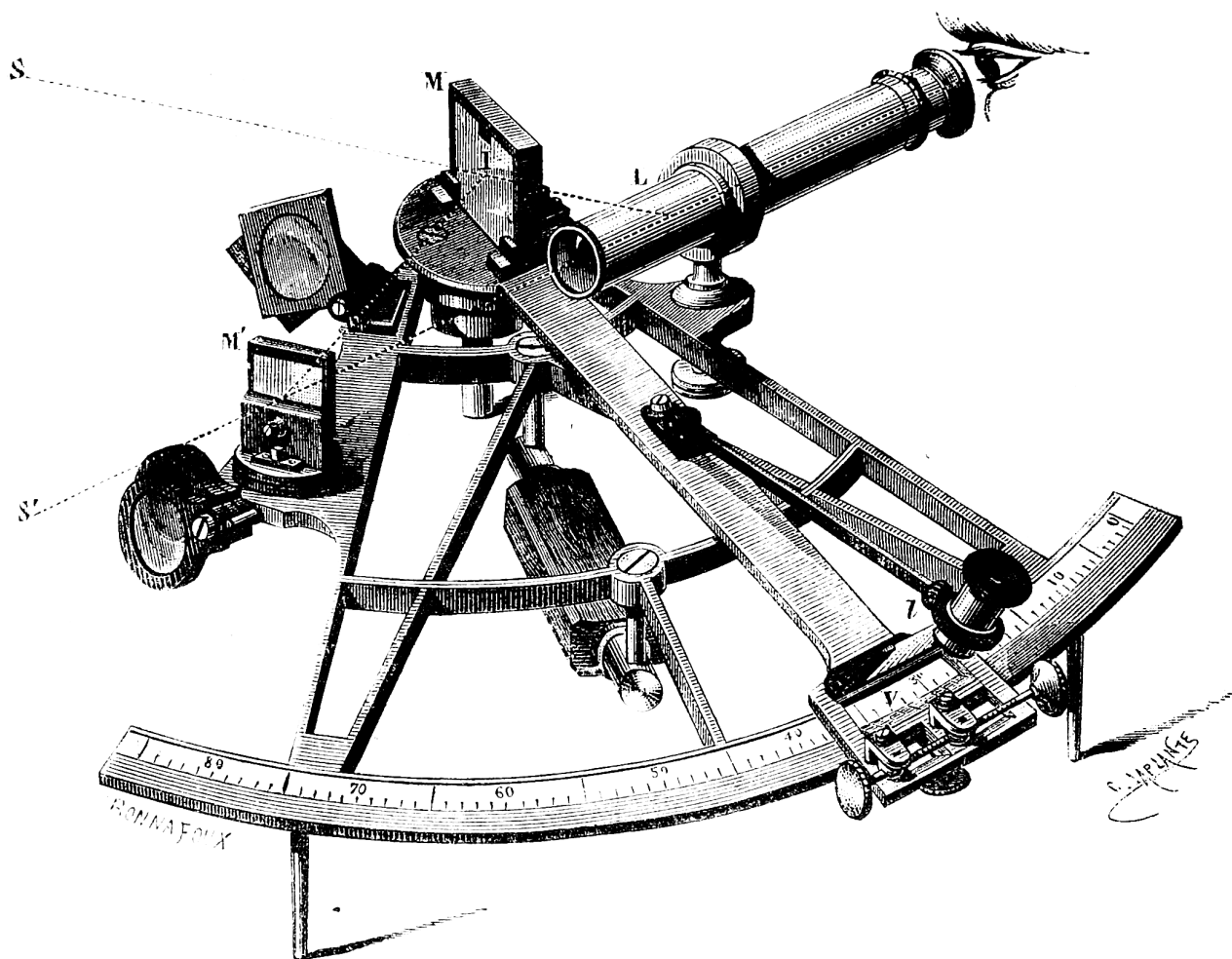




ALMANAQUE NÁUTICO PERSEIS 2016

ALMANAQUE NÁUTICO PERSEIS 2016

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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 presenta 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: 20 ^d 6 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 PMG: 5 ^h 17 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	179	13.9	-23	03.5	283	03.3	+1	27.6	60 N	7 09	8 06	9 02	** ** *		11 24	16		
1	194	13.6		03.4	297	37.4		18.2	58	7 02	7 54	8 46	** ** *		25	17		
2	209	13.3		03.2	312	11.6	+1	08.8	56	6 56	44	31	** ** *		25	19		
3	224	13.0		03.0	326	45.8	+0	59.5	54	50	36	19	** ** *		25	20		
4	239	12.7		02.8	341	20.0		50.1	52	44	28	8 08	** ** *		25	23		
5	254	12.4	-23	02.6	355	54.3	+0	40.7	50	6 39	7 20	7 59	** ** *		11 25	24		
6	269	12.1	-23	02.4	10	28.5	+0	31.3	45	6 27	7 05	7 38	23 59 58	11 26	26	26		
7	284	11.8		02.2	25	02.8		21.9	40	17	6 51	22	57 56	26	29			
8	299	11.5		02.0	39	37.0		12.6	35	08	40	7 08	56 53	26	31			
9	314	11.2		01.8	54	11.3	+0	03.2	30	6 00	29	6 56	54 52	26	34			
10	329	10.9		01.6	68	45.6	-0	06.2	20	5 44	6 11	35	52 48	27	36			
11	344	10.6	-23	01.4	83	19.9	-0	15.5	10 N	5 28	5 54	6 17	23 51 45	11 27	39			
12	359	10.3	-23	01.2	97	54.2	-0	24.9	0	5 11	5 37	6 00	23 49 42	11 27	42			
13	14	10.0		01.0	112	28.5		34.3	10 S	4 52	5 19	5 42	47 40	27	45			
14	29	09.7		00.8	127	02.8		43.6	20	30	4 59	24	46 36	28	48			
15	44	09.5		00.6	141	37.1	-0	52.9	30	4 01	35	5 02	44 33	28	51			
16	59	09.2		00.4	156	11.4	-1	02.3	35	3 43	20	4 49	43 31	28	53			
17	74	08.9	-23	00.2	170	45.8	-1	11.6	40	3 20	4 02	4 34	23 41 30	11 28	56			
18	89	08.6	-23	00.0	185	20.1	-1	20.9	45	2 50	3 40	4 17	23 40 27	11 28	59			
19	104	08.3	-22	59.8	199	54.4		30.3	50	2 06	3 11	3 55	38 24	29	61			
20	119	08.0		59.6	214	28.8		39.6	52	1 40	2 56	44	37 23	29	62			
21	134	07.7		59.4	229	03.1		48.9	54	0 59	38	32	37 21	29	64			
22	149	07.4		59.2	243	37.5	-1	58.2	56	** ** *	2 17	18	36 19	29	66			
23	164	07.1		58.9	258	11.8	-2	07.5	58	** ** *	1 49	3 02	35 18	29	68			
24	179	06.8	-22	58.7	272	46.1	-2	16.7	60 S	** ** *	1 04	2 42	23 34 15	11 29	70			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 16 ^m 8			Mag: -4.0 PMG: 9 ^h 22 ^m			Mag: +1.3 PMG: 7 ^h 07 ^m			Mag: -2.2 PMG: 4 ^h 56 ^m			Mag: +0.5 PMG: 9 ^h 57 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	100	05.4	219	42.3	-18	36.9	253	00.9	-9	33.5	285	53.1	+3	51.3	210	16.0	-20	29.6
1	115	07.9	234	41.6		37.6	268	02.1		34.0	300	55.5		51.3	225	18.2		29.6
2	130	10.4	249	41.0		38.3	283	03.2		34.5	315	57.9		51.3	240	20.4		29.7
3	145	12.8	264	40.3		38.9	298	04.4		35.0	331	00.3		51.3	255	22.6		29.7
4	160	15.3	279	39.6		39.6	313	05.5		35.5	346	02.7		51.3	270	24.7		29.7
5	175	17.8	294	39.0	-18	40.3	328	06.7	-9	36.0	1	05.1	+3	51.3	285	26.9	-20	29.8
6	190	20.2	309	38.3	-18	40.9	343	07.8	-9	36.5	16	07.5	+3	51.3	300	29.1	-20	29.8
7	205	22.7	324	37.6		41.6	358	09.0		37.0	31	10.0		51.3	315	31.3		29.8
8	220	25.2	339	37.0		42.2	13	10.1		37.5	46	12.4		51.2	330	33.4		29.9
9	235	27.6	354	36.3		42.9	28	11.3		37.9	61	14.8		51.2	345	35.6		29.9
10	250	30.1	9	35.7		43.6	43	12.4		38.4	76	17.2		51.2	0	37.8		30.0
11	265	32.6	24	35.0	-18	44.2	58	13.6	-9	38.9	91	19.6	+3	51.2	15	40.0	-20	30.0
12	280	35.0	39	34.3	-18	44.9	73	14.7	-9	39.4	106	22.0	+3	51.2	30	42.1	-20	30.0
13	295	37.5	54	33.7		45.5	88	15.8		39.9	121	24.4		51.2	45	44.3		30.1
14	310	39.9	69	33.0		46.2	103	17.0		40.4	136	26.8		51.2	60	46.5		30.1
15	325	42.4	84	32.3		46.8	118	18.1		40.9	151	29.2		51.2	75	48.7		30.1
16	340	44.9	99	31.7		47.5	133	19.3		41.4	166	31.6		51.2	90	50.9		30.2
17	355	47.3	114	31.0	-18	48.2	148	20.4	-9	41.9	181	34.1	+3	51.2	105	53.0	-20	30.2
18	10	49.8	129	30.3	-18	48.8	163	21.6	-9	42.4	196	36.5	+3	51.1	120	55.2	-20	30.2
19	25	52.3	144	29.7		49.5	178	22.7		42.8	211	38.9		51.1	135	57.4		30.3
20	40	54.7	159	29.0		50.1	193	23.9		43.3	226	41.3		51.1	150	59.6		30.3
21	55	57.2	174	28.3		50.8	208	25.0		43.8	241	43.7		51.1	166	01.7		30.4
22	70	59.7	189	27.7		51.4	223	26.2		44.3	256	46.1		51.1	181	03.9		30.4
23	86	02.1	204	27.0		52.1	238	27.3		44.8	271	48.5		51.1	196	06.1		30.4
24	101	04.6	219	26.3	-18	52.7	253	28.5	-9	45.3	286	50.9	+3	51.1	211	08.3	-20	30.5
Dif	—			-7 -7			+11 -5			+24 0			+22 0			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 21 ^d 6 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 8			SD: 14:8 PMG: 5 ^h 59 ^m Rº: 43 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	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	06.8	-22 58.7	272	46.1	-2 16.7	60 N	15 06	16 02	16 59	0 06 70	11 40 16			
1	194	06.5	58.5	287	20.5 ¹⁵⁴	26.0	58	23	14	17 06	04 68	42 19			
2	209	06.2	58.3	301	54.8 ¹⁵³	35.2	56	37	24	12	03 66	44 20			
3	224	05.9	58.1	316	29.1 ¹⁵³	44.5	54	15 49	32	18	02 64	46 22			
4	239	05.6	57.9	331	03.4 ¹⁵³	-2 53.7	52	16 00	40	24	01 63	48 23			
5	254	05.3	-22 57.7	345	37.8 ¹⁵⁴	-3 02.9	50	16 09	16 47	17 29	0 00 62	11 49 25			
6	269	05.0	-22 57.5	0	12.1 ¹⁵³	-3 12.1	45	16 29	17 03	17 40	** ** *	11 52 28			
7	284	04.7	57.2	14	46.4 ¹⁵³	21.3	40	16 46	16	50	** ** *	55 30			
8	299	04.4	57.0	29	20.7 ¹⁵³	30.5	35	17 00	28	17 59	** ** *	11 57 33			
9	314	04.2	56.8	43	55.0 ¹⁵³	39.7	30	12	38	18 08	** ** *	12 00 34			
10	329	03.9	56.6	58	29.3 ¹⁵³	48.8	20	32	17 56	24	** ** *	03 37			
11	344	03.6	-22 56.4	73	03.5 ¹⁵²	-3 57.9	10 N	17 50	18 13	18 40	** ** *	12 06 40			
12	359	03.3	-22 56.2	87	37.8 ¹⁵³	-4 07.1	0	18 08	18 30	18 56	** ** *	12 09 43			
13	14	03.0	55.9	102	12.0 ¹⁵²	16.2	10 S	25	18 48	19 15	** ** *	12 46			
14	29	02.7	55.7	116	46.3 ¹⁵³	25.2	20	18 43	19 08	19 37	** ** *	16 48			
15	44	02.4	55.5	131	20.5 ¹⁵²	34.3	30	19 05	32	20 05	** ** *	19 52			
16	59	02.1	55.3	145	54.7 ¹⁵²	43.3	35	17	19 47	23	** ** *	21 54			
17	74	01.8	-22 55.0	160	28.9 ¹⁵²	-4 52.4	40	19 32	20 05	20 46	** ** *	12 24 55			
18	89	01.5	-22 54.8	175	03.1 ¹⁵²	-5 01.4	45	19 50	20 27	21 15	** ** *	12 27 58			
19	104	01.2	54.6	189	37.3 ¹⁵²	10.4	50	20 11	20 55	21 59	** ** *	30 61			
20	119	00.9	54.4	204	11.4 ¹⁵¹	19.3	52	22	21 10	22 24	** ** *	31 63			
21	134	00.7	54.1	218	45.6 ¹⁵²	28.3	54	34	27	23 03	23 58 23	33 64			
22	149	00.4	53.9	233	19.7 ¹⁵¹	37.2	56	20 48	21 48	** ** *	55 22	35 66			
23	164	00.1	53.7	247	53.8 ¹⁵¹	46.1	58	21 04	22 15	** ** *	53 19	37 68			
24	178	59.8	-22 53.5	262	27.9 ¹⁵¹	-5 55.0	60 S	21 23	22 58	** ** *	23 49 18	12 39 70			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 12 ^m 9		Mag: -4.0 PMG: 9 ^h 23 ^m			Mag: +1.2 PMG: 7 ^h 06 ^m			Mag: -2.2 PMG: 4 ^h 52 ^m			Mag: +0.5 PMG: 9 ^h 54 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	101	04.6	219 26.3	-18 52.7	253 28.5	-9 45.3	286 50.9	+3 51.1	211 08.3	-20 30.5					
1	116	07.0	234 25.7	53.4	268 29.6	45.8	301 53.4	51.1	226 10.5	30.5					
2	131	09.5	249 25.0	54.0	283 30.8	46.3	316 55.8	51.1	241 12.6	30.5					
3	146	12.0	264 24.3	54.6	298 31.9	46.7	331 58.2	51.1	256 14.8	30.6					
4	161	14.4	279 23.6	55.3	313 33.1	47.2	347 00.6	51.1	271 17.0	30.6					
5	176	16.9	294 23.0	-18 55.9	328 34.2	-9 47.7	2 03.0	+3 51.0	286 19.2	-20 30.6					
6	191	19.4	309 22.3	-18 56.6	343 35.4	-9 48.2	17 05.4	+3 51.0	301 21.3	-20 30.7					
7	206	21.8	324 21.6	57.2	358 36.5	48.7	32 07.8	51.0	316 23.5	30.7					
8	221	24.3	339 20.9	57.9	13 37.7	49.2	47 10.3	51.0	331 25.7	30.7					
9	236	26.8	354 20.3	58.5	28 38.8	49.7	62 12.7	51.0	346 27.9	30.8					
10	251	29.2	9 19.6	59.1	43 40.0	50.2	77 15.1	51.0	1 30.1	30.8					
11	266	31.7	24 18.9	-18 59.8	58 41.1	-9 50.6	92 17.5	+3 51.0	16 32.2	-20 30.9					
12	281	34.2	39 18.2	-19 00.4	73 42.3	-9 51.1	107 19.9	+3 51.0	31 34.4	-20 30.9					
13	296	36.6	54 17.6	01.1	88 43.4	51.6	122 22.3	51.0	46 36.6	30.9					
14	311	39.1	69 16.9	01.7	103 44.6	52.1	137 24.8	51.0	61 38.8	31.0					
15	326	41.5	84 16.2	02.3	118 45.7	52.6	152 27.2	51.0	76 41.0	31.0					
16	341	44.0	99 15.5	03.0	133 46.9	53.1	167 29.6	51.0	91 43.1	31.0					
17	356	46.5	114 14.9	-19 03.6	148 48.0	-9 53.6	182 32.0	+3 51.0	106 45.3	-20 31.1					
18	11	48.9	129 14.2	-19 04.2	163 49.2	-9 54.0	197 34.4	+3 50.9	121 47.5	-20 31.1					
19	26	51.4	144 13.5	04.9	178 50.3	54.5	212 36.9	50.9	136 49.7	31.1					
20	41	53.9	159 12.8	05.5	193 51.4	55.0	227 39.3	50.9	151 51.8	31.2					
21	56	56.3	174 12.1	06.1	208 52.6	55.5	242 41.7	50.9	166 54.0	31.2					
22	71	58.8	189 11.4	06.8	223 53.7	56.0	257 44.1	50.9	181 56.2	31.2					
23	87	01.3	204 10.8	07.4	238 54.9	56.5	272 46.5	50.9	196 58.4	31.3					
24	102	03.7	219 10.1	-19 08.0	253 56.0	-9 56.9	287 49.0	+3 50.9	212 00.6	-20 31.3					
Dif	—		-7	-6	+11	-5	+24	0	+22	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: 22 ^d 6 PHE { SD: 14'8 PMG: 6 ^h 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	59.8	-22	53.5	262	27.9	-5 55.0	60 N	7	09	8	05	9	01	1 16 70
1	193	59.5		53.2	277	01.9 ¹⁵⁰	-6 03.9 ⁸⁹	58	7	02	7	54	8	45	12 68
2	208	59.2		53.0	291	36.0 ¹⁵¹	12.7 ⁸⁸	56	6	55	44	31	09	66	04 22
3	223	58.9		52.8	306	10.0 ¹⁵⁰	21.5 ⁸⁸	54		49	35	19	06	65	08 20
4	238	58.6		52.5	320	44.0 ¹⁵⁰	30.3 ⁸⁸	52		44	27	8	08	04	63
5	253	58.3	-22	52.3	335	18.0 ¹⁵⁰	-6 39.1 ⁸⁸	50	6	39	7	20	7	58	1 02 61
6	268	58.0	-22	52.1	349	51.9 ¹⁴⁹	-6 47.8 ⁸⁷	45	6	28	7	05	7	38	0 57 58
7	283	57.7		51.8	4	25.9 ¹⁵⁰	-6 56.5 ⁸⁷	40		18	6	52	22	53	55
8	298	57.5		51.6	18	59.8 ¹⁴⁹	-7 05.2 ⁸⁷	35		09	40	7	08	49	54
9	313	57.2		51.4	33	33.6 ¹⁴⁸	13.9 ⁸⁷	30	6	00	30	6	56	46	52
10	328	56.9		51.1	48	07.5 ¹⁴⁹	22.5 ⁸⁶	20	5	44	6	12	36	40	49
11	343	56.6	-22	50.9	62	41.3 ¹⁴⁸	-7 31.1 ⁸⁶	10 N	5	29	5	55	6	18	0 36 46
12	358	56.3	-22	50.7	77	15.1 ¹⁴⁸	-7 39.7 ⁸⁶	0	5	12	5	38	6	01	0 31 44
13	13	56.0		50.4	91	48.9 ¹⁴⁸	48.3 ⁸⁶	10 S	4	53	20	5	43	27	41
14	28	55.7		50.2	106	22.6 ¹⁴⁷	-7 56.8 ⁸⁵	20		31	5	00	25	22	38
15	43	55.4		49.9	120	56.3 ¹⁴⁷	-8 05.3 ⁸⁵	30	4	03	4	36	5	03	17 35
16	58	55.1		49.7	135	30.0 ¹⁴⁷	13.7 ⁸⁴	35	3	45	21	4	51	14	33
17	73	54.9	-22	49.4	150	03.7 ¹⁴⁷	-8 22.2 ⁸⁵	40	3	22	4	04	4	36	0 11 31
18	88	54.6	-22	49.2	164	37.3 ¹⁴⁶	-8 30.6 ⁸⁴	45	2	53	3	42	4	19	0 07 29
19	103	54.3		49.0	179	10.9 ¹⁴⁶	38.9 ⁸³	50	2	09	3	13	3	57	02 26
20	118	54.0		48.7	193	44.4 ¹⁴⁵	47.3 ⁸⁴	52	1	44	2	58	46	0	00 25
21	133	53.7		48.5	208	17.9 ¹⁴⁵	-8 55.6 ⁸³	54	1	05	41	34	**	**	**
22	148	53.4		48.2	222	51.4 ¹⁴⁵	-9 03.8 ⁸²	56	**	**	2	20	21	**	**
23	163	53.1		48.0	237	24.9 ¹⁴⁵	12.1 ⁸³	58	**	**	1	53	3	05	**
24	178	52.8	-22	47.7	251	58.3 ¹⁴⁴	-9 20.3 ⁸²	60 S	**	**	1	11	2	45	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 08 ^m 9		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: +1.2 PMG: 7 ^h 04 ^m		Mag: -2.2 PMG: 4 ^h 48 ^m		Mag: +0.5 PMG: 9 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	102	03.7	219	10.1	253	56.0	287	49.0	212	00.6
1	117	06.2	234	09.4	268	57.2	302	51.4	227	02.7
2	132	08.7	249	08.7	283	58.3	317	53.8	242	04.9
3	147	11.1	264	08.0	298	59.5	332	56.2	257	07.1
4	162	13.6	279	07.3	314	00.6	347	58.6	272	09.3
5	177	16.0	294	06.7	329	01.8	3	01.1	287	11.5
6	192	18.5	309	06.0	344	02.9	18	03.5	302	13.6
7	207	21.0	324	05.3	359	04.1	33	05.9	317	15.8
8	222	23.4	339	04.6	14	05.3	48	08.3	332	18.0
9	237	25.9	354	03.9	29	06.4	63	10.8	347	20.2
10	252	28.4	9	03.2	44	07.6	78	13.2	2	22.4
11	267	30.8	24	02.5	59	08.7	93	15.6	17	24.5
12	282	33.3	39	01.9	74	09.9	108	18.0	32	26.7
13	297	35.8	54	01.2	89	11.0	123	20.5	47	28.9
14	312	38.2	69	00.5	104	12.2	138	22.9	62	31.1
15	327	40.7	83	59.8	119	13.3	153	25.3	77	33.3
16	342	43.1	98	59.1	134	14.5	168	27.7	92	35.4
17	357	45.6	113	58.4	149	15.6	183	30.2	107	37.6
18	12	48.1	128	57.7	164	16.8	198	32.6	122	39.8
19	27	50.5	143	57.0	179	17.9	213	35.0	137	42.0
20	42	53.0	158	56.3	194	19.1	228	37.4	152	44.2
21	57	55.5	173	55.6	209	20.2	243	39.9	167	46.4
22	72	57.9	188	54.9	224	21.4	258	42.3	182	48.5
23	88	00.4	203	54.2	239	22.5	273	44.7	197	50.7
24	103	02.9	218	53.6	254	23.7	288	47.2	212	52.9
Dif	—		-7	-6	+12	-5	+24	0	+22	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 23 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7										
	PMG: 12 ^h 04 ^m 7			SD: 14'8 PMG: 7 ^h 25 ^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	
0	178	52.8	-22	47.7	251	58.3	-9 20.3	60 N	15 09	16 05	17 01	2 26 70	12 15 22	
1	193	52.6		47.5	266	31.7 ¹⁴⁴	28.4 81	58	25	16	08	20 68	21 24	
2	208	52.3		47.2	281	05.0 ¹⁴³	36.6 82	56	39	26	14	15 66	27 26	
3	223	52.0		47.0	295	38.3 ¹⁴³	44.6 80	54	15 51	35	20	11 64	32 27	
4	238	51.7		46.7	310	11.6 ¹⁴³	-9 52.7 81	52	16 02	42	26	07 63	36 29	
5	253	51.4	-22	46.5	324	44.8 ¹⁴²	-10 00.7 80	50	16 11	16 49	17 31	2 03 62	12 41 30	
6	268	51.1	-22	46.2	339	18.0 ¹⁴²	-10 08.7 80	45	16 31	17 05	17 42	1 55 59	12 50 32	
7	283	50.8		46.0	353	51.2 ¹⁴²	16.6 79	40	16 48	18	17 52	48 57	12 57 35	
8	298	50.5		45.7	8	24.3 ¹⁴¹	24.5 79	35	17 01	29	18 01	43 54	13 04 36	
9	313	50.3		45.5	22	57.3 ¹⁴⁰	32.4 79	30	13	39	09	38 52	09 39	
10	328	50.0		45.2	37	30.4 ¹⁴¹	40.2 78	20	34	17 58	25	29 50	19 41	
11	343	49.7	-22	45.0	52	03.4 ¹⁴⁰	-10 48.0 78	10 N	17 52	18 14	18 41	1 22 47	13 28 43	
12	358	49.4	-22	44.7	66	36.3 ¹³⁹	-10 55.7 77	0	18 08	18 31	18 57	1 15 45	13 36 46	
13	13	49.1		44.4	81	09.2 ¹³⁹	-11 03.4 77	10 S	25	18 48	19 15	08 42	44 48	
14	28	48.8		44.2	95	42.1 ¹³⁹	11.0 76	20	18 44	19 08	19 37	1 00 40	13 53 50	
15	43	48.6		43.9	110	14.9 ¹³⁸	18.6 76	30	19 05	32	20 05	0 52 37	14 03 53	
16	58	48.3		43.7	124	47.7 ¹³⁸	26.2 76	35	18	19 47	23	47 36	09 55	
17	73	48.0	-22	43.4	139	20.4 ¹³⁷	-11 33.7 75	40	19 32	20 05	20 46	0 42 33	14 15 57	
18	88	47.7	-22	43.1	153	53.1 ¹³⁷	-11 41.2 75	45	19 49	20 26	21 15	0 36 31	14 23 59	
19	103	47.4		42.9	168	25.7 ¹³⁶	48.6 74	50	20 11	20 55	21 57	28 28	32 62	
20	118	47.1		42.6	182	58.3 ¹³⁶	-11 56.0 74	52	21	21 09	22 22	25 27	37 62	
21	133	46.8		42.3	197	30.8 ¹³⁵	-12 03.3 73	54	33	26	22 59	21 25	41 65	
22	148	46.6		42.1	212	03.3 ¹³⁵	10.6 73	56	20 47	21 46	** **	17 24	47 65	
23	163	46.3		41.8	226	35.8 ¹³⁵	17.8 72	58	21 02	22 13	** **	12 22	53 67	
24	178	46.0	-22	41.5	241	08.2 ¹³⁴	-12 25.0 72	60 S	21 21	22 53	** **	0 07 20	14 59 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 05 ^m 0		Mag: -4.0 PMG: 9 ^h 25 ^m			Mag: +1.2 PMG: 7 ^h 02 ^m			Mag: -2.2 PMG: 4 ^h 44 ^m			Mag: +0.5 PMG: 9 ^h 47 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	103	02.9	218	53.6	-19 22.8	254	23.7	-10 08.5	288	47.2	+3 50.8	212	52.9	-20 32.2
1	118	05.3	233	52.9	23.4	269	24.8	09.0	303	49.6	50.8	227	55.1	32.2
2	133	07.8	248	52.2	24.0	284	26.0	09.5	318	52.0	50.8	242	57.3	32.2
3	148	10.3	263	51.5	24.6	299	27.1	10.0	333	54.4	50.8	257	59.4	32.3
4	163	12.7	278	50.8	25.2	314	28.3	10.5	348	56.9	50.8	273	01.6	32.3
5	178	15.2	293	50.1	-19 25.8	329	29.4	-10 10.9	3	59.3	+3 50.8	288	03.8	-20 32.3
6	193	17.6	308	49.4	-19 26.4	344	30.6	-10 11.4	19	01.7	+3 50.8	303	06.0	-20 32.4
7	208	20.1	323	48.7	27.0	359	31.7	11.9	34	04.2	50.8	318	08.2	32.4
8	223	22.6	338	48.0	27.6	14	32.9	12.4	49	06.6	50.8	333	10.3	32.4
9	238	25.0	353	47.3	28.2	29	34.0	12.9	64	09.0	50.8	348	12.5	32.5
10	253	27.5	8	46.6	28.8	44	35.2	13.3	79	11.5	50.8	3	14.7	32.5
11	268	30.0	23	45.9	-19 29.4	59	36.3	-10 13.8	94	13.9	+3 50.8	18	16.9	-20 32.5
12	283	32.4	38	45.2	-19 30.0	74	37.5	-10 14.3	109	16.3	+3 50.8	33	19.1	-20 32.6
13	298	34.9	53	44.5	30.6	89	38.6	14.8	124	18.7	50.8	48	21.3	32.6
14	313	37.4	68	43.8	31.2	104	39.8	15.2	139	21.2	50.8	63	23.4	32.6
15	328	39.8	83	43.1	31.8	119	41.0	15.7	154	23.6	50.8	78	25.6	32.7
16	343	42.3	98	42.4	32.4	134	42.1	16.2	169	26.0	50.8	93	27.8	32.7
17	358	44.8	113	41.7	-19 33.0	149	43.3	-10 16.7	184	28.5	+3 50.8	108	30.0	-20 32.7
18	13	47.2	128	41.0	-19 33.6	164	44.4	-10 17.2	199	30.9	+3 50.8	123	32.2	-20 32.8
19	28	49.7	143	40.3	34.2	179	45.6	17.6	214	33.3	50.8	138	34.4	32.8
20	43	52.1	158	39.6	34.8	194	46.7	18.1	229	35.8	50.8	153	36.5	32.9
21	58	54.6	173	38.9	35.4	209	47.9	18.6	244	38.2	50.8	168	38.7	32.9
22	73	57.1	188	38.2	36.0	224	49.0	19.1	259	40.6	50.8	183	40.9	32.9
23	88	59.5	203	37.4	36.6	239	50.2	19.6	274	43.1	50.8	198	43.1	33.0
24	104	02.0	218	36.7	-19 37.1	254	51.3	-10 20.0	289	45.5	+3 50.8	213	45.3	-20 33.0
Dif	—		-7		-6	+12		-5	+24		0	+22		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 05 ^m 2			Edad: 24 ^d 6 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'2 PMG: 8 ^h 11 ^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	178	46.0	-22	241	08.2	-12	25.0	60 N	7 08	8 04	9 00	3 36	69	12 37	28
1	193	45.7		255	40.5 ¹³³		32.1	71	7 01	7 53	8 44	28	67	45	30
2	208	45.4		270	12.8 ¹³³		39.2	71	6 55	43	30	21	66	53	31
3	223	45.1		284	45.1 ¹³³		46.2	70	54	49	35	18	15	64	12 59 30
4	238	44.9		299	17.3 ¹³²	-12	53.2	70	52	44	27	8 07	10	62	13 05 34
5	253	44.6	-22	313	49.4 ¹³¹	-13	00.2	70	50	6 39	7 20	7 58	3 05	61	13 11 35
6	268	44.3	-22	328	21.5 ¹³¹	-13	07.0	68	45	6 28	7 05	7 38	2 54	59	13 22 38
7	283	44.0		342	53.6 ¹³¹		13.8	68	40	18	6 52	22	45	57	32 39
8	298	43.7		357	25.6 ¹³⁰		20.6	68	35	09	41	7 08	37	55	40 41
9	313	43.5		11	57.5 ¹²⁹		27.3	67	30	6 01	30	6 57	30	54	13 48 42
10	328	43.2		26	29.4 ¹²⁹		34.0	67	20	5 45	6 12	36	19	51	14 00 45
11	343	42.9	-22	41	01.2 ¹²⁸	-13	40.6	66	10 N	5 29	5 56	6 18	2 09	49	14 11 47
12	358	42.6	-22	55	33.0 ¹²⁸	-13	47.1	65	0	5 13	5 39	6 01	2 00	46	14 22 48
13	13	42.3		70	04.8 ¹²⁸	-13	53.6	65	10 S	4 55	22	5 44	1 50	45	32 50
14	28	42.0		84	36.4 ¹²⁶	-14	00.0	64	20	33	5 02	26	40	43	43 52
15	43	41.8		99	08.1 ¹²⁷	-14	06.4	64	30	4 05	4 38	5 05	29	40	14 56 54
16	58	41.5		113	39.6 ¹²⁵		12.7	63	35	3 47	23	4 52	23	38	15 04 55
17	73	41.2	-22	128	11.2 ¹²⁶	-14	18.9	62	40	3 24	4 05	4 38	1 15	37	15 12 57
18	88	40.9	-22	142	42.6 ¹²⁴	-14	25.1	62	45	2 55	3 44	4 21	1 07	35	15 22 59
19	103	40.6		157	14.0 ¹²⁴		31.2	61	50	2 13	15	3 59	0 56	33	34 61
20	118	40.4		171	45.4 ¹²⁴		37.3	61	52	1 48	3 01	49	52	31	39 62
21	133	40.1		186	16.7 ¹²³		43.3	60	54	1 11	2 44	37	46	30	46 63
22	148	39.8		200	47.9 ¹²²		49.2	59	56	** ** *	2 24	24	41	28	15 52 65
23	163	39.5		215	19.1 ¹²²	-14	55.1	59	58	** ** *	1 57	3 08	34	27	16 00 66
24	178	39.2	-22	229	50.2 ¹²¹	-15	00.9	58	60 S	** ** *	1 17	2 49	0 27	25	16 09 68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 01 ^m 1		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +1.2 PMG: 7 ^h 00 ^m		Mag: -2.2 PMG: 4 ^h 40 ^m		Mag: +0.5 PMG: 9 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	104	02.0	218	36.7	-19	37.1	254	51.3	-10	20.0
1	119	04.5	233	36.0		37.7	269	52.5		20.5
2	134	06.9	248	35.3		38.3	284	53.6		21.0
3	149	09.4	263	34.6		38.9	299	54.8		21.5
4	164	11.9	278	33.9		39.5	314	55.9		21.9
5	179	14.3	293	33.2	-19	40.1	329	57.1	-10	22.4
6	194	16.8	308	32.5	-19	40.6	344	58.3	-10	22.9
7	209	19.2	323	31.8		41.2	359	59.4		23.4
8	224	21.7	338	31.1		41.8	15	00.6		23.8
9	239	24.2	353	30.4		42.4	30	01.7		24.3
10	254	26.6	8	29.7		43.0	45	02.9		24.8
11	269	29.1	23	28.9	-19	43.5	60	04.0	-10	25.3
12	284	31.6	38	28.2	-19	44.1	75	05.2	-10	25.7
13	299	34.0	53	27.5		44.7	90	06.3		26.2
14	314	36.5	68	26.8		45.3	105	07.5		26.7
15	329	39.0	83	26.1		45.8	120	08.6		27.2
16	344	41.4	98	25.4		46.4	135	09.8		27.6
17	359	43.9	113	24.7	-19	47.0	150	11.0	-10	28.1
18	14	46.4	128	23.9	-19	47.5	165	12.1	-10	28.6
19	29	48.8	143	23.2		48.1	180	13.3		29.1
20	44	51.3	158	22.5		48.7	195	14.4		29.5
21	59	53.7	173	21.8		49.2	210	15.6		30.0
22	74	56.2	188	21.1		49.8	225	16.7		30.5
23	89	58.7	203	20.4		50.4	240	17.9		31.0
24	105	01.1	218	19.6	-19	50.9	255	19.0	-10	31.4
Dif	—		-7		-6		+12		-5	
								+24		0
									+22	
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 05 ^m 6			Edad: 25 ^d 6 PHE { SD: 15/0 PMG: 8 ^h 58 ^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	39.2	-22	34.9	229	50.2	-15	00.9	60 N	15 12	16 08	17 04	4 45	67	13 05	35		
1	193	39.0		34.6	244	21.3 ¹²¹		06.6 ⁵⁷	58	28	19	11	35	65	15	37		
2	208	38.7		34.3	258	52.3 ¹²⁰		12.2 ⁵⁶	56	42	28	17	27	63	24	38		
3	223	38.4		34.1	273	23.3 ¹²⁰		17.8 ⁵⁶	54	15 54	37	23	19	62	32	39		
4	238	38.1		33.8	287	54.2 ¹¹⁹		23.4 ⁵⁶	52	16 04	45	28	12	61	39	40		
5	253	37.9	-22	33.5	302	25.0 ¹¹⁸	-15	28.8 ⁵⁴	50	16 14	16 52	17 33	4 06	60	13 46	41		
6	268	37.6	-22	33.2	316	55.8 ¹¹⁸	-15	34.2 ⁵⁴	45	16 33	17 07	17 44	3 53	58	14 00	42		
7	283	37.3		32.9	331	26.5 ¹¹⁷		39.6 ⁵⁴	40	16 49	20	17 53	42	57	11	44		
8	298	37.0		32.6	345	57.2 ¹¹⁷		44.8 ⁵²	35	17 03	31	18 02	32	56	21	45		
9	313	36.7		32.3	0	27.8 ¹¹⁶		50.0 ⁵²	30	15	41	10	24	55	30	46		
10	328	36.5		32.0	14	58.4 ¹¹⁶	-15	55.1 ⁵¹	20	35	17 59	26	3 10	53	45	47		
11	343	36.2	-22	31.7	29	28.9 ¹¹⁵	-16	00.1 ⁵⁰	10 N	17 53	18 15	18 42	2 58	51	14 58	49		
12	358	35.9	-22	31.4	43	59.3 ¹¹⁴	-16	05.1 ⁵⁰	0	18 09	18 32	18 58	2 46	50	15 10	50		
13	13	35.6		31.1	58	29.7 ¹¹⁴		10.0 ⁴⁹	10 S	26	18 49	19 16	35	48	22	52		
14	28	35.4		30.8	73	00.1 ¹¹⁴		14.8 ⁴⁸	20	18 44	19 09	19 38	23	46	35	53		
15	43	35.1		30.5	87	30.3 ¹¹²		19.5 ⁴⁷	30	19 05	33	20 05	09	44	50	55		
16	58	34.8		30.2	102	00.5 ¹¹²		24.2 ⁴⁷	35	18	19 47	23	2 01	43	15 59	55		
17	73	34.5	-22	30.0	116	30.7 ¹¹²	-16	28.7 ⁴⁵	40	19 32	20 04	20 45	1 52	42	16 09	56		
18	88	34.3	-22	29.7	131	00.8 ¹¹¹	-16	33.2 ⁴⁵	45	19 49	20 26	21 14	1 42	40	16 21	57		
19	103	34.0		29.4	145	30.8 ¹¹⁰		37.7 ⁴⁵	50	20 10	20 54	21 56	29	38	35	59		
20	118	33.7		29.1	160	00.8 ¹¹⁰		42.0 ⁴³	52	21	21 08	22 20	23	37	41	60		
21	133	33.4		28.7	174	30.8 ¹¹⁰		46.3 ⁴³	54	32	24	22 55	16	36	49	60		
22	148	33.2		28.4	189	00.6 ¹⁰⁸		50.5 ⁴²	56	20 45	21 44	** ** *	09	35	16 57	62		
23	163	32.9		28.1	203	30.5 ¹⁰⁹		54.6 ⁴¹	58	21 01	22 10	** ** *	1 01	33	17 06	63		
24	178	32.6	-22	27.8	218	00.2 ¹⁰⁷	-16	58.6 ⁴⁰	60 S	21 19	22 48	** ** *	0 52	31	17 17	64		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 16 ^h 57 ^m 1		Mag: -4.0 PMG: 9 ^h 27 ^m			Mag: +1.2 PMG: 6 ^h 58 ^m			Mag: -2.2 PMG: 4 ^h 36 ^m				Mag: +0.5 PMG: 9 ^h 40 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	
0	105	01.1	218	19.6	-19	50.9	255	19.0	-10	31.4	290	44.1	+3	50.8	214	37.7	-20	33.8
1	120	03.6	233	18.9		51.5	270	20.2		31.9	305	46.5		50.8	229	39.9		33.8
2	135	06.1	248	18.2		52.1	285	21.4		32.4	320	49.0		50.8	244	42.0		33.9
3	150	08.5	263	17.5		52.6	300	22.5		32.9	335	51.4		50.9	259	44.2		33.9
4	165	11.0	278	16.8		53.2	315	23.7		33.3	350	53.8		50.9	274	46.4		33.9
5	180	13.5	293	16.1	-19	53.8	330	24.8	-10	33.8	5	56.3	+3	50.9	289	48.6	-20	34.0
6	195	15.9	308	15.3	-19	54.3	345	26.0	-10	34.3	20	58.7	+3	50.9	304	50.8	-20	34.0
7	210	18.4	323	14.6		54.9	0	27.1		34.8	36	01.2		50.9	319	53.0		34.0
8	225	20.9	338	13.9		55.4	15	28.3		35.2	51	03.6		50.9	334	55.2		34.1
9	240	23.3	353	13.2		56.0	30	29.4		35.7	66	06.1		50.9	349	57.3		34.1
10	255	25.8	8	12.4		56.5	45	30.6		36.2	81	08.5		50.9	4	59.5		34.1
11	270	28.2	23	11.7	-19	57.1	60	31.8	-10	36.6	96	11.0	+3	50.9	20	01.7	-20	34.2
12	285	30.7	38	11.0	-19	57.7	75	32.9	-10	37.1	111	13.4	+3	50.9	35	03.9	-20	34.2
13	300	33.2	53	10.3		58.2	90	34.1		37.6	126	15.9		50.9	50	06.1		34.2
14	315	35.6	68	09.5		58.8	105	35.2		38.1	141	18.3		50.9	65	08.3		34.3
15	330	38.1	83	08.8		59.3	120	36.4		38.5	156	20.8		50.9	80	10.5		34.3
16	345	40.6	98	08.1	-19	59.9	135	37.5		39.0	171	23.2		50.9	95	12.6		34.3
17	0	43.0	113	07.4	-20	00.4	150	38.7	-10	39.5	186	25.6	+3	50.9	110	14.8	-20	34.4
18	15	45.5	128	06.6	-20	01.0	165	39.9	-10	39.9	201	28.1	+3	50.9	125	17.0	-20	34.4
19	30	48.0	143	05.9		01.5	180	41.0		40.4	216	30.5		50.9	140	19.2		34.4
20	45	50.4	158	05.2		02.1	195	42.2		40.9	231	33.0		50.9	155	21.4		34.5
21	60	52.9	173	04.5		02.6	210	43.3		41.4	246	35.4		50.9	170	23.6		34.5
22	75	55.4	188	03.7		03.1	225	44.5		41.8	261	37.9		51.0	185	25.8		34.5
23	90	57.8	203	03.0		03.7	240	45.6		42.3	276	40.3		51.0	200	27.9		34.6
24	106	00.3	218	02.3	-20	04.2	255	46.8	-10	42.8	291	42.8	+3	51.0	215	30.1	-20	34.6
Dif	—		-7		-6		+12		-5		+24		0		+22			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 06 ^m 0				Edad: 26 ^d 6 PHE { 4 ^h : 55/9 12 ^h : 56/2 20 ^h : 56/4 PMG: 9 ^h 48 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	32.6	-22	27.8	218	00.2	-16	58.6	60 N	7 07	8 03	8 58	5 52	61	13 40	46	
1	193	32.3		27.5	232	29.9 ¹⁰⁷	-17	02.5 ³⁹	58	7 01	7 52	42	40	61	13 52	47	
2	208	32.1		27.2	246	59.6 ¹⁰⁷		06.4	56	6 54	43	29	30	60	14 02	48	
3	223	31.8		26.9	261	29.2 ¹⁰⁶		10.1 ³⁷	54	49	34	17	21	59	11	48	
4	238	31.5		26.6	275	58.7 ¹⁰⁵		13.8 ³⁷	52	43	27	8 07	13	59	19	49	
5	253	31.2	-22	26.3	290	28.2 ¹⁰⁵	-17	17.4 ³⁶	50	6 39	7 20	7 57	5 06	58	14 27	48	
6	268	31.0	-22	26.0	304	57.6 ¹⁰⁴	-17	21.0 ³⁶	45	6 28	7 05	7 38	4 51	57	14 42	50	
7	283	30.7		25.7	319	27.0 ¹⁰⁴		24.4 ³⁴	40	18	6 52	22	39	55	14 55	50	
8	298	30.4		25.4	333	56.3 ¹⁰³		27.7 ³³	35	09	41	7 09	28	55	15 06	51	
9	313	30.1		25.1	348	25.6 ¹⁰³		31.0 ³³	30	6 01	31	6 57	19	54	16	51	
10	328	29.9		24.8	2	54.8 ¹⁰²		34.1 ³¹	20	5 45	6 13	37	4 03	53	32	52	
11	343	29.6	-22	24.4	17	23.9 ¹⁰¹	-17	37.2 ³¹	10 N	5 30	5 56	6 19	3 49	52	15 47	52	
12	358	29.3	-22	24.1	31	53.0 ¹⁰¹	-17	40.2 ³⁰	0	5 14	5 40	6 02	3 36	51	16 00	53	
13	13	29.1		23.8	46	22.1 ¹⁰¹		43.1 ²⁹	10 S	4 56	23	5 46	23	51	14	53	
14	28	28.8		23.5	60	51.1 ¹⁰⁰		45.9 ²⁸	20	34	5 03	27	3 09	50	28	54	
15	43	28.5		23.2	75	20.0 ⁹⁹		48.6 ²⁷	30	4 06	4 39	5 06	2 53	49	45	54	
16	58	28.2		22.9	89	48.9 ⁹⁹		51.2 ²⁶	35	3 49	25	4 54	44	48	16 54	55	
17	73	28.0	-22	22.6	104	17.7 ⁹⁸	-17	53.8 ²⁶	40	3 27	4 07	4 40	2 34	47	17 05	55	
18	88	27.7	-22	22.2	118	46.5 ⁹⁸	-17	56.2 ²⁴	45	2 58	3 46	4 23	2 22	46	17 18	55	
19	103	27.4		21.9	133	15.3 ⁹⁸	-17	58.5 ²³	50	2 16	18	4 01	07	45	34	55	
20	118	27.2		21.6	147	44.0 ⁹⁷	-18	00.8 ²³	52	1 52	3 04	3 51	2 00	44	41	56	
21	133	26.9		21.3	162	12.6 ⁹⁶		02.9 ²¹	54	1 17	2 48	40	1 52	44	49	57	
22	148	26.6		21.0	176	41.2 ⁹⁶		05.0 ²¹	56	** ** *	28	27	44	43	17 59	56	
23	163	26.4		20.6	191	09.7 ⁹⁵		07.0 ²⁰	58	** ** *	2 02	3 11	34	42	18 09	57	
24	178	26.1	-22	20.3	205	38.2 ⁹⁵	-18	08.8 ¹⁸	60 S	** ** *	1 24	2 53	1 23	41	18 21	57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 53 ^m 2		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +1.2 PMG: 6 ^h 56 ^m		Mag: -2.3 PMG: 4 ^h 32 ^m		Mag: +0.5 PMG: 9 ^h 37 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	106	00.3	218	02.3	255	46.8	291	42.8	215	30.1
1	121	02.7	233	01.6	270	48.0	306	45.2	230	32.3
2	136	05.2	248	00.8	285	49.1	321	47.7	245	34.5
3	151	07.7	263	00.1	300	50.3	336	50.1	260	36.7
4	166	10.1	277	59.4	315	51.4	351	52.6	275	38.9
5	181	12.6	292	58.6	330	52.6	6 55.1	+3 51.0	290	41.1
6	196	15.1	307	57.9	345	53.7	21 57.5	+3 51.0	305	43.3
7	211	17.5	322	57.2	0 54.9	46.1	37 00.0	51.0	320	45.4
8	226	20.0	337	56.4	15 56.1	46.5	52 02.4	51.0	335	47.6
9	241	22.5	352	55.7	30 57.2	47.0	67 04.9	51.0	350	49.8
10	256	24.9	7 55.0	09.6	45 58.4	47.5	82 07.3	51.0	5 52.0	34.9
11	271	27.4	22 54.2	-20 10.1	60 59.5	-10 47.9	97 09.8	+3 51.1	20 54.2	-20 35.0
12	286	29.8	37 53.5	-20 10.7	76 00.7	-10 48.4	112 12.2	+3 51.1	35 56.4	-20 35.0
13	301	32.3	52 52.8	11.2	91 01.9	48.9	127 14.7	51.1	50 58.6	35.0
14	316	34.8	67 52.0	11.7	106 03.0	49.3	142 17.1	51.1	66 00.8	35.1
15	331	37.2	82 51.3	12.3	121 04.2	49.8	157 19.6	51.1	81 02.9	35.1
16	346	39.7	97 50.6	12.8	136 05.3	50.3	172 22.0	51.1	96 05.1	35.1
17	1 42.2	112 49.8	-20 13.3	151 06.5	-10 50.7	187 24.5	+3 51.1	111 07.3	-20 35.2	
18	16 44.6	127 49.1	-20 13.8	166 07.7	-10 51.2	202 27.0	+3 51.1	126 09.5	-20 35.2	
19	31 47.1	142 48.3	14.4	181 08.8	51.7	217 29.4	51.1	141 11.7	35.2	
20	46 49.6	157 47.6	14.9	196 10.0	52.1	232 31.9	51.1	156 13.9	35.3	
21	61 52.0	172 46.9	15.4	211 11.1	52.6	247 34.3	51.1	171 16.1	35.3	
22	76 54.5	187 46.1	15.9	226 12.3	53.1	262 36.8	51.2	186 18.3	35.3	
23	91 57.0	202 45.4	16.5	241 13.4	53.5	277 39.2	51.2	201 20.4	35.4	
24	106 59.4	217 44.7	-20 17.0	256 14.6	-10 54.0	292 41.7	+3 51.2	216 22.6	-20 35.4	
Dif	—		-7		+12		+25		+22	
			-5		-5		0		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: 27 ^d 6 PHE { 4 ^h : 56 ^h 6 12 ^h : 56 ^h 8 20 ^h : 57 ^h 0 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	178	26.1	-22	20.3	205	38.2	-18 08.8	60 N	15 16	16 11	17 06	6 53 53	14 26 58		
1	193	25.8		20.0	220	06.7	95 10.6	58	32	22	13	41 53	39 57		
2	208	25.5		19.7	234	35.1	94 12.2	56	45	31	19	30 53	50 57		
3	223	25.3		19.3	249	03.4	93 13.8	54	15 57	39	25	20 53	14 59 57		
4	238	25.0		19.0	263	31.8	94 15.3	52	16 07	47	30	12 53	15 08 57		
5	253	24.7	-22	18.7	278	00.0	92 -18 16.7	50	16 16	16 54	17 35	6 04 53	15 15 57		
6	268	24.5	-22	18.4	292	28.2	92 -18 17.9	45	16 36	17 09	17 46	5 48 53	15 32 56		
7	283	24.2		18.0	306	56.4	92 19.1	40	16 51	21	17 55	34 54	45 56		
8	298	23.9		17.7	321	24.5	91 20.2	35	17 05	32	18 04	23 54	15 57 55		
9	313	23.7		17.4	335	52.6	91 21.1	30	16	17 42	12	5 13 54	16 07 55		
10	328	23.4		17.1	350	20.7	91 22.0	20	36	18 00	27	4 56 54	24 55		
11	343	23.1	-22	16.7	4	48.7	90 -18 22.8	10 N	17 54	18 16	18 42	4 41 54	16 39 54		
12	358	22.9	-22	16.4	19	16.7	90 -18 23.5	0	18 10	18 33	18 59	4 27 54	16 53 54		
13	13	22.6		16.1	33	44.6	89 24.0	10 S	27	18 50	19 16	4 14 53	17 07 53		
14	28	22.3		15.7	48	12.5	89 24.5	20	18 45	19 09	19 38	3 59 53	22 53		
15	43	22.1		15.4	62	40.3	88 24.8	30	19 05	33	20 05	42 53	39 52		
16	58	21.8		15.1	77	08.2	89 25.1	35	18	19 47	23	32 53	17 49 52		
17	73	21.5	-22	14.7	91	35.9	87 -18 25.2	40	19 32	20 04	20 45	3 21 53	18 00 52		
18	88	21.3	-22	14.4	106	03.7	88 -18 25.3	45	19 49	20 25	21 13	3 08 53	18 13 52		
19	103	21.0		14.1	120	31.4	87 25.2	50	20 10	20 53	21 54	2 52 53	29 51		
20	118	20.7		13.7	134	59.1	87 25.0	52	20	21 06	22 17	44 53	37 50		
21	133	20.5		13.4	149	26.7	86 24.8	54	31	23	22 50	36 53	46 50		
22	148	20.2		13.0	163	54.3	86 24.4	56	44	21 42	** **	27 52	18 55 50		
23	163	19.9		12.7	178	21.9	86 23.9	58	20 59	22 07	** **	16 52	19 06 49		
24	178	19.7	-22	12.4	192	49.4	85 -18 23.3	60 S	21 17	22 42	** **	2 04 52	19 18 48		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 49 ^m 3		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +1.2 PMG: 6 ^h 54 ^m		Mag: -2.3 PMG: 4 ^h 28 ^m		Mag: +0.5 PMG: 9 ^h 33 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	106	59.4	217	44.7	-20	17.0	256	14.6	-10	54.0	292	41.7	+3	51.2	216	22.6	-20	35.4
1	122	01.9	232	43.9		17.5	271	15.8		54.5	307	44.2		51.2	231	24.8		35.4
2	137	04.3	247	43.2		18.0	286	16.9		54.9	322	46.6		51.2	246	27.0		35.5
3	152	06.8	262	42.4		18.5	301	18.1		55.4	337	49.1		51.2	261	29.2		35.5
4	167	09.3	277	41.7		19.1	316	19.2		55.9	352	51.5		51.2	276	31.4		35.5
5	182	11.7	292	40.9	-20	19.6	331	20.4	-10	56.3	7	54.0	+3	51.2	291	33.6	-20	35.6
6	197	14.2	307	40.2	-20	20.1	346	21.6	-10	56.8	22	56.5	+3	51.2	306	35.8	-20	35.6
7	212	16.7	322	39.5		20.6	1	22.7		57.3	37	58.9		51.2	321	38.0		35.6
8	227	19.1	337	38.7		21.1	16	23.9		57.7	53	01.4		51.3	336	40.1		35.7
9	242	21.6	352	38.0		21.6	31	25.0		58.2	68	03.8		51.3	351	42.3		35.7
10	257	24.1	7	37.2		22.1	46	26.2		58.7	83	06.3		51.3	6	44.5		35.7
11	272	26.5	22	36.5	-20	22.7	61	27.4	-10	59.1	98	08.8	+3	51.3	21	46.7	-20	35.8
12	287	29.0	37	35.7	-20	23.2	76	28.5	-10	59.6	113	11.2	+3	51.3	36	48.9	-20	35.8
13	302	31.5	52	35.0		23.7	91	29.7	-11	00.1	128	13.7		51.3	51	51.1		35.8
14	317	33.9	67	34.2		24.2	106	30.9		00.5	143	16.1		51.3	66	53.3		35.9
15	332	36.4	82	33.5		24.7	121	32.0		01.0	158	18.6		51.3	81	55.5		35.9
16	347	38.8	97	32.8		25.2	136	33.2		01.5	173	21.1		51.3	96	57.7		35.9
17	2	41.3	112	32.0	-20	25.7	151	34.3	-11	01.9	188	23.5	+3	51.4	111	59.8	-20	36.0
18	17	43.8	127	31.3	-20	26.2	166	35.5	-11	02.4	203	26.0	+3	51.4	127	02.0	-20	36.0
19	32	46.2	142	30.5		26.7	181	36.7		02.8	218	28.5		51.4	142	04.2		36.0
20	47	48.7	157	29.8		27.2	196	37.8		03.3	233	30.9		51.4	157	06.4		36.1
21	62	51.2	172	29.0		27.7	211	39.0		03.8	248	33.4		51.4	172	08.6		36.1
22	77	53.6	187	28.3		28.2	226	40.1		04.2	263	35.9		51.4	187	10.8		36.1
23	92	56.1	202	27.5		28.7	241	41.3		04.7	278	38.3		51.4	202	13.0		36.2
24	107	58.6	217	26.8	-20	29.2	256	42.5	-11	05.2	293	40.8	+3	51.5	217	15.2	-20	36.2
Dif	—		-7		-5		+12		-5		+25		0		+22		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 06 ^m 9				Edad: 28 ^d 6 PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7 PMG: 11 ^h 34 ^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	h m m	
0	178	19.7	-22	12.4	192	49.4	-18	23.3	60 N	7 06	8 01	8 56	7 46 44	15 24 69		
1	193	19.4		12.0	207	16.9 85		22.6 7	58	7 00	7 51	41	34 45	36 68		
2	208	19.2		11.7	221	44.4 85		21.8 8	56	6 54	42	27	23 46	47 66		
3	223	18.9		11.3	236	11.9 85		20.9 9	54	48	33	16	13 47	15 56 66		
4	238	18.6		11.0	250	39.3 84		19.9 10	52	43	26	8 06	7 05 47	16 05 64		
5	253	18.4	-22	10.6	265	06.7 84	-18	18.8 11	50	6 38	7 19	7 57	6 57 48	16 12 64		
6	268	18.1	-22	10.3	279	34.1 84	-18	17.5 13	45	6 27	7 04	7 37	6 41 49	16 28 62		
7	283	17.8		10.0	294	01.4 83		16.2 13	40	18	6 52	22	28 50	41 61		
8	298	17.6		09.6	308	28.7 83		14.8 14	35	09	41	7 09	17 51	16 52 60		
9	313	17.3		09.3	322	56.0 83		13.2 16	30	6 01	31	6 57	6 07 51	17 02 59		
10	328	17.0		08.9	337	23.3 83		11.5 17	20	5 46	6 13	37	5 50 52	19 57		
11	343	16.8	-22	08.6	351	50.6 83	-18	09.8 17	10 N	5 31	5 57	6 20	5 35 53	17 33 56		
12	358	16.5	-22	08.2	6	17.8 82	-18	07.9 19	0	5 15	5 41	6 03	5 21 54	17 47 55		
13	13	16.3		07.9	20	45.0 82		05.9 20	10 S	4 57	24	5 47	5 07 55	18 00 54		
14	28	16.0		07.5	35	12.2 82		03.8 21	20	36	5 04	29	4 52 56	15 52		
15	43	15.7		07.2	49	39.4 82	-18	01.6 22	30	4 08	4 41	5 08	35 58	31 51		
16	58	15.5		06.8	64	06.6 82	-17	59.3 23	35	3 51	27	4 56	25 58	41 49		
17	73	15.2	-22	06.5	78	33.7 81	-17	56.9 24	40	3 29	4 10	4 42	4 14 59	18 52 48		
18	88	15.0	-22	06.1	93	00.8 81	-17	54.3 26	45	3 01	3 48	4 25	4 01 59	19 05 46		
19	103	14.7		05.7	107	28.0 82		51.7 26	50	2 20	21	4 04	3 45 60	20 45		
20	118	14.4		05.4	121	55.0 80		49.0 27	52	1 57	3 07	3 54	37 61	27 45		
21	133	14.2		05.0	136	22.1 81		46.1 29	54	1 24	2 51	43	29 61	36 43		
22	148	13.9		04.7	150	49.2 81		43.1 30	56	** **	32	30	19 62	45 42		
23	163	13.7		04.3	165	16.3 81		40.1 30	58	** **	2 07	3 15	3 08 63	19 55 40		
24	178	13.4	-22	04.0	179	43.3 80	-17	36.9 32	60 S	** **	1 31	2 57	2 56 64	20 06 40		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 45 ^m 3		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +1.2 PMG: 6 ^h 53 ^m		Mag: -2.3 PMG: 4 ^h 25 ^m		Mag: +0.5 PMG: 9 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	107	58.6	217	26.8	-20	29.2	256	42.5	-11	05.2	293	40.8	+3	51.5	217	15.2	-20	36.2
1	123	01.0	232	26.0		29.7	271	43.6		05.6	308	43.2		51.5	232	17.4		36.2
2	138	03.5	247	25.3		30.2	286	44.8		06.1	323	45.7		51.5	247	19.6		36.3
3	153	06.0	262	24.5		30.7	301	46.0		06.6	338	48.2		51.5	262	21.7		36.3
4	168	08.4	277	23.8		31.2	316	47.1		07.0	353	50.6		51.5	277	23.9		36.3
5	183	10.9	292	23.0	-20	31.7	331	48.3	-11	07.5	8	53.1	+3	51.5	292	26.1	-20	36.4
6	198	13.3	307	22.3	-20	32.2	346	49.4	-11	07.9	23	55.6	+3	51.5	307	28.3	-20	36.4
7	213	15.8	322	21.5		32.7	1	50.6		08.4	38	58.1		51.5	322	30.5		36.4
8	228	18.3	337	20.7		33.2	16	51.8		08.9	54	00.5		51.6	337	32.7		36.4
9	243	20.7	352	20.0		33.6	31	52.9		09.3	69	03.0		51.6	352	34.9		36.5
10	258	23.2	7	19.2		34.1	46	54.1		09.8	84	05.5		51.6	7	37.1		36.5
11	273	25.7	22	18.5	-20	34.6	61	55.3	-11	10.2	99	07.9	+3	51.6	22	39.3	-20	36.5
12	288	28.1	37	17.7	-20	35.1	76	56.4	-11	10.7	114	10.4	+3	51.6	37	41.5	-20	36.6
13	303	30.6	52	17.0		35.6	91	57.6		11.2	129	12.9		51.6	52	43.7		36.6
14	318	33.1	67	16.2		36.1	106	58.7		11.6	144	15.3		51.7	67	45.9		36.6
15	333	35.5	82	15.5		36.6	121	59.9		12.1	159	17.8		51.7	82	48.0		36.7
16	348	38.0	97	14.7		37.0	137	01.1		12.5	174	20.3		51.7	97	50.2		36.7
17	3	40.5	112	13.9	-20	37.5	152	02.2	-11	13.0	189	22.7	+3	51.7	112	52.4	-20	36.7
18	18	42.9	127	13.2	-20	38.0	167	03.4	-11	13.5	204	25.2	+3	51.7	127	54.6	-20	36.8
19	33	45.4	142	12.4		38.5	182	04.6		13.9	219	27.7		51.7	142	56.8		36.8
20	48	47.8	157	11.7		39.0	197	05.7		14.4	234	30.2		51.7	157	59.0		36.8
21	63	50.3	172	10.9		39.4	212	06.9		14.8	249	32.6		51.8	173	01.2		36.9
22	78	52.8	187	10.1		39.9	227	08.1		15.3	264	35.1		51.8	188	03.4		36.9
23	93	55.2	202	09.4		40.4	242	09.2		15.8	279	37.6		51.8	203	05.6		36.9
24	108	57.7	217	08.6	-20	40.9	257	10.4	-11	16.2	294	40.0	+3	51.8	218	07.8	-20	37.0
Dif	—		-8		-5		+12		-5		+25		0		+22		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: 29 ^d 6 PHE { 4 ^h : 57/9 12 ^h : 58/1 20 ^h : 58/2 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	h m m	
0	178	13.4	-22	04.0	179	43.3	-17 36.9	60 N	15 20	16 14	17 09	8 30 35	16 33 77		
1	193	13.1		03.6	194	10.4	81 33.6	58	35	25	16	19 37	44 75		
2	208	12.9		03.2	208	37.4	80 30.2	56	15 48	34	22	09 38	16 53 74		
3	223	12.6		02.9	223	04.4	80 26.7	54	16 00	42	27	8 00 40	17 02 72		
4	238	12.4		02.5	237	31.4	80 23.1	52	10	50	32	7 52 42	09 71		
5	253	12.1	-22	02.2	251	58.5	81 -17 19.4	50	16 19	16 56	17 37	7 45 43	17 16 69		
6	268	11.9	-22	01.8	266	25.5	80 -17 15.6	45	16 38	17 11	17 48	7 30 45	17 30 67		
7	283	11.6		01.4	280	52.5	80 11.7	40	16 53	23	17 57	18 46	42 65		
8	298	11.3		01.1	295	19.5	80 07.6	35	17 06	34	18 05	7 08 47	17 52 63		
9	313	11.1		00.7	309	46.5	80 -17 03.5	30	18	17 44	13	6 58 49	18 01 61		
10	328	10.8	-22	00.3	324	13.5	80 -16 59.2	20	38	18 01	28	42 52	16 59		
11	343	10.6	-22	00.0	338	40.5	80 -16 54.9	10 N	17 55	18 17	18 43	6 28 54	18 29 57		
12	358	10.3	-21	59.6	353	07.5	80 -16 50.4	0	18 11	18 33	18 59	6 15 55	18 42 54		
13	13	10.1		59.2	7	34.5	80 45.9	10 S	27	18 50	19 17	6 02 57	18 54 52		
14	28	09.8		58.9	22	01.4	79 41.2	20	18 45	19 09	19 38	5 48 59	19 07 50		
15	43	09.6		58.5	36	28.4	80 36.5	30	19 06	33	20 05	33 60	22 47		
16	58	09.3		58.1	50	55.4	80 31.6	35	18	19 47	22	23 62	30 46		
17	73	09.0	-21	57.8	65	22.4	80 -16 26.6	40	19 31	20 04	20 44	5 13 63	19 40 44		
18	88	08.8	-21	57.4	79	49.5	81 -16 21.5	45	19 48	20 24	21 12	5 00 65	19 51 43		
19	103	08.5		57.0	94	16.5	80 16.4	50	20 09	20 51	21 51	4 45 67	20 05 40		
20	118	08.3		56.6	108	43.5	80 11.1	52	18	21 05	22 14	38 68	12 38		
21	133	08.0		56.3	123	10.5	80 05.7	54	30	20	22 45	30 69	19 37		
22	148	07.8		55.9	137	37.5	80 -16 00.2	56	42	21 39	** **	21 71	27 35		
23	163	07.5		55.5	152	04.6	81 -15 54.6	58	20 57	22 03	** **	11 72	35 34		
24	178	07.3	-21	55.1	166	31.6	80 -15 49.0	60 S	21 15	22 37	** **	4 00 74	20 46 31		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 41 ^m 4		Mag: -4.0 PMG: 9 ^h 32 ^m			Mag: +1.1 PMG: 6 ^h 51 ^m			Mag: -2.3 PMG: 4 ^h 21 ^m			Mag: +0.5 PMG: 9 ^h 26 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	108	57.7	217	08.6	-20	40.9	257	10.4	-11	16.2	294	40.0	+3	51.8	
1	124	00.2	232	07.9		41.3	272	11.5		16.7	309	42.5		51.8	
2	139	02.6	247	07.1		41.8	287	12.7		17.1	324	45.0		51.8	
3	154	05.1	262	06.3		42.3	302	13.9		17.6	339	47.5		51.9	
4	169	07.6	277	05.6		42.8	317	15.0		18.1	354	49.9		51.9	
5	184	10.0	292	04.8	-20	43.2	332	16.2	-11	18.5	9	52.4	+3	51.9	
6	199	12.5	307	04.1	-20	43.7	347	17.4	-11	19.0	24	54.9	+3	51.9	
7	214	15.0	322	03.3		44.2	2	18.5		19.4	39	57.4		51.9	
8	229	17.4	337	02.5		44.6	17	19.7		19.9	54	59.8		51.9	
9	244	19.9	352	01.8		45.1	32	20.9		20.3	70	02.3		52.0	
10	259	22.3	7	01.0		45.6	47	22.0		20.8	85	04.8		52.0	
11	274	24.8	22	00.2	-20	46.0	62	23.2	-11	21.3	100	07.3	+3	52.0	
12	289	27.3	36	59.5	-20	46.5	77	24.4	-11	21.7	115	09.7	+3	52.0	
13	304	29.7	51	58.7		46.9	92	25.5		22.2	130	12.2		52.0	
14	319	32.2	66	57.9		47.4	107	26.7		22.6	145	14.7		52.1	
15	334	34.7	81	57.2		47.9	122	27.9		23.1	160	17.2		52.1	
16	349	37.1	96	56.4		48.3	137	29.0		23.5	175	19.7		52.1	
17	4	39.6	111	55.6	-20	48.8	152	30.2	-11	24.0	190	22.1	+3	52.1	
18	19	42.1	126	54.9	-20	49.2	167	31.4	-11	24.5	205	24.6	+3	52.1	
19	34	44.5	141	54.1		49.7	182	32.5		24.9	220	27.1		52.1	
20	49	47.0	156	53.3		50.2	197	33.7		25.4	235	29.6		52.2	
21	64	49.4	171	52.6		50.6	212	34.9		25.8	250	32.0		52.2	
22	79	51.9	186	51.8		51.1	227	36.0		26.3	265	34.5		52.2	
23	94	54.4	201	51.0		51.5	242	37.2		26.7	280	37.0		52.2	
24	109	56.8	216	50.2	-20	52.0	257	38.4	-11	27.2	295	39.5	+3	52.2	
Dif	—		-8			-5	+12			-5			+25 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 0 ^d 9	PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7									
	PMG: 12 ^h 07 ^m 7					SD: 15'9		PMG: 13 ^h 23 ^m			R ^o : 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h m	h m	h m		h m	m
0	178	07.3	-21 55.1	166	31.6	-15 49.0		60 N	7 05	8 00	8 54	9 05	28	17 50 83
1	193	07.0		180	58.7	81 43.2	58	58	6 58	7 49	39	8 56	30	17 59 80
2	208	06.8		195	25.8	81 37.3	59	56	53	40	26	47	33	18 07 78
3	223	06.5		209	52.8	80 31.3	60	54	47	32	15	40	34	14 76
4	238	06.3		224	19.9	81 25.2	61	52	42	25	8 05	34	35	20 74
5	253	06.0	-21 53.2	238	47.0	81 -15 19.1	61	50	6 37	7 18	7 56	8 28	37	18 25 73
6	268	05.8	-21 52.9	253	14.1	81 -15 12.8	63	45	6 27	7 04	7 37	8 15	40	18 37 70
7	283	05.5		267	41.3	82 -15 06.4	64	40	18	6 51	21	8 04	43	47 67
8	298	05.3		282	08.4	81 -15 00.0	64	35	09	41	7 08	7 55	45	18 55 65
9	313	05.0		296	35.6	82 -14 53.4	66	30	6 01	31	6 57	47	47	19 02 63
10	328	04.8		311	02.7	81 46.8	66	20	5 46	6 14	37	34	49	15 59
11	343	04.5	-21 50.9	325	29.9	82 -14 40.1	67	10 N	5 32	5 58	6 20	7 22	51	19 26 56
12	358	04.3	-21 50.6	339	57.1	82 -14 33.2	69	0	5 16	5 42	6 04	7 10	54	19 36 54
13	13	04.0		354	24.3	82 26.3	69	10 S	4 58	25	5 48	6 59	57	46 51
14	28	03.8		8	51.5	82 19.3	70	20	37	5 06	30	47	59	19 57 48
15	43	03.5		23	18.8	83 12.2	71	30	4 10	4 43	5 10	33	62	20 09 45
16	58	03.3		37	46.1	83 -14 05.0	72	35	3 53	29	4 58	25	64	16 43
17	73	03.0	-21 48.6	52	13.3	82 -13 57.7	73	40	3 31	4 12	4 44	6 16	66	20 24 41
18	88	02.8	-21 48.2	66	40.6	83 -13 50.3	74	45	3 04	3 51	4 27	6 05	68	20 34 38
19	103	02.5		81	08.0	84 42.9	74	50	2 24	24	4 07	5 52	71	45 35
20	118	02.3		95	35.3	83 35.3	76	52	2 02	3 11	3 57	46	73	50 33
21	133	02.0		110	02.7	84 27.7	76	54	1 31	2 55	46	39	75	20 56 31
22	148	01.8		124	30.0	83 20.0	77	56	0 25	36	33	32	76	21 02 30
23	163	01.5		138	57.4	84 12.2	78	58	** **	2 12	18	23	78	09 28
24	178	01.3	-21 45.9	153	24.9	85 -13 04.3	79	60 S	** **	1 39	3 01	5 14	80	21 17 25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 16 ^h 37 ^m 5		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: +1.1 PMG: 6 ^h 49 ^m		Mag: -2.3 PMG: 4 ^h 17 ^m		Mag: +0.5 PMG: 9 ^h 23 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	109	56.8	216	50.2	-20 52.0	257 38.4	-11 27.2	295 39.5	+3 52.2	219 00.4	-20 37.7
1	124	59.3	231	49.5	52.4	272 39.5	27.6	310 42.0	52.3	234 02.6	37.7
2	140	01.8	246	48.7	52.9	287 40.7	28.1	325 44.5	52.3	249 04.8	37.8
3	155	04.2	261	47.9	53.3	302 41.9	28.6	340 46.9	52.3	264 07.0	37.8
4	170	06.7	276	47.2	53.8	317 43.0	29.0	355 49.4	52.3	279 09.2	37.8
5	185	09.2	291	46.4	-20 54.2	332 44.2	-11 29.5	10 51.9	+3 52.3	294 11.4	-20 37.9
6	200	11.6	306	45.6	-20 54.7	347 45.4	-11 29.9	25 54.4	+3 52.4	309 13.6	-20 37.9
7	215	14.1	321	44.8	55.1	2 46.5	30.4	40 56.9	52.4	324 15.8	37.9
8	230	16.6	336	44.1	55.5	17 47.7	30.8	55 59.3	52.4	339 18.0	38.0
9	245	19.0	351	43.3	56.0	32 48.9	31.3	71 01.8	52.4	354 20.2	38.0
10	260	21.5	6 42.5	56.4	47 50.0	31.7	31.7	86 04.3	52.4	9 22.4	38.0
11	275	23.9	21 41.7	-20 56.9	62 51.2	-11 32.2	32.2	101 06.8	+3 52.5	24 24.6	-20 38.1
12	290	26.4	36 41.0	-20 57.3	77 52.4	-11 32.6	32.6	116 09.3	+3 52.5	39 26.8	-20 38.1
13	305	28.9	51 40.2	57.7	92 53.5	33.1	33.1	131 11.8	52.5	54 29.0	38.1
14	320	31.3	66 39.4	58.2	107 54.7	33.6	33.6	146 14.2	52.5	69 31.1	38.2
15	335	33.8	81 38.6	58.6	122 55.9	34.0	34.0	161 16.7	52.6	84 33.3	38.2
16	350	36.3	96 37.9	59.1	137 57.0	34.5	34.5	176 19.2	52.6	99 35.5	38.2
17	5 38.7	111 37.1	-20 59.5	152 58.2	-11 34.9	191 21.7	+3 52.6	114 37.7	-20 38.2		
18	20 41.2	126 36.3	-20 59.9	167 59.4	-11 35.4	206 24.2	+3 52.6	129 39.9	-20 38.3		
19	35 43.7	141 35.5	-21 00.4	183 00.5	35.8	221 26.7	52.6	144 42.1	38.3		
20	50 46.1	156 34.8	00.8	198 01.7	36.3	236 29.2	52.7	159 44.3	38.3		
21	65 48.6	171 34.0	01.2	213 02.9	36.7	251 31.6	52.7	174 46.5	38.4		
22	80 51.1	186 33.2	01.6	228 04.0	37.2	266 34.1	52.7	189 48.7	38.4		
23	95 53.5	201 32.4	02.1	243 05.2	37.6	281 36.6	52.7	204 50.9	38.4		
24	110 56.0	216 31.6	-21 02.5	258 06.4	-11 38.1	296 39.1	+3 52.8	219 53.1	-20 38.5		
Dif	—	-8	-4	+12	-5	+25	0	+22	0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 08 ^m 1			Edad: 1 ^d 9	PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'0 R°: 53 ^m										
	hG ☉	Dec		hG ☾		Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	01.3	-21 45.9	153	24.9	-13 04.3	79	60 N	15 24	16 18	17 13	9 33 23	19 13 85		
1	193	01.0		167	52.3	-12 56.4	84	58	39	28	19	26 26	19 83		
2	208	00.8		182	19.7	48.3	81	56	15 52	37	25	20 28	25 80		
3	223	00.5		196	47.2	40.2	81	54	16 03	45	30	14 30	30 78		
4	238	00.3		211	14.7	32.0	82	52	13	52	35	09 32	34 76		
5	253	00.0	-21 43.9	225	42.3	-12 23.7	83	50	16 22	16 59	17 39	9 05 33	19 38 74		
6	267	59.8	-21 43.5	240	09.8	-12 15.4	83	45	16 40	17 13	17 50	8 55 36	19 47 70		
7	282	59.6		254	37.4	-12 06.9	85	40	16 55	25	17 59	47 39	19 54 68		
8	297	59.3		269	05.0	-11 58.4	85	35	17 08	36	18 07	40 41	20 00 65		
9	312	59.1		283	32.6	49.8	86	30	19	17 45	15	34 43	05 63		
10	327	58.8		298	00.2	41.2	86	20	39	18 03	30	23 47	14 60		
11	342	58.6	-21 41.5	312	27.9	-11 32.4	88	10 N	17 56	18 18	18 44	8 13 51	20 22 56		
12	357	58.3	-21 41.1	326	55.6	-11 23.6	88	0	18 12	18 34	19 00	8 04 54	20 30 53		
13	12	58.1		341	23.3	14.8	88	10 S	28	18 51	17	7 56 56	37 50		
14	27	57.8		40.3	355 51.0	-11 05.8	90	20	18 45	19 09	19 38	46 59	45 47		
15	42	57.6		10	18.7	-10 56.8	90	30	19 05	32	20 05	35 63	54 43		
16	57	57.4		24	46.5	47.7	91	35	17	19 46	22	29 65	20 59 41		
17	72	57.1	-21 39.1	39	14.3	-10 38.6	91	40	19 31	20 03	20 43	7 22 67	21 05 38		
18	87	56.9	-21 38.7	53	42.1	-10 29.4	92	45	19 47	20 23	21 10	7 13 71	21 12 35		
19	102	56.6		68	10.0	20.1	93	50	20 07	20 50	21 49	7 03 74	20 31		
20	117	56.4		82	37.8	10.7	94	52	17	21 03	22 10	6 59 75	23 30		
21	132	56.1		97	05.7	-10 01.3	94	54	28	18	22 39	54 77	27 29		
22	147	55.9		111	33.6	-9 51.9	94	56	40	21 37	23 31	48 79	32 26		
23	162	55.7		126	01.6	42.3	96	58	20 55	22 00	** **	41 82	37 24		
24	177	55.4	-21 36.2	140	29.5	-9 32.7	96	60 S	21 12	22 31	** **	6 34 84	21 42 22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 33 ^m 5		Mag: -4.0 PMG: 9 ^h 34 ^m		Mag: +1.1 PMG: 6 ^h 47 ^m		Mag: -2.3 PMG: 4 ^h 13 ^m		Mag: +0.5 PMG: 9 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	110	56.0	216 31.6	-21 02.5	258 06.4	-11 38.1	296 39.1	+3 52.8	219 53.1	-20 38.5
1	125	58.4	231 30.9	02.9	273 07.6	38.5	311 41.6	52.8	234 55.3	38.5
2	141	00.9	246 30.1	03.4	288 08.7	39.0	326 44.1	52.8	249 57.5	38.5
3	156	03.4	261 29.3	03.8	303 09.9	39.4	341 46.6	52.8	264 59.7	38.6
4	171	05.8	276 28.5	04.2	318 11.1	39.9	356 49.1	52.8	280 01.9	38.6
5	186	08.3	291 27.7	-21 04.6	333 12.2	-11 40.3	11 51.6	+3 52.9	295 04.1	-20 38.6
6	201	10.8	306 27.0	-21 05.0	348 13.4	-11 40.8	26 54.0	+3 52.9	310 06.3	-20 38.6
7	216	13.2	321 26.2	05.5	3 14.6	41.2	41 56.5	52.9	325 08.5	38.7
8	231	15.7	336 25.4	05.9	18 15.7	41.7	56 59.0	52.9	340 10.7	38.7
9	246	18.2	351 24.6	06.3	33 16.9	42.1	72 01.5	53.0	355 12.9	38.7
10	261	20.6	6 23.8	06.7	48 18.1	42.6	87 04.0	53.0	10 15.1	38.8
11	276	23.1	21 23.0	-21 07.1	63 19.3	-11 43.0	102 06.5	+3 53.0	25 17.3	-20 38.8
12	291	25.6	36 22.3	-21 07.5	78 20.4	-11 43.5	117 09.0	+3 53.0	40 19.5	-20 38.8
13	306	28.0	51 21.5	08.0	93 21.6	43.9	132 11.5	53.1	55 21.7	38.9
14	321	30.5	66 20.7	08.4	108 22.8	44.4	147 14.0	53.1	70 23.9	38.9
15	336	32.9	81 19.9	08.8	123 23.9	44.8	162 16.5	53.1	85 26.1	38.9
16	351	35.4	96 19.1	09.2	138 25.1	45.3	177 19.0	53.1	100 28.3	39.0
17	6 37.9	111 18.3	-21 09.6	153 26.3	-11 45.7	192 21.5	+3 53.2	115 30.5	-20 39.0	
18	21 40.3	126 17.5	-21 10.0	168 27.4	-11 46.2	207 23.9	+3 53.2	130 32.7	-20 39.0	
19	36 42.8	141 16.8	10.4	183 28.6	46.6	222 26.4	53.2	145 34.9	39.0	
20	51 45.3	156 16.0	10.8	198 29.8	47.1	237 28.9	53.2	160 37.1	39.1	
21	66 47.7	171 15.2	11.2	213 31.0	47.5	252 31.4	53.3	175 39.3	39.1	
22	81 50.2	186 14.4	11.6	228 32.1	48.0	267 33.9	53.3	190 41.5	39.1	
23	96 52.7	201 13.6	12.0	243 33.3	48.4	282 36.4	53.3	205 43.7	39.2	
24	111 55.1	216 12.8	-21 12.4	258 34.5	-11 48.9	297 38.9	+3 53.3	220 45.9	-20 39.2	
Dif	—	-8	-4	+12	-4	+25	0	+22		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 08 ^m 5			Edad: 2 ^d 9 PHE { SD: 16:1 PMG: 15 ^h 10 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	177	55.4	-21	36.2	140	29.5	-9	32.7	60 N	7 03	7 58	8 51	9 56	21	20 38	86		
1	192	55.2		35.8	154	57.5	90	23.1	58	6 57	48	37	52	23	42	83		
2	207	54.9		35.4	169	25.5	90	13.4	56	51	39	24	48	25	45	81		
3	222	54.7		35.0	183	53.6	91	-9 03.6	54	46	31	13	44	27	48	78		
4	237	54.5		34.5	198	21.6	90	-8 53.8	52	41	24	8 03	41	29	50	77		
5	252	54.2	-21	34.1	212	49.7	91	-8 43.9	50	6 37	7 17	7 54	9 38	30	20 52	76		
6	267	54.0	-21	33.7	227	17.8	91	-8 34.0	45	6 27	7 03	7 36	9 31	34	20 57	72		
7	282	53.8		33.3	241	45.9	91	24.0	40	18	6 51	21	26	37	21 02	68		
8	297	53.5		32.9	256	14.0	91	14.0	35	09	40	7 08	21	40	05	66		
9	312	53.3		32.5	270	42.2	92	-8 03.9	30	6 02	31	6 57	17	42	08	63		
10	327	53.0		32.0	285	10.4	92	-7 53.8	20	5 47	6 14	38	10	46	14	59		
11	342	52.8	-21	31.6	299	38.6	92	-7 43.6	10 N	5 32	5 58	6 21	9 04	49	21 18	56		
12	357	52.6	-21	31.2	314	06.8	92	-7 33.4	0	5 17	5 43	6 05	8 58	52	21 23	52		
13	12	52.3		30.8	328	35.1	93	23.1	10 S	4 59	26	5 49	52	55	27	49		
14	27	52.1		30.4	343	03.3	92	12.8	20	39	5 07	31	45	60	32	45		
15	42	51.9		29.9	357	31.6	93	-7 02.4	30	4 12	4 44	11	38	63	37	41		
16	57	51.6		29.5	11	59.9	93	-6 52.0	35	3 55	31	5 00	34	65	40	39		
17	72	51.4	-21	29.1	26	28.2	93	-6 41.6	40	3 34	4 14	4 46	8 29	68	21 43	36		
18	87	51.1	-21	28.7	40	56.6	94	-6 31.1	45	3 07	3 54	4 30	8 24	71	21 47	33		
19	102	50.9		28.2	55	25.0	94	20.5	50	2 28	27	10	17	75	51	30		
20	117	50.7		27.8	69	53.3	93	-6 10.0	52	2 07	3 14	4 00	14	77	53	29		
21	132	50.4		27.4	84	21.7	94	-5 59.4	54	1 38	2 59	3 49	11	78	56	26		
22	147	50.2		27.0	98	50.2	95	48.7	56	0 46	41	37	07	81	21 58	25		
23	162	50.0		26.5	113	18.6	94	38.1	58	** **	2 18	22	8 03	83	22 01	22		
24	177	49.7	-21	26.1	127	47.1	95	-5 27.4	60 S	** **	1 46	3 05	7 58	86	22 04	20		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 29 ^m 6		Mag: -4.0 PMG: 9 ^h 36 ^m				Mag: +1.1 PMG: 6 ^h 45 ^m				Mag: -2.3 PMG: 4 ^h 09 ^m				Mag: +0.5 PMG: 9 ^h 16 ^m			
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	111	55.1	216	12.8	-21	12.4	258	34.5	-11	48.9	297	38.9	+3	53.3	220	45.9	-20	39.2
1	126	57.6	231	12.0		12.9	273	35.6		49.3	312	41.4		53.4	235	48.1		39.2
2	142	00.0	246	11.2		13.3	288	36.8		49.7	327	43.9		53.4	250	50.3		39.3
3	157	02.5	261	10.4		13.7	303	38.0		50.2	342	46.4		53.4	265	52.4		39.3
4	172	05.0	276	09.7		14.1	318	39.2		50.6	357	48.9		53.4	280	54.6		39.3
5	187	07.4	291	08.9	-21	14.4	333	40.3	-11	51.1	12	51.4	+3	53.5	295	56.8	-20	39.3
6	202	09.9	306	08.1	-21	14.8	348	41.5	-11	51.5	27	53.9	+3	53.5	310	59.0	-20	39.4
7	217	12.4	321	07.3		15.2	3	42.7		52.0	42	56.4		53.5	326	01.2		39.4
8	232	14.8	336	06.5		15.6	18	43.9		52.4	57	58.9		53.6	341	03.4		39.4
9	247	17.3	351	05.7		16.0	33	45.0		52.9	73	01.4		53.6	356	05.6		39.5
10	262	19.8	6	04.9		16.4	48	46.2		53.3	88	03.9		53.6	11	07.8		39.5
11	277	22.2	21	04.1	-21	16.8	63	47.4	-11	53.8	103	06.4	+3	53.6	26	10.0	-20	39.5
12	292	24.7	36	03.3	-21	17.2	78	48.5	-11	54.2	118	08.9	+3	53.7	41	12.2	-20	39.6
13	307	27.2	51	02.5		17.6	93	49.7		54.7	133	11.4		53.7	56	14.4		39.6
14	322	29.6	66	01.7		18.0	108	50.9		55.1	148	13.9		53.7	71	16.6		39.6
15	337	32.1	81	00.9		18.4	123	52.1		55.5	163	16.4		53.7	86	18.8		39.6
16	352	34.5	96	00.1		18.8	138	53.2		56.0	178	18.9		53.8	101	21.0		39.7
17	7	37.0	110	59.3	-21	19.1	153	54.4	-11	56.4	193	21.4	+3	53.8	116	23.2	-20	39.7
18	22	39.5	125	58.6	-21	19.5	168	55.6	-11	56.9	208	23.9	+3	53.8	131	25.4	-20	39.7
19	37	41.9	140	57.8		19.9	183	56.8		57.3	223	26.4		53.9	146	27.6		39.8
20	52	44.4	155	57.0		20.3	198	57.9		57.8	238	28.9		53.9	161	29.8		39.8
21	67	46.9	170	56.2		20.7	213	59.1		58.2	253	31.4		53.9	176	32.0		39.8
22	82	49.3	185	55.4		21.1	229	00.3		58.7	268	33.9		53.9	191	34.2		39.9
23	97	51.8	200	54.6		21.4	244	01.5		59.1	283	36.4		54.0	206	36.4		39.9
24	112	54.3	215	53.8	-21	21.8	259	02.6	-11	59.5	298	38.9	+3	54.0	221	38.7	-20	39.9
Dif	—		-8		-4		+12		-4		+25		0		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 08 ^m 9			Edad: 3 ^d 9 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 SD: 16:1 PMG: 16 ^h 02 ^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	h m m	
0	177	49.7	-21	26.1	127	47.1	-5	27.4	60 N	15 28	16 22	17 16	10 17 19	22 04 86	
1	192	49.5		25.7	142	15.5		16.6 ⁹⁴	58	43	31	22	15 21	05 83	
2	207	49.3		25.2	156	44.0		107 ⁹⁵	56	15 55	40	28	13 24	06 80	
3	222	49.0		24.8	171	12.5		108 ⁹⁵	54	16 06	48	33	11 26	06 79	
4	237	48.8		24.4	185	41.1		109 ⁹⁶	52	16	16 55	38	10 27	07 77	
5	252	48.6	-21	24.0	200	09.6		108 ⁹⁵	50	16 24	17 01	17 42	10 08 30	22 08 74	
6	267	48.3	-21	23.5	214	38.2		109 ⁹⁶	45	16 43	17 15	17 52	10 05 33	22 09 71	
7	282	48.1		23.1	229	06.7		109 ⁹⁵	40	16 57	27	18 01	03 36	10 68	
8	297	47.9		22.6	243	35.3		109 ⁹⁶	35	17 10	38	09	10 01 38	11 65	
9	312	47.7		22.2	258	03.9		110 ⁹⁶	30	21	17 47	16	9 59 41	11 63	
10	327	47.4		21.8	272	32.5		110 ⁹⁶	20	40	18 04	31	56 45	13 58	
11	342	47.2	-21	21.3	287	01.1		110 ⁹⁶	10 N	17 57	18 19	18 45	9 53 48	22 14 55	
12	357	47.0	-21	20.9	301	29.8		110 ⁹⁷	0	18 13	18 35	19 01	9 50 52	22 15 52	
13	12	46.7		20.5	315	58.4		110 ⁹⁶	10 S	28	18 51	18	47 56	16 48	
14	27	46.5		20.0	330	27.1		111 ⁹⁷	20	18 45	19 10	19 38	45 58	17 45	
15	42	46.3		19.6	344	55.7		111 ⁹⁶	30	19 05	32	20 04	41 63	18 41	
16	57	46.0		19.1	359	24.4		111 ⁹⁷	35	17	19 46	21	39 66	19 38	
17	72	45.8	-21	18.7	13	53.1		111 ⁹⁷	40	19 30	20 02	20 42	9 37 68	22 19 36	
18	87	45.6	-21	18.3	28	21.8		111 ⁹⁷	45	19 46	20 22	21 08	9 35 71	22 20 33	
19	102	45.4		17.8	42	50.5		111 ⁹⁷	50	20 06	20 48	21 46	32 75	21 29	
20	117	45.1		17.4	57	19.2		112 ⁹⁷	52	15	21 01	22 07	31 76	22 27	
21	132	44.9		16.9	71	47.9		111 ⁹⁷	54	26	16	22 34	29 79	22 26	
22	147	44.7		16.5	86	16.7		112 ⁹⁸	56	38	33	23 19	28 80	23 24	
23	162	44.4		16.0	100	45.4		111 ⁹⁷	58	20 52	21 55	** **	26 83	23 22	
24	177	44.2	-21	15.6	115	14.1		112 ⁹⁷	60 S	21 09	22 25	** **	9 24 85	22 24 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 25 ^m 7		Mag: -4.0 PMG: 9 ^h 37 ^m			Mag: +1.1 PMG: 6 ^h 43 ^m			Mag: -2.3 PMG: 4 ^h 05 ^m			Mag: +0.5 PMG: 9 ^h 12 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	112	54.3	215	53.8	-21	21.8	259	02.6	-11	59.5	298	38.9	+3	54.0	
1	127	56.7	230	53.0		22.2	274	03.8	-12	00.0	313	41.4		54.0	
2	142	59.2	245	52.2		22.6	289	05.0	-12	00.4	328	43.9		54.1	
3	158	01.7	260	51.4		22.9	304	06.1		00.9	343	46.4		54.1	
4	173	04.1	275	50.6		23.3	319	07.3		01.3	358	48.9		54.1	
5	188	06.6	290	49.8	-21	23.7	334	08.5	-12	01.8	13	51.4	+3	54.2	
6	203	09.0	305	49.0	-21	24.1	349	09.7	-12	02.2	28	53.9	+3	54.2	
7	218	11.5	320	48.2		24.4	4	10.8		02.6	43	56.4		54.2	
8	233	14.0	335	47.4		24.8	19	12.0		03.1	58	58.9		54.2	
9	248	16.4	350	46.6		25.2	34	13.2		03.5	74	01.4		54.3	
10	263	18.9	5	45.8		25.5	49	14.4		04.0	89	03.9		54.3	
11	278	21.4	20	45.0	-21	25.9	64	15.6	-12	04.4	104	06.4	+3	54.3	
12	293	23.8	35	44.2	-21	26.3	79	16.7	-12	04.9	119	08.9	+3	54.4	
13	308	26.3	50	43.4		26.6	94	17.9		05.3	134	11.5		54.4	
14	323	28.8	65	42.6		27.0	109	19.1		05.7	149	14.0		54.4	
15	338	31.2	80	41.8		27.4	124	20.3		06.2	164	16.5		54.5	
16	353	33.7	95	41.0		27.7	139	21.4		06.6	179	19.0		54.5	
17	8	36.1	110	40.2	-21	28.1	154	22.6	-12	07.1	194	21.5	+3	54.5	
18	23	38.6	125	39.4	-21	28.4	169	23.8	-12	07.5	209	24.0	+3	54.6	
19	38	41.1	140	38.6		28.8	184	25.0		07.9	224	26.5		54.6	
20	53	43.5	155	37.8		29.2	199	26.1		08.4	239	29.0		54.6	
21	68	46.0	170	36.9		29.5	214	27.3		08.8	254	31.5		54.6	
22	83	48.5	185	36.1		29.9	229	28.5		09.3	269	34.0		54.7	
23	98	50.9	200	35.3		30.2	244	29.7		09.7	284	36.5		54.7	
24	113	53.4	215	34.5	-21	30.6	259	30.8	-12	10.1	299	39.0	+3	54.7	
Dif	—		-8		-4	+12		-4	+25		0		+22		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: 4 ^d 9	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 52 ^m	SD: 16/2 PMG: 16 ^h 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	44.2	-21	15.6	115	14.1	-1 03.3	60 N	7 01	7 56	8 48	10 36	20	23 30	85	
1	192	44.0		15.2	129	42.9	98 -0 52.1	58	6 55	46	34	36	22	28	83	
2	207	43.8		14.7	144	11.6	97 40.9	56	50	37	22	37	24	26	81	
3	222	43.5		14.3	158	40.4	98 29.7	54	45	29	11	37	26	25	78	
4	237	43.3		13.8	173	09.2	98 18.6	52	40	22	8 02	37	28	24	76	
5	252	43.1	-21	13.4	187	37.9	97 -0 07.4	50	6 36	7 16	7 53	10 38	29	23 22	75	
6	267	42.9	-21	12.9	202	06.7	98 +0 03.8	45	6 26	7 02	7 35	10 38	34	23 20	71	
7	282	42.6		12.5	216	35.5	98 15.0	40	17	6 50	20	39	36	18	68	
8	297	42.4		12.0	231	04.2	97 26.2	35	09	40	7 08	39	39	16	65	
9	312	42.2		11.6	245	33.0	98 37.4	30	6 01	31	6 57	40	41	14	63	
10	327	42.0		11.1	260	01.8	98 48.6	20	5 47	6 14	38	41	45	11	59	
11	342	41.7	-21	10.6	274	30.6	98 +0 59.7	10 N	5 33	5 59	6 21	10 41	49	23 09	55	
12	357	41.5	-21	10.2	288	59.3	97 +1 10.9	0	5 18	5 43	6 06	10 42	52	23 07	52	
13	12	41.3		09.7	303	28.1	98 22.0	10 S	5 01	27	5 50	43	55	04	49	
14	27	41.1		09.3	317	56.9	98 33.2	20	4 40	5 09	33	43	59	23 02	45	
15	42	40.9		08.8	332	25.6	97 44.3	30	4 14	4 46	13	44	63	22 59	41	
16	57	40.6		08.4	346	54.4	98 +1 55.5	35	3 57	33	5 01	45	65	57	39	
17	72	40.4	-21	07.9	1	23.2	98 +2 06.6	40	3 37	4 16	4 48	10 45	68	22 55	37	
18	87	40.2	-21	07.4	15	51.9	97 +2 17.7	45	3 10	3 56	4 32	10 46	71	22 53	34	
19	102	40.0		07.0	30	20.7	98 28.7	50	2 33	31	12	47	75	50	31	
20	117	39.7		06.5	44	49.4	97 39.8	52	2 12	18	4 03	47	77	49	29	
21	132	39.5		06.1	59	18.2	98 +2 50.9	54	1 44	3 03	3 53	48	78	48	27	
22	147	39.3		05.6	73	46.9	97 +3 01.9	56	1 00	2 45	41	48	81	47	24	
23	162	39.1		05.1	88	15.6	97 12.9	58	** **	2 23	27	49	83	45	23	
24	177	38.9	-21	04.7	102	44.4	98 +3 23.9	60 S	** **	1 54	3 10	10 49	86	22 43	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 16 ^h 21 ^m 8		Mag: -4.0 PMG: 9 ^h 38 ^m		Mag: +1.1 PMG: 6 ^h 41 ^m		Mag: -2.3 PMG: 4 ^h 01 ^m		Mag: +0.5 PMG: 9 ^h 09 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	113	53.4	215	34.5	-21	30.6	259	30.8	-12	10.1	299	39.0	+3	54.7	222	31.5	-20	40.6	
1	128	55.9	230	33.7		30.9	274	32.0		10.6	314	41.6		54.8	237	33.7		40.6	
2	143	58.3	245	32.9		31.3	289	33.2		11.0	329	44.1		54.8	252	35.9		40.7	
3	159	00.8	260	32.1		31.6	304	34.4		11.5	344	46.6		54.8	267	38.1		40.7	
4	174	03.3	275	31.3		32.0	319	35.6		11.9	359	49.1		54.9	282	40.3		40.7	
5	189	05.7	290	30.5	-21	32.3	334	36.7	-12	12.3	14	51.6	+3	54.9	297	42.5	-20	40.8	
6	204	08.2	305	29.7	-21	32.7	349	37.9	-12	12.8	29	54.1	+3	54.9	312	44.7	-20	40.8	
7	219	10.6	320	28.9		33.0	4	39.1		13.2	44	56.6		55.0	327	46.9		40.8	
8	234	13.1	335	28.1		33.4	19	40.3		13.7	59	59.1		55.0	342	49.1		40.9	
9	249	15.6	350	27.3		33.7	34	41.4		14.1	75	01.7		55.0	357	51.3		40.9	
10	264	18.0	5	26.5		34.0	49	42.6		14.5	90	04.2		55.1	12	53.5		40.9	
11	279	20.5	20	25.6	-21	34.4	64	43.8	-12	15.0	105	06.7	+3	55.1	27	55.7	-20	40.9	
12	294	23.0	35	24.8	-21	34.7	79	45.0	-12	15.4	120	09.2	+3	55.1	42	57.9	-20	41.0	
13	309	25.4	50	24.0		35.1	94	46.2		15.8	135	11.7		55.2	58	00.2		41.0	
14	324	27.9	65	23.2		35.4	109	47.3		16.3	150	14.2		55.2	73	02.4		41.0	
15	339	30.4	80	22.4		35.7	124	48.5		16.7	165	16.7		55.2	88	04.6		41.1	
16	354	32.8	95	21.6		36.1	139	49.7		17.1	180	19.3		55.3	103	06.8		41.1	
17	9	35.3	110	20.8	-21	36.4	154	50.9	-12	17.6	195	21.8	+3	55.3	118	09.0	-20	41.1	
18	24	37.7	125	20.0	-21	36.8	169	52.0	-12	18.0	210	24.3	+3	55.3	133	11.2	-20	41.1	
19	39	40.2	140	19.2		37.1	184	53.2		18.5	225	26.8		55.4	148	13.4		41.2	
20	54	42.7	155	18.4		37.4	199	54.4		18.9	240	29.3		55.4	163	15.6		41.2	
21	69	45.1	170	17.5		37.7	214	55.6		19.3	255	31.8		55.5	178	17.8		41.2	
22	84	47.6	185	16.7		38.1	229	56.8		19.8	270	34.3		55.5	193	20.0		41.3	
23	99	50.1	200	15.9		38.4	244	57.9		20.2	285	36.9		55.5	208	22.2		41.3	
24	114	52.5	215	15.1	-21	38.7	259	59.1	-12	20.6	300	39.4	+3	55.6	223	24.4	-20	41.3	
Dif	—		-8	-3			+12	-4			+25	0			+22				

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: 5 ^d 9 PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/2 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
0	177	38.9	-21	04.7	102	44.4	+3 23.9	60 N	15 33	16 25	17 19	10 56	21	**	**	**
1	192	38.6		04.2	117	13.1	34.9 ¹¹⁰	58	47	35	25	10 58	24	**	**	**
2	207	38.4		03.8	131	41.8	45.8 ¹⁰⁹	56	15 59	43	31	11 01	26	**	**	**
3	222	38.2		03.3	146	10.5	+3 56.8 ¹¹⁰	54	16 10	51	36	03 28		**	**	**
4	237	38.0		02.8	160	39.2	+4 07.7 ¹⁰⁹	52	19	16 58	40	05 30		**	**	**
5	252	37.8	-21	02.4	175	07.8	+4 18.5 ¹⁰⁸	50	16 27	17 04	17 44	11 07	32	**	**	**
6	267	37.6	-21	01.9	189	36.5	+4 29.4 ¹⁰⁹	45	16 45	17 18	17 54	11 12	34	**	**	**
7	282	37.3		01.4	204	05.2	40.2 ¹⁰⁸	40	17 00	29	18 03	15 38		**	**	**
8	297	37.1		01.0	218	33.8	+4 51.0 ¹⁰⁸	35	12	39	11	18 40		**	**	**
9	312	36.9	-21	00.5	233	02.4	+5 01.8 ¹⁰⁸	30	23	17 49	18	21 42		**	**	**
10	327	36.7	-21	00.0	247	31.1	12.5 ¹⁰⁷	20	41	18 05	32	26 46		**	**	**
11	342	36.5	-20	59.5	261	59.7	+5 23.2 ¹⁰⁷	10 N	17 58	18 20	18 46	11 30	49	**	**	**
12	357	36.3	-20	59.1	276	28.3	+5 33.9 ¹⁰⁷	0	18 13	18 35	19 01	11 34	52	23 59	53	
13	12	36.0		58.6	290	56.8	44.5 ¹⁰⁶	10 S	29	18 51	18	38 55		53	50	
14	27	35.8		58.1	305	25.4	+5 55.1 ¹⁰⁶	20	18 46	19 10	19 38	42 59		47	47	
15	42	35.6		57.7	319	54.0	+6 05.6 ¹⁰⁵	30	19 05	32	20 04	47 63		40	43	
16	57	35.4		57.2	334	22.5	16.2 ¹⁰⁶	35	16	19 45	20	50 65		36	41	
17	72	35.2	-20	56.7	348	51.0	+6 26.7 ¹⁰⁵	40	19 29	20 01	20 40	11 53	68	23 32	39	
18	87	35.0	-20	56.2	3	19.5	+6 37.1 ¹⁰⁴	45	19 45	20 21	21 06	11 57	71	23 27	36	
19	102	34.7		55.8	17	48.0	47.5 ¹⁰⁴	50	20 04	46	21 43	12 02	74	21	32	
20	117	34.5		55.3	32	16.5	+6 57.9 ¹⁰⁴	52	14	20 58	22 03	04 76		18	31	
21	132	34.3		54.8	46	44.9	+7 08.2 ¹⁰³	54	24	21 13	22 29	06 78		15	29	
22	147	34.1		54.3	61	13.3	18.5 ¹⁰³	56	36	30	23 08	09 80		11	28	
23	162	33.9		53.8	75	41.8	28.7 ¹⁰²	58	20 49	21 51	** ** *	12 82		08	25	
24	177	33.7	-20	53.4	90	10.2	+7 38.9 ¹⁰²	60 S	21 05	22 19	** ** *	12 15	85	23 03	23	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 17 ^m 8		Mag: -4.0 PMG: 9 ^h 40 ^m			Mag: +1.1 PMG: 6 ^h 40 ^m			Mag: -2.3 PMG: 3 ^h 57 ^m			Mag: +0.5 PMG: 9 ^h 05 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	114	52.5	215	15.1	-21 38.7	259	59.1	-12 20.6	300	39.4	+3 55.6	223	24.4	-20 41.3			
1	129	55.0	230	14.3	39.1	275	00.3	21.1	315	41.9	55.6	238	26.6	41.3			
2	144	57.5	245	13.5	39.4	290	01.5	21.5	330	44.4	55.6	253	28.8	41.4			
3	159	59.9	260	12.7	39.7	305	02.7	21.9	345	46.9	55.7	268	31.0	41.4			
4	175	02.4	275	11.8	40.0	320	03.8	22.4	0	49.5	55.7	283	33.2	41.4			
5	190	04.9	290	11.0	-21 40.4	335	05.0	-12 22.8	15	52.0	+3 55.7	298	35.4	-20 41.5			
6	205	07.3	305	10.2	-21 40.7	350	06.2	-12 23.2	30	54.5	+3 55.8	313	37.6	-20 41.5			
7	220	09.8	320	09.4	41.0	5	07.4	23.7	45	57.0	55.8	328	39.9	41.5			
8	235	12.2	335	08.6	41.3	20	08.6	24.1	60	59.5	55.8	343	42.1	41.5			
9	250	14.7	350	07.8	41.6	35	09.7	24.6	76	02.1	55.9	358	44.3	41.6			
10	265	17.2	5	06.9	42.0	50	10.9	25.0	91	04.6	55.9	13	46.5	41.6			
11	280	19.6	20	06.1	-21 42.3	65	12.1	-12 25.4	106	07.1	+3 56.0	28	48.7	-20 41.6			
12	295	22.1	35	05.3	-21 42.6	80	13.3	-12 25.9	121	09.6	+3 56.0	43	50.9	-20 41.7			
13	310	24.6	50	04.5	42.9	95	14.5	26.3	136	12.1	56.0	58	53.1	41.7			
14	325	27.0	65	03.7	43.2	110	15.7	26.7	151	14.7	56.1	73	55.3	41.7			
15	340	29.5	80	02.9	43.5	125	16.8	27.2	166	17.2	56.1	88	57.5	41.7			
16	355	32.0	95	02.0	43.8	140	18.0	27.6	181	19.7	56.1	103	59.7	41.8			
17	10	34.4	110	01.2	-21 44.1	155	19.2	-12 28.0	196	22.2	+3 56.2	119	01.9	-20 41.8			
18	25	36.9	125	00.4	-21 44.5	170	20.4	-12 28.4	211	24.7	+3 56.2	134	04.1	-20 41.8			
19	40	39.4	139	59.6	44.8	185	21.6	28.9	226	27.3	56.3	149	06.3	41.9			
20	55	41.8	154	58.8	45.1	200	22.7	29.3	241	29.8	56.3	164	08.5	41.9			
21	70	44.3	169	57.9	45.4	215	23.9	29.7	256	32.3	56.3	179	10.7	41.9			
22	85	46.7	184	57.1	45.7	230	25.1	30.2	271	34.8	56.4	194	13.0	41.9			
23	100	49.2	199	56.3	46.0	245	26.3	30.6	286	37.4	56.4	209	15.2	42.0			
24	115	51.7	214	55.5	-21 46.3	260	27.5	-12 31.0	301	39.9	+3 56.4	224	17.4	-20 42.0			
Dif	—		-8			+12			-4			+25			0		

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16/3			Edad: 6 ^d 9	PHE {	4 ^h : 59/1 12 ^h : 59/1 20 ^h : 59/0	R°: 54 ^m	Náutico		Civil	Hora		R°	Hora	R°			
	PMG: 12 ^h 09 ^m 9															SD: 16/1		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif										
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m
0	177	33.7	-20 53.4	90	10.2	+7 38.9	101	49.0	60 N	6 59	7 53	8 45	11 17	25	0 55	84		
1	192	33.5	52.9	104	38.5	93	101	49.0	58	53	44	31	22	28	51	81		
2	207	33.3	52.4	119	06.9	94	101	49.0	56	48	35	20	27	29	47	79		
3	222	33.0	51.9	133	35.2	93	101	49.0	54	43	28	09	31	32	43	77		
4	237	32.8	51.4	148	03.5	93	99	19.1	52	39	21	8 00	35	33	40	75		
5	252	32.6	-20 51.0	162	31.8	93	100	29.1	50	6 35	7 15	7 52	11 39	34	0 37	74		
6	267	32.4	-20 50.5	177	00.1	93	99	39.0	45	6 25	7 01	7 34	11 46	38	0 31	70		
7	282	32.2	50.0	191	28.3	92	98	48.8	40	16	6 50	19	53	40	26	67		
8	297	32.0	49.5	205	56.6	93	98	58.6	35	09	40	7 07	11 58	43	21	65		
9	312	31.8	49.0	220	24.8	92	97	08.3	30	6 01	31	6 56	12 03	44	17	63		
10	327	31.6	48.5	234	52.9	91	97	18.0	20	5 47	6 14	38	12	47	10	59		
11	342	31.4	-20 48.0	249	21.1	92	96	27.6	10 N	5 33	5 59	6 22	12 19	51	0 04	56		
12	357	31.2	-20 47.6	263	49.2	91	96	37.2	0	5 18	5 44	6 06	12 26	54	** ** *			
13	12	31.0	47.1	278	17.3	91	95	46.7	10 S	5 02	28	5 51	33	57	** ** *			
14	27	30.7	46.6	292	45.4	91	94	56.1	20	4 42	5 10	34	41	59	** ** *			
15	42	30.5	46.1	307	13.5	91	94	05.5	30	16	4 48	15	50	62	** ** *			
16	57	30.3	45.6	321	41.5	90	93	14.8	35	4 00	35	5 03	12 55	65	** ** *			
17	72	30.1	-20 45.1	336	09.5	90	93	24.1	40	3 39	4 19	4 50	13 01	67	** ** *			
18	87	29.9	-20 44.6	350	37.5	90	91	33.2	45	3 13	3 59	4 35	13 08	69	** ** *			
19	102	29.7	44.1	5 05.5	90		92	42.4	50	2 37	34	16	16	73	23 53	37		
20	117	29.5	43.6	19 33.4	89		90	51.4	52	2 17	22	4 06	20	74	49	35		
21	132	29.3	43.1	34 01.3	89		90	00.4	54	1 51	3 07	3 56	24	76	44	34		
22	147	29.1	42.6	48 29.2	89		90	09.4	56	1 12	2 50	44	29	78	39	32		
23	162	28.9	42.1	62 57.1	89		88	18.2	58	** ** *	29	31	34	80	33	30		
24	177	28.7	-20 41.6	77 24.9	88		88	11 27.0	60 S	** ** *	2 01	3 15	13 40	82	23 26	28		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 13 ^m 9		Mag: -4.0 PMG: 9 ^h 41 ^m			Mag: +1.0 PMG: 6 ^h 38 ^m			Mag: -2.3 PMG: 3 ^h 53 ^m			Mag: +0.5 PMG: 9 ^h 02 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	115	51.7	214	55.5	-21 46.3	260	27.5	-12 31.0	301	39.9	+3 56.4	224	17.4	-20 42.0		
1	130	54.1	229	54.7	46.6	275	28.7	31.5	316	42.4	56.5	239	19.6	42.0		
2	145	56.6	244	53.8	46.9	290	29.8	31.9	331	44.9	56.5	254	21.8	42.0		
3	160	59.1	259	53.0	47.2	305	31.0	32.3	346	47.5	56.6	269	24.0	42.1		
4	176	01.5	274	52.2	47.5	320	32.2	32.8	1 50.0		56.6	284	26.2	42.1		
5	191	04.0	289	51.4	-21 47.8	335	33.4	-12 33.2	16 52.5	+3 56.6		299	28.4	-20 42.1		
6	206	06.5	304	50.6	-21 48.1	350	34.6	-12 33.6	31 55.0	+3 56.7		314	30.6	-20 42.2		
7	221	08.9	319	49.7	48.4	5 35.8		34.1	46 57.6		56.7	329	32.8	42.2		
8	236	11.4	334	48.9	48.7	20 36.9		34.5	62 00.1		56.8	344	35.0	42.2		
9	251	13.8	349	48.1	49.0	35 38.1		34.9	77 02.6		56.8	359	37.2	42.2		
10	266	16.3	4 47.3		49.2	50 39.3		35.3	92 05.2		56.8	14 39.5		42.3		
11	281	18.8	19 46.4	-21 49.5		65 40.5	-12 35.8		107 07.7	+3 56.9		29 41.7	-20 42.3			
12	296	21.2	34 45.6	-21 49.8		80 41.7	-12 36.2		122 10.2	+3 56.9		44 43.9	-20 42.3			
13	311	23.7	49 44.8		50.1	95 42.9		36.6	137 12.7		57.0	59 46.1		42.4		
14	326	26.2	64 44.0		50.4	110 44.0		37.1	152 15.3		57.0	74 48.3		42.4		
15	341	28.6	79 43.1		50.7	125 45.2		37.5	167 17.8		57.0	89 50.5		42.4		
16	356	31.1	94 42.3		51.0	140 46.4		37.9	182 20.3		57.1	104 52.7		42.4		
17	11 33.6		109 41.5	-21 51.3		155 47.6	-12 38.4		197 22.9	+3 57.1		119 54.9	-20 42.5			
18	26 36.0		124 40.7	-21 51.5		170 48.8	-12 38.8		212 25.4	+3 57.2		134 57.1	-20 42.5			
19	41 38.5		139 39.8		51.8	185 50.0		39.2	227 27.9		57.2	149 59.3		42.5		
20	56 41.0		154 39.0		52.1	200 51.1		39.6	242 30.5		57.2	165 01.6		42.6		
21	71 43.4		169 38.2		52.4	215 52.3		40.1	257 33.0		57.3	180 03.8		42.6		
22	86 45.9		184 37.4		52.7	230 53.5		40.5	272 35.5		57.3	195 06.0		42.6		
23	101 48.3		199 36.5		52.9	245 54.7		40.9	287 38.0		57.4	210 08.2		42.6		
24	116 50.8		214 35.7	-21 53.2		260 55.9	-12 41.3		302 40.6	+3 57.4		225 10.4	-20 42.7			
Dif	—		-8			-3	+12		-4	+25		0	+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 10 ^m 3			Edad: 7 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 58'9 20 ^h : 58'8 R°: 54 ^m SD: 16:1 PMG: 19 ^h 33 ^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	177	28.7	-20	41.6	77	24.9	+11	27.0	60 N	15 37	16 29	17 23	11 42 31	2 19 80				
1	192	28.5		41.1	91	52.7	88	35.7	58	15 51	39	29	50 33	12 78				
2	207	28.3		40.7	106	20.5	88	44.4	56	16 03	47	34	11 56 35	06 76				
3	222	28.1		40.2	120	48.2	87	+11 52.9	54	13	16 54	39	12 03 36	2 00 75				
4	237	27.9		39.7	135	16.0	88	+12 01.4	52	22	17 01	43	08 38	1 55 73				
5	252	27.7	-20	39.2	149	43.7	87	+12 09.9	50	16 30	17 07	17 47	12 13 39	1 51 71				
6	267	27.5	-20	38.7	164	11.3	86	+12 18.2	45	16 48	17 20	17 56	12 24 42	1 41 68				
7	282	27.3		38.2	178	39.0	87	26.5	40	17 02	31	18 05	33 44	33 66				
8	297	27.1		37.7	193	06.6	86	34.7	35	14	41	12	41 45	26 64				
9	312	26.9		37.2	207	34.2	86	42.8	30	25	17 50	20	47 48	20 62				
10	327	26.7		36.6	222	01.8	86	50.9	20	43	18 06	33	12 59 50	09 59				
11	342	26.4	-20	36.1	236	29.3	85	+12 58.8	10 N	17 59	18 21	18 47	13 10 52	1 00 57				
12	357	26.2	-20	35.6	250	56.8	85	+13 06.7	0	18 14	18 36	19 02	13 20 54	0 52 54				
13	12	26.0		35.1	265	24.3	85	14.5	10 S	29	18 52	18	30 56	43 52				
14	27	25.8		34.6	279	51.8	85	22.3	20	18 46	19 09	19 38	40 59	34 49				
15	42	25.6		34.1	294	19.2	84	29.9	30	19 05	31	20 03	13 52 62	23 46				
16	57	25.4		33.6	308	46.6	84	37.4	35	16	19 44	19	14 00 63	17 45				
17	72	25.2	-20	33.1	323	14.0	84	+13 44.9	40	19 29	20 00	20 39	14 08 65	0 11 42				
18	87	25.0	-20	32.6	337	41.4	84	+13 52.3	45	19 44	20 19	21 04	14 17 67	0 03 39				
19	102	24.8		32.1	352	08.7	83	+13 59.6	50	20 03	44	40	29 70	** ** *				
20	117	24.7		31.6	6	36.0	83	+14 06.8	52	12	20 56	21 59	34 71	** ** *				
21	132	24.5		31.1	21	03.3	83	14.0	54	22	21 10	22 23	40 73	** ** *				
22	147	24.3		30.6	35	30.5	82	21.0	56	33	26	22 59	47 74	** ** *				
23	162	24.1		30.0	49	57.8	83	28.0	58	20 46	21 46	** ** *	14 54 76	** ** *				
24	177	23.9	-20	29.5	64	25.0	82	+14 34.8	60 S	21 02	22 13	** ** *	15 02 79	23 54 34				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 10 ^m 0		Mag: -4.0 PMG: 9 ^h 42 ^m				Mag: +1.0 PMG: 6 ^h 36 ^m				Mag: -2.3 PMG: 3 ^h 49 ^m				Mag: +0.5 PMG: 8 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	116	50.8	214	35.7	-21	53.2	260	55.9	-12	41.3	302	40.6	+3	57.4	225	10.4	-20	42.7
1	131	53.3	229	34.9		53.5	275	57.1		41.8	317	43.1		57.4	240	12.6		42.7
2	146	55.7	244	34.1		53.8	290	58.3		42.2	332	45.6		57.5	255	14.8		42.7
3	161	58.2	259	33.2		54.0	305	59.4		42.6	347	48.2		57.5	270	17.0		42.7
4	177	00.7	274	32.4		54.3	321	00.6		43.1	2	50.7		57.6	285	19.2		42.8
5	192	03.1	289	31.6	-21	54.6	336	01.8	-12	43.5	17	53.2	+3	57.6	300	21.4	-20	42.8
6	207	05.6	304	30.7	-21	54.8	351	03.0	-12	43.9	32	55.8	+3	57.7	315	23.7	-20	42.8
7	222	08.1	319	29.9		55.1	6	04.2		44.3	47	58.3		57.7	330	25.9		42.9
8	237	10.5	334	29.1		55.4	21	05.4		44.8	63	00.8		57.7	345	28.1		42.9
9	252	13.0	349	28.2		55.6	36	06.6		45.2	78	03.4		57.8	0	30.3		42.9
10	267	15.5	4	27.4		55.9	51	07.7		45.6	93	05.9		57.8	15	32.5		42.9
11	282	17.9	19	26.6	-21	56.2	66	08.9	-12	46.0	108	08.5	+3	57.9	30	34.7	-20	43.0
12	297	20.4	34	25.8	-21	56.4	81	10.1	-12	46.5	123	11.0	+3	57.9	45	36.9	-20	43.0
13	312	22.8	49	24.9		56.7	96	11.3		46.9	138	13.5		58.0	60	39.1		43.0
14	327	25.3	64	24.1		57.0	111	12.5		47.3	153	16.1		58.0	75	41.4		43.0
15	342	27.8	79	23.3		57.2	126	13.7		47.7	168	18.6		58.0	90	43.6		43.1
16	357	30.2	94	22.4		57.5	141	14.9		48.2	183	21.1		58.1	105	45.8		43.1
17	12	32.7	109	21.6	-21	57.7	156	16.1	-12	48.6	198	23.7	+3	58.1	120	48.0	-20	43.1
18	27	35.2	124	20.8	-21	58.0	171	17.2	-12	49.0	213	26.2	+3	58.2	135	50.2	-20	43.2
19	42	37.6	139	19.9		58.2	186	18.4		49.4	228	28.7		58.2	150	52.4		43.2
20	57	40.1	154	19.1		58.5	201	19.6		49.9	243	31.3		58.3	165	54.6		43.2
21	72	42.6	169	18.3		58.8	216	20.8		50.3	258	33.8		58.3	180	56.8		43.2
22	87	45.0	184	17.4		59.0	231	22.0		50.7	273	36.4		58.4	195	59.0		43.3
23	102	47.5	199	16.6		59.3	246	23.2		51.1	288	38.9		58.4	211	01.3		43.3
24	117	49.9	214	15.8	-21	59.5	261	24.4	-12	51.6	303	41.4	+3	58.4	226	03.5	-20	43.3
Dif	—		-8		-3		+12		-4		+25		0		+22			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3			Edad: 8 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'5														
	PMG: 12 ^h 10 ^m 6				SD: 16'0 PMG: 20 ^h 27 ^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	23.9	-20	29.5	64	25.0	+14	34.8	60 N	6 57	7 50	8 42	12 13	38	3 39	75		
1	192	23.7		29.0	78	52.1	81	41.6	58	51	41	29	23	40	30	73		
2	207	23.5		28.5	93	19.3	82	48.3	56	46	33	17	31	42	22	71		
3	222	23.3		28.0	107	46.4	81	+14	54.9	54	42	26	8 07	39	43	15	70	
4	237	23.1		27.5	122	13.5	81	+15	01.4	52	37	19	7 58	46	44	08	69	
5	252	22.9	-20	27.0	136	40.6	81	+15	07.8	50	6 33	7 13	7 50	12 52	45	3 02	68	
6	267	22.7	-20	26.4	151	07.7	81	+15	14.1	45	6 24	7 00	7 33	13 06	46	2 49	66	
7	282	22.5		25.9	165	34.7	80	20.3	62	40	16	6 49	18	17	48	39	64	
8	297	22.3		25.4	180	01.7	80	26.4	61	35	08	39	7 06	26	50	30	62	
9	312	22.1		24.9	194	28.7	80	32.4	60	30	6 01	30	6 56	35	50	22	61	
10	327	21.9		24.4	208	55.7	80	38.4	60	20	5 47	14	38	13 49	53	2 08	59	
11	342	21.7	-20	23.9	223	22.7	80	+15	44.2	10 N	5 34	6 00	6 22	14 02	54	1 57	56	
12	357	21.5	-20	23.3	237	49.6	79	+15	49.9	0	5 19	5 45	6 07	14 14	56	1 46	55	
13	12	21.3		22.8	252	16.5	79	+15	55.6	10 S	5 03	29	5 52	26	57	35	53	
14	27	21.1		22.3	266	43.4	79	+16	01.1	20	4 43	5 12	35	39	58	23	51	
15	42	20.9		21.8	281	10.3	79	06.5	54	30	18	4 50	17	14	54	60	09	49
16	57	20.8		21.2	295	37.1	78	11.9	54	35	4 02	37	5 05	15	03	61	1 02	47
17	72	20.6	-20	20.7	310	03.9	78	+16	17.1	40	3 42	4 21	4 53	15	13	62	0 53	46
18	87	20.4	-20	20.2	324	30.8	79	+16	22.3	45	3 17	4 02	4 37	15	24	64	0 42	45
19	102	20.2		19.7	338	57.6	78	27.3	50	50	2 42	3 38	19	39	65	30	42	
20	117	20.0		19.1	353	24.3	77	32.2	49	52	2 23	26	10	45	66	24	41	
21	132	19.8		18.6	7	51.1	78	37.1	49	54	1 58	3 12	4 00	15	53	66	18	39
22	147	19.6		18.1	22	17.9	78	41.8	47	56	1 23	2 55	3 48	16	01	68	11	38
23	162	19.4		17.6	36	44.6	77	46.4	46	58	** ** *	35	35	10	69		0 03	36
24	177	19.2	-20	17.0	51	11.3	77	+16	50.9	60 S	** ** *	2 09	3 20	16	21	71	** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 06 ^m 0		Mag: -4.0 PMG: 9 ^h 43 ^m		Mag: +1.0 PMG: 6 ^h 34 ^m		Mag: -2.3 PMG: 3 ^h 45 ^m		Mag: +0.5 PMG: 8 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	117	49.9	214	15.8	-21	59.5	261	24.4	-12	51.6
1	132	52.4	229	14.9	-21	59.8	276	25.6		52.0
2	147	54.9	244	14.1	-22	00.0	291	26.7		52.4
3	162	57.3	259	13.3	-22	00.2	306	27.9		52.8
4	177	59.8	274	12.4		00.5	321	29.1		53.2
5	193	02.3	289	11.6	-22	00.7	336	30.3	-12	53.7
6	208	04.7	304	10.8	-22	01.0	351	31.5	-12	54.1
7	223	07.2	319	09.9		01.2	6	32.7		54.5
8	238	09.7	334	09.1		01.5	21	33.9		54.9
9	253	12.1	349	08.3		01.7	36	35.1		55.4
10	268	14.6	4	07.4		01.9	51	36.3		55.8
11	283	17.1	19	06.6	-22	02.2	66	37.5	-12	56.2
12	298	19.5	34	05.7	-22	02.4	81	38.6	-12	56.6
13	313	22.0	49	04.9		02.7	96	39.8		57.0
14	328	24.4	64	04.1		02.9	111	41.0		57.5
15	343	26.9	79	03.2		03.1	126	42.2		57.9
16	358	29.4	94	02.4		03.4	141	43.4		58.3
17	13	31.8	109	01.6	-22	03.6	156	44.6	-12	58.7
18	28	34.3	124	00.7	-22	03.8	171	45.8	-12	59.1
19	43	36.8	138	59.9		04.0	186	47.0	-12	59.6
20	58	39.2	153	59.0		04.3	201	48.2	-13	00.0
21	73	41.7	168	58.2		04.5	216	49.4	-13	00.4
22	88	44.2	183	57.4		04.7	231	50.5		00.8
23	103	46.6	198	56.5		04.9	246	51.7		01.2
24	118	49.1	213	55.7	-22	05.2	261	52.9	-13	01.7
Dif	—		-8		-2		+12		-4	
								+25		0
									+22	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16/3				Edad: 9 ^d 9 PHE { 4 ^h : 58/4 12 ^h : 58/2 20 ^h : 58/1 R°: 55 ^m														
	PMG: 12 ^h 10 ^m 9				SD: 15/9 PMG: 21 ^h 23 ^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	177	19.2	-20	17.0	51	11.3		+16	50.9			60 N	15 42	16 33	17 27	12 51 49	4 54 66		
1	192	19.0		16.5	65	38.0	77		55.3	44		58	15 55	42	32	13 03 49	43 65		
2	207	18.8		16.0	80	04.7	77		+16	59.6	43	56	16 07	50	37	13 50	33 64		
3	222	18.7		15.5	94	31.4	77		+17	03.8	42	54	17	16 57	42	22 51	25 63		
4	237	18.5		14.9	108	58.1	77			07.9	41	52	25	17 04	46	30 51	17 62		
5	252	18.3	-20	14.4	123	24.7	76		+17	11.9	40	50	16 33	17 10	17 50	13 37 52	4 10 62		
6	267	18.1	-20	13.9	137	51.4	77		+17	15.8	39	45	16 50	17 23	17 59	13 52 53	3 55 61		
7	282	17.9		13.3	152	18.0	76			19.6	38	40	17 04	34	18 07	14 05 53	43 60		
8	297	17.7		12.8	166	44.7	77			23.3	37	35	16	43	14	16 53	32 59		
9	312	17.5		12.3	181	11.3	76			26.8	35	30	26	17 52	21	25 54	23 59		
10	327	17.4		11.7	195	37.9	76			30.3	35	20	17 44	18 08	34	42 54	3 07 58		
11	342	17.2	-20	11.2	210	04.5	76		+17	33.6	33	10 N	18 00	18 22	18 48	14 56 55	2 53 57		
12	357	17.0	-20	10.6	224	31.1	76		+17	36.8	32	0	18 14	18 37	19 02	15 10 55	2 41 55		
13	12	16.8		10.1	238	57.7	76			40.0	30	10 S	29	18 52	18	23 56	28 54		
14	27	16.6		09.6	253	24.3	76			43.0	30	20	18 45	19 09	19 38	37 57	2 14 53		
15	42	16.4		09.0	267	50.9	76			45.9	29	30	19 04	30	20 02	15 54 57	1 58 53		
16	57	16.2		08.5	282	17.5	76			48.7	28	35	15	43	18	16 04 57	49 52		
17	72	16.1	-20	08.0	296	44.1	76		+17	51.4	27	40	19 27	19 59	20 37	16 15 57	1 39 50		
18	87	15.9	-20	07.4	311	10.7	76		+17	54.0	26	45	19 42	20 17	21 02	16 28 58	1 27 49		
19	102	15.7		06.9	325	37.3	76			56.4	24	50	20 01	41	36	44 58	12 48		
20	117	15.5		06.3	340	03.9	76		+17	58.8	24	52	09	20 53	21 54	51 59	1 05 47		
21	132	15.3		05.8	354	30.5	76		+18	01.0	22	54	19	21 06	22 18	16 59 59	0 57 47		
22	147	15.1		05.3	8	57.1	76			03.2	22	56	30	22	22 50	17 09 59	49 46		
23	162	15.0		04.7	23	23.7	76			05.2	20	58	43	21 42	** **	19 60	39 45		
24	177	14.8	-20	04.2	37	50.3	76		+18	07.1	19	60 S	20 58	22 06	** **	17 32 60	0 28 43		
UT	ARIES		VENUS				MARTE				JÚPITER			SATURNO					
	PMG: 16 ^h 02 ^m 1		Mag: -4.0 PMG: 9 ^h 45 ^m				Mag: +1.0 PMG: 6 ^h 32 ^m				Mag: -2.3 PMG: 3 ^h 41 ^m			Mag: +0.5 PMG: 8 ^h 51 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	118	49.1	213	55.7	-22	05.2	261	52.9	-13	01.7	304	42.5	+3	59.6	226	56.6	-20	44.0	
1	133	51.6	228	54.8		05.4	276	54.1		02.1	319	45.0		59.6	241	58.8		44.0	
2	148	54.0	243	54.0		05.6	291	55.3		02.5	334	47.6		59.6	257	01.0		44.0	
3	163	56.5	258	53.2		05.8	306	56.5		02.9	349	50.1		59.7	272	03.3		44.0	
4	178	58.9	273	52.3		06.1	321	57.7		03.3	4	52.7		59.7	287	05.5		44.1	
5	194	01.4	288	51.5	-22	06.3	336	58.9	-13	03.8	19	55.2	+3	59.8	302	07.7	-20	44.1	
6	209	03.9	303	50.6	-22	06.5	352	00.1	-13	04.2	34	57.8	+3	59.8	317	09.9	-20	44.1	
7	224	06.3	318	49.8		06.7	7	01.3		04.6	50	00.3		59.9	332	12.1		44.1	
8	239	08.8	333	49.0		06.9	22	02.5		05.0	65	02.9	+3	59.9	347	14.3		44.2	
9	254	11.3	348	48.1		07.1	37	03.7		05.4	80	05.4	+4	00.0	2	16.6		44.2	
10	269	13.7	3	47.3		07.3	52	04.8		05.8	95	08.0	+4	00.0	17	18.8		44.2	
11	284	16.2	18	46.4	-22	07.6	67	06.0	-13	06.3	110	10.5	+4	00.1	32	21.0	-20	44.2	
12	299	18.7	33	45.6	-22	07.8	82	07.2	-13	06.7	125	13.1	+4	00.1	47	23.2	-20	44.3	
13	314	21.1	48	44.7		08.0	97	08.4		07.1	140	15.6		00.2	62	25.4		44.3	
14	329	23.6	63	43.9		08.2	112	09.6		07.5	155	18.2		00.2	77	27.6		44.3	
15	344	26.1	78	43.1		08.4	127	10.8		07.9	170	20.7		00.3	92	29.9		44.4	
16	359	28.5	93	42.2		08.6	142	12.0		08.4	185	23.3		00.3	107	32.1		44.4	
17	14	31.0	108	41.4	-22	08.8	157	13.2	-13	08.8	200	25.8	+4	00.4	122	34.3	-20	44.4	
18	29	33.4	123	40.5	-22	09.0	172	14.4	-13	09.2	215	28.4	+4	00.4	137	36.5	-20	44.4	
19	44	35.9	138	39.7		09.2	187	15.6		09.6	230	30.9		00.5	152	38.7		44.5	
20	59	38.4	153	38.8		09.4	202	16.8		10.0	245	33.5		00.5	167	40.9		44.5	
21	74	40.8	168	38.0		09.6	217	18.0		10.4	260	36.0		00.6	182	43.2		44.5	
22	89	43.3	183	37.2		09.8	232	19.2		10.8	275	38.6		00.6	197	45.4		44.5	
23	104	45.8	198	36.3		10.0	247	20.4		11.3	290	41.1		00.7	212	47.6		44.6	
24	119	48.2	213	35.5	-22	10.2	262	21.6	-13	11.7	305	43.7	+4	00.7	227	49.8	-20	44.6	
Dif	—		-8		-2		+12		-4		+26		0		+22		0		

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 10 ^d 9 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'7 Rº: 54 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 11 ^m 2			SD: 15'8 PMG: 22 ^h 18 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m
0	177	14.8	-20	04.2	37	50.3	+18	07.1	18	60 N	6 54	7 47	8 38	13 40	59	6 00	54
1	192	14.6		03.6	52	16.9		08.9	18	58	49	39	25	13 52	59	5 48	54
2	207	14.4		03.1	66	43.5		10.6	17	56	44	31	14	14 03	58	37	55
3	222	14.2		02.5	81	10.1		12.2	16	54	40	24	8 04	13 57		28	54
4	237	14.1		02.0	95	36.7		13.6	14	52	36	17	7 56	21 57		19	55
5	252	13.9	-20	01.4	110	03.4	+18	15.0	14	50	6 32	7 12	7 48	14 29	57	5 12	55
6	267	13.7	-20	00.9	124	30.0	+18	16.2	12	45	6 23	6 59	7 31	14 45	57	4 56	55
7	282	13.5	-20	00.3	138	56.7		17.4	12	40	15	48	17	14 58	56	43	55
8	297	13.3	-19	59.8	153	23.3		18.4	10	35	08	38	7 06	15 09	56	31	55
9	312	13.2		59.2	167	50.0		19.3	9	30	6 01	30	6 55	19 56		22	55
10	327	13.0		58.7	182	16.7		20.1	8	20	5 47	14	38	36 56		4 05	55
11	342	12.8	-19	58.1	196	43.4	+18	20.8	7	10 N	5 34	6 00	6 22	15 51	55	3 50	55
12	357	12.6	-19	57.6	211	10.1	+18	21.4	6	0	5 20	5 46	6 08	16 05	54	3 36	55
13	12	12.5		57.0	225	36.9		21.8	4	10 S	5 04	30	5 53	19 54		22	55
14	27	12.3		56.5	240	03.6		22.2	4	20	4 45	5 13	37	34 53		3 07	56
15	42	12.1		55.9	254	30.4		22.4	2	30	20	4 52	18	16 51	53	2 51	55
16	57	11.9		55.4	268	57.2		22.6	2	35	4 04	39	5 07	17 01	53	41	55
17	72	11.7	-19	54.8	283	24.0	+18	22.6	0	40	3 45	4 24	4 55	17 12	53	2 29	55
18	87	11.6	-19	54.3	297	50.9	+18	22.5	1	45	3 20	4 05	4 40	17 26	51	2 16	55
19	102	11.4		53.7	312	17.7		22.3	2	50	2 46	3 41	22	42 51		2 00	55
20	117	11.2		53.1	326	44.6		22.0	3	52	28	30	13	50 50		1 52	55
21	132	11.0		52.6	341	11.5		21.6	4	54	2 05	16	4 04	17 58	51	44	54
22	147	10.9		52.0	355	38.4		21.1	5	56	1 33	3 00	3 53	18 08	50	35	54
23	162	10.7		51.5	10	05.4		20.4	7	58	** **	2 41	40	19 49		24	54
24	177	10.5	-19	50.9	24	32.4	+18	19.7	7	60 S	** **	2 16	3 25	18 32	48	1 11	54

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 58 ^m 2		Mag: -4.0 PMG: 9 ^h 46 ^m			Mag: +1.0 PMG: 6 ^h 30 ^m			Mag: -2.3 PMG: 3 ^h 36 ^m			Mag: +0.5 PMG: 8 ^h 47 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'			
0	119	48.2	213	35.5	-22	10.2	262	21.6	-13	11.7	305	43.7	+4	00.7	227	49.8	-20	44.6
1	134	50.7	228	34.6		10.4	277	22.8		12.1	320	46.2		00.8	242	52.0		44.6
2	149	53.2	243	33.8		10.6	292	23.9		12.5	335	48.8		00.8	257	54.2		44.6
3	164	55.6	258	32.9		10.8	307	25.1		12.9	350	51.3		00.9	272	56.5		44.7
4	179	58.1	273	32.1		11.0	322	26.3		13.3	5	53.9		00.9	287	58.7		44.7
5	195	00.6	288	31.2	-22	11.2	337	27.5	-13	13.8	20	56.5	+4	01.0	303	00.9	-20	44.7
6	210	03.0	303	30.4	-22	11.4	352	28.7	-13	14.2	35	59.0	+4	01.0	318	03.1	-20	44.7
7	225	05.5	318	29.5		11.5	7	29.9		14.6	51	01.6		01.1	333	05.3		44.8
8	240	07.9	333	28.7		11.7	22	31.1		15.0	66	04.1		01.1	348	07.6		44.8
9	255	10.4	348	27.8		11.9	37	32.3		15.4	81	06.7		01.2	3	09.8		44.8
10	270	12.9	3	27.0		12.1	52	33.5		15.8	96	09.2		01.2	18	12.0		44.8
11	285	15.3	18	26.2	-22	12.3	67	34.7	-13	16.2	111	11.8	+4	01.3	33	14.2	-20	44.9
12	300	17.8	33	25.3	-22	12.5	82	35.9	-13	16.6	126	14.4	+4	01.4	48	16.4	-20	44.9
13	315	20.3	48	24.5		12.7	97	37.1		17.1	141	16.9		01.4	63	18.7		44.9
14	330	22.7	63	23.6		12.8	112	38.3		17.5	156	19.5		01.5	78	20.9		44.9
15	345	25.2	78	22.8		13.0	127	39.5		17.9	171	22.0		01.5	93	23.1		45.0
16	0	27.7	93	21.9		13.2	142	40.7		18.3	186	24.6		01.6	108	25.3		45.0
17	15	30.1	108	21.1	-22	13.4	157	41.9	-13	18.7	201	27.1	+4	01.6	123	27.5	-20	45.0
18	30	32.6	123	20.2	-22	13.6	172	43.1	-13	19.1	216	29.7	+4	01.7	138	29.8	-20	45.1
19	45	35.0	138	19.4		13.7	187	44.3		19.5	231	32.3		01.7	153	32.0		45.1
20	60	37.5	153	18.5		13.9	202	45.5		19.9	246	34.8		01.8	168	34.2		45.1
21	75	40.0	168	17.7		14.1	217	46.7		20.4	261	37.4		01.8	183	36.4		45.1
22	90	42.4	183	16.8		14.2	232	47.9		20.8	276	39.9		01.9	198	38.6		45.2
23	105	44.9	198	16.0		14.4	247	49.1		21.2	291	42.5		01.9	213	40.9		45.2
24	120	47.4	213	15.1	-22	14.6	262	50.3	-13	21.6	306	45.1	+4	02.0	228	43.1	-20	45.2
Dif	—		-8			-2	+12			-4	+26			+1	+22			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3		Edad: 11 ^d 9 PHE { 4 ^h : 57:5 12 ^h : 57:4 20 ^h : 57:2 R°: 53 ^m											
	PMG: 12 ^h 11 ^m 4		PMG: 23 ^h 12 ^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	
0	177	10.5	-19 50.9	24 32.4	+18 19.7	9	60 N	15 47	16 38	17 30	14 39 67	6 54 43		
1	192	10.4	50.4	38 59.4	18.8	9	58	16 00	46	36	14 51 65	42 44		
2	207	10.2	49.8	53 26.4	17.9	9	56	11	16 54	40	15 01 64	32 45		
3	222	10.0	49.2	67 53.4	16.8	11	54	20	17 01	45	10 64	22 46		
4	237	09.8	48.7	82 20.5	15.6	12	52	29	07	49	18 63	14 47		
5	252	09.7	-19 48.1	96 47.7	+18 14.4	12	50	16 37	17 13	17 53	15 26 62	6 07 47		
6	267	09.5	-19 47.5	111 14.8	+18 13.0	14	45	16 53	17 25	18 01	15 42 60	5 51 48		
7	282	09.3	47.0	125 42.0	11.5	15	40	17 06	36	09	15 54 59	38 49		
8	297	09.1	46.4	140 09.2	09.9	16	35	18	45	16	16 05 58	26 51		
9	312	09.0	45.8	154 36.5	08.2	17	30	28	17 54	23	15 57	17 50		
10	327	08.8	45.3	169 03.7	06.4	18	20	17 45	18 09	36	32 55	5 00 52		
11	342	08.6	-19 44.7	183 31.1	+18 04.4	20	10 N	18 01	18 23	18 49	16 46 54	4 45 53		
12	357	08.5	-19 44.1	197 58.4	+18 02.4	20	0	18 15	18 37	19 03	16 59 53	4 31 54		
13	12	08.3	43.6	212 25.8	+18 00.3	21	10 S	30	18 52	18	17 13 52	17 55		
14	27	08.1	43.0	226 53.2	+17 58.1	22	20	18 45	19 09	19 37	27 51	4 03 55		
15	42	08.0	42.4	241 20.7	55.7	24	30	19 03	30	20 01	44 48	3 46 56		
16	57	07.8	41.9	255 48.2	53.3	24	35	14	42	17	17 54 47	36 57		
17	72	07.6	-19 41.3	270 15.8	+17 50.8	25	40	19 26	19 57	20 36	18 05 46	3 24 58		
18	87	07.5	-19 40.7	284 43.4	+17 48.1	27	45	19 41	20 15	21 00	18 17 45	3 11 59		
19	102	07.3	40.2	299 11.0	45.4	27	50	19 58	39	33	33 43	2 55 59		
20	117	07.1	39.6	313 38.7	42.6	28	52	20 07	20 50	21 50	40 43	47 60		
21	132	07.0	39.0	328 06.4	39.6	30	54	16	21 03	22 12	49 41	38 61		
22	147	06.8	38.4	342 34.1	36.6	30	56	27	18	22 41	18 58 40	29 61		
23	162	06.6	37.9	357 01.9	33.5	31	58	39	21 37	23 35	19 08 39	18 62		
24	177	06.5	-19 37.3	11 29.8	+17 30.2	33	60 S	20 54	22 00	** **	19 20 37	2 05 64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 15 ^h 54 ^m 2		Mag: -4.0 PMG: 9 ^h 48 ^m			Mag: +1.0 PMG: 6 ^h 28 ^m			Mag: -2.3 PMG: 3 ^h 32 ^m			Mag: +0.5 PMG: 8 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	120	47.4	213 15.1	-22 14.6	262 50.3	-13 21.6	306 45.1	+4 02.0	228 43.1	-20 45.2				
1	135	49.8	228 14.3	14.8	277 51.5	22.0	321 47.6	02.0	243 45.3	45.2				
2	150	52.3	243 13.4	14.9	292 52.7	22.4	336 50.2	02.1	258 47.5	45.3				
3	165	54.8	258 12.6	15.1	307 53.9	22.8	351 52.8	02.1	273 49.7	45.3				
4	180	57.2	273 11.7	15.3	322 55.1	23.2	6 55.3	02.2	288 52.0	45.3				
5	195	59.7	288 10.9	-22 15.4	337 56.3	-13 23.6	21 57.9	+4 02.3	303 54.2	-20 45.3				
6	211	02.2	303 10.0	-22 15.6	352 57.4	-13 24.1	37 00.4	+4 02.3	318 56.4	-20 45.4				
7	226	04.6	318 09.2	15.7	7 58.6	24.5	52 03.0	02.4	333 58.6	45.4				
8	241	07.1	333 08.3	15.9	22 59.8	24.9	67 05.6	02.4	349 00.8	45.4				
9	256	09.5	348 07.5	16.1	38 01.0	25.3	82 08.1	02.5	4 03.1	45.4				
10	271	12.0	3 06.6	16.2	53 02.2	25.7	97 10.7	02.5	19 05.3	45.5				
11	286	14.5	18 05.8	-22 16.4	68 03.4	-13 26.1	112 13.3	+4 02.6	34 07.5	-20 45.5				
12	301	16.9	33 04.9	-22 16.5	83 04.6	-13 26.5	127 15.8	+4 02.6	49 09.7	-20 45.5				
13	316	19.4	48 04.0	16.7	98 05.8	26.9	142 18.4	02.7	64 12.0	45.5				
14	331	21.9	63 03.2	16.8	113 07.0	27.3	157 20.9	02.8	79 14.2	45.6				
15	346	24.3	78 02.3	17.0	128 08.2	27.7	172 23.5	02.8	94 16.4	45.6				
16	1	26.8	93 01.5	17.2	143 09.4	28.1	187 26.1	02.9	109 18.6	45.6				
17	16	29.3	108 00.6	-22 17.3	158 10.6	-13 28.6	202 28.6	+4 02.9	124 20.8	-20 45.6				
18	31	31.7	122 59.8	-22 17.5	173 11.8	-13 29.0	217 31.2	+4 03.0	139 23.1	-20 45.7				
19	46	34.2	137 58.9	17.6	188 13.0	29.4	232 33.8	03.0	154 25.3	45.7				
20	61	36.7	152 58.1	17.7	203 14.2	29.8	247 36.3	03.1	169 27.5	45.7				
21	76	39.1	167 57.2	17.9	218 15.4	30.2	262 38.9	03.1	184 29.7	45.7				
22	91	41.6	182 56.4	18.0	233 16.6	30.6	277 41.5	03.2	199 32.0	45.8				
23	106	44.0	197 55.5	18.2	248 17.8	31.0	292 44.0	03.3	214 34.2	45.8				
24	121	46.5	212 54.7	-22 18.3	263 19.0	-13 31.4	307 46.6	+4 03.3	229 36.4	-20 45.8				
Dif	—		-9	-2	+12	-4	+26	+1	+22	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3			Edad: 12 ^d 9 PHE { 4 ^h : 57'0 12 ^h : 56'9 20 ^h : 56'7 R°: ***														
	PMG: 12 ^h 11 ^m 7			SD: 15'6 PMG: *** **m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	
0	177	06.5	-19	37.3	11	29.8	+17	30.2	60 N	6	52	7	44	8	35	15	46	
1	192	06.3		36.7	25	57.7	89	26.9	58	47	36	22	15	56	70	26	35	
2	207	06.1		36.1	40	25.6	89	23.5	56	42	28	11	16	05	68	17	36	
3	222	06.0		35.6	54	53.6	90	20.0	54	38	21	8	02	14	66	08	38	
4	237	05.8		35.0	69	21.6	90	16.3	52	34	15	7	53	21	65	7	01	
5	252	05.6	-19	34.4	83	49.7	91	+17	50	6	30	7	10	7	46	16	28	
6	267	05.5	-19	33.8	98	17.8	91	+17	45	6	22	6	57	7	30	16	42	
7	282	05.3		33.2	112	46.0	92	04.9	40	14	47	16	16	53	60		27	
8	297	05.2		32.7	127	14.2	92	+17	35	07	38	7	05	17	03	59	17	
9	312	05.0		32.1	141	42.5	93	+16	30	6	00	29	6	55	12	57	6	
10	327	04.8		31.5	156	10.8	93	52.7	20	5	47	14	38	27	55	5	52	
11	342	04.7	-19	30.9	170	39.2	94	+16	10 N	5	34	6	00	6	22	17	40	
12	357	04.5	-19	30.3	185	07.6	94	+16	0	5	21	5	46	6	08	17	52	
13	12	04.3		29.8	199	36.1	95	39.6	10 S	5	05	31	5	54	18	05		
14	27	04.2		29.2	214	04.6	95	35.1	20	4	46	5	14	38	18	46	4	
15	42	04.0		28.6	228	33.2	96	30.5	30	22	4	54	20	32	45	42	57	
16	57	03.9		28.0	243	01.9	97	25.8	35	4	07	41	5	09	41	43	33	
17	72	03.7	-19	27.4	257	30.6	97	+16	40	3	48	4	26	4	57	18	51	
18	87	03.5	-19	26.8	271	59.3	97	+16	45	3	24	4	08	4	43	19	02	
19	102	03.4		26.2	286	28.1	98	11.1	50	2	51	3	45	25	16	37	3	
20	117	03.2		25.7	300	57.0	99	06.1	50		34	34	17	23	35	47	65	
21	132	03.1		25.1	315	25.9	99	+16	54	2	12	21	4	07	30	34	39	
22	147	02.9		24.5	329	54.8	99	+15	56	1	42	3	05	3	57	38	33	
23	162	02.8		23.9	344	23.9	101	50.5	58	0	49	2	47	45	47	31	20	
24	177	02.6	-19	23.3	358	52.9	100	+15	60 S	**	**	2	24	3	30	19	57	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 50 ^m 3			Mag: -4.0 PMG: 9 ^h 49 ^m			Mag: +1.0 PMG: 6 ^h 26 ^m			Mag: -2.3 PMG: 3 ^h 28 ^m			Mag: +0.5 PMG: 8 ^h 40 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	121	46.5	212	54.7	-22	18.3	263	19.0	-13	31.4	307	46.6	+4	03.3	229	36.4	-20	45.8
1	136	49.0	227	53.8		18.5	278	20.2		31.8	322	49.2		03.4	244	38.6		45.8
2	151	51.4	242	53.0		18.6	293	21.4		32.2	337	51.8		03.4	259	40.8		45.9
3	166	53.9	257	52.1		18.7	308	22.6		32.6	352	54.3		03.5	274	43.1		45.9
4	181	56.4	272	51.2		18.9	323	23.8		33.0	7	56.9		03.5	289	45.3		45.9
5	196	58.8	287	50.4	-22	19.0	338	25.0	-13	33.4	22	59.5	+4	03.6	304	47.5	-20	45.9
6	212	01.3	302	49.5	-22	19.2	353	26.2	-13	33.8	38	02.0	+4	03.7	319	49.7	-20	46.0
7	227	03.8	317	48.7		19.3	8	27.5		34.2	53	04.6		03.7	334	52.0		46.0
8	242	06.2	332	47.8		19.4	23	28.7		34.7	68	07.2		03.8	349	54.2		46.0
9	257	08.7	347	47.0		19.6	38	29.9		35.1	83	09.7		03.8	4	56.4		46.0
10	272	11.2	2	46.1		19.7	53	31.1		35.5	98	12.3		03.9	19	58.6		46.1
11	287	13.6	17	45.3	-22	19.8	68	32.3	-13	35.9	113	14.9	+4	03.9	35	00.9	-20	46.1
12	302	16.1	32	44.4	-22	19.9	83	33.5	-13	36.3	128	17.5	+4	04.0	50	03.1	-20	46.1
13	317	18.5	47	43.5		20.1	98	34.7		36.7	143	20.0		04.1	65	05.3		46.1
14	332	21.0	62	42.7		20.2	113	35.9		37.1	158	22.6		04.1	80	07.5		46.2
15	347	23.5	77	41.8		20.3	128	37.1		37.5	173	25.2		04.2	95	09.8		46.2
16	2	25.9	92	41.0		20.5	143	38.3		37.9	188	27.7		04.2	110	12.0		46.2
17	17	28.4	107	40.1	-22	20.6	158	39.5	-13	38.3	203	30.3	+4	04.3	125	14.2	-20	46.2
18	32	30.9	122	39.3	-22	20.7	173	40.7	-13	38.7	218	32.9	+4	04.4	140	16.4	-20	46.3
19	47	33.3	137	38.4		20.8	188	41.9		39.1	233	35.5		04.4	155	18.7		46.3
20	62	35.8	152	37.5		20.9	203	43.1		39.5	248	38.0		04.5	170	20.9		46.3
21	77	38.3	167	36.7		21.1	218	44.3		39.9	263	40.6		04.5	185	23.1		46.3
22	92	40.7	182	35.8		21.2	233	45.5		40.3	278	43.2		04.6	200	25.3		46.4
23	107	43.2	197	35.0		21.3	248	46.7		40.7	293	45.8		04.6	215	27.6		46.4
24	122	45.7	212	34.1	-22	21.4	263	47.9	-13	41.1	308	48.3	+4	04.7	230	29.8	-20	46.4
Dif	—		-9	-1			+12	-4			+26	+1			+22	0		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 13 ^d 9 PHE { 4 ^h : 56:5 12 ^h : 56:3 20 ^h : 56:1						Civil		Náutico		Hora R°	
	PMG: 12 ^h 12 ^m 0		PMG: 0 ^h 05 ^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	177	02.6	-19 23.3	358	52.9	+15 45.1	55 60 N	15 52	16 42	17 34	16 57 74	8 10 26		
1	192	02.4		13	22.1 ¹⁰²	39.6	55 58	16 04	50	39	17 06 71	8 01 28		
2	207	02.3		27	51.2 ¹⁰¹	34.1	55 56	15	16 58	44	13 70	7 53 30		
3	222	02.1		42	20.5 ¹⁰³	28.5	54 54	24	17 04	48	20 68	46 32		
4	237	02.0		56	49.8 ¹⁰³	22.8	57 52	32	10	52	26 66	40 32		
5	252	01.8	-19 20.3	71	19.2 ¹⁰⁴	+15 17.0	58 50	16 40	17 16	17 55	17 32 65	7 34 34		
6	267	01.7	-19 19.7	85	48.6 ¹⁰⁴	+15 11.2	58 45	16 56	17 28	18 04	17 44 61	7 21 37		
7	282	01.5		100	18.0 ¹⁰⁴	+15 05.3	59 40	17 09	38	11	17 53 60	11 39		
8	297	01.3		114	47.6 ¹⁰⁶	+14 59.3	60 35	20	47	18	18 02 57	7 02 40		
9	312	01.2		129	17.2 ¹⁰⁶	53.2	61 30	30	17 55	24	09 56	6 54 42		
10	327	01.0		143	46.8 ¹⁰⁶	47.1	61 20	17 47	18 10	37	22 53	40 45		
11	342	00.9	-19 16.8	158	16.5 ¹⁰⁷	+14 40.9	62 10 N	18 02	18 24	18 49	18 33 50	6 28 47		
12	357	00.7	-19 16.2	172	46.3 ¹⁰⁸	+14 34.6	63 0	18 16	18 37	19 03	18 43 48	6 17 49		
13	12	00.6		187	16.1 ¹⁰⁸	28.3	63 10 S	30	18 52	18	18 53 46	6 05 52		
14	27	00.4		201	46.0 ¹⁰⁹	21.9	64 20	18 45	19 09	19 37	19 04 43	5 53 54		
15	42	00.3		216	15.9 ¹⁰⁹	15.4	65 30	19 03	29	20 00	17 40	39 57		
16	57	00.1		230	45.9 ¹¹⁰	08.8	66 35	13	41	15	24 38	31 58		
17	72	00.0	-19 13.2	245	15.9 ¹¹⁰	+14 02.2	66 40	19 25	19 56	20 34	19 32 37	5 22 60		
18	86	59.8	-19 12.6	259	46.1 ¹¹²	+13 55.5	67 45	19 39	20 13	20 57	19 42 34	5 11 62		
19	101	59.7		274	16.2 ¹¹¹	48.8	67 50	19 56	36	21 29	53 32	4 58 65		
20	116	59.5		288	46.4 ¹¹²	41.9	69 52	20 04	47	21 46	19 58 31	52 66		
21	131	59.4		303	16.7 ¹¹³	35.1	68 54	13	20 59	22 06	20 04 29	45 67		
22	146	59.2		317	47.1 ¹¹⁴	28.1	70 56	24	21 14	22 33	11 27	37 69		
23	161	59.1		332	17.5 ¹¹⁴	21.1	70 58	35	32	23 17	18 25	29 70		
24	176	58.9	-19 09.0	346	47.9 ¹¹⁴	+13 14.1	70 60 S	20 49	21 54	** **	20 26 23	4 19 73		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 46 ^m 4		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: +0.9 PMG: 6 ^h 24 ^m		Mag: -2.4 PMG: 3 ^h 24 ^m		Mag: +0.5 PMG: 8 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	122	45.7	212	34.1	-22	21.4	263	47.9	-13	41.1
1	137	48.1	227	33.2		21.5	278	49.1		41.5
2	152	50.6	242	32.4		21.6	293	50.3		41.9
3	167	53.0	257	31.5		21.7	308	51.5		42.3
4	182	55.5	272	30.7		21.9	323	52.7		42.7
5	197	58.0	287	29.8	-22	22.0	338	53.9	-13	43.1
6	213	00.4	302	29.0	-22	22.1	353	55.1	-13	43.5
7	228	02.9	317	28.1		22.2	8	56.3		43.9
8	243	05.4	332	27.2		22.3	23	57.5		44.3
9	258	07.8	347	26.4		22.4	38	58.7		44.7
10	273	10.3	2	25.5		22.5	54	00.0		45.1
11	288	12.8	17	24.7	-22	22.6	69	01.2	-13	45.5
12	303	15.2	32	23.8	-22	22.7	84	02.4	-13	45.9
13	318	17.7	47	22.9		22.8	99	03.6		46.3
14	333	20.1	62	22.1		22.9	114	04.8		46.7
15	348	22.6	77	21.2		23.0	129	06.0		47.1
16	3	25.1	92	20.4		23.1	144	07.2		47.5
17	18	27.5	107	19.5	-22	23.2	159	08.4	-13	47.9
18	33	30.0	122	18.6	-22	23.3	174	09.6	-13	48.3
19	48	32.5	137	17.8		23.4	189	10.8		48.7
20	63	34.9	152	16.9		23.5	204	12.0		49.1
21	78	37.4	167	16.1		23.6	219	13.2		49.5
22	93	39.9	182	15.2		23.7	234	14.4		49.9
23	108	42.3	197	14.3		23.8	249	15.6		50.3
24	123	44.8	212	13.5	-22	23.8	264	16.8	-13	50.7
Dif	—		-9		-1		+12		-4	
								+26	+1	
										+22

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 14 ^d 9 PHE { 4 ^h : 56:0 12 ^h : 55:8 20 ^h : 55:6											
	PMG: 12 ^h 12 ^m 2			SD: 15:3 PMG: 0 ^h 55 ^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	m	h m m	m
0	176	58.9	-19 09.0	346	47.9	+13 14.1	72	60 N	6 49	7 41	8 31	18 11	73	8 36	22
1	191	58.8	08.4	1	18.5 ¹¹⁶	+13 06.9	72	58	44	33	19	17	71	29	24
2	206	58.6	07.7	15	49.0 ¹¹⁵	+12 59.7	72	56	40	26	8 08	23	69	23	25
3	221	58.5	07.1	30	19.7 ¹¹⁷	52.5	72	54	36	19	7 59	28	67	18	26
4	236	58.3	06.5	44	50.3 ¹¹⁶	45.2	73	52	32	13	51	32	66	12	29
5	251	58.2	-19 05.9	59	21.1 ¹¹⁸	+12 37.9	73	50	6 28	7 08	7 43	18 37	64	8 08	30
6	266	58.0	-19 05.3	73	51.9 ¹¹⁸	+12 30.4	75	45	6 20	6 56	7 28	18 45	62	7 58	32
7	281	57.9	04.7	88	22.8 ¹¹⁹	23.0	74	40	13	46	15	53	59	50	34
8	296	57.7	04.1	102	53.7 ¹¹⁹	15.5	75	35	06	37	7 04	18 59	57	42	37
9	311	57.6	03.5	117	24.6 ¹¹⁹	07.9	76	30	6 00	29	6 54	19 05	54	36	39
10	326	57.4	02.9	131	55.7 ¹²¹	+12 00.3	76	20	5 47	14	37	15	51	25	42
11	341	57.3	-19 02.3	146	26.8 ¹²¹	+11 52.6	77	10 N	5 35	6 00	6 23	19 23	49	7 15	45
12	356	57.2	-19 01.7	160	57.9 ¹²¹	+11 44.9	77	0	5 21	5 47	6 09	19 31	46	7 06	47
13	11	57.0	01.0	175	29.1 ¹²²	37.1	78	10 S	5 06	32	5 55	39	43	6 57	50
14	26	56.9	-19 00.4	190	00.4 ¹²³	29.2	79	20	4 48	5 16	39	47	41	47	52
15	41	56.7	-18 59.8	204	31.7 ¹²³	21.4	78	30	24	4 56	22	19 57	37	36	55
16	56	56.6	59.2	219	03.0 ¹²³	13.4	80	35	4 09	43	12	20 02	36	29	58
17	71	56.4	-18 58.6	233	34.4 ¹²⁴	+11 05.5	79	40	3 51	4 29	5 00	20 09	33	6 22	59
18	86	56.3	-18 58.0	248	05.9 ¹²⁵	+10 57.5	80	45	3 28	4 11	4 46	20 16	31	6 13	62
19	101	56.1	57.4	262	37.4 ¹²⁵	49.4	81	50	2 56	3 49	29	25	27	6 03	64
20	116	56.0	56.7	277	09.0 ¹²⁶	41.3	81	52	39	38	20	29	26	5 58	66
21	131	55.9	56.1	291	40.7 ¹²⁷	33.2	81	54	2 19	25	11	33	25	52	68
22	146	55.7	55.5	306	12.3 ¹²⁶	25.0	82	56	1 51	3 11	4 01	38	23	46	70
23	161	55.6	54.9	320	44.1 ¹²⁸	16.7	83	58	1 08	2 53	3 49	43	22	39	72
24	176	55.4	-18 54.3	335	15.9 ¹²⁸	+10 08.5	82	60 S	** **	2 31	3 36	20 49	20	5 32	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 42 ^m 4		Mag: -3.9 PMG: 9 ^h 52 ^m		Mag: +0.9 PMG: 6 ^h 22 ^m		Mag: -2.4 PMG: 3 ^h 20 ^m		Mag: +0.5 PMG: 8 ^h 33 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	123	44.8	212 13.5	-22 23.8	264 16.8	-13 50.7	309 50.2	+4 06.2	231 23.2	-20 47.0
1	138	47.3	227 12.6	23.9	279 18.1	51.1	324 52.8	06.2	246 25.5	47.0
2	153	49.7	242 11.7	24.0	294 19.3	51.5	339 55.4	06.3	261 27.7	47.0
3	168	52.2	257 10.9	24.1	309 20.5	51.9	354 58.0	06.4	276 29.9	47.1
4	183	54.6	272 10.0	24.2	324 21.7	52.3	10 00.6	06.4	291 32.2	47.1
5	198	57.1	287 09.2	-22 24.3	339 22.9	-13 52.7	25 03.1	+4 06.5	306 34.4	-20 47.1
6	213	59.6	302 08.3	-22 24.3	354 24.1	-13 53.1	40 05.7	+4 06.6	321 36.6	-20 47.1
7	229	02.0	317 07.4	24.4	9 25.3	53.5	55 08.3	06.6	336 38.8	47.1
8	244	04.5	332 06.6	24.5	24 26.5	53.9	70 10.9	06.7	351 41.1	47.2
9	259	07.0	347 05.7	24.6	39 27.7	54.3	85 13.5	06.7	6 43.3	47.2
10	274	09.4	2 04.8	24.7	54 28.9	54.7	100 16.1	06.8	21 45.5	47.2
11	289	11.9	17 04.0	-22 24.7	69 30.1	-13 55.1	115 18.7	+4 06.9	36 47.8	-20 47.2
12	304	14.4	32 03.1	-22 24.8	84 31.3	-13 55.5	130 21.2	+4 06.9	51 50.0	-20 47.3
13	319	16.8	47 02.3	24.9	99 32.6	55.9	145 23.8	07.0	66 52.2	47.3
14	334	19.3	62 01.4	25.0	114 33.8	56.3	160 26.4	07.1	81 54.5	47.3
15	349	21.8	77 00.5	25.0	129 35.0	56.7	175 29.0	07.1	96 56.7	47.3
16	4	24.2	91 59.7	25.1	144 36.2	57.1	190 31.6	07.2	111 58.9	47.4
17	19	26.7	106 58.8	-22 25.2	159 37.4	-13 57.5	205 34.2	+4 07.3	127 01.1	-20 47.4
18	34	29.1	121 57.9	-22 25.2	174 38.6	-13 57.9	220 36.8	+4 07.3	142 03.4	-20 47.4
19	49	31.6	136 57.1	25.3	189 39.8	58.3	235 39.3	07.4	157 05.6	47.4
20	64	34.1	151 56.2	25.4	204 41.0	58.7	250 41.9	07.5	172 07.8	47.5
21	79	36.5	166 55.3	25.4	219 42.2	59.1	265 44.5	07.5	187 10.1	47.5
22	94	39.0	181 54.5	25.5	234 43.4	59.5	280 47.1	07.6	202 12.3	47.5
23	109	41.5	196 53.6	25.5	249 44.7	-13 59.8	295 49.7	07.6	217 14.5	47.5
24	124	43.9	211 52.8	-22 25.6	264 45.9	-14 00.2	310 52.3	+4 07.7	232 16.8	-20 47.5
Dif	—		-9	-1	+12	-4	+26	+1	+22	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: 15 ^d 9 PHE { 4 ^h : 55:4 12 ^h : 55:3 20 ^h : 55:1 PMG: 1 ^h 42 ^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	176	55.4	-18	54.3	335	15.9	+10	08.5	60 N	15 57	16 46	17 38	19 24	72	8 58	18		
1	191	55.3		53.6	349	47.7 ¹²⁸	+10	00.1 ⁸⁴	58	16 09	16 54	43	28	70	53	20		
2	206	55.2		53.0	4	19.6 ¹²⁹	+9	51.8 ⁸³	56	19	17 01	47	32	68	48	22		
3	221	55.0		52.4	18	51.6 ¹³⁰		43.4 ⁸⁴	54	28	08	51	35	66	44	24		
4	236	54.9		51.8	33	23.6 ¹³⁰		35.0 ⁸⁴	52	36	13	55	38	65	41	25		
5	251	54.7	-18	51.2	47	55.6 ¹³⁰	+9	26.5 ⁸⁵	50	16 43	17 19	17 58	19 41	63	8 38	26		
6	266	54.6	-18	50.5	62	27.7 ¹³¹	+9	18.0 ⁸⁵	45	16 58	17 30	18 06	19 47	60	8 30	30		
7	281	54.5		49.9	76	59.8 ¹³¹		09.5 ⁸⁵	40	17 11	40	13	52	57	24	32		
8	296	54.3		49.3	91	32.0 ¹³²	+9	00.9 ⁸⁶	35	22	49	20	56	55	19	34		
9	311	54.2		48.7	106	04.3 ¹³³	+8	52.3 ⁸⁶	30	31	17 57	26	19 59	54	15	36		
10	326	54.1		48.0	120	36.6 ¹³³		43.7 ⁸⁶	20	17 48	18 11	38	20 06	50	07	39		
11	341	53.9	-18	47.4	135	08.9 ¹³³	+8	35.0 ⁸⁷	10 N	18 02	18 24	18 50	20 12	46	8 00	42		
12	356	53.8	-18	46.8	149	41.3 ¹³⁴	+8	26.3 ⁸⁷	0	18 16	18 38	19 03	20 17	44	7 53	45		
13	11	53.6		46.2	164	13.7 ¹³⁴		17.5 ⁸⁸	10 S	30	18 52	18	22	41	47	47		
14	26	53.5		45.5	178	46.2 ¹³⁵	+8	08.8 ⁸⁷	20	18 45	19 08	36	28	38	39	51		
15	41	53.4		44.9	193	18.7 ¹³⁵	+8	00.0 ⁸⁸	30	19 02	28	19 59	34	35	31	54		
16	56	53.2		44.3	207	51.3 ¹³⁶	+7	51.2 ⁸⁸	35	12	40	20 14	38	33	27	55		
17	71	53.1	-18	43.6	222	23.9 ¹³⁶	+7	42.3 ⁸⁹	40	19 23	19 54	20 32	20 42	31	7 21	58		
18	86	53.0	-18	43.0	236	56.6 ¹³⁷	+7	33.4 ⁸⁹	45	19 37	20 11	20 54	20 47	28	7 15	61		
19	101	52.8		42.4	251	29.3 ¹³⁷		24.5 ⁸⁹	50	19 54	33	21 25	52	26	07	64		
20	116	52.7		41.8	266	02.0 ¹³⁷		15.6 ⁸⁹	52	20 02	43	21 41	55	24	04	65		
21	131	52.6		41.1	280	34.8 ¹³⁸	+7	06.7 ⁸⁹	54	10	20 56	22 00	20 58	22	7 00	67		
22	146	52.4		40.5	295	07.6 ¹³⁸	+6	57.7 ⁹⁰	56	20	21 10	22 26	21 01	21	6 56	68		
23	161	52.3		39.9	309	40.5 ¹³⁹		48.7 ⁹⁰	58	32	27	23 03	05	19	51	71		
24	176	52.2	-18	39.2	324	13.4 ¹³⁹	+6	39.7 ⁹⁰	60 S	20 45	21 47	** **	21 09	16	6 46	73		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 38 ^m 5		Mag: -3.9 PMG: 9 ^h 53 ^m				Mag: +0.9 PMG: 6 ^h 20 ^m				Mag: -2.4 PMG: 3 ^h 16 ^m				Mag: +0.5 PMG: 8 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	124	43.9	211	52.8	-22	25.6	264	45.9	-14	00.2	310	52.3	+4	07.7	232	16.8	-20	47.5
1	139	46.4	226	51.9		25.7	279	47.1		00.6	325	54.9		07.8	247	19.0		47.6
2	154	48.9	241	51.0		25.7	294	48.3		01.0	340	57.5		07.8	262	21.2		47.6
3	169	51.3	256	50.2		25.8	309	49.5		01.4	356	00.1		07.9	277	23.5		47.6
4	184	53.8	271	49.3		25.8	324	50.7		01.8	11	02.6		08.0	292	25.7		47.6
5	199	56.2	286	48.4	-22	25.9	339	51.9	-14	02.2	26	05.2	+4	08.0	307	27.9	-20	47.7
6	214	58.7	301	47.6	-22	25.9	354	53.1	-14	02.6	41	07.8	+4	08.1	322	30.2	-20	47.7
7	230	01.2	316	46.7		26.0	9	54.4		03.0	56	10.4		08.2	337	32.4		47.7
8	245	03.6	331	45.8		26.0	24	55.6		03.4	71	13.0		08.2	352	34.6		47.7
9	260	06.1	346	45.0		26.1	39	56.8		03.8	86	15.6		08.3	7	36.9		47.8
10	275	08.6	1	44.1		26.1	54	58.0		04.2	101	18.2		08.4	22	39.1		47.8
11	290	11.0	16	43.2	-22	26.2	69	59.2	-14	04.6	116	20.8	+4	08.4	37	41.3	-20	47.8
12	305	13.5	31	42.4	-22	26.2	85	00.4	-14	05.0	131	23.4	+4	08.5	52	43.6	-20	47.8
13	320	16.0	46	41.5		26.3	100	01.6		05.4	146	26.0		08.6	67	45.8		47.8
14	335	18.4	61	40.6		26.3	115	02.8		05.7	161	28.6		08.6	82	48.0		47.9
15	350	20.9	76	39.8		26.4	130	04.1		06.1	176	31.2		08.7	97	50.3		47.9
16	5	23.4	91	38.9		26.4	145	05.3		06.5	191	33.8		08.8	112	52.5		47.9
17	20	25.8	106	38.0	-22	26.5	160	06.5	-14	06.9	206	36.3	+4	08.8	127	54.7	-20	47.9
18	35	28.3	121	37.2	-22	26.5	175	07.7	-14	07.3	221	38.9	+4	08.9	142	57.0	-20	48.0
19	50	30.7	136	36.3		26.5	190	08.9		07.7	236	41.5		09.0	157	59.2		48.0
20	65	33.2	151	35.4		26.6	205	10.1		08.1	251	44.1		09.0	173	01.4		48.0
21	80	35.7	166	34.6		26.6	220	11.3		08.5	266	46.7		09.1	188	03.7		48.0
22	95	38.1	181	33.7		26.6	235	12.6		08.9	281	49.3		09.2	203	05.9		48.1
23	110	40.6	196	32.8		26.7	250	13.8		09.3	296	51.9		09.2	218	08.1		48.1
24	125	43.1	211	32.0	-22	26.7	265	15.0	-14	09.7	311	54.5	+4	09.3	233	10.4	-20	48.1
Dif	—		-9		0		+12		-4		+26		+1		+22			

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: 16 ^d 9 PHE { 4 ^h : 55:0 12 ^h : 54:8 20 ^h : 54:7 PMG: 2 ^h 28 ^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	39.2	324	13.4	+6 39.7	60 N	6 46	7 37	8 26	20 36	71	9 16	16
1	191	52.0		38.6	338	46.4 ¹⁴⁰	30.6 ⁹¹	58	41	30	15	38	69	13	18
2	206	51.9		38.0	353	19.4 ¹⁴⁰	21.5 ⁹⁰	56	37	23	8 05	40	67	10	20
3	221	51.8		37.3	7	52.4 ¹⁴⁰	12.5 ⁹¹	54	33	16	7 56	41	66	08	22
4	236	51.6		36.7	22	25.5 ¹⁴¹	+6 03.4 ⁹¹	52	30	11	48	43	63	06	23
5	251	51.5	-18	36.0	36	58.6 ¹⁴¹	+5 54.2 ⁹²	50	6 26	7 06	7 41	20 44	62	9 04	25
6	266	51.4	-18	35.4	51	31.7 ¹⁴¹	+5 45.1 ⁹¹	45	6 19	6 54	7 26	20 47	59	9 00	28
7	281	51.2		34.8	66	04.9 ¹⁴²	35.9 ⁹²	40	12	44	13	49	56	8 56	31
8	296	51.1		34.1	80	38.1 ¹⁴²	26.7 ⁹²	35	6 05	36	7 03	51	54	53	33
9	311	51.0		33.5	95	11.4 ¹⁴³	17.5 ⁹²	30	5 59	28	6 53	53	52	51	34
10	326	50.9		32.9	109	44.7 ¹⁴³	+5 08.3 ⁹²	20	47	14	37	56	48	46	38
11	341	50.7	-18	32.2	124	18.0 ¹⁴³	+4 59.1 ⁹²	10 N	5 35	6 00	6 23	20 58	46	8 42	41
12	356	50.6	-18	31.6	138	51.4 ¹⁴⁴	+4 49.9 ⁹²	0	5 22	5 47	6 09	21 01	43	8 38	44
13	11	50.5		30.9	153	24.8 ¹⁴⁴	40.6 ⁹³	10 S	5 07	33	5 55	03	41	34	47
14	26	50.3		30.3	167	58.2 ¹⁴⁴	31.3 ⁹³	20	4 49	5 17	41	06	37	30	49
15	41	50.2		29.6	182	31.6 ¹⁴⁴	22.0 ⁹³	30	26	4 58	24	09	34	25	53
16	56	50.1		29.0	197	05.1 ¹⁴⁵	12.7 ⁹³	35	4 12	46	14	11	32	22	55
17	71	50.0	-18	28.4	211	38.7 ¹⁴⁶	+4 03.4 ⁹³	40	3 54	4 32	5 02	21 13	29	8 19	57
18	86	49.8	-18	27.7	226	12.2 ¹⁴⁵	+3 54.1 ⁹³	45	3 31	4 14	4 49	21 15	27	8 16	59
19	101	49.7		27.1	240	45.8 ¹⁴⁶	44.8 ⁹³	50	3 01	3 53	32	18	24	11	63
20	116	49.6		26.4	255	19.4 ¹⁴⁶	35.5 ⁹³	52	2 45	42	24	19	23	09	64
21	131	49.5		25.8	269	53.0 ¹⁴⁶	26.1 ⁹⁴	54	25	30	15	20	22	07	66
22	146	49.3		25.1	284	26.7 ¹⁴⁷	16.8 ⁹³	56	2 00	3 16	4 05	22	19	04	68
23	161	49.2		24.5	299	00.4 ¹⁴⁷	+3 07.4 ⁹⁴	58	1 22	2 59	3 54	24	17	8 02	69
24	176	49.1	-18	23.8	313	34.1 ¹⁴⁷	+2 58.0 ⁹⁴	60 S	** **	2 38	3 41	21 25	16	7 59	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 34 ^m 6		Mag: -3.9 PMG: 9 ^h 54 ^m		Mag: +0.9 PMG: 6 ^h 18 ^m		Mag: -2.4 PMG: 3 ^h 12 ^m		Mag: +0.5 PMG: 8 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	125	43.1	211	32.0	-22	26.7	265	15.0	-14	09.7
1	140	45.5	226	31.1		26.7	280	16.2		10.0
2	155	48.0	241	30.2		26.8	295	17.4		10.4
3	170	50.5	256	29.4		26.8	310	18.6		10.8
4	185	52.9	271	28.5		26.8	325	19.8		11.2
5	200	55.4	286	27.6	-22	26.9	340	21.1	-14	11.6
6	215	57.9	301	26.8	-22	26.9	355	22.3	-14	12.0
7	231	00.3	316	25.9		26.9	10	23.5		12.4
8	246	02.8	331	25.0		26.9	25	24.7		12.8
9	261	05.2	346	24.2		27.0	40	25.9		13.2
10	276	07.7	1	23.3		27.0	55	27.1		13.5
11	291	10.2	16	22.4	-22	27.0	70	28.4	-14	13.9
12	306	12.6	31	21.6	-22	27.0	85	29.6	-14	14.3
13	321	15.1	46	20.7		27.0	100	30.8		14.7
14	336	17.6	61	19.8		27.1	115	32.0		15.1
15	351	20.0	76	19.0		27.1	130	33.2		15.5
16	6	22.5	91	18.1		27.1	145	34.4		15.9
17	21	25.0	106	17.2	-22	27.1	160	35.7	-14	16.3
18	36	27.4	121	16.4	-22	27.1	175	36.9	-14	16.6
19	51	29.9	136	15.5		27.1	190	38.1		17.0
20	66	32.3	151	14.6		27.1	205	39.3		17.4
21	81	34.8	166	13.8		27.1	220	40.5		17.8
22	96	37.3	181	12.9		27.1	235	41.7		18.2
23	111	39.7	196	12.0		27.1	250	43.0		18.6
24	126	42.2	211	11.2	-22	27.2	265	44.2	-14	19.0
Dif	—		-9		0		+12		-4	
									+26	
									+1	

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: 17 ^d 9 PHE { SD: 14:9 PMG: 3 ^h 11 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	49.1	-18 23.8	313	34.1	+2 58.0	93	60 N	16 02	16 51	17 43	21 47 71	9 32 15	
1	191	49.0	23.2	328	07.9 ¹⁴⁸	48.7	93	58	13	16 58	47	47 68	31 18	
2	206	48.8	22.5	342	41.6 ¹⁴⁷	39.3	94	56	23	17 05	51	47 66	30 20	
3	221	48.7	21.9	357	15.4 ¹⁴⁸	29.9	94	54	32	11	54	47 64	30 22	
4	236	48.6	21.2	11	49.3 ¹⁴⁹	20.5	94	52	39	17	58	46 63	29 23	
5	251	48.5	-18 20.6	26	23.1 ¹⁴⁸	+2 11.1	94	50	16 46	17 22	18 01	21 46 62	9 29 24	
6	266	48.3	-18 19.9	40	57.0 ¹⁴⁹	+2 01.7	94	45	17 01	17 33	18 08	21 46 58	9 28 27	
7	281	48.2	19.3	55	30.9 ¹⁴⁹	+1 52.3	94	40	14	42	15	45 56	27 29	
8	296	48.1	18.6	70	04.8 ¹⁴⁹	42.9	94	35	24	51	21	45 54	26 31	
9	311	48.0	18.0	84	38.7 ¹⁴⁹	33.5	94	30	33	17 58	27	45 52	25 34	
10	326	47.9	17.3	99	12.6 ¹⁴⁹	24.1	94	20	17 49	18 12	39	44 49	24 37	
11	341	47.7	-18 16.7	113	46.6 ¹⁵⁰	+1 14.7	94	10 N	18 03	18 25	18 51	21 44 45	9 23 40	
12	356	47.6	-18 16.0	128	20.6 ¹⁵⁰	+1 05.3	94	0	18 16	18 38	19 03	21 44 42	9 22 42	
13	11	47.5	15.4	142	54.6 ¹⁵⁰	+0 55.9	94	10 S	30	18 52	18	44 39	21 45	
14	26	47.4	14.7	157	28.6 ¹⁵⁰	46.5	94	20	18 44	19 08	35	43 37	19 49	
15	41	47.3	14.1	172	02.7 ¹⁵¹	37.1	94	30	19 01	27	19 58	43 33	18 52	
16	56	47.1	13.4	186	36.7 ¹⁵⁰	27.7	94	35	10	38	20 12	43 31	17 54	
17	71	47.0	-18 12.7	201	10.8 ¹⁵¹	+0 18.3	94	40	19 22	19 52	20 29	21 42 30	9 16 56	
18	86	46.9	-18 12.1	215	44.9 ¹⁵¹	+0 08.9	94	45	19 35	20 09	20 51	21 42 27	9 15 59	
19	101	46.8	11.4	230	19.0 ¹⁵¹	-0 00.5	94	50	51	30	21 21	42 24	14 62	
20	116	46.7	10.8	244	53.1 ¹⁵¹	09.9	94	52	19 59	40	36	42 22	13 64	
21	131	46.5	10.1	259	27.2 ¹⁵¹	19.3	94	54	20 07	20 52	21 55	42 21	13 65	
22	146	46.4	09.4	274	01.3 ¹⁵¹	28.6	93	56	17	21 05	22 18	41 20	12 67	
23	161	46.3	08.8	288	35.5 ¹⁵²	38.0	94	58	28	21	22 51	41 18	11 69	
24	176	46.2	-18 08.1	303	09.6 ¹⁵¹	-0 47.4	94	60 S	20 40	21 41	** **	21 41 16	9 10 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 30 ^m 6		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: +0.9 PMG: 6 ^h 17 ^m		Mag: -2.4 PMG: 3 ^h 08 ^m		Mag: +0.5 PMG: 8 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	126	42.2	211	11.2	-22	27.2	265	44.2	-14	19.0
1	141	44.7	226	10.3		27.2	280	45.4		19.3
2	156	47.1	241	09.4		27.2	295	46.6		19.7
3	171	49.6	256	08.6		27.2	310	47.8		20.1
4	186	52.1	271	07.7		27.2	325	49.1		20.5
5	201	54.5	286	06.8	-22	27.2	340	50.3	-14	20.9
6	216	57.0	301	06.0	-22	27.2	355	51.5	-14	21.3
7	231	59.5	316	05.1		27.2	10	52.7		21.7
8	247	01.9	331	04.2		27.2	25	53.9		22.0
9	262	04.4	346	03.3		27.1	40	55.2		22.4
10	277	06.8	1	02.5		27.1	55	56.4		22.8
11	292	09.3	16	01.6	-22	27.1	70	57.6	-14	23.2
12	307	11.8	31	00.7	-22	27.1	85	58.8	-14	23.6
13	322	14.2	45	59.9		27.1	101	00.0		24.0
14	337	16.7	60	59.0		27.1	116	01.3		24.3
15	352	19.2	75	58.1		27.1	131	02.5		24.7
16	7	21.6	90	57.3		27.1	146	03.7		25.1
17	22	24.1	105	56.4	-22	27.1	161	04.9	-14	25.5
18	37	26.6	120	55.5	-22	27.0	176	06.2	-14	25.9
19	52	29.0	135	54.7		27.0	191	07.4		26.2
20	67	31.5	150	53.8		27.0	206	08.6		26.6
21	82	33.9	165	52.9		27.0	221	09.8		27.0
22	97	36.4	180	52.1		27.0	236	11.0		27.4
23	112	38.9	195	51.2		27.0	251	12.3		27.8
24	127	41.3	210	50.3	-22	26.9	266	13.5	-14	28.2
Dif	—		-9	0		+12	-4	+26	+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 0			Edad: 18 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 3 ^h 54 ^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	h	m
0	176	46.2	-18	08.1	303	09.6	-0	47.4	60 N	6 42	7 34	8 22	22 58	69	9 47	16		
1	191	46.1		07.5	317	43.8 ¹⁵²	-0	56.7 ⁹³	58	38	26	11	55	68	49	18		
2	206	46.0		06.8	332	18.0 ¹⁵²	-1	06.1 ⁹⁴	56	34	20	8 01	53	66	50	20		
3	221	45.8		06.1	346	52.2 ¹⁵²		15.4 ⁹³	54	31	14	7 53	51	64	51	20		
4	236	45.7		05.5	1	26.3 ¹⁵¹		24.7 ⁹³	52	27	08	45	49	63	52	23		
5	251	45.6	-18	04.8	16	00.5 ¹⁵²	-1	34.1 ⁹⁴	50	6 24	7 03	7 39	22 48	61	9 53	24		
6	266	45.5	-18	04.1	30	34.7 ¹⁵²	-1	43.4 ⁹³	45	6 17	6 52	7 24	22 44	58	9 55	27		
7	281	45.4		03.5	45	09.0 ¹⁵³	-1	52.7 ⁹²	40	10	43	12	41	56	56	30		
8	296	45.3		02.8	59	43.2 ¹⁵²	-2	01.9 ⁹³	35	6 04	35	7 01	39	53	57	32		
9	311	45.2		02.1	74	17.4 ¹⁵²		11.2 ⁹³	30	5 58	27	6 52	37	51	9 59	33		
10	326	45.1		01.5	88	51.6 ¹⁵²		20.5 ⁹³	20	47	13	36	33	48	10 01	37		
11	341	44.9	-18	00.8	103	25.8 ¹⁵²	-2	29.7 ⁹²	10 N	5 35	6 01	6 23	22 29	46	10 03	39		
12	356	44.8	-18	00.1	118	00.1 ¹⁵³	-2	39.0 ⁹³	0	5 22	5 48	6 09	22 26	43	10 04	43		
13	11	44.7	-17	59.5	132	34.3 ¹⁵²		48.2 ⁹²	10 S	5 08	34	5 56	23	40	06	45		
14	26	44.6		58.8	147	08.5 ¹⁵²	-2	57.4 ⁹²	20	4 51	5 18	42	20	37	08	48		
15	41	44.5		58.1	161	42.7 ¹⁵²	-3	06.6 ⁹²	30	28	4 59	25	16	34	10	51		
16	56	44.4		57.5	176	17.0 ¹⁵³		15.8 ⁹²	35	4 14	48	16	14	32	11	53		
17	71	44.3	-17	56.8	190	51.2 ¹⁵²	-3	25.0 ⁹²	40	3 57	4 34	5 05	22 12	30	10 12	56		
18	86	44.2	-17	56.1	205	25.4 ¹⁵²	-3	34.1 ⁹¹	45	3 35	4 18	4 51	22 09	28	10 14	58		
19	101	44.1		55.5	219	59.6 ¹⁵²		43.2 ⁹¹	50	3 05	3 57	35	06	25	16	61		
20	116	43.9		54.8	234	33.9 ¹⁵³	-3	52.4 ⁹²	52	2 50	46	28	04	24	17	62		
21	131	43.8		54.1	249	08.1 ¹⁵²	-4	01.4 ⁹⁰	54	32	35	19	03	22	18	64		
22	146	43.7		53.4	263	42.3 ¹⁵²		10.5 ⁹¹	56	2 08	21	4 10	22 01	20	19	66		
23	161	43.6		52.8	278	16.5 ¹⁵²		19.6 ⁹¹	58	1 35	3 05	3 59	21 59	19	20	68		
24	176	43.5	-17	52.1	292	50.7 ¹⁵²	-4	28.6 ⁹⁰	60 S	** *	2 46	3 46	21 57	16	10 21	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 26 ^m 7		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +0.9 PMG: 6 ^h 15 ^m		Mag: -2.4 PMG: 3 ^h 04 ^m		Mag: +0.5 PMG: 8 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	127	41.3	210	50.3	-22	26.9	266	13.5	-14	28.2
1	142	43.8	225	49.4		26.9	281	14.7		28.5
2	157	46.3	240	48.6		26.9	296	15.9		28.9
3	172	48.7	255	47.7		26.9	311	17.2		29.3
4	187	51.2	270	46.8		26.8	326	18.4		29.7
5	202	53.7	285	46.0	-22	26.8	341	19.6	-14	30.1
6	217	56.1	300	45.1	-22	26.8	356	20.8	-14	30.4
7	232	58.6	315	44.2		26.7	11	22.0		30.8
8	248	01.1	330	43.4		26.7	26	23.3		31.2
9	263	03.5	345	42.5		26.7	41	24.5		31.6
10	278	06.0	0	41.6		26.6	56	25.7		32.0
11	293	08.4	15	40.8	-22	26.6	71	26.9	-14	32.3
12	308	10.9	30	39.9	-22	26.6	86	28.2	-14	32.7
13	323	13.4	45	39.0		26.5	101	29.4		33.1
14	338	15.8	60	38.1		26.5	116	30.6		33.5
15	353	18.3	75	37.3		26.4	131	31.8		33.9
16	8	20.8	90	36.4		26.4	146	33.1		34.2
17	23	23.2	105	35.5	-22	26.4	161	34.3	-14	34.6
18	38	25.7	120	34.7	-22	26.3	176	35.5	-14	35.0
19	53	28.2	135	33.8		26.3	191	36.7		35.4
20	68	30.6	150	32.9		26.2	206	38.0		35.7
21	83	33.1	165	32.1		26.2	221	39.2		36.1
22	98	35.6	180	31.2		26.1	236	40.4		36.5
23	113	38.0	195	30.3		26.1	251	41.7		36.9
24	128	40.5	210	29.5	-22	26.0	266	42.9	-14	37.3
Dif	—		-9		0		+12		-4	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2		Edad: 19 ^d 9 PHE { 4 ^h : 54°2 12 ^h : 54°2 20 ^h : 54°2		SD: 14°8													
	PMG: 12 ^h 13 ^m 2	PMG: 4 ^h 37 ^m	R°: 42 ^m	hG ☉	Dec	hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	43.5	-17	52.1	292	50.7	-4	28.6	60 N	16 07	16 56	17 47	** ** *	** ** *	10 03	18		
1	191	43.4		51.4	307	24.9 ¹⁵²		37.6	58	18	17 03	51	** ** *	** ** *	07	19		
2	206	43.3		50.7	321	59.0 ¹⁵¹		46.7	56	27	09	54	23 59	65	10	21		
3	221	43.2		50.1	336	33.2 ¹⁵²	-4	55.6	54	36	15	17 58	55 64		12	23		
4	236	43.1		49.4	351	07.4 ¹⁵²	-5	04.6	52	43	20	18 01	52 62		15	24		
5	251	43.0	-17	48.7	5	41.5 ¹⁵¹	-5	13.5	50	16 50	17 25	18 04	23 49	61	10 17	26		
6	266	42.9	-17	48.0	20	15.7 ¹⁵²	-5	22.4	45	17 04	17 36	18 11	23 42	58	10 22	28		
7	281	42.8		47.3	34	49.8 ¹⁵¹		31.3	40	16	45	17	37 55		26	31		
8	296	42.7		46.7	49	23.9 ¹⁵¹		40.2	35	26	17 53	23	32 54		29	33		
9	311	42.6		46.0	63	58.0 ¹⁵¹		49.1	30	35	18 00	29	28 52		32	35		
10	326	42.5		45.3	78	32.1 ¹⁵¹	-5	57.9	20	17 50	13	40	21 49		38	38		
11	341	42.3	-17	44.6	93	06.2 ¹⁵¹	-6	06.7	10 N	18 04	18 26	18 51	23 15	46	10 42	41		
12	356	42.2	-17	43.9	107	40.3 ¹⁵¹	-6	15.4	0	18 17	18 38	19 04	23 09	44	10 47	43		
13	11	42.1		43.3	122	14.3 ¹⁵⁰		24.2	10 S	30	18 52	18	23 03	42	51	46		
14	26	42.0		42.6	136	48.4 ¹⁵¹		32.9	20	18 44	19 07	35	22 57	39	10 56	48		
15	41	41.9		41.9	151	22.4 ¹⁵⁰		41.6	30	19 00	26	19 57	50 36		11 01	52		
16	56	41.8		41.2	165	56.4 ¹⁵⁰		50.3	35	09	37	20 10	46 34		04	54		
17	71	41.7	-17	40.5	180	30.4 ¹⁵⁰	-6	58.9	40	19 20	19 50	20 27	22 42	32	11 08	56		
18	86	41.6	-17	39.8	195	04.3 ¹⁴⁹	-7	07.5	45	19 33	20 06	20 48	22 37	29	11 12	58		
19	101	41.5		39.2	209	38.3 ¹⁵⁰		16.1	50	48	27	21 17	31 27		17	61		
20	116	41.4		38.5	224	12.2 ¹⁴⁹		24.6	52	19 56	36	31	28 25		19	63		
21	131	41.3		37.8	238	46.1 ¹⁴⁹		33.2	54	20 04	20 48	21 49	25 24		22	64		
22	146	41.2		37.1	253	20.0 ¹⁴⁹		41.7	56	13	21 01	22 11	21 23		25	65		
23	161	41.1		36.4	267	53.8 ¹⁴⁸		50.1	58	23	16	22 41	18 20		28	67		
24	176	41.0	-17	35.7	282	27.7 ¹⁴⁹	-7	58.5	60 S	20 35	21 35	23 34	22 13	19	11 31	70		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 22 ^m 8		Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +0.9 PMG: 6 ^h 13 ^m			Mag: -2.4 PMG: 2 ^h 59 ^m			Mag: +0.5 PMG: 8 ^h 15 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	128	40.5	210	29.5	-22	26.0	266	42.9	-14	37.3	315	02.2	+4	14.5	235	51.5	-20	49.7
1	143	42.9	225	28.6		26.0	281	44.1		37.6	330	04.8		14.6	250	53.8		49.7
2	158	45.4	240	27.7		25.9	296	45.3		38.0	345	07.4		14.7	265	56.0		49.7
3	173	47.9	255	26.8		25.9	311	46.6		38.4	0	10.0		14.8	280	58.3		49.7
4	188	50.3	270	26.0		25.8	326	47.8		38.8	15	12.6		14.8	296	00.5		49.8
5	203	52.8	285	25.1	-22	25.8	341	49.0	-14	39.1	30	15.3	+4	14.9	311	02.8	-20	49.8
6	218	55.3	300	24.2	-22	25.7	356	50.2	-14	39.5	45	17.9	+4	15.0	326	05.0	-20	49.8
7	233	57.7	315	23.4		25.6	11	51.5		39.9	60	20.5		15.1	341	07.2		49.8
8	249	00.2	330	22.5		25.6	26	52.7		40.3	75	23.1		15.2	356	09.5		49.9
9	264	02.7	345	21.6		25.5	41	53.9		40.6	90	25.7		15.2	11	11.7		49.9
10	279	05.1	0	20.8		25.5	56	55.2		41.0	105	28.3		15.3	26	14.0		49.9
11	294	07.6	15	19.9	-22	25.4	71	56.4	-14	41.4	120	31.0	+4	15.4	41	16.2	-20	49.9
12	309	10.0	30	19.0	-22	25.3	86	57.6	-14	41.8	135	33.6	+4	15.5	56	18.5	-20	49.9
13	324	12.5	45	18.1		25.3	101	58.8		42.1	150	36.2		15.5	71	20.7		50.0
14	339	15.0	60	17.3		25.2	117	00.1		42.5	165	38.8		15.6	86	22.9		50.0
15	354	17.4	75	16.4		25.1	132	01.3		42.9	180	41.4		15.7	101	25.2		50.0
16	9	19.9	90	15.5		25.1	147	02.5		43.3	195	44.1		15.8	116	27.4		50.0
17	24	22.4	105	14.7	-22	25.0	162	03.8	-14	43.6	210	46.7	+4	15.9	131	29.7	-20	50.0
18	39	24.8	120	13.8	-22	24.9	177	05.0	-14	44.0	225	49.3	+4	15.9	146	31.9	-20	50.1
19	54	27.3	135	12.9		24.9	192	06.2		44.4	240	51.9		16.0	161	34.2		50.1
20	69	29.8	150	12.1		24.8	207	07.5		44.8	255	54.5		16.1	176	36.4		50.1
21	84	32.2	165	11.2		24.7	222	08.7		45.1	270	57.2		16.2	191	38.7		50.1
22	99	34.7	180	10.3		24.6	237	09.9		45.5	285	59.8		16.3	206	40.9		50.1
23	114	37.2	195	09.5		24.6	252	11.1		45.9	301	02.4		16.3	221	43.2		50.2
24	129	39.6	210	08.6	-22	24.5	267	12.4	-14	46.3	316	05.0	+4	16.4	236	45.4	-20	50.2
Dif	—		-9	+1		+12	-4			+26	+1		+22		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: 20 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 5 ^h 19 ^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	176	41.0	-17	35.7	282	27.7	-7	58.5	60 N	6 39	7 30	8 17	0 07	70	10 21	20
1	191	40.9		35.0	297	01.5 ¹⁴⁸	-8	06.9 ⁸⁴	58	35	23	8 07	0 03	67	26	22
2	206	40.8		34.3	311	35.3 ¹⁴⁸		15.3 ⁸⁴	56	31	16	7 58	** ** *		31	24
3	221	40.7		33.7	326	09.1 ¹⁴⁸		23.6 ⁸³	54	28	11	50	** ** *		35	26
4	236	40.6		33.0	340	42.8 ¹⁴⁷		31.9 ⁸³	52	25	06	42	** ** *		39	27
5	251	40.5	-17	32.3	355	16.5 ¹⁴⁷	-8	40.2 ⁸³	50	6 22	7 01	7 36	** ** *		10 43	28
6	266	40.4	-17	31.6	9	50.2 ¹⁴⁷	-8	48.4 ⁸²	45	6 15	6 50	7 22	** ** *		10 50	31
7	281	40.3		30.9	24	23.9 ¹⁴⁷	-8	56.6 ⁸²	40	09	41	10	** ** *		10 57	33
8	296	40.2		30.2	38	57.5 ¹⁴⁶	-9	04.8 ⁸²	35	6 03	33	7 00	** ** *		11 02	35
9	311	40.1		29.5	53	31.1 ¹⁴⁶		12.9 ⁸¹	30	5 57	26	6 51	** ** *		07	37
10	326	40.0		28.8	68	04.7 ¹⁴⁶		21.0 ⁸¹	20	46	13	36	** ** *		16	39
11	341	40.0	-17	28.1	82	38.2 ¹⁴⁵	-9	29.1 ⁸¹	10 N	5 35	6 01	6 23	** ** *		11 23	42
12	356	39.9	-17	27.4	97	11.8 ¹⁴⁶	-9	37.1 ⁸⁰	0	5 23	5 48	6 10	23 53	45	11 30	44
13	11	39.8		26.7	111	45.3 ¹⁴⁵		45.0 ⁷⁹	10 S	5 09	35	5 57	45 43		37	47
14	26	39.7		26.0	126	18.7 ¹⁴⁴	-9	53.0 ⁸⁰	20	4 52	20	43	36 41		44	50
15	41	39.6		25.3	140	52.1 ¹⁴⁴	-10	00.9 ⁷⁹	30	30	5 01	27	26 38		53	52
16	56	39.5		24.6	155	25.5 ¹⁴⁴		08.7 ⁷⁸	35	17	4 50	18	20 37		11 58	54
17	71	39.4	-17	23.9	169	58.9 ¹⁴⁴	-10	16.6 ⁷⁹	40	4 00	4 37	5 07	23 14	35	12 04	55
18	86	39.3	-17	23.2	184	32.2 ¹⁴³	-10	24.3 ⁷⁷	45	3 39	4 21	4 54	23 06	33	12 10	58
19	101	39.2		22.5	199	05.5 ¹⁴³		32.1 ⁷⁸	50	3 10	4 01	39	22 58	30	18	61
20	116	39.1		21.8	213	38.8 ¹⁴³		39.8 ⁷⁷	52	2 56	3 51	32	53 29		22	62
21	131	39.0		21.1	228	12.0 ¹⁴²		47.4 ⁷⁶	54	38	39	23	49 27		26	63
22	146	38.9		20.4	242	45.2 ¹⁴²	-10	55.0 ⁷⁶	56	2 16	27	14	44 26		30	65
23	161	38.8		19.7	257	18.3 ¹⁴¹	-11	02.6 ⁷⁶	58	1 46	3 11	4 04	38 25		35	67
24	176	38.7	-17	19.0	271	51.4 ¹⁴¹	-11	10.1 ⁷⁵	60 S	0 53	2 53	3 52	22 32	22	12 41	69

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 18 ^m 8		Mag: -3.9 PMG: 10 ^h 00 ^m			Mag: +0.8 PMG: 6 ^h 11 ^m			Mag: -2.4 PMG: 2 ^h 55 ^m			Mag: +0.5 PMG: 8 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	129	39.6	210	08.6	-22	24.5	267	12.4	-14	46.3	316	05.0	+4	16.4	236	45.4	-20	50.2
1	144	42.1	225	07.7		24.4	282	13.6		46.6	331	07.7		16.5	251	47.6		50.2
2	159	44.5	240	06.8		24.3	297	14.8		47.0	346	10.3		16.6	266	49.9		50.2
3	174	47.0	255	06.0		24.2	312	16.1		47.4	1	12.9		16.6	281	52.1		50.3
4	189	49.5	270	05.1		24.1	327	17.3		47.7	16	15.5		16.7	296	54.4		50.3
5	204	51.9	285	04.2	-22	24.1	342	18.5	-14	48.1	31	18.2	+4	16.8	311	56.6	-20	50.3
6	219	54.4	300	03.4	-22	24.0	357	19.8	-14	48.5	46	20.8	+4	16.9	326	58.9	-20	50.3
7	234	56.9	315	02.5		23.9	12	21.0		48.9	61	23.4		17.0	342	01.1		50.3
8	249	59.3	330	01.6		23.8	27	22.2		49.2	76	26.0		17.0	357	03.4		50.4
9	265	01.8	345	00.8		23.7	42	23.5		49.6	91	28.7		17.1	12	05.6		50.4
10	280	04.3	359	59.9		23.6	57	24.7		50.0	106	31.3		17.2	27	07.9		50.4
11	295	06.7	14	59.0	-22	23.5	72	25.9	-14	50.3	121	33.9	+4	17.3	42	10.1	-20	50.4
12	310	09.2	29	58.1	-22	23.4	87	27.2	-14	50.7	136	36.5	+4	17.4	57	12.4	-20	50.4
13	325	11.6	44	57.3		23.3	102	28.4		51.1	151	39.2		17.5	72	14.6		50.5
14	340	14.1	59	56.4		23.3	117	29.6		51.4	166	41.8		17.5	87	16.9		50.5
15	355	16.6	74	55.5		23.2	132	30.9		51.8	181	44.4		17.6	102	19.1		50.5
16	10	19.0	89	54.7		23.1	147	32.1		52.2	196	47.0		17.7	117	21.4		50.5
17	25	21.5	104	53.8	-22	23.0	162	33.3	-14	52.6	211	49.7	+4	17.8	132	23.6	-20	50.5
18	40	24.0	119	52.9	-22	22.9	177	34.6	-14	52.9	226	52.3	+4	17.9	147	25.9	-20	50.6
19	55	26.4	134	52.1		22.8	192	35.8		53.3	241	54.9		17.9	162	28.1		50.6
20	70	28.9	149	51.2		22.7	207	37.0		53.7	256	57.6		18.0	177	30.3		50.6
21	85	31.4	164	50.3		22.6	222	38.3		54.0	272	00.2		18.1	192	32.6		50.6
22	100	33.8	179	49.5		22.5	237	39.5		54.4	287	02.8		18.2	207	34.8		50.6
23	115	36.3	194	48.6		22.3	252	40.8		54.8	302	05.4		18.3	222	37.1		50.7
24	130	38.8	209	47.7	-22	22.2	267	42.0	-14	55.1	317	08.1	+4	18.3	237	39.3	-20	50.7
Dif	—		-9		+1		+12		-4		+26		+1		+22			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2		Edad: 21 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7	SD: 14'8		R°: 46 ^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	176	38.7	-17	19.0	271	51.4	-11 10.1	60 N	16 13	17 00	17 51	1 17 69	10 41 25					
1	191	38.7		18.3	286	24.5 ¹⁴¹	17.6 ⁷⁵	58	23	07	55	10 67	48 27					
2	206	38.6		17.6	300	57.5 ¹⁴⁰	25.0 ⁷⁴	56	32	13	17 58	1 04 65	10 55 28					
3	221	38.5		16.9	315	30.5 ¹⁴⁰	32.4 ⁷⁴	54	40	19	18 01	0 59 63	11 01 29					
4	236	38.4		16.2	330	03.5 ¹⁴⁰	39.7 ⁷³	52	47	24	04	54 62	06 31					
5	251	38.3	-17	15.5	344	36.4 ¹³⁹	-11 47.0 ⁷³	50	16 53	17 28	18 07	0 50 60	11 11 32					
6	266	38.2	-17	14.8	359	09.3 ¹³⁹	-11 54.3 ⁷³	45	17 07	17 38	18 14	0 40 58	11 21 35					
7	281	38.1		14.1	13	42.1 ¹³⁸	-12 01.5 ⁷²	40	18	47	19	32 56	30 36					
8	296	38.0		13.4	28	14.9 ¹³⁸	08.6 ⁷¹	35	28	17 55	25	26 54	37 38					
9	311	37.9		12.7	42	47.7 ¹³⁸	15.7 ⁷¹	30	37	18 02	30	20 52	44 39					
10	326	37.8		12.0	57	20.4 ¹³⁷	22.8 ⁷¹	20	17 52	15	41	10 50	11 55 42					
11	341	37.8	-17	11.3	71	53.0 ¹³⁶	-12 29.8 ⁷⁰	10 N	18 05	18 27	18 52	0 01 47	12 05 44					
12	356	37.7	-17	10.6	86	25.7 ¹³⁷	-12 36.7 ⁶⁹	0	18 17	18 39	19 04	*** ** *	12 14 47					
13	11	37.6		09.9	100	58.2 ¹³⁵	43.6 ⁶⁹	10 S	30	18 52	17	*** ** *	24 48					
14	26	37.5		09.2	115	30.8 ¹³⁶	50.5 ⁶⁹	20	43	19 06	34	*** ** *	34 50					
15	41	37.4		08.5	130	03.3 ¹³⁵	-12 57.3 ⁶⁸	30	18 59	24	19 55	*** ** *	45 53					
16	56	37.3		07.8	144	35.7 ¹³⁴	-13 04.0 ⁶⁷	35	19 08	35	20 08	23 57 40	52 54					
17	71	37.2	-17	07.1	159	08.1 ¹³⁴	-13 10.7 ⁶⁷	40	19 18	19 48	20 25	23 49 38	12 59 56					
18	86	37.2	-17	06.3	173	40.4 ¹³³	-13 17.3 ⁶⁶	45	19 30	20 04	20 45	23 39 37	13 08 58					
19	101	37.1		05.6	188	12.8 ¹³⁴	23.9 ⁶⁶	50	45	23	21 13	28 34	19 60					
20	116	37.0		04.9	202	45.0 ¹³²	30.4 ⁶⁵	52	19 52	33	27	22 34	24 61					
21	131	36.9		04.2	217	17.2 ¹³²	36.9 ⁶⁵	54	20 00	44	21 43	16 33	29 63					
22	146	36.8		03.5	231	49.4 ¹³²	43.3 ⁶⁴	56	09	20 56	22 04	10 31	35 64					
23	161	36.7		02.8	246	21.5 ¹³¹	49.7 ⁶⁴	58	19	21 11	22 31	23 03 29	42 66					
24	176	36.7	-17	02.1	260	53.6 ¹³¹	-13 56.0 ⁶³	60 S	20 30	21 28	23 14	22 54 28	13 50 68					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 14 ^m 9	Mag: -3.9 PMG: 10 ^h 01 ^m	Mag: +0.8 PMG: 6 ^h 09 ^m	Mag: -2.4 PMG: 2 ^h 51 ^m	Mag: +0.5 PMG: 8 ^h 08 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°					
0	130	38.8	209	47.7	-22	22.2	267	42.0	-14	55.1	317	08.1	+4	18.3				
1	145	41.2	224	46.9		22.1	282	43.2		55.5	332	10.7		18.4				
2	160	43.7	239	46.0		22.0	297	44.5		55.9	347	13.3		18.5				
3	175	46.1	254	45.1		21.9	312	45.7		56.2	2	16.0		18.6				
4	190	48.6	269	44.2		21.8	327	46.9		56.6	17	18.6		18.7				
5	205	51.1	284	43.4	-22	21.7	342	48.2	-14	57.0	32	21.2	+4	18.8				
6	220	53.5	299	42.5	-22	21.6	357	49.4	-14	57.3	47	23.9	+4	18.8				
7	235	56.0	314	41.6		21.5	12	50.6		57.7	62	26.5		18.9				
8	250	58.5	329	40.8		21.3	27	51.9		58.1	77	29.1		19.0				
9	266	00.9	344	39.9		21.2	42	53.1		58.4	92	31.7		19.1				
10	281	03.4	359	39.0		21.1	57	54.4		58.8	107	34.4		19.2				
11	296	05.9	14	38.2	-22	21.0	72	55.6	-14	59.2	122	37.0	+4	19.3				
12	311	08.3	29	37.3	-22	20.9	87	56.8	-14	59.5	137	39.6	+4	19.3				
13	326	10.8	44	36.4		20.8	102	58.1	-14	59.9	152	42.3		19.4				
14	341	13.3	59	35.6		20.6	117	59.3	-15	00.3	167	44.9		19.5				
15	356	15.7	74	34.7		20.5	133	00.5		00.6	182	47.5		19.6				
16	11	18.2	89	33.8		20.4	148	01.8		01.0	197	50.2		19.7				
17	26	20.6	104	33.0	-22	20.3	163	03.0	-15	01.4	212	52.8	+4	19.8				
18	41	23.1	119	32.1	-22	20.1	178	04.3	-15	01.7	227	55.4	+4	19.8				
19	56	25.6	134	31.2		20.0	193	05.5		02.1	242	58.1		19.9				
20	71	28.0	149	30.4		19.9	208	06.7		02.5	258	00.7		20.0				
21	86	30.5	164	29.5		19.7	223	08.0		02.8	273	03.4		20.1				
22	101	33.0	179	28.6		19.6	238	09.2		03.2	288	06.0		20.2				
23	116	35.4	194	27.8		19.5	253	10.5		03.6	303	08.6		20.3				
24	131	37.9	209	26.9	-22	19.3	268	11.7	-15	03.9	318	11.3	+4	20.3				
Dif	—		-9		+1		+12		-4		+26		+1		+23		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: 22 ^d 9 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2 SD: 14'9 PMG: 6 ^h 49 ^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
0	176	36.7	-17	02.1	260	53.6	-13 56.0	60 N	6 35	7 26	8 13	2 26	67	11 06	30
1	191	36.6		01.4	275	25.6 ¹³⁰	-14 02.2 ⁶²	58	31	19	8 03	17	65	15	32
2	206	36.5	-17	00.6	289	57.5 ¹²⁹	08.4 ⁶¹	56	28	13	7 54	09	64	23	34
3	221	36.4	-16	59.9	304	29.4 ¹²⁹	14.5 ⁶¹	54	25	08	46	2	02	30	36
4	236	36.3		59.2	319	01.3 ¹²⁹	20.6 ⁶¹	52	22	7 03	39	1	56	37	36
5	251	36.2	-16	58.5	333	33.1 ¹²⁸	-14 26.6 ⁶⁰	50	6 19	6 58	7 33	1	50	11	43
6	266	36.2	-16	57.8	348	04.9 ¹²⁸	-14 32.5 ⁵⁹	45	6 13	6 48	7 19	1	38	11	56
7	281	36.1		57.1	2	36.6 ¹²⁷	38.4 ⁵⁹	40	07	40	7 08	28	56	12	06
8	296	36.0		56.3	17	08.3 ¹²⁷	44.2 ⁵⁸	35	6 02	32	6 59	20	54	15	43
9	311	35.9		55.6	31	39.9 ¹²⁶	49.9 ⁵⁷	30	5 56	25	50	12	54	23	44
10	326	35.8		54.9	46	11.4 ¹²⁵	-14 55.6 ⁵⁷	20	46	12	35	1	00	37	45
11	341	35.8	-16	54.2	60	42.9 ¹²⁵	-15 01.2 ⁵⁶	10 N	5 35	6 00	6 22	0	48	12	49
12	356	35.7	-16	53.5	75	14.4 ¹²⁵	-15 06.8 ⁵⁶	0	5 23	5 48	6 10	0	38	13	01
13	11	35.6		52.7	89	45.8 ¹²⁴	12.3 ⁵⁵	10 S	5 10	36	5 58	28	45	12	50
14	26	35.5		52.0	104	17.1 ¹²³	17.7 ⁵⁴	20	4 53	21	44	17	43	24	52
15	41	35.5		51.3	118	48.4 ¹²³	23.1 ⁵⁴	30	32	5 03	29	0	04	38	53
16	56	35.4		50.6	133	19.6 ¹²²	28.4 ⁵³	35	19	4 52	20	**	**	46	55
17	71	35.3	-16	49.9	147	50.8 ¹²²	-15 33.6 ⁵²	40	4 03	4 40	5 10	**	**	13	55
18	86	35.2	-16	49.1	162	21.9 ¹²¹	-15 38.7 ⁵¹	45	3 42	4 24	4 57	**	**	14	06
19	101	35.1		48.4	176	53.0 ¹²¹	43.8 ⁵¹	50	15	4 04	42	**	**	19	59
20	116	35.1		47.7	191	24.0 ¹²⁰	48.8 ⁵⁰	52	3 01	3 55	35	23	56	25	60
21	131	35.0		47.0	205	55.0 ¹²⁰	53.8 ⁵⁰	54	2 45	44	28	49	39	32	61
22	146	34.9		46.2	220	25.9 ¹¹⁹	-15 58.6 ⁴⁸	56	2 24	32	19	41	38	39	63
23	161	34.8		45.5	234	56.7 ¹¹⁸	-16 03.4 ⁴⁸	58	1 57	17	4 09	32	37	48	63
24	176	34.8	-16	44.8	249	27.5 ¹¹⁸	-16 08.2 ⁴⁸	60 S	1 14	3 00	3 57	23	22	14	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 15 ^h 11 ^m 0		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: +0.8 PMG: 6 ^h 07 ^m		Mag: -2.4 PMG: 2 ^h 47 ^m		Mag: +0.5 PMG: 8 ^h 05 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	131	37.9	209	26.9	-22	19.3	268	11.7	-15	03.9	318	11.3	+4	20.3	238	33.4	-20	51.2	
1	146	40.4	224	26.0		19.2	283	12.9		04.3	333	13.9		20.4	253	35.6		51.2	
2	161	42.8	239	25.2		19.1	298	14.2		04.7	348	16.5		20.5	268	37.9		51.2	
3	176	45.3	254	24.3		18.9	313	15.4		05.0	3	19.2		20.6	283	40.1		51.2	
4	191	47.7	269	23.4		18.8	328	16.7		05.4	18	21.8		20.7	298	42.4		51.2	
5	206	50.2	284	22.6	-22	18.7	343	17.9	-15	05.7	33	24.4	+4	20.8	313	44.6	-20	51.3	
6	221	52.7	299	21.7	-22	18.5	358	19.1	-15	06.1	48	27.1	+4	20.9	328	46.9	-20	51.3	
7	236	55.1	314	20.8		18.4	13	20.4		06.5	63	29.7		20.9	343	49.1		51.3	
8	251	57.6	329	20.0		18.2	28	21.6		06.8	78	32.4		21.0	358	51.4		51.3	
9	267	00.1	344	19.1		18.1	43	22.9		07.2	93	35.0		21.1	13	53.6		51.3	
10	282	02.5	359	18.2		17.9	58	24.1		07.6	108	37.6		21.2	28	55.9		51.4	
11	297	05.0	14	17.4	-22	17.8	73	25.4	-15	07.9	123	40.3	+4	21.3	43	58.1	-20	51.4	
12	312	07.5	29	16.5	-22	17.6	88	26.6	-15	08.3	138	42.9	+4	21.4	59	00.4	-20	51.4	
13	327	09.9	44	15.6		17.5	103	27.8		08.6	153	45.5		21.5	74	02.7		51.4	
14	342	12.4	59	14.8		17.3	118	29.1		09.0	168	48.2		21.5	89	04.9		51.4	
15	357	14.9	74	13.9		17.2	133	30.3		09.4	183	50.8		21.6	104	07.2		51.4	
16	12	17.3	89	13.0		17.0	148	31.6		09.7	198	53.5		21.7	119	09.4		51.5	
17	27	19.8	104	12.2	-22	16.9	163	32.8	-15	10.1	213	56.1	+4	21.8	134	11.7	-20	51.5	
18	42	22.2	119	11.3	-22	16.7	178	34.1	-15	10.4	228	58.8	+4	21.9	149	13.9	-20	51.5	
19	57	24.7	134	10.4		16.6	193	35.3		10.8	244	01.4		22.0	164	16.2		51.5	
20	72	27.2	149	09.6		16.4	208	36.6		11.2	259	04.0		22.1	179	18.4		51.5	
21	87	29.6	164	08.7		16.3	223	37.8		11.5	274	06.7		22.1	194	20.7		51.6	
22	102	32.1	179	07.8		16.1	238	39.0		11.9	289	09.3		22.2	209	22.9		51.6	
23	117	34.6	194	07.0		15.9	253	40.3		12.2	304	12.0		22.3	224	25.2		51.6	
24	132	37.0	209	06.1	-22	15.8	268	41.5	-15	12.6	319	14.6	+4	22.4	239	27.5	-20	51.6	
Dif	—		-9	+1		+12	-4			+26		+1			+23				0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 23 ^d 9 PHE	4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 9										
	PMG: 12 ^h 13 ^m 7				SD: 15 ^h 1										
	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	34.8	-16 44.8	249	27.5	-16 08.2	46	60 N	16 18	17 05	17 55	3 33	63	11 36	40
1	191	34.7	44.1	263	58.3 ¹¹⁸	12.8	46	58	28	11	17 59	22	62	47	42
2	206	34.6	43.3	278	28.9 ¹¹⁶	17.4	46	56	36	17	18 02	13	60	11 57	42
3	221	34.5	42.6	292	59.6 ¹¹⁷	21.9	45	54	44	22	05	3 04	60	12 06	42
4	236	34.5	41.9	307	30.1 ¹¹⁵	26.3	44	52	50	27	07	2 57	59	13	44
5	251	34.4	-16 41.1	322	00.6 ¹¹⁵	-16 30.7	44	50	16 57	17 31	18 10	2 50	59	12 20	44
6	266	34.3	-16 40.4	336	31.1 ¹¹⁵	-16 34.9	42	45	17 10	17 41	18 16	2 36	57	12 35	45
7	281	34.3	39.7	351	01.5 ¹¹⁴	39.1	42	40	21	49	22	24	56	47	47
8	296	34.2	39.0	5	31.8 ¹¹³	43.3	42	35	30	17 57	27	14	55	12 58	47
9	311	34.1	38.2	20	02.1 ¹¹³	47.3	40	30	38	18 03	32	2 06	53	13 07	48
10	326	34.0	37.5	34	32.4 ¹¹³	51.3	40	20	17 53	16	42	1 51	52	22	49
11	341	34.0	-16 36.8	49	02.5 ¹¹¹	-16 55.1	38	10 N	18 05	18 27	18 52	1 38	51	13 36	50
12	356	33.9	-16 36.0	63	32.7 ¹¹²	-16 58.9	38	0	18 17	18 39	19 04	1 25	50	13 49	51
13	11	33.8	35.3	78	02.7 ¹¹⁰	-17 02.7	38	10 S	29	18 51	17	13	49	14 02	52
14	26	33.8	34.6	92	32.7 ¹¹⁰	06.3	36	20	42	19 06	33	1 00	47	16	52
15	41	33.7	33.8	107	02.7 ¹¹⁰	09.9	36	30	18 57	23	19 53	0 46	45	31	54
16	56	33.6	33.1	121	32.6 ¹⁰⁹	13.3	34	35	19 06	33	20 06	37	45	41	54
17	71	33.6	-16 32.4	136	02.4 ¹⁰⁸	-17 16.7	34	40	19 16	19 46	20 22	0 27	44	14 51	55
18	86	33.5	-16 31.6	150	32.2 ¹⁰⁸	-17 20.0	33	45	19 28	20 01	20 42	0 16	42	15 03	56
19	101	33.4	30.9	165	01.9 ¹⁰⁷	23.3	33	50	42	20	21 08	0 02	41	18	57
20	116	33.3	30.2	179	31.6 ¹⁰⁷	26.4	31	52	49	29	22	** *	** *	25	57
21	131	33.3	29.4	194	01.2 ¹⁰⁶	29.4	30	54	19 57	39	37	** *	** *	33	58
22	146	33.2	28.7	208	30.7 ¹⁰⁵	32.4	30	56	20 05	20 51	21 57	** *	** *	42	58
23	161	33.1	27.9	223	00.2 ¹⁰⁵	35.3	29	58	14	21 05	22 22	** *	** *	15	51
24	176	33.1	-16 27.2	237	29.7 ¹⁰⁵	-17 38.1	28	60 S	20 25	21 22	22 58	23 57	46	16 03	60
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 07 ^m 0		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +0.8 PMG: 6 ^h 05 ^m			Mag: -2.4 PMG: 2 ^h 43 ^m			Mag: +0.5 PMG: 8 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	132	37.0	209 06.1	-22 15.8	268 41.5	-15 12.6	319 14.6	+4 22.4	239 27.5	-20 51.6					
1	147	39.5	224 05.2	15.6	283 42.8	13.0	334 17.2	22.5	254 29.7	51.6					
2	162	42.0	239 04.4	15.4	298 44.0	13.3	349 19.9	22.6	269 32.0	51.7					
3	177	44.4	254 03.5	15.3	313 45.3	13.7	4 22.5	22.7	284 34.2	51.7					
4	192	46.9	269 02.6	15.1	328 46.5	14.0	19 25.2	22.8	299 36.5	51.7					
5	207	49.4	284 01.8	-22 14.9	343 47.8	-15 14.4	34 27.8	+4 22.8	314 38.7	-20 51.7					
6	222	51.8	299 00.9	-22 14.8	358 49.0	-15 14.8	49 30.5	+4 22.9	329 41.0	-20 51.7					
7	237	54.3	314 00.0	14.6	13 50.3	15.1	64 33.1	23.0	344 43.2	51.8					
8	252	56.7	328 59.2	14.4	28 51.5	15.5	79 35.7	23.1	359 45.5	51.8					
9	267	59.2	343 58.3	14.3	43 52.7	15.8	94 38.4	23.2	14 47.8	51.8					
10	283	01.7	358 57.4	14.1	58 54.0	16.2	109 41.0	23.3	29 50.0	51.8					
11	298	04.1	13 56.6	-22 13.9	73 55.2	-15 16.5	124 43.7	+4 23.4	44 52.3	-20 51.8					
12	313	06.6	28 55.7	-22 13.7	88 56.5	-15 16.9	139 46.3	+4 23.5	59 54.5	-20 51.8					
13	328	09.1	43 54.9	13.6	103 57.7	17.3	154 49.0	23.5	74 56.8	51.9					
14	343	11.5	58 54.0	13.4	118 59.0	17.6	169 51.6	23.6	89 59.0	51.9					
15	358	14.0	73 53.1	13.2	134 00.2	18.0	184 54.3	23.7	105 01.3	51.9					
16	13	16.5	88 52.3	13.0	149 01.5	18.3	199 56.9	23.8	120 03.6	51.9					
17	28	18.9	103 51.4	-22 12.8	164 02.7	-15 18.7	214 59.6	+4 23.9	135 05.8	-20 51.9					
18	43	21.4	118 50.5	-22 12.7	179 04.0	-15 19.0	230 02.2	+4 24.0	150 08.1	-20 52.0					
19	58	23.9	133 49.7	12.5	194 05.2	19.4	245 04.9	24.1	165 10.3	52.0					
20	73	26.3	148 48.8	12.3	209 06.5	19.8	260 07.5	24.2	180 12.6	52.0					
21	88	28.8	163 47.9	12.1	224 07.7	20.1	275 10.1	24.3	195 14.8	52.0					
22	103	31.2	178 47.1	11.9	239 09.0	20.5	290 12.8	24.3	210 17.1	52.0					
23	118	33.7	193 46.2	11.7	254 10.2	20.8	305 15.4	24.4	225 19.4	52.1					
24	133	36.2	208 45.4	-22 11.5	269 11.5	-15 21.2	320 18.1	+4 24.5	240 21.6	-20 52.1					
Dif	—		-9	+2	+12	-4	+26	+1	+23	0					

ALMANAQUE NÁUTICO PERSEIS

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: 25 ^d 9 PHE { 4 ^h : 56/9 12 ^h : 57/2 20 ^h : 57/5 SD: 15/5 PMG: 9 ^h 20 ^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	176	31.6	-16	09.3	225	00.4	-18	17.2	60 N	16 23	17 10	18 00	5 33 48	13 08 63
1	191	31.5		08.6	239	28.6		17.6	58	32	16	03	20 49	20 62
2	206	31.5		07.8	253	56.7		17.9	56	40	21	06	09 50	31 62
3	221	31.4		07.1	268	24.8		18.1	54	48	26	08	5 00 50	40 62
4	236	31.4		06.3	282	52.8		18.2	52	16 54	30	11	4 51 51	49 60
5	251	31.3	-16	05.6	297	20.7	-18	18.3	50	17 00	17 35	18 13	4 44 51	13 56 61
6	266	31.3	-16	04.8	311	48.7	-18	18.2	45	17 13	17 44	18 19	4 28 51	14 13 59
7	281	31.2		04.1	326	16.6		18.0	40	23	52	24	14 52	26 58
8	296	31.1		03.3	340	44.4		17.6	35	32	17 59	29	4 03 52	37 58
9	311	31.1		02.6	355	12.2		17.2	30	40	18 05	33	3 53 52	14 47 57
10	326	31.0		01.8	9	40.0		16.7	20	17 54	17	43	36 53	15 04 56
11	341	31.0	-16	01.1	24	07.7	-18	16.1	10 N	18 06	18 28	18 53	3 21 54	15 19 55
12	356	30.9	-16	00.3	38	35.4	-18	15.4	0	18 17	18 39	19 04	3 07 54	15 33 54
13	11	30.9	-15	59.5	53	03.0		14.6	10 S	29	18 51	17	2 53 55	15 47 53
14	26	30.8		58.8	67	30.6		13.6	20	42	19 05	32	38 55	16 01 53
15	41	30.8		58.0	81	58.2		12.6	30	18 56	21	19 52	22 55	18 52
16	56	30.7		57.3	96	25.7		11.4	35	19 04	32	20 04	12 55	28 51
17	71	30.7	-15	56.5	110	53.2	-18	10.2	40	19 14	19 44	20 20	2 00 56	16 39 50
18	86	30.6	-15	55.8	125	20.6	-18	08.8	45	19 25	19 58	20 39	1 47 56	16 52 49
19	101	30.6		55.0	139	48.1		07.3	50	39	20 16	21 04	31 57	17 08 48
20	116	30.5		54.2	154	15.4		05.8	52	46	25	17	24 56	15 48
21	131	30.5		53.5	168	42.8		04.1	54	19 53	35	32	15 57	24 46
22	146	30.4		52.7	183	10.1		02.3	56	20 01	46	21 50	1 06 57	33 46
23	161	30.4		52.0	197	37.4	-18	00.4	58	10	20 59	22 13	0 55 57	43 45
24	176	30.3	-15	51.2	212	04.6	-17	58.4	60 S	20 20	21 15	22 44	0 43 58	17 56 43

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 59 ^m 2		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: +0.8 PMG: 6 ^h 01 ^m			Mag: -2.4 PMG: 2 ^h 34 ^m			Mag: +0.5 PMG: 7 ^h 54 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	134	35.3	208	24.7	-22	06.6	269	41.6	-15	29.6	321	21.7	+4	26.7	241	15.9	-20	52.5
1	149	37.8	223	23.8		06.4	284	42.8		30.0	336	24.4		26.8	256	18.1		52.5
2	164	40.2	238	23.0		06.2	299	44.1		30.3	351	27.0		26.9	271	20.4		52.6
3	179	42.7	253	22.1		06.0	314	45.3		30.7	6	29.7		27.0	286	22.7		52.6
4	194	45.2	268	21.2		05.8	329	46.6		31.0	21	32.4		27.1	301	24.9		52.6
5	209	47.6	283	20.4	-22	05.5	344	47.8	-15	31.4	36	35.0	+4	27.2	316	27.2	-20	52.6
6	224	50.1	298	19.5	-22	05.3	359	49.1	-15	31.7	51	37.7	+4	27.3	331	29.4	-20	52.6
7	239	52.6	313	18.7		05.1	14	50.3		32.1	66	40.3		27.4	346	31.7		52.6
8	254	55.0	328	17.8		04.9	29	51.6		32.4	81	43.0		27.4	1	34.0		52.7
9	269	57.5	343	16.9		04.6	44	52.9		32.8	96	45.6		27.5	16	36.2		52.7
10	285	00.0	358	16.1		04.4	59	54.1		33.1	111	48.3		27.6	31	38.5		52.7
11	300	02.4	13	15.2	-22	04.2	74	55.4	-15	33.5	126	51.0	+4	27.7	46	40.8	-20	52.7
12	315	04.9	28	14.4	-22	03.9	89	56.6	-15	33.8	141	53.6	+4	27.8	61	43.0	-20	52.7
13	330	07.3	43	13.5		03.7	104	57.9		34.2	156	56.3		27.9	76	45.3		52.7
14	345	09.8	58	12.7		03.5	119	59.2		34.5	171	58.9		28.0	91	47.5		52.8
15	0	12.3	73	11.8		03.2	135	00.4		34.9	187	01.6		28.1	106	49.8		52.8
16	15	14.7	88	10.9		03.0	150	01.7		35.2	202	04.2		28.2	121	52.1		52.8
17	30	17.2	103	10.1	-22	02.8	165	02.9	-15	35.6	217	06.9	+4	28.3	136	54.3	-20	52.8
18	45	19.7	118	09.2	-22	02.5	180	04.2	-15	35.9	232	09.6	+4	28.4	151	56.6	-20	52.8
19	60	22.1	133	08.4		02.3	195	05.5		36.3	247	12.2		28.5	166	58.9		52.9
20	75	24.6	148	07.5		02.1	210	06.7		36.6	262	14.9		28.6	182	01.1		52.9
21	90	27.1	163	06.7		01.8	225	08.0		37.0	277	17.5		28.7	197	03.4		52.9
22	105	29.5	178	05.8		01.6	240	09.2		37.3	292	20.2		28.8	212	05.7		52.9
23	120	32.0	193	04.9		01.3	255	10.5		37.6	307	22.9		28.9	227	07.9		52.9
24	135	34.5	208	04.1	-22	01.1	270	11.8	-15	38.0	322	25.5	+4	28.9	242	10.2	-20	52.9
Dif	—		-9		+2		+13		-3		+27		+1		+23			

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: 26 ^d 9 PHE { 4 ^h : 57:7 12 ^h : 58:0 20 ^h : 58:3 R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	30.3	-15	51.2	212	04.6	-17	58.4	21	60 N	6 27	7 17	8 03	6 21	40	14 11	74
1	191	30.3		50.4	226	31.9	83	56.3	21	58	24	11	7 54	6 09	42	22	73
2	206	30.2		49.7	240	59.1	82	54.0	23	56	21	06	46	5 59	43	33	70
3	221	30.2		48.9	255	26.2	81	51.7	23	54	19	7 01	39	50	44	42	69
4	236	30.1		48.1	269	53.3	81	49.3	24	52	16	6 57	33	42	45	49	69
5	251	30.1	-15	47.4	284	20.4	81	-17	46.7	26	50	6 14	6 53	7 27	5 35	45	14 57 67
6	266	30.0	-15	46.6	298	47.5	81	-17	44.0	27	45	6 09	6 44	7 14	5 19	47	15 12 65
7	281	30.0		45.9	313	14.6	81	41.3	27	40	6 04	36	7 04	5 06	49	24	64
8	296	29.9		45.1	327	41.6	80	38.4	29	35	5 59	29	6 55	4 55	50	35	62
9	311	29.9		44.3	342	08.6	80	35.4	30	30	54	23	47	45	51	15 44	61
10	326	29.8		43.6	356	35.6	80	32.3	31	20	45	11	34	29	52	16 00	59
11	341	29.8	-15	42.8	11	02.5	79	-17	29.1	32	10 N	5 35	6 00	6 22	4 15	53	16 14 57
12	356	29.7	-15	42.0	25	29.5	80	-17	25.8	33	0	5 24	5 49	6 11	4 01	55	16 27 56
13	11	29.7		41.3	39	56.4	79	22.4	34	10 S	5 12	37	5 59	3 48	56	40	54
14	26	29.6		40.5	54	23.2	78	18.8	36	20	4 56	24	47	33	58	16 54	52
15	41	29.6		39.7	68	50.1	79	15.2	36	30	36	5 07	32	17	59	17 10	49
16	56	29.6		39.0	83	17.0	79	11.4	38	35	24	4 57	24	3 07	60	19	48
17	71	29.5	-15	38.2	97	43.8	78	-17	07.6	38	40	4 09	4 45	5 14	2 56	61	17 29 47
18	86	29.5	-15	37.4	112	10.6	78	-17	03.6	40	45	3 50	4 30	5 03	2 43	63	17 41 45
19	101	29.4		36.6	126	37.4	78	-16	59.5	41	50	25	12	4 49	28	64	17 56 43
20	116	29.4		35.9	141	04.2	78	55.4	41	52	3 12	4 04	43	20	65	18 03	42
21	131	29.3		35.1	155	30.9	77	51.1	43	54	2 57	3 54	36	12	66	10	41
22	146	29.3		34.3	169	57.7	78	46.7	44	56	39	42	28	2 03	67	19	39
23	161	29.3		33.6	184	24.4	77	42.2	45	58	2 16	29	19	1 52	68	28	38
24	176	29.2	-15	32.8	198	51.1	77	-16	37.6	46	60 S	1 44	3 14	4 09	1 41	69	18 39 36

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 14 ^h 55 ^m 3		Mag: -3.9 PMG: 10 ^h 08 ^m			Mag: +0.7 PMG: 5 ^h 59 ^m			Mag: -2.4 PMG: 2 ^h 30 ^m			Mag: +0.5 PMG: 7 ^h 50 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	135	34.5	208	04.1	-22	01.1	270	11.8	-15	38.0	322	25.5	+4	28.9	242	10.2
1	150	36.9	223	03.2		00.8	285	13.0		38.3	337	28.2		29.0	257	12.5
2	165	39.4	238	02.4		00.6	300	14.3		38.7	352	30.8		29.1	272	14.7
3	180	41.8	253	01.5		00.3	315	15.5		39.0	7	33.5		29.2	287	17.0
4	195	44.3	268	00.7	-22	00.1	330	16.8		39.4	22	36.2		29.3	302	19.3
5	210	46.8	282	59.8	-21	59.8	345	18.1	-15	39.7	37	38.8	+4	29.4	317	21.5
6	225	49.2	297	59.0	-21	59.6	0	19.3	-15	40.1	52	41.5	+4	29.5	332	23.8
7	240	51.7	312	58.1		59.3	15	20.6		40.4	67	44.2		29.6	347	26.1
8	255	54.2	327	57.2		59.1	30	21.9		40.8	82	46.8		29.7	2	28.3
9	270	56.6	342	56.4		58.8	45	23.1		41.1	97	49.5		29.8	17	30.6
10	285	59.1	357	55.5		58.6	60	24.4		41.4	112	52.1		29.9	32	32.9
11	301	01.6	12	54.7	-21	58.3	75	25.6	-15	41.8	127	54.8	+4	30.0	47	35.1
12	316	04.0	27	53.8	-21	58.1	90	26.9	-15	42.1	142	57.5	+4	30.1	62	37.4
13	331	06.5	42	53.0		57.8	105	28.2		42.5	158	00.1		30.2	77	39.7
14	346	08.9	57	52.1		57.5	120	29.4		42.8	173	02.8		30.3	92	41.9
15	1	11.4	72	51.3		57.3	135	30.7		43.2	188	05.5		30.4	107	44.2
16	16	13.9	87	50.4		57.0	150	32.0		43.5	203	08.1		30.5	122	46.5
17	31	16.3	102	49.6	-21	56.7	165	33.2	-15	43.8	218	10.8	+4	30.6	137	48.7
18	46	18.8	117	48.7	-21	56.5	180	34.5	-15	44.2	233	13.5	+4	30.7	152	51.0
19	61	21.3	132	47.9		56.2	195	35.8		44.5	248	16.1		30.8	167	53.3
20	76	23.7	147	47.0		55.9	210	37.0		44.9	263	18.8		30.9	182	55.5
21	91	26.2	162	46.1		55.7	225	38.3		45.2	278	21.5		31.0	197	57.8
22	106	28.7	177	45.3		55.4	240	39.6		45.6	293	24.1		31.0	213	00.1
23	121	31.1	192	44.4		55.1	255	40.8		45.9	308	26.8		31.1	228	02.3
24	136	33.6	207	43.6	-21	54.9	270	42.1	-15	46.2	323	29.5	+4	31.2	243	04.6
Dif	—		-9	+3			+13	-3			+27	+1			+23	

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: 27 ^d 9 PHE { 4 ^h : 58 ^h 5 12 ^h : 58 ^h 8 20 ^h : 59 ^h 0 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	h m			
0	176	29.2	-15	32.8	198	51.1	-16	37.6	60 N	16 28	17 14	18 04	7 01	32	15 25	82		
1	191	29.2		32.0	213	17.8	77	32.8	58	37	20	07	6 51	34	35	79		
2	206	29.1		31.2	227	44.5	77	28.0	56	45	25	09	42	36	43	78		
3	221	29.1		30.5	242	11.2	77	23.1	54	52	30	12	34	37	51	76		
4	236	29.1		29.7	256	37.9	77	18.0	52	16 58	34	14	27	39	15 58	74		
5	251	29.0	-15	28.9	271	04.5	76	-16	50	17 04	17 38	18 16	6 20	41	16 04	73		
6	266	29.0	-15	28.1	285	31.2	77	-16	45	17 16	17 46	18 21	6 06	43	16 17	70		
7	281	28.9		27.4	299	57.8	76	-16	40	26	17 54	26	5 55	45	28	67		
8	296	28.9		26.6	314	24.5	77	-15	35	34	18 00	30	45	47	37	66		
9	311	28.9		25.8	328	51.1	76	51.3	30	42	07	35	36	49	45	64		
10	326	28.8		25.0	343	17.7	76	45.6	20	17 55	18	44	21	51	16 59	61		
11	341	28.8	-15	24.3	357	44.4	77	-15	10 N	18 07	18 28	18 53	5 08	54	17 11	58		
12	356	28.7	-15	23.5	12	11.0	76	-15	0	18 18	18 39	19 04	4 56	56	17 23	55		
13	11	28.7		22.7	26	37.6	76	28.0	10 S	29	18 51	16	44	58	34	53		
14	26	28.7		21.9	41	04.2	76	21.9	20	41	19 04	31	31	60	46	50		
15	41	28.6		21.1	55	30.8	76	15.7	30	18 54	20	19 50	16	62	17 59	48		
16	56	28.6		20.4	69	57.4	76	09.4	35	19 03	30	20 02	4 07	64	18 07	46		
17	71	28.6	-15	19.6	84	24.0	76	-15	40	19 12	19 41	20 17	3 57	66	18 16	43		
18	86	28.5	-15	18.8	98	50.6	76	-14	45	19 23	19 55	20 35	3 46	68	18 26	41		
19	101	28.5		18.0	113	17.2	76	49.9	50	36	20 13	21 00	32	70	39	38		
20	116	28.5		17.2	127	43.8	76	43.3	52	42	21	12	25	72	45	36		
21	131	28.4		16.5	142	10.5	77	36.5	54	49	30	26	18	73	51	35		
22	146	28.4		15.7	156	37.1	76	29.6	56	19 57	41	21 43	10	74	18 58	33		
23	161	28.4		14.9	171	03.7	76	22.6	58	20 05	20 54	22 04	3 00	77	19 06	31		
24	176	28.3	-15	14.1	185	30.3	76	-14	60 S	20 15	21 09	22 33	2 50	78	19 15	29		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 51 ^m 3		Mag: -3.9 PMG: 10 ^h 10 ^m				Mag: +0.7 PMG: 5 ^h 57 ^m				Mag: -2.4 PMG: 2 ^h 26 ^m				Mag: +0.5 PMG: 7 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	136	33.6	207	43.6	-21	54.9	270	42.1	-15	46.2	323	29.5	+4	31.2	243	04.6	-20	53.4
1	151	36.1	222	42.7		54.6	285	43.4		46.6	338	32.1		31.3	258	06.9		53.4
2	166	38.5	237	41.9		54.3	300	44.6		46.9	353	34.8		31.4	273	09.1		53.4
3	181	41.0	252	41.0		54.0	315	45.9		47.3	8	37.5		31.5	288	11.4		53.4
4	196	43.4	267	40.2		53.8	330	47.2		47.6	23	40.1		31.6	303	13.7		53.4
5	211	45.9	282	39.3	-21	53.5	345	48.4	-15	47.9	38	42.8	+4	31.7	318	15.9	-20	53.4
6	226	48.4	297	38.5	-21	53.2	0	49.7	-15	48.3	53	45.5	+4	31.8	333	18.2	-20	53.5
7	241	50.8	312	37.6		52.9	15	51.0		48.6	68	48.1		31.9	348	20.5		53.5
8	256	53.3	327	36.8		52.6	30	52.2		49.0	83	50.8		32.0	3	22.8		53.5
9	271	55.8	342	35.9		52.4	45	53.5		49.3	98	53.5		32.1	18	25.0		53.5
10	286	58.2	357	35.1		52.1	60	54.8		49.6	113	56.1		32.2	33	27.3		53.5
11	302	00.7	12	34.2	-21	51.8	75	56.0	-15	50.0	128	58.8	+4	32.3	48	29.6	-20	53.5
12	317	03.2	27	33.4	-21	51.5	90	57.3	-15	50.3	144	01.5	+4	32.4	63	31.8	-20	53.6
13	332	05.6	42	32.5		51.2	105	58.6		50.7	159	04.1		32.5	78	34.1		53.6
14	347	08.1	57	31.7		50.9	120	59.8		51.0	174	06.8		32.6	93	36.4		53.6
15	2	10.6	72	30.8		50.6	136	01.1		51.3	189	09.5		32.7	108	38.6		53.6
16	17	13.0	87	30.0		50.4	151	02.4		51.7	204	12.2		32.8	123	40.9		53.6
17	32	15.5	102	29.1	-21	50.1	166	03.7	-15	52.0	219	14.8	+4	32.9	138	43.2	-20	53.6
18	47	17.9	117	28.3	-21	49.8	181	04.9	-15	52.4	234	17.5	+4	33.0	153	45.5	-20	53.7
19	62	20.4	132	27.4		49.5	196	06.2		52.7	249	20.2		33.1	168	47.7		53.7
20	77	22.9	147	26.6		49.2	211	07.5		53.0	264	22.8		33.2	183	50.0		53.7
21	92	25.3	162	25.7		48.9	226	08.7		53.4	279	25.5		33.3	198	52.3		53.7
22	107	27.8	177	24.9		48.6	241	10.0		53.7	294	28.2		33.4	213	54.5		53.7
23	122	30.3	192	24.0		48.3	256	11.3		54.0	309	30.9		33.5	228	56.8		53.7
24	137	32.7	207	23.2	-21	48.0	271	12.6	-15	54.4	324	33.5	+4	33.6	243	59.1	-20	53.8
Dif	—		-8		+3		+13		-3		+27		+1		+23			

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: 28 ^d 9 PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/6 R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	28.3	-15	14.1	185	30.3	-14	15.6	72	58	60 N	6 23	7 13	7 58	7 33	26	16 47	87		
1	191	28.3		13.3	199	56.9	76	08.4	72	58		20	07	50	25	29	16 54	84		
2	206	28.3		12.5	214	23.5	76	-14	01.1	73	56	18	7 02	42	18	31	17 01	82		
3	221	28.2		11.7	228	50.2	77	-13	53.8	73	54	16	6 58	35	11	33	07 79			
4	236	28.2		11.0	243	16.8	76		46.3	75	52	13	53	29	06	34	12 78			
5	251	28.2	-15	10.2	257	43.5	77	-13	38.8	75	50	6 11	6 50	7 24	7 01	35	17 17	76		
6	266	28.1	-15	09.4	272	10.1	76	-13	31.1	77	45	6 06	6 41	7 12	6 49	39	17 27	72		
7	281	28.1		08.6	286	36.8	77		23.4	77	40	6 02	34	7 02	40	42	35 70			
8	296	28.1		07.8	301	03.4	76		15.6	78	35	5 57	27	6 54	32	44	43 67			
9	311	28.0		07.0	315	30.1	77	-13	07.7	79	30	53	21	46	25	46	17 49	65		
10	326	28.0		06.2	329	56.8	77	-12	59.7	80	20	44	10	33	12	50	18 00	61		
11	341	28.0	-15	05.5	344	23.5	77	-12	51.6	81	10 N	5 35	6 00	6 22	6 02	52	18 09	58		
12	356	27.9	-15	04.7	358	50.2	77	-12	43.4	82	0	5 24	5 49	6 11	5 52	55	18 18	55		
13	11	27.9		03.9	13	16.9	77		35.2	82	10 S	5 12	38	6 00	42	58	27 52			
14	26	27.9		03.1	27	43.6	77		26.8	84	20	4 58	25	5 48	31	61	36 49			
15	41	27.9		02.3	42	10.3	77		18.4	84	30	38	5 09	34	18	65	47 45			
16	56	27.8		01.5	56	37.1	78		09.9	85	35	26	4 59	26	11	67	53 42			
17	71	27.8	-15	00.7	71	03.8	77	-12	01.3	86	40	4 12	4 48	5 17	5 03	69	18 59	41		
18	86	27.8	-14	59.9	85	30.6	78	-11	52.6	87	45	3 53	4 34	5 06	4 54	71	19 07	38		
19	101	27.8		59.1	99	57.4	78		43.9	87	50	29	16	4 53	42	75	17 34			
20	116	27.7		58.3	114	24.2	78		35.0	89	52	17	4 08	47	37	76	21 33			
21	131	27.7		57.5	128	51.0	78		26.1	89	54	3 03	3 59	40	31	78	26 31			
22	146	27.7		56.7	143	17.8	78		17.1	90	56	2 46	48	32	24	80	31 29			
23	161	27.7		56.0	157	44.6	78	-11	08.1	90	58	2 25	35	24	17	82	37 27			
24	176	27.6	-14	55.2	172	11.4	78	-10	58.9	92	60 S	1 57	3 21	4 14	4 08	85	19 44	24		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 47 ^m 4		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: +0.7 PMG: 5 ^h 55 ^m		Mag: -2.4 PMG: 2 ^h 21 ^m		Mag: +0.5 PMG: 7 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	137	32.7	207	23.2	-21	48.0	271	12.6	-15	54.4
1	152	35.2	222	22.4		47.7	286	13.8		54.7
2	167	37.7	237	21.5		47.4	301	15.1		55.1
3	182	40.1	252	20.7		47.1	316	16.4		55.4
4	197	42.6	267	19.8		46.8	331	17.7		55.7
5	212	45.1	282	19.0	-21	46.5	346	18.9	-15	56.1
6	227	47.5	297	18.1	-21	46.2	1	20.2	-15	56.4
7	242	50.0	312	17.3		45.9	16	21.5		56.7
8	257	52.4	327	16.4		45.6	31	22.8		57.1
9	272	54.9	342	15.6		45.3	46	24.0		57.4
10	287	57.4	357	14.7		44.9	61	25.3		57.7
11	302	59.8	12	13.9	-21	44.6	76	26.6	-15	58.1
12	318	02.3	27	13.1	-21	44.3	91	27.9	-15	58.4
13	333	04.8	42	12.2		44.0	106	29.1		58.7
14	348	07.2	57	11.4		43.7	121	30.4		59.1
15	3	09.7	72	10.5		43.4	136	31.7		59.4
16	18	12.2	87	09.7		43.1	151	33.0	-15	59.8
17	33	14.6	102	08.8	-21	42.7	166	34.2	-16	00.1
18	48	17.1	117	08.0	-21	42.4	181	35.5	-16	00.4
19	63	19.5	132	07.1		42.1	196	36.8		00.8
20	78	22.0	147	06.3		41.8	211	38.1		01.1
21	93	24.5	162	05.5		41.4	226	39.3		01.4
22	108	26.9	177	04.6		41.1	241	40.6		01.8
23	123	29.4	192	03.8		40.8	256	41.9		02.1
24	138	31.9	207	02.9	-21	40.5	271	43.2	-16	02.4
Dif	—		-8		+3		+13		-3	

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: 29 ^d 9 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 60'0 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	176	27.6	-14	55.2	172	11.4	-10	58.9	60 N	16 34	17 19	18 09	7 59 23	18 14 88										
1	191	27.6		54.4	186	38.3	79	49.7	58	42	24	11	54 25	18 86										
2	206	27.6		53.6	201	05.2	79	40.4	56	49	29	13	49 27	23 83										
3	221	27.6		52.8	215	32.1	79	31.0	54	16 56	33	15	44 30	26 81										
4	236	27.5		52.0	229	59.0	79	21.6	52	17 02	37	17	40 31	30 79										
5	251	27.5	-14	51.2	244	25.9	79	-10 12.1	50	17 07	17 41	18 19	7 36 33	18 33 77										
6	266	27.5	-14	50.4	258	52.8	79	-10 02.5	45	17 18	17 49	18 24	7 28 37	18 39 74										
7	281	27.5		49.6	273	19.8	80	-9 52.9	40	28	17 56	28	22 39	45 70										
8	296	27.4		48.8	287	46.7	79	43.2	35	36	18 02	32	16 42	50 67										
9	311	27.4		48.0	302	13.7	80	33.4	30	43	08	36	11 44	18 54 65										
10	326	27.4		47.2	316	40.7	80	23.6	20	17 56	19	45	7 02 48	19 01 61										
11	341	27.4	-14	46.4	331	07.7	80	-9 13.7	10 N	18 07	18 29	18 54	6 54 52	19 07 58										
12	356	27.4	-14	45.6	345	34.7	80	-9 03.7	0	18 18	18 39	19 04	6 47 54	19 13 54										
13	11	27.3		44.8	0	01.8	81	-8 53.7	10 S	28	18 50	15	40 57	19 50										
14	26	27.3		44.0	14	28.8	80	43.6	20	40	19 03	30	32 61	25 47										
15	41	27.3		43.2	28	55.9	81	33.4	30	18 53	18	19 48	23 65	32 43										
16	56	27.3		42.4	43	23.0	81	23.2	35	19 01	28	20 00	18 67	35 41										
17	71	27.3	-14	41.6	57	50.1	81	-8 12.9	40	19 10	19 39	20 14	6 12 70	19 40 38										
18	86	27.2	-14	40.8	72	17.2	81	-8 02.6	45	19 20	19 52	20 32	6 05 73	19 45 35										
19	101	27.2		40.0	86	44.3	81	-7 52.3	50	33	20 09	20 55	5 57 76	51 32										
20	116	27.2		39.2	101	11.5	82	41.8	52	38	17	21 07	53 78	54 30										
21	131	27.2		38.4	115	38.7	82	31.4	54	45	26	20	49 80	19 57 28										
22	146	27.2		37.6	130	05.8	81	20.8	56	19 52	36	36	44 83	20 00 26										
23	161	27.1		36.8	144	33.0	82	-7 10.3	58	20 00	20 48	21 56	39 85	04 24										
24	176	27.1	-14	36.0	159	00.3	83	-6 59.6	60 S	20 10	21 02	22 22	5 33 88	20 08 22										
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG: 14 ^h 43 ^m 5		Mag: -3.9 PMG: 10 ^h 12 ^m			Mag: +0.7 PMG: 5 ^h 53 ^m			Mag: -2.4 PMG: 2 ^h 17 ^m			Mag: +0.5 PMG: 7 ^h 39 ^m												
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	138	31.9	207	02.9	-21	40.5	271	43.2	-16	02.4	325	37.7	+4	36.0	244	53.7	-20	54.2						
1	153	34.3	222	02.1		40.1	286	44.5		02.7	340	40.4		36.1	259	55.9		54.2						
2	168	36.8	237	01.3		39.8	301	45.7		03.1	355	43.1		36.2	274	58.2		54.2						
3	183	39.3	252	00.4		39.5	316	47.0		03.4	10	45.8		36.3	290	00.5		54.2						
4	198	41.7	266	59.6		39.2	331	48.3		03.7	25	48.4		36.4	305	02.8		54.2						
5	213	44.2	281	58.7	-21	38.8	346	49.6	-16	04.1	40	51.1	+4	36.5	320	05.0	-20	54.2						
6	228	46.7	296	57.9	-21	38.5	1	50.9	-16	04.4	55	53.8	+4	36.6	335	07.3	-20	54.3						
7	243	49.1	311	57.0		38.2	16	52.1		04.7	70	56.5		36.7	350	09.6		54.3						
8	258	51.6	326	56.2		37.8	31	53.4		05.1	85	59.2		36.8	5	11.9		54.3						
9	273	54.0	341	55.4		37.5	46	54.7		05.4	101	01.8		36.9	20	14.1		54.3						
10	288	56.5	356	54.5		37.1	61	56.0		05.7	116	04.5		37.0	35	16.4		54.3						
11	303	59.0	11	53.7	-21	36.8	76	57.3	-16	06.1	131	07.2	+4	37.1	50	18.7	-20	54.3						
12	319	01.4	26	52.8	-21	36.5	91	58.5	-16	06.4	146	09.9	+4	37.2	65	21.0	-20	54.3						
13	334	03.9	41	52.0		36.1	106	59.8		06.7	161	12.6		37.3	80	23.2		54.4						
14	349	06.4	56	51.2		35.8	122	01.1		07.1	176	15.3		37.4	95	25.5		54.4						
15	4	08.8	71	50.3		35.4	137	02.4		07.4	191	17.9		37.5	110	27.8		54.4						
16	19	11.3	86	49.5		35.1	152	03.7		07.7	206	20.6		37.6	125	30.1		54.4						
17	34	13.8	101	48.7	-21	34.8	167	05.0	-16	08.0	221	23.3	+4	37.7	140	32.4	-20	54.4						
18	49	16.2	116	47.8	-21	34.4	182	06.2	-16	08.4	236	26.0	+4	37.8	155	34.6	-20	54.4						
19	64	18.7	131	47.0		34.1	197	07.5		08.7	251	28.7		37.9	170	36.9		54.5						
20	79	21.2	146	46.1		33.7	212	08.8		09.0	266	31.3		38.0	185	39.2		54.5						
21	94	23.6	161	45.3		33.4	227	10.1		09.4	281	34.0		38.1	200	41.5		54.5						
22	109	26.1	176	44.5		33.0	242	11.4		09.7	296	36.7		38.2	215	43.8		54.5						
23	124	28.5	191	43.6		32.7	257	12.7		10.0	311	39.4		38.4	230	46.0		54.5						
24	139	31.0	206	42.8	-21	32.3	272	13.9	-16	10.3	326	42.1	+4	38.5	245	48.3	-20	54.5						
Dif	—		-8			+3	+13			-3			+27			+1			+23			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: 1 ^d 4 PHE { 4 ^h : 60'1 12 ^h : 60'1 20 ^h : 60'2 Rº: 54 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	27.1	-14	36.0	159	00.3	-6	59.6	60 N	6 19	7 08	7 53	8 22	20	19 42	89			
1	191	27.1		35.2	173	27.5		49.0	58	16	7 03	45	19 23		44	86			
2	206	27.1		34.4	187	54.7		38.2	56	14	6 58	38	16 25		46	83			
3	221	27.1		33.6	202	22.0		27.5	54	12	54	31	14 27		47	82			
4	236	27.1		32.7	216	49.3		16.7	52	10	50	26	11 30		49	79			
5	251	27.1	-14	31.9	231	16.6		-6 05.8	50	6 08	6 46	7 20	8 09	31	19 50	78			
6	266	27.0	-14	31.1	245	43.9		-5 55.0	45	6 04	6 39	7 09	8 05	34	19 53	74			
7	281	27.0		30.3	260	11.2		44.0	40	6 00	32	7 00	8 01	38	55	71			
8	296	27.0		29.5	274	38.6		33.1	35	5 56	26	6 52	7 58	40	57	68			
9	311	27.0		28.7	289	05.9		22.1	30	52	20	45	55	43	19 59	65			
10	326	27.0		27.9	303	33.3		-5 11.0	20	43	09	32	50	47	20 02	61			
11	341	27.0	-14	27.1	318	00.7		-5 00.0	10 N	5 34	6 00	6 21	7 46	50	20 05	57			
12	356	27.0	-14	26.3	332	28.1		-4 48.9	0	5 25	5 49	6 11	7 41	54	20 07	54			
13	11	26.9		25.5	346	55.5		37.8	10 S	5 13	38	6 00	37	58	09	51			
14	26	26.9		24.7	1	22.9		26.6	20	4 59	26	5 49	33	61	12	47			
15	41	26.9		23.9	15	50.4		15.4	30	40	11	36	28	65	15	42			
16	56	26.9		23.0	30	17.9		-4 04.2	35	29	5 01	28	25	68	16	40			
17	71	26.9	-14	22.2	44	45.3		-3 52.9	40	4 15	4 50	5 19	7 22	70	20 18	38			
18	86	26.9	-14	21.4	59	12.8		-3 41.7	45	3 57	4 37	5 09	7 18	74	20 20	35			
19	101	26.9		20.6	73	40.3		30.4	50	34	20	4 57	13	78	23	30			
20	116	26.9		19.8	88	07.8		19.1	52	22	12	51	11	80	24	29			
21	131	26.9		19.0	102	35.3		-3 07.8	54	3 09	4 03	44	09	81	25	27			
22	146	26.8		18.2	117	02.9		-2 56.4	56	2 53	3 53	37	07	83	26	26			
23	161	26.8		17.4	131	30.4		45.0	58	33	41	29	04	86	28	23			
24	176	26.8	-14	16.5	145	58.0		-2 33.7	60 S	2 08	3 27	4 20	7 01	88	20 30	20			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 14 ^h 39 ^m 5		Mag: -3.9 PMG: 10 ^h 14 ^m				Mag: +0.7 PMG: 5 ^h 51 ^m				Mag: -2.4 PMG: 2 ^h 13 ^m				Mag: +0.5 PMG: 7 ^h 36 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	139	31.0	206	42.8	-21	32.3	272	13.9	-16	10.3	326	42.1	+4	38.5	245	48.3	-20	54.5	
1	154	33.5	221	42.0		31.9	287	15.2		10.7	341	44.8		38.6	260	50.6		54.5	
2	169	35.9	236	41.1		31.6	302	16.5		11.0	356	47.4		38.7	275	52.9		54.6	
3	184	38.4	251	40.3		31.2	317	17.8		11.3	11	50.1		38.8	290	55.1		54.6	
4	199	40.9	266	39.5		30.9	332	19.1		11.7	26	52.8		38.9	305	57.4		54.6	
5	214	43.3	281	38.6	-21	30.5	347	20.4	-16	12.0	41	55.5	+4	39.0	320	59.7	-20	54.6	
6	229	45.8	296	37.8	-21	30.2	2	21.7	-16	12.3	56	58.2	+4	39.1	336	02.0	-20	54.6	
7	244	48.3	311	37.0		29.8	17	22.9		12.6	72	00.9		39.2	351	04.3		54.6	
8	259	50.7	326	36.1		29.4	32	24.2		13.0	87	03.6		39.3	6	06.5		54.7	
9	274	53.2	341	35.3		29.1	47	25.5		13.3	102	06.2		39.4	21	08.8		54.7	
10	289	55.6	356	34.5		28.7	62	26.8		13.6	117	08.9		39.5	36	11.1		54.7	
11	304	58.1	11	33.6	-21	28.3	77	28.1	-16	13.9	132	11.6	+4	39.6	51	13.4	-20	54.7	
12	320	00.6	26	32.8	-21	28.0	92	29.4	-16	14.3	147	14.3	+4	39.7	66	15.7	-20	54.7	
13	335	03.0	41	32.0		27.6	107	30.7		14.6	162	17.0		39.8	81	17.9		54.7	
14	350	05.5	56	31.1		27.2	122	32.0		14.9	177	19.7		39.9	96	20.2		54.7	
15	5	08.0	71	30.3		26.9	137	33.3		15.2	192	22.4		40.0	111	22.5		54.8	
16	20	10.4	86	29.5		26.5	152	34.5		15.6	207	25.0		40.1	126	24.8		54.8	
17	35	12.9	101	28.6	-21	26.1	167	35.8	-16	15.9	222	27.7	+4	40.2	141	27.1	-20	54.8	
18	50	15.4	116	27.8	-21	25.8	182	37.1	-16	16.2	237	30.4	+4	40.3	156	29.4	-20	54.8	
19	65	17.8	131	27.0		25.4	197	38.4		16.5	252	33.1		40.4	171	31.6		54.8	
20	80	20.3	146	26.1		25.0	212	39.7		16.9	267	35.8		40.5	186	33.9		54.8	
21	95	22.8	161	25.3		24.6	227	41.0		17.2	282	38.5		40.6	201	36.2		54.9	
22	110	25.2	176	24.5		24.2	242	42.3		17.5	297	41.2		40.8	216	38.5		54.9	
23	125	27.7	191	23.6		23.9	257	43.6		17.8	312	43.9		40.9	231	40.8		54.9	
24	140	30.1	206	22.8	-21	23.5	272	44.9	-16	18.2	327	46.5	+4	41.0	246	43.0	-20	54.9	
Dif	—		-8 +4		+13 -3		+27 -3		+27 -3		+27 -3		+27 -3		+23 -3		+23 -3		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2		Edad: 2 ^d 4 PHE { 4 ^h : 60 ^h 2 12 ^h : 60 ^h 2 20 ^h : 60 ^h 1 R°: 54 ^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	26.8	-14	16.5	145	58.0	-2 33.7	60 N	16 39	17 24	18 13	8 42	21	21 11	88		
1	191	26.8		15.7	160	25.6	86 22.3	58	47	29	15	42	23	10	85		
2	206	26.8		14.9	174	53.2	86 -2 10.8	56	16 54	33	17	41	25	09	83		
3	221	26.8		14.1	189	20.7	85 -1 59.4	54	17 00	37	19	41	27	09	80		
4	236	26.8		13.3	203	48.4	87 48.0	52	05	41	21	41	28	08	79		
5	251	26.8	-14	12.5	218	16.0	86 -1 36.5	50	17 10	17 44	18 22	8 40	31	21 08	77		
6	266	26.8	-14	11.6	232	43.6	86 -1 25.1	45	17 21	17 52	18 26	8 39	35	21 07	73		
7	281	26.8		10.8	247	11.2	86 13.6	40	30	17 58	30	39	37	06	70		
8	296	26.8		10.0	261	38.9	87 -1 02.1	35	38	18 04	34	38	40	05	67		
9	311	26.8		09.2	276	06.5	86 -0 50.7	30	45	10	38	38	42	04	65		
10	326	26.8		08.4	290	34.2	87 39.2	20	17 57	20	46	37	46	03	61		
11	341	26.8	-14	07.5	305	01.9	87 -0 27.7	10 N	18 08	18 29	18 54	8 36	50	21 02	57		
12	356	26.8	-14	06.7	319	29.5	86 -0 16.2	0	18 18	18 39	19 04	8 35	54	21 01	53		
13	11	26.7		05.9	333	57.2	87 -0 04.8	10 S	28	18 50	15	35	57	21 00	50		
14	26	26.7		05.1	348	24.9	87 +0 06.7	20	39	19 02	29	34	61	20 59	46		
15	41	26.7		04.3	2	52.6	87 18.2	30	51	17	46	33	65	57	43		
16	56	26.7		03.4	17	20.3	87 29.7	35	18 59	26	19 58	33	67	56	41		
17	71	26.7	-14	02.6	31	48.0	87 +0 41.1	40	19 07	19 36	20 11	8 32	70	20 56	37		
18	86	26.7	-14	01.8	46	15.8	88 +0 52.6	45	19 17	19 49	20 28	8 32	73	20 55	34		
19	101	26.7		01.0	60	43.5	87 +1 04.0	50	29	20 05	20 50	31	77	53	31		
20	116	26.7	-14	00.2	75	11.2	87 15.5	52	35	13	21 02	31	79	53	29		
21	131	26.7	-13	59.3	89	38.9	87 26.9	54	41	21	14	30	82	52	28		
22	146	26.7		58.5	104	06.7	88 38.3	56	48	31	29	30	83	52	25		
23	161	26.7		57.7	118	34.4	87 +1 49.7	58	19 55	42	21 48	30	85	51	23		
24	176	26.7	-13	56.9	133	02.2	88 +2 01.1	60 S	20 04	20 55	22 11	8 29	89	20 50	21		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 14 ^h 35 ^m 6		Mag: -3.9 PMG: 10 ^h 15 ^m		Mag: +0.6 PMG: 5 ^h 49 ^m		Mag: -2.4 PMG: 2 ^h 09 ^m		Mag: +0.5 PMG: 7 ^h 32 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	140	30.1	206	22.8	-21	23.5	272	44.9	-16	18.2							
1	155	32.6	221	22.0		23.1	287	46.2		18.5							
2	170	35.1	236	21.2		22.7	302	47.4		18.8							
3	185	37.5	251	20.3		22.3	317	48.7		19.1							
4	200	40.0	266	19.5		22.0	332	50.0		19.4							
5	215	42.5	281	18.7	-21	21.6	347	51.3	-16	19.8							
6	230	44.9	296	17.8	-21	21.2	2	52.6	-16	20.1							
7	245	47.4	311	17.0		20.8	17	53.9		20.4							
8	260	49.9	326	16.2		20.4	32	55.2		20.7							
9	275	52.3	341	15.4		20.0	47	56.5		21.1							
10	290	54.8	356	14.5		19.6	62	57.8		21.4							
11	305	57.2	11	13.7	-21	19.2	77	59.1	-16	21.7							
12	320	59.7	26	12.9	-21	18.8	93	00.4	-16	22.0							
13	336	02.2	41	12.1		18.4	108	01.7		22.3							
14	351	04.6	56	11.2		18.1	123	03.0		22.7							
15	6	07.1	71	10.4		17.7	138	04.3		23.0							
16	21	09.6	86	09.6		17.3	153	05.6		23.3							
17	36	12.0	101	08.8	-21	16.9	168	06.9	-16	23.6							
18	51	14.5	116	07.9	-21	16.5	183	08.2	-16	23.9							
19	66	17.0	131	07.1		16.1	198	09.5		24.3							
20	81	19.4	146	06.3		15.7	213	10.8		24.6							
21	96	21.9	161	05.5		15.3	228	12.0		24.9							
22	111	24.4	176	04.6		14.9	243	13.3		25.2							
23	126	26.8	191	03.8		14.4	258	14.6		25.5							
24	141	29.3	206	03.0	-21	14.0	273	15.9	-16	25.9							
Dif	—		-8		+4		+13		-3		+27		+1		+23		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: 3 ^d 4 SD: 16:4 PMG: 15 ^h 42 ^m	PHE { 4 ^h : 60:1 12 ^h : 60:0 20 ^h : 59:9 Rº: 53 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.7	-13	56.9	133	02.2	+2	01.1	60 N	6 14	7 03	7 48	9 03	21	22 39	86
1	191	26.7		56.0	147	29.9		12.5 ¹¹⁴	58	12	6 58	40	05	24	35	84
2	206	26.7		55.2	161	57.7		23.8 ¹¹³	56	10	54	33	06	26	32	81
3	221	26.7		54.4	176	25.4		35.2 ¹¹⁴	54	09	50	27	08	28	29	79
4	236	26.7		53.6	190	53.2		46.5 ¹¹³	52	07	47	22	09	30	27	77
5	251	26.7	-13	52.7	205	20.9	+2	57.8 ¹¹³	50	6 05	6 43	7 17	9 11	31	22 25	75
6	266	26.7	-13	51.9	219	48.7	+3	09.0 ¹¹²	45	6 01	6 36	7 06	9 14	35	22 20	71
7	281	26.7		51.1	234	16.4		20.3 ¹¹³	40	5 58	29	6 57	16	38	16	68
8	296	26.7		50.3	248	44.2		31.5 ¹¹²	35	54	24	50	18	41	12	66
9	311	26.7		49.4	263	12.0		42.7 ¹¹²	30	50	18	43	20	43	09	64
10	326	26.7		48.6	277	39.7	+3	53.9 ¹¹²	20	42	6 09	31	23	47	22 04	60
11	341	26.7	-13	47.8	292	07.5	+4	05.0 ¹¹¹	10 N	5 34	5 59	6 21	9 26	50	21 59	57
12	356	26.7	-13	46.9	306	35.2	+4	16.1 ¹¹¹	0	5 25	5 49	6 11	9 29	53	21 54	54
13	11	26.8		46.1	321	03.0		27.2 ¹¹¹	10 S	14	39	6 01	32	57	50	50
14	26	26.8		45.3	335	30.7		38.2 ¹¹⁰	20	5 00	27	5 50	35	60	45	47
15	41	26.8		44.5	349	58.5	+4	49.2 ¹¹⁰	30	4 42	12	37	38	65	40	43
16	56	26.8		43.6	4	26.2	+5	00.2 ¹¹⁰	35	31	5 03	30	40	67	37	41
17	71	26.8	-13	42.8	18	54.0	+5	11.2 ¹¹⁰	40	4 18	4 53	5 22	9 42	70	21 33	39
18	86	26.8	-13	42.0	33	21.7	+5	22.1 ¹⁰⁹	45	4 01	4 40	5 12	9 45	73	21 29	36
19	101	26.8		41.1	47	49.5		32.9 ¹⁰⁸	50	3 39	24	5 00	48	77	24	33
20	116	26.8		40.3	62	17.2		43.8 ¹⁰⁹	52	28	16	4 55	50	78	22	31
21	131	26.8		39.5	76	44.9	+5	54.5 ¹⁰⁷	54	15	4 08	48	52	79	20	29
22	146	26.8		38.6	91	12.7	+6	05.3 ¹⁰⁸	56	3 00	3 58	42	53	82	17	27
23	161	26.8		37.8	105	40.4		16.0 ¹⁰⁷	58	2 41	47	34	55	85	14	25
24	176	26.8	-13	37.0	120	08.1	+6	26.6 ¹⁰⁶	60 S	2 18	3 34	4 25	9 58	87	21 11	22

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 31 ^m 7		Mag: -3.9 PMG: 10 ^h 16 ^m			Mag: +0.6 PMG: 5 ^h 46 ^m			Mag: -2.4 PMG: 2 ^h 04 ^m			Mag: +0.5 PMG: 7 ^h 28 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	141	29.3	206	03.0	-21	14.0	273	15.9	-16	25.9	328	51.1	+4	43.5	247	37.9	-20	55.3
1	156	31.7	221	02.2		13.6	288	17.2		26.2	343	53.8		43.6	262	40.2		55.3
2	171	34.2	236	01.3		13.2	303	18.5		26.5	358	56.5		43.7	277	42.4		55.3
3	186	36.7	251	00.5		12.8	318	19.8		26.8	13	59.2		43.8	292	44.7		55.3
4	201	39.1	265	59.7		12.4	333	21.1		27.1	29	01.9		43.9	307	47.0		55.3
5	216	41.6	280	58.9	-21	12.0	348	22.4	-16	27.5	44	04.6	+4	44.1	322	49.3	-20	55.3
6	231	44.1	295	58.1	-21	11.6	3	23.7	-16	27.8	59	07.3	+4	44.2	337	51.6	-20	55.3
7	246	46.5	310	57.2		11.2	18	25.0		28.1	74	10.0		44.3	352	53.9		55.4
8	261	49.0	325	56.4		10.7	33	26.3		28.4	89	12.7		44.4	7	56.2		55.4
9	276	51.5	340	55.6		10.3	48	27.6		28.7	104	15.4		44.5	22	58.5		55.4
10	291	53.9	355	54.8		09.9	63	28.9		29.0	119	18.1		44.6	38	00.7		55.4
11	306	56.4	10	54.0	-21	09.5	78	30.2	-16	29.4	134	20.8	+4	44.7	53	03.0	-20	55.4
12	321	58.8	25	53.1	-21	09.1	93	31.5	-16	29.7	149	23.5	+4	44.8	68	05.3	-20	55.4
13	337	01.3	40	52.3		08.7	108	32.8		30.0	164	26.2		44.9	83	07.6		55.4
14	352	03.8	55	51.5		08.2	123	34.1		30.3	179	28.9		45.0	98	09.9		55.5
15	7	06.2	70	50.7		07.8	138	35.4		30.6	194	31.6		45.1	113	12.2		55.5
16	22	08.7	85	49.9		07.4	153	36.7		30.9	209	34.3		45.2	128	14.5		55.5
17	37	11.2	100	49.0	-21	07.0	168	38.1	-16	31.3	224	37.0	+4	45.4	143	16.8	-20	55.5
18	52	13.6	115	48.2	-21	06.5	183	39.4	-16	31.6	239	39.7	+4	45.5	158	19.0	-20	55.5
19	67	16.1	130	47.4		06.1	198	40.7		31.9	254	42.4		45.6	173	21.3		55.5
20	82	18.6	145	46.6		05.7	213	42.0		32.2	269	45.1		45.7	188	23.6		55.5
21	97	21.0	160	45.8		05.3	228	43.3		32.5	284	47.8		45.8	203	25.9		55.6
22	112	23.5	175	45.0		04.8	243	44.6		32.8	299	50.5		45.9	218	28.2		55.6
23	127	26.0	190	44.1		04.4	258	45.9		33.1	314	53.2		46.0	233	30.5		55.6
24	142	28.4	205	43.3	-21	04.0	273	47.2	-16	33.5	329	55.9	+4	46.1	248	32.8	-20	55.6
Dif	—		-8	+4			+13	-3			+27	+1			+23			

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: 4 ^d 4 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'5 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			
0	176	26.8	-13	37.0	120	08.1	+6	26.6	60 N	16 44	17 29	18 18	9 24	24	** ** *			
1	191	26.8		36.1	134	35.8	87	37.3	58	52	33	20	29	26	23 59 80			
2	206	26.8		35.3	149	03.5	87	47.8	56	16 58	37	21	32	29	53 78			
3	221	26.8		34.5	163	31.2	87	+6 58.3	54	17 04	41	23	36	31	48 76			
4	236	26.9		33.6	177	58.9	87	+7 08.8	52	09	44	24	39	33	44 74			
5	251	26.9	-13	32.8	192	26.6	87	+7 19.2	50	17 14	17 48	18 26	9 42	34	23 40 73			
6	266	26.9	-13	32.0	206	54.3	87	+7 29.6	45	17 24	17 55	18 29	9 49	37	23 31 70			
7	281	26.9		31.1	221	22.0	87	39.9	40	33	18 01	32	54	40	24 68			
8	296	26.9		30.3	235	49.6	86	+7 50.2	35	40	06	36	9	59 42	18 65			
9	311	26.9		29.4	250	17.3	87	+8 00.4	30	47	11	39	10	03 44	13 63			
10	326	26.9		28.6	264	44.9	86	10.6	20	17 58	21	47	10	48	23 04 59			
11	341	26.9	-13	27.8	279	12.6	87	+8 20.7	10 N	18 08	18 30	18 55	10	16 51	22 56 56			
12	356	26.9	-13	26.9	293	40.2	86	+8 30.7	0	18 18	18 39	19 04	10	22 54	22 48 54			
13	11	26.9		26.1	308	07.8	86	40.7	10 S	27	18 49	14	29	56	40 52			
14	26	27.0		25.3	322	35.5	87	+8 50.6	20	38	19 01	27	35	60	32 49			
15	41	27.0		24.4	337	03.1	86	+9 00.5	30	50	15	44	43	63	23 46			
16	56	27.0		23.6	351	30.7	86	10.3	35	18 57	23	19 55	47	66	18 43			
17	71	27.0	-13	22.7	5	58.3	86	+9 20.0	40	19 05	19 34	20 08	10	52 68	22 12 41			
18	86	27.0	-13	21.9	20	25.8	85	+9 29.7	45	19 14	19 46	20 25	10	58 71	22 05 39			
19	101	27.0		21.1	34	53.4	86	39.3	50	25	20 01	46	11	05 74	21 57 35			
20	116	27.0		20.2	49	21.0	86	48.9	52	31	08	20 56	08	76	53 34			
21	131	27.1		19.4	63	48.5	85	+9 58.4	54	37	17	21 09	11	78	49 32			
22	146	27.1		18.5	78	16.0	85	+10 07.8	56	43	26	23	15	80	44 31			
23	161	27.1		17.7	92	43.6	86	17.2	58	50	37	21 40	20	82	39 28			
24	176	27.1	-13	16.8	107	11.1	85	+10 26.4	60 S	19 59	20 49	22 01	11	25 84	21 33 26			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 27 ^m 7		Mag: -3.9 PMG: 10 ^h 18 ^m				Mag: +0.6 PMG: 5 ^h 44 ^m				Mag: -2.4 PMG: 2 ^h 00 ^m				Mag: +0.5 PMG: 7 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	142	28.4	205	43.3	-21	04.0	273	47.2	-16	33.5	329	55.9	+4	46.1	248	32.8	-20	55.6
1	157	30.9	220	42.5		03.5	288	48.5		33.8	344	58.6		46.2	263	35.1		55.6
2	172	33.3	235	41.7		03.1	303	49.8		34.1	0	01.3		46.3	278	37.4		55.6
3	187	35.8	250	40.9		02.7	318	51.1		34.4	15	04.0		46.4	293	39.7		55.6
4	202	38.3	265	40.1		02.2	333	52.4		34.7	30	06.7		46.6	308	41.9		55.7
5	217	40.7	280	39.3	-21	01.8	348	53.7	-16	35.0	45	09.4	+4	46.7	323	44.2	-20	55.7
6	232	43.2	295	38.4	-21	01.3	3	55.0	-16	35.3	60	12.1	+4	46.8	338	46.5	-20	55.7
7	247	45.7	310	37.6		00.9	18	56.3		35.6	75	14.8		46.9	353	48.8		55.7
8	262	48.1	325	36.8	-21	00.5	33	57.6		36.0	90	17.5		47.0	8	51.1		55.7
9	277	50.6	340	36.0	-21	00.0	48	58.9		36.3	105	20.2		47.1	23	53.4		55.7
10	292	53.1	355	35.2	-20	59.6	64	00.2		36.6	120	22.9		47.2	38	55.7		55.7
11	307	55.5	10	34.4	-20	59.1	79	01.5	-16	36.9	135	25.6	+4	47.3	53	58.0	-20	55.7
12	322	58.0	25	33.6	-20	58.7	94	02.9	-16	37.2	150	28.3	+4	47.4	69	00.3	-20	55.8
13	338	00.5	40	32.8		58.2	109	04.2		37.5	165	31.0		47.5	84	02.6		55.8
14	353	02.9	55	31.9		57.8	124	05.5		37.8	180	33.7		47.7	99	04.9		55.8
15	8	05.4	70	31.1		57.3	139	06.8		38.1	195	36.4		47.8	114	07.1		55.8
16	23	07.8	85	30.3		56.9	154	08.1		38.5	210	39.1		47.9	129	09.4		55.8
17	38	10.3	100	29.5	-20	56.4	169	09.4	-16	38.8	225	41.8	+4	48.0	144	11.7	-20	55.8
18	53	12.8	115	28.7	-20	56.0	184	10.7	-16	39.1	240	44.5	+4	48.1	159	14.0	-20	55.8
19	68	15.2	130	27.9		55.5	199	12.0		39.4	255	47.2		48.2	174	16.3		55.9
20	83	17.7	145	27.1		55.1	214	13.3		39.7	270	49.9		48.3	189	18.6		55.9
21	98	20.2	160	26.3		54.6	229	14.6		40.0	285	52.6		48.4	204	20.9		55.9
22	113	22.6	175	25.5		54.2	244	16.0		40.3	300	55.3		48.5	219	23.2		55.9
23	128	25.1	190	24.7		53.7	259	17.3		40.6	315	58.0		48.7	234	25.5		55.9
24	143	27.6	205	23.8	-20	53.3	274	18.6	-16	40.9	331	00.7	+4	48.8	249	27.8	-20	55.9
Dif	—		-8 +4		+13 -3		+27 -3		+27 -3		+27 -3		+27 -3		+23 0		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: 5 ^d 4 PHE { 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 59/0 PMG: 17 ^h 29 ^m R°: 55 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.1	-13	16.8	107	11.1	+10	26.4	60 N	6 09	6 58	7 42	9 48	29	0 05	82	
1	191	27.1		16.0	121	38.6 ⁸⁵		35.7 ⁹³	58	08	54	35	9 55	31	**	**	
2	206	27.1		15.2	136	06.1 ⁸⁵		44.8 ⁹¹	56	06	50	29	10 01	33	**	**	
3	221	27.2		14.3	150	33.6 ⁸⁵	+10	53.9 ⁸⁵	54	05	46	23	07 34		**	**	
4	236	27.2		13.5	165	01.0 ⁸⁴	+11	02.9 ⁹⁰	52	03	43	18	12 36		**	**	
5	251	27.2	-13	12.6	179	28.5 ⁸⁵	+11	11.8 ⁸⁹	50	6 02	6 40	7 13	10 16	38	**	**	
6	266	27.2	-13	11.8	193	55.9 ⁸⁴	+11	20.6 ⁸⁸	45	5 59	6 33	7 03	10 26	40	**	**	
7	281	27.2		10.9	208	23.4 ⁸⁵		29.4 ⁸⁸	40	55	27	6 55	34 43		**	**	
8	296	27.2		10.1	222	50.8 ⁸⁴		38.1 ⁸⁷	35	52	22	48	41 45		**	**	
9	311	27.3		09.2	237	18.2 ⁸⁴		46.7 ⁸⁶	30	49	17	41	47 47		**	**	
10	326	27.3		08.4	251	45.6 ⁸⁴	+11	55.3 ⁸⁶	20	42	6 08	30	10 58	49	**	**	
11	341	27.3	-13	07.5	266	13.0 ⁸⁴	+12	03.8 ⁸⁵	10 N	5 34	5 59	6 20	11 07	52	23 52	57	
12	356	27.3	-13	06.7	280	40.4 ⁸⁴	+12	12.1 ⁸³	0	5 25	5 50	6 11	11 16	55	23 42	55	
13	11	27.3		05.8	295	07.7 ⁸³		20.5 ⁸⁴	10 S	14	40	6 01	25 57		32 53		
14	26	27.4		05.0	309	35.1 ⁸⁴		28.7 ⁸²	20	5 01	28	5 51	35 59		21 50		
15	41	27.4		04.2	324	02.4 ⁸³		36.8 ⁸¹	30	4 44	14	39	46 62		09 47		
16	56	27.4		03.3	338	29.8 ⁸⁴		44.9 ⁸⁰	35	34	5 05	32	11 53	63	23 01	47	
17	71	27.4	-13	02.5	352	57.1 ⁸³	+12	52.9 ⁸¹	40	4 21	4 55	5 24	12 00	66	22 53	45	
18	86	27.4	-13	01.6	7	24.4 ⁸³	+13	00.8 ⁷⁹	45	4 04	4 43	5 15	12 09	68	22 44	42	
19	101	27.5	-13	00.8	21	51.7 ⁸³		08.6 ⁷⁸	50	3 43	28	5 04	19 71		32 40		
20	116	27.5	-12	59.9	36	19.0 ⁸³		16.3 ⁷⁷	52	33	21	4 58	24 72		27 39		
21	131	27.5		59.1	50	46.3 ⁸³		24.0 ⁷⁷	54	21	13	53	29 74		21 38		
22	146	27.5		58.2	65	13.5 ⁸²		31.5 ⁷⁵	56	3 06	4 03	46	35 76		15 36		
23	161	27.6		57.4	79	40.8 ⁸³		39.0 ⁷⁵	58	2 49	3 53	39	42 77		22 07	35	
24	176	27.6	-12	56.5	94	08.0 ⁸²	+13	46.4 ⁷⁴	60 S	2 28	3 40	4 31	12 49	80	21 59	32	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 23 ^m 8		Mag: -3.9 PMG: 10 ^h 19 ^m				Mag: +0.6 PMG: 5 ^h 42 ^m				Mag: -2.5 PMG: 1 ^h 56 ^m				Mag: +0.5 PMG: 7 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	143	27.6	205	23.8	-20	53.3	274	18.6	-16	40.9	331	00.7	+4	48.8	249	27.8	-20	55.9
1	158	30.0	220	23.0		52.8	289	19.9		41.3	346	03.4		48.9	264	30.1		55.9
2	173	32.5	235	22.2		52.3	304	21.2		41.6	1	06.1		49.0	279	32.4		56.0
3	188	34.9	250	21.4		51.9	319	22.5		41.9	16	08.8		49.1	294	34.7		56.0
4	203	37.4	265	20.6		51.4	334	23.8		42.2	31	11.5		49.2	309	37.0		56.0
5	218	39.9	280	19.8	-20	50.9	349	25.1	-16	42.5	46	14.2	+4	49.3	324	39.2	-20	56.0
6	233	42.3	295	19.0	-20	50.5	4	26.5	-16	42.8	61	16.9	+4	49.4	339	41.5	-20	56.0
7	248	44.8	310	18.2		50.0	19	27.8		43.1	76	19.6		49.5	354	43.8		56.0
8	263	47.3	325	17.4		49.5	34	29.1		43.4	91	22.3		49.7	9	46.1		56.0
9	278	49.7	340	16.6		49.1	49	30.4		43.7	106	25.1		49.8	24	48.4		56.0
10	293	52.2	355	15.8		48.6	64	31.7		44.0	121	27.8		49.9	39	50.7		56.1
11	308	54.7	10	15.0	-20	48.1	79	33.0	-16	44.3	136	30.5	+4	50.0	54	53.0	-20	56.1
12	323	57.1	25	14.2	-20	47.7	94	34.3	-16	44.6	151	33.2	+4	50.1	69	55.3	-20	56.1
13	338	59.6	40	13.4		47.2	109	35.7		45.0	166	35.9		50.2	84	57.6		56.1
14	354	02.1	55	12.6		46.7	124	37.0		45.3	181	38.6		50.3	99	59.9		56.1
15	9	04.5	70	11.8		46.2	139	38.3		45.6	196	41.3		50.4	115	02.2		56.1
16	24	07.0	85	11.0		45.8	154	39.6		45.9	211	44.0		50.6	130	04.5		56.1
17	39	09.4	100	10.2	-20	45.3	169	40.9	-16	46.2	226	46.7	+4	50.7	145	06.8	-20	56.1
18	54	11.9	115	09.4	-20	44.8	184	42.2	-16	46.5	241	49.4	+4	50.8	160	09.1	-20	56.2
19	69	14.4	130	08.6		44.3	199	43.6		46.8	256	52.1		50.9	175	11.4		56.2
20	84	16.8	145	07.8		43.9	214	44.9		47.1	271	54.8		51.0	190	13.7		56.2
21	99	19.3	160	07.0		43.4	229	46.2		47.4	286	57.5		51.1	205	16.0		56.2
22	114	21.8	175	06.2		42.9	244	47.5		47.7	302	00.2		51.2	220	18.3		56.2
23	129	24.2	190	05.4		42.4	259	48.8		48.0	317	03.0		51.3	235	20.6		56.2
24	144	26.7	205	04.6	-20	41.9	274	50.2	-16	48.3	332	05.7	+4	51.5	250	22.9	-20	56.2
Dif	—		-8		+5		+13		-3		+27		+1		+23		0	

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: 6 ^d 4 PHE { 4 ^h : 58/9 12 ^h : 58/7 20 ^h : 58/5 PMG: 18 ^h 24 ^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	176	27.6	-12 56.5	94	08.0	+13 46.4	72	60 N	16 50	17 34	18 22	10 17 36	1 27 77	
1	191	27.6	55.6	108	35.2	+13 53.6	72	58	16 56	38	24	26 38	19 74	
2	206	27.6	54.8	123	02.5	+14 00.8	72	56	17 03	41	25	34 39	11 73	
3	221	27.7	53.9	137	29.7	07.9	71	54	08	45	26	41 41	1 04 72	
4	236	27.7	53.1	151	56.9	15.0	71	52	13	48	27	48 42	0 58 70	
5	251	27.7	-12 52.2	166	24.1	+14 21.9	69	50	17 17	17 51	18 29	10 54 42	0 53 69	
6	266	27.7	-12 51.4	180	51.2	+14 28.7	68	45	17 27	17 57	18 32	11 06 45	0 41 67	
7	281	27.8	50.5	195	18.4	35.5	68	40	35	18 03	35	17 46	32 64	
8	296	27.8	49.7	209	45.6	42.1	66	35	42	08	38	26 48	23 63	
9	311	27.8	48.8	224	12.7	48.7	66	30	48	13	41	34 49	16 61	
10	326	27.8	48.0	238	39.9	+14 55.1	64	20	17 59	21	47	47 52	0 03 59	
11	341	27.9	-12 47.1	253	07.0	+15 01.5	64	10 N	18 08	18 30	18 55	11 59 53	** ** *	**
12	356	27.9	-12 46.3	267	34.1	+15 07.8	63	0	18 18	18 39	19 03	12 11 54	** ** *	**
13	11	27.9	45.4	282	01.2	13.9	61	10 S	27	48	13	22 56	** ** *	**
14	26	27.9	44.5	296	28.3	20.0	61	20	37	18 59	26	34 58	** ** *	**
15	41	28.0	43.7	310	55.5	26.0	60	30	48	19 13	42	48 60	23 56 51	
16	56	28.0	42.8	325	22.5	31.9	59	35	18 55	21	19 53	12 56 62	48 49	
17	71	28.0	-12 42.0	339	49.6	+15 37.7	58	40	19 02	19 31	20 05	13 06 62	23 38 49	
18	86	28.1	-12 41.1	354	16.7	+15 43.3	56	45	19 11	19 43	20 21	13 17 64	23 26 48	
19	101	28.1	40.3	8	43.8	48.9	56	50	22	19 57	41	30 66	12 46	
20	116	28.1	39.4	23	10.9	54.4	55	52	27	20 04	20 51	36 67	23 06 45	
21	131	28.1	38.5	37	37.9	+15 59.8	54	54	32	12	21 03	43 68	22 59 43	
22	146	28.2	37.7	52	05.0	+16 05.1	53	56	38	21	16	51 69	51 42	
23	161	28.2	36.8	66	32.0	10.3	52	58	45	31	32	13 59 71	42 41	
24	176	28.2	-12 36.0	80	59.1	+16 15.4	51	60 S	19 53	20 42	21 52	14 09 73	22 31 40	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 19 ^m 9		Mag: -3.9 PMG: 10 ^h 20 ^m		Mag: +0.6 PMG: 5 ^h 40 ^m		Mag: -2.5 PMG: 1 ^h 51 ^m		Mag: +0.5 PMG: 7 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	144	26.7	205 04.6	-20 41.9	274 50.2	-16 48.3	332 05.7	+4 51.5	250 22.9	-20 56.2
1	159	29.2	220 03.8	41.4	289 51.5	48.6	347 08.4	51.6	265 25.2	56.3
2	174	31.6	235 03.0	41.0	304 52.8	48.9	2 11.1	51.7	280 27.5	56.3
3	189	34.1	250 02.2	40.5	319 54.1	49.2	17 13.8	51.8	295 29.8	56.3
4	204	36.6	265 01.4	40.0	334 55.4	49.5	32 16.5	51.9	310 32.1	56.3
5	219	39.0	280 00.6	-20 39.5	349 56.8	-16 49.8	47 19.2	+4 52.0	325 34.4	-20 56.3
6	234	41.5	294 59.8	-20 39.0	4 58.1	-16 50.1	62 21.9	+4 52.1	340 36.7	-20 56.3
7	249	43.9	309 59.0	38.5	19 59.4	50.5	77 24.6	52.2	355 38.9	56.3
8	264	46.4	324 58.2	38.0	35 00.7	50.8	92 27.3	52.4	10 41.2	56.3
9	279	48.9	339 57.4	37.5	50 02.0	51.1	107 30.0	52.5	25 43.5	56.4
10	294	51.3	354 56.6	37.0	65 03.4	51.4	122 32.8	52.6	40 45.8	56.4
11	309	53.8	9 55.8	-20 36.5	80 04.7	-16 51.7	137 35.5	+4 52.7	55 48.1	-20 56.4
12	324	56.3	24 55.0	-20 36.0	95 06.0	-16 52.0	152 38.2	+4 52.8	70 50.4	-20 56.4
13	339	58.7	39 54.2	35.5	110 07.3	52.3	167 40.9	52.9	85 52.7	56.4
14	355	01.2	54 53.4	35.0	125 08.6	52.6	182 43.6	53.0	100 55.0	56.4
15	10	03.7	69 52.6	34.5	140 10.0	52.9	197 46.3	53.2	115 57.3	56.4
16	25	06.1	84 51.8	34.0	155 11.3	53.2	212 49.0	53.3	130 59.6	56.4
17	40	08.6	99 51.0	-20 33.5	170 12.6	-16 53.5	227 51.7	+4 53.4	146 01.9	-20 56.5
18	55	11.0	114 50.2	-20 33.0	185 13.9	-16 53.8	242 54.4	+4 53.5	161 04.2	-20 56.5
19	70	13.5	129 49.4	32.5	200 15.3	54.1	257 57.2	53.6	176 06.5	56.5
20	85	16.0	144 48.6	32.0	215 16.6	54.4	272 59.9	53.7	191 08.8	56.5
21	100	18.4	159 47.8	31.5	230 17.9	54.7	288 02.6	53.8	206 11.1	56.5
22	115	20.9	174 47.1	31.0	245 19.2	55.0	303 05.3	54.0	221 13.4	56.5
23	130	23.4	189 46.3	30.5	260 20.6	55.3	318 08.0	54.1	236 15.7	56.5
24	145	25.8	204 45.5	-20 30.0	275 21.9	-16 55.6	333 10.7	+4 54.2	251 18.0	-20 56.5
Dif	—	-8	+5	+13	-3	+27	+1	+23	0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2				Edad: 7 ^d 4	PHE { 4 ^h : 58 ^m /3 12 ^h : 58 ^m /1 20 ^h : 58 ^m /0	SD: 15 ^h 9			Principio del crepúsculo			Salida de Luna		Puesta de Luna					
	PMG: 12 ^h 14 ^m 1						PMG: 19 ^h 18 ^m			Rº: 55 ^m			Hora		Rº					
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico		Civil		Hora		Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	28.2	-12	36.0	80	59.1	+16	15.4	49	60 N	6 05	6 53	7 37	10 53	44	2 44	68			
1	191	28.3		35.1	95	26.1	80	20.3	49	58	03	49	30	11 04	45	33	67			
2	206	28.3		34.2	109	53.2	81	25.2	48	56	02	46	24	13 47		24	66			
3	221	28.3		33.4	124	20.2	80	30.0	49	54	01	42	19	22 47		16	65			
4	236	28.4		32.5	138	47.3	81	34.7	47	52	6 00	39	14	30 47		08	64			
5	251	28.4	-12	31.6	153	14.3	80	+16	39.2	45	50	5 59	6 37	7 10	11 36	49	2 02	63		
6	266	28.4	-12	30.8	167	41.3	80	+16	43.7	45	45	5 56	6 30	7 00	11 51	50	1 48	61		
7	281	28.5		29.9	182	08.4	81	48.1	44	40	53	25	6 52	12 03	51	36	61			
8	296	28.5		29.1	196	35.4	80	52.3	42	35	50	20	46	14 51		26	60			
9	311	28.5		28.2	211	02.4	80	+16	56.5	42	30	47	15	40	23 52		17	59		
10	326	28.6		27.3	225	29.5	81	+17	00.5	40	20	41	6 06	29	39 53		1 02	57		
11	341	28.6	-12	26.5	239	56.5	80	+17	04.5	40	10 N	5 33	5 58	6 20	12 52	54	0 49	56		
12	356	28.6	-12	25.6	254	23.5	80	+17	08.3	38	0	5 25	5 50	6 11	13 05	55	0 37	55		
13	11	28.7		24.7	268	50.6	81	12.0	37	10 S	15	40	6 02	18 56		25	53			
14	26	28.7		23.9	283	17.6	80	15.7	37	20	5 02	29	5 52	32 56		0 11	53			
15	41	28.8		23.0	297	44.7	81	19.2	35	30	4 46	16	41	48 57		***	***	***		
16	56	28.8		22.1	312	11.7	80	22.6	34	35	36	5 08	34	13 58	57	***	***	***		
17	71	28.8	-12	21.3	326	38.8	81	+17	25.9	33	40	4 23	4 58	5 27	14 08	59	***	***	***	
18	86	28.9	-12	20.4	341	05.8	80	+17	29.1	32	45	4 08	4 46	5 18	14 21	59	***	***	***	
19	101	28.9		19.5	355	32.9	81	32.2	31	50	3 48	32	07	36 60		23 58	51			
20	116	28.9		18.7	9	59.9	80	35.2	30	52	38	25	5 02	43 61		51	51			
21	131	29.0		17.8	24	27.0	81	38.1	29	54	26	17	4 57	14 51	61	42	51			
22	146	29.0		16.9	38	54.1	81	40.9	28	56	3 13	4 08	51	15 00	62	33	51			
23	161	29.1		16.1	53	21.2	81	43.5	26	58	2 57	3 58	44	10 63		23	50			
24	176	29.1	-12	15.2	67	48.3	81	+17	46.1	26	60 S	2 37	3 47	4 36	15 22	63	23 11	49		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 15 ^m 9		Mag: -3.9 PMG: 10 ^h 22 ^m		Mag: +0.6 PMG: 5 ^h 38 ^m		Mag: -2.5 PMG: 1 ^h 47 ^m		Mag: +0.5 PMG: 7 ^h 14 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	145	25.8	204	45.5	275	21.9	333	10.7	251	18.0
1	160	28.3	219	44.7	290	23.2	348	13.4	266	20.3
2	175	30.8	234	43.9	305	24.5	3	16.2	281	22.6
3	190	33.2	249	43.1	320	25.9	18	18.9	296	24.9
4	205	35.7	264	42.3	335	27.2	33	21.6	311	27.2
5	220	38.2	279	41.5	350	28.5	48	24.3	326	29.5
6	235	40.6	294	40.7	5	29.9	63	27.0	341	31.8
7	250	43.1	309	39.9	20	31.2	78	29.7	356	34.2
8	265	45.5	324	39.2	35	32.5	93	32.4	11	36.5
9	280	48.0	339	38.4	50	33.8	108	35.2	26	38.8
10	295	50.5	354	37.6	65	35.2	123	37.9	41	41.1
11	310	52.9	9	36.8	80	36.5	138	40.6	56	43.4
12	325	55.4	24	36.0	95	37.8	153	43.3	71	45.7
13	340	57.9	39	35.2	110	39.2	168	46.0	86	48.0
14	356	00.3	54	34.4	125	40.5	183	48.7	101	50.3
15	11	02.8	69	33.6	140	41.8	198	51.4	116	52.6
16	26	05.3	84	32.9	155	43.2	213	54.2	131	54.9
17	41	07.7	99	32.1	170	44.5	228	56.9	146	57.2
18	56	10.2	114	31.3	185	45.8	243	59.6	161	59.5
19	71	12.7	129	30.5	200	47.2	259	02.3	177	01.8
20	86	15.1	144	29.7	215	48.5	274	05.0	192	04.1
21	101	17.6	159	28.9	230	49.8	289	07.7	207	06.4
22	116	20.0	174	28.1	245	51.2	304	10.5	222	08.7
23	131	22.5	189	27.4	260	52.5	319	13.2	237	11.0
24	146	25.0	204	26.6	275	53.8	334	15.9	252	13.3
Dif	—		-8	+5	+13	-3	+27	+1	+23	0

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: 8 ^d 4 PHE { 4 ^h : 57/8 12 ^h : 57/6 20 ^h : 57/4 PMG: 20 ^h 13 ^m R°: 53 ^m											
	hG ☉	Dec			hG ☾	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	176	29.1	-12	15.2	67	48.3	+17	46.1	60 N	16 55	17 38	18 27	11 37 54	3 52 57		
1	191	29.1		14.3	82	15.4		48.5	58	17 01		42	11 49 55	40 57		
2	206	29.2		13.5	96	42.5		50.9	56		07	46	12 00 54	30 57		
3	221	29.2		12.6	111	09.7		53.1	54		12	49	09 54	21 56		
4	236	29.3		11.7	125	36.8		55.2	52		17	51	17 55	12 57		
5	251	29.3	-12	10.9	140	03.9	+17	57.3	50	17 21	17 54	18 32	12 25 54	3 05 56		
6	266	29.3	-12	10.0	154	31.1	+17	59.2	45	17 30	18 00	18 34	12 41 54	2 49 56		
7	281	29.4		09.1	168	58.3	+18	01.0	40		37	05	12 54 54	37 55		
8	296	29.4		08.2	183	25.5		02.7	35		44	10	13 05 54	26 55		
9	311	29.5		07.4	197	52.7		04.3	30	17 50		14	15 54	2 16 55		
10	326	29.5		06.5	212	19.9		05.8	20	18 00		22	32 54	1 59 55		
11	341	29.5	-12	05.6	226	47.1	+18	07.1	10 N	18 09	18 30	18 55	13 46 54	1 45 55		
12	356	29.6	-12	04.8	241	14.4	+18	08.4	0	18 17	18 39	19 03	14 00 54	1 32 54		
13	11	29.6		03.9	255	41.6		09.6	10 S		26	48	14 53	18 54		
14	26	29.7		03.0	270	08.9		10.6	20		35	18 58	25	28 54	1 04 53	
15	41	29.7		02.1	284	36.2		11.6	30		46	19 11	40	45 54	0 47 53	
16	56	29.8		01.3	299	03.5		12.4	35	18 52		19	19 50	37 53		
17	71	29.8	-12	00.4	313	30.9	+18	13.1	40	19 00	19 28	20 02	15 07 53	0 27 52		
18	86	29.8	-11	59.5	327	58.2	+18	13.8	45	19 08	19 39	20 17	15 20 53	0 14 52		
19	101	29.9		58.6	342	25.6		14.3	50		18	19 53	36 53	** ** *		
20	116	29.9		57.8	356	53.0		14.7	52		23	20 00	44 52	** ** *		
21	131	30.0		56.9	11	20.5		15.0	54		28	07	20 57	** ** *		
22	146	30.0		56.0	25	47.9		15.2	56		34	15	21 10	** ** *		
23	161	30.1		55.1	40	15.4		15.3	58		40	25	13 51	** ** *		
24	176	30.1	-11	54.3	54	42.9	+18	15.3	60 S	19 48	20 36	21 43	16 25 51	** ** *		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 12 ^m 0		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +0.5 PMG: 5 ^h 36 ^m		Mag: -2.5 PMG: 1 ^h 43 ^m		Mag: +0.5 PMG: 7 ^h 10 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	146	25.0	204	26.6	-20	17.5	275	53.8	-17	02.8						
1	161	27.4	219	25.8		16.9	290	55.2		03.0						
2	176	29.9	234	25.0		16.4	305	56.5		03.3						
3	191	32.4	249	24.2		15.8	320	57.8		03.6						
4	206	34.8	264	23.5		15.3	335	59.2		03.9						
5	221	37.3	279	22.7	-20	14.8	351	00.5	-17	04.2						
6	236	39.8	294	21.9	-20	14.2	6	01.8	-17	04.5						
7	251	42.2	309	21.1		13.7	21	03.2		04.8						
8	266	44.7	324	20.3		13.1	36	04.5		05.1						
9	281	47.2	339	19.6		12.6	51	05.8		05.4						
10	296	49.6	354	18.8		12.0	66	07.2		05.7						
11	311	52.1	9	18.0	-20	11.5	81	08.5	-17	06.0						
12	326	54.5	24	17.2	-20	11.0	96	09.8	-17	06.3						
13	341	57.0	39	16.4		10.4	111	11.2		06.6						
14	356	59.5	54	15.7		09.9	126	12.5		06.9						
15	12	01.9	69	14.9		09.3	141	13.9		07.2						
16	27	04.4	84	14.1		08.8	156	15.2		07.5						
17	42	06.9	99	13.3	-20	08.2	171	16.5	-17	07.8						
18	57	09.3	114	12.6	-20	07.7	186	17.9	-17	08.1						
19	72	11.8	129	11.8		07.1	201	19.2		08.3						
20	87	14.3	144	11.0		06.5	216	20.6		08.6						
21	102	16.7	159	10.2		06.0	231	21.9		08.9						
22	117	19.2	174	09.5		05.4	246	23.2		09.2						
23	132	21.6	189	08.7		04.9	261	24.6		09.5						
24	147	24.1	204	07.9	-20	04.3	276	25.9	-17	09.8						
Dif	—		-8		+5		+13		-3							
									+27							
									+1							
									+23							
									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 0			Edad: 9 ^d 4 PHE { 4 ^h : 57'2 12 ^h : 57'1 20 ^h : 56'9 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	176	30.1	-11	54.3	54	42.9	+18	15.3	60 N	6 00	6 48	7 32	12 31	63	4 49	46
1	191	30.2		53.4	69	10.4		15.2	58	5 59	45	25	44	61	37	47
2	206	30.2		52.5	83	37.9		14.9	56	58	41	20	12 54	61	27	47
3	221	30.3		51.6	98	05.5		14.6	54	57	38	15	13 03	61	17	48
4	236	30.3		50.7	112	33.1		14.2	52	56	36	10	12 59		09	48
5	251	30.4	-11	49.9	127	00.7	+18	13.6	50	5 55	6 33	7 06	13 19	59	4 01	49
6	266	30.4	-11	49.0	141	28.4	+18	13.0	45	5 53	6 27	6 57	13 35	58	3 45	50
7	281	30.5		48.1	155	56.0		12.3	40	51	22	50	48	57	32	51
8	296	30.5		47.2	170	23.7		11.4	35	48	18	43	13 59	56	21	51
9	311	30.6		46.4	184	51.5		10.4	30	45	13	38	14 09	55	3 11	52
10	326	30.6		45.5	199	19.2		09.4	20	39	6 05	28	26	54	2 54	52
11	341	30.7	-11	44.6	213	47.0	+18	08.2	10 N	5 33	5 58	6 19	14 40	53	2 40	52
12	356	30.7	-11	43.7	228	14.9	+18	07.0	0	5 25	5 49	6 11	14 54	52	2 26	53
13	11	30.8		42.8	242	42.7		05.6	10 S	15	41	6 02	15 07	52	2 12	54
14	26	30.8		42.0	257	10.6		04.1	20	5 04	30	5 53	22	50	1 57	55
15	41	30.9		41.1	271	38.6		02.6	30	4 48	17	42	39	49	40	55
16	56	30.9		40.2	286	06.5	+18	00.9	35	38	10	36	15 48	49	30	56
17	71	31.0	-11	39.3	300	34.5	+17	59.1	40	4 26	5 00	5 29	16 00	47	1 19	56
18	86	31.0	-11	38.4	315	02.5	+17	57.3	45	4 11	4 49	5 21	16 13	46	1 06	56
19	101	31.1		37.5	329	30.6		55.3	50	3 52	36	11	29	45	0 49	57
20	116	31.1		36.7	343	58.7		53.2	52	43	29	06	36	44	42	57
21	131	31.2		35.8	358	26.8		51.1	54	32	22	5 01	44	44	33	58
22	146	31.2		34.9	12	55.0		48.8	56	19	13	4 55	16 54	42	24	58
23	161	31.3		34.0	27	23.2		46.4	58	3 04	4 04	49	17 04	42	13	58
24	176	31.3	-11	33.1	41	51.5	+17	44.0	60 S	2 46	3 53	4 41	17 16	41	0 00	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 08 ^m 1		Mag: -3.9 PMG: 10 ^h 24 ^m		Mag: +0.5 PMG: 5 ^h 34 ^m		Mag: -2.5 PMG: 1 ^h 38 ^m		Mag: +0.5 PMG: 7 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	147	24.1	204	07.9	276	25.9	335	21.2	253	08.7
1	162	26.6	219	07.1	291	27.3	350	23.9	268	11.0
2	177	29.0	234	06.4	306	28.6	5	26.6	283	13.3
3	192	31.5	249	05.6	321	29.9	20	29.3	298	15.6
4	207	34.0	264	04.8	336	31.3	35	32.1	313	17.9
5	222	36.4	279	04.1	351	32.6	50	34.8	328	20.2
6	237	38.9	294	03.3	6	34.0	65	37.5	343	22.5
7	252	41.4	309	02.5	21	35.3	80	40.2	358	24.8
8	267	43.8	324	01.7	36	36.7	95	42.9	13	27.1
9	282	46.3	339	01.0	51	38.0	110	45.7	28	29.4
10	297	48.8	354	00.2	66	39.4	125	48.4	43	31.8
11	312	51.2	8	59.4	81	40.7	140	51.1	58	34.1
12	327	53.7	23	58.7	96	42.0	155	53.8	73	36.4
13	342	56.1	38	57.9	111	43.4	170	56.6	88	38.7
14	357	58.6	53	57.1	126	44.7	185	59.3	103	41.0
15	13	01.1	68	56.4	141	46.1	201	02.0	118	43.3
16	28	03.5	83	55.6	156	47.4	216	04.7	133	45.6
17	43	06.0	98	54.8	171	48.8	231	07.5	148	47.9
18	58	08.5	113	54.1	186	50.1	246	10.2	163	50.2
19	73	10.9	128	53.3	201	51.5	261	12.9	178	52.5
20	88	13.4	143	52.5	216	52.8	276	15.6	193	54.9
21	103	15.9	158	51.8	231	54.2	291	18.4	208	57.2
22	118	18.3	173	51.0	246	55.5	306	21.1	223	59.5
23	133	20.8	188	50.2	261	56.9	321	23.8	239	01.8
24	148	23.3	203	49.5	276	58.2	336	26.5	254	04.1
Dif	—		-8		+6		+27		+23	

UT	SOL			LUNA						Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9			Edad: 10 ^d 4 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 6 20 ^h : 56 ^m 4 Rº: 50 ^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	176	31.3	-11	33.1	41	51.5	+17	44.0	60 N	17 00	17 43	18 32	13 34 69	5 35 36					
1	191	31.4		32.2	56	19.8	93	41.4	58	06	47	32	45 67	24 37					
2	206	31.4		31.4	70	48.1	93	38.8	56	11	50	33	13 55 65	14 39					
3	221	31.5		30.5	85	16.4	93	36.0	54	16	52	34	14 04 64	5 05 40					
4	236	31.5		29.6	99	44.9	95	33.2	52	20	55	34	11 63	4 57 41					
5	251	31.6	-11	28.7	114	13.3	94	+17 30.3	50	17 24	17 57	18 35	14 18 62	4 50 42					
6	266	31.7	-11	27.8	128	41.8	95	+17 27.2	45	17 33	18 03	18 37	14 33 60	4 35 44					
7	281	31.7		26.9	143	10.3	95	24.1	40	40	07	39	45 58	23 45					
8	296	31.8		26.0	157	38.9	96	20.9	35	46	12	41	14 55 57	12 46					
9	311	31.8		25.2	172	07.5	96	17.6	30	17 51	16	44	15 04 56	4 03 47					
10	326	31.9		24.3	186	36.1	96	14.2	20	18 01	23	49	20 54	3 46 49					
11	341	31.9	-11	23.4	201	04.8	97	+17 10.7	10 N	18 09	18 31	18 55	15 33 52	3 32 51					
12	356	32.0	-11	22.5	215	33.6	98	+17 07.1	0	18 17	18 38	19 03	15 46 51	3 19 52					
13	11	32.1		21.6	230	02.4	98	+17 03.4	10 S	25	47	12	15 59 49	3 06 53					
14	26	32.1		20.7	244	31.2	98	+16 59.6	20	34	18 57	23	16 12 47	2 52 54					
15	41	32.2		19.8	259	00.1	99	55.8	30	44	19 09	38	28 45	35 56					
16	56	32.2		18.9	273	29.0	99	51.8	35	50	16	48	37 44	26 56					
17	71	32.3	-11	18.0	287	57.9	99	+16 47.8	40	18 57	19 25	19 59	16 47 42	2 15 58					
18	86	32.4	-11	17.2	302	27.0	101	+16 43.7	45	19 05	19 36	20 14	16 59 41	2 02 59					
19	101	32.4		16.3	316	56.0	100	39.5	50	14	49	32	17 14 38	1 46 61					
20	116	32.5		15.4	331	25.1	101	35.2	52	19	19 55	41	20 38	39 62					
21	131	32.5		14.5	345	54.3	102	30.8	54	24	20 02	20 51	28 36	31 62					
22	146	32.6		13.6	0	23.4	101	26.3	56	29	10	21 03	36 35	22 63					
23	161	32.7		12.7	14	52.7	103	21.8	58	35	19	17	46 33	1 11 65					
24	176	32.7	-11	11.8	29	22.0	103	+16 17.1	60 S	19 42	20 29	21 34	17 57 31	0 59 67					
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 14 ^h 04 ^m 1		Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: +0.5 PMG: 5 ^h 32 ^m			Mag: -2.5 PMG: 1 ^h 34 ^m				Mag: +0.5 PMG: 7 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec			hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	148	23.3	203	49.5	-19	50.6	276	58.2	-17	16.8	336	26.5	+5	02.6	254	04.1			
1	163	25.7	218	48.7		50.0	291	59.6		17.0	351	29.3		02.7	269	06.4			
2	178	28.2	233	47.9		49.4	307	00.9		17.3	6	32.0		02.8	284	08.7			
3	193	30.6	248	47.2		48.8	322	02.3		17.6	21	34.7		03.0	299	11.0			
4	208	33.1	263	46.4		48.2	337	03.6		17.9	36	37.4		03.1	314	13.4			
5	223	35.6	278	45.6	-19	47.7	352	05.0	-17	18.2	51	40.2	+5	03.2	329	15.7			
6	238	38.0	293	44.9	-19	47.1	7	06.3	-17	18.5	66	42.9	+5	03.3	344	18.0			
7	253	40.5	308	44.1		46.5	22	07.7		18.8	81	45.6		03.4	359	20.3			
8	268	43.0	323	43.4		45.9	37	09.0		19.1	96	48.3		03.6	14	22.6			
9	283	45.4	338	42.6		45.3	52	10.4		19.3	111	51.1		03.7	29	24.9			
10	298	47.9	353	41.8		44.7	67	11.7		19.6	126	53.8		03.8	44	27.2			
11	313	50.4	8	41.1	-19	44.1	82	13.1	-17	19.9	141	56.5	+5	03.9	59	29.6			
12	328	52.8	23	40.3	-19	43.5	97	14.4	-17	20.2	156	59.3	+5	04.0	74	31.9			
13	343	55.3	38	39.6		42.9	112	15.8		20.5	172	02.0		04.2	89	34.2			
14	358	57.8	53	38.8		42.3	127	17.1		20.8	187	04.7		04.3	104	36.5			
15	14	00.2	68	38.0		41.7	142	18.5		21.0	202	07.4		04.4	119	38.8			
16	29	02.7	83	37.3		41.1	157	19.9		21.3	217	10.2		04.5	134	41.1			
17	44	05.1	98	36.5	-19	40.5	172	21.2	-17	21.6	232	12.9	+5	04.6	149	43.4			
18	59	07.6	113	35.8	-19	39.9	187	22.6	-17	21.9	247	15.6	+5	04.8	164	45.8			
19	74	10.1	128	35.0		39.3	202	23.9		22.2	262	18.4		04.9	179	48.1			
20	89	12.5	143	34.3		38.7	217	25.3		22.5	277	21.1		05.0	194	50.4			
21	104	15.0	158	33.5		38.1	232	26.6		22.8	292	23.8		05.1	209	52.7			
22	119	17.5	173	32.7		37.5	247	28.0		23.0	307	26.5		05.2	224	55.0			
23	134	19.9	188	32.0		36.9	262	29.3		23.3	322	29.3		05.4	239	57.3			
24	149	22.4	203	31.2	-19	36.3	277	30.7	-17	23.6	337	32.0	+5	05.5	254	59.6			
Dif	—		-8			+6	+14			-3	+27			+1			+23		0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16/2 PMG: 12 ^h 13 ^m 8			Edad: 11 ^d 4 PHE { 4 ^h : 56/2 12 ^h : 56/1 20 ^h : 55/9 PMG: 22 ^h 48 ^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	h	m	m		
0	176	32.7	-11	11.8	29	22.0	+16	17.1	47	60 N	5	55	6	43	7	26	14	43	72	6	11	28	
1	191	32.8		10.9	43	51.3 ¹⁰³		12.4	47	58		54		40	20		14	52	70	6	01	31	
2	206	32.8		10.0	58	20.7 ¹⁰⁴		07.6	48	56		54		37	15		15	00	68	5	53	32	
3	221	32.9		09.1	72	50.1 ¹⁰⁴	+16	02.7	49	54		53		34	10			08	66		45	33	
4	236	33.0		08.2	87	19.6 ¹⁰⁵	+15	57.8	49	52		52		32	06			14	65		38	35	
5	251	33.0	-11	07.4	101	49.1 ¹⁰⁵	+15	52.7	51	50		5	52	6	29	7	02	15	20	64	5	32	36
6	266	33.1	-11	06.5	116	18.7 ¹⁰⁶	+15	47.6	51	45		5	50	6	24	6	54	15	33	61	5	19	38
7	281	33.1		05.6	130	48.3 ¹⁰⁶		42.4	52	40		48		20	47			43	59		5	08	40
8	296	33.2		04.7	145	18.0 ¹⁰⁷		37.1	53	35		46		15	41		15	52	57	4	58	42	
9	311	33.3		03.8	159	47.7 ¹⁰⁷		31.8	53	30		44		12	36		16	00	56		50	43	
10	326	33.3		02.9	174	17.5 ¹⁰⁸		26.4	54	20		38	6	04	27			14	53		35	46	
11	341	33.4	-11	02.0	188	47.3 ¹⁰⁸	+15	20.9	55	10 N		5	32	5	57	6	18	16	25	51	4	23	47
12	356	33.5	-11	01.1	203	17.2 ¹⁰⁹	+15	15.3	56	0		5	25	5	49	6	10	16	37	48	4	11	49
13	11	33.5	-11	00.2	217	47.1 ¹⁰⁹		09.6	57	10 S		16		41	6	02		48	46		3	59	51
14	26	33.6	-10	59.3	232	17.1 ¹¹⁰	+15	03.9	57	20		5	05	31	5	54		16	59	44		46	53
15	41	33.7		58.4	246	47.1 ¹¹⁰	+14	58.1	58	30		4	50	19	44			17	13	41		31	56
16	56	33.7		57.5	261	17.2 ¹¹¹		52.2	59	35		40		12	38			21	39		22	58	
17	71	33.8	-10	56.6	275	47.3 ¹¹¹	+14	46.3	59	40		4	29	5	03	5	31	17	29	38	3	13	59
18	86	33.9	-10	55.7	290	17.4 ¹¹¹	+14	40.2	61	45		4	15	4	53	5	24	17	40	35	3	01	61
19	101	33.9		54.8	304	47.7 ¹¹³		34.1	61	50		3	56	39	14			52	33		2	47	63
20	116	34.0		53.9	319	17.9 ¹¹²		28.0	61	52		47		33	10			17	58	32		41	64
21	131	34.1		53.0	333	48.2 ¹¹³		21.8	62	54		37		26	05			18	04	31		33	66
22	146	34.1		52.1	348	18.6 ¹¹⁴		15.5	63	56		25		18	5	00		11	29		25	67	
23	161	34.2		51.2	2	49.0 ¹¹⁴		09.1	64	58		3	11	4	10	4	54	19	27		16	69	
24	176	34.3	-10	50.3	17	19.5 ¹¹⁵	+14	02.7	64	60 S		2	54	3	59	4	47	18	28	25	2	06	70

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 00 ^m 2		Mag: -3.9 PMG: 10 ^h 26 ^m				Mag: +0.5 PMG: 5 ^h 29 ^m				Mag: -2.5 PMG: 1 ^h 30 ^m				Mag: +0.5 PMG: 6 ^h 59 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	149	22.4	203	31.2	-19	36.3	277	30.7	-17	23.6	337	32.0	+5	05.5	254	59.6	-20	57.6
1	164	24.9	218	30.5		35.7	292	32.1		23.9	352	34.7		05.6	270	02.0		57.7
2	179	27.3	233	29.7		35.1	307	33.4		24.2	7	37.5		05.7	285	04.3		57.7
3	194	29.8	248	29.0		34.5	322	34.8		24.4	22	40.2		05.8	300	06.6		57.7
4	209	32.2	263	28.2		33.8	337	36.1		24.7	37	42.9		06.0	315	08.9		57.7
5	224	34.7	278	27.5	-19	33.2	352	37.5	-17	25.0	52	45.7	+5	06.1	330	11.2	-20	57.7
6	239	37.2	293	26.7	-19	32.6	7	38.9	-17	25.3	67	48.4	+5	06.2	345	13.5	-20	57.7
7	254	39.6	308	26.0		32.0	22	40.2		25.6	82	51.1		06.3	0	15.9		57.7
8	269	42.1	323	25.2		31.4	37	41.6		25.9	97	53.8		06.4	15	18.2		57.7
9	284	44.6	338	24.5		30.8	52	42.9		26.1	112	56.6		06.6	30	20.5		57.7
10	299	47.0	353	23.7		30.2	67	44.3		26.4	127	59.3		06.7	45	22.8		57.8
11	314	49.5	8	23.0	-19	29.5	82	45.7	-17	26.7	143	02.0	+5	06.8	60	25.1	-20	57.8
12	329	52.0	23	22.2	-19	28.9	97	47.0	-17	27.0	158	04.8	+5	06.9	75	27.5	-20	57.8
13	344	54.4	38	21.5		28.3	112	48.4		27.3	173	07.5		07.1	90	29.8		57.8
14	359	56.9	53	20.7		27.7	127	49.7		27.5	188	10.2		07.2	105	32.1		57.8
15	14	59.4	68	20.0		27.1	142	51.1		27.8	203	13.0		07.3	120	34.4		57.8
16	30	01.8	83	19.2		26.4	157	52.5		28.1	218	15.7		07.4	135	36.7		57.8
17	45	04.3	98	18.5	-19	25.8	172	53.8	-17	28.4	233	18.4	+5	07.5	150	39.0	-20	57.8
18	60	06.7	113	17.7	-19	25.2	187	55.2	-17	28.7	248	21.2	+5	07.7	165	41.4	-20	57.8
19	75	09.2	128	17.0		24.6	202	56.6		28.9	263	23.9		07.8	180	43.7		57.8
20	90	11.7	143	16.2		23.9	217	57.9		29.2	278	26.6		07.9	195	46.0		57.9
21	105	14.1	158	15.5		23.3	232	59.3		29.5	293	29.4		08.0	210	48.3		57.9
22	120	16.6	173	14.7		22.7	248	00.7		29.8	308	32.1		08.1	225	50.6		57.9
23	135	19.1	188	14.0		22.0	263	02.0		30.1	323	34.8		08.3	240	53.0		57.9
24	150	21.5	203	13.2	-19	21.4	278	03.4	-17	30.3	338	37.6	+5	08.4	255	55.3	-20	57.9
Dif	—		-7 +6				+14 -3				+27 +1				+23 0			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 12 ^d 4 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/5 R°: 46 ^m											
	PMG: 12 ^h 13 ^m 7		SD: 15:2 PMG: 23 ^h 36 ^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	34.3	-10 50.3	17	19.5	+14 02.7	60 N	17 05	17 48	18 37	15 55	72	6 39	23
1	191	34.3		31	50.0 ¹¹⁵	+13 56.2	58	11	51	37	16 02	70	32	24
2	206	34.4		46	20.6 ¹¹⁶	49.6	56	16	54	37	08 69		25	26
3	221	34.5		60	51.2 ¹¹⁶	43.0	54	20	56	37	14 67		18	29
4	236	34.5		75	21.9 ¹¹⁷	36.3	52	24	17 58	38	19 65		13	30
5	251	34.6	-10 45.8	89	52.6 ¹¹⁷	+13 29.5	50	17 28	18 01	18 38	16 24	64	6 08	31
6	266	34.7	-10 44.9	104	23.4 ¹¹⁸	+13 22.7	45	17 35	18 05	18 40	16 34	61	5 57	34
7	281	34.7		118	54.2 ¹¹⁸	15.9	40	42	10	41	42 59		48	36
8	296	34.8		133	25.0 ¹¹⁸	08.9	35	48	13	43	49 57		40	38
9	311	34.9		147	56.0 ¹²⁰	+13 01.9	30	17 53	17	45	16 56	54	33	39
10	326	35.0		162	26.9 ¹¹⁹	+12 54.9	20	18 02	24	50	17 07	51	21	42
11	341	35.0	-10 40.4	176	57.9 ¹²⁰	+12 47.8	10 N	18 10	18 31	18 56	17 16	49	5 10	45
12	356	35.1	-10 39.5	191	29.0 ¹²¹	+12 40.6	0	18 17	18 38	19 02	17 25	46	5 00	47
13	11	35.2		206	00.1 ¹²¹	33.4	10 S	25	46	11	34 44		4 50	50
14	26	35.2		220	31.3 ¹²²	26.1	20	33	18 55	22	43 41		39	53
15	41	35.3		235	02.5 ¹²²	18.7	30	42	19 07	36	17 54	38	27	55
16	56	35.4		249	33.8 ¹²³	11.4	35	48	14	45	18 00	36	20	57
17	71	35.5	-10 35.0	264	05.1 ¹²³	+12 03.9	40	18 54	19 22	19 56	18 07	34	4 12	58
18	86	35.5	-10 34.1	278	36.4 ¹²³	+11 56.4	45	19 01	19 32	20 10	18 15	32	4 02	61
19	101	35.6		293	07.8 ¹²⁴	48.9	50	10	45	27	25 29		3 50	64
20	116	35.7		307	39.3 ¹²⁵	41.3	52	14	51	36	30 27		45	65
21	131	35.8		322	10.8 ¹²⁵	33.6	54	19	19 57	46	35 26		39	67
22	146	35.8		336	42.3 ¹²⁵	25.9	56	24	20 05	20 57	40 25		32	69
23	161	35.9		351	13.9 ¹²⁶	18.2	58	30	13	21 10	46 23		25	70
24	176	36.0	-10 28.7	5	45.5 ¹²⁶	+11 10.4	60 S	19 36	20 23	21 26	18 53	21	3 16	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 56 ^m 3		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: +0.5 PMG: 5 ^h 27 ^m		Mag: -2.5 PMG: 1 ^h 25 ^m		Mag: +0.5 PMG: 6 ^h 55 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	150	21.5	203	13.2	-19 21.4	278 03.4	-17 30.3	338 37.6	+5 08.4	255 55.3	-20 57.9
1	165	24.0	218	12.5	20.8	293 04.8	30.6	353 40.3	08.5	270 57.6	57.9
2	180	26.5	233	11.8	20.1	308 06.1	30.9	8 43.0	08.6	285 59.9	57.9
3	195	28.9	248	11.0	19.5	323 07.5	31.2	23 45.8	08.8	301 02.2	57.9
4	210	31.4	263	10.3	18.9	338 08.9	31.4	38 48.5	08.9	316 04.6	57.9
5	225	33.9	278	09.5	-19 18.2	353 10.2	-17 31.7	53 51.2	+5 09.0	331 06.9	-20 57.9
6	240	36.3	293	08.8	-19 17.6	8 11.6	-17 32.0	68 54.0	+5 09.1	346 09.2	-20 58.0
7	255	38.8	308	08.0	17.0	23 13.0	32.3	83 56.7	09.2	1 11.5	58.0
8	270	41.2	323	07.3	16.3	38 14.3	32.6	98 59.4	09.4	16 13.8	58.0
9	285	43.7	338	06.6	15.7	53 15.7	32.8	114 02.2	09.5	31 16.2	58.0
10	300	46.2	353	05.8	15.0	68 17.1	33.1	129 04.9	09.6	46 18.5	58.0
11	315	48.6	8	05.1	-19 14.4	83 18.4	-17 33.4	144 07.6	+5 09.7	61 20.8	-20 58.0
12	330	51.1	23	04.3	-19 13.8	98 19.8	-17 33.7	159 10.4	+5 09.9	76 23.1	-20 58.0
13	345	53.6	38	03.6	13.1	113 21.2	33.9	174 13.1	10.0	91 25.5	58.0
14	0	56.0	53	02.9	12.5	128 22.5	34.2	189 15.8	10.1	106 27.8	58.0
15	15	58.5	68	02.1	11.8	143 23.9	34.5	204 18.6	10.2	121 30.1	58.0
16	31	01.0	83	01.4	11.2	158 25.3	34.8	219 21.3	10.3	136 32.4	58.1
17	46	03.4	98	00.7	-19 10.5	173 26.7	-17 35.0	234 24.0	+5 10.5	151 34.7	-20 58.1
18	61	05.9	112	59.9	-19 09.9	188 28.0	-17 35.3	249 26.8	+5 10.6	166 37.1	-20 58.1
19	76	08.3	127	59.2	09.2	203 29.4	35.6	264 29.5	10.7	181 39.4	58.1
20	91	10.8	142	58.4	08.6	218 30.8	35.9	279 32.2	10.8	196 41.7	58.1
21	106	13.3	157	57.7	07.9	233 32.1	36.1	294 35.0	11.0	211 44.0	58.1
22	121	15.7	172	57.0	07.3	248 33.5	36.4	309 37.7	11.1	226 46.4	58.1
23	136	18.2	187	56.2	06.6	263 34.9	36.7	324 40.5	11.2	241 48.7	58.1
24	151	20.7	202	55.5	-19 06.0	278 36.3	-17 37.0	339 43.2	+5 11.3	256 51.0	-20 58.1
Dif	—		-7	+6		+14	-3	+27	+1		+23

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: 13 ^d 4 SD: 15:1 PMG: *** **m	PHE { 4 ^h : 55:3 12 ^h : 55:2 20 ^h : 55:1 R°: ***										
	hG ☉	Dec	Dif			Náutico		Civil	Hora R°		Hora R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	36.0	-10 28.7	5	45.5	+11 10.4	60 N	5	49	6	38	7	20	17	07
1	191	36.1	27.8	20	17.2 ¹²⁷	+11 02.5 ⁷⁹	58	49	35	15	12	70	6	56	22
2	206	36.1	26.9	34	49.0 ¹²⁸	+10 54.6 ⁷⁹	56	49	32	10	17	68	51	23	
3	221	36.2	26.0	49	20.7 ¹²⁷	46.7 ⁷⁹	54	49	30	06	21	66	47	24	
4	236	36.3	25.0	63	52.6 ¹²⁹	38.7 ⁸⁰	52	49	28	7	02	24	65	43	26
5	251	36.4	-10 24.1	78	24.4 ¹²⁸	+10 30.7 ⁸⁰	50	5	48	6	26	6	59	17	28
6	266	36.4	-10 23.2	92	56.4 ¹³⁰	+10 22.6 ⁸¹	45	5	47	6	21	6	51	17	35
7	281	36.5	22.3	107	28.3 ¹²⁹	14.5 ⁸¹	40	46	17	44	41	57	24	33	
8	296	36.6	21.4	122	00.3 ¹³⁰	+10 06.3 ⁸²	35	44	13	39	46	55	18	35	
9	311	36.7	20.5	136	32.4 ¹³¹	+9 58.1 ⁸²	30	42	10	34	50	54	12	37	
10	326	36.7	19.6	151	04.5 ¹³¹	49.9 ⁸²	20	37	6	03	25	17	58	50	6
11	341	36.8	-10 18.7	165	36.6 ¹³¹	+9 41.6 ⁸³	10 N	5	32	5	56	6	18	18	05
12	356	36.9	-10 17.8	180	08.8 ¹³²	+9 33.3 ⁸³	0	5	25	5	49	6	10	18	11
13	11	37.0	16.9	194	41.0 ¹³²	24.9 ⁸⁴	10 S	16	41	6	03	18	42	40	48
14	26	37.1	16.0	209	13.3 ¹³³	16.5 ⁸⁴	20	5	06	32	5	55	24	39	32
15	41	37.1	15.1	223	45.6 ¹³³	+9 08.1 ⁸⁴	30	4	52	21	45	32	36	22	54
16	56	37.2	14.1	238	17.9 ¹³³	+8 59.6 ⁸⁵	35	43	14	40	36	34	17	56	
17	71	37.3	-10 13.2	252	50.3 ¹³⁴	+8 51.1 ⁸⁵	40	4	32	5	05	5	34	18	41
18	86	37.4	-10 12.3	267	22.7 ¹³⁴	+8 42.6 ⁸⁵	45	4	18	4	56	5	26	18	47
19	101	37.5	11.4	281	55.2 ¹³⁵	34.0 ⁸⁶	50	4	01	43	18	54	27	4	54
20	116	37.5	10.5	296	27.7 ¹³⁵	25.4 ⁸⁶	52	3	52	37	14	18	57	25	50
21	131	37.6	09.6	311	00.3 ¹³⁶	16.8 ⁸⁶	54	42	31	09	19	01	23	46	67
22	146	37.7	08.7	325	32.9 ¹³⁶	+8 08.1 ⁸⁷	56	31	23	5	04	05	22	41	68
23	161	37.8	07.8	340	05.5 ¹³⁶	+7 59.4 ⁸⁷	58	18	15	4	59	09	20	35	71
24	176	37.9	-10 06.9	354	38.2 ¹³⁷	+7 50.7 ⁸⁷	60 S	3	02	4	05	4	52	19	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 52 ^m 3		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +0.4 PMG: 5 ^h 25 ^m		Mag: -2.5 PMG: 1 ^h 21 ^m		Mag: +0.5 PMG: 6 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	151	20.7	202	55.5	-19	06.0	278	36.3	-17	37.0
1	166	23.1	217	54.8		05.3	293	37.6		37.2
2	181	25.6	232	54.0		04.7	308	39.0		37.5
3	196	28.1	247	53.3		04.0	323	40.4		37.8
4	211	30.5	262	52.6		03.3	338	41.8		38.1
5	226	33.0	277	51.8	-19	02.7	353	43.1	-17	38.3
6	241	35.5	292	51.1	-19	02.0	8	44.5	-17	38.6
7	256	37.9	307	50.4		01.4	23	45.9		38.9
8	271	40.4	322	49.6	-19	00.7	38	47.3		39.2
9	286	42.8	337	48.9	-19	00.0	53	48.7		39.4
10	301	45.3	352	48.2	-18	59.4	68	50.0		39.7
11	316	47.8	7	47.4	-18	58.7	83	51.4	-17	40.0
12	331	50.2	22	46.7	-18	58.0	98	52.8	-17	40.2
13	346	52.7	37	46.0		57.4	113	54.2		40.5
14	1	55.2	52	45.3		56.7	128	55.6		40.8
15	16	57.6	67	44.5		56.0	143	56.9		41.1
16	32	00.1	82	43.8		55.4	158	58.3		41.3
17	47	02.6	97	43.1	-18	54.7	173	59.7	-17	41.6
18	62	05.0	112	42.3	-18	54.0	189	01.1	-17	41.9
19	77	07.5	127	41.6		53.3	204	02.5		42.1
20	92	09.9	142	40.9		52.7	219	03.8		42.4
21	107	12.4	157	40.2		52.0	234	05.2		42.7
22	122	14.9	172	39.4		51.3	249	06.6		43.0
23	137	17.3	187	38.7		50.6	264	08.0		43.2
24	152	19.8	202	38.0	-18	50.0	279	09.4	-17	43.5
Dif	—		-7	+7		+14	-3	+27		+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 4			Edad: 14 ^d 4 PHE { SD: 15/0 PMG: 0 ^h 22 ^m R°: 44 ^m 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/7										
	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	176	37.9	-10 06.9	354	38.2	+7 50.7	88	60 N	17 10	17 53	18 41	18 20 71	7 21 17	
1	191	37.9	05.9	9	10.9 ¹³⁷	41.9	88	58	15	56	41	22 70	18 19	
2	206	38.0	05.0	23	43.6 ¹³⁷	33.1	88	56	20	17 58	41	25 67	14 21	
3	221	38.1	04.1	38	16.4 ¹³⁸	24.3	88	54	24	18 00	41	27 66	11 22	
4	236	38.2	03.2	52	49.2 ¹³⁸	15.4	89	52	28	02	41	29 64	09 24	
5	251	38.3	-10 02.3	67	22.1 ¹³⁹	+7 06.6	88	50	17 31	18 04	18 41	18 31 63	7 06 26	
6	266	38.4	-10 01.4	81	55.0 ¹³⁹	+6 57.7	89	45	17 38	18 08	18 42	18 35 60	7 01 28	
7	281	38.4	-10 00.5	96	27.9 ¹³⁹	48.7	90	40	44	12	43	38 57	6 57 30	
8	296	38.5	-9 59.5	111	00.9 ¹⁴⁰	39.8	89	35	50	15	45	41 55	53 33	
9	311	38.6	58.6	125	33.9 ¹⁴⁰	30.8	90	30	17 54	19	46	44 53	49 35	
10	326	38.7	57.7	140	06.9 ¹⁴⁰	21.8	90	20	18 03	25	51	48 50	43 39	
11	341	38.8	-9 56.8	154	39.9 ¹⁴⁰	+6 12.8	90	10 N	18 10	18 31	18 56	18 52 46	6 38 41	
12	356	38.9	-9 55.9	169	13.0 ¹⁴¹	+6 03.8	90	0	18 17	18 38	19 02	18 56 43	6 33 44	
13	11	38.9	55.0	183	46.2 ¹⁴²	+5 54.7	91	10 S	24	45	10	19 00 40	28 47	
14	26	39.0	54.1	198	19.3 ¹⁴¹	45.6	91	20	31	18 54	20	03 38	22 50	
15	41	39.1	53.1	212	52.5 ¹⁴²	36.5	91	30	40	19 05	34	08 34	16 53	
16	56	39.2	52.2	227	25.8 ¹⁴³	27.4	91	35	45	11	42	10 33	13 55	
17	71	39.3	-9 51.3	241	59.0 ¹⁴²	+5 18.3	91	40	18 51	19 19	19 53	19 13 30	6 09 57	
18	86	39.4	-9 50.4	256	32.3 ¹⁴³	+5 09.1	92	45	18 58	19 29	20 06	19 17 27	6 04 60	
19	101	39.5	49.5	271	05.6 ¹⁴³	+4 59.9	92	50	19 06	41	23	21 24	5 58 63	
20	116	39.5	48.6	285	39.0 ¹⁴⁴	50.8	91	52	10	46	31	22 24	56 64	
21	131	39.6	47.6	300	12.4 ¹⁴⁴	41.5	93	54	14	52	40	24 22	53 66	
22	146	39.7	46.7	314	45.8 ¹⁴⁴	32.3	92	56	19	19 59	20 51	27 20	49 68	
23	161	39.8	45.8	329	19.2 ¹⁴⁴	23.1	92	58	24	20 07	21 03	29 18	46 70	
24	176	39.9	-9 44.9	343	52.7 ¹⁴⁵	+4 13.8	93	60 S	19 30	20 16	21 18	19 32 16	5 42 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 48 ^m 4		Mag: -3.9 PMG: 10 ^h 30 ^m			Mag: +0.4 PMG: 5 ^h 23 ^m			Mag: -2.5 PMG: 1 ^h 17 ^m			Mag: +0.5 PMG: 6 ^h 48 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	152	19.8	202	38.0	-18 50.0	279	09.4	-17 43.5	340	48.9	+5 14.3	257	46.8	-20 58.4
1	167	22.3	217	37.3	49.3	294	10.8	43.8	355	51.7	14.4	272	49.2	58.4
2	182	24.7	232	36.5	48.6	309	12.1	44.0	10	54.4	14.5	287	51.5	58.4
3	197	27.2	247	35.8	47.9	324	13.5	44.3	25	57.1	14.7	302	53.8	58.4
4	212	29.7	262	35.1	47.3	339	14.9	44.6	40	59.9	14.8	317	56.1	58.4
5	227	32.1	277	34.4	-18 46.6	354	16.3	-17 44.8	56	02.6	+5 14.9	332	58.5	-20 58.4
6	242	34.6	292	33.7	-18 45.9	9	17.7	-17 45.1	71	05.4	+5 15.0	348	00.8	-20 58.4
7	257	37.1	307	32.9	45.2	24	19.1	45.4	86	08.1	15.2	3	03.1	58.4
8	272	39.5	322	32.2	44.5	39	20.4	45.6	101	10.8	15.3	18	05.5	58.4
9	287	42.0	337	31.5	43.8	54	21.8	45.9	116	13.6	15.4	33	07.8	58.4
10	302	44.4	352	30.8	43.1	69	23.2	46.2	131	16.3	15.5	48	10.1	58.4
11	317	46.9	7	30.0	-18 42.5	84	24.6	-17 46.4	146	19.1	+5 15.7	63	12.4	-20 58.5
12	332	49.4	22	29.3	-18 41.8	99	26.0	-17 46.7	161	21.8	+5 15.8	78	14.8	-20 58.5
13	347	51.8	37	28.6	41.1	114	27.4	47.0	176	24.5	15.9	93	17.1	58.5
14	2 54.3	52	27.9	40.4	129 28.8	47.2	191 27.3	16.0	191	27.3	16.0	108	19.4	58.5
15	17 56.8	67	27.2	39.7	144 30.2	47.5	206 30.0	16.2	206	30.0	16.2	123	21.8	58.5
16	32 59.2	82	26.5	39.0	159 31.6	47.8	221 32.8	16.3	221	32.8	16.3	138	24.1	58.5
17	48 01.7	97	25.7	-18 38.3	174 32.9	-17 48.0	236 35.5	+5 16.4	236	35.5	+5 16.4	153	26.4	-20 58.5
18	63 04.2	112	25.0	-18 37.6	189 34.3	-17 48.3	251 38.3	+5 16.5	251	38.3	+5 16.5	168	28.8	-20 58.5
19	78 06.6	127	24.3	36.9	204 35.7	48.6	266 41.0	16.7	266	41.0	16.7	183	31.1	58.5
20	93 09.1	142	23.6	36.2	219 37.1	48.8	281 43.7	16.8	281	43.7	16.8	198	33.4	58.5
21	108 11.6	157	22.9	35.5	234 38.5	49.1	296 46.5	16.9	296	46.5	16.9	213	35.7	58.5
22	123 14.0	172	22.2	34.8	249 39.9	49.4	311 49.2	17.0	311	49.2	17.0	228	38.1	58.5
23	138 16.5	187	21.4	34.1	264 41.3	49.6	326 52.0	17.2	326	52.0	17.2	243	40.4	58.6
24	153 18.9	202	20.7	-18 33.4	279 42.7	-17 49.9	341 54.7	+5 17.3	341	54.7	+5 17.3	258	42.7	-20 58.6
Dif	—		-7	+7		+14	-3		+27		+1		+23	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: 15 ^d 4 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 PMG: 1 ^h 06 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	176	39.9	-9 44.9	343	52.7	+4 13.8	60 N	5 44	6 32	7 15	19 31	71	7 38	16
1	191	40.0	44.0	358	26.2 ¹⁴⁵	+4 04.6	58	44	30	10	32	68	37	18
2	206	40.1	43.0	12	59.7 ¹⁴⁵	+3 55.3	56	45	28	05	32	67	35	20
3	221	40.2	42.1	27	33.2 ¹⁴⁵	46.0	54	45	26	7 01	33	65	34	22
4	236	40.2	41.2	42	06.8 ¹⁴⁶	36.7	52	45	24	6 58	33	64	33	23
5	251	40.3	-9 40.3	56	40.4 ¹⁴⁶	+3 27.4	50	5 45	6 22	6 55	19 34	62	7 32	24
6	266	40.4	-9 39.4	71	14.0 ¹⁴⁶	+3 18.1	45	5 44	6 18	6 48	19 35	58	7 29	28
7	281	40.5	38.4	85	47.6 ¹⁴⁶	+3 08.8	40	43	14	42	35	56	27	30
8	296	40.6	37.5	100	21.3 ¹⁴⁷	+2 59.5	35	42	11	36	36	54	26	32
9	311	40.7	36.6	114	55.0 ¹⁴⁷	50.1	30	40	08	32	37	52	24	34
10	326	40.8	35.7	129	28.7 ¹⁴⁷	40.8	20	36	6 02	24	38	48	22	37
11	341	40.9	-9 34.8	144	02.4 ¹⁴⁷	+2 31.4	10 N	5 31	5 55	6 17	19 38	46	7 19	40
12	356	41.0	-9 33.8	158	36.2 ¹⁴⁸	+2 22.1	0	5 25	5 49	6 10	19 39	43	7 17	43
13	11	41.1	32.9	173	10.0 ¹⁴⁸	12.7	10 S	17	42	6 03	40	40	15	46
14	26	41.1	32.0	187	43.7 ¹⁴⁷	+2 03.3	20	5 07	33	5 55	41	37	12	49
15	41	41.2	31.1	202	17.6 ¹⁴⁹	+1 54.0	30	4 53	22	47	42	34	09	53
16	56	41.3	30.2	216	51.4 ¹⁴⁸	44.6	35	45	16	42	43	31	08	54
17	71	41.4	-9 29.2	231	25.2 ¹⁴⁸	+1 35.2	40	4 34	5 08	5 36	19 43	30	7 06	57
18	86	41.5	-9 28.3	245	59.1 ¹⁴⁹	+1 25.8	45	4 21	4 59	5 29	19 44	27	7 04	59
19	101	41.6	27.4	260	33.0 ¹⁴⁹	16.4	50	4 05	47	21	45	24	01	63
20	116	41.7	26.5	275	06.9 ¹⁴⁹	+1 07.1	52	3 57	41	17	46	22	7 00	64
21	131	41.8	25.5	289	40.8 ¹⁴⁹	+0 57.7	54	48	35	13	46	21	6 59	65
22	146	41.9	24.6	304	14.7 ¹⁴⁹	48.3	56	37	28	09	47	19	57	67
23	161	42.0	23.7	318	48.7 ¹⁵⁰	38.9	58	25	20	5 03	47	18	56	69
24	176	42.1	-9 22.8	333	22.6 ¹⁴⁹	+0 29.5	60 S	3 10	4 11	4 58	19 48	16	6 54	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 44 ^m 5		Mag: -3.9 PMG: 10 ^h 31 ^m		Mag: +0.4 PMG: 5 ^h 21 ^m		Mag: -2.5 PMG: 1 ^h 12 ^m		Mag: +0.5 PMG: 6 ^h 44 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	153	18.9	202	20.7	-18 33.4	279	42.7	-17 49.9	341	54.7	+5 17.3	258	42.7	-20 58.6
1	168	21.4	217	20.0	32.7	294	44.1	50.2	356	57.5	17.4	273	45.1	58.6
2	183	23.9	232	19.3	32.0	309	45.5	50.4	12	00.2	17.5	288	47.4	58.6
3	198	26.3	247	18.6	31.3	324	46.9	50.7	27	02.9	17.7	303	49.7	58.6
4	213	28.8	262	17.9	30.6	339	48.3	51.0	42	05.7	17.8	318	52.1	58.6
5	228	31.3	277	17.2	-18 29.9	354	49.6	-17 51.2	57	08.4	+5 17.9	333	54.4	-20 58.6
6	243	33.7	292	16.5	-18 29.2	9	51.0	-17 51.5	72	11.2	+5 18.0	348	56.7	-20 58.6
7	258	36.2	307	15.7	28.5	24	52.4	51.8	87	13.9	18.2	3	59.1	58.6
8	273	38.7	322	15.0	27.8	39	53.8	52.0	102	16.7	18.3	19	01.4	58.6
9	288	41.1	337	14.3	27.1	54	55.2	52.3	117	19.4	18.4	34	03.7	58.6
10	303	43.6	352	13.6	26.4	69	56.6	52.6	132	22.1	18.5	49	06.1	58.6
11	318	46.0	7	12.9	-18 25.7	84	58.0	-17 52.8	147	24.9	+5 18.7	64	08.4	-20 58.7
12	333	48.5	22	12.2	-18 25.0	99	59.4	-17 53.1	162	27.6	+5 18.8	79	10.7	-20 58.7
13	348	51.0	37	11.5	24.2	115	00.8	53.3	177	30.4	18.9	94	13.1	58.7
14	3	53.4	52	10.8	23.5	130	02.2	53.6	192	33.1	19.0	109	15.4	58.7
15	18	55.9	67	10.1	22.8	145	03.6	53.9	207	35.9	19.2	124	17.7	58.7
16	33	58.4	82	09.4	22.1	160	05.0	54.1	222	38.6	19.3	139	20.1	58.7
17	49	00.8	97	08.7	-18 21.4	175	06.4	-17 54.4	237	41.4	+5 19.4	154	22.4	-20 58.7
18	64	03.3	112	07.9	-18 20.7	190	07.8	-17 54.7	252	44.1	+5 19.5	169	24.7	-20 58.7
19	79	05.8	127	07.2	20.0	205	09.2	54.9	267	46.9	19.7	184	27.1	58.7
20	94	08.2	142	06.5	19.2	220	10.6	55.2	282	49.6	19.8	199	29.4	58.7
21	109	10.7	157	05.8	18.5	235	12.0	55.4	297	52.3	19.9	214	31.7	58.7
22	124	13.2	172	05.1	17.8	250	13.4	55.7	312	55.1	20.0	229	34.1	58.7
23	139	15.6	187	04.4	17.1	265	14.8	56.0	327	57.8	20.2	244	36.4	58.8
24	154	18.1	202	03.7	-18 16.4	280	16.2	-17 56.2	343	00.6	+5 20.3	259	38.8	-20 58.8
Dif	—		-7	+7		+14	-3		+27	+1		+23		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 1			Edad: 16 ^d 4 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/2 PMG: 1 ^h 50 ^m R°: 42 ^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	42.1	-9 22.8	333	22.6	+0 29.5	94	60 N	17 16	17 58	18 46	20 42	70	7 54	16
1	191	42.2	21.8	347	56.6 ¹⁵⁰	20.1	94	58	20	18 00	46	40	68	55	18
2	206	42.3	20.9	2	30.6 ¹⁵⁰	10.8	93	56	24	02	45	39	66	55	20
3	221	42.4	20.0	17	04.6 ¹⁵⁰	+0 01.4	94	54	28	04	45	38	64	55	22
4	236	42.5	19.1	31	38.6 ¹⁵⁰	-0 08.0	94	52	31	05	45	37	62	56	23
5	251	42.5	-9 18.1	46	12.7 ¹⁵¹	-0 17.3	93	50	17 34	18 07	18 45	20 36	61	7 56	24
6	266	42.6	-9 17.2	60	46.7 ¹⁵⁰	-0 26.7	94	45	17 41	18 11	18 45	20 33	59	7 57	27
7	281	42.7	16.3	75	20.7 ¹⁵⁰	36.0	93	40	47	14	45	31	56	57	30
8	296	42.8	15.4	89	54.8 ¹⁵¹	45.4	94	35	51	17	46	30	53	58	31
9	311	42.9	14.4	104	28.9 ¹⁵¹	-0 54.7	93	30	17 56	20	48	29	51	58	34
10	326	43.0	13.5	119	02.9 ¹⁵⁰	-1 04.0	93	20	18 03	26	51	26	48	59	37
11	341	43.1	-9 12.6	133	37.0 ¹⁵¹	-1 13.4	94	10 N	18 10	18 31	18 56	20 24	45	7 59	40
12	356	43.2	-9 11.6	148	11.1 ¹⁵¹	-1 22.7	93	0	18 16	18 37	19 02	20 22	43	8 00	43
13	11	43.3	10.7	162	45.2 ¹⁵¹	32.0	93	10 S	23	44	09	20	40	01	45
14	26	43.4	09.8	177	19.3 ¹⁵¹	41.3	93	20	30	18 52	19	18	37	01	48
15	41	43.5	08.9	191	53.4 ¹⁵¹	50.6	93	30	38	19 03	31	16	34	02	51
16	56	43.6	07.9	206	27.5 ¹⁵¹	-1 59.8	92	35	43	09	40	14	32	02	54
17	71	43.7	-9 07.0	221	01.7 ¹⁵²	-2 09.1	93	40	18 48	19 16	19 50	20 13	30	8 03	55
18	86	43.8	-9 06.1	235	35.8 ¹⁵¹	-2 18.4	93	45	18 55	19 25	20 02	20 11	28	8 03	58
19	101	43.9	05.2	250	09.9 ¹⁵¹	27.6	92	50	19 02	36	18	09	25	04	61
20	116	44.0	04.2	264	44.1 ¹⁵²	36.8	92	52	06	42	25	08	24	04	63
21	131	44.1	03.3	279	18.2 ¹⁵¹	46.0	92	54	10	47	34	07	22	04	65
22	146	44.2	02.4	293	52.3 ¹⁵¹	-2 55.2	92	56	14	19 54	44	06	20	04	67
23	161	44.3	01.4	308	26.5 ¹⁵²	-3 04.4	92	58	19	20 01	20 56	05	18	05	68
24	176	44.4	-9 00.5	323	00.6 ¹⁵¹	-3 13.6	92	60 S	19 24	20 10	21 10	20 04	16	8 05	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 40 ^m 5		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: +0.4 PMG: 5 ^h 18 ^m		Mag: -2.5 PMG: 1 ^h 08 ^m		Mag: +0.5 PMG: 6 ^h 40 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	154	18.1	202	03.7	-18	16.4	280	16.2	-17	56.2	343	00.6	+5	20.3	259	38.8	-20	58.8
1	169	20.5	217	03.0		15.6	295	17.6		56.5	358	03.3		20.4	274	41.1		58.8
2	184	23.0	232	02.3		14.9	310	19.0		56.7	13	06.1		20.5	289	43.4		58.8
3	199	25.5	247	01.6		14.2	325	20.4		57.0	28	08.8		20.7	304	45.8		58.8
4	214	27.9	262	00.9		13.5	340	21.8		57.3	43	11.6		20.8	319	48.1		58.8
5	229	30.4	277	00.2	-18	12.7	355	23.2	-17	57.5	58	14.3	+5	20.9	334	50.4	-20	58.8
6	244	32.9	291	59.5	-18	12.0	10	24.6	-17	57.8	73	17.1	+5	21.0	349	52.8	-20	58.8
7	259	35.3	306	58.8		11.3	25	26.0		58.0	88	19.8		21.2	4	55.1		58.8
8	274	37.8	321	58.1		10.5	40	27.4		58.3	103	22.6		21.3	19	57.4		58.8
9	289	40.3	336	57.4		09.8	55	28.9		58.6	118	25.3		21.4	34	59.8		58.8
10	304	42.7	351	56.7		09.1	70	30.3		58.8	133	28.0		21.6	50	02.1		58.8
11	319	45.2	6	56.0	-18	08.4	85	31.7	-17	59.1	148	30.8	+5	21.7	65	04.5	-20	58.9
12	334	47.6	21	55.3	-18	07.6	100	33.1	-17	59.3	163	33.5	+5	21.8	80	06.8	-20	58.9
13	349	50.1	36	54.6		06.9	115	34.5		59.6	178	36.3		21.9	95	09.1		58.9
14	4	52.6	51	53.9		06.2	130	35.9	-17	59.9	193	39.0		22.1	110	11.5		58.9
15	19	55.0	66	53.2		05.4	145	37.3	-18	00.1	208	41.8		22.2	125	13.8		58.9
16	34	57.5	81	52.5		04.7	160	38.7		00.4	223	44.5		22.3	140	16.1		58.9
17	50	00.0	96	51.8	-18	03.9	175	40.1	-18	00.6	238	47.3	+5	22.4	155	18.5	-20	58.9
18	65	02.4	111	51.1	-18	03.2	190	41.5	-18	00.9	253	50.0	+5	22.6	170	20.8	-20	58.9
19	80	04.9	126	50.4		02.5	205	42.9		01.1	268	52.8		22.7	185	23.2		58.9
20	95	07.4	141	49.7		01.7	220	44.3		01.4	283	55.5		22.8	200	25.5		58.9
21	110	09.8	156	49.0		01.0	235	45.8		01.7	298	58.3		22.9	215	27.8		58.9
22	125	12.3	171	48.3	-18	00.2	250	47.2		01.9	314	01.0		23.1	230	30.2		58.9
23	140	14.8	186	47.7	-17	59.5	265	48.6		02.2	329	03.8		23.2	245	32.5		58.9
24	155	17.2	201	47.0	-17	58.8	280	50.0	-18	02.4	344	06.5	+5	23.3	260	34.9	-20	59.0
Dif	—		-7		+7		+14		-3		+27		+1		+23		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: 17 ^d 4 PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1 SD: 14/8 PMG: 2 ^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	h	m
0	176	44.4	-9 00.5	323	00.6	-3 13.6	60 N	5 39	6 27	7 09	21 52	69	8 10	17	
1	191	44.5	-8 59.6	337	34.7 ¹⁵¹	22.7 ⁹¹	58	39	25	04	48	67	13	19	
2	206	44.6	58.6	352	08.9 ¹⁵²	31.8 ⁹¹	56	40	23	7 01	45	65	15	21	
3	221	44.7	57.7	6	43.0 ¹⁵¹	41.0 ⁹²	54	40	21	6 57	42	64	17	22	
4	236	44.8	56.8	21	17.2 ¹⁵²	50.1 ⁹¹	52	41	20	54	39	62	19	23	
5	251	44.9	-8 55.8	35	51.3 ¹⁵¹	-3 59.1 ⁹⁰	50	5 41	6 18	6 51	21 37	61	8 20	25	
6	266	45.0	-8 54.9	50	25.4 ¹⁵¹	-4 08.2 ⁹¹	45	5 41	6 15	6 44	21 32	57	8 24	28	
7	281	45.1	54.0	64	59.5 ¹⁵¹	17.2 ⁹⁰	40	40	11	39	27	56	27	30	
8	296	45.2	53.1	79	33.7 ¹⁵²	26.3 ⁹¹	35	39	09	34	23	54	29	33	
9	311	45.3	52.1	94	07.8 ¹⁵¹	35.3 ⁹⁰	30	38	06	30	20	52	32	34	
10	326	45.4	51.2	108	41.9 ¹⁵¹	44.2 ⁸⁹	20	35	6 00	22	14	49	36	37	
11	341	45.5	-8 50.3	123	16.0 ¹⁵¹	-4 53.2 ⁹⁰	10 N	5 30	5 55	6 16	21 09	46	8 39	41	
12	356	45.6	-8 49.3	137	50.1 ¹⁵¹	-5 02.1 ⁸⁹	0	5 24	5 49	6 10	21 05	43	8 43	42	
13	11	45.7	48.4	152	24.2 ¹⁵¹	11.1 ⁹⁰	10 S	17	42	6 03	21 00	41	46	45	
14	26	45.8	47.5	166	58.3 ¹⁵¹	19.9 ⁸⁸	20	5 08	34	5 56	20 55	38	49	49	
15	41	45.9	46.5	181	32.4 ¹⁵¹	28.8 ⁸⁹	30	4 55	24	48	50	35	53	52	
16	56	46.0	45.6	196	06.4 ¹⁵⁰	37.7 ⁸⁹	35	47	18	44	46	34	56	53	
17	71	46.1	-8 44.7	210	40.5 ¹⁵¹	-5 46.5 ⁸⁸	40	4 37	5 10	5 38	20 43	31	8 58	56	
18	86	46.2	-8 43.7	225	14.6 ¹⁵¹	-5 55.3 ⁸⁸	45	4 25	5 02	5 32	20 39	28	9 01	58	
19	101	46.3	42.8	239	48.6 ¹⁵⁰	-6 04.0 ⁸⁷	50	09	4 51	25	34	26	05	61	
20	116	46.5	41.8	254	22.6 ¹⁵⁰	12.8 ⁸⁸	52	4 01	45	21	32	24	07	62	
21	131	46.6	40.9	268	56.7 ¹⁵¹	21.5 ⁸⁷	54	3 53	40	17	29	23	09	63	
22	146	46.7	40.0	283	30.7 ¹⁵⁰	30.2 ⁸⁷	56	43	33	13	26	22	11	65	
23	161	46.8	39.0	298	04.7 ¹⁵⁰	38.8 ⁸⁶	58	31	26	08	23	20	13	67	
24	176	46.9	-8 38.1	312	38.6 ¹⁴⁹	-6 47.5 ⁸⁷	60 S	3 17	4 17	5 03	20 20	18	9 15	70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 36 ^m 6		Mag: -3.9 PMG: 10 ^h 33 ^m			Mag: +0.3 PMG: 5 ^h 16 ^m			Mag: -2.5 PMG: 1 ^h 03 ^m			Mag: +0.5 PMG: 6 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	155	17.2	201	47.0	-17 58.8	280	50.0	-18 02.4	344	06.5	+5 23.3	260	34.9	-20 59.0	
1	170	19.7	216	46.3	58.0	295	51.4	02.7	359	09.3	23.5	275	37.2	59.0	
2	185	22.1	231	45.6	57.3	310	52.8	02.9	14	12.0	23.6	290	39.5	59.0	
3	200	24.6	246	44.9	56.5	325	54.2	03.2	29	14.8	23.7	305	41.9	59.0	
4	215	27.1	261	44.2	55.8	340	55.6	03.5	44	17.5	23.8	320	44.2	59.0	
5	230	29.5	276	43.5	-17 55.0	355	57.0	-18 03.7	59	20.3	+5 24.0	335	46.6	-20 59.0	
6	245	32.0	291	42.8	-17 54.3	10	58.5	-18 04.0	74	23.0	+5 24.1	350	48.9	-20 59.0	
7	260	34.5	306	42.1	53.5	25	59.9	04.2	89	25.8	24.2	5	51.2	59.0	
8	275	36.9	321	41.4	52.8	41	01.3	04.5	104	28.5	24.3	20	53.6	59.0	
9	290	39.4	336	40.7	52.0	56	02.7	04.7	119	31.3	24.5	35	55.9	59.0	
10	305	41.9	351	40.1	51.3	71	04.1	05.0	134	34.0	24.6	50	58.3	59.0	
11	320	44.3	6	39.4	-17 50.5	86	05.5	-18 05.2	149	36.8	+5 24.7	66	00.6	-20 59.0	
12	335	46.8	21	38.7	-17 49.8	101	07.0	-18 05.5	164	39.5	+5 24.9	81	03.0	-20 59.0	
13	350	49.2	36	38.0	49.0	116	08.4	05.8	179	42.3	25.0	96	05.3	59.0	
14	5	51.7	51	37.3	48.2	131	09.8	06.0	194	45.0	25.1	111	07.6	59.1	
15	20	54.2	66	36.6	47.5	146	11.2	06.3	209	47.8	25.2	126	10.0	59.1	
16	35	56.6	81	35.9	46.7	161	12.6	06.5	224	50.5	25.4	141	12.3	59.1	
17	50	59.1	96	35.2	-17 46.0	176	14.0	-18 06.8	239	53.3	+5 25.5	156	14.7	-20 59.1	
18	66	01.6	111	34.6	-17 45.2	191	15.5	-18 07.0	254	56.0	+5 25.6	171	17.0	-20 59.1	
19	81	04.0	126	33.9	44.5	206	16.9	07.3	269	58.8	25.7	186	19.4	59.1	
20	96	06.5	141	33.2	43.7	221	18.3	07.5	285	01.5	25.9	201	21.7	59.1	
21	111	09.0	156	32.5	42.9	236	19.7	07.8	300	04.3	26.0	216	24.0	59.1	
22	126	11.4	171	31.8	42.2	251	21.1	08.0	315	07.0	26.1	231	26.4	59.1	
23	141	13.9	186	31.1	41.4	266	22.6	08.3	330	09.8	26.3	246	28.7	59.1	
24	156	16.4	201	30.5	-17 40.6	281	24.0	-18 08.5	345	12.5	+5 26.4	261	31.1	-20 59.1	
Dif	—		-7		+8	+14		-3	+27		+1	+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 18 ^d 4 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1										
	PMG: 12 ^h 12 ^m 8			SD: 14 ^h 7 PMG: 3 ^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 m	h m m	h m m
0	176	46.9	-8 38.1	312	38.6	-6 47.5	86	60 N	17 21	18 03	18 51	23 01 69	8 27 19	
1	191	47.0		327	12.6 ¹⁵⁰	-6 56.1	86	58	25	05	50	22 55 67	32 21	
2	206	47.1	36.2	341	46.6 ¹⁵⁰	-7 04.7	86	56	29	06	49	50 65	36 22	
3	221	47.2	35.3	356	20.5 ¹⁴⁹		85	54	32	08	49	46 63	39 24	
4	236	47.3	34.4	10	54.4 ¹⁴⁹		85	52	35	09	48	41 62	42 26	
5	251	47.4	-8 33.4	25	28.3 ¹⁴⁹	-7 30.2	85	50	17 38	18 10	18 48	22 38 60	8 45 27	
6	266	47.5	-8 32.5	40	02.2 ¹⁴⁹	-7 38.6	84	45	17 44	18 13	18 47	22 29 58	8 52 30	
7	281	47.6	31.5	54	36.1 ¹⁴⁹	47.1	85	40	49	16	48	23 55	8 57 32	
8	296	47.7	30.6	69	10.0 ¹⁴⁹	-7 55.4	83	35	53	19	48	17 53	9 02 34	
9	311	47.8	29.7	83	43.8 ¹⁴⁸	-8 03.8	84	30	17 57	21	49	12 51	06 36	
10	326	47.9	28.7	98	17.6 ¹⁴⁸	12.1	83	20	18 04	26	52	22 03 49	13 39	
11	341	48.1	-8 27.8	112	51.4 ¹⁴⁸	-8 20.4	83	10 N	18 10	18 31	18 56	21 55 47	9 20 41	
12	356	48.2	-8 26.9	127	25.2 ¹⁴⁸	-8 28.7	83	0	18 16	18 37	19 01	21 48 44	9 25 44	
13	11	48.3	25.9	141	59.0 ¹⁴⁸	36.9	82	10 S	22	43	08	41 42	31 46	
14	26	48.4	25.0	156	32.7 ¹⁴⁷	45.1	82	20	29	18 51	17	33 40	38 48	
15	41	48.5	24.0	171	06.5 ¹⁴⁸	-8 53.2	81	30	36	19 00	29	25 36	45 52	
16	56	48.6	23.1	185	40.2 ¹⁴⁷	-9 01.3	81	35	40	06	37	20 35	49 54	
17	71	48.7	-8 22.2	200	13.8 ¹⁴⁶	-9 09.4	81	40	18 45	19 13	19 46	21 14 33	9 54 55	
18	86	48.8	-8 21.2	214	47.5 ¹⁴⁷	-9 17.4	80	45	18 51	19 22	19 58	21 07 32	9 59 58	
19	101	48.9	20.3	229	21.1 ¹⁴⁶	25.4	80	50	18 58	32	20 13	21 00 28	10 06 61	
20	116	49.0	19.3	243	54.7 ¹⁴⁶	33.4	80	52	19 02	37	20	20 56 27	09 62	
21	131	49.1	18.4	258	28.3 ¹⁴⁶	41.3	79	54	05	42	29	52 26	12 64	
22	146	49.3	17.5	273	01.9 ¹⁴⁶	49.2	79	56	09	49	38	48 24	16 65	
23	161	49.4	16.5	287	35.4 ¹⁴⁵	-9 57.0	78	58	14	19 55	20 49	43 23	20 67	
24	176	49.5	-8 15.6	302	08.9 ¹⁴⁵	-10 04.8	78	60 S	19 19	20 03	21 02	20 38 20	10 25 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 32 ^m 7		Mag: -3.9 PMG: 10 ^h 34 ^m			Mag: +0.3 PMG: 5 ^h 14 ^m			Mag: -2.5 PMG: 0 ^h 59 ^m			Mag: +0.5 PMG: 6 ^h 33 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	156	16.4	201	30.5	-17 40.6	281	24.0	-18 08.5	345	12.5	+5 26.4	261	31.1	-20 59.1
1	171	18.8	216	29.8	39.9	296	25.4	08.8	0	15.3	26.5	276	33.4	59.1
2	186	21.3	231	29.1	39.1	311	26.8	09.0	15	18.0	26.6	291	35.8	59.1
3	201	23.7	246	28.4	38.3	326	28.3	09.3	30	20.8	26.8	306	38.1	59.1
4	216	26.2	261	27.7	37.6	341	29.7	09.5	45	23.5	26.9	321	40.4	59.2
5	231	28.7	276	27.1	-17 36.8	356	31.1	-18 09.8	60	26.3	+5 27.0	336	42.8	-20 59.2
6	246	31.1	291	26.4	-17 36.0	11	32.5	-18 10.0	75	29.0	+5 27.1	351	45.1	-20 59.2
7	261	33.6	306	25.7	35.3	26	34.0	10.3	90	31.8	27.3	6	47.5	59.2
8	276	36.1	321	25.0	34.5	41	35.4	10.6	105	34.5	27.4	21	49.8	59.2
9	291	38.5	336	24.3	33.7	56	36.8	10.8	120	37.3	27.5	36	52.2	59.2
10	306	41.0	351	23.7	32.9	71	38.2	11.1	135	40.0	27.7	51	54.5	59.2
11	321	43.5	6	23.0	-17 32.2	86	39.7	-18 11.3	150	42.8	+5 27.8	66	56.9	-20 59.2
12	336	45.9	21	22.3	-17 31.4	101	41.1	-18 11.6	165	45.5	+5 27.9	81	59.2	-20 59.2
13	351	48.4	36	21.6	30.6	116	42.5	11.8	180	48.3	28.0	97	01.6	59.2
14	6	50.9	51	21.0	29.8	131	43.9	12.1	195	51.0	28.2	112	03.9	59.2
15	21	53.3	66	20.3	29.1	146	45.4	12.3	210	53.8	28.3	127	06.2	59.2
16	36	55.8	81	19.6	28.3	161	46.8	12.6	225	56.5	28.4	142	08.6	59.2
17	51	58.2	96	18.9	-17 27.5	176	48.2	-18 12.8	240	59.3	+5 28.6	157	10.9	-20 59.2
18	67	00.7	111	18.3	-17 26.7	191	49.7	-18 13.0	256	02.1	+5 28.7	172	13.3	-20 59.3
19	82	03.2	126	17.6	25.9	206	51.1	13.3	271	04.8	28.8	187	15.6	59.3
20	97	05.6	141	16.9	25.2	221	52.5	13.5	286	07.6	28.9	202	18.0	59.3
21	112	08.1	156	16.2	24.4	236	53.9	13.8	301	10.3	29.1	217	20.3	59.3
22	127	10.6	171	15.6	23.6	251	55.4	14.0	316	13.1	29.2	232	22.7	59.3
23	142	13.0	186	14.9	22.8	266	56.8	14.3	331	15.8	29.3	247	25.0	59.3
24	157	15.5	201	14.2	-17 22.0	281	58.2	-18 14.5	346	18.6	+5 29.4	262	27.4	-20 59.3
Dif	—		-7	+8		+14	-3		+28		+1	+23		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'1 PMG: 12 ^h 12 ^m 6			Edad: 19 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'7 PMG: 3 ^h 58 ^m R°: 45 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m							
0	176	49.5	-8	15.6	302	08.9	-10	04.8	77	60 N	5	33	6	21	7	03	**	**	**	8	46	22
1	191	49.6		14.6	316	42.4 ¹⁴⁵		12.5	77	58	34	20	6	59	**	**	**		53	24		
2	206	49.7		13.7	331	15.8 ¹⁴⁴		20.3	78	56	35	18	56	23	55	63		8	58	26		
3	221	49.8		12.8	345	49.3 ¹⁴⁵		27.9	76	54	36	17	52		49	61		9	03	28		
4	236	49.9		11.8	0	22.7 ¹⁴⁴		35.6	77	52	36	15	49		43	61		08	29			
5	251	50.0	-8	10.9	14	56.0 ¹⁴³	-10	43.1	75	50	5	37	6	14	23	38	59		9	12	30	
6	266	50.2	-8	09.9	29	29.4 ¹⁴⁴	-10	50.7	76	45	5	37	6	11	23	27	57		9	22	32	
7	281	50.3		09.0	44	02.7 ¹⁴³	-10	58.2	75	40	37	09	36		18	55		29	35			
8	296	50.4		08.0	58	36.0 ¹⁴³	-11	05.6	74	35	37	06	32		10	54		36	36			
9	311	50.5		07.1	73	09.2 ¹⁴²		13.0	74	30	36	04	28		23	03	53		42	38		
10	326	50.6		06.2	87	42.5 ¹⁴³		20.4	74	20	33	5	59		22	52	50		9	52	40	
11	341	50.7	-8	05.2	102	15.6 ¹⁴¹	-11	27.7	73	10 N	5	29	5	54	22	42	47		10	01	42	
12	356	50.8	-8	04.3	116	48.8 ¹⁴²	-11	35.0	73	0	5	24	5	48	22	32	46		10	09	45	
13	11	50.9		03.3	131	21.9 ¹⁴¹		42.2	72	10 S	17	42	6	03		23	44		17	47		
14	26	51.1		02.4	145	55.0 ¹⁴¹		49.4	72	20	5	09	35	5	57	13	41		26	50		
15	41	51.2		01.4	160	28.1 ¹⁴¹	-11	56.5	71	30	4	57	25	50	22	01	40		37	52		
16	56	51.3	-8	00.5	175	01.1 ¹⁴⁰	-12	03.6	71	35	49	20	45		21	55	38		43	53		
17	71	51.4	-7	59.5	189	34.1 ¹⁴⁰	-12	10.6	70	40	4	40	5	13	21	47	37		10	49	55	
18	86	51.5	-7	58.6	204	07.1 ¹⁴⁰	-12	17.6	70	45	4	28	5	04	5	35	21	39	34	10	57	57
19	101	51.6		57.7	218	40.0 ¹³⁹		24.5	69	50	13	4	54	28		28	32		11	07	59	
20	116	51.8		56.7	233	12.9 ¹³⁹		31.3	68	52	4	06	49	25		23	31		11	61		
21	131	51.9		55.8	247	45.7 ¹³⁸		38.2	69	54	3	58	44	21		18	30		16	62		
22	146	52.0		54.8	262	18.5 ¹³⁸		44.9	67	56	48	38	17		12	29		21	64			
23	161	52.1		53.9	276	51.3 ¹³⁸		51.6	67	58	37	31	13		21	06	26		27	66		
24	176	52.2	-7	52.9	291	24.1 ¹³⁸	-12	58.3	67	60 S	3	24	4	23	20	58	25		11	34	68	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 13 ^h 28 ^m 8			Mag: -3.9 PMG: 10 ^h 36 ^m			Mag: +0.3 PMG: 5 ^h 12 ^m			Mag: -2.5 PMG: 0 ^h 55 ^m			Mag: +0.5 PMG: 6 ^h 29 ^m									
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	157	15.5	201	14.2	-17	22.0	281	58.2	-18	14.5	346	18.6	+5	29.4	262	27.4	-20	59.3				
1	172	18.0	216	13.6		21.2	296	59.7		14.8	1	21.3		29.6	277	29.7		59.3				
2	187	20.4	231	12.9		20.4	312	01.1		15.0	16	24.1		29.7	292	32.1		59.3				
3	202	22.9	246	12.2		19.7	327	02.5		15.3	31	26.8		29.8	307	34.4		59.3				
4	217	25.3	261	11.5		18.9	342	04.0		15.5	46	29.6		30.0	322	36.8		59.3				
5	232	27.8	276	10.9	-17	18.1	357	05.4	-18	15.8	61	32.3	+5	30.1	337	39.1	-20	59.3				
6	247	30.3	291	10.2	-17	17.3	12	06.8	-18	16.0	76	35.1	+5	30.2	352	41.5	-20	59.3				
7	262	32.7	306	09.5		16.5	27	08.3		16.3	91	37.9		30.3	7	43.8		59.3				
8	277	35.2	321	08.9		15.7	42	09.7		16.5	106	40.6		30.5	22	46.2		59.3				
9	292	37.7	336	08.2		14.9	57	11.1		16.8	121	43.4		30.6	37	48.5		59.4				
10	307	40.1	351	07.5		14.1	72	12.6		17.0	136	46.1		30.7	52	50.9		59.4				
11	322	42.6	6	06.9	-17	13.3	87	14.0	-18	17.3	151	48.9	+5	30.9	67	53.2	-20	59.4				
12	337	45.1	21	06.2	-17	12.5	102	15.5	-18	17.5	166	51.6	+5	31.0	82	55.6	-20	59.4				
13	352	47.5	36	05.5		11.7	117	16.9		17.7	181	54.4		31.1	97	57.9		59.4				
14	7	50.0	51	04.9		10.9	132	18.3		18.0	196	57.1		31.2	113	00.3		59.4				
15	22	52.5	66	04.2		10.1	147	19.8		18.2	211	59.9		31.4	128	02.6		59.4				
16	37	54.9	81	03.5		09.3	162	21.2		18.5	227	02.6		31.5	143	05.0		59.4				
17	52	57.4	96	02.9	-17	08.5	177	22.7	-18	18.7	242	05.4	+5	31.6	158	07.3	-20	59.4				
18	67	59.8	111	02.2	-17	07.7	192	24.1	-18	19.0	257	08.2	+5	31.8	173	09.7	-20	59.4				
19	83	02.3	126	01.6		06.9	207	25.5		19.2	272	10.9		31.9	188	12.0		59.4				
20	98	04.8	141	00.9		06.1	222	27.0		19.5	287	13.7		32.0	203	14.4		59.4				
21	113	07.2	156	00.2		05.3	237	28.4		19.7	302	16.4		32.1	218	16.7		59.4				
22	128	09.7	170	59.6		04.5	252	29.9		20.0	317	19.2		32.3	233	19.1		59.4				
23	143	12.2	185	58.9		03.7	267	31.3		20.2	332	21.9		32.4	248	21.4		59.4				
24	158	14.6	200	58.2	-17	02.9	282	32.7	-18	20.4	347	24.7	+5	32.5	263	23.8	-20	59.4				
Dif	—			-7	+8		+14			-2		+28		+1		+24						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 4 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6					Civil			Hora		Hora	
	PMG: 12 ^h 12 ^m 4			SD: 14'8 PMG: 4 ^h 43 ^m R°: 46 ^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
0	176	52.2	-7 52.9	291	24.1	-12 58.3		60 N	17 26	18 08	18 56	0 10 67	9 08 28		
1	191	52.3		305	56.8 ¹³⁷	-13 04.9	66	58	29	09	54	0 02 65	17 29		
2	206	52.5	51.0	320	29.4 ¹³⁶	11.5	66	56	33	10	53	** ** *	24 31		
3	221	52.6	50.1	335	02.1 ¹³⁷	18.0	65	54	36	11	52	** ** *	31 32		
4	236	52.7	49.1	349	34.7 ¹³⁶	24.4	64	52	39	13	52	** ** *	37 33		
5	251	52.8	-7 48.2	4	07.2 ¹³⁵	-13 30.8	64	50	17 41	18 14	18 51	** ** *	9 42 35		
6	266	52.9	-7 47.3	18	39.7 ¹³⁵	-13 37.1	63	45	17 46	18 16	18 50	** ** *	9 54 37		
7	281	53.0	46.3	33	12.2 ¹³⁵	43.4	63	40	51	18	50	** ** *	10 04 38		
8	296	53.2	45.4	47	44.6 ¹³⁴	49.6	62	35	55	20	50	** ** *	12 40		
9	311	53.3	44.4	62	17.0 ¹³⁴	-13 55.8	62	30	17 59	23	50	23 56 52	20 41		
10	326	53.4	43.5	76	49.4 ¹³⁴	-14 01.9	61	20	18 05	27	53	42 50	32 43		
11	341	53.5	-7 42.5	91	21.7 ¹³³	-14 07.9	60	10 N	18 10	18 32	18 56	23 29 49	10 43 45		
12	356	53.6	-7 41.6	105	53.9 ¹³²	-14 13.9	60	0	18 16	18 37	19 01	23 18 48	10 54 47		
13	11	53.8	40.6	120	26.2 ¹³³	19.8	59	10 S	21	42	07	23 07 46	11 04 49		
14	26	53.9	39.7	134	58.4 ¹³²	25.7	59	20	27	49	15	22 54 45	16 50		
15	41	54.0	38.7	149	30.5 ¹³¹	31.5	58	30	34	18 58	27	41 42	29 52		
16	56	54.1	37.8	164	02.6 ¹³¹	37.2	57	35	38	19 04	34	33 41	36 53		
17	71	54.2	-7 36.8	178	34.7 ¹³¹	-14 42.9	57	40	18 42	19 10	19 43	22 24 40	11 44 55		
18	86	54.4	-7 35.9	193	06.7 ¹³⁰	-14 48.5	56	45	18 48	19 18	19 54	22 13 39	11 54 57		
19	101	54.5	34.9	207	38.6 ¹²⁹	54.0	55	50	54	28	20 08	22 00 38	12 06 59		
20	116	54.6	34.0	222	10.6 ¹³⁰	-14 59.5	55	52	18 57	32	15	21 54 37	12 60		
21	131	54.7	33.0	236	42.4 ¹²⁸	-15 04.9	54	54	19 00	37	23	48 35	18 61		
22	146	54.8	32.1	251	14.3 ¹²⁹	10.3	54	56	04	43	32	41 34	25 62		
23	161	55.0	31.1	265	46.1 ¹²⁸	15.6	53	58	08	50	42	32 33	33 63		
24	176	55.1	-7 30.2	280	17.8 ¹²⁷	-15 20.8	52	60 S	19 13	19 57	20 54	21 23 31	12 42 65		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 24 ^m 8		Mag: -3.9 PMG: 10 ^h 37 ^m			Mag: +0.3 PMG: 5 ^h 09 ^m			Mag: -2.5 PMG: 0 ^h 50 ^m			Mag: +0.5 PMG: 6 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	158	14.6	200 58.2	-17 02.9	282 32.7	-18 20.4	347 24.7	+5 32.5	263 23.8	-20 59.4					
1	173	17.1	215 57.6	02.1	297 34.2	20.7	2 27.4	32.7	278 26.1	59.5					
2	188	19.6	230 56.9	01.3	312 35.6	20.9	17 30.2	32.8	293 28.5	59.5					
3	203	22.0	245 56.3	-17 00.5	327 37.1	21.2	32 33.0	32.9	308 30.8	59.5					
4	218	24.5	260 55.6	-16 59.7	342 38.5	21.4	47 35.7	33.0	323 33.2	59.5					
5	233	26.9	275 55.0	-16 58.9	357 40.0	-18 21.7	62 38.5	+5 33.2	338 35.5	-20 59.5					
6	248	29.4	290 54.3	-16 58.0	12 41.4	-18 21.9	77 41.2	+5 33.3	353 37.9	-20 59.5					
7	263	31.9	305 53.6	57.2	27 42.9	22.1	92 44.0	33.4	8 40.2	59.5					
8	278	34.3	320 53.0	56.4	42 44.3	22.4	107 46.7	33.6	23 42.6	59.5					
9	293	36.8	335 52.3	55.6	57 45.7	22.6	122 49.5	33.7	38 45.0	59.5					
10	308	39.3	350 51.7	54.8	72 47.2	22.9	137 52.2	33.8	53 47.3	59.5					
11	323	41.7	5 51.0	-16 54.0	87 48.6	-18 23.1	152 55.0	+5 34.0	68 49.7	-20 59.5					
12	338	44.2	20 50.4	-16 53.2	102 50.1	-18 23.4	167 57.8	+5 34.1	83 52.0	-20 59.5					
13	353	46.7	35 49.7	52.3	117 51.5	23.6	183 00.5	34.2	98 54.4	59.5					
14	8	49.1	50 49.0	51.5	132 53.0	23.8	198 03.3	34.3	113 56.7	59.5					
15	23	51.6	65 48.4	50.7	147 54.4	24.1	213 06.0	34.5	128 59.1	59.5					
16	38	54.1	80 47.7	49.9	162 55.9	24.3	228 08.8	34.6	144 01.4	59.5					
17	53	56.5	95 47.1	-16 49.1	177 57.3	-18 24.6	243 11.5	+5 34.7	159 03.8	-20 59.5					
18	68	59.0	110 46.4	-16 48.2	192 58.8	-18 24.8	258 14.3	+5 34.9	174 06.1	-20 59.6					
19	84	01.4	125 45.8	47.4	208 00.2	25.0	273 17.1	35.0	189 08.5	59.6					
20	99	03.9	140 45.1	46.6	223 01.7	25.3	288 19.8	35.1	204 10.9	59.6					
21	114	06.4	155 44.5	45.8	238 03.1	25.5	303 22.6	35.2	219 13.2	59.6					
22	129	08.8	170 43.8	45.0	253 04.6	25.8	318 25.3	35.4	234 15.6	59.6					
23	144	11.3	185 43.2	44.1	268 06.1	26.0	333 28.1	35.5	249 17.9	59.6					
24	159	13.8	200 42.5	-16 43.3	283 07.5	-18 26.2	348 30.8	+5 35.6	264 20.3	-20 59.6					
Dif	—		-7	+8	+14	-2	+28	+1	+24	0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 12 ^m 2			Edad: 21 ^d 4 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 SD: 14'9 PMG: 5 ^h 29 ^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
0	176	55.1	-7	30.2	280	17.8	-15 20.8	60 N	5 28	6 16	6 57	1 17	63	9 36	35
1	191	55.2		29.2	294	49.5 ¹²⁷	25.9 51	58	29	14	54	1 07	62	46	36
2	206	55.3		28.3	309	21.2 ¹²⁷	31.0 50	56	30	13	51	0 58	61	9 55	38
3	221	55.4		27.3	323	52.8 ¹²⁶	36.0 50	54	31	12	48	50	60	10 03	39
4	236	55.6		26.4	338	24.3 ¹²⁵	41.0 50	52	32	11	45	44	58	10 40	40
5	251	55.7	-7	25.4	352	55.9 ¹²⁶	-15 45.9 49	50	5 33	6 10	6 43	0 37	58	10 17	40
6	266	55.8	-7	24.5	7	27.3 ¹²⁴	-15 50.7 48	45	5 34	6 08	6 37	0 24	56	10 31	41
7	281	55.9		23.5	21	58.8 ¹²⁵	-15 55.4 47	40	34	06	33	13	55	42	43
8	296	56.1		22.6	36	30.1 ¹²³	-16 00.1 47	35	34	04	29	0 04	53	10 52	44
9	311	56.2		21.6	51	01.5 ¹²⁴	04.7 46	30	34	6 02	26	** ** *	**	11 01	44
10	326	56.3		20.7	65	32.7 ¹²²	09.2 45	20	32	5 57	20	** ** *	**	15	47
11	341	56.4	-7	19.7	80	04.0 ¹²³	-16 13.7 45	10 N	5 28	5 53	6 14	** ** *	**	11 28	48
12	356	56.6	-7	18.7	94	35.2 ¹²²	-16 18.0 44	0	5 24	5 48	6 09	** ** *	**	11 41	48
13	11	56.7		17.8	109	06.3 ¹²¹	22.4 43	10 S	18	42	6 04	23 53	49	11 53	50
14	26	56.8		16.8	123	37.4 ¹²¹	26.6 42	20	5 10	36	5 58	39	48	12 06	51
15	41	56.9		15.9	138	08.4 ¹²⁰	30.7 41	30	4 58	27	51	23	47	21	52
16	56	57.1		14.9	152	39.4 ¹²⁰	34.8 41	35	51	21	47	14	47	29	54
17	71	57.2	-7	14.0	167	10.4 ¹²⁰	-16 38.8 40	40	4 42	5 15	5 43	23 04	46	12 39	54
18	86	57.3	-7	13.0	181	41.3 ¹¹⁹	-16 42.8 40	45	4 31	5 07	5 38	22 52	45	12 51	55
19	101	57.4		12.1	196	12.1 ¹¹⁸	46.6 38	50	17	4 58	31	38	43	13 05	57
20	116	57.6		11.1	210	42.9 ¹¹⁸	50.4 37	52	10	53	28	31	43	12	57
21	131	57.7		10.2	225	13.7 ¹¹⁸	54.1 37	54	4 03	48	25	23	43	19	58
22	146	57.8		09.2	239	44.4 ¹¹⁷	-16 57.7 36	56	3 54	43	22	15	41	27	59
23	161	57.9		08.2	254	15.0 ¹¹⁶	-17 01.3 36	58	43	36	18	22 05	41	36	60
24	176	58.1	-7	07.3	268	45.6 ¹¹⁶	-17 04.8 35	60 S	3 31	4 29	5 13	21 54	40	13 47	61

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 20 ^m 9		Mag: -3.9 PMG: 10 ^h 38 ^m		Mag: +0.3 PMG: 5 ^h 07 ^m		Mag: -2.5 PMG: 0 ^h 46 ^m		Mag: +0.5 PMG: 6 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	159	13.8	200	42.5	-16	43.3	283	07.5	-18	26.2	348	30.8	+5	35.6	264	20.3	-20	59.6
1	174	16.2	215	41.9		42.5	298	09.0		26.5	3	33.6		35.8	279	22.6		59.6
2	189	18.7	230	41.2		41.6	313	10.4		26.7	18	36.4		35.9	294	25.0		59.6
3	204	21.2	245	40.6		40.8	328	11.9		27.0	33	39.1		36.0	309	27.3		59.6
4	219	23.6	260	39.9		40.0	343	13.3		27.2	48	41.9		36.1	324	29.7		59.6
5	234	26.1	275	39.3	-16	39.2	358	14.8	-18	27.4	63	44.6	+5	36.3	339	32.1	-20	59.6
6	249	28.6	290	38.6	-16	38.3	13	16.2	-18	27.7	78	47.4	+5	36.4	354	34.4	-20	59.6
7	264	31.0	305	38.0		37.5	28	17.7		27.9	93	50.2		36.5	9	36.8		59.6
8	279	33.5	320	37.4		36.7	43	19.2		28.1	108	52.9		36.7	24	39.1		59.6
9	294	35.9	335	36.7		35.8	58	20.6		28.4	123	55.7		36.8	39	41.5		59.6
10	309	38.4	350	36.1		35.0	73	22.1		28.6	138	58.4		36.9	54	43.9		59.6
11	324	40.9	5	35.4	-16	34.2	88	23.5	-18	28.9	154	01.2	+5	37.1	69	46.2	-20	59.7
12	339	43.3	20	34.8	-16	33.3	103	25.0	-18	29.1	169	03.9	+5	37.2	84	48.6	-20	59.7
13	354	45.8	35	34.1		32.5	118	26.4		29.3	184	06.7		37.3	99	50.9		59.7
14	9	48.3	50	33.5		31.6	133	27.9		29.6	199	09.5		37.4	114	53.3		59.7
15	24	50.7	65	32.8		30.8	148	29.4		29.8	214	12.2		37.6	129	55.6		59.7
16	39	53.2	80	32.2		30.0	163	30.8		30.0	229	15.0		37.7	144	58.0		59.7
17	54	55.7	95	31.6	-16	29.1	178	32.3	-18	30.3	244	17.7	+5	37.8	160	00.4	-20	59.7
18	69	58.1	110	30.9	-16	28.3	193	33.8	-18	30.5	259	20.5	+5	38.0	175	02.7	-20	59.7
19	85	00.6	125	30.3		27.4	208	35.2		30.8	274	23.3		38.1	190	05.1		59.7
20	100	03.0	140	29.6		26.6	223	36.7		31.0	289	26.0		38.2	205	07.4		59.7
21	115	05.5	155	29.0		25.8	238	38.1		31.2	304	28.8		38.3	220	09.8		59.7
22	130	08.0	170	28.4		24.9	253	39.6		31.5	319	31.5		38.5	235	12.2		59.7
23	145	10.4	185	27.7		24.1	268	41.1		31.7	334	34.3		38.6	250	14.5		59.7
24	160	12.9	200	27.1	-16	23.2	283	42.5	-18	31.9	349	37.1	+5	38.7	265	16.9	-20	59.7
Dif	—		-6	+8		+15	-2			+28	+1			+24		0		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 12 ^m 0			Edad: 22 ^d 4 PHE { 4 ^h : 55:3 12 ^h : 55:6 20 ^h : 55:8 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	
0	176	58.1	-7 07.3	268	45.6	-17 04.8	60 N	17 31	18 13	19 01		2 20 59		10 11 44	
1	191	58.2	06.3	283	16.2 ¹¹⁶	08.1 ³³	58	34	14	18 59		2 09 58		22 46	
2	206	58.3	05.4	297	46.7 ¹¹⁵	11.4 ³³	56	37	14	57		1 59 57		33 45	
3	221	58.4	04.4	312	17.2 ¹¹⁵	14.7 ³³	54	40	15	56		50 56		42 46	
4	236	58.6	03.5	326	47.6 ¹¹⁴	17.8 ³¹	52	42	16	55		42 56		50 46	
5	251	58.7	-7 02.5	341	17.9 ¹¹³	-17 20.9 ³¹	50	17 44	18 17	18 54		1 35 56		10 57 47	
6	266	58.8	-7 01.6	355	48.3 ¹¹⁴	-17 23.9 ³⁰	45	17 49	18 19	18 53		1 20 55		11 12 48	
7	281	59.0	-7 00.6	10	18.5 ¹¹²	26.7 ²⁸	40	53	20	52		1 08 53		25 48	
8	296	59.1	-6 59.6	24	48.7 ¹¹²	29.6 ²⁹	35	17 57	22	52		0 57 53		36 49	
9	311	59.2	58.7	39	18.9 ¹¹²	32.3 ²⁷	30	18 00	24	52		48 52		11 45 49	
10	326	59.3	57.7	53	49.0 ¹¹¹	34.9 ²⁶	20	06	28	53		32 52		12 02 49	
11	341	59.5	-6 56.8	68	19.1 ¹¹¹	-17 37.5 ²⁶	10 N	18 11	18 32	18 56		0 18 51		12 16 50	
12	356	59.6	-6 55.8	82	49.1 ¹¹⁰	-17 40.0 ²⁵	0	18 15	18 36	19 00		0 06 49		12 29 51	
13	11	59.7	54.9	97	19.1 ¹¹⁰	42.4 ²⁴	10 S	20	41	06		** ** