	-10	51.0	188	53.0	-10	10.2	60 N	17 05	17 48	18 37	6 41	11	17 07 81	
1	191	34.4		50.1	203	24.5 ¹²⁵	-9	59.2 ¹¹⁰	58	11	51	37	36	14	11 78	
2	206	34.5		49.2	217	56.1 ¹²⁶		48.1 ¹¹¹	56	16	54	37	32	16	14 76	
3	221	34.6		48.3	232	27.8 ¹²⁷		37.0 ¹¹¹	54	20	56	37	28	18	18 77	
4	236	34.6		47.4	246	59.5 ¹²⁷		25.8 ¹¹²	52	24	17 58	38	24	20	20 72	
5	251	34.7	-10	46.5	261	31.2 ¹²⁷	-9	14.6 ¹¹²	50	17 28	18 01	18 38	6 21	21	17 23 69	
6	266	34.8	-10	45.6	276	03.1 ¹²⁹	-9	03.3 ¹¹³	45	17 35	18 05	18 39	6 13	26	17 29 65	
7	281	34.8		44.7	290	34.9 ¹²⁸	-8	52.1 ¹¹²	40	42	10	41	07	29	34 61	
8	296	34.9		43.8	305	06.9 ¹³⁰		40.8 ¹¹³	35	48	13	43	6	02 32	38 58	
9	311	35.0		42.9	319	38.8 ¹²⁹		29.4 ¹¹⁴	30	17 53	17	45	5	57 34	41 57	
10	326	35.1		42.0	334	10.9 ¹³¹		18.1 ¹¹³	20	18 02	24	50	49	39	47 52	
11	341	35.1	-10	41.1	348	42.9 ¹³⁰	-8	06.7 ¹¹⁴	10 N	18 10	18 31	18 56	5 42	42	17 53 48	
12	356	35.2	-10	40.2	3	15.1 ¹³²	-7	55.2 ¹¹⁵	0	18 17	18 38	19 02	5 36	45	17 58 44	
13	11	35.3		39.3	17	47.3 ¹³²		43.8 ¹¹⁴	10 S	25	46	11	29	49	18 02 42	
14	26	35.3		38.4	32	19.5 ¹³²		32.3 ¹¹⁵	20	33	18 55	22	22	52	08 37	
15	41	35.4		37.5	46	51.8 ¹³³		20.8 ¹¹⁵	30	42	19 07	36	13	58	14 33	
16	56	35.5		36.6	61	24.1 ¹³³	-7	09.3 ¹¹⁵	35	48	14	45	09	59	17 31	
17	71	35.5	-10	35.7	75	56.5 ¹³⁴	-6	57.7 ¹¹⁶	40	18 54	19 22	19 56	5 03	63	18 21 28	
18	86	35.6	-10	34.8	90	28.9 ¹³⁴	-6	46.1 ¹¹⁶	45	19 02	19 32	20 10	4 57	66	18 25 25	
19	101	35.7		33.9	105	01.4 ¹³⁵		34.5 ¹¹⁶	50	10	45	27	49	70	30 21	
20	116	35.8		33.0	119	33.9 ¹³⁵		22.9 ¹¹⁶	52	15	51	36	46	72	33 19	
21	131	35.8		32.0	134	06.4 ¹³⁵	-6	11.3 ¹¹⁶	54	19	19 57	46	42	74	35 18	
22	146	35.9		31.1	148	39.0 ¹³⁶	-5	59.6 ¹¹⁷	56	24	20 05	20 57	38	76	38 15	
23	161	36.0		30.2	163	11.7 ¹³⁷		48.0 ¹¹⁶	58	30	13	21 10	33	79	41 13	
24	176	36.0	-10	29.3	177	44.4 ¹³⁷	-5	36.3 ¹¹⁷	60 S	19 36	20 23	21 26	4 28	81	18 45 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 56 ^m 4		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: -1.1 PMG: 1 ^h 21 ^m			Mag: -2.3 PMG: 16 ^h 11 ^m			Mag: +0.5 PMG: 3 ^h 51 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	150	20.0	136	47.8	+6	09.9	339	36.4	+8	33.9	116	48.8	+12	24.5	302 05.8	-8 46.2
1	165	22.4	151	47.7		11.2	354	39.6		34.3	131	50.9		24.6	317 08.4	46.2
2	180	24.9	166	47.6		12.5	9	42.9		34.6	146	52.9		24.8	332 10.9	46.2
3	195	27.4	181	47.4		13.8	24	46.1		35.0	161	55.0		24.9	347 13.4	46.2
4	210	29.8	196	47.3		15.1	39	49.4		35.3	176	57.1		25.1	2 15.9	46.1
5	225	32.3	211	47.2	+6	16.3	54	52.6	+8	35.7	191	59.2	+12	25.2	17 18.4	-8 46.1
6	240	34.8	226	47.0	+6	17.6	69	55.9	+8	36.0	207	01.2	+12	25.4	32 20.9	-8 46.1
7	255	37.2	241	46.9		18.9	84	59.1		36.4	222	03.3		25.5	47 23.5	46.0
8	270	39.7	256	46.8		20.2	100	02.4		36.7	237	05.4		25.7	62 26.0	46.0
9	285	42.1	271	46.7		21.4	115	05.6		37.1	252	07.4		25.8	77 28.5	46.0
10	300	44.6	286	46.5		22.7	130	08.9		37.4	267	09.5		25.9	92 31.0	45.9
11	315	47.1	301	46.4	+6	24.0	145	12.1	+8	37.8	282	11.6	+12	26.1	107 33.5	-8 45.9
12	330	49.5	316	46.3	+6	25.3	160	15.4	+8	38.2	297	13.6	+12	26.2	122 36.0	-8 45.9
13	345	52.0	331	46.1		26.5	175	18.6		38.5	312	15.7		26.4	137 38.6	45.8
14	0	54.5	346	46.0		27.8	190	21.9		38.9	327	17.8		26.5	152 41.1	45.8
15	15	56.9	1	45.9		29.1	205	25.2		39.2	342	19.8		26.7	167 43.6	45.8
16	30	59.4	16	45.8		30.4	220	28.4		39.6	357	21.9		26.8	182 46.1	45.8
17	46	01.9	31	45.6	+6	31.6	235	31.7	+8	39.9	12	24.0	+12	27.0	197 48.6	-8 45.7
18	61	04.3	46	45.5	+6	32.9	250	34.9	+8	40.3	27	26.1	+12	27.1	212 51.1	-8 45.7
19	76	06.8	61	45.4		34.2	265	38.2		40.6	42	28.1		27.3	227 53.7	45.7
20	91	09.2	76	45.3		35.5	280	41.5		41.0	57	30.2		27.4	242 56.2	45.6
21	106	11.7	91	45.1		36.7	295	44.7		41.3	72	32.3		27.5	257 58.7	45.6
22	121	14.2	106	45.0		38.0	310	48.0		41.7	87	34.3		27.7	273 01.2	45.6
23	136	16.6	121	44.9		39.3	325	51.3		42.1	102	36.4		27.8	288 03.7	45.5
24	151	19.1	136	44.7	+6	40.6	340	54.5	+8	42.4	117	38.5	+12	28.0	303 06.3	-8 45.5
Dif	—		-1		+13	+33		+4	+21		+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 0 ^d 1 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'6 PMG: 12 ^h 32 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	36.0	-10 29.3	177	44.4	-5 36.3	60 N	5 49	6 38	7 20	6 52	10	18 28	79	
1	191	36.1	28.4	192	17.1 ¹³⁷	24.6 ¹¹⁷	58	49	35	15	50	12	29	76	
2	206	36.2	27.5	206	49.9 ¹³⁸	12.8 ¹¹⁸	56	49	32	10	48	14	30	73	
3	221	36.3	26.6	221	22.7 ¹³⁸	-5 01.1 ¹¹⁷	54	49	30	06	46	16	31	71	
4	236	36.3	25.7	235	55.6 ¹³⁹	-4 49.4 ¹¹⁷	52	49	28	7 02	44	19	32	69	
5	251	36.4	-10 24.8	250	28.5 ¹³⁹	-4 37.6 ¹¹⁸	50	5 48	6 26	6 59	6 42	21	18 32	68	
6	266	36.5	-10 23.9	265	01.4 ¹³⁹	-4 25.8 ¹¹⁸	45	5 47	6 21	6 51	6 39	24	18 34	64	
7	281	36.6	23.0	279	34.4 ¹⁴⁰	14.0 ¹¹⁸	40	46	17	44	36	27	35	61	
8	296	36.6	22.1	294	07.4 ¹⁴⁰	-4 02.2 ¹¹⁸	35	44	13	39	34	30	36	58	
9	311	36.7	21.2	308	40.4 ¹⁴⁰	-3 50.4 ¹¹⁸	30	42	10	34	31	33	38	55	
10	326	36.8	20.3	323	13.5 ¹⁴¹	38.6 ¹¹⁸	20	37	6 03	25	28	36	39	51	
11	341	36.9	-10 19.3	337	46.6 ¹⁴¹	-3 26.8 ¹¹⁸	10 N	5 32	5 56	6 18	6 24	41	18 41	47	
12	356	36.9	-10 18.4	352	19.7 ¹⁴¹	-3 15.0 ¹¹⁸	0	5 25	5 49	6 10	6 21	44	18 42	44	
13	11	37.0	17.5	6	52.9 ¹⁴²	-3 03.2 ¹¹⁸	10 S	16	41	6 03	18	47	44	40	
14	26	37.1	16.6	21	26.1 ¹⁴²	-2 51.4 ¹¹⁸	20	5 06	32	5 55	14	52	45	36	
15	41	37.2	15.7	35	59.4 ¹⁴³	39.5 ¹¹⁹	30	4 52	21	45	11	55	47	32	
16	56	37.3	14.8	50	32.7 ¹⁴³	27.7 ¹¹⁸	35	43	14	40	08	58	48	29	
17	71	37.3	-10 13.9	65	06.0 ¹⁴³	-2 15.9 ¹¹⁸	40	4 32	5 05	5 34	6 06	61	18 49	27	
18	86	37.4	-10 13.0	79	39.3 ¹⁴³	-2 04.0 ¹¹⁹	45	4 18	4 56	5 26	6 03	64	18 50	24	
19	101	37.5	12.1	94	12.7 ¹⁴⁴	-1 52.2 ¹¹⁸	50	4 01	43	18	5 59	69	51	20	
20	116	37.6	11.2	108	46.1 ¹⁴⁴	40.4 ¹¹⁸	52	3 52	37	13	58	70	52	18	
21	131	37.6	10.2	123	19.5 ¹⁴⁴	28.5 ¹¹⁹	54	42	31	09	56	72	53	16	
22	146	37.7	09.3	137	52.9 ¹⁴⁴	16.7 ¹¹⁸	56	31	23	5 04	54	74	53	15	
23	161	37.8	08.4	152	26.4 ¹⁴⁵	-1 04.9 ¹¹⁸	58	18	15	4 58	52	77	54	12	
24	176	37.9	-10 07.5	166	59.9 ¹⁴⁵	-0 53.1 ¹¹⁸	60 S	3 02	4 05	4 52	5 49	80	18 55	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 52 ^m 4		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: -1.1 PMG: 1 ^h 16 ^m			Mag: -2.3 PMG: 16 ^h 07 ^m			Mag: +0.5 PMG: 3 ^h 47 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	151	19.1	136	44.7	+6 40.6	340	54.5	+8 42.4	117	38.5	+12 28.0	303	06.3	-8 45.5	
1	166	21.6	151	44.6	41.8	355	57.8	42.8	132	40.5	28.1	318	08.8	45.5	
2	181	24.0	166	44.5	43.1	11	01.1	43.1	147	42.6	28.3	333	11.3	45.4	
3	196	26.5	181	44.4	44.4	26	04.3	43.5	162	44.7	28.4	348	13.8	45.4	
4	211	29.0	196	44.2	45.6	41	07.6	43.8	177	46.7	28.6	3	16.3	45.4	
5	226	31.4	211	44.1	+6 46.9	56	10.9	+8 44.2	192	48.8	+12 28.7	18	18.9	-8 45.3	
6	241	33.9	226	44.0	+6 48.2	71	14.1	+8 44.5	207	50.8	+12 28.9	33	21.4	-8 45.3	
7	256	36.4	241	43.9	49.5	86	17.4	44.9	222	52.9	29.0	48	23.9	45.3	
8	271	38.8	256	43.7	50.7	101	20.7	45.3	237	55.0	29.2	63	26.4	45.3	
9	286	41.3	271	43.6	52.0	116	24.0	45.6	252	57.0	29.3	78	28.9	45.2	
10	301	43.7	286	43.5	53.3	131	27.2	46.0	267	59.1	29.4	93	31.5	45.2	
11	316	46.2	301	43.3	+6 54.5	146	30.5	+8 46.3	283	01.2	+12 29.6	108	34.0	-8 45.2	
12	331	48.7	316	43.2	+6 55.8	161	33.8	+8 46.7	298	03.2	+12 29.7	123	36.5	-8 45.1	
13	346	51.1	331	43.1	57.1	176	37.1	47.0	313	05.3	29.9	138	39.0	45.1	
14	1	53.6	346	43.0	58.4	191	40.4	47.4	328	07.4	30.0	153	41.6	45.1	
15	16	56.1	1	42.8	+6 59.6	206	43.6	47.8	343	09.4	30.2	168	44.1	45.0	
16	31	58.5	16	42.7	+7 00.9	221	46.9	48.1	358	11.5	30.3	183	46.6	45.0	
17	47	01.0	31	42.6	+7 02.2	236	50.2	+8 48.5	13	13.5	+12 30.5	198	49.1	-8 45.0	
18	62	03.5	46	42.5	+7 03.4	251	53.5	+8 48.8	28	15.6	+12 30.6	213	51.6	-8 44.9	
19	77	05.9	61	42.3	04.7	266	56.8	49.2	43	17.7	30.8	228	54.2	44.9	
20	92	08.4	76	42.2	06.0	282	00.0	49.5	58	19.7	30.9	243	56.7	44.9	
21	107	10.8	91	42.1	07.2	297	03.3	49.9	73	21.8	31.1	258	59.2	44.8	
22	122	13.3	106	42.0	08.5	312	06.6	50.3	88	23.9	31.2	274	01.7	44.8	
23	137	15.8	121	41.8	09.8	327	09.9	50.6	103	25.9	31.4	289	04.3	44.8	
24	152	18.2	136	41.7	+7 11.0	342	13.2	+8 51.0	118	28.0	+12 31.5	304	06.8	-8 44.7	
Dif	—		-1 +13			+33 +4			+21 +1			+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 1 ^d 1 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1 PMG: 13 ^h 15 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	37.9	-10 07.5	166	59.9	-0 53.1		60 N	17 10	17 53	18 41	7 02	9	19 47	77
1	191	38.0	06.6	181	33.4 ¹⁴⁵	41.2 ¹¹⁹		58	15	56	41	02 12		45	75
2	206	38.0	05.7	196	07.0 ¹⁴⁶	29.4 ¹¹⁸		56	20	17 58	41	02 15		43	73
3	221	38.1	04.8	210	40.6 ¹⁴⁶	17.6 ¹¹⁸		54	24	18 00	41	02 17		42	70
4	236	38.2	03.8	225	14.2 ¹⁴⁶	-0 05.8 ¹¹⁸		52	28	02	41	03 18		41	68
5	251	38.3	-10 02.9	239	47.8 ¹⁴⁶	+0 05.9 ¹¹⁷		50	17 31	18 04	18 41	7 03	20	19 40	66
6	266	38.4	-10 02.0	254	21.4 ¹⁴⁶	+0 17.7 ¹¹⁸		45	17 38	18 08	18 42	7 03	24	19 38	62
7	281	38.4	01.1	268	55.1 ¹⁴⁷	29.5 ¹¹⁸		40	44	12	43	03 27		36	59
8	296	38.5	-10 00.2	283	28.8 ¹⁴⁷	41.2 ¹¹⁷		35	50	15	45	04 29		34	57
9	311	38.6	-9 59.3	298	02.4 ¹⁴⁶	+0 53.0 ¹¹⁸		30	17 54	18	46	04 32		33	54
10	326	38.7	58.4	312	36.2 ¹⁴⁸	+1 04.7 ¹¹⁷		20	18 02	25	51	04 36		30	50
11	341	38.8	-9 57.4	327	09.9 ¹⁴⁷	+1 16.4 ¹¹⁷		10 N	18 10	18 31	18 56	7 05	39	19 28	46
12	356	38.9	-9 56.5	341	43.6 ¹⁴⁷	+1 28.1 ¹¹⁷		0	18 17	18 38	19 02	7 05	43	19 26	43
13	11	38.9	55.6	356	17.4 ¹⁴⁸	39.8 ¹¹⁷		10 S	24	45	10	05 47		24	39
14	26	39.0	54.7	10	51.2 ¹⁴⁸	+1 51.5 ¹¹⁷		20	31	18 54	20	06 50		21	36
15	41	39.1	53.8	25	25.0 ¹⁴⁸	+2 03.1 ¹¹⁶		30	40	19 05	34	06 55		19	32
16	56	39.2	52.9	39	58.8 ¹⁴⁸	14.7 ¹¹⁶		35	45	11	42	06 57		17	30
17	71	39.3	-9 51.9	54	32.6 ¹⁴⁸	+2 26.3 ¹¹⁶		40	18 51	19 19	19 53	7 07	60	19 16	27
18	86	39.4	-9 51.0	69	06.5 ¹⁴⁹	+2 37.9 ¹¹⁶		45	18 58	19 29	20 06	7 07	63	19 14	24
19	101	39.4	50.1	83	40.3 ¹⁴⁸	+2 49.5 ¹¹⁶		50	19 06	41	23	08 67		11	21
20	116	39.5	49.2	98	14.2 ¹⁴⁹	+3 01.1 ¹¹⁶		52	10	46	31	08 69		10	19
21	131	39.6	48.3	112	48.0 ¹⁴⁸	12.6 ¹¹⁵		54	15	52	40	08 71		09	17
22	146	39.7	47.4	127	21.9 ¹⁴⁹	24.1 ¹¹⁵		56	19	19 59	20 51	08 73		08	15
23	161	39.8	46.4	141	55.8 ¹⁴⁹	35.6 ¹¹⁵		58	24	20 07	21 03	09 75		06	13
24	176	39.9	-9 45.5	156	29.7 ¹⁴⁹	+3 47.1 ¹¹⁵		60 S	19 30	20 17	21 18	7 09	78	19 05	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 48 ^m 5		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: -1.1 PMG: 1 ^h 11 ^m			Mag: -2.3 PMG: 16 ^h 04 ^m			Mag: +0.5 PMG: 3 ^h 43 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	152	18.2	136	41.7	+7 11.0	342	13.2	+8 51.0	118	28.0	+12 31.5	304	06.8	-8 44.7	
1	167	20.7	151	41.6	12.3	357	16.5	51.3	133	30.0	31.7	319	09.3	44.7	
2	182	23.2	166	41.5	13.6	12	19.8	51.7	148	32.1	31.8	334	11.8	44.7	
3	197	25.6	181	41.3	14.8	27	23.0	52.1	163	34.2	31.9	349	14.3	44.6	
4	212	28.1	196	41.2	16.1	42	26.3	52.4	178	36.2	32.1	4	16.9	44.6	
5	227	30.6	211	41.1	+7 17.4	57	29.6	+8 52.8	193	38.3	+12 32.2	19	19.4	-8 44.6	
6	242	33.0	226	41.0	+7 18.6	72	32.9	+8 53.1	208	40.3	+12 32.4	34	21.9	-8 44.5	
7	257	35.5	241	40.8	19.9	87	36.2	53.5	223	42.4	32.5	49	24.4	44.5	
8	272	38.0	256	40.7	21.2	102	39.5	53.9	238	44.5	32.7	64	27.0	44.5	
9	287	40.4	271	40.6	22.4	117	42.8	54.2	253	46.5	32.8	79	29.5	44.4	
10	302	42.9	286	40.5	23.7	132	46.1	54.6	268	48.6	33.0	94	32.0	44.4	
11	317	45.3	301	40.3	+7 24.9	147	49.4	+8 54.9	283	50.6	+12 33.1	109	34.5	-8 44.4	
12	332	47.8	316	40.2	+7 26.2	162	52.7	+8 55.3	298	52.7	+12 33.3	124	37.1	-8 44.3	
13	347	50.3	331	40.1	27.5	177	56.0	55.7	313	54.8	33.4	139	39.6	44.3	
14	2	52.7	346	40.0	28.7	192	59.3	56.0	328	56.8	33.6	154	42.1	44.3	
15	17	55.2	1	39.8	30.0	208	02.6	56.4	343	58.9	33.7	169	44.6	44.2	
16	32	57.7	16	39.7	31.3	223	05.9	56.7	359	00.9	33.9	184	47.2	44.2	
17	48	00.1	31	39.6	+7 32.5	238	09.2	+8 57.1	14	03.0	+12 34.0	199	49.7	-8 44.2	
18	63	02.6	46	39.5	+7 33.8	253	12.5	+8 57.5	29	05.1	+12 34.2	214	52.2	-8 44.1	
19	78	05.1	61	39.3	35.0	268	15.8	57.8	44	07.1	34.3	229	54.8	44.1	
20	93	07.5	76	39.2	36.3	283	19.1	58.2	59	09.2	34.5	244	57.3	44.1	
21	108	10.0	91	39.1	37.6	298	22.4	58.6	74	11.2	34.6	259	59.8	44.0	
22	123	12.4	106	39.0	38.8	313	25.7	58.9	89	13.3	34.8	275	02.3	44.0	
23	138	14.9	121	38.9	40.1	328	29.0	59.3	104	15.3	34.9	290	04.9	44.0	
24	153	17.4	136	38.7	+7 41.3	343	32.3	+8 59.6	119	17.4	+12 35.1	305	07.4	-8 43.9	
Dif	—		-1	+13		+33	+4		+21		+1	+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 3			Edad: 2 ^d 1	PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'7 R°: 43 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	176	39.9	-9 45.5	156	29.7	+3 47.1		60 N	5 44	6 32	7 15	7 11	11	21 04	77	
1	191	40.0		171	03.6 ¹⁴⁹	+3 58.5 ¹¹⁴		58	45	30	10	14	13	21 00	73	
2	206	40.0		185	37.5 ¹⁴⁹	+4 09.9 ¹¹⁴		56	45	28	05	17	15	20 56	71	
3	221	40.1		200	11.4 ¹⁴⁹		21.3 ¹¹⁴	54	45	26	7 02	19	17	52	69	
4	236	40.2		214	45.3 ¹⁴⁹		32.7 ¹¹⁴	52	45	24	6 58	21	19	49	67	
5	251	40.3	-9 40.9	229	19.3 ¹⁵⁰	+4 44.0 ¹¹³		50	5 45	6 22	6 55	7 23	20	20 46	66	
6	266	40.4	-9 40.0	243	53.2 ¹⁴⁹	+4 55.3 ¹¹³		45	5 44	6 18	6 48	7 27	24	20 40	62	
7	281	40.5		258	27.1 ¹⁴⁹	+5 06.6 ¹¹³		40	43	14	42	30	27	35	59	
8	296	40.6		273	01.0 ¹⁴⁹		17.9 ¹¹³	35	42	11	37	33	30	31	56	
9	311	40.7		287	35.0 ¹⁵⁰		29.1 ¹¹²	30	40	08	32	36	32	27	53	
10	326	40.7		302	08.9 ¹⁴⁹		40.3 ¹¹²	20	36	6 02	24	40	36	20	50	
11	341	40.8	-9 35.4	316	42.9 ¹⁵⁰	+5 51.5 ¹¹²		10 N	5 31	5 55	6 17	7 44	40	20 14	47	
12	356	40.9	-9 34.5	331	16.8 ¹⁴⁹	+6 02.6 ¹¹¹		0	5 25	5 49	6 10	7 48	43	20 09	43	
13	11	41.0		345	50.7 ¹⁴⁹		13.7 ¹¹¹	10 S	17	42	6 03	52	46	20 03	40	
14	26	41.1		32.6	0 24.7 ¹⁵⁰		24.8 ¹¹¹	20	5 07	33	5 55	7 56	50	19 57	37	
15	41	41.2		14	58.6 ¹⁴⁹		35.8 ¹¹⁰	30	4 53	22	47	8 01	54	51	33	
16	56	41.3		29	32.5 ¹⁴⁹		46.8 ¹¹⁰	35	45	16	42	03	57	47	30	
17	71	41.4	-9 29.9	44	06.5 ¹⁵⁰	+6 57.7 ¹⁰⁹		40	4 34	5 08	5 36	8 07	58	19 43	28	
18	86	41.5	-9 28.9	58	40.4 ¹⁴⁹	+7 08.7 ¹¹⁰		45	4 21	4 59	5 29	8 10	62	19 38	25	
19	101	41.6		73	14.3 ¹⁴⁹		19.6 ¹⁰⁹	50	4 05	47	21	15	65	32	21	
20	116	41.6		87	48.2 ¹⁴⁹		30.4 ¹⁰⁸	52	3 57	41	17	17	67	29	20	
21	131	41.7		102	22.1 ¹⁴⁹		41.2 ¹⁰⁸	54	48	35	13	19	69	26	18	
22	146	41.8		116	56.0 ¹⁴⁹	+7 52.0 ¹⁰⁸		56	37	28	08	21	72	23	16	
23	161	41.9		131	29.9 ¹⁴⁹	+8 02.7 ¹⁰⁷		58	25	20	5 03	24	74	19	14	
24	176	42.0	-9 23.4	146	03.8 ¹⁴⁹	+8 13.4 ¹⁰⁷		60 S	3 10	4 11	4 57	8 27	77	19 15	11	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 44 ^m 6			Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: -1.1 PMG: 1 ^h 06 ^m			Mag: -2.2 PMG: 16 ^h 01 ^m			Mag: +0.5 PMG: 3 ^h 39 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	153	17.4	136 38.7	+7 41.3		343 32.3	+8 59.6		119 17.4	+12 35.1		305 07.4	-8 43.9			
1	168	19.8	151 38.6		42.6	358 35.6	+9 00.0		134 19.5		35.2	320 09.9		43.9		
2	183	22.3	166 38.5		43.9	13 38.9	+9 00.4		149 21.5		35.4	335 12.4		43.9		
3	198	24.8	181 38.4		45.1	28 42.2		00.7	164 23.6		35.5	350 15.0		43.8		
4	213	27.2	196 38.2		46.4	43 45.5		01.1	179 25.6		35.7	5 17.5		43.8		
5	228	29.7	211 38.1	+7 47.6		58 48.8	+9 01.4		194 27.7	+12 35.8		20 20.0	-8 43.8			
6	243	32.2	226 38.0	+7 48.9		73 52.1	+9 01.8		209 29.7	+12 36.0		35 22.6	-8 43.7			
7	258	34.6	241 37.9		50.2	88 55.5		02.2	224 31.8		36.1	50 25.1		43.7		
8	273	37.1	256 37.7		51.4	103 58.8		02.5	239 33.8		36.3	65 27.6		43.7		
9	288	39.6	271 37.6		52.7	119 02.1		02.9	254 35.9		36.4	80 30.1		43.6		
10	303	42.0	286 37.5		53.9	134 05.4		03.3	269 37.9		36.5	95 32.7		43.6		
11	318	44.5	301 37.4	+7 55.2		149 08.7	+9 03.6		284 40.0	+12 36.7		110 35.2	-8 43.6			
12	333	46.9	316 37.2	+7 56.4		164 12.0	+9 04.0		299 42.1	+12 36.8		125 37.7	-8 43.5			
13	348	49.4	331 37.1		57.7	179 15.3		04.4	314 44.1		37.0	140 40.3		43.5		
14	3	51.9	346 37.0	+7 59.0		194 18.6		04.7	329 46.2		37.1	155 42.8		43.4		
15	18	54.3	1 36.9	+8 00.2		209 22.0		05.1	344 48.2		37.3	170 45.3		43.4		
16	33	56.8	16 36.8		01.5	224 25.3		05.4	359 50.3		37.4	185 47.8		43.4		
17	48	59.3	31 36.6	+8 02.7		239 28.6	+9 05.8		14 52.3	+12 37.6		200 50.4	-8 43.3			
18	64	01.7	46 36.5	+8 04.0		254 31.9	+9 06.2		29 54.4	+12 37.7		215 52.9	-8 43.3			
19	79	04.2	61 36.4		05.2	269 35.2		06.5	44 56.4		37.9	230 55.4		43.3		
20	94	06.7	76 36.3		06.5	284 38.6		06.9	59 58.5		38.0	245 58.0		43.2		
21	109	09.1	91 36.1		07.7	299 41.9		07.3	75 00.5		38.2	261 00.5		43.2		
22	124	11.6	106 36.0		09.0	314 45.2		07.6	90 02.6		38.3	276 03.0		43.2		
23	139	14.0	121 35.9		10.2	329 48.5		08.0	105 04.6		38.5	291 05.6		43.1		
24	154	16.5	136 35.8	+8 11.5		344 51.8	+9 08.4		120 06.7	+12 38.6		306 08.1	-8 43.1			
Dif	—			-1	+13	+33		+4	+21		+1	+25				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 1			Edad: 3 ^d 1 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 PMG: 14 ^h 41 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	42.0	-9 23.4	146	03.8	+8 13.4	107	60 N	17 15	17 58	18 46	7 22 12	22 21 75		
1	191	42.1	22.5	160	37.7 ¹⁴⁹	24.1 ¹⁰⁷	58	58	20	18 00	46	27 15	13 73		
2	206	42.2	21.5	175	11.5 ¹⁴⁸	34.7 ¹⁰⁶	56	56	24	02	45	32 17	07 70		
3	221	42.3	20.6	189	45.4 ¹⁴⁹	45.3 ¹⁰⁶	54	54	28	04	45	36 19	22 01 66		
4	236	42.4	19.7	204	19.3 ¹⁴⁹	+8 55.8 ¹⁰⁵	52	52	31	05	45	40 21	21 56 66		
5	251	42.5	-9 18.8	218	53.1 ¹⁴⁸	+9 06.3 ¹⁰⁵	50	50	17 34	18 07	18 45	7 43 23	21 52 64		
6	266	42.6	-9 17.8	233	26.9 ¹⁴⁸	+9 16.7 ¹⁰⁴	45	45	17 41	18 11	18 45	7 51 26	21 42 61		
7	281	42.7	16.9	248	00.7 ¹⁴⁸	27.1 ¹⁰⁴	40	40	47	14	45	7 57 29	34 58		
8	296	42.8	16.0	262	34.5 ¹⁴⁸	37.5 ¹⁰⁴	35	35	51	17	46	8 03 31	27 55		
9	311	42.9	15.1	277	08.3 ¹⁴⁸	47.8 ¹⁰³	30	30	17 56	20	48	08 33	20 54		
10	326	42.9	14.1	291	42.1 ¹⁴⁸	+9 58.1 ¹⁰³	20	20	18 03	26	51	16 38	10 50		
11	341	43.0	-9 13.2	306	15.8 ¹⁴⁷	+10 08.3 ¹⁰²	10 N	10 N	18 10	18 31	18 56	8 24 40	21 01 47		
12	356	43.1	-9 12.3	320	49.6 ¹⁴⁸	+10 18.4 ¹⁰¹	0	0	18 16	18 37	19 02	8 31 44	20 52 44		
13	11	43.2	11.3	335	23.3 ¹⁴⁷	28.6 ¹⁰²	10 S	10 S	23	44	09	38 47	43 41		
14	26	43.3	10.4	349	57.0 ¹⁴⁷	38.6 ¹⁰⁰	20	20	30	18 52	19	46 50	34 38		
15	41	43.4	09.5	4	30.7 ¹⁴⁷	48.7 ¹⁰¹	30	30	38	19 03	31	8 55 53	24 34		
16	56	43.5	08.6	19	04.4 ¹⁴⁷	+10 58.6 ⁹⁹	35	35	43	09	40	9 00 55	17 33		
17	71	43.6	-9 07.6	33	38.0 ¹⁴⁶	+11 08.5 ⁹⁹	40	40	18 48	19 16	19 50	9 05 59	20 11 30		
18	86	43.7	-9 06.7	48	11.7 ¹⁴⁷	+11 18.4 ⁹⁹	45	45	18 55	19 25	20 02	9 12 62	20 03 27		
19	101	43.8	05.8	62	45.3 ¹⁴⁶	28.2 ⁹⁸	50	50	19 02	36	18	20 65	19 53 24		
20	116	43.9	04.8	77	18.9 ¹⁴⁶	38.0 ⁹⁸	52	52	06	42	26	24 67	49 22		
21	131	44.0	03.9	91	52.5 ¹⁴⁶	47.7 ⁹⁷	54	54	10	47	34	28 69	44 21		
22	146	44.1	03.0	106	26.0 ¹⁴⁵	+11 57.4 ⁹⁷	56	56	14	19 54	44	33 71	39 18		
23	161	44.2	02.1	120	59.6 ¹⁴⁶	+12 07.0 ⁹⁶	58	58	19	20 01	20 56	38 73	33 16		
24	176	44.3	-9 01.1	135	33.1 ¹⁴⁵	+12 16.5 ⁹⁵	60 S	60 S	19 24	20 10	21 10	9 44 76	19 26 14		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 40 ^m 7		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: -1.1 PMG: 1 ^h 00 ^m			Mag: -2.2 PMG: 15 ^h 57 ^m			Mag: +0.5 PMG: 3 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	
0	154	16.5	136	35.8	+8 11.5	344	51.8	+9 08.4	120	06.7	+12 38.6	306	08.1	-8 43.1	
1	169	19.0	151	35.7	12.7	359	55.2	08.7	135	08.7	38.8	321	10.6	43.1	
2	184	21.4	166	35.5	14.0	14	58.5	09.1	150	10.8	38.9	336	13.2	43.0	
3	199	23.9	181	35.4	15.3	30	01.8	09.4	165	12.8	39.1	351	15.7	43.0	
4	214	26.4	196	35.3	16.5	45	05.1	09.8	180	14.9	39.2	6	18.2	43.0	
5	229	28.8	211	35.2	+8 17.8	60	08.5	+9 10.2	195	16.9	+12 39.4	21	20.7	-8 42.9	
6	244	31.3	226	35.1	+8 19.0	75	11.8	+9 10.5	210	19.0	+12 39.5	36	23.3	-8 42.9	
7	259	33.8	241	34.9	20.3	90	15.1	10.9	225	21.0	39.7	51	25.8	42.8	
8	274	36.2	256	34.8	21.5	105	18.4	11.3	240	23.1	39.8	66	28.3	42.8	
9	289	38.7	271	34.7	22.8	120	21.8	11.6	255	25.1	40.0	81	30.9	42.8	
10	304	41.2	286	34.6	24.0	135	25.1	12.0	270	27.2	40.1	96	33.4	42.7	
11	319	43.6	301	34.4	+8 25.3	150	28.4	+9 12.4	285	29.2	+12 40.3	111	35.9	-8 42.7	
12	334	46.1	316	34.3	+8 26.5	165	31.8	+9 12.7	300	31.3	+12 40.4	126	38.5	-8 42.7	
13	349	48.5	331	34.2	27.8	180	35.1	13.1	315	33.3	40.6	141	41.0	42.6	
14	4	51.0	346	34.1	29.0	195	38.4	13.5	330	35.4	40.7	156	43.5	42.6	
15	19	53.5	1	34.0	30.2	210	41.8	13.8	345	37.4	40.9	171	46.1	42.6	
16	34	55.9	16	33.8	31.5	225	45.1	14.2	0	39.5	41.0	186	48.6	42.5	
17	49	58.4	31	33.7	+8 32.7	240	48.4	+9 14.6	15	41.5	+12 41.2	201	51.1	-8 42.5	
18	65	00.9	46	33.6	+8 34.0	255	51.8	+9 14.9	30	43.6	+12 41.3	216	53.7	-8 42.4	
19	80	03.3	61	33.5	35.2	270	55.1	15.3	45	45.6	41.5	231	56.2	42.4	
20	95	05.8	76	33.4	36.5	285	58.4	15.6	60	47.7	41.6	246	58.7	42.4	
21	110	08.3	91	33.2	37.7	301	01.8	16.0	75	49.7	41.8	262	01.3	42.3	
22	125	10.7	106	33.1	39.0	316	05.1	16.4	90	51.8	42.0	277	03.8	42.3	
23	140	13.2	121	33.0	40.2	331	08.4	16.7	105	53.8	42.1	292	06.4	42.3	
24	155	15.7	136	32.9	+8 41.5	346	11.8	+9 17.1	120	55.9	+12 42.3	307	08.9	-8 42.2	
Dif	—		-1		+12	+33		+4	+20		+2	+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 4 ^d 1	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 45 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	44.3	-9 01.1	135	33.1	+12 16.5	60 N	5 39	6 27	7 09		7 34	16	23 36	73
1	191	44.4	-9 00.2	150	06.6 ¹⁴⁵	26.0 ⁹⁵	58	40	25	05		42	18	26	70
2	206	44.5	-8 59.3	164	40.1 ¹⁴⁵	35.5 ⁹⁵	56	40	23	7 01		49	21	17	68
3	221	44.6	58.3	179	13.5 ¹⁴⁴	44.9 ⁹⁴	54	40	21	6 57		7 55	23	09	67
4	236	44.7	57.4	193	46.9 ¹⁴⁴	+12 54.2 ⁹³	52	41	20	54		8 01	24	23	02 65
5	251	44.8	-8 56.5	208	20.3 ¹⁴⁴	+13 03.5 ⁹³	50	5 41	6 18	6 51		8 06	26	22	56 63
6	266	44.9	-8 55.5	222	53.7 ¹⁴⁴	+13 12.7 ⁹²	45	5 41	6 15	6 44		8 17	29	22	43 60
7	281	45.0	54.6	237	27.1 ¹⁴⁴	21.8 ⁹¹	40	40	12	39		26	32	32	57
8	296	45.1	53.7	252	00.4 ¹⁴³	30.9 ⁹¹	35	39	09	34		34	34	22	55
9	311	45.2	52.7	266	33.7 ¹⁴³	40.0 ⁹¹	30	38	06	30		41	36	14	53
10	326	45.3	51.8	281	07.0 ¹⁴³	48.9 ⁸⁹	20	35	6 00	23		8 54	39	22	00 50
11	341	45.4	-8 50.9	295	40.2 ¹⁴²	+13 57.9 ⁹⁰	10 N	5 30	5 55	6 16		9 04	42	21	48 47
12	356	45.5	-8 49.9	310	13.4 ¹⁴²	+14 06.7 ⁸⁸	0	5 24	5 49	6 10		9 15	44	21	36 45
13	11	45.6	49.0	324	46.6 ¹⁴²	15.5 ⁸⁸	10 S	17	42	6 03		25	47	24	43
14	26	45.7	48.1	339	19.8 ¹⁴²	24.2 ⁸⁷	20	5 08	34	5 56		36	50	21	12 41
15	41	45.8	47.1	353	52.9 ¹⁴¹	32.9 ⁸⁷	30	4 55	24	48		48	54	20	58 38
16	56	45.9	46.2	8	26.0 ¹⁴¹	41.5 ⁸⁶	35	47	18	44		9 55	56	50	36
17	71	46.0	-8 45.3	22	59.1 ¹⁴¹	+14 50.0 ⁸⁵	40	4 37	5 10	5 38		10 04	58	20	41 33
18	86	46.1	-8 44.3	37	32.1 ¹⁴⁰	+14 58.5 ⁸⁵	45	4 25	5 02	5 32		10 14	60	20	30 31
19	101	46.2	43.4	52	05.1 ¹⁴⁰	+15 06.9 ⁸⁴	50	09	4 51	24		25	64	17	28
20	116	46.3	42.5	66	38.1 ¹⁴⁰	15.2 ⁸³	52	4 01	45	21		31	65	11	27
21	131	46.4	41.5	81	11.1 ¹⁴⁰	23.5 ⁸³	54	3 53	40	17		37	67	20	05 24
22	146	46.5	40.6	95	44.0 ¹³⁹	31.7 ⁸²	56	43	33	13		44	69	19	57 23
23	161	46.6	39.7	110	16.9 ¹³⁹	39.9 ⁸²	58	31	26	08		10 51	72	49	20
24	176	46.7	-8 38.7	124	49.7 ¹³⁸	+15 47.9 ⁸⁰	60 S	3 17	4 17	5 03		11 00	75	19	40 17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 36 ^m 7		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: -1.2 PMG: 0 ^h 55 ^m			Mag: -2.2 PMG: 15 ^h 54 ^m			Mag: +0.5 PMG: 3 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	155	15.7	136	32.9	+8 41.5	346	11.8	+9 17.1	120	55.9	+12 42.3	307	08.9	-8 42.2	
1	170	18.1	151	32.8	42.7	1	15.1	17.5	135	57.9	42.4	322	11.4	42.2	
2	185	20.6	166	32.6	44.0	16	18.4	17.8	151	00.0	42.6	337	14.0	42.2	
3	200	23.0	181	32.5	45.2	31	21.8	18.2	166	02.0	42.7	352	16.5	42.1	
4	215	25.5	196	32.4	46.4	46	25.1	18.6	181	04.1	42.9	7	19.0	42.1	
5	230	28.0	211	32.3	+8 47.7	61	28.5	+9 18.9	196	06.1	+12 43.0	22	21.6	-8 42.0	
6	245	30.4	226	32.2	+8 48.9	76	31.8	+9 19.3	211	08.1	+12 43.2	37	24.1	-8 42.0	
7	260	32.9	241	32.0	50.2	91	35.2	19.7	226	10.2	43.3	52	26.6	42.0	
8	275	35.4	256	31.9	51.4	106	38.5	20.0	241	12.2	43.5	67	29.2	41.9	
9	290	37.8	271	31.8	52.7	121	41.8	20.4	256	14.3	43.6	82	31.7	41.9	
10	305	40.3	286	31.7	53.9	136	45.2	20.8	271	16.3	43.8	97	34.2	41.9	
11	320	42.8	301	31.6	+8 55.1	151	48.5	+9 21.1	286	18.4	+12 43.9	112	36.8	-8 41.8	
12	335	45.2	316	31.4	+8 56.4	166	51.9	+9 21.5	301	20.4	+12 44.1	127	39.3	-8 41.8	
13	350	47.7	331	31.3	57.6	181	55.2	21.9	316	22.5	44.2	142	41.9	41.7	
14	5	50.1	346	31.2	+8 58.9	196	58.6	22.2	331	24.5	44.4	157	44.4	41.7	
15	20	52.6	1	31.1	+9 00.1	212	01.9	22.6	346	26.6	44.5	172	46.9	41.7	
16	35	55.1	16	31.0	01.3	227	05.3	23.0	1	28.6	44.7	187	49.5	41.6	
17	50	57.5	31	30.8	+9 02.6	242	08.6	+9 23.3	16	30.6	+12 44.8	202	52.0	-8 41.6	
18	66	00.0	46	30.7	+9 03.8	257	12.0	+9 23.7	31	32.7	+12 45.0	217	54.5	-8 41.6	
19	81	02.5	61	30.6	05.1	272	15.3	24.1	46	34.7	45.1	232	57.1	41.5	
20	96	04.9	76	30.5	06.3	287	18.7	24.4	61	36.8	45.3	247	59.6	41.5	
21	111	07.4	91	30.4	07.5	302	22.0	24.8	76	38.8	45.4	263	02.2	41.4	
22	126	09.9	106	30.2	08.8	317	25.4	25.2	91	40.9	45.6	278	04.7	41.4	
23	141	12.3	121	30.1	10.0	332	28.7	25.5	106	42.9	45.7	293	07.2	41.4	
24	156	14.8	136	30.0	+9 11.2	347	32.1	+9 25.9	121	44.9	+12 45.9	308	09.8	-8 41.3	
Dif	—		-1	+12		+33	+4		+20	+2		+25			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 12 ^m 8			Edad: 5 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'		°	'		°	'	h m	h m	h m	h m m	h m m	h m m	
0	176	46.7	-8 38.7	124	49.7	+15 47.9	80	60 N	17 21	18 03	18 51	7 50 20	*** ** *	*** ** *	
1	191	46.8		139	22.5 ¹³⁸	+15 55.9	80	58	25	05	50	8 00 24	*** ** *	*** ** *	
2	206	47.0		153	55.3 ¹³⁸	+16 03.9	80	56	29	06	49	10 25	*** ** *	*** ** *	
3	221	47.1		168	28.1 ¹³⁸		78	54	32	08	49	18 27	*** ** *	*** ** *	
4	236	47.2		183	00.8 ¹³⁷		78	52	35	09	48	25 29	*** ** *	*** ** *	
5	251	47.3	-8 34.0	197	33.5 ¹³⁷	+16 27.2	77	50	17 38	18 10	18 48	8 32 30	23 59 60		
6	266	47.4	-8 33.1	212	06.2 ¹³⁷	+16 34.9	77	45	17 44	18 13	18 47	8 46 34	23 43 57		
7	281	47.5		226	38.8 ¹³⁶		75	40	49	16	48	8 58 36	29 56		
8	296	47.6		241	11.4 ¹³⁶		75	35	53	19	48	9 08 38	17 55		
9	311	47.7		255	43.9 ¹³⁵	+16 57.4	75	30	17 57	21	49	17 39	23 07 53		
10	326	47.8		270	16.4 ¹³⁵	+17 04.7	73	20	18 04	26	52	33 42	22 50 51		
11	341	47.9	-8 28.4	284	48.9 ¹³⁵	+17 12.0	73	10 N	18 10	18 31	18 56	9 46 45	22 35 49		
12	356	48.0	-8 27.5	299	21.3 ¹³⁴	+17 19.2	72	0	18 16	18 37	19 01	9 59 46	22 21 47		
13	11	48.1		313	53.7 ¹³⁴		71	10 S	22	43	08	10 12 48	22 07 46		
14	26	48.2		328	26.1 ¹³⁴		71	20	29	18 51	17	26 50	21 53 43		
15	41	48.3		342	58.4 ¹³³		70	30	36	19 00	29	42 53	36 40		
16	56	48.4		357	30.7 ¹³³		69	35	40	06	37	10 51 55	26 39		
17	71	48.6	-8 22.8	12	03.0 ¹³³	+17 54.1	68	40	18 45	19 13	19 46	11 02 56	21 14 38		
18	86	48.7	-8 21.8	26	35.2 ¹³²	+18 00.8	67	45	18 51	19 22	19 58	11 14 59	21 01 36		
19	101	48.8		41	07.4 ¹³²		67	50	18 58	32	20 13	29 62	20 45 33		
20	116	48.9		55	39.5 ¹³¹		66	52	19 02	37	20	36 64	38 32		
21	131	49.0		70	11.7 ¹³²		65	54	05	42	29	44 65	29 31		
22	146	49.1		84	43.7 ¹³⁰		64	56	09	49	38	11 53 67	20 29		
23	161	49.2		99	15.8 ¹³¹		64	58	14	19 56	20 49	12 03 69	20 09 27		
24	176	49.3	-8 16.2	113	47.7 ¹²⁹	+18 39.6	62	60 S	19 19	20 04	21 02	12 15 72	19 57 24		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 32 ^m 8		Mag: -4.3 PMG: 14 ^h 54 ^m		Mag: -1.2 PMG: 0 ^h 50 ^m		Mag: -2.2 PMG: 15 ^h 51 ^m		Mag: +0.5 PMG: 3 ^h 27 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	156	14.8	136	30.0	+9 11.2	347 32.1	+9 25.9	121 44.9	+12 45.9	308 09.8	-8 41.3
1	171	17.3	151	29.9	12.5	2 35.4	26.3	136 47.0	46.0	323 12.3	41.3
2	186	19.7	166	29.8	13.7	17 38.8	26.6	151 49.0	46.2	338 14.9	41.2
3	201	22.2	181	29.6	15.0	32 42.1	27.0	166 51.1	46.3	353 17.4	41.2
4	216	24.6	196	29.5	16.2	47 45.5	27.4	181 53.1	46.5	8 19.9	41.2
5	231	27.1	211	29.4	+9 17.4	62 48.8	+9 27.7	196 55.1	+12 46.7	23 22.5	-8 41.1
6	246	29.6	226	29.3	+9 18.7	77 52.2	+9 28.1	211 57.2	+12 46.8	38 25.0	-8 41.1
7	261	32.0	241	29.2	19.9	92 55.5	28.5	226 59.2	47.0	53 27.6	41.1
8	276	34.5	256	29.1	21.1	107 58.9	28.8	242 01.3	47.1	68 30.1	41.0
9	291	37.0	271	28.9	22.4	123 02.2	29.2	257 03.3	47.3	83 32.6	41.0
10	306	39.4	286	28.8	23.6	138 05.6	29.6	272 05.3	47.4	98 35.2	40.9
11	321	41.9	301	28.7	+9 24.8	153 09.0	+9 29.9	287 07.4	+12 47.6	113 37.7	-8 40.9
12	336	44.4	316	28.6	+9 26.1	168 12.3	+9 30.3	302 09.4	+12 47.7	128 40.3	-8 40.9
13	351	46.8	331	28.5	27.3	183 15.7	30.7	317 11.5	47.9	143 42.8	40.8
14	6	49.3	346	28.3	28.5	198 19.0	31.0	332 13.5	48.0	158 45.3	40.8
15	21	51.7	1	28.2	29.8	213 22.4	31.4	347 15.5	48.2	173 47.9	40.7
16	36	54.2	16	28.1	31.0	228 25.8	31.8	2 17.6	48.3	188 50.4	40.7
17	51	56.7	31	28.0	+9 32.2	243 29.1	+9 32.1	17 19.6	+12 48.5	203 53.0	-8 40.7
18	66	59.1	46	27.9	+9 33.5	258 32.5	+9 32.5	32 21.7	+12 48.6	218 55.5	-8 40.6
19	82	01.6	61	27.7	34.7	273 35.8	32.9	47 23.7	48.8	233 58.0	40.6
20	97	04.1	76	27.6	35.9	288 39.2	33.2	62 25.7	48.9	249 00.6	40.6
21	112	06.5	91	27.5	37.1	303 42.6	33.6	77 27.8	49.1	264 03.1	40.5
22	127	09.0	106	27.4	38.4	318 45.9	34.0	92 29.8	49.3	279 05.7	40.5
23	142	11.5	121	27.3	39.6	333 49.3	34.3	107 31.9	49.4	294 08.2	40.4
24	157	13.9	136	27.2	+9 40.8	348 52.7	+9 34.7	122 33.9	+12 49.6	309 10.8	-8 40.4
Dif	—		-1	+12		+34	+4	+20	+2	+25	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 12 ^m 4			Edad: 7 ^d 1 PHE { 4 ^h : 54 ^h 4 12 ^h : 54 ^h 5 20 ^h : 54 ^h 6 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	176	52.0	-7 53.5	102	23.9	+20 44.2	60 N	17 26	18 08	18 56	8 39 39	1 58 62		
1	191	52.2		116	54.9 ¹²⁰	48.3 41	58	29	09	54	8 54 41	43 60		
2	206	52.3	51.6	131	25.8 ¹¹⁹	52.3 40	56	33	10	53	9 08 42	30 58		
3	221	52.4	50.7	145	56.8 ¹²⁰	56.1 38	54	36	11	52	19 43	18 58		
4	236	52.5	49.8	160	27.7 ¹¹⁹	+20 59.9 38	52	39	12	52	30 43	1 08 57		
5	251	52.6	-7 48.8	174	58.5 ¹¹⁸	+21 03.6 37	50	17 41	18 14	18 51	9 39 44	0 59 56		
6	266	52.7	-7 47.9	189	29.4 ¹¹⁹	+21 07.2 36	45	17 46	18 16	18 50	9 58 46	0 40 55		
7	281	52.9	46.9	204	00.1 ¹¹⁷	10.7 35	40	51	18	50	10 14 46	25 54		
8	296	53.0	46.0	218	30.9 ¹¹⁸	14.1 34	35	55	20	50	28 46	12 53		
9	311	53.1	45.0	233	01.6 ¹¹⁷	17.4 33	30	17 59	23	50	39 48	0 00 53		
10	326	53.2	44.1	247	32.3 ¹¹⁷	20.6 32	20	18 05	27	53	10 59 48	** ** *	**	
11	341	53.3	-7 43.1	262	02.9 ¹¹⁶	+21 23.7 31	10 N	18 10	18 32	18 56	11 17 49	** ** *	**	
12	356	53.5	-7 42.2	276	33.5 ¹¹⁶	+21 26.7 30	0	18 16	18 37	19 01	11 33 50	23 57 50		
13	11	53.6	41.2	291	04.1 ¹¹⁶	29.6 29	10 S	21	42	07	11 50 50	40 50		
14	26	53.7	40.3	305	34.6 ¹¹⁵	32.4 28	20	27	49	15	12 07 51	22 50		
15	41	53.8	39.3	320	05.1 ¹¹⁵	35.1 27	30	34	18 58	27	28 51	23 01 50		
16	56	53.9	38.4	334	35.5 ¹¹⁴	37.7 26	35	38	19 04	34	40 51	22 49 49		
17	71	54.1	-7 37.4	349	06.0 ¹¹⁵	+21 40.2 25	40	18 43	19 10	19 43	12 53 53	22 35 49		
18	86	54.2	-7 36.5	3	36.3 ¹¹³	+21 42.6 24	45	18 48	19 18	19 54	13 09 53	22 19 48		
19	101	54.3	35.5	18	06.7 ¹¹⁴	44.9 23	50	54	28	20 08	29 54	21 59 48		
20	116	54.4	34.6	32	37.0 ¹¹³	47.1 22	52	18 57	32	15	39 54	49 48		
21	131	54.5	33.6	47	07.3 ¹¹³	49.1 20	54	19 00	37	23	13 50 54	38 48		
22	146	54.7	32.7	61	37.5 ¹¹²	51.1 20	56	04	43	32	14 02 55	26 47		
23	161	54.8	31.7	76	07.7 ¹¹²	53.0 19	58	08	50	42	16 56	21 11 47		
24	176	54.9	-7 30.8	90	37.9 ¹¹²	+21 54.8 18	60 S	19 13	19 57	20 54	14 33 56	20 55 46		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 24 ^m 9		Mag: -4.3 PMG: 14 ^h 54 ^m			Mag: -1.2 PMG: 0 ^h 39 ^m			Mag: -2.2 PMG: 15 ^h 44 ^m			Mag: +0.4 PMG: 3 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	158	13.1	136 24.3	+10 10.2		350 13.5	+9 43.5		123 22.7	+12 53.2		310 11.8	-8 39.4	
1	173	15.5	151 24.2	11.4		5 16.9	43.8		138 24.8	53.4		325 14.4	39.4	
2	188	18.0	166 24.1	12.6		20 20.3	44.2		153 26.8	53.6		340 16.9	39.4	
3	203	20.5	181 24.0	13.9		35 23.7	44.6		168 28.8	53.7		355 19.5	39.3	
4	218	22.9	196 23.9	15.1		50 27.0	44.9		183 30.9	53.9		10 22.0	39.3	
5	233	25.4	211 23.8	+10 16.3		65 30.4	+9 45.3		198 32.9	+12 54.0		25 24.6	-8 39.2	
6	248	27.8	226 23.7	+10 17.5		80 33.8	+9 45.6		213 34.9	+12 54.2		40 27.1	-8 39.2	
7	263	30.3	241 23.5	18.7		95 37.2	46.0		228 37.0	54.3		55 29.7	39.1	
8	278	32.8	256 23.4	19.9		110 40.5	46.4		243 39.0	54.5		70 32.2	39.1	
9	293	35.2	271 23.3	21.2		125 43.9	46.7		258 41.0	54.6		85 34.8	39.1	
10	308	37.7	286 23.2	22.4		140 47.3	47.1		273 43.1	54.8		100 37.3	39.0	
11	323	40.2	301 23.1	+10 23.6		155 50.7	+9 47.5		288 45.1	+12 54.9		115 39.8	-8 39.0	
12	338	42.6	316 23.0	+10 24.8		170 54.1	+9 47.8		303 47.1	+12 55.1		130 42.4	-8 38.9	
13	353	45.1	331 22.8	26.0		185 57.4	48.2		318 49.2	55.3		145 44.9	38.9	
14	8	47.6	346 22.7	27.2		201 00.8	48.6		333 51.2	55.4		160 47.5	38.9	
15	23	50.0	1 22.6	28.4		216 04.2	48.9		348 53.2	55.6		175 50.0	38.8	
16	38	52.5	16 22.5	29.7		231 07.6	49.3		3 55.2	55.7		190 52.6	38.8	
17	53	55.0	31 22.4	+10 30.9		246 11.0	+9 49.7		18 57.3	+12 55.9		205 55.1	-8 38.7	
18	68	57.4	46 22.3	+10 32.1		261 14.3	+9 50.0		33 59.3	+12 56.0		220 57.7	-8 38.7	
19	83	59.9	61 22.1	33.3		276 17.7	50.4		49 01.3	56.2		236 00.2	38.7	
20	99	02.3	76 22.0	34.5		291 21.1	50.8		64 03.4	56.3		251 02.8	38.6	
21	114	04.8	91 21.9	35.7		306 24.5	51.1		79 05.4	56.5		266 05.3	38.6	
22	129	07.3	106 21.8	36.9		321 27.9	51.5		94 07.4	56.7		281 07.9	38.5	
23	144	09.7	121 21.7	38.1		336 31.3	51.8		109 09.5	56.8		296 10.4	38.5	
24	159	12.2	136 21.6	+10 39.3		351 34.6	+9 52.2		124 11.5	+12 57.0		311 13.0	-8 38.4	
Dif	—		-1	+12		+34	+4		+20	+2		+25		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 8 ^d 1	PHE { 4 ^h : 54 ^h :7 12 ^h : 54 ^h :9 20 ^h : 55 ^h :0										
	PMG: 12 ^h 12 ^m 2					PMG: 18 ^h 35 ^m		Rº: 51 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	54.9	-7	90	37.9	+21	54.8	5	28	6	16	6	57	9	18
1	191	55.0		105	08.0 ¹¹¹		56.5	29	14		54		35	54	2
2	206	55.1		119	38.2 ¹¹²		58.1	30	13		51		9	50	53
3	221	55.3		134	08.2 ¹¹⁰	+21	59.5	31	12		48		10	02	53
4	236	55.4		148	38.3 ¹¹¹	+22	00.9	32	11		45		13	53	2
5	251	55.5	-7	163	08.3 ¹¹⁰	+22	02.1	5	33	6	10	6	43	10	23
6	266	55.6	-7	177	38.3 ¹¹⁰	+22	03.3	5	34	6	08	6	37	10	44
7	281	55.8		192	08.2 ¹⁰⁹		04.3	34	06		33		11	00	52
8	296	55.9		206	38.1 ¹⁰⁹		05.3	34	04		29		14	52	1
9	311	56.0		221	08.0 ¹⁰⁹		06.1	34	02	6	02	26	27	51	0
10	326	56.1		235	37.9 ¹⁰⁹		06.8	32	5	57	20		11	47	52
11	341	56.3	-7	250	07.7 ¹⁰⁸	+22	07.5	5	29	5	53	6	14	12	06
12	356	56.4	-7	264	37.5 ¹⁰⁸	+22	08.0	5	24	5	48	6	09	12	23
13	11	56.5		279	07.3 ¹⁰⁸		08.4	18	42		6	04	40	50	**
14	26	56.6		293	37.1 ¹⁰⁸		08.7	5	09	36	5	58	12	58	50
15	41	56.7		308	06.8 ¹⁰⁷		08.9	4	58	27	51		13	19	49
16	56	56.9		322	36.5 ¹⁰⁷		08.9	51	21	47			31	49	38
17	71	57.0	-7	337	06.1 ¹⁰⁶	+22	08.9	4	42	5	15	5	43	13	46
18	86	57.1	-7	351	35.8 ¹⁰⁷	+22	08.8	4	31	5	07	5	38	14	02
19	101	57.3		6	05.4 ¹⁰⁶		08.5	17	4	58	31		23	48	22
20	116	57.4		20	35.0 ¹⁰⁶		08.2	10	53		28		33	47	37
21	131	57.5		35	04.5 ¹⁰⁵		07.7	4	02	48	25		44	47	26
22	146	57.6		49	34.1 ¹⁰⁶		07.1	3	54	42	22		14	57	46
23	161	57.8		64	03.6 ¹⁰⁵		06.4	43	36		18		15	12	45
24	176	57.9	-7	78	33.1 ¹⁰⁵	+22	05.6	3	31	4	29	5	13	15	29

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 21 ^m 0			Mag: -4.3 PMG: 14 ^h 55 ^m			Mag: -1.2 PMG: 0 ^h 34 ^m			Mag: -2.2 PMG: 15 ^h 41 ^m			Mag: +0.4 PMG: 3 ^h 15 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	159	12.2		136	21.6	+10	351	34.6	+9	124	11.5	+12	311	13.0	-8
1	174	14.7		151	21.5		6	38.0		139	13.5		326	15.5	
2	189	17.1		166	21.3		21	41.4		154	15.5		341	18.1	
3	204	19.6		181	21.2		36	44.8		169	17.6		356	20.6	
4	219	22.1		196	21.1		51	48.2		184	19.6		11	23.2	
5	234	24.5		211	21.0	+10	66	51.6	+9	199	21.6	+12	26	25.7	-8
6	249	27.0		226	20.9	+10	81	55.0	+9	214	23.6	+12	41	28.3	-8
7	264	29.5		241	20.8		96	58.3		229	25.7		56	30.8	
8	279	31.9		256	20.6		112	01.7		244	27.7		71	33.4	
9	294	34.4		271	20.5		127	05.1		259	29.7		86	35.9	
10	309	36.8		286	20.4		142	08.5		274	31.8		101	38.5	
11	324	39.3		301	20.3	+10	157	11.9	+9	289	33.8	+12	116	41.0	-8
12	339	41.8		316	20.2	+10	172	15.3	+9	304	35.8	+12	131	43.6	-8
13	354	44.2		331	20.1		187	18.7		319	37.8		146	46.1	
14	9	46.7		346	20.0		202	22.1		334	39.9		161	48.7	
15	24	49.2		1	19.8		217	25.4		349	41.9		176	51.3	
16	39	51.6		16	19.7		232	28.8		4	43.9		191	53.8	
17	54	54.1		31	19.6	+10	247	32.2	+9	19	45.9	+12	206	56.4	-8
18	69	56.6		46	19.5	+11	262	35.6	+9	34	48.0	+12	221	58.9	-8
19	84	59.0		61	19.4		277	39.0		49	50.0	+12	237	01.5	
20	100	01.5		76	19.3		292	42.4		64	52.0	+13	252	04.0	
21	115	04.0		91	19.2		307	45.8	+9	79	54.0		267	06.6	
22	130	06.4		106	19.0		322	49.2	+10	94	56.1		282	09.1	
23	145	08.9		121	18.9		337	52.6		109	58.1		297	11.7	
24	160	11.3		136	18.8	+11	352	56.0	+10	125	00.1	+13	312	14.2	-8
Dif	—			-1	+12		+34	+4		+20	+2		+26	0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 9 ^d 1	PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /4 20 ^h : 55 ^h /7 R°: 51 ^m										
	PMG: 12 ^h 12 ^m 0	PMG: 19 ^h 26 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	176	57.9	-7	07.9	78	33.1	+22 05.6	60 N	17 31	18 13	19 01	10 12 67	3 50 39	
1	191	58.0		07.0	93	02.5 ¹⁰⁴	04.7	58	34	14	18 59	29 65	33 41	
2	206	58.1		06.0	107	32.0 ¹⁰⁵	03.7	56	37	14	57	43 64	19 42	
3	221	58.3		05.0	122	01.4 ¹⁰⁴	02.5	54	40	15	56	10 55 63	3 07 42	
4	236	58.4		04.1	136	30.8 ¹⁰⁴	+22 01.3	52	42	16	55	11 06 62	2 56 43	
5	251	58.5	-7	03.1	151	00.2 ¹⁰⁴	+21 59.9	50	17 44	18 17	18 54	11 16 60	2 46 44	
6	266	58.7	-7	02.2	165	29.5 ¹⁰³	+21 58.5	45	17 49	18 19	18 53	11 36 59	2 26 45	
7	281	58.8		01.2	179	58.9 ¹⁰⁴	56.9	40	53	20	52	11 52 58	2 09 47	
8	296	58.9	-7	00.3	194	28.2 ¹⁰³	55.2	35	17 57	22	52	12 06 57	1 55 47	
9	311	59.0	-6	59.3	208	57.5 ¹⁰³	53.4	30	18 00	24	52	18 56	43 48	
10	326	59.2		58.3	223	26.8 ¹⁰³	51.5	20	06	28	53	39 54	22 49	
11	341	59.3	-6	57.4	237	56.0 ¹⁰²	+21 49.4	10 N	18 11	18 32	18 56	12 57 52	1 04 50	
12	356	59.4	-6	56.4	252	25.3 ¹⁰³	+21 47.3	0	18 15	18 36	19 00	13 13 52	0 47 51	
13	11	59.6		55.5	266	54.5 ¹⁰²	45.0	10 S	20	41	06	30 50	30 52	
14	26	59.7		54.5	281	23.7 ¹⁰²	42.7	20	26	48	14	13 48 48	0 12 52	
15	41	59.8		53.6	295	52.9 ¹⁰²	40.2	30	32	18 56	24	14 08 47	** ** *	
16	56	59.9		52.6	310	22.1 ¹⁰²	37.6	35	35	19 01	31	20 46	** ** *	
17	72	00.1	-6	51.6	324	51.3 ¹⁰²	+21 34.9	40	18 39	19 07	19 40	14 34 45	** ** *	
18	87	00.2	-6	50.7	339	20.4 ¹⁰¹	+21 32.0	45	18 44	19 14	19 50	14 51 43	** ** *	
19	102	00.3		49.7	353	49.6 ¹⁰²	29.1	50	50	23	20 04	15 11 41	23 43 65	
20	117	00.5		48.8	8	18.7 ¹⁰¹	26.1	52	53	28	10	20 40	34 65	
21	132	00.6		47.8	22	47.8 ¹⁰¹	22.9	54	56	32	17	31 39	23 67	
22	147	00.7		46.9	37	16.9 ¹⁰¹	19.6	56	18 59	38	26	43 37	23 11 69	
23	162	00.9		45.9	51	46.0 ¹⁰¹	16.2	58	19 03	44	35	15 57 36	22 58 70	
24	177	01.0	-6	44.9	66	15.1 ¹⁰¹	+21 12.7	60 S	19 07	19 51	20 47	16 14 33	22 41 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 17 ^m 1		Mag: -4.3 PMG: 14 ^h 55 ^m			Mag: -1.2 PMG: 0 ^h 28 ^m			Mag: -2.2 PMG: 15 ^h 38 ^m			Mag: +0.4 PMG: 3 ^h 11 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	160	11.3	136	18.8	+11 08.3	352 56.0	+10 00.9	125 00.1	+13 00.7	312 14.2	-8 37.4			
1	175	13.8	151	18.7	09.5	7 59.3	01.3	140 02.1	00.9	327 16.8	37.4			
2	190	16.3	166	18.6	10.7	23 02.7	01.6	155 04.2	01.0	342 19.3	37.3			
3	205	18.7	181	18.5	11.9	38 06.1	02.0	170 06.2	01.2	357 21.9	37.3			
4	220	21.2	196	18.4	13.1	53 09.5	02.3	185 08.2	01.3	12 24.4	37.3			
5	235	23.7	211	18.2	+11 14.3	68 12.9	+10 02.7	200 10.2	+13 01.5	27 27.0	-8 37.2			
6	250	26.1	226	18.1	+11 15.5	83 16.3	+10 03.1	215 12.3	+13 01.6	42 29.6	-8 37.2			
7	265	28.6	241	18.0	16.6	98 19.7	03.4	230 14.3	01.8	57 32.1	37.1			
8	280	31.1	256	17.9	17.8	113 23.1	03.8	245 16.3	02.0	72 34.7	37.1			
9	295	33.5	271	17.8	19.0	128 26.5	04.1	260 18.3	02.1	87 37.2	37.0			
10	310	36.0	286	17.7	20.2	143 29.9	04.5	275 20.3	02.3	102 39.8	37.0			
11	325	38.4	301	17.6	+11 21.4	158 33.3	+10 04.9	290 22.4	+13 02.4	117 42.3	-8 36.9			
12	340	40.9	316	17.4	+11 22.6	173 36.7	+10 05.2	305 24.4	+13 02.6	132 44.9	-8 36.9			
13	355	43.4	331	17.3	23.8	188 40.1	05.6	320 26.4	02.7	147 47.4	36.9			
14	10	45.8	346	17.2	25.0	203 43.5	05.9	335 28.4	02.9	162 50.0	36.8			
15	25	48.3	1	17.1	26.2	218 46.9	06.3	350 30.5	03.1	177 52.6	36.8			
16	40	50.8	16	17.0	27.4	233 50.2	06.7	5 32.5	03.2	192 55.1	36.7			
17	55	53.2	31	16.9	+11 28.6	248 53.6	+10 07.0	20 34.5	+13 03.4	207 57.7	-8 36.7			
18	70	55.7	46	16.8	+11 29.8	263 57.0	+10 07.4	35 36.5	+13 03.5	223 00.2	-8 36.6			
19	85	58.2	61	16.6	31.0	279 00.4	07.7	50 38.5	03.7	238 02.8	36.6			
20	101	00.6	76	16.5	32.2	294 03.8	08.1	65 40.6	03.8	253 05.3	36.6			
21	116	03.1	91	16.4	33.4	309 07.2	08.5	80 42.6	04.0	268 07.9	36.5			
22	131	05.6	106	16.3	34.5	324 10.6	08.8	95 44.6	04.2	283 10.4	36.5			
23	146	08.0	121	16.2	35.7	339 14.0	09.2	110 46.6	04.3	298 13.0	36.4			
24	161	10.5	136	16.1	+11 36.9	354 17.4	+10 09.5	125 48.6	+13 04.5	313 15.6	-8 36.4			
Dif	—		-1	+12		+34	+4	+20	+2		+26		0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 1 PHE { 4 ^h : 55 ^m /9 12 ^h : 56 ^m /2 20 ^h : 56 ^m /4 R°: 51 ^m														
	PMG: 12 ^h 11 ^m 8			SD: 15 ^m 2 PMG: 20 ^h 17 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora		R°	Hora		R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m
0	177	01.0	-6 44.9	66	15.1	+21 12.7			60 N	5 22	6 10	6 52	11 19	78			4 29	28
1	192	01.1		80	44.1 ¹⁰⁰	09.1 ³⁶			58	24	09	48	34	75			14	31
2	207	01.3		95	13.2 ¹⁰¹	05.4 ³⁷			56	25	08	46	47	72			4 01	33
3	222	01.4		109	42.2 ¹⁰⁰	+21 01.5 ³⁹			54	27	08	43	11 58	70			3 49	35
4	237	01.5		124	11.3 ¹⁰¹	+20 57.6 ³⁹			52	28	07	41	12 08	69			39	37
5	252	01.7	-6 40.1	138	40.3 ¹⁰⁰	+20 53.5 ⁴¹			50	5 29	6 06	6 39	12 16	68			3 30	38
6	267	01.8	-6 39.2	153	09.3 ¹⁰⁰	+20 49.3 ⁴²			45	5 31	6 04	6 34	12 35	64			3 11	41
7	282	01.9		167	38.3 ¹⁰⁰	45.0 ⁴³			40	32	03	30	12 50	62			2 56	42
8	297	02.1		182	07.3 ¹⁰⁰	40.6 ⁴⁴			35	32	6 01	26	13 03	60			42	45
9	312	02.2		196	36.3 ¹⁰⁰	36.1 ⁴⁵			30	32	5 59	23	14	58			31	45
10	327	02.3		211	05.3 ¹⁰⁰	31.5 ⁴⁶			20	30	56	18	33	56			2 11	48
11	342	02.5	-6 34.4	225	34.3 ¹⁰⁰	+20 26.7 ⁴⁸			10 N	5 28	5 52	6 13	13 49	54			1 54	50
12	357	02.6	-6 33.4	240	03.3 ¹⁰⁰	+20 21.9 ⁴⁸			0	5 24	5 48	6 09	14 05	51			1 38	51
13	12	02.7		254	32.3 ¹⁰⁰	16.9 ⁵⁰			10 S	18	43	6 04	20	49			22	53
14	27	02.9		31.5	269 01.2 ⁹⁹	11.8 ⁵¹			20	10	36	5 59	36	47			1 04	55
15	42	03.0		30.5	283 30.2 ¹⁰⁰	06.6 ⁵²			30	5 00	28	53	14 55	44			0 44	57
16	57	03.1		29.6	297 59.2 ¹⁰⁰	+20 01.3 ⁵³			35	4 53	23	49	15 06	43			33	58
17	72	03.3	-6 28.6	312	28.1 ⁹⁹	+19 55.9 ⁵⁴			40	4 45	5 17	5 45	15 19	40			0 19	60
18	87	03.4	-6 27.7	326	57.1 ¹⁰⁰	+19 50.4 ⁵⁵			45	4 34	5 10	5 40	15 34	38			0 03	62
19	102	03.5		26.7	341 26.0 ⁹⁹	44.7 ⁵⁷			50	21	5 01	35	15 52	35			** ** *	**
20	117	03.7		25.7	355 55.0 ¹⁰⁰	39.0 ⁵⁷			52	15	4 57	32	16 00	34			** ** *	**
21	132	03.8		24.8	10 23.9 ⁹⁹	33.1 ⁵⁹			54	4 07	52	29	10	31			** ** *	**
22	147	04.0		23.8	24 52.8 ⁹⁹	27.2 ⁵⁹			56	3 59	47	26	20	30			** ** *	**
23	162	04.1		22.8	39 21.8 ¹⁰⁰	21.1 ⁶¹			58	49	41	22	33	27			** ** *	**
24	177	04.2	-6 21.9	53	50.7 ⁹⁹	+19 14.9 ⁶²			60 S	3 38	4 34	5 18	16 47	24			23 54	82
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 13 ^h 13 ^m 1			Mag: -4.3 PMG: 14 ^h 55 ^m			Mag: -1.2 PMG: 0 ^h 23 ^m			Mag: -2.2 PMG: 15 ^h 35 ^m			Mag: +0.4 PMG: 3 ^h 06 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	161	10.5		136	16.1	+11 36.9	354	17.4	+10 09.5	125	48.6	+13 04.5	313	15.6	-8 36.4			
1	176	12.9		151	16.0	38.1	9	20.8	09.9	140	50.7	04.6	328	18.1	36.3			
2	191	15.4		166	15.9	39.3	24	24.2	10.3	155	52.7	04.8	343	20.7	36.3			
3	206	17.9		181	15.7	40.5	39	27.6	10.6	170	54.7	04.9	358	23.2	36.2			
4	221	20.3		196	15.6	41.7	54	31.0	11.0	185	56.7	05.1	13	25.8	36.2			
5	236	22.8		211	15.5	+11 42.9	69	34.4	+10 11.3	200	58.7	+13 05.3	28	28.4	-8 36.2			
6	251	25.3		226	15.4	+11 44.1	84	37.8	+10 11.7	216	00.8	+13 05.4	43	30.9	-8 36.1			
7	266	27.7		241	15.3	45.2	99	41.2	12.0	231	02.8	05.6	58	33.5	36.1			
8	281	30.2		256	15.2	46.4	114	44.6	12.4	246	04.8	05.7	73	36.0	36.0			
9	296	32.7		271	15.1	47.6	129	48.0	12.8	261	06.8	05.9	88	38.6	36.0			
10	311	35.1		286	14.9	48.8	144	51.4	13.1	276	08.8	06.0	103	41.1	35.9			
11	326	37.6		301	14.8	+11 50.0	159	54.8	+10 13.5	291	10.9	+13 06.2	118	43.7	-8 35.9			
12	341	40.1		316	14.7	+11 51.2	174	58.2	+10 13.8	306	12.9	+13 06.4	133	46.3	-8 35.8			
13	356	42.5		331	14.6	52.4	190	01.6	14.2	321	14.9	06.5	148	48.8	35.8			
14	11	45.0		346	14.5	53.5	205	05.0	14.5	336	16.9	06.7	163	51.4	35.7			
15	26	47.4		1	14.4	54.7	220	08.4	14.9	351	18.9	06.8	178	53.9	35.7			
16	41	49.9		16	14.3	55.9	235	11.8	15.2	6	20.9	07.0	193	56.5	35.7			
17	56	52.4		31	14.2	+11 57.1	250	15.2	+10 15.6	21	23.0	+13 07.1	208	59.1	-8 35.6			
18	71	54.8		46	14.0	+11 58.3	265	18.6	+10 16.0	36	25.0	+13 07.3	224	01.6	-8 35.6			
19	86	57.3		61	13.9	+11 59.4	280	22.0	16.3	51	27.0	07.5	239	04.2	35.5			
20	101	59.8		76	13.8	+12 00.6	295	25.4	16.7	66	29.0	07.6	254	06.7	35.5			
21	117	02.2		91	13.7	01.8	310	28.8	17.0	81	31.0	07.8	269	09.3	35.4			
22	132	04.7		106	13.6	03.0	325	32.2	17.4	96	33.0	07.9	284	11.9	35.4			
23	147	07.2		121	13.5	04.2	340	35.6	17.7	111	35.1	08.1	299	14.4	35.3			
24	162	09.6		136	13.4	+12 05.3	355	39.0	+10 18.1	126	37.1	+13 08.3	314	17.0	-8 35.3			
Dif	—			-1		+12	+34		+4	+20		+2	+26			0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 11 ^d 1 PHE { 4 ^h : 56 ^h /7 12 ^h : 57 ^h /0 20 ^h : 57 ^h /3					Civil			R°		R°	
	PMG: 12 ^h 11 ^m 6			SD: 15 ^h 4 PMG: 21 ^h 08 ^m R°: 52 ^m					Náutico			Hora		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	04.2	-6 21.9	53	50.7	+19 14.9	63	60 N	17 36	18 18	19 06	12 37 85	4 57 21		
1	192	04.4	20.9	68	19.7 ¹⁰⁰	08.6	63	58	39	18	03	49 82	45 24		
2	207	04.5	20.0	82	48.6 ⁹⁹	+19 02.2	64	56	41	18	02	12 59 79	34 27		
3	222	04.6	19.0	97	17.5 ⁹⁹	+18 55.7	65	54	44	19	19 00	13 08 77	24 29		
4	237	04.8	18.0	111	46.5 ¹⁰⁰	49.0	67	52	46	19	18 59	17 74	16 30		
5	252	04.9	-6 17.1	126	15.4 ⁹⁹	+18 42.3	67	50	17 48	18 20	18 57	13 24 73	4 08 32		
6	267	05.1	-6 16.1	140	44.4 ¹⁰⁰	+18 35.4	69	45	17 52	18 21	18 55	13 39 69	3 52 35		
7	282	05.2	15.1	155	13.3 ⁹⁹	28.5	69	40	55	23	54	13 52 66	38 39		
8	297	05.3	14.2	169	42.2 ⁹⁹	21.4	71	35	17 59	24	53	14 03 63	27 40		
9	312	05.5	13.2	184	11.2 ¹⁰⁰	14.3	71	30	18 01	25	53	12 62	3 16 43		
10	327	05.6	12.2	198	40.1 ⁹⁹	+18 07.0	73	20	06	28	54	29 57	2 59 46		
11	342	05.7	-6 11.3	213	09.1 ¹⁰⁰	+17 59.6	74	10 N	18 11	18 32	18 56	14 43 54	2 44 48		
12	357	05.9	-6 10.3	227	38.0 ⁹⁹	+17 52.1	75	0	18 15	18 36	19 00	14 56 51	2 29 52		
13	12	06.0	09.3	242	07.0 ¹⁰⁰	44.6	75	10 S	19	40	05	15 09 49	2 15 54		
14	27	06.2	08.4	256	36.0 ¹⁰⁰	36.9	77	20	24	46	12	23 46	1 59 57		
15	42	06.3	07.4	271	04.9 ⁹⁹	29.1	78	30	29	54	22	39 42	41 60		
16	57	06.4	06.5	285	33.9 ¹⁰⁰	21.2	79	35	33	18 58	28	49 39	31 62		
17	72	06.6	-6 05.5	300	02.9 ¹⁰⁰	+17 13.2	80	40	18 36	19 04	19 36	15 59 37	1 19 64		
18	87	06.7	-6 04.5	314	31.8 ⁹⁹	+17 05.1	81	45	18 41	19 11	19 46	16 12 34	1 05 67		
19	102	06.9	03.6	329	00.8 ¹⁰⁰	+16 56.8	83	50	46	19	19 59	27 30	0 48 70		
20	117	07.0	02.6	343	29.8 ¹⁰⁰	48.5	83	52	48	23	20 05	34 28	39 72		
21	132	07.1	01.6	357	58.8 ¹⁰⁰	40.1	84	54	51	27	12	41 27	30 74		
22	147	07.3	-6 00.7	12	27.7 ⁹⁹	31.6	85	56	54	32	20	16 50 24	20 76		
23	162	07.4	-5 59.7	26	56.7 ¹⁰⁰	23.0	86	58	18 57	38	29	17 00 21	0 08 79		
24	177	07.6	-5 58.7	41	25.7 ¹⁰⁰	+16 14.3	87	60 S	19 01	19 44	20 39	17 11 18	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 09 ^m 2		Mag: -4.3 PMG: 14 ^h 55 ^m		Mag: -1.2 PMG: 0 ^h 17 ^m		Mag: -2.2 PMG: 15 ^h 31 ^m		Mag: +0.4 PMG: 3 ^h 02 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	162	09.6	136	13.4	+12 05.3	355	39.0	+10 18.1	126	37.1	+13 08.3	314	17.0	-8 35.3	
1	177	12.1	151	13.3	06.5	10	42.4	18.4	141	39.1	08.4	329	19.5	35.3	
2	192	14.6	166	13.2	07.7	25	45.8	18.8	156	41.1	08.6	344	22.1	35.2	
3	207	17.0	181	13.0	08.9	40	49.2	19.1	171	43.1	08.7	359	24.7	35.2	
4	222	19.5	196	12.9	10.1	55	52.6	19.5	186	45.1	08.9	14	27.2	35.1	
5	237	21.9	211	12.8	+12 11.2	70	56.0	+10 19.9	201	47.2	+13 09.0	29	29.8	-8 35.1	
6	252	24.4	226	12.7	+12 12.4	85	59.4	+10 20.2	216	49.2	+13 09.2	44	32.3	-8 35.0	
7	267	26.9	241	12.6	13.6	101	02.8	20.6	231	51.2	09.4	59	34.9	35.0	
8	282	29.3	256	12.5	14.8	116	06.2	20.9	246	53.2	09.5	74	37.5	34.9	
9	297	31.8	271	12.4	15.9	131	09.6	21.3	261	55.2	09.7	89	40.0	34.9	
10	312	34.3	286	12.3	17.1	146	13.0	21.6	276	57.2	09.8	104	42.6	34.8	
11	327	36.7	301	12.1	+12 18.3	161	16.4	+10 22.0	291	59.2	+13 10.0	119	45.2	-8 34.8	
12	342	39.2	316	12.0	+12 19.5	176	19.8	+10 22.3	307	01.2	+13 10.2	134	47.7	-8 34.7	
13	357	41.7	331	11.9	20.6	191	23.2	22.7	322	03.3	10.3	149	50.3	34.7	
14	12	44.1	346	11.8	21.8	206	26.6	23.0	337	05.3	10.5	164	52.8	34.7	
15	27	46.6	1	11.7	23.0	221	30.0	23.4	352	07.3	10.6	179	55.4	34.6	
16	42	49.0	16	11.6	24.1	236	33.4	23.7	7	09.3	10.8	194	58.0	34.6	
17	57	51.5	31	11.5	+12 25.3	251	36.8	+10 24.1	22	11.3	+13 10.9	210	00.5	-8 34.5	
18	72	54.0	46	11.4	+12 26.5	266	40.2	+10 24.4	37	13.3	+13 11.1	225	03.1	-8 34.5	
19	87	56.4	61	11.3	27.7	281	43.6	24.8	52	15.3	11.3	240	05.7	34.4	
20	102	58.9	76	11.1	28.8	296	47.0	25.1	67	17.4	11.4	255	08.2	34.4	
21	118	01.4	91	11.0	30.0	311	50.4	25.5	82	19.4	11.6	270	10.8	34.3	
22	133	03.8	106	10.9	31.2	326	53.8	25.8	97	21.4	11.7	285	13.4	34.3	
23	148	06.3	121	10.8	32.3	341	57.2	26.2	112	23.4	11.9	300	15.9	34.2	
24	163	08.8	136	10.7	+12 33.5	357	00.6	+10 26.5	127	25.4	+13 12.1	315	18.5	-8 34.2	
Dif	—		-1	+12		+34	+4		+20		+2		+26		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 12 ^d 1	PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1									
	PMG: 12 ^h 11 ^m 4													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m
0	177	07.6	-5 58.7	41	25.7	+16 14.3		60 N	5 16	6 04	6 46	14 02	89	5 18 17
1	192	07.7		55	54.7 ¹⁰⁰	+16 05.5	88	58	18	04	43	11 85		09 19
2	207	07.9		70	23.7 ¹⁰⁰	+15 56.6	89	56	20	03	40	18 83		5 01 22
3	222	08.0		84	52.8 ¹⁰¹		90	54	22	03	38	25 80		4 53 25
4	237	08.1		99	21.8 ¹⁰⁰		91	52	24	03	36	31 78		46 27
5	252	08.3	-5 53.9	113	50.8 ¹⁰⁰	+15 29.3	92	50	5 25	6 02	6 34	14 37	76	4 40 29
6	267	08.4	-5 52.9	128	19.8 ¹⁰⁰	+15 20.0	93	45	5 27	6 01	6 30	14 48	72	4 27 33
7	282	08.6		142	48.8 ¹⁰⁰		94	40	29	6 00	27	14 58	69	17 35
8	297	08.7		157	17.9 ¹⁰¹	+15 01.1	95	35	29	5 59	24	15 06	66	4 07 38
9	312	08.9		171	46.9 ¹⁰⁰	+14 51.5	96	30	30	57	21	14 63		3 59 41
10	327	09.0		186	16.0 ¹⁰¹		97	20	29	54	16	26 59		45 44
11	342	09.1	-5 48.1	200	45.0 ¹⁰⁰	+14 32.1	97	10 N	5 27	5 51	6 12	15 37	55	3 32 48
12	357	09.3	-5 47.1	215	14.1 ¹⁰¹	+14 22.2	99	0	5 23	5 47	6 08	15 47	52	3 21 51
13	12	09.4		229	43.1 ¹⁰⁰		99	10 S	18	43	6 04	15 58	47	3 09 54
14	27	09.6		244	12.2 ¹⁰¹	+14 02.2	101	20	11	37	5 59	16 09	43	2 56 58
15	42	09.7		258	41.3 ¹⁰¹	+13 52.1	101	30	5 01	30	54	21 39		41 63
16	57	09.9		273	10.3 ¹⁰⁰		102	35	4 55	25	51	28 37		33 64
17	72	10.0	-5 42.3	287	39.4 ¹⁰¹	+13 31.6	103	40	4 47	5 20	5 47	16 36	34	2 23 67
18	87	10.2	-5 41.3	302	08.5 ¹⁰¹	+13 21.2	104	45	4 37	5 13	5 43	16 46	30	2 12 70
19	102	10.3		316	37.6 ¹⁰¹		105	50	25	05	38	16 57	27	1 58 74
20	117	10.4		331	06.7 ¹⁰¹	+13 00.1	106	52	19	5 01	36	17 02	25	51 77
21	132	10.6		345	35.7 ¹⁰⁰	+12 49.5	106	54	12	4 57	33	08 23		44 79
22	147	10.7		0	04.8 ¹⁰¹		107	56	4 04	52	30	14 21		36 81
23	162	10.9		14	33.9 ¹⁰¹		108	58	3 55	46	27	21 18		27 84
24	177	11.0	-5 35.5	29	03.0 ¹⁰¹	+12 17.1	109	60 S	3 45	4 40	5 23	17 29	15	1 16 87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 05 ^m 3		Mag: -4.3 PMG: 14 ^h 55 ^m		Mag: -1.2 PMG: 0 ^h 12 ^m		Mag: -2.2 PMG: 15 ^h 28 ^m		Mag: +0.4 PMG: 2 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	163	08.8	136	10.7	+12 33.5	357	00.6	+10 26.5	127	25.4	+13 12.1	315	18.5	-8 34.2
1	178	11.2	151	10.6	34.7	12	04.0	26.9	142	27.4	12.2	330	21.0	34.1
2	193	13.7	166	10.5	35.8	27	07.4	27.2	157	29.4	12.4	345	23.6	34.1
3	208	16.2	181	10.4	37.0	42	10.8	27.6	172	31.4	12.5	0	26.2	34.1
4	223	18.6	196	10.3	38.2	57	14.2	27.9	187	33.4	12.7	15	28.7	34.0
5	238	21.1	211	10.1	+12 39.3	72	17.6	+10 28.3	202	35.5	+13 12.9	30	31.3	-8 34.0
6	253	23.5	226	10.0	+12 40.5	87	21.0	+10 28.6	217	37.5	+13 13.0	45	33.9	-8 33.9
7	268	26.0	241	09.9	41.7	102	24.4	29.0	232	39.5	13.2	60	36.4	33.9
8	283	28.5	256	09.8	42.8	117	27.8	29.3	247	41.5	13.3	75	39.0	33.8
9	298	30.9	271	09.7	44.0	132	31.2	29.7	262	43.5	13.5	90	41.6	33.8
10	313	33.4	286	09.6	45.1	147	34.7	30.0	277	45.5	13.6	105	44.1	33.7
11	328	35.9	301	09.5	+12 46.3	162	38.1	+10 30.4	292	47.5	+13 13.8	120	46.7	-8 33.7
12	343	38.3	316	09.4	+12 47.5	177	41.5	+10 30.7	307	49.5	+13 14.0	135	49.3	-8 33.6
13	358	40.8	331	09.3	48.6	192	44.9	31.1	322	51.5	14.1	150	51.8	33.6
14	13	43.3	346	09.1	49.8	207	48.3	31.4	337	53.5	14.3	165	54.4	33.5
15	28	45.7	1	09.0	50.9	222	51.7	31.7	352	55.6	14.4	180	57.0	33.5
16	43	48.2	16	08.9	52.1	237	55.1	32.1	7	57.6	14.6	195	59.5	33.4
17	58	50.7	31	08.8	+12 53.3	252	58.5	+10 32.4	22	59.6	+13 14.8	211	02.1	-8 33.4
18	73	53.1	46	08.7	+12 54.4	268	01.9	+10 32.8	38	01.6	+13 14.9	226	04.7	-8 33.3
19	88	55.6	61	08.6	55.6	283	05.3	33.1	53	03.6	15.1	241	07.2	33.3
20	103	58.0	76	08.5	56.7	298	08.7	33.5	68	05.6	15.2	256	09.8	33.2
21	119	00.5	91	08.4	57.9	313	12.1	33.8	83	07.6	15.4	271	12.4	33.2
22	134	03.0	106	08.3	+12 59.1	328	15.5	34.2	98	09.6	15.6	286	14.9	33.2
23	149	05.4	121	08.2	+13 00.2	343	18.9	34.5	113	11.6	15.7	301	17.5	33.1
24	164	07.9	136	08.0	+13 01.4	358	22.3	+10 34.9	128	13.6	+13 15.9	316	20.1	-8 33.1
Dif	—		-1	+12		+34	+3		+20		+2	+26		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 13 ^d 1 PHE { 4 ^h : 58 ^m /4 12 ^h : 58 ^m /7 20 ^h : 59 ^m /0 R°: 51 ^m	SD: 15 ^h 9				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 1				PMG: 22 ^h 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	11.0	-5 35.5	29	03.0	+12 17.1		60 N	17 41	18 22	19 11	15 31 92	5 35 13		
1	192	11.2		43	32.1 ¹⁰¹	+12 06.1 ¹¹⁰		58	43	22	08	36 89	28 17		
2	207	11.3		58	01.3 ¹⁰²	+11 55.0 ¹¹¹		56	45	23	06	41 86	23 19		
3	222	11.5		72	30.4 ¹⁰¹	43.9 ¹¹¹		54	47	23	04	45 83	18 21		
4	237	11.6		86	59.5 ¹⁰¹	32.7 ¹¹²		52	49	23	02	49 81	13 24		
5	252	11.8	-5 30.7	101	28.6 ¹⁰¹	+11 21.4 ¹¹³		50	17 51	18 23	19 01	15 53 78	5 09 25		
6	267	11.9	-5 29.7	115	57.7 ¹⁰¹	+11 10.0 ¹¹⁴		45	17 55	18 24	18 58	16 00 74	5 00 29		
7	282	12.1	28.7	130	26.8 ¹⁰¹	+10 58.6 ¹¹⁴		40	17 58	25	56	07 70	4 52 33		
8	297	12.2	27.7	144	55.9 ¹⁰¹	47.1 ¹¹⁵		35	18 00	26	55	12 67	45 37		
9	312	12.4	26.8	159	25.1 ¹⁰²	35.5 ¹¹⁶		30	03	27	54	17 64	40 38		
10	327	12.5	25.8	173	54.2 ¹⁰¹	23.8 ¹¹⁷		20	07	29	55	25 59	29 44		
11	342	12.6	-5 24.8	188	23.3 ¹⁰¹	+10 12.1 ¹¹⁷		10 N	18 11	18 32	18 56	16 32 55	4 20 48		
12	357	12.8	-5 23.9	202	52.4 ¹⁰¹	+10 00.3 ¹¹⁸		0	18 14	18 35	18 59	16 39 51	4 12 51		
13	12	12.9	22.9	217	21.6 ¹⁰²	+9 48.4 ¹¹⁹		10 S	18	39	19 04	45 48	4 03 55		
14	27	13.1	21.9	231	50.7 ¹⁰¹	36.4 ¹²⁰		20	22	45	10	16 52 44	3 54 59		
15	42	13.2	20.9	246	19.8 ¹⁰¹	24.4 ¹²⁰		30	27	51	20	17 00 39	44 63		
16	57	13.4	20.0	260	48.9 ¹⁰¹	12.4 ¹²⁰		35	30	18 56	26	05 36	37 67		
17	72	13.5	-5 19.0	275	18.0 ¹⁰¹	+9 00.2 ¹²²		40	18 33	19 01	19 33	17 10 33	3 30 70		
18	87	13.7	-5 18.0	289	47.2 ¹⁰²	+8 48.0 ¹²²		45	18 37	19 07	19 42	17 16 30	3 22 73		
19	102	13.8	17.1	304	16.3 ¹⁰¹	35.7 ¹²³		50	42	15	19 54	24 25	12 78		
20	117	14.0	16.1	318	45.4 ¹⁰¹	23.4 ¹²³		52	44	18	20 00	27 23	08 79		
21	132	14.1	15.1	333	14.5 ¹⁰¹	+8 11.0 ¹²⁴		54	46	22	06	31 20	3 03 81		
22	147	14.3	14.1	347	43.6 ¹⁰¹	+7 58.6 ¹²⁴		56	49	27	14	35 18	2 57 84		
23	162	14.4	13.2	2	12.7 ¹⁰¹	46.1 ¹²⁵		58	52	32	22	39 16	51 87		
24	177	14.6	-5 12.2	16	41.8 ¹⁰¹	+7 33.5 ¹²⁶		60 S	18 55	19 38	20 32	17 44 13	2 43 91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 01 ^m 3		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: -1.2 PMG: 0 ^h 06 ^m		Mag: -2.2 PMG: 15 ^h 25 ^m		Mag: +0.4 PMG: 2 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	164	07.9	136	08.0	+13	01.4	358	22.3	+10	34.9	128	13.6	+13	15.9	316	20.1	-8	33.1
1	179	10.4	151	07.9		02.5	13	25.7		35.2	143	15.6		16.0	331	22.6		33.0
2	194	12.8	166	07.8		03.7	28	29.1		35.5	158	17.6		16.2	346	25.2		33.0
3	209	15.3	181	07.7		04.8	43	32.5		35.9	173	19.7		16.4	1	27.8		32.9
4	224	17.8	196	07.6		06.0	58	35.9		36.2	188	21.7		16.5	16	30.3		32.9
5	239	20.2	211	07.5	+13	07.1	73	39.3	+10	36.6	203	23.7	+13	16.7	31	32.9	-8	32.8
6	254	22.7	226	07.4	+13	08.3	88	42.7	+10	36.9	218	25.7	+13	16.8	46	35.5	-8	32.8
7	269	25.1	241	07.3		09.4	103	46.1		37.3	233	27.7		17.0	61	38.0		32.7
8	284	27.6	256	07.2		10.6	118	49.5		37.6	248	29.7		17.2	76	40.6		32.7
9	299	30.1	271	07.1		11.7	133	52.9		37.9	263	31.7		17.3	91	43.2		32.6
10	314	32.5	286	06.9		12.9	148	56.3		38.3	278	33.7		17.5	106	45.7		32.6
11	329	35.0	301	06.8	+13	14.0	163	59.7	+10	38.6	293	35.7	+13	17.6	121	48.3	-8	32.5
12	344	37.5	316	06.7	+13	15.2	179	03.1	+10	39.0	308	37.7	+13	17.8	136	50.9	-8	32.5
13	359	39.9	331	06.6		16.3	194	06.5		39.3	323	39.7		18.0	151	53.5		32.4
14	14	42.4	346	06.5		17.5	209	09.9		39.7	338	41.7		18.1	166	56.0		32.4
15	29	44.9	1	06.4		18.6	224	13.3		40.0	353	43.7		18.3	181	58.6		32.3
16	44	47.3	16	06.3		19.8	239	16.7		40.3	8	45.7		18.4	197	01.2		32.3
17	59	49.8	31	06.2	+13	20.9	254	20.1	+10	40.7	23	47.7	+13	18.6	212	03.7	-8	32.2
18	74	52.3	46	06.1	+13	22.1	269	23.5	+10	41.0	38	49.7	+13	18.8	227	06.3	-8	32.2
19	89	54.7	61	06.0		23.2	284	26.9		41.4	53	51.7		18.9	242	08.9		32.1
20	104	57.2	76	05.9		24.4	299	30.3		41.7	68	53.7		19.1	257	11.4		32.1
21	119	59.6	91	05.7		25.5	314	33.7		42.0	83	55.8		19.2	272	14.0		32.0
22	135	02.1	106	05.6		26.7	329	37.1		42.4	98	57.8		19.4	287	16.6		32.0
23	150	04.6	121	05.5		27.8	344	40.5		42.7	113	59.8		19.6	302	19.2		31.9
24	165	07.0	136	05.4	+13	29.0	359	43.9	+10	43.1	129	01.8	+13	19.7	317	21.7	-8	31.9
Dif	—		-1 +11				+34 +3				+20 +2				+26 0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 1	PHE {	SD: 16 ^h 1	4 ^h : 59 ^m 2 12 ^h : 59 ^m 5 20 ^h : 59 ^m 7	R°: 52 ^m								
	PMG: 12 ^h 10 ^m 9									PMG: 23 ^h 42 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	14.6	-5 12.2	16	41.8	+7 33.5		60 N	5 10	5 58	6 40	17 03	94	5 48	13	
1	192	14.7		31	10.9 ¹⁰¹		20.9 ¹²⁶	58		13	58	37	05	90	45	15
2	207	14.9		45	40.0 ¹⁰¹	+7 08.2 ¹²⁷		56	15	58	35	07	87	42	18	
3	222	15.0		60	09.0 ¹⁰⁰	+6 55.5 ¹²⁷		54	17	58	33	08	85	39	20	
4	237	15.2		74	38.1 ¹⁰¹		42.7 ¹²⁸	52	19	58	32	10	83	37	22	
5	252	15.3	-5 07.3	89	07.2 ¹⁰¹	+6 29.9 ¹²⁸		50	5 21	5 58	6 30	17 11	81	5 34	25	
6	267	15.5	-5 06.4	103	36.2 ¹⁰⁰	+6 17.0 ¹²⁹		45	5 23	5 57	6 27	17 14	76	5 29	29	
7	282	15.7		118	05.3 ¹⁰¹	+6 04.1 ¹²⁹		40	25	57	24	17 72		25	33	
8	297	15.8		132	34.3 ¹⁰⁰	+5 51.1 ¹³⁰		35	27	56	21	19 69		22	35	
9	312	16.0		147	03.4 ¹⁰¹		38.1 ¹³⁰	30	27	55	19	21 66		18	39	
10	327	16.1		161	32.4 ¹⁰⁰		25.0 ¹³¹	20	27	53	15	24 61		13	43	
11	342	16.3	-5 01.5	176	01.4 ¹⁰⁰	+5 11.9 ¹³¹		10 N	5 26	5 50	6 11	17 27	56	5 08	47	
12	357	16.4	-5 00.5	190	30.4 ¹⁰⁰	+4 58.7 ¹³²		0	5 23	5 47	6 08	17 30	52	5 03	51	
13	12	16.6	-4 59.5	204	59.4 ¹⁰⁰		45.5 ¹³²	10 S	18	43	04	33	48	4 58	56	
14	27	16.7		219	28.4 ¹⁰⁰		32.3 ¹³²	20	12	38	6 00	36	43	53	60	
15	42	16.9		233	57.4 ¹⁰⁰		19.0 ¹³³	30	5 03	31	5 55	39	38	47	65	
16	57	17.0		248	26.3 ⁹⁹	+4 05.7 ¹³³		35	4 57	27	53	41	36	44	68	
17	72	17.2	-4 55.6	262	55.3 ¹⁰⁰	+3 52.4 ¹³³		40	4 50	5 22	5 49	17 43	33	4 40	71	
18	87	17.3	-4 54.7	277	24.2 ⁹⁹	+3 39.0 ¹³⁴		45	4 40	5 16	5 46	17 46	28	4 35	75	
19	102	17.5		291	53.1 ⁹⁹		25.6 ¹³⁴	50	29	08	41	49	24	30	79	
20	117	17.6		306	22.0 ⁹⁹	+3 12.1 ¹³⁵		52	23	05	39	50	22	27	82	
21	132	17.8		320	50.9 ⁹⁹	+2 58.7 ¹³⁴		54	17	5 01	37	51	21	24	84	
22	147	17.9		335	19.8 ⁹⁹		45.2 ¹³⁵	56	09	4 56	34	53	18	21	87	
23	162	18.1		349	48.6 ⁹⁸		31.6 ¹³⁶	58	4 01	51	32	55	15	18	89	
24	177	18.3	-4 48.8	4	17.5 ⁹⁹	+2 18.1 ¹³⁵		60 S	3 51	4 45	5 29	17 57	12	4 14	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 57 ^m 4		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: -1.2 PMG: 0 ^h 01 ^m		Mag: -2.2 PMG: 15 ^h 22 ^m		Mag: +0.4 PMG: 2 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	07.0	136	05.4	+13 29.0		359	43.9	+10 43.1	
1	180	09.5	151	05.3		30.1	14	47.3		43.4
2	195	12.0	166	05.2		31.2	29	50.7		43.7
3	210	14.4	181	05.1		32.4	44	54.1		44.1
4	225	16.9	196	05.0		33.5	59	57.5		44.4
5	240	19.4	211	04.9	+13 34.7		75	01.0	+10 44.7	
6	255	21.8	226	04.8	+13 35.8		90	04.4	+10 45.1	
7	270	24.3	241	04.7		36.9	105	07.8		45.4
8	285	26.7	256	04.5		38.1	120	11.2		45.8
9	300	29.2	271	04.4		39.2	135	14.6		46.1
10	315	31.7	286	04.3		40.4	150	18.0		46.4
11	330	34.1	301	04.2	+13 41.5		165	21.4	+10 46.8	
12	345	36.6	316	04.1	+13 42.6		180	24.8	+10 47.1	
13	0	39.1	331	04.0		43.8	195	28.2		47.4
14	15	41.5	346	03.9		44.9	210	31.6		47.8
15	30	44.0	1	03.8		46.0	225	35.0		48.1
16	45	46.5	16	03.7		47.2	240	38.4		48.4
17	60	48.9	31	03.6	+13 48.3		255	41.8	+10 48.8	
18	75	51.4	46	03.5	+13 49.4		270	45.2	+10 49.1	
19	90	53.9	61	03.4		50.6	285	48.6		49.4
20	105	56.3	76	03.2		51.7	300	51.9		49.8
21	120	58.8	91	03.1		52.8	315	55.3		50.1
22	136	01.2	106	03.0		54.0	330	58.7		50.4
23	151	03.7	121	02.9		55.1	346	02.1		50.8
24	166	06.2	136	02.8	+13 56.2		1	05.5	+10 51.1	
Dif	—		-1		+11		-8966		+3	
							+20		+2	
									+26	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 10 ^m 7			Edad: 15 ^d 1 PHE { 4 ^h : 59/9 12 ^h : 60/0 20 ^h : 60/2 R°: ***m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	18.3	-4	48.8	4	17.5	+2 18.1	60 N	17 46	18 27	19 16	18 37	95	6 01	12	
1	192	18.4		47.8	18	46.3 ⁹⁸	+2 04.5 ¹³⁶	58	48	27	13	35	93	00	16	
2	207	18.6		46.9	33	15.1 ⁹⁸	+1 50.9 ¹³⁶	56	50	27	10	34	89	6 00	18	
3	222	18.7		45.9	47	43.9 ⁹⁸	37.3 ¹³⁶	54	51	27	08	33	87	5 59	21	
4	237	18.9		44.9	62	12.6 ⁹⁷	23.7 ¹³⁶	52	53	26	06	33	84	5 59	23	
5	252	19.0	-4	43.9	76	41.4 ⁹⁸	+1 10.0 ¹³⁷	50	17 54	18 26	19 04	18 32	82	5 59	24	
6	267	19.2	-4	43.0	91	10.1 ⁹⁷	+0 56.3 ¹³⁷	45	17 57	18 26	19 01	18 30	77	5 58	29	
7	282	19.3		42.0	105	38.8 ⁹⁷	42.6 ¹³⁷	40	18 00	27	18 58	29	73	5 58	32	
8	297	19.5		41.0	120	07.5 ⁹⁷	28.9 ¹³⁷	35	02	27	57	28	69	5 57	36	
9	312	19.7		40.0	134	36.2 ⁹⁷	15.2 ¹³⁷	30	04	28	56	27	66	5 57	39	
10	327	19.8		39.1	149	04.8 ⁹⁶	+0 01.5 ¹³⁷	20	08	30	55	25	62	5 56	44	
11	342	20.0	-4	38.1	163	33.4 ⁹⁶	-0 12.2 ¹³⁷	10 N	18 11	18 32	18 56	18 23	58	5 55	48	
12	357	20.1	-4	37.1	178	02.0 ⁹⁶	-0 26.0 ¹³⁸	0	18 14	18 35	18 59	18 22	53	5 54	53	
13	12	20.3		36.1	192	30.6 ⁹⁶	39.7 ¹³⁷	10 S	17	38	19 03	21	49	5 54	56	
14	27	20.4		35.2	206	59.1 ⁹⁵	-0 53.5 ¹³⁸	20	21	43	09	19	45	5 53	61	
15	42	20.6		34.2	221	27.6 ⁹⁵	-1 07.2 ¹³⁷	30	25	49	17	17	40	5 52	66	
16	57	20.7		33.2	235	56.1 ⁹⁵	21.0 ¹³⁸	35	27	53	23	17	36	5 52	69	
17	72	20.9	-4	32.2	250	24.6 ⁹⁵	-1 34.8 ¹³⁸	40	18 30	18 57	19 30	18 16	33	5 51	72	
18	87	21.1	-4	31.3	264	53.0 ⁹⁴	-1 48.5 ¹³⁷	45	18 33	19 03	19 38	18 14	30	5 50	77	
19	102	21.2		30.3	279	21.4 ⁹⁴	-2 02.3 ¹³⁸	50	37	10	49	13	26	4 59	81	
20	117	21.4		29.3	293	49.8 ⁹⁴	16.0 ¹³⁷	52	39	13	19 55	12	24	4 59	83	
21	132	21.5		28.3	308	18.1 ⁹³	29.8 ¹³⁸	54	41	17	20 01	12	21	4 58	86	
22	147	21.7		27.3	322	46.4 ⁹³	43.5 ¹³⁷	56	43	21	08	11	19	4 58	88	
23	162	21.9		26.4	337	14.7 ⁹³	-2 57.2 ¹³⁷	58	46	26	16	10	16	4 57	92	
24	177	22.0	-4	25.4	351	43.0 ⁹³	-3 10.9 ¹³⁷	60 S	18 49	19 32	20 25	18 09	13	5 47	94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 53 ^m 5		Mag: -4.3 PMG: 14 ^h 56 ^m			Mag: -1.2 PMG: 23 ^h 50 ^m			Mag: -2.2 PMG: 15 ^h 19 ^m			Mag: +0.4 PMG: 2 ^h 46 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	166	06.2	136	02.8	+13	56.2	1	05.5	+10	51.1	129	49.8	+13	23.6	318	23.5
1	181	08.6	151	02.7		57.4	16	08.9		51.4	144	51.8		23.8	333	26.1
2	196	11.1	166	02.6		58.5	31	12.3		51.8	159	53.8		23.9	348	28.6
3	211	13.6	181	02.5	+13	59.6	46	15.7		52.1	174	55.8		24.1	3	31.2
4	226	16.0	196	02.4	+14	00.8	61	19.1		52.4	189	57.8		24.2	18	33.8
5	241	18.5	211	02.3	+14	01.9	76	22.5	+10	52.8	204	59.8	+13	24.4	33	36.4
6	256	21.0	226	02.2	+14	03.0	91	25.9	+10	53.1	220	01.8	+13	24.6	48	38.9
7	271	23.4	241	02.1		04.1	106	29.3		53.4	235	03.8		24.7	63	41.5
8	286	25.9	256	02.0		05.3	121	32.7		53.7	250	05.8		24.9	78	44.1
9	301	28.4	271	01.8		06.4	136	36.1		54.1	265	07.8		25.0	93	46.7
10	316	30.8	286	01.7		07.5	151	39.5		54.4	280	09.8		25.2	108	49.2
11	331	33.3	301	01.6	+14	08.6	166	42.9	+10	54.7	295	11.8	+13	25.4	123	51.8
12	346	35.7	316	01.5	+14	09.8	181	46.3	+10	55.1	310	13.8	+13	25.5	138	54.4
13	1	38.2	331	01.4		10.9	196	49.7		55.4	325	15.8		25.7	153	57.0
14	16	40.7	346	01.3		12.0	211	53.1		55.7	340	17.8		25.9	168	59.5
15	31	43.1	1	01.2		13.1	226	56.5		56.0	355	19.8		26.0	184	02.1
16	46	45.6	16	01.1		14.3	241	59.9		56.4	10	21.8		26.2	199	04.7
17	61	48.1	31	01.0	+14	15.4	257	03.3	+10	56.7	25	23.8	+13	26.3	214	07.3
18	76	50.5	46	00.9	+14	16.5	272	06.7	+10	57.0	40	25.8	+13	26.5	229	09.8
19	91	53.0	61	00.8		17.6	287	10.1		57.4	55	27.8		26.7	244	12.4
20	106	55.5	76	00.7		18.8	302	13.5		57.7	70	29.8		26.8	259	15.0
21	121	57.9	91	00.6		19.9	317	16.9		58.0	85	31.8		27.0	274	17.6
22	137	00.4	106	00.5		21.0	332	20.3		58.3	100	33.8		27.2	289	20.1
23	152	02.8	121	00.3		22.1	347	23.7		58.7	115	35.7		27.3	304	22.7
24	167	05.3	136	00.2	+14	23.2	2	27.0	+10	59.0	130	37.7	+13	27.5	319	25.3
Dif	—		-1		+11		+34		+3		+20		+2		+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 16 ^d 1 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 4 20 ^h : 60 ^h 5											
	PMG: 12 ^h 10 ^m 4			SD: 16 ^d 4 PMG: 0 ^h 34 ^m R ^o : 54 ^m											
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	22.0	-4 25.4	351	43.0	-3 10.9	60 N	5 04	5 52	6 34	20 12	97	6 13	14	
1	192	22.2	24.4	6	11.2 92	24.6 137	58	07	53	32	08 92		16	17	
2	207	22.3	23.4	20	39.4 92	38.3 137	56	10	53	30	03 90		18	20	
3	222	22.5	22.5	35	07.6 92	-3 52.0 137	54	12	53	29	20 00 87		20	22	
4	237	22.6	21.5	49	35.7 91	-4 05.7 137	52	15	54	27	19 57 84		22	24	
5	252	22.8	-4 20.5	64	03.8 91	-4 19.3 136	50	5 16	5 54	6 26	19 54 82		6 23	27	
6	267	23.0	-4 19.5	78	31.8 90	-4 32.9 136	45	5 20	5 54	6 23	19 47 78		6 27	31	
7	282	23.1	18.5	92	59.9 91	-4 46.5 136	40	22	54	21	42 74		30	35	
8	297	23.3	17.6	107	27.8 89	-5 00.1 136	35	24	53	19	37 71		33	38	
9	312	23.4	16.6	121	55.8 90	13.6 135	30	25	53	17	33 68		36	40	
10	327	23.6	15.6	136	23.7 89	27.1 135	20	26	51	13	27 63		40	45	
11	342	23.8	-4 14.6	150	51.6 89	-5 40.6 135	10 N	5 25	5 49	6 10	19 21 58		6 43	50	
12	357	23.9	-4 13.6	165	19.4 88	-5 54.0 134	0	5 22	5 46	6 07	19 15 55		6 47	54	
13	12	24.1	12.7	179	47.2 88	-6 07.5 135	10 S	18	43	04	10 50		50	58	
14	27	24.2	11.7	194	15.0 88	20.9 134	20	13	38	6 01	19 04 46		54	62	
15	42	24.4	10.7	208	42.7 87	34.2 133	30	5 04	33	5 57	18 57 42		6 58	68	
16	57	24.6	09.7	223	10.4 87	-6 47.5 133	35	4 59	29	54	53 40		7 01	70	
17	72	24.7	-4 08.8	237	38.0 86	-7 00.8 133	40	4 52	5 24	5 52	18 49 36		7 03	74	
18	87	24.9	-4 07.8	252	05.6 86	-7 14.0 132	45	4 43	5 19	5 48	18 44 33		7 07	77	
19	102	25.0	06.8	266	33.2 86	27.2 132	50	32	12	45	39 28		10	83	
20	117	25.2	05.8	281	00.7 85	40.4 132	52	27	08	43	36 26		12	85	
21	132	25.4	04.8	295	28.2 85	-7 53.5 131	54	21	05	41	33 24		14	87	
22	147	25.5	03.9	309	55.6 84	-8 06.5 130	56	14	5 01	39	30 21		16	90	
23	162	25.7	02.9	324	23.0 84	19.6 131	58	4 06	4 56	36	26 19		19	92	
24	177	25.9	-4 01.9	338	50.4 84	-8 32.5 129	60 S	3 57	4 51	5 34	18 22 16		7 21	96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 12 ^h 49 ^m 5		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: -1.2 PMG: 23 ^h 45 ^m		Mag: -2.2 PMG: 15 ^h 15 ^m		Mag: +0.4 PMG: 2 ^h 42 ^m		
	hG ♊		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	
0	167	05.3	136	00.2	+14 23.2	2 27.0	+10 59.0	130 37.7	+13 27.5	319 25.3	-8 29.5
1	182	07.8	151	00.1	24.3	17 30.4	59.3	145 39.7	27.6	334 27.9	29.4
2	197	10.2	166	00.0	25.5	32 33.8	+10 59.6	160 41.7	27.8	349 30.5	29.4
3	212	12.7	180	59.9	26.6	47 37.2	+11 00.0	175 43.7	28.0	4 33.0	29.3
4	227	15.2	195	59.8	27.7	62 40.6	+11 00.3	190 45.7	28.1	19 35.6	29.3
5	242	17.6	210	59.7	+14 28.8	77 44.0	+11 00.6	205 47.7	+13 28.3	34 38.2	-8 29.2
6	257	20.1	225	59.6	+14 29.9	92 47.4	+11 00.9	220 49.7	+13 28.4	49 40.8	-8 29.2
7	272	22.6	240	59.5	31.0	107 50.8	01.2	235 51.7	28.6	64 43.3	29.1
8	287	25.0	255	59.4	32.2	122 54.2	01.6	250 53.7	28.8	79 45.9	29.1
9	302	27.5	270	59.3	33.3	137 57.6	01.9	265 55.7	28.9	94 48.5	29.0
10	317	30.0	285	59.2	34.4	153 01.0	02.2	280 57.7	29.1	109 51.1	29.0
11	332	32.4	300	59.1	+14 35.5	168 04.4	+11 02.5	295 59.7	+13 29.3	124 53.7	-8 28.9
12	347	34.9	315	59.0	+14 36.6	183 07.8	+11 02.9	311 01.7	+13 29.4	139 56.2	-8 28.9
13	2 37.3	330 58.9	37.7	198 11.1	03.2	198 11.1	03.2	326 03.7	29.6	154 58.8	28.8
14	17 39.8	345 58.8	38.8	213 14.5	03.5	213 14.5	03.5	341 05.7	29.7	170 01.4	28.8
15	32 42.3	0 58.7	39.9	228 17.9	03.8	228 17.9	03.8	356 07.7	29.9	185 04.0	28.7
16	47 44.7	15 58.5	41.0	243 21.3	04.1	243 21.3	04.1	11 09.7	30.1	200 06.6	28.7
17	62 47.2	30 58.4	+14 42.1	258 24.7	+11 04.5	258 24.7	+11 04.5	26 11.6	+13 30.2	215 09.1	-8 28.6
18	77 49.7	45 58.3	+14 43.3	273 28.1	+11 04.8	273 28.1	+11 04.8	41 13.6	+13 30.4	230 11.7	-8 28.6
19	92 52.1	60 58.2	44.4	288 31.5	05.1	288 31.5	05.1	56 15.6	30.6	245 14.3	28.5
20	107 54.6	75 58.1	45.5	303 34.9	05.4	303 34.9	05.4	71 17.6	30.7	260 16.9	28.5
21	122 57.1	90 58.0	46.6	318 38.3	05.7	318 38.3	05.7	86 19.6	30.9	275 19.5	28.4
22	137 59.5	105 57.9	47.7	333 41.6	06.1	333 41.6	06.1	101 21.6	31.0	290 22.0	28.4
23	153 02.0	120 57.8	48.8	348 45.0	06.4	348 45.0	06.4	116 23.6	31.2	305 24.6	28.3
24	168 04.4	135 57.7	+14 49.9	3 48.4	+11 06.7	3 48.4	+11 06.7	131 25.6	+13 31.4	320 27.2	-8 28.3
Dif	—		-1	+11		+34	+3	+20	+2	+26	+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 17 ^d 1	PHE {	4 ^h : 60:5 12 ^h : 60:5 20 ^h : 60:5			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 10 ^m 1								SD: 16:5			PMG: 1 ^h 28 ^m			R°: 55 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	25.9	-4 01.9	338	50.4	-8 32.5	83	60 N	17 51	18 32	19 21	21 49 95	6 27 17		
1	192	26.0	-4 00.9	353	17.7	45.4	129	58	52	32	17	40 92	33 20		
2	207	26.2	-3 59.9	7	44.9	-8 58.3	129	56	54	31	14	33 89	38 23		
3	222	26.3	59.0	22	12.2	-9 11.1	128	54	55	30	12	27 86	42 26		
4	237	26.5	58.0	36	39.3	23.8	127	52	56	30	09	21 84	46 28		
5	252	26.7	-3 57.0	51	06.5	-9 36.5	127	50	17 57	18 30	19 07	21 16 81	6 50 30		
6	267	26.8	-3 56.0	65	33.6	-9 49.1	126	45	18 00	18 29	19 03	21 05 77	6 58 35		
7	282	27.0	55.0	80	00.6	-10 01.7	126	40	02	29	19 00	20 56 73	7 05 38		
8	297	27.2	54.1	94	27.6	14.2	125	35	04	29	18 58	48 71	11 41		
9	312	27.3	53.1	108	54.6	26.6	124	30	05	29	57	41 68	16 44		
10	327	27.5	52.1	123	21.5	39.0	124	20	08	30	56	30 63	25 48		
11	342	27.6	-3 51.1	137	48.3	-10 51.3	123	10 N	18 11	18 32	18 56	20 19 61	7 33 52		
12	357	27.8	-3 50.1	152	15.1	-11 03.5	122	0	18 13	18 34	18 58	20 10 57	7 41 56		
13	12	28.0	49.2	166	41.9	15.7	122	10 S	16	37	19 02	20 00 54	48 60		
14	27	28.1	48.2	181	08.6	27.7	120	20	19	41	07	19 50 50	7 56 64		
15	42	28.3	47.2	195	35.3	39.8	121	30	23	47	15	39 46	8 06 68		
16	57	28.5	46.2	210	01.9	-11 51.7	119	35	25	50	20	33 43	11 71		
17	72	28.6	-3 45.2	224	28.5	-12 03.5	118	40	18 27	18 54	19 26	19 25 41	8 17 74		
18	87	28.8	-3 44.2	238	55.0	-12 15.3	118	45	18 30	18 59	19 34	19 17 37	8 24 78		
19	102	29.0	43.3	253	21.5	27.0	117	50	33	19 06	45	07 33	33 82		
20	117	29.1	42.3	267	48.0	38.6	116	52	35	09	50	19 02 31	37 84		
21	132	29.3	41.3	282	14.3	-12 50.2	116	54	36	12	19 55	18 57 29	41 86		
22	147	29.4	40.3	296	40.7	-13 01.6	114	56	38	16	20 02	51 26	46 89		
23	162	29.6	39.3	311	07.0	13.0	114	58	40	20	09	45 23	51 92		
24	177	29.8	-3 38.4	325	33.2	-13 24.3	113	60 S	18 43	19 25	20 18	18 38 20	8 57 96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 45 ^m 6		Mag: -4.3 PMG: 14 ^h 56 ^m		Mag: -1.2 PMG: 23 ^h 39 ^m		Mag: -2.2 PMG: 15 ^h 12 ^m		Mag: +0.4 PMG: 2 ^h 38 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	168	04.4	135	57.7	+14	49.9	3	48.4	+11	06.7	131	25.6	+13	31.4	320	27.2	-8	28.3
1	183	06.9	150	57.6		51.0	18	51.8		07.0	146	27.6		31.5	335	29.8		28.2
2	198	09.4	165	57.5		52.1	33	55.2		07.3	161	29.6		31.7	350	32.4		28.2
3	213	11.8	180	57.4		53.2	48	58.6		07.6	176	31.6		31.9	5	34.9		28.1
4	228	14.3	195	57.3		54.3	64	02.0		08.0	191	33.6		32.0	20	37.5		28.0
5	243	16.8	210	57.2	+14	55.4	79	05.3	+11	08.3	206	35.6	+13	32.2	35	40.1	-8	28.0
6	258	19.2	225	57.1	+14	56.5	94	08.7	+11	08.6	221	37.5	+13	32.4	50	42.7	-8	27.9
7	273	21.7	240	57.0		57.6	109	12.1		08.9	236	39.5		32.5	65	45.3		27.9
8	288	24.2	255	56.9		58.7	124	15.5		09.2	251	41.5		32.7	80	47.9		27.8
9	303	26.6	270	56.8	+14	59.8	139	18.9		09.5	266	43.5		32.8	95	50.4		27.8
10	318	29.1	285	56.7	+15	00.9	154	22.3		09.8	281	45.5		33.0	110	53.0		27.7
11	333	31.6	300	56.5	+15	02.0	169	25.7	+11	10.2	296	47.5	+13	33.2	125	55.6	-8	27.7
12	348	34.0	315	56.4	+15	03.1	184	29.0	+11	10.5	311	49.5	+13	33.3	140	58.2	-8	27.6
13	3 36.5	330	56.3		04.2	199	32.4		10.8	326	51.5		33.5	156	00.8		27.6	
14	18 38.9	345	56.2		05.3	214	35.8		11.1	341	53.5		33.7	171	03.3		27.5	
15	33 41.4	0 56.1		06.4		229	39.2		11.4	356	55.5		33.8	186	05.9		27.5	
16	48 43.9	15 56.0		07.5		244	42.6		11.7	11 57.4		34.0		201	08.5		27.4	
17	63 46.3	30 55.9	+15	08.6		259	45.9	+11	12.0	26 59.4	+13	34.1		216	11.1	-8	27.4	
18	78 48.8	45 55.8	+15	09.7		274	49.3	+11	12.3	42 01.4	+13	34.3		231	13.7	-8	27.3	
19	93 51.3	60 55.7		10.8		289	52.7		12.7	57 03.4		34.5		246	16.3		27.3	
20	108 53.7	75 55.6		11.9		304	56.1		13.0	72 05.4		34.6		261	18.8		27.2	
21	123 56.2	90 55.5		13.0		319	59.5		13.3	87 07.4		34.8		276	21.4		27.2	
22	138 58.7	105 55.4		14.1		335	02.9		13.6	102 09.4		35.0		291	24.0		27.1	
23	154 01.1	120 55.3		15.1		350	06.2		13.9	117 11.4		35.1		306	26.6		27.0	
24	169 03.6	135 55.2	+15	16.2		5 09.6	+11	14.2		132 13.4	+13	35.3		321 29.2	-8	27.0		
Dif	—		-1	+11		+34	+3			+20		+2		+26		+		

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 18 ^d 1 PHE { 4 ^h : 60'4 12 ^h : 60'4 20 ^h : 60'3														
	PMG: 12 ^h 09 ^m 9			SD: 16'5 PMG: 2 ^h 23 ^m R°: 57 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m		
0	177	29.8	-3	38.4	325	33.2	-13	24.3	60 N	4	58	5	46	6	28	23 24 89	6 44 23	
1	192	29.9		37.4	339	59.4	72	35.4	58	5	02	47	26		12 86	6 53 26		
2	207	30.1		36.4	354	25.6	72	46.5	56	05	48	25	23	02	83	7 01 29		
3	222	30.3		35.4	8	51.7	71	-13	57.5	54	08	49	24	22	53 80	08 32		
4	237	30.4		34.4	23	17.8	71	-14	08.4	52	10	49	23		45 78	14 34		
5	252	30.6	-3	33.4	37	43.8	70	-14	19.3	50	5	12	5	49	6 22	22 37 77	7 20 36	
6	267	30.8	-3	32.5	52	09.7	69	-14	30.0	45	5	16	5	50	6 19	22 22 74	7 33 39	
7	282	30.9		31.5	66	35.7	70		40.6	40	19	51	17		22 09 71	43 43		
8	297	31.1		30.5	81	01.5	68	-14	51.1	35	21	51	16		21 59 69	7 52 45		
9	312	31.3		29.5	95	27.4	69	-15	01.5	30	23	50	14		49 67	8 00 48		
10	327	31.4		28.5	109	53.2	68		11.8	20	24	50	12		33 64	13 52		
11	342	31.6	-3	27.5	124	18.9	67	-15	22.0	10 N	5	24	5	48	6 09	21 20 61	8 25 55	
12	357	31.8	-3	26.6	138	44.6	67	-15	32.2	0	5	22	5	46	6 07	21 07 58	8 37 57	
13	12	31.9		25.6	153	10.3	67		42.2	10 S	19	43	04		20 54 56	8 48 61		
14	27	32.1		24.6	167	35.9	66	-15	52.0	20	13	39	6	01	40 53	9 00 64		
15	42	32.3		23.6	182	01.4	65	-16	01.8	30	06	34	5	58	25 50	14 67		
16	57	32.4		22.6	196	26.9	65		11.5	35	5	01	31	56	16 48	22 70		
17	72	32.6	-3	21.6	210	52.4	65	-16	21.1	40	4	54	5	26	5 54	20 06 46	9 31 72	
18	87	32.8	-3	20.7	225	17.9	65	-16	30.5	45	4	46	5	21	5	51	19 54 43	9 42 75
19	102	32.9		19.7	239	43.3	64		39.9	50	36	15	48		40 39	9 55 79		
20	117	33.1		18.7	254	08.6	63		49.1	52	31	12	46		33 38	10 01 81		
21	132	33.3		17.7	268	33.9	63	-16	58.2	54	25	09	45		26 36	07 84		
22	147	33.4		16.7	282	59.2	63	-17	07.2	56	19	05	43		17 34	15 86		
23	162	33.6		15.7	297	24.4	62		16.0	58	12	5	01	41	19 08 31	23 90		
24	177	33.8	-3	14.8	311	49.6	62	-17	24.8	60 S	4	03	4	56	5 39	18 58 27	10 33 93	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 41 ^m 7		Mag: -4.3 PMG: 14 ^h 56 ^m			Mag: -1.2 PMG: 23 ^h 34 ^m			Mag: -2.2 PMG: 15 ^h 09 ^m			Mag: +0.4 PMG: 2 ^h 34 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°				
0	169	03.6	135	55.2	+15	16.2	5	09.6	+11	14.2	132	13.4	+13	35.3	321	29.2	-8	27.0
1	184	06.0	150	55.1		17.3	20	13.0		14.5	147	15.3		35.5	336	31.8		26.9
2	199	08.5	165	55.0		18.4	35	16.4		14.8	162	17.3		35.6	351	34.3		26.9
3	214	11.0	180	54.9		19.5	50	19.7		15.1	177	19.3		35.8	6	36.9		26.8
4	229	13.4	195	54.8		20.6	65	23.1		15.4	192	21.3		35.9	21	39.5		26.8
5	244	15.9	210	54.7	+15	21.7	80	26.5	+11	15.7	207	23.3	+13	36.1	36	42.1	-8	26.7
6	259	18.4	225	54.6	+15	22.8	95	29.9	+11	16.0	222	25.3	+13	36.3	51	44.7	-8	26.7
7	274	20.8	240	54.5		23.9	110	33.3		16.4	237	27.3		36.4	66	47.3		26.6
8	289	23.3	255	54.4		24.9	125	36.6		16.7	252	29.3		36.6	81	49.9		26.6
9	304	25.8	270	54.3		26.0	140	40.0		17.0	267	31.2		36.8	96	52.4		26.5
10	319	28.2	285	54.2		27.1	155	43.4		17.3	282	33.2		36.9	111	55.0		26.5
11	334	30.7	300	54.0	+15	28.2	170	46.8	+11	17.6	297	35.2	+13	37.1	126	57.6	-8	26.4
12	349	33.2	315	53.9	+15	29.3	185	50.1	+11	17.9	312	37.2	+13	37.3	142	00.2	-8	26.4
13	4	35.6	330	53.8		30.4	200	53.5		18.2	327	39.2		37.4	157	02.8		26.3
14	19	38.1	345	53.7		31.4	215	56.9		18.5	342	41.2		37.6	172	05.4		26.2
15	34	40.5	0	53.6		32.5	231	00.3		18.8	357	43.2		37.7	187	08.0		26.2
16	49	43.0	15	53.5		33.6	246	03.6		19.1	12	45.1		37.9	202	10.5		26.1
17	64	45.5	30	53.4	+15	34.7	261	07.0	+11	19.4	27	47.1	+13	38.1	217	13.1	-8	26.1
18	79	47.9	45	53.3	+15	35.8	276	10.4	+11	19.7	42	49.1	+13	38.2	232	15.7	-8	26.0
19	94	50.4	60	53.2		36.9	291	13.7		20.0	57	51.1		38.4	247	18.3		26.0
20	109	52.9	75	53.1		37.9	306	17.1		20.3	72	53.1		38.6	262	20.9		25.9
21	124	55.3	90	53.0		39.0	321	20.5		20.6	87	55.1		38.7	277	23.5		25.9
22	139	57.8	105	52.9		40.1	336	23.9		20.9	102	57.1		38.9	292	26.1		25.8
23	155	00.3	120	52.8		41.2	351	27.2		21.2	117	59.0		39.1	307	28.6		25.8
24	170	02.7	135	52.7	+15	42.2	6	30.6	+11	21.5	133	01.0	+13	39.2	322	31.2	-8	25.7
Dif	—		-1		+11		+34		+3		+20		+2		+26		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 19 ^d 1	PHE { 4 ^h : 60 ^m /2 12 ^h : 60 ^m /0 20 ^h : 59 ^m /9	SD: 16 ^h 4			R°: 59 ^m									
	PMG: 12 ^h 09 ^m 6	PMG: 3 ^h 20 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	177	33.8	-3	311	49.6	-17	24.8	60 N	17 56	18 37	19 26	** ** *	**	7 07	33			
1	192	33.9		326	14.8	62	33.4	58	57	36	22	** ** *	**	19	36			
2	207	34.1		340	39.9	61	41.9	56	58	35	19	** ** *	**	30	39			
3	222	34.3		355	05.0	61	50.3	54	17 59	34	15	** ** *	**	40	40			
4	237	34.4		9	30.0	60	-17 58.6	52	18 00	33	13	** ** *	**	48	42			
5	252	34.6	-3	23	55.0	60	-18 06.7	50	18 01	18 33	19 10	23 54	70	7 56	44			
6	267	34.8	-3	38	20.0	60	-18 14.7	45	18 02	18 32	19 06	23 36	67	8 12	47			
7	282	35.0		52	44.9	59	22.6	40	04	31	02	20 66		26	49			
8	297	35.1		67	09.8	59	30.4	35	05	31	19 00	23 08	64	37	51			
9	312	35.3		81	34.7	59	38.0	30	07	30	18 58	22 56	64	8 48	52			
10	327	35.5		95	59.5	58	45.5	20	09	31	56	37 62		9 05	55			
11	342	35.6	-3	110	24.3	58	-18 52.9	10 N	18 11	18 32	18 56	22 21	60	9 20	57			
12	357	35.8	-3	124	49.1	58	-19 00.1	0	18 13	18 34	18 58	22 05	59	9 34	59			
13	12	36.0		139	13.9	58	07.2	10 S	15	36	19 00	21 50	58	9 49	61			
14	27	36.1	-3	153	38.6	57	14.2	20	17	39	05	33 57		10 04	63			
15	42	36.3	-3	168	03.3	57	21.0	30	20	44	12	15 54		21 66				
16	57	36.5	-2	182	28.0	57	27.7	35	22	47	17	21 04	53	32	67			
17	72	36.6	-2	196	52.6	56	-19 34.3	40	18 24	18 51	19 23	20 52	51	10 43	69			
18	87	36.8	-2	211	17.2	56	-19 40.7	45	18 26	18 56	19 30	20 37	50	10 57	71			
19	102	37.0		225	41.8	56	47.0	50	29	19 01	40	19 48		11 14	74			
20	117	37.2		240	06.4	56	53.1	52	30	04	45	11 47		22 75				
21	132	37.3		254	30.9	55	-19 59.2	54	31	07	50	20 02	45	31 77				
22	147	37.5		268	55.5	56	-20 05.0	56	33	11	19 56	19 51	44	41 78				
23	162	37.7		283	20.0	55	10.8	58	35	14	20 03	39 42		11 53	80			
24	177	37.8	-2	297	44.5	55	-20 16.4	60 S	18 37	19 19	20 11	19 25	40	12 06	83			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 37 ^m 7		Mag: -4.4 PMG: 14 ^h 57 ^m			Mag: -1.1 PMG: 23 ^h 29 ^m			Mag: -2.2 PMG: 15 ^h 06 ^m			Mag: +0.4 PMG: 2 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	170	02.7	135	52.7	+15	42.2	6	30.6	+11	21.5	133	01.0	+13	39.2	322	31.2	-8	25.7
1	185	05.2	150	52.6		43.3	21	34.0		21.8	148	03.0		39.4	337	33.8		25.7
2	200	07.7	165	52.5		44.4	36	37.3		22.1	163	05.0		39.5	352	36.4		25.6
3	215	10.1	180	52.4		45.5	51	40.7		22.4	178	07.0		39.7	7	39.0		25.5
4	230	12.6	195	52.3		46.5	66	44.1		22.7	193	09.0		39.9	22	41.6		25.5
5	245	15.0	210	52.2	+15	47.6	81	47.4	+11	23.0	208	10.9	+13	40.0	37	44.2	-8	25.4
6	260	17.5	225	52.1	+15	48.7	96	50.8	+11	23.3	223	12.9	+13	40.2	52	46.8	-8	25.4
7	275	20.0	240	52.0		49.8	111	54.2		23.6	238	14.9		40.4	67	49.3		25.3
8	290	22.4	255	51.9		50.8	126	57.5		23.9	253	16.9		40.5	82	51.9		25.3
9	305	24.9	270	51.8		51.9	142	00.9		24.2	268	18.9		40.7	97	54.5		25.2
10	320	27.4	285	51.7		53.0	157	04.3		24.5	283	20.9		40.9	112	57.1		25.2
11	335	29.8	300	51.6	+15	54.0	172	07.6	+11	24.8	298	22.8	+13	41.0	127	59.7	-8	25.1
12	350	32.3	315	51.5	+15	55.1	187	11.0	+11	25.1	313	24.8	+13	41.2	143	02.3	-8	25.1
13	5	34.8	330	51.4		56.2	202	14.4		25.4	328	26.8		41.4	158	04.9		25.0
14	20	37.2	345	51.3		57.3	217	17.7		25.7	343	28.8		41.5	173	07.5		24.9
15	35	39.7	0	51.2		58.3	232	21.1		26.0	358	30.8		41.7	188	10.1		24.9
16	50	42.1	15	51.1	+15	59.4	247	24.4		26.3	13	32.8		41.8	203	12.6		24.8
17	65	44.6	30	51.0	+16	00.5	262	27.8	+11	26.5	28	34.7	+13	42.0	218	15.2	-8	24.8
18	80	47.1	45	50.9	+16	01.5	277	31.2	+11	26.8	43	36.7	+13	42.2	233	17.8	-8	24.7
19	95	49.5	60	50.8		02.6	292	34.5		27.1	58	38.7		42.3	248	20.4		24.7
20	110	52.0	75	50.7		03.7	307	37.9		27.4	73	40.7		42.5	263	23.0		24.6
21	125	54.5	90	50.6		04.7	322	41.2		27.7	88	42.7		42.7	278	25.6		24.6
22	140	56.9	105	50.5		05.8	337	44.6		28.0	103	44.6		42.8	293	28.2		24.5
23	155	59.4	120	50.4		06.8	352	48.0		28.3	118	46.6		43.0	308	30.8		24.4
24	171	01.9	135	50.3	+16	07.9	7	51.3	+11	28.6	133	48.6	+13	43.2	323	33.4	-8	24.4
Dif	—		-1			+11	+34		+3	+20		+2		+26		+1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 09 ^m 3			Edad: 20 ^d 1 PHE { 4 ^h : 59/7 12 ^h : 59/5 20 ^h : 59/3 PMG: 4 ^h 19 ^m R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	177	37.8	-2	51.1	297	44.5	-20	16.4	60 N	4 52	5 40	6 22	0 53	76	7 40	47	
1	192	38.0		50.2	312	09.0	55	21.8	58	56	42	21	38	74	7 55	49	
2	207	38.2		49.2	326	33.4	54	27.1	56	4 59	43	20	25	72	8 09	50	
3	222	38.4		48.2	340	57.9	55	32.3	54	5 03	44	19	13	72	20	51	
4	237	38.5		47.2	355	22.3	54	37.4	52	05	45	18	0 03	71	30	52	
5	252	38.7	-2	46.2	9	46.8	55	-20	42.2	50	5 08	5 45	6 17	** ** *	8 40	52	
6	267	38.9	-2	45.2	24	11.2	54	-20	47.0	45	5 12	5 46	6 16	** ** *	8 59	54	
7	282	39.0		44.2	38	35.6	54	51.6	46	40	16	47	14	** ** *	9 15	55	
8	297	39.2		43.3	53	00.0	54	-20	56.1	35	19	48	13	** ** *	28	56	
9	312	39.4		42.3	67	24.4	54	-21	00.4	30	20	48	12	** ** *	9 40	56	
10	327	39.6		41.3	81	48.8	54	04.5	41	20	22	48	10	23 39	59	10 00	
11	342	39.7	-2	40.3	96	13.2	54	-21	08.6	10 N	5 23	5 47	6 08	23 21	59	10 17	
12	357	39.9	-2	39.3	110	37.5	53	-21	12.4	0	5 21	5 45	6 06	23 04	59	10 33	
13	12	40.1		38.3	125	01.9	54	16.2	38	10 S	19	43	04	22 48	58	10 50	
14	27	40.2		37.3	139	26.3	54	19.8	36	20	14	40	6 02	30	58	11 07	
15	42	40.4		36.4	153	50.7	54	23.2	34	30	07	35	5 59	22 09	58	27 62	
16	57	40.6		35.4	168	15.1	54	26.5	33	35	5 02	32	58	21 57	58	39 62	
17	72	40.8	-2	34.4	182	39.5	54	-21	29.6	40	4 57	5 29	5 56	21 43	58	11 52	
18	87	40.9	-2	33.4	197	03.9	54	-21	32.6	45	4 49	5 24	5 54	21 27	58	12 08	
19	102	41.1		32.4	211	28.3	54	35.5	29	50	40	18	51	21 07	57	28 64	
20	117	41.3		31.4	225	52.7	54	38.2	27	52	35	16	50	20 58	56	37 65	
21	132	41.4		30.4	240	17.1	54	40.8	26	54	30	13	49	47	56	48 65	
22	147	41.6		29.4	254	41.5	54	43.2	24	56	24	09	47	35	56	12 59	
23	162	41.8		28.5	269	06.0	55	45.5	23	58	17	06	45	21	56	13 13	
24	177	42.0	-2	27.5	283	30.4	54	-21	47.6	60 S	4 09	5 01	5 44	20 05	55	13 29	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 33 ^m 8		Mag: -4.4 PMG: 14 ^h 57 ^m			Mag: -1.1 PMG: 23 ^h 23 ^m			Mag: -2.2 PMG: 15 ^h 03 ^m			Mag: +0.4 PMG: 2 ^h 25 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	171	01.9	135	50.3	+16	07.9	7	51.3	+11	28.6	133	48.6	+13	43.2	323	33.4	
1	186	04.3	150	50.2		09.0	22	54.7		28.9	148	50.6		43.3	338	35.9	
2	201	06.8	165	50.1		10.0	37	58.0		29.2	163	52.6		43.5	353	38.5	
3	216	09.3	180	50.0		11.1	53	01.4		29.5	178	54.5		43.7	8	41.1	
4	231	11.7	195	49.9		12.1	68	04.7		29.8	193	56.5		43.8	23	43.7	
5	246	14.2	210	49.8	+16	13.2	83	08.1	+11	30.0	208	58.5	+13	44.0	38	46.3	
6	261	16.6	225	49.7	+16	14.3	98	11.5	+11	30.3	224	00.5	+13	44.2	53	48.9	
7	276	19.1	240	49.6		15.3	113	14.8		30.6	239	02.5		44.3	68	51.5	
8	291	21.6	255	49.5		16.4	128	18.2		30.9	254	04.4		44.5	83	54.1	
9	306	24.0	270	49.4		17.4	143	21.5		31.2	269	06.4		44.7	98	56.7	
10	321	26.5	285	49.3		18.5	158	24.9		31.5	284	08.4		44.8	113	59.3	
11	336	29.0	300	49.2	+16	19.6	173	28.2	+11	31.8	299	10.4	+13	45.0	129	01.9	
12	351	31.4	315	49.1	+16	20.6	188	31.6	+11	32.1	314	12.4	+13	45.1	144	04.4	
13	6	33.9	330	49.0		21.7	203	34.9		32.3	329	14.3		45.3	159	07.0	
14	21	36.4	345	48.9		22.7	218	38.3		32.6	344	16.3		45.5	174	09.6	
15	36	38.8	0	48.8		23.8	233	41.6		32.9	359	18.3		45.6	189	12.2	
16	51	41.3	15	48.7		24.8	248	45.0		33.2	14	20.3		45.8	204	14.8	
17	66	43.8	30	48.6	+16	25.9	263	48.3	+11	33.5	29	22.3	+13	46.0	219	17.4	
18	81	46.2	45	48.5	+16	26.9	278	51.7	+11	33.8	44	24.2	+13	46.1	234	20.0	
19	96	48.7	60	48.4		28.0	293	55.0		34.0	59	26.2		46.3	249	22.6	
20	111	51.1	75	48.3		29.0	308	58.4		34.3	74	28.2		46.5	264	25.2	
21	126	53.6	90	48.2		30.1	324	01.7		34.6	89	30.2		46.6	279	27.8	
22	141	56.1	105	48.1		31.1	339	05.1		34.9	104	32.1		46.8	294	30.4	
23	156	58.5	120	48.0		32.2	354	08.4		35.2	119	34.1		47.0	309	33.0	
24	172	01.0	135	47.9	+16	33.2	9	11.8	+11	35.5	134	36.1	+13	47.1	324	35.6	
Dif	—		-1			+11	+34			+3	+20		+2	+26			+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 09 ^m 1			Edad: 21 ^d 1 PHE { SD: 16'1 PMG: 5 ^h 19 ^m R°: 58 ^m 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	42.0	-2	27.5	283	30.4	-21	47.6	60 N	18 01	18 42	19 31	2 09 58	8 27 62
1	192	42.1		26.5	297	54.9	55	49.6	58	01	41	27	1 52 58	44 62
2	207	42.3		25.5	312	19.4	55	51.4	56	02	39	23	37 59	8 59 62
3	222	42.5		24.5	326	43.9	55	53.1	54	03	38	19	25 58	9 11 62
4	237	42.7		23.5	341	08.4	55	54.6	52	03	37	16	14 58	22 62
5	252	42.8	-2	22.5	355	32.9	55	-21	50	18 04	18 36	19 14	1 04 58	9 32 61
6	267	43.0	-2	21.6	9	57.5	56	-21	45	18 05	18 34	19 09	0 43 59	9 53 61
7	282	43.2		20.6	24	22.1	56	58.3	40	06	33	05	26 59	10 10 60
8	297	43.4		19.6	38	46.7	56	-21	35	07	32	19 02	12 59	24 60
9	312	43.5		18.6	53	11.4	57	-22	30	08	32	18 59	0 00 59	36 60
10	327	43.7		17.6	67	36.0	56	00.8	20	09	31	57	** ** *	10 57 59
11	342	43.9	-2	16.6	82	00.7	57	-22	10 N	18 11	18 32	18 56	** ** *	11 16 58
12	357	44.1	-2	15.6	96	25.4	57	-22	0	18 12	18 33	18 57	** ** *	11 33 57
13	12	44.2		14.6	110	50.2	58	01.9	10 S	14	35	18 59	23 46 58	11 50 57
14	27	44.4		13.7	125	15.0	58	02.0	20	16	38	19 03	28 59	12 08 57
15	42	44.6		12.7	139	39.8	58	01.9	30	18	42	10	23 07 61	29 56
16	57	44.8		11.7	154	04.7	59	01.7	35	19	44	14	22 55 61	41 56
17	72	44.9	-2	10.7	168	29.5	58	-22	40	18 21	18 48	19 20	22 41 62	12 55 55
18	87	45.1	-2	09.7	182	54.5	60	-22	45	18 22	18 52	19 26	22 25 63	13 12 54
19	102	45.3		08.7	197	19.4	59	-22	50	24	57	35	22 04 65	32 53
20	117	45.5		07.7	211	44.5	61	-21	52	25	18 59	40	21 54 66	42 53
21	132	45.6		06.7	226	09.5	60	58.5	54	27	19 02	45	43 66	13 53 52
22	147	45.8		05.8	240	34.6	61	57.5	56	28	05	50	31 67	14 05 52
23	162	46.0		04.8	254	59.7	61	56.3	58	29	09	19 56	17 68	20 50
24	177	46.2	-2	03.8	269	24.9	62	-21	60 S	18 31	19 13	20 04	21 00 69	14 37 49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 12 ^h 29 ^m 9		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: -1.1 PMG: 23 ^h 18 ^m		Mag: -2.2 PMG: 15 ^h 00 ^m		Mag: +0.4 PMG: 2 ^h 21 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	172	01.0	135	47.9	+16	33.2	9	11.8	+11	35.5	134	36.1	+13	47.1	324	35.6	-8	23.1	
1	187	03.5	150	47.8		34.3	24	15.1		35.7	149	38.1		47.3	339	38.1		23.0	
2	202	05.9	165	47.7		35.3	39	18.4		36.0	164	40.0		47.5	354	40.7		22.9	
3	217	08.4	180	47.6		36.4	54	21.8		36.3	179	42.0		47.6	9	43.3		22.9	
4	232	10.9	195	47.5		37.4	69	25.1		36.6	194	44.0		47.8	24	45.9		22.8	
5	247	13.3	210	47.4	+16	38.4	84	28.5	+11	36.9	209	46.0	+13	48.0	39	48.5	-8	22.8	
6	262	15.8	225	47.3	+16	39.5	99	31.8	+11	37.1	224	48.0	+13	48.1	54	51.1	-8	22.7	
7	277	18.3	240	47.2		40.5	114	35.2		37.4	239	49.9		48.3	69	53.7		22.7	
8	292	20.7	255	47.1		41.6	129	38.5		37.7	254	51.9		48.5	84	56.3		22.6	
9	307	23.2	270	47.0		42.6	144	41.8		38.0	269	53.9		48.6	99	58.9		22.6	
10	322	25.6	285	46.9		43.7	159	45.2		38.2	284	55.9		48.8	115	01.5		22.5	
11	337	28.1	300	46.8	+16	44.7	174	48.5	+11	38.5	299	57.8	+13	48.9	130	04.1	-8	22.4	
12	352	30.6	315	46.7	+16	45.7	189	51.9	+11	38.8	314	59.8	+13	49.1	145	06.7	-8	22.4	
13	7	33.0	330	46.6		46.8	204	55.2		39.1	330	01.8		49.3	160	09.3		22.3	
14	22	35.5	345	46.5		47.8	219	58.5		39.3	345	03.8		49.4	175	11.9		22.3	
15	37	38.0	0	46.4		48.9	235	01.9		39.6	0	05.7		49.6	190	14.5		22.2	
16	52	40.4	15	46.3		49.9	250	05.2		39.9	15	07.7		49.8	205	17.1		22.2	
17	67	42.9	30	46.2	+16	50.9	265	08.5	+11	40.2	30	09.7	+13	49.9	220	19.7	-8	22.1	
18	82	45.4	45	46.1	+16	52.0	280	11.9	+11	40.4	45	11.7	+13	50.1	235	22.3	-8	22.0	
19	97	47.8	60	46.0		53.0	295	15.2		40.7	60	13.6		50.3	250	24.8		22.0	
20	112	50.3	75	45.9		54.0	310	18.5		41.0	75	15.6		50.4	265	27.4		21.9	
21	127	52.7	90	45.8		55.1	325	21.9		41.3	90	17.6		50.6	280	30.0		21.9	
22	142	55.2	105	45.7		56.1	340	25.2		41.5	105	19.6		50.8	295	32.6		21.8	
23	157	57.7	120	45.6		57.1	355	28.5		41.8	120	21.5		50.9	310	35.2		21.8	
24	173	00.1	135	45.5	+16	58.2	10	31.9	+11	42.1	135	23.5	+13	51.1	325	37.8	-8	21.7	
Dif	—		-1	+10		+33	+3			+20	+2			+26	+1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 22 ^d 1	PHE	4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'1											
	PMG: 12 ^h 08 ^m 8							SD: 16'0			PMG: 6 ^h 17 ^m		R°: 56 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	46.2	-2	03.8		269	24.9	-21	55.0	15	60 N	4	45	5	34	6	16
1	192	46.3		02.8		283	50.1	62	53.5	16	58		50		36	15	
2	207	46.5		01.8		298	15.4	63	51.9	17	56		54		38	15	
3	222	46.7	-2	00.8		312	40.7	63	50.2	17	54	4	58		39	14	
4	237	46.9	-1	59.8		327	06.1	64	48.3	19	52	5	01		40	13	
5	252	47.0	-1	58.8		341	31.5	64	-21	20	50	5	03	5	41	6	13
6	267	47.2	-1	57.9		355	57.0	65	-21	22	45	5	09	5	43	6	12
7	282	47.4		56.9		10	22.5	65	41.8	23	40		13		44	11	
8	297	47.6		55.9		24	48.1	66	39.4	24	35		16		45	10	
9	312	47.7		54.9		39	13.7	66	36.8	26	30		18		46	10	
10	327	47.9		53.9		53	39.4	67	34.1	27	20		21		46	08	
11	342	48.1	-1	52.9		68	05.1	67	-21	28	10 N	5	22	5	46	6	07
12	357	48.3	-1	51.9		82	30.9	68	-21	29	0	5	21	5	45	6	06
13	12	48.4		50.9		96	56.8	69	25.3	31	10 S		19		43	04	
14	27	48.6		50.0		111	22.7	69	22.1	32	20		15		40	02	
15	42	48.8		49.0		125	48.7	70	18.7	34	30		09		37	6	00
16	57	49.0		48.0		140	14.7	70	15.3	34	35	5	04		34	5	59
17	72	49.2	-1	47.0		154	40.8	71	-21	36	40	4	59	5	31	5	58
18	87	49.3	-1	46.0		169	07.0	72	-21	37	45	4	52	5	27	5	56
19	102	49.5		45.0		183	33.2	72	04.1	39	50		43		22	54	
20	117	49.7		44.0		197	59.5	73	-21	40	52		39		19	53	
21	132	49.9		43.0		212	25.8	73	-20	40	54		34		17	52	
22	147	50.0		42.1		226	52.2	74	51.8	43	56		29		14	51	
23	162	50.2		41.1		241	18.7	75	47.5	43	58		22		10	50	
24	177	50.4	-1	40.1		255	45.3	76	-20	45	60 S	4	15	5	06	5	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 25 ^m 9		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: -1.1 PMG: 23 ^h 13 ^m		Mag: -2.1 PMG: 14 ^h 56 ^m		Mag: +0.4 PMG: 2 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	00.1	135	45.5	+16	58.2	10	31.9	+11	42.1
1	188	02.6	150	45.4	+16	59.2	25	35.2		42.3
2	203	05.1	165	45.3	+17	00.2	40	38.5		42.6
3	218	07.5	180	45.2		01.3	55	41.9		42.9
4	233	10.0	195	45.1		02.3	70	45.2		43.1
5	248	12.5	210	45.0	+17	03.3	85	48.5	+11	43.4
6	263	14.9	225	44.9	+17	04.3	100	51.8	+11	43.7
7	278	17.4	240	44.8		05.4	115	55.2		44.0
8	293	19.9	255	44.7		06.4	130	58.5		44.2
9	308	22.3	270	44.6		07.4	146	01.8		44.5
10	323	24.8	285	44.5		08.5	161	05.1		44.8
11	338	27.2	300	44.4	+17	09.5	176	08.5	+11	45.0
12	353	29.7	315	44.3	+17	10.5	191	11.8	+11	45.3
13	8	32.2	330	44.2		11.5	206	15.1		45.5
14	23	34.6	345	44.1		12.5	221	18.4		45.8
15	38	37.1	0	44.1		13.6	236	21.8		46.1
16	53	39.6	15	44.0		14.6	251	25.1		46.3
17	68	42.0	30	43.9	+17	15.6	266	28.4	+11	46.6
18	83	44.5	45	43.8	+17	16.6	281	31.7	+11	46.9
19	98	47.0	60	43.7		17.7	296	35.0		47.1
20	113	49.4	75	43.6		18.7	311	38.3		47.4
21	128	51.9	90	43.5		19.7	326	41.7		47.7
22	143	54.4	105	43.4		20.7	341	45.0		47.9
23	158	56.8	120	43.3		21.7	356	48.3		48.2
24	173	59.3	135	43.2	+17	22.7	11	51.6	+11	48.4
Dif	—		-1		+10		+33		+3	
									+20	
										+2
										+26
										+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 5			Edad: 23 ^d 1 PHE { 4 ^h : 57 ^m /9 12 ^h : 57 ^m /7 20 ^h : 57 ^m /5 SD: 15 ^h 8 PMG: 7 ^h 13 ^m R°: 53 ^m					Civil	Náutico	Hora	R°	Hora	R°	
hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	50.4	-1 40.1	255	45.3	-20 43.0	45	60 N	18 06	18 47	19 37	3 48 27	10 45 82		
1	192	50.6		270	11.9	38.5	76	58	06	45	32	33 30	10 59 79		
2	207	50.8	38.1	284	38.5	33.8	47	56	06	43	27	20 33	11 12 76		
3	222	50.9	37.1	299	05.3	28.9	49	54	07	42	23	3 09 35	23 73		
4	237	51.1	36.1	313	32.1	24.0	49	52	07	40	20	2 59 37	32 72		
5	252	51.3	-1 35.1	327	59.0	-20 19.0	50	50	18 07	18 39	19 17	2 50 38	11 41 70		
6	267	51.5	-1 34.1	342	26.0	-20 13.8	52	45	18 08	18 37	19 11	2 31 41	11 59 67		
7	282	51.6	33.2	356	53.0	08.5	53	40	08	35	07	16 43	12 13 65		
8	297	51.8	32.2	11	20.1	-20 03.1	54	35	09	34	03	2 03 45	26 62		
9	312	52.0	31.2	25	47.2	-19 57.6	55	30	09	33	19 01	1 52 47	37 60		
10	327	52.2	30.2	40	14.5	52.0	56	20	10	32	18 58	32 50	12 55 57		
11	342	52.4	-1 29.2	54	41.8	-19 46.3	57	10 N	18 11	18 32	18 56	1 16 51	13 11 55		
12	357	52.5	-1 28.2	69	09.2	-19 40.5	58	0	18 12	18 32	18 56	1 00 54	13 26 52		
13	12	52.7	27.2	83	36.6	34.5	60	10 S	13	34	18 58	0 44 56	41 50		
14	27	52.9	26.2	98	04.2	28.5	60	20	14	36	19 02	27 58	13 57 47		
15	42	53.1	25.3	112	31.8	22.3	62	30	15	39	07	0 08 60	14 15 44		
16	57	53.2	24.3	126	59.4	16.0	63	35	16	42	11	** ** *	25 42		
17	72	53.4	-1 23.3	141	27.2	-19 09.7	63	40	18 17	18 44	19 16	** ** *	14 37 40		
18	87	53.6	-1 22.3	155	55.0	-19 03.2	65	45	18 19	18 48	19 22	** ** *	14 51 38		
19	102	53.8	21.3	170	22.9	-18 56.6	66	50	20	52	31	** ** *	15 08 35		
20	117	54.0	20.3	184	50.9	50.0	66	52	21	55	35	** ** *	16 33		
21	132	54.1	19.3	199	18.9	43.2	68	54	22	18 57	39	** ** *	25 31		
22	147	54.3	18.3	213	47.0	36.3	69	56	22	19 00	44	23 52 76	35 29		
23	162	54.5	17.3	228	15.2	29.4	69	58	23	03	50	41 79	15 47 26		
24	177	54.7	-1 16.4	242	43.5	-18 22.3	71	60 S	18 25	19 06	19 57	23 28 83	16 00 23		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 22 ^m 0		Mag: -4.4 PMG: 14 ^h 57 ^m			Mag: -1.1 PMG: 23 ^h 07 ^m			Mag: -2.1 PMG: 14 ^h 53 ^m			Mag: +0.4 PMG: 2 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	173	59.3	135	43.2	+17 22.7	11	51.6	+11 48.4	136	10.8	+13 55.1	326	40.2	-8 20.3	
1	189	01.7	150	43.1	23.8	26	54.9	48.7	151	12.8	55.3	341	42.8	20.3	
2	204	04.2	165	43.0	24.8	41	58.2	49.0	166	14.8	55.4	356	45.4	20.2	
3	219	06.7	180	42.9	25.8	57	01.6	49.2	181	16.7	55.6	11	48.0	20.1	
4	234	09.1	195	42.8	26.8	72	04.9	49.5	196	18.7	55.8	26	50.6	20.1	
5	249	11.6	210	42.7	+17 27.8	87	08.2	+11 49.7	211	20.7	+13 55.9	41	53.2	-8 20.0	
6	264	14.1	225	42.6	+17 28.8	102	11.5	+11 50.0	226	22.6	+13 56.1	56	55.8	-8 20.0	
7	279	16.5	240	42.5	29.8	117	14.8	50.2	241	24.6	56.3	71	58.4	19.9	
8	294	19.0	255	42.4	30.9	132	18.1	50.5	256	26.6	56.4	87	01.0	19.9	
9	309	21.5	270	42.3	31.9	147	21.4	50.8	271	28.5	56.6	102	03.6	19.8	
10	324	23.9	285	42.2	32.9	162	24.7	51.0	286	30.5	56.8	117	06.2	19.7	
11	339	26.4	300	42.1	+17 33.9	177	28.0	+11 51.3	301	32.5	+13 56.9	132	08.8	-8 19.7	
12	354	28.9	315	42.1	+17 34.9	192	31.3	+11 51.5	316	34.5	+13 57.1	147	11.4	-8 19.6	
13	9	31.3	330	42.0	35.9	207	34.6	51.8	331	36.4	57.3	162	14.0	19.6	
14	24	33.8	345	41.9	36.9	222	37.9	52.0	346	38.4	57.4	177	16.6	19.5	
15	39	36.2	0	41.8	37.9	237	41.3	52.3	1	40.4	57.6	192	19.2	19.5	
16	54	38.7	15	41.7	38.9	252	44.6	52.5	16	42.3	57.8	207	21.8	19.4	
17	69	41.2	30	41.6	+17 39.9	267	47.9	+11 52.8	31	44.3	+13 57.9	222	24.4	-8 19.3	
18	84	43.6	45	41.5	+17 40.9	282	51.2	+11 53.0	46	46.3	+13 58.1	237	27.0	-8 19.3	
19	99	46.1	60	41.4	41.9	297	54.5	53.3	61	48.2	58.3	252	29.6	19.2	
20	114	48.6	75	41.3	42.9	312	57.8	53.5	76	50.2	58.4	267	32.2	19.2	
21	129	51.0	90	41.2	43.9	328	01.1	53.8	91	52.2	58.6	282	34.8	19.1	
22	144	53.5	105	41.1	44.9	343	04.4	54.0	106	54.1	58.8	297	37.4	19.0	
23	159	56.0	120	41.0	45.9	358	07.7	54.3	121	56.1	58.9	312	40.0	19.0	
24	174	58.4	135	40.9	+17 46.9	13	11.0	+11 54.5	136	58.1	+13 59.1	327	42.6	-8 18.9	
Dif	—		-1		+10	+33		+3	+20		+2	+26		+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 2			Edad: 24 ^d 1 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 PMG: 8 ^h 06 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	54.7	-1 16.4	242	43.5	-18	22.3	60 N	4 39	5 28	6 10	4 15	19	12	07	83
1	192	54.9		257	11.9		15.1	58	44	30	09	4 03	22	18	80	
2	207	55.0		271	40.3		07.9	56	49	32	09	3 53	25	28	77	
3	222	55.2		286	08.8	-18	00.5	54	52	34	09	44	27	36	75	
4	237	55.4		300	37.3	-17	53.1	52	56	35	09	36	29	44	73	
5	252	55.6	-1 11.4	315	06.0	-17	45.6	50	4 59	5 37	6 09	3 28	31	12	51	71
6	267	55.8	-1 10.4	329	34.7	-17	38.0	45	5 05	5 39	6 08	3 12	35	13	06	67
7	282	55.9		344	03.5		30.3	40	09	41	08	2 59	38	18	64	
8	297	56.1		358	32.3		22.5	35	13	42	07	48	40	28	62	
9	312	56.3		13	01.3		14.6	30	16	43	07	39	41	37	59	
10	327	56.5		27	30.3	-17	06.6	20	19	44	06	22	45	13	52	56
11	342	56.7	-1 05.5	41	59.4	-16	58.5	10 N	5 20	5 45	6 06	2 07	48	14	06	52
12	357	56.8	-1 04.5	56	28.5	-16	50.4	0	5 20	5 44	6 05	1 54	50	14	18	50
13	12	57.0		70	57.8		42.2	10 S	19	43	04	40	53	31	46	
14	27	57.2		85	27.1		33.9	20	15	41	03	25	57	44	43	
15	42	57.4		99	56.5		25.5	30	10	38	02	1 08	60	14	59	39
16	57	57.6	-1 00.5	114	25.9		17.0	35	06	36	01	0 58	62	15	07	38
17	72	57.7	-0 59.5	128	55.5	-16	08.5	40	5 01	5 33	6 00	0 47	64	15	17	35
18	87	57.9	-0 58.6	143	25.1	-15	59.9	45	4 55	5 29	5 59	0 34	67	15	29	31
19	102	58.1		157	54.7		51.2	50	47	25	57	18	70	43	28	
20	117	58.3		172	24.5		42.4	52	43	23	57	10	72	49	26	
21	132	58.5		186	54.3		33.6	54	38	21	56	0 01	75	15	56	25
22	147	58.7		201	24.2		24.6	56	33	18	55	** *	** *	16	04	22
23	162	58.8		215	54.2		15.7	58	27	15	54	** *	** *	13	20	
24	177	59.0	-0 52.6	230	24.2	-15	06.6	60 S	4 21	5 12	5 53	** *	** *	16	23	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 12 ^h 18 ^m 1		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: -1.0 PMG: 23 ^h 02 ^m		Mag: -2.1 PMG: 14 ^h 50 ^m		Mag: +0.4 PMG: 2 ^h 09 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	174	58.4	135	40.9	+17	46.9	13	11.0	+11	54.5	136	58.1	+13	59.1	327	42.6	-8	18.9
1	190	00.9	150	40.8		47.9	28	14.3		54.8	152	00.0		59.3	342	45.2		18.9
2	205	03.3	165	40.7		48.9	43	17.5		55.0	167	02.0		59.4	357	47.8		18.8
3	220	05.8	180	40.7		49.9	58	20.8		55.3	182	04.0		59.6	12	50.4		18.7
4	235	08.3	195	40.6		50.9	73	24.1		55.5	197	05.9		59.8	27	53.0		18.1
5	250	10.7	210	40.5	+17	51.9	88	27.4	+11	55.8	212	07.9	+13	59.9	42	55.6	-8	18.6
6	265	13.2	225	40.4	+17	52.9	103	30.7	+11	56.0	227	09.9	+14	00.1	57	58.2	-8	18.6
7	280	15.7	240	40.3		53.9	118	34.0		56.3	242	11.8		00.3	73	00.8		18.5
8	295	18.1	255	40.2		54.9	133	37.3		56.5	257	13.8		00.4	88	03.4		18.5
9	310	20.6	270	40.1		55.9	148	40.6		56.8	272	15.8		00.6	103	06.0		18.4
10	325	23.1	285	40.0		56.9	163	43.9		57.0	287	17.7		00.8	118	08.6		18.3
11	340	25.5	300	39.9	+17	57.9	178	47.2	+11	57.2	302	19.7	+14	00.9	133	11.2	-8	18.3
12	355	28.0	315	39.8	+17	58.9	193	50.5	+11	57.5	317	21.6	+14	01.1	148	13.8	-8	18.2
13	10	30.5	330	39.7	+17	59.9	208	53.8		57.7	332	23.6		01.3	163	16.4		18.2
14	25	32.9	345	39.6	+18	00.9	223	57.0		58.0	347	25.6		01.4	178	19.0		18.1
15	40	35.4	0	39.6		01.9	239	00.3		58.2	2	27.5		01.6	193	21.6		18.0
16	55	37.8	15	39.5		02.9	254	03.6		58.4	17	29.5		01.8	208	24.2		18.0
17	70	40.3	30	39.4	+18	03.8	269	06.9	+11	58.7	32	31.5	+14	01.9	223	26.8	-8	17.9
18	85	42.8	45	39.3	+18	04.8	284	10.2	+11	58.9	47	33.4	+14	02.1	238	29.4	-8	17.9
19	100	45.2	60	39.2		05.8	299	13.5		59.2	62	35.4		02.3	253	32.0		17.8
20	115	47.7	75	39.1		06.8	314	16.7		59.4	77	37.4		02.4	268	34.6		17.7
21	130	50.2	90	39.0		07.8	329	20.0		59.6	92	39.3		02.6	283	37.2		17.7
22	145	52.6	105	38.9		08.8	344	23.3	+11	59.9	107	41.3		02.8	298	39.8		17.6
23	160	55.1	120	38.8		09.8	359	26.6	+12	00.1	122	43.3		02.9	313	42.4		17.6
24	175	57.6	135	38.7	+18	10.7	14	29.9	+12	00.4	137	45.2	+14	03.1	328	45.0	-8	17.5
Dif	—		-1	+10			+33	+2			+20	+2			+26	+1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 25 ^d 1 PHE { 4 ^h : 56 ^h 7 12 ^h : 56 ^h 5 20 ^h : 56 ^h 3															
	PMG: 12 ^h 07 ^m 9		PMG: 8 ^h 56 ^m R°: 47 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	177	59.0	-0	52.6	230	24.2	-15 06.6	60 N	18 11	18 52	19 42	4 34 15	13 30 82					
1	192	59.2		51.6	244	54.3 ¹¹¹	-14 57.5 ⁹¹	58	10	50	36	25 18	38 79					
2	207	59.4		50.6	259	24.5 ¹¹²	48.3 ⁹²	56	10	48	32	18 19	45 76					
3	222	59.6		49.7	273	54.7 ¹¹²	39.0 ⁹³	54	10	46	27	11 22	51 74					
4	237	59.7		48.7	288	25.0 ¹¹³	29.7 ⁹³	52	10	44	24	4 05 23	13 57 72					
5	252	59.9	-0	47.7	302	55.4 ¹¹⁴	-14 20.3 ⁹⁴	50	18 10	18 43	19 21	3 59 26	14 02 70					
6	268	00.1	-0	46.7	317	25.8 ¹¹⁴	-14 10.8 ⁹⁵	45	18 10	18 40	19 14	3 47 29	14 13 66					
7	283	00.3		45.7	331	56.3 ¹¹⁵	-14 01.3 ⁹⁵	40	10	37	09	37 32	22 63					
8	298	00.5		44.7	346	26.9 ¹¹⁶	-13 51.7 ⁹⁶	35	10	36	05	28 35	30 60					
9	313	00.6		43.7	0	57.6 ¹¹⁷	42.0 ⁹⁷	30	10	34	19 02	20 38	36 58					
10	328	00.8		42.7	15	28.3 ¹¹⁷	32.3 ⁹⁷	20	11	33	18 58	3 07 41	48 54					
11	343	01.0	-0	41.7	29	59.1 ¹¹⁸	-13 22.6 ⁹⁷	10 N	18 11	18 32	18 56	2 55 45	14 58 50					
12	358	01.2	-0	40.8	44	29.9 ¹¹⁸	-13 12.7 ⁹⁹	0	18 11	18 32	18 56	2 44 48	15 08 46					
13	13	01.4		39.8	59	00.8 ¹¹⁹	-13 02.8 ⁹⁹	10 S	12	33	18 57	33 51	17 43					
14	28	01.6		38.8	73	31.8 ¹²⁰	-12 52.9 ⁹⁹	20	12	34	19 00	22 54	27 40					
15	43	01.7		37.8	88	02.8 ¹²⁰	42.9 ¹⁰⁰	30	13	37	05	08 59	38 36					
16	58	01.9		36.8	102	33.9 ¹²¹	32.9 ¹⁰⁰	35	14	39	08	2 00 61	45 33					
17	73	02.1	-0	35.8	117	05.1 ¹²²	-12 22.7 ¹⁰²	40	18 14	18 41	19 13	1 51 64	15 52 31					
18	88	02.3	-0	34.8	131	36.3 ¹²²	-12 12.6 ¹⁰¹	45	18 15	18 44	19 19	1 41 66	16 00 28					
19	103	02.5		33.8	146	07.6 ¹²³	-12 02.4 ¹⁰²	50	16	48	26	28 71	11 24					
20	118	02.7		32.8	160	39.0 ¹²⁴	-11 52.1 ¹⁰³	52	16	50	30	22 73	15 23					
21	133	02.8		31.9	175	10.4 ¹²⁴	41.8 ¹⁰³	54	17	52	34	16 74	21 20					
22	148	03.0		30.9	189	41.9 ¹²⁵	31.5 ¹⁰³	56	17	54	39	08 77	26 18					
23	163	03.2		29.9	204	13.4 ¹²⁵	21.1 ¹⁰⁴	58	18	57	44	1 00 79	33 15					
24	178	03.4	-0	28.9	218	45.0 ¹²⁶	-11 10.6 ¹⁰⁵	60 S	18 19	19 00	19 50	0 51 82	16 40 13					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 14 ^m 2		Mag: -4.4 PMG: 14 ^h 58 ^m		Mag: -1.0 PMG: 22 ^h 57 ^m		Mag: -2.1 PMG: 14 ^h 47 ^m		Mag: +0.3 PMG: 2 ^h 05 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♏	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	175	57.6	135	38.7	+18	10.7	14	29.9	+12	00.4	137	45.2	+14	03.1	328	45.0	-8	17.5
1	191	00.0	150	38.6		11.7	29	33.1		00.6	152	47.2		03.3	343	47.6		17.4
2	206	02.5	165	38.6		12.7	44	36.4		00.8	167	49.1		03.4	358	50.2		17.4
3	221	05.0	180	38.5		13.7	59	39.7		01.1	182	51.1		03.6	13	52.9		17.3
4	236	07.4	195	38.4		14.7	74	43.0		01.3	197	53.1		03.8	28	55.5		17.3
5	251	09.9	210	38.3	+18	15.7	89	46.2	+12	01.5	212	55.0	+14	03.9	43	58.1	-8	17.2
6	266	12.3	225	38.2	+18	16.6	104	49.5	+12	01.8	227	57.0	+14	04.1	59	00.7	-8	17.1
7	281	14.8	240	38.1		17.6	119	52.8		02.0	242	59.0		04.3	74	03.3		17.1
8	296	17.3	255	38.0		18.6	134	56.1		02.2	258	00.9		04.4	89	05.9		17.0
9	311	19.7	270	37.9		19.6	149	59.3		02.5	273	02.9		04.6	104	08.5		17.0
10	326	22.2	285	37.8		20.6	165	02.6		02.7	288	04.8		04.8	119	11.1		16.9
11	341	24.7	300	37.8	+18	21.5	180	05.9	+12	02.9	303	06.8	+14	04.9	134	13.7	-8	16.8
12	356	27.1	315	37.7	+18	22.5	195	09.1	+12	03.2	318	08.8	+14	05.1	149	16.3	-8	16.8
13	11	29.6	330	37.6		23.5	210	12.4		03.4	333	10.7		05.3	164	18.9		16.7
14	26	32.1	345	37.5		24.5	225	15.7		03.6	348	12.7		05.5	179	21.5		16.7
15	41	34.5	0	37.4		25.4	240	18.9		03.9	3	14.6		05.6	194	24.1		16.6
16	56	37.0	15	37.3		26.4	255	22.2		04.1	18	16.6		05.8	209	26.7		16.5
17	71	39.4	30	37.2	+18	27.4	270	25.5	+12	04.3	33	18.6	+14	06.0	224	29.3	-8	16.5
18	86	41.9	45	37.1	+18	28.3	285	28.7	+12	04.6	48	20.5	+14	06.1	239	31.9	-8	16.4
19	101	44.4	60	37.0		29.3	300	32.0		04.8	63	22.5		06.3	254	34.5		16.4
20	116	46.8	75	37.0		30.3	315	35.3		05.0	78	24.5		06.5	269	37.1		16.3
21	131	49.3	90	36.9		31.3	330	38.5		05.2	93	26.4		06.6	284	39.8		16.2
22	146	51.8	105	36.8		32.2	345	41.8		05.5	108	28.4		06.8	299	42.4		16.2
23	161	54.2	120	36.7		33.2	0	45.0		05.7	123	30.3		07.0	314	45.0		16.1
24	176	56.7	135	36.6	+18	34.2	15	48.3	+12	05.9	138	32.3	+14	07.1	329	47.6	-8	16.1
Dif	—		-1		+10		+33		+2		+20		+2		+26		+1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 3			Edad: 27 ^d 1 PHE { 4 ^h : 55 ^h 7 12 ^h : 55 ^h 5 20 ^h : 55 ^h 4 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	07.8	-0 05.2	207	39.0	-6 48.5	60 N	18 15	18 57	19 47	5 00	11	16 12	78	
1	193	08.0	04.2	222	11.8 ¹³⁸	37.2 ¹¹³	58	15	54	41	4 57	13	14 75		
2	208	08.2	03.2	236	44.7 ¹³⁹	25.9 ¹¹³	56	14	52	36	54 15	16 73			
3	223	08.3	02.2	251	17.6 ¹³⁹	14.5 ¹¹⁴	54	14	49	31	52 17	17 7			
4	238	08.5	01.2	265	50.6 ¹⁴⁰	-6 03.2 ¹¹³	52	14	48	27	49 19	19 69			
5	253	08.7	-0 00.2	280	23.5 ¹³⁹	-5 51.8 ¹¹⁴	50	18 13	18 46	19 24	4 47 21	16 20 68			
6	268	08.9	+0 00.8	294	56.6 ¹⁴¹	-5 40.4 ¹¹⁴	45	18 13	18 42	19 17	4 42 25	16 23 64			
7	283	09.1	01.7	309	29.7 ¹⁴¹	29.0 ¹¹⁴	40	12	39	11	38 28	26 60			
8	298	09.3	02.7	324	02.8 ¹⁴¹	17.6 ¹¹⁴	35	12	37	07	35 30	28 57			
9	313	09.4	03.7	338	35.9 ¹⁴¹	-5 06.1 ¹¹⁵	30	12	35	19 03	32 32	30 55			
10	328	09.6	04.7	353	09.1 ¹⁴²	-4 54.7 ¹¹⁴	20	11	33	18 59	27 36	33 51			
11	343	09.8	+0 05.7	7	42.3 ¹⁴²	-4 43.2 ¹¹⁵	10 N	18 11	18 32	18 56	4 22 40	16 36 47			
12	358	10.0	+0 06.7	22	15.5 ¹⁴²	-4 31.7 ¹¹⁵	0	18 11	18 31	18 55	4 18 43	16 39 43			
13	13	10.2	07.7	36	48.8 ¹⁴³	20.2 ¹¹⁵	10 S	10	31	56	13 48	41 40			
14	28	10.4	08.7	51	22.1 ¹⁴³	-4 08.7 ¹¹⁵	20	10	32	18 58	09 51	44 36			
15	43	10.6	09.7	65	55.5 ¹⁴⁴	-3 57.2 ¹¹⁵	30	11	34	19 02	03 56	47 32			
16	58	10.7	10.6	80	28.9 ¹⁴⁴	45.7 ¹¹⁵	35	11	36	05	4 00 58	49 30			
17	73	10.9	+0 11.6	95	02.3 ¹⁴⁴	-3 34.1 ¹¹⁶	40	18 11	18 38	19 09	3 57 60	16 51 27			
18	88	11.1	+0 12.6	109	35.7 ¹⁴⁴	-3 22.6 ¹¹⁵	45	18 11	18 40	19 15	3 53 63	16 53 24			
19	103	11.3	13.6	124	09.2 ¹⁴⁵	-3 11.0 ¹¹⁶	50	11	44	22	48 67	56 20			
20	118	11.5	14.6	138	42.6 ¹⁴⁴	-2 59.5 ¹¹⁵	52	12	45	25	45 70	57 19			
21	133	11.7	15.6	153	16.2 ¹⁴⁶	47.9 ¹¹⁶	54	12	47	29	43 72	16 59 17			
22	148	11.8	16.6	167	49.7 ¹⁴⁵	36.3 ¹¹⁶	56	12	49	33	40 74	17 00 15			
23	163	12.0	17.6	182	23.3 ¹⁴⁶	24.7 ¹¹⁶	58	12	51	38	37 76	02 13			
24	178	12.2	+0 18.5	196	56.9 ¹⁴⁶	-2 13.2 ¹¹⁵	60 S	18 12	18 54	19 44	3 34 79	17 04 10			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 06 ^m 3		Mag: -4.4 PMG: 14 ^h 58 ^m		Mag: -1.0 PMG: 22 ^h 47 ^m		Mag: -2.1 PMG: 14 ^h 41 ^m		Mag: +0.3 PMG: 1 ^h 56 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♏	Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	177	55.8	135 34.6	+18 57.2	17 06.2	+12 11.2	139 19.3	+14 11.2	330 50.2	-8 14.6	
1	192	58.3	150 34.5	58.1	32 09.5	11.4	154 21.2	11.3	345 52.8	14.5	
2	208	00.8	165 34.4	+18 59.1	47 12.7	11.6	169 23.2	11.5	0 55.4	14.5	
3	223	03.2	180 34.3	+19 00.0	62 15.9	11.8	184 25.2	11.7	15 58.0	14.4	
4	238	05.7	195 34.2	+19 01.0	77 19.2	12.0	199 27.1	11.8	31 00.6	14.4	
5	253	08.2	210 34.1	+19 01.9	92 22.4	+12 12.2	214 29.1	+14 12.0	46 03.2	-8 14.3	
6	268	10.6	225 34.1	+19 02.8	107 25.6	+12 12.4	229 31.0	+14 12.2	61 05.8	-8 14.2	
7	283	13.1	240 34.0	03.8	122 28.9	12.7	244 33.0	12.3	76 08.4	14.2	
8	298	15.5	255 33.9	04.7	137 32.1	12.9	259 34.9	12.5	91 11.0	14.1	
9	313	18.0	270 33.8	05.7	152 35.3	13.1	274 36.9	12.7	106 13.7	14.1	
10	328	20.5	285 33.7	06.6	167 38.6	13.3	289 38.8	12.8	121 16.3	14.0	
11	343	22.9	300 33.7	+19 07.6	182 41.8	+12 13.5	304 40.8	+14 13.0	136 18.9	-8 13.9	
12	358	25.4	315 33.6	+19 08.5	197 45.0	+12 13.7	319 42.8	+14 13.2	151 21.5	-8 13.9	
13	13	27.9	330 33.5	09.4	212 48.2	13.9	334 44.7	13.3	166 24.1	13.8	
14	28	30.3	345 33.4	10.4	227 51.5	14.1	349 46.7	13.5	181 26.7	13.7	
15	43	32.8	0 33.3	11.3	242 54.7	14.3	4 48.6	13.7	196 29.3	13.7	
16	58	35.3	15 33.2	12.3	257 57.9	14.5	19 50.6	13.9	211 31.9	13.6	
17	73	37.7	30 33.2	+19 13.2	273 01.1	+12 14.7	34 52.5	+14 14.0	226 34.5	-8 13.6	
18	88	40.2	45 33.1	+19 14.1	288 04.3	+12 14.9	49 54.5	+14 14.2	241 37.2	-8 13.5	
19	103	42.7	60 33.0	15.1	303 07.6	15.1	64 56.4	14.4	256 39.8	13.4	
20	118	45.1	75 32.9	16.0	318 10.8	15.3	79 58.4	14.5	271 42.4	13.4	
21	133	47.6	90 32.8	16.9	333 14.0	15.5	95 00.3	14.7	286 45.0	13.3	
22	148	50.0	105 32.8	17.9	348 17.2	15.7	110 02.3	14.9	301 47.6	13.2	
23	163	52.5	120 32.7	18.8	3 20.4	15.9	125 04.2	15.0	316 50.2	13.2	
24	178	55.0	135 32.6	+19 19.8	18 23.6	+12 16.1	140 06.2	+14 15.2	331 52.8	-8 13.1	
Dif	—	-1	+9	+32	+2	+20	+2	+26	+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 07 ^m 0			Edad: 28 ^d 1 PHE { 4 ^h : 55:2 12 ^h : 55:1 20 ^h : 55:0 R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	178	12.2	+0 18.5	196	56.9	-2 13.2	60 N	4 26	5 16	5 58	5 11	9	17 30	77	
1	193	12.4		211	30.5 ¹⁴⁶	-2 01.6 ¹¹⁶	58	32	19	58	10	12	29	75	
2	208	12.6		226	04.1 ¹⁴⁶	-1 50.0 ¹¹⁶	56	37	22	59	09	15	29	72	
3	223	12.8		240	37.8 ¹⁴⁷	38.4 ¹¹⁶	54	42	24	5 59	09	16	28	70	
4	238	13.0		255	11.5 ¹⁴⁷	26.8 ¹¹⁶	52	46	26	6 00	08	19	28	68	
5	253	13.1	+0 23.5	269	45.2 ¹⁴⁷	-1 15.3 ¹¹⁵	50	4 50	5 28	6 00	5 08	20	17 28	66	
6	268	13.3	+0 24.5	284	18.9 ¹⁴⁷	-1 03.7 ¹¹⁶	45	4 57	5 31	6 01	5 07	23	17 27	62	
7	283	13.5		298	52.7 ¹⁴⁸	-0 52.1 ¹¹⁶	40	5 03	34	01	06	27	26	59	
8	298	13.7		313	26.4 ¹⁴⁷	40.5 ¹¹⁶	35	07	37	02	05	30	25	57	
9	313	13.9		328	00.2 ¹⁴⁸	29.0 ¹¹⁵	30	11	38	02	04	32	25	54	
10	328	14.1		342	34.0 ¹⁴⁸	17.4 ¹¹⁶	20	15	41	03	03	36	24	50	
11	343	14.3	+0 29.4	357	07.8 ¹⁴⁸	-0 05.8 ¹¹⁶	10 N	5 18	5 42	6 03	5 02	40	17 23	46	
12	358	14.4	+0 30.4	11	41.7 ¹⁴⁹	+0 05.7 ¹¹⁵	0	5 19	5 43	6 04	5 01	43	17 22	43	
13	13	14.6		26	15.5 ¹⁴⁸	17.2 ¹¹⁵	10 S	19	43	04	01	46	21	40	
14	28	14.8		40	49.4 ¹⁴⁹	28.8 ¹¹⁶	20	17	42	04	5 00	50	20	36	
15	43	15.0		55	23.3 ¹⁴⁹	40.3 ¹¹⁵	30	12	40	04	4 59	54	19	32	
16	58	15.2		69	57.1 ¹⁴⁸	+0 51.8 ¹¹⁵	35	09	39	04	58	57	19	29	
17	73	15.4	+0 35.3	84	31.1 ¹⁵⁰	+1 03.3 ¹¹⁵	40	5 05	5 37	6 04	4 57	60	17 18	27	
18	88	15.6	+0 36.3	99	05.0 ¹⁴⁹	+1 14.8 ¹¹⁵	45	5 00	5 35	6 04	4 56	63	17 17	24	
19	103	15.7		113	38.9 ¹⁴⁹	26.3 ¹¹⁵	50	4 54	32	04	55	67	16	21	
20	118	15.9		128	12.8 ¹⁴⁹	37.8 ¹¹⁵	52	50	30	04	55	68	16	19	
21	133	16.1		142	46.8 ¹⁵⁰	+1 49.3 ¹¹⁵	54	47	28	04	55	70	16	16	
22	148	16.3		157	20.7 ¹⁴⁹	+2 00.7 ¹¹⁴	56	42	26	04	54	72	15	15	
23	163	16.5		171	54.7 ¹⁵⁰	12.1 ¹¹⁴	58	37	24	03	53	75	15	12	
24	178	16.7	+0 42.2	186	28.7 ¹⁵⁰	+2 23.5 ¹¹⁴	60 S	4 32	5 22	6 03	4 53	77	17 14	10	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 02 ^m 4			Mag: -4.4 PMG: 14 ^h 58 ^m			Mag: -1.0 PMG: 22 ^h 42 ^m			Mag: -2.1 PMG: 14 ^h 38 ^m			Mag: +0.3 PMG: 1 ^h 52 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'		°	'		°	'		°	'		°	'	
0	178	55.0		135	32.6	+19 19.8	18	23.6	+12 16.1	140	06.2	+14 15.2	331	52.8	-8 13.1
1	193	57.4		150	32.5	20.7	33	26.9	16.3	155	08.2	15.4	346	55.4	13.1
2	208	59.9		165	32.4	21.6	48	30.1	16.5	170	10.1	15.5	1	58.1	13.0
3	224	02.4		180	32.4	22.5	63	33.3	16.7	185	12.1	15.7	17	00.7	12.9
4	239	04.8		195	32.3	23.5	78	36.5	16.9	200	14.0	15.9	32	03.3	12.9
5	254	07.3		210	32.2	+19 24.4	93	39.7	+12 17.1	215	16.0	+14 16.0	47	05.9	-8 12.8
6	269	09.8		225	32.1	+19 25.3	108	42.9	+12 17.3	230	17.9	+14 16.2	62	08.5	-8 12.8
7	284	12.2		240	32.1	26.3	123	46.1	17.5	245	19.9	16.4	77	11.1	12.7
8	299	14.7		255	32.0	27.2	138	49.3	17.7	260	21.8	16.6	92	13.7	12.6
9	314	17.1		270	31.9	28.1	153	52.5	17.9	275	23.8	16.7	107	16.3	12.6
10	329	19.6		285	31.8	29.0	168	55.7	18.1	290	25.7	16.9	122	19.0	12.5
11	344	22.1		300	31.7	+19 30.0	183	58.9	+12 18.3	305	27.7	+14 17.1	137	21.6	-8 12.4
12	359	24.5		315	31.7	+19 30.9	199	02.1	+12 18.5	320	29.6	+14 17.2	152	24.2	-8 12.4
13	14	27.0		330	31.6	31.8	214	05.3	18.7	335	31.6	17.4	167	26.8	12.3
14	29	29.5		345	31.5	32.7	229	08.5	18.9	350	33.5	17.6	182	29.4	12.3
15	44	31.9		0	31.4	33.7	244	11.7	19.1	5	35.5	17.7	197	32.0	12.2
16	59	34.4		15	31.4	34.6	259	14.9	19.3	20	37.4	17.9	212	34.6	12.1
17	74	36.9		30	31.3	+19 35.5	274	18.1	+12 19.5	35	39.4	+14 18.1	227	37.2	-8 12.1
18	89	39.3		45	31.2	+19 36.4	289	21.3	+12 19.7	50	41.3	+14 18.2	242	39.9	-8 12.0
19	104	41.8		60	31.1	37.3	304	24.5	19.9	65	43.3	18.4	257	42.5	11.9
20	119	44.3		75	31.0	38.3	319	27.7	20.0	80	45.2	18.6	272	45.1	11.9
21	134	46.7		90	31.0	39.2	334	30.9	20.2	95	47.2	18.7	287	47.7	11.8
22	149	49.2		105	30.9	40.1	349	34.1	20.4	110	49.1	18.9	302	50.3	11.8
23	164	51.6		120	30.8	41.0	4	37.3	20.6	125	51.1	19.1	317	52.9	11.7
24	179	54.1		135	30.7	+19 41.9	19	40.5	+12 20.8	140	53.0	+14 19.3	332	55.5	-8 11.6
Dif	—			-1	+9		+32	+2		+20	+2		+26	+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 29 ^d 1 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6 R°: 43 ^m										
	PMG: 12 ^h 06 ^m 7			SD: 15 ^h 0 PMG: 11 ^h 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	16.7	+0 42.2	186	28.7	+2 23.5		60 N	18 20	19 02	19 53	5 20 11	18 47 77	
1	193	16.9		201	02.7 ¹⁵⁰	34.9 ¹¹⁴		58	19	18 59	46	22 13	44 73	
2	208	17.0	44.2	215	36.7 ¹⁵⁰	46.3 ¹¹⁴		56	19	56	41	24 15	41 71	
3	223	17.2	45.2	230	10.6 ¹⁴⁹	+2 57.7 ¹¹⁴		54	18	53	36	25 17	38 69	
4	238	17.4	46.2	244	44.6 ¹⁵⁰	+3 09.0 ¹¹³		52	17	51	31	27 19	36 67	
5	253	17.6	+0 47.2	259	18.6 ¹⁵⁰	+3 20.4 ¹¹⁴		50	18 17	18 49	19 27	5 28 20	18 34 65	
6	268	17.8	+0 48.2	273	52.7 ¹⁵¹	+3 31.7 ¹¹³		45	18 15	18 45	19 19	5 30 25	18 29 62	
7	283	18.0	49.1	288	26.7 ¹⁵⁰	42.9 ¹¹²		40	14	41	13	33 27	25 59	
8	298	18.2	50.1	303	00.7 ¹⁵⁰	+3 54.2 ¹¹³		35	14	39	08	35 29	22 56	
9	313	18.4	51.1	317	34.7 ¹⁵⁰	+4 05.4 ¹¹²		30	13	37	19 05	36 32	19 54	
10	328	18.5	52.1	332	08.7 ¹⁵⁰	16.7 ¹¹³		20	12	34	18 59	39 36	14 49	
11	343	18.7	+0 53.1	346	42.7 ¹⁵⁰	+4 27.9 ¹¹²		10 N	18 11	18 32	18 56	5 42 39	18 09 47	
12	358	18.9	+0 54.1	1	16.7 ¹⁵⁰	+4 39.0 ¹¹¹		0	18 10	18 31	18 55	5 44 43	18 05 43	
13	13	19.1	55.1	15	50.8 ¹⁵¹	+4 50.2 ¹¹²		10 S	09	30	55	47 46	18 01 40	
14	28	19.3	56.1	30	24.8 ¹⁵⁰	+5 01.3 ¹¹¹		20	09	31	18 56	50 49	17 56 37	
15	43	19.5	57.0	44	58.8 ¹⁵⁰	12.4 ¹¹¹		30	08	32	19 00	53 54	51 33	
16	58	19.7	58.0	59	32.8 ¹⁵⁰	23.5 ¹¹¹		35	08	33	03	55 56	48 31	
17	73	19.8	+0 59.0	74	06.8 ¹⁵⁰	+5 34.5 ¹¹⁰		40	18 08	18 35	19 06	5 57 59	17 45 28	
18	88	20.0	+1 00.0	88	40.8 ¹⁵⁰	+5 45.5 ¹¹⁰		45	18 07	18 37	19 11	5 59 62	17 41 25	
19	103	20.2	+1 01.0	103	14.8 ¹⁵⁰	+5 56.5 ¹¹⁰		50	07	39	17	6 02 66	37 21	
20	118	20.4	02.0	117	48.8 ¹⁵⁰	+6 07.4 ¹⁰⁹		52	07	41	20	03 68	35 19	
21	133	20.6	03.0	132	22.8 ¹⁵⁰	18.3 ¹⁰⁹		54	07	42	24	05 69	32 18	
22	148	20.8	03.9	146	56.8 ¹⁵⁰	29.2 ¹⁰⁹		56	07	44	27	06 72	30 16	
23	163	21.0	04.9	161	30.7 ¹⁴⁹	40.1 ¹⁰⁹		58	07	46	32	08 74	27 14	
24	178	21.2	+1 05.9	176	04.7 ¹⁵⁰	+6 50.9 ¹⁰⁸		60 S	18 06	18 48	19 37	6 10 77	17 24 11	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 58 ^m 4		Mag: -4.4 PMG: 14 ^h 58 ^m		Mag: -0.9 PMG: 22 ^h 37 ^m		Mag: -2.1 PMG: 14 ^h 35 ^m		Mag: +0.3 PMG: 1 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	179	54.1	135	30.7	+19 41.9		140	53.0	+14 19.3					
1	194	56.6	150	30.7	42.8		155	55.0	19.4					
2	209	59.0	165	30.6	43.7		170	56.9	19.6					
3	225	01.5	180	30.5	44.7		185	58.9	19.8					
4	240	04.0	195	30.4	45.6		201	00.8	19.9					
5	255	06.4	210	30.4	+19 46.5		216	02.8	+14 20.1					
6	270	08.9	225	30.3	+19 47.4		231	04.7	+14 20.3					
7	285	11.4	240	30.2	48.3		246	06.7	20.4					
8	300	13.8	255	30.2	49.2		261	08.6	20.6					
9	315	16.3	270	30.1	50.1		276	10.6	20.8					
10	330	18.7	285	30.0	51.0		291	12.5	20.9					
11	345	21.2	300	29.9	+19 51.9		306	14.5	+14 21.1					
12	0	23.7	315	29.9	+19 52.8		321	16.4	+14 21.3					
13	15	26.1	330	29.8	53.7		336	18.4	21.4					
14	30	28.6	345	29.7	54.6		351	20.3	21.6					
15	45	31.1	0	29.6	55.6		6	22.3	21.8					
16	60	33.5	15	29.6	56.5		21	24.2	22.0					
17	75	36.0	30	29.5	+19 57.4		36	26.2	+14 22.1					
18	90	38.5	45	29.4	+19 58.3		51	28.1	+14 22.3					
19	105	40.9	60	29.4	+19 59.2		66	30.1	22.5					
20	120	43.4	75	29.3	+20 00.1		81	32.0	22.6					
21	135	45.9	90	29.2	01.0		96	34.0	22.8					
22	150	48.3	105	29.1	01.9		111	35.9	23.0					
23	165	50.8	120	29.1	02.8		126	37.9	23.1					
24	180	53.2	135	29.0	+20 03.7		141	39.8	+14 23.3					
Dif	—		-1	+9	+32	+2	+19	+2	+26	+1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 06 ^m 4			Edad: 0 ^d 4 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'4 Rº: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	21.2	+1	05.9	176	04.7	+6 50.9	60 N	4 19	5 10	5 52	5 31	12	20	04	75	
1	193	21.3		06.9	190	38.7 ¹⁵⁰	+7 01.7 ¹⁰⁸	58	26	13	53	35	15	19	57	73	
2	208	21.5		07.9	205	12.6 ¹⁴⁹	12.5 ¹⁰⁸	56	32	16	53	39	17		52	71	
3	223	21.7		08.9	219	46.6 ¹⁵⁰	23.2 ¹⁰⁷	54	37	19	54	42	19		47	69	
4	238	21.9		09.9	234	20.5 ¹⁴⁹	33.9 ¹⁰⁷	52	41	21	55	46	20		43	66	
5	253	22.1	+1	10.8	248	54.4 ¹⁴⁹	+7 44.5 ¹⁰⁶	50	4 45	5 23	5 56	5 48	22	19	39	65	
6	268	22.3	+1	11.8	263	28.3 ¹⁴⁹	+7 55.1 ¹⁰⁶	45	4 53	5 28	5 57	5 55	25	19	31	61	
7	283	22.5		12.8	278	02.2 ¹⁴⁹	+8 05.7 ¹⁰⁶	40	4 59	31	58	6 00	28		24	58	
8	298	22.7		13.8	292	36.1 ¹⁴⁹	16.2 ¹⁰⁵	35	5 04	34	5 59	04	31		18	56	
9	313	22.8		14.8	307	10.0 ¹⁴⁹	26.7 ¹⁰⁵	30	08	36	6 00	08	33		13	53	
10	328	23.0		15.8	321	43.8 ¹⁴⁸	37.2 ¹⁰⁵	20	14	39	01	15	37	19	03	50	
11	343	23.2	+1	16.8	336	17.7 ¹⁴⁹	+8 47.6 ¹⁰⁴	10 N	5 17	5 41	6 02	6 21	41	18	56	46	
12	358	23.4	+1	17.7	350	51.5 ¹⁴⁸	+8 58.0 ¹⁰⁴	0	5 19	5 43	6 03	6 27	44	18	48	44	
13	13	23.6		18.7	5	25.3 ¹⁴⁸	+9 08.3 ¹⁰³	10 S	19	43	04	33	47		41	40	
14	28	23.8		19.7	19	59.2 ¹⁴⁹	18.6 ¹⁰³	20	17	43	05	39	50		33	37	
15	43	24.0		20.7	34	32.9 ¹⁴⁷	28.8 ¹⁰²	30	14	42	05	47	53		24	34	
16	58	24.1		21.7	49	06.7 ¹⁴⁸	39.0 ¹⁰²	35	11	41	06	51	56		19	32	
17	73	24.3	+1	22.7	63	40.5 ¹⁴⁸	+9 49.2 ¹⁰²	40	5 08	5 39	6 06	6 56	58	18	13	29	
18	88	24.5	+1	23.6	78	14.2 ¹⁴⁷	+9 59.3 ¹⁰¹	45	5 03	5 37	6 07	7 01	62	18	06	27	
19	103	24.7		24.6	92	47.9 ¹⁴⁷	+10 09.4 ¹⁰¹	50	4 57	35	07	08	65	17	58	23	
20	118	24.9		25.6	107	21.6 ¹⁴⁷	19.4 ¹⁰⁰	52	54	34	07	11	67		54	22	
21	133	25.1		26.6	121	55.3 ¹⁴⁷	29.4 ¹⁰⁰	54	51	32	07	14	69		50	20	
22	148	25.3		27.6	136	29.0 ¹⁴⁷	39.3 ⁹⁹	56	47	31	08	18	71		46	18	
23	163	25.5		28.6	151	02.6 ¹⁴⁶	49.2 ⁹⁹	58	42	29	08	22	74		41	15	
24	178	25.6	+1	29.6	165	36.2 ¹⁴⁶	+10 59.0 ⁹⁸	60 S	4 37	5 27	6 08	7 27	76	17	35	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 54 ^m 5		Mag: -4.4 PMG: 14 ^h 58 ^m		Mag: -0.9 PMG: 22 ^h 31 ^m		Mag: -2.1 PMG: 14 ^h 31 ^m		Mag: +0.3 PMG: 1 ^h 44 ^m									
	hG ♈	hG ♀	hG ♂	hG ♎	hG ♈	hG ♎	hG ♊	hG ♋	hG ♏	hG ♐								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	180	53.2	135	29.0	+20	03.7	20	56.7	+12	25.2	141	39.8	+14	23.3	333	58.3	-8	10.1
1	195	55.7	150	28.9		04.5	35	59.9		25.3	156	41.8		23.5	349	00.9		10.1
2	210	58.2	165	28.9		05.4	51	03.1		25.5	171	43.7		23.6		4	03.5	10.0
3	226	00.6	180	28.8		06.3	66	06.2		25.7	186	45.7		23.8	19	06.2		09.9
4	241	03.1	195	28.7		07.2	81	09.4		25.9	201	47.6		24.0	34	08.8		09.9
5	256	05.6	210	28.7	+20	08.1	96	12.5	+12	26.0	216	49.5	+14	24.2	49	11.4	-8	09.8
6	271	08.0	225	28.6	+20	09.0	111	15.7	+12	26.2	231	51.5	+14	24.3	64	14.0	-8	09.7
7	286	10.5	240	28.5		09.9	126	18.9		26.4	246	53.4		24.5	79	16.6		09.7
8	301	13.0	255	28.5		10.8	141	22.0		26.6	261	55.4		24.7	94	19.2		09.6
9	316	15.4	270	28.4		11.7	156	25.2		26.7	276	57.3		24.8	109	21.9		09.5
10	331	17.9	285	28.3		12.6	171	28.3		26.9	291	59.3		25.0	124	24.5		09.5
11	346	20.3	300	28.2	+20	13.5	186	31.5	+12	27.1	307	01.2	+14	25.2	139	27.1	-8	09.4
12	1	22.8	315	28.2	+20	14.4	201	34.6	+12	27.2	322	03.2	+14	25.3	154	29.7	-8	09.4
13	16	25.3	330	28.1		15.2	216	37.8		27.4	337	05.1		25.5	169	32.3		09.3
14	31	27.7	345	28.0		16.1	231	40.9		27.6	352	07.1		25.7	184	35.0		09.2
15	46	30.2	0	28.0		17.0	246	44.1		27.7	7	09.0		25.8	199	37.6		09.2
16	61	32.7	15	27.9		17.9	261	47.2		27.9	22	10.9		26.0	214	40.2		09.1
17	76	35.1	30	27.8	+20	18.8	276	50.4	+12	28.1	37	12.9	+14	26.2	229	42.8	-8	09.0
18	91	37.6	45	27.8	+20	19.7	291	53.5	+12	28.2	52	14.8	+14	26.4	244	45.4	-8	09.0
19	106	40.1	60	27.7		20.5	306	56.7		28.4	67	16.8		26.5	259	48.0		08.9
20	121	42.5	75	27.6		21.4	321	59.8		28.6	82	18.7		26.7	274	50.7		08.8
21	136	45.0	90	27.6		22.3	337	03.0		28.7	97	20.7		26.9	289	53.3		08.8
22	151	47.5	105	27.5		23.2	352	06.1		28.9	112	22.6		27.0	304	55.9		08.7
23	166	49.9	120	27.5		24.1	7	09.2		29.1	127	24.6		27.2	319	58.5		08.7
24	181	52.4	135	27.4	+20	24.9	22	12.4	+12	29.2	142	26.5	+14	27.4	335	01.1	-8	08.6
Dif	—		-1		+9		+32		+2		+19		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 06 ^m 1			Edad: 1 ^d 4 SD: 14 ^h 8 PMG: 13 ^h 21 ^m	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 R°: 45 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	25.6	+1 29.6	165	36.2	+10 59.0	98	60 N	18 25	19 07	19 58	5 43 14	21 19 74		
1	193	25.8		180	09.8 ¹⁴⁶	+11 08.8	98	58	24	03	51	50 17	10 71		
2	208	26.0		194	43.4 ¹⁴⁶		97	56	23	19 00	45	5 56 19	21 03 68		
3	223	26.2		209	17.0 ¹⁴⁶		97	54	22	18 57	40	6 01 22	20 56 66		
4	238	26.4		223	50.5 ¹⁴⁵		96	52	21	55	35	06 23	49 65		
5	253	26.6	+1 34.5	238	24.0 ¹⁴⁵	+11 47.4	96	50	18 20	18 52	19 31	6 10 25	20 44 63		
6	268	26.8	+1 35.5	252	57.5 ¹⁴⁵	+11 56.9	95	45	18 18	18 47	19 22	6 20 28	20 32 60		
7	283	27.0		267	31.0 ¹⁴⁵	+12 06.4	95	40	16	44	15	28 31	22 58		
8	298	27.2		282	04.5 ¹⁴⁵		94	35	15	40	10	35 33	14 55		
9	313	27.3		296	37.9 ¹⁴⁴		94	30	14	38	06	41 36	20 06 54		
10	328	27.5		311	11.3 ¹⁴⁴		93	20	12	34	19 00	6 52 39	19 53 51		
11	343	27.7	+1 40.4	325	44.7 ¹⁴⁴	+12 43.7	92	10 N	18 11	18 32	18 56	7 02 41	19 42 48		
12	358	27.9	+1 41.4	340	18.0 ¹⁴³	+12 52.9	92	0	18 09	18 30	18 54	7 11 44	19 32 45		
13	13	28.1		354	51.3 ¹⁴³	+13 02.1	92	10 S	08	29	54	20 47	21 43		
14	28	28.3		9	24.6 ¹⁴³		90	20	07	29	55	29 50	19 10 40		
15	43	28.5		23	57.9 ¹⁴³		91	30	06	30	18 57	40 54	18 58 36		
16	58	28.7		38	31.1 ¹⁴²		89	35	05	30	19 00	47 55	51 34		
17	73	28.8	+1 46.3	53	04.4 ¹⁴³	+13 38.0	89	40	18 04	18 31	19 03	7 54 58	18 42 33		
18	88	29.0	+1 47.3	67	37.6 ¹⁴²	+13 46.9	89	45	18 04	18 33	19 07	8 03 60	18 33 30		
19	103	29.2		82	10.7 ¹⁴¹	+13 55.6	87	50	03	35	13	13 64	21 27		
20	118	29.4		96	43.9 ¹⁴²	+14 04.4	88	52	02	36	15	18 66	16 25		
21	133	29.6		111	17.0 ¹⁴¹		86	54	02	37	18	23 68	10 23		
22	148	29.8		125	50.0 ¹⁴⁰		86	56	01	38	22	29 70	18 04 21		
23	163	30.0		140	23.1 ¹⁴¹		85	58	01	40	26	36 72	17 56 19		
24	178	30.2	+1 53.2	154	56.1 ¹⁴⁰	+14 38.6	85	60 S	18 00	18 42	19 31	8 43 75	17 48 16		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 50 ^m 6			Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: -0.9 PMG: 22 ^h 26 ^m			Mag: -2.1 PMG: 14 ^h 28 ^m			Mag: +0.3 PMG: 1 ^h 40 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	181	52.4		135	27.4	+20 24.9	22	12.4	+12 29.2	142	26.5	+14 27.4	335	01.1	-8 08.6
1	196	54.8		150	27.3	25.8	37	15.5	29.4	157	28.4	27.5	350	03.8	08.5
2	211	57.3		165	27.3	26.7	52	18.7	29.5	172	30.4	27.7	5	06.4	08.5
3	226	59.8		180	27.2	27.6	67	21.8	29.7	187	32.3	27.9	20	09.0	08.4
4	242	02.2		195	27.1	28.5	82	24.9	29.9	202	34.3	28.0	35	11.6	08.3
5	257	04.7		210	27.1	+20 29.3	97	28.1	+12 30.0	217	36.2	+14 28.2	50	14.2	-8 08.3
6	272	07.2		225	27.0	+20 30.2	112	31.2	+12 30.2	232	38.2	+14 28.4	65	16.9	-8 08.2
7	287	09.6		240	26.9	31.1	127	34.3	30.3	247	40.1	28.6	80	19.5	08.1
8	302	12.1		255	26.9	31.9	142	37.5	30.5	262	42.1	28.7	95	22.1	08.1
9	317	14.6		270	26.8	32.8	157	40.6	30.7	277	44.0	28.9	110	24.7	08.0
10	332	17.0		285	26.8	33.7	172	43.7	30.8	292	45.9	29.1	125	27.3	07.9
11	347	19.5		300	26.7	+20 34.6	187	46.8	+12 31.0	307	47.9	+14 29.2	140	30.0	-8 07.9
12	2	21.9		315	26.6	+20 35.4	202	50.0	+12 31.1	322	49.8	+14 29.4	155	32.6	-8 07.8
13	17	24.4		330	26.6	36.3	217	53.1	31.3	337	51.8	29.6	170	35.2	07.8
14	32	26.9		345	26.5	37.2	232	56.2	31.4	352	53.7	29.7	185	37.8	07.7
15	47	29.3		0	26.5	38.0	247	59.3	31.6	7	55.7	29.9	200	40.4	07.6
16	62	31.8		15	26.4	38.9	263	02.5	31.7	22	57.6	30.1	215	43.1	07.6
17	77	34.3		30	26.3	+20 39.8	278	05.6	+12 31.9	37	59.5	+14 30.3	230	45.7	-8 07.5
18	92	36.7		45	26.3	+20 40.6	293	08.7	+12 32.1	53	01.5	+14 30.4	245	48.3	-8 07.4
19	107	39.2		60	26.2	41.5	308	11.8	32.2	68	03.4	30.6	260	50.9	07.4
20	122	41.7		75	26.2	42.4	323	14.9	32.4	83	05.4	30.8	275	53.5	07.3
21	137	44.1		90	26.1	43.2	338	18.0	32.5	98	07.3	30.9	290	56.2	07.2
22	152	46.6		105	26.0	44.1	353	21.2	32.7	113	09.2	31.1	305	58.8	07.2
23	167	49.1		120	26.0	44.9	8	24.3	32.8	128	11.2	31.3	321	01.4	07.1
24	182	51.5		135	25.9	+20 45.8	23	27.4	+12 33.0	143	13.1	+14 31.4	336	04.0	-8 07.0
Dif	—			-1 +9			+31 +2			+19 +2			+26 +1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0			Edad: 2 ^d 4	PHE {	4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0												
	PMG: 12 ^h 05 ^m 8							SD: 14'7			PMG: 14 ^h 06 ^m		R°: 46 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	30.2	+1	53.2	154	56.1	+14	38.6	60 N	4	12	5	04	5	45	5	57	
1	193	30.3		54.1	169	29.1		47.0	58		20	07		47	6	07		
2	208	30.5		55.1	184	02.1	+14	55.3	83	56	26	11		48	15	24		
3	223	30.7		56.1	198	35.0	+15	03.6	83	54	31	14		49	23	25		
4	238	30.9		57.1	213	07.9		11.8	82	52	36	17		50	29	28		
5	253	31.1	+1	58.1	227	40.8	+15	20.0	82	50	4	40	5	19	5	51		
6	268	31.3	+1	59.1	242	13.6	+15	28.0	80	45	4	49	5	24	5	53		
7	283	31.5	+2	00.0	256	46.4		36.0	80	40	4	56		28	55	6	59	
8	298	31.7	+2	01.0	271	19.2		44.0	80	35	5	01	31	56		7	08	
9	313	31.8		02.0	285	51.9		51.8	78	30	06	34		57		17	38	
10	328	32.0		03.0	300	24.7	+15	59.6	78	20	12	37	5	59		31	41	
11	343	32.2	+2	04.0	314	57.3	+16	07.3	77	10 N	5	16	5	40	6	01	7	43
12	358	32.4	+2	04.9	329	30.0	+16	15.0	77	0	5	18	5	42	6	03	7	55
13	13	32.6		05.9	344	02.6		22.6	76	10 S	19		43	04		8	07	48
14	28	32.8		06.9	358	35.2		30.1	75	20	18		43	05		19	51	19
15	43	33.0		07.9	13	07.8		37.5	74	30	15		43	07		34	53	34
16	58	33.2		08.9	27	40.3		44.9	74	35	13		42	07		42	55	25
17	73	33.4	+2	09.9	42	12.8	+16	52.2	73	40	5	10	5	41	6	08	8	52
18	88	33.5	+2	10.8	56	45.2	+16	59.4	72	45	5	06	5	40	6	09	9	03
19	103	33.7		11.8	71	17.7	+17	06.5	71	50	5	00		38	10		17	62
20	118	33.9		12.8	85	50.0		13.6	71	52	4	58	37	11		24	63	41
21	133	34.1		13.8	100	22.4		20.6	70	54	54		36	11		31	65	33
22	148	34.3		14.8	114	54.7		27.5	69	56	51		35	12		39	67	25
23	163	34.5		15.7	129	27.0		34.3	68	58	47		33	12		48	70	15
24	178	34.7	+2	16.7	143	59.3	+17	41.1	68	60 S	4	42	5	32	6	13	9	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 46 ^m 6		Mag: -4.5 PMG: 14 ^h 58 ^m		Mag: -0.9 PMG: 22 ^h 22 ^m		Mag: -2.1 PMG: 14 ^h 25 ^m		Mag: +0.3 PMG: 1 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	182	51.5	135	25.9	+20	45.8	23	27.4	+12	33.0	143	13.1	+14	31.4	336	04.0	-8	07.0
1	197	54.0	150	25.9		46.7	38	30.5		33.1	158	15.1		31.6	351	06.6		07.0
2	212	56.4	165	25.8		47.5	53	33.6		33.3	173	17.0		31.8	6	09.3		06.9
3	227	58.9	180	25.7		48.4	68	36.7		33.4	188	18.9		31.9	21	11.9		06.9
4	243	01.4	195	25.7		49.2	83	39.8		33.5	203	20.9		32.1	36	14.5		06.8
5	258	03.8	210	25.6	+20	50.1	98	42.9	+12	33.7	218	22.8	+14	32.3	51	17.1	-8	06.7
6	273	06.3	225	25.6	+20	50.9	113	46.0	+12	33.8	233	24.8	+14	32.5	66	19.7	-8	06.7
7	288	08.8	240	25.5		51.8	128	49.1		34.0	248	26.7		32.6	81	22.4		06.6
8	303	11.2	255	25.5		52.6	143	52.2		34.1	263	28.7		32.8	96	25.0		06.5
9	318	13.7	270	25.4		53.5	158	55.3		34.3	278	30.6		33.0	111	27.6		06.5
10	333	16.2	285	25.4		54.4	173	58.4		34.4	293	32.5		33.1	126	30.2		06.4
11	348	18.6	300	25.3	+20	55.2	189	01.5	+12	34.6	308	34.5	+14	33.3	141	32.9	-8	06.3
12	3	21.1	315	25.2	+20	56.1	204	04.6	+12	34.7	323	36.4	+14	33.5	156	35.5	-8	06.3
13	18	23.6	330	25.2		56.9	219	07.7		34.9	338	38.3		33.6	171	38.1		06.2
14	33	26.0	345	25.1		57.8	234	10.8		35.0	353	40.3		33.8	186	40.7		06.1
15	48	28.5	0	25.1		58.6	249	13.9		35.1	8	42.2		34.0	201	43.3		06.1
16	63	30.9	15	25.0	+20	59.4	264	17.0		35.3	23	44.2		34.2	216	46.0		06.0
17	78	33.4	30	25.0	+21	00.3	279	20.1	+12	35.4	38	46.1	+14	34.3	231	48.6	-8	05.9
18	93	35.9	45	24.9	+21	01.1	294	23.2	+12	35.6	53	48.0	+14	34.5	246	51.2	-8	05.9
19	108	38.3	60	24.9		02.0	309	26.3		35.7	68	50.0		34.7	261	53.8		05.8
20	123	40.8	75	24.8		02.8	324	29.4		35.8	83	51.9		34.8	276	56.5		05.7
21	138	43.3	90	24.8		03.7	339	32.5		36.0	98	53.9		35.0	291	59.1		05.7
22	153	45.7	105	24.7		04.5	354	35.6		36.1	113	55.8		35.2	307	01.7		05.6
23	168	48.2	120	24.7		05.4	9	38.7		36.2	128	57.7		35.3	322	04.3		05.6
24	183	50.7	135	24.6	+21	06.2	24	41.7	+12	36.4	143	59.7	+14	35.5	337	06.9	-8	05.5
Dif	—		-1		+8		+31		+1		+19		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 16'0 PMG: 12 ^h 05 ^m 5			Edad: 3 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 PMG: 14 ^h 52 ^m R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m							
0	178	34.7	+2	16.7	143	59.3	+17	41.1	60 N	18	30	19	12	20	04	6	16	26	23	43	64
1	193	34.9			158	31.5 ¹³²		47.8 ⁶⁷	58	28	08	19	56			28	28		29	62	
2	208	35.0			173	03.7 ¹³²	+17	54.4 ⁶⁶	56	27	04	50			39	30		17	60		
3	223	35.2			187	35.8 ¹³¹	+18	00.9 ⁶⁵	54	25	19	01	44			48	32		23	06	59
4	238	35.4			202	07.9 ¹³¹		07.3 ⁶⁴	52	24	18	58	39			6	57	33	22	57	58
5	253	35.6	+2	21.6	216	40.0 ¹³¹	+18	13.7 ⁶⁴	50	18	23	18	55	19	34	7	04	34	22	48	58
6	268	35.8	+2	22.6	231	12.1 ¹³¹	+18	20.0 ⁶³	45	18	21	18	50	19	25	7	20	37	22	30	56
7	283	36.0			245	44.1 ¹³⁰		26.2 ⁶²	40	18		46	18			33	39		16	54	
8	298	36.2			260	16.1 ¹³⁰		32.3 ⁶¹	35	17		42	12			45	40		22	03	53
9	313	36.4			274	48.0 ¹²⁹		38.3 ⁶⁰	30	15		39	07			7	55	41	21	53	52
10	328	36.6			289	20.0 ¹³⁰		44.3 ⁶⁰	20	13		35	19	01		8	12	43		34	51
11	343	36.7	+2	27.5	303	51.8 ¹²⁸	+18	50.2 ⁵⁹	10 N	18	11	18	32	18	56	8	27	45	21	18	49
12	358	36.9	+2	28.5	318	23.7 ¹²⁹	+18	55.9 ⁵⁷	0	18	09	18	29	18	54	8	41	47	21	03	48
13	13	37.1			332	55.5 ¹²⁸	+19	01.6 ⁵⁷	10 S	07		28	52			8	55	48	20	48	47
14	28	37.3			347	27.3 ¹²⁸		07.3 ⁵⁷	20	05		27	53			9	10	50		32	45
15	43	37.5			1	59.0 ¹²⁷		12.8 ⁵⁵	30	03		27	55			27	53		14	43	
16	58	37.7			16	30.7 ¹²⁷		18.2 ⁵⁴	35	02		28	18	57		37	54		20	03	42
17	73	37.9	+2	33.4	31	02.4 ¹²⁷	+19	23.6 ⁵⁴	40	18	01	18	28	19	00	9	49	55	19	51	41
18	88	38.1	+2	34.4	45	34.1 ¹²⁷	+19	28.9 ⁵³	45	18	00	18	29	19	03	10	03	57	19	37	39
19	103	38.2			60	05.7 ¹²⁶		34.1 ⁵²	50	17	58	31	08			19	60		19	38	
20	118	38.4			74	37.3 ¹²⁶		39.2 ⁵¹	52	58		31	11			27	61		11	36	
21	133	38.6			89	08.8 ¹²⁵		44.2 ⁵⁰	54	57		32	13			36	62		19	02	35
22	148	38.8			103	40.3 ¹²⁵		49.1 ⁴⁹	56	56		33	16			46	64		18	51	34
23	163	39.0			118	11.8 ¹²⁵		53.9 ⁴⁸	58	55		34	20			10	58	65	40	32	
24	178	39.2	+2	40.2	132	43.3 ¹²⁵	+19	58.7 ⁴⁸	60 S	17	54	18	36	19	24	11	11	68	18	26	30
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 11 ^h 42 ^m 7		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: -0.9 PMG: 22 ^h 17 ^m			Mag: -2.1 PMG: 14 ^h 22 ^m			Mag: +0.3 PMG: 1 ^h 31 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	183	50.7	135	24.6	+21	06.2	24	41.7	+12	36.4	143	59.7	+14	35.5	337	06.9	-8	05.5			
1	198	53.1	150	24.6		07.0	39	44.8		36.5	159	01.6		35.7	352	09.6		05.4			
2	213	55.6	165	24.5		07.9	54	47.9		36.7	174	03.6		35.9	7	12.2		05.4			
3	228	58.0	180	24.5		08.7	69	51.0		36.8	189	05.5		36.0	22	14.8		05.3			
4	244	00.5	195	24.4		09.5	84	54.1		36.9	204	07.4		36.2	37	17.4		05.2			
5	259	03.0	210	24.4	+21	10.4	99	57.1	+12	37.1	219	09.4	+14	36.4	52	20.1	-8	05.2			
6	274	05.4	225	24.3	+21	11.2	115	00.2	+12	37.2	234	11.3	+14	36.5	67	22.7	-8	05.1			
7	289	07.9	240	24.3		12.1	130	03.3		37.3	249	13.2		36.7	82	25.3		05.0			
8	304	10.4	255	24.2		12.9	145	06.4		37.5	264	15.2		36.9	97	27.9		05.0			
9	319	12.8	270	24.2		13.7	160	09.4		37.6	279	17.1		37.0	112	30.6		04.9			
10	334	15.3	285	24.1		14.6	175	12.5		37.7	294	19.1		37.2	127	33.2		04.8			
11	349	17.8	300	24.1	+21	15.4	190	15.6	+12	37.8	309	21.0	+14	37.4	142	35.8	-8	04.8			
12	4	20.2	315	24.0	+21	16.2	205	18.7	+12	38.0	324	22.9	+14	37.6	157	38.4	-8	04.7			
13	19	22.7	330	24.0		17.1	220	21.7		38.1	339	24.9		37.7	172	41.0		04.6			
14	34	25.2	345	23.9		17.9	235	24.8		38.2	354	26.8		37.9	187	43.7		04.6			
15	49	27.6	0	23.9		18.7	250	27.9		38.4	9	28.7		38.1	202	46.3		04.5			
16	64	30.1	15	23.8		19.5	265	30.9		38.5	24	30.7		38.2	217	48.9		04.4			
17	79	32.5	30	23.8	+21	20.4	280	34.0	+12	38.6	39	32.6	+14	38.4	232	51.5	-8	04.4			
18	94	35.0	45	23.7	+21	21.2	295	37.1	+12	38.7	54	34.5	+14	38.6	247	54.2	-8	04.3			
19	109	37.5	60	23.7		22.0	310	40.1		38.9	69	36.5		38.7	262	56.8		04.2			
20	124	39.9	75	23.7		22.8	325	43.2		39.0	84	38.4		38.9	277	59.4		04.2			
21	139	42.4	90	23.6		23.7	340	46.2		39.1	99	40.4		39.1	293	02.0		04.1			
22	154	44.9	105	23.6		24.5	355	49.3		39.2	114	42.3		39.3	308	04.7		04.0			
23	169	47.3	120	23.5		25.3	10	52.4		39.4	129	44.2		39.4	323	07.3		04.0			
24	184	49.8	135	23.5	+21	26.1	25	55.4	+12	39.5	144	46.2	+14	39.6	338	09.9	-8	03.9			
Dif	—		0			+8	+31			+1	+19		+2		+26			+1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 2			Edad: 4 ^d 4 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	39.2	+2	40.2	132	43.3	+19	58.7	46	60 N	4 06	4 57	5 39	6 42	35	*** ** *
1	193	39.4		41.2	147	14.7 ¹²⁴	+20	03.3	46	58	13	5 02	41	6 56	37	*** ** *
2	208	39.6		42.2	161	46.0 ¹²³		07.9	45	56	20	05	43	7 09	38	*** ** *
3	223	39.8		43.2	176	17.4 ¹²⁴		12.4	45	54	26	09	44	20	39	*** ** *
4	238	39.9		44.1	190	48.7 ¹²³		16.7	43	52	31	12	46	30	40	23 55 52
5	253	40.1	+2	45.1	205	20.0 ¹²³	+20	21.0	43	50	4 36	5 14	5 47	7 38	41	23 46 52
6	268	40.3	+2	46.1	219	51.2 ¹²²	+20	25.2	42	45	4 45	5 20	5 50	7 57	42	23 26 51
7	283	40.5		47.1	234	22.5 ¹²³		29.3	41	40	53	25	52	8 12	43	23 10 51
8	298	40.7		48.1	248	53.7 ¹²²		33.3	40	35	4 58	28	53	25	44	22 56 51
9	313	40.9		49.0	263	24.8 ¹²¹		37.3	40	30	5 03	31	55	36	45	45 50
10	328	41.1		50.0	277	55.9 ¹²¹		41.1	38	20	10	36	5 58	8 55	47	25 49
11	343	41.3	+2	51.0	292	27.0 ¹²¹	+20	44.8	37	10 N	5 15	5 39	6 00	9 12	47	22 07 49
12	358	41.5	+2	52.0	306	58.1 ¹²¹	+20	48.4	36	0	5 17	5 41	6 02	9 28	48	21 51 49
13	13	41.6		52.9	321	29.1 ¹²⁰		52.0	36	10 S	19	43	04	9 43	50	35 48
14	28	41.8		53.9	336	00.1 ¹²⁰		55.4	34	20	18	44	06	10 00	51	21 17 48
15	43	42.0		54.9	350	31.1 ¹²⁰	+20	58.8	34	30	16	44	08	20	51	20 57 47
16	58	42.2		55.9	5	02.1 ¹²⁰	+21	02.0	32	35	14	44	09	31	52	45 47
17	73	42.4	+2	56.9	19	33.0 ¹¹⁹	+21	05.2	32	40	5 12	5 43	6 10	10 44	53	20 32 46
18	88	42.6	+2	57.8	34	03.9 ¹¹⁹	+21	08.2	30	45	5 08	5 42	6 12	11 00	54	20 16 45
19	103	42.8		58.8	48	34.7 ¹¹⁸		11.2	30	50	03	41	13	19	55	19 57 44
20	118	43.0	+2	59.8	63	05.6 ¹¹⁹		14.1	29	52	5 01	40	14	28	56	47 44
21	133	43.1	+3	00.8	77	36.4 ¹¹⁸		16.8	27	54	4 58	40	15	38	56	37 43
22	148	43.3		01.7	92	07.1 ¹¹⁷		19.5	27	56	55	39	16	11 50	57	25 43
23	163	43.5		02.7	106	37.9 ¹¹⁸		22.1	26	58	52	38	17	12 03	58	19 12 42
24	178	43.7	+3	03.7	121	08.6 ¹¹⁷	+21	24.6	25	60 S	4 47	5 36	6 18	12 19	59	18 56 41

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 38 ^m 8		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: -0.8 PMG: 22 ^h 12 ^m			Mag: -2.1 PMG: 14 ^h 19 ^m			Mag: +0.3 PMG: 1 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	184	49.8	135	23.5	+21	26.1	25	55.4	+12	39.5	144	46.2	+14	39.6	338	09.9	-8	03.9
1	199	52.3	150	23.4		27.0	40	58.5		39.6	159	48.1		39.8	353	12.5		03.9
2	214	54.7	165	23.4		27.8	56	01.5		39.7	174	50.0		39.9	8	15.2		03.8
3	229	57.2	180	23.3		28.6	71	04.6		39.9	189	52.0		40.1	23	17.8		03.7
4	244	59.7	195	23.3		29.4	86	07.6		40.0	204	53.9		40.3	38	20.4		03.7
5	260	02.1	210	23.3	+21	30.2	101	10.7	+12	40.1	219	55.8	+14	40.4	53	23.0	-8	03.6
6	275	04.6	225	23.2	+21	31.0	116	13.7	+12	40.2	234	57.8	+14	40.6	68	25.7	-8	03.5
7	290	07.0	240	23.2		31.9	131	16.8		40.3	249	59.7		40.8	83	28.3		03.5
8	305	09.5	255	23.1		32.7	146	19.8		40.5	265	01.6		41.0	98	30.9		03.4
9	320	12.0	270	23.1		33.5	161	22.9		40.6	280	03.6		41.1	113	33.5		03.3
10	335	14.4	285	23.1		34.3	176	25.9		40.7	295	05.5		41.3	128	36.2		03.3
11	350	16.9	300	23.0	+21	35.1	191	29.0	+12	40.8	310	07.4	+14	41.5	143	38.8	-8	03.2
12	5	19.4	315	23.0	+21	35.9	206	32.0	+12	40.9	325	09.4	+14	41.6	158	41.4	-8	03.1
13	20	21.8	330	22.9		36.7	221	35.0		41.0	340	11.3		41.8	173	44.0		03.1
14	35	24.3	345	22.9		37.5	236	38.1		41.2	355	13.2		42.0	188	46.7		03.0
15	50	26.8	0	22.9		38.4	251	41.1		41.3	10	15.2		42.1	203	49.3		02.9
16	65	29.2	15	22.8		39.2	266	44.2		41.4	25	17.1		42.3	218	51.9		02.9
17	80	31.7	30	22.8	+21	40.0	281	47.2	+12	41.5	40	19.0	+14	42.5	233	54.6	-8	02.8
18	95	34.1	45	22.8	+21	40.8	296	50.2	+12	41.6	55	21.0	+14	42.7	248	57.2	-8	02.7
19	110	36.6	60	22.7		41.6	311	53.3		41.7	70	22.9		42.8	263	59.8		02.7
20	125	39.1	75	22.7		42.4	326	56.3		41.8	85	24.8		43.0	279	02.4		02.6
21	140	41.5	90	22.6		43.2	341	59.3		41.9	100	26.8		43.2	294	05.1		02.5
22	155	44.0	105	22.6		44.0	357	02.4		42.1	115	28.7		43.3	309	07.7		02.5
23	170	46.5	120	22.6		44.8	12	05.4		42.2	130	30.6		43.5	324	10.3		02.4
24	185	48.9	135	22.5	+21	45.6	27	08.4	+12	42.3	145	32.6	+14	43.7	339	12.9	-8	02.3
Dif	—		0	+8		+30	+1			+19	+2		+26	+1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 04 ^m 9			Edad: 5 ^d 4 PHE { SD: 14:8 PMG: 16 ^h 28 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m
0	178	43.7	+3	03.7	121	08.6	+21 24.6	60 N	18 35	19 17	20 10	7 17 47	0 47 54	
1	193	43.9		04.7	135	39.3 ¹¹⁷	26.9 ²³	58	33	13	20 02	33 48	31 54	
2	208	44.1		05.6	150	09.9 ¹¹⁶	29.2 ²³	56	31	09	19 54	47 48	17 53	
3	223	44.3		06.6	164	40.6 ¹¹⁷	31.4 ²²	54	29	05	48	7 59 48	0 05 53	
4	238	44.5		07.6	179	11.2 ¹¹⁶	33.4 ²⁰	52	28	19 02	43	8 10 48	** ** *	
5	253	44.7	+3	08.6	193	41.8 ¹¹⁶	+21 35.4 ²⁰	50	18 26	18 59	19 38	8 19 49	** ** *	
6	268	44.8	+3	09.5	208	12.4 ¹¹⁶	+21 37.3 ¹⁹	45	18 23	18 53	19 28	8 39 49	** ** *	
7	283	45.0		10.5	222	42.9 ¹¹⁵	39.1 ¹⁸	40	21	48	20	8 55 49	** ** *	
8	298	45.2		11.5	237	13.4 ¹¹⁵	40.7 ¹⁶	35	18	44	14	9 09 49	23 47 48	
9	313	45.4		12.5	251	43.9 ¹¹⁵	42.3 ¹⁶	30	16	40	09	21 49	35 48	
10	328	45.6		13.4	266	14.4 ¹¹⁵	43.8 ¹⁵	20	13	35	19 01	42 49	23 14 49	
11	343	45.8	+3	14.4	280	44.8 ¹¹⁴	+21 45.1 ¹³	10 N	18 11	18 32	18 56	9 59 50	22 56 50	
12	358	46.0	+3	15.4	295	15.2 ¹¹⁴	+21 46.4 ¹³	0	18 08	18 29	18 53	10 16 49	22 40 49	
13	13	46.2		16.4	309	45.6 ¹¹⁴	47.5 ¹¹	10 S	06	27	51	33 49	23 50	
14	28	46.3		17.3	324	16.0 ¹¹⁴	48.6 ¹¹	20	04	26	51	10 51 49	22 05 50	
15	43	46.5		18.3	338	46.3 ¹¹³	49.6 ¹⁰	30	01	25	53	11 11 50	21 44 51	
16	58	46.7		19.3	353	16.7 ¹¹⁴	50.4 ⁸	35	18 00	25	54	23 50	32 51	
17	73	46.9	+3	20.3	7	47.0 ¹¹³	+21 51.2 ⁸	40	17 58	18 25	18 56	11 37 49	21 18 51	
18	88	47.1	+3	21.2	22	17.3 ¹¹³	+21 51.8 ⁶	45	17 56	18 25	18 59	11 54 49	21 01 52	
19	103	47.3		22.2	36	47.5 ¹¹²	52.3 ⁵	50	54	26	19 04	12 14 49	20 41 52	
20	118	47.5		23.2	51	17.8 ¹¹³	52.8 ⁵	52	53	27	06	24 49	31 53	
21	133	47.7		24.2	65	48.0 ¹¹²	53.1 ³	54	52	27	08	34 49	20 53	
22	148	47.8		25.1	80	18.2 ¹¹²	53.3 ²	56	51	28	11	12 47 49	20 08 53	
23	163	48.0		26.1	94	48.4 ¹¹²	53.4 ¹	58	50	29	14	13 01 49	19 54 53	
24	178	48.2	+3	27.1	109	18.6 ¹¹²	+21 53.5 ¹	60 S	17 48	18 30	19 18	13 18 48	19 37 53	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 11 ^h 34 ^m 8		Mag: -4.5 PMG: 14 ^h 59 ^m			Mag: -0.8 PMG: 22 ^h 07 ^m			Mag: -2.1 PMG: 14 ^h 16 ^m		Mag: +0.3 PMG: 1 ^h 23 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	185	48.9	135	22.5	+21 45.6	27 08.4	+12 42.3	145 32.6	+14 43.7	339 12.9	-8 02.3			
1	200	51.4	150	22.5	46.4	42 11.4	42.4	160 34.5	43.9	354 15.6	02.3			
2	215	53.9	165	22.5	47.2	57 14.5	42.5	175 36.4	44.0	9 18.2	02.2			
3	230	56.3	180	22.4	48.0	72 17.5	42.6	190 38.4	44.2	24 20.8	02.1			
4	245	58.8	195	22.4	48.8	87 20.5	42.7	205 40.3	44.4	39 23.4	02.1			
5	261	01.3	210	22.4	+21 49.6	102 23.5	+12 42.8	220 42.2	+14 44.5	54 26.1	-8 02.0			
6	276	03.7	225	22.3	+21 50.4	117 26.5	+12 42.9	235 44.2	+14 44.7	69 28.7	-8 01.9			
7	291	06.2	240	22.3	51.2	132 29.6	43.0	250 46.1	44.9	84 31.3	01.9			
8	306	08.6	255	22.3	52.0	147 32.6	43.1	265 48.0	45.0	99 34.0	01.8			
9	321	11.1	270	22.2	52.8	162 35.6	43.2	280 50.0	45.2	114 36.6	01.7			
10	336	13.6	285	22.2	53.6	177 38.6	43.4	295 51.9	45.4	129 39.2	01.7			
11	351	16.0	300	22.2	+21 54.4	192 41.6	+12 43.5	310 53.8	+14 45.6	144 41.8	-8 01.6			
12	6	18.5	315	22.2	+21 55.2	207 44.6	+12 43.6	325 55.8	+14 45.7	159 44.5	-8 01.5			
13	21	21.0	330	22.1	56.0	222 47.7	43.7	340 57.7	45.9	174 47.1	01.5			
14	36	23.4	345	22.1	56.7	237 50.7	43.8	355 59.6	46.1	189 49.7	01.4			
15	51	25.9	0	22.1	57.5	252 53.7	43.9	11 01.6	46.2	204 52.4	01.3			
16	66	28.4	15	22.0	58.3	267 56.7	44.0	26 03.5	46.4	219 55.0	01.3			
17	81	30.8	30	22.0	+21 59.1	282 59.7	+12 44.1	41 05.4	+14 46.6	234 57.6	-8 01.2			
18	96	33.3	45	22.0	+21 59.9	298 02.7	+12 44.2	56 07.3	+14 46.7	250 00.2	-8 01.1			
19	111	35.8	60	22.0	+22 00.7	313 05.7	44.3	71 09.3	46.9	265 02.9	01.1			
20	126	38.2	75	21.9	01.5	328 08.7	44.4	86 11.2	47.1	280 05.5	01.0			
21	141	40.7	90	21.9	02.3	343 11.7	44.5	101 13.1	47.3	295 08.1	00.9			
22	156	43.1	105	21.9	03.0	358 14.7	44.6	116 15.1	47.4	310 10.7	00.9			
23	171	45.6	120	21.8	03.8	13 17.7	44.7	131 17.0	47.6	325 13.4	00.8			
24	186	48.1	135	21.8	+22 04.6	28 20.7	+12 44.8	146 18.9	+14 47.8	340 16.0	-8 00.7			
Dif	—		0		+8	+30	+1	+19	+2	+26	+1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 04 ^m 6			Edad: 6 ^d 4 SD: 14'9 PMG: 17 ^h 17 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 55'0 R°: 50 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	178	48.2	+3	27.1	109	18.6	+21	53.5	1	60 N	3	59	4	51	5	33
1	193	48.4		28.1	123	48.8 ¹¹²		53.4	2	58	4	07	4	56	36	
2	208	48.6		29.0	138	18.9 ¹¹¹		53.2	3	56	14	5	00	38	35	58
3	223	48.8		30.0	152	49.0 ¹¹¹		52.9	4	54	21	04	39	47	58	0
4	238	49.0		31.0	167	19.1 ¹¹¹		52.5	5	52	26	07	41	8	58	57
5	253	49.2	+3	32.0	181	49.2 ¹¹¹	+21	52.0	6	50	4	31	5	10	5	43
6	268	49.4	+3	32.9	196	19.3 ¹¹¹	+21	51.3	7	45	4	41	5	16	5	46
7	283	49.5		33.9	210	49.4 ¹¹¹		50.6	8	40	49	21	48	44	54	0
8	298	49.7		34.9	225	19.4 ¹¹⁰		49.8	9	35	4	55	25	51	9	58
9	313	49.9		35.8	239	49.4 ¹¹⁰		48.8	10	30	5	01	29	53	10	10
10	328	50.1		36.8	254	19.5 ¹¹¹		47.8	11	20	08	34	56	31	51	**
11	343	50.3	+3	37.8	268	49.5 ¹¹⁰	+21	46.7	12	10 N	5	13	5	38	5	59
12	358	50.5	+3	38.8	283	19.5 ¹¹⁰	+21	45.4	13	0	5	17	5	41	6	01
13	13	50.7		39.7	297	49.4 ¹⁰⁹		44.0	14	10 S	18	43	04	22	49	23
14	28	50.9		40.7	312	19.4 ¹¹⁰		42.6	15	20	19	44	06	11	40	48
15	43	51.0		41.7	326	49.4 ¹¹⁰		41.0	16	30	17	45	09	12	01	46
16	58	51.2		42.6	341	19.3 ¹⁰⁹		39.3	17	35	16	45	11	13	46	23
17	73	51.4	+3	43.6	355	49.2 ¹⁰⁹	+21	37.5	18	40	5	14	5	45	6	12
18	88	51.6	+3	44.6	10	19.2 ¹¹⁰	+21	35.6	19	45	5	11	5	45	6	14
19	103	51.8		45.6	24	49.1 ¹⁰⁹		33.6	20	50	07	44	16	13	03	43
20	118	52.0		46.5	39	19.0 ¹⁰⁹		31.5	21	52	05	44	18	13	42	24
21	133	52.2		47.5	53	48.9 ¹⁰⁹		29.3	22	54	5	02	43	19	23	41
22	148	52.4		48.5	68	18.8 ¹⁰⁹		27.0	23	56	4	59	43	20	36	40
23	163	52.5		49.4	82	48.7 ¹⁰⁹		24.5	24	58	56	42	21	13	50	38
24	178	52.7	+3	50.4	97	18.5 ¹⁰⁸	+21	22.0	25	60 S	4	53	5	41	6	23
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 30 ^m 9		Mag: -4.5 PMG: 14 ^h 59 ^m			Mag: -0.8 PMG: 22 ^h 02 ^m			Mag: -2.1 PMG: 14 ^h 13 ^m			Mag: +0.3 PMG: 1 ^h 19 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	186	48.1	135	21.8	+22	208	20.7	+12	146	18.9	+14	340	16.0	-8		
1	201	50.5	150	21.8		43	23.7		161	20.9		355	18.6			
2	216	53.0	165	21.8		58	26.7		176	22.8		10	21.3			
3	231	55.5	180	21.7		73	29.7		191	24.7		25	23.9			
4	246	57.9	195	21.7		88	32.7		206	26.6		40	26.5			
5	262	00.4	210	21.7	+22	103	35.7	+12	221	28.6	+14	55	29.1	-8		
6	277	02.9	225	21.7	+22	118	38.7	+12	236	30.5	+14	70	31.8	-8		
7	292	05.3	240	21.7		133	41.6		251	32.4		85	34.4			
8	307	07.8	255	21.6		148	44.6		266	34.4		100	37.0			
9	322	10.2	270	21.6		163	47.6		281	36.3		115	39.7			
10	337	12.7	285	21.6		178	50.6		296	38.2		130	42.3	-8		
11	352	15.2	300	21.6	+22	193	53.6	+12	311	40.1	+14	145	44.9	-8		
12	7	17.6	315	21.6	+22	208	56.6	+12	326	42.1	+14	160	47.6	-7		
13	22	20.1	330	21.5		223	59.6		341	44.0		175	50.2			
14	37	22.6	345	21.5		239	02.5		356	45.9		190	52.8			
15	52	25.0	0	21.5		254	05.5		11	47.9		205	55.4			
16	67	27.5	15	21.5		269	08.5		26	49.8		220	58.1			
17	82	30.0	30	21.5	+22	284	11.5	+12	41	51.7	+14	236	00.7	-7		
18	97	32.4	45	21.4	+22	299	14.4	+12	56	53.6	+14	251	03.3	-7		
19	112	34.9	60	21.4		314	17.4		71	55.6		266	06.0			
20	127	37.4	75	21.4		329	20.4		86	57.5		281	08.6			
21	142	39.8	90	21.4		344	23.4		101	59.4		296	11.2			
22	157	42.3	105	21.4		359	26.3		117	01.4		311	13.8			
23	172	44.7	120	21.4		14	29.3		132	03.3		326	16.5			
24	187	47.2	135	21.3	+22	29	32.3	+12	147	05.2	+14	341	19.1	-7		
Dif	—		0	+8		+30	+1		+19	+2		+26	+1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 12 ^h 04 ^m 3			Edad: 7 ^d 4 PHE { SD: 15:0 PMG: 18 ^h 07 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	52.7	+3	50.4	97	18.5	+21	22.0	60 N	18 40	19 23	20 16	9 05	71	2 24	32
1	193	52.9		51.4	111	48.4 ¹⁰⁹		19.4 ²⁶	58	37	17	20 07	20 69		2 08	34
2	208	53.1		52.4	126	18.2 ¹⁰⁸		16.6 ²⁸	56	35	13	19 59	33 67		1 55	36
3	223	53.3		53.3	140	48.1 ¹⁰⁹		13.7 ²⁹	54	33	09	52	45 65		43	37
4	238	53.5		54.3	155	17.9 ¹⁰⁸		10.8 ²⁹	52	31	05	47	9 55	64	33	38
5	253	53.7	+3	55.3	169	47.8 ¹⁰⁹	+21	07.7 ³¹	50	18 29	19 02	19 41	10 04	63	1 24	39
6	268	53.9	+3	56.2	184	17.6 ¹⁰⁸	+21	04.5 ³²	45	18 26	18 55	19 30	10 23	60	1 04	42
7	283	54.0		57.2	198	47.4 ¹⁰⁸	+21	01.2 ³³	40	23	50	22	38 59		0 48	43
8	298	54.2		58.2	213	17.3 ¹⁰⁹	+20	57.8 ³⁴	35	20	45	15	10 51	58	35	44
9	313	54.4	+3	59.1	227	47.1 ¹⁰⁸		54.3 ³⁵	30	18	42	10	11 03	56	23	46
10	328	54.6	+4	00.1	242	16.9 ¹⁰⁸		50.7 ³⁶	20	14	36	19 02	22 54		0 03	47
11	343	54.8	+4	01.1	256	46.7 ¹⁰⁸	+20	47.0 ³⁷	10 N	18 11	18 32	18 56	11 39	52	** ** *	**
12	358	55.0	+4	02.1	271	16.5 ¹⁰⁸	+20	43.2 ³⁸	0	18 08	18 28	18 52	11 55	50	** ** *	**
13	13	55.2		03.0	285	46.3 ¹⁰⁸		39.3 ³⁹	10 S	05	26	50	12 11	48	** ** *	**
14	28	55.3		04.0	300	16.1 ¹⁰⁸		35.2 ⁴¹	20	18 02	24	49	28 46		23 48	54
15	43	55.5		05.0	314	45.9 ¹⁰⁸		31.1 ⁴¹	30	17 59	22	50	47 44		29 57	
16	58	55.7		05.9	329	15.7 ¹⁰⁸		26.8 ⁴³	35	57	22	51	12 59	42	18 59	
17	73	55.9	+4	06.9	343	45.5 ¹⁰⁸	+20	22.5 ⁴³	40	17 55	18 22	18 53	13 12	41	23 06	60
18	88	56.1	+4	07.9	358	15.3 ¹⁰⁸	+20	18.0 ⁴⁵	45	17 52	18 22	18 56	13 27	39	22 51	63
19	103	56.3		08.8	12	45.1 ¹⁰⁸		13.5 ⁴⁵	50	50	22	18 59	46 36		33 66	
20	118	56.5		09.8	27	14.8 ¹⁰⁷		08.8 ⁴⁷	52	49	22	19 01	13 55	35	24 67	
21	133	56.7		10.8	41	44.6 ¹⁰⁸	+20	04.0 ⁴⁸	54	47	22	03	14 04	34	15 68	
22	148	56.8		11.7	56	14.4 ¹⁰⁸	+19	59.2 ⁴⁸	56	46	23	06	16 32		22 04	70
23	163	57.0		12.7	70	44.2 ¹⁰⁸		54.2 ⁵⁰	58	44	23	09	28 30		21 51	73
24	178	57.2	+4	13.7	85	14.0 ¹⁰⁸	+19	49.1 ⁵¹	60 S	17 42	18 24	19 12	14 43	28	21 37	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 27 ^m 0		Mag: -4.5 PMG: 14 ^h 59 ^m		Mag: -0.8 PMG: 21 ^h 58 ^m		Mag: -2.1 PMG: 14 ^h 10 ^m		Mag: +0.3 PMG: 1 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	187	47.2	135	21.3	+22	23.1	29	32.3	+12	46.9	147	05.2	+14	51.9	341	19.1	-7	59.1
1	202	49.7	150	21.3		23.9	44	35.2		47.0	162	07.1		52.0	356	21.7		59.1
2	217	52.1	165	21.3		24.6	59	38.2		47.1	177	09.1		52.2	11	24.4		59.0
3	232	54.6	180	21.3		25.4	74	41.2		47.2	192	11.0		52.4	26	27.0		58.9
4	247	57.1	195	21.3		26.2	89	44.1		47.2	207	12.9		52.5	41	29.6		58.9
5	262	59.5	210	21.3	+22	26.9	104	47.1	+12	47.3	222	14.8	+14	52.7	56	32.3	-7	58.8
6	278	02.0	225	21.3	+22	27.7	119	50.1	+12	47.4	237	16.8	+14	52.9	71	34.9	-7	58.7
7	293	04.5	240	21.2		28.4	134	53.0		47.5	252	18.7		53.1	86	37.5		58.7
8	308	06.9	255	21.2		29.2	149	56.0		47.6	267	20.6		53.2	101	40.2		58.6
9	323	09.4	270	21.2		29.9	164	58.9		47.6	282	22.6		53.4	116	42.8		58.5
10	338	11.9	285	21.2		30.7	180	01.9		47.7	297	24.5		53.6	131	45.4		58.5
11	353	14.3	300	21.2	+22	31.4	195	04.8	+12	47.8	312	26.4	+14	53.7	146	48.0	-7	58.4
12	8	16.8	315	21.2	+22	32.2	210	07.8	+12	47.9	327	28.3	+14	53.9	161	50.7	-7	58.3
13	23	19.2	330	21.2		32.9	225	10.7		48.0	342	30.3		54.1	176	53.3		58.3
14	38	21.7	345	21.2		33.7	240	13.7		48.0	357	32.2		54.2	191	55.9		58.2
15	53	24.2	0	21.2		34.4	255	16.6		48.1	12	34.1		54.4	206	58.6		58.1
16	68	26.6	15	21.2		35.2	270	19.6		48.2	27	36.0		54.6	222	01.2		58.1
17	83	29.1	30	21.2	+22	35.9	285	22.5	+12	48.3	42	38.0	+14	54.8	237	03.8	-7	58.0
18	98	31.6	45	21.1	+22	36.7	300	25.5	+12	48.3	57	39.9	+14	54.9	252	06.5	-7	57.9
19	113	34.0	60	21.1		37.4	315	28.4		48.4	72	41.8		55.1	267	09.1		57.9
20	128	36.5	75	21.1		38.2	330	31.4		48.5	87	43.7		55.3	282	11.7		57.8
21	143	39.0	90	21.1		38.9	345	34.3		48.6	102	45.7		55.4	297	14.4		57.7
22	158	41.4	105	21.1		39.7	0	37.2		48.6	117	47.6		55.6	312	17.0		57.7
23	173	43.9	120	21.1		40.4	15	40.2		48.7	132	49.5		55.8	327	19.6		57.6
24	188	46.4	135	21.1	+22	41.2	30	43.1	+12	48.8	147	51.4	+14	56.0	342	22.3	-7	57.5
Dif	—		0		+8		+30		+1		+19		+2		+26		+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 12 ^h 04 ^m 0			Edad: 8 ^d 4 PHE { 4 ^h : 55'8 12 ^h : 56'1 20 ^h : 56'3 PMG: 18 ^h 57 ^m R°: 50 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m													
0	178	57.2	+4	13.7	85	14.0	+19	49.1	52	60 N	3	52	4	45	5	27	10	16	79	2	56	23					
1	193	57.4		14.6	99	43.8	108	43.9	53	58	4	01		50	30		29	76		42	27						
2	208	57.6		15.6	114	13.6	108	38.6	53	56		08		55	32		40	74		31	28						
3	223	57.8		16.6	128	43.3	107	33.2	54	54		15	4	59	35		50	72		20	31						
4	238	58.0		17.5	143	13.1	108	27.7	55	52		21	5	02	36		10	59	70		11	33					
5	253	58.2	+4	18.5	157	42.9	108	22.1	56	50		4	26	5	06	5	38		11	07	68	2	03	34			
6	268	58.3	+4	19.5	172	12.7	108	16.4	57	45		4	37	5	12	5	42		11	23	65	1	46	36			
7	283	58.5		20.4	186	42.5	108	10.5	59	40			46	18	45		37	63			31	40					
8	298	58.7		21.4	201	12.3	108	04.6	59	35			53	22	48		49	60			19	41					
9	313	58.9		22.4	215	42.1	108	58.6	60	30		4	58	26	50		11	59	58		1	09	42				
10	328	59.1		23.3	230	11.9	108	52.5	61	20			5	06	32	54		12	16	55		0	50	46			
11	343	59.3	+4	24.3	244	41.7	108	46.3	62	10 N			5	12	5	37	5	58		12	31	53		0	34	48	
12	358	59.5	+4	25.3	259	11.5	108	39.9	64	0			5	16	5	40	6	01		12	45	50		0	19	50	
13	13	59.6		26.2	273	41.3	108	33.5	64	10 S				18	43	04		12	59	48		0	04	52			
14	28	59.8		27.2	288	11.1	108	27.0	65	20				19	45	07		13	14	45		**	**	**			
15	44	00.0		28.2	302	40.9	108	20.3	67	30				19	46	10		31	42		**	**	**				
16	59	00.2		29.1	317	10.7	108	13.6	67	35				18	47	12		41	40		**	**	**				
17	74	00.4	+4	30.1	331	40.5	108	06.8	68	40				5	16	5	47	6	14		13	53	37		**	**	**
18	89	00.6	+4	31.1	346	10.3	108	59.8	70	45				5	13	5	47	6	17		14	06	35		23	54	67
19	104	00.8		32.0	0	40.1	108	52.8	70	50				10	47	20		22	32				39	70			
20	119	00.9		33.0	15	10.0	109	45.7	71	52				08	47	21		30	30				31	73			
21	134	01.1		34.0	29	39.8	108	38.4	73	54				06	47	22		38	28				23	75			
22	149	01.3		34.9	44	09.6	108	31.1	73	56				04	47	24		48	26				14	77			
23	164	01.5		35.9	58	39.4	108	23.7	74	58				5	01	46	26		14	58	24		23	04	79		
24	179	01.7	+4	36.9	73	09.3	109	16.1	76	60 S				4	58	5	46	6	28		15	11	20		22	52	83

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 23 ^m 0		Mag: -4.5 PMG: 14 ^h 59 ^m			Mag: -0.7 PMG: 21 ^h 53 ^m			Mag: -2.1 PMG: 14 ^h 07 ^m			Mag: +0.3 PMG: 1 ^h 10 ^m							
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	188	46.4	135	21.1	+22	41.2	30	43.1	+12	48.8	147	51.4	+14	56.0	342	22.3	-7	57.5	
1	203	48.8	150	21.1		41.9	45	46.1		48.8	162	53.4		56.1	357	24.9		57.5	
2	218	51.3	165	21.1		42.6	60	49.0		48.9	177	55.3		56.3	12	27.5		57.4	
3	233	53.7	180	21.1		43.4	75	51.9		49.0	192	57.2		56.5	27	30.2		57.3	
4	248	56.2	195	21.1		44.1	90	54.9		49.0	207	59.1		56.6	42	32.8		57.2	
5	263	58.7	210	21.1	+22	44.8	105	57.8	+12	49.1	223	01.1	+14	56.8	57	35.4	-7	57.2	
6	279	01.1	225	21.1	+22	45.6	121	00.7	+12	49.2	238	03.0	+14	57.0	72	38.0	-7	57.1	
7	294	03.6	240	21.1		46.3	136	03.6		49.2	253	04.9		57.1	87	40.7		57.0	
8	309	06.1	255	21.1		47.1	151	06.6		49.3	268	06.8		57.3	102	43.3		57.0	
9	324	08.5	270	21.1		47.8	166	09.5		49.4	283	08.8		57.5	117	45.9		56.9	
10	339	11.0	285	21.1		48.5	181	12.4		49.4	298	10.7		57.7	132	48.6		56.8	
11	354	13.5	300	21.1	+22	49.3	196	15.3	+12	49.5	313	12.6	+14	57.8	147	51.2	-7	56.8	
12	9	15.9	315	21.1	+22	50.0	211	18.3	+12	49.6	328	14.5	+14	58.0	162	53.8	-7	56.7	
13	24	18.4	330	21.1		50.7	226	21.2		49.6	343	16.4		58.2	177	56.5		56.6	
14	39	20.8	345	21.1		51.4	241	24.1		49.7	358	18.4		58.3	192	59.1		56.6	
15	54	23.3	0	21.1		52.2	256	27.0		49.8	13	20.3		58.5	208	01.7		56.5	
16	69	25.8	15	21.1		52.9	271	29.9		49.8	28	22.2		58.7	223	04.4		56.4	
17	84	28.2	30	21.1	+22	53.6	286	32.9	+12	49.9	43	24.1	+14	58.8	238	07.0	-7	56.4	
18	99	30.7	45	21.1	+22	54.4	301	35.8	+12	49.9	58	26.1	+14	59.0	253	09.6	-7	56.3	
19	114	33.2	60	21.1		55.1	316	38.7		50.0	73	28.0		59.2	268	12.3		56.2	
20	129	35.6	75	21.1		55.8	331	41.6		50.1	88	29.9		59.4	283	14.9		56.2	
21	144	38.1	90	21.2		56.5	346	44.5		50.1	103	31.8		59.5	298	17.5		56.1	
22	159	40.6	105	21.2		57.3	1	47.4		50.2	118	33.8		59.7	313	20.2		56.0	
23	174	43.0	120	21.2		58.0	16	50.3		50.2	133	35.7	+14	59.9	328	22.8		56.0	
24	189	45.5	135	21.2	+22	58.7	31	53.2	+12	50.3	148	37.6	+15	00.0	343	25.4	-7	55.9	
Dif	—		0		+7		+29		+1		+19		+2		+26			+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 7			Edad: 9 ^d 4 PHE { 4 ^h : 56'6 12 ^h : 56'9 20 ^h : 57'2 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	179	01.7	+4 36.9	73	09.3	+17 16.1	76	60 N	18 45	19 28	20 22	11 35 85	3 19 19	
1	194	01.9	37.8	87	39.1 ¹⁰⁸	08.5	76	58	42	22	12	45 82	3 09 21	
2	209	02.1	38.8	102	08.9 ¹⁰⁸	+17 00.8	77	56	39	17	20 04	11 54 79	2 59 24	
3	224	02.2	39.7	116	38.8 ¹⁰⁹	+16 53.0	78	54	37	13	19 57	12 02 76	51 26	
4	239	02.4	40.7	131	08.6 ¹⁰⁸	45.1	79	52	34	09	50	09 74	44 27	
5	254	02.6	+4 41.7	145	38.5 ¹⁰⁹	+16 37.1	80	50	18 32	19 05	19 45	12 15 73	2 37 29	
6	269	02.8	+4 42.6	160	08.3 ¹⁰⁸	+16 29.0	81	45	18 28	18 58	19 33	12 28 69	2 22 33	
7	284	03.0	43.6	174	38.2 ¹⁰⁹	20.8	82	40	25	52	24	40 65	11 35	
8	299	03.2	44.6	189	08.0 ¹⁰⁸	12.5	83	35	22	47	17	49 63	2 00 39	
9	314	03.4	45.5	203	37.9 ¹⁰⁹	+16 04.1	84	30	19	43	11	12 57 61	1 51 41	
10	329	03.5	46.5	218	07.7 ¹⁰⁸	+15 55.6	85	20	14	37	19 02	13 11 57	36 44	
11	344	03.7	+4 47.4	232	37.6 ¹⁰⁹	+15 47.0	86	10 N	18 11	18 32	18 56	13 24 53	1 22 47	
12	359	03.9	+4 48.4	247	07.4 ¹⁰⁸	+15 38.4	86	0	18 07	18 28	18 52	13 35 50	1 09 50	
13	14	04.1	49.4	261	37.3 ¹⁰⁹	29.6	88	10 S	04	25	49	47 46	0 56 53	
14	29	04.3	50.3	276	07.2 ¹⁰⁹	20.7	89	20	18 00	22	48	13 59 43	42 56	
15	44	04.5	51.3	290	37.0 ¹⁰⁸	11.8	89	30	17 56	20	48	14 13 39	26 60	
16	59	04.7	52.3	305	06.9 ¹⁰⁹	+15 02.8	90	35	54	19	49	21 37	17 62	
17	74	04.8	+4 53.2	319	36.8 ¹⁰⁹	+14 53.7	91	40	17 52	18 19	18 50	14 30 35	0 06 64	
18	89	05.0	+4 54.2	334	06.6 ¹⁰⁸	+14 44.4	93	45	17 49	18 18	18 52	14 41 31	*** ** *	
19	104	05.2	55.1	348	36.5 ¹⁰⁹	35.1	93	50	45	18	55	14 54 28	*** ** *	
20	119	05.4	56.1	3	06.4 ¹⁰⁹	25.8	93	52	44	18	57	15 00 26	*** ** *	
21	134	05.6	57.1	17	36.3 ¹⁰⁹	16.3	95	54	42	17	18 58	06 24	*** ** *	
22	149	05.8	58.0	32	06.1 ¹⁰⁸	+14 06.7	96	56	40	17	19 01	14 22	*** ** *	
23	164	06.0	59.0	46	36.0 ¹⁰⁹	+13 57.1	96	58	39	18	03	22 19	*** ** *	
24	179	06.1	+4 59.9	61	05.9 ¹⁰⁹	+13 47.3	98	60 S	17 36	18 18	19 06	15 31 17	*** ** *	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 19 ^m 1		Mag: -4.5 PMG: 14 ^h 59 ^m			Mag: -0.7 PMG: 21 ^h 48 ^m			Mag: -2.1 PMG: 14 ^h 04 ^m			Mag: +0.3 PMG: 1 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	189	45.5	135	21.2	+22 58.7	31	53.2	+12 50.3	148	37.6	+15 00.0	343	25.4	-7 55.9
1	204	48.0	150	21.2	+22 59.4	46	56.1	50.4	163	39.5	+15 00.2	358	28.1	55.8
2	219	50.4	165	21.2	+23 00.1	61	59.0	50.4	178	41.4	00.4	13	30.7	55.8
3	234	52.9	180	21.2	00.9	77	02.0	50.5	193	43.4	00.6	28	33.3	55.7
4	249	55.3	195	21.2	01.6	92	04.9	50.5	208	45.3	00.7	43	36.0	55.6
5	264	57.8	210	21.2	+23 02.3	107	07.8	+12 50.6	223	47.2	+15 00.9	58	38.6	-7 55.6
6	280	00.3	225	21.2	+23 03.0	122	10.7	+12 50.6	238	49.1	+15 01.1	73	41.2	-7 55.5
7	295	02.7	240	21.3	03.7	137	13.5	50.7	253	51.1	01.2	88	43.9	55.4
8	310	05.2	255	21.3	04.4	152	16.4	50.7	268	53.0	01.4	103	46.5	55.4
9	325	07.7	270	21.3	05.2	167	19.3	50.8	283	54.9	01.6	118	49.1	55.3
10	340	10.1	285	21.3	05.9	182	22.2	50.9	298	56.8	01.7	133	51.8	55.2
11	355	12.6	300	21.3	+23 06.6	197	25.1	+12 50.9	313	58.7	+15 01.9	148	54.4	-7 55.1
12	10	15.1	315	21.3	+23 07.3	212	28.0	+12 51.0	329	00.7	+15 02.1	163	57.0	-7 55.1
13	25	17.5	330	21.3	08.0	227	30.9	51.0	344	02.6	02.3	178	59.7	55.0
14	40	20.0	345	21.4	08.7	242	33.8	51.1	359	04.5	02.4	194	02.3	54.9
15	55	22.5	0	21.4	09.4	257	36.7	51.1	14	06.4	02.6	209	04.9	54.9
16	70	24.9	15	21.4	10.1	272	39.6	51.2	29	08.3	02.8	224	07.6	54.8
17	85	27.4	30	21.4	+23 10.8	287	42.5	+12 51.2	44	10.3	+15 02.9	239	10.2	-7 54.7
18	100	29.8	45	21.4	+23 11.5	302	45.3	+12 51.3	59	12.2	+15 03.1	254	12.8	-7 54.7
19	115	32.3	60	21.4	12.2	317	48.2	51.3	74	14.1	03.3	269	15.5	54.6
20	130	34.8	75	21.5	12.9	332	51.1	51.3	89	16.0	03.5	284	18.1	54.5
21	145	37.2	90	21.5	13.6	347	54.0	51.4	104	17.9	03.6	299	20.7	54.5
22	160	39.7	105	21.5	14.3	2	56.9	51.4	119	19.9	03.8	314	23.4	54.4
23	175	42.2	120	21.5	15.0	17	59.7	51.5	134	21.8	04.0	329	26.0	54.3
24	190	44.6	135	21.5	+23 15.7	33	02.6	+12 51.5	149	23.7	+15 04.1	344	28.7	-7 54.3
Dif	—		0	+7		+29	+1		+19	+2		+26	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0			Edad: 10 ^d 4	PHE	SD: 15 ^h 6		PMG: 20 ^h 37 ^m	R ^o : 50 ^m							
	hG ☉	Dec														
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	06.1	+4	59.9	61	05.9	+13	47.3	60 N	3	44	4	38	5	21	
1	194	06.3	+5	00.9	75	35.7 ¹⁰⁸		37.5 ⁹⁸	58	3	54	44	24	07	85	
2	209	06.5		01.9	90	05.6 ¹⁰⁹		27.6 ⁹⁹	56	4	02	49	27	13	82	
3	224	06.7		02.8	104	35.5 ¹⁰⁹		17.6 ¹⁰⁰	54	10	54	30	18	80	17	22
4	239	06.9		03.8	119	05.3 ¹⁰⁸	+13	07.5 ¹⁰¹	52	16	4	57	32	23	78	
5	254	07.1	+5	04.7	133	35.2 ¹⁰⁹	+12	57.4 ¹⁰¹	50	4	22	5	01	5	34	
6	269	07.2	+5	05.7	148	05.1 ¹⁰⁹	+12	47.1 ¹⁰³	45	4	33	5	09	5	38	
7	284	07.4		06.7	162	34.9 ¹⁰⁸		36.8 ¹⁰³	40	42	15	42	45	68	46	34
8	299	07.6		07.6	177	04.8 ¹⁰⁹		26.4 ¹⁰⁴	35	50	20	45	52	65	39	36
9	314	07.8		08.6	191	34.6 ¹⁰⁸		16.0 ¹⁰⁴	30	4	56	24	48	13	58	
10	329	08.0		09.5	206	04.5 ¹⁰⁹	+12	05.4 ¹⁰⁶	20	5	05	30	53	14	08	
11	344	08.2	+5	10.5	220	34.3 ¹⁰⁸	+11	54.8 ¹⁰⁶	10 N	5	11	5	35	5	57	
12	359	08.4	+5	11.5	235	04.1 ¹⁰⁸	+11	44.0 ¹⁰⁸	0	5	15	5	39	6	00	
13	14	08.5		12.4	249	34.0 ¹⁰⁹		33.3 ¹⁰⁷	10 S	18	43	04	33	47	49	
14	29	08.7		13.4	264	03.8 ¹⁰⁸		22.4 ¹⁰⁹	20	20	45	07	42	43	38	
15	44	08.9		14.3	278	33.6 ¹⁰⁸		11.4 ¹¹⁰	30	20	48	11	52	39	26	
16	59	09.1		15.3	293	03.5 ¹⁰⁹	+11	00.4 ¹¹⁰	35	19	48	14	14	58	36	
17	74	09.3	+5	16.3	307	33.3 ¹⁰⁸	+10	49.3 ¹¹¹	40	5	18	5	49	6	16	
18	89	09.5	+5	17.2	322	03.1 ¹⁰⁸	+10	38.2 ¹¹¹	45	5	16	5	50	6	19	
19	104	09.6		18.2	336	32.9 ¹⁰⁸		26.9 ¹¹³	50	13	50	23	22	25	0	
20	119	09.8		19.1	351	02.6 ¹⁰⁷		15.6 ¹¹³	52	11	51	24	26	23	44	
21	134	10.0		20.1	5	32.4 ¹⁰⁸	+10	04.2 ¹¹⁴	54	10	51	26	30	22	38	
22	149	10.2		21.0	20	02.2 ¹⁰⁸	+9	52.8 ¹¹⁴	56	08	51	28	36	19	31	
23	164	10.4		22.0	34	32.0 ¹⁰⁸		41.3 ¹¹⁵	58	05	51	30	41	17	23	
24	179	10.6	+5	22.9	49	01.7 ¹⁰⁷	+9	29.7 ¹¹⁶	60 S	5	02	5	51	6	32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.5		Mag: -0.7		Mag: -2.1		Mag: +0.3	
	11 ^h 15 ^m 2		PMG: 14 ^h 59 ^m		PMG: 21 ^h 44 ^m		PMG: 14 ^h 01 ^m		PMG: 1 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	190	44.6	135	21.5	+23	15.7	33	02.6	+12	51.5
1	205	47.1	150	21.6		16.4	48	05.5		51.6
2	220	49.6	165	21.6		17.1	63	08.4		51.6
3	235	52.0	180	21.6		17.8	78	11.2		51.7
4	250	54.5	195	21.6		18.5	93	14.1		51.7
5	265	56.9	210	21.7	+23	19.2	108	17.0	+12	51.7
6	280	59.4	225	21.7	+23	19.9	123	19.8	+12	51.8
7	296	01.9	240	21.7		20.6	138	22.7		51.8
8	311	04.3	255	21.7		21.3	153	25.6		51.9
9	326	06.8	270	21.8		22.0	168	28.4		51.9
10	341	09.3	285	21.8		22.7	183	31.3		52.0
11	356	11.7	300	21.8	+23	23.4	198	34.2	+12	52.0
12	11	14.2	315	21.9	+23	24.1	213	37.0	+12	52.0
13	26	16.7	330	21.9		24.8	228	39.9		52.1
14	41	19.1	345	21.9		25.5	243	42.7		52.1
15	56	21.6	0	21.9		26.2	258	45.6		52.1
16	71	24.1	15	22.0		26.8	273	48.5		52.2
17	86	26.5	30	22.0	+23	27.5	288	51.3	+12	52.2
18	101	29.0	45	22.0	+23	28.2	303	54.2	+12	52.3
19	116	31.4	60	22.1		28.9	318	57.0		52.3
20	131	33.9	75	22.1		29.6	333	59.9		52.3
21	146	36.4	90	22.1		30.3	349	02.7		52.4
22	161	38.8	105	22.2		30.9	4	05.6		52.4
23	176	41.3	120	22.2		31.6	19	08.4		52.4
24	191	43.8	135	22.3	+23	32.3	34	11.3	+12	52.5
Dif	—		0	+7			+29	0		
								+19	+2	
									+26	+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 03 ^m 1			Edad: 11 ^d 4 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 8 20 ^h : 59 ^m 1 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	10.6	+5 22.9	49	01.7	+9 29.7		60 N	18 50	19 33	20 28	14 28 92	3 52 13	
1	194	10.7		63	31.5 ¹⁰⁸	18.0 ¹¹⁷		58	46	27	18	32 88	47 16	
2	209	10.9		78	01.2 ¹⁰⁷	+9 06.3 ¹¹⁷		56	43	21	09	35 86	43 19	
3	224	11.1		92	30.9 ¹⁰⁷	+8 54.5 ¹¹⁸		54	40	17	20 01	38 83	39 21	
4	239	11.3		107	00.6 ¹⁰⁷	42.7 ¹¹⁸		52	38	12	19 54	41 80	36 23	
5	254	11.5	+5 27.7	121	30.3 ¹⁰⁷	+8 30.8 ¹¹⁹		50	18 36	19 09	19 48	14 43 79	3 33 24	
6	269	11.7	+5 28.7	136	00.0 ¹⁰⁷	+8 18.8 ¹²⁰		45	18 31	19 01	19 36	14 48 74	3 26 29	
7	284	11.8		150	29.7 ¹⁰⁷	+8 06.7 ¹²¹		40	27	18 54	27	53 70	20 32	
8	299	12.0		164	59.3 ¹⁰⁶	+7 54.6 ¹²¹		35	23	49	19	14 57 67	15 35	
9	314	12.2		179	28.9 ¹⁰⁶	42.5 ¹²¹		30	20	44	13	15 00 64	10 38	
10	329	12.4		193	58.6 ¹⁰⁷	30.3 ¹²²		20	15	37	19 03	06 59	3 02 43	
11	344	12.6	+5 33.5	208	28.2 ¹⁰⁶	+7 18.0 ¹²³		10 N	18 10	18 32	18 56	15 11 55	2 56 46	
12	359	12.8	+5 34.4	222	57.8 ¹⁰⁶	+7 05.7 ¹²³		0	18 06	18 27	18 51	15 15 51	2 49 50	
13	14	12.9		237	27.3 ¹⁰⁵	+6 53.3 ¹²⁴		10 S	18 02	24	48	20 47	42 55	
14	29	13.1		251	56.9 ¹⁰⁶	40.8 ¹²⁵		20	17 58	20	46	25 43	35 59	
15	44	13.3		266	26.4 ¹⁰⁵	28.3 ¹²⁵		30	54	18	45	31 38	27 63	
16	59	13.5		280	56.0 ¹⁰⁶	15.8 ¹²⁵		35	51	17	46	34 35	22 66	
17	74	13.7	+5 39.2	295	25.4 ¹⁰⁴	+6 03.2 ¹²⁶		40	17 48	18 15	18 47	15 38 32	2 17 69	
18	89	13.8	+5 40.1	309	54.9 ¹⁰⁵	+5 50.5 ¹²⁷		45	17 45	18 14	18 48	15 42 29	2 11 72	
19	104	14.0		324	24.4 ¹⁰⁵	37.8 ¹²⁷		50	41	13	51	47 25	03 77	
20	119	14.2		338	53.8 ¹⁰⁴	25.1 ¹²⁷		52	39	13	52	49 23	2 00 79	
21	134	14.4		353	23.2 ¹⁰⁴	+5 12.3 ¹²⁸		54	37	13	54	52 20	1 56 81	
22	149	14.6		7	52.6 ¹⁰⁴	+4 59.4 ¹²⁹		56	35	12	55	55 18	51 84	
23	164	14.8		44.9	22 22.0 ¹⁰⁴	46.6 ¹²⁸		58	33	12	18 57	15 58 15	47 86	
24	179	14.9	+5 45.9	36	51.3 ¹⁰³	+4 33.6 ¹³⁰		60 S	17 30	18 12	19 00	16 01 13	1 41 90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 11 ^m 2		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: -0.7 PMG: 21 ^h 39 ^m			Mag: -2.1 PMG: 13 ^h 58 ^m			Mag: +0.3 PMG: 0 ^h 58 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	191	43.8	135 22.3	+23 32.3	34 11.3	+12 52.5		150 09.7	+15 08.2		345 31.9	-7 52.6		
1	206	46.2	150 22.3	33.0	49 14.1	52.5		165 11.7	08.4		0 34.5	52.6		
2	221	48.7	165 22.3	33.7	64 16.9	52.5		180 13.6	08.6		15 37.2	52.5		
3	236	51.2	180 22.4	34.3	79 19.8	52.5		195 15.5	08.7		30 39.8	52.4		
4	251	53.6	195 22.4	35.0	94 22.6	52.6		210 17.4	08.9		45 42.4	52.3		
5	266	56.1	210 22.4	+23 35.7	109 25.5	+12 52.6		225 19.3	+15 09.1		60 45.1	-7 52.3		
6	281	58.6	225 22.5	+23 36.4	124 28.3	+12 52.6		240 21.3	+15 09.3		75 47.7	-7 52.2		
7	297	01.0	240 22.5	37.0	139 31.1	52.7		255 23.2	09.4		90 50.4	52.1		
8	312	03.5	255 22.6	37.7	154 34.0	52.7		270 25.1	09.6		105 53.0	52.1		
9	327	05.9	270 22.6	38.4	169 36.8	52.7		285 27.0	09.8		120 55.6	52.0		
10	342	08.4	285 22.7	39.0	184 39.6	52.7		300 28.9	09.9		135 58.3	51.9		
11	357	10.9	300 22.7	+23 39.7	199 42.5	+12 52.8		315 30.8	+15 10.1		151 00.9	-7 51.9		
12	12	13.3	315 22.7	+23 40.4	214 45.3	+12 52.8		330 32.8	+15 10.3		166 03.5	-7 51.8		
13	27	15.8	330 22.8	41.1	229 48.1	52.8		345 34.7	10.4		181 06.2	51.7		
14	42	18.3	345 22.8	41.7	244 50.9	52.9		0 36.6	10.6		196 08.8	51.7		
15	57	20.7	0 22.9	42.4	259 53.8	52.9		15 38.5	10.8		211 11.4	51.6		
16	72	23.2	15 22.9	43.1	274 56.6	52.9		30 40.4	11.0		226 14.1	51.5		
17	87	25.7	30 23.0	+23 43.7	289 59.4	+12 52.9		45 42.3	+15 11.1		241 16.7	-7 51.5		
18	102	28.1	45 23.0	+23 44.4	305 02.2	+12 52.9		60 44.2	+15 11.3		256 19.4	-7 51.4		
19	117	30.6	60 23.1	45.0	320 05.1	53.0		75 46.2	11.5		271 22.0	51.3		
20	132	33.0	75 23.1	45.7	335 07.9	53.0		90 48.1	11.6		286 24.6	51.3		
21	147	35.5	90 23.2	46.4	350 10.7	53.0		105 50.0	11.8		301 27.3	51.2		
22	162	38.0	105 23.2	47.0	5 13.5	53.0		120 51.9	12.0		316 29.9	51.1		
23	177	40.4	120 23.3	47.7	20 16.3	53.1		135 53.8	12.2		331 32.5	51.0		
24	192	42.9	135 23.3	+23 48.3	35 19.1	+12 53.1		150 55.7	+15 12.3		346 35.2	-7 51.0		
Dif	—		0 +7			+28 0			+19 +2		+26 +1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 02 ^m 9			Edad: 12 ^d 4 PHE { SD: 16:1 PMG: 22 ^h 19 ^m										
				R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	14.9	+5 45.9	36	51.3	+4 33.6		60 N	3 37	4 32	5 15	16 00	94	4 05 13
1	194	15.1	46.8	51	20.7 ¹⁰⁴	20.7 ¹²⁹		58	47	38	19	00	91	03 16
2	209	15.3	47.8	65	50.0 ¹⁰³	+4 07.6 ¹³¹		56	3 56	44	22	01	88	02 18
3	224	15.5	48.7	80	19.2 ¹⁰²	+3 54.6 ¹³⁰		54	4 04	48	25	01	86	4 00 21
4	239	15.7	49.7	94	48.5 ¹⁰³	41.5 ¹³¹		52	11	53	27	01	84	3 59 22
5	254	15.9	+5 50.6	109	17.7 ¹⁰²	+3 28.4 ¹³¹		50	4 17	4 57	5 30	16 02	81	3 57 25
6	269	16.0	+5 51.6	123	46.9 ¹⁰²	+3 15.2 ¹³²		45	4 29	5 05	5 35	16 02	77	3 55 28
7	284	16.2	52.5	138	16.0 ¹⁰¹	+3 02.0 ¹³²		40	39	11	39	03	73	52 33
8	299	16.4	53.5	152	45.1 ¹⁰¹	+2 48.8 ¹³²		35	47	17	42	04	69	50 36
9	314	16.6	54.4	167	14.2 ¹⁰¹	35.5 ¹³³		30	4 53	21	45	04	66	48 39
10	329	16.8	55.4	181	43.3 ¹⁰¹	22.2 ¹³³		20	5 03	29	51	05	61	45 43
11	344	16.9	+5 56.3	196	12.3 ¹⁰⁰	+2 08.9 ¹³³		10 N	5 10	5 34	5 55	16 06	56	3 42 48
12	359	17.1	+5 57.3	210	41.3 ¹⁰⁰	+1 55.5 ¹³⁴		0	5 15	5 39	6 00	16 06	53	3 39 52
13	14	17.3	58.2	225	10.3 ¹⁰⁰	42.1 ¹³⁴		10 S	18	43	04	07	49	37 55
14	29	17.5	+5 59.2	239	39.2 ⁹⁹	28.7 ¹³⁴		20	20	46	08	08	44	34 60
15	44	17.7	+6 00.1	254	08.1 ⁹⁹	15.3 ¹³⁴		30	21	49	13	09	39	30 65
16	59	17.8	01.1	268	37.0 ⁹⁹	+1 01.8 ¹³⁵		35	21	50	15	09	37	28 68
17	74	18.0	+6 02.0	283	05.8 ⁹⁸	+0 48.3 ¹³⁵		40	5 20	5 51	6 18	16 10	33	3 26 71
18	89	18.2	+6 03.0	297	34.6 ⁹⁸	+0 34.8 ¹³⁵		45	5 18	5 52	6 22	16 11	29	3 23 75
19	104	18.4	03.9	312	03.4 ⁹⁸	21.3 ¹³⁵		50	16	53	26	12	25	20 80
20	119	18.6	04.9	326	32.1 ⁹⁷	+0 07.8 ¹³⁵		52	15	54	28	12	23	19 81
21	134	18.7	05.8	341	00.8 ⁹⁷	-0 05.8 ¹³⁶		54	13	54	30	12	21	17 84
22	149	18.9	06.8	355	29.4 ⁹⁶	19.3 ¹³⁵		56	12	55	32	13	19	15 87
23	164	19.1	07.7	9	58.0 ⁹⁶	32.9 ¹³⁶		58	10	55	34	13	16	13 90
24	179	19.3	+6 08.7	24	26.6 ⁹⁶	-0 46.5 ¹³⁶		60 S	5 07	5 55	6 37	16 14	13	3 11 93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 07 ^m 3		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: -0.6 PMG: 21 ^h 35 ^m		Mag: -2.1 PMG: 13 ^h 55 ^m		Mag: +0.3 PMG: 0 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	42.9	135 23.3	+23 48.3	35 19.1	+12 53.1	150 55.7	+15 12.3	346 35.2	-7 51.0
1	207	45.4	150 23.4	49.0	50 22.0	53.1	165 57.7	12.5	1 37.8	50.9
2	222	47.8	165 23.4	49.7	65 24.8	53.1	180 59.6	12.7	16 40.5	50.8
3	237	50.3	180 23.5	50.3	80 27.6	53.1	196 01.5	12.8	31 43.1	50.8
4	252	52.8	195 23.5	51.0	95 30.4	53.1	211 03.4	13.0	46 45.7	50.7
5	267	55.2	210 23.6	+23 51.6	110 33.2	+12 53.2	226 05.3	+15 13.2	61 48.4	-7 50.6
6	282	57.7	225 23.6	+23 52.3	125 36.0	+12 53.2	241 07.2	+15 13.3	76 51.0	-7 50.6
7	298	00.2	240 23.7	52.9	140 38.8	53.2	256 09.1	13.5	91 53.6	50.5
8	313	02.6	255 23.8	53.6	155 41.6	53.2	271 11.1	13.7	106 56.3	50.4
9	328	05.1	270 23.8	54.2	170 44.4	53.2	286 13.0	13.9	121 58.9	50.4
10	343	07.5	285 23.9	54.9	185 47.2	53.2	301 14.9	14.0	137 01.6	50.3
11	358	10.0	300 23.9	+23 55.5	200 50.0	+12 53.3	316 16.8	+15 14.2	152 04.2	-7 50.2
12	13	12.5	315 24.0	+23 56.2	215 52.8	+12 53.3	331 18.7	+15 14.4	167 06.8	-7 50.1
13	28	14.9	330 24.1	56.8	230 55.6	53.3	346 20.6	14.5	182 09.5	50.1
14	43	17.4	345 24.1	57.5	245 58.4	53.3	1 22.5	14.7	197 12.1	50.0
15	58	19.9	0 24.2	58.1	261 01.2	53.3	16 24.5	14.9	212 14.7	49.9
16	73	22.3	15 24.2	58.8	276 04.0	53.3	31 26.4	15.1	227 17.4	49.9
17	88	24.8	30 24.3	+23 59.4	291 06.8	+12 53.3	46 28.3	+15 15.2	242 20.0	-7 49.8
18	103	27.3	45 24.4	+24 00.0	306 09.6	+12 53.3	61 30.2	+15 15.4	257 22.7	-7 49.7
19	118	29.7	60 24.4	+24 00.7	321 12.4	53.4	76 32.1	15.6	272 25.3	49.7
20	133	32.2	75 24.5	01.3	336 15.1	53.4	91 34.0	15.7	287 27.9	49.6
21	148	34.6	90 24.6	02.0	351 17.9	53.4	106 35.9	15.9	302 30.6	49.5
22	163	37.1	105 24.6	02.6	6 20.7	53.4	121 37.8	16.1	317 33.2	49.5
23	178	39.6	120 24.7	03.2	21 23.5	53.4	136 39.8	16.2	332 35.8	49.4
24	193	42.0	135 24.8	+24 03.9	36 26.3	+12 53.4	151 41.7	+15 16.4	347 38.5	-7 49.3
Dif	—		+1	+6	+28	0	+19	+2	+26	+1

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 6			Edad: 13 ^d 4 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'6 PMG: 23 ^h 12 ^m R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	19.3	+6	08.7	24	26.6	-0	46.5	60 N	18	54	19	38	20	34	17	34
1	194	19.5		09.6	38	55.1	95	-1 00.1 ¹³⁶	58	51	32	23	31	94	19	16	
2	209	19.6		10.6	53	23.6	95	13.7 ¹³⁶	56	47	26	14	29	90	20	19	
3	224	19.8		11.5	67	52.0	94	27.4 ¹³⁷	54	44	21	20 06	27	88	21	2	
4	239	20.0		12.5	82	20.4	94	41.0 ¹³⁶	52	41	16	19 58	25	85	21	24	
5	254	20.2	+6	13.4	96	48.8	94	-1 54.6 ¹³⁶	50	18	39	19 12	19 52	17	23	83	4
6	269	20.4	+6	14.3	111	17.1	93	-2 08.2 ¹³⁶	45	18	33	19 03	19 39	17	19	78	4
7	284	20.5		15.3	125	45.3	92	21.9 ¹³⁷	40	29	18	56	29	16	74	25	34
8	299	20.7		16.2	140	13.5	92	35.5 ¹³⁶	35	25	50	21	13	71	26	37	
9	314	20.9		17.2	154	41.7	92	-2 49.1 ¹³⁶	30	21	46	14	10	69	27	40	
10	329	21.1		18.1	169	09.8	91	-3 02.8 ¹³⁷	20	15	38	19 04	06	63	28	45	
11	344	21.3	+6	19.1	183	37.9	91	-3 16.4 ¹³⁶	10 N	18	10	18 32	18 56	17	02	59	4
12	359	21.4	+6	20.0	198	05.9	90	-3 30.0 ¹³⁶	0	18	06	18 27	18 51	16	59	55	4
13	14	21.6		21.0	212	33.9	90	43.6 ¹³⁶	10 S	18	01	22	47	56	50	32	58
14	29	21.8		21.9	227	01.8	89	-3 57.2 ¹³⁶	20	17	57	19	44	52	46	34	62
15	44	22.0		22.9	241	29.7	89	-4 10.8 ¹³⁶	30	51	15	43	48	42	35	68	
16	59	22.2		23.8	255	57.5	88	24.4 ¹³⁶	35	49	14	43	46	38	36	70	
17	74	22.3	+6	24.8	270	25.3	88	-4 37.9 ¹³⁵	40	17	45	18 12	18 44	16	43	36	4
18	89	22.5	+6	25.7	284	53.0	87	-4 51.4 ¹³⁵	45	17	41	18 11	18 45	16	40	32	4
19	104	22.7		26.6	299	20.6	86	-5 05.0 ¹³⁶	50	37	09	47	37	27	40	82	
20	119	22.9		27.6	313	48.2	86	18.5 ¹³⁵	52	35	09	48	35	26	40	85	
21	134	23.1		28.5	328	15.8	86	31.9 ¹³⁴	54	33	08	49	33	24	41	87	
22	149	23.2		29.5	342	43.3	85	45.4 ¹³⁵	56	30	07	50	32	20	42	89	
23	164	23.4		30.4	357	10.7	84	-5 58.8 ¹³⁴	58	27	07	52	29	18	43	92	
24	179	23.6	+6	31.4	11	38.1	84	-6 12.2 ¹³⁴	60 S	17	24	18 06	18 54	16	27	15	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 03 ^m 4		Mag: -4.6 PMG: 14 ^h 58 ^m			Mag: -0.6 PMG: 21 ^h 30 ^m			Mag: -2.1 PMG: 13 ^h 51 ^m			Mag: +0.3 PMG: 0 ^h 49 ^m					
	hG ♈	hG ♀		Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	193	42.0	135	24.8	+24	03.9	36	26.3	+12	53.4	151	41.7	+15	16.4			
1	208	44.5	150	24.8		04.5	51	29.1		53.4	166	43.6		16.6			
2	223	47.0	165	24.9		05.2	66	31.8		53.4	181	45.5		16.8			
3	238	49.4	180	25.0		05.8	81	34.6		53.4	196	47.4		16.9			
4	253	51.9	195	25.1		06.4	96	37.4		53.4	211	49.3		17.1			
5	268	54.4	210	25.1	+24	07.1	111	40.2	+12	53.4	226	51.2	+15	17.3			
6	283	56.8	225	25.2	+24	07.7	126	43.0	+12	53.4	241	53.1	+15	17.4			
7	298	59.3	240	25.3		08.3	141	45.7		53.4	256	55.1		17.6			
8	314	01.8	255	25.3		08.9	156	48.5		53.4	271	57.0		17.8			
9	329	04.2	270	25.4		09.6	171	51.3		53.4	286	58.9		17.9			
10	344	06.7	285	25.5		10.2	186	54.0		53.4	302	00.8		18.1			
11	359	09.1	300	25.6	+24	10.8	201	56.8	+12	53.4	317	02.7	+15	18.3			
12	14	11.6	315	25.7	+24	11.5	216	59.6	+12	53.4	332	04.6	+15	18.5			
13	29	14.1	330	25.7		12.1	232	02.3		53.4	347	06.5		18.6			
14	44	16.5	345	25.8		12.7	247	05.1		53.4	2	08.4		18.8			
15	59	19.0	0	25.9		13.3	262	07.9		53.4	17	10.4		19.0			
16	74	21.5	15	26.0		14.0	277	10.6		53.4	32	12.3		19.1			
17	89	23.9	30	26.1	+24	14.6	292	13.4	+12	53.4	47	14.2	+15	19.3			
18	104	26.4	45	26.1	+24	15.2	307	16.2	+12	53.4	62	16.1	+15	19.5			
19	119	28.9	60	26.2		15.8	322	18.9		53.4	77	18.0		19.7			
20	134	31.3	75	26.3		16.4	337	21.7		53.4	92	19.9		19.8			
21	149	33.8	90	26.4		17.1	352	24.4		53.4	107	21.8		20.0			
22	164	36.2	105	26.5		17.7	7	27.2		53.4	122	23.7		20.2			
23	179	38.7	120	26.6		18.3	22	29.9		53.4	137	25.6		20.3			
24	194	41.2	135	26.6	+24	18.9	37	32.7	+12	53.4	152	27.5	+15	20.5			
Dif	—		+1	+6			+28	0			+19	+2			+26	+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 02 ^m 3			Edad: 14 ^d 4 PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'1 PMG: **h **m R°: **m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	23.6	+6	31.4	11	38.1	-6	12.2	60 N	3	30	4	25	5	09	19	11	99
1	194	23.8		32.3	26	05.5	84	25.6 ¹³⁴	58		41		32		13	19	05	95
2	209	23.9		33.2	40	32.7	82	38.9 ¹³³	56		50		38		17	18	59	92
3	224	24.1		34.2	55	00.0	83	-6 52.2 ¹³³	54	3	58		43		20		55	88
4	239	24.3		35.1	69	27.1	81	-7 05.5 ¹³³	52	4	06		48		23		50	86
5	254	24.5	+6	36.1	83	54.2	81	-7 18.8 ¹³³	50	4	12	4	52	5	25	18	46	84
6	269	24.7	+6	37.0	98	21.3	81	-7 32.0 ¹³²	45	4	25	5	01	5	31	18	37	80
7	284	24.8		38.0	112	48.3	80	45.1 ¹³¹	40		35		08		36		30	76
8	299	25.0		38.9	127	15.2	79	-7 58.2 ¹³¹	35		44		14		40		24	73
9	314	25.2		39.8	141	42.1	79	-8 11.3 ¹³¹	30	4	51		19		43		19	69
10	329	25.4		40.8	156	08.9	78	24.4 ¹³¹	20	5	01		27		49		09	65
11	344	25.5	+6	41.7	170	35.6	77	-8 37.3 ¹²⁹	10 N	5	08	5	33	5	54	18	01	61
12	359	25.7	+6	42.7	185	02.3	77	-8 50.3 ¹³⁰	0	5	14	5	38	5	59	17	54	57
13	14	25.9		43.6	199	28.9	76	-9 03.2 ¹²⁹	10 S		18		43	6	04		46	54
14	29	26.1		44.6	213	55.5	76	16.0 ¹²⁸	20		21		46		08		38	50
15	44	26.3		45.5	228	22.0	75	28.8 ¹²⁸	30		22		50	14		30	45	43
16	59	26.4		46.4	242	48.5	75	41.5 ¹²⁷	35		22		52	17		24	43	46
17	74	26.6	+6	47.4	257	14.8	73	-9 54.2 ¹²⁷	40	5	22	5	53	6	20	17	19	39
18	89	26.8	+6	48.3	271	41.2	74	-10 06.8 ¹²⁶	45	5	21	5	55	6	24	17	12	36
19	104	27.0		49.3	286	07.4	72	19.4 ¹²⁶	50		19		57	29		04	32	6
20	119	27.1		50.2	300	33.6	72	31.8 ¹²⁴	52		18		57	31		17	01	29
21	134	27.3		51.1	314	59.7	71	44.3 ¹²⁵	54		17		58	33		16	57	27
22	149	27.5		52.1	329	25.8	71	-10 56.6 ¹²³	56		16		59	36		52	25	11
23	164	27.7		53.0	343	51.8	70	-11 08.9 ¹²³	58		14	5	59	39		47	22	15
24	179	27.8	+6	53.9	358	17.8	70	-11 21.1 ¹²²	60 S	5	12	6	00	6	42	16	42	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 59 ^m 4		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: -0.6 PMG: 21 ^h 26 ^m		Mag: -2.1 PMG: 13 ^h 48 ^m		Mag: +0.3 PMG: 0 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	194	41.2	135	26.6	+24	18.9	37	32.7	+12	53.4
1	209	43.6	150	26.7		19.5	52	35.4		53.4
2	224	46.1	165	26.8		20.1	67	38.2		53.4
3	239	48.6	180	26.9		20.8	82	40.9		53.4
4	254	51.0	195	27.0		21.4	97	43.7		53.4
5	269	53.5	210	27.1	+24	22.0	112	46.4	+12	53.4
6	284	56.0	225	27.2	+24	22.6	127	49.2	+12	53.4
7	299	58.4	240	27.3		23.2	142	51.9		53.4
8	315	00.9	255	27.4		23.8	157	54.7		53.4
9	330	03.4	270	27.5		24.4	172	57.4		53.4
10	345	05.8	285	27.6		25.0	188	00.1		53.3
11	0	08.3	300	27.7	+24	25.6	203	02.9	+12	53.3
12	15	10.7	315	27.7	+24	26.2	218	05.6	+12	53.3
13	30	13.2	330	27.8		26.8	233	08.3		53.3
14	45	15.7	345	27.9		27.4	248	11.1		53.3
15	60	18.1	0	28.0		28.0	263	13.8		53.3
16	75	20.6	15	28.1		28.6	278	16.5		53.3
17	90	23.1	30	28.2	+24	29.2	293	19.3	+12	53.3
18	105	25.5	45	28.3	+24	29.8	308	22.0	+12	53.2
19	120	28.0	60	28.4		30.4	323	24.7		53.2
20	135	30.5	75	28.5		31.0	338	27.4		53.2
21	150	32.9	90	28.6		31.6	353	30.2		53.2
22	165	35.4	105	28.8		32.2	8	32.9		53.2
23	180	37.8	120	28.9		32.8	23	35.6		53.2
24	195	40.3	135	29.0	+24	33.4	38	38.3	+12	53.2
Dif	—		+1 +6		+27		0		+19 +2	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 0			Edad: 15 ^d 4 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'2 PMG: 0 ^h 07 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	27.8	+6 53.9	358	17.8	-11 21.1	60 N	18 59	19 44	20 41	20 50 95	4 47 21		
1	194	28.0		12	43.6	68 33.3	58	55	37	29	40 91	4 55 24		
2	209	28.2		27	09.5	69 45.4	56	51	30	19	31 89	5 01 28		
3	224	28.4		41	35.2	67 -11 57.3	54	48	25	10	23 86	07 30		
4	239	28.5		56	00.9	67 -12 09.3	52	45	20	20 03	16 84	12 32		
5	254	28.7	+6 58.6	70	26.5	66 -12 21.1	50	18 42	19 15	19 56	20 10 82	5 17 34		
6	269	28.9	+6 59.6	84	52.1	66 -12 32.9	45	18 36	19 06	19 42	19 57 78	5 27 39		
7	284	29.1	+7 00.5	99	17.6	65 44.6	40	31	18 58	31	46 75	36 42		
8	299	29.3		113	43.0	64 -12 56.2	35	26	52	22	37 72	43 45		
9	314	29.4		128	08.4	64 -13 07.7	30	23	47	15	28 70	5 50 47		
10	329	29.6		142	33.7	63 19.1	20	16	38	19 04	14 67	6 01 52		
11	344	29.8	+7 04.3	156	59.0	63 -13 30.4	10 N	18 10	18 32	18 56	19 02 63	6 11 55		
12	359	30.0	+7 05.2	171	24.1	61 -13 41.7	0	18 05	18 26	18 50	18 51 60	6 21 58		
13	14	30.1		185	49.3	62 -13 52.8	10 S	18 00	21	46	40 57	30 62		
14	29	30.3		200	14.3	60 -14 03.9	20	17 55	17	43	28 54	40 66		
15	44	30.5		214	39.3	60 14.8	30	49	13	41	15 49	52 70		
16	59	30.6		229	04.3	60 25.7	35	46	11	40	18 07 47	6 58 73		
17	74	30.8	+7 09.9	243	29.2	59 -14 36.4	40	17 42	18 09	18 41	17 58 45	7 06 75		
18	89	31.0	+7 10.8	257	54.0	58 -14 47.1	45	17 38	18 07	18 41	17 48 42	7 15 79		
19	104	31.2		272	18.7	57 -14 57.7	50	33	05	42	36 38	26 83		
20	119	31.3		286	43.4	57 -15 08.1	52	30	04	43	30 36	31 85		
21	134	31.5		301	08.1	57 18.5	54	28	03	44	24 34	36 88		
22	149	31.7		315	32.7	56 28.7	56	25	02	45	17 31	42 91		
23	164	31.9		329	57.2	55 38.8	58	22	01	47	09 29	49 94		
24	179	32.0	+7 16.4	344	21.7	55 -15 48.9	60 S	17 18	18 00	18 48	17 00 25	7 57 97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 55 ^m 5		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: -0.6 PMG: 21 ^h 22 ^m		Mag: -2.1 PMG: 13 ^h 45 ^m		Mag: +0.3 PMG: 0 ^h 41 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	195	40.3	135	29.0	+24 33.4	38 38.3	+12 53.2	153 13.4	+15 24.6	349 45.2	-7 46.0
1	210	42.8	150	29.1	34.0	53 41.1	53.1	168 15.3	24.8	4 47.8	45.9
2	225	45.2	165	29.2	34.6	68 43.8	53.1	183 17.2	24.9	19 50.5	45.9
3	240	47.7	180	29.3	35.2	83 46.5	53.1	198 19.1	25.1	34 53.1	45.8
4	255	50.2	195	29.4	35.8	98 49.2	53.1	213 21.0	25.3	49 55.7	45.7
5	270	52.6	210	29.5	+24 36.4	113 51.9	+12 53.1	228 22.9	+15 25.4	64 58.4	-7 45.7
6	285	55.1	225	29.6	+24 37.0	128 54.6	+12 53.0	243 24.8	+15 25.6	80 01.0	-7 45.6
7	300	57.6	240	29.7	37.6	143 57.3	53.0	258 26.7	25.8	95 03.7	45.5
8	316	00.0	255	29.8	38.1	159 00.1	53.0	273 28.6	26.0	110 06.3	45.4
9	331	02.5	270	30.0	38.7	174 02.8	53.0	288 30.5	26.1	125 08.9	45.4
10	346	05.0	285	30.1	39.3	189 05.5	53.0	303 32.5	26.3	140 11.6	45.3
11	1	07.4	300	30.2	+24 39.9	204 08.2	+12 52.9	318 34.4	+15 26.5	155 14.2	-7 45.2
12	16	09.9	315	30.3	+24 40.5	219 10.9	+12 52.9	333 36.3	+15 26.6	170 16.9	-7 45.2
13	31	12.3	330	30.4	41.1	234 13.6	52.9	348 38.2	26.8	185 19.5	45.1
14	46	14.8	345	30.5	41.6	249 16.3	52.9	3 40.1	27.0	200 22.1	45.0
15	61	17.3	0	30.7	42.2	264 19.0	52.8	18 42.0	27.1	215 24.8	45.0
16	76	19.7	15	30.8	42.8	279 21.7	52.8	33 43.9	27.3	230 27.4	44.9
17	91	22.2	30	30.9	+24 43.4	294 24.4	+12 52.8	48 45.8	+15 27.5	245 30.1	-7 44.8
18	106	24.7	45	31.0	+24 44.0	309 27.1	+12 52.8	63 47.7	+15 27.7	260 32.7	-7 44.8
19	121	27.1	60	31.1	44.5	324 29.8	52.7	78 49.6	27.8	275 35.3	44.7
20	136	29.6	75	31.3	45.1	339 32.5	52.7	93 51.5	28.0	290 38.0	44.6
21	151	32.1	90	31.4	45.7	354 35.2	52.7	108 53.4	28.2	305 40.6	44.5
22	166	34.5	105	31.5	46.3	9 37.9	52.7	123 55.3	28.3	320 43.3	44.5
23	181	37.0	120	31.6	46.8	24 40.6	52.6	138 57.2	28.5	335 45.9	44.4
24	196	39.5	135	31.8	+24 47.4	39 43.3	+12 52.6	153 59.1	+15 28.7	350 48.6	-7 44.3
Dif	—		+1	+6		+27	0	+19	+2	+26	+1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 01 ^m 7			Edad: 16 ^d 4 PHE { SD: 16:7 PMG: 1 ^h 05 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	32.0	+7 16.4	344	21.7	-15 48.9	99	60 N	3 22	4 19	5 03	22 25	85	5 08	30	
1	194	32.2		358	46.1	-15 58.8	99	58	34	26	08	11 83		19	33	
2	209	32.4	18.3	13	10.4	-16 08.6	98	56	44	33	12	22 00	80	29	35	
3	224	32.6	19.2	27	34.7	18.2	96	54	3 53	38	15	21 49	79	37	38	
4	239	32.7	20.2	41	59.0	27.8	96	52	4 00	43	18	40 77		44	40	
5	254	32.9	+7 21.1	56	23.2	-16 37.3	95	50	4 07	4 48	5 21	21 32	76	5 51	42	
6	269	33.1	+7 22.0	70	47.3	-16 46.6	93	45	4 21	4 57	5 27	21 15	73	6 06	45	
7	284	33.3	23.0	85	11.4	-16 55.8	92	40	32	5 05	32	21 01	71	18	48	
8	299	33.4	23.9	99	35.5	-17 04.9	91	35	41	11	37	20 49	69	28	50	
9	314	33.6	24.8	113	59.5	13.8	89	30	48	17	41	38 68		37	52	
10	329	33.8	25.7	128	23.4	22.7	89	20	4 59	25	47	21 65		6 53	55	
11	344	33.9	+7 26.7	142	47.3	-17 31.4	87	10 N	5 07	5 32	5 53	20 05	64	7 06	59	
12	359	34.1	+7 27.6	157	11.1	-17 39.9	85	0	5 13	5 38	5 58	19 51	61	7 19	61	
13	14	34.3	28.5	171	34.9	48.4	85	10 S	18	42	6 04	37 59		32	64	
14	29	34.5	29.5	185	58.7	-17 56.7	83	20	21	47	09	22 57		7 46	66	
15	44	34.6	30.4	200	22.4	-18 04.9	82	30	23	51	15	19 04	55	8 02	69	
16	59	34.8	31.3	214	46.1	12.9	80	35	24	53	18	18 54	54	11	71	
17	74	35.0	+7 32.3	229	09.7	-18 20.9	80	40	5 24	5 55	6 22	18 43	51	8 21	74	
18	89	35.1	+7 33.2	243	33.3	-18 28.6	77	45	5 23	5 57	6 27	18 30	49	8 34	76	
19	104	35.3	34.1	257	56.8	36.3	77	50	22	6 00	32	14 46		49	79	
20	119	35.5	35.1	272	20.4	43.8	75	52	21	00	34	18 06	45	8 56	81	
21	134	35.7	36.0	286	43.8	51.2	74	54	21	01	37	17 58	43	9 04	83	
22	149	35.8	36.9	301	07.3	-18 58.4	72	56	20	03	40	48 41		13	85	
23	164	36.0	37.8	315	30.7	-19 05.5	71	58	18	04	43	38 38		23	88	
24	179	36.2	+7 38.8	329	54.0	-19 12.5	70	60 S	5 17	6 05	6 47	17 25	36	9 34	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 10 ^h 51 ^m 6		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: -0.5 PMG: 21 ^h 17 ^m		Mag: -2.1 PMG: 13 ^h 42 ^m		Mag: +0.2 PMG: 0 ^h 37 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	196	39.5	135	31.8	+24 47.4	39 43.3	+12 52.6	153 59.1	+15 28.7	350 48.6	-7 44.3
1	211	41.9	150	31.9	48.0	54 45.9	52.6	169 01.1	28.8	5 51.2	44.3
2	226	44.4	165	32.0	48.6	69 48.6	52.5	184 03.0	29.0	20 53.8	44.2
3	241	46.8	180	32.1	49.1	84 51.3	52.5	199 04.9	29.2	35 56.5	44.1
4	256	49.3	195	32.3	49.7	99 54.0	52.5	214 06.8	29.4	50 59.1	44.1
5	271	51.8	210	32.4	+24 50.3	114 56.7	+12 52.5	229 08.7	+15 29.5	66 01.8	-7 44.0
6	286	54.2	225	32.5	+24 50.8	129 59.4	+12 52.4	244 10.6	+15 29.7	81 04.4	-7 43.9
7	301	56.7	240	32.7	51.4	145 02.1	52.4	259 12.5	29.9	96 07.0	43.8
8	316	59.2	255	32.8	52.0	160 04.7	52.4	274 14.4	30.0	111 09.7	43.8
9	332	01.6	270	32.9	52.5	175 07.4	52.3	289 16.3	30.2	126 12.3	43.7
10	347	04.1	285	33.1	53.1	190 10.1	52.3	304 18.2	30.4	141 15.0	43.6
11	2	06.6	300	33.2	+24 53.7	205 12.8	+12 52.3	319 20.1	+15 30.5	156 17.6	-7 43.6
12	17	09.0	315	33.4	+24 54.2	220 15.4	+12 52.2	334 22.0	+15 30.7	171 20.2	-7 43.5
13	32	11.5	330	33.5	54.8	235 18.1	52.2	349 23.9	30.9	186 22.9	43.4
14	47	13.9	345	33.6	55.3	250 20.8	52.1	4 25.8	31.1	201 25.5	43.4
15	62	16.4	0	33.8	55.9	265 23.5	52.1	19 27.7	31.2	216 28.2	43.3
16	77	18.9	15	33.9	56.5	280 26.1	52.1	34 29.6	31.4	231 30.8	43.2
17	92	21.3	30	34.1	+24 57.0	295 28.8	+12 52.0	49 31.5	+15 31.6	246 33.5	-7 43.2
18	107	23.8	45	34.2	+24 57.6	310 31.5	+12 52.0	64 33.4	+15 31.7	261 36.1	-7 43.1
19	122	26.3	60	34.3	58.1	325 34.1	52.0	79 35.4	31.9	276 38.7	43.0
20	137	28.7	75	34.5	58.7	340 36.8	51.9	94 37.3	32.1	291 41.4	42.9
21	152	31.2	90	34.6	59.2	355 39.5	51.9	109 39.2	32.2	306 44.0	42.9
22	167	33.7	105	34.8	+24 59.8	10 42.1	51.8	124 41.1	32.4	321 46.7	42.8
23	182	36.1	120	34.9	+25 00.3	25 44.8	51.8	139 43.0	32.6	336 49.3	42.7
24	197	38.6	135	35.1	+25 00.9	40 47.4	+12 51.8	154 44.9	+15 32.8	351 51.9	-7 42.7
Dif	—		+1 +6		+27 0		+19 +2		+26 +1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 12 ^h 01 ^m 5			Edad: 17 ^d 4 PHE { SD: 16°6 PMG: 2 ^h 06 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	36.2	+7	38.8	329	54.0	-19 12.5	60 N	19 04	19 49	20 47	23 50 68	5 38 43		
1	194	36.3			344	17.4 44	19.3 68	58	18 59	41	35	34 67	5 52 45		
2	209	36.5			358	40.7 43	25.9 66	56	55	35	24	20 66	6 04 47		
3	224	36.7			13	04.0 43	32.4 65	54	51	29	15	23 08 66	15 49		
4	239	36.9			27	27.2 42	38.8 64	52	48	23	07	22 57 66	24 50		
5	254	37.0	+7	43.4	41	50.4 42	-19 45.0 62	50	18 45	19 19	20 00	22 48 65	6 33 51		
6	269	37.2	+7	44.3	56	13.6 42	-19 51.1 61	45	18 38	19 09	19 45	22 28 64	6 51 53		
7	284	37.4			70	36.8 42	-19 57.1 60	40	33	19 00	33	22 12 64	7 06 55		
8	299	37.5			85	00.0 42	-20 02.8 57	35	28	18 54	24	21 58 64	18 56		
9	314	37.7			99	23.1 41	08.5 57	30	24	48	17	46 64	29 57		
10	329	37.9			113	46.2 41	14.0 55	20	17	39	19 05	26 63	7 48 59		
11	344	38.1	+7	49.0	128	09.4 42	-20 19.3 53	10 N	18 10	18 32	18 56	21 09 62	8 05 60		
12	359	38.2	+7	49.9	142	32.4 40	-20 24.5 52	0	18 05	18 26	18 50	20 52 62	8 20 62		
13	14	38.4			156	55.5 41	29.5 50	10 S	17 59	20	45	36 61	36 62		
14	29	38.6			171	18.6 41	34.4 49	20	53	16	41	20 19 60	8 52 64		
15	44	38.7			185	41.6 40	39.1 47	30	47	11	39	19 59 59	9 11 66		
16	59	38.9			200	04.7 41	43.7 46	35	43	09	38	48 58	22 67		
17	74	39.1	+7	54.5	214	27.7 40	-20 48.1 44	40	17 39	18 06	18 38	19 34 58	9 35 68		
18	89	39.2	+7	55.4	228	50.8 41	-20 52.4 43	45	17 34	18 04	18 38	19 19 57	9 50 69		
19	104	39.4			243	13.8 40	-20 56.5 41	50	29	01	38	19 00 56	10 08 71		
20	119	39.6			257	36.8 40	-21 00.5 40	52	26	18 00	39	18 51 55	17 72		
21	134	39.7			271	59.9 41	04.3 38	54	23	17 59	39	41 54	27 73		
22	149	39.9	+7	59.1	286	22.9 40	07.9 36	56	20	57	40	29 54	38 74		
23	164	40.1	+8	00.1	300	45.9 40	11.4 35	58	16	56	41	16 53	10 51 75		
24	179	40.2	+8	01.0	315	09.0 41	-21 14.7 33	60 S	17 13	17 55	18 42	18 01 51	11 05 77		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 47 ^m 7		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: -0.5 PMG: 21 ^h 13 ^m		Mag: -2.1 PMG: 13 ^h 39 ^m		Mag: +0.2 PMG: 0 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	38.6	135	35.1	40	47.4	154	44.9	351	51.9
1	212	41.1	150	35.2					6	54.6
2	227	43.5	165	35.4					21	57.2
3	242	46.0	180	35.5	02.5				36	59.9
4	257	48.4	195	35.7	03.1				52	02.5
5	272	50.9	210	35.8	+25 03.6				67	05.2
6	287	53.4	225	36.0	+25 04.2				82	07.8
7	302	55.8	240	36.1	04.7				97	10.4
8	317	58.3	255	36.3	05.3				112	13.1
9	333	00.8	270	36.4	05.8				127	15.7
10	348	03.2	285	36.6	06.4				142	18.4
11	3	05.7	300	36.8	+25 06.9				157	21.0
12	18	08.2	315	36.9	+25 07.4				172	23.7
13	33	10.6	330	37.1	08.0				187	26.3
14	48	13.1	345	37.2	08.5				202	28.9
15	63	15.6	0	37.4	09.1				217	31.6
16	78	18.0	15	37.6	09.6				232	34.2
17	93	20.5	30	37.7	+25 10.1				247	36.9
18	108	22.9	45	37.9	+25 10.7				262	39.5
19	123	25.4	60	38.1	11.2				277	42.1
20	138	27.9	75	38.2	11.7				292	44.8
21	153	30.3	90	38.4	12.3				307	47.4
22	168	32.8	105	38.6	12.8				322	50.1
23	183	35.3	120	38.7	13.3				337	52.7
24	198	37.7	135	38.9	+25 13.9				352	55.4
Dif	—		+2	+5	+26	0	+19	+2	+26	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 01 ^m 2			Edad: 18 ^d 4 PHE { 4 ^h : 60'3 12 ^h : 60'1 20 ^h : 59'9 SD: 16'5 PMG: 3 ^h 07 ^m R°: 61 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	40.2	+8	01.0		315	09.0	-21	14.7	3	14	4	57	** ** *		6	21	59
1	194	40.4		01.9	40	329	32.0		17.9	27	20	5	02	** ** *			37	60
2	209	40.6		02.8	41	343	55.1		20.9	38	27		06	** ** *	6	51	60	
3	224	40.7		03.8	41	358	18.2		23.8	47	33	10		** ** *	7	04	60	
4	239	40.9		04.7	41	12	41.3		26.5	3	55	14		** ** *		14	60	
5	254	41.1	+8	05.6	40	27	04.3	-21	29.1	4	02	4	43	5	17	23	53	53
6	269	41.3	+8	06.5	42	41	27.5	-21	31.5	4	17	4	53	5	24	23	32	55
7	284	41.4		07.4	41	55	50.6		33.7	29	5	02	29		16	55		8
8	299	41.6		08.4	42	70	13.8		35.8	38	08	34		23	02	56		14
9	314	41.8		09.3	41	84	36.9		37.7	46	14	38		22	50	56		26
10	329	41.9		10.2	42	99	00.1		39.5	4	57	23	46		29	57		8
11	344	42.1	+8	11.1	42	113	23.3	-21	41.1	5	06	5	52	22	11	58		9
12	359	42.3	+8	12.1	43	127	46.6	-21	42.6	5	13	5	58	21	54	59		9
13	14	42.4		13.0	43	142	09.9		43.9	18	42	6	04		37	60		38
14	29	42.6		13.9	43	156	33.2		45.1	22	47	10		21	19	61		9
15	44	42.8		14.8	43	170	56.5		46.1	24	52	16		20	58	62		10
16	59	42.9		15.7	44	185	19.9		46.9	25	55	20		46	62		29	60
17	74	43.1	+8	16.6	44	199	43.3	-21	47.6	5	26	5	57	6	24	20	32	63
18	89	43.2	+8	17.6	45	214	06.8	-21	48.1	5	26	6	00	6	29	20	16	63
19	104	43.4		18.5	44	228	30.2		48.5	25	03	35		19	56	64		11
20	119	43.6		19.4	46	242	53.8		48.8	25	04	38		46	64		29	59
21	134	43.7		20.3	45	257	17.3		48.8	24	05	41		35	65		40	58
22	149	43.9		21.2	46	271	40.9		48.8	23	06	44		23	65		11	52
23	164	44.1		22.2	47	286	04.6		48.5	22	08	48		19	09	66		12
24	179	44.2	+8	23.1	47	300	28.3	-21	48.2	5	21	6	52	18	52	67		12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 43 ^m 7		Mag: -4.6 PMG: 14 ^h 57 ^m		Mag: -0.5 PMG: 21 ^h 09 ^m		Mag: -2.1 PMG: 13 ^h 36 ^m		Mag: +0.2 PMG: 0 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	198	37.7	135	38.9	+25	13.9	41	50.9	+12	50.7	155	30.5	+15	36.8	352	55.4	-7	41.0
1	213	40.2	150	39.1		14.4	56	53.5		50.6	170	32.4		37.0	7	58.0		40.9
2	228	42.7	165	39.3		14.9	71	56.1		50.5	185	34.3		37.2	23	00.6		40.9
3	243	45.1	180	39.4		15.4	86	58.8		50.5	200	36.2		37.3	38	03.3		40.8
4	258	47.6	195	39.6		16.0	102	01.4		50.4	215	38.2		37.5	53	05.9		40.7
5	273	50.1	210	39.8	+25	16.5	117	04.0	+12	50.4	230	40.1	+15	37.7	68	08.6	-7	40.6
6	288	52.5	225	40.0	+25	17.0	132	06.6	+12	50.3	245	42.0	+15	37.8	83	11.2	-7	40.6
7	303	55.0	240	40.1		17.5	147	09.2		50.3	260	43.9		38.0	98	13.9		40.5
8	318	57.4	255	40.3		18.1	162	11.9		50.2	275	45.8		38.2	113	16.5		40.4
9	333	59.9	270	40.5		18.6	177	14.5		50.2	290	47.7		38.4	128	19.1		40.4
10	349	02.4	285	40.7		19.1	192	17.1		50.1	305	49.6		38.5	143	21.8		40.3
11	4	04.8	300	40.9	+25	19.6	207	19.7	+12	50.1	320	51.5	+15	38.7	158	24.4	-7	40.2
12	19	07.3	315	41.1	+25	20.1	222	22.3	+12	50.0	335	53.4	+15	38.9	173	27.1	-7	40.2
13	34	09.8	330	41.2		20.7	237	24.9		49.9	350	55.3		39.0	188	29.7		40.1
14	49	12.2	345	41.4		21.2	252	27.6		49.9	5	57.2		39.2	203	32.4		40.0
15	64	14.7	0	41.6		21.7	267	30.2		49.8	20	59.1		39.4	218	35.0		40.0
16	79	17.2	15	41.8		22.2	282	32.8		49.8	36	01.0		39.5	233	37.6		39.9
17	94	19.6	30	42.0	+25	22.7	297	35.4	+12	49.7	51	02.9	+15	39.7	248	40.3	-7	39.8
18	109	22.1	45	42.2	+25	23.2	312	38.0	+12	49.6	66	04.8	+15	39.9	263	42.9	-7	39.7
19	124	24.5	60	42.4		23.7	327	40.6		49.6	81	06.7		40.1	278	45.6		39.7
20	139	27.0	75	42.6		24.3	342	43.2		49.5	96	08.6		40.2	293	48.2		39.6
21	154	29.5	90	42.8		24.8	357	45.8		49.5	111	10.5		40.4	308	50.9		39.5
22	169	31.9	105	43.0		25.3	12	48.4		49.4	126	12.4		40.6	323	53.5		39.5
23	184	34.4	120	43.1		25.8	27	51.0		49.3	141	14.3		40.7	338	56.1		39.5
24	199	36.9	135	43.3	+25	26.3	42	53.6	+12	49.3	156	16.2	+15	40.9	353	58.8	-7	39.3
Dif	—		+2		+5		+26		-1		+19		+2		+26		+1	

UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 19 ^d 4 PHE { 4 ^h : 59/6 12 ^h : 59/3 20 ^h : 59/1							Civil			Hora		Hora	
	PMG: 12 ^h 00 ^m 9		PMG: 4 ^h 08 ^m R°: 59 ^m							Náutico			R°		R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif										
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	179	44.2	+8 23.1	300	28.3	-21 48.2	6	60 N	19 09	19 55	20 54	0 58 47	7 20 74			
1	194	44.4	24.0	314	52.0	47.6	6	58	19 04	46	41	41 49	37 72			
2	209	44.6	24.9	329	15.8	47.0	6	56	18 59	39	29	26 51	7 51 71			
3	224	44.7	25.8	343	39.7	46.1	9	54	55	33	19	14 51	8 04 69			
4	239	44.9	26.7	358	03.6	45.2	9	52	51	27	11	0 03 52	14 69			
5	254	45.1	+8 27.7	12	27.6	-21 44.0	12	50	18 48	19 22	20 03	** ** *	8 24 68			
6	269	45.2	+8 28.6	26	51.6	-21 42.8	12	45	18 41	19 11	19 48	** ** *	8 45 65			
7	284	45.4	29.5	41	15.6	41.4	14	40	35	19 03	36	** ** *	9 01 64			
8	299	45.6	30.4	55	39.8	39.8	16	35	30	18 55	26	23 58 48	15 63			
9	314	45.7	31.3	70	04.0	38.1	17	30	25	49	18	46 50	27 62			
10	329	45.9	32.2	84	28.2	36.3	18	20	17	40	19 06	26 53	9 48 60			
11	344	46.0	+8 33.2	98	52.5	-21 34.3	20	10 N	18 10	18 32	18 57	23 09 54	10 06 59			
12	359	46.2	+8 34.1	113	16.9	-21 32.1	22	0	18 04	18 25	18 49	22 53 56	10 22 58			
13	14	46.4	35.0	127	41.3	29.9	22	10 S	17 58	19	44	37 58	39 57			
14	29	46.5	35.9	142	05.9	27.5	24	20	52	14	40	20 60	10 57 55			
15	44	46.7	36.8	156	30.4	24.9	26	30	45	09	36	22 00 62	11 17 54			
16	59	46.9	37.7	170	55.1	22.2	27	35	41	06	35	21 48 64	29 52			
17	74	47.0	+8 38.6	185	19.8	-21 19.4	28	40	17 36	18 03	18 35	21 35 65	11 43 51			
18	89	47.2	+8 39.6	199	44.6	-21 16.4	30	45	17 31	18 00	18 34	21 19 67	11 59 49			
19	104	47.4	40.5	214	09.4	13.3	31	50	24	17 57	34	21 00 69	12 19 47			
20	119	47.5	41.4	228	34.3	10.1	32	52	22	56	35	20 50 71	28 47			
21	134	47.7	42.3	242	59.4	06.7	34	54	18	54	35	40 72	38 46			
22	149	47.8	43.2	257	24.4	-21 03.2	35	56	15	52	35	28 74	12 50 44			
23	164	48.0	44.1	271	49.6	-20 59.6	36	58	11	51	36	20 15 75	13 04 42			
24	179	48.2	+8 45.0	286	14.8	-20 55.8	38	60 S	17 07	17 49	18 37	19 59 78	13 20 40			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 39 ^m 8		Mag: -4.6 PMG: 14 ^h 57 ^m		Mag: -0.5 PMG: 21 ^h 05 ^m		Mag: -2.1 PMG: 13 ^h 33 ^m		Mag: +0.2 PMG: 0 ^h 24 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec	
h	°	°	°	°	°	°	°	°	°	
0	199	36.9	135 43.3	+25 26.3	42 53.6	+12 49.3	156 16.2	+15 40.9	353 58.8	-7 39.3
1	214	39.3	150 43.5	26.8	57 56.2	49.2	171 18.1	41.1	9 01.4	39.3
2	229	41.8	165 43.7	27.3	72 58.8	49.1	186 20.0	41.2	24 04.1	39.2
3	244	44.3	180 43.9	27.8	88 01.4	49.1	201 21.9	41.4	39 06.7	39.1
4	259	46.7	195 44.1	28.3	103 04.0	49.0	216 23.8	41.6	54 09.4	39.0
5	274	49.2	210 44.3	+25 28.8	118 06.6	+12 48.9	231 25.7	+15 41.7	69 12.0	-7 39.0
6	289	51.7	225 44.5	+25 29.3	133 09.2	+12 48.9	246 27.6	+15 41.9	84 14.7	-7 38.9
7	304	54.1	240 44.7	29.8	148 11.8	48.8	261 29.5	42.1	99 17.3	38.8
8	319	56.6	255 45.0	30.3	163 14.3	48.7	276 31.4	42.3	114 19.9	38.8
9	334	59.0	270 45.2	30.8	178 16.9	48.7	291 33.3	42.4	129 22.6	38.7
10	350	01.5	285 45.4	31.3	193 19.5	48.6	306 35.2	42.6	144 25.2	38.6
11	5	04.0	300 45.6	+25 31.8	208 22.1	+12 48.5	321 37.1	+15 42.8	159 27.9	-7 38.6
12	20	06.4	315 45.8	+25 32.3	223 24.7	+12 48.5	336 39.0	+15 42.9	174 30.5	-7 38.5
13	35	08.9	330 46.0	32.8	238 27.3	48.4	351 40.9	43.1	189 33.2	38.4
14	50	11.4	345 46.2	33.3	253 29.8	48.3	6 42.8	43.3	204 35.8	38.4
15	65	13.8	0 46.4	33.8	268 32.4	48.3	21 44.7	43.4	219 38.4	38.3
16	80	16.3	15 46.6	34.3	283 35.0	48.2	36 46.6	43.6	234 41.1	38.2
17	95	18.8	30 46.8	+25 34.8	298 37.6	+12 48.1	51 48.5	+15 43.8	249 43.7	-7 38.1
18	110	21.2	45 47.1	+25 35.3	313 40.2	+12 48.0	66 50.4	+15 43.9	264 46.4	-7 38.1
19	125	23.7	60 47.3	35.8	328 42.7	48.0	81 52.3	44.1	279 49.0	38.0
20	140	26.2	75 47.5	36.3	343 45.3	47.9	96 54.1	44.3	294 51.7	37.9
21	155	28.6	90 47.7	36.7	358 47.9	47.8	111 56.0	44.5	309 54.3	37.9
22	170	31.1	105 47.9	37.2	13 50.5	47.8	126 57.9	44.6	324 56.9	37.8
23	185	33.5	120 48.2	37.7	28 53.0	47.7	141 59.8	44.8	339 59.6	37.7
24	200	36.0	135 48.4	+25 38.2	43 55.6	+12 47.6	157 01.7	+15 45.0	355 02.2	-7 37.7
Dif	—	+2	+5	+26	-1	+19	+2	+26	+1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 00 ^m 7			Edad: 20 ^d 4 PHE { SD: 16'0 PMG: 5 ^h 07 ^m R°: 55 ^m 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	48.2	+8	45.0	286	14.8	-20	55.8	60 N	3 07	4 06	4 51	1 45	33	8 34	81	
1	194	48.3		45.9	300	40.1	63	51.9	58	20	14	4 57	30	35	8 49	78	
2	209	48.5		46.9	315	05.5	64	47.9	56	32	22	5 01	17	37	9 02	76	
3	224	48.6		47.8	329	31.0	65	43.7	54	41	28	05	1 05	39	13	74	
4	239	48.8		48.7	343	56.5	65	39.4	52	50	34	09	0 55	41	23	72	
5	254	49.0	+8	49.6	358	22.1	66	-20	50	3 58	4 39	5 13	0 46	42	9 32	71	
6	269	49.1	+8	50.5	12	47.8	67	-20	45	4 13	4 50	5 20	0 27	45	9 50	68	
7	284	49.3		51.4	27	13.6	68	25.9	40	25	4 58	26	0 11	47	10 05	66	
8	299	49.4		52.3	41	39.5	69	21.1	35	35	5 06	32	**	**	**	18	64
9	314	49.6		53.2	56	05.5	70	16.2	30	43	12	36	**	**	**	29	62
10	329	49.8		54.1	70	31.5	70	11.2	20	4 56	22	44	**	**	**	10 48	59
11	344	49.9	+8	55.0	84	57.6	71	-20	10 N	5 05	5 30	5 51	**	**	**	11 05	57
12	359	50.1	+8	55.9	99	23.8	72	-20	0	5 12	5 36	5 57	23	49	53	11 20	55
13	14	50.2		56.9	113	50.1	73	-19	10 S	18	42	6 04	35	55	36	52	
14	29	50.4		57.8	128	16.5	74	50.0	20	22	48	10	20	57	11 52	50	
15	44	50.6		58.7	142	43.0	75	44.4	30	25	53	17	23	02	61	12 11	46
16	59	50.7	+8	59.6	157	09.5	75	38.7	35	27	56	22	22	52	63	21	46
17	74	50.9	+9	00.5	171	36.1	76	-19	40	5 28	5 59	6 26	22	40	65	12 34	43
18	89	51.0	+9	01.4	186	02.9	78	-19	45	5 28	6 02	6 32	22	26	68	12 48	41
19	104	51.2		02.3	200	29.7	78	20.9	50	28	05	38	09	71	13 06	38	
20	119	51.4		03.2	214	56.6	79	14.7	52	28	07	41	22	01	73	15	36
21	134	51.5		04.1	229	23.6	80	08.5	54	28	09	44	21	52	75	24	34
22	149	51.7		05.0	243	50.7	81	-19	56	27	10	48	42	77	34	33	
23	164	51.8		05.9	258	17.8	81	-18	58	27	12	52	30	80	13 46	30	
24	179	52.0	+9	06.8	272	45.1	83	-18	60 S	5 26	6 14	6 56	21	17	83	14 00	27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 35 ^m 9		Mag: -4.6 PMG: 14 ^h 57 ^m		Mag: -0.4 PMG: 21 ^h 01 ^m		Mag: -2.1 PMG: 13 ^h 30 ^m		Mag: +0.2 PMG: 0 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	200	36.0	135	48.4	+25	38.2	43	55.6	+12	47.6	157	01.7	+15	45.0	355	02.2	-7	37.7
1	215	38.5	150	48.6		38.7	58	58.2		47.5	172	03.6		45.1	10	04.9		37.6
2	230	40.9	165	48.8		39.2	74	00.7		47.5	187	05.5		45.3	25	07.5		37.5
3	245	43.4	180	49.0		39.7	89	03.3		47.4	202	07.4		45.5	40	10.2		37.4
4	260	45.9	195	49.3		40.1	104	05.9		47.3	217	09.3		45.6	55	12.8		37.4
5	275	48.3	210	49.5	+25	40.6	119	08.4	+12	47.2	232	11.2	+15	45.8	70	15.5	-7	37.3
6	290	50.8	225	49.7	+25	41.1	134	11.0	+12	47.1	247	13.1	+15	46.0	85	18.1	-7	37.2
7	305	53.3	240	50.0		41.6	149	13.5		47.1	262	15.0		46.1	100	20.7		37.2
8	320	55.7	255	50.2		42.1	164	16.1		47.0	277	16.9		46.3	115	23.4		37.1
9	335	58.2	270	50.4		42.5	179	18.7		46.9	292	18.8		46.5	130	26.0		37.0
10	351	00.7	285	50.7		43.0	194	21.2		46.8	307	20.7		46.7	145	28.7		37.0
11	6	03.1	300	50.9	+25	43.5	209	23.8	+12	46.8	322	22.6	+15	46.8	160	31.3	-7	36.9
12	21	05.6	315	51.1	+25	44.0	224	26.3	+12	46.7	337	24.5	+15	47.0	175	34.0	-7	36.8
13	36	08.0	330	51.4		44.4	239	28.9		46.6	352	26.4		47.2	190	36.6		36.8
14	51	10.5	345	51.6		44.9	254	31.4		46.5	7	28.3		47.3	205	39.2		36.7
15	66	13.0	0	51.8		45.4	269	34.0		46.4	22	30.2		47.5	220	41.9		36.6
16	81	15.4	15	52.1		45.8	284	36.5		46.4	37	32.1		47.7	235	44.5		36.5
17	96	17.9	30	52.3	+25	46.3	299	39.1	+12	46.3	52	34.0	+15	47.8	250	47.2	-7	36.5
18	111	20.4	45	52.6	+25	46.8	314	41.6	+12	46.2	67	35.9	+15	48.0	265	49.8	-7	36.4
19	126	22.8	60	52.8		47.3	329	44.2		46.1	82	37.8		48.2	280	52.5		36.3
20	141	25.3	75	53.1		47.7	344	46.7		46.0	97	39.7		48.3	295	55.1		36.3
21	156	27.8	90	53.3		48.2	359	49.2		45.9	112	41.6		48.5	310	57.8		36.2
22	171	30.2	105	53.6		48.7	14	51.8		45.8	127	43.5		48.7	326	00.4		36.1
23	186	32.7	120	53.8		49.1	29	54.3		45.8	142	45.4		48.9	341	03.0		36.1
24	201	35.1	135	54.1	+25	49.6	44	56.9	+12	45.7	157	47.3	+15	49.0	356	05.7	-7	36.0
Dif	—		+2		+5		+26		-1		+19		+2		+26		+1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0		Edad: 21 ^d 4	PHE { 4 ^h : 57:9 12 ^h : 57:7 20 ^h : 57:4	SD: 15:8	PMG: 6 ^h 02 ^m			R°: 52 ^m	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 4	Civil								Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	
0	179	52.0	+9 06.8	272	45.1	-18 49.1	60 N	19 14	20 00	21 01	2 18 22	9 55 84			
1	194	52.2	07.7	287	12.4	83 42.4	58	08	19 51	20 47	2 05 25	10 07 81			
2	209	52.3	08.6	301	39.9	85 35.7	56	19 03	44	34	1 54 28	18 77			
3	224	52.5	09.5	316	07.4	85 28.8	54	18 59	37	24	44 30	27 75			
4	239	52.6	10.5	330	35.0	86 21.8	52	55	31	15	36 32	35 73			
5	254	52.8	+9 11.4	345	02.7	87 -18 14.8	50	18 51	19 25	20 07	1 28 33	10 43 71			
6	269	52.9	+9 12.3	359	30.5	88 -18 07.6	45	18 43	19 14	19 51	1 12 36	10 58 68			
7	284	53.1	13.2	13 58.4	89 -18 00.3	73 73	40	37	19 05	38	0 58 39	11 11 65			
8	299	53.3	14.1	28 26.3	89 -17 53.0	73 73	35	31	18 57	28	46 42	22 62			
9	314	53.4	15.0	42 54.4	91 45.6	74 74	30	26	51	20	36 44	31 60			
10	329	53.6	15.9	57 22.5	91 38.0	76 76	20	18	40	19 06	19 47	11 47 57			
11	344	53.7	+9 16.8	71 50.8	93 -17 30.4	76 76	10 N	18 10	18 32	18 57	0 03 50	12 02 53			
12	359	53.9	+9 17.7	86 19.1	93 -17 22.7	77 77	0	18 04	18 25	18 49	** ** *	12 15 50			
13	14 54.0	18.6	100 47.5	94 14.9	94 78	78	10 S	17 57	18	43	** ** *	28 48			
14	29 54.2	19.5	115 16.0	95 -17 07.0	79 79	79	20	50	12	38	** ** *	42 44			
15	44 54.4	20.4	129 44.6	96 -16 59.1	79 79	79	30	42	07	34	** ** *	12 57 42			
16	59 54.5	21.3	144 13.2	96 51.0	81 81	81	35	38	03	33	23 55 61	13 07 39			
17	74 54.7	+9 22.2	158 42.0	98 -16 42.9	81 81	81	40	17 33	18 00	18 32	23 45 64	13 17 37			
18	89 54.8	+9 23.1	173 10.9	99 -16 34.7	82 82	82	45	17 27	17 57	18 31	23 34 67	13 29 34			
19	104 55.0	24.0	187 39.8	99 26.4	83 83	83	50	20	53	30	20 71	44 30			
20	119 55.1	24.9	202 08.8	100 18.0	84 84	84	52	17	51	30	14 72	51 28			
21	134 55.3	25.8	216 37.9	101 09.6	84 84	84	54	14	50	30	23 07 74	13 58 27			
22	149 55.4	26.7	231 07.1	102 -16 01.0	86 86	86	56	10	48	31	22 59 77	14 07 24			
23	164 55.6	27.6	245 36.4	103 -15 52.4	86 86	86	58	06	46	31	50 79	16 22			
24	179 55.7	+9 28.5	260 05.8	104 -15 43.8	86 86	86	60 S	17 01	17 43	18 31	22 40 82	14 27 19			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 10 ^h 31 ^m 9	Mag: -4.6 PMG: 14 ^h 56 ^m	Mag: -0.4 PMG: 20 ^h 57 ^m	Mag: -2.0 PMG: 13 ^h 27 ^m	Mag: +0.2 PMG: 0 ^h 16 ^m						
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄						
h	°	'	°	'	°	'	°	'	°	'	
0	201	35.1	135	54.1	+25 49.6	44 56.9	+12 45.7	157 47.3	+15 49.0	356 05.7	-7 36.0
1	216	37.6	150	54.3	50.1	59 59.4	45.6	172 49.2	49.2	11 08.3	35.9
2	231	40.1	165	54.6	50.5	75 01.9	45.5	187 51.1	49.4	26 11.0	35.9
3	246	42.5	180	54.8	51.0	90 04.5	45.4	202 53.0	49.5	41 13.6	35.8
4	261	45.0	195	55.1	51.4	105 07.0	45.3	217 54.9	49.7	56 16.3	35.7
5	276	47.5	210	55.3	+25 51.9	120 09.5	+12 45.2	232 56.7	+15 49.9	71 18.9	-7 35.6
6	291	49.9	225	55.6	+25 52.4	135 12.1	+12 45.2	247 58.6	+15 50.0	86 21.6	-7 35.6
7	306	52.4	240	55.8	52.8	150 14.6	45.1	263 00.5	50.2	101 24.2	35.5
8	321	54.9	255	56.1	53.3	165 17.1	45.0	278 02.4	50.4	116 26.8	35.4
9	336	57.3	270	56.4	53.7	180 19.7	44.9	293 04.3	50.5	131 29.5	35.4
10	351	59.8	285	56.6	54.2	195 22.2	44.8	308 06.2	50.7	146 32.1	35.3
11	7 02.3	300	56.9	+25 54.6	210 24.7	+12 44.7	323 08.1	+15 50.9	161 34.8	-7 35.2	
12	22 04.7	315	57.1	+25 55.1	225 27.2	+12 44.6	338 10.0	+15 51.1	176 37.4	-7 35.2	
13	37 07.2	330	57.4	55.5	240 29.8	44.5	353 11.9	51.2	191 40.1	35.1	
14	52 09.6	345	57.7	56.0	255 32.3	44.4	8 13.8	51.4	206 42.7	35.0	
15	67 12.1	0 57.9	56.4	270 34.8	44.3	23 15.7	51.6	221 45.4	51.7	226 48.0	34.9
16	82 14.6	15 58.2	56.9	285 37.3	44.2	38 17.6	51.7	236 48.0	51.9	251 50.6	-7 34.8
17	97 17.0	30 58.5	+25 57.3	300 39.8	+12 44.2	53 19.5	+15 51.9	251 50.6	52.1	266 53.3	-7 34.7
18	112 19.5	45 58.8	+25 57.8	315 42.3	+12 44.1	68 21.4	+15 52.1	266 53.3	52.2	281 55.9	34.7
19	127 22.0	60 59.0	58.2	330 44.9	44.0	83 23.3	52.2	281 55.9	52.4	296 58.6	34.6
20	142 24.4	75 59.3	58.7	345 47.4	43.9	98 25.2	52.4	296 58.6	52.6	312 01.2	34.5
21	157 26.9	90 59.6	59.1	0 49.9	43.8	113 27.1	52.6	312 01.2	52.7	327 03.9	34.5
22	172 29.4	105 59.9	+25 59.6	15 52.4	43.7	128 29.0	52.7	327 03.9	52.9	342 06.5	34.4
23	187 31.8	121 00.1	+26 00.0	30 54.9	43.6	143 30.9	52.9	342 06.5	53.1	357 09.2	-7 34.3
24	202 34.3	136 00.4	+26 00.5	45 57.4	+12 43.5	158 32.8	+15 53.1	357 09.2			
Dif	—	+3	+5	+25	-1	+19	+2	+26			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 12 ^h 00 ^m 2			Edad: 22 ^d 4 PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'6 PMG: 6 ^h 54 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	55.7	+9	28.5	260	05.8	-15	43.8	60 N	2 59	3 59	4 45	2 40	16	11 19 82
1	194	55.9		29.4	274	35.2 ¹⁰⁴		35.0 ⁸⁸	58	3 13	4 08	51	30	19	28 79
2	209	56.1		30.3	289	04.7 ¹⁰⁵		26.2 ⁸⁸	56	25	16	4 56	22	21	35 77
3	224	56.2		31.2	303	34.3 ¹⁰⁶		17.3 ⁸⁹	54	36	23	5 01	14	24	42 70
4	239	56.4		32.1	318	04.0 ¹⁰⁷	-15	08.3 ⁹⁰	52	45	29	05	08	25	48 72
5	254	56.5	+9	33.0	332	33.8 ¹⁰⁸	-14	59.3 ⁹⁰	50	3 53	4 35	5 09	2 01	28	11 54 70
6	269	56.7	+9	33.9	347	03.7 ¹⁰⁹	-14	50.2 ⁹¹	45	4 09	4 46	5 17	1 48	31	12 06 66
7	284	56.8		34.8	1	33.6 ¹⁰⁹		41.0 ⁹²	40	22	4 55	23	37	34	16 63
8	299	57.0		35.7	16	03.6 ¹¹⁰		31.8 ⁹²	35	32	5 03	29	28	37	24 61
9	314	57.1		36.6	30	33.7 ¹¹¹		22.5 ⁹³	30	41	10	34	20	39	31 59
10	329	57.3		37.5	45	03.9 ¹¹²		13.2 ⁹³	20	4 54	20	43	1 06	42	44 54
11	344	57.4	+9	38.4	59	34.2 ¹¹³	-14	03.8 ⁹⁴	10 N	5 04	5 29	5 50	0 53	46	12 55 51
12	359	57.6	+9	39.3	74	04.5 ¹¹³	-13	54.3 ⁹⁵	0	5 12	5 36	5 57	0 42	48	13 05 48
13	14	57.7		40.2	88	34.9 ¹¹⁴		44.7 ⁹⁶	10 S	18	42	6 04	30	52	16 44
14	29	57.9		41.0	103	05.4 ¹¹⁵		35.1 ⁹⁶	20	23	48	11	17	56	26 41
15	44	58.0		41.9	117	36.0 ¹¹⁶		25.5 ⁹⁶	30	27	54	19	0 03	59	39 36
16	59	58.2		42.8	132	06.7 ¹¹⁷		15.8 ⁹⁷	35	28	5 58	23	** ** *	**	46 34
17	74	58.4	+9	43.7	146	37.4 ¹¹⁷	-13	06.0 ⁹⁸	40	5 29	6 01	6 28	** ** *	**	13 54 32
18	89	58.5	+9	44.6	161	08.2 ¹¹⁸	-12	56.2 ⁹⁸	45	5 30	6 04	6 34	** ** *	**	14 03 29
19	104	58.7		45.5	175	39.1 ¹¹⁹		46.3 ⁹⁹	50	31	08	41	** ** *	**	14 25
20	119	58.8		46.4	190	10.0 ¹¹⁹		36.4 ⁹⁹	52	31	10	44	** ** *	**	19 24
21	134	59.0		47.3	204	41.0 ¹²⁰		26.4 ¹⁰⁰	54	31	12	48	** ** *	**	25 22
22	149	59.1		48.2	219	12.1 ¹²¹		16.4 ¹⁰⁰	56	31	14	52	** ** *	**	31 20
23	164	59.3		49.1	233	43.3 ¹²²	-12	06.3 ¹⁰¹	58	31	16	6 56	** ** *	**	38 17
24	179	59.4	+9	50.0	248	14.5 ¹²²	-11	56.2 ¹⁰¹	60 S	5 30	6 19	7 01	** ** *	**	14 46 14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 28 ^m 0		Mag: -4.6 PMG: 14 ^h 56 ^m		Mag: -0.4 PMG: 20 ^h 53 ^m		Mag: -2.0 PMG: 13 ^h 24 ^m		Mag: +0.2 PMG: 0 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	202	34.3	136	00.4	+26	00.5	45	57.4	+12	43.5	158	32.8	+15	53.1	357	09.2	-7	34.3
1	217	36.8	151	00.7		00.9	60	59.9		43.4	173	34.6		53.2	12	11.8		34.3
2	232	39.2	166	01.0		01.3	76	02.4		43.3	188	36.5		53.4	27	14.4		34.2
3	247	41.7	181	01.3		01.8	91	04.9		43.2	203	38.4		53.6	42	17.1		34.1
4	262	44.1	196	01.5		02.2	106	07.4		43.1	218	40.3		53.8	57	19.7		34.0
5	277	46.6	211	01.8	+26	02.7	121	09.9	+12	43.0	233	42.2	+15	53.9	72	22.4	-7	34.0
6	292	49.1	226	02.1	+26	03.1	136	12.4	+12	42.9	248	44.1	+15	54.1	87	25.0	-7	33.9
7	307	51.5	241	02.4		03.5	151	15.0		42.8	263	46.0		54.3	102	27.7		33.8
8	322	54.0	256	02.7		04.0	166	17.4		42.7	278	47.9		54.4	117	30.3		33.8
9	337	56.5	271	03.0		04.4	181	19.9		42.6	293	49.8		54.6	132	33.0		33.7
10	352	58.9	286	03.3		04.8	196	22.4		42.5	308	51.7		54.8	147	35.6		33.6
11	8	01.4	301	03.6	+26	05.3	211	24.9	+12	42.4	323	53.6	+15	54.9	162	38.2	-7	33.6
12	23	03.9	316	03.9	+26	05.7	226	27.4	+12	42.3	338	55.5	+15	55.1	177	40.9	-7	33.5
13	38	06.3	331	04.2		06.1	241	29.9		42.2	353	57.4		55.3	192	43.5		33.4
14	53	08.8	346	04.5		06.5	256	32.4		42.1	8	59.3		55.4	207	46.2		33.4
15	68	11.3	1	04.8		07.0	271	34.9		42.0	24	01.2		55.6	222	48.8		33.3
16	83	13.7	16	05.1		07.4	286	37.4		41.9	39	03.0		55.8	237	51.5		33.2
17	98	16.2	31	05.4	+26	07.8	301	39.9	+12	41.8	54	04.9	+15	55.9	252	54.1	-7	33.1
18	113	18.6	46	05.7	+26	08.3	316	42.4	+12	41.7	69	06.8	+15	56.1	267	56.8	-7	33.1
19	128	21.1	61	06.0		08.7	331	44.9		41.6	84	08.7		56.3	282	59.4		33.0
20	143	23.6	76	06.3		09.1	346	47.3		41.5	99	10.6		56.5	298	02.0		32.9
21	158	26.0	91	06.6		09.5	1	49.8		41.4	114	12.5		56.6	313	04.7		32.9
22	173	28.5	106	06.9		10.0	16	52.3		41.3	129	14.4		56.8	328	07.3		32.8
23	188	31.0	121	07.2		10.4	31	54.8		41.1	144	16.3		57.0	343	10.0		32.7
24	203	33.4	136	07.5	+26	10.8	46	57.3	+12	41.0	159	18.2	+15	57.1	358	12.6	-7	32.7
Dif	—		+3	+4		+4	+25	-1		+19	+2		+26			+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9			Edad: 23 ^d 4	PHE {	4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0			Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 59 ^m 9								SD: 15°4			PMG: 7 ^h 42 ^m			R°: 45 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	179	59.4	+9 50.0	248	14.5	-11 56.2		60 N	19 19	20 06	21 08	2 56 12		12 41 80				
1	194	59.6	50.9	262	45.8 ¹²³	46.0 ¹⁰²		58	13	19 56	20 53	49 15		47 77				
2	209	59.7	51.8	277	17.2 ¹²⁴	35.8 ¹⁰²		56	08	48	40	43 18		52 74				
3	224	59.9	52.7	291	48.6 ¹²⁴	25.5 ¹⁰³		54	19 03	41	29	38 20		12 56 72				
4	240	00.0	53.6	306	20.1 ¹²⁵	15.2 ¹⁰³		52	18 58	34	19	33 22		13 00 71				
5	255	00.2	+9 54.4	320	51.7 ¹²⁶	-11 04.8 ¹⁰⁴		50	18 54	19 29	20 11	2 29 23		13 04 69				
6	270	00.3	+9 55.3	335	23.3 ¹²⁶	-10 54.5 ¹⁰³		45	18 46	19 17	19 54	2 19 27		13 12 65				
7	285	00.5	56.2	349	55.0 ¹²⁷	44.0 ¹⁰⁵		40	39	19 07	41	11 31		19 61				
8	300	00.6	57.1	4	26.8 ¹²⁸	33.5 ¹⁰⁵		35	33	18 59	30	2 05 32		25 58				
9	315	00.8	58.0	18	58.6 ¹²⁸	23.0 ¹⁰⁵		30	27	52	21	1 59 35		30 56				
10	330	00.9	58.9	33	30.5 ¹²⁹	12.5 ¹⁰⁵		20	18	41	19 07	48 39		38 52				
11	345	01.1	+9 59.8	48	02.4 ¹²⁹	-10 01.9 ¹⁰⁶		10 N	18 11	18 32	18 57	1 39 43		13 46 48				
12	0	01.2	+10 00.7	62	34.5 ¹³¹	-9 51.3 ¹⁰⁶		0	18 03	18 24	18 49	1 30 46		13 53 45				
13	15	01.4	01.6	77	06.5 ¹³⁰	40.6 ¹⁰⁷		10 S	17 56	17	42	22 49		14 00 41				
14	30	01.5	02.5	91	38.7 ¹³²	29.9 ¹⁰⁷		20	49	11	37	13 52		07 38				
15	45	01.7	03.3	106	10.9 ¹³²	19.2 ¹⁰⁷		30	40	04	32	1 02 57		15 34				
16	60	01.8	04.2	120	43.1 ¹³²	-9 08.4 ¹⁰⁸		35	35	18 01	30	0 56 59		20 32				
17	75	01.9	+10 05.1	135	15.4 ¹³³	-8 57.6 ¹⁰⁸		40	17 30	17 57	18 29	0 49 62		14 26 29				
18	90	02.1	+10 06.0	149	47.8 ¹³⁴	-8 46.8 ¹⁰⁸		45	17 24	17 53	18 28	0 41 65		14 32 26				
19	105	02.2	06.9	164	20.2 ¹³⁴	35.9 ¹⁰⁹		50	16	49	27	31 69		39 23				
20	120	02.4	07.8	178	52.7 ¹³⁵	25.0 ¹⁰⁹		52	13	47	26	26 71		43 20				
21	135	02.5	08.7	193	25.2 ¹³⁵	14.1 ¹⁰⁹		54	09	45	26	21 73		47 18				
22	150	02.7	09.6	207	57.8 ¹³⁶	-8 03.2 ¹⁰⁹		56	05	43	26	16 75		51 16				
23	165	02.8	10.4	222	30.4 ¹³⁶	-7 52.2 ¹¹⁰		58	17 00	40	26	09 78		14 55 15				
24	180	03.0	+10 11.3	237	03.1 ¹³⁷	-7 41.2 ¹¹⁰		60 S	16 55	17 38	18 26	0 02 81		15 00 12				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 24 ^m 1		Mag: -4.6 PMG: 14 ^h 55 ^m			Mag: -0.4 PMG: 20 ^h 49 ^m			Mag: -2.0 PMG: 13 ^h 21 ^m			Mag: +0.2 PMG: 0 ^h 07 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	203	33.4	136 07.5	+26 10.8	46 57.3	+12 41.0	159 18.2	+15 57.1	358 12.6	-7 32.7								
1	218	35.9	151 07.8	11.2	61 59.8	40.9	174 20.1	57.3	13 15.3	32.6								
2	233	38.4	166 08.1	11.6	77 02.2	40.8	189 22.0	57.5	28 17.9	32.5								
3	248	40.8	181 08.4	12.0	92 04.7	40.7	204 23.9	57.6	43 20.6	32.4								
4	263	43.3	196 08.8	12.5	107 07.2	40.6	219 25.8	57.8	58 23.2	32.4								
5	278	45.7	211 09.1	+26 12.9	122 09.7	+12 40.5	234 27.7	+15 58.0	73 25.8	-7 32.3								
6	293	48.2	226 09.4	+26 13.3	137 12.1	+12 40.4	249 29.5	+15 58.1	88 28.5	-7 32.2								
7	308	50.7	241 09.7	13.7	152 14.6	40.3	264 31.4	58.3	103 31.1	32.2								
8	323	53.1	256 10.0	14.1	167 17.1	40.2	279 33.3	58.5	118 33.8	32.1								
9	338	55.6	271 10.4	14.5	182 19.5	40.1	294 35.2	58.6	133 36.4	32.0								
10	353	58.1	286 10.7	14.9	197 22.0	39.9	309 37.1	58.8	148 39.1	32.0								
11	9	00.5	301 11.0	+26 15.4	212 24.5	+12 39.8	324 39.0	+15 59.0	163 41.7	-7 31.9								
12	24	03.0	316 11.3	+26 15.8	227 26.9	+12 39.7	339 40.9	+15 59.1	178 44.4	-7 31.8								
13	39	05.5	331 11.7	16.2	242 29.4	39.6	354 42.8	59.3	193 47.0	31.8								
14	54	07.9	346 12.0	16.6	257 31.9	39.5	9 44.7	59.5	208 49.6	31.7								
15	69	10.4	1 12.3	17.0	272 34.3	39.4	24 46.6	59.7	223 52.3	31.6								
16	84	12.9	16 12.7	17.4	287 36.8	39.3	39 48.5	+15 59.8	238 54.9	31.5								
17	99	15.3	31 13.0	+26 17.8	302 39.2	+12 39.2	54 50.3	+16 00.0	253 57.6	-7 31.5								
18	114	17.8	46 13.3	+26 18.2	317 41.7	+12 39.0	69 52.2	+16 00.2	269 00.2	-7 31.4								
19	129	20.2	61 13.7	18.6	332 44.2	38.9	84 54.1	00.3	284 02.9	31.3								
20	144	22.7	76 14.0	19.0	347 46.6	38.8	99 56.0	00.5	299 05.5	31.3								
21	159	25.2	91 14.3	19.4	2 49.1	38.7	114 57.9	00.7	314 08.2	31.2								
22	174	27.6	106 14.7	19.8	17 51.5	38.6	129 59.8	00.8	329 10.8	31.1								
23	189	30.1	121 15.0	20.2	32 54.0	38.5	145 01.7	01.0	344 13.4	31.1								
24	204	32.6	136 15.4	+26 20.6	47 56.4	+12 38.3	160 03.6	+16 01.2	359 16.1	-7 31.0								
Dif	—		+3		+4		+25		-1		+19		+2		+26		+1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 59 ^m 7				Edad: 24 ^d 4 PHE SD: 15°2 PMG: 8 ^h 27 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	03.0	+10	11.3	237	03.1	-7	41.2	60 N	2	50	3	53	4	40	3	08	11
1	195	03.1		12.2	251	35.8 ¹³⁷		30.2 ¹¹⁰	58	3	06	4	02		46		04	14
2	210	03.3		13.1	266	08.6 ¹³⁸		19.1 ¹¹¹	56		19		11		51		3	01
3	225	03.4		14.0	280	41.4 ¹³⁸	-7	08.1 ¹¹⁰	54		30		18		4	56	2	58
4	240	03.6		14.9	295	14.3 ¹³⁹	-6	57.0 ¹¹¹	52		40		24		5	00		55
5	255	03.7	+10	15.7	309	47.2 ¹³⁹	-6	45.9 ¹¹¹	50	3	48	4	30	5	04	2	52	21
6	270	03.9	+10	16.6	324	20.2 ¹⁴⁰	-6	34.7 ¹¹²	45	4	05	4	42	5	13	2	46	25
7	285	04.0		17.5	338	53.2 ¹⁴⁰		23.6 ¹¹¹	40		19		4	52	20		42	27
8	300	04.1		18.4	353	26.3 ¹⁴¹		12.4 ¹¹²	35		29		5	00	26		37	31
9	315	04.3		19.3	7	59.4 ¹⁴¹	-6	01.2 ¹¹²	30		38		07		32		34	33
10	330	04.4		20.2	22	32.5 ¹⁴¹	-5	50.0 ¹¹²	20	4	52		19		41		27	37
11	345	04.6	+10	21.0	37	05.7 ¹⁴²	-5	38.8 ¹¹²	10 N	5	03	5	28	5	49	2	22	40
12	0	04.7	+10	21.9	51	39.0 ¹⁴³	-5	27.5 ¹¹³	0	5	11	5	35	5	56	2	16	44
13	15	04.9		22.8	66	12.2 ¹⁴²		16.3 ¹¹²	10 S		18		42	6	04		11	47
14	30	05.0		23.7	80	45.5 ¹⁴³	-5	05.0 ¹¹³	20		23		49		11	2	05	51
15	45	05.2		24.6	95	18.9 ¹⁴⁴	-4	53.7 ¹¹³	30		28		56		20	1	59	55
16	60	05.3		25.5	109	52.3 ¹⁴⁴		42.4 ¹¹³	35		30	5	59		25		55	58
17	75	05.4	+10	26.3	124	25.7 ¹⁴⁴	-4	31.1 ¹¹³	40	5	31	6	03	6	30	1	51	60
18	90	05.6	+10	27.2	138	59.1 ¹⁴⁴	-4	19.8 ¹¹³	45	5	33	6	07	6	37	1	46	64
19	105	05.7		28.1	153	32.6 ¹⁴⁵	-4	08.5 ¹¹³	50		34		11		44		40	67
20	120	05.9		29.0	168	06.1 ¹⁴⁵	-3	57.2 ¹¹³	52		34		13		48		37	69
21	135	06.0		29.9	182	39.7 ¹⁴⁶		45.8 ¹¹⁴	54		34		16		52		34	71
22	150	06.2		30.7	197	13.3 ¹⁴⁶		34.5 ¹¹³	56		35		18	6	56		31	73
23	165	06.3		31.6	211	46.9 ¹⁴⁶		23.1 ¹¹⁴	58		35		20	7	01		27	76
24	180	06.4	+10	32.5	226	20.6 ¹⁴⁷	-3	11.7 ¹¹⁴	60 S	5	35	6	23	7	06	1	23	79

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 20 ^m 1			Mag: -4.7 PMG: 14 ^h 55 ^m			Mag: -0.4 PMG: 20 ^h 45 ^m			Mag: -2.0 PMG: 13 ^h 18 ^m			Mag: +0.2 PMG: 0 ^h 03 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	204	32.6	136	15.4	+26	20.6	47	56.4	+12	38.3	160	03.6	+16	01.2	359	16.1		
1	219	35.0	151	15.7		21.0	62	58.9		38.2	175	05.5		01.3	14	18.7		
2	234	37.5	166	16.1		21.4	78	01.3		38.1	190	07.4		01.5	29	21.4		
3	249	40.0	181	16.4		21.8	93	03.8		38.0	205	09.3		01.7	44	24.0		
4	264	42.4	196	16.8		22.2	108	06.2		37.9	220	11.1		01.8	59	26.7		
5	279	44.9	211	17.1	+26	22.6	123	08.7	+12	37.7	235	13.0	+16	02.0	74	29.3		
6	294	47.3	226	17.5	+26	23.0	138	11.1	+12	37.6	250	14.9	+16	02.2	89	32.0		
7	309	49.8	241	17.8		23.4	153	13.5		37.5	265	16.8		02.3	104	34.6		
8	324	52.3	256	18.2		23.8	168	16.0		37.4	280	18.7		02.5	119	37.3		
9	339	54.7	271	18.5		24.2	183	18.4		37.3	295	20.6		02.7	134	39.9		
10	354	57.2	286	18.9		24.5	198	20.9		37.1	310	22.5		02.8	149	42.5		
11	9	59.7	301	19.2	+26	24.9	213	23.3	+12	37.0	325	24.4	+16	03.0	164	45.2		
12	25	02.1	316	19.6	+26	25.3	228	25.7	+12	36.9	340	26.3	+16	03.2	179	47.8		
13	40	04.6	331	20.0		25.7	243	28.2		36.8	355	28.2		03.4	194	50.5		
14	55	07.1	346	20.3		26.1	258	30.6		36.6	10	30.0		03.5	209	53.1		
15	70	09.5	1	20.7		26.5	273	33.0		36.5	25	31.9		03.7	224	55.8		
16	85	12.0	16	21.1		26.9	288	35.5		36.4	40	33.8		03.9	239	58.4		
17	100	14.5	31	21.4	+26	27.2	303	37.9	+12	36.3	55	35.7	+16	04.0	255	01.1		
18	115	16.9	46	21.8	+26	27.6	318	40.3	+12	36.1	70	37.6	+16	04.2	270	03.7		
19	130	19.4	61	22.2		28.0	333	42.8		36.0	85	39.5		04.4	285	06.3		
20	145	21.8	76	22.5		28.4	348	45.2		35.9	100	41.4		04.5	300	09.0		
21	160	24.3	91	22.9		28.8	3	47.6		35.8	115	43.3		04.7	315	11.6		
22	175	26.8	106	23.3		29.1	18	50.0		35.6	130	45.2		04.9	330	14.3		
23	190	29.2	121	23.7		29.5	33	52.5		35.5	145	47.0		05.0	345	16.9		
24	205	31.7	136	24.0	+26	29.9	48	54.9	+12	35.4	160	48.9	+16	05.2	0	19.6		
Dif	—		+4		+4		+24		-1		+19		+2		-8974		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15/9 PMG: 11 ^h 59 ^m 5			Edad: 25 ^d 4 PHE { SD: 15/1 PMG: 9 ^h 11 ^m R°: 42 ^m 4 ^h : 55/2 12 ^h : 55/1 20 ^h : 54/9														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	180	06.4	+10	32.5	226	20.6	-3	11.7	60 N	19 24	20 11	21 16	3 19 10	15 18 77				
1	195	06.6		33.4	240	54.3 ¹⁴⁷	-3	00.4 ¹¹³	58	17	20 01	20 59	18 12	19 74				
2	210	06.7		34.3	255	28.0 ¹⁴⁷	-2	49.0 ¹¹⁴	56	12	19 53	45	16 15	19 71				
3	225	06.9		35.1	270	01.7 ¹⁴⁷		37.6 ¹¹⁴	54	06	45	34	15 17	19 69				
4	240	07.0		36.0	284	35.5 ¹⁴⁸		26.2 ¹¹⁴	52	19 02	38	24	14 19	19 68				
5	255	07.2	+10	36.9	299	09.3 ¹⁴⁸	-2	14.8 ¹¹⁴	50	18 57	19 32	20 15	3 13 20	15 19 66				
6	270	07.3	+10	37.8	313	43.1 ¹⁴⁸	-2	03.4 ¹¹⁴	45	18 48	19 19	19 57	3 11 24	15 20 62				
7	285	07.4		38.6	328	16.9 ¹⁴⁸	-1	52.0 ¹¹⁴	40	41	09	43	09 27	20 59				
8	300	07.6		39.5	342	50.8 ¹⁴⁹		40.6 ¹¹⁴	35	34	19 01	32	08 29	20 56				
9	315	07.7		40.4	357	24.7 ¹⁴⁹		29.3 ¹¹³	30	29	18 53	23	07 31	20 54				
10	330	07.9		41.3	11	58.6 ¹⁴⁹		17.9 ¹¹⁴	20	19	42	19 08	04 36	21 49				
11	345	08.0	+10	42.1	26	32.5 ¹⁴⁹	-1	06.5 ¹¹⁴	10 N	18 11	18 32	18 57	3 02 40	15 21 46				
12	0	08.1	+10	43.0	41	06.5 ¹⁵⁰	-0	55.1 ¹¹⁴	0	18 03	18 24	18 48	3 00 43	15 21 43				
13	15	08.3		43.9	55	40.5 ¹⁵⁰		43.7 ¹¹⁴	10 S	17 55	16	41	2 58 47	21 39				
14	30	08.4		44.8	70	14.5 ¹⁵⁰		32.3 ¹¹⁴	20	47	09	35	56 50	21 36				
15	45	08.6		45.6	84	48.5 ¹⁵⁰		21.0 ¹¹³	30	38	18 02	30	54 54	22 31				
16	60	08.7		46.5	99	22.5 ¹⁵⁰	-0	09.6 ¹¹⁴	35	33	17 59	28	53 56	22 29				
17	75	08.8	+10	47.4	113	56.6 ¹⁵¹	+0	01.8 ¹¹⁴	40	17 27	17 55	18 26	2 51 59	15 22 27				
18	90	09.0	+10	48.3	128	30.6 ¹⁵⁰	+0	13.1 ¹¹³	45	17 20	17 50	18 24	2 50 62	15 22 24				
19	105	09.1		49.1	143	04.7 ¹⁵¹		24.5 ¹¹⁴	50	12	45	23	47 67	22 20				
20	120	09.3		50.0	157	38.8 ¹⁵¹		35.8 ¹¹³	52	09	43	22	46 68	22 19				
21	135	09.4		50.9	172	12.9 ¹⁵¹		47.2 ¹¹⁴	54	05	41	22	45 70	22 17				
22	150	09.5		51.7	186	47.0 ¹⁵¹	+0	58.5 ¹¹³	56	17 00	38	21	44 72	22 15				
23	165	09.7		52.6	201	21.1 ¹⁵¹	+1	09.8 ¹¹³	58	16 55	35	21	43 74	22 13				
24	180	09.8	+10	53.5	215	55.3 ¹⁵²	+1	21.1 ¹¹³	60 S	16 49	17 32	18 21	2 42 76	15 23 10				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 16 ^m 2		Mag: -4.7 PMG: 14 ^h 54 ^m				Mag: -0.3 PMG: 20 ^h 41 ^m				Mag: -2.0 PMG: 13 ^h 15 ^m				Mag: +0.2 PMG: 23 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	31.7	136	24.0	+26	29.9	48	54.9	+12	35.4	160	48.9	+16	05.2	0	19.6	-7	29.3
1	220	34.2	151	24.4		30.3	63	57.3		35.3	175	50.8		05.4	15	22.2		29.3
2	235	36.6	166	24.8		30.7	78	59.7		35.1	190	52.7		05.5	30	24.9		29.2
3	250	39.1	181	25.2		31.0	94	02.1		35.0	205	54.6		05.7	45	27.5		29.1
4	265	41.6	196	25.6		31.4	109	04.6		34.9	220	56.5		05.9	60	30.1		29.1
5	280	44.0	211	25.9	+26	31.8	124	07.0	+12	34.7	235	58.4	+16	06.0	75	32.8	-7	29.0
6	295	46.5	226	26.3	+26	32.1	139	09.4	+12	34.6	251	00.3	+16	06.2	90	35.4	-7	28.9
7	310	49.0	241	26.7		32.5	154	11.8		34.5	266	02.2		06.4	105	38.1		28.9
8	325	51.4	256	27.1		32.9	169	14.2		34.3	281	04.0		06.5	120	40.7		28.8
9	340	53.9	271	27.5		33.3	184	16.6		34.2	296	05.9		06.7	135	43.4		28.7
10	355	56.3	286	27.9		33.6	199	19.0		34.1	311	07.8		06.9	150	46.0		28.7
11	10	58.8	301	28.3	+26	34.0	214	21.4	+12	33.9	326	09.7	+16	07.0	165	48.7	-7	28.6
12	26	01.3	316	28.7	+26	34.4	229	23.8	+12	33.8	341	11.6	+16	07.2	180	51.3	-7	28.5
13	41	03.7	331	29.1		34.7	244	26.3		33.7	356	13.5		07.4	195	53.9		28.4
14	56	06.2	346	29.5		35.1	259	28.7		33.5	11	15.4		07.5	210	56.6		28.4
15	71	08.7	1	29.9		35.4	274	31.1		33.4	26	17.3		07.7	225	59.2		28.3
16	86	11.1	16	30.3		35.8	289	33.5		33.3	41	19.1		07.9	241	01.9		28.2
17	101	13.6	31	30.7	+26	36.2	304	35.9	+12	33.1	56	21.0	+16	08.0	256	04.5	-7	28.2
18	116	16.1	46	31.1	+26	36.5	319	38.3	+12	33.0	71	22.9	+16	08.2	271	07.2	-7	28.1
19	131	18.5	61	31.5		36.9	334	40.7		32.9	86	24.8		08.4	286	09.8		28.0
20	146	21.0	76	31.9		37.2	349	43.1		32.7	101	26.7		08.5	301	12.5		28.0
21	161	23.4	91	32.3		37.6	4	45.5		32.6	116	28.6		08.7	316	15.1		27.9
22	176	25.9	106	32.7		38.0	19	47.9		32.5	131	30.5		08.9	331	17.8		27.8
23	191	28.4	121	33.1		38.3	34	50.2		32.3	146	32.4		09.1	346	20.4		27.8
24	206	30.8	136	33.6	+26	38.7	49	52.6	+12	32.2	161	34.2	+16	09.2	1	23.0	-7	27.7
Dif	—		+4		+4		+24		-1		+19		+2		+26		+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 2				Edad: 26 ^d 4 PHE { SD: 14'9 PMG: 9 ^h 53 ^m R°: 43 ^m 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	09.8	+10	53.5	215	55.3	+1	21.1	60 N	2	42	3	46	4	34	3	29	11
1	195	10.0		54.4	230	29.4 ¹⁵¹		32.4 ¹¹³	58	2	59	3	57		40	30	13	33
2	210	10.1		55.2	245	03.6 ¹⁵²		43.7 ¹¹³	56	3	13	4	05		46	31	15	30
3	225	10.2		56.1	259	37.8 ¹⁵²	+1	54.9 ¹¹²	54		24		13		51	32	17	28
4	240	10.4		57.0	274	11.9 ¹⁵¹	+2	06.2 ¹¹³	52		34		20		56	33	18	27
5	255	10.5	+10	57.8	288	46.1 ¹⁵²	+2	17.4 ¹¹²	50	3	43	4	26	5	00	3	33	21
6	270	10.6	+10	58.7	303	20.3 ¹⁵²	+2	28.6 ¹¹²	45	4	01	4	39	5	10	3	35	24
7	285	10.8	+10	59.6	317	54.5 ¹⁵²		39.8 ¹¹²	40		15		49		17	36	27	19
8	300	10.9	+11	00.4	332	28.7 ¹⁵²	+2	51.0 ¹¹²	35		26	4	58	24		37	30	16
9	315	11.1		01.3	347	02.9 ¹⁵²	+3	02.2 ¹¹²	30		36	5	05	30		38	32	14
10	330	11.2		02.2	1	37.2 ¹⁵³		13.3 ¹¹¹	20	4	50		17	39		40	36	10
11	345	11.3	+11	03.1	16	11.4 ¹⁵²	+3	24.5 ¹¹²	10 N	5	02	5	27	5	48	3	42	39
12	0	11.5	+11	03.9	30	45.6 ¹⁵²	+3	35.6 ¹¹¹	0	5	10	5	35	5	56	3	43	43
13	15	11.6		04.8	45	19.8 ¹⁵²		46.7 ¹¹¹	10 S		18		42	6	04	45	45	16
14	30	11.7		05.7	59	54.0 ¹⁵²	+3	57.8 ¹¹¹	20		24		49	12		46	50	15
15	45	11.9		06.5	74	28.3 ¹⁵³	+4	08.8 ¹¹⁰	30		29	5	57	21		48	53	53
16	60	12.0		07.4	89	02.5 ¹⁵²		19.8 ¹¹⁰	35		31	6	01	26		49	56	51
17	75	12.1	+11	08.3	103	36.7 ¹⁵²	+4	30.9 ¹¹¹	40	5	33	6	05	6	32	3	50	59
18	90	12.3	+11	09.1	118	10.9 ¹⁵²	+4	41.8 ¹⁰⁹	45	5	35	6	09	6	39	3	52	61
19	105	12.4		10.0	132	45.1 ¹⁵²	+4	52.8 ¹¹⁰	50		37		14	47		54	65	42
20	120	12.6		10.9	147	19.3 ¹⁵²	+5	03.7 ¹⁰⁹	52		37		17	51		54	67	41
21	135	12.7		11.7	161	53.5 ¹⁵²		14.6 ¹⁰⁹	54		38		19	6	55	55	69	39
22	150	12.8		12.6	176	27.7 ¹⁵²		25.5 ¹⁰⁹	56		38		22	7	00	56	71	37
23	165	13.0		13.4	191	01.9 ¹⁵²		36.4 ¹⁰⁹	58		39		24	05		57	74	35
24	180	13.1	+11	14.3	205	36.1 ¹⁵²	+5	47.2 ¹⁰⁸	60 S	5	39	6	28	7	11	3	58	77
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 12 ^m 3		Mag: -4.7 PMG: 14 ^h 53 ^m				Mag: -0.3 PMG: 20 ^h 37 ^m				Mag: -2.0 PMG: 13 ^h 12 ^m				Mag: +0.2 PMG: 23 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	30.8	136	33.6	+26	38.7	49	52.6	+12	32.2	161	34.2	+16	09.2	1	23.0	-7	27.7
1	221	33.3	151	34.0		39.0	64	55.0		32.0	176	36.1		09.4	16	25.7		27.6
2	236	35.8	166	34.4		39.4	79	57.4		31.9	191	38.0		09.6	31	28.3		27.6
3	251	38.2	181	34.8		39.7	94	59.8		31.8	206	39.9		09.7	46	31.0		27.5
4	266	40.7	196	35.2		40.1	110	02.2		31.6	221	41.8		09.9	61	33.6		27.4
5	281	43.2	211	35.7	+26	40.4	125	04.6	+12	31.5	236	43.7	+16	10.1	76	36.3	-7	27.3
6	296	45.6	226	36.1	+26	40.8	140	07.0	+12	31.3	251	45.6	+16	10.2	91	38.9	-7	27.3
7	311	48.1	241	36.5		41.1	155	09.4		31.2	266	47.5		10.4	106	41.6		27.2
8	326	50.6	256	36.9		41.5	170	11.7		31.1	281	49.3		10.6	121	44.2		27.1
9	341	53.0	271	37.4		41.8	185	14.1		30.9	296	51.2		10.7	136	46.8		27.1
10	356	55.5	286	37.8		42.2	200	16.5		30.8	311	53.1		10.9	151	49.5		27.0
11	11	57.9	301	38.2	+26	42.5	215	18.9	+12	30.6	326	55.0	+16	11.1	166	52.1	-7	26.9
12	27	00.4	316	38.7	+26	42.9	230	21.3	+12	30.5	341	56.9	+16	11.2	181	54.8	-7	26.9
13	42	02.9	331	39.1		43.2	245	23.6		30.3	356	58.8		11.4	196	57.4		26.8
14	57	05.3	346	39.5		43.5	260	26.0		30.2	12	00.7		11.6	212	00.1		26.7
15	72	07.8	1	40.0		43.9	275	28.4		30.0	27	02.5		11.7	227	02.7		26.7
16	87	10.3	16	40.4		44.2	290	30.8		29.9	42	04.4		11.9	242	05.4		26.6
17	102	12.7	31	40.9	+26	44.6	305	33.1	+12	29.8	57	06.3	+16	12.1	257	08.0	-7	26.5
18	117	15.2	46	41.3	+26	44.9	320	35.5	+12	29.6	72	08.2	+16	12.2	272	10.6	-7	26.5
19	132	17.7	61	41.7		45.2	335	37.9		29.5	87	10.1		12.4	287	13.3		26.4
20	147	20.1	76	42.2		45.6	350	40.3		29.3	102	12.0		12.6	302	15.9		26.3
21	162	22.6	91	42.6		45.9	5	42.6		29.2	117	13.9		12.7	317	18.6		26.2
22	177	25.0	106	43.1		46.3	20	45.0		29.0	132	15.7		12.9	332	21.2		26.2
23	192	27.5	121	43.5		46.6	35	47.4		28.9	147	17.6		13.1	347	23.9		26.1
24	207	30.0	136	44.0	+26	46.9	50	49.7	+12	28.7	162	19.5	+16	13.2	2	26.5	-7	26.0
Dif	—		+4		+3		+24		-1		+19		+2		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 27 ^d 4 PHE { SD: 14'8 PMG: 10 ^h 36 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	13.1	+11	14.3	205	36.1	+5	47.2	60 N	19 29	20 17	21 23	3 40	11	17 51	75
1	195	13.2		15.2	220	10.3 ¹⁵²	+5	58.0 ¹⁰⁸	58	22	20 06	21 06	43	14	46	72
2	210	13.4		16.0	234	44.5 ¹⁵²	+6	08.8 ¹⁰⁸	56	16	19 57	20 51	46	16	41	70
3	225	13.5		16.9	249	18.7 ¹⁵²		19.5 ¹⁰⁷	54	10	49	39	49	18	37	68
4	240	13.6		17.8	263	52.8 ¹⁵¹		30.3 ¹⁰⁸	52	05	42	28	51	20	33	67
5	255	13.8	+11	18.6	278	27.0 ¹⁵²	+6	41.0 ¹⁰⁷	50	19 01	19 35	20 19	3 54	21	17 30	65
6	270	13.9	+11	19.5	293	01.1 ¹⁵¹	+6	51.6 ¹⁰⁶	45	18 51	19 22	20 00	3 59	25	17 23	61
7	285	14.0		20.3	307	35.2 ¹⁵¹	+7	02.2 ¹⁰⁶	40	43	11	19 45	4 03	28	17	58
8	300	14.2		21.2	322	09.4 ¹⁵²		12.8 ¹⁰⁶	35	36	19 02	34	07	30	12	55
9	315	14.3		22.1	336	43.5 ¹⁵¹		23.4 ¹⁰⁶	30	30	18 55	24	10	33	17 07	54
10	330	14.4		22.9	351	17.6 ¹⁵¹		33.9 ¹⁰⁵	20	20	42	19 09	16	36	16 59	50
11	345	14.6	+11	23.8	5	51.7 ¹⁵¹	+7	44.4 ¹⁰⁵	10 N	18 11	18 32	18 57	4 21	40	16 53	46
12	0	14.7	+11	24.6	20	25.7 ¹⁵⁰	+7	54.8 ¹⁰⁴	0	18 02	18 23	18 48	4 26	42	16 46	43
13	15	14.8		25.5	34	59.8 ¹⁵¹	+8	05.3 ¹⁰⁵	10 S	17 54	16	40	30	46	40	40
14	30	14.9		26.4	49	33.8 ¹⁵⁰		15.6 ¹⁰³	20	46	08	34	36	49	33	37
15	45	15.1		27.2	64	07.8 ¹⁵⁰		26.0 ¹⁰⁴	30	36	18 00	28	41	54	25	34
16	60	15.2		28.1	78	41.8 ¹⁵⁰		36.3 ¹⁰³	35	30	17 56	26	45	55	21	31
17	75	15.3	+11	28.9	93	15.8 ¹⁵⁰	+8	46.5 ¹⁰²	40	17 24	17 52	18 23	4 49	58	16 16	29
18	90	15.5	+11	29.8	107	49.8 ¹⁵⁰	+8	56.8 ¹⁰³	45	17 17	17 47	18 21	4 53	61	16 10	26
19	105	15.6		30.7	122	23.8 ¹⁵⁰	+9	07.0 ¹⁰²	50	08	41	19	4 59	65	03	23
20	120	15.7		31.5	136	57.7 ¹⁴⁹		17.1 ¹⁰¹	52	04	39	18	5 01	67	16 00	21
21	135	15.9		32.4	151	31.6 ¹⁴⁹		27.2 ¹⁰¹	54	17 00	36	18	04	69	15 56	20
22	150	16.0		33.2	166	05.5 ¹⁴⁹		37.3 ¹⁰¹	56	16 55	34	17	07	71	53	17
23	165	16.1		34.1	180	39.4 ¹⁴⁹		47.3 ¹⁰⁰	58	50	30	16	11	73	48	15
24	180	16.3	+11	34.9	195	13.3 ¹⁴⁹	+9	57.3 ¹⁰⁰	60 S	16 44	17 27	18 15	5 15	75	15 44	12
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 08 ^m 3		Mag: -4.7 PMG: 14 ^h 53 ^m			Mag: -0.3 PMG: 20 ^h 33 ^m			Mag: -2.0 PMG: 13 ^h 09 ^m			Mag: +0.2 PMG: 23 ^h 46 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	207	30.0	136	44.0	+26	46.9	50	49.7	+12	28.7	162	19.5	+16	13.2	2	26.5
1	222	32.4	151	44.5		47.3	65	52.1		28.6	177	21.4		13.4	17	29.2
2	237	34.9	166	44.9		47.6	80	54.5		28.4	192	23.3		13.6	32	31.8
3	252	37.4	181	45.4		47.9	95	56.8		28.3	207	25.2		13.7	47	34.4
4	267	39.8	196	45.8		48.2	110	59.2		28.1	222	27.1		13.9	62	37.1
5	282	42.3	211	46.3	+26	48.6	126	01.5	+12	28.0	237	28.9	+16	14.1	77	39.7
6	297	44.8	226	46.8	+26	48.9	141	03.9	+12	27.8	252	30.8	+16	14.2	92	42.4
7	312	47.2	241	47.2		49.2	156	06.3		27.7	267	32.7		14.4	107	45.0
8	327	49.7	256	47.7		49.6	171	08.6		27.5	282	34.6		14.6	122	47.7
9	342	52.2	271	48.2		49.9	186	11.0		27.4	297	36.5		14.7	137	50.3
10	357	54.6	286	48.6		50.2	201	13.3		27.2	312	38.4		14.9	152	53.0
11	12	57.1	301	49.1	+26	50.5	216	15.7	+12	27.1	327	40.3	+16	15.1	167	55.6
12	27	59.5	316	49.6	+26	50.8	231	18.0	+12	26.9	342	42.1	+16	15.2	182	58.2
13	43	02.0	331	50.0		51.2	246	20.4		26.8	357	44.0		15.4	198	00.9
14	58	04.5	346	50.5		51.5	261	22.7		26.6	12	45.9		15.6	213	03.5
15	73	06.9	1	51.0		51.8	276	25.1		26.4	27	47.8		15.7	228	06.2
16	88	09.4	16	51.5		52.1	291	27.4		26.3	42	49.7		15.9	243	08.8
17	103	11.9	31	52.0	+26	52.4	306	29.8	+12	26.1	57	51.6	+16	16.1	258	11.5
18	118	14.3	46	52.4	+26	52.8	321	32.1	+12	26.0	72	53.4	+16	16.2	273	14.1
19	133	16.8	61	52.9		53.1	336	34.4		25.8	87	55.3		16.4	288	16.8
20	148	19.3	76	53.4		53.4	351	36.8		25.7	102	57.2		16.6	303	19.4
21	163	21.7	91	53.9		53.7	6	39.1		25.5	117	59.1		16.7	318	22.0
22	178	24.2	106	54.4		54.0	21	41.5		25.4	133	01.0		16.9	333	24.7
23	193	26.6	121	54.9		54.3	36	43.8		25.2	148	02.9		17.1	348	27.3
24	208	29.1	136	55.4	+26	54.6	51	46.1	+12	25.0	163	04.8	+16	17.2	3	30.0
Dif	—		+5			+3	+24			-2	+19		+2		+26	
															+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 8			Edad: 28 ^d 4 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	16.3	+11	34.9	195	13.3	+9	57.3	60 N	2 34	3 40	4 28	3 51	14	19 06	74
1	195	16.4		35.8	209	47.1 ¹⁴⁸	+10	07.2 ⁹⁹	58	2 51	3 51	35	3 57	16	18 58	72
2	210	16.5		36.6	224	21.0 ¹⁴⁹		17.1 ⁹⁹	56	3 06	4 00	41	4 02	19	51	69
3	225	16.6		37.5	238	54.8 ¹⁴⁸		27.0 ⁹⁹	54	18	08	47	07	21	45	6
4	240	16.8		38.4	253	28.5 ¹⁴⁷		36.8 ⁹⁸	52	29	15	52	11	23	40	65
5	255	16.9	+11	39.2	268	02.3 ¹⁴⁸	+10	46.5 ⁹⁷	50	3 38	4 22	4 56	4 15	24	18 35	63
6	270	17.0	+11	40.1	282	36.0 ¹⁴⁷	+10	56.2 ⁹⁷	45	3 57	4 35	5 06	4 24	27	18 24	60
7	285	17.2		40.9	297	09.7 ¹⁴⁷	+11	05.9 ⁹⁶	40	4 12	46	14	31	30	15	57
8	300	17.3		41.8	311	43.4 ¹⁴⁷		15.5 ⁹⁶	35	24	4 55	21	37	33	07	56
9	315	17.4		42.6	326	17.1 ¹⁴⁷		25.0 ⁹⁵	30	33	5 03	28	43	34	18 01	53
10	330	17.5		43.5	340	50.7 ¹⁴⁶		34.6 ⁹⁶	20	4 49	15	38	4 52	38	17 49	50
11	345	17.7	+11	44.3	355	24.3 ¹⁴⁶	+11	44.0 ⁹⁴	10 N	5 01	5 26	5 47	5 01	41	17 39	47
12	0	17.8	+11	45.2	9	57.9 ¹⁴⁶	+11	53.4 ⁹⁴	0	5 10	5 34	5 55	5 08	44	17 29	45
13	15	17.9		46.0	24	31.5 ¹⁴⁶	+12	02.8 ⁹⁴	10 S	18	42	6 04	16	47	20	42
14	30	18.1		46.9	39	05.0 ¹⁴⁵		12.1 ⁹³	20	24	50	12	25	50	17 10	39
15	45	18.2		47.7	53	38.5 ¹⁴⁵		21.3 ⁹²	30	30	5 58	22	35	53	16 59	35
16	60	18.3		48.6	68	12.0 ¹⁴⁵		30.5 ⁹²	35	33	6 02	28	40	56	52	34
17	75	18.4	+11	49.4	82	45.4 ¹⁴⁴	+12	39.7 ⁹²	40	5 35	6 07	6 34	5 47	58	16 45	31
18	90	18.6	+11	50.3	97	18.8 ¹⁴⁴	+12	48.8 ⁹¹	45	5 37	6 12	6 42	5 54	61	16 36	29
19	105	18.7		51.1	111	52.2 ¹⁴⁴	+12	57.8 ⁹⁰	50	40	17	50	6 04	64	26	25
20	120	18.8		52.0	126	25.6 ¹⁴⁴	+13	06.8 ⁹⁰	52	40	20	55	08	66	21	24
21	135	18.9		52.8	140	58.9 ¹⁴³		15.7 ⁸⁹	54	41	22	6 59	13	67	16	22
22	150	19.1		53.7	155	32.2 ¹⁴³		24.6 ⁸⁹	56	42	25	7 04	18	69	10	20
23	165	19.2		54.5	170	05.5 ¹⁴³		33.4 ⁸⁸	58	43	29	09	24	72	16 03	18
24	180	19.3	+11	55.4	184	38.8 ¹⁴³	+13	42.1 ⁸⁷	60 S	5 43	6 32	7 16	6 30	75	15 56	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 04 ^m 4		Mag: -4.7 PMG: 14 ^h 52 ^m		Mag: -0.3 PMG: 20 ^h 30 ^m		Mag: -2.0 PMG: 13 ^h 06 ^m		Mag: +0.2 PMG: 23 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	208	29.1	136	55.4	+26	54.6	51	46.1	+12	25.0	163	04.8	+16	17.2	3	30.0	-7	24.4
1	223	31.6	151	55.9		55.0	66	48.5		24.9	178	06.6		17.4	18	32.6		24.3
2	238	34.0	166	56.4		55.3	81	50.8		24.7	193	08.5		17.6	33	35.3		24.3
3	253	36.5	181	56.9		55.6	96	53.2		24.6	208	10.4		17.7	48	37.9		24.2
4	268	39.0	196	57.4		55.9	111	55.5		24.4	223	12.3		17.9	63	40.6		24.1
5	283	41.4	211	57.9	+26	56.2	126	57.8	+12	24.2	238	14.2	+16	18.1	78	43.2	-7	24.1
6	298	43.9	226	58.4	+26	56.5	142	00.1	+12	24.1	253	16.1	+16	18.2	93	45.8	-7	24.0
7	313	46.4	241	58.9		56.8	157	02.5		23.9	268	17.9		18.4	108	48.5		23.9
8	328	48.8	256	59.4		57.1	172	04.8		23.8	283	19.8		18.6	123	51.1		23.9
9	343	51.3	271	59.9		57.4	187	07.1		23.6	298	21.7		18.7	138	53.8		23.8
10	358	53.8	287	00.4		57.7	202	09.5		23.4	313	23.6		18.9	153	56.4		23.7
11	13	56.2	302	00.9	+26	58.0	217	11.8	+12	23.3	328	25.5	+16	19.1	168	59.1	-7	23.7
12	28	58.7	317	01.5	+26	58.3	232	14.1	+12	23.1	343	27.4	+16	19.2	184	01.7	-7	23.6
13	44	01.1	332	02.0		58.6	247	16.4		22.9	358	29.2		19.4	199	04.3		23.5
14	59	03.6	347	02.5		58.9	262	18.8		22.8	13	31.1		19.6	214	07.0		23.5
15	74	06.1	2	03.0		59.2	277	21.1		22.6	28	33.0		19.7	229	09.6		23.4
16	89	08.5	17	03.5		59.5	292	23.4		22.4	43	34.9		19.9	244	12.3		23.3
17	104	11.0	32	04.1	+26	59.8	307	25.7	+12	22.3	58	36.8	+16	20.1	259	14.9	-7	23.2
18	119	13.5	47	04.6	+27	00.1	322	28.0	+12	22.1	73	38.7	+16	20.2	274	17.6	-7	23.2
19	134	15.9	62	05.1		00.4	337	30.3		21.9	88	40.5		20.4	289	20.2		23.1
20	149	18.4	77	05.7		00.7	352	32.7		21.8	103	42.4		20.6	304	22.9		23.0
21	164	20.9	92	06.2		01.0	7	35.0		21.6	118	44.3		20.7	319	25.5		23.0
22	179	23.3	107	06.7		01.3	22	37.3		21.4	133	46.2		20.9	334	28.1		22.9
23	194	25.8	122	07.3		01.6	37	39.6		21.3	148	48.1		21.1	349	30.8		22.8
24	209	28.3	137	07.8	+27	01.9	52	41.9	+12	21.1	163	50.0	+16	21.2	4	33.4	-7	22.8
Dif	—		+5		+3		+23		-2		+19		+2		+26		+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 29 ^d 4 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰					Civil			Hora		Hora	
	PMG: 11 ^h 58 ^m 6			SD: 14 ^h 7					Náutico		R°	R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	19.3	+11 55.4	184	38.8	+13 42.1		60 N	19 34	20 23	21 31	4 05 17	20 20 72		
1	195	19.4		199	12.0 ¹⁴²	50.8 ⁸⁷		58	26	11	21 12	13 21	10 68		
2	210	19.6	57.1	213	45.2 ¹⁴²	+13 59.5 ⁸⁷		56	20	20 02	20 57	21 22	20 00 67		
3	225	19.7	57.9	228	18.3 ¹⁴¹	+14 08.0 ⁸⁵		54	14	19 53	44	28 24	19 52 65		
4	240	19.8	58.8	242	51.5 ¹⁴²	16.5 ⁸⁵		52	09	46	33	34 26	45 63		
5	255	19.9	+11 59.6	257	24.5 ¹⁴⁰	+14 25.0 ⁸⁵		50	19 04	19 39	20 23	4 39 28	19 38 62		
6	270	20.1	+12 00.5	271	57.6 ¹⁴¹	+14 33.4 ⁸⁴		45	18 53	19 25	20 03	4 51 31	19 24 59		
7	285	20.2	01.3	286	30.6 ¹⁴⁰	41.7 ⁸³		40	45	13	19 48	5 01 33	12 57		
8	300	20.3	02.2	301	03.6 ¹⁴⁰	50.0 ⁸³		35	38	19 04	36	10 35	19 03 54		
9	315	20.4	03.0	315	36.6 ¹⁴⁰	+14 58.1 ⁸¹		30	31	18 56	26	17 37	18 54 53		
10	330	20.6	03.8	330	09.5 ¹³⁹	+15 06.3 ⁸²		20	20	43	19 10	30 40	39 50		
11	345	20.7	+12 04.7	344	42.4 ¹³⁹	+15 14.3 ⁸⁰		10 N	18 11	18 32	18 57	5 42 42	18 26 48		
12	0	20.8	+12 05.5	359	15.3 ¹³⁹	+15 22.3 ⁸⁰		0	18 02	18 23	18 48	5 52 45	18 14 46		
13	15	20.9	06.4	13	48.1 ¹³⁸	30.3 ⁸⁰		10 S	17 53	15	40	6 03 48	18 02 44		
14	30	21.0	07.2	28	20.9 ¹³⁸	38.1 ⁷⁸		20	44	18 07	33	15 50	17 49 41		
15	45	21.2	08.1	42	53.7 ¹³⁸	45.9 ⁷⁸		30	34	17 58	26	28 53	34 39		
16	60	21.3	08.9	57	26.4 ¹³⁷	+15 53.7 ⁷⁸		35	28	54	23	36 55	26 37		
17	75	21.4	+12 09.7	71	59.1 ¹³⁷	+16 01.3 ⁷⁶		40	17 21	17 49	18 21	6 45 57	17 16 35		
18	90	21.5	+12 10.6	86	31.8 ¹³⁷	+16 08.9 ⁷⁶		45	17 14	17 44	18 18	6 55 60	17 05 33		
19	105	21.7	11.4	101	04.4 ¹³⁶	16.4 ⁷⁵		50	05	38	15	7 08 63	16 51 30		
20	120	21.8	12.3	115	37.0 ¹³⁶	23.9 ⁷⁵		52	17 00	35	14	14 64	45 28		
21	135	21.9	13.1	130	09.6 ¹³⁶	31.2 ⁷³		54	16 56	32	13	20 66	38 27		
22	150	22.0	13.9	144	42.1 ¹³⁵	38.5 ⁷³		56	50	29	12	27 69	30 25		
23	165	22.1	14.8	159	14.6 ¹³⁵	45.8 ⁷³		58	45	26	11	36 70	21 23		
24	180	22.3	+12 15.6	173	47.0 ¹³⁴	+16 52.9 ⁷¹		60 S	16 38	17 22	18 10	7 45 73	16 11 20		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 00 ^m 5		Mag: -4.7 PMG: 14 ^h 51 ^m			Mag: -0.2 PMG: 20 ^h 26 ^m			Mag: -2.0 PMG: 13 ^h 03 ^m			Mag: +0.3 PMG: 23 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	209	28.3	137 07.8	+27 01.9	52 41.9	+12 21.1		163 50.0	+16 21.2	4 33.4		0 33.4		-7 22.8	
1	224	30.7	152 08.3	02.1	67 44.2	20.9		178 51.8	21.4	19 36.1		19 36.1		22.7	
2	239	33.2	167 08.9	02.4	82 46.5	20.8		193 53.7	21.6	34 38.7		34 38.7		22.6	
3	254	35.6	182 09.4	02.7	97 48.8	20.6		208 55.6	21.7	49 41.4		49 41.4		22.6	
4	269	38.1	197 10.0	03.0	112 51.1	20.4		223 57.5	21.9	64 44.0		64 44.0		22.5	
5	284	40.6	212 10.5	+27 03.3	127 53.4	+12 20.3		238 59.4	+16 22.1	79 46.7		79 46.7		-7 22.4	
6	299	43.0	227 11.1	+27 03.6	142 55.7	+12 20.1		254 01.2	+16 22.2	94 49.3		94 49.3		-7 22.4	
7	314	45.5	242 11.6	03.9	157 58.0	19.9		269 03.1	22.4	109 51.9		109 51.9		22.3	
8	329	48.0	257 12.2	04.1	173 00.3	19.8		284 05.0	22.6	124 54.6		124 54.6		22.2	
9	344	50.4	272 12.7	04.4	188 02.6	19.6		299 06.9	22.7	139 57.2		139 57.2		22.2	
10	359	52.9	287 13.3	04.7	203 04.9	19.4		314 08.8	22.9	154 59.9		154 59.9		22.1	
11	14	55.4	302 13.8	+27 05.0	218 07.2	+12 19.2		329 10.7	+16 23.1	170 02.5		170 02.5		-7 22.0	
12	29	57.8	317 14.4	+27 05.3	233 09.5	+12 19.1		344 12.5	+16 23.2	185 05.2		185 05.2		-7 22.0	
13	45	00.3	332 14.9	05.5	248 11.8	18.9		359 14.4	23.4	200 07.8		200 07.8		21.9	
14	60	02.7	347 15.5	05.8	263 14.1	18.7		14 16.3	23.6	215 10.4		215 10.4		21.8	
15	75	05.2	2 16.1	06.1	278 16.4	18.5		29 18.2	23.7	230 13.1		230 13.1		21.8	
16	90	07.7	17 16.6	06.4	293 18.7	18.4		44 20.1	23.9	245 15.7		245 15.7		21.7	
17	105	10.1	32 17.2	+27 06.7	308 21.0	+12 18.2		59 21.9	+16 24.1	260 18.4		260 18.4		-7 21.6	
18	120	12.6	47 17.8	+27 06.9	323 23.3	+12 18.0		74 23.8	+16 24.2	275 21.0		275 21.0		-7 21.6	
19	135	15.1	62 18.4	07.2	338 25.6	17.8		89 25.7	24.4	290 23.7		290 23.7		21.5	
20	150	17.5	77 18.9	07.5	353 27.9	17.7		104 27.6	24.5	305 26.3		305 26.3		21.4	
21	165	20.0	92 19.5	07.7	8 30.2	17.5		119 29.5	24.7	320 28.9		320 28.9		21.4	
22	180	22.5	107 20.1	08.0	23 32.4	17.3		134 31.4	24.9	335 31.6		335 31.6		21.3	
23	195	24.9	122 20.7	08.3	38 34.7	17.1		149 33.2	25.0	350 34.2		350 34.2		21.2	
24	210	27.4	137 21.3	+27 08.5	53 37.0	+12 17.0		164 35.1	+16 25.2	5 36.9		5 36.9		-7 21.2	
Dif	—		+6	+3	+23	-2		+19	+2			+26	+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4			Edad: 0 ^d 7 SD: 14 ^h 7 PMG: 12 ^h 49 ^m	PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0 Rº: 47 ^m											
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m
0	180	22.3	+12 15.6	173	47.0	+16 52.9	71	60 N	2 25	3 33	4 22	4 22	24	21 32	66	
1	195	22.4	16.5	188	19.5 ¹³⁵	+17 00.0	71	58	2 44	45	30	34	26	18	64	
2	210	22.5	17.3	202	51.8 ¹³³	+17 07.0	70	56	3 00	3 54	36	43	28	21 07	62	
3	225	22.6	18.1	217	24.2 ¹³⁴	14.0	70	54	13	4 03	42	4 52	30	20 57	61	
4	240	22.7	19.0	231	56.5 ¹³³	20.8	68	52	24	11	48	5 00	31	48	60	
5	255	22.9	+12 19.8	246	28.8 ¹³³	+17 27.6	68	50	3 34	4 17	4 53	5 07	32	20 40	59	
6	270	23.0	+12 20.7	261	01.0 ¹³²	+17 34.3	67	45	3 53	4 32	5 03	5 22	35	20 23	56	
7	285	23.1	21.5	275	33.3 ¹³³	40.9	66	40	4 09	43	12	34	37	20 09	55	
8	300	23.2	22.3	290	05.4 ¹³¹	47.5	66	35	21	4 53	19	45	39	19 57	54	
9	315	23.3	23.2	304	37.6 ¹³²	+17 54.0	65	30	31	5 01	25	5 54	40	47	52	
10	330	23.5	24.0	319	09.7 ¹³¹	+18 00.4	64	20	47	14	37	6 10	43	29	51	
11	345	23.6	+12 24.8	333	41.8 ¹³¹	+18 06.7	63	10 N	4 59	5 25	5 46	6 24	45	19 14	49	
12	0	23.7	+12 25.7	348	13.8 ¹³⁰	+18 12.9	62	0	5 09	5 34	5 55	6 37	47	19 00	47	
13	15	23.8	26.5	2	45.8 ¹³⁰	19.1	62	10 S	18	42	6 04	6 51	48	18 46	45	
14	30	23.9	27.3	17	17.8 ¹³⁰	25.1	60	20	25	51	13	7 05	51	30	44	
15	45	24.0	28.2	31	49.7 ¹²⁹	31.1	60	30	31	5 59	24	21	53	13	42	
16	60	24.2	29.0	46	21.6 ¹²⁹	37.0	59	35	34	6 04	30	31	54	18 03	41	
17	75	24.3	+12 29.8	60	53.5 ¹²⁹	+18 42.8	58	40	5 37	6 09	6 36	7 42	56	17 51	40	
18	90	24.4	+12 30.7	75	25.3 ¹²⁸	+18 48.6	58	45	5 40	6 14	6 44	7 55	58	17 38	37	
19	105	24.5	31.5	89	57.1 ¹²⁸	54.2	56	50	42	20	54	8 11	60	21	35	
20	120	24.6	32.3	104	28.9 ¹²⁸	+18 59.8	56	52	43	23	6 58	18	62	13	35	
21	135	24.7	33.2	119	00.6 ¹²⁷	+19 05.3	55	54	44	26	7 03	26	63	17 05	33	
22	150	24.9	34.0	133	32.3 ¹²⁷	10.7	54	56	46	29	08	36	64	16 55	31	
23	165	25.0	34.8	148	04.0 ¹²⁷	16.0	53	58	47	33	14	46	67	44	30	
24	180	25.1	+12 35.7	162	35.6 ¹²⁶	+19 21.3	53	60 S	5 48	6 37	7 20	8 58	70	16 31	27	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 9 ^h 56 ^m 5			Mag: -4.7 PMG: 14 ^h 50 ^m			Mag: -0.2 PMG: 20 ^h 22 ^m			Mag: -2.0 PMG: 13 ^h 00 ^m			Mag: +0.3 PMG: 23 ^h 33 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	210	27.4	137 21.3	+27 08.5	53 37.0	+12 17.0	164 35.1	+16 25.2	5 36.9	-7 21.2						
1	225	29.9	152 21.8	08.8	68 39.3	16.8	179 37.0	25.4	20 39.5	21.1						
2	240	32.3	167 22.4	09.1	83 41.6	16.6	194 38.9	25.5	35 42.2	21.0						
3	255	34.8	182 23.0	09.3	98 43.9	16.4	209 40.8	25.7	50 44.8	21.0						
4	270	37.2	197 23.6	09.6	113 46.1	16.2	224 42.6	25.9	65 47.5	20.9						
5	285	39.7	212 24.2	+27 09.9	128 48.4	+12 16.1	239 44.5	+16 26.0	80 50.1	-7 20.8						
6	300	42.2	227 24.8	+27 10.1	143 50.7	+12 15.9	254 46.4	+16 26.2	95 52.7	-7 20.8						
7	315	44.6	242 25.4	10.4	158 53.0	15.7	269 48.3	26.4	110 55.4	20.7						
8	330	47.1	257 26.0	10.7	173 55.2	15.5	284 50.2	26.5	125 58.0	20.6						
9	345	49.6	272 26.6	10.9	188 57.5	15.3	299 52.0	26.7	141 00.7	20.5						
10	0	52.0	287 27.2	11.2	203 59.8	15.2	314 53.9	26.9	156 03.3	20.5						
11	15	54.5	302 27.8	+27 11.4	219 02.0	+12 15.0	329 55.8	+16 27.0	171 06.0	-7 20.4						
12	30	57.0	317 28.4	+27 11.7	234 04.3	+12 14.8	344 57.7	+16 27.2	186 08.6	-7 20.3						
13	45	59.4	332 29.0	12.0	249 06.6	14.6	359 59.6	27.4	201 11.2	20.3						
14	61	01.9	347 29.6	12.2	264 08.9	14.4	15 01.4	27.5	216 13.9	20.2						
15	76	04.3	2 30.2	12.5	279 11.1	14.2	30 03.3	27.7	231 16.5	20.1						
16	91	06.8	17 30.9	12.7	294 13.4	14.1	45 05.2	27.9	246 19.2	20.1						
17	106	09.3	32 31.5	+27 13.0	309 15.7	+12 13.9	60 07.1	+16 28.0	261 21.8	-7 20.0						
18	121	11.7	47 32.1	+27 13.2	324 17.9	+12 13.7	75 09.0	+16 28.2	276 24.5	-7 19.9						
19	136	14.2	62 32.7	13.5	339 20.2	13.5	90 10.8	28.4	291 27.1	19.9						
20	151	16.7	77 33.3	13.7	354 22.4	13.3	105 12.7	28.5	306 29.7	19.8						
21	166	19.1	92 34.0	14.0	9 24.7	13.1	120 14.6	28.7	321 32.4	19.7						
22	181	21.6	107 34.6	14.2	24 27.0	12.9	135 16.5	28.9	336 35.0	19.7						
23	196	24.1	122 35.2	14.5	39 29.2	12.8	150 18.4	29.0	351 37.7	19.6						
24	211	26.5	137 35.8	+27 14.7	54 31.5	+12 12.6	165 20.2	+16 29.2	6 40.3	-7 19.5						
Dif	—		+6	+3	+23	-2	+19	+2	+26	+1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 2			Edad: 1 ^d 7 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 13 ^h 36 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	25.1	+12	35.7	162	35.6	+19 21.3	60 N	19 39	20 29	21 40	4 46 32	22 38 57	
1	195	25.2		36.5	177	07.2 ¹²⁶	26.4 ⁵¹	58	31	17	19	5 00 33	22 57	
2	210	25.3		37.3	191	38.8 ¹²⁶	31.5 ⁵¹	56	24	20 06	21 03	11 36	22 09 56	
3	225	25.4		38.2	206	10.3 ¹²⁵	36.4 ⁴⁹	54	18	19 57	20 49	22 36	21 58 54	
4	240	25.6		39.0	220	41.8 ¹²⁵	41.3 ⁴⁹	52	12	49	37	31 38	48 54	
5	255	25.7	+12	39.8	235	13.2 ¹²⁴	+19 46.1 ⁴⁸	50	19 07	19 42	20 27	5 39 39	21 39 53	
6	270	25.8	+12	40.6	249	44.7 ¹²⁵	+19 50.8 ⁴⁷	45	18 56	19 28	20 06	5 57 40	21 19 53	
7	285	25.9		41.5	264	16.1 ¹²⁴	+19 55.4 ⁴⁶	40	47	16	19 50	6 11 42	21 04 52	
8	300	26.0		42.3	278	47.5 ¹²⁴	+20 00.0 ⁴⁶	35	39	19 06	38	24 43	20 51 51	
9	315	26.1		43.1	293	18.8 ¹²³	+20 04.4 ⁴⁴	30	32	18 57	27	34 44	39 51	
10	330	26.2		44.0	307	50.1 ¹²³	08.7 ⁴³	20	21	44	19 10	6 53 45	20 50	
11	345	26.4	+12	44.8	322	21.4 ¹²³	+20 13.0 ⁴³	10 N	18 11	18 32	18 58	7 09 47	20 03 49	
12	0	26.5	+12	45.6	336	52.6 ¹²²	+20 17.2 ⁴²	0	18 02	18 23	18 47	7 24 48	19 47 49	
13	15	26.6		46.4	351	23.9 ¹²³	21.2 ⁴⁰	10 S	17 52	14	39	39 49	31 48	
14	30	26.7		47.3	5	55.0 ¹²¹	25.2 ⁴⁰	20	43	18 05	31	7 56 50	19 14 47	
15	45	26.8		48.1	20	26.2 ¹²²	29.1 ³⁹	30	32	17 56	25	8 14 52	18 55 46	
16	60	26.9		48.9	34	57.3 ¹²¹	32.9 ³⁸	35	26	52	21	25 53	44 45	
17	75	27.0	+12	49.7	49	28.4 ¹²¹	+20 36.6 ³⁷	40	17 19	17 46	18 18	8 38 53	18 31 44	
18	90	27.1	+12	50.6	63	59.5 ¹²¹	+20 40.2 ³⁶	45	17 10	17 41	18 15	8 53 55	18 15 44	
19	105	27.3		51.4	78	30.6 ¹²¹	43.7 ³⁵	50	17 01	34	12	9 11 57	17 56 43	
20	120	27.4		52.2	93	01.6 ¹²⁰	47.1 ³⁴	52	16 56	31	11	20 57	48 41	
21	135	27.5		53.0	107	32.6 ¹²⁰	50.4 ³³	54	51	28	09	29 59	38 40	
22	150	27.6		53.9	122	03.5 ¹¹⁹	53.6 ³²	56	46	25	08	40 60	26 40	
23	165	27.7		54.7	136	34.5 ¹²⁰	56.7 ³¹	58	40	21	07	9 53 61	17 14 38	
24	180	27.8	+12	55.5	151	05.4 ¹¹⁹	+20 59.8 ³¹	60 S	16 33	17 17	18 05	10 08 62	16 58 38	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 52 ^m 6		Mag: -4.7 PMG: 14 ^h 49 ^m			Mag: -0.2 PMG: 20 ^h 19 ^m			Mag: -2.0 PMG: 12 ^h 57 ^m			Mag: +0.3 PMG: 23 ^h 29 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	211	26.5	137	35.8	+27 14.7	54	31.5	+12 12.6	165	20.2	+16 29.2	6	40.3	-7 19.5
1	226	29.0	152	36.5		69	33.7	12.4	180	22.1	29.3	21	43.0	19.5
2	241	31.5	167	37.1		84	36.0	12.2	195	24.0	29.5	36	45.6	19.4
3	256	33.9	182	37.7		99	38.2	12.0	210	25.9	29.7	51	48.2	19.3
4	271	36.4	197	38.4		114	40.5	11.8	225	27.8	29.8	66	50.9	19.3
5	286	38.8	212	39.0	+27 16.0	129	42.7	+12 11.6	240	29.6	+16 30.0	81	53.5	-7 19.2
6	301	41.3	227	39.7	+27 16.2	144	45.0	+12 11.4	255	31.5	+16 30.2	96	56.2	-7 19.1
7	316	43.8	242	40.3		159	47.2	11.2	270	33.4	30.3	111	58.8	19.1
8	331	46.2	257	41.0		174	49.5	11.1	285	35.3	30.5	127	01.5	19.0
9	346	48.7	272	41.6		189	51.7	10.9	300	37.2	30.7	142	04.1	18.9
10	1	51.2	287	42.3		204	54.0	10.7	315	39.0	30.8	157	06.7	18.9
11	16	53.6	302	42.9	+27 17.4	219	56.2	+12 10.5	330	40.9	+16 31.0	172	09.4	-7 18.8
12	31	56.1	317	43.6	+27 17.6	234	58.5	+12 10.3	345	42.8	+16 31.2	187	12.0	-7 18.7
13	46	58.6	332	44.2		250	00.7	10.1	0	44.7	31.3	202	14.7	18.7
14	62	01.0	347	44.9		265	02.9	09.9	15	46.5	31.5	217	17.3	18.6
15	77	03.5	2	45.6		280	05.2	09.7	30	48.4	31.7	232	20.0	18.5
16	92	06.0	17	46.2		295	07.4	09.5	45	50.3	31.8	247	22.6	18.5
17	107	08.4	32	46.9	+27 18.8	310	09.7	+12 09.3	60	52.2	+16 32.0	262	25.2	-7 18.4
18	122	10.9	47	47.6	+27 19.0	325	11.9	+12 09.1	75	54.1	+16 32.2	277	27.9	-7 18.3
19	137	13.3	62	48.2		340	14.1	08.9	90	55.9	32.3	292	30.5	18.3
20	152	15.8	77	48.9		355	16.4	08.7	105	57.8	32.5	307	33.2	18.2
21	167	18.3	92	49.6		10	18.6	08.5	120	59.7	32.6	322	35.8	18.1
22	182	20.7	107	50.2		25	20.8	08.4	136	01.6	32.8	337	38.4	18.1
23	197	23.2	122	50.9		40	23.1	08.2	151	03.5	33.0	352	41.1	18.0
24	212	25.7	137	51.6	+27 20.4	55	25.3	+12 08.0	166	05.3	+16 33.1	7	43.7	-7 17.9
Dif	—		+7 +2			+22 -2			+19 +2		+26 +1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 1			Edad: 2 ^d 7 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2 PMG: 14 ^h 24 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	180	27.8	+12 55.5	151	05.4	+20 59.8	60 N	2 16	3 27	4 16		5 18 43	23 35 46				
1	195	27.9		165	36.3 ¹¹⁹	+21 02.7 ²⁹	58		36 39	25		33 44	19 46				
2	210	28.0		180	07.1 ¹¹⁸	05.5 ²⁸	56	2 53	49	32		47 44	23 05 46				
3	225	28.1		194	38.0 ¹¹⁹	08.3 ²⁸	54	3 07	3 58	38		5 58 46	22 52 48				
4	240	28.3		209	08.8 ¹¹⁸	10.9 ²⁶	52		19 40	44		6 09 45	42 47				
5	255	28.4	+12 59.6	223	39.6 ¹¹⁸	+21 13.5 ²⁶	50	3 29	4 13	4 49		6 18 46	22 32 48				
6	270	28.5	+13 00.4	238	10.3 ¹¹⁷	+21 15.9 ²⁴	45	3 50	4 28	5 00		6 37 47	22 12 48				
7	285	28.6		252	41.1 ¹¹⁸	18.2 ²³	40	4 05	40	09		6 53 47	21 56 48				
8	300	28.7		267	11.8 ¹¹⁷	20.5 ²³	35		18 50	17		7 07 47	42 49				
9	315	28.8		281	42.5 ¹¹⁷	22.6 ²¹	30		29 45	23		18 48	30 49				
10	330	28.9		296	13.2 ¹¹⁷	24.7 ²¹	20		46 51	35		38 48	21 10 49				
11	345	29.0	+13 04.5	310	43.8 ¹¹⁶	+21 26.6 ¹⁹	10 N	4 58	5 24	5 45		7 56 48	20 52 49				
12	0	29.1	+13 05.3	325	14.5 ¹¹⁷	+21 28.5 ¹⁹	0	5 09	5 33	5 55		8 12 49	20 36 49				
13	15	29.2		339	45.1 ¹¹⁶	30.2 ¹⁷	10 S		18 42	6 04		28 50	19 49				
14	30	29.3		354	15.7 ¹¹⁶	31.9 ¹⁷	20		25 51	14		8 46 49	20 01 49				
15	45	29.5		8	46.2 ¹¹⁵	33.4 ¹⁵	30		32 00	25		9 06 50	19 41 49				
16	60	29.6		23	16.8 ¹¹⁶	34.9 ¹⁵	35		35 05	31		18 50	29 49				
17	75	29.7	+13 09.4	37	47.3 ¹¹⁵	+21 36.2 ¹³	40	5 39	6 10	6 38		9 31 51	19 15 49				
18	90	29.8	+13 10.2	52	17.9 ¹¹⁶	+21 37.4 ¹²	45	5 42	6 16	6 47		9 48 50	18 59 49				
19	105	29.9		66	48.4 ¹¹⁵	38.6 ¹²	50		45 23	6 57		10 08 50	39 49				
20	120	30.0		81	18.8 ¹¹⁴	39.6 ¹⁰	52		46 26	7 01		17 51	29 49				
21	135	30.1		95	49.3 ¹¹⁵	40.6 ¹⁰	54		48 29	06		28 51	18 50				
22	150	30.2		110	19.8 ¹¹⁵	41.4 ⁸	56		49 33	12		40 51	18 06 50				
23	165	30.3		124	50.2 ¹¹⁴	42.1 ⁷	58		51 37	18		10 54 51	17 52 49				
24	180	30.4	+13 15.1	139	20.6 ¹¹⁴	+21 42.8 ⁷	60 S	5 52	6 41	7 25		11 10 52	17 36 49				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 9 ^h 48 ^m 7		Mag: -4.7 PMG: 14 ^h 48 ^m			Mag: -0.2 PMG: 20 ^h 15 ^m			Mag: -2.0 PMG: 12 ^h 54 ^m			Mag: +0.3 PMG: 23 ^h 25 ^m					
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	212	25.7	137	51.6	+27 20.4	55	25.3	+12 08.0	166	05.3	+16 33.1	7	43.7	-7 17.9			
1	227	28.1	152	52.3	20.6	70	27.5	07.8	181	07.2	33.3	22	46.4	17.9			
2	242	30.6	167	53.0	20.8	85	29.8	07.6	196	09.1	33.5	37	49.0	17.8			
3	257	33.1	182	53.7	21.1	100	32.0	07.4	211	11.0	33.6	52	51.7	17.7			
4	272	35.5	197	54.4	21.3	115	34.2	07.2	226	12.8	33.8	67	54.3	17.7			
5	287	38.0	212	55.0	+27 21.5	130	36.4	+12 07.0	241	14.7	+16 34.0	82	56.9	-7 17.6			
6	302	40.5	227	55.7	+27 21.7	145	38.7	+12 06.8	256	16.6	+16 34.1	97	59.6	-7 17.5			
7	317	42.9	242	56.4	21.9	160	40.9	06.6	271	18.5	34.3	113	02.2	17.5			
8	332	45.4	257	57.1	22.2	175	43.1	06.4	286	20.4	34.5	128	04.9	17.4			
9	347	47.8	272	57.8	22.4	190	45.3	06.2	301	22.2	34.6	143	07.5	17.3			
10	2	50.3	287	58.5	22.6	205	47.5	06.0	316	24.1	34.8	158	10.1	17.3			
11	17	52.8	302	59.2	+27 22.8	220	49.8	+12 05.8	331	26.0	+16 35.0	173	12.8	-7 17.2			
12	32	55.2	318	00.0	+27 23.0	235	52.0	+12 05.6	346	27.9	+16 35.1	188	15.4	-7 17.1			
13	47	57.7	333	00.7	23.2	250	54.2	05.4	1	29.7	35.3	203	18.1	17.1			
14	63	00.2	348	01.4	23.5	265	56.4	05.2	16	31.6	35.4	218	20.7	17.0			
15	78	02.6	3	02.1	23.7	280	58.6	05.0	31	33.5	35.6	233	23.4	17.0			
16	93	05.1	18	02.8	23.9	296	00.8	04.8	46	35.4	35.8	248	26.0	16.9			
17	108	07.6	33	03.5	+27 24.1	311	03.1	+12 04.6	61	37.3	+16 35.9	263	28.6	-7 16.8			
18	123	10.0	48	04.2	+27 24.3	326	05.3	+12 04.4	76	39.1	+16 36.1	278	31.3	-7 16.8			
19	138	12.5	63	05.0	24.5	341	07.5	04.2	91	41.0	36.3	293	33.9	16.7			
20	153	14.9	78	05.7	24.7	356	09.7	04.0	106	42.9	36.4	308	36.6	16.6			
21	168	17.4	93	06.4	24.9	11	11.9	03.7	121	44.8	36.6	323	39.2	16.6			
22	183	19.9	108	07.1	25.1	26	14.1	03.5	136	46.6	36.8	338	41.8	16.5			
23	198	22.3	123	07.9	25.3	41	16.3	03.3	151	48.5	36.9	353	44.5	16.4			
24	213	24.8	138	08.6	+27 25.5	56	18.5	+12 03.1	166	50.4	+16 37.1	8	47.1	-7 16.4			
Dif	—		+7		+2	+22		-2	+19		+2	+26		+1			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 57 ^m 9				Edad: 3 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 49 ^m															
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	30.4	+13	15.1	139	20.6	+21	42.8	60 N	19	44	20	35	21	49	6	01	55	** ** *	
1	195	30.5		15.9	153	51.0 ¹¹⁴		43.3	58	35	22	26	17	55	** ** *					
2	210	30.6		16.7	168	21.4 ¹¹⁴		43.7	56	28	11	21 09	31	55	23	51	39			
3	225	30.7		17.6	182	51.8 ¹¹⁴		44.0	54	21	20 02	20 54	44	53	40	39				
4	240	30.8		18.4	197	22.2 ¹¹⁴		44.2	52	15	19 53	42	6	54	54	29	40			
5	255	30.9	+13	19.2	211	52.6 ¹¹⁴	+21	44.4	50	19	10	19 46	20	31	7	04	53	23	20	41
6	270	31.0	+13	20.0	226	22.9 ¹¹³	+21	44.4	45	18	58	19 30	20	09	7	24	52	23	00	43
7	285	31.2		20.8	240	53.2 ¹¹³		44.3	40	49	18	19 53	40	52	22	44	44			
8	300	31.3		21.6	255	23.6 ¹¹⁴		44.1	35	41	19 08	40	7	54	51	31	45			
9	315	31.4		22.4	269	53.9 ¹¹³		43.8	30	34	18 59	29	8	06	51	22	19	46		
10	330	31.5		23.2	284	24.2 ¹¹³		43.4	20	22	44	19 11	26	51	21	59	47			
11	345	31.6	+13	24.0	298	54.5 ¹¹³	+21	42.9	10 N	18	11	18 33	18	58	8	44	50	21	41	48
12	0	31.7	+13	24.9	313	24.8 ¹¹³	+21	42.3	0	18	01	18 23	18	47	9	01	49	21	25	49
13	15	31.8		25.7	327	55.1 ¹¹³		41.5	10 S	17	52	13	38	18	48	21	08	50		
14	30	31.9		26.5	342	25.3 ¹¹²		40.7	20	41	18	04	30	35	48	20	50	52		
15	45	32.0		27.3	356	55.6 ¹¹³		39.8	30	30	17	55	23	9	56	47	30	53		
16	60	32.1		28.1	11	25.9 ¹¹³		38.8	35	23	49	19	10	08	47	18	53			
17	75	32.2	+13	28.9	25	56.1 ¹¹²	+21	37.6	40	17	16	17 44	18	16	10	22	46	20	04	54
18	90	32.3	+13	29.7	40	26.4 ¹¹³	+21	36.4	45	17	07	17 38	18	12	10	38	46	19	48	55
19	105	32.4		30.5	54	56.6 ¹¹²		35.1	50	16	57	31	09	10	58	45	28	56		
20	120	32.5		31.3	69	26.8 ¹¹²		33.6	55	52	27	07	11	08	44	18	58			
21	135	32.6		32.1	83	57.1 ¹¹³		32.1	54	47	24	06	19	43	19	08	58			
22	150	32.7		32.9	98	27.3 ¹¹²		30.4	56	41	20	04	31	42	18	56	58			
23	165	32.8		33.7	112	57.5 ¹¹²		28.7	58	35	16	02	11	45	42	41	60			
24	180	32.9	+13	34.5	127	27.8 ¹¹³	+21	26.8	60 S	16	27	17 12	18	01	12	02	40	18	25	61

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 44 ^m 7		Mag: -4.7 PMG: 14 ^h 47 ^m				Mag: -0.1 PMG: 20 ^h 12 ^m				Mag: -2.0 PMG: 12 ^h 51 ^m				Mag: +0.3 PMG: 23 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	24.8	138	08.6	+27	25.5	56	18.5	+12	03.1	166	50.4	+16	37.1	8	47.1	-7	16.4
1	228	27.3	153	09.4		25.8	71	20.7		02.9	181	52.3		37.3	23	49.8		16.3
2	243	29.7	168	10.1		26.0	86	22.9		02.7	196	54.2		37.4	38	52.4		16.2
3	258	32.2	183	10.8		26.2	101	25.1		02.5	211	56.0		37.6	53	55.1		16.2
4	273	34.7	198	11.6		26.4	116	27.3		02.3	226	57.9		37.7	68	57.7		16.1
5	288	37.1	213	12.3	+27	26.6	131	29.5	+12	02.1	241	59.8	+16	37.9	84	00.3	-7	16.0
6	303	39.6	228	13.1	+27	26.8	146	31.7	+12	01.9	257	01.7	+16	38.1	99	03.0	-7	16.0
7	318	42.1	243	13.8		27.0	161	33.9		01.7	272	03.5		38.2	114	05.6		15.9
8	333	44.5	258	14.6		27.2	176	36.1		01.5	287	05.4		38.4	129	08.3		15.8
9	348	47.0	273	15.3		27.4	191	38.3		01.3	302	07.3		38.6	144	10.9		15.8
10	3	49.4	288	16.1		27.5	206	40.5		01.1	317	09.2		38.7	159	13.5		15.7
11	18	51.9	303	16.8	+27	27.7	221	42.7	+12	00.8	332	11.0	+16	38.9	174	16.2	-7	15.6
12	33	54.4	318	17.6	+27	27.9	236	44.9	+12	00.6	347	12.9	+16	39.1	189	18.8	-7	15.6
13	48	56.8	333	18.4		28.1	251	47.1		00.4	2	14.8		39.2	204	21.5		15.5
14	63	59.3	348	19.1		28.3	266	49.3	+12	00.2	17	16.7		39.4	219	24.1		15.4
15	79	01.8	3	19.9		28.5	281	51.5	+12	00.0	32	18.5		39.5	234	26.7		15.4
16	94	04.2	18	20.7		28.7	296	53.6	+11	59.8	47	20.4		39.7	249	29.4		15.3
17	109	06.7	33	21.4	+27	28.9	311	55.8	+11	59.6	62	22.3	+16	39.9	264	32.0	-7	15.2
18	124	09.2	48	22.2	+27	29.1	326	58.0	+11	59.4	77	24.2	+16	40.0	279	34.7	-7	15.2
19	139	11.6	63	23.0		29.3	342	00.2		59.2	92	26.1		40.2	294	37.3		15.1
20	154	14.1	78	23.8		29.5	357	02.4		58.9	107	27.9		40.4	309	40.0		15.0
21	169	16.6	93	24.6		29.6	12	04.6		58.7	122	29.8		40.5	324	42.6		15.0
22	184	19.0	108	25.3		29.8	27	06.8		58.5	137	31.7		40.7	339	45.2		14.9
23	199	21.5	123	26.1		30.0	42	08.9		58.3	152	33.6		40.9	354	47.9		14.8
24	214	23.9	138	26.9	+27	30.2	57	11.1	+11	58.1	167	35.4	+16	41.0	9	50.5	-7	14.8
Dif	—		+8		+2		+22		-2		+19		+2		+26		+	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 7				Edad: 4 ^d 7 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 SD: 14'9 PMG: 16 ^h 02 ^m R ^o : 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	32.9	+13	34.5	127	27.8	+21	26.8	20	60 N	2 06	3 20	4 11	6 56	67	0 21	35	
1	195	33.0		35.3	141	58.0 ¹¹²		24.8	20	58	29	33	19	7 12	65	0 05	37	
2	210	33.1		36.1	156	28.2 ¹¹²		22.8	20	56	2 46	44	27	26	63	***	***	***
3	225	33.2		36.9	170	58.4 ¹¹²		20.6	22	54	3 01	3 53	34	37	62	***	***	***
4	240	33.3		37.7	185	28.7 ¹¹³		18.3	23	52	13	4 02	40	48	60	***	***	***
5	255	33.4	+13	38.5	199	58.9 ¹¹²	+21	16.0	23	50	3 24	4 09	4 45	7 57	60	***	***	***
6	270	33.5	+13	39.3	214	29.1 ¹¹²	+21	13.5	25	45	3 46	4 25	4 57	8 16	58	23	43	38
7	285	33.6		40.1	228	59.3 ¹¹²		10.9	26	40	4 02	37	5 06	32	56	28	40	
8	300	33.7		40.9	243	29.5 ¹¹²		08.2	27	35	16	48	14	45	55	16	41	
9	315	33.8		41.7	257	59.8 ¹¹³		05.4	28	30	27	4 56	22	8 57	54	23	05	42
10	330	33.9		42.5	272	30.0 ¹¹²	+21	02.5	29	20	44	5 11	34	9 17	52	22	46	45
11	345	34.0	+13	43.3	287	00.2 ¹¹²	+20	59.5	30	10 N	4 57	5 23	5 44	9 34	51	22	29	47
12	0	34.1	+13	44.1	301	30.5 ¹¹³	+20	56.4	31	0	5 08	5 33	5 54	9 50	49	22	14	49
13	15	34.2		44.9	316	00.7 ¹¹²		53.2	32	10 S	18	43	6 04	10 06	48	21	58	51
14	30	34.3		45.7	330	30.9 ¹¹²		49.9	33	20	26	5 52	14	23	47	42	52	
15	45	34.4		46.5	345	01.2 ¹¹³		46.5	34	30	33	6 01	26	43	44	23	55	
16	60	34.5		47.3	359	31.4 ¹¹²		43.0	35	35	37	07	33	10 55	43	21	11	57
17	75	34.6	+13	48.1	14	01.7 ¹¹³	+20	39.4	36	40	5 40	6 12	6 40	11 08	42	20	58	58
18	90	34.7	+13	48.9	28	31.9 ¹¹²	+20	35.6	38	45	5 44	6 19	6 49	11 24	40	20	43	60
19	105	34.8		49.7	43	02.2 ¹¹³		31.8	38	50	48	26	7 00	43	38	24	63	
20	120	34.9		50.5	57	32.5 ¹¹³		27.9	39	52	49	29	04	11 52	37	16	63	
21	135	35.0		51.3	72	02.7 ¹¹²		23.9	40	54	51	33	10	12 02	36	20	06	65
22	150	35.1		52.1	86	33.0 ¹¹³		19.7	42	56	53	36	16	13	35	19	54	67
23	165	35.2		52.9	101	03.3 ¹¹³		15.5	42	58	54	41	22	27	32	41	69	
24	180	35.3	+13	53.7	115	33.6 ¹¹³	+20	11.2	43	60 S	5 56	6 45	7 30	12 42	30	19	26	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 40 ^m 8		Mag: -4.7 PMG: 14 ^h 45 ^m		Mag: -0.1 PMG: 20 ^h 08 ^m		Mag: -2.0 PMG: 12 ^h 48 ^m		Mag: +0.3 PMG: 23 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	214	23.9	138	26.9	+27	30.2	57	11.1	+11	58.1	167	35.4	+16	41.0	9	50.5	-7	14.8
1	229	26.4	153	27.7		30.4	72	13.3		57.9	182	37.3		41.2	24	53.2		14.7
2	244	28.9	168	28.5		30.6	87	15.5		57.7	197	39.2		41.4	39	55.8		14.7
3	259	31.3	183	29.3		30.7	102	17.6		57.4	212	41.1		41.5	54	58.4		14.6
4	274	33.8	198	30.1		30.9	117	19.8		57.2	227	42.9		41.7	70	01.1		14.5
5	289	36.3	213	30.9	+27	31.1	132	22.0	+11	57.0	242	44.8	+16	41.8	85	03.7	-7	14.5
6	304	38.7	228	31.7	+27	31.3	147	24.2	+11	56.8	257	46.7	+16	42.0	100	06.4	-7	14.4
7	319	41.2	243	32.5		31.5	162	26.3		56.6	272	48.6		42.2	115	09.0		14.3
8	334	43.7	258	33.3		31.6	177	28.5		56.4	287	50.4		42.3	130	11.6		14.3
9	349	46.1	273	34.1		31.8	192	30.7		56.1	302	52.3		42.5	145	14.3		14.2
10	4	48.6	288	34.9		32.0	207	32.9		55.9	317	54.2		42.7	160	16.9		14.1
11	19	51.1	303	35.8	+27	32.2	222	35.0	+11	55.7	332	56.1	+16	42.8	175	19.6	-7	14.1
12	34	53.5	318	36.6	+27	32.3	237	37.2	+11	55.5	347	57.9	+16	43.0	190	22.2	-7	14.0
13	49	56.0	333	37.4		32.5	252	39.4		55.3	2	59.8		43.1	205	24.8		13.9
14	64	58.4	348	38.2		32.7	267	41.5		55.0	18	01.7		43.3	220	27.5		13.9
15	80	00.9	3	39.1		32.8	282	43.7		54.8	33	03.6		43.5	235	30.1		13.8
16	95	03.4	18	39.9		33.0	297	45.9		54.6	48	05.4		43.6	250	32.8		13.7
17	110	05.8	33	40.7	+27	33.2	312	48.0	+11	54.4	63	07.3	+16	43.8	265	35.4	-7	13.7
18	125	08.3	48	41.5	+27	33.4	327	50.2	+11	54.2	78	09.2	+16	44.0	280	38.0	-7	13.6
19	140	10.8	63	42.4		33.5	342	52.3		53.9	93	11.1		44.1	295	40.7		13.5
20	155	13.2	78	43.2		33.7	357	54.5		53.7	108	12.9		44.3	310	43.3		13.5
21	170	15.7	93	44.1		33.8	12	56.7		53.5	123	14.8		44.5	325	46.0		13.4
22	185	18.2	108	44.9		34.0	27	58.8		53.3	138	16.7		44.6	340	48.6		13.4
23	200	20.6	123	45.7		34.2	43	01.0		53.1	153	18.6		44.8	355	51.2		13.3
24	215	23.1	138	46.6	+27	34.3	58	03.1	+11	52.8	168	20.4	+16	44.9	10	53.9	-7	13.2
Dif	—		+8		+2		+22		-2		+19		+2		+26		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 5 ^d 7	PHE {	4 ^h : 55°1 12 ^h : 55°3 20 ^h : 55°5 R°: 49 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 6								PMG: 16 ^h 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	35.3	+13 53.7	115	33.6	+20 11.2		60 N	19 49	20 41	21 58	8 03 75	0 56 26		
1	195	35.4		130	03.9 ¹¹³	06.8	44	58	40	27	34	17 72	42 28		
2	210	35.5	55.3	144	34.2 ¹¹³	+20 02.2	46	56	32	16	21 15	29 70	30 30		
3	225	35.5	56.1	159	04.5 ¹¹³	+19 57.6	46	54	25	20 06	20 59	39 68	19 32		
4	240	35.6	56.9	173	34.8 ¹¹³	52.9	47	52	19	19 57	46	48 67	09 34		
5	255	35.7	+13 57.7	188	05.2 ¹¹⁴	+19 48.1	48	50	19 13	19 49	20 35	8 57 64	0 01 35		
6	270	35.8	+13 58.5	202	35.5 ¹¹³	+19 43.1	50	45	19 01	19 33	20 13	9 14 62	*** ** *		
7	285	35.9	+13 59.3	217	05.9 ¹¹⁴	38.1	50	40	18 51	20	19 55	28 60	*** ** *		
8	300	36.0	+14 00.0	231	36.2 ¹¹³	33.0	51	35	42	09	42	40 58	23 57 38		
9	315	36.1	+14 00.8	246	06.6 ¹¹⁴	27.8	52	30	35	19 00	30	9 51 56	47 40		
10	330	36.2	01.6	260	37.0 ¹¹⁴	22.4	54	20	22	18 45	19 12	10 09 53	31 43		
11	345	36.3	+14 02.4	275	07.3 ¹¹³	+19 17.0	54	10 N	18 11	18 33	18 58	10 25 51	23 16 46		
12	0	36.4	+14 03.2	289	37.7 ¹¹⁴	+19 11.5	55	0	18 01	18 22	18 47	10 39 49	23 03 48		
13	15	36.5	04.0	304	08.1 ¹¹⁴	05.9	56	10 S	17 51	12	37	10 54 47	22 49 51		
14	30	36.6	04.8	318	38.6 ¹¹⁵	+19 00.2	57	20	40	18 03	29	11 10 44	34 54		
15	45	36.7	05.6	333	09.0 ¹¹⁴	+18 54.4	58	30	28	17 53	21	27 42	18 57		
16	60	36.8	06.4	347	39.4 ¹¹⁴	48.5	59	35	21	47	17	38 40	22 08 59		
17	75	36.9	+14 07.1	2	09.9 ¹¹⁵	+18 42.4	61	40	17 13	17 41	18 13	11 50 38	21 56 61		
18	90	37.0	+14 07.9	16	40.3 ¹¹⁴	+18 36.4	60	45	17 04	17 35	18 09	12 04 35	21 43 64		
19	105	37.0	08.7	31	10.8 ¹¹⁵	30.2	62	50	16 53	27	05	21 32	27 67		
20	120	37.1	09.5	45	41.3 ¹¹⁵	23.9	63	52	48	24	03	29 31	19 69		
21	135	37.2	10.3	60	11.7 ¹¹⁴	17.5	64	54	43	20	02	38 29	11 70		
22	150	37.3	11.1	74	42.2 ¹¹⁵	11.0	65	56	37	16	18 00	48 27	21 01 72		
23	165	37.4	11.9	89	12.7 ¹¹⁵	+18 04.4	66	58	30	12	17 58	12 59 25	20 50 75		
24	180	37.5	+14 12.7	103	43.3 ¹¹⁶	+17 57.8	66	60 S	16 22	17 07	17 56	13 12 23	20 37 78		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 36 ^m 9		Mag: -4.7 PMG: 14 ^h 44 ^m		Mag: -0.1 PMG: 20 ^h 05 ^m		Mag: -2.0 PMG: 12 ^h 45 ^m		Mag: +0.3 PMG: 23 ^h 12 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	215	23.1	138	46.6	+27 34.3		58	03.1	+11 52.8	168	20.4	+16 44.9	10 53.9	-7 13.2	
1	230	25.5	153	47.4	34.5		73	05.3	52.6	183	22.3	45.1	25 56.5	13.2	
2	245	28.0	168	48.3	34.7		88	07.4	52.4	198	24.2	45.3	40 59.1	13.1	
3	260	30.5	183	49.2	34.8		103	09.6	52.2	213	26.1	45.4	56 01.8	13.0	
4	275	32.9	198	50.0	35.0		118	11.7	51.9	228	27.9	45.6	71 04.4	13.1	
5	290	35.4	213	50.9	+27 35.1		133	13.9	+11 51.7	243	29.8	+16 45.8	86 07.1	-7 12.9	
6	305	37.9	228	51.7	+27 35.3		148	16.0	+11 51.5	258	31.7	+16 45.9	101 09.7	-7 12.8	
7	320	40.3	243	52.6	35.5		163	18.2	51.3	273	33.6	46.1	116 12.3	12.8	
8	335	42.8	258	53.5	35.6		178	20.3	51.0	288	35.4	46.2	131 15.0	12.7	
9	350	45.3	273	54.3	35.8		193	22.5	50.8	303	37.3	46.4	146 17.6	12.6	
10	5	47.7	288	55.2	35.9		208	24.6	50.6	318	39.2	46.6	161 20.3	12.6	
11	20	50.2	303	56.1	+27 36.1		223	26.8	+11 50.4	333	41.1	+16 46.7	176 22.9	-7 12.5	
12	35	52.7	318	57.0	+27 36.2		238	28.9	+11 50.1	348	42.9	+16 46.9	191 25.5	-7 12.4	
13	50	55.1	333	57.8	36.4		253	31.0	49.9	3	44.8	47.1	206 28.2	12.4	
14	65	57.6	348	58.7	36.5		268	33.2	49.7	18	46.7	47.2	221 30.8	12.3	
15	81	00.0	3	59.6	36.7		283	35.3	49.4	33	48.6	47.4	236 33.5	12.3	
16	96	02.5	19	00.5	36.8		298	37.5	49.2	48	50.4	47.6	251 36.1	12.2	
17	111	05.0	34	01.4	+27 37.0		313	39.6	+11 49.0	63	52.3	+16 47.7	266 38.7	-7 12.1	
18	126	07.4	49	02.3	+27 37.1		328	41.7	+11 48.8	78	54.2	+16 47.9	281 41.4	-7 12.1	
19	141	09.9	64	03.2	37.3		343	43.9	48.5	93	56.0	48.0	296 44.0	12.0	
20	156	12.4	79	04.1	37.4		358	46.0	48.3	108	57.9	48.2	311 46.7	11.9	
21	171	14.8	94	05.0	37.6		13	48.1	48.1	123	59.8	48.4	326 49.3	11.9	
22	186	17.3	109	05.9	37.7		28	50.3	47.8	139	01.7	48.5	341 51.9	11.8	
23	201	19.8	124	06.8	37.8		43	52.4	47.6	154	03.5	48.7	356 54.6	11.7	
24	216	22.2	139	07.7	+27 38.0		58	54.5	+11 47.4	169	05.4	+16 48.9	11 57.2	-7 11.7	
Dif	—		+9		+2		+21		-2	+19		+2	+26		+

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 4			Edad: 6 ^d 7 PHE { SD: 15'1 PMG: 17 ^h 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	37.5	+14	12.7	103	43.3	+17 57.8	60 N	1 56	3 14	4 05	9 18	80	1 22	20
1	195	37.6		13.4	118	13.8 ¹¹⁵	51.0 ⁶⁸	58	2 21	27	14	29	77	10	23
2	210	37.7		14.2	132	44.3 ¹¹⁵	44.2 ⁶⁸	56	40	39	22	39	74	1 00	25
3	225	37.8		15.0	147	14.9 ¹¹⁶	37.2 ⁷⁰	54	2 55	49	29	47	72	0 51	27
4	240	37.9		15.8	161	45.4 ¹¹⁵	30.2 ⁷⁰	52	3 08	3 57	36	9 55	70	43	29
5	255	38.0	+14	16.6	176	16.0 ¹¹⁶	+17 23.0 ⁷²	50	3 19	4 05	4 41	10 01	69	0 36	30
6	270	38.0	+14	17.4	190	46.6 ¹¹⁶	+17 15.8 ⁷²	45	3 42	4 21	4 53	10 16	65	0 21	33
7	285	38.1		18.1	205	17.2 ¹¹⁶	08.5 ⁷³	40	3 59	34	5 04	28	62	0 08	36
8	300	38.2		18.9	219	47.8 ¹¹⁶	+17 01.1 ⁷⁴	35	4 13	45	12	38	60	** ** *	**
9	315	38.3		19.7	234	18.4 ¹¹⁶	+16 53.6 ⁷⁵	30	25	4 54	20	10 47	58	** ** *	**
10	330	38.4		20.5	248	49.0 ¹¹⁶	46.0 ⁷⁶	20	43	5 10	33	11 02	55	** ** *	**
11	345	38.5	+14	21.3	263	19.7 ¹¹⁷	+16 38.4 ⁷⁶	10 N	4 57	5 22	5 44	11 16	51	** ** *	**
12	0	38.6	+14	22.0	277	50.3 ¹¹⁶	+16 30.6 ⁷⁸	0	5 08	5 33	5 54	11 28	48	23 51	49
13	15	38.7		22.8	292	20.9 ¹¹⁶	22.7 ⁷⁹	10 S	18	43	6 04	41	45	40	52
14	30	38.8		23.6	306	51.6 ¹¹⁷	14.8 ⁷⁹	20	26	5 52	15	11 54	42	28	55
15	45	38.8		24.4	321	22.3 ¹¹⁷	+16 06.8 ⁸⁰	30	34	6 03	27	12 09	39	15	58
16	60	38.9		25.2	335	53.0 ¹¹⁷	+15 58.7 ⁸¹	35	38	08	34	18	37	23 07	60
17	75	39.0	+14	25.9	350	23.6 ¹¹⁶	+15 50.5 ⁸²	40	5 42	6 14	6 42	12 28	34	22 57	64
18	90	39.1	+14	26.7	4	54.3 ¹¹⁷	+15 42.2 ⁸³	45	5 46	6 21	6 52	12 39	32	22 47	66
19	105	39.2		27.5	19	25.0 ¹¹⁷	33.8 ⁸⁴	50	51	29	7 03	12 53	29	34	70
20	120	39.3		28.3	33	55.8 ¹¹⁸	25.4 ⁸⁴	52	52	32	08	13 00	26	28	72
21	135	39.4		29.0	48	26.5 ¹¹⁷	16.8 ⁸⁶	54	54	36	13	07	25	21	74
22	150	39.4		29.8	62	57.2 ¹¹⁷	+15 08.2 ⁸⁶	56	56	40	20	15	23	13	77
23	165	39.5		30.6	77	27.9 ¹¹⁷	+14 59.5 ⁸⁷	58	5 58	45	27	24	20	22 05	79
24	180	39.6	+14	31.4	91	58.7 ¹¹⁸	+14 50.7 ⁸⁸	60 S	6 00	6 50	7 35	13 35	17	21 55	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 32 ^m 9		Mag: -4.7 PMG: 14 ^h 43 ^m		Mag: -0.1 PMG: 20 ^h 02 ^m		Mag: -2.0 PMG: 12 ^h 42 ^m		Mag: +0.3 PMG: 23 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	216	22.2	139	07.7	+27	38.0	58	54.5	+11	47.4	169	05.4	+16	48.9	11	57.2	-7	11.7
1	231	24.7	154	08.6		38.1	73	56.7		47.1	184	07.3		49.0	26	59.8		11.6
2	246	27.2	169	09.5		38.3	88	58.8		46.9	199	09.2		49.2	42	02.5		11.5
3	261	29.6	184	10.4		38.4	104	00.9		46.7	214	11.0		49.3	57	05.1		11.5
4	276	32.1	199	11.4		38.5	119	03.1		46.4	229	12.9		49.5	72	07.8		11.4
5	291	34.5	214	12.3	+27	38.7	134	05.2	+11	46.2	244	14.8	+16	49.7	87	10.4	-7	11.4
6	306	37.0	229	13.2	+27	38.8	149	07.3	+11	46.0	259	16.7	+16	49.8	102	13.0	-7	11.3
7	321	39.5	244	14.1		38.9	164	09.4		45.7	274	18.5		50.0	117	15.7		11.2
8	336	41.9	259	15.1		39.1	179	11.5		45.5	289	20.4		50.2	132	18.3		11.2
9	351	44.4	274	16.0		39.2	194	13.7		45.3	304	22.3		50.3	147	20.9		11.1
10	6	46.9	289	16.9		39.3	209	15.8		45.0	319	24.1		50.5	162	23.6		11.0
11	21	49.3	304	17.9	+27	39.5	224	17.9	+11	44.8	334	26.0	+16	50.6	177	26.2	-7	11.0
12	36	51.8	319	18.8	+27	39.6	239	20.0	+11	44.6	349	27.9	+16	50.8	192	28.9	-7	10.9
13	51	54.3	334	19.8		39.7	254	22.1		44.3	4	29.8		51.0	207	31.5		10.8
14	66	56.7	349	20.7		39.9	269	24.3		44.1	19	31.6		51.1	222	34.1		10.8
15	81	59.2	4	21.7		40.0	284	26.4		43.9	34	33.5		51.3	237	36.8		10.7
16	97	01.6	19	22.6		40.1	299	28.5		43.6	49	35.4		51.4	252	39.4		10.7
17	112	04.1	34	23.6	+27	40.3	314	30.6	+11	43.4	64	37.3	+16	51.6	267	42.1	-7	10.6
18	127	06.6	49	24.5	+27	40.4	329	32.7	+11	43.1	79	39.1	+16	51.8	282	44.7	-7	10.5
19	142	09.0	64	25.5		40.5	344	34.8		42.9	94	41.0		51.9	297	47.3		10.5
20	157	11.5	79	26.4		40.6	359	36.9		42.7	109	42.9		52.1	312	50.0		10.4
21	172	14.0	94	27.4		40.7	14	39.1		42.4	124	44.7		52.3	327	52.6		10.3
22	187	16.4	109	28.4		40.9	29	41.2		42.2	139	46.6		52.4	342	55.2		10.3
23	202	18.9	124	29.3		41.0	44	43.3		41.9	154	48.5		52.6	357	57.9		10.2
24	217	21.4	139	30.3	+27	41.1	59	45.4	+11	41.7	169	50.4	+16	52.7	13	00.5	-7	10.1
Dif	—		+9		+1		+21		-2		+19		+2		+26		+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 3			Edad: 7 ^d 7 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 57'0 R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	39.6	+14	31.4	91	58.7	+14	50.7	60 N	19 54	20 47	22 08	10 38 84	1 42 15			
1	195	39.7		32.1	106	29.4 ¹¹⁷		41.8 ⁸⁹	58	44	32	21 41	46 81	33 18			
2	210	39.8		32.9	121	00.2 ¹¹⁸		32.9 ⁸⁹	56	36	20	21	53 78	25 21			
3	225	39.9		33.7	135	31.0 ¹¹⁸		23.8 ⁹¹	54	29	10	21 05	10 59 76	18 23			
4	240	40.0		34.5	150	01.7 ¹¹⁷		14.7 ⁹¹	52	22	20 01	20 51	11 05 74	12 25			
5	255	40.0	+14	35.2	164	32.5 ¹¹⁸	+14	05.5 ⁹²	50	19 16	19 53	20 39	11 10 72	1 06 27			
6	270	40.1	+14	36.0	179	03.3 ¹¹⁸	+13	56.2 ⁹³	45	19 03	19 36	20 16	11 21 68	0 54 30			
7	285	40.2		36.8	193	34.1 ¹¹⁸		46.9 ⁹³	40	18 53	22	19 58	30 65	44 33			
8	300	40.3		37.5	208	04.9 ¹¹⁸		37.4 ⁹⁵	35	44	11	44	38 62	35 36			
9	315	40.4		38.3	222	35.7 ¹¹⁸		27.9 ⁹⁵	30	36	19 02	32	45 59	27 38			
10	330	40.5		39.1	237	06.5 ¹¹⁸		18.3 ⁹⁶	20	23	18 46	19 13	11 57 55	14 42			
11	345	40.6	+14	39.9	251	37.3 ¹¹⁸	+13	08.7 ⁹⁶	10 N	18 11	18 33	18 59	12 07 52	0 02 46			
12	0	40.6	+14	40.6	266	08.1 ¹¹⁸	+12	58.9 ⁹⁸	0	18 01	18 22	18 47	12 16 49	*** ** *			
13	15	40.7		41.4	280	38.9 ¹¹⁸		49.1 ⁹⁸	10 S	17 50	12	37	26 45	*** ** *			
14	30	40.8		42.2	295	09.7 ¹¹⁸		39.2 ⁹⁹	20	39	18 02	28	36 42	*** ** *			
15	45	40.9		42.9	309	40.5 ¹¹⁸		29.2 ¹⁰⁰	30	26	17 51	19	48 37	*** ** *			
16	60	41.0		43.7	324	11.3 ¹¹⁸		19.2 ¹⁰⁰	35	19	45	15	12 55 35	*** ** *			
17	75	41.0	+14	44.5	338	42.1 ¹¹⁸	+12	09.1 ¹⁰¹	40	17 11	17 39	18 11	13 02 33	*** ** *			
18	90	41.1	+14	45.2	353	12.9 ¹¹⁸	+11	58.9 ¹⁰²	45	17 01	17 32	18 07	13 11 29	23 53 69			
19	105	41.2		46.0	7	43.7 ¹¹⁸		48.6 ¹⁰³	50	16 50	24	02	22 25	44 73			
20	120	41.3		46.8	22	14.5 ¹¹⁸		38.3 ¹⁰³	52	44	20	18 00	26 24	40 75			
21	135	41.4		47.5	36	45.3 ¹¹⁸		27.9 ¹⁰⁴	54	39	16	17 58	32 22	35 77			
22	150	41.5		48.3	51	16.2 ¹¹⁹		17.4 ¹⁰⁵	56	32	12	56	38 19	30 79			
23	165	41.5		49.1	65	47.0 ¹¹⁸	+11	06.8 ¹⁰⁶	58	25	07	54	44 17	24 82			
24	180	41.6	+14	49.8	80	17.8 ¹¹⁸	+10	56.2 ¹⁰⁶	60 S	16 17	17 02	17 51	13 52 14	23 17 85			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 29 ^m 0		Mag: -4.7 PMG: 14 ^h 41 ^m		Mag: -0.1 PMG: 19 ^h 58 ^m		Mag: -2.0 PMG: 12 ^h 39 ^m		Mag: +0.3 PMG: 23 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	217	21.4	139	30.3	+27	41.1	59	45.4	+11	41.7	169	50.4	+16	52.7	13	00.5	-7	10.1
1	232	23.8	154	31.3		41.2	74	47.5		41.5	184	52.2		52.9	28	03.2		10.1
2	247	26.3	169	32.3		41.4	89	49.6		41.2	199	54.1		53.1	43	05.8		10.0
3	262	28.8	184	33.2		41.5	104	51.7		41.0	214	56.0		53.2	58	08.4		10.0
4	277	31.2	199	34.2		41.6	119	53.8		40.7	229	57.9		53.4	73	11.1		09.9
5	292	33.7	214	35.2	+27	41.7	134	55.9	+11	40.5	244	59.7	+16	53.6	88	13.7	-7	09.8
6	307	36.1	229	36.2	+27	41.8	149	58.0	+11	40.3	260	01.6	+16	53.7	103	16.3	-7	09.8
7	322	38.6	244	37.2		41.9	165	00.1		40.0	275	03.5		53.9	118	19.0		09.7
8	337	41.1	259	38.2		42.0	180	02.2		39.8	290	05.3		54.0	133	21.6		09.6
9	352	43.5	274	39.2		42.2	195	04.3		39.5	305	07.2		54.2	148	24.2		09.6
10	7	46.0	289	40.2		42.3	210	06.4		39.3	320	09.1		54.4	163	26.9		09.5
11	22	48.5	304	41.2	+27	42.4	225	08.5	+11	39.0	335	11.0	+16	54.5	178	29.5	-7	09.4
12	37	50.9	319	42.2	+27	42.5	240	10.6	+11	38.8	350	12.8	+16	54.7	193	32.2	-7	09.4
13	52	53.4	334	43.2		42.6	255	12.7		38.6	5	14.7		54.8	208	34.8		09.3
14	67	55.9	349	44.2		42.7	270	14.8		38.3	20	16.6		55.0	223	37.4		09.3
15	82	58.3	4	45.2		42.8	285	16.9		38.1	35	18.4		55.2	238	40.1		09.2
16	98	00.8	19	46.2		42.9	300	19.0		37.8	50	20.3		55.3	253	42.7		09.1
17	113	03.3	34	47.3	+27	43.0	315	21.1	+11	37.6	65	22.2	+16	55.5	268	45.3	-7	09.1
18	128	05.7	49	48.3	+27	43.1	330	23.1	+11	37.3	80	24.1	+16	55.7	283	48.0	-7	09.0
19	143	08.2	64	49.3		43.2	345	25.2		37.1	95	25.9		55.8	298	50.6		08.9
20	158	10.6	79	50.3		43.3	0	27.3		36.8	110	27.8		56.0	313	53.2		08.9
21	173	13.1	94	51.4		43.4	15	29.4		36.6	125	29.7		56.1	328	55.9		08.8
22	188	15.6	109	52.4		43.5	30	31.5		36.3	140	31.5		56.3	343	58.5		08.8
23	203	18.0	124	53.4		43.7	45	33.6		36.1	155	33.4		56.5	359	01.2		08.7
24	218	20.5	139	54.5	+27	43.8	60	35.7	+11	35.8	170	35.3	+16	56.6	14	03.8	-7	08.6
Dif	—		+10		+1		+21		-2		+19		+2		+26		+	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 2				Edad: 8 ^d 7 PHE { SD: 15°6 PMG: 19 ^h 16 ^m 4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/9 R°: 50 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	41.6	+14	49.8	80	17.8	+10	56.2	60 N	1	46	3	07	4	00	12	02
1	195	41.7		50.6	94	48.6 ¹¹⁸		45.5 ¹⁰⁷	58	2	13		21	09		07	83
2	210	41.8		51.4	109	19.3 ¹¹⁷		34.8 ¹⁰⁷	56		33		33	18		11	81
3	225	41.9		52.1	123	50.1 ¹¹⁸		24.0 ¹⁰⁸	54	2	49		44	25		15	79
4	240	41.9		52.9	138	20.9 ¹¹⁸		13.1 ¹⁰⁹	52	3	03		3	53		19	76
5	255	42.0	+14	53.7	152	51.7 ¹¹⁸	+10	02.1 ¹¹⁰	50	3	15		4	01	4	38	12
6	270	42.1	+14	54.4	167	22.5 ¹¹⁸	+9	51.1 ¹¹⁰	45	3	38		4	18	4	50	12
7	285	42.2		55.2	181	53.2 ¹¹⁷		40.0 ¹¹¹	40	3	56		32	5	01	35	67
8	300	42.2		55.9	196	24.0 ¹¹⁸		28.9 ¹¹¹	35	4	11		43	10		40	64
9	315	42.3		56.7	210	54.7 ¹¹⁷		17.7 ¹¹²	30		22		4	53	18	44	61
10	330	42.4		57.5	225	25.5 ¹¹⁸	+9	06.4 ¹¹³	20		41		5	08	31	52	56
11	345	42.5	+14	58.2	239	56.2 ¹¹⁷	+8	55.1 ¹¹³	10 N	4	56		5	21	5	43	12
12	0	42.6	+14	59.0	254	26.9 ¹¹⁷	+8	43.7 ¹¹⁴	0	5	08		5	32	5	54	13
13	15	42.6	+14	59.7	268	57.6 ¹¹⁷		32.3 ¹¹⁴	10 S		18		43	6	04	11	45
14	30	42.7	+15	00.5	283	28.3 ¹¹⁷		20.8 ¹¹⁵	20		27		5	53	16	18	41
15	45	42.8		01.3	297	59.0 ¹¹⁷	+8	09.2 ¹¹⁶	30		35		6	04	29	25	37
16	60	42.9		02.0	312	29.7 ¹¹⁷	+7	57.6 ¹¹⁶	35		40		10	36		30	34
17	75	42.9	+15	02.8	327	00.3 ¹¹⁶	+7	45.9 ¹¹⁷	40	5	44		6	16	6	44	13
18	90	43.0	+15	03.5	341	31.0 ¹¹⁷	+7	34.2 ¹¹⁷	45	5	48		6	23	6	54	13
19	105	43.1		04.3	356	01.6 ¹¹⁶		22.4 ¹¹⁸	50		53		31	7	06	47	24
20	120	43.2		05.0	10	32.2 ¹¹⁶	+7	10.5 ¹¹⁹	52		55		35	11		50	22
21	135	43.3		05.8	25	02.8 ¹¹⁶	+6	58.6 ¹¹⁹	54		57		39	17		54	20
22	150	43.3		06.6	39	33.4 ¹¹⁶		46.7 ¹¹⁹	56	5	59		44	24		13	57
23	165	43.4		07.3	54	03.9 ¹¹⁵		34.7 ¹²⁰	58	6	02		49	31		14	01
24	180	43.5	+15	08.1	68	34.5 ¹¹⁶	+6	22.6 ¹²¹	60 S	6	04		6	54	7	39	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 9 ^h 25 ^m 1		Mag: -4.7 PMG: 14 ^h 39 ^m		Mag: 0.0 PMG: 19 ^h 55 ^m		Mag: -2.0 PMG: 12 ^h 36 ^m		Mag: +0.3 PMG: 23 ^h 00 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	218	20.5	139	54.5	+27	60	35.7	+11	35.8	170	35.3	+16	56.6	14	03.8	-7	08.6
1	233	23.0	154	55.5		75	37.7		35.6	185	37.2		56.8	29	06.4		08.6
2	248	25.4	169	56.6		90	39.8		35.3	200	39.0		56.9	44	09.1		08.5
3	263	27.9	184	57.6		105	41.9		35.1	215	40.9		57.1	59	11.7		08.4
4	278	30.4	199	58.7		120	44.0		34.8	230	42.8		57.3	74	14.3		08.4
5	293	32.8	214	59.7	+27	135	46.1	+11	34.6	245	44.6	+16	57.4	89	17.0	-7	08.3
6	308	35.3	230	00.8	+27	150	48.1	+11	34.3	260	46.5	+16	57.6	104	19.6	-7	08.3
7	323	37.7	245	01.8		165	50.2		34.1	275	48.4		57.8	119	22.2		08.2
8	338	40.2	260	02.9		180	52.3		33.8	290	50.3		57.9	134	24.9		08.1
9	353	42.7	275	04.0		195	54.4		33.6	305	52.1		58.1	149	27.5		08.1
10	8	45.1	290	05.0		210	56.4		33.3	320	54.0		58.2	164	30.2		08.0
11	23	47.6	305	06.1	+27	225	58.5	+11	33.1	335	55.9	+16	58.4	179	32.8	-7	07.9
12	38	50.1	320	07.2	+27	241	00.6	+11	32.8	350	57.7	+16	58.6	194	35.4	-7	07.9
13	53	52.5	335	08.3		256	02.7		32.6	5	59.6		58.7	209	38.1		07.8
14	68	55.0	350	09.3		271	04.7		32.3	21	01.5		58.9	224	40.7		07.8
15	83	57.5	5	10.4		286	06.8		32.1	36	03.4		59.0	239	43.3		07.7
16	98	59.9	20	11.5		301	08.9		31.8	51	05.2		59.2	254	46.0		07.6
17	114	02.4	35	12.6	+27	316	10.9	+11	31.6	66	07.1	+16	59.4	269	48.6	-7	07.6
18	129	04.9	50	13.7	+27	331	13.0	+11	31.3	81	09.0	+16	59.5	284	51.2	-7	07.5
19	144	07.3	65	14.8		346	15.1		31.1	96	10.8		59.7	299	53.9		07.4
20	159	09.8	80	15.9		1	17.1		30.8	111	12.7	+16	59.8	314	56.5		07.4
21	174	12.2	95	17.0		16	19.2		30.6	126	14.6	+17	00.0	329	59.1		07.3
22	189	14.7	110	18.1		31	21.3		30.3	141	16.5	+17	00.2	345	01.8		07.3
23	204	17.2	125	19.2		46	23.3		30.0	156	18.3		00.3	0	04.4		07.2
24	219	19.6	140	20.3	+27	61	25.4	+11	29.8	171	20.2	+17	00.5	15	07.0	-7	07.1
Dif	—		+11		+1	+21		-3		+19		+2		+26		+1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 0		Edad: 9 ^d 7 PHE { 4 ^h : 58'2 12 ^h : 58'6 20 ^h : 58'9 R°: 50 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	43.5	+15	08.1	68	34.5	+6 22.6	60 N	19 59	20 53	22 18	13 28	90	2 10	13
1	195	43.6		08.8	83	05.0 ¹¹⁵	+6 10.5 ¹²¹	58	49	38	21 49	30 87		07	15
2	210	43.6		09.6	97	35.5 ¹¹⁵	+5 58.4 ¹²¹	56	40	25	27	32 84		04	18
3	225	43.7		10.3	112	06.0 ¹¹⁵	46.2 ¹²²	54	32	14	21 10	34 81		2 02	20
4	240	43.8		11.1	126	36.4 ¹¹⁴	33.9 ¹²³	52	25	20 05	20 56	35 80		1 59	22
5	255	43.8	+15	11.8	141	06.9 ¹¹⁵	+5 21.7 ¹²²	50	19 19	19 56	20 43	13 36	78	1 57	24
6	270	43.9	+15	12.6	155	37.3 ¹¹⁴	+5 09.3 ¹²⁴	45	19 06	19 38	20 19	13 39	73	1 53	28
7	285	44.0		13.3	170	07.6 ¹¹³	+4 56.9 ¹²⁴	40	18 55	24	20 00	42 69		49	31
8	300	44.1		14.1	184	38.0 ¹¹⁴	44.5 ¹²⁴	35	46	13	19 45	44 66		45	35
9	315	44.1		14.8	199	08.3 ¹¹³	32.1 ¹²⁴	30	38	19 03	33	45 64		42	37
10	330	44.2		15.6	213	38.6 ¹¹³	19.6 ¹²⁵	20	24	18 47	19 14	48 59		37	42
11	345	44.3	+15	16.3	228	08.9 ¹¹³	+4 07.0 ¹²⁶	10 N	18 12	18 34	18 59	13 51	54	1 32	46
12	0	44.4	+15	17.1	242	39.2 ¹¹³	+3 54.4 ¹²⁶	0	18 00	18 22	18 47	13 54	50	1 28	49
13	15	44.4		17.8	257	09.4 ¹¹²	41.8 ¹²⁶	10 S	17 49	11	36	56 47		24	53
14	30	44.5		18.6	271	39.6 ¹¹²	29.1 ¹²⁷	20	38	18 01	27	13 59	42	19	57
15	45	44.6		19.3	286	09.7 ¹¹¹	16.4 ¹²⁷	30	25	17 49	18	14 02	38	13	62
16	60	44.6		20.1	300	39.9 ¹¹²	+3 03.7 ¹²⁷	35	17	43	13	04 35		10	65
17	75	44.7	+15	20.8	315	10.0 ¹¹¹	+2 50.9 ¹²⁸	40	17 08	17 37	18 09	14 06	32	1 06	68
18	90	44.8	+15	21.6	329	40.0 ¹¹⁰	+2 38.1 ¹²⁸	45	16 58	17 29	18 04	14 08	29	1 02	72
19	105	44.9		22.3	344	10.0 ¹¹⁰	25.3 ¹²⁸	50	46	21	17 59	11 24		0 57	76
20	120	44.9		23.1	358	40.0 ¹¹⁰	+2 12.5 ¹²⁸	52	41	17	57	12 23		55	77
21	135	45.0		23.8	13	10.0 ¹¹⁰	+1 59.6 ¹²⁹	54	35	12	54	14 20		52	80
22	150	45.1		24.5	27	39.9 ¹⁰⁹	46.6 ¹³⁰	56	28	08	52	15 18		49	83
23	165	45.1		25.3	42	09.8 ¹⁰⁹	33.7 ¹²⁹	58	20	17 03	50	17 15		46	85
24	180	45.2	+15	26.0	56	39.6 ¹⁰⁸	+1 20.7 ¹³⁰	60 S	16 11	16 57	17 47	14 19	12	0 42	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 21 ^m 2		Mag: -4.7 PMG: 14 ^h 38 ^m		Mag: 0.0 PMG: 19 ^h 52 ^m		Mag: -2.0 PMG: 12 ^h 33 ^m		Mag: +0.3 PMG: 22 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	219	19.6	140	20.3	+27	45.9	61	25.4	+11	29.8	171	20.2	+17	00.5	15	07.0	-7	07.1
1	234	22.1	155	21.4		46.0	76	27.5		29.5	186	22.1		00.6	30	09.7		07.1
2	249	24.6	170	22.5		46.0	91	29.5		29.3	201	23.9		00.8	45	12.3		07.0
3	264	27.0	185	23.6		46.1	106	31.6		29.0	216	25.8		01.0	60	14.9		06.9
4	279	29.5	200	24.8		46.2	121	33.6		28.8	231	27.7		01.1	75	17.6		06.9
5	294	32.0	215	25.9	+27	46.3	136	35.7	+11	28.5	246	29.5	+17	01.3	90	20.2	-7	06.8
6	309	34.4	230	27.0	+27	46.3	151	37.7	+11	28.2	261	31.4	+17	01.5	105	22.8	-7	06.8
7	324	36.9	245	28.2		46.4	166	39.8		28.0	276	33.3		01.6	120	25.5		06.7
8	339	39.4	260	29.3		46.5	181	41.8		27.7	291	35.2		01.8	135	28.1		06.6
9	354	41.8	275	30.4		46.6	196	43.9		27.5	306	37.0		01.9	150	30.8		06.6
10	9	44.3	290	31.6		46.6	211	46.0		27.2	321	38.9		02.1	165	33.4		06.5
11	24	46.7	305	32.7	+27	46.7	226	48.0	+11	26.9	336	40.8	+17	02.3	180	36.0	-7	06.4
12	39	49.2	320	33.8	+27	46.8	241	50.1	+11	26.7	351	42.6	+17	02.4	195	38.7	-7	06.4
13	54	51.7	335	35.0		46.8	256	52.1		26.4	6	44.5		02.6	210	41.3		06.3
14	69	54.1	350	36.1		46.9	271	54.1		26.2	21	46.4		02.7	225	43.9		06.3
15	84	56.6	5	37.3		47.0	286	56.2		25.9	36	48.3		02.9	240	46.6		06.2
16	99	59.1	20	38.5		47.0	301	58.2		25.6	51	50.1		03.1	255	49.2		06.1
17	115	01.5	35	39.6	+27	47.1	317	00.3	+11	25.4	66	52.0	+17	03.2	270	51.8	-7	06.1
18	130	04.0	50	40.8	+27	47.2	332	02.3	+11	25.1	81	53.9	+17	03.4	285	54.5	-7	06.0
19	145	06.5	65	42.0		47.2	347	04.4		24.9	96	55.7		03.5	300	57.1		06.0
20	160	08.9	80	43.1		47.3	2	06.4		24.6	111	57.6		03.7	315	59.7		05.9
21	175	11.4	95	44.3		47.3	17	08.5		24.3	126	59.5		03.9	331	02.4		05.8
22	190	13.8	110	45.5		47.4	32	10.5		24.1	142	01.3		04.0	346	05.0		05.8
23	205	16.3	125	46.6		47.5	47	12.5		23.8	157	03.2		04.2	1	07.6		05.7
24	220	18.8	140	47.8	+27	47.5	62	14.6	+11	23.5	172	05.1	+17	04.3	16	10.3	-7	05.6
Dif	—		+11	+1		+20	-3		+19	+2		+26	+1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9			Edad: 10 ^d 7 SD: 16 ^h 1 PMG: 20 ^h 56 ^m	PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 5 20 ^h : 59 ^m 8 R°: 53 ^m											
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	45.2	+15	26.0	56	39.6	+1	20.7	60 N	1 35	3 00	3 54	14 58	94	2 23	12
1	195	45.3		26.8	71	09.4 ¹⁰⁸	+1	07.7 ¹³⁰	58	2 04	15	4 04	57	91	22	16
2	210	45.4		27.5	85	39.2 ¹⁰⁸	+0	54.7 ¹³⁰	56	26	28	13	56	88	22	18
3	225	45.4		28.3	100	08.9 ¹⁰⁷		41.7 ¹³⁰	54	43	39	21	55	85	22	20
4	240	45.5		29.0	114	38.6 ¹⁰⁷		28.6 ¹³¹	52	2 58	49	28	55	82	21	23
5	255	45.6	+15	29.7	129	08.2 ¹⁰⁶	+0	15.5 ¹³¹	50	3 10	3 57	4 34	14 54	80	2 21	25
6	270	45.6	+15	30.5	143	37.8 ¹⁰⁶	+0	02.4 ¹³¹	45	3 35	4 15	4 47	14 52	76	2 21	28
7	285	45.7		31.2	158	07.3 ¹⁰⁵	-0	10.7 ¹³¹	40	3 53	29	4 59	51	72	20	32
8	300	45.8		32.0	172	36.8 ¹⁰⁵		23.9 ¹³²	35	4 08	41	5 08	50	68	20	35
9	315	45.8		32.7	187	06.3 ¹⁰⁵		37.0 ¹³¹	30	20	4 51	16	49	65	19	38
10	330	45.9		33.4	201	35.7 ¹⁰⁴	-0	50.2 ¹³²	20	40	5 07	30	47	61	19	42
11	345	46.0	+15	34.2	216	05.1 ¹⁰⁴	-1	03.4 ¹³²	10 N	4 55	5 20	5 42	14 45	57	2 18	47
12	0	46.0	+15	34.9	230	34.4 ¹⁰³	-1	16.6 ¹³²	0	5 07	5 32	5 53	14 44	52	2 17	51
13	15	46.1		35.7	245	03.6 ¹⁰²		29.8 ¹³²	10 S	18	43	6 05	43	48	17	55
14	30	46.2		36.4	259	32.8 ¹⁰²		43.0 ¹³²	20	27	5 54	16	41	44	16	59
15	45	46.2		37.1	274	02.0 ¹⁰²	-1	56.2 ¹³²	30	37	6 05	30	40	39	15	65
16	60	46.3		37.9	288	31.1 ¹⁰¹	-2	09.5 ¹³³	35	41	11	37	39	36	15	67
17	75	46.4	+15	38.6	303	00.1 ¹⁰⁰	-2	22.7 ¹³²	40	5 46	6 18	6 46	14 38	33	2 14	71
18	90	46.4	+15	39.3	317	29.1 ¹⁰⁰	-2	35.9 ¹³²	45	5 51	6 25	6 56	14 37	29	2 14	74
19	105	46.5		40.1	331	58.1 ¹⁰⁰	-2	49.2 ¹³³	50	56	34	7 09	35	26	13	78
20	120	46.6		40.8	346	27.0 ⁹⁹	-3	02.4 ¹³²	52	5 58	38	14	35	23	12	81
21	135	46.6		41.6	0	55.8 ⁹⁸		15.7 ¹³³	54	6 00	43	21	34	21	12	83
22	150	46.7		42.3	15	24.6 ⁹⁸		28.9 ¹³²	56	03	47	27	33	19	12	85
23	165	46.8		43.0	29	53.3 ⁹⁷		42.1 ¹³²	58	05	52	35	32	17	11	88
24	180	46.8	+15	43.8	44	21.9 ⁹⁶	-3	55.4 ¹³³	60 S	6 08	6 58	7 44	14 31	14	2 10	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 17 ^m 2		Mag: -4.7 PMG: 14 ^h 36 ^m		Mag: 0.0 PMG: 19 ^h 48 ^m		Mag: -2.0 PMG: 12 ^h 30 ^m		Mag: +0.3 PMG: 22 ^h 51 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	220	18.8	140	47.8	+27	47.5	62	14.6	+11	23.5	172	05.1	+17	04.3	16	10.3	-7	05.6
1	235	21.2	155	49.0		47.6	77	16.6		23.3	187	06.9		04.5	31	12.9		05.6
2	250	23.7	170	50.2		47.6	92	18.7		23.0	202	08.8		04.7	46	15.5		05.5
3	265	26.2	185	51.4		47.7	107	20.7		22.7	217	10.7		04.8	61	18.2		05.5
4	280	28.6	200	52.6		47.7	122	22.7		22.5	232	12.6		05.0	76	20.8		05.4
5	295	31.1	215	53.8	+27	47.8	137	24.8	+11	22.2	247	14.4	+17	05.1	91	23.4	-7	05.3
6	310	33.6	230	55.0	+27	47.9	152	26.8	+11	21.9	262	16.3	+17	05.3	106	26.1	-7	05.3
7	325	36.0	245	56.2		47.9	167	28.8		21.7	277	18.2		05.5	121	28.7		05.2
8	340	38.5	260	57.4		48.0	182	30.9		21.4	292	20.0		05.6	136	31.3		05.2
9	355	41.0	275	58.6		48.0	197	32.9		21.1	307	21.9		05.8	151	34.0		05.1
10	10	43.4	290	59.8		48.1	212	34.9		20.9	322	23.8		05.9	166	36.6		05.0
11	25	45.9	306	01.0	+27	48.1	227	37.0	+11	20.6	337	25.6	+17	06.1	181	39.2	-7	05.0
12	40	48.3	321	02.3	+27	48.2	242	39.0	+11	20.3	352	27.5	+17	06.3	196	41.9	-7	04.9
13	55	50.8	336	03.5		48.2	257	41.0		20.1	7	29.4		06.4	211	44.5		04.9
14	70	53.3	351	04.7		48.2	272	43.0		19.8	22	31.2		06.6	226	47.1		04.8
15	85	55.7	6	05.9		48.3	287	45.1		19.5	37	33.1		06.7	241	49.7		04.7
16	100	58.2	21	07.2		48.3	302	47.1		19.3	52	35.0		06.9	256	52.4		04.7
17	116	00.7	36	08.4	+27	48.4	317	49.1	+11	19.0	67	36.9	+17	07.0	271	55.0	-7	04.6
18	131	03.1	51	09.6	+27	48.4	332	51.1	+11	18.7	82	38.7	+17	07.2	286	57.6	-7	04.5
19	146	05.6	66	10.9		48.5	347	53.2		18.5	97	40.6		07.4	302	00.3		04.5
20	161	08.1	81	12.1		48.5	2	55.2		18.2	112	42.5		07.5	317	02.9		04.4
21	176	10.5	96	13.4		48.5	17	57.2		17.9	127	44.3		07.7	332	05.5		04.4
22	191	13.0	111	14.6		48.6	32	59.2		17.6	142	46.2		07.8	347	08.2		04.3
23	206	15.4	126	15.9		48.6	48	01.2		17.4	157	48.1		08.0	2	10.8		04.2
24	221	17.9	141	17.1	+27	48.7	63	03.2	+11	17.1	172	49.9	+17	08.2	17	13.4	-7	04.2
Dif	—		+12		0		+20		-3		+19		+2		+26		+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 8			Edad: 11 ^d 7 PHE { SD: 16'3 PMG: 21 ^h 49 ^m 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'6 R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m
0	180	46.8	+15	43.8	44	21.9	-3 55.4	60 N	20 04	20 59	22 30	16 32	97	2 35	15
1	195	46.9		44.5	58	50.5	-4 08.6	58	19 53	43	21 57	28	93	38	17
2	210	46.9		45.2	73	19.1	21.8	56	44	30	34	24	90	40	20
3	225	47.0		45.9	87	47.5	35.0	54	36	18	15	20	88	42	22
4	240	47.1		46.7	102	15.9	-4 48.2	52	29	08	21 00	17	85	44	25
5	255	47.1	+15	47.4	116	44.3	-5 01.4	50	19 22	20 00	20 47	16 14	83	2 46	27
6	270	47.2	+15	48.1	131	12.6	-5 14.6	45	19 08	19 41	20 22	16 08	78	2 49	32
7	285	47.3		48.9	145	40.8	27.7	40	18 57	27	20 03	16 03	74	52	35
8	300	47.3		49.6	160	08.9	40.8	35	47	15	19 47	15 58	71	55	38
9	315	47.4		50.3	174	37.0	-5 54.0	30	39	19 04	35	54	69	2 57	41
10	330	47.4		51.1	189	05.0	-6 07.1	20	24	18 48	19 15	48	63	3 01	46
11	345	47.5	+15	51.8	203	33.0	-6 20.1	10 N	18 12	18 34	18 59	15 42	59	3 05	50
12	0	47.6	+15	52.5	218	00.9	-6 33.2	0	18 00	18 22	18 47	15 36	56	3 08	54
13	15	47.6		53.2	232	28.7	46.2	10 S	17 49	18 11	36	31	52	12	58
14	30	47.7		54.0	246	56.4	-6 59.2	20	37	17 59	26	25	48	15	63
15	45	47.7		54.7	261	24.1	-7 12.2	30	23	48	16	19	43	20	67
16	60	47.8		55.4	275	51.7	25.1	35	15	41	11	15	40	22	70
17	75	47.9	+15	56.1	290	19.2	-7 38.0	40	17 06	17 34	18 07	15 11	37	3 25	73
18	90	47.9	+15	56.9	304	46.7	-7 50.9	45	16 56	17 26	18 01	15 06	34	3 28	77
19	105	48.0		57.6	319	14.1	-8 03.8	50	43	17	17 56	15 01	29	31	82
20	120	48.0		58.3	333	41.4	16.6	52	37	13	53	14	58	27	33
21	135	48.1		59.0	348	08.6	29.3	54	31	09	51	55	25	35	86
22	150	48.2	+15	59.8	2	35.8	42.1	56	23	17 04	48	52	23	37	89
23	165	48.2	+16	00.5	17	02.9	-8 54.8	58	15	16 58	46	49	19	39	92
24	180	48.3	+16	01.2	31	29.9	-9 07.4	60 S	16 06	16 52	17 43	14 45	16	3 42	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 13 ^m 3		Mag: -4.7 PMG: 14 ^h 34 ^m		Mag: 0.0 PMG: 19 ^h 45 ^m		Mag: -2.0 PMG: 12 ^h 27 ^m		Mag: +0.3 PMG: 22 ^h 47 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	221	17.9	141	17.1	63	03.2	+11	17.1	172	49.9					
1	236	20.4	156	18.4	78	05.3		16.8	187	51.8					
2	251	22.8	171	19.7	93	07.3		16.6	202	53.7					
3	266	25.3	186	20.9	108	09.3		16.3	217	55.5					
4	281	27.8	201	22.2	123	11.3		16.0	232	57.4					
5	296	30.2	216	23.5	138	13.3	+11	15.7	247	59.3					
6	311	32.7	231	24.8	153	15.3	+11	15.5	263	01.2					
7	326	35.2	246	26.0	168	17.3		15.2	278	03.0					
8	341	37.6	261	27.3	183	19.4		14.9	293	04.9					
9	356	40.1	276	28.6	198	21.4		14.6	308	06.8					
10	11	42.6	291	29.9	213	23.4		14.4	323	08.6					
11	26	45.0	306	31.2	228	25.4	+11	14.1	338	10.5					
12	41	47.5	321	32.5	243	27.4	+11	13.8	353	12.4					
13	56	49.9	336	33.8	258	29.4		13.5	8	14.2					
14	71	52.4	351	35.1	273	31.4		13.3	23	16.1					
15	86	54.9	6	36.4	288	33.4		13.0	38	18.0					
16	101	57.3	21	37.7	303	35.4		12.7	53	19.8					
17	116	59.8	36	39.0	318	37.4	+11	12.4	68	21.7					
18	132	02.3	51	40.3	333	39.4	+11	12.2	83	23.6					
19	147	04.7	66	41.7	348	41.4		11.9	98	25.4					
20	162	07.2	81	43.0	3	43.4		11.6	113	27.3					
21	177	09.7	96	44.3	18	45.4		11.3	128	29.2					
22	192	12.1	111	45.6	33	47.4		11.0	143	31.0					
23	207	14.6	126	47.0	48	49.4		10.8	158	32.9					
24	222	17.1	141	48.3	63	51.4	+11	10.5	173	34.8					
Dif	—		+13	0	+20	-3		+19	+2		+26		+1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 7			Edad: 12 ^d 7 PHE { SD: 16 ^h 5 PMG: 22 ^h 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	48.3	+16 01.2	31	29.9	-9 07.4	60 N	1 23	2 54	3 49	18 09	98	2 50	18
1	195	48.3	01.9	45	56.8	79 20.0 ¹²⁶	58	1 56	3 10	4 00	18 01	94	2 55	22
2	210	48.4	02.7	60	23.7	79 32.5 ¹²⁵	56	2 19	23	09	17 54	91	3 00	25
3	225	48.5	03.4	74	50.5	78 45.0 ¹²⁵	54	37	35	17	48 88		05	27
4	240	48.5	04.1	89	17.2	77 -9 57.5 ¹²⁵	52	2 53	45	24	42 86		09	29
5	255	48.6	+16 04.8	103	43.8	76 -10 09.9 ¹²⁴	50	3 06	3 53	4 31	17 37	84	3 13	31
6	270	48.6	+16 05.5	118	10.4	76 -10 22.2 ¹²³	45	3 31	4 12	4 45	17 26	79	3 21	35
7	285	48.7	06.2	132	36.8	74 34.5 ¹²³	40	3 50	26	4 56	17 76		27	39
8	300	48.7	07.0	147	03.2	74 46.7 ¹²²	35	4 06	39	5 06	09 73		33	42
9	315	48.8	07.7	161	29.6	74 -10 58.9 ¹²²	30	18	4 49	14	17 03	70	38	45
10	330	48.9	08.4	175	55.8	72 -11 11.0 ¹²¹	20	38	5 06	29	16 51	66	47	49
11	345	48.9	+16 09.1	190	22.0	72 -11 23.1 ¹²¹	10 N	4 54	5 20	5 42	16 41	62	3 55	53
12	0	49.0	+16 09.8	204	48.0	70 -11 35.0 ¹¹⁹	0	5 07	5 32	5 53	16 32	59	4 02	57
13	15	49.0	10.6	219	14.0	70 47.0 ¹²⁰	10 S	18	43	6 05	23 55		10	60
14	30	49.1	11.3	233	39.9	69 -11 58.8 ¹¹⁸	20	28	5 54	17	13 51		18	64
15	45	49.1	12.0	248	05.8	69 -12 10.6 ¹¹⁸	30	38	6 06	31	16 02	47	27	69
16	60	49.2	12.7	262	31.5	67 22.3 ¹¹⁷	35	42	13	39	15 55	45	32	72
17	75	49.2	+16 13.4	276	57.2	67 -12 33.9 ¹¹⁶	40	5 47	6 20	6 48	15 48	42	4 38	75
18	90	49.3	+16 14.1	291	22.8	66 -12 45.5 ¹¹⁶	45	5 53	6 28	6 59	15 40	38	4 45	79
19	105	49.4	14.8	305	48.3	65 -12 56.9 ¹¹⁴	50	5 58	37	7 12	30 34		53	83
20	120	49.4	15.6	320	13.8	65 -13 08.3 ¹¹⁴	52	6 01	41	17	25 33		4 57	85
21	135	49.5	16.3	334	39.1	63 19.6 ¹¹³	54	03	46	24	20 30		5 01	88
22	150	49.5	17.0	349	04.4	63 30.9 ¹¹³	56	06	51	31	15 27		06	90
23	165	49.6	17.7	3 29.6	62 42.0 ¹¹¹		58	09	6 56	40	08 25		11	94
24	180	49.6	+16 18.4	17 54.7	61 -13 53.1 ¹¹¹		60 S	6 12	7 02	7 49	15 01	22	5 17	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 09 ^m 4		Mag: -4.7 PMG: 14 ^h 31 ^m		Mag: 0.0 PMG: 19 ^h 42 ^m		Mag: -2.0 PMG: 12 ^h 24 ^m		Mag: +0.3 PMG: 22 ^h 43 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	222	17.1	141	48.3	+27 49.3	63 51.4	+11 10.5	173 34.8	+17 12.0	18 16.6	-7 02.7			
1	237	19.5	156	49.7	49.3	78 53.4	10.2	188 36.6	12.1	33 19.2	02.7			
2	252	22.0	171	51.0	49.3	93 55.4	09.9	203 38.5	12.3	48 21.8	02.6			
3	267	24.4	186	52.3	49.3	108 57.4	09.6	218 40.4	12.5	63 24.5	02.6			
4	282	26.9	201	53.7	49.4	123 59.4	09.4	233 42.3	12.6	78 27.1	02.5			
5	297	29.4	216	55.0	+27 49.4	139 01.4	+11 09.1	248 44.1	+17 12.8	93 29.7	-7 02.4			
6	312	31.8	231	56.4	+27 49.4	154 03.4	+11 08.8	263 46.0	+17 12.9	108 32.4	-7 02.4			
7	327	34.3	246	57.8	49.4	169 05.4	08.5	278 47.9	13.1	123 35.0	02.3			
8	342	36.8	261	59.1	49.4	184 07.3	08.2	293 49.7	13.2	138 37.6	02.3			
9	357	39.2	277	00.5	49.4	199 09.3	08.0	308 51.6	13.4	153 40.3	02.2			
10	12	41.7	292	01.9	49.4	214 11.3	07.7	323 53.5	13.6	168 42.9	02.1			
11	27	44.2	307	03.2	+27 49.4	229 13.3	+11 07.4	338 55.3	+17 13.7	183 45.5	-7 02.1			
12	42	46.6	322	04.6	+27 49.4	244 15.3	+11 07.1	353 57.2	+17 13.9	198 48.1	-7 02.0			
13	57	49.1	337	06.0	49.4	259 17.3	06.8	8 59.1	14.0	213 50.8	02.0			
14	72	51.5	352	07.4	49.4	274 19.3	06.5	24 00.9	14.2	228 53.4	01.9			
15	87	54.0	7 08.8	49.4		289 21.2	06.3	39 02.8	14.4	243 56.0	01.8			
16	102	56.5	22 10.2	49.4		304 23.2	06.0	54 04.7	14.5	258 58.7	01.8			
17	117	58.9	37 11.6	+27 49.4		319 25.2	+11 05.7	69 06.5	+17 14.7	274 01.3	-7 01.7			
18	133	01.4	52 12.9	+27 49.4		334 27.2	+11 05.4	84 08.4	+17 14.8	289 03.9	-7 01.7			
19	148	03.9	67 14.3	49.4		349 29.2	05.1	99 10.3	15.0	304 06.5	01.6			
20	163	06.3	82 15.8	49.4		4 31.1	04.8	114 12.1	15.1	319 09.2	01.5			
21	178	08.8	97 17.2	49.4		19 33.1	04.5	129 14.0	15.3	334 11.8	01.5			
22	193	11.3	112 18.6	49.4		34 35.1	04.3	144 15.9	15.5	349 14.4	01.4			
23	208	13.7	127 20.0	49.4		49 37.1	04.0	159 17.7	15.6	4 17.1	01.4			
24	223	16.2	142 21.4	+27 49.4		64 39.1	+11 03.7	174 19.6	+17 15.8	19 19.7	-7 01.3			
Dif	—		+14		0	+20		+19		+2	+26		+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 56 ^m 7			Edad: 13 ^d 7 PHE { 4 ^h : 61:3 12 ^h : 61:4 20 ^h : 61:4 R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	49.6	+16	18.4	17	54.7	-13 53.1	60 N	20 09	21 05	22 43	19 47	93	3 08	25
1	195	49.7		19.1	32	19.7	60 -14 04.0	58	19 58	20 48	22 06	35	89	17	28
2	210	49.7		19.8	46	44.7	60 14.9	56	48	34	21 41	25	86	25	31
3	225	49.8		20.5	61	09.6	59 25.7	54	40	23	21	16	84	32	34
4	240	49.8		21.2	75	34.3	57 36.4	52	32	12	21 05	08	82	38	36
5	255	49.9	+16	21.9	89	59.1	58 -14 47.0	50	19 25	20 03	20 52	19 01	80	3 44	38
6	270	49.9	+16	22.7	104	23.7	56 -14 57.5	45	19 11	19 44	20 25	18 45	78	3 56	42
7	285	50.0		23.4	118	48.3	56 -15 07.9	40	18 59	29	20 05	33	74	4 06	46
8	300	50.0		24.1	133	12.7	54 18.2	35	49	16	19 49	22	73	15	48
9	315	50.1		24.8	147	37.1	54 28.4	30	40	19 06	36	18 13	70	23	50
10	330	50.1		25.5	162	01.5	54 38.4	20	25	18 48	16	17 57	67	36	54
11	345	50.2	+16	26.2	176	25.7	52 -15 48.4	10 N	18 12	18 34	19 00	17 43	65	4 48	58
12	0	50.2	+16	26.9	190	49.9	52 -15 58.3	0	18 00	18 22	18 47	17 31	61	4 59	61
13	15	50.3		27.6	205	14.0	51 -16 08.1	10 S	17 48	18 10	35	18	59	5 10	64
14	30	50.3		28.3	219	38.0	50 17.7	20	36	17 58	25	17 04	57	22	67
15	45	50.4		29.0	234	02.0	50 27.3	30	21	46	15	16 49	53	36	71
16	60	50.4		29.7	248	25.9	49 36.7	35	13	40	10	40	51	44	73
17	75	50.5	+16	30.4	262	49.7	48 -16 46.0	40	17 04	17 32	18 04	16 30	49	5 53	75
18	90	50.5	+16	31.1	277	13.4	47 -16 55.2	45	16 53	17 24	17 59	16 18	47	6 04	78
19	105	50.6		31.8	291	37.1	47 -17 04.2	50	40	14	53	16 04	43	16	83
20	120	50.6		32.5	306	00.7	46 13.2	52	34	10	50	15 58	41	22	85
21	135	50.7		33.2	320	24.2	45 22.0	54	27	05	48	50	39	29	87
22	150	50.7		33.9	334	47.6	44 30.7	56	19	17 00	45	42	37	36	90
23	165	50.8		34.6	349	11.0	44 39.3	58	11	16 54	42	33	34	45	92
24	180	50.8	+16	35.3	3	34.4	44 -17 47.7	60 S	16 01	16 48	17 38	15 23	30	6 54	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 05 ^m 4		Mag: -4.7 PMG: 14 ^h 29 ^m		Mag: +0.1 PMG: 19 ^h 39 ^m		Mag: -2.0 PMG: 12 ^h 21 ^m		Mag: +0.3 PMG: 22 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	16.2	142	21.4	64	39.1	174	19.6	19	19.7
1	238	18.7	157	22.8	79	41.0	189	21.5	34	22.3
2	253	21.1	172	24.3	94	43.0	204	23.3	49	24.9
3	268	23.6	187	25.7	109	45.0	219	25.2	64	27.6
4	283	26.0	202	27.1	124	46.9	234	27.1	79	30.2
5	298	28.5	217	28.6	139	48.9	249	28.9	94	32.8
6	313	31.0	232	30.0	154	50.9	264	30.8	109	35.5
7	328	33.4	247	31.4	169	52.9	279	32.7	124	38.1
8	343	35.9	262	32.9	184	54.8	294	34.5	139	40.7
9	358	38.4	277	34.3	199	56.8	309	36.4	154	43.3
10	13	40.8	292	35.8	214	58.8	324	38.3	169	46.0
11	28	43.3	307	37.2	230	00.7	339	40.1	184	48.6
12	43	45.8	322	38.7	245	02.7	354	42.0	199	51.2
13	58	48.2	337	40.2	260	04.7	9	43.9	214	53.9
14	73	50.7	352	41.6	275	06.6	24	45.7	229	56.5
15	88	53.2	7	43.1	290	08.6	39	47.6	244	59.1
16	103	55.6	22	44.6	305	10.5	54	49.5	260	01.7
17	118	58.1	37	46.1	320	12.5	69	51.3	275	04.4
18	134	00.5	52	47.5	335	14.5	84	53.2	290	07.0
19	149	03.0	67	49.0	350	16.4	99	55.1	305	09.6
20	164	05.5	82	50.5	5	18.4	114	56.9	320	12.2
21	179	07.9	97	52.0	20	20.3	129	58.8	335	14.9
22	194	10.4	112	53.5	35	22.3	145	00.7	350	17.5
23	209	12.9	127	55.0	50	24.3	160	02.5	5	20.1
24	224	15.3	142	56.5	65	26.2	175	04.4	20	22.8
Dif	—		+15		0		+19		+26	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 14 ^d 7 PHE { 4 ^h : 61 ^m 4 12 ^h : 61 ^m 4 20 ^h : 61 ^m 3 R°: ***m												
	PMG: 11 ^h 56 ^m 6			SD: 16 ^d 7 PMG: ***h ***m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m	
0	180	50.8	+16 35.3	3	34.4	42	-17 47.7	83	60 N	1 09	2 47	3 44	21 20 78		3 33 36	
1	195	50.9	36.0	17	57.6	42	-17 56.0	82	58	1 47	3 04	3 55	21 04 77		45 40	
2	210	50.9	36.7	32	20.8	42	-18 04.2	81	56	2 12	18	4 04	20 51 76		3 56 42	
3	225	51.0	37.4	46	44.0	42	12.3	79	54	32	30	13	40 75		4 06 44	
4	240	51.0	38.1	61	07.1	41	20.2	78	52	2 48	41	20	30 74		14 46	
5	255	51.0	+16 38.8	75	30.1	40	-18 28.0	77	50	3 01	3 50	4 27	20 21 73		4 22 47	
6	270	51.1	+16 39.5	89	53.0	39	-18 35.6	76	45	3 28	4 09	4 42	20 03 71		4 38 50	
7	285	51.1	40.2	104	15.9	39	43.1	75	40	3 48	24	4 54	19 47 70		4 52 52	
8	300	51.2	40.9	118	38.8	39	50.5	74	35	4 03	36	5 04	35 68		5 03 54	
9	315	51.2	41.6	133	01.6	38	-18 57.7	72	30	16	4 47	13	23 68		13 56	
10	330	51.3	42.3	147	24.3	37	-19 04.8	71	20	37	5 05	28	19 04 66		30 59	
11	345	51.3	+16 43.0	161	47.0	37	-19 11.7	69	10 N	4 53	5 19	5 41	18 48 64		5 46 60	
12	0	51.4	+16 43.7	176	09.7	37	-19 18.5	68	0	5 06	5 32	5 53	18 32 64		6 00 62	
13	15	51.4	44.4	190	32.3	36	25.2	67	10 S	18	43	6 05	17 62		14 65	
14	30	51.4	45.1	204	54.8	35	31.7	65	20	29	5 55	18	18 01 60		29 67	
15	45	51.5	45.8	219	17.3	35	38.1	64	30	39	6 07	32	17 42 59		47 69	
16	60	51.5	46.4	233	39.8	35	44.3	62	35	44	14	41	31 58		6 57 71	
17	75	51.6	+16 47.1	248	02.2	34	-19 50.3	60	40	5 49	6 22	6 50	17 19 56		7 08 73	
18	90	51.6	+16 47.8	262	24.6	34	-19 56.2	59	45	5 55	6 30	7 01	17 05 54		7 22 75	
19	105	51.7	48.5	276	46.9	33	-20 02.0	58	50	6 01	40	14	16 47 52		39 77	
20	120	51.7	49.2	291	09.2	33	07.6	56	52	04	44	21	39 51		47 78	
21	135	51.7	49.9	305	31.5	33	13.1	55	54	06	49	28	29 51		7 56 80	
22	150	51.8	50.6	319	53.8	33	18.4	53	56	09	6 54	35	19 49		8 06 82	
23	165	51.8	51.3	334	16.0	32	23.5	51	58	13	7 00	44	16 07 47		17 84	
24	180	51.9	+16 52.0	348	38.2	32	-20 28.5	50	60 S	6 16	7 07	7 54	15 53 45		8 30 87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 01 ^m 5		Mag: -4.7 PMG: 14 ^h 27 ^m		Mag: +0.1 PMG: 19 ^h 36 ^m		Mag: -2.0 PMG: 12 ^h 18 ^m		Mag: +0.4 PMG: 22 ^h 35 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	224	15.3	142 56.5	+27 49.1	65 26.2	+10 56.7	175 04.4	+17 19.6	20 22.8	-6 59.9	
1	239	17.8	157 58.0	49.0	80 28.2	56.4	190 06.3	19.7	35 25.4	59.8	
2	254	20.3	172 59.5	49.0	95 30.1	56.1	205 08.1	19.9	50 28.0	59.8	
3	269	22.7	188 01.0	49.0	110 32.1	55.8	220 10.0	20.0	65 30.6	59.7	
4	284	25.2	203 02.6	49.0	125 34.0	55.5	235 11.9	20.2	80 33.3	59.7	
5	299	27.6	218 04.1	+27 48.9	140 36.0	+10 55.2	250 13.7	+17 20.3	95 35.9	-6 59.6	
6	314	30.1	233 05.6	+27 48.9	155 37.9	+10 54.9	265 15.6	+17 20.5	110 38.5	-6 59.6	
7	329	32.6	248 07.1	48.9	170 39.9	54.6	280 17.5	20.7	125 41.1	59.5	
8	344	35.0	263 08.7	48.8	185 41.8	54.4	295 19.3	20.8	140 43.8	59.4	
9	359	37.5	278 10.2	48.8	200 43.8	54.1	310 21.2	21.0	155 46.4	59.4	
10	14	40.0	293 11.7	48.8	215 45.7	53.8	325 23.1	21.1	170 49.0	59.3	
11	29	42.4	308 13.3	+27 48.7	230 47.7	+10 53.5	340 24.9	+17 21.3	185 51.6	-6 59.3	
12	44	44.9	323 14.8	+27 48.7	245 49.6	+10 53.2	355 26.8	+17 21.4	200 54.3	-6 59.2	
13	59	47.4	338 16.4	48.7	260 51.6	52.9	10 28.7	21.6	215 56.9	59.2	
14	74	49.8	353 17.9	48.6	275 53.5	52.6	25 30.5	21.8	230 59.5	59.1	
15	89	52.3	8 19.5	48.6	290 55.4	52.3	40 32.4	21.9	246 02.1	59.0	
16	104	54.8	23 21.0	48.5	305 57.4	52.0	55 34.3	22.1	261 04.8	59.0	
17	119	57.2	38 22.6	+27 48.5	320 59.3	+10 51.7	70 36.1	+17 22.2	276 07.4	-6 58.9	
18	134	59.7	53 24.2	+27 48.5	336 01.3	+10 51.4	85 38.0	+17 22.4	291 10.0	-6 58.9	
19	150	02.1	68 25.7	48.4	351 03.2	51.1	100 39.9	22.5	306 12.6	58.8	
20	165	04.6	83 27.3	48.4	6 05.2	50.8	115 41.7	22.7	321 15.3	58.8	
21	180	07.1	98 28.9	48.3	21 07.1	50.5	130 43.6	22.8	336 17.9	58.7	
22	195	09.5	113 30.5	48.3	36 09.0	50.2	145 45.5	23.0	351 20.5	58.6	
23	210	12.0	128 32.1	48.2	51 11.0	49.9	160 47.3	23.2	6 23.2	58.6	
24	225	14.5	143 33.7	+27 48.2	66 12.9	+10 49.6	175 49.2	+17 23.3	21 25.8	-6 58.5	
Dif	—		+15	0	+19	-3	+19	+2	+26	+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna													
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5			Edad: 15 ^d 7 PHE { 4 ^h : 61 ^m 3 12 ^h : 61 ^m 1 20 ^h : 61 ^m 0 PMG: 0 ^h 47 ^m R°: 64 ^m																						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°											
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m												
0	180	51.9	+16	52.0	348	38.2	-20	28.5	60 N	20 14	21 11	22 59	22 38 59	4 09 53												
1	195	51.9		52.6	3	00.3	31	33.3	58	20 02	20 54	22 15	21 60	25 54												
2	210	51.9		53.3	17	22.5	32	38.0	56	19 52	39	21 47	22 07 60	38 56												
3	225	52.0		54.0	31	44.6	31	42.5	54	43	27	27	21 55 60	4 50 56												
4	240	52.0		54.7	46	06.7	31	46.8	52	35	16	21 10	44 60	5 00 57												
5	255	52.1	+16	55.4	60	28.7	30	-20 51.0	50	19 28	20 06	20 56	21 34 61	5 09 58												
6	270	52.1	+16	56.1	74	50.8	31	-20 55.1	45	19 13	19 47	20 28	21 14 61	5 28 59												
7	285	52.1		56.8	89	12.8	30	-20 58.9	40	19 01	31	20 08	20 57 62	44 60												
8	300	52.2		57.4	103	34.9	31	-21 02.7	35	18 51	18	19 51	43 62	5 57 61												
9	315	52.2		58.1	117	56.9	30	06.2	30	41	19 07	38	31 62	6 09 61												
10	330	52.3		58.8	132	18.9	30	09.6	20	26	18 49	17	20 10 63	29 62												
11	345	52.3	+16	59.5	146	40.9	30	-21 12.8	10 N	18 12	18 35	19 00	19 52 63	6 46 63												
12	0	52.3	+17	00.2	161	02.9	30	-21 15.9	0	18 00	18 22	18 47	19 36 62	7 02 64												
13	15	52.4		00.9	175	24.9	30	18.8	10 S	17 48	18 10	35	19 63	19 64												
14	30	52.4		01.5	189	46.9	30	21.5	20	35	17 58	24	19 01 63	36 65												
15	45	52.5		02.2	204	08.9	30	24.1	30	20	45	13	18 41 63	7 56 65												
16	60	52.5		02.9	218	31.0	31	26.5	35	11	38	08	29 63	8 08 65												
17	75	52.5	+17	03.6	232	53.0	30	-21 28.8	40	17 02	17 30	18 03	18 15 63	8 21 66												
18	90	52.6	+17	04.3	247	15.0	30	-21 30.8	45	16 50	17 21	17 57	17 59 63	8 37 66												
19	105	52.6		04.9	261	37.0	30	32.8	50	37	11	50	39 63	8 56 67												
20	120	52.6		05.6	275	59.1	31	34.5	52	30	07	47	30 63	9 05 68												
21	135	52.7		06.3	290	21.2	31	36.1	54	23	17 02	44	20 62	16 68												
22	150	52.7		07.0	304	43.3	31	37.5	56	15	16 56	41	17 08 62	28 68												
23	165	52.7		07.6	319	05.4	31	38.8	58	16 06	50	38	16 54 62	41 69												
24	180	52.8	+17	08.3	333	27.5	31	-21 39.9	60 S	15 56	16 44	17 34	16 38 62	9 57 69												
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 8 ^h 57 ^m 6		Mag: -4.7 PMG: 14 ^h 24 ^m			Mag: +0.1 PMG: 19 ^h 33 ^m			Mag: -2.0 PMG: 12 ^h 15 ^m			Mag: +0.4 PMG: 22 ^h 30 ^m														
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°											
0	225	14.5	143	33.7	+27	48.2	66	12.9	+10	49.6	175	49.2	+17	23.3	21 25.8											
1	240	16.9	158	35.3		48.1	81	14.8		49.3	190	51.1		23.5	36 28.4											
2	255	19.4	173	36.9		48.1	96	16.8		49.0	205	52.9		23.6	51 31.0											
3	270	21.9	188	38.5		48.0	111	18.7		48.7	220	54.8		23.8	66 33.7											
4	285	24.3	203	40.1		48.0	126	20.6		48.4	235	56.7		23.9	81 36.3											
5	300	26.8	218	41.7	+27	47.9	141	22.6	+10	48.1	250	58.5	+17	24.1	96 38.9											
6	315	29.3	233	43.3	+27	47.9	156	24.5	+10	47.8	266	00.4	+17	24.3	111 41.5											
7	330	31.7	248	44.9		47.8	171	26.4		47.4	281	02.2		24.4	126 44.1											
8	345	34.2	263	46.5		47.8	186	28.4		47.1	296	04.1		24.6	141 46.8											
9	0	36.6	278	48.1		47.7	201	30.3		46.8	311	06.0		24.7	156 49.4											
10	15	39.1	293	49.8		47.7	216	32.2		46.5	326	07.8		24.9	171 52.0											
11	30	41.6	308	51.4	+27	47.6	231	34.1	+10	46.2	341	09.7	+17	25.0	186 54.6											
12	45	44.0	323	53.0	+27	47.6	246	36.1	+10	45.9	356	11.6	+17	25.2	201 57.3											
13	60	46.5	338	54.7		47.5	261	38.0		45.6	11	13.4		25.3	216 59.9											
14	75	49.0	353	56.3		47.4	276	39.9		45.3	26	15.3		25.5	232 02.5											
15	90	51.4	8	58.0		47.4	291	41.8		45.0	41	17.2		25.7	247 05.1											
16	105	53.9	23	59.6		47.3	306	43.8		44.7	56	19.0		25.8	262 07.8											
17	120	56.4	39	01.3	+27	47.3	321	45.7	+10	44.4	71	20.9	+17	26.0	277 10.4											
18	135	58.8	54	02.9	+27	47.2	336	47.6	+10	44.1	86	22.8	+17	26.1	292 13.0											
19	151	01.3	69	04.6		47.1	351	49.5		43.8	101	24.6		26.3	307 15.6											
20	166	03.8	84	06.3		47.1	6	51.4		43.5	116	26.5		26.4	322 18.3											
21	181	06.2	99	07.9		47.0	21	53.4		43.2	131	28.4		26.6	337 20.9											
22	196	08.7	114	09.6		46.9	36	55.3		42.9	146	30.2		26.8	352 23.5											
23	211	11.1	129	11.3		46.9	51	57.2		42.6	161	32.1		26.9	7 26.1											
24	226	13.6	144	13.0	+27	46.8	66	59.1	+10	42.2	176	34.0	+17	27.1	22 28.8											
Dif	—		+16			-1			+19			-3			+19			+2			+26			+1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 16 ^d 7 PHE { 4 ^h : 60 ^h 8 12 ^h : 60 ^h 5 20 ^h : 60 ^h 3 PMG: 1 ^h 51 ^m R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.8	+17 08.3	333	27.5	-21 39.9	9	60 N	0 53	2 41	3 39	23 37	40	5 02	71	
1	195	52.8	09.0	347	49.7	40.8	9	58	1 37	2 58	3 50	21 42		19	70	
2	210	52.8	09.7	2	11.9	41.6	8	56	2 05	3 13	4 00	23 07	44	34	68	
3	225	52.9	10.4	16	34.1	42.2	6	54	26	26	09	22 55	46	46	68	
4	240	52.9	11.0	30	56.3	42.7	5	52	42	37	17	44 48		5 57	68	
5	255	52.9	+17 11.7	45	18.6	-21 42.9	2	50	2 57	3 46	4 24	22 35	48	6 07	67	
6	270	53.0	+17 12.4	59	40.9	-21 43.1	2	45	3 24	4 06	4 39	22 15	51	6 27	66	
7	285	53.0	13.0	74	03.3	43.0	1	40	3 45	22	4 52	21 59	52	44	65	
8	300	53.0	13.7	88	25.7	42.8	2	35	4 01	34	5 02	45 54		6 58	65	
9	315	53.1	14.4	102	48.1	42.5	3	30	15	4 45	11	33 55		7 10	64	
10	330	53.1	15.1	117	10.6	42.0	5	20	36	5 03	27	21 13	56	31	63	
11	345	53.1	+17 15.7	131	33.1	-21 41.3	7	10 N	4 52	5 18	5 40	20 55	58	7 49	62	
12	0	53.2	+17 16.4	145	55.7	-21 40.5	8	0	5 06	5 31	5 53	20 38	60	8 06	61	
13	15	53.2	17.1	160	18.3	39.5	10	10 S	18	44	6 05	22 61		23	60	
14	30	53.2	17.7	174	40.9	38.3	12	20	29	5 56	19	20 04	63	8 41	59	
15	45	53.3	18.4	189	03.7	37.0	13	30	40	6 08	34	19 44	64	9 01	59	
16	60	53.3	19.1	203	26.4	35.5	15	35	45	16	42	32 65		13	58	
17	75	53.3	+17 19.7	217	49.3	-21 33.9	16	40	5 51	6 23	6 52	19 18	67	9 27	57	
18	90	53.4	+17 20.4	232	12.2	-21 32.2	17	45	5 57	6 32	7 04	19 02	68	9 43	56	
19	105	53.4	21.1	246	35.1	30.2	20	50	6 03	42	17	18 42	70	10 03	55	
20	120	53.4	21.7	260	58.1	28.2	20	52	06	47	24	33 71		13	54	
21	135	53.5	22.4	275	21.2	25.9	23	54	09	52	31	22 72		24	53	
22	150	53.5	23.1	289	44.4	23.5	24	56	13	6 58	39	18 10	73	36	52	
23	165	53.5	23.7	304	07.6	21.0	25	58	16	7 04	48	17 56	75	10 50	51	
24	180	53.5	+17 24.4	318	30.9	-21 18.3	27	60 S	6 20	7 11	7 58	17 40	77	11 06	49	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 53 ^m 6		Mag: -4.7 PMG: 14 ^h 21 ^m			Mag: +0.1 PMG: 19 ^h 30 ^m			Mag: -2.0 PMG: 12 ^h 12 ^m			Mag: +0.4 PMG: 22 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	226	13.6	144	13.0	+27 46.8	66	59.1	+10 42.2	176	34.0	+17 27.1	22	28.8	-6 57.2
1	241	16.1	159	14.6	46.7	82	01.0	41.9	191	35.8	27.2	37	31.4	57.1
2	256	18.5	174	16.3	46.7	97	02.9	41.6	206	37.7	27.4	52	34.0	57.0
3	271	21.0	189	18.0	46.6	112	04.9	41.3	221	39.6	27.5	67	36.6	57.0
4	286	23.5	204	19.7	46.5	127	06.8	41.0	236	41.4	27.7	82	39.2	56.9
5	301	25.9	219	21.4	+27 46.5	142	08.7	+10 40.7	251	43.3	+17 27.8	97	41.9	-6 56.9
6	316	28.4	234	23.1	+27 46.4	157	10.6	+10 40.4	266	45.1	+17 28.0	112	44.5	-6 56.8
7	331	30.9	249	24.8	46.3	172	12.5	40.1	281	47.0	28.2	127	47.1	56.8
8	346	33.3	264	26.6	46.2	187	14.4	39.8	296	48.9	28.3	142	49.7	56.7
9	1	35.8	279	28.3	46.2	202	16.3	39.5	311	50.7	28.5	157	52.4	56.7
10	16	38.2	294	30.0	46.1	217	18.2	39.1	326	52.6	28.6	172	55.0	56.6
11	31	40.7	309	31.7	+27 46.0	232	20.1	+10 38.8	341	54.5	+17 28.8	187	57.6	-6 56.5
12	46	43.2	324	33.4	+27 45.9	247	22.1	+10 38.5	356	56.3	+17 28.9	203	00.2	-6 56.5
13	61	45.6	339	35.2	45.8	262	24.0	38.2	11	58.2	29.1	218	02.8	56.4
14	76	48.1	354	36.9	45.8	277	25.9	37.9	27	00.1	29.2	233	05.5	56.4
15	91	50.6	9	38.6	45.7	292	27.8	37.6	42	01.9	29.4	248	08.1	56.3
16	106	53.0	24	40.4	45.6	307	29.7	37.3	57	03.8	29.6	263	10.7	56.3
17	121	55.5	39	42.1	+27 45.5	322	31.6	+10 37.0	72	05.7	+17 29.7	278	13.3	-6 56.2
18	136	58.0	54	43.9	+27 45.4	337	33.5	+10 36.6	87	07.5	+17 29.9	293	16.0	-6 56.2
19	152	00.4	69	45.6	45.4	352	35.4	36.3	102	09.4	30.0	308	18.6	56.1
20	167	02.9	84	47.4	45.3	7	37.3	36.0	117	11.3	30.2	323	21.2	56.0
21	182	05.4	99	49.2	45.2	22	39.2	35.7	132	13.1	30.3	338	23.8	56.0
22	197	07.8	114	50.9	45.1	37	41.1	35.4	147	15.0	30.5	353	26.4	55.9
23	212	10.3	129	52.7	45.0	52	43.0	35.1	162	16.8	30.6	8	29.1	55.9
24	227	12.7	144	54.5	+27 44.9	67	44.9	+10 34.8	177	18.7	+17 30.8	23	31.7	-6 55.8

Dif	—	+17	-1	+19	-3	+19	+2	+26	+

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 7 PHE { 4 ^h : 60'0 12 ^h : 59'8 20 ^h : 59'5					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4			SD: 16'4 PMG: 2 ^h 53 ^m R°: 59 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m	m
0	180	53.5	+17 24.4	318	30.9	-21 18.3	28	60 N	20 18	21 18	23 21	** ** *		6 13	82
1	195	53.6	25.1	332	54.2	43 15.5	28	58	20 06	20 59	22 25	** ** *		29	79
2	210	53.6	25.7	347	17.7	45 12.5	30	56	19 56	44	21 54	23 51	32	42	78
3	225	53.6	26.4	1	41.1	44 09.4	31	54	47	31	32	41	34	6	54
4	240	53.7	27.1	16	04.7	46 06.2	32	52	39	20	15	32	36	7	05
5	255	53.7	+17 27.7	30	28.4	47 -21 02.8	34	50	19 31	20 10	21 00	23 23	38	7	14
6	270	53.7	+17 28.4	44	52.1	47 -20 59.2	36	45	19 16	19 49	20 32	23 06	41	7	33
7	285	53.7	29.0	59	15.9	48 55.5	37	40	19 03	33	20 10	22 51	44	7	49
8	300	53.8	29.7	73	39.8	49 51.7	38	35	18 52	20	19 53	39	46	8	03
9	315	53.8	30.4	88	03.8	50 47.7	40	30	43	19 09	40	28	48	14	65
10	330	53.8	31.0	102	27.8	50 43.6	41	20	27	18 50	18	22 09	51	34	62
11	345	53.8	+17 31.7	116	51.9	51 -20 39.4	42	10 N	18 13	18 35	19 01	21 53	54	8	51
12	0	53.9	+17 32.3	131	16.2	53 -20 35.0	44	0	18 00	18 22	18 47	21 38	56	9	07
13	15	53.9	33.0	145	40.5	53 30.5	45	10 S	17 47	18 09	35	23	58	23	56
14	30	53.9	33.6	160	04.9	54 25.8	47	20	34	17 57	23	21 07	61	9	40
15	45	53.9	34.3	174	29.4	55 21.1	47	30	18	43	12	20 48	64	10	00
16	60	54.0	35.0	188	53.9	55 16.1	50	35	17 09	36	07	37	66	11	50
17	75	54.0	+17 35.6	203	18.6	57 -20 11.1	50	40	16 59	17 28	18 01	20 25	68	10	24
18	90	54.0	+17 36.3	217	43.3	57 -20 05.9	52	45	16 48	17 19	17 54	20 10	71	10	39
19	105	54.0	36.9	232	08.2	59 -20 00.7	52	50	33	09	48	19 52	74	10	58
20	120	54.1	37.6	246	33.1	59 -19 55.2	55	52	27	17 04	45	44	75	11	07
21	135	54.1	38.2	260	58.1	60 49.7	55	54	20	16 59	41	34	77	17	40
22	150	54.1	38.9	275	23.3	62 44.0	57	56	11	53	38	23	79	28	38
23	165	54.1	39.5	289	48.5	62 38.3	57	58	16 02	46	34	19 11	81	41	35
24	180	54.2	+17 40.2	304	13.8	63 -19 32.4	59	60 S	15 52	16 39	17 30	18 57	84	11	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 49 ^m 7		Mag: -4.7 PMG: 14 ^h 19 ^m		Mag: +0.1 PMG: 19 ^h 27 ^m		Mag: -2.0 PMG: 12 ^h 09 ^m		Mag: +0.4 PMG: 22 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	227	12.7	144 54.5	+27 44.9	67 44.9	+10 34.8	177 18.7	+17 30.8	23 31.7	-6 55.8
1	242	15.2	159 56.2	44.8	82 46.8	34.4	192 20.6	30.9	38 34.3	55.8
2	257	17.7	174 58.0	44.7	97 48.7	34.1	207 22.4	31.1	53 36.9	55.7
3	272	20.1	189 59.8	44.6	112 50.6	33.8	222 24.3	31.3	68 39.6	55.7
4	287	22.6	205 01.6	44.5	127 52.5	33.5	237 26.2	31.4	83 42.2	55.6
5	302	25.1	220 03.4	+27 44.5	142 54.4	+10 33.2	252 28.0	+17 31.6	98 44.8	-6 55.5
6	317	27.5	235 05.2	+27 44.4	157 56.2	+10 32.9	267 29.9	+17 31.7	113 47.4	-6 55.5
7	332	30.0	250 07.0	44.3	172 58.1	32.5	282 31.8	31.9	128 50.0	55.4
8	347	32.5	265 08.8	44.2	188 00.0	32.2	297 33.6	32.0	143 52.7	55.4
9	2 34.9	280 10.6	44.1	203 01.9	31.9	312 35.5	32.2	158 55.3	55.3	
10	17 37.4	295 12.4	44.0	218 03.8	31.6	327 37.4	32.3	173 57.9	55.3	
11	32 39.9	310 14.2	+27 43.9	233 05.7	+10 31.3	342 39.2	+17 32.5	189 00.5	-6 55.2	
12	47 42.3	325 16.1	+27 43.8	248 07.6	+10 31.0	357 41.1	+17 32.6	204 03.1	-6 55.2	
13	62 44.8	340 17.9	43.7	263 09.5	30.6	12 43.0	32.8	219 05.8	55.1	
14	77 47.2	355 19.7	43.6	278 11.4	30.3	27 44.8	33.0	234 08.4	55.0	
15	92 49.7	10 21.6	43.5	293 13.3	30.0	42 46.7	33.1	249 11.0	55.0	
16	107 52.2	25 23.4	43.4	308 15.1	29.7	57 48.5	33.3	264 13.6	54.9	
17	122 54.6	40 25.2	+27 43.3	323 17.0	+10 29.4	72 50.4	+17 33.4	279 16.2	-6 54.9	
18	137 57.1	55 27.1	+27 43.1	338 18.9	+10 29.0	87 52.3	+17 33.6	294 18.9	-6 54.8	
19	152 59.6	70 28.9	43.0	353 20.8	28.7	102 54.1	33.7	309 21.5	54.8	
20	168 02.0	85 30.8	42.9	8 22.7	28.4	117 56.0	33.9	324 24.1	54.7	
21	183 04.5	100 32.6	42.8	23 24.6	28.1	132 57.9	34.0	339 26.7	54.7	
22	198 07.0	115 34.5	42.7	38 26.4	27.8	147 59.7	34.2	354 29.3	54.6	
23	213 09.4	130 36.4	42.6	53 28.3	27.4	163 01.6	34.3	9 32.0	54.6	
24	228 11.9	145 38.2	+27 42.5	68 30.2	+10 27.1	178 03.5	+17 34.5	24 34.6	-6 54.5	
Dif	—		+18	-1	+19	-3	+19	+2	+26	+

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8				Edad: 18 ^d 7 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 8 20 ^h : 58 ^m 5											
	PMG: 11 ^h 56 ^m 4				SD: 16 ^d 2 PMG: 3 ^h 52 ^m R°: 55 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	54.2	+17	40.2	304	13.8	-19	32.4	60 N	0 31	2 34	3 34	0 17	26	7 35	86
1	195	54.2		40.8	318	39.2		26.3	58	1 27	2 53	46	0 03	30	7 48	83
2	210	54.2		41.5	333	04.7		20.2	56	1 58	3 08	3 56	** ** *	**	8 00	80
3	225	54.2		42.1	347	30.3		14.0	54	2 20	21	4 05	** ** *	**	10 7	7
4	240	54.3		42.8	1	56.0		07.6	52	37	33	14	** ** *	**	19	75
5	255	54.3	+17	43.4	16	21.8	-19	01.1	50	2 52	3 43	4 21	** ** *	**	8 27	73
6	270	54.3	+17	44.1	30	47.7	-18	54.5	45	3 21	4 03	4 37	23 47	34	8 43	71
7	285	54.3		44.7	45	13.7		47.8	40	42	19	4 49	35 37		8 57	68
8	300	54.3		45.4	59	39.8		41.0	35	3 59	33	5 00	25 39		9 09	65
9	315	54.4		46.0	74	06.0		34.1	30	4 13	4 44	10	16 41		19	63
10	330	54.4		46.7	88	32.3		27.1	20	35	5 02	26	23 00	46	36	60
11	345	54.4	+17	47.3	102	58.7	-18	20.0	10 N	4 52	5 18	5 40	22 47	48	9 51	57
12	0	54.4	+17	48.0	117	25.2	-18	12.7	0	5 06	5 31	5 53	22 34	52	10 05	54
13	15	54.4		48.6	131	51.8	-18	05.4	10 S	18	44	6 06	21 55		19	51
14	30	54.5		49.3	146	18.5	-17	58.0	20	30	5 56	19	22 08	58	34	48
15	45	54.5		49.9	160	45.3		50.4	30	41	6 10	35	21 52	62	10 51	45
16	60	54.5		50.6	175	12.2		42.8	35	47	17	44	43 64		11 01	43
17	75	54.5	+17	51.2	189	39.2	-17	35.1	40	5 53	6 25	6 54	21 33	66	11 12	40
18	90	54.5	+17	51.8	204	06.3	-17	27.3	45	5 59	6 34	7 06	21 21	69	11 25	38
19	105	54.6		52.5	218	33.6		19.4	50	6 06	45	20	21 06	73	41	34
20	120	54.6		53.1	233	00.9		11.4	52	09	50	27	20 59	75	49	32
21	135	54.6		53.8	247	28.3	-17	03.3	54	12	6 55	34	51 77		11 57	30
22	150	54.6		54.4	261	55.8	-16	55.1	56	16	7 01	43	42 80		12 06	28
23	165	54.6		55.0	276	23.4		46.9	58	19	07	7 52	32 82		16	26
24	180	54.6	+17	55.7	290	51.1	-16	38.5	60 S	6 23	7 15	8 03	20 21	85	12 28	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 45 ^m 8		Mag: -4.7 PMG: 14 ^h 16 ^m		Mag: +0.2 PMG: 19 ^h 24 ^m		Mag: -2.0 PMG: 12 ^h 06 ^m		Mag: +0.4 PMG: 22 ^h 18 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	228	11.9	145	38.2	+27	42.5	68	30.2	+10	27.1	178	03.5	+17	34.5	24	34.6	-6	54.5
1	243	14.4	160	40.1		42.4	83	32.1		26.8	193	05.3		34.7	39	37.2		54.4
2	258	16.8	175	42.0		42.3	98	33.9		26.5	208	07.2		34.8	54	39.8		54.4
3	273	19.3	190	43.9		42.2	113	35.8		26.1	223	09.0		35.0	69	42.4		54.3
4	288	21.7	205	45.8		42.0	128	37.7		25.8	238	10.9		35.1	84	45.0		54.3
5	303	24.2	220	47.6	+27	41.9	143	39.6	+10	25.5	253	12.8	+17	35.3	99	47.7	-6	54.2
6	318	26.7	235	49.5	+27	41.8	158	41.4	+10	25.2	268	14.6	+17	35.4	114	50.3	-6	54.2
7	333	29.1	250	51.4		41.7	173	43.3		24.9	283	16.5		35.6	129	52.9		54.1
8	348	31.6	265	53.3		41.6	188	45.2		24.5	298	18.4		35.7	144	55.5		54.1
9	3	34.1	280	55.2		41.5	203	47.1		24.2	313	20.2		35.9	159	58.1		54.0
10	18	36.5	295	57.2		41.3	218	48.9		23.9	328	22.1		36.0	175	00.8		54.0
11	33	39.0	310	59.1	+27	41.2	233	50.8	+10	23.6	343	24.0	+17	36.2	190	03.4	-6	53.9
12	48	41.5	326	01.0	+27	41.1	248	52.7	+10	23.2	358	25.8	+17	36.3	205	06.0	-6	53.9
13	63	43.9	341	02.9		41.0	263	54.6		22.9	13	27.7		36.5	220	08.6		53.8
14	78	46.4	356	04.8		40.8	278	56.4		22.6	28	29.5		36.7	235	11.2		53.7
15	93	48.9	11	06.8		40.7	293	58.3		22.2	43	31.4		36.8	250	13.9		53.7
16	108	51.3	26	08.7		40.6	309	00.2		21.9	58	33.3		37.0	265	16.5		53.6
17	123	53.8	41	10.6	+27	40.5	324	02.0	+10	21.6	73	35.1	+17	37.1	280	19.1	-6	53.6
18	138	56.2	56	12.6	+27	40.3	339	03.9	+10	21.3	88	37.0	+17	37.3	295	21.7	-6	53.5
19	153	58.7	71	14.5		40.2	354	05.8		20.9	103	38.9		37.4	310	24.3		53.5
20	169	01.2	86	16.5		40.1	9	07.6		20.6	118	40.7		37.6	325	26.9		53.4
21	184	03.6	101	18.4		39.9	24	09.5		20.3	133	42.6		37.7	340	29.6		53.4
22	199	06.1	116	20.4		39.8	39	11.3		20.0	148	44.5		37.9	355	32.2		53.3
23	214	08.6	131	22.4		39.7	54	13.2		19.6	163	46.3		38.0	10	34.8		53.3
24	229	11.0	146	24.3	+27	39.5	69	15.1	+10	19.3	178	48.2	+17	38.2	25	37.4	-6	53.2
Dif	—		+19		-1		+19		-3		+19		+2		+26		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			Edad: 19 ^d 7 PHE { 4 ^h : 58 ^h /2 12 ^h : 57 ^h /9 20 ^h : 57 ^h /6 SD: 15 ^h 9 PMG: 4 ^h 47 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	54.6	+17 55.7	290	51.1	-16 38.5	88	60 N	20 23	21 24	** **	0 43 19	9 01 85	
1	195	54.7	56.3	305	18.9	30.1	84	58	11	21 05	22 35	33 21	11 82	
2	210	54.7	57.0	319	46.8	21.6	85	56	20 00	20 49	22 02	23 25	20 79	
3	225	54.7	57.6	334	14.8	13.0	86	54	19 50	35	21 38	15 27	27 77	
4	240	54.7	58.2	348	42.9	-16 04.3	87	52	42	23	20	08 28	34 75	
5	255	54.7	+17 58.9	3	11.1	-15 55.5	88	50	19 34	20 13	21 04	0 01 30	9 40 73	
6	270	54.7	+17 59.5	17	39.4	-15 46.7	88	45	19 18	19 52	20 35	** ** *	9 54 68	
7	285	54.7	+18 00.1	32	07.8	37.8	89	40	19 05	35	20 13	** ** *	10 05 65	
8	300	54.8	00.8	46	36.3	28.8	90	35	18 54	22	19 55	** ** *	14 63	
9	315	54.8	01.4	61	04.9	19.8	90	30	44	19 10	41	23 57 37	22 60	
10	330	54.8	02.1	75	33.6	10.6	92	20	27	18 51	19	46 41	36 56	
11	345	54.8	+18 02.7	90	02.3	-15 01.4	92	10 N	18 13	18 35	19 01	23 35 45	10 48 53	
12	0	54.8	+18 03.3	104	31.2	-14 52.2	92	0	18 00	18 22	18 47	23 26 48	10 59 50	
13	15	54.8	04.0	119	00.2	42.8	94	10 S	17 47	18 09	34	16 51	11 10 47	
14	30	54.8	04.6	133	29.3	33.4	94	20	33	17 56	22	23 06 54	22 44	
15	45	54.9	05.2	147	58.4	23.9	95	30	17	42	11	22 54 59	36 39	
16	60	54.9	05.8	162	27.7	14.4	95	35	17 08	35	18 05	47 61	44 37	
17	75	54.9	+18 06.5	176	57.0	-14 04.8	96	40	16 57	17 26	17 59	22 39 64	11 52 35	
18	90	54.9	+18 07.1	191	26.5	-13 55.1	97	45	16 45	17 17	17 52	22 30 67	12 03 31	
19	105	54.9	07.7	205	56.0	45.4	97	50	31	06	45	19 71	15 28	
20	120	54.9	08.4	220	25.6	35.6	98	52	24	17 01	42	14 73	21 26	
21	135	54.9	09.0	234	55.4	25.8	98	54	16	16 55	38	08 75	27 24	
22	150	54.9	09.6	249	25.2	15.9	99	56	16 08	49	35	22 02 77	34 22	
23	165	55.0	10.3	263	55.1	-13 06.0	99	58	15 58	43	31	21 54 81	42 19	
24	180	55.0	+18 10.9	278	25.0	-12 56.0	100	60 S	15 47	16 35	17 27	21 46 83	12 51 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 41 ^m 8		Mag: -4.7 PMG: 14 ^h 12 ^m		Mag: +0.2 PMG: 19 ^h 21 ^m		Mag: -2.0 PMG: 12 ^h 03 ^m		Mag: +0.4 PMG: 22 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	229	11.0	146 24.3	+27 39.5	69 15.1	+10 19.3	178 48.2	+17 38.2	25 37.4	-6 53.2
1	244	13.5	161 26.3	39.4	84 16.9	19.0	193 50.0	38.3	40 40.0	53.2
2	259	16.0	176 28.3	39.3	99 18.8	18.6	208 51.9	38.5	55 42.6	53.1
3	274	18.4	191 30.3	39.1	114 20.6	18.3	223 53.8	38.6	70 45.3	53.1
4	289	20.9	206 32.2	39.0	129 22.5	18.0	238 55.6	38.8	85 47.9	53.0
5	304	23.4	221 34.2	+27 38.9	144 24.4	+10 17.7	253 57.5	+17 39.0	100 50.5	-6 52.9
6	319	25.8	236 36.2	+27 38.7	159 26.2	+10 17.3	268 59.4	+17 39.1	115 53.1	-6 52.9
7	334	28.3	251 38.2	38.6	174 28.1	17.0	284 01.2	39.3	130 55.7	52.8
8	349	30.7	266 40.2	38.4	189 29.9	16.7	299 03.1	39.4	145 58.3	52.8
9	4	33.2	281 42.2	38.3	204 31.8	16.3	314 04.9	39.6	161 01.0	52.7
10	19	35.7	296 44.2	38.2	219 33.6	16.0	329 06.8	39.7	176 03.6	52.7
11	34	38.1	311 46.3	+27 38.0	234 35.5	+10 15.7	344 08.7	+17 39.9	191 06.2	-6 52.6
12	49	40.6	326 48.3	+27 37.9	249 37.3	+10 15.3	359 10.5	+17 40.0	206 08.8	-6 52.6
13	64	43.1	341 50.3	37.7	264 39.2	15.0	14 12.4	40.2	221 11.4	52.5
14	79	45.5	356 52.3	37.6	279 41.0	14.7	29 14.3	40.3	236 14.0	52.5
15	94	48.0	11 54.4	37.4	294 42.9	14.3	44 16.1	40.5	251 16.7	52.4
16	109	50.5	26 56.4	37.3	309 44.7	14.0	59 18.0	40.6	266 19.3	52.4
17	124	52.9	41 58.4	+27 37.1	324 46.6	+10 13.7	74 19.9	+17 40.8	281 21.9	-6 52.3
18	139	55.4	57 00.5	+27 37.0	339 48.4	+10 13.3	89 21.7	+17 40.9	296 24.5	-6 52.3
19	154	57.8	72 02.5	36.8	354 50.3	13.0	104 23.6	41.1	311 27.1	52.2
20	170	00.3	87 04.6	36.7	9 52.1	12.7	119 25.4	41.2	326 29.7	52.2
21	185	02.8	102 06.6	36.5	24 54.0	12.3	134 27.3	41.4	341 32.4	52.1
22	200	05.2	117 08.7	36.4	39 55.8	12.0	149 29.2	41.6	356 35.0	52.0
23	215	07.7	132 10.8	36.2	54 57.7	11.7	164 31.0	41.7	11 37.6	52.0
24	230	10.2	147 12.8	+27 36.1	69 59.5	+10 11.3	179 32.9	+17 41.9	26 40.2	-6 51.9
Dif	—		+20	-1	+19	-3	+19	+2	+26	+

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 20 ^d 7 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 0 20 ^h : 56 ^m 7 PMG: 5 ^h 37 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.0	+18	10.9	278	25.0	-12	56.0	60 N	**	**	2	28	3	29	1	02	14
1	195	55.0		11.5	292	55.1 ¹¹¹		45.9 ¹⁰¹	58	1	17	2	47	41		0	54	17
2	210	55.0		12.1	307	25.3 ¹¹²		35.8 ¹⁰¹	56	1	50	3	04	3	52	48	19	39
3	225	55.0		12.8	321	55.5 ¹¹²		25.6 ¹⁰²	54	2	14	17		4	02	42	21	44
4	240	55.0		13.4	336	25.8 ¹¹³		15.4 ¹⁰²	52		33	29		10		36	24	49
5	255	55.0	+18	14.0	350	56.2 ¹¹⁴	-12	05.2 ¹⁰²	50	2	48	3	39	4	18	0	31	25
6	270	55.0	+18	14.6	5	26.7 ¹¹⁵	-11	54.9 ¹⁰³	45	3	18	4	00	4	34	0	21	29
7	285	55.0		15.3	19	57.3 ¹¹⁶		44.5 ¹⁰⁴	40		40	17		47		12	32	10
8	300	55.0		15.9	34	28.0 ¹¹⁷		34.1 ¹⁰⁴	35	3	57	31		4	59	0	04	35
9	315	55.0		16.5	48	58.7 ¹¹⁷		23.7 ¹⁰⁴	30	4	11	4	42	5	08	**	**	**
10	330	55.1		17.1	63	29.5 ¹¹⁸		13.2 ¹⁰⁵	20		34	5	01	25		**	**	**
11	345	55.1	+18	17.7	78	00.4 ¹¹⁹	-11	02.6 ¹⁰⁶	10 N	4	51	5	17	5	39	**	**	**
12	0	55.1	+18	18.4	92	31.4 ¹²⁰	-10	52.1 ¹⁰⁵	0	5	06	5	31	5	53	**	**	**
13	15	55.1		19.0	107	02.4 ¹²⁰		41.5 ¹⁰⁶	10 S		19		44	6	06	**	**	**
14	30	55.1		19.6	121	33.6 ¹²²		30.8 ¹⁰⁷	20		30	5	57	20		**	**	**
15	45	55.1		20.2	136	04.8 ¹²²		20.1 ¹⁰⁷	30		42	6	11	36		23	53	56
16	60	55.1		20.8	150	36.1 ¹²³	-10	09.4 ¹⁰⁷	35		48	18		45		48	59	21
17	75	55.1	+18	21.5	165	07.4 ¹²³	-9	58.7 ¹⁰⁷	40	5	54	6	27	6	56	23	43	62
18	90	55.1	+18	22.1	179	38.8 ¹²⁴	-9	47.9 ¹⁰⁸	45	6	01	6	36	7	08	23	37	65
19	105	55.1		22.7	194	10.3 ¹²⁵		37.1 ¹⁰⁸	50		08		48	23		30	69	43
20	120	55.1		23.3	208	41.9 ¹²⁶		26.2 ¹⁰⁹	52		12		53	30		27	70	47
21	135	55.1		23.9	223	13.6 ¹²⁷		15.3 ¹⁰⁹	54		15	6	58	38		23	73	51
22	150	55.1		24.5	237	45.3 ¹²⁷	-9	04.4 ¹⁰⁹	56		19	7	04	46		19	75	12
23	165	55.1		25.2	252	17.0 ¹²⁷	-8	53.4 ¹¹⁰	58		23	11		7	56	15	77	13
24	180	55.1	+18	25.8	266	48.9 ¹²⁹	-8	42.5 ¹⁰⁹	60 S	6	27	7	19	8	07	23	09	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 37 ^m 9		Mag: -4.7 PMG: 14 ^h 09 ^m		Mag: +0.2 PMG: 19 ^h 18 ^m		Mag: -2.0 PMG: 12 ^h 00 ^m		Mag: +0.4 PMG: 22 ^h 09 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	230	10.2	147	12.8	+27	36.1	69	59.5	+10	11.3
1	245	12.6	162	14.9		35.9	85	01.4		11.0
2	260	15.1	177	17.0		35.7	100	03.2		10.7
3	275	17.6	192	19.1		35.6	115	05.0		10.3
4	290	20.0	207	21.1		35.4	130	06.9		10.0
5	305	22.5	222	23.2	+27	35.3	145	08.7	+10	09.6
6	320	25.0	237	25.3	+27	35.1	160	10.6	+10	09.3
7	335	27.4	252	27.4		34.9	175	12.4		09.0
8	350	29.9	267	29.5		34.8	190	14.2		08.6
9	5	32.3	282	31.6		34.6	205	16.1		08.3
10	20	34.8	297	33.7		34.4	220	17.9		08.0
11	35	37.3	312	35.9	+27	34.3	235	19.7	+10	07.6
12	50	39.7	327	38.0	+27	34.1	250	21.6	+10	07.3
13	65	42.2	342	40.1		33.9	265	23.4		06.9
14	80	44.7	357	42.2		33.8	280	25.2		06.6
15	95	47.1	12	44.4		33.6	295	27.1		06.3
16	110	49.6	27	46.5		33.4	310	28.9		05.9
17	125	52.1	42	48.6	+27	33.3	325	30.7	+10	05.6
18	140	54.5	57	50.8	+27	33.1	340	32.6	+10	05.2
19	155	57.0	72	52.9		32.9	355	34.4		04.9
20	170	59.5	87	55.1		32.7	10	36.2		04.6
21	186	01.9	102	57.2		32.6	25	38.0		04.2
22	201	04.4	117	59.4		32.4	40	39.9		03.9
23	216	06.8	133	01.6		32.2	55	41.7		03.5
24	231	09.3	148	03.8	+27	32.0	70	43.5	+10	03.2
Dif	—		+21		-2		+18		-3	
							+19		+2	
									+26	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 21 ^d 7 PHE { 4 ^h : 56 ^h /4 12 ^h : 56 ^h /2 20 ^h : 55 ^h /9											
	PMG: 11 ^h 56 ^m 3			SD: 15 ^h 4 PMG: 6 ^h 25 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	55.1	+18 25.8	266	48.9	-8 42.5	110	60 N	20 28	21 31	** **	1 16	11	11 48	79
1	195	55.1	26.4	281	20.8 ¹²⁹	31.5 ¹¹⁰	110	58	15	21 10	22 47	11 14	52	76	
2	210	55.1	27.0	295	52.8 ¹³⁰	20.4 ¹¹¹	111	56	20 04	20 53	22 09	07 16	55	74	
3	225	55.2	27.6	310	24.8 ¹³⁰	-8 09.4 ¹¹⁰	110	54	19 54	39	21 44	03 19	11 58	72	
4	240	55.2	28.2	324	57.0 ¹³²	-7 58.3 ¹¹¹	111	52	45	27	24	1 00	20	12 01	69
5	255	55.2	+18 28.8	339	29.1 ¹³¹	-7 47.2 ¹¹¹	111	50	19 37	20 16	21 08	0 56	23	12 03	68
6	270	55.2	+18 29.4	354	01.4 ¹³³	-7 36.1 ¹¹¹	111	45	19 20	19 55	20 38	0 50	25	12 09	64
7	285	55.2	30.0	8	33.7 ¹³³	24.9 ¹¹²	112	40	19 07	37	20 15	44 29	13	61	
8	300	55.2	30.7	23	06.0 ¹³³	13.8 ¹¹¹	111	35	18 55	23	19 57	39 31	17	58	
9	315	55.2	31.3	37	38.4 ¹³⁴	-7 02.6 ¹¹²	112	30	45	19 11	43	34 34	20	56	
10	330	55.2	31.9	52	10.9 ¹³⁵	-6 51.4 ¹¹²	112	20	28	18 52	20	27 38	26	51	
11	345	55.2	+18 32.5	66	43.4 ¹³⁵	-6 40.1 ¹¹³	113	10 N	18 14	18 36	19 02	0 20	42	12 31	48
12	0	55.2	+18 33.1	81	16.0 ¹³⁶	-6 28.9 ¹¹²	112	0	18 00	18 22	18 47	0 14	45	12 36	44
13	15	55.2	33.7	95	48.7 ¹³⁷	17.6 ¹¹³	113	10 S	17 46	18 08	34	07 49	40	41	
14	30	55.2	34.3	110	21.4 ¹³⁷	-6 06.4 ¹¹²	112	20	32	17 55	22	0 00	53	45	37
15	45	55.2	34.9	124	54.1 ¹³⁷	-5 55.1 ¹¹³	113	30	16	41	10	** ** *	**	51	33
16	60	55.2	35.5	139	26.9 ¹³⁸	43.8 ¹¹³	113	35	17 06	33	18 04	** ** *	**	54	30
17	75	55.2	+18 36.1	153	59.8 ¹³⁹	-5 32.4 ¹¹⁴	114	40	16 55	17 24	17 57	** ** *	**	12 57	28
18	90	55.2	+18 36.7	168	32.7 ¹³⁹	-5 21.1 ¹¹³	113	45	16 43	17 15	17 50	** ** *	**	13 01	25
19	105	55.2	37.3	183	05.6 ¹³⁹	-5 09.8 ¹¹³	113	50	28	17 03	43	** ** *	**	06	22
20	120	55.2	37.9	197	38.6 ¹⁴⁰	-4 58.4 ¹¹⁴	114	52	21	16 58	39	** ** *	**	09	19
21	135	55.2	38.5	212	11.7 ¹⁴¹	47.0 ¹¹⁴	114	54	13	52	36	** ** *	**	11	18
22	150	55.2	39.1	226	44.8 ¹⁴¹	35.7 ¹¹³	113	56	16 04	46	32	** ** *	**	14	15
23	165	55.2	39.7	241	17.9 ¹⁴¹	24.3 ¹¹⁴	114	58	15 54	39	28	** ** *	**	17	13
24	180	55.2	+18 40.3	255	51.1 ¹⁴²	-4 12.9 ¹¹⁴	114	60 S	15 42	16 31	17 23	** ** *	**	13 20	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 34 ^m 0		Mag: -4.7 PMG: 14 ^h 06 ^m		Mag: +0.2 PMG: 19 ^h 15 ^m		Mag: -2.0 PMG: 11 ^h 57 ^m		Mag: +0.4 PMG: 22 ^h 05 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	231	09.3	148	03.8	+27 32.0	70 43.5	+10 03.2	180 17.6	+17 45.5	27 42.9	-6 50.7
1	246	11.8	163	05.9	31.9	85 45.4	02.9	195 19.5	45.7	42 45.5	50.6
2	261	14.2	178	08.1	31.7	100 47.2	02.5	210 21.3	45.8	57 48.2	50.6
3	276	16.7	193	10.3	31.5	115 49.0	02.2	225 23.2	46.0	72 50.8	50.5
4	291	19.2	208	12.5	31.3	130 50.8	01.8	240 25.0	46.1	87 53.4	50.5
5	306	21.6	223	14.7	+27 31.1	145 52.6	+10 01.5	255 26.9	+17 46.3	102 56.0	-6 50.4
6	321	24.1	238	16.9	+27 30.9	160 54.5	+10 01.1	270 28.8	+17 46.4	117 58.6	-6 50.4
7	336	26.6	253	19.1	30.7	175 56.3	00.8	285 30.6	46.6	133 01.2	50.3
8	351	29.0	268	21.3	30.6	190 58.1	00.5	300 32.5	46.7	148 03.8	50.3
9	6	31.5	283	23.5	30.4	205 59.9	+10 00.1	315 34.4	46.9	163 06.4	50.2
10	21	33.9	298	25.7	30.2	221 01.7	+9 59.8	330 36.2	47.0	178 09.1	50.2
11	36	36.4	313	27.9	+27 30.0	236 03.6	+9 59.4	345 38.1	+17 47.2	193 11.7	-6 50.1
12	51	38.9	328	30.1	+27 29.8	251 05.4	+9 59.1	0 40.0	+17 47.3	208 14.3	-6 50.1
13	66	41.3	343	32.4	29.6	266 07.2	58.7	15 41.8	47.5	223 16.9	50.0
14	81	43.8	358	34.6	29.4	281 09.0	58.4	30 43.7	47.6	238 19.5	50.0
15	96	46.3	13	36.8	29.2	296 10.8	58.0	45 45.5	47.8	253 22.1	49.9
16	111	48.7	28	39.1	29.0	311 12.6	57.7	60 47.4	47.9	268 24.7	49.9
17	126	51.2	43	41.3	+27 28.8	326 14.5	+9 57.3	75 49.3	+17 48.1	283 27.3	-6 49.8
18	141	53.7	58	43.6	+27 28.6	341 16.3	+9 57.0	90 51.1	+17 48.2	298 29.9	-6 49.8
19	156	56.1	73	45.8	28.4	356 18.1	56.7	105 53.0	48.4	313 32.6	49.7
20	171	58.6	88	48.1	28.2	11 19.9	56.3	120 54.9	48.5	328 35.2	49.7
21	187	01.1	103	50.4	28.0	26 21.7	56.0	135 56.7	48.7	343 37.8	49.6
22	202	03.5	118	52.6	27.8	41 23.5	55.6	150 58.6	48.8	358 40.4	49.6
23	217	06.0	133	54.9	27.6	56 25.3	55.3	166 00.4	49.0	13 43.0	49.5
24	232	08.4	148	57.2	+27 27.4	71 27.1	+9 54.9	181 02.3	+17 49.1	28 45.6	-6 49.5
Dif	—		+22	-2	+18	-3		+19	+2	+26	+

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15°8 PMG: 11 ^h 56 ^m 3				Edad: 22 ^d 7 PHE { SD: 15°2 PMG: 7 ^h 09 ^m R°: 43 ^m 4 ^h : 55°7 12 ^h : 55°5 20 ^h : 55°3																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	55.2	+18	40.3	255	51.1	-4	12.9	60 N	**	**	2	21	3	24	1	27	11			
1	195	55.2		40.9	270	24.3 ¹⁴²	-4	01.5 ¹¹⁴	58	1	05	42	37	25	13	08	74				
2	210	55.2		41.5	284	57.6 ¹⁴³	-3	50.1 ¹¹⁴	56	1	43	2	59	48	23	15	09	72			
3	225	55.2		42.1	299	30.9 ¹⁴³		38.7 ¹¹⁴	54	2	08	3	13	3	58	22	17	10	70		
4	240	55.2		42.7	314	04.3 ¹⁴⁴		27.3 ¹¹⁴	52	28	25	4	07	20	19	10	68				
5	255	55.2	+18	43.3	328	37.7 ¹⁴⁴	-3	15.9 ¹¹⁴	50	2	44	3	36	4	15	1	19	20	13	11	66
6	270	55.2	+18	43.9	343	11.1 ¹⁴⁴	-3	04.5 ¹¹⁴	45	3	14	3	58	4	32	1	15	25	13	13	62
7	285	55.2		44.5	357	44.6 ¹⁴⁵	-2	53.0 ¹¹⁵	40	37	4	15	45	13	27	14	59				
8	300	55.1		45.1	12	18.1 ¹⁴⁵		41.6 ¹¹⁴	35	3	55	29	4	57	10	30	15	56			
9	315	55.1		45.7	26	51.6 ¹⁴⁵		30.2 ¹¹⁴	30	4	10	4	41	5	07	08	33	16	54		
10	330	55.1		46.3	41	25.2 ¹⁴⁶		18.8 ¹¹⁴	20	33	5	01	24	05	36	17	50				
11	345	55.1	+18	46.9	55	58.8 ¹⁴⁶	-2	07.4 ¹¹⁴	10 N	4	51	5	17	5	39	1	02	40	13	19	46
12	0	55.1	+18	47.5	70	32.5 ¹⁴⁷	-1	55.9 ¹¹⁵	0	5	06	5	31	5	53	0	59	43	13	20	43
13	15	55.1		48.1	85	06.1 ¹⁴⁶		44.5 ¹¹⁴	10 S	19	44	6	06	56	47	21	39				
14	30	55.1		48.7	99	39.9 ¹⁴⁸		33.1 ¹¹⁴	20	31	5	58	21	53	50	22	36				
15	45	55.1		49.3	114	13.6 ¹⁴⁷		21.7 ¹¹⁴	30	43	6	12	37	49	55	24	32				
16	60	55.1		49.9	128	47.4 ¹⁴⁸	-1	10.3 ¹¹⁴	35	49	20	47	47	57	24	30					
17	75	55.1	+18	50.5	143	21.2 ¹⁴⁸	-0	58.9 ¹¹⁴	40	5	56	6	29	6	58	0	45	60	13	25	27
18	90	55.1	+18	51.1	157	55.0 ¹⁴⁸	-0	47.5 ¹¹⁴	45	6	03	6	39	7	10	0	42	63	13	26	24
19	105	55.1		51.7	172	28.8 ¹⁴⁸		36.1 ¹¹⁴	50	11	50	26	39	67	28	20					
20	120	55.1		52.3	187	02.7 ¹⁴⁹		24.7 ¹¹⁴	52	14	6	55	33	37	69	28	19				
21	135	55.1		52.8	201	36.6 ¹⁴⁹		13.3 ¹¹⁴	54	18	7	01	41	36	70	29	17				
22	150	55.1		53.4	216	10.5 ¹⁴⁹	-0	02.0 ¹¹³	56	22	08	7	50	34	73	29	15				
23	165	55.1		54.0	230	44.5 ¹⁵⁰	+0	09.4 ¹¹⁴	58	26	15	8	00	32	75	30	13				
24	180	55.1	+18	54.6	245	18.5 ¹⁵⁰	+0	20.7 ¹¹³	60 S	6	30	7	22	8	12	0	30	77	13	31	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 30 ^m 0		Mag: -4.6 PMG: 14 ^h 02 ^m		Mag: +0.2 PMG: 19 ^h 12 ^m		Mag: -2.0 PMG: 11 ^h 54 ^m		Mag: +0.4 PMG: 22 ^h 01 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	232	08.4	148	57.2	+27	27.4	71	27.1	+9	54.9	181	02.3	+17	49.1	28	45.6	-6	49.5
1	247	10.9	163	59.5		27.2	86	28.9		54.6	196	04.2		49.3	43	48.2		49.4
2	262	13.4	179	01.7		27.0	101	30.8		54.2	211	06.0		49.4	58	50.8		49.4
3	277	15.8	194	04.0		26.8	116	32.6		53.9	226	07.9		49.6	73	53.4		49.3
4	292	18.3	209	06.3		26.6	131	34.4		53.5	241	09.7		49.7	88	56.0		49.3
5	307	20.8	224	08.6	+27	26.4	146	36.2	+9	53.2	256	11.6	+17	49.9	103	58.7	-6	49.2
6	322	23.2	239	10.9	+27	26.2	161	38.0	+9	52.8	271	13.5	+17	50.0	119	01.3	-6	49.2
7	337	25.7	254	13.2		26.0	176	39.8		52.5	286	15.3		50.2	134	03.9		49.1
8	352	28.2	269	15.6		25.8	191	41.6		52.1	301	17.2		50.3	149	06.5		49.1
9	7	30.6	284	17.9		25.6	206	43.4		51.8	316	19.1		50.5	164	09.1		49.0
10	22	33.1	299	20.2		25.4	221	45.2		51.4	331	20.9		50.6	179	11.7		49.0
11	37	35.5	314	22.5	+27	25.2	236	47.0	+9	51.1	346	22.8	+17	50.8	194	14.3	-6	48.9
12	52	38.0	329	24.8	+27	24.9	251	48.8	+9	50.7	1	24.6	+17	50.9	209	16.9	-6	48.9
13	67	40.5	344	27.2		24.7	266	50.6		50.4	16	26.5		51.1	224	19.5		48.8
14	82	42.9	359	29.5		24.5	281	52.4		50.0	31	28.4		51.2	239	22.1		48.8
15	97	45.4	14	31.9		24.3	296	54.2		49.7	46	30.2		51.4	254	24.8		48.7
16	112	47.9	29	34.2		24.1	311	56.0		49.3	61	32.1		51.5	269	27.4		48.7
17	127	50.3	44	36.6	+27	23.8	326	57.8	+9	48.9	76	34.0	+17	51.7	284	30.0	-6	48.6
18	142	52.8	59	38.9	+27	23.6	341	59.6	+9	48.6	91	35.8	+17	51.8	299	32.6	-6	48.6
19	157	55.3	74	41.3		23.4	357	01.4		48.2	106	37.7		52.0	314	35.2		48.5
20	172	57.7	89	43.6		23.2	12	03.2		47.9	121	39.5		52.1	329	37.8		48.5
21	188	00.2	104	46.0		23.0	27	05.0		47.5	136	41.4		52.3	344	40.4		48.4
22	203	02.7	119	48.4		22.7	42	06.8		47.2	151	43.3		52.4	359	43.0		48.4
23	218	05.1	134	50.8		22.5	57	08.6		46.8	166	45.1		52.6	14	45.6		48.3
24	233	07.6	149	53.2	+27	22.3	72	10.3	+9	46.5	181	47.0	+17	52.7	29	48.2	-6	48.3
Dif	—		+23		-2		+18		-4		+19		+2		+26		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8		Edad: 23 ^d 7 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 7											
	PMG: 11 ^h 56 ^m 3		SD: 15°0 PMG: 7 ^h 52 ^m R°: 43 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	55.1	+18 54.6		245 18.5	+0 20.7	60 N	20 33	21 37	** **	1 38 10		14 24 76	
1	195	55.0	55.2		259 52.5 ¹⁵⁰	32.1 ¹¹⁴	58	19	21 15	23 01	38 13		22 73	
2	210	55.0	55.8		274 26.5 ¹⁵⁰	43.4 ¹¹³	56	20 07	20 58	22 17	38 15		21 71	
3	225	55.0	56.4		289 00.5 ¹⁵⁰	+0 54.7 ¹¹³	54	19 57	43	21 50	39 17		20 68	
4	240	55.0	57.0		303 34.6 ¹⁵¹	+1 06.0 ¹¹³	52	48	31	29	39 19		18 67	
5	255	55.0	+18 57.5		318 08.6 ¹⁵⁰	+1 17.3 ¹¹³	50	19 40	20 20	21 13	1 39 20		14 17 65	
6	270	55.0	+18 58.1		332 42.7 ¹⁵¹	+1 28.6 ¹¹³	45	19 23	19 57	20 41	1 40 23		14 15 61	
7	285	55.0	58.7		347 16.8 ¹⁵¹	39.9 ¹¹³	40	19 09	39	20 18	40 27		13 58	
8	300	55.0	59.3		1 50.9 ¹⁵¹	+1 51.1 ¹¹²	35	18 57	25	19 59	40 30		11 56	
9	315	55.0	+18 59.9		16 25.1 ¹⁵²	+2 02.3 ¹¹²	30	47	19 13	44	41 31		10 53	
10	330	55.0	+19 00.5		30 59.2 ¹⁵¹	13.6 ¹¹³	20	29	18 53	21	41 36		07 49	
11	345	55.0	+19 01.0		45 33.4 ¹⁵²	+2 24.8 ¹¹²	10 N	18 14	18 36	19 02	1 42 39		14 05 46	
12	0	54.9	+19 01.6		60 07.5 ¹⁵¹	+2 35.9 ¹¹¹	0	18 00	18 22	18 47	1 42 43		14 03 42	
13	15	54.9	02.2		74 41.7 ¹⁵²	47.1 ¹¹²	10 S	17 46	18 08	34	43 45		14 00 40	
14	30	54.9	02.8		89 15.9 ¹⁵²	+2 58.2 ¹¹¹	20	31	17 54	21	43 50		13 58 36	
15	45	54.9	03.4		103 50.1 ¹⁵²	+3 09.4 ¹¹²	30	14	40	09	44 53		56 31	
16	60	54.9	03.9		118 24.3 ¹⁵²	20.5 ¹¹¹	35	17 05	32	18 02	44 56		54 30	
17	75	54.9	+19 04.5		132 58.5 ¹⁵²	+3 31.6 ¹¹¹	40	16 54	17 23	17 56	1 45 58		13 52 27	
18	90	54.9	+19 05.1		147 32.7 ¹⁵²	+3 42.6 ¹¹⁰	45	16 41	17 13	17 48	1 45 62		13 50 24	
19	105	54.9	05.7		162 06.9 ¹⁵²	+3 53.7 ¹¹¹	50	25	17 01	40	46 65		48 21	
20	120	54.8	06.2		176 41.2 ¹⁵³	+4 04.7 ¹¹⁰	52	18	16 55	37	46 67		47 19	
21	135	54.8	06.8		191 15.4 ¹⁵²	15.7 ¹¹⁰	54	09	49	33	46 69		46 17	
22	150	54.8	07.4		205 49.6 ¹⁵²	26.7 ¹¹⁰	56	16 00	43	29	47 71		44 16	
23	165	54.8	08.0		220 23.9 ¹⁵³	37.6 ¹⁰⁹	58	15 50	36	25	47 74		43 13	
24	180	54.8	+19 08.5		234 58.1 ¹⁵²	+4 48.5 ¹⁰⁹	60 S	15 38	16 28	17 20	1 47 77		13 41 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 26 ^m 1		Mag: -4.6 PMG: 13 ^h 58 ^m			Mag: +0.2 PMG: 19 ^h 09 ^m			Mag: -2.0 PMG: 11 ^h 51 ^m			Mag: +0.4 PMG: 21 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	233	07.6	149 53.2	+27 22.3	72 10.3	+9 46.5	181 47.0	+17 52.7	29 48.2	-6 48.3				
1	248	10.0	164 55.5	22.1	87 12.1	46.1	196 48.9	52.9	44 50.8	48.2				
2	263	12.5	179 57.9	21.8	102 13.9	45.8	211 50.7	53.0	59 53.4	48.2				
3	278	15.0	195 00.3	21.6	117 15.7	45.4	226 52.6	53.2	74 56.1	48.1				
4	293	17.4	210 02.7	21.4	132 17.5	45.1	241 54.4	53.3	89 58.7	48.1				
5	308	19.9	225 05.1	+27 21.1	147 19.3	+9 44.7	256 56.3	+17 53.5	105 01.3	-6 48.0				
6	323	22.4	240 07.5	+27 20.9	162 21.1	+9 44.3	271 58.2	+17 53.6	120 03.9	-6 48.0				
7	338	24.8	255 10.0	20.7	177 22.9	44.0	287 00.0	53.8	135 06.5	47.9				
8	353	27.3	270 12.4	20.4	192 24.7	43.6	302 01.9	53.9	150 09.1	47.9				
9	8	29.8	285 14.8	20.2	207 26.4	43.3	317 03.7	54.1	165 11.7	47.8				
10	23	32.2	300 17.2	20.0	222 28.2	42.9	332 05.6	54.2	180 14.3	47.8				
11	38	34.7	315 19.7	+27 19.7	237 30.0	+9 42.6	347 07.5	+17 54.4	195 16.9	-6 47.7				
12	53	37.2	330 22.1	+27 19.5	252 31.8	+9 42.2	2	09.3	+17 54.5	210 19.5	-6 47.7			
13	68	39.6	345 24.5	19.3	267 33.6	41.8	17	11.2	54.7	225 22.1	47.6			
14	83	42.1	0 27.0	19.0	282 35.4	41.5	32	13.1	54.8	240 24.7	47.6			
15	98	44.5	15 29.4	18.8	297 37.1	41.1	47	14.9	55.0	255 27.3	47.6			
16	113	47.0	30 31.9	18.5	312 38.9	40.8	62	16.8	55.1	270 29.9	47.5			
17	128	49.5	45 34.4	+27 18.3	327 40.7	+9 40.4	77	18.6	+17 55.3	285 32.6	-6 47.5			
18	143	51.9	60 36.8	+27 18.0	342 42.5	+9 40.0	92	20.5	+17 55.4	300 35.2	-6 47.4			
19	158	54.4	75 39.3	17.8	357 44.3	39.7	107	22.4	55.6	315 37.8	47.4			
20	173	56.9	90 41.8	17.5	12 46.0	39.3	122	24.2	55.7	330 40.4	47.3			
21	188	59.3	105 44.2	17.3	27 47.8	39.0	137	26.1	55.9	345 43.0	47.3			
22	204	01.8	120 46.7	17.1	42 49.6	38.6	152	27.9	56.0	0 45.6	47.2			
23	219	04.3	135 49.2	16.8	57 51.4	38.2	167	29.8	56.2	15 48.2	47.2			
24	234	06.7	150 51.7	+27 16.6	72 53.1	+9 37.9	182	31.7	+17 56.3	30 50.8	-6 47.1			
Dif	—		+24	-2	+18	-4	+19	+1		+26	0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 24 ^d 7 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 PMG: 8 ^h 35 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	54.8	+19 08.5	234	58.1	+4 48.5	109	60 N	** *	2 15	3 19	1 48	11	15 40	75
1	195	54.8	09.1	249	32.4	+4 59.4	109	58	0 52	37	33	51	13	35	73
2	210	54.8	09.7	264	06.6	+5 10.3	109	56	1 35	2 54	45	53	16	32	70
3	225	54.7	10.3	278	40.8	21.1	108	54	2 02	3 09	3 55	56	17	28	68
4	240	54.7	10.8	293	15.1	32.0	109	52	23	22	4 04	58	19	25	66
5	255	54.7	+19 11.4	307	49.3	+5 42.8	108	50	2 40	3 33	4 12	1 59	21	15 22	65
6	270	54.7	+19 12.0	322	23.6	+5 53.5	107	45	3 11	3 55	4 30	2 03	25	15 16	61
7	285	54.7	12.6	336	57.8	+6 04.3	108	40	35	4 13	44	07	27	11	58
8	300	54.7	13.1	351	32.0	15.0	107	35	3 53	27	4 55	10	30	07	55
9	315	54.7	13.7	6	06.2	25.6	106	30	4 08	4 40	5 06	12	32	15 03	53
10	330	54.6	14.3	20	40.4	36.3	107	20	32	5 00	23	17	36	14 56	50
11	345	54.6	+19 14.8	35	14.6	+6 46.9	106	10 N	4 50	5 16	5 39	2 21	39	14 51	46
12	0	54.6	+19 15.4	49	48.8	+6 57.5	106	0	5 05	5 31	5 53	2 25	42	14 45	43
13	15	54.6	16.0	64	23.0	+7 08.0	105	10 S	19	45	6 07	28	46	40	39
14	30	54.6	16.5	78	57.2	18.5	105	20	32	5 58	22	33	49	34	36
15	45	54.6	17.1	93	31.4	29.0	105	30	44	6 13	39	37	53	27	33
16	60	54.5	17.7	108	05.5	39.4	104	35	51	21	6 48	40	55	24	30
17	75	54.5	+19 18.2	122	39.7	+7 49.8	104	40	5 57	6 30	7 00	2 43	58	14 19	29
18	90	54.5	+19 18.8	137	13.8	+8 00.2	104	45	6 05	6 41	7 13	2 47	61	14 14	26
19	105	54.5	19.4	151	48.0	10.5	103	50	13	53	29	51	65	09	21
20	120	54.5	19.9	166	22.1	20.8	103	52	17	6 58	36	53	67	06	20
21	135	54.4	20.5	180	56.2	31.1	103	54	20	7 04	44	55	69	03	18
22	150	54.4	21.0	195	30.3	41.3	102	56	25	11	7 54	2 58	70	14 00	16
23	165	54.4	21.6	210	04.3	+8 51.5	102	58	29	18	8 04	3 01	72	13 56	14
24	180	54.4	+19 22.2	224	38.4	+9 01.6	101	60 S	6 34	7 26	8 16	3 04	75	13 52	12
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 22 ^m 2			Mag: -4.6 PMG: 13 ^h 54 ^m			Mag: +0.3 PMG: 19 ^h 06 ^m			Mag: -2.0 PMG: 11 ^h 48 ^m			Mag: +0.4 PMG: 21 ^h 53 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	234	06.7	150 51.7	+27 16.6	72 53.1	+9 37.9	182 31.7	+17 56.3	30 50.8	-6 47.1					
1	249	09.2	165 54.2	16.3	87 54.9	37.5	197 33.5	56.5	45 53.4	47.1					
2	264	11.6	180 56.7	16.0	102 56.7	37.2	212 35.4	56.6	60 56.0	47.0					
3	279	14.1	195 59.2	15.8	117 58.5	36.8	227 37.3	56.8	75 58.6	47.0					
4	294	16.6	211 01.7	15.5	133 00.2	36.4	242 39.1	56.9	91 01.2	46.9					
5	309	19.0	226 04.2	+27 15.3	148 02.0	+9 36.1	257 41.0	+17 57.1	106 03.8	-6 46.9					
6	324	21.5	241 06.8	+27 15.0	163 03.8	+9 35.7	272 42.8	+17 57.2	121 06.4	-6 46.8					
7	339	24.0	256 09.3	14.8	178 05.6	35.3	287 44.7	57.4	136 09.0	46.8					
8	354	26.4	271 11.8	14.5	193 07.3	35.0	302 46.6	57.5	151 11.6	46.7					
9	9	28.9	286 14.3	14.2	208 09.1	34.6	317 48.4	57.7	166 14.2	46.7					
10	24	31.4	301 16.9	14.0	223 10.9	34.3	332 50.3	57.8	181 16.8	46.6					
11	39	33.8	316 19.4	+27 13.7	238 12.6	+9 33.9	347 52.1	+17 58.0	196 19.4	-6 46.6					
12	54	36.3	331 22.0	+27 13.5	253 14.4	+9 33.5	2	54.0	+17 58.1	211 22.1	-6 46.5				
13	69	38.8	346 24.5	13.2	268 16.2	33.2	17	55.9	58.3	226 24.7	46.5				
14	84	41.2	1	27.1	283 17.9	32.8	32	57.7	58.4	241 27.3	46.5				
15	99	43.7	16	29.6	298 19.7	32.4	47	59.6	58.6	256 29.9	46.4				
16	114	46.1	31	32.2	313 21.5	32.1	63	01.4	58.7	271 32.5	46.4				
17	129	48.6	46	34.8	+27 12.1	328 23.2	+9 31.7	78 03.3	+17 58.9	286 35.1	-6 46.3				
18	144	51.1	61	37.3	+27 11.9	343 25.0	+9 31.3	93 05.2	+17 59.0	301 37.7	-6 46.3				
19	159	53.5	76	39.9	11.6	358 26.8	31.0	108 07.0	59.2	316 40.3	46.2				
20	174	56.0	91	42.5	11.3	13 28.5	30.6	123 08.9	59.3	331 42.9	46.2				
21	189	58.5	106	45.1	11.0	28 30.3	30.2	138 10.8	59.5	346 45.5	46.1				
22	205	00.9	121	47.7	10.8	43 32.0	29.9	153 12.6	59.6	1	48.1	46.1			
23	220	03.4	136	50.3	10.5	58 33.8	29.5	168 14.5	59.8	16	50.7	46.0			
24	235	05.9	151	52.9	+27 10.2	73 35.6	+9 29.1	183 16.3	+17 59.9	31 53.3	-6 46.0				
Dif	—			+25	-3	+18	-4	+19		+1	+26				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 25 ^d 7 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 2 20 ^h : 54 ^h 1					Civil Nútico			Hora R°		Hora R°	
	PMG: 11 ^h 56 ^m 4			SD: 14 ^h 8 PMG: 9 ^h 18 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	54.4	+19	22.2	224	38.4	+9	01.6	60 N	20 37	21 44	** **	1 59 13	16 55 74	
1	195	54.4		22.7	239	12.4 ¹⁵⁰		11.7 ¹⁰¹	58	23	21	23 18	2 04 16	48 71	
2	210	54.3		23.3	253	46.5 ¹⁵¹		21.8 ¹⁰¹	56	11	21 02	22 25	09 18	42 69	
3	225	54.3		23.8	268	20.5 ¹⁵⁰		31.8 ¹⁰⁰	54	20 00	20 47	21 56	13 20	36 67	
4	240	54.3		24.4	282	54.4 ¹⁴⁹		41.8 ¹⁰⁰	52	19 51	34	34	17 21	31 65	
5	255	54.3	+19	25.0	297	28.4 ¹⁵⁰	+9	51.7 ⁹⁹	50	19 43	20 23	21 17	2 20 24	16 27 63	
6	270	54.3	+19	25.5	312	02.4 ¹⁵⁰	+10	01.6 ⁹⁹	45	19 25	20 00	20 44	2 28 26	16 17 60	
7	285	54.2		26.1	326	36.3 ¹⁴⁹		11.5 ⁹⁹	40	19 11	19 42	20	34 29	09 57	
8	300	54.2		26.6	341	10.2 ¹⁴⁹		21.3 ⁹⁸	35	18 58	27	20 01	40 31	16 02 55	
9	315	54.2		27.2	355	44.1 ¹⁴⁹		31.0 ⁹⁷	30	48	19 14	19 46	44 34	15 56 53	
10	330	54.2		27.7	10	17.9 ¹⁴⁸		40.8 ⁹⁸	20	30	18 54	22	2 53 37	46 49	
11	345	54.1	+19	28.3	24	51.8 ¹⁴⁹	+10	50.4 ⁹⁶	10 N	18 14	18 37	19 03	3 00 41	15 37 46	
12	0	54.1	+19	28.9	39	25.6 ¹⁴⁸	+11	00.1 ⁹⁷	0	18 00	18 22	18 47	3 07 44	15 28 44	
13	15	54.1		29.4	53	59.4 ¹⁴⁸		09.6 ⁹⁵	10 S	17 46	18 08	34	14 47	19 42	
14	30	54.1		30.0	68	33.2 ¹⁴⁸		19.2 ⁹⁶	20	31	17 54	21	22 49	10 39	
15	45	54.1		30.5	83	06.9 ¹⁴⁷		28.6 ⁹⁴	30	13	39	08	30 53	15 00 35	
16	60	54.0		31.1	97	40.6 ¹⁴⁷		38.1 ⁹⁵	35	17 03	30	18 01	35 56	14 54 33	
17	75	54.0	+19	31.6	112	14.3 ¹⁴⁷	+11	47.4 ⁹³	40	16 52	17 21	17 54	3 41 58	14 48 30	
18	90	54.0	+19	32.2	126	48.0 ¹⁴⁷	+11	56.8 ⁹⁴	45	16 39	17 11	17 47	3 48 60	14 40 28	
19	105	54.0		32.7	141	21.7 ¹⁴⁷	+12	06.0 ⁹²	50	22	16 58	38	3 56 64	30 25	
20	120	53.9		33.3	155	55.3 ¹⁴⁶		15.3 ⁹³	52	15	53	34	4 00 65	26 23	
21	135	53.9		33.8	170	28.9 ¹⁴⁶		24.4 ⁹¹	54	16 06	47	30	04 67	21 22	
22	150	53.9		34.4	185	02.4 ¹⁴⁵		33.6 ⁹²	56	15 57	40	26	08 70	16 19	
23	165	53.9		34.9	199	36.0 ¹⁴⁶		42.6 ⁹⁰	58	46	32	22	13 72	10 17	
24	180	53.8	+19	35.5	214	09.5 ¹⁴⁵	+12	51.6 ⁹⁰	60 S	15 34	16 24	17 17	4 19 75	14 04 14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 18 ^m 2		Mag: -4.6 PMG: 13 ^h 50 ^m		Mag: +0.3 PMG: 19 ^h 03 ^m		Mag: -2.0 PMG: 11 ^h 45 ^m		Mag: +0.4 PMG: 21 ^h 49 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	235	05.9	151	52.9	73	35.6	183	16.3	31	53.3					
1	250	08.3	166	55.5	88	37.3	198	18.2	46	55.9					
2	265	10.8	181	58.1	103	39.1	213	20.1	61	58.5					
3	280	13.2	197	00.7	118	40.8	228	21.9	77	01.1					
4	295	15.7	212	03.3	133	42.6	243	23.8	92	03.7					
5	310	18.2	227	06.0	148	44.4	258	25.6	107	06.3					
6	325	20.6	242	08.6	163	46.1	273	27.5	122	08.9					
7	340	23.1	257	11.2	178	47.9	288	29.4	137	11.5					
8	355	25.6	272	13.9	193	49.6	303	31.2	152	14.1					
9	10	28.0	287	16.5	208	51.4	318	33.1	167	16.7					
10	25	30.5	302	19.1	223	53.1	333	35.0	182	19.3					
11	40	33.0	317	21.8	238	54.9	348	36.8	197	21.9					
12	55	35.4	332	24.5	253	56.6	3	38.7	212	24.5					
13	70	37.9	347	27.1	268	58.4	18	40.5	227	27.1					
14	85	40.4	2	29.8	284	00.1	33	42.4	242	29.7					
15	100	42.8	17	32.5	299	01.9	48	44.3	257	32.3					
16	115	45.3	32	35.1	314	03.6	63	46.1	272	34.9					
17	130	47.7	47	37.8	329	05.4	78	48.0	287	37.5					
18	145	50.2	62	40.5	344	07.1	93	49.8	302	40.1					
19	160	52.7	77	43.2	359	08.9	108	51.7	317	42.7					
20	175	55.1	92	45.9	4	10.6	123	53.6	332	45.3					
21	190	57.6	107	48.6	29	12.4	138	55.4	347	47.9					
22	206	00.1	122	51.3	44	14.1	153	57.3	2	50.5					
23	221	02.5	137	54.0	59	15.9	168	59.1	17	53.1					
24	236	05.0	152	56.7	74	17.6	184	01.0	32	55.7					
Dif	—		+27	-3	+18	-4	+19	+1	+26	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 26 ^d 7 SD: 14 ^h 7 PMG: 10 ^h 01 ^m	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 Rº: 45 ^m										
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	53.8	+19 35.5	214	09.5	+12 51.6	60 N	** *	2 08	3 15		2 12	17	18 09	73
1	195	53.8		228	42.9 ¹⁴⁴	+13 00.6 ⁹⁰	58	0 35	31	29		20 19		17 59	70
2	210	53.8		243	16.4 ¹⁴⁵	09.5 ⁸⁹	56	1 27	2 50	41		27 21		51 67	
3	225	53.8		257	49.8 ¹⁴⁴	18.3 ⁸⁸	54	1 57	3 05	3 52		33 23		43 66	
4	240	53.7		272	23.2 ¹⁴⁴	27.1 ⁸⁸	52	2 18	18	4 01		38 25		36 64	
5	255	53.7	+19 38.2	286	56.5 ¹⁴³	+13 35.9 ⁸⁸	50	2 36	3 30	4 10		2 44	26	17 30	63
6	270	53.7	+19 38.7	301	29.9 ¹⁴⁴	+13 44.5 ⁸⁶	45	3 09	3 53	4 27		2 54	30	17 17	60
7	285	53.6		316	03.2 ¹⁴³	+13 53.2 ⁸⁷	40	33	4 11	42		3 03	32	17 06	57
8	300	53.6		330	36.4 ¹⁴²	+14 01.7 ⁸⁵	35	3 51	26	4 54		11 34		16 57	55
9	315	53.6		345	09.7 ¹⁴³	10.2 ⁸⁵	30	4 07	38	5 05		18 36		49 53	
10	330	53.6		359	42.8 ¹⁴¹	18.7 ⁸⁵	20	31	4 59	23		30 39		35 51	
11	345	53.5	+19 41.4	14	16.0 ¹⁴²	+14 27.0 ⁸³	10 N	4 50	5 16	5 38		3 41	42	16 23	48
12	0	53.5	+19 42.0	28	49.1 ¹⁴¹	+14 35.3 ⁸³	0	5 05	5 31	5 53		3 51	44	16 12	45
13	15	53.5		43	22.2 ¹⁴¹	43.6 ⁸²	10 S	19	45	6 07		4 01	47	16 01	43
14	30	53.4		57	55.3 ¹⁴¹	51.8 ⁸²	20	32	5 59	22		11 50		15 49	40
15	45	53.4		72	28.3 ¹⁴⁰	+14 59.9 ⁸¹	30	45	6 14	40		23 54		35 37	
16	60	53.4		87	01.3 ¹⁴⁰	+15 08.0 ⁸¹	35	52	23	6 50		31 55		27 36	
17	75	53.4	+19 44.7	101	34.3 ¹⁴⁰	+15 16.0 ⁸⁰	40	5 59	6 32	7 01		4 39	57	15 18	34
18	90	53.3	+19 45.2	116	07.2 ¹³⁹	+15 23.9 ⁷⁹	45	6 07	6 43	7 15		4 48	60	15 08	31
19	105	53.3		130	40.1 ¹³⁹	31.8 ⁷⁹	50	15	6 55	31		5 00	63	14 55	28
20	120	53.3		145	13.0 ¹³⁹	39.6 ⁷⁸	52	19	7 01	39		05 65		49 27	
21	135	53.2		159	45.8 ¹³⁸	47.3 ⁷⁷	54	23	07	47		11 67		43 25	
22	150	53.2		174	18.6 ¹³⁸	+15 55.0 ⁷⁶	56	27	14	7 57		18 68		35 24	
23	165	53.2		188	51.3 ¹³⁷	+16 02.6 ⁷⁶	58	32	21	8 08		25 71		27 21	
24	180	53.1	+19 48.4	203	24.0 ¹³⁷	+16 10.1 ⁷⁵	60 S	6 37	7 30	8 21		5 34	73	14 18	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 14 ^m 3		Mag: -4.5 PMG: 13 ^h 46 ^m		Mag: +0.3 PMG: 19 ^h 01 ^m		Mag: -2.0 PMG: 11 ^h 42 ^m		Mag: +0.4 PMG: 21 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	05.0	152	56.7	+27 03.3	74 17.6	+9 20.3	184 01.0	+18 03.5	32 55.7
1	251	07.5	167	59.4	03.0	89 19.3	19.9	199 02.9	03.6	47 58.3
2	266	09.9	183	02.1	02.7	104 21.1	19.5	214 04.7	03.7	63 00.9
3	281	12.4	198	04.9	02.4	119 22.8	19.1	229 06.6	03.9	78 03.5
4	296	14.9	213	07.6	02.1	134 24.6	18.8	244 08.4	04.0	93 06.1
5	311	17.3	228	10.3	+27 01.8	149 26.3	+9 18.4	259 10.3	+18 04.2	108 08.7
6	326	19.8	243	13.1	+27 01.5	164 28.1	+9 18.0	274 12.2	+18 04.3	123 11.3
7	341	22.2	258	15.8	01.1	179 29.8	17.6	289 14.0	04.5	138 13.9
8	356	24.7	273	18.6	00.8	194 31.5	17.3	304 15.9	04.6	153 16.5
9	11	27.2	288	21.3	00.5	209 33.3	16.9	319 17.8	04.8	168 19.1
10	26	29.6	303	24.1	+27 00.2	224 35.0	16.5	334 19.6	04.9	183 21.7
11	41	32.1	318	26.8	+26 59.9	239 36.7	+9 16.1	349 21.5	+18 05.1	198 24.3
12	56	34.6	333	29.6	+26 59.6	254 38.5	+9 15.8	4 23.3	+18 05.2	213 26.9
13	71	37.0	348	32.4	59.3	269 40.2	15.4	19 25.2	05.4	228 29.5
14	86	39.5	3 35.1	59.0	284 42.0	15.0	34 27.1	05.5	243 32.1	44.2
15	101	42.0	18 37.9	58.6	299 43.7	14.6	49 28.9	05.7	258 34.7	44.2
16	116	44.4	33 40.7	58.3	314 45.4	14.2	64 30.8	05.8	273 37.3	44.1
17	131	46.9	48 43.5	+26 58.0	329 47.2	+9 13.9	79 32.6	+18 06.0	288 39.9	-6 44.1
18	146	49.3	63 46.3	+26 57.7	344 48.9	+9 13.5	94 34.5	+18 06.1	303 42.5	-6 44.1
19	161	51.8	78 49.1	57.4	359 50.6	13.1	109 36.4	06.2	318 45.1	44.0
20	176	54.3	93 51.9	57.0	14 52.4	12.7	124 38.2	06.4	333 47.7	44.0
21	191	56.7	108 54.7	56.7	29 54.1	12.4	139 40.1	06.5	348 50.3	43.9
22	206	59.2	123 57.5	56.4	44 55.8	12.0	154 41.9	06.7	3 52.9	43.9
23	222	01.7	139 00.3	56.1	59 57.5	11.6	169 43.8	06.8	18 55.5	43.8
24	237	04.1	154 03.2	+26 55.7	74 59.3	+9 11.2	184 45.7	+18 07.0	33 58.1	-6 43.8
Dif	—		+28	-3	+17	-4	+19	+1	+26	0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8		Edad: 27 ^d 7 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 53 ^h 9													
	PMG: 11 ^h 56 ^m 5	PMG: 10 ^h 46 ^m	R°: 47 ^m	hG ☉	Dec	hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	53.1	+19 48.4		203	24.0	+16 10.1	75	60 N	20 42	21 51	** **	2 29 21	19 22 68		
1	195	53.1		48.9	217	56.7 ¹³⁷	17.6	75	58	27	26	** **	39 24	19 09 66		
2	210	53.1		49.5	232	29.3 ¹³⁶	25.0	74	56	15	21 07	22 34	48 26	18 58 64		
3	225	53.0		50.0	247	01.9 ¹³⁶	32.3	73	54	20 04	20 51	22 02	2 56 28	49 62		
4	240	53.0		50.5	261	34.5 ¹³⁶	39.5	72	52	19 54	38	21 39	3 03 30	40 61		
5	255	53.0	+19 51.1		276	07.0 ¹³⁵	+16 46.7	72	50	19 45	20 26	21 21	3 10 31	18 33 59		
6	270	52.9	+19 51.6		290	39.5 ¹³⁵	+16 53.8	71	45	19 27	20 02	20 47	3 24 33	18 17 57		
7	285	52.9		52.1	305	11.9 ¹³⁴	+17 00.9	71	40	12	19 44	22	35 36	18 03 56		
8	300	52.9		52.7	319	44.4 ¹³⁵	07.8	69	35	19 00	28	20 03	45 38	17 52 54		
9	315	52.8		53.2	334	16.7 ¹³³	14.7	69	30	18 49	19 16	19 47	3 54 39	42 53		
10	330	52.8		53.7	348	49.1 ¹³⁴	21.5	68	20	31	18 55	23	4 09 42	26 50		
11	345	52.8	+19 54.2		3	21.4 ¹³³	+17 28.2	67	10 N	18 15	18 37	19 04	4 23 44	17 11 49		
12	0	52.7	+19 54.8		17	53.7 ¹³³	+17 34.9	67	0	18 00	18 22	18 48	4 35 46	16 57 47		
13	15	52.7		55.3	32	25.9 ¹³²	41.5	66	10 S	17 45	18 08	33	4 48 48	44 45		
14	30	52.7		55.8	46	58.1 ¹³²	48.0	65	20	30	17 53	20	5 01 51	29 43		
15	45	52.6		56.3	61	30.2 ¹³¹	+17 54.4	64	30	12	38	07	17 53	12 41		
16	60	52.6		56.9	76	02.3 ¹³¹	+18 00.8	64	35	17 02	29	18 00	26 54	16 03 39		
17	75	52.6	+19 57.4		90	34.4 ¹³¹	+18 07.0	62	40	16 50	17 20	17 53	5 36 56	15 52 38		
18	90	52.5	+19 57.9		105	06.5 ¹³¹	+18 13.2	62	45	16 37	17 09	17 45	5 48 59	15 39 36		
19	105	52.5		58.4	119	38.5 ¹³⁰	19.4	62	50	20	16 56	36	6 03 61	23 34		
20	120	52.5		59.0	134	10.4 ¹²⁹	25.4	60	52	12	50	32	10 63	16 32		
21	135	52.4	+19 59.5		148	42.3 ¹²⁹	31.3	59	54	16 04	44	28	18 64	15 08 31		
22	150	52.4	+20 00.0		163	14.2 ¹²⁹	37.2	59	56	15 54	37	24	26 66	14 59 29		
23	165	52.4	+20 00.5		177	46.1 ¹²⁹	43.0	58	58	43	29	19	36 68	48 28		
24	180	52.3	+20 01.0		192	17.9 ¹²⁸	+18 48.7	57	60 S	15 30	16 21	17 13	6 47 71	14 37 24		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 8 ^h 10 ^m 4	Mag: -4.5 PMG: 13 ^h 41 ^m	Mag: +0.3 PMG: 18 ^h 58 ^m	Mag: -2.0 PMG: 11 ^h 40 ^m	Mag: +0.4 PMG: 21 ^h 40 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'						
0	237	04.1	154	03.2	+26 55.7	74	59.3	+9 11.2	184	45.7	+18 07.0	33	58.1	-6 43.8		
1	252	06.6	169	06.0	55.4	90	01.0	10.8	199	47.5	07.1	49	00.7	43.7		
2	267	09.1	184	08.8	55.1	105	02.7	10.5	214	49.4	07.3	64	03.3	43.7		
3	282	11.5	199	11.7	54.7	120	04.5	10.1	229	51.3	07.4	79	05.9	43.7		
4	297	14.0	214	14.5	54.4	135	06.2	09.7	244	53.1	07.6	94	08.5	43.6		
5	312	16.5	229	17.3	+26 54.1	150	07.9	+9 09.3	259	55.0	+18 07.7	109	11.1	-6 43.6		
6	327	18.9	244	20.2	+26 53.7	165	09.6	+9 08.9	274	56.8	+18 07.9	124	13.7	-6 43.5		
7	342	21.4	259	23.1	53.4	180	11.4	08.6	289	58.7	08.0	139	16.3	43.5		
8	357	23.8	274	25.9	53.1	195	13.1	08.2	305	00.6	08.1	154	18.9	43.4		
9	12	26.3	289	28.8	52.7	210	14.8	07.8	320	02.4	08.3	169	21.5	43.4		
10	27	28.8	304	31.6	52.4	225	16.5	07.4	335	04.3	08.4	184	24.1	43.3		
11	42	31.2	319	34.5	+26 52.1	240	18.2	+9 07.0	350	06.1	+18 08.6	199	26.7	-6 43.3		
12	57	33.7	334	37.4	+26 51.7	255	20.0	+9 06.6	5	08.0	+18 08.7	214	29.3	-6 43.3		
13	72	36.2	349	40.3	51.4	270	21.7	06.3	20	09.9	08.9	229	31.9	43.2		
14	87	38.6	4	43.2	51.0	285	23.4	05.9	35	11.7	09.0	244	34.5	43.2		
15	102	41.1	19	46.1	50.7	300	25.1	05.5	50	13.6	09.2	259	37.1	43.1		
16	117	43.6	34	49.0	50.3	315	26.8	05.1	65	15.4	09.3	274	39.7	43.1		
17	132	46.0	49	51.9	+26 50.0	330	28.6	+9 04.7	80	17.3	+18 09.5	289	42.3	-6 43.0		
18	147	48.5	64	54.8	+26 49.6	345	30.3	+9 04.3	95	19.2	+18 09.6	304	44.9	-6 43.0		
19	162	51.0	79	57.7	49.3	0	32.0	04.0	110	21.0	09.8	319	47.5	43.0		
20	177	53.4	95	00.6	48.9	15	33.7	03.6	125	22.9	09.9	334	50.1	42.9		
21	192	55.9	110	03.5	48.6	30	35.4	03.2	140	24.7	10.0	349	52.6	42.9		
22	207	58.3	125	06.4	48.2	45	37.1	02.8	155	26.6	10.2	4	55.2	42.8		
23	223	00.8	140	09.4	47.9	60	38.9	02.4	170	28.5	10.3	19	57.8	42.8		
24	238	03.3	155	12.3	+26 47.5	75	40.6	+9 02.0	185	30.3	+18 10.5	35	00.4	-6 42.7		
Dif	—		+29 -3		+17 -4		+19 +1		+26 0							

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 28 ^d 7 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 11 ^h 33 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.3	+20	01.0	192	17.9	+18	48.7	60 N	** **	2 02	3 10	2 50	29	20 30	60		
1	195	52.3		01.6	206	49.7 ¹²⁸		54.3 ⁵⁶	58	** **	26	25	3 03	31	15	59		
2	210	52.2		02.1	221	21.4 ¹²⁷	+18	59.9 ⁵⁶	56	1 19	2 46	38	14	33	20 02	58		
3	225	52.2		02.6	235	53.1 ¹²⁷	+19	05.3 ⁵⁴	54	1 51	3 02	49	24	34	19 51	57		
4	240	52.2		03.1	250	24.8 ¹²⁷		10.7 ⁵⁴	52	2 14	15	3 59	33	35	41	56		
5	255	52.1	+20	03.6	264	56.4 ¹²⁶	+19	16.0 ⁵³	50	2 32	3 27	4 07	3 41	36	19 32	56		
6	270	52.1	+20	04.1	279	28.0 ¹²⁶	+19	21.2 ⁵²	45	3 06	3 51	4 25	3 57	39	19 14	54		
7	285	52.0		04.7	293	59.6 ¹²⁶		26.3 ⁵¹	40	30	4 09	40	4 11	41	18 59	53		
8	300	52.0		05.2	308	31.1 ¹²⁵		31.3 ⁵⁰	35	3 50	24	4 53	23	42	46	53		
9	315	52.0		05.7	323	02.6 ¹²⁵		36.2 ⁴⁹	30	4 05	37	5 04	33	43	35	52		
10	330	51.9		06.2	337	34.1 ¹²⁵		41.1 ⁴⁹	20	30	4 58	22	4 51	45	16	50		
11	345	51.9	+20	06.7	352	05.5 ¹²⁴	+19	45.9 ⁴⁸	10 N	4 49	5 16	5 38	5 07	46	18 00	49		
12	0	51.8	+20	07.2	6	36.9 ¹²⁴	+19	50.5 ⁴⁶	0	5 05	5 31	5 53	5 21	48	17 44	48		
13	15	51.8		07.7	21	08.2 ¹²³		55.1 ⁴⁶	10 S	20	5 45	6 08	36	49	29	47		
14	30	51.8		08.2	35	39.6 ¹²⁴	+19	59.6 ⁴⁵	20	33	6 00	23	5 52	50	17 12	46		
15	45	51.7		08.7	50	10.8 ¹²²	+20	04.0 ⁴⁴	30	46	15	41	6 10	52	16 53	45		
16	60	51.7		09.3	64	42.1 ¹²³		08.3 ⁴³	35	5 53	24	6 51	20	54	42	44		
17	75	51.6	+20	09.8	79	13.3 ¹²²	+20	12.6 ⁴³	40	6 01	6 34	7 03	6 32	55	16 30	43		
18	90	51.6	+20	10.3	93	44.5 ¹²²	+20	16.7 ⁴¹	45	6 09	6 45	7 17	6 47	56	16 15	42		
19	105	51.6		10.8	108	15.7 ¹²²		20.7 ⁴⁰	50	17	6 57	34	7 04	58	15 57	40		
20	120	51.5		11.3	122	46.8 ¹²¹		24.7 ⁴⁰	52	21	7 03	42	13	59	48	39		
21	135	51.5		11.8	137	17.9 ¹²¹		28.5 ³⁸	54	26	10	7 50	22	60	39	38		
22	150	51.4		12.3	151	48.9 ¹²⁰		32.3 ³⁸	56	30	17	8 00	32	62	28	37		
23	165	51.4		12.8	166	19.9 ¹²⁰		36.0 ³⁷	58	35	25	12	44	63	16	35		
24	180	51.3	+20	13.3	180	50.9 ¹²⁰	+20	39.5 ³⁵	60 S	6 40	7 34	8 25	7 58	65	15 01	34		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 06 ^m 4		Mag: -4.5 PMG: 13 ^h 36 ^m				Mag: +0.3 PMG: 18 ^h 55 ^m				Mag: -2.0 PMG: 11 ^h 37 ^m				Mag: +0.4 PMG: 21 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	03.3	155	12.3	+26	47.5	75	40.6	+9	02.0	185	30.3	+18	10.5	35	00.4	-6	42.7
1	253	05.7	170	15.2		47.2	90	42.3		01.7	200	32.2		10.6	50	03.0		42.7
2	268	08.2	185	18.2		46.8	105	44.0		01.3	215	34.1		10.8	65	05.6		42.6
3	283	10.7	200	21.1		46.5	120	45.7		00.9	230	35.9		10.9	80	08.2		42.6
4	298	13.1	215	24.1		46.1	135	47.4		00.5	245	37.8		11.1	95	10.8		42.6
5	313	15.6	230	27.0	+26	45.7	150	49.1	+9	00.1	260	39.6	+18	11.2	110	13.4	-6	42.5
6	328	18.1	245	30.0	+26	45.4	165	50.8	+8	59.7	275	41.5	+18	11.4	125	16.0	-6	42.5
7	343	20.5	260	33.0		45.0	180	52.5		59.3	290	43.4		11.5	140	18.6		42.4
8	358	23.0	275	35.9		44.7	195	54.3		58.9	305	45.2		11.6	155	21.2		42.4
9	13	25.5	290	38.9		44.3	210	56.0		58.6	320	47.1		11.8	170	23.8		42.3
10	28	27.9	305	41.9		43.9	225	57.7		58.2	335	48.9		11.9	185	26.4		42.3
11	43	30.4	320	44.9	+26	43.6	240	59.4	+8	57.8	350	50.8	+18	12.1	200	29.0	-6	42.3
12	58	32.8	335	47.9	+26	43.2	256	01.1	+8	57.4	5	52.7	+18	12.2	215	31.6	-6	42.2
13	73	35.3	350	50.8		42.8	271	02.8		57.0	20	54.5		12.4	230	34.2		42.2
14	88	37.8	5	53.8		42.5	286	04.5		56.6	35	56.4		12.5	245	36.8		42.1
15	103	40.2	20	56.8		42.1	301	06.2		56.2	50	58.2		12.7	260	39.3		42.1
16	118	42.7	35	59.9		41.7	316	07.9		55.8	66	00.1		12.8	275	41.9		42.0
17	133	45.2	51	02.9	+26	41.3	331	09.6	+8	55.5	81	02.0	+18	12.9	290	44.5	-6	42.0
18	148	47.6	66	05.9	+26	41.0	346	11.3	+8	55.1	96	03.8	+18	13.1	305	47.1	-6	42.0
19	163	50.1	81	08.9		40.6	1	13.0		54.7	111	05.7		13.2	320	49.7		41.9
20	178	52.6	96	11.9		40.2	16	14.7		54.3	126	07.5		13.4	335	52.3		41.9
21	193	55.0	111	15.0		39.8	31	16.4		53.9	141	09.4		13.5	350	54.9		41.8
22	208	57.5	126	18.0		39.5	46	18.1		53.5	156	11.3		13.7	5	57.5		41.8
23	223	59.9	141	21.0		39.1	61	19.8		53.1	171	13.1		13.8	21	00.1		41.8
24	239	02.4	156	24.1	+26	38.7	76	21.5	+8	52.7	186	15.0	+18	14.0	36	02.7	-6	41.7
Dif	—		+30		-4		+17		-4		+19		+1		+26		0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 29 ^d 7 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2 R°: 49 ^m												
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	51.3	+20	13.3	180	50.9	+20	39.5	60 N	20 46	21 57	** **	3 19 40	21 30 50			
1	195	51.3		13.8	195	21.9 ¹²⁰		43.0 ³⁵	58	31	31	** **	34 41	14 50			
2	210	51.3		14.3	209	52.8 ¹¹⁹		46.4 ³⁴	56	18	21 11	22 43	47 42	21 00 50			
3	225	51.2		14.8	224	23.8 ¹²⁰		49.7 ³³	54	20 07	20 55	22 08	3 58 43	20 48 50			
4	240	51.2		15.3	238	54.6 ¹¹⁸		52.9 ³²	52	19 57	41	21 44	4 08 44	37 50			
5	255	51.1	+20	15.8	253	25.5 ¹¹⁹	+20	56.0 ³¹	50	19 48	20 29	21 25	4 17 44	20 28 50			
6	270	51.1	+20	16.3	267	56.3 ¹¹⁸	+20	59.0 ³⁰	45	19 29	20 04	20 50	4 36 45	20 08 50			
7	285	51.0		16.8	282	27.1 ¹¹⁸	+21	01.9 ²⁹	40	14	19 46	25	4 52 45	19 52 50			
8	300	51.0		17.3	296	57.9 ¹¹⁸		04.7 ²⁸	35	19 01	30	20 05	5 05 46	39 49			
9	315	51.0		17.8	311	28.6 ¹¹⁷		07.4 ²⁷	30	18 50	19 17	19 49	16 47	27 49			
10	330	50.9		18.3	325	59.3 ¹¹⁷		10.0 ²⁶	20	32	18 55	24	36 47	19 06 50			
11	345	50.9	+20	18.8	340	30.0 ¹¹⁷	+21	12.5 ²⁵	10 N	18 15	18 38	19 04	5 53 48	18 49 49			
12	0	50.8	+20	19.3	355	00.7 ¹¹⁷	+21	14.9 ²⁴	0	18 00	18 22	18 48	6 09 49	18 32 50			
13	15	50.8		19.8	9	31.3 ¹¹⁶		17.2 ²³	10 S	17 45	18 08	33	25 49	18 16 49			
14	30	50.7		20.3	24	01.9 ¹¹⁶		19.4 ²²	20	29	17 53	20	6 42 50	17 58 49			
15	45	50.7		20.8	38	32.5 ¹¹⁶		21.6 ²²	30	11	37	18 06	7 02 51	38 49			
16	60	50.6		21.3	53	03.1 ¹¹⁶		23.6 ²⁰	35	17 01	28	17 59	14 51	26 49			
17	75	50.6	+20	21.8	67	33.6 ¹¹⁵	+21	25.5 ¹⁹	40	16 49	17 18	17 52	7 27 52	17 13 48			
18	90	50.5	+20	22.3	82	04.2 ¹¹⁶	+21	27.3 ¹⁸	45	16 35	17 07	17 43	7 43 52	16 57 47			
19	105	50.5		22.8	96	34.7 ¹¹⁵		29.0 ¹⁷	50	18	16 54	34	8 02 53	37 47			
20	120	50.4		23.3	111	05.2 ¹¹⁵		30.6 ¹⁶	52	10	48	30	12 53	27 48			
21	135	50.4		23.8	125	35.6 ¹¹⁴		32.1 ¹⁵	54	16 01	42	26	22 54	17 47			
22	150	50.3		24.3	140	06.1 ¹¹⁵		33.6 ¹⁵	56	15 51	34	21	34 54	16 05 47			
23	165	50.3		24.8	154	36.5 ¹¹⁴		34.9 ¹³	58	39	26	16	8 47 55	15 51 46			
24	180	50.3	+20	25.2	169	06.9 ¹¹⁴	+21	36.1 ¹²	60 S	15 26	16 17	17 11	9 03 56	15 35 46			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 8 ^h 02 ^m 5		Mag: -4.4 PMG: 13 ^h 32 ^m		Mag: +0.4 PMG: 18 ^h 52 ^m		Mag: -2.0 PMG: 11 ^h 34 ^m		Mag: +0.5 PMG: 21 ^h 32 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	239	02.4	156	24.1	+26	38.7	76	21.5	+8	52.7	186	15.0	+18	14.0	36	02.7	
1	254	04.9	171	27.1		38.3	91	23.2		52.3	201	16.9		14.1	51	05.3	
2	269	07.3	186	30.2		37.9	106	24.9		51.9	216	18.7		14.2	66	07.9	
3	284	09.8	201	33.2		37.5	121	26.6		51.5	231	20.6		14.4	81	10.5	
4	299	12.3	216	36.3		37.2	136	28.3		51.2	246	22.4		14.5	96	13.0	
5	314	14.7	231	39.4	+26	36.8	151	30.0	+8	50.8	261	24.3	+18	14.7	111	15.6	
6	329	17.2	246	42.4	+26	36.4	166	31.7	+8	50.4	276	26.2	+18	14.8	126	18.2	
7	344	19.7	261	45.5		36.0	181	33.4		50.0	291	28.0		15.0	141	20.8	
8	359	22.1	276	48.6		35.6	196	35.1		49.6	306	29.9		15.1	156	23.4	
9	14	24.6	291	51.7		35.2	211	36.8		49.2	321	31.7		15.3	171	26.0	
10	29	27.1	306	54.8		34.8	226	38.5		48.8	336	33.6		15.4	186	28.6	
11	44	29.5	321	57.8	+26	34.4	241	40.2	+8	48.4	351	35.5	+18	15.5	201	31.2	
12	59	32.0	337	00.9	+26	34.0	256	41.8	+8	48.0	6	37.3	+18	15.7	216	33.8	
13	74	34.4	352	04.0		33.6	271	43.5		47.6	21	39.2		15.8	231	36.4	
14	89	36.9	7	07.2		33.2	286	45.2		47.2	36	41.0		16.0	246	39.0	
15	104	39.4	22	10.3		32.8	301	46.9		46.8	51	42.9		16.1	261	41.5	
16	119	41.8	37	13.4		32.4	316	48.6		46.4	66	44.8		16.3	276	44.1	
17	134	44.3	52	16.5	+26	32.0	331	50.3	+8	46.0	81	46.6	+18	16.4	291	46.7	
18	149	46.8	67	19.6	+26	31.6	346	52.0	+8	45.6	96	48.5	+18	16.6	306	49.3	
19	164	49.2	82	22.8		31.2	1	53.7		45.2	111	50.3		16.7	321	51.9	
20	179	51.7	97	25.9		30.8	16	55.4		44.8	126	52.2		16.8	336	54.5	
21	194	54.2	112	29.0		30.4	31	57.0		44.5	141	54.1		17.0	351	57.1	
22	209	56.6	127	32.2		30.0	46	58.7		44.1	156	55.9		17.1	6	59.7	
23	224	59.1	142	35.3		29.6	62	00.4		43.7	171	57.8		17.3	22	02.3	
24	240	01.6	157	38.5	+26	29.2	77	02.1	+8	43.3	186	59.7	+18	17.4	37	04.9	
Dif	—		+31		-4		+17		-4		+19		+1		+26		
															0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 7			Edad: 1 ^d 0 SD: 14 ^h 8 PMG: 13 ^h 10 ^m	PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 4 Rº: 49 ^m	Dif		Rº			Rº				
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	50.3	+20 25.2	169	06.9	+21 36.1	60 N	** **	1 56	3 06	3 59	51	22 20	38	
1	195	50.2	25.7	183	37.3 ¹¹⁴	37.2	58	** **	2 21	22	4 15	52	22 04	39	
2	210	50.2	26.2	198	07.7 ¹¹⁴	38.2	56	1 10	42	35	29	51	21 50	41	
3	225	50.1	26.7	212	38.0 ¹¹³	39.1	54	1 45	2 58	46	41	51	38	42	
4	240	50.1	27.2	227	08.4 ¹¹⁴	39.9	52	2 09	3 12	3 56	4 52	51	27	43	
5	255	50.0	+20 27.7	241	38.7 ¹¹³	+21 40.6	50	2 28	3 24	4 05	5 01	51	21 18	43	
6	270	50.0	+20 28.2	256	09.0 ¹¹³	+21 41.2	45	3 03	3 48	4 24	5 21	51	20 58	44	
7	285	49.9	28.7	270	39.3 ¹¹³	41.7	40	28	4 07	39	37	51	42	45	
8	300	49.9	29.1	285	09.6 ¹¹³	42.0	35	3 48	23	4 52	5 51	50	28	46	
9	315	49.8	29.6	299	39.9 ¹¹³	42.3	30	4 04	36	5 03	6 03	50	20 16	47	
10	330	49.8	30.1	314	10.1 ¹¹²	42.5	20	29	4 58	22	23	50	19 56	48	
11	345	49.7	+20 30.6	328	40.4 ¹¹³	+21 42.6	10 N	4 49	5 15	5 38	6 41	50	19 38	49	
12	0	49.7	+20 31.1	343	10.6 ¹¹²	+21 42.6	0	5 05	5 31	5 53	6 58	49	19 22	49	
13	15	49.6	31.6	357	40.9 ¹¹³	42.4	10 S	20	5 46	6 08	7 14	49	19 05	50	
14	30	49.6	32.0	12	11.1 ¹¹²	42.2	20	34	6 01	24	32	49	18 47	51	
15	45	49.5	32.5	26	41.3 ¹¹²	41.8	30	47	17	42	7 53	48	27	51	
16	60	49.4	33.0	41	11.5 ¹¹²	41.4	35	5 54	25	6 53	8 05	48	15	52	
17	75	49.4	+20 33.5	55	41.7 ¹¹²	+21 40.9	40	6 02	6 35	7 05	8 19	47	18 01	53	
18	90	49.3	+20 34.0	70	11.9 ¹¹²	+21 40.2	45	6 10	6 46	7 19	8 35	47	17 44	54	
19	105	49.3	34.4	84	42.1 ¹¹²	39.4	50	20	7 00	36	8 55	47	24	55	
20	120	49.2	34.9	99	12.2 ¹¹¹	38.6	52	24	06	44	9 05	46	15	55	
21	135	49.2	35.4	113	42.4 ¹¹²	37.6	54	28	12	7 53	16	45	17 04	55	
22	150	49.1	35.9	128	12.6 ¹¹²	36.5	56	33	20	8 04	28	45	16 52	56	
23	165	49.1	36.3	142	42.7 ¹¹¹	35.4	58	38	28	15	42	45	37	57	
24	180	49.0	+20 36.8	157	12.9 ¹¹²	+21 34.1	60 S	6 43	7 37	8 29	9 59	44	16 21	58	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 58 ^m 6			Mag: -4.4 PMG: 13 ^h 27 ^m			Mag: +0.4 PMG: 18 ^h 50 ^m			Mag: -2.0 PMG: 11 ^h 31 ^m			Mag: +0.5 PMG: 21 ^h 28 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	240	01.6	157	38.5	+26 29.2	77	02.1	+8 43.3	186	59.7	+18 17.4	37	04.9	-6 40.7	
1	255	04.0	172	41.6	28.8	92	03.8	42.9	202	01.5	17.6	52	07.4	40.7	
2	270	06.5	187	44.8	28.4	107	05.5	42.5	217	03.4	17.7	67	10.0	40.6	
3	285	08.9	202	47.9	28.0	122	07.1	42.1	232	05.2	17.8	82	12.6	40.6	
4	300	11.4	217	51.1	27.5	137	08.8	41.7	247	07.1	18.0	97	15.2	40.6	
5	315	13.9	232	54.3	+26 27.1	152	10.5	+8 41.3	262	09.0	+18 18.1	112	17.8	-6 40.5	
6	330	16.3	247	57.5	+26 26.7	167	12.2	+8 40.9	277	10.8	+18 18.3	127	20.4	-6 40.5	
7	345	18.8	263	00.7	26.3	182	13.9	40.5	292	12.7	18.4	142	23.0	40.4	
8	0	21.3	278	03.8	25.9	197	15.6	40.1	307	14.5	18.6	157	25.6	40.4	
9	15	23.7	293	07.0	25.5	212	17.2	39.7	322	16.4	18.7	172	28.2	40.4	
10	30	26.2	308	10.2	25.0	227	18.9	39.3	337	18.3	18.8	187	30.7	40.3	
11	45	28.7	323	13.4	+26 24.6	242	20.6	+8 38.9	352	20.1	+18 19.0	202	33.3	-6 40.3	
12	60	31.1	338	16.6	+26 24.2	257	22.3	+8 38.5	7	22.0	+18 19.1	217	35.9	-6 40.2	
13	75	33.6	353	19.8	23.8	272	23.9	38.1	22	23.8	19.3	232	38.5	40.2	
14	90	36.1	8	23.1	23.3	287	25.6	37.7	37	25.7	19.4	247	41.1	40.2	
15	105	38.5	23	26.3	22.9	302	27.3	37.3	52	27.6	19.6	262	43.7	40.1	
16	120	41.0	38	29.5	22.5	317	29.0	36.9	67	29.4	19.7	277	46.3	40.1	
17	135	43.4	53	32.7	+26 22.1	332	30.6	+8 36.5	82	31.3	+18 19.9	292	48.9	-6 40.0	
18	150	45.9	68	36.0	+26 21.6	347	32.3	+8 36.1	97	33.2	+18 20.0	307	51.4	-6 40.0	
19	165	48.4	83	39.2	21.2	2	34.0	35.7	112	35.0	20.1	322	54.0	40.0	
20	180	50.8	98	42.4	20.8	17	35.7	35.3	127	36.9	20.3	337	56.6	39.9	
21	195	53.3	113	45.7	20.3	32	37.3	34.9	142	38.7	20.4	352	59.2	39.9	
22	210	55.8	128	48.9	19.9	47	39.0	34.5	157	40.6	20.6	8	01.8	39.8	
23	225	58.2	143	52.2	19.5	62	40.7	34.1	172	42.5	20.7	23	04.4	39.8	
24	241	00.7	158	55.4	+26 19.0	77	42.3	+8 33.7	187	44.3	+18 20.8	38	07.0	-6 39.8	
Dif	—		+32	-4		+17	-4		+19		+1		+26		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 8			Edad: 2 ^d 0 PHE { SD: 14'8 PMG: 13 ^h 59 ^m					Civil			R°			R°		
	hG ☉	Dec		hG ☾	Dif	Dec			Dif								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	49.0	+20	36.8	157	12.9	+21	34.1	60 N	20	51	22	04	**	**	4	50
1	195	49.0		37.3	171	43.0 ¹¹¹		32.7	14	58	35	21	36	**	**	5	07
2	210	48.9		37.8	186	13.2 ¹¹²		31.2	15	56	21	21	16	22	52	20	61
3	225	48.9		38.2	200	43.4 ¹¹²		29.6	16	54	10	20	59	22	14	32	60
4	240	48.8		38.7	215	13.5 ¹¹¹		27.9	17	52	20	00	44	21	48	43	58
5	255	48.8	+20	39.2	229	43.7 ¹¹²	+21	26.1	18	50	19	51	20	32	21	29	5
6	270	48.7	+20	39.7	244	13.8 ¹¹¹	+21	24.2	19	45	19	31	20	07	20	53	6
7	285	48.6		40.1	258	44.0 ¹¹²		22.2	20	40	16	19	47		27	28	55
8	300	48.6		40.6	273	14.1 ¹¹¹		20.1	21	35	19	03	32	20	07	41	54
9	315	48.5		41.1	287	44.3 ¹¹²		17.9	22	30	18	52	19	18	19	50	6
10	330	48.5		41.5	302	14.4 ¹¹¹		15.6	23	20	32	18	56		25	7	13
11	345	48.4	+20	42.0	316	44.6 ¹¹²	+21	13.1	25	10 N	18	16	18	38	19	05	7
12	0	48.4	+20	42.5	331	14.8 ¹¹²	+21	10.6	25	0	18	00	18	22	18	48	7
13	15	48.3		43.0	345	45.0 ¹¹²		08.0	26	10 S	17	45	18	08	33	8	03
14	30	48.2		43.4	0	15.1 ¹¹¹		05.2	28	20	29	17	52		19	21	47
15	45	48.2		43.9	14	45.3 ¹¹²	+21	02.4	28	30	10		36	18	05	41	45
16	60	48.1		44.3	29	15.5 ¹¹²	+20	59.5	29	35	17	00	27	17	58	8	53
17	75	48.1	+20	44.8	43	45.7 ¹¹²	+20	56.4	31	40	16	48	17	17	50	9	06
18	90	48.0	+20	45.3	58	15.9 ¹¹²	+20	53.3	31	45	16	33	17	06	17	42	9
19	105	48.0		45.7	72	46.1 ¹¹²		50.0	33	50	16	16	52		33	42	40
20	120	47.9		46.2	87	16.3 ¹¹²		46.7	33	52	16	07		46	28	9	51
21	135	47.8		46.7	101	46.6 ¹¹³		43.2	35	54	15	58	39		24	10	01
22	150	47.8		47.1	116	16.8 ¹¹²		39.7	35	56		48	32		19	13	37
23	165	47.7		47.6	130	47.1 ¹¹³		36.0	37	58		36	24		14	27	35
24	180	47.7	+20	48.1	145	17.3 ¹¹²	+20	32.3	37	60 S	15	22	16	14	17	08	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 7 ^h 54 ^m 7		Mag: -4.4 PMG: 13 ^h 21 ^m			Mag: +0.4 PMG: 18 ^h 47 ^m			Mag: -2.0 PMG: 11 ^h 28 ^m			Mag: +0.5 PMG: 21 ^h 24 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	241	00.7	158	55.4	+26	19.0	77	42.3	+8	33.7	187	44.3	+18	20.8	38	07.0	
1	256	03.2	173	58.7		18.6	92	44.0		33.3	202	46.2		21.0	53	09.6	
2	271	05.6	189	02.0		18.1	107	45.7		32.9	217	48.0		21.1	68	12.1	
3	286	08.1	204	05.2		17.7	122	47.4		32.5	232	49.9		21.3	83	14.7	
4	301	10.5	219	08.5		17.3	137	49.0		32.1	247	51.8		21.4	98	17.3	
5	316	13.0	234	11.8	+26	16.8	152	50.7	+8	31.7	262	53.6	+18	21.6	113	19.9	
6	331	15.5	249	15.1	+26	16.4	167	52.4	+8	31.3	277	55.5	+18	21.7	128	22.5	
7	346	17.9	264	18.4		15.9	182	54.0		30.8	292	57.3		21.8	143	25.1	
8	1	20.4	279	21.7		15.5	197	55.7		30.4	307	59.2		22.0	158	27.7	
9	16	22.9	294	25.0		15.0	212	57.4		30.0	323	01.1		22.1	173	30.2	
10	31	25.3	309	28.3		14.6	227	59.0		29.6	338	02.9		22.3	188	32.8	
11	46	27.8	324	31.6	+26	14.1	243	00.7	+8	29.2	353	04.8	+18	22.4	203	35.4	
12	61	30.3	339	34.9	+26	13.7	258	02.3	+8	28.8	8	06.7	+18	22.6	218	38.0	
13	76	32.7	354	38.2		13.2	273	04.0		28.4	23	08.5		22.7	233	40.6	
14	91	35.2	9	41.5		12.8	288	05.7		28.0	38	10.4		22.8	248	43.2	
15	106	37.7	24	44.8		12.3	303	07.3		27.6	53	12.2		23.0	263	45.8	
16	121	40.1	39	48.2		11.9	318	09.0		27.2	68	14.1		23.1	278	48.3	
17	136	42.6	54	51.5	+26	11.4	333	10.7	+8	26.8	83	16.0	+18	23.3	293	50.9	
18	151	45.0	69	54.8	+26	11.0	348	12.3	+8	26.4	98	17.8	+18	23.4	308	53.5	
19	166	47.5	84	58.2		10.5	3	14.0		26.0	113	19.7		23.6	323	56.1	
20	181	50.0	100	01.5		10.0	18	15.6		25.6	128	21.5		23.7	338	58.7	
21	196	52.4	115	04.9		09.6	33	17.3		25.2	143	23.4		23.8	354	01.3	
22	211	54.9	130	08.2		09.1	48	18.9		24.8	158	25.3		24.0	9	03.8	
23	226	57.4	145	11.6		08.6	63	20.6		24.4	173	27.1		24.1	24	06.4	
24	241	59.8	160	14.9	+26	08.2	78	22.3	+8	23.9	188	29.0	+18	24.3	39	09.0	
Dif	—		+33			-5	+17			-4	+19			+1	+26		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9			Edad: 3 ^d 0 SD: 14 ^h 9 PMG: 14 ^h 48 ^m											PHE { 4 ^h : 54 ^h 8 12 ^h : 55 ^h 0 20 ^h : 55 ^h 1 R°: 49 ^m	
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	180	47.7	+20 48.1	145	17.3	+20 32.3	60 N	** **	1 49	3 02	5 54	72	23 27 21			
1	195	47.6	48.5	159	47.6 ¹¹³	28.4 39	58	** **	2 17	18	6 08	70	14 24			
2	210	47.6	49.0	174	17.9 ¹¹³	24.5 39	56	1 01	38	32	21 67	23 03 27				
3	225	47.5	49.4	188	48.1 ¹¹²	20.4 41	54	1 39	2 55	43	32 66	22 54 28				
4	240	47.4	49.9	203	18.4 ¹¹³	16.2 42	52	2 05	3 09	3 54	41 65	45 30				
5	255	47.4	+20 50.3	217	48.8 ¹¹⁴	+20 12.0 42	50	2 25	3 21	4 03	6 50	63	22 38 31			
6	270	47.3	+20 50.8	232	19.1 ¹¹³	+20 07.6 44	45	3 01	3 46	4 22	7 08	60	22 21 35			
7	285	47.3	51.3	246	49.4 ¹¹³	+20 03.2 44	40	27	4 06	37	23 58	22 08 37				
8	300	47.2	51.7	261	19.8 ¹¹⁴	+19 58.6 46	35	3 47	22	4 50	35 57	21 57 38				
9	315	47.1	52.2	275	50.2 ¹¹⁴	54.0 46	30	4 03	35	5 02	7 46	55	47 40			
10	330	47.1	52.6	290	20.5 ¹¹³	49.2 48	20	29	4 57	21	8 05	53	29 44			
11	345	47.0	+20 53.1	304	50.9 ¹¹⁴	+19 44.4 48	10 N	4 49	5 15	5 38	8 21	51	21 14 46			
12	0	46.9	+20 53.5	319	21.3 ¹¹⁴	+19 39.4 50	0	5 05	5 31	5 53	8 36	49	21 00 48			
13	15	46.9	54.0	333	51.8 ¹¹⁵	34.4 50	10 S	20	5 46	6 09	8 51	47	20 46 50			
14	30	46.8	54.4	348	22.2 ¹¹⁴	29.2 52	20	34	6 01	25	9 08	44	30 53			
15	45	46.8	54.9	2	52.7 ¹¹⁵	24.0 52	30	48	18	43	26 42	13 56				
16	60	46.7	55.3	17	23.1 ¹¹⁴	18.6 54	35	5 56	27	6 54	37 41	20 02 58				
17	75	46.6	+20 55.8	31	53.6 ¹¹⁵	+19 13.2 54	40	6 04	6 37	7 07	9 49	39	19 50 60			
18	90	46.6	+20 56.2	46	24.1 ¹¹⁵	+19 07.7 55	45	6 12	6 48	7 21	10 04	37	19 36 63			
19	105	46.5	56.7	60	54.7 ¹¹⁶	+19 02.1 56	50	22	7 02	39	22 34	19 65				
20	120	46.4	57.1	75	25.2 ¹¹⁵	+18 56.3 58	52	26	08	47	30 33	11 67				
21	135	46.4	57.6	89	55.8 ¹¹⁶	50.5 58	54	30	15	7 56	39 31	19 02 68				
22	150	46.3	58.0	104	26.3 ¹¹⁵	44.6 59	56	35	22	8 07	10 50	29	18 52 70			
23	165	46.3	58.5	118	56.9 ¹¹⁶	38.6 60	58	41	31	19	11 02	27	40 73			
24	180	46.2	+20 58.9	133	27.5 ¹¹⁶	+18 32.5 61	60 S	6 46	7 40	8 33	11 16	24	18 27 75			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 7 ^h 50 ^m 7		Mag: -4.3 PMG: 13 ^h 16 ^m			Mag: +0.4 PMG: 18 ^h 44 ^m			Mag: -2.0 PMG: 11 ^h 25 ^m			Mag: +0.5 PMG: 21 ^h 20 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	241	59.8	160	14.9	+26 08.2	78	22.3	+8 23.9	188	29.0	+18 24.3	39	09.0	-6 38.8		
1	257	02.3	175	18.3	07.7	93	23.9	23.5	203	30.8	24.4	54	11.6	38.8		
2	272	04.8	190	21.7	07.2	108	25.6	23.1	218	32.7	24.5	69	14.2	38.8		
3	287	07.2	205	25.1	06.8	123	27.2	22.7	233	34.6	24.7	84	16.8	38.7		
4	302	09.7	220	28.4	06.3	138	28.9	22.3	248	36.4	24.8	99	19.3	38.7		
5	317	12.2	235	31.8	+26 05.8	153	30.5	+8 21.9	263	38.3	+18 25.0	114	21.9	-6 38.6		
6	332	14.6	250	35.2	+26 05.4	168	32.2	+8 21.5	278	40.2	+18 25.1	129	24.5	-6 38.6		
7	347	17.1	265	38.6	04.9	183	33.8	21.1	293	42.0	25.3	144	27.1	38.6		
8	2	19.5	280	42.0	04.4	198	35.5	20.7	308	43.9	25.4	159	29.7	38.5		
9	17	22.0	295	45.4	03.9	213	37.1	20.3	323	45.7	25.5	174	32.3	38.5		
10	32	24.5	310	48.8	03.5	228	38.8	19.9	338	47.6	25.7	189	34.8	38.5		
11	47	26.9	325	52.2	+26 03.0	243	40.4	+8 19.4	353	49.5	+18 25.8	204	37.4	-6 38.4		
12	62	29.4	340	55.6	+26 02.5	258	42.1	+8 19.0	8	51.3	+18 26.0	219	40.0	-6 38.4		
13	77	31.9	355	59.0	02.0	273	43.7	18.6	23	53.2	26.1	234	42.6	38.3		
14	92	34.3	11	02.5	01.5	288	45.4	18.2	38	55.0	26.2	249	45.2	38.3		
15	107	36.8	26	05.9	01.1	303	47.0	17.8	53	56.9	26.4	264	47.7	38.3		
16	122	39.3	41	09.3	00.6	318	48.7	17.4	68	58.8	26.5	279	50.3	38.2		
17	137	41.7	56	12.7	+26 00.1	333	50.3	+8 17.0	84	00.6	+18 26.7	294	52.9	-6 38.2		
18	152	44.2	71	16.2	+25 59.6	348	52.0	+8 16.6	99	02.5	+18 26.8	309	55.5	-6 38.2		
19	167	46.7	86	19.6	59.1	3	53.6	16.1	114	04.4	26.9	324	58.1	38.1		
20	182	49.1	101	23.1	58.6	18	55.3	15.7	129	06.2	27.1	340	00.7	38.1		
21	197	51.6	116	26.5	58.1	33	56.9	15.3	144	08.1	27.2	355	03.2	38.0		
22	212	54.0	131	30.0	57.6	48	58.6	14.9	159	09.9	27.4	10	05.8	38.0		
23	227	56.5	146	33.4	57.1	64	00.2	14.5	174	11.8	27.5	25	08.4	38.0		
24	242	59.0	161	36.9	+25 56.6	79	01.8	+8 14.1	189	13.7	+18 27.6	40	11.0	-6 37.9		
Dif	—		+34 -5			+16 -4			+19 +1			+26 0			0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 57 ^m 0			Edad: 4 ^d 0 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/6 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	46.2	+20 58.9	133	27.5	+18 32.5	62	60 N	20 55	22 11	** **	7 06	78	23 48	16	
1	195	46.1	59.4	147	58.2 ¹¹⁷	26.3	62	58	39	21 42	** **	18 75		38 19		
2	210	46.1	+20 59.8	162	28.8 ¹¹⁶	20.0	63	56	25	20	23 03	28 73		30 21		
3	225	46.0	+21 00.3	176	59.5 ¹¹⁷	13.7	63	54	13	21 02	22 20	38 70		22 22		
4	240	45.9	00.7	191	30.1 ¹¹⁶	07.2	65	52	20 02	20 47	21 53	46 68		15 26		
5	255	45.9	+21 01.1	206	00.8 ¹¹⁷	+18 00.7	65	50	19 53	20 35	21 32	7 53	67	23 09	27	
6	270	45.8	+21 01.6	220	31.6 ¹¹⁸	+17 54.0	67	45	19 33	20 09	20 55	8 08	64	22 56	31	
7	285	45.7	02.0	235	02.3 ¹¹⁷	47.3	67	40	18	19 49	29	21 61		45 33		
8	300	45.7	02.5	249	33.1 ¹¹⁸	40.5	68	35	19 04	33	20 08	32 59		35 36		
9	315	45.6	02.9	264	03.8 ¹¹⁷	33.5	70	30	18 53	19 20	19 52	41 57		27 38		
10	330	45.5	03.3	278	34.6 ¹¹⁸	26.5	70	20	33	18 57	26	8 58	53	13 41		
11	345	45.5	+21 03.8	293	05.4 ¹¹⁸	+17 19.4	71	10 N	18 16	18 39	19 06	9 12	50	22 00	45	
12	0	45.4	+21 04.2	307	36.3 ¹¹⁹	+17 12.3	71	0	18 01	18 23	18 49	9 25	48	21 48	48	
13	15	45.3	04.7	322	07.1 ¹¹⁸	+17 05.0	73	10 S	17 45	18 07	33	38 45		36 51		
14	30	45.3	05.1	336	38.0 ¹¹⁹	+16 57.6	74	20	29	17 52	19	9 52	43	23 54		
15	45	45.2	05.5	351	08.9 ¹¹⁹	50.2	74	30	17 10	36	18 05	10 08	39	09 57		
16	60	45.1	06.0	5	39.8 ¹¹⁹	42.7	75	35	16 59	26	17 57	18 37		21 00	59	
17	75	45.1	+21 06.4	20	10.7 ¹¹⁹	+16 35.1	76	40	16 46	17 16	17 49	10 28	35	20 50	62	
18	90	45.0	+21 06.8	34	41.6 ¹¹⁹	+16 27.4	77	45	16 32	17 04	17 41	10 41	32	20 39	64	
19	105	44.9	07.3	49	12.6 ¹²⁰	19.6	78	50	14	16 51	31	10 56	29	24 69		
20	120	44.9	07.7	63	43.6 ¹²⁰	11.7	79	52	16 05	44	27	11 03	27	18 70		
21	135	44.8	08.1	78	14.6 ¹²⁰	+16 03.8	79	54	15 56	37	22	10 26		10 72		
22	150	44.7	08.6	92	45.6 ¹²⁰	+15 55.7	81	56	45	30	17	19 24		20 02	74	
23	165	44.7	09.0	107	16.6 ¹²⁰	47.6	81	58	33	21	12	29 21		19 53	77	
24	180	44.6	+21 09.4	121	47.7 ¹²¹	+15 39.4	82	60 S	15 19	16 11	17 05	11 40	19	19 42	80	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO						
	PMG: 7 ^h 46 ^m 8		Mag: -4.3 PMG: 13 ^h 10 ^m		Mag: +0.4 PMG: 18 ^h 42 ^m		Mag: -2.0 PMG: 11 ^h 22 ^m			Mag: +0.5 PMG: 21 ^h 16 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	
0	242	59.0	161 36.9	+25 56.6	79 01.8	+8 14.1	189 13.7	+18 27.6	40 11.0	-6 37.9						
1	258	01.4	176 40.4	56.2	94 03.5	13.7	204 15.5	27.8	55 13.6	37.9						
2	273	03.9	191 43.8	55.7	109 05.1	13.3	219 17.4	27.9	70 16.1	37.9						
3	288	06.4	206 47.3	55.2	124 06.8	12.8	234 19.2	28.1	85 18.7	37.8						
4	303	08.8	221 50.8	54.7	139 08.4	12.4	249 21.1	28.2	100 21.3	37.8						
5	318	11.3	236 54.3	+25 54.2	154 10.1	+8 12.0	264 23.0	+18 28.4	115 23.9	-6 37.8						
6	333	13.8	251 57.8	+25 53.7	169 11.7	+8 11.6	279 24.8	+18 28.5	130 26.5	-6 37.7						
7	348	16.2	267 01.2	53.2	184 13.3	11.2	294 26.7	28.6	145 29.0	37.7						
8	3	18.7	282 04.7	52.7	199 15.0	10.8	309 28.5	28.8	160 31.6	37.6						
9	18	21.2	297 08.2	52.1	214 16.6	10.4	324 30.4	28.9	175 34.2	37.6						
10	33	23.6	312 11.7	51.6	229 18.2	09.9	339 32.3	29.1	190 36.8	37.6						
11	48	26.1	327 15.2	+25 51.1	244 19.9	+8 09.5	354 34.1	+18 29.2	205 39.4	-6 37.5						
12	63	28.5	342 18.8	+25 50.6	259 21.5	+8 09.1	9 36.0	+18 29.3	220 41.9	-6 37.5						
13	78	31.0	357 22.3	50.1	274 23.2	08.7	24 37.9	29.5	235 44.5	37.5						
14	93	33.5	12 25.8	49.6	289 24.8	08.3	39 39.7	29.6	250 47.1	37.4						
15	108	35.9	27 29.3	49.1	304 26.4	07.9	54 41.6	29.8	265 49.7	37.4						
16	123	38.4	42 32.8	48.6	319 28.1	07.4	69 43.4	29.9	280 52.2	37.4						
17	138	40.9	57 36.4	+25 48.1	334 29.7	+8 07.0	84 45.3	+18 30.0	295 54.8	-6 37.3						
18	153	43.3	72 39.9	+25 47.6	349 31.3	+8 06.6	99 47.2	+18 30.2	310 57.4	-6 37.3						
19	168	45.8	87 43.4	47.0	4 33.0	06.2	114 49.0	30.3	326 00.0	37.2						
20	183	48.3	102 47.0	46.5	19 34.6	05.8	129 50.9	30.5	341 02.6	37.2						
21	198	50.7	117 50.5	46.0	34 36.2	05.4	144 52.8	30.6	356 05.1	37.2						
22	213	53.2	132 54.1	45.5	49 37.9	04.9	159 54.6	30.7	11 07.7	37.1						
23	228	55.6	147 57.6	45.0	64 39.5	04.5	174 56.5	30.9	26 10.3	37.1						
24	243	58.1	163 01.2	+25 44.4	79 41.1	+8 04.1	189 58.3	+18 31.0	41 12.9	-6 37.1						
Dif	—		+35		-5		+16		-4		+19		+1		+26	
0																

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1			Edad: 5 ^d 0	PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 2 R ^o : 48 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R ^o	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	44.6	+21 09.4	121	47.7	+15 39.4	82	60 N	** **	1 43	2 59	8 24	81	** **	**
1	195	44.5	09.9	136	18.7 ¹²⁰	31.2	82	58	** **	2 12	3 15	33 78		23 57	17
2	210	44.5	10.3	150	49.8 ¹²¹	22.8	84	56	0 51	34	29	41 75		51 19	
3	225	44.4	10.7	165	20.9 ¹²¹	14.4	84	54	1 34	2 52	41	48 73		46 2	
4	240	44.3	11.1	179	52.1 ¹²²	+15 05.9	85	52	2 01	3 06	3 51	8 54	71	41 23	
5	255	44.2	+21 11.6	194	23.2 ¹²¹	+14 57.3	86	50	2 21	3 19	4 01	9 00	69	23 36	25
6	270	44.2	+21 12.0	208	54.3 ¹²¹	+14 48.6	87	45	2 58	3 45	4 20	9 12	66	23 27	28
7	285	44.1	12.4	223	25.5 ¹²²	39.9	87	40	3 25	4 04	36	22 63		18 32	
8	300	44.0	12.8	237	56.7 ¹²²	31.0	89	35	3 45	21	4 49	31 60		11 34	
9	315	44.0	13.3	252	27.9 ¹²²	22.1	89	30	4 02	34	5 01	38 58		23 05	36
10	330	43.9	13.7	266	59.1 ¹²²	13.1	90	20	28	4 57	21	9 51	54	22 54	41
11	345	43.8	+21 14.1	281	30.3 ¹²²	+14 04.1	90	10 N	4 48	5 15	5 38	10 02	51	22 45	44
12	0	43.8	+21 14.5	296	01.6 ¹²³	+13 55.0	91	0	5 06	5 31	5 53	10 13	47	22 36	47
13	15	43.7	15.0	310	32.8 ¹²²	45.8	92	10 S	21	5 47	6 09	23 45		27 50	
14	30	43.6	15.4	325	04.1 ¹²³	36.5	93	20	35	6 02	26	35 41		17 54	
15	45	43.5	15.8	339	35.4 ¹²³	27.1	94	30	49	19	45	47 38		22 06	58
16	60	43.5	16.2	354	06.7 ¹²³	17.7	94	35	5 57	28	6 56	10 55	35	21 59	61
17	75	43.4	+21 16.6	8	38.0 ¹²³	+13 08.2	95	40	6 05	6 38	7 08	11 03	33	21 52	63
18	90	43.3	+21 17.1	23	09.3 ¹²³	+12 58.7	95	45	6 14	6 50	7 23	11 13	29	21 43	67
19	105	43.3	17.5	37	40.7 ¹²⁴	49.0	97	50	24	7 04	41	25 25		33 70	
20	120	43.2	17.9	52	12.0 ¹²³	39.3	97	52	28	10	50	30 24		28 72	
21	135	43.1	18.3	66	43.4 ¹²⁴	29.6	97	54	33	17	7 59	36 22		22 75	
22	150	43.0	18.7	81	14.8 ¹²⁴	19.7	99	56	38	25	8 10	43 20		16 77	
23	165	43.0	19.2	95	46.1 ¹²³	+12 09.8	99	58	43	34	22	50 18		10 79	
24	180	42.9	+21 19.6	110	17.5 ¹²⁴	+11 59.8 ¹⁰⁰		60 S	6 49	7 44	8 37	11 59	14	21 02	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 42 ^m 9		Mag: -4.2 PMG: 13 ^h 05 ^m		Mag: +0.4 PMG: 18 ^h 39 ^m		Mag: -2.0 PMG: 11 ^h 19 ^m		Mag: +0.5 PMG: 21 ^h 12 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	243	58.1	163	01.2	+25 44.4	79	41.1	+8 04.1	189	58.3	+18 31.0	41	12.9	-6 37.1	
1	259	00.6	178	04.8	43.9	94	42.7	03.7	205	00.2	31.2	56	15.4	37.0	
2	274	03.0	193	08.3	43.4	109	44.4	03.3	220	02.1	31.3	71	18.0	37.0	
3	289	05.5	208	11.9	42.9	124	46.0	02.8	235	03.9	31.4	86	20.6	37.0	
4	304	08.0	223	15.5	42.3	139	47.6	02.4	250	05.8	31.6	101	23.2	36.9	
5	319	10.4	238	19.0	+25 41.8	154	49.3	+8 02.0	265	07.6	+18 31.7	116	25.8	-6 36.9	
6	334	12.9	253	22.6	+25 41.3	169	50.9	+8 01.6	280	09.5	+18 31.8	131	28.3	-6 36.9	
7	349	15.4	268	26.2	40.7	184	52.5	01.2	295	11.4	32.0	146	30.9	36.8	
8	4	17.8	283	29.8	40.2	199	54.1	00.7	310	13.2	32.1	161	33.5	36.8	
9	19	20.3	298	33.4	39.7	214	55.8	+8 00.3	325	15.1	32.3	176	36.1	36.8	
10	34	22.8	313	37.0	39.1	229	57.4	+7 59.9	340	17.0	32.4	191	38.6	36.7	
11	49	25.2	328	40.6	+25 38.6	244	59.0	+7 59.5	355	18.8	+18 32.5	206	41.2	-6 36.7	
12	64	27.7	343	44.2	+25 38.1	260	00.6	+7 59.1	10	20.7	+18 32.7	221	43.8	-6 36.6	
13	79	30.1	358	47.8	37.5	275	02.3	58.6	25	22.5	32.8	236	46.4	36.6	
14	94	32.6	13	51.4	37.0	290	03.9	58.2	40	24.4	33.0	251	48.9	36.6	
15	109	35.1	28	55.0	36.5	305	05.5	57.8	55	26.3	33.1	266	51.5	36.5	
16	124	37.5	43	58.6	35.9	320	07.1	57.4	70	28.1	33.2	281	54.1	36.5	
17	139	40.0	59	02.3	+25 35.4	335	08.7	+7 56.9	85	30.0	+18 33.4	296	56.7	-6 36.5	
18	154	42.5	74	05.9	+25 34.8	350	10.4	+7 56.5	100	31.8	+18 33.5	311	59.2	-6 36.4	
19	169	44.9	89	09.5	34.3	5	12.0	56.1	115	33.7	33.7	327	01.8	36.4	
20	184	47.4	104	13.1	33.7	20	13.6	55.7	130	35.6	33.8	342	04.4	36.4	
21	199	49.9	119	16.8	33.2	35	15.2	55.3	145	37.4	33.9	357	07.0	36.3	
22	214	52.3	134	20.4	32.6	50	16.8	54.8	160	39.3	34.1	12	09.5	36.3	
23	229	54.8	149	24.1	32.1	65	18.5	54.4	175	41.2	34.2	27	12.1	36.3	
24	244	57.3	164	27.7	+25 31.5	80	20.1	+7 54.0	190	43.0	+18 34.3	42	14.7	-6 36.2	
Dif	—		+36		-5	+16		-4	+19		+1	+26		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 15'8 PMG: 11 ^h 57 ^m 2			Edad: 6 ^d 0 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9 R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m						
0	180	42.9	+21	19.6	110	17.5	+11	59.8	60 N	20 59	22 17	** **	9 45 83	0 04 14							
1	195	42.8		20.0	124	48.9		49.8	58	42	21 46	** **	51 80	** **	**						
2	210	42.7		20.4	139	20.3		39.7	56	28	24	23 15	9 56 78	** **	**						
3	225	42.7		20.8	153	51.7		29.5	54	16	21 06	22 26	10 01 75	** **	**						
4	240	42.6		21.2	168	23.2		19.3	52	20 05	20 50	21 57	05 74	** **	**						
5	255	42.5	+21	21.6	182	54.6	+11	09.0	50	19 55	20 37	21 36	10 09 72	** **	**						
6	270	42.4	+21	22.0	197	26.0	+10	58.6	45	19 35	20 11	20 58	10 18 67	23 55 27							
7	285	42.4		22.5	211	57.5		48.2	40	19	19 51	31	25 64	50 30							
8	300	42.3		22.9	226	28.9		37.7	35	19 06	35	20 10	31 61	45 33							
9	315	42.2		23.3	241	00.4		27.1	30	18 54	19 21	19 53	36 59	41 36							
10	330	42.1		23.7	255	31.8		16.5	20	34	18 58	27	45 54	35 40							
11	345	42.1	+21	24.1	270	03.3	+10	05.9	10 N	18 17	18 39	19 06	10 53 51	23 29 43							
12	0	42.0	+21	24.5	284	34.8	+9	55.1	0	18 01	18 23	18 49	11 00 48	23 23 47							
13	15	41.9		24.9	299	06.2		44.3	10 S	17 45	18 07	33	08 43	17 51							
14	30	41.8		25.3	313	37.7		33.5	20	28	17 52	19	16 40	11 55							
15	45	41.8		25.7	328	09.2		22.6	30	17 09	35	18 04	25 35	04 59							
16	60	41.7		26.1	342	40.6		11.6	35	16 58	26	17 57	30 33	23 00 62							
17	75	41.6	+21	26.5	357	12.1	+9	00.6	40	16 45	17 15	17 49	11 36 30	22 55 65							
18	90	41.5	+21	26.9	11	43.6	+8	49.5	45	16 30	17 03	17 40	11 42 28	22 50 68							
19	105	41.4		27.3	26	15.0		38.4	50	12	16 49	30	50 24	43 72							
20	120	41.4		27.7	40	46.5		27.2	52	16 03	43	25	54 22	40 74							
21	135	41.3		28.1	55	18.0		16.0	54	15 54	35	20	11 58 20	37 76							
22	150	41.2		28.5	69	49.4	+8	04.7	56	43	28	15	12 03 18	33 79							
23	165	41.1		28.9	84	20.9	+7	53.4	58	30	19	09	08 15	29 81							
24	180	41.1	+21	29.3	98	52.3	+7	42.0	60 S	15 15	16 09	17 03	12 13 13	22 24 84							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 7 ^h 38 ^m 9			Mag: -4.2 PMG: 12 ^h 59 ^m			Mag: +0.4 PMG: 18 ^h 37 ^m			Mag: -2.0 PMG: 11 ^h 16 ^m			Mag: +0.5 PMG: 21 ^h 07 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	244	57.3	164	27.7	+25	31.5	80	20.1	+7	54.0	190	43.0	+18	34.3	42	14.7	-6	36.2			
1	259	59.7	179	31.4		31.0	95	21.7		53.6	205	44.9		34.5	57	17.3		36.2			
2	275	02.2	194	35.0		30.4	110	23.3		53.1	220	46.7		34.6	72	19.8		36.2			
3	290	04.6	209	38.7		29.9	125	24.9		52.7	235	48.6		34.8	87	22.4		36.1			
4	305	07.1	224	42.4		29.3	140	26.5		52.3	250	50.5		34.9	102	25.0		36.1			
5	320	09.6	239	46.0	+25	28.8	155	28.1	+7	51.9	265	52.3	+18	35.0	117	27.6	-6	36.1			
6	335	12.0	254	49.7	+25	28.2	170	29.8	+7	51.4	280	54.2	+18	35.2	132	30.1	-6	36.0			
7	350	14.5	269	53.4		27.6	185	31.4		51.0	295	56.1		35.3	147	32.7		36.0			
8	5	17.0	284	57.0		27.1	200	33.0		50.6	310	57.9		35.5	162	35.3		36.0			
9	20	19.4	300	00.7		26.5	215	34.6		50.2	325	59.8		35.6	177	37.9		35.9			
10	35	21.9	315	04.4		26.0	230	36.2		49.7	341	01.6		35.7	192	40.4		35.9			
11	50	24.4	330	08.1	+25	25.4	245	37.8	+7	49.3	356	03.5	+18	35.9	207	43.0	-6	35.9			
12	65	26.8	345	11.8	+25	24.8	260	39.4	+7	48.9	11	05.4	+18	36.0	222	45.6	-6	35.8			
13	80	29.3	0	15.5		24.3	275	41.0		48.5	26	07.2		36.1	237	48.1		35.8			
14	95	31.7	15	19.2		23.7	290	42.7		48.0	41	09.1		36.3	252	50.7		35.8			
15	110	34.2	30	22.9		23.1	305	44.3		47.6	56	11.0		36.4	267	53.3		35.7			
16	125	36.7	45	26.6		22.6	320	45.9		47.2	71	12.8		36.6	282	55.9		35.7			
17	140	39.1	60	30.3	+25	22.0	335	47.5	+7	46.7	86	14.7	+18	36.7	297	58.4	-6	35.7			
18	155	41.6	75	34.0	+25	21.4	350	49.1	+7	46.3	101	16.5	+18	36.8	313	01.0	-6	35.6			
19	170	44.1	90	37.7		20.9	5	50.7		45.9	116	18.4		37.0	328	03.6		35.6			
20	185	46.5	105	41.4		20.3	20	52.3		45.5	131	20.3		37.1	343	06.1		35.6			
21	200	49.0	120	45.2		19.7	35	53.9		45.0	146	22.1		37.3	358	08.7		35.5			
22	215	51.5	135	48.9		19.1	50	55.5		44.6	161	24.0		37.4	13	11.3		35.5			
23	230	53.9	150	52.6		18.5	65	57.1		44.2	176	25.9		37.5	28	13.9		35.5			
24	245	56.4	165	56.3	+25	18.0	80	58.7	+7	43.7	191	27.7	+18	37.7	43	16.4	-6	35.4			
Dif	—			+37			-6			+16			-4			+19			+1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 0	PHE { 4 ^h : 57 ^m 2 12 ^h : 57 ^m 5 20 ^h : 57 ^m 7									
	PMG: 11 ^h 57 ^m 3					PMG: 17 ^h 59 ^m		R ^o : 48 ^m						
	hG ☉	Dec		hG ☾	Dif Dec Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	41.1	+21	29.3	98	52.3	+7 42.0	60 N	** **	1 37	2 55	11 08	86	0 18 12
1	195	41.0		29.7	113	23.8 ¹²⁵	30.6 ¹¹⁴	58	** **	2 08	3 12	11 83		14 14
2	210	40.9		30.1	127	55.2 ¹²⁴	19.1 ¹¹⁵	56	0 39	30	26	14 80		10 17
3	225	40.8		30.5	142	26.7 ¹²⁵	+7 07.6 ¹¹⁵	54	1 28	2 49	39	16 78		07 19
4	240	40.7		30.9	156	58.1 ¹²⁴	+6 56.0 ¹¹⁶	52	1 57	3 04	49	19 75		04 21
5	255	40.7	+21	31.3	171	29.5 ¹²⁴	+6 44.4 ¹¹⁶	50	2 18	3 17	3 59	11 21	73	0 01 23
6	270	40.6	+21	31.7	186	00.9 ¹²⁴	+6 32.7 ¹¹⁷	45	2 56	3 43	4 19	11 25	69	** ** *
7	285	40.5		32.1	200	32.3 ¹²⁴	21.0 ¹¹⁷	40	3 23	4 03	35	29 66		** ** *
8	300	40.4		32.5	215	03.7 ¹²⁴	+6 09.2 ¹¹⁸	35	3 44	20	4 49	32 63		** ** *
9	315	40.3		32.9	229	35.0 ¹²³	+5 57.4 ¹¹⁸	30	4 01	34	5 00	35 60		** ** *
10	330	40.3		33.3	244	06.4 ¹²⁴	45.6 ¹¹⁸	20	28	4 56	20	39 56		** ** *
11	345	40.2	+21	33.7	258	37.7 ¹²³	+5 33.7 ¹¹⁹	10 N	4 48	5 15	5 38	11 44	51	** ** *
12	0	40.1	+21	34.1	273	09.1 ¹²⁴	+5 21.8 ¹¹⁹	0	5 06	5 31	5 54	11 48	47	** ** *
13	15	40.0		34.5	287	40.4 ¹²³	+5 09.8 ¹²⁰	10 S	21	5 47	6 10	51 45		** ** *
14	30	39.9		34.9	302	11.7 ¹²³	+4 57.8 ¹²⁰	20	36	6 03	26	11 56	40	** ** *
15	45	39.9		35.3	316	43.0 ¹²³	45.8 ¹²⁰	30	50	20	46	12 00	36	** ** *
16	60	39.8		35.6	331	14.2 ¹²²	33.7 ¹²¹	35	5 58	29	6 57	03 33		** ** *
17	75	39.7	+21	36.0	345	45.5 ¹²³	+4 21.6 ¹²¹	40	6 06	6 40	7 10	12 06	31	** ** *
18	90	39.6	+21	36.4	0	16.7 ¹²²	+4 09.4 ¹²²	45	6 15	6 52	7 25	12 10	27	23 58 70
19	105	39.5		36.8	14	47.9 ¹²²	+3 57.3 ¹²¹	50	25	7 06	43	14 23		55 75
20	120	39.5		37.2	29	19.1 ¹²²	45.0 ¹²³	52	30	13	7 52	16 21		54 77
21	135	39.4		37.6	43	50.2 ¹²¹	32.8 ¹²²	54	35	20	8 02	18 20		53 79
22	150	39.3		38.0	58	21.4 ¹²²	20.5 ¹²³	56	40	28	13	21 17		52 81
23	165	39.2		38.4	72	52.5 ¹²¹	+3 08.2 ¹²³	58	46	37	25	23 15		50 84
24	180	39.1	+21	38.7	87	23.6 ¹²¹	+2 55.8 ¹²⁴	60 S	6 52	7 47	8 40	12 26	12	23 48 87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG		Mag: -4.1		Mag: +0.5		Mag: -2.0		Mag: +0.5							
	7 ^h 35 ^m 0		PMG: 12 ^h 53 ^m		PMG: 18 ^h 34 ^m		PMG: 11 ^h 13 ^m		PMG: 21 ^h 03 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	245	56.4	165	56.3	+25	80	58.7	+7 43.7	191	27.7	+18 37.7	43	16.4	-6 35.4		
1	260	58.9	181	00.1		96	00.3	43.3	206	29.6	37.8	58	19.0	35.4		
2	276	01.3	196	03.8		111	01.9	42.9	221	31.4	37.9	73	21.6	35.4		
3	291	03.8	211	07.6		126	03.5	42.5	236	33.3	38.1	88	24.1	35.3		
4	306	06.2	226	11.3		141	05.1	42.0	251	35.2	38.2	103	26.7	35.3		
5	321	08.7	241	15.1	+25	156	06.7	+7 41.6	266	37.0	+18 38.4	118	29.3	-6 35.3		
6	336	11.2	256	18.8	+25	171	08.3	+7 41.2	281	38.9	+18 38.5	133	31.9	-6 35.2		
7	351	13.6	271	22.6		186	09.9	40.7	296	40.8	38.6	148	34.4	35.2		
8	6	16.1	286	26.3		201	11.5	40.3	311	42.6	38.8	163	37.0	35.2		
9	21	18.6	301	30.1		216	13.1	39.9	326	44.5	38.9	178	39.6	35.1		
10	36	21.0	316	33.9		231	14.7	39.4	341	46.3	39.0	193	42.1	35.1		
11	51	23.5	331	37.6	+25	246	16.3	+7 39.0	356	48.2	+18 39.2	208	44.7	-6 35.1		
12	66	26.0	346	41.4	+25	261	17.9	+7 38.6	11	50.1	+18 39.3	223	47.3	-6 35.0		
13	81	28.4	1	45.2		276	19.5	38.1	26	51.9	39.4	238	49.8	35.0		
14	96	30.9	16	49.0		291	21.1	37.7	41	53.8	39.6	253	52.4	35.0		
15	111	33.4	31	52.7		306	22.7	37.3	56	55.7	39.7	268	55.0	35.0		
16	126	35.8	46	56.5		321	24.3	36.8	71	57.5	39.9	283	57.6	34.9		
17	141	38.3	62	00.3	+25	336	25.9	+7 36.4	86	59.4	+18 40.0	299	00.1	-6 34.9		
18	156	40.7	77	04.1	+25	351	27.5	+7 36.0	102	01.2	+18 40.1	314	02.7	-6 34.9		
19	171	43.2	92	07.9		6	29.1	35.5	117	03.1	40.3	329	05.3	34.8		
20	186	45.7	107	11.7		21	30.7	35.1	132	05.0	40.4	344	07.8	34.8		
21	201	48.1	122	15.5		36	32.3	34.7	147	06.8	40.5	359	10.4	34.8		
22	216	50.6	137	19.3		51	33.9	34.2	162	08.7	40.7	14	13.0	34.7		
23	231	53.1	152	23.1		66	35.5	33.8	177	10.6	40.8	29	15.5	34.7		
24	246	55.5	167	26.9	+25	81	37.1	+7 33.4	192	12.4	+18 41.0	44	18.1	-6 34.7		
Dif	—		+38		-6		+16		-4		+19		+1		+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 5			Edad: 8 ^d 0 PHE { 4 ^h : 58 ^h 0 12 ^h : 58 ^h 3 20 ^h : 58 ^h 6 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	39.1	+21 38.7	87	23.6	+2 55.8	60 N	21 03	22 24	** **	12 34	88	0 30	12		
1	195	39.0	39.1	101	54.7 ¹²¹	43.5 ¹²³	58	20 45	21 51	** **	34 85		28 15			
2	210	39.0	39.5	116	25.7 ¹²⁰	31.1 ¹²⁴	56	31	28	23 31	34 83		27 17			
3	225	38.9	39.9	130	56.7 ¹²⁰	18.6 ¹²⁵	54	18	21 09	22 32	34 80		26 19			
4	240	38.8	40.3	145	27.7 ¹²⁰	+2 06.2 ¹²⁴	52	20 07	20 53	22 02	34 78		25 21			
5	255	38.7	+21 40.7	159	58.6 ¹¹⁹	+1 53.7 ¹²⁵	50	19 58	20 40	21 40	12 34	76	0 24	23		
6	270	38.6	+21 41.0	174	29.6 ¹²⁰	+1 41.2 ¹²⁵	45	19 37	20 13	21 00	12 34	72	0 22	27		
7	285	38.5	41.4	189	00.5 ¹¹⁹	28.7 ¹²⁵	40	21	19 53	20 33	35 68		20 31			
8	300	38.5	41.8	203	31.3 ¹¹⁸	16.1 ¹²⁶	35	19 07	36	20 12	35 65		18 34			
9	315	38.4	42.2	218	02.1 ¹¹⁸	+1 03.5 ¹²⁶	30	18 55	19 22	19 55	35 62		17 36			
10	330	38.3	42.5	232	32.9 ¹¹⁸	+0 50.9 ¹²⁶	20	35	18 59	28	35 58		15 40			
11	345	38.2	+21 42.9	247	03.7 ¹¹⁸	+0 38.3 ¹²⁶	10 N	18 17	18 40	19 07	12 35	54	0 12	45		
12	0	38.1	+21 43.3	261	34.4 ¹¹⁷	+0 25.7 ¹²⁶	0	18 01	18 23	18 49	12 35	50	0 10	49		
13	15	38.0	43.7	276	05.1 ¹¹⁷	13.0 ¹²⁷	10 S	17 45	18 08	34	36 45		08 52			
14	30	38.0	44.0	290	35.7 ¹¹⁶	+0 00.4 ¹²⁶	20	28	17 52	19	36 41		06 56			
15	45	37.9	44.4	305	06.3 ¹¹⁶	-0 12.3 ¹²⁷	30	17 08	34	18 04	36 37		03 61			
16	60	37.8	44.8	319	36.9 ¹¹⁶	25.0 ¹²⁷	35	16 57	25	17 56	36 35		02 63			
17	75	37.7	+21 45.2	334	07.4 ¹¹⁵	-0 37.7 ¹²⁷	40	16 44	17 14	17 48	12 37	31	0 00	67		
18	90	37.6	+21 45.5	348	37.9 ¹¹⁵	-0 50.5 ¹²⁸	45	16 29	17 02	17 39	12 37	28	** **	**		
19	105	37.5	45.9	3	08.4 ¹¹⁵	-1 03.2 ¹²⁷	50	10	16 48	28	37 24		** **	**		
20	120	37.4	46.3	17	38.8 ¹¹⁴	15.9 ¹²⁷	52	16 01	41	24	37 22		** **	**		
21	135	37.3	46.7	32	09.1 ¹¹³	28.7 ¹²⁸	54	15 52	34	19	38 19		** **	**		
22	150	37.3	47.0	46	39.4 ¹¹³	41.4 ¹²⁷	56	40	26	13	38 17		** **	**		
23	165	37.2	47.4	61	09.7 ¹¹³	-1 54.2 ¹²⁸	58	27	17	08	38 15		** **	**		
24	180	37.1	+21 47.8	75	39.9 ¹¹²	-2 07.0 ¹²⁸	60 S	15 12	16 06	17 01	12 38	13	** **	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 7 ^h 31 ^m 1		Mag: -4.0 PMG: 12 ^h 47 ^m			Mag: +0.5 PMG: 18 ^h 32 ^m			Mag: -2.0 PMG: 11 ^h 10 ^m			Mag: +0.5 PMG: 20 ^h 59 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	246	55.5	167	26.9	+25 03.7	81	37.1	+7 33.4	192	12.4	+18 41.0	44	18.1	-6 34.7		
1	261	58.0	182	30.7	03.1	96	38.7	32.9	207	14.3	41.1	59	20.7	34.6		
2	277	00.5	197	34.5	02.5	111	40.3	32.5	222	16.1	41.2	74	23.2	34.6		
3	292	02.9	212	38.4	01.9	126	41.8	32.1	237	18.0	41.4	89	25.8	34.6		
4	307	05.4	227	42.2	01.3	141	43.4	31.6	252	19.9	41.5	104	28.4	34.5		
5	322	07.8	242	46.0	+25 00.7	156	45.0	+7 31.2	267	21.7	+18 41.6	119	30.9	-6 34.5		
6	337	10.3	257	49.8	+25 00.1	171	46.6	+7 30.8	282	23.6	+18 41.8	134	33.5	-6 34.5		
7	352	12.8	272	53.7	+24 59.5	186	48.2	30.3	297	25.5	41.9	149	36.1	34.5		
8	7	15.2	287	57.5	58.9	201	49.8	29.9	312	27.3	42.0	164	38.6	34.4		
9	22	17.7	303	01.3	58.2	216	51.4	29.5	327	29.2	42.2	179	41.2	34.4		
10	37	20.2	318	05.2	57.6	231	53.0	29.0	342	31.1	42.3	194	43.8	34.4		
11	52	22.6	333	09.0	+24 57.0	246	54.5	+7 28.6	357	32.9	+18 42.5	209	46.3	-6 34.3		
12	67	25.1	348	12.9	+24 56.4	261	56.1	+7 28.2	12	34.8	+18 42.6	224	48.9	-6 34.3		
13	82	27.6	3	16.7	55.8	276	57.7	27.7	27	36.6	42.7	239	51.5	34.3		
14	97	30.0	18	20.6	55.2	291	59.3	27.3	42	38.5	42.9	254	54.0	34.2		
15	112	32.5	33	24.4	54.5	307	00.9	26.8	57	40.4	43.0	269	56.6	34.2		
16	127	35.0	48	28.3	53.9	322	02.5	26.4	72	42.2	43.1	284	59.2	34.2		
17	142	37.4	63	32.2	+24 53.3	337	04.1	+7 26.0	87	44.1	+18 43.3	300	01.7	-6 34.1		
18	157	39.9	78	36.0	+24 52.7	352	05.6	+7 25.5	102	46.0	+18 43.4	315	04.3	-6 34.1		
19	172	42.3	93	39.9	52.0	7	07.2	25.1	117	47.8	43.5	330	06.9	34.1		
20	187	44.8	108	43.7	51.4	22	08.8	24.7	132	49.7	43.7	345	09.4	34.1		
21	202	47.3	123	47.6	50.8	37	10.4	24.2	147	51.5	43.8	0	12.0	34.0		
22	217	49.7	138	51.5	50.1	52	12.0	23.8	162	53.4	43.9	15	14.6	34.0		
23	232	52.2	153	55.4	49.5	67	13.5	23.3	177	55.3	44.1	30	17.1	34.0		
24	247	54.7	168	59.3	+24 48.9	82	15.1	+7 22.9	192	57.1	+18 44.2	45	19.7	-6 33.9		
Dif	—		+38	-6		+16	-4		+19	+1		+26		0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 9 ^d 0	PHE {	4 ^h : 58 ^m 8 12 ^h : 59 ^m 1 20 ^h : 59 ^m 4		Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 57 ^m 6							R ^o : 53 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	37.1	+21	47.8	75	39.9	-2	07.0	60 N	1 31	2 52	14 02	93	0 42	13
1	195	37.0		48.1	90	10.1	112	19.8	58	2 03	3 09	13 59	89	43	16
2	210	36.9		48.5	104	40.2	111	32.6	56	0 24	27	57	86	44	19
3	225	36.8		48.9	119	10.3	111	45.3	54	1 23	2 46	54	84	45	21
4	240	36.7		49.2	133	40.3	110	-2 58.1	52	1 53	3 01	52	81	46	23
5	255	36.7	+21	49.6	148	10.2	109	-3 10.9	50	2 15	3 15	13 50	79	0 47	25
6	270	36.6	+21	50.0	162	40.2	110	-3 23.7	45	2 54	3 41	13 46	75	0 49	29
7	285	36.5		50.3	177	10.0	108	36.5	40	3 22	4 02	43	70	51	32
8	300	36.4		50.7	191	39.8	108	-3 49.2	35	3 43	19	40	67	52	35
9	315	36.3		51.0	206	09.6	108	-4 02.0	30	4 00	33	5 00	37	65	53
10	330	36.2		51.4	220	39.3	107	14.8	20	27	4 56	33	60	55	43
11	345	36.1	+21	51.8	235	08.9	106	-4 27.5	10 N	4 48	5 15	13 29	56	0 57	47
12	0	36.0	+21	52.1	249	38.5	106	-4 40.3	0	5 06	5 32	13 25	52	0 59	50
13	15	35.9		52.5	264	08.0	105	-4 53.0	10 S	21	5 48	21	49	1 00	55
14	30	35.9		52.9	278	37.4	104	-5 05.8	20	36	6 04	17	45	02	59
15	45	35.8		53.2	293	06.8	104	18.5	30	51	21	13	40	04	64
16	60	35.7		53.6	307	36.1	103	31.2	35	5 59	30	11	37	05	67
17	75	35.6	+21	53.9	322	05.4	103	-5 43.8	40	6 08	6 41	13 08	34	1 07	69
18	90	35.5	+21	54.3	336	34.6	102	-5 56.5	45	6 17	6 53	13 05	30	1 08	73
19	105	35.4		54.6	351	03.8	102	-6 09.2	50	27	7 08	13 01	26	10	77
20	120	35.3		55.0	5	32.8	100	21.8	52	32	15	12 59	25	11	79
21	135	35.2		55.3	20	01.8	100	34.4	54	37	22	57	23	12	81
22	150	35.1		55.7	34	30.8	100	47.0	56	42	30	55	20	13	84
23	165	35.0		56.1	48	59.6	98	-6 59.6	58	48	39	53	17	14	87
24	180	35.0	+21	56.4	63	28.4	98	-7 12.1	60 S	6 55	7 49	12 51	14	1 15	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -4.1		Mag: +0.5		Mag: -2.0		Mag: +0.5						
	7 ^h 27 ^m 1		PMG: 12 ^h 41 ^m		PMG: 18 ^h 29 ^m		PMG: 11 ^h 07 ^m		PMG: 20 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	247	54.7	168	59.3	+24	82	15.1	+7	192	57.1	+18	45	19.7	-6	33.9
1	262	57.1	184	03.1		97	16.7		207	59.0		60	22.2		33.9
2	277	59.6	199	07.0		112	18.3		223	00.9		75	24.8		33.9
3	293	02.1	214	10.9		127	19.9		238	02.7		90	27.4		33.8
4	308	04.5	229	14.8		142	21.4		253	04.6		105	29.9		33.8
5	323	07.0	244	18.7	+24	157	23.0	+7	268	06.5	+18	120	32.5	-6	33.8
6	338	09.5	259	22.6	+24	172	24.6	+7	283	08.3	+18	135	35.1	-6	33.8
7	353	11.9	274	26.5		187	26.2		298	10.2		150	37.6		33.7
8	8	14.4	289	30.4		202	27.8		313	12.0		165	40.2		33.7
9	23	16.8	304	34.3		217	29.3		328	13.9		180	42.8		33.7
10	38	19.3	319	38.2		232	30.9		343	15.8		195	45.3		33.6
11	53	21.8	334	42.1	+24	247	32.5	+7	358	17.6	+18	210	47.9	-6	33.6
12	68	24.2	349	46.0	+24	262	34.1	+7	13	19.5	+18	225	50.4	-6	33.6
13	83	26.7	4	49.9		277	35.6		28	21.4		240	53.0		33.6
14	98	29.2	19	53.9		292	37.2		43	23.2		255	55.6		33.5
15	113	31.6	34	57.8		307	38.8		58	25.1		270	58.1		33.5
16	128	34.1	50	01.7		322	40.3		73	27.0		286	00.7		33.5
17	143	36.6	65	05.6	+24	337	41.9	+7	88	28.8	+18	301	03.3	-6	33.4
18	158	39.0	80	09.5	+24	352	43.5	+7	103	30.7	+18	316	05.8	-6	33.4
19	173	41.5	95	13.5		7	45.1		118	32.5		331	08.4		33.4
20	188	43.9	110	17.4		22	46.6		133	34.4		346	10.9		33.3
21	203	46.4	125	21.3		37	48.2		148	36.3		1	13.5		33.3
22	218	48.9	140	25.3		52	49.8		163	38.1		16	16.1		33.3
23	233	51.3	155	29.2		67	51.3		178	40.0		31	18.6		33.3
24	248	53.8	170	33.2	+24	82	52.9	+7	193	41.9	+18	46	21.2	-6	33.2
Dif	—		+39	-6		+16	-4		+19	+1		+26	0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7			Edad: 10 ^d 0 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 9 20 ^h : 60 ^m 1 PMG: 20 ^h 30 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	35.0	+21 56.4	63	28.4	-7 12.1		60 N	21 06	22 30	** ** *	15 35	94	0 55	15
1	195	34.9	56.8	77	57.2	98 24.6	125	58	20 49	21 56	** ** *	28 92		0 59	19
2	210	34.8	57.1	92	25.8	96 37.1	125	56	34	31	** ** *	23 88		1 03	21
3	225	34.7	57.5	106	54.4	96 -7 49.5	124	54	21	21 12	22 38	18 85		06	24
4	240	34.6	57.8	121	22.9	95 -8 02.0	125	52	10	20 56	22 06	13 84		09	26
5	255	34.5	+21 58.2	135	51.4	95 -8 14.3	123	50	20 00	20 43	21 43	15 09	81	1 12	28
6	270	34.4	+21 58.5	150	19.7	93 -8 26.7	124	45	19 39	20 15	21 03	15 01	76	1 18	32
7	285	34.3	58.9	164	48.0	93 39.0	123	40	22	19 54	20 35	14 53	74	23	35
8	300	34.2	59.2	179	16.2	92 -8 51.3	123	35	19 08	37	20 13	47 70		27	39
9	315	34.1	59.5	193	44.4	92 -9 03.6	123	30	18 56	23	19 56	42 67		31	41
10	330	34.0	+21 59.9	208	12.4	90 15.8	122	20	36	19 00	29	33 63		38	46
11	345	33.9	+22 00.2	222	40.4	90 -9 27.9	121	10 N	18 18	18 41	19 07	14 25	59	1 44	50
12	0	33.8	+22 00.6	237	08.3	89 -9 40.1	122	0	18 01	18 24	18 50	14 17	55	1 49	54
13	15	33.8	00.9	251	36.2	89 -9 52.1	120	10 S	17 45	18 08	34	10 51		1 55	57
14	30	33.7	01.3	266	03.9	87 -10 04.2	121	20	28	17 52	19	14 02	48	2 01	61
15	45	33.6	01.6	280	31.6	87 16.1	119	30	17 08	34	18 04	13 53	43	08	66
16	60	33.5	02.0	294	59.2	86 28.1	120	35	16 56	24	17 56	48 41		12	68
17	75	33.4	+22 02.3	309	26.7	85 -10 40.0	119	40	16 43	17 13	17 47	13 42	38	2 16	72
18	90	33.3	+22 02.6	323	54.1	84 -10 51.8	118	45	16 28	17 01	17 38	13 35	35	2 21	76
19	105	33.2	03.0	338	21.4	83 -11 03.6	118	50	09	16 46	27	27 31		27	80
20	120	33.1	03.3	352	48.7	83 15.3	117	52	16 00	40	22	24 28		30	82
21	135	33.0	03.7	7	15.9	82 27.0	117	54	15 50	32	17	20 26		33	85
22	150	32.9	04.0	21	42.9	80 38.6	116	56	38	24	12	15 24		37	87
23	165	32.8	04.3	36	10.0	81 -11 50.1	115	58	25	15	17 06	10 22		41	90
24	180	32.7	+22 04.7	50	36.9	79 -12 01.6	115	60 S	15 10	16 04	16 59	13 05	18	2 45	94
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 23 ^m 2		Mag: -4.1 PMG: 12 ^h 34 ^m			Mag: +0.5 PMG: 18 ^h 27 ^m			Mag: -2.0 PMG: 11 ^h 04 ^m			Mag: +0.5 PMG: 20 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	248	53.8	170	33.2	+24 33.4	82	52.9	+7 12.3	193	41.9	+18 47.5	46	21.2	-6 33.2	
1	263	56.3	185	37.1	32.8	97	54.5	11.9	208	43.7	47.6	61	23.8	33.2	
2	278	58.7	200	41.0	32.1	112	56.0	11.4	223	45.6	47.7	76	26.3	33.2	
3	294	01.2	215	45.0	31.4	127	57.6	11.0	238	47.5	47.9	91	28.9	33.1	
4	309	03.7	230	48.9	30.8	142	59.2	10.5	253	49.3	48.0	106	31.4	33.1	
5	324	06.1	245	52.9	+24 30.1	158	00.7	+7 10.1	268	51.2	+18 48.1	121	34.0	-6 33.1	
6	339	08.6	260	56.8	+24 29.5	173	02.3	+7 09.6	283	53.1	+18 48.3	136	36.6	-6 33.1	
7	354	11.1	276	00.8	28.8	188	03.9	09.2	298	54.9	48.4	151	39.1	33.0	
8	9	13.5	291	04.8	28.1	203	05.4	08.7	313	56.8	48.5	166	41.7	33.0	
9	24	16.0	306	08.7	27.5	218	07.0	08.3	328	58.6	48.7	181	44.2	33.0	
10	39	18.4	321	12.7	26.8	233	08.6	07.8	344	00.5	48.8	196	46.8	33.0	
11	54	20.9	336	16.7	+24 26.1	248	10.1	+7 07.4	359	02.4	+18 48.9	211	49.4	-6 32.9	
12	69	23.4	351	20.6	+24 25.5	263	11.7	+7 07.0	14	04.2	+18 49.1	226	51.9	-6 32.9	
13	84	25.8	6	24.6	24.8	278	13.3	06.5	29	06.1	49.2	241	54.5	32.9	
14	99	28.3	21	28.6	24.1	293	14.8	06.1	44	08.0	49.3	256	57.0	32.8	
15	114	30.8	36	32.5	23.5	308	16.4	05.6	59	09.8	49.5	271	59.6	32.8	
16	129	33.2	51	36.5	22.8	323	17.9	05.2	74	11.7	49.6	287	02.2	32.8	
17	144	35.7	66	40.5	+24 22.1	338	19.5	+7 04.7	89	13.6	+18 49.7	302	04.7	-6 32.8	
18	159	38.2	81	44.5	+24 21.4	353	21.1	+7 04.3	104	15.4	+18 49.9	317	07.3	-6 32.7	
19	174	40.6	96	48.5	20.8	8	22.6	03.8	119	17.3	50.0	332	09.8	32.7	
20	189	43.1	111	52.4	20.1	23	24.2	03.4	134	19.2	50.1	347	12.4	32.7	
21	204	45.5	126	56.4	19.4	38	25.7	02.9	149	21.0	50.3	2	14.9	32.7	
22	219	48.0	142	00.4	18.7	53	27.3	02.5	164	22.9	50.4	17	17.5	32.6	
23	234	50.5	157	04.4	18.1	68	28.9	02.0	179	24.7	50.5	32	20.1	32.6	
24	249	52.9	172	08.4	+24 17.4	83	30.4	+7 01.6	194	26.6	+18 50.7	47	22.6	-6 32.6	
Dif	—		+40		-7	+16		-4	+19		+1	+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 9				Edad: 11 ^d 0 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'7 R°: 60 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	32.7	+22	04.7	50	36.9	-12	01.6	60 N	** **	1 25	2 49	17 09	95	1 10	21	
1	195	32.6		05.0	65	03.7	78	13.0 ¹¹⁴	58	** **	2 00	3 07	17 00	90	18	23	
2	210	32.5		05.3	79	30.5	78	24.4 ¹¹⁴	56	** **	24	22	16 51	88	24	27	
3	225	32.4		05.7	93	57.1	76	35.7 ¹¹³	54	1 17	43	34	43	86	30	29	
4	240	32.3		06.0	108	23.7	76	46.9 ¹¹²	52	1 49	2 59	46	37	83	35	31	
5	255	32.2	+22	06.3	122	50.2	75	-12 58.0 ¹¹¹	50	2 12	3 13	3 56	16 30	82	1 40	33	
6	270	32.1	+22	06.7	137	16.6	74	-13 09.1 ¹¹¹	45	2 53	3 40	4 16	16 17	78	1 50	37	
7	285	32.0		07.0	151	42.9	73	20.1 ¹¹⁰	40	3 21	4 01	33	16 07	74	1 58	41	
8	300	31.9		07.3	166	09.1	72	31.0 ¹⁰⁹	35	3 42	18	47	15 57	72	2 06	44	
9	315	31.9		07.7	180	35.3	72	41.9 ¹⁰⁹	30	4 00	32	4 59	49	70	12	46	
10	330	31.8		08.0	195	01.3	70	-13 52.6 ¹⁰⁷	20	27	4 56	5 20	36	65	24	50	
11	345	31.7	+22	08.3	209	27.3	70	-14 03.3 ¹⁰⁷	10 N	4 48	5 15	5 38	15 24	62	2 34	53	
12	0	31.6	+22	08.7	223	53.2	69	-14 13.9 ¹⁰⁶	0	5 06	5 32	5 54	15 12	60	2 43	57	
13	15	31.5		09.0	238	19.0	68	24.5 ¹⁰⁶	10 S	22	5 48	6 11	15 01	57	2 52	61	
14	30	31.4		09.3	252	44.7	67	34.9 ¹⁰⁴	20	37	6 04	28	14 50	53	3 02	64	
15	45	31.3		09.6	267	10.3	66	45.2 ¹⁰³	30	5 52	22	48	36	50	14	68	
16	60	31.2		10.0	281	35.8	65	-14 55.5 ¹⁰³	35	6 00	32	6 59	29	47	20	71	
17	75	31.1	+22	10.3	296	01.2	64	-15 05.7 ¹⁰²	40	6 09	6 43	7 13	14 20	44	3 28	74	
18	90	31.0	+22	10.6	310	26.6	64	-15 15.7 ¹⁰⁰	45	6 18	6 55	7 28	14 10	41	3 37	77	
19	105	30.9		10.9	324	51.8	62	25.7 ¹⁰⁰	50	29	7 10	47	13 58	37	47	82	
20	120	30.8		11.3	339	17.0	62	35.6 ⁹⁹	52	34	17	7 56	52	36	52	84	
21	135	30.7		11.6	353	42.1	61	45.4 ⁹⁸	54	39	24	8 07	46	34	3 58	86	
22	150	30.6		11.9	8	07.1	60	-15 55.1 ⁹⁷	56	44	32	18	39	31	4 04	88	
23	165	30.5		12.2	22	32.0	59	-16 04.7 ⁹⁶	58	50	42	31	32	28	11	91	
24	180	30.4	+22	12.5	36	56.8	58	-16 14.2 ⁹⁵	60 S	6 57	7 52	8 47	13 23	25	4 19	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 19 ^m 3		Mag: -4.1 PMG: 12 ^h 28 ^m		Mag: +0.5 PMG: 18 ^h 24 ^m		Mag: -2.0 PMG: 11 ^h 01 ^m		Mag: +0.5 PMG: 20 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	249	52.9	172	08.4	+24	17.4	83	30.4	+7	01.6
1	264	55.4	187	12.4		16.7	98	32.0		01.1
2	279	57.9	202	16.4		16.0	113	33.5		00.7
3	295	00.3	217	20.4		15.3	128	35.1	+7	00.2
4	310	02.8	232	24.4		14.7	143	36.6	+6	59.8
5	325	05.3	247	28.4	+24	14.0	158	38.2	+6	59.3
6	340	07.7	262	32.4	+24	13.3	173	39.7	+6	58.9
7	355	10.2	277	36.4		12.6	188	41.3		58.4
8	10	12.7	292	40.4		11.9	203	42.8		58.0
9	25	15.1	307	44.4		11.2	218	44.4		57.5
10	40	17.6	322	48.4		10.5	233	46.0		57.1
11	55	20.0	337	52.5	+24	09.9	248	47.5	+6	56.6
12	70	22.5	352	56.5	+24	09.2	263	49.1	+6	56.2
13	85	25.0	8	00.5		08.5	278	50.6		55.7
14	100	27.4	23	04.5		07.8	293	52.2		55.3
15	115	29.9	38	08.5		07.1	308	53.7		54.8
16	130	32.4	53	12.5		06.4	323	55.3		54.4
17	145	34.8	68	16.6	+24	05.7	338	56.8	+6	53.9
18	160	37.3	83	20.6	+24	05.0	353	58.4	+6	53.5
19	175	39.8	98	24.6		04.3	8	59.9		53.0
20	190	42.2	113	28.6		03.6	24	01.5		52.6
21	205	44.7	128	32.7		02.9	39	03.0		52.1
22	220	47.2	143	36.7		02.2	54	04.5		51.7
23	235	49.6	158	40.7		01.5	69	06.1		51.2
24	250	52.1	173	44.8	+24	00.8	84	07.6	+6	50.8
Dif	—		+40		-7		+16		-5	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 1				Edad: 12 ^d 0 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'1 R°: 63 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico	Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	30.4	+22	12.5	36	56.8	-16	14.2	60 N	21 10	22 37	** **	18 44	87	1 31	29				
1	195	30.3		12.9	51	21.6	58	23.5	58	20 52	22 00	** **	30 84		41	33				
2	210	30.2		13.2	65	46.2	56	32.8	56	36	21 35	** **	19 82		51	35				
3	225	30.1		13.5	80	10.8	56	42.0	92	54	23	21 15	22 44	09 80	1 59	38				
4	240	30.0		13.8	94	35.3	55	-16 51.0	90	52	12	20 59	22 10	18 00	78	2 06	40			
5	255	29.9	+22	14.1	108	59.7	54	-17 00.0	90	50	20 02	20 45	21 46	17 52	77	2 13	42			
6	270	29.8	+22	14.5	123	24.0	53	-17 08.8	88	45	19 41	20 17	21 05	17 35	74	2 27	46			
7	285	29.7		14.8	137	48.3	53	17.5	87	40	24	19 56	20 37	21 72		39	48			
8	300	29.6		15.1	152	12.4	51	26.1	86	35	19 09	39	20 15	17 09	70	50	50			
9	315	29.5		15.4	166	36.5	51	34.6	85	30	18 57	24	19 57	16 59	69	2 58	53			
10	330	29.4		15.7	181	00.5	50	43.0	84	20	36	19 01	30	41 67		3 14	55			
11	345	29.3	+22	16.0	195	24.4	49	-17 51.2	82	10 N	18 18	18 41	19 08	16 26	64	3 27	59			
12	0	29.2	+22	16.3	209	48.2	48	-17 59.4	80	0	18 02	18 24	18 50	16 12	62	3 40	61			
13	15	29.1		16.6	224	12.0	48	-18 07.4	80	10 S	17 45	18 08	34	15 58	60	3 53	63			
14	30	29.0		17.0	238	35.7	47	15.2	78	20	28	17 51	19	43 58		4 06	67			
15	45	28.9		17.3	252	59.3	46	23.0	78	30	17 08	34	18 03	26 55		22	69			
16	60	28.8		17.6	267	22.8	45	30.6	76	35	16 56	24	17 55	16 54		31	71			
17	75	28.7	+22	17.9	281	46.3	45	-18 38.1	75	40	16 43	17 13	17 46	15 04	52	4 42	73			
18	90	28.6	+22	18.2	296	09.7	44	-18 45.5	74	45	16 27	17 00	17 37	14 51	50	4 54	76			
19	105	28.5		18.5	310	33.0	43	52.7	72	50	16 07	16 45	26	35 47		5 09	79			
20	120	28.4		18.8	324	56.2	42	-18 59.8	71	52	15 58	38	21	28 45		16	81			
21	135	28.3		19.1	339	19.4	42	-19 06.7	69	54	48	31	16	20 43		24	83			
22	150	28.2		19.4	353	42.5	41		69	56	36	22	11	10 42		32	86			
23	165	28.1		19.7	8	05.5	40		66	58	23	13	17 04	14 00	39	42	88			
24	180	28.0	+22	20.0	22	28.5	40	-19 26.8	66	60 S	15 07	16 02	16 58	13 48	36	5 53	92			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 15 ^m 3				Mag: -4.2 PMG: 12 ^h 22 ^m				Mag: +0.5 PMG: 18 ^h 22 ^m				Mag: -2.0 PMG: 10 ^h 58 ^m				Mag: +0.5 PMG: 20 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	250	52.1	173	44.8	+24	00.8	84	07.6	+6	50.8	195	11.4	+18	53.9	48	24.0	-6	31.9		
1	265	54.5	188	48.8	+24	00.1	99	09.2		50.3	210	13.2		54.0	63	26.5		31.9		
2	280	57.0	203	52.9	+23	59.4	114	10.7		49.8	225	15.1		54.1	78	29.1		31.9		
3	295	59.5	218	56.9		58.7	129	12.3		49.4	240	17.0		54.2	93	31.6		31.9		
4	311	01.9	234	00.9		58.0	144	13.8		48.9	255	18.8		54.4	108	34.2		31.8		
5	326	04.4	249	05.0	+23	57.3	159	15.4	+6	48.5	270	20.7	+18	54.5	123	36.7	-6	31.8		
6	341	06.9	264	09.0	+23	56.6	174	16.9	+6	48.0	285	22.6	+18	54.6	138	39.3	-6	31.8		
7	356	09.3	279	13.1		55.9	189	18.5		47.6	300	24.4		54.8	153	41.8		31.8		
8	11	11.8	294	17.1		55.2	204	20.0		47.1	315	26.3		54.9	168	44.4		31.7		
9	26	14.3	309	21.2		54.5	219	21.5		46.7	330	28.2		55.0	183	47.0		31.7		
10	41	16.7	324	25.2		53.8	234	23.1		46.2	345	30.0		55.2	198	49.5		31.7		
11	56	19.2	339	29.3	+23	53.1	249	24.6	+6	45.8	0	31.9	+18	55.3	213	52.1	-6	31.7		
12	71	21.7	354	33.3	+23	52.4	264	26.2	+6	45.3	15	33.8	+18	55.4	228	54.6	-6	31.6		
13	86	24.1	9	37.4		51.7	279	27.7		44.8	30	35.6		55.6	243	57.2		31.6		
14	101	26.6	24	41.4		51.0	294	29.2		44.4	45	37.5		55.7	258	59.7		31.6		
15	116	29.0	39	45.5		50.2	309	30.8		43.9	60	39.3		55.8	274	02.3		31.6		
16	131	31.5	54	49.5		49.5	324	32.3		43.5	75	41.2		56.0	289	04.8		31.5		
17	146	34.0	69	53.6	+23	48.8	339	33.9	+6	43.0	90	43.1	+18	56.1	304	07.4	-6	31.5		
18	161	36.4	84	57.6	+23	48.1	354	35.4	+6	42.6	105	44.9	+18	56.2	319	09.9	-6	31.5		
19	176	38.9	100	01.7		47.4	9	36.9		42.1	120	46.8		56.4	334	12.5		31.5		
20	191	41.4	115	05.8		46.7	24	38.5		41.6	135	48.7		56.5	349	15.0		31.4		
21	206	43.8	130	09.8		46.0	39	40.0		41.2	150	50.5		56.6	4	17.6		31.4		
22	221	46.3	145	13.9		45.2	54	41.5		40.7	165	52.4		56.7	19	20.1		31.4		
23	236	48.8	160	18.0		44.5	69	43.1		40.3	180	54.3		56.9	34	22.7		31.4		
24	251	51.2	175	22.0	+23	43.8	84	44.6	+6	39.8	195	56.1	+18	57.0	49	25.2	-6	31.3		
Dif	—				+41				-7				+19				+1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 13 ^d 0	PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 2 20 ^h : 61 ^m 2										
	PMG: 11 ^h 58 ^m 2					SD: 16 ^h 6		PMG: 23 ^h 29 ^m			Rº: 64 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	28.0	+22 20.0	22	28.5	-19 26.8	60 N	** **	1 19	2 46	20 11	70	2 00	44	
1	195	27.9	20.3	36	51.4	39 33.2	58	** **	1 56	3 04	19 54	70	14	46	
2	210	27.8	20.6	51	14.3	39 39.4	56	** **	2 21	20	41	68	26	48	
3	225	27.7	20.9	65	37.1	38 45.6	54	1 12	41	33	29	68	37	50	
4	240	27.6	21.2	79	59.8	37 51.5	52	1 46	2 57	44	18	68	46	51	
5	255	27.4	+22 21.5	94	22.5	37 -19 57.4	50	2 10	3 11	3 54	19 09	67	2 55	52	
6	270	27.3	+22 21.8	108	45.1	36 -20 03.0	45	2 51	3 39	4 15	18 49	67	3 13	54	
7	285	27.2	22.1	123	07.6	35 08.6	40	3 19	4 00	32	33	66	27	56	
8	300	27.1	22.4	137	30.2	36 14.0	35	41	17	47	19	66	40	57	
9	315	27.0	22.7	151	52.6	34 19.2	30	3 59	32	4 59	18 08	65	3 51	58	
10	330	26.9	23.0	166	15.0	34 24.3	20	4 27	4 56	5 20	17 48	64	4 09	61	
11	345	26.8	+22 23.3	180	37.4	34 -20 29.2	10 N	4 48	5 15	5 38	17 30	64	4 26	62	
12	0	26.7	+22 23.6	194	59.7	33 -20 34.0	0	5 06	5 32	5 55	17 14	64	4 41	63	
13	15	26.6	23.9	209	22.0	33 38.6	10 S	22	5 48	6 11	16 58	63	4 56	65	
14	30	26.5	24.2	223	44.2	32 43.1	20	38	6 05	29	41	62	5 13	66	
15	45	26.4	24.5	238	06.4	32 47.4	30	5 53	23	6 49	21	61	31	68	
16	60	26.3	24.8	252	28.6	32 51.5	35	6 01	33	7 01	16 10	60	42	69	
17	75	26.2	+22 25.1	266	50.7	31 -20 55.5	40	6 10	6 44	7 14	15 56	60	5 55	70	
18	90	26.1	+22 25.4	281	12.8	31 -20 59.4	45	6 20	6 56	7 30	15 41	59	6 10	71	
19	105	26.0	25.7	295	34.8	30 -21 03.0	50	31	7 12	49	22	58	28	73	
20	120	25.9	26.0	309	56.9	31 06.6	52	35	18	7 59	13	57	37	74	
21	135	25.8	26.3	324	18.9	30 09.9	54	41	26	8 09	15 03	57	47	74	
22	150	25.7	26.6	338	40.8	29 13.1	56	46	35	21	14 52	55	6 58	75	
23	165	25.6	26.8	353	02.8	30 16.2	58	52	44	34	39	54	7 10	77	
24	180	25.5	+22 27.1	7	24.7	29 -21 19.0	60 S	6 59	7 55	8 50	14 24	53	7 25	79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 11 ^m 4		Mag: -4.2 PMG: 12 ^h 15 ^m		Mag: +0.5 PMG: 18 ^h 19 ^m		Mag: -2.0 PMG: 10 ^h 55 ^m		Mag: +0.5 PMG: 20 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	251	51.2	175	22.0	+23 43.8	84	44.6	+6 39.8	195	56.1	+18 57.0	49	25.2	-6 31.3
1	266	53.7	190	26.1	43.1	99	46.1	39.4	210	58.0	57.1	64	27.8	31.3
2	281	56.1	205	30.2	42.4	114	47.7	38.9	225	59.9	57.3	79	30.3	31.3
3	296	58.6	220	34.2	41.7	129	49.2	38.4	241	01.7	57.4	94	32.9	31.3
4	312	01.1	235	38.3	40.9	144	50.7	38.0	256	03.6	57.5	109	35.4	31.2
5	327	03.5	250	42.4	+23 40.2	159	52.3	+6 37.5	271	05.5	+18 57.7	124	38.0	-6 31.2
6	342	06.0	265	46.4	+23 39.5	174	53.8	+6 37.1	286	07.3	+18 57.8	139	40.5	-6 31.2
7	357	08.5	280	50.5	38.8	189	55.3	36.6	301	09.2	57.9	154	43.1	31.2
8	12	10.9	295	54.6	38.0	204	56.9	36.1	316	11.1	58.1	169	45.6	31.2
9	27	13.4	310	58.7	37.3	219	58.4	35.7	331	12.9	58.2	184	48.2	31.1
10	42	15.9	326	02.7	36.6	234	59.9	35.2	346	14.8	58.3	199	50.7	31.1
11	57	18.3	341	06.8	+23 35.9	250	01.5	+6 34.8	1	16.7	+18 58.5	214	53.3	-6 31.1
12	72	20.8	356	10.9	+23 35.1	265	03.0	+6 34.3	16	18.5	+18 58.6	229	55.8	-6 31.1
13	87	23.3	11	15.0	34.4	280	04.5	33.8	31	20.4	58.7	244	58.4	31.0
14	102	25.7	26	19.1	33.7	295	06.1	33.4	46	22.3	58.8	260	00.9	31.0
15	117	28.2	41	23.1	33.0	310	07.6	32.9	61	24.1	59.0	275	03.5	31.0
16	132	30.6	56	27.2	32.2	325	09.1	32.5	76	26.0	59.1	290	06.0	31.0
17	147	33.1	71	31.3	+23 31.5	340	10.6	+6 32.0	91	27.9	+18 59.2	305	08.6	-6 30.9
18	162	35.6	86	35.4	+23 30.8	355	12.2	+6 31.5	106	29.7	+18 59.4	320	11.1	-6 30.9
19	177	38.0	101	39.5	30.0	10	13.7	31.1	121	31.6	59.5	335	13.7	30.9
20	192	40.5	116	43.5	29.3	25	15.2	30.6	136	33.5	59.6	350	16.2	30.9
21	207	43.0	131	47.6	28.6	40	16.7	30.1	151	35.3	59.8	5	18.8	30.8
22	222	45.4	146	51.7	27.8	55	18.3	29.7	166	37.2	+18 59.9	20	21.3	30.8
23	237	47.9	161	55.8	27.1	70	19.8	29.2	181	39.1	+19 00.0	35	23.9	30.8
24	252	50.4	176	59.9	+23 26.4	85	21.3	+6 28.8	196	40.9	+19 00.1	50	26.4	-6 30.8
Dif	—		+41 -7		+15 -5		+19 -5		+19 +1		+25 0			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58 ^m 4			Edad: 14 ^d 0 PHE { SD: 16'6 PMG: **h **m					4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'9 R°: **m							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	25.5	+22	27.1	7	24.7	-21	19.0	60 N	21 13	22 43	** **	21 21	50	2 44	62
1	195	25.3		27.4	21	46.6	29	21.8	58	20 54	22 04	** **	21 04	51	3 00	63
2	210	25.2		27.7	36	08.5	29	24.3	56	39	21 38	** **	20 49	53	14	63
3	225	25.1		28.0	50	30.4	29	26.7	54	25	18	22 49	37	54	27	63
4	240	25.0		28.3	64	52.3	29	28.9	52	14	21 01	22 14	26	55	37	63
5	255	24.9	+22	28.6	79	14.1	28	-21	50	20 04	20 47	21 49	20 16	56	3 47	63
6	270	24.8	+22	28.8	93	36.0	29	-21	45	19 42	20 19	21 07	19 56	57	4 07	63
7	285	24.7		29.1	107	57.8	28	34.6	40	25	19 57	20 38	39	59	23	64
8	300	24.6		29.4	122	19.7	29	36.2	35	19 11	40	20 16	25	59	37	64
9	315	24.5		29.7	136	41.5	28	37.6	30	18 58	25	19 58	19 13	60	4 49	64
10	330	24.4		30.0	151	03.4	29	38.8	20	37	19 01	30	18 52	61	5 10	63
11	345	24.3	+22	30.3	165	25.2	28	-21	10 N	18 19	18 42	19 09	18 34	62	5 28	63
12	0	24.2	+22	30.5	179	47.1	29	-21	0	18 02	18 24	18 50	18 18	62	5 44	64
13	15	24.1		30.8	194	09.0	29	41.5	10 S	17 45	18 08	34	18 01	63	6 01	63
14	30	24.0		31.1	208	30.8	28	42.1	20	28	17 51	19	17 43	64	19	63
15	45	23.8		31.4	222	52.7	29	42.5	30	17 07	33	18 03	22	65	39	63
16	60	23.7		31.6	237	14.6	29	42.8	35	16 55	23	17 55	17 10	66	6 51	63
17	75	23.6	+22	31.9	251	36.6	30	-21	40	16 42	17 12	17 46	16 56	67	7 05	63
18	90	23.5	+22	32.2	265	58.5	29	-21	45	16 26	16 59	17 36	16 40	67	7 21	63
19	105	23.4		32.5	280	20.5	30	42.5	50	16 06	44	25	20	68	41	62
20	120	23.3		32.7	294	42.5	30	42.1	52	15 57	37	20	10	69	7 51	61
21	135	23.2		33.0	309	04.5	30	41.6	54	47	29	15	16 00	68	8 01	62
22	150	23.1		33.3	323	26.5	30	40.8	56	35	21	09	15 47	70	13	62
23	165	23.0		33.6	337	48.6	31	39.9	58	21	11	17 03	33	71	27	61
24	180	22.9	+22	33.8	352	10.7	31	-21	60 S	15 05	16 01	16 56	15 17	71	8 44	60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 07 ^m 5		Mag: -4.2 PMG: 12 ^h 09 ^m		Mag: +0.6 PMG: 18 ^h 17 ^m		Mag: -2.0 PMG: 10 ^h 52 ^m		Mag: +0.5 PMG: 20 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	252	50.4	176	59.9	+23	26.4	85	21.3	+6	28.8	196	40.9	+19	00.1	50	26.4	-6	30.8
1	267	52.8	192	04.0		25.6	100	22.8		28.3	211	42.8		00.3	65	29.0		30.8
2	282	55.3	207	08.1		24.9	115	24.4		27.8	226	44.7		00.4	80	31.5		30.7
3	297	57.8	222	12.2		24.2	130	25.9		27.4	241	46.5		00.5	95	34.1		30.7
4	313	00.2	237	16.2		23.4	145	27.4		26.9	256	48.4		00.7	110	36.6		30.7
5	328	02.7	252	20.3	+23	22.7	160	28.9	+6	26.4	271	50.3	+19	00.8	125	39.2	-6	30.7
6	343	05.1	267	24.4	+23	22.0	175	30.5	+6	26.0	286	52.1	+19	00.9	140	41.7	-6	30.6
7	358	07.6	282	28.5		21.2	190	32.0		25.5	301	54.0		01.1	155	44.3		30.6
8	13	10.1	297	32.6		20.5	205	33.5		25.1	316	55.9		01.2	170	46.8		30.6
9	28	12.5	312	36.7		19.8	220	35.0		24.6	331	57.7		01.3	185	49.3		30.6
10	43	15.0	327	40.8		19.0	235	36.5		24.1	346	59.6		01.4	200	51.9		30.6
11	58	17.5	342	44.9	+23	18.3	250	38.1	+6	23.7	2	01.5	+19	01.6	215	54.4	-6	30.5
12	73	19.9	357	49.0	+23	17.5	265	39.6	+6	23.2	17	03.3	+19	01.7	230	57.0	-6	30.5
13	88	22.4	12	53.1		16.8	280	41.1		22.7	32	05.2		01.8	245	59.5		30.5
14	103	24.9	27	57.2		16.1	295	42.6		22.3	47	07.1		02.0	261	02.1		30.5
15	118	27.3	43	01.3		15.3	310	44.1		21.8	62	08.9		02.1	276	04.6		30.4
16	133	29.8	58	05.3		14.6	325	45.7		21.3	77	10.8		02.2	291	07.2		30.4
17	148	32.3	73	09.4	+23	13.8	340	47.2	+6	20.9	92	12.7	+19	02.4	306	09.7	-6	30.4
18	163	34.7	88	13.5	+23	13.1	355	48.7	+6	20.4	107	14.5	+19	02.5	321	12.3	-6	30.4
19	178	37.2	103	17.6		12.3	10	50.2		19.9	122	16.4		02.6	336	14.8		30.4
20	193	39.6	118	21.7		11.6	25	51.7		19.5	137	18.3		02.7	351	17.3		30.3
21	208	42.1	133	25.8		10.9	40	53.2		19.0	152	20.1		02.9	6	19.9		30.3
22	223	44.6	148	29.9		10.1	55	54.8		18.5	167	22.0		03.0	21	22.4		30.3
23	238	47.0	163	34.0		09.4	70	56.3		18.1	182	23.9		03.1	36	25.0		30.3
24	253	49.5	178	38.1	+23	08.6	85	57.8	+6	17.6	197	25.7	+19	03.3	51	27.5	-6	30.3
Dif	—		+41		-7		+15		-5		+19		+1		+25		0	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 58 ^m 6				Edad: 15 ^d 0 PHE { SD: 16/6 PMG: 0 ^h 33 ^m R°: 62 ^m 4 ^h : 60/8 12 ^h : 60/6 20 ^h : 60/4																	
	hG ☉		Dec		hG ☾		Dif		Dec				Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	22.9	+22	33.8	352	10.7	-21	38.9	12	37.7	12	60 N	** **	1 14	2 44	22 11	33	3 46	79			
1	195	22.8		34.1	6	32.9		37.7	14	37.7	14	58	** **	1 52	3 02	21 55	37	4 03	77			
2	210	22.6		34.4	20	55.1		36.3	32	36.3	32	56	** **	2 19	18	42	39	17	75			
3	225	22.5		34.6	35	17.3		34.7	16	34.7	16	54	1 07	39	31	31	41	30	73			
4	240	22.4		34.9	49	39.6		33.0	17	33.0	17	52	1 43	2 56	43	21	43	40	73			
5	255	22.3	+22	35.2	64	01.9	-21	31.2	18	31.2	18	50	2 07	3 10	3 53	21 12	44	4 50	72			
6	270	22.2	+22	35.5	78	24.2	-21	29.2	20	29.2	20	45	2 50	3 38	4 15	20 53	47	5 10	70			
7	285	22.1		35.7	92	46.7		27.0	22	27.0	22	40	3 18	3 59	32	38	49	27	68			
8	300	22.0		36.0	107	09.1		24.7	23	24.7	23	35	41	4 17	46	24	51	41	67			
9	315	21.9		36.2	121	31.6		22.2	25	22.2	25	30	3 58	31	4 59	20 13	53	5 53	66			
10	330	21.8		36.5	135	54.2		19.5	27	19.5	27	20	4 26	4 55	5 20	19 53	56	6 13	65			
11	345	21.6	+22	36.8	150	16.8	-21	16.7	28	16.7	28	10 N	4 48	5 15	5 38	19 36	58	6 31	63			
12	0	21.5	+22	37.0	164	39.5	-21	13.8	29	13.8	29	0	5 06	5 33	5 55	19 20	60	6 48	61			
13	15	21.4		37.3	179	02.3		10.7	31	10.7	31	10 S	23	5 49	6 12	19 04	62	7 04	60			
14	30	21.3		37.6	193	25.1		07.4	33	07.4	33	20	38	6 06	29	18 47	64	22	58			
15	45	21.2		37.8	207	47.9		04.0	34	04.0	34	30	5 54	24	6 50	27	67	42	57			
16	60	21.1		38.1	222	10.9	-21	00.5	35	00.5	35	35	6 02	34	7 02	16	68	7 54	55			
17	75	21.0	+22	38.3	236	33.9	-20	56.8	37	56.8	37	40	6 11	6 45	7 15	18 03	69	8 08	53			
18	90	20.9	+22	38.6	250	56.9	-20	52.9	39	52.9	39	45	6 21	6 58	7 31	17 47	72	8 24	52			
19	105	20.8		38.9	265	20.1		48.9	40	48.9	40	50	32	7 13	7 51	28	74	43	50			
20	120	20.6		39.1	279	43.3		44.8	41	44.8	41	52	37	20	8 00	19	75	8 52	49			
21	135	20.5		39.4	294	06.6		40.5	43	40.5	43	54	42	28	11	17 08	78	9 03	47			
22	150	20.4		39.6	308	29.9		36.0	45	36.0	45	56	48	37	23	16 57	79	15	45			
23	165	20.3		39.9	322	53.4		31.5	45	31.5	45	58	6 54	46	37	44	81	28	44			
24	180	20.2	+22	40.1	337	16.9	-20	26.8	47	26.8	47	60 S	7 01	7 57	8 53	16 28	84	9 44	41			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 03 ^m 5		Mag: -4.2 PMG: 12 ^h 02 ^m			Mag: +0.6 PMG: 18 ^h 14 ^m			Mag: -2.0 PMG: 10 ^h 49 ^m			Mag: +0.6 PMG: 20 ^h 31 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	253	49.5	178	38.1	+23 08.6	85	57.8	+6 17.6	197	25.7	+19 03.3	51	27.5	-6 30.3
1	268	52.0	193	42.2	07.9	100	59.3	17.1	212	27.6	03.4	66	30.1	30.2
2	283	54.4	208	46.3	07.1	116	00.8	16.7	227	29.5	03.5	81	32.6	30.2
3	298	56.9	223	50.4	06.4	131	02.3	16.2	242	31.3	03.6	96	35.2	30.2
4	313	59.4	238	54.5	05.6	146	03.8	15.7	257	33.2	03.8	111	37.7	30.2
5	329	01.8	253	58.6	+23 04.9	161	05.3	+6 15.3	272	35.1	+19 03.9	126	40.2	-6 30.2
6	344	04.3	269	02.7	+23 04.1	176	06.9	+6 14.8	287	36.9	+19 04.0	141	42.8	-6 30.1
7	359	06.8	284	06.8	03.4	191	08.4	14.3	302	38.8	04.2	156	45.3	30.1
8	14	09.2	299	10.9	02.6	206	09.9	13.9	317	40.7	04.3	171	47.9	30.1
9	29	11.7	314	15.0	01.9	221	11.4	13.4	332	42.5	04.4	186	50.4	30.1
10	44	14.1	329	19.1	01.1	236	12.9	12.9	347	44.4	04.5	201	53.0	30.0
11	59	16.6	344	23.2	+23 00.4	251	14.4	+6 12.5	2	46.3	+19 04.7	216	55.5	-6 30.0
12	74	19.1	359	27.3	+22 59.6	266	15.9	+6 12.0	17	48.1	+19 04.8	231	58.0	-6 30.0
13	89	21.5	14	31.4	58.9	281	17.4	11.5	32	50.0	04.9	247	00.6	30.0
14	104	24.0	29	35.5	58.1	296	18.9	11.0	47	51.9	05.1	262	03.1	30.0
15	119	26.5	44	39.6	57.4	311	20.4	10.6	62	53.7	05.2	277	05.7	29.9
16	134	28.9	59	43.7	56.6	326	22.0	10.1	77	55.6	05.3	292	08.2	29.9
17	149	31.4	74	47.7	+22 55.9	341	23.5	+6 09.6	92	57.5	+19 05.4	307	10.8	-6 29.9
18	164	33.9	89	51.8	+22 55.1	356	25.0	+6 09.2	107	59.4	+19 05.6	322	13.3	-6 29.9
19	179	36.3	104	55.9	54.4	11	26.5	08.7	123	01.2	05.7	337	15.8	29.9
20	194	38.8	120	00.0	53.6	26	28.0	08.2	138	03.1	05.8	352	18.4	29.8
21	209	41.3	135	04.1	52.9	41	29.5	07.8	153	05.0	06.0	7	20.9	29.8
22	224	43.7	150	08.2	52.1	56	31.0	07.3	168	06.8	06.1	22	23.5	29.8
23	239	46.2	165	12.3	51.4	71	32.5	06.8	183	08.7	06.2	37	26.0	29.8
24	254	48.6	180	16.4	+22 50.6	86	34.0	+6 06.3	198	10.6	+19 06.3	52	28.5	-6 29.8
Dif	—		+41		-7	+15		-5	+19		+1	+25		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 16 ^d 0 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 6												
	PMG: 11 ^h 58 ^m 7			SD: 16 ^h 4 PMG: 1 ^h 35 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	20.2	+22 40.1	337	16.9	-20 26.8		60 N	21 16	22 49	** **	22 44 22		5 05 88		
1	195	20.1	40.4	351	40.5	21.9	49	58	20 57	22 08	** **	32 26		20 84		
2	210	20.0	40.7	6	04.2	16.9	50	56	41	21 41	** **	21 29		32 82		
3	225	19.8	40.9	20	27.9	11.8	51	54	27	20	22 55	12 31		43 80		
4	240	19.7	41.2	34	51.8	06.5	53	52	16	21 03	22 17	22 04 32		5 53 78		
5	255	19.6	+22 41.4	49	15.7	-20 01.1	54	50	20 05	20 49	21 52	21 56 35		6 02 76		
6	270	19.5	+22 41.7	63	39.7	-19 55.6	55	45	19 44	20 21	21 09	21 40 38		6 20 73		
7	285	19.4	41.9	78	03.8	50.0	56	40	26	19 59	20 40	27 41		35 70		
8	300	19.3	42.2	92	28.0	44.2	58	35	19 12	41	20 18	15 44		48 68		
9	315	19.2	42.4	106	52.3	38.2	60	30	18 59	26	19 59	21 06 45		6 59 66		
10	330	19.0	42.7	121	16.6	32.2	60	20	38	19 02	31	20 49 49		7 18 62		
11	345	18.9	+22 42.9	135	41.1	-19 26.0	62	10 N	18 19	18 42	19 09	20 34 52		7 34 60		
12	0	18.8	+22 43.2	150	05.7	-19 19.7	63	0	18 02	18 25	18 51	20 20 55		7 49 58		
13	15	18.7	43.4	164	30.3	13.3	64	10 S	17 46	18 08	34	20 06 58		8 04 55		
14	30	18.6	43.6	178	55.0	06.8	65	20	28	17 51	19	19 51 61		20 53		
15	45	18.5	43.9	193	19.9	-19 00.1	67	30	17 07	33	18 03	34 64		39 49		
16	60	18.4	44.1	207	44.8	-18 53.3	68	35	16 55	23	17 55	24 67		8 49 48		
17	75	18.2	+22 44.4	222	09.8	-18 46.5	68	40	16 41	17 12	17 46	19 12 69		9 01 45		
18	90	18.1	+22 44.6	236	34.9	-18 39.4	71	45	16 25	16 59	17 36	18 59 72		9 16 42		
19	105	18.0	44.9	251	00.2	32.3	71	50	16 05	43	25	42 76		33 39		
20	120	17.9	45.1	265	25.5	25.1	72	52	15 56	36	20	34 78		41 38		
21	135	17.8	45.3	279	50.9	17.7	74	54	45	28	14	26 79		9 50 36		
22	150	17.7	45.6	294	16.4	10.3	74	56	33	20	08	16 82		10 00 34		
23	165	17.6	45.8	308	42.0	-18 02.7	76	58	19	16 10	17 02	18 05 85		12 31		
24	180	17.4	+22 46.1	323	07.7	-17 55.0	77	60 S	15 03	15 59	16 55	17 52 88		10 25 28		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 59 ^m 6		Mag: -4.2 PMG: 11 ^h 56 ^m			Mag: +0.6 PMG: 18 ^h 12 ^m			Mag: -2.0 PMG: 10 ^h 46 ^m			Mag: +0.6 PMG: 20 ^h 27 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	254	48.6	180 16.4	+22 50.6	86 34.0	+6 06.3			198 10.6	+19 06.3		52 28.5	-6 06.3			
1	269	51.1	195 20.5	49.9	101 35.5	05.9			213 12.4	06.5		67 31.1		29.7		
2	284	53.6	210 24.6	49.1	116 37.0	05.4			228 14.3	06.6		82 33.6		29.7		
3	299	56.0	225 28.7	48.4	131 38.5	04.9			243 16.2	06.7		97 36.2		29.7		
4	314	58.5	240 32.8	47.6	146 40.0	04.5			258 18.0	06.8		112 38.7		29.7		
5	330	01.0	255 36.9	+22 46.8	161 41.5	+6 04.0			273 19.9	+19 07.0		127 41.2	-6 29.7			
6	345	03.4	270 41.0	+22 46.1	176 43.0	+6 03.5			288 21.8	+19 07.1		142 43.8	-6 29.7			
7	0	05.9	285 45.1	45.3	191 44.5	03.0			303 23.6	07.2		157 46.3		29.6		
8	15	08.4	300 49.2	44.5	206 46.0	02.6			318 25.5	07.4		172 48.9		29.6		
9	30	10.8	315 53.3	43.8	221 47.5	02.1			333 27.4	07.5		187 51.4		29.6		
10	45	13.3	330 57.4	43.0	236 49.0	01.6			348 29.2	07.6		202 53.9		29.6		
11	60	15.8	346 01.5	+22 42.3	251 50.5	+6 01.1			3 31.1	+19 07.7		217 56.5	-6 29.6			
12	75	18.2	1 05.5	+22 41.5	266 52.0	+6 00.7			18 33.0	+19 07.9		232 59.0	-6 29.5			
13	90	20.7	16 09.6	40.8	281 53.5	+6 00.2			33 34.8	08.0		248 01.6		29.5		
14	105	23.1	31 13.7	40.0	296 55.0	+5 59.7			48 36.7	08.1		263 04.1		29.5		
15	120	25.6	46 17.8	39.2	311 56.5	59.2			63 38.6	08.3		278 06.6		29.5		
16	135	28.1	61 21.9	38.5	326 58.0	58.8			78 40.5	08.4		293 09.2		29.5		
17	150	30.5	76 26.0	+22 37.7	341 59.5	+5 58.3			93 42.3	+19 08.5		308 11.7	-6 29.4			
18	165	33.0	91 30.1	+22 37.0	357 01.0	+5 57.8			108 44.2	+19 08.6		323 14.3	-6 29.4			
19	180	35.5	106 34.2	36.2	12 02.5	57.3			123 46.1	08.8		338 16.8		29.4		
20	195	37.9	121 38.2	35.4	27 04.0	56.9			138 47.9	08.9		353 19.3		29.4		
21	210	40.4	136 42.3	34.7	42 05.5	56.4			153 49.8	09.0		8 21.9		29.4		
22	225	42.9	151 46.4	33.9	57 07.0	55.9			168 51.7	09.1		23 24.4		29.4		
23	240	45.3	166 50.5	33.2	72 08.5	55.4			183 53.5	09.3		38 26.9		29.3		
24	255	47.8	181 54.6	+22 32.4	87 10.0	+5 55.0			198 55.4	+19 09.4		53 29.5	-6 29.3			
Dif	—		+41		-8		+15		-5		+19		+1		+25	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8				Edad: 17 ^d 0 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 0 20 ^h : 58 ^h 7											
	PMG: 11 ^h 58 ^m 9				SD: 16 ^h 2 PMG: 2 ^h 33 ^m R°: 55 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	17.4	+22	46.1	323	07.7	-17	55.0	60 N	** **	1 09	2 41	23 06	17	6 33	88
1	195	17.3		46.3	337	33.6	69	47.3	58	** **	1 49	3 01	22 58	19	44	85
2	210	17.2		46.5	351	59.5	69	39.4	56	** **	2 16	16	50	22	6 54	83
3	225	17.1		46.8	6	25.5	70	31.4	54	1 03	37	30	43	24	7 03	80
4	240	17.0		47.0	20	51.6	71	23.3	52	1 40	2 54	42	36	27	11	78
5	255	16.9	+22	47.2	35	17.8	72	-17	50	2 05	3 08	3 52	22 31	28	7 18	76
6	270	16.7	+22	47.5	49	44.1	73	-17	45	2 48	3 37	4 14	22 18	32	7 33	72
7	285	16.6		47.7	64	10.6	75	-16	40	3 18	3 59	31	22 08	35	45	69
8	300	16.5		47.9	78	37.1	75	50.0	35	40	4 16	46	21 59	38	7 56	66
9	315	16.4		48.2	93	03.7	76	41.5	30	3 58	31	4 58	51	41	8 05	63
10	330	16.3		48.4	107	30.4	77	32.8	20	4 26	4 55	5 20	38	44	20	60
11	345	16.1	+22	48.6	121	57.3	79	-16	10 N	4 48	5 15	5 38	21 26	48	8 34	56
12	0	16.0	+22	48.9	136	24.2	79	-16	0	5 07	5 33	5 55	21 15	51	8 47	53
13	15	15.9		49.1	150	51.2	80	-16	10 S	23	5 49	6 12	21 04	54	8 59	50
14	30	15.8		49.3	165	18.4	82	-15	20	39	6 06	30	20 52	58	9 13	46
15	45	15.7		49.6	179	45.6	82	48.3	30	5 55	25	6 51	38	63	28	43
16	60	15.6		49.8	194	12.9	83	39.1	35	6 03	35	7 03	31	64	37	40
17	75	15.4	+22	50.0	208	40.4	85	-15	40	6 12	6 46	7 16	20 21	68	9 46	39
18	90	15.3	+22	50.2	223	07.9	85	-15	45	6 22	6 59	7 33	20 11	70	9 58	35
19	105	15.2		50.5	237	35.6	87	11.2	50	33	7 15	7 53	19 58	75	10 12	31
20	120	15.1		50.7	252	03.3	87	-15	52	38	22	8 02	52	77	19	29
21	135	15.0		50.9	266	31.2	89	-14	54	44	30	13	45	79	26	27
22	150	14.8		51.1	280	59.1	89	42.5	56	50	38	25	38	81	34	25
23	165	14.7		51.4	295	27.1	90	32.8	58	6 56	48	39	30	83	43	22
24	180	14.6	+22	51.6	309	55.3	92	-14	60 S	7 03	7 59	8 56	19 20	87	10 53	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 55 ^m 7		Mag: -4.2 PMG: 11 ^h 49 ^m		Mag: +0.6 PMG: 18 ^h 10 ^m		Mag: -2.0 PMG: 10 ^h 43 ^m		Mag: +0.6 PMG: 20 ^h 23 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	255	47.8	181	54.6	+22	32.4	87	10.0	+5	55.0	198	55.4	+19	09.4	53	29.5	-6	29.3
1	270	50.2	196	58.6		31.6	102	11.5		54.5	213	57.3		09.5	68	32.0		29.3
2	285	52.7	212	02.7		30.9	117	13.0		54.0	228	59.1		09.6	83	34.5		29.3
3	300	55.2	227	06.8		30.1	132	14.4		53.5	244	01.0		09.8	98	37.1		29.3
4	315	57.6	242	10.9		29.4	147	15.9		53.1	259	02.9		09.9	113	39.6		29.2
5	331	00.1	257	15.0	+22	28.6	162	17.4	+5	52.6	274	04.8	+19	10.0	128	42.2	-6	29.2
6	346	02.6	272	19.0	+22	27.8	177	18.9	+5	52.1	289	06.6	+19	10.2	143	44.7	-6	29.2
7	1	05.0	287	23.1		27.1	192	20.4		51.6	304	08.5		10.3	158	47.2		29.2
8	16	07.5	302	27.2		26.3	207	21.9		51.2	319	10.4		10.4	173	49.8		29.2
9	31	10.0	317	31.3		25.5	222	23.4		50.7	334	12.2		10.5	188	52.3		29.2
10	46	12.4	332	35.3		24.8	237	24.9		50.2	349	14.1		10.7	203	54.8		29.1
11	61	14.9	347	39.4	+22	24.0	252	26.4	+5	49.7	4	16.0	+19	10.8	218	57.4	-6	29.1
12	76	17.4	2	43.5	+22	23.3	267	27.9	+5	49.2	19	17.8	+19	10.9	233	59.9	-6	29.1
13	91	19.8	17	47.6		22.5	282	29.4		48.8	34	19.7		11.0	249	02.4		29.1
14	106	22.3	32	51.6		21.7	297	30.8		48.3	49	21.6		11.2	264	05.0		29.1
15	121	24.7	47	55.7		21.0	312	32.3		47.8	64	23.4		11.3	279	07.5		29.0
16	136	27.2	62	59.8		20.2	327	33.8		47.3	79	25.3		11.4	294	10.1		29.0
17	151	29.7	78	03.8	+22	19.4	342	35.3	+5	46.9	94	27.2	+19	11.5	309	12.6	-6	29.0
18	166	32.1	93	07.9	+22	18.7	357	36.8	+5	46.4	109	29.1	+19	11.7	324	15.1	-6	29.0
19	181	34.6	108	12.0		17.9	12	38.3		45.9	124	30.9		11.8	339	17.7		29.0
20	196	37.1	123	16.0		17.2	27	39.8		45.4	139	32.8		11.9	354	20.2		29.0
21	211	39.5	138	20.1		16.4	42	41.3		44.9	154	34.7		12.0	9	22.7		28.9
22	226	42.0	153	24.1		15.6	57	42.7		44.5	169	36.5		12.2	24	25.3		28.9
23	241	44.5	168	28.2		14.9	72	44.2		44.0	184	38.4		12.3	39	27.8		28.9
24	256	46.9	183	32.3	+22	14.1	87	45.7	+5	43.5	199	40.3	+19	12.4	54	30.3	-6	28.9
Dif	—		+41		-8		+15		-5		+19		+1		+25		0	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 1			Edad: 18 ^d 0 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 1 20 ^h : 57 ^m 8 SD: 15 ^h 9 PMG: 3 ^h 28 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	14.6	+22	51.6	309	55.3	-14	23.1	60 N	21 19	22 54	** **	23 23	13	8 01	86	
1	195	14.5		51.8	324	23.5	92	13.3	58	20 59	22 11	** **	17 15		09	83	
2	210	14.4		52.0	338	51.8	93	-14	03.4	56	43	21 44	** **	12 18	17	80	
3	225	14.3		52.2	353	20.3	95	-13	53.4	54	29	23	23 00	07 20	23	78	
4	240	14.1		52.5	7	48.8	95	43.4	50	17	21 05	22 20	23 03	22	29	75	
5	255	14.0	+22	52.7	22	17.4	96	-13	33.3	50	20 07	20 51	21 54	22 59	24	8 34	73
6	270	13.9	+22	52.9	36	46.2	98	-13	23.1	45	19 45	20 22	21 11	22 50	28	8 45	69
7	285	13.8		53.1	51	15.0	98	12.9	40	27	20 00	20 41	20 41	43 31	8 54	66	
8	300	13.7		53.3	65	43.9	99	-13	02.7	35	13	19 42	19	37 34	9 02	63	
9	315	13.5		53.5	80	12.9	100	-12	52.3	30	19 00	27	20 00	32 36	08	61	
10	330	13.4		53.8	94	42.0	101	42.0	20	18 39	19 03	19 32	22 41	20	57		
11	345	13.3	+22	54.0	109	11.2	102	-12	31.5	10 N	18 20	18 43	19 10	22 14	44	9 30	53
12	0	13.2	+22	54.2	123	40.5	103	-12	21.0	0	18 03	18 25	18 51	22 06	48	9 40	49
13	15	13.0		54.4	138	09.9	104	-12	10.5	10 S	17 46	18 08	35	21 58	51	49	46
14	30	12.9		54.6	152	39.4	105	-11	59.9	20	28	17 52	19	50 55	9 59	43	
15	45	12.8		54.8	167	08.9	105	49.3	30	17 07	33	18 03	41 59	10 11	38		
16	60	12.7		55.0	181	38.6	107	38.6	35	16 55	23	17 54	35 62	17	36		
17	75	12.6	+22	55.2	196	08.3	107	-11	27.9	40	16 41	17 11	17 45	21 29	64	10 25	33
18	90	12.4	+22	55.4	210	38.1	108	-11	17.1	45	16 25	16 58	17 35	21 21	68	10 33	30
19	105	12.3		55.7	225	08.1	110	-11	06.3	50	16 05	43	24	13 72	43	26	
20	120	12.2		55.9	239	38.1	110	-10	55.4	52	15 55	36	19	09 73	48	24	
21	135	12.1		56.1	254	08.2	111	44.5	54	44	28	13	21 04	76	53	23	
22	150	12.0		56.3	268	38.3	111	33.6	56	32	19	08	20 59	78	10 59	20	
23	165	11.8		56.5	283	08.6	113	22.6	58	18	16 09	17 01	53 81	11 05	18		
24	180	11.7	+22	56.7	297	38.9	113	-10	11.6	60 S	15 01	15 58	16 54	20 47	84	11 13	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 51 ^m 7			Mag: -4.2 PMG: 11 ^h 43 ^m			Mag: +0.6 PMG: 18 ^h 07 ^m			Mag: -2.0 PMG: 10 ^h 40 ^m			Mag: +0.6 PMG: 20 ^h 19 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	256	46.9	183	32.3	+22	14.1	87	45.7	+5	43.5	199	40.3	+19	12.4	54	30.3	
1	271	49.4	198	36.3		13.3	102	47.2		43.0	214	42.1		12.5	69	32.9	
2	286	51.9	213	40.4		12.6	117	48.7		42.5	229	44.0		12.7	84	35.4	
3	301	54.3	228	44.4		11.8	132	50.2		42.1	244	45.9		12.8	99	37.9	
4	316	56.8	243	48.5		11.1	147	51.6		41.6	259	47.8		12.9	114	40.5	
5	331	59.2	258	52.5	+22	10.3	162	53.1	+5	41.1	274	49.6	+19	13.1	129	43.0	
6	347	01.7	273	56.6	+22	09.5	177	54.6	+5	40.6	289	51.5	+19	13.2	144	45.5	
7	2	04.2	289	00.6		08.8	192	56.1		40.1	304	53.4		13.3	159	48.1	
8	17	06.6	304	04.7		08.0	207	57.6		39.7	319	55.2		13.4	174	50.6	
9	32	09.1	319	08.7		07.2	222	59.0		39.2	334	57.1		13.6	189	53.1	
10	47	11.6	334	12.8		06.5	238	00.5		38.7	349	59.0		13.7	204	55.7	
11	62	14.0	349	16.8	+22	05.7	253	02.0	+5	38.2	5	00.8	+19	13.8	219	58.2	
12	77	16.5	4	20.9	+22	05.0	268	03.5	+5	37.7	20	02.7	+19	13.9	235	00.7	
13	92	19.0	19	24.9		04.2	283	05.0		37.2	35	04.6		14.1	250	03.2	
14	107	21.4	34	28.9		03.4	298	06.4		36.8	50	06.5		14.2	265	05.8	
15	122	23.9	49	33.0		02.7	313	07.9		36.3	65	08.3		14.3	280	08.3	
16	137	26.4	64	37.0		01.9	328	09.4		35.8	80	10.2		14.4	295	10.8	
17	152	28.8	79	41.1	+22	01.1	343	10.9	+5	35.3	95	12.1	+19	14.6	310	13.4	
18	167	31.3	94	45.1	+22	00.4	358	12.4	+5	34.8	110	13.9	+19	14.7	325	15.9	
19	182	33.7	109	49.1	+21	59.6	13	13.8		34.3	125	15.8		14.8	340	18.4	
20	197	36.2	124	53.2		58.9	28	15.3		33.9	140	17.7		14.9	355	21.0	
21	212	38.7	139	57.2		58.1	43	16.8		33.4	155	19.6		15.1	10	23.5	
22	227	41.1	155	01.2		57.3	58	18.3		32.9	170	21.4		15.2	25	26.0	
23	242	43.6	170	05.2		56.6	73	19.7		32.4	185	23.3		15.3	40	28.6	
24	257	46.1	185	09.3	+21	55.8	88	21.2	+5	31.9	200	25.2	+19	15.4	55	31.1	
Dif	—			+40 -8			+15 -5			+19 +1			+25 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 3				Edad: 19 ^d 0 PHE { SD: 15 ^h 7 PMG: 4 ^h 18 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	11.7	+22	56.7	297	38.9	-10	11.6	60 N	** **	1 04	2 40	23 36	11		9 27	83	
1	195	11.6		56.9	312	09.4 ¹¹⁵	-10	00.5 ¹¹¹	58	** **	1 47	2 59	32 14			32	80	
2	210	11.5		57.1	326	39.9 ¹¹⁵	-9	49.4 ¹¹¹	56	** **	2 14	3 15	30 15			37	77	
3	225	11.3		57.3	341	10.5 ¹¹⁶		38.3 ¹¹¹	54	0 58	36	29	27 18			41	74	
4	240	11.2		57.5	355	41.1 ¹¹⁶		27.1 ¹¹²	52	1 38	2 53	41	25 20			44	73	
5	255	11.1	+22	57.7	10	11.9 ¹¹⁸	-9	15.9 ¹¹²	50	2 04	3 07	3 51	23 23	21		9 47	71	
6	270	11.0	+22	57.9	24	42.7 ¹¹⁸	-9	04.7 ¹¹²	45	2 47	3 36	4 13	23 18	25		9 54	67	
7	285	10.9		58.1	39	13.6 ¹¹⁹	-8	53.5 ¹¹²	40	3 17	3 58	31	14 29			10 00	63	
8	300	10.7		58.3	53	44.6 ¹²⁰		42.2 ¹¹³	35	40	4 16	46	11 31			05	60	
9	315	10.6		58.5	68	15.6 ¹²⁰		30.9 ¹¹³	30	3 58	31	4 58	08 33			09	58	
10	330	10.5		58.7	82	46.8 ¹²²		19.6 ¹¹³	20	4 26	4 55	5 20	23 03	37		17	53	
11	345	10.4	+22	58.9	97	18.0 ¹²²	-8	08.2 ¹¹⁴	10 N	4 48	5 15	5 38	22 58	42		10 23	50	
12	0	10.2	+22	59.1	111	49.3 ¹²³	-7	56.8 ¹¹⁴	0	5 07	5 33	5 56	22 54	45		10 29	47	
13	15	10.1		59.3	126	20.6 ¹²³		45.4 ¹¹⁴	10 S	24	5 50	6 13	49 49			35	43	
14	30	10.0		59.5	140	52.0 ¹²⁴		34.0 ¹¹⁴	20	40	6 07	31	45 52			42	39	
15	45	09.9		59.7	155	23.5 ¹²⁵		22.5 ¹¹⁵	30	5 56	25	6 52	40 56			49	35	
16	60	09.7	+22	59.9	169	55.1 ¹²⁶	-7	11.1 ¹¹⁴	35	6 04	36	7 04	37 59			53	32	
17	75	09.6	+23	00.1	184	26.7 ¹²⁶	-6	59.6 ¹¹⁵	40	6 13	6 47	7 18	22 33	62		10 58	29	
18	90	09.5	+23	00.3	198	58.4 ¹²⁷	-6	48.1 ¹¹⁵	45	6 23	7 00	7 34	22 29	66		11 03	26	
19	105	09.4		00.4	213	30.2 ¹²⁸		36.6 ¹¹⁵	50	35	16	7 54	25 69			09	23	
20	120	09.3		00.6	228	02.0 ¹²⁸		25.0 ¹¹⁶	52	40	23	8 04	22 71			12	21	
21	135	09.1		00.8	242	33.9 ¹²⁹		13.5 ¹¹⁵	54	45	31	15	20 73			16	19	
22	150	09.0		01.0	257	05.8 ¹²⁹	-6	01.9 ¹¹⁶	56	51	40	27	17 76			19	17	
23	165	08.9		01.2	271	37.8 ¹³⁰	-5	50.4 ¹¹⁵	58	6 58	7 50	41	14 78			23	15	
24	180	08.8	+23	01.4	286	09.9 ¹³¹	-5	38.8 ¹¹⁶	60 S	7 05	8 01	8 58	22 11	81		11 27	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 47 ^m 8		Mag: -4.2 PMG: 11 ^h 36 ^m		Mag: +0.6 PMG: 18 ^h 05 ^m		Mag: -2.0 PMG: 10 ^h 37 ^m		Mag: +0.6 PMG: 20 ^h 15 ^m									
	hG ♈	hG ♀	hG ♂	hG ♎	hG ♊	hG ♋	hG ♏	hG ♍	hG ♐	hG ♑								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	257	46.1	185	09.3	+21	55.8	88	21.2	+5	31.9	200	25.2	+19	15.4	55	31.1	-6	28.5
1	272	48.5	200	13.3		55.1	103	22.7		31.4	215	27.0		15.6	70	33.6		28.5
2	287	51.0	215	17.3		54.3	118	24.2		31.0	230	28.9		15.7	85	36.1		28.5
3	302	53.5	230	21.3		53.5	133	25.6		30.5	245	30.8		15.8	100	38.7		28.5
4	317	55.9	245	25.4		52.8	148	27.1		30.0	260	32.6		15.9	115	41.2		28.5
5	332	58.4	260	29.4	+21	52.0	163	28.6	+5	29.5	275	34.5	+19	16.0	130	43.7	-6	28.4
6	348	00.8	275	33.4	+21	51.3	178	30.0	+5	29.0	290	36.4	+19	16.2	145	46.3	-6	28.4
7	3	03.3	290	37.4		50.5	193	31.5		28.5	305	38.3		16.3	160	48.8		28.4
8	18	05.8	305	41.4		49.7	208	33.0		28.0	320	40.1		16.4	175	51.3		28.4
9	33	08.2	320	45.4		49.0	223	34.5		27.6	335	42.0		16.5	190	53.9		28.4
10	48	10.7	335	49.4		48.2	238	35.9		27.1	350	43.9		16.7	205	56.4		28.4
11	63	13.2	350	53.4	+21	47.5	253	37.4	+5	26.6	5	45.7	+19	16.8	220	58.9	-6	28.4
12	78	15.6	5	57.4	+21	46.7	268	38.9	+5	26.1	20	47.6	+19	16.9	236	01.4	-6	28.3
13	93	18.1	21	01.4		45.9	283	40.3		25.6	35	49.5		17.0	251	04.0		28.3
14	108	20.6	36	05.4		45.2	298	41.8		25.1	50	51.4		17.2	266	06.5		28.3
15	123	23.0	51	09.4		44.4	313	43.3		24.6	65	53.2		17.3	281	09.0		28.3
16	138	25.5	66	13.4		43.7	328	44.7		24.2	80	55.1		17.4	296	11.5		28.3
17	153	28.0	81	17.4	+21	42.9	343	46.2	+5	23.7	95	57.0	+19	17.5	311	14.1	-6	28.3
18	168	30.4	96	21.4	+21	42.2	358	47.7	+5	23.2	110	58.8	+19	17.7	326	16.6	-6	28.3
19	183	32.9	111	25.4		41.4	13	49.1		22.7	126	00.7		17.8	341	19.1		28.2
20	198	35.3	126	29.4		40.6	28	50.6		22.2	141	02.6		17.9	356	21.7		28.2
21	213	37.8	141	33.4		39.9	43	52.1		21.7	156	04.5		18.0	11	24.2		28.2
22	228	40.3	156	37.4		39.1	58	53.5		21.2	171	06.3		18.2	26	26.7		28.2
23	243	42.7	171	41.4		38.4	73	55.0		20.7	186	08.2		18.3	41	29.2		28.2
24	258	45.2	186	45.4	+21	37.6	88	56.5	+5	20.3	201	10.1	+19	18.4	56	31.8	-6	28.2
Dif	—		+40		-8		+15		-5		+19		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8			Edad: 20 ^d 0 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/0										
	PMG: 11 ^h 59 ^m 5			SD: 15/4 PMG: 5 ^h 05 ^m Rº: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	08.8	+23 01.4	286	09.9	-5 38.8		60 N	21 21	22 59	** **	23 47 10	10 50 79	
1	195	08.6	01.6	300	42.1 ¹³²	27.2 ¹¹⁶		58	21 01	22 15	** **	46 13	52 76	
2	210	08.5	01.8	315	14.3 ¹³²	15.6 ¹¹⁶		56	20 45	21 46	** **	45 16	54 74	
3	225	08.4	02.0	329	46.5 ¹³²	-5 04.0 ¹¹⁶		54	31	25	23 05	45 17	55 72	
4	240	08.3	02.1	344	18.8 ¹³³	-4 52.3 ¹¹⁷		52	19	21 07	22 23	45 19	57 70	
5	255	08.1	+23 02.3	358	51.2 ¹³⁴	-4 40.7 ¹¹⁶		50	20 08	20 52	21 57	23 44 21	10 58 68	
6	270	08.0	+23 02.5	13	23.6 ¹³⁴	-4 29.1 ¹¹⁶		45	19 46	20 23	21 13	23 43 25	11 01 64	
7	285	07.9	02.7	27	56.1 ¹³⁵	17.4 ¹¹⁷		40	28	20 01	20 43	43 27	03 61	
8	300	07.8	02.9	42	28.6 ¹³⁵	-4 05.8 ¹¹⁶		35	14	19 43	20	42 30	05 58	
9	315	07.6	03.1	57	01.2 ¹³⁶	-3 54.1 ¹¹⁷		30	19 01	28	20 01	41 33	07 56	
10	330	07.5	03.2	71	33.8 ¹³⁶	42.5 ¹¹⁶		20	18 39	19 04	19 33	40 37	10 52	
11	345	07.4	+23 03.4	86	06.5 ¹³⁷	-3 30.8 ¹¹⁷		10 N	18 20	18 44	19 11	23 40 40	11 13 48	
12	0	07.2	+23 03.6	100	39.3 ¹³⁸	-3 19.1 ¹¹⁷		0	18 03	18 26	18 52	23 39 43	11 16 44	
13	15	07.1	03.8	115	12.0 ¹³⁷	-3 07.5 ¹¹⁶		10 S	17 46	18 09	35	38 47	18 41	
14	30	07.0	04.0	129	44.9 ¹³⁹	-2 55.8 ¹¹⁷		20	28	17 52	19	37 51	21 37	
15	45	06.9	04.1	144	17.8 ¹³⁹	44.2 ¹¹⁶		30	17 07	33	18 03	36 55	24 33	
16	60	06.7	04.3	158	50.7 ¹³⁹	32.5 ¹¹⁷		35	16 55	23	17 54	36 57	25 31	
17	75	06.6	+23 04.5	173	23.6 ¹³⁹	-2 20.8 ¹¹⁷		40	16 41	17 11	17 45	23 35 60	11 27 28	
18	90	06.5	+23 04.7	187	56.7 ¹⁴¹	-2 09.2 ¹¹⁶		45	16 24	16 58	17 35	23 35 63	11 29 25	
19	105	06.4	04.8	202	29.7 ¹⁴⁰	-1 57.6 ¹¹⁶		50	16 04	42	24	34 67	32 21	
20	120	06.2	05.0	217	02.8 ¹⁴¹	45.9 ¹¹⁷		52	15 54	35	18	33 69	33 20	
21	135	06.1	05.2	231	35.9 ¹⁴¹	34.3 ¹¹⁶		54	44	27	13	33 71	35 17	
22	150	06.0	05.4	246	09.1 ¹⁴²	22.7 ¹¹⁶		56	31	18	07	33 72	36 16	
23	165	05.9	05.5	260	42.3 ¹⁴²	-1 11.0 ¹¹⁷		58	17	16 08	17 00	32 75	38 13	
24	180	05.7	+23 05.7	275	15.6 ¹⁴³	-0 59.4 ¹¹⁶		60 S	15 00	15 57	16 53	23 32 77	11 39 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 43 ^m 9		Mag: -4.1 PMG: 11 ^h 30 ^m			Mag: +0.6 PMG: 18 ^h 02 ^m			Mag: -2.0 PMG: 10 ^h 34 ^m			Mag: +0.6 PMG: 20 ^h 10 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	258	45.2	186	45.4	+21 37.6	88	56.5	+5 20.3	201	10.1	+19 18.4	56	31.8	-6 28.2
1	273	47.7	201	49.3	36.9	103	57.9	19.8	216	11.9	18.5	71	34.3	28.2
2	288	50.1	216	53.3	36.1	118	59.4	19.3	231	13.8	18.6	86	36.8	28.1
3	303	52.6	231	57.3	35.4	134	00.9	18.8	246	15.7	18.8	101	39.3	28.1
4	318	55.1	247	01.3	34.6	149	02.3	18.3	261	17.6	18.9	116	41.9	28.1
5	333	57.5	262	05.2	+21 33.8	164	03.8	+5 17.8	276	19.4	+19 19.0	131	44.4	-6 28.1
6	349	00.0	277	09.2	+21 33.1	179	05.3	+5 17.3	291	21.3	+19 19.1	146	46.9	-6 28.1
7	4	02.5	292	13.2	32.3	194	06.7	16.8	306	23.2	19.3	161	49.4	28.1
8	19	04.9	307	17.1	31.6	209	08.2	16.3	321	25.1	19.4	176	52.0	28.1
9	34	07.4	322	21.1	30.8	224	09.6	15.9	336	26.9	19.5	191	54.5	28.0
10	49	09.8	337	25.1	30.1	239	11.1	15.4	351	28.8	19.6	206	57.0	28.0
11	64	12.3	352	29.0	+21 29.3	254	12.6	+5 14.9	6	30.7	+19 19.8	221	59.5	-6 28.0
12	79	14.8	7	33.0	+21 28.6	269	14.0	+5 14.4	21	32.5	+19 19.9	237	02.1	-6 28.0
13	94	17.2	22	36.9	27.8	284	15.5	13.9	36	34.4	20.0	252	04.6	28.0
14	109	19.7	37	40.9	27.1	299	16.9	13.4	51	36.3	20.1	267	07.1	28.0
15	124	22.2	52	44.8	26.3	314	18.4	12.9	66	38.2	20.2	282	09.6	28.0
16	139	24.6	67	48.8	25.6	329	19.9	12.4	81	40.0	20.4	297	12.2	28.0
17	154	27.1	82	52.7	+21 24.8	344	21.3	+5 11.9	96	41.9	+19 20.5	312	14.7	-6 27.9
18	169	29.6	97	56.7	+21 24.1	359	22.8	+5 11.4	111	43.8	+19 20.6	327	17.2	-6 27.9
19	184	32.0	113	00.6	23.3	14	24.2	10.9	126	45.6	20.7	342	19.7	27.9
20	199	34.5	128	04.5	22.6	29	25.7	10.5	141	47.5	20.9	357	22.3	27.9
21	214	36.9	143	08.5	21.8	44	27.1	10.0	156	49.4	21.0	12	24.8	27.9
22	229	39.4	158	12.4	21.1	59	28.6	09.5	171	51.3	21.1	27	27.3	27.9
23	244	41.9	173	16.4	20.3	74	30.1	09.0	186	53.1	21.2	42	29.8	27.9
24	259	44.3	188	20.3	+21 19.6	89	31.5	+5 08.5	201	55.0	+19 21.3	57	32.4	-6 27.9
Dif	—		+40 -8			+15 -5			+19		+1	+25 0		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 59 ^m 7				Edad: 21 ^d 0 PHE { SD: 15/2 PMG: 5 ^h 49 ^m R°: 44 ^m 4 ^h : 55/8 12 ^h : 55/5 20 ^h : 55/3															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	05.7	+23	05.7	275	15.6	-0	59.4	60 N	**	**	1	00	2	38	23	57	11	12 09 77	
1	195	05.6		05.9	289	48.9 ¹⁴³		47.8 ¹¹⁶	58	**	**	1	45	2	58	23	59	13	08 75	
2	210	05.5		06.0	304	22.2 ¹⁴³		36.2 ¹¹⁶	56	**	**	2	13	3	14	**	**	**	08 72	
3	225	05.4		06.2	318	55.5 ¹⁴³		24.6 ¹¹⁶	54	0	54	34	28			**	**	**	07 70	
4	240	05.2		06.4	333	28.9 ¹⁴⁴		13.1 ¹¹⁵	52	1	36	2	52	40		**	**	**	07 68	
5	255	05.1	+23	06.5	348	02.3 ¹⁴⁴	-0	01.5 ¹¹⁶	50	2	02	3	07	3	51	**	**	**	12 06 66	
6	270	05.0	+23	06.7	2	35.8 ¹⁴⁵	+0	10.0 ¹¹⁵	45	2	47	3	36	4	13	**	**	**	12 05 63	
7	285	04.8		06.9	17	09.3 ¹⁴⁵		21.6 ¹¹⁶	40	3	17	3	58	31		**	**	**	04 60	
8	300	04.7		07.0	31	42.8 ¹⁴⁵		33.1 ¹¹⁵	35		39	4	16	45		**	**	**	03 57	
9	315	04.6		07.2	46	16.3 ¹⁴⁵		44.6 ¹¹⁵	30	3	58	31	4	58		**	**	**	03 54	
10	330	04.5		07.4	60	49.9 ¹⁴⁶	+0	56.1 ¹¹⁵	20	4	26	4	56	5	20	**	**	**	02 50	
11	345	04.3	+23	07.5	75	23.5 ¹⁴⁶	+1	07.6 ¹¹⁵	10 N	4	49	5	16	5	39	**	**	**	12 01 46	
12	0	04.2	+23	07.7	89	57.1 ¹⁴⁶	+1	19.0 ¹¹⁴	0	5	07	5	34	5	56	**	**	**	12 00 43	
13	15	04.1		07.9	104	30.8 ¹⁴⁷		30.5 ¹¹⁵	10 S		24	5	50	6	13	**	**	**	11 59 40	
14	30	03.9		08.0	119	04.4 ¹⁴⁶		41.9 ¹¹⁴	20		40	6	08	32		**	**	**	58 36	
15	45	03.8		08.2	133	38.1 ¹⁴⁷	+1	53.3 ¹¹⁴	30	5	56	26	6	52		**	**	**	57 32	
16	60	03.7		08.3	148	11.9 ¹⁴⁸	+2	04.7 ¹¹⁴	35	6	05	37	7	05		**	**	**	56 30	
17	75	03.6	+23	08.5	162	45.6 ¹⁴⁷	+2	16.1 ¹¹⁴	40	6	14	6	48	7	19	**	**	**	11 55 27	
18	90	03.4	+23	08.7	177	19.4 ¹⁴⁸	+2	27.4 ¹¹³	45	6	24	7	01	7	35	**	**	**	11 54 24	
19	105	03.3		08.8	191	53.1 ¹⁴⁷		38.7 ¹¹³	50		36	17	7	56		**	**	**	53 21	
20	120	03.2		09.0	206	26.9 ¹⁴⁸	+2	50.0 ¹¹³	52		41	25	8	05		**	**	**	53 19	
21	135	03.0		09.1	221	00.7 ¹⁴⁸	+3	01.3 ¹¹³	54		46	33	16			**	**	**	52 17	
22	150	02.9		09.3	235	34.6 ¹⁴⁹		12.6 ¹¹³	56		53	41	29			**	**	**	52 15	
23	165	02.8		09.4	250	08.4 ¹⁴⁸		23.8 ¹¹²	58	6	59	7	51	8	43	**	**	**	51 13	
24	180	02.7	+23	09.6	264	42.3 ¹⁴⁹	+3	35.0 ¹¹²	60 S	7	06	8	03	9	00	**	**	**	11 50 11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 39 ^m 9		Mag: -4.1 PMG: 11 ^h 24 ^m				Mag: +0.7 PMG: 18 ^h 00 ^m				Mag: -2.0 PMG: 10 ^h 31 ^m				Mag: +0.6 PMG: 20 ^h 06 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	259	44.3	188	20.3	+21	19.6		89	31.5	+5	08.5		201	55.0	+19	21.3	57	32.4	-6	27.9
1	274	46.8	203	24.2		18.9		104	33.0		08.0		216	56.9		21.5	72	34.9		27.8
2	289	49.3	218	28.1		18.1		119	34.4		07.5		231	58.8		21.6	87	37.4		27.8
3	304	51.7	233	32.1		17.4		134	35.9		07.0		247	00.6		21.7	102	39.9		27.8
4	319	54.2	248	36.0		16.6		149	37.3		06.5		262	02.5		21.8	117	42.4		27.8
5	334	56.7	263	39.9	+21	15.9		164	38.8	+5	06.0		277	04.4	+19	22.0	132	45.0	-6	27.8
6	349	59.1	278	43.8	+21	15.1		179	40.2	+5	05.5		292	06.3	+19	22.1	147	47.5	-6	27.8
7	5	01.6	293	47.7		14.4		194	41.7		05.0		307	08.1		22.2	162	50.0		27.8
8	20	04.1	308	51.6		13.6		209	43.1		04.5		322	10.0		22.3	177	52.5		27.8
9	35	06.5	323	55.5		12.9		224	44.6		04.0		337	11.9		22.4	192	55.1		27.8
10	50	09.0	338	59.4		12.2		239	46.1		03.5		352	13.7		22.6	207	57.6		27.7
11	65	11.4	354	03.3	+21	11.4		254	47.5	+5	03.1		7	15.6	+19	22.7	223	00.1	-6	27.7
12	80	13.9	9	07.2	+21	10.7		269	49.0	+5	02.6		22	17.5	+19	22.8	238	02.6	-6	27.7
13	95	16.4	24	11.1		09.9		284	50.4		02.1		37	19.4		22.9	253	05.1		27.7
14	110	18.8	39	15.0		09.2		299	51.9		01.6		52	21.2		23.1	268	07.7		27.7
15	125	21.3	54	18.9		08.5		314	53.3		01.1		67	23.1		23.2	283	10.2		27.7
16	140	23.8	69	22.8		07.7		329	54.8		00.6		82	25.0		23.3	298	12.7		27.7
17	155	26.2	84	26.7	+21	07.0		344	56.2	+5	00.1		97	26.9	+19	23.4	313	15.2	-6	27.7
18	170	28.7	99	30.6	+21	06.3		359	57.7	+4	59.6		112	28.7	+19	23.5	328	17.7	-6	27.6
19	185	31.2	114	34.5		05.5		14	59.1		59.1		127	30.6		23.7	343	20.3		27.6
20	200	33.6	129	38.4		04.8		30	00.5		58.6		142	32.5		23.8	358	22.8		27.6
21	215	36.1	144	42.2		04.1		45	02.0		58.1		157	34.4		23.9	13	25.3		27.6
22	230	38.6	159	46.1		03.3		60	03.4		57.6		172	36.2		24.0	28	27.8		27.6
23	245	41.0	174	50.0		02.6		75	04.9		57.1		187	38.1		24.1	43	30.3		27.6
24	260	43.5	189	53.8	+21	01.8		90	06.3	+4	56.6		202	40.0	+19	24.3	58	32.9	-6	27.6
Dif	—		+39		-7		+15		-5		+19		+1		+25		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°7' PMG: 11 ^h 59 ^m 9			Edad: 22 ^d 0 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 SD: 15°0 PMG: 6 ^h 33 ^m R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	180	02.7	+23 09.6	264	42.3	+3 35.0	60 N	21 23	23 04	** ** *	** ** *	13 26	76	
1	195	02.5	09.8	279	16.1 ¹⁴⁸	46.2 ¹¹²	58	21 03	22 17	** ** *	** ** *	23 73		
2	210	02.4	09.9	293	50.0 ¹⁴⁹	+3 57.4 ¹¹²	56	20 46	21 48	** ** *	0 01 15	20 70		
3	225	02.3	10.1	308	23.9 ¹⁴⁹	+4 08.5 ¹¹¹	54	32	26	23 09	02 18	17 69		
4	240	02.1	10.2	322	57.8 ¹⁴⁹	19.6 ¹¹¹	52	20	21 09	22 26	04 19	15 66		
5	255	02.0	+23 10.4	337	31.8 ¹⁵⁰	+4 30.7 ¹¹¹	50	20 10	20 54	21 59	0 05 21	13 12	65	
6	270	01.9	+23 10.5	352	05.7 ¹⁴⁹	+4 41.7 ¹¹⁰	45	19 47	20 25	21 14	0 08 24	13 08	61	
7	285	01.7	10.7	6	39.6 ¹⁴⁹	+4 52.8 ¹¹¹	40	29	20 02	20 44	10 27	04 58		
8	300	01.6	10.8	21	13.6 ¹⁵⁰	+5 03.7 ¹⁰⁹	35	15	19 44	21	12 30	13 00	56	
9	315	01.5	11.0	35	47.5 ¹⁴⁹	14.7 ¹¹⁰	30	19 02	29	20 02	14 32	12 57	54	
10	330	01.4	11.1	50	21.5 ¹⁵⁰	25.6 ¹⁰⁹	20	18 40	19 04	19 34	17 36	52 49		
11	345	01.2	+23 11.2	64	55.5 ¹⁵⁰	+5 36.6 ¹¹⁰	10 N	18 21	18 44	19 11	0 20 39	12 47	46	
12	0	01.1	+23 11.4	79	29.4 ¹⁴⁹	+5 47.4 ¹⁰⁸	0	18 04	18 26	18 52	0 22 43	12 43	43	
13	15	01.0	11.5	94	03.4 ¹⁵⁰	+5 58.3 ¹⁰⁹	10 S	17 46	18 09	35	25 46	39 39		
14	30	00.8	11.7	108	37.4 ¹⁵⁰	+6 09.1 ¹⁰⁸	20	28	17 52	19	28 49	34 36		
15	45	00.7	11.8	123	11.4 ¹⁵⁰	19.8 ¹⁰⁷	30	17 07	33	18 03	31 54	29 32		
16	60	00.6	12.0	137	45.3 ¹⁴⁹	30.6 ¹⁰⁸	35	16 55	23	17 54	33 56	26 30		
17	75	00.4	+23 12.1	152	19.3 ¹⁵⁰	+6 41.3 ¹⁰⁷	40	16 41	17 11	17 45	0 35 59	12 22	28	
18	90	00.3	+23 12.3	166	53.3 ¹⁵⁰	+6 52.0 ¹⁰⁷	45	16 24	16 58	17 35	0 38 61	12 18	26	
19	105	00.2	12.4	181	27.3 ¹⁵⁰	+7 02.6 ¹⁰⁶	50	16 04	42	23	41 65	14 21		
20	120	00.1	12.5	196	01.2 ¹⁴⁹	13.2 ¹⁰⁶	52	15 54	35	18	42 67	12 20		
21	134	59.9	12.7	210	35.2 ¹⁵⁰	23.8 ¹⁰⁶	54	43	27	13	44 69	09 18		
22	149	59.8	12.8	225	09.2 ¹⁵⁰	34.3 ¹⁰⁵	56	30	18	07	45 72	07 16		
23	164	59.7	12.9	239	43.1 ¹⁴⁹	44.8 ¹⁰⁵	58	15 16	16 07	17 00	47 74	04 14		
24	179	59.5	+23 13.1	254	17.1 ¹⁵⁰	+7 55.2 ¹⁰⁴	60 S	14 59	15 56	16 53	0 49 77	12 01	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 36 ^m 0		Mag: -4.1 PMG: 11 ^h 18 ^m		Mag: +0.7 PMG: 17 ^h 58 ^m		Mag: -2.0 PMG: 10 ^h 28 ^m		Mag: +0.6 PMG: 20 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	260	43.5	189 53.8	+21 01.8	90 06.3	+4 56.6	202 40.0	+19 24.3	58 32.9	-6 27.6
1	275	45.9	204 57.7	01.1	105 07.8	56.1	217 41.8	24.4	73 35.4	27.6
2	290	48.4	220 01.6	+21 00.4	120 09.2	55.6	232 43.7	24.5	88 37.9	27.6
3	305	50.9	235 05.4	+20 59.7	135 10.7	55.1	247 45.6	24.6	103 40.4	27.6
4	320	53.3	250 09.3	58.9	150 12.1	54.6	262 47.5	24.8	118 42.9	27.5
5	335	55.8	265 13.2	+20 58.2	165 13.6	+4 54.1	277 49.3	+19 24.9	133 45.4	-6 27.5
6	350	58.3	280 17.0	+20 57.5	180 15.0	+4 53.6	292 51.2	+19 25.0	148 48.0	-6 27.5
7	6	00.7	295 20.9	56.7	195 16.5	53.1	307 53.1	25.1	163 50.5	27.5
8	21	03.2	310 24.7	56.0	210 17.9	52.6	322 55.0	25.2	178 53.0	27.5
9	36	05.7	325 28.5	55.3	225 19.3	52.1	337 56.8	25.4	193 55.5	27.5
10	51	08.1	340 32.4	54.6	240 20.8	51.6	352 58.7	25.5	208 58.0	27.5
11	66	10.6	355 36.2	+20 53.8	255 22.2	+4 51.1	8 00.6	+19 25.6	224 00.6	-6 27.5
12	81	13.0	10 40.1	+20 53.1	270 23.7	+4 50.6	23 02.5	+19 25.7	239 03.1	-6 27.5
13	96	15.5	25 43.9	52.4	285 25.1	50.1	38 04.3	25.8	254 05.6	27.5
14	111	18.0	40 47.7	51.7	300 26.5	49.6	53 06.2	26.0	269 08.1	27.4
15	126	20.4	55 51.6	50.9	315 28.0	49.1	68 08.1	26.1	284 10.6	27.4
16	141	22.9	70 55.4	50.2	330 29.4	48.6	83 10.0	26.2	299 13.1	27.4
17	156	25.4	85 59.2	+20 49.5	345 30.9	+4 48.1	98 11.8	+19 26.3	314 15.7	-6 27.4
18	171	27.8	101 03.0	+20 48.8	0 32.3	+4 47.6	113 13.7	+19 26.4	329 18.2	-6 27.4
19	186	30.3	116 06.8	48.0	15 33.7	47.1	128 15.6	26.6	344 20.7	27.4
20	201	32.8	131 10.6	47.3	30 35.2	46.6	143 17.5	26.7	359 23.2	27.4
21	216	35.2	146 14.5	46.6	45 36.6	46.1	158 19.3	26.8	14 25.7	27.4
22	231	37.7	161 18.3	45.9	60 38.1	45.6	173 21.2	26.9	29 28.2	27.4
23	246	40.2	176 22.1	45.2	75 39.5	45.1	188 23.1	27.0	44 30.8	27.4
24	261	42.6	191 25.9	+20 44.5	90 40.9	+4 44.6	203 25.0	+19 27.2	59 33.3	-6 27.3
Dif	—	+38	-7	+14	-5	+19	+1	+25		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 1				Edad: 23 ^d 0 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 R°: 44 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	59.5	+23	13.1	254	17.1	+7	55.2	60 N	** *	0 56	2 37	0 08	12	14	42	75
1	194	59.4		13.2	268	51.0 ¹⁴⁹	+8	05.6 ¹⁰⁴	58	** *	1 43	2 57	12	15		36	72
2	209	59.3		13.4	283	25.0 ¹⁵⁰		16.0 ¹⁰⁴	56	** *	2 12	3 13	16	17		30	70
3	224	59.1		13.5	297	58.9 ¹⁴⁹		26.4 ¹⁰⁴	54	0 51	33	28	20	19		26	67
4	239	59.0		13.6	312	32.9 ¹⁵⁰		36.6 ¹⁰²	52	1 34	2 51	40	23	21		21	66
5	254	58.9	+23	13.8	327	06.8 ¹⁴⁹	+8	46.9 ¹⁰³	50	2 01	3 06	3 50	0 26	22	14	17	64
6	269	58.7	+23	13.9	341	40.7 ¹⁴⁹	+8	57.1 ¹⁰²	45	2 46	3 35	4 13	0 32	26	14	09	60
7	284	58.6		14.0	356	14.6 ¹⁴⁹	+9	07.3 ¹⁰²	40	3 16	3 58	31	37	29	14	02	58
8	299	58.5		14.2	10	48.5 ¹⁴⁹		17.4 ¹⁰¹	35	39	4 16	45	42	31	13	56	55
9	314	58.3		14.3	25	22.4 ¹⁴⁹		27.5 ¹⁰¹	30	3 58	31	4 58	46	33		51	53
10	329	58.2		14.4	39	56.2 ¹⁴⁸		37.5 ¹⁰⁰	20	4 27	4 56	5 20	53	37	41	50	
11	344	58.1	+23	14.5	54	30.1 ¹⁴⁹	+9	47.5 ¹⁰⁰	10 N	4 49	5 16	5 39	0 59	40	13	33	47
12	359	58.0	+23	14.7	69	03.9 ¹⁴⁸	+9	57.5 ¹⁰⁰	0	5 08	5 34	5 56	1 05	43	13	26	43
13	14	57.8		14.8	83	37.7 ¹⁴⁸	+10	07.4 ⁹⁹	10 S	25	5 51	6 14	11	46		18	41
14	29	57.7		14.9	98	11.5 ¹⁴⁸		17.2 ⁹⁸	20	41	6 08	32	17	50		10	38
15	44	57.6		15.1	112	45.3 ¹⁴⁸		27.0 ⁹⁸	30	5 57	27	6 53	25	53	13	01	34
16	59	57.4		15.2	127	19.1 ¹⁴⁸		36.8 ⁹⁸	35	6 06	37	7 05	29	55	12	56	32
17	74	57.3	+23	15.3	141	52.8 ¹⁴⁷	+10	46.5 ⁹⁷	40	6 15	6 49	7 19	1 34	58	12	50	30
18	89	57.2	+23	15.4	156	26.6 ¹⁴⁸	+10	56.2 ⁹⁷	45	6 25	7 02	7 36	1 39	61	12	44	26
19	104	57.0		15.6	171	00.3 ¹⁴⁷	+11	05.8 ⁹⁶	50	37	18	7 57	46	65		35	24
20	119	56.9		15.7	185	34.0 ¹⁴⁷		15.4 ⁹⁶	52	42	26	8 06	49	67		32	22
21	134	56.8		15.8	200	07.7 ¹⁴⁷		24.9 ⁹⁵	54	48	34	17	53	68		27	21
22	149	56.6		15.9	214	41.3 ¹⁴⁶		34.4 ⁹⁵	56	6 54	43	30	1 57	70		23	18
23	164	56.5		16.0	229	15.0 ¹⁴⁷		43.8 ⁹⁴	58	7 00	7 53	8 44	2 01	72	18	16	
24	179	56.4	+23	16.2	243	48.6 ¹⁴⁶	+11	53.1 ⁹³	60 S	7 08	8 04	9 02	2 06	75	12	12	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 32 ^m 1		Mag: -4.0 PMG: 11 ^h 11 ^m		Mag: +0.7 PMG: 17 ^h 56 ^m		Mag: -2.0 PMG: 10 ^h 25 ^m		Mag: +0.6 PMG: 19 ^h 58 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	261	42.6	191	25.9	+20	44.5	90	40.9	+4	44.6
1	276	45.1	206	29.7		43.7	105	42.4		44.1
2	291	47.5	221	33.5		43.0	120	43.8		43.6
3	306	50.0	236	37.3		42.3	135	45.2		43.1
4	321	52.5	251	41.0		41.6	150	46.7		42.6
5	336	54.9	266	44.8	+20	40.9	165	48.1	+4	42.1
6	351	57.4	281	48.6	+20	40.2	180	49.6	+4	41.6
7	6	59.9	296	52.4		39.5	195	51.0		41.1
8	22	02.3	311	56.2		38.7	210	52.4		40.6
9	37	04.8	326	59.9		38.0	225	53.9		40.1
10	52	07.3	342	03.7		37.3	240	55.3		39.6
11	67	09.7	357	07.5	+20	36.6	255	56.7	+4	39.1
12	82	12.2	12	11.2	+20	35.9	270	58.2	+4	38.6
13	97	14.6	27	15.0		35.2	285	59.6		38.1
14	112	17.1	42	18.8		34.5	301	01.0		37.6
15	127	19.6	57	22.5		33.8	316	02.5		37.1
16	142	22.0	72	26.3		33.1	331	03.9		36.6
17	157	24.5	87	30.0	+20	32.4	346	05.3	+4	36.1
18	172	27.0	102	33.8	+20	31.7	1	06.7	+4	35.6
19	187	29.4	117	37.5		31.0	16	08.2		35.1
20	202	31.9	132	41.2		30.3	31	09.6		34.6
21	217	34.4	147	45.0		29.6	46	11.0		34.1
22	232	36.8	162	48.7		28.9	61	12.5		33.6
23	247	39.3	177	52.4		28.2	76	13.9		33.1
24	262	41.8	192	56.2	+20	27.5	91	15.3	+4	32.6
Dif	—		+38		-7		+14		-5	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna											
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 3				Edad: 24 ^d 0 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 2 20 ^h : 54 ^m 1 PMG: 7 ^h 59 ^m R°: 44 ^m																						
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m											
0	179	56.4	+23	16.2	243	48.6	+11	53.1	60 N	21 25	23 08	** **	0 20 15		15 57 73												
1	194	56.2		16.3	258	22.2 ¹⁴⁶	+12	02.4 ⁹³	58	21 04	22 19	** **	27 18		48 70												
2	209	56.1		16.4	272	55.8 ¹⁴⁶		11.7 ⁹³	56	20 48	21 50	** **	33 20		40 68												
3	224	56.0		16.5	287	29.3 ¹⁴⁵		20.9 ⁹²	54	34	28	23 13	39 21		33 66												
4	239	55.8		16.6	302	02.8 ¹⁴⁵		30.1 ⁹²	52	21	21 10	22 28	44 23		27 64												
5	254	55.7	+23	16.8	316	36.3 ¹⁴⁵	+12	39.2 ⁹¹	50	20 11	20 55	22 00	0 48 25		15 21 63												
6	269	55.6	+23	16.9	331	09.8 ¹⁴⁵	+12	48.2 ⁹⁰	45	19 48	20 26	21 15	0 58 28		15 09 60												
7	284	55.4		17.0	345	43.3 ¹⁴⁵	+12	57.2 ⁹⁰	40	30	20 03	20 45	1 06 31		15 00 57												
8	299	55.3		17.1	0	16.7 ¹⁴⁴	+13	06.1 ⁸⁹	35	15	19 45	22	13 33		14 51 55												
9	314	55.2		17.2	14	50.1 ¹⁴⁴		15.0 ⁸⁹	30	19 02	30	20 03	19 35		44 53												
10	329	55.0		17.3	29	23.5 ¹⁴⁴		23.8 ⁸⁸	20	18 40	19 05	19 34	30 38		31 50												
11	344	54.9	+23	17.4	43	56.8 ¹⁴³	+13	32.6 ⁸⁸	10 N	18 22	18 45	19 12	1 39 42		14 20 47												
12	359	54.8	+23	17.5	58	30.1 ¹⁴³	+13	41.3 ⁸⁷	0	18 04	18 27	18 53	1 48 44		14 09 45												
13	14	54.6		17.7	73	03.4 ¹⁴³		49.9 ⁸⁶	10 S	17 47	18 09	36	1 57 47		13 59 42												
14	29	54.5		17.8	87	36.7 ¹⁴³	+13	58.5 ⁸⁶	20	28	17 52	20	2 07 50		48 40												
15	44	54.4		17.9	102	09.9 ¹⁴²	+14	07.0 ⁸⁵	30	17 07	33	18 03	18 53		35 37												
16	59	54.2		18.0	116	43.1 ¹⁴²		15.5 ⁸⁵	35	16 55	23	17 55	24 56		28 35												
17	74	54.1	+23	18.1	131	16.2 ¹⁴¹	+14	23.9 ⁸⁴	40	16 41	17 11	17 45	2 32 57		13 20 33												
18	89	54.0	+23	18.2	145	49.4 ¹⁴²	+14	32.2 ⁸³	45	16 24	16 58	17 35	2 40 61		13 10 30												
19	104	53.8		18.3	160	22.5 ¹⁴¹		40.5 ⁸³	50	16 03	42	23	51 63		12 59 27												
20	119	53.7		18.4	174	55.6 ¹⁴¹		48.7 ⁸²	52	15 54	34	18	2 56 65		54 25												
21	134	53.6		18.5	189	28.6 ¹⁴⁰	+14	56.9 ⁸²	54	43	26	12	3 01 67		48 23												
22	149	53.4		18.6	204	01.6 ¹⁴⁰	+15	05.0 ⁸¹	56	30	17	06	07 69		41 22												
23	164	53.3		18.7	218	34.6 ¹⁴⁰		13.0 ⁸⁰	58	15 15	16 07	17 00	13 72		34 19												
24	179	53.2	+23	18.8	233	07.5 ¹³⁹	+15	20.9 ⁷⁹	60 S	14 58	15 56	16 52	3 21 74		12 26 16												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 6 ^h 28 ^m 2			Mag: -4.1 PMG: 11 ^h 06 ^m			Mag: +0.7 PMG: 17 ^h 53 ^m			Mag: -2.0 PMG: 10 ^h 22 ^m			Mag: +0.6 PMG: 19 ^h 54 ^m														
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	262	41.8	192	56.2	+20	27.5	91	15.3	+4	32.6	204	10.0	+19	30.0	60	33.6	-6	27.1									
1	277	44.2	207	59.9		26.8	106	16.7		32.1	219	11.9		30.1	75	36.1		27.1									
2	292	46.7	223	03.6		26.1	121	18.2		31.6	234	13.7		30.3	90	38.6		27.1									
3	307	49.1	238	07.3		25.4	136	19.6		31.1	249	15.6		30.4	105	41.1		27.1									
4	322	51.6	253	11.0		24.7	151	21.0		30.6	264	17.5		30.5	120	43.6		27.1									
5	337	54.1	268	14.7	+20	24.0	166	22.5	+4	30.1	279	19.4	+19	30.6	135	46.1	-6	27.1									
6	352	56.5	283	18.5	+20	23.3	181	23.9	+4	29.6	294	21.2	+19	30.7	150	48.7	-6	27.1									
7	7	59.0	298	22.2		22.6	196	25.3		29.0	309	23.1		30.9	165	51.2		27.1									
8	23	01.5	313	25.9		21.9	211	26.7		28.5	324	25.0		31.0	180	53.7		27.1									
9	38	03.9	328	29.6		21.3	226	28.2		28.0	339	26.9		31.1	195	56.2		27.1									
10	53	06.4	343	33.2		20.6	241	29.6		27.5	354	28.8		31.2	210	58.7		27.1									
11	68	08.9	358	36.9	+20	19.9	256	31.0	+4	27.0	9	30.6	+19	31.3	226	01.2	-6	27.1									
12	83	11.3	13	40.6	+20	19.2	271	32.4	+4	26.5	24	32.5	+19	31.4	241	03.7	-6	27.1									
13	98	13.8	28	44.3		18.5	286	33.9		26.0	39	34.4		31.6	256	06.2		27.1									
14	113	16.3	43	48.0		17.8	301	35.3		25.5	54	36.3		31.7	271	08.7		27.0									
15	128	18.7	58	51.7		17.1	316	36.7		25.0	69	38.1		31.8	286	11.2		27.0									
16	143	21.2	73	55.3		16.5	331	38.1		24.5	84	40.0		31.9	301	13.8		27.0									
17	158	23.6	88	59.0	+20	15.8	346	39.5	+4	24.0	99	41.9	+19	32.0	316	16.3	-6	27.0									
18	173	26.1	104	02.7	+20	15.1	1	41.0	+4	23.5	114	43.8	+19	32.2	331	18.8	-6	27.0									
19	188	28.6	119	06.3		14.4	16	42.4		23.0	129	45.6		32.3	346	21.3		27.0									
20	203	31.0	134	10.0		13.7	31	43.8		22.5	144	47.5		32.4	1	23.8		27.0									
21	218	33.5	149	13.6		13.1	46	45.2		22.0	159	49.4		32.5	16	26.3		27.0									
22	233	36.0	164	17.3		12.4	61	46.6		21.4	174	51.3		32.6	31	28.8		27.0									
23	248	38.4	179	20.9		11.7	76	48.1		20.9	189	53.2		32.7	46	31.3		27.0									
24	263	40.9	194	24.6	+20	11.0	91	49.5	+4	20.4	204	55.0	+19	32.9	61	33.8	-6	27.0									
Dif	—			+37			-7			+14			-5			+19			+1			+25			0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 25 ^d 0 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0												
	PMG: 12 ^h 00 ^m 6				SD: 14 ^m 7 PMG: 8 ^h 43 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	53.2	+23	18.8	233	07.5	+15	20.9	60 N	** **	0 53	2 36	0 35	20	17 10	70	
1	194	53.0		18.9	247	40.4 ¹³⁹		28.8 ⁷⁹	58	** **	1 41	2 56	45	22	16 58	68	
2	209	52.9		19.0	262	13.3 ¹³⁹		36.7 ⁷⁹	56	** **	2 11	3 13	0 53	24	48	66	
3	224	52.8		19.1	276	46.2 ¹³⁹		44.4 ⁷⁷	54	0 48	33	27	1 00	26	39	64	
4	239	52.6		19.2	291	19.0 ¹³⁸		52.1 ⁷⁷	52	1 33	2 51	39	07	28	31	63	
5	254	52.5	+23	19.3	305	51.7 ¹³⁷	+15	59.7 ⁷⁶	50	2 01	3 06	3 50	1 13	29	16 24	61	
6	269	52.4	+23	19.4	320	24.5 ¹³⁸	+16	07.3 ⁷⁶	45	2 46	3 35	4 13	1 26	32	16 09	58	
7	284	52.2		19.5	334	57.2 ¹³⁷		14.8 ⁷⁵	40	3 16	3 58	31	37	34	15 57	56	
8	299	52.1		19.6	349	29.8 ¹³⁶		22.2 ⁷⁴	35	39	4 16	46	46	36	46	55	
9	314	51.9		19.7	4	02.5 ¹³⁷		29.5 ⁷³	30	3 58	31	4 59	1 54	38	37	53	
10	329	51.8		19.8	18	35.1 ¹³⁶		36.8 ⁷²	20	4 27	4 56	5 20	2 08	41	21	50	
11	344	51.7	+23	19.9	33	07.6 ¹³⁵	+16	44.0 ⁷¹	10 N	4 49	5 16	5 39	2 21	43	15 07	49	
12	359	51.5	+23	20.0	47	40.2 ¹³⁶	+16	51.1 ⁷¹	0	5 08	5 34	5 57	2 32	46	14 54	47	
13	14	51.4		20.1	62	12.6 ¹³⁴	+16	58.2 ⁷¹	10 S	25	5 51	6 14	44	48	41	45	
14	29	51.3		20.2	76	45.1 ¹³⁵	+17	05.2 ⁷⁰	20	41	6 09	33	2 57	50	28	42	
15	44	51.1		20.3	91	17.5 ¹³⁴		12.1 ⁶⁹	30	5 58	28	6 54	3 11	53	12	40	
16	59	51.0		20.4	105	49.9 ¹³⁴		18.9 ⁶⁸	35	6 06	38	7 06	20	54	14 03	38	
17	74	50.9	+23	20.5	120	22.2 ¹³³	+17	25.7 ⁶⁸	40	6 16	6 50	7 20	3 29	57	13 53	36	
18	89	50.7	+23	20.6	134	54.5 ¹³³	+17	32.4 ⁶⁷	45	6 26	7 03	7 37	3 41	59	13 40	35	
19	104	50.6		20.6	149	26.8 ¹³³		39.0 ⁶⁶	50	38	19	7 58	3 54	62	26	31	
20	119	50.5		20.7	163	59.0 ¹³²		45.5 ⁶⁵	52	43	27	8 08	4 01	63	19	30	
21	134	50.3		20.8	178	31.2 ¹³²		52.0 ⁶⁵	54	49	35	19	08	65	11	29	
22	149	50.2		20.9	193	03.3 ¹³¹	+17	58.4 ⁶⁴	56	6 55	44	31	16	67	13 03	27	
23	164	50.1		21.0	207	35.4 ¹³¹	+18	04.7 ⁶³	58	7 01	7 54	8 46	25	69	12 53	25	
24	179	49.9	+23	21.1	222	07.5 ¹³¹	+18	10.9 ⁶²	60 S	7 09	8 06	9 03	4 35	72	12 42	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 24 ^m 2		Mag: -4.1 PMG: 11 ^h 00 ^m		Mag: +0.7 PMG: 17 ^h 51 ^m		Mag: -2.0 PMG: 10 ^h 19 ^m		Mag: +0.6 PMG: 19 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	263	40.9	194	24.6	+20	11.0	91	49.5	+4	20.4	204	55.0	+19	32.9	61	33.8	-6	27.0
1	278	43.4	209	28.2		10.4	106	50.9		19.9	219	56.9		33.0	76	36.3		27.0
2	293	45.8	224	31.9		09.7	121	52.3		19.4	234	58.8		33.1	91	38.8		27.0
3	308	48.3	239	35.5		09.0	136	53.7		18.9	250	00.7		33.2	106	41.3		27.0
4	323	50.7	254	39.1		08.4	151	55.2		18.4	265	02.5		33.3	121	43.9		27.0
5	338	53.2	269	42.8	+20	07.7	166	56.6	+4	17.9	280	04.4	+19	33.4	136	46.4	-6	27.0
6	353	55.7	284	46.4	+20	07.0	181	58.0	+4	17.4	295	06.3	+19	33.6	151	48.9	-6	27.0
7	8	58.1	299	50.0		06.3	196	59.4		16.9	310	08.2		33.7	166	51.4		26.9
8	24	00.6	314	53.6		05.7	212	00.8		16.4	325	10.1		33.8	181	53.9		26.9
9	39	03.1	329	57.2		05.0	227	02.2		15.8	340	11.9		33.9	196	56.4		26.9
10	54	05.5	345	00.9		04.4	242	03.7		15.3	355	13.8		34.0	211	58.9		26.9
11	69	08.0	0	04.5	+20	03.7	257	05.1	+4	14.8	10	15.7	+19	34.1	227	01.4	-6	26.9
12	84	10.5	15	08.1	+20	03.0	272	06.5	+4	14.3	25	17.6	+19	34.3	242	03.9	-6	26.9
13	99	12.9	30	11.7		02.4	287	07.9		13.8	40	19.4		34.4	257	06.4		26.9
14	114	15.4	45	15.3		01.7	302	09.3		13.3	55	21.3		34.5	272	08.9		26.9
15	129	17.9	60	18.8		01.0	317	10.7		12.8	70	23.2		34.6	287	11.4		26.9
16	144	20.3	75	22.4	+20	00.4	332	12.1		12.3	85	25.1		34.7	302	13.9		26.9
17	159	22.8	90	26.0	+19	59.7	347	13.6	+4	11.8	100	27.0	+19	34.8	317	16.4	-6	26.9
18	174	25.2	105	29.6	+19	59.1	2	15.0	+4	11.3	115	28.8	+19	35.0	332	18.9	-6	26.9
19	189	27.7	120	33.2		58.4	17	16.4		10.7	130	30.7		35.1	347	21.4		26.9
20	204	30.2	135	36.8		57.8	32	17.8		10.2	145	32.6		35.2	2	24.0		26.9
21	219	32.6	150	40.3		57.1	47	19.2		09.7	160	34.5		35.3	17	26.5		26.9
22	234	35.1	165	43.9		56.5	62	20.6		09.2	175	36.4		35.4	32	29.0		26.9
23	249	37.6	180	47.5		55.8	77	22.0		08.7	190	38.2		35.5	47	31.5		26.9
24	264	40.0	195	51.0	+19	55.2	92	23.4	+4	08.2	205	40.1	+19	35.7	62	34.0	-6	26.9
Dif	—		+36		-7		+14		-5		+19		+1		+25		0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 26 ^d 0	PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 1	SD: 14 ^h 7	PMG: 9 ^h 29 ^m			R°: 48 ^m							
	PMG: 12 ^h 00 ^m 8																	
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	49.9	+23	21.1	222	07.5	+18	10.9	60 N	21 26	23 11	** **	0 55 26		18 20 63			
1	194	49.8		21.2	236	39.5 ¹³⁰		17.0	58	21 06	22 21	** **	1 07 28		18 06 61			
2	209	49.7		21.3	251	11.5 ¹³⁰		23.1	56	20 49	21 51	** **	17 31		17 54 60			
3	224	49.5		21.3	265	43.5 ¹³⁰		29.1	54	35	29	23 15	26 32		43 55			
4	239	49.4		21.4	280	15.4 ¹²⁹		35.0	52	22	21 11	22 29	35 33		34 58			
5	254	49.2	+23	21.5	294	47.3 ¹²⁹	+18	40.8	50	20 12	20 56	22 02	1 42 35		17 25 57			
6	269	49.1	+23	21.6	309	19.1 ¹²⁸	+18	46.5	45	19 49	20 26	21 16	1 58 37		17 07 56			
7	284	49.0		21.7	323	50.9 ¹²⁸		52.2	40	31	20 04	20 46	2 11 39		16 53 54			
8	299	48.8		21.7	338	22.7 ¹²⁸	+18	57.8	35	16	19 46	22	22 41		41 53			
9	314	48.7		21.8	352	54.4 ¹²⁷	+19	03.3	30	19 03	30	20 04	32 42		30 52			
10	329	48.6		21.9	7	26.1 ¹²⁷		08.7	20	18 41	19 06	19 35	2 49 44		16 11 51			
11	344	48.4	+23	22.0	21	57.8 ¹²⁷	+19	14.0	10 N	18 22	18 45	19 12	3 04 46		15 56 49			
12	359	48.3	+23	22.1	36	29.4 ¹²⁶	+19	19.2	0	18 04	18 27	18 53	3 18 47		15 41 48			
13	14	48.2		22.1	51	01.0 ¹²⁶		24.4	10 S	17 47	18 10	36	32 49		26 46			
14	29	48.0		22.2	65	32.5 ¹²⁵		29.5	20	29	17 53	20	3 47 51		15 10 45			
15	44	47.9		22.3	80	04.0 ¹²⁵		34.4	30	17 07	34	18 04	4 04 53		14 52 43			
16	59	47.8		22.4	94	35.5 ¹²⁵		39.3	35	16 55	23	17 55	14 54		41 43			
17	74	47.6	+23	22.4	109	06.9 ¹²⁴	+19	44.1	40	16 41	17 11	17 45	4 26 55		14 29 41			
18	89	47.5	+23	22.5	123	38.3 ¹²⁴	+19	48.8	45	16 24	16 58	17 35	4 40 57		14 15 39			
19	104	47.3		22.6	138	09.7 ¹²⁴		53.5	50	16 03	42	23	4 56 60		13 57 38			
20	119	47.2		22.7	152	41.0 ¹²³	+19	58.0	52	15 53	34	18	5 04 61		49 37			
21	134	47.1		22.7	167	12.3 ¹²³	+20	02.5	54	42	26	12	13 62		40 36			
22	149	46.9		22.8	181	43.5 ¹²²		06.8	56	30	17	06	23 63		30 34			
23	164	46.8		22.9	196	14.7 ¹²²		11.1	58	15 15	16 07	17 00	34 65		18 33			
24	179	46.7	+23	22.9	210	45.9 ¹²²	+20	15.3	60 S	14 58	15 55	16 52	5 47 68		13 05 30			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 20 ^m 3		Mag: -4.2 PMG: 10 ^h 54 ^m				Mag: +0.7 PMG: 17 ^h 49 ^m				Mag: -2.0 PMG: 10 ^h 16 ^m				Mag: +0.6 PMG: 19 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	264	40.0	195	51.0	+19	55.2	92	23.4	+4	08.2	205	40.1	+19	35.7	62	34.0	-6	26.9
1	279	42.5	210	54.6		54.5	107	24.9		07.7	220	42.0		35.8	77	36.5		26.9
2	294	45.0	225	58.1		53.9	122	26.3		07.2	235	43.9		35.9	92	39.0		26.9
3	309	47.4	241	01.7		53.2	137	27.7		06.6	250	45.8		36.0	107	41.5		26.8
4	324	49.9	256	05.2		52.6	152	29.1		06.1	265	47.6		36.1	122	44.0		26.8
5	339	52.4	271	08.8	+19	51.9	167	30.5	+4	05.6	280	49.5	+19	36.2	137	46.5	-6	26.8
6	354	54.8	286	12.3	+19	51.3	182	31.9	+4	05.1	295	51.4	+19	36.4	152	49.0	-6	26.8
7	9	57.3	301	15.8		50.7	197	33.3		04.6	310	53.3		36.5	167	51.5		26.8
8	24	59.7	316	19.4		50.0	212	34.7		04.1	325	55.1		36.6	182	54.0		26.8
9	40	02.2	331	22.9		49.4	227	36.1		03.6	340	57.0		36.7	197	56.5		26.8
10	55	04.7	346	26.4		48.7	242	37.5		03.1	355	58.9		36.8	212	59.0		26.8
11	70	07.1	1	29.9	+19	48.1	257	38.9	+4	02.5	11	00.8	+19	36.9	228	01.5	-6	26.8
12	85	09.6	16	33.4	+19	47.5	272	40.3	+4	02.0	26	02.7	+19	37.1	243	04.0	-6	26.8
13	100	12.1	31	36.9		46.8	287	41.8		01.5	41	04.5		37.2	258	06.5		26.8
14	115	14.5	46	40.5		46.2	302	43.2		01.0	56	06.4		37.3	273	09.0		26.8
15	130	17.0	61	44.0		45.6	317	44.6	+4	00.5	71	08.3		37.4	288	11.5		26.8
16	145	19.5	76	47.5		44.9	332	46.0	+4	00.0	86	10.2		37.5	303	14.0		26.8
17	160	21.9	91	51.0	+19	44.3	347	47.4	+3	59.5	101	12.1	+19	37.6	318	16.5	-6	26.8
18	175	24.4	106	54.4	+19	43.7	2	48.8	+3	58.9	116	13.9	+19	37.8	333	19.0	-6	26.8
19	190	26.9	121	57.9		43.1	17	50.2		58.4	131	15.8		37.9	348	21.5		26.8
20	205	29.3	137	01.4		42.4	32	51.6		57.9	146	17.7		38.0	3	24.0		26.8
21	220	31.8	152	04.9		41.8	47	53.0		57.4	161	19.6		38.1	18	26.5		26.8
22	235	34.2	167	08.4		41.2	62	54.4		56.9	176	21.5		38.2	33	29.0		26.8
23	250	36.7	182	11.9		40.6	77	55.8		56.4	191	23.3		38.3	48	31.5		26.8
24	265	39.2	197	15.3	+19	39.9	92	57.2	+3	55.8	206	25.2	+19	38.4	63	34.0	-6	26.8
Dif	—		+35		-6		+14		-5		+19		+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 27 ^d 0	PHE	SD: 14 ^h 7		R ^c : 49 ^m								
	PMG: 12 ^h 01 ^m 0								PMG: 10 ^h 17 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	46.7	+23	210	45.9	+20	15.3	60 N	** **	0 50	2 36	1 21	35	19 23	54	
1	194	46.5		225	17.0 ¹²¹		19.4 ⁴¹	58	** **	1 41	2 56	35	38	19 07	54	
2	209	46.4		239	48.1 ¹²¹		23.4 ⁴⁰	56	** **	2 10	3 13	48	38	18 54	53	
3	224	46.3		254	19.2 ¹²¹		27.3 ³⁹	54	0 46	33	27	1 58	40	42	55	
4	239	46.1		268	50.2 ¹²⁰		31.1 ³⁸	52	1 32	2 51	39	2 08	41	32	52	
5	254	46.0	+23	283	21.2 ¹²⁰	+20	34.8 ³⁷	50	2 00	3 06	3 50	2 17	41	18 22	53	
6	269	45.8	+23	297	52.2 ¹²⁰	+20	38.4 ³⁶	45	2 46	3 35	4 13	2 35	43	18 03	52	
7	284	45.7		312	23.2 ¹²⁰		41.9 ³⁵	40	3 16	3 58	31	2 50	44	17 47	51	
8	299	45.6		326	54.1 ¹¹⁹		45.4 ³⁵	35	39	4 16	46	3 03	44	34	51	
9	314	45.4		341	24.9 ¹¹⁸		48.7 ³³	30	3 58	31	4 59	14	45	22	51	
10	329	45.3		355	55.8 ¹¹⁹		51.9 ³²	20	4 27	4 56	5 21	33	47	17 02	50	
11	344	45.2	+23	10	26.6 ¹¹⁸	+20	55.1 ³²	10 N	4 50	5 17	5 40	3 50	47	16 45	49	
12	359	45.0	+23	24	57.3 ¹¹⁷	+20	58.1 ³⁰	0	5 09	5 35	5 57	4 05	49	16 29	49	
13	14	44.9		39	28.1 ¹¹⁸	+21	01.1 ³⁰	10 S	26	5 52	6 15	21	49	16 12	49	
14	29	44.8		53	58.8 ¹¹⁷		04.0 ²⁹	20	42	6 09	33	38	50	15 55	48	
15	44	44.6		68	29.5 ¹¹⁷		06.7 ²⁷	30	5 58	28	6 54	4 57	52	35	48	
16	59	44.5		83	00.1 ¹¹⁶		09.4 ²⁷	35	6 07	39	7 07	5 08	52	24	47	
17	74	44.3	+23	97	30.7 ¹¹⁶	+21	11.9 ²⁵	40	6 16	6 50	7 21	5 21	53	15 10	47	
18	89	44.2	+23	112	01.3 ¹¹⁶	+21	14.4 ²⁵	45	6 27	7 04	7 38	5 37	54	14 54	46	
19	104	44.1		126	31.9 ¹¹⁶		16.8 ²⁴	50	38	20	7 59	5 56	55	35	45	
20	119	43.9		141	02.4 ¹¹⁵		19.0 ²²	52	44	27	8 08	6 05	55	26	44	
21	134	43.8		155	33.0 ¹¹⁶		21.2 ²²	54	49	36	20	15	56	16	44	
22	149	43.7		170	03.4 ¹¹⁴		23.3 ²¹	56	6 56	45	32	26	57	14 04	43	
23	164	43.5		184	33.9 ¹¹⁵		25.2 ¹⁹	58	7 02	7 55	8 47	39	58	13 51	42	
24	179	43.4	+23	199	04.3 ¹¹⁴	+21	27.1 ¹⁹	60 S	7 10	8 07	9 04	6 55	59	13 35	41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -4.2		Mag: +0.7		Mag: -2.0		Mag: +0.6						
	6 ^h 16 ^m 4		PMG: 10 ^h 48 ^m		PMG: 17 ^h 47 ^m		PMG: 10 ^h 13 ^m		PMG: 19 ^h 42 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	265	39.2	197	15.3	+19	92	57.2	+3	206	25.2	+19	63	34.0	-6	26.8
1	280	41.6	212	18.8		107	58.6		221	27.1		78	36.5		26.8
2	295	44.1	227	22.2		123	00.0		236	29.0		93	39.0		26.8
3	310	46.6	242	25.7		138	01.4		251	30.9		108	41.5		26.8
4	325	49.0	257	29.2		153	02.8		266	32.8		123	44.0		26.8
5	340	51.5	272	32.6	+19	168	04.2	+3	281	34.6	+19	138	46.5	-6	26.8
6	355	54.0	287	36.1	+19	183	05.6	+3	296	36.5	+19	153	49.0	-6	26.8
7	10	56.4	302	39.5		198	07.0		311	38.4		168	51.5		26.8
8	25	58.9	317	42.9		213	08.4		326	40.3		183	54.0		26.8
9	41	01.3	332	46.4		228	09.8		341	42.2		198	56.5		26.8
10	56	03.8	347	49.8		243	11.2		356	44.0		213	59.0		26.7
11	71	06.3	2	53.2	+19	258	12.6	+3	11	45.9	+19	229	01.5	-6	26.7
12	86	08.7	17	56.6	+19	273	14.0	+3	26	47.8	+19	244	04.0	-6	26.7
13	101	11.2	33	00.1		288	15.4		41	49.7		259	06.5		26.7
14	116	13.7	48	03.5		303	16.8		56	51.6		274	09.0		26.7
15	131	16.1	63	06.9		318	18.2		71	53.4		289	11.5		26.7
16	146	18.6	78	10.3		333	19.6		86	55.3		304	14.0		26.7
17	161	21.1	93	13.7	+19	348	21.0	+3	101	57.2	+19	319	16.5	-6	26.7
18	176	23.5	108	17.1	+19	3	22.4	+3	116	59.1	+19	334	19.0	-6	26.7
19	191	26.0	123	20.5		18	23.8		132	01.0		349	21.5		26.7
20	206	28.5	138	23.9		33	25.2		147	02.9		4	24.0		26.7
21	221	30.9	153	27.3		48	26.6		162	04.7		19	26.5		26.7
22	236	33.4	168	30.7		63	27.9		177	06.6		34	29.0		26.7
23	251	35.8	183	34.0		78	29.3		192	08.5		49	31.5		26.7
24	266	38.3	198	37.4	+19	93	30.7	+3	207	10.4	+19	64	34.0	-6	26.7
Dif	—		+34	-6		+14	-5		+19	+1		+25			0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 28 ^d 0 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/4 R°: 49 ^m											
	PMG: 12 ^h 01 ^m 2				SD: 14'8 PMG: 11 ^h 06 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	43.4	+23	24.4	199	04.3	+21	27.1	18	60 N	21 27	23 13	** **	1 56 48	20 17 43	
1	194	43.2		24.4	213	34.7 ¹¹⁴		28.9	16	58	21 07	22 22	** **	2 13 48	20 01 43	
2	209	43.1		24.5	228	05.1 ¹¹⁴		30.5	16	56	20 50	21 52	** **	26 49	19 47 44	
3	224	43.0		24.5	242	35.5 ¹¹⁴		32.1	15	54	35	30	23 17	38 49	35 45	
4	239	42.8		24.6	257	05.8 ¹¹³		33.6	15	52	23	21 12	22 30	49 48	24 45	
5	254	42.7	+23	24.6	271	36.1 ¹¹³	+21	34.9	13	50	20 12	20 57	22 03	2 58 49	19 15 45	
6	269	42.6	+23	24.7	286	06.4 ¹¹³	+21	36.2	13	45	19 50	20 27	21 17	3 18 49	18 55 46	
7	284	42.4		24.7	300	36.7 ¹¹³		37.3	11	40	32	20 05	20 46	34 49	38 47	
8	299	42.3		24.7	315	06.9 ¹¹²		38.4	11	35	17	19 46	23	47 50	25 47	
9	314	42.2		24.8	329	37.2 ¹¹³		39.4	10	30	19 04	31	20 04	3 59 50	18 13 48	
10	329	42.0		24.8	344	07.4 ¹¹²		40.2	8	20	18 41	19 06	19 35	4 20 49	17 52 49	
11	344	41.9	+23	24.9	358	37.6 ¹¹²	+21	40.9	7	10 N	18 22	18 46	19 13	4 37 50	17 34 50	
12	359	41.7	+23	24.9	13	07.7 ¹¹¹	+21	41.6	7	0	18 05	18 27	18 54	4 54 49	17 18 49	
13	14	41.6		25.0	27	37.9 ¹¹²		42.1	5	10 S	17 47	18 10	37	5 10 50	17 01 50	
14	29	41.5		25.0	42	08.0 ¹¹¹		42.5	4	20	29	17 53	20	28 50	16 43 51	
15	44	41.3		25.0	56	38.2 ¹¹²		42.9	4	30	17 08	34	18 04	5 49 49	23 51	
16	59	41.2		25.1	71	08.3 ¹¹¹		43.1	2	35	16 55	23	17 55	6 00 50	16 11 51	
17	74	41.1	+23	25.1	85	38.3 ¹¹⁰	+21	43.2	1	40	16 41	17 12	17 46	6 14 50	15 57 51	
18	89	40.9	+23	25.2	100	08.4 ¹¹¹	+21	43.2	0	45	16 24	16 58	17 35	6 31 49	15 40 52	
19	104	40.8		25.2	114	38.5 ¹¹¹		43.1	1	50	16 03	42	24	6 51 49	20 53	
20	119	40.6		25.2	129	08.5 ¹¹⁰		42.9	2	52	15 54	35	18	7 00 49	10 53	
21	134	40.5		25.3	143	38.6 ¹¹¹		42.6	3	54	42	26	13	11 49	15 00 53	
22	149	40.4		25.3	158	08.6 ¹¹⁰		42.2	4	56	30	17	06	23 49	14 47 54	
23	164	40.2		25.3	172	38.6 ¹¹⁰		41.7	5	58	15 15	16 07	17 00	37 49	33 54	
24	179	40.1	+23	25.4	187	08.6 ¹¹⁰	+21	41.1	6	60 S	14 58	15 55	16 52	7 54 48	14 16 55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 12 ^m 4		Mag: -4.3 PMG: 10 ^h 43 ^m		Mag: +0.7 PMG: 17 ^h 44 ^m		Mag: -2.0 PMG: 10 ^h 10 ^m		Mag: +0.6 PMG: 19 ^h 38 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	266	38.3	198	37.4	+19	25.4	93	30.7	+3	43.4	207	10.4	+19	41.2	64	34.0	-6	26.7
1	281	40.8	213	40.8		24.8	108	32.1		42.9	222	12.3		41.3	79	36.5		26.7
2	296	43.2	228	44.2		24.2	123	33.5		42.4	237	14.1		41.4	94	39.0		26.7
3	311	45.7	243	47.5		23.6	138	34.9		41.9	252	16.0		41.5	109	41.5		26.7
4	326	48.2	258	50.9		23.1	153	36.3		41.3	267	17.9		41.7	124	44.0		26.7
5	341	50.6	273	54.2	+19	22.5	168	37.7	+3	40.8	282	19.8	+19	41.8	139	46.5	-6	26.7
6	356	53.1	288	57.6	+19	21.9	183	39.1	+3	40.3	297	21.7	+19	41.9	154	49.0	-6	26.7
7	11	55.6	304	00.9		21.3	198	40.5		39.8	312	23.6		42.0	169	51.5		26.7
8	26	58.0	319	04.3		20.7	213	41.9		39.3	327	25.4		42.1	184	53.9		26.7
9	42	00.5	334	07.6		20.2	228	43.3		38.7	342	27.3		42.2	199	56.4		26.7
10	57	03.0	349	11.0		19.6	243	44.7		38.2	357	29.2		42.3	214	58.9		26.7
11	72	05.4	4	14.3	+19	19.0	258	46.0	+3	37.7	12	31.1	+19	42.4	230	01.4	-6	26.7
12	87	07.9	19	17.6	+19	18.4	273	47.4	+3	37.2	27	33.0	+19	42.6	245	03.9	-6	26.7
13	102	10.3	34	20.9		17.8	288	48.8		36.7	42	34.9		42.7	260	06.4		26.7
14	117	12.8	49	24.3		17.3	303	50.2		36.1	57	36.7		42.8	275	08.9		26.7
15	132	15.3	64	27.6		16.7	318	51.6		35.6	72	38.6		42.9	290	11.4		26.7
16	147	17.7	79	30.9		16.1	333	53.0		35.1	87	40.5		43.0	305	13.9		26.7
17	162	20.2	94	34.2	+19	15.6	348	54.4	+3	34.6	102	42.4	+19	43.1	320	16.4	-6	26.7
18	177	22.7	109	37.5	+19	15.0	3	55.8	+3	34.0	117	44.3	+19	43.2	335	18.9	-6	26.7
19	192	25.1	124	40.8		14.4	18	57.1		33.5	132	46.1		43.4	350	21.4		26.7
20	207	27.6	139	44.1		13.9	33	58.5		33.0	147	48.0		43.5	5	23.9		26.7
21	222	30.1	154	47.4		13.3	48	59.9		32.5	162	49.9		43.6	20	26.4		26.7
22	237	32.5	169	50.7		12.7	64	01.3		32.0	177	51.8		43.7	35	28.9		26.7
23	252	35.0	184	54.0		12.2	79	02.7		31.4	192	53.7		43.8	50	31.4		26.7
24	267	37.5	199	57.2	+19	11.6	94	04.1	+3	30.9	207	55.6	+19	43.9	65	33.9	-6	26.7
Dif	—		+33		-6		+14		-5		+19		+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 29 ^d 0	PHE { 4 ^h : 54 ^h /5 12 ^h : 54 ^h /6 20 ^h : 54 ^h /8	Principio del crepúsculo		Salida de Luna			Puesta de Luna				
	PMG: 12 ^h 01 ^m 4					R ^o : 50 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	40.1	+23	25.4	187	08.6	+21	41.1	7	60 N	** *	0 49	2 36	2 44	61
1	194	40.0		25.4	201	38.6 ¹¹⁰		40.4	8	58	** *	1 40	2 56	3 01	59
2	209	39.8		25.4	216	08.6 ¹¹⁰		39.6	10	56	** *	2 10	3 13	15	58
3	224	39.7		25.5	230	38.5 ¹⁰⁹		38.6	10	54	0 45	33	27	27	57
4	239	39.5		25.5	245	08.5 ¹¹⁰		37.6	12	52	1 32	2 51	39	37	57
5	254	39.4	+23	25.5	259	38.5 ¹¹⁰	+21	36.4	12	50	2 00	3 06	3 50	3 47	56
6	269	39.3	+23	25.6	274	08.4 ¹⁰⁹	+21	35.2	12	45	2 46	3 35	4 13	4 07	55
7	284	39.1		25.6	288	38.3 ¹⁰⁹		33.8	14	40	3 16	3 58	31	23	54
8	299	39.0		25.6	303	08.3 ¹¹⁰		32.4	14	35	40	4 16	46	37	53
9	314	38.9		25.7	317	38.2 ¹⁰⁹		30.8	16	30	3 58	32	4 59	4 49	52
10	329	38.7		25.7	332	08.2 ¹¹⁰		29.1	17	20	4 27	4 57	5 21	5 09	52
11	344	38.6	+23	25.7	346	38.1 ¹⁰⁹	+21	27.4	17	10 N	4 50	5 17	5 40	5 27	50
12	359	38.5	+23	25.7	1	08.0 ¹⁰⁹	+21	25.5	19	0	5 09	5 35	5 58	5 43	50
13	14	38.3		25.8	15	37.9 ¹⁰⁹		23.5	20	10 S	26	5 52	6 15	6 00	49
14	29	38.2		25.8	30	07.9 ¹¹⁰		21.4	21	20	42	6 10	34	18	47
15	44	38.0		25.8	44	37.8 ¹⁰⁹		19.2	22	30	5 59	29	6 55	38	47
16	59	37.9		25.8	59	07.7 ¹⁰⁹		16.9	23	35	6 08	39	7 07	6 50	46
17	74	37.8	+23	25.8	73	37.6 ¹⁰⁹	+21	14.5	24	40	6 17	6 51	7 22	7 04	45
18	89	37.6	+23	25.9	88	07.5 ¹⁰⁹	+21	12.0	25	45	6 27	7 05	7 38	7 20	44
19	104	37.5		25.9	102	37.5 ¹¹⁰		09.3	27	50	39	21	7 59	40	42
20	119	37.4		25.9	117	07.4 ¹⁰⁹		06.6	27	52	44	28	8 09	7 49	42
21	134	37.2		25.9	131	37.3 ¹⁰⁹		03.8	28	54	50	36	20	8 00	41
22	149	37.1		25.9	146	07.3 ¹¹⁰	+21	00.9	29	56	6 56	45	33	12	40
23	164	36.9		26.0	160	37.2 ¹⁰⁹	+20	57.8	31	58	7 03	7 56	8 48	26	38
24	179	36.8	+23	26.0	175	07.2 ¹¹⁰	+20	54.7	31	60 S	7 11	8 07	9 05	8 42	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -4.3		Mag: +0.7		Mag: -2.0		Mag: +0.6									
	6 ^h 08 ^m 5		PMG: 10 ^h 38 ^m		PMG: 17 ^h 42 ^m		PMG: 10 ^h 07 ^m		PMG: 19 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	267	37.5	199	57.2	+19	11.6	94	04.1	+3	30.9	207	55.6	+19	43.9	65	33.9	-6	26.7
1	282	39.9	215	00.5		11.1	109	05.5		30.4	222	57.4		44.0	80	36.3		26.7
2	297	42.4	230	03.8		10.5	124	06.8		29.9	237	59.3		44.1	95	38.8		26.7
3	312	44.8	245	07.1		10.0	139	08.2		29.3	253	01.2		44.3	110	41.3		26.7
4	327	47.3	260	10.3		09.4	154	09.6		28.8	268	03.1		44.4	125	43.8		26.7
5	342	49.8	275	13.6	+19	08.9	169	11.0	+3	28.3	283	05.0	+19	44.5	140	46.3	-6	26.7
6	357	52.2	290	16.8	+19	08.3	184	12.4	+3	27.8	298	06.9	+19	44.6	155	48.8	-6	26.7
7	12	54.7	305	20.1		07.8	199	13.8		27.2	313	08.8		44.7	170	51.3		26.7
8	27	57.2	320	23.3		07.2	214	15.1		26.7	328	10.6		44.8	185	53.8		26.7
9	42	59.6	335	26.6		06.7	229	16.5		26.2	343	12.5		44.9	200	56.3		26.7
10	58	02.1	350	29.8		06.1	244	17.9		25.7	358	14.4		45.0	215	58.8		26.7
11	73	04.6	5	33.0	+19	05.6	259	19.3	+3	25.1	13	16.3	+19	45.2	231	01.3	-6	26.7
12	88	07.0	20	36.3	+19	05.0	274	20.7	+3	24.6	28	18.2	+19	45.3	246	03.8	-6	26.7
13	103	09.5	35	39.5		04.5	289	22.1		24.1	43	20.1		45.4	261	06.2		26.7
14	118	12.0	50	42.7		03.9	304	23.4		23.6	58	21.9		45.5	276	08.7		26.7
15	133	14.4	65	45.9		03.4	319	24.8		23.0	73	23.8		45.6	291	11.2		26.7
16	148	16.9	80	49.2		02.9	334	26.2		22.5	88	25.7		45.7	306	13.7		26.7
17	163	19.3	95	52.4	+19	02.3	349	27.6	+3	22.0	103	27.6	+19	45.8	321	16.2	-6	26.7
18	178	21.8	110	55.6	+19	01.8	4	29.0	+3	21.5	118	29.5	+19	45.9	336	18.7	-6	26.7
19	193	24.3	125	58.8		01.3	19	30.3		20.9	133	31.4		46.1	351	21.2		26.7
20	208	26.7	141	02.0		00.7	34	31.7		20.4	148	33.2		46.2	6	23.7		26.7
21	223	29.2	156	05.2	+19	00.2	49	33.1		19.9	163	35.1		46.3	21	26.2		26.7
22	238	31.7	171	08.4	+18	59.7	64	34.5		19.4	178	37.0		46.4	36	28.7		26.7
23	253	34.1	186	11.5		59.1	79	35.8		18.8	193	38.9		46.5	51	31.1		26.7
24	268	36.6	201	14.7	+18	58.6	94	37.2	+3	18.3	208	40.8	+19	46.6	66	33.6	-6	26.7
Dif	—		+32		-5		+14		-5		+19		+1		+25			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 30 ^d 0 PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/1 R°: 49 ^m													
	PMG: 12 ^h 01 ^m 7				SD: 14'9 PMG: 12 ^h 45 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	36.8	+23	26.0	175	07.2	+20	54.7	60 N	21	28	23	14	***	***	3	45	
1	194	36.7		26.0	189	37.1 ¹⁰⁹		51.4	58	21	07	22	23	***	***	4	00	
2	209	36.5		26.0	204	07.1 ¹¹⁰		48.1	56	20	50	21	53	***	***	13	66	
3	224	36.4		26.0	218	37.0 ¹⁰⁹		44.6	54	36		31	23	18	24	65		
4	239	36.3		26.0	233	07.0 ¹¹⁰		41.1	52	24	21	22	31	34	63	48		
5	254	36.1	+23	26.1	247	37.0 ¹¹⁰	+20	37.4	50	20	13	20	57	22	03	4	43	
6	269	36.0	+23	26.1	262	07.0 ¹¹⁰	+20	33.6	45	19	50	20	28	21	17	5	02	
7	284	35.8		26.1	276	37.0 ¹¹⁰		29.8	40	32	20	05	20	47	17	58		
8	299	35.7		26.1	291	07.0 ¹¹⁰		25.8	35	17	19	47	24	30	56			
9	314	35.6		26.1	305	37.0 ¹¹⁰		21.7	30	19	04	32	20	05	5	41		
10	329	35.4		26.1	320	07.1 ¹¹¹		17.6	20	18	42	19	07	19	36	6	01	
11	344	35.3	+23	26.1	334	37.1 ¹¹⁰	+20	13.3	10 N	18	23	18	46	19	13	6	17	
12	359	35.2	+23	26.1	349	07.2 ¹¹¹	+20	08.9	0	18	05	18	28	18	54	6	33	
13	14	35.0		26.1	3	37.2 ¹¹⁰	+20	04.4	10 S	17	48	18	11	37	6	49		
14	29	34.9		26.1	18	07.3 ¹¹¹	+19	59.9	20	29	17	53	21	7	05			
15	44	34.7		26.1	32	37.4 ¹¹¹		55.2	30	17	08	34	18	04	25	43		
16	59	34.6		26.2	47	07.5 ¹¹¹		50.4	35	16	56	24	17	56	36	42		
17	74	34.5	+23	26.2	61	37.7 ¹¹²	+19	45.5	40	16	41	17	12	17	46	7	49	
18	89	34.3	+23	26.2	76	07.8 ¹¹¹	+19	40.5	45	16	25	16	58	17	36	8	04	
19	104	34.2		26.2	90	37.9 ¹¹¹		35.5	50	16	04	42	24	24	22	36		
20	119	34.1		26.2	105	08.1 ¹¹²		30.3	52	15	54	35	19	19	31	35		
21	134	33.9		26.2	119	38.3 ¹¹²		25.0	53	54	43	27	13	13	41	33		
22	149	33.8		26.2	134	08.5 ¹¹²		19.6	54	56	30	18	07	07	8	52		
23	164	33.7		26.2	148	38.7 ¹¹²		14.2	54	58	15	15	16	07	9	04		
24	179	33.5	+23	26.2	163	09.0 ¹¹³	+19	08.6	60 S	14	58	15	56	16	52	9	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 04 ^m 6		Mag: -4.4 PMG: 10 ^h 33 ^m		Mag: +0.8 PMG: 17 ^h 40 ^m		Mag: -2.0 PMG: 10 ^h 04 ^m		Mag: +0.6 PMG: 19 ^h 31 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	268	36.6	201	14.7	94	37.2	208	40.8	66	33.6
1	283	39.1	216	17.9	109	38.6	223	42.7	81	36.1
2	298	41.5	231	21.1	124	40.0	238	44.6	96	38.6
3	313	44.0	246	24.2	139	41.4	253	46.4	111	41.1
4	328	46.4	261	27.4	154	42.7	268	48.3	126	43.6
5	343	48.9	276	30.6	169	44.1	283	50.2	141	46.1
6	358	51.4	291	33.7	184	45.5	298	52.1	156	48.6
7	13	53.8	306	36.9	199	46.9	313	54.0	171	51.0
8	28	56.3	321	40.0	214	48.2	328	55.9	186	53.5
9	43	58.8	336	43.2	229	49.6	343	57.8	201	56.0
10	59	01.2	351	46.3	244	51.0	358	59.6	216	58.5
11	74	03.7	6	49.4	259	52.3	14	01.5	232	01.0
12	89	06.2	21	52.6	274	53.7	29	03.4	247	03.5
13	104	08.6	36	55.7	289	55.1	44	05.3	262	06.0
14	119	11.1	51	58.8	304	56.5	59	07.2	277	08.5
15	134	13.6	67	01.9	319	57.8	74	09.1	292	10.9
16	149	16.0	82	05.1	334	59.2	89	11.0	307	13.4
17	164	18.5	97	08.2	350	00.6	104	12.8	322	15.9
18	179	20.9	112	11.3	5	02.0	119	14.7	337	18.4
19	194	23.4	127	14.4	20	03.3	134	16.6	352	20.9
20	209	25.9	142	17.5	35	04.7	149	18.5	7	23.4
21	224	28.3	157	20.6	50	06.1	164	20.4	22	25.9
22	239	30.8	172	23.7	65	07.4	179	22.3	37	28.3
23	254	33.3	187	26.7	80	08.8	194	24.2	52	30.8
24	269	35.7	202	29.8	95	10.2	209	26.1	67	33.3
Dif	—		+31		-5		+19		+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 ^m PMG: 12 ^h 01 ^m 9				Edad: 1 ^d 4 PHE { SD: 15 ^h 0 ^m PMG: 13 ^h 34 ^m R°: 49 ^m 4 ^h : 55 ^m /3 12 ^h : 55 ^m /4 20 ^h : 55 ^m /6															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	33.5	+23	26.2	163	09.0	+19	08.6	60 N	** **	0 49	2 36	4 55	77	21 55	18				
1	194	33.4		26.2	177	39.2	+19	02.9	57	** **	1 40	2 56	5 08	74	44	21				
2	209	33.2		26.2	192	09.5	+18	57.2	57	** **	2 10	3 13	19	72	35	25				
3	224	33.1		26.2	206	39.8		51.3	59		0 45	33	27	69	27	25				
4	239	33.0		26.2	221	10.1		45.4	59		1 32	2 51	40	68	20	26				
5	254	32.8	+23	26.2	235	40.4	+18	39.3	61		2 00	3 06	3 51	66	21 13	28				
6	269	32.7	+23	26.2	250	10.8	+18	33.2	61		2 46	3 36	4 13	63	20 59	31				
7	284	32.6		26.1	264	41.1		27.0	62		3 17	3 58	31	61	47	34				
8	299	32.4		26.1	279	11.5		20.6	64		40	4 17	46	59	37	37				
9	314	32.3		26.1	293	41.9		14.2	64		3 59	32	4 59	57	28	39				
10	329	32.1		26.1	308	12.4		07.7	65		4 28	4 57	5 22	53	20 12	43				
11	344	32.0	+23	26.1	322	42.8	+18	01.1	66	10 N	4 50	5 18	5 41	51	19 59	45				
12	359	31.9	+23	26.1	337	13.3	+17	54.4	67	0	5 09	5 36	5 58	49	19 46	48				
13	14	31.7		26.1	351	43.8		47.6	68	10 S	26	5 53	6 16	46	33	51				
14	29	31.6		26.1	6	14.3		40.8	68	20	43	6 10	34	44	19	54				
15	44	31.5		26.1	20	44.8		33.8	70	30	5 59	29	6 55	41	19 04	57				
16	59	31.3		26.1	35	15.4		26.7	71	35	6 08	40	7 08	39	18 54	60				
17	74	31.2	+23	26.1	49	46.0	+17	19.6	71	40	6 17	6 51	7 22	37	18 44	61				
18	89	31.1	+23	26.0	64	16.6	+17	12.4	72	45	6 28	7 05	7 39	34	18 31	65				
19	104	30.9		26.0	78	47.2	+17	05.0	74	50	40	21	8 00	31	16	68				
20	119	30.8		26.0	93	17.8	+16	57.6	74	52	45	29	10	29	09	70				
21	134	30.6		26.0	107	48.5		50.1	75	54	51	37	21	28	18	01	71			
22	149	30.5		26.0	122	19.2		42.5	76	56	6 57	46	33	24	25	17	52	74		
23	164	30.4		26.0	136	49.9		34.9	76	58	7 04	7 56	8 48	34	23	42	76			
24	179	30.2	+23	25.9	151	20.6	+16	27.1	78	60 S	7 11	8 08	9 06	20	17 31	79				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 00 ^m 6				Mag: -4.4 PMG: 10 ^h 28 ^m				Mag: +0.8 PMG: 17 ^h 38 ^m				Mag: -2.1 PMG: 10 ^h 01 ^m				Mag: +0.6 PMG: 19 ^h 27 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	269	35.7			202	29.8	+18	46.4	95	10.2	+3	05.6	209	26.1	+19	49.3	67	33.3	-6	26.8
1	284	38.2			217	32.9		45.9	110	11.5		05.1	224	27.9		49.4	82	35.8		26.8
2	299	40.7			232	36.0		45.5	125	12.9		04.6	239	29.8		49.5	97	38.3		26.8
3	314	43.1			247	39.0		45.0	140	14.3		04.0	254	31.7		49.6	112	40.8		26.8
4	329	45.6			262	42.1		44.5	155	15.6		03.5	269	33.6		49.7	127	43.3		26.8
5	344	48.1			277	45.2	+18	44.0	170	17.0	+3	03.0	284	35.5	+19	49.8	142	45.7	-6	26.8
6	359	50.5			292	48.2	+18	43.5	185	18.4	+3	02.4	299	37.4	+19	49.9	157	48.2	-6	26.8
7	14	53.0			307	51.3		43.0	200	19.7		01.9	314	39.3		50.0	172	50.7		26.8
8	29	55.4			322	54.3		42.6	215	21.1		01.4	329	41.1		50.2	187	53.2		26.8
9	44	57.9			337	57.4		42.1	230	22.5		00.9	344	43.0		50.3	202	55.7		26.8
10	60	00.4			353	00.4		41.6	245	23.8	+3	00.3	359	44.9		50.4	217	58.2		26.8
11	75	02.8			8	03.4	+18	41.1	260	25.2	+2	59.8	14	46.8	+19	50.5	233	00.6	-6	26.8
12	90	05.3			23	06.5	+18	40.7	275	26.6	+2	59.3	29	48.7	+19	50.6	248	03.1	-6	26.8
13	105	07.8			38	09.5		40.2	290	27.9		58.7	44	50.6		50.7	263	05.6		26.9
14	120	10.2			53	12.5		39.7	305	29.3		58.2	59	52.5		50.8	278	08.1		26.9
15	135	12.7			68	15.5		39.2	320	30.7		57.7	74	54.4		50.9	293	10.6		26.9
16	150	15.2			83	18.6		38.8	335	32.0		57.1	89	56.3		51.0	308	13.1		26.9
17	165	17.6			98	21.6	+18	38.3	350	33.4	+2	56.6	104	58.1	+19	51.1	323	15.5	-6	26.9
18	180	20.1			113	24.6	+18	37.8	5	34.8	+2	56.1	120	00.0	+19	51.3	338	18.0	-6	26.9
19	195	22.6			128	27.6		37.4	20	36.1		55.5	135	01.9		51.4	353	20.5		26.9
20	210	25.0			143	30.6		36.9	35	37.5		55.0	150	03.8		51.5	8	23.0		26.9
21	225	27.5			158	33.6		36.5	50	38.8		54.5	165	05.7		51.6	23	25.5		26.9
22	240	29.9			173	36.6		36.0	65	40.2		53.9	180	07.6		51.7	38	27.9		26.9
23	255	32.4			188	39.5		35.5	80	41.6		53.4	195	09.5		51.8	53	30.4		26.9
24	270	34.9			203	42.5	+18	35.1	95	42.9	+2	52.9	210	11.4	+19	51.9	68	32.9	-6	26.9
Dif	—		+30		-5		+14		-5		+19		+1		+25		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 4	PHE {	4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 0 R°: 47 ^m									
	PMG: 12 ^h 02 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	179	30.2	+23 25.9	151	20.6	+16 27.1	78	60 N	21 28	23 14	** **	6 12	80	22 13	14
1	194	30.1	25.9	165	51.4 ¹¹⁸	19.3	78	58	21 07	22 23	** **	22 77	22 05	17	
2	209	30.0	25.9	180	22.2 ¹¹⁸	11.4	79	56	20 51	21 53	** **	31 74	21 58	20	
3	224	29.8	25.9	194	53.0 ¹¹⁸	+16 03.4	80	54	36	31	23 18	38 73	52 22		
4	239	29.7	25.9	209	23.8 ¹¹⁸	+15 55.3	81	52	24	21 13	22 31	45 71	46 24		
5	254	29.6	+23 25.8	223	54.6 ¹¹⁸	+15 47.1	82	50	20 13	20 58	22 03	6 51	69	21 41	26
6	269	29.4	+23 25.8	238	25.5 ¹¹⁹	+15 38.9	82	45	19 51	20 28	21 18	7 05	65	21 30	29
7	284	29.3	25.8	252	56.4 ¹¹⁹	30.6	83	40	33	20 05	20 47	16 62	21 32		
8	299	29.1	25.8	267	27.3 ¹¹⁹	22.1	85	35	17	19 47	24	25 60	14 34		
9	314	29.0	25.8	281	58.3 ¹²⁰	13.7	84	30	19 04	32	20 05	33 58	21 07	36	
10	329	28.9	25.7	296	29.2 ¹¹⁹	+15 05.1	86	20	18 42	19 07	19 36	7 47	54	20 55	40
11	344	28.7	+23 25.7	311	00.2 ¹²⁰	+14 56.5	86	10 N	18 23	18 46	19 14	8 00	50	20 44	44
12	359	28.6	+23 25.7	325	31.2 ¹²⁰	+14 47.7	88	0	18 06	18 28	18 55	8 11	48	20 34	47
13	14	28.5	25.7	340	02.2 ¹²⁰	38.9	88	10 S	17 48	18 11	38	22 45	24 50		
14	29	28.3	25.6	354	33.3 ¹²¹	30.1	88	20	30	17 54	21	35 41	13 54		
15	44	28.2	25.6	9	04.3 ¹²⁰	21.1	90	30	17 09	35	18 05	49 37	20 01	58	
16	59	28.1	25.6	23	35.4 ¹²¹	12.1	90	35	16 56	24	17 56	8 57	35	19 54	60
17	74	27.9	+23 25.5	38	06.5 ¹²¹	+14 03.0	91	40	16 42	17 13	17 47	9 06	33	19 45	63
18	89	27.8	+23 25.5	52	37.6 ¹²¹	+13 53.8	92	45	16 25	16 59	17 36	9 16	31	19 36	66
19	104	27.6	25.5	67	08.8 ¹²²	44.6	92	50	16 04	43	24	29 27	24 70		
20	119	27.5	25.4	81	39.9 ¹²¹	35.3	93	52	15 54	35	19	35 25	19 71		
21	134	27.4	25.4	96	11.1 ¹²²	25.9	94	54	43	27	13	42 23	12 74		
22	149	27.2	25.4	110	42.3 ¹²²	16.4	95	56	31	18	07	49 21	19 06	76	
23	164	27.1	25.3	125	13.6 ¹²³	+13 06.9	95	58	15 16	16 08	17 00	9 57	19	18 58	79
24	179	27.0	+23 25.3	139	44.8 ¹²²	+12 57.3	96	60 S	14 58	15 56	16 53	10 06	16	18 50	81
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 56 ^m 7		Mag: -4.5 PMG: 10 ^h 23 ^m		Mag: +0.8 PMG: 17 ^h 36 ^m		Mag: -2.1 PMG: 9 ^h 58 ^m		Mag: +0.7 PMG: 19 ^h 23 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	270	34.9	203	42.5	95	42.9	+2 52.9	210	11.4	+19 51.9	68 32.9	-6 26.9			
1	285	37.3	218	45.5	110	44.3	52.3	225	13.2	52.0	83 35.4	26.9			
2	300	39.8	233	48.5	125	45.6	51.8	240	15.1	52.1	98 37.9	26.9			
3	315	42.3	248	51.4	140	47.0	51.3	255	17.0	52.2	113 40.3	26.9			
4	330	44.7	263	54.4	155	48.4	50.7	270	18.9	52.4	128 42.8	26.9			
5	345	47.2	278	57.4	+18 32.8	170 49.7	+2 50.2	285	20.8	+19 52.5	143 45.3	-6 26.9			
6	0	49.7	294	00.3	+18 32.4	185 51.1	+2 49.7	300	22.7	+19 52.6	158 47.8	-6 26.9			
7	15	52.1	309	03.3	31.9	200 52.4	49.1	315	24.6	52.7	173 50.3	26.9			
8	30	54.6	324	06.2	31.5	215 53.8	48.6	330	26.5	52.8	188 52.7	26.9			
9	45	57.1	339	09.2	31.0	230 55.2	48.1	345	28.4	52.9	203 55.2	27.0			
10	60	59.5	354	12.1	30.6	245 56.5	47.5	0	30.2	53.0	218 57.7	27.0			
11	76	02.0	9	15.0	+18 30.2	260 57.9	+2 47.0	15	32.1	+19 53.1	234 00.2	-6 27.0			
12	91	04.4	24	18.0	+18 29.7	275 59.2	+2 46.5	30	34.0	+19 53.2	249 02.7	-6 27.0			
13	106	06.9	39	20.9	29.3	291 00.6	45.9	45	35.9	53.3	264 05.1	27.0			
14	121	09.4	54	23.8	28.9	306 01.9	45.4	60	37.8	53.4	279 07.6	27.0			
15	136	11.8	69	26.7	28.4	321 03.3	44.9	75	39.7	53.5	294 10.1	27.0			
16	151	14.3	84	29.7	28.0	336 04.7	44.3	90	41.6	53.7	309 12.6	27.0			
17	166	16.8	99	32.6	+18 27.6	351 06.0	+2 43.8	105	43.5	+19 53.8	324 15.1	-6 27.0			
18	181	19.2	114	35.5	+18 27.1	6 07.4	+2 43.2	120	45.4	+19 53.9	339 17.5	-6 27.0			
19	196	21.7	129	38.4	26.3	21 08.7	42.7	135	47.3	54.0	354 20.0	27.0			
20	211	24.2	144	41.3	26.3	36 10.1	42.2	150	49.1	54.1	9 22.5	27.0			
21	226	26.6	159	44.2	25.9	51 11.4	41.6	165	51.0	54.2	24 25.0	27.0			
22	241	29.1	174	47.1	25.4	66 12.8	41.1	180	52.9	54.3	39 27.5	27.0			
23	256	31.5	189	49.9	25.0	81 14.1	40.6	195	54.8	54.4	54 29.9	27.0			
24	271	34.0	204	52.8	+18 24.6	96 15.5	+2 40.0	210	56.7	+19 54.5	69 32.4	-6 27.0			
Dif	—		+29	-4		+14	-5		+19	+1		+25		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 4 ^d 4 PHE {	4 ^h : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2 R°: 47 ^m										
	PMG: 12 ^h 02 ^m 5				SD: 15 ^h 4 PMG: 15 ^h 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m	
0	179	23.7	+23	24.3	128	19.4	+8	48.2	60 N	21 28	23 13	** **	8 55 83	22 39 12	
1	194	23.6		24.2	142	51.0 ¹²⁶		37.1 ¹¹¹	58	21 07	22 23	** **	8 59 80	37 14	
2	209	23.5		24.2	157	22.6 ¹²⁶		26.0 ¹¹¹	56	20 51	21 53	** **	9 02 78	35 17	
3	224	23.3		24.1	171	54.2 ¹²⁶		14.8 ¹¹²	54	36	31	23 17	05 76	33 19	
4	239	23.2		24.0	186	25.8 ¹²⁶	+8	03.6 ¹¹²	52	24	21 13	22 31	08 74	31 21	
5	254	23.1	+23	24.0	200	57.4 ¹²⁶	+7	52.3 ¹¹³	50	20 13	20 58	22 03	9 11 72	22 30 22	
6	269	22.9	+23	23.9	215	29.0 ¹²⁶	+7	41.0 ¹¹³	45	19 51	20 28	21 18	9 17 67	22 26 27	
7	284	22.8		23.9	230	00.6 ¹²⁶		29.6 ¹¹⁴	40	33	20 06	20 47	21 65	24 29	
8	299	22.7		23.8	244	32.2 ¹²⁶		18.2 ¹¹⁴	35	18	19 47	24	25 62	21 33	
9	314	22.5		23.8	259	03.9 ¹²⁷	+7	06.8 ¹¹⁴	30	19 05	32	20 06	29 59	19 35	
10	329	22.4		23.7	273	35.5 ¹²⁶	+6	55.3 ¹¹⁵	20	18 43	19 07	19 37	35 55	15 40	
11	344	22.3	+23	23.6	288	07.1 ¹²⁶	+6	43.7 ¹¹⁶	10 N	18 24	18 47	19 14	9 41 50	22 11 44	
12	359	22.1	+23	23.6	302	38.7 ¹²⁶	+6	32.2 ¹¹⁵	0	18 06	18 29	18 55	9 46 47	22 08 47	
13	14	22.0		23.5	317	10.4 ¹²⁷		20.5 ¹¹⁷	10 S	17 49	18 12	38	51 43	05 51	
14	29	21.9		23.5	331	42.0 ¹²⁶	+6	08.9 ¹¹⁶	20	30	17 54	22	9 56 40	22 01 55	
15	44	21.7		23.4	346	13.6 ¹²⁶	+5	57.2 ¹¹⁷	30	17 09	35	18 05	10 02 36	21 57 59	
16	59	21.6		23.3	0	45.2 ¹²⁶		45.4 ¹¹⁸	35	16 57	25	17 57	06 33	55 62	
17	74	21.5	+23	23.3	15	16.8 ¹²⁶	+5	33.7 ¹¹⁷	40	16 43	17 13	17 47	10 10 30	21 52 65	
18	89	21.3	+23	23.2	29	48.5 ¹²⁷	+5	21.9 ¹¹⁸	45	16 26	17 00	17 37	10 15 26	21 49 68	
19	104	21.2		23.1	44	20.1 ¹²⁶	+5	10.0 ¹¹⁹	50	16 05	16 43	25	20 23	45 73	
20	119	21.1		23.1	58	51.7 ¹²⁶	+4	58.1 ¹¹⁹	52	15 55	36	20	23 21	43 75	
21	134	20.9		23.0	73	23.3 ¹²⁶		46.2 ¹¹⁹	54	44	28	14	25 19	41 77	
22	149	20.8		22.9	87	54.9 ¹²⁶		34.3 ¹¹⁹	56	31	19	08	28 17	39 79	
23	164	20.7		22.9	102	26.4 ¹²⁵		22.3 ¹²⁰	58	15 17	16 09	17 01	32 14	37 81	
24	179	20.5	+23	22.8	116	58.0 ¹²⁶	+4	10.3 ¹²⁰	60 S	14 59	15 57	16 54	10 36 11	21 34 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 48 ^m 8		Mag: -4.5 PMG: 10 ^h 14 ^m		Mag: +0.8 PMG: 17 ^h 31 ^m		Mag: -2.1 PMG: 9 ^h 52 ^m		Mag: +0.7 PMG: 19 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	272	33.2	206	00.7	+18	15.0	96	47.9	+2	27.1
1	287	35.6	221	03.5		14.6	111	49.2		26.6
2	302	38.1	236	06.2		14.2	126	50.6		26.0
3	317	40.5	251	09.0		13.8	141	51.9		25.5
4	332	43.0	266	11.8		13.4	156	53.2		24.9
5	347	45.5	281	14.5	+18	13.1	171	54.6	+2	24.4
6	2	47.9	296	17.3	+18	12.7	186	55.9	+2	23.9
7	17	50.4	311	20.0		12.3	201	57.3		23.3
8	32	52.9	326	22.8		11.9	216	58.6		22.8
9	47	55.3	341	25.5		11.6	232	00.0		22.2
10	62	57.8	356	28.3		11.2	247	01.3		21.7
11	78	00.3	11	31.0	+18	10.8	262	02.6	+2	21.2
12	93	02.7	26	33.7	+18	10.5	277	04.0	+2	20.6
13	108	05.2	41	36.5		10.1	292	05.3		20.1
14	123	07.6	56	39.2		09.7	307	06.7		19.5
15	138	10.1	71	41.9		09.4	322	08.0		19.0
16	153	12.6	86	44.6		09.0	337	09.3		18.5
17	168	15.0	101	47.3	+18	08.7	352	10.7	+2	17.9
18	183	17.5	116	50.0	+18	08.3	7	12.0	+2	17.4
19	198	20.0	131	52.7		07.9	22	13.4		16.8
20	213	22.4	146	55.4		07.6	37	14.7		16.3
21	228	24.9	161	58.1		07.2	52	16.0		15.7
22	243	27.4	177	00.8		06.9	67	17.4		15.2
23	258	29.8	192	03.5		06.5	82	18.7		14.7
24	273	32.3	207	06.2	+18	06.2	97	20.1	+2	14.1
Dif	—		+27		-4		+13		-5	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 4	PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 6 20 ^h : 57 ^m 8 Rº: 48 ^m										
	PMG: 12 ^h 02 ^m 7					SD: 15 ^h 6		PMG: 16 ^h 44 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	20.5	+23	22.8		116	58.0	+4	10.3	60 N	** **	0 52	2 37	10 18	86
1	194	20.4		22.7		131	29.6 ¹²⁶	+3	58.3 ¹²⁰	58	** **	1 42	2 58	19 83	51 15
2	209	20.3		22.7		146	01.1 ¹²⁵		46.2 ¹²¹	56	** **	2 12	3 15	20 80	52 17
3	224	20.1		22.6		160	32.7 ¹²⁶		34.1 ¹²¹	54	0 48	34	29	21 78	52 20
4	239	20.0		22.5		175	04.2 ¹²⁵		22.0 ¹²¹	52	1 34	2 52	41	22 76	52 22
5	254	19.9	+23	22.4		189	35.7 ¹²⁵	+3	09.9 ¹²¹	50	2 02	3 07	3 52	10 23	73
6	269	19.7	+23	22.4		204	07.2 ¹²⁵	+2	57.7 ¹²²	45	2 47	3 37	4 15	10 24	70
7	284	19.6		22.3		218	38.7 ¹²⁵		45.5 ¹²²	40	3 18	4 00	33	26 66	53 31
8	299	19.5		22.2		233	10.2 ¹²⁵		33.3 ¹²²	35	3 41	18	4 48	27 63	54 33
9	314	19.3		22.2		247	41.6 ¹²⁴		21.0 ¹²³	30	4 00	33	5 01	28 60	54 36
10	329	19.2		22.1		262	13.1 ¹²⁵	+2	08.8 ¹²²	20	29	4 58	23	30 55	55 40
11	344	19.1	+23	22.0		276	44.5 ¹²⁴	+1	56.5 ¹²³	10 N	4 51	5 18	5 42	10 31	52
12	359	18.9	+23	21.9		291	15.9 ¹²⁴	+1	44.2 ¹²³	0	5 10	5 37	5 59	10 33	47
13	14	18.8		21.8		305	47.3 ¹²⁴		31.9 ¹²³	10 S	27	5 54	6 16	34 44	56 52
14	29	18.7		21.8		320	18.6 ¹²³		19.5 ¹²⁴	20	5 43	6 11	35	36 40	56 56
15	44	18.5		21.7		334	50.0 ¹²⁴	+1	07.2 ¹²³	30	6 00	30	6 56	38 35	56 61
16	59	18.4		21.6		349	21.3 ¹²³	+0	54.8 ¹²⁴	35	09	40	7 09	39 33	57 63
17	74	18.3	+23	21.5		3	52.6 ¹²³	+0	42.4 ¹²⁴	40	6 18	6 52	7 23	10 40	30
18	89	18.1	+23	21.4		18	23.9 ¹²³	+0	30.0 ¹²⁴	45	6 28	7 06	7 39	10 41	27
19	104	18.0		21.4		32	55.1 ¹²²		17.6 ¹²⁴	50	40	22	8 00	43 23	58 74
20	119	17.9		21.3		47	26.3 ¹²²	+0	05.1 ¹²⁵	52	45	29	10	44 21	58 76
21	134	17.7		21.2		61	57.5 ¹²²	-0	07.3 ¹²⁴	54	51	37	21	44 20	58 79
22	149	17.6		21.1		76	28.7 ¹²²		19.7 ¹²⁴	56	6 57	46	34	45 17	58 81
23	164	17.5		21.0		90	59.8 ¹²¹		32.2 ¹²⁵	58	7 04	7 57	8 48	46 15	58 84
24	179	17.3	+23	20.9		105	30.9 ¹²¹	-0	44.7 ¹²⁵	60 S	7 11	8 08	9 06	10 47	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 44 ^m 9		Mag: -4.5 PMG: 10 ^h 10 ^m		Mag: +0.8 PMG: 17 ^h 29 ^m		Mag: -2.1 PMG: 9 ^h 49 ^m		Mag: +0.7 PMG: 19 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	273	32.3	207	06.2	+18	06.2	97	20.1	+2	14.1
1	288	34.8	222	08.8		05.8	112	21.4		13.6
2	303	37.2	237	11.5		05.5	127	22.7		13.0
3	318	39.7	252	14.2		05.1	142	24.1		12.5
4	333	42.1	267	16.9		04.8	157	25.4		11.9
5	348	44.6	282	19.5	+18	04.5	172	26.7	+2	11.4
6	3	47.1	297	22.2	+18	04.1	187	28.1	+2	10.9
7	18	49.5	312	24.8		03.8	202	29.4		10.3
8	33	52.0	327	27.5		03.5	217	30.7		09.8
9	48	54.5	342	30.1		03.1	232	32.1		09.2
10	63	56.9	357	32.7		02.8	247	33.4		08.7
11	78	59.4	12	35.4	+18	02.5	262	34.8	+2	08.1
12	94	01.9	27	38.0	+18	02.1	277	36.1	+2	07.6
13	109	04.3	42	40.6		01.8	292	37.4		07.0
14	124	06.8	57	43.3		01.5	307	38.8		06.5
15	139	09.3	72	45.9		01.1	322	40.1		06.0
16	154	11.7	87	48.5		00.8	337	41.4		05.4
17	169	14.2	102	51.1	+18	00.5	352	42.8	+2	04.9
18	184	16.6	117	53.7	+18	00.2	7	44.1	+2	04.3
19	199	19.1	132	56.3	+17	59.9	22	45.4		03.8
20	214	21.6	147	58.9		59.5	37	46.7		03.2
21	229	24.0	163	01.5		59.2	52	48.1		02.7
22	244	26.5	178	04.1		58.9	67	49.4		02.1
23	259	29.0	193	06.7		58.6	82	50.7		01.6
24	274	31.4	208	09.3	+17	58.3	97	52.1	+2	01.0
Dif	—		+26	-3		+13	-5		+19	+1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 9			Edad: 6 ^d 4 PHE { SD: 15 ^h 8 PMG: 17 ^h 32 ^m 4 ^h : 58 ^h 0 12 ^h : 58 ^h 2 20 ^h : 58 ^h 4 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	179	17.3	+23 20.9	105	30.9	-0 44.7	60 N	21 27	23 11	** **	11 44 88	23 03 14			
1	194	17.2	20.8	120	02.0 ¹²¹	-0 57.1 ¹²⁴	58	21 07	22 22	** **	42 85	06 17			
2	209	17.1	20.8	134	33.1 ¹²¹	-1 09.6 ¹²⁵	56	20 50	21 53	** **	40 83	09 19			
3	224	16.9	20.7	149	04.1 ¹²⁰	22.1 ¹²⁵	54	36	31	23 15	39 80	12 22			
4	239	16.8	20.6	163	35.1 ¹²⁰	34.6 ¹²⁵	52	24	21 13	22 30	38 77	14 23			
5	254	16.7	+23 20.5	178	06.0 ¹¹⁹	-1 47.1 ¹²⁵	50	20 13	20 58	22 03	11 36 76	23 16 25			
6	269	16.6	+23 20.4	192	36.9 ¹¹⁹	-1 59.6 ¹²⁵	45	19 51	20 28	21 18	11 34 71	23 20 30			
7	284	16.4	20.3	207	07.8 ¹¹⁹	-2 12.1 ¹²⁵	40	33	20 06	20 47	32 67	24 33			
8	299	16.3	20.2	221	38.6 ¹¹⁸	24.6 ¹²⁵	35	18	19 48	24	30 64	27 36			
9	314	16.2	20.1	236	09.4 ¹¹⁸	37.1 ¹²⁵	30	19 05	32	20 06	28 62	30 39			
10	329	16.0	20.0	250	40.2 ¹¹⁸	-2 49.6 ¹²⁵	20	18 43	19 08	19 37	25 58	35 43			
11	344	15.9	+23 19.9	265	10.9 ¹¹⁷	-3 02.1 ¹²⁵	10 N	18 24	18 47	19 14	11 23 53	23 40 47			
12	359	15.8	+23 19.8	279	41.6 ¹¹⁷	-3 14.5 ¹²⁴	0	18 07	18 29	18 55	11 20 50	23 44 50			
13	14	15.6	19.7	294	12.3 ¹¹⁷	27.0 ¹²⁵	10 S	17 49	18 12	38	18 46	48 54			
14	29	15.5	19.7	308	42.9 ¹¹⁶	39.5 ¹²⁵	20	31	17 55	22	16 42	52 59			
15	44	15.4	19.6	323	13.4 ¹¹⁵	-3 52.0 ¹²⁵	30	17 10	36	18 06	13 38	23 57 63			
16	59	15.3	19.5	337	43.9 ¹¹⁵	-4 04.4 ¹²⁴	35	16 57	25	17 57	12 34	** ** *			
17	74	15.1	+23 19.4	352	14.4 ¹¹⁵	-4 16.9 ¹²⁵	40	16 43	17 14	17 48	11 10 32	** ** *			
18	89	15.0	+23 19.3	6	44.8 ¹¹⁴	-4 29.3 ¹²⁴	45	16 26	17 00	17 38	11 08 28	** ** *			
19	104	14.9	19.2	21	15.2 ¹¹⁴	41.7 ¹²⁴	50	16 06	16 44	26	06 24	** ** *			
20	119	14.7	19.1	35	45.5 ¹¹³	-4 54.1 ¹²⁴	52	15 56	37	21	05 22	** ** *			
21	134	14.6	19.0	50	15.8 ¹¹³	-5 06.5 ¹²⁴	54	45	29	15	04 20	** ** *			
22	149	14.5	18.9	64	46.0 ¹¹²	18.9 ¹²⁴	56	32	20	09	02 19	** ** *			
23	164	14.3	18.8	79	16.2 ¹¹²	31.3 ¹²⁴	58	18	16 09	17 02	11 01 16	** ** *			
24	179	14.2	+23 18.7	93	46.3 ¹¹¹	-5 43.6 ¹²³	60 S	15 00	15 58	16 55	10 59 13	** ** *			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 41 ^m 0		Mag: -4.6 PMG: 10 ^h 06 ^m			Mag: +0.8 PMG: 17 ^h 27 ^m			Mag: -2.1 PMG: 9 ^h 46 ^m			Mag: +0.7 PMG: 19 ^h 07 ^m			
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	274	31.4	208 09.3	+17 58.3		97 52.1	+2 01.0		213 13.0	+20 02.2		72 30.3	-6 27.7		
1	289	33.9	223 11.8	58.0		112 53.4	+2 00.5		228 14.9	02.3		87 32.8	27.7		
2	304	36.4	238 14.4	57.7		127 54.7	+2 00.0		243 16.8	02.4		102 35.3	27.7		
3	319	38.8	253 17.0	57.4		142 56.1	+1 59.4		258 18.7	02.5		117 37.7	27.7		
4	334	41.3	268 19.5	57.0		157 57.4	58.9		273 20.6	02.6		132 40.2	27.7		
5	349	43.7	283 22.1	+17 56.7		172 58.7	+1 58.3		288 22.5	+20 02.7		147 42.7	-6 27.7		
6	4	46.2	298 24.7	+17 56.4		188 00.0	+1 57.8		303 24.4	+20 02.8		162 45.1	-6 27.8		
7	19	48.7	313 27.2	56.1		203 01.4	57.2		318 26.3	02.9		177 47.6	27.8		
8	34	51.1	328 29.8	55.8		218 02.7	56.7		333 28.2	03.0		192 50.1	27.8		
9	49	53.6	343 32.3	55.5		233 04.0	56.1		348 30.1	03.1		207 52.5	27.8		
10	64	56.1	358 34.8	55.2		248 05.4	55.6		3	32.0	03.2	222 55.0	27.8		
11	79	58.5	13 37.4	+17 54.9		263 06.7	+1 55.0		18 33.9	+20 03.3		237 57.5	-6 27.8		
12	95	01.0	28 39.9	+17 54.6		278 08.0	+1 54.5		33 35.8	+20 03.4		252 59.9	-6 27.8		
13	110	03.5	43 42.4	54.4		293 09.3	53.9		48 37.7	03.5		268 02.4	27.8		
14	125	05.9	58 45.0	54.1		308 10.7	53.4		63 39.6	03.6		283 04.8	27.8		
15	140	08.4	73 47.5	53.8		323 12.0	52.8		78 41.5	03.7		298 07.3	27.9		
16	155	10.9	88 50.0	53.5		338 13.3	52.3		93 43.4	03.8		313 09.8	27.9		
17	170	13.3	103 52.5	+17 53.2		353 14.6	+1 51.7		108 45.3	+20 03.9		328 12.2	-6 27.9		
18	185	15.8	118 55.0	+17 52.9		8 16.0	+1 51.2		123 47.2	+20 04.0		343 14.7	-6 27.9		
19	200	18.2	133 57.5	52.6		23 17.3	50.6		138 49.1	04.1		358 17.2	27.9		
20	215	20.7	149 00.0	52.3		38 18.6	50.1		153 51.0	04.2		13 19.6	27.9		
21	230	23.2	164 02.5	52.1		53 19.9	49.5		168 52.9	04.3		28 22.1	27.9		
22	245	25.6	179 05.0	51.8		68 21.3	49.0		183 54.8	04.4		43 24.5	27.9		
23	260	28.1	194 07.5	51.5		83 22.6	48.5		198 56.7	04.6		58 27.0	28.0		
24	275	30.6	209 10.0	+17 51.2		98 23.9	+1 47.9		213 58.6	+20 04.7		73 29.5	-6 28.0		
Dif	—		+25 -3		+13 -5		-5		+19 +1		+25 0		0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 7 ^d 4	PHE {	4 ^h : 58 ^m /6 12 ^h : 58 ^m /8 20 ^h : 59 ^m /0		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 03 ^m 2														PMG: 18 ^h 22 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	14.2	+23	18.7	93	46.3	-5	43.6	60 N	** **	0 56	2 39	13 12	91	23 17	18
1	194	14.1		18.5	108	16.4 ¹¹¹	-5	55.9 ¹²³	58	** **	1 44	2 59		07 88		23 21
2	209	14.0		18.4	122	46.4 ¹¹⁰	-6	08.2 ¹²³	56	** **	2 14	3 16	13 03	84		28 24
3	224	13.8		18.3	137	16.3 ¹⁰⁹		20.5 ¹²³	54	0 51	36	30	12 59	82		33 26
4	239	13.7		18.2	151	46.2 ¹⁰⁹		32.8 ¹²³	52	1 36	2 53	42		55 80		37 28
5	254	13.6	+23	18.1	166	16.1 ¹⁰⁹	-6	45.0 ¹²²	50	2 03	3 08	3 53	12 52	78	23 41	30
6	269	13.4	+23	18.0	180	45.9 ¹⁰⁸	-6	57.2 ¹²²	45	2 48	3 38	4 15	12 45	73	23 50	34
7	284	13.3		17.9	195	15.6 ¹⁰⁷	-7	09.4 ¹²²	40	3 19	4 00	33		39 70		23 57 37
8	299	13.2		17.8	209	45.3 ¹⁰⁷		21.6 ¹²²	35	3 42	19	4 48	34 67		** **	** **
9	314	13.1		17.7	224	14.9 ¹⁰⁶		33.7 ¹²¹	30	4 00	34	5 01	30 64		** **	** **
10	329	12.9		17.6	238	44.5 ¹⁰⁶		45.8 ¹²¹	20	29	4 59	23	23 59		** **	** **
11	344	12.8	+23	17.5	253	14.0 ¹⁰⁵	-7	57.9 ¹²¹	10 N	4 52	5 19	5 42	12 16	56	** **	** **
12	359	12.7	+23	17.4	267	43.4 ¹⁰⁴	-8	09.9 ¹²⁰	0	5 11	5 37	5 59	12 10	52	** **	** **
13	14	12.5		17.2	282	12.8 ¹⁰⁴		21.9 ¹²⁰	10 S	28	5 54	6 17	12 04	49	** **	** **
14	29	12.4		17.1	296	42.1 ¹⁰³		33.9 ¹²⁰	20	5 44	6 11	35	11 58	44	** **	** **
15	44	12.3		17.0	311	11.3 ¹⁰²		45.8 ¹¹⁹	30	6 00	30	6 56	51 40		** **	** **
16	59	12.2		16.9	325	40.5 ¹⁰²	-8	57.7 ¹¹⁹	35	09	41	7 09	46 38		0 00	66
17	74	12.0	+23	16.8	340	09.6 ¹⁰¹	-9	09.5 ¹¹⁸	40	6 18	6 52	7 23	11 42	35	0 04	68
18	89	11.9	+23	16.7	354	38.7 ¹⁰¹	-9	21.3 ¹¹⁸	45	6 28	7 06	7 39	11 36	32	0 07	73
19	104	11.8		16.6	9	07.7 ¹⁰⁰		33.1 ¹¹⁸	50	40	22	8 00	30 28		12 77	
20	119	11.6		16.4	23	36.6 ⁹⁹		44.8 ¹¹⁷	52	45	29	10	27 26		14 79	
21	134	11.5		16.3	38	05.4 ⁹⁸	-9	56.5 ¹¹⁷	54	51	37	21	24 24		17 80	
22	149	11.4		16.2	52	34.2 ⁹⁸	-10	08.2 ¹¹⁷	56	6 57	46	33	21 21		19 83	
23	164	11.3		16.1	67	02.9 ⁹⁷		19.8 ¹¹⁶	58	7 04	7 56	8 48	17 18		22 86	
24	179	11.1	+23	16.0	81	31.5 ⁹⁶	-10	31.3 ¹¹⁵	60 S	7 11	8 08	9 05	11 12	16	0 25	89

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG			Mag: -4.6			Mag: +0.8			Mag: -2.1			Mag: +0.7		
	5 ^h 37 ^m 0			PMG: 10 ^h 02 ^m			PMG: 17 ^h 25 ^m			PMG: 9 ^h 43 ^m			PMG: 19 ^h 03 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	275	30.6		209	10.0	+17	98	23.9	+1	213	58.6	+20	73	29.5	-6
1	290	33.0		224	12.5		113	25.2		229	00.4		88	31.9	
2	305	35.5		239	14.9		128	26.5		244	02.3		103	34.4	
3	320	38.0		254	17.4		143	27.9		259	04.2		118	36.9	
4	335	40.4		269	19.9		158	29.2		274	06.1		133	39.3	
5	350	42.9		284	22.3	+17	173	30.5	+1	289	08.0	+20	148	41.8	-6
6	5	45.4		299	24.8	+17	188	31.8	+1	304	09.9	+20	163	44.2	-6
7	20	47.8		314	27.3		203	33.2		319	11.8		178	46.7	
8	35	50.3		329	29.7		218	34.5		334	13.7		193	49.2	
9	50	52.7		344	32.2		233	35.8		349	15.6		208	51.6	
10	65	55.2		359	34.6		248	37.1		4	17.5		223	54.1	
11	80	57.7		14	37.0	+17	263	38.4	+1	19	19.4	+20	238	56.5	-6
12	96	00.1		29	39.5	+17	278	39.8	+1	34	21.3	+20	253	59.0	-6
13	111	02.6		44	41.9		293	41.1		49	23.2		269	01.5	
14	126	05.1		59	44.3		308	42.4		64	25.1		284	03.9	
15	141	07.5		74	46.8		323	43.7		79	27.0		299	06.4	
16	156	10.0		89	49.2		338	45.0		94	28.9		314	08.8	
17	171	12.5		104	51.6	+17	353	46.3	+1	109	30.8	+20	329	11.3	-6
18	186	14.9		119	54.0	+17	8	47.7	+1	124	32.7	+20	344	13.8	-6
19	201	17.4		134	56.4		23	49.0		139	34.6		359	16.2	
20	216	19.8		149	58.8		38	50.3		154	36.5		14	18.7	
21	231	22.3		165	01.2		53	51.6		169	38.4		29	21.1	
22	246	24.8		180	03.6		68	52.9		184	40.3		44	23.6	
23	261	27.2		195	06.0		83	54.2		199	42.2		59	26.0	
24	276	29.7		210	08.4	+17	98	55.6	+1	214	44.1	+20	74	28.5	-6
Dif	—			+24	-3		+13	-6		+19	+1		+25	0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 8 ^d 4	PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/6	SD: 16 ^h 1				R°: 57 ^m					
	PMG: 12 ^h 03 ^m 4															
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	11.1	+23	16.0	81	31.5	-10	31.3	60 N	21 27	23 08	** **	14 43	92	23 35	24
1	194	11.0		15.8	96	00.1		42.8 ¹¹⁵	58	21 06	22 21	** **	35	88	44	27
2	209	10.9		15.7	110	28.5	94	-10 54.2 ¹¹⁴	56	20 50	21 52	** **	27	86	52	30
3	224	10.7		15.6	124	56.9	94	-11 05.6 ¹¹⁴	54	36	30	23 12	21	83	23 59	32
4	239	10.6		15.5	139	25.3	94	17.0 ¹¹⁴	52	24	21 12	22 29	15	81	** **	**
5	254	10.5	+23	15.4	153	53.5	92	-11 28.2 ¹¹²	50	20 13	20 57	22 02	14 10	78	** **	**
6	269	10.4	+23	15.2	168	21.7	92	-11 39.5 ¹¹³	45	19 51	20 28	21 17	13 58	75	** **	**
7	284	10.2		15.1	182	49.8	91	-11 50.6 ¹¹¹	40	33	20 06	20 47	49	71	** **	**
8	299	10.1		15.0	197	17.9	91	-12 01.7 ¹¹¹	35	18	19 48	24	41	69	0 03	40
9	314	10.0		14.8	211	45.8	89	12.8 ¹¹¹	30	19 05	33	20 06	34	66	09	42
10	329	09.9		14.7	226	13.7	89	23.8 ¹¹⁰	20	18 43	19 08	19 37	22	63	18	47
11	344	09.7	+23	14.6	240	41.5	88	-12 34.7 ¹⁰⁹	10 N	18 24	18 47	19 15	13 12	59	0 27	50
12	359	09.6	+23	14.5	255	09.3	88	-12 45.5 ¹⁰⁸	0	18 07	18 30	18 56	13 02	56	0 34	54
13	14	09.5		14.3	269	36.9	86	-12 56.3 ¹⁰⁸	10 S	17 50	18 13	39	12 53	52	42	58
14	29	09.4		14.2	284	04.5	86	-13 07.0 ¹⁰⁷	20	31	17 55	23	42	49	0 51	61
15	44	09.2		14.1	298	32.0	85	17.7 ¹⁰⁷	30	17 10	37	18 06	31	45	1 00	66
16	59	09.1		13.9	312	59.4	84	28.3 ¹⁰⁶	35	16 58	26	17 58	24	43	06	68
17	74	09.0	+23	13.8	327	26.7	83	-13 38.8 ¹⁰⁵	40	16 44	17 15	17 49	12 17	40	1 12	71
18	89	08.9	+23	13.7	341	53.9	82	-13 49.2 ¹⁰⁴	45	16 27	17 01	17 38	12 08	37	1 20	74
19	104	08.7		13.5	356	21.1	82	-13 59.6 ¹⁰⁴	50	16 07	16 45	27	11 58	33	29	78
20	119	08.6		13.4	10	48.2	81	-14 09.8 ¹⁰²	52	15 57	38	21	53	31	33	80
21	134	08.5		13.3	25	15.2	80	20.0 ¹⁰²	54	46	30	16	48	29	37	83
22	149	08.4		13.1	39	42.1	79	30.2 ¹⁰²	56	34	21	10	42	26	42	85
23	164	08.2		13.0	54	08.9	78	40.2 ¹⁰⁰	58	19	16 11	17 03	35	24	48	88
24	179	08.1	+23	12.9	68	35.7	78	-14 50.2 ¹⁰⁰	60 S	15 02	15 59	16 56	11 28	21	1 54	92
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 5 ^h 33 ^m 1		Mag: -4.6 PMG: 9 ^h 58 ^m		Mag: +0.8 PMG: 17 ^h 23 ^m		Mag: -2.1 PMG: 9 ^h 40 ^m		Mag: +0.7 PMG: 18 ^h 59 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	276	29.7	210	08.4	+17	45.0	98	55.6	+1	34.7						
1	291	32.2	225	10.8		44.8	113	56.9		34.1						
2	306	34.6	240	13.2		44.5	128	58.2		33.6						
3	321	37.1	255	15.5		44.3	143	59.5		33.0						
4	336	39.6	270	17.9		44.1	159	00.8		32.5						
5	351	42.0	285	20.3	+17	43.8	174	02.1	+1	31.9						
6	6	44.5	300	22.6	+17	43.6	189	03.5	+1	31.4						
7	21	47.0	315	25.0		43.4	204	04.8		30.8						
8	36	49.4	330	27.3		43.1	219	06.1		30.3						
9	51	51.9	345	29.7		42.9	234	07.4		29.7						
10	66	54.3	0	32.0		42.7	249	08.7		29.2						
11	81	56.8	15	34.4	+17	42.5	264	10.0	+1	28.6						
12	96	59.3	30	36.7	+17	42.2	279	11.3	+1	28.1						
13	112	01.7	45	39.1		42.0	294	12.6		27.5						
14	127	04.2	60	41.4		41.8	309	14.0		27.0						
15	142	06.7	75	43.7		41.6	324	15.3		26.4						
16	157	09.1	90	46.0		41.3	339	16.6		25.8						
17	172	11.6	105	48.4	+17	41.1	354	17.9	+1	25.3						
18	187	14.1	120	50.7	+17	40.9	9	19.2	+1	24.7						
19	202	16.5	135	53.0		40.7	24	20.5		24.2						
20	217	19.0	150	55.3		40.5	39	21.8		23.6						
21	232	21.5	165	57.6		40.3	54	23.1		23.1						
22	247	23.9	180	59.9		40.1	69	24.4		22.5						
23	262	26.4	196	02.2		39.8	84	25.7		22.0						
24	277	28.8	211	04.5	+17	39.6	99	27.1	+1	21.4						
Dif	—		+23		-2		+13		-6							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7			Edad: 9 ^d 4	PHE	4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'1 R°: 59 ^m				Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 12 ^h 03 ^m 6																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	179	08.1	+23	12.9	68	35.7	77	-14	50.2	98	60 N	0 59	2 41	16 15	88	23 59	35
1	194	08.0		12.7	83	02.4	77	-15	00.0	98	58	1 46	3 01	16 03	85	***	***
2	209	07.9		12.6	97	29.0	76	-15	09.8	98	56	2 15	17	15 53	82	***	***
3	224	07.7		12.4	111	55.5	75		19.5	97	54	0 55	37	31	44	80	***
4	239	07.6		12.3	126	21.9	74		29.1	96	52	1 38	2 55	43	36	78	0 05
5	254	07.5	+23	12.2	140	48.2	73	-15	38.7	96	50	2 05	3 10	3 54	15 28	77	0 11
6	269	07.4	+23	12.0	155	14.5	73	-15	48.1	94	45	2 50	3 39	4 16	15 13	74	0 24
7	284	07.2		11.9	169	40.7	72	-15	57.4	93	40	3 20	4 01	34	15 00	72	34
8	299	07.1		11.7	184	06.8	71	-16	06.7	93	35	3 43	19	4 49	14 50	69	43
9	314	07.0		11.6	198	32.8	70		15.8	91	30	4 01	34	5 02	40 68	0 51	48
10	329	06.9		11.5	212	58.7	69		24.9	91	20	30	4 59	24	25 64	1 05	51
11	344	06.7	+23	11.3	227	24.6	69	-16	33.8	89	10 N	4 52	5 19	5 42	14 11	61	1 17
12	359	06.6	+23	11.2	241	50.3	67	-16	42.7	89	0	5 11	5 37	6 00	13 58	59	1 28
13	14	06.5		11.0	256	16.0	67	-16	51.4	87	10 S	28	5 54	17	45 57	40	60
14	29	06.4		10.9	270	41.6	66	-17	00.0	86	20	5 44	6 12	36	31 54	1 52	63
15	44	06.2		10.7	285	07.1	65	-17	08.6	86	30	6 00	30	6 57	16 51	2 06	66
16	59	06.1		10.6	299	32.6	65		17.0	84	35	09	41	7 09	13 07	49	14
17	74	06.0	+23	10.4	313	57.9	63	-17	25.3	83	40	6 18	6 52	7 23	12 57	47	2 23
18	89	05.9	+23	10.3	328	23.2	63	-17	33.6	83	45	6 28	7 06	7 39	12 45	44	2 34
19	104	05.7		10.1	342	48.4	62		41.7	81	50	40	22	8 00	31 40	47	78
20	119	05.6		10.0	357	13.5	61		49.7	80	52	45	29	10	24 39	2 53	80
21	134	05.5		09.8	11	38.6	61	-17	57.5	78	54	51	37	21	17 37	3 00	82
22	149	05.4		09.7	26	03.5	59	-18	05.3	78	56	6 57	46	33	12 08	35	07
23	164	05.3		09.5	40	28.4	59		13.0	77	58	7 04	7 56	8 47	11 59	33	16
24	179	05.1	+23	09.4	54	53.2	58	-18	20.5	75	60 S	7 11	8 07	9 05	11 49	29	3 26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 29 ^m 2		Mag: -4.6 PMG: 9 ^h 54 ^m		Mag: +0.8 PMG: 17 ^h 21 ^m		Mag: -2.1 PMG: 9 ^h 37 ^m		Mag: +0.7 PMG: 18 ^h 55 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	277	28.8	211	04.5	+17	99	27.1	+1	21.4	215	29.8
1	292	31.3	226	06.8		114	28.4		20.9	230	31.7
2	307	33.8	241	09.1		129	29.7		20.3	245	33.6
3	322	36.2	256	11.4		144	31.0		19.7	260	35.5
4	337	38.7	271	13.6		159	32.3		19.2	275	37.4
5	352	41.2	286	15.9	+17	174	33.6	+1	18.6	290	39.3
6	7	43.6	301	18.2	+17	189	34.9	+1	18.1	305	41.2
7	22	46.1	316	20.4		204	36.2		17.5	320	43.1
8	37	48.6	331	22.7		219	37.5		17.0	335	45.0
9	52	51.0	346	25.0		234	38.8		16.4	350	46.9
10	67	53.5	1	27.2		249	40.1		15.9	5	48.8
11	82	55.9	16	29.5	+17	264	41.4	+1	15.3	20	50.7
12	97	58.4	31	31.7	+17	279	42.7	+1	14.7	35	52.6
13	113	00.9	46	34.0		294	44.0		14.2	50	54.5
14	128	03.3	61	36.2		309	45.3		13.6	65	56.4
15	143	05.8	76	38.4		324	46.6		13.1	80	58.3
16	158	08.3	91	40.7		339	47.9		12.5	96	00.2
17	173	10.7	106	42.9	+17	354	49.3	+1	12.0	111	02.1
18	188	13.2	121	45.1	+17	9	50.6	+1	11.4	126	04.0
19	203	15.7	136	47.3		24	51.9		10.9	141	05.9
20	218	18.1	151	49.5		39	53.2		10.3	156	07.8
21	233	20.6	166	51.8		54	54.5		09.7	171	09.7
22	248	23.1	181	54.0		69	55.8		09.2	186	11.6
23	263	25.5	196	56.2		84	57.1		08.6	201	13.6
24	278	28.0	211	58.4	+17	99	58.4	+1	08.1	216	15.5
Dif	—		+22	-2		+13	-6			+19	+1

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 8			Edad: 10 ^d 4 PHE { 4 ^h : 60'2 12 ^h : 60'3 20 ^h : 60'4 Rº: 62 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	05.1	+23 09.4	54	53.2	-18 20.5	74	60 N	21 25	23 04	** **	17 43	77	** **	**			
1	194	05.0	09.2	69	18.0	58	27.9	58	21 06	22 19	** **	28 76		0 11	38			
2	209	04.9	09.1	83	42.6	56	35.2	72	56	20 49	21 51	** **	15 74		22 40			
3	224	04.8	08.9	98	07.2	56	42.4	73	54	35	29	23 09	17 04	73	31	43		
4	239	04.6	08.7	112	31.7	55	49.4	70	52	23	21 12	22 27	16 54	72	40	44		
5	254	04.5	+23 08.6	126	56.1	54	-18 56.3	69	50	20 13	20 57	22 01	16 45	71	0 47	46		
6	269	04.4	+23 08.4	141	20.5	54	-19 03.1	68	45	19 51	20 28	21 17	16 27	69	1 04	48		
7	284	04.3	08.3	155	44.8	53	09.8	67	40	33	20 05	20 47	16 12	67	17	51		
8	299	04.2	08.1	170	09.0	52	16.4	66	35	18	19 48	24	15 59	67	29	52		
9	314	04.0	07.9	184	33.1	51	22.8	64	30	19 05	33	20 06	48 66		39 54			
10	329	03.9	07.8	198	57.2	51	29.1	63	20	18 43	19 08	19 37	29 64		1 56	56		
11	344	03.8	+23 07.6	213	21.2	50	-19 35.2	61	10 N	18 25	18 48	19 15	15 12	63	2 11	59		
12	359	03.7	+23 07.5	227	45.2	50	-19 41.2	60	0	18 07	18 30	18 56	14 57	61	2 25	61		
13	14	03.6	07.3	242	09.0	48	47.1	59	10 S	17 50	18 13	39	42 60		40 62			
14	29	03.4	07.1	256	32.8	48	52.9	58	20	32	17 56	23	25 59		2 55	64		
15	44	03.3	07.0	270	56.6	48	-19 58.5	56	30	17 11	37	18 07	14 07	57	3 12	67		
16	59	03.2	06.8	285	20.3	47	-20 03.9	54	35	16 59	27	17 59	13 56	56	23	68		
17	74	03.1	+23 06.6	299	43.9	46	-20 09.3	54	40	16 45	17 15	17 49	13 44	54	3 34	70		
18	89	02.9	+23 06.5	314	07.5	46	-20 14.5	52	45	16 28	17 02	17 39	13 29	53	3 48	72		
19	104	02.8	06.3	328	31.0	45	19.5	50	50	16 08	16 46	28	11 51		4 05	74		
20	119	02.7	06.1	342	54.4	44	24.5	50	52	15 58	39	23	13 03	50	13	75		
21	134	02.6	06.0	357	17.8	44	29.2	47	54	47	31	17	12 54	49	22	77		
22	149	02.5	05.8	11	41.2	44	33.8	46	56	35	22	11	43 48		32 78			
23	164	02.3	05.6	26	04.5	43	38.3	45	58	21	12	17 04	32 45		43 81			
24	179	02.2	+23 05.5	40	27.7	42	-20 42.7	44	60 S	15 04	16 01	16 57	12 18	43	4 56	84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 25 ^m 2		Mag: -4.6 PMG: 9 ^h 51 ^m			Mag: +0.9 PMG: 17 ^h 19 ^m			Mag: -2.1 PMG: 9 ^h 34 ^m			Mag: +0.7 PMG: 18 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	278	28.0	211 58.4	+17 35.1	99 58.4	+1 08.1	216 15.5	+20 11.9	76 26.3	-6 29.1								
1	293	30.4	227 00.6	34.9	114 59.7	07.5	231 17.4	12.0	91 28.7	29.1								
2	308	32.9	242 02.8	34.7	130 01.0	06.9	246 19.3	12.1	106 31.2	29.1								
3	323	35.4	257 04.9	34.5	145 02.3	06.4	261 21.2	12.2	121 33.6	29.1								
4	338	37.8	272 07.1	34.4	160 03.6	05.8	276 23.1	12.3	136 36.1	29.1								
5	353	40.3	287 09.3	+17 34.2	175 04.9	+1 05.3	291 25.0	+20 12.4	151 38.5	-6 29.1								
6	8	42.8	302 11.5	+17 34.0	190 06.2	+1 04.7	306 26.9	+20 12.5	166 41.0	-6 29.2								
7	23	45.2	317 13.7	33.9	205 07.5	04.2	321 28.8	12.6	181 43.4	29.2								
8	38	47.7	332 15.8	33.7	220 08.8	03.6	336 30.7	12.7	196 45.9	29.2								
9	53	50.2	347 18.0	33.5	235 10.1	03.0	351 32.6	12.8	211 48.3	29.2								
10	68	52.6	2 20.2	33.4	250 11.4	02.5	6 34.5	12.9	226 50.8	29.2								
11	83	55.1	17 22.3	+17 33.2	265 12.7	+1 01.9	21 36.4	+20 13.0	241 53.2	-6 29.3								
12	98	57.6	32 24.5	+17 33.1	280 14.0	+1 01.4	36 38.3	+20 13.1	256 55.7	-6 29.3								
13	114	00.0	47 26.6	32.9	295 15.3	00.8	51 40.2	13.2	271 58.1	29.3								
14	129	02.5	62 28.8	32.8	310 16.6	+1 00.2	66 42.1	13.3	287 00.6	29.3								
15	144	04.9	77 30.9	32.6	325 17.9	+0 59.7	81 44.0	13.4	302 03.0	29.3								
16	159	07.4	92 33.0	32.4	340 19.2	59.1	96 45.9	13.5	317 05.5	29.3								
17	174	09.9	107 35.2	+17 32.3	355 20.5	+0 58.6	111 47.9	+20 13.6	332 07.9	-6 29.4								
18	189	12.3	122 37.3	+17 32.1	10 21.8	+0 58.0	126 49.8	+20 13.7	347 10.4	-6 29.4								
19	204	14.8	137 39.4	32.0	25 23.0	57.5	141 51.7	13.8	2 12.8	29.4								
20	219	17.3	152 41.6	31.8	40 24.3	56.9	156 53.6	13.9	17 15.3	29.4								
21	234	19.7	167 43.7	31.7	55 25.6	56.3	171 55.5	14.0	32 17.7	29.4								
22	249	22.2	182 45.8	31.6	70 26.9	55.8	186 57.4	14.1	47 20.2	29.5								
23	264	24.7	197 47.9	31.4	85 28.2	55.2	201 59.3	14.2	62 22.6	29.5								
24	279	27.1	212 50.0	+17 31.3	100 29.5	+0 54.7	217 01.2	+20 14.3	77 25.0	-6 29.5								
Dif	—		+22		-2		+13		-6		+19		+1		+24		0	

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 9			Edad: 11 ^d 4 PHE	4 ^h : 60 ^s 5 12 ^h : 60 ^s 5 20 ^h : 60 ^s 5 Rº: 63 ^m											
	hG ☉	Dec			hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	02.2	+23 05.5	40	27.7	-20 42.7	42	60 N	** *	1 04	2 43		19 00	60	0 34	51
1	194	02.1	05.3	54	50.9	46.9	42	58	** *	1 49	3 02		18 44	59	0 49	53
2	209	02.0	05.1	69	14.1	50.9	40	56	** *	2 17	19		29 61		1 02	54
3	224	01.9	04.9	83	37.2	54.8	39	54	0 59	39	33		17 61		14	55
4	239	01.8	04.8	98	00.2	-20 58.5	37	52	1 40	2 56	45		18 06	61	24	56
5	254	01.6	+23 04.6	112	23.2	-21 02.1	36	50	2 07	3 11	3 55		17 56	61	1 33	56
6	269	01.5	+23 04.4	126	46.2	-21 05.6	35	45	2 51	3 40	4 17		17 36	61	1 52	58
7	284	01.4	04.2	141	09.1	08.9	33	40	3 21	4 02	35		19 62		2 08	58
8	299	01.3	04.1	155	32.0	12.0	31	35	3 44	20	4 50		17 06	61	21	59
9	314	01.2	03.9	169	54.9	15.0	30	30	4 02	4 35	5 03		16 54	62	33	60
10	329	01.0	03.7	184	17.7	17.8	28	20	31	5 00	24		33 62		2 52	61
11	344	00.9	+23 03.5	198	40.5	-21 20.5	27	10 N	4 53	5 20	5 43		16 15	62	3 10	61
12	359	00.8	+23 03.3	213	03.3	-21 23.0	25	0	5 12	5 38	6 00		15 58	63	3 26	62
13	14	00.7	03.2	227	26.0	25.4	24	10 S	28	5 55	17		42 62		42	63
14	29	00.6	03.0	241	48.7	27.6	22	20	5 44	6 12	36		24 62		3 59	64
15	44	00.4	02.8	256	11.4	29.7	21	30	6 00	30	6 57		15 04	62	4 19	64
16	59	00.3	02.6	270	34.1	31.6	19	35	09	41	7 09		14 52	62	31	64
17	74	00.2	+23 02.4	284	56.8	-21 33.3	17	40	6 18	6 52	7 23		14 38	62	4 44	65
18	89	00.1	+23 02.3	299	19.4	-21 34.9	16	45	6 28	7 05	7 39		14 22	62	5 00	66
19	104	00.0	02.1	313	42.0	36.3	14	50	40	21	7 59		14 02	62	19	67
20	118	59.9	01.9	328	04.6	37.6	13	52	45	28	8 09		13 53	62	28	67
21	133	59.7	01.7	342	27.2	38.7	11	54	50	36	20		43 61		39	67
22	148	59.6	01.5	356	49.8	39.7	10	56	6 56	45	32		31 61		5 50	68
23	163	59.5	01.3	11	12.3	40.5	8	58	7 03	7 55	8 47		17 61		6 04	68
24	178	59.4	+23 01.1	25	34.9	-21 41.1	6	60 S	7 10	8 07	9 04		13 01	61	6 20	68

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 5 ^h 21 ^m 3		Mag: -4.7 PMG: 9 ^h 47 ^m		Mag: +0.9 PMG: 17 ^h 17 ^m		Mag: -2.1 PMG: 9 ^h 31 ^m			Mag: +0.7 PMG: 18 ^h 47 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	279	27.1	212	50.0	+17 31.3	100	29.5	+0 54.7	217	01.2	+20 14.3	77	25.0		
1	294	29.6	227	52.1	31.1	115	30.8	54.1	232	03.1	14.4	92	27.5		
2	309	32.1	242	54.2	31.0	130	32.1	53.5	247	05.0	14.5	107	29.9		
3	324	34.5	257	56.3	30.8	145	33.4	53.0	262	06.9	14.6	122	32.4		
4	339	37.0	272	58.4	30.7	160	34.7	52.4	277	08.8	14.7	137	34.8		
5	354	39.4	288	00.5	+17 30.6	175	36.0	+0 51.9	292	10.7	+20 14.8	152	37.3		
6	9	41.9	303	02.6	+17 30.4	190	37.3	+0 51.3	307	12.6	+20 14.9	167	39.7		
7	24	44.4	318	04.7	30.3	205	38.6	50.7	322	14.5	15.0	182	42.2		
8	39	46.8	333	06.8	30.2	220	39.9	50.2	337	16.5	15.1	197	44.6		
9	54	49.3	348	08.8	30.0	235	41.2	49.6	352	18.4	15.2	212	47.1		
10	69	51.8	3	10.9	29.9	250	42.5	49.0	7	20.3	15.3	227	49.5		
11	84	54.2	18	13.0	+17 29.8	265	43.7	+0 48.5	22	22.2	+20 15.4	242	51.9		
12	99	56.7	33	15.0	+17 29.7	280	45.0	+0 47.9	37	24.1	+20 15.5	257	54.4		
13	114	59.2	48	17.1	29.5	295	46.3	47.4	52	26.0	15.6	272	56.8		
14	130	01.6	63	19.2	29.4	310	47.6	46.8	67	27.9	15.7	287	59.3		
15	145	04.1	78	21.2	29.3	325	48.9	46.2	82	29.8	15.8	303	01.7		
16	160	06.5	93	23.3	29.2	340	50.2	45.7	97	31.7	15.9	318	04.2		
17	175	09.0	108	25.3	+17 29.0	355	51.5	+0 45.1	112	33.6	+20 16.0	333	06.6		
18	190	11.5	123	27.3	+17 28.9	10	52.8	+0 44.6	127	35.5	+20 16.1	348	09.1		
19	205	13.9	138	29.4	28.8	25	54.1	44.0	142	37.4	16.2	3	11.5		
20	220	16.4	153	31.4	28.7	40	55.4	43.4	157	39.4	16.3	18	13.9		
21	235	18.9	168	33.4	28.6	55	56.6	42.9	172	41.3	16.4	33	16.4		
22	250	21.3	183	35.5	28.5	70	57.9	42.3	187	43.2	16.5	48	18.8		
23	265	23.8	198	37.5	28.3	85	59.2	41.7	202	45.1	16.6	63	21.3		
24	280	26.3	213	39.5	+17 28.2	101	00.5	+0 41.2	217	47.0	+20 16.7	78	23.7		
Dif	—		+21	-1		+13	-6		+19		+1		+24		0

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 4	PHE { 4 ^h : 60 ^h 5 12 ^h : 60 ^h 4 20 ^h : 60 ^h 4 R°: 60 ^m											
	PMG: 12 ^h 04 ^m 1					PMG: 23 ^h 16 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	59.4	+23 01.1	25	34.9	-21 41.1	5	60 N	21 24	22 59	** **	20 00	41	1 25	70	
1	193	59.3	01.0	39	57.4	41.6	3	58	21 04	22 17	** **	19 43	44	42	69	
2	208	59.2	00.8	54	20.0	41.9	3	56	20 48	21 49	** **	30 45		1 56	69	
3	223	59.0	00.6	68	42.6	42.1	2	54	34	28	23 05	18 47		2 09	68	
4	238	58.9	00.4	83	05.1	42.1	0	52	23	21 11	22 25	19 07	48	20	67	
5	253	58.8	+23 00.2	97	27.7	41.9	2	50	20 12	20 56	22 00	18 57	50	2 29	67	
6	268	58.7	+23 00.0	111	50.3	41.6	3	45	19 50	20 27	21 16	18 37	52	2 50	66	
7	283	58.6	+22 59.8	126	12.8	41.1	5	40	33	20 05	20 46	21 54		3 06	66	
8	298	58.5	59.6	140	35.4	40.5	6	35	18	19 47	24	18 07	56	20	65	
9	313	58.3	59.4	154	58.0	39.7	8	30	19 05	32	20 06	17 56	56	33	64	
10	328	58.2	59.2	169	20.7	38.8	9	20	18 44	19 08	19 37	35 58		3 53	64	
11	343	58.1	+22 59.0	183	43.3	37.6	12	10 N	18 25	18 48	19 15	17 17	60	4 11	63	
12	358	58.0	+22 58.8	198	05.9	36.4	12	0	18 08	18 30	18 56	17 01	61	4 28	62	
13	13	57.9	58.6	212	28.6	35.0	14	10 S	17 51	18 13	40	16 44	63	4 45	61	
14	28	57.8	58.4	226	51.3	33.4	16	20	33	17 57	24	26 64		5 03	60	
15	43	57.7	58.2	241	14.0	31.7	17	30	12	38	18 08	16 06	66	23	60	
16	58	57.5	58.0	255	36.8	29.8	19	35	17 00	28	17 59	15 54	67	35	59	
17	73	57.4	+22 57.8	269	59.6	27.7	21	40	16 46	17 16	17 50	15 40	68	5 49	58	
18	88	57.3	+22 57.6	284	22.4	25.5	22	45	16 29	17 03	17 40	15 24	70	6 06	56	
19	103	57.2	57.4	298	45.2	23.2	23	50	09	16 47	29	15 04	71	26	55	
20	118	57.1	57.2	313	08.1	20.6	26	52	16 00	40	24	14 55	72	35	55	
21	133	57.0	57.0	327	31.0	18.0	26	54	15 49	32	18	44 73		46	54	
22	148	56.9	56.8	341	54.0	15.2	28	56	37	23	12	32 75		6 58	53	
23	163	56.7	56.6	356	17.0	12.2	30	58	22	14	17 06	18 76		7 12	52	
24	178	56.6	+22 56.4	10	40.0	09.1	31	60 S	15 06	16 02	16 59	14 02	78	7 28	51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 17 ^m 4		Mag: -4.7 PMG: 9 ^h 44 ^m		Mag: +0.9 PMG: 17 ^h 14 ^m		Mag: -2.1 PMG: 9 ^h 28 ^m		Mag: +0.7 PMG: 18 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	280	26.3	213 39.5	+17 28.2	101 00.5	+0 41.2	217 47.0	+20 16.7	78 23.7	-6 30.0
1	295	28.7	228 41.5	28.1	116 01.8	40.6	232 48.9	16.8	93 26.2	30.0
2	310	31.2	243 43.5	28.0	131 03.1	40.1	247 50.8	16.9	108 28.6	30.0
3	325	33.7	258 45.6	27.9	146 04.4	39.5	262 52.7	16.9	123 31.0	30.0
4	340	36.1	273 47.6	27.8	161 05.7	38.9	277 54.6	17.0	138 33.5	30.0
5	355	38.6	288 49.6	+17 27.7	176 06.9	+0 38.4	292 56.5	+20 17.1	153 35.9	-6 30.1
6	10	41.0	303 51.6	+17 27.6	191 08.2	+0 37.8	307 58.5	+20 17.2	168 38.4	-6 30.1
7	25	43.5	318 53.6	27.5	206 09.5	37.2	323 00.4	17.3	183 40.8	30.1
8	40	46.0	333 55.5	27.4	221 10.8	36.7	338 02.3	17.4	198 43.2	30.1
9	55	48.4	348 57.5	27.3	236 12.1	36.1	353 04.2	17.5	213 45.7	30.2
10	70	50.9	3 59.5	27.2	251 13.4	35.5	8 06.1	17.6	228 48.1	30.2
11	85	53.4	19 01.5	+17 27.1	266 14.7	+0 35.0	23 08.0	+20 17.7	243 50.6	-6 30.2
12	100	55.8	34 03.5	+17 27.0	281 15.9	+0 34.4	38 09.9	+20 17.8	258 53.0	-6 30.2
13	115	58.3	49 05.4	26.9	296 17.2	33.9	53 11.8	17.9	273 55.4	30.2
14	131	00.8	64 07.4	26.8	311 18.5	33.3	68 13.7	18.0	288 57.9	30.3
15	146	03.2	79 09.4	26.7	326 19.8	32.7	83 15.6	18.1	304 00.3	30.3
16	161	05.7	94 11.3	26.6	341 21.1	32.2	98 17.6	18.2	319 02.8	30.3
17	176	08.2	109 13.3	+17 26.5	356 22.4	+0 31.6	113 19.5	+20 18.3	334 05.2	-6 30.3
18	191	10.6	124 15.3	+17 26.4	11 23.6	+0 31.0	128 21.4	+20 18.4	349 07.6	-6 30.3
19	206	13.1	139 17.2	26.3	26 24.9	30.5	143 23.3	18.5	4 10.1	30.4
20	221	15.5	154 19.2	26.3	41 26.2	29.9	158 25.2	18.6	19 12.5	30.4
21	236	18.0	169 21.1	26.2	56 27.5	29.3	173 27.1	18.7	34 15.0	30.4
22	251	20.5	184 23.0	26.1	71 28.8	28.8	188 29.0	18.8	49 17.4	30.4
23	266	22.9	199 25.0	26.0	86 30.1	28.2	203 30.9	18.9	64 19.8	30.5
24	281	25.4	214 26.9	+17 25.9	101 31.3	+0 27.6	218 32.8	+20 19.0	79 22.3	-6 30.5
Dif	—		+20	-1	+13	-6	+19	+1	+24	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 13 ^d 4 PHE { 4 ^h : 60 ^h /3 12 ^h : 60 ^h /1 20 ^h : 60 ^h /0 R°: ***												
	PMG: 12 ^h 04 ^m 3			SD: 16 ^d 4 PMG: *** **m												
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	178	56.6	+22 56.4	10	40.0	-21 09.1			60 N	** **	1 09	2 45	20 41 28	2 35 84		
1	193	56.5	56.2	25	03.1	05.8	33		58	** **	1 52	3 04	27 31	2 51 81		
2	208	56.4	56.0	39	26.2	02.4	34		56	** **	2 20	20	15 34	3 05 79		
3	223	56.3	55.8	53	49.4	42	36		54	1 04	41	34	20 05 36	17 77		
4	238	56.2	55.6	68	12.6	42	37		52	1 43	2 58	46	19 55 38	27 76		
5	253	56.1	+22 55.4	82	35.9	43	38		50	2 09	3 13	3 57	19 47 40	3 36 75		
6	268	56.0	+22 55.2	96	59.3	44	41		45	2 53	3 41	4 18	19 29 43	3 56 72		
7	283	55.8	55.0	111	22.6	43	41		40	3 22	4 03	36	15 45	4 12 69		
8	298	55.7	54.8	125	46.1	45	43		35	3 45	21	4 51	19 03 47	25 68		
9	313	55.6	54.6	140	09.6	45	44		30	4 03	4 36	5 03	18 52 49	37 66		
10	328	55.5	54.3	154	33.1	45	46		20	31	5 00	25	33 53	4 57 64		
11	343	55.4	+22 54.1	168	56.8	47	48		10 N	4 54	5 20	5 43	18 17 55	5 14 62		
12	358	55.3	+22 53.9	183	20.5	47	48		0	5 12	5 38	6 01	18 02 58	5 30 60		
13	13	55.2	53.7	197	44.2	47	50		10 S	29	5 55	18	17 47 60	5 46 58		
14	28	55.1	53.5	212	08.0	48	52		20	5 44	6 12	36	30 64	6 03 56		
15	43	54.9	53.3	226	31.9	49	52		30	6 00	30	6 56	12 66	23 53		
16	58	54.8	53.1	240	55.9	50	55		35	09	41	7 09	17 01 68	34 52		
17	73	54.7	+22 52.8	255	19.9	50	55		40	6 18	6 52	7 22	16 48 71	6 47 50		
18	88	54.6	+22 52.6	269	44.0	51	57		45	6 28	7 05	7 39	16 34 72	7 02 48		
19	103	54.5	52.4	284	08.1	51	58		50	39	21	7 59	15 77	21 45		
20	118	54.4	52.2	298	32.4	53	59		52	44	28	8 08	16 07 78	30 43		
21	133	54.3	52.0	312	56.7	53	61		54	50	36	19	15 57 80	40 41		
22	148	54.2	51.8	327	21.1	54	62		56	6 56	45	31	47 81	7 51 40		
23	163	54.1	51.5	341	45.5	54	64		58	7 02	7 54	8 45	34 84	8 04 37		
24	178	53.9	+22 51.3	356	10.1	56	64		60 S	7 09	8 06	9 02	15 20 87	8 19 34		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 13 ^m 4		Mag: -4.7 PMG: 9 ^h 41 ^m			Mag: +0.9 PMG: 17 ^h 12 ^m			Mag: -2.1 PMG: 9 ^h 25 ^m			Mag: +0.7 PMG: 18 ^h 39 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	281	25.4	214	26.9	+17 25.9	101	31.3	+0 27.6	218	32.8	+20 19.0	79	22.3	-6 30.5
1	296	27.9	229	28.8	25.8	116	32.6	27.1	233	34.8	19.1	94	24.7	30.5
2	311	30.3	244	30.8	25.8	131	33.9	26.5	248	36.7	19.2	109	27.2	30.5
3	326	32.8	259	32.7	25.7	146	35.2	26.0	263	38.6	19.3	124	29.6	30.5
4	341	35.3	274	34.6	25.6	161	36.5	25.4	278	40.5	19.4	139	32.0	30.6
5	356	37.7	289	36.5	+17 25.5	176	37.7	+0 24.8	293	42.4	+20 19.4	154	34.5	-6 30.6
6	11	40.2	304	38.4	+17 25.5	191	39.0	+0 24.3	308	44.3	+20 19.5	169	36.9	-6 30.6
7	26	42.7	319	40.3	25.4	206	40.3	23.7	323	46.2	19.6	184	39.3	30.6
8	41	45.1	334	42.2	25.3	221	41.6	23.1	338	48.1	19.7	199	41.8	30.7
9	56	47.6	349	44.1	25.2	236	42.9	22.6	353	50.1	19.8	214	44.2	30.7
10	71	50.0	4	46.0	25.2	251	44.1	22.0	8	52.0	19.9	229	46.7	30.7
11	86	52.5	19	47.9	+17 25.1	266	45.4	+0 21.4	23	53.9	+20 20.0	244	49.1	-6 30.7
12	101	55.0	34	49.8	+17 25.0	281	46.7	+0 20.9	38	55.8	+20 20.1	259	51.5	-6 30.7
13	116	57.4	49	51.7	25.0	296	48.0	20.3	53	57.7	20.2	274	54.0	30.8
14	131	59.9	64	53.6	24.9	311	49.2	19.7	68	59.6	20.3	289	56.4	30.8
15	147	02.4	79	55.5	24.8	326	50.5	19.2	84	01.5	20.4	304	58.8	30.8
16	162	04.8	94	57.4	24.8	341	51.8	18.6	99	03.4	20.5	320	01.3	30.8
17	177	07.3	109	59.2	+17 24.7	356	53.1	+0 18.0	114	05.4	+20 20.6	335	03.7	-6 30.9
18	192	09.8	125	01.1	+17 24.7	11	54.3	+0 17.5	129	07.3	+20 20.7	350	06.2	-6 30.9
19	207	12.2	140	03.0	24.6	26	55.6	16.9	144	09.2	20.8	5	08.6	30.9
20	222	14.7	155	04.8	24.5	41	56.9	16.3	159	11.1	20.9	20	11.0	30.9
21	237	17.2	170	06.7	24.5	56	58.2	15.8	174	13.0	21.0	35	13.5	31.0
22	252	19.6	185	08.5	24.4	71	59.4	15.2	189	14.9	21.1	50	15.9	31.0
23	267	22.1	200	10.4	24.4	87	00.7	14.6	204	16.8	21.2	65	18.3	31.0
24	282	24.5	215	12.2	+17 24.3	102	02.0	+0 14.1	219	18.8	+20 21.3	80	20.8	-6 31.0
Dif	—		+19 -1			+13 -6			+19 +1			+24 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 14 ^d 4 PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 6 20 ^h : 59 ^m 4											
	PMG: 12 ^h 04 ^m 5			SD: 16 ^h 3 PMG: 0 ^h 16 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	53.9	+22 51.3	356	10.1	−19 11.3	66	60 N	21 22	22 55	** **	21 09 19		3 59 90	
1	193	53.8	51.1	10	34.7	−19 04.7	66	58	21 03	22 14	** **	20 58 23		4 12 87	
2	208	53.7	50.9	24	59.4	−18 58.0	67	56	20 47	21 47	** **	49 25		24 83	
3	223	53.6	50.6	39	24.2	51.2	68	54	33	26	23 01	41 27		34 81	
4	238	53.5	50.4	53	49.0	44.2	70	52	22	21 09	22 23	33 30		43 79	
5	253	53.4	+22 50.2	68	14.0	−18 37.2	70	50	20 11	20 55	21 58	20 27 31		4 51 77	
6	268	53.3	+22 50.0	82	39.0	−18 30.0	72	45	19 50	20 26	21 15	20 12 36		5 08 73	
7	283	53.2	49.8	97	04.1	22.7	73	40	32	20 05	20 46	20 00 39		21 71	
8	298	53.1	49.5	111	29.3	15.3	74	35	18	19 47	23	19 50 42		33 68	
9	313	53.0	49.3	125	54.6	07.8	75	30	19 05	32	20 05	41 44		5 43 66	
10	328	52.9	49.1	140	20.0	−18 00.1	77	20	18 44	19 08	19 37	26 47		6 01 62	
11	343	52.7	+22 48.8	154	45.4	−17 52.4	77	10 N	18 25	18 48	19 15	19 12 51		6 16 59	
12	358	52.6	+22 48.6	169	11.0	−17 44.5	79	0	18 08	18 31	18 57	19 00 54		6 30 56	
13	13	52.5	48.4	183	36.6	36.6	79	10 S	17 51	18 14	40	18 47 57		44 53	
14	28	52.4	48.2	198	02.3	28.5	81	20	33	17 57	25	34 60		6 59 50	
15	43	52.3	47.9	212	28.2	20.3	82	30	13	39	09	18 65		7 16 46	
16	58	52.2	47.7	226	54.1	12.0	83	35	17 01	29	18 00	18 09 67		26 44	
17	73	52.1	+22 47.5	241	20.1	−17 03.7	83	40	16 47	17 17	17 51	17 59 69		7 37 42	
18	88	52.0	+22 47.2	255	46.1	−16 55.2	85	45	16 31	17 04	17 41	17 46 73		7 50 39	
19	103	51.9	47.0	270	12.3	46.6	86	50	11	16 49	30	32 76		8 06 35	
20	118	51.8	46.8	284	38.6	37.9	87	52	16 01	42	25	25 78		13 34	
21	133	51.7	46.5	299	04.9	29.2	87	54	15 51	34	20	17 81		21 32	
22	148	51.6	46.3	313	31.4	20.3	89	56	38	25	14	17 08 84		31 29	
23	163	51.4	46.0	327	57.9	11.4	89	58	24	15	07	16 58 87		41 27	
24	178	51.3	+22 45.8	342	24.6	−16 02.3	91	60 S	15 08	16 04	17 00	16 47 90		8 53 23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 09 ^m 5		Mag: −4.7 PMG: 9 ^h 38 ^m		Mag: +0.9 PMG: 17 ^h 10 ^m		Mag: −2.1 PMG: 9 ^h 22 ^m		Mag: +0.7 PMG: 18 ^h 36 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	282	24.5	215 12.2	+17 24.3	102 02.0	+0 14.1	219 18.8	+20 21.3	80 20.8	−6 31.0	
1	297	27.0	230 14.1	24.3	117 03.3	13.5	234 20.7	21.3	95 23.2	31.0	
2	312	29.5	245 15.9	24.2	132 04.5	12.9	249 22.6	21.4	110 25.6	31.1	
3	327	31.9	260 17.8	24.2	147 05.8	12.3	264 24.5	21.5	125 28.1	31.1	
4	342	34.4	275 19.6	24.1	162 07.1	11.8	279 26.4	21.6	140 30.5	31.1	
5	357	36.9	290 21.4	+17 24.1	177 08.4	+0 11.2	294 28.3	+20 21.7	155 32.9	−6 31.1	
6	12	39.3	305 23.3	+17 24.0	192 09.6	+0 10.6	309 30.2	+20 21.8	170 35.4	−6 31.2	
7	27	41.8	320 25.1	24.0	207 10.9	10.1	324 32.2	21.9	185 37.8	31.2	
8	42	44.3	335 26.9	23.9	222 12.2	09.5	339 34.1	22.0	200 40.2	31.2	
9	57	46.7	350 28.7	23.9	237 13.5	08.9	354 36.0	22.1	215 42.7	31.2	
10	72	49.2	5 30.5	23.8	252 14.7	08.4	9 37.9	22.2	230 45.1	31.3	
11	87	51.7	20 32.4	+17 23.8	267 16.0	+0 07.8	24 39.8	+20 22.3	245 47.5	−6 31.3	
12	102	54.1	35 34.2	+17 23.8	282 17.3	+0 07.2	39 41.7	+20 22.4	260 50.0	−6 31.3	
13	117	56.6	50 36.0	23.7	297 18.5	06.7	54 43.6	22.5	275 52.4	31.3	
14	132	59.0	65 37.8	23.7	312 19.8	06.1	69 45.6	22.6	290 54.8	31.4	
15	148	01.5	80 39.6	23.7	327 21.1	05.5	84 47.5	22.7	305 57.3	31.4	
16	163	04.0	95 41.4	23.6	342 22.4	05.0	99 49.4	22.8	320 59.7	31.4	
17	178	06.4	110 43.1	+17 23.6	357 23.6	+0 04.4	114 51.3	+20 22.9	336 02.1	−6 31.4	
18	193	08.9	125 44.9	+17 23.6	12 24.9	+0 03.8	129 53.2	+20 22.9	351 04.6	−6 31.5	
19	208	11.4	140 46.7	23.5	27 26.2	03.3	144 55.1	23.0	6 07.0	31.5	
20	223	13.8	155 48.5	23.5	42 27.4	02.7	159 57.1	23.1	21 09.4	31.5	
21	238	16.3	170 50.3	23.5	57 28.7	02.1	174 59.0	23.2	36 11.9	31.5	
22	253	18.8	185 52.0	23.4	72 30.0	01.5	190 00.9	23.3	51 14.3	31.6	
23	268	21.2	200 53.8	23.4	87 31.2	01.0	205 02.8	23.4	66 16.7	31.6	
24	283	23.7	215 55.6	+17 23.4	102 32.5	+0 00.4	220 04.7	+20 23.5	81 19.1	−6 31.6	
Dif	—		+18	0	+13	−6	+19	+1	+24	0	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7				Edad: 15 ^d 4 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 6																
	PMG: 12 ^h 04 ^m 7				SD: 16 ^h 1																
	PMG: 1 ^h 13 ^m				R°: 53 ^m																
	hG ☉ Dec				hG ☾ Dif				Dec Dif					Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	51.3	+22	45.8	342	24.6		-16	02.3	91	60 N	** **	1 15	2 47	21 28	15		5 29	89		
1	193	51.2		45.6	356	51.3	77	-15	53.2	91	58	** **	1 56	3 07	21 17			39	86		
2	208	51.1		45.3	11	18.1	78		44.0	92	56	** **	2 22	22	14 20			47	83		
3	223	51.0		45.1	25	45.0	79		34.7	93	54	1 09	2 43	36	08 23			5 55	81		
4	238	50.9		44.9	40	12.0	80		25.3	94	52	1 46	3 00	48	21 03	25		6 02	78		
5	253	50.8	+22	44.6	54	39.1	81	-15	15.8	95	50	2 11	3 14	3 58	20 58	27		6 08	76		
6	268	50.7	+22	44.4	69	06.3	82	-15	06.3	95	45	2 54	3 43	4 20	20 48	30		6 21	72		
7	283	50.6		44.1	83	33.6	83	-14	56.6	97	40	3 24	4 05	37	39 34			32	69		
8	298	50.5		43.9	98	00.9	83		46.9	97	35	3 46	22	4 52	32 36			41	66		
9	313	50.4		43.6	112	28.4	85		37.1	98	30	4 04	4 37	5 04	25 39			6 49	64		
10	328	50.3		43.4	126	55.9	85		27.3	98	20	32	5 01	26	13 44			7 03	59		
11	343	50.2	+22	43.2	141	23.6	87	-14	17.3	100	10 N	4 54	5 21	5 44	20 03	47		7 15	56		
12	358	50.1	+22	42.9	155	51.3	87	-14	07.3	100	0	5 12	5 39	6 01	19 54	50		7 26	52		
13	13	50.0		42.7	170	19.2	89	-13	57.2	101	10 S	29	5 55	18	44 54			37	49		
14	28	49.9		42.4	184	47.1	89		47.1	101	20	5 45	6 12	36	34 58			7 49	45		
15	43	49.8		42.2	199	15.1	90		36.9	102	30	6 00	30	6 56	23 62			8 02	42		
16	58	49.7		41.9	213	43.2	91		26.6	103	35	09	40	7 08	16 64			10	39		
17	73	49.5	+22	41.7	228	11.4	92	-13	16.2	104	40	6 18	6 52	7 22	19 08	68		8 19	36		
18	88	49.4	+22	41.4	242	39.7	93	-13	05.8	104	45	6 28	7 05	7 38	18 59	71		8 29	33		
19	103	49.3		41.2	257	08.0	93	-12	55.3	105	50	39	20	7 58	48 75			41	29		
20	118	49.2		40.9	271	36.5	95		44.8	105	52	44	27	8 07	43 77			47	27		
21	133	49.1		40.7	286	05.0	95		34.2	106	54	49	35	18	38 79			8 53	25		
22	148	49.0		40.4	300	33.7	97		23.6	106	56	6 55	44	30	32 81			9 00	23		
23	163	48.9		40.2	315	02.4	97		12.9	107	58	7 01	7 53	8 44	25 84			08	20		
24	178	48.8	+22	39.9	329	31.2	98	-12	02.1	108	60 S	7 08	8 04	9 00	18 17	87		9 16	18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 05 ^m 6		Mag: -4.7 PMG: 9 ^h 35 ^m		Mag: +0.9 PMG: 17 ^h 08 ^m		Mag: -2.1 PMG: 9 ^h 18 ^m		Mag: +0.7 PMG: 18 ^h 32 ^m	
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	283	23.7	215	55.6	+17	23.4	102	32.5	+0	00.4
1	298	26.2	230	57.3		23.4	117	33.8	-0	00.2
2	313	28.6	245	59.1		23.3	132	35.0		00.7
3	328	31.1	261	00.9		23.3	147	36.3		01.3
4	343	33.5	276	02.6		23.3	162	37.6		01.9
5	358	36.0	291	04.4	+17	23.3	177	38.8	-0	02.4
6	13	38.5	306	06.1	+17	23.2	192	40.1	-0	03.0
7	28	40.9	321	07.8		23.2	207	41.4		03.6
8	43	43.4	336	09.6		23.2	222	42.6		04.2
9	58	45.9	351	11.3		23.2	237	43.9		04.7
10	73	48.3	6	13.1		23.2	252	45.2		05.3
11	88	50.8	21	14.8	+17	23.2	267	46.4	-0	05.9
12	103	53.3	36	16.5	+17	23.1	282	47.7	-0	06.4
13	118	55.7	51	18.2		23.1	297	49.0		07.0
14	133	58.2	66	20.0		23.1	312	50.2		07.6
15	149	00.6	81	21.7		23.1	327	51.5		08.2
16	164	03.1	96	23.4		23.1	342	52.8		08.7
17	179	05.6	111	25.1	+17	23.1	357	54.0	-0	09.3
18	194	08.0	126	26.8	+17	23.1	12	55.3	-0	09.9
19	209	10.5	141	28.5		23.1	27	56.5		10.4
20	224	13.0	156	30.2		23.1	42	57.8		11.0
21	239	15.4	171	31.9		23.1	57	59.1		11.6
22	254	17.9	186	33.6		23.1	73	00.3		12.2
23	269	20.4	201	35.3		23.1	88	01.6		12.7
24	284	22.8	216	37.0	+17	23.1	103	02.9	-0	13.3
Dif	—		+17		0		+13		-6	
									+19	
									+1	
									+24	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 16 ^d 4 PHE	SD: 15 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 04 ^m 8				PMG: 2 ^h 06 ^m				Civil		Náutico		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	48.8	+22 39.9	329	31.2	-12 02.1	99	60 N	21 20	22 49	** **	21 43 12	6 58 86		
1	193	48.7	39.6	344	00.1	-11 51.3	108	58	21 01	22 11	** **	38 15	7 05 83		
2	208	48.6	39.4	358	29.1	40.4	109	56	20 45	21 45	** **	34 18	10 81		
3	223	48.5	39.1	12	58.2	29.5	109	54	32	24	22 56	31 19	16 77		
4	238	48.4	38.9	27	27.3	18.5	110	52	20	21 08	22 20	28 21	20 76		
5	253	48.3	+22 38.6	41	56.6	-11 07.5	110	50	20 10	20 54	21 56	21 25 23	7 24 74		
6	268	48.2	+22 38.4	56	25.9	-10 56.4	111	45	19 49	20 26	21 14	21 18 27	7 33 70		
7	283	48.1	38.1	70	55.3	45.3	111	40	32	20 04	20 45	13 30	41 66		
8	298	48.0	37.8	85	24.8	34.2	111	35	17	19 47	23	08 33	47 63		
9	313	47.9	37.6	99	54.4	23.0	112	30	19 05	32	20 05	21 04 35	7 53 60		
10	328	47.8	37.3	114	24.0	11.8	112	20	18 44	19 08	19 37	20 57 40	8 02 57		
11	343	47.7	+22 37.1	128	53.8	-10 00.5	113	10 N	18 25	18 48	19 15	20 50 44	8 11 52		
12	358	47.6	+22 36.8	143	23.6	-9 49.2	113	0	18 08	18 31	18 57	20 44 48	8 18 49		
13	13	47.5	36.5	157	53.5	37.8	114	10 S	17 52	18 14	41	38 51	26 45		
14	28	47.4	36.3	172	23.5	26.5	113	20	34	17 58	25	32 55	34 42		
15	43	47.3	36.0	186	53.5	15.0	115	30	14	40	09	25 59	44 37		
16	58	47.2	35.7	201	23.7	-9 03.6	114	35	17 02	30	18 01	20 62	49 35		
17	73	47.1	+22 35.5	215	53.9	-8 52.1	115	40	16 48	17 18	17 52	20 16 64	8 55 32		
18	88	47.0	+22 35.2	230	24.2	-8 40.6	115	45	16 32	17 06	17 42	20 10 68	9 02 28		
19	103	46.9	34.9	244	54.5	29.0	116	50	12	16 50	31	03 73	10 25		
20	118	46.8	34.7	259	25.0	17.5	115	52	16 03	43	26	20 00 74	14 23		
21	133	46.7	34.4	273	55.5	-8 05.9	116	54	15 52	35	21	19 57 76	18 21		
22	148	46.6	34.1	288	26.0	-7 54.3	116	56	41	27	15	53 79	23 18		
23	163	46.5	33.9	302	56.7	42.6	117	58	27	17	09	49 81	28 16		
24	178	46.4	+22 33.6	317	27.4	-7 30.9	117	60 S	15 10	16 06	17 02	19 44 84	9 34 13		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 01 ^m 7		Mag: -4.7 PMG: 9 ^h 32 ^m		Mag: +0.9 PMG: 17 ^h 06 ^m		Mag: -2.1 PMG: 9 ^h 15 ^m		Mag: +0.7 PMG: 18 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	284	22.8	216	37.0	103	02.9	220	50.8	82	17.4
1	299	25.3	231	38.6	118	04.1	235	52.7	97	19.9
2	314	27.8	246	40.3	133	05.4	250	54.6	112	22.3
3	329	30.2	261	42.0	148	06.6	265	56.5	127	24.7
4	344	32.7	276	43.7	163	07.9	280	58.4	142	27.2
5	359	35.1	291	45.3	178	09.2	296	00.3	157	29.6
6	14	37.6	306	47.0	193	10.4	311	02.3	172	32.0
7	29	40.1	321	48.7	208	11.7	326	04.2	187	34.4
8	44	42.5	336	50.3	223	12.9	341	06.1	202	36.9
9	59	45.0	351	52.0	238	14.2	356	08.0	217	39.3
10	74	47.5	6	53.6	253	15.4	11	09.9	232	41.7
11	89	49.9	21	55.3	268	16.7	26	11.9	247	44.1
12	104	52.4	36	56.9	283	18.0	41	13.8	262	46.6
13	119	54.9	51	58.6	298	19.2	56	15.7	277	49.0
14	134	57.3	67	00.2	313	20.5	71	17.6	292	51.4
15	149	59.8	82	01.9	328	21.7	86	19.6	307	53.8
16	165	02.3	97	03.5	343	23.0	101	21.5	322	56.3
17	180	04.7	112	05.1	358	24.2	116	23.4	337	58.7
18	195	07.2	127	06.8	13	25.5	131	25.3	353	01.1
19	210	09.6	142	08.4	28	26.8	146	27.2	8	03.5
20	225	12.1	157	10.0	43	28.0	161	29.2	23	06.0
21	240	14.6	172	11.6	58	29.3	176	31.1	38	08.4
22	255	17.0	187	13.2	73	30.5	191	33.0	53	10.8
23	270	19.5	202	14.8	88	31.8	206	34.9	68	13.2
24	285	22.0	217	16.5	103	33.0	221	36.8	83	15.6
Dif	—		+16	0	+13	-6	+19	+1	+24	0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 0			Edad: 17 ^d 4 PHE { SD: 15 ^h 7 PMG: 2 ^h 56 ^m R°: 47 ^m 4 ^h : 57 ^s 5 12 ^h : 57 ^s 2 20 ^h : 56 ^s 9											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	46.4	+22	33.6	317	27.4	-7 30.9	60 N	** **	1 21	2 50	21 55	11	8 24	83
1	193	46.3		33.3	331	58.2 ¹¹⁸	19.2 ¹¹⁷	58	** **	1 59	3 09	53	14	28	79
2	208	46.2		33.1	346	29.1 ¹¹⁹	-7 07.5 ¹¹⁷	56	** **	2 25	25	52	16	31	77
3	223	46.1		32.8	1	00.0 ¹¹⁹	-6 55.8 ¹¹⁷	54	1 14	2 46	38	50	18	33	75
4	238	46.0		32.5	15	31.0 ¹²⁰	44.0 ¹¹⁸	52	1 50	3 02	3 50	49	20	36	73
5	253	45.9	+22	32.2	30	02.1 ¹²¹	-6 32.3 ¹¹⁷	50	2 14	3 16	4 00	21 48	21	8 38	71
6	268	45.8	+22	32.0	44	33.2 ¹²¹	-6 20.5 ¹¹⁸	45	2 56	3 44	4 21	21 45	25	8 43	67
7	283	45.7		31.7	59	04.4 ¹²²	-6 08.7 ¹¹⁸	40	3 25	4 06	38	43	28	47	63
8	298	45.6		31.4	73	35.7 ¹²³	-5 56.9 ¹¹⁸	35	3 47	23	4 53	41	31	50	61
9	313	45.5		31.1	88	07.0 ¹²³	45.0 ¹¹⁹	30	4 05	4 38	5 05	39	34	53	58
10	328	45.4		30.9	102	38.4 ¹²⁴	33.2 ¹¹⁸	20	33	5 02	26	37	37	8 59	53
11	343	45.3	+22	30.6	117	09.9 ¹²⁵	-5 21.3 ¹¹⁹	10 N	4 55	5 22	5 44	21 34	42	9 03	50
12	358	45.2	+22	30.3	131	41.4 ¹²⁵	-5 09.5 ¹¹⁸	0	5 13	5 39	6 01	21 32	45	9 07	46
13	13	45.1		30.0	146	12.9 ¹²⁵	-4 57.6 ¹¹⁹	10 S	29	5 55	18	29	49	11	43
14	28	45.0		29.7	160	44.6 ¹²⁷	45.7 ¹¹⁹	20	5 45	6 12	36	27	52	16	39
15	43	44.9		29.5	175	16.3 ¹²⁷	33.8 ¹¹⁹	30	6 00	30	6 56	24	57	21	34
16	58	44.8		29.2	189	48.0 ¹²⁷	21.9 ¹¹⁹	35	09	40	7 08	22	60	24	32
17	73	44.7	+22	28.9	204	19.8 ¹²⁸	-4 10.0 ¹¹⁹	40	6 17	6 51	7 21	21 20	63	9 27	29
18	88	44.6	+22	28.6	218	51.7 ¹²⁹	-3 58.1 ¹¹⁹	45	6 27	7 04	7 37	21 18	66	9 30	27
19	103	44.5		28.3	233	23.6 ¹²⁹	46.2 ¹¹⁹	50	38	19	7 57	16	69	35	22
20	118	44.4		28.1	247	55.6 ¹³⁰	34.3 ¹¹⁹	52	43	26	8 06	14	72	37	20
21	133	44.3		27.8	262	27.6 ¹³⁰	22.4 ¹¹⁹	54	48	34	17	13	73	39	19
22	148	44.2		27.5	276	59.7 ¹³¹	-3 10.5 ¹¹⁹	56	6 54	42	29	12	75	41	17
23	163	44.1		27.2	291	31.8 ¹³¹	-2 58.6 ¹¹⁹	58	7 00	7 52	42	10	78	44	14
24	178	44.1	+22	26.9	306	03.9 ¹³¹	-2 46.7 ¹¹⁹	60 S	7 07	8 03	8 58	21 08	81	9 47	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 4 ^h 57 ^m 7		Mag: -4.7 PMG: 9 ^h 30 ^m		Mag: +0.9 PMG: 17 ^h 04 ^m		Mag: -2.1 PMG: 9 ^h 12 ^m		Mag: +0.7 PMG: 18 ^h 24 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	285	22.0	217	16.5	+17 23.4	103	33.0	-0 27.1	221	36.8	+20 27.9	83	15.6	-6 32.9	
1	300	24.4	232	18.1	23.4	118	34.3	27.6	236	38.8	28.0	98	18.1	32.9	
2	315	26.9	247	19.7	23.4	133	35.5	28.2	251	40.7	28.1	113	20.5	32.9	
3	330	29.4	262	21.3	23.4	148	36.8	28.8	266	42.6	28.2	128	22.9	33.0	
4	345	31.8	277	22.9	23.5	163	38.1	29.4	281	44.5	28.3	143	25.3	33.0	
5	0	34.3	292	24.5	+17 23.5	178	39.3	-0 29.9	296	46.5	+20 28.4	158	27.8	-6 33.0	
6	15	36.7	307	26.0	+17 23.5	193	40.6	-0 30.5	311	48.4	+20 28.5	173	30.2	-6 33.0	
7	30	39.2	322	27.6	23.6	208	41.8	31.1	326	50.3	28.6	188	32.6	33.1	
8	45	41.7	337	29.2	23.6	223	43.1	31.7	341	52.2	28.6	203	35.0	33.1	
9	60	44.1	352	30.8	23.6	238	44.3	32.2	356	54.1	28.7	218	37.5	33.1	
10	75	46.6	7	32.4	23.7	253	45.6	32.8	11	56.1	28.8	233	39.9	33.2	
11	90	49.1	22	33.9	+17 23.7	268	46.8	-0 33.4	26	58.0	+20 28.9	248	42.3	-6 33.2	
12	105	51.5	37	35.5	+17 23.7	283	48.1	-0 34.0	41	59.9	+20 29.0	263	44.7	-6 33.2	
13	120	54.0	52	37.1	23.8	298	49.3	34.5	57	01.8	29.1	278	47.1	33.2	
14	135	56.5	67	38.6	23.8	313	50.6	35.1	72	03.8	29.2	293	49.6	33.3	
15	150	58.9	82	40.2	23.8	328	51.8	35.7	87	05.7	29.3	308	52.0	33.3	
16	166	01.4	97	41.8	23.9	343	53.1	36.3	102	07.6	29.4	323	54.4	33.3	
17	181	03.9	112	43.3	+17 23.9	358	54.3	-0 36.8	117	09.5	+20 29.5	338	56.8	-6 33.4	
18	196	06.3	127	44.9	+17 24.0	13	55.6	-0 37.4	132	11.5	+20 29.6	353	59.2	-6 33.4	
19	211	08.8	142	46.4	24.0	28	56.8	38.0	147	13.4	29.6	9	01.7	33.4	
20	226	11.2	157	48.0	24.0	43	58.1	38.6	162	15.3	29.7	24	04.1	33.4	
21	241	13.7	172	49.5	24.1	58	59.3	39.1	177	17.2	29.8	39	06.5	33.5	
22	256	16.2	187	51.0	24.1	74	00.6	39.7	192	19.1	29.9	54	08.9	33.5	
23	271	18.6	202	52.6	24.2	89	01.8	40.3	207	21.1	30.0	69	11.3	33.5	
24	286	21.1	217	54.1	+17 24.2	104	03.1	-0 40.9	222	23.0	+20 30.1	84	13.8	-6 33.6	
Dif	—		+16		0	+13		-6	+19		+1	+24		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 18 ^d 4	PHE {	4 ^h : 56 ^m 6 12 ^h : 56 ^m 3 20 ^h : 56 ^m 1			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 1								PMG: 3 ^h 43 ^m			Rº: 44 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	44.1	+22 26.9	306	03.9	-2 46.7		60 N	21 17	22 44	** **	22 06	11	9 47	80
1	193	44.0	26.6	320	36.2 ¹³³	34.8 ¹¹⁹		58	20 59	22 07	** **	07 13		47 77	
2	208	43.9	26.3	335	08.4 ¹³²	22.9 ¹¹⁹		56	44	21 42	** **	08 15		48 74	
3	223	43.8	26.1	349	40.8 ¹³⁴	-2 11.0 ¹¹⁹		54	31	22	22 51	08 18		48 73	
4	238	43.7	25.8	4	13.1 ¹³³	-1 59.1 ¹¹⁹		52	19	21 06	22 17	09 19		49 70	
5	253	43.6	+22 25.5	18	45.5 ¹³⁴	-1 47.2 ¹¹⁹		50	20 09	20 52	21 54	22 09	21	9 49	69
6	268	43.5	+22 25.2	33	18.0 ¹³⁵	-1 35.3 ¹¹⁹		45	19 48	20 24	21 12	22 10	25	9 50	64
7	283	43.4	24.9	47	50.5 ¹³⁵	23.5 ¹¹⁸		40	31	20 03	20 44	11 28		50 62	
8	298	43.3	24.6	62	23.0 ¹³⁵	-1 11.6 ¹¹⁹		35	17	19 46	22	12 31		51 58	
9	313	43.2	24.3	76	55.6 ¹³⁶	-0 59.7 ¹¹⁹		30	19 04	32	20 04	13 33		51 56	
10	328	43.1	24.0	91	28.2 ¹³⁶	47.9 ¹¹⁸		20	18 44	19 08	19 37	14 37		52 52	
11	343	43.0	+22 23.7	106	00.9 ¹³⁷	-0 36.1 ¹¹⁸		10 N	18 25	18 48	19 15	22 16	40	9 53	48
12	358	42.9	+22 23.4	120	33.6 ¹³⁷	-0 24.2 ¹¹⁹		0	18 09	18 31	18 57	22 17	44	9 53	45
13	13	42.8	23.1	135	06.4 ¹³⁸	12.4 ¹¹⁸		10 S	17 52	18 15	41	18 47		54 41	
14	28	42.7	22.8	149	39.1 ¹³⁷	-0 00.7 ¹¹⁷		20	35	17 58	26	19 51		55 37	
15	43	42.6	22.5	164	11.9 ¹³⁸	+0 11.1 ¹¹⁸		30	14	41	10	21 55		55 33	
16	58	42.5	22.2	178	44.8 ¹³⁹	22.9 ¹¹⁸		35	17 03	31	18 02	22 57		56 30	
17	73	42.5	+22 21.9	193	17.7 ¹³⁹	+0 34.6 ¹¹⁷		40	16 49	17 20	17 53	22 23	60	9 56	28
18	88	42.4	+22 21.6	207	50.6 ¹³⁹	+0 46.4 ¹¹⁸		45	16 34	17 07	17 44	22 24	63	9 57	25
19	103	42.3	21.3	222	23.5 ¹³⁹	+0 58.1 ¹¹⁷		50	14	16 52	33	25 67		57 21	
20	118	42.2	21.0	236	56.5 ¹⁴⁰	+1 09.8 ¹¹⁷		52	16 05	45	28	26 69		57 20	
21	133	42.1	20.7	251	29.5 ¹⁴⁰	21.4 ¹¹⁶		54	15 54	37	23	26 72		58 17	
22	148	42.0	20.4	266	02.6 ¹⁴¹	33.1 ¹¹⁷		56	43	29	17	27 73		58 16	
23	163	41.9	20.1	280	35.7 ¹⁴¹	44.7 ¹¹⁶		58	29	19	11	28 76		58 14	
24	178	41.8	+22 19.8	295	08.8 ¹⁴¹	+1 56.3 ¹¹⁶		60 S	15 13	16 09	17 04	22 29	78	9 59	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.7		Mag: +0.9		Mag: -2.1		Mag: +0.7	
	4 ^h 53 ^m 8		PMG: 9 ^h 27 ^m		PMG: 17 ^h 02 ^m		PMG: 9 ^h 09 ^m		PMG: 18 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	286	21.1	217	54.1	104	03.1	222	23.0	84	13.8
1	301	23.6	232	55.6	119	04.3	237	24.9	99	16.2
2	316	26.0	247	57.2	134	05.6	252	26.8	114	18.6
3	331	28.5	262	58.7	149	06.8	267	28.8	129	21.0
4	346	31.0	278	00.2	164	08.1	282	30.7	144	23.4
5	1	33.4	293	01.7	179	09.3	297	32.6	159	25.9
6	16	35.9	308	03.2	194	10.6	312	34.5	174	28.3
7	31	38.4	323	04.8	209	11.8	327	36.5	189	30.7
8	46	40.8	338	06.3	224	13.0	342	38.4	204	33.1
9	61	43.3	353	07.8	239	14.3	357	40.3	219	35.5
10	76	45.7	8	09.3	254	15.5	12	42.2	234	37.9
11	91	48.2	23	10.8	269	16.8	27	44.2	249	40.4
12	106	50.7	38	12.3	284	18.0	42	46.1	264	42.8
13	121	53.1	53	13.8	299	19.3	57	48.0	279	45.2
14	136	55.6	68	15.3	314	20.5	72	50.0	294	47.6
15	151	58.1	83	16.7	329	21.8	87	51.9	309	50.0
16	167	00.5	98	18.2	344	23.0	102	53.8	324	52.5
17	182	03.0	113	19.7	359	24.2	117	55.7	339	54.9
18	197	05.5	128	21.2	14	25.5	132	57.7	354	57.3
19	212	07.9	143	22.7	29	26.7	147	59.6	9	59.7
20	227	10.4	158	24.1	44	28.0	163	01.5	25	02.1
21	242	12.8	173	25.6	59	29.2	178	03.4	40	04.5
22	257	15.3	188	27.1	74	30.5	193	05.4	55	07.0
23	272	17.8	203	28.5	89	31.7	208	07.3	70	09.4
24	287	20.2	218	30.0	104	32.9	223	09.2	85	11.8
Dif	—		+15	+1	+12	-6	+19	+1	+24	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 05 ^m 3				Edad: 19 ^d 4 PHE { 4 ^h : 55 ['] 8 12 ^h : 55 ['] 6 20 ^h : 55 ['] 4 PMG: 4 ^h 27 ^m R°: 44 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.8	+22	19.8	295	08.8	+1	56.3	60 N	** *	1 27	2 53	22 17	12	11 07	77	
1	193	41.7		19.5	309	41.9 ¹⁴¹	+2	07.9 ¹¹⁶	58	** *	2 03	3 12	20 15		04 75		
2	208	41.6		19.2	324	15.0 ¹⁴¹		19.5 ¹¹⁶	56	** *	29	27	23 17		02 73		
3	223	41.5		18.9	338	48.2 ¹⁴²		31.0 ¹¹⁵	54	1 20	2 48	40	26 18		11 01	70	
4	238	41.4		18.6	353	21.4 ¹⁴²		42.6 ¹¹⁶	52	1 53	3 05	3 52	28 21		10 59	68	
5	253	41.4	+22	18.3	7	54.6 ¹⁴²	+2	54.1 ¹¹⁵	50	2 17	3 19	4 02	22 30	22	10 58	66	
6	268	41.3	+22	18.0	22	27.9 ¹⁴³	+3	05.5 ¹¹⁴	45	2 58	3 46	4 23	22 35	26	10 54	63	
7	283	41.2		17.7	37	01.2 ¹⁴³		17.0 ¹¹⁵	40	3 27	4 07	40	39 29		52 59		
8	298	41.1		17.4	51	34.4 ¹⁴²		28.4 ¹¹⁴	35	3 49	25	4 54	43 31		49 57		
9	313	41.0		17.1	66	07.8 ¹⁴⁴		39.8 ¹¹⁴	30	4 06	4 39	5 06	46 33		47 55		
10	328	40.9		16.8	80	41.1 ¹⁴³	+3	51.1 ¹¹³	20	34	5 03	27	51 37		44 51		
11	343	40.8	+22	16.5	95	14.4 ¹⁴³	+4	02.5 ¹¹⁴	10 N	4 55	5 22	5 45	22 56	41	10 41	47	
12	358	40.7	+22	16.2	109	47.8 ¹⁴⁴	+4	13.8 ¹¹³	0	5 13	5 39	6 02	23 01	43	10 38	44	
13	13	40.6		15.8	124	21.2 ¹⁴⁴		25.0 ¹¹²	10 S	29	5 56	18	05 47		35 41		
14	28	40.5		15.5	138	54.6 ¹⁴⁴		36.3 ¹¹³	20	5 45	6 12	36	10 50		32 37		
15	43	40.5		15.2	153	28.0 ¹⁴⁴		47.5 ¹¹²	30	6 00	30	6 56	16 54		28 33		
16	58	40.4		14.9	168	01.4 ¹⁴⁴	+4	58.7 ¹¹²	35	08	40	7 07	19 57		26 31		
17	73	40.3	+22	14.6	182	34.9 ¹⁴⁵	+5	09.8 ¹¹¹	40	6 17	6 51	7 21	23 23	59	10 24	28	
18	88	40.2	+22	14.3	197	08.3 ¹⁴⁴	+5	20.9 ¹¹¹	45	6 26	7 03	7 37	23 27	62	10 22	25	
19	103	40.1		14.0	211	41.8 ¹⁴⁵		32.0 ¹¹¹	50	37	18	7 56	32 66		18 22		
20	118	40.0		13.6	226	15.3 ¹⁴⁵		43.1 ¹¹¹	52	42	25	8 05	35 67		17 20		
21	133	39.9		13.3	240	48.7 ¹⁴⁴	+5	54.1 ¹¹⁰	54	47	33	15	38 69		15 18		
22	148	39.8		13.0	255	22.2 ¹⁴⁵	+6	05.0 ¹⁰⁹	56	53	41	27	40 72		14 16		
23	163	39.7		12.7	269	55.7 ¹⁴⁵		16.0 ¹¹⁰	58	6 59	7 50	40	44 74		12 14		
24	178	39.7	+22	12.4	284	29.2 ¹⁴⁵	+6	26.9 ¹⁰⁹	60 S	7 06	8 01	8 56	23 47	77	10 10	11	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 49 ^m 9		Mag: -4.7 PMG: 9 ^h 25 ^m			Mag: +0.9 PMG: 17 ^h 00 ^m			Mag: -2.1 PMG: 9 ^h 06 ^m			Mag: +0.7 PMG: 18 ^h 16 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	287	20.2	218	30.0	+17	25.6	104	32.9	-0	54.7	223	09.2	+20	32.2			
1	302	22.7	233	31.4		25.7	119	34.2		55.3	238	11.1		32.3			
2	317	25.2	248	32.9		25.7	134	35.4		55.9	253	13.1		32.4			
3	332	27.6	263	34.4		25.8	149	36.7		56.5	268	15.0		32.5			
4	347	30.1	278	35.8		25.9	164	37.9		57.1	283	16.9		32.6			
5	2	32.6	293	37.2	+17	26.0	179	39.1	-0	57.6	298	18.9	+20	32.7			
6	17	35.0	308	38.7	+17	26.0	194	40.4	-0	58.2	313	20.8	+20	32.8			
7	32	37.5	323	40.1		26.1	209	41.6		58.8	328	22.7		32.8			
8	47	40.0	338	41.6		26.2	224	42.9	-0	59.4	343	24.6		32.9			
9	62	42.4	353	43.0		26.3	239	44.1	-1	00.0	358	26.6		33.0			
10	77	44.9	8	44.4		26.3	254	45.3	-1	00.5	13	28.5		33.1			
11	92	47.3	23	45.9	+17	26.4	269	46.6	-1	01.1	28	30.4	+20	33.2			
12	107	49.8	38	47.3	+17	26.5	284	47.8	-1	01.7	43	32.4	+20	33.3			
13	122	52.3	53	48.7		26.6	299	49.1		02.3	58	34.3		33.4			
14	137	54.7	68	50.1		26.6	314	50.3		02.9	73	36.2		33.5			
15	152	57.2	83	51.5		26.7	329	51.5		03.4	88	38.1		33.5			
16	167	59.7	98	53.0		26.8	344	52.8		04.0	103	40.1		33.6			
17	183	02.1	113	54.4	+17	26.9	359	54.0	-1	04.6	118	42.0	+20	33.7			
18	198	04.6	128	55.8	+17	27.0	14	55.2	-1	05.2	133	43.9	+20	33.8			
19	213	07.1	143	57.2		27.1	29	56.5		05.8	148	45.9		33.9			
20	228	09.5	158	58.6		27.1	44	57.7		06.3	163	47.8		34.0			
21	243	12.0	174	00.0		27.2	59	59.0		06.9	178	49.7		34.1			
22	258	14.5	189	01.4		27.3	75	00.2		07.5	193	51.6		34.2			
23	273	16.9	204	02.8		27.4	90	01.4		08.1	208	53.6		34.2			
24	288	19.4	219	04.1	+17	27.5	105	02.7	-1	08.7	223	55.5	+20	34.3			
Dif	—		+14			+1	+12			-6	+19			+1	+24		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 05 ^m 4			Edad: 20 ^d 4 PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 SD: 15/1 PMG: 5 ^h 11 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	39.7	+22	12.4	284	29.2	+6 26.9	60 N	21 14	22 38	** **	22 29	14	12 24 76
1	193	39.6		12.1	299	02.8 ¹⁴⁶	37.7 ¹⁰⁸	58	20 57	22 04	** **	35	16	19 73
2	208	39.5		11.7	313	36.3 ¹⁴⁵	48.6 ¹⁰⁹	56	42	21 39	** **	40	19	15 71
3	223	39.4		11.4	328	09.8 ¹⁴⁵	+6 59.3 ¹⁰⁷	54	29	20	22 46	44	21	11 69
4	238	39.3		11.1	342	43.3 ¹⁴⁵	+7 10.1 ¹⁰⁸	52	18	21 04	22 14	49	22	07 67
5	253	39.2	+22	10.8	357	16.9 ¹⁴⁶	+7 20.8 ¹⁰⁷	50	20 08	20 50	21 51	22 52	25	12 04 65
6	268	39.1	+22	10.4	11	50.4 ¹⁴⁵	+7 31.5 ¹⁰⁷	45	19 47	20 23	21 11	23 01	27	11 57 62
7	283	39.1		10.1	26	23.9 ¹⁴⁵	42.1 ¹⁰⁶	40	30	20 02	20 43	08	30	51 59
8	298	39.0		09.8	40	57.5 ¹⁴⁶	+7 52.7 ¹⁰⁶	35	16	19 45	21	14	32	46 57
9	313	38.9		09.5	55	31.0 ¹⁴⁵	+8 03.2 ¹⁰⁵	30	19 04	31	20 04	19	35	42 54
10	328	38.8		09.1	70	04.6 ¹⁴⁶	13.7 ¹⁰⁵	20	18 43	19 08	19 36	28	39	35 50
11	343	38.7	+22	08.8	84	38.1 ¹⁴⁵	+8 24.2 ¹⁰⁵	10 N	18 26	18 48	19 15	23 37	41	11 28 47
12	358	38.6	+22	08.5	99	11.6 ¹⁴⁵	+8 34.6 ¹⁰⁴	0	18 09	18 31	18 57	23 44	44	11 22 44
13	13	38.5		08.2	113	45.2 ¹⁴⁶	45.0 ¹⁰⁴	10 S	17 53	18 15	41	23 52	47	16 40
14	28	38.5		07.8	128	18.7 ¹⁴⁵	+8 55.3 ¹⁰³	20	35	17 59	26	** ** *	**	09 37
15	43	38.4		07.5	142	52.2 ¹⁴⁵	+9 05.6 ¹⁰³	30	15	42	11	** ** *	**	11 01 34
16	58	38.3		07.2	157	25.7 ¹⁴⁵	15.8 ¹⁰²	35	17 04	32	18 03	** ** *	**	10 57 32
17	73	38.2	+22	06.9	171	59.2 ¹⁴⁵	+9 26.0 ¹⁰²	40	16 51	17 21	17 54	** ** *	**	10 52 30
18	88	38.1	+22	06.5	186	32.7 ¹⁴⁵	+9 36.1 ¹⁰¹	45	16 35	17 08	17 45	** ** *	**	10 47 26
19	103	38.0		06.2	201	06.2 ¹⁴⁵	46.2 ¹⁰¹	50	16	16 54	34	** ** *	**	40 23
20	118	38.0		05.9	215	39.7 ¹⁴⁵	+9 56.2 ¹⁰⁰	52	16 07	47	30	** ** *	**	37 21
21	133	37.9		05.5	230	13.2 ¹⁴⁵	+10 06.2 ¹⁰⁰	54	15 57	39	25	** ** *	**	33 20
22	148	37.8		05.2	244	46.7 ¹⁴⁵	16.2 ¹⁰⁰	56	45	31	19	** ** *	**	30 17
23	163	37.7		04.9	259	20.2 ¹⁴⁵	26.1 ⁹⁹	58	32	22	13	** ** *	**	26 15
24	178	37.6	+22	04.5	273	53.6 ¹⁴⁴	+10 35.9 ⁹⁸	60 S	15 16	16 11	17 06	** ** *	**	10 21 13
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 45 ^m 9		Mag: -4.7 PMG: 9 ^h 23 ^m		Mag: +0.9 PMG: 16 ^h 58 ^m		Mag: -2.1 PMG: 9 ^h 03 ^m		Mag: +0.7 PMG: 18 ^h 12 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	288	19.4	219	04.1	105	02.7	-1 08.7	223	55.5	+20 34.3	86	09.7	-6 35.0	
1	303	21.8	234	05.5	120	03.9	09.2	238	57.4	34.4	101	12.1	35.1	
2	318	24.3	249	06.9	135	05.1	09.8	253	59.4	34.5	116	14.5	35.1	
3	333	26.8	264	08.3	150	06.4	10.4	269	01.3	34.6	131	16.9	35.1	
4	348	29.2	279	09.7	165	07.6	11.0	284	03.2	34.7	146	19.4	35.2	
5	3	31.7	294	11.1	180	08.8	-1 11.6	299	05.2	+20 34.8	161	21.8	-6 35.2	
6	18	34.2	309	12.4	195	10.1	-1 12.1	314	07.1	+20 34.8	176	24.2	-6 35.2	
7	33	36.6	324	13.8	210	11.3	12.7	329	09.0	34.9	191	26.6	35.3	
8	48	39.1	339	15.2	225	12.5	13.3	344	10.9	35.0	206	29.0	35.3	
9	63	41.6	354	16.5	240	13.8	13.9	359	12.9	35.1	221	31.4	35.3	
10	78	44.0	9	17.9	255	15.0	14.5	14	14.8	35.2	236	33.8	35.4	
11	93	46.5	24	19.2	270	16.2	-1 15.1	29	16.7	+20 35.3	251	36.2	-6 35.4	
12	108	48.9	39	20.6	285	17.5	-1 15.6	44	18.7	+20 35.4	266	38.6	-6 35.4	
13	123	51.4	54	22.0	300	18.7	16.2	59	20.6	35.5	281	41.1	35.5	
14	138	53.9	69	23.3	315	19.9	16.8	74	22.5	35.5	296	43.5	35.5	
15	153	56.3	84	24.6	330	21.2	17.4	89	24.5	35.6	311	45.9	35.5	
16	168	58.8	99	26.0	345	22.4	18.0	104	26.4	35.7	326	48.3	35.6	
17	184	01.3	114	27.3	0	23.6	-1 18.5	119	28.3	+20 35.8	341	50.7	-6 35.6	
18	199	03.7	129	28.7	15	24.8	-1 19.1	134	30.3	+20 35.9	356	53.1	-6 35.6	
19	214	06.2	144	30.0	30	26.1	19.7	149	32.2	36.0	11	55.5	35.7	
20	229	08.7	159	31.3	45	27.3	20.3	164	34.1	36.1	26	57.9	35.7	
21	244	11.1	174	32.7	60	28.5	20.9	179	36.1	36.1	42	00.3	35.7	
22	259	13.6	189	34.0	75	29.8	21.5	194	38.0	36.2	57	02.7	35.8	
23	274	16.1	204	35.3	90	31.0	22.0	209	39.9	36.3	72	05.1	35.8	
24	289	18.5	219	36.6	105	32.2	-1 22.6	224	41.9	+20 36.4	87	07.6	-6 35.8	
Dif	—		+14		+12		-6	+19		+1	+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 4	PHE {	R°: 44 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 05 ^m 6													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	37.6	+22 04.5	273	53.6	+10 35.9	98	60 N	** **	1 33	2 57	22 43 17	13 40 75	
1	193	37.5	04.2	288	27.1 ¹⁴⁵	45.7	98	58	** **	2 08	3 15	51 20	32 72	
2	208	37.5	03.9	303	00.5 ¹⁴⁴	+10 55.4	97	56	** **	32	30	22 59 22	26 69	
3	223	37.4	03.5	317	33.9 ¹⁴⁴	+11 05.1	97	54	1 26	2 51	42	23 05 25	20 67	
4	238	37.3	03.2	332	07.3 ¹⁴⁴	14.8	97	52	1 57	3 07	3 54	11 26	14 66	
5	253	37.2	+22 02.8	346	40.7 ¹⁴⁴	+11 24.3	95	50	2 20	3 21	4 04	23 17 27	13 09 64	
6	268	37.1	+22 02.5	1	14.1 ¹⁴⁴	+11 33.9	96	45	3 00	3 48	4 24	23 28 31	12 59 60	
7	283	37.0	02.2	15	47.4 ¹⁴³	43.3	94	40	28	4 09	41	38 33	50 58	
8	298	37.0	01.8	30	20.8 ¹⁴⁴	+11 52.8	95	35	3 50	26	4 55	46 36	43 55	
9	313	36.9	01.5	44	54.1 ¹⁴³	+12 02.1	93	30	4 07	4 40	5 07	23 54 37	36 53	
10	328	36.8	01.1	59	27.4 ¹⁴³	11.4	93	20	35	5 03	28	** ** *	25 50	
11	343	36.7	+22 00.8	74	00.7 ¹⁴³	+12 20.7	93	10 N	4 56	5 23	5 45	** ** *	12 15 47	
12	358	36.6	+22 00.5	88	34.0 ¹⁴³	+12 29.9	92	0	5 14	5 40	6 02	** ** *	12 06 44	
13	13	36.6	+22 00.1	103	07.3 ¹⁴³	39.0	91	10 S	30	5 56	18	** ** *	11 56 42	
14	28	36.5	+21 59.8	117	40.5 ¹⁴²	48.1	91	20	5 45	6 12	36	0 00 51	46 39	
15	43	36.4	59.4	132	13.7 ¹⁴²	+12 57.1	90	30	6 00	29	6 55	10 54	35 36	
16	58	36.3	59.1	146	46.9 ¹⁴²	+13 06.1	90	35	08	39	7 07	16 55	29 34	
17	73	36.2	+21 58.7	161	20.1 ¹⁴²	+13 15.0	89	40	6 16	6 50	7 20	0 22 58	11 22 31	
18	88	36.2	+21 58.4	175	53.3 ¹⁴²	+13 23.8	88	45	6 26	7 02	7 35	0 29 61	11 13 29	
19	103	36.1	58.0	190	26.4 ¹⁴¹	32.6	88	50	36	17	7 55	38 65	11 03 26	
20	118	36.0	57.7	204	59.5 ¹⁴¹	41.3	87	52	41	24	8 04	42 67	10 58 24	
21	133	35.9	57.3	219	32.6 ¹⁴¹	50.0	87	54	46	31	14	47 68	53 22	
22	148	35.8	57.0	234	05.6 ¹⁴⁰	+13 58.6	86	56	51	39	25	52 70	47 21	
23	163	35.8	56.6	248	38.7 ¹⁴¹	+14 07.1	85	58	6 57	49	38	0 58 72	41 18	
24	178	35.7	+21 56.3	263	11.7 ¹⁴⁰	+14 15.6	85	60 S	7 04	7 59	8 54	1 04 75	10 34 15	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 42 ^m 0		Mag: -4.7 PMG: 9 ^h 21 ^m			Mag: +0.9 PMG: 16 ^h 56 ^m			Mag: -2.1 PMG: 9 ^h 00 ^m			Mag: +0.7 PMG: 18 ^h 09 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	289	18.5	219	36.6	+17 29.8	105	32.2	-1 22.6	224	41.9	+20 36.4	87	07.6	-6 35.8
1	304	21.0	234	38.0	29.9	120	33.5	23.2	239	43.8	36.5	102	10.0	35.9
2	319	23.4	249	39.3	30.1	135	34.7	23.8	254	45.7	36.6	117	12.4	35.9
3	334	25.9	264	40.6	30.2	150	35.9	24.4	269	47.7	36.7	132	14.8	35.9
4	349	28.4	279	41.9	30.3	165	37.1	25.0	284	49.6	36.7	147	17.2	36.0
5	4	30.8	294	43.2	+17 30.4	180	38.4	-1 25.5	299	51.5	+20 36.8	162	19.6	-6 36.0
6	19	33.3	309	44.5	+17 30.5	195	39.6	-1 26.1	314	53.5	+20 36.9	177	22.0	-6 36.0
7	34	35.8	324	45.8	30.6	210	40.8	26.7	329	55.4	37.0	192	24.4	36.1
8	49	38.2	339	47.1	30.7	225	42.0	27.3	344	57.3	37.1	207	26.8	36.1
9	64	40.7	354	48.4	30.8	240	43.3	27.9	359	59.3	37.2	222	29.2	36.1
10	79	43.2	9	49.7	30.9	255	44.5	28.5	15	01.2	37.3	237	31.6	36.2
11	94	45.6	24	51.0	+17 31.1	270	45.7	-1 29.0	30	03.1	+20 37.3	252	34.0	-6 36.2
12	109	48.1	39	52.3	+17 31.2	285	46.9	-1 29.6	45	05.1	+20 37.4	267	36.4	-6 36.3
13	124	50.5	54	53.6	31.3	300	48.2	30.2	60	07.0	37.5	282	38.8	36.3
14	139	53.0	69	54.8	31.4	315	49.4	30.8	75	08.9	37.6	297	41.3	36.3
15	154	55.5	84	56.1	31.5	330	50.6	31.4	90	10.9	37.7	312	43.7	36.4
16	169	57.9	99	57.4	31.6	345	51.8	32.0	105	12.8	37.8	327	46.1	36.4
17	185	00.4	114	58.7	+17 31.8	0	53.1	-1 32.5	120	14.7	+20 37.9	342	48.5	-6 36.4
18	200	02.9	129	59.9	+17 31.9	15	54.3	-1 33.1	135	16.7	+20 37.9	357	50.9	-6 36.5
19	215	05.3	145	01.2	32.0	30	55.5	33.7	150	18.6	38.0	12	53.3	36.5
20	230	07.8	160	02.5	32.1	45	56.7	34.3	165	20.5	38.1	27	55.7	36.5
21	245	10.3	175	03.7	32.2	60	58.0	34.9	180	22.5	38.2	42	58.1	36.6
22	260	12.7	190	05.0	32.4	75	59.2	35.5	195	24.4	38.3	58	00.5	36.6
23	275	15.2	205	06.3	32.5	90	00.4	36.1	210	26.3	38.4	73	02.9	36.6
24	290	17.7	220	07.5	+17 32.6	106	01.6	-1 36.6	225	28.3	+20 38.4	88	05.3	-6 36.7
Dif	—		+13	+1		+12	-6		+19	+1		+24	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 22 ^d 4 PHE { 4 ^h : 54 ^h /4 12 ^h : 54 ^h /3 20 ^h : 54 ^h /2											
	PMG: 12 ^h 05 ^m 7			SD: 14'8 PMG: 6 ^h 39 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	35.7	+21 56.3	263	11.7	+14 15.6	84	60 N	21 11	22 32	** **	23 00 24		14 55 71	
1	193	35.6	55.9	277	44.7 ¹⁴⁰	24.0	84	58	20 54	22 00	** **	11 26		44 69	
2	208	35.5	55.6	292	17.7 ¹⁴⁰	32.4	84	56	39	21 36	** **	21 28		35 67	
3	223	35.5	55.2	306	50.6 ¹³⁹	40.7	83	54	27	17	22 40	30 29		27 65	
4	238	35.4	54.9	321	23.5 ¹³⁹	48.9	82	52	16	21 02	22 10	37 31		20 63	
5	253	35.3	+21 54.5	335	56.4 ¹³⁹	+14 57.0	81	50	20 06	20 49	21 48	23 44 32		14 13 62	
6	268	35.2	+21 54.2	350	29.3 ¹³⁹	+15 05.1	81	45	19 46	20 22	21 09	23 59 35		13 59 59	
7	283	35.1	53.8	5	02.1 ¹³⁸	13.1	80	40	29	20 01	20 41	** ** *		48 56	
8	298	35.1	53.5	19	34.9 ¹³⁸	21.1	80	35	15	19 45	20	** ** *		38 55	
9	313	35.0	53.1	34	07.7 ¹³⁸	29.0	79	30	19 03	30	20 03	** ** *		29 54	
10	328	34.9	52.8	48	40.4 ¹³⁷	36.8	78	20	18 43	19 07	19 36	0 07 40		15 50	
11	343	34.8	+21 52.4	63	13.1 ¹³⁷	+15 44.5	77	10 N	18 26	18 48	19 15	0 18 43		13 02 48	
12	358	34.8	+21 52.0	77	45.8 ¹³⁷	+15 52.2	77	0	18 09	18 32	18 57	0 28 46		12 50 46	
13	13	34.7	51.7	92	18.5 ¹³⁷	+15 59.8	76	10 S	17 53	16	42	39 48		38 44	
14	28	34.6	51.3	106	51.1 ¹³⁶	+16 07.3	75	20	36	18 00	27	0 51 50		25 42	
15	43	34.5	51.0	121	23.7 ¹³⁶	14.8	75	30	16	17 42	12	1 04 53		11 38	
16	58	34.5	50.6	135	56.3 ¹³⁶	22.2	74	35	17 05	33	18 04	11 56		12 03 36	
17	73	34.4	+21 50.2	150	28.8 ¹³⁵	+16 29.5	73	40	16 52	17 22	17 56	1 20 57		11 53 35	
18	88	34.3	+21 49.9	165	01.3 ¹³⁵	+16 36.8	73	45	16 37	17 10	17 46	1 30 60		11 42 33	
19	103	34.2	49.5	179	33.8 ¹³⁵	43.9	71	50	18	16 55	36	43 63		29 29	
20	118	34.2	49.2	194	06.2 ¹³⁴	51.1	72	52	16 09	49	31	49 64		22 29	
21	133	34.1	48.8	208	38.6 ¹³⁴	+16 58.1	70	54	15 59	41	26	1 55 66		15 27	
22	148	34.0	48.4	223	11.0 ¹³⁴	+17 05.0	69	56	48	33	21	2 02 68		11 08 24	
23	163	33.9	48.1	237	43.3 ¹³³	11.9	69	58	35	24	15	10 71		10 59 23	
24	178	33.9	+21 47.7	252	15.6 ¹³³	+17 18.7	68	60 S	15 20	16 14	17 09	2 19 74		10 49 20	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 38 ^m 1		Mag: -4.7 PMG: 9 ^h 19 ^m			Mag: +1.0 PMG: 16 ^h 55 ^m			Mag: -2.1 PMG: 8 ^h 57 ^m			Mag: +0.7 PMG: 18 ^h 05 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	290	17.7	220 07.5	+17 32.6	106 01.6	-1 36.6	225 28.3	+20 38.4	88 05.3	-6 36.7					
1	305	20.1	235 08.8	32.7	121 02.9	37.2	240 30.2	38.5	103 07.7	36.7					
2	320	22.6	250 10.0	32.9	136 04.1	37.8	255 32.2	38.6	118 10.1	36.7					
3	335	25.0	265 11.3	33.0	151 05.3	38.4	270 34.1	38.7	133 12.5	36.8					
4	350	27.5	280 12.5	33.1	166 06.5	39.0	285 36.0	38.8	148 14.9	36.8					
5	5	30.0	295 13.7	+17 33.2	181 07.7	-1 39.6	300 38.0	+20 38.9	163 17.3	-6 36.8					
6	20	32.4	310 15.0	+17 33.4	196 09.0	-1 40.2	315 39.9	+20 39.0	178 19.7	-6 36.9					
7	35	34.9	325 16.2	33.5	211 10.2	40.7	330 41.8	39.0	193 22.1	36.9					
8	50	37.4	340 17.5	33.6	226 11.4	41.3	345 43.8	39.1	208 24.5	37.0					
9	65	39.8	355 18.7	33.8	241 12.6	41.9	0 45.7	39.2	223 26.9	37.0					
10	80	42.3	10 19.9	33.9	256 13.8	42.5	15 47.6	39.3	238 29.3	37.0					
11	95	44.8	25 21.1	+17 34.0	271 15.1	-1 43.1	30 49.6	+20 39.4	253 31.7	-6 37.1					
12	110	47.2	40 22.4	+17 34.2	286 16.3	-1 43.7	45 51.5	+20 39.5	268 34.1	-6 37.1					
13	125	49.7	55 23.6	34.3	301 17.5	44.2	60 53.5	39.5	283 36.5	37.1					
14	140	52.2	70 24.8	34.4	316 18.7	44.8	75 55.4	39.6	298 38.9	37.2					
15	155	54.6	85 26.0	34.6	331 19.9	45.4	90 57.3	39.7	313 41.3	37.2					
16	170	57.1	100 27.2	34.7	346 21.1	46.0	105 59.3	39.8	328 43.8	37.2					
17	185	59.5	115 28.4	+17 34.8	1 22.4	-1 46.6	121 01.2	+20 39.9	343 46.2	-6 37.3					
18	201	02.0	130 29.6	+17 35.0	16 23.6	-1 47.2	136 03.1	+20 40.0	358 48.6	-6 37.3					
19	216	04.5	145 30.9	35.1	31 24.8	47.8	151 05.1	40.0	13 51.0	37.4					
20	231	06.9	160 32.1	35.2	46 26.0	48.4	166 07.0	40.1	28 53.4	37.4					
21	246	09.4	175 33.3	35.4	61 27.2	48.9	181 09.0	40.2	43 55.8	37.4					
22	261	11.9	190 34.4	35.5	76 28.4	49.5	196 10.9	40.3	58 58.2	37.5					
23	276	14.3	205 35.6	35.6	91 29.7	50.1	211 12.8	40.4	74 00.6	37.5					
24	291	16.8	220 36.8	+17 35.8	106 30.9	-1 50.7	226 14.8	+20 40.5	89 03.0	-6 37.5					
Dif	—		+12	+1	+12	-6	+19	+1	+24	0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 8			Edad: 23 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 7 ^h 25 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	33.9	+21	47.7	252	15.6	+17	18.7	60 N	** **	1 40	3 00	23 24	31	16 06	66		
1	193	33.8		47.3	266	47.9 ¹³³		25.5 ⁶⁸	58	** **	2 12	18	37 34		15 53	64		
2	208	33.7		47.0	281	20.1 ¹³²		32.1 ⁶⁶	56	0 33	36	32	49 35		42 62			
3	223	33.6		46.6	295	52.3 ¹³²		38.7 ⁶⁶	54	1 31	2 54	45	23 59	37	32 61			
4	238	33.6		46.2	310	24.5 ¹³²		45.2 ⁶⁵	52	2 01	3 10	3 56	** **	** **	23 60			
5	253	33.5	+21	45.9	324	56.6 ¹³¹	+17	51.6 ⁶⁴	50	2 24	3 23	4 06	** **	** **	15 15	59		
6	268	33.4	+21	45.5	339	28.7 ¹³¹	+17	57.9 ⁶³	45	3 03	3 50	4 26	** **	** **	14 58	57		
7	283	33.4		45.1	354	00.8 ¹³¹	+18	04.2 ⁶³	40	30	4 10	42	0 11	37	44 55			
8	298	33.3		44.7	8	32.8 ¹³⁰		10.4 ⁶²	35	3 51	27	4 56	22 38		33 53			
9	313	33.2		44.4	23	04.8 ¹³⁰		16.5 ⁶¹	30	4 09	4 41	5 08	31 40	23	52			
10	328	33.1		44.0	37	36.8 ¹³⁰		22.5 ⁶⁰	20	36	5 04	28	0 47	42	14 05	51		
11	343	33.1	+21	43.6	52	08.7 ¹²⁹	+18	28.5 ⁶⁰	10 N	4 56	5 23	5 46	1 01	44	13 50	49		
12	358	33.0	+21	43.2	66	40.6 ¹²⁹	+18	34.3 ⁵⁸	0	5 14	5 40	6 02	1 14	46	13 36	47		
13	13	32.9		42.9	81	12.4 ¹²⁸		40.1 ⁵⁸	10 S	30	5 56	18	27 48		22 45			
14	28	32.9		42.5	95	44.3 ¹²⁹		45.8 ⁵⁷	20	44	6 12	35	41 50	13 07	44			
15	43	32.8		42.1	110	16.0 ¹²⁷		51.4 ⁵⁶	30	5 59	29	6 55	1 57	53	12 49	42		
16	58	32.7		41.7	124	47.8 ¹²⁸	+18	56.9 ⁵⁵	35	6 07	38	7 06	2 07	54	39 41			
17	73	32.6	+21	41.4	139	19.5 ¹²⁷	+19	02.4 ⁵⁵	40	6 16	6 49	7 19	2 17	56	12 28	39		
18	88	32.6	+21	41.0	153	51.2 ¹²⁷	+19	07.8 ⁵⁴	45	6 25	7 01	7 34	2 30	58	12 15	37		
19	103	32.5		40.6	168	22.8 ¹²⁶		13.0 ⁵²	50	35	16	7 53	46 60	11 58	35			
20	118	32.4		40.2	182	54.4 ¹²⁶		18.2 ⁵²	52	40	22	8 02	2 53	62	51 34			
21	133	32.4		39.9	197	26.0 ¹²⁶		23.3 ⁵¹	54	45	30	12	3 01	63	42 33			
22	148	32.3		39.5	211	57.5 ¹²⁵		28.4 ⁵¹	56	50	38	23	10 65	32	32			
23	163	32.2		39.1	226	29.0 ¹²⁵		33.3 ⁴⁹	58	6 56	47	36	21 67	22	29			
24	178	32.2	+21	38.7	241	00.5 ¹²⁵	+19	38.1 ⁴⁸	60 S	7 02	7 57	8 51	3 33	69	11 09	27		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 34 ^m 1		Mag: -4.7 PMG: 9 ^h 17 ^m				Mag: +1.0 PMG: 16 ^h 53 ^m				Mag: -2.1 PMG: 8 ^h 54 ^m				Mag: +0.7 PMG: 18 ^h 01 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	291	16.8	220	36.8	+17	35.8	106	30.9	-1	50.7	226	14.8	+20	40.5	89	03.0	-6	37.5
1	306	19.3	235	38.0		35.9	121	32.1		51.3	241	16.7		40.5	104	05.4		37.6
2	321	21.7	250	39.2		36.1	136	33.3		51.9	256	18.7		40.6	119	07.8		37.6
3	336	24.2	265	40.4		36.2	151	34.5		52.5	271	20.6		40.7	134	10.2		37.6
4	351	26.7	280	41.6		36.3	166	35.7		53.0	286	22.5		40.8	149	12.6		37.7
5	6	29.1	295	42.7	+17	36.5	181	37.0	-1	53.6	301	24.5	+20	40.9	164	15.0	-6	37.7
6	21	31.6	310	43.9	+17	36.6	196	38.2	-1	54.2	316	26.4	+20	41.0	179	17.4	-6	37.8
7	36	34.0	325	45.1		36.8	211	39.4		54.8	331	28.4		41.0	194	19.8		37.8
8	51	36.5	340	46.3		36.9	226	40.6		55.4	346	30.3		41.1	209	22.2		37.8
9	66	39.0	355	47.4		37.1	241	41.8		56.0	1	32.2		41.2	224	24.6		37.9
10	81	41.4	10	48.6		37.2	256	43.0		56.6	16	34.2		41.3	239	27.0		37.9
11	96	43.9	25	49.8	+17	37.4	271	44.2	-1	57.2	31	36.1	+20	41.4	254	29.4	-6	37.9
12	111	46.4	40	50.9	+17	37.5	286	45.4	-1	57.7	46	38.1	+20	41.5	269	31.8	-6	38.0
13	126	48.8	55	52.1		37.7	301	46.7		58.3	61	40.0		41.5	284	34.2		38.0
14	141	51.3	70	53.2		37.8	316	47.9		58.9	76	41.9		41.6	299	36.6		38.1
15	156	53.8	85	54.4		37.9	331	49.1	-1	59.5	91	43.9		41.7	314	39.0		38.1
16	171	56.2	100	55.5		38.1	346	50.3	-2	00.1	106	45.8		41.8	329	41.3		38.1
17	186	58.7	115	56.7	+17	38.2	1	51.5	-2	00.7	121	47.8	+20	41.9	344	43.7	-6	38.2
18	202	01.1	130	57.8	+17	38.4	16	52.7	-2	01.3	136	49.7	+20	42.0	359	46.1	-6	38.2
19	217	03.6	145	59.0		38.5	31	53.9		01.9	151	51.6		42.0	14	48.5		38.2
20	232	06.1	161	00.1		38.7	46	55.1		02.4	166	53.6		42.1	29	50.9		38.3
21	247	08.5	176	01.2		38.9	61	56.3		03.0	181	55.5		42.2	44	53.3		38.3
22	262	11.0	191	02.4		39.0	76	57.6		03.6	196	57.5		42.3	59	55.7		38.4
23	277	13.5	206	03.5		39.2	91	58.8		04.2	211	59.4		42.4	74	58.1		38.4
24	292	15.9	221	04.6	+17	39.3	107	00.0	-2	04.8	227	01.3	+20	42.4	90	00.5	-6	38.4
Dif	—		+12		+1		+12		-6		+19		+1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 24 ^d 4 PHE	SD: 14 ^h 8				R°: 48 ^m							
	PMG: 12 ^h 05 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	178	32.2	+21 38.7	241	00.5	+19 38.1	48	60 N	21 08	22 26	** **	23 55	43	17 12	59	
1	193	32.1	38.3	255	31.9 ¹²⁴	42.9	48	58	20 51	21 56	** **	** **	**	16 57	57	
2	208	32.0	37.9	270	03.3 ¹²⁴	47.6	47	56	37	33	23 24	** **	**	44	56	
3	223	32.0	37.6	284	34.7 ¹²⁴	52.1	45	54	25	21 15	22 35	** **	**	33	55	
4	238	31.9	37.2	299	06.0 ¹²³	+19 56.6	45	52	14	20 59	22 06	0 08	38	23	55	
5	253	31.8	+21 36.8	313	37.3 ¹²³	+20 01.0	44	50	20 04	20 46	21 45	0 16	39	16 14	54	
6	268	31.8	+21 36.4	328	08.5 ¹²²	+20 05.4	44	45	19 44	20 20	21 07	0 34	40	15 55	53	
7	283	31.7	36.0	342	39.7 ¹²²	09.6	42	40	28	20 00	20 40	0 48	42	39	53	
8	298	31.6	35.6	357	10.9 ¹²²	13.7	41	35	15	19 44	19	1 00	43	26	52	
9	313	31.6	35.3	11	42.1 ¹²²	17.7	40	30	19 03	30	20 02	11 44		15 15	51	
10	328	31.5	34.9	26	13.2 ¹²¹	21.7	40	20	18 43	19 07	19 36	29 46		14 56	50	
11	343	31.4	+21 34.5	40	44.3 ¹²¹	+20 25.6	39	10 N	18 26	18 48	19 15	1 45	47	14 39	49	
12	358	31.4	+21 34.1	55	15.3 ¹²⁰	+20 29.3	37	0	18 10	18 32	18 58	2 00	48	14 23	49	
13	13	31.3	33.7	69	46.3 ¹²⁰	33.0	37	10 S	17 54	16	42	15 49		14 07	48	
14	28	31.2	33.3	84	17.3 ¹²⁰	36.6	36	20	37	18 00	28	31 51		13 51	47	
15	43	31.2	32.9	98	48.3 ¹²⁰	40.0	34	30	17	17 43	13	2 50	52	31	46	
16	58	31.1	32.5	113	19.2 ¹¹⁹	43.4	34	35	17 06	34	18 05	3 01	53	20	45	
17	73	31.0	+21 32.1	127	50.0 ¹¹⁸	+20 46.7	33	40	16 54	17 23	17 57	3 13	54	13 07	45	
18	88	31.0	+21 31.7	142	20.9 ¹¹⁹	+20 49.9	32	45	16 38	17 11	17 48	3 28	55	12 52	43	
19	103	30.9	31.3	156	51.7 ¹¹⁸	53.0	31	50	20	16 57	38	46 57		33	42	
20	118	30.8	30.9	171	22.5 ¹¹⁸	56.0	30	52	11	51	33	3 55	57	25	41	
21	133	30.8	30.6	185	53.2 ¹¹⁷	+20 59.0	30	54	16 01	43	28	4 04	59	15	40	
22	148	30.7	30.2	200	24.0 ¹¹⁸	+21 01.8	28	56	15 50	36	23	15 60		12 04	39	
23	163	30.6	29.8	214	54.7 ¹¹⁷	04.5	27	58	38	27	18	28 61		11 51	38	
24	178	30.6	+21 29.4	229	25.3 ¹¹⁶	+21 07.1	26	60 S	15 23	16 17	17 11	4 42	63	11 36	37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 30 ^m 2		Mag: -4.7 PMG: 9 ^h 15 ^m		Mag: +1.0 PMG: 16 ^h 51 ^m		Mag: -2.1 PMG: 8 ^h 51 ^m		Mag: +0.7 PMG: 17 ^h 57 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	292	15.9	221	04.6	+17 39.3	107	00.0	-2 04.8	227	01.3	+20 42.4	90	00.5	-6 38.4	
1	307	18.4	236	05.8	39.5	122	01.2	05.4	242	03.3	42.5	105	02.9	38.5	
2	322	20.9	251	06.9	39.6	137	02.4	06.0	257	05.2	42.6	120	05.3	38.5	
3	337	23.3	266	08.0	39.8	152	03.6	06.6	272	07.2	42.7	135	07.7	38.5	
4	352	25.8	281	09.1	39.9	167	04.8	07.2	287	09.1	42.8	150	10.1	38.6	
5	7	28.3	296	10.3	+17 40.1	182	06.0	-2 07.7	302	11.1	+20 42.9	165	12.5	-6 38.6	
6	22	30.7	311	11.4	+17 40.2	197	07.2	-2 08.3	317	13.0	+20 42.9	180	14.9	-6 38.7	
7	37	33.2	326	12.5	40.4	212	08.4	08.9	332	14.9	43.0	195	17.3	38.7	
8	52	35.6	341	13.6	40.6	227	09.6	09.5	347	16.9	43.1	210	19.7	38.7	
9	67	38.1	356	14.7	40.7	242	10.8	10.1	2	18.8	43.2	225	22.1	38.8	
10	82	40.6	11	15.8	40.9	257	12.1	10.7	17	20.8	43.3	240	24.5	38.8	
11	97	43.0	26	16.9	+17 41.0	272	13.3	-2 11.3	32	22.7	+20 43.3	255	26.9	-6 38.9	
12	112	45.5	41	18.0	+17 41.2	287	14.5	-2 11.9	47	24.7	+20 43.4	270	29.3	-6 38.9	
13	127	48.0	56	19.1	41.4	302	15.7	12.5	62	26.6	43.5	285	31.7	38.9	
14	142	50.4	71	20.2	41.5	317	16.9	13.0	77	28.5	43.6	300	34.1	39.0	
15	157	52.9	86	21.3	41.7	332	18.1	13.6	92	30.5	43.7	315	36.5	39.0	
16	172	55.4	101	22.4	41.8	347	19.3	14.2	107	32.4	43.8	330	38.9	39.1	
17	187	57.8	116	23.5	+17 42.0	2	20.5	-2 14.8	122	34.4	+20 43.8	345	41.3	-6 39.1	
18	203	00.3	131	24.5	+17 42.2	17	21.7	-2 15.4	137	36.3	+20 43.9	0	43.6	-6 39.1	
19	218	02.8	146	25.6	42.3	32	22.9	16.0	152	38.3	44.0	15	46.0	39.2	
20	233	05.2	161	26.7	42.5	47	24.1	16.6	167	40.2	44.1	30	48.4	39.2	
21	248	07.7	176	27.8	42.7	62	25.3	17.2	182	42.2	44.2	45	50.8	39.2	
22	263	10.1	191	28.9	42.8	77	26.5	17.8	197	44.1	44.2	60	53.2	39.3	
23	278	12.6	206	29.9	43.0	92	27.7	18.4	212	46.0	44.3	75	55.6	39.3	
24	293	15.1	221	31.0	+17 43.2	107	28.9	-2 18.9	227	48.0	+20 44.4	90	58.0	-6 39.4	
Dif	—		+11		+2	+12		-6	+19		+1	+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 0			Edad: 25 ^d 4 PHE { SD: 14'8 PMG: 9 ^h 00 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	30.6	+21	229	25.3	+21	07.1	25	60 N	** ** *	1 46	3 04	** ** *	18 11	47
1	193	30.5		243	55.9 ¹¹⁶		09.6	25	58	** ** *	2 17	21	0 11	44	17 54 48
2	208	30.4		258	26.5 ¹¹⁶		12.0	24	56	0 48	39	35	24	45	40 48
3	223	30.4		272	57.1 ¹¹⁶		14.4	24	54	1 37	2 58	48	36	45	28 48
4	238	30.3		287	27.7 ¹¹⁶		16.6	22	52	2 06	3 13	3 58	46	45	18 48
5	253	30.3	+21	301	58.2 ¹¹⁵	+21	18.7	21	50	2 27	3 26	4 08	0 55	46	17 08 49
6	268	30.2	+21	316	28.7 ¹¹⁵	+21	20.8	21	45	3 05	3 52	4 28	1 14	47	16 48 49
7	283	30.1		330	59.1 ¹¹⁴		22.7	19	40	32	4 12	44	30	47	32 49
8	298	30.1		345	29.5 ¹¹⁴		24.5	18	35	3 53	29	4 58	43	48	18 49
9	313	30.0		359	59.9 ¹¹⁴		26.2	17	30	4 10	4 42	5 09	1 55	48	16 06 50
10	328	29.9		14	30.3 ¹¹⁴		27.9	17	20	36	5 05	29	2 15	48	15 46 50
11	343	29.9	+21	29	00.7 ¹¹⁴	+21	29.4	15	10 N	4 57	5 24	5 46	2 32	49	15 28 50
12	358	29.8	+21	43	31.0 ¹¹³	+21	30.8	14	0	5 14	5 40	6 02	2 48	49	15 12 50
13	13	29.8		58	01.3 ¹¹³		32.1	13	10 S	30	5 56	18	3 04	50	14 55 50
14	28	29.7		72	31.6 ¹¹³		33.4	13	20	44	6 11	35	22	50	38 49
15	43	29.6		87	01.8 ¹¹²		34.5	11	30	5 59	28	6 54	42	50	17 50
16	58	29.6		101	32.1 ¹¹³		35.5	10	35	6 07	38	7 05	3 54	50	14 05 50
17	73	29.5	+21	116	02.3 ¹¹²	+21	36.4	9	40	6 15	6 48	7 18	4 07	51	13 52 49
18	88	29.5	+21	130	32.4 ¹¹¹	+21	37.2	8	45	6 24	7 00	7 33	4 23	51	13 35 50
19	103	29.4		145	02.6 ¹¹²		37.9	7	50	34	14	7 51	43	52	15 50
20	118	29.3		159	32.7 ¹¹¹		38.5	6	52	38	21	8 00	4 52	52	13 06 50
21	133	29.3		174	02.9 ¹¹²		39.0	5	54	43	28	10	5 03	52	12 55 50
22	148	29.2		188	33.0 ¹¹¹		39.4	4	56	48	36	21	15	52	43 50
23	163	29.2		203	03.0 ¹¹⁰		39.7	3	58	6 54	44	33	29	52	29 50
24	178	29.1	+21	217	33.1 ¹¹¹	+21	39.9	2	60 S	7 00	7 54	8 48	5 45	53	12 13 49
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 26 ^m 3		Mag: -4.7 PMG: 9 ^h 13 ^m			Mag: +1.0 PMG: 16 ^h 49 ^m			Mag: -2.1 PMG: 8 ^h 48 ^m			Mag: +0.7 PMG: 17 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	293	15.1	221	31.0	+17	107	28.9	-2	227	48.0	+20	90	58.0	-6	
1	308	17.5	236	32.1		122	30.1		242	49.9		106	00.4		
2	323	20.0	251	33.1		137	31.3		257	51.9		121	02.8		
3	338	22.5	266	34.2		152	32.5		272	53.8		136	05.2		
4	353	24.9	281	35.3		167	33.7		287	55.8		151	07.6		
5	8	27.4	296	36.3	+17	182	34.9	-2	302	57.7	+20	166	10.0	-6	
6	23	29.9	311	37.4	+17	197	36.1	-2	317	59.7	+20	181	12.4	-6	
7	38	32.3	326	38.4		212	37.3		333	01.6		196	14.8		
8	53	34.8	341	39.5		227	38.5		348	03.6		211	17.1		
9	68	37.3	356	40.5		242	39.7		3	05.5		226	19.5		
10	83	39.7	11	41.6		257	40.9		18	07.4		241	21.9		
11	98	42.2	26	42.6	+17	272	42.1	-2	33	09.4	+20	256	24.3	-6	
12	113	44.6	41	43.6	+17	287	43.3	-2	48	11.3	+20	271	26.7	-6	
13	128	47.1	56	44.7		302	44.5		63	13.3		286	29.1		
14	143	49.6	71	45.7		317	45.7		78	15.2		301	31.5		
15	158	52.0	86	46.8		332	46.9		93	17.2		316	33.9		
16	173	54.5	101	47.8		347	48.1		108	19.1		331	36.3		
17	188	57.0	116	48.8	+17	2	49.3	-2	123	21.1	+20	346	38.7	-6	
18	203	59.4	131	49.8	+17	17	50.5	-2	138	23.0	+20	1	41.1	-6	
19	219	01.9	146	50.9		32	51.7		153	25.0		16	43.4		
20	234	04.4	161	51.9		47	52.9		168	26.9		31	45.8		
21	249	06.8	176	52.9		62	54.1		183	28.9		46	48.2		
22	264	09.3	191	53.9		77	55.3		198	30.8		61	50.6		
23	279	11.7	206	54.9		92	56.5		213	32.8		76	53.0		
24	294	14.2	221	55.9	+17	107	57.7	-2	228	34.7	+20	91	55.4	-6	
Dif	—		+10		+2	+12		-6	+19		+1	+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 26 ^d 4	PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8										
	PMG: 12 ^h 06 ^m 1					SD: 14 ^h 9			PMG: 9 ^h 49 ^m		R°: 50 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	29.1	+21 19.7	217	33.1	+21 39.9	1	60 N	21 05	22 20	** **	0 38 56	18 58 36		
1	193	29.1	19.2	232	03.1 ¹¹⁰	40.0	0	58	20 48	21 51	** **	0 55 55	42 37		
2	208	29.0	18.8	246	33.2 ¹¹¹	40.0	0	56	34	29	23 12	1 09 54	28 39		
3	223	28.9	18.4	261	03.2 ¹¹⁰	39.8	2	54	22	21 12	22 29	21 54	16 41		
4	238	28.9	18.0	275	33.2 ¹¹⁰	39.6	2	52	12	20 57	22 02	31 54	18 06 41		
5	253	28.8	+21 17.6	290	03.1 ¹⁰⁹	+21 39.3	3	50	20 03	20 44	21 42	1 41 53	17 57 42		
6	268	28.8	+21 17.2	304	33.1 ¹¹⁰	+21 38.8	5	45	19 43	20 19	21 05	2 01 53	17 37 44		
7	283	28.7	16.7	319	03.0 ¹⁰⁹	38.3	5	40	27	19 59	20 38	17 52	21 45		
8	298	28.7	16.3	333	33.0 ¹¹⁰	37.6	7	35	14	43	18	31 52	17 07 46		
9	313	28.6	15.9	348	02.9 ¹⁰⁹	36.9	7	30	19 02	29	20 01	2 43 51	16 56 46		
10	328	28.5	15.5	2	32.8 ¹⁰⁹	36.0	9	20	18 42	19 07	19 35	3 03 51	36 47		
11	343	28.5	+21 15.1	17	02.7 ¹⁰⁹	+21 35.0	10	10 N	18 25	18 48	19 15	3 21 50	16 18 49		
12	358	28.4	+21 14.7	31	32.5 ¹⁰⁸	+21 34.0	10	0	18 10	18 32	18 58	3 37 50	16 02 50		
13	13	28.4	14.2	46	02.4 ¹⁰⁹	32.8	12	10 S	17 54	17	43	3 54 49	15 45 51		
14	28	28.3	13.8	60	32.2 ¹⁰⁸	31.5	13	20	37	18 01	28	4 12 49	27 52		
15	43	28.3	13.4	75	02.1 ¹⁰⁹	30.1	14	30	19	17 44	14	32 48	15 07 53		
16	58	28.2	13.0	89	31.9 ¹⁰⁸	28.6	15	35	17 08	35	18 06	44 48	14 55 54		
17	73	28.1	+21 12.6	104	01.7 ¹⁰⁸	+21 27.0	16	40	16 55	17 25	17 58	4 58 47	14 41 55		
18	88	28.1	+21 12.1	118	31.6 ¹⁰⁹	+21 25.3	17	45	16 40	17 13	17 49	5 14 47	14 25 56		
19	103	28.0	11.7	133	01.4 ¹⁰⁸	23.4	19	50	22	16 59	40	35 45	14 05 57		
20	118	28.0	11.3	147	31.2 ¹⁰⁸	21.5	19	52	14	53	35	44 45	13 56 57		
21	133	27.9	10.9	162	01.0 ¹⁰⁸	19.5	20	54	16 04	46	31	5 55 44	45 58		
22	148	27.9	10.4	176	30.8 ¹⁰⁸	17.3	22	56	15 53	38	25	6 07 44	33 59		
23	163	27.8	10.0	191	00.5 ¹⁰⁷	15.1	22	58	41	29	20	21 43	19 60		
24	178	27.8	+21 09.6	205	30.3 ¹⁰⁸	+21 12.7	24	60 S	15 27	16 20	17 14	6 38 41	13 02 62		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 22 ^m 3		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +1.0 PMG: 16 ^h 47 ^m		Mag: -2.1 PMG: 8 ^h 45 ^m		Mag: +0.8 PMG: 17 ^h 49 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	294	14.2	221	55.9	+17 47.3	107 57.7	-2 33.1	228 34.7	+20 46.3	91 55.4	-6 40.3
1	309	16.7	236	57.0	47.5	122 58.9	33.7	243 36.7	46.4	106 57.8	40.4
2	324	19.1	251	58.0	47.7	138 00.1	34.3	258 38.6	46.5	122 00.2	40.4
3	339	21.6	266	59.0	47.9	153 01.3	34.9	273 40.6	46.6	137 02.6	40.5
4	354	24.1	282	00.0	48.0	168 02.5	35.5	288 42.5	46.6	152 05.0	40.5
5	9	26.5	297	01.0	+17 48.2	183 03.7	-2 36.1	303 44.5	+20 46.7	167 07.3	-6 40.5
6	24	29.0	312	02.0	+17 48.4	198 04.9	-2 36.7	318 46.4	+20 46.8	182 09.7	-6 40.6
7	39	31.5	327	03.0	48.6	213 06.1	37.3	333 48.4	46.9	197 12.1	40.6
8	54	33.9	342	04.0	48.8	228 07.3	37.9	348 50.3	47.0	212 14.5	40.7
9	69	36.4	357	05.0	48.9	243 08.5	38.5	3 52.3	47.0	227 16.9	40.7
10	84	38.9	12 05.9	49.1	258 09.6	39.1	18 54.2	47.1	242 19.3	40.7	
11	99	41.3	27 06.9	+17 49.3	273 10.8	-2 39.7	33 56.1	+20 47.2	257 21.7	-6 40.8	
12	114	43.8	42 07.9	+17 49.5	288 12.0	-2 40.2	48 58.1	+20 47.3	272 24.1	-6 40.8	
13	129	46.2	57 08.9	49.7	303 13.2	40.8	64 00.0	47.4	287 26.4	40.9	
14	144	48.7	72 09.9	49.9	318 14.4	41.4	79 02.0	47.4	302 28.8	40.9	
15	159	51.2	87 10.8	50.0	333 15.6	42.0	94 04.0	47.5	317 31.2	41.0	
16	174	53.6	102 11.8	50.2	348 16.8	42.6	109 05.9	47.6	332 33.6	41.0	
17	189	56.1	117 12.8	+17 50.4	3 18.0	-2 43.2	124 07.9	+20 47.7	347 36.0	-6 41.0	
18	204	58.6	132 13.8	+17 50.6	18 19.2	-2 43.8	139 09.8	+20 47.8	2 38.4	-6 41.1	
19	220	01.0	147 14.7	50.8	33 20.4	44.4	154 11.8	47.8	17 40.8	41.1	
20	235	03.5	162 15.7	51.0	48 21.6	45.0	169 13.7	47.9	32 43.2	41.2	
21	250	06.0	177 16.7	51.2	63 22.8	45.6	184 15.7	48.0	47 45.5	41.2	
22	265	08.4	192 17.6	51.4	78 24.0	46.2	199 17.6	48.1	62 47.9	41.3	
23	280	10.9	207 18.6	51.5	93 25.1	46.8	214 19.6	48.2	77 50.3	41.3	
24	295	13.4	222 19.5	+17 51.7	108 26.3	-2 47.4	229 21.5	+20 48.2	92 52.7	-6 41.3	
Dif	—		+10 +2		+12 -6		+20 +1		+24 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 2			Edad: 27 ^d 4 PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'2 PMG: 10 ^h 39 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	27.8	+21 09.6	205	30.3	+21 12.7	60 N	** **	1 53	3 08	1 34	67	19 34	26	
1	193	27.7	09.1	220	00.1 ¹⁰⁸	10.3 ²⁴	58	** **	2 22	25	1 50	65	19 30		
2	208	27.7	08.7	234	29.9 ¹⁰⁸	07.7 ²⁶	56	1 00	2 43	38	2 03	64	19 07	32	
3	223	27.6	08.3	248	59.6 ¹⁰⁷	05.1 ²⁶	54	1 43	3 01	3 50	15	62	18 57	33	
4	238	27.6	07.9	263	29.4 ¹⁰⁸	+21 02.3 ²⁸	52	2 10	16	4 01	25	62	47 35		
5	253	27.5	+21 07.4	277	59.2 ¹⁰⁸	+20 59.4 ²⁹	50	2 31	3 28	4 10	2 34	61	18 39	35	
6	268	27.5	+21 07.0	292	28.9 ¹⁰⁷	+20 56.4 ³⁰	45	3 08	3 54	4 30	2 54	58	18 21	38	
7	283	27.4	06.6	306	58.7 ¹⁰⁸	53.3 ³¹	40	34	4 14	46	3 09	57	18 06	40	
8	298	27.4	06.1	321	28.5 ¹⁰⁸	50.1 ³²	35	3 55	30	4 59	23	56	17 53	42	
9	313	27.3	05.7	335	58.2 ¹⁰⁷	46.8 ³³	30	4 11	4 44	5 10	34	55	42 44		
10	328	27.3	05.3	350	28.0 ¹⁰⁸	43.4 ³⁴	20	37	5 06	30	3 54	53	23 46		
11	343	27.2	+21 04.8	4	57.8 ¹⁰⁸	+20 39.9 ³⁵	10 N	4 58	5 24	5 47	4 11	52	17 07	48	
12	358	27.2	+21 04.4	19	27.5 ¹⁰⁷	+20 36.3 ³⁶	0	5 15	5 40	6 03	4 27	50	16 52	49	
13	13	27.1	04.0	33	57.3 ¹⁰⁸	32.6 ³⁷	10 S	30	5 56	18	4 43	49	36 52		
14	28	27.1	03.5	48	27.1 ¹⁰⁸	28.7 ³⁹	20	44	6 11	35	5 01	47	19 54		
15	43	27.0	03.1	62	56.9 ¹⁰⁸	24.8 ³⁹	30	5 58	28	6 53	20	46	16 00	56	
16	58	27.0	02.7	77	26.7 ¹⁰⁸	20.8 ⁴⁰	35	6 06	37	7 04	32	44	15 49	57	
17	73	26.9	+21 02.2	91	56.5 ¹⁰⁸	+20 16.6 ⁴²	40	6 14	6 47	7 17	5 45	43	15 36	59	
18	88	26.9	+21 01.8	106	26.3 ¹⁰⁸	+20 12.4 ⁴²	45	6 22	6 59	7 32	6 01	41	15 21	61	
19	103	26.8	01.3	120	56.1 ¹⁰⁸	08.0 ⁴⁴	50	32	7 13	49	20	39	15 02	63	
20	118	26.8	00.9	135	25.9 ¹⁰⁸	+20 03.6 ⁴⁴	52	37	19	7 58	29	38	14 53	65	
21	133	26.7	+21 00.5	149	55.7 ¹⁰⁸	+19 59.0 ⁴⁶	54	41	26	8 07	39	37	43 66		
22	148	26.7	+21 00.0	164	25.5 ¹⁰⁸	54.4 ⁴⁶	56	46	33	18	6 51	35	32 68		
23	163	26.6	+20 59.6	178	55.4 ¹⁰⁹	49.6 ⁴⁸	58	52	42	30	7 04	33	19 70		
24	178	26.6	+20 59.1	193	25.2 ¹⁰⁸	+19 44.8 ⁴⁸	60 S	6 58	7 52	8 44	7 19	31	14 04	72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 18 ^m 4		Mag: -4.7 PMG: 9 ^h 10 ^m		Mag: +1.0 PMG: 16 ^h 45 ^m		Mag: -2.1 PMG: 8 ^h 41 ^m		Mag: +0.8 PMG: 17 ^h 46 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	'	°	'								
0	295	13.4	222	19.5	+17	51.7	108	26.3	-2	47.4	229	21.5	+20	48.2	92	52.7	-6	41.3
1	310	15.8	237	20.5		51.9	123	27.5		48.0	244	23.5		48.3	107	55.1		41.4
2	325	18.3	252	21.4		52.1	138	28.7		48.5	259	25.4		48.4	122	57.5		41.4
3	340	20.7	267	22.4		52.3	153	29.9		49.1	274	27.4		48.5	137	59.9		41.5
4	355	23.2	282	23.3		52.5	168	31.1		49.7	289	29.3		48.5	153	02.2		41.5
5	10	25.7	297	24.3	+17	52.7	183	32.3	-2	50.3	304	31.3	+20	48.6	168	04.6	-6	41.6
6	25	28.1	312	25.2	+17	52.9	198	33.5	-2	50.9	319	33.2	+20	48.7	183	07.0	-6	41.6
7	40	30.6	327	26.2		53.1	213	34.7		51.5	334	35.2		48.8	198	09.4		41.6
8	55	33.1	342	27.1		53.3	228	35.8		52.1	349	37.1		48.9	213	11.8		41.7
9	70	35.5	357	28.0		53.5	243	37.0		52.7	4	39.1		48.9	228	14.2		41.7
10	85	38.0	12	29.0		53.6	258	38.2		53.3	19	41.0		49.0	243	16.5		41.8
11	100	40.5	27	29.9	+17	53.8	273	39.4	-2	53.9	34	43.0	+20	49.1	258	18.9	-6	41.8
12	115	42.9	42	30.8	+17	54.0	288	40.6	-2	54.5	49	44.9	+20	49.2	273	21.3	-6	41.9
13	130	45.4	57	31.8		54.2	303	41.8		55.1	64	46.9		49.2	288	23.7		41.9
14	145	47.9	72	32.7		54.4	318	43.0		55.7	79	48.8		49.3	303	26.1		41.9
15	160	50.3	87	33.6		54.6	333	44.1		56.3	94	50.8		49.4	318	28.5		42.0
16	175	52.8	102	34.5		54.8	348	45.3		56.9	109	52.8		49.5	333	30.8		42.0
17	190	55.2	117	35.4	+17	55.0	3	46.5	-2	57.5	124	54.7	+20	49.6	348	33.2	-6	42.1
18	205	57.7	132	36.4	+17	55.2	18	47.7	-2	58.1	139	56.7	+20	49.6	3	35.6	-6	42.1
19	221	00.2	147	37.3		55.4	33	48.9		58.7	154	58.6		49.7	18	38.0		42.2
20	236	02.6	162	38.2		55.6	48	50.1		59.2	170	00.6		49.8	33	40.4		42.2
21	251	05.1	177	39.1		55.8	63	51.3	-2	59.8	185	02.5		49.9	48	42.8		42.2
22	266	07.6	192	40.0		56.0	78	52.4	-3	00.4	200	04.5		49.9	63	45.1		42.3
23	281	10.0	207	40.9		56.2	93	53.6		01.0	215	06.4		50.0	78	47.5		42.3
24	296	12.5	222	41.8	+17	56.4	108	54.8	-3	01.6	230	08.4	+20	50.1	93	49.9	-6	42.4
Dif	—		+9	+2		+12	-6			+20	+1			+24				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 28 ^d 4	PHE {	4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 7									
	PMG: 12 ^h 06 ^m 3								SD: 15 ^h 1	PMG: 11 ^h 29 ^m	R°: 50 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	26.6	+20 59.1	193	25.2	+19 44.8	50	60 N	21 01	22 14	** **	2 41 76	20 00 20		
1	193	26.5	58.7	207	55.1 ¹⁰⁹	39.8	50	58	20 45	21 46	** **	2 55 73	19 49 23		
2	208	26.5	58.3	222	25.0 ¹⁰⁹	34.8	50	56	31	26	23 02	3 07 71	39 25		
3	223	26.4	57.8	236	54.8 ¹⁰⁸	29.6	52	54	20	21 08	22 24	17 69	30 27		
4	238	26.4	57.4	251	24.7 ¹⁰⁹	24.3	53	52	10	20 54	21 58	27 67	22 29		
5	253	26.3	+20 56.9	265	54.6 ¹⁰⁹	+19 19.0	53	50	20 00	20 42	21 39	3 35 65	19 14 31		
6	268	26.3	+20 56.5	280	24.5 ¹⁰⁹	+19 13.5	55	45	19 41	20 17	21 02	3 52 63	18 59 34		
7	283	26.2	56.0	294	54.5 ¹¹⁰	07.9	56	40	26	19 57	20 37	4 06 61	46 37		
8	298	26.2	55.6	309	24.4 ¹⁰⁹	+19 02.3	56	35	13	41	16	19 58	35 39		
9	313	26.1	55.1	323	54.4 ¹¹⁰	+18 56.5	58	30	19 01	28	20 00	29 57	26 40		
10	328	26.1	54.7	338	24.3 ¹⁰⁹	50.7	58	20	18 42	19 06	19 34	4 47 54	18 09 44		
11	343	26.1	+20 54.2	352	54.3 ¹¹⁰	+18 44.7	60	10 N	18 25	18 48	19 14	5 03 51	17 55 46		
12	358	26.0	+20 53.8	7	24.3 ¹¹⁰	+18 38.7	60	0	18 10	18 32	18 58	5 17 50	17 41 49		
13	13	26.0	53.3	21	54.3 ¹¹⁰	32.5	62	10 S	17 55	17	43	32 47	28 51		
14	28	25.9	52.9	36	24.3 ¹¹⁰	26.3	62	20	38	18 02	29	5 48 45	17 13 54		
15	43	25.9	52.4	50	54.4 ¹¹¹	19.9	64	30	20	17 45	15	6 06 42	16 56 58		
16	58	25.8	52.0	65	24.4 ¹¹⁰	13.5	64	35	17 09	36	07	16 40	46 60		
17	73	25.8	+20 51.5	79	54.5 ¹¹¹	+18 06.9	66	40	16 57	17 26	18 00	6 28 38	16 35 62		
18	88	25.7	+20 51.1	94	24.6 ¹¹¹	+18 00.3	66	45	16 42	17 15	17 51	6 42 36	16 22 64		
19	103	25.7	50.6	108	54.7 ¹¹¹	+17 53.6	67	50	24	17 01	42	6 59 33	16 05 68		
20	118	25.7	50.2	123	24.8 ¹¹¹	46.8	68	52	16	16 55	37	7 07 31	15 58 69		
21	133	25.6	49.7	137	55.0 ¹¹²	39.9	69	54	16 07	48	33	16 30	49 71		
22	148	25.6	49.3	152	25.1 ¹¹¹	32.9	70	56	15 56	41	28	26 28	40 73		
23	163	25.5	48.8	166	55.3 ¹¹²	25.8	71	58	44	32	23	37 26	29 75		
24	178	25.5	+20 48.4	181	25.5 ¹¹²	+17 18.6	72	60 S	15 30	16 23	17 17	7 50 23	15 16 78		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 14 ^m 5		Mag: -4.7 PMG: 9 ^h 09 ^m		Mag: +1.0 PMG: 16 ^h 43 ^m		Mag: -2.1 PMG: 8 ^h 38 ^m		Mag: +0.8 PMG: 17 ^h 42 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	296	12.5	222 41.8	+17 56.4	108 54.8	-3 01.6	230 08.4	+20 50.1	93 49.9	-6 42.4					
1	311	15.0	237 42.7	56.6	123 56.0	02.2	245 10.3	50.2	108 52.3	42.4					
2	326	17.4	252 43.6	56.8	138 57.2	02.8	260 12.3	50.3	123 54.7	42.5					
3	341	19.9	267 44.5	57.0	153 58.4	03.4	275 14.3	50.3	138 57.1	42.5					
4	356	22.4	282 45.4	57.2	168 59.5	04.0	290 16.2	50.4	153 59.4	42.6					
5	11	24.8	297 46.3	+17 57.4	184 00.7	-3 04.6	305 18.2	+20 50.5	169 01.8	-6 42.6					
6	26	27.3	312 47.2	+17 57.6	199 01.9	-3 05.2	320 20.1	+20 50.6	184 04.2	-6 42.6					
7	41	29.7	327 48.1	57.8	214 03.1	05.8	335 22.1	50.6	199 06.6	42.7					
8	56	32.2	342 49.0	58.0	229 04.3	06.4	350 24.0	50.7	214 09.0	42.7					
9	71	34.7	357 49.8	58.2	244 05.4	07.0	5 26.0	50.8	229 11.3	42.8					
10	86	37.1	12 50.7	58.4	259 06.6	07.6	20 27.9	50.9	244 13.7	42.8					
11	101	39.6	27 51.6	+17 58.6	274 07.8	-3 08.2	35 29.9	+20 50.9	259 16.1	-6 42.9					
12	116	42.1	42 52.5	+17 58.8	289 09.0	-3 08.8	50 31.9	+20 51.0	274 18.5	-6 42.9					
13	131	44.5	57 53.3	59.0	304 10.2	09.4	65 33.8	51.1	289 20.9	43.0					
14	146	47.0	72 54.2	59.2	319 11.3	10.0	80 35.8	51.2	304 23.2	43.0					
15	161	49.5	87 55.1	59.4	334 12.5	10.6	95 37.7	51.3	319 25.6	43.0					
16	176	51.9	102 56.0	59.6	349 13.7	11.2	110 39.7	51.3	334 28.0	43.1					
17	191	54.4	117 56.8	+17 59.8	4 14.9	-3 11.8	125 41.6	+20 51.4	349 30.4	-6 43.1					
18	206	56.8	132 57.7	+18 00.0	19 16.1	-3 12.3	140 43.6	+20 51.5	4 32.8	-6 43.2					
19	221	59.3	147 58.5	+18 00.2	34 17.2	12.9	155 45.6	51.6	19 35.1	43.2					
20	237	01.8	162 59.4	00.4	49 18.4	13.5	170 47.5	51.6	34 37.5	43.3					
21	252	04.2	178 00.3	00.6	64 19.6	14.1	185 49.5	51.7	49 39.9	43.3					
22	267	06.7	193 01.1	00.8	79 20.8	14.7	200 51.4	51.8	64 42.3	43.4					
23	282	09.2	208 02.0	01.0	94 22.0	15.3	215 53.4	51.9	79 44.7	43.4					
24	297	11.6	223 02.8	+18 01.2	109 23.1	-3 15.9	230 55.4	+20 51.9	94 47.0	-6 43.4					
Dif	—		+9	+2	+12	-6	+20	+1	+24						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 3			Edad: 29 ^d 4 PHE { SD: 15'2 PMG: 12 ^h 19 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.5	+20 48.4	181	25.5	+17 18.6	73	60 N	*** **	1 59	3 12	3 57	80	20 20	16
1	193	25.5	47.9	195	55.7 ¹¹²	11.3	73	58	*** **	2 27	28	4 08	77	12	18
2	208	25.4	47.4	210	25.9 ¹¹²	+17 03.9	74	56	1 11	2 48	42	18	74	20 04	21
3	223	25.4	47.0	224	56.2 ¹¹³	+16 56.5	74	54	1 49	3 05	3 53	26	73	19 57	23
4	238	25.3	46.5	239	26.4 ¹¹²	48.9	76	52	2 15	19	4 03	34	70	51	25
5	253	25.3	+20 46.1	253	56.7 ¹¹³	+16 41.3	76	50	2 34	3 31	4 13	4 40	69	19 45	27
6	268	25.2	+20 45.6	268	27.0 ¹¹³	+16 33.6	77	45	3 11	3 56	4 32	4 55	65	19 33	30
7	283	25.2	45.1	282	57.3 ¹¹³	25.8	78	40	36	4 16	4 47	5 07	62	23	33
8	298	25.2	44.7	297	27.7 ¹¹⁴	17.9	79	35	3 56	31	5 00	17	60	14	36
9	313	25.1	44.2	311	58.0 ¹¹³	09.9	80	30	4 13	4 45	12	26	58	19 06	39
10	328	25.1	43.8	326	28.4 ¹¹⁴	+16 01.8	81	20	38	5 07	31	41	55	18 53	42
11	343	25.0	+20 43.3	340	58.8 ¹¹⁴	+15 53.6	82	10 N	4 58	5 25	5 47	5 54	52	18 41	46
12	358	25.0	+20 42.8	355	29.2 ¹¹⁴	+15 45.4	82	0	5 15	5 41	6 03	6 07	49	18 30	49
13	13	25.0	42.4	9	59.7 ¹¹⁵	37.1	83	10 S	30	5 56	18	19	46	19	52
14	28	24.9	41.9	24	30.1 ¹¹⁴	28.7	84	20	44	6 11	34	33	42	18 07	55
15	43	24.9	41.4	39	00.6 ¹¹⁵	20.2	85	30	5 58	27	6 53	48	39	17 54	58
16	58	24.9	41.0	53	31.1 ¹¹⁵	11.6	86	35	6 05	36	7 03	6 56	38	46	60
17	73	24.8	+20 40.5	68	01.6 ¹¹⁵	+15 03.0	86	40	6 13	6 46	7 16	7 06	35	17 37	63
18	88	24.8	+20 40.0	82	32.2 ¹¹⁶	+14 54.2	88	45	6 21	6 57	7 30	7 18	32	17 26	66
19	103	24.7	39.6	97	02.7 ¹¹⁵	45.4	88	50	31	7 11	47	32	28	13	70
20	118	24.7	39.1	111	33.3 ¹¹⁶	36.5	89	52	35	17	7 56	38	27	07	72
21	133	24.7	38.6	126	03.9 ¹¹⁶	27.5	90	54	39	24	8 05	46	25	17 00	74
22	148	24.6	38.2	140	34.5 ¹¹⁶	18.5	90	56	44	31	15	7 54	23	16 53	76
23	163	24.6	37.7	155	05.2 ¹¹⁷	09.4	91	58	49	39	27	8 03	20	44	79
24	178	24.6	+20 37.2	169	35.8 ¹¹⁶	+14 00.2	92	60 S	6 55	7 49	8 41	8 13	18	16 34	82
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 10 ^m 5		Mag: -4.7 PMG: 9 ^h 07 ^m			Mag: +1.0 PMG: 16 ^h 41 ^m			Mag: -2.1 PMG: 8 ^h 35 ^m			Mag: +0.8 PMG: 17 ^h 38 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	297	11.6	223 02.8	+18 01.2	109 23.1	-3 15.9	230 55.4	+20 51.9	94 47.0	-6 43.4					
1	312	14.1	238 03.7	01.4	124 24.3	16.5	245 57.3	52.0	109 49.4	43.5					
2	327	16.6	253 04.5	01.6	139 25.5	17.1	260 59.3	52.1	124 51.8	43.5					
3	342	19.0	268 05.4	01.9	154 26.7	17.7	276 01.2	52.2	139 54.2	43.6					
4	357	21.5	283 06.2	02.1	169 27.8	18.3	291 03.2	52.2	154 56.5	43.6					
5	12	24.0	298 07.0	+18 02.3	184 29.0	-3 18.9	306 05.1	+20 52.3	169 58.9	-6 43.7					
6	27	26.4	313 07.9	+18 02.5	199 30.2	-3 19.5	321 07.1	+20 52.4	185 01.3	-6 43.7					
7	42	28.9	328 08.7	02.7	214 31.4	20.1	336 09.1	52.5	200 03.7	43.8					
8	57	31.3	343 09.5	02.9	229 32.5	20.7	351 11.0	52.5	215 06.1	43.8					
9	72	33.8	358 10.4	03.1	244 33.7	21.3	6 13.0	52.6	230 08.4	43.9					
10	87	36.3	13 11.2	03.3	259 34.9	21.9	21 14.9	52.7	245 10.8	43.9					
11	102	38.7	28 12.0	+18 03.5	274 36.1	-3 22.5	36 16.9	+20 52.8	260 13.2	-6 43.9					
12	117	41.2	43 12.9	+18 03.7	289 37.2	-3 23.1	51 18.9	+20 52.8	275 15.6	-6 44.0					
13	132	43.7	58 13.7	03.9	304 38.4	23.7	66 20.8	52.9	290 17.9	44.0					
14	147	46.1	73 14.5	04.1	319 39.6	24.3	81 22.8	53.0	305 20.3	44.1					
15	162	48.6	88 15.3	04.4	334 40.8	24.9	96 24.7	53.1	320 22.7	44.1					
16	177	51.1	103 16.1	04.6	349 41.9	25.5	111 26.7	53.1	335 25.1	44.2					
17	192	53.5	118 17.0	+18 04.8	4 43.1	-3 26.1	126 28.7	+20 53.2	350 27.4	-6 44.2					
18	207	56.0	133 17.8	+18 05.0	19 44.3	-3 26.7	141 30.6	+20 53.3	5 29.8	-6 44.3					
19	222	58.5	148 18.6	05.2	34 45.4	27.3	156 32.6	53.4	20 32.2	44.3					
20	238	00.9	163 19.4	05.4	49 46.6	27.9	171 34.6	53.4	35 34.6	44.4					
21	253	03.4	178 20.2	05.6	64 47.8	28.5	186 36.5	53.5	50 36.9	44.4					
22	268	05.8	193 21.0	05.8	79 49.0	29.1	201 38.5	53.6	65 39.3	44.5					
23	283	08.3	208 21.8	06.0	94 50.1	29.7	216 40.4	53.7	80 41.7	44.5					
24	298	10.8	223 22.6	+18 06.3	109 51.3	-3 30.3	231 42.4	+20 53.7	95 44.1	-6 44.5					
Dif	—		+8	+2	+12	-6	+20	+1	+24						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 30 ^d 4 PHE { 4 ^h : 56 ^h /4 12 ^h : 56 ^h /6 20 ^h : 56 ^h /7 R°: 48 ^m											
	PMG: 12 ^h 06 ^m 4			SD: 15 ^h 3 PMG: 13 ^h 07 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	24.6	+20 37.2	169	35.8	+14 00.2		60 N	20 57	22 08	** **	5 17 83	20 36 13		
1	193	24.5		184	06.5 ¹¹⁷	+13 50.9 ⁹³		58	41	21 42	** **	25 80	30 16		
2	208	24.5	36.3	198	37.2 ¹¹⁷	41.5 ⁹⁴		56	28	22	22 53	32 78	25 18		
3	223	24.5	35.8	213	07.9 ¹¹⁷	32.1 ⁹⁴		54	17	21 05	22 18	39 75	20 21		
4	238	24.4	35.3	227	38.7 ¹¹⁸	22.6 ⁹⁵		52	20 07	20 51	21 54	44 73	16 22		
5	253	24.4	+20 34.8	242	09.4 ¹¹⁷	+13 13.1 ⁹⁵		50	19 58	20 39	21 35	5 49 72	20 12 24		
6	268	24.3	+20 34.4	256	40.2 ¹¹⁸	+13 03.4 ⁹⁷		45	19 39	20 15	21 00	6 00 68	20 03 28		
7	283	24.3	33.9	271	11.0 ¹¹⁸	+12 53.7 ⁹⁷		40	24	19 56	20 35	09 64	19 56 31		
8	298	24.3	33.4	285	41.8 ¹¹⁸	43.9 ⁹⁸		35	12	40	20 15	17 61	50 34		
9	313	24.2	32.9	300	12.6 ¹¹⁸	34.1 ⁹⁸		30	19 00	27	19 59	24 59	45 36		
10	328	24.2	32.5	314	43.5 ¹¹⁹	24.1 ¹⁰⁰		20	18 41	19 05	34	36 55	35 41		
11	343	24.2	+20 32.0	329	14.3 ¹¹⁸	+12 14.2 ⁹⁹		10 N	18 25	18 48	19 14	6 46 51	19 27 44		
12	358	24.1	+20 31.5	343	45.2 ¹¹⁹	+12 04.1 ¹⁰¹		0	18 10	18 32	18 58	6 56 48	19 19 47		
13	13	24.1	31.0	358	16.1 ¹¹⁹	+11 54.0 ¹⁰¹		10 S	17 55	17	43	7 05 45	11 51		
14	28	24.1	30.6	12	47.0 ¹¹⁹	43.8 ¹⁰²		20	39	18 02	29	15 42	19 02 55		
15	43	24.0	30.1	27	17.9 ¹¹⁹	33.5 ¹⁰³		30	21	17 46	16	27 37	18 52 59		
16	58	24.0	29.6	41	48.9 ¹²⁰	23.2 ¹⁰³		35	17 10	38	09	34 34	46 62		
17	73	24.0	+20 29.1	56	19.9 ¹²⁰	+11 12.8 ¹⁰⁴		40	16 58	17 28	18 01	7 41 32	18 40 64		
18	88	24.0	+20 28.6	70	50.8 ¹¹⁹	+11 02.4 ¹⁰⁴		45	16 44	17 17	17 53	7 50 29	18 32 68		
19	103	23.9	28.1	85	21.8 ¹²⁰	+10 51.9 ¹⁰⁵		50	27	17 03	43	8 00 26	23 72		
20	118	23.9	27.7	99	52.8 ¹²⁰	41.3 ¹⁰⁶		52	19	16 57	39	05 24	19 73		
21	133	23.9	27.2	114	23.9 ¹²¹	30.7 ¹⁰⁶		54	16 10	51	35	11 21	14 76		
22	148	23.8	26.7	128	54.9 ¹²⁰	20.0 ¹⁰⁷		56	15 59	43	30	17 19	09 78		
23	163	23.8	26.2	143	26.0 ¹²¹	+10 09.3 ¹⁰⁷		58	48	35	25	23 17	18 03 81		
24	178	23.8	+20 25.7	157	57.0 ¹²⁰	+9 58.5 ¹⁰⁸		60 S	15 34	16 26	17 20	8 31 14	17 56 84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 4 ^h 06 ^m 6		Mag: -4.7 PMG: 9 ^h 06 ^m		Mag: +1.0 PMG: 16 ^h 39 ^m		Mag: -2.1 PMG: 8 ^h 32 ^m		Mag: +0.8 PMG: 17 ^h 34 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	298	10.8	223	22.6	+18 06.3	109 51.3	-3 30.3	231 42.4	+20 53.7	95 44.1	-6 44.5	
1	313	13.2	238	23.4	06.5	124 52.5	30.9	246 44.4	53.8	110 46.4	44.6	
2	328	15.7	253	24.2	06.7	139 53.6	31.5	261 46.3	53.9	125 48.8	44.6	
3	343	18.2	268	25.0	06.9	154 54.8	32.1	276 48.3	54.0	140 51.2	44.7	
4	358	20.6	283	25.8	07.1	169 56.0	32.6	291 50.3	54.0	155 53.6	44.7	
5	13	23.1	298	26.6	+18 07.3	184 57.2	-3 33.2	306 52.2	+20 54.1	170 55.9	-6 44.8	
6	28	25.6	313	27.4	+18 07.5	199 58.3	-3 33.8	321 54.2	+20 54.2	185 58.3	-6 44.8	
7	43	28.0	328	28.1	07.8	214 59.5	34.4	336 56.1	54.3	201 00.7	44.9	
8	58	30.5	343	28.9	08.0	230 00.7	35.0	351 58.1	54.3	216 03.1	44.9	
9	73	33.0	358	29.7	08.2	245 01.8	35.6	7 00.1	54.4	231 05.4	45.0	
10	88	35.4	13	30.5	08.4	260 03.0	36.2	22 02.0	54.5	246 07.8	45.0	
11	103	37.9	28	31.3	+18 08.6	275 04.2	-3 36.8	37 04.0	+20 54.6	261 10.2	-6 45.1	
12	118	40.3	43	32.0	+18 08.8	290 05.3	-3 37.4	52 06.0	+20 54.6	276 12.5	-6 45.1	
13	133	42.8	58	32.8	09.0	305 06.5	38.0	67 07.9	54.7	291 14.9	45.2	
14	148	45.3	73	33.6	09.3	320 07.7	38.6	82 09.9	54.8	306 17.3	45.2	
15	163	47.7	88	34.4	09.5	335 08.8	39.2	97 11.9	54.9	321 19.7	45.3	
16	178	50.2	103	35.1	09.7	350 10.0	39.8	112 13.8	54.9	336 22.0	45.3	
17	193	52.7	118	35.9	+18 09.9	5 11.2	-3 40.4	127 15.8	+20 55.0	351 24.4	-6 45.3	
18	208	55.1	133	36.7	+18 10.1	20 12.3	-3 41.0	142 17.7	+20 55.1	6 26.8	-6 45.4	
19	223	57.6	148	37.4	10.3	35 13.5	41.6	157 19.7	55.2	21 29.2	45.4	
20	239	00.1	163	38.2	10.6	50 14.7	42.2	172 21.7	55.2	36 31.5	45.5	
21	254	02.5	178	38.9	10.8	65 15.8	42.8	187 23.6	55.3	51 33.9	45.5	
22	269	05.0	193	39.7	11.0	80 17.0	43.4	202 25.6	55.4	66 36.3	45.6	
23	284	07.4	208	40.4	11.2	95 18.2	44.0	217 27.6	55.5	81 38.6	45.6	
24	299	09.9	223	41.2	+18 11.4	110 19.3	-3 44.6	232 29.5	+20 55.5	96 41.0	-6 45.7	
Dif	—		+8	+2		+12	-6	+20	+1		+24	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 4			Edad: 1 ^d 8 PHE { SD: 15'5 PMG: 13 ^h 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.8	+20	25.7	157	57.0	+9	58.5	60 N	** *	2 06	3 17	6 40	84	20 49	13
1	193	23.7		25.2	172	28.1 ¹²¹		47.7 ¹⁰⁸	58	** *	32	32	45	82	46	15
2	208	23.7		24.8	186	59.2 ¹²¹		36.8 ¹⁰⁹	56	1 20	2 52	45	50	78	43	17
3	223	23.7		24.3	201	30.3 ¹²¹		25.8 ¹¹⁰	54	1 55	3 08	3 56	54	76	41	19
4	238	23.6		23.8	216	01.4 ¹²¹		14.8 ¹¹⁰	52	2 19	22	4 06	6 57	75	38	22
5	253	23.6	+20	23.3	230	32.5 ¹²¹	+9	03.7 ¹¹¹	50	2 38	3 34	4 15	7 01	72	20 36	23
6	268	23.6	+20	22.8	245	03.7 ¹²²	+8	52.6 ¹¹¹	45	3 13	3 59	4 34	7 08	68	20 31	27
7	283	23.6		22.3	259	34.8 ¹²¹		41.4 ¹¹²	40	38	4 18	4 49	13	65	27	31
8	298	23.5		21.8	274	06.0 ¹²²		30.2 ¹¹²	35	3 58	33	5 02	18	62	24	33
9	313	23.5		21.3	288	37.1 ¹²¹		19.0 ¹¹²	30	4 14	4 46	13	23	59	21	36
10	328	23.5		20.8	303	08.3 ¹²²	+8	07.6 ¹¹⁴	20	39	5 08	32	31	55	16	40
11	343	23.5	+20	20.3	317	39.5 ¹²²	+7	56.3 ¹¹³	10 N	4 59	5 25	5 48	7 37	51	20 11	44
12	358	23.4	+20	19.9	332	10.7 ¹²²	+7	44.9 ¹¹⁴	0	5 15	5 41	6 03	7 44	47	20 06	48
13	13	23.4		19.4	346	41.9 ¹²²		33.4 ¹¹⁵	10 S	30	5 55	18	50	44	20 02	51
14	28	23.4		18.9	1	13.1 ¹²²		21.9 ¹¹⁵	20	43	6 10	34	7 57	40	19 57	55
15	43	23.3		18.4	15	44.3 ¹²²	+7	10.4 ¹¹⁵	30	5 57	26	6 52	8 04	36	51	60
16	58	23.3		17.9	30	15.5 ¹²²	+6	58.8 ¹¹⁶	35	6 04	35	7 02	08	34	48	62
17	73	23.3	+20	17.4	44	46.7 ¹²²	+6	47.2 ¹¹⁶	40	6 12	6 45	7 14	8 13	31	19 44	66
18	88	23.3	+20	16.9	59	18.0 ¹²³	+6	35.5 ¹¹⁷	45	6 20	6 56	7 28	8 19	28	19 40	69
19	103	23.2		16.4	73	49.2 ¹²²		23.8 ¹¹⁷	50	29	7 09	45	26	23	35	73
20	118	23.2		15.9	88	20.4 ¹²²		12.1 ¹¹⁷	52	33	15	7 53	29	22	32	75
21	133	23.2		15.4	102	51.7 ¹²³	+6	00.3 ¹¹⁸	54	37	21	8 02	32	20	30	77
22	148	23.2		14.9	117	22.9 ¹²²	+5	48.5 ¹¹⁸	56	42	29	12	36	18	27	79
23	163	23.1		14.4	131	54.2 ¹²³		36.6 ¹¹⁹	58	47	37	24	40	16	24	82
24	178	23.1	+20	13.9	146	25.4 ¹²²	+5	24.7 ¹¹⁹	60 S	6 52	7 46	8 37	8 45	13	19 20	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 02 ^m 7		Mag: -4.6 PMG: 9 ^h 05 ^m		Mag: +1.0 PMG: 16 ^h 37 ^m		Mag: -2.2 PMG: 8 ^h 29 ^m		Mag: +0.8 PMG: 17 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	299	09.9	223	41.2	+18	11.4	110	19.3	-3	44.6	232	29.5	+20	55.5	96	41.0	-6	45.7
1	314	12.4	238	41.9		11.6	125	20.5		45.2	247	31.5		55.6	111	43.4		45.7
2	329	14.8	253	42.7		11.9	140	21.6		45.8	262	33.5		55.7	126	45.8		45.8
3	344	17.3	268	43.4		12.1	155	22.8		46.4	277	35.4		55.7	141	48.1		45.8
4	359	19.8	283	44.2		12.3	170	24.0		47.0	292	37.4		55.8	156	50.5		45.9
5	14	22.2	298	44.9	+18	12.5	185	25.1	-3	47.6	307	39.4	+20	55.9	171	52.9	-6	45.9
6	29	24.7	313	45.7	+18	12.7	200	26.3	-3	48.2	322	41.3	+20	56.0	186	55.2	-6	46.0
7	44	27.2	328	46.4		13.0	215	27.5		48.8	337	43.3		56.0	201	57.6		46.0
8	59	29.6	343	47.1		13.2	230	28.6		49.4	352	45.3		56.1	217	00.0		46.1
9	74	32.1	358	47.9		13.4	245	29.8		50.0	7	47.2		56.2	232	02.3		46.1
10	89	34.6	13	48.6		13.6	260	31.0		50.6	22	49.2		56.3	247	04.7		46.2
11	104	37.0	28	49.3	+18	13.8	275	32.1	-3	51.2	37	51.2	+20	56.3	262	07.1	-6	46.2
12	119	39.5	43	50.1	+18	14.1	290	33.3	-3	51.8	52	53.1	+20	56.4	277	09.5	-6	46.3
13	134	41.9	58	50.8		14.3	305	34.4		52.4	67	55.1		56.5	292	11.8		46.3
14	149	44.4	73	51.5		14.5	320	35.6		53.0	82	57.1		56.6	307	14.2		46.4
15	164	46.9	88	52.2		14.7	335	36.8		53.6	97	59.0		56.6	322	16.6		46.4
16	179	49.3	103	52.9		14.9	350	37.9		54.2	113	01.0		56.7	337	18.9		46.5
17	194	51.8	118	53.7	+18	15.2	5	39.1	-3	54.8	128	03.0	+20	56.8	352	21.3	-6	46.5
18	209	54.3	133	54.4	+18	15.4	20	40.2	-3	55.4	143	04.9	+20	56.8	7	23.7	-6	46.6
19	224	56.7	148	55.1		15.6	35	41.4		56.0	158	06.9		56.9	22	26.0		46.6
20	239	59.2	163	55.8		15.8	50	42.6		56.6	173	08.9		57.0	37	28.4		46.7
21	255	01.7	178	56.5		16.0	65	43.7		57.2	188	10.9		57.1	52	30.8		46.7
22	270	04.1	193	57.2		16.3	80	44.9		57.8	203	12.8		57.1	67	33.1		46.8
23	285	06.6	208	57.9		16.5	95	46.0		58.4	218	14.8		57.2	82	35.5		46.8
24	300	09.1	223	58.6	+18	16.7	110	47.2	-3	59.0	233	16.8	+20	57.3	97	37.9	-6	46.9
Dif	—		+7		+2		+12		-6		+20		+1		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 8	PHE {	4 ^h : 57/4 12 ^h : 57/6 20 ^h : 57/7 R°: 48 ^m									
	PMG: 12 ^h 06 ^m 5														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	23.1	+20 13.9	146	25.4	+5 24.7		60 N	20 53	22 01	** **	8 04 86	21 02 12		
1	193	23.1	13.4	160	56.7 ¹²³	12.8 ¹¹⁹		58	38	21 37	** **	07 82	01 15		
2	208	23.1	12.9	175	27.9 ¹²²	+5 00.8 ¹²⁰		56	25	17	22 44	08 80	00 18		
3	223	23.0	12.4	189	59.1 ¹²²	+4 48.8 ¹²⁰		54	14	21 02	22 12	10 78	00 19		
4	238	23.0	11.9	204	30.4 ¹²³	36.8 ¹²⁰		52	20 05	20 48	21 49	12 75	21 00 21		
5	253	23.0	+20 11.4	219	01.6 ¹²²	+4 24.8 ¹²⁰		50	19 56	20 36	21 31	8 13 73	20 59 23		
6	268	23.0	+20 10.9	233	32.9 ¹²³	+4 12.7 ¹²¹		45	19 38	20 12	20 57	8 16 69	20 58 28		
7	283	23.0	10.4	248	04.1 ¹²²	+4 00.6 ¹²¹		40	23	19 54	33	18 66	58 30		
8	298	22.9	09.9	262	35.3 ¹²²	+3 48.5 ¹²¹		35	19 10	39	20 13	20 63	57 34		
9	313	22.9	09.4	277	06.5 ¹²²	36.3 ¹²²		30	18 59	26	19 58	22 60	57 36		
10	328	22.9	08.9	291	37.8 ¹²³	24.1 ¹²²		20	41	19 05	33	26 55	56 40		
11	343	22.9	+20 08.4	306	09.0 ¹²²	+3 11.9 ¹²²		10 N	18 25	18 47	19 14	8 28 52	20 55 44		
12	358	22.8	+20 07.9	320	40.2 ¹²²	+2 59.7 ¹²²		0	18 10	18 32	18 58	8 31 48	20 54 48		
13	13	22.8	07.3	335	11.4 ¹²²	47.4 ¹²³		10 S	17 55	18	43	34 44	53 52		
14	28	22.8	06.8	349	42.6 ¹²²	35.1 ¹²³		20	40	18 03	30	37 40	52 56		
15	43	22.8	06.3	4	13.7 ¹²¹	22.8 ¹²³		30	22	17 48	17	40 36	51 61		
16	58	22.8	05.8	18	44.9 ¹²²	+2 10.5 ¹²³		35	12	39	10	42 33	50 64		
17	73	22.7	+20 05.3	33	16.1 ¹²²	+1 58.2 ¹²³		40	17 00	17 29	18 02	8 44 30	20 50 66		
18	88	22.7	+20 04.8	47	47.2 ¹²¹	+1 45.8 ¹²⁴		45	16 46	17 18	17 54	8 47 26	20 49 70		
19	103	22.7	04.3	62	18.4 ¹²²	33.5 ¹²³		50	29	06	46	49 23	48 74		
20	118	22.7	03.8	76	49.5 ¹²¹	21.1 ¹²⁴		52	21	17 00	42	51 21	47 76		
21	133	22.7	03.3	91	20.6 ¹²¹	+1 08.7 ¹²⁴		54	12	16 53	37	52 19	47 78		
22	148	22.6	02.8	105	51.7 ¹²¹	+0 56.3 ¹²⁴		56	16 03	46	33	54 17	46 81		
23	163	22.6	02.2	120	22.8 ¹²¹	43.9 ¹²⁴		58	15 51	38	28	56 14	46 83		
24	178	22.6	+20 01.7	134	53.8 ¹²⁰	+0 31.4 ¹²⁵		60 S	15 38	16 29	17 23	8 58 12	20 45 86		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 58 ^m 7		Mag: -4.6 PMG: 9 ^h 04 ^m		Mag: +1.0 PMG: 16 ^h 36 ^m		Mag: -2.2 PMG: 8 ^h 26 ^m		Mag: +0.8 PMG: 17 ^h 27 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	300 09.1	223 58.6	+18 16.7	110 47.2	-3 59.0	233 16.8	+20 57.3	97 37.9	-6 46.9						
1	315 11.5	238 59.3	16.9	125 48.3	-3 59.6	248 18.7	57.4	112 40.2	46.9						
2	330 14.0	254 00.0	17.2	140 49.5	-4 00.2	263 20.7	57.4	127 42.6	46.9						
3	345 16.4	269 00.7	17.4	155 50.7	00.8	278 22.7	57.5	142 45.0	47.0						
4	0 18.9	284 01.4	17.6	170 51.8	01.4	293 24.6	57.6	157 47.3	47.0						
5	15 21.4	299 02.1	+18 17.8	185 53.0	-4 02.0	308 26.6	+20 57.6	172 49.7	-6 47.1						
6	30 23.8	314 02.8	+18 18.1	200 54.1	-4 02.6	323 28.6	+20 57.7	187 52.1	-6 47.1						
7	45 26.3	329 03.5	18.3	215 55.3	03.2	338 30.6	57.8	202 54.4	47.2						
8	60 28.8	344 04.2	18.5	230 56.4	03.8	353 32.5	57.9	217 56.8	47.2						
9	75 31.2	359 04.9	18.7	245 57.6	04.4	8 34.5	57.9	232 59.2	47.3						
10	90 33.7	14 05.6	18.9	260 58.8	05.0	23 36.5	58.0	248 01.5	47.3						
11	105 36.2	29 06.3	+18 19.2	275 59.9	-4 05.6	38 38.4	+20 58.1	263 03.9	-6 47.4						
12	120 38.6	44 06.9	+18 19.4	291 01.1	-4 06.2	53 40.4	+20 58.1	278 06.3	-6 47.4						
13	135 41.1	59 07.6	19.6	306 02.2	06.8	68 42.4	58.2	293 08.6	47.5						
14	150 43.5	74 08.3	19.8	321 03.4	07.4	83 44.4	58.3	308 11.0	47.5						
15	165 46.0	89 09.0	20.1	336 04.5	08.0	98 46.3	58.4	323 13.4	47.6						
16	180 48.5	104 09.7	20.3	351 05.7	08.6	113 48.3	58.4	338 15.7	47.6						
17	195 50.9	119 10.3	+18 20.5	6 06.8	-4 09.2	128 50.3	+20 58.5	353 18.1	-6 47.7						
18	210 53.4	134 11.0	+18 20.7	21 08.0	-4 09.8	143 52.2	+20 58.6	8 20.5	-6 47.7						
19	225 55.9	149 11.7	21.0	36 09.1	10.4	158 54.2	58.6	23 22.8	47.8						
20	240 58.3	164 12.3	21.2	51 10.3	11.0	173 56.2	58.7	38 25.2	47.8						
21	256 00.8	179 13.0	21.4	66 11.4	11.6	188 58.2	58.8	53 27.6	47.9						
22	271 03.3	194 13.7	21.6	81 12.6	12.2	204 00.1	58.9	68 29.9	47.9						
23	286 05.7	209 14.3	21.9	96 13.7	12.8	219 02.1	58.9	83 32.3	48.0						
24	301 08.2	224 15.0	+18 22.1	111 14.9	-4 13.4	234 04.1	+20 59.0	98 34.6	-6 48.0						
Dif	—	+7	+2	+12	-6	+20	+1	+24	0						

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 3 ^d 8 PHE { SD: 15'7 PMG: 15 ^h 31 ^m 4 ^h : 57'9 12 ^h : 58'0 20 ^h : 58'2 R°: 49 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	22.6	+20	01.7	134	53.8	+0	31.4	60 N	** *	2 12	3 21	9 30	87	21 14	13				
1	193	22.6		01.2	149	24.9 ¹²¹		19.0 ¹²⁴	58	** *	37	36	29	84	16	16				
2	208	22.6		00.7	163	55.9 ¹²⁰	+0	06.6 ¹²⁴	56	1 29	2 56	48	28	82	18	18				
3	223	22.6	+20	00.2	178	26.9 ¹²⁰	-0	05.9 ¹²⁵	54	2 01	3 12	3 59	28	79	19	21				
4	238	22.5	+19	59.7	192	57.9 ¹²⁰		18.4 ¹²⁵	52	24	25	4 09	27	77	21	23				
5	253	22.5	+19	59.2	207	28.9 ¹²⁰	-0	30.8 ¹²⁴	50	2 42	3 37	4 18	9 26	75	21 22	25				
6	268	22.5	+19	58.6	221	59.8 ¹¹⁹	-0	43.3 ¹²⁵	45	3 16	4 01	4 36	9 25	71	21 26	28				
7	283	22.5		58.1	236	30.7 ¹¹⁹	-0	55.8 ¹²⁵	40	3 41	19	4 51	24	67	28	32				
8	298	22.5		57.6	251	01.7 ¹²⁰	-1	08.3 ¹²⁵	35	4 00	35	5 03	23	64	31	34				
9	313	22.5		57.1	265	32.5 ¹¹⁸		20.7 ¹²⁴	30	16	4 47	14	22	62	33	37				
10	328	22.4		56.6	280	03.4 ¹¹⁹		33.2 ¹²⁵	20	40	5 08	32	21	57	36	42				
11	343	22.4	+19	56.0	294	34.2 ¹¹⁸	-1	45.7 ¹²⁵	10 N	4 59	5 26	5 48	9 20	53	21 39	46				
12	358	22.4	+19	55.5	309	05.0 ¹¹⁸	-1	58.2 ¹²⁵	0	5 15	5 41	6 03	9 19	49	21 42	50				
13	13	22.4		55.0	323	35.8 ¹¹⁸	-2	10.7 ¹²⁵	10 S	30	5 55	18	18	45	45	53				
14	28	22.4		54.5	338	06.6 ¹¹⁸		23.1 ¹²⁴	20	43	6 10	33	17	41	48	57				
15	43	22.4		54.0	352	37.3 ¹¹⁷		35.6 ¹²⁵	30	5 56	25	6 51	16	36	52	61				
16	58	22.4		53.4	7	08.0 ¹¹⁷	-2	48.0 ¹²⁴	35	6 03	34	7 01	15	34	54	64				
17	73	22.3	+19	52.9	21	38.7 ¹¹⁷	-3	00.5 ¹²⁵	40	6 10	6 43	7 13	9 14	32	21 56	67				
18	88	22.3	+19	52.4	36	09.3 ¹¹⁶	-3	12.9 ¹²⁴	45	6 18	6 54	7 26	9 13	28	21 59	71				
19	103	22.3		51.9	50	39.9 ¹¹⁶		25.4 ¹²⁵	50	27	7 07	43	12	24	22 02	75				
20	118	22.3		51.3	65	10.5 ¹¹⁶		37.8 ¹²⁴	52	31	13	7 51	12	22	03	78				
21	133	22.3		50.8	79	41.1 ¹¹⁶	-3	50.2 ¹²⁴	54	35	19	8 00	11	21	05	79				
22	148	22.3		50.3	94	11.6 ¹¹⁵	-4	02.6 ¹²⁴	56	39	26	09	11	18	07	82				
23	163	22.3		49.8	108	42.1 ¹¹⁵		15.0 ¹²⁴	58	44	34	20	10	16	09	84				
24	178	22.3	+19	49.2	123	12.5 ¹¹⁴	-4	27.4 ¹²⁴	60 S	6 50	7 42	8 33	9 10	12	22 11	88				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 54 ^m 8				Mag: -4.6 PMG: 9 ^h 03 ^m				Mag: +1.0 PMG: 16 ^h 34 ^m				Mag: -2.2 PMG: 8 ^h 23 ^m				Mag: +0.8 PMG: 17 ^h 23 ^m			
h	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	301	08.2	224	15.0	+18	22.1		111	14.9	-4	13.4		234	04.1	+20	59.0	98	34.6	-6	48.0
1	316	10.7	239	15.6		22.3		126	16.1		14.0		249	06.1		59.1	113	37.0		48.1
2	331	13.1	254	16.3		22.5		141	17.2		14.6		264	08.0		59.1	128	39.4		48.2
3	346	15.6	269	16.9		22.8		156	18.4		15.2		279	10.0		59.2	143	41.7		48.2
4	1	18.0	284	17.6		23.0		171	19.5		15.8		294	12.0		59.3	158	44.1		48.3
5	16	20.5	299	18.2	+18	23.2		186	20.7	-4	16.4		309	13.9	+20	59.4	173	46.5	-6	48.3
6	31	23.0	314	18.9	+18	23.4		201	21.8	-4	17.0		324	15.9	+20	59.4	188	48.8	-6	48.4
7	46	25.4	329	19.5		23.7		216	23.0		17.6		339	17.9		59.5	203	51.2		48.4
8	61	27.9	344	20.2		23.9		231	24.1		18.2		354	19.9		59.6	218	53.6		48.5
9	76	30.4	359	20.8		24.1		246	25.3		18.8		9	21.8		59.6	233	55.9		48.5
10	91	32.8	14	21.5		24.4		261	26.4		19.4		24	23.8		59.7	248	58.3		48.6
11	106	35.3	29	22.1	+18	24.6		276	27.6	-4	20.1		39	25.8	+20	59.8	264	00.6	-6	48.6
12	121	37.8	44	22.7	+18	24.8		291	28.7	-4	20.7		54	27.8	+20	59.9	279	03.0	-6	48.7
13	136	40.2	59	23.4		25.0		306	29.9		21.3		69	29.7	+20	59.9	294	05.4		48.7
14	151	42.7	74	24.0		25.3		321	31.0		21.9		84	31.7	+21	00.0	309	07.7		48.8
15	166	45.1	89	24.6		25.5		336	32.1		22.5		99	33.7	+21	00.1	324	10.1		48.8
16	181	47.6	104	25.3		25.7		351	33.3		23.1		114	35.7		00.1	339	12.4		48.9
17	196	50.1	119	25.9	+18	25.9		6	34.4	-4	23.7		129	37.6	+21	00.2	354	14.8	-6	48.9
18	211	52.5	134	26.5	+18	26.2		21	35.6	-4	24.3		144	39.6	+21	00.3	9	17.2	-6	49.0
19	226	55.0	149	27.1		26.4		36	36.7		24.9		159	41.6		00.3	24	19.5		49.0
20	241	57.5	164	27.8		26.6		51	37.9		25.5		174	43.6		00.4	39	21.9		49.1
21	256	59.9	179	28.4		26.8		66	39.0		26.1		189	45.6		00.5	54	24.3		49.1
22	272	02.4	194	29.0		27.1		81	40.2		26.7		204	47.5		00.6	69	26.6		49.2
23	287	04.9	209	29.6		27.3		96	41.3		27.3		219	49.5		00.6	84	29.0		49.2
24	302	07.3	224	30.2	+18	27.5		111	42.5	-4	27.9		234	51.5	+21	00.7	99	31.3	-6	49.3
Dif	—		+6		+2		+11		-6		+20		+1		+24		-1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 4 ^d 8	PHE { 4 ^h : 58 ^h /3 12 ^h : 58 ^h /4 20 ^h : 58 ^h /6 R°: 51 ^m										
	PMG: 12 ^h 06 ^m 5					SD: 15 ^h 9									
	hG ☉ Dec			hG ☾ Dif Dec Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	22.3	+19 49.2	123	12.5	-4 27.4	60 N	20 48	21 55	** **	10 57 89	21 27 16			
1	193	22.2	48.7	137	42.9 ¹¹⁴	39.7 ¹²³	58	34	32	23 29	53 86	32 19			
2	208	22.2	48.2	152	13.3 ¹¹⁴	-4 52.0 ¹²³	56	22	21 13	22 36	50 82	36 22			
3	223	22.2	47.6	166	43.6 ¹¹³	-5 04.4 ¹²⁴	54	11	20 58	22 07	47 80	40 22			
4	238	22.2	47.1	181	13.9 ¹¹³	16.7 ¹²³	52	20 02	45	21 45	44 78	44 26			
5	253	22.2	+19 46.6	195	44.2 ¹¹³	-5 28.9 ¹²²	50	19 53	20 33	21 27	10 41 76	21 47 28			
6	268	22.2	+19 46.1	210	14.4 ¹¹²	-5 41.2 ¹²³	45	19 36	20 10	20 54	10 36 71	21 54 32			
7	283	22.2	45.5	224	44.6 ¹¹²	-5 53.4 ¹²²	40	21	19 52	30	31 68	22 00 35			
8	298	22.2	45.0	239	14.7 ¹¹¹	-6 05.6 ¹²²	35	19 09	37	20 12	27 66	05 38			
9	313	22.2	44.5	253	44.8 ¹¹¹	17.8 ¹²²	30	18 58	25	19 56	24 62	10 40			
10	328	22.2	43.9	268	14.8 ¹¹⁰	29.9 ¹²¹	20	40	19 04	32	18 58	18 45			
11	343	22.1	+19 43.4	282	44.8 ¹¹⁰	-6 42.1 ¹²²	10 N	18 25	18 47	19 13	10 13 54	22 25 48			
12	358	22.1	+19 42.9	297	14.8 ¹¹⁰	-6 54.2 ¹²¹	0	18 10	18 32	18 58	10 08 51	22 32 52			
13	13	22.1	42.3	311	44.7 ¹⁰⁹	-7 06.2 ¹²⁰	10 S	17 56	18	44	10 03 47	38 56			
14	28	22.1	41.8	326	14.6 ¹⁰⁹	18.3 ¹²¹	20	40	18 04	31	9 58 43	45 60			
15	43	22.1	41.3	340	44.4 ¹⁰⁸	30.3 ¹²⁰	30	23	17 49	18	52 39	53 64			
16	58	22.1	40.7	355	14.2 ¹⁰⁸	42.2 ¹¹⁹	35	13	40	11	49 37	22 58 66			
17	73	22.1	+19 40.2	9	43.9 ¹⁰⁷	-7 54.2 ¹²⁰	40	17 02	17 31	18 04	9 46 33	23 03 69			
18	88	22.1	+19 39.6	24	13.6 ¹⁰⁷	-8 06.1 ¹¹⁹	45	16 48	17 20	17 56	9 41 30	23 10 72			
19	103	22.1	39.1	38	43.2 ¹⁰⁶	17.9 ¹¹⁸	50	32	08	48	36 26	17 77			
20	118	22.1	38.6	53	12.8 ¹⁰⁶	29.7 ¹¹⁸	52	24	17 02	44	34 24	21 78			
21	133	22.1	38.0	67	42.3 ¹⁰⁵	41.5 ¹¹⁸	54	15	16 56	40	32 22	24 81			
22	148	22.1	37.5	82	11.8 ¹⁰⁵	-8 53.2 ¹¹⁷	56	16 06	49	35	29 20	29 83			
23	163	22.1	36.9	96	41.2 ¹⁰⁴	-9 04.9 ¹¹⁷	58	15 55	41	31	26 17	33 86			
24	178	22.1	+19 36.4	111	10.6 ¹⁰⁴	-9 16.6 ¹¹⁷	60 S	15 42	16 33	17 26	9 22 15	23 39 89			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO	
	PMG 3 ^h 50 ^m 9		Mag: -4.6 PMG: 9 ^h 02 ^m			Mag: +1.0 PMG: 16 ^h 32 ^m			Mag: -2.2 PMG: 8 ^h 19 ^m			Mag: +0.8 PMG: 17 ^h 19 ^m	
	hG ♈ Dec		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec	
h	°	'	°	'	°	°	'	°	'	°	'	°	'
0	302	07.3	224	30.2	+18 27.5	111	42.5	-4 27.9	234	51.5	+21 00.7	99	31.3
1	317	09.8	239	30.9	27.8	126	43.6	28.5	249	53.5	00.8	114	33.7
2	332	12.3	254	31.5	28.0	141	44.8	29.1	264	55.4	00.8	129	36.1
3	347	14.7	269	32.1	28.2	156	45.9	29.7	279	57.4	00.9	144	38.4
4	2	17.2	284	32.7	28.4	171	47.0	30.3	294	59.4	01.0	159	40.8
5	17	19.6	299	33.3	+18 28.7	186	48.2	-4 30.9	310	01.4	+21 01.0	174	43.1
6	32	22.1	314	33.9	+18 28.9	201	49.3	-4 31.5	325	03.3	+21 01.1	189	45.5
7	47	24.6	329	34.5	29.1	216	50.5	32.1	340	05.3	01.2	204	47.9
8	62	27.0	344	35.1	29.4	231	51.6	32.7	355	07.3	01.3	219	50.2
9	77	29.5	359	35.7	29.6	246	52.8	33.3	10	09.3	01.3	234	52.6
10	92	32.0	14	36.3	29.8	261	53.9	33.9	25	11.3	01.4	249	54.9
11	107	34.4	29	36.9	+18 30.0	276	55.0	-4 34.5	40	13.2	+21 01.5	264	57.3
12	122	36.9	44	37.5	+18 30.3	291	56.2	-4 35.1	55	15.2	+21 01.5	279	59.6
13	137	39.4	59	38.1	30.5	306	57.3	35.7	70	17.2	01.6	295	02.0
14	152	41.8	74	38.7	30.7	321	58.5	36.3	85	19.2	01.7	310	04.4
15	167	44.3	89	39.2	31.0	336	59.6	36.9	100	21.2	01.7	325	06.7
16	182	46.8	104	39.8	31.2	352	00.8	37.5	115	23.1	01.8	340	09.1
17	197	49.2	119	40.4	+18 31.4	7	01.9	-4 38.1	130	25.1	+21 01.9	355	11.4
18	212	51.7	134	41.0	+18 31.6	22	03.0	-4 38.7	145	27.1	+21 01.9	10	13.8
19	227	54.1	149	41.6	31.9	37	04.2	39.3	160	29.1	02.0	25	16.2
20	242	56.6	164	42.2	32.1	52	05.3	39.9	175	31.1	02.1	40	18.5
21	257	59.1	179	42.7	32.3	67	06.5	40.5	190	33.0	02.1	55	20.9
22	273	01.5	194	43.3	32.6	82	07.6	41.1	205	35.0	02.2	70	23.2
23	288	04.0	209	43.9	32.8	97	08.7	41.7	220	37.0	02.3	85	25.6
24	303	06.5	224	44.5	+18 33.0	112	09.9	-4 42.3	235	39.0	+21 02.4	100	27.9
Dif	—		+6 +2			+11 -6			+20 +1			+24 -1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5				Edad: 5 ^d 8 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 59 ^m 0 R°: 54 ^m SD: 16 ^h 0 PMG: 17 ^h 11 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.1	+19	36.4	111	10.6	-9	16.6	60 N	** **	2	19	3	25	12	26	89
1	193	22.1		35.9	125	39.9 ¹⁰³		28.2 ¹¹⁶	58	0	44	2	42		19	86	51
2	208	22.0		35.3	140	09.1 ¹⁰²		39.8 ¹¹⁶	56	1	37	3	00	3	52	12	84
3	223	22.0		34.8	154	38.3 ¹⁰²	-9	51.3 ¹¹⁵	54	2	07	16	4	02	07	81	22
4	238	22.0		34.2	169	07.5 ¹⁰²	-10	02.7 ¹¹⁴	52	29		29	12	12	02	79	10
5	253	22.0	+19	33.7	183	36.6 ¹⁰¹	-10	14.2 ¹¹⁵	50	2	46	3	40	4	20	11	57
6	268	22.0	+19	33.1	198	05.6 ¹⁰⁰	-10	25.5 ¹¹³	45	3	19	4	03	4	38	11	47
7	283	22.0		32.6	212	34.6 ¹⁰⁰		36.8 ¹¹³	40	3	43	21	4	52	39	70	35
8	298	22.0		32.1	227	03.5 ⁹⁹		48.1 ¹¹³	35	4	02	36	5	04	33	66	43
9	313	22.0		31.5	241	32.4 ⁹⁹	-10	59.3 ¹¹²	30	17	4	49	15	26	65	22	50
10	328	22.0		31.0	256	01.2 ⁹⁸	-11	10.4 ¹¹¹	20	4	41	5	09	33	16	60	23
11	343	22.0	+19	30.4	270	29.9 ⁹⁷	-11	21.5 ¹¹¹	10 N	5	00	5	26	5	49	11	07
12	358	22.0	+19	29.9	284	58.6 ⁹⁷	-11	32.6 ¹¹¹	0	5	16	5	41	6	03	10	59
13	13	22.0		29.3	299	27.2 ⁹⁶		43.5 ¹⁰⁹	10 S	29	5	55	17	50	50	34	57
14	28	22.0		28.8	313	55.8 ⁹⁶	-11	54.4 ¹⁰⁹	20	42	6	09	32	41	47	45	60
15	43	22.0		28.2	328	24.3 ⁹⁵	-12	05.3 ¹⁰⁹	30	5	55	24	6	50	31	43	23
16	58	22.0		27.7	342	52.7 ⁹⁴		16.1 ¹⁰⁸	35	6	02	33	7	00	26	40	** ** *
17	73	22.0	+19	27.1	357	21.1 ⁹⁴	-12	26.8 ¹⁰⁷	40	6	09	6	42	7	11	10	19
18	88	22.0	+19	26.6	11	49.4 ⁹³	-12	37.5 ¹⁰⁷	45	6	16	6	52	7	24	10	11
19	103	22.0		26.0	26	17.6 ⁹²		48.0 ¹⁰⁵	50	25	7	05	41	10	02	31	** ** *
20	118	22.0		25.5	40	45.8 ⁹²	-12	58.6 ¹⁰⁶	52	29	10		48	9	58	29	** ** *
21	133	22.0		24.9	55	13.9 ⁹¹	-13	09.0 ¹⁰⁴	54	33	16	7	57	54	26	** ** *	
22	148	22.0		24.4	69	41.9 ⁹⁰		19.4 ¹⁰⁴	56	37	23	8	06	49	24	** ** *	
23	163	22.0		23.8	84	09.9 ⁹⁰		29.7 ¹⁰³	58	41	31	17	43	22	** ** *		
24	178	22.0	+19	23.3	98	37.8 ⁸⁹	-13	39.9 ¹⁰²	60 S	6	47	7	39	8	29	9	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 46 ^m 9		Mag: -4.6 PMG: 9 ^h 01 ^m		Mag: +1.0 PMG: 16 ^h 30 ^m		Mag: -2.2 PMG: 8 ^h 16 ^m		Mag: +0.8 PMG: 17 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	303	06.5	224	44.5	+18	33.0	112	09.9	-4	42.3
1	318	08.9	239	45.0		33.2	127	11.0		42.9
2	333	11.4	254	45.6		33.5	142	12.2		43.6
3	348	13.9	269	46.2		33.7	157	13.3		44.2
4	3	16.3	284	46.7		33.9	172	14.4		44.8
5	18	18.8	299	47.3	+18	34.2	187	15.6	-4	45.4
6	33	21.2	314	47.9	+18	34.4	202	16.7	-4	46.0
7	48	23.7	329	48.4		34.6	217	17.8		46.6
8	63	26.2	344	49.0		34.8	232	19.0		47.2
9	78	28.6	359	49.5		35.1	247	20.1		47.8
10	93	31.1	14	50.1		35.3	262	21.3		48.4
11	108	33.6	29	50.6	+18	35.5	277	22.4	-4	49.0
12	123	36.0	44	51.2	+18	35.8	292	23.5	-4	49.6
13	138	38.5	59	51.7		36.0	307	24.7		50.2
14	153	41.0	74	52.3		36.2	322	25.8		50.8
15	168	43.4	89	52.8		36.4	337	26.9		51.4
16	183	45.9	104	53.4		36.7	352	28.1		52.0
17	198	48.4	119	53.9	+18	36.9	7	29.2	-4	52.6
18	213	50.8	134	54.5	+18	37.1	22	30.3	-4	53.2
19	228	53.3	149	55.0		37.4	37	31.5		53.8
20	243	55.7	164	55.5		37.6	52	32.6		54.4
21	258	58.2	179	56.1		37.8	67	33.7		55.0
22	274	00.7	194	56.6		38.0	82	34.9		55.6
23	289	03.1	209	57.1		38.3	97	36.0		56.2
24	304	05.6	224	57.7	+18	38.5	112	37.1	-4	56.8
Dif	—		+6		+2		+11		-6	
							+20		+1	
									+24	
									-	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 6 ^d 8	PHE { 4 ^h : 59 ^m /1 12 ^h : 59 ^m /2 20 ^h : 59 ^m /3										
	PMG: 12 ^h 06 ^m 5					SD: 16 ^h 1			SD: 18 ^h 05 ^m		R°: 57 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	22.0	+19 23.3	98	37.8	-13 39.9		60 N	20 44	21 48	** **	13 55 88		22 04 29	
1	193	22.0	22.7	113	05.7 ⁸⁹	-13 50.1 ¹⁰²		58	30	26	23 12	45 84		15 33	
2	208	22.0	22.1	127	33.5 ⁸⁸	-14 00.2 ¹⁰¹		56	18	21 09	22 28	36 81		25 35	
3	223	22.0	21.6	142	01.2 ⁸⁷	10.2 ¹⁰⁰		54	20 08	20 54	22 01	28 79		33 37	
4	238	22.0	21.0	156	28.8 ⁸⁶	20.1 ⁹⁹		52	19 59	41	21 40	21 77		41 39	
5	253	22.0	+19 20.5	170	56.4 ⁸⁶	-14 29.9 ⁹⁸		50	19 51	20 30	21 23	13 14 76		22 48 41	
6	268	22.0	+19 19.9	185	23.9 ⁸⁵	-14 39.7 ⁹⁸		45	19 33	20 08	20 52	13 00 72		23 03 44	
7	283	22.0	19.4	199	51.4 ⁸⁵	49.4 ⁹⁶		40	19	19 50	28	12 49 69		15 46	
8	298	22.0	18.8	214	18.7 ⁸³	-14 59.0 ⁹⁷		35	19 07	36	20 10	39 67		26 48	
9	313	22.0	18.2	228	46.1 ⁸⁴	-15 08.5 ⁹⁵		30	18 57	23	19 55	31 65		35 50	
10	328	22.0	17.7	243	13.3 ⁸²	17.9 ⁹⁴		20	39	19 03	31	16 62		23 51 53	
11	343	22.0	+19 17.1	257	40.5 ⁸²	-15 27.2 ⁹³		10 N	18 24	18 47	19 13	12 04 58		** ** *	
12	358	22.0	+19 16.6	272	07.6 ⁸¹	-15 36.5 ⁹¹		0	18 10	18 32	18 57	11 52 56		** ** *	
13	13	22.0	16.0	286	34.6 ⁸⁰	45.6 ⁹¹		10 S	17 56	18	44	40 54		** ** *	
14	28	22.1	15.4	301	01.6 ⁸⁰	-15 54.7 ⁹¹		20	41	18 04	31	28 50		** ** *	
15	43	22.1	14.9	315	28.5 ⁷⁹	-16 03.7 ⁹⁰		30	24	17 50	19	14 47		** ** *	
16	58	22.1	14.3	329	55.3 ⁷⁸	12.5 ⁸⁸		35	14	41	12	11 06 45		0 04 67	
17	73	22.1	+19 13.7	344	22.0 ⁷⁷	-16 21.3 ⁸⁸		40	17 03	17 32	18 05	10 56 43		0 12 70	
18	88	22.1	+19 13.2	358	48.7 ⁷⁷	-16 30.0 ⁸⁷		45	16 50	17 22	17 58	10 46 40		0 22 72	
19	103	22.1	12.6	13	15.3 ⁷⁶	38.6 ⁸⁶		50	34	10	50	33 36		34 76	
20	118	22.1	12.1	27	41.9 ⁷⁶	47.1 ⁸⁵		52	27	17 05	46	27 35		39 78	
21	133	22.1	11.5	42	08.4 ⁷⁵	-16 55.5 ⁸⁴		54	19	16 59	42	20 33		45 80	
22	148	22.1	10.9	56	34.8 ⁷⁴	-17 03.8 ⁸³		56	16 09	52	38	13 31		52 82	
23	163	22.1	10.4	71	01.1 ⁷³	12.0 ⁸²		58	15 59	45	34	10 05 28		0 59 86	
24	178	22.1	+19 09.8	85	27.4 ⁷³	-17 20.0 ⁸⁰		60 S	15 46	16 36	17 29	9 55 25		1 08 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 43 ^m 0		Mag: -4.6 PMG: 9 ^h 00 ^m		Mag: +1.0 PMG: 16 ^h 28 ^m		Mag: -2.2 PMG: 8 ^h 13 ^m		Mag: +0.8 PMG: 17 ^h 12 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	304	05.6	224	57.7	+18 38.5	112	37.1	-4 56.8	236	26.6	+21 04.0	101	24.5	-6 51.8	
1	319	08.1	239	58.2	38.7	127	38.3	57.4	251	28.6	04.1	116	26.8	51.9	
2	334	10.5	254	58.7	39.0	142	39.4	58.0	266	30.5	04.1	131	29.2	51.9	
3	349	13.0	269	59.3	39.2	157	40.5	58.6	281	32.5	04.2	146	31.5	52.0	
4	4	15.5	284	59.8	39.4	172	41.7	59.3	296	34.5	04.3	161	33.9	52.1	
5	19	17.9	300	00.3	+18 39.6	187	42.8	-4 59.9	311	36.5	+21 04.3	176	36.2	-6 52.1	
6	34	20.4	315	00.8	+18 39.9	202	43.9	-5 00.5	326	38.5	+21 04.4	191	38.6	-6 52.2	
7	49	22.8	330	01.3	40.1	217	45.1	01.1	341	40.5	04.5	206	40.9	52.2	
8	64	25.3	345	01.9	40.3	232	46.2	01.7	356	42.5	04.5	221	43.3	52.3	
9	79	27.8	0	02.4	40.6	247	47.3	02.3	11	44.5	04.6	236	45.6	52.3	
10	94	30.2	15	02.9	40.8	262	48.5	02.9	26	46.4	04.7	251	48.0	52.4	
11	109	32.7	30	03.4	+18 41.0	277	49.6	-5 03.5	41	48.4	+21 04.7	266	50.3	-6 52.4	
12	124	35.2	45	03.9	+18 41.2	292	50.7	-5 04.1	56	50.4	+21 04.8	281	52.7	-6 52.5	
13	139	37.6	60	04.4	41.5	307	51.9	04.7	71	52.4	04.9	296	55.0	52.6	
14	154	40.1	75	04.9	41.7	322	53.0	05.3	86	54.4	04.9	311	57.4	52.6	
15	169	42.6	90	05.4	41.9	337	54.1	05.9	101	56.4	05.0	326	59.7	52.7	
16	184	45.0	105	05.9	42.2	352	55.2	06.5	116	58.4	05.1	342	02.1	52.7	
17	199	47.5	120	06.4	+18 42.4	7	56.4	-5 07.1	132	00.4	+21 05.1	357	04.4	-6 52.8	
18	214	50.0	135	06.9	+18 42.6	22	57.5	-5 07.7	147	02.3	+21 05.2	12	06.8	-6 52.8	
19	229	52.4	150	07.4	42.8	37	58.6	08.3	162	04.3	05.3	27	09.1	52.9	
20	244	54.9	165	07.9	43.1	52	59.8	08.9	177	06.3	05.3	42	11.5	52.9	
21	259	57.3	180	08.4	43.3	68	00.9	09.5	192	08.3	05.4	57	13.8	53.0	
22	274	59.8	195	08.9	43.5	83	02.0	10.1	207	10.3	05.5	72	16.2	53.0	
23	290	02.3	210	09.4	43.7	98	03.1	10.7	222	12.3	05.5	87	18.5	53.1	
24	305	04.7	225	09.9	+18 44.0	113	04.3	-5 11.3	237	14.3	+21 05.6	102	20.9	-6 53.2	
Dif	—		+5		+2	+11		-6	+20		+1	+24		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 06 ^m 5			Edad: 7 ^d 8 PHE { SD: 16/2 PMG: 19 ^h 02 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	m	m	m
0	178	22.1	+19 09.8	85	27.4	-17 20.0	60 N	** **	2 25	3 30	15 23	80	22 33	43	
1	193	22.1	09.2	99	53.6	72	58	1 02	2 47	44	15 09	78	22 48	45	
2	208	22.1	08.6	114	19.8	72	56	1 45	3 05	3 55	14 57	76	23 00	46	
3	223	22.1	08.1	128	45.9	71	54	2 13	20	4 06	47 74		10 49		
4	238	22.1	07.5	143	11.9	70	52	33	32	15	38 73		20 49		
5	253	22.2	+19 06.9	157	37.8	69	50	2 50	3 43	4 23	14 30	71	23 29	50	
6	268	22.2	+19 06.4	172	03.7	69	45	3 22	4 06	4 40	14 12	69	23 47	52	
7	283	22.2	05.8	186	29.5	68	40	3 45	23	4 54	13 58	67	** **	**	
8	298	22.2	05.2	200	55.3	68	35	4 03	38	5 06	46 66		** **	**	
9	313	22.2	04.7	215	20.9	66	30	18	4 50	16	36 64		** **	**	
10	328	22.2	04.1	229	46.6	67	20	4 42	5 10	34	18 62		** **	**	
11	343	22.2	+19 03.5	244	12.1	65	10 N	5 00	5 27	5 49	13 02	61	0 05	55	
12	358	22.2	+19 02.9	258	37.6	65	0	5 16	5 41	6 03	12 48	59	0 18	58	
13	13	22.2	02.4	273	03.0	64	10 S	29	5 55	17	34 57		31 60		
14	28	22.2	01.8	287	28.4	64	20	42	6 08	32	18 55		0 45	63	
15	43	22.3	01.2	301	53.7	63	30	5 54	23	48	12 01	53	1 02	65	
16	58	22.3	00.6	316	19.0	63	35	6 01	31	6 58	11 51	51	11 67		
17	73	22.3	+19 00.1	330	44.2	62	40	6 07	6 40	7 09	11 39	50	1 22	68	
18	88	22.3	+18 59.5	345	09.3	61	45	6 15	6 50	7 22	11 26	48	1 34	71	
19	103	22.3	58.9	359	34.4	61	50	23	7 02	38	09 46		50 74		
20	118	22.3	58.3	13	59.4	60	52	26	08	45	11 02	44	1 57	76	
21	133	22.3	57.7	28	24.3	59	54	30	14	7 54	10 53	43	2 05	77	
22	148	22.3	57.2	42	49.2	59	56	34	20	8 03	44 40		14 79		
23	163	22.4	56.6	57	14.1	59	58	38	27	13	33 39		25 81		
24	178	22.4	+18 56.0	71	38.9	58	60 S	6 43	7 35	8 25	10 20	36	2 37	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 3 ^h 39 ^m 1		Mag: -4.6 PMG: 8 ^h 59 ^m		Mag: +1.1 PMG: 16 ^h 26 ^m		Mag: -2.2 PMG: 8 ^h 10 ^m		Mag: +0.8 PMG: 17 ^h 08 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	305	04.7	225	09.9	+18 44.0	113	04.3	-5 11.3	237	14.3	+21 05.6	102	20.9	-6 53.2	
1	320	07.2	240	10.4	44.2	128	05.4	11.9	252	16.3	05.7	117	23.2	53.2	
2	335	09.7	255	10.9	44.4	143	06.5	12.6	267	18.2	05.7	132	25.6	53.3	
3	350	12.1	270	11.4	44.7	158	07.6	13.2	282	20.2	05.8	147	27.9	53.3	
4	5	14.6	285	11.9	44.9	173	08.8	13.8	297	22.2	05.9	162	30.3	53.4	
5	20	17.1	300	12.3	+18 45.1	188	09.9	-5 14.4	312	24.2	+21 05.9	177	32.6	-6 53.4	
6	35	19.5	315	12.8	+18 45.3	203	11.0	-5 15.0	327	26.2	+21 06.0	192	35.0	-6 53.5	
7	50	22.0	330	13.3	45.6	218	12.1	15.6	342	28.2	06.1	207	37.3	53.6	
8	65	24.5	345	13.8	45.8	233	13.3	16.2	357	30.2	06.1	222	39.7	53.6	
9	80	26.9	0	14.3	46.0	248	14.4	16.8	12	32.2	06.2	237	42.0	53.7	
10	95	29.4	15	14.7	46.3	263	15.5	17.4	27	34.2	06.3	252	44.4	53.7	
11	110	31.8	30	15.2	+18 46.5	278	16.6	-5 18.0	42	36.2	+21 06.3	267	46.7	-6 53.8	
12	125	34.3	45	15.7	+18 46.7	293	17.8	-5 18.6	57	38.2	+21 06.4	282	49.1	-6 53.8	
13	140	36.8	60	16.1	46.9	308	18.9	19.2	72	40.1	06.5	297	51.4	53.9	
14	155	39.2	75	16.6	47.2	323	20.0	19.8	87	42.1	06.5	312	53.8	53.9	
15	170	41.7	90	17.1	47.4	338	21.1	20.4	102	44.1	06.6	327	56.1	54.0	
16	185	44.2	105	17.5	47.6	353	22.3	21.0	117	46.1	06.6	342	58.5	54.1	
17	200	46.6	120	18.0	+18 47.8	8	23.4	-5 21.6	132	48.1	+21 06.7	358	00.8	-6 54.1	
18	215	49.1	135	18.5	+18 48.1	23	24.5	-5 22.2	147	50.1	+21 06.8	13	03.2	-6 54.2	
19	230	51.6	150	18.9	48.3	38	25.6	22.8	162	52.1	06.8	28	05.5	54.2	
20	245	54.0	165	19.4	48.5	53	26.7	23.4	177	54.1	06.9	43	07.9	54.3	
21	260	56.5	180	19.8	48.7	68	27.9	24.1	192	56.1	07.0	58	10.2	54.3	
22	275	59.0	195	20.3	49.0	83	29.0	24.7	207	58.1	07.0	73	12.5	54.4	
23	291	01.4	210	20.7	49.2	98	30.1	25.3	223	00.1	07.1	88	14.9	54.5	
24	306	03.9	225	21.2	+18 49.4	113	31.2	-5 25.9	238	02.1	+21 07.2	103	17.2	-6 54.5	
Dif	—		+5		+2	+11		-6	+20		+1	+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 8 ^d 8	PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/7										
	PMG: 12 ^h 06 ^m 5					SD: 16 ^h 2			PMG: 20 ^h 01 ^m		Rº: 60 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.4	+18 56.0	71	38.9	-19 59.7	57	60 N	20 39	21 42	** **	16 43 65	23 16 60		
1	193	22.4	55.4	86	03.6	-20 04.9	52	58	26	21	22 58	27 64	33 60		
2	208	22.4	54.8	100	28.3	09.8	49	56	15	21 04	22 20	13 64	46 61		
3	223	22.4	54.3	114	53.0	14.7	49	54	20 05	20 50	21 55	16 01 64	23 59 60		
4	238	22.4	53.7	129	17.5	19.4	47	52	19 56	38	35	15 51 63	** * *		
5	253	22.5	+18 53.1	143	42.1	-20 24.0	46	50	19 48	20 27	21 19	15 41 64	** * *		
6	268	22.5	+18 52.5	158	06.6	-20 28.4	44	45	19 31	20 05	20 49	15 21 63	** * *		
7	283	22.5	51.9	172	31.0	32.7	43	40	17	19 48	26	15 05 63	0 01 54		
8	298	22.5	51.3	186	55.4	36.9	42	35	19 06	34	20 08	14 52 62	14 55		
9	313	22.5	50.7	201	19.8	40.9	40	30	18 56	22	19 53	40 62	25 56		
10	328	22.5	50.2	215	44.1	44.8	39	20	39	19 02	30	20 62	0 44 57		
11	343	22.5	+18 49.6	230	08.4	-20 48.6	38	10 N	18 24	18 46	19 12	14 03 61	1 00 59		
12	358	22.6	+18 49.0	244	32.6	-20 52.2	36	0	18 10	18 32	18 57	13 47 60	1 16 59		
13	13	22.6	48.4	258	56.8	55.7	35	10 S	17 56	18	44	31 59	31 61		
14	28	22.6	47.8	273	21.0	-20 59.0	33	20	42	18 05	32	13 13 60	1 48 62		
15	43	22.6	47.2	287	45.1	-21 02.2	32	30	25	17 51	20	12 54 58	2 07 63		
16	58	22.6	46.6	302	09.2	05.2	30	35	16	43	13	42 58	18 64		
17	73	22.7	+18 46.0	316	33.3	-21 08.1	29	40	17 05	17 34	18 07	12 29 57	2 30 66		
18	88	22.7	+18 45.5	330	57.3	-21 10.9	28	45	16 52	17 24	18 00	12 14 56	2 45 67		
19	103	22.7	44.9	345	21.3	13.5	26	50	37	13	17 52	11 55 55	3 04 68		
20	118	22.7	44.3	359	45.3	16.0	25	52	30	07	49	46 55	13 68		
21	133	22.7	43.7	14	09.2	18.3	23	54	22	17 01	45	36 54	22 70		
22	148	22.8	43.1	28	33.1	20.5	22	56	13	16 55	41	24 54	33 71		
23	163	22.8	42.5	42	57.0	22.5	20	58	16 02	48	37	11 12 52	3 46 71		
24	178	22.8	+18 41.9	57	20.9	-21 24.4	19	60 S	15 51	16 40	17 32	10 56 52	4 01 73		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 35 ^m 2		Mag: -4.6 PMG: 8 ^h 58 ^m		Mag: +1.1 PMG: 16 ^h 25 ^m		Mag: -2.2 PMG: 8 ^h 07 ^m		Mag: +0.8 PMG: 17 ^h 04 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'						
0	306	03.9	225 21.2	+18 49.4	113 31.2	-5 25.9	238 02.1	+21 07.2	103 17.2						
1	321	06.3	240 21.6	49.6	128 32.4	26.5	253 04.1	07.2	118 19.6						
2	336	08.8	255 22.1	49.9	143 33.5	27.1	268 06.0	07.3	133 21.9						
3	351	11.3	270 22.5	50.1	158 34.6	27.7	283 08.0	07.4	148 24.3						
4	6	13.7	285 23.0	50.3	173 35.7	28.3	298 10.0	07.4	163 26.6						
5	21	16.2	300 23.4	+18 50.5	188 36.8	-5 28.9	313 12.0	+21 07.5	178 29.0						
6	36	18.7	315 23.9	+18 50.8	203 37.9	-5 29.5	328 14.0	+21 07.6	193 31.3						
7	51	21.1	330 24.3	51.0	218 39.1	30.1	343 16.0	07.6	208 33.7						
8	66	23.6	345 24.8	51.2	233 40.2	30.7	358 18.0	07.7	223 36.0						
9	81	26.1	0 25.2	51.4	248 41.3	31.3	13 20.0	07.8	238 38.3						
10	96	28.5	15 25.6	51.7	263 42.4	31.9	28 22.0	07.8	253 40.7						
11	111	31.0	30 26.1	+18 51.9	278 43.5	-5 32.5	43 24.0	+21 07.9	268 43.0						
12	126	33.4	45 26.5	+18 52.1	293 44.7	-5 33.1	58 26.0	+21 07.9	283 45.4						
13	141	35.9	60 26.9	52.3	308 45.8	33.7	73 28.0	08.0	298 47.7						
14	156	38.4	75 27.4	52.6	323 46.9	34.3	88 30.0	08.1	313 50.1						
15	171	40.8	90 27.8	52.8	338 48.0	35.0	103 32.0	08.1	328 52.4						
16	186	43.3	105 28.2	53.0	353 49.1	35.6	118 34.0	08.2	343 54.8						
17	201	45.8	120 28.6	+18 53.2	8 50.2	-5 36.2	133 36.0	+21 08.3	358 57.1						
18	216	48.2	135 29.1	+18 53.5	23 51.4	-5 36.8	148 38.0	+21 08.3	13 59.4						
19	231	50.7	150 29.5	53.7	38 52.5	37.4	163 40.0	08.4	29 01.8						
20	246	53.2	165 29.9	53.9	53 53.6	38.0	178 42.0	08.5	44 04.1						
21	261	55.6	180 30.3	54.1	68 54.7	38.6	193 44.0	08.5	59 06.5						
22	276	58.1	195 30.7	54.4	83 55.8	39.2	208 46.0	08.6	74 08.8						
23	292	00.6	210 31.1	54.6	98 56.9	39.8	223 48.0	08.7	89 11.2						
24	307	03.0	225 31.6	+18 54.8	113 58.1	-5 40.4	238 50.0	+21 08.7	104 13.5						
Dif	—		+4	+2	+11	-6	+20	+1	+23	-1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 06 ^m 5			Edad: 9 ^d 8 PHE { 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/7 R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.8	+18	41.9	57	20.9	-21	24.4	18	60 N	**	**	2	32	3	34	17 48 48
1	193	22.8		41.3	71	44.7	48	26.2	18	58	1	15	2	52	48	31	50
2	208	22.8		40.7	86	08.5	48	27.8	16	56	1	53	3	09	3	59	17 51
3	223	22.9		40.1	100	32.3	48	29.2	14	54	2	19	24	4	09	17 05	52
4	238	22.9		39.5	114	56.1	48	30.5	13	52	38	36	18		16	54	53
5	253	22.9	+18	38.9	129	19.9	48	-21	12	50	2	54	3	46	4	26	16 45
6	268	22.9	+18	38.3	143	43.7	48	-21	10	45	3	25	4	08	4	42	16 24
7	283	22.9		37.7	158	07.4	47	33.5	8	40	3	48	25	4	56	16 08	56
8	298	23.0		37.1	172	31.2	48	34.2	7	35	4	05	39	5	07	15 54	57
9	313	23.0		36.5	186	54.9	47	34.8	6	30	20	4	51	17		42	57
10	328	23.0		35.9	201	18.6	47	35.2	4	20	4	43	5	11	34	22	58
11	343	23.0	+18	35.3	215	42.3	47	-21	2	10 N	5	01	5	27	5	49	15 04
12	358	23.1	+18	34.7	230	06.1	48	-21	2	0	5	16	5	41	6	03	14 47
13	13	23.1		34.1	244	29.8	47	35.5	1	10 S	29	5	54	17		30	61
14	28	23.1		33.5	258	53.5	47	35.3	2	20	41	6	08	31		14	13
15	43	23.1		32.9	273	17.2	47	35.0	3	30	53	22	47		13	52	63
16	58	23.2		32.3	287	40.9	47	34.5	5	35	5	59	30	6	57	40	63
17	73	23.2	+18	31.7	302	04.7	48	-21	6	40	6	06	6	38	7	07	13 26
18	88	23.2	+18	31.1	316	28.4	47	-21	8	45	6	13	6	48	7	20	13 10
19	103	23.2		30.5	330	52.1	47	32.1	10	50	20	7	00	35		12	50
20	118	23.3		29.9	345	15.9	48	31.1	10	52	24	05	42		41	66	21
21	133	23.3		29.3	359	39.6	47	29.8	13	54	27	11	50		30	67	32
22	148	23.3		28.7	14	03.4	48	28.5	13	56	31	17	7	59	18	67	44
23	163	23.3		28.1	28	27.2	48	26.9	16	58	35	24	8	09	12	04	68
24	178	23.4	+18	27.5	42	51.0	48	-21	16	60 S	6	40	7	32	8	21	11 48
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 31 ^m 2		Mag: -4.6 PMG: 8 ^h 58 ^m			Mag: +1.1 PMG: 16 ^h 23 ^m			Mag: -2.2 PMG: 8 ^h 04 ^m			Mag: +0.8 PMG: 17 ^h 00 ^m					
h	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
0	307	03.0	225	31.6	+18 54.8	113	58.1	-5 40.4	238	50.0	+21 08.7	104	13.5	-6 55.9			
1	322	05.5	240	32.0	55.0	128	59.2	41.0	253	52.0	08.8	119	15.9	56.0			
2	337	07.9	255	32.4	55.3	144	00.3	41.6	268	53.9	08.8	134	18.2	56.0			
3	352	10.4	270	32.8	55.5	159	01.4	42.2	283	55.9	08.9	149	20.5	56.1			
4	7	12.9	285	33.2	55.7	174	02.5	42.8	298	57.9	09.0	164	22.9	56.1			
5	22	15.3	300	33.6	+18 55.9	189	03.6	-5 43.4	313	59.9	+21 09.0	179	25.2	-6 56.2			
6	37	17.8	315	34.0	+18 56.1	204	04.7	-5 44.0	329	01.9	+21 09.1	194	27.6	-6 56.3			
7	52	20.3	330	34.4	56.4	219	05.8	44.7	344	03.9	09.2	209	29.9	56.3			
8	67	22.7	345	34.8	56.6	234	07.0	45.3	359	05.9	09.2	224	32.2	56.4			
9	82	25.2	0	35.2	56.8	249	08.1	45.9	14	07.9	09.3	239	34.6	56.4			
10	97	27.7	15	35.6	57.0	264	09.2	46.5	29	09.9	09.4	254	36.9	56.5			
11	112	30.1	30	36.0	+18 57.3	279	10.3	-5 47.1	44	11.9	+21 09.4	269	39.3	-6 56.5			
12	127	32.6	45	36.4	+18 57.5	294	11.4	-5 47.7	59	13.9	+21 09.5	284	41.6	-6 56.6			
13	142	35.1	60	36.8	57.7	309	12.5	48.3	74	15.9	09.5	299	44.0	56.7			
14	157	37.5	75	37.2	57.9	324	13.6	48.9	89	17.9	09.6	314	46.3	56.7			
15	172	40.0	90	37.6	58.1	339	14.7	49.5	104	19.9	09.7	329	48.6	56.8			
16	187	42.4	105	38.0	58.4	354	15.9	50.1	119	21.9	09.7	344	51.0	56.8			
17	202	44.9	120	38.4	+18 58.6	9	17.0	-5 50.7	134	23.9	+21 09.8	359	53.3	-6 56.9			
18	217	47.4	135	38.7	+18 58.8	24	18.1	-5 51.3	149	25.9	+21 09.9	14	55.7	-6 57.0			
19	232	49.8	150	39.1	59.0	39	19.2	51.9	164	27.9	09.9	29	58.0	57.0			
20	247	52.3	165	39.5	59.2	54	20.3	52.5	179	29.9	10.0	45	00.3	57.1			
21	262	54.8	180	39.9	59.5	69	21.4	53.1	194	31.9	10.1	60	02.7	57.1			
22	277	57.2	195	40.3	59.7	84	22.5	53.7	209	33.9	10.1	75	05.0	57.2			
23	292	59.7	210	40.7	+18 59.9	99	23.6	54.4	224	35.9	10.2	90	07.4	57.3			
24	308	02.2	225	41.0	+19 00.1	114	24.7	-5 55.0	239	37.9	+21 10.2	105	09.7	-6 57.3			
Dif	—		+4		+2	+11		-6	+20		+1	+23		-1			

UT	SOL			LUNA						Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m .4			Edad: 10 ^d .8 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'5 Rº: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif				Civil	Náutico		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	h m	m	
0	178	23.4	+18	27.5	42	51.0	-21	25.3	60 N	20 34	21 35	** **		18 36	33	0 16	77	
1	193	23.4		26.9	57	14.8 48		23.4 19	58	22	16	22 47		21 36		33	74	
2	208	23.4		26.3	71	38.7 49		21.5 21	56	11	21 00	22 13		18 08	38	47	73	
3	223	23.4		25.7	86	02.5 48		19.4 21	54	20 01	20 46	21 49		17 57	40	0 59	72	
4	238	23.5		25.1	100	26.4 49		17.1 23	52	19 53	34	30		47 42		1 10	70	
5	253	23.5	+18	24.5	114	50.3 49	-21	14.7 24	50	19 45	20 24	21 15		17 38	43	1 19	70	
6	268	23.5	+18	23.9	129	14.3 50	-21	12.1 26	45	19 29	20 03	20 45		17 19	46	1 39	68	
7	283	23.6		23.2	143	38.3 50		09.4 27	40	15	19 46	23		17 04	48	1 56	66	
8	298	23.6		22.6	158	02.2 49		06.6 28	35	19 04	32	20 06		16 51	50	2 09	65	
9	313	23.6		22.0	172	26.3 51		03.6 30	30	18 54	20	19 52		39 52		21	64	
10	328	23.7		21.4	186	50.3 50	-21	00.5 31	20	38	19 01	29		20 54		42	62	
11	343	23.7	+18	20.8	201	14.4 51	-20	57.2 33	10 N	18 23	18 46	19 12		16 03	56	2 59	61	
12	358	23.7	+18	20.2	215	38.6 52	-20	53.8 34	0	18 10	18 32	18 57		15 47	58	3 16	59	
13	13	23.7		19.6	230	02.7 51		50.2 36	10 S	17 57	19	44		31 61		32	58	
14	28	23.8		19.0	244	26.9 52		46.5 37	20	43	18 06	32		15 14	63	3 50	56	
15	43	23.8		18.3	258	51.2 53		42.7 38	30	27	17 52	21		14 55	65	4 10	54	
16	58	23.8		17.7	273	15.5 53		38.7 40	35	17	44	15		43 67		22	53	
17	73	23.9	+18	17.1	287	39.8 53	-20	34.6 41	40	17 07	17 36	18 08		14 30	68	4 35	52	
18	88	23.9	+18	16.5	302	04.2 54	-20	30.4 42	45	16 54	17 26	18 02		14 15	70	4 51	50	
19	103	23.9		15.9	316	28.6 54		26.0 44	50	40	15	17 54		13 56	72	5 10	49	
20	118	24.0		15.3	330	53.1 55		21.5 45	52	33	10	51		47 73		19	48	
21	133	24.0		14.6	345	17.6 55		16.8 47	54	25	17 04	48		37 75		30	46	
22	148	24.0		14.0	359	42.1 55		12.0 48	56	16	16 58	44		25 77		41	45	
23	163	24.1		13.4	14	06.8 57		07.1 49	58	16 06	51	40		13 12	79	5 55	42	
24	178	24.1	+18	12.8	28	31.4 56	-20	02.0 51	60 S	15 55	16 44	17 36		12 56	82	6 10	41	
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 3 ^h 27 ^m .3			Mag: -4.6 PMG: 8 ^h 57 ^m			Mag: +1.1 PMG: 16 ^h 21 ^m			Mag: -2.2 PMG: 8 ^h 00 ^m				Mag: +0.8 PMG: 16 ^h 57 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	02.2	225	41.0	+19	00.1	114	24.7	-5	55.0	239	37.9	+21	10.2	105	09.7	-6	57.3
1	323	04.6	240	41.4		00.3	129	25.8		55.6	254	39.9		10.3	120	12.0		57.4
2	338	07.1	255	41.8		00.6	144	26.9		56.2	269	42.0		10.4	135	14.4		57.4
3	353	09.6	270	42.2		00.8	159	28.1		56.8	284	44.0		10.4	150	16.7		57.5
4	8	12.0	285	42.5		01.0	174	29.2		57.4	299	46.0		10.5	165	19.1		57.6
5	23	14.5	300	42.9	+19	01.2	189	30.3	-5	58.0	314	48.0	+21	10.6	180	21.4	-6	57.6
6	38	16.9	315	43.3	+19	01.4	204	31.4	-5	58.6	329	50.0	+21	10.6	195	23.7	-6	57.7
7	53	19.4	330	43.6		01.6	219	32.5		59.2	344	52.0		10.7	210	26.1		57.7
8	68	21.9	345	44.0		01.9	234	33.6	-5	59.8	359	54.0		10.7	225	28.4		57.8
9	83	24.3	0	44.4		02.1	249	34.7	-6	00.4	14	56.0		10.8	240	30.7		57.9
10	98	26.8	15	44.7		02.3	264	35.8		01.0	29	58.0		10.9	255	33.1		57.9
11	113	29.3	30	45.1	+19	02.5	279	36.9	-6	01.6	45	00.0	+21	10.9	270	35.4	-6	58.0
12	128	31.7	45	45.4	+19	02.7	294	38.0	-6	02.2	60	02.0	+21	11.0	285	37.8	-6	58.0
13	143	34.2	60	45.8		02.9	309	39.1		02.8	75	04.0		11.1	300	40.1		58.1
14	158	36.7	75	46.2		03.2	324	40.2		03.5	90	06.0		11.1	315	42.4		58.2
15	173	39.1	90	46.5		03.4	339	41.3		04.1	105	08.0		11.2	330	44.8		58.2
16	188	41.6	105	46.9		03.6	354	42.4		04.7	120	10.0		11.2	345	47.1		58.3
17	203	44.1	120	47.2	+19	03.8	9	43.5	-6	05.3	135	12.0	+21	11.3	0	49.4	-6	58.3
18	218	46.5	135	47.6	+19	04.0	24	44.6	-6	05.9	150	14.0	+21	11.4	15	51.8	-6	58.4
19	233	49.0	150	47.9		04.2	39	45.7		06.5	165	16.0		11.4	30	54.1		58.5
20	248	51.4	165	48.3		04.5	54	46.8		07.1	180	18.0		11.5	45	56.5		58.5
21	263	53.9	180	48.6		04.7	69	47.9		07.7	195	20.0		11.5	60	58.8		58.6
22	278	56.4	195	48.9		04.9	84	49.0		08.3	210	22.0		11.6	76	01.1		58.6
23	293	58.8	210	49.3		05.1	99	50.2		08.9	225	24.0		11.7	91	03.5		58.7
24	309	01.3	225	49.6	+19	05.3	114	51.3	-6	09.5	240	26.0	+21	11.7	106	05.8	-6	58.8
Dif	—			+4 +2			+11 -6			+20 +1				+23 -1				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h /8				Edad: 11 ^d 8 PHE	4 ^h : 59 ^m /4 12 ^h : 59 ^m /3 20 ^h : 59 ^m /2												
	PMG: 12 ^h 06 ^m 4					SD: 16 ^h 2												
	PMG: 22 ^h 59 ^m				Rº: 55 ^m													
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	178	24.1	+18	12.8	28	31.4	-20	02.0	52	60 N	**	**	2	38	3	39	19	09
1	193	24.1		12.2	42	56.1	-19	56.8	52	58	1	27	2	58	3	52	18	57
2	208	24.2		11.6	57	20.9		51.5	53	56	2	00	3	14	4	03	46	29
3	223	24.2		10.9	71	45.7		46.1	54	54	24		27		12		37	31
4	238	24.2		10.3	86	10.6		40.5	56	52	43		39		21		29	33
5	253	24.3	+18	09.7	100	35.6	-19	34.8	57	50	2	58	3	50	4	28	18	21
6	268	24.3	+18	09.1	115	00.6	-19	28.9	59	45	3	28	4	11	4	44	18	05
7	283	24.3		08.5	129	25.6		23.0	59	40	3	50		27	4	58	17	52
8	298	24.4		07.8	143	50.8		16.9	61	35	4	07		41	5	09		41
9	313	24.4		07.2	158	15.9		10.7	62	30	21		4	53	19		31	46
10	328	24.4		06.6	172	41.2	-19	04.4	63	20	4	44		5	12	35	17	14
11	343	24.5	+18	06.0	187	06.5	-18	57.9	65	10 N	5	01		5	27	5	50	16
12	358	24.5	+18	05.3	201	31.9	-18	51.4	65	0	5	16		5	41	6	03	16
13	13	24.6		04.7	215	57.3		44.7	67	10 S	29		5	54		16	32	58
14	28	24.6		04.1	230	22.8		37.9	68	20	40		6	07		30	17	61
15	43	24.6		03.5	244	48.4		30.9	70	30	52		21		46	16	00	64
16	58	24.7		02.8	259	14.1		23.9	70	35	5	58		28	6	55	15	50
17	73	24.7	+18	02.2	273	39.8	-18	16.7	72	40	6	04		6	37	7	05	15
18	88	24.7	+18	01.6	288	05.5	-18	09.5	72	45	6	11		6	46	7	18	15
19	103	24.8		00.9	302	31.4	-18	02.1	74	50	18		6	57		32	08	76
20	118	24.8	+18	00.3	316	57.3	-17	54.6	75	52	21		7	02		39	15	00
21	133	24.9	+17	59.7	331	23.3		47.0	76	54	24		08		47	14	52	79
22	148	24.9		59.1	345	49.4		39.3	77	56	28		14		7	55	42	82
23	163	24.9		58.4	0	15.5		31.5	78	58	32		20		8	05	31	85
24	178	25.0	+17	57.8	14	41.7	-17	23.6	79	60 S	6	36		7	28	8	16	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 23 ^m 4		Mag: -4.6 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 16 ^h 19 ^m		Mag: -2.2 PMG: 7 ^h 57 ^m		Mag: +0.8 PMG: 16 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	309	01.3	225	49.6	+19	05.3	114	51.3	-6	09.5
1	324	03.8	240	50.0		05.5	129	52.4		10.1
2	339	06.2	255	50.3		05.7	144	53.5		10.7
3	354	08.7	270	50.6		06.0	159	54.6		11.3
4	9	11.2	285	51.0		06.2	174	55.7		11.9
5	24	13.6	300	51.3	+19	06.4	189	56.8	-6	12.6
6	39	16.1	315	51.6	+19	06.6	204	57.9	-6	13.2
7	54	18.6	330	52.0		06.8	219	59.0		13.8
8	69	21.0	345	52.3		07.0	235	00.1		14.4
9	84	23.5	0	52.6		07.2	250	01.2		15.0
10	99	25.9	15	53.0		07.5	265	02.3		15.6
11	114	28.4	30	53.3	+19	07.7	280	03.4	-6	16.2
12	129	30.9	45	53.6	+19	07.9	295	04.5	-6	16.8
13	144	33.3	60	53.9		08.1	310	05.6		17.4
14	159	35.8	75	54.3		08.3	325	06.7		18.0
15	174	38.3	90	54.6		08.5	340	07.8		18.6
16	189	40.7	105	54.9		08.7	355	08.9		19.2
17	204	43.2	120	55.2	+19	08.9	10	10.0	-6	19.8
18	219	45.7	135	55.5	+19	09.1	25	11.1	-6	20.4
19	234	48.1	150	55.8		09.4	40	12.2		21.1
20	249	50.6	165	56.2		09.6	55	13.2		21.7
21	264	53.0	180	56.5		09.8	70	14.3		22.3
22	279	55.5	195	56.8		10.0	85	15.4		22.9
23	294	58.0	210	57.1		10.2	100	16.5		23.5
24	310	00.4	225	57.4	+19	10.4	115	17.6	-6	24.1
Dif	—		+3		+2		+11		-6	
									+20	
									+1	
									+23	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3			Edad: 12 ^d 8 PHE { SD: 16 ^h 1 PMG: 23 ^h 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.0	+17 57.8	14	41.7	-17 23.6	80	60 N	20 29	21 29	** **	19 32 17	2 59 89	
1	193	25.0	57.2	29	08.0	15.6	81	58	17	21 10	22 36	23 20	3 10 86	
2	208	25.1	56.5	43	34.4	-17 07.5	82	56	20 07	20 55	22 05	15 23	20 83	
3	223	25.1	55.9	58	00.8	-16 59.2	83	54	19 58	42	21 43	08 25	29 80	
4	238	25.1	55.3	72	27.3	50.9	83	52	49	30	26	19 02 27	37 78	
5	253	25.2	+17 54.6	86	53.9	-16 42.5	84	50	19 42	20 20	21 11	18 56 29	3 44 76	
6	268	25.2	+17 54.0	101	20.5	-16 34.0	85	45	19 26	20 00	20 42	18 44 33	3 59 72	
7	283	25.3	53.4	115	47.3	25.4	86	40	13	19 44	21	34 36	4 11 69	
8	298	25.3	52.7	130	14.1	16.7	87	35	19 03	30	20 04	25 39	21 67	
9	313	25.3	52.1	144	41.0	-16 07.9	88	30	18 53	19	19 50	17 41	30 65	
10	328	25.4	51.5	159	07.9	-15 59.0	89	20	37	19 00	28	18 04 45	4 46 60	
11	343	25.4	+17 50.8	173	35.0	-15 50.0	90	10 N	18 23	18 45	19 11	17 52 49	5 00 57	
12	358	25.5	+17 50.2	188	02.1	-15 40.9	91	0	18 10	18 31	18 57	17 41 52	5 12 54	
13	13	25.5	49.5	202	29.3	31.7	92	10 S	17 57	19	44	30 55	25 50	
14	28	25.6	48.9	216	56.6	22.5	92	20	43	18 06	33	18 59	38 47	
15	43	25.6	48.3	231	23.9	13.2	93	30	28	17 53	22	17 04 63	5 53 44	
16	58	25.7	47.6	245	51.3	-15 03.8	94	35	19	46	16	16 56 66	6 02 41	
17	73	25.7	+17 47.0	260	18.8	-14 54.3	95	40	17 09	17 37	18 10	16 47 69	6 12 39	
18	88	25.7	+17 46.4	274	46.4	-14 44.7	96	45	16 57	17 28	18 04	16 37 71	6 24 35	
19	103	25.8	45.7	289	14.1	35.0	97	50	42	17	17 57	24 76	38 31	
20	118	25.8	45.1	303	41.8	25.3	97	52	36	13	54	18 78	44 30	
21	133	25.9	44.4	318	09.6	15.5	98	54	28	07	50	11 80	51 28	
22	148	25.9	43.8	332	37.5	-14 05.6	99	56	20	17 01	47	16 04 82	6 59 26	
23	163	26.0	43.1	347	05.5	-13 55.6	100	58	10	16 55	43	15 56 85	7 08 23	
24	178	26.0	+17 42.5	1	33.6	-13 45.6	100	60 S	16 00	16 48	17 39	15 46 88	7 19 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 19 ^m 4		Mag: -4.6 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 16 ^h 18 ^m		Mag: -2.2 PMG: 7 ^h 54 ^m		Mag: +0.8 PMG: 16 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	310	00.4	225 57.4	+19 10.4	115 17.6	-6 24.1	241 14.2	+21 13.2	107 01.8	-7 00.2
1	325	02.9	240 57.7	10.6	130 18.7	24.7	256 16.3	13.3	122 04.2	00.3
2	340	05.4	255 58.0	10.8	145 19.8	25.3	271 18.3	13.3	137 06.5	00.4
3	355	07.8	270 58.3	11.0	160 20.9	25.9	286 20.3	13.4	152 08.8	00.4
4	10	10.3	285 58.6	11.2	175 22.0	26.5	301 22.3	13.4	167 11.2	00.5
5	25	12.8	300 58.9	+19 11.4	190 23.1	-6 27.1	316 24.3	+21 13.5	182 13.5	-7 00.5
6	40	15.2	315 59.2	+19 11.6	205 24.2	-6 27.7	331 26.3	+21 13.6	197 15.8	-7 00.6
7	55	17.7	330 59.5	11.9	220 25.3	28.3	346 28.3	13.6	212 18.2	00.7
8	70	20.2	345 59.8	12.1	235 26.4	29.0	1 30.3	13.7	227 20.5	00.7
9	85	22.6	1 00.1	12.3	250 27.5	29.6	16 32.3	13.7	242 22.8	00.8
10	100	25.1	16 00.4	12.5	265 28.6	30.2	31 34.4	13.8	257 25.1	00.9
11	115	27.5	31 00.7	+19 12.7	280 29.7	-6 30.8	46 36.4	+21 13.9	272 27.5	-7 00.9
12	130	30.0	46 01.0	+19 12.9	295 30.8	-6 31.4	61 38.4	+21 13.9	287 29.8	-7 01.0
13	145	32.5	61 01.2	13.1	310 31.9	32.0	76 40.4	14.0	302 32.1	01.0
14	160	34.9	76 01.5	13.3	325 33.0	32.6	91 42.4	14.0	317 34.5	01.1
15	175	37.4	91 01.8	13.5	340 34.1	33.2	106 44.4	14.1	332 36.8	01.2
16	190	39.9	106 02.1	13.7	355 35.1	33.8	121 46.4	14.2	347 39.1	01.2
17	205	42.3	121 02.4	+19 13.9	10 36.2	-6 34.4	136 48.5	+21 14.2	2 41.5	-7 01.3
18	220	44.8	136 02.7	+19 14.1	25 37.3	-6 35.0	151 50.5	+21 14.3	17 43.8	-7 01.4
19	235	47.3	151 02.9	14.3	40 38.4	35.6	166 52.5	14.3	32 46.1	01.4
20	250	49.7	166 03.2	14.5	55 39.5	36.2	181 54.5	14.4	47 48.5	01.5
21	265	52.2	181 03.5	14.7	70 40.6	36.8	196 56.5	14.5	62 50.8	01.6
22	280	54.7	196 03.8	14.9	85 41.7	37.5	211 58.5	14.5	77 53.1	01.6
23	295	57.1	211 04.0	15.1	100 42.8	38.1	227 00.5	14.6	92 55.4	01.7
24	310	59.6	226 04.3	+19 15.3	115 43.9	-6 38.7	242 02.6	+21 14.6	107 57.8	-7 01.7
Dif	—		+3	+2	+11	-6	+20	+1	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 2			Edad: 13 ^d 8 PHE { SD: 16'0 PMG: *** **m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	26.0	+17 42.5	1	33.6	-13 45.6		60 N	0 40	2 44	3 44	19 49	14	4 28	87	
1	193	26.1		16	01.7		91	58	1 37	3 03	3 56	43 17		36	84	
2	208	26.1		30	29.9		92	56	2 08	18	4 06	38 19		43	82	
3	223	26.2		44	58.2		93	54	30	31	16	33 21		49	80	
4	238	26.2		59	26.5	-13 04.8	103	52	2 48	43	24	29 23		4 55	77	
5	253	26.3	+17 39.3	73	54.9	-12 54.4	104	50	3 02	3 53	4 31	19 25	25	5 00	75	
6	268	26.3	+17 38.6	88	23.5	-12 44.0	104	45	3 31	4 13	4 47	19 17	29	5 11	71	
7	283	26.3		102	52.0		95	40	3 52	29	5 00	10 32		20	68	
8	298	26.4		117	20.7		97	35	4 09	43	10	19 04	34		28	65
9	313	26.4		131	49.4		97	30	23	4 54	20	18 58	38		35	62
10	328	26.5		146	18.3	-12 01.6	107	20	4 45	5 12	36	49 42		46	58	
11	343	26.5	+17 35.4	160	47.1	-11 50.9	107	10 N	5 02	5 28	5 50	18 41	45	5 57	54	
12	358	26.6	+17 34.7	175	16.1	-11 40.1	108	0	5 16	5 41	6 03	18 33	49	6 06	51	
13	13	26.6		189	45.1		100	10 S	28	5 54	16	25 53		15	48	
14	28	26.7		204	14.2		101	20	40	6 06	29	17 56	25	45	44	
15	43	26.7		218	43.4	-11 07.4	110	30	51	19	44	07 61		37	39	
16	58	26.8		233	12.7	-10 56.4	110	35	5 56	27	6 53	18 02	63	43	37	
17	73	26.8	+17 31.5	247	42.0	-10 45.4	110	40	6 02	6 35	7 03	17 56	66	6 51	34	
18	88	26.9	+17 30.8	262	11.4	-10 34.3	111	45	6 08	6 44	7 15	17 48	70	6 59	31	
19	103	26.9		276	40.9		105	50	15	54	29	40 74		7 09	27	
20	118	27.0		291	10.4		105	52	18	6 59	36	36 76		14	25	
21	133	27.0		305	40.0	-10 00.7	113	54	21	7 04	43	31 78		19	23	
22	148	27.1		320	09.7	-9 49.5	112	56	25	10	7 52	26 81		25	21	
23	163	27.2		334	39.5		108	58	29	16	8 01	21 83		31	19	
24	178	27.2	+17 26.9	349	09.3	-9 26.8	114	60 S	6 33	7 24	8 11	17 14	87	7 39	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 15 ^m 5		Mag: -4.6 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 16 ^h 16 ^m		Mag: -2.2 PMG: 7 ^h 51 ^m		Mag: +0.8 PMG: 16 ^h 46 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	310	59.6	226	04.3	+19 15.3	115	43.9	-6 38.7	242	02.6	+21 14.6	107	57.8	-7 01.7				
1	326	02.0	241	04.6		15.5	130	45.0		39.3	257	04.6		14.7	123	00.1		01.8
2	341	04.5	256	04.9		15.7	145	46.1		39.9	272	06.6		14.8	138	02.4		01.9
3	356	07.0	271	05.1		15.9	160	47.1		40.5	287	08.6		14.8	153	04.8		01.9
4	11	09.4	286	05.4		16.1	175	48.2		41.1	302	10.6		14.9	168	07.1		02.0
5	26	11.9	301	05.7	+19 16.3	190	49.3	-6 41.7	317	12.6	+21 14.9	183	09.4		-7 02.1			
6	41	14.4	316	05.9	+19 16.5	205	50.4	-6 42.3	332	14.6	+21 15.0	198	11.8		-7 02.1			
7	56	16.8	331	06.2		16.7	220	51.5		42.9	347	16.7		15.0	213	14.1		02.2
8	71	19.3	346	06.5		16.9	235	52.6		43.5	2 18.7	15.1	228	16.4		02.2		
9	86	21.8	1	06.7		17.1	250	53.7		44.1	17 20.7	15.2	243	18.7		02.3		
10	101	24.2	16	07.0		17.3	265	54.8		44.7	32 22.7	15.2	258	21.1		02.4		
11	116	26.7	31	07.2	+19 17.5	17.5	280	55.8	-6 45.4	47 24.7	+21 15.3	273	23.4		-7 02.4			
12	131	29.2	46	07.5	+19 17.7	17.7	295	56.9	-6 46.0	62 26.7	+21 15.3	288	25.7		-7 02.5			
13	146	31.6	61	07.7		17.9	310	58.0		46.6	77 28.8	15.4	303	28.0		02.6		
14	161	34.1	76	08.0		18.1	325	59.1		47.2	92 30.8	15.5	318	30.4		02.6		
15	176	36.5	91	08.2		18.3	341	00.2		47.8	107 32.8	15.5	333	32.7		02.7		
16	191	39.0	106	08.5		18.5	356	01.3		48.4	122 34.8	15.6	348	35.0		02.8		
17	206	41.5	121	08.8	+19 18.7	18.7	11	02.4	-6 49.0	137 36.8	+21 15.6	3	37.4		-7 02.8			
18	221	43.9	136	09.0	+19 18.9	18.9	26	03.5	-6 49.6	152 38.9	+21 15.7	18	39.7		-7 02.9			
19	236	46.4	151	09.2		19.1	41	04.5		50.2	167 40.9	15.8	33	42.0		03.0		
20	251	48.9	166	09.5		19.3	56	05.6		50.8	182 42.9	15.8	48	44.3		03.0		
21	266	51.3	181	09.7		19.5	71	06.7		51.4	197 44.9	15.9	63	46.7		03.1		
22	281	53.8	196	10.0		19.7	86	07.8		52.0	212 46.9	15.9	78	49.0		03.1		
23	296	56.3	211	10.2		19.9	101	08.9		52.6	227 48.9	16.0	93	51.3		03.2		
24	311	58.7	226	10.5	+19 20.1	20.1	116	10.0	-6 53.3	242 51.0	+21 16.0	108	53.6		-7 03.3			
Dif	—		+3		+2		+11		-6		+20		+1		+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 06 ^m 1			Edad: 14 ^d 8 PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'4 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	178	27.2	+17	26.9	349	09.3	-9	26.8	60 N	20 24	21 22	23 11	20 03 11	5 55 85				
1	193	27.3		26.3	3	39.2 ¹⁰⁹		15.4 ¹¹⁴	58	13	21 05	22 26	20 00 14	6 00 82				
2	208	27.3		25.6	18	09.1 ¹⁰⁹		-9 04.0 ¹¹⁴	56	20 03	20 50	21 58	19 57 17	05 79				
3	223	27.4		25.0	32	39.2 ¹¹¹		-8 52.5 ¹¹⁵	54	19 54		37	54 19	09 77				
4	238	27.4		24.3	47	09.3 ¹¹¹		41.0 ¹¹⁵	52		46	26	52 21	12 75				
5	253	27.5	+17	23.6	61	39.4 ¹¹¹		-8 29.5 ¹¹⁵	50	19 39	20 17	21 06	19 50 23	6 15 73				
6	268	27.5	+17	23.0	76	09.6 ¹¹²		-8 18.0 ¹¹⁵	45	19 24	19 57	20 39	19 46 26	6 22 69				
7	283	27.6		22.3	90	39.9 ¹¹³		-8 06.4 ¹¹⁶	40	11	41	18	42 29	28 65				
8	298	27.6		21.7	105	10.3 ¹¹⁴		-7 54.7 ¹¹⁷	35	19 01	28	20 02	38 33	33 62				
9	313	27.7		21.0	119	40.7 ¹¹⁴		43.1 ¹¹⁶	30	18 52	19 17	19 48	36 35	37 60				
10	328	27.7		20.3	134	11.2 ¹¹⁵		31.4 ¹¹⁷	20	36	18 59	27	31 39	44 56				
11	343	27.8	+17	19.7	148	41.7 ¹¹⁵		-7 19.7 ¹¹⁷	10 N	18 22	18 44	19 10	19 26 43	6 51 51				
12	358	27.9	+17	19.0	163	12.3 ¹¹⁶		-7 08.0 ¹¹⁷	0	18 10	18 31	18 56	19 22 47	6 57 48				
13	13	27.9		18.4	177	43.0 ¹¹⁷		-6 56.2 ¹¹⁸	10 S	17 57	19	44	18 50	7 03 44				
14	28	28.0		17.7	192	13.7 ¹¹⁷		44.5 ¹¹⁷	20	44	18 07	33	13 55	09 40				
15	43	28.0		17.0	206	44.5 ¹¹⁸		32.7 ¹¹⁸	30	29	17 54	23	08 59	16 36				
16	58	28.1		16.4	221	15.3 ¹¹⁸		20.9 ¹¹⁸	35	20	47	17	05 62	20 34				
17	73	28.1	+17	15.7	235	46.3 ¹²⁰		-6 09.0 ¹¹⁹	40	17 10	17 39	18 12	19 02 64	7 25 30				
18	88	28.2	+17	15.1	250	17.2 ¹¹⁹		-5 57.2 ¹¹⁸	45	16 59	17 30	18 06	18 58 68	7 30 28				
19	103	28.3		14.4	264	48.2 ¹²⁰		45.3 ¹¹⁹	50	45	20	17 59	54 71	36 24				
20	118	28.3		13.7	279	19.3 ¹²¹		33.4 ¹¹⁹	52	38	15	56	52 73	39 22				
21	133	28.4		13.1	293	50.4 ¹²¹		21.5 ¹¹⁹	54	31	10	53	49 76	42 20				
22	148	28.4		12.4	308	21.6 ¹²²		-5 09.6 ¹¹⁹	56	23	17 05	50	47 77	46 18				
23	163	28.5		11.7	322	52.9 ¹²³		-4 57.7 ¹¹⁹	58	14	16 59	46	44 80	50 15				
24	178	28.5	+17	11.1	337	24.1 ¹²²		-4 45.8 ¹¹⁹	60 S	16 04	16 52	17 43	18 41 83	7 54 13				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 11 ^m 6			Mag: -4.5 PMG: 8 ^h 55 ^m			Mag: +1.1 PMG: 16 ^h 14 ^m			Mag: -2.2 PMG: 7 ^h 48 ^m			Mag: +0.8 PMG: 16 ^h 42 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	311	58.7	226	10.5	+19	20.1	116	10.0	-6	53.3	242	51.0	+21	16.0	108	53.6	-7	03.3
1	327	01.2	241	10.7		20.3	131	11.0		53.9	257	53.0		16.1	123	56.0		03.3
2	342	03.6	256	10.9		20.5	146	12.1		54.5	272	55.0		16.2	138	58.3		03.4
3	357	06.1	271	11.2		20.7	161	13.2		55.1	287	57.0		16.2	154	00.6		03.5
4	12	08.6	286	11.4		20.9	176	14.3		55.7	302	59.0		16.3	169	02.9		03.5
5	27	11.0	301	11.6	+19	21.1	191	15.4	-6	56.3	318	01.1	+21	16.3	184	05.3	-7	03.6
6	42	13.5	316	11.9	+19	21.3	206	16.5	-6	56.9	333	03.1	+21	16.4	199	07.6	-7	03.7
7	57	16.0	331	12.1		21.5	221	17.5		57.5	348	05.1		16.4	214	09.9		03.7
8	72	18.4	346	12.3		21.7	236	18.6		58.1	3	07.1		16.5	229	12.2		03.8
9	87	20.9	1	12.6		21.9	251	19.7		58.7	18	09.2		16.6	244	14.6		03.9
10	102	23.4	16	12.8		22.0	266	20.8		59.3	33	11.2		16.6	259	16.9		03.9
11	117	25.8	31	13.0	+19	22.2	281	21.9	-6	59.9	48	13.2	+21	16.7	274	19.2	-7	04.0
12	132	28.3	46	13.2	+19	22.4	296	22.9	-7	00.5	63	15.2	+21	16.7	289	21.5	-7	04.0
13	147	30.8	61	13.5		22.6	311	24.0		01.1	78	17.2		16.8	304	23.9		04.1
14	162	33.2	76	13.7		22.8	326	25.1		01.8	93	19.3		16.9	319	26.2		04.2
15	177	35.7	91	13.9		23.0	341	26.2		02.4	108	21.3		16.9	334	28.5		04.2
16	192	38.1	106	14.1		23.2	356	27.3		03.0	123	23.3		17.0	349	30.8		04.3
17	207	40.6	121	14.3	+19	23.4	11	28.3	-7	03.6	138	25.3	+21	17.0	4	33.2	-7	04.4
18	222	43.1	136	14.6	+19	23.6	26	29.4	-7	04.2	153	27.4	+21	17.1	19	35.5	-7	04.4
19	237	45.5	151	14.8		23.8	41	30.5		04.8	168	29.4		17.1	34	37.8		04.5
20	252	48.0	166	15.0		24.0	56	31.6		05.4	183	31.4		17.2	49	40.1		04.6
21	267	50.5	181	15.2		24.1	71	32.7		06.0	198	33.4		17.3	64	42.5		04.6
22	282	52.9	196	15.4		24.3	86	33.7		06.6	213	35.4		17.3	79	44.8		04.7
23	297	55.4	211	15.6		24.5	101	34.8		07.2	228	37.5		17.4	94	47.1		04.8
24	312	57.9	226	15.8	+19	24.7	116	35.9	-7	07.8	243	39.5	+21	17.4	109	49.4	-7	04.8
Dif	—			+2	+2		+11	-6		+20	+1		+23	-1				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 06 ^m 0				Edad: 15 ^d 8 PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'7 SD: 15'6 PMG: 1 ^h 33 ^m R°: 47 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m
0	178	28.5	+17	11.1	337	24.1	-4	45.8	60 N	1 02	2 51	3 49	20 14	12	7 20	82				
1	193	28.6		10.4	351	55.5 ¹²⁴		33.8 ¹²⁰	58	1 47	3 08	4 00	14 14		22	80				
2	208	28.7		09.7	6	26.9 ¹²⁴		21.9 ¹¹⁹	56	2 15	23	10	14 16		24	77				
3	223	28.7		09.1	20	58.3 ¹²⁴	-4	09.9 ¹²⁰	54	35	36	19	13 18		26	74				
4	238	28.8		08.4	35	29.8 ¹²⁵	-3	58.0 ¹¹⁹	52	2 52	46	27	13 20		27	72				
5	253	28.8	+17	07.7	50	01.4 ¹²⁶	-3	46.0 ¹²⁰	50	3 06	3 56	4 34	20 13	21	7 28	71				
6	268	28.9	+17	07.0	64	33.0 ¹²⁶	-3	34.0 ¹²⁰	45	3 34	4 16	4 49	20 12	25	7 31	66				
7	283	29.0		06.4	79	04.6 ¹²⁶		22.0 ¹²⁰	40	3 55	31	5 01	11 29		33	63				
8	298	29.0		05.7	93	36.3 ¹²⁷	-3	10.1 ¹¹⁹	35	4 11	44	12	11 31		35	60				
9	313	29.1		05.0	108	08.0 ¹²⁷	-2	58.1 ¹²⁰	30	24	4 55	21	11 33		37	58				
10	328	29.1		04.4	122	39.8 ¹²⁸		46.1 ¹²⁰	20	4 46	5 13	37	10 38		40	53				
11	343	29.2	+17	03.7	137	11.6 ¹²⁸	-2	34.1 ¹²⁰	10 N	5 02	5 28	5 50	20 09	42	7 42	50				
12	358	29.3	+17	03.0	151	43.5 ¹²⁹	-2	22.1 ¹²⁰	0	5 16	5 41	6 03	20 09	45	7 45	46				
13	13	29.3		02.3	166	15.4 ¹²⁹	-2	10.2 ¹¹⁹	10 S	28	5 53	15	08 49		47	42				
14	28	29.4		01.7	180	47.4 ¹³⁰	-1	58.2 ¹²⁰	20	39	6 05	28	08 52		49	39				
15	43	29.5		01.0	195	19.4 ¹³⁰		46.2 ¹²⁰	30	49	18	43	07 57		52	34				
16	58	29.5	+17	00.3	209	51.4 ¹³⁰		34.3 ¹¹⁹	35	5 55	25	6 52	07 59		54	32				
17	73	29.6	+16	59.7	224	23.5 ¹³¹	-1	22.3 ¹²⁰	40	6 00	6 33	7 01	20 06	62	7 55	30				
18	88	29.6	+16	59.0	238	55.6 ¹³¹	-1	10.4 ¹¹⁹	45	6 06	6 41	7 13	20 06	65	7 58	25				
19	103	29.7		58.3	253	27.8 ¹³²	-0	58.4 ¹²⁰	50	13	51	26	05 70		8 00	22				
20	118	29.8		57.6	268	00.0 ¹³²		46.5 ¹¹⁹	52	15	6 56	33	05 71		01	20				
21	133	29.8		56.9	282	32.2 ¹³²		34.6 ¹¹⁹	54	18	7 01	40	05 73		02	19				
22	148	29.9		56.3	297	04.5 ¹³³		22.7 ¹¹⁹	56	22	07	48	04 76		04	16				
23	163	30.0		55.6	311	36.8 ¹³³	-0	10.8 ¹¹⁹	58	25	13	7 57	04 78		05	14				
24	178	30.0	+16	54.9	326	09.1 ¹³³	+0	01.1 ¹¹⁹	60 S	6 29	7 19	8 07	20 04	80	8 07	11				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 07 ^m 6				Mag: -4.5 PMG: 8 ^h 55 ^m				Mag: +1.1 PMG: 16 ^h 12 ^m				Mag: -2.2 PMG: 7 ^h 44 ^m				Mag: +0.8 PMG: 16 ^h 38 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	57.9	226	15.8	+19	24.7	116	35.9	-7	07.8	243	39.5	+21	17.4	109	49.4	-7	04.8		
1	328	00.3	241	16.0		24.9	131	37.0		08.4	258	41.5		17.5	124	51.8		04.9		
2	343	02.8	256	16.2		25.1	146	38.1		09.0	273	43.5		17.5	139	54.1		05.0		
3	358	05.2	271	16.4		25.3	161	39.1		09.7	288	45.6		17.6	154	56.4		05.0		
4	13	07.7	286	16.7		25.4	176	40.2		10.3	303	47.6		17.6	169	58.7		05.1		
5	28	10.2	301	16.9	+19	25.6	191	41.3	-7	10.9	318	49.6	+21	17.7	185	01.0	-7	05.2		
6	43	12.6	316	17.1	+19	25.8	206	42.4	-7	11.5	333	51.6	+21	17.8	200	03.4	-7	05.2		
7	58	15.1	331	17.3		26.0	221	43.4		12.1	348	53.7		17.8	215	05.7		05.3		
8	73	17.6	346	17.5		26.2	236	44.5		12.7	3	55.7		17.9	230	08.0		05.4		
9	88	20.0	1	17.6		26.4	251	45.6		13.3	18	57.7		17.9	245	10.3		05.4		
10	103	22.5	16	17.8		26.6	266	46.7		13.9	33	59.7		18.0	260	12.7		05.5		
11	118	25.0	31	18.0	+19	26.7	281	47.7	-7	14.5	49	01.8	+21	18.0	275	15.0	-7	05.6		
12	133	27.4	46	18.2	+19	26.9	296	48.8	-7	15.1	64	03.8	+21	18.1	290	17.3	-7	05.6		
13	148	29.9	61	18.4		27.1	311	49.9		15.7	79	05.8		18.2	305	19.6		05.7		
14	163	32.4	76	18.6		27.3	326	51.0		16.3	94	07.9		18.2	320	21.9		05.8		
15	178	34.8	91	18.8		27.5	341	52.0		16.9	109	09.9		18.3	335	24.3		05.8		
16	193	37.3	106	19.0		27.7	356	53.1		17.6	124	11.9		18.3	350	26.6		05.9		
17	208	39.7	121	19.2	+19	27.8	11	54.2	-7	18.2	139	13.9	+21	18.4	5	28.9	-7	05.9		
18	223	42.2	136	19.4	+19	28.0	26	55.3	-7	18.8	154	16.0	+21	18.4	20	31.2	-7	06.0		
19	238	44.7	151	19.5		28.2	41	56.3		19.4	169	18.0		18.5	35	33.5		06.1		
20	253	47.1	166	19.7		28.4	56	57.4		20.0	184	20.0		18.6	50	35.9		06.1		
21	268	49.6	181	19.9		28.6	71	58.5		20.6	199	22.0		18.6	65	38.2		06.2		
22	283	52.1	196	20.1		28.7	86	59.5		21.2	214	24.1		18.7	80	40.5		06.3		
23	298	54.5	211	20.3		28.9	102	00.6		21.8	229	26.1		18.7	95	42.8		06.3		
24	313	57.0	226	20.4	+19	29.1	117	01.7	-7	22.4	244	28.1	+21	18.8	110	45.1	-7	06.4		
Dif	—		+2		+2		+11		-6		+20		+1		+23		-			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 9			Edad: 16 ^d 8 PHE { SD: 15/4 PMG: 2 ^h 20 ^m 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	30.0	+16 54.9	326	09.1	+0 01.1	60 N	20 19	21 16	22 55	20 26 12	8 42 80				
1	193	30.1	54.2	340	41.5 ¹³⁴	13.0 ¹¹⁹	58	20 08	20 59	22 17	28 14	42 76				
2	208	30.2	53.6	355	13.9 ¹³⁴	24.9 ¹¹⁹	56	19 58	45	21 51	30 16	41 74				
3	223	30.2	52.9	9	46.3 ¹³⁴	36.7 ¹¹⁸	54	50	33	31	31 19	40 72				
4	238	30.3	52.2	24	18.8 ¹³⁵	+0 48.5 ¹¹⁸	52	42	22	15	33 20	39 71				
5	253	30.4	+16 51.5	38	51.3 ¹³⁵	+1 00.3 ¹¹⁸	50	19 35	20 13	21 02	20 34 22	8 39 68				
6	268	30.4	+16 50.8	53	23.8 ¹³⁵	+1 12.1 ¹¹⁸	45	19 21	19 54	20 35	20 37 26	8 37 65				
7	283	30.5	50.2	67	56.4 ¹³⁶	23.9 ¹¹⁸	40	19 09	39	20 15	40 29	36 62				
8	298	30.6	49.5	82	29.0 ¹³⁶	35.6 ¹¹⁷	35	18 59	26	19 59	42 32	35 59				
9	313	30.6	48.8	97	01.6 ¹³⁶	47.4 ¹¹⁸	30	50	19 16	46	44 34	35 56				
10	328	30.7	48.1	111	34.2 ¹³⁶	+1 59.1 ¹¹⁷	20	35	18 58	25	48 37	33 52				
11	343	30.8	+16 47.4	126	06.9 ¹³⁷	+2 10.8 ¹¹⁷	10 N	18 22	18 44	19 09	20 51 41	8 32 48				
12	358	30.8	+16 46.7	140	39.6 ¹³⁷	+2 22.4 ¹¹⁶	0	18 09	18 31	18 56	20 54 44	8 31 44				
13	13	30.9	46.1	155	12.3 ¹³⁷	34.1 ¹¹⁷	10 S	17 57	19	44	20 57 48	29 42				
14	28	31.0	45.4	169	45.0 ¹³⁷	45.7 ¹¹⁶	20	45	18 07	34	21 00 52	28 38				
15	43	31.0	44.7	184	17.8 ¹³⁸	+2 57.3 ¹¹⁶	30	30	17 55	24	04 55	26 34				
16	58	31.1	44.0	198	50.6 ¹³⁸	+3 08.8 ¹¹⁵	35	22	48	18	06 58	26 31				
17	73	31.2	+16 43.3	213	23.4 ¹³⁸	+3 20.4 ¹¹⁶	40	17 12	17 41	18 13	21 08 61	8 25 28				
18	88	31.2	+16 42.6	227	56.2 ¹³⁸	+3 31.9 ¹¹⁵	45	17 01	17 32	18 07	21 11 64	8 23 26				
19	103	31.3	41.9	242	29.1 ¹³⁹	43.3 ¹¹⁴	50	16 48	23	18 01	15 67	22 22				
20	118	31.4	41.3	257	01.9 ¹³⁸	+3 54.8 ¹¹⁵	52	42	18	17 59	16 69	21 21				
21	133	31.5	40.6	271	34.8 ¹³⁹	+4 06.2 ¹¹⁴	54	35	13	56	18 71	21 18				
22	148	31.5	39.9	286	07.7 ¹³⁹	17.6 ¹¹⁴	56	27	08	53	20 73	20 16				
23	163	31.6	39.2	300	40.6 ¹³⁹	29.0 ¹¹⁴	58	18	17 02	50	22 76	19 14				
24	178	31.7	+16 38.5	315	13.6 ¹⁴⁰	+4 40.3 ¹¹³	60 S	16 08	16 56	17 46	21 24 79	8 18 12				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 03 ^m 7		Mag: -4.5 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 16 ^h 11 ^m		Mag: -2.2 PMG: 7 ^h 41 ^m		Mag: +0.8 PMG: 16 ^h 34 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	313	57.0	226	20.4	+19 29.1	117 01.7	-7 22.4	244 28.1	+21 18.8	110 45.1	
1	328	59.5	241	20.6	29.3	132 02.8	23.0	259 30.2	18.8	125 47.5	
2	344	01.9	256	20.8	29.4	147 03.8	23.6	274 32.2	18.9	140 49.8	
3	359	04.4	271	21.0	29.6	162 04.9	24.2	289 34.2	18.9	155 52.1	
4	14	06.9	286	21.1	29.8	177 06.0	24.8	304 36.3	19.0	170 54.4	
5	29	09.3	301	21.3	+19 30.0	192 07.0	-7 25.5	319 38.3	+21 19.1	185 56.7	
6	44	11.8	316	21.5	+19 30.2	207 08.1	-7 26.1	334 40.3	+21 19.1	200 59.1	
7	59	14.2	331	21.7	30.3	222 09.2	26.7	349 42.3	19.2	216 01.4	
8	74	16.7	346	21.8	30.5	237 10.2	27.3	4 44.4	19.2	231 03.7	
9	89	19.2	1	22.0	30.7	252 11.3	27.9	19 46.4	19.3	246 06.0	
10	104	21.6	16	22.2	30.9	267 12.4	28.5	34 48.4	19.3	261 08.3	
11	119	24.1	31	22.3	+19 31.0	282 13.5	-7 29.1	49 50.5	+21 19.4	276 10.7	
12	134	26.6	46	22.5	+19 31.2	297 14.5	-7 29.7	64 52.5	+21 19.4	291 13.0	
13	149	29.0	61	22.6	31.4	312 15.6	30.3	79 54.5	19.5	306 15.3	
14	164	31.5	76	22.8	31.5	327 16.7	30.9	94 56.6	19.6	321 17.6	
15	179	34.0	91	23.0	31.7	342 17.7	31.5	109 58.6	19.6	336 19.9	
16	194	36.4	106	23.1	31.9	357 18.8	32.1	125 00.6	19.7	351 22.2	
17	209	38.9	121	23.3	+19 32.1	12 19.9	-7 32.7	140 02.7	+21 19.7	6 24.6	
18	224	41.3	136	23.4	+19 32.2	27 20.9	-7 33.4	155 04.7	+21 19.8	21 26.9	
19	239	43.8	151	23.6	32.4	42 22.0	34.0	170 06.7	19.8	36 29.2	
20	254	46.3	166	23.7	32.6	57 23.1	34.6	185 08.8	19.9	51 31.5	
21	269	48.7	181	23.9	32.7	72 24.1	35.2	200 10.8	19.9	66 33.8	
22	284	51.2	196	24.0	32.9	87 25.2	35.8	215 12.8	20.0	81 36.1	
23	299	53.7	211	24.2	33.1	102 26.3	36.4	230 14.9	20.0	96 38.5	
24	314	56.1	226	24.3	+19 33.3	117 27.3	-7 37.0	245 16.9	+21 20.1	111 40.8	
Dif	—		+2	+2		+11	-6	+20	+1	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h /8			Edad: 17 ^d 8 PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /3										
	PMG: 12 ^h 05 ^m 8			SD: 15 ^d /2 PMG: 3 ^h 05 ^m R°: 44 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	m	h m m	m
0	178	31.7	+16 38.5	315	13.6	+4 40.3	60 N	1 18	2 57	3 53	20 38 13	10 02 78		
1	193	31.7		329	46.5 ¹³⁹	+4 51.6 ¹¹³	58	1 56	3 14	4 04	42 16	9 58 75		
2	208	31.8		344	19.5 ¹⁴⁰	+5 02.8 ¹¹²	56	2 21	28	14	46 18	55 73		
3	223	31.9		358	52.4 ¹³⁹	14.1 ¹¹³	54	41	40	22	50 20	52 71		
4	238	32.0		13	25.4 ¹⁴⁰	25.3 ¹¹²	52	2 57	50	30	53 22	50 68		
5	253	32.0	+16 35.0	27	58.4 ¹⁴⁰	+5 36.4 ¹¹¹	50	3 10	3 59	4 37	20 56 24	9 47 67		
6	268	32.1	+16 34.4	42	31.5 ¹⁴¹	+5 47.5 ¹¹¹	45	3 37	4 18	4 51	21 03 27	9 42 63		
7	283	32.2		57	04.5 ¹⁴⁰	+5 58.6 ¹¹¹	40	3 57	33	5 03	09 30	38 60		
8	298	32.2		71	37.5 ¹⁴⁰	+6 09.7 ¹¹¹	35	4 13	46	13	14 32	34 57		
9	313	32.3		86	10.6 ¹⁴¹	20.7 ¹¹⁰	30	26	4 57	22	18 34	31 55		
10	328	32.4		100	43.6 ¹⁴⁰	31.6 ¹⁰⁹	20	4 47	5 14	37	25 39	25 51		
11	343	32.5	+16 30.9	115	16.7 ¹⁴¹	+6 42.6 ¹¹⁰	10 N	5 03	5 28	5 50	21 32 42	9 20 48		
12	358	32.5	+16 30.2	129	49.7 ¹⁴⁰	+6 53.4 ¹⁰⁸	0	5 16	5 41	6 02	21 38 45	9 15 45		
13	13	32.6		144	22.8 ¹⁴¹	+7 04.3 ¹⁰⁹	10 S	27	5 52	14	45 47	11 41		
14	28	32.7		158	55.9 ¹⁴¹	15.1 ¹⁰⁸	20	38	6 04	27	52 50	06 38		
15	43	32.8		173	29.0 ¹⁴¹	25.9 ¹⁰⁸	30	48	16	41	21 59 55	9 00 34		
16	58	32.8		188	02.1 ¹⁴¹	36.6 ¹⁰⁷	35	53	23	50	22 04 57	8 57 32		
17	73	32.9	+16 26.7	202	35.2 ¹⁴¹	+7 47.3 ¹⁰⁷	40	5 58	6 30	6 59	22 09 59	8 53 29		
18	88	33.0	+16 26.0	217	08.3 ¹⁴¹	+7 57.9 ¹⁰⁶	45	6 04	6 39	7 10	22 15 62	8 49 26		
19	103	33.1		231	41.3 ¹⁴⁰	+8 08.5 ¹⁰⁶	50	10	48	23	22 66	44 23		
20	118	33.1		246	14.4 ¹⁴¹	19.0 ¹⁰⁵	52	12	53	29	25 68	42 21		
21	133	33.2		260	47.5 ¹⁴¹	29.5 ¹⁰⁵	54	15	6 58	36	29 70	39 19		
22	148	33.3		275	20.7 ¹⁴²	40.0 ¹⁰⁵	56	18	7 03	44	33 72	36 18		
23	163	33.4		289	53.8 ¹⁴¹	+8 50.4 ¹⁰⁴	58	21	09	7 52	38 74	33 15		
24	178	33.4	+16 21.8	304	26.9 ¹⁴¹	+9 00.7 ¹⁰³	60 S	6 25	7 15	8 02	22 43 77	8 30 12		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 2 ^h 59 ^m 8		Mag: -4.5 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 16 ^h 09 ^m		Mag: -2.2 PMG: 7 ^h 38 ^m		Mag: +0.8 PMG: 16 ^h 31 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'
0	314	56.1	226	24.3	+19 33.3	117	27.3	-7 37.0	245	16.9	+21 20.1
1	329	58.6	241	24.5		132	28.4	37.6	260	18.9	20.2
2	345	01.1	256	24.6		147	29.5	38.2	275	21.0	20.2
3	0	03.5	271	24.8		162	30.5	38.8	290	23.0	20.3
4	15	06.0	286	24.9		177	31.6	39.4	305	25.0	20.3
5	30	08.5	301	25.1	+19 34.1	192	32.6	-7 40.0	320	27.1	+21 20.4
6	45	10.9	316	25.2	+19 34.3	207	33.7	-7 40.6	335	29.1	+21 20.4
7	60	13.4	331	25.3		222	34.8	41.3	350	31.1	20.5
8	75	15.8	346	25.5		237	35.8	41.9	5	33.2	20.5
9	90	18.3	1	25.6		252	36.9	42.5	20	35.2	20.6
10	105	20.8	16	25.8		267	38.0	43.1	35	37.2	20.6
11	120	23.2	31	25.9	+19 35.1	282	39.0	-7 43.7	50	39.3	+21 20.7
12	135	25.7	46	26.0	+19 35.3	297	40.1	-7 44.3	65	41.3	+21 20.8
13	150	28.2	61	26.2		312	41.1	44.9	80	43.3	20.8
14	165	30.6	76	26.3		327	42.2	45.5	95	45.4	20.9
15	180	33.1	91	26.4		342	43.3	46.1	110	47.4	20.9
16	195	35.6	106	26.6		357	44.3	46.7	125	49.5	21.0
17	210	38.0	121	26.7	+19 36.1	12	45.4	-7 47.3	140	51.5	+21 21.0
18	225	40.5	136	26.8	+19 36.2	27	46.5	-7 47.9	155	53.5	+21 21.1
19	240	42.9	151	26.9		42	47.5	48.5	170	55.6	21.1
20	255	45.4	166	27.1		57	48.6	49.2	185	57.6	21.2
21	270	47.9	181	27.2		72	49.6	49.8	200	59.6	21.2
22	285	50.3	196	27.3		87	50.7	50.4	216	01.7	21.3
23	300	52.8	211	27.4		102	51.8	51.0	231	03.7	21.3
24	315	55.3	226	27.5	+19 37.2	117	52.8	-7 51.6	246	05.8	+21 21.4
Dif	—		+1 +2		+11 -6		+20 +1		+23 -1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			Edad: 18 ^d 8 PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 0 20 ^h : 54 ^m 8 PMG: 3 ^h 49 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	33.4	+16	21.8	304	26.9	+9	00.7	60 N	20 14	21 09	22 41	20 51	16	11 20	75		
1	193	33.5		21.1	318	59.9 ¹⁴⁰		11.0 ¹⁰³	58	20 03	20 53	22 08	20 58	19	13	73		
2	208	33.6		20.4	333	33.0 ¹⁴¹		21.3 ¹⁰³	56	19 54	40	21 44	21 04	22	08	70		
3	223	33.7		19.7	348	06.1 ¹⁴¹		31.5 ¹⁰²	54	46	28	26	10 23		11 03	68		
4	238	33.8		19.0	2	39.2 ¹⁴¹		41.7 ¹⁰²	52	39	18	21 10	15 25		10 58	67		
5	253	33.8	+16	18.3	17	12.3 ¹⁴¹	+9	51.8 ¹⁰¹	50	19 32	20 09	20 57	21 20	26	10 54	65		
6	268	33.9	+16	17.6	31	45.4 ¹⁴¹	+10	01.8 ¹⁰⁰	45	19 18	19 51	20 32	21 30	30	10 45	61		
7	283	34.0		16.9	46	18.5 ¹⁴¹		11.8 ¹⁰⁰	40	19 07	36	20 12	39 32		38	58		
8	298	34.1		16.2	60	51.5 ¹⁴⁰		21.8 ¹⁰⁰	35	18 57	24	19 57	46 34		31	57		
9	313	34.1		15.5	75	24.6 ¹⁴¹		31.7 ⁹⁹	30	48	19 14	44	21 52	37	26	54		
10	328	34.2		14.8	89	57.7 ¹⁴¹		41.5 ⁹⁸	20	34	18 57	24	22 04	39	16	51		
11	343	34.3	+16	14.1	104	30.7 ¹⁴⁰	+10	51.3 ⁹⁸	10 N	18 21	18 43	19 09	22 14	42	10 08	47		
12	358	34.4	+16	13.4	119	03.7 ¹⁴⁰	+11	01.0 ⁹⁷	0	18 09	18 31	18 56	22 23	45	10 00	44		
13	13	34.5		12.7	133	36.8 ¹⁴¹		10.7 ⁹⁷	10 S	17 57	19	45	32 48		9 52	42		
14	28	34.5		12.0	148	09.8 ¹⁴⁰		20.4 ⁹⁷	20	45	18 08	34	42 51		44	38		
15	43	34.6		11.2	162	42.8 ¹⁴⁰		29.9 ⁹⁵	30	31	17 56	25	22 54	54	34	35		
16	58	34.7		10.5	177	15.8 ¹⁴⁰		39.4 ⁹⁵	35	23	50	20	23 01	55	29	33		
17	73	34.8	+16	09.8	191	48.8 ¹⁴⁰	+11	48.9 ⁹⁵	40	17 14	17 42	18 15	23 08	58	9 22	31		
18	88	34.9	+16	09.1	206	21.8 ¹⁴⁰	+11	58.3 ⁹⁴	45	17 03	17 34	18 09	23 17	61	9 15	28		
19	103	35.0		08.4	220	54.7 ¹³⁹	+12	07.6 ⁹³	50	16 51	25	04	28 64		07	24		
20	118	35.0		07.7	235	27.7 ¹⁴⁰		16.9 ⁹³	52	45	21	18 01	33 66		9 03	23		
21	133	35.1		07.0	250	00.6 ¹³⁹		26.1 ⁹²	54	38	16	17 59	39 67		8 58	22		
22	148	35.2		06.3	264	33.5 ¹³⁹		35.3 ⁹²	56	31	11	56	45 69		54	19		
23	163	35.3		05.6	279	06.4 ¹³⁹		44.4 ⁹¹	58	22	06	53	23 52	72	48	17		
24	178	35.4	+16	04.9	293	39.3 ¹³⁹	+12	53.4 ⁹⁰	60 S	16 13	17 00	17 50	** ** *		8 42	15		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 55 ^m 8		Mag: -4.5 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 16 ^h 07 ^m			Mag: -2.2 PMG: 7 ^h 35 ^m			Mag: +0.8 PMG: 16 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	315	55.3	226	27.5	+19	37.2	117	52.8	-7	51.6	246	05.8	+21	21.4	112	36.3	-7	09.7
1	330	57.7	241	27.7		37.3	132	53.9		52.2	261	07.8		21.4	127	38.7		09.7
2	346	00.2	256	27.8		37.5	147	54.9		52.8	276	09.8		21.5	142	41.0		09.8
3	1	02.7	271	27.9		37.7	162	56.0		53.4	291	11.9		21.6	157	43.3		09.9
4	16	05.1	286	28.0		37.8	177	57.0		54.0	306	13.9		21.6	172	45.6		09.9
5	31	07.6	301	28.1	+19	38.0	192	58.1	-7	54.6	321	16.0	+21	21.7	187	47.9	-7	10.0
6	46	10.1	316	28.2	+19	38.1	207	59.2	-7	55.2	336	18.0	+21	21.7	202	50.2	-7	10.1
7	61	12.5	331	28.3		38.3	223	00.2		55.8	351	20.0		21.8	217	52.5		10.2
8	76	15.0	346	28.5		38.4	238	01.3		56.4	6	22.1		21.8	232	54.8		10.2
9	91	17.4	1	28.6		38.6	253	02.3		57.0	21	24.1		21.9	247	57.2		10.3
10	106	19.9	16	28.7		38.7	268	03.4		57.7	36	26.2		21.9	262	59.5		10.4
11	121	22.4	31	28.8	+19	38.9	283	04.4	-7	58.3	51	28.2	+21	22.0	278	01.8	-7	10.4
12	136	24.8	46	28.9	+19	39.1	298	05.5	-7	58.9	66	30.2	+21	22.0	293	04.1	-7	10.5
13	151	27.3	61	29.0		39.2	313	06.6	-7	59.5	81	32.3		22.1	308	06.4		10.6
14	166	29.8	76	29.1		39.4	328	07.6	-8	00.1	96	34.3		22.1	323	08.7		10.6
15	181	32.2	91	29.2		39.5	343	08.7		00.7	111	36.4		22.2	338	11.0		10.7
16	196	34.7	106	29.3		39.7	358	09.7		01.3	126	38.4		22.2	353	13.3		10.8
17	211	37.2	121	29.4	+19	39.8	13	10.8	-8	01.9	141	40.4	+21	22.3	8	15.6	-7	10.8
18	226	39.6	136	29.5	+19	40.0	28	11.8	-8	02.5	156	42.5	+21	22.4	23	18.0	-7	10.9
19	241	42.1	151	29.6		40.1	43	12.9		03.1	171	44.5		22.4	38	20.3		11.0
20	256	44.6	166	29.7		40.3	58	13.9		03.7	186	46.6		22.5	53	22.6		11.1
21	271	47.0	181	29.8		40.4	73	15.0		04.3	201	48.6		22.5	68	24.9		11.1
22	286	49.5	196	29.9		40.6	88	16.0		04.9	216	50.7		22.6	83	27.2		11.2
23	301	51.9	211	30.0		40.7	103	17.1		05.5	231	52.7		22.6	98	29.5		11.3
24	316	54.4	226	30.1	+19	40.9	118	18.1	-8	06.2	246	54.7	+21	22.7	113	31.8	-7	11.3
Dif	—		+1		+2		+11		-6		+20		+1		+23		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 6				Edad: 19 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 SD: 14'9 PMG: 4 ^h 34 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	35.4	+16	04.9	293	39.3	+12	53.4	60 N	1	31	3	03	3	58	21	07
1	193	35.5		04.1	308	12.2 ¹³⁹	+13	02.4	58	2	04	19	4	09	17	23	12
2	208	35.5		03.4	322	45.1 ¹³⁹		11.3	56	28	32	18		26	25	26	71
3	223	35.6		02.7	337	17.9 ¹³⁸		20.2	54	2	46	44	26	33	28	11	68
4	238	35.7		02.0	351	50.8 ¹³⁹		29.0	52	3	02	3	54	40	29	12	05
5	253	35.8	+16	01.3	6	23.6 ¹³⁸	+13	37.7	50	3	14	4	03	21	46	31	64
6	268	35.9	+16	00.6	20	56.4 ¹³⁸	+13	46.4	45	3	40	4	21	11	59	63	
7	283	36.0	+15	59.9	35	29.1 ¹³⁷	+13	55.0	40	3	59	36	5	05	22	00	60
8	298	36.0		59.2	50	01.9 ¹³⁸	+14	03.5	35	4	15	48	15	11	35	36	58
9	313	36.1		58.4	64	34.6 ¹³⁷		12.0	30	27	4	58	23	29	39	20	53
10	328	36.2		57.7	79	07.3 ¹³⁷		20.4	20	4	47	5	15	43	42	11	07
11	343	36.3	+15	57.0	93	40.0 ¹³⁷	+14	28.7	10 N	5	03	5	29	22	56	44	50
12	358	36.4	+15	56.3	108	12.7 ¹³⁷	+14	37.0	0	5	16	5	41	23	08	46	48
13	13	36.5		55.6	122	45.4 ¹³⁷		45.2	10 S	27	5	52	14	20	48	34	46
14	28	36.6		54.8	137	18.0 ¹³⁶	+14	53.3	20	37	6	03	26	33	50	22	41
15	43	36.6		54.1	151	50.6 ¹³⁶	+15	01.4	30	46	15	40		48	53	09	38
16	58	36.7		53.4	166	23.2 ¹³⁶		09.4	35	51	21	48		23	56	55	36
17	73	36.8	+15	52.7	180	55.8 ¹³⁶	+15	17.3	40	5	56	6	28	9	53	34	
18	88	36.9	+15	52.0	195	28.3 ¹³⁵	+15	25.1	45	6	01	6	36	10	43	32	
19	103	37.0		51.3	210	00.8 ¹³⁵		32.9	50	07	45	20		31	29	29	
20	118	37.1		50.5	224	33.3 ¹³⁵		40.6	52	09	50	26		26	27	31	
21	133	37.2		49.8	239	05.8 ¹³⁵		48.3	54	12	54	32		20	25	27	
22	148	37.3		49.1	253	38.3 ¹³⁵	+15	55.8	56	14	6	59	39	13	23	21	
23	163	37.3		48.4	268	10.7 ¹³⁴	+16	03.3	58	17	7	04	47	9	05	23	
24	178	37.4	+15	47.6	282	43.1 ¹³⁴	+16	10.8	60 S	6	20	7	10	8	57	18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 51 ^m 9		Mag: -4.5 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 16 ^h 06 ^m		Mag: -2.2 PMG: 7 ^h 31 ^m		Mag: +0.8 PMG: 16 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	316	54.4	226	30.1	118	18.1	246	54.7	113	31.8
1	331	56.9	241	30.2	133	19.2	261	56.8	128	34.1
2	346	59.3	256	30.2	148	20.3	276	58.8	143	36.4
3	2	01.8	271	30.3	163	21.3	292	00.9	158	38.8
4	17	04.3	286	30.4	178	22.4	307	02.9	173	41.1
5	32	06.7	301	30.5	193	23.4	322	05.0	188	43.4
6	47	09.2	316	30.6	208	24.5	337	07.0	203	45.7
7	62	11.7	331	30.7	223	25.5	352	09.1	218	48.0
8	77	14.1	346	30.8	238	26.6	7	11.1	233	50.3
9	92	16.6	1	30.8	253	27.6	22	13.1	248	52.6
10	107	19.0	16	30.9	268	28.7	37	15.2	263	54.9
11	122	21.5	31	31.0	283	29.7	52	17.2	278	57.2
12	137	24.0	46	31.1	298	30.8	67	19.3	293	59.5
13	152	26.4	61	31.2	313	31.8	82	21.3	309	01.8
14	167	28.9	76	31.2	328	32.9	97	23.4	324	04.2
15	182	31.4	91	31.3	343	33.9	112	25.4	339	06.5
16	197	33.8	106	31.4	358	35.0	127	27.5	354	08.8
17	212	36.3	121	31.4	13	36.0	142	29.5	9	11.1
18	227	38.8	136	31.5	28	37.0	157	31.6	24	13.4
19	242	41.2	151	31.6	43	38.1	172	33.6	39	15.7
20	257	43.7	166	31.7	58	39.1	187	35.7	54	18.0
21	272	46.2	181	31.7	73	40.2	202	37.7	69	20.3
22	287	48.6	196	31.8	88	41.2	217	39.8	84	22.6
23	302	51.1	211	31.9	103	42.3	232	41.8	99	24.9
24	317	53.5	226	31.9	118	43.3	247	43.9	114	27.2
Dif	—		+1	+1	+10	-6	+20	+1	+23	-

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 4			Edad: 20 ^d 8 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 PMG: 5 ^h 19 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	37.4	+15 47.6	282	43.1	+16 10.8	73	60 N	20 09	21 03	22 29	21 28 28		13 49 68	
1	193	37.5	46.9	297	15.5 ¹³⁴	18.1	73	58	19 59	20 47	21 59	40 31		37 66	
2	208	37.6	46.2	311	47.8 ¹³³	25.4	73	56	50	35	37	21 51 32		26 65	
3	223	37.7	45.5	326	20.1 ¹³³	32.6	72	54	42	24	20	22 01 33		17 63	
4	238	37.8	44.8	340	52.4 ¹³³	39.7	71	52	35	14	21 05	09 35		09 62	
5	253	37.9	+15 44.0	355	24.7 ¹³³	+16 46.8	71	50	19 29	20 05	20 53	22 17 35		13 02 60	
6	268	38.0	+15 43.3	9	56.9 ¹³²	+16 53.7	69	45	19 15	19 48	20 28	22 33 38		12 46 58	
7	283	38.1	42.6	24	29.2 ¹³³	+17 00.6	69	40	19 04	34	20 09	46 40		34 56	
8	298	38.2	41.9	39	01.3 ¹³¹	07.4	68	35	18 55	22	19 55	22 58 41		23 54	
9	313	38.2	41.1	53	33.5 ¹³²	14.2	68	30	46	19 12	42	23 08 42		12 13 53	
10	328	38.3	40.4	68	05.6 ¹³¹	20.9	67	20	32	18 55	23	25 44		11 57 51	
11	343	38.4	+15 39.7	82	37.8 ¹³²	+17 27.4	65	10 N	18 20	18 42	19 08	23 40 46		11 43 49	
12	358	38.5	+15 38.9	97	09.8 ¹³⁰	+17 34.0	66	0	18 09	18 30	18 55	23 54 47		11 30 47	
13	13	38.6	38.2	111	41.9 ¹³¹	40.4	64	10 S	17 58	19	45	** ** *		17 45	
14	28	38.7	37.5	126	13.9 ¹³⁰	46.7	63	20	46	18 09	35	** ** *		11 03 43	
15	43	38.8	36.8	140	45.9 ¹³⁰	53.0	63	30	32	17 57	26	** ** *		10 47 40	
16	58	38.9	36.0	155	17.9 ¹³⁰	+17 59.2	62	35	25	51	21	** ** *		38 39	
17	73	39.0	+15 35.3	169	49.8 ¹²⁹	+18 05.3	61	40	17 16	17 44	18 16	0 06 57		10 27 37	
18	88	39.1	+15 34.6	184	21.7 ¹²⁹	+18 11.3	60	45	17 06	17 37	18 11	0 18 59		10 15 35	
19	103	39.2	33.8	198	53.6 ¹²⁹	17.3	60	50	16 53	28	06	32 62		10 00 32	
20	118	39.3	33.1	213	25.4 ¹²⁸	23.2	59	52	48	24	04	39 63		9 53 31	
21	133	39.4	32.4	227	57.2 ¹²⁸	28.9	57	54	41	19	18 02	46 65		45 30	
22	148	39.4	31.6	242	29.0 ¹²⁸	34.6	57	56	34	15	17 59	0 54 67		36 29	
23	163	39.5	30.9	257	00.8 ¹²⁸	40.3	57	58	27	09	56	1 04 68		26 27	
24	178	39.6	+15 30.2	271	32.5 ¹²⁷	+18 45.8	55	60 S	16 18	17 04	17 54	1 14 72		9 15 24	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 48 ^m 0		Mag: -4.5 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 16 ^h 04 ^m			Mag: -2.2 PMG: 7 ^h 28 ^m			Mag: +0.8 PMG: 16 ^h 20 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	317	53.5	226	31.9	+19 44.3	118	43.3	-8 20.7	247	43.9	+21 23.9	114	27.2	-7 13.0	
1	332	56.0	241	32.0	44.4	133	44.4	21.3	262	45.9	24.0	129	29.5	13.1	
2	347	58.5	256	32.1	44.5	148	45.4	21.9	277	47.9	24.0	144	31.8	13.2	
3	3	00.9	271	32.1	44.7	163	46.5	22.5	292	50.0	24.1	159	34.2	13.2	
4	18	03.4	286	32.2	44.8	178	47.5	23.2	307	52.0	24.1	174	36.5	13.3	
5	33	05.9	301	32.2	+19 44.9	193	48.6	-8 23.8	322	54.1	+21 24.2	189	38.8	-7 13.4	
6	48	08.3	316	32.3	+19 45.1	208	49.6	-8 24.4	337	56.1	+21 24.2	204	41.1	-7 13.5	
7	63	10.8	331	32.4	45.2	223	50.6	25.0	352	58.2	24.3	219	43.4	13.5	
8	78	13.3	346	32.4	45.3	238	51.7	25.6	8	00.2	24.3	234	45.7	13.6	
9	93	15.7	1	32.5	45.5	253	52.7	26.2	23	02.3	24.4	249	48.0	13.7	
10	108	18.2	16	32.5	45.6	268	53.8	26.8	38	04.3	24.4	264	50.3	13.7	
11	123	20.7	31	32.6	+19 45.7	283	54.8	-8 27.4	53	06.4	+21 24.5	279	52.6	-7 13.8	
12	138	23.1	46	32.6	+19 45.9	298	55.9	-8 28.0	68	08.5	+21 24.5	294	54.9	-7 13.9	
13	153	25.6	61	32.7	46.0	313	56.9	28.6	83	10.5	24.6	309	57.2	14.0	
14	168	28.0	76	32.7	46.1	328	57.9	29.2	98	12.6	24.6	324	59.5	14.0	
15	183	30.5	91	32.8	46.2	343	59.0	29.8	113	14.6	24.7	340	01.8	14.1	
16	198	33.0	106	32.8	46.4	359	00.0	30.4	128	16.7	24.7	355	04.1	14.2	
17	213	35.4	121	32.9	+19 46.5	14	01.1	-8 31.0	143	18.7	+21 24.8	10	06.4	-7 14.2	
18	228	37.9	136	32.9	+19 46.6	29	02.1	-8 31.6	158	20.8	+21 24.8	25	08.7	-7 14.3	
19	243	40.4	151	33.0	46.8	44	03.2	32.2	173	22.8	24.9	40	11.0	14.4	
20	258	42.8	166	33.0	46.9	59	04.2	32.9	188	24.9	24.9	55	13.3	14.5	
21	273	45.3	181	33.0	47.0	74	05.2	33.5	203	26.9	25.0	70	15.7	14.5	
22	288	47.8	196	33.1	47.1	89	06.3	34.1	218	29.0	25.0	85	18.0	14.6	
23	303	50.2	211	33.1	47.3	104	07.3	34.7	233	31.0	25.1	100	20.3	14.7	
24	318	52.7	226	33.2	+19 47.4	119	08.4	-8 35.3	248	33.1	+21 25.1	115	22.6	-7 14.7	
Dif	—		+1		+1	+10		-6	+21		+1	+23		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 05 ^m 3			Edad: 21 ^d 8 PHE { SD: 14'8 PMG: 6 ^h 05 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	39.6	+15 30.2	271	32.5	+18 45.8		60 N	1 43	3 09	4 03	21 56	38	14 57	62		
1	193	39.7		286	04.2 ¹²⁷	51.2 ⁵⁴		58	2 12	24	13	22 11	39	43	60		
2	208	39.8		300	35.9 ¹²⁷	+18 56.6 ⁵³		56	34	37	22	23 41		31	58		
3	223	39.9		315	07.5 ¹²⁶	+19 01.9 ⁵⁴		54	2 52	48	30	34 41		20	58		
4	238	40.0		329	39.1 ¹²⁶	07.1 ⁵²		52	3 06	3 57	36	44 42		11	56		
5	253	40.1	+15 26.5	344	10.7 ¹²⁶	+19 12.2 ⁵¹		50	3 19	4 06	4 43	22 52	43	14 02	56		
6	268	40.2	+15 25.8	358	42.3 ¹²⁶	+19 17.2 ⁵⁰		45	3 43	4 24	4 56	23 11	44	13 44	55		
7	283	40.3		13	13.8 ¹²⁵	22.1 ⁴⁹		40	4 02	38	5 07	26 45		30	53		
8	298	40.4		27	45.3 ¹²⁵	27.0 ⁴⁹		35	17	49	16	39 45		17	53		
9	313	40.5		42	16.7 ¹²⁴	31.7 ⁴⁷		30	29	4 59	25	23 50	46	13 06	52		
10	328	40.6		56	48.2 ¹²⁵	36.4 ⁴⁷		20	4 48	5 15	39	** ** *	**	12 48	50		
11	343	40.7	+15 22.1	71	19.5 ¹²³	+19 41.0 ⁴⁶		10 N	5 03	5 29	5 51	** ** *	**	12 32	49		
12	358	40.8	+15 21.4	85	50.9 ¹²⁴	+19 45.5 ⁴⁵		0	5 15	5 40	6 02	** ** *	**	12 17	48		
13	13	40.9		100	22.3 ¹²⁴	49.9 ⁴⁴		10 S	26	5 51	13	0 08	49	12 02	47		
14	28	41.0		114	53.6 ¹²³	54.2 ⁴³		20	36	6 02	25	23 51		11 46	45		
15	43	41.1		129	24.8 ¹²²	+19 58.4 ⁴²		30	45	13	38	41 52		27	44		
16	58	41.2		143	56.1 ¹²³	+20 02.5 ⁴¹		35	49	19	46	0 51	54	17	43		
17	73	41.3	+15 17.7	158	27.3 ¹²²	+20 06.6 ⁴¹		40	5 54	6 26	6 54	1 03	55	11 04	43		
18	88	41.4	+15 16.9	172	58.5 ¹²²	+20 10.5 ³⁹		45	5 59	6 33	7 04	1 17	56	10 50	41		
19	103	41.5		187	29.7 ¹²²	14.4 ³⁹		50	6 04	42	16	34 58		32	39		
20	118	41.6		202	00.8 ¹²¹	18.1 ³⁷		52	06	46	22	42 59		24	38		
21	133	41.7		216	31.9 ¹²¹	21.8 ³⁷		54	08	50	28	1 51	60	15	37		
22	148	41.8		231	03.0 ¹²¹	25.4 ³⁶		56	11	6 55	35	2 01	62	10 05	35		
23	163	41.9		245	34.0 ¹²⁰	28.9 ³⁵		58	13	7 00	43	12 64		9 53	34		
24	178	42.0	+15 12.5	260	05.0 ¹²⁰	+20 32.3 ³⁴		60 S	6 16	7 06	7 52	2 26	65	9 39	32		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 44 ^m 0			Mag: -4.5 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 16 ^h 02 ^m			Mag: -2.3 PMG: 7 ^h 25 ^m			Mag: +0.8 PMG: 16 ^h 16 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°	'	
0	318	52.7		226	33.2	+19 47.4		119	08.4	-8 35.3		248	33.1	+21 25.1	115	22.6	-7 14.7
1	333	55.1		241	33.2	47.5		134	09.4	35.9		263	35.1	25.2	130	24.9	14.8
2	348	57.6		256	33.2	47.6		149	10.4	36.5		278	37.2	25.2	145	27.2	14.9
3	4	00.1		271	33.3	47.8		164	11.5	37.1		293	39.2	25.3	160	29.5	15.0
4	19	02.5		286	33.3	47.9		179	12.5	37.7		308	41.3	25.3	175	31.8	15.0
5	34	05.0		301	33.3	+19 48.0		194	13.5	-8 38.3		323	43.4	+21 25.4	190	34.1	-7 15.1
6	49	07.5		316	33.4	+19 48.1		209	14.6	-8 38.9		338	45.4	+21 25.4	205	36.4	-7 15.2
7	64	09.9		331	33.4	48.2		224	15.6	39.5		353	47.5	25.5	220	38.7	15.3
8	79	12.4		346	33.4	48.4		239	16.7	40.1		8	49.5	25.5	235	41.0	15.3
9	94	14.9		1	33.5	48.5		254	17.7	40.7		23	51.6	25.6	250	43.3	15.4
10	109	17.3		16	33.5	48.6		269	18.7	41.3		38	53.6	25.6	265	45.6	15.5
11	124	19.8		31	33.5	+19 48.7		284	19.8	-8 42.0		53	55.7	+21 25.7	280	47.9	-7 15.5
12	139	22.3		46	33.5	+19 48.8		299	20.8	-8 42.6		68	57.7	+21 25.7	295	50.2	-7 15.6
13	154	24.7		61	33.6	48.9		314	21.8	43.2		83	59.8	25.8	310	52.5	15.7
14	169	27.2		76	33.6	49.1		329	22.9	43.8		99	01.9	25.8	325	54.8	15.8
15	184	29.6		91	33.6	49.2		344	23.9	44.4		114	03.9	25.9	340	57.1	15.8
16	199	32.1		106	33.6	49.3		359	25.0	45.0		129	06.0	25.9	355	59.4	15.9
17	214	34.6		121	33.7	+19 49.4		14	26.0	-8 45.6		144	08.0	+21 26.0	11	01.7	-7 16.0
18	229	37.0		136	33.7	+19 49.5		29	27.0	-8 46.2		159	10.1	+21 26.0	26	04.0	-7 16.1
19	244	39.5		151	33.7	49.6		44	28.1	46.8		174	12.1	26.1	41	06.3	16.1
20	259	42.0		166	33.7	49.8		59	29.1	47.4		189	14.2	26.1	56	08.6	16.2
21	274	44.4		181	33.7	49.9		74	30.1	48.0		204	16.3	26.2	71	10.9	16.3
22	289	46.9		196	33.8	50.0		89	31.2	48.6		219	18.3	26.2	86	13.2	16.3
23	304	49.4		211	33.8	50.1		104	32.2	49.2		234	20.4	26.3	101	15.5	16.4
24	319	51.8		226	33.8	+19 50.2		119	33.2	-8 49.8		249	22.4	+21 26.3	116	17.8	-7 16.5
Dif	—			0	+1			+10	-6			+21		0	+23		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 8 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/4										
	PMG: 12 ^h 05 ^m 1			SD: 14 ^h 8 PMG: 6 ^h 53 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	42.0	+15	260	05.0	+20	32.3	60 N	20 03	20 56	22 18	22 34 50	15 59 51	
1	193	42.1		274	36.0 ¹²⁰		35.6 ³³	58	19 54	42	21 51	22 50 50	43 51	
2	208	42.2		289	07.0 ¹²⁰		38.8 ³²	56	45	30	30	23 04 50	29 52	
3	223	42.3		303	37.9 ¹¹⁹		41.9 ³¹	54	38	19	14	15 50	18 51	
4	238	42.4		318	08.8 ¹¹⁹		44.9 ³⁰	52	31	10	21 00	26 50	15 07 51	
5	253	42.5	+15	332	39.7 ¹¹⁹	+20	47.8 ²⁹	50	19 25	20 02	20 48	23 35 50	14 58 51	
6	268	42.6	+15	347	10.5 ¹¹⁸	+20	50.7 ²⁹	45	19 12	19 44	20 24	23 55 50	14 39 50	
7	283	42.7		1	41.3 ¹¹⁸		53.4 ²⁷	40	19 02	31	20 06	** ** *	23 50	
8	298	42.8		16	12.1 ¹¹⁸		56.0 ²⁶	35	18 53	20	19 52	** ** *	14 10 50	
9	313	42.9		30	42.9 ¹¹⁸	+20	58.6 ²⁶	30	45	19 10	40	** ** *	13 58 50	
10	328	43.0		45	13.6 ¹¹⁷	+21	01.0 ²⁴	20	31	18 54	21	0 09 47	38 50	
11	343	43.1	+15	59	44.3 ¹¹⁷	+21	03.3 ²³	10 N	18 19	18 41	19 07	0 26 48	13 21 49	
12	358	43.2	+15	74	15.0 ¹¹⁷	+21	05.6 ²³	0	18 09	18 30	18 55	0 41 49	13 05 49	
13	13	43.3		88	45.7 ¹¹⁷		07.7 ²¹	10 S	17 58	19	45	0 57 49	12 49 48	
14	28	43.4		103	16.3 ¹¹⁶		09.8 ²¹	20	46	18 09	35	1 14 50	31 49	
15	43	43.5		117	46.9 ¹¹⁶		11.7 ¹⁹	30	34	17 58	27	33 51	11 48	
16	58	43.6	+15	132	17.5 ¹¹⁶		13.6 ¹⁹	35	26	52	22	45 51	12 00 47	
17	73	43.7	+14	146	48.1 ¹¹⁶	+21	15.3 ¹⁷	40	17 18	17 46	18 18	1 58 52	11 47 47	
18	88	43.8	+14	161	18.6 ¹¹⁵	+21	17.0 ¹⁷	45	17 08	17 39	18 14	2 13 53	11 31 47	
19	103	43.9		175	49.1 ¹¹⁵		18.5 ¹⁵	50	16 56	30	09	32 54	11 47	
20	118	44.0		190	19.6 ¹¹⁵		20.0 ¹⁵	52	51	27	07	41 54	11 02 46	
21	133	44.1		204	50.0 ¹¹⁴		21.3 ¹³	54	45	23	05	2 51 55	10 52 46	
22	148	44.3		219	20.5 ¹¹⁵		22.6 ¹³	56	38	18	02	3 03 55	40 45	
23	163	44.4		233	50.9 ¹¹⁴		23.7 ¹¹	58	31	13	18 00	16 56	27 45	
24	178	44.5	+14	248	21.3 ¹¹⁴	+21	24.8 ¹¹	60 S	16 22	17 08	17 57	3 31 57	10 11 44	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 40 ^m 1		Mag: -4.5 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 16 ^h 01 ^m		Mag: -2.3 PMG: 7 ^h 21 ^m		Mag: +0.8 PMG: 16 ^h 12 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	51.8	226	33.8	+19	50.2	119	33.2	-8	49.8	249	22.4	+21	26.3
1	334	54.3	241	33.8		50.3	134	34.3		50.4	264	24.5		26.4
2	349	56.8	256	33.8		50.4	149	35.3		51.0	279	26.6		26.4
3	4	59.2	271	33.8		50.5	164	36.3		51.6	294	28.6		26.5
4	20	01.7	286	33.8		50.6	179	37.4		52.3	309	30.7		26.5
5	35	04.1	301	33.8	+19	50.7	194	38.4	-8	52.9	324	32.7	+21	26.6
6	50	06.6	316	33.9	+19	50.9	209	39.4	-8	53.5	339	34.8	+21	26.6
7	65	09.1	331	33.9		51.0	224	40.4		54.1	354	36.9		26.7
8	80	11.5	346	33.9		51.1	239	41.5		54.7	9	38.9		26.7
9	95	14.0	1	33.9		51.2	254	42.5		55.3	24	41.0		26.8
10	110	16.5	16	33.9		51.3	269	43.5		55.9	39	43.0		26.8
11	125	18.9	31	33.9	+19	51.4	284	44.6	-8	56.5	54	45.1	+21	26.8
12	140	21.4	46	33.9	+19	51.5	299	45.6	-8	57.1	69	47.2	+21	26.9
13	155	23.9	61	33.9		51.6	314	46.6		57.7	84	49.2		26.9
14	170	26.3	76	33.9		51.7	329	47.7		58.3	99	51.3		27.0
15	185	28.8	91	33.9		51.8	344	48.7		58.9	114	53.3		27.0
16	200	31.2	106	33.9		51.9	359	49.7	-8	59.5	129	55.4		27.1
17	215	33.7	121	33.9	+19	52.0	14	50.7	-9	00.1	144	57.5	+21	27.1
18	230	36.2	136	33.9	+19	52.1	29	51.8	-9	00.7	159	59.5	+21	27.2
19	245	38.6	151	33.9		52.2	44	52.8		01.3	175	01.6		27.2
20	260	41.1	166	33.9		52.3	59	53.8		01.9	190	03.7		27.3
21	275	43.6	181	33.9		52.4	74	54.9		02.6	205	05.7		27.3
22	290	46.0	196	33.8		52.5	89	55.9		03.2	220	07.8		27.4
23	305	48.5	211	33.8		52.6	104	56.9		03.8	235	09.8		27.4
24	320	51.0	226	33.8	+19	52.7	119	57.9	-9	04.4	250	11.9	+21	27.5
Dif	—		0		+1		+10		-6		+21		0	
													+23	
													-1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 04 ^m 9				Edad: 23 ^d 8 PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/7 PMG: 7 ^h 42 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	44.5	+14	54.5	248	21.3	+21	24.8	60 N	1 53	3 15	4 08	23 24	62	16 50	41		
1	193	44.6		53.8	262	51.7 ¹¹⁴		25.7	58	2 20	29	17	40	61	34	42		
2	208	44.7		53.0	277	22.0 ¹¹³		26.6	56	41	41	26	23 54	59	21	42		
3	223	44.8		52.2	291	52.4 ¹¹⁴		27.3	54	2 57	3 52	33	** ** *	**	16 09	43		
4	238	44.9		51.5	306	22.7 ¹¹³		28.0	52	3 11	4 01	40	** ** *	**	15 58	44		
5	253	45.0	+14	50.7	320	53.0 ¹¹³	+21	28.5	50	3 23	4 09	4 46	** ** *	**	15 49	45		
6	268	45.1	+14	50.0	335	23.2 ¹¹²	+21	29.0	45	3 46	4 26	4 58	** ** *	**	15 29	46		
7	283	45.2		49.2	349	53.5 ¹¹³		29.3	40	4 04	40	5 09	0 11	50	13	47		
8	298	45.3		48.5	4	23.7 ¹¹²		29.5	35	18	4 51	18	24	50	15 00	47		
9	313	45.4		47.7	18	53.9 ¹¹²		29.7	30	30	5 00	26	36	50	14 48	48		
10	328	45.5		47.0	33	24.1 ¹¹²		29.7	20	4 49	16	39	0 56	50	28	48		
11	343	45.6	+14	46.2	47	54.3 ¹¹²	+21	29.6	10 N	5 03	5 29	5 51	1 14	49	14 10	49		
12	358	45.8	+14	45.4	62	24.5 ¹¹²	+21	29.5	0	5 15	5 40	6 02	1 30	49	13 54	49		
13	13	45.9		44.7	76	54.6 ¹¹¹		29.2	10 S	25	5 51	12	1 46	50	37	51		
14	28	46.0		43.9	91	24.7 ¹¹¹		28.8	20	35	6 01	23	2 04	49	13 20	51		
15	43	46.1		43.2	105	54.8 ¹¹¹		28.3	30	43	11	36	24	49	12 59	52		
16	58	46.2		42.4	120	24.9 ¹¹¹		27.7	35	47	17	43	36	49	47	52		
17	73	46.3	+14	41.6	134	55.0 ¹¹¹	+21	27.0	40	5 52	6 24	6 52	2 50	48	12 34	52		
18	88	46.4	+14	40.9	149	25.1 ¹¹¹	+21	26.2	45	5 56	6 31	7 01	3 06	48	12 18	53		
19	103	46.5		40.1	163	55.1 ¹¹⁰		25.3	50	6 01	39	13	26	48	11 58	53		
20	118	46.6		39.4	178	25.2 ¹¹¹		24.3	52	03	43	18	35	48	48	54		
21	133	46.7		38.6	192	55.2 ¹¹⁰		23.2	54	05	47	24	46	47	38	54		
22	148	46.9		37.8	207	25.2 ¹¹⁰		22.0	56	07	51	31	3 58	47	25	55		
23	163	47.0		37.1	221	55.2 ¹¹⁰		20.7	58	09	6 56	38	4 12	47	11 12	55		
24	178	47.1	+14	36.3	236	25.2 ¹¹⁰	+21	19.2	60 S	6 12	7 01	7 46	4 28	46	10 55	56		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 36 ^m 2		Mag: -4.5 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 15 ^h 59 ^m		Mag: -2.3 PMG: 7 ^h 18 ^m		Mag: +0.8 PMG: 16 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	320	51.0	226	33.8	+19	52.7	119	57.9	-9	04.4
1	335	53.4	241	33.8		52.8	134	59.0		05.0
2	350	55.9	256	33.8		52.9	150	00.0		05.6
3	5	58.4	271	33.8		53.0	165	01.0		06.2
4	21	00.8	286	33.8		53.1	180	02.0		06.8
5	36	03.3	301	33.8	+19	53.2	195	03.1	-9	07.4
6	51	05.7	316	33.7	+19	53.3	210	04.1	-9	08.0
7	66	08.2	331	33.7		53.4	225	05.1		08.6
8	81	10.7	346	33.7		53.5	240	06.1		09.2
9	96	13.1	1	33.7		53.6	255	07.2		09.8
10	111	15.6	16	33.7		53.6	270	08.2		10.4
11	126	18.1	31	33.7	+19	53.7	285	09.2	-9	11.0
12	141	20.5	46	33.6	+19	53.8	300	10.2	-9	11.6
13	156	23.0	61	33.6		53.9	315	11.3		12.2
14	171	25.5	76	33.6		54.0	330	12.3		12.8
15	186	27.9	91	33.6		54.1	345	13.3		13.4
16	201	30.4	106	33.5		54.2	0	14.3		14.0
17	216	32.9	121	33.5	+19	54.3	15	15.3	-9	14.7
18	231	35.3	136	33.5	+19	54.4	30	16.4	-9	15.3
19	246	37.8	151	33.5		54.5	45	17.4		15.9
20	261	40.2	166	33.4		54.5	60	18.4		16.5
21	276	42.7	181	33.4		54.6	75	19.4		17.1
22	291	45.2	196	33.4		54.7	90	20.5		17.7
23	306	47.6	211	33.3		54.8	105	21.5		18.3
24	321	50.1	226	33.3	+19	54.9	120	22.5	-9	18.9
Dif	—		0 +1		+10 -6		+21 0		+23 -1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 8 PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/2										
	PMG: 12 ^h 04 ^m 8			SD: 14/9 PMG: 8 ^h 31 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	47.1	+14 36.3	236	25.2	+21 19.2	15	60 N	19 58	20 49	22 07	** ** *	17 31	31
1	193	47.2	35.5	250	55.2 ¹¹⁰	17.7	15	58	49	36	21 43	** ** *	16	33
2	208	47.3	34.8	265	25.1 ¹⁰⁹	16.1	16	56	41	24	23	** ** *	17 03	35
3	223	47.4	34.0	279	55.1 ¹¹⁰	14.3	18	54	33	14	21 08	0 05	59	16 52 37
4	238	47.5	33.3	294	25.0 ¹⁰⁹	12.5	18	52	27	20 05	20 55	16	58	42 38
5	253	47.6	+14 32.5	308	55.0 ¹¹⁰	+21 10.5	20	50	19 21	19 58	20 43	0 25	57	16 34 38
6	268	47.8	+14 31.7	323	24.9 ¹⁰⁹	+21 08.5	20	45	19 09	19 41	20 21	0 45	56	16 15 41
7	283	47.9	31.0	337	54.8 ¹⁰⁹	06.3	22	40	18 59	28	20 03	1 01	54	16 00 42
8	298	48.0	30.2	352	24.7 ¹⁰⁹	04.1	22	35	50	17	19 49	14	54	15 47 44
9	313	48.1	29.4	6	54.6 ¹⁰⁹	+21 01.7	24	30	43	19 08	38	26	53	36 44
10	328	48.2	28.7	21	24.5 ¹⁰⁹	+20 59.2	25	20	30	18 53	20	1 46	52	15 16 47
11	343	48.3	+14 27.9	35	54.4 ¹⁰⁹	+20 56.6	26	10 N	18 19	18 40	19 06	2 03	51	14 59 49
12	358	48.4	+14 27.1	50	24.3 ¹⁰⁹	+20 54.0	26	0	18 08	18 29	18 54	2 19	50	14 43 50
13	13	48.6	26.4	64	54.2 ¹⁰⁹	51.2	28	10 S	17 58	19	45	36	49	28 51
14	28	48.7	25.6	79	24.1 ¹⁰⁹	48.3	29	20	47	18 10	36	2 53	48	14 11 52
15	43	48.8	24.8	93	53.9 ¹⁰⁸	45.3	30	30	35	17 59	28	3 13	46	13 51 55
16	58	48.9	24.0	108	23.8 ¹⁰⁹	42.2	31	35	28	54	24	25	45	39 56
17	73	49.0	+14 23.3	122	53.7 ¹⁰⁹	+20 39.0	32	40	17 20	17 48	18 20	3 38	45	13 26 57
18	88	49.1	+14 22.5	137	23.5 ¹⁰⁸	+20 35.7	33	45	17 10	17 41	18 16	3 54	43	13 11 58
19	103	49.2	21.7	151	53.4 ¹⁰⁹	32.3	34	50	16 59	33	11	4 14	41	12 51 61
20	118	49.4	21.0	166	23.2 ¹⁰⁸	28.7	36	52	54	30	09	23	41	42 62
21	133	49.5	20.2	180	53.1 ¹⁰⁹	25.1	36	54	48	26	08	33	40	32 63
22	148	49.6	19.4	195	22.9 ¹⁰⁸	21.4	37	56	42	22	06	45	39	20 64
23	163	49.7	18.6	209	52.8 ¹⁰⁹	17.6	38	58	35	17	04	4 59	37	12 07 66
24	178	49.8	+14 17.9	224	22.6 ¹⁰⁸	+20 13.6	40	60 S	16 27	17 12	18 01	5 14	36	11 51 68
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 32 ^m 2		Mag: -4.5 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 15 ^h 57 ^m			Mag: -2.3 PMG: 7 ^h 15 ^m			Mag: +0.8 PMG: 16 ^h 05 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	321	50.1	226	33.3	+19 54.9	120	22.5	-9 18.9	251	01.5	+21 28.6	118	08.1	-7 20.1
1	336	52.6	241	33.3	55.0	135	23.5	19.5	266	03.6	28.7	133	10.4	20.1
2	351	55.0	256	33.2	55.0	150	24.5	20.1	281	05.7	28.7	148	12.7	20.2
3	6	57.5	271	33.2	55.1	165	25.6	20.7	296	07.7	28.8	163	15.0	20.3
4	22	00.0	286	33.2	55.2	180	26.6	21.3	311	09.8	28.8	178	17.3	20.4
5	37	02.4	301	33.1	+19 55.3	195	27.6	-9 21.9	326	11.9	+21 28.8	193	19.6	-7 20.4
6	52	04.9	316	33.1	+19 55.4	210	28.6	-9 22.5	341	13.9	+21 28.9	208	21.9	-7 20.5
7	67	07.4	331	33.0	55.4	225	29.6	23.1	356	16.0	28.9	223	24.2	20.6
8	82	09.8	346	33.0	55.5	240	30.6	23.7	11	18.1	29.0	238	26.5	20.7
9	97	12.3	1	33.0	55.6	255	31.7	24.3	26	20.2	29.0	253	28.8	20.7
10	112	14.7	16	32.9	55.7	270	32.7	24.9	41	22.2	29.1	268	31.1	20.8
11	127	17.2	31	32.9	+19 55.8	285	33.7	-9 25.5	56	24.3	+21 29.1	283	33.4	-7 20.9
12	142	19.7	46	32.8	+19 55.8	300	34.7	-9 26.1	71	26.4	+21 29.2	298	35.6	-7 21.0
13	157	22.1	61	32.8	55.9	315	35.7	26.7	86	28.4	29.2	313	37.9	21.0
14	172	24.6	76	32.7	56.0	330	36.7	27.3	101	30.5	29.3	328	40.2	21.1
15	187	27.1	91	32.7	56.1	345	37.8	28.0	116	32.6	29.3	343	42.5	21.2
16	202	29.5	106	32.6	56.1	0	38.8	28.6	131	34.7	29.4	358	44.8	21.3
17	217	32.0	121	32.6	+19 56.2	15	39.8	-9 29.2	146	36.7	+21 29.4	13	47.1	-7 21.3
18	232	34.5	136	32.5	+19 56.3	30	40.8	-9 29.8	161	38.8	+21 29.4	28	49.4	-7 21.4
19	247	36.9	151	32.5	56.4	45	41.8	30.4	176	40.9	29.5	43	51.7	21.5
20	262	39.4	166	32.4	56.4	60	42.8	31.0	191	43.0	29.5	58	54.0	21.6
21	277	41.8	181	32.4	56.5	75	43.8	31.6	206	45.0	29.6	73	56.3	21.6
22	292	44.3	196	32.3	56.6	90	44.9	32.2	221	47.1	29.6	88	58.6	21.7
23	307	46.8	211	32.3	56.6	105	45.9	32.8	236	49.2	29.7	104	00.9	21.8
24	322	49.2	226	32.2	+19 56.7	120	46.9	-9 33.4	251	51.3	+21 29.7	119	03.2	-7 21.9
Dif	—		0	+1		+10	-6		+21		0		+23	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 6			Edad: 25 ^d 8 PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 5 20 ^h : 55 ^h 7 SD: 15 ^h 0 PMG: 9 ^h 21 ^m R°: 50 ^m											
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	49.8	+14	17.9	224	22.6	+20	13.6	60 N	2	03	3	21	4	13
1	193	50.0		17.1	238	52.5 ¹⁰⁹		09.6 ⁴⁰	58		28		34		22
2	208	50.1		16.3	253	22.3 ¹⁰⁸		05.4 ⁴²	56	2	47		46		30
3	223	50.2		15.6	267	52.2 ¹⁰⁹	+20	01.2 ⁴²	54	3	02	3	56		37
4	238	50.3		14.8	282	22.0 ¹⁰⁸	+19	56.8 ⁴⁴	52		15	4	05		43
5	253	50.4	+14	14.0	296	51.9 ¹⁰⁹	+19	52.4 ⁴⁴	50	3	27	4	12	4	49
6	268	50.5	+14	13.2	311	21.8 ¹⁰⁹	+19	47.8 ⁴⁶	45	3	49	4	29	5	01
7	283	50.7		12.5	325	51.6 ¹⁰⁸		43.2 ⁴⁶	40	4	06		42		11
8	298	50.8		11.7	340	21.5 ¹⁰⁹		38.4 ⁴⁸	35		20	4	53		19
9	313	50.9		10.9	354	51.3 ¹⁰⁸		33.6 ⁴⁸	30		32	5	02		27
10	328	51.0		10.1	9	21.2 ¹⁰⁹		28.6 ⁵⁰	20	4	50		17		40
11	343	51.1	+14	09.4	23	51.1 ¹⁰⁹	+19	23.6 ⁵⁰	10 N	5	04	5	29	5	51
12	358	51.3	+14	08.6	38	21.0 ¹⁰⁹	+19	18.4 ⁵²	0	5	15	5	40	6	01
13	13	51.4		07.8	52	50.8 ¹⁰⁸		13.1 ⁵³	10 S		25		50		11
14	28	51.5		07.0	67	20.7 ¹⁰⁹		07.8 ⁵³	20		33	5	59		22
15	43	51.6		06.2	81	50.6 ¹⁰⁹	+19	02.3 ⁵⁵	30		41	6	10		34
16	58	51.7		05.5	96	20.5 ¹⁰⁹	+18	56.7 ⁵⁶	35		45		15		41
17	73	51.9	+14	04.7	110	50.4 ¹⁰⁹	+18	51.1 ⁵⁶	40	5	49	6	21	6	49
18	88	52.0	+14	03.9	125	20.3 ¹⁰⁹	+18	45.3 ⁵⁸	45	5	53	6	28	6	58
19	103	52.1		03.1	139	50.3 ¹¹⁰		39.4 ⁵⁹	50		57		35		7
20	118	52.2		02.3	154	20.2 ¹⁰⁹		33.5 ⁵⁹	52	5	59		39		14
21	133	52.3		01.6	168	50.1 ¹⁰⁹		27.4 ⁶¹	54	6	01		43		20
22	148	52.5	+14	00.8	183	20.1 ¹¹⁰		21.3 ⁶¹	56		03		47		26
23	163	52.6	+14	00.0	197	50.0 ¹⁰⁹		15.0 ⁶³	58		05		51		33
24	178	52.7	+13	59.2	212	20.0 ¹¹⁰	+18	08.7 ⁶³	60 S	6	07	6	56	7	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 28 ^m 3		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 15 ^h 56 ^m		Mag: -2.3 PMG: 7 ^h 12 ^m		Mag: +0.8 PMG: 16 ^h 01 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	322	49.2	226	32.2	+19	56.7	120	46.9	-9	33.4
1	337	51.7	241	32.2		56.8	135	47.9		34.0
2	352	54.2	256	32.1		56.8	150	48.9		34.6
3	7	56.6	271	32.1		56.9	165	49.9		35.2
4	22	59.1	286	32.0		57.0	180	50.9		35.8
5	38	01.6	301	31.9	+19	57.0	195	52.0	-9	36.4
6	53	04.0	316	31.9	+19	57.1	210	53.0	-9	37.0
7	68	06.5	331	31.8		57.2	225	54.0		37.6
8	83	09.0	346	31.8		57.2	240	55.0		38.2
9	98	11.4	1	31.7		57.3	255	56.0		38.8
10	113	13.9	16	31.6		57.4	270	57.0		39.4
11	128	16.3	31	31.6	+19	57.4	285	58.0	-9	40.0
12	143	18.8	46	31.5	+19	57.5	300	59.0	-9	40.6
13	158	21.3	61	31.4		57.6	316	00.0		41.2
14	173	23.7	76	31.4		57.6	331	01.0		41.8
15	188	26.2	91	31.3		57.7	346	02.1		42.4
16	203	28.7	106	31.2		57.7	1	03.1		43.0
17	218	31.1	121	31.2	+19	57.8	16	04.1	-9	43.7
18	233	33.6	136	31.1	+19	57.8	31	05.1	-9	44.3
19	248	36.1	151	31.0		57.9	46	06.1		44.9
20	263	38.5	166	30.9		58.0	61	07.1		45.5
21	278	41.0	181	30.9		58.0	76	08.1		46.1
22	293	43.5	196	30.8		58.1	91	09.1		46.7
23	308	45.9	211	30.7		58.1	106	10.1		47.3
24	323	48.4	226	30.6	+19	58.2	121	11.1	-9	47.9
Dif	—		-1		+1		+10		-6	
							+21		0	
									+23	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 04 ^m 4			Edad: 26 ^d 8 PHE { SD: 15°2 PMG: 10 ^h 11 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	178	52.7	+13 59.2	212	20.0	+18 08.7	60 N	19 52	20 43	21 57	1 38 79	18 25 18			
1	193	52.8	58.4	226	49.9 ¹⁰⁹	+18 02.2	65 58	43	30	35	1 51 76	15 21			
2	208	53.0	57.6	241	19.9 ¹¹⁰	+17 55.7	65 56	36	19	17	2 01 74	18 06 23			
3	223	53.1	56.9	255	49.9 ¹¹⁰	49.0	67 54	29	09	21 02	10 72	17 58 26			
4	238	53.2	56.1	270	19.9 ¹¹⁰	42.3	67 52	23	20 01	20 49	18 70	52 27			
5	253	53.3	+13 55.3	284	49.9 ¹¹⁰	+17 35.5	68 50	19 18	19 53	20 39	2 26 68	17 45 29			
6	268	53.5	+13 54.5	299	19.9 ¹¹⁰	+17 28.5	70 45	19 06	19 38	20 17	2 42 64	17 32 32			
7	283	53.6	53.7	313	49.9 ¹¹⁰	21.5	70 40	18 56	25	20 00	2 55 62	21 35			
8	298	53.7	52.9	328	20.0 ¹¹¹	14.4	71 35	48	15	19 47	3 05 60	11 38			
9	313	53.8	52.2	342	50.0 ¹¹⁰	+17 07.2	72 30	41	19 06	36	15 58	17 03 39			
10	328	54.0	51.4	357	20.1 ¹¹¹	+16 59.9	73 20	28	18 51	18	31 55	16 48 43			
11	343	54.1	+13 50.6	11	50.1 ¹¹⁰	+16 52.5	74 10 N	18 18	18 39	19 05	3 46 52	16 35 46			
12	358	54.2	+13 49.8	26	20.2 ¹¹¹	+16 45.0	75 0	18 08	18 29	18 54	3 59 50	16 23 49			
13	13	54.3	49.0	40	50.3 ¹¹¹	37.5	75 10 S	17 58	19	44	4 12 47	16 11 52			
14	28	54.5	48.2	55	20.4 ¹¹¹	29.8	77 20	48	10	36	27 44	15 58 55			
15	43	54.6	47.4	69	50.5 ¹¹¹	22.0	78 30	36	18 00	29	43 41	43 58			
16	58	54.7	46.7	84	20.6 ¹¹¹	14.2	78 35	29	17 55	25	4 52 39	34 61			
17	73	54.8	+13 45.9	98	50.8 ¹¹²	+16 06.3	79 40	17 21	17 49	18 21	5 03 37	15 24 63			
18	88	55.0	+13 45.1	113	20.9 ¹¹¹	+15 58.3	80 45	17 13	17 43	18 18	5 16 34	15 12 66			
19	103	55.1	44.3	127	51.1 ¹¹²	50.1	82 50	17 02	36	14	31 31	14 58 70			
20	118	55.2	43.5	142	21.2 ¹¹¹	42.0	81 52	16 57	32	12	38 29	51 72			
21	133	55.3	42.7	156	51.4 ¹¹²	33.7	83 54	52	29	11	46 27	44 73			
22	148	55.5	41.9	171	21.6 ¹¹²	25.3	84 56	46	25	09	5 55 25	35 76			
23	163	55.6	41.1	185	51.8 ¹¹²	16.8	85 58	39	21	07	6 05 23	26 78			
24	178	55.7	+13 40.3	200	22.0 ¹¹²	+15 08.3	85 60 S	16 31	17 16	18 05	6 16 20	14 15 81			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 24 ^m 4		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 15 ^h 54 ^m		Mag: -2.3 PMG: 7 ^h 08 ^m		Mag: +0.8 PMG: 15 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	323	48.4	226	30.6	+19 58.2	121	11.1	-9 47.9	252	41.1	+21 30.8	119	58.1	-7 23.7
1	338	50.8	241	30.6	58.2	136	12.1	48.5	267	43.2	30.9	135	00.4	23.8
2	353	53.3	256	30.5	58.3	151	13.1	49.1	282	45.3	30.9	150	02.7	23.9
3	8	55.8	271	30.4	58.3	166	14.1	49.7	297	47.4	30.9	165	05.0	24.0
4	23	58.2	286	30.3	58.4	181	15.2	50.3	312	49.5	31.0	180	07.3	24.0
5	39	00.7	301	30.2	+19 58.4	196	16.2	-9 50.9	327	51.5	+21 31.0	195	09.6	-7 24.1
6	54	03.2	316	30.2	+19 58.5	211	17.2	-9 51.5	342	53.6	+21 31.1	210	11.9	-7 24.2
7	69	05.6	331	30.1	58.5	226	18.2	52.1	357	55.7	31.1	225	14.2	24.3
8	84	08.1	346	30.0	58.6	241	19.2	52.7	12	57.8	31.2	240	16.4	24.3
9	99	10.6	1	29.9	58.6	256	20.2	53.3	27	59.9	31.2	255	18.7	24.4
10	114	13.0	16	29.8	58.7	271	21.2	53.9	43	02.0	31.2	270	21.0	24.5
11	129	15.5	31	29.7	+19 58.7	286	22.2	-9 54.5	58	04.0	+21 31.3	285	23.3	-7 24.6
12	144	18.0	46	29.7	+19 58.8	301	23.2	-9 55.1	73	06.1	+21 31.3	300	25.6	-7 24.7
13	159	20.4	61	29.6	58.8	316	24.2	55.7	88	08.2	31.4	315	27.9	24.7
14	174	22.9	76	29.5	58.9	331	25.2	56.3	103	10.3	31.4	330	30.2	24.8
15	189	25.3	91	29.4	58.9	346	26.2	56.9	118	12.4	31.5	345	32.5	24.9
16	204	27.8	106	29.3	59.0	1	27.2	57.5	133	14.5	31.5	0	34.7	25.0
17	219	30.3	121	29.2	+19 59.0	16	28.2	-9 58.1	148	16.5	+21 31.6	15	37.0	-7 25.0
18	234	32.7	136	29.1	+19 59.1	31	29.2	-9 58.7	163	18.6	+21 31.6	30	39.3	-7 25.1
19	249	35.2	151	29.0	59.1	46	30.2	59.3	178	20.7	31.6	45	41.6	25.2
20	264	37.7	166	28.9	59.1	61	31.2	-9 59.9	193	22.8	31.7	60	43.9	25.3
21	279	40.1	181	28.8	59.2	76	32.2	-10 00.5	208	24.9	31.7	75	46.2	25.4
22	294	42.6	196	28.7	59.2	91	33.2	01.1	223	27.0	31.8	90	48.5	25.4
23	309	45.1	211	28.6	59.3	106	34.2	01.7	238	29.1	31.8	105	50.7	25.5
24	324	47.5	226	28.6	+19 59.3	121	35.2	-10 02.3	253	31.1	+21 31.9	120	53.0	-7 25.6
Dif	—		-1		0	+10		-6	+21		0	+23		-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 2			Edad: 27 ^d 8 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	55.7	+13 40.3	200	22.0	+15 08.3	86	60 N	2 12	3 27	4 17	2 57	83	18 43	14
1	193	55.9		214	52.3 ¹¹³	+14 59.7	86	58		35	39	26	3 07	79	36 17
2	208	56.0		229	22.5 ¹¹²		87	56	2 53	3 50	33	15	77		29 20
3	223	56.1		243	52.8 ¹¹³		88	54	3 07	4 00	40	22	75		24 22
4	238	56.2		258	23.0 ¹¹²		89	52		20	08	46	28	73	19 24
5	253	56.4	+13 36.4	272	53.3 ¹¹³	+14 24.4	89	50	3 30	4 16	4 52	3 34	71	18 14	26
6	268	56.5	+13 35.6	287	23.6 ¹¹³	+14 15.3	91	45	3 52	4 31	5 03	3 46	68	18 04	30
7	283	56.6		301	53.9 ¹¹³	+14 06.2	91	40	4 09		44	13	3 57	64	17 56 32
8	298	56.8		316	24.2 ¹¹³	+13 57.0	92	35		22	4 54	21	4 05	62	49 35
9	313	56.9		330	54.5 ¹¹³		92	30		33	5 03	28	13	59	42 38
10	328	57.0		345	24.9 ¹¹⁴		94	20	4 51		18	40	26	56	31 42
11	343	57.2	+13 31.6	359	55.2 ¹¹³	+13 29.0	94	10 N	5 04	5 29	5 51	4 38	52	17 21	46
12	358	57.3	+13 30.8	14	25.6 ¹¹⁴	+13 19.5	95	0	5 15	5 40	6 01	4 49	49	17 12	49
13	13	57.4		28	55.9 ¹¹³		96	10 S		24	49	11	4 59	46	17 03 52
14	28	57.5		43	26.3 ¹¹⁴	+13 00.2	97	20	32	5 58	21	5 11	42	16 53	56
15	43	57.7		57	56.7 ¹¹⁴	+12 50.5	97	30	40	6 08	32	24	38	41	60
16	58	57.8		72	27.1 ¹¹⁴		98	35	43		13	39	31	37	35 62
17	73	57.9	+13 26.8	86	57.5 ¹¹⁴	+12 30.8	99	40	5 47	6 19	6 46	5 40	34	16 27	65
18	88	58.1	+13 26.0	101	27.9 ¹¹⁴	+12 20.9	99	45	5 50	6 25	6 55	5 50	31	16 18	69
19	103	58.2		115	58.4 ¹¹⁵		100	50		54	32	7 06	6 02	27	08 72
20	118	58.3		130	28.8 ¹¹⁴	+12 00.8	101	52		56	35	10	07	26	16 03 74
21	133	58.5		144	59.3 ¹¹⁵	+11 50.6	102	54		57	39	16	13	24	15 57 76
22	148	58.6		159	29.7 ¹¹⁴		102	56	5 59		42	22	20	22	51 78
23	163	58.7		174	00.2 ¹¹⁵		103	58	6 00		47	28	28	19	44 81
24	178	58.9	+13 21.2	188	30.7 ¹¹⁵	+11 19.7	104	60 S	6 02	6 51	7 36	6 36	17	15 36	84
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 2 ^h 20 ^m 4		Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 15 ^h 53 ^m			Mag: -2.3 PMG: 7 ^h 05 ^m			Mag: +0.8 PMG: 15 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	324	47.5	226	28.6	+19 59.3	121	35.2	-10 02.3	253	31.1	+21 31.9	120	53.0	-7 25.6	
1	339	50.0	241	28.5	59.3	136	36.2	02.9	268	33.2	31.9	135	55.3	25.7	
2	354	52.4	256	28.4	59.4	151	37.2	03.5	283	35.3	32.0	150	57.6	25.7	
3	9	54.9	271	28.3	59.4	166	38.2	04.1	298	37.4	32.0	165	59.9	25.8	
4	24	57.4	286	28.2	59.4	181	39.2	04.7	313	39.5	32.0	181	02.2	25.9	
5	39	59.8	301	28.1	+19 59.5	196	40.2	-10 05.3	328	41.6	+21 32.1	196	04.5	-7 26.0	
6	55	02.3	316	28.0	+19 59.5	211	41.2	-10 05.9	343	43.7	+21 32.1	211	06.7	-7 26.1	
7	70	04.8	331	27.9	59.5	226	42.2	06.5	358	45.8	32.2	226	09.0	26.1	
8	85	07.2	346	27.7	59.6	241	43.2	07.2	13	47.8	32.2	241	11.3	26.2	
9	100	09.7	1	27.6	59.6	256	44.2	07.8	28	49.9	32.3	256	13.6	26.3	
10	115	12.2	16	27.5	59.6	271	45.2	08.4	43	52.0	32.3	271	15.9	26.4	
11	130	14.6	31	27.4	+19 59.7	286	46.2	-10 09.0	58	54.1	+21 32.3	286	18.2	-7 26.5	
12	145	17.1	46	27.3	+19 59.7	301	47.2	-10 09.6	73	56.2	+21 32.4	301	20.5	-7 26.5	
13	160	19.6	61	27.2	59.7	316	48.2	10.2	88	58.3	32.4	316	22.7	26.6	
14	175	22.0	76	27.1	59.8	331	49.2	10.8	104	00.4	32.5	331	25.0	26.7	
15	190	24.5	91	27.0	59.8	346	50.2	11.4	119	02.5	32.5	346	27.3	26.8	
16	205	26.9	106	26.9	59.8	1	51.2	12.0	134	04.6	32.6	1	29.6	26.8	
17	220	29.4	121	26.8	+19 59.9	16	52.2	-10 12.6	149	06.6	+21 32.6	16	31.9	-7 26.9	
18	235	31.9	136	26.7	+19 59.9	31	53.2	-10 13.2	164	08.7	+21 32.6	31	34.2	-7 27.0	
19	250	34.3	151	26.6	59.9	46	54.2	13.8	179	10.8	32.7	46	36.4	27.1	
20	265	36.8	166	26.4	+19 59.9	61	55.1	14.4	194	12.9	32.7	61	38.7	27.2	
21	280	39.3	181	26.3	+20 00.0	76	56.1	15.0	209	15.0	32.8	76	41.0	27.2	
22	295	41.7	196	26.2	00.0	91	57.1	15.6	224	17.1	32.8	91	43.3	27.3	
23	310	44.2	211	26.1	00.0	106	58.1	16.2	239	19.2	32.9	106	45.6	27.4	
24	325	46.7	226	26.0	+20 00.0	121	59.1	-10 16.8	254	21.3	+21 32.9	121	47.9	-7 27.5	
Dif	—		-1		0	+10		-6	+21		0	+23		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 0			Edad: 28 ^d 8 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 5 R°: 49 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m										
0	178	58.9	+13	21.2	188	30.7	+11	19.7	60 N	19 46	20 36	21 48	4 20 85	18 57 14										
1	193	59.0		20.4	203	01.2 ¹¹⁵	+11	09.3 ¹⁰⁴	58	38	24	27	26 82	53 16										
2	208	59.1		19.6	217	31.7 ¹¹⁵	+10	58.8 ¹⁰⁵	56	31	14	21 10	32 79	49 19										
3	223	59.3		18.8	232	02.2 ¹¹⁵		48.2 ¹⁰⁶	54	25	20 05	20 56	37 77	46 20										
4	238	59.4		18.0	246	32.7 ¹¹⁵		37.6 ¹⁰⁶	52	19	19 57	44	41 75	43 22										
5	253	59.5	+13	17.2	261	03.2 ¹¹⁵	+10	26.9 ¹⁰⁷	50	19 14	19 49	20 34	4 45 73	18 40 24										
6	268	59.7	+13	16.4	275	33.8 ¹¹⁶	+10	16.2 ¹⁰⁷	45	19 03	19 34	20 13	4 54 69	18 34 28										
7	283	59.8		15.6	290	04.3 ¹¹⁵	+10	05.3 ¹⁰⁹	40	18 54	22	19 57	5 01 66	28 32										
8	298	59.9		14.8	304	34.9 ¹¹⁶	+9	54.5 ¹⁰⁸	35	46	12	44	07 63	24 34										
9	314	00.1		14.0	319	05.4 ¹¹⁵		43.5 ¹¹⁰	30	39	19 04	33	12 61	20 37										
10	329	00.2		13.2	333	36.0 ¹¹⁶		32.6 ¹⁰⁹	20	27	18 50	17	22 56	13 41										
11	344	00.4	+13	12.4	348	06.6 ¹¹⁶	+9	21.5 ¹¹¹	10 N	18 17	18 38	19 04	5 30 52	18 07 45										
12	359	00.5	+13	11.6	2	37.1 ¹¹⁵	+9	10.4 ¹¹¹	0	18 07	18 29	18 53	5 38 48	18 01 48										
13	14	00.6		10.8	17	07.7 ¹¹⁶	+8	59.2 ¹¹²	10 S	17 58	19	44	45 45	17 55 52										
14	29	00.8		10.0	31	38.3 ¹¹⁶		48.0 ¹¹²	20	48	11	37	5 53 42	49 56										
15	44	00.9		09.2	46	08.9 ¹¹⁶		36.8 ¹¹²	30	37	18 01	30	6 02 38	41 61										
16	59	01.0		08.4	60	39.5 ¹¹⁶		25.4 ¹¹⁴	35	31	17 57	26	08 34	37 63										
17	74	01.2	+13	07.6	75	10.1 ¹¹⁶	+8	14.1 ¹¹³	40	17 23	17 51	18 23	6 14 32	17 32 66										
18	89	01.3	+13	06.8	89	40.7 ¹¹⁶	+8	02.6 ¹¹⁵	45	17 15	17 45	18 20	6 21 28	17 27 69										
19	104	01.4		06.0	104	11.3 ¹¹⁶	+7	51.1 ¹¹⁵	50	05	38	16	29 25	20 74										
20	119	01.6		05.2	118	41.9 ¹¹⁶		39.6 ¹¹⁵	52	17 00	35	15	33 23	17 75										
21	134	01.7		04.3	133	12.5 ¹¹⁶		28.0 ¹¹⁶	54	16 55	32	14	37 21	13 78										
22	149	01.9		03.5	147	43.1 ¹¹⁶		16.4 ¹¹⁶	56	49	29	12	42 19	09 81										
23	164	02.0		02.7	162	13.7 ¹¹⁶	+7	04.8 ¹¹⁶	58	43	25	11	47 16	05 83										
24	179	02.1	+13	01.9	176	44.3 ¹¹⁶	+6	53.0 ¹¹⁸	60 S	16 36	17 20	18 09	6 53 13	17 00 86										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 2 ^h 16 ^m 5			Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 15 ^h 51 ^m			Mag: -2.3 PMG: 7 ^h 02 ^m			Mag: +0.8 PMG: 15 ^h 50 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	325	46.7	226	26.0	+20	00.0	121	59.1	-10	16.8	254	21.3	+21	32.9	121	47.9	-7	27.5						
1	340	49.1	241	25.9	+20	00.0	137	00.1		17.4	269	23.4		32.9	136	50.1		27.6						
2	355	51.6	256	25.7	+20	00.1	152	01.1		18.0	284	25.5		33.0	151	52.4		27.6						
3	10	54.1	271	25.6		00.1	167	02.1		18.6	299	27.6		33.0	166	54.7		27.7						
4	25	56.5	286	25.5		00.1	182	03.1		19.2	314	29.7		33.1	181	57.0		27.8						
5	40	59.0	301	25.4	+20	00.1	197	04.1	-10	19.8	329	31.8	+21	33.1	196	59.3	-7	27.9						
6	56	01.4	316	25.3	+20	00.2	212	05.1	-10	20.4	344	33.8	+21	33.2	212	01.6	-7	28.0						
7	71	03.9	331	25.1		00.2	227	06.1		21.0	359	35.9		33.2	227	03.8		28.0						
8	86	06.4	346	25.0		00.2	242	07.1		21.6	14	38.0		33.2	242	06.1		28.1						
9	101	08.8	1	24.9		00.2	257	08.0		22.2	29	40.1		33.3	257	08.4		28.2						
10	116	11.3	16	24.8		00.2	272	09.0		22.8	44	42.2		33.3	272	10.7		28.3						
11	131	13.8	31	24.6	+20	00.2	287	10.0	-10	23.4	59	44.3	+21	33.4	287	13.0	-7	28.4						
12	146	16.2	46	24.5	+20	00.2	302	11.0	-10	24.0	74	46.4	+21	33.4	302	15.2	-7	28.4						
13	161	18.7	61	24.4		00.3	317	12.0		24.6	89	48.5		33.4	317	17.5		28.5						
14	176	21.2	76	24.3		00.3	332	13.0		25.2	104	50.6		33.5	332	19.8		28.6						
15	191	23.6	91	24.1		00.3	347	14.0		25.8	119	52.7		33.5	347	22.1		28.7						
16	206	26.1	106	24.0		00.3	2	15.0		26.4	134	54.8		33.6	2	24.4		28.8						
17	221	28.5	121	23.9	+20	00.3	17	16.0	-10	27.0	149	56.9	+21	33.6	17	26.7	-7	28.8						
18	236	31.0	136	23.8	+20	00.3	32	17.0	-10	27.6	164	59.0	+21	33.7	32	28.9	-7	28.9						
19	251	33.5	151	23.6		00.3	47	17.9		28.2	180	01.1		33.7	47	31.2		29.0						
20	266	35.9	166	23.5		00.3	62	18.9		28.8	195	03.2		33.7	62	33.5		29.1						
21	281	38.4	181	23.4		00.4	77	19.9		29.4	210	05.3		33.8	77	35.8		29.2						
22	296	40.9	196	23.2		00.4	92	20.9		30.0	225	07.4		33.8	92	38.1		29.2						
23	311	43.3	211	23.1		00.4	107	21.9		30.6	240	09.5		33.9	107	40.3		29.3						
24	326	45.8	226	23.0	+20	00.4	122	22.9	-10	31.2	255	11.6	+21	33.9	122	42.6	-7	29.4						
Dif	—			-1			+10			-6			+21			0			+23			-		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15/8 PMG: 12 ^h 03 ^m 7			Edad: 0 ^d 3 PHE { SD: 15/7 PMG: 12 ^h 38 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m										
0	179	02.1	+13	01.9	176	44.3	+6 53.0	60 N	2 21	3 32	4 22	5 45	87	19 11	12												
1	194	02.3		01.1	191	14.9 ¹¹⁶	41.3 ¹¹⁷	58	42	44	30	48	84	09	15												
2	209	02.4	+13	00.3	205	45.5 ¹¹⁶	29.5 ¹¹⁸	56	2 58	3 55	37	51	81	08	17												
3	224	02.6	+12	59.5	220	16.1 ¹¹⁶	17.6 ¹¹⁹	54	3 12	4 04	44	54	79	06	20												
4	239	02.7		58.7	234	46.7 ¹¹⁶	+6 05.8 ¹¹⁸	52	24	12	49	56	77	05	22												
5	254	02.8	+12	57.9	249	17.3 ¹¹⁶	+5 53.8 ¹²⁰	50	3 34	4 19	4 55	5 58	75	19 04	24												
6	269	03.0	+12	57.1	263	47.9 ¹¹⁶	+5 41.9 ¹¹⁹	45	3 55	4 34	5 06	6 03	70	19 02	28												
7	284	03.1		56.3	278	18.5 ¹¹⁶	29.9 ¹²⁰	40	4 11	46	15	07	66	19 00	31												
8	299	03.3		55.4	292	49.1 ¹¹⁶	17.8 ¹²¹	35	24	4 56	22	10	64	18 58	34												
9	314	03.4		54.6	307	19.7 ¹¹⁶	+5 05.8 ¹²⁰	30	35	5 04	29	13	61	57	36												
10	329	03.5		53.8	321	50.3 ¹¹⁶	+4 53.7 ¹²¹	20	4 51	18	41	18	56	54	41												
11	344	03.7	+12	53.0	336	20.9 ¹¹⁶	+4 41.5 ¹²²	10 N	5 04	5 29	5 51	6 22	53	18 52	45												
12	359	03.8	+12	52.2	350	51.5 ¹¹⁶	+4 29.3 ¹²²	0	5 15	5 39	6 00	6 26	49	18 49	49												
13	14	04.0		51.4	5	22.1 ¹¹⁶	17.1 ¹²²	10 S	23	48	10	30	45	47	53												
14	29	04.1		50.6	19	52.6 ¹¹⁵	+4 04.9 ¹²²	20	31	5 57	19	35	41	45	57												
15	44	04.2		49.7	34	23.2 ¹¹⁶	+3 52.6 ¹²³	30	38	6 06	30	40	36	42	61												
16	59	04.4		48.9	48	53.7 ¹¹⁵	40.3 ¹²³	35	41	11	37	42	35	40	65												
17	74	04.5	+12	48.1	63	24.3 ¹¹⁶	+3 28.0 ¹²³	40	5 44	6 16	6 44	6 46	31	18 38	68												
18	89	04.7	+12	47.3	77	54.8 ¹¹⁵	+3 15.6 ¹²⁴	45	5 47	6 22	6 52	6 49	28	18 36	71												
19	104	04.8		46.5	92	25.3 ¹¹⁵	+3 03.3 ¹²³	50	51	28	7 02	54	24	34	75												
20	119	05.0		45.7	106	55.9 ¹¹⁶	+2 50.9 ¹²⁴	52	52	31	06	56	22	32	77												
21	134	05.1		44.9	121	26.4 ¹¹⁵	38.5 ¹²⁴	54	53	35	11	6 58	20	31	79												
22	149	05.2		44.0	135	56.8 ¹¹⁴	26.0 ¹²⁵	56	55	38	17	7 01	17	30	81												
23	164	05.4		43.2	150	27.3 ¹¹⁵	13.5 ¹²⁵	58	56	42	23	03	16	28	84												
24	179	05.5	+12	42.4	164	57.8 ¹¹⁵	+2 01.1 ¹²⁴	60 S	5 57	6 46	7 30	7 06	13	18 26	87												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 2 ^h 12 ^m 6			Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: +1.1 PMG: 15 ^h 49 ^m			Mag: -2.3 PMG: 6 ^h 58 ^m			Mag: +0.8 PMG: 15 ^h 47 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	326	45.8	226	23.0	+20	00.4	122	22.9	-10	31.2	255	11.6	+21	33.9	122	42.6											
1	341	48.3	241	22.8		00.4	137	23.9		31.8	270	13.7		33.9	137	44.9											
2	356	50.7	256	22.7		00.4	152	24.8		32.4	285	15.8		34.0	152	47.2											
3	11	53.2	271	22.5		00.4	167	25.8		33.0	300	17.9		34.0	167	49.5											
4	26	55.7	286	22.4		00.4	182	26.8		33.6	315	20.0		34.1	182	51.7											
5	41	58.1	301	22.3	+20	00.4	197	27.8	-10	34.2	330	22.1	+21	34.1	197	54.0											
6	57	00.6	316	22.1	+20	00.4	212	28.8	-10	34.8	345	24.2	+21	34.2	212	56.3											
7	72	03.0	331	22.0		00.4	227	29.8		35.4	0	26.3		34.2	227	58.6											
8	87	05.5	346	21.8		00.4	242	30.8		36.0	15	28.4		34.2	243	00.9											
9	102	08.0	1	21.7		00.4	257	31.7		36.6	30	30.5		34.3	258	03.1											
10	117	10.4	16	21.6		00.4	272	32.7		37.2	45	32.6		34.3	273	05.4											
11	132	12.9	31	21.4	+20	00.4	287	33.7	-10	37.8	60	34.7	+21	34.4	288	07.7											
12	147	15.4	46	21.3	+20	00.4	302	34.7	-10	38.4	75	36.8	+21	34.4	303	10.0											
13	162	17.8	61	21.1		00.4	317	35.7		39.0	90	38.9		34.4	318	12.3											
14	177	20.3	76	21.0		00.4	332	36.7		39.6	105	41.0		34.5	333	14.5											
15	192	22.8	91	20.8		00.4	347	37.6		40.2	120	43.1		34.5	348	16.8											
16	207	25.2	106	20.7		00.4	2	38.6		40.8	135	45.2		34.6	3	19.1											
17	222	27.7	121	20.5	+20	00.4	17	39.6	-10	41.4	150	47.3	+21	34.6	18	21.4											
18	237	30.1	136	20.4	+20	00.4	32	40.6	-10	42.0	165	49.4	+21	34.6	33	23.6											
19	252	32.6	151	20.2		00.4	47	41.6		42.6	180	51.5		34.7	48	25.9											
20	267	35.1	166	20.1		00.4	62	42.5		43.2	195	53.6		34.7	63	28.2											
21	282	37.5	181	19.9		00.3	77	43.5		43.8	210	55.7		34.8	78	30.5											
22	297	40.0	196	19.8		00.3	92	44.5		44.4	225	57.8		34.8	93	32.8											
23	312	42.5	211	19.6		00.3	107	45.5		45.0	240	59.9		34.8	108	35.0											
24	327	44.9	226	19.5	+20	00.3	122	46.5	-10	45.6	256	02.0	+21	34.9	123	37.3											
Dif	—			-1			0			+10			-6			+21			0			+23			-8		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 5			Edad: 1 ^d 3 SD: 15 ^h 8 PMG: 13 ^h 27 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	05.5	+12 42.4	164	57.8	+2 01.1		60 N	19 41	20 30	21 39	7 12 88	19 23 14			
1	194	05.7		179	28.3 ¹¹⁵	+1 48.6 ¹²⁵		58	33	18	19	12 85	24 16			
2	209	05.8		193	58.7 ¹¹⁴	36.0 ¹²⁶		56	26	08	21 03	12 83	25 19			
3	224	06.0		208	29.1 ¹¹⁴	23.5 ¹²⁵		54	20	20 00	20 50	13 80	26 22			
4	239	06.1		222	59.5 ¹¹⁴	+1 11.0 ¹²⁵		52	15	19 52	39	13 78	27 23			
5	254	06.3	+12 38.3	237	29.9 ¹¹⁴	+0 58.4 ¹²⁶		50	19 10	19 45	20 29	7 13 76	19 28 25			
6	269	06.4	+12 37.5	252	00.3 ¹¹⁴	+0 45.8 ¹²⁶		45	18 59	19 31	20 09	7 13 72	19 30 29			
7	284	06.5		266	30.7 ¹¹⁴	33.2 ¹²⁶		40	51	19	19 54	13 68	31 32			
8	299	06.7		281	01.0 ¹¹³	20.6 ¹²⁶		35	43	10	41	14 65	32 36			
9	314	06.8		295	31.3 ¹¹³	+0 08.0 ¹²⁶		30	37	19 02	31	14 62	33 38			
10	329	07.0		310	01.7 ¹¹⁴	-0 04.6 ¹²⁶		20	26	18 48	15	14 58	35 43			
11	344	07.1	+12 33.4	324	31.9 ¹¹²	-0 17.2 ¹²⁶		10 N	18 16	18 37	19 03	7 15 53	19 37 46			
12	359	07.3	+12 32.6	339	02.2 ¹¹³	-0 29.8 ¹²⁶		0	18 07	18 28	18 53	7 15 50	19 38 51			
13	14	07.4		353	32.5 ¹¹³	42.5 ¹²⁷		10 S	17 58	19	44	15 46	40 54			
14	29	07.6		8	02.7 ¹¹²	-0 55.1 ¹²⁶		20	49	11	37	16 42	42 58			
15	44	07.7		22	32.9 ¹¹²	-1 07.7 ¹²⁶		30	38	18 03	31	16 37	43 63			
16	59	07.9		37	03.1 ¹¹²	20.4 ¹²⁷		35	32	17 58	28	17 34	45 65			
17	74	08.0	+12 28.5	51	33.2 ¹¹¹	-1 33.0 ¹²⁶		40	17 25	17 53	18 25	7 17 32	19 46 68			
18	89	08.2	+12 27.6	66	03.4 ¹¹²	-1 45.6 ¹²⁶		45	17 17	17 47	18 22	7 17 29	19 47 72			
19	104	08.3		80	33.5 ¹¹¹	-1 58.3 ¹²⁷		50	08	41	19	18 24	49 76			
20	119	08.4		95	03.6 ¹¹¹	-2 10.9 ¹²⁶		52	17 03	38	18	18 22	49 79			
21	134	08.6		109	33.6 ¹¹⁰	23.5 ¹²⁶		54	16 59	35	17	18 21	50 81			
22	149	08.7		124	03.7 ¹¹¹	36.1 ¹²⁶		56	53	32	16	18 19	51 83			
23	164	08.9		138	33.7 ¹¹⁰	-2 48.7 ¹²⁶		58	47	29	15	19 15	52 86			
24	179	09.0	+12 22.7	153	03.6 ¹⁰⁹	-3 01.3 ¹²⁶		60 S	16 41	17 25	18 13	7 19 13	19 53 89			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 08 ^m 7		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.2 PMG: 15 ^h 48 ^m		Mag: -2.3 PMG: 6 ^h 55 ^m		Mag: +0.8 PMG: 15 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	327	44.9	226	19.5	+20 00.3	122 46.5	-10 45.6	256 02.0	+21 34.9	123 37.3
1	342	47.4	241	19.3	00.3	137 47.4	46.2	271 04.1	34.9	138 39.6
2	357	49.9	256	19.2	00.3	152 48.4	46.8	286 06.2	35.0	153 41.9
3	12	52.3	271	19.0	00.3	167 49.4	47.4	301 08.3	35.0	168 44.1
4	27	54.8	286	18.9	00.3	182 50.4	48.0	316 10.4	35.0	183 46.4
5	42	57.3	301	18.7	+20 00.3	197 51.4	-10 48.6	331 12.5	+21 35.1	198 48.7
6	57	59.7	316	18.6	+20 00.2	212 52.3	-10 49.2	346 14.6	+21 35.1	213 51.0
7	73	02.2	331	18.4	00.2	227 53.3	49.8	1 16.7	35.2	228 53.3
8	88	04.6	346	18.2	00.2	242 54.3	50.4	16 18.8	35.2	243 55.5
9	103	07.1	1 18.1	00.2	257 55.3	50.9	31 20.9	35.2	258 57.8	258 57.8
10	118	09.6	16 17.9	00.2	272 56.2	51.5	46 23.1	35.3	274 00.1	274 00.1
11	133	12.0	31 17.8	+20 00.2	287 57.2	-10 52.1	61 25.2	+21 35.3	289 02.4	-7 32.2
12	148	14.5	46 17.6	+20 00.1	302 58.2	-10 52.7	76 27.3	+21 35.4	304 04.6	-7 32.3
13	163	17.0	61 17.4	00.1	317 59.2	53.3	91 29.4	35.4	319 06.9	32.4
14	178	19.4	76 17.3	00.1	333 00.2	53.9	106 31.5	35.4	334 09.2	32.5
15	193	21.9	91 17.1	00.1	348 01.1	54.5	121 33.6	35.5	349 11.5	32.6
16	208	24.4	106 16.9	+20 00.1	3 02.1	55.1	136 35.7	35.5	4 13.7	32.6
17	223	26.8	121 16.8	+20 00.0	18 03.1	-10 55.7	151 37.8	+21 35.6	19 16.0	-7 32.7
18	238	29.3	136 16.6	+20 00.0	33 04.1	-10 56.3	166 39.9	+21 35.6	34 18.3	-7 32.8
19	253	31.8	151 16.4	00.0	48 05.0	56.9	181 42.0	35.6	49 20.6	32.9
20	268	34.2	166 16.3	+20 00.0	63 06.0	57.5	196 44.1	35.7	64 22.8	33.0
21	283	36.7	181 16.1	+19 59.9	78 07.0	58.1	211 46.2	35.7	79 25.1	33.0
22	298	39.1	196 15.9	59.9	93 07.9	58.7	226 48.4	35.8	94 27.4	33.1
23	313	41.6	211 15.8	59.9	108 08.9	59.3	241 50.5	35.8	109 29.7	33.2
24	328	44.1	226 15.6	+19 59.9	123 09.9	-10 59.9	256 52.6	+21 35.8	124 31.9	-7 33.3
Dif	—	—	-2	0	+10	-6	+21	0	+23	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 3			Edad: 2 ^d 3 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9 PMG: 14 ^h 17 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	09.0	+12 22.7	153	03.6	-3 01.3	60 N	2 29	3 38	4 27		8 40	90	19 37	15
1	194	09.2		167	33.6 ¹¹⁰	13.9 ¹²⁶	58	2 48	49	35		37	87	40	19
2	209	09.3		182	03.5 ¹⁰⁹	26.5 ¹²⁶	56	3 04	3 59	41		35	83	44	21
3	224	09.5		196	33.4 ¹⁰⁹	39.1 ¹²⁶	54	17	4 08	47		33	81	47	24
4	239	09.6		211	03.3 ¹⁰⁹	-3 51.6 ¹²⁵	52	28	16	53		31	78	50	26
5	254	09.8	+12 18.6	225	33.1 ¹⁰⁸	-4 04.2 ¹²⁶	50	3 38	4 22	4 58		8 29	77	19 53	27
6	269	09.9	+12 17.7	240	02.9 ¹⁰⁸	-4 16.7 ¹²⁵	45	3 58	4 37	5 08		8 25	72	19 59	31
7	284	10.1		254	32.7 ¹⁰⁸	29.2 ¹²⁵	40	4 14	48	17		21	69	20 03	35
8	299	10.2		269	02.4 ¹⁰⁷	41.6 ¹²⁴	35	26	4 57	24		19	66	08	37
9	314	10.4		283	32.1 ¹⁰⁷	-4 54.1 ¹²⁵	30	36	5 06	30		16	63	11	40
10	329	10.5		298	01.7 ¹⁰⁶	-5 06.5 ¹²⁴	20	4 52	19	41		12	58	18	44
11	344	10.7	+12 13.6	312	31.4 ¹⁰⁷	-5 19.0 ¹²⁵	10 N	5 04	5 30	5 51		8 08	55	20 23	49
12	359	10.8	+12 12.8	327	01.0 ¹⁰⁶	-5 31.4 ¹²⁴	0	5 14	5 39	6 00		8 05	51	20 29	52
13	14	11.0		341	30.5 ¹⁰⁵	43.7 ¹²³	10 S	22	47	09		8 01	47	34	55
14	29	11.1		356	00.0 ¹⁰⁵	-5 56.1 ¹²⁴	20	30	5 55	18		7 58	43	40	59
15	44	11.3		10	29.5 ¹⁰⁵	-6 08.4 ¹²³	30	36	6 04	28		53	39	46	64
16	59	11.5		24	59.0 ¹⁰⁵	20.6 ¹²²	35	39	08	34		51	36	50	66
17	74	11.6	+12 08.6	39	28.4 ¹⁰⁴	-6 32.9 ¹²³	40	5 42	6 13	6 41		7 49	33	20 54	70
18	89	11.8	+12 07.8	53	57.7 ¹⁰³	-6 45.1 ¹²²	45	5 44	6 19	6 49		7 46	30	20 59	73
19	104	11.9		68	27.1 ¹⁰⁴	-6 57.3 ¹²²	50	47	25	6 58		42	26	21 05	77
20	119	12.1		82	56.3 ¹⁰²	-7 09.5 ¹²²	52	48	27	7 02		40	24	08	79
21	134	12.2		97	25.6 ¹⁰³	21.6 ¹²¹	54	49	30	07		39	22	11	81
22	149	12.4		111	54.8 ¹⁰²	33.6 ¹²⁰	56	50	34	12		37	19	14	84
23	164	12.5		126	23.9 ¹⁰¹	45.7 ¹²¹	58	51	37	18		34	18	18	86
24	179	12.7	+12 02.8	140	53.1 ¹⁰²	-7 57.7 ¹²⁰	60 S	5 52	6 41	7 25		7 32	14	21 22	90
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 2 ^h 04 ^m 7			Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: +1.2 PMG: 15 ^h 46 ^m			Mag: -2.3 PMG: 6 ^h 52 ^m			Mag: +0.8 PMG: 15 ^h 39 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	328	44.1	226	15.6	+19 59.9	123	09.9	-10 59.9	256	52.6	+21 35.8	124	31.9	-7 33.3	
1	343	46.5	241	15.4	59.8	138	10.9	-11 00.5	271	54.7	35.9	139	34.2	33.4	
2	358	49.0	256	15.3	59.8	153	11.8	01.1	286	56.8	35.9	154	36.5	33.5	
3	13	51.5	271	15.1	59.8	168	12.8	01.7	301	58.9	36.0	169	38.8	33.5	
4	28	53.9	286	14.9	59.7	183	13.8	02.3	317	01.0	36.0	184	41.0	33.6	
5	43	56.4	301	14.7	+19 59.7	198	14.8	-11 02.9	332	03.1	+21 36.0	199	43.3	-7 33.7	
6	58	58.9	316	14.6	+19 59.7	213	15.7	-11 03.5	347	05.2	+21 36.1	214	45.6	-7 33.8	
7	74	01.3	331	14.4	59.6	228	16.7	04.1	2	07.3	36.1	229	47.9	33.9	
8	89	03.8	346	14.2	59.6	243	17.7	04.7	17	09.5	36.2	244	50.1	33.9	
9	104	06.2	1	14.0	59.6	258	18.6	05.3	32	11.6	36.2	259	52.4	34.0	
10	119	08.7	16	13.9	59.5	273	19.6	05.9	47	13.7	36.2	274	54.7	34.1	
11	134	11.2	31	13.7	+19 59.5	288	20.6	-11 06.5	62	15.8	+21 36.3	289	57.0	-7 34.2	
12	149	13.6	46	13.5	+19 59.5	303	21.5	-11 07.1	77	17.9	+21 36.3	304	59.2	-7 34.3	
13	164	16.1	61	13.3	59.4	318	22.5	07.7	92	20.0	36.3	320	01.5	34.4	
14	179	18.6	76	13.1	59.4	333	23.5	08.3	107	22.1	36.4	335	03.8	34.4	
15	194	21.0	91	13.0	59.4	348	24.5	08.9	122	24.3	36.4	350	06.0	34.5	
16	209	23.5	106	12.8	59.3	3	25.4	09.5	137	26.4	36.5	5	08.3	34.6	
17	224	26.0	121	12.6	+19 59.3	18	26.4	-11 10.1	152	28.5	+21 36.5	20	10.6	-7 34.7	
18	239	28.4	136	12.4	+19 59.2	33	27.4	-11 10.7	167	30.6	+21 36.5	35	12.9	-7 34.8	
19	254	30.9	151	12.2	59.2	48	28.3	11.2	182	32.7	36.6	50	15.1	34.9	
20	269	33.4	166	12.0	59.1	63	29.3	11.8	197	34.8	36.6	65	17.4	34.9	
21	284	35.8	181	11.9	59.1	78	30.3	12.4	212	36.9	36.7	80	19.7	35.0	
22	299	38.3	196	11.7	59.1	93	31.2	13.0	227	39.1	36.7	95	22.0	35.1	
23	314	40.7	211	11.5	59.0	108	32.2	13.6	242	41.2	36.7	110	24.2	35.2	
24	329	43.2	226	11.3	+19 59.0	123	33.2	-11 14.2	257	43.3	+21 36.8	125	26.5	-7 35.3	
Dif	—			-2 0			+10 -6			+21 0			+23 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			Edad: 3 ^d 3	PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'1									
	PMG: 12 ^h 03 ^m 0					SD: 16'1			PMG: 15 ^h 08 ^m		R°: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	12.7	+12 02.8	140	53.1	-7 57.7		60 N	19 35	20 23	21 30	10 10 90	19 52 20	
1	194	12.8		155	22.1 ¹⁰⁰	-8 09.6 ¹¹⁹		58	28	12	21 12	10 04 86	19 59 23	
2	209	13.0		169	51.2 ¹⁰¹	21.6 ¹²⁰		56	21	20 03	20 57	9 58 84	20 05 26	
3	224	13.1	+12 00.3	184	20.2 ¹⁰⁰	33.4 ¹¹⁸		54	16	19 55	44	54 81	11 27	
4	239	13.3	+11 59.4	198	49.1 ⁹⁹	45.3 ¹¹⁹		52	11	47	34	49 80	16 29	
5	254	13.5	+11 58.6	213	18.0 ⁹⁹	-8 57.0 ¹¹⁷		50	19 06	19 41	20 24	9 46 77	20 20 32	
6	269	13.6	+11 57.8	227	46.8 ⁹⁸	-9 08.8 ¹¹⁸		45	18 56	19 27	20 05	9 37 73	20 30 35	
7	284	13.8		242	15.6 ⁹⁸	20.5 ¹¹⁷		40	48	16	19 50	30 70	38 39	
8	299	13.9		256	44.4 ⁹⁸	32.1 ¹¹⁶		35	41	19 07	39	25 66	45 41	
9	314	14.1		271	13.1 ⁹⁷	43.7 ¹¹⁶		30	35	18 59	29	19 65	20 51 44	
10	329	14.2		285	41.8 ⁹⁷	-9 55.2 ¹¹⁵		20	24	47	13	10 61	21 02 48	
11	344	14.4	+11 53.6	300	10.4 ⁹⁶	-10 06.7 ¹¹⁵		10 N	18 15	18 36	19 01	9 03 56	21 12 51	
12	359	14.5	+11 52.8	314	38.9 ⁹⁵	-10 18.1 ¹¹⁴		0	18 06	18 27	18 52	8 56 53	21 21 54	
13	14	14.7		329	07.5 ⁹⁶	29.5 ¹¹⁴		10 S	17 58	19	44	48 50	29 58	
14	29	14.9		343	35.9 ⁹⁴	40.8 ¹¹³		20	49	12	37	41 46	39 61	
15	44	15.0		358	04.3 ⁹⁴	-10 52.1 ¹¹³		30	39	18 04	32	32 42	50 65	
16	59	15.2		12	32.7 ⁹⁴	-11 03.2 ¹¹¹		35	34	17 59	29	27 40	21 56 67	
17	74	15.3	+11 48.6	27	01.0 ⁹³	-11 14.4 ¹¹²		40	17 27	17 55	18 26	8 22 37	22 04 69	
18	89	15.5	+11 47.7	41	29.3 ⁹³	-11 25.4 ¹¹⁰		45	17 20	17 50	18 24	8 16 33	22 12 73	
19	104	15.6		55	57.5 ⁹²	36.4 ¹¹⁰		50	11	44	22	08 29	22 77	
20	119	15.8		70	25.6 ⁹¹	47.4 ¹¹⁰		52	07	41	21	04 28	27 79	
21	134	16.0		84	53.7 ⁹¹	-11 58.2 ¹⁰⁸		54	17 02	39	20	8 01 25	32 81	
22	149	16.1		99	21.8 ⁹¹	-12 09.1 ¹⁰⁹		56	16 57	36	19	7 56 24	38 83	
23	164	16.3		43.5	113 49.8 ⁹⁰	19.8 ¹⁰⁷		58	52	32	18	52 20	44 87	
24	179	16.4	+11 42.7	128	17.7 ⁸⁹	-12 30.4 ¹⁰⁶		60 S	16 45	17 29	18 17	7 46 18	22 52 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 00 ^m 8		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.2 PMG: 15 ^h 45 ^m		Mag: -2.3 PMG: 6 ^h 48 ^m		Mag: +0.8 PMG: 15 ^h 36 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	329	43.2	226	11.3	+19 59.0	123	33.2	-11 14.2	257	43.3	+21 36.8
1	344	45.7	241	11.1	58.9	138	34.1	14.8	272	45.4	36.8
2	359	48.1	256	10.9	58.9	153	35.1	15.4	287	47.5	36.8
3	14	50.6	271	10.7	58.8	168	36.1	16.0	302	49.6	36.9
4	29	53.1	286	10.6	58.8	183	37.0	16.6	317	51.8	36.9
5	44	55.5	301	10.4	+19 58.7	198	38.0	-11 17.2	332	53.9	+21 37.0
6	59	58.0	316	10.2	+19 58.7	213	39.0	-11 17.8	347	56.0	+21 37.0
7	75	00.5	331	10.0	58.6	228	39.9	18.4	2	58.1	37.0
8	90	02.9	346	09.8	58.6	243	40.9	19.0	18	00.2	37.1
9	105	05.4	1	09.6	58.5	258	41.8	19.6	33	02.3	37.1
10	120	07.8	16	09.4	58.5	273	42.8	20.2	48	04.5	37.1
11	135	10.3	31	09.2	+19 58.4	288	43.8	-11 20.8	63	06.6	+21 37.2
12	150	12.8	46	09.0	+19 58.4	303	44.7	-11 21.4	78	08.7	+21 37.2
13	165	15.2	61	08.8	58.3	318	45.7	22.0	93	10.8	37.3
14	180	17.7	76	08.6	58.3	333	46.7	22.6	108	12.9	37.3
15	195	20.2	91	08.4	58.2	348	47.6	23.2	123	15.1	37.3
16	210	22.6	106	08.2	58.1	3	48.6	23.7	138	17.2	37.4
17	225	25.1	121	08.0	+19 58.1	18	49.5	-11 24.3	153	19.3	+21 37.4
18	240	27.6	136	07.8	+19 58.0	33	50.5	-11 24.9	168	21.4	+21 37.4
19	255	30.0	151	07.6	58.0	48	51.5	25.5	183	23.5	37.5
20	270	32.5	166	07.4	57.9	63	52.4	26.1	198	25.7	37.5
21	285	35.0	181	07.2	57.9	78	53.4	26.7	213	27.8	37.6
22	300	37.4	196	07.0	57.8	93	54.3	27.3	228	29.9	37.6
23	315	39.9	211	06.8	57.7	108	55.3	27.9	243	32.0	37.6
24	330	42.3	226	06.6	+19 57.7	123	56.3	-11 28.5	258	34.2	+21 37.7
Dif	—		-2 -1		+10 -6		+21 0		+23 -1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15/8 PMG: 12 ^h 02 ^m 8			Edad: 4 ^d 3 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3 R°: 55 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m				
0	179	16.4	+11	42.7	128	17.7	-12	30.4	60 N	2	37	3	44	4	32	11	40	88	20	12	27	
1	194	16.6		41.8	142	45.6	89	41.0	58	2	55	3	54	39		30	86		22	30		
2	209	16.8		41.0	157	13.5	89	-12	51.6	56	3	10	4	04	45	22	83		31	32		
3	224	16.9		40.2	171	41.3	88	-13	02.0	54	22	12	51	15	80				38	35		
4	239	17.1		39.3	186	09.0	87	12.4	52	33	19	4	56	09	78				45	37		
5	254	17.2	+11	38.5	200	36.7	87	-13	22.7	50	3	42	4	26	5	01	11	03	76	20	52	38
6	269	17.4	+11	37.6	215	04.3	86	-13	32.9	45	4	01	4	39	5	10	10	50	73	21	05	42
7	284	17.6		36.8	229	31.9	86	43.0	40	16	50	19		40	70				17	44		
8	299	17.7		35.9	243	59.4	85	-13	53.1	35	28	4	59	25	31	67			26	47		
9	314	17.9		35.1	258	26.8	84	-14	03.0	30	37	5	07	32	24	65			35	48		
10	329	18.0		34.2	272	54.2	84	12.9	20	4	53	19	42	10	11	61	21	50	51			
11	344	18.2	+11	33.4	287	21.6	84	-14	22.7	10 N	5	04	5	30	5	51	9	59	58	22	03	53
12	359	18.4	+11	32.6	301	48.9	83	-14	32.4	0	5	14	5	38	5	59	9	49	55	22	15	56
13	14	18.5		31.7	316	16.1	82	42.1	10 S	22	22	46	6	08	38	52			27	59		
14	29	18.7		30.9	330	43.3	82	-14	51.6	20	28	5	54	16	27	49			40	61		
15	44	18.8		30.0	345	10.4	81	-15	01.1	30	34	6	02	26	14	46			22	55	64	
16	59	19.0		29.2	359	37.5	81	10.4	35	36		06	32	9	07	43	23	03	67			
17	74	19.2	+11	28.3	14	04.5	80	-15	19.7	40	5	39	6	10	6	38	8	59	41	23	13	69
18	89	19.3	+11	27.5	28	31.5	80	-15	28.9	45	5	41	6	15	6	45	8	49	38	23	25	71
19	104	19.5		26.6	42	58.4	79	38.0	50	43	21	54		37	35		39	75				
20	119	19.7		25.8	57	25.2	78	47.0	52	44	23	6	58	32	33		46	76				
21	134	19.8		24.9	71	52.0	78	-15	55.9	54	45	26	7	03	26	31	23	53	78			
22	149	20.0		24.1	86	18.8	78	-16	04.6	56	46	29	07	20	28		***	***	***			
23	164	20.1		23.2	100	45.4	76	13.3	58	47	32	13		12	26		***	***	***			
24	179	20.3	+11	22.4	115	12.1	77	-16	21.9	60 S	5	47	6	36	7	19	8	04	23	***	***	***
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 1 ^h 56 ^m 9			Mag: -4.4 PMG: 8 ^h 56 ^m			Mag: +1.2 PMG: 15 ^h 43 ^m			Mag: -2.3 PMG: 6 ^h 45 ^m			Mag: +0.8 PMG: 15 ^h 32 ^m									
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	330	42.3		226	06.6	+19	57.7	123	56.3	-11	28.5	258	34.2	+21	37.7	126	21.0	-7	37.3			
1	345	44.8		241	06.4		57.6	138	57.2		29.1	273	36.3		37.7	141	23.3		37.4			
2	0	47.3		256	06.2		57.5	153	58.2		29.7	288	38.4		37.7	156	25.5		37.4			
3	15	49.7		271	06.0		57.5	168	59.1		30.3	303	40.5		37.8	171	27.8		37.5			
4	30	52.2		286	05.8		57.4	184	00.1		30.9	318	42.6		37.8	186	30.1		37.6			
5	45	54.7		301	05.6	+19	57.3	199	01.1	-11	31.5	333	44.8	+21	37.9	201	32.3	-7	37.7			
6	60	57.1		316	05.4	+19	57.3	214	02.0	-11	32.1	348	46.9	+21	37.9	216	34.6	-7	37.8			
7	75	59.6		331	05.2		57.2	229	03.0		32.7	3	49.0		37.9	231	36.9		37.9			
8	91	02.1		346	05.0		57.1	244	03.9		33.3	18	51.1		38.0	246	39.1		37.9			
9	106	04.5		1	04.8		57.1	259	04.9		33.8	33	53.3		38.0	261	41.4		38.0			
10	121	07.0		16	04.6		57.0	274	05.8		34.4	48	55.4		38.0	276	43.7		38.1			
11	136	09.5		31	04.4	+19	56.9	289	06.8	-11	35.0	63	57.5	+21	38.1	291	45.9	-7	38.2			
12	151	11.9		46	04.2	+19	56.8	304	07.8	-11	35.6	78	59.6	+21	38.1	306	48.2	-7	38.3			
13	166	14.4		61	03.9		56.8	319	08.7		36.2	94	01.8		38.2	321	50.5		38.4			
14	181	16.8		76	03.7		56.7	334	09.7		36.8	109	03.9		38.2	336	52.8		38.4			
15	196	19.3		91	03.5		56.6	349	10.6		37.4	124	06.0		38.2	351	55.0		38.5			
16	211	21.8		106	03.3		56.6	4	11.6		38.0	139	08.1		38.3	6	57.3		38.6			
17	226	24.2		121	03.1	+19	56.5	19	12.5	-11	38.6	154	10.3	+21	38.3	21	59.6	-7	38.7			
18	241	26.7		136	02.9	+19	56.4	34	13.5	-11	39.2	169	12.4	+21	38.3	37	01.8	-7	38.8			
19	256	29.2		151	02.7		56.3	49	14.4		39.8	184	14.5		38.4	52	04.1		38.9			
20	271	31.6		166	02.5		56.2	64	15.4		40.4	199	16.7		38.4	67	06.4		39.0			
21	286	34.1		181	02.2		56.2	79	16.3		41.0	214	18.8		38.4	82	08.6		39.0			
22	301	36.6		196	02.0		56.1	94	17.3		41.6	229	20.9		38.5	97	10.9		39.1			
23	316	39.0		211	01.8		56.0	109	18.2		42.2	244	23.0		38.5	112	13.2		39.2			
24	331	41.5		226	01.6	+19	55.9	124	19.2	-11	42.7	259	25.2	+21	38.6	127	15.4	-7	39.3			
Dif	—			-2 -1			+10 -6			+21 0			+23 -1									

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 5				Edad: 5 ^d 3 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 58 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	m
0	179	20.3	+11	22.4	115	12.1	-16	21.9	60 N	19 29	20 17	21 21	13 08	82	20 39	38				
1	194	20.5		21.5	129	38.6	75	30.4	58	22	20 06	21 04	12 56	79	20 52	40				
2	209	20.6		20.7	144	05.2	76	38.8	56	16	19 57	20 50	45	77	21 03	42				
3	224	20.8		19.8	158	31.6	74	47.1	54	11	50	39	35	75	13	44				
4	239	21.0		19.0	172	58.1	75	-16 55.3	52	06	43	28	27	73	22	45				
5	254	21.1	+11	18.1	187	24.4	73	-17 03.4	50	19 02	19 37	20 19	12 19	72	21 30	46				
6	269	21.3	+11	17.3	201	50.7	73	-17 11.4	45	18 53	19 24	20 01	12 03	69	21 47	49				
7	284	21.5		16.4	216	17.0	73	19.3	40	45	13	19 47	11 50	67	22 01	50				
8	299	21.6		15.6	230	43.2	72	27.0	35	38	19 04	36	38	66	13	52				
9	314	21.8		14.7	245	09.3	71	34.7	30	32	18 57	26	29	64	23	53				
10	329	22.0		13.9	259	35.4	71	42.2	20	22	45	12	11 12	62	41	55				
11	344	22.1	+11	13.0	274	01.5	71	-17 49.6	10 N	18 14	18 35	19 00	10 57	60	22 56	57				
12	359	22.3	+11	12.2	288	27.5	70	-17 57.0	0	18 06	18 27	18 51	10 44	57	23 11	58				
13	14	22.4		11.3	302	53.4	69	-18 04.2	10 S	17 58	19	44	30	56	26	59				
14	29	22.6		10.5	317	19.3	69	11.2	20	50	12	38	16	53	41	62				
15	44	22.8		09.6	331	45.2	69	18.2	30	40	05	33	10 00	51	23 59	64				
16	59	22.9		08.8	346	11.0	68	25.1	35	35	18 01	30	9 50	50	***	***	***			
17	74	23.1	+11	07.9	0	36.7	67	-18 31.8	40	17 29	17 57	18 28	9 40	47	***	***	***			
18	89	23.3	+11	07.1	15	02.5	68	-18 38.4	45	17 22	17 52	18 26	9 27	45	***	***	***			
19	104	23.4		06.2	29	28.1	66	44.9	50	14	47	24	12	42	***	***	***			
20	119	23.6		05.4	43	53.7	66	51.3	52	10	44	24	9 05	41	***	***	***			
21	134	23.8		04.5	58	19.3	66	-18 57.6	54	06	42	23	8 57	39	***	***	***			
22	149	24.0		03.6	72	44.8	65	-19 03.7	56	17 01	39	23	48	38	0 01	80				
23	164	24.1		02.8	87	10.3	65	09.7	58	16 56	36	22	38	35	11	82				
24	179	24.3	+11	01.9	101	35.7	64	-19 15.6	60 S	16 50	17 33	18 22	8 27	32	0 21	86				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 52 ^m 9		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.2 PMG: 15 ^h 42 ^m		Mag: -2.3 PMG: 6 ^h 41 ^m		Mag: +0.8 PMG: 15 ^h 29 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	331	41.5	226	01.6	+19	55.9	124	19.2	-11	42.7
1	346	43.9	241	01.4		55.8	139	20.2		43.3
2	1	46.4	256	01.2		55.8	154	21.1		43.9
3	16	48.9	271	00.9		55.7	169	22.1		44.5
4	31	51.3	286	00.7		55.6	184	23.0		45.1
5	46	53.8	301	00.5	+19	55.5	199	24.0	-11	45.7
6	61	56.3	316	00.3	+19	55.4	214	24.9	-11	46.3
7	76	58.7	331	00.1		55.3	229	25.9		46.9
8	92	01.2	345	59.8		55.2	244	26.8		47.5
9	107	03.7	0	59.6		55.2	259	27.8		48.1
10	122	06.1	15	59.4		55.1	274	28.7		48.7
11	137	08.6	30	59.2	+19	55.0	289	29.7	-11	49.3
12	152	11.1	45	58.9	+19	54.9	304	30.6	-11	49.8
13	167	13.5	60	58.7		54.8	319	31.6		50.4
14	182	16.0	75	58.5		54.7	334	32.5		51.0
15	197	18.4	90	58.3		54.6	349	33.5		51.6
16	212	20.9	105	58.0		54.5	4	34.4		52.2
17	227	23.4	120	57.8	+19	54.4	19	35.4	-11	52.8
18	242	25.8	135	57.6	+19	54.3	34	36.3	-11	53.4
19	257	28.3	150	57.4		54.2	49	37.2		54.0
20	272	30.8	165	57.1		54.1	64	38.2		54.6
21	287	33.2	180	56.9		54.0	79	39.1		55.2
22	302	35.7	195	56.7		53.9	94	40.1		55.8
23	317	38.2	210	56.4		53.8	109	41.0		56.3
24	332	40.6	225	56.2	+19	53.7	124	42.0	-11	56.9
Dif	—		-2		-1		+9		-6	
							+21		0	
									+23	
									-1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 02 ^m 2				Edad: 6 ^d 3 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 Rº: 59 ^m SD: 16/2 PMG: 17 ^h 55 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	24.3	+11	01.9	101	35.7	-19	15.6	60 N	2	44	3	49	4	37	14	30
1	194	24.5		01.1	116	01.1	64	21.4	58	3	01	3	59	43	15	68	21
2	209	24.6	+11	00.2	130	26.5	64	27.0	56	15	4	08	49	14	02	67	45
3	224	24.8	+10	59.4	144	51.8	63	32.5	55	27	16	54	13	50	66	21	57
4	239	25.0		58.5	159	17.1	63	37.9	54	37	23	4	59	40	66	22	07
5	254	25.1	+10	57.6	173	42.3	62	-19	43.2	53	3	46	4	29	5	04	13
6	269	25.3	+10	56.8	188	07.5	62	-19	48.3	51	4	04	4	42	5	13	13
7	284	25.5		55.9	202	32.7	62	53.3	50	18	4	52	20	12	57	63	22
8	299	25.6		55.1	216	57.8	61	-19	58.2	49	29	5	01	27	44	63	23
9	314	25.8		54.2	231	22.9	61	-20	02.9	47	39	08	33	33	62	16	58
10	329	26.0		53.4	245	47.9	60	07.5	46	4	53	20	43	12	14	60	36
11	344	26.2	+10	52.5	260	12.9	60	-20	12.0	45	5	05	5	30	5	51	11
12	359	26.3	+10	51.6	274	37.9	60	-20	16.4	44	5	13	5	38	5	59	11
13	14	26.5		50.8	289	02.9	60	20.6	42	21	21	45	6	07	26	58	***
14	29	26.7		49.9	303	27.8	59	24.7	41	20	27	5	52	15	11	09	57
15	44	26.8		49.1	317	52.7	59	28.6	39	30	32	6	00	24	10	51	55
16	59	27.0		48.2	332	17.6	59	32.4	38	35	34	04	29	40	54	0	10
17	74	27.2	+10	47.3	346	42.4	58	-20	36.1	37	5	36	6	08	6	35	10
18	89	27.3	+10	46.5	1	07.2	58	-20	39.6	35	5	38	6	12	6	42	10
19	104	27.5		45.6	15	32.0	58	43.0	34	50	40	17	50	9	54	51	0
20	119	27.7		44.7	29	56.8	58	46.3	33	52	40	19	54	46	50	1	02
21	134	27.9		43.9	44	21.5	57	49.4	31	54	41	22	6	58	36	50	11
22	149	28.0		43.0	58	46.2	57	52.4	30	56	41	24	7	03	26	48	21
23	164	28.2		42.2	73	10.9	57	55.2	28	58	42	27	08	9	13	47	33
24	179	28.4	+10	41.3	87	35.6	57	-20	58.0	28	5	42	6	30	7	13	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 49 ^m 0		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.2 PMG: 15 ^h 40 ^m		Mag: -2.3 PMG: 6 ^h 38 ^m		Mag: +0.8 PMG: 15 ^h 25 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	332	40.6	225	56.2	+19	53.7	260	16.3	+21	39.4
1	347	43.1	240	56.0		53.6	275	18.5		39.4
2	2	45.6	255	55.7		53.5	290	20.6		39.5
3	17	48.0	270	55.5		53.4	305	22.7		39.5
4	32	50.5	285	55.3		53.3	320	24.9		39.5
5	47	52.9	300	55.0	+19	53.2	335	27.0	+21	39.6
6	62	55.4	315	54.8	+19	53.1	350	29.1	+21	39.6
7	77	57.9	330	54.6		53.0	5	31.3		39.6
8	93	00.3	345	54.3		52.9	20	33.4		39.7
9	108	02.8	0	54.1		52.8	35	35.6		39.7
10	123	05.3	15	53.9		52.7	50	37.7		39.8
11	138	07.7	30	53.6	+19	52.6	65	39.8	+21	39.8
12	153	10.2	45	53.4	+19	52.5	80	42.0	+21	39.8
13	168	12.7	60	53.1		52.4	95	44.1		39.9
14	183	15.1	75	52.9		52.3	110	46.3		39.9
15	198	17.6	90	52.7		52.1	125	48.4		39.9
16	213	20.0	105	52.4		52.0	140	50.5		40.0
17	228	22.5	120	52.2	+19	51.9	155	52.7	+21	40.0
18	243	25.0	135	51.9	+19	51.8	170	54.8	+21	40.0
19	258	27.4	150	51.7		51.7	185	56.9		40.1
20	273	29.9	165	51.5		51.6	200	59.1		40.1
21	288	32.4	180	51.2		51.5	216	01.2		40.1
22	303	34.8	195	51.0		51.3	231	03.4		40.2
23	318	37.3	210	50.7		51.2	246	05.5		40.2
24	333	39.8	225	50.5	+19	51.1	261	07.7	+21	40.2
Dif	—		-2		-1		+9		-6	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 0			Edad: 7 ^d 3 SD: 16 ^h 1 PMG: 18 ^h 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	179	28.4	+10	41.3	87	35.6	-20	58.0	60 N	19 23	20 10	21 13	15 39 53	22 10 68
1	194	28.6		40.4	102	00.3	57	-21 00.5	58	17	20 00	20 57	23 53	26 68
2	209	28.7		39.6	116	24.9	56	03.0	56	11	19 52	44	15 09 54	40 67
3	224	28.9		38.7	130	49.6	57	05.3	54	06	45	33	14 56 55	22 52 66
4	239	29.1		37.8	145	14.2	56	07.4	52	19 02	38	23	46 55	23 03 65
5	254	29.2	+10	37.0	159	38.8	56	-21 09.4	50	18 58	19 32	20 15	14 36 56	23 12 65
6	269	29.4	+10	36.1	174	03.4	56	-21 11.3	45	18 49	19 20	19 57	14 16 57	23 32 64
7	284	29.6		35.2	188	28.0	56	13.0	40	42	10	44	14 00 57	23 48 63
8	299	29.8		34.4	202	52.5	55	14.6	35	36	19 02	33	13 47 57	** ** *
9	314	29.9		33.5	217	17.1	56	16.1	30	30	18 55	24	35 57	** ** *
10	329	30.1		32.6	231	41.7	56	17.4	20	21	43	19 10	13 14 58	** ** *
11	344	30.3	+10	31.8	246	06.2	55	-21 18.5	10 N	18 13	18 34	18 59	12 57 58	** ** *
12	359	30.5	+10	30.9	260	30.8	56	-21 19.6	0	18 05	18 26	18 51	12 40 59	0 09 59
13	14	30.6		30.0	274	55.3	55	20.4	10 S	17 58	19	44	24 59	25 60
14	29	30.8		29.2	289	19.9	56	21.2	20	50	12	38	12 06 60	0 43 59
15	44	31.0		28.3	303	44.4	55	21.8	30	41	06	34	11 46 60	1 03 59
16	59	31.2		27.4	318	09.0	56	22.2	35	36	18 02	32	34 60	14 60
17	74	31.3	+10	26.6	332	33.6	56	-21 22.6	40	17 31	17 58	18 30	11 21 60	1 27 61
18	89	31.5	+10	25.7	346	58.1	55	-21 22.7	45	17 24	17 54	18 28	11 05 60	1 43 61
19	104	31.7		24.8	1	22.7	56	22.8	50	17	50	27	10 45 61	2 03 60
20	119	31.9		24.0	15	47.3	56	22.6	52	13	47	27	36 61	12 60
21	134	32.1		23.1	30	11.9	56	22.4	54	09	45	26	26 61	22 61
22	149	32.2		22.2	44	36.4	55	22.0	56	05	43	26	14 61	34 60
23	164	32.4		21.4	59	01.1	57	21.5	58	17 00	40	26	10 00 62	2 47 61
24	179	32.6	+10	20.5	73	25.7	56	-21 20.8	60 S	16 55	17 37	18 26	9 45 61	3 03 61

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 45 ^m 1		Mag: -4.3 PMG: 8 ^h 57 ^m		Mag: +1.2 PMG: 15 ^h 39 ^m		Mag: -2.3 PMG: 6 ^h 35 ^m		Mag: +0.8 PMG: 15 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	333	39.8	225	50.5	+19	51.1	125	04.6	-12	11.1	261	07.7	+21	40.2	129	04.1	-7	43.4
1	348	42.2	240	50.2		51.0	140	05.5		11.7	276	09.8		40.3	144	06.4		43.5
2	3	44.7	255	50.0		50.9	155	06.5		12.3	291	11.9		40.3	159	08.6		43.6
3	18	47.2	270	49.7		50.7	170	07.4		12.9	306	14.1		40.3	174	10.9		43.7
4	33	49.6	285	49.5		50.6	185	08.3		13.4	321	16.2		40.4	189	13.1		43.7
5	48	52.1	300	49.2	+19	50.5	200	09.3	-12	14.0	336	18.4	+21	40.4	204	15.4	-7	43.8
6	63	54.5	315	49.0	+19	50.4	215	10.2	-12	14.6	351	20.5	+21	40.4	219	17.7	-7	43.9
7	78	57.0	330	48.8		50.2	230	11.2		15.2	6	22.7		40.5	234	19.9		44.0
8	93	59.5	345	48.5		50.1	245	12.1		15.8	21	24.8		40.5	249	22.2		44.1
9	109	01.9	0	48.3		50.0	260	13.0		16.4	36	26.9		40.5	264	24.4		44.2
10	124	04.4	15	48.0		49.9	275	14.0		17.0	51	29.1		40.6	279	26.7		44.3
11	139	06.9	30	47.8	+19	49.7	290	14.9	-12	17.6	66	31.2	+21	40.6	294	29.0	-7	44.3
12	154	09.3	45	47.5	+19	49.6	305	15.8	-12	18.1	81	33.4	+21	40.6	309	31.2	-7	44.4
13	169	11.8	60	47.2		49.5	320	16.8		18.7	96	35.5		40.7	324	33.5		44.5
14	184	14.3	75	47.0		49.4	335	17.7		19.3	111	37.7		40.7	339	35.7		44.6
15	199	16.7	90	46.7		49.2	350	18.6		19.9	126	39.8		40.7	354	38.0		44.7
16	214	19.2	105	46.5		49.1	5	19.6		20.5	141	42.0		40.8	9	40.3		44.8
17	229	21.7	120	46.2	+19	49.0	20	20.5	-12	21.1	156	44.1	+21	40.8	24	42.5	-7	44.9
18	244	24.1	135	46.0	+19	48.8	35	21.4	-12	21.7	171	46.2	+21	40.8	39	44.8	-7	45.0
19	259	26.6	150	45.7		48.7	50	22.4		22.3	186	48.4		40.9	54	47.0		45.0
20	274	29.0	165	45.5		48.6	65	23.3		22.8	201	50.5		40.9	69	49.3		45.1
21	289	31.5	180	45.2		48.4	80	24.2		23.4	216	52.7		40.9	84	51.6		45.2
22	304	34.0	195	45.0		48.3	95	25.2		24.0	231	54.8		41.0	99	53.8		45.3
23	319	36.4	210	44.7		48.1	110	26.1		24.6	246	57.0		41.0	114	56.1		45.4
24	334	38.9	225	44.4	+19	48.0	125	27.0	-12	25.2	261	59.1	+21	41.0	129	58.3	-7	45.5
Dif	—		-3		-1		+9		-6		+21		0		+23		-1	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 01 ^m 7			Edad: 8 ^d 3 PHE { 4 ^h : 59/1 12 ^h : 59/0 20 ^h : 58/9 PMG: 19 ^h 53 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	32.6	+10 20.5	73	25.7	-21 20.8	8	60 N	2 52	3 55	4 41	16 32	37	23 18	81			
1	194	32.8		87	50.3		20.0	58	3 07	4 04	48	16 40		34 77				
2	209	32.9		102	15.0		19.0	56	20	13	53	16 03	42	47 75				
3	224	33.1		116	39.6		17.9	54	32	20	4 58	15 51	44	23 58	74			
4	239	33.3		131	04.3		16.7	52	41	26	5 02	41 45		*** **	**			
5	254	33.5	+10 16.1	145	29.0	-21 15.3	14	50	3 50	4 32	5 06	15 32	46	*** **	***			
6	269	33.6	+10 15.3	159	53.7	-21 13.8	15	45	4 07	4 44	5 15	15 13	48	*** **	***			
7	284	33.8		174	18.5		12.1	40	20	4 54	22	14 57	50	*** **	***			
8	299	34.0		188	43.2		10.3	35	31	5 02	28	44 51		0 02	62			
9	314	34.2		203	08.0		08.4	30	40	09	34	32 53		14 61				
10	329	34.4		217	32.9		06.3	20	4 54	21	43	14 12	55	34 60				
11	344	34.5	+10 10.9	231	57.7	-21 04.1	22	10 N	5 05	5 30	5 51	13 55	56	0 52	59			
12	359	34.7	+10 10.0	246	22.6	-21 01.8	23	0	5 13	5 37	5 58	13 39	57	1 08	59			
13	14	34.9	09.2	260	47.5	-20 59.3	25	10 S	20	44	6 06	23 59		2 57				
14	29	35.1	08.3	275	12.4	56.7	26	20	25	51	13	13 06	60	1 42	57			
15	44	35.3	07.4	289	37.4	53.9	28	30	30	5 58	22	12 46	62	2 02	56			
16	59	35.4	06.5	304	02.4	51.0	29	35	32	6 01	27	34 64		14 54				
17	74	35.6	+10 05.7	318	27.4	-20 48.0	30	40	5 33	6 05	6 32	12 21	65	2 28	53			
18	89	35.8	+10 04.8	332	52.5	-20 44.8	32	45	5 35	6 09	6 39	12 05	66	2 44	52			
19	104	36.0	03.9	347	17.6	41.6	32	50	36	13	46	11 46	68	3 03	51			
20	119	36.2	03.0	1	42.7	38.1	35	52	36	15	50	37 69		12 50				
21	134	36.3	02.2	16	07.9	34.6	35	54	36	17	53	27 70		23 49				
22	149	36.5	01.3	30	33.1	30.9	37	56	37	20	6 58	15 71		34 48				
23	164	36.7	+10 00.4	44	58.4	27.1	38	58	37	22	7 02	11 02	73	3 48	47			
24	179	36.9	+9 59.5	59	23.7	-20 23.1	40	60 S	5 37	6 25	7 08	10 46	75	4 04	45			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 41 ^m 1		Mag: -4.3 PMG: 8 ^h 57 ^m			Mag: +1.2 PMG: 15 ^h 37 ^m			Mag: -2.3 PMG: 6 ^h 31 ^m			Mag: +0.8 PMG: 15 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'
0	334	38.9	225	44.4	+19 48.0	125	27.0	-12 25.2	261	59.1	+21 41.0	129	58.3	-7 45.5
1	349	41.4	240	44.2	47.9	140	28.0	25.8	277	01.3	41.1	145	00.6	45.6
2	4	43.8	255	43.9	47.7	155	28.9	26.4	292	03.4	41.1	160	02.8	45.7
3	19	46.3	270	43.7	47.6	170	29.8	27.0	307	05.6	41.1	175	05.1	45.7
4	34	48.8	285	43.4	47.4	185	30.8	27.5	322	07.7	41.2	190	07.4	45.8
5	49	51.2	300	43.1	+19 47.3	200	31.7	-12 28.1	337	09.9	+21 41.2	205	09.6	-7 45.9
6	64	53.7	315	42.9	+19 47.2	215	32.6	-12 28.7	352	12.0	+21 41.2	220	11.9	-7 46.0
7	79	56.2	330	42.6	47.0	230	33.6	29.3	7	14.2	41.3	235	14.1	46.1
8	94	58.6	345	42.4	46.9	245	34.5	29.9	22	16.3	41.3	250	16.4	46.2
9	110	01.1	0	42.1	46.7	260	35.4	30.5	37	18.5	41.3	265	18.7	46.3
10	125	03.5	15	41.8	46.6	275	36.3	31.1	52	20.6	41.4	280	20.9	46.3
11	140	06.0	30	41.6	+19 46.4	290	37.3	-12 31.6	67	22.8	+21 41.4	295	23.2	-7 46.4
12	155	08.5	45	41.3	+19 46.3	305	38.2	-12 32.2	82	24.9	+21 41.4	310	25.4	-7 46.5
13	170	10.9	60	41.0	46.1	320	39.1	32.8	97	27.1	41.5	325	27.7	46.6
14	185	13.4	75	40.8	46.0	335	40.1	33.4	112	29.2	41.5	340	29.9	46.7
15	200	15.9	90	40.5	45.8	350	41.0	34.0	127	31.4	41.5	355	32.2	46.8
16	215	18.3	105	40.3	45.7	5	41.9	34.6	142	33.5	41.6	10	34.5	46.9
17	230	20.8	120	40.0	+19 45.5	20	42.8	-12 35.2	157	35.7	+21 41.6	25	36.7	-7 47.0
18	245	23.3	135	39.7	+19 45.4	35	43.8	-12 35.7	172	37.8	+21 41.6	40	39.0	-7 47.0
19	260	25.7	150	39.4	45.2	50	44.7	36.3	187	40.0	41.7	55	41.2	47.1
20	275	28.2	165	39.2	45.1	65	45.6	36.9	202	42.1	41.7	70	43.5	47.2
21	290	30.6	180	38.9	44.9	80	46.5	37.5	217	44.3	41.7	85	45.7	47.3
22	305	33.1	195	38.6	44.8	95	47.5	38.1	232	46.5	41.8	100	48.0	47.4
23	320	35.6	210	38.4	44.6	110	48.4	38.7	247	48.6	41.8	115	50.3	47.5
24	335	38.0	225	38.1	+19 44.5	125	49.3	-12 39.2	262	50.8	+21 41.8	130	52.5	-7 47.6
Dif	—		-3 -1			+9 -6			+22 0			+23 -1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 9 ^d 3	PHE { 4 ^h : 58 ^h /9 12 ^h : 58 ^h /8 20 ^h : 58 ^h /7	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 01 ^m 4	PMG: 20 ^h 50 ^m	R°: 54 ^m			Civil			Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	36.9	+9 59.5	59	23.7	-20 23.1	41	60 N	19 17	20 03	21 05	17 09	26	** ** *	** ** *
1	194	37.1		58.6	73 49.1		64	58	12	19 54	20 50	16 56	29	** ** *	** ** *
2	209	37.2		57.8	88 14.5		64	56	06	47	38	45	31	** ** *	** ** *
3	224	37.4		56.9	102 39.9		64	54	19 02	40	27	35	33	** ** *	** ** *
4	239	37.6		56.0	117 05.4		65	52	18 58	33	18	26	35	0 08	72
5	254	37.8	+9 55.1	131	30.9	-20 01.4	46	50	18 54	19 28	20 10	16 18	37	0 17	71
6	269	38.0	+9 54.3	145	56.5	-19 56.7	47	45	18 46	19 16	19 53	16 01	40	0 36	68
7	284	38.2		53.4	160 22.1		66	40	39	19 07	40	15 47	43	0 51	66
8	299	38.3		52.5	174 47.8		67	35	33	18 59	30	35	45	1 04	65
9	314	38.5		51.6	189 13.5		67	30	28	52	21	25	46	15	63
10	329	38.7		50.7	203 39.3		68	20	19	42	19 08	15 07	50	34	61
11	344	38.9	+9 49.9	218	05.2	-19 31.3	53	10 N	18 12	18 33	18 58	14 51	53	1 51	59
12	359	39.1	+9 49.0	232	31.0	-19 25.8	55	0	18 05	18 26	18 50	14 36	56	2 07	56
13	14	39.3		48.1	246 57.0		70	10 S	17 58	19	44	22	57	22	55
14	29	39.4		47.2	261 23.0		70	20	51	13	39	14 06	60	39	52
15	44	39.6		46.3	275 49.0		70	30	43	07	35	13 48	63	2 58	49
16	59	39.8		45.5	290 15.1	-19 02.8	71	35	38	03	33	38	65	3 08	49
17	74	40.0	+9 44.6	304	41.3	-18 56.8	72	40	17 33	18 00	18 32	13 26	67	3 21	46
18	89	40.2	+9 43.7	319	07.5	-18 50.6	72	45	17 27	17 56	18 31	13 11	70	3 36	44
19	104	40.4		42.8	333 33.8		73	50	19	52	30	12 54	73	3 54	41
20	119	40.5		41.9	348 00.2		74	52	16	50	30	46	74	4 02	40
21	134	40.7		41.1	2 26.6		74	54	13	49	30	37	76	12	38
22	149	40.9		40.2	16 53.0		74	56	09	47	30	26	78	22	37
23	164	41.1		39.3	31 19.5		75	58	17 04	44	30	15	80	35	34
24	179	41.3	+9 38.4	45	46.1	-18 11.3	68	60 S	16 59	17 42	18 30	12 01	83	4 49	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 37 ^m 2		Mag: -4.3 PMG: 8 ^h 58 ^m		Mag: +1.2 PMG: 15 ^h 36 ^m		Mag: -2.4 PMG: 6 ^h 28 ^m		Mag: +0.8 PMG: 15 ^h 14 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	335	38.0	225	38.1	+19 44.5		125	49.3	-12 39.2	262	50.8	+21 41.8	130	52.5	-7 47.6	
1	350	40.5	240	37.8		44.3	140	50.2		39.8	277	52.9		41.9	47.7	
2	5	43.0	255	37.6		44.1	155	51.2		40.4	292	55.1		41.9	47.8	
3	20	45.4	270	37.3		44.0	170	52.1		41.0	307	57.2		41.9	47.8	
4	35	47.9	285	37.0		43.8	185	53.0		41.6	322	59.4		42.0	47.9	
5	50	50.4	300	36.7	+19 43.7		200	53.9	-12 42.2		338	01.5	+21 42.0		48.0	
6	65	52.8	315	36.5	+19 43.5		215	54.9	-12 42.8		353	03.7	+21 42.0		48.1	
7	80	55.3	330	36.2		43.3	230	55.8		43.3	8	05.8		42.0	48.2	
8	95	57.8	345	35.9		43.2	245	56.7		43.9	23	08.0		42.1	48.3	
9	111	00.2	0	35.7		43.0	260	57.6		44.5	38	10.2		42.1	48.4	
10	126	02.7	15	35.4		42.8	275	58.6		45.1	53	12.3		42.1	48.5	
11	141	05.1	30	35.1	+19 42.7		290	59.5	-12 45.7		68	14.5	+21 42.2		48.5	
12	156	07.6	45	34.8	+19 42.5		306	00.4	-12 46.3		83	16.6	+21 42.2		48.6	
13	171	10.1	60	34.6		42.3	321	01.3		46.8	98	18.8		42.2	48.7	
14	186	12.5	75	34.3		42.2	336	02.2		47.4	113	21.0		42.3	48.8	
15	201	15.0	90	34.0		42.0	351	03.2		48.0	128	23.1		42.3	48.9	
16	216	17.5	105	33.7		41.8	6	04.1		48.6	143	25.3		42.3	49.0	
17	231	19.9	120	33.4	+19 41.6		21	05.0	-12 49.2		158	27.4	+21 42.4		49.1	
18	246	22.4	135	33.2	+19 41.5		36	05.9	-12 49.8		173	29.6	+21 42.4		49.2	
19	261	24.9	150	32.9		41.3	51	06.8		50.3	188	31.7		42.4	49.3	
20	276	27.3	165	32.6		41.1	66	07.8		50.9	203	33.9		42.5	49.3	
21	291	29.8	180	32.3		41.0	81	08.7		51.5	218	36.1		42.5	49.4	
22	306	32.3	195	32.0		40.8	96	09.6		52.1	233	38.2		42.5	49.5	
23	321	34.7	210	31.8		40.6	111	10.5		52.7	248	40.4		42.6	49.6	
24	336	37.2	225	31.5	+19 40.4		126	11.4	-12 53.3		263	42.5	+21 42.6		49.7	
Dif	—		-3		-2		+9		-6		+22		0		+23	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h 8			Edad: 10 ^d 3	PHE	4 ^h : 58 ^m 5 12 ^h : 58 ^m 4 20 ^h : 58 ^m 3				Náutico	Civil		Hora	R°	Hora	R°							
	PMG: 12 ^h 01 ^m 1					R°: 52 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif																
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m						
0	179	41.3	+9	38.4	45	46.1	77	-18	11.3	60 N	2	59	4	00	4	46	17	35	19	0	39	86	
1	194	41.5		37.5	60	12.8	77	-18	04.4	58	3	13		09	52	25	22		0	51	83		
2	209	41.7		36.6	74	39.5	77	-17	57.3	56		26		17	4	57	16	25		1	02	80	
3	224	41.8		35.8	89	06.2	77		50.2	54		36		24	5	02	08	27		12	77		
4	239	42.0		34.9	103	33.1	79		42.9	52		45		30		06	17	01	29		20	76	
5	254	42.2	+9	34.0	118	00.0	79	-17	35.6	50	3	53	4	35	5	09	16	55	31	1	28	74	
6	269	42.4	+9	33.1	132	26.9	79	-17	28.1	45	4	10	4	47	5	18	16	41	35	1	44	70	
7	284	42.6		32.2	146	53.9	80		20.6	40		23		4	56	24	30	37		1	57	68	
8	299	42.8		31.3	161	21.0	81		12.9	77		33		5	04	30	20	40		2	09	65	
9	314	43.0		30.4	175	48.2	82	-17	05.2	77		41		10		35	16	11	43		18	63	
10	329	43.1		29.6	190	15.4	82	-16	57.3	79		55		21		44	15	57	46		35	60	
11	344	43.3	+9	28.7	204	42.7	83	-16	49.3	80	10 N	5	05	5	30	5	51	15	44	49	2	50	56
12	359	43.5	+9	27.8	219	10.0	83	-16	41.3	80	0	5	12	5	37	5	58	15	32	52	3	03	54
13	14	43.7		26.9	233	37.4	84		33.2	81	10 S		19		43	6	05		19	56		17	51
14	29	43.9		26.0	248	04.9	85		24.9	83	20		24		49	12	15	06	59		31	48	
15	44	44.1		25.1	262	32.5	86		16.6	83	30		28		55	20	14	51	63		47	45	
16	59	44.3		24.2	277	00.1	86	-16	08.2	84	35		29	5	59	24	43	64		3	57	42	
17	74	44.5	+9	23.4	291	27.8	87	-15	59.7	85	40	5	30	6	02	6	29	14	33	67	4	07	41
18	89	44.6	+9	22.5	305	55.5	87	-15	51.1	86	45	5	31	6	05	6	35	14	21	70	4	20	37
19	104	44.8		21.6	320	23.3	88		42.4	87	50		32		09	42	07	74			35	34	
20	119	45.0		20.7	334	51.2	89		33.6	88	52		32		11	45	14	00	76		42	32	
21	134	45.2		19.8	349	19.2	90		24.8	88	54		32		13	49	13	53	78		50	30	
22	149	45.4		18.9	3	47.2	90		15.8	90	56		32		15	53	44	81		4	59	28	
23	164	45.6		18.0	18	15.3	91	-15	06.8	90	58		32		17	6	57	35	83		5	09	25
24	179	45.8	+9	17.1	32	43.4	91	-14	57.7	91	60 S	5	31	6	19	7	02	13	24	86	5	20	23

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 33 ^m 3		Mag: -4.3 PMG: 8 ^h 58 ^m			Mag: +1.2 PMG: 15 ^h 34 ^m			Mag: -2.4 PMG: 6 ^h 24 ^m			Mag: +0.8 PMG: 15 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	336	37.2	225	31.5	+19	40.4	126	11.4	-12	53.3	263	42.5	+21	42.6	131	46.6	-7	49.7
1	351	39.6	240	31.2		40.2	141	12.4		53.8	278	44.7		42.6	146	48.9		49.8
2	6	42.1	255	30.9		40.1	156	13.3		54.4	293	46.9		42.6	161	51.1		49.9
3	21	44.6	270	30.6		39.9	171	14.2		55.0	308	49.0		42.7	176	53.4		50.0
4	36	47.0	285	30.3		39.7	186	15.1		55.6	323	51.2		42.7	191	55.7		50.1
5	51	49.5	300	30.1	+19	39.5	201	16.0	-12	56.2	338	53.4	+21	42.7	206	57.9	-7	50.1
6	66	52.0	315	29.8	+19	39.3	216	16.9	-12	56.7	353	55.5	+21	42.8	222	00.2	-7	50.2
7	81	54.4	330	29.5		39.2	231	17.9		57.3	8	57.7		42.8	237	02.4		50.3
8	96	56.9	345	29.2		39.0	246	18.8		57.9	23	59.8		42.8	252	04.7		50.4
9	111	59.4	0	28.9		38.8	261	19.7		58.5	39	02.0		42.9	267	06.9		50.5
10	127	01.8	15	28.6		38.6	276	20.6		59.1	54	04.2		42.9	282	09.2		50.6
11	142	04.3	30	28.4	+19	38.4	291	21.5	-12	59.7	69	06.3	+21	42.9	297	11.4	-7	50.7
12	157	06.8	45	28.1	+19	38.2	306	22.4	-13	00.2	84	08.5	+21	43.0	312	13.7	-7	50.8
13	172	09.2	60	27.8		38.0	321	23.4		00.8	99	10.7		43.0	327	15.9		50.9
14	187	11.7	75	27.5		37.9	336	24.3		01.4	114	12.8		43.0	342	18.2		50.9
15	202	14.1	90	27.2		37.7	351	25.2		02.0	129	15.0		43.0	357	20.4		51.0
16	217	16.6	105	26.9		37.5	6	26.1		02.6	144	17.2		43.1	12	22.7		51.1
17	232	19.1	120	26.6	+19	37.3	21	27.0	-13	03.1	159	19.3	+21	43.1	27	24.9	-7	51.2
18	247	21.5	135	26.3	+19	37.1	36	27.9	-13	03.7	174	21.5	+21	43.1	42	27.2	-7	51.3
19	262	24.0	150	26.0		36.9	51	28.8		04.3	189	23.7		43.2	57	29.4		51.4
20	277	26.5	165	25.8		36.7	66	29.7		04.9	204	25.8		43.2	72	31.7		51.5
21	292	28.9	180	25.5		36.5	81	30.7		05.5	219	28.0		43.2	87	33.9		51.6
22	307	31.4	195	25.2		36.3	96	31.6		06.0	234	30.2		43.3	102	36.2		51.7
23	322	33.9	210	24.9		36.1	111	32.5		06.6	249	32.3		43.3	117	38.4		51.7
24	337	36.3	225	24.6	+19	35.9	126	33.4	-13	07.2	264	34.5	+21	43.3	132	40.7	-7	51.8
Dif	—		-3		-2		+9		-6		+22		0		+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 8			Edad: 11 ^d 3 PHE { SD: 15 ^h 9 PMG: 22 ^h 36 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	45.8	+9	17.1	32	43.4	-14 57.7	60 N	19 11	19 57	20 57	17 54	15	2 05	86
1	194	46.0		16.2	47	11.6	92 48.5	58		06	48	47	18	14	83
2	209	46.2		15.4	61	39.9	93 39.3	56	19 01	41	31	41	20	22	81
3	224	46.3		14.5	76	08.2	93 29.9	54	18 57	34	21	35	23	29	79
4	239	46.5		13.6	90	36.7	95 20.5	52		53	29	30	25	36	76
5	254	46.7	+9	12.7	105	05.1	94 -14 11.0	50	18 50	19 23	20 05	17 26	26	2 42	74
6	269	46.9	+9	11.8	119	33.7	96 -14 01.5	45	18 42	19 12	19 49	17 16	30	2 54	71
7	284	47.1		10.9	134	02.3	96 -13 51.8	40		36	19 04	07	34	3 05	67
8	299	47.3		10.0	148	31.0	97 42.1	35	30	18 56	27	17 00	36	14	64
9	314	47.5		09.1	162	59.7	97 32.4	30	26	50	19	16 54	38	21	62
10	329	47.7		08.2	177	28.6	99 22.5	20	18	40	19 06	43	42	35	57
11	344	47.9	+9	07.3	191	57.4	98 -13 12.6	10 N	18 11	18 32	18 57	16 33	46	3 46	54
12	359	48.1	+9	06.4	206	26.4	100 -13 02.6	0	18 04	18 25	18 49	16 24	49	3 57	51
13	14	48.3		05.5	220	55.4	100 -12 52.6	10 S	17 58	19	44	15	53	4 08	47
14	29	48.4		04.7	235	24.5	101 42.5	20	51	13	39	16 05	57	19	44
15	44	48.6		03.8	249	53.6	101 32.3	30	44	08	36	15 54	61	32	40
16	59	48.8		02.9	264	22.8	102 22.1	35	39	05	34	47	64	39	38
17	74	49.0	+9	02.0	278	52.1	103 -12 11.8	40	17 35	18 02	18 33	15 40	66	4 48	35
18	89	49.2	+9	01.1	293	21.4	103 -12 01.4	45	17 29	17 59	18 33	15 31	70	4 57	33
19	104	49.4	+9	00.2	307	50.8	104 -11 51.0	50	22	55	33	21	73	5 09	28
20	119	49.6	+8	59.3	322	20.2	104 40.5	52	19	54	33	16	75	14	27
21	134	49.8		58.4	336	49.8	106 30.0	54	16	52	33	11	77	20	25
22	149	50.0		57.5	351	19.4	106 19.4	56	12	50	33	15 05	80	27	23
23	164	50.2		56.6	5	49.0	106 -11 08.8	58	08	48	34	14 58	83	34	20
24	179	50.4	+8	55.7	20	18.7	107 -10 58.1	60 S	17 04	17 46	18 34	14 50	86	5 43	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 1 ^h 29 ^m 3		Mag: -4.3 PMG: 8 ^h 59 ^m		Mag: +1.2 PMG: 15 ^h 33 ^m		Mag: -2.4 PMG: 6 ^h 21 ^m		Mag: +0.8 PMG: 15 ^h 07 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'									
0	337	36.3	225	24.6	+19	35.9	126	33.4	-13	07.2	264	34.5	+21	43.3	132	40.7	-7	51.8	
1	352	38.8	240	24.3		35.7	141	34.3		07.8	279	36.7		43.3	147	43.0		51.9	
2	7	41.2	255	24.0		35.5	156	35.2		08.4	294	38.8		43.4	162	45.2		52.0	
3	22	43.7	270	23.7		35.3	171	36.1		08.9	309	41.0		43.4	177	47.5		52.1	
4	37	46.2	285	23.4		35.1	186	37.0		09.5	324	43.2		43.4	192	49.7		52.2	
5	52	48.6	300	23.1	+19	34.9	201	37.9	-13	10.1	339	45.3	+21	43.5	207	52.0	-7	52.3	
6	67	51.1	315	22.8	+19	34.7	216	38.9	-13	10.7	354	47.5	+21	43.5	222	54.2	-7	52.4	
7	82	53.6	330	22.5		34.5	231	39.8		11.3	9	49.7		43.5	237	56.5		52.5	
8	97	56.0	345	22.2		34.3	246	40.7		11.8	24	51.9		43.6	252	58.7		52.6	
9	112	58.5	0	21.9		34.1	261	41.6		12.4	39	54.0		43.6	268	01.0		52.6	
10	128	01.0	15	21.6		33.9	276	42.5		13.0	54	56.2		43.6	283	03.2		52.7	
11	143	03.4	30	21.3	+19	33.7	291	43.4	-13	13.6	69	58.4	+21	43.6	298	05.5	-7	52.8	
12	158	05.9	45	21.0	+19	33.5	306	44.3	-13	14.1	85	00.5	+21	43.7	313	07.7	-7	52.9	
13	173	08.4	60	20.7		33.3	321	45.2		14.7	100	02.7		43.7	328	10.0		53.0	
14	188	10.8	75	20.4		33.1	336	46.1		15.3	115	04.9		43.7	343	12.2		53.1	
15	203	13.3	90	20.1		32.9	351	47.0		15.9	130	07.1		43.8	358	14.5		53.2	
16	218	15.7	105	19.8		32.7	6	47.9		16.5	145	09.2		43.8	13	16.7		53.3	
17	233	18.2	120	19.5	+19	32.4	21	48.8	-13	17.0	160	11.4	+21	43.8	28	19.0	-7	53.4	
18	248	20.7	135	19.2	+19	32.2	36	49.8	-13	17.6	175	13.6	+21	43.9	43	21.2	-7	53.4	
19	263	23.1	150	18.9		32.0	51	50.7		18.2	190	15.7		43.9	58	23.5		53.5	
20	278	25.6	165	18.6		31.8	66	51.6		18.8	205	17.9		43.9	73	25.7		53.6	
21	293	28.1	180	18.3		31.6	81	52.5		19.4	220	20.1		43.9	88	28.0		53.7	
22	308	30.5	195	18.0		31.4	96	53.4		19.9	235	22.3		44.0	103	30.2		53.8	
23	323	33.0	210	17.7		31.2	111	54.3		20.5	250	24.4		44.0	118	32.5		53.9	
24	338	35.5	225	17.4	+19	30.9	126	55.2	-13	21.1	265	26.6	+21	44.0	133	34.7	-7	54.0	
Dif	—	—	-3	-2		+9	-6	-6		+22	0	0		+23	-1	-1	-1		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 3	PHE {	4 ^h : 57 ^m 7 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3	R°: 47 ^m									
	PMG: 12 ^h 00 ^m 5							SD: 15 ^h 7		PMG: 23 ^h 25 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil			Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	50.4	+8 55.7	20	18.7	-10 58.1		60 N	3 06	4 05	4 51		18 09 13		3 31 85	
1	194	50.6		34	48.5 ¹⁰⁸		47.4 ¹⁰⁷	58	19	14	4 56		05 15		37 82	
2	209	50.7		49	18.3 ¹⁰⁸		36.6 ¹⁰⁸	56	31	21	5 01		18 01 18		43 79	
3	224	50.9		63	48.2 ¹⁰⁹		25.8 ¹⁰⁸	54	41	28	05		17 58 20		48 76	
4	239	51.1		78	18.1 ¹⁰⁹		14.9 ¹⁰⁹	52	49	33	09		55 22		52 75	
5	254	51.3	+8 51.2	92	48.1 ¹¹⁰	-10 04.0 ¹⁰⁹		50	3 57	4 39	5 12		17 52 23		3 56 73	
6	269	51.5	+8 50.3	107	18.2 ¹¹¹	-9 53.0 ¹¹⁰		45	4 13	4 49	5 20		17 46 27		4 05 68	
7	284	51.7		121	48.3 ¹¹¹		42.0 ¹¹⁰	40	25	4 58	26		41 30		12 65	
8	299	51.9		136	18.5 ¹¹²		30.9 ¹¹¹	35	35	5 05	31		36 33		18 62	
9	314	52.1		150	48.8 ¹¹³		19.8 ¹¹¹	30	43	12	36		32 36		23 60	
10	329	52.3		165	19.1 ¹¹³	-9 08.7 ¹¹¹		20	4 55	22	44		25 40		32 56	
11	344	52.5	+8 45.8	179	49.4 ¹¹³	-8 57.5 ¹¹²		10 N	5 05	5 30	5 51		17 19 44		4 40 52	
12	359	52.7	+8 44.9	194	19.8 ¹¹⁴	-8 46.3 ¹¹²		0	5 12	5 36	5 57		17 13 48		4 48 48	
13	14	52.9		208	50.3 ¹¹⁵		35.0 ¹¹³	10 S	18	42	6 03		08 51		4 55 45	
14	29	53.1		223	20.8 ¹¹⁵		23.8 ¹¹²	20	22	48	10		17 02 54		5 03 41	
15	44	53.3		237	51.4 ¹¹⁶		12.4 ¹¹⁴	30	25	53	17		16 55 59		12 37	
16	59	53.5		252	22.0 ¹¹⁶	-8 01.1 ¹¹³		35	27	56	21		51 61		17 35	
17	74	53.7	+8 40.4	266	52.7 ¹¹⁷	-7 49.7 ¹¹⁴		40	5 27	5 59	6 26		16 46 65		5 23 32	
18	89	53.9	+8 39.6	281	23.4 ¹¹⁷	-7 38.3 ¹¹⁴		45	5 28	6 02	6 31		16 41 68		5 30 28	
19	104	54.1		295	54.2 ¹¹⁸		26.8 ¹¹⁵	50	28	05	38		34 72		37 25	
20	119	54.2		310	25.0 ¹¹⁸		15.4 ¹¹⁴	52	28	07	41		31 74		41 23	
21	134	54.4		324	55.9 ¹¹⁹	-7 03.9 ¹¹⁵		54	28	08	44		28 76		45 21	
22	149	54.6		339	26.9 ¹²⁰	-6 52.4 ¹¹⁵		56	27	10	48		25 78		50 19	
23	164	54.8		353	57.9 ¹²⁰		40.8 ¹¹⁶	58	27	12	52		21 80		5 54 17	
24	179	55.0	+8 34.1	8	28.9 ¹²⁰	-6 29.2 ¹¹⁶		60 S	5 26	6 14	6 56		16 16 84		6 00 14	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -4.3			Mag: +1.2			Mag: -2.4			Mag: +0.8		
	1 ^h 25 ^m 4		PMG: 8 ^h 59 ^m			PMG: 15 ^h 31 ^m			PMG: 6 ^h 17 ^m			PMG: 15 ^h 03 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	338	35.5	225	17.4	+19 30.9	126	55.2	-13 21.1	265	26.6	+21 44.0	133	34.7	-7 54.0
1	353	37.9	240	17.1	30.7	141	56.1	21.7	280	28.8	44.1	148	37.0	54.1
2	8	40.4	255	16.8	30.5	156	57.0	22.2	295	31.0	44.1	163	39.2	54.2
3	23	42.9	270	16.5	30.3	171	57.9	22.8	310	33.1	44.1	178	41.5	54.3
4	38	45.3	285	16.2	30.1	186	58.8	23.4	325	35.3	44.1	193	43.7	54.3
5	53	47.8	300	15.9	+19 29.8	201	59.7	-13 24.0	340	37.5	+21 44.2	208	45.9	-7 54.4
6	68	50.2	315	15.6	+19 29.6	217	00.6	-13 24.5	355	39.7	+21 44.2	223	48.2	-7 54.5
7	83	52.7	330	15.3	29.4	232	01.5	25.1	10	41.8	44.2	238	50.4	54.6
8	98	55.2	345	15.0	29.2	247	02.4	25.7	25	44.0	44.3	253	52.7	54.7
9	113	57.6	0	14.7	29.0	262	03.3	26.3	40	46.2	44.3	268	54.9	54.8
10	129	00.1	15	14.4	28.7	277	04.2	26.9	55	48.4	44.3	283	57.2	54.9
11	144	02.6	30	14.1	+19 28.5	292	05.1	-13 27.4	70	50.6	+21 44.3	298	59.4	-7 55.0
12	159	05.0	45	13.8	+19 28.3	307	06.0	-13 28.0	85	52.7	+21 44.4	314	01.7	-7 55.1
13	174	07.5	60	13.5	28.0	322	06.9	28.6	100	54.9	44.4	329	03.9	55.2
14	189	10.0	75	13.1	27.8	337	07.8	29.2	115	57.1	44.4	344	06.2	55.3
15	204	12.4	90	12.8	27.6	352	08.7	29.7	130	59.3	44.5	359	08.4	55.3
16	219	14.9	105	12.5	27.4	7	09.6	30.3	146	01.4	44.5	14	10.7	55.4
17	234	17.3	120	12.2	+19 27.1	22	10.5	-13 30.9	161	03.6	+21 44.5	29	12.9	-7 55.5
18	249	19.8	135	11.9	+19 26.9	37	11.4	-13 31.5	176	05.8	+21 44.5	44	15.2	-7 55.6
19	264	22.3	150	11.6	26.7	52	12.3	32.0	191	08.0	44.6	59	17.4	55.7
20	279	24.7	165	11.3	26.4	67	13.2	32.6	206	10.2	44.6	74	19.7	55.8
21	294	27.2	180	11.0	26.2	82	14.1	33.2	221	12.3	44.6	89	21.9	55.9
22	309	29.7	195	10.7	26.0	97	15.0	33.8	236	14.5	44.7	104	24.2	56.0
23	324	32.1	210	10.4	25.7	112	15.9	34.3	251	16.7	44.7	119	26.4	56.1
24	339	34.6	225	10.0	+19 25.5	127	16.8	-13 34.9	266	18.9	+21 44.7	134	28.7	-7 56.2
Dif	—		-3	-2		+9	-6		+22	0		+22	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 2			Edad: 13 ^d 3 PHE { 4 ^h : 57'1 12 ^h : 57'0 20 ^h : 56'8 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	55.0	+8 34.1	8	28.9	-6 29.2	60 N	19 05	19 50	20 49	18 22 12	4 56 83			
1	194	55.2	33.2	23	00.0 ¹²¹	17.6 ¹¹⁶	58	19 01	42	36	20 15	4 59 80			
2	209	55.4	32.3	37	31.1 ¹²¹	-6 06.0 ¹¹⁶	56	18 56	36	25	19 17	5 02 77			
3	224	55.6	31.4	52	02.3 ¹²²	-5 54.4 ¹¹⁶	54	52	29	16	18 18	04 76			
4	239	55.8	30.5	66	33.5 ¹²²	42.7 ¹¹⁷	52	49	24	07	17 20	07 73			
5	254	56.0	+8 29.6	81	04.8 ¹²³	-5 31.0 ¹¹⁷	50	18 45	19 19	20 00	18 15 23	5 09 71			
6	269	56.2	+8 28.7	95	36.1 ¹²³	-5 19.4 ¹¹⁶	45	18 38	19 09	19 45	18 13 26	5 13 67			
7	284	56.4	27.8	110	07.5 ¹²⁴	-5 07.6 ¹¹⁸	40	33	19 00	33	11 29	17 64			
8	299	56.6	26.9	124	38.9 ¹²⁴	-4 55.9 ¹¹⁷	35	28	18 53	24	09 32	20 61			
9	314	56.8	26.0	139	10.3 ¹²⁴	44.2 ¹¹⁷	30	23	48	16	08 34	23 59			
10	329	57.0	25.1	153	41.8 ¹²⁵	32.4 ¹¹⁸	20	16	38	19 04	05 39	28 54			
11	344	57.2	+8 24.2	168	13.4 ¹²⁶	-4 20.7 ¹¹⁷	10 N	18 09	18 31	18 55	18 03 42	5 32 51			
12	359	57.4	+8 23.3	182	45.0 ¹²⁶	-4 08.9 ¹¹⁸	0	18 03	18 24	18 49	18 01 46	5 36 47			
13	14	57.6	22.4	197	16.6 ¹²⁶	-3 57.1 ¹¹⁸	10 S	17 58	19	43	17 59 49	40 43			
14	29	57.8	21.5	211	48.2 ¹²⁶	45.3 ¹¹⁸	20	52	14	39	56 54	44 40			
15	44	58.0	20.6	226	19.9 ¹²⁷	33.5 ¹¹⁸	30	45	09	37	54 57	49 35			
16	59	58.2	19.7	240	51.7 ¹²⁸	21.7 ¹¹⁸	35	41	06	36	52 60	52 32			
17	74	58.4	+8 18.8	255	23.4 ¹²⁷	-3 09.9 ¹¹⁸	40	17 36	18 04	18 35	17 51 62	5 55 30			
18	89	58.6	+8 17.9	269	55.3 ¹²⁹	-2 58.1 ¹¹⁸	45	17 31	18 01	18 35	17 49 66	5 58 27			
19	104	58.8	17.0	284	27.1 ¹²⁸	46.2 ¹¹⁹	50	25	17 58	35	46 70	6 02 23			
20	119	59.0	16.1	298	59.0 ¹²⁹	34.4 ¹¹⁸	52	23	57	36	45 72	04 21			
21	134	59.2	15.2	313	30.9 ¹²⁹	22.6 ¹¹⁸	54	20	55	36	44 74	06 20			
22	149	59.4	14.3	328	02.9 ¹³⁰	-2 10.8 ¹¹⁸	56	16	54	37	43 76	09 17			
23	164	59.6	13.4	342	34.9 ¹³⁰	-1 58.9 ¹¹⁹	58	13	52	38	41 79	11 15			
24	179	59.8	+8 12.4	357	06.9 ¹³⁰	-1 47.1 ¹¹⁸	60 S	17 08	17 51	18 39	17 40 81	6 14 12			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 21 ^m 5			Mag: -4.3 PMG: 9 ^h 00 ^m			Mag: +1.2 PMG: 15 ^h 30 ^m			Mag: -2.4 PMG: 6 ^h 14 ^m			Mag: +0.8 PMG: 15 ^h 00 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	°	'	°	°	'		°	'		°	'		°	'	
0	339	34.6	225 10.0	+19 25.5	127 16.8	-13 34.9	266 18.9	+21 44.7		134 28.7	-7 56.2				
1	354	37.1	240 09.7	25.2	142 17.7	35.5	281 21.1	44.7		149 30.9	56.3				
2	9	39.5	255 09.4	25.0	157 18.6	36.1	296 23.3	44.8		164 33.1	56.3				
3	24	42.0	270 09.1	24.8	172 19.5	36.6	311 25.4	44.8		179 35.4	56.4				
4	39	44.5	285 08.8	24.5	187 20.4	37.2	326 27.6	44.8		194 37.6	56.5				
5	54	46.9	300 08.5	+19 24.3	202 21.3	-13 37.8	341 29.8	+21 44.9		209 39.9	-7 56.6				
6	69	49.4	315 08.2	+19 24.0	217 22.2	-13 38.4	356 32.0	+21 44.9		224 42.1	-7 56.7				
7	84	51.8	330 07.8	23.8	232 23.1	38.9	11 34.2	44.9		239 44.4	56.8				
8	99	54.3	345 07.5	23.6	247 24.0	39.5	26 36.4	44.9		254 46.6	56.9				
9	114	56.8	0 07.2	23.3	262 24.9	40.1	41 38.5	45.0		269 48.9	57.0				
10	129	59.2	15 06.9	23.1	277 25.8	40.7	56 40.7	45.0		284 51.1	57.1				
11	145	01.7	30 06.6	+19 22.8	292 26.7	-13 41.2	71 42.9	+21 45.0		299 53.4	-7 57.2				
12	160	04.2	45 06.3	+19 22.6	307 27.6	-13 41.8	86 45.1	+21 45.1		314 55.6	-7 57.3				
13	175	06.6	60 05.9	22.3	322 28.4	42.4	101 47.3	45.1		329 57.9	57.3				
14	190	09.1	75 05.6	22.1	337 29.3	43.0	116 49.5	45.1		345 00.1	57.4				
15	205	11.6	90 05.3	21.8	352 30.2	43.5	131 51.6	45.1		0 02.3	57.5				
16	220	14.0	105 05.0	21.6	7 31.1	44.1	146 53.8	45.2		15 04.6	57.6				
17	235	16.5	120 04.7	+19 21.3	22 32.0	-13 44.7	161 56.0	+21 45.2		30 06.8	-7 57.7				
18	250	18.9	135 04.3	+19 21.1	37 32.9	-13 45.2	176 58.2	+21 45.2		45 09.1	-7 57.8				
19	265	21.4	150 04.0	20.8	52 33.8	45.8	192 00.4	45.2		60 11.3	57.9				
20	280	23.9	165 03.7	20.6	67 34.7	46.4	207 02.6	45.3		75 13.6	58.0				
21	295	26.3	180 03.4	20.3	82 35.6	47.0	222 04.8	45.3		90 15.8	58.1				
22	310	28.8	195 03.1	20.0	97 36.5	47.5	237 07.0	45.3		105 18.1	58.2				
23	325	31.3	210 02.7	19.8	112 37.4	48.1	252 09.1	45.4		120 20.3	58.3				
24	340	33.7	225 02.4	+19 19.5	127 38.3	-13 48.7	267 11.3	+21 45.4		135 22.5	-7 58.3				
Dif	—	—	-3	-2	+9	-6	+22	0		+22	-1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8			Edad: 14 ^d 3 PHE { 4 ^h : 56 ^m /6 12 ^h : 56 ^m /4 20 ^h : 56 ^m /2						Principio del crepúsculo			Salida de Luna			Puesta de Luna			
	PMG: 11 ^h 59 ^m 9			SD: 15 ^h 4 PMG: 0 ^h 12 ^m R°: 46 ^m						Principio del crepúsculo			Salida de Luna			Puesta de Luna			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	59.8	+8	12.4	357	06.9	-1	47.1	60 N	3	12	4	11	4	56	18	34	12	
1	195	00.0		11.5	11	38.9 ¹³⁰		35.3 ¹¹⁸	58	25	19	5	01	35	14	6	19	80	
2	210	00.2		10.6	26	11.0 ¹³¹		23.5 ¹¹⁸	56	36	25	05		36	16	19	76		
3	225	00.4		09.7	40	43.1 ¹³¹		-1	11.7 ¹¹⁸	54	45	31	09	36	19	20	73		
4	240	00.6		08.8	55	15.3 ¹³²		-0	59.9 ¹¹⁸	52	3	53	37	37	21	20	71		
5	255	00.8	+8	07.9	69	47.5 ¹³²		-0	48.1 ¹¹⁸	50	4	01	4	42	5	15	18	38	22
6	270	01.0	+8	07.0	84	19.7 ¹³²		-0	36.3 ¹¹⁸	45	4	16	4	52	5	22	18	39	26
7	285	01.2		06.1	98	51.9 ¹³²		24.5 ¹¹⁸	40	27	5	00	28	40	29	21	62		
8	300	01.4		05.2	113	24.2 ¹³³		12.7 ¹¹⁸	35	36	07	33	41	32	21	60			
9	315	01.6		04.3	127	56.5 ¹³³		-0	00.9 ¹¹⁸	30	44	13	37	42	34	22	56		
10	330	01.8		03.4	142	28.8 ¹³³		+0	10.8 ¹¹⁷	20	4	56	22	44	44	38	22	53	
11	345	02.0	+8	02.5	157	01.1 ¹³³		+0	22.6 ¹¹⁸	10 N	5	05	5	30	5	51	18	45	42
12	0	02.2	+8	01.5	171	33.5 ¹³⁴		+0	34.3 ¹¹⁷	0	5	11	5	36	5	57	18	47	45
13	15	02.4	+8	00.6	186	05.9 ¹³⁴		46.0 ¹¹⁷	10 S	17	41	6	02	48	48	23	42		
14	30	02.6	+7	59.7	200	38.3 ¹³⁴		+0	57.8 ¹¹⁸	20	20	46	08	50	52	24	38		
15	45	02.8		58.8	215	10.8 ¹³⁵		+1	09.4 ¹¹⁶	30	23	51	15	51	57	24	34		
16	60	03.0		57.9	229	43.2 ¹³⁴		21.1 ¹¹⁷	35	24	53	19	52	59	24	32			
17	75	03.2	+7	57.0	244	15.7 ¹³⁵		+1	32.8 ¹¹⁷	40	5	24	5	56	6	23	18	53	62
18	90	03.4	+7	56.1	258	48.2 ¹³⁵		+1	44.4 ¹¹⁶	45	5	24	5	58	6	28	18	55	64
19	105	03.6		55.2	273	20.8 ¹³⁶		+1	56.0 ¹¹⁶	50	24	6	01	34	56	69	25	22	
20	120	03.8		54.3	287	53.3 ¹³⁵		+2	07.6 ¹¹⁶	52	23	02	36	57	70	25	21		
21	135	04.0		53.4	302	25.9 ¹³⁶		19.2 ¹¹⁶	54	23	04	39	58	72	26	18			
22	150	04.2		52.4	316	58.5 ¹³⁶		30.8 ¹¹⁶	56	22	05	43	18	59	74	26	16		
23	165	04.4		51.5	331	31.1 ¹³⁶		42.3 ¹¹⁵	58	21	07	46	19	00	77	26	14		
24	180	04.6	+7	50.6	346	03.7 ¹³⁶		+2	53.8 ¹¹⁵	60 S	5	20	6	08	6	50	19	01	80

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 17 ^m 5			Mag: -4.3 PMG: 9 ^h 00 ^m			Mag: +1.2 PMG: 15 ^h 29 ^m			Mag: -2.4 PMG: 6 ^h 10 ^m			Mag: +0.8 PMG: 14 ^h 56 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	340	33.7	225	02.4	+19	19.5	127	38.3	-13	48.7	267	11.3	+21	45.4	135	22.5	-7	58.3
1	355	36.2	240	02.1		19.3	142	39.1		49.2	282	13.5		45.4	150	24.8		58.4
2	10	38.7	255	01.8		19.0	157	40.0		49.8	297	15.7		45.4	165	27.0		58.5
3	25	41.1	270	01.4		18.8	172	40.9		50.4	312	17.9		45.5	180	29.3		58.6
4	40	43.6	285	01.1		18.5	187	41.8		51.0	327	20.1		45.5	195	31.5		58.7
5	55	46.1	300	00.8	+19	18.2	202	42.7	-13	51.5	342	22.3	+21	45.5	210	33.8	-7	58.8
6	70	48.5	315	00.5	+19	18.0	217	43.6	-13	52.1	357	24.5	+21	45.5	225	36.0	-7	58.9
7	85	51.0	330	00.2		17.7	232	44.5		52.7	12	26.7		45.6	240	38.3		59.0
8	100	53.4	344	59.8		17.4	247	45.4		53.3	27	28.8		45.6	255	40.5		59.1
9	115	55.9	359	59.5		17.2	262	46.3		53.8	42	31.0		45.6	270	42.7		59.2
10	130	58.4	14	59.2		16.9	277	47.1		54.4	57	33.2		45.7	285	45.0		59.3
11	146	00.8	29	58.9	+19	16.6	292	48.0	-13	55.0	72	35.4	+21	45.7	300	47.2	-7	59.4
12	161	03.3	44	58.5	+19	16.4	307	48.9	-13	55.5	87	37.6	+21	45.7	315	49.5	-7	59.5
13	176	05.8	59	58.2		16.1	322	49.8		56.1	102	39.8		45.7	330	51.7		59.5
14	191	08.2	74	57.9		15.8	337	50.7		56.7	117	42.0		45.8	345	54.0		59.6
15	206	10.7	89	57.5		15.6	352	51.6		57.2	132	44.2		45.8	0	56.2		59.7
16	221	13.2	104	57.2		15.3	7	52.5		57.8	147	46.4		45.8	15	58.4		59.8
17	236	15.6	119	56.9	+19	15.0	22	53.4	-13	58.4	162	48.6	+21	45.8	31	00.7	-7	59.9
18	251	18.1	134	56.6	+19	14.7	37	54.2	-13	59.0	177	50.8	+21	45.9	46	02.9	-8	00.0
19	266	20.6	149	56.2		14.5	52	55.1	-13	59.5	192	53.0		45.9	61	05.2	-8	00.1
20	281	23.0	164	55.9		14.2	67	56.0	-14	00.1	207	55.2		45.9	76	07.4		00.2
21	296	25.5	179	55.6		13.9	82	56.9		00.7	222	57.4		45.9	91	09.7		00.3
22	311	27.9	194	55.2		13.6	97	57.8		01.2	237	59.6		46.0	106	11.9		00.4
23	326	30.4	209	54.9		13.4	112	58.7		01.8	253	01.7		46.0	121	14.1		00.5
24	341	32.9	224	54.6	+19	13.1	127	59.5	-14	02.4	268	03.9	+21	46.0	136	16.4	-8	00.6
Dif	—		-3	-3			+9	-6			+22	0			+22	-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 5			Edad: 15 ^d 3 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^o 8 20 ^h : 55 ^o 6 SD: 15 ^h 3 PMG: 0 ^h 58 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	04.6	+7 50.6	346	03.7	+2 53.8	60 N	18 59	19 44	20 41	18 46 13	7 39 79		
1	195	04.8	49.7	0	36.3 ¹³⁶	+3 05.3 ¹¹⁵	58	55	36	29	49 16	37 76		
2	210	05.0	48.8	15	09.0 ¹³⁷	16.8 ¹¹⁵	56	51	30	19	52 18	35 73		
3	225	05.2	47.9	29	41.7 ¹³⁷	28.2 ¹¹⁴	54	47	24	10	55 20	33 71		
4	240	05.4	47.0	44	14.3 ¹³⁶	39.7 ¹¹⁵	52	44	19	20 02	18 58 21	31 69		
5	255	05.6	+7 46.0	58	47.0 ¹³⁷	+3 51.1 ¹¹⁴	50	18 41	19 15	19 55	19 00 23	7 29 68		
6	270	05.8	+7 45.1	73	19.7 ¹³⁷	+4 02.4 ¹¹³	45	18 35	19 05	19 41	19 05 27	7 26 64		
7	285	06.0	44.2	87	52.5 ¹³⁸	13.7 ¹¹³	40	29	18 57	30	09 30	23 61		
8	300	06.2	43.3	102	25.2 ¹³⁷	25.0 ¹¹³	35	25	51	21	13 32	21 58		
9	315	06.4	42.4	116	58.0 ¹³⁸	36.3 ¹¹³	30	21	45	14	16 35	18 56		
10	330	06.6	41.5	131	30.7 ¹³⁷	47.6 ¹¹³	20	14	36	19 02	22 38	15 51		
11	345	06.8	+7 40.6	146	03.5 ¹³⁸	+4 58.8 ¹¹²	10 N	18 08	18 29	18 54	19 27 42	7 11 49		
12	0	07.0	+7 39.6	160	36.3 ¹³⁸	+5 09.9 ¹¹¹	0	18 03	18 24	18 48	19 32 44	7 08 45		
13	15	07.2	38.7	175	09.0 ¹³⁷	21.1 ¹¹²	10 S	17 57	19	43	36 48	05 42		
14	30	07.4	37.8	189	41.8 ¹³⁸	32.2 ¹¹¹	20	52	14	40	42 51	7 02 38		
15	45	07.6	36.9	204	14.6 ¹³⁸	43.3 ¹¹¹	30	46	10	38	48 55	6 58 34		
16	60	07.8	36.0	218	47.5 ¹³⁹	+5 54.3 ¹¹⁰	35	42	08	37	51 58	56 32		
17	75	08.0	+7 35.1	233	20.3 ¹³⁸	+6 05.3 ¹¹⁰	40	17 38	18 05	18 37	19 55 60	6 54 29		
18	90	08.3	+7 34.2	247	53.1 ¹³⁸	+6 16.3 ¹¹⁰	45	17 34	18 03	18 37	19 59 64	6 51 26		
19	105	08.5	33.2	262	25.9 ¹³⁸	27.2 ¹⁰⁹	50	28	01	38	20 05 67	47 23		
20	120	08.7	32.3	276	58.8 ¹³⁹	38.1 ¹⁰⁹	52	26	18 00	39	07 69	46 21		
21	135	08.9	31.4	291	31.6 ¹³⁸	49.0 ¹⁰⁹	54	23	17 59	40	10 71	44 19		
22	150	09.1	30.5	306	04.4 ¹³⁸	+6 59.8 ¹⁰⁸	56	20	58	41	13 73	42 17		
23	165	09.3	29.6	320	37.3 ¹³⁹	+7 10.5 ¹⁰⁷	58	17	56	42	17 75	40 15		
24	180	09.5	+7 28.7	335	10.1 ¹³⁸	+7 21.3 ¹⁰⁸	60 S	17 13	17 55	18 43	20 21 77	6 38 12		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 13 ^m 6		Mag: -4.3 PMG: 9 ^h 01 ^m		Mag: +1.2 PMG: 15 ^h 27 ^m		Mag: -2.4 PMG: 6 ^h 07 ^m		Mag: +0.8 PMG: 14 ^h 53 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	341	32.9	224	54.6	+19 13.1	127 59.5	-14 02.4	268 03.9	+21 46.0	136 16.4	-8 00.6
1	356	35.3	239	54.3	12.8	143 00.4	02.9	283 06.1	46.1	151 18.6	00.6
2	11	37.8	254	53.9	12.5	158 01.3	03.5	298 08.3	46.1	166 20.9	00.7
3	26	40.3	269	53.6	12.3	173 02.2	04.1	313 10.5	46.1	181 23.1	00.8
4	41	42.7	284	53.3	12.0	188 03.1	04.7	328 12.7	46.1	196 25.3	00.9
5	56	45.2	299	52.9	+19 11.7	203 04.0	-14 05.2	343 14.9	+21 46.2	211 27.6	-8 01.0
6	71	47.7	314	52.6	+19 11.4	218 04.8	-14 05.8	358 17.1	+21 46.2	226 29.8	-8 01.1
7	86	50.1	329	52.3	11.1	233 05.7	06.4	13 19.3	46.2	241 32.1	01.2
8	101	52.6	344	51.9	10.8	248 06.6	06.9	28 21.5	46.2	256 34.3	01.3
9	116	55.0	359	51.6	10.5	263 07.5	07.5	43 23.7	46.3	271 36.6	01.4
10	131	57.5	14	51.3	10.3	278 08.4	08.1	58 25.9	46.3	286 38.8	01.5
11	147	00.0	29	50.9	+19 10.0	293 09.2	-14 08.6	73 28.1	+21 46.3	301 41.0	-8 01.6
12	162	02.4	44	50.6	+19 09.7	308 10.1	-14 09.2	88 30.3	+21 46.3	316 43.3	-8 01.7
13	177	04.9	59	50.3	09.4	323 11.0	09.8	103 32.5	46.4	331 45.5	01.8
14	192	07.4	74	49.9	09.1	338 11.9	10.3	118 34.7	46.4	346 47.8	01.8
15	207	09.8	89	49.6	08.8	353 12.8	10.9	133 36.9	46.4	1 50.0	01.9
16	222	12.3	104	49.2	08.5	8 13.6	11.5	148 39.1	46.4	16 52.2	02.0
17	237	14.8	119	48.9	+19 08.2	23 14.5	-14 12.0	163 41.3	+21 46.5	31 54.5	-8 02.1
18	252	17.2	134	48.6	+19 07.9	38 15.4	-14 12.6	178 43.5	+21 46.5	46 56.7	-8 02.2
19	267	19.7	149	48.2	07.6	53 16.3	13.2	193 45.7	46.5	61 59.0	02.3
20	282	22.2	164	47.9	07.3	68 17.1	13.7	208 47.9	46.5	77 01.2	02.4
21	297	24.6	179	47.6	07.0	83 18.0	14.3	223 50.1	46.6	92 03.4	02.5
22	312	27.1	194	47.2	06.7	98 18.9	14.9	238 52.3	46.6	107 05.7	02.6
23	327	29.5	209	46.9	06.5	113 19.8	15.4	253 54.5	46.6	122 07.9	02.7
24	342	32.0	224	46.5	+19 06.2	128 20.7	-14 16.0	268 56.7	+21 46.6	137 10.2	-8 02.8
Dif	—		-3	-3		+9	-6	+22	0	+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 2			Edad: 16 ^d 3 PHE { SD: 15'1 PMG: 1 ^h 42 ^m												
				R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	09.5	+7 28.7	335	10.1	+7 21.3		60 N	3 19	4 16	5 00	18 59	15	8 58	77	
1	195	09.7	27.7	349	43.0 ¹³⁹	31.9 ¹⁰⁶		58	31	23	05	19 05	18	53	74	
2	210	09.9	26.8	4	15.8 ¹³⁸	42.6 ¹⁰⁷		56	41	30	09	10 20		48	72	
3	225	10.1	25.9	18	48.7 ¹³⁹	+7 53.2 ¹⁰⁶		54	50	35	12	15 22		44	70	
4	240	10.3	25.0	33	21.5 ¹³⁸	+8 03.7 ¹⁰⁵		52	3 57	40	15	19 24		40	68	
5	255	10.5	+7 24.1	47	54.4 ¹³⁹	+8 14.3 ¹⁰⁶		50	4 04	4 45	5 18	19 23	26	8 37	66	
6	270	10.7	+7 23.1	62	27.2 ¹³⁸	+8 24.7 ¹⁰⁴		45	4 18	4 55	5 25	19 32	29	8 30	62	
7	285	10.9	22.2	77	00.0 ¹³⁸	35.1 ¹⁰⁴		40	29	5 02	30	39 31		24	60	
8	300	11.1	21.3	91	32.9 ¹³⁹	45.5 ¹⁰⁴		35	38	09	34	45 34		19	57	
9	315	11.3	20.4	106	05.7 ¹³⁸	+8 55.8 ¹⁰³		30	45	14	38	19 51	35	14	55	
10	330	11.5	19.5	120	38.6 ¹³⁹	+9 06.1 ¹⁰³		20	4 57	23	45	20 00	39	06	52	
11	345	11.7	+7 18.5	135	11.4 ¹³⁸	+9 16.3 ¹⁰²		10 N	5 05	5 29	5 51	20 09	42	8 00	48	
12	0	11.9	+7 17.6	149	44.2 ¹³⁸	+9 26.5 ¹⁰²		0	5 11	5 35	5 56	20 16	46	7 53	45	
13	15	12.2	16.7	164	17.1 ¹³⁹	36.7 ¹⁰²		10 S	15	40	6 01	24 48		47	42	
14	30	12.4	15.8	178	49.9 ¹³⁸	46.7 ¹⁰⁰		20	19	44	07	33 51		40	39	
15	45	12.6	14.9	193	22.7 ¹³⁸	+9 56.8 ¹⁰¹		30	21	49	13	43 54		32	35	
16	60	12.8	13.9	207	55.5 ¹³⁸	+10 06.7 ⁹⁹		35	21	51	16	49 56		28	33	
17	75	13.0	+7 13.0	222	28.3 ¹³⁸	+10 16.7 ¹⁰⁰		40	5 21	5 53	6 20	20 55	59	7 23	30	
18	90	13.2	+7 12.1	237	01.1 ¹³⁸	+10 26.5 ⁹⁸		45	5 21	5 55	6 24	21 03	61	7 17	28	
19	105	13.4	11.2	251	33.9 ¹³⁸	36.3 ⁹⁸		50	20	57	30	12 65		10	24	
20	120	13.6	10.3	266	06.7 ¹³⁸	46.1 ⁹⁸		52	19	58	32	16 67		07	22	
21	135	13.8	09.3	280	39.4 ¹³⁷	+10 55.8 ⁹⁷		54	18	5 59	35	21 68		7 03	21	
22	150	14.0	08.4	295	12.2 ¹³⁸	+11 05.5 ⁹⁷		56	17	6 00	37	26 71		6 59	19	
23	165	14.2	07.5	309	44.9 ¹³⁷	15.0 ⁹⁵		58	16	01	41	32 73		55	17	
24	180	14.4	+7 06.6	324	17.7 ¹³⁸	+11 24.6 ⁹⁶		60 S	5 14	6 02	6 44	21 38	76	6 50	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 1 ^h 09 ^m 7		Mag: -4.3 PMG: 9 ^h 01 ^m		Mag: +1.2 PMG: 15 ^h 26 ^m		Mag: -2.4 PMG: 6 ^h 03 ^m		Mag: +0.8 PMG: 14 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	342	32.0	224	46.5	+19 06.2	128	20.7	-14 16.0	268	56.7	+21 46.6	137	10.2	-8 02.8
1	357	34.5	239	46.2	05.9	143	21.5	16.6	283	58.9	46.7	152	12.4	02.9
2	12	36.9	254	45.9	05.6	158	22.4	17.1	299	01.1	46.7	167	14.6	03.0
3	27	39.4	269	45.5	05.3	173	23.3	17.7	314	03.3	46.7	182	16.9	03.1
4	42	41.9	284	45.2	04.9	188	24.2	18.3	329	05.5	46.7	197	19.1	03.1
5	57	44.3	299	44.9	+19 04.6	203	25.0	-14 18.8	344	07.7	+21 46.8	212	21.4	-8 03.2
6	72	46.8	314	44.5	+19 04.3	218	25.9	-14 19.4	359	09.9	+21 46.8	227	23.6	-8 03.3
7	87	49.3	329	44.2	04.0	233	26.8	20.0	14	12.1	46.8	242	25.8	03.4
8	102	51.7	344	43.8	03.7	248	27.7	20.5	29	14.4	46.8	257	28.1	03.5
9	117	54.2	359	43.5	03.4	263	28.5	21.1	44	16.6	46.9	272	30.3	03.6
10	132	56.6	14	43.1	03.1	278	29.4	21.7	59	18.8	46.9	287	32.6	03.7
11	147	59.1	29	42.8	+19 02.8	293	30.3	-14 22.2	74	21.0	+21 46.9	302	34.8	-8 03.8
12	163	01.6	44	42.5	+19 02.5	308	31.1	-14 22.8	89	23.2	+21 46.9	317	37.0	-8 03.9
13	178	04.0	59	42.1	02.2	323	32.0	23.4	104	25.4	47.0	332	39.3	04.0
14	193	06.5	74	41.8	01.9	338	32.9	23.9	119	27.6	47.0	347	41.5	04.1
15	208	09.0	89	41.4	01.6	353	33.8	24.5	134	29.8	47.0	2	43.7	04.2
16	223	11.4	104	41.1	01.3	8	34.6	25.1	149	32.0	47.0	17	46.0	04.3
17	238	13.9	119	40.7	+19 00.9	23	35.5	-14 25.6	164	34.2	+21 47.1	32	48.2	-8 04.4
18	253	16.4	134	40.4	+19 00.6	38	36.4	-14 26.2	179	36.4	+21 47.1	47	50.5	-8 04.5
19	268	18.8	149	40.1	+19 00.3	53	37.2	26.7	194	38.6	47.1	62	52.7	04.5
20	283	21.3	164	39.7	+19 00.0	68	38.1	27.3	209	40.8	47.1	77	54.9	04.6
21	298	23.8	179	39.4	+18 59.7	83	39.0	27.9	224	43.0	47.2	92	57.2	04.7
22	313	26.2	194	39.0	59.4	98	39.9	28.4	239	45.3	47.2	107	59.4	04.8
23	328	28.7	209	38.7	59.0	113	40.7	29.0	254	47.5	47.2	123	01.7	04.9
24	343	31.1	224	38.3	+18 58.7	128	41.6	-14 29.6	269	49.7	+21 47.2	138	03.9	-8 05.0
Dif	—		-3 -3		+9 -6		+22 0		+22 0		+22 -1		-1 -1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 17 ^d 3 PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 9			SD: 15°0 PMG: 2 ^h 27 ^m R°: 46 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	14.4	+7 06.6	324	17.7	+11 24.6	95	60 N	18 53	19 37	20 34	19 14 20	10 15 74		
1	195	14.6	05.6	338	50.4 ¹³⁷	34.1	95	58	49	31	22	23 22	07 72		
2	210	14.8	04.7	353	23.1 ¹³⁷	43.5	94	56	46	24	13	30 24	10 00 69		
3	225	15.1	03.8	7	55.8 ¹³⁷	+11 52.8	93	54	42	19	20 04	37 26	9 54 66		
4	240	15.3	02.9	22	28.5 ¹³⁷	+12 02.2	94	52	40	14	19 57	43 28	48 66		
5	255	15.5	+7 02.0	37	01.2 ¹³⁷	+12 11.4	92	50	18 37	19 10	19 50	19 49 29	9 43 64		
6	270	15.7	+7 01.0	51	33.9 ¹³⁷	+12 20.6	92	45	18 31	19 01	19 37	20 01 31	9 32 61		
7	285	15.9	+7 00.1	66	06.6 ¹³⁷	29.7	91	40	26	18 54	27	10 35	24 58		
8	300	16.1	+6 59.2	80	39.2 ¹³⁶	38.8	91	35	22	48	18	19 36	16 56		
9	315	16.3	58.3	95	11.8 ¹³⁶	47.8	90	30	19	43	11	26 38	9 09 54		
10	330	16.5	57.3	109	44.5 ¹³⁷	+12 56.7	89	20	12	35	19 01	39 41	8 58 51		
11	345	16.7	+6 56.4	124	17.1 ¹³⁶	+13 05.6	89	10 N	18 07	18 28	18 53	20 51 43	8 48 48		
12	0	16.9	+6 55.5	138	49.6 ¹³⁵	+13 14.4	88	0	18 02	18 23	18 47	21 02 46	8 38 46		
13	15	17.1	54.6	153	22.2 ¹³⁶	23.1	87	10 S	17 57	18	43	12 49	29 43		
14	30	17.3	53.6	167	54.8 ¹³⁶	31.8	87	20	52	14	40	24 51	19 40		
15	45	17.6	52.7	182	27.3 ¹³⁵	40.4	86	30	47	11	39	37 54	07 37		
16	60	17.8	51.8	196	59.8 ¹³⁵	49.0	86	35	44	09	38	45 56	8 01 35		
17	75	18.0	+6 50.9	211	32.4 ¹³⁶	+13 57.4	84	40	17 40	18 07	18 39	21 54 58	7 53 33		
18	90	18.2	+6 49.9	226	04.8 ¹³⁴	+14 05.9	85	45	17 36	18 05	18 39	22 04 60	7 45 30		
19	105	18.4	49.0	240	37.3 ¹³⁵	14.2	83	50	31	04	41	17 63	34 27		
20	120	18.6	48.1	255	09.8 ¹³⁵	22.5	83	52	29	03	42	23 64	29 26		
21	135	18.8	47.2	269	42.2 ¹³⁴	30.7	82	54	27	02	43	29 67	24 24		
22	150	19.0	46.2	284	14.6 ¹³⁴	38.8	81	56	24	01	44	37 68	18 22		
23	165	19.2	45.3	298	47.0 ¹³⁴	46.9	81	58	21	18 00	46	45 70	12 19		
24	180	19.4	+6 44.4	313	19.4 ¹³⁴	+14 54.9	80	60 S	17 18	17 59	18 48	22 54 73	7 04 17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 05 ^m 7		Mag: -4.3 PMG: 9 ^h 02 ^m		Mag: +1.2 PMG: 15 ^h 24 ^m		Mag: -2.4 PMG: 6 ^h 00 ^m		Mag: +0.8 PMG: 14 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	343	31.1	224	38.3	+18 58.7	128	41.6	-14 29.6	269	49.7	+21 47.2	138	03.9	-8 05.0
1	358	33.6	239	38.0	58.4	143	42.5	30.1	284	51.9	47.3	153	06.1	05.1
2	13	36.1	254	37.6	58.1	158	43.3	30.7	299	54.1	47.3	168	08.4	05.2
3	28	38.5	269	37.3	57.8	173	44.2	31.3	314	56.3	47.3	183	10.6	05.3
4	43	41.0	284	36.9	57.4	188	45.1	31.8	329	58.5	47.3	198	12.8	05.4
5	58	43.5	299	36.6	+18 57.1	203	45.9	-14 32.4	345	00.7	+21 47.4	213	15.1	-8 05.5
6	73	45.9	314	36.3	+18 56.8	218	46.8	-14 32.9	0	02.9	+21 47.4	228	17.3	-8 05.6
7	88	48.4	329	35.9	56.5	233	47.7	33.5	15	05.2	47.4	243	19.5	05.7
8	103	50.9	344	35.6	56.1	248	48.5	34.1	30	07.4	47.4	258	21.8	05.8
9	118	53.3	359	35.2	55.8	263	49.4	34.6	45	09.6	47.5	273	24.0	05.9
10	133	55.8	14	34.9	55.5	278	50.3	35.2	60	11.8	47.5	288	26.3	06.0
11	148	58.2	29	34.5	+18 55.1	293	51.1	-14 35.8	75	14.0	+21 47.5	303	28.5	-8 06.0
12	164	00.7	44	34.2	+18 54.8	308	52.0	-14 36.3	90	16.2	+21 47.5	318	30.7	-8 06.1
13	179	03.2	59	33.8	54.5	323	52.9	36.9	105	18.4	47.6	333	33.0	06.2
14	194	05.6	74	33.5	54.2	338	53.7	37.4	120	20.6	47.6	348	35.2	06.3
15	209	08.1	89	33.1	53.8	353	54.6	38.0	135	22.9	47.6	3	37.4	06.4
16	224	10.6	104	32.8	53.5	8	55.5	38.6	150	25.1	47.6	18	39.7	06.5
17	239	13.0	119	32.4	+18 53.2	23	56.3	-14 39.1	165	27.3	+21 47.6	33	41.9	-8 06.6
18	254	15.5	134	32.1	+18 52.8	38	57.2	-14 39.7	180	29.5	+21 47.7	48	44.1	-8 06.7
19	269	18.0	149	31.7	52.5	53	58.1	40.3	195	31.7	47.7	63	46.4	06.8
20	284	20.4	164	31.4	52.1	68	58.9	40.8	210	33.9	47.7	78	48.6	06.9
21	299	22.9	179	31.0	51.8	83	59.8	41.4	225	36.1	47.7	93	50.9	07.0
22	314	25.4	194	30.7	51.5	99	00.6	41.9	240	38.4	47.8	108	53.1	07.1
23	329	27.8	209	30.3	51.1	114	01.5	42.5	255	40.6	47.8	123	55.3	07.2
24	344	30.3	224	29.9	+18 50.8	129	02.4	-14 43.1	270	42.8	+21 47.8	138	57.6	-8 07.3
Dif	—		-3	-3		+9	-6		+22	0		+22	-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58 ^m 5			Edad: 18 ^d 3 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 PMG: 3 ^h 13 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	19.4	+6	44.4	313	19.4	+14	54.9	60 N	3 25	4 21	5 05	19 34	25	11 29	71		
1	195	19.7		43.4	327	51.8 ¹³⁴	+15	02.8	58	36	28	09	45	27	19	68		
2	210	19.9		42.5	342	24.1 ¹³³		10.7	56	46	34	13	19	54	30	09	67	
3	225	20.1		41.6	356	56.5 ¹³⁴		18.5	54	3 54	39	16	20	03	31	11	01	
4	240	20.3		40.7	11	28.8 ¹³³		26.2	52	4 01	44	19	11	32	10	54	63	
5	255	20.5	+6	39.7	26	01.0 ¹³²	+15	33.9	50	4 08	4 48	5 21	20	18	33	10	47	
6	270	20.7	+6	38.8	40	33.3 ¹³³	+15	41.4	45	4 21	4 57	5 27	20	32	37	10	33	
7	285	20.9		37.9	55	05.6 ¹³³		48.9	40	31	5 04	32	45	38	22	57		
8	300	21.1		36.9	69	37.8 ¹³²	+15	56.3	35	40	10	36	20	55	40	12	55	
9	315	21.3		36.0	84	10.0 ¹³²	+16	03.7	30	47	15	39	21	04	41	10	03	
10	330	21.5		35.1	98	42.2 ¹³²		11.0	20	4 57	23	45	20	44	9	49	50	
11	345	21.8	+6	34.2	113	14.3 ¹³¹	+16	18.2	10 N	5 05	5 29	5 51	21	34	46	9	36	
12	0	22.0	+6	33.2	127	46.5 ¹³²	+16	25.3	0	5 10	5 34	5 55	21	48	46	9	24	
13	15	22.2		32.3	142	18.6 ¹³¹		32.3	10 S	14	39	6 00	22	01	48	9	12	
14	30	22.4		31.4	156	50.7 ¹³¹		39.3	20	17	43	05	15	50	8	59	42	
15	45	22.6		30.4	171	22.7 ¹³⁰		46.2	30	18	46	10	31	53	44	40		
16	60	22.8		29.5	185	54.8 ¹³¹		53.0	35	19	48	13	41	54	36	38		
17	75	23.0	+6	28.6	200	26.8 ¹³⁰	+16	59.8	40	5 18	5 50	6 17	22	52	55	8	26	
18	90	23.2	+6	27.7	214	58.8 ¹³⁰	+17	06.4	45	5 17	5 51	6 21	23	04	58	8	15	
19	105	23.4		26.7	229	30.8 ¹³⁰		13.0	50	16	53	25	20	60	8	01	31	
20	120	23.7		25.8	244	02.8 ¹³⁰		19.5	52	15	54	27	27	61	7	55	30	
21	135	23.9		24.9	258	34.7 ¹²⁹		25.9	54	14	54	30	36	62	48	28		
22	150	24.1		23.9	273	06.6 ¹²⁹		32.2	56	12	55	32	45	64	40	27		
23	165	24.3		23.0	287	38.5 ¹²⁹		38.5	58	11	56	35	23	55	66	31	25	
24	180	24.5	+6	22.1	302	10.4 ¹²⁹	+17	44.7	60 S	5 09	5 57	6 38	** ** *	**	7 21	22		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 01 ^m 8		Mag: -4.3 PMG: 9 ^h 02 ^m			Mag: +1.2 PMG: 15 ^h 23 ^m			Mag: -2.4 PMG: 5 ^h 56 ^m			Mag: +0.8 PMG: 14 ^h 42 ^m						
	hG ☿		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	344	30.3	224	29.9	+18	50.8	129	02.4	-14	43.1	270	42.8	+21	47.8	138	57.6		
1	359	32.7	239	29.6		50.4	144	03.2		43.6	285	45.0		47.8	153	59.8		
2	14	35.2	254	29.2		50.1	159	04.1		44.2	300	47.2		47.9	169	02.0		
3	29	37.7	269	28.9		49.8	174	04.9		44.7	315	49.5		47.9	184	04.3		
4	44	40.1	284	28.5		49.4	189	05.8		45.3	330	51.7		47.9	199	06.5		
5	59	42.6	299	28.2	+18	49.1	204	06.7	-14	45.9	345	53.9	+21	47.9	214	08.7		
6	74	45.1	314	27.8	+18	48.7	219	07.5	-14	46.4	0	56.1	+21	48.0	229	11.0		
7	89	47.5	329	27.5		48.4	234	08.4		47.0	15	58.3		48.0	244	13.2		
8	104	50.0	344	27.1		48.0	249	09.2		47.5	31	00.5		48.0	259	15.4		
9	119	52.5	359	26.8		47.7	264	10.1		48.1	46	02.8		48.0	274	17.7		
10	134	54.9	14	26.4		47.3	279	11.0		48.7	61	05.0		48.0	289	19.9		
11	149	57.4	29	26.0	+18	47.0	294	11.8	-14	49.2	76	07.2	+21	48.1	304	22.1		
12	164	59.9	44	25.7	+18	46.6	309	12.7	-14	49.8	91	09.4	+21	48.1	319	24.4		
13	180	02.3	59	25.3		46.3	324	13.5		50.3	106	11.6		48.1	334	26.6		
14	195	04.8	74	25.0		45.9	339	14.4		50.9	121	13.9		48.1	349	28.8		
15	210	07.2	89	24.6		45.6	354	15.3		51.4	136	16.1		48.2	4	31.1		
16	225	09.7	104	24.3		45.2	9	16.1		52.0	151	18.3		48.2	19	33.3		
17	240	12.2	119	23.9	+18	44.9	24	17.0	-14	52.6	166	20.5	+21	48.2	34	35.6		
18	255	14.6	134	23.6	+18	44.5	39	17.8	-14	53.1	181	22.8	+21	48.2	49	37.8		
19	270	17.1	149	23.2		44.2	54	18.7		53.7	196	25.0		48.2	64	40.0		
20	285	19.6	164	22.8		43.8	69	19.5		54.2	211	27.2		48.3	79	42.3		
21	300	22.0	179	22.5		43.4	84	20.4		54.8	226	29.4		48.3	94	44.5		
22	315	24.5	194	22.1		43.1	99	21.3		55.4	241	31.7		48.3	109	46.7		
23	330	27.0	209	21.8		42.7	114	22.1		55.9	256	33.9		48.3	124	49.0		
24	345	29.4	224	21.4	+18	42.4	129	23.0	-14	56.5	271	36.1	+21	48.4	139	51.2		
Dif	—		-4		-4		+9		-6		+22		0		+22		-	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 2		Edad: 19 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 3 ^h 59 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	24.5	+6	22.1	302	10.4	+17 44.7	60 N	18 47	19 31	20 26	19 59 33	12 40 64	
1	195	24.7		21.1	316	42.2 ¹²⁸	50.8 ⁶¹	58	44	25	15	20 12 35	27 62	
2	210	24.9		20.2	331	14.0 ¹²⁸	+17 56.8 ⁶⁰	56	41	19	20 06	24 36	16 61	
3	225	25.1		19.3	345	45.8 ¹²⁸	+18 02.7 ⁵⁹	54	38	14	19 59	34 38	12 06 59	
4	240	25.4		18.3	0	17.6 ¹²⁸	08.6 ⁵⁹	52	35	10	52	43 39	11 57 59	
5	255	25.6	+6	17.4	14	49.4 ¹²⁸	+18 14.3 ⁵⁷	50	18 33	19 06	19 46	20 51 40	11 49 58	
6	270	25.8	+6	16.5	29	21.1 ¹²⁷	+18 20.0 ⁵⁷	45	18 27	18 57	19 33	21 09 41	11 32 56	
7	285	26.0		15.5	43	52.8 ¹²⁷	25.6 ⁵⁶	40	23	50	23	23 42	19 54	
8	300	26.2		14.6	58	24.5 ¹²⁷	31.1 ⁵⁵	35	19	45	15	35 43	11 07 53	
9	315	26.4		13.7	72	56.1 ¹²⁶	36.6 ⁵⁵	30	16	40	19 09	21 45 45	10 57 52	
10	330	26.6		12.7	87	27.8 ¹²⁷	41.9 ⁵³	20	11	33	18 59	22 04 45	39 51	
11	345	26.8	+6	11.8	101	59.4 ¹²⁶	+18 47.1 ⁵²	10 N	18 06	18 27	18 52	22 20 46	10 24 49	
12	0	27.1	+6	10.9	116	30.9 ¹²⁵	+18 52.3 ⁵¹	0	18 01	18 22	18 46	22 34 48	10 10 47	
13	15	27.3		09.9	131	02.5 ¹²⁶	+18 57.4 ⁵⁰	10 S	17 57	18	43	22 49 49	9 56 46	
14	30	27.5		09.0	145	34.0 ¹²⁵	+19 02.4 ⁴⁹	20	53	15	40	23 05 50	41 44	
15	45	27.7		08.1	160	05.5 ¹²⁵	07.3 ⁴⁸	30	48	12	40	24 51	24 42	
16	60	27.9		07.1	174	37.0 ¹²⁵	12.1 ⁴⁸	35	45	10	40	35 52	14 41	
17	75	28.1	+6	06.2	189	08.5 ¹²⁵	+19 16.9 ⁴⁸	40	17 42	18 09	18 40	23 47 53	9 02 40	
18	90	28.3	+6	05.3	203	39.9 ¹²⁴	+19 21.5 ⁴⁶	45	17 38	18 08	18 42	*** ** *	8 49 38	
19	105	28.5		04.3	218	11.4 ¹²⁵	26.1 ⁴⁶	50	34	06	44	*** ** *	32 37	
20	120	28.8		03.4	232	42.8 ¹²⁴	30.5 ⁴⁴	52	32	06	45	*** ** *	25 35	
21	135	29.0		02.5	247	14.1 ¹²³	34.9 ⁴⁴	54	30	05	46	*** ** *	16 34	
22	150	29.2		01.5	261	45.5 ¹²⁴	39.2 ⁴³	56	28	05	48	*** ** *	8 07 32	
23	165	29.4	+6	00.6	276	16.8 ¹²³	43.4 ⁴²	58	25	04	50	*** ** *	7 56 31	
24	180	29.6	+5	59.6	290	48.1 ¹²³	+19 47.5 ⁴¹	60 S	17 22	18 04	18 52	0 07 68	7 43 29	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 57 ^m 9		Mag: -4.3 PMG: 9 ^h 03 ^m		Mag: +1.2 PMG: 15 ^h 22 ^m		Mag: -2.4 PMG: 5 ^h 53 ^m		Mag: +0.8 PMG: 14 ^h 38 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	345	29.4	224	21.4	+18 42.4	129	23.0	-14 56.5	271	36.1	+21 48.4	139	51.2	-8 09.5
1	0	31.9	239	21.0	42.0	144	23.8	57.0	286	38.3	48.4	154	53.4	09.6
2	15	34.3	254	20.7	41.6	159	24.7	57.6	301	40.6	48.4	169	55.7	09.7
3	30	36.8	269	20.3	41.3	174	25.5	58.1	316	42.8	48.4	184	57.9	09.8
4	45	39.3	284	20.0	40.9	189	26.4	58.7	331	45.0	48.5	200	00.1	09.9
5	60	41.7	299	19.6	+18 40.5	204	27.2	-14 59.3	346	47.2	+21 48.5	215	02.3	-8 10.0
6	75	44.2	314	19.2	+18 40.2	219	28.1	-14 59.8	1	49.5	+21 48.5	230	04.6	-8 10.1
7	90	46.7	329	18.9	39.8	234	28.9	-15 00.4	16	51.7	48.5	245	06.8	10.2
8	105	49.1	344	18.5	39.4	249	29.8	00.9	31	53.9	48.5	260	09.0	10.3
9	120	51.6	359	18.2	39.1	264	30.6	01.5	46	56.1	48.6	275	11.3	10.4
10	135	54.1	14	17.8	38.7	279	31.5	02.0	61	58.4	48.6	290	13.5	10.5
11	150	56.5	29	17.4	+18 38.3	294	32.3	-15 02.6	77	00.6	+21 48.6	305	15.7	-8 10.6
12	165	59.0	44	17.1	+18 38.0	309	33.2	-15 03.1	92	02.8	+21 48.6	320	18.0	-8 10.7
13	181	01.5	59	16.7	37.6	324	34.0	03.7	107	05.0	48.7	335	20.2	10.8
14	196	03.9	74	16.4	37.2	339	34.9	04.3	122	07.3	48.7	350	22.4	10.9
15	211	06.4	89	16.0	36.8	354	35.7	04.8	137	09.5	48.7	5	24.7	11.0
16	226	08.8	104	15.6	36.5	9	36.6	05.4	152	11.7	48.7	20	26.9	11.1
17	241	11.3	119	15.3	+18 36.1	24	37.4	-15 05.9	167	14.0	+21 48.7	35	29.1	-8 11.1
18	256	13.8	134	14.9	+18 35.7	39	38.3	-15 06.5	182	16.2	+21 48.8	50	31.4	-8 11.2
19	271	16.2	149	14.5	35.3	54	39.1	07.0	197	18.4	48.8	65	33.6	11.3
20	286	18.7	164	14.2	34.9	69	40.0	07.6	212	20.7	48.8	80	35.8	11.4
21	301	21.2	179	13.8	34.6	84	40.8	08.1	227	22.9	48.8	95	38.1	11.5
22	316	23.6	194	13.4	34.2	99	41.7	08.7	242	25.1	48.8	110	40.3	11.6
23	331	26.1	209	13.1	33.8	114	42.5	09.2	257	27.4	48.9	125	42.5	11.7
24	346	28.6	224	12.7	+18 33.4	129	43.4	-15 09.8	272	29.6	+21 48.9	140	44.8	-8 11.8
Dif	—		-4		-4	+9		-6	+22		0	+22		-1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15'9			Edad: 20 ^d 3	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3																		
	PMG: 11 ^h 57 ^m 9																						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	180	29.6	+5	290	48.1	+19	47.5	40	60 N	3	31	4	26	5	10	20	32	45	13	44	56		
1	195	29.8		305	19.4 ¹²³		51.5	40	58		42		32		13	20	47	46		29	55		
2	210	30.0		319	50.6 ¹²²		55.5	40	56		51		38		17	21	00	46		17	54		
3	225	30.3		334	21.9 ¹²³	+19	59.3	38	54		3	58	43	19			12	46		13	05	54	
4	240	30.5		348	53.1 ¹²²	+20	03.1	38	52		4	05	47	22			22	46		12	56	53	
5	255	30.7	+5	3	24.3 ¹²²	+20	06.7	36	50		4	11	4	51	5	24	21	31	46		12	47	52
6	270	30.9	+5	17	55.4 ¹²¹	+20	10.3	36	45		4	24	5	00	5	29	21	50	47		12	28	52
7	285	31.1		32	26.6 ¹²²		13.7	34	40		34		06		34	22	05	47		13	51		
8	300	31.3		46	57.7 ¹²¹		17.1	34	35		41		12		37		18	48		12	00	51	
9	315	31.5		61	28.8 ¹²¹		20.4	33	30		48		16		40		30	47		11	49	50	
10	330	31.8		75	59.9 ¹²¹		23.6	32	20		4	58	24		46	22	49	48		30	49		
11	345	32.0	+5	90	30.9 ¹²⁰	+20	26.7	31	10 N		5	05	5	29	5	50	23	06	49		11	13	49
12	0	32.2	+5	105	01.9 ¹²⁰	+20	29.7	30	0		5	10	5	34	5	55	23	22	49		10	57	49
13	15	32.4		119	33.0 ¹²¹		32.6	29	10 S		13		38		5	59		38	49		42	48	
14	30	32.6		134	03.9 ¹¹⁹		35.4	28	20		15		41		6	03	23	55	50		25	47	
15	45	32.8		148	34.9 ¹²⁰		38.1	27	30		16		44		08	**	**	**		10	06	46	
16	60	33.0		163	05.9 ¹²⁰		40.7	26	35		16		45		10	**	**	**		9	55	45	
17	75	33.3	+5	177	36.8 ¹¹⁹	+20	43.3	26	40		5	15	5	46	6	13	**	**	**		9	42	45
18	90	33.5	+5	192	07.7 ¹¹⁹	+20	45.7	24	45		5	14	5	48	6	17	0	02	54		9	27	44
19	105	33.7		206	38.6 ¹¹⁹		48.0	23	50		11		49		21		20	55		09	43		
20	120	33.9		221	09.5 ¹¹⁹		50.3	23	52		10		49		23		28	56		9	00	42	
21	135	34.1		235	40.3 ¹¹⁸		52.4	21	54		09		50		25		38	57		8	50	42	
22	150	34.3		250	11.1 ¹¹⁸		54.5	21	56		07		50		27		0	49	57		39	41	
23	165	34.5		264	42.0 ¹¹⁹		56.4	19	58		05		50		30		1	01	59		27	40	
24	180	34.8	+5	279	12.8 ¹¹⁸	+20	58.3	19	60 S		5	03	5	51	6	32	1	15	61		8	12	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 0 ^h 53 ^m 9		Mag: -4.3 PMG: 9 ^h 03 ^m		Mag: +1.2 PMG: 15 ^h 20 ^m		Mag: -2.4 PMG: 5 ^h 49 ^m		Mag: +0.8 PMG: 14 ^h 35 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	346	28.6	224	12.7	+18	33.4	129	43.4	-15	09.8	272	29.6	+21	48.9	140	44.8	-8	11.8	
1	1	31.0	239	12.4		33.0	144	44.2		10.4	287	31.8		48.9	155	47.0		11.9	
2	16	33.5	254	12.0		32.7	159	45.1		10.9	302	34.0		48.9	170	49.2		12.0	
3	31	36.0	269	11.6		32.3	174	45.9		11.5	317	36.3		49.0	185	51.4		12.1	
4	46	38.4	284	11.3		31.9	189	46.8		12.0	332	38.5		49.0	200	53.7		12.2	
5	61	40.9	299	10.9	+18	31.5	204	47.6	-15	12.6	347	40.7	+21	49.0	215	55.9	-8	12.3	
6	76	43.3	314	10.5	+18	31.1	219	48.5	-15	13.1	2	43.0	+21	49.0	230	58.1	-8	12.4	
7	91	45.8	329	10.2		30.7	234	49.3		13.7	17	45.2		49.0	246	00.4		12.5	
8	106	48.3	344	09.8		30.3	249	50.1		14.2	32	47.4		49.1	261	02.6		12.6	
9	121	50.7	359	09.4		29.9	264	51.0		14.8	47	49.7		49.1	276	04.8		12.7	
10	136	53.2	14	09.1		29.6	279	51.8		15.3	62	51.9		49.1	291	07.1		12.8	
11	151	55.7	29	08.7	+18	29.2	294	52.7	-15	15.9	77	54.2	+21	49.1	306	09.3	-8	12.9	
12	166	58.1	44	08.3	+18	28.8	309	53.5	-15	16.4	92	56.4	+21	49.1	321	11.5	-8	13.0	
13	182	00.6	59	08.0		28.4	324	54.4		17.0	107	58.6		49.2	336	13.8		13.1	
14	197	03.1	74	07.6		28.0	339	55.2		17.5	123	00.9		49.2	351	16.0		13.2	
15	212	05.5	89	07.2		27.6	354	56.0		18.1	138	03.1		49.2	6	18.2		13.3	
16	227	08.0	104	06.9		27.2	9	56.9		18.6	153	05.3		49.2	21	20.4		13.3	
17	242	10.4	119	06.5	+18	26.8	24	57.7	-15	19.2	168	07.6	+21	49.3	36	22.7	-8	13.4	
18	257	12.9	134	06.1	+18	26.4	39	58.6	-15	19.7	183	09.8	+21	49.3	51	24.9	-8	13.5	
19	272	15.4	149	05.8		26.0	54	59.4		20.3	198	12.0		49.3	66	27.1		13.6	
20	287	17.8	164	05.4		25.6	70	00.3		20.9	213	14.3		49.3	81	29.4		13.7	
21	302	20.3	179	05.0		25.2	85	01.1		21.4	228	16.5		49.3	96	31.6		13.8	
22	317	22.8	194	04.6		24.8	100	01.9		22.0	243	18.8		49.4	111	33.8		13.9	
23	332	25.2	209	04.3		24.4	115	02.8		22.5	258	21.0		49.4	126	36.0		14.0	
24	347	27.7	224	03.9	+18	24.0	130	03.6	-15	23.1	273	23.2	+21	49.4	141	38.3	-8	14.1	
Dif	—		-4	-4		-4	+8	-6		-6	+22			0	+22				-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 5		Edad: 21 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 PMG: 5 ^h 34 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	34.8	+5 37.1	279	12.8	+20 58.3	60 N	18 41	19 25	20 19	21 17 56	14 40 45		
1	195	35.0		293	43.5 ¹¹⁷	+21 00.0	58	38	19	09	33 55	24 46		
2	210	35.2	35.2	308	14.3 ¹¹⁸	+21 01.7	56	35	13	20 00	46 55	14 11 46		
3	225	35.4	34.3	322	45.0 ¹¹⁷	03.2	54	33	09	19 53	21 58 54	13 59 46		
4	240	35.6	33.4	337	15.7 ¹¹⁷	04.7	52	30	05	46	22 08 54	49 46		
5	255	35.8	+5 32.4	351	46.4 ¹¹⁷	+21 06.1	50	18 28	19 01	19 41	22 17 54	13 39 47		
6	270	36.1	+5 31.5	6	17.1 ¹¹⁷	+21 07.3	45	18 24	18 53	19 29	22 37 52	13 20 47		
7	285	36.3	30.5	20	47.8 ¹¹⁷	08.5	40	20	47	20	22 52 53	13 04 48		
8	300	36.5	29.6	35	18.5 ¹¹⁷	09.6	35	17	42	12	23 06 51	12 51 48		
9	315	36.7	28.7	49	49.1 ¹¹⁶	10.5	30	14	38	19 06	17 52	39 48		
10	330	36.9	27.7	64	19.7 ¹¹⁶	11.4	20	09	31	18 57	37 51	19 49		
11	345	37.1	+5 26.8	78	50.3 ¹¹⁶	+21 12.2	10 N	18 05	18 26	18 50	23 55 49	12 02 49		
12	0	37.4	+5 25.8	93	20.9 ¹¹⁶	+21 12.8	0	18 01	18 22	18 46	*** ** *	11 46 49		
13	15	37.6	24.9	107	51.5 ¹¹⁶	13.4	10 S	17 57	18	43	*** ** *	30 49		
14	30	37.8	23.9	122	22.1 ¹¹⁶	13.9	20	53	15	41	*** ** *	11 12 49		
15	45	38.0	23.0	136	52.6 ¹¹⁵	14.3	30	49	13	41	0 15 50	10 52 50		
16	60	38.2	22.1	151	23.1 ¹¹⁵	14.5	35	47	12	41	27 49	40 50		
17	75	38.4	+5 21.1	165	53.7 ¹¹⁶	+21 14.7	40	17 44	18 11	18 42	0 40 50	10 27 50		
18	90	38.7	+5 20.2	180	24.2 ¹¹⁵	+21 14.8	45	17 41	18 10	18 44	0 56 50	10 11 50		
19	105	38.9	19.2	194	54.7 ¹¹⁵	14.7	50	37	09	47	1 15 50	9 52 50		
20	120	39.1	18.3	209	25.1 ¹¹⁴	14.6	52	35	09	48	24 50	42 50		
21	135	39.3	17.3	223	55.6 ¹¹⁵	14.4	54	34	09	50	35 50	32 50		
22	150	39.5	16.4	238	26.1 ¹¹⁵	14.1	56	32	09	52	1 46 51	20 50		
23	165	39.7	15.5	252	56.5 ¹¹⁴	13.6	58	29	09	54	2 00 50	9 07 50		
24	180	40.0	+5 14.5	267	26.9 ¹¹⁴	+21 13.1	60 S	17 27	18 08	18 57	2 16 50	8 51 50		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 50 ^m 0		Mag: -4.2 PMG: 9 ^h 04 ^m		Mag: +1.2 PMG: 15 ^h 19 ^m		Mag: -2.4 PMG: 5 ^h 46 ^m		Mag: +0.8 PMG: 14 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	347	27.7	224	03.9	+18 24.0	130	03.6	-15 23.1	273	23.2	+21 49.4	141	38.3	-8 14.1
1	2	30.2	239	03.5	23.6	145	04.5	23.6	288	25.5	49.4	156	40.5	14.2
2	17	32.6	254	03.2	23.2	160	05.3	24.2	303	27.7	49.4	171	42.7	14.3
3	32	35.1	269	02.8	22.8	175	06.1	24.7	318	30.0	49.5	186	45.0	14.4
4	47	37.6	284	02.4	22.4	190	07.0	25.3	333	32.2	49.5	201	47.2	14.5
5	62	40.0	299	02.1	+18 22.0	205	07.8	-15 25.8	348	34.4	+21 49.5	216	49.4	-8 14.6
6	77	42.5	314	01.7	+18 21.6	220	08.7	-15 26.4	3	36.7	+21 49.5	231	51.6	-8 14.7
7	92	44.9	329	01.3	21.1	235	09.5	26.9	18	38.9	49.5	246	53.9	14.8
8	107	47.4	344	00.9	20.7	250	10.3	27.5	33	41.2	49.6	261	56.1	14.9
9	122	49.9	359	00.6	20.3	265	11.2	28.0	48	43.4	49.6	276	58.3	15.0
10	137	52.3	14	00.2	19.9	280	12.0	28.6	63	45.7	49.6	292	00.6	15.1
11	152	54.8	28	59.8	+18 19.5	295	12.8	-15 29.1	78	47.9	+21 49.6	307	02.8	-8 15.2
12	167	57.3	43	59.5	+18 19.1	310	13.7	-15 29.6	93	50.1	+21 49.6	322	05.0	-8 15.3
13	182	59.7	58	59.1	18.7	325	14.5	30.2	108	52.4	49.7	337	07.2	15.4
14	198	02.2	73	58.7	18.3	340	15.3	30.7	123	54.6	49.7	352	09.5	15.5
15	213	04.7	88	58.3	17.8	355	16.2	31.3	138	56.9	49.7	7	11.7	15.6
16	228	07.1	103	58.0	17.4	10	17.0	31.8	153	59.1	49.7	22	13.9	15.7
17	243	09.6	118	57.6	+18 17.0	25	17.8	-15 32.4	169	01.4	+21 49.7	37	16.2	-8 15.7
18	258	12.1	133	57.2	+18 16.6	40	18.7	-15 32.9	184	03.6	+21 49.8	52	18.4	-8 15.8
19	273	14.5	148	56.8	16.2	55	19.5	33.5	199	05.9	49.8	67	20.6	15.9
20	288	17.0	163	56.5	15.7	70	20.4	34.0	214	08.1	49.8	82	22.8	16.0
21	303	19.4	178	56.1	15.3	85	21.2	34.6	229	10.3	49.8	97	25.1	16.1
22	318	21.9	193	55.7	14.9	100	22.0	35.1	244	12.6	49.8	112	27.3	16.2
23	333	24.4	208	55.4	14.5	115	22.9	35.7	259	14.8	49.9	127	29.5	16.3
24	348	26.8	223	55.0	+18 14.1	130	23.7	-15 36.2	274	17.1	+21 49.9	142	31.7	-8 16.4
Dif	—		-4		-4	+8		-5	+22		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15°9 PMG: 11 ^h 57 ^m 2			Edad: 22 ^d 3 SD: 14°8 PMG: 6 ^h 23 ^m																			
	PHE { 4 ^h : 54°6 12 ^h : 54°7 20 ^h : 54°8			R°: 49 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m								
0	180	40.0	+5	14.5	267	26.9	+21	13.1	6	60 N	3	37	4	31	5	14	22	13	67	15	25	34	
1	195	40.2			281	57.4	115	12.5	6	58	47	37	18	28	65	15	10	36					
2	210	40.4			296	27.8	114	11.7	8	56	3	55	42	20	41	63	14	57	37				
3	225	40.6			310	58.2	114	10.9	8	54	4	03	47	23	22	52	62	45	39				
4	240	40.8			325	28.6	114	10.0	9	52	09	51	25	23	02	61	35	40					
5	255	41.0	+5	09.8	339	59.0	114	+21	08.9	11	50	4	15	4	54	5	27	23	11	60	14	26	41
6	270	41.3	+5	08.8	354	29.3	113	+21	07.8	11	45	4	27	5	02	5	32	23	29	58	14	07	43
7	285	41.5			8	59.7	114	06.6	12	40	36	08	36	45	56	13	52	44					
8	300	41.7			23	30.0	113	05.2	14	35	43	13	39	23	57	56	39	44					
9	315	41.9			38	00.4	114	03.8	14	30	49	17	41	**	**	**	27	46					
10	330	42.1			52	30.7	113	02.2	16	20	4	58	24	46	**	**	**	13	08	47			
11	345	42.3	+5	04.1	67	01.1	114	+21	00.6	16	10 N	5	05	5	29	5	50	**	**	**	12	51	48
12	0	42.6	+5	03.2	81	31.4	113	+20	58.8	18	0	5	09	5	33	5	54	0	11	49	12	35	49
13	15	42.8			96	01.7	113	57.0	18	10 S	12	36	5	57	27	49	19	50					
14	30	43.0			110	32.0	113	55.0	20	20	14	39	6	01	0	45	47	12	01	52			
15	45	43.2	+5	00.3	125	02.3	113	53.0	20	30	14	41	05	1	05	46	11	42	52				
16	60	43.4	+4	59.4	139	32.6	113	50.8	22	35	13	42	08	16	47	30	53						
17	75	43.7	+4	58.4	154	02.9	113	+20	48.6	22	40	5	12	5	43	6	10	1	30	45	11	17	54
18	90	43.9	+4	57.5	168	33.2	113	+20	46.2	24	45	5	10	5	44	6	13	1	46	44	11	01	55
19	105	44.1			183	03.5	113	43.8	24	50	07	44	17	2	05	44	10	42	56				
20	120	44.3			55.6	197	33.8	41.2	26	52	06	45	18	14	44	32	58						
21	135	44.5			54.6	212	04.0	38.5	27	54	04	45	20	25	42	22	58						
22	150	44.7			53.7	226	34.3	35.8	27	56	02	45	22	37	41	10	10	60					
23	165	45.0			52.8	241	04.6	32.9	29	58	5	00	45	24	2	50	41	9	57	60			
24	180	45.2	+4	51.8	255	34.8	112	+20	30.0	29	60 S	4	57	5	45	6	26	3	06	40	9	41	62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 46 ^m 1		Mag: -4.2 PMG: 9 ^h 05 ^m		Mag: +1.2 PMG: 15 ^h 18 ^m		Mag: -2.4 PMG: 5 ^h 42 ^m		Mag: +0.8 PMG: 14 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	348	26.8	223	55.0	+18	14.1	130	23.7	-15	36.2	274	17.1	+21	49.9	142	31.7	-8	16.4
1	3	29.3	238	54.6		13.6	145	24.5		36.8	289	19.3		49.9	157	34.0		16.5
2	18	31.8	253	54.2		13.2	160	25.3		37.3	304	21.6		49.9	172	36.2		16.6
3	33	34.2	268	53.9		12.8	175	26.2		37.9	319	23.8		49.9	187	38.4		16.7
4	48	36.7	283	53.5		12.4	190	27.0		38.4	334	26.1		50.0	202	40.7		16.8
5	63	39.2	298	53.1	+18	11.9	205	27.8	-15	39.0	349	28.3	+21	50.0	217	42.9	-8	16.9
6	78	41.6	313	52.7	+18	11.5	220	28.7	-15	39.5	4	30.6	+21	50.0	232	45.1	-8	17.0
7	93	44.1	328	52.4		11.1	235	29.5		40.0	19	32.8		50.0	247	47.3		17.1
8	108	46.5	343	52.0		10.6	250	30.3		40.6	34	35.1		50.0	262	49.6		17.2
9	123	49.0	358	51.6		10.2	265	31.2		41.1	49	37.3		50.1	277	51.8		17.3
10	138	51.5	13	51.2		09.8	280	32.0		41.7	64	39.6		50.1	292	54.0		17.4
11	153	53.9	28	50.9	+18	09.3	295	32.8	-15	42.2	79	41.8	+21	50.1	307	56.2	-8	17.5
12	168	56.4	43	50.5	+18	08.9	310	33.6	-15	42.8	94	44.1	+21	50.1	322	58.5	-8	17.6
13	183	58.9	58	50.1		08.5	325	34.5		43.3	109	46.3		50.1	338	00.7		17.7
14	199	01.3	73	49.7		08.0	340	35.3		43.9	124	48.6		50.2	353	02.9		17.8
15	214	03.8	88	49.3		07.6	355	36.1		44.4	139	50.8		50.2	8	05.1		17.9
16	229	06.3	103	49.0		07.2	10	37.0		45.0	154	53.1		50.2	23	07.4		18.0
17	244	08.7	118	48.6	+18	06.7	25	37.8	-15	45.5	169	55.3	+21	50.2	38	09.6	-8	18.1
18	259	11.2	133	48.2	+18	06.3	40	38.6	-15	46.0	184	57.6	+21	50.2	53	11.8	-8	18.2
19	274	13.7	148	47.8		05.8	55	39.4		46.6	199	59.8		50.3	68	14.0		18.3
20	289	16.1	163	47.5		05.4	70	40.3		47.1	215	02.1		50.3	83	16.3		18.4
21	304	18.6	178	47.1		05.0	85	41.1		47.7	230	04.3		50.3	98	18.5		18.5
22	319	21.0	193	46.7		04.5	100	41.9		48.2	245	06.6		50.3	113	20.7		18.6
23	334	23.5	208	46.3		04.1	115	42.7		48.8	260	08.9		50.3	128	22.9		18.7
24	349	26.0	223	45.9	+18	03.6	130	43.6	-15	49.3	275	11.1	+21	50.3	143	25.2	-8	18.7
Dif	—		-4	-4			+8	-5			+23	0			+22	-1		

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 23 ^d 3		PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'3										
	PMG: 11 ^h 56 ^m 8		SD: 14'9			PMG: 7 ^h 12 ^m			Rº: 49 ^m						
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	180	45.2	+4 51.8	255	34.8	+20 30.0	60 N	18 35	19 18	20 11	23 20 75	15 59 27			
1	195	45.4	50.9	270	05.1 ¹¹³	26.9 31	58	32	13	20 02	33 72	46 29			
2	210	45.6	49.9	284	35.4 ¹¹³	23.7 32	56	30	08	19 54	44 70	34 31			
3	225	45.8	49.0	299	05.6 ¹¹²	20.5 32	54	28	04	47	23 54 68	24 33			
4	240	46.1	48.0	313	35.9 ¹¹³	17.1 34	52	26	19 00	41	** ** *	15 34			
5	255	46.3	+4 47.1	328	06.1 ¹¹²	+20 13.6 35	50	18 24	18 57	19 36	** ** *	15 07 35			
6	270	46.5	+4 46.1	342	36.4 ¹¹³	+20 10.1 35	45	18 20	18 49	19 25	** ** *	14 50 37			
7	285	46.7	45.2	357	06.6 ¹¹²	06.4 37	40	16	44	16	** ** *	36 39			
8	300	46.9	44.2	11	36.9 ¹¹³	+20 02.6 38	35	14	39	09	** ** *	23 42			
9	315	47.1	43.3	26	07.1 ¹¹²	+19 58.8 38	30	11	35	19 03	0 09 54	14 13 43			
10	330	47.4	42.3	40	37.4 ¹¹³	54.8 40	20	07	29	18 55	28 52	13 55 45			
11	345	47.6	+4 41.4	55	07.6 ¹¹²	+19 50.7 41	10 N	18 03	18 24	18 49	0 44 51	13 39 47			
12	0	47.8	+4 40.4	69	37.9 ¹¹³	+19 46.5 42	0	18 00	18 21	18 45	1 00 49	13 24 49			
13	15	48.0	39.5	84	08.1 ¹¹²	42.3 42	10 S	17 57	18	42	16 47	13 09 51			
14	30	48.2	38.5	98	38.3 ¹¹²	37.9 44	20	54	16	41	32 46	12 53 53			
15	45	48.5	37.6	113	08.6 ¹¹³	33.4 45	30	50	14	42	1 51 45	34 56			
16	60	48.7	36.6	127	38.8 ¹¹²	28.9 45	35	48	13	43	2 03 43	23 57			
17	75	48.9	+4 35.7	142	09.1 ¹¹³	+19 24.2 47	40	17 46	18 13	18 44	2 15 42	12 11 58			
18	90	49.1	+4 34.7	156	39.4 ¹¹³	+19 19.4 48	45	17 43	18 12	18 46	2 30 41	11 56 61			
19	105	49.3	33.8	171	09.6 ¹¹²	14.6 48	50	40	12	50	49 38	38 63			
20	120	49.6	32.8	185	39.9 ¹¹³	09.6 50	52	39	12	51	2 58 36	30 64			
21	135	49.8	31.9	200	10.1 ¹¹²	+19 04.6 50	54	37	12	53	3 07 36	20 66			
22	150	50.0	30.9	214	40.4 ¹¹³	+18 59.4 52	56	35	13	56	18 34	11 10 67			
23	165	50.2	30.0	229	10.6 ¹¹²	54.1 53	58	34	13	18 58	31 32	10 57 69			
24	180	50.4	+4 29.0	243	40.9 ¹¹³	+18 48.8 53	60 S	17 32	18 13	19 01	3 46 30	10 43 71			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO	
	PMG		Mag: -4.2		Mag: +1.2		Mag: -2.4		Mag: +0.8		
	0 ^h 42 ^m 2		PMG: 9 ^h 05 ^m		PMG: 15 ^h 16 ^m		PMG: 5 ^h 38 ^m		PMG: 14 ^h 24 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	349	26.0	223 45.9	+18 03.6	130 43.6	-15 49.3	275 11.1	+21 50.3	143 25.2	-8 18.7	
1	4 28.4	238 45.6	03.2	145 44.4	49.8	290 13.4	50.4	158 27.4	18.8		
2	19 30.9	253 45.2	02.7	160 45.2	50.4	305 15.6	50.4	173 29.6	18.9		
3	34 33.4	268 44.8	02.3	175 46.0	50.9	320 17.9	50.4	188 31.8	19.0		
4	49 35.8	283 44.4	01.8	190 46.9	51.5	335 20.1	50.4	203 34.1	19.1		
5	64 38.3	298 44.1	+18 01.4	205 47.7	-15 52.0	350 22.4	+21 50.4	218 36.3	-8 19.2		
6	79 40.8	313 43.7	+18 00.9	220 48.5	-15 52.6	5 24.6	+21 50.5	233 38.5	-8 19.3		
7	94 43.2	328 43.3	+18 00.5	235 49.3	53.1	20 26.9	50.5	248 40.7	19.4		
8	109 45.7	343 42.9	+18 00.0	250 50.2	53.6	35 29.2	50.5	263 43.0	19.5		
9	124 48.2	358 42.5	+17 59.6	265 51.0	54.2	50 31.4	50.5	278 45.2	19.6		
10	139 50.6	13 42.2	59.1	280 51.8	54.7	65 33.7	50.5	293 47.4	19.7		
11	154 53.1	28 41.8	+17 58.7	295 52.6	-15 55.3	80 35.9	+21 50.6	308 49.6	-8 19.8		
12	169 55.5	43 41.4	+17 58.2	310 53.4	-15 55.8	95 38.2	+21 50.6	323 51.9	-8 19.9		
13	184 58.0	58 41.0	57.8	325 54.3	56.4	110 40.5	50.6	338 54.1	20.0		
14	200 00.5	73 40.6	57.3	340 55.1	56.9	125 42.7	50.6	353 56.3	20.1		
15	215 02.9	88 40.3	56.9	355 55.9	57.4	140 45.0	50.6	8 58.5	20.2		
16	230 05.4	103 39.9	56.4	10 56.7	58.0	155 47.2	50.6	24 00.8	20.3		
17	245 07.9	118 39.5	+17 55.9	25 57.5	-15 58.5	170 49.5	+21 50.7	39 03.0	-8 20.4		
18	260 10.3	133 39.1	+17 55.5	40 58.4	-15 59.1	185 51.8	+21 50.7	54 05.2	-8 20.5		
19	275 12.8	148 38.7	55.0	55 59.2	-15 59.6	200 54.0	50.7	69 07.4	20.6		
20	290 15.3	163 38.4	54.6	71 00.0	-16 00.1	215 56.3	50.7	84 09.6	20.7		
21	305 17.7	178 38.0	54.1	86 00.8	00.7	230 58.5	50.7	99 11.9	20.8		
22	320 20.2	193 37.6	53.6	101 01.6	01.2	246 00.8	50.8	114 14.1	20.9		
23	335 22.7	208 37.2	53.2	116 02.5	01.8	261 03.1	50.8	129 16.3	21.0		
24	350 25.1	223 36.8	+17 52.7	131 03.3	-16 02.3	276 05.3	+21 50.8	144 18.5	-8 21.1		
Dif	—	-4	-5	+8	-5	+23	0	+22	-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5			Edad: 24 ^d 3 PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 7 20 ^h : 56 ^m 0 PMG: 8 ^h 01 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	50.4	+4	29.0	243	40.9	+18 48.8	60 N	3 43	4 36	5 19	** ** *	**	16 26	20			
1	195	50.7		28.1	258	11.2 ¹¹³	43.3 ⁵⁵	58	3 52	42	22	** ** *	**	15	23			
2	210	50.9		27.1	272	41.5 ¹¹³	37.8 ⁵⁵	56	4 00	46	24	** ** *	**	16 05	25			
3	225	51.1		26.2	287	11.7 ¹¹²	32.2 ⁵⁶	54	07	50	27	** ** *	**	15 57	27			
4	240	51.3		25.2	301	42.0 ¹¹³	26.4 ⁵⁸	52	13	54	29	0 03	66	49	29			
5	255	51.5	+4	24.3	316	12.3 ¹¹³	+18 20.6 ⁵⁸	50	4 18	4 57	5 30	0 11	65	15 42	31			
6	270	51.7	+4	23.3	330	42.6 ¹¹³	+18 14.6 ⁶⁰	45	4 29	5 04	5 34	0 27	63	15 27	34			
7	285	52.0		22.4	345	12.9 ¹¹³	08.6 ⁶⁰	40	38	10	37	41	60	15	37			
8	300	52.2		21.4	359	43.2 ¹¹³	+18 02.5 ⁶¹	35	45	15	40	0 53	58	15 05	38			
9	315	52.4		20.5	14	13.5 ¹¹³	+17 56.3 ⁶²	30	50	18	43	1 03	56	14 56	40			
10	330	52.6		19.5	28	43.8 ¹¹³	50.0 ⁶³	20	4 59	24	47	20	54	40	44			
11	345	52.8	+4	18.5	43	14.1 ¹¹³	+17 43.6 ⁶⁴	10 N	5 04	5 29	5 50	1 35	52	14 26	46			
12	0	53.1	+4	17.6	57	44.4 ¹¹³	+17 37.1 ⁶⁵	0	5 08	5 32	5 53	1 49	49	14 13	49			
13	15	53.3		16.6	72	14.7 ¹¹³	30.5 ⁶⁶	10 S	11	35	56	2 03	47	14 00	51			
14	30	53.5		15.7	86	45.0 ¹¹³	23.8 ⁶⁷	20	12	37	5 59	18	45	13 46	54			
15	45	53.7		14.7	101	15.4 ¹¹⁴	17.0 ⁶⁸	30	11	39	6 03	36	41	30	57			
16	60	53.9		13.8	115	45.7 ¹¹³	10.1 ⁶⁹	35	10	40	05	46	40	20	60			
17	75	54.2	+4	12.8	130	16.0 ¹¹³	+17 03.2 ⁶⁹	40	5 09	5 40	6 07	2 57	38	13 09	62			
18	90	54.4	+4	11.9	144	46.4 ¹¹⁴	+16 56.1 ⁷¹	45	5 06	5 40	6 09	3 11	35	12 57	64			
19	105	54.6		10.9	159	16.7 ¹¹³	49.0 ⁷¹	50	03	40	12	27	33	41	67			
20	120	54.8		10.0	173	47.1 ¹¹⁴	41.7 ⁷³	52	5 01	40	14	34	32	34	69			
21	135	55.0		09.0	188	17.4 ¹¹³	34.4 ⁷³	54	4 59	40	15	43	30	26	70			
22	150	55.3		08.1	202	47.8 ¹¹⁴	27.0 ⁷⁴	56	57	40	17	3	52	17	72			
23	165	55.5		07.1	217	18.1 ¹¹³	19.5 ⁷⁵	58	54	39	18	4	03	26	75			
24	180	55.7	+4	06.1	231	48.5 ¹¹⁴	+16 11.9 ⁷⁶	60 S	4 51	5 39	6 20	4 16	23	11 54	78			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 38 ^m 2		Mag: -4.2 PMG: 9 ^h 06 ^m			Mag: +1.2 PMG: 15 ^h 15 ^m			Mag: -2.5 PMG: 5 ^h 35 ^m			Mag: +0.8 PMG: 14 ^h 21 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	350	25.1	223	36.8	+17	52.7	131	03.3	-16	02.3	276	05.3	+21	50.8	144	18.5	-8	21.1
1	5	27.6	238	36.4		52.2	146	04.1		02.8	291	07.6		50.8	159	20.8		21.2
2	20	30.0	253	36.1		51.8	161	04.9		03.4	306	09.9		50.8	174	23.0		21.3
3	35	32.5	268	35.7		51.3	176	05.7		03.9	321	12.1		50.8	189	25.2		21.4
4	50	35.0	283	35.3		50.8	191	06.5		04.5	336	14.4		50.9	204	27.4		21.5
5	65	37.4	298	34.9	+17	50.4	206	07.4	-16	05.0	351	16.6	+21	50.9	219	29.6	-8	21.6
6	80	39.9	313	34.5	+17	49.9	221	08.2	-16	05.5	6	18.9	+21	50.9	234	31.9	-8	21.7
7	95	42.4	328	34.2		49.4	236	09.0		06.1	21	21.2		50.9	249	34.1		21.8
8	110	44.8	343	33.8		48.9	251	09.8		06.6	36	23.4		50.9	264	36.3		21.9
9	125	47.3	358	33.4		48.5	266	10.6		07.1	51	25.7		50.9	279	38.5		22.0
10	140	49.8	13	33.0		48.0	281	11.4		07.7	66	28.0		51.0	294	40.8		22.1
11	155	52.2	28	32.6	+17	47.5	296	12.2	-16	08.2	81	30.2	+21	51.0	309	43.0	-8	22.2
12	170	54.7	43	32.2	+17	47.0	311	13.1	-16	08.8	96	32.5	+21	51.0	324	45.2	-8	22.3
13	185	57.1	58	31.9		46.6	326	13.9		09.3	111	34.8		51.0	339	47.4		22.4
14	200	59.6	73	31.5		46.1	341	14.7		09.8	126	37.0		51.0	354	49.6		22.5
15	216	02.1	88	31.1		45.6	356	15.5		10.4	141	39.3		51.1	9	51.9		22.6
16	231	04.5	103	30.7		45.1	11	16.3		10.9	156	41.6		51.1	24	54.1		22.7
17	246	07.0	118	30.3	+17	44.7	26	17.1	-16	11.4	171	43.8	+21	51.1	39	56.3	-8	22.8
18	261	09.5	133	29.9	+17	44.2	41	17.9	-16	12.0	186	46.1	+21	51.1	54	58.5	-8	22.8
19	276	11.9	148	29.6		43.7	56	18.7		12.5	201	48.4		51.1	70	00.8		22.9
20	291	14.4	163	29.2		43.2	71	19.6		13.1	216	50.6		51.1	85	03.0		23.0
21	306	16.9	178	28.8		42.7	86	20.4		13.6	231	52.9		51.2	100	05.2		23.1
22	321	19.3	193	28.4		42.2	101	21.2		14.1	246	55.2		51.2	115	07.4		23.2
23	336	21.8	208	28.0		41.8	116	22.0		14.7	261	57.5		51.2	130	09.6		23.3
24	351	24.3	223	27.6	+17	41.3	131	22.8	-16	15.2	276	59.7	+21	51.2	145	11.9	-8	23.4
Dif	—		-4		-5		+8		-5		+23		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 25 ^d 3	PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/7									
	PMG: 11 ^h 56 ^m 1					SD: 15°3			PMG: 8 ^h 50 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	55.7	+4 06.1	231	48.5	+16 11.9	77	60 N	18 29	19 12	20 04	0 35 80	16 46 16	
1	195	55.9	05.2	246	18.9 ¹¹⁴	+16 04.2	77	58	27	07	19 56	45 78	38 19	
2	210	56.2	04.2	260	49.3 ¹¹⁴	+15 56.4	78	56	25	19 02	48	0 54 75	30 22	
3	225	56.4	03.3	275	19.6 ¹¹³	48.6	80	54	23	18 59	42	1 02 73	24 24	
4	240	56.6	02.3	289	50.0 ¹¹⁴	40.6	80	52	21	55	36	09 71	18 26	
5	255	56.8	+4 01.4	304	20.4 ¹¹⁴	+15 32.6	80	50	18 19	18 52	19 31	1 16 69	16 13 27	
6	270	57.0	+4 00.4	318	50.8 ¹¹⁴	+15 24.5	81	45	18 16	18 46	19 21	1 30 65	16 01 31	
7	285	57.3	+3 59.5	333	21.2 ¹¹⁴	16.3	82	40	13	40	13	41 63	15 52 34	
8	300	57.5	58.5	347	51.6 ¹¹⁴	+15 08.0	83	35	11	36	06	51 60	43 37	
9	315	57.7	57.6	2	22.0 ¹¹⁴	+14 59.6	84	30	09	33	19 01	1 59 59	36 39	
10	330	57.9	56.6	16	52.4 ¹¹⁴	51.1	85	20	05	27	18 53	2 14 55	24 42	
11	345	58.1	+3 55.6	31	22.9 ¹¹⁵	+14 42.6	85	10 N	18 02	18 23	18 48	2 27 51	15 12 46	
12	0	58.4	+3 54.7	45	53.3 ¹¹⁴	+14 34.0	86	0	17 59	18 20	18 44	2 38 49	15 02 49	
13	15	58.6	53.7	60	23.7 ¹¹⁴	25.2	88	10 S	57	18	42	2 50 46	14 51 52	
14	30	58.8	52.8	74	54.2 ¹¹⁵	16.5	87	20	54	16	42	3 03 43	40 55	
15	45	59.0	51.8	89	24.6 ¹¹⁴	+14 07.6	89	30	51	15	43	17 40	27 59	
16	60	59.2	50.9	103	55.0 ¹¹⁴	+13 58.6	90	35	49	15	44	26 37	20 61	
17	75	59.5	+3 49.9	118	25.5 ¹¹⁵	+13 49.6	90	40	17 48	18 15	18 46	3 35 35	14 11 64	
18	90	59.7	+3 49.0	132	55.9 ¹¹⁴	+13 40.5	91	45	17 45	18 15	18 49	3 46 33	14 01 67	
19	105	59.9	48.0	147	26.4 ¹¹⁵	31.3	92	50	43	15	53	4 00 28	13 48 71	
20	121	00.1	47.0	161	56.8 ¹¹⁴	22.0	93	52	42	15	55	06 27	43 72	
21	136	00.3	46.1	176	27.3 ¹¹⁵	12.7	93	54	41	16	18 57	13 25	36 75	
22	151	00.6	45.1	190	57.7 ¹¹⁴	+13 03.2	95	56	39	16	19 00	20 24	29 77	
23	166	00.8	44.2	205	28.2 ¹¹⁵	+12 53.7	95	58	38	17	03	29 21	21 80	
24	181	01.0	+3 43.2	219	58.6 ¹¹⁴	+12 44.1	96	60 S	17 36	18 18	19 06	4 39 18	13 12 83	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 34 ^m 3		Mag: -4.2 PMG: 9 ^h 06 ^m			Mag: +1.2 PMG: 15 ^h 14 ^m			Mag: -2.5 PMG: 5 ^h 31 ^m			Mag: +0.8 PMG: 14 ^h 17 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	351	24.3	223	27.6	+17 41.3	131	22.8	-16 15.2	276	59.7	+21 51.2	145	11.9	-8 23.4
1	6	26.7	238	27.2	40.8	146	23.6	15.7	292	02.0	51.2	160	14.1	23.5
2	21	29.2	253	26.9	40.3	161	24.4	16.3	307	04.3	51.2	175	16.3	23.6
3	36	31.6	268	26.5	39.8	176	25.2	16.8	322	06.5	51.3	190	18.5	23.7
4	51	34.1	283	26.1	39.3	191	26.0	17.3	337	08.8	51.3	205	20.7	23.8
5	66	36.6	298	25.7	+17 38.8	206	26.8	-16 17.9	352	11.1	+21 51.3	220	23.0	-8 23.9
6	81	39.0	313	25.3	+17 38.3	221	27.6	-16 18.4	7	13.4	+21 51.3	235	25.2	-8 24.0
7	96	41.5	328	24.9	37.8	236	28.5	18.9	22	15.6	51.3	250	27.4	24.1
8	111	44.0	343	24.6	37.4	251	29.3	19.5	37	17.9	51.3	265	29.6	24.2
9	126	46.4	358	24.2	36.9	266	30.1	20.0	52	20.2	51.4	280	31.8	24.3
10	141	48.9	13	23.8	36.4	281	30.9	20.6	67	22.5	51.4	295	34.1	24.4
11	156	51.4	28	23.4	+17 35.9	296	31.7	-16 21.1	82	24.7	+21 51.4	310	36.3	-8 24.5
12	171	53.8	43	23.0	+17 35.4	311	32.5	-16 21.6	97	27.0	+21 51.4	325	38.5	-8 24.6
13	186	56.3	58	22.6	34.9	326	33.3	22.2	112	29.3	51.4	340	40.7	24.7
14	201	58.8	73	22.2	34.4	341	34.1	22.7	127	31.6	51.4	355	42.9	24.8
15	217	01.2	88	21.9	33.9	356	34.9	23.2	142	33.8	51.5	10	45.2	24.9
16	232	03.7	103	21.5	33.4	11	35.7	23.8	157	36.1	51.5	25	47.4	25.0
17	247	06.1	118	21.1	+17 32.9	26	36.5	-16 24.3	172	38.4	+21 51.5	40	49.6	-8 25.1
18	262	08.6	133	20.7	+17 32.4	41	37.3	-16 24.8	187	40.7	+21 51.5	55	51.8	-8 25.2
19	277	11.1	148	20.3	31.9	56	38.1	25.3	202	42.9	51.5	70	54.0	25.3
20	292	13.5	163	19.9	31.4	71	38.9	25.9	217	45.2	51.5	85	56.3	25.4
21	307	16.0	178	19.5	30.9	86	39.7	26.4	232	47.5	51.6	100	58.5	25.5
22	322	18.5	193	19.1	30.4	101	40.5	26.9	247	49.8	51.6	116	00.7	25.6
23	337	20.9	208	18.8	29.9	116	41.3	27.5	262	52.0	51.6	131	02.9	25.7
24	352	23.4	223	18.4	+17 29.4	131	42.1	-16 28.0	277	54.3	+21 51.6	146	05.1	-8 25.8
Dif	—		-4		-5	+8		-5	+23		0	+22		-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 8			Edad: 26 ^d 3 PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/5 PMG: 9 ^h 39 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	01.0	+3 43.2	219	58.6	+12 44.1	96	60 N	3 49	4 41	5 24	1 55	84	17 02	15	
1	196	01.2	42.3	234	29.1 ¹¹⁵	34.5	96	58	3 57	46	26	2 03	81	16 57	17	
2	211	01.4	41.3	248	59.6 ¹¹⁵	24.8	97	56	4 04	50	28	09	79	52	19	
3	226	01.7	40.3	263	30.0 ¹¹⁴	14.9	99	54	11	54	30	15	76	48	21	
4	241	01.9	39.4	278	00.5 ¹¹⁵	+12 05.1	98	52	17	4 58	32	20	74	44	23	
5	256	02.1	+3 38.4	292	31.0 ¹¹⁵	+11 55.1	100	50	4 22	5 01	5 33	2 25	72	16 40	25	
6	271	02.3	+3 37.5	307	01.4 ¹¹⁴	+11 45.1	100	45	4 32	5 07	5 37	2 35	69	16 32	29	
7	286	02.6	36.5	321	31.9 ¹¹⁵	35.0	101	40	40	12	39	44	65	26	32	
8	301	02.8	35.5	336	02.3 ¹¹⁴	24.8	102	35	46	16	42	51	63	20	35	
9	316	03.0	34.6	350	32.8 ¹¹⁵	14.6	102	30	51	20	44	2 58	60	15	37	
10	331	03.2	33.6	5	03.3 ¹¹⁵	+11 04.3	103	20	4 59	25	47	3 09	56	16 06	42	
11	346	03.4	+3 32.7	19	33.7 ¹¹⁴	+10 53.9	104	10 N	5 04	5 29	5 50	3 18	53	15 58	46	
12	1	03.7	+3 31.7	34	04.2 ¹¹⁵	+10 43.5	104	0	5 08	5 32	5 53	3 27	49	15 51	49	
13	16	03.9	30.8	48	34.7 ¹¹⁵	33.0	105	10 S	10	34	55	36	46	43	53	
14	31	04.1	29.8	63	05.1 ¹¹⁴	22.4	106	20	10	36	5 58	46	42	35	57	
15	46	04.3	28.8	77	35.6 ¹¹⁵	11.8	106	30	09	37	6 00	3 57	38	26	61	
16	61	04.5	27.9	92	06.0 ¹¹⁴	+10 01.1	107	35	07	37	02	4 03	36	21	63	
17	76	04.8	+3 26.9	106	36.5 ¹¹⁵	+9 50.3	108	40	5 05	5 37	6 04	4 10	33	15 15	66	
18	91	05.0	+3 26.0	121	06.9 ¹¹⁴	+9 39.5	108	45	5 02	5 36	6 06	4 19	29	15 08	69	
19	106	05.2	25.0	135	37.4 ¹¹⁵	28.6	109	50	4 58	36	08	28	27	14 59	74	
20	121	05.4	24.0	150	07.8 ¹¹⁴	17.6	110	52	56	35	09	33	24	55	76	
21	136	05.7	23.1	164	38.2 ¹¹⁴	+9 06.6	110	54	54	35	10	38	23	51	77	
22	151	05.9	22.1	179	08.6 ¹¹⁴	+8 55.5	111	56	51	34	11	44	20	46	80	
23	166	06.1	21.2	193	39.1 ¹¹⁵	44.4	111	58	48	34	13	50	18	41	82	
24	181	06.3	+3 20.2	208	09.5 ¹¹⁴	+8 33.2	112	60 S	4 45	5 33	6 14	4 57	15	14 35	85	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 30 ^m 4		Mag: -4.2 PMG: 9 ^h 07 ^m			Mag: +1.2 PMG: 15 ^h 12 ^m			Mag: -2.5 PMG: 5 ^h 28 ^m			Mag: +0.8 PMG: 14 ^h 14 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	°
0	352	23.4	223	18.4	+17 29.4	131	42.1	-16 28.0	277	54.3	+21 51.6	146	05.1	-8 25.8		
1	7	25.9	238	18.0	28.9	146	42.9	28.5	292	56.6	51.6	161	07.4	25.9		
2	22	28.3	253	17.6	28.3	161	43.7	29.1	307	58.9	51.6	176	09.6	26.0		
3	37	30.8	268	17.2	27.8	176	44.5	29.6	323	01.2	51.7	191	11.8	26.1		
4	52	33.2	283	16.8	27.3	191	45.3	30.1	338	03.4	51.7	206	14.0	26.2		
5	67	35.7	298	16.4	+17 26.8	206	46.1	-16 30.7	353	05.7	+21 51.7	221	16.2	-8 26.3		
6	82	38.2	313	16.0	+17 26.3	221	46.9	-16 31.2	8	08.0	+21 51.7	236	18.5	-8 26.4		
7	97	40.6	328	15.7	25.8	236	47.7	31.7	23	10.3	51.7	251	20.7	26.5		
8	112	43.1	343	15.3	25.3	251	48.5	32.3	38	12.6	51.7	266	22.9	26.6		
9	127	45.6	358	14.9	24.8	266	49.3	32.8	53	14.8	51.8	281	25.1	26.7		
10	142	48.0	13	14.5	24.2	281	50.1	33.3	68	17.1	51.8	296	27.3	26.8		
11	157	50.5	28	14.1	+17 23.7	296	50.9	-16 33.8	83	19.4	+21 51.8	311	29.5	-8 26.9		
12	172	53.0	43	13.7	+17 23.2	311	51.7	-16 34.4	98	21.7	+21 51.8	326	31.8	-8 27.0		
13	187	55.4	58	13.3	22.7	326	52.5	34.9	113	24.0	51.8	341	34.0	27.1		
14	202	57.9	73	12.9	22.2	341	53.3	35.4	128	26.3	51.8	356	36.2	27.2		
15	218	00.4	88	12.6	21.7	356	54.1	36.0	143	28.5	51.8	11	38.4	27.3		
16	233	02.8	103	12.2	21.1	11	54.9	36.5	158	30.8	51.9	26	40.6	27.4		
17	248	05.3	118	11.8	+17 20.6	26	55.7	-16 37.0	173	33.1	+21 51.9	41	42.9	-8 27.5		
18	263	07.7	133	11.4	+17 20.1	41	56.5	-16 37.6	188	35.4	+21 51.9	56	45.1	-8 27.6		
19	278	10.2	148	11.0	19.6	56	57.3	38.1	203	37.7	51.9	71	47.3	27.7		
20	293	12.7	163	10.6	19.1	71	58.1	38.6	218	40.0	51.9	86	49.5	27.8		
21	308	15.1	178	10.2	18.5	86	58.9	39.1	233	42.2	51.9	101	51.7	27.9		
22	323	17.6	193	09.8	18.0	101	59.7	39.7	248	44.5	52.0	116	53.9	28.0		
23	338	20.1	208	09.4	17.5	117	00.5	40.2	263	46.8	52.0	131	56.2	28.1		
24	353	22.5	223	09.1	+17 16.9	132	01.3	-16 40.7	278	49.1	+21 52.0	146	58.4	-8 28.2		
Dif	—		-4 -5			+8 -5			+23 0			+22 -1				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 55 ^m 4		Edad: 27 ^d 3 PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'2 R°: 49 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	181	06.3	+3	20.2	208	09.5	+8 33.2	60 N	18 23	19 05	19 57	3 19	87	17 17	13			
1	196	06.5		19.2	222	39.9 ¹¹⁴	22.0 ¹¹²	58	21	19 01	49	24	83	14	16			
2	211	06.8		18.3	237	10.3 ¹¹⁴	+8 10.7 ¹¹³	56	19	18 57	42	28	81	11	19			
3	226	07.0		17.3	251	40.7 ¹¹⁴	+7 59.3 ¹¹⁴	54	18	53	36	31	79	09	2			
4	241	07.2		16.4	266	11.1 ¹¹⁴	47.9 ¹¹⁴	52	16	50	31	34	77	07	23			
5	256	07.4	+3	15.4	280	41.4 ¹¹³	+7 36.4 ¹¹⁵	50	18 15	18 48	19 26	3 37	75	17 05	25			
6	271	07.6	+3	14.4	295	11.8 ¹¹⁴	+7 24.9 ¹¹⁵	45	18 12	18 42	19 17	3 44	70	17 01	29			
7	286	07.9		13.5	309	42.2 ¹¹⁴	13.4 ¹¹⁵	40	10	37	09	49	67	16 58	32			
8	301	08.1		12.5	324	12.5 ¹¹³	+7 01.7 ¹¹⁷	35	08	33	19 03	54	64	55	35			
9	316	08.3		11.6	338	42.9 ¹¹⁴	+6 50.1 ¹¹⁶	30	06	30	18 58	3 58	61	52	38			
10	331	08.5		10.6	353	13.2 ¹¹³	38.4 ¹¹⁷	20	03	25	51	4 05	56	48	42			
11	346	08.8	+3	09.6	7	43.5 ¹¹³	+6 26.6 ¹¹⁸	10 N	18 01	18 22	18 46	4 11	53	16 44	46			
12	1	09.0	+3	08.7	22	13.8 ¹¹³	+6 14.8 ¹¹⁸	0	17 59	18 19	18 43	4 16	50	16 40	49			
13	16	09.2		07.7	36	44.1 ¹¹³	+6 02.9 ¹¹⁹	10 S	57	18	42	22	46	36	53			
14	31	09.4		06.8	51	14.4 ¹¹³	+5 51.0 ¹¹⁹	20	54	16	42	28	42	32	57			
15	46	09.6		05.8	65	44.7 ¹¹³	39.1 ¹¹⁹	30	52	16	44	35	37	27	62			
16	61	09.9		04.8	80	14.9 ¹¹²	27.1 ¹²⁰	35	51	16	45	39	35	24	65			
17	76	10.1	+3	03.9	94	45.1 ¹¹²	+5 15.1 ¹²⁰	40	17 49	18 16	18 48	4 43	32	16 21	68			
18	91	10.3	+3	02.9	109	15.4 ¹¹³	+5 03.0 ¹²¹	45	17 48	18 17	18 51	4 48	29	16 17	71			
19	106	10.5		01.9	123	45.6 ¹¹²	+4 50.9 ¹²¹	50	46	18	56	55	24	13	75			
20	121	10.8	+3	01.0	138	15.8 ¹¹²	38.7 ¹²²	52	45	19	18 58	4 57	23	11	77			
21	136	11.0	+3	00.0	152	45.9 ¹¹¹	26.6 ¹²¹	54	44	19	19 01	5 01	21	08	80			
22	151	11.2	+2	59.1	167	16.1 ¹¹²	14.3 ¹²³	56	43	20	04	04	19	06	82			
23	166	11.4		58.1	181	46.3 ¹¹²	+4 02.1 ¹²²	58	42	21	07	08	16	03	85			
24	181	11.6	+2	57.1	196	16.4 ¹¹¹	+3 49.8 ¹²³	60 S	17 41	18 22	19 11	5 12	14	16 00	87			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 26 ^m 4		Mag: -4.2 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 15 ^h 11 ^m			Mag: -2.5 PMG: 5 ^h 24 ^m			Mag: +0.8 PMG: 14 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	353	22.5	223	09.1	+17	16.9	132	01.3	-16	40.7	278	49.1	+21	52.0	146	58.4	-8	28.2
1	8	25.0	238	08.7		16.4	147	02.1		41.2	293	51.4		52.0	162	00.6		28.3
2	23	27.5	253	08.3		15.9	162	02.9		41.8	308	53.7		52.0	177	02.8		28.4
3	38	29.9	268	07.9		15.4	177	03.7		42.3	323	56.0		52.0	192	05.0		28.5
4	53	32.4	283	07.5		14.8	192	04.5		42.8	338	58.3		52.0	207	07.2		28.6
5	68	34.8	298	07.1	+17	14.3	207	05.3	-16	43.4	354	00.5	+21	52.1	222	09.5	-8	28.7
6	83	37.3	313	06.7	+17	13.8	222	06.1	-16	43.9	9	02.8	+21	52.1	237	11.7	-8	28.8
7	98	39.8	328	06.3		13.2	237	06.8		44.4	24	05.1		52.1	252	13.9		28.9
8	113	42.2	343	05.9		12.7	252	07.6		44.9	39	07.4		52.1	267	16.1		29.0
9	128	44.7	358	05.6		12.2	267	08.4		45.5	54	09.7		52.1	282	18.3		29.1
10	143	47.2	13	05.2		11.6	282	09.2		46.0	69	12.0		52.1	297	20.5		29.2
11	158	49.6	28	04.8	+17	11.1	297	10.0	-16	46.5	84	14.3	+21	52.2	312	22.8	-8	29.3
12	173	52.1	43	04.4	+17	10.6	312	10.8	-16	47.0	99	16.6	+21	52.2	327	25.0	-8	29.4
13	188	54.6	58	04.0		10.0	327	11.6		47.6	114	18.9		52.2	342	27.2		29.5
14	203	57.0	73	03.6		09.5	342	12.4		48.1	129	21.2		52.2	357	29.4		29.6
15	218	59.5	88	03.2		08.9	357	13.2		48.6	144	23.4		52.2	12	31.6		29.7
16	234	02.0	103	02.8		08.4	12	14.0		49.1	159	25.7		52.2	27	33.8		29.8
17	249	04.4	118	02.4	+17	07.9	27	14.8	-16	49.7	174	28.0	+21	52.2	42	36.1	-8	29.9
18	264	06.9	133	02.0	+17	07.3	42	15.5	-16	50.2	189	30.3	+21	52.3	57	38.3	-8	30.0
19	279	09.3	148	01.7		06.8	57	16.3		50.7	204	32.6		52.3	72	40.5		30.1
20	294	11.8	163	01.3		06.2	72	17.1		51.2	219	34.9		52.3	87	42.7		30.2
21	309	14.3	178	00.9		05.7	87	17.9		51.8	234	37.2		52.3	102	44.9		30.3
22	324	16.7	193	00.5		05.1	102	18.7		52.3	249	39.5		52.3	117	47.1		30.4
23	339	19.2	208	00.1		04.6	117	19.5		52.8	264	41.8		52.3	132	49.3		30.5
24	354	21.7	222	59.7	+17	04.1	132	20.3	-16	53.3	279	44.1	+21	52.3	147	51.6	-8	30.6
Dif	—		-4		-5		+8		-5		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 55 ^m 0			Edad: 28 ^d 3 SD: 15'9 PMG: 11 ^h 17 ^m	PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'9 R°: 51 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	181	11.6	+2 57.1	196	16.4	+3 49.8	60 N	3 54	4 46	5 29	4 46	89	17 30	14			
1	196	11.9		210	46.5 ¹¹¹	37.5 ¹²³	58	4 02	51	30	47 86		30 17				
2	211	12.1		225	16.6 ¹¹¹	25.1 ¹²⁴	56	09	54	32	49 83		30 19				
3	226	12.3		239	46.6 ¹¹⁰	12.7 ¹²⁴	54	15	4 58	34	50 81		30 21				
4	241	12.5		254	16.7 ¹¹¹	+3 00.3 ¹²⁴	52	20	5 01	35	51 79		30 23				
5	256	12.8	+2 52.3	268	46.7 ¹¹⁰	+2 47.9 ¹²⁴	50	4 25	5 04	5 36	4 52 77		17 30 25				
6	271	13.0	+2 51.4	283	16.7 ¹¹⁰	+2 35.4 ¹²⁵	45	4 35	5 09	5 39	4 54 73		17 30 29				
7	286	13.2		297	46.7 ¹¹⁰	22.9 ¹²⁵	40	42	14	41	56 69		30 33				
8	301	13.4		312	16.6 ¹⁰⁹	+2 10.4 ¹²⁵	35	48	18	43	58 65		30 35				
9	316	13.6		326	46.6 ¹¹⁰	+1 57.9 ¹²⁵	30	4 53	21	45	4 59 63		30 38				
10	331	13.9		341	16.5 ¹⁰⁹	45.3 ¹²⁶	20	5 00	25	47	5 01 59		30 43				
11	346	14.1	+2 46.5	355	46.4 ¹⁰⁹	+1 32.7 ¹²⁶	10 N	5 04	5 29	5 50	5 04 54		17 30 47				
12	1	14.3	+2 45.6	10	16.2 ¹⁰⁸	+1 20.1 ¹²⁶	0	5 07	5 31	5 52	5 06 50		17 29 51				
13	16	14.5		24	46.1 ¹⁰⁹	+1 07.5 ¹²⁶	10 S	08	33	54	08 46		29 55				
14	31	14.8		39	15.9 ¹⁰⁸	+0 54.8 ¹²⁷	20	08	34	56	10 42		29 59				
15	46	15.0		53	45.7 ¹⁰⁸	42.2 ¹²⁶	30	06	34	58	12 38		29 63				
16	61	15.2		68	15.4 ¹⁰⁷	29.5 ¹²⁷	35	05	34	5 59	14 35		29 66				
17	76	15.4	+2 40.8	82	45.2 ¹⁰⁸	+0 16.8 ¹²⁷	40	5 02	5 33	6 00	5 15 33		17 29 69				
18	91	15.6	+2 39.8	97	14.9 ¹⁰⁷	+0 04.1 ¹²⁷	45	4 59	5 33	6 02	5 17 29		17 28 73				
19	106	15.9		111	44.5 ¹⁰⁶	-0 08.6 ¹²⁷	50	54	31	04	19 25		28 78				
20	121	16.1		126	14.2 ¹⁰⁷	21.3 ¹²⁷	52	52	31	04	20 23		28 79				
21	136	16.3		140	43.8 ¹⁰⁶	34.0 ¹²⁷	54	49	30	05	22 21		28 82				
22	151	16.5		155	13.4 ¹⁰⁶	46.8 ¹²⁸	56	46	29	06	23 19		28 84				
23	166	16.8		169	42.9 ¹⁰⁵	-0 59.5 ¹²⁷	58	42	28	07	24 16		28 86				
24	181	17.0	+2 34.0	184	12.4 ¹⁰⁵	-1 12.3 ¹²⁸	60 S	4 38	5 27	6 08	5 26 13		17 27 90				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 22 ^m 5			Mag: -4.2 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 15 ^h 10 ^m			Mag: -2.5 PMG: 5 ^h 20 ^m			Mag: +0.8 PMG: 14 ^h 06 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	354	21.7		222	59.7	+17 04.1	132	20.3	-16 53.3	279	44.1	+21 52.3	147	51.6	-8 30.6		
1	9	24.1		237	59.3	03.5	147	21.1	53.8	294	46.4	52.4	162	53.8	30.7		
2	24	26.6		252	58.9	03.0	162	21.8	54.4	309	48.7	52.4	177	56.0	30.8		
3	39	29.1		267	58.5	02.4	177	22.6	54.9	324	51.0	52.4	192	58.2	30.9		
4	54	31.5		282	58.1	01.9	192	23.4	55.4	339	53.3	52.4	208	00.4	31.0		
5	69	34.0		297	57.7	+17 01.3	207	24.2	-16 55.9	354	55.6	+21 52.4	223	02.6	-8 31.1		
6	84	36.5		312	57.4	+17 00.8	222	25.0	-16 56.5	9	57.9	+21 52.4	238	04.8	-8 31.2		
7	99	38.9		327	57.0	+17 00.2	237	25.8	57.0	25	00.2	52.4	253	07.1	31.3		
8	114	41.4		342	56.6	+16 59.6	252	26.6	57.5	40	02.5	52.5	268	09.3	31.4		
9	129	43.8		357	56.2	59.1	267	27.3	58.0	55	04.8	52.5	283	11.5	31.5		
10	144	46.3		12	55.8	58.5	282	28.1	58.5	70	07.1	52.5	298	13.7	31.6		
11	159	48.8		27	55.4	+16 58.0	297	28.9	-16 59.1	85	09.4	+21 52.5	313	15.9	-8 31.7		
12	174	51.2		42	55.0	+16 57.4	312	29.7	-16 59.6	100	11.6	+21 52.5	328	18.1	-8 31.8		
13	189	53.7		57	54.6	56.9	327	30.5	-17 00.1	115	13.9	52.5	343	20.4	31.9		
14	204	56.2		72	54.2	56.3	342	31.3	00.6	130	16.2	52.5	358	22.6	32.0		
15	219	58.6		87	53.8	55.7	357	32.0	01.2	145	18.5	52.6	13	24.8	32.1		
16	235	01.1		102	53.4	55.2	12	32.8	01.7	160	20.8	52.6	28	27.0	32.2		
17	250	03.6		117	53.1	+16 54.6	27	33.6	-17 02.2	175	23.1	+21 52.6	43	29.2	-8 32.3		
18	265	06.0		132	52.7	+16 54.1	42	34.4	-17 02.7	190	25.5	+21 52.6	58	31.4	-8 32.4		
19	280	08.5		147	52.3	53.5	57	35.2	03.2	205	27.8	52.6	73	33.6	32.5		
20	295	10.9		162	51.9	52.9	72	35.9	03.8	220	30.1	52.6	88	35.8	32.6		
21	310	13.4		177	51.5	52.4	87	36.7	04.3	235	32.4	52.6	103	38.1	32.7		
22	325	15.9		192	51.1	51.8	102	37.5	04.8	250	34.7	52.7	118	40.3	32.8		
23	340	18.3		207	50.7	51.2	117	38.3	05.3	265	37.0	52.7	133	42.5	32.9		
24	355	20.8		222	50.3	+16 50.7	132	39.1	-17 05.8	280	39.3	+21 52.7	148	44.7	-8 33.0		
Dif	—			-4		-6	+8		-5	+23		0	+22		-1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 29 ^d 3 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 3 20 ^h : 59 ^m 4 R°: 52 ^m											
	PMG: 11 ^h 54 ^m 7		PMG: 12 ^h 08 ^m						Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	17.0	+2 34.0	184	12.4	-1 12.3	60 N	18 17	18 59	19 50	6 15 91	17 44 15		
1	196	17.2		198	41.9 ¹⁰⁵	25.0 ¹²⁷	58	15	55	43	13 88	47 18		
2	211	17.4		213	11.4 ¹⁰⁵	37.8 ¹²⁸	56	14	51	37	12 85	49 21		
3	226	17.6		227	40.8 ¹⁰⁴	-1 50.5 ¹²⁷	54	13	48	31	11 82	51 23		
4	241	17.9		242	10.1 ¹⁰³	-2 03.3 ¹²⁸	52	12	46	26	10 80	53 26		
5	256	18.1	+2 29.2	256	39.5 ¹⁰⁴	-2 16.0 ¹²⁷	50	18 11	18 43	19 22	6 09 78	17 55 27		
6	271	18.3	+2 28.2	271	08.8 ¹⁰³	-2 28.8 ¹²⁸	45	18 08	18 38	19 13	6 07 73	17 59 32		
7	286	18.5		285	38.1 ¹⁰³	41.5 ¹²⁷	40	07	34	06	05 70	18 03 34		
8	301	18.8		300	07.3 ¹⁰²	-2 54.3 ¹²⁸	35	05	30	19 00	03 67	05 38		
9	316	19.0		314	36.5 ¹⁰²	-3 07.0 ¹²⁷	30	04	28	18 56	02 64	08 40		
10	331	19.2		329	05.7 ¹⁰²	19.7 ¹²⁷	20	01	23	49	6 00 59	13 44		
11	346	19.4	+2 23.4	343	34.8 ¹⁰¹	-3 32.5 ¹²⁸	10 N	18 00	18 21	18 45	5 58 55	18 17 48		
12	1	19.6	+2 22.4	358	03.9 ¹⁰¹	-3 45.2 ¹²⁷	0	17 58	18 19	18 43	5 56 52	18 20 53		
13	16	19.9		12	32.9 ¹⁰⁰	-3 57.9 ¹²⁷	10 S	56	17	42	54 48	24 56		
14	31	20.1		27	01.9 ¹⁰⁰	-4 10.5 ¹²⁶	20	55	17	42	52 44	28 60		
15	46	20.3		41	30.9 ¹⁰⁰	23.2 ¹²⁷	30	53	17	45	50 39	32 66		
16	61	20.5		55	59.8 ⁹⁹	35.8 ¹²⁶	35	52	18	47	49 37	35 68		
17	76	20.8	+2 17.6	70	28.7 ⁹⁹	-4 48.5 ¹²⁷	40	17 51	18 18	18 50	5 48 33	18 38 71		
18	91	21.0	+2 16.6	84	57.5 ⁹⁸	-5 01.1 ¹²⁶	45	17 50	18 19	18 54	5 46 30	18 41 75		
19	106	21.2		99	26.3 ⁹⁸	13.7 ¹²⁶	50	49	21	18 59	44 26	46 78		
20	121	21.4		113	55.1 ⁹⁸	26.2 ¹²⁵	52	48	22	19 01	43 25	47 81		
21	136	21.6		128	23.8 ⁹⁷	38.8 ¹²⁶	54	48	23	04	43 22	50 83		
22	151	21.9		142	52.4 ⁹⁶	-5 51.3 ¹²⁵	56	47	24	08	42 19	52 85		
23	166	22.1		157	21.1 ⁹⁷	-6 03.8 ¹²⁵	58	46	25	12	40 18	54 89		
24	181	22.3	+2 10.8	171	49.6 ⁹⁵	-6 16.2 ¹²⁴	60 S	17 45	18 27	19 16	5 39 15	18 57 92		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 0 ^h 18 ^m 6		Mag: -4.2 PMG: 9 ^h 09 ^m		Mag: +1.2 PMG: 15 ^h 09 ^m		Mag: -2.5 PMG: 5 ^h 17 ^m		Mag: +0.8 PMG: 14 ^h 03 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	°	°	°	°	°	°	°	°	°	°			
0	355	20.8		222	50.3	+16 50.7	132 39.1	-17 05.8	280 39.3	+21 52.7	148 44.7	-8 33.0		
1	10	23.3		237	49.9	50.1	147 39.8	06.3	295 41.6	52.7	163 46.9	33.1		
2	25	25.7		252	49.5	49.5	162 40.6	06.9	310 43.9	52.7	178 49.1	33.2		
3	40	28.2		267	49.1	49.0	177 41.4	07.4	325 46.2	52.7	193 51.3	33.3		
4	55	30.7		282	48.7	48.4	192 42.2	07.9	340 48.5	52.7	208 53.6	33.4		
5	70	33.1		297	48.4	+16 47.8	207 43.0	-17 08.4	355 50.8	+21 52.7	223 55.8	-8 33.5		
6	85	35.6		312	48.0	+16 47.3	222 43.7	-17 08.9	10 53.1	+21 52.8	238 58.0	-8 33.6		
7	100	38.1		327	47.6	46.7	237 44.5	09.5	25 55.4	52.8	254 00.2	33.7		
8	115	40.5		342	47.2	46.1	252 45.3	10.0	40 57.7	52.8	269 02.4	33.8		
9	130	43.0		357	46.8	45.5	267 46.1	10.5	56 00.0	52.8	284 04.6	33.9		
10	145	45.4		12	46.4	45.0	282 46.8	11.0	71 02.3	52.8	299 06.8	34.0		
11	160	47.9		27	46.0	+16 44.4	297 47.6	-17 11.5	86 04.6	+21 52.8	314 09.0	-8 34.1		
12	175	50.4		42	45.6	+16 43.8	312 48.4	-17 12.0	101 06.9	+21 52.8	329 11.3	-8 34.2		
13	190	52.8		57	45.2	43.2	327 49.2	12.6	116 09.2	52.9	344 13.5	34.3		
14	205	55.3		72	44.8	42.6	342 49.9	13.1	131 11.5	52.9	359 15.7	34.4		
15	220	57.8		87	44.4	42.1	357 50.7	13.6	146 13.8	52.9	14 17.9	34.5		
16	236	00.2		102	44.0	41.5	12 51.5	14.1	161 16.2	52.9	29 20.1	34.6		
17	251	02.7		117	43.7	+16 40.9	27 52.3	-17 14.6	176 18.5	+21 52.9	44 22.3	-8 34.7		
18	266	05.2		132	43.3	+16 40.3	42 53.0	-17 15.1	191 20.8	+21 52.9	59 24.5	-8 34.8		
19	281	07.6		147	42.9	39.7	57 53.8	15.7	206 23.1	52.9	74 26.7	34.9		
20	296	10.1		162	42.5	39.2	72 54.6	16.2	221 25.4	52.9	89 29.0	35.0		
21	311	12.5		177	42.1	38.6	87 55.4	16.7	236 27.7	53.0	104 31.2	35.1		
22	326	15.0		192	41.7	38.0	102 56.1	17.2	251 30.0	53.0	119 33.4	35.2		
23	341	17.5		207	41.3	37.4	117 56.9	17.7	266 32.3	53.0	134 35.6	35.3		
24	356	19.9		222	40.9	+16 36.8	132 57.7	-17 18.2	281 34.6	+21 53.0	149 37.8	-8 35.4		
Dif	—	—	-4	-6	+8	-5	+23	0	+22	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/9 PMG: 11 ^h 54 ^m 3			Edad: 0 ^d 9 PHE { SD: 16/2 PMG: 13 ^h 00 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m			
0	181	22.3	+2	171	49.6	-6	16.2	60 N	4 00	4 51	5 33	7 46	92	17 59	19			
1	196	22.5		186	18.2		28.6 ¹²⁴	58	07	55	35	41	89	18 05	22			
2	211	22.8		200	46.6		41.0 ¹²⁴	56	13	4 59	36	37	86	10	25			
3	226	23.0		215	15.1	-6	53.4 ¹²⁴	54	19	5 02	37	33	84	14	28			
4	241	23.2		229	43.5	-7	05.7 ¹²³	52	24	04	38	30	81	19	29			
5	256	23.4	+2	244	11.8	-7	18.0 ¹²³	50	4 28	5 07	5 39	7 27	79	18 22	31			
6	271	23.6	+2	258	40.1	-7	30.3 ¹²³	45	4 37	5 12	5 41	7 20	76	18 31	35			
7	286	23.9		273	08.3		42.5 ¹²²	40	44	16	43	15	72	37	39			
8	301	24.1		287	36.5	-7	54.7 ¹²²	35	49	19	45	10	69	43	41			
9	316	24.3		302	04.7	-8	06.8 ¹²¹	30	4 54	22	46	7 06	66	48	44			
10	331	24.5		316	32.8		18.9 ¹²¹	20	5 00	26	48	6 59	62	18 57	48			
11	346	24.8	+2	331	00.8	-8	31.0 ¹²¹	10 N	5 04	5 29	5 50	6 53	58	19 05	52			
12	1	25.0	+1	345	28.8	-8	43.0 ¹²⁰	0	5 06	5 30	5 51	6 48	53	19 13	55			
13	16	25.2		359	56.7	-8	54.9 ¹¹⁹	10 S	07	32	53	42	50	20	59			
14	31	25.4		14	24.6	-9	06.8 ¹¹⁹	20	06	32	54	36	46	28	63			
15	46	25.6		28	52.5		18.7 ¹¹⁹	30	04	32	55	29	42	38	66			
16	61	25.9		43	20.3		30.5 ¹¹⁸	35	5 02	31	56	26	39	43	69			
17	76	26.1	+1	57	48.0	-9	42.3 ¹¹⁸	40	4 59	5 30	5 57	6 21	37	19 49	72			
18	91	26.3	+1	72	15.7	-9	53.9 ¹¹⁶	45	4 55	5 29	5 58	6 16	33	19 56	75			
19	106	26.5		86	43.3	-10	05.6 ¹¹⁷	50	49	27	5 59	10	29	20	04	80		
20	121	26.8		101	10.9		17.2 ¹¹⁶	52	47	26	6 00	08	27	08	82			
21	136	27.0		115	38.4		28.7 ¹¹⁵	54	44	25	00	05	25	13	83			
22	151	27.2		130	05.9		40.2 ¹¹⁵	56	40	24	01	6 01	23	17	86			
23	166	27.4		144	33.3	-10	51.6 ¹¹⁴	58	36	23	01	5 58	20	23	89			
24	181	27.6	+1	159	00.7	-11	02.9 ¹¹³	60 S	4 32	5 21	6 02	5 54	17	20 29	92			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 14 ^m 6		Mag: -4.2 PMG: 9 ^h 10 ^m				Mag: +1.2 PMG: 15 ^h 07 ^m				Mag: -2.5 PMG: 5 ^h 13 ^m				Mag: +0.8 PMG: 13 ^h 59 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	356	19.9	222	40.9	+16	36.8	132	57.7	-17	18.2	281	34.6	+21	53.0	149	37.8	-8	35.4
1	11	22.4	237	40.5		36.2	147	58.4		18.7	296	36.9		53.0	164	40.0		35.5
2	26	24.9	252	40.1		35.6	162	59.2		19.3	311	39.3		53.0	179	42.2		35.6
3	41	27.3	267	39.7		35.0	178	00.0		19.8	326	41.6		53.0	194	44.4		35.7
4	56	29.8	282	39.3		34.5	193	00.8		20.3	341	43.9		53.0	209	46.7		35.8
5	71	32.3	297	38.9	+16	33.9	208	01.5	-17	20.8	356	46.2	+21	53.1	224	48.9	-8	35.9
6	86	34.7	312	38.6	+16	33.3	223	02.3	-17	21.3	11	48.5	+21	53.1	239	51.1	-8	36.0
7	101	37.2	327	38.2		32.7	238	03.1		21.8	26	50.8		53.1	254	53.3		36.1
8	116	39.7	342	37.8		32.1	253	03.8		22.3	41	53.1		53.1	269	55.5		36.2
9	131	42.1	357	37.4		31.5	268	04.6		22.8	56	55.5		53.1	284	57.7		36.3
10	146	44.6	12	37.0		30.9	283	05.4		23.4	71	57.8		53.1	299	59.9		36.4
11	161	47.0	27	36.6	+16	30.3	298	06.1	-17	23.9	87	00.1	+21	53.1	315	02.1	-8	36.5
12	176	49.5	42	36.2	+16	29.7	313	06.9	-17	24.4	102	02.4	+21	53.1	330	04.3	-8	36.6
13	191	52.0	57	35.8		29.1	328	07.7		24.9	117	04.7		53.2	345	06.6		36.7
14	206	54.4	72	35.4		28.5	343	08.4		25.4	132	07.0		53.2	0	08.8		36.8
15	221	56.9	87	35.0		27.9	358	09.2		25.9	147	09.3		53.2	15	11.0		36.9
16	236	59.4	102	34.6		27.3	13	10.0		26.4	162	11.7		53.2	30	13.2		37.0
17	252	01.8	117	34.2	+16	26.7	28	10.7	-17	26.9	177	14.0	+21	53.2	45	15.4	-8	37.1
18	267	04.3	132	33.8	+16	26.1	43	11.5	-17	27.5	192	16.3	+21	53.2	60	17.6	-8	37.2
19	282	06.8	147	33.4		25.5	58	12.3		28.0	207	18.6		53.2	75	19.8		37.3
20	297	09.2	162	33.1		24.9	73	13.0		28.5	222	20.9		53.2	90	22.0		37.4
21	312	11.7	177	32.7		24.3	88	13.8		29.0	237	23.3		53.3	105	24.2		37.5
22	327	14.1	192	32.3		23.7	103	14.6		29.5	252	25.6		53.3	120	26.4		37.6
23	342	16.6	207	31.9		23.1	118	15.3		30.0	267	27.9		53.3	135	28.7		37.7
24	357	19.1	222	31.5	+16	22.5	133	16.1	-17	30.5	282	30.2	+21	53.3	150	30.9	-8	37.8
Dif	—		-4		-6		+8		-5		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 0			Edad: 1 ^d 9 PHE { SD: 16'3 PMG: 13 ^h 55 ^m 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	27.6	+1 47.6	159	00.7	-11 02.9	60 N	18 11	18 53	19 44	9 18 92	18 18 25		
1	196	27.9		173	28.0	83 14.2	58	10	49	37	10 88	27 28		
2	211	28.1		187	55.2	82 25.4	56	09	46	31	9 03 85	35 31		
3	226	28.3		202	22.4	82 36.5	54	08	43	26	8 57 83	42 33		
4	241	28.5		216	49.6	82 47.6	52	07	41	21	51 81	48 35		
5	256	28.8	+1 42.8	231	16.7	81 -11 58.6	50	18 06	18 39	19 17	8 46 79	18 53 37		
6	271	29.0	+1 41.8	245	43.7	80 -12 09.5	45	18 05	18 34	19 09	8 36 74	19 06 40		
7	286	29.2		260	10.7	80 20.4	40	03	30	19 02	27 71	16 43		
8	301	29.4		274	37.6	79 31.1	35	02	27	18 57	19 69	24 46		
9	316	29.6		289	04.5	79 41.8	30	01	25	53	12 67	32 48		
10	331	29.9		303	31.3	78 -12 52.5	20	18 00	22	47	8 01 62	45 52		
11	346	30.1	+1 37.0	317	58.1	78 -13 03.0	10 N	17 58	18 19	18 44	7 51 59	19 57 54		
12	1	30.3	+1 36.0	332	24.8	77 -13 13.5	0	17 57	18 18	18 42	7 41 57	20 08 57		
13	16	30.5		346	51.4	76 23.8	10 S	56	17	42	32 53	19 60		
14	31	30.7		1	18.0	76 34.1	20	55	17	43	22 50	31 63		
15	46	31.0		15	44.6	76 44.4	30	54	18	46	11 46	44 66		
16	61	31.2		30	11.0	74 -13 54.5	35	54	19	48	7 05 43	20 52 68		
17	76	31.4	+1 31.1	44	37.5	75 -14 04.5	40	17 53	18 20	18 52	6 58 41	21 01 71		
18	91	31.6	+1 30.2	59	03.9	74 -14 14.5	45	17 53	18 22	18 56	6 49 38	21 11 74		
19	106	31.9		73	30.2	73 24.3	50	52	24	19 02	39 34	24 77		
20	121	32.1		87	56.5	73 34.1	52	52	25	05	35 32	30 79		
21	136	32.3		102	22.7	72 43.8	54	51	27	08	30 30	36 81		
22	151	32.5		116	48.9	72 -14 53.3	56	51	28	12	24 28	43 84		
23	166	32.7		131	15.0	71 -15 02.8	58	51	30	16	18 25	21 52 86		
24	181	33.0	+1 24.4	145	41.0	70 -15 12.2	60 S	17 50	18 32	19 21	6 11 22	22 01 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 10 ^m 7		Mag: -4.2 PMG: 9 ^h 10 ^m			Mag: +1.2 PMG: 15 ^h 06 ^m			Mag: -2.5 PMG: 5 ^h 09 ^m			Mag: +0.7 PMG: 13 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	357	19.1	222 31.5	+16 22.5	133 16.1	-17 30.5	282 30.2	+21 53.3	150 30.9	-8 37.8				
1	12	21.5	237 31.1	21.9	148 16.9	31.0	297 32.5	53.3	165 33.1	37.9				
2	27	24.0	252 30.7	21.3	163 17.6	31.5	312 34.9	53.3	180 35.3	38.0				
3	42	26.5	267 30.3	20.7	178 18.4	32.0	327 37.2	53.3	195 37.5	38.1				
4	57	28.9	282 29.9	20.0	193 19.1	32.5	342 39.5	53.3	210 39.7	38.2				
5	72	31.4	297 29.5	+16 19.4	208 19.9	-17 33.1	357 41.8	+21 53.3	225 41.9	-8 38.3				
6	87	33.9	312 29.1	+16 18.8	223 20.7	-17 33.6	12 44.1	+21 53.4	240 44.1	-8 38.4				
7	102	36.3	327 28.7	18.2	238 21.4	34.1	27 46.5	53.4	255 46.3	38.5				
8	117	38.8	342 28.3	17.6	253 22.2	34.6	42 48.8	53.4	270 48.5	38.6				
9	132	41.3	357 28.0	17.0	268 23.0	35.1	57 51.1	53.4	285 50.8	38.7				
10	147	43.7	12 27.6	16.4	283 23.7	35.6	72 53.4	53.4	300 53.0	38.8				
11	162	46.2	27 27.2	+16 15.7	298 24.5	-17 36.1	87 55.7	+21 53.4	315 55.2	-8 38.9				
12	177	48.6	42 26.8	+16 15.1	313 25.2	-17 36.6	102 58.1	+21 53.4	330 57.4	-8 39.0				
13	192	51.1	57 26.4	14.5	328 26.0	37.1	118 00.4	53.4	345 59.6	39.1				
14	207	53.6	72 26.0	13.9	343 26.8	37.6	133 02.7	53.5	1 01.8	39.2				
15	222	56.0	87 25.6	13.3	358 27.5	38.1	148 05.0	53.5	16 04.0	39.3				
16	237	58.5	102 25.2	12.7	13 28.3	38.6	163 07.4	53.5	31 06.2	39.4				
17	253	01.0	117 24.8	+16 12.0	28 29.0	-17 39.1	178 09.7	+21 53.5	46 08.4	-8 39.5				
18	268	03.4	132 24.4	+16 11.4	43 29.8	-17 39.7	193 12.0	+21 53.5	61 10.6	-8 39.6				
19	283	05.9	147 24.0	10.8	58 30.6	40.2	208 14.3	53.5	76 12.8	39.7				
20	298	08.4	162 23.6	10.2	73 31.3	40.7	223 16.7	53.5	91 15.1	39.8				
21	313	10.8	177 23.2	09.5	88 32.1	41.2	238 19.0	53.5	106 17.3	39.9				
22	328	13.3	192 22.8	08.9	103 32.8	41.7	253 21.3	53.5	121 19.5	40.0				
23	343	15.7	207 22.5	08.3	118 33.6	42.2	268 23.7	53.6	136 21.7	40.1				
24	358	18.2	222 22.1	+16 07.7	133 34.3	-17 42.7	283 26.0	+21 53.6	151 23.9	-8 40.2				
Dif	—		-4	-6	+8	-5	+23	0	+22	-1				

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53 ^m 6			Edad: 2 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'9 R°: 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	33.0	+1 24.4	145	41.0	-15 12.2	93	60 N	4 05	4 56	5 38	10 50	86	18 43	35		
1	196	33.2		160	07.0		21.5	58	12	5 00	39		38 83	18 55	38		
2	211	33.4		174	33.0		30.7	56	18	03	40		28 81	19 06	40		
3	226	33.6		188	58.9		39.8	54	23	05	41		20 78	15	42		
4	241	33.9		203	24.8		48.8	52	27	08	42		12 77	23	43		
5	256	34.1	+1 19.5	217	50.6	-15 57.6	88	50	4 31	5 10	5 42	10 05	75	19 30	45		
6	271	34.3	+1 18.5	232	16.3	-16 06.4	88	45	4 40	5 14	5 44	9 50	73	19 46	48		
7	286	34.5		246	42.0		15.1	40	46	18	45		38 70	19 59	50		
8	301	34.7		261	07.7		23.6	35	51	21	46		28 68	20 10	51		
9	316	35.0		275	33.3		32.1	30	4 55	23	47		19 66	20	53		
10	331	35.2		289	58.8		40.4	20	5 01	26	48	9 03	64	37	55		
11	346	35.4	+1 13.7	304	24.3	-16 48.7	83	10 N	5 04	5 28	5 49	8 50	61	20 51	57		
12	1	35.6	+1 12.7	318	49.8	-16 56.8	81	0	5 06	5 30	5 50	8 38	58	21 05	59		
13	16	35.9		333	15.2	-17 04.8	80	10 S		06	30	51	25	56	19	61	
14	31	36.1		347	40.6		12.7	20		05	30	52	8	12	53	34	62
15	46	36.3		2	05.9		20.5	30	5 01	29	53	7 57	50	21 50	65		
16	61	36.5		16	31.2		28.2	35	4 59	28	53	48	49	22 00	67		
17	76	36.7	+1 07.9	30	56.4	-17 35.7	75	40	4 55	5 27	5 54	7 39	46	22 12	67		
18	91	37.0	+1 06.9	45	21.6	-17 43.1	74	45	4 51	5 25	5 54	7 27	44	22 25	70		
19	106	37.2		59	46.7		50.4	50	45	23	55		13 41	41	72		
20	121	37.4		74	11.8	-17 57.6	72	52	42	21	55		07 39	49	73		
21	136	37.6		88	36.9	-18 04.7	71	54	39	20	55	7 00	37	22 57	75		
22	151	37.8		103	01.9		11.7	56	35	19	56	6 52	35	23 07	76		
23	166	38.1		117	26.9		18.5	58	31	17	56		43 33	18	78		
24	181	38.3	+1 01.1	131	51.8	-18 25.2	67	60 S	4 25	5 15	5 56	6 33	30	23 30	81		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 06 ^m 8		Mag: -4.2 PMG: 9 ^h 11 ^m			Mag: +1.2 PMG: 15 ^h 05 ^m			Mag: -2.5 PMG: 5 ^h 05 ^m			Mag: +0.7 PMG: 13 ^h 52 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	358	18.2	222	22.1	+16 07.7	133	34.3	-17 42.7	283	26.0	+21 53.6	151	23.9	-8 40.2	
1	13	20.7	237	21.7		148	35.1		298	28.3		166	26.1		40.3
2	28	23.1	252	21.3		163	35.8		313	30.6		181	28.3		40.4
3	43	25.6	267	20.9		178	36.6		328	33.0		196	30.5		40.5
4	58	28.1	282	20.5		193	37.4		343	35.3		211	32.7		40.6
5	73	30.5	297	20.1	+16 04.5	208	38.1	-17 45.2	358	37.6	+21 53.6	226	34.9	-8 40.7	
6	88	33.0	312	19.7	+16 03.9	223	38.9	-17 45.7	13	40.0	+21 53.6	241	37.1	-8 40.8	
7	103	35.5	327	19.3		238	39.6		28	42.3		256	39.3		40.9
8	118	37.9	342	18.9		253	40.4		43	44.6		271	41.5		41.0
9	133	40.4	357	18.5		268	41.1		58	47.0		286	43.8		41.1
10	148	42.9	12 18.1		01.4	283	41.9		73	49.3		301	46.0		41.2
11	163	45.3	27 17.7	+16 00.7		298	42.6	-17 48.2	88	51.6	+21 53.7	316	48.2	-8 41.3	
12	178	47.8	42 17.4	+16 00.1		313	43.4	-17 48.7	103	53.9	+21 53.7	331	50.4	-8 41.4	
13	193	50.2	57 17.0	+15 59.5		328	44.1		118	56.3		346	52.6		41.5
14	208	52.7	72 16.6		58.8	343	44.9		133	58.6		1	54.8		41.6
15	223	55.2	87 16.2		58.2	358	45.6		149	00.9		16	57.0		41.7
16	238	57.6	102 15.8		57.5	13	46.4		164	03.3		31	59.2		41.8
17	254	00.1	117 15.4	+15 56.9		28	47.1	-17 51.2	179	05.6	+21 53.7	47	01.4	-8 41.9	
18	269	02.6	132 15.0	+15 56.3		43	47.9	-17 51.7	194	07.9	+21 53.8	62	03.6	-8 42.0	
19	284	05.0	147 14.6		55.6	58	48.6		209	10.3		77	05.8		42.1
20	299	07.5	162 14.2		55.0	73	49.4		224	12.6		92	08.0		42.2
21	314	10.0	177 13.8		54.3	88	50.1		239	15.0		107	10.2		42.3
22	329	12.4	192 13.4		53.7	103	50.9		254	17.3		122	12.5		42.4
23	344	14.9	207 13.0		53.0	118	51.6		269	19.6		137	14.7		42.5
24	359	17.4	222 12.6	+15 52.4		133	52.4	-17 54.7	284	22.0	+21 53.8	152	16.9	-8 42.6	
Dif	—		-4		-6	+8		-5	+23		0	+22		-1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 53 ^m 3		Edad: 3 ^d 9 PHE { 4 ^h : 59/9 12 ^h : 59/8 20 ^h : 59/7 Rº: 59 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m			
0	181	38.3	+1	01.1	131	51.8	-18 25.2	60 N	18 05	18 47	19 37	12 16	74	19 18	49			
1	196	38.5	+1	00.1	146	16.8	31.8 66	58	04	43	30	12 01	73	33	50			
2	211	38.7	+0	59.1	160	41.6	58 38.2 64	56	03	41	25	11 49	71	46	51			
3	226	39.0		58.2	175	06.5	59 44.5 63	54	03	38	20	38 71		19 57	52			
4	241	39.2		57.2	189	31.3	58 50.7 62	52	02	36	16	29 69		20 06	53			
5	256	39.4	+0	56.2	203	56.0	57 -18 56.8 61	50	18 02	18 34	19 12	11 20	69	20 15	54			
6	271	39.6	+0	55.2	218	20.8	58 -19 02.7 59	45	18 01	18 30	19 05	11 03	66	20 34	54			
7	286	39.8		54.3	232	45.5	57 08.5 58	40	18 00	27	18 59	10 48	65	20 49	55			
8	301	40.1		53.3	247	10.1	56 14.2 57	35	17 59	25	54	36 64		21 01	57			
9	316	40.3		52.3	261	34.8	57 19.7 55	30	59	23	50	25 63		13	57			
10	331	40.5		51.4	275	59.4	56 25.2 55	20	58	20	45	10 07	61	32	58			
11	346	40.7	+0	50.4	290	24.0	56 -19 30.4 52	10 N	17 57	18 18	18 42	9 51	60	21 48	59			
12	1	40.9	+0	49.4	304	48.5	55 -19 35.6 52	0	17 57	18 17	18 41	9 36	59	22 04	59			
13	16	41.2		48.4	319	13.0	55 40.6 50	10 S	56	17	41	21 58		20	60			
14	31	41.4		47.5	333	37.5	55 45.5 49	20	56	18	43	9 05	57	36	61			
15	46	41.6		46.5	348	02.0	55 50.2 47	30	55	19	47	8 47	55	22 55	62			
16	61	41.8		45.5	2	26.5	55 54.8 46	35	55	20	50	37 54		23 07	62			
17	76	42.0	+0	44.6	16	50.9	54 -19 59.3 45	40	17 55	18 22	18 54	8 25	53	23 19	63			
18	91	42.3	+0	43.6	31	15.4	55 -20 03.6 43	45	17 55	18 24	18 59	8 11	51	23 35	63			
19	106	42.5		42.6	45	39.8	54 07.8 42	50	55	27	19 05	7 54	49	23 53	64			
20	121	42.7		41.6	60	04.1	53 11.9 41	52	55	29	08	46 48		***	***			
21	136	42.9		40.7	74	28.5	54 15.8 39	54	55	30	12	37 47		***	***			
22	151	43.2		39.7	88	52.9	54 19.6 38	56	55	32	16	27 46		***	***			
23	166	43.4		38.7	103	17.2	53 23.2 36	58	55	34	21	16 44		***	***			
24	181	43.6	+0	37.8	117	41.5	53 -20 26.7 35	60 S	17 55	18 36	19 26	7 03	42	***	***			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 02 ^m 8		Mag: -4.2 PMG: 9 ^h 11 ^m			Mag: +1.2 PMG: 15 ^h 04 ^m			Mag: -2.5 PMG: 5 ^h 02 ^m			Mag: +0.7 PMG: 13 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	359	17.4	222	12.6	+15	52.4	133	52.4	-17	54.7	284	22.0	+21	53.8	152	16.9	-8	42.6
1	14	19.8	237	12.3		51.7	148	53.1		55.2	299	24.3		53.8	167	19.1		42.7
2	29	22.3	252	11.9		51.1	163	53.9		55.7	314	26.6		53.8	182	21.3		42.8
3	44	24.7	267	11.5		50.5	178	54.6		56.2	329	29.0		53.8	197	23.5		42.9
4	59	27.2	282	11.1		49.8	193	55.4		56.7	344	31.3		53.9	212	25.7		43.0
5	74	29.7	297	10.7	+15	49.2	208	56.1	-17	57.2	359	33.6	+21	53.9	227	27.9	-8	43.1
6	89	32.1	312	10.3	+15	48.5	223	56.9	-17	57.7	14	36.0	+21	53.9	242	30.1	-8	43.2
7	104	34.6	327	09.9		47.9	238	57.6		58.2	29	38.3		53.9	257	32.3		43.3
8	119	37.1	342	09.5		47.2	253	58.4		58.7	44	40.7		53.9	272	34.5		43.4
9	134	39.5	357	09.1		46.5	268	59.1		59.2	59	43.0		53.9	287	36.7		43.6
10	149	42.0	12	08.7		45.9	283	59.9	-17	59.7	74	45.3		53.9	302	38.9		43.7
11	164	44.5	27	08.3	+15	45.2	299	00.6	-18	00.2	89	47.7	+21	53.9	317	41.1	-8	43.8
12	179	46.9	42	07.9	+15	44.6	314	01.4	-18	00.7	104	50.0	+21	53.9	332	43.3	-8	43.9
13	194	49.4	57	07.5		43.9	329	02.1		01.2	119	52.4		53.9	347	45.5		44.0
14	209	51.8	72	07.2		43.3	344	02.8		01.7	134	54.7		54.0	2	47.8		44.1
15	224	54.3	87	06.8		42.6	359	03.6		02.2	149	57.0		54.0	17	50.0		44.2
16	239	56.8	102	06.4		42.0	14	04.3		02.7	164	59.4		54.0	32	52.2		44.3
17	254	59.2	117	06.0	+15	41.3	29	05.1	-18	03.2	180	01.7	+21	54.0	47	54.4	-8	44.4
18	270	01.7	132	05.6	+15	40.6	44	05.8	-18	03.7	195	04.1	+21	54.0	62	56.6	-8	44.5
19	285	04.2	147	05.2		40.0	59	06.6		04.2	210	06.4		54.0	77	58.8		44.6
20	300	06.6	162	04.8		39.3	74	07.3		04.7	225	08.8		54.0	93	01.0		44.7
21	315	09.1	177	04.4		38.6	89	08.0		05.2	240	11.1		54.0	108	03.2		44.8
22	330	11.6	192	04.0		38.0	104	08.8		05.7	255	13.4		54.0	123	05.4		44.9
23	345	14.0	207	03.6		37.3	119	09.5		06.2	270	15.8		54.0	138	07.6		45.0
24	0	16.5	222	03.2	+15	36.7	134	10.3	-18	06.7	285	18.1	+21	54.0	153	09.8	-8	45.1
Dif	—		-4		-7		+7		-5		+23		0		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 52 ^m 9			Edad: 4 ^d 9 SD: 16°2 PMG: 16 ^h 49 ^m	PHE { 4 ^h : 59°6 12 ^h : 59°5 20 ^h : 59°4 R°: 59 ^m	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec																
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	43.6	+0	37.8	117	41.5		-20	26.7	60 N	4	10	5	01	5	43	13	30
1	196	43.8		36.8	132	05.9	54		30.1	58		17		04		43	14	58
2	211	44.0		35.8	146	30.2	53		33.3	56		22		07		44	13	00
3	226	44.3		34.8	160	54.5	53		36.4	54		27		09		44	12	49
4	241	44.5		33.9	175	18.8	53		39.3	52		31		11		45	38	59
5	256	44.7	+0	32.9	189	43.0	52	-20	42.1	50	4	35	5	13	5	45	12	29
6	271	44.9	+0	31.9	204	07.3	53	-20	44.7	45	4	42	5	17	5	46	12	09
7	286	45.1		30.9	218	31.6	53		47.2	40		48		20		47	11	53
8	301	45.4		30.0	232	55.9	53		49.6	35		53		22		47	40	59
9	316	45.6		29.0	247	20.2	53		51.8	30	4	56	24		48		28	60
10	331	45.8		28.0	261	44.4	52		53.9	20	5	01	27		49		11	08
11	346	46.0	+0	27.1	276	08.7	53	-20	55.9	10 N	5	04	5	28	5	49	10	51
12	1	46.2	+0	26.1	290	33.0	53	-20	57.7	0	5	05	5	29	5	50	10	35
13	16	46.5		25.1	304	57.3	53	-20	59.3	10 S		05		29		50	19	59
14	31	46.7		24.1	319	21.6	53	-21	00.8	20	5	03	28		50		10	02
15	46	46.9		23.2	333	45.9	53		02.2	30	4	59	27		50		9	42
16	61	47.1		22.2	348	10.2	53		03.4	35		56		25		50	31	59
17	76	47.3	+0	21.2	2	34.5	53	-21	04.5	40	4	52	5	23	5	50	9	18
18	91	47.6	+0	20.3	16	58.9	54	-21	05.5	45	4	47	5	21	5	50	9	02
19	106	47.8		19.3	31	23.2	53		06.3	50		40		18		50	8	43
20	121	48.0		18.3	45	47.6	54		06.9	52		37		17		50	34	58
21	136	48.2		17.3	60	12.0	54		07.4	54		33		15		50	24	58
22	151	48.4		16.4	74	36.4	54		07.8	56		29		13		50	13	57
23	166	48.7		15.4	89	00.8	54		08.0	58		24		11		50	8	00
24	181	48.9	+0	14.4	103	25.3	55	-21	08.1	60 S	4	19	5	09	5	50	7	45
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 55 ^m 0			Mag: -4.2 PMG: 9 ^h 12 ^m			Mag: +1.2 PMG: 15 ^h 03 ^m			Mag: -2.5 PMG: 4 ^h 58 ^m			Mag: +0.7 PMG: 13 ^h 45 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	0	16.5	222	03.2	+15	36.7	134	10.3	-18	06.7	285	18.1	+21	54.0	153	09.8	-8	45.1
1	15	19.0	237	02.8		36.0	149	11.0		07.2	300	20.5		54.1	168	12.0		45.2
2	30	21.4	252	02.5		35.3	164	11.8		07.7	315	22.8		54.1	183	14.2		45.3
3	45	23.9	267	02.1		34.7	179	12.5		08.2	330	25.2		54.1	198	16.4		45.4
4	60	26.3	282	01.7		34.0	194	13.2		08.7	345	27.5		54.1	213	18.6		45.5
5	75	28.8	297	01.3	+15	33.3	209	14.0	-18	09.2	0	29.9	+21	54.1	228	20.8	-8	45.6
6	90	31.3	312	00.9	+15	32.6	224	14.7	-18	09.6	15	32.2	+21	54.1	243	23.0	-8	45.7
7	105	33.7	327	00.5		32.0	239	15.4		10.1	30	34.6		54.1	258	25.2		45.8
8	120	36.2	342	00.1		31.3	254	16.2		10.6	45	36.9		54.1	273	27.4		45.9
9	135	38.7	356	59.7		30.6	269	16.9		11.1	60	39.3		54.1	288	29.6		46.0
10	150	41.1	11	59.3		30.0	284	17.7		11.6	75	41.6		54.1	303	31.9		46.1
11	165	43.6	26	58.9	+15	29.3	299	18.4	-18	12.1	90	44.0	+21	54.1	318	34.1	-8	46.2
12	180	46.1	41	58.5	+15	28.6	314	19.1	-18	12.6	105	46.3	+21	54.2	333	36.3	-8	46.3
13	195	48.5	56	58.2		27.9	329	19.9		13.1	120	48.7		54.2	348	38.5		46.4
14	210	51.0	71	57.8		27.3	344	20.6		13.6	135	51.0		54.2	3	40.7		46.5
15	225	53.5	86	57.4		26.6	359	21.3		14.1	150	53.4		54.2	18	42.9		46.6
16	240	55.9	101	57.0		25.9	14	22.1		14.6	165	55.7		54.2	33	45.1		46.7
17	255	58.4	116	56.6	+15	25.2	29	22.8	-18	15.1	180	58.1	+21	54.2	48	47.3	-8	46.8
18	271	00.8	131	56.2	+15	24.6	44	23.6	-18	15.6	196	00.4	+21	54.2	63	49.5	-8	46.9
19	286	03.3	146	55.8		23.9	59	24.3		16.0	211	02.8		54.2	78	51.7		47.0
20	301	05.8	161	55.4		23.2	74	25.0		16.5	226	05.1		54.2	93	53.9		47.1
21	316	08.2	176	55.0		22.5	89	25.8		17.0	241	07.5		54.2	108	56.1		47.2
22	331	10.7	191	54.6		21.8	104	26.5		17.5	256	09.8		54.2	123	58.3		47.3
23	346	13.2	206	54.2		21.1	119	27.2		18.0	271	12.2		54.3	139	00.5		47.4
24	1	15.6	221	53.9	+15	20.5	134	28.0	-18	18.5	286	14.5	+21	54.3	154	02.7	-8	47.5
Dif	—			-4			+7			-5			+23			+22		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 15 ^h 9		Edad: 5 ^d 9	PHE { 4 ^h : 59/2 12 ^h : 59/1 20 ^h : 59/0	R°: 57 ^m								
	PMG: 11 ^h 52 ^m 6												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif							
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	181	48.9	+0	14.4	103	25.3	-21 08.1	60 N	17 59	18 40	19 30	14 28 41	21 12 76
1	196	49.1		13.4	117	49.7	54 08.1	58	58	38	24	14 12 44	27 74
2	211	49.3		12.5	132	14.2	55 07.9	56	58	35	19	13 59 45	40 73
3	226	49.5		11.5	146	38.7	55 07.5	54	58	33	15	47 47	21 52 71
4	241	49.8		10.5	161	03.2	55 07.1	52	58	31	11	37 47	22 02 70
5	256	50.0	+0	09.6	175	27.8	56 -21 06.5	50	17 57	18 30	19 08	13 28 48	22 11 69
6	271	50.2	+0	08.6	189	52.4	56 -21 05.7	45	17 57	18 26	19 01	13 08 51	22 30 66
7	286	50.4		07.6	204	17.0	56 04.8	40	57	24	18 55	12 53 51	46 64
8	301	50.6		06.6	218	41.7	57 03.8	35	56	22	51	39 53	22 59 63
9	316	50.9		05.7	233	06.3	56 02.6	30	56	20	48	28 53	23 10 62
10	331	51.1		04.7	247	31.1	58 -21 01.3	20	56	18	44	12 08 55	29 60
11	346	51.3	+0	03.7	261	55.8	57 -20 59.8	10 N	17 56	18 17	18 41	11 50 57	23 46 58
12	1	51.5	+0	02.7	276	20.6	58 -20 58.3	0	17 56	18 16	18 40	11 34 58	*** ** *
13	16	51.7		01.8	290	45.4	58 56.5	10 S	56	17	41	18 59	*** ** *
14	31	52.0	+0	00.8	305	10.3	59 54.7	20	56	18	44	11 01 60	*** ** *
15	46	52.2	-0	00.2	319	35.2	59 52.7	30	56	20	48	10 41 61	*** ** *
16	61	52.4		01.2	334	00.1	59 50.6	35	57	22	51	30 62	0 09 56
17	76	52.6	-0	02.1	348	25.1	60 -20 48.3	40	17 57	18 24	18 56	10 16 63	0 22 55
18	91	52.8	-0	03.1	2	50.1	60 -20 45.9	45	17 57	18 27	19 01	10 01 64	0 38 54
19	106	53.1		04.1	17	15.2	61 43.4	50	58	30	08	9 41 66	0 57 54
20	121	53.3		05.0	31	40.3	61 40.7	52	58	32	12	32 66	1 06 54
21	136	53.5		06.0	46	05.4	61 37.9	54	58	34	16	22 67	17 52
22	151	53.7		07.0	60	30.6	62 35.0	56	59	36	20	9 10 68	28 52
23	166	53.9		08.0	74	55.9	63 31.9	58	17 59	38	25	8 57 69	42 50
24	181	54.2	-0	08.9	89	21.2	63 -20 28.7	60 S	18 00	18 41	19 31	8 41 71	1 57 50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 51 ^m 0		Mag: -4.2 PMG: 9 ^h 13 ^m		Mag: +1.2 PMG: 15 ^h 01 ^m		Mag: -2.5 PMG: 4 ^h 54 ^m		Mag: +0.7 PMG: 13 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	1	15.6	221	53.9	134	28.0	-18 18.5	286	14.5	+21 54.3	154 02.7	-8 47.5						
1	16	18.1	236	53.5		19.8	149 28.7		19.0	301 16.9	54.3	169 04.9	47.6					
2	31	20.6	251	53.1		19.1	164 29.4		19.5	316 19.2	54.3	184 07.1	47.7					
3	46	23.0	266	52.7		18.4	179 30.2		20.0	331 21.6	54.3	199 09.3	47.8					
4	61	25.5	281	52.3		17.7	194 30.9		20.5	346 23.9	54.3	214 11.5	47.9					
5	76	28.0	296	51.9	+15	17.0	209 31.6	-18	20.9	1	26.3	+21 54.3	229 13.7	-8 48.0				
6	91	30.4	311	51.5	+15	16.3	224 32.4	-18	21.4	16	28.6	+21 54.3	244 15.9	-8 48.1				
7	106	32.9	326	51.1		15.7	239 33.1		21.9	31	31.0	54.3	259 18.1	48.2				
8	121	35.3	341	50.7		15.0	254 33.8		22.4	46	33.4	54.3	274 20.3	48.4				
9	136	37.8	356	50.3		14.3	269 34.5		22.9	61	35.7	54.3	289 22.5	48.5				
10	151	40.3	11	49.9		13.6	284 35.3		23.4	76	38.1	54.3	304 24.7	48.6				
11	166	42.7	26	49.6	+15	12.9	299 36.0	-18	23.9	91	40.4	+21 54.4	319 26.9	-8 48.7				
12	181	45.2	41	49.2	+15	12.2	314 36.7	-18	24.4	106	42.8	+21 54.4	334 29.1	-8 48.8				
13	196	47.7	56	48.8		11.5	329 37.5		24.8	121	45.1	54.4	349 31.4	48.9				
14	211	50.1	71	48.4		10.8	344 38.2		25.3	136	47.5	54.4	4	33.6	49.0			
15	226	52.6	86	48.0		10.1	359 38.9		25.8	151	49.9	54.4	19	35.8	49.1			
16	241	55.1	101	47.6		09.4	14 39.7		26.3	166	52.2	54.4	34	38.0	49.2			
17	256	57.5	116	47.2	+15	08.7	29 40.4	-18	26.8	181	54.6	+21 54.4	49 40.2	-8 49.3				
18	272	00.0	131	46.8	+15	08.0	44 41.1	-18	27.3	196	56.9	+21 54.4	64 42.4	-8 49.4				
19	287	02.5	146	46.4		07.3	59 41.8		27.8	211	59.3	54.4	79 44.6	49.5				
20	302	04.9	161	46.0		06.6	74 42.6		28.2	227	01.7	54.4	94 46.8	49.6				
21	317	07.4	176	45.7		05.9	89 43.3		28.7	242	04.0	54.4	109 49.0	49.7				
22	332	09.8	191	45.3		05.2	104 44.0		29.2	257	06.4	54.4	124 51.2	49.8				
23	347	12.3	206	44.9		04.5	119 44.7		29.7	272	08.7	54.4	139 53.4	49.9				
24	2	14.8	221	44.5	+15	03.8	134 45.5	-18	30.2	287	11.1	+21 54.5	154 55.6	-8 50.0				
Dif	—		-4		-7		+7		-5		+24		0		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52 ^m 2			Edad: 6 ^d 9 SD: 16'0 PMG: 18 ^h 45 ^m	PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'5 R°: 55 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	181	54.2	-0 08.9	89	21.2	-20 28.7	33	60 N	4 16	5 06	5 47	15 09	29	22 28	83
1	196	54.4	09.9	103	46.5	25.4	33	58	21	08	48	14 56	32	41	80
2	211	54.6	10.9	118	11.9	21.9	35	56	26	11	48	44 34		22 53	77
3	226	54.8	11.9	132	37.4	18.4	35	54	31	13	48	34 36		23 03	75
4	241	55.0	12.8	147	02.9	14.7	37	52	35	14	48	24 38		12	73
5	256	55.2	-0 13.8	161	28.4	-20 10.8	39	50	4 38	5 16	5 48	14 16	39	23 20	71
6	271	55.5	-0 14.8	175	54.0	-20 06.9	39	45	4 45	5 19	5 49	13 59	42	23 36	69
7	286	55.7	15.7	190	19.7	-20 02.8	41	40	50	22	49	44 45		23 50	66
8	301	55.9	16.7	204	45.4	-19 58.6	42	35	54	24	49	32 46		** ** *	**
9	316	56.1	17.7	219	11.2	54.3	43	30	4 57	25	49	21 48		** ** *	**
10	331	56.3	18.7	233	37.0	49.8	45	20	5 02	27	49	13 03	51	** ** *	**
11	346	56.6	-0 19.6	248	02.9	-19 45.2	46	10 N	5 04	5 28	5 49	12 47	53	** ** *	**
12	1	56.8	-0 20.6	262	28.9	-19 40.6	46	0	5 04	5 28	5 49	12 32	55	0 02	57
13	16	57.0	21.6	276	54.9	35.7	49	10 S	03	28	49	17 57		18	55
14	31	57.2	22.6	291	20.9	30.8	49	20	5 01	26	48	12 01	59	34	53
15	46	57.4	23.5	305	47.1	25.8	50	30	4 56	24	48	11 42	63	0 54	50
16	61	57.6	24.5	320	13.3	20.6	52	35	53	22	48	32 63		1 05	49
17	76	57.9	-0 25.5	334	39.5	-19 15.3	53	40	4 49	5 20	5 47	11 19	66	1 17	49
18	91	58.1	-0 26.5	349	05.8	-19 09.9	54	45	4 43	5 17	5 47	11 05	67	1 32	47
19	106	58.3	27.4	3	32.2	-19 04.4	55	50	36	14	46	10 47	70	1 51	44
20	121	58.5	28.4	17	58.7	-18 58.8	56	52	32	12	46	38 72		2 00	42
21	136	58.7	29.4	32	25.2	53.1	57	54	28	10	45	29 73		09	41
22	151	59.0	30.3	46	51.7	47.2	59	56	24	08	45	18 76		20	40
23	166	59.2	31.3	61	18.4	41.2	60	58	18	05	44	10 06	78	32	38
24	181	59.4	-0 32.3	75	45.1	-18 35.2	60	60 S	4 12	5 02	5 44	9 52	80	2 47	35

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 23 ^h 47 ^m 1		Mag: -4.1 PMG: 9 ^h 13 ^m			Mag: +1.2 PMG: 15 ^h 00 ^m			Mag: -2.5 PMG: 4 ^h 50 ^m			Mag: +0.7 PMG: 13 ^h 38 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	2	14.8	221	44.5	+15 03.8	134	45.5	-18 30.2	287	11.1	+21 54.5	154	55.6	-8 50.0
1	17	17.2	236	44.1	03.1	149	46.2	30.7	302	13.5	54.5	169	57.8	50.1
2	32	19.7	251	43.7	02.4	164	46.9	31.2	317	15.8	54.5	185	00.0	50.2
3	47	22.2	266	43.3	01.7	179	47.6	31.6	332	18.2	54.5	200	02.2	50.3
4	62	24.6	281	42.9	01.0	194	48.4	32.1	347	20.6	54.5	215	04.4	50.4
5	77	27.1	296	42.5	+15 00.3	209	49.1	-18 32.6	2	22.9	+21 54.5	230	06.6	-8 50.5
6	92	29.6	311	42.2	+14 59.6	224	49.8	-18 33.1	17	25.3	+21 54.5	245	08.8	-8 50.6
7	107	32.0	326	41.8	58.9	239	50.5	33.6	32	27.7	54.5	260	11.0	50.7
8	122	34.5	341	41.4	58.2	254	51.3	34.1	47	30.0	54.5	275	13.2	50.8
9	137	36.9	356	41.0	57.5	269	52.0	34.5	62	32.4	54.5	290	15.4	50.9
10	152	39.4	11	40.6	56.7	284	52.7	35.0	77	34.7	54.5	305	17.6	51.0
11	167	41.9	26	40.2	+14 56.0	299	53.4	-18 35.5	92	37.1	+21 54.5	320	19.8	-8 51.1
12	182	44.3	41	39.8	+14 55.3	314	54.2	-18 36.0	107	39.5	+21 54.5	335	22.0	-8 51.2
13	197	46.8	56	39.4	54.6	329	54.9	36.5	122	41.8	54.6	350	24.2	51.3
14	212	49.3	71	39.0	53.9	344	55.6	37.0	137	44.2	54.6	5	26.4	51.4
15	227	51.7	86	38.7	53.2	359	56.3	37.4	152	46.6	54.6	20	28.6	51.5
16	242	54.2	101	38.3	52.5	14	57.0	37.9	167	49.0	54.6	35	30.8	51.6
17	257	56.7	116	37.9	+14 51.8	29	57.8	-18 38.4	182	51.3	+21 54.6	50	33.0	-8 51.7
18	272	59.1	131	37.5	+14 51.0	44	58.5	-18 38.9	197	53.7	+21 54.6	65	35.2	-8 51.8
19	288	01.6	146	37.1	50.3	59	59.2	39.4	212	56.1	54.6	80	37.4	51.9
20	303	04.1	161	36.7	49.6	74	59.9	39.8	227	58.4	54.6	95	39.6	52.0
21	318	06.5	176	36.3	48.9	90	00.6	40.3	243	00.8	54.6	110	41.8	52.1
22	333	09.0	191	35.9	48.2	105	01.4	40.8	258	03.2	54.6	125	44.0	52.3
23	348	11.4	206	35.5	47.4	120	02.1	41.3	273	05.5	54.6	140	46.2	52.4
24	3	13.9	221	35.2	+14 46.7	135	02.8	-18 41.8	288	07.9	+21 54.6	155	48.4	-8 52.5
Dif	—		-4 -7			+7 -5			+24 0			+22 -1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 7 ^d 9	PHE {	4 ^h : 58'3 12 ^h : 58'2 20 ^h : 58'0									
	PMG: 11 ^h 51 ^m 9					SD: 15°9			PMG: 19 ^h 40 ^m		R°: 51 ^m			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	m
0	181	59.4	-0 32.3	75	45.1	-18 35.2	62	60 N	17 53	18 34	19 24	15 38 22	23 51 84	
1	196	59.6	33.3	90	11.8	77	29.0	58	53	32	18	28 24	** ** *	**
2	211	59.8	34.2	104	38.7	79	22.7	56	53	30	14	18 27	** ** *	**
3	227	00.0	35.2	119	05.6	79	16.3	54	53	28	10	10 28	** ** *	**
4	242	00.3	36.2	133	32.5	79	09.8	52	53	27	06	15 02 31	** ** *	**
5	257	00.5	-0 37.2	147	59.6	81	-18 03.3	50	17 53	18 25	19 03	14 55 33	** ** *	**
6	272	00.7	-0 38.1	162	26.7	81	-17 56.6	45	17 53	18 22	18 57	14 41 35	** ** *	**
7	287	00.9	39.1	176	53.8	81	49.8	40	53	20	52	29 38	** ** *	**
8	302	01.1	40.1	191	21.1	83	42.8	35	54	19	48	18 41	0 02 64	
9	317	01.4	41.1	205	48.4	83	35.8	30	54	18	45	14 09 43	12 62	
10	332	01.6	42.0	220	15.8	84	28.7	20	54	16	42	13 54 46	29 59	
11	347	01.8	-0 43.0	234	43.2	84	-17 21.5	10 N	17 55	18 16	18 40	13 40 49	0 44 57	
12	2	02.0	-0 44.0	249	10.7	85	-17 14.3	0	17 55	18 16	18 40	13 27 52	0 59 53	
13	17	02.2	44.9	263	38.3	86	-17 06.9	10 S	56	17	41	14 55	1 13 51	
14	32	02.4	45.9	278	05.9	86	-16 59.4	20	57	19	44	13 00 58	27 49	
15	47	02.7	46.9	292	33.7	88	51.8	30	58	21	49	12 45 61	44 46	
16	62	02.9	47.9	307	01.4	87	44.1	35	58	23	53	35 64	1 54 44	
17	77	03.1	-0 48.8	321	29.3	89	-16 36.4	40	17 59	18 26	18 58	12 25 66	2 06 41	
18	92	03.3	-0 49.8	335	57.2	89	-16 28.5	45	18 00	18 29	19 04	12 12 69	2 19 39	
19	107	03.5	50.8	350	25.2	90	20.6	50	01	33	12	11 57 73	35 35	
20	122	03.7	51.8	4	53.3	91	12.5	52	01	35	15	50 74	42 34	
21	137	04.0	52.7	19	21.4	91	-16 04.4	54	02	37	20	42 76	2 50 33	
22	152	04.2	53.7	33	49.6	92	-15 56.2	56	03	40	25	34 78	3 00 30	
23	167	04.4	54.7	48	17.9	93	47.9	58	03	43	30	24 80	10 28	
24	182	04.6	-0 55.7	62	46.2	93	-15 39.6	60 S	18 04	18 46	19 37	11 12 84	3 22 25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 43 ^m 2		Mag: -4.1 PMG: 9 ^h 14 ^m		Mag: +1.2 PMG: 14 ^h 59 ^m		Mag: -2.5 PMG: 4 ^h 47 ^m		Mag: +0.7 PMG: 13 ^h 35 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	3	13.9	221	35.2	+14	46.7	135	02.8	-18	41.8	288	07.9	+21	54.6	155	48.4	-8	52.5
1	18	16.4	236	34.8		46.0	150	03.5		42.2	303	10.3		54.6	170	50.6		52.6
2	33	18.8	251	34.4		45.3	165	04.2		42.7	318	12.6		54.6	185	52.8		52.7
3	48	21.3	266	34.0		44.6	180	05.0		43.2	333	15.0		54.6	200	55.0		52.8
4	63	23.8	281	33.6		43.8	195	05.7		43.7	348	17.4		54.7	215	57.2		52.9
5	78	26.2	296	33.2	+14	43.1	210	06.4	-18	44.1	3	19.8	+21	54.7	230	59.4	-8	53.0
6	93	28.7	311	32.8	+14	42.4	225	07.1	-18	44.6	18	22.1	+21	54.7	246	01.6	-8	53.1
7	108	31.2	326	32.4		41.7	240	07.8		45.1	33	24.5		54.7	261	03.8		53.2
8	123	33.6	341	32.1		40.9	255	08.5		45.6	48	26.9		54.7	276	06.0		53.3
9	138	36.1	356	31.7		40.2	270	09.3		46.1	63	29.3		54.7	291	08.2		53.4
10	153	38.6	11	31.3		39.5	285	10.0		46.5	78	31.6		54.7	306	10.4		53.5
11	168	41.0	26	30.9	+14	38.7	300	10.7	-18	47.0	93	34.0	+21	54.7	321	12.6	-8	53.6
12	183	43.5	41	30.5	+14	38.0	315	11.4	-18	47.5	108	36.4	+21	54.7	336	14.8	-8	53.7
13	198	45.9	56	30.1		37.3	330	12.1		48.0	123	38.8		54.7	351	17.0		53.8
14	213	48.4	71	29.7		36.5	345	12.8		48.4	138	41.1		54.7	6	19.2		53.9
15	228	50.9	86	29.3		35.8	0	13.5		48.9	153	43.5		54.7	21	21.4		54.0
16	243	53.3	101	29.0		35.1	15	14.3		49.4	168	45.9		54.7	36	23.6		54.1
17	258	55.8	116	28.6	+14	34.4	30	15.0	-18	49.9	183	48.3	+21	54.7	51	25.8	-8	54.2
18	273	58.3	131	28.2	+14	33.6	45	15.7	-18	50.3	198	50.6	+21	54.7	66	28.0	-8	54.3
19	289	00.7	146	27.8		32.9	60	16.4		50.8	213	53.0		54.8	81	30.2		54.4
20	304	03.2	161	27.4		32.1	75	17.1		51.3	228	55.4		54.8	96	32.4		54.5
21	319	05.7	176	27.0		31.4	90	17.8		51.8	243	57.8		54.8	111	34.6		54.6
22	334	08.1	191	26.6		30.7	105	18.5		52.2	259	00.1		54.8	126	36.8		54.7
23	349	10.6	206	26.2		29.9	120	19.2		52.7	274	02.5		54.8	141	39.0		54.8
24	4	13.0	221	25.9	+14	29.2	135	20.0	-18	53.2	289	04.9	+21	54.8	156	41.2	-8	54.9
Dif	—		-4	-7		+7	-5		+24	0		+22		-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15'9 PMG: 11 ^h 51 ^m 5			Edad: 8 ^d 9 SD: 15'8 PMG: 20 ^h 31 ^m	PHE { 4 ^h : 57'9 12 ^h : 57'7 20 ^h : 57'5 R°: 49 ^m															
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	182	04.6	-0	55.7	62	46.2	-15	39.6	60 N	4	21	5	10	5	52	16	00	16		
1	197	04.8		56.6	77	14.6	94	31.1	85	58	26	13	52	15	52	19	0	01	81	
2	212	05.0		57.6	91	43.1	95	22.6	85	56	31	15	52	45	21		10	79		
3	227	05.2		58.6	106	11.7	96	14.0	86	54	35	16	52	38	24		18	76		
4	242	05.5	-0	59.6	120	40.3	96	-15	05.3	87	38	18	51	33	25		25	74		
5	257	05.7	-1	00.5	135	09.0	97	-14	56.5	88	4	41	5	19	28	27	0	31	73	
6	272	05.9	-1	01.5	149	37.7	97	-14	47.7	88	4	47	5	22	15	16	31	0	45	69
7	287	06.1		02.5	164	06.5	98	38.8	89	40	52	24	51	15	07	34	0	56	66	
8	302	06.3		03.4	178	35.4	99	29.8	90	35	56	25	50	14	59	37	1	06	63	
9	317	06.5		04.4	193	04.4	100	20.7	91	30	4	58	26	50	52	39	14	61		
10	332	06.8		05.4	207	33.4	100	11.6	91	20	5	02	28	50	40	43	28	57		
11	347	07.0	-1	06.4	222	02.5	101	-14	02.3	93	5	04	5	28	14	29	46	1	41	54
12	2	07.2	-1	07.3	236	31.6	101	-13	53.1	92	5	04	5	28	14	19	50	1	52	51
13	17	07.4		08.3	251	00.8	102	43.7	94	10 S	5	02	27	48	14	09	53	2	04	48
14	32	07.6		09.3	265	30.1	103	34.3	94	20	4	59	25	47	13	58	56	16	45	
15	47	07.8		10.3	279	59.5	104	24.8	95	30	54	22	45	46	60		30	41		
16	62	08.1		11.2	294	28.9	104	15.3	95	35	50	19	45	39	62		38	39		
17	77	08.3	-1	12.2	308	58.4	105	-13	05.6	97	4	45	5	17	13	31	65	2	47	36
18	92	08.5	-1	13.2	323	27.9	105	-12	56.0	96	4	39	5	14	13	21	68	2	58	33
19	107	08.7		14.2	337	57.5	106	46.2	98	50	31	09	42	10	72		3	10	30	
20	122	08.9		15.1	352	27.2	107	36.4	98	52	27	07	41	13	04	74		16	28	
21	137	09.1		16.1	6	56.9	107	26.6	98	54	23	05	40	12	58	76		23	26	
22	152	09.3		17.1	21	26.7	108	16.7	99	56	18	02	40	52	78		30	24		
23	167	09.6		18.0	35	56.6	109	-12	06.7	100	12	5	00	39	44	81		38	22	
24	182	09.8	-1	19.0	50	26.5	109	-11	56.6	101	4	06	4	56	12	36	83	3	47	19
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 39 ^m 2			Mag: -4.1 PMG: 9 ^h 15 ^m			Mag: +1.2 PMG: 14 ^h 58 ^m			Mag: -2.5 PMG: 4 ^h 43 ^m			Mag: +0.7 PMG: 13 ^h 31 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	4	13.0	221	25.9	+14	29.2	135	20.0	-18	53.2	289	04.9	+21	54.8	156	41.2	-8	54.9		
1	19	15.5	236	25.5		28.5	150	20.7		53.7	304	07.3		54.8	171	43.4		55.0		
2	34	18.0	251	25.1		27.7	165	21.4		54.1	319	09.7		54.8	186	45.6		55.1		
3	49	20.4	266	24.7		27.0	180	22.1		54.6	334	12.0		54.8	201	47.8		55.2		
4	64	22.9	281	24.3		26.2	195	22.8		55.1	349	14.4		54.8	216	50.0		55.3		
5	79	25.4	296	23.9	+14	25.5	210	23.5	-18	55.5	4	16.8	+21	54.8	231	52.2	-8	55.4		
6	94	27.8	311	23.5	+14	24.7	225	24.2	-18	56.0	19	19.2	+21	54.8	246	54.4	-8	55.6		
7	109	30.3	326	23.2		24.0	240	24.9		56.5	34	21.6		54.8	261	56.6		55.7		
8	124	32.8	341	22.8		23.3	255	25.6		57.0	49	24.0		54.8	276	58.8		55.8		
9	139	35.2	356	22.4		22.5	270	26.3		57.4	64	26.3		54.8	292	01.0		55.9		
10	154	37.7	11	22.0		21.8	285	27.0		57.9	79	28.7		54.8	307	03.2		56.0		
11	169	40.2	26	21.6	+14	21.0	300	27.8	-18	58.4	94	31.1	+21	54.8	322	05.4	-8	56.1		
12	184	42.6	41	21.2	+14	20.3	315	28.5	-18	58.8	109	33.5	+21	54.9	337	07.6	-8	56.2		
13	199	45.1	56	20.8		19.5	330	29.2		59.3	124	35.9		54.9	352	09.8		56.3		
14	214	47.5	71	20.5		18.8	345	29.9	-18	59.8	139	38.3		54.9	7	12.0		56.4		
15	229	50.0	86	20.1		18.0	0	30.6	-19	00.3	154	40.6		54.9	22	14.2		56.5		
16	244	52.5	101	19.7		17.3	15	31.3		00.7	169	43.0		54.9	37	16.4		56.6		
17	259	54.9	116	19.3	+14	16.5	30	32.0	-19	01.2	184	45.4	+21	54.9	52	18.6	-8	56.7		
18	274	57.4	131	18.9	+14	15.8	45	32.7	-19	01.7	199	47.8	+21	54.9	67	20.8	-8	56.8		
19	289	59.9	146	18.5		15.0	60	33.4		02.1	214	50.2		54.9	82	23.0		56.9		
20	305	02.3	161	18.1		14.3	75	34.1		02.6	229	52.6		54.9	97	25.2		57.0		
21	320	04.8	176	17.8		13.5	90	34.8		03.1	244	55.0		54.9	112	27.4		57.1		
22	335	07.3	191	17.4		12.7	105	35.5		03.5	259	57.3		54.9	127	29.6		57.2		
23	350	09.7	206	17.0		12.0	120	36.2		04.0	274	59.7		54.9	142	31.8		57.3		
24	5	12.2	221	16.6	+14	11.2	135	36.9	-19	04.5	290	02.1	+21	54.9	157	34.0	-8	57.4		
Dif	—		-4		-7		+7		-5		+24		0		+22			-		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°0 PMG: 11 ^h 51 ^m 2		Edad: 9 ^d 9 PHE { SD: 15°6 PMG: 21 ^h 20 ^m 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 57/0 R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	09.8	-1	19.0	50	26.5	-11	56.6	60 N	17	47	18	28	16	16
1	197	10.0		20.0	64	56.5 ¹¹⁰		46.6 ¹⁰⁰	58	47	26	12	11	16	
2	212	10.2		21.0	79	26.5 ¹¹⁰		36.4 ¹⁰²	56	48	24	08	06	19	
3	227	10.4		21.9	93	56.6 ¹¹¹		26.2 ¹⁰²	54	48	23	04	16	02	
4	242	10.6		22.9	108	26.8 ¹¹²		16.0 ¹⁰²	52	48	22	19	15	58	
5	257	10.8	-1	23.9	122	57.0 ¹¹²	-11	05.7 ¹⁰³	50	17	49	18	15	55	
6	272	11.1	-1	24.9	137	27.3 ¹¹³	-10	55.3 ¹⁰⁴	45	17	49	18	15	47	
7	287	11.3		25.8	151	57.6 ¹¹³		44.9 ¹⁰⁴	40	50	17	48	41	31	
8	302	11.5		26.8	166	28.0 ¹¹⁴		34.5 ¹⁰⁴	35	51	16	45	36	33	
9	317	11.7		27.8	180	58.5 ¹¹⁵		24.0 ¹⁰⁵	30	51	15	43	31	36	
10	332	11.9		28.7	195	29.0 ¹¹⁵		13.4 ¹⁰⁶	20	52	14	40	23	40	
11	347	12.1	-1	29.7	209	59.5 ¹¹⁵	-10	02.8 ¹⁰⁶	10 N	17	53	18	14	15	15
12	2	12.3	-1	30.7	224	30.2 ¹¹⁷	-9	52.2 ¹⁰⁶	0	17	54	18	15	15	09
13	17	12.6		31.7	239	00.8 ¹¹⁶		41.5 ¹⁰⁷	10 S	56	17	41	15	02	
14	32	12.8		32.6	253	31.6 ¹¹⁸		30.8 ¹⁰⁷	20	57	19	45	14	54	
15	47	13.0		33.6	268	02.3 ¹¹⁷		20.1 ¹⁰⁷	30	17	59	23	51	46	
16	62	13.2		34.6	282	33.2 ¹¹⁹	-9	09.3 ¹⁰⁸	35	18	00	25	18	55	
17	77	13.4	-1	35.6	297	04.1 ¹¹⁹	-8	58.5 ¹⁰⁸	40	18	01	18	28	14	
18	92	13.6	-1	36.5	311	35.0 ¹¹⁹	-8	47.6 ¹⁰⁹	45	18	02	18	32	14	
19	107	13.8		37.5	326	06.0 ¹²⁰		36.7 ¹⁰⁹	50	04	36	15	22	71	
20	122	14.0		38.5	340	37.0 ¹²⁰		25.7 ¹¹⁰	52	05	39	19	18	73	
21	137	14.3		39.5	355	08.1 ¹²¹		14.8 ¹⁰⁹	54	06	41	24	14	75	
22	152	14.5		40.4	9	39.3 ¹²²	-8	03.8 ¹¹⁰	56	07	44	29	10	77	
23	167	14.7		41.4	24	10.5 ¹²²	-7	52.7 ¹¹¹	58	08	47	35	14	05	
24	182	14.9	-1	42.4	38	41.7 ¹²²	-7	41.7 ¹¹⁰	60 S	18	09	18	51	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 35 ^m 3		Mag: -4.1 PMG: 9 ^h 15 ^m		Mag: +1.2 PMG: 14 ^h 57 ^m		Mag: -2.6 PMG: 4 ^h 39 ^m		Mag: +0.7 PMG: 13 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	5	12.2	221	16.6	135	36.9	290	02.1	157	34.0
1	20	14.7	236	16.2	150	37.6	305	04.5	172	36.2
2	35	17.1	251	15.8	165	38.3	320	06.9	187	38.4
3	50	19.6	266	15.4	180	39.0	335	09.3	202	40.6
4	65	22.0	281	15.1	195	39.7	350	11.7	217	42.8
5	80	24.5	296	14.7	210	40.4	5	14.1	232	45.0
6	95	27.0	311	14.3	225	41.1	20	16.5	247	47.2
7	110	29.4	326	13.9	240	41.8	35	18.8	262	49.4
8	125	31.9	341	13.5	255	42.5	50	21.2	277	51.6
9	140	34.4	356	13.1	270	43.2	65	23.6	292	53.8
10	155	36.8	11	12.8	285	43.9	80	26.0	307	55.9
11	170	39.3	26	12.4	300	44.6	95	28.4	322	58.1
12	185	41.8	41	12.0	315	45.3	110	30.8	338	00.3
13	200	44.2	56	11.6	330	46.0	125	33.2	353	02.5
14	215	46.7	71	11.2	345	46.7	140	35.6	8	04.7
15	230	49.1	86	10.8	0	47.4	155	38.0	23	06.9
16	245	51.6	101	10.5	15	48.1	170	40.4	38	09.1
17	260	54.1	116	10.1	30	48.8	185	42.8	53	11.3
18	275	56.5	131	09.7	45	49.5	200	45.2	68	13.5
19	290	59.0	146	09.3	60	50.2	215	47.6	83	15.7
20	306	01.5	161	08.9	75	50.9	230	50.0	98	17.9
21	321	03.9	176	08.5	90	51.6	245	52.3	113	20.1
22	336	06.4	191	08.2	105	52.3	260	54.7	128	22.3
23	351	08.9	206	07.8	120	53.0	275	57.1	143	24.5
24	6	11.3	221	07.4	135	53.7	290	59.5	158	26.7
Dif	—		-4	-8	+7	-5	+24	0	+22	-1

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 10 ^d 9 PHE	SD: 15'5											
	PMG: 11 ^h 50 ^m 8				PMG: 22 ^h 07 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	14.9	-1 42.4	38	41.7	-7 41.7		60 N	4 26	5 15	5 57	16 29	13	2 39	81	
1	197	15.1		53	13.0 ¹²³		30.6 ¹¹¹	58	31	17	56	27	15	43	79	
2	212	15.3		67	44.3 ¹²³		19.4 ¹¹²	56	35	19	56	25	17	47	76	
3	227	15.5		82	15.7 ¹²⁴	-7 08.3 ¹¹¹		54	38	20	55	23	19	50	74	
4	242	15.7		96	47.1 ¹²⁴	-6 57.1 ¹¹²		52	42	21	55	21	21	53	72	
5	257	16.0	-1 47.2	111	18.6 ¹²⁵	-6 45.9 ¹¹²		50	4 44	5 22	5 54	16 19	23	2 56	70	
6	272	16.2	-1 48.2	125	50.1 ¹²⁵	-6 34.6 ¹¹³		45	4 50	5 24	5 53	16 15	26	3 02	66	
7	287	16.4		140	21.7 ¹²⁶		23.4 ¹¹²	40	54	26	53	12	29	06	64	
8	302	16.6		154	53.3 ¹²⁶		12.1 ¹¹³	35	4 57	27	52	09	32	11	60	
9	317	16.8		169	24.9 ¹²⁶	-6 00.8 ¹¹³		30	5 00	27	51	07	34	14	58	
10	332	17.0		183	56.6 ¹²⁷	-5 49.5 ¹¹³		20	02	28	50	16 03	38	21	53	
11	347	17.2	-1 53.1	198	28.3 ¹²⁷	-5 38.1 ¹¹⁴		10 N	5 03	5 28	5 49	15 59	42	3 26	50	
12	2	17.4	-1 54.0	213	00.1 ¹²⁸	-5 26.8 ¹¹³		0	5 03	5 27	5 48	15 56	46	3 31	47	
13	17	17.7		227	31.9 ¹²⁸		15.4 ¹¹⁴	10 S	5 01	25	46	52	50	37	43	
14	32	17.9		242	03.7 ¹²⁸	-5 04.0 ¹¹⁴		20	4 57	23	45	49	53	42	39	
15	47	18.1		256	35.6 ¹²⁹	-4 52.6 ¹¹⁴		30	51	19	43	45	57	48	35	
16	62	18.3		271	07.5 ¹²⁹		41.1 ¹¹⁵	35	47	17	42	42	60	52	32	
17	77	18.5	-1 58.9	285	39.5 ¹³⁰	-4 29.7 ¹¹⁴		40	4 42	5 13	5 41	15 39	63	3 56	30	
18	92	18.7	-1 59.9	300	11.5 ¹³⁰	-4 18.2 ¹¹⁵		45	4 35	5 10	5 39	15 36	66	4 00	27	
19	107	18.9	-2 00.9	314	43.5 ¹³⁰	-4 06.7 ¹¹⁵		50	26	05	37	33	69	06	23	
20	122	19.1		329	15.5 ¹³⁰	-3 55.3 ¹¹⁴		52	22	02	36	31	71	08	22	
21	137	19.3		343	47.6 ¹³¹		43.8 ¹¹⁵	54	17	5 00	35	29	73	11	20	
22	152	19.6		358	19.8 ¹³²		32.3 ¹¹⁵	56	12	4 57	34	27	75	14	17	
23	167	19.8		12	51.9 ¹³¹		20.8 ¹¹⁵	58	4 06	54	33	24	78	17	16	
24	182	20.0	-2 05.7	27	24.1 ¹³²	-3 09.2 ¹¹⁶		60 S	3 59	4 50	5 32	15 22	80	4 21	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 31 ^m 4		Mag: -4.1 PMG: 9 ^h 16 ^m		Mag: +1.2 PMG: 14 ^h 56 ^m		Mag: -2.6 PMG: 4 ^h 35 ^m		Mag: +0.7 PMG: 13 ^h 24 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	6	11.3	221	07.4	+13	52.8	135	53.7	-19	15.6	290	59.5	+21	55.0	158	26.7	-8	59.9	
1	21	13.8	236	07.0		52.1	150	54.4		16.1	306	01.9		55.0	173	28.9	-9	00.0	
2	36	16.3	251	06.6		51.3	165	55.1		16.6	321	04.3		55.0	188	31.1	-9	00.1	
3	51	18.7	266	06.2		50.5	180	55.8		17.0	336	06.7		55.0	203	33.3		00.2	
4	66	21.2	281	05.9		49.7	195	56.5		17.5	351	09.1		55.0	218	35.5		00.3	
5	81	23.6	296	05.5	+13	49.0	210	57.2	-19	17.9	6	11.5	+21	55.1	233	37.7	-9	00.4	
6	96	26.1	311	05.1	+13	48.2	225	57.9	-19	18.4	21	13.9	+21	55.1	248	39.9	-9	00.5	
7	111	28.6	326	04.7		47.4	240	58.6		18.9	36	16.3		55.1	263	42.1		00.6	
8	126	31.0	341	04.3		46.6	255	59.3		19.3	51	18.7		55.1	278	44.3		00.7	
9	141	33.5	356	03.9		45.8	271	00.0		19.8	66	21.1		55.1	293	46.5		00.8	
10	156	36.0	11	03.6		45.0	286	00.7		20.2	81	23.5		55.1	308	48.7		00.9	
11	171	38.4	26	03.2	+13	44.3	301	01.3	-19	20.7	96	25.9	+21	55.1	323	50.9	-9	01.0	
12	186	40.9	41	02.8	+13	43.5	316	02.0	-19	21.2	111	28.3	+21	55.1	338	53.1	-9	01.1	
13	201	43.4	56	02.4		42.7	331	02.7		21.6	126	30.7		55.1	353	55.3		01.2	
14	216	45.8	71	02.0		41.9	346	03.4		22.1	141	33.1		55.1	8	57.5		01.4	
15	231	48.3	86	01.6		41.1	1	04.1		22.5	156	35.5		55.1	23	59.6		01.5	
16	246	50.7	101	01.3		40.3	16	04.8		23.0	171	37.9		55.1	39	01.8		01.6	
17	261	53.2	116	00.9	+13	39.6	31	05.5	-19	23.5	186	40.3	+21	55.1	54	04.0	-9	01.7	
18	276	55.7	131	00.5	+13	38.8	46	06.2	-19	23.9	201	42.7	+21	55.1	69	06.2	-9	01.8	
19	291	58.1	146	00.1		38.0	61	06.9		24.4	216	45.1		55.1	84	08.4		01.9	
20	307	00.6	160	59.7		37.2	76	07.6		24.8	231	47.5		55.1	99	10.6		02.0	
21	322	03.1	175	59.4		36.4	91	08.3		25.3	246	50.0		55.1	114	12.8		02.1	
22	337	05.5	190	59.0		35.6	106	08.9		25.7	261	52.4		55.1	129	15.0		02.2	
23	352	08.0	205	58.6		34.8	121	09.6		26.2	276	54.8		55.1	144	17.2		02.3	
24	7	10.5	220	58.2	+13	34.0	136	10.3	-19	26.7	291	57.2	+21	55.1	159	19.4	-9	02.4	
Dif	—		-4		-8		+7		-5		+24		0		+22		-1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 11 ^d 9 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0											
	PMG: 11 ^h 50 ^m 5		SD: 15'4		PMG: 22 ^h 52 ^m				R°: 45 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	20.0	-2 05.7	27	24.1	-3 09.2	60 N	17 41	18 22	19 11	16 42 12	4 00 80		
1	197	20.2	06.7	41	56.3 ¹³²	-2 57.7 ¹¹⁵	58	41	20	06	42 14	02 77		
2	212	20.4	07.7	56	28.6 ¹³³	46.2 ¹¹⁵	56	42	19	19 03	42 16	03 75		
3	227	20.6	08.6	71	00.9 ¹³³	34.6 ¹¹⁶	54	43	18	18 59	42 18	04 73		
4	242	20.8	09.6	85	33.2 ¹³³	23.1 ¹¹⁵	52	44	17	56	42 20	05 71		
5	257	21.0	-2 10.6	100	05.5 ¹³³	-2 11.6 ¹¹⁵	50	17 44	18 16	18 54	16 42 22	4 06 69		
6	272	21.2	-2 11.5	114	37.9 ¹³⁴	-2 00.0 ¹¹⁶	45	17 46	18 15	18 49	16 41 26	4 08 65		
7	287	21.4	12.5	129	10.3 ¹³⁴	-1 48.5 ¹¹⁵	40	47	14	45	41 29	10 61		
8	302	21.7	13.5	143	42.7 ¹³⁴	36.9 ¹¹⁶	35	48	13	42	41 32	11 59		
9	317	21.9	14.5	158	15.1 ¹³⁴	25.4 ¹¹⁵	30	49	13	40	41 34	12 57		
10	332	22.1	15.4	172	47.6 ¹³⁵	13.8 ¹¹⁶	20	50	12	38	41 38	14 53		
11	347	22.3	-2 16.4	187	20.1 ¹³⁵	-1 02.3 ¹¹⁵	10 N	17 52	18 13	18 37	16 41 42	4 16 49		
12	2	22.5	-2 17.4	201	52.6 ¹³⁵	-0 50.8 ¹¹⁵	0	17 54	18 14	18 38	16 42 44	4 18 45		
13	17	22.7	18.3	216	25.2 ¹³⁶	39.2 ¹¹⁶	10 S	55	17	41	42 48	20 41		
14	32	22.9	19.3	230	57.7 ¹³⁵	27.7 ¹¹⁵	20	17 57	19	45	42 52	21 38		
15	47	23.1	20.3	245	30.3 ¹³⁶	16.2 ¹¹⁵	30	18 00	24	52	42 56	23 34		
16	62	23.3	21.3	260	02.9 ¹³⁶	-0 04.7 ¹¹⁵	35	01	27	18 56	42 58	24 32		
17	77	23.5	-2 22.2	274	35.5 ¹³⁶	+0 06.9 ¹¹⁶	40	18 03	18 30	19 02	16 42 61	4 26 29		
18	92	23.7	-2 23.2	289	08.2 ¹³⁷	+0 18.4 ¹¹⁵	45	18 05	18 34	19 09	16 42 64	4 27 26		
19	107	24.0	24.2	303	40.8 ¹³⁶	29.8 ¹¹⁴	50	07	40	18	42 68	29 22		
20	122	24.2	25.1	318	13.5 ¹³⁷	41.3 ¹¹⁵	52	08	42	23	42 70	30 20		
21	137	24.4	26.1	332	46.2 ¹³⁷	+0 52.8 ¹¹⁵	54	09	45	28	42 72	31 18		
22	152	24.6	27.1	347	18.9 ¹³⁷	+1 04.3 ¹¹⁵	56	11	48	33	42 74	31 17		
23	167	24.8	28.1	1	51.7 ¹³⁸	15.7 ¹¹⁴	58	12	52	40	42 77	33 14		
24	182	25.0	-2 29.0	16	24.4 ¹³⁷	+1 27.1 ¹¹⁴	60 S	18 14	18 56	19 48	16 42 80	4 34 12		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 27 ^m 4		Mag: -4.1 PMG: 9 ^h 16 ^m		Mag: +1.2 PMG: 14 ^h 55 ^m		Mag: -2.6 PMG: 4 ^h 31 ^m		Mag: +0.7 PMG: 13 ^h 21 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	7	10.5	220	58.2	+13	34.0	291	57.2	+21	55.1	159	19.4	-9	02.4
1	22	12.9	235	57.8		33.2	151	11.0		55.1	174	21.6		02.5
2	37	15.4	250	57.4		32.4	166	11.7		55.1	189	23.8		02.6
3	52	17.9	265	57.1		31.6	181	12.4		55.1	204	26.0		02.7
4	67	20.3	280	56.7		30.8	196	13.1		55.1	219	28.2		02.8
5	82	22.8	295	56.3	+13	30.1	211	13.8	-19	28.9	234	30.4	-9	02.9
6	97	25.2	310	55.9	+13	29.3	226	14.4	-19	29.4	249	32.6	-9	03.0
7	112	27.7	325	55.5		28.5	241	15.1		29.8	264	34.8		03.1
8	127	30.2	340	55.2		27.7	256	15.8		30.3	279	37.0		03.2
9	142	32.6	355	54.8		26.9	271	16.5		30.7	294	39.2		03.3
10	157	35.1	10	54.4		26.1	286	17.2		31.2	309	41.4		03.4
11	172	37.6	25	54.0	+13	25.3	301	17.9	-19	31.7	324	43.6	-9	03.5
12	187	40.0	40	53.6	+13	24.5	316	18.6	-19	32.1	339	45.7	-9	03.6
13	202	42.5	55	53.3		23.7	331	19.2		32.6	354	47.9		03.7
14	217	45.0	70	52.9		22.9	346	19.9		33.0	9	50.1		03.8
15	232	47.4	85	52.5		22.1	1	20.6		33.5	24	52.3		03.9
16	247	49.9	100	52.1		21.3	16	21.3		33.9	39	54.5		04.1
17	262	52.4	115	51.7	+13	20.4	31	22.0	-19	34.4	54	56.7	-9	04.2
18	277	54.8	130	51.4	+13	19.6	46	22.7	-19	34.8	69	58.9	-9	04.3
19	292	57.3	145	51.0		18.8	61	23.3		35.3	85	01.1		04.4
20	307	59.7	160	50.6		18.0	76	24.0		35.7	100	03.3		04.5
21	323	02.2	175	50.2		17.2	91	24.7		36.2	115	05.5		04.6
22	338	04.7	190	49.8		16.4	106	25.4		36.6	130	07.7		04.7
23	353	07.1	205	49.5		15.6	121	26.1		37.1	145	09.9		04.8
24	8	09.6	220	49.1	+13	14.8	136	26.7	-19	37.5	160	12.1	-9	04.9
Dif	—		-4	-8		+7	-5	+24		0	+22	-1		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/0 PMG: 11 ^h 49 ^m 8			Edad: 13 ^d 9 PHE { SD: 15/1 PMG: **h **m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	30.0	-2	52.3	5	33.4	+5 55.2	60 N	17 35	18 16	19 04	17 06	15	6 39	77
1	197	30.2		53.3	20	06.3 ¹³⁹	+6 06.1 ¹⁰⁹	58	36	15	19 01	11 18		35	74
2	212	30.4		54.3	34	39.3 ¹⁴⁰	16.8 ¹⁰⁷	56	37	14	18 57	16 19		31	72
3	227	30.6		55.2	49	12.2 ¹³⁹	27.6 ¹⁰⁸	54	38	13	54	20 21		28	70
4	242	30.8		56.2	63	45.1 ¹³⁹	38.3 ¹⁰⁷	52	39	13	52	23 23		25	68
5	257	31.0	-2	57.2	78	18.1 ¹⁴⁰	+6 49.0 ¹⁰⁷	50	17 40	18 12	18 50	17 27	24	6 23	66
6	272	31.2	-2	58.2	92	51.0 ¹³⁹	+6 59.6 ¹⁰⁶	45	17 42	18 11	18 45	17 34	28	6 17	63
7	287	31.4	-2	59.1	107	23.9 ¹³⁹	+7 10.3 ¹⁰⁷	40	44	10	42	40 30		12	60
8	302	31.6	-3	00.1	121	56.9 ¹⁴⁰	20.8 ¹⁰⁵	35	45	10	40	45 33		08	57
9	317	31.8		01.1	136	29.8 ¹³⁹	31.4 ¹⁰⁶	30	46	10	38	49 36		6 05	55
10	332	32.0		02.0	151	02.7 ¹³⁹	41.8 ¹⁰⁴	20	49	11	36	17 57	39	5 58	52
11	347	32.2	-3	03.0	165	35.6 ¹³⁹	+7 52.3 ¹⁰⁵	10 N	17 51	18 12	18 36	18 04	42	5 53	48
12	2	32.4	-3	04.0	180	08.5 ¹³⁹	+8 02.7 ¹⁰⁴	0	17 53	18 14	18 38	18 11	45	5 48	45
13	17	32.6		04.9	194	41.4 ¹³⁹	13.1 ¹⁰⁴	10 S	55	16	41	18 48		43	41
14	32	32.8		05.9	209	14.3 ¹³⁹	23.4 ¹⁰³	20	17 58	20	46	25 51		37	39
15	47	33.0		06.9	223	47.2 ¹³⁹	33.7 ¹⁰³	30	18 01	25	53	33 55		31	35
16	62	33.2		07.8	238	20.1 ¹³⁹	43.9 ¹⁰²	35	03	28	18 58	38 57		28	32
17	77	33.4	-3	08.8	252	52.9 ¹³⁸	+8 54.1 ¹⁰²	40	18 05	18 32	19 04	18 43	60	5 24	30
18	92	33.6	-3	09.8	267	25.8 ¹³⁹	+9 04.2 ¹⁰¹	45	18 07	18 37	19 12	18 50	62	5 19	27
19	107	33.8		10.8	281	58.6 ¹³⁸	14.3 ¹⁰¹	50	10	43	22	18 57	66	14	23
20	122	34.0		11.7	296	31.5 ¹³⁹	24.4 ¹⁰¹	52	11	46	26	19 01	67	11	22
21	137	34.2		12.7	311	04.3 ¹³⁸	34.3 ⁹⁹	54	13	49	32	05 69		08	21
22	152	34.4		13.7	325	37.1 ¹³⁸	44.3 ¹⁰⁰	56	15	52	38	09 71		05	19
23	167	34.6		14.6	340	10.0 ¹³⁹	+9 54.2 ⁹⁹	58	16	18 56	45	14 74		5 02	16
24	182	34.8	-3	15.6	354	42.8 ¹³⁸	+10 04.0 ⁹⁸	60 S	18 18	19 01	19 53	19 19	77	4 58	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 19 ^m 6		Mag: -4.1 PMG: 9 ^h 18 ^m		Mag: +1.2 PMG: 14 ^h 52 ^m		Mag: -2.6 PMG: 4 ^h 24 ^m		Mag: +0.7 PMG: 13 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	9	08.7	220	40.0	+12	55.2	136	43.0	-19	48.3
1	24	11.2	235	39.6		54.3	151	43.7		48.7
2	39	13.7	250	39.3		53.5	166	44.3		49.1
3	54	16.1	265	38.9		52.7	181	45.0		49.6
4	69	18.6	280	38.5		51.9	196	45.7		50.0
5	84	21.1	295	38.1	+12	51.0	211	46.4	-19	50.5
6	99	23.5	310	37.7	+12	50.2	226	47.0	-19	50.9
7	114	26.0	325	37.4		49.4	241	47.7		51.4
8	129	28.4	340	37.0		48.5	256	48.4		51.8
9	144	30.9	355	36.6		47.7	271	49.0		52.2
10	159	33.4	10	36.2		46.9	286	49.7		52.7
11	174	35.8	25	35.9	+12	46.0	301	50.4	-19	53.1
12	189	38.3	40	35.5	+12	45.2	316	51.0	-19	53.6
13	204	40.8	55	35.1		44.4	331	51.7		54.0
14	219	43.2	70	34.7		43.5	346	52.4		54.4
15	234	45.7	85	34.4		42.7	1	53.1		54.9
16	249	48.2	100	34.0		41.9	16	53.7		55.3
17	264	50.6	115	33.6	+12	41.0	31	54.4	-19	55.8
18	279	53.1	130	33.2	+12	40.2	46	55.1	-19	56.2
19	294	55.6	145	32.9		39.3	61	55.7		56.6
20	309	58.0	160	32.5		38.5	76	56.4		57.1
21	325	00.5	175	32.1		37.7	91	57.1		57.5
22	340	02.9	190	31.7		36.8	106	57.7		58.0
23	355	05.4	205	31.4		36.0	121	58.4		58.4
24	10	07.9	220	31.0	+12	35.1	136	59.1	-19	58.8
Dif	—		-4		-8		+7		-4	
								+24		0
									+22	
										-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0			Edad: 14 ^d 9	PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'8	SD: 15'0	PMG: 0 ^h 22 ^m	R°: 45 ^m														
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m					
0	182	34.8	-3	15.6		354	42.8	+10	04.0	60 N	4	36	5	25	6	06	17	21	18	7	56	75
1	197	35.0		16.6		9	15.6 ¹³⁸		13.8 ⁹⁸	58	40	26		05		29	20		49	73		
2	212	35.3		17.5		23	48.3 ¹³⁷		23.6 ⁹⁸	56	43	27		04		35	23		43	71		
3	227	35.5		18.5		38	21.1 ¹³⁸		33.3 ⁹⁷	54	46	27		02		41	25		38	68		
4	242	35.7		19.5		52	53.9 ¹³⁸		42.9 ⁹⁶	52	48	28		01		46	27		33	67		
5	257	35.9	-3	20.4		67	26.6 ¹³⁷	+10	52.5 ⁹⁶	50	4	51	5	28	6	00	17	51	28	7	29	65
6	272	36.1	-3	21.4		81	59.3 ¹³⁷	+11	02.1 ⁹⁶	45	4	55	5	29	5	58	18	02	31	7	20	61
7	287	36.3		22.4		96	32.1 ¹³⁸		11.5 ⁹⁴	40	4	58		30	57		10	34		12	59	
8	302	36.5		23.3		111	04.8 ¹³⁷		21.0 ⁹⁵	35	5	00		30	55		18	36		05	57	
9	317	36.7		24.3		125	37.5 ¹³⁷		30.3 ⁹³	30		02		30	53		25	37		7	00	54
10	332	36.9		25.3		140	10.1 ¹³⁶		39.7 ⁹⁴	20		03		29	51		36	41		6	50	51
11	347	37.1	-3	26.3		154	42.8 ¹³⁷	+11	48.9 ⁹²	10 N	5	03	5	28	5	49	18	46	44	6	41	48
12	2	37.3	-3	27.2		169	15.4 ¹³⁶	+11	58.1 ⁹²	0	5	02	5	26	5	46	18	56	46	6	33	45
13	17	37.5		28.2		183	48.1 ¹³⁷	+12	07.2 ⁹¹	10 S	4	58		23	44		19	06	48		24	43
14	32	37.7		29.2		198	20.7 ¹³⁶		16.3 ⁹¹	20		53	19	41			16	51		16	39	
15	47	37.9		30.1		212	53.3 ¹³⁶		25.4 ⁹¹	30		46	14	38			28	54		06	36	
16	62	38.1		31.1		227	25.9 ¹³⁶		34.3 ⁸⁹	35		41	11	36			35	56		6	00	34
17	77	38.3	-3	32.1		241	58.4 ¹³⁵	+12	43.2 ⁸⁹	40	4	35	5	07	5	34	19	43	58	5	54	32
18	92	38.5	-3	33.0		256	31.0 ¹³⁶	+12	52.1 ⁸⁹	45	4	27	5	02	5	31	19	52	61	5	46	30
19	107	38.7		34.0		271	03.5 ¹³⁵	+13	00.8 ⁸⁷	50		17	4	56	28		20	03	64		37	26
20	122	38.9		35.0		285	36.0 ¹³⁵		09.5 ⁸⁷	52		12	53	27			08	66		33	25	
21	137	39.1		35.9		300	08.5 ¹³⁵		18.2 ⁸⁷	54		07	50	25			14	67		29	22	
22	152	39.3		36.9		314	41.0 ¹³⁵		26.8 ⁸⁶	56	4	00	46	24			20	70		24	20	
23	167	39.5		37.9		329	13.5 ¹³⁵		35.3 ⁸⁵	58	3	53	42	22			28	71		18	19	
24	182	39.7	-3	38.8		343	45.9 ¹³⁴	+13	43.8 ⁸⁵	60 S	3	45	4	37	5	20	20	36	74	5	12	16

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 15 ^m 7		Mag: -4.1 PMG: 9 ^h 18 ^m			Mag: +1.2 PMG: 14 ^h 51 ^m			Mag: -2.6 PMG: 4 ^h 20 ^m			Mag: +0.7 PMG: 13 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	10	07.9	220	31.0	+12	35.1	136	59.1	-19	58.8	294	51.3	+21	55.3	161	57.3	-9	09.9
1	25	10.3	235	30.6		34.3	151	59.7		59.3	309	53.8		55.3	176	59.5		10.0
2	40	12.8	250	30.2		33.4	167	00.4	-19	59.7	324	56.2		55.3	192	01.7		10.1
3	55	15.3	265	29.9		32.6	182	01.1	-20	00.1	339	58.6		55.3	207	03.9		10.2
4	70	17.7	280	29.5		31.8	197	01.7		00.6	355	01.1		55.3	222	06.1		10.3
5	85	20.2	295	29.1	+12	30.9	212	02.4	-20	01.0	10	03.5	+21	55.3	237	08.3	-9	10.4
6	100	22.7	310	28.7	+12	30.1	227	03.0	-20	01.4	25	05.9	+21	55.3	252	10.5	-9	10.5
7	115	25.1	325	28.4		29.2	242	03.7		01.9	40	08.4		55.3	267	12.7		10.6
8	130	27.6	340	28.0		28.4	257	04.4		02.3	55	10.8		55.3	282	14.9		10.7
9	145	30.0	355	27.6		27.5	272	05.0		02.8	70	13.2		55.3	297	17.1		10.8
10	160	32.5	10	27.2		26.7	287	05.7		03.2	85	15.7		55.3	312	19.2		10.9
11	175	35.0	25	26.9	+12	25.8	302	06.4	-20	03.6	100	18.1	+21	55.3	327	21.4	-9	11.0
12	190	37.4	40	26.5	+12	25.0	317	07.0	-20	04.1	115	20.5	+21	55.3	342	23.6	-9	11.1
13	205	39.9	55	26.1		24.1	332	07.7		04.5	130	23.0		55.3	357	25.8		11.2
14	220	42.4	70	25.7		23.3	347	08.3		04.9	145	25.4		55.3	12	28.0		11.4
15	235	44.8	85	25.4		22.4	2	09.0		05.4	160	27.8		55.3	27	30.2		11.5
16	250	47.3	100	25.0		21.6	17	09.7		05.8	175	30.3		55.3	42	32.4		11.6
17	265	49.8	115	24.6	+12	20.7	32	10.3	-20	06.2	190	32.7	+21	55.3	57	34.6	-9	11.7
18	280	52.2	130	24.3	+12	19.9	47	11.0	-20	06.7	205	35.2	+21	55.3	72	36.8	-9	11.8
19	295	54.7	145	23.9		19.0	62	11.6		07.1	220	37.6		55.3	87	39.0		11.9
20	310	57.2	160	23.5		18.1	77	12.3		07.5	235	40.0		55.3	102	41.2		12.0
21	325	59.6	175	23.1		17.3	92	13.0		08.0	250	42.5		55.3	117	43.3		12.1
22	341	02.1	190	22.8		16.4	107	13.6		08.4	265	44.9		55.3	132	45.5		12.2
23	356	04.5	205	22.4		15.6	122	14.3		08.8	280	47.4		55.3	147	47.7		12.3
24	11	07.0	220	22.0	+12	14.7	137	14.9	-20	09.2	295	49.8	+21	55.3	162	49.9	-9	12.4
Dif	—		-4		-9		+7		-4		+24		0		+22		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 15 ^d 9 PHE	SD: 14'9				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 49 ^m 2				PMG: 1 ^h 07 ^m				R°: 46 ^m		R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	39.7	-3 38.8	343	45.9	+13 43.8	83	60 N	17 29	18 10	18 58	17 39 23	9 11 73	
1	197	39.9	39.8	358	18.3 ¹³⁴	+13 52.1	83	58	30	09	55	49 26	9 02 70	
2	212	40.1	40.8	12	50.8 ¹³⁵	+14 00.5	84	56	32	09	52	17 58 27	8 54 67	
3	227	40.3	41.7	27	23.1 ¹³³	08.7	82	54	33	08	49	18 06 29	46 66	
4	242	40.5	42.7	41	55.5 ¹³⁴	16.9	82	52	34	08	47	13 30	40 64	
5	257	40.7	-3 43.7	56	27.9 ¹³⁴	+14 25.0	81	50	17 36	18 08	18 45	18 19 32	8 34 63	
6	272	40.9	-3 44.6	71	00.2 ¹³³	+14 33.1	81	45	17 38	18 07	18 41	18 33 34	8 21 60	
7	287	41.1	45.6	85	32.5 ¹³³	41.1	80	40	40	07	39	44 37	11 57	
8	302	41.3	46.6	100	04.8 ¹³³	49.0	79	35	42	07	37	18 54 38	8 02 55	
9	317	41.5	47.5	114	37.0 ¹³²	+14 56.8	78	30	44	08	35	19 02 40	7 54 54	
10	332	41.6	48.5	129	09.3 ¹³³	+15 04.6	78	20	47	09	34	17 42	41 51	
11	347	41.8	-3 49.5	143	41.5 ¹³²	+15 12.3	77	10 N	17 50	18 11	18 35	19 30 44	7 29 48	
12	2	42.0	-3 50.4	158	13.7 ¹³²	+15 20.0	77	0	17 52	18 13	18 37	19 42 46	7 18 46	
13	17	42.2	51.4	172	45.9 ¹³²	27.5	75	10 S	55	16	41	19 54 49	7 07 44	
14	32	42.4	52.4	187	18.1 ¹³²	35.0	75	20	17 58	21	46	20 07 51	6 55 42	
15	47	42.6	53.3	201	50.2 ¹³¹	42.4	74	30	18 02	26	18 54	22 53	42 39	
16	62	42.8	54.3	216	22.3 ¹³¹	49.8	74	35	04	30	19 00	31 55	34 37	
17	77	43.0	-3 55.3	230	54.4 ¹³¹	+15 57.0	72	40	18 07	18 34	19 06	20 41 56	6 26 35	
18	92	43.2	-3 56.2	245	26.5 ¹³¹	+16 04.2	72	45	18 10	18 39	19 14	20 53 58	6 16 32	
19	107	43.4	57.2	259	58.6 ¹³¹	11.3	71	50	13	46	25	21 07 61	6 03 30	
20	122	43.6	58.2	274	30.6 ¹³⁰	18.4	71	52	15	49	30	14 62	5 58 28	
21	137	43.8	-3 59.1	289	02.6 ¹³⁰	25.3	69	54	17	53	36	21 64	51 27	
22	152	44.0	-4 00.1	303	34.6 ¹³⁰	32.2	69	56	19	18 56	43	30 65	44 25	
23	167	44.2	01.1	318	06.6 ¹³⁰	39.0	68	58	21	19 01	50	39 68	37 22	
24	182	44.4	-4 02.0	332	38.5 ¹²⁹	+16 45.7	67	60 S	18 23	19 06	19 59	21 50 70	5 28 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 11 ^m 7		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +1.2 PMG: 14 ^h 50 ^m		Mag: -2.6 PMG: 4 ^h 16 ^m		Mag: +0.7 PMG: 13 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	11	07.0	220 22.0	+12 14.7	137 14.9	-20 09.2	295 49.8	+21 55.3	162 49.9	-9 12.4
1	26	09.5	235 21.6	13.9	152 15.6	09.7	310 52.2	55.3	177 52.1	12.5
2	41	11.9	250 21.3	13.0	167 16.3	10.1	325 54.7	55.3	192 54.3	12.6
3	56	14.4	265 20.9	12.1	182 16.9	10.5	340 57.1	55.3	207 56.5	12.7
4	71	16.9	280 20.5	11.3	197 17.6	11.0	355 59.6	55.3	222 58.7	12.8
5	86	19.3	295 20.2	+12 10.4	212 18.2	-20 11.4	11 02.0	+21 55.3	238 00.9	-9 12.9
6	101	21.8	310 19.8	+12 09.5	227 18.9	-20 11.8	26 04.5	+21 55.3	253 03.1	-9 13.0
7	116	24.3	325 19.4	08.7	242 19.5	12.3	41 06.9	55.3	268 05.2	13.1
8	131	26.7	340 19.0	07.8	257 20.2	12.7	56 09.3	55.3	283 07.4	13.2
9	146	29.2	355 18.7	07.0	272 20.8	13.1	71 11.8	55.3	298 09.6	13.3
10	161	31.6	10 18.3	06.1	287 21.5	13.5	86 14.2	55.3	313 11.8	13.4
11	176	34.1	25 17.9	+12 05.2	302 22.2	-20 14.0	101 16.7	+21 55.3	328 14.0	-9 13.6
12	191	36.6	40 17.5	+12 04.4	317 22.8	-20 14.4	116 19.1	+21 55.3	343 16.2	-9 13.7
13	206	39.0	55 17.2	03.5	332 23.5	14.8	131 21.6	55.3	358 18.4	13.8
14	221	41.5	70 16.8	02.6	347 24.1	15.3	146 24.0	55.3	13 20.6	13.9
15	236	44.0	85 16.4	01.8	2 24.8	15.7	161 26.5	55.3	28 22.8	14.0
16	251	46.4	100 16.1	+12 00.9	17 25.4	16.1	176 28.9	55.3	43 25.0	14.1
17	266	48.9	115 15.7	+12 00.0	32 26.1	-20 16.5	191 31.4	+21 55.3	58 27.1	-9 14.2
18	281	51.4	130 15.3	+11 59.1	47 26.7	-20 17.0	206 33.8	+21 55.3	73 29.3	-9 14.3
19	296	53.8	145 15.0	58.3	62 27.4	17.4	221 36.2	55.3	88 31.5	14.4
20	311	56.3	160 14.6	57.4	77 28.0	17.8	236 38.7	55.3	103 33.7	14.5
21	326	58.8	175 14.2	56.5	92 28.7	18.2	251 41.1	55.3	118 35.9	14.6
22	342	01.2	190 13.8	55.7	107 29.3	18.7	266 43.6	55.3	133 38.1	14.7
23	357	03.7	205 13.5	54.8	122 30.0	19.1	281 46.0	55.3	148 40.3	14.8
24	12	06.1	220 13.1	+11 53.9	137 30.6	-20 19.5	296 48.5	+21 55.3	163 42.5	-9 14.9
Dif	—		-4	-9	+7	-4	+24	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 48 ^m 9			Edad: 16 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 PMG: 1 ^h 53 ^m R°: 47 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m			
0	182	44.4	-4	02.0	332	38.5	+16	45.7	67	60 N	4	41	5	30	6	11	18 02 31	10 24 67	
1	197	44.6		03.0	347	10.5 ¹³⁰		52.4	67	58	44		30	09	15	32	12 64		
2	212	44.8		04.0	1	42.4 ¹²⁹	+16	59.0	66	56	47		30	08	25	34	10 01 63		
3	227	45.0		04.9	16	14.3 ¹²⁹	+17	05.5	65	54	50		31	06	35	35	9 52 62		
4	242	45.2		05.9	30	46.1 ¹²⁸		11.9	64	52	52		31	05	43	37	44 60		
5	257	45.4	-4	06.9	45	18.0 ¹²⁹	+17	18.2	63	50	4	54	5	31	6	03	18 51 37	9 37 59	
6	272	45.6	-4	07.8	59	49.8 ¹²⁸	+17	24.5	63	45	4	57	5	32	6	01	19 07 39	9 21 57	
7	287	45.8		08.8	74	21.6 ¹²⁸		30.6	61	40	5	00		31	5	58	21 40	9 08 56	
8	302	46.0		09.8	88	53.4 ¹²⁸		36.7	61	35	02		31	56	32	42	8 57 54		
9	317	46.2		10.7	103	25.1 ¹²⁷		42.7	60	30	03		31	55	42	43	48 53		
10	332	46.4		11.7	117	56.9 ¹²⁸		48.7	60	20	04		29	51	19	59	45	32 50	
11	347	46.5	-4	12.6	132	28.6 ¹²⁷	+17	54.5	58	10 N	5	03		5	27	5	48	20 14 46	8 17 49
12	2	46.7	-4	13.6	147	00.3 ¹²⁷	+18	00.3	58	0	5	01		5	25	5	46	20 28 48	8 04 47
13	17	46.9		14.6	161	31.9 ¹²⁶		06.0	57	10 S	4	57		22	43	43	48	7 51 45	
14	32	47.1		15.5	176	03.6 ¹²⁷		11.6	56	20	52		17	39	20	58	50	37 43	
15	47	47.3		16.5	190	35.2 ¹²⁶		17.1	55	30	43		12	36	21	15	52	21 41	
16	62	47.5		17.5	205	06.8 ¹²⁶		22.5	54	35	38		08	33	26	52	11 40		
17	77	47.7	-4	18.4	219	38.4 ¹²⁶	+18	27.8	53	40	4	31		5	03	5	31	21 37 54	7 01 38
18	92	47.9	-4	19.4	234	10.0 ¹²⁶	+18	33.1	53	45	4	23		4	58	5	28	21 51 56	6 48 37
19	107	48.1		20.4	248	41.5 ¹²⁵		38.3	52	50	12		51	24	22	08	57	33 34	
20	122	48.3		21.3	263	13.1 ¹²⁶		43.3	50	52	07		48	22	16	58	26 33		
21	137	48.5		22.3	277	44.6 ¹²⁵		48.3	50	54	4	01		45	20	25	59	18 32	
22	152	48.7		23.2	292	16.0 ¹²⁴		53.2	49	56	3	55		41	18	35	60	6 09 31	
23	167	48.9		24.2	306	47.5 ¹²⁵	+18	58.1	49	58	47		36	16	22	47	61	5 59 29	
24	182	49.1	-4	25.2	321	18.9 ¹²⁴	+19	02.8	47	60 S	3	38		4	31	5	14	23 00 63	5 48 26
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 07 ^m 8			Mag: -4.1 PMG: 9 ^h 19 ^m			Mag: +1.2 PMG: 14 ^h 49 ^m			Mag: -2.6 PMG: 4 ^h 12 ^m			Mag: +0.7 PMG: 13 ^h 03 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°				
0	12	06.1	220	13.1	+11	53.9	137	30.6	-20	19.5	296	48.5	+21	55.3	163	42.5	-9	14.9	
1	27	08.6	235	12.7		53.0	152	31.3		19.9	311	50.9		55.3	178	44.7		15.0	
2	42	11.1	250	12.4		52.2	167	31.9		20.4	326	53.4		55.3	193	46.8		15.1	
3	57	13.5	265	12.0		51.3	182	32.6		20.8	341	55.8		55.3	208	49.0		15.2	
4	72	16.0	280	11.6		50.4	197	33.2		21.2	356	58.3		55.3	223	51.2		15.3	
5	87	18.5	295	11.2	+11	49.5	212	33.9	-20	21.6	12	00.7	+21	55.3	238	53.4	-9	15.4	
6	102	20.9	310	10.9	+11	48.7	227	34.5	-20	22.1	27	03.2	+21	55.3	253	55.6	-9	15.5	
7	117	23.4	325	10.5		47.8	242	35.2		22.5	42	05.7		55.3	268	57.8		15.6	
8	132	25.9	340	10.1		46.9	257	35.8		22.9	57	08.1		55.3	284	00.0		15.8	
9	147	28.3	355	09.8		46.0	272	36.5		23.3	72	10.6		55.3	299	02.2		15.9	
10	162	30.8	10	09.4		45.1	287	37.1		23.7	87	13.0		55.3	314	04.4		16.0	
11	177	33.3	25	09.0	+11	44.3	302	37.8	-20	24.2	102	15.5	+21	55.3	329	06.6	-9	16.1	
12	192	35.7	40	08.7	+11	43.4	317	38.4	-20	24.6	117	17.9	+21	55.3	344	08.7	-9	16.2	
13	207	38.2	55	08.3		42.5	332	39.1		25.0	132	20.4		55.3	359	10.9		16.3	
14	222	40.6	70	07.9		41.6	347	39.7		25.4	147	22.8		55.3	14	13.1		16.4	
15	237	43.1	85	07.6		40.7	2	40.4		25.8	162	25.3		55.3	29	15.3		16.5	
16	252	45.6	100	07.2		39.8	17	41.0		26.3	177	27.7		55.3	44	17.5		16.6	
17	267	48.0	115	06.8	+11	38.9	32	41.7	-20	26.7	192	30.2	+21	55.3	59	19.7	-9	16.7	
18	282	50.5	130	06.4	+11	38.1	47	42.3	-20	27.1	207	32.7	+21	55.3	74	21.9	-9	16.8	
19	297	53.0	145	06.1		37.2	62	42.9		27.5	222	35.1		55.3	89	24.1		16.9	
20	312	55.4	160	05.7		36.3	77	43.6		27.9	237	37.6		55.3	104	26.2		17.0	
21	327	57.9	175	05.3		35.4	92	44.2		28.4	252	40.0		55.3	119	28.4		17.1	
22	343	00.4	190	05.0		34.5	107	44.9		28.8	267	42.5		55.3	134	30.6		17.2	
23	358	02.8	205	04.6		33.6	122	45.5		29.2	282	44.9		55.3	149	32.8		17.3	
24	13	05.3	220	04.2	+11	32.7	137	46.2	-20	29.6	297	47.4	+21	55.3	164	35.0	-9	17.4	
Dif	—			-4	-9		+6	-4			+25	0			+22	-1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48 ^m 6			Edad: 17 ^d 9 PHE { SD: 14'8 PMG: 2 ^h 40 ^m					4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 47 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	182	49.1	-4 25.2	321	18.9	+19 02.8	60 N	17 23	18 04	18 52	18 33 39	11 31 58			
1	197	49.2	26.1	335	50.4 ¹²⁵	07.4 ⁴⁶	58	25	04	49	47 41	16 58			
2	212	49.4	27.1	350	21.8 ¹²⁴	12.0 ⁴⁶	56	27	04	47	18 59 42	11 04 57			
3	227	49.6	28.1	4	53.2 ¹²⁴	16.5 ⁴⁵	54	28	03	44	19 10 43	10 54 56			
4	242	49.8	29.0	19	24.5 ¹²³	20.9 ⁴⁴	52	30	03	42	20 43	44 55			
5	257	50.0	-4 30.0	33	55.9 ¹²⁴	+19 25.1 ⁴²	50	17 31	18 03	18 41	19 28 44	10 36 54			
6	272	50.2	-4 31.0	48	27.2 ¹²³	+19 29.3 ⁴²	45	17 34	18 04	18 38	19 46 45	10 18 53			
7	287	50.4	31.9	62	58.5 ¹²³	33.5 ⁴⁰	40	37	04	35	20 01 45	10 04 52			
8	302	50.6	32.9	77	29.8 ¹²³	37.5 ⁴⁰	35	39	05	34	14 46	9 51 52			
9	317	50.8	33.8	92	01.1 ¹²³	41.4 ³⁹	30	41	05	33	25 46	41 50			
10	332	51.0	34.8	106	32.3 ¹²²	45.2 ³⁸	20	45	07	33	20 44 47	22 50			
11	347	51.2	-4 35.8	121	03.5 ¹²²	+19 49.0 ³⁸	10 N	17 49	18 10	18 34	21 00 48	9 06 49			
12	2	51.4	-4 36.7	135	34.8 ¹²³	+19 52.6 ³⁶	0	17 52	18 13	18 37	21 16 48	8 51 48			
13	17	51.5	37.7	150	06.0 ¹²²	56.2 ³⁶	10 S	55	16	41	31 49	36 47			
14	32	51.7	38.7	164	37.1 ¹²¹	+19 59.7 ³⁵	20	17 59	21	47	21 48 49	20 46			
15	47	51.9	39.6	179	08.3 ¹²²	+20 03.1 ³⁴	30	18 03	27	18 56	22 07 50	8 02 45			
16	62	52.1	40.6	193	39.5 ¹²²	06.3 ³²	35	06	31	19 01	18 51	7 51 44			
17	77	52.3	-4 41.5	208	10.6 ¹²¹	+20 09.5 ³²	40	18 09	18 36	19 08	22 31 51	7 39 43			
18	92	52.5	-4 42.5	222	41.7 ¹²¹	+20 12.6 ³¹	45	18 12	18 42	19 17	22 47 51	7 25 42			
19	107	52.7	43.5	237	12.8 ¹²¹	15.7 ³¹	50	16	49	29	23 05 52	7 07 41			
20	122	52.9	44.4	251	43.9 ¹²¹	18.6 ²⁹	52	18	53	34	14 52	6 59 40			
21	137	53.1	45.4	266	15.0 ¹²¹	21.4 ²⁸	54	20	18 56	40	24 52	50 39			
22	152	53.2	46.4	280	46.0 ¹²⁰	24.1 ²⁷	56	23	19 01	47	35 53	40 37			
23	167	53.4	47.3	295	17.1 ¹²¹	26.7 ²⁶	58	25	06	19 56	23 48 53	28 36			
24	182	53.6	-4 48.3	309	48.1 ¹²⁰	+20 29.3 ²⁶	60 S	18 28	19 11	20 05	** ** *	6 14 35			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 23 ^h 03 ^m 9		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +1.2 PMG: 14 ^h 48 ^m		Mag: -2.6 PMG: 4 ^h 08 ^m		Mag: +0.7 PMG: 13 ^h 00 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	13	05.3	220 04.2	+11 32.7	137 46.2	-20 29.6	297 47.4	+21 55.3	164 35.0	-9 17.4	
1	28	07.7	235 03.9	31.8	152 46.8	30.0	312 49.9	55.3	179 37.2	17.5	
2	43	10.2	250 03.5	31.0	167 47.5	30.5	327 52.3	55.3	194 39.4	17.6	
3	58	12.7	265 03.1	30.1	182 48.1	30.9	342 54.8	55.3	209 41.6	17.7	
4	73	15.1	280 02.8	29.2	197 48.7	31.3	357 57.2	55.3	224 43.8	17.8	
5	88	17.6	295 02.4	+11 28.3	212 49.4	-20 31.7	12 59.7	+21 55.3	239 45.9	-9 18.0	
6	103	20.1	310 02.0	+11 27.4	227 50.0	-20 32.1	28 02.2	+21 55.3	254 48.1	-9 18.1	
7	118	22.5	325 01.7	26.5	242 50.7	32.5	43 04.6	55.3	269 50.3	18.2	
8	133	25.0	340 01.3	25.6	257 51.3	33.0	58 07.1	55.3	284 52.5	18.3	
9	148	27.5	355 00.9	24.7	272 51.9	33.4	73 09.5	55.3	299 54.7	18.4	
10	163	29.9	10 00.6	23.8	287 52.6	33.8	88 12.0	55.3	314 56.9	18.5	
11	178	32.4	25 00.2	+11 22.9	302 53.2	-20 34.2	103 14.5	+21 55.3	329 59.1	-9 18.6	
12	193	34.9	39 59.8	+11 22.0	317 53.9	-20 34.6	118 16.9	+21 55.3	345 01.3	-9 18.7	
13	208	37.3	54 59.5	21.1	332 54.5	35.0	133 19.4	55.3	0 03.4	18.8	
14	223	39.8	69 59.1	20.2	347 55.1	35.4	148 21.9	55.3	15 05.6	18.9	
15	238	42.2	84 58.7	19.3	2 55.8	35.9	163 24.3	55.3	30 07.8	19.0	
16	253	44.7	99 58.4	18.4	17 56.4	36.3	178 26.8	55.3	45 10.0	19.1	
17	268	47.2	114 58.0	+11 17.5	32 57.1	-20 36.7	193 29.3	+21 55.3	60 12.2	-9 19.2	
18	283	49.6	129 57.6	+11 16.6	47 57.7	-20 37.1	208 31.7	+21 55.2	75 14.4	-9 19.3	
19	298	52.1	144 57.3	15.7	62 58.3	37.5	223 34.2	55.2	90 16.6	19.4	
20	313	54.6	159 56.9	14.8	77 59.0	37.9	238 36.7	55.2	105 18.8	19.5	
21	328	57.0	174 56.5	13.9	92 59.6	38.3	253 39.1	55.2	120 20.9	19.6	
22	343	59.5	189 56.2	13.0	108 00.2	38.7	268 41.6	55.2	135 23.1	19.7	
23	359	02.0	204 55.8	12.1	123 00.9	39.2	283 44.1	55.2	150 25.3	19.8	
24	14	04.4	219 55.4	+11 11.2	138 01.5	-20 39.6	298 46.5	+21 55.2	165 27.5	-9 19.9	
Dif	—	—	-4	-9	+6	-4	+25	0	+22	-1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 19 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4												
	PMG: 11 ^h 48 ^m 0			SD: 14'8 PMG: 4 ^h 16 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	182	58.1	-5 11.3	298	09.2	+21 01.4	1	60 N	17 17	17 58	18 46	20 04	61	13 18	38	
1	197	58.3	12.3	312	40.0 ¹¹⁸	01.5	1	58	19	58	44	19 60		13 03	39	
2	212	58.5	13.2	327	10.7 ¹¹⁷	01.5	0	56	21	58	41	32 59		12 50	40	
3	227	58.6	14.2	341	41.5 ¹¹⁸	01.4	1	54	23	59	39	43 58		38 42		
4	242	58.8	15.1	356	12.2 ¹¹⁷	01.3	1	52	25	59	38	20 53	57	28 42		
5	257	59.0	-5 16.1	10	43.0 ¹¹⁸	+21 01.0	3	50	17 27	17 59	18 37	21 02	56	12 19	43	
6	272	59.2	-5 17.1	25	13.7 ¹¹⁷	+21 00.6	4	45	17 31	18 00	18 34	21 21	55	12 00	44	
7	287	59.4	18.0	39	44.4 ¹¹⁷	+21 00.1	5	40	34	01	32	36 54		11 45	44	
8	302	59.6	19.0	54	15.2 ¹¹⁸	+20 59.6	5	35	37	02	31	21 49	53	32 45		
9	317	59.7	19.9	68	45.9 ¹¹⁷	58.9	7	30	39	03	31	22 00	52	20 46		
10	332	59.9	20.9	83	16.6 ¹¹⁷	58.2	7	20	43	06	31	20 50		11 00	47	
11	348	00.1	-5 21.9	97	47.4 ¹¹⁸	+20 57.3	9	10 N	17 47	18 08	18 33	22 37	49	10 43	48	
12	3	00.3	-5 22.8	112	18.1 ¹¹⁷	+20 56.3	10	0	17 51	18 12	18 36	22 52	49	10 27	49	
13	18	00.5	23.8	126	48.8 ¹¹⁷	55.3	10	10 S	55	16	41	23 08	47	10 11	49	
14	33	00.6	24.7	141	19.5 ¹¹⁷	54.1	12	20	17 59	22	48	25 46		9 54	50	
15	48	00.8	25.7	155	50.2 ¹¹⁷	52.9	12	30	18 04	29	18 57	44 45		34 51		
16	63	01.0	26.6	170	21.0 ¹¹⁸	51.5	14	35	07	33	19 03	23 56	43	23 51		
17	78	01.2	-5 27.6	184	51.7 ¹¹⁷	+20 50.1	14	40	18 11	18 38	19 11	** * *	**	9 10	51	
18	93	01.4	-5 28.5	199	22.4 ¹¹⁷	+20 48.5	16	45	18 15	18 45	19 20	** * *	**	8 54	52	
19	108	01.6	29.5	213	53.1 ¹¹⁷	46.9	16	50	19	52	32	** * *	**	35 53		
20	123	01.7	30.5	228	23.8 ¹¹⁷	45.1	18	52	22	18 56	38	0 06	46	25 54		
21	138	01.9	31.4	242	54.5 ¹¹⁷	43.3	18	54	24	19 00	45	16 46		15 54		
22	153	02.1	32.4	257	25.2 ¹¹⁷	41.4	19	56	27	05	19 52	28 45		8 04	54	
23	168	02.3	33.3	271	55.9 ¹¹⁷	39.3	21	58	30	10	20 01	41 45		7 50	56	
24	183	02.5	-5 34.3	286	26.7 ¹¹⁸	+20 37.2	21	60 S	18 33	19 16	20 11	0 57	44	7 34	57	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 56 ^m 0		Mag: -4.1 PMG: 9 ^h 21 ^m			Mag: +1.2 PMG: 14 ^h 46 ^m			Mag: -2.6 PMG: 4 ^h 00 ^m			Mag: +0.7 PMG: 12 ^h 53 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	15	03.6	219	46.7	+10 49.3		138	16.7	-20 49.3		299	45.9	+21 55.2		166	20.0
1	30	06.0	234	46.3	48.4		153	17.3	49.8		314	48.3	55.2		181	22.2
2	45	08.5	249	46.0	47.5		168	17.9	50.2		329	50.8	55.2		196	24.4
3	60	11.0	264	45.6	46.5		183	18.6	50.6		344	53.3	55.2		211	26.5
4	75	13.4	279	45.2	45.6		198	19.2	51.0		359	55.8	55.2		226	28.7
5	90	15.9	294	44.9	+10 44.7		213	19.8	-20 51.4		14	58.3	+21 55.2		241	30.9
6	105	18.3	309	44.5	+10 43.8		228	20.4	-20 51.8		30	00.7	+21 55.2		256	33.1
7	120	20.8	324	44.1	42.8		243	21.1	52.2		45	03.2	55.2		271	35.3
8	135	23.3	339	43.8	41.9		258	21.7	52.6		60	05.7	55.2		286	37.5
9	150	25.7	354	43.4	41.0		273	22.3	53.0		75	08.2	55.1		301	39.7
10	165	28.2	9	43.1	40.1		288	22.9	53.4		90	10.7	55.1		316	41.8
11	180	30.7	24	42.7	+10 39.1		303	23.6	-20 53.8		105	13.1	+21 55.1		331	44.0
12	195	33.1	39	42.3	+10 38.2		318	24.2	-20 54.2		120	15.6	+21 55.1		346	46.2
13	210	35.6	54	42.0	37.3		333	24.8	54.6		135	18.1	55.1		1	48.4
14	225	38.1	69	41.6	36.4		348	25.4	55.0		150	20.6	55.1		16	50.6
15	240	40.5	84	41.2	35.4		3	26.1	55.4		165	23.1	55.1		31	52.8
16	255	43.0	99	40.9	34.5		18	26.7	55.8		180	25.5	55.1		46	55.0
17	270	45.5	114	40.5	+10 33.6		33	27.3	-20 56.2		195	28.0	+21 55.1		61	57.1
18	285	47.9	129	40.2	+10 32.6		48	27.9	-20 56.6		210	30.5	+21 55.1		76	59.3
19	300	50.4	144	39.8	31.7		63	28.5	57.0		225	33.0	55.1		92	01.5
20	315	52.8	159	39.4	30.8		78	29.2	57.4		240	35.5	55.1		107	03.7
21	330	55.3	174	39.1	29.8		93	29.8	57.8		255	38.0	55.1		122	05.9
22	345	57.8	189	38.7	28.9		108	30.4	58.2		270	40.4	55.1		137	08.1
23	1	00.2	204	38.4	28.0		123	31.0	58.6		285	42.9	55.1		152	10.3
24	16	02.7	219	38.0	+10 27.0		138	31.7	-20 59.0		300	45.4	+21 55.1		167	12.4
Dif	—		-4		-9		+6		-4		+25		0		+22	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 7			Edad: 20 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 SD: 14'8 PMG: 5 ^h 04 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	02.5	-5	34.3	286	26.7	+20	37.2	60 N	4 51	5 39	6 21	21 05	70	13 56 29
1	198	02.6		35.2	300	57.4 ¹¹⁷		34.9 ²³	58	53	39	18	19 68		42 32
2	213	02.8		36.2	315	28.1 ¹¹⁷		32.6 ²³	56	55	38	16	31 66		30 33
3	228	03.0		37.2	329	58.8 ¹¹⁷		30.2 ²⁴	54	57	38	13	41 64		20 34
4	243	03.2		38.1	344	29.5 ¹¹⁷		27.7 ²⁵	52	4 59	38	11	50 63		10 36
5	258	03.3	-5	39.1	359	00.2 ¹¹⁷	+20	25.0 ²⁷	50	5 00	5 37	6 10	21 58	62	13 02 37
6	273	03.5	-5	40.0	13	31.0 ¹¹⁸	+20	22.3 ²⁷	45	5 02	5 36	6 06	22 16	59	12 44 39
7	288	03.7		41.0	28	01.7 ¹¹⁷		19.5 ²⁸	40	04	35	02	30 57		29 41
8	303	03.9		41.9	42	32.4 ¹¹⁷		16.6 ²⁹	35	05	34	6 00	42 56		17 42
9	318	04.1		42.9	57	03.2 ¹¹⁸		13.6 ³⁰	30	05	33	5 57	22 52	55	12 06 43
10	333	04.2		43.8	71	33.9 ¹¹⁷		10.5 ³¹	20	05	30	52	23 10	53	11 47 45
11	348	04.4	-5	44.8	86	04.6 ¹¹⁷	+20	07.3 ³²	10 N	5 03	5 27	5 48	23 26	50	11 31 47
12	3	04.6	-5	45.7	100	35.4 ¹¹⁸	+20	04.0 ³³	0	5 00	5 24	5 44	23 41	48	11 16 48
13	18	04.8		46.7	115	06.1 ¹¹⁷	+20	00.6 ³⁴	10 S	4 55	19	40	23 55	47	11 00 50
14	33	04.9		47.7	129	36.9 ¹¹⁸	+19	57.1 ³⁵	20	48	14	36	** ** *		10 44 51
15	48	05.1		48.6	144	07.7 ¹¹⁸		53.5 ³⁶	30	38	07	31	** ** *		25 53
16	63	05.3		49.6	158	38.4 ¹¹⁷		49.8 ³⁷	35	32	5 02	28	** ** *		14 54
17	78	05.5	-5	50.5	173	09.2 ¹¹⁸	+19	46.0 ³⁸	40	4 24	4 57	5 24	0 09	42	10 01 56
18	93	05.7	-5	51.5	187	40.0 ¹¹⁸	+19	42.1 ³⁹	45	4 15	4 50	5 20	0 24	41	9 46 58
19	108	05.8		52.4	202	10.7 ¹¹⁷		38.2 ³⁹	50	4 03	42	15	43 39		28 59
20	123	06.0		53.4	216	41.5 ¹¹⁸		34.1 ⁴¹	52	3 57	39	13	0 52	38	19 60
21	138	06.2		54.3	231	12.3 ¹¹⁸		30.0 ⁴¹	54	50	34	11	1 02	37	9 09 62
22	153	06.4		55.3	245	43.1 ¹¹⁸		25.7 ⁴³	56	43	30	08	13 36		8 58 63
23	168	06.5		56.2	260	13.9 ¹¹⁸		21.3 ⁴⁴	58	34	24	05	26 35		46 64
24	183	06.7	-5	57.2	274	44.7 ¹¹⁸	+19	16.9 ⁴⁴	60 S	3 24	4 18	5 01	1 41	33	8 31 66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 52 ^m 1		Mag: -4.1 PMG: 9 ^h 22 ^m		Mag: +1.2 PMG: 14 ^h 45 ^m		Mag: -2.6 PMG: 3 ^h 56 ^m		Mag: +0.7 PMG: 12 ^h 49 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	16	02.7	219	38.0	+10	27.0	138	31.7	-20	59.0	300	45.4	+21	55.1	167	12.4	-9	25.0
1	31	05.2	234	37.6		26.1	153	32.3		59.4	315	47.9		55.1	182	14.6		25.1
2	46	07.6	249	37.3		25.2	168	32.9	-20	59.8	330	50.4		55.1	197	16.8		25.2
3	61	10.1	264	36.9		24.2	183	33.5	-21	00.1	345	52.9		55.1	212	19.0		25.3
4	76	12.6	279	36.5		23.3	198	34.1		00.5	0	55.4		55.1	227	21.2		25.4
5	91	15.0	294	36.2	+10	22.4	213	34.8	-21	00.9	15	57.9	+21	55.1	242	23.4	-9	25.5
6	106	17.5	309	35.8	+10	21.4	228	35.4	-21	01.3	31	00.3	+21	55.1	257	25.6	-9	25.6
7	121	20.0	324	35.5		20.5	243	36.0		01.7	46	02.8		55.1	272	27.7		25.7
8	136	22.4	339	35.1		19.6	258	36.6		02.1	61	05.3		55.1	287	29.9		25.8
9	151	24.9	354	34.7		18.6	273	37.2		02.5	76	07.8		55.1	302	32.1		25.9
10	166	27.3	9	34.4		17.7	288	37.8		02.9	91	10.3		55.1	317	34.3		26.0
11	181	29.8	24	34.0	+10	16.7	303	38.5	-21	03.3	106	12.8	+21	55.1	332	36.5	-9	26.2
12	196	32.3	39	33.7	+10	15.8	318	39.1	-21	03.7	121	15.3	+21	55.0	347	38.7	-9	26.3
13	211	34.7	54	33.3		14.9	333	39.7		04.1	136	17.8		55.0	2	40.9		26.4
14	226	37.2	69	32.9		13.9	348	40.3		04.5	151	20.3		55.0	17	43.0		26.5
15	241	39.7	84	32.6		13.0	3	40.9		04.9	166	22.7		55.0	32	45.2		26.6
16	256	42.1	99	32.2		12.0	18	41.5		05.3	181	25.2		55.0	47	47.4		26.7
17	271	44.6	114	31.9	+10	11.1	33	42.2	-21	05.7	196	27.7	+21	55.0	62	49.6	-9	26.8
18	286	47.1	129	31.5	+10	10.1	48	42.8	-21	06.1	211	30.2	+21	55.0	77	51.8	-9	26.9
19	301	49.5	144	31.2		09.2	63	43.4		06.4	226	32.7		55.0	92	54.0		27.0
20	316	52.0	159	30.8		08.3	78	44.0		06.8	241	35.2		55.0	107	56.1		27.1
21	331	54.4	174	30.4		07.3	93	44.6		07.2	256	37.7		55.0	122	58.3		27.2
22	346	56.9	189	30.1		06.4	108	45.2		07.6	271	40.2		55.0	138	00.5		27.3
23	1	59.4	204	29.7		05.4	123	45.8		08.0	286	42.7		55.0	153	02.7		27.4
24	17	01.8	219	29.4	+10	04.5	138	46.5	-21	08.4	301	45.2	+21	55.0	168	04.9	-9	27.5
Dif	—		-4	-9		+6	-4		+25	0		+22	-1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 21 ^d 9 PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/3											
	PMG: 11 ^h 47 ^m 4			SD: 14'9 PMG: 5 ^h 52 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	06.7	-5 57.2	274	44.7	+19 16.9		60 N	17 11	17 52	18 40	22 15 76		14 25 23	
1	198	06.9	58.1	289	15.5 ¹¹⁸	12.4 ⁴⁵		58	14	53	38	27 73		14 24	
2	213	07.1	-5 59.1	303	46.4 ¹¹⁹	07.7 ⁴⁷		56	16	53	36	37 71		14 03 27	
3	228	07.2	-6 00.0	318	17.2 ¹¹⁸	+19 03.0 ⁴⁷		54	19	54	35	45 69		13 54 29	
4	243	07.4	-6 01.0	332	48.0 ¹¹⁸	+18 58.2 ⁴⁸		52	21	54	33	22 53 68		46 30	
5	258	07.6	-6 02.0	347	18.9 ¹¹⁹	+18 53.3 ⁴⁹		50	17 23	17 55	18 32	23 00 66		13 39 31	
6	273	07.8	-6 02.9	1	49.7 ¹¹⁸	+18 48.3 ⁵⁰		45	17 27	17 56	18 30	23 15 63		13 23 35	
7	288	07.9	03.9	16	20.6 ¹¹⁹	43.2 ⁵¹		40	31	58	29	27 61		13 10 37	
8	303	08.1	04.8	30	51.4 ¹¹⁸	38.0 ⁵²		35	34	17 59	29	38 58		12 59 39	
9	318	08.3	05.8	45	22.3 ¹¹⁹	32.7 ⁵³		30	37	18 01	28	23 47 56		49 41	
10	333	08.5	06.7	59	53.2 ¹¹⁹	27.3 ⁵⁴		20	42	04	29	** ** *		32 44	
11	348	08.6	-6 07.7	74	24.0 ¹¹⁸	+18 21.8 ⁵⁵		10 N	17 46	18 07	18 32	** ** *		12 18 46	
12	3	08.8	-6 08.6	88	54.9 ¹¹⁹	+18 16.3 ⁵⁵		0	17 51	18 11	18 36	** ** *		12 04 48	
13	18	09.0	09.6	103	25.8 ¹¹⁹	10.6 ⁵⁷		10 S	17 55	16	41	** ** *		11 50 50	
14	33	09.1	10.5	117	56.7 ¹¹⁹	+18 04.9 ⁵⁷		20	18 00	22	48	0 11 44		35 53	
15	48	09.3	11.5	132	27.6 ¹¹⁹	+17 59.1 ⁵⁸		30	06	30	18 58	29 42		18 56	
16	63	09.5	12.4	146	58.5 ¹¹⁹	53.1 ⁶⁰		35	09	35	19 05	39 41		11 08 57	
17	78	09.7	-6 13.4	161	29.5 ¹²⁰	+17 47.1 ⁶⁰		40	18 13	18 40	19 13	0 51 39		10 57 59	
18	93	09.8	-6 14.3	176	00.4 ¹¹⁹	+17 41.0 ⁶¹		45	18 17	18 47	19 23	1 05 37		10 44 61	
19	108	10.0	15.3	190	31.3 ¹¹⁹	34.8 ⁶²		50	23	18 56	36	22 35		27 64	
20	123	10.2	16.2	205	02.3 ¹²⁰	28.6 ⁶²		52	25	19 00	42	30 33		19 66	
21	138	10.3	17.2	219	33.2 ¹¹⁹	22.2 ⁶⁴		54	28	04	49	39 32		11 67	
22	153	10.5	18.1	234	04.2 ¹²⁰	15.7 ⁶⁵		56	31	09	19 57	1 49 30		10 01 69	
23	168	10.7	19.1	248	35.1 ¹¹⁹	09.2 ⁶⁵		58	34	15	20 06	2 01 28		9 50 71	
24	183	10.9	-6 20.0	263	06.1 ¹²⁰	+17 02.6 ⁶⁶		60 S	18 38	19 22	20 17	2 14 25		9 37 74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 48 ^m 1		Mag: -4.1 PMG: 9 ^h 22 ^m			Mag: +1.2 PMG: 14 ^h 44 ^m			Mag: -2.6 PMG: 3 ^h 52 ^m			Mag: +0.7 PMG: 12 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	17	01.8	219	29.4	+10 04.5	138	46.5	-21 08.4	301	45.2	+21 55.0	168	04.9	-9 27.5	
1	32	04.3	234	29.0	03.5	153	47.1	08.8	316	47.7	55.0	183	07.1	27.6	
2	47	06.8	249	28.6	02.6	168	47.7	09.2	331	50.2	55.0	198	09.2	27.7	
3	62	09.2	264	28.3	01.6	183	48.3	09.6	346	52.7	55.0	213	11.4	27.8	
4	77	11.7	279	27.9	+10 00.7	198	48.9	10.0	1	55.2	55.0	228	13.6	27.9	
5	92	14.2	294	27.6	+9 59.7	213	49.5	-21 10.3	16	57.7	+21 55.0	243	15.8	-9 28.0	
6	107	16.6	309	27.2	+9 58.8	228	50.1	-21 10.7	32	00.2	+21 55.0	258	18.0	-9 28.2	
7	122	19.1	324	26.8	57.8	243	50.7	11.1	47	02.7	55.0	273	20.2	28.3	
8	137	21.6	339	26.5	56.9	258	51.4	11.5	62	05.2	55.0	288	22.4	28.4	
9	152	24.0	354	26.1	55.9	273	52.0	11.9	77	07.7	55.0	303	24.5	28.5	
10	167	26.5	9	25.8	55.0	288	52.6	12.3	92	10.2	55.0	318	26.7	28.6	
11	182	28.9	24	25.4	+9 54.0	303	53.2	-21 12.7	107	12.7	+21 54.9	333	28.9	-9 28.7	
12	197	31.4	39	25.1	+9 53.0	318	53.8	-21 13.1	122	15.2	+21 54.9	348	31.1	-9 28.8	
13	212	33.9	54	24.7	52.1	333	54.4	13.4	137	17.7	54.9	3	33.3	28.9	
14	227	36.3	69	24.3	51.1	348	55.0	13.8	152	20.2	54.9	18	35.5	29.0	
15	242	38.8	84	24.0	50.2	3	55.6	14.2	167	22.7	54.9	33	37.6	29.1	
16	257	41.3	99	23.6	49.2	18	56.2	14.6	182	25.2	54.9	48	39.8	29.2	
17	272	43.7	114	23.3	+9 48.3	33	56.8	-21 15.0	197	27.7	+21 54.9	63	42.0	-9 29.3	
18	287	46.2	129	22.9	+9 47.3	48	57.4	-21 15.4	212	30.2	+21 54.9	78	44.2	-9 29.4	
19	302	48.7	144	22.6	46.4	63	58.1	15.8	227	32.7	54.9	93	46.4	29.5	
20	317	51.1	159	22.2	45.4	78	58.7	16.1	242	35.2	54.9	108	48.6	29.6	
21	332	53.6	174	21.8	44.4	93	59.3	16.5	257	37.7	54.9	123	50.7	29.7	
22	347	56.1	189	21.5	43.5	108	59.9	16.9	272	40.2	54.9	138	52.9	29.8	
23	2	58.5	204	21.1	42.5	124	00.5	17.3	287	42.7	54.9	153	55.1	29.9	
24	18	01.0	219	20.8	+9 41.6	139	01.1	-21 17.7	302	45.2	+21 54.9	168	57.3	-9 30.0	
Dif	—		-4	-10		+6	-4		+25	0		+22	-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0			Edad: 22 ^d 9 PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /7 20 ^h : 56 ^s /0											
	PMG: 11 ^h 47 ^m 1				SD: 15 ^s 1			PMG: 6 ^h 41 ^m R°: 47 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	10.9	-6 20.0	263	06.1	+17 02.6		60 N	4 55	5 44	6 25	23 31	81	14 48	18
1	198	11.0		277	37.1 ¹²⁰	+16 55.8	68	58	58	43	22	40	78	38	21
2	213	11.2		292	08.1 ¹²⁰		68	56	4 59	42	20	48	75	30	23
3	228	11.4		306	39.0 ¹¹⁹		69	54	5 01	42	17	23 54	73	23	25
4	243	11.5		321	10.0 ¹²⁰		69	52	02	41	15	** ** *	**	16	27
5	258	11.7	-6 24.8	335	41.0 ¹²⁰	+16 28.1	71	50	5 03	5 40	6 13	** ** *	**	14 10	29
6	273	11.9	-6 25.7	350	12.0 ¹²⁰	+16 20.9	72	45	5 05	5 39	6 08	** ** *	**	13 58	31
7	288	12.0		4	43.1 ¹²¹		72	40	06	37	05	** ** *	**	47	34
8	303	12.2		19	14.1 ¹²⁰	+16 06.4	73	35	07	36	6 01	** ** *	**	38	36
9	318	12.4		33	45.1 ¹²⁰	+15 59.0	74	30	07	34	5 58	** ** *	**	30	38
10	333	12.5		48	16.1 ¹²⁰		75	20	05	31	53	0 03	53	16	42
11	348	12.7	-6 30.5	62	47.1 ¹²⁰	+15 43.9	76	10 N	5 03	5 27	5 48	0 16	51	13 04	45
12	3	12.9	-6 31.4	77	18.2 ¹²¹	+15 36.3	76	0	4 59	5 23	5 44	0 29	48	12 52	48
13	18	13.1		91	49.2 ¹²⁰		78	10 S	54	18	39	42	45	40	51
14	33	13.2		106	20.3 ¹²¹		78	20	46	12	34	0 55	43	28	54
15	48	13.4		120	51.3 ¹²⁰		79	30	36	5 04	28	1 11	39	14	57
16	63	13.6		135	22.4 ¹²¹	+15 04.8	80	35	29	4 59	25	20	38	12 05	59
17	78	13.7	-6 36.1	149	53.4 ¹²⁰	+14 56.7	81	40	4 21	4 54	5 21	1 30	36	11 56	61
18	93	13.9	-6 37.1	164	24.5 ¹²¹	+14 48.6	81	45	4 11	4 47	5 17	1 42	33	11 45	64
19	108	14.1		178	55.5 ¹²⁰		82	50	3 58	38	11	1 57	30	31	68
20	123	14.2		193	26.6 ¹²¹		83	52	52	34	09	2 03	29	25	69
21	138	14.4		207	57.7 ¹²¹		84	54	45	29	06	11	27	18	71
22	153	14.6		222	28.7 ¹²⁰		85	56	36	24	5 03	19	25	10	73
23	168	14.7		236	59.8 ¹²¹	+14 06.7	85	58	27	18	4 59	29 22		11 01	75
24	183	14.9	-6 42.8	251	30.9 ¹²¹	+13 58.0	87	60 S	3 16	4 12	4 55	2 39	20	10 51	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 44 ^m 2		Mag: -4.1 PMG: 9 ^h 23 ^m		Mag: +1.2 PMG: 14 ^h 43 ^m		Mag: -2.6 PMG: 3 ^h 48 ^m		Mag: +0.7 PMG: 12 ^h 42 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	18	01.0	219	20.8	+9 41.6		302	45.2	+21 54.9	168	57.3			
1	33	03.4	234	20.4	40.6		317	47.7	54.9	183	59.5			
2	48	05.9	249	20.1	39.6		332	50.2	54.9	199	01.7			
3	63	08.4	264	19.7	38.7		347	52.7	54.9	214	03.8			
4	78	10.8	279	19.4	37.7		2	55.2	54.9	229	06.0			
5	93	13.3	294	19.0	+9 36.7		17	57.7	+21 54.9	244	08.2			
6	108	15.8	309	18.6	+9 35.8		33	00.2	+21 54.8	259	10.4			
7	123	18.2	324	18.3	34.8		48	02.7	54.8	274	12.6			
8	138	20.7	339	17.9	33.8		63	05.2	54.8	289	14.8			
9	153	23.2	354	17.6	32.9		78	07.7	54.8	304	16.9			
10	168	25.6	9	17.2	31.9		93	10.2	54.8	319	19.1			
11	183	28.1	24	16.9	+9 30.9		108	12.7	+21 54.8	334	21.3			
12	198	30.5	39	16.5	+9 30.0		123	15.3	+21 54.8	349	23.5			
13	213	33.0	54	16.2	29.0		138	17.8	54.8	4	25.7			
14	228	35.5	69	15.8	28.0		153	20.3	54.8	19	27.9			
15	243	37.9	84	15.4	27.1		168	22.8	54.8	34	30.0			
16	258	40.4	99	15.1	26.1		183	25.3	54.8	49	32.2			
17	273	42.9	114	14.7	+9 25.1		198	27.8	+21 54.8	64	34.4			
18	288	45.3	129	14.4	+9 24.2		213	30.3	+21 54.8	79	36.6			
19	303	47.8	144	14.0	23.2		228	32.8	54.8	94	38.8			
20	318	50.3	159	13.7	22.2		243	35.3	54.8	109	41.0			
21	333	52.7	174	13.3	21.2		258	37.8	54.8	124	43.1			
22	348	55.2	189	13.0	20.3		273	40.4	54.8	139	45.3			
23	3	57.7	204	12.6	19.3		288	42.9	54.7	154	47.5			
24	19	00.1	219	12.3	+9 18.3		303	45.4	+21 54.7	169	49.7			
Dif	—		-4		-10	+6	+25		0	+22		-		-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 23 ^d 9 PHE { 4 ^h : 56:2 12 ^h : 56:5 20 ^h : 56:8												
	PMG: 11 ^h 46 ^m 9		SD: 15:3 PMG: 7 ^h 28 ^m R°: 48 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	183	14.9	-6 42.8		251	30.9	+13 58.0	60 N	17 05	17 46	18 34	** ** *	15 06	15	
1	198	15.1		43.7	266	02.0 ¹²¹	49.3 ⁸⁷	58	08	47	33	** ** *	14 59	18	
2	213	15.2		44.7	280	33.0 ¹²⁰	40.6 ⁸⁷	56	11	48	31	** ** *	53	20	
3	228	15.4		45.6	295	04.1 ¹²¹	31.7 ⁸⁹	54	14	49	30	** ** *	48	22	
4	243	15.5		46.6	309	35.2 ¹²¹	22.8 ⁸⁹	52	16	50	29	0 01	71	43	
5	258	15.7	-6 47.5		324	06.3 ¹²¹	+13 13.8 ⁹⁰	50	17 19	17 51	18 28	0 06	69	14	
6	273	15.9	-6 48.4		338	37.4 ¹²¹	+13 04.7 ⁹¹	45	17 23	17 53	18 27	0 18	65	14	
7	288	16.0		49.4	353	08.4 ¹²⁰	+12 55.5 ⁹²	40	28	55	26	28	62	21	
8	303	16.2		50.3	7	39.5 ¹²¹	46.3 ⁹²	35	31	57	26	36	60	14	
9	318	16.4		51.3	22	10.6 ¹²¹	37.0 ⁹³	30	34	17 58	26	43	58	14	
10	333	16.5		52.2	36	41.7 ¹²¹	27.6 ⁹⁴	20	40	18 02	28	0 56	54	13	
11	348	16.7	-6 53.2		51	12.7 ¹²⁰	+12 18.2 ⁹⁴	10 N	17 45	18 06	18 31	1 07	51	13	
12	3	16.9	-6 54.1		65	43.8 ¹²¹	+12 08.7 ⁹⁵	0	17 50	18 11	18 35	1 17	48	13	
13	18	17.0		55.1	80	14.9 ¹²¹	+11 59.1 ⁹⁶	10 S	17 55	16	41	27	45	31	
14	33	17.2		56.0	94	45.9 ¹²⁰	49.4 ⁹⁷	20	18 01	23	18 49	38	42	22	
15	48	17.3		56.9	109	17.0 ¹²¹	39.7 ⁹⁷	30	07	31	19 00	50	38	11	
16	63	17.5		57.9	123	48.0 ¹²⁰	29.9 ⁹⁸	35	11	36	07	1 58	35	13	
17	78	17.7	-6 58.8		138	19.1 ¹²¹	+11 20.0 ⁹⁹	40	18 15	18 42	19 15	2 06	33	12	
18	93	17.8	-6 59.8		152	50.1 ¹²⁰	+11 10.1 ⁹⁹	45	18 20	18 50	19 26	2 15	31	12	
19	108	18.0	-7 00.7		167	21.2 ¹²¹	+11 00.1 ¹⁰⁰	50	26	18 59	40	27	26	39	
20	123	18.1		01.7	181	52.2 ¹²⁰	+10 50.0 ¹⁰¹	52	29	19 04	46	32	25	34	
21	138	18.3		02.6	196	23.2 ¹²⁰	39.9 ¹⁰¹	54	32	08	19 54	38	23	29	
22	153	18.5		03.5	210	54.2 ¹²⁰	29.7 ¹⁰²	56	35	14	20 02	44	21	23	
23	168	18.6		04.5	225	25.2 ¹²⁰	19.4 ¹⁰³	58	39	20	12	51	19	16	
24	183	18.8	-7 05.4		239	56.2 ¹²⁰	+10 09.1 ¹⁰³	60 S	18 43	19 27	20 24	2 59	17	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 40 ^m 3		Mag: -4.1 PMG: 9 ^h 23 ^m		Mag: +1.2 PMG: 14 ^h 42 ^m		Mag: -2.6 PMG: 3 ^h 44 ^m		Mag: +0.7 PMG: 12 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	00.1	219	12.3	+9 18.3		303	45.4	+21 54.7	
1	34	02.6	234	11.9	17.3		318	47.9	54.7	
2	49	05.0	249	11.5	16.4		333	50.4	54.7	
3	64	07.5	264	11.2	15.4		348	52.9	54.7	
4	79	10.0	279	10.8	14.4		3	55.4	54.7	
5	94	12.4	294	10.5	+9 13.4		18	58.0	+21 54.7	
6	109	14.9	309	10.1	+9 12.5		34	00.5	+21 54.7	
7	124	17.4	324	09.8	11.5		49	03.0	54.7	
8	139	19.8	339	09.4	10.5		64	05.5	54.7	
9	154	22.3	354	09.1	09.5		79	08.0	54.7	
10	169	24.8	9	08.7	08.6		94	10.5	54.7	
11	184	27.2	24	08.4	+9 07.6		109	13.1	+21 54.7	
12	199	29.7	39	08.0	+9 06.6		124	15.6	+21 54.7	
13	214	32.2	54	07.7	05.6		139	18.1	54.7	
14	229	34.6	69	07.3	04.6		154	20.6	54.7	
15	244	37.1	84	07.0	03.6		169	23.1	54.6	
16	259	39.5	99	06.6	02.7		184	25.6	54.6	
17	274	42.0	114	06.2	+9 01.7		199	28.2	+21 54.6	
18	289	44.5	129	05.9	+9 00.7		214	30.7	+21 54.6	
19	304	46.9	144	05.5	+8 59.7		229	33.2	54.6	
20	319	49.4	159	05.2	58.7		244	35.7	54.6	
21	334	51.9	174	04.8	57.7		259	38.2	54.6	
22	349	54.3	189	04.5	56.8		274	40.8	54.6	
23	4 56.8	204	04.1	55.8	124	29.2	289	43.3	54.6	
24	19 59.3	219	03.8	+8 54.8	139	29.8	304	45.8	+21 54.6	
Dif	—	-4	-10		+6	-4	+25	0		+22

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 24 ^d 9	PHE { 4 ^h : 57'1 12 ^h : 57'4 20 ^h : 57'7	SD: 15'5											
	PMG: 11 ^h 46 ^m 6					PMG: 8 ^h 16 ^m				R°: 49 ^m							
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	183	18.8	-7	05.4	239	56.2	+10	09.1	60 N	5	00	5	48	6	30	0	52
1	198	19.0		06.4	254	27.2 ¹²⁰	+9	58.7 ¹⁰⁴	58	02	47	27	0	58	80	17	16
2	213	19.1		07.3	268	58.2 ¹²⁰		48.2 ¹⁰⁵	56	03	46	24	1	03	78	13	19
3	228	19.3		08.3	283	29.2 ¹²⁰		37.7 ¹⁰⁵	54	04	45	21	07	76	10	21	
4	243	19.4		09.2	298	00.2 ¹²⁰		27.1 ¹⁰⁶	52	05	44	18	12	74	07	23	
5	258	19.6	-7	10.1	312	31.1 ¹¹⁹	+9	16.4 ¹⁰⁷	50	5	06	5	44	6	16	1	15
6	273	19.7	-7	11.1	327	02.0 ¹¹⁹	+9	05.7 ¹⁰⁷	45	5	07	5	41	6	11	1	23
7	288	19.9		12.0	341	33.0 ¹²⁰	+8	55.0 ¹⁰⁷	40	08	39	07	30	65	54	31	
8	303	20.1		13.0	356	03.9 ¹¹⁹		44.1 ¹⁰⁹	35	08	37	6	03	36	62	49	35
9	318	20.2		13.9	10	34.8 ¹¹⁹		33.3 ¹⁰⁸	30	08	35	5	59	41	60	46	37
10	333	20.4		14.8	25	05.7 ¹¹⁹		22.3 ¹¹⁰	20	06	31	54	50	55	39	41	
11	348	20.5	-7	15.8	39	36.6 ¹¹⁹	+8	11.3 ¹¹⁰	10 N	5	03	5	27	5	48	1	58
12	3	20.7	-7	16.7	54	07.4 ¹¹⁸	+8	00.3 ¹¹⁰	0	4	58	5	23	5	43	2	05
13	18	20.9		17.7	68	38.3 ¹¹⁹	+7	49.2 ¹¹¹	10 S	52	17	38	12	45	22	52	
14	33	21.0		18.6	83	09.1 ¹¹⁸		38.0 ¹¹²	20	44	10	33	20	41	16	56	
15	48	21.2		19.5	97	39.9 ¹¹⁸		26.8 ¹¹²	30	33	5	02	28	37	09	61	
16	63	21.3		20.5	112	10.7 ¹¹⁸		15.5 ¹¹³	35	26	4	57	22	33	35	05	64
17	78	21.5	-7	21.4	126	41.5 ¹¹⁸	+7	04.2 ¹¹³	40	4	18	4	50	5	18	2	39
18	93	21.6	-7	22.4	141	12.3 ¹¹⁸	+6	52.8 ¹¹⁴	45	4	07	4	43	5	13	2	46
19	108	21.8		23.3	155	43.0 ¹¹⁷		41.4 ¹¹⁴	50	3	53	34	07	53	26	49	74
20	123	22.0		24.2	170	13.7 ¹¹⁷		29.9 ¹¹⁵	52	46	29	04	2	57	23	46	76
21	138	22.1		25.2	184	44.4 ¹¹⁷		18.4 ¹¹⁵	54	39	24	5	01	3	01	43	77
22	153	22.3		26.1	199	15.1 ¹¹⁷	+6	06.8 ¹¹⁶	56	30	19	4	58	05	20	40	79
23	168	22.4		27.1	213	45.8 ¹¹⁷	+5	55.2 ¹¹⁶	58	20	12	54	10	17	36	82	
24	183	22.6	-7	28.0	228	16.4 ¹¹⁶	+5	43.5 ¹¹⁷	60 S	3	09	4	05	4	49	3	16
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 36 ^m 3			Mag: -4.1 PMG: 9 ^h 24 ^m			Mag: +1.2 PMG: 14 ^h 41 ^m			Mag: -2.6 PMG: 3 ^h 40 ^m			Mag: +0.7 PMG: 12 ^h 35 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	19	59.3	219	03.8	+8	54.8	139	29.8	-21	35.7	304	45.8	+21	54.6	170	42.1	-9
1	35	01.7	234	03.4		53.8	154	30.4		36.0	319	48.3		54.6	185	44.2	
2	50	04.2	249	03.1		52.8	169	31.0		36.4	334	50.9		54.6	200	46.4	
3	65	06.6	264	02.7		51.8	184	31.6		36.8	349	53.4		54.6	215	48.6	
4	80	09.1	279	02.4		50.8	199	32.2		37.1	4	55.9		54.6	230	50.8	
5	95	11.6	294	02.0	+8	49.8	214	32.7	-21	37.5	19	58.4	+21	54.6	245	53.0	-9
6	110	14.0	309	01.7	+8	48.9	229	33.3	-21	37.9	35	01.0	+21	54.5	260	55.2	-9
7	125	16.5	324	01.3		47.9	244	33.9		38.2	50	03.5		54.5	275	57.3	
8	140	19.0	339	01.0		46.9	259	34.5		38.6	65	06.0		54.5	290	59.5	
9	155	21.4	354	00.6		45.9	274	35.1		39.0	80	08.5		54.5	306	01.7	
10	170	23.9	9	00.3		44.9	289	35.7		39.3	95	11.1		54.5	321	03.9	
11	185	26.4	23	59.9	+8	43.9	304	36.3	-21	39.7	110	13.6	+21	54.5	336	06.1	-9
12	200	28.8	38	59.6	+8	42.9	319	36.9	-21	40.1	125	16.1	+21	54.5	351	08.2	-9
13	215	31.3	53	59.2		41.9	334	37.4		40.4	140	18.6		54.5	6	10.4	
14	230	33.8	68	58.9		40.9	349	38.0		40.8	155	21.2		54.5	21	12.6	
15	245	36.2	83	58.5		39.9	4	38.6		41.1	170	23.7		54.5	36	14.8	
16	260	38.7	98	58.2		38.9	19	39.2		41.5	185	26.2		54.5	51	17.0	
17	275	41.1	113	57.8	+8	37.9	34	39.8	-21	41.9	200	28.7	+21	54.5	66	19.1	-9
18	290	43.6	128	57.5	+8	36.9	49	40.4	-21	42.2	215	31.3	+21	54.5	81	21.3	-9
19	305	46.1	143	57.1		35.9	64	41.0		42.6	230	33.8		54.5	96	23.5	
20	320	48.5	158	56.8		34.9	79	41.6		42.9	245	36.3		54.4	111	25.7	
21	335	51.0	173	56.4		33.9	94	42.1		43.3	260	38.9		54.4	126	27.9	
22	350	53.5	188	56.1		32.9	109	42.7		43.7	275	41.4		54.4	141	30.1	
23	5	55.9	203	55.7		31.9	124	43.3		44.0	290	43.9		54.4	156	32.2	
24	20	58.4	218	55.4	+8	31.0	139	43.9	-21	44.4	305	46.5	+21	54.4	171	34.4	-9
Dif	—		-4	-10	+6		-4	+25		0	+22		-1				

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 25 ^d 9 PHE		4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6				Civil		Náutico		Hora R°	
	PMG: 11 ^h 46 ^m 4		SD: 15:7	PMG: 9 ^h 05 ^m	Dec	Dif								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	22.6	-7	28.0	228	16.4	+5 43.5	60 N	16 59	17 41	18 29	2 16 86	15 35 13	
1	198	22.7		28.9	242	47.0 ¹¹⁶	31.8 ¹¹⁷	58	17 03	42	27	18 84	33 17	
2	213	22.9		29.9	257	17.6 ¹¹⁶	20.1 ¹¹⁷	56	06	43	26	21 81	32 19	
3	228	23.0		30.8	271	48.2 ¹¹⁶	+5 08.3 ¹¹⁸	54	09	45	25	23 79	31 21	
4	243	23.2		31.7	286	18.7 ¹¹⁵	+4 56.4 ¹¹⁹	52	12	46	25	26 76	30 23	
5	258	23.3	-7	32.7	300	49.2 ¹¹⁵	+4 44.5 ¹¹⁹	50	17 14	17 47	18 24	2 27 75	15 29 25	
6	273	23.5	-7	33.6	315	19.7 ¹¹⁵	+4 32.6 ¹¹⁹	45	17 20	17 49	18 23	2 32 70	15 27 29	
7	288	23.7		34.6	329	50.2 ¹¹⁵	20.6 ¹²⁰	40	25	52	23	35 67	25 33	
8	303	23.8		35.5	344	20.6 ¹¹⁴	+4 08.6 ¹²⁰	35	29	54	23	38 64	24 35	
9	318	24.0		36.4	358	51.0 ¹¹⁴	+3 56.6 ¹²⁰	30	32	17 56	24	41 61	23 37	
10	333	24.1		37.4	13	21.4 ¹¹⁴	44.5 ¹²¹	20	39	18 01	26	45 57	20 43	
11	348	24.3	-7	38.3	27	51.8 ¹¹⁴	+3 32.4 ¹²¹	10 N	17 44	18 05	18 30	2 49 53	15 18 47	
12	3	24.4	-7	39.2	42	22.1 ¹¹³	+3 20.3 ¹²¹	0	17 50	18 11	18 35	2 53 49	15 16 51	
13	18	24.6		40.2	56	52.4 ¹¹³	+3 08.1 ¹²²	10 S	17 55	16	41	2 57 46	14 54	
14	33	24.7		41.1	71	22.6 ¹¹²	+2 55.9 ¹²²	20	18 01	24	18 50	3 01 42	12 58	
15	48	24.9		42.0	85	52.9 ¹¹³	43.6 ¹²³	30	08	33	19 01	05 38	10 63	
16	63	25.0		43.0	100	23.1 ¹¹²	31.3 ¹²³	35	12	38	09	08 35	09 65	
17	78	25.2	-7	43.9	114	53.2 ¹¹¹	+2 19.0 ¹²³	40	18 17	18 45	19 18	3 11 32	15 07 68	
18	93	25.3	-7	44.8	129	23.3 ¹¹¹	+2 06.7 ¹²³	45	18 22	18 53	19 29	3 14 29	15 05 72	
19	108	25.5		45.8	143	53.4 ¹¹¹	+1 54.3 ¹²⁴	50	29	19 03	43	19 24	03 76	
20	123	25.6		46.7	158	23.5 ¹¹¹	41.9 ¹²⁴	52	32	07	50	20 23	02 78	
21	138	25.8		47.6	172	53.5 ¹¹⁰	29.5 ¹²⁴	54	35	12	19 58	22 21	15 00 81	
22	153	25.9		48.6	187	23.5 ¹¹⁰	17.1 ¹²⁴	56	39	18	20 07	25 19	14 59 83	
23	168	26.1		49.5	201	53.4 ¹⁰⁹	+1 04.6 ¹²⁵	58	43	25	18	27 17	58 85	
24	183	26.2	-7	50.5	216	23.3 ¹⁰⁹	+0 52.1 ¹²⁵	60 S	18 48	19 33	20 30	3 30 14	14 56 88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 32 ^m 4		Mag: -4.1 PMG: 9 ^h 25 ^m		Mag: +1.2 PMG: 14 ^h 41 ^m		Mag: -2.7 PMG: 3 ^h 36 ^m		Mag: +0.7 PMG: 12 ^h 32 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	'	°	'	°	'	°	'	
0	20	58.4	218 55.4	+8 31.0	139 43.9	-21 44.4	305 46.5	+21 54.4	171 34.4	-9 37.6
1	36	00.9	233 55.0	30.0	154 44.5	44.8	320 49.0	54.4	186 36.6	37.7
2	51	03.3	248 54.7	29.0	169 45.1	45.1	335 51.5	54.4	201 38.8	37.8
3	66	05.8	263 54.3	28.0	184 45.6	45.5	350 54.0	54.4	216 41.0	37.9
4	81	08.3	278 54.0	26.9	199 46.2	45.8	5 56.6	54.4	231 43.1	38.1
5	96	10.7	293 53.6	+8 25.9	214 46.8	-21 46.2	20 59.1	+21 54.4	246 45.3	-9 38.2
6	111	13.2	308 53.3	+8 24.9	229 47.4	-21 46.5	36 01.6	+21 54.4	261 47.5	-9 38.3
7	126	15.6	323 52.9	23.9	244 48.0	46.9	51 04.2	54.4	276 49.7	38.4
8	141	18.1	338 52.6	22.9	259 48.5	47.3	66 06.7	54.4	291 51.9	38.5
9	156	20.6	353 52.2	21.9	274 49.1	47.6	81 09.2	54.3	306 54.0	38.6
10	171	23.0	8 51.9	20.9	289 49.7	48.0	96 11.8	54.3	321 56.2	38.7
11	186	25.5	23 51.5	+8 19.9	304 50.3	-21 48.3	111 14.3	+21 54.3	336 58.4	-9 38.8
12	201	28.0	38 51.2	+8 18.9	319 50.9	-21 48.7	126 16.9	+21 54.3	352 00.6	-9 38.9
13	216	30.4	53 50.8	17.9	334 51.4	49.0	141 19.4	54.3	7 02.8	39.0
14	231	32.9	68 50.5	16.9	349 52.0	49.4	156 21.9	54.3	22 04.9	39.1
15	246	35.4	83 50.1	15.9	4 52.6	49.7	171 24.5	54.3	37 07.1	39.2
16	261	37.8	98 49.8	14.9	19 53.2	50.1	186 27.0	54.3	52 09.3	39.3
17	276	40.3	113 49.4	+8 13.9	34 53.8	-21 50.5	201 29.5	+21 54.3	67 11.5	-9 39.4
18	291	42.7	128 49.1	+8 12.9	49 54.3	-21 50.8	216 32.1	+21 54.3	82 13.7	-9 39.5
19	306	45.2	143 48.7	11.9	64 54.9	51.2	231 34.6	54.3	97 15.9	39.6
20	321	47.7	158 48.4	10.9	79 55.5	51.5	246 37.2	54.3	112 18.0	39.7
21	336	50.1	173 48.0	09.9	94 56.1	51.9	261 39.7	54.2	127 20.2	39.8
22	351	52.6	188 47.7	08.8	109 56.6	52.2	276 42.2	54.2	142 22.4	39.9
23	6 55.1	203 47.3	07.8	124 57.2	52.6	291 44.8	291 44.8	54.2	157 24.6	40.1
24	21 57.5	218 47.0	+8 06.8	139 57.8	-21 52.9	306 47.3	+21 54.2		172 26.8	-9 40.2
Dif	—		-3	-10	+6	-4	+25	0	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46 ^m 1			Edad: 26 ^d 9 PHE { SD: 16'0 PMG: 9 ^h 54 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	26.2	-7	50.5	216	23.3	+0 52.1	60 N	5 05	5 53	6 35	3 42	91	15 48	15
1	198	26.4		51.4	230	53.2	109 39.6	58	06	52	31	42	87	50	17
2	213	26.5		52.3	245	23.0	108 27.1	56	07	50	28	42	85	51	20
3	228	26.7		53.3	259	52.8	108 14.6	54	08	49	25	42	82	52	23
4	243	26.8		54.2	274	22.5	107 +0 02.0	52	09	48	22	42	80	53	25
5	258	27.0	-7	55.1	288	52.2	107 -0 10.6	50	5 09	5 47	6 19	3 42	78	15 54	27
6	273	27.1	-7	56.0	303	21.9	107 -0 23.2	45	5 10	5 44	6 13	3 42	74	15 56	31
7	288	27.3		57.0	317	51.5	106 35.8	40	10	41	09	42	70	58	34
8	303	27.4		57.9	332	21.1	106 -0 48.4	35	10	39	04	42	67	15 59	37
9	318	27.6		58.8	346	50.6	105 -1 01.0	30	09	37	6 01	42	64	16 00	40
10	333	27.7	-7	59.8	1	20.1	105 13.7	20	06	32	5 54	42	60	03	44
11	348	27.9	-8	00.7	15	49.5	104 -1 26.3	10 N	5 03	5 27	5 48	3 42	55	16 05	48
12	3	28.0	-8	01.6	30	18.9	104 -1 39.0	0	4 58	5 22	5 43	3 42	52	16 07	52
13	18	28.1		02.6	44	48.2	103 -1 51.6	10 S	51	16	37	43	47	08	56
14	33	28.3		03.5	59	17.5	103 -2 04.3	20	43	09	31	43	43	10	61
15	48	28.4		04.4	73	46.8	103 17.0	30	31	5 00	24	43	39	13	64
16	63	28.6		05.4	88	15.9	101 29.7	35	23	4 54	20	43	36	14	67
17	78	28.7	-8	06.3	102	45.1	102 -2 42.3	40	4 14	4 47	5 15	3 43	33	16 15	71
18	93	28.9	-8	07.2	117	14.2	101 -2 55.0	45	4 03	4 39	5 09	3 43	30	16 17	74
19	108	29.0		08.2	131	43.2	100 -3 07.7	50	3 48	29	03	43	26	19	79
20	123	29.2		09.1	146	12.2	100 20.3	52	41	24	5 00	43	24	20	81
21	138	29.3		10.0	160	41.1	99 33.0	54	33	19	4 56	43	22	21	83
22	153	29.5		10.9	175	10.0	99 45.7	56	24	13	52	44	19	22	85
23	168	29.6		11.9	189	38.8	98 -3 58.3	58	14	4 07	48	44	17	23	88
24	183	29.7	-8	12.8	204	07.6	98 -4 11.0	60 S	3 01	3 59	4 44	3 44	14	16 24	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 22 ^h 28 ^m 5		Mag: -4.1 PMG: 9 ^h 25 ^m		Mag: +1.2 PMG: 14 ^h 40 ^m		Mag: -2.7 PMG: 3 ^h 32 ^m		Mag: +0.7 PMG: 12 ^h 28 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	21	57.5	218	47.0	+8 06.8	139	57.8	-21 52.9	172	26.8	-9 40.2
1	37	00.0	233	46.6	05.8	154	58.4	53.3	187	28.9	40.3
2	52	02.5	248	46.3	04.8	169	59.0	53.6	202	31.1	40.4
3	67	04.9	263	46.0	03.8	184	59.5	54.0	217	33.3	40.5
4	82	07.4	278	45.6	02.8	200	00.1	54.3	232	35.5	40.6
5	97	09.9	293	45.3	+8 01.8	215	00.7	-21 54.7	247	37.7	-9 40.7
6	112	12.3	308	44.9	+8 00.8	230	01.3	-21 55.0	262	39.8	-9 40.8
7	127	14.8	323	44.6	+7 59.7	245	01.8	55.4	277	42.0	40.9
8	142	17.2	338	44.2	58.7	260	02.4	55.7	292	44.2	41.0
9	157	19.7	353	43.9	57.7	275	03.0	56.1	307	46.4	41.1
10	172	22.2	8	43.5	56.7	290	03.5	56.4	322	48.6	41.2
11	187	24.6	23	43.2	+7 55.7	305	04.1	-21 56.8	337	50.7	-9 41.3
12	202	27.1	38	42.8	+7 54.7	320	04.7	-21 57.1	352	52.9	-9 41.4
13	217	29.6	53	42.5	53.6	335	05.3	57.5	7	55.1	41.5
14	232	32.0	68	42.1	52.6	350	05.8	57.8	22	57.3	41.6
15	247	34.5	83	41.8	51.6	5	06.4	58.2	37	59.5	41.7
16	262	37.0	98	41.4	50.6	20	07.0	58.5	53	01.6	41.8
17	277	39.4	113	41.1	+7 49.6	35	07.6	-21 58.9	68	03.8	-9 41.9
18	292	41.9	128	40.8	+7 48.6	50	08.1	-21 59.2	83	06.0	-9 42.1
19	307	44.3	143	40.4	47.5	65	08.7	59.6	98	08.2	42.2
20	322	46.8	158	40.1	46.5	80	09.3	-21 59.9	247	38.2	54.0
21	337	49.3	173	39.7	45.5	95	09.8	-22 00.2	262	40.7	54.0
22	352	51.7	188	39.4	44.5	110	10.4	00.6	277	43.3	54.0
23	7	54.2	203	39.0	43.4	125	11.0	00.9	292	45.8	54.0
24	22	56.7	218	38.7	+7 42.4	140	11.5	-22 01.3	307	48.4	+21 54.0
Dif	—		-3 -10		+6 -3		+25 0		+22 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 27 ^d 9 PHE {	4 ^h : 59'7 12 ^h : 59'9 20 ^h : 60'1										
	PMG: 11 ^h 45 ^m 9				SD: 16'2										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	m
0	183	29.7	-8 12.8	204	07.6	-4 11.0	126	60 N	16 53	17 35	18 23	5 13 93		16 03 18	
1	198	29.9		218	36.3	97	23.6	58	16 57	37	22	09 90		07 21	
2	213	30.0		233	05.0	97	36.2	56	17 01	38	21	07 87		11 24	
3	228	30.2		247	33.6	96	-4 48.8	54	04	40	21	04 85		15 25	
4	243	30.3		262	02.1	95	-5 01.4	52	07	41	20	02 82		18 28	
5	258	30.5	-8 17.4	276	30.6	95	-5 14.0	50	17 10	17 43	18 20	5 00 80		16 21 29	
6	273	30.6	-8 18.4	290	59.0	94	-5 26.5	45	17 16	17 46	18 20	4 56 75		16 27 34	
7	288	30.7		305	27.4	94	39.1	40	22	49	20	52 72		32 37	
8	303	30.9		319	55.7	93	-5 51.6	35	26	51	21	49 69		36 41	
9	318	31.0		334	23.9	92	-6 04.1	30	30	54	22	46 66		40 43	
10	333	31.2		348	52.1	92	16.6	20	37	17 59	25	42 61		47 48	
11	348	31.3	-8 23.0	3	20.3	92	-6 29.0	10 N	17 43	18 04	18 29	4 37 58		16 53 51	
12	3	31.4	-8 23.9	17	48.3	90	-6 41.4	0	17 49	18 10	18 34	4 34 53		16 59 55	
13	18	31.6		32	16.3	90	-6 53.8	10 S	17 55	17	41	30 50		17 04 59	
14	33	31.7		46	44.3	90	-7 06.2	20	18 02	24	18 50	26 46		11 62	
15	48	31.9		61	12.1	88	18.5	30	10	34	19 03	22 41		17 68	
16	63	32.0		75	39.9	88	30.8	35	14	40	11	19 39		21 70	
17	78	32.1	-8 28.6	90	07.7	88	-7 43.1	40	18 19	18 47	19 20	4 16 36		17 26 73	
18	93	32.3	-8 29.5	104	35.4	87	-7 55.3	45	18 25	18 55	19 32	4 13 32		17 31 77	
19	108	32.4		119	03.0	86	-8 07.5	50	32	19 06	47	09 28		38 80	
20	123	32.6		133	30.5	85	19.6	52	36	11	19 55	07 26		41 82	
21	138	32.7		147	58.0	85	31.7	54	39	17	20 03	05 24		44 85	
22	153	32.8		162	25.4	84	43.8	56	43	23	13	03 22		47 88	
23	168	33.0		176	52.8	84	-8 55.8	58	48	30	24	4 01 19		51 91	
24	183	33.1	-8 35.0	191	20.1	83	-9 07.8	60 S	18 53	19 38	20 37	3 58 16		17 56 94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 22 ^h 24 ^m 5		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +1.2 PMG: 14 ^h 39 ^m		Mag: -2.7 PMG: 3 ^h 28 ^m		Mag: +0.6 PMG: 12 ^h 25 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	22	56.7	218	38.7	+7 42.4	140	11.5	-22 01.3	307 48.4	+21 54.0		
1	37	59.1	233	38.3	41.4	155	12.1	01.6	322 50.9	54.0		
2	53	01.6	248	38.0	40.4	170	12.7	02.0	337 53.5	54.0		
3	68	04.1	263	37.6	39.4	185	13.2	02.3	352 56.0	54.0		
4	83	06.5	278	37.3	38.3	200	13.8	02.7	7 58.6	54.0		
5	98	09.0	293	36.9	+7 37.3	215	14.4	-22 03.0	23 01.1	+21 54.0		
6	113	11.5	308	36.6	+7 36.3	230	15.0	-22 03.3	38 03.7	+21 53.9		
7	128	13.9	323	36.3	35.3	245	15.5	03.7	53 06.2	53.9		
8	143	16.4	338	35.9	34.2	260	16.1	04.0	68 08.8	53.9		
9	158	18.8	353	35.6	33.2	275	16.7	04.4	83 11.3	53.9		
10	173	21.3	8 35.2	32.2	290 17.2	290	17.2	04.7	98 13.9	53.9		
11	188	23.8	23 34.9	+7 31.2	305 17.8	305	17.8	-22 05.0	113 16.5	+21 53.9		
12	203	26.2	38 34.5	+7 30.1	320 18.3	320	18.3	-22 05.4	128 19.0	+21 53.9		
13	218	28.7	53 34.2	29.1	335 18.9	335	18.9	05.7	143 21.6	53.9		
14	233	31.2	68 33.8	28.1	350 19.5	350	19.5	06.1	158 24.1	53.9		
15	248	33.6	83 33.5	27.0	5 20.0	5	20.0	06.4	173 26.7	53.9		
16	263	36.1	98 33.2	26.0	20 20.6	20	20.6	06.7	188 29.2	53.9		
17	278	38.6	113 32.8	+7 25.0	35 21.2	35	21.2	-22 07.1	203 31.8	+21 53.8		
18	293	41.0	128 32.5	+7 24.0	50 21.7	50	21.7	-22 07.4	218 34.3	+21 53.8		
19	308	43.5	143 32.1	22.9	65 22.3	65	22.3	07.8	233 36.9	53.8		
20	323	45.9	158 31.8	21.9	80 22.9	80	22.9	08.1	248 39.4	53.8		
21	338	48.4	173 31.4	20.9	95 23.4	95	23.4	08.4	263 42.0	53.8		
22	353	50.9	188 31.1	19.8	110 24.0	110	24.0	08.8	278 44.6	53.8		
23	8 53.3	203 30.7	18.8	125 24.5	09.1	125	24.5	09.1	293 47.1	53.8		
24	23 55.8	218 30.4	+7 17.8	140 25.1	-22 09.4	140	25.1	-22 09.4	308 49.7	+21 53.8		
Dif	—	-3	-10	+6	-3				+26	0	+22	-1

UT	SOL		● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 7		Edad: 28 ^d 9 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'6 R°: 58 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	183	33.1	-8 35.0	191	20.1	-9 07.8	60 N	5 10	5 58	6 40	6 46	94	16 21	23
1	198	33.3	36.0	205	47.3	82 19.7	58	11	56	36	39	91	28 27	27
2	213	33.4	36.9	220	14.5	82 31.6	56	11	54	32	34	88	35 29	29
3	228	33.5	37.8	234	41.6	81 43.4	54	12	53	28	29	85	40 32	32
4	243	33.7	38.7	249	08.6	80 -9 55.2	52	12	51	25	24	83	46 33	33
5	258	33.8	-8 39.7	263	35.5	79 -10 07.0	50	5 12	5 50	6 22	6 20	81	16 50	36
6	273	33.9	-8 40.6	278	02.4	79 -10 18.6	45	5 12	5 46	6 16	6 11	77	17 01	39
7	288	34.1	41.5	292	29.2	78 30.2	40	12	43	11	6 04	74	09 43	43
8	303	34.2	42.4	306	56.0	78 41.8	35	11	41	06	5 58	70	17 45	45
9	318	34.3	43.4	321	22.6	76 -10 53.3	30	10	38	6 02	52	68	23 48	48
10	333	34.5	44.3	335	49.2	76 -11 04.7	20	07	33	5 55	43	64	35 51	51
11	348	34.6	-8 45.2	350	15.8	76 -11 16.1	10 N	5 03	5 27	5 48	5 35	60	17 44	55
12	3 34.8	-8 46.1	4 42.2	74 74	-11 27.4	113 38.6	0	4 57	5 21	5 42	5 27	57	17 54	58
13	18 34.9	47.0	19 08.6	74 74	-11 38.6	112 30.2	10 S	50	15	36	20	53	18 03	61
14	33 35.0	48.0	33 35.0	74 74	-11 49.8	112 31.6	20	41	5 07	29	12	49	13 65	65
15	48 35.2	48.9	48 01.2	72 72	-12 00.9	111 11.9	30	29	4 57	22	5 03	45	25 68	68
16	63 35.3	49.8	62 27.4	72 71	-12 11.9	110 22.8	35	21	51	17	4 58	42	31 71	71
17	78 35.4	-8 50.7	76 53.5	71 71	-12 33.7	109 44.5	40	4 11	4 44	5 12	4 52	40	18 39	73
18	93 35.6	-8 51.6	91 19.6	70 70	-12 55.2	107 16.4	45	3 59	4 36	5 06	4 45	37	18 48	76
19	108 35.7	52.6	105 45.6	69 69	-13 05.9	107 26.9	50	44	25	4 59	37	33	18 58	81
20	123 35.8	53.5	120 11.5	68 68	-13 16.4	105 26.9	52	36	20	55	33	31	19 03	83
21	138 36.0	54.4	134 37.3	67 67	-13 37.3	104 16.4	54	28	14	51	29	29	09 84	84
22	153 36.1	55.3	149 03.1	66 66	-13 37.3	104 16.4	56	18	08	47	25	26	15 87	87
23	168 36.2	56.2	163 28.8	66 66	-13 37.3	104 16.4	58	3 07	4 01	43	20	23	22 90	90
24	183 36.4	-8 57.2	177 54.4	66 66	-13 37.3	104 16.4	60 S	2 53	3 52	4 38	4 14	21	19 30	93
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO			
	PMG: 22 ^h 20 ^m 6		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +1.2 PMG: 14 ^h 38 ^m		Mag: -2.7 PMG: 3 ^h 24 ^m				Mag: +0.6 PMG: 12 ^h 21 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	23 55.8	218 30.4	+7 17.8	140 25.1	-22 09.4	308 49.7	+21 53.8	174 11.4	-9 45.2					
1	38 58.3	233 30.1	16.7	155 25.7	09.8	323 52.2	53.8	189 13.6	45.3					
2	54 00.7	248 29.7	15.7	170 26.2	10.1	338 54.8	53.8	204 15.7	45.4					
3	69 03.2	263 29.4	14.7	185 26.8	10.4	353 57.4	53.7	219 17.9	45.5					
4	84 05.7	278 29.0	13.6	200 27.4	10.8	8 59.9	53.7	234 20.1	45.6					
5	99 08.1	293 28.7	+7 12.6	215 27.9	-22 11.1	24 02.5	+21 53.7	249 22.3	-9 45.7					
6	114 10.6	308 28.3	+7 11.6	230 28.5	-22 11.4	39 05.0	+21 53.7	264 24.5	-9 45.8					
7	129 13.1	323 28.0	10.5	245 29.0	11.8	54 07.6	53.7	279 26.6	45.9					
8	144 15.5	338 27.7	09.5	260 29.6	12.1	69 10.2	53.7	294 28.8	46.1					
9	159 18.0	353 27.3	08.4	275 30.2	12.4	84 12.7	53.7	309 31.0	46.2					
10	174 20.4	8 27.0	07.4	290 30.7	12.8	99 15.3	53.7	324 33.2	46.3					
11	189 22.9	23 26.6	+7 06.4	305 31.3	-22 13.1	114 17.8	+21 53.7	339 35.3	-9 46.4					
12	204 25.4	38 26.3	+7 05.3	320 31.8	-22 13.4	129 20.4	+21 53.6	354 37.5	-9 46.5					
13	219 27.8	53 25.9	04.3	335 32.4	13.8	144 23.0	53.6	9 39.7	46.6					
14	234 30.3	68 25.6	03.3	350 32.9	14.1	159 25.5	53.6	24 41.9	46.7					
15	249 32.8	83 25.3	02.2	5 33.5	14.4	174 28.1	53.6	39 44.1	46.8					
16	264 35.2	98 24.9	01.2	20 34.1	14.8	189 30.7	53.6	54 46.2	46.9					
17	279 37.7	113 24.6	+7 00.1	35 34.6	-22 15.1	204 33.2	+21 53.6	69 48.4	-9 47.0					
18	294 40.2	128 24.2	+6 59.1	50 35.2	-22 15.4	219 35.8	+21 53.6	84 50.6	-9 47.1					
19	309 42.6	143 23.9	58.1	65 35.7	15.8	234 38.4	53.6	99 52.8	47.2					
20	324 45.1	158 23.5	57.0	80 36.3	16.1	249 40.9	53.6	114 55.0	47.3					
21	339 47.5	173 23.2	56.0	95 36.8	16.4	264 43.5	53.6	129 57.1	47.4					
22	354 50.0	188 22.9	54.9	110 37.4	16.7	279 46.1	53.5	144 59.3	47.5					
23	9 52.5	203 22.5	53.9	125 38.0	17.1	294 48.6	53.5	160 01.5	47.6					
24	24 54.9	218 22.2	+6 52.8	140 38.5	-22 17.4	309 51.2	+21 53.5	175 03.7	-9 47.7					
Dif	—	-3	-10	+6	-3	+26	0	+22	-1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 5			Edad: 29 ^d 9 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'8 SD: 16'5 PMG: 12 ^h 38 ^m R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	36.4	-8	57.2	177	54.4	-13	37.3	60 N	16 47	17 30	18 18	8 20 92	16 44 32
1	198	36.5		58.1	192	20.0	66	47.6	58	52	32	17	10 88	16 55 35
2	213	36.6		59.0	206	45.5	65	-13	57.8	56	16 56	34	17	8 02 85
3	228	36.7	-8	59.9	221	10.9	64	-14	07.9	54	17 00	36	16	7 54 83
4	243	36.9	-9	00.8	235	36.3	64	17.9	52	03	37	16	16	47 82
5	258	37.0	-9	01.8	250	01.6	63	-14	27.9	50	17 06	17 39	18 16	7 41 80
6	273	37.1	-9	02.7	264	26.8	62	-14	37.7	45	17 13	17 43	18 17	7 28 76
7	288	37.3		03.6	278	52.0	62	47.5	40	19	46	17	18 73	17 52 48
8	303	37.4		04.5	293	17.1	61	-14	57.1	35	23	49	18	08 71
9	318	37.5		05.4	307	42.1	60	-15	06.7	30	28	52	20	7 00 69
10	333	37.7		06.3	322	07.1	60	16.1	20	35	17 58	23	23	6 47 65
11	348	37.8	-9	07.3	336	32.0	59	-15	25.5	10 N	17 42	18 04	18 28	6 35 62
12	3	37.9	-9	08.2	350	56.9	59	-15	34.7	0	17 49	18 10	18 34	6 24 59
13	18	38.0		09.1	5	21.7	58	43.8	10 S	17 55	17	42	42	13 56
14	33	38.2		10.0	19	46.4	57	-15	52.9	20	18 03	25	18 51	6 01 54
15	48	38.3		10.9	34	11.0	56	-16	01.8	30	11	35	19 04	5 48 50
16	63	38.4		11.8	48	35.6	56	10.6	88	35	16	42	13	40 48
17	78	38.6	-9	12.7	63	00.2	56	-16	19.3	40	18 21	18 49	19 23	5 32 45
18	93	38.7	-9	13.7	77	24.6	54	-16	27.9	45	18 28	18 58	19 35	5 22 42
19	108	38.8		14.6	91	49.1	55	36.4	85	50	35	19 10	51	10 39
20	123	38.9		15.5	106	13.4	53	44.7	83	52	39	15	19 59	5 04 37
21	138	39.1		16.4	120	37.7	53	-16	53.0	54	43	21	20 08	4 58 35
22	153	39.2		17.3	135	02.0	53	-17	01.1	56	47	27	18	51 33
23	168	39.3		18.2	149	26.2	52	09.1	80	58	52	35	30	43 31
24	183	39.4	-9	19.1	163	50.3	51	-17	17.0	60 S	18 58	19 44	20 44	4 35 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 16 ^m 7		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +1.2 PMG: 14 ^h 37 ^m		Mag: -2.7 PMG: 3 ^h 20 ^m		Mag: +0.6 PMG: 12 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	24	54.9	218	22.2	+6	52.8	140	38.5	-22	17.4
1	39	57.4	233	21.8		51.8	155	39.1		17.7
2	54	59.9	248	21.5		50.7	170	39.6		18.1
3	70	02.3	263	21.1		49.7	185	40.2		18.4
4	85	04.8	278	20.8		48.7	200	40.7		18.7
5	100	07.3	293	20.5	+6	47.6	215	41.3	-22	19.0
6	115	09.7	308	20.1	+6	46.6	230	41.8	-22	19.4
7	130	12.2	323	19.8		45.5	245	42.4		19.7
8	145	14.7	338	19.4		44.5	260	42.9		20.0
9	160	17.1	353	19.1		43.4	275	43.5		20.3
10	175	19.6	8	18.8		42.4	290	44.0		20.7
11	190	22.0	23	18.4	+6	41.3	305	44.6	-22	21.0
12	205	24.5	38	18.1	+6	40.3	320	45.1	-22	21.3
13	220	27.0	53	17.7		39.2	335	45.7		21.6
14	235	29.4	68	17.4		38.2	350	46.2		21.9
15	250	31.9	83	17.1		37.1	5	46.8		22.3
16	265	34.4	98	16.7		36.1	20	47.3		22.6
17	280	36.8	113	16.4	+6	35.0	35	47.9	-22	22.9
18	295	39.3	128	16.0	+6	34.0	50	48.4	-22	23.2
19	310	41.8	143	15.7		32.9	65	49.0		23.6
20	325	44.2	158	15.3		31.9	80	49.5		23.9
21	340	46.7	173	15.0		30.8	95	50.1		24.2
22	355	49.2	188	14.7		29.8	110	50.6		24.5
23	10	51.6	203	14.3		28.7	125	51.2		24.8
24	25	54.1	218	14.0	+6	27.7	140	51.7	-22	25.2
Dif	—		-3	-10		+6	-3	+26		0
										+22
										-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 3			Edad: 1 ^d 5 PHE { SD: 16'6 PMG: 13 ^h 38 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	39.4	-9	163	50.3	-17	17.0	60 N	5	14	6	03	6	45	9	52
1	198	39.6		178	14.4		24.8	58	15	6	00		40	38	80	30
2	213	39.7		192	38.4		32.4	56	15	5	58		36	27	78	41
3	228	39.8		207	02.4		39.9	54	15		56		32	17	77	17
4	243	39.9		221	26.3		47.3	52	15		54		29	09	75	18
5	258	40.1	-9	235	50.2	-17	54.6	50	5	15	5	53	6	26	9	01
6	273	40.2	-9	250	14.1	-18	01.7	45	5	15	5	49	6	19	8	44
7	288	40.3		264	37.8		08.7	40	14		45		13	31	69	40
8	303	40.4		279	01.6		15.6	35	13		42		08	19	68	18
9	318	40.6		293	25.3		22.3	30	11		39	6	03	8	09	67
10	333	40.7		307	48.9		28.9	20	08		33	5	56	7	52	65
11	348	40.8	-9	322	12.6	-18	35.4	10 N	5	03	5	27	5	49	7	37
12	3	40.9	-9	336	36.1	-18	41.8	0	4	57	5	21	5	42	7	23
13	18	41.1		350	59.7		48.0	10 S	49		14		35	7	09	60
14	33	41.2		5	23.2	-18	54.1	20	39		5	05	28	6	55	57
15	48	41.3		19	46.6	-19	00.0	30	26		4	55	19	38	55	41
16	63	41.4		34	10.0	-19	05.8	35	18		49		15	28	54	20
17	78	41.5	-9	48	33.4	-19	11.4	40	4	08	4	41	5	09	6	17
18	93	41.7	-9	62	56.8	-19	17.0	45	3	55	4	32	5	02	6	04
19	108	41.8		77	20.1		22.3	50	39		20	4	54	5	49	47
20	123	41.9		91	43.4		27.6	52	31		15		51	41	47	45
21	138	42.0		106	06.7		32.7	54	22		09		47	33	45	21
22	153	42.1		120	29.9		37.6	56	12		4	02	42	24	43	22
23	168	42.3		134	53.2		42.4	58	3	00	3	55	37	14	41	16
24	183	42.4	-9	149	16.4	-19	47.1	60 S	2	45	3	46	4	32	5	02

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 12 ^m 7		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +1.2 PMG: 14 ^h 36 ^m		Mag: -2.7 PMG: 3 ^h 16 ^m		Mag: +0.6 PMG: 12 ^h 14 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	25	54.1	218	14.0	+6	27.7	140	51.7	-22	25.2	310	52.9	+21	53.2	175	56.0	-9	50.3
1	40	56.5	233	13.6		26.6	155	52.3		25.5	325	55.5		53.2	190	58.1		50.4
2	55	59.0	248	13.3		25.6	170	52.8		25.8	340	58.1		53.2	206	00.3		50.5
3	71	01.5	263	13.0		24.5	185	53.4		26.1	356	00.6		53.2	221	02.5		50.6
4	86	03.9	278	12.6		23.5	200	53.9		26.4	11	03.2		53.2	236	04.7		50.7
5	101	06.4	293	12.3	+6	22.4	215	54.5	-22	26.7	26	05.8	+21	53.2	251	06.8	-9	50.8
6	116	08.9	308	11.9	+6	21.3	230	55.0	-22	27.1	41	08.4	+21	53.2	266	09.0	-9	50.9
7	131	11.3	323	11.6		20.3	245	55.6		27.4	56	10.9		53.2	281	11.2		51.0
8	146	13.8	338	11.3		19.2	260	56.1		27.7	71	13.5		53.2	296	13.4		51.1
9	161	16.3	353	10.9		18.2	275	56.7		28.0	86	16.1		53.1	311	15.6		51.2
10	176	18.7	8	10.6		17.1	290	57.2		28.3	101	18.7		53.1	326	17.7		51.3
11	191	21.2	23	10.2	+6	16.1	305	57.7	-22	28.6	116	21.3	+21	53.1	341	19.9	-9	51.4
12	206	23.6	38	09.9	+6	15.0	320	58.3	-22	29.0	131	23.8	+21	53.1	356	22.1	-9	51.5
13	221	26.1	53	09.6		13.9	335	58.8		29.3	146	26.4		53.1	11	24.3		51.6
14	236	28.6	68	09.2		12.9	350	59.4		29.6	161	29.0		53.1	26	26.4		51.7
15	251	31.0	83	08.9		11.8	5	59.9		29.9	176	31.6		53.1	41	28.6		51.8
16	266	33.5	98	08.5		10.8	21	00.5		30.2	191	34.2		53.1	56	30.8		51.9
17	281	36.0	113	08.2	+6	09.7	36	01.0	-22	30.5	206	36.8	+21	53.0	71	33.0	-9	52.0
18	296	38.4	128	07.9	+6	08.6	51	01.6	-22	30.8	221	39.3	+21	53.0	86	35.2	-9	52.1
19	311	40.9	143	07.5		07.6	66	02.1		31.2	236	41.9		53.0	101	37.3		52.3
20	326	43.4	158	07.2		06.5	81	02.6		31.5	251	44.5		53.0	116	39.5		52.4
21	341	45.8	173	06.9		05.5	96	03.2		31.8	266	47.1		53.0	131	41.7		52.5
22	356	48.3	188	06.5		04.4	111	03.7		32.1	281	49.7		53.0	146	43.9		52.6
23	11	50.8	203	06.2		03.3	126	04.3		32.4	296	52.3		53.0	161	46.0		52.7
24	26	53.2	218	05.8	+6	02.3	141	04.8	-22	32.7	311	54.8	+21	53.0	176	48.2	-9	52.8
Dif	—		-3	-11		+5	-3			+26		0		+22		-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 45 ^m 1			Edad: 2 ^d 5 PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'4 R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	42.4	-9 41.0	149	16.4	-19 47.1	45	60 N	16 41	17 24	18 12	11 14 66	18 01 61		
1	198	42.5		163	39.5	51.6	45	58	47	27	12	10 58 66	17 61		
2	213	42.6	42.8	178	02.7	-19 56.0	44	56	51	29	12	45 66	30 61		
3	228	42.7	43.7	192	25.8	-20 00.2	42	54	55	31	12	34 65	42 61		
4	243	42.9	44.6	206	49.0	04.3	41	52	16 59	33	12	24 65	18 52 61		
5	258	43.0	-9 45.5	221	12.1	-20 08.2	39	50	17 02	17 35	18 12	10 15 64	19 01 61		
6	273	43.1	-9 46.4	235	35.2	-20 12.0	38	45	17 10	17 39	18 13	9 56 64	19 20 62		
7	288	43.2	47.4	249	58.3	15.6	36	40	16	43	15	40 64	36 61		
8	303	43.3	48.3	264	21.3	19.1	35	35	21	47	16	27 64	19 49 61		
9	318	43.5	49.2	278	44.4	22.5	34	30	26	50	18	9 16 63	20 01 61		
10	333	43.6	50.1	293	07.5	25.7	32	20	34	17 56	22	8 57 62	20 62		
11	348	43.7	-9 51.0	307	30.5	-20 28.7	30	10 N	17 41	18 03	18 27	8 40 62	20 38 61		
12	3	43.8	-9 51.9	321	53.6	-20 31.6	29	0	17 48	18 09	18 34	8 24 62	20 54 61		
13	18	43.9	52.8	336	16.6	34.3	27	10 S	17 56	17	42	8 09 61	21 10 60		
14	33	44.0	53.7	350	39.7	36.9	26	20	18 03	26	18 52	7 52 60	27 60		
15	48	44.2	54.6	5	02.7	39.4	25	30	12	37	19 06	33 60	47 60		
16	63	44.3	55.5	19	25.8	41.6	22	35	17	44	15	22 59	21 58 60		
17	78	44.4	-9 56.4	33	48.8	-20 43.8	22	40	18 23	18 52	19 25	7 09 59	22 11 60		
18	93	44.5	-9 57.3	48	11.9	-20 45.8	20	45	18 30	19 01	19 38	6 54 58	22 27 59		
19	108	44.6	58.2	62	35.0	47.6	18	50	39	13	19 55	36 57	46 59		
20	123	44.7	-9 59.1	76	58.1	49.3	17	52	43	19	20 04	28 56	22 55 59		
21	138	44.8	-10 00.0	91	21.2	50.8	15	54	47	25	13	18 56	23 05 59		
22	153	45.0	-10 00.9	105	44.3	52.2	14	56	52	32	24	6 07 55	17 58		
23	168	45.1	01.8	120	07.4	53.4	12	58	18 57	40	37	5 55 54	30 58		
24	183	45.2	-10 02.7	134	30.6	-20 54.5	11	60 S	19 03	19 50	20 52	5 41 53	23 45 57		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 08 ^m 8		Mag: -4.0 PMG: 9 ^h 28 ^m			Mag: +1.2 PMG: 14 ^h 35 ^m			Mag: -2.7 PMG: 3 ^h 12 ^m			Mag: +0.6 PMG: 12 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	°	'	
0	26	53.2	218 05.8	+6 02.3	141 04.8	-22 32.7	311 54.8	+21 53.0	176 48.2	-9 52.8					
1	41	55.7	233 05.5	01.2	156 05.3	33.0	326 57.4	52.9	191 50.4	52.9					
2	56	58.1	248 05.2	+6 00.1	171 05.9	33.3	342 00.0	52.9	206 52.6	53.0					
3	72	00.6	263 04.8	+5 59.1	186 06.4	33.6	357 02.6	52.9	221 54.7	53.1					
4	87	03.1	278 04.5	58.0	201 07.0	34.0	12 05.2	52.9	236 56.9	53.2					
5	102	05.5	293 04.1	+5 56.9	216 07.5	-22 34.3	27 07.8	+21 52.9	251 59.1	-9 53.3					
6	117	08.0	308 03.8	+5 55.9	231 08.0	-22 34.6	42 10.4	+21 52.9	267 01.3	-9 53.4					
7	132	10.5	323 03.5	54.8	246 08.6	34.9	57 12.9	52.9	282 03.5	53.5					
8	147	12.9	338 03.1	53.7	261 09.1	35.2	72 15.5	52.9	297 05.6	53.6					
9	162	15.4	353 02.8	52.7	276 09.7	35.5	87 18.1	52.8	312 07.8	53.7					
10	177	17.9	8 02.5	51.6	291 10.2	35.8	102 20.7	52.8	327 10.0	53.8					
11	192	20.3	23 02.1	+5 50.5	306 10.7	-22 36.1	117 23.3	+21 52.8	342 12.2	-9 53.9					
12	207	22.8	38 01.8	+5 49.5	321 11.3	-22 36.4	132 25.9	+21 52.8	357 14.3	-9 54.0					
13	222	25.3	53 01.4	48.4	336 11.8	36.7	147 28.5	52.8	12 16.5	54.1					
14	237	27.7	68 01.1	47.3	351 12.3	37.0	162 31.1	52.8	27 18.7	54.2					
15	252	30.2	83 00.8	46.3	6 12.9	37.3	177 33.7	52.8	42 20.9	54.3					
16	267	32.6	98 00.4	45.2	21 13.4	37.6	192 36.2	52.8	57 23.1	54.5					
17	282	35.1	113 00.1	+5 44.1	36 14.0	-22 38.0	207 38.8	+21 52.7	72 25.2	-9 54.6					
18	297	37.6	127 59.7	+5 43.1	51 14.5	-22 38.3	222 41.4	+21 52.7	87 27.4	-9 54.7					
19	312	40.0	142 59.4	42.0	66 15.0	38.6	237 44.0	52.7	102 29.6	54.8					
20	327	42.5	157 59.1	40.9	81 15.6	38.9	252 46.6	52.7	117 31.8	54.9					
21	342	45.0	172 58.7	39.9	96 16.1	39.2	267 49.2	52.7	132 33.9	55.0					
22	357	47.4	187 58.4	38.8	111 16.6	39.5	282 51.8	52.7	147 36.1	55.1					
23	12	49.9	202 58.1	37.7	126 17.2	39.8	297 54.4	52.7	162 38.3	55.2					
24	27	52.4	217 57.7	+5 36.6	141 17.7	-22 40.1	312 57.0	+21 52.6	177 40.5	-9 55.3					
Dif	—		-3	-11	+5	-3	+26	0	+22	-1					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 44 ^m 9				Edad: 3 ^d 5 PHE { 4 ^h : 60:2 12 ^h : 60:0 20 ^h : 59:9 PMG: 15 ^h 40 ^m R°: 60 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	45.2	-10	02.7	134	30.6	-20	54.5	60 N	5	19	6	07	6	50	12	20
1	198	45.3		03.6	148	53.8		55.4	58		19		05		45	12	04
2	213	45.4		04.5	163	17.0		56.2	56		19		02		40	11	51
3	228	45.5		05.4	177	40.2		56.9	54		19	6	00		36		39
4	243	45.6		06.3	192	03.4		57.3	52		19	5	58		32		29
5	258	45.7	-10	07.2	206	26.7	-20	57.7	50	5	18	5	56	6	29	11	19
6	273	45.9	-10	08.1	220	50.0	-20	57.8	45	5	17	5	51	6	21	11	00
7	288	46.0		09.0	235	13.3		57.9	40		16		48		15	10	44
8	303	46.1		09.9	249	36.7		57.7	35		14		44		10	31	56
9	318	46.2		10.8	264	00.1		57.5	30		13		40	6	05	10	19
10	333	46.3		11.7	278	23.5		57.1	20		08		34	5	56	9	59
11	348	46.4	-10	12.6	292	47.0	-20	56.5	10 N	5	03	5	27	5	49	9	42
12	3	46.5	-10	13.5	307	10.5	-20	55.8	0	4	56	5	21	5	42	9	26
13	18	46.6		14.4	321	34.0		54.9	10 S		48		13		34	9	10
14	33	46.7		15.3	335	57.6		53.9	20		38	5	04		26	8	52
15	48	46.9		16.2	350	21.2		52.8	13		24	4	53		17	33	62
16	63	47.0		17.1	4	44.9		51.5	35		15		46		12	21	63
17	78	47.1	-10	18.0	19	08.6	-20	50.1	40	4	04	4	38	5	06	8	08
18	93	47.2	-10	18.9	33	32.3	-20	48.5	45	3	51	4	28	4	59	7	52
19	108	47.3		19.8	47	56.2		46.7	50		34		16		50	33	65
20	123	47.4		20.7	62	20.0		44.9	52		26		10		46	24	66
21	138	47.5		21.6	76	43.9		42.9	20		16	4	04		42	14	66
22	153	47.6		22.5	91	07.9		40.7	56	3	05	3	57		37	7	02
23	168	47.7		23.4	105	31.9		38.4	58	2	53		49		32	6	49
24	183	47.8	-10	24.3	119	56.0	-20	36.0	60 S	2	37	3	39	4	26	6	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 04 ^m 9		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +1.2 PMG: 14 ^h 34 ^m		Mag: -2.7 PMG: 3 ^h 08 ^m		Mag: +0.6 PMG: 12 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	27	52.4	217	57.7	+5	36.6	141	17.7	+21	52.6
1	42	54.8	232	57.4		35.6	156	18.2		52.6
2	57	57.3	247	57.0		34.5	171	18.8		52.6
3	72	59.8	262	56.7		33.4	186	19.3		52.6
4	88	02.2	277	56.4		32.3	201	19.8		52.6
5	103	04.7	292	56.0	+5	31.3	216	20.4	+21	52.6
6	118	07.1	307	55.7	+5	30.2	231	20.9	+21	52.6
7	133	09.6	322	55.4		29.1	246	21.4		52.6
8	148	12.1	337	55.0		28.0	261	22.0		52.5
9	163	14.5	352	54.7		27.0	276	22.5		52.5
10	178	17.0	7	54.3		25.9	291	23.0		52.5
11	193	19.5	22	54.0	+5	24.8	306	23.6	+21	52.5
12	208	21.9	37	53.7	+5	23.7	321	24.1	+21	52.5
13	223	24.4	52	53.3		22.7	336	24.6		52.5
14	238	26.9	67	53.0		21.6	351	25.1		52.5
15	253	29.3	82	52.7		20.5	6	25.7		52.4
16	268	31.8	97	52.3		19.4	21	26.2		52.4
17	283	34.3	112	52.0	+5	18.4	36	26.7	+21	52.4
18	298	36.7	127	51.7	+5	17.3	51	27.3	+21	52.4
19	313	39.2	142	51.3		16.2	66	27.8		52.4
20	328	41.6	157	51.0		15.1	81	28.3		52.4
21	343	44.1	172	50.6		14.0	96	28.9		52.4
22	358	46.6	187	50.3		13.0	111	29.4		52.3
23	13	49.0	202	50.0		11.9	126	29.9		52.3
24	28	51.5	217	49.6	+5	10.8	141	30.4	+21	52.3
Dif	—		-3		-11		+5		0	

0	12	19	20	48	19	02	75
1	18	04	50		18		73
2	11	51	50		31		72
3		39	52		43		70
4		29	52		19	53	69
5	20	02	69				
6	20	22	66				
7		37	65				
8	20	50	65				
9	21	02	63				
10	22		61				
11	21	39	60				
12	21	55	58				
13	22	10	58				
14	27		56				
15	47		54				
16	22	58	53				
17	23	11	52				
18	23	26	50				
19	23	54	47				
20	**	**	**				
21	**	**	**				
22	**	**	**				
23	**	**	**				
24	**	**	**				

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 7		Edad: 4 ^d 5 PHE { 4 ^h : 59'6 12 ^h : 59'4 20 ^h : 59'2 R°: 56 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m			
0	183	47.8	-10	24.3	119	56.0	-20	36.0	60 N	16 36	17 19	18 07	13 08	33	20 17	82		
1	198	47.9		25.2	134	20.1		33.4	58	41	22	07	12 54	36	31	79		
2	213	48.0		26.1	148	44.3		30.7	56	46	24	07	41	39	43	77		
3	228	48.1		27.0	163	08.5		27.9	54	51	27	08	31	40	20	53	75	
4	243	48.2		27.9	177	32.8		24.9	52	55	29	08	21	42	21	02	74	
5	258	48.4	-10	28.8	191	57.2	-20	21.8	50	16 58	17 31	18 09	12 13	42	21 11	72		
6	273	48.5	-10	29.7	206	21.6	-20	18.5	45	17 06	17 36	18 10	11 55	45	21 28	69		
7	288	48.6		30.5	220	46.1		15.1	34	13	40	12	40	47	42	67		
8	303	48.7		31.4	235	10.7		11.6	35	19	44	14	27	49	21	55	64	
9	318	48.8		32.3	249	35.3		08.0	36	30	24	48	16	11	16	51	63	
10	333	48.9		33.2	264	00.0		04.2	38	20	33	17 55	21	10	57	54	60	
11	348	49.0	-10	34.1	278	24.8	-20	00.3	39	10 N	17 41	18 02	18 27	10	41	55	57	
12	3	49.1	-10	35.0	292	49.6	-19	56.2	41	0	17 48	18 09	18 34	10	26	57	56	
13	18	49.2		35.9	307	14.5		52.1	43	10 S	17 56	17	42	10	10	59	53	
14	33	49.3		36.8	321	39.5		47.8	44	20	18 04	27	18 53	9	54	61	51	
15	48	49.4		37.7	336	04.5		43.4	44	30	14	38	19 07	35	63	41	48	
16	63	49.5		38.6	350	29.6		38.8	46	35	19	45	17	24	65	23	46	
17	78	49.6	-10	39.5	4	54.8	-19	34.2	46	40	18 26	18 54	19 28	9	11	67	*** ** *	
18	93	49.7	-10	40.4	19	20.1	-19	29.4	48	45	18 33	19 04	19 42	8	56	69	*** ** *	
19	108	49.8		41.2	33	45.4		24.5	49	50	42	17	19 59	38	71	*** ** *	*** ** *	
20	123	49.9		42.1	48	10.8		19.4	51	52	46	23	20 08	30	71	*** ** *	*** ** *	
21	138	50.0		43.0	62	36.3		14.3	51	54	51	29	18	20	73	0	46	
22	153	50.1		43.9	77	01.9		09.0	53	56	18 56	37	30	8	09	75	15	44
23	168	50.2		44.8	91	27.5	-19	03.6	54	58	19 02	45	43	7	56	77	28	42
24	183	50.3	-10	45.7	105	53.2	-18	58.1	55	60 S	19 08	19 55	20 59	7	42	79	0	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 22 ^h 01 ^m 0		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +1.2 PMG: 14 ^h 33 ^m		Mag: -2.7 PMG: 3 ^h 04 ^m		Mag: +0.6 PMG: 12 ^h 04 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	28	51.5	217	49.6	+5	10.8	141	30.4	-22	47.2	313	59.3	+21	52.3	178	32.7	-9	57.8	
1	43	54.0	232	49.3		09.7	156	31.0		47.5	329	01.9		52.3	193	34.9		57.9	
2	58	56.4	247	49.0		08.6	171	31.5		47.8	344	04.5		52.3	208	37.1		58.0	
3	73	58.9	262	48.6		07.6	186	32.0		48.1	359	07.1		52.3	223	39.2		58.1	
4	89	01.4	277	48.3		06.5	201	32.5		48.4	14	09.8		52.3	238	41.4		58.2	
5	104	03.8	292	48.0	+5	05.4	216	33.1	-22	48.7	29	12.4	+21	52.2	253	43.6	-9	58.3	
6	119	06.3	307	47.6	+5	04.3	231	33.6	-22	49.0	44	15.0	+21	52.2	268	45.8	-9	58.4	
7	134	08.7	322	47.3		03.2	246	34.1		49.3	59	17.6		52.2	283	48.0		58.5	
8	149	11.2	337	46.9		02.1	261	34.6		49.6	74	20.2		52.2	298	50.1		58.6	
9	164	13.7	352	46.6	+5	01.1	276	35.2		49.9	89	22.8		52.2	313	52.3		58.7	
10	179	16.1	7	46.3	+5	00.0	291	35.7		50.1	104	25.4		52.2	328	54.5		58.9	
11	194	18.6	22	45.9	+4	58.9	306	36.2	-22	50.4	119	28.0	+21	52.2	343	56.7	-9	59.0	
12	209	21.1	37	45.6	+4	57.8	321	36.7	-22	50.7	134	30.6	+21	52.1	358	58.8	-9	59.1	
13	224	23.5	52	45.3		56.7	336	37.3		51.0	149	33.2		52.1	14	01.0		59.2	
14	239	26.0	67	44.9		55.6	351	37.8		51.3	164	35.8		52.1	29	03.2		59.3	
15	254	28.5	82	44.6		54.5	6	38.3		51.6	179	38.4		52.1	44	05.4		59.4	
16	269	30.9	97	44.3		53.5	21	38.8		51.9	194	41.0		52.1	59	07.5		59.5	
17	284	33.4	112	43.9	+4	52.4	36	39.4	-22	52.2	209	43.6	+21	52.1	74	09.7	-9	59.6	
18	299	35.9	127	43.6	+4	51.3	51	39.9	-22	52.5	224	46.2	+21	52.1	89	11.9	-9	59.7	
19	314	38.3	142	43.2		50.2	66	40.4		52.7	239	48.8		52.0	104	14.1		59.8	
20	329	40.8	157	42.9		49.1	81	40.9		53.0	254	51.5		52.0	119	16.3	-9	59.9	
21	344	43.2	172	42.6		48.0	96	41.5		53.3	269	54.1		52.0	134	18.4	-10	00.0	
22	359	45.7	187	42.2		46.9	111	42.0		53.6	284	56.7		52.0	149	20.6	-10	00.1	
23	14	48.2	202	41.9		45.8	126	42.5		53.9	299	59.3		52.0	164	22.8		00.2	
24	29	50.6	217	41.6	+4	44.8	141	43.0	-22	54.2	315	01.9	+21	52.0	179	25.0	-10	00.3	
Dif	—		-3		-11		+5		-3		+26		0		+22		-		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna																	
	SD: 16 ^h 1			Edad: 5 ^d 5	PHE {																									
	PMG: 11 ^h 44 ^m 6					SD: 16 ^h 1		4 ^h : 59 ^m 0 12 ^h : 58 ^m 7 20 ^h : 58 ^m 5																						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº															
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m														
0	183	50.3	-10 45.7	105	53.2	-18 58.1	56	60 N	5	24	6	12	6	55	13	41														
1	198	50.4	46.6	120	19.0	68 52.5	56	58	23	09	49	30	26	21	50	82														
2	213	50.5	47.5	134	44.9	69 46.8	57	56	23	06	44	20	29	22	00	79														
3	228	50.6	48.4	149	10.9	70 40.9	59	54	22	04	40	11	31	08	7															
4	243	50.7	49.3	163	36.9	70 35.0	59	52	22	6	01	36	13	03	33	16														
5	258	50.8	-10 50.1	178	03.0	71 -18 28.9	61	50	5	21	5	59	6	32	12	55														
6	273	50.9	-10 51.0	192	29.2	72 -18 22.7	62	45	5	20	5	54	6	24	12	40														
7	288	51.0	51.9	206	55.5	73 16.4	63	40	18	50	17	27	41	49	66															
8	303	51.1	52.8	221	21.8	73 10.1	63	35	16	46	11	16	43	22	59	64														
9	318	51.2	53.7	235	48.3	75 -18 03.6	65	30	14	42	6	06	12	07	45	23														
10	333	51.3	54.6	250	14.8	75 -17 57.0	66	20	09	35	5	57	11	51	48	23														
11	348	51.4	-10 55.5	264	41.4	76 -17 50.3	67	10 N	5	03	5	28	5	49	11	36														
12	3	51.5	-10 56.3	279	08.1	77 -17 43.5	68	0	4	56	5	20	5	41	11	23														
13	18	51.6	57.2	293	34.9	78 36.6	69	10 S	47	12	33	11	09	56	***	***														
14	33	51.7	58.1	308	01.7	78 29.6	70	20	36	5	02	25	10	55	59	***	***													
15	48	51.8	59.0	322	28.7	80 22.5	71	30	21	4	51	15	38	63	***	***														
16	63	51.9	-10 59.9	336	55.7	80 15.3	72	35	12	43	10	29	64	***	***	***														
17	78	52.0	-11 00.8	351	22.8	81 -17 08.0	73	40	4	01	4	35	5	03	10	18														
18	93	52.1	-11 01.7	5	50.0	82 -17 00.6	74	45	3	47	4	25	4	56	10	05														
19	108	52.2	02.5	20	17.2	82 -16 53.1	75	50	29	12	46	9	49	72	33	39														
20	123	52.3	03.4	34	44.6	84 45.5	76	52	20	4	06	42	41	74	41	37														
21	138	52.3	04.3	49	12.0	84 37.9	76	54	3	11	3	59	38	33	76	50														
22	153	52.4	05.2	63	39.5	85 30.1	78	56	2	59	52	32	24	78	0	59														
23	168	52.5	06.1	78	07.1	86 22.3	78	58	45	43	27	13	81	1	10	31														
24	183	52.6	-11 06.9	92	34.8	87 -16 14.3	80	60 S	2	29	3	33	4	20	9	01														
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO																	
	PMG: 21 ^h 57 ^m 0			Mag: -4.0 PMG: 9 ^h 29 ^m			Mag: +1.2 PMG: 14 ^h 33 ^m			Mag: -2.7 PMG: 2 ^h 59 ^m			Mag: +0.6 PMG: 12 ^h 01 ^m																	
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec																	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	'														
0	29	50.6	217	41.6	+4	44.8	141	43.0	-22	54.2	315	01.9	+21	52.0	179	25.0														
1	44	53.1	232	41.2		43.7	156	43.5		54.5	330	04.5		52.0	194	27.1														
2	59	55.6	247	40.9		42.6	171	44.1		54.7	345	07.1		51.9	209	29.3														
3	74	58.0	262	40.6		41.5	186	44.6		55.0	0	09.7		51.9	224	31.5														
4	90	00.5	277	40.2		40.4	201	45.1		55.3	15	12.3		51.9	239	33.7														
5	105	03.0	292	39.9	+4	39.3	216	45.6	-22	55.6	30	15.0	+21	51.9	254	35.8														
6	120	05.4	307	39.6	+4	38.2	231	46.1	-22	55.9	45	17.6	+21	51.9	269	38.0														
7	135	07.9	322	39.2		37.1	246	46.7		56.2	60	20.2		51.9	284	40.2														
8	150	10.4	337	38.9		36.0	261	47.2		56.4	75	22.8		51.8	299	42.4														
9	165	12.8	352	38.5		34.9	276	47.7		56.7	90	25.4		51.8	314	44.5														
10	180	15.3	7	38.2		33.8	291	48.2		57.0	105	28.0		51.8	329	46.7														
11	195	17.7	22	37.9	+4	32.8	306	48.7	-22	57.3	120	30.6	+21	51.8	344	48.9														
12	210	20.2	37	37.5	+4	31.7	321	49.2	-22	57.6	135	33.3	+21	51.8	359	51.1														
13	225	22.7	52	37.2		30.6	336	49.8		57.8	150	35.9		51.8	14	53.2														
14	240	25.1	67	36.9		29.5	351	50.3		58.1	165	38.5		51.8	29	55.4														
15	255	27.6	82	36.5		28.4	6	50.8		58.4	180	41.1		51.7	44	57.6														
16	270	30.1	97	36.2		27.3	21	51.3		58.7	195	43.7		51.7	59	59.8														
17	285	32.5	112	35.9	+4	26.2	36	51.8	-22	59.0	210	46.3	+21	51.7	75	02.0														
18	300	35.0	127	35.5	+4	25.1	51	52.3	-22	59.2	225	49.0	+21	51.7	90	04.1														
19	315	37.5	142	35.2		24.0	66	52.9		59.5	240	51.6		51.7	105	06.3														
20	330	39.9	157	34.9		22.9	81	53.4	-22	59.8	255	54.2		51.7	120	08.5														
21	345	42.4	172	34.5		21.8	96	53.9	-23	00.1	270	56.8		51.6	135	10.7														
22	0	44.9	187	34.2		20.7	111	54.4		00.3	285	59.4		51.6	150	12.8														
23	15	47.3	202	33.9		19.6	126	54.9		00.6	301	02.0		51.6	165	15.0														
24	30	49.8	217	33.5	+4	18.5	141	55.4	-23	00.9	316	04.7	+21	51.6	180	17.2														
Dif	—			-3			-11			+5			-3			+26			0			+22			-			-3		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 6 ^d 5	PHE	SD: 15 ^h 9									R°: 49 ^m
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	52.6	-11	06.9	92	34.8	-16 14.3	60 N	16 30	17 13	18 02	14 05 18	23 04 83		
1	198	52.7		07.8	107	02.6	-16 06.3	58	36	17	02	13 56 21	12 80		
2	213	52.8		08.7	121	30.4	-15 58.2	56	41	20	03	49 23	19 77		
3	228	52.9		09.6	135	58.4	50.0	54	46	22	04	42 25	25 75		
4	243	53.0		10.5	150	26.4	41.8	52	50	25	04	36 27	30 74		
5	258	53.1	-11	11.4	164	54.5	-15 33.4	50	16 54	17 27	18 05	13 30 29	23 35 72		
6	273	53.2	-11	12.2	179	22.7	-15 25.0	45	17 03	17 33	18 07	13 18 32	23 46 68		
7	288	53.3		13.1	193	50.9	16.5	40	10	38	09	13 08 35	23 55 65		
8	303	53.4		14.0	208	19.3	-15 07.9	35	16	42	11	12 59 38	** ** *		
9	318	53.5		14.9	222	47.7	-14 59.2	30	22	46	14	52 40	** ** *		
10	333	53.5		15.8	237	16.2	50.5	20	31	17 54	19	39 43	** ** *		
11	348	53.6	-11	16.6	251	44.8	-14 41.7	10 N	17 40	18 01	18 26	12 27 47	** ** *		
12	3	53.7	-11	17.5	266	13.4	-14 32.8	0	17 48	18 09	18 33	12 16 50	** ** *		
13	18	53.8		18.4	280	42.2	23.8	10 S	17 56	17	43	12 05 54	0 01 49		
14	33	53.9		19.3	295	11.0	14.8	20	18 05	27	18 54	11 54 56	14 46		
15	48	54.0		20.1	309	39.9	-14 05.7	30	15	40	19 09	41 60	29 42		
16	63	54.1		21.0	324	08.9	-13 56.6	35	21	47	19	33 62	37 40		
17	78	54.2	-11	21.9	338	37.9	-13 47.3	40	18 28	18 56	19 30	11 24 65	0 47 38		
18	93	54.3	-11	22.8	353	07.1	-13 38.0	45	18 36	19 07	19 45	11 14 68	0 58 35		
19	108	54.4		23.7	7	36.3	28.7	50	45	20	20 04	11 01 72	1 12 31		
20	123	54.4		24.5	22	05.6	19.3	52	50	27	13	10 55 74	18 30		
21	138	54.5		25.4	36	34.9	09.8	54	18 55	34	23	49 76	25 28		
22	153	54.6		26.3	51	04.4	-13 00.2	56	19 00	42	35	42 78	33 26		
23	168	54.7		27.2	65	33.9	-12 50.6	58	06	19 51	20 50	34 80	41 24		
24	183	54.8	-11	28.0	80	03.5	-12 41.0	60 S	19 13	20 01	21 07	10 24 84	1 51 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 53 ^m 1		Mag: -4.0 PMG: 9 ^h 30 ^m		Mag: +1.2 PMG: 14 ^h 32 ^m		Mag: -2.7 PMG: 2 ^h 55 ^m		Mag: +0.6 PMG: 11 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	49.8	217	33.5	+4	18.5	141	55.4	-23	00.9
1	45	52.2	232	33.2		17.4	156	56.0		01.2
2	60	54.7	247	32.9		16.3	171	56.5		01.4
3	75	57.2	262	32.5		15.2	186	57.0		01.7
4	90	59.6	277	32.2		14.1	201	57.5		02.0
5	106	02.1	292	31.8	+4	13.0	216	58.0	-23	02.3
6	121	04.6	307	31.5	+4	11.9	231	58.5	-23	02.5
7	136	07.0	322	31.2		10.8	246	59.0		02.8
8	151	09.5	337	30.8		09.7	261	59.5		03.1
9	166	12.0	352	30.5		08.6	277	00.1		03.4
10	181	14.4	7	30.2		07.5	292	00.6		03.6
11	196	16.9	22	29.8	+4	06.4	307	01.1	-23	03.9
12	211	19.3	37	29.5	+4	05.3	322	01.6	-23	04.2
13	226	21.8	52	29.2		04.2	337	02.1		04.4
14	241	24.3	67	28.8		03.1	352	02.6		04.7
15	256	26.7	82	28.5		02.0	7	03.1		05.0
16	271	29.2	97	28.2	+4	00.9	22	03.6		05.3
17	286	31.7	112	27.8	+3	59.8	37	04.1	-23	05.5
18	301	34.1	127	27.5	+3	58.7	52	04.7	-23	05.8
19	316	36.6	142	27.2		57.6	67	05.2		06.1
20	331	39.1	157	26.8		56.5	82	05.7		06.3
21	346	41.5	172	26.5		55.4	97	06.2		06.6
22	1	44.0	187	26.2		54.3	112	06.7		06.9
23	16	46.5	202	25.8		53.2	127	07.2		07.1
24	31	48.9	217	25.5	+3	52.1	142	07.7	-23	07.4
Dif	—		-3	-11		+5	-3	+26		0
									+22	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 3			Edad: 7 ^d 5 SD: 15'7 PMG: 19 ^h 18 ^m	PHE { 4 ^h : 57'5 12 ^h : 57'3 20 ^h : 57'1 R°: 47 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	54.8	-11	28.0	80	03.5	-12	41.0	60 N	5 28	6 17	7 00	14 23	14	***	***
1	198	54.9		28.9	94	33.1 ¹⁰⁶		31.2 ⁹⁸	58	27	13	6 54	17 17		***	***
2	213	55.0		29.8	109	02.9 ¹⁰⁸		21.5 ⁹⁷	56	27	10	49	12 19		***	***
3	228	55.0		30.7	123	32.7 ¹⁰⁸		11.6 ⁹⁹	54	26	07	44	07 21		***	***
4	243	55.1		31.5	138	02.6 ¹⁰⁹	-12	01.7 ⁹⁹	52	25	05	39	14 03	23	***	***
5	258	55.2	-11	32.4	152	32.5 ¹⁰⁹	-11	51.8 ⁹⁹	50	5 24	6 02	6 35	13 59	25	***	***
6	273	55.3	-11	33.3	167	02.5 ¹¹⁰	-11	41.8 ¹⁰⁰	45	5 22	5 57	6 27	13 50	29	***	***
7	288	55.4		34.1	181	32.6 ¹¹¹		31.7 ¹⁰¹	40	20	52	19	43 32		***	***
8	303	55.5		35.0	196	02.8 ¹¹²		21.7 ¹⁰⁰	35	18	47	13	37 34		0 03	62
9	318	55.6		35.9	210	33.0 ¹¹²		11.5 ¹⁰²	30	15	43	6 07	32 36		10	59
10	333	55.6		36.8	225	03.3 ¹¹³	-11	01.3 ¹⁰²	20	09	35	5 58	22 41		21	56
11	348	55.7	-11	37.6	239	33.7 ¹¹⁴	-10	51.1 ¹⁰²	10 N	5 03	5 28	5 49	13 14	44	0 31	52
12	3	55.8	-11	38.5	254	04.1 ¹¹⁴	-10	40.8 ¹⁰³	0	4 55	5 20	5 41	13 06	48	0 41	48
13	18	55.9		39.4	268	34.6 ¹¹⁵		30.5 ¹⁰³	10 S	46	11	33	12 59	50	0 50	45
14	33	56.0		40.2	283	05.2 ¹¹⁶		20.1 ¹⁰⁴	20	34	5 01	24	50 55		1 00	42
15	48	56.1		41.1	297	35.8 ¹¹⁶	-10	09.7 ¹⁰⁴	30	19	4 49	13	41 58		11	38
16	63	56.1		42.0	312	06.5 ¹¹⁷	-9	59.2 ¹⁰⁵	35	4 10	41	07	35 61		17	36
17	78	56.2	-11	42.9	326	37.2 ¹¹⁷	-9	48.7 ¹⁰⁵	40	3 58	4 32	5 00	12 29	64	1 25	33
18	93	56.3	-11	43.7	341	08.0 ¹¹⁸	-9	38.2 ¹⁰⁵	45	3 43	4 21	4 52	12 22	67	1 33	30
19	108	56.4		44.6	355	38.9 ¹¹⁹		27.6 ¹⁰⁶	50	25	08	43	13 71		43	27
20	123	56.5		45.5	10	09.9 ¹²⁰		17.0 ¹⁰⁶	52	15	4 01	38	09 73		48	25
21	138	56.5		46.3	24	40.9 ¹²⁰	-9	06.4 ¹⁰⁶	54	3 05	3 54	33	05 74		53	23
22	153	56.6		47.2	39	11.9 ¹²⁰	-8	55.7 ¹⁰⁷	56	2 53	46	27	12 00	76	1 59	21
23	168	56.7		48.1	53	43.0 ¹²¹		45.0 ¹⁰⁷	58	38	37	21	11 54	79	2 05	19
24	183	56.8	-11	48.9	68	14.2 ¹²²	-8	34.2 ¹⁰⁸	60 S	2 20	3 26	4 14	11 48	82	2 12	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 49 ^m 2		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +1.2 PMG: 14 ^h 31 ^m		Mag: -2.7 PMG: 2 ^h 51 ^m		Mag: +0.6 PMG: 11 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	31	48.9	217	25.5	+3	52.1	142	07.7	-23	07.4
1	46	51.4	232	25.2		51.0	157	08.2		07.7
2	61	53.8	247	24.8		49.9	172	08.7		07.9
3	76	56.3	262	24.5		48.8	187	09.2		08.2
4	91	58.8	277	24.2		47.7	202	09.7		08.5
5	107	01.2	292	23.8	+3	46.6	217	10.2	-23	08.7
6	122	03.7	307	23.5	+3	45.5	232	10.8	-23	09.0
7	137	06.2	322	23.1		44.4	247	11.3		09.3
8	152	08.6	337	22.8		43.3	262	11.8		09.5
9	167	11.1	352	22.5		42.2	277	12.3		09.8
10	182	13.6	7	22.1		41.0	292	12.8		10.1
11	197	16.0	22	21.8	+3	39.9	307	13.3	-23	10.3
12	212	18.5	37	21.5	+3	38.8	322	13.8	-23	10.6
13	227	21.0	52	21.1		37.7	337	14.3		10.8
14	242	23.4	67	20.8		36.6	352	14.8		11.1
15	257	25.9	82	20.5		35.5	7	15.3		11.4
16	272	28.3	97	20.1		34.4	22	15.8		11.6
17	287	30.8	112	19.8	+3	33.3	37	16.3	-23	11.9
18	302	33.3	127	19.5	+3	32.2	52	16.8	-23	12.1
19	317	35.7	142	19.1		31.1	67	17.3		12.4
20	332	38.2	157	18.8		30.0	82	17.8		12.7
21	347	40.7	172	18.5		28.9	97	18.3		12.9
22	2	43.1	187	18.1		27.7	112	18.8		13.2
23	17	45.6	202	17.8		26.6	127	19.3		13.4
24	32	48.1	217	17.5	+3	25.5	142	19.8	-23	13.7
Dif	—		-3		-11		+5		-3	
							+26		0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 2			Edad: 8 ^d 5 PHE { 4 ^h : 56:9 12 ^h : 56:7 20 ^h : 56:5 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'		h m	h m	h m	h m	h m	h m	h m	h m
0	183	56.8	-11 48.9	68	14.2	-8 34.2	60 N	16 25	17 08	17 57	14 37	12	0 27	81	
1	198	56.9	49.8	82	45.4 ¹²²	23.4 ¹⁰⁸	58	31	12	58	34	15	32	78	
2	213	56.9	50.7	97	16.7 ¹²³	12.6 ¹⁰⁸	56	37	15	17 59	31	17	36	76	
3	228	57.0	51.5	111	48.1 ¹²⁴	-8 01.8 ¹⁰⁸	54	42	18	18 00	28	19	40	74	
4	243	57.1	52.4	126	19.5 ¹²⁴	-7 50.9 ¹⁰⁹	52	46	21	01	26	21	44	72	
5	258	57.2	-11 53.3	140	50.9 ¹²⁴	-7 40.0 ¹⁰⁹	50	16 51	17 24	18 02	14 24	22	0 47	70	
6	273	57.2	-11 54.1	155	22.4 ¹²⁵	-7 29.1 ¹⁰⁹	45	17 00	17 30	18 04	14 19	26	0 54	66	
7	288	57.3	55.0	169	54.0 ¹²⁶	18.1 ¹¹⁰	40	07	35	07	15	29	1 00	63	
8	303	57.4	55.9	184	25.6 ¹²⁶	-7 07.1 ¹¹⁰	35	14	40	09	11	32	05	60	
9	318	57.5	56.7	198	57.3 ¹²⁷	-6 56.1 ¹¹⁰	30	20	44	12	08	35	09	58	
10	333	57.6	57.6	213	29.0 ¹²⁷	45.1 ¹¹⁰	20	30	17 52	18	14 03	38	17	53	
11	348	57.6	-11 58.5	228	00.7 ¹²⁷	-6 34.0 ¹¹¹	10 N	17 39	18 00	18 25	13 58	42	1 23	50	
12	3	57.7	-11 59.3	242	32.5 ¹²⁸	-6 22.9 ¹¹¹	0	17 48	18 09	18 33	13 54	45	1 29	47	
13	18	57.8	-12 00.2	257	04.4 ¹²⁹	11.8 ¹¹¹	10 S	17 56	18	43	49	49	35	44	
14	33	57.9	01.0	271	36.3 ¹²⁹	-6 00.7 ¹¹¹	20	18 06	28	18 55	45	52	42	39	
15	48	57.9	01.9	286	08.2 ¹²⁹	-5 49.6 ¹¹¹	30	16	41	19 11	39	57	49	36	
16	63	58.0	02.8	300	40.2 ¹³⁰	38.4 ¹¹²	35	23	49	21	36	59	53	33	
17	78	58.1	-12 03.6	315	12.3 ¹³¹	-5 27.3 ¹¹¹	40	18 30	18 59	19 33	13 33	62	1 58	30	
18	93	58.2	-12 04.5	329	44.3 ¹³⁰	-5 16.1 ¹¹²	45	18 39	19 10	19 48	13 29	65	2 03	28	
19	108	58.2	05.4	344	16.5 ¹³²	-5 04.9 ¹¹²	50	49	24	20 08	24	69	10	24	
20	123	58.3	06.2	358	48.6 ¹³¹	-4 53.7 ¹¹²	52	54	31	17	22	70	13	22	
21	138	58.4	07.1	13	20.8 ¹³²	42.4 ¹¹³	54	18 59	38	28	19	73	16	20	
22	153	58.5	07.9	27	53.1 ¹³³	31.2 ¹¹²	56	19 05	47	41	16	75	20	18	
23	168	58.5	08.8	42	25.4 ¹³³	19.9 ¹¹³	58	11	19 56	20 57	13 78		24	16	
24	183	58.6	-12 09.7	56	57.7 ¹³³	-4 08.7 ¹¹²	60 S	19 19	20 07	21 16	13 10	80	2 28	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 45 ^m 2		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +1.2 PMG: 14 ^h 30 ^m		Mag: -2.7 PMG: 2 ^h 47 ^m		Mag: +0.6 PMG: 11 ^h 50 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	32	48.1	217	17.5	+3 25.5	142	19.8	-23 13.7	318	10.8	+21 50.8	182	01.6	-10 07.8
1	47	50.5	232	17.1	24.4	157	20.3	14.0	333	13.4	50.8	197	03.8	07.9
2	62	53.0	247	16.8	23.3	172	20.8	14.2	348	16.1	50.8	212	06.0	08.0
3	77	55.4	262	16.5	22.2	187	21.3	14.5	3	18.7	50.8	227	08.2	08.1
4	92	57.9	277	16.1	21.1	202	21.8	14.7	18	21.4	50.7	242	10.3	08.2
5	108	00.4	292	15.8	+3 20.0	217	22.3	-23 15.0	33	24.0	+21 50.7	257	12.5	-10 08.3
6	123	02.8	307	15.5	+3 18.8	232	22.8	-23 15.2	48	26.6	+21 50.7	272	14.7	-10 08.4
7	138	05.3	322	15.1	17.7	247	23.3	15.5	63	29.3	50.7	287	16.9	08.5
8	153	07.8	337	14.8	16.6	262	23.8	15.7	78	31.9	50.7	302	19.0	08.6
9	168	10.2	352	14.5	15.5	277	24.3	16.0	93	34.5	50.7	317	21.2	08.7
10	183	12.7	7	14.1	14.4	292	24.8	16.3	108	37.2	50.6	332	23.4	08.8
11	198	15.2	22	13.8	+3 13.3	307	25.3	-23 16.5	123	39.8	+21 50.6	347	25.6	-10 09.0
12	213	17.6	37	13.4	+3 12.2	322	25.8	-23 16.8	138	42.5	+21 50.6	2	27.7	-10 09.1
13	228	20.1	52	13.1	11.1	337	26.3	17.0	153	45.1	50.6	17	29.9	09.2
14	243	22.6	67	12.8	09.9	352	26.8	17.3	168	47.7	50.6	32	32.1	09.3
15	258	25.0	82	12.4	08.8	7	27.3	17.5	183	50.4	50.6	47	34.3	09.4
16	273	27.5	97	12.1	07.7	22	27.8	17.8	198	53.0	50.5	62	36.4	09.5
17	288	29.9	112	11.8	+3 06.6	37	28.3	-23 18.0	213	55.7	+21 50.5	77	38.6	-10 09.6
18	303	32.4	127	11.4	+3 05.5	52	28.8	-23 18.3	228	58.3	+21 50.5	92	40.8	-10 09.7
19	318	34.9	142	11.1	04.4	67	29.3	18.5	244	01.0	50.5	107	43.0	09.8
20	333	37.3	157	10.8	03.2	82	29.8	18.8	259	03.6	50.5	122	45.1	09.9
21	348	39.8	172	10.4	02.1	97	30.3	19.0	274	06.2	50.4	137	47.3	10.0
22	3	42.3	187	10.1	+3 01.0	112	30.8	19.3	289	08.9	50.4	152	49.5	10.1
23	18	44.7	202	09.8	+2 59.9	127	31.3	19.5	304	11.5	50.4	167	51.7	10.2
24	33	47.2	217	09.4	+2 58.8	142	31.8	-23 19.8	319	14.2	+21 50.4	182	53.8	-10 10.3
Dif	—		-3	-11	+5	-3	+26	0	+22		-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 44 ^m 0			Edad: 9 ^d 5 SD: 15:4 PMG: 20 ^h 50 ^m	PHE { 4 ^h : 56:3 12 ^h : 56:1 20 ^h : 55:9 R°: 44 ^m													
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	58.6	-12	09.7	56	57.7	-4	08.7	60 N	5 33	6 21	7 05	14 49	13	1 48	79		
1	198	58.7		10.5	71	30.0 ¹³³	-3	57.4 ¹¹³	58	32	18	6 59	49	14	50	77		
2	213	58.7		11.4	86	02.4 ¹³⁴		46.1 ¹¹³	56	31	14	53	48	17	52	74		
3	228	58.8		12.2	100	34.9 ¹³⁵		34.8 ¹¹³	54	30	11	48	47	19	54	72		
4	243	58.9		13.1	115	07.3 ¹³⁴		23.5 ¹¹³	52	28	08	43	47	20	56	70		
5	258	59.0	-12	14.0	129	39.8 ¹³⁵	-3	12.2 ¹¹³	50	5 27	6 05	6 39	14 46	22	1 57	68		
6	273	59.0	-12	14.8	144	12.4 ¹³⁶	-3	00.9 ¹¹³	45	5 25	5 59	6 29	14 45	26	2 00	65		
7	288	59.1		15.7	158	44.9 ¹³⁵	-2	49.6 ¹¹³	40	22	54	22	44	29	03	61		
8	303	59.2		16.5	173	17.5 ¹³⁶		38.3 ¹¹³	35	19	49	15	43	32	05	58		
9	318	59.2		17.4	187	50.2 ¹³⁷		26.9 ¹¹⁴	30	16	44	6 09	43	33	07	56		
10	333	59.3		18.2	202	22.8 ¹³⁶		15.6 ¹¹³	20	10	36	5 59	41	38	10	52		
11	348	59.4	-12	19.1	216	55.5 ¹³⁷	-2	04.3 ¹¹³	10 N	5 03	5 28	5 49	14 40	41	2 13	48		
12	3	59.4	-12	20.0	231	28.2 ¹³⁷	-1	52.9 ¹¹⁴	0	4 55	5 20	5 41	14 39	45	2 16	45		
13	18	59.5		20.8	246	01.0 ¹³⁸		41.6 ¹¹³	10 S	45	10	32	38	48	19	41		
14	33	59.6		21.7	260	33.8 ¹³⁸		30.3 ¹¹³	20	33	5 00	22	37	52	21	38		
15	48	59.6		22.5	275	06.6 ¹³⁸		18.9 ¹¹⁴	30	17	4 46	11	36	56	25	33		
16	63	59.7		23.4	289	39.4 ¹³⁸	-1	07.6 ¹¹³	35	4 07	38	5 05	35	58	26	32		
17	78	59.8	-12	24.2	304	12.2 ¹³⁸	-0	56.3 ¹¹³	40	3 55	4 29	4 58	14 35	60	2 28	29		
18	93	59.8	-12	25.1	318	45.1 ¹³⁹	-0	45.0 ¹¹³	45	3 39	4 18	4 49	14 34	64	2 31	26		
19	108	59.9		25.9	333	18.0 ¹³⁹		33.6 ¹¹⁴	50	20	4 04	39	33	67	34	22		
20	124	00.0		26.8	347	50.9 ¹³⁹		22.3 ¹¹³	52	3 10	3 57	34	32	70	35	21		
21	139	00.0		27.6	2	23.9 ¹⁴⁰	-0	11.0 ¹¹³	54	2 59	49	29	32	71	36	19		
22	154	00.1		28.5	16	56.8 ¹³⁹	+0	00.3 ¹¹³	56	46	41	23	31	73	38	17		
23	169	00.2		29.4	31	29.8 ¹⁴⁰		11.6 ¹¹³	58	31	31	16	31	75	40	14		
24	184	00.2	-12	30.2	46	02.8 ¹⁴⁰	+0	22.8 ¹¹²	60 S	2 12	3 20	4 09	14 30	78	2 41	13		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 41 ^m 3		Mag: -4.0 PMG: 9 ^h 32 ^m			Mag: +1.2 PMG: 14 ^h 29 ^m			Mag: -2.7 PMG: 2 ^h 43 ^m			Mag: +0.6 PMG: 11 ^h 47 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	33	47.2	217	09.4	+2	58.8	142	31.8	-23	19.8	319	14.2	+21	50.4	182	53.8	-10	10.3
1	48	49.7	232	09.1		57.7	157	32.3		20.0	334	16.8		50.4	197	56.0		10.4
2	63	52.1	247	08.8		56.5	172	32.8		20.3	349	19.5		50.4	212	58.2		10.5
3	78	54.6	262	08.4		55.4	187	33.3		20.5	4	22.1		50.3	228	00.4		10.6
4	93	57.0	277	08.1		54.3	202	33.8		20.8	19	24.8		50.3	243	02.6		10.7
5	108	59.5	292	07.8	+2	53.2	217	34.3	-23	21.0	34	27.4	+21	50.3	258	04.7	-10	10.8
6	124	02.0	307	07.4	+2	52.1	232	34.8	-23	21.3	49	30.0	+21	50.3	273	06.9	-10	10.9
7	139	04.4	322	07.1		50.9	247	35.3		21.5	64	32.7		50.3	288	09.1		11.0
8	154	06.9	337	06.8		49.8	262	35.8		21.7	79	35.3		50.2	303	11.3		11.1
9	169	09.4	352	06.4		48.7	277	36.3		22.0	94	38.0		50.2	318	13.4		11.2
10	184	11.8	7	06.1		47.6	292	36.8		22.2	109	40.6		50.2	333	15.6		11.3
11	199	14.3	22	05.8	+2	46.5	307	37.2	-23	22.5	124	43.3	+21	50.2	348	17.8	-10	11.4
12	214	16.8	37	05.4	+2	45.3	322	37.7	-23	22.7	139	45.9	+21	50.2	3	20.0	-10	11.5
13	229	19.2	52	05.1		44.2	337	38.2		23.0	154	48.6		50.2	18	22.1		11.6
14	244	21.7	67	04.7		43.1	352	38.7		23.2	169	51.2		50.1	33	24.3		11.7
15	259	24.2	82	04.4		42.0	7	39.2		23.5	184	53.9		50.1	48	26.5		11.9
16	274	26.6	97	04.1		40.9	22	39.7		23.7	199	56.5		50.1	63	28.7		12.0
17	289	29.1	112	03.7	+2	39.7	37	40.2	-23	23.9	214	59.2	+21	50.1	78	30.8	-10	12.1
18	304	31.5	127	03.4	+2	38.6	52	40.7	-23	24.2	230	01.8	+21	50.1	93	33.0	-10	12.2
19	319	34.0	142	03.1		37.5	67	41.2		24.4	245	04.5		50.0	108	35.2		12.3
20	334	36.5	157	02.7		36.4	82	41.7		24.7	260	07.1		50.0	123	37.4		12.4
21	349	38.9	172	02.4		35.3	97	42.2		24.9	275	09.8		50.0	138	39.5		12.5
22	4	41.4	187	02.1		34.1	112	42.7		25.1	290	12.4		50.0	153	41.7		12.6
23	19	43.9	202	01.7		33.0	127	43.1		25.4	305	15.1		50.0	168	43.9		12.7
24	34	46.3	217	01.4	+2	31.9	142	43.6	-23	25.6	320	17.7	+21	49.9	183	46.1	-10	12.8
Dif	—		-3		-11	+5		-2		+26		0		+22		-		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 10 ^d 5 PHE { SD: 15:2 PMG: 21 ^h 34 ^m					4 ^h : 55:7 12 ^h : 55:6 20 ^h : 55:4 R°: 45 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	184	00.2	-12	30.2	46	02.8	+0	22.8	60 N	16 19	17 03	17 52	15 02	12		3 07	78	
1	199	00.3		31.1	60	35.8 ¹⁴⁰		34.1 ¹¹³	58	26	07	53	03	15		07	75	
2	214	00.4		31.9	75	08.9 ¹⁴¹		45.4 ¹¹³	56	32	11	54	05	17		06	73	
3	229	00.4		32.8	89	41.9 ¹⁴⁰	+0	56.6 ¹¹²	54	37	14	56	06	19		06	77	
4	244	00.5		33.6	104	15.0 ¹⁴¹	+1	07.9 ¹¹³	52	42	17	57	07	21		06	68	
5	259	00.6	-12	34.5	118	48.1 ¹⁴¹	+1	19.1 ¹¹²	50	16 47	17 20	17 58	15 08	23		3 05	67	
6	274	00.6	-12	35.3	133	21.2 ¹⁴¹	+1	30.3 ¹¹²	45	16 57	17 27	18 01	15 11	26		3 05	63	
7	289	00.7		36.2	147	54.3 ¹⁴¹		41.5 ¹¹²	40	17 05	32	04	13	29		04	60	
8	304	00.7		37.0	162	27.4 ¹⁴¹	+1	52.7 ¹¹²	35	12	38	07	15	31		03	58	
9	319	00.8		37.9	177	00.6 ¹⁴²	+2	03.9 ¹¹²	30	18	42	10	16	34		03	55	
10	334	00.9		38.7	191	33.7 ¹⁴¹		15.0 ¹¹¹	20	29	17 51	17	19	37		02	51	
11	349	00.9	-12	39.6	206	06.9 ¹⁴²	+2	26.1 ¹¹¹	10 N	17 38	18 00	18 25	15 21	41		3 01	48	
12	4	01.0	-12	40.4	220	40.1 ¹⁴²	+2	37.3 ¹¹²	0	17 47	18 09	18 33	15 24	44		3 01	44	
13	19	01.1		41.2	235	13.3 ¹⁴²		48.4 ¹¹¹	10 S	17 57	18	43	26	48		3 00	41	
14	34	01.1		42.1	249	46.5 ¹⁴²	+2	59.4 ¹¹⁰	20	18 06	29	18 56	29	51		2 59	38	
15	49	01.2		42.9	264	19.7 ¹⁴²	+3	10.5 ¹¹¹	30	18	43	19 13	32	55		58	34	
16	64	01.2		43.8	278	52.9 ¹⁴²		21.5 ¹¹⁰	35	25	18 51	23	33	58		58	31	
17	79	01.3	-12	44.6	293	26.1 ¹⁴²	+3	32.6 ¹¹¹	40	18 32	19 01	19 36	15 35	60		2 57	29	
18	94	01.4	-12	45.5	307	59.3 ¹⁴²	+3	43.6 ¹¹⁰	45	18 41	19 13	19 51	15 38	62		2 57	25	
19	109	01.4		46.3	322	32.5 ¹⁴²	+3	54.5 ¹⁰⁹	50	52	28	20 12	40	67		56	22	
20	124	01.5		47.2	337	05.8 ¹⁴³	+4	05.5 ¹¹⁰	52	18 57	35	22	42	68		56	20	
21	139	01.5		48.0	351	39.0 ¹⁴²		16.4 ¹⁰⁹	54	19 03	42	34	43	70		55	19	
22	154	01.6		48.9	6	12.3 ¹⁴³		27.3 ¹⁰⁹	56	09	19 51	20 47	44	73		55	17	
23	169	01.6		49.7	20	45.5 ¹⁴²		38.2 ¹⁰⁹	58	16	20 02	21 04	46	75		54	15	
24	184	01.7	-12	50.5	35	18.7 ¹⁴²	+4	49.0 ¹⁰⁸	60 S	19 24	20 14	21 24	15 48	77		2 54	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 37 ^m 4		Mag: -4.0 PMG: 9 ^h 32 ^m		Mag: +1.2 PMG: 14 ^h 29 ^m		Mag: -2.7 PMG: 2 ^h 38 ^m		Mag: +0.6 PMG: 11 ^h 43 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	34	46.3	217	01.4	+2	31.9	142	43.6	-23	25.6	320	17.7	+21	49.9	183	46.1	-10	12.8
1	49	48.8	232	01.1		30.8	157	44.1		25.9	335	20.4		49.9	198	48.2		12.9
2	64	51.3	247	00.7		29.6	172	44.6		26.1	350	23.0		49.9	213	50.4		13.0
3	79	53.7	262	00.4		28.5	187	45.1		26.3	5	25.7		49.9	228	52.6		13.1
4	94	56.2	277	00.1		27.4	202	45.6		26.6	20	28.4		49.9	243	54.8		13.2
5	109	58.7	291	59.7	+2	26.3	217	46.1	-23	26.8	35	31.0	+21	49.9	258	56.9	-10	13.3
6	125	01.1	306	59.4	+2	25.1	232	46.6	-23	27.0	50	33.7	+21	49.8	273	59.1	-10	13.4
7	140	03.6	321	59.1		24.0	247	47.1		27.3	65	36.3		49.8	289	01.3		13.5
8	155	06.0	336	58.7		22.9	262	47.5		27.5	80	39.0		49.8	304	03.5		13.6
9	170	08.5	351	58.4		21.8	277	48.0		27.8	95	41.6		49.8	319	05.6		13.7
10	185	11.0	6	58.0		20.6	292	48.5		28.0	110	44.3		49.8	334	07.8		13.8
11	200	13.4	21	57.7	+2	19.5	307	49.0	-23	28.2	125	46.9	+21	49.7	349	10.0	-10	13.9
12	215	15.9	36	57.4	+2	18.4	322	49.5	-23	28.5	140	49.6	+21	49.7	4	12.2	-10	14.0
13	230	18.4	51	57.0		17.3	337	50.0		28.7	155	52.2		49.7	19	14.3		14.1
14	245	20.8	66	56.7		16.1	352	50.5		28.9	170	54.9		49.7	34	16.5		14.2
15	260	23.3	81	56.4		15.0	7	51.0		29.2	185	57.6		49.7	49	18.7		14.3
16	275	25.8	96	56.0		13.9	22	51.4		29.4	201	00.2		49.6	64	20.9		14.4
17	290	28.2	111	55.7	+2	12.8	37	51.9	-23	29.6	216	02.9	+21	49.6	79	23.0	-10	14.5
18	305	30.7	126	55.4	+2	11.6	52	52.4	-23	29.9	231	05.5	+21	49.6	94	25.2	-10	14.6
19	320	33.1	141	55.0		10.5	67	52.9		30.1	246	08.2		49.6	109	27.4		14.7
20	335	35.6	156	54.7		09.4	82	53.4		30.3	261	10.9		49.6	124	29.6		14.8
21	350	38.1	171	54.4		08.2	97	53.9		30.5	276	13.5		49.5	139	31.7		15.0
22	5	40.5	186	54.0		07.1	112	54.4		30.8	291	16.2		49.5	154	33.9		15.1
23	20	43.0	201	53.7		06.0	127	54.8		31.0	306	18.8		49.5	169	36.1		15.2
24	35	45.5	216	53.3	+2	04.9	142	55.3	-23	31.2	321	21.5	+21	49.5	184	38.3	-10	15.3
Dif	—		-3		-11		+5		-2		+27		0		+22		-1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 11 ^d 5 PHE { SD: 15'1 PMG: 22 ^h 19 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	01.7	-12	50.5	35	18.7	+4	49.0	60 N	5	37	6	26	7	10	15	14
1	199	01.8		51.4	49	52.0 ¹⁴³	+4	59.8 ¹⁰⁸	58	36	22	7	03	18	17	22	74
2	214	01.8		52.2	64	25.2 ¹⁴²	+5	10.6 ¹⁰⁸	56	34	18	6	57	22	18	19	72
3	229	01.9		53.1	78	58.5 ¹⁴³		21.4 ¹⁰⁸	54	33	15	5	51	25	21	17	69
4	244	01.9		53.9	93	31.7 ¹⁴²		32.1 ¹⁰⁷	52	32	11	4	46	28	22	14	68
5	259	02.0	-12	54.8	108	05.0 ¹⁴³	+5	42.8 ¹⁰⁷	50	5	30	6	08	6	42	15	31
6	274	02.0	-12	55.6	122	38.2 ¹⁴²	+5	53.5 ¹⁰⁷	45	5	27	6	02	6	32	15	37
7	289	02.1		56.4	137	11.5 ¹⁴³	+6	04.1 ¹⁰⁶	40	24	5	56	24	42	30	04	60
8	304	02.1		57.3	151	44.7 ¹⁴²		14.8 ¹⁰⁷	35	21	51	17	46	32	4	01	57
9	319	02.2		58.1	166	17.9 ¹⁴²		25.3 ¹⁰⁵	30	18	46	6	10	50	34	3	58
10	334	02.3		59.0	180	51.2 ¹⁴³		35.9 ¹⁰⁶	20	11	37	5	59	15	56	39	53
11	349	02.3	-12	59.8	195	24.4 ¹⁴²	+6	46.4 ¹⁰⁵	10 N	5	03	5	28	5	50	16	02
12	4	02.4	-13	00.6	209	57.6 ¹⁴²	+6	56.9 ¹⁰⁵	0	4	55	5	19	5	40	16	08
13	19	02.4		01.5	224	30.8 ¹⁴²	+7	07.3 ¹⁰⁴	10 S	44	5	10	31	14	47	4	41
14	34	02.5		02.3	239	04.0 ¹⁴²		17.7 ¹⁰⁴	20	32	4	58	21	20	50	37	38
15	49	02.5		03.2	253	37.3 ¹⁴³		28.1 ¹⁰⁴	30	15	45	09	27	54	32	34	
16	64	02.6		04.0	268	10.4 ¹⁴¹		38.4 ¹⁰³	35	4	04	36	5	03	31	56	29
17	79	02.6	-13	04.8	282	43.6 ¹⁴²	+7	48.7 ¹⁰³	40	3	52	4	26	4	55	16	35
18	94	02.7	-13	05.7	297	16.8 ¹⁴²	+7	58.9 ¹⁰²	45	3	36	4	14	4	46	16	40
19	109	02.7		06.5	311	50.0 ¹⁴²	+8	09.1 ¹⁰²	50	15	4	00	35	47	65	18	23
20	124	02.8		07.4	326	23.1 ¹⁴¹		19.3 ¹⁰²	52	3	05	3	52	30	50	67	16
21	139	02.8		08.2	340	56.3 ¹⁴²		29.4 ¹⁰¹	54	2	53	45	24	53	69	14	20
22	154	02.9		09.0	355	29.4 ¹⁴¹		39.5 ¹⁰¹	56	40	36	18	16	57	71	12	17
23	169	02.9		09.9	10	02.6 ¹⁴²		49.6 ¹⁰¹	58	23	25	11	17	01	73	09	15
24	184	03.0	-13	10.7	24	35.7 ¹⁴¹	+8	59.6 ¹⁰⁰	60 S	2	03	3	13	4	03	17	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 33 ^m 4		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: +1.2 PMG: 14 ^h 28 ^m		Mag: -2.7 PMG: 2 ^h 34 ^m		Mag: +0.6 PMG: 11 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	35	45.5	216	53.3	+2	04.9	142	55.3	-23	31.2	321	21.5	+21	49.5	184	38.3	-10	15.3
1	50	47.9	231	53.0		03.7	157	55.8		31.5	336	24.2		49.5	199	40.4		15.4
2	65	50.4	246	52.7		02.6	172	56.3		31.7	351	26.8		49.4	214	42.6		15.5
3	80	52.9	261	52.3		01.5	187	56.8		31.9	6	29.5		49.4	229	44.8		15.6
4	95	55.3	276	52.0	+2	00.3	202	57.3		32.2	21	32.1		49.4	244	47.0		15.7
5	110	57.8	291	51.7	+1	59.2	217	57.7	-23	32.4	36	34.8	+21	49.4	259	49.2	-10	15.8
6	126	00.3	306	51.3	+1	58.1	232	58.2	-23	32.6	51	37.5	+21	49.4	274	51.3	-10	15.9
7	141	02.7	321	51.0		57.0	247	58.7		32.8	66	40.1		49.3	289	53.5		16.0
8	156	05.2	336	50.7		55.8	262	59.2		33.1	81	42.8		49.3	304	55.7		16.1
9	171	07.6	351	50.3		54.7	277	59.7		33.3	96	45.5		49.3	319	57.9		16.2
10	186	10.1	6	50.0		53.6	293	00.2		33.5	111	48.1		49.3	335	00.0		16.3
11	201	12.6	21	49.6	+1	52.4	308	00.6	-23	33.7	126	50.8	+21	49.3	350	02.2	-10	16.4
12	216	15.0	36	49.3	+1	51.3	323	01.1	-23	34.0	141	53.4	+21	49.2	5	04.4	-10	16.5
13	231	17.5	51	49.0		50.2	338	01.6		34.2	156	56.1		49.2	20	06.6		16.6
14	246	20.0	66	48.6		49.0	353	02.1		34.4	171	58.8		49.2	35	08.7		16.7
15	261	22.4	81	48.3		47.9	8	02.6		34.6	187	01.4		49.2	50	10.9		16.8
16	276	24.9	96	48.0		46.8	23	03.0		34.9	202	04.1		49.2	65	13.1		16.9
17	291	27.4	111	47.6	+1	45.6	38	03.5	-23	35.1	217	06.8	+21	49.1	80	15.3	-10	17.0
18	306	29.8	126	47.3	+1	44.5	53	04.0	-23	35.3	232	09.4	+21	49.1	95	17.4	-10	17.1
19	321	32.3	141	47.0		43.4	68	04.5		35.5	247	12.1		49.1	110	19.6		17.2
20	336	34.7	156	46.6		42.2	83	05.0		35.7	262	14.8		49.1	125	21.8		17.3
21	351	37.2	171	46.3		41.1	98	05.4		36.0	277	17.4		49.1	140	24.0		17.4
22	6	39.7	186	45.9		40.0	113	05.9		36.2	292	20.1		49.0	155	26.1		17.5
23	21	42.1	201	45.6		38.8	128	06.4		36.4	307	22.8		49.0	170	28.3		17.6
24	36	44.6	216	45.3	+1	37.7	143	06.9	-23	36.6	322	25.4	+21	49.0	185	30.5	-10	17.7
Dif	—		-3		-11		+5		-2		+27		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:1			Edad: 12 ^d 5 PHE { 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/7 R°: 46 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 43 ^m 8			PMG: 23 ^h 03 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	184	03.0	-13 10.7	24	35.7	+8 59.6	60 N	16	14	16 58	17 47	15 28	17	5 42	75		
1	199	03.0		39	08.8 ¹⁴¹	+9 09.5 ⁹⁹	58	21		17 03	49		35	19	36	73	
2	214	03.1	12.4	53	41.9 ¹⁴¹		56	27	07	50	40	22		31	70		
3	229	03.1	13.2	68	15.0 ¹⁴¹		54	33	10	52	46	23		26	69		
4	244	03.2	14.0	82	48.0 ¹⁴⁰		52	39	14	53	50	25		22	67		
5	259	03.2	-13 14.9	97	21.1 ¹⁴¹	+9 48.9 ⁹⁸	50	16	43	17 17	17 55	15 55	26	5 18	65		
6	274	03.3	-13 15.7	111	54.1 ¹⁴⁰	+9 58.6 ⁹⁷	45	16	54	17 24	17 58	16 04	30	5 10	62		
7	289	03.3	16.5	126	27.1 ¹⁴⁰	+10 08.3 ⁹⁷	40	17	02	30	18 02	12 32		5 04	58		
8	304	03.4	17.4	141	00.2 ¹⁴¹	17.9 ⁹⁶	35	10		36	05	18 35		4 58	56		
9	319	03.4	18.2	155	33.1 ¹³⁹	27.5 ⁹⁶	30	16		41	09	24 37		53	54		
10	334	03.5	19.0	170	06.1 ¹⁴⁰	37.0 ⁹⁵	20	27		50	16	35 39		44	51		
11	349	03.5	-13 19.9	184	39.1 ¹⁴⁰	+10 46.5 ⁹⁵	10 N	17	38	17 59	18 24	16 44	42	4 36	48		
12	4	03.5	-13 20.7	199	12.0 ¹³⁹	+10 55.9 ⁹⁴	0	17	47	18 08	18 33	16 52	46	4 29	45		
13	19	03.6	21.5	213	45.0 ¹⁴⁰	+11 05.3 ⁹⁴	10 S	17	57	19	44	17 01	48	22	42		
14	34	03.6	22.4	228	17.9 ¹³⁹	14.6 ⁹³	20	18	07	30	18 57	10 51		15	38		
15	49	03.7	23.2	242	50.8 ¹³⁹	23.9 ⁹³	30	19		45	19 14	21 54		06	35		
16	64	03.7	24.0	257	23.6 ¹³⁸	33.1 ⁹²	35	27		18 53	25	27 56		4 01	33		
17	79	03.8	-13 24.8	271	56.5 ¹³⁹	+11 42.3 ⁹²	40	18	35	19 03	19 38	17 34	58	3 55	31		
18	94	03.8	-13 25.7	286	29.3 ¹³⁸	+11 51.4 ⁹¹	45	18	44	19 16	19 55	17 42	61	3 49	28		
19	109	03.9	26.5	301	02.1 ¹³⁸	+12 00.4 ⁹⁰	50	18	56	31	20 16	52 65		41	25		
20	124	03.9	27.3	315	34.9 ¹³⁸	09.4 ⁹⁰	52	19	01	39	27	17 57	66	37	24		
21	139	03.9	28.2	330	07.7 ¹³⁸	18.4 ⁹⁰	54	07		47	39	18 02	68	34	21		
22	154	04.0	29.0	344	40.5 ¹³⁸	27.2 ⁸⁸	56	13		19 56	20 54	08 69		29	20		
23	169	04.0	29.8	359	13.2 ¹³⁷	36.1 ⁸⁹	58	21		20 07	21 11	14 72		24	18		
24	184	04.1	-13 30.6	13	45.9 ¹³⁷	+12 44.8 ⁸⁷	60 S	19	29	20 20	21 33	18 21	75	3 19	15		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 21 ^h 29 ^m 5		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: +1.2 PMG: 14 ^h 27 ^m		Mag: -2.7 PMG: 2 ^h 30 ^m		Mag: +0.6 PMG: 11 ^h 36 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	36	44.6	216	45.3	+1 37.7	143 06.9	-23 36.6	322 25.4	+21 49.0	185 30.5	-10 17.7		
1	51	47.1	231	44.9	36.6	158 07.3	36.9	337 28.1	49.0	200 32.7	17.8		
2	66	49.5	246	44.6	35.4	173 07.8	37.1	352 30.8	49.0	215 34.8	17.9		
3	81	52.0	261	44.3	34.3	188 08.3	37.3	7 33.5	48.9	230 37.0	18.0		
4	96	54.5	276	43.9	33.2	203 08.8	37.5	22 36.1	48.9	245 39.2	18.1		
5	111	56.9	291	43.6	+1 32.0	218 09.3	-23 37.7	37 38.8	+21 48.9	260 41.4	-10 18.2		
6	126	59.4	306	43.3	+1 30.9	233 09.7	-23 37.9	52 41.5	+21 48.9	275 43.5	-10 18.3		
7	142	01.9	321	42.9	29.8	248 10.2	38.2	67 44.1	48.9	290 45.7	18.4		
8	157	04.3	336	42.6	28.6	263 10.7	38.4	82 46.8	48.8	305 47.9	18.6		
9	172	06.8	351	42.2	27.5	278 11.2	38.6	97 49.5	48.8	320 50.1	18.7		
10	187	09.2	6	41.9	26.4	293 11.6	38.8	112 52.1	48.8	335 52.2	18.8		
11	202	11.7	21	41.6	+1 25.2	308 12.1	-23 39.0	127 54.8	+21 48.8	350 54.4	-10 18.9		
12	217	14.2	36	41.2	+1 24.1	323 12.6	-23 39.2	142 57.5	+21 48.8	5 56.6	-10 19.0		
13	232	16.6	51	40.9	22.9	338 13.1	39.5	158 00.2	48.7	20 58.8	19.1		
14	247	19.1	66	40.6	21.8	353 13.5	39.7	173 02.8	48.7	36 00.9	19.2		
15	262	21.6	81	40.2	20.7	8 14.0	39.9	188 05.5	48.7	51 03.1	19.3		
16	277	24.0	96	39.9	19.5	23 14.5	40.1	203 08.2	48.7	66 05.3	19.4		
17	292	26.5	111	39.5	+1 18.4	38 15.0	-23 40.3	218 10.9	+21 48.7	81 07.5	-10 19.5		
18	307	29.0	126	39.2	+1 17.3	53 15.4	-23 40.5	233 13.5	+21 48.6	96 09.6	-10 19.6		
19	322	31.4	141	38.9	16.1	68 15.9	40.7	248 16.2	48.6	111 11.8	19.7		
20	337	33.9	156	38.5	15.0	83 16.4	40.9	263 18.9	48.6	126 14.0	19.8		
21	352	36.3	171	38.2	13.9	98 16.9	41.2	278 21.6	48.6	141 16.2	19.9		
22	7	38.8	186	37.8	12.7	113 17.3	41.4	293 24.2	48.5	156 18.3	20.0		
23	22	41.3	201	37.5	11.6	128 17.8	41.6	308 26.9	48.5	171 20.5	20.1		
24	37	43.7	216	37.2	+1 10.4	143 18.3	-23 41.8	323 29.6	+21 48.5	186 22.7	-10 20.2		
Dif	—		-3		-11	+5	-2	+27		0	+22		-

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 13 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 Rº: 46 ^m												
	PMG: 11 ^h 43 ^m 7			SD: 14'9 PMG: 23 ^h 49 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	184	04.1	-13	30.6	13	45.9	+12	44.8	60 N	5	42	6	31	7	15	15 45 21
1	199	04.1		31.5	28	18.6 ¹³⁷	+12	53.5 ⁸⁷	58	40	26		08	15	54	23
2	214	04.2		32.3	42	51.3 ¹³⁷	+13	02.2 ⁸⁷	56	38	22		7	01	16	02
3	229	04.2		33.1	57	23.9 ¹³⁶		10.8 ⁸⁶	54	37	18		6	55	09	27
4	244	04.2		33.9	71	56.5 ¹³⁶		19.3 ⁸⁵	52	35	15		50	15	29	29
5	259	04.3	-13	34.8	86	29.1 ¹³⁶	+13	27.7 ⁸⁴	50	5	33	6	11	6	45	16
6	274	04.3	-13	35.6	101	01.7 ¹³⁶	+13	36.1 ⁸⁴	45	5	30	6	04	6	35	16
7	289	04.4		36.4	115	34.3 ¹³⁶		44.5 ⁸⁴	40	26	5	58	26		44	35
8	304	04.4		37.2	130	06.8 ¹³⁵	+13	52.7 ⁸²	35	23		52	18		16	53
9	319	04.4		38.1	144	39.3 ¹³⁵	+14	01.0 ⁸³	30	19		47	12		17	01
10	334	04.5		38.9	159	11.8 ¹³⁵		09.1 ⁸¹	20	12		38	6	00	14	42
11	349	04.5	-13	39.7	173	44.3 ¹³⁵	+14	17.2 ⁸¹	10 N	5	03	5	28	5	50	17
12	4	04.5	-13	40.5	188	16.8 ¹³⁵	+14	25.2 ⁸⁰	0	4	54	5	19	5	40	17
13	19	04.6		41.3	202	49.2 ¹³⁴		33.1 ⁷⁹	10 S	43		5	09	30		17
14	34	04.6		42.2	217	21.6 ¹³⁴		41.0 ⁷⁹	20	30		4	57	20		18
15	49	04.7		43.0	231	53.9 ¹³³		48.8 ⁷⁸	30	13		43		08		15
16	64	04.7		43.8	246	26.3 ¹³⁴	+14	56.6 ⁷⁸	35	4	02		34	5	01	23
17	79	04.7	-13	44.6	260	58.6 ¹³³	+15	04.2 ⁷⁶	40	3	49	4	23	4	52	18
18	94	04.8	-13	45.5	275	30.9 ¹³³	+15	11.8 ⁷⁶	45	3	32	4	11	4	43	18
19	109	04.8		46.3	290	03.2 ¹³³		19.4 ⁷⁶	50	10		3	56	31		18
20	124	04.8		47.1	304	35.4 ¹³²		26.8 ⁷⁴	52	3	00		48	26		19
21	139	04.9		47.9	319	07.7 ¹³³		34.2 ⁷⁴	54	2	47		40	20		10
22	154	04.9		48.7	333	39.9 ¹³²		41.5 ⁷³	56		33		30	13		17
23	169	04.9		49.5	348	12.1 ¹³²		48.8 ⁷³	58	2	15	19		4	06	26
24	184	05.0	-13	50.4	2	44.2 ¹³¹	+15	55.9 ⁷¹	60 S	1	53	3	07	3	57	19
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 21 ^h 25 ^m 6		Mag: -4.0 PMG: 9 ^h 34 ^m			Mag: +1.2 PMG: 14 ^h 26 ^m			Mag: -2.7 PMG: 2 ^h 26 ^m			Mag: +0.6 PMG: 11 ^h 33 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	37	43.7	216	37.2	+1	10.4	143	18.3	-23	41.8	323	29.6	+21	48.5	186	22.7
1	52	46.2	231	36.8		09.3	158	18.8		42.0	338	32.3		48.5	201	24.9
2	67	48.7	246	36.5		08.2	173	19.2		42.2	353	34.9		48.5	216	27.0
3	82	51.1	261	36.2		07.0	188	19.7		42.4	8	37.6		48.4	231	29.2
4	97	53.6	276	35.8		05.9	203	20.2		42.6	23	40.3		48.4	246	31.4
5	112	56.1	291	35.5	+1	04.7	218	20.6	-23	42.8	38	43.0	+21	48.4	261	33.6
6	127	58.5	306	35.1	+1	03.6	233	21.1	-23	43.0	53	45.6	+21	48.4	276	35.7
7	143	01.0	321	34.8		02.5	248	21.6		43.3	68	48.3		48.4	291	37.9
8	158	03.5	336	34.5		01.3	263	22.1		43.5	83	51.0		48.3	306	40.1
9	173	05.9	351	34.1	+1	00.2	278	22.5		43.7	98	53.7		48.3	321	42.3
10	188	08.4	6	33.8	+0	59.0	293	23.0		43.9	113	56.4		48.3	336	44.4
11	203	10.8	21	33.4	+0	57.9	308	23.5	-23	44.1	128	59.0	+21	48.3	351	46.6
12	218	13.3	36	33.1	+0	56.8	323	23.9	-23	44.3	144	01.7	+21	48.2	6	48.8
13	233	15.8	51	32.8		55.6	338	24.4		44.5	159	04.4		48.2	21	51.0
14	248	18.2	66	32.4		54.5	353	24.9		44.7	174	07.1		48.2	36	53.1
15	263	20.7	81	32.1		53.3	8	25.3		44.9	189	09.8		48.2	51	55.3
16	278	23.2	96	31.8		52.2	23	25.8		45.1	204	12.4		48.2	66	57.5
17	293	25.6	111	31.4	+0	51.1	38	26.3	-23	45.3	219	15.1	+21	48.1	81	59.7
18	308	28.1	126	31.1	+0	49.9	53	26.7	-23	45.5	234	17.8	+21	48.1	97	01.8
19	323	30.6	141	30.7		48.8	68	27.2		45.7	249	20.5		48.1	112	04.0
20	338	33.0	156	30.4		47.6	83	27.7		45.9	264	23.2		48.1	127	06.2
21	353	35.5	171	30.1		46.5	98	28.1		46.1	279	25.9		48.1	142	08.4
22	8	38.0	186	29.7		45.4	113	28.6		46.3	294	28.5		48.0	157	10.6
23	23	40.4	201	29.4		44.2	128	29.1		46.5	309	31.2		48.0	172	12.7
24	38	42.9	216	29.0	+0	43.1	143	29.6	-23	46.7	324	33.9	+21	48.0	187	14.9
Dif	—		-3		-11	+5		-2	+27		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°1			Edad: 14 ^d 5 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 6			PMG: *** **m R°: ***					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	184	05.0	-13 50.4	2	44.2	+15 55.9	71	60 N	16 08	16 53	17 42	16 06 28		8 10 69	
1	199	05.0	51.2	17	16.3 ¹³¹	+16 03.0	71	58	16	16 58	44	17 30		7 59 67	
2	214	05.0	52.0	31	48.4 ¹³¹	10.1	71	56	23	17 02	46	28 31		49 65	
3	229	05.1	52.8	46	20.5 ¹³¹	17.0	69	54	29	06	48	36 33		41 63	
4	244	05.1	53.6	60	52.6 ¹³¹	23.9	69	52	35	10	50	44 35		33 62	
5	259	05.1	-13 54.4	75	24.6 ¹³⁰	+16 30.7	68	50	16 40	17 14	17 52	16 51 36		7 27 60	
6	274	05.2	-13 55.3	89	56.6 ¹³⁰	+16 37.4	67	45	16 51	17 21	17 56	17 07 37		7 12 58	
7	289	05.2	56.1	104	28.6 ¹³⁰	44.1	67	40	17 00	28	18 00	19 40		7 00 56	
8	304	05.2	56.9	119	00.5 ¹²⁹	50.6	65	35	07	34	03	30 41		6 50 54	
9	319	05.3	57.7	133	32.5 ¹³⁰	+16 57.1	65	30	14	39	07	40 42		41 53	
10	334	05.3	58.5	148	04.4 ¹²⁹	+17 03.5	64	20	26	49	15	17 56 44		26 50	
11	349	05.3	-13 59.3	162	36.3 ¹²⁹	+17 09.9	64	10 N	17 37	17 59	18 24	18 10 46		6 12 49	
12	4	05.3	-14 00.1	177	08.1 ¹²⁸	+17 16.1	62	0	17 47	18 08	18 33	18 24 47		6 00 47	
13	19	05.4	01.0	191	40.0 ¹²⁹	22.3	62	10 S	17 57	19	44	37 49		5 47 45	
14	34	05.4	01.8	206	11.8 ¹²⁸	28.4	61	20	18 08	31	18 58	18 52 50		34 43	
15	49	05.4	02.6	220	43.5 ¹²⁷	34.4	60	30	21	46	19 16	19 09 52		19 40	
16	64	05.5	03.4	235	15.3 ¹²⁸	40.4	60	35	28	18 55	27	18 54		10 39	
17	79	05.5	-14 04.2	249	47.0 ¹²⁷	+17 46.2	58	40	18 37	19 06	19 41	19 29 55		5 00 38	
18	94	05.5	-14 05.0	264	18.8 ¹²⁸	+17 52.0	58	45	18 47	19 19	19 58	19 43 56		4 49 35	
19	109	05.5	05.8	278	50.4 ¹²⁶	+17 57.7	57	50	18 59	35	20 21	19 59 58		34 33	
20	124	05.6	06.6	293	22.1 ¹²⁷	+18 03.3	56	52	19 05	43	32	20 06 60		28 31	
21	139	05.6	07.4	307	53.8 ¹²⁷	08.8	55	54	11	19 51	20 45	14 61		21 30	
22	154	05.6	08.3	322	25.4 ¹²⁶	14.3	55	56	18	20 01	21 00	24 62		12 29	
23	169	05.6	09.1	336	57.0 ¹²⁶	19.6	53	58	26	13	19	35 63		4 03 27	
24	184	05.7	-14 09.9	351	28.5 ¹²⁵	+18 24.9	53	60 S	19 35	20 26	21 43	20 47 66		3 53 24	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 21 ^m 6		Mag: -4.0 PMG: 9 ^h 34 ^m			Mag: +1.2 PMG: 14 ^h 26 ^m			Mag: -2.8 PMG: 2 ^h 21 ^m			Mag: +0.6 PMG: 11 ^h 29 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	38	42.9	216 29.0	+0 43.1	143 29.6	-23 46.7	324 33.9	+21 48.0	187 14.9	-10 22.6					
1	53	45.3	231 28.7	41.9	158 30.0	46.9	339 36.6	48.0	202 17.1	22.8					
2	68	47.8	246 28.4	40.8	173 30.5	47.1	354 39.3	47.9	217 19.3	22.9					
3	83	50.3	261 28.0	39.6	188 31.0	47.3	9 42.0	47.9	232 21.4	23.0					
4	98	52.7	276 27.7	38.5	203 31.4	47.5	24 44.6	47.9	247 23.6	23.1					
5	113	55.2	291 27.3	+0 37.4	218 31.9	-23 47.7	39 47.3	+21 47.9	262 25.8	-10 23.2					
6	128	57.7	306 27.0	+0 36.2	233 32.3	-23 47.9	54 50.0	+21 47.9	277 28.0	-10 23.3					
7	144	00.1	321 26.7	35.1	248 32.8	48.1	69 52.7	47.8	292 30.1	23.4					
8	159	02.6	336 26.3	33.9	263 33.3	48.3	84 55.4	47.8	307 32.3	23.5					
9	174	05.1	351 26.0	32.8	278 33.7	48.5	99 58.1	47.8	322 34.5	23.6					
10	189	07.5	6 25.6	31.6	293 34.2	48.7	115 00.8	47.8	337 36.7	23.7					
11	204	10.0	21 25.3	+0 30.5	308 34.7	-23 48.9	130 03.5	+21 47.7	352 38.8	-10 23.8					
12	219	12.4	36 24.9	+0 29.3	323 35.1	-23 49.1	145 06.1	+21 47.7	7 41.0	-10 23.9					
13	234	14.9	51 24.6	28.2	338 35.6	49.3	160 08.8	47.7	22 43.2	24.0					
14	249	17.4	66 24.3	27.1	353 36.1	49.5	175 11.5	47.7	37 45.4	24.1					
15	264	19.8	81 23.9	25.9	8 36.5	49.7	190 14.2	47.7	52 47.5	24.2					
16	279	22.3	96 23.6	24.8	23 37.0	49.9	205 16.9	47.6	67 49.7	24.3					
17	294	24.8	111 23.2	+0 23.6	38 37.5	-23 50.1	220 19.6	+21 47.6	82 51.9	-10 24.4					
18	309	27.2	126 22.9	+0 22.5	53 37.9	-23 50.3	235 22.3	+21 47.6	97 54.1	-10 24.5					
19	324	29.7	141 22.6	21.3	68 38.4	50.5	250 25.0	47.6	112 56.2	24.6					
20	339	32.2	156 22.2	20.2	83 38.8	50.6	265 27.7	47.5	127 58.4	24.7					
21	354	34.6	171 21.9	19.0	98 39.3	50.8	280 30.3	47.5	143 00.6	24.8					
22	9	37.1	186 21.5	17.9	113 39.8	51.0	295 33.0	47.5	158 02.8	24.9					
23	24	39.6	201 21.2	16.8	128 40.2	51.2	310 35.7	47.5	173 04.9	25.0					
24	39	42.0	216 20.9	+0 15.6	143 40.7	-23 51.4	325 38.4	+21 47.4	188 07.1	-10 25.1					
Dif	—		-3	-11	+5	-2	+27	0	+22	-1					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6				Edad: 15 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 SD: 14'7 PMG: 0 ^h 35 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	05.7	-14	09.9	351	28.5	+18	24.9	60 N	5	46	6	35	7	21	16	34
1	199	05.7		10.7	6	00.1 ¹²⁶		30.1 ⁵²	58	44	30		13		47	38	
2	214	05.7		11.5	20	31.6 ¹²⁵		35.2 ⁵¹	56	42	26	7	06	16	59	39	
3	229	05.7		12.3	35	03.1 ¹²⁵		40.2 ⁵⁰	54	40	22	6	59	17	09	40	
4	244	05.8		13.1	49	34.6 ¹²⁵		45.1 ⁴⁹	52	38	18		54	19	40		
5	259	05.8	-14	13.9	64	06.1 ¹²⁵	+18	50.0 ⁴⁹	50	5	36	6	15	6	49	17	27
6	274	05.8	-14	14.7	78	37.5 ¹²⁴	+18	54.7 ⁴⁷	45	5	32	6	07	6	37	17	44
7	289	05.8		15.5	93	08.9 ¹²⁴	+18	59.4 ⁴⁶	40	28	6	00		28	17	59	
8	304	05.9		16.3	107	40.3 ¹²⁴	+19	04.0 ⁴⁷	35	24	5	54		20	18	11	
9	319	05.9		17.1	122	11.7 ¹²⁴		08.5 ⁴⁵	30	20	49		13		22	45	
10	334	05.9		17.9	136	43.1 ¹²⁴		12.9 ⁴⁴	20	12	38	6	01		40	46	
11	349	05.9	-14	18.7	151	14.4 ¹²³	+19	17.2 ⁴³	10 N	5	04	5	29	5	50	18	56
12	4	06.0	-14	19.5	165	45.7 ¹²³	+19	21.4 ⁴²	0	4	54	5	19	5	40	19	11
13	19	06.0		20.3	180	17.0 ¹²³		25.6 ⁴⁰	10 S	43	5	08		30		26	49
14	34	06.0		21.1	194	48.3 ¹²³		29.6 ⁴⁰	20	29	4	56		19		19	42
15	49	06.0		21.9	209	19.6 ¹²³		33.6 ⁴⁰	30	4	11	41	5	06		20	01
16	64	06.0		22.7	223	50.8 ¹²²		37.4 ³⁸	35	3	59	32	4	58		12	51
17	79	06.1	-14	23.6	238	22.0 ¹²²	+19	41.2 ³⁸	40	3	46	4	21	4	50	20	24
18	94	06.1	-14	24.4	252	53.2 ¹²²	+19	44.9 ³⁷	45	3	28	4	08	4	40	20	39
19	109	06.1		25.2	267	24.4 ¹²²		48.5 ³⁶	50	3	06	3	52	28		20	57
20	124	06.1		26.0	281	55.6 ¹²²		52.0 ³⁵	52	2	55	44	22			21	06
21	139	06.1		26.8	296	26.7 ¹²¹		55.4 ³⁴	54	42	35		16			15	55
22	154	06.1		27.6	310	57.9 ¹²²	+19	58.7 ³³	56	26	25		09			26	56
23	169	06.2		28.4	325	29.0 ¹²¹	+20	02.0 ³³	58	2	07	14	4	01		38	57
24	184	06.2	-14	29.2	340	00.1 ¹²¹	+20	05.1 ³¹	60 S	1	43	3	00	3	52	21	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 17 ^m 7		Mag: -4.0 PMG: 9 ^h 35 ^m		Mag: +1.2 PMG: 14 ^h 25 ^m		Mag: -2.8 PMG: 2 ^h 17 ^m		Mag: +0.6 PMG: 11 ^h 26 ^m	
	hG ♊		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	39	42.0	216	20.9	+0	15.6	143	40.7	-23	51.4
1	54	44.5	231	20.5		14.5	158	41.2		51.6
2	69	46.9	246	20.2		13.3	173	41.6		51.8
3	84	49.4	261	19.8		12.2	188	42.1		52.0
4	99	51.9	276	19.5		11.0	203	42.5		52.2
5	114	54.3	291	19.1	+0	09.9	218	43.0	-23	52.4
6	129	56.8	306	18.8	+0	08.7	233	43.5	-23	52.5
7	144	59.3	321	18.5		07.6	248	43.9		52.7
8	160	01.7	336	18.1		06.4	263	44.4		52.9
9	175	04.2	351	17.8		05.3	278	44.8		53.1
10	190	06.7	6	17.4		04.1	293	45.3		53.3
11	205	09.1	21	17.1	+0	03.0	308	45.8	-23	53.5
12	220	11.6	36	16.7	+0	01.8	323	46.2	-23	53.7
13	235	14.1	51	16.4	+0	00.7	338	46.7		53.9
14	250	16.5	66	16.1	-0	00.5	353	47.1		54.0
15	265	19.0	81	15.7		01.6	8	47.6		54.2
16	280	21.4	96	15.4		02.7	23	48.0		54.4
17	295	23.9	111	15.0	-0	03.9	38	48.5	-23	54.6
18	310	26.4	126	14.7	-0	05.0	53	49.0	-23	54.8
19	325	28.8	141	14.3		06.2	68	49.4		55.0
20	340	31.3	156	14.0		07.3	83	49.9		55.1
21	355	33.8	171	13.6		08.5	98	50.3		55.3
22	10	36.2	186	13.3		09.6	113	50.8		55.5
23	25	38.7	201	13.0		10.8	128	51.2		55.7
24	40	41.2	216	12.6	-0	11.9	143	51.7	-23	55.9
Dif	—		-3		-11		+5		-2	
							+27		0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^d 1 PMG: 11 ^h 43 ^m 6			Edad: 16 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 1 ^h 23 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	184	06.2	-14	29.2	340	00.1	+20	05.1	60 N	16 03	16 48	17 38	17 10 47	10 21 52				
1	199	06.2		30.0	354	31.2 ¹²¹		08.1	30 58	11	54	40	25 48	10 06 52				
2	214	06.2		30.7	9	02.3 ¹²¹		11.1	30 56	19	16 58	42	38 48	9 53 52				
3	229	06.2		31.5	23	33.3 ¹²⁰		13.9	28 54	25	17 03	45	49 48	42 51				
4	244	06.2		32.3	38	04.4 ¹²¹		16.7	28 52	31	07	47	17 59 48	32 51				
5	259	06.3	-14	33.1	52	35.4 ¹²⁰	+20	19.4	27 50	16 36	17 10	17 48	18 08 48	9 23 51				
6	274	06.3	-14	33.9	67	06.4 ¹²⁰	+20	22.0	26 45	16 48	17 18	17 53	18 27 48	9 05 50				
7	289	06.3		34.7	81	37.5 ¹²¹		24.4	24 40	16 57	25	17 57	42 48	8 50 50				
8	304	06.3		35.5	96	08.5 ¹²⁰		26.8	24 35	17 05	32	18 02	18 55 49	37 49				
9	319	06.3		36.3	110	39.4 ¹¹⁹		29.1	23 30	13	37	06	19 07 48	26 49				
10	334	06.3		37.1	125	10.4 ¹²⁰		31.3	22 20	25	48	14	26 48	8 06 49				
11	349	06.3	-14	37.9	139	41.4 ¹²⁰	+20	33.4	21 10 N	17 36	17 58	18 23	19 43 48	7 50 48				
12	4	06.4	-14	38.7	154	12.3 ¹¹⁹	+20	35.4	20 0	17 47	18 08	18 33	19 59 48	7 34 48				
13	19	06.4		39.5	168	43.3 ¹²⁰		37.3	19 10 S	17 58	19	45	20 15 48	19 47				
14	34	06.4		40.3	183	14.2 ¹¹⁹		39.1	18 20	18 09	32	18 59	32 48	7 02 47				
15	49	06.4		41.1	197	45.1 ¹¹⁹		40.8	17 30	23	48	19 18	20 52 48	6 43 47				
16	64	06.4		41.9	212	16.0 ¹¹⁹		42.5	17 35	30	18 57	30	21 03 48	32 46				
17	79	06.4	-14	42.7	226	46.9 ¹¹⁹	+20	44.0	15 40	18 39	19 08	19 44	21 16 48	6 19 46				
18	94	06.4	-14	43.5	241	17.8 ¹¹⁹	+20	45.4	14 45	18 50	19 22	20 02	21 32 48	6 04 45				
19	109	06.4		44.3	255	48.7 ¹¹⁹		46.8	14 50	19 02	39	25	21 51 48	5 45 45				
20	124	06.4		45.0	270	19.6 ¹¹⁹		48.0	12 52	08	47	37	22 00 48	37 44				
21	139	06.5		45.8	284	50.5 ¹¹⁹		49.1	11 54	15	19 56	20 51	10 48	27 44				
22	154	06.5		46.6	299	21.3 ¹¹⁸		50.2	11 56	22	20 06	21 07	22 47	16 43				
23	169	06.5		47.4	313	52.2 ¹¹⁹		51.1	9 58	30	18	27	35 47	5 03 43				
24	184	06.5	-14	48.2	328	23.0 ¹¹⁸	+20	52.0	9 60 S	19 40	20 33	21 54	22 50 47	4 49 41				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 13 ^m 8		Mag: -4.0 PMG: 9 ^h 35 ^m			Mag: +1.2 PMG: 14 ^h 24 ^m			Mag: -2.8 PMG: 2 ^h 13 ^m			Mag: +0.6 PMG: 11 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	40	41.2	216	12.6	-0	11.9	143	51.7	-23	55.9	326	43.1	+21	46.9	188	59.3	-10	27.5
1	55	43.6	231	12.3		13.1	158	52.2		56.0	341	45.8		46.9	204	01.5		27.6
2	70	46.1	246	11.9		14.2	173	52.6		56.2	356	48.5		46.8	219	03.7		27.7
3	85	48.6	261	11.6		15.4	188	53.1		56.4	11	51.2		46.8	234	05.9		27.8
4	100	51.0	276	11.2		16.5	203	53.5		56.6	26	53.9		46.8	249	08.0		27.9
5	115	53.5	291	10.9	-0	17.7	218	54.0	-23	56.8	41	56.6	+21	46.8	264	10.2	-10	28.0
6	130	55.9	306	10.5	-0	18.8	233	54.4	-23	56.9	56	59.3	+21	46.7	279	12.4	-10	28.1
7	145	58.4	321	10.2		20.0	248	54.9		57.1	72	02.0		46.7	294	14.6		28.2
8	161	00.9	336	09.9		21.1	263	55.3		57.3	87	04.7		46.7	309	16.7		28.4
9	176	03.3	351	09.5		22.3	278	55.8		57.5	102	07.4		46.7	324	18.9		28.5
10	191	05.8	6	09.2		23.4	293	56.3		57.6	117	10.1		46.7	339	21.1		28.6
11	206	08.3	21	08.8	-0	24.6	308	56.7	-23	57.8	132	12.8	+21	46.6	354	23.3	-10	28.7
12	221	10.7	36	08.5	-0	25.7	323	57.2	-23	58.0	147	15.5	+21	46.6	9	25.4	-10	28.8
13	236	13.2	51	08.1		26.9	338	57.6		58.2	162	18.2		46.6	24	27.6		28.9
14	251	15.7	66	07.8		28.0	353	58.1		58.3	177	20.9		46.6	39	29.8		29.0
15	266	18.1	81	07.4		29.2	8	58.5		58.5	192	23.6		46.5	54	32.0		29.1
16	281	20.6	96	07.1		30.3	23	59.0		58.7	207	26.3		46.5	69	34.1		29.2
17	296	23.0	111	06.7	-0	31.5	38	59.4	-23	58.9	222	29.0	+21	46.5	84	36.3	-10	29.3
18	311	25.5	126	06.4	-0	32.6	53	59.9	-23	59.0	237	31.7	+21	46.5	99	38.5	-10	29.4
19	326	28.0	141	06.1		33.8	69	00.3		59.2	252	34.4		46.4	114	40.7		29.5
20	341	30.4	156	05.7		34.9	84	00.8		59.4	267	37.1		46.4	129	42.8		29.6
21	356	32.9	171	05.4		36.1	99	01.2		59.6	282	39.9		46.4	144	45.0		29.7
22	11	35.4	186	05.0		37.2	114	01.7		59.7	297	42.6		46.4	159	47.2		29.8
23	26	37.8	201	04.7		38.4	129	02.1	-23	59.9	312	45.3		46.3	174	49.4		29.9
24	41	40.3	216	04.3	-0	39.5	144	02.6	-24	00.1	327	48.0	+21	46.3	189	51.5	-10	30.0
Dif	—		-3		-12		+5		-2		+27		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 17 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.5	-14	48.2	328	23.0	+20	52.0	60 N	5 50	6 40	7 26	17 57	58	11 13	42
1	199	06.5		49.0	342	53.9 ¹¹⁹		52.7	58	48	35	17	18 13	56	10 58	42
2	214	06.5		49.8	357	24.7 ¹¹⁸		53.4	56	46	30	10	26 55		45	43
3	229	06.5		50.6	11	55.6 ¹¹⁹		53.9	54	43	25	7 03	37 55		33	44
4	244	06.5		51.4	26	26.4 ¹¹⁸		54.4	52	41	21	6 57	47 55		23	44
5	259	06.5	-14	52.1	40	57.3 ¹¹⁹	+20	54.8	50	5 39	6 18	6 52	18 56	54	10 14	45
6	274	06.5	-14	52.9	55	28.1 ¹¹⁸	+20	55.0	45	5 35	6 09	6 40	19 15	53	9 55	45
7	289	06.5		53.7	69	58.9 ¹¹⁸		55.2	40	30	6 02	31	30 53		40	45
8	304	06.5		54.5	84	29.8 ¹¹⁹		55.3	35	26	5 56	22	44 51		26	47
9	319	06.5		55.3	99	00.6 ¹¹⁸		55.3	30	22	50	15	19 55	51	9 15	47
10	334	06.6		56.1	113	31.4 ¹¹⁸		55.1	20	13	39	6 02	20 14	50	8 55	48
11	349	06.6	-14	56.9	128	02.2 ¹¹⁸	+20	54.9	10 N	5 04	5 29	5 51	20 31	49	8 38	48
12	4	06.6	-14	57.6	142	33.1 ¹¹⁹	+20	54.6	0	4 54	5 19	5 40	20 47	48	8 22	49
13	19	06.6		58.4	157	03.9 ¹¹⁸		54.2	10 S	42	5 08	29	21 03	47	8 06	49
14	34	06.6	-14	59.2	171	34.7 ¹¹⁸		53.7	20	28	4 55	18	20 46		7 49	49
15	49	06.6	-15	00.0	186	05.6 ¹¹⁹		53.1	30	4 09	39	5 04	40 45		30	49
16	64	06.6	-15	00.8	200	36.4 ¹¹⁸		52.4	35	3 57	29	4 56	21 51	45	18	50
17	79	06.6	-15	01.6	215	07.2 ¹¹⁸	+20	51.6	40	3 43	4 18	4 47	22 04	44	7 05	50
18	94	06.6	-15	02.3	229	38.1 ¹¹⁹	+20	50.7	45	3 25	4 05	4 37	22 20	42	6 49	51
19	109	06.6		03.1	244	08.9 ¹¹⁸		49.7	50	3 01	3 48	24	39 41		30	51
20	124	06.6		03.9	258	39.7 ¹¹⁸		48.6	52	2 50	40	18	48 40		21	51
21	139	06.6		04.7	273	10.6 ¹¹⁹		47.4	54	36	30	12	22 58	40	6 11	51
22	154	06.6		05.5	287	41.4 ¹¹⁸		46.1	56	2 20	20	4 04	23 09	39	5 59	52
23	169	06.6		06.2	302	12.3 ¹¹⁹		44.7	58	1 59	3 08	3 56	22 38		46	52
24	184	06.6	-15	07.0	316	43.2 ¹¹⁹	+20	43.3	60 S	1 33	2 54	3 46	23 37	37	5 30	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 09 ^m 8		Mag: -4.0 PMG: 9 ^h 36 ^m		Mag: +1.2 PMG: 14 ^h 23 ^m		Mag: -2.8 PMG: 2 ^h 08 ^m		Mag: +0.6 PMG: 11 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	41	40.3	216	04.3	-0	39.5	144	02.6	-24	00.1
1	56	42.8	231	04.0		40.7	159	03.0		00.2
2	71	45.2	246	03.6		41.9	174	03.5		00.4
3	86	47.7	261	03.3		43.0	189	03.9		00.6
4	101	50.2	276	02.9		44.2	204	04.4		00.8
5	116	52.6	291	02.6	-0	45.3	219	04.8	-24	00.9
6	131	55.1	306	02.2	-0	46.5	234	05.3	-24	01.1
7	146	57.5	321	01.9		47.6	249	05.7		01.3
8	162	00.0	336	01.5		48.8	264	06.2		01.4
9	177	02.5	351	01.2		49.9	279	06.6		01.6
10	192	04.9	6	00.8		51.1	294	07.1		01.8
11	207	07.4	21	00.5	-0	52.2	309	07.5	-24	01.9
12	222	09.9	36	00.1	-0	53.4	324	08.0	-24	02.1
13	237	12.3	50	59.8		54.5	339	08.4		02.3
14	252	14.8	65	59.5		55.7	354	08.9		02.4
15	267	17.3	80	59.1		56.8	9	09.3		02.6
16	282	19.7	95	58.8		58.0	24	09.8		02.7
17	297	22.2	110	58.4	-0	59.1	39	10.2	-24	02.9
18	312	24.7	125	58.1	-1	00.3	54	10.7	-24	03.1
19	327	27.1	140	57.7		01.4	69	11.1		03.2
20	342	29.6	155	57.4		02.6	84	11.6		03.4
21	357	32.0	170	57.0		03.8	99	12.0		03.6
22	12	34.5	185	56.7		04.9	114	12.5		03.7
23	27	37.0	200	56.3		06.1	129	12.9		03.9
24	42	39.4	215	56.0	-1	07.2	144	13.3	-24	04.0

Dif	—	-3	-12	+4	-2	+27	0	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 18 ^d 5 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:3 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	184	06.6	-15	07.0	316	43.2	+20 43.3	60 N	15 58	16 44	17 33	18 55	66	11 55	32
1	199	06.6		07.8	331	14.0	41.7	58	16 07		49	36	19 09	64	40 34
2	214	06.6		08.6	345	44.9	40.0	56	14	54	39	21	63	28	35
3	229	06.6		09.3	0	15.8	38.3	54	21	16 59	41	32	61	17	36
4	244	06.6		10.1	14	46.7	36.4	52	27	17 03	43	42	60	11 07	38
5	259	06.6	-15	10.9	29	17.6	+20 34.4	50	16 33	17 07	17 45	19 50	59	10 59	38
6	274	06.6	-15	11.7	43	48.5	+20 32.4	45	16 45	17 16	17 51	20 08	57	10 40	41
7	289	06.6		12.5	58	19.4	30.2	40	16 55	23	17 55	23	55	25	42
8	304	06.6		13.2	72	50.3	28.0	35	17 04	30	18 00	35	54	13	42
9	319	06.6		14.0	87	21.2	25.6	30	11	36	04	20 46	52	10 02	43
10	334	06.6		14.8	101	52.2	23.2	20	24	47	13	21 04	51	9 43	45
11	349	06.6	-15	15.6	116	23.1	+20 20.7	10 N	17 36	17 58	18 23	21 20	49	9 26	47
12	4	06.6	-15	16.3	130	54.0	+20 18.0	0	17 47	18 08	18 33	21 35	48	9 11	47
13	19	06.6		17.1	145	25.0	15.3	10 S	17 58	20	18 46	21 50	46	8 55	49
14	34	06.5		17.9	159	56.0	12.5	20	18 10	33	19 01	22 06	45	38	51
15	49	06.5		18.6	174	27.0	09.6	30	24	50	20	25	42	19	52
16	64	06.5		19.4	188	58.0	06.6	35	32	18 59	32	36	41	8 08	53
17	79	06.5	-15	20.2	203	29.0	+20 03.5	40	18 42	19 11	19 47	22 48	39	7 55	54
18	94	06.5	-15	21.0	218	00.0	+20 00.3	45	18 52	19 25	20 05	23 02	38	7 40	55
19	109	06.5		21.7	232	31.0	+19 57.0	50	19 06	43	30	20 36	21	57	
20	124	06.5		22.5	247	02.0	53.6	52	12	19 51	42	28	35	12	57
21	139	06.5		23.3	261	33.1	50.1	54	19	20 01	20 56	38	33	7 02	58
22	154	06.5		24.0	276	04.2	46.6	56	27	12	21 14	23 48	32	6 51	59
23	169	06.5		24.8	290	35.2	42.9	58	35	24	21 35	** ** *	**	38	61
24	184	06.5	-15	25.6	305	06.3	+19 39.2	60 S	19 45	20 39	22 05	** ** *	**	6 23	62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 05 ^m 9		Mag: -4.0 PMG: 9 ^h 36 ^m		Mag: +1.2 PMG: 14 ^h 23 ^m		Mag: -2.8 PMG: 2 ^h 04 ^m		Mag: +0.6 PMG: 11 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	°	'	°	'	°	'	°	'	°	'
0	42	39.4	215	56.0	-1	07.2	144	13.3	-24	04.0
1	57	41.9	230	55.6		08.4	159	13.8		04.2
2	72	44.4	245	55.3		09.5	174	14.2		04.4
3	87	46.8	260	54.9		10.7	189	14.7		04.5
4	102	49.3	275	54.6		11.8	204	15.1		04.7
5	117	51.8	290	54.2	-1	13.0	219	15.6	-24	04.8
6	132	54.2	305	53.9	-1	14.1	234	16.0	-24	05.0
7	147	56.7	320	53.5		15.3	249	16.5		05.2
8	162	59.1	335	53.2		16.4	264	16.9		05.3
9	178	01.6	350	52.8		17.6	279	17.4		05.5
10	193	04.1	5	52.5		18.8	294	17.8		05.6
11	208	06.5	20	52.1	-1	19.9	309	18.2	-24	05.8
12	223	09.0	35	51.8	-1	21.1	324	18.7	-24	05.9
13	238	11.5	50	51.4		22.2	339	19.1		06.1
14	253	13.9	65	51.0		23.4	354	19.6		06.2
15	268	16.4	80	50.7		24.5	9	20.0		06.4
16	283	18.9	95	50.3		25.7	24	20.5		06.6
17	298	21.3	110	50.0	-1	26.8	39	20.9	-24	06.7
18	313	23.8	125	49.6	-1	28.0	54	21.3	-24	06.9
19	328	26.3	140	49.3		29.1	69	21.8		07.0
20	343	28.7	155	48.9		30.3	84	22.2		07.2
21	358	31.2	170	48.6		31.5	99	22.7		07.3
22	13	33.6	185	48.2		32.6	114	23.1		07.5
23	28	36.1	200	47.9		33.8	129	23.5		07.6
24	43	38.6	215	47.5	-1	34.9	144	24.0	-24	07.8
Dif	—		-4		-12		+4		-2	
							+27		0	
									+22	
									-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 19 ^d 5 PHE { SD: 14'8 PMG: 3 ^h 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	184	06.5	-15 25.6	305	06.3	+19 39.2	60 N	5 55	6 45	7 31	20 01	73	12 27	24	
1	199	06.5	26.3	319	37.4 ¹²¹	35.3 ³⁹	58	52	39	22	13	70	14	27	
2	214	06.5	27.1	334	08.5 ¹²¹	31.4 ³⁹	56	49	34	14	24	68	12 03	29	
3	229	06.4	27.9	348	39.7 ¹²²	27.4 ⁴⁰	54	47	29	07	33	66	11 53	31	
4	244	06.4	28.6	3	10.8 ¹²¹	23.3 ⁴¹	52	45	25	7 01	42	64	45	32	
5	259	06.4	-15 29.4	17	41.9 ¹²¹	+19 19.0 ⁴³	50	5 42	6 21	6 55	20 49	63	11 37	33	
6	274	06.4	-15 30.2	32	13.1 ¹²²	+19 14.7 ⁴³	45	5 37	6 12	6 43	21 05	60	11 21	35	
7	289	06.4	30.9	46	44.3 ¹²²	10.4 ⁴³	40	32	6 04	33	18	58	11 07	38	
8	304	06.4	31.7	61	15.5 ¹²²	05.9 ⁴⁵	35	28	5 58	24	29	56	10 55	40	
9	319	06.4	32.5	75	46.7 ¹²²	+19 01.3 ⁴⁶	30	23	52	16	38	55	45	41	
10	334	06.4	33.2	90	17.9 ¹²²	+18 56.6 ⁴⁷	20	14	40	6 03	21 55	52	28	43	
11	349	06.4	-15 34.0	104	49.2 ¹²³	+18 51.9 ⁴⁷	10 N	5 04	5 30	5 51	22 09	50	10 13	45	
12	4	06.3	-15 34.8	119	20.4 ¹²²	+18 47.0 ⁴⁹	0	4 54	5 19	5 40	22 23	47	9 58	48	
13	19	06.3	35.5	133	51.7 ¹²³	42.1 ⁴⁹	10 S	41	5 07	29	36	45	44	49	
14	34	06.3	36.3	148	23.0 ¹²³	37.1 ⁵⁰	20	26	4 54	17	22 51	42	29	51	
15	49	06.3	37.1	162	54.2 ¹²²	32.0 ⁵¹	30	4 07	37	5 03	23 07	40	11	53	
16	64	06.3	37.8	177	25.6 ¹²⁴	26.8 ⁵²	35	3 55	27	4 55	17	37	9 01	55	
17	79	06.3	-15 38.6	191	56.9 ¹²³	+18 21.5 ⁵³	40	3 40	4 16	4 45	23 27	36	8 49	56	
18	94	06.3	-15 39.3	206	28.2 ¹²³	+18 16.2 ⁵³	45	3 21	4 02	4 34	23 40	34	8 35	58	
19	109	06.2	40.1	220	59.6 ¹²⁴	10.7 ⁵⁵	50	2 57	3 44	21	23 56	30	18	61	
20	124	06.2	40.9	235	30.9 ¹²³	+18 05.2 ⁵⁵	52	44	35	14	** ** *	**	09	63	
21	139	06.2	41.6	250	02.3 ¹²⁴	+17 59.5 ⁵⁷	54	30	26	08	** ** *	**	8 00	64	
22	154	06.2	42.4	264	33.7 ¹²⁴	53.8 ⁵⁷	56	2 13	15	4 00	** ** *	**	7 50	66	
23	169	06.2	43.1	279	05.1 ¹²⁴	48.0 ⁵⁸	58	1 51	3 02	3 51	0 00	30	39	67	
24	184	06.2	-15 43.9	293	36.6 ¹²⁵	+17 42.1 ⁵⁹	60 S	1 22	2 47	3 41	0 14	27	7 25	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 02 ^m 0		Mag: -4.0 PMG: 9 ^h 37 ^m		Mag: +1.2 PMG: 14 ^h 22 ^m		Mag: -2.8 PMG: 2 ^h 00 ^m		Mag: +0.6 PMG: 11 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	43	38.6	215	47.5	-1	34.9	144	24.0	-24	07.8	329	58.2	+21	45.1	191	36.0	-10	34.8
1	58	41.0	230	47.2		36.1	159	24.4		07.9	345	00.9		45.1	206	38.2		34.9
2	73	43.5	245	46.8		37.2	174	24.9		08.1	0	03.7		45.1	221	40.3		35.0
3	88	46.0	260	46.5		38.4	189	25.3		08.2	15	06.4		45.0	236	42.5		35.1
4	103	48.4	275	46.1		39.5	204	25.8		08.4	30	09.1		45.0	251	44.7		35.2
5	118	50.9	290	45.8	-1	40.7	219	26.2	-24	08.5	45	11.8	+21	45.0	266	46.9	-10	35.3
6	133	53.4	305	45.4	-1	41.9	234	26.6	-24	08.7	60	14.5	+21	45.0	281	49.1	-10	35.4
7	148	55.8	320	45.0		43.0	249	27.1		08.8	75	17.3		44.9	296	51.2		35.5
8	163	58.3	335	44.7		44.2	264	27.5		09.0	90	20.0		44.9	311	53.4		35.6
9	179	00.8	350	44.3		45.3	279	27.9		09.1	105	22.7		44.9	326	55.6		35.7
10	194	03.2	5	44.0		46.5	294	28.4		09.2	120	25.4		44.9	341	57.8		35.8
11	209	05.7	20	43.6	-1	47.6	309	28.8	-24	09.4	135	28.2	+21	44.8	356	59.9	-10	35.9
12	224	08.1	35	43.3	-1	48.8	324	29.3	-24	09.5	150	30.9	+21	44.8	12	02.1	-10	36.0
13	239	10.6	50	42.9		49.9	339	29.7		09.7	165	33.6		44.8	27	04.3		36.1
14	254	13.1	65	42.6		51.1	354	30.1		09.8	180	36.3		44.8	42	06.5		36.2
15	269	15.5	80	42.2		52.3	9	30.6		10.0	195	39.1		44.7	57	08.6		36.3
16	284	18.0	95	41.9		53.4	24	31.0		10.1	210	41.8		44.7	72	10.8		36.4
17	299	20.5	110	41.5	-1	54.6	39	31.5	-24	10.3	225	44.5	+21	44.7	87	13.0	-10	36.5
18	314	22.9	125	41.1	-1	55.7	54	31.9	-24	10.4	240	47.2	+21	44.6	102	15.2	-10	36.6
19	329	25.4	140	40.8		56.9	69	32.3		10.5	255	50.0		44.6	117	17.3		36.7
20	344	27.9	155	40.4		58.0	84	32.8		10.7	270	52.7		44.6	132	19.5		36.8
21	359	30.3	170	40.1	-1	59.2	99	33.2		10.8	285	55.4		44.6	147	21.7		36.9
22	14	32.8	185	39.7	-2	00.4	114	33.6		11.0	300	58.1		44.5	162	23.9		37.0
23	29	35.3	200	39.4		01.5	129	34.1		11.1	316	00.9		44.5	177	26.1		37.1
24	44	37.7	215	39.0	-2	02.7	144	34.5	-24	11.2	331	03.6	+21	44.5	192	28.2	-10	37.2
Dif	—		-4	-12		+4	-1			+27	0			+22		-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 5	PHE { 4 ^h : 54/8 12 ^h : 55/0 20 ^h : 55/2										
	PMG: 11 ^h 43 ^m 6					SD: 14 ^h 9			PMG: 4 ^h 34 ^m		R°: 47 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	06.2	-15 43.9	293	36.6	+17 42.1	59	60 N	15 53	16 39	17 29	21 14 76	12 51 19		
1	199	06.1	44.6	308	08.0 ¹²⁴	36.2	59	58	16 02	45	32	23 74	41 21		
2	214	06.1	45.4	322	39.5 ¹²⁵	30.1	61	56	10	51	35	32 71	32 23		
3	229	06.1	46.2	337	10.9 ¹²⁴	24.0	61	54	17	16 56	38	39 70	24 25		
4	244	06.1	46.9	351	42.4 ¹²⁵	17.7	63	52	24	17 00	40	46 68	17 27		
5	259	06.1	-15 47.7	6	13.9 ¹²⁵	+17 11.4	63	50	16 30	17 04	17 43	21 52 66	12 10 29		
6	274	06.0	-15 48.4	20	45.4 ¹²⁵	+17 05.1	63	45	16 42	17 13	17 48	22 05 63	11 56 32		
7	289	06.0	49.2	35	17.0 ¹²⁶	+16 58.6	65	40	16 53	21	53	16 60	45 34		
8	304	06.0	49.9	49	48.5 ¹²⁵	52.0	66	35	17 02	28	17 58	25 58	35 36		
9	319	06.0	50.7	64	20.1 ¹²⁶	45.4	66	30	10	35	18 03	33 56	26 38		
10	334	06.0	51.4	78	51.6 ¹²⁵	38.7	67	20	23	46	13	47 52	11 11 42		
11	349	05.9	-15 52.2	93	23.2 ¹²⁶	+16 31.9	68	10 N	17 36	17 57	18 23	22 59 49	10 58 44		
12	4	05.9	-15 52.9	107	54.8 ¹²⁶	+16 25.0	69	0	17 47	18 09	18 34	23 10 46	10 46 46		
13	19	05.9	53.7	122	26.4 ¹²⁶	18.0	70	10 S	17 59	21	18 46	21 44	33 49		
14	34	05.9	54.5	136	58.1 ¹²⁷	11.0	70	20	18 11	34	19 02	33 41	20 52		
15	49	05.9	55.2	151	29.7 ¹²⁶	+16 03.9	71	30	26	18 51	22	47 37	10 04 55		
16	64	05.8	56.0	166	01.3 ¹²⁶	+15 56.7	72	35	34	19 01	34	23 54 36	9 56 56		
17	79	05.8	-15 56.7	180	33.0 ¹²⁷	+15 49.4	73	40	18 44	19 13	19 50	** ** *	9 45 59		
18	94	05.8	-15 57.5	195	04.7 ¹²⁷	+15 42.1	73	45	18 55	19 28	20 09	** ** *	9 33 62		
19	109	05.8	58.2	209	36.4 ¹²⁷	34.6	75	50	19 09	46	34	** ** *	19 64		
20	124	05.7	59.0	224	08.1 ¹²⁷	27.1	75	52	16	19 55	20 47	0 03 29	12 66		
21	139	05.7	-15 59.7	238	39.8 ¹²⁷	19.5	76	54	23	20 05	21 02	11 28	9 04 68		
22	154	05.7	-16 00.4	253	11.5 ¹²⁷	11.9	76	56	31	17	21	20 26	8 56 69		
23	169	05.7	01.2	267	43.2 ¹²⁷	+15 04.1	78	58	40	30	21 44	30 24	46 72		
24	184	05.6	-16 01.9	282	15.0 ¹²⁸	+14 56.3	78	60 S	19 51	20 46	22 17	0 41 22	8 35 74		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 58 ^m 0		Mag: -4.0 PMG: 9 ^h 38 ^m			Mag: +1.2 PMG: 14 ^h 21 ^m			Mag: -2.8 PMG: 1 ^h 55 ^m			Mag: +0.6 PMG: 11 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	44	37.7	215	39.0	-2 02.7	144	34.5	-24 11.2	331	03.6	+21 44.5	192	28.2	-10 37.2	
1	59	40.2	230	38.6	03.8	159	34.9	11.4	346	06.3	44.5	207	30.4	37.3	
2	74	42.6	245	38.3	05.0	174	35.4	11.5	1	09.0	44.4	222	32.6	37.4	
3	89	45.1	260	37.9	06.1	189	35.8	11.7	16	11.8	44.4	237	34.8	37.5	
4	104	47.6	275	37.6	07.3	204	36.3	11.8	31	14.5	44.4	252	36.9	37.6	
5	119	50.0	290	37.2	-2 08.4	219	36.7	-24 11.9	46	17.2	+21 44.4	267	39.1	-10 37.7	
6	134	52.5	305	36.9	-2 09.6	234	37.1	-24 12.1	61	20.0	+21 44.3	282	41.3	-10 37.8	
7	149	55.0	320	36.5	10.8	249	37.6	12.2	76	22.7	44.3	297	43.5	37.9	
8	164	57.4	335	36.1	11.9	264	38.0	12.3	91	25.4	44.3	312	45.6	38.0	
9	179	59.9	350	35.8	13.1	279	38.4	12.5	106	28.1	44.2	327	47.8	38.1	
10	195	02.4	5 35.4	14.2	14.2	294	38.9	12.6	121	30.9	44.2	342	50.0	38.2	
11	210	04.8	20 35.1	-2 15.4	15.4	309	39.3	-24 12.8	136	33.6	+21 44.2	357	52.2	-10 38.3	
12	225	07.3	35 34.7	-2 16.5	16.5	324	39.7	-24 12.9	151	36.3	+21 44.2	12 54.4	-10 38.4		
13	240	09.7	50 34.4	17.7	17.7	339	40.2	13.0	166	39.1	44.1	27 56.5	38.5		
14	255	12.2	65 34.0	18.9	18.9	354	40.6	13.2	181	41.8	44.1	42 58.7	38.6		
15	270	14.7	80 33.6	20.0	20.0	9 41.0	13.3	13.3	196	44.5	44.1	58 00.9	38.7		
16	285	17.1	95 33.3	21.2	21.2	24 41.5	13.4	13.4	211	47.3	44.1	73 03.1	38.8		
17	300	19.6	110 32.9	-2 22.3	22.3	39 41.9	-24 13.6	13.6	226	50.0	+21 44.0	88 05.2	-10 38.9		
18	315	22.1	125 32.6	-2 23.5	23.5	54 42.3	-24 13.7	13.7	241	52.7	+21 44.0	103 07.4	-10 39.0		
19	330	24.5	140 32.2	24.6	24.6	69 42.8	13.8	13.8	256	55.5	44.0	118 09.6	39.1		
20	345	27.0	155 31.8	25.8	25.8	84 43.2	14.0	14.0	271	58.2	43.9	133 11.8	39.2		
21	0	29.5	170 31.5	27.0	27.0	99 43.6	14.1	14.1	287	00.9	43.9	148 13.9	39.3		
22	15	31.9	185 31.1	28.1	28.1	114 44.1	14.2	14.2	302	03.7	43.9	163 16.1	39.4		
23	30	34.4	200 30.8	29.3	29.3	129 44.5	14.3	14.3	317	06.4	43.9	178 18.3	39.5		
24	45	36.9	215 30.4	-2 30.4	30.4	144 44.9	-24 14.5	14.5	332	09.1	+21 43.8	193 20.5	-10 39.6		
Dif	—		-4		-12	+4		-1	+27		0		+22		-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6				Edad: 21 ^d 5 PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8 PMG: 5 ^h 21 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	05.6	-16	01.9	282	15.0	+14	56.3	60 N	5	59	6	49	7	36	22	30	
1	199	05.6		02.7	296	46.7 ¹²⁷		48.4 ⁷⁹	58		56	43		27	37	77		
2	214	05.6		03.4	311	18.5 ¹²⁸		40.4 ⁸⁰	56		53	38		18	43	75		
3	229	05.5		04.2	325	50.3 ¹²⁸		32.4 ⁸⁰	54		50	33		11	49	72		
4	244	05.5		04.9	340	22.1 ¹²⁸		24.3 ⁸¹	52		48	28	7	04	54	70		
5	259	05.5	-16	05.7	354	53.8 ¹²⁷	+14	16.1 ⁸²	50	5	45	6	24	6	58	22	58	
6	274	05.5	-16	06.4	9	25.6 ¹²⁸	+14	07.8 ⁸³	45	5	40	6	15	6	46	23	08	
7	289	05.4		07.2	23	57.4 ¹²⁸	+13	59.5 ⁸⁴	40		34	07		35	16	62		
8	304	05.4		07.9	38	29.3 ¹²⁹		51.1 ⁸³	35		29	6	00		26	23	59	
9	319	05.4		08.6	53	01.1 ¹²⁸		42.6 ⁸⁵	30		25	5	53		18	29	57	
10	334	05.3		09.4	67	32.9 ¹²⁸		34.1 ⁸⁵	20		15	41		6	04	39	53	
11	349	05.3	-16	10.1	82	04.8 ¹²⁹	+13	25.5 ⁸⁶	10 N	5	05	5	30	5	52	23	48	
12	4	05.3	-16	10.9	96	36.6 ¹²⁸	+13	16.8 ⁸⁷	0	4	54	5	19	5	40	23	56	
13	19	05.3		11.6	111	08.5 ¹²⁹	+13	08.0 ⁸⁸	10 S		41	5	06		28	***	***	
14	34	05.2		12.4	125	40.3 ¹²⁸	+12	59.2 ⁸⁸	20		25	4	53		16	***	***	
15	49	05.2		13.1	140	12.2 ¹²⁹		50.3 ⁸⁹	30	4	05	36	5	01	***	***	***	
16	64	05.2		13.8	154	44.0 ¹²⁸		41.3 ⁹⁰	35	3	53	25	4	53	***	***	***	
17	79	05.1	-16	14.6	169	15.9 ¹²⁹	+12	32.3 ⁹⁰	40	3	37	4	13	4	43	0	03	
18	94	05.1	-16	15.3	183	47.8 ¹²⁹	+12	23.2 ⁹¹	45	3	18	3	59	4	31	0	14	
19	109	05.1		16.0	198	19.6 ¹²⁸		14.0 ⁹²	50	2	52	40	17		26	28	23	
20	124	05.0		16.8	212	51.5 ¹²⁹	+12	04.8 ⁹²	52		39	31		11	32	26	18	
21	139	05.0		17.5	227	23.4 ¹²⁹	+11	55.5 ⁹³	54		24	21	4	04	39	24	12	
22	154	05.0		18.3	241	55.3 ¹²⁹		46.1 ⁹⁴	56	2	06	3	10	3	56	46	22	
23	169	04.9		19.0	256	27.2 ¹²⁹		36.7 ⁹⁴	58	1	42	2	57	46	0	54	20	
24	184	04.9	-16	19.7	270	59.0 ¹²⁸	+11	27.2 ⁹⁵	60 S	1	09	2	41	3	36	1	03	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 54 ^m 1		Mag: -4.0 PMG: 9 ^h 38 ^m				Mag: +1.2 PMG: 14 ^h 21 ^m				Mag: -2.8 PMG: 1 ^h 51 ^m				Mag: +0.6 PMG: 11 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	45	36.9	215	30.4	-2	30.4	144	44.9	-24	14.5	332	09.1	+21	43.8	193	20.5	-10	39.6
1	60	39.3	230	30.0		31.6	159	45.3		14.6	347	11.9		43.8	208	22.7		39.7
2	75	41.8	245	29.7		32.7	174	45.8		14.7	2	14.6		43.8	223	24.8		39.8
3	90	44.2	260	29.3		33.9	189	46.2		14.9	17	17.3		43.8	238	27.0		39.9
4	105	46.7	275	29.0		35.1	204	46.6		15.0	32	20.1		43.7	253	29.2		40.0
5	120	49.2	290	28.6	-2	36.2	219	47.1	-24	15.1	47	22.8	+21	43.7	268	31.4	-10	40.1
6	135	51.6	305	28.2	-2	37.4	234	47.5	-24	15.2	62	25.5	+21	43.7	283	33.5	-10	40.2
7	150	54.1	320	27.9		38.5	249	47.9		15.4	77	28.3		43.6	298	35.7		40.3
8	165	56.6	335	27.5		39.7	264	48.4		15.5	92	31.0		43.6	313	37.9		40.4
9	180	59.0	350	27.1		40.8	279	48.8		15.6	107	33.7		43.6	328	40.1		40.5
10	196	01.5	5	26.8		42.0	294	49.2		15.7	122	36.5		43.6	343	42.2		40.6
11	211	04.0	20	26.4	-2	43.2	309	49.6	-24	15.9	137	39.2	+21	43.5	358	44.4	-10	40.7
12	226	06.4	35	26.1	-2	44.3	324	50.1	-24	16.0	152	42.0	+21	43.5	13	46.6	-10	40.8
13	241	08.9	50	25.7		45.5	339	50.5		16.1	167	44.7		43.5	28	48.8		40.9
14	256	11.4	65	25.3		46.6	354	50.9		16.2	182	47.4		43.5	43	51.0		41.0
15	271	13.8	80	25.0		47.8	9	51.4		16.4	197	50.2		43.4	58	53.1		41.1
16	286	16.3	95	24.6		48.9	24	51.8		16.5	212	52.9		43.4	73	55.3		41.2
17	301	18.7	110	24.2	-2	50.1	39	52.2	-24	16.6	227	55.6	+21	43.4	88	57.5	-10	41.3
18	316	21.2	125	23.9	-2	51.2	54	52.6	-24	16.7	242	58.4	+21	43.3	103	59.7	-10	41.4
19	331	23.7	140	23.5		52.4	69	53.1		16.9	258	01.1		43.3	119	01.8		41.5
20	346	26.1	155	23.1		53.6	84	53.5		17.0	273	03.9		43.3	134	04.0		41.6
21	1	28.6	170	22.8		54.7	99	53.9		17.1	288	06.6		43.3	149	06.2		41.7
22	16	31.1	185	22.4		55.9	114	54.4		17.2	303	09.3		43.2	164	08.4		41.8
23	31	33.5	200	22.1		57.0	129	54.8		17.3	318	12.1		43.2	179	10.5		41.9
24	46	36.0	215	21.7	-2	58.2	144	55.2	-24	17.5	333	14.8	+21	43.2	194	12.7	-10	42.0
Dif	—		-4		-12		+4		-1		+27		0		+22		-	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7				Edad: 22 ^d 5 PHE { 4 ^h : 56 ^h 1 12 ^h : 56 ^h 3 20 ^h : 56 ^h 6 PMG: 6 ^h 08 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	184	04.9	-16	19.7	270	59.0	+11	27.2	60 N	15 48	16 35	17 25	23 50	82	13 26	14		
1	199	04.9		20.5	285	30.9 ¹²⁹		17.6 ⁹⁶	58	15 58	41	29		54 80	21	16		
2	214	04.8		21.2	300	02.8 ¹²⁹	+11	08.0 ⁹⁶	56	16 06	47	32	23 58	77	16	19		
3	229	04.8		21.9	314	34.7 ¹²⁹	+10	58.3 ⁹⁷	54	14	52	35	** ** *	**	12	21		
4	244	04.7		22.7	329	06.6 ¹²⁹		48.6 ⁹⁷	52	21	16 57	37	** ** *	**	08	23		
5	259	04.7	-16	23.4	343	38.5 ¹²⁹	+10	38.8 ⁹⁸	50	16 27	17 01	17 40	** ** *	**	13 05	24		
6	274	04.7	-16	24.1	358	10.3 ¹²⁸	+10	28.9 ⁹⁹	45	16 40	17 11	17 46	** ** *	**	12 57	28		
7	289	04.6		24.9	12	42.2 ¹²⁹		19.0 ⁹⁹	40	16 51	19	51	** ** *	**	51	31		
8	304	04.6		25.6	27	14.1 ¹²⁹	+10	09.0 ¹⁰⁰	35	17 00	27	17 57	** ** *	**	46	33		
9	319	04.6		26.3	41	45.9 ¹²⁸	+9	58.9 ¹⁰¹	30	08	33	18 02	** ** *	**	41	36		
10	334	04.5		27.1	56	17.8 ¹²⁹		48.8 ¹⁰¹	20	23	46	12	** ** *	**	33	40		
11	349	04.5	-16	27.8	70	49.6 ¹²⁸	+9	38.7 ¹⁰¹	10 N	17 35	17 57	18 22	** ** *	**	12 26	43		
12	4	04.4	-16	28.5	85	21.5 ¹²⁹	+9	28.5 ¹⁰²	0	17 47	18 09	18 34	** ** *	**	12 19	46		
13	19	04.4		29.3	99	53.3 ¹²⁸		18.2 ¹⁰³	10 S	17 59	21	18 47	0 05	43	12	50		
14	34	04.4		30.0	114	25.1 ¹²⁸	+9	07.8 ¹⁰⁴	20	18 12	36	19 03	14	40	12	04		
15	49	04.3		30.7	128	57.0 ¹²⁹	+8	57.5 ¹⁰³	30	27	18 53	24	24	36	11	56		
16	64	04.3		31.4	143	28.8 ¹²⁸		47.0 ¹⁰⁵	35	36	19 04	37	30	34	51	60		
17	79	04.2	-16	32.2	158	00.6 ¹²⁸	+8	36.5 ¹⁰⁵	40	18 46	19 16	19 53	0 37	31	11	45		
18	94	04.2	-16	32.9	172	32.4 ¹²⁸	+8	26.0 ¹⁰⁵	45	18 58	19 31	20 12	0 44	29	11	39		
19	109	04.1		33.6	187	04.1 ¹²⁷		15.3 ¹⁰⁷	50	19 13	50	39	54	25	31	69		
20	124	04.1		34.3	201	35.9 ¹²⁸	+8	04.7 ¹⁰⁶	52	19	19 59	20 52	0 58	23	27	72		
21	139	04.1		35.1	216	07.7 ¹²⁸	+7	54.0 ¹⁰⁷	54	27	20 10	21 08	1 03	21	23	73		
22	154	04.0		35.8	230	39.4 ¹²⁷		43.2 ¹⁰⁸	56	35	22	28	08	19	18	76		
23	169	04.0		36.5	245	11.1 ¹²⁷		32.4 ¹⁰⁸	58	45	36	21 53	14	17	13	79		
24	184	03.9	-16	37.2	259	42.8 ¹²⁷	+7	21.5 ¹⁰⁹	60 S	19 56	20 53	22 31	1 20	15	11	08		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 50 ^m 2		Mag: -4.0 PMG: 9 ^h 39 ^m				Mag: +1.2 PMG: 14 ^h 20 ^m				Mag: -2.8 PMG: 1 ^h 47 ^m				Mag: +0.6 PMG: 11 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	36.0	215	21.7	-2	58.2	144	55.2	-24	17.5	333	14.8	+21	43.2	194	12.7	-10	42.0
1	61	38.5	230	21.3	-2	59.3	159	55.6		17.6	348	17.6		43.1	209	14.9		42.1
2	76	40.9	245	21.0	-3	00.5	174	56.1		17.7	3	20.3		43.1	224	17.1		42.2
3	91	43.4	260	20.6		01.7	189	56.5		17.8	18	23.0		43.1	239	19.3		42.3
4	106	45.9	275	20.2		02.8	204	56.9		17.9	33	25.8		43.1	254	21.4		42.4
5	121	48.3	290	19.9	-3	04.0	219	57.3	-24	18.0	48	28.5	+21	43.0	269	23.6	-10	42.5
6	136	50.8	305	19.5	-3	05.1	234	57.8	-24	18.2	63	31.3	+21	43.0	284	25.8	-10	42.6
7	151	53.2	320	19.1		06.3	249	58.2		18.3	78	34.0		43.0	299	28.0		42.7
8	166	55.7	335	18.8		07.4	264	58.6		18.4	93	36.8		43.0	314	30.1		42.8
9	181	58.2	350	18.4		08.6	279	59.0		18.5	108	39.5		42.9	329	32.3		42.9
10	197	00.6	5	18.0		09.8	294	59.5		18.6	123	42.2		42.9	344	34.5		43.0
11	212	03.1	20	17.7	-3	10.9	309	59.9	-24	18.7	138	45.0	+21	42.9	359	36.7	-10	43.1
12	227	05.6	35	17.3	-3	12.1	325	00.3	-24	18.8	153	47.7	+21	42.8	14	38.9	-10	43.2
13	242	08.0	50	16.9		13.2	340	00.7		19.0	168	50.5		42.8	29	41.0		43.3
14	257	10.5	65	16.6		14.4	355	01.2		19.1	183	53.2		42.8	44	43.2		43.4
15	272	13.0	80	16.2		15.5	10	01.6		19.2	198	56.0		42.8	59	45.4		43.5
16	287	15.4	95	15.8		16.7	25	02.0		19.3	213	58.7		42.7	74	47.6		43.6
17	302	17.9	110	15.5	-3	17.9	40	02.4	-24	19.4	229	01.4	+21	42.7	89	49.7	-10	43.7
18	317	20.3	125	15.1	-3	19.0	55	02.9	-24	19.5	244	04.2	+21	42.7	104	51.9	-10	43.8
19	332	22.8	140	14.7		20.2	70	03.3		19.6	259	06.9		42.6	119	54.1		43.9
20	347	25.3	155	14.4		21.3	85	03.7		19.7	274	09.7		42.6	134	56.3		44.0
21	2	27.7	170	14.0		22.5	100	04.1		19.8	289	12.4		42.6	149	58.5		44.1
22	17	30.2	185	13.6		23.6	115	04.6		20.0	304	15.2		42.6	165	00.6		44.2
23	32	32.7	200	13.2		24.8	130	05.0		20.1	319	17.9		42.5	180	02.8		44.3
24	47	35.1	215	12.9	-3	26.0	145	05.4	-24	20.2	334	20.7	+21	42.5	195	05.0	-10	44.4
Dif	—		-4		-12		+4		-1		+27		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 23 ^d 5 PHE { 4 ^h : 56 ^m /9 12 ^h : 57 ^m /2 20 ^h : 57 ^m /5												
	PMG: 11 ^h 43 ^m 8			SD: 15 ^h 5 PMG: 6 ^h 54 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	184	03.9	-16	37.2	259	42.8	+7 21.5	60 N	6 03	6 54	7 41	** ** *	**	13 40	13	
1	199	03.9		38.0	274	14.5 ¹²⁷	+7 10.6 ¹⁰⁹	58	6 00	47	31	** ** *	**	37 16		
2	214	03.8		38.7	288	46.2 ¹²⁷	+6 59.7 ¹⁰⁹	56	5 57	42	23	** ** *	**	35 18		
3	229	03.8		39.4	303	17.9 ¹²⁷	48.7 ¹¹⁰	54	54	36	15	0 01 75		33 20		
4	244	03.8		40.1	317	49.5 ¹²⁶	37.6 ¹¹¹	52	51	31	08	04 73		31 22		
5	259	03.7	-16	40.9	332	21.2 ¹²⁷	+6 26.5 ¹¹¹	50	5 48	6 27	7 02	0 07 71		13 29 24		
6	274	03.7	-16	41.6	346	52.8 ¹²⁶	+6 15.3 ¹¹²	45	5 42	6 17	6 48	0 13 67		13 25 28		
7	289	03.6		42.3	1	24.4 ¹²⁶	+6 04.1 ¹¹²	40	36	09	37	18 64		22 31		
8	304	03.6		43.0	15	55.9 ¹²⁵	+5 52.9 ¹¹²	35	31	6 01	28	22 61		19 34		
9	319	03.5		43.7	30	27.5 ¹²⁶	41.6 ¹¹³	30	26	5 55	20	26 58		17 36		
10	334	03.5		44.5	44	59.0 ¹²⁵	30.3 ¹¹³	20	16	42	6 05	32 55		13 40		
11	349	03.4	-16	45.2	59	30.5 ¹²⁵	+5 18.9 ¹¹⁴	10 N	5 05	5 30	5 52	0 38 50		13 09 44		
12	4	03.4	-16	45.9	74	02.0 ¹²⁵	+5 07.5 ¹¹⁴	0	4 54	5 19	5 40	0 43 47		13 05 48		
13	19	03.3		46.6	88	33.4 ¹²⁴	+4 56.1 ¹¹⁴	10 S	40	5 06	28	48 44		13 02 51		
14	34	03.3		47.3	103	04.8 ¹²⁴	44.6 ¹¹⁵	20	24	4 52	15	0 54 40		12 58 55		
15	49	03.2		48.0	117	36.2 ¹²⁴	33.1 ¹¹⁵	30	4 04	34	5 00	1 00 36		53 60		
16	64	03.2		48.8	132	07.6 ¹²⁴	21.5 ¹¹⁶	35	3 50	24	4 51	04 34		51 62		
17	79	03.1	-16	49.5	146	39.0 ¹²⁴	+4 09.9 ¹¹⁶	40	3 35	4 11	4 41	1 08 31		12 48 65		
18	94	03.1	-16	50.2	161	10.3 ¹²³	+3 58.2 ¹¹⁷	45	3 14	3 56	4 29	1 13 28		12 45 68		
19	109	03.0		50.9	175	41.6 ¹²³	46.6 ¹¹⁶	50	2 48	37	14	19 24		40 73		
20	124	03.0		51.6	190	12.8 ¹²²	34.8 ¹¹⁸	52	34	27	07	21 23		39 74		
21	139	02.9		52.3	204	44.0 ¹²²	23.1 ¹¹⁷	54	2 18	17	4 00	24 21		36 77		
22	154	02.9		53.1	219	15.2 ¹²²	+3 11.3 ¹¹⁸	56	1 59	3 05	3 51	27 19		34 79		
23	169	02.8		53.8	233	46.4 ¹²²	+2 59.5 ¹¹⁸	58	1 33	2 51	42	31 16		32 81		
24	184	02.8	-16	54.5	248	17.5 ¹²¹	+2 47.7 ¹¹⁸	60 S	0 56	2 34	3 31	1 35 13		12 29 84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 46 ^m 2		Mag: -4.0 PMG: 9 ^h 39 ^m			Mag: +1.2 PMG: 14 ^h 19 ^m			Mag: -2.8 PMG: 1 ^h 42 ^m			Mag: +0.6 PMG: 10 ^h 58 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'	
0	47	35.1	215	12.9	-3	26.0	145	05.4	-24	20.2	334	20.7	+21	42.5	195	05.0
1	62	37.6	230	12.5		27.1	160	05.8		20.3	349	23.4		42.5	210	07.2
2	77	40.1	245	12.1		28.3	175	06.2		20.4	4	26.2		42.4	225	09.3
3	92	42.5	260	11.8		29.4	190	06.7		20.5	19	28.9		42.4	240	11.5
4	107	45.0	275	11.4		30.6	205	07.1		20.6	34	31.7		42.4	255	13.7
5	122	47.5	290	11.0	-3	31.7	220	07.5	-24	20.7	49	34.4	+21	42.4	270	15.9
6	137	49.9	305	10.7	-3	32.9	235	07.9	-24	20.8	64	37.2	+21	42.3	285	18.1
7	152	52.4	320	10.3		34.0	250	08.3		20.9	79	39.9		42.3	300	20.2
8	167	54.8	335	09.9		35.2	265	08.8		21.0	94	42.7		42.3	315	22.4
9	182	57.3	350	09.5		36.4	280	09.2		21.1	109	45.4		42.2	330	24.6
10	197	59.8	5	09.2		37.5	295	09.6		21.2	124	48.1		42.2	345	26.8
11	213	02.2	20	08.8	-3	38.7	310	10.0	-24	21.3	139	50.9	+21	42.2	0	28.9
12	228	04.7	35	08.4	-3	39.8	325	10.4	-24	21.4	154	53.6	+21	42.1	15	31.1
13	243	07.2	50	08.1		41.0	340	10.9		21.5	169	56.4		42.1	30	33.3
14	258	09.6	65	07.7		42.1	355	11.3		21.6	184	59.1		42.1	45	35.5
15	273	12.1	80	07.3		43.3	10	11.7		21.7	200	01.9		42.1	60	37.7
16	288	14.6	95	06.9		44.5	25	12.1		21.8	215	04.7		42.0	75	39.8
17	303	17.0	110	06.6	-3	45.6	40	12.5	-24	21.9	230	07.4	+21	42.0	90	42.0
18	318	19.5	125	06.2	-3	46.8	55	13.0	-24	22.0	245	10.2	+21	42.0	105	44.2
19	333	21.9	140	05.8		47.9	70	13.4		22.1	260	12.9		41.9	120	46.4
20	348	24.4	155	05.4		49.1	85	13.8		22.2	275	15.7		41.9	135	48.5
21	3	26.9	170	05.1		50.2	100	14.2		22.3	290	18.4		41.9	150	50.7
22	18	29.3	185	04.7		51.4	115	14.6		22.4	305	21.2		41.9	165	52.9
23	33	31.8	200	04.3		52.5	130	15.1		22.5	320	23.9		41.8	180	55.1
24	48	34.3	215	03.9	-3	53.7	145	15.5	-24	22.6	335	26.7	+21	41.8	195	57.3
Dif	—		-4	-12		+4	-1			+27	0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9			Edad: 24 ^d 5 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 2 20 ^h : 58 ^m 5 PMG: 7 ^h 42 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	184	02.8	-16	54.5	248	17.5	+2	47.7	60 N	15 43	16 31	17 21	1 13 85	13 53 14				
1	199	02.7		55.2	262	48.6 ¹²¹		35.8 ¹¹⁹	58	15 53	37	25	14 83	53 16				
2	214	02.7		55.9	277	19.7 ¹²¹		23.9 ¹¹⁹	56	16 02	43	28	15 81	53 19				
3	229	02.6		56.6	291	50.7 ¹²⁰	+2	11.9 ¹²⁰	54	10	49	32	16 78	53 21				
4	244	02.5		57.3	306	21.7 ¹²⁰	+2	00.0 ¹¹⁹	52	17	54	35	17 76	53 23				
5	259	02.5	-16	58.0	320	52.6 ¹¹⁹	+1	48.0 ¹²⁰	50	16 24	16 59	17 37	1 18 74	13 53 25				
6	274	02.4	-16	58.7	335	23.5 ¹¹⁹	+1	36.0 ¹²⁰	45	16 37	17 09	17 44	1 20 70	13 53 29				
7	289	02.4	-16	59.5	349	54.4 ¹¹⁹		23.9 ¹²¹	40	49	17	50	22 66	53 32				
8	304	02.3	-17	00.2	4	25.2 ¹¹⁸	+1	11.8 ¹²¹	35	16 58	25	17 55	23 64	53 35				
9	319	02.3		00.9	18	56.0 ¹¹⁸	+0	59.7 ¹²¹	30	17 07	32	18 01	24 61	53 38				
10	334	02.2		01.6	33	26.7 ¹¹⁷		47.6 ¹²¹	20	22	45	11	27 56	53 42				
11	349	02.1	-17	02.3	47	57.4 ¹¹⁷	+0	35.5 ¹²¹	10 N	17 35	17 57	18 22	1 28 53	13 53 46				
12	4	02.1	-17	03.0	62	28.1 ¹¹⁷	+0	23.3 ¹²²	0	17 47	18 09	18 34	1 30 49	13 53 50				
13	19	02.0		03.7	76	58.7 ¹¹⁶	+0	11.2 ¹²¹	10 S	18 00	22	18 48	32 45	53 54				
14	34	02.0		04.4	91	29.2 ¹¹⁵	-0	01.0 ¹²²	20	13	37	19 04	34 41	53 58				
15	49	01.9		05.1	105	59.7 ¹¹⁵		13.3 ¹²³	30	29	18 55	26	36 37	53 62				
16	64	01.9		05.8	120	30.2 ¹¹⁵		25.5 ¹²²	35	38	19 06	39	38 34	53 65				
17	79	01.8	-17	06.5	135	00.6 ¹¹⁴	-0	37.7 ¹²²	40	18 49	19 19	19 55	1 39 32	13 53 68				
18	94	01.7	-17	07.2	149	31.0 ¹¹⁴	-0	50.0 ¹²³	45	19 01	19 34	20 16	1 41 28	13 53 71				
19	109	01.7		07.9	164	01.3 ¹¹³	-1	02.3 ¹²³	50	16	19 54	44	43 24	53 75				
20	124	01.6		08.6	178	31.6 ¹¹³		14.6 ¹²³	52	23	20 04	20 58	44 22	53 77				
21	139	01.6		09.3	193	01.8 ¹¹²		26.9 ¹²³	54	31	14	21 15	45 20	53 79				
22	154	01.5		10.0	207	32.0 ¹¹²		39.2 ¹²³	56	40	27	21 35	46 18	53 82				
23	169	01.4		10.7	222	02.1 ¹¹¹	-1	51.5 ¹²³	58	19 50	42	22 03	47 16	53 84				
24	184	01.4	-17	11.4	236	32.1 ¹¹⁰	-2	03.8 ¹²³	60 S	20 01	20 59	22 48	1 48 14	13 53 87				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 20 ^h 42 ^m 3		Mag: -4.0 PMG: 9 ^h 40 ^m			Mag: +1.2 PMG: 14 ^h 19 ^m			Mag: -2.8 PMG: 1 ^h 38 ^m				Mag: +0.6 PMG: 10 ^h 55 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	48	34.3	215	03.9	-3	53.7	145	15.5	-24	22.6	335	26.7	+21	41.8	195	57.3	-10	46.7
1	63	36.7	230	03.6		54.9	160	15.9		22.7	350	29.4		41.8	210	59.4		46.8
2	78	39.2	245	03.2		56.0	175	16.3		22.8	5	32.2		41.7	226	01.6		46.9
3	93	41.7	260	02.8		57.2	190	16.7		22.9	20	34.9		41.7	241	03.8		47.0
4	108	44.1	275	02.4		58.3	205	17.1		23.0	35	37.7		41.7	256	06.0		47.1
5	123	46.6	290	02.1	-3	59.5	220	17.6	-24	23.1	50	40.4	+21	41.6	271	08.2	-10	47.2
6	138	49.1	305	01.7	-4	00.6	235	18.0	-24	23.2	65	43.2	+21	41.6	286	10.3	-10	47.3
7	153	51.5	320	01.3		01.8	250	18.4		23.3	80	45.9		41.6	301	12.5		47.4
8	168	54.0	335	00.9		02.9	265	18.8		23.4	95	48.7		41.6	316	14.7		47.5
9	183	56.4	350	00.6		04.1	280	19.2		23.5	110	51.5		41.5	331	16.9		47.6
10	198	58.9	5	00.2		05.2	295	19.6		23.6	125	54.2		41.5	346	19.0		47.7
11	214	01.4	19	59.8	-4	06.4	310	20.1	-24	23.7	140	57.0	+21	41.5	1	21.2	-10	47.8
12	229	03.8	34	59.4	-4	07.6	325	20.5	-24	23.8	155	59.7	+21	41.4	16	23.4	-10	47.9
13	244	06.3	49	59.1		08.7	340	20.9		23.9	171	02.5		41.4	31	25.6		48.0
14	259	08.8	64	58.7		09.9	355	21.3		24.0	186	05.2		41.4	46	27.8		48.1
15	274	11.2	79	58.3		11.0	10	21.7		24.1	201	08.0		41.4	61	29.9		48.2
16	289	13.7	94	57.9		12.2	25	22.1		24.1	216	10.7		41.3	76	32.1		48.3
17	304	16.2	109	57.6	-4	13.3	40	22.6	-24	24.2	231	13.5	+21	41.3	91	34.3	-10	48.4
18	319	18.6	124	57.2	-4	14.5	55	23.0	-24	24.3	246	16.3	+21	41.3	106	36.5	-10	48.5
19	334	21.1	139	56.8		15.6	70	23.4		24.4	261	19.0		41.2	121	38.7		48.6
20	349	23.6	154	56.4		16.8	85	23.8		24.5	276	21.8		41.2	136	40.8		48.7
21	4	26.0	169	56.0		17.9	100	24.2		24.6	291	24.5		41.2	151	43.0		48.8
22	19	28.5	184	55.7		19.1	115	24.6		24.7	306	27.3		41.1	166	45.2		48.9
23	34	30.9	199	55.3		20.3	130	25.0		24.8	321	30.1		41.1	181	47.4		49.0
24	49	33.4	214	54.9	-4	21.4	145	25.5	-24	24.9	336	32.8	+21	41.1	196	49.5	-10	49.1
Dif	—		-4		-12		+4		-1		+28		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 25 ^d 5 PHE { SD: 16'0 PMG: 8 ^h 31 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	01.4	-17	11.4	236	32.1	-2	03.8	60 N	6 08	6 58	7 46	2 38	90	14 07	16		
1	199	01.3		12.1	251	02.1		16.2	58	04	52	36	37	86	09	19		
2	214	01.2		12.8	265	32.0		28.5	56	6 00	45	27	36	83	12	21		
3	229	01.2		13.5	280	01.9		40.8	54	5 57	40	19	34	82	14	24		
4	244	01.1		14.2	294	31.8		53.2	52	54	35	12	33	79	16	26		
5	259	01.1	-17	14.9	309	01.5		05.5	50	5 51	6 30	7 05	2 32	77	14 18	28		
6	274	01.0	-17	15.6	323	31.2		17.9	45	5 45	6 20	6 51	2 30	73	14 22	32		
7	289	00.9		16.3	338	00.9		30.2	40	39	11	40	28	70	25	35		
8	304	00.9		17.0	352	30.5		42.6	35	33	6 03	30	27	66	28	38		
9	319	00.8		17.7	7	00.0		54.9	30	27	5 56	21	25	64	31	40		
10	334	00.7		18.4	21	29.4		07.3	20	17	43	6 06	23	59	35	45		
11	349	00.7	-17	19.1	35	58.8		19.6	10 N	5 06	5 31	5 53	2 21	55	14 39	49		
12	4	00.6	-17	19.8	50	28.2		31.9	0	4 54	5 19	5 40	2 19	51	14 43	53		
13	19	00.5		20.5	64	57.4		44.3	10 S	40	5 06	28	17	48	47	56		
14	34	00.5		21.2	79	26.6		56.6	20	23	4 51	5 14	15	44	51	60		
15	49	00.4		21.9	93	55.7		08.9	30	4 02	33	4 59	13	39	55	65		
16	64	00.3		22.6	108	24.8		21.2	35	3 48	22	49	12	36	14 58	68		
17	79	00.3	-17	23.3	122	53.8		33.4	40	3 32	4 09	4 39	2 11	33	15 01	71		
18	94	00.2	-17	23.9	137	22.7		45.7	45	3 11	3 53	4 26	2 09	30	15 04	75		
19	109	00.1		24.6	151	51.6		58.0	50	2 44	33	11	07	26	08	79		
20	124	00.0		25.3	166	20.4		10.2	52	29	24	4 04	06	25	10	81		
21	139	00.0		26.0	180	49.1		22.4	54	2 13	13	3 56	05	23	12	83		
22	153	59.9		26.7	195	17.7		34.6	56	1 52	3 00	47	04	20	15	85		
23	168	59.8		27.4	209	46.3		46.8	58	1 24	2 45	37	03	18	17	88		
24	183	59.8	-17	28.1	224	14.8		58.9	60 S	0 39	2 28	3 26	2 02	15	15 20	91		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 38 ^m 4		Mag: -4.0 PMG: 9 ^h 41 ^m			Mag: +1.2 PMG: 14 ^h 18 ^m			Mag: -2.8 PMG: 1 ^h 34 ^m			Mag: +0.6 PMG: 10 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	49	33.4	214	54.9	-4	21.4	145	25.5	-24	24.9	336	32.8	+21	41.1	196	49.5	-10	49.1
1	64	35.9	229	54.5		22.6	160	25.9		24.9	351	35.6		41.0	211	51.7		49.2
2	79	38.3	244	54.1		23.7	175	26.3		25.0	6	38.3		41.0	226	53.9		49.3
3	94	40.8	259	53.8		24.9	190	26.7		25.1	21	41.1		41.0	241	56.1		49.4
4	109	43.3	274	53.4		26.0	205	27.1		25.2	36	43.9		41.0	256	58.3		49.5
5	124	45.7	289	53.0	-4	27.2	220	27.5	-24	25.3	51	46.6	+21	40.9	272	00.4	-10	49.6
6	139	48.2	304	52.6	-4	28.3	235	27.9	-24	25.4	66	49.4	+21	40.9	287	02.6	-10	49.7
7	154	50.7	319	52.2		29.5	250	28.3		25.5	81	52.1		40.9	302	04.8		49.8
8	169	53.1	334	51.9		30.6	265	28.8		25.5	96	54.9		40.8	317	07.0		49.9
9	184	55.6	349	51.5		31.8	280	29.2		25.6	111	57.7		40.8	332	09.2		50.0
10	199	58.0	4	51.1		32.9	295	29.6		25.7	127	00.4		40.8	347	11.3		50.1
11	215	00.5	19	50.7	-4	34.1	310	30.0	-24	25.8	142	03.2	+21	40.7	2	13.5	-10	50.2
12	230	03.0	34	50.3	-4	35.3	325	30.4	-24	25.9	157	05.9	+21	40.7	17	15.7	-10	50.3
13	245	05.4	49	49.9		36.4	340	30.8		25.9	172	08.7		40.7	32	17.9		50.4
14	260	07.9	64	49.6		37.6	355	31.2		26.0	187	11.5		40.7	47	20.1		50.4
15	275	10.4	79	49.2		38.7	10	31.6		26.1	202	14.2		40.6	62	22.2		50.5
16	290	12.8	94	48.8		39.9	25	32.1		26.2	217	17.0		40.6	77	24.4		50.6
17	305	15.3	109	48.4	-4	41.0	40	32.5	-24	26.3	232	19.8	+21	40.6	92	26.6	-10	50.7
18	320	17.8	124	48.0	-4	42.2	55	32.9	-24	26.3	247	22.5	+21	40.5	107	28.8	-10	50.8
19	335	20.2	139	47.6		43.3	70	33.3		26.4	262	25.3		40.5	122	30.9		50.9
20	350	22.7	154	47.3		44.5	85	33.7		26.5	277	28.0		40.5	137	33.1		51.0
21	5	25.2	169	46.9		45.6	100	34.1		26.6	292	30.8		40.4	152	35.3		51.1
22	20	27.6	184	46.5		46.8	115	34.5		26.7	307	33.6		40.4	167	37.5		51.2
23	35	30.1	199	46.1		47.9	130	34.9		26.7	322	36.3		40.4	182	39.7		51.3
24	50	32.5	214	45.7	-4	49.1	145	35.3	-24	26.8	337	39.1	+21	40.3	197	41.8	-10	51.4
Dif	—		-4		-12		+4		-1		+28		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna													
	SD: 16'2 PMG: 11 ^h 44 ^m 1			Edad: 26 ^d 5 PHE { 4 ^h : 59'7 12 ^h : 60'0 20 ^h : 60'3 R°: 55 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m												
0	183	59.8	-17	28.1	224	14.8	-6	58.9	60 N	15 39	16 27	17 18	4 08 93	14 23 20													
1	198	59.7		28.8	238	43.2	94	-7 11.0 ¹²¹	58	49	34	22	4 03 90	28 23													
2	213	59.6		29.5	253	11.5	93	23.1 ¹²¹	56	15 59	40	25	3 59 87	33 26													
3	228	59.5		30.1	267	39.8	93	35.2 ¹²¹	54	16 07	46	29	56 84	38 28													
4	243	59.5		30.8	282	08.0	92	47.2 ¹²⁰	52	14	51	32	52 83	42 30													
5	258	59.4	-17	31.5	296	36.1	91	-7 59.2 ¹²⁰	50	16 21	16 56	17 35	3 49 81	14 46 32													
6	273	59.3	-17	32.2	311	04.1	90	-8 11.2 ¹²⁰	45	16 35	17 07	17 42	3 43 76	14 54 36													
7	288	59.3		32.9	325	32.1	90	23.2 ¹²⁰	40	47	16	48	38 72	15 00 40													
8	303	59.2		33.6	339	59.9	88	35.1 ¹¹⁹	35	16 57	24	17 54	33 69	06 43													
9	318	59.1		34.2	354	27.7	88	46.9 ¹¹⁸	30	17 06	31	18 00	29 67	11 45													
10	333	59.0		34.9	8	55.4	87	-8 58.8 ¹¹⁹	20	21	44	11	22 62	20 50													
11	348	59.0	-17	35.6	23	23.1	87	-9 10.6 ¹¹⁸	10 N	17 35	17 57	18 22	3 16 58	15 28 53													
12	3	58.9	-17	36.3	37	50.6	85	-9 22.3 ¹¹⁷	0	17 48	18 09	18 35	3 10 55	15 36 56													
13	18	58.8		37.0	52	18.1	85	34.0 ¹¹⁷	10 S	18 01	23	18 49	3 05 51	43 60													
14	33	58.7		37.7	66	45.5	84	45.7 ¹¹⁷	20	15	38	19 06	2 59 47	15 51 64													
15	48	58.7		38.3	81	12.8	83	-9 57.3 ¹¹⁶	30	31	18 57	28	52 43	16 00 68													
16	63	58.6		39.0	95	40.0	82	-10 08.9 ¹¹⁶	35	40	19 08	41	48 41	06 70													
17	78	58.5	-17	39.7	110	07.2	82	-10 20.4 ¹¹⁵	40	18 51	19 21	19 58	2 44 37	16 12 73													
18	93	58.4	-17	40.4	124	34.2	80	-10 31.9 ¹¹⁵	45	19 04	19 37	20 20	2 39 34	16 19 76													
19	108	58.3		41.1	139	01.2	80	43.3 ¹¹⁴	50	19	19 58	20 48	33 30	27 81													
20	123	58.3		41.7	153	28.1	79	-10 54.7 ¹¹⁴	52	27	20 08	21 03	31 28	31 83													
21	138	58.2		42.4	167	54.9	78	-11 06.0 ¹¹³	54	35	19	21	28 26	35 85													
22	153	58.1		43.1	182	21.6	77	17.2 ¹¹²	56	44	32	21 43	24 24	40 87													
23	168	58.0		43.8	196	48.2	76	28.4 ¹¹²	58	19 55	20 48	22 14	21 21	45 91													
24	183	57.9	-17	44.4	211	14.7	75	-11 39.5 ¹¹¹	60 S	20 07	21 06	23 12	2 17 18	16 51 94													
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 34 ^m 5			Mag: -4.0 PMG: 9 ^h 41 ^m			Mag: +1.2 PMG: 14 ^h 17 ^m			Mag: -2.8 PMG: 1 ^h 29 ^m			Mag: +0.6 PMG: 10 ^h 48 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	50	32.5	214	45.7	-4	49.1	145	35.3	-24	26.8	337	39.1	+21	40.3	197	41.8	-10	51.4									
1	65	35.0	229	45.3		50.2	160	35.7		26.9	352	41.9		40.3	212	44.0		51.5									
2	80	37.5	244	45.0		51.4	175	36.2		27.0	7	44.6		40.3	227	46.2		51.6									
3	95	39.9	259	44.6		52.5	190	36.6		27.0	22	47.4		40.3	242	48.4		51.7									
4	110	42.4	274	44.2		53.7	205	37.0		27.1	37	50.2		40.2	257	50.6		51.8									
5	125	44.9	289	43.8	-4	54.8	220	37.4	-24	27.2	52	52.9	+21	40.2	272	52.7	-10	51.9									
6	140	47.3	304	43.4	-4	56.0	235	37.8	-24	27.3	67	55.7	+21	40.2	287	54.9	-10	52.0									
7	155	49.8	319	43.0		57.1	250	38.2		27.3	82	58.5		40.1	302	57.1		52.1									
8	170	52.3	334	42.6		58.3	265	38.6		27.4	98	01.2		40.1	317	59.3		52.2									
9	185	54.7	349	42.2	-4	59.4	280	39.0		27.5	113	04.0		40.1	333	01.5		52.3									
10	200	57.2	4	41.9	-5	00.6	295	39.4		27.5	128	06.8		40.0	348	03.6		52.4									
11	215	59.6	19	41.5	-5	01.7	310	39.8	-24	27.6	143	09.5	+21	40.0	3	05.8	-10	52.5									
12	231	02.1	34	41.1	-5	02.9	325	40.2	-24	27.7	158	12.3	+21	40.0	18	08.0	-10	52.6									
13	246	04.6	49	40.7		04.0	340	40.6		27.8	173	15.1		39.9	33	10.2		52.7									
14	261	07.0	64	40.3		05.2	355	41.1		27.8	188	17.8		39.9	48	12.4		52.8									
15	276	09.5	79	39.9		06.3	10	41.5		27.9	203	20.6		39.9	63	14.5		52.9									
16	291	12.0	94	39.5		07.5	25	41.9		28.0	218	23.4		39.8	78	16.7		53.0									
17	306	14.4	109	39.1	-5	08.6	40	42.3	-24	28.0	233	26.1	+21	39.8	93	18.9	-10	53.1									
18	321	16.9	124	38.8	-5	09.8	55	42.7	-24	28.1	248	28.9	+21	39.8	108	21.1	-10	53.2									
19	336	19.4	139	38.4		10.9	70	43.1		28.2	263	31.7		39.8	123	23.3		53.3									
20	351	21.8	154	38.0		12.1	85	43.5		28.2	278	34.4		39.7	138	25.4		53.4									
21	6	24.3	169	37.6		13.2	100	43.9		28.3	293	37.2		39.7	153	27.6		53.5									
22	21	26.8	184	37.2		14.4	115	44.3		28.4	308	40.0		39.7	168	29.8		53.6									
23	36	29.2	199	36.8		15.5	130	44.7		28.4	323	42.7		39.6	183	32.0		53.7									
24	51	31.7	214	36.4	-5	16.7	145	45.1	-24	28.5	338	45.5	+21	39.6	198	34.2	-10	53.7									
Dif	—			-4			-12			+4			-1			+28			0			+22			-		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 44 ^m 2			Edad: 27 ^d 5 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'9 R°: 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	57.9	-17	44.4	211	14.7	-11	39.5	60 N	6 12	7 03	7 51	5 41	94	14 43	27	
1	198	57.9		45.1	225	41.2	75	-11	50.6	08	6 56	40	33	91	51	31	
2	213	57.8		45.8	240	07.6	74	-12	01.6	04	49	31	26	88	14 59	33	
3	228	57.7		46.5	254	33.9	73		12.6	6 00	43	23	20	85	15 06	35	
4	243	57.6		47.1	269	00.1	72		23.4	5 57	38	15	15	83	12	37	
5	258	57.5	-17	47.8	283	26.2	71	-12	34.2	5 54	6 33	7 08	5 10	81	15 18	39	
6	273	57.5	-17	48.5	297	52.2	70	-12	44.9	5 47	6 22	6 54	4 59	77	15 30	43	
7	288	57.4		49.1	312	18.1	69	-12	55.6	41	13	42	50	74	40	46	
8	303	57.3		49.8	326	44.0	69	-13	06.2	35	6 05	32	42	71	49	48	
9	318	57.2		50.5	341	09.7	67		16.7	30	5 58	23	36	68	15 56	51	
10	333	57.1		51.2	355	35.4	67		27.1	18	44	6 07	24	65	16 10	53	
11	348	57.0	-17	51.8	10	01.0	66	-13	37.5	10 N	5 06	5 32	5 54	4 14	62	16 21	57
12	3	57.0	-17	52.5	24	26.5	65	-13	47.7	0	4 54	5 19	5 41	4 05	58	16 32	60
13	18	56.9		53.2	38	51.9	64	-13	57.9	10 S	40	5 05	28	3 56	55	43	63
14	33	56.8		53.8	53	17.2	63	-14	08.0	20	22	4 50	5 14	46	51	16 55	65
15	48	56.7		54.5	67	42.5	63		18.0	30	4 00	31	4 57	35	47	17 08	69
16	63	56.6		55.2	82	07.6	61		27.9	35	3 46	20	48	29	45	16	71
17	78	56.5	-17	55.8	96	32.7	61	-14	37.8	40	3 30	4 07	4 37	3 21	43	17 25	74
18	93	56.4	-17	56.5	110	57.7	60	-14	47.5	45	3 08	3 50	4 24	3 13	40	17 35	77
19	108	56.3		57.2	125	22.6	59	-14	57.2	50	2 39	30	08	3 03	36	48	80
20	123	56.3		57.8	139	47.4	58	-15	06.7	52	25	20	4 01	2 59	33	17 54	82
21	138	56.2		58.5	154	12.1	57		16.2	54	2 07	3 09	3 53	54	31	18 00	84
22	153	56.1		59.2	168	36.8	57		25.5	56	1 44	2 55	43	48	29	07	87
23	168	56.0	-17	59.8	183	01.3	55		34.8	58	1 14	40	33	42	26	16	89
24	183	55.9	-18	00.5	197	25.8	55	-15	43.9	60 S	0 15	2 21	3 21	2 35	23	18 25	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 30 ^m 5		Mag: -3.9 PMG: 9 ^h 42 ^m		Mag: +1.2 PMG: 14 ^h 17 ^m		Mag: -2.8 PMG: 1 ^h 25 ^m		Mag: +0.6 PMG: 10 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	51	31.7	214	36.4	-5	16.7	145	45.1	-24	28.5	338	45.5	+21	39.6	198	34.2	-10	53.7
1	66	34.1	229	36.0		17.8	160	45.5		28.6	353	48.3		39.6	213	36.3		53.8
2	81	36.6	244	35.6		19.0	175	45.9		28.6	8	51.1		39.5	228	38.5		53.9
3	96	39.1	259	35.2		20.1	190	46.3		28.7	23	53.8		39.5	243	40.7		54.0
4	111	41.5	274	34.8		21.3	205	46.7		28.8	38	56.6		39.5	258	42.9		54.1
5	126	44.0	289	34.5	-5	22.4	220	47.1	-24	28.8	53	59.4	+21	39.4	273	45.1	-10	54.2
6	141	46.5	304	34.1	-5	23.6	235	47.6	-24	28.9	69	02.1	+21	39.4	288	47.2	-10	54.3
7	156	48.9	319	33.7		24.7	250	48.0		28.9	84	04.9		39.4	303	49.4		54.4
8	171	51.4	334	33.3		25.9	265	48.4		29.0	99	07.7		39.3	318	51.6		54.5
9	186	53.9	349	32.9		27.0	280	48.8		29.1	114	10.5		39.3	333	53.8		54.6
10	201	56.3	4	32.5		28.2	295	49.2		29.1	129	13.2		39.3	348	56.0		54.7
11	216	58.8	19	32.1	-5	29.3	310	49.6	-24	29.2	144	16.0	+21	39.2	3	58.1	-10	54.8
12	232	01.3	34	31.7	-5	30.5	325	50.0	-24	29.2	159	18.8	+21	39.2	19	00.3	-10	54.9
13	247	03.7	49	31.3		31.6	340	50.4		29.3	174	21.6		39.2	34	02.5		55.0
14	262	06.2	64	30.9		32.8	355	50.8		29.4	189	24.3		39.1	49	04.7		55.1
15	277	08.6	79	30.5		33.9	10	51.2		29.4	204	27.1		39.1	64	06.9		55.2
16	292	11.1	94	30.1		35.1	25	51.6		29.5	219	29.9		39.1	79	09.0		55.3
17	307	13.6	109	29.7	-5	36.2	40	52.0	-24	29.5	234	32.6	+21	39.1	94	11.2	-10	55.4
18	322	16.0	124	29.3	-5	37.4	55	52.4	-24	29.6	249	35.4	+21	39.0	109	13.4	-10	55.5
19	337	18.5	139	28.9		38.5	70	52.8		29.7	264	38.2		39.0	124	15.6		55.6
20	352	21.0	154	28.5		39.7	85	53.2		29.7	279	41.0		39.0	139	17.8		55.7
21	7	23.4	169	28.2		40.8	100	53.6		29.8	294	43.7		38.9	154	19.9		55.8
22	22	25.9	184	27.8		41.9	115	54.0		29.8	309	46.5		38.9	169	22.1		55.9
23	37	28.4	199	27.4		43.1	130	54.4		29.9	324	49.3		38.9	184	24.3		56.0
24	52	30.8	214	27.0	-5	44.2	145	54.8	-24	29.9	339	52.1	+21	38.8	199	26.5	-10	56.1
Dif	—		-4		-11		+4		-1		+28		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 44 ^m 3			Edad: 28 ^d 5 PHE { 4 ^h : 61°1 12 ^h : 61°2 20 ^h : 61°3 R°: 63 ^m SD: 16°6 PMG: 11 ^h 17 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	55.9	-18 00.5	197	25.8	-15 43.9	91	60 N	15 34	16 23	17 14	7 15 90	15 10 39	
1	198	55.8	01.1	211	50.2	-15 53.0	91	58	45	30	18	7 04 87	22 41	
2	213	55.7	01.8	226	14.5	-16 01.9	89	56	15 55	37	22	6 54 84	32 44	
3	228	55.6	02.5	240	38.8	10.8	89	54	16 04	43	26	45 83	41 46	
4	243	55.5	03.1	255	02.9	19.5	87	52	11	48	29	38 80	49 48	
5	258	55.5	-18 03.8	269	27.0	-16 28.1	86	50	16 18	16 53	17 33	6 31 79	15 57 48	
6	273	55.4	-18 04.4	283	51.0	-16 36.6	85	45	16 33	17 05	17 40	6 16 76	16 13 51	
7	288	55.3	05.1	298	14.9	45.0	84	40	45	14	47	6 04 73	26 53	
8	303	55.2	05.8	312	38.8	-16 53.3	83	35	16 56	22	53	5 53 72	37 55	
9	318	55.1	06.4	327	02.5	-17 01.4	81	30	17 05	30	17 59	44 70	16 47 56	
10	333	55.0	07.1	341	26.2	09.5	81	20	21	44	18 10	29 66	17 03 59	
11	348	54.9	-18 07.7	355	49.8	-17 17.4	79	10 N	17 35	17 57	18 22	5 16 63	17 18 61	
12	3	54.8	-18 08.4	10	13.4	-17 25.2	78	0	17 48	18 10	18 35	5 03 62	17 32 63	
13	18	54.7	09.0	24	36.8	32.9	77	10 S	18 01	23	18 50	4 51 59	17 46 64	
14	33	54.6	09.7	39	00.2	40.4	75	20	16	39	19 07	37 57	18 00 67	
15	48	54.5	10.4	53	23.6	47.9	75	30	32	18 58	30	22 54	17 69	
16	63	54.4	11.0	67	46.8	-17 55.2	73	35	42	19 10	19 44	14 51	27 70	
17	78	54.3	-18 11.7	82	10.0	-18 02.3	71	40	18 53	19 24	20 01	4 04 50	18 39 71	
18	93	54.2	-18 12.3	96	33.1	-18 09.4	71	45	19 07	19 40	20 23	3 53 47	18 52 73	
19	108	54.1	13.0	110	56.2	16.3	69	50	23	20 02	20 53	39 43	19 08 76	
20	123	54.0	13.6	125	19.2	23.1	68	52	30	12	21 08	32 42	16 77	
21	138	53.9	14.3	139	42.1	29.7	66	54	39	24	27	25 41	24 79	
22	153	53.8	14.9	154	05.0	36.2	65	56	49	37	21 51	17 39	34 80	
23	168	53.8	15.6	168	27.8	42.6	64	58	19 59	20 54	22 25	3 08 36	45 81	
24	183	53.7	-18 16.2	182	50.6	-18 48.8	62	60 S	20 12	21 14	** **	2 58 33	19 57 84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 26 ^m 6		Mag: -3.9 PMG: 9 ^h 42 ^m			Mag: +1.2 PMG: 14 ^h 16 ^m			Mag: -2.8 PMG: 1 ^h 20 ^m			Mag: +0.6 PMG: 10 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	52	30.8	214	27.0	-5 44.2	145	54.8	-24 29.9	339	52.1	+21 38.8	199	26.5	-10 56.1
1	67	33.3	229	26.6	45.4	160	55.2	30.0	354	54.8	38.8	214	28.7	56.2
2	82	35.7	244	26.2	46.5	175	55.6	30.0	9	57.6	38.8	229	30.9	56.3
3	97	38.2	259	25.8	47.7	190	56.0	30.1	25	00.4	38.7	244	33.0	56.4
4	112	40.7	274	25.4	48.8	205	56.4	30.1	40	03.2	38.7	259	35.2	56.4
5	127	43.1	289	25.0	-5 50.0	220	56.8	-24 30.2	55	06.0	+21 38.7	274	37.4	-10 56.5
6	142	45.6	304	24.6	-5 51.1	235	57.2	-24 30.2	70	08.7	+21 38.6	289	39.6	-10 56.6
7	157	48.1	319	24.2	52.3	250	57.6	30.3	85	11.5	38.6	304	41.8	56.7
8	172	50.5	334	23.8	53.4	265	58.0	30.3	100	14.3	38.6	319	43.9	56.8
9	187	53.0	349	23.4	54.5	280	58.4	30.4	115	17.1	38.5	334	46.1	56.9
10	202	55.5	4 23.0	55.7	55.7	295	58.8	30.4	130	19.8	38.5	349	48.3	57.0
11	217	57.9	19 22.6	-5 56.8	56.8	310	59.2	-24 30.5	145	22.6	+21 38.5	4 50.5	-10 57.1	
12	233	00.4	34 22.2	-5 58.0	58.0	325	59.6	-24 30.5	160	25.4	+21 38.4	19 52.7	-10 57.2	
13	248	02.9	49 21.8	-5 59.1	59.1	341	00.0	30.6	175	28.2	38.4	34 54.8	57.3	
14	263	05.3	64 21.4	-6 00.3	00.3	356	00.4	30.6	190	31.0	38.4	49 57.0	57.4	
15	278	07.8	79 21.0	01.4	01.4	11 00.8	30.7	30.7	205	33.7	38.3	64 59.2	57.5	
16	293	10.2	94 20.6	02.6	02.6	26 01.2	30.7	30.7	220	36.5	38.3	80 01.4	57.6	
17	308	12.7	109 20.2	-6 03.7	03.7	41 01.6	-24 30.8	30.8	235	39.3	+21 38.3	95 03.6	-10 57.7	
18	323	15.2	124 19.8	-6 04.8	04.8	56 02.0	-24 30.8	30.8	250	42.1	+21 38.2	110 05.7	-10 57.8	
19	338	17.6	139 19.4	06.0	06.0	71 02.4	30.9	30.9	265	44.8	38.2	125 07.9	57.9	
20	353	20.1	154 19.0	07.1	07.1	86 02.8	30.9	30.9	280	47.6	38.2	140 10.1	58.0	
21	8	22.6	169 18.6	08.3	08.3	101 03.2	31.0	31.0	295	50.4	38.1	155 12.3	58.1	
22	23	25.0	184 18.2	09.4	09.4	116 03.6	31.0	31.0	310	53.2	38.1	170 14.5	58.2	
23	38	27.5	199 17.8	10.6	10.6	131 04.0	31.1	31.1	325	56.0	38.1	185 16.7	58.3	
24	53	30.0	214 17.4	-6 11.7	11.7	146 04.4	-24 31.1	31.1	340	58.7	+21 38.0	200 18.8	-10 58.4	
Dif	—		-4	-11		+4	0		+28		0	+22	-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 5				Edad: 0 ^d 1 PHE { SD: 16:7 PMG: 12 ^h 20 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	53.7	-18	16.2	182	50.6	-18	48.8	60 N	6	16	7	07	7	56	8	45	
1	198	53.6		16.9	197	13.3	37	-18	54.9	58	11	7	00	45	31	75	16	
2	213	53.5		17.5	211	35.9	36	-19	00.9	56	07	6	53	35	18	75	16	
3	228	53.4		18.2	225	58.5	36		06.7	54	04		47	26	8	08	73	
4	243	53.3		18.8	240	21.1	36		12.4	52	6	00	41	19	7	58	73	
5	258	53.2	-18	19.5	254	43.6	35	-19	17.9	50	5	57	6	36	7	50	71	
6	273	53.1	-18	20.1	269	06.0	34	-19	23.3	45	5	49	6	25	6	57	7	
7	288	53.0		20.7	283	28.4	34		28.5	40	43		15	44	17	69		
8	303	52.9		21.4	297	50.8	34		33.6	35	36	6	07	34	7	05	68	
9	318	52.8		22.0	312	13.1	33		38.6	30	30	5	59	24	6	54	67	
10	333	52.7		22.7	326	35.3	32		43.4	20	19		45	6	08	35	66	
11	348	52.6	-18	23.3	340	57.6	33	-19	48.0	10 N	5	07	5	32	5	54	6	
12	3	52.4	-18	24.0	355	19.8	32	-19	52.5	0	4	54	5	19	5	41	6	
13	18	52.3		24.6	9	41.9	31	-19	56.8	10 S	39		5	05	27	5	50	
14	33	52.2		25.2	24	04.0	31	-20	01.0	20	4	22	4	49	5	13	34	
15	48	52.1		25.9	38	26.1	31		05.1	30	3	59	30		4	56	16	
16	63	52.0		26.5	52	48.2	31		09.0	39	35	45	19	46	5	05	59	
17	78	51.9	-18	27.2	67	10.2	30	-20	12.7	40	3	27	4	05	4	54	57	
18	93	51.8	-18	27.8	81	32.2	30	-20	16.3	45	3	05	3	48	4	40	55	
19	108	51.7		28.4	95	54.2	30		19.7	50	2	35	27	4	06	22	54	
20	123	51.6		29.1	110	16.2	30		23.0	52		20	16	3	58	14	53	
21	138	51.5		29.7	124	38.1	29		26.1	54	2	01	3	05	49	4	06	
22	153	51.4		30.4	139	00.1	30		29.0	56	1	37	2	51	40	3	56	
23	168	51.3		31.0	153	22.0	29		31.8	58	1	03	35	29		44	49	
24	183	51.2	-18	31.6	167	43.9	29	-20	34.5	60 S	**	**	2	15	3	31	47	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 22 ^m 7		Mag: -3.9 PMG: 9 ^h 43 ^m				Mag: +1.2 PMG: 14 ^h 15 ^m				Mag: -2.8 PMG: 1 ^h 16 ^m				Mag: +0.6 PMG: 10 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	53	30.0	214	17.4	-6	11.7	146	04.4	-24	31.1	340	58.7	+21	38.0	200	18.8	-10	58.4
1	68	32.4	229	17.0		12.8	161	04.8		31.1	356	01.5		38.0	215	21.0		58.5
2	83	34.9	244	16.6		14.0	176	05.2		31.2	11	04.3		38.0	230	23.2		58.6
3	98	37.4	259	16.1		15.1	191	05.6		31.2	26	07.1		37.9	245	25.4		58.7
4	113	39.8	274	15.7		16.3	206	06.0		31.3	41	09.9		37.9	260	27.6		58.7
5	128	42.3	289	15.3	-6	17.4	221	06.4	-24	31.3	56	12.7	+21	37.9	275	29.7	-10	58.8
6	143	44.7	304	14.9	-6	18.6	236	06.8	-24	31.3	71	15.4	+21	37.8	290	31.9	-10	58.9
7	158	47.2	319	14.5		19.7	251	07.2		31.4	86	18.2		37.8	305	34.1		59.0
8	173	49.7	334	14.1		20.8	266	07.6		31.4	101	21.0		37.8	320	36.3		59.1
9	188	52.1	349	13.7		22.0	281	08.0		31.5	116	23.8		37.7	335	38.5		59.2
10	203	54.6	4	13.3		23.1	296	08.4		31.5	131	26.6		37.7	350	40.7		59.3
11	218	57.1	19	12.9	-6	24.3	311	08.8	-24	31.5	146	29.3	+21	37.7	5	42.8	-10	59.4
12	233	59.5	34	12.5	-6	25.4	326	09.2	-24	31.6	161	32.1	+21	37.6	20	45.0	-10	59.5
13	249	02.0	49	12.1		26.5	341	09.6		31.6	176	34.9		37.6	35	47.2		59.6
14	264	04.5	64	11.7		27.7	356	10.0		31.7	191	37.7		37.6	50	49.4		59.7
15	279	06.9	79	11.3		28.8	11	10.4		31.7	206	40.5		37.5	65	51.6		59.8
16	294	09.4	94	10.9		30.0	26	10.8		31.7	221	43.3		37.5	80	53.7	-10	59.9
17	309	11.9	109	10.5	-6	31.1	41	11.2	-24	31.8	236	46.0	+21	37.5	95	55.9	-11	00.0
18	324	14.3	124	10.1	-6	32.2	56	11.6	-24	31.8	251	48.8	+21	37.4	110	58.1	-11	00.1
19	339	16.8	139	09.6		33.4	71	12.0		31.8	266	51.6		37.4	126	00.3		00.2
20	354	19.2	154	09.2		34.5	86	12.4		31.9	281	54.4		37.4	141	02.5		00.3
21	9	21.7	169	08.8		35.7	101	12.8		31.9	296	57.2		37.3	156	04.7		00.4
22	24	24.2	184	08.4		36.8	116	13.2		31.9	312	00.0		37.3	171	06.8		00.5
23	39	26.6	199	08.0		37.9	131	13.6		32.0	327	02.8		37.3	186	09.0		00.6
24	54	29.1	214	07.6	-6	39.1	146	13.9	-24	32.0	342	05.5	+21	37.2	201	11.2	-11	00.7
Dif	—		-4		-11		+4		0		+28		0		+22		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 44 ^m 7				Edad: 1 ^d 1 PHE { SD: 16:7 PMG: 13 ^h 23 ^m 4 ^h : 61 ^h 3 12 ^h : 61 ^h 2 20 ^h : 61 ^h 0 R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	183	51.2	-18	31.6	167	43.9	-20	34.5	60 N	15 30	16 19	17 11	10 02	58	16 44	72		
1	198	51.1		32.3	182	05.8	29	36.9	58	41	27	15	9 46	59	17 00	71		
2	213	51.0		32.9	196	27.7	29	39.2	56	15 51	34	20	33	59	13	70		
3	228	50.9		33.5	210	49.5	28	41.4	54	16 00	40	23	21	60	25	69		
4	243	50.8		34.2	225	11.4	29	43.4	52	08	46	27	11	60	35	69		
5	258	50.7	-18	34.8	239	33.3	29	-20 45.3	50	16 16	16 51	17 30	9 01	61	17 44	69		
6	273	50.5	-18	35.4	253	55.1	28	-20 46.9	45	16 31	17 03	17 38	8 42	61	18 04	67		
7	288	50.4		36.1	268	17.0	29	48.5	40	43	13	45	26	62	20	66		
8	303	50.3		36.7	282	38.9	29	49.8	35	16 54	21	52	13	62	33	66		
9	318	50.2		37.3	297	00.8	29	51.0	30	17 04	29	17 58	8 01	62	18 45	65		
10	333	50.1		38.0	311	22.7	29	52.1	20	20	43	18 10	7 41	63	19 05	64		
11	348	50.0	-18	38.6	325	44.6	29	-20 53.0	10 N	17 35	17 57	18 22	7 24	63	19 22	63		
12	3	49.9	-18	39.2	340	06.5	29	-20 53.7	0	17 48	18 10	18 35	7 08	63	19 38	62		
13	18	49.8		39.8	354	28.4	29	54.2	10 S	18 02	24	18 50	6 52	63	19 54	62		
14	33	49.7		40.5	8	50.4	30	54.6	20	17	18 40	19 08	35	63	20 11	61		
15	48	49.5		41.1	23	12.3	29	54.9	30	34	19 00	32	15	64	31	59		
16	63	49.4		41.7	37	34.3	30	55.0	35	44	12	19 46	6 04	64	43	58		
17	78	49.3	-18	42.3	51	56.3	30	-20 54.9	40	18 56	19 26	20 04	5 51	64	20 56	57		
18	93	49.2	-18	43.0	66	18.4	31	-20 54.7	45	19 09	19 43	20 27	5 35	64	21 11	57		
19	108	49.1		43.6	80	40.5	31	54.3	50	26	20 05	20 58	16	64	30	55		
20	123	49.0		44.2	95	02.6	31	53.7	52	34	16	21 14	5 07	64	40	54		
21	138	48.9		44.8	109	24.7	31	53.0	7	43	28	34	4 57	64	21 50	53		
22	153	48.7		45.5	123	46.9	32	52.2	8	19 53	20 43	21 59	46	64	22 01	52		
23	168	48.6		46.1	138	09.1	32	51.2	10	20 04	21 00	22 38	33	64	14	51		
24	183	48.5	-18	46.7	152	31.3	32	-20 50.0	12	20 18	21 21	** **	4 18	64	22 29	50		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 18 ^m 7		Mag: -3.9 PMG: 9 ^h 44 ^m				Mag: +1.2 PMG: 14 ^h 15 ^m				Mag: -2.8 PMG: 1 ^h 11 ^m				Mag: +0.6 PMG: 10 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	29.1	214	07.6	-6	39.1	146	13.9	-24	32.0	342	05.5	+21	37.2	201	11.2	-11	00.7
1	69	31.6	229	07.2		40.2	161	14.3		32.0	357	08.3		37.2	216	13.4		00.7
2	84	34.0	244	06.8		41.4	176	14.7		32.1	12	11.1		37.2	231	15.6		00.8
3	99	36.5	259	06.4		42.5	191	15.1		32.1	27	13.9		37.1	246	17.7		00.9
4	114	39.0	274	06.0		43.6	206	15.5		32.1	42	16.7		37.1	261	19.9		01.0
5	129	41.4	289	05.5	-6	44.8	221	15.9	-24	32.2	57	19.5	+21	37.1	276	22.1	-11	01.1
6	144	43.9	304	05.1	-6	45.9	236	16.3	-24	32.2	72	22.3	+21	37.0	291	24.3	-11	01.2
7	159	46.3	319	04.7		47.0	251	16.7		32.2	87	25.0		37.0	306	26.5		01.3
8	174	48.8	334	04.3		48.2	266	17.1		32.2	102	27.8		37.0	321	28.7		01.4
9	189	51.3	349	03.9		49.3	281	17.5		32.3	117	30.6		36.9	336	30.8		01.5
10	204	53.7	4	03.5		50.4	296	17.9		32.3	132	33.4		36.9	351	33.0		01.6
11	219	56.2	19	03.1	-6	51.6	311	18.3	-24	32.3	147	36.2	+21	36.9	6	35.2	-11	01.7
12	234	58.7	34	02.7	-6	52.7	326	18.7	-24	32.4	162	39.0	+21	36.8	21	37.4	-11	01.8
13	250	01.1	49	02.2		53.9	341	19.1		32.4	177	41.8		36.8	36	39.6		01.9
14	265	03.6	64	01.8		55.0	356	19.5		32.4	192	44.6		36.8	51	41.8		02.0
15	280	06.1	79	01.4		56.1	11	19.9		32.4	207	47.3		36.7	66	43.9		02.1
16	295	08.5	94	01.0		57.3	26	20.3		32.5	222	50.1		36.7	81	46.1		02.2
17	310	11.0	109	00.6	-6	58.4	41	20.7	-24	32.5	237	52.9	+21	36.7	96	48.3	-11	02.3
18	325	13.5	124	00.2	-6	59.5	56	21.0	-24	32.5	252	55.7	+21	36.6	111	50.5	-11	02.4
19	340	15.9	138	59.8	-7	00.7	71	21.4		32.5	267	58.5		36.6	126	52.7		02.5
20	355	18.4	153	59.3		01.8	86	21.8		32.5	283	01.3		36.6	141	54.9		02.6
21	10	20.8	168	58.9		02.9	101	22.2		32.6	298	04.1		36.5	156	57.0		02.6
22	25	23.3	183	58.5		04.1	116	22.6		32.6	313	06.9		36.5	171	59.2		02.7
23	40	25.8	198	58.1		05.2	131	23.0		32.6	328	09.7		36.5	187	01.4		02.8
24	55	28.2	213	57.7	-7	06.3	146	23.4	-24	32.6	343	12.4	+21	36.4	202	03.6	-11	02.9
Dif	—		-4		-11		+4		0		+28		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 9			Edad: 2 ^d 1 SD: 16:6 PMG: 14 ^h 26 ^m	PHE { 4 ^h : 60:9 12 ^h : 60:7 20 ^h : 60:5 R°: 60 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	48.5	-18	46.7	152	31.3	-20	50.0	60 N	6 20	7 12	8 01	11 00	41	17 56	83
1	198	48.4		47.3	166	53.6	33	48.6	58	15	7 04	7 50	10 45	43	18 11	80
2	213	48.3		48.0	181	15.9	33	47.2	56	11	6 57	39	32	45	23	79
3	228	48.2		48.6	195	38.3	34	45.5	54	07	50	30	21	47	34	77
4	243	48.1		49.2	210	00.7	34	43.7	52	03	45	22	11	48	44	75
5	258	47.9	-18	49.8	224	23.2	35	-20	50	6 00	6 39	7 15	10 02	49	18 53	74
6	273	47.8	-18	50.4	238	45.7	35	-20	45	5 52	6 27	6 59	9 43	51	19 11	71
7	288	47.7		51.1	253	08.2	35	37.4	40	45	18	47	28	53	26	69
8	303	47.6		51.7	267	30.9	37	35.0	35	38	09	36	15	54	39	67
9	318	47.5		52.3	281	53.6	37	32.5	30	32	6 01	26	9 03	56	19 50	66
10	333	47.3		52.9	296	16.3	37	29.8	20	20	5 46	6 10	8 44	58	20 09	63
11	348	47.2	-18	53.5	310	39.1	38	-20	10 N	5 07	5 33	5 55	8 27	59	20 25	61
12	3	47.1	-18	54.1	325	01.9	38	-20	0	4 54	5 19	5 41	8 11	61	20 40	60
13	18	47.0		54.7	339	24.9	40	20.8	10 S	39	5 05	27	7 55	63	20 56	57
14	33	46.9		55.4	353	47.8	39	17.5	20	4 21	4 49	5 13	38	64	21 12	55
15	48	46.7		56.0	8	10.9	41	14.1	30	3 58	29	4 55	19	66	30	53
16	63	46.6		56.6	22	34.0	41	10.6	35	43	17	45	7 08	66	41	51
17	78	46.5	-18	57.2	36	57.2	42	-20	40	3 25	4 03	4 33	6 55	68	21 53	49
18	93	46.4	-18	57.8	51	20.4	42	-20	45	3 02	3 46	4 20	6 39	70	22 08	47
19	108	46.3		58.4	65	43.8	44	-19	50	2 31	24	4 03	20	72	25	44
20	123	46.1		59.0	80	07.2	44	54.9	52	2 15	13	3 55	11	73	34	42
21	138	46.0	-18	59.6	94	30.6	44	50.6	54	1 55	3 01	46	6 01	74	43	41
22	153	45.9	-19	00.3	108	54.2	46	46.2	56	1 30	2 46	36	5 50	75	22 53	39
23	168	45.8		00.9	123	17.8	46	41.7	58	0 51	29	25	37	76	23 05	37
24	183	45.6	-19	01.5	137	41.5	47	-19	60 S	** **	2 08	3 11	5 22	78	23 19	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 14 ^m 8		Mag: -3.9 PMG: 9 ^h 44 ^m		Mag: +1.2 PMG: 14 ^h 14 ^m		Mag: -2.8 PMG: 1 ^h 07 ^m		Mag: +0.6 PMG: 10 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	55	28.2	213	57.7	146	23.4	343	12.4	202	03.6
1	70	30.7	228	57.3	161	23.8	358	15.2	217	05.8
2	85	33.2	243	56.8	176	24.2	13	18.0	232	08.0
3	100	35.6	258	56.4	191	24.6	28	20.8	247	10.1
4	115	38.1	273	56.0	206	25.0	43	23.6	262	12.3
5	130	40.6	288	55.6	221	25.4	58	26.4	277	14.5
6	145	43.0	303	55.2	236	25.8	73	29.2	292	16.7
7	160	45.5	318	54.7	251	26.1	88	32.0	307	18.9
8	175	48.0	333	54.3	266	26.5	103	34.8	322	21.1
9	190	50.4	348	53.9	281	26.9	118	37.6	337	23.2
10	205	52.9	3	53.5	296	27.3	133	40.4	352	25.4
11	220	55.3	18	53.1	311	27.7	148	43.1	7	27.6
12	235	57.8	33	52.7	326	28.1	163	45.9	22	29.8
13	251	00.3	48	52.2	341	28.5	178	48.7	37	32.0
14	266	02.7	63	51.8	356	28.9	193	51.5	52	34.2
15	281	05.2	78	51.4	11	29.3	208	54.3	67	36.3
16	296	07.7	93	51.0	26	29.7	223	57.1	82	38.5
17	311	10.1	108	50.5	41	30.1	238	59.9	97	40.7
18	326	12.6	123	50.1	56	30.4	254	02.7	112	42.9
19	341	15.1	138	49.7	71	30.8	269	05.5	127	45.1
20	356	17.5	153	49.3	86	31.2	284	08.3	142	47.3
21	11	20.0	168	48.9	101	31.6	299	11.1	157	49.4
22	26	22.5	183	48.4	116	32.0	314	13.9	172	51.6
23	41	24.9	198	48.0	131	32.4	329	16.7	187	53.8
24	56	27.4	213	47.6	146	32.8	344	19.5	202	56.0
Dif	—		-4	-11	+4	0	+28	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 45 ^m 1			Edad: 3 ^d 1 PHE { SD: 16°4 PMG: 15 ^h 26 ^m 4 ^h : 60°2 12 ^h : 60°0 20 ^h : 59°7 R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	45.6	-19 01.5	137	41.5	-19 37.0	48	60 N	15 26	16 15	17 08	11 41 28	19 19 87	
1	198	45.5	02.1	152	05.3	32.2	48	58	38	24	13	28 31	31 84	
2	213	45.4	02.7	166	29.2	27.2	50	56	48	31	17	17 34	42 81	
3	228	45.3	03.3	180	53.1	22.2	50	54	15 57	37	21	11 08 35	51 79	
4	243	45.1	03.9	195	17.1	17.0	52	52	16 06	43	25	10 59 37	19 59 77	
5	258	45.0	-19 04.5	209	41.3	-19 11.6	54	50	16 13	16 49	17 28	10 51 39	20 07 75	
6	273	44.9	-19 05.1	224	05.5	-19 06.2	54	45	16 29	17 01	17 37	10 34 43	20 22 72	
7	288	44.8	05.7	238	29.7	-19 00.6	56	40	42	11	44	21 45	35 69	
8	303	44.6	06.3	252	54.1	-18 54.9	57	35	16 53	20	51	10 09 47	46 67	
9	318	44.5	06.9	267	18.6	49.1	58	30	17 03	28	17 57	9 59 49	20 56 64	
10	333	44.4	07.5	281	43.1	43.1	60	20	20	43	18 10	42 51	21 12 61	
11	348	44.3	-19 08.1	296	07.7	-18 37.1	60	10 N	17 35	17 57	18 22	9 26 55	21 26 58	
12	3	44.1	-19 08.7	310	32.5	-18 30.9	62	0	17 49	18 11	18 36	9 12 57	21 40 55	
13	18	44.0	09.3	324	57.3	24.6	63	10 S	18 03	25	18 51	8 58 59	21 53 52	
14	33	43.9	09.9	339	22.2	18.2	64	20	18	18 42	19 10	42 62	22 07 49	
15	48	43.7	10.5	353	47.2	11.6	66	30	36	19 02	34	25 65	23 45	
16	63	43.6	11.1	8	12.3	-18 05.0	66	35	46	14	19 49	14 67	32 44	
17	78	43.5	-19 11.7	22	37.5	-17 58.2	68	40	18 58	19 29	20 07	8 03 69	22 42 42	
18	93	43.3	-19 12.3	37	02.7	-17 51.4	68	45	19 12	19 47	20 30	7 49 71	22 55 38	
19	108	43.2	12.9	51	28.1	44.4	70	50	29	20 09	21 02	32 75	23 09 36	
20	123	43.1	13.5	65	53.6	37.3	71	52	38	20	19	24 76	16 34	
21	138	43.0	14.1	80	19.1	30.1	72	54	47	33	21 40	15 78	24 32	
22	153	42.8	14.7	94	44.8	22.8	73	56	19 57	20 48	22 08	7 05 80	32 30	
23	168	42.7	15.3	109	10.5	15.4	74	58	20 09	21 06	22 53	6 53 83	42 27	
24	183	42.6	-19 15.9	123	36.4	-17 07.9	75	60 S	20 23	21 28	** **	6 40 86	23 53 24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 10 ^m 9		Mag: -3.9 PMG: 9 ^h 45 ^m		Mag: +1.2 PMG: 14 ^h 13 ^m		Mag: -2.8 PMG: 1 ^h 03 ^m		Mag: +0.6 PMG: 10 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	56	27.4	213	47.6	-7	33.5	146	32.8	-24	33.0
1	71	29.8	228	47.2		34.6	161	33.2		33.0
2	86	32.3	243	46.7		35.7	176	33.6		33.0
3	101	34.8	258	46.3		36.9	191	33.9		33.0
4	116	37.2	273	45.9		38.0	206	34.3		33.0
5	131	39.7	288	45.5	-7	39.1	221	34.7	-24	33.1
6	146	42.2	303	45.0	-7	40.2	236	35.1	-24	33.1
7	161	44.6	318	44.6		41.4	251	35.5		33.1
8	176	47.1	333	44.2		42.5	266	35.9		33.1
9	191	49.6	348	43.8		43.6	281	36.3		33.1
10	206	52.0	3	43.3		44.8	296	36.7		33.1
11	221	54.5	18	42.9	-7	45.9	311	37.1	-24	33.1
12	236	57.0	33	42.5	-7	47.0	326	37.4	-24	33.1
13	251	59.4	48	42.0		48.1	341	37.8		33.1
14	267	01.9	63	41.6		49.3	356	38.2		33.1
15	282	04.3	78	41.2		50.4	11	38.6		33.1
16	297	06.8	93	40.8		51.5	26	39.0		33.1
17	312	09.3	108	40.3	-7	52.6	41	39.4	-24	33.1
18	327	11.7	123	39.9	-7	53.8	56	39.8	-24	33.1
19	342	14.2	138	39.5		54.9	71	40.2		33.1
20	357	16.7	153	39.0		56.0	86	40.5		33.1
21	12	19.1	168	38.6		57.1	101	40.9		33.1
22	27	21.6	183	38.2		58.2	116	41.3		33.1
23	42	24.1	198	37.7	-7	59.4	131	41.7		33.1
24	57	26.5	213	37.3	-8	00.5	146	42.1	-24	33.1
Dif	—	—	-4	-11		+4	0	+28		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 45 ^m 3			Edad: 4 ^d 1 PHE { 4 ^h : 59'4 12 ^h : 59'1 20 ^h : 58'8 R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	42.6	-19	15.9	123	36.4	-17	07.9	60 N	6	24	7	16	8	06	12	09
1	198	42.4		16.5	138	02.3	69	-17	00.4	58	19		08	7	54	11	59
2	213	42.3		17.1	152	28.4	71	-16	52.7	56	14	7	00	43	51	25	21
3	228	42.2		17.7	166	54.5	71		44.9	54	10	6	54	34	43	28	
4	243	42.0		18.2	181	20.7	72		37.0	52	06		48	26	36	30	
5	258	41.9	-19	18.8	195	47.1	74	-16	29.0	50	6	02	6	42	7	18	11
6	273	41.8	-19	19.4	210	13.5	74	-16	20.9	45	5	54	6	30	7	02	11
7	288	41.6		20.0	224	40.0	75		12.8	40	47		20	6	49	11	06
8	303	41.5		20.6	239	06.6	76	-16	04.5	35	40		11	38	10	56	41
9	318	41.3		21.2	253	33.3	77	-15	56.2	30	33	6	02	28	48	43	22
10	333	41.2		21.8	268	00.1	78		47.7	20	21	5	47	6	11	33	47
11	348	41.1	-19	22.4	282	27.0	79	-15	39.2	10 N	5	08	5	34	5	56	10
12	3	40.9	-19	23.0	296	54.0	80	-15	30.6	0	4	54	5	20	5	42	10
13	18	40.8		23.5	311	21.1	81		21.9	10 S	39	5	05	27	9	57	56
14	33	40.7		24.1	325	48.3	82		13.2	20	4	20	4	48	5	12	44
15	48	40.5		24.7	340	15.6	83	-15	04.3	30	3	57	28	4	54	30	63
16	63	40.4		25.3	354	43.0	84	-14	55.4	35	41		16	44	21	66	
17	78	40.2	-19	25.9	9	10.5	85	-14	46.4	40	3	23	4	01	4	32	9
18	93	40.1	-19	26.5	23	38.1	86	-14	37.3	45	2	59	3	43	4	18	9
19	108	40.0		27.0	38	05.7	86		28.2	50	27		21	4	00	8	47
20	123	39.8		27.6	52	33.5	88		19.0	52	2	10	3	10	3	52	40
21	138	39.7		28.2	67	01.4	89		09.7	54	1	50	2	57	43	33	78
22	153	39.6		28.8	81	29.3	89	-14	00.3	56	1	22		42	33	25	81
23	168	39.4		29.4	95	57.4	91	-13	50.9	58	0	36		24	21	16	83
24	183	39.3	-19	29.9	110	25.5	91	-13	41.4	60 S	**	**	2	02	3	07	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 20 ^h 06 ^m 9		Mag: -3.9 PMG: 9 ^h 46 ^m		Mag: +1.2 PMG: 14 ^h 13 ^m		Mag: -2.8 PMG: 0 ^h 58 ^m		Mag: +0.6 PMG: 10 ^h 23 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	57	26.5	213	37.3	-8	00.5	146	42.1	-24	33.1							
1	72	29.0	228	36.9		01.6	161	42.5		33.1							
2	87	31.5	243	36.4		02.7	176	42.9		33.1							
3	102	33.9	258	36.0		03.9	191	43.3		33.1							
4	117	36.4	273	35.6		05.0	206	43.6		33.1							
5	132	38.8	288	35.1	-8	06.1	221	44.0	-24	33.1							
6	147	41.3	303	34.7	-8	07.2	236	44.4	-24	33.1							
7	162	43.8	318	34.3		08.3	251	44.8		33.1							
8	177	46.2	333	33.8		09.5	266	45.2		33.1							
9	192	48.7	348	33.4		10.6	281	45.6		33.1							
10	207	51.2	3	33.0		11.7	296	46.0		33.1							
11	222	53.6	18	32.5	-8	12.8	311	46.3	-24	33.1							
12	237	56.1	33	32.1	-8	13.9	326	46.7	-24	33.1							
13	252	58.6	48	31.7		15.1	341	47.1		33.1							
14	268	01.0	63	31.2		16.2	356	47.5		33.1							
15	283	03.5	78	30.8		17.3	11	47.9		33.0							
16	298	05.9	93	30.4		18.4	26	48.3		33.0							
17	313	08.4	108	29.9	-8	19.5	41	48.7	-24	33.0							
18	328	10.9	123	29.5	-8	20.7	56	49.0	-24	33.0							
19	343	13.3	138	29.0		21.8	71	49.4		33.0							
20	358	15.8	153	28.6		22.9	86	49.8		33.0							
21	13	18.3	168	28.2		24.0	101	50.2		33.0							
22	28	20.7	183	27.7		25.1	116	50.6		33.0							
23	43	23.2	198	27.3		26.2	131	51.0		33.0							
24	58	25.7	213	26.9	-8	27.4	146	51.3	-24	32.9							
Dif	—		-4		-11		+4		0		+28		0		+22		-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2		Edad: 5 ^d 1	PHE	SD: 16°0	R°: 49 ^m			Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 45 ^m 5	hG ☉							Dec	hG ☾					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	39.3	-19	29.9	110	25.5	-13	41.4	60 N	15	22	16	12	12	29
1	198	39.1		30.5	124	53.7	92	31.8	58	34	21		10	22	19
2	213	39.0		31.1	139	22.0	93	22.2	56	45	28		15	16	21
3	228	38.8		31.7	153	50.5	95	12.5	54	15	55	35	19	11	23
4	243	38.7		32.3	168	19.0	95	-13	52	16	03	41	23	06	25
5	258	38.6	-19	32.8	182	47.5	95	-12	50	16	11	16	47	12	01
6	273	38.4	-19	33.4	197	16.2	97	-12	45	16	27	16	59	11	52
7	288	38.3		34.0	211	45.0	98	33.1	40	41	17	10	43	44	33
8	303	38.1		34.6	226	13.9	99	23.2	35	16	52	19	50	37	36
9	318	38.0		35.1	240	42.8	99	13.1	30	17	02	28	17	31	38
10	333	37.8		35.7	255	11.8	100	-12	20	19		43	18	20	43
11	348	37.7	-19	36.3	269	41.0	102	-11	10 N	17	35	17	57	11	11
12	3	37.6	-19	36.8	284	10.2	102	-11	0	17	49	18	11	11	02
13	18	37.4		37.4	298	39.5	103	32.4	10 S	18	04	26	18	10	53
14	33	37.3		38.0	313	08.8	103	22.1	20	19	18	43	19	11	44
15	48	37.1		38.6	327	38.3	105	11.8	30	37	19	04		36	33
16	63	37.0		39.1	342	07.8	105	-11	35	18	48	16	19	51	27
17	78	36.8	-19	39.7	356	37.4	106	-10	40	19	00	19	31	20	10
18	93	36.7	-19	40.3	11	07.2	108	-10	45	19	15	19	50	20	34
19	108	36.5		40.8	25	36.9	107	29.9	50	33	20	13	21	07	10
20	123	36.4		41.4	40	06.8	109	19.4	52	41		24		25	9
21	138	36.2		42.0	54	36.7	109	-10	54	19	51	37	21	47	51
22	153	36.1		42.5	69	06.8	111	-9	56	20	01	20	53	22	17
23	168	35.9		43.1	83	36.9	111	47.4	58	14	21	12	23	14	46
24	183	35.8	-19	43.7	98	07.0	111	-9	60 S	20	28	21	35	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 03 ^m 0		Mag: -3.9 PMG: 9 ^h 46 ^m		Mag: +1.2 PMG: 14 ^h 12 ^m		Mag: -2.8 PMG: 0 ^h 54 ^m		Mag: +0.6 PMG: 10 ^h 20 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	58	25.7	213	26.9	-8	27.4	146	51.3	-24	32.9
1	73	28.1	228	26.4		28.5	161	51.7		32.9
2	88	30.6	243	26.0		29.6	176	52.1		32.9
3	103	33.1	258	25.5		30.7	191	52.5		32.9
4	118	35.5	273	25.1		31.8	206	52.9		32.9
5	133	38.0	288	24.7	-8	32.9	221	53.3	-24	32.9
6	148	40.4	303	24.2	-8	34.0	236	53.7	-24	32.9
7	163	42.9	318	23.8		35.2	251	54.0		32.9
8	178	45.4	333	23.3		36.3	266	54.4		32.8
9	193	47.8	348	22.9		37.4	281	54.8		32.8
10	208	50.3	3	22.4		38.5	296	55.2		32.8
11	223	52.8	18	22.0	-8	39.6	311	55.6	-24	32.8
12	238	55.2	33	21.6	-8	40.7	326	56.0	-24	32.8
13	253	57.7	48	21.1		41.8	341	56.3		32.7
14	269	00.2	63	20.7		43.0	356	56.7		32.7
15	284	02.6	78	20.2		44.1	11	57.1		32.7
16	299	05.1	93	19.8		45.2	26	57.5		32.7
17	314	07.6	108	19.3	-8	46.3	41	57.9	-24	32.7
18	329	10.0	123	18.9	-8	47.4	56	58.2	-24	32.6
19	344	12.5	138	18.4		48.5	71	58.6		32.6
20	359	14.9	153	18.0		49.6	86	59.0		32.6
21	14	17.4	168	17.5		50.7	101	59.4		32.6
22	29	19.9	183	17.1		51.8	116	59.8		32.6
23	44	22.3	198	16.7		52.9	132	00.2		32.5
24	59	24.8	213	16.2	-8	54.1	147	00.5	-24	32.5
Dif	—	—	-4	-11		+4	0	+28		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 6 ^d 1	PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/1									
	PMG: 11 ^h 45 ^m 7					SD: 15:7		SD: 18 ^h 03 ^m			R°: 46 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	183	35.8	-19 43.7	98	07.0	-9 36.7	108	6 27	7 20	8 11	12 45	13	23 35	81
1	198	35.6	44.2	112	37.3 ¹¹³	25.9 ¹⁰⁸	113	22	12	7 58	41 15		38 78	
2	213	35.5	44.8	127	07.6 ¹¹³	15.1 ¹⁰⁸	108	17	7 04	47	37 18		41 75	
3	228	35.3	45.4	141	38.0 ¹¹⁴	-9 04.3 ¹⁰⁸	108	13	6 57	38	34 20		44 73	
4	243	35.2	45.9	156	08.5 ¹¹⁵	-8 53.4 ¹⁰⁹	109	09	51	29	31 22		46 71	
5	258	35.0	-19 46.5	170	39.0 ¹¹⁵	-8 42.6 ¹⁰⁸	108	6 05	6 45	7 21	12 28	24	23 48	69
6	273	34.9	-19 47.0	185	09.7 ¹¹⁷	-8 31.6 ¹¹⁰	110	5 57	6 32	7 05	12 22	27	23 52	65
7	288	34.7	47.6	199	40.3 ¹¹⁶	20.7 ¹⁰⁹	109	49	22	6 51	17 31		56 62	
8	303	34.6	48.2	214	11.1 ¹¹⁸	-8 09.7 ¹¹⁰	110	42	12	40	13 33		23 59	59
9	318	34.4	48.7	228	41.9 ¹¹⁸	-7 58.7 ¹¹⁰	110	35	6 04	29	09 36		** ** *	**
10	333	34.3	49.3	243	12.8 ¹¹⁹	47.7 ¹¹⁰	110	22	5 49	6 12	12 03	39	** ** *	**
11	348	34.1	-19 49.8	257	43.8 ¹²⁰	-7 36.6 ¹¹¹	111	5 09	5 34	5 57	11 57	43	** ** *	**
12	3	34.0	-19 50.4	272	14.8 ¹²⁰	-7 25.5 ¹¹¹	111	4 55	5 20	5 42	11 51	47	** ** *	**
13	18	33.8	50.9	286	45.9 ¹²¹	14.4 ¹¹¹	111	39	5 05	5 28	46 50		** ** *	**
14	33	33.7	51.5	301	17.1 ¹²²	-7 03.3 ¹¹¹	111	4 20	4 48	5 12	40 54		** ** *	**
15	48	33.5	52.1	315	48.3 ¹²²	-6 52.1 ¹¹²	112	3 55	27	4 54	33 58		** ** *	**
16	63	33.4	52.6	330	19.6 ¹²³	41.0 ¹¹¹	111	40	15	43	29 61		** ** *	**
17	78	33.2	-19 53.2	344	50.9 ¹²³	-6 29.8 ¹¹²	112	3 21	4 00	4 31	11 25	63	** ** *	**
18	93	33.0	-19 53.7	359	22.3 ¹²⁴	-6 18.6 ¹¹²	112	2 57	3 41	4 16	11 20	66	0 06	29
19	108	32.9	54.3	13	53.8 ¹²⁵	-6 07.4 ¹¹²	112	24	18	3 58	14 70		13 26	
20	123	32.7	54.8	28	25.3 ¹²⁵	-5 56.1 ¹¹³	113	2 06	3 06	50	11 72		17 23	
21	138	32.6	55.4	42	56.9 ¹²⁶	44.9 ¹¹²	112	1 44	2 53	40	08 74		21 21	
22	153	32.4	55.9	57	28.5 ¹²⁶	33.6 ¹¹³	113	1 14	38	29	05 76		25 19	
23	168	32.3	56.5	72	00.2 ¹²⁷	22.3 ¹¹³	113	0 17	2 19	17	11 01	78	30 17	
24	183	32.1	-19 57.0	86	32.0 ¹²⁸	-5 11.0 ¹¹³	113	** ** *	1 55	3 03	10 56	82	0 35	14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 59 ^m 1		Mag: -3.9 PMG: 9 ^h 47 ^m			Mag: +1.2 PMG: 14 ^h 12 ^m			Mag: -2.8 PMG: 0 ^h 49 ^m			Mag: +0.6 PMG: 10 ^h 16 ^m		
	hG ♊		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	59	24.8	213	16.2	-8 54.1	147	00.5	-24 32.5	347	41.1	+21 33.0	205	33.4	-11 11.9
1	74	27.3	228	15.8	55.2	162	00.9	32.5	2	43.9	33.0	220	35.5	12.0
2	89	29.7	243	15.3	56.3	177	01.3	32.5	17	46.7	33.0	235	37.7	12.1
3	104	32.2	258	14.9	57.4	192	01.7	32.4	32	49.5	32.9	250	39.9	12.2
4	119	34.7	273	14.4	58.5	207	02.1	32.4	47	52.3	32.9	265	42.1	12.3
5	134	37.1	288	14.0	-8 59.6	222	02.5	-24 32.4	62	55.1	+21 32.9	280	44.3	-11 12.3
6	149	39.6	303	13.5	-9 00.7	237	02.8	-24 32.4	77	57.9	+21 32.8	295	46.5	-11 12.4
7	164	42.1	318	13.1	01.8	252	03.2	32.3	93	00.7	32.8	310	48.7	12.5
8	179	44.5	333	12.6	02.9	267	03.6	32.3	108	03.5	32.7	325	50.9	12.6
9	194	47.0	348	12.2	04.0	282	04.0	32.3	123	06.3	32.7	340	53.0	12.7
10	209	49.4	3	11.7	05.1	297	04.4	32.3	138	09.1	32.7	355	55.2	12.8
11	224	51.9	18	11.3	-9 06.2	312	04.7	-24 32.2	153	12.0	+21 32.6	10	57.4	-11 12.9
12	239	54.4	33	10.8	-9 07.3	327	05.1	-24 32.2	168	14.8	+21 32.6	25	59.6	-11 13.0
13	254	56.8	48	10.4	08.5	342	05.5	32.2	183	17.6	32.6	41	01.8	13.1
14	269	59.3	63	09.9	09.6	357	05.9	32.1	198	20.4	32.5	56	04.0	13.2
15	285	01.8	78	09.4	10.7	12	06.3	32.1	213	23.2	32.5	71	06.2	13.3
16	300	04.2	93	09.0	11.8	27	06.6	32.1	228	26.0	32.5	86	08.4	13.4
17	315	06.7	108	08.5	-9 12.9	42	07.0	-24 32.0	243	28.8	+21 32.4	101	10.5	-11 13.4
18	330	09.2	123	08.1	-9 14.0	57	07.4	-24 32.0	258	31.6	+21 32.4	116	12.7	-11 13.5
19	345	11.6	138	07.6	15.1	72	07.8	32.0	273	34.4	32.3	131	14.9	13.6
20	0	14.1	153	07.2	16.2	87	08.2	31.9	288	37.2	32.3	146	17.1	13.7
21	15	16.5	168	06.7	17.3	102	08.5	31.9	303	40.0	32.3	161	19.3	13.8
22	30	19.0	183	06.3	18.4	117	08.9	31.9	318	42.8	32.2	176	21.5	13.9
23	45	21.5	198	05.8	19.5	132	09.3	31.8	333	45.7	32.2	191	23.7	14.0
24	60	23.9	213	05.4	-9 20.6	147	09.7	-24 31.8	348	48.5	+21 32.2	206	25.9	-11 14.1
Dif	—		-5 -11		+4 0		0		+28 0		+22 -1		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2 PMG: 11 ^h 46 ^m 0			Edad: 7 ^d 1 SD: 15°5 PMG: 18 ^h 49 ^m	PHE { 4 ^h : 56/8 12 ^h : 56/5 20 ^h : 56/3 R°: 44 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	183	32.1	-19	57.0	86	32.0	-5 11.0	60 N	15 18	16 09	17 02	12 58 12	** ** *	** ** *				
1	198	31.9		57.6	101	03.8 ¹²⁸	-4 59.7 ¹¹³	58	31	18	07	56 15	** ** *	** ** *				
2	213	31.8		58.1	115	35.6 ¹²⁸	48.4 ¹¹³	56	42	26	12	55 17	** ** *	** ** *				
3	228	31.6		58.7	130	07.5 ¹²⁹	37.1 ¹¹³	54	15 52	33	17	54 19	** ** *	** ** *				
4	243	31.5		59.2	144	39.5 ¹³⁰	25.7 ¹¹⁴	52	16 01	39	21	53 20	** ** *	** ** *				
5	258	31.3	-19	59.8	159	11.5 ¹³⁰	-4 14.4 ¹¹³	50	16 09	16 45	17 25	12 52 22	** ** *	** ** *				
6	273	31.2	-20	00.3	173	43.6 ¹³¹	-4 03.0 ¹¹⁴	45	16 26	16 58	17 34	12 49 26	** ** *	** ** *				
7	288	31.0		00.8	188	15.7 ¹³¹	-3 51.7 ¹¹³	40	39	17 09	42	48 28	** ** *	** ** *				
8	303	30.8		01.4	202	47.8 ¹³¹	40.3 ¹¹⁴	35	16 51	18	49	46 31	** ** *	** ** *				
9	318	30.7		01.9	217	20.0 ¹³²	28.9 ¹¹⁴	30	17 01	27	17 56	45 33	0 01 57					
10	333	30.5		02.5	231	52.3 ¹³³	17.6 ¹¹³	20	19	43	18 10	42 38	06 53					
11	348	30.3	-20	03.0	246	24.6 ¹³³	-3 06.2 ¹¹⁴	10 N	17 35	17 57	18 23	12 40 41	0 10 49					
12	3	30.2	-20	03.6	260	56.9 ¹³³	-2 54.8 ¹¹⁴	0	17 50	18 12	18 37	12 38 45	0 14 45					
13	18	30.0		04.1	275	29.3 ¹³⁴	43.5 ¹¹³	10 S	18 04	27	18 53	36 48	18 42					
14	33	29.9		04.6	290	01.7 ¹³⁴	32.1 ¹¹⁴	20	21	18 44	19 13	34 52	21 39					
15	48	29.7		05.2	304	34.1 ¹³⁴	20.7 ¹¹⁴	30	39	19 06	38	31 56	26 34					
16	63	29.5		05.7	319	06.6 ¹³⁵	-2 09.3 ¹¹⁴	35	18 50	19	19 53	30 58	28 33					
17	78	29.4	-20	06.3	333	39.2 ¹³⁶	-1 58.0 ¹¹³	40	19 03	19 34	20 13	12 28 61	0 31 30					
18	93	29.2	-20	06.8	348	11.8 ¹³⁶	-1 46.6 ¹¹⁴	45	19 17	19 52	20 37	12 26 65	0 35 26					
19	108	29.0		07.3	2	44.4 ¹³⁶	35.2 ¹¹⁴	50	36	20 16	21 12	24 68	39 22					
20	123	28.9		07.9	17	17.0 ¹³⁶	23.9 ¹¹³	52	45	28	30	23 70	40 22					
21	138	28.7		08.4	31	49.7 ¹³⁷	12.5 ¹¹⁴	54	19 54	42	21 54	22 72	42 20					
22	153	28.6		08.9	46	22.4 ¹³⁷	-1 01.2 ¹¹³	56	20 05	20 58	22 26	21 74	44 18					
23	168	28.4		09.5	60	55.2 ¹³⁸	-0 49.8 ¹¹⁴	58	18	21 18	** ** *	19 77	47 15					
24	183	28.2	-20	10.0	75	28.0 ¹³⁸	-0 38.5 ¹¹³	60 S	20 33	21 43	** ** *	12 18 79	0 49 13					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 55 ^m 1		Mag: -3.9 PMG: 9 ^h 48 ^m			Mag: +1.2 PMG: 14 ^h 11 ^m			Mag: -2.8 PMG: 0 ^h 45 ^m			Mag: +0.6 PMG: 10 ^h 13 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	60	23.9	213	05.4	-9	20.6	147	09.7	-24	31.8	348	48.5	+21	32.2	206	25.9	-11	14.1
1	75	26.4	228	04.9		21.7	162	10.1		31.8	3	51.3		32.1	221	28.0		14.2
2	90	28.9	243	04.4		22.8	177	10.4		31.7	18	54.1		32.1	236	30.2		14.3
3	105	31.3	258	04.0		23.9	192	10.8		31.7	33	56.9		32.0	251	32.4		14.4
4	120	33.8	273	03.5		25.0	207	11.2		31.7	48	59.7		32.0	266	34.6		14.4
5	135	36.3	288	03.1	-9	26.1	222	11.6	-24	31.6	64	02.5	+21	32.0	281	36.8	-11	14.5
6	150	38.7	303	02.6	-9	27.2	237	12.0	-24	31.6	79	05.3	+21	31.9	296	39.0	-11	14.6
7	165	41.2	318	02.1		28.3	252	12.3		31.6	94	08.1		31.9	311	41.2		14.7
8	180	43.7	333	01.7		29.4	267	12.7		31.5	109	10.9		31.9	326	43.4		14.8
9	195	46.1	348	01.2		30.5	282	13.1		31.5	124	13.7		31.8	341	45.6		14.9
10	210	48.6	3	00.8		31.6	297	13.5		31.4	139	16.6		31.8	356	47.7		15.0
11	225	51.0	18	00.3	-9	32.7	312	13.9	-24	31.4	154	19.4	+21	31.7	11	49.9	-11	15.1
12	240	53.5	32	59.8	-9	33.8	327	14.2	-24	31.4	169	22.2	+21	31.7	26	52.1	-11	15.2
13	255	56.0	47	59.4		34.9	342	14.6		31.3	184	25.0		31.7	41	54.3		15.3
14	270	58.4	62	58.9		36.0	357	15.0		31.3	199	27.8		31.6	56	56.5		15.4
15	286	00.9	77	58.5		37.1	12	15.4		31.2	214	30.6		31.6	71	58.7		15.5
16	301	03.4	92	58.0		38.2	27	15.8		31.2	229	33.4		31.6	87	00.9		15.5
17	316	05.8	107	57.5	-9	39.3	42	16.1	-24	31.1	244	36.2	+21	31.5	102	03.1	-11	15.6
18	331	08.3	122	57.1	-9	40.4	57	16.5	-24	31.1	259	39.0	+21	31.5	117	05.2	-11	15.7
19	346	10.8	137	56.6		41.5	72	16.9		31.1	274	41.9		31.4	132	07.4		15.8
20	1	13.2	152	56.1		42.6	87	17.3		31.0	289	44.7		31.4	147	09.6		15.9
21	16	15.7	167	55.7		43.7	102	17.6		31.0	304	47.5		31.4	162	11.8		16.0
22	31	18.1	182	55.2		44.8	117	18.0		30.9	319	50.3		31.3	177	14.0		16.1
23	46	20.6	197	54.8		45.8	132	18.4		30.9	334	53.1		31.3	192	16.2		16.2
24	61	23.1	212	54.3	-9	46.9	147	18.8	-24	30.8	349	55.9	+21	31.3	207	18.4	-11	16.3
Dif	—		-5		-11		+4		0		+28		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 8 ^d 1	PHE { 4 ^h : 56'1 12 ^h : 55'8 20 ^h : 55'6											
	PMG: 11 ^h 46 ^m 2					SD: 15'3		PMG: 19 ^h 33 ^m			R°: 44 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	28.2	-20	10.0	75	28.0	-0	38.5	60 N	6 31	7 24	8 16	13 10	12	0 56	78
1	198	28.1		10.5	90	00.8 ¹³⁸		27.2 ¹¹³	58	26	15	8 03	11 15		56	75
2	213	27.9		11.1	104	33.6 ¹³⁸		15.8 ¹¹⁴	56	21	07	7 51	12 17		56	73
3	228	27.7		11.6	119	06.5 ¹³⁹		-0 04.5 ¹¹³	54	16	7 00	41	13 18		57	70
4	243	27.6		12.1	133	39.4 ¹³⁹		+0 06.8 ¹¹³	52	12	6 54	32	13 21		57	69
5	258	27.4	-20	12.7	148	12.3 ¹³⁹		+0 18.0 ¹¹²	50	6 08	6 48	7 24	13 14	22	0 57	67
6	273	27.2	-20	13.2	162	45.3 ¹⁴⁰		+0 29.3 ¹¹³	45	5 59	6 35	7 07	13 15	26	0 57	64
7	288	27.1		13.7	177	18.3 ¹⁴⁰		40.6 ¹¹³	40	51	24	6 53	16 29		58	60
8	303	26.9		14.3	191	51.3 ¹⁴⁰		+0 51.8 ¹¹²	35	43	14	42	17 32		58	58
9	318	26.7		14.8	206	24.3 ¹⁴⁰		+1 03.1 ¹¹³	30	36	6 05	31	18 34		58	56
10	333	26.6		15.3	220	57.4 ¹⁴¹		14.3 ¹¹²	20	23	5 50	6 13	20 37		59	51
11	348	26.4	-20	15.8	235	30.5 ¹⁴¹		+1 25.5 ¹¹²	10 N	5 09	5 35	5 57	13 21	41	0 59	48
12	3	26.2	-20	16.4	250	03.6 ¹⁴¹		+1 36.7 ¹¹²	0	4 55	5 21	5 43	13 23	44	0 59	45
13	18	26.0		16.9	264	36.7 ¹⁴¹		47.8 ¹¹¹	10 S	39	5 05	5 28	24 47		1 00	41
14	33	25.9		17.4	279	09.9 ¹⁴²		+1 59.0 ¹¹²	20	4 19	4 48	5 12	26 50		00	38
15	48	25.7		17.9	293	43.0 ¹⁴¹		+2 10.1 ¹¹¹	30	3 54	26	4 53	27 55		00	34
16	63	25.5		18.5	308	16.2 ¹⁴²		21.2 ¹¹¹	35	39	4 13	42	28 57		01	31
17	78	25.4	-20	19.0	322	49.4 ¹⁴²		+2 32.3 ¹¹¹	40	3 19	3 58	4 29	13 29	60	1 01	29
18	93	25.2	-20	19.5	337	22.6 ¹⁴²		+2 43.4 ¹¹¹	45	2 54	3 39	4 14	13 31	62	1 01	26
19	108	25.0		20.0	351	55.9 ¹⁴³		+2 54.5 ¹¹¹	50	20	15	3 56	32 67		01	23
20	123	24.8		20.5	6	29.1 ¹⁴²		+3 05.5 ¹¹⁰	52	2 02	3 03	47	33 68		02	20
21	138	24.7		21.1	21	02.4 ¹⁴³		16.5 ¹¹⁰	54	1 38	2 50	37	34 70		02	18
22	153	24.5		21.6	35	35.7 ¹⁴³		27.5 ¹¹⁰	56	1 05	34	26	35 72		02	17
23	168	24.3		22.1	50	08.9 ¹⁴²		38.4 ¹⁰⁹	58	** **	2 14	3 14	36 74		02	15
24	183	24.2	-20	22.6	64	42.2 ¹⁴³		+3 49.4 ¹¹⁰	60 S	** **	1 49	2 58	13 37	77	1 02	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 51 ^m 2		Mag: -3.9 PMG: 9 ^h 49 ^m		Mag: +1.2 PMG: 14 ^h 10 ^m		Mag: -2.8 PMG: 0 ^h 40 ^m		Mag: +0.6 PMG: 10 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	61	23.1	212	54.3	-9	46.9	147	18.8	-24	30.8
1	76	25.5	227	53.8		48.0	162	19.2		30.8
2	91	28.0	242	53.4		49.1	177	19.5		30.7
3	106	30.5	257	52.9		50.2	192	19.9		30.7
4	121	32.9	272	52.4		51.3	207	20.3		30.6
5	136	35.4	287	52.0	-9	52.4	222	20.7	-24	30.6
6	151	37.9	302	51.5	-9	53.5	237	21.1	-24	30.6
7	166	40.3	317	51.0		54.6	252	21.4		30.5
8	181	42.8	332	50.6		55.7	267	21.8		30.5
9	196	45.3	347	50.1		56.8	282	22.2		30.4
10	211	47.7	2	49.6		57.9	297	22.6		30.4
11	226	50.2	17	49.1	-9	59.0	312	22.9	-24	30.3
12	241	52.6	32	48.7	-10	00.0	327	23.3	-24	30.2
13	256	55.1	47	48.2	-10	01.1	342	23.7		30.2
14	271	57.6	62	47.7		02.2	357	24.1		30.1
15	287	00.0	77	47.3		03.3	12	24.4		30.1
16	302	02.5	92	46.8		04.4	27	24.8		30.0
17	317	05.0	107	46.3	-10	05.5	42	25.2	-24	30.0
18	332	07.4	122	45.9	-10	06.6	57	25.6	-24	29.9
19	347	09.9	137	45.4		07.7	72	26.0		29.9
20	2	12.4	152	44.9		08.7	87	26.3		29.8
21	17	14.8	167	44.4		09.8	102	26.7		29.8
22	32	17.3	182	44.0		10.9	117	27.1		29.7
23	47	19.8	197	43.5		12.0	132	27.5		29.6
24	62	22.2	212	43.0	-10	13.1	147	27.8	-24	29.6
Dif	—		-5	-11			+4	+1		
									+28	0
										+22
										-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 46 ^m 5			Edad: 9 ^d 1 PHE { 4 ^h : 55:4 12 ^h : 55:3 20 ^h : 55:1 R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m		
0	183	24.2	-20	22.6	64	42.2	+3 49.4	60 N	15 14	16 06	16 59	13 22	14	2	14	76		
1	198	24.0		23.1	79	15.6 ¹⁴⁴	+4 00.3 ¹⁰⁹	58	28	15	17 05	26	15		11	74		
2	213	23.8		23.7	93	48.9 ¹⁴³	11.2 ¹⁰⁹	56	39	23	10	29	18		09	72		
3	228	23.6		24.2	108	22.2 ¹⁴³	22.0 ¹⁰⁸	54	50	31	15	31	20		07	70		
4	243	23.5		24.7	122	55.5 ¹⁴³	32.9 ¹⁰⁹	52	15 59	37	19	34	21		06	67		
5	258	23.3	-20	25.2	137	28.9 ¹⁴⁴	+4 43.7 ¹⁰⁸	50	16 07	16 43	17 23	13 36	23	2	04	66		
6	273	23.1	-20	25.7	152	02.2 ¹⁴³	+4 54.4 ¹⁰⁷	45	16 24	16 57	17 33	13 41	26	2	01	62		
7	288	22.9		26.2	166	35.6 ¹⁴⁴	+5 05.2 ¹⁰⁸	40	38	17 08	41	45	29	1	58	59		
8	303	22.8		26.7	181	09.0 ¹⁴⁴	15.9 ¹⁰⁷	35	16 50	18	49	49	31		56	57		
9	318	22.6		27.3	195	42.3 ¹⁴³	26.6 ¹⁰⁷	30	17 01	27	17 56	52	34		54	54		
10	333	22.4		27.8	210	15.7 ¹⁴⁴	37.3 ¹⁰⁷	20	19	43	18 10	13 57	38		50	51		
11	348	22.2	-20	28.3	224	49.1 ¹⁴⁴	+5 47.9 ¹⁰⁶	10 N	17 35	17 57	18 23	14 02	41	1	47	47		
12	3	22.0	-20	28.8	239	22.5 ¹⁴⁴	+5 58.5 ¹⁰⁶	0	17 50	18 12	18 38	14 07	44	1	44	44		
13	18	21.9		29.3	253	55.9 ¹⁴⁴	+6 09.0 ¹⁰⁵	10 S	18 05	28	18 54	11	47		41	41		
14	33	21.7		29.8	268	29.2 ¹⁴³	19.6 ¹⁰⁶	20	22	18 46	19 14	16	51		38	37		
15	48	21.5		30.3	283	02.6 ¹⁴⁴	30.0 ¹⁰⁴	30	41	19 07	39	22	54		34	34		
16	63	21.3		30.8	297	36.0 ¹⁴⁴	40.5 ¹⁰⁵	35	18 52	21	19 56	25	57		32	31		
17	78	21.2	-20	31.3	312	09.4 ¹⁴⁴	+6 50.9 ¹⁰⁴	40	19 05	19 36	20 15	14 29	59	1	30	28		
18	93	21.0	-20	31.8	326	42.8 ¹⁴⁴	+7 01.3 ¹⁰⁴	45	19 20	19 55	20 41	14 33	62	1	27	26		
19	108	20.8		32.3	341	16.1 ¹⁴³	11.7 ¹⁰⁴	50	39	20 20	21 16	39	65		24	22		
20	123	20.6		32.9	355	49.5 ¹⁴⁴	22.0 ¹⁰³	52	48	32	21 36	41	67		22	21		
21	138	20.4		33.4	10	22.9 ¹⁴⁴	32.2 ¹⁰²	54	19 58	20 46	22 00	44	69		20	20		
22	153	20.3		33.9	24	56.2 ¹⁴³	42.5 ¹⁰³	56	20 09	21 03	22 36	47	71		19	17		
23	168	20.1		34.4	39	29.6 ¹⁴⁴	+7 52.7 ¹⁰²	58	23	23	** **	50	73		17	15		
24	183	19.9	-20	34.9	54	03.0 ¹⁴⁴	+8 02.8 ¹⁰¹	60 S	20 38	21 50	** **	14 54	76	1	14	13		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 19 ^h 47 ^m 3		Mag: -3.9 PMG: 9 ^h 49 ^m				Mag: +1.2 PMG: 14 ^h 10 ^m				Mag: -2.8 PMG: 0 ^h 36 ^m				Mag: +0.6 PMG: 10 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	22.2	212	43.0	-10	13.1	147	27.8	-24	29.6	351	03.4	+21	30.4	208	10.9	-11	18.4
1	77	24.7	227	42.5		14.2	162	28.2		29.5	6	06.3		30.3	223	13.1		18.5
2	92	27.1	242	42.1		15.3	177	28.6		29.5	21	09.1		30.3	238	15.3		18.6
3	107	29.6	257	41.6		16.3	192	29.0		29.4	36	11.9		30.2	253	17.5		18.7
4	122	32.1	272	41.1		17.4	207	29.3		29.4	51	14.7		30.2	268	19.7		18.8
5	137	34.5	287	40.6	-10	18.5	222	29.7	-24	29.3	66	17.5	+21	30.2	283	21.9	-11	18.9
6	152	37.0	302	40.2	-10	19.6	237	30.1	-24	29.2	81	20.3	+21	30.1	298	24.1	-11	19.0
7	167	39.5	317	39.7		20.7	252	30.5		29.2	96	23.1		30.1	313	26.3		19.1
8	182	41.9	332	39.2		21.8	267	30.8		29.1	111	26.0		30.0	328	28.5		19.2
9	197	44.4	347	38.7		22.8	282	31.2		29.1	126	28.8		30.0	343	30.7		19.2
10	212	46.9	2	38.2		23.9	297	31.6		29.0	141	31.6		30.0	358	32.8		19.3
11	227	49.3	17	37.8	-10	25.0	312	32.0	-24	28.9	156	34.4	+21	29.9	13	35.0	-11	19.4
12	242	51.8	32	37.3	-10	26.1	327	32.3	-24	28.9	171	37.2	+21	29.9	28	37.2	-11	19.5
13	257	54.2	47	36.8		27.2	342	32.7		28.8	186	40.0		29.9	43	39.4		19.6
14	272	56.7	62	36.3		28.2	357	33.1		28.7	201	42.9		29.8	58	41.6		19.7
15	287	59.2	77	35.9		29.3	12	33.5		28.7	216	45.7		29.8	73	43.8		19.8
16	303	01.6	92	35.4		30.4	27	33.9		28.6	231	48.5		29.7	88	46.0		19.9
17	318	04.1	107	34.9	-10	31.5	42	34.2	-24	28.5	246	51.3	+21	29.7	103	48.2	-11	20.0
18	333	06.6	122	34.4	-10	32.6	57	34.6	-24	28.5	261	54.1	+21	29.7	118	50.4	-11	20.0
19	348	09.0	137	33.9		33.6	72	35.0		28.4	276	56.9		29.6	133	52.6		20.1
20	3	11.5	152	33.4		34.7	87	35.4		28.3	291	59.8		29.6	148	54.8		20.2
21	18	14.0	167	33.0		35.8	102	35.7		28.3	307	02.6		29.6	163	57.0		20.3
22	33	16.4	182	32.5		36.9	117	36.1		28.2	322	05.4		29.5	178	59.1		20.4
23	48	18.9	197	32.0		38.0	132	36.5		28.1	337	08.2		29.5	194	01.3		20.5
24	63	21.4	212	31.5	-10	39.0	147	36.9	-24	28.1	352	11.0	+21	29.4	209	03.5	-11	20.6
Dif	—		-5		-11		+4		+1		+28		0		+22		-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 10 ^d 1	PHE	4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'7		Rº: 45 ^m		Náutico	Civil		Hora	Rº	Hora	Rº	
	PMG: 11 ^h 46 ^m 8																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	183	19.9	-20	54	03.0	+8	02.8	101	60 N	6	35	7	28	8	21	13	36
1	198	19.7		68	36.3 ¹⁴³		12.9 ¹⁰¹		58		29	19	8	07		41	18
2	213	19.5		83	09.7 ¹⁴⁴		23.0 ¹⁰¹		56		24	11	7	55		47	20
3	228	19.3		97	43.0 ¹⁴³		33.0 ¹⁰⁰		54		19	7	03	45		51	22
4	243	19.2		112	16.3 ¹⁴³		43.0 ¹⁰⁰		52		15	6	57	36		55	24
5	258	19.0	-20	126	49.6 ¹⁴³	+8	53.0 ¹⁰⁰		50		6	10	6	51	7	13	59
6	273	18.8	-20	141	22.9 ¹⁴³	+9	02.9 ⁹⁹		45		6	01	6	37	7	14	07
7	288	18.6		155	56.2 ¹⁴³		12.8 ⁹⁹		40		5	53	26	6	56	14	32
8	303	18.4		170	29.5 ¹⁴³		22.6 ⁹⁸		35		45	16	43		20	34	53
9	318	18.2		185	02.8 ¹⁴³		32.3 ⁹⁷		30		38	6	07	33		26	35
10	333	18.1		199	36.1 ¹⁴³		42.1 ⁹⁸		20		24	5	51	6	14	35	39
11	348	17.9	-20	214	09.3 ¹⁴²	+9	51.7 ⁹⁶		10 N		5	10	5	36	5	14	43
12	3	17.7	-20	228	42.6 ¹⁴³	+10	01.4 ⁹⁷		0		4	55	5	21	5	14	51
13	18	17.5		243	15.8 ¹⁴²		11.0 ⁹⁶		10 S		39	5	05	28		14	58
14	33	17.3		257	49.0 ¹⁴²		20.5 ⁹⁵		20		4	19	4	47	5	15	07
15	48	17.1		272	22.2 ¹⁴²		30.0 ⁹⁵		30		3	54	26	4	52	16	54
16	63	16.9		286	55.4 ¹⁴²		39.4 ⁹⁴		35		37	4	12	41		22	55
17	78	16.8	-20	301	28.5 ¹⁴¹	+10	48.8 ⁹⁴		40		3	18	3	57	4	15	28
18	93	16.6	-20	316	01.7 ¹⁴²	+10	58.1 ⁹³		45		2	52	3	38	4	13	55
19	108	16.4		330	34.8 ¹⁴¹	+11	07.4 ⁹³		50		2	17	13	3	54	44	64
20	123	16.2		345	07.9 ¹⁴¹		16.7 ⁹³		52		1	57	3	01	45	48	66
21	138	16.0		359	41.0 ¹⁴¹		25.8 ⁹¹		54		1	33	2	47	35	53	67
22	153	15.8		14	14.1 ¹⁴¹		35.0 ⁹²		56		0	56	30	23		15	58
23	168	15.6		46.2	28	47.2 ¹⁴¹	44.0 ⁹⁰		58		** ** *	2	09	3	10	16	03
24	183	15.4	-20	43	20.2 ¹⁴⁰	+11	53.1 ⁹¹		60 S		** ** *	1	43	2	55	16	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 43 ^m 3		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: +1.2 PMG: 14 ^h 09 ^m		Mag: -2.8 PMG: 0 ^h 31 ^m		Mag: +0.6 PMG: 10 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	63	21.4	212	31.5	147	36.9	352	11.0	209	03.5
1	78	23.8	227	31.0	162	37.2	7	13.8	224	05.7
2	93	26.3	242	30.5	177	37.6	22	16.7	239	07.9
3	108	28.7	257	30.1	192	38.0	37	19.5	254	10.1
4	123	31.2	272	29.6	207	38.4	52	22.3	269	12.3
5	138	33.7	287	29.1	222	38.7	67	25.1	284	14.5
6	153	36.1	302	28.6	237	39.1	82	27.9	299	16.7
7	168	38.6	317	28.1	252	39.5	97	30.7	314	18.9
8	183	41.1	332	27.6	267	39.9	112	33.6	329	21.1
9	198	43.5	347	27.1	282	40.2	127	36.4	344	23.3
10	213	46.0	2	26.7	297	40.6	142	39.2	359	25.4
11	228	48.5	17	26.2	312	41.0	157	42.0	14	27.6
12	243	50.9	32	25.7	327	41.3	172	44.8	29	29.8
13	258	53.4	47	25.2	342	41.7	187	47.7	44	32.0
14	273	55.9	62	24.7	357	42.1	202	50.5	59	34.2
15	288	58.3	77	24.2	12	42.5	217	53.3	74	36.4
16	304	00.8	92	23.7	27	42.8	232	56.1	89	38.6
17	319	03.2	107	23.2	42	43.2	247	58.9	104	40.8
18	334	05.7	122	22.7	57	43.6	263	01.7	119	43.0
19	349	08.2	137	22.2	72	44.0	278	04.6	134	45.2
20	4	10.6	152	21.8	87	44.3	293	07.4	149	47.4
21	19	13.1	167	21.3	102	44.7	308	10.2	164	49.6
22	34	15.6	182	20.8	117	45.1	323	13.0	179	51.8
23	49	18.0	197	20.3	132	45.5	338	15.8	194	54.0
24	64	20.5	212	19.8	147	45.8	353	18.7	209	56.1
Dif	—		-5	-11	+4	+1	+28		+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 47 ^m 1			Edad: 11 ^d 1 PHE { 4 ^h : 54 ^h 5 12 ^h : 54 ^h 4 20 ^h : 54 ^h 3 R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m
0	183	15.4	-20	46.7	43	20.2	+11 53.1	60 N	15 11	16 03	16 57	13 51	20	4	45	74
1	198	15.3		47.2	57	53.2 ¹⁴⁰	+12 02.0 ⁸⁹	58	25	13	17 03	13 59	22		38	71
2	213	15.1		47.7	72	26.2 ¹⁴⁰	10.9 ⁸⁹	56	37	21	08	14 07	24		31	69
3	228	14.9		48.2	86	59.2 ¹⁴⁰	19.8 ⁸⁹	54	47	29	13	13 26			25	66
4	243	14.7		48.7	101	32.2 ¹⁴⁰	28.6 ⁸⁸	52	15 57	36	18	19 28			20	65
5	258	14.5	-20	49.2	116	05.1 ¹³⁹	+12 37.3 ⁸⁷	50	16 05	16 42	17 22	14 24	29	4	15	63
6	273	14.3	-20	49.6	130	38.1 ¹⁴⁰	+12 46.0 ⁸⁷	45	16 23	16 55	17 32	14 36	32	4	05	60
7	288	14.1		50.1	145	11.0 ¹³⁹	+12 54.6 ⁸⁶	40	37	17 07	40	46	34	3	56	58
8	303	13.9		50.6	159	43.8 ¹³⁸	+13 03.2 ⁸⁶	35	16 50	17	48	14 54	36		49	55
9	318	13.7		51.1	174	16.7 ¹³⁹	11.7 ⁸⁵	30	17 00	26	17 56	15 01	38		42	54
10	333	13.5		51.6	188	49.5 ¹³⁸	20.2 ⁸⁵	20	19	43	18 10	14	40		31	50
11	348	13.3	-20	52.0	203	22.3 ¹³⁸	+13 28.6 ⁸⁴	10 N	17 35	17 58	18 24	15 25	43	3	21	48
12	3	13.1	-20	52.5	217	55.1 ¹³⁸	+13 36.9 ⁸³	0	17 51	18 13	18 39	15 35	46	3	12	45
13	18	13.0		53.0	232	27.9 ¹³⁸	45.1 ⁸²	10 S	18 06	29	18 55	46	48	3	03	42
14	33	12.8		53.5	247	00.6 ¹³⁷	+13 53.3 ⁸²	20	23	18 47	19 16	15 57	50	2	53	40
15	48	12.6		53.9	261	33.3 ¹³⁷	+14 01.5 ⁸²	30	42	19 09	41	16 10	53		42	37
16	63	12.4		54.4	276	06.0 ¹³⁷	09.6 ⁸¹	35	18 54	23	19 58	17	56		36	35
17	78	12.2	-20	54.9	290	38.7 ¹³⁷	+14 17.6 ⁸⁰	40	19 07	19 39	20 18	16 26	57	2	29	32
18	93	12.0	-20	55.4	305	11.3 ¹³⁶	+14 25.5 ⁷⁹	45	19 23	19 58	20 44	16 36	60	2	20	30
19	108	11.8		55.8	319	43.9 ¹³⁶	33.4 ⁷⁹	50	42	20 23	21 21	48	63	10	27	
20	123	11.6		56.3	334	16.5 ¹³⁶	41.2 ⁷⁸	52	19 51	36	21 41	16 54	64		06	25
21	138	11.4		56.8	348	49.1 ¹³⁶	49.0 ⁷⁸	54	20 02	20 51	22 07	17 00	66	2	00	24
22	153	11.2		57.3	3	21.6 ¹³⁵	+14 56.6 ⁷⁶	56	13	21 08	22 47	07	68	1	55	22
23	168	11.0		57.7	17	54.1 ¹³⁵	+15 04.3 ⁷⁷	58	27	29	** **	15	70		48	20
24	183	10.8	-20	58.2	32	26.6 ¹³⁵	+15 11.8 ⁷⁵	60 S	20 43	21 57	** **	17 24	72	1	41	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 39 ^m 4		Mag: -3.9 PMG: 9 ^h 51 ^m		Mag: +1.2 PMG: 14 ^h 09 ^m		Mag: -2.8 PMG: 0 ^h 27 ^m		Mag: +0.6 PMG: 9 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	64	20.5	212	19.8	147	45.8	353	18.7	209	56.1
1	79	23.0	227	19.3	162	46.2	8	21.5	224	58.3
2	94	25.4	242	18.8	177	46.6	23	24.3	240	00.5
3	109	27.9	257	18.3	192	47.0	38	27.1	255	02.7
4	124	30.3	272	17.8	207	47.3	53	29.9	270	04.9
5	139	32.8	287	17.3	222	47.7	68	32.8	285	07.1
6	154	35.3	302	16.8	237	48.1	83	35.6	300	09.3
7	169	37.7	317	16.3	252	48.4	98	38.4	315	11.5
8	184	40.2	332	15.8	267	48.8	113	41.2	330	13.7
9	199	42.7	347	15.3	282	49.2	128	44.0	345	15.9
10	214	45.1	2	14.8	297	49.6	143	46.9	0	18.1
11	229	47.6	17	14.3	312	49.9	158	49.7	15	20.3
12	244	50.1	32	13.8	327	50.3	173	52.5	30	22.5
13	259	52.5	47	13.3	342	50.7	188	55.3	45	24.7
14	274	55.0	62	12.8	357	51.1	203	58.1	60	26.9
15	289	57.5	77	12.3	12	51.4	219	01.0	75	29.0
16	304	59.9	92	11.8	27	51.8	234	03.8	90	31.2
17	320	02.4	107	11.3	42	52.2	249	06.6	105	33.4
18	335	04.8	122	10.8	57	52.5	264	09.4	120	35.6
19	350	07.3	137	10.3	72	52.9	279	12.2	135	37.8
20	5	09.8	152	09.8	87	53.3	294	15.1	150	40.0
21	20	12.2	167	09.3	102	53.7	309	17.9	165	42.2
22	35	14.7	182	08.8	117	54.0	324	20.7	180	44.4
23	50	17.2	197	08.3	132	54.4	339	23.5	195	46.6
24	65	19.6	212	07.8	147	54.8	354	26.4	210	48.8
Dif	—		-5		+4		+28		+22	
			-11		+1		0		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 47 ^m 4			Edad: 12 ^d 1 PHE { SD: 14/8 PMG: 22 ^h 32 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	10.8	-20	58.2	32	26.6	+15	11.8	60 N	6 38	7 32	8 25	14 11	25	5 59	70
1	198	10.6		58.7	46	59.1 ¹³⁵		19.3 ⁷⁵	58	32	23	8 11	21	28	49	67
2	213	10.4		59.1	61	31.5 ¹³⁴		26.7 ⁷⁴	56	27	14	7 59	31	29	40	65
3	228	10.2	-20	59.6	76	03.9 ¹³⁴		34.0 ⁷³	54	22	07	48	39	31	32	64
4	243	10.0	-21	00.1	90	36.3 ¹³⁴		41.3 ⁷³	52	17	7 00	39	47	32	25	62
5	258	09.8	-21	00.5	105	08.7 ¹³⁴	+15	48.5 ⁷²	50	6 13	6 53	7 30	14 53	34	5 18	62
6	273	09.6	-21	01.0	119	41.0 ¹³³	+15	55.6 ⁷¹	45	6 03	6 40	7 12	15 08	36	5 05	58
7	288	09.4		01.5	134	13.3 ¹³³	+16	02.7 ⁷⁰	40	5 55	28	6 58	20	38	4 54	56
8	303	09.2		01.9	148	45.5 ¹³²		09.7 ⁶⁹	35	47	18	45	30	39	44	55
9	318	09.0		02.4	163	17.8 ¹³³		16.6 ⁶⁹	30	39	6 09	34	39	41	36	53
10	333	08.8		02.9	177	50.0 ¹³²		23.4 ⁶⁸	20	25	5 52	6 16	15 54	43	21	51
11	348	08.6	-21	03.3	192	22.2 ¹³²	+16	30.2 ⁶⁸	10 N	5 11	5 37	5 59	16 08	45	4 09	48
12	3	08.4	-21	03.8	206	54.3 ¹³¹	+16	36.9 ⁶⁷	0	4 56	5 22	5 44	16 21	47	3 57	46
13	18	08.2		04.3	221	26.5 ¹³²		43.5 ⁶⁶	10 S	39	5 06	28	34	48	45	45
14	33	08.0		04.7	235	58.6 ¹³¹		50.1 ⁶⁶	20	4 19	4 47	5 11	16 47	51	33	42
15	48	07.8		05.2	250	30.7 ¹³¹	+16	56.5 ⁶⁴	30	3 53	25	4 52	17 03	53	19	39
16	63	07.6		05.6	265	02.7 ¹³⁰	+17	02.9 ⁶³	35	36	4 12	40	13	54	11	37
17	78	07.4	-21	06.1	279	34.7 ¹³⁰	+17	09.2 ⁶³	40	3 16	3 56	4 27	17 23	56	3 01	36
18	93	07.2	-21	06.6	294	06.7 ¹³⁰	+17	15.5 ⁶³	45	2 50	3 36	4 12	17 36	57	2 50	34
19	108	07.0		07.0	308	38.7 ¹³⁰		21.6 ⁶¹	50	2 13	3 11	3 52	51	59	37	31
20	123	06.8		07.5	323	10.6 ¹²⁹		27.7 ⁶¹	52	1 53	2 58	43	17 58	61	31	30
21	138	06.6		07.9	337	42.5 ¹²⁹		33.7 ⁶⁰	54	1 27	44	33	18 06	62	24	28
22	153	06.4		08.4	352	14.4 ¹²⁹		39.6 ⁵⁹	56	0 47	26	21	15	63	17	26
23	168	06.2		08.8	6	46.3 ¹²⁹		45.5 ⁵⁹	58	** **	2 05	3 07	25	65	2 08	25
24	183	06.0	-21	09.3	21	18.1 ¹²⁸	+17	51.2 ⁵⁷	60 S	** **	1 37	2 51	18 36	68	1 59	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 35 ^m 5		Mag: -3.9 PMG: 9 ^h 52 ^m		Mag: +1.2 PMG: 14 ^h 08 ^m		Mag: -2.8 PMG: 0 ^h 22 ^m		Mag: +0.6 PMG: 9 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	19.6	212	07.8	-11	30.2	147	54.8	-24	24.2
1	80	22.1	227	07.3		31.3	162	55.2		24.1
2	95	24.6	242	06.8		32.3	177	55.5		24.0
3	110	27.0	257	06.3		33.4	192	55.9		23.9
4	125	29.5	272	05.8		34.5	207	56.3		23.8
5	140	32.0	287	05.3	-11	35.5	222	56.6	-24	23.7
6	155	34.4	302	04.8	-11	36.6	237	57.0	-24	23.7
7	170	36.9	317	04.3		37.6	252	57.4		23.6
8	185	39.3	332	03.8		38.7	267	57.8		23.5
9	200	41.8	347	03.3		39.7	282	58.1		23.4
10	215	44.3	2	02.8		40.8	297	58.5		23.3
11	230	46.7	17	02.2	-11	41.8	312	58.9	-24	23.2
12	245	49.2	32	01.7	-11	42.9	327	59.2	-24	23.1
13	260	51.7	47	01.2		43.9	342	59.6		23.0
14	275	54.1	62	00.7		45.0	358	00.0		22.9
15	290	56.6	77	00.2		46.0	13	00.4		22.8
16	305	59.1	91	59.7		47.1	28	00.7		22.7
17	321	01.5	106	59.2	-11	48.1	43	01.1	-24	22.6
18	336	04.0	121	58.7	-11	49.2	58	01.5	-24	22.5
19	351	06.4	136	58.2		50.2	73	01.9		22.4
20	6	08.9	151	57.7		51.3	88	02.2		22.3
21	21	11.4	166	57.1		52.3	103	02.6		22.2
22	36	13.8	181	56.6		53.4	118	03.0		22.1
23	51	16.3	196	56.1		54.4	133	03.3		22.0
24	66	18.8	211	55.6	-11	55.5	148	03.7	-24	21.9
Dif	—		-5		-11		+4		+1	
							+28		0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 47 ^m 8			Edad: 13 ^d 1 PHE SD: 14:7 PMG: 23 ^h 19 ^m	4 ^h : 54:1 12 ^h : 54:0 20 ^h : 54:0 Rº: 48 ^m									
	hG ☉	Dec	Dif			Civil			Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	06.0	-21	09.3	21	18.1	+17 51.2	60 N	15 08	16 01	16 55	14 36 33	7 09 64	
1	198	05.8		09.7	35	49.9 ¹²⁸	+17 56.9 ⁵⁷	58	22	11	17 01	14 49 35	6 56 63	
2	213	05.6		10.2	50	21.7 ¹²⁸	+18 02.5 ⁵⁶	56	35	19	07	15 00 37	45 61	
3	228	05.4		10.6	64	53.4 ¹²⁷	08.0 ⁵⁵	54	45	27	12	10 38	36 60	
4	243	05.2		11.1	79	25.1 ¹²⁷	13.4 ⁵⁴	52	15 55	34	17	19 38	27 59	
5	258	05.0	-21	11.5	93	56.8 ¹²⁷	+18 18.8 ⁵⁴	50	16 03	16 40	17 21	15 27 39	6 20 57	
6	273	04.8	-21	12.0	108	28.5 ¹²⁷	+18 24.1 ⁵³	45	16 22	16 54	17 31	15 44 41	6 03 56	
7	288	04.6		12.4	123	00.1 ¹²⁶	29.2 ⁵¹	40	36	17 06	40	15 58 42	5 50 54	
8	303	04.3		12.9	137	31.8 ¹²⁷	34.4 ⁵²	35	16 49	17	48	16 09 44	39 53	
9	318	04.1		13.3	152	03.3 ¹²⁵	39.4 ⁵⁰	30	17 00	26	17 55	20 44	29 52	
10	333	03.9		13.8	166	34.9 ¹²⁶	44.3 ⁴⁹	20	19	43	18 10	37 46	5 12 50	
11	348	03.7	-21	14.2	181	06.5 ¹²⁶	+18 49.1 ⁴⁸	10 N	17 36	17 58	18 24	16 53 47	4 57 49	
12	3	03.5	-21	14.7	195	38.0 ¹²⁵	+18 53.9 ⁴⁸	0	17 51	18 14	18 39	17 08 47	4 43 48	
13	18	03.3		15.1	210	09.5 ¹²⁵	+18 58.6 ⁴⁷	10 S	18 07	30	18 57	22 49	30 45	
14	33	03.1		15.6	224	40.9 ¹²⁴	+19 03.2 ⁴⁶	20	24	18 48	19 17	38 50	4 15 44	
15	48	02.9		16.0	239	12.4 ¹²⁵	07.7 ⁴⁵	30	44	19 11	19 43	17 56 51	3 58 42	
16	63	02.7		16.5	253	43.8 ¹²⁴	12.1 ⁴⁴	35	18 56	25	20 00	18 07 52	48 41	
17	78	02.5	-21	16.9	268	15.2 ¹²⁴	+19 16.4 ⁴³	40	19 09	19 41	20 21	18 19 53	3 37 40	
18	93	02.3	-21	17.3	282	46.5 ¹²³	+19 20.7 ⁴³	45	19 25	20 01	20 47	18 33 54	3 24 38	
19	108	02.1		17.8	297	17.9 ¹²⁴	24.8 ⁴¹	50	45	27	21 25	50 56	08 36	
20	123	01.8		18.2	311	49.2 ¹²³	28.9 ⁴¹	52	19 54	40	21 46	18 59 56	3 01 35	
21	138	01.6		18.7	326	20.5 ¹²³	32.9 ⁴⁰	54	20 05	20 55	22 14	19 08 57	2 52 34	
22	153	01.4		19.1	340	51.8 ¹²³	36.7 ³⁸	56	17	21 13	23 00	18 58	43 33	
23	168	01.2		19.5	355	23.0 ¹²²	40.5 ³⁸	58	31	21 35	** ** *	30 59	33 31	
24	183	01.0	-21	20.0	9	54.3 ¹²³	+19 44.2 ³⁷	60 S	20 48	22 05	** ** *	19 44 61	2 21 28	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 19 ^h 31 ^m 5		Mag: -3.9 PMG: 9 ^h 53 ^m			Mag: +1.2 PMG: 14 ^h 07 ^m			Mag: -2.8 PMG: 0 ^h 18 ^m			Mag: +0.7 PMG: 9 ^h 52 ^m		
	hG ♈	Dec	hG ♀	Dec	Dif	hG ♂	Dec	Dif	hG ♃	Dec	Dif	hG ♄	Dec	Dif
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	66	18.8	211	55.6	-11 55.5	148	03.7	-24 21.9	355	34.1	+21 26.6	211	41.5	-11 26.9
1	81	21.2	226	55.1	56.5	163	04.1	21.8	10	36.9	26.6	226	43.7	27.0
2	96	23.7	241	54.6	57.6	178	04.5	21.7	25	39.7	26.5	241	45.9	27.1
3	111	26.2	256	54.1	58.6	193	04.8	21.6	40	42.6	26.5	256	48.1	27.2
4	126	28.6	271	53.5	-11 59.6	208	05.2	21.5	55	45.4	26.5	271	50.3	27.3
5	141	31.1	286	53.0	-12 00.7	223	05.6	-24 21.4	70	48.2	+21 26.4	286	52.4	-11 27.4
6	156	33.6	301	52.5	-12 01.7	238	05.9	-24 21.2	85	51.0	+21 26.4	301	54.6	-11 27.5
7	171	36.0	316	52.0	02.8	253	06.3	21.1	100	53.9	26.3	316	56.8	27.5
8	186	38.5	331	51.5	03.8	268	06.7	21.0	115	56.7	26.3	331	59.0	27.6
9	201	40.9	346	51.0	04.9	283	07.1	20.9	130	59.5	26.3	347	01.2	27.7
10	216	43.4	1	50.4	05.9	298	07.4	20.8	146	02.3	26.2	2	03.4	27.8
11	231	45.9	16	49.9	-12 06.9	313	07.8	-24 20.7	161	05.1	+21 26.2	17	05.6	-11 27.9
12	246	48.3	31	49.4	-12 08.0	328	08.2	-24 20.6	176	08.0	+21 26.1	32	07.8	-11 28.0
13	261	50.8	46	48.9	09.0	343	08.5	20.5	191	10.8	26.1	47	10.0	28.1
14	276	53.3	61	48.4	10.1	358	08.9	20.4	206	13.6	26.1	62	12.2	28.2
15	291	55.7	76	47.8	11.1	13	09.3	20.3	221	16.4	26.0	77	14.4	28.2
16	306	58.2	91	47.3	12.1	28	09.6	20.2	236	19.3	26.0	92	16.6	28.3
17	322	00.7	106	46.8	-12 13.2	43	10.0	-24 20.1	251	22.1	+21 25.9	107	18.8	-11 28.4
18	337	03.1	121	46.3	-12 14.2	58	10.4	-24 19.9	266	24.9	+21 25.9	122	21.0	-11 28.5
19	352	05.6	136	45.8	15.3	73	10.8	19.8	281	27.7	25.9	137	23.2	28.6
20	7	08.1	151	45.2	16.3	88	11.1	19.7	296	30.6	25.8	152	25.4	28.7
21	22	10.5	166	44.7	17.3	103	11.5	19.6	311	33.4	25.8	167	27.6	28.8
22	37	13.0	181	44.2	18.4	118	11.9	19.5	326	36.2	25.7	182	29.8	28.8
23	52	15.4	196	43.7	19.4	133	12.2	19.4	341	39.0	25.7	197	32.0	28.9
24	67	17.9	211	43.1	-12 20.4	148	12.6	-24 19.3	356	41.9	+21 25.7	212	34.2	-11 29.0
Dif	—		-5		-10	+4		+1	+28		0	+22		-1

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 48 ^m 1			Edad: 14 ^d 1 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: ***														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	01.0	-21	20.0	9	54.3	+19	44.2	37	60 N	6	42	7	36	8	29	15	09
1	198	00.8		20.4	24	25.5 ¹²²		47.9	37	58		35		26		15	24	44
2	213	00.6		20.8	38	56.7 ¹²²		51.4	35	56		30	17	8	02		37	44
3	228	00.4		21.3	53	27.8 ¹²¹		54.8	34	54		25	09	7	51		48	45
4	243	00.1		21.7	67	59.0 ¹²²		+19	58.1	33	52	20	7	02	42		15	57
5	257	59.9	-21	22.1	82	30.1 ¹²¹		+20	01.4	33	50	6	15	6	56	7	33	16
6	272	59.7	-21	22.6	97	01.2 ¹²¹		+20	04.6	32	45	6	05	6	42	7	15	16
7	287	59.5		23.0	111	32.3 ¹²¹			07.6	30	40	5	56	30	7	00		40
8	302	59.3		23.4	126	03.4 ¹²¹			10.6	30	35		48	20	6	47		16
9	317	59.1		23.9	140	34.4 ¹²⁰			13.5	29	30		41	6	10	36		17
10	332	58.9		24.3	155	05.5 ¹²¹			16.3	28	20		26	5	53	17		23
11	347	58.6	-21	24.7	169	36.5 ¹²⁰		+20	18.9	26	10 N	5	12	5	38	6	00	17
12	2	58.4	-21	25.2	184	07.5 ¹²⁰		+20	21.5	26	0	4	56	5	22	5	44	17
13	17	58.2		25.6	198	38.5 ¹²⁰			24.0	25	10 S		39	5	06	29		18
14	32	58.0		26.0	213	09.5 ¹²⁰			26.5	25	20	4	19	4	47	5	11	28
15	47	57.8		26.4	227	40.4 ¹¹⁹			28.8	23	30	3	52	25	4	52		47
16	62	57.6		26.9	242	11.4 ¹²⁰			31.0	22	35		36	4	11	40		18
17	77	57.4	-21	27.3	256	42.3 ¹¹⁹		+20	33.1	21	40	3	15	3	55	4	26	19
18	92	57.1	-21	27.7	271	13.2 ¹¹⁹		+20	35.2	21	45		2	48	3	35	4	10
19	107	56.9		28.1	285	44.1 ¹¹⁹			37.1	19	50	2	10	3	09	3	51	46
20	122	56.7		28.6	300	15.0 ¹¹⁹			38.9	18	52		1	49	2	56	41	19
21	137	56.5		29.0	314	45.9 ¹¹⁹			40.7	18	54		1	22	41	30		20
22	152	56.3		29.4	329	16.7 ¹¹⁸			42.3	16	56		0	36		23	18	16
23	167	56.0		29.8	343	47.6 ¹¹⁹			43.9	16	58		***	***	2	01	3	04
24	182	55.8	-21	30.3	358	18.4 ¹¹⁸		+20	45.3	14	60 S		**	**	1	31	2	48

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 19 ^h 27 ^m 6		Mag: -3.9 PMG: 9 ^h 53 ^m			Mag: +1.2 PMG: 14 ^h 07 ^m			Mag: -2.8 PMG: 0 ^h 13 ^m			Mag: +0.7 PMG: 9 ^h 48 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	67	17.9	211	43.1	-12	20.4	148	12.6	-24	19.3	356	41.9	+21	25.7		
1	82	20.4	226	42.6		21.5	163	13.0		19.1	11	44.7		25.6		
2	97	22.8	241	42.1		22.5	178	13.4		19.0	26	47.5		25.6		
3	112	25.3	256	41.6		23.5	193	13.7		18.9	41	50.3		25.5		
4	127	27.8	271	41.0		24.6	208	14.1		18.8	56	53.2		25.5		
5	142	30.2	286	40.5	-12	25.6	223	14.5	-24	18.7	71	56.0	+21	25.5		
6	157	32.7	301	40.0	-12	26.6	238	14.8	-24	18.6	86	58.8	+21	25.4		
7	172	35.2	316	39.5		27.7	253	15.2		18.4	102	01.6		25.4		
8	187	37.6	331	38.9		28.7	268	15.6		18.3	117	04.5		25.3		
9	202	40.1	346	38.4		29.7	283	15.9		18.2	132	07.3		25.3		
10	217	42.5	1	37.9		30.8	298	16.3		18.1	147	10.1		25.3		
11	232	45.0	16	37.3	-12	31.8	313	16.7	-24	18.0	162	12.9	+21	25.2		
12	247	47.5	31	36.8	-12	32.8	328	17.1	-24	17.9	177	15.8	+21	25.2		
13	262	49.9	46	36.3		33.8	343	17.4		17.7	192	18.6		25.1		
14	277	52.4	61	35.7		34.9	358	17.8		17.6	207	21.4		25.1		
15	292	54.9	76	35.2		35.9	13	18.2		17.5	222	24.2		25.1		
16	307	57.3	91	34.7		36.9	28	18.5		17.4	237	27.1		25.0		
17	322	59.8	106	34.2	-12	38.0	43	18.9	-24	17.2	252	29.9	+21	25.0		
18	338	02.3	121	33.6	-12	39.0	58	19.3	-24	17.1	267	32.7	+21	24.9		
19	353	04.7	136	33.1		40.0	73	19.6		17.0	282	35.5		24.9		
20	8	07.2	151	32.6		41.0	88	20.0		16.9	297	38.4		24.9		
21	23	09.7	166	32.0		42.1	103	20.4		16.7	312	41.2		24.8		
22	38	12.1	181	31.5		43.1	118	20.8		16.6	327	44.0		24.8		
23	53	14.6	196	30.9		44.1	133	21.1		16.5	342	46.8		24.7		
24	68	17.0	211	30.4	-12	45.1	148	21.5	-24	16.4	357	49.7	+21	24.7		
Dif	—		-5			-10	+4		+1		+28		0	+22		-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 5			Edad: 15 ^d 1 PHE { SD: 14:7 PMG: 0 ^h 07 ^m 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	55.8	-21 30.3	358	18.4	+20 45.3	14	60 N	15 05	15 59	16 53	15 53 54	9 09 46	
1	197	55.6	30.7	12	49.3 ¹¹⁹	46.7	13	58	20	16 09	17 00	16 08 54	8 54 46	
2	212	55.4	31.1	27	20.1 ¹¹⁸	48.0	13	56	32	18	05	21 53	41 46	
3	227	55.2	31.5	41	50.9 ¹¹⁸	49.1	11	54	44	26	11	33 52	29 47	
4	242	54.9	31.9	56	21.7 ¹¹⁸	50.2	11	52	15 53	33	15	43 52	19 47	
5	257	54.7	-21 32.3	70	52.5 ¹¹⁸	+20 51.2	10	50	16 02	16 39	17 20	16 52 52	8 10 47	
6	272	54.5	-21 32.8	85	23.3 ¹¹⁸	+20 52.1	9	45	16 21	16 54	17 30	17 11 51	7 51 47	
7	287	54.3	33.2	99	54.1 ¹¹⁸	52.8	7	40	36	17 06	39	26 51	36 47	
8	302	54.1	33.6	114	24.9 ¹¹⁸	53.5	7	35	16 49	16	47	40 50	23 47	
9	317	53.8	34.0	128	55.6 ¹¹⁷	54.1	6	30	17 00	26	17 55	17 51 50	7 11 48	
10	332	53.6	34.4	143	26.4 ¹¹⁸	54.6	5	20	19	43	18 10	18 11 49	6 52 48	
11	347	53.4	-21 34.8	157	57.2 ¹¹⁸	+20 55.0	4	10 N	17 36	17 59	18 25	18 28 49	6 35 48	
12	2	53.2	-21 35.2	172	27.9 ¹¹⁷	+20 55.3	3	0	17 52	18 14	18 40	18 44 48	6 19 48	
13	17	53.0	35.7	186	58.7 ¹¹⁸	55.5	2	10 S	18 08	31	18 58	19 00 47	6 03 48	
14	32	52.7	36.1	201	29.4 ¹¹⁷	55.6	1	20	26	18 50	19 18	17 47	5 46 48	
15	47	52.5	36.5	216	00.2 ¹¹⁸	55.6	0	30	46	19 13	19 45	36 47	26 49	
16	62	52.3	36.9	230	30.9 ¹¹⁷	55.5	1	35	18 58	27	20 02	19 48 46	15 48	
17	77	52.1	-21 37.3	245	01.7 ¹¹⁸	+20 55.3	2	40	19 11	19 43	20 23	20 01 45	5 01 49	
18	92	51.8	-21 37.7	259	32.4 ¹¹⁷	+20 55.0	3	45	19 28	20 04	20 51	20 17 44	4 46 49	
19	107	51.6	38.1	274	03.2 ¹¹⁸	54.6	4	50	48	30	21 29	36 43	27 49	
20	122	51.4	38.5	288	33.9 ¹¹⁷	54.1	5	52	19 57	43	21 51	45 43	18 49	
21	137	51.2	38.9	303	04.7 ¹¹⁸	53.5	6	54	20 08	20 59	22 21	20 55 43	4 08 49	
22	152	50.9	39.3	317	35.4 ¹¹⁷	52.9	6	56	21	21 17	23 15	21 07 41	3 56 49	
23	167	50.7	39.7	332	06.1 ¹¹⁷	52.1	8	58	35	21 40	** **	20 41	43 49	
24	182	50.5	-21 40.1	346	36.9 ¹¹⁸	+20 51.2	9	60 S	20 52	22 12	** **	21 35 40	3 28 49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 23 ^m 7		Mag: -3.9 PMG: 9 ^h 54 ^m		Mag: +1.2 PMG: 14 ^h 06 ^m		Mag: -2.8 PMG: 0 ^h 09 ^m		Mag: +0.7 PMG: 9 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	68	17.0	211 30.4	-12 45.1	148 21.5	-24 16.4	357 49.7	+21 24.7	213 26.9	-11 31.1
1	83	19.5	226 29.9	46.1	163 21.9	16.2	12 52.5	24.7	228 29.1	31.2
2	98	22.0	241 29.3	47.2	178 22.2	16.1	27 55.3	24.6	243 31.3	31.2
3	113	24.4	256 28.8	48.2	193 22.6	16.0	42 58.1	24.6	258 33.5	31.3
4	128	26.9	271 28.3	49.2	208 23.0	15.9	58 01.0	24.5	273 35.7	31.4
5	143	29.4	286 27.7	-12 50.2	223 23.3	-24 15.7	73 03.8	+21 24.5	288 37.9	-11 31.5
6	158	31.8	301 27.2	-12 51.3	238 23.7	-24 15.6	88 06.6	+21 24.5	303 40.1	-11 31.6
7	173	34.3	316 26.7	52.3	253 24.1	15.5	103 09.4	24.4	318 42.3	31.7
8	188	36.8	331 26.1	53.3	268 24.5	15.4	118 12.3	24.4	333 44.5	31.8
9	203	39.2	346 25.6	54.3	283 24.8	15.2	133 15.1	24.3	348 46.7	31.8
10	218	41.7	1 25.0	55.3	298 25.2	15.1	148 17.9	24.3	3 48.9	31.9
11	233	44.2	16 24.5	-12 56.3	313 25.6	-24 15.0	163 20.8	+21 24.3	18 51.1	-11 32.0
12	248	46.6	31 24.0	-12 57.4	328 25.9	-24 14.8	178 23.6	+21 24.2	33 53.3	-11 32.1
13	263	49.1	46 23.4	58.4	343 26.3	14.7	193 26.4	24.2	48 55.5	32.2
14	278	51.5	61 22.9	-12 59.4	358 26.7	14.6	208 29.2	24.1	63 57.7	32.3
15	293	54.0	76 22.3	-13 00.4	13 27.0	14.4	223 32.1	24.1	78 59.9	32.4
16	308	56.5	91 21.8	01.4	28 27.4	14.3	238 34.9	24.1	94 02.1	32.4
17	323	58.9	106 21.2	-13 02.4	43 27.8	-24 14.2	253 37.7	+21 24.0	109 04.3	-11 32.5
18	339	01.4	121 20.7	-13 03.5	58 28.2	-24 14.0	268 40.5	+21 24.0	124 06.5	-11 32.6
19	354	03.9	136 20.2	04.5	73 28.5	13.9	283 43.4	23.9	139 08.7	32.7
20	9	06.3	151 19.6	05.5	88 28.9	13.8	298 46.2	23.9	154 10.9	32.8
21	24	08.8	166 19.1	06.5	103 29.3	13.6	313 49.0	23.8	169 13.1	32.9
22	39	11.3	181 18.5	07.5	118 29.6	13.5	328 51.8	23.8	184 15.3	33.0
23	54	13.7	196 18.0	08.5	133 30.0	13.4	343 54.7	23.8	199 17.5	33.0
24	69	16.2	211 17.4	-13 09.5	148 30.4	-24 13.2	358 57.5	+21 23.7	214 19.7	-11 33.1
Dif	—		-5	-10	+4	+1	+28	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^d 2 PMG: 11 ^h 48 ^m 8			Edad: 16 ^d 1 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 PMG: 0 ^h 55 ^m R ^o : 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	50.5	-21	40.1	346	36.9	+20	51.2	60 N	6 45	7 40	8 34	16 47	64	9 55	35
1	197	50.3		40.5	1	07.7 ¹¹⁸		50.2 ¹⁰	58	38	29	19	17 02	62	40	36
2	212	50.0		40.9	15	38.4 ¹¹⁷		49.2 ¹⁰	56	33	20	8 06	14 61		27	38
3	227	49.8		41.3	30	09.2 ¹¹⁸		48.0 ¹²	54	27	12	7 55	25 60		16	39
4	242	49.6		41.7	44	39.9 ¹¹⁷		46.7 ¹³	52	22	7 05	45	35 59		9 06	40
5	257	49.4	-21	42.1	59	10.7 ¹¹⁸	+20	45.4 ¹³	50	6 18	6 58	7 36	17 44	57	8 57	41
6	272	49.1	-21	42.5	73	41.5 ¹¹⁸	+20	43.9 ¹⁵	45	6 07	6 44	7 17	18 02	56	8 38	42
7	287	48.9		42.9	88	12.3 ¹¹⁸		42.4 ¹⁵	40	5 58	32	7 02	17 55		23	43
8	302	48.7		43.3	102	43.1 ¹¹⁸		40.7 ¹⁷	35	50	21	6 49	30 53		8 10	44
9	317	48.4		43.7	117	13.9 ¹¹⁸		39.0 ¹⁷	30	42	6 12	38	18 41	52	7 59	45
10	332	48.2		44.1	131	44.7 ¹¹⁸		37.1 ¹⁹	20	27	5 54	18	19 00	51	40	46
11	347	48.0	-21	44.5	146	15.5 ¹¹⁸	+20	35.2 ¹⁹	10 N	5 13	5 39	6 01	19 17	49	7 23	47
12	2	47.8	-21	44.9	160	46.3 ¹¹⁸	+20	33.1 ²¹	0	4 57	5 23	5 45	19 32	48	7 07	48
13	17	47.5		45.3	175	17.1 ¹¹⁸		31.0 ²¹	10 S	40	5 06	29	19 47	47	6 51	49
14	32	47.3		45.7	189	48.0 ¹¹⁹		28.8 ²²	20	4 19	4 47	5 12	20 04	45	34	50
15	47	47.1		46.1	204	18.8 ¹¹⁸		26.4 ²⁴	30	3 52	24	4 51	23 43		15	51
16	62	46.8		46.5	218	49.7 ¹¹⁹		24.0 ²⁴	35	35	4 10	39	34 42		6 03	52
17	77	46.6	-21	46.9	233	20.5 ¹¹⁸	+20	21.5 ²⁵	40	3 14	3 54	4 26	20 46	41	5 50	53
18	92	46.4	-21	47.3	247	51.4 ¹¹⁹	+20	18.9 ²⁶	45	2 46	3 33	4 09	21 01	40	5 35	53
19	107	46.1		47.6	262	22.3 ¹¹⁹		16.2 ²⁷	50	2 08	3 07	3 49	19 38		16	55
20	122	45.9		48.0	276	53.2 ¹¹⁹		13.4 ²⁸	52	1 46	2 54	39	28 37		5 07	55
21	137	45.7		48.4	291	24.2 ¹²⁰		10.5 ²⁹	54	1 16	38	29	38 35		4 57	56
22	152	45.4		48.8	305	55.1 ¹¹⁹		07.5 ³⁰	56	0 22	2 20	16	21 48	35	45	57
23	167	45.2		49.2	320	26.0 ¹¹⁹		04.4 ³¹	58	** **	1 56	3 02	22 01	32	32	58
24	182	45.0	-21	49.6	334	57.0 ¹²⁰	+20	01.2 ³²	60 S	** **	1 25	2 44	22 15	31	4 17	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 19 ^m 7		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: +1.2 PMG: 14 ^h 06 ^m		Mag: -2.8 PMG: 0 ^h 04 ^m		Mag: +0.7 PMG: 9 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	69	16.2	211	17.4	-13	09.5	148	30.4	-24	13.2
1	84	18.7	226	16.9		10.5	163	30.7		13.1
2	99	21.1	241	16.3		11.5	178	31.1		12.9
3	114	23.6	256	15.8		12.6	193	31.5		12.8
4	129	26.0	271	15.2		13.6	208	31.8		12.7
5	144	28.5	286	14.7	-13	14.6	223	32.2	-24	12.5
6	159	31.0	301	14.1	-13	15.6	238	32.6	-24	12.4
7	174	33.4	316	13.6		16.6	253	33.0		12.2
8	189	35.9	331	13.0		17.6	268	33.3		12.1
9	204	38.4	346	12.5		18.6	283	33.7		12.0
10	219	40.8	1	11.9		19.6	298	34.1		11.8
11	234	43.3	16	11.4	-13	20.6	313	34.4	-24	11.7
12	249	45.8	31	10.8	-13	21.6	328	34.8	-24	11.5
13	264	48.2	46	10.3		22.6	343	35.2		11.4
14	279	50.7	61	09.7		23.6	358	35.5		11.2
15	294	53.2	76	09.2		24.6	13	35.9		11.1
16	309	55.6	91	08.6		25.6	28	36.3		11.0
17	324	58.1	106	08.1	-13	26.6	43	36.6	-24	10.8
18	340	00.5	121	07.5	-13	27.6	58	37.0	-24	10.7
19	355	03.0	136	07.0		28.6	73	37.4		10.5
20	10	05.5	151	06.4		29.6	88	37.8		10.4
21	25	07.9	166	05.8		30.6	103	38.1		10.2
22	40	10.4	181	05.3		31.6	118	38.5		10.1
23	55	12.9	196	04.7		32.6	133	38.9		09.9
24	70	15.3	211	04.2	-13	33.6	148	39.2	-24	09.8
Dif	—		-6		-10		+4		+1	
							-8972		0	
									+22	
									-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 17 ^d 1 PHE	SD: 14°8									
	PMG: 11 ^h 49 ^m 2				PMG: 1 ^h 44 ^m				R°: 47 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	45.0	-21 49.6	334	57.0	+20 01.2	32	60 N	15 02	15 57	16 52	17 51 70	10 30 26	
1	197	44.7	50.0	349	28.0 ¹²⁰	+19 58.0	34	58	18	16 07	16 58	18 04 68	16 29	
2	212	44.5	50.4	3	59.0 ¹²⁰	54.6	34	56	31	16	17 04	15 66	10 05 30	
3	227	44.3	50.7	18	30.0 ¹²⁰	51.2	34	54	42	24	09	25 64	9 55 32	
4	242	44.0	51.1	33	01.0 ¹²⁰	47.6	36	52	15 52	32	14	34 62	46 33	
5	257	43.8	-21 51.5	47	32.0 ¹²⁰	+19 44.0	36	50	16 01	16 38	17 19	18 41 62	9 38 34	
6	272	43.6	-21 51.9	62	03.1 ¹²¹	+19 40.2	38	45	16 20	16 53	17 30	18 58 59	9 20 37	
7	287	43.3	52.3	76	34.1 ¹²⁰	36.4	38	40	35	17 05	39	19 12 57	9 06 39	
8	302	43.1	52.6	91	05.2 ¹²¹	32.5	39	35	16 48	16	47	23 55	8 54 41	
9	317	42.9	53.0	105	36.3 ¹²¹	28.5	40	30	17 00	26	17 55	33 54	44 41	
10	332	42.6	53.4	120	07.5 ¹²²	24.4	41	20	19	43	18 10	19 51 51	26 44	
11	347	42.4	-21 53.8	134	38.6 ¹²¹	+19 20.2	42	10 N	17 37	17 59	18 25	20 06 49	8 10 46	
12	2	42.2	-21 54.2	149	09.7 ¹²¹	+19 15.9	43	0	17 53	18 15	18 41	20 20 47	7 55 47	
13	17	41.9	54.5	163	40.9 ¹²²	11.6	43	10 S	18 09	32	18 59	34 45	40 49	
14	32	41.7	54.9	178	12.1 ¹²²	07.1	45	20	27	18 51	19 20	20 49 43	24 51	
15	47	41.5	55.3	192	43.3 ¹²²	+19 02.6	45	30	47	19 14	19 47	21 06 40	7 06 53	
16	62	41.2	55.7	207	14.6 ¹²³	+18 57.9	47	35	18 59	29	20 04	16 39	6 55 55	
17	77	41.0	-21 56.0	221	45.8 ¹²²	+18 53.2	47	40	19 13	19 45	20 26	21 27 37	6 43 56	
18	92	40.7	-21 56.4	236	17.1 ¹²³	+18 48.4	48	45	19 30	20 06	20 54	21 41 34	6 28 58	
19	107	40.5	56.8	250	48.4 ¹²³	43.5	49	50	19 51	33	21 33	21 57 32	11 59	
20	122	40.3	57.2	265	19.7 ¹²³	38.5	50	52	20 00	20 47	21 56	22 05 30	6 02 61	
21	137	40.0	57.5	279	51.0 ¹²³	33.4	51	54	12	21 03	22 27	13 29	5 53 62	
22	152	39.8	57.9	294	22.4 ¹²⁴	28.2	52	56	24	22	** **	23 27	42 64	
23	167	39.5	58.3	308	53.7 ¹²³	23.0	52	58	39	21 46	** **	33 26	30 65	
24	182	39.3	-21 58.6	323	25.1 ¹²⁴	+18 17.7	53	60 S	20 57	22 19	** **	22 46 23	5 16 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 19 ^h 15 ^m 8		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: +1.2 PMG: 14 ^h 05 ^m		Mag: -2.8 PMG: 23 ^h 55 ^m		Mag: +0.7 PMG: 9 ^h 38 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	70	15.3	211 04.2	-13 33.6	148 39.2	-24 09.8	0	05.3	+21 22.8	215 12.5	-11 35.2
1	85	17.8	226 03.6	34.6	163 39.6	09.6	15	08.2	22.7	230 14.7	35.2
2	100	20.3	241 03.1	35.6	178 40.0	09.5	30	11.0	22.7	245 16.9	35.3
3	115	22.7	256 02.5	36.6	193 40.3	09.3	45	13.8	22.6	260 19.1	35.4
4	130	25.2	271 01.9	37.6	208 40.7	09.2	60	16.6	22.6	275 21.3	35.5
5	145	27.6	286 01.4	-13 38.6	223 41.1	-24 09.0	75	19.5	+21 22.5	290 23.5	-11 35.6
6	160	30.1	301 00.8	-13 39.6	238 41.4	-24 08.9	90	22.3	+21 22.5	305 25.7	-11 35.7
7	175	32.6	316 00.3	40.6	253 41.8	08.7	105	25.1	22.5	320 27.9	35.7
8	190	35.0	330 59.7	41.6	268 42.2	08.6	120	28.0	22.4	335 30.1	35.8
9	205	37.5	345 59.1	42.6	283 42.6	08.4	135	30.8	22.4	350 32.3	35.9
10	220	40.0	0 58.6	43.6	298 42.9	08.3	150	33.6	22.3	5 34.5	36.0
11	235	42.4	15 58.0	-13 44.6	313 43.3	-24 08.1	165	36.4	+21 22.3	20 36.8	-11 36.1
12	250	44.9	30 57.4	-13 45.6	328 43.7	-24 08.0	180	39.3	+21 22.3	35 39.0	-11 36.2
13	265	47.4	45 56.9	46.6	343 44.0	07.8	195	42.1	22.2	50 41.2	36.2
14	280	49.8	60 56.3	47.5	358 44.4	07.7	210	44.9	22.2	65 43.4	36.3
15	295	52.3	75 55.8	48.5	13 44.8	07.5	225	47.7	22.1	80 45.6	36.4
16	310	54.8	90 55.2	49.5	28 45.1	07.3	240	50.6	22.1	95 47.8	36.5
17	325	57.2	105 54.6	-13 50.5	43 45.5	-24 07.2	255	53.4	+21 22.1	110 50.0	-11 36.6
18	340	59.7	120 54.1	-13 51.5	58 45.9	-24 07.0	270	56.2	+21 22.0	125 52.2	-11 36.7
19	356	02.1	135 53.5	52.5	73 46.2	06.9	285	59.1	22.0	140 54.4	36.7
20	11	04.6	150 52.9	53.5	88 46.6	06.7	301	01.9	21.9	155 56.6	36.8
21	26	07.1	165 52.4	54.5	103 47.0	06.6	316	04.7	21.9	170 58.8	36.9
22	41	09.5	180 51.8	55.4	118 47.3	06.4	331	07.5	21.9	186 01.0	37.0
23	56	12.0	195 51.2	56.4	133 47.7	06.2	346	10.4	21.8	201 03.2	37.1
24	71	14.5	210 50.6	-13 57.4	148 48.1	-24 06.1	1	13.2	+21 21.8	216 05.4	-11 37.2
Dif	—		-6	-10	+4	+2	+28	0		+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 49 ^m 6			Edad: 18 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: 47 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m		
0	182	39.3	-21	58.6	323	25.1	+18	17.7	60 N	6 48	7 43	8 38	19 01	75	10 56	21				
1	197	39.1		59.0	337	56.5		12.2	58	41	33	22	12 72		45 23					
2	212	38.8		59.4	352	28.0		06.7	55	35	23	8 09	21 70		35 25					
3	227	38.6	-21	59.7	6	59.4	+18	01.1	56	30	15	7 58	29 68		27 22					
4	242	38.3	-22	00.1	21	30.9	+17	55.5	56	25	08	47	36 66		19 29					
5	257	38.1	-22	00.5	36	02.4	+17	49.7	58	6 20	7 01	7 38	19 43	64	10 12	30				
6	272	37.9	-22	00.8	50	33.9	+17	43.9	58	6 09	6 46	7 19	19 57	61	9 57	33				
7	287	37.6		01.2	65	05.4		37.9	60	6 00	34	7 04	20 09	58	45 35					
8	302	37.4		01.5	79	37.0		31.9	60	5 52	23	6 51	18 57		35 37					
9	317	37.1		01.9	94	08.6		25.9	60	30	44	6 13	39 27	55	25 39					
10	332	36.9		02.3	108	40.2		19.7	62	20	28	5 56	42 51		9 10 41					
11	347	36.7	-22	02.6	123	11.8	+17	13.4	63	10 N	5 13	5 40	6 02	20 55	48	8 56	44			
12	2	36.4	-22	03.0	137	43.4	+17	07.1	63	0	4 58	5 24	5 46	21 07	46	8 42	47			
13	17	36.2		03.4	152	15.1	+17	00.7	64	10 S	40	5 07	29	19	43	29	49			
14	32	35.9		03.7	166	46.8	+16	54.2	65	20	4 19	4 47	5 12	32	40	8 15	52			
15	47	35.7		04.1	181	18.5		47.6	66	30	3 51	24	4 51	46	38	7 59	54			
16	62	35.4		04.4	195	50.2		41.0	66	35	34	4 10	39	21	55	50	55			
17	77	35.2	-22	04.8	210	22.0	+16	34.2	68	40	3 13	3 53	4 25	22 04	34	7 39	58			
18	92	35.0	-22	05.1	224	53.7	+16	27.4	68	45	2 45	3 32	4 09	22 15	32	7 26	60			
19	107	34.7		05.5	239	25.5		20.5	69	50	2 05	3 05	3 48	29 28	10	63				
20	122	34.5		05.8	253	57.3		13.6	69	52	1 42	2 52	38	35	27	7 03	65			
21	137	34.2		06.2	268	29.2	+16	06.5	71	54	1 11	36	27	42	25	6 55	66			
22	152	34.0		06.5	283	01.0	+15	59.4	71	56	** **	2 17	3 14	50	23	46	68			
23	167	33.7		06.9	297	32.9		52.2	72	58	** **	1 53	2 59	22 59	21	35	71			
24	182	33.5	-22	07.2	312	04.8	+15	44.9	73	60 S	** **	1 19	2 42	23 09	18	6 23	73			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 11 ^m 9			Mag: -3.9 PMG: 9 ^h 57 ^m			Mag: +1.2 PMG: 14 ^h 04 ^m			Mag: -2.8 PMG: 23 ^h 51 ^m			Mag: +0.7 PMG: 9 ^h 34 ^m							
	hG ♈		hG ♀		hG ♂		hG ♎		hG ♊		hG ♋		hG ♏		hG ♐		hG ♑		hG ♒	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	71	14.5	210	50.6	-13	57.4	148	48.1	-24	06.1	1	13.2	+21	21.8	216	05.4	-11	37.2		
1	86	16.9	225	50.1		58.4	163	48.5		05.9	16	16.0		21.7	231	07.6		37.2		
2	101	19.4	240	49.5	-13	59.4	178	48.8		05.8	31	18.9		21.7	246	09.8		37.3		
3	116	21.9	255	48.9	-14	00.4	193	49.2		05.6	46	21.7		21.6	261	12.0		37.4		
4	131	24.3	270	48.4		01.4	208	49.6		05.4	61	24.5		21.6	276	14.2		37.5		
5	146	26.8	285	47.8	-14	02.3	223	49.9	-24	05.3	76	27.3	+21	21.6	291	16.4	-11	37.6		
6	161	29.3	300	47.2	-14	03.3	238	50.3	-24	05.1	91	30.2	+21	21.5	306	18.6	-11	37.7		
7	176	31.7	315	46.6		04.3	253	50.7		04.9	106	33.0		21.5	321	20.8		37.7		
8	191	34.2	330	46.1		05.3	268	51.0		04.8	121	35.8		21.4	336	23.0		37.8		
9	206	36.6	345	45.5		06.3	283	51.4		04.6	136	38.6		21.4	351	25.2		37.9		
10	221	39.1	0	44.9		07.2	298	51.8		04.4	151	41.5		21.4	6	27.4		38.0		
11	236	41.6	15	44.4	-14	08.2	313	52.1	-24	04.3	166	44.3	+21	21.3	21	29.6	-11	38.1		
12	251	44.0	30	43.8	-14	09.2	328	52.5	-24	04.1	181	47.1	+21	21.3	36	31.8	-11	38.2		
13	266	46.5	45	43.2		10.2	343	52.9		04.0	196	50.0		21.2	51	34.0		38.2		
14	281	49.0	60	42.6		11.1	358	53.2		03.8	211	52.8		21.2	66	36.2		38.3		
15	296	51.4	75	42.0		12.1	373	53.6		03.6	226	55.6		21.2	81	38.4		38.4		
16	311	53.9	90	41.5		13.1	388	54.0		03.5	241	58.4		21.1	96	40.6		38.5		
17	326	56.4	105	40.9	-14	14.1	403	54.4	-24	03.3	257	01.3	+21	21.1	111	42.8	-11	38.6		
18	341	58.8	120	40.3	-14	15.0	418	54.7	-24	03.1	272	04.1	+21	21.0	126	45.1	-11	38.7		
19	357	01.3	135	39.7		16.0	433	55.1		02.9	287	06.9		21.0	141	47.3		38.7		
20	12	03.8	150	39.2		17.0	448	55.5		02.8	302	09.7		20.9	156	49.5		38.8		
21	27	06.2	165	38.6		18.0	463	55.8		02.6	317	12.6		20.9	171	51.7		38.9		
22	42	08.7	180	38.0		18.9	478	56.2		02.4	332	15.4		20.9	186	53.9		39.0		
23	57	11.1	195	37.4		19.9	493	56.6		02.3	347	18.2		20.8	201	56.1		39.1		
24	72	13.6	210	36.8	-14	20.9	508	56.9	-24	02.1	2	21.1	+21	20.8	216	58.3	-11	39.1		
Dif	—		-6		-10		+4		+2		+28		0		+22		-1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°2			Edad: 19 ^d 1 PHE { 4 ^h : 54/8 12 ^h : 55/0 20 ^h : 55/2												
	PMG: 11 ^h 50 ^m 0				PMG: 3 ^h 18 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	182	33.5	-22 07.2	312	04.8	+15 44.9	73	60 N	15 00	15 55	16 50	20 16 77	11 17 16			
1	197	33.2	07.6	326	36.7 ¹²⁹	37.6	74	58	16	16 06	16 57	24 74	08 19			
2	212	33.0	07.9	341	08.7 ¹³⁰	30.2	75	56	29	15	17 03	31 72	11 00 22			
3	227	32.7	08.3	355	40.6 ¹²⁹	22.7	76	54	41	23	09	37 70	10 54 23			
4	242	32.5	08.6	10	12.6 ¹³⁰	15.1	76	52	15 51	31	14	42 68	48 24			
5	257	32.2	-22 09.0	24	44.6 ¹³⁰	+15 07.5	76	50	16 00	16 38	17 18	20 47 67	10 42 26			
6	272	32.0	-22 09.3	39	16.6 ¹³⁰	+14 59.8	77	45	16 19	16 52	17 29	20 58 63	10 30 30			
7	287	31.8	09.7	53	48.6 ¹³⁰	52.0	78	40	35	17 05	39	21 07 60	20 33			
8	302	31.5	10.0	68	20.7 ¹³¹	44.1	79	35	16 48	16	47	15 57	12 34			
9	317	31.3	10.4	82	52.7 ¹³⁰	36.2	79	30	17 00	26	17 55	22 55	10 04 37			
10	332	31.0	10.7	97	24.8 ¹³¹	28.2	80	20	20	17 44	18 11	33 52	9 51 40			
11	347	30.8	-22 11.1	111	56.9 ¹³¹	+14 20.2	80	10 N	17 37	18 00	18 26	21 43 49	9 40 43			
12	2	30.5	-22 11.4	126	29.1 ¹³²	+14 12.0	82	0	17 54	18 16	18 42	21 53 45	9 29 46			
13	17	30.3	11.7	141	01.2 ¹³¹	+14 03.8	82	10 S	18 10	33	19 00	22 02 43	18 49			
14	32	30.0	12.1	155	33.4 ¹³²	+13 55.6	82	20	28	18 52	21	12 40	9 07 51			
15	47	29.8	12.4	170	05.5 ¹³¹	47.2	84	30	18 49	19 16	19 49	24 36	8 53 55			
16	62	29.5	12.8	184	37.7 ¹³²	38.8	84	35	19 01	30	20 06	30 34	45 57			
17	77	29.3	-22 13.1	199	09.9 ¹³²	+13 30.3	85	40	19 15	19 48	20 28	22 38 31	8 37 59			
18	92	29.0	-22 13.4	213	42.2 ¹³³	+13 21.8	85	45	19 32	20 09	20 57	22 47 28	8 26 62			
19	107	28.8	13.8	228	14.4 ¹³²	13.2	86	50	19 53	36	21 37	22 57 25	13 66			
20	122	28.5	14.1	242	46.7 ¹³³	+13 04.5	87	52	20 03	20 50	22 01	23 02 23	08 67			
21	137	28.3	14.4	257	18.9 ¹³²	+12 55.8	87	54	15	21 06	22 34	07 22	8 01 69			
22	152	28.0	14.8	271	51.2 ¹³³	47.0	88	56	28	26	** **	13 20	7 54 71			
23	167	27.8	15.1	286	23.5 ¹³³	38.2	88	58	20 43	21 51	** **	20 17	46 73			
24	182	27.5	-22 15.4	300	55.8 ¹³³	+12 29.2	90	60 S	21 01	22 27	** **	23 27 15	7 36 76			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 07 ^m 9		Mag: -3.9 PMG: 9 ^h 58 ^m			Mag: +1.2 PMG: 14 ^h 04 ^m			Mag: -2.8 PMG: 23 ^h 46 ^m			Mag: +0.7 PMG: 9 ^h 31 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	72	13.6	210 36.8	-14 20.9	148 56.9	-24 02.1	2	21.1	+21 20.8	216 58.3	-11 39.1					
1	87	16.1	225 36.3	21.8	163 57.3	01.9	17	23.9	20.7	232 00.5	39.2					
2	102	18.5	240 35.7	22.8	178 57.7	01.8	32	26.7	20.7	247 02.7	39.3					
3	117	21.0	255 35.1	23.8	193 58.0	01.6	47	29.5	20.7	262 04.9	39.4					
4	132	23.5	270 34.5	24.8	208 58.4	01.4	62	32.4	20.6	277 07.1	39.5					
5	147	25.9	285 33.9	-14 25.7	223 58.8	-24 01.2	77	35.2	+21 20.6	292 09.3	-11 39.6					
6	162	28.4	300 33.3	-14 26.7	238 59.2	-24 01.1	92	38.0	+21 20.5	307 11.5	-11 39.6					
7	177	30.9	315 32.8	27.7	253 59.5	00.9	107	40.9	20.5	322 13.7	39.7					
8	192	33.3	330 32.2	28.6	268 59.9	00.7	122	43.7	20.5	337 15.9	39.8					
9	207	35.8	345 31.6	29.6	284 00.3	00.5	137	46.5	20.4	352 18.1	39.9					
10	222	38.3	0 31.0	30.6	299 00.6	00.4	152	49.3	20.4	7 20.3	40.0					
11	237	40.7	15 30.4	-14 31.5	314 01.0	-24 00.2	167	52.2	+21 20.3	22 22.5	-11 40.1					
12	252	43.2	30 29.8	-14 32.5	329 01.4	-24 00.0	182	55.0	+21 20.3	37 24.7	-11 40.1					
13	267	45.6	45 29.2	33.4	344 01.7	-23 59.8	197	57.8	20.2	52 26.9	40.2					
14	282	48.1	60 28.7	34.4	359 02.1	59.6	213	00.6	20.2	67 29.2	40.3					
15	297	50.6	75 28.1	35.4	14 02.5	59.5	228	03.5	20.2	82 31.4	40.4					
16	312	53.0	90 27.5	36.3	29 02.8	59.3	243	06.3	20.1	97 33.6	40.5					
17	327	55.5	105 26.9	-14 37.3	44 03.2	-23 59.1	258	09.1	+21 20.1	112 35.8	-11 40.5					
18	342	58.0	120 26.3	-14 38.2	59 03.6	-23 58.9	273	12.0	+21 20.0	127 38.0	-11 40.6					
19	358	00.4	135 25.7	39.2	74 03.9	58.8	288	14.8	20.0	142 40.2	40.7					
20	13	02.9	150 25.1	40.2	89 04.3	58.6	303	17.6	20.0	157 42.4	40.8					
21	28	05.4	165 24.5	41.1	104 04.7	58.4	318	20.4	19.9	172 44.6	40.9					
22	43	07.8	180 23.9	42.1	119 05.1	58.2	333	23.3	19.9	187 46.8	41.0					
23	58	10.3	195 23.3	43.0	134 05.4	58.0	348	26.1	19.8	202 49.0	41.0					
24	73	12.7	210 22.8	-14 44.0	149 05.8	-23 57.8	3	28.9	+21 19.8	217 51.2	-11 41.1					
Dif	—		-6		-10		+4		+2		+28		0		+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'2 PMG: 11 ^h 50 ^m 4			Edad: 20 ^d 1 PHE { 4 ^h : 55'3 12 ^h : 55'5 20 ^h : 55'7 PMG: 4 ^h 04 ^m R°: 45 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	182	27.5	-22	15.4	300	55.8	+12	29.2	60 N	6	51	7	46	8	41	21	33							
1	197	27.2		15.8	315	28.1 ¹³³		20.2	58		44		36		26	38	76							
2	212	27.0		16.1	330	00.5 ¹³⁴		11.2	56		38		26		12	43	74							
3	227	26.7		16.4	344	32.8 ¹³³	+12	02.1	54		32		18	8	00	47	72							
4	242	26.5		16.8	359	05.2 ¹³⁴	+11	52.9	52		27		10	7	50	50	70							
5	257	26.2	-22	17.1	13	37.5 ¹³³	+11	43.7	50	6	22	7	03	7	41	21	54							
6	272	26.0	-22	17.4	28	09.9 ¹³⁴	+11	34.4	45	6	11	6	48	7	22	22	01							
7	287	25.7		17.8	42	42.3 ¹³⁴		25.1	40	6	02		36	7	06		07							
8	302	25.5		18.1	57	14.7 ¹³⁴		15.7	35	5	53		25	6	52		12							
9	317	25.2		18.4	71	47.1 ¹³⁴	+11	06.2	30		45	6	15		41		17							
10	332	25.0		18.7	86	19.5 ¹³⁴	+10	56.7	20		30	5	57		21		25							
11	347	24.7	-22	19.1	100	51.9 ¹³⁴	+10	47.1	10 N	5	14	5	41	6	03	22	32							
12	2	24.5	-22	19.4	115	24.4 ¹³⁵	+10	37.5	0	4	58	5	24	5	47	22	38							
13	17	24.2		19.7	129	56.8 ¹³⁴		27.8	10 S		40	5	07		30		45							
14	32	23.9		20.0	144	29.3 ¹³⁵		18.0	20	4	19	4	48	5	12	22	52							
15	47	23.7		20.3	159	01.7 ¹³⁴	+10	08.2	30	3	51		24	4	51	23	00							
16	62	23.4		20.7	173	34.2 ¹³⁵	+9	58.4	35		34	4	10		39		04							
17	77	23.2	-22	21.0	188	06.6 ¹³⁴	+9	48.5	40	3	12	3	53	4	25	23	09							
18	92	22.9	-22	21.3	202	39.1 ¹³⁵	+9	38.5 ¹⁰⁰	45	2	44	3	31	4	08	23	15							
19	107	22.7		21.6	217	11.5 ¹³⁴		28.5 ¹⁰⁰	50	2	03	3	04		3	47	22							
20	122	22.4		21.9	231	44.0 ¹³⁵		18.5 ¹⁰⁰	52	1	39	2	50		37		25							
21	137	22.1		22.3	246	16.5 ¹³⁵	+9	08.3 ¹⁰²	54	1	06		34		25		29							
22	152	21.9		22.6	260	48.9 ¹³⁴	+8	58.2 ¹⁰¹	56	** ** *	2	14		3	12		33							
23	167	21.6		22.9	275	21.4 ¹³⁵		48.0 ¹⁰²	58	** ** *	1	49		2	57		37							
24	182	21.4	-22	23.2	289	53.9 ¹³⁵	+8	37.7 ¹⁰³	60 S	** ** *	1	13		2	39	23	42							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 19 ^h 04 ^m 0			Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +1.2 PMG: 14 ^h 03 ^m			Mag: -2.8 PMG: 23 ^h 42 ^m			Mag: +0.7 PMG: 9 ^h 27 ^m											
	hG ♈			hG ♀			hG ♂			hG ♐			hG ♑											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	73	12.7	210	22.8	-14	44.0	149	05.8	-23	57.8	3	28.9	+21	19.8	217	51.2	-11	41.1						
1	88	15.2	225	22.2		44.9	164	06.2		57.7	18	31.7		19.7	232	53.4		41.2						
2	103	17.7	240	21.6		45.9	179	06.5		57.5	33	34.6		19.7	247	55.6		41.3						
3	118	20.1	255	21.0		46.9	194	06.9		57.3	48	37.4		19.7	262	57.8		41.4						
4	133	22.6	270	20.4		47.8	209	07.3		57.1	63	40.2		19.6	278	00.0		41.4						
5	148	25.1	285	19.8	-14	48.8	224	07.6	-23	56.9	78	43.1	+21	19.6	293	02.2	-11	41.5						
6	163	27.5	300	19.2	-14	49.7	239	08.0	-23	56.7	93	45.9	+21	19.5	308	04.5	-11	41.6						
7	178	30.0	315	18.6		50.7	254	08.4		56.6	108	48.7		19.5	323	06.7		41.7						
8	193	32.5	330	18.0		51.6	269	08.7		56.4	123	51.5		19.5	338	08.9		41.8						
9	208	34.9	345	17.4		52.6	284	09.1		56.2	138	54.4		19.4	353	11.1		41.8						
10	223	37.4	0	16.8		53.5	299	09.5		56.0	153	57.2		19.4	8	13.3		41.9						
11	238	39.9	15	16.2	-14	54.5	314	09.9	-23	55.8	169	00.0	+21	19.3	23	15.5	-11	42.0						
12	253	42.3	30	15.6	-14	55.4	329	10.2	-23	55.6	184	02.8	+21	19.3	38	17.7	-11	42.1						
13	268	44.8	45	15.0		56.4	344	10.6		55.4	199	05.7		19.3	53	19.9		42.2						
14	283	47.2	60	14.4		57.3	359	11.0		55.2	214	08.5		19.2	68	22.1		42.3						
15	298	49.7	75	13.8		58.3	14	11.3		55.0	229	11.3		19.2	83	24.3		42.3						
16	313	52.2	90	13.2	-14	59.2	29	11.7		54.9	244	14.2		19.1	98	26.5		42.4						
17	328	54.6	105	12.6	-15	00.2	44	12.1	-23	54.7	259	17.0	+21	19.1	113	28.7	-11	42.5						
18	343	57.1	120	12.0	-15	01.1	59	12.4	-23	54.5	274	19.8	+21	19.0	128	30.9	-11	42.6						
19	358	59.6	135	11.4		02.0	74	12.8		54.3	289	22.6		19.0	143	33.2		42.7						
20	14	02.0	150	10.8		03.0	89	13.2		54.1	304	25.5		19.0	158	35.4		42.7						
21	29	04.5	165	10.2		03.9	104	13.5		53.9	319	28.3		18.9	173	37.6		42.8						
22	44	07.0	180	09.6		04.9	119	13.9		53.7	334	31.1		18.9	188	39.8		42.9						
23	59	09.4	195	09.0		05.8	134	14.3		53.5	349	33.9		18.8	203	42.0		43.0						
24	74	11.9	210	08.4	-15	06.8	149	14.7	-23	53.3	4	36.8	+21	18.8	218	44.2	-11	43.1						
Dif	—			-6			+4			+2			+28			0			+22			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna							
	SD: 16°2 PMG: 11 ^h 50 ^m 8			Edad: 21 ^d 1 SD: 15°2 PMG: 4 ^h 49 ^m	PHE { 4 ^h : 55°9 12 ^h : 56°2 20 ^h : 56°4 R°: 46 ^m																
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	182	21.4	-22	23.2	289	53.9	+8	37.7	60 N	14	58	15	53	16	49	22	52	81			
1	197	21.1		23.5	304	26.4 ¹³⁵		27.4 ¹⁰³	58	15	14	16	04	16	56	54	79	44	15		
2	212	20.9		23.8	318	58.8 ¹³⁴		17.0 ¹⁰⁴	56	28		14	17	02	57	76	40	18			
3	227	20.6		24.1	333	31.3 ¹³⁵	+8	06.6 ¹⁰⁴	54	39	22		08	22	59	74	38	19			
4	242	20.3		24.5	348	03.8 ¹³⁵	+7	56.2 ¹⁰⁴	52	50	30		13	23	00	73	35	21			
5	257	20.1	-22	24.8	2	36.2 ¹³⁴	+7	45.7 ¹⁰⁵	50	15	59	16	37	17	18	23	02	70	11	33	23
6	272	19.8	-22	25.1	17	08.7 ¹³⁵	+7	35.2 ¹⁰⁵	45	16	19	16	52	17	29	23	06	66	11	27	27
7	287	19.6		25.4	31	41.1 ¹³⁴		24.6 ¹⁰⁶	40	35	17	05		39	09	63		23	30		
8	302	19.3		25.7	46	13.6 ¹³⁵		13.9 ¹⁰⁷	35	16	48		16	47	11	60		19	33		
9	317	19.0		26.0	60	46.0 ¹³⁴	+7	03.3 ¹⁰⁶	30	17	00	26	17	56	13	58		16	35		
10	332	18.8		26.3	75	18.5 ¹³⁵	+6	52.6 ¹⁰⁷	20	20	17	44	18	11	17	54		10	39		
11	347	18.5	-22	26.6	89	50.9 ¹³⁴	+6	41.8 ¹⁰⁸	10 N	17	38	18	00	18	27	23	21	50	11	05	42
12	2	18.3	-22	26.9	104	23.3 ¹³⁴	+6	31.0 ¹⁰⁸	0	17	54	18	17	18	43	23	24	46	11	00	46
13	17	18.0		27.2	118	55.7 ¹³⁴		20.2 ¹⁰⁸	10 S	18	11	34	19	01	27	43	10	55	49		
14	32	17.7		27.5	133	28.1 ¹³⁴	+6	09.3 ¹⁰⁹	20	29		18	54	23	31	39		50	53		
15	47	17.5		27.8	148	00.5 ¹³⁴	+5	58.4 ¹⁰⁹	30	18	51	19	18	19	51	34	36		44	57	
16	62	17.2		28.1	162	32.9 ¹³⁴		47.4 ¹¹⁰	35	19	03	32	20	08	37	32		40	60		
17	77	16.9	-22	28.4	177	05.2 ¹³³	+5	36.4 ¹¹⁰	40	19	17	19	50	20	30	23	39	30	10	36	63
18	92	16.7	-22	28.7	191	37.6 ¹³⁴	+5	25.4 ¹¹⁰	45	19	34	20	11	20	59	23	42	27	10	32	65
19	107	16.4		29.0	206	09.9 ¹³³		14.3 ¹¹¹	50	19	56	39	21	41	46	23		26	69		
20	122	16.2		29.3	220	42.2 ¹³³	+5	03.2 ¹¹¹	52	20	06	20	53	22	05	47	22		24	71	
21	137	15.9		29.6	235	14.5 ¹³³	+4	52.1 ¹¹¹	54	17	21	10	22	40	49	20		21	73		
22	152	15.6		29.9	249	46.8 ¹³³		40.9 ¹¹²	56	31		30		** **	51	18		18	75		
23	167	15.4		30.2	264	19.1 ¹³³		29.7 ¹¹²	58	20	46	21	56	** **	53	15		14	78		
24	182	15.1	-22	30.5	278	51.3 ¹³²	+4	18.4 ¹¹³	60 S	21	05	22	34	** **	23	55	13	10	10	80	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 19 ^h 00 ^m 1		Mag: -3.9 PMG: 10 ^h 00 ^m			Mag: +1.2 PMG: 14 ^h 03 ^m			Mag: -2.8 PMG: 23 ^h 37 ^m			Mag: +0.7 PMG: 9 ^h 24 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	'				
0	74	11.9	210	08.4	-15	06.8	149	14.7	-23	53.3	4	36.8	+21	18.8	218	44.2	-11	43.1			
1	89	14.4	225	07.8		07.7	164	15.0		53.1	19	39.6		18.8	233	46.4		43.1			
2	104	16.8	240	07.2		08.6	179	15.4		52.9	34	42.4		18.7	248	48.6		43.2			
3	119	19.3	255	06.6		09.6	194	15.8		52.7	49	45.3		18.7	263	50.8		43.3			
4	134	21.7	270	06.0		10.5	209	16.1		52.5	64	48.1		18.6	278	53.0		43.4			
5	149	24.2	285	05.3	-15	11.5	224	16.5	-23	52.3	79	50.9	+21	18.6	293	55.2	-11	43.5			
6	164	26.7	300	04.7	-15	12.4	239	16.9	-23	52.1	94	53.7	+21	18.5	308	57.4	-11	43.5			
7	179	29.1	315	04.1		13.3	254	17.2		51.9	109	56.6		18.5	323	59.7		43.6			
8	194	31.6	330	03.5		14.3	269	17.6		51.7	124	59.4		18.5	339	01.9		43.7			
9	209	34.1	345	02.9		15.2	284	18.0		51.6	140	02.2		18.4	354	04.1		43.8			
10	224	36.5	0	02.3		16.1	299	18.3		51.4	155	05.0		18.4	9	06.3		43.9			
11	239	39.0	15	01.7	-15	17.1	314	18.7	-23	51.2	170	07.9	+21	18.3	24	08.5	-11	43.9			
12	254	41.5	30	01.1	-15	18.0	329	19.1	-23	51.0	185	10.7	+21	18.3	39	10.7	-11	44.0			
13	269	43.9	45	00.5		18.9	344	19.5		50.8	200	13.5		18.3	54	12.9		44.1			
14	284	46.4	59	59.9		19.9	359	19.8		50.6	215	16.3		18.2	69	15.1		44.2			
15	299	48.8	74	59.2		20.8	14	20.2		50.4	230	19.2		18.2	84	17.3		44.3			
16	314	51.3	89	58.6		21.7	29	20.6		50.2	245	22.0		18.1	99	19.5		44.3			
17	329	53.8	104	58.0	-15	22.7	44	20.9	-23	49.9	260	24.8	+21	18.1	114	21.7	-11	44.4			
18	344	56.2	119	57.4	-15	23.6	59	21.3	-23	49.7	275	27.6	+21	18.0	129	24.0	-11	44.5			
19	359	58.7	134	56.8		24.5	74	21.7		49.5	290	30.5		18.0	144	26.2		44.6			
20	15	01.2	149	56.2		25.4	89	22.0		49.3	305	33.3		18.0	159	28.4		44.7			
21	30	03.6	164	55.6		26.4	104	22.4		49.1	320	36.1		17.9	174	30.6		44.7			
22	45	06.1	179	54.9		27.3	119	22.8		48.9	335	39.0		17.9	189	32.8		44.8			
23	60	08.6	194	54.3		28.2	134	23.2		48.7	350	41.8		17.8	204	35.0		44.9			
24	75	11.0	209	53.7	-15	29.1	149	23.5	-23	48.5	5	44.6	+21	17.8	219	37.2	-11	45.0			
Dif	—		-6		-9		+4		+2		+28		0		+22		-1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'2 PMG: 11 ^h 51 ^m 2			Edad: 22 ^d 1 PHE { 4 ^h : 56'7 12 ^h : 57'0 20 ^h : 57'2 PMG: 5 ^h 35 ^m R°: 47 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m											
0	182	15.1	-22	30.5	278	51.3	+4	18.4	60 N	6 53	7 49	8 45	** ** *	**	12 00	13											
1	197	14.8		30.8	293	23.6 ¹³³	+4	07.2 ¹¹²	58	47	38	29	** ** *	**	11 59	15											
2	212	14.6		31.1	307	55.8 ¹³²	+3	55.9 ¹¹³	56	40	29	15	** ** *	**	58	18											
3	227	14.3		31.4	322	28.0 ¹³²		44.5 ¹¹⁴	54	35	20	8 03	** ** *	**	57	20											
4	242	14.0		31.7	337	00.2 ¹³²		33.2 ¹¹³	52	29	12	7 53	** ** *	**	56	22											
5	257	13.8	-22	32.0	351	32.3 ¹³¹	+3	21.8 ¹¹⁴	50	6 24	7 05	7 43	** ** *	**	11 56	23											
6	272	13.5	-22	32.3	6	04.4 ¹³¹	+3	10.3 ¹¹⁵	45	6 13	6 50	7 24	** ** *	**	11 54	27											
7	287	13.2		32.6	20	36.5 ¹³¹	+2	58.9 ¹¹⁴	40	6 04	37	7 08	** ** *	**	53	30											
8	302	13.0		32.9	35	08.6 ¹³¹		47.4 ¹¹⁵	35	5 55	26	6 54	** ** *	**	52	33											
9	317	12.7		33.2	49	40.7 ¹³¹		35.9 ¹¹⁵	30	46	6 16	42	** ** *	**	51	35											
10	332	12.4		33.5	64	12.7 ¹³⁰		24.3 ¹¹⁶	20	31	5 58	22	** ** *	**	49	40											
11	347	12.2	-22	33.7	78	44.7 ¹³⁰	+2	12.8 ¹¹⁵	10 N	5 15	5 42	6 04	** ** *	**	11 47	44											
12	2	11.9	-22	34.0	93	16.6 ¹²⁹	+2	01.2 ¹¹⁶	0	4 59	5 25	5 47	** ** *	**	11 46	47											
13	17	11.6		34.3	107	48.6 ¹³⁰	+1	49.6 ¹¹⁶	10 S	41	5 08	31	** ** *	**	44	51											
14	32	11.4		34.6	122	20.5 ¹²⁹		38.0 ¹¹⁶	20	4 19	4 48	5 12	** ** *	**	43	54											
15	47	11.1		34.9	136	52.4 ¹²⁹		26.3 ¹¹⁷	30	3 51	24	4 51	** ** *	**	41	59											
16	62	10.8		35.2	151	24.2 ¹²⁸		14.6 ¹¹⁷	35	33	4 10	39	** ** *	**	40	61											
17	77	10.6	-22	35.5	165	56.0 ¹²⁸	+1	02.9 ¹¹⁷	40	3 11	3 52	4 25	** ** *	**	11 39	64											
18	92	10.3	-22	35.7	180	27.8 ¹²⁸	+0	51.2 ¹¹⁷	45	2 42	3 31	4 07	** ** *	**	11 37	68											
19	107	10.0		36.0	194	59.5 ¹²⁷		39.5 ¹¹⁷	50	2 01	3 03	3 46	** ** *	**	35	72											
20	122	09.8		36.3	209	31.2 ¹²⁷		27.7 ¹¹⁸	52	1 36	2 49	36	** ** *	**	35	73											
21	137	09.5		36.6	224	02.9 ¹²⁷		16.0 ¹¹⁷	54	1 01	32	24	** ** *	**	34	75											
22	152	09.2		36.9	238	34.5 ¹²⁶	+0	04.2 ¹¹⁸	56	** ** *	2 12	3 11	** ** *	**	33	77											
23	167	09.0		37.1	253	06.1 ¹²⁶	-0	07.6 ¹¹⁸	58	** ** *	1 46	2 55	** ** *	**	32	80											
24	182	08.7	-22	37.4	267	37.7 ¹²⁶	-0	19.4 ¹¹⁸	60 S	** ** *	1 08	2 37	** ** *	**	11 30	83											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 18 ^h 56 ^m 2			Mag: -3.9 PMG: 10 ^h 01 ^m			Mag: +1.2 PMG: 14 ^h 02 ^m			Mag: -2.8 PMG: 23 ^h 33 ^m			Mag: +0.7 PMG: 9 ^h 20 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	75	11.0	209	53.7	-15	29.1	149	23.5	-23	48.5	5	44.6	+21	17.8	219	37.2	-11	45.0									
1	90	13.5	224	53.1		30.1	164	23.9		48.3	20	47.4		17.8	234	39.4		45.1									
2	105	16.0	239	52.5		31.0	179	24.3		48.1	35	50.3		17.7	249	41.6		45.1									
3	120	18.4	254	51.9		31.9	194	24.6		47.9	50	53.1		17.7	264	43.8		45.2									
4	135	20.9	269	51.2		32.8	209	25.0		47.7	65	55.9		17.6	279	46.0		45.3									
5	150	23.3	284	50.6	-15	33.8	224	25.4	-23	47.5	80	58.7	+21	17.6	294	48.3	-11	45.4									
6	165	25.8	299	50.0	-15	34.7	239	25.7	-23	47.3	96	01.6	+21	17.6	309	50.5	-11	45.5									
7	180	28.3	314	49.4		35.6	254	26.1		47.1	111	04.4		17.5	324	52.7		45.5									
8	195	30.7	329	48.8		36.5	269	26.5		46.9	126	07.2		17.5	339	54.9		45.6									
9	210	33.2	344	48.1		37.4	284	26.9		46.7	141	10.0		17.4	354	57.1		45.7									
10	225	35.7	359	47.5		38.4	299	27.2		46.4	156	12.9		17.4	9	59.3		45.8									
11	240	38.1	14	46.9	-15	39.3	314	27.6	-23	46.2	171	15.7	+21	17.3	25	01.5	-11	45.9									
12	255	40.6	29	46.3	-15	40.2	329	28.0	-23	46.0	186	18.5	+21	17.3	40	03.7	-11	45.9									
13	270	43.1	44	45.6		41.1	344	28.3		45.8	201	21.3		17.3	55	05.9		46.0									
14	285	45.5	59	45.0		42.0	359	28.7		45.6	216	24.2		17.2	70	08.2		46.1									
15	300	48.0	74	44.4		42.9	14	29.1		45.4	231	27.0		17.2	85	10.4		46.2									
16	315	50.5	89	43.8		43.9	29	29.4		45.2	246	29.8		17.1	100	12.6		46.3									
17	330	52.9	104	43.1	-15	44.8	44	29.8	-23	45.0	261	32.6	+21	17.1	115	14.8	-11	46.3									
18	345	55.4	119	42.5	-15	45.7	59	30.2	-23	44.7	276	35.5	+21	17.1	130	17.0	-11	46.4									
19	0	57.8	134	41.9		46.6	74	30.6		44.5	291	38.3		17.0	145	19.2		46.5									
20	16	00.3	149	41.3		47.5	89	30.9		44.3	306	41.1		17.0	160	21.4		46.6									
21	31	02.8	164	40.6		48.4	104	31.3		44.1	321	43.9		16.9	175	23.6		46.7									
22	46	05.2	179	40.0		49.3	119	31.7		43.9	336	46.8		16.9	190	25.8		46.7									
23	61	07.7	194	39.4		50.2	134	32.0		43.7	351	49.6		16.8	205	28.1		46.8									
24	76	10.2	209	38.8	-15	51.2	149	32.4	-23	43.5	6	52.4	+21	16.8	220	30.3	-11	46.9									
Dif	—			-6			-9			+4			+2			+28			0			+22			-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 51 ^m 6			Edad: 23 ^d 1 SD: 15:6 PMG: 6 ^h 22 ^m	PHE { 4 ^h : 57:5 12 ^h : 57:8 20 ^h : 58:1 R°: 48 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	08.7	-22	37.4	267	37.7	-0 19.4	60 N	14 56	15 52	16 48	0 13 85	12 13 14	
1	197	08.4		37.7	282	09.2 ¹²⁵	31.2 ¹¹⁸	58	15 13	16 03	16 55	13 82	14 17	
2	212	08.2		38.0	296	40.7 ¹²⁵	43.1 ¹¹⁹	56	27	13	17 02	13 79	16 19	
3	227	07.9		38.3	311	12.1 ¹²⁴	-0 54.9 ¹¹⁸	54	39	22	07	13 77	17 21	
4	242	07.6		38.5	325	43.5 ¹²⁴	-1 06.8 ¹¹⁹	52	49	29	13	13 74	18 23	
5	257	07.3	-22	38.8	340	14.8 ¹²³	-1 18.7 ¹¹⁹	50	15 59	16 37	17 18	0 12 73	12 19 25	
6	272	07.1	-22	39.1	354	46.1 ¹²³	-1 30.5 ¹¹⁸	45	16 18	16 52	17 29	0 12 69	12 21 29	
7	287	06.8		39.4	9	17.3 ¹²²	42.4 ¹¹⁹	40	35	17 05	39	12 65	23 32	
8	302	06.5		39.6	23	48.5 ¹²²	-1 54.3 ¹¹⁹	35	16 48	16	48	11 63	25 35	
9	317	06.3		39.9	38	19.7 ¹²²	-2 06.2 ¹¹⁹	30	17 00	26	17 56	11 60	26 38	
10	332	06.0		40.2	52	50.8 ¹²¹	18.1 ¹¹⁹	20	21	17 44	18 12	11 56	29 42	
11	347	05.7	-22	40.4	67	21.8 ¹²⁰	-2 30.0 ¹¹⁹	10 N	17 38	18 01	18 27	0 11 51	12 31 46	
12	2	05.4	-22	40.7	81	52.8 ¹²⁰	-2 42.0 ¹²⁰	0	17 55	18 18	18 44	0 10 48	12 33 49	
13	17	05.2		41.0	96	23.8 ¹²⁰	-2 53.9 ¹¹⁹	10 S	18 12	35	19 02	10 45	35 53	
14	32	04.9		41.2	110	54.7 ¹¹⁹	-3 05.8 ¹¹⁹	20	31	18 55	24	10 41	37 57	
15	47	04.6		41.5	125	25.5 ¹¹⁸	17.7 ¹¹⁹	30	18 52	19 19	19 52	10 36	40 61	
16	62	04.4		41.8	139	56.3 ¹¹⁸	29.6 ¹¹⁹	35	19 05	34	20 10	09 34	41 64	
17	77	04.1	-22	42.0	154	27.0 ¹¹⁷	-3 41.5 ¹¹⁹	40	19 19	19 52	20 33	0 09 31	12 43 66	
18	92	03.8	-22	42.3	168	57.7 ¹¹⁷	-3 53.5 ¹²⁰	45	19 36	20 13	21 02	0 09 28	12 45 70	
19	107	03.5		42.6	183	28.3 ¹¹⁶	-4 05.4 ¹¹⁹	50	19 58	42	21 45	09 24	47 74	
20	122	03.3		42.8	197	58.9 ¹¹⁶	17.3 ¹¹⁹	52	20 08	20 56	22 10	09 22	48 76	
21	137	03.0		43.1	212	29.4 ¹¹⁵	29.2 ¹¹⁹	54	20	21 13	22 47	09 20	49 78	
22	152	02.7		43.4	226	59.8 ¹¹⁴	41.1 ¹¹⁹	56	34	21 34	** **	09 18	50 81	
23	167	02.4		43.6	241	30.2 ¹¹⁴	-4 53.0 ¹¹⁹	58	20 49	22 00	** **	08 17	52 83	
24	182	02.2	-22	43.9	256	00.5 ¹¹³	-5 04.8 ¹¹⁸	60 S	21 09	22 41	** **	0 08 14	12 53 86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 52 ^m 2		Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: +1.2 PMG: 14 ^h 01 ^m			Mag: -2.8 PMG: 23 ^h 28 ^m			Mag: +0.7 PMG: 9 ^h 17 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	°	'	°	'	°	'	
0	76	10.2	209	38.8	-15	51.2	149	32.4	-23	43.5	6 52.4	+21	16.8	
1	91	12.6	224	38.1		52.1	164	32.8		43.2	21 55.2		16.8	
2	106	15.1	239	37.5		53.0	179	33.1		43.0	36 58.1		16.7	
3	121	17.6	254	36.9		53.9	194	33.5		42.8	52 00.9		16.7	
4	136	20.0	269	36.2		54.8	209	33.9		42.6	67 03.7		16.6	
5	151	22.5	284	35.6	-15	55.7	224	34.3	-23	42.4	82 06.5	+21	16.6	
6	166	24.9	299	35.0	-15	56.6	239	34.6	-23	42.1	97 09.4	+21	16.6	
7	181	27.4	314	34.3		57.5	254	35.0		41.9	112 12.2		16.5	
8	196	29.9	329	33.7		58.4	269	35.4		41.7	127 15.0		16.5	
9	211	32.3	344	33.1	-15	59.3	284	35.7		41.5	142 17.8		16.4	
10	226	34.8	359	32.4	-16	00.2	299	36.1		41.3	157 20.7		16.4	
11	241	37.3	14	31.8	-16	01.1	314	36.5	-23	41.0	172 23.5	+21	16.3	
12	256	39.7	29	31.2	-16	02.0	329	36.9	-23	40.8	187 26.3	+21	16.3	
13	271	42.2	44	30.5		02.9	344	37.2		40.6	202 29.1		16.3	
14	286	44.7	59	29.9		03.8	359	37.6		40.4	217 32.0		16.2	
15	301	47.1	74	29.3		04.7	14	38.0		40.1	232 34.8		16.2	
16	316	49.6	89	28.6		05.6	29	38.3		39.9	247 37.6		16.1	
17	331	52.1	104	28.0	-16	06.5	44	38.7	-23	39.7	262 40.4	+21	16.1	
18	346	54.5	119	27.3	-16	07.4	59	39.1	-23	39.5	277 43.3	+21	16.1	
19	1	57.0	134	26.7		08.3	74	39.5		39.2	292 46.1		16.0	
20	16	59.4	149	26.1		09.2	89	39.8		39.0	307 48.9		16.0	
21	32	01.9	164	25.4		10.1	104	40.2		38.8	322 51.7		15.9	
22	47	04.4	179	24.8		11.0	119	40.6		38.6	337 54.6		15.9	
23	62	06.8	194	24.1		11.9	134	40.9		38.3	352 57.4		15.8	
24	77	09.3	209	23.5	-16	12.8	149	41.3	-23	38.1	8 00.2	+21	15.8	
Dif	—		-6		-9		+4		+2		+28		0	
											+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 52 ^m 1			Edad: 24 ^d 1 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 7 20 ^h : 59 ^m 1 PMG: 7 ^h 10 ^m R ^o : 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	182	02.2	-22	43.9	256	00.5	-5	04.8	60 N	6 56	7 52	8 48	1 38	88	12 27 17
1	197	01.9		44.1	270	30.7 ¹¹²		16.7 ¹¹⁹	58	49	41	32	35	85	31 20
2	212	01.6		44.4	285	00.9 ¹¹²		28.5 ¹¹⁸	56	43	31	18	32	83	35 22
3	227	01.3		44.6	299	31.0 ¹¹¹		40.4 ¹¹⁹	54	37	22	8 06	30	80	38 25
4	242	01.1		44.9	314	01.1 ¹¹¹		-5 52.2 ¹¹⁸	52	31	15	7 55	27	78	41 27
5	257	00.8	-22	45.2	328	31.1 ¹¹⁰		-6 04.0 ¹¹⁸	50	6 26	7 08	7 46	1 25	76	12 44 29
6	272	00.5	-22	45.4	343	01.0 ¹⁰⁹		-6 15.8 ¹¹⁸	45	6 15	6 52	7 26	1 21	72	12 50 33
7	287	00.2		45.7	357	30.8 ¹⁰⁸		27.6 ¹¹⁸	40	6 05	39	7 09	17	68	12 55 36
8	302	00.0		45.9	12	00.6 ¹⁰⁸		39.4 ¹¹⁸	35	5 56	28	6 56	14	65	13 00 38
9	316	59.7		46.2	26	30.3 ¹⁰⁷		-6 51.1 ¹¹⁷	30	48	6 18	44	11	63	04 41
10	331	59.4		46.4	40	59.9 ¹⁰⁶		-7 02.8 ¹¹⁷	20	32	5 59	23	07	58	11 45
11	346	59.1	-22	46.7	55	29.5 ¹⁰⁶		-7 14.5 ¹¹⁷	10 N	5 16	5 43	6 05	1 02	55	13 17 49
12	1	58.8	-22	46.9	69	59.0 ¹⁰⁵		-7 26.2 ¹¹⁷	0	5 00	5 26	5 48	0 58	51	13 22 53
13	16	58.6		47.2	84	28.4 ¹⁰⁴		37.8 ¹¹⁶	10 S	4 41	5 08	31	55	47	28 56
14	31	58.3		47.4	98	57.7 ¹⁰³		-7 49.5 ¹¹⁷	20	4 19	4 49	5 13	51	43	34 60
15	46	58.0		47.7	113	27.0 ¹⁰³		-8 01.0 ¹¹⁵	30	3 51	24	4 52	46	39	41 64
16	61	57.7		47.9	127	56.2 ¹⁰²		12.6 ¹¹⁶	35	33	4 10	39	43	37	45 66
17	76	57.5	-22	48.2	142	25.3 ¹⁰¹		-8 24.1 ¹¹⁵	40	3 11	3 52	4 24	0 40	34	13 49 70
18	91	57.2	-22	48.4	156	54.3 ¹⁰⁰		-8 35.7 ¹¹⁶	45	2 42	3 30	4 07	0 37	31	13 55 73
19	106	56.9		48.7	171	23.3 ¹⁰⁰		47.1 ¹¹⁴	50	1 59	3 02	3 45	33	27	14 01 77
20	121	56.6		48.9	185	52.1 ⁹⁸		-8 58.6 ¹¹⁵	52	1 34	2 47	35	31	25	04 79
21	136	56.3		49.1	200	20.9 ⁹⁸		-9 10.0 ¹¹⁴	54	0 57	31	23	29	23	07 81
22	151	56.1		49.4	214	49.6 ⁹⁷		21.3 ¹¹³	56	** **	2 10	3 10	27	21	11 83
23	166	55.8		49.6	229	18.3 ⁹⁷		32.7 ¹¹⁴	58	** **	1 43	2 54	25	18	15 86
24	181	55.5	-22	49.9	243	46.8 ⁹⁵		-9 44.0 ¹¹³	60 S	** **	1 03	2 35	0 22	15	14 19 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 48 ^m 3		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: +1.2 PMG: 14 ^h 01 ^m		Mag: -2.8 PMG: 23 ^h 24 ^m		Mag: +0.7 PMG: 9 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	09.3	209	23.5	-16	12.8	149	41.3	-23	38.1
1	92	11.8	224	22.9		13.7	164	41.7		37.9
2	107	14.2	239	22.2		14.5	179	42.0		37.7
3	122	16.7	254	21.6		15.4	194	42.4		37.4
4	137	19.2	269	20.9		16.3	209	42.8		37.2
5	152	21.6	284	20.3	-16	17.2	224	43.2	-23	37.0
6	167	24.1	299	19.6	-16	18.1	239	43.5	-23	36.7
7	182	26.5	314	19.0		19.0	254	43.9		36.5
8	197	29.0	329	18.3		19.9	269	44.3		36.3
9	212	31.5	344	17.7		20.8	284	44.6		36.0
10	227	33.9	359	17.1		21.7	299	45.0		35.8
11	242	36.4	14	16.4	-16	22.5	314	45.4	-23	35.6
12	257	38.9	29	15.8	-16	23.4	329	45.8	-23	35.3
13	272	41.3	44	15.1		24.3	344	46.1		35.1
14	287	43.8	59	14.5		25.2	359	46.5		34.9
15	302	46.3	74	13.8		26.1	14	46.9		34.6
16	317	48.7	89	13.2		26.9	29	47.3		34.4
17	332	51.2	104	12.5	-16	27.8	44	47.6	-23	34.2
18	347	53.7	119	11.9	-16	28.7	59	48.0	-23	33.9
19	2	56.1	134	11.2		29.6	74	48.4		33.7
20	17	58.6	149	10.6		30.5	89	48.7		33.5
21	33	01.0	164	09.9		31.3	104	49.1		33.2
22	48	03.5	179	09.3		32.2	119	49.5		33.0
23	63	06.0	194	08.6		33.1	134	49.9		32.7
24	78	08.4	209	07.9	-16	34.0	149	50.2	-23	32.5
Dif	—		-6	-9			+4	+2		
									+28	0
									+22	-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 52 ^m 5		Edad: 25 ^d 1 PHE { 4 ^h : 59'4 12 ^h : 59'7 20 ^h : 59'9 SD: 16'1 PMG: 8 ^h 02 ^m R°: 55 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m			
0	181	55.5	-22	49.9	243	46.8	-9 44.0	60 N	14 55	15 51	16 48	3 06	91	12 44	22			
1	196	55.2		50.1	258	15.3	95 -9 55.2	58	15 12	16 03	16 55	3 00	88	51	25			
2	211	54.9		50.3	272	43.6	93 -10 06.4	56	26	12	17 01	2 55	85	12 57	28			
3	226	54.7		50.6	287	11.9	93 17.6	54	38	21	07	50	82	13 03	30			
4	241	54.4		50.8	301	40.1	92 28.7	52	49	29	13	45	81	08	32			
5	256	54.1	-22	51.1	316	08.2	91 -10 39.8	50	15 58	16 36	17 18	2 41	79	13 13	34			
6	271	53.8	-22	51.3	330	36.3	91 -10 50.8	45	16 18	16 52	17 29	2 33	74	13 23	38			
7	286	53.5		51.5	345	04.2	89 -11 01.8	40	35	17 05	39	25	71	31	41			
8	301	53.3		51.8	359	32.1	89 12.7	35	16 48	16	48	19	68	38	44			
9	316	53.0		52.0	13	59.8	87 23.6	30	17 00	27	17 56	14	66	45	46			
10	331	52.7		52.2	28	27.5	87 34.4	20	21	17 45	18 12	2 05	61	13 56	50			
11	346	52.4	-22	52.5	42	55.1	86 -11 45.1	10 N	17 39	18 02	18 28	1 57	58	14 06	53			
12	1	52.1	-22	52.7	57	22.6	85 -11 55.9	0	17 56	18 19	18 45	1 49	55	14 15	56			
13	16	51.8		52.9	71	50.0	84 -12 06.5	10 S	18 13	36	19 03	42	51	24	59			
14	31	51.6		53.2	86	17.3	83 17.1	20	32	18 56	25	34	48	34	63			
15	46	51.3		53.4	100	44.5	82 27.6	30	18 53	19 21	19 54	25	44	45	67			
16	61	51.0		53.6	115	11.7	82 38.1	35	19 06	36	20 12	20	41	51	70			
17	76	50.7	-22	53.8	129	38.7	80 -12 48.5	40	19 21	19 53	20 35	1 14	39	14 59	72			
18	91	50.4	-22	54.1	144	05.6	79 -12 58.8	45	19 38	20 15	21 04	1 08	35	15 08	74			
19	106	50.1		54.3	158	32.5	79 -13 09.1	50	20 00	44	21 48	1 00	31	18	79			
20	121	49.9		54.5	172	59.2	77 19.3	52	11	20 59	22 14	0 56	30	23	81			
21	136	49.6		54.8	187	25.9	77 29.4	54	23	21 16	22 53	52	28	28	83			
22	151	49.3		55.0	201	52.5	76 39.5	56	36	21 37	** **	48	25	34	85			
23	166	49.0		55.2	216	19.0	75 49.4	58	20 52	22 05	** **	43	22	41	88			
24	181	48.7	-22	55.4	230	45.3	73 -13 59.3	60 S	21 12	22 47	** **	0 37	20	15 49	91			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 44 ^m 4		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +1.2 PMG: 14 ^h 00 ^m			Mag: -2.8 PMG: 23 ^h 19 ^m			Mag: +0.7 PMG: 9 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	78	08.4	209	07.9	-16	34.0	149	50.2	-23	32.5	9	08.0	+21	14.8	222	16.5	-11	50.6
1	93	10.9	224	07.3		34.8	164	50.6		32.3	24	10.8		14.8	237	18.7		50.7
2	108	13.4	239	06.6		35.7	179	51.0		32.0	39	13.6		14.7	252	21.0		50.8
3	123	15.8	254	06.0		36.6	194	51.3		31.8	54	16.4		14.7	267	23.2		50.9
4	138	18.3	269	05.3		37.5	209	51.7		31.5	69	19.2		14.6	282	25.4		51.0
5	153	20.8	284	04.7	-16	38.3	224	52.1	-23	31.3	84	22.1	+21	14.6	297	27.6	-11	51.0
6	168	23.2	299	04.0	-16	39.2	239	52.5	-23	31.1	99	24.9	+21	14.6	312	29.8	-11	51.1
7	183	25.7	314	03.4		40.1	254	52.8		30.8	114	27.7		14.5	327	32.0		51.2
8	198	28.2	329	02.7		40.9	269	53.2		30.6	129	30.5		14.5	342	34.3		51.3
9	213	30.6	344	02.0		41.8	284	53.6		30.3	144	33.4		14.4	357	36.5		51.3
10	228	33.1	359	01.4		42.7	299	53.9		30.1	159	36.2		14.4	12	38.7		51.4
11	243	35.5	14	00.7	-16	43.5	314	54.3	-23	29.8	174	39.0	+21	14.3	27	40.9	-11	51.5
12	258	38.0	29	00.1	-16	44.4	329	54.7	-23	29.6	189	41.8	+21	14.3	42	43.1	-11	51.6
13	273	40.5	43	59.4		45.3	344	55.1		29.4	204	44.6		14.3	57	45.3		51.6
14	288	42.9	58	58.7		46.1	359	55.4		29.1	219	47.5		14.2	72	47.6		51.7
15	303	45.4	73	58.1		47.0	14	55.8		28.9	234	50.3		14.2	87	49.8		51.8
16	318	47.9	88	57.4		47.9	29	56.2		28.6	249	53.1		14.1	102	52.0		51.9
17	333	50.3	103	56.8	-16	48.7	44	56.6	-23	28.4	264	55.9	+21	14.1	117	54.2	-11	51.9
18	348	52.8	118	56.1	-16	49.6	59	56.9	-23	28.1	279	58.7	+21	14.1	132	56.4	-11	52.0
19	3	55.3	133	55.4		50.5	74	57.3		27.9	295	01.6		14.0	147	58.6		52.1
20	18	57.7	148	54.8		51.3	89	57.7		27.6	310	04.4		14.0	163	00.9		52.2
21	34	00.2	163	54.1		52.2	104	58.1		27.4	325	07.2		13.9	178	03.1		52.3
22	49	02.6	178	53.4		53.0	119	58.4		27.1	340	10.0		13.9	193	05.3		52.3
23	64	05.1	193	52.8		53.9	134	58.8		26.9	355	12.8		13.9	208	07.5		52.4
24	79	07.6	208	52.1	-16	54.8	149	59.2	-23	26.6	10	15.7	+21	13.8	223	09.7	-11	52.5
Dif	—		-7		-9		+4		+2		+28		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 53 ^m 0			Edad: 26 ^d 1 PHE { 4 ^h : 60/2 12 ^h : 60/4 20 ^h : 60/7 SD: 16:4 PMG: 8 ^h 57 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	48.7	-22	55.4	230	45.3	-13	59.3	60 N	6 58	7 55	8 51	4 37	91	13 06	31		
1	196	48.4		55.6	245	11.6	73	-14 09.2	58	51	43	34	28	88	16	34		
2	211	48.2		55.9	259	37.8	72	18.9	56	45	33	20	20	85	25	37		
3	226	47.9		56.1	274	03.9	71	28.6	54	39	25	8 08	12	83	33	39		
4	241	47.6		56.3	288	29.9	70	38.2	52	33	17	7 57	06	80	40	41		
5	256	47.3	-22	56.5	302	55.8	69	-14 47.7	50	6 28	7 09	7 48	4 00	79	13 47	42		
6	271	47.0	-22	56.7	317	21.6	68	-14 57.1	45	6 17	6 54	7 27	3 47	75	14 01	45		
7	286	46.7		57.0	331	47.4	68	-15 06.4	40	6 07	41	7 11	36	73	12	48		
8	301	46.4		57.2	346	13.0	66	15.6	35	5 58	29	6 57	27	70	22	50		
9	316	46.2		57.4	0	38.5	65	24.8	30	49	19	45	20	68	31	52		
10	331	45.9		57.6	15	03.9	64	33.9	20	33	6 00	24	3 06	65	46	55		
11	346	45.6	-22	57.8	29	29.3	64	-15 42.8	10 N	5 17	5 44	6 06	2 55	61	14 59	58		
12	1	45.3	-22	58.0	43	54.5	62	-15 51.7	0	5 01	5 27	5 49	2 44	58	15 11	60		
13	16	45.0		58.2	58	19.7	62	-16 00.5	10 S	4 42	5 09	32	33	56	23	63		
14	31	44.7		58.4	72	44.7	60	09.1	20	4 20	4 49	5 13	22	52	37	65		
15	46	44.4		58.7	87	09.7	60	17.7	30	3 51	25	4 52	09	49	15	52		
16	61	44.2		58.9	101	34.6	59	26.2	35	33	4 10	39	2 01	47	16 01	70		
17	76	43.9	-22	59.1	115	59.3	57	-16 34.6	40	3 11	3 52	4 25	1 53	44	16 11	72		
18	91	43.6	-22	59.3	130	24.0	57	-16 42.8	45	2 41	3 30	4 07	1 43	42	16 22	75		
19	106	43.3		59.5	144	48.6	56	51.0	50	1 58	3 01	3 45	31	38	37	77		
20	121	43.0		59.7	159	13.1	55	-16 59.0	52	1 32	2 47	35	26	36	44	79		
21	136	42.7	-22	59.9	173	37.5	54	-17 07.0	54	0 52	29	23	20	34	51	81		
22	151	42.4	-23	00.1	188	01.9	54	14.8	56	** **	2 08	3 09	13	32	16 59	83		
23	166	42.1		00.3	202	26.1	52	22.5	58	** **	1 41	2 53	1 05	30	17 09	85		
24	181	41.8	-23	00.5	216	50.3	52	-17 30.1	60 S	** **	0 58	2 33	0 57	27	17 20	88		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 40 ^m 4		Mag: -3.9 PMG: 10 ^h 05 ^m				Mag: +1.2 PMG: 14 ^h 00 ^m				Mag: -2.8 PMG: 23 ^h 15 ^m				Mag: +0.7 PMG: 9 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	79	07.6	208	52.1	-16	54.8	149	59.2	-23	26.6	10	15.7	+21	13.8	223	09.7	-11	52.5
1	94	10.0	223	51.4		55.6	164	59.5		26.4	25	18.5		13.8	238	11.9		52.6
2	109	12.5	238	50.8		56.5	179	59.9		26.1	40	21.3		13.7	253	14.2		52.6
3	124	15.0	253	50.1		57.3	195	00.3		25.9	55	24.1		13.7	268	16.4		52.7
4	139	17.4	268	49.4		58.2	210	00.7		25.6	70	26.9		13.6	283	18.6		52.8
5	154	19.9	283	48.8	-16	59.0	225	01.0	-23	25.4	85	29.8	+21	13.6	298	20.8	-11	52.9
6	169	22.4	298	48.1	-16	59.9	240	01.4	-23	25.1	100	32.6	+21	13.6	313	23.0	-11	52.9
7	184	24.8	313	47.4	-17	00.7	255	01.8		24.9	115	35.4		13.5	328	25.2		53.0
8	199	27.3	328	46.8		01.6	270	02.2		24.6	130	38.2		13.5	343	27.5		53.1
9	214	29.8	343	46.1		02.4	285	02.5		24.4	145	41.0		13.4	358	29.7		53.2
10	229	32.2	358	45.4		03.3	300	02.9		24.1	160	43.9		13.4	13	31.9		53.2
11	244	34.7	13	44.7	-17	04.1	315	03.3	-23	23.8	175	46.7	+21	13.4	28	34.1	-11	53.3
12	259	37.1	28	44.1	-17	05.0	330	03.7	-23	23.6	190	49.5	+21	13.3	43	36.3	-11	53.4
13	274	39.6	43	43.4		05.8	345	04.0		23.3	205	52.3		13.3	58	38.6		53.5
14	289	42.1	58	42.7		06.7	0	04.4		23.1	220	55.1		13.2	73	40.8		53.5
15	304	44.5	73	42.0		07.5	15	04.8		22.8	235	58.0		13.2	88	43.0		53.6
16	319	47.0	88	41.4		08.4	30	05.1		22.6	251	00.8		13.1	103	45.2		53.7
17	334	49.5	103	40.7	-17	09.2	45	05.5	-23	22.3	266	03.6	+21	13.1	118	47.4	-11	53.8
18	349	51.9	118	40.0	-17	10.1	60	05.9	-23	22.0	281	06.4	+21	13.1	133	49.7	-11	53.9
19	4	54.4	133	39.3		10.9	75	06.3		21.8	296	09.2		13.0	148	51.9		53.9
20	19	56.9	148	38.7		11.7	90	06.6		21.5	311	12.1		13.0	163	54.1		54.0
21	34	59.3	163	38.0		12.6	105	07.0		21.3	326	14.9		12.9	178	56.3		54.1
22	50	01.8	178	37.3		13.4	120	07.4		21.0	341	17.7		12.9	193	58.5		54.2
23	65	04.3	193	36.6		14.3	135	07.8		20.7	356	20.5		12.9	209	00.8		54.2
24	80	06.7	208	36.0	-17	15.1	150	08.1	-23	20.5	11	23.3	+21	12.8	224	03.0	-11	54.3
Dif	—		-7		-8		+4		+3		+28		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 27 ^d 1 PHE { 4 ^h : 60'9 12 ^h : 61'1 20 ^h : 61'2											
	PMG: 11 ^h 53 ^m 4				SD: 16'6 PMG: 9 ^h 57 ^m R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	181	41.8	-23 00.5	216	50.3	-17 30.1	75	60 N	14 54	15 51	16 47	6 08 85	13 37 46		
1	196	41.6	00.7	231	14.3	37.6	50	58	15 11	16 02	16 54	5 56 82	13 50 48		
2	211	41.3	00.9	245	38.3	45.0	74	56	25	12	17 01	45 80	14 02 49		
3	226	41.0	01.1	260	02.2	52.2	72	54	38	21	07	35 78	12 51		
4	241	40.7	01.3	274	26.0	59.4	72	52	48	29	13	26 77	21 52		
5	256	40.4	-23 01.5	288	49.7	06.4	70	50	15 58	16 36	17 18	5 19 75	14 29 53		
6	271	40.1	-23 01.7	303	13.3	13.3	69	45	16 18	16 52	17 29	5 02 73	14 46 55		
7	286	39.8	01.9	317	36.9	20.0	67	40	35	17 05	39	4 49 71	15 00 57		
8	301	39.5	02.1	332	00.4	26.7	67	35	16 49	17	48	37 70	12 58		
9	316	39.2	02.3	346	23.8	33.2	65	30	17 01	27	17 57	28 68	23 59		
10	331	39.0	02.5	0	47.1	39.5	63	20	22	17 46	18 13	4 11 66	41 60		
11	346	38.7	-23 02.7	15	10.3	45.8	63	10 N	17 40	18 03	18 29	3 56 64	15 57 62		
12	1	38.4	-23 02.9	29	33.5	51.9	61	0	17 57	18 20	18 46	3 42 62	16 11 64		
13	16	38.1	03.1	43	56.6	57.9	60	10 S	18 14	37	19 05	29 60	26 65		
14	31	37.8	03.3	58	19.6	03.7	58	20	33	18 58	27	3 14 58	16 42 66		
15	46	37.5	03.5	72	42.5	09.4	57	30	18 55	19 22	19 55	2 58 55	17 00 67		
16	61	37.2	03.7	87	05.4	15.0	56	35	19 08	37	20 14	48 54	11 68		
17	76	36.9	-23 03.9	101	28.2	20.4	54	40	19 22	19 55	20 37	2 37 53	17 23 69		
18	91	36.6	-23 04.0	115	50.9	25.7	53	45	19 40	20 17	21 06	2 25 50	17 37 71		
19	106	36.3	04.2	130	13.6	30.9	52	50	20 02	20 46	21 51	09 48	17 54 73		
20	121	36.0	04.4	144	36.2	35.9	50	52	13	21 01	22 17	2 02 46	18 03 73		
21	136	35.7	04.6	158	58.7	40.8	49	54	25	19	22 58	1 54 45	12 74		
22	151	35.5	04.8	173	21.2	45.5	47	56	39	21 40	** **	45 43	22 75		
23	166	35.2	05.0	187	43.6	50.1	46	58	20 55	22 08	** **	35 41	34 76		
24	181	34.9	-23 05.2	202	06.0	54.5	44	60 S	21 15	22 53	** **	1 24 38	18 48 78		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 36 ^m 5		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: +1.2 PMG: 13 ^h 59 ^m		Mag: -2.8 PMG: 23 ^h 10 ^m		Mag: +0.7 PMG: 9 ^h 02 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	80	06.7	208	36.0	-17	15.1	150	08.1	-23	20.5	11	23.3	+21	12.8	224	03.0	-11	54.3
1	95	09.2	223	35.3		15.9	165	08.5		20.2	26	26.1		12.8	239	05.2		54.4
2	110	11.6	238	34.6		16.8	180	08.9		20.0	41	29.0		12.7	254	07.4		54.5
3	125	14.1	253	33.9		17.6	195	09.3		19.7	56	31.8		12.7	269	09.6		54.5
4	140	16.6	268	33.2		18.4	210	09.6		19.4	71	34.6		12.6	284	11.8		54.6
5	155	19.0	283	32.6	-17	19.3	225	10.0	-23	19.2	86	37.4	+21	12.6	299	14.1	-11	54.7
6	170	21.5	298	31.9	-17	20.1	240	10.4	-23	18.9	101	40.2	+21	12.6	314	16.3	-11	54.8
7	185	24.0	313	31.2		21.0	255	10.8		18.6	116	43.1		12.5	329	18.5		54.8
8	200	26.4	328	30.5		21.8	270	11.1		18.4	131	45.9		12.5	344	20.7		54.9
9	215	28.9	343	29.8		22.6	285	11.5		18.1	146	48.7		12.4	359	23.0		55.0
10	230	31.4	358	29.1		23.4	300	11.9		17.8	161	51.5		12.4	14	25.2		55.1
11	245	33.8	13	28.5	-17	24.3	315	12.3	-23	17.6	176	54.3	+21	12.4	29	27.4	-11	55.1
12	260	36.3	28	27.8	-17	25.1	330	12.6	-23	17.3	191	57.1	+21	12.3	44	29.6	-11	55.2
13	275	38.8	43	27.1		25.9	345	13.0		17.0	207	00.0		12.3	59	31.8		55.3
14	290	41.2	58	26.4		26.8	0	13.4		16.8	222	02.8		12.2	74	34.1		55.4
15	305	43.7	73	25.7		27.6	15	13.8		16.5	237	05.6		12.2	89	36.3		55.4
16	320	46.1	88	25.0		28.4	30	14.1		16.2	252	08.4		12.2	104	38.5		55.5
17	335	48.6	103	24.3	-17	29.2	45	14.5	-23	16.0	267	11.2	+21	12.1	119	40.7	-11	55.6
18	350	51.1	118	23.7	-17	30.1	60	14.9	-23	15.7	282	14.0	+21	12.1	134	42.9	-11	55.7
19	5	53.5	133	23.0		30.9	75	15.3		15.4	297	16.9		12.0	149	45.2		55.7
20	20	56.0	148	22.3		31.7	90	15.6		15.2	312	19.7		12.0	164	47.4		55.8
21	35	58.5	163	21.6		32.5	105	16.0		14.9	327	22.5		11.9	179	49.6		55.9
22	51	00.9	178	20.9		33.4	120	16.4		14.6	342	25.3		11.9	194	51.8		56.0
23	66	03.4	193	20.2		34.2	135	16.8		14.3	357	28.1		11.9	209	54.0		56.0
24	81	05.9	208	19.5	-17	35.0	150	17.1	-23	14.1	12	30.9	+21	11.8	224	56.3	-11	56.1
Dif	—		-7	-8		+4	+3			+28		0			+22		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 53 ^m 9				Edad: 28 ^d 1 PHE { 4 ^h : 61/3 12 ^h : 61/4 20 ^h : 61/4 R°: 65 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	34.9	-23	05.2	202	06.0	-19	54.5	60 N	7 01	7 57	8 54	7 33	70	14 23	63	
1	196	34.6		05.3	216	28.3	33	-19 58.8	58	6 53	46	37	18	69	38	64	
2	211	34.3		05.5	230	50.5	32	-20 02.9	56	47	36	23	7 05	68	14 51	64	
3	226	34.0		05.7	245	12.7	32	06.9	54	41	27	8 10	6 53	69	15 03	64	
4	241	33.7		05.9	259	34.8	31	10.8	52	35	19	7 59	43	68	13	64	
5	256	33.4	-23	06.1	273	56.9	31	-20 14.4	50	6 30	7 11	7 50	6 34	68	15 22	64	
6	271	33.1	-23	06.2	288	19.0	31	-20 18.0	45	6 18	6 56	7 29	6 15	68	15 41	65	
7	286	32.8		06.4	302	41.0	30	21.3	40	6 08	42	7 13	6 00	67	15 57	64	
8	301	32.5		06.6	317	02.9	29	24.6	35	5 59	31	6 59	5 47	66	16 10	64	
9	316	32.2		06.8	331	24.9	30	27.6	30	50	20	47	36	66	22	64	
10	331	31.9		07.0	345	46.7	28	30.6	20	34	6 02	26	17	65	41	65	
11	346	31.6	-23	07.1	0	08.6	29	-20 33.3	10 N	5 18	5 45	6 07	5 00	64	16 59	64	
12	1	31.3	-23	07.3	14	30.4	28	-20 35.9	0	5 02	5 28	5 50	4 44	64	17 15	64	
13	16	31.1		07.5	28	52.2	28	38.4	10 S	4 43	5 10	33	29	63	31	64	
14	31	30.8		07.7	43	13.9	27	40.6	20	4 21	4 50	5 14	4 12	63	17 48	64	
15	46	30.5		07.8	57	35.6	27	42.8	30	3 52	25	4 52	3 53	62	18 07	64	
16	61	30.2		08.0	71	57.3	27	44.7	35	33	4 10	40	42	62	19	63	
17	76	29.9	-23	08.2	86	19.0	27	-20 46.5	40	3 11	3 52	4 25	3 30	60	18 32	63	
18	91	29.6	-23	08.3	100	40.6	26	-20 48.2	45	2 41	3 30	4 07	3 15	60	18 48	62	
19	106	29.3		08.5	115	02.3	27	49.7	50	1 57	3 01	3 45	2 57	59	19 07	62	
20	121	29.0		08.7	129	23.9	26	51.0	52	1 30	2 46	34	48	59	16	62	
21	136	28.7		08.8	143	45.5	26	52.2	54	0 49	29	22	39	57	26	62	
22	151	28.4		09.0	158	07.1	26	53.2	56	** **	2 07	3 08	28	57	37	62	
23	166	28.1		09.2	172	28.6	25	54.0	58	** **	1 39	2 52	16	56	19 50	61	
24	181	27.8	-23	09.3	186	50.2	26	-20 54.7	60 S	** **	0 54	2 32	2 02	54	20 06	60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 32 ^m 6		Mag: -3.9 PMG: 10 ^h 07 ^m		Mag: +1.2 PMG: 13 ^h 59 ^m		Mag: -2.8 PMG: 23 ^h 06 ^m		Mag: +0.7 PMG: 8 ^h 59 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	81	05.9	208	19.5	-17	35.0	150	17.1	-23	14.1
1	96	08.3	223	18.8		35.8	165	17.5		13.8
2	111	10.8	238	18.1		36.6	180	17.9		13.5
3	126	13.3	253	17.4		37.5	195	18.3		13.2
4	141	15.7	268	16.7		38.3	210	18.7		13.0
5	156	18.2	283	16.1	-17	39.1	225	19.0	-23	12.7
6	171	20.6	298	15.4	-17	39.9	240	19.4	-23	12.4
7	186	23.1	313	14.7		40.7	255	19.8		12.1
8	201	25.6	328	14.0		41.5	270	20.2		11.9
9	216	28.0	343	13.3		42.3	285	20.5		11.6
10	231	30.5	358	12.6		43.2	300	20.9		11.3
11	246	33.0	13	11.9	-17	44.0	315	21.3	-23	11.0
12	261	35.4	28	11.2	-17	44.8	330	21.7	-23	10.8
13	276	37.9	43	10.5		45.6	345	22.0		10.5
14	291	40.4	58	09.8		46.4	0	22.4		10.2
15	306	42.8	73	09.1		47.2	15	22.8		09.9
16	321	45.3	88	08.4		48.0	30	23.2		09.6
17	336	47.7	103	07.7	-17	48.8	45	23.5	-23	09.4
18	351	50.2	118	07.0	-17	49.6	60	23.9	-23	09.1
19	6	52.7	133	06.3		50.4	75	24.3		08.8
20	21	55.1	148	05.6		51.2	90	24.7		08.5
21	36	57.6	163	04.9		52.0	105	25.1		08.2
22	52	00.1	178	04.2		52.8	120	25.4		08.0
23	67	02.5	193	03.5		53.6	135	25.8		07.7
24	82	05.0	208	02.8	-17	54.4	150	26.2	-23	07.4
Dif	—		-7 -8		+4 +3		+28 0		+22 -1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 54 ^m 4		Edad: 29 ^d 1 PHE { 4 ^h : 61 ⁴ / ₄ 12 ^h : 61 ⁴ / ₄ 20 ^h : 61 ⁴ / ₃ R°: 63 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	181	27.8	-23	09.3	186	50.2	-20 54.7	5	60 N	14 53	15 51	16 47	8 43 51	15 26 80				
1	196	27.5		09.5	201	11.8	55.2	3	58	15 10	16 02	16 54	27 52	42 78				
2	211	27.2		09.7	215	33.3	55.5	2	56	25	12	17 01	13 54	15 55 77				
3	226	26.9		09.8	229	54.9	55.7	2	54	37	21	07	8 02 55	16 07 75				
4	241	26.6		10.0	244	16.4	55.8	1	52	48	29	13	7 51 56	17 74				
5	256	26.3	-23	10.2	258	38.0	-20 55.6	2	50	15 58	16 36	17 18	7 42 57	16 26 74				
6	271	26.0	-23	10.3	272	59.6	-20 55.3	3	45	16 19	16 52	17 30	7 23 58	16 46 71				
7	286	25.7		10.5	287	21.1	54.9	4	40	35	17 06	40	7 07 59	17 01 70				
8	301	25.4		10.6	301	42.7	54.3	6	35	16 49	17	49	6 53 60	14 69				
9	316	25.1		10.8	316	04.3	53.5	8	30	17 01	28	17 58	42 60	26 68				
10	331	24.8		10.9	330	26.0	52.5	10	20	22	17 46	18 14	22 62	17 46 65				
11	346	24.5	-23	11.1	344	47.6	-20 51.4	11	10 N	17 41	18 04	18 30	6 04 63	18 03 64				
12	1	24.2	-23	11.3	359	09.2	-20 50.2	12	0	17 58	18 21	18 47	5 48 64	18 19 62				
13	16	23.9		11.4	13	30.9	48.8	14	10 S	18 16	39	19 06	32 65	35 61				
14	31	23.6		11.6	27	52.6	47.2	16	20	34	18 59	28	5 15 65	18 52 59				
15	46	23.3		11.7	42	14.4	45.4	18	30	18 56	19 24	19 57	4 55 66	19 11 57				
16	61	23.0		11.9	56	36.1	43.5	19	35	19 09	39	20 15	44 66	22 57				
17	76	22.7	-23	12.0	70	57.9	-20 41.5	20	40	19 24	19 57	20 38	4 30 68	19 35 55				
18	91	22.4	-23	12.2	85	19.7	-20 39.3	22	45	19 42	20 19	21 08	4 15 68	19 50 54				
19	106	22.2		12.3	99	41.6	36.9	24	50	20 04	20 48	21 53	3 56 69	20 09 51				
20	121	21.9		12.5	114	03.5	34.3	26	52	15	21 03	22 20	47 69	18 50				
21	136	21.6		12.6	128	25.4	31.7	26	54	27	21	23 04	36 70	28 48				
22	151	21.3		12.8	142	47.4	28.8	29	56	41	21 43	** ** *	25 71	39 47				
23	166	21.0		12.9	157	09.4	25.8	30	58	20 58	22 12	** ** *	3 12 71	20 51 46				
24	181	20.7	-23	13.1	171	31.5	-20 22.7	31	60 S	21 18	22 59	** ** *	2 56 73	21 06 43				
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 18 ^h 28 ^m 6		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +1.2 PMG: 13 ^h 58 ^m		Mag: -2.8 PMG: 23 ^h 01 ^m			Mag: +0.7 PMG: 8 ^h 55 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	82	05.0	208	02.8	-17	54.4	150	26.2	-23	07.4	13	38.5	+21	10.8	225	49.6	-11	57.9
1	97	07.5	223	02.1		55.2	165	26.6		07.1	28	41.3		10.8	240	51.8		58.0
2	112	09.9	238	01.4		56.0	180	26.9		06.8	43	44.1		10.8	255	54.1		58.0
3	127	12.4	253	00.7		56.8	195	27.3		06.5	58	46.9		10.7	270	56.3		58.1
4	142	14.9	268	00.0		57.6	210	27.7		06.2	73	49.7		10.7	285	58.5		58.2
5	157	17.3	282	59.3	-17	58.4	225	28.1	-23	06.0	88	52.5	+21	10.6	301	00.7	-11	58.2
6	172	19.8	297	58.5	-17	59.2	240	28.5	-23	05.7	103	55.3	+21	10.6	316	03.0	-11	58.3
7	187	22.2	312	57.8	-18	00.0	255	28.8		05.4	118	58.2		10.6	331	05.2		58.4
8	202	24.7	327	57.1	-18	00.8	270	29.2		05.1	134	01.0		10.5	346	07.4		58.5
9	217	27.2	342	56.4		01.6	285	29.6		04.8	149	03.8		10.5	1	09.6		58.5
10	232	29.6	357	55.7		02.4	300	30.0		04.5	164	06.6		10.4	16	11.9		58.6
11	247	32.1	12	55.0	-18	03.2	315	30.3	-23	04.2	179	09.4	+21	10.4	31	14.1	-11	58.7
12	262	34.6	27	54.3	-18	04.0	330	30.7	-23	04.0	194	12.2	+21	10.3	46	16.3	-11	58.8
13	277	37.0	42	53.6		04.8	345	31.1		03.7	209	15.0		10.3	61	18.5		58.8
14	292	39.5	57	52.9		05.6	0	31.5		03.4	224	17.8		10.3	76	20.8		58.9
15	307	42.0	72	52.2		06.3	15	31.9		03.1	239	20.7		10.2	91	23.0		59.0
16	322	44.4	87	51.5		07.1	30	32.2		02.8	254	23.5		10.2	106	25.2		59.0
17	337	46.9	102	50.7	-18	07.9	45	32.6	-23	02.5	269	26.3	+21	10.1	121	27.4	-11	59.1
18	352	49.4	117	50.0	-18	08.7	60	33.0	-23	02.2	284	29.1	+21	10.1	136	29.7	-11	59.2
19	7	51.8	132	49.3		09.5	75	33.4		01.9	299	31.9		10.1	151	31.9		59.3
20	22	54.3	147	48.6		10.3	90	33.8		01.6	314	34.7		10.0	166	34.1		59.3
21	37	56.7	162	47.9		11.1	105	34.1		01.3	329	37.5		10.0	181	36.3		59.4
22	52	59.2	177	47.2		11.8	120	34.5		01.0	344	40.3		09.9	196	38.6		59.5
23	68	01.7	192	46.5		12.6	135	34.9		00.7	359	43.1		09.9	211	40.8		59.6
24	83	04.1	207	45.7	-18	13.4	150	35.3	-23	00.4	14	45.9	+21	09.9	226	43.0	-11	59.6
Dif	—		-7		-8		+4		+3		+28		0		+22		-1	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 54 ^m 9			Edad: 0 ^d 6 PHE { 4 ^h : 61/2 12 ^h : 61/0 20 ^h : 60/8 PMG: 13 ^h 07 ^m R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	20.7	-23	13.1	171	31.5	-20	22.7	33	60 N	7 02	7 59	8 56	9 34	35	16 46	89
1	196	20.4		13.2	185	53.6		19.4	33	58	6 55	48	39	19	38	17 00	86
2	211	20.1		13.4	200	15.8		15.9	35	56	48	37	25	9 07	41	12	83
3	226	19.8		13.5	214	38.0		12.3	36	54	42	28	12	8 57	42	22	8
4	241	19.5		13.6	229	00.3		08.5	38	52	37	20	8 01	47	44	31	80
5	256	19.2	-23	13.8	243	22.6	-20	04.6	39	50	6 31	7 13	7 51	8 39	45	17 40	77
6	271	18.9	-23	13.9	257	45.0	-20	00.6	40	45	6 20	6 57	7 31	8 21	48	17 57	74
7	286	18.6		14.1	272	07.5	-19	56.4	42	40	10	44	14	8 06	50	18 11	72
8	301	18.3		14.2	286	30.0		52.0	44	35	6 00	32	7 00	7 53	53	23	70
9	316	18.0		14.3	300	52.5		47.5	45	30	5 52	22	6 48	42	54	34	67
10	331	17.7		14.5	315	15.2		42.9	46	20	35	6 03	27	24	56	18 51	65
11	346	17.4	-23	14.6	329	37.9	-19	38.1	48	10 N	5 19	5 46	6 08	7 07	59	19 07	62
12	1	17.1	-23	14.8	344	00.7	-19	33.2	49	0	5 02	5 29	5 51	6 52	61	19 21	60
13	16	16.8		14.9	358	23.5		28.1	51	10 S	4 44	5 11	34	37	63	36	56
14	31	16.5		15.0	12	46.4		22.9	52	20	4 21	4 50	5 15	20	65	19 51	54
15	46	16.2		15.2	27	09.4		17.6	53	30	3 52	26	4 53	6 01	68	20 08	51
16	61	15.9		15.3	41	32.5		12.1	55	35	34	4 10	40	5 50	70	19	48
17	76	15.5	-23	15.4	55	55.6	-19	06.5	56	40	3 11	3 52	4 25	5 38	71	20 30	47
18	91	15.2	-23	15.6	70	18.8	-19	00.7	58	45	2 41	3 30	4 07	5 23	73	20 44	44
19	106	14.9		15.7	84	42.1	-18	54.9	58	50	1 56	3 01	3 45	5 05	76	21 00	41
20	121	14.6		15.8	99	05.5		48.9	60	52	1 29	2 46	34	4 56	77	08	39
21	136	14.3		15.9	113	28.9		42.7	62	54	0 46	28	22	46	79	16	38
22	151	14.0		16.1	127	52.5		36.4	63	56	** *	2 06	3 08	36	80	26	35
23	166	13.7		16.2	142	16.1		30.1	63	58	** *	1 37	2 52	23	83	37	32
24	181	13.4	-23	16.3	156	39.8	-18	23.5	66	60 S	** *	0 50	2 32	4 09	85	21 49	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 24 ^m 7		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +1.2 PMG: 13 ^h 57 ^m		Mag: -2.8 PMG: 22 ^h 57 ^m		Mag: +0.7 PMG: 8 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	04.1	207	45.7	-18	13.4	150	35.3	-23	00.4	14	45.9	+21	09.9	226	43.0	-11	59.6
1	98	06.6	222	45.0		14.2	165	35.6	-23	00.2	29	48.8		09.8	241	45.2		59.7
2	113	09.1	237	44.3		15.0	180	36.0	-22	59.9	44	51.6		09.8	256	47.5		59.8
3	128	11.5	252	43.6		15.7	195	36.4		59.6	59	54.4		09.7	271	49.7		59.7
4	143	14.0	267	42.9		16.5	210	36.8		59.3	74	57.2		09.7	286	51.9	-11	59.9
5	158	16.5	282	42.2	-18	17.3	225	37.2	-22	59.0	90	00.0	+21	09.7	301	54.1	-12	00.0
6	173	18.9	297	41.4	-18	18.1	240	37.5	-22	58.7	105	02.8	+21	09.6	316	56.4	-12	00.1
7	188	21.4	312	40.7		18.8	255	37.9		58.4	120	05.6		09.6	331	58.6		00.1
8	203	23.9	327	40.0		19.6	270	38.3		58.1	135	08.4		09.5	347	00.8		00.2
9	218	26.3	342	39.3		20.4	285	38.7		57.8	150	11.2		09.5	2	03.0		00.3
10	233	28.8	357	38.6		21.2	300	39.1		57.5	165	14.0		09.5	17	05.3		00.4
11	248	31.2	12	37.8	-18	21.9	315	39.4	-22	57.2	180	16.8	+21	09.4	32	07.5	-12	00.4
12	263	33.7	27	37.1	-18	22.7	330	39.8	-22	56.9	195	19.7	+21	09.4	47	09.7	-12	00.5
13	278	36.2	42	36.4		23.5	345	40.2		56.6	210	22.5		09.3	62	12.0		00.6
14	293	38.6	57	35.7		24.2	0	40.6		56.3	225	25.3		09.3	77	14.2		00.6
15	308	41.1	72	35.0		25.0	15	41.0		56.0	240	28.1		09.2	92	16.4		00.7
16	323	43.6	87	34.2		25.8	30	41.3		55.7	255	30.9		09.2	107	18.6		00.8
17	338	46.0	102	33.5	-18	26.5	45	41.7	-22	55.4	270	33.7	+21	09.2	122	20.9	-12	00.9
18	353	48.5	117	32.8	-18	27.3	60	42.1	-22	55.1	285	36.5	+21	09.1	137	23.1	-12	00.9
19	8	51.0	132	32.1		28.1	75	42.5		54.8	300	39.3		09.1	152	25.3		01.0
20	23	53.4	147	31.3		28.8	90	42.9		54.5	315	42.1		09.0	167	27.6		01.1
21	38	55.9	162	30.6		29.6	105	43.2		54.2	330	44.9		09.0	182	29.8		01.1
22	53	58.4	177	29.9		30.4	120	43.6		53.9	345	47.7		09.0	197	32.0		01.2
23	69	00.8	192	29.2		31.1	135	44.0		53.5	0	50.5		08.9	212	34.2		01.3
24	84	03.3	207	28.4	-18	31.9	150	44.4	-22	53.2	15	53.3	+21	08.9	227	36.5	-12	01.4
Dif	—		-7		-8		+4		+3		+28		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 55 ^m 3			Edad: 1 ^d 6 PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'1 PMG: 14 ^h 07 ^m R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	181	13.4	-23	16.3	156	39.8	-18	23.5	60 N	14 53	15 51	16 47	10 09 24	18 15 91
1	196	13.1		16.5	171	03.6	48	16.9	58	15 10	16 02	16 55	9 57 28	26 87
2	211	12.8		16.6	185	27.5	49	10.1	56	25	12	17 01	48 30	35 84
3	226	12.5		16.7	199	51.4	49	-18 03.2	54	38	21	07	39 32	43 82
4	241	12.2		16.8	214	15.5	51	-17 56.2	52	49	29	13	31 35	51 79
5	256	11.9	-23	16.9	228	39.6	51	-17 49.1	50	15 58	16 37	17 18	9 24 36	18 57 78
6	271	11.6	-23	17.1	243	03.8	52	-17 41.8	45	16 19	16 53	17 30	9 09 40	19 11 74
7	286	11.3		17.2	257	28.2	54	34.5	40	36	17 06	40	8 56 43	23 71
8	301	11.0		17.3	271	52.6	54	27.0	35	16 50	18	50	46 45	33 68
9	316	10.7		17.4	286	17.1	55	19.4	30	17 02	29	17 58	36 48	41 66
10	331	10.4		17.5	300	41.7	56	11.7	20	23	17 47	18 15	20 51	19 56 62
11	346	10.1	-23	17.7	315	06.4	57	-17 03.9	10 N	17 42	18 05	18 31	8 06 54	20 09 58
12	1	09.8	-23	17.8	329	31.1	57	-16 56.0	0	17 59	18 22	18 48	7 53 57	20 21 55
13	16	09.5		17.9	343	56.0	59	48.0	10 S	18 17	18 40	19 07	40 60	32 52
14	31	09.2		18.0	358	21.0	60	39.9	20	35	19 00	29	25 64	45 49
15	46	08.9		18.1	12	46.1	61	31.7	30	18 57	25	19 58	09 67	20 59 45
16	61	08.6		18.2	27	11.2	61	23.3	35	19 10	40	20 17	7 00 69	21 07 43
17	76	08.3	-23	18.4	41	36.5	63	-16 14.9	40	19 25	19 58	20 40	6 49 71	21 17 40
18	91	08.0	-23	18.5	56	01.9	64	-16 06.4	45	19 43	20 21	21 10	6 36 74	21 28 36
19	106	07.7		18.6	70	27.3	64	-15 57.8	50	20 06	20 50	21 55	21 78	41 33
20	121	07.4		18.7	84	52.9	66	49.1	52	17	21 05	22 23	13 80	47 31
21	136	07.1		18.8	99	18.5	66	40.2	54	29	23	23 08	6 05 82	21 54 29
22	151	06.8		18.9	113	44.3	68	31.3	56	20 43	21 45	** **	5 56 84	22 01 27
23	166	06.5		19.0	128	10.1	68	22.4	58	21 00	22 15	** **	46 86	09 25
24	181	06.2	-23	19.1	142	36.1	70	-15 13.3	60 S	21 20	23 03	** **	5 34 90	22 19 21
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 20 ^m 8		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: +1.2 PMG: 13 ^h 57 ^m		Mag: -2.8 PMG: 22 ^h 52 ^m		Mag: +0.7 PMG: 8 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	84	03.3	207	28.4	-18	31.9	15	53.3	+21	08.9				
1	99	05.7	222	27.7		32.6	30	56.1		08.8				
2	114	08.2	237	27.0		33.4	45	59.0		08.8				
3	129	10.7	252	26.2		34.2	61	01.8		08.8				
4	144	13.1	267	25.5		34.9	76	04.6		08.7				
5	159	15.6	282	24.8	-18	35.7	91	07.4	+21	08.7				
6	174	18.1	297	24.0	-18	36.4	106	10.2	+21	08.6				
7	189	20.5	312	23.3		37.2	121	13.0		08.6				
8	204	23.0	327	22.6		37.9	136	15.8		08.6				
9	219	25.5	342	21.9		38.7	151	18.6		08.5				
10	234	27.9	357	21.1		39.4	166	21.4		08.5				
11	249	30.4	12	20.4	-18	40.2	181	24.2	+21	08.4				
12	264	32.9	27	19.7	-18	40.9	196	27.0	+21	08.4				
13	279	35.3	42	18.9		41.7	211	29.8		08.4				
14	294	37.8	57	18.2		42.4	226	32.6		08.3				
15	309	40.2	72	17.4		43.2	241	35.4		08.3				
16	324	42.7	87	16.7		43.9	256	38.2		08.2				
17	339	45.2	102	16.0	-18	44.7	271	41.0	+21	08.2				
18	354	47.6	117	15.2	-18	45.4	286	43.8	+21	08.2				
19	9	50.1	132	14.5		46.2	301	46.6		08.1				
20	24	52.6	147	13.8		46.9	316	49.4		08.1				
21	39	55.0	162	13.0		47.6	331	52.2		08.0				
22	54	57.5	177	12.3		48.4	346	55.0		08.0				
23	70	00.0	192	11.6		49.1	1	57.9		08.0				
24	85	02.4	207	10.8	-18	49.9	17	00.7	+21	07.9				
Dif	—		-7		-7		+4		+3					
							+28		0					
									+22					
									-1					

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 2 ^d 6	PHE {	SD: 16:3	4 ^h : 59:8 12 ^h : 59:5 20 ^h : 59:2	R°: 52 ^m								
	PMG: 11 ^h 55 ^m 8									PMG: 15 ^h 03 ^m						
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m
0	181	06.2	-23	19.1	142	36.1	-15	13.3	92	60 N	7 04	8 01	8 59	10 33	18	19 46 87
1	196	05.9		19.2	157	02.1	70	-15	04.1	92	58	6 57	7 49	41	25 21	53 85
2	211	05.5		19.3	171	28.3	72	-14	54.9	93	56	50	39	26	18 23	19 59 82
3	226	05.2		19.4	185	54.5	72		45.6	93	54	44	30	14	11 26	20 05 80
4	241	04.9		19.5	200	20.8	73		36.1	95	52	38	22	8 03	06 27	10 78
5	256	04.6	-23	19.6	214	47.3	75	-14	26.6	95	50	6 33	7 14	7 53	10 00	20 15 76
6	271	04.3	-23	19.8	229	13.8	75	-14	17.1	95	45	6 21	6 58	7 32	9 49	20 25 72
7	286	04.0		19.9	243	40.4	76	-14	07.4	97	40	11	45	16	39 37	34 68
8	301	03.7		20.0	258	07.2	78	-13	57.7	97	35	6 02	33	7 01	31 40	41 65
9	316	03.4		20.1	272	34.0	78		47.9	98	30	5 53	23	6 49	24 42	47 63
10	331	03.1		20.2	287	00.9	79		38.1	98	20	36	6 04	28	11 46	20 58 58
11	346	02.8	-23	20.3	301	28.0	81	-13	28.1	100	10 N	5 20	5 47	6 09	9 00	21 07 55
12	1	02.5	-23	20.3	315	55.1	81	-13	18.1	100	0	5 03	5 30	5 52	8 50	21 16 51
13	16	02.2		20.4	330	22.3	82	-13	08.0	101	10 S	4 44	5 12	35	40 56	24 48
14	31	01.9		20.5	344	49.6	83	-12	57.9	101	20	4 22	4 51	5 16	29 60	34 44
15	46	01.6		20.6	359	17.0	84		47.7	102	30	3 53	26	4 54	16 64	44 40
16	61	01.3		20.7	13	44.5	85		37.4	103	35	34	4 11	41	09 66	50 37
17	76	01.0	-23	20.8	28	12.1	86	-12	27.1	103	40	3 11	3 53	4 26	8 00	21 57 34
18	91	00.7	-23	20.9	42	39.8	87	-12	16.7	104	45	2 41	3 30	4 08	7 50	22 04 32
19	106	00.4		21.0	57	07.6	88	-12	06.3	104	50	1 56	3 01	3 45	39 76	14 27
20	121	00.1		21.1	71	35.5	89	-11	55.8	105	52	1 28	2 46	35	33 79	18 26
21	135	59.7		21.2	86	03.5	90		45.2	106	54	0 43	28	22	27 81	23 24
22	150	59.4		21.3	100	31.5	90		34.6	106	56	** **	2 06	3 08	20 83	28 22
23	165	59.1		21.4	114	59.7	92		23.9	107	58	** **	1 36	2 51	12 86	34 19
24	180	58.8	-23	21.5	129	28.0	93	-11	13.2	107	60 S	** **	0 48	2 31	7 04	22 40 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 16 ^m 8		Mag: -3.9 PMG: 10 ^h 12 ^m		Mag: +1.2 PMG: 13 ^h 56 ^m		Mag: -2.8 PMG: 22 ^h 48 ^m		Mag: +0.7 PMG: 8 ^h 45 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	85	02.4	207	10.8	150	53.6	17	00.7	228	30.0
1	100	04.9	222	10.1	165	53.9	32	03.5	243	32.2
2	115	07.4	237	09.3	180	54.3	47	06.3	258	34.4
3	130	09.8	252	08.6	195	54.7	62	09.1	273	36.7
4	145	12.3	267	07.8	210	55.1	77	11.9	288	38.9
5	160	14.7	282	07.1	225	55.5	92	14.7	303	41.1
6	175	17.2	297	06.4	240	55.9	107	17.5	318	43.4
7	190	19.7	312	05.6	255	56.3	122	20.3	333	45.6
8	205	22.1	327	04.9	270	56.6	137	23.1	348	47.8
9	220	24.6	342	04.1	285	57.0	152	25.9	3	50.1
10	235	27.1	357	03.4	300	57.4	167	28.7	18	52.3
11	250	29.5	12	02.6	315	57.8	182	31.5	33	54.5
12	265	32.0	27	01.9	330	58.2	197	34.3	48	56.7
13	280	34.5	42	01.2	345	58.6	212	37.1	63	59.0
14	295	36.9	57	00.4	0	58.9	227	39.9	79	01.2
15	310	39.4	71	59.7	15	59.3	242	42.7	94	03.4
16	325	41.8	86	58.9	30	59.7	257	45.5	109	05.7
17	340	44.3	101	58.2	46	00.1	272	48.3	124	07.9
18	355	46.8	116	57.4	61	00.5	287	51.1	139	10.1
19	10	49.2	131	56.7	76	00.9	302	53.9	154	12.4
20	25	51.7	146	55.9	91	01.3	317	56.7	169	14.6
21	40	54.2	161	55.2	106	01.6	332	59.5	184	16.8
22	55	56.6	176	54.4	121	02.0	348	02.3	199	19.1
23	70	59.1	191	53.7	136	02.4	3	05.1	214	21.3
24	86	01.6	206	52.9	151	02.8	18	07.9	229	23.5
Dif	—		-7		+4		+28		+22	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 56 ^m 3			Edad: 3 ^d 6 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'3 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	58.8	-23	21.5	129	28.0	-11 13.2	60 N	14 53	15 51	16 48	10 51 15	21 13 85					
1	195	58.5		21.5	143	56.3	93 -11 02.5	58	15 11	16 02	16 55	46 17	18 81					
2	210	58.2		21.6	158	24.7	94 -10 51.7	56	25	13	17 02	41 20	21 79					
3	225	57.9		21.7	172	53.3	96 40.8	54	38	22	08	37 22	25 76					
4	240	57.6		21.8	187	21.9	96 29.9	52	49	30	14	33 24	28 74					
5	255	57.3	-23	21.9	201	50.6	97 -10 19.0	50	15 59	16 37	17 19	10 30 26	21 31 72					
6	270	57.0	-23	22.0	216	19.4	98 -10 08.0	45	16 20	16 53	17 31	10 22 30	21 37 68					
7	285	56.7		22.0	230	48.3	99 -9 56.9	40	36	17 07	41	16 33	42 65					
8	300	56.4		22.1	245	17.2	99 45.9	35	16 51	19	50	11 35	46 62					
9	315	56.1		22.2	259	46.3	101 34.8	30	17 03	29	17 59	10 06 38	50 59					
10	330	55.8		22.3	274	15.4	101 23.6	20	24	17 48	18 16	9 57 42	21 56 55					
11	345	55.5	-23	22.4	288	44.6	102 -9 12.4	10 N	17 43	18 05	18 32	9 50 46	22 02 51					
12	0	55.1	-23	22.4	303	13.9	103 -9 01.2	0	18 00	18 23	18 49	9 43 49	22 07 48					
13	15	54.8		22.5	317	43.3	104 -8 50.0	10 S	18	18 41	19 08	36 53	12 45					
14	30	54.5		22.6	332	12.8	105 38.7	20	37	19 01	30	29 56	18 40					
15	45	54.2		22.7	346	42.3	105 27.4	30	18 59	26	19 59	20 61	24 36					
16	60	53.9		22.7	1	12.0	107 16.1	35	19 12	19 41	20 18	15 64	27 34					
17	75	53.6	-23	22.8	15	41.7	107 -8 04.7	40	19 27	20 00	20 41	9 10 66	22 31 32					
18	90	53.3	-23	22.9	30	11.5	108 -7 53.3	45	19 45	20 22	21 12	9 03 70	22 36 28					
19	105	53.0		23.0	44	41.3	108 41.9	50	20 07	20 52	21 57	8 55 74	41 25					
20	120	52.7		23.0	59	11.3	110 30.4	52	18	21 07	22 25	52 75	44 23					
21	135	52.4		23.1	73	41.3	110 19.0	54	30	25	23 11	48 77	47 20					
22	150	52.1		23.2	88	11.4	111 -7 07.5	56	20 45	21 47	** **	43 80	50 18					
23	165	51.8		23.3	102	41.6	112 -6 56.0	58	21 01	22 17	** **	38 83	53 16					
24	180	51.5	-23	23.3	117	11.8	112 -6 44.5	60 S	21 22	23 07	** **	8 33 85	22 57 14					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 12 ^m 9		Mag: -3.9 PMG: 10 ^h 13 ^m			Mag: +1.2 PMG: 13 ^h 55 ^m			Mag: -2.8 PMG: 22 ^h 43 ^m			Mag: +0.7 PMG: 8 ^h 41 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	86	01.6	206	52.9	-19	07.3	151	02.8	-22	38.1	18	07.9	+21	07.0	229	23.5	-12	04.7
1	101	04.0	221	52.2		08.1	166	03.2		37.7	33	10.7		06.9	244	25.8		04.8
2	116	06.5	236	51.4		08.8	181	03.6		37.4	48	13.5		06.9	259	28.0		04.9
3	131	09.0	251	50.7		09.5	196	04.0		37.1	63	16.3		06.8	274	30.2		05.0
4	146	11.4	266	49.9		10.2	211	04.3		36.7	78	19.1		06.8	289	32.5		05.0
5	161	13.9	281	49.1	-19	10.9	226	04.7	-22	36.4	93	21.9	+21	06.8	304	34.7	-12	05.1
6	176	16.3	296	48.4	-19	11.6	241	05.1	-22	36.1	108	24.7	+21	06.7	319	36.9	-12	05.2
7	191	18.8	311	47.6		12.3	256	05.5		35.8	123	27.5		06.7	334	39.2		05.2
8	206	21.3	326	46.9		13.0	271	05.9		35.4	138	30.3		06.6	349	41.4		05.3
9	221	23.7	341	46.1		13.8	286	06.3		35.1	153	33.1		06.6	4	43.6		05.4
10	236	26.2	356	45.4		14.5	301	06.7		34.8	168	35.9		06.6	19	45.9		05.4
11	251	28.7	11	44.6	-19	15.2	316	07.0	-22	34.4	183	38.7	+21	06.5	34	48.1	-12	05.5
12	266	31.1	26	43.9	-19	15.9	331	07.4	-22	34.1	198	41.5	+21	06.5	49	50.3	-12	05.6
13	281	33.6	41	43.1		16.6	346	07.8		33.8	213	44.3		06.5	64	52.6		05.6
14	296	36.1	56	42.3		17.3	1	08.2		33.4	228	47.0		06.4	79	54.8		05.7
15	311	38.5	71	41.6		18.0	16	08.6		33.1	243	49.8		06.4	94	57.0		05.8
16	326	41.0	86	40.8		18.7	31	09.0		32.8	258	52.6		06.3	109	59.3		05.9
17	341	43.5	101	40.1	-19	19.4	46	09.4	-22	32.4	273	55.4	+21	06.3	125	01.5	-12	05.9
18	356	45.9	116	39.3	-19	20.1	61	09.8	-22	32.1	288	58.2	+21	06.3	140	03.7	-12	06.0
19	11	48.4	131	38.5		20.8	76	10.1		31.8	304	01.0		06.2	155	06.0		06.1
20	26	50.8	146	37.8		21.5	91	10.5		31.4	319	03.8		06.2	170	08.2		06.1
21	41	53.3	161	37.0		22.2	106	10.9		31.1	334	06.6		06.1	185	10.4		06.2
22	56	55.8	176	36.3		22.9	121	11.3		30.8	349	09.4		06.1	200	12.7		06.3
23	71	58.2	191	35.5		23.6	136	11.7		30.4	4	12.2		06.1	215	14.9		06.3
24	87	00.7	206	34.7	-19	24.3	151	12.1	-22	30.1	19	15.0	+21	06.0	230	17.2	-12	06.4
Dif	—		-8		-7		+4		+3		+28		0		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 56 ^m 8			Edad: 4 ^d 6 PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'3 R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	51.5	-23	23.3	117	11.8	-6	44.5	60 N	7 06	8 03	9 00	11 06	13	22 38	80		
1	195	51.1		23.4	131	42.1 ¹¹³		32.9 ¹¹⁶	58	6 58	7 51	8 43		03 16	39 78			
2	210	50.8		23.5	146	12.5 ¹¹⁴		21.4 ¹¹⁵	56		51 41	28	11 01	18	40 76			
3	225	50.5		23.5	160	43.0 ¹¹⁵	-6	09.8 ¹¹⁶	54		45 31	15	10 59	20	41 74			
4	240	50.2		23.6	175	13.5 ¹¹⁵	-5	58.2 ¹¹⁶	52		40 23	8 04		57 22	42 72			
5	255	49.9	-23	23.6	189	44.1 ¹¹⁶	-5	46.6 ¹¹⁶	50	6 34	7 16	7 54	10 56	23	22 43	70		
6	270	49.6	-23	23.7	204	14.7 ¹¹⁶	-5	35.0 ¹¹⁶	45	6 22	7 00	7 34	10 52	27	22 45	66		
7	285	49.3		23.8	218	45.5 ¹¹⁸		23.4 ¹¹⁶	40		12 6 46	17	49 30		47 62			
8	300	49.0		23.8	233	16.3 ¹¹⁸		11.7 ¹¹⁷	35	6 03	34	7 03	46 33		48 60			
9	315	48.7		23.9	247	47.1 ¹¹⁸	-5	00.1 ¹¹⁶	30	5 54	24	6 50	44 35		49 58			
10	330	48.4		24.0	262	18.1 ¹²⁰	-4	48.4 ¹¹⁷	20		38 6 05	29	39 40		51 54			
11	345	48.1	-23	24.0	276	49.1 ¹²⁰	-4	36.8 ¹¹⁶	10 N	5 21	5 48	6 11	10 36	43	22 53	50		
12	0	47.8	-23	24.1	291	20.1 ¹²⁰	-4	25.1 ¹¹⁷	0	5 04	5 31	5 53	10 32	47	22 55	46		
13	15	47.4		24.1	305	51.2 ¹²¹		13.4 ¹¹⁷	10 S	4 45	5 12	35	29 50		57 42			
14	30	47.1		24.2	320	22.4 ¹²²	-4	01.7 ¹¹⁷	20	4 23	4 52	5 17	25 54		22 58	39		
15	45	46.8		24.2	334	53.6 ¹²²	-3	50.1 ¹¹⁶	30	3 54	27	4 54	21 58		23 00	35		
16	60	46.5		24.3	349	24.9 ¹²³		38.4 ¹¹⁷	35		35 4 12	41	19 61		01 33			
17	75	46.2	-23	24.4	3	56.3 ¹²⁴	-3	26.7 ¹¹⁷	40	3 12	3 54	4 26	10 16	64	23 03	29		
18	90	45.9	-23	24.4	18	27.7 ¹²⁴	-3	15.0 ¹¹⁷	45	2 41	3 31	4 08	10 13	67	23 04	27		
19	105	45.6		24.5	32	59.1 ¹²⁴	-3	03.3 ¹¹⁷	50	1 56	3 01	3 46		09 71	06 23			
20	120	45.3		24.5	47	30.7 ¹²⁶	-2	51.6 ¹¹⁷	52	1 28	2 46	35		07 73	07 21			
21	135	45.0		24.6	62	02.2 ¹²⁵		40.0 ¹¹⁶	54	0 42	28	23		05 75	07 20			
22	150	44.7		24.6	76	33.9 ¹²⁷		28.3 ¹¹⁷	56	** ** *	2 06	3 08		03 77	08 18			
23	165	44.4		24.7	91	05.5 ¹²⁶		16.6 ¹¹⁷	58	** ** *	1 36	2 52	10 01	79	09 15			
24	180	44.1	-23	24.7	105	37.3 ¹²⁸	-2	04.9 ¹¹⁷	60 S	** ** *	0 46	2 31	9 58	82	23 11	12		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 09 ^m 0		Mag: -3.9 PMG: 10 ^h 14 ^m				Mag: +1.2 PMG: 13 ^h 55 ^m				Mag: -2.8 PMG: 22 ^h 39 ^m				Mag: +0.7 PMG: 8 ^h 38 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	00.7	206	34.7	-19	24.3	151	12.1	-22	30.1	19	15.0	+21	06.0	230	17.2	-12	06.4
1	102	03.2	221	34.0		25.0	166	12.5		29.7	34	17.8		06.0	245	19.4		06.5
2	117	05.6	236	33.2		25.7	181	12.9		29.4	49	20.6		05.9	260	21.6		06.5
3	132	08.1	251	32.4		26.4	196	13.2		29.1	64	23.4		05.9	275	23.9		06.6
4	147	10.6	266	31.7		27.1	211	13.6		28.7	79	26.2		05.9	290	26.1		06.7
5	162	13.0	281	30.9	-19	27.7	226	14.0	-22	28.4	94	29.0	+21	05.8	305	28.3	-12	06.7
6	177	15.5	296	30.1	-19	28.4	241	14.4	-22	28.0	109	31.8	+21	05.8	320	30.6	-12	06.8
7	192	18.0	311	29.4		29.1	256	14.8		27.7	124	34.6		05.7	335	32.8		06.9
8	207	20.4	326	28.6		29.8	271	15.2		27.4	139	37.4		05.7	350	35.0		07.0
9	222	22.9	341	27.8		30.5	286	15.6		27.0	154	40.2		05.7	5	37.3		07.0
10	237	25.3	356	27.1		31.2	301	16.0		26.7	169	42.9		05.6	20	39.5		07.1
11	252	27.8	11	26.3	-19	31.9	316	16.4	-22	26.3	184	45.7	+21	05.6	35	41.7	-12	07.2
12	267	30.3	26	25.5	-19	32.6	331	16.7	-22	26.0	199	48.5	+21	05.5	50	44.0	-12	07.2
13	282	32.7	41	24.8		33.2	346	17.1		25.6	214	51.3		05.5	65	46.2		07.3
14	297	35.2	56	24.0		33.9	1	17.5		25.3	229	54.1		05.5	80	48.5		07.4
15	312	37.7	71	23.2		34.6	16	17.9		25.0	244	56.9		05.4	95	50.7		07.4
16	327	40.1	86	22.4		35.3	31	18.3		24.6	259	59.7		05.4	110	52.9		07.5
17	342	42.6	101	21.7	-19	36.0	46	18.7	-22	24.3	275	02.5	+21	05.4	125	55.2	-12	07.6
18	357	45.1	116	20.9	-19	36.6	61	19.1	-22	23.9	290	05.3	+21	05.3	140	57.4	-12	07.6
19	12	47.5	131	20.1		37.3	76	19.5		23.6	305	08.1		05.3	155	59.6		07.7
20	27	50.0	146	19.4		38.0	91	19.9		23.2	320	10.9		05.2	171	01.9		07.8
21	42	52.4	161	18.6		38.7	106	20.3		22.9	335	13.7		05.2	186	04.1		07.8
22	57	54.9	176	17.8		39.4	121	20.6		22.5	350	16.5		05.2	201	06.4		07.9
23	72	57.4	191	17.0		40.0	136	21.0		22.2	5	19.2		05.1	216	08.6		08.0
24	87	59.8	206	16.3	-19	40.7	151	21.4	-22	21.8	20	22.0	+21	05.1	231	10.8	-12	08.0
Dif	—		-8		-7		+4		+3		+28		0		+22		-	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 57 ^m 3				Edad: 5 ^d 6 PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'4 R°: 45 ^m														
	hG ☉		Dec		hG ☾		Dif												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m	
0	180	44.1	-23	24.7	105	37.3	-2	04.9	60 N	14 54	15 51	16 48	11 19	12	23 58	79			
1	195	43.7		24.8	120	09.0 ¹²⁷	-1	53.3 ¹¹⁶	58	15 11	16 03	16 56		15	57 76				
2	210	43.4		24.8	134	40.9 ¹²⁹		41.6 ¹¹⁷	56	26	13	17 03		19 17	56 73				
3	225	43.1		24.9	149	12.7 ¹²⁸		30.0 ¹¹⁶	54	39	22	09		19 19	55 71				
4	240	42.8		24.9	163	44.6 ¹²⁹		18.3 ¹¹⁷	52	15 50	31	14		19 21	54 69				
5	255	42.5	-23	24.9	178	16.6 ¹³⁰	-1	06.7 ¹¹⁶	50	16 00	16 38	17 20	11 19	22	23 53	67			
6	270	42.2	-23	25.0	192	48.6 ¹³⁰	-0	55.1 ¹¹⁶	45	16 20	16 54	17 32	11 19	26	23 51	64			
7	285	41.9		25.0	207	20.7 ¹³¹		43.5 ¹¹⁶	40	37	17 08	42		19 29	49 61				
8	300	41.6		25.1	221	52.8 ¹³¹		31.9 ¹¹⁶	35	16 51	20	17 51		19 32	48 58				
9	315	41.3		25.1	236	24.9 ¹³¹		20.3 ¹¹⁶	30	17 04	30	18 00		19 34	47 55				
10	330	41.0		25.2	250	57.1 ¹³²	-0	08.7 ¹¹⁶	20	25	17 49	17		19 38	45 51				
11	345	40.6	-23	25.2	265	29.3 ¹³²	+0	02.8 ¹¹⁵	10 N	17 44	18 06	18 33	11 19	42	23 43	48			
12	0	40.3	-23	25.2	280	01.6 ¹³³	+0	14.3 ¹¹⁵	0	18 01	18 24	18 50	11 19	45	23 41	45			
13	15	40.0		25.3	294	33.9 ¹³³		25.9 ¹¹⁶	10 S	19	18 42	19 09		19 49	39 41				
14	30	39.7		25.3	309	06.2 ¹³³		37.4 ¹¹⁵	20	18 38	19 02	19 31		19 52	37 38				
15	45	39.4		25.3	323	38.6 ¹³⁴	+0	48.9 ¹¹⁵	30	19 00	27	20 01		19 57	35 34				
16	60	39.1		25.4	338	11.0 ¹³⁴	+1	00.3 ¹¹⁴	35	13	19 43	19		20 58	34 31				
17	75	38.8	-23	25.4	352	43.5 ¹³⁵	+1	11.8 ¹¹⁵	40	19 28	20 01	20 42	11 20	61	23 32	29			
18	90	38.5	-23	25.5	7	15.9 ¹³⁴	+1	23.2 ¹¹⁴	45	19 46	20 23	21 13	11 20	64	23 31	26			
19	105	38.2		25.5	21	48.4 ¹³⁵		34.6 ¹¹⁴	50	20 08	20 53	21 59		20 68	29 22				
20	120	37.9		25.5	36	21.0 ¹³⁶		46.0 ¹¹⁴	52	19	21 08	22 27		20 70	28 21				
21	135	37.6		25.6	50	53.6 ¹³⁶	+1	57.4 ¹¹⁴	54	32	26	23 14		20 72	27 19				
22	150	37.2		25.6	65	26.2 ¹³⁶	+2	08.7 ¹¹³	56	20 46	21 49	** **		20 74	26 17				
23	165	36.9		25.6	79	58.8 ¹³⁶		20.0 ¹¹³	58	21 03	22 19	** **		20 77	24 16				
24	180	36.6	-23	25.6	94	31.5 ¹³⁷	+2	31.3 ¹¹³	60 S	21 23	23 10	** **	11 20	80	23 23	13			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO											
	PMG: 18 ^h 05 ^m 0		Mag: -3.9 PMG: 10 ^h 15 ^m		Mag: +1.2 PMG: 13 ^h 54 ^m		Mag: -2.8 PMG: 22 ^h 34 ^m			Mag: +0.7 PMG: 8 ^h 34 ^m											
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄											
h	°	'	°	'	°	'	°	'	°	'	°	'									
0	87	59.8	206	16.3	-19	40.7	151	21.4	-22	21.8	20	22.0	+21	05.1	231	10.8	-12	08.0			
1	103	02.3	221	15.5		41.4	166	21.8		21.5	35	24.8		05.0	246	13.1		08.1			
2	118	04.8	236	14.7		42.0	181	22.2		21.1	50	27.6		05.0	261	15.3		08.2			
3	133	07.2	251	13.9		42.7	196	22.6		20.8	65	30.4		05.0	276	17.5		08.2			
4	148	09.7	266	13.2		43.4	211	23.0		20.4	80	33.2		04.9	291	19.8		08.3			
5	163	12.2	281	12.4	-19	44.1	226	23.4	-22	20.1	95	36.0	+21	04.9	306	22.0	-12	08.4			
6	178	14.6	296	11.6	-19	44.7	241	23.8	-22	19.7	110	38.8	+21	04.8	321	24.3	-12	08.4			
7	193	17.1	311	10.8		45.4	256	24.2		19.4	125	41.6		04.8	336	26.5		08.5			
8	208	19.6	326	10.0		46.1	271	24.6		19.0	140	44.4		04.8	351	28.7		08.6			
9	223	22.0	341	09.3		46.7	286	24.9		18.7	155	47.1		04.7	6	31.0		08.6			
10	238	24.5	356	08.5		47.4	301	25.3		18.3	170	49.9		04.7	21	33.2		08.7			
11	253	26.9	11	07.7	-19	48.0	316	25.7	-22	18.0	185	52.7	+21	04.7	36	35.5	-12	08.8			
12	268	29.4	26	06.9	-19	48.7	331	26.1	-22	17.6	200	55.5	+21	04.6	51	37.7	-12	08.8			
13	283	31.9	41	06.1		49.4	346	26.5		17.3	215	58.3		04.6	66	39.9		08.9			
14	298	34.3	56	05.4		50.0	1	26.9		16.9	231	01.1		04.5	81	42.2		09.0			
15	313	36.8	71	04.6		50.7	16	27.3		16.6	246	03.9		04.5	96	44.4		09.0			
16	328	39.3	86	03.8		51.3	31	27.7		16.2	261	06.7		04.5	111	46.7		09.1			
17	343	41.7	101	03.0	-19	52.0	46	28.1	-22	15.9	276	09.4	+21	04.4	126	48.9	-12	09.2			
18	358	44.2	116	02.2	-19	52.7	61	28.5	-22	15.5	291	12.2	+21	04.4	141	51.1	-12	09.2			
19	13	46.7	131	01.5		53.3	76	28.9		15.1	306	15.0		04.3	156	53.4		09.3			
20	28	49.1	146	00.7		54.0	91	29.3		14.8	321	17.8		04.3	171	55.6		09.4			
21	43	51.6	160	59.9		54.6	106	29.7		14.4	336	20.6		04.3	186	57.8		09.4			
22	58	54.0	175	59.1		55.3	121	30.0		14.1	351	23.4		04.2	202	00.1		09.5			
23	73	56.5	190	58.3		55.9	136	30.4		13.7	6	26.2		04.2	217	02.3		09.6			
24	88	59.0	205	57.5	-19	56.6	151	30.8	-22	13.4	21	29.0	+21	04.2	232	04.6	-12	09.6			
Dif	—		-8		-7		+4		+4		+28			0			+22			-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 8			Edad: 6 ^d 6 PHE { SD: 15'3 PMG: 18 ^h 15 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	36.6	-23	25.6	94	31.5	+2	31.3	60 N	7 07	8 04	9 02	11 31	13	***	***
1	195	36.3		25.7	109	04.1 ¹³⁶		42.6 ¹¹³	58	6 59	7 52	8 44	34 15		***	***
2	210	36.0		25.7	123	36.9 ¹³⁸	+2	53.8 ¹¹²	56	53	42	29	36 18		***	***
3	225	35.7		25.7	138	09.6 ¹³⁷	+3	05.0 ¹¹²	54	46	33	17	38 19		***	***
4	240	35.4		25.7	152	42.4 ¹³⁸		16.2 ¹¹²	52	41	24	8 05	40 21		***	***
5	255	35.1	-23	25.8	167	15.1 ¹³⁷	+3	27.4 ¹¹²	50	6 35	7 17	7 56	11 41	23	***	***
6	270	34.8	-23	25.8	181	48.0 ¹³⁹	+3	38.5 ¹¹¹	45	6 24	7 01	7 35	11 45	26	***	***
7	285	34.4		25.8	196	20.8 ¹³⁸	+3	49.6 ¹¹¹	40	13	6 47	18	48 29		***	***
8	300	34.1		25.8	210	53.6 ¹³⁸	+4	00.7 ¹¹¹	35	6 04	36	7 04	51 31		***	***
9	315	33.8		25.9	225	26.5 ¹³⁹		11.7 ¹¹⁰	30	5 55	25	6 51	53 34		***	***
10	330	33.5		25.9	239	59.4 ¹³⁹		22.8 ¹¹¹	20	39	6 06	30	11 57	38	***	***
11	345	33.2	-23	25.9	254	32.3 ¹³⁹	+4	33.7 ¹⁰⁹	10 N	5 22	5 49	6 12	12 01	41	***	***
12	0	32.9	-23	25.9	269	05.3 ¹⁴⁰	+4	44.7 ¹¹⁰	0	5 05	5 32	5 54	12 04	45	***	***
13	15	32.6		25.9	283	38.2 ¹³⁹	+4	55.6 ¹⁰⁹	10 S	4 46	5 13	36	08 47		***	***
14	30	32.3		26.0	298	11.2 ¹⁴⁰	+5	06.5 ¹⁰⁹	20	4 24	4 53	5 17	11 51		***	***
15	45	32.0		26.0	312	44.1 ¹³⁹		17.3 ¹⁰⁸	30	3 54	28	4 55	16 55		***	***
16	60	31.7		26.0	327	17.1 ¹⁴⁰		28.2 ¹⁰⁹	35	36	4 13	42	18 57		***	***
17	75	31.3	-23	26.0	341	50.1 ¹⁴⁰	+5	38.9 ¹⁰⁷	40	3 13	3 54	4 27	12 21	60	***	***
18	90	31.0	-23	26.0	356	23.2 ¹⁴¹	+5	49.7 ¹⁰⁸	45	2 42	3 32	4 09	12 24	63	23 57	27
19	105	30.7		26.0	10	56.2 ¹⁴⁰	+6	00.4 ¹⁰⁷	50	1 56	3 02	3 47	28 67		51	24
20	120	30.4		26.1	25	29.2 ¹⁴⁰		11.1 ¹⁰⁷	52	1 28	2 47	36	30 68		49	22
21	135	30.1		26.1	40	02.3 ¹⁴¹		21.7 ¹⁰⁶	54	0 41	29	23	32 70		46	20
22	150	29.8		26.1	54	35.3 ¹⁴⁰		32.3 ¹⁰⁶	56	*** **	2 06	3 09	34 72		43	18
23	165	29.5		26.1	69	08.4 ¹⁴¹		42.8 ¹⁰⁵	58	*** **	1 36	2 52	37 74		40	16
24	180	29.2	-23	26.1	83	41.5 ¹⁴¹	+6	53.4 ¹⁰⁶	60 S	*** **	0 45	2 32	12 40	77	23 36	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 01 ^m 1		Mag: -3.9 PMG: 10 ^h 17 ^m		Mag: +1.2 PMG: 13 ^h 54 ^m		Mag: -2.8 PMG: 22 ^h 30 ^m		Mag: +0.6 PMG: 8 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	88	59.0	205	57.5	151	30.8	-22	13.4	21	29.0
1	104	01.4	220	56.7		57.2		13.0	+21	04.2
2	119	03.9	235	56.0	166	31.2		12.6		04.1
3	134	06.4	250	55.2	181	31.6		12.3		04.1
4	149	08.8	265	54.4	196	32.0		12.3		04.0
5	164	11.3	280	53.6	211	32.4	-11.9			04.0
6	179	13.8	295	52.8	226	32.8	-22	11.6	96	42.9
7	194	16.2	310	52.0		33.2	-22	11.2	+21	03.9
8	209	18.7	325	51.2	241	33.2		10.8		03.9
9	224	21.2	340	50.4	256	33.6		10.5		03.9
10	239	23.6	355	49.6	271	34.0		10.5		03.9
11	254	26.1	10	48.8	286	34.4		10.1		03.8
12	269	28.5	25	48.1	299	34.8		09.7		03.8
13	284	31.0	40	47.3	301	34.8	-22	09.4	171	56.8
14	299	33.5	55	46.5	316	35.2		09.4	186	59.6
15	314	35.9	70	45.7	331	35.6	-22	09.0	+21	03.7
16	329	38.4	85	44.9	346	36.0		08.7	202	02.4
17	344	40.9	100	44.1		36.4		08.3	217	05.2
18	359	43.3	115	43.3	1	36.7		07.9	232	07.9
19	14	45.8	130	42.5	16	36.7		07.6	247	10.7
20	29	48.3	145	41.7	31	37.1	-22	07.2	262	13.5
21	44	50.7	160	40.9	46	37.5		07.2	277	16.3
22	59	53.2	175	40.1	61	37.9	-22	06.8	+21	03.5
23	74	55.7	190	39.3	76	38.3		06.5		03.5
24	89	58.1	205	38.5	91	38.7		06.1	307	21.8
					106	39.1		05.7	322	24.6
					121	39.5		05.4	337	27.4
					136	39.9		05.0	352	30.2
					151	40.3	-22	04.6	7	33.0
									22	35.8
Dif	—		-8	-6	+4	+4			+28	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 58 ^m 3				Edad: 7 ^d 6 PHE { SD: 15:1 PMG: 18 ^h 59 ^m 4 ^h : 55/4 12 ^h : 55/2 20 ^h : 55/0 R°: 45 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	29.2	-23	26.1	83	41.5	+6	53.4	60 N	14 54	15 52	16 49	11 44 15	1 17 76				
1	195	28.9		26.1	98	14.6 ¹⁴¹	+7	03.8 ¹⁰⁴	58	15 12	16 04	16 57	49 17	13 73				
2	210	28.6		26.1	112	47.7 ¹⁴¹		14.3 ¹⁰⁵	56	27	14	17 03	54 19	09 71				
3	225	28.2		26.1	127	20.7 ¹⁴⁰		24.7 ¹⁰⁴	54	39	23	10	11 57 22	06 69				
4	240	27.9		26.1	141	53.8 ¹⁴¹		35.0 ¹⁰³	52	15 51	32	15	12 01 23	03 67				
5	255	27.6	-23	26.1	156	27.0 ¹⁴²	+7	45.3 ¹⁰³	50	16 01	16 39	17 21	12 04 25	1 00 66				
6	270	27.3	-23	26.1	171	00.1 ¹⁴¹	+7	55.6 ¹⁰³	45	16 21	16 55	17 32	12 11 28	0 55 62				
7	285	27.0		26.1	185	33.2 ¹⁴¹	+8	05.8 ¹⁰²	40	38	17 09	43	17 31	50 59				
8	300	26.7		26.1	200	06.3 ¹⁴¹		16.0 ¹⁰²	35	16 52	21	17 52	22 33	46 57				
9	315	26.4		26.1	214	39.4 ¹⁴¹		26.1 ¹⁰¹	30	17 05	31	18 01	27 35	42 55				
10	330	26.1		26.1	229	12.5 ¹⁴¹		36.2 ¹⁰¹	20	26	17 50	18	35 38	36 51				
11	345	25.8	-23	26.1	243	45.6 ¹⁴¹	+8	46.2 ¹⁰⁰	10 N	17 45	18 07	18 34	12 42 42	0 31 47				
12	0	25.4	-23	26.1	258	18.7 ¹⁴¹	+8	56.2 ¹⁰⁰	0	18 02	18 25	18 51	12 49 44	0 26 44				
13	15	25.1		26.1	272	51.8 ¹⁴¹	+9	06.2 ¹⁰⁰	10 S	20	18 43	19 10	12 55 48	20 42				
14	30	24.8		26.1	287	24.9 ¹⁴¹		16.1 ⁹⁹	20	18 39	19 03	19 33	13 02 51	15 38				
15	45	24.5		26.1	301	58.1 ¹⁴²		25.9 ⁹⁸	30	19 01	28	20 02	11 54	09 34				
16	60	24.2		26.1	316	31.2 ¹⁴¹		35.8 ⁹⁹	35	14	19 44	20	15 57	05 33				
17	75	23.9	-23	26.1	331	04.2 ¹⁴⁰	+9	45.5 ⁹⁷	40	19 29	20 02	20 44	13 21 58	0 01 30				
18	90	23.6	-23	26.1	345	37.3 ¹⁴¹	+9	55.2 ⁹⁷	45	19 47	20 24	21 14	13 27 62	** ** *				
19	105	23.3		26.1	0	10.4 ¹⁴¹	+10	04.9 ⁹⁷	50	20 10	20 54	22 00	35 65	** ** *				
20	120	23.0		26.1	14	43.5 ¹⁴¹		14.5 ⁹⁶	52	20	21 09	22 28	38 67	** ** *				
21	135	22.7		26.1	29	16.6 ¹⁴¹		24.0 ⁹⁵	54	33	27	23 15	42 68	** ** *				
22	150	22.3		26.1	43	49.6 ¹⁴⁰		33.5 ⁹⁵	56	20 47	21 50	** ** *	46 71	** ** *				
23	165	22.0		26.1	58	22.7 ¹⁴¹		43.0 ⁹⁵	58	21 04	22 20	** ** *	51 73	23 56 18				
24	180	21.7	-23	26.1	72	55.7 ¹⁴⁰	+10	52.4 ⁹⁴	60 S	21 24	23 11	** ** *	13 57 75	23 50 16				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 57 ^m 2		Mag: -3.9 PMG: 10 ^h 18 ^m				Mag: +1.2 PMG: 13 ^h 53 ^m				Mag: -2.8 PMG: 22 ^h 25 ^m				Mag: +0.6 PMG: 8 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	89	58.1	205	38.5	-20	11.9	151	40.3	-22	04.6	22	35.8	+21	03.2	232	58.4	-12	11.2
1	105	00.6	220	37.7		12.5	166	40.7		04.2	37	38.5		03.2	248	00.6		11.3
2	120	03.0	235	36.9		13.1	181	41.1		03.9	52	41.3		03.2	263	02.9		11.4
3	135	05.5	250	36.1		13.8	196	41.5		03.5	67	44.1		03.1	278	05.1		11.4
4	150	08.0	265	35.3		14.4	211	41.9		03.1	82	46.9		03.1	293	07.3		11.5
5	165	10.4	280	34.5	-20	15.0	226	42.3	-22	02.8	97	49.7	+21	03.1	308	09.6	-12	11.6
6	180	12.9	295	33.7	-20	15.6	241	42.7	-22	02.4	112	52.4	+21	03.0	323	11.8	-12	11.6
7	195	15.4	310	32.9		16.2	256	43.1		02.0	127	55.2		03.0	338	14.1		11.7
8	210	17.8	325	32.1		16.9	271	43.5		01.6	142	58.0		02.9	353	16.3		11.7
9	225	20.3	340	31.3		17.5	286	43.9		01.3	158	00.8		02.9	8	18.6		11.8
10	240	22.8	355	30.5		18.1	301	44.3		00.9	173	03.6		02.9	23	20.8		11.9
11	255	25.2	10	29.7	-20	18.7	316	44.7	-22	00.5	188	06.3	+21	02.8	38	23.0	-12	11.9
12	270	27.7	25	28.9	-20	19.3	331	45.1	-22	00.2	203	09.1	+21	02.8	53	25.3	-12	12.0
13	285	30.1	40	28.1		19.9	346	45.5	-21	59.8	218	11.9		02.8	68	27.5		12.1
14	300	32.6	55	27.3		20.6	1	45.9		59.4	233	14.7		02.7	83	29.8		12.1
15	315	35.1	70	26.5		21.2	16	46.3		59.0	248	17.5		02.7	98	32.0		12.2
16	330	37.5	85	25.7		21.8	31	46.7		58.7	263	20.2		02.6	113	34.3		12.3
17	345	40.0	100	24.9	-20	22.4	46	47.1	-21	58.3	278	23.0	+21	02.6	128	36.5	-12	12.3
18	0	42.5	115	24.1	-20	23.0	61	47.5	-21	57.9	293	25.8	+21	02.6	143	38.8	-12	12.4
19	15	44.9	130	23.3		23.6	76	47.9		57.5	308	28.6		02.5	158	41.0		12.5
20	30	47.4	145	22.5		24.2	91	48.3		57.1	323	31.3		02.5	173	43.2		12.5
21	45	49.9	160	21.7		24.8	106	48.7		56.8	338	34.1		02.5	188	45.5		12.6
22	60	52.3	175	20.9		25.4	121	49.1		56.4	353	36.9		02.4	203	47.7		12.7
23	75	54.8	190	20.0		26.0	136	49.5		56.0	8	39.7		02.4	218	50.0		12.7
24	90	57.3	205	19.2	-20	26.6	151	49.9	-21	55.6	23	42.4	+21	02.3	233	52.2	-12	12.8
Dif	—		-8		-6		+4		+4		+28		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 58 ^m 8			Edad: 8 ^d 6 PHE { 4 ^h : 54:9 12 ^h : 54:7 20 ^h : 54:6 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	21.7	-23	26.1	72	55.7	+10	52.4	60 N	7 08	8 05	9 03	11 59	18	2 33	74		
1	195	21.4		26.1	87	28.8 ¹⁴¹	+11	01.7 ⁹³	58	7 00	7 53	8 45	12 06	21	26	72		
2	210	21.1		26.1	102	01.8 ¹⁴⁰		11.0 ⁹³	56	6 54	43	30	13 22		20	70		
3	225	20.8		26.0	116	34.8 ¹⁴⁰		20.3 ⁹³	54	47	34	18	19 24		15	66		
4	240	20.5		26.0	131	07.8 ¹⁴⁰		29.4 ⁹¹	52	42	25	8 06	24 26		10	66		
5	255	20.2	-23	26.0	145	40.8 ¹⁴⁰	+11	38.6 ⁹²	50	6 36	7 18	7 57	12 29	27	2 06	64		
6	270	19.9	-23	26.0	160	13.8 ¹⁴⁰	+11	47.6 ⁹⁰	45	6 25	7 02	7 36	12 39	31	1 57	60		
7	285	19.5		26.0	174	46.8 ¹⁴⁰	+11	56.6 ⁹⁰	40	14	6 48	19	48 33		49	58		
8	300	19.2		26.0	189	19.7 ¹³⁹	+12	05.6 ⁹⁰	35	6 05	37	7 05	12 55	35	43	55		
9	315	18.9		26.0	203	52.7 ¹⁴⁰		14.5 ⁸⁹	30	5 56	26	6 52	13 02	37	37	54		
10	330	18.6		25.9	218	25.6 ¹³⁹		23.3 ⁸⁸	20	40	6 07	31	13 40		27	50		
11	345	18.3	-23	25.9	232	58.5 ¹³⁹	+12	32.1 ⁸⁸	10 N	5 23	5 50	6 13	13 24	42	1 18	48		
12	0	18.0	-23	25.9	247	31.4 ¹³⁹	+12	40.8 ⁸⁷	0	5 06	5 33	5 55	13 33	45	1 10	45		
13	15	17.7		25.9	262	04.3 ¹³⁹		49.5 ⁸⁷	10 S	4 47	5 14	37	43 47		1 02	42		
14	30	17.4		25.9	276	37.2 ¹³⁹	+12	58.1 ⁸⁶	20	4 25	4 54	5 18	13 53	50	0 53	39		
15	45	17.1		25.8	291	10.0 ¹³⁸	+13	06.7 ⁸⁶	30	3 55	29	4 56	14 05	53	43	36		
16	60	16.8		25.8	305	42.8 ¹³⁸		15.1 ⁸⁴	35	37	4 14	43	12 55		38	34		
17	75	16.4	-23	25.8	320	15.7 ¹³⁹	+13	23.6 ⁸⁵	40	3 14	3 55	4 28	14 19	58	0 31	32		
18	90	16.1	-23	25.8	334	48.5 ¹³⁸	+13	31.9 ⁸³	45	2 43	3 33	4 10	14 29	59	0 24	29		
19	105	15.8		25.7	349	21.2 ¹³⁷		40.2 ⁸³	50	1 57	3 03	3 48	40 63		15	26		
20	120	15.5		25.7	3	54.0 ¹³⁸		48.4 ⁸²	52	1 29	2 48	37	45 64		11	24		
21	135	15.2		25.7	18	26.7 ¹³⁷	+13	56.6 ⁸²	54	0 42	30	24	50 67		06	23		
22	150	14.9		25.7	32	59.5 ¹³⁸	+14	04.7 ⁸¹	56	** **	2 07	3 10	14 57	68	0 01	21		
23	165	14.6		25.6	47	32.2 ¹³⁷		12.7 ⁸⁰	58	** **	1 37	2 53	15 04	70	** **	**		
24	180	14.3	-23	25.6	62	04.8 ¹³⁶	+14	20.7 ⁸⁰	60 S	** **	0 46	2 33	15 12	73	** **	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 53 ^m 2		Mag: -3.9 PMG: 10 ^h 19 ^m				Mag: +1.2 PMG: 13 ^h 52 ^m				Mag: -2.8 PMG: 22 ^h 21 ^m				Mag: +0.6 PMG: 8 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	57.3	205	19.2	-20	26.6	151	49.9	-21	55.6	23	42.4	+21	02.3	233	52.2	-12	12.8
1	105	59.7	220	18.4		27.2	166	50.3		55.2	38	45.2		02.3	248	54.5		12.8
2	121	02.2	235	17.6		27.8	181	50.7		54.9	53	48.0		02.3	263	56.7		12.9
3	136	04.6	250	16.8		28.4	196	51.1		54.5	68	50.8		02.2	278	59.0		13.0
4	151	07.1	265	16.0		29.0	211	51.5		54.1	83	53.5		02.2	294	01.2		13.0
5	166	09.6	280	15.2	-20	29.6	226	51.9	-21	53.7	98	56.3	+21	02.2	309	03.5	-12	13.1
6	181	12.0	295	14.4	-20	30.2	241	52.3	-21	53.3	113	59.1	+21	02.1	324	05.7	-12	13.2
7	196	14.5	310	13.6		30.8	256	52.7		53.0	129	01.9		02.1	339	07.9		13.2
8	211	17.0	325	12.8		31.4	271	53.1		52.6	144	04.6		02.0	354	10.2		13.3
9	226	19.4	340	11.9		32.0	286	53.5		52.2	159	07.4		02.0	9	12.4		13.4
10	241	21.9	355	11.1		32.6	301	53.9		51.8	174	10.2		02.0	24	14.7		13.4
11	256	24.4	10	10.3	-20	33.2	316	54.3	-21	51.4	189	13.0	+21	01.9	39	16.9	-12	13.5
12	271	26.8	25	09.5	-20	33.8	331	54.7	-21	51.0	204	15.7	+21	01.9	54	19.2	-12	13.6
13	286	29.3	40	08.7		34.4	346	55.1		50.7	219	18.5		01.9	69	21.4		13.6
14	301	31.8	55	07.9		35.0	1	55.5		50.3	234	21.3		01.8	84	23.7		13.7
15	316	34.2	70	07.1		35.6	16	55.9		49.9	249	24.1		01.8	99	25.9		13.7
16	331	36.7	85	06.2		36.1	31	56.3		49.5	264	26.8		01.8	114	28.2		13.8
17	346	39.1	100	05.4	-20	36.7	46	56.7	-21	49.1	279	29.6	+21	01.7	129	30.4	-12	13.9
18	1	41.6	115	04.6	-20	37.3	61	57.1	-21	48.7	294	32.4	+21	01.7	144	32.7	-12	13.9
19	16	44.1	130	03.8		37.9	76	57.5		48.3	309	35.2		01.6	159	34.9		14.0
20	31	46.5	145	03.0		38.5	91	57.9		47.9	324	37.9		01.6	174	37.2		14.1
21	46	49.0	160	02.2		39.1	106	58.3		47.6	339	40.7		01.6	189	39.4		14.1
22	61	51.5	175	01.3		39.6	121	58.7		47.2	354	43.5		01.5	204	41.7		14.2
23	76	53.9	190	00.5		40.2	136	59.1		46.8	9	46.2		01.5	219	43.9		14.3
24	91	56.4	204	59.7	-20	40.8	151	59.5	-21	46.4	24	49.0	+21	01.5	234	46.1	-12	14.3
Dif	—		-8		-6		+4		+4		+28		0		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°3			Edad: 9 ^d 6	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2	SD: 14'8			PMG: 20 ^h 29 ^m	R°: 47 ^m						
	PMG: 11 ^h 59 ^m 3															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	14.3	-23	25.6	62	04.8	+14	20.7	60 N	14 56	15 53	16 50	12 17 23	3 47 71		
1	195	14.0		25.6	76	37.5 ¹³⁷		28.6	58	15 13	16 05	16 58	27 25	38 69		
2	210	13.6		25.5	91	10.1 ¹³⁶		36.5	56	28	15	17 05	35 28	30 66		
3	225	13.3		25.5	105	42.7 ¹³⁶		44.2	54	41	25	11	43 29	22 65		
4	240	13.0		25.5	120	15.3 ¹³⁶		52.0	52	15 52	33	16	50 30	16 63		
5	255	12.7	-23	25.4	134	47.9 ¹³⁶	+14	59.6	50	16 02	16 40	17 22	12 56 32	3 10 62		
6	270	12.4	-23	25.4	149	20.5 ¹³⁶	+15	07.2	45	16 22	16 56	17 34	13 10 34	2 57 60		
7	285	12.1		25.4	163	53.0 ¹³⁵		14.7	40	39	17 10	44	21 36	47 57		
8	300	11.8		25.3	178	25.5 ¹³⁵		22.1	35	16 53	22	17 53	30 39	38 55		
9	315	11.5		25.3	192	58.0 ¹³⁵		29.5	30	17 06	32	18 02	39 39	31 53		
10	330	11.2		25.3	207	30.4 ¹³⁴		36.8	20	27	17 51	19	13 53 43	17 51		
11	345	10.9	-23	25.2	222	02.9 ¹³⁵	+15	44.0	10 N	17 46	18 08	18 35	14 06 44	2 06 48		
12	0	10.5	-23	25.2	236	35.3 ¹³⁴	+15	51.1	0	18 03	18 26	18 52	14 18 46	1 55 45		
13	15	10.2		25.1	251	07.6 ¹³³	+15	58.2	10 S	21	18 44	19 11	30 49	44 43		
14	30	09.9		25.1	265	40.0 ¹³⁴	+16	05.2	20	18 40	19 04	19 33	43 51	32 41		
15	45	09.6		25.1	280	12.3 ¹³³		12.2	30	19 02	29	20 03	14 58 53	19 38		
16	60	09.3		25.0	294	44.6 ¹³³		19.0	35	15	19 44	21	15 07 54	12 36		
17	75	09.0	-23	25.0	309	16.9 ¹³³	+16	25.8	40	19 30	20 03	20 44	15 17 56	1 03 35		
18	90	08.7	-23	24.9	323	49.2 ¹³³	+16	32.6	45	19 48	20 25	21 15	15 28 58	0 53 32		
19	105	08.4		24.9	338	21.4 ¹³²		39.2	50	20 10	20 55	22 01	43 60	41 29		
20	120	08.1		24.8	352	53.6 ¹³²		45.8	52	21	21 10	22 29	49 62	35 28		
21	135	07.8		24.8	7	25.8 ¹³²		52.3	54	34	28	23 15	15 57 63	29 26		
22	150	07.4		24.7	21	58.0 ¹³²	+16	58.7	56	20 48	21 50	** **	16 05 65	22 25		
23	165	07.1		24.7	36	30.1 ¹³¹	+17	05.0	58	21 05	22 20	** **	14 67	14 23		
24	180	06.8	-23	24.6	51	02.2 ¹³¹	+17	11.3	60 S	21 25	23 11	** **	16 25 69	0 06 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 49 ^m 3		Mag: -3.9 PMG: 10 ^h 21 ^m		Mag: +1.2 PMG: 13 ^h 52 ^m		Mag: -2.8 PMG: 22 ^h 17 ^m		Mag: +0.6 PMG: 8 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	91	56.4	204	59.7	151	59.5	24	49.0	234	46.1
1	106	58.9	219	58.9	166	59.9	39	51.8	249	48.4
2	122	01.3	234	58.1	182	00.3	54	54.6	264	50.6
3	137	03.8	249	57.2	197	00.7	69	57.3	279	52.9
4	152	06.2	264	56.4	212	01.1	85	00.1	294	55.1
5	167	08.7	279	55.6	227	01.5	100	02.9	309	57.4
6	182	11.2	294	54.8	242	01.9	115	05.6	324	59.6
7	197	13.6	309	54.0	257	02.3	130	08.4	340	01.9
8	212	16.1	324	53.1	272	02.7	145	11.2	355	04.1
9	227	18.6	339	52.3	287	03.1	160	13.9	10	06.4
10	242	21.0	354	51.5	302	03.5	175	16.7	25	08.6
11	257	23.5	9	50.7	317	03.9	190	19.5	40	10.9
12	272	26.0	24	49.8	332	04.3	205	22.2	55	13.1
13	287	28.4	39	49.0	347	04.7	220	25.0	70	15.4
14	302	30.9	54	48.2	2	05.1	235	27.8	85	17.6
15	317	33.4	69	47.4	17	05.5	250	30.5	100	19.9
16	332	35.8	84	46.5	32	05.9	265	33.3	115	22.1
17	347	38.3	99	45.7	47	06.3	280	36.1	130	24.4
18	2	40.7	114	44.9	62	06.7	295	38.8	145	26.6
19	17	43.2	129	44.1	77	07.2	310	41.6	160	28.9
20	32	45.7	144	43.2	92	07.6	325	44.4	175	31.1
21	47	48.1	159	42.4	107	08.0	340	47.1	190	33.4
22	62	50.6	174	41.6	122	08.4	355	49.9	205	35.6
23	77	53.1	189	40.7	137	08.8	10	52.7	220	37.9
24	92	55.5	204	39.9	152	09.2	25	55.4	235	40.1
Dif	—		-8		+4		+28		+22	
			-6		+4		0		-1	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 10 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 47 ^m												
	PMG: 11 ^h 59 ^m 8				SD: 14'8		PMG: 21 ^h 16 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	06.8	-23	24.6	51	02.2	+17	11.3	60 N	7 09	8 06	9 03	12 40	30	4 58	67
1	195	06.5		24.6	65	34.3 ¹³¹		17.5	58	7 01	7 54	8 46	12 52	32	47	64
2	210	06.2		24.5	80	06.3 ¹³⁰		23.6	56	6 54	44	31	13 03	33	36	63
3	225	05.9		24.5	94	38.3 ¹³⁰		29.6	54	48	35	18	12 35		27	60
4	240	05.6		24.4	109	10.3 ¹³⁰		35.6	52	43	26	8 07	20 36		19	66
5	255	05.3	-23	24.4	123	42.3 ¹³⁰	+17	41.4	50	6 37	7 19	7 57	13 28	37	4 12	59
6	270	05.0	-23	24.3	138	14.3 ¹³⁰	+17	47.2	45	6 26	7 03	7 37	13 44	39	3 57	56
7	285	04.7		24.3	152	46.2 ¹²⁹		52.9	40	15	6 49	20	13 57	41	44	55
8	300	04.3		24.2	167	18.1 ¹²⁹	+17	58.6	35	6 06	37	7 06	14 09	41	33	54
9	315	04.0		24.2	181	49.9 ¹²⁸	+18	04.1	30	5 57	27	6 53	18 43		24	52
10	330	03.7		24.1	196	21.8 ¹²⁹		09.6	20	40	6 08	32	36 44		3 08	50
11	345	03.4	-23	24.0	210	53.6 ¹²⁸	+18	15.0	10 N	5 24	5 51	6 13	14 50	46	2 54	48
12	0	03.1	-23	24.0	225	25.4 ¹²⁸	+18	20.3	0	5 07	5 33	5 56	15 04	48	2 40	47
13	15	02.8		23.9	239	57.1 ¹²⁷		25.5	10 S	4 48	5 15	5 38	19 48		27	45
14	30	02.5		23.9	254	28.9 ¹²⁸		30.7	20	4 26	4 55	5 19	34 50		2 13	44
15	45	02.2		23.8	269	00.6 ¹²⁷		35.7	30	3 57	30	4 57	15 51	52	1 57	41
16	60	01.9		23.7	283	32.2 ¹²⁶		40.7	35	38	4 15	44	16 01	53	48	40
17	75	01.6	-23	23.7	298	03.9 ¹²⁷	+18	45.6	40	3 15	3 56	4 29	16 13	54	1 38	38
18	90	01.2	-23	23.6	312	35.5 ¹²⁶	+18	50.4	45	2 44	3 34	4 11	16 26	56	1 25	37
19	105	00.9		23.5	327	07.1 ¹²⁶		55.1	50	1 58	3 04	3 49	43 57		10	34
20	120	00.6		23.5	341	38.7 ¹²⁶	+18	59.8	52	1 31	2 49	38	16 51	58	1 03	33
21	135	00.3		23.4	356	10.3 ¹²⁶	+19	04.3	54	0 44	31	26	17 00	59	0 55	32
22	150	00.0		23.4	10	41.8 ¹²⁵		08.8	56	** **	2 09	3 11	10 60		47	30
23	164	59.7		23.3	25	13.3 ¹²⁵		13.2	58	** **	1 39	2 54	21 62		37	28
24	179	59.4	-23	23.2	39	44.8 ¹²⁵	+19	17.5	60 S	** **	0 48	2 34	17 34	64	0 26	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 45 ^m 4		Mag: -3.9 PMG: 10 ^h 22 ^m		Mag: +1.2 PMG: 13 ^h 51 ^m		Mag: -2.8 PMG: 22 ^h 12 ^m		Mag: +0.6 PMG: 8 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	92	55.5	204	39.9	-20	54.4	152	09.2	-21	36.9	25	55.4	+21	00.6	235	40.1	-12	15.8
1	107	58.0	219	39.1		54.9	167	09.6		36.5	40	58.2		00.6	250	42.4		15.9
2	123	00.5	234	38.2		55.5	182	10.0		36.1	56	01.0		00.5	265	44.6		15.9
3	138	02.9	249	37.4		56.0	197	10.4		35.7	71	03.7		00.5	280	46.9		16.0
4	153	05.4	264	36.6		56.6	212	10.8		35.3	86	06.5		00.4	295	49.1		16.1
5	168	07.9	279	35.8	-20	57.1	227	11.2	-21	34.9	101	09.3	+21	00.4	310	51.4	-12	16.1
6	183	10.3	294	34.9	-20	57.7	242	11.6	-21	34.5	116	12.0	+21	00.4	325	53.6	-12	16.2
7	198	12.8	309	34.1		58.2	257	12.0		34.1	131	14.8		00.3	340	55.9		16.3
8	213	15.2	324	33.3		58.8	272	12.4		33.7	146	17.6		00.3	355	58.1		16.3
9	228	17.7	339	32.4		59.3	287	12.8		33.3	161	20.3		00.3	11	00.4		16.4
10	243	20.2	354	31.6	-20	59.9	302	13.2		32.9	176	23.1		00.2	26	02.6		16.4
11	258	22.6	9	30.8	-21	00.4	317	13.6	-21	32.5	191	25.9	+21	00.2	41	04.9	-12	16.5
12	273	25.1	24	29.9	-21	00.9	332	14.1	-21	32.1	206	28.6	+21	00.2	56	07.1	-12	16.6
13	288	27.6	39	29.1		01.5	347	14.5		31.7	221	31.4		00.1	71	09.4		16.6
14	303	30.0	54	28.2		02.0	2	14.9		31.3	236	34.1		00.1	86	11.7		16.7
15	318	32.5	69	27.4		02.6	17	15.3		30.9	251	36.9	+21	00.1	101	13.9		16.7
16	333	35.0	84	26.6		03.1	32	15.7		30.5	266	39.7	+21	00.0	116	16.2		16.8
17	348	37.4	99	25.7	-21	03.6	47	16.1	-21	30.0	281	42.4	+21	00.0	131	18.4	-12	16.9
18	3	39.9	114	24.9	-21	04.2	62	16.5	-21	29.6	296	45.2	+20	59.9	146	20.7	-12	16.9
19	18	42.4	129	24.1		04.7	77	16.9		29.2	311	47.9		59.9	161	22.9		17.0
20	33	44.8	144	23.2		05.2	92	17.3		28.8	326	50.7		59.9	176	25.2		17.1
21	48	47.3	159	22.4		05.8	107	17.7		28.4	341	53.5		59.8	191	27.4		17.1
22	63	49.7	174	21.5		06.3	122	18.1		28.0	356	56.2		59.8	206	29.7		17.2
23	78	52.2	189	20.7		06.8	137	18.5		27.6	11	59.0		59.8	221	31.9		17.2
24	93	54.7	204	19.9	-21	07.4	152	19.0	-21	27.2	27	01.7	+20	59.7	236	34.2	-12	17.3
Dif	—		-8		-5		+4		+4		+28		0		+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 11 ^d 6 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 49 ^m										
	PMG: 12 ^h 00 ^m 3			PMG: 22 ^h 03 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	59.4	-23 23.2	39	44.8	+19 17.5	42	60 N	14 57	15 55	16 52	13 10 40	6 05 59	
1	194	59.1	23.1	54	16.2 ¹²⁴	21.7	41	58	15 15	16 07	16 59	24 41	5 51 58	
2	209	58.8	23.1	68	47.6 ¹²⁴	25.8	40	56	29	17	17 06	36 42	39 57	
3	224	58.5	23.0	83	19.0 ¹²⁴	29.8	40	54	42	26	12	47 42	29 55	
4	239	58.2	22.9	97	50.4 ¹²⁴	33.8	40	52	15 53	34	18	13 56 43	19 56	
5	254	57.8	-23 22.9	112	21.8 ¹²⁴	+19 37.6	38	50	16 03	16 41	17 23	14 05 43	5 11 55	
6	269	57.5	-23 22.8	126	53.1 ¹²³	+19 41.4	38	45	16 24	16 57	17 35	14 23 44	4 53 54	
7	284	57.2	22.7	141	24.4 ¹²³	45.1	37	40	40	17 11	45	38 45	39 52	
8	299	56.9	22.6	155	55.7 ¹²³	48.6	35	35	16 55	23	17 54	14 50 46	27 51	
9	314	56.6	22.6	170	26.9 ¹²²	52.1	35	30	17 07	33	18 03	15 01 46	4 16 51	
10	329	56.3	22.5	184	58.2 ¹²³	55.5	34	20	28	17 52	20	20 47	3 58 50	
11	344	56.0	-23 22.4	199	29.4 ¹²²	+19 58.9	34	10 N	17 47	18 09	18 36	15 36 48	3 42 49	
12	359	55.7	-23 22.3	214	00.6 ¹²²	+20 02.1	32	0	18 04	18 27	18 53	15 52 48	3 27 48	
13	14	55.4	22.2	228	31.8 ¹²²	05.2	31	10 S	22	18 45	19 12	16 07 49	3 12 47	
14	29	55.1	22.2	243	02.9 ¹²¹	08.3	31	20	18 41	19 05	19 34	24 49	2 57 45	
15	44	54.8	22.1	257	34.0 ¹²¹	11.2	29	30	19 03	30	20 03	43 50	38 45	
16	59	54.5	22.0	272	05.2 ¹²²	14.1	29	35	16	19 45	22	16 54 50	28 44	
17	74	54.1	-23 21.9	286	36.2 ¹²⁰	+20 16.8	27	40	19 31	20 03	20 45	17 07 50	2 16 43	
18	89	53.8	-23 21.8	301	07.3 ¹²¹	+20 19.5	27	45	19 49	20 26	21 16	17 22 51	2 02 41	
19	104	53.5	21.8	315	38.4 ¹²¹	22.1	26	50	20 11	20 56	22 01	40 52	1 44 40	
20	119	53.2	21.7	330	09.4 ¹²⁰	24.6	25	52	22	21 11	22 29	49 52	36 40	
21	134	52.9	21.6	344	40.4 ¹²⁰	27.0	24	54	34	29	23 14	17 59 53	27 39	
22	149	52.6	21.5	359	11.4 ¹²⁰	29.2	22	56	20 48	21 51	** **	18 10 53	17 37	
23	164	52.3	21.4	13	42.4 ¹²⁰	31.5	23	58	21 05	22 20	** **	23 53	1 05 36	
24	179	52.0	-23 21.3	28	13.3 ¹¹⁹	+20 33.6	21	60 S	21 25	23 10	** **	18 38 54	0 52 34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 17 ^h 41 ^m 4		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +1.2 PMG: 13 ^h 50 ^m		Mag: -2.8 PMG: 22 ^h 08 ^m		Mag: +0.6 PMG: 8 ^h 12 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	93	54.7	204 19.9	-21 07.4	152 19.0	-21 27.2	27	01.7	+20 59.7	236 34.2	-12 17.3
1	108	57.1	219 19.0	07.9	167 19.4	26.8	42	04.5	59.7	251 36.4	17.4
2	123	59.6	234 18.2	08.4	182 19.8	26.4	57	07.3	59.7	266 38.7	17.4
3	139	02.1	249 17.3	08.9	197 20.2	25.9	72	10.0	59.6	281 40.9	17.5
4	154	04.5	264 16.5	09.5	212 20.6	25.5	87	12.8	59.6	296 43.2	17.5
5	169	07.0	279 15.7	-21 10.0	227 21.0	-21 25.1	102	15.5	+20 59.6	311 45.4	-12 17.6
6	184	09.5	294 14.8	-21 10.5	242 21.4	-21 24.7	117	18.3	+20 59.5	326 47.7	-12 17.7
7	199	11.9	309 14.0	11.0	257 21.8	24.3	132	21.1	59.5	341 50.0	17.7
8	214	14.4	324 13.1	11.5	272 22.2	23.9	147	23.8	59.5	356 52.2	17.8
9	229	16.8	339 12.3	12.1	287 22.6	23.5	162	26.6	59.4	11 54.5	17.8
10	244	19.3	354 11.4	12.6	302 23.1	23.1	177	29.3	59.4	26 56.7	17.9
11	259	21.8	9 10.6	-21 13.1	317 23.5	-21 22.6	192	32.1	+20 59.4	41 59.0	-12 18.0
12	274	24.2	24 09.8	-21 13.6	332 23.9	-21 22.2	207	34.8	+20 59.3	57 01.2	-12 18.0
13	289	26.7	39 08.9	14.1	347 24.3	21.8	222	37.6	59.3	72 03.5	18.1
14	304	29.2	54 08.1	14.6	2 24.7	21.4	237	40.4	59.2	87 05.7	18.2
15	319	31.6	69 07.2	15.2	17 25.1	21.0	252	43.1	59.2	102 08.0	18.2
16	334	34.1	84 06.4	15.7	32 25.5	20.6	267	45.9	59.2	117 10.2	18.3
17	349	36.6	99 05.5	-21 16.2	47 25.9	-21 20.1	282	48.6	+20 59.1	132 12.5	-12 18.3
18	4	39.0	114 04.7	-21 16.7	62 26.3	-21 19.7	297	51.4	+20 59.1	147 14.8	-12 18.4
19	19	41.5	129 03.8	17.2	77 26.8	19.3	312	54.1	59.1	162 17.0	18.5
20	34	44.0	144 03.0	17.7	92 27.2	18.9	327	56.9	59.0	177 19.3	18.5
21	49	46.4	159 02.1	18.2	107 27.6	18.5	342	59.6	59.0	192 21.5	18.6
22	64	48.9	174 01.3	18.7	122 28.0	18.1	358	02.4	59.0	207 23.8	18.6
23	79	51.3	189 00.4	19.2	137 28.4	17.6	13	05.2	58.9	222 26.0	18.7
24	94	53.8	203 59.6	-21 19.7	152 28.8	-21 17.2	28	07.9	+20 58.9	237 28.3	-12 18.8
Dif	—		-8	-5	+4	+4	+28	0		+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 00 ^m 8			Edad: 12 ^d 6 PHE { SD: 14'7 PMG: 22 ^h 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	52.0	-23	28	13.3	+20	33.6	60 N	7 09	8 06	9 04	13 50	50	7 04	49
1	194	51.7		42	44.3 ¹²⁰		35.6	58	7 02	7 54	8 46	14 05	50	6 49	49
2	209	51.4		57	15.2 ¹¹⁹		37.5	56	6 55	44	31	18 50		36	49
3	224	51.1		71	46.1 ¹¹⁹		39.3	54	49	35	19	29 50		24	50
4	239	50.8		86	17.0 ¹¹⁹		41.1	52	43	27	8 08	39 50		15	49
5	254	50.4	-23	100	47.9 ¹¹⁹	+20	42.7	50	6 38	7 20	7 58	14 48	50	6 06	49
6	269	50.1	-23	115	18.7 ¹¹⁸	+20	44.2	45	6 26	7 03	7 37	15 07	50	5 47	49
7	284	49.8		129	49.6 ¹¹⁹		45.7	40	16	6 50	21	23 49		31	49
8	299	49.5		144	20.4 ¹¹⁸		47.0	35	6 07	38	7 06	36 49		18	49
9	314	49.2		158	51.2 ¹¹⁸		48.3	30	5 58	28	6 54	15 47	50	5 07	49
10	329	48.9		173	22.0 ¹¹⁸		49.4	20	41	6 09	33	16 07	49	4 48	48
11	344	48.6	-23	187	52.8 ¹¹⁸	+20	50.5	10 N	5 25	5 52	6 14	16 24	49	4 31	48
12	359	48.3	-23	202	23.6 ¹¹⁸	+20	51.4	0	5 08	5 34	5 57	16 40	48	4 15	48
13	14	48.0		216	54.4 ¹¹⁸		52.3	10 S	4 49	5 16	39	16 56	48	3 59	48
14	29	47.7		231	25.1 ¹¹⁷		53.1	20	4 27	4 56	5 21	17 13	48	42	48
15	44	47.4		245	55.9 ¹¹⁸		53.7	30	3 58	31	4 59	33 47		23	48
16	59	47.1		260	26.6 ¹¹⁷		54.3	35	39	4 16	46	44 47		3 12	47
17	74	46.8	-23	274	57.4 ¹¹⁸	+20	54.8	40	3 16	3 58	4 31	17 57	47	2 59	47
18	89	46.5	-23	289	28.1 ¹¹⁷	+20	55.2	45	2 46	3 35	4 13	18 13	47	2 43	47
19	104	46.1		303	58.8 ¹¹⁷		55.5	50	2 00	3 06	3 50	32 46		24	47
20	119	45.8		318	29.5 ¹¹⁷		55.6	52	1 33	2 51	39	41 46		16	46
21	134	45.5		333	00.2 ¹¹⁷		55.7	54	0 47	33	27	18 52	45	2 06	46
22	149	45.2		347	30.9 ¹¹⁷		55.7	56	** ** *	2 10	3 13	19 03	45	1 54	46
23	164	44.9		2	01.6 ¹¹⁷		55.6	58	** ** *	1 41	2 56	16 45		41	46
24	179	44.6	-23	16	32.3 ¹¹⁷	+20	55.4	60 S	** ** *	0 51	2 36	19 32	44	1 26	45
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 37 ^m 5		Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: +1.2 PMG: 13 ^h 50 ^m			Mag: -2.8 PMG: 22 ^h 03 ^m			Mag: +0.6 PMG: 8 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	94	53.8	203	59.6	-21	19.7	152	28.8	-21	17.2	28	07.9	+20	58.9	
1	109	56.3	218	58.7		20.2	167	29.2		16.8	43	10.7		58.9	
2	124	58.7	233	57.9		20.7	182	29.6		16.4	58	13.4		58.8	
3	140	01.2	248	57.0		21.2	197	30.1		16.0	73	16.2		58.8	
4	155	03.7	263	56.2		21.7	212	30.5		15.5	88	18.9		58.8	
5	170	06.1	278	55.3	-21	22.2	227	30.9	-21	15.1	103	21.7	+20	58.7	
6	185	08.6	293	54.5	-21	22.7	242	31.3	-21	14.7	118	24.4	+20	58.7	
7	200	11.1	308	53.6		23.2	257	31.7		14.3	133	27.2		58.7	
8	215	13.5	323	52.8		23.7	272	32.1		13.8	148	29.9		58.6	
9	230	16.0	338	51.9		24.2	287	32.5		13.4	163	32.7		58.6	
10	245	18.5	353	51.1		24.7	302	32.9		13.0	178	35.4		58.6	
11	260	20.9	8	50.2	-21	25.2	317	33.4	-21	12.6	193	38.2	+20	58.5	
12	275	23.4	23	49.4	-21	25.7	332	33.8	-21	12.1	208	40.9	+20	58.5	
13	290	25.8	38	48.5		26.2	347	34.2		11.7	223	43.7		58.5	
14	305	28.3	53	47.7		26.7	2	34.6		11.3	238	46.4		58.4	
15	320	30.8	68	46.8		27.1	17	35.0		10.9	253	49.2		58.4	
16	335	33.2	83	45.9		27.6	32	35.4		10.4	268	51.9		58.4	
17	350	35.7	98	45.1	-21	28.1	47	35.8	-21	10.0	283	54.7	+20	58.3	
18	5	38.2	113	44.2	-21	28.6	62	36.3	-21	09.6	298	57.4	+20	58.3	
19	20	40.6	128	43.4		29.1	77	36.7		09.2	314	00.2		58.3	
20	35	43.1	143	42.5		29.6	92	37.1		08.7	329	02.9		58.2	
21	50	45.6	158	41.7		30.0	107	37.5		08.3	344	05.7		58.2	
22	65	48.0	173	40.8		30.5	122	37.9		07.9	359	08.4		58.2	
23	80	50.5	188	39.9		31.0	137	38.3		07.4	14	11.2		58.1	
24	95	53.0	203	39.1	-21	31.5	152	38.8	-21	07.0	29	13.9	+20	58.1	
Dif	—		-9		-5		+4		+4		+28		0		+23
															-1

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 01 ^m 3				Edad: 13 ^d 6 PHE { SD: 14:7 PMG: 23 ^h 40 ^m														
	hG ☉		Dec		hG ☾		Dif												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	179	44.6	-23	19.0	16	32.3	+20	55.4	60 N	14 59	15 57	16 53	14 40 61	7 53 39					
1	194	44.3		18.8	31	03.0 ¹¹⁷		55.1	58	15 16	16 08	17 01	14 55 60	38 40					
2	209	44.0		18.7	45	33.6 ¹¹⁶		54.7	56	31	18	07	15 08 59	25 41					
3	224	43.7		18.6	60	04.3 ¹¹⁷		54.2	54	44	27	14	19 58	14 41					
4	239	43.4		18.5	74	35.0 ¹¹⁷		53.6	52	15 55	35	19	29 57	7 04 42					
5	254	43.1	-23	18.4	89	05.6 ¹¹⁶	+20	52.9	50	16 04	16 43	17 24	15 38 56	6 55 43					
6	269	42.8	-23	18.3	103	36.3 ¹¹⁷	+20	52.1	45	16 25	16 59	17 36	15 57 55	6 36 44					
7	284	42.5		18.2	118	06.9 ¹¹⁶		51.2	40	42	17 12	46	16 12 54	20 45					
8	299	42.2		18.1	132	37.6 ¹¹⁷		50.2	35	16 56	24	17 56	25 53	6 07 46					
9	314	41.9		17.9	147	08.3 ¹¹⁷		49.1	30	17 08	34	18 04	37 51	5 56 46					
10	329	41.6		17.8	161	38.9 ¹¹⁶		48.0	20	29	17 53	21	16 56 50	36 47					
11	344	41.2	-23	17.7	176	09.6 ¹¹⁷	+20	46.7	10 N	17 48	18 10	18 37	17 13 49	5 19 48					
12	359	40.9	-23	17.6	190	40.2 ¹¹⁶	+20	45.3	0	18 05	18 28	18 54	17 28 49	5 03 49					
13	14	40.6		17.5	205	10.9 ¹¹⁷		43.8	10 S	23	18 46	19 13	17 44 47	4 47 50					
14	29	40.3		17.4	219	41.6 ¹¹⁷		42.3	20	18 41	19 06	19 35	18 01 46	30 50					
15	44	40.0		17.2	234	12.2 ¹¹⁶		40.6	30	19 03	31	20 04	20 45	4 11 50					
16	59	39.7		17.1	248	42.9 ¹¹⁷		38.8	35	16	19 46	23	31 44	3 59 51					
17	74	39.4	-23	17.0	263	13.6 ¹¹⁷	+20	36.9	40	19 31	20 04	20 46	18 44 43	3 46 52					
18	89	39.1	-23	16.9	277	44.3 ¹¹⁷	+20	35.0	45	19 49	20 26	21 16	19 00 41	3 30 53					
19	104	38.8		16.8	292	14.9 ¹¹⁶		32.9	50	20 11	20 56	22 01	18 40	11 53					
20	119	38.5		16.6	306	45.6 ¹¹⁷		30.8	52	22	21 11	22 28	27 39	3 02 54					
21	134	38.2		16.5	321	16.3 ¹¹⁷		28.5	54	34	29	23 12	37 38	2 52 54					
22	149	37.9		16.4	335	47.0 ¹¹⁷		26.2	56	20 49	21 51	** ** *	19 48 37	40 55					
23	164	37.6		16.3	350	17.7 ¹¹⁷		23.7	58	21 05	22 20	** ** *	20 01 36	27 55					
24	179	37.3	-23	16.1	4	48.4 ¹¹⁷	+20	21.2	60 S	21 25	23 08	** ** *	20 16 34	2 11 56					
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 17 ^h 33 ^m 6			Mag: -3.9 PMG: 10 ^h 26 ^m			Mag: +1.2 PMG: 13 ^h 49 ^m			Mag: -2.8 PMG: 21 ^h 59 ^m				Mag: +0.6 PMG: 8 ^h 05 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	95	53.0	203	39.1	-21	31.5	152	38.8	-21	07.0	29	13.9	+20	58.1	238	22.5	-12	20.2	
1	110	55.4	218	38.2		32.0	167	39.2		06.6	44	16.7		58.1	253	24.7		20.2	
2	125	57.9	233	37.4		32.4	182	39.6		06.1	59	19.4		58.0	268	27.0		20.3	
3	141	00.3	248	36.5		32.9	197	40.0		05.7	74	22.2		58.0	283	29.3		20.4	
4	156	02.8	263	35.6		33.4	212	40.4		05.3	89	24.9		58.0	298	31.5		20.4	
5	171	05.3	278	34.8	-21	33.9	227	40.8	-21	04.9	104	27.7	+20	57.9	313	33.8	-12	20.5	
6	186	07.7	293	33.9	-21	34.3	242	41.3	-21	04.4	119	30.4	+20	57.9	328	36.0	-12	20.5	
7	201	10.2	308	33.1		34.8	257	41.7		04.0	134	33.2		57.9	343	38.3		20.6	
8	216	12.7	323	32.2		35.3	272	42.1		03.6	149	35.9		57.8	358	40.6		20.7	
9	231	15.1	338	31.3		35.7	287	42.5		03.1	164	38.7		57.8	13	42.8		20.7	
10	246	17.6	353	30.5		36.2	302	42.9		02.7	179	41.4		57.8	28	45.1		20.8	
11	261	20.1	8	29.6	-21	36.7	317	43.3	-21	02.3	194	44.1	+20	57.7	43	47.3	-12	20.8	
12	276	22.5	23	28.7	-21	37.1	332	43.8	-21	01.8	209	46.9	+20	57.7	58	49.6	-12	20.9	
13	291	25.0	38	27.9		37.6	347	44.2		01.4	224	49.6		57.7	73	51.9		20.9	
14	306	27.5	53	27.0		38.0	2	44.6		00.9	239	52.4		57.6	88	54.1		21.0	
15	321	29.9	68	26.1		38.5	17	45.0		00.5	254	55.1		57.6	103	56.4		21.1	
16	336	32.4	83	25.3		39.0	32	45.4	-21	00.1	269	57.9		57.6	118	58.6		21.1	
17	351	34.8	98	24.4	-21	39.4	47	45.8	-20	59.6	285	00.6	+20	57.5	134	00.9	-12	21.2	
18	6	37.3	113	23.5	-21	39.9	62	46.3	-20	59.2	300	03.4	+20	57.5	149	03.2	-12	21.2	
19	21	39.8	128	22.7		40.3	77	46.7		58.8	315	06.1		57.5	164	05.4		21.3	
20	36	42.2	143	21.8		40.8	92	47.1		58.3	330	08.8		57.4	179	07.7		21.4	
21	51	44.7	158	20.9		41.3	107	47.5		57.9	345	11.6		57.4	194	09.9		21.4	
22	66	47.2	173	20.1		41.7	122	47.9		57.4	0	14.3		57.4	209	12.2		21.5	
23	81	49.6	188	19.2		42.2	137	48.4		57.0	15	17.1		57.3	224	14.5		21.5	
24	96	52.1	203	18.3	-21	42.6	152	48.8	-20	56.6	30	19.8	+20	57.3	239	16.7	-12	21.6	
Dif	—		-9		-5		+4		+4		+27		0		+23		-1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 01 ^m 8			Edad: 14 ^d 6 PHE { SD: 14'8 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	37.3	-23	16.1	4	48.4	+20 21.2	60 N	7 09	8 06	9 03	15 41	69	8 32	30
1	194	37.0		16.0	19	19.2 ¹¹⁸	18.5 ²⁷	58	7 02	7 55	8 46	15 55	66	18	32
2	209	36.7		15.9	33	49.9 ¹¹⁷	15.8 ²⁸	56	6 55	44	32	16 07	64	8 06	33
3	224	36.4		15.7	48	20.6 ¹¹⁷	13.0 ²⁷	54	49	35	19	17 63		7 55	35
4	239	36.1		15.6	62	51.4 ¹¹⁸	10.0 ³⁰	52	44	27	8 08	26 62		46	36
5	254	35.8	-23	15.5	77	22.1 ¹¹⁷	+20 07.0 ³⁰	50	6 38	7 20	7 58	16 34	61	7 38	37
6	269	35.5	-23	15.3	91	52.9 ¹¹⁸	+20 03.9 ³¹	45	6 27	7 04	7 38	16 52	58	7 20	39
7	284	35.2		15.2	106	23.7 ¹¹⁸	+20 00.7 ³²	40	17	6 51	21	17 06	56	7 05	41
8	299	34.8		15.1	120	54.5 ¹¹⁸	+19 57.4 ³³	35	6 07	39	7 07	18 55		6 53	42
9	314	34.5		14.9	135	25.3 ¹¹⁸	54.0 ³⁴	30	5 59	28	6 55	28 54		42	43
10	329	34.2		14.8	149	56.1 ¹¹⁸	50.5 ³⁵	20	42	6 10	34	17 46	52	23	45
11	344	33.9	-23	14.7	164	27.0 ¹¹⁹	+19 46.9 ³⁶	10 N	5 26	5 53	6 15	18 02	50	6 07	47
12	359	33.6	-23	14.5	178	57.8 ¹¹⁸	+19 43.2 ³⁷	0	5 09	5 35	5 58	18 17	47	5 52	48
13	14	33.3		14.4	193	28.7 ¹¹⁹	39.4 ³⁸	10 S	4 50	5 18	41	31 46		37	49
14	29	33.0		14.3	207	59.5 ¹¹⁸	35.6 ³⁸	20	4 28	4 57	22	18 47	44	20	51
15	44	32.7		14.1	222	30.4 ¹¹⁹	31.6 ⁴⁰	30	3 59	32	5 00	19 05	41	5 01	53
16	59	32.4		14.0	237	01.3 ¹¹⁹	27.6 ⁴⁰	35	41	4 17	4 47	15 40		4 50	54
17	74	32.1	-23	13.8	251	32.2 ¹¹⁹	+19 23.4 ⁴²	40	3 18	3 59	4 32	19 27	39	4 38	55
18	89	31.8	-23	13.7	266	03.2 ¹²⁰	+19 19.2 ⁴²	45	2 47	3 37	4 14	19 41	37	4 23	56
19	104	31.5		13.6	280	34.1 ¹¹⁹	14.9 ⁴³	50	2 02	3 07	3 52	19 58	34	4 04	59
20	119	31.2		13.4	295	05.1 ¹²⁰	10.4 ⁴⁵	52	1 35	2 52	41	20 06	33	3 56	59
21	134	30.9		13.3	309	36.1 ¹²⁰	05.9 ⁴⁵	54	0 51	35	29	15 32		46	60
22	149	30.6		13.1	324	07.1 ¹²⁰	+19 01.3 ⁴⁶	56	*** **	2 13	3 15	25 30		35	62
23	164	30.3		13.0	338	38.1 ¹²⁰	+18 56.6 ⁴⁷	58	*** **	1 43	2 58	37 28		22	64
24	179	30.0	-23	12.8	353	09.1 ¹²⁰	+18 51.9 ⁴⁷	60 S	*** **	0 56	2 38	20 50	25	3 07	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 29 ^m 7		Mag: -3.9 PMG: 10 ^h 27 ^m		Mag: +1.2 PMG: 13 ^h 48 ^m		Mag: -2.8 PMG: 21 ^h 55 ^m		Mag: +0.6 PMG: 8 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	52.1	203	18.3	-21	42.6	152	48.8	-20	56.6
1	111	54.6	218	17.5		43.1	167	49.2		56.1
2	126	57.0	233	16.6		43.5	182	49.6		55.7
3	141	59.5	248	15.7		44.0	197	50.0		55.2
4	157	01.9	263	14.9		44.4	212	50.5		54.8
5	172	04.4	278	14.0	-21	44.8	227	50.9	-20	54.4
6	187	06.9	293	13.1	-21	45.3	242	51.3	-20	53.9
7	202	09.3	308	12.3		45.7	257	51.7		53.5
8	217	11.8	323	11.4		46.2	272	52.1		53.0
9	232	14.3	338	10.5		46.6	287	52.6		52.6
10	247	16.7	353	09.6		47.1	302	53.0		52.1
11	262	19.2	8	08.8	-21	47.5	317	53.4	-20	51.7
12	277	21.7	23	07.9	-21	47.9	332	53.8	-20	51.3
13	292	24.1	38	07.0		48.4	347	54.2		50.8
14	307	26.6	53	06.1		48.8	2	54.7		50.4
15	322	29.1	68	05.3		49.2	17	55.1		49.9
16	337	31.5	83	04.4		49.7	32	55.5		49.5
17	352	34.0	98	03.5	-21	50.1	47	55.9	-20	49.0
18	7	36.4	113	02.6	-21	50.5	62	56.4	-20	48.6
19	22	38.9	128	01.8		51.0	77	56.8		48.1
20	37	41.4	143	00.9		51.4	92	57.2		47.7
21	52	43.8	158	00.0		51.8	107	57.6		47.2
22	67	46.3	172	59.1		52.3	122	58.0		46.8
23	82	48.8	187	58.3		52.7	137	58.5		46.3
24	97	51.2	202	57.4	-21	53.1	152	58.9	-20	45.9
Dif	—		-9		-4		+4		+4	
							+27		0	
									+23	
									-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 15 ^d 6	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7									
	PMG: 12 ^h 02 ^m 2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	30.0	-23	353	09.1	+18	51.9	60 N	15 01	15 59	16 55	16 50 74	9 02 22	
1	194	29.7		7	40.2 ¹²¹		47.0 ⁴⁹	58	19	16 10	17 03	17 01 72	8 50 25	
2	209	29.4		22	11.2 ¹²⁰		42.0 ⁵⁰	56	33	20	09	11 69	39 27	
3	224	29.1		36	42.3 ¹²¹		37.0 ⁵⁰	54	45	29	15	20 67	30 29	
4	239	28.8		51	13.4 ¹²¹		31.8 ⁵²	52	15 56	37	21	28 65	22 30	
5	254	28.5	-23	65	44.6 ¹²²	+18	26.6 ⁵²	50	16 06	16 44	17 26	17 35 64	8 15 31	
6	269	28.2	-23	80	15.7 ¹²¹	+18	21.3 ⁵³	45	16 27	17 00	17 38	17 50 61	7 59 34	
7	284	27.9		94	46.9 ¹²²		15.9 ⁵⁴	40	43	14	48	18 02 59	46 37	
8	299	27.6		109	18.1 ¹²²		10.4 ⁵⁵	35	16 57	25	17 57	13 56	35 38	
9	314	27.3		123	49.3 ¹²²	+18	04.9 ⁵⁵	30	17 09	36	18 06	22 55	25 40	
10	329	27.0		138	20.5 ¹²²	+17	59.2 ⁵⁷	20	30	17 54	22	38 52	7 08 43	
11	344	26.7	-23	152	51.8 ¹²³	+17	53.5 ⁵⁷	10 N	17 49	18 12	18 38	18 52 49	6 54 45	
12	359	26.4	-23	167	23.0 ¹²²	+17	47.6 ⁵⁹	0	18 06	18 28	18 55	19 04 47	6 40 47	
13	14	26.1		181	54.3 ¹²³		41.7 ⁵⁹	10 S	23	18 46	19 13	17 45	26 49	
14	29	25.8		196	25.6 ¹²³		35.7 ⁶⁰	20	18 42	19 07	19 36	31 42	6 11 52	
15	44	25.5		210	57.0 ¹²⁴		29.6 ⁶¹	30	19 04	31	20 05	46 39	5 54 54	
16	59	25.2		225	28.3 ¹²³		23.5 ⁶¹	35	17	19 46	23	19 55 37	44 56	
17	74	24.9	-23	239	59.7 ¹²⁴	+17	17.2 ⁶³	40	19 32	20 04	20 46	20 06 35	5 33 57	
18	89	24.6	-23	254	31.1 ¹²⁴	+17	10.9 ⁶³	45	19 49	20 27	21 16	20 18 32	5 19 60	
19	104	24.3		269	02.5 ¹²⁴	+17	04.5 ⁶⁴	50	20 12	20 56	22 00	32 30	5 03 62	
20	119	24.0		283	34.0 ¹²⁵	+16	58.0 ⁶⁵	52	22	21 11	22 27	39 28	4 55 64	
21	134	23.7		298	05.4 ¹²⁴		51.4 ⁶⁶	54	34	28	23 09	47 26	46 66	
22	149	23.4		312	36.9 ¹²⁵		44.8 ⁶⁶	56	20 48	21 50	** ** *	20 55 25	37 67	
23	164	23.1		327	08.4 ¹²⁵		38.1 ⁶⁷	58	21 05	22 19	** ** *	21 05 22	26 69	
24	179	22.8	-23	341	40.0 ¹²⁶	+16	31.3 ⁶⁸	60 S	21 25	23 04	** ** *	21 15 20	4 13 72	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 25 ^m 7		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +1.2 PMG: 13 ^h 48 ^m		Mag: -2.8 PMG: 21 ^h 50 ^m		Mag: +0.6 PMG: 7 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	97	51.2	202	57.4	-21	53.1	152	58.9	-20	45.9				
1	112	53.7	217	56.5		53.5	167	59.3		45.4				
2	127	56.2	232	55.6		53.9	182	59.7		45.0				
3	142	58.6	247	54.8		54.4	198	00.2		44.5				
4	158	01.1	262	53.9		54.8	213	00.6		44.1				
5	173	03.6	277	53.0	-21	55.2	228	01.0	-20	43.6				
6	188	06.0	292	52.1	-21	55.6	243	01.4	-20	43.2				
7	203	08.5	307	51.2		56.0	258	01.9		42.7				
8	218	10.9	322	50.4		56.5	273	02.3		42.3				
9	233	13.4	337	49.5		56.9	288	02.7		41.8				
10	248	15.9	352	48.6		57.3	303	03.1		41.4				
11	263	18.3	7	47.7	-21	57.7	318	03.6	-20	40.9				
12	278	20.8	22	46.8	-21	58.1	333	04.0	-20	40.5				
13	293	23.3	37	46.0		58.5	348	04.4		40.0				
14	308	25.7	52	45.1		58.9	3	04.8		39.6				
15	323	28.2	67	44.2		59.3	18	05.3		39.1				
16	338	30.7	82	43.3	-21	59.7	33	05.7		38.6				
17	353	33.1	97	42.4	-22	00.1	48	06.1	-20	38.2				
18	8	35.6	112	41.5	-22	00.5	63	06.5	-20	37.7				
19	23	38.1	127	40.7		01.0	78	07.0		37.3				
20	38	40.5	142	39.8		01.4	93	07.4		36.8				
21	53	43.0	157	38.9		01.8	108	07.8		36.4				
22	68	45.4	172	38.0		02.2	123	08.2		35.9				
23	83	47.9	187	37.1		02.6	138	08.7		35.4				
24	98	50.4	202	36.2	-22	03.0	153	09.1	-20	35.0				
Dif	—		-9		-4		+4		+5					
							+27		0					
									+23					
									-1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^d 3			Edad: 16 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0										
	PMG: 12 ^h 02 ^m 7			SD: 14 ^d 9 PMG: 1 ^h 16 ^m R°: 46 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	22.8	-23 09.1	341	40.0	+16 31.3	60 N	7 10	8 06	9 03	18 04	76	9 24	18
1	194	22.5	08.9	356	11.5 ¹²⁵	24.4 ⁶⁹	58	7 02	7 55	8 46	13 74		15 20	
2	209	22.2	08.7	10	43.1 ¹²⁶	17.4 ⁷⁰	56	6 56	45	32	20 72		9 06	23
3	224	21.9	08.6	25	14.7 ¹²⁶	10.4 ⁷⁰	54	50	36	19	27 70		8 59	24
4	239	21.6	08.4	39	46.3 ¹²⁶	+16 03.2 ⁷²	52	44	28	8 08	33 68		52	26
5	254	21.3	-23 08.2	54	18.0 ¹²⁷	+15 56.0 ⁷²	50	6 39	7 20	7 59	18 39	66	8 46	28
6	269	21.0	-23 08.0	68	49.6 ¹²⁶	+15 48.8 ⁷²	45	6 27	7 04	7 38	18 51	63	8 33	31
7	284	20.7	07.9	83	21.3 ¹²⁷	41.4 ⁷⁴	40	17	6 51	22	19 01	60	23	33
8	299	20.4	07.7	97	53.0 ¹²⁷	34.0 ⁷⁴	35	6 08	40	7 08	09 58		13	36
9	314	20.1	07.5	112	24.8 ¹²⁸	26.5 ⁷⁵	30	5 59	29	6 55	17 55		8 05	38
10	329	19.8	07.4	126	56.5 ¹²⁷	18.9 ⁷⁶	20	43	6 11	34	30 51		7 51	41
11	344	19.5	-23 07.2	141	28.3 ¹²⁸	+15 11.3 ⁷⁶	10 N	5 27	5 53	6 16	19 41	48	7 39	43
12	359	19.2	-23 07.0	156	00.1 ¹²⁸	+15 03.6 ⁷⁷	0	5 10	5 36	5 59	19 51	46	7 27	46
13	14	18.9	06.8	170	32.0 ¹²⁹	+14 55.8 ⁷⁸	10 S	4 52	5 19	42	20 02	43	15	49
14	29	18.6	06.7	185	03.8 ¹²⁸	47.9 ⁷⁹	20	29	4 58	23	13 40		7 03	52
15	44	18.3	06.5	199	35.7 ¹²⁹	40.0 ⁷⁹	30	4 00	34	5 01	25 37		6 48	55
16	59	18.0	06.3	214	07.6 ¹²⁹	32.0 ⁸⁰	35	3 42	19	4 48	32 35		40	57
17	74	17.7	-23 06.1	228	39.5 ¹²⁹	+14 23.9 ⁸¹	40	3 19	4 01	4 33	20 41	32	6 30	60
18	89	17.4	-23 05.9	243	11.4 ¹²⁹	+14 15.8 ⁸¹	45	2 49	3 38	4 16	20 50	30	6 19	62
19	104	17.1	05.8	257	43.4 ¹³⁰	+14 07.6 ⁸²	50	2 05	3 09	3 53	21 02	26	6 05	65
20	119	16.8	05.6	272	15.3 ¹²⁹	+13 59.3 ⁸³	52	1 38	2 54	43	07 25		5 59	67
21	134	16.5	05.4	286	47.3 ¹³⁰	51.0 ⁸³	54	0 56	37	31	13 23		52	68
22	149	16.2	05.2	301	19.4 ¹³¹	42.6 ⁸⁴	56	** ** *	2 15	17	20 21		44	70
23	164	15.9	05.0	315	51.4 ¹³⁰	34.1 ⁸⁵	58	** ** *	1 47	3 00	27 19		35	73
24	179	15.6	-23 04.8	330	23.5 ¹³¹	+13 25.5 ⁸⁶	60 S	** ** *	1 01	2 40	21 35	16	5 25	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 21 ^m 8		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: +1.2 PMG: 13 ^h 47 ^m		Mag: -2.8 PMG: 21 ^h 46 ^m		Mag: +0.6 PMG: 7 ^h 54 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	98	50.4	202	36.2	-22 03.0	153	09.1	-20 35.0	32	31.1	+20 55.8			
1	113	52.8	217	35.4	03.3	168	09.5	34.5	47	33.8	55.7			
2	128	55.3	232	34.5	03.7	183	10.0	34.1	62	36.6	55.7			
3	143	57.8	247	33.6	04.1	198	10.4	33.6	77	39.3	55.7			
4	159	00.2	262	32.7	04.5	213	10.8	33.1	92	42.0	55.6			
5	174	02.7	277	31.8	-22 04.9	228	11.2	-20 32.7	107	44.7	+20 55.6			
6	189	05.2	292	30.9	-22 05.3	243	11.7	-20 32.2	122	47.5	+20 55.6			
7	204	07.6	307	30.0	05.7	258	12.1	31.8	137	50.2	55.5			
8	219	10.1	322	29.1	06.1	273	12.5	31.3	152	52.9	55.5			
9	234	12.6	337	28.3	06.5	288	12.9	30.8	167	55.6	55.5			
10	249	15.0	352	27.4	06.9	303	13.4	30.4	182	58.4	55.5			
11	264	17.5	7	26.5	-22 07.2	318	13.8	-20 29.9	198	01.1	+20 55.4			
12	279	19.9	22	25.6	-22 07.6	333	14.2	-20 29.4	213	03.8	+20 55.4			
13	294	22.4	37	24.7	08.0	348	14.7	29.0	228	06.5	55.4			
14	309	24.9	52	23.8	08.4	3	15.1	28.5	243	09.3	55.3			
15	324	27.3	67	22.9	08.8	18	15.5	28.1	258	12.0	55.3			
16	339	29.8	82	22.0	09.2	33	16.0	27.6	273	14.7	55.3			
17	354	32.3	97	21.1	-22 09.5	48	16.4	-20 27.1	288	17.4	+20 55.2			
18	9	34.7	112	20.2	-22 09.9	63	16.8	-20 26.7	303	20.2	+20 55.2			
19	24	37.2	127	19.4	10.3	78	17.2	26.2	318	22.9	55.2			
20	39	39.7	142	18.5	10.7	93	17.7	25.7	333	25.6	55.1			
21	54	42.1	157	17.6	11.0	108	18.1	25.3	348	28.3	55.1			
22	69	44.6	172	16.7	11.4	123	18.5	24.8	3	31.1	55.1			
23	84	47.0	187	15.8	11.8	138	19.0	24.3	18	33.8	55.1			
24	99	49.5	202	14.9	-22 12.1	153	19.4	-20 23.9	33	36.5	+20 55.0			
Dif	—		-9		-4	+4		+5	+27		0	+23		-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 03 ^m 2				Edad: 17 ^d 6 PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/4 PMG: 2 ^h 02 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	15.6	-23	04.8	330	23.5	+13	25.5	60 N	15 04	16 01	16 57	19 20 79		9 42 15			
1	194	15.3		04.7	344	55.5 ¹³⁰		16.9 ⁸⁶	58	21	12	17 04	27 75		35 17			
2	209	15.0		04.5	359	27.6 ¹³¹	+13	08.3 ⁸⁶	56	35	22	11	32 73		29 19			
3	224	14.7		04.3	13	59.8 ¹³²	+12	59.5 ⁸⁸	54	48	31	17	37 71		23 22			
4	239	14.4		04.1	28	31.9 ¹³¹		50.7 ⁸⁸	52	15 58	39	23	41 69		18 24			
5	254	14.1	-23	03.9	43	04.1 ¹³²	+12	41.9 ⁸⁸	50	16 08	16 46	17 28	19 45 68		9 14 25			
6	269	13.8	-23	03.7	57	36.2 ¹³¹	+12	32.9 ⁹⁰	45	16 28	17 02	17 39	19 54 63		9 04 28			
7	284	13.5		03.5	72	08.4 ¹³²		24.0 ⁸⁹	40	45	15	49	20 01 60		8 56 31			
8	299	13.2		03.3	86	40.6 ¹³²		14.9 ⁹¹	35	16 59	27	17 58	07 58		49 33			
9	314	12.9		03.1	101	12.9 ¹³³	+12	05.8 ⁹¹	30	17 11	37	18 07	12 56		43 35			
10	329	12.6		02.9	115	45.1 ¹³²	+11	56.6 ⁹²	20	32	17 56	23	21 52		32 39			
11	344	12.3	-23	02.7	130	17.4 ¹³³	+11	47.4 ⁹²	10 N	17 50	18 13	18 39	20 29 49		8 22 43			
12	359	12.0	-23	02.6	144	49.7 ¹³³	+11	38.1 ⁹³	0	18 07	18 29	18 56	20 37 45		8 13 46			
13	14	11.7		02.4	159	22.0 ¹³³		28.8 ⁹³	10 S	24	18 47	19 14	45 42		8 04 49			
14	29	11.4		02.2	173	54.3 ¹³³		19.4 ⁹⁴	20	18 43	19 07	19 36	20 53 38		7 55 51			
15	44	11.1		02.0	188	26.6 ¹³³		10.0 ⁹⁴	30	19 04	32	20 05	21 02 35		43 56			
16	59	10.9		01.8	202	58.9 ¹³³	+11	00.5 ⁹⁵	35	17	19 47	23	07 33		37 58			
17	74	10.6	-23	01.6	217	31.3 ¹³⁴	+10	50.9 ⁹⁶	40	19 32	20 05	20 46	21 13 30		7 30 60			
18	89	10.3	-23	01.4	232	03.7 ¹³⁴	+10	41.3 ⁹⁶	45	19 50	20 27	21 16	21 20 27		7 21 63			
19	104	10.0		01.2	246	36.1 ¹³⁴		31.6 ⁹⁷	50	20 12	20 56	22 00	28 24		10 67			
20	119	09.7		01.0	261	08.5 ¹³⁴		21.9 ⁹⁷	52	22	21 10	22 26	32 22		06 68			
21	134	09.4		00.8	275	40.9 ¹³⁴		12.1 ⁹⁸	54	34	28	23 06	36 20		7 00 71			
22	149	09.1		00.6	290	13.3 ¹³⁴	+10	02.3 ⁹⁸	56	20 48	21 49	** **	41 18		6 54 73			
23	164	08.8		00.4	304	45.7 ¹³⁴	+9	52.4 ⁹⁹	58	21 04	22 17	** **	46 16		48 74			
24	179	08.5	-23	00.1	319	18.2 ¹³⁵	+9	42.5 ⁹⁹	60 S	21 24	23 00	** **	21 51 14		6 40 77			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 17 ^m 9		Mag: -3.9 PMG: 10 ^h 32 ^m				Mag: +1.2 PMG: 13 ^h 46 ^m				Mag: -2.8 PMG: 21 ^h 42 ^m				Mag: +0.6 PMG: 7 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	99	49.5	202	14.9	-22	12.1	153	19.4	-20	23.9	33	36.5	+20	55.0	241	59.9	-12	25.6
1	114	52.0	217	14.0		12.5	168	19.8		23.4	48	39.2		55.0	257	02.2		25.7
2	129	54.4	232	13.1		12.9	183	20.3		22.9	63	41.9		55.0	272	04.4		25.7
3	144	56.9	247	12.2		13.3	198	20.7		22.4	78	44.7		54.9	287	06.7		25.8
4	159	59.4	262	11.3		13.6	213	21.1		22.0	93	47.4		54.9	302	09.0		25.8
5	175	01.8	277	10.4	-22	14.0	228	21.5	-20	21.5	108	50.1	+20	54.9	317	11.2	-12	25.9
6	190	04.3	292	09.5	-22	14.3	243	22.0	-20	21.0	123	52.8	+20	54.8	332	13.5	-12	26.0
7	205	06.8	307	08.6		14.7	258	22.4		20.6	138	55.5		54.8	347	15.8		26.0
8	220	09.2	322	07.7		15.1	273	22.8		20.1	153	58.3		54.8	2	18.1		26.1
9	235	11.7	337	06.8		15.4	288	23.3		19.6	169	01.0		54.8	17	20.3		26.1
10	250	14.2	352	05.9		15.8	303	23.7		19.1	184	03.7		54.7	32	22.6		26.2
11	265	16.6	7	05.0	-22	16.1	318	24.1	-20	18.7	199	06.4	+20	54.7	47	24.9	-12	26.2
12	280	19.1	22	04.1	-22	16.5	333	24.6	-20	18.2	214	09.1	+20	54.7	62	27.1	-12	26.3
13	295	21.5	37	03.2		16.9	348	25.0		17.7	229	11.9		54.6	77	29.4		26.3
14	310	24.0	52	02.4		17.2	3	25.4		17.3	244	14.6		54.6	92	31.7		26.4
15	325	26.5	67	01.5		17.6	18	25.9		16.8	259	17.3		54.6	107	34.0		26.4
16	340	28.9	82	00.6		17.9	33	26.3		16.3	274	20.0		54.6	122	36.2		26.5
17	355	31.4	96	59.7	-22	18.3	48	26.7	-20	15.8	289	22.7	+20	54.5	137	38.5	-12	26.5
18	10	33.9	111	58.8	-22	18.6	63	27.2	-20	15.4	304	25.4	+20	54.5	152	40.8	-12	26.6
19	25	36.3	126	57.9		19.0	78	27.6		14.9	319	28.2		54.5	167	43.0		26.7
20	40	38.8	141	57.0		19.3	93	28.0		14.4	334	30.9		54.4	182	45.3		26.7
21	55	41.3	156	56.1		19.7	108	28.5		13.9	349	33.6		54.4	197	47.6		26.8
22	70	43.7	171	55.2		20.0	123	28.9		13.4	4	36.3		54.4	212	49.9		26.8
23	85	46.2	186	54.3		20.3	138	29.3		13.0	19	39.0		54.3	227	52.1		26.9
24	100	48.7	201	53.4	-22	20.7	153	29.8	-20	12.5	34	41.7	+20	54.3	242	54.4	-12	26.9
Dif	—		-9		-4		+4		+5		+27		0		+23		-1	

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	44.7	44.7	44.8	44.7	44.5	44.3	44.0	43.8	43.7	43.6	43.7	43.8
2 - β Cas	<i>Caph</i>	2.3	357	32.5	32.7	32.7	32.6	32.4	32.0	31.6	31.3	31.1	31.1	31.2	31.4
3 - γ Peg	<i>Algenib</i>	2.8	356	32.0	32.1	32.1	32.0	31.8	31.6	31.4	31.2	31.1	31.0	31.1	31.1
4 - α Phe	<i>Ankaa</i>	2.4	353	16.8	16.9	16.9	16.9	16.7	16.5	16.2	16.0	15.8	15.8	15.8	16.0
5 - α Cas	<i>Schedar</i>	2.2	349	41.8	42.0	42.1	42.0	41.8	41.5	41.1	40.8	40.6	40.5	40.5	40.7
6 - β Cet	<i>Diphda</i>	2.0	348	56.9	57.0	57.1	57.0	56.9	56.7	56.4	56.2	56.1	56.0	56.1	56.1
7 - γ Cas	<i>Navi</i>	1.6	345	38.0	38.3	38.4	38.4	38.2	37.8	37.4	37.0	36.7	36.6	36.7	36.8
8 - β And	<i>Mirach</i>	2.1	342	23.6	23.7	23.8	23.7	23.6	23.4	23.1	22.8	22.6	22.6	22.5	22.6
9 - α Eri	<i>Achernar</i>	0.5	335	27.4	27.7	27.9	27.9	27.8	27.6	27.3	26.9	26.6	26.5	26.6	26.7
10 - γ And	<i>Almak</i>	2.3	328	49.9	50.1	50.2	50.2	50.1	49.9	49.6	49.3	49.1	48.9	48.9	48.9
12 - α Ari	<i>Hamal</i>	2.0	328	1.8	1.9	2.0	2.0	2.0	1.8	1.5	1.3	1.1	0.9	0.9	0.9
11 - α UMi	<i>Polaris</i>	2.0	317	66.0	79.3	90.7	97.2	96.0	87.5	74.4	59.1	45.3	35.5	31.2	34.2
13 - θ Eri	<i>Acamar</i>	3.3	315	18.9	19.1	19.2	19.3	19.3	19.2	19.0	18.7	18.5	18.3	18.2	18.3
14 - α Cet	<i>Menkar</i>	2.5	314	15.9	16.0	16.1	16.2	16.2	16.0	15.8	15.6	15.4	15.2	15.2	15.1
15 - β Per	<i>Algol</i>	2.1	312	45.1	45.2	45.4	45.5	45.4	45.3	45.0	44.7	44.4	44.2	44.1	44.1
16 - α Per	<i>Mirfak</i>	1.8	308	41.5	41.7	41.9	42.0	42.0	41.8	41.5	41.1	40.8	40.6	40.4	40.4
17 - η Tau	<i>Alcyone</i>	2.9	302	56.4	56.5	56.7	56.8	56.7	56.6	56.4	56.2	55.9	55.7	55.6	55.5
18 - γ Eri	<i>Zaurak</i>	3.0	300	20.7	20.8	20.9	21.0	21.0	20.9	20.8	20.5	20.3	20.2	20.0	20.0
19 - α Tau	<i>Aldebaran</i>	0.9	290	50.2	50.3	50.5	50.6	50.6	50.5	50.4	50.1	49.9	49.7	49.5	49.4
20 - β Ori	<i>Rigel</i>	0.1	281	12.7	12.8	12.9	13.0	13.1	13.1	12.9	12.7	12.5	12.3	12.1	12.0
21 - α Aur	<i>Capella</i>	0.1	280	35.5	35.6	35.8	35.9	36.0	36.0	35.8	35.5	35.2	34.9	34.6	34.5
22 - γ Ori	<i>Bellatrix</i>	1.6	278	32.8	32.8	33.0	33.1	33.1	33.1	33.0	32.8	32.6	32.3	32.2	32.0
23 - β Tau	<i>Elnath</i>	1.7	278	13.5	13.6	13.7	13.9	13.9	13.9	13.7	13.5	13.3	13.0	12.8	12.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	50.1	50.2	50.3	50.4	50.5	50.5	50.3	50.1	49.9	49.7	49.5	49.4
25 - ε Ori	<i>Alnilam</i>	1.7	275	47.1	47.1	47.2	47.4	47.4	47.4	47.3	47.1	46.9	46.7	46.5	46.4
26 - ζ Ori	<i>Alnitak</i>	1.9	274	38.9	39.0	39.1	39.2	39.3	39.3	39.2	39.0	38.8	38.6	38.4	38.2
27 - κ Ori	<i>Saiph</i>	2.1	272	54.5	54.6	54.7	54.8	54.9	54.9	54.8	54.6	54.4	54.2	54.0	53.9
28 - α Ori	<i>Betelgeuse</i>	0.4	271	2.0	2.1	2.2	2.3	2.4	2.4	2.3	2.1	1.9	1.7	1.5	1.3
29 - β Aur	<i>Menkalinan</i>	1.9	269	53.0	53.1	53.2	53.4	53.5	53.5	53.4	53.1	52.8	52.5	52.2	52.0
30 - β CMa	<i>Mirzam</i>	2.0	264	11.0	11.0	11.2	11.3	11.4	11.4	11.3	11.2	11.0	10.8	10.6	10.4
31 - α Car	<i>Canopus</i>	-0.7	263	56.0	56.2	56.4	56.7	56.9	57.0	57.0	56.8	56.5	56.2	55.9	55.7
32 - γ Gem	<i>Alhena</i>	1.9	260	23.2	23.3	23.4	23.5	23.6	23.6	23.5	23.4	23.1	22.9	22.7	22.5
33 - α CMa	<i>Sirius</i>	-1.5	258	34.2	34.3	34.4	34.5	34.7	34.7	34.6	34.5	34.3	34.1	33.8	33.7
34 - ε CMa	<i>Adhara</i>	1.5	255	12.9	13.0	13.1	13.2	13.4	13.4	13.4	13.3	13.1	12.8	12.6	12.4
35 - δ CMa	<i>Wezen</i>	1.9	252	46.2	46.2	46.3	46.5	46.6	46.7	46.6	46.5	46.3	46.1	45.9	45.7
36 - η CMa	<i>Aludra</i>	2.5	248	50.8	50.8	51.0	51.1	51.3	51.3	51.3	51.2	51.0	50.8	50.5	50.3
37 - α Gem	<i>Castor</i>	2.0	246	8.8	8.8	8.8	9.0	9.1	9.2	9.1	9.0	8.8	8.5	8.3	8.0
38 - α CMi	<i>Procyon</i>	0.4	244	60.4	60.4	60.5	60.6	60.7	60.8	60.7	60.6	60.4	60.2	60.0	59.8
39 - β Gem	<i>Pollux</i>	1.1	243	28.5	28.5	28.6	28.7	28.9	28.9	28.9	28.7	28.6	28.3	28.1	27.8
40 - ζ Pup	<i>Naos</i>	2.3	238	59.2	59.2	59.4	59.5	59.7	59.8	59.8	59.8	59.6	59.4	59.1	58.8
41 - γ Vel	<i>Regor</i>	1.8	237	30.8	30.8	30.9	31.1	31.3	31.5	31.5	31.4	31.2	31.0	30.7	30.4
42 - ε Car	<i>Avior</i>	1.9	234	17.8	17.8	18.0	18.3	18.6	18.8	18.9	18.9	18.7	18.3	17.9	17.6
43 - δ Velorum		2.0	228	43.7	43.7	43.8	44.0	44.3	44.5	44.6	44.6	44.4	44.1	43.8	43.5
44 - ζ Hydrae		3.1	225	59.0	58.9	58.9	59.0	59.1	59.2	59.2	59.2	59.0	58.9	58.6	58.4
45 - λ Vel	<i>Suhail</i>	2.2	222	52.7	52.7	52.7	52.9	53.1	53.2	53.3	53.3	53.2	53.0	52.7	52.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	39.0	39.0	39.2	39.6	40.0	40.4	40.7	40.7	40.5	40.1	39.6	39.1
47 - ι Car	<i>Aspidiske</i>	2.3	220	38.0	37.9	38.0	38.3	38.6	38.8	39.0	39.0	38.9	38.6	38.2	37.8
48 - α Lyn	<i>Elvashak</i>	3.1	219	32.6	32.5	32.5	32.6	32.7	32.8	32.9	32.8	32.7	32.5	32.2	31.9
49 - α Hyd	<i>Alphard</i>	2.0	217	56.8	56.7	56.7	56.8	56.9	57.0	57.0	57.0	56.9	56.7	56.5	56.2
50 - α Leo	<i>Regulus</i>	1.4	207	44.3	44.2	44.1	44.2	44.3	44.4	44.4	44.4	44.4	44.2	44.0	43.8

ESTRELLAS, 2012
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	+29	9.6	9.6	9.5	9.4	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.0
2 - β Cas	<i>Caph</i>	2.3	+59	13.3	13.2	13.1	13.0	12.9	12.9	13.0	13.1	13.3	13.5	13.6	13.7
3 - γ Peg	<i>Algenib</i>	2.8	+15	15.2	15.1	15.1	15.1	15.1	15.2	15.3	15.4	15.5	15.5	15.5	15.5
4 - α Phe	<i>Ankaa</i>	2.4	-42	14.6	14.5	14.4	14.3	14.1	14.0	13.9	13.9	14.0	14.1	14.2	14.3
5 - α Cas	<i>Schedar</i>	2.2	+56	36.5	36.5	36.3	36.2	36.1	36.1	36.2	36.3	36.5	36.6	36.8	36.9
6 - β Cet	<i>Diphda</i>	2.0	-17	55.3	55.3	55.2	55.2	55.1	54.9	54.8	54.8	54.8	54.8	54.9	55.0
7 - γ Cas	<i>Navi</i>	1.6	+60	47.3	47.2	47.1	46.9	46.9	46.8	46.9	47.0	47.2	47.3	47.5	47.6
8 - β And	<i>Mirach</i>	2.1	+35	41.3	41.2	41.2	41.1	41.0	41.1	41.1	41.2	41.4	41.5	41.6	41.6
9 - α Eri	<i>Achernar</i>	0.5	-57	10.8	10.7	10.6	10.5	10.3	10.1	10.0	10.0	10.1	10.2	10.4	10.5
10 - γ And	<i>Almak</i>	2.3	+42	23.5	23.4	23.4	23.3	23.2	23.2	23.2	23.3	23.4	23.5	23.6	23.7
12 - α Ari	<i>Hamal</i>	2.0	+23	31.3	31.2	31.2	31.2	31.1	31.2	31.2	31.3	31.4	31.5	31.5	31.5
11 - α UMi	<i>Polaris</i>	2.0	+89	19.3	19.3	19.3	19.1	19.0	18.8	18.8	18.8	18.9	19.0	19.2	19.4
13 - θ Eri	<i>Acamar</i>	3.3	-40	15.6	15.6	15.6	15.5	15.3	15.2	15.0	15.0	15.0	15.1	15.2	15.3
14 - α Cet	<i>Menkar</i>	2.5	+4	8.2	8.2	8.1	8.2	8.2	8.3	8.3	8.4	8.5	8.5	8.5	8.4
15 - β Per	<i>Algol</i>	2.1	+41	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.4	0.4
16 - α Per	<i>Mirfak</i>	1.8	+49	54.4	54.4	54.4	54.3	54.2	54.1	54.1	54.1	54.2	54.3	54.4	54.5
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.6	8.6	8.7	8.7	8.7
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.6	28.7	28.7	28.6	28.5	28.4	28.3	28.2	28.2	28.2	28.3	28.4
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.0	31.9	31.9	31.9	31.9	31.9	32.0	32.0	32.0	32.1	32.1	32.0
20 - β Ori	<i>Rigel</i>	0.1	-8	11.4	11.5	11.5	11.5	11.4	11.3	11.3	11.2	11.1	11.2	11.2	11.3
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	36.9	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.4	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.8
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.4	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.2	56.3
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.2	40.2	40.2	40.1	40.0	40.0	39.9	39.8	39.9	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.4	24.4	24.4	24.4	24.4	24.4	24.5	24.5	24.5	24.5	24.5	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.9	56.9	56.9	56.9	56.8	56.7	56.7	56.7	56.7	56.7	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.9	58.0	58.0	58.0	58.0	57.9	57.8	57.7	57.6	57.7	57.7	57.9
31 - α Car	<i>Canopus</i>	-0.7	-52	42.3	42.5	42.5	42.5	42.5	42.3	42.2	42.0	41.9	42.0	42.1	42.2
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.1	23.1
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.1	44.2	44.3	44.3	44.3	44.2	44.1	44.0	43.9	43.9	44.0	44.2
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.5	59.6	59.7	59.7	59.6	59.5	59.4	59.3	59.2	59.2	59.3	59.5
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.9	25.1	25.1	25.1	25.1	25.0	24.9	24.8	24.7	24.7	24.8	24.9
36 - η CMa	<i>Aludra</i>	2.5	-29	19.8	19.9	20.0	20.0	20.0	19.9	19.8	19.6	19.6	19.6	19.6	19.8
37 - α Gem	<i>Castor</i>	2.0	+31	51.5	51.6	51.6	51.6	51.6	51.6	51.5	51.5	51.4	51.4	51.4	51.3
38 - α CMi	<i>Procyon</i>	0.4	+5	11.4	11.4	11.4	11.4	11.4	11.4	11.5	11.5	11.5	11.5	11.4	11.3
39 - β Gem	<i>Pollux</i>	1.1	+27	59.6	59.6	59.7	59.7	59.7	59.7	59.6	59.6	59.6	59.5	59.5	59.4
40 - ζ Pup	<i>Naos</i>	2.3	-40	2.4	2.5	2.6	2.7	2.7	2.6	2.5	2.3	2.2	2.2	2.3	2.4
41 - γ Vel	<i>Regor</i>	1.8	-47	22.5	22.6	22.8	22.8	22.8	22.7	22.6	22.4	22.3	22.3	22.3	22.5
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.0	33.2	33.3	33.4	33.4	33.3	33.2	33.0	32.9	32.8	32.9	33.0
43 - δ Velorum		2.0	-54	45.3	45.4	45.6	45.7	45.7	45.6	45.5	45.3	45.2	45.2	45.2	45.3
44 - ζ Hydrae		3.1	+5	53.8	53.7	53.7	53.7	53.7	53.7	53.8	53.8	53.8	53.8	53.7	53.6
45 - λ Vel	<i>Suhail</i>	2.2	-43	29.0	29.1	29.3	29.4	29.4	29.3	29.2	29.1	29.0	28.9	28.9	29.1
46 - β Car	<i>Miaplacidus</i>	1.7	-69	46.0	46.2	46.4	46.5	46.5	46.5	46.4	46.2	46.1	46.0	46.0	46.1
47 - ι Car	<i>Aspidiske</i>	2.3	-59	19.6	19.8	19.9	20.1	20.1	20.0	19.9	19.8	19.6	19.6	19.6	19.7
48 - α Lyn	<i>Elvashak</i>	3.1	+34	20.2	20.2	20.3	20.3	20.4	20.4	20.3	20.3	20.2	20.1	20.0	19.9
49 - α Hyd	<i>Alphard</i>	2.0	-8	42.8	42.9	43.0	43.0	43.0	43.0	42.9	42.9	42.8	42.8	42.9	43.0
50 - α Leo	<i>Regulus</i>	1.4	+11	54.3	54.2	54.2	54.2	54.3	54.3	54.3	54.3	54.3	54.2	54.1	54.0

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	10.0	9.8	9.8	9.9	10.0	10.2	10.4	10.4	10.4	10.3	10.0	9.7
52 - ν	Hydrae	3.1	197	26.2	26.1	26.0	26.0	26.1	26.2	26.3	26.3	26.3	26.2	26.0	25.7
53 - β	UMa Merak	2.4	194	21.0	20.7	20.7	20.7	20.9	21.1	21.3	21.4	21.4	21.2	20.9	20.6
54 - α	UMa Dubhe	1.8	193	52.4	52.1	52.0	52.1	52.4	52.7	52.9	53.0	53.0	52.8	52.5	52.1
55 - β	Leo Denebola	2.1	182	34.5	34.3	34.2	34.2	34.3	34.4	34.4	34.5	34.5	34.4	34.3	34.0
56 - γ	Crv Gienah	2.6	175	53.2	53.0	52.9	52.8	52.9	53.0	53.0	53.1	53.1	53.1	52.9	52.7
57 - α	Cru Acrux	1.4	173	10.3	9.9	9.7	9.6	9.7	9.9	10.2	10.4	10.6	10.5	10.2	9.8
58 - γ	Cru Gacrux	1.6	172	1.9	1.5	1.4	1.3	1.4	1.5	1.7	1.9	2.0	2.0	1.8	1.4
59 - γ	Cen Muhlifain	2.2	169	26.7	26.5	26.3	26.2	26.3	26.4	26.5	26.7	26.8	26.7	26.5	26.2
60 - β	Cru Mimosa	1.3	167	53.0	52.6	52.4	52.3	52.4	52.6	52.8	53.0	53.1	53.1	52.9	52.5
61 - ε	UMa Alioth	1.8	166	21.4	21.1	20.9	20.8	20.9	21.1	21.3	21.5	21.6	21.7	21.5	21.2
62 - α^2	CVn Cor Caroli	2.9	165	50.9	50.6	50.5	50.4	50.5	50.6	50.7	50.8	50.9	50.9	50.8	50.6
63 - ε	Vir Vindemiatrix	2.8	164	18.1	17.8	17.7	17.6	17.6	17.7	17.8	17.9	17.9	17.9	17.8	17.6
64 - ζ	UMa Mizar	2.3	158	53.7	53.4	53.2	53.1	53.1	53.3	53.5	53.7	53.9	53.9	53.8	53.6
65 - α	Vir Spica	1.0	158	32.3	32.0	31.9	31.8	31.8	31.8	31.9	32.0	32.1	32.1	32.0	31.8
66 - η	UMa Alkaid	1.9	152	59.7	59.4	59.1	59.0	59.0	59.2	59.3	59.5	59.7	59.8	59.7	59.5
67 - β	Cen Hadar	0.6	148	49.4	49.0	48.6	48.4	48.4	48.5	48.6	48.9	49.1	49.2	49.1	48.7
68 - θ	Cen Menkent	2.1	148	8.8	8.5	8.3	8.2	8.1	8.1	8.2	8.3	8.5	8.5	8.4	8.2
69 - α	Boo Arcturus	0.0	145	56.7	56.4	56.3	56.1	56.1	56.1	56.2	56.3	56.4	56.5	56.4	56.3
70 - α^1	Cen Rigil Kentaurus	0.0	139	53.4	52.9	52.6	52.3	52.2	52.3	52.5	52.7	53.0	53.1	53.0	52.7
71 - α^2	Lib Zubenelgenubi	2.8	137	6.6	6.4	6.2	6.0	5.9	5.9	6.0	6.1	6.2	6.3	6.2	6.1
72 - β	UMi Kochab	2.1	137	20.3	19.7	19.1	18.8	18.8	19.1	19.6	20.1	20.7	21.1	21.2	21.0
73 - β	Lib Zubeneschamali	2.6	130	35.0	34.8	34.6	34.4	34.3	34.3	34.3	34.4	34.5	34.6	34.6	34.5
74 - α	CrB Alphecca	2.2	126	12.0	11.8	11.6	11.4	11.3	11.3	11.3	11.5	11.6	11.7	11.7	11.6
75 - α	Ser Unukalhai	2.7	123	47.0	46.8	46.6	46.4	46.3	46.2	46.3	46.4	46.5	46.6	46.6	46.5
76 - α	Sco Antares	0.9	112	27.7	27.5	27.2	27.0	26.8	26.8	26.8	26.8	27.0	27.1	27.1	27.0
77 - α	TrA Atria	1.9	107	30.9	30.3	29.8	29.2	28.8	28.6	28.7	28.9	29.3	29.7	29.9	29.7
78 - ε	Scorpii	2.3	107	15.8	15.5	15.3	15.0	14.8	14.7	14.7	14.8	14.9	15.1	15.1	15.0
79 - η	Oph Sabik	2.4	102	14.0	13.7	13.5	13.3	13.1	13.0	13.0	13.0	13.1	13.3	13.3	13.3
80 - α	Her Rasalgethi	3.1	101	12.1	11.9	11.7	11.5	11.3	11.2	11.2	11.3	11.4	11.5	11.6	11.6
81 - λ	Sco Shaula	1.6	96	23.6	23.4	23.1	22.8	22.6	22.4	22.4	22.4	22.6	22.8	22.8	22.8
82 - α	Oph Rasalhague	2.1	96	7.7	7.5	7.3	7.0	6.9	6.7	6.7	6.8	6.9	7.1	7.1	7.1
83 - θ	Sco Sargas	1.9	95	27.3	27.0	26.7	26.4	26.1	26.0	25.9	26.0	26.2	26.3	26.4	26.4
84 - γ	Dra Eltanin	2.2	90	47.1	46.9	46.6	46.3	46.0	45.9	45.9	46.1	46.3	46.6	46.8	46.8
85 - ε	Sgr Kaus Australis	1.9	83	45.5	45.3	45.0	44.8	44.5	44.3	44.2	44.3	44.4	44.6	44.7	44.7
86 - α	Lyr Vega	0.0	80	40.0	39.9	39.7	39.4	39.2	39.0	39.0	39.0	39.2	39.4	39.5	39.6
87 - σ	Sgr Nunki	2.0	75	59.9	59.7	59.5	59.2	59.0	58.8	58.7	58.7	58.8	59.0	59.1	59.1
88 - α	Aql Altair	0.8	62	9.5	9.4	9.3	9.0	8.8	8.6	8.5	8.5	8.6	8.7	8.8	8.9
89 - γ	Cyg Sadr	2.2	54	20.3	20.2	20.1	19.8	19.6	19.3	19.2	19.2	19.3	19.4	19.6	19.7
90 - α	Pav Peacock	1.9	53	21.4	21.2	21.0	20.6	20.2	19.9	19.6	19.5	19.6	19.9	20.1	20.3
91 - α	Cyg Deneb	1.3	49	32.6	32.6	32.4	32.2	31.9	31.6	31.4	31.4	31.5	31.7	31.9	32.0
92 - α	Cep Alderamin	2.4	40	17.5	17.5	17.3	17.0	16.6	16.2	16.0	15.9	16.0	16.2	16.6	16.9
93 - ε	Peg Enif	0.7	33	48.4	48.3	48.3	48.1	47.9	47.6	47.4	47.3	47.3	47.4	47.5	47.6
94 - δ	Cap Deneb Algedi	2.9	33	4.5	4.4	4.3	4.2	3.9	3.7	3.5	3.4	3.4	3.4	3.6	3.6
95 - α	Gru Al Na'ir	1.7	27	45.3	45.3	45.2	45.0	44.7	44.4	44.1	44.0	43.9	44.0	44.2	44.4
96 - β	Gruis	2.1	19	9.4	9.4	9.3	9.2	8.9	8.6	8.3	8.1	8.0	8.1	8.3	8.4
97 - α	PsA Fomalhaut	1.2	15	25.3	25.3	25.3	25.1	24.9	24.7	24.4	24.2	24.2	24.2	24.3	24.4
98 - β	Peg Scheat	2.4	13	54.6	54.6	54.6	54.4	54.2	54.0	53.8	53.6	53.5	53.5	53.6	53.7
99 - α	Peg Markab	2.5	13	39.5	39.6	39.5	39.4	39.2	39.0	38.7	38.6	38.5	38.5	38.6	38.7

ESTRELLAS, 2012
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	29.0	29.2	29.4	29.5	29.6	29.6	29.5	29.4	29.2	29.1	29.1	29.2
52 - ν	Hydrae	3.1	-16	15.5	15.6	15.7	15.8	15.8	15.8	15.7	15.7	15.6	15.6	15.6	15.7
53 - β	UMa Merak	2.4	+56	18.7	18.7	18.8	19.0	19.1	19.1	19.0	18.9	18.8	18.6	18.5	18.4
54 - α	UMa Dubhe	1.8	+61	40.7	40.8	40.9	41.1	41.2	41.2	41.1	41.0	40.8	40.7	40.5	40.4
55 - β	Leo Denebola	2.1	+14	30.0	30.0	30.0	30.0	30.1	30.1	30.1	30.1	30.1	30.0	29.9	29.8
56 - γ	Crv Gienah	2.6	-17	36.6	36.7	36.8	36.9	36.9	36.9	36.8	36.8	36.7	36.7	36.7	36.8
57 - α	Cru Acrux	1.4	-63	9.8	9.9	10.1	10.3	10.4	10.5	10.5	10.4	10.3	10.1	10.0	10.0
58 - γ	Cru Gacrux	1.6	-57	10.7	10.8	11.0	11.2	11.3	11.3	11.3	11.3	11.1	11.0	10.9	10.9
59 - γ	Cen Muhlifain	2.2	-49	1.4	1.6	1.7	1.9	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.7
60 - β	Cru Mimosa	1.3	-59	45.1	45.2	45.4	45.6	45.7	45.8	45.8	45.7	45.6	45.5	45.4	45.3
61 - ϵ	UMa Alioth	1.8	+55	53.3	53.3	53.4	53.5	53.6	53.7	53.7	53.7	53.5	53.4	53.2	53.1
62 - α^2	CVn Cor Caroli	2.9	+38	14.9	14.8	14.9	15.0	15.1	15.2	15.2	15.2	15.1	15.0	14.8	14.7
63 - ϵ	Vir Vindemiatrix	2.8	+10	53.5	53.4	53.4	53.4	53.5	53.5	53.6	53.6	53.5	53.5	53.4	53.3
64 - ζ	UMa Mizar	2.3	+54	51.4	51.4	51.4	51.6	51.7	51.8	51.8	51.8	51.7	51.5	51.3	51.2
65 - α	Vir Spica	1.0	-11	13.5	13.6	13.7	13.7	13.7	13.7	13.7	13.6	13.6	13.6	13.6	13.7
66 - η	UMa Alkaid	1.9	+49	14.8	14.8	14.9	15.0	15.1	15.2	15.3	15.3	15.2	15.0	14.9	14.7
67 - β	Cen Hadar	0.6	-60	25.6	25.7	25.8	26.0	26.1	26.2	26.3	26.3	26.2	26.0	25.9	25.9
68 - θ	Cen Menkent	2.1	-36	25.6	25.7	25.8	25.9	26.0	26.1	26.1	26.0	26.0	25.9	25.8	25.8
69 - α	Boo Arcturus	0.0	+19	7.0	6.9	6.9	6.9	7.0	7.1	7.2	7.2	7.2	7.1	7.0	6.8
70 - α^1	Cen Rigil Kentaurus	0.0	-60	52.9	52.9	53.0	53.2	53.3	53.4	53.5	53.5	53.4	53.3	53.1	53.1
71 - α^2	Lib Zubenelgenubi	2.8	-16	5.5	5.6	5.6	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6
72 - β	UMi Kochab	2.1	+74	6.0	6.0	6.0	6.2	6.3	6.5	6.5	6.5	6.4	6.3	6.1	5.9
73 - β	Lib Zubeneshamali	2.6	-9	25.6	25.7	25.8	25.8	25.8	25.7	25.7	25.7	25.7	25.7	25.7	25.7
74 - α	CrB Alphecca	2.2	+26	40.3	40.2	40.2	40.2	40.3	40.5	40.6	40.6	40.6	40.5	40.4	40.3
75 - α	Ser Unukalhai	2.7	+6	23.2	23.1	23.1	23.1	23.2	23.2	23.3	23.3	23.3	23.3	23.3	23.2
76 - α	Sco Antares	0.9	-26	27.4	27.4	27.5	27.5	27.5	27.5	27.6	27.6	27.5	27.5	27.5	27.5
77 - α	TrA Atria	1.9	-69	2.7	2.6	2.7	2.7	2.8	3.0	3.1	3.2	3.2	3.1	3.0	2.8
78 - ϵ	Scorpii	2.3	-34	18.8	18.8	18.8	18.8	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.8
79 - η	Oph Sabik	2.4	-15	44.3	44.3	44.4	44.4	44.4	44.3	44.3	44.3	44.3	44.3	44.3	44.3
80 - α	Her Rasalgethi	3.1	+14	22.6	22.5	22.4	22.5	22.6	22.7	22.8	22.8	22.9	22.8	22.8	22.7
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	32.9	33.0	33.1	33.2	33.3	33.3	33.4	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.2	29.0	29.0	29.0	29.1	29.3	29.5	29.6	29.7	29.6	29.6	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.6	22.6	22.5	22.5	22.5	22.5	22.6	22.6	22.6	22.6	22.6	22.6
86 - α	Lyr Vega	0.0	+38	47.7	47.6	47.5	47.5	47.6	47.8	47.9	48.1	48.1	48.1	48.1	48.0
87 - σ	Sgr Nunki	2.0	-26	16.8	16.8	16.8	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
88 - α	Aql Altair	0.8	+8	54.1	54.0	54.0	54.0	54.1	54.2	54.3	54.4	54.4	54.5	54.4	54.4
89 - γ	Cyg Sadr	2.2	+40	17.9	17.7	17.6	17.6	17.7	17.8	18.0	18.1	18.2	18.3	18.3	18.2
90 - α	Pav Peacock	1.9	-56	41.7	41.6	41.5	41.4	41.3	41.3	41.4	41.5	41.6	41.7	41.7	41.6
91 - α	Cyg Deneb	1.3	+45	19.6	19.4	19.3	19.3	19.3	19.5	19.6	19.8	19.9	20.0	20.0	20.0
92 - α	Cep Alderamin	2.4	+62	38.4	38.3	38.1	38.1	38.1	38.2	38.4	38.5	38.7	38.8	38.9	38.8
93 - ϵ	Peg Enif	0.7	+9	55.9	55.9	55.8	55.9	55.9	56.0	56.1	56.2	56.3	56.3	56.3	56.3
94 - δ	Cap Deneb Algedi	2.9	-16	4.3	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	4.0	4.0	4.0
95 - α	Gru Al Na'ir	1.7	-46	54.2	54.1	54.0	53.8	53.7	53.7	53.7	53.7	53.8	53.9	54.0	54.0
96 - β	Gruis	2.1	-46	49.4	49.3	49.2	49.0	48.9	48.8	48.8	48.8	48.9	49.0	49.1	49.1
97 - α	PsA Fomalhaut	1.2	-29	33.6	33.5	33.4	33.3	33.2	33.1	33.0	33.0	33.1	33.1	33.2	33.2
98 - β	Peg Scheat	2.4	+28	9.1	9.0	8.9	8.9	8.9	9.0	9.1	9.2	9.4	9.5	9.5	9.5
99 - α	Peg Markab	2.5	+15	16.4	16.3	16.2	16.2	16.3	16.4	16.5	16.6	16.7	16.7	16.7	16.7

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul
			h m	h m	h m	h m	h m	h m	h m
1 - α Andromedae	<i>Alpheratz</i>	2.1	17 26	15 24	13 30	11 28	9 30	7 28	5 30
2 - β Cassiopeae	<i>Caph</i>	2.3	17 27	15 25	13 31	11 29	9 31	7 29	5 31
6 - β Ceti	<i>Diphda</i>	2.0	18 01	15 59	14 05	12 03	10 05	8 03	6 05
9 - α Eridani	<i>Achernar</i>	0.5	18 55	16 53	14 59	12 57	10 59	8 57	6 59
12 - α Arietis	<i>Hamal</i>	2.0	19 24	17 23	15 29	13 27	11 29	9 27	7 29
13 - θ Eridani	<i>Acamar</i>	3.3	20 15	18 13	16 19	14 17	12 19	10 17	8 20
16 - α Persei	<i>Mirfak</i>	1.8	20 42	18 40	16 46	14 44	12 46	10 44	8 46
19 - α Tauri	<i>Aldebaran</i>	0.9	21 53	19 51	17 57	15 55	13 57	11 55	9 57
20 - β Orionis	<i>Rigel</i>	0.1	22 31	20 29	18 35	16 33	14 35	12 34	10 36
21 - α Aurigae	<i>Capella</i>	0.1	22 34	20 32	18 38	16 36	14 38	12 36	10 38
22 - γ Orionis	<i>Bellatrix</i>	1.6	22 42	20 40	18 46	16 44	14 46	12 44	10 46
28 - α Orionis	<i>Betelgeuse</i>	0.4	23 12	21 10	19 16	17 14	15 16	13 14	11 16
31 - α Carinae	<i>Canopus</i>	-0.7	23 40	21 38	19 44	17 42	15 44	13 42	11 44
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 05	22 00	20 06	18 04	16 06	14 04	12 06
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	0 19	22 13	20 19	18 17	16 19	14 17	12 19
38 - α Canis Minoris	<i>Procyon</i>	0.4	1 00	22 54	21 00	18 58	17 00	14 58	13 00
39 - β Geminorum	<i>Pollux</i>	1.1	1 06	23 00	21 06	19 04	17 06	15 04	13 06
42 - ϵ Carinae	<i>Avior</i>	1.9	1 42	23 36	21 42	19 41	17 43	15 41	13 43
45 - λ Velorum	<i>Suhail</i>	2.2	2 28	0 26	22 28	20 26	18 28	16 26	14 28
46 - β Carinae	<i>Miaplacidus</i>	1.7	2 33	0 31	22 33	20 31	18 33	16 31	14 33
49 - α Hydrae	<i>Alphard</i>	2.0	2 47	0 46	22 48	20 46	18 48	16 46	14 48
50 - α Leonis	<i>Regulus</i>	1.4	3 28	1 26	23 28	21 27	19 29	17 27	15 29
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 24	2 22	0 28	22 22	20 24	18 22	16 24
55 - β Leonis	<i>Denebola</i>	2.1	5 09	3 07	1 13	23 07	21 09	19 07	17 09
57 - α Crucis	<i>Acrux</i>	1.4	5 46	3 44	1 50	23 44	21 46	19 45	17 47
58 - γ Crucis	<i>Gacrux</i>	1.6	5 51	3 49	1 55	23 49	21 51	19 49	17 51
60 - β Crucis	<i>Mimosa</i>	1.3	6 07	4 05	2 11	0 09	22 08	20 06	18 08
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 13	4 11	2 17	0 16	22 14	20 12	18 14
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	6 43	4 41	2 47	0 45	22 43	20 42	18 44
65 - α Virginis	<i>Spica</i>	1.0	6 44	4 43	2 49	0 47	22 45	20 43	18 45
68 - θ Centauri	<i>Menkent</i>	2.1	7 26	5 24	3 30	1 28	23 26	21 24	19 26
69 - α Bootis	<i>Arcturus</i>	0.0	7 35	5 33	3 39	1 37	23 35	21 33	19 35
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	7 59	5 57	4 03	2 01	0 03	21 57	19 59
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 09	6 07	4 13	2 11	0 13	22 08	20 10
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 53	6 52	4 58	2 56	0 58	22 52	20 54
76 - α Scorpii	<i>Antares</i>	0.9	9 48	7 46	5 52	3 51	1 53	23 47	21 49
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 08	8 06	6 12	4 10	2 12	0 11	22 09
81 - λ Scorpii	<i>Shaula</i>	1.6	10 52	8 51	6 56	4 55	2 57	0 55	22 53
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 53	8 52	6 58	4 56	2 58	0 56	22 54
84 - γ Draconis	<i>Eltanin</i>	2.2	11 15	9 13	7 19	5 17	3 19	1 17	23 15
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	11 43	9 41	7 47	5 45	3 47	1 45	23 43
86 - α Lyrae	<i>Vega</i>	0.0	11 55	9 53	7 59	5 57	3 59	1 58	23 56
87 - σ Sagittarii	<i>Nunki</i>	2.0	12 14	10 12	8 18	6 16	4 18	2 16	0 18
88 - α Aquilae	<i>Altair</i>	0.8	13 09	11 07	9 13	7 11	5 13	3 11	1 13
90 - α Pavonis	<i>Peacock</i>	1.9	13 44	11 42	9 48	7 46	5 48	3 47	1 49
91 - α Cygni	<i>Deneb</i>	1.3	13 59	11 57	10 03	8 01	6 04	4 02	2 04
93 - ϵ Pegasi	<i>Enif</i>	0.7	15 02	13 00	11 06	9 04	7 06	5 04	3 07
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 26	13 24	11 30	9 28	7 30	5 29	3 31
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 15	14 13	12 19	10 18	8 20	6 18	4 20
99 - α Pegasi	<i>Markab</i>	2.5	16 22	14 21	12 27	10 25	8 27	6 25	4 27

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN	
			h m	h m	h m	h m	h m		
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 28	1 27	23 25	21 23	19 25	Se restará para obtener la hora del paso en otro día del mismo mes.	
2 - β Cassiopeae	<i>Caph</i>	2.3	3 29	1 27	23 26	21 24	19 26		
6 - β Ceti	<i>Diphda</i>	2.0	4 04	2 02	0 04	21 58	20 00		
9 - α Eridani	<i>Achernar</i>	0.5	4 57	2 55	0 58	22 52	20 54		
12 - α Arietis	<i>Hamal</i>	2.0	5 27	3 25	1 27	23 21	21 23	Día	Corr.
13 - θ Eridani	<i>Acamar</i>	3.3	6 18	4 16	2 18	0 16	22 14	1	h m
16 - α Persei	<i>Mirfak</i>	1.8	6 44	4 42	2 44	0 42	22 41	2	0 00
19 - α Tauri	<i>Aldebaran</i>	0.9	7 55	5 53	3 56	1 54	23 52	3	0 04
20 - β Orionis	<i>Rigel</i>	0.1	8 34	6 32	4 34	2 32	0 34	4	0 08
21 - α Aurigae	<i>Capella</i>	0.1	8 36	6 34	4 36	2 35	0 37	5	0 12
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 44	6 42	4 45	2 43	0 45	6	0 16
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 14	7 12	5 14	3 13	1 15	7	0 20
31 - α Carinae	<i>Canopus</i>	-0.7	9 43	7 41	5 43	3 41	1 43	8	0 24
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 04	8 02	6 04	4 02	2 04	9	0 28
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 17	8 16	6 18	4 16	2 18	10	0 31
38 - α Canis Minoris	<i>Procyon</i>	0.4	10 58	8 56	6 58	4 56	2 58	11	0 35
39 - β Geminorum	<i>Pollux</i>	1.1	11 04	9 02	7 04	5 03	3 05	12	0 39
42 - ϵ Carinae	<i>Avior</i>	1.9	11 41	9 39	7 41	5 39	3 41	13	0 43
45 - λ Velorum	<i>Suhail</i>	2.2	12 26	10 24	8 27	6 25	4 27	14	0 47
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 31	10 29	8 31	6 30	4 32	15	0 51
49 - α Hydrae	<i>Alphard</i>	2.0	12 46	10 44	8 46	6 44	4 46	16	0 55
50 - α Leonis	<i>Regulus</i>	1.4	13 27	11 25	9 27	7 25	5 27	17	0 59
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 22	12 20	10 22	8 20	6 22	18	1 03
55 - β Leonis	<i>Denebola</i>	2.1	15 07	13 05	11 07	9 05	7 08	19	1 07
57 - α Crucis	<i>Acrux</i>	1.4	15 45	13 43	11 45	9 43	7 45	20	1 11
58 - γ Crucis	<i>Gacrux</i>	1.6	15 49	13 47	11 49	9 48	7 50	21	1 15
60 - β Crucis	<i>Mimosa</i>	1.3	16 06	14 04	12 06	10 04	8 06	22	1 19
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 12	14 10	12 12	10 10	8 12	23	1 23
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 42	14 40	12 42	10 40	8 42	24	1 27
65 - α Virginis	<i>Spica</i>	1.0	16 43	14 41	12 43	10 41	8 43	25	1 30
68 - θ Centauri	<i>Menkent</i>	2.1	17 25	15 23	13 25	11 23	9 25	26	1 34
69 - α Bootis	<i>Arcturus</i>	0.0	17 33	15 31	13 33	11 32	9 34	27	1 38
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 58	15 56	13 58	11 56	9 58	28	1 42
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 08	16 06	14 08	12 06	10 08	29	1 46
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 52	16 50	14 52	12 50	10 52	30	1 50
76 - α Scorpii	<i>Antares</i>	0.9	19 47	17 45	15 47	13 45	11 47	31	1 54
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 07	18 05	16 07	14 05	12 07		1 58
81 - λ Scorpii	<i>Shaula</i>	1.6	20 51	18 49	16 51	14 49	12 51	Si el resultado es negativo sumar 23 ^h 56 ^m .	
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 52	18 50	16 52	14 50	12 52		
84 - γ Draconis	<i>Eltanin</i>	2.2	21 13	19 12	17 14	15 12	13 14		
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 41	19 40	17 42	15 40	13 42		
86 - α Lyrae	<i>Vega</i>	0.0	21 54	19 52	17 54	15 52	13 54	2ª CORRECCIÓN	
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 12	20 11	18 13	16 11	14 13		
88 - α Aquilae	<i>Altair</i>	0.8	23 08	21 06	19 08	17 06	15 08	Se aplicará para tener la hora civil del paso por otro meridiano.	
90 - α Pavonis	<i>Peacock</i>	1.9	23 43	21 41	19 43	17 41	15 43		
91 - α Cygni	<i>Deneb</i>	1.3	0 02	21 56	19 58	17 56	15 58		
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 05	22 59	21 01	18 59	17 01		
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 29	23 23	21 25	19 23	17 25		
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 18	0 16	22 14	20 12	18 14		
99 - α Pegasi	<i>Markab</i>	2.5	2 25	0 23	22 21	20 19	18 21	Long.	Corr.
								o	m
								180 W	-2
								138 W	-1
								46 W	0
								46 E	+1
								136 E	+2
								180 E	

Si el resultado es negativo sumar 23^h 56^m.

2ª CORRECCIÓN

Se aplicará para tener la hora civil del paso por otro meridiano.

Long.	Corr.
180 W	0
138 W	-2
46 W	-1
46 E	0
136 E	+1
180 E	+2

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-30.4	26 00	-39.3	52 00	-40.3	78 00	-33.1	104 00	-19.1	130 00	-1.4	156 00	+16.7
0 30	-30.7	26 30	-39.4	52 30	-40.2	78 30	-32.8	104 30	-18.8	130 30	-1.0	156 30	+17.0
1 00	-30.9	27 00	-39.5	53 00	-40.1	79 00	-32.6	105 00	-18.5	131 00	-0.7	157 00	+17.3
1 30	-31.1	27 30	-39.6	53 30	-40.1	79 30	-32.4	105 30	-18.2	131 30	-0.3	157 30	+17.7
2 00	-31.4	28 00	-39.7	54 00	-40.0	80 00	-32.2	106 00	-17.9	132 00	+0.1	158 00	+18.0
2 30	-31.6	28 30	-39.8	54 30	-39.9	80 30	-32.0	106 30	-17.6	132 30	+0.4	158 30	+18.3
3 00	-31.8	29 00	-39.9	55 00	-39.8	81 00	-31.7	107 00	-17.2	133 00	+0.8	159 00	+18.6
3 30	-32.0	29 30	-39.9	55 30	-39.8	81 30	-31.5	107 30	-16.9	133 30	+1.1	159 30	+18.9
4 00	-32.3	30 00	-40.0	56 00	-39.7	82 00	-31.3	108 00	-16.6	134 00	+1.5	160 00	+19.3
4 30	-32.5	30 30	-40.1	56 30	-39.6	82 30	-31.1	108 30	-16.3	134 30	+1.8	160 30	+19.6
5 00	-32.7	31 00	-40.2	57 00	-39.5	83 00	-30.8	109 00	-15.9	135 00	+2.2	161 00	+19.9
5 30	-32.9	31 30	-40.2	57 30	-39.4	83 30	-30.6	109 30	-15.6	135 30	+2.6	161 30	+20.2
6 00	-33.1	32 00	-40.3	58 00	-39.3	84 00	-30.4	110 00	-15.3	136 00	+2.9	162 00	+20.5
6 30	-33.3	32 30	-40.3	58 30	-39.2	84 30	-30.1	110 30	-14.9	136 30	+3.3	162 30	+20.8
7 00	-33.5	33 00	-40.4	59 00	-39.1	85 00	-29.9	111 00	-14.6	137 00	+3.6	163 00	+21.1
7 30	-33.7	33 30	-40.5	59 30	-39.0	85 30	-29.6	111 30	-14.3	137 30	+4.0	163 30	+21.4
8 00	-33.9	34 00	-40.5	60 00	-38.9	86 00	-29.4	112 00	-13.9	138 00	+4.3	164 00	+21.7
8 30	-34.1	34 30	-40.6	60 30	-38.8	86 30	-29.1	112 30	-13.6	138 30	+4.7	164 30	+22.0
9 00	-34.3	35 00	-40.6	61 00	-38.6	87 00	-28.9	113 00	-13.3	139 00	+5.0	165 00	+22.3
9 30	-34.5	35 30	-40.6	61 30	-38.5	87 30	-28.6	113 30	-12.9	139 30	+5.4	165 30	+22.6
10 00	-34.7	36 00	-40.7	62 00	-38.4	88 00	-28.4	114 00	-12.6	140 00	+5.8	166 00	+22.9
10 30	-34.9	36 30	-40.7	62 30	-38.3	88 30	-28.1	114 30	-12.2	140 30	+6.1	166 30	+23.2
11 00	-35.1	37 00	-40.7	63 00	-38.2	89 00	-27.8	115 00	-11.9	141 00	+6.5	167 00	+23.5
11 30	-35.3	37 30	-40.8	63 30	-38.0	89 30	-27.6	115 30	-11.6	141 30	+6.8	167 30	+23.8
12 00	-35.4	38 00	-40.8	64 00	-37.9	90 00	-27.3	116 00	-11.2	142 00	+7.2	168 00	+24.1
12 30	-35.6	38 30	-40.8	64 30	-37.8	90 30	-27.1	116 30	-10.9	142 30	+7.5	168 30	+24.4
13 00	-35.8	39 00	-40.8	65 00	-37.6	91 00	-26.8	117 00	-10.5	143 00	+7.9	169 00	+24.7
13 30	-36.0	39 30	-40.9	65 30	-37.5	91 30	-26.5	117 30	-10.2	143 30	+8.2	169 30	+24.9
14 00	-36.1	40 00	-40.9	66 00	-37.3	92 00	-26.2	118 00	-9.8	144 00	+8.6	170 00	+25.2
14 30	-36.3	40 30	-40.9	66 30	-37.2	92 30	-26.0	118 30	-9.5	144 30	+8.9	170 30	+25.5
15 00	-36.5	41 00	-40.9	67 00	-37.0	93 00	-25.7	119 00	-9.1	145 00	+9.3	171 00	+25.8
15 30	-36.6	41 30	-40.9	67 30	-36.9	93 30	-25.4	119 30	-8.8	145 30	+9.6	171 30	+26.1
16 00	-36.8	42 00	-40.9	68 00	-36.7	94 00	-25.1	120 00	-8.4	146 00	+10.0	172 00	+26.3
16 30	-36.9	42 30	-40.9	68 30	-36.6	94 30	-24.8	120 30	-8.1	146 30	+10.3	172 30	+26.6
17 00	-37.1	43 00	-40.9	69 00	-36.4	95 00	-24.6	121 00	-7.7	147 00	+10.6	173 00	+26.9
17 30	-37.2	43 30	-40.9	69 30	-36.2	95 30	-24.3	121 30	-7.4	147 30	+11.0	173 30	+27.1
18 00	-37.4	44 00	-40.9	70 00	-36.1	96 00	-24.0	122 00	-7.0	148 00	+11.3	174 00	+27.4
18 30	-37.5	44 30	-40.9	70 30	-35.9	96 30	-23.7	122 30	-6.7	148 30	+11.7	174 30	+27.7
19 00	-37.7	45 00	-40.8	71 00	-35.7	97 00	-23.4	123 00	-6.3	149 00	+12.0	175 00	+27.9
19 30	-37.8	45 30	-40.8	71 30	-35.6	97 30	-23.1	123 30	-6.0	149 30	+12.4	175 30	+28.2
20 00	-37.9	46 00	-40.8	72 00	-35.4	98 00	-22.8	124 00	-5.6	150 00	+12.7	176 00	+28.5
20 30	-38.1	46 30	-40.8	72 30	-35.2	98 30	-22.5	124 30	-5.3	150 30	+13.0	176 30	+28.7
21 00	-38.2	47 00	-40.7	73 00	-35.0	99 00	-22.2	125 00	-4.9	151 00	+13.4	177 00	+29.0
21 30	-38.3	47 30	-40.7	73 30	-34.8	99 30	-21.9	125 30	-4.6	151 30	+13.7	177 30	+29.2
22 00	-38.5	48 00	-40.7	74 00	-34.7	100 00	-21.6	126 00	-4.2	152 00	+14.0	178 00	+29.5
22 30	-38.6	48 30	-40.6	74 30	-34.5	100 30	-21.3	126 30	-3.9	152 30	+14.4	178 30	+29.7
23 00	-38.7	49 00	-40.6	75 00	-34.3	101 00	-21.0	127 00	-3.5	153 00	+14.7	179 00	+30.0
23 30	-38.8	49 30	-40.5	75 30	-34.1	101 30	-20.7	127 30	-3.1	153 30	+15.0	179 30	+30.2
24 00	-38.9	50 00	-40.5	76 00	-33.9	102 00	-20.4	128 00	-2.8	154 00	+15.4	180 00	+30.4
24 30	-39.0	50 30	-40.4	76 30	-33.7	102 30	-20.1	128 30	-2.4	154 30	+15.7	180 30	+30.7
25 00	-39.1	51 00	-40.4	77 00	-33.5	103 00	-19.8	129 00	-2.1	155 00	+16.0	181 00	+30.9
25 30	-39.2	51 30	-40.3	77 30	-33.3	103 30	-19.5	129 30	-1.7	155 30	+16.4	181 30	+31.1
26 00	-39.3	52 00	-40.3	78 00	-33.1	104 00	-19.1	130 00	-1.4	156 00	+16.7	182 00	+31.4

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+31.4	208 00	+39.7	234 00	+40.0	260 00	+32.2	286 00	+17.9	312 00	-0.1	338 00	-18.0
182 30	+31.6	208 30	+39.8	234 30	+39.9	260 30	+32.0	286 30	+17.6	312 30	-0.4	338 30	-18.3
183 00	+31.8	209 00	+39.9	235 00	+39.8	261 00	+31.7	287 00	+17.2	313 00	-0.8	339 00	-18.6
183 30	+32.0	209 30	+39.9	235 30	+39.8	261 30	+31.5	287 30	+16.9	313 30	-1.1	339 30	-18.9
184 00	+32.3	210 00	+40.0	236 00	+39.7	262 00	+31.3	288 00	+16.6	314 00	-1.5	340 00	-19.3
184 30	+32.5	210 30	+40.1	236 30	+39.6	262 30	+31.1	288 30	+16.3	314 30	-1.8	340 30	-19.6
185 00	+32.7	211 00	+40.2	237 00	+39.5	263 00	+30.8	289 00	+15.9	315 00	-2.2	341 00	-19.9
185 30	+32.9	211 30	+40.2	237 30	+39.4	263 30	+30.6	289 30	+15.6	315 30	-2.6	341 30	-20.2
186 00	+33.1	212 00	+40.3	238 00	+39.3	264 00	+30.4	290 00	+15.3	316 00	-2.9	342 00	-20.5
186 30	+33.3	212 30	+40.3	238 30	+39.2	264 30	+30.1	290 30	+14.9	316 30	-3.3	342 30	-20.8
187 00	+33.5	213 00	+40.4	239 00	+39.1	265 00	+29.9	291 00	+14.6	317 00	-3.6	343 00	-21.1
187 30	+33.7	213 30	+40.5	239 30	+39.0	265 30	+29.6	291 30	+14.3	317 30	-4.0	343 30	-21.4
188 00	+33.9	214 00	+40.5	240 00	+38.9	266 00	+29.4	292 00	+13.9	318 00	-4.3	344 00	-21.7
188 30	+34.1	214 30	+40.6	240 30	+38.8	266 30	+29.1	292 30	+13.6	318 30	-4.7	344 30	-22.0
189 00	+34.3	215 00	+40.6	241 00	+38.6	267 00	+28.9	293 00	+13.3	319 00	-5.0	345 00	-22.3
189 30	+34.5	215 30	+40.6	241 30	+38.5	267 30	+28.6	293 30	+12.9	319 30	-5.4	345 30	-22.6
190 00	+34.7	216 00	+40.7	242 00	+38.4	268 00	+28.4	294 00	+12.6	320 00	-5.8	346 00	-22.9
190 30	+34.9	216 30	+40.7	242 30	+38.3	268 30	+28.1	294 30	+12.2	320 30	-6.1	346 30	-23.2
191 00	+35.1	217 00	+40.7	243 00	+38.2	269 00	+27.8	295 00	+11.9	321 00	-6.5	347 00	-23.5
191 30	+35.3	217 30	+40.8	243 30	+38.0	269 30	+27.6	295 30	+11.6	321 30	-6.8	347 30	-23.8
192 00	+35.4	218 00	+40.8	244 00	+37.9	270 00	+27.3	296 00	+11.2	322 00	-7.2	348 00	-24.1
192 30	+35.6	218 30	+40.8	244 30	+37.8	270 30	+27.1	296 30	+10.9	322 30	-7.5	348 30	-24.4
193 00	+35.8	219 00	+40.8	245 00	+37.6	271 00	+26.8	297 00	+10.5	323 00	-7.9	349 00	-24.7
193 30	+36.0	219 30	+40.9	245 30	+37.5	271 30	+26.5	297 30	+10.2	323 30	-8.2	349 30	-24.9
194 00	+36.1	220 00	+40.9	246 00	+37.3	272 00	+26.2	298 00	+9.8	324 00	-8.6	350 00	-25.2
194 30	+36.3	220 30	+40.9	246 30	+37.2	272 30	+26.0	298 30	+9.5	324 30	-8.9	350 30	-25.5
195 00	+36.5	221 00	+40.9	247 00	+37.0	273 00	+25.7	299 00	+9.1	325 00	-9.3	351 00	-25.8
195 30	+36.6	221 30	+40.9	247 30	+36.9	273 30	+25.4	299 30	+8.8	325 30	-9.6	351 30	-26.1
196 00	+36.8	222 00	+40.9	248 00	+36.7	274 00	+25.1	300 00	+8.4	326 00	-10.0	352 00	-26.3
196 30	+36.9	222 30	+40.9	248 30	+36.6	274 30	+24.8	300 30	+8.1	326 30	-10.3	352 30	-26.6
197 00	+37.1	223 00	+40.9	249 00	+36.4	275 00	+24.6	301 00	+7.7	327 00	-10.6	353 00	-26.9
197 30	+37.2	223 30	+40.9	249 30	+36.2	275 30	+24.3	301 30	+7.4	327 30	-11.0	353 30	-27.1
198 00	+37.4	224 00	+40.9	250 00	+36.1	276 00	+24.0	302 00	+7.0	328 00	-11.3	354 00	-27.4
198 30	+37.5	224 30	+40.9	250 30	+35.9	276 30	+23.7	302 30	+6.7	328 30	-11.7	354 30	-27.7
199 00	+37.7	225 00	+40.8	251 00	+35.7	277 00	+23.4	303 00	+6.3	329 00	-12.0	355 00	-27.9
199 30	+37.8	225 30	+40.8	251 30	+35.6	277 30	+23.1	303 30	+6.0	329 30	-12.4	355 30	-28.2
200 00	+37.9	226 00	+40.8	252 00	+35.4	278 00	+22.8	304 00	+5.6	330 00	-12.7	356 00	-28.5
200 30	+38.1	226 30	+40.8	252 30	+35.2	278 30	+22.5	304 30	+5.3	330 30	-13.0	356 30	-28.7
201 00	+38.2	227 00	+40.7	253 00	+35.0	279 00	+22.2	305 00	+4.9	331 00	-13.4	357 00	-29.0
201 30	+38.3	227 30	+40.7	253 30	+34.8	279 30	+21.9	305 30	+4.6	331 30	-13.7	357 30	-29.2
202 00	+38.5	228 00	+40.7	254 00	+34.7	280 00	+21.6	306 00	+4.2	332 00	-14.0	358 00	-29.5
202 30	+38.6	228 30	+40.6	254 30	+34.5	280 30	+21.3	306 30	+3.9	332 30	-14.4	358 30	-29.7
203 00	+38.7	229 00	+40.6	255 00	+34.3	281 00	+21.0	307 00	+3.5	333 00	-14.7	359 00	-30.0
203 30	+38.8	229 30	+40.5	255 30	+34.1	281 30	+20.7	307 30	+3.1	333 30	-15.0	359 30	-30.2
204 00	+38.9	230 00	+40.5	256 00	+33.9	282 00	+20.4	308 00	+2.8	334 00	-15.4	360 00	-30.4
204 30	+39.0	230 30	+40.4	256 30	+33.7	282 30	+20.1	308 30	+2.4	334 30	-15.7		
205 00	+39.1	231 00	+40.4	257 00	+33.5	283 00	+19.8	309 00	+2.1	335 00	-16.0		
205 30	+39.2	231 30	+40.3	257 30	+33.3	283 30	+19.5	309 30	+1.7	335 30	-16.4		
206 00	+39.3	232 00	+40.3	258 00	+33.1	284 00	+19.1	310 00	+1.4	336 00	-16.7		
206 30	+39.4	232 30	+40.2	258 30	+32.8	284 30	+18.8	310 30	+1.0	336 30	-17.0		
207 00	+39.5	233 00	+40.1	259 00	+32.6	285 00	+18.5	311 00	+0.7	337 00	-17.3		
207 30	+39.6	233 30	+40.1	259 30	+32.4	285 30	+18.2	311 30	+0.3	337 30	-17.7		
208 00	+39.7	234 00	+40.0	260 00	+32.2	286 00	+17.9	312 00	-0.1	338 00	-18.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
120	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
260	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
300	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
360	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL $\cap$	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
0	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.2	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.1	+0.1	+0.2	+0.4
60	+0.1	+0.2	+0.3	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1
100	0.0	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.4
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.2	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.3	+0.1	-0.1	-0.2	-0.4
240	-0.1	-0.2	-0.3	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1
280	0.0	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	+0.1
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.4
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.5	+0.6	20
30	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	60
70	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	70
80	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.7	-0.9	-1.0	80
90	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	90
100	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	100
110	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	110
120	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	120
130	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	130
140	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.2	-1.3	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.2	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	240
250	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.6	+0.6	+0.7	250
260	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	+1.0	260
270	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	270
280	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.4	280
290	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	290
300	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	300
310	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	310
320	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	320
330	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

Cuando el signo es +, la Polar está al E del meridiano.
 Cuando el signo es -, la Polar está al W del meridiano.

Long	Retardo diario																	
	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	65 ^m	70 ^m	75 ^m	80 ^m	85 ^m	90 ^m
o	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3
15	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
20	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5
25	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6
30	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8
35	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
40	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10
45	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11
50	1	1	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	13
55	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14
60	1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	13	14	15
65	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	14	15	16
70	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
75	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19
80	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
85	1	2	4	5	6	7	8	9	11	12	13	14	15	17	18	19	20	21
90	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20	21	23
95	1	3	4	5	7	8	9	11	12	13	15	16	17	18	20	21	22	24
100	1	3	4	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
105	1	3	4	6	7	9	10	12	13	15	16	18	19	20	22	23	25	26
110	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28
115	2	3	5	6	8	10	11	13	14	16	18	19	21	22	24	26	27	29
120	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
125	2	3	5	7	9	10	12	14	16	17	19	21	23	24	26	28	30	31
130	2	4	5	7	9	11	13	14	16	18	20	22	23	25	27	29	31	33
135	2	4	6	8	9	11	13	15	17	19	21	23	24	26	28	30	32	34
140	2	4	6	8	10	12	14	16	18	19	21	23	25	27	29	31	33	35
145	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
150	2	4	6	8	10	13	15	17	19	21	23	25	27	29	31	33	35	38
155	2	4	6	9	11	13	15	17	19	22	24	26	28	30	32	34	37	39
160	2	4	7	9	11	13	16	18	20	22	24	27	29	31	33	36	38	40
165	2	5	7	9	11	14	16	18	21	23	25	28	30	32	34	37	39	41
170	2	5	7	9	12	14	17	19	21	24	26	28	31	33	35	38	40	43
175	2	5	7	10	12	15	17	19	22	24	27	29	32	34	36	39	41	44
180	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2012**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2012)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0.3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 22	+0.2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 27	+0.1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 22	0.0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0.1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 7	-0.2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 11	-0.3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 27	-0.2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 1	-0.1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 25	0.0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 53	+15.2			Oct 17	+0.1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	47 16	+15.3			Nov 9	+0.2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	49 40	+15.4			Dic 15	+0.3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	52 04	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	54 28	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	56 52	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	59 16	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	61 40	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	64 04	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	66 28	+16.1				
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

TABLA C = PLANETAS Y ESTRELLAS											
Refracción						Paralaje (2012)					
Altura apte.	Corrección	Altura apte.	Corrección	Fechas		Venus para cualquier altura	Marte Altura aparente				
° /	'	° /	'				< 30°	> 30° < 60°	> 60°		
6 30	-7.8	14 00	-3.8	Ene	1	+0.1	+0.1	+0.1	0.0		
6 40	-7.6	15 00	-3.6	Ene	5	+0.1	+0.1	+0.1	+0.1		
6 50	-7.5	16 00	-3.3	Ene	15	+0.1	+0.2	+0.1	+0.1		
7 00	-7.3	17 00	-3.0	Feb	22	+0.1	+0.2	+0.2	+0.1		
7 15	-7.1	18 00	-2.8	Mar	3	+0.2	+0.2	+0.2	+0.1		
7 30	-6.9	19 00	-2.6	Mar	18	+0.2	+0.2	+0.1	+0.1		
7 45	-6.7	20 00	-2.5	Abr	19	+0.3	+0.2	+0.1	+0.1		
8 00	-6.5	21 00	-2.4	Abr	27	+0.3	+0.1	+0.1	+0.1		
8 15	-6.3	22 00	-2.2	May	8	+0.3	+0.1	+0.1	0.0		
8 30	-6.2	23 00	-2.0	May	10	+0.4	+0.1	+0.1	0.0		
8 45	-6.0	24 00	-1.8	May	30	+0.5	+0.1	+0.1	0.0		
9 00	-5.9	25 00	-1.6	Jun	12	+0.4	+0.1	+0.1	0.0		
9 20	-5.7	26 00	-1.3	Jul	2	+0.3	+0.1	+0.1	0.0		
9 40	-5.5	27 00	-1.2	Jul	23	+0.2	+0.1	+0.1	0.0		
10 00	-5.3	28 00	-1.0	Sep	7	+0.1	+0.1	+0.1	0.0		
10 30	-5.1	29 00	-0.8	Nov	6	+0.1	+0.1	0.0	0.0		
11 00	-4.8	30 00	-0.6	Dic	31						
11 30	-4.6	31 00	-0.4								
12 00	-4.5	32 00	-0.2								
12 30	-4.3	33 00	0.0								
13 00	-4.1	34 00									

La altura aparente es la observada corregida por depresión del horizonte.
En estas tablas, para los valores explícitos tomar el valor superior.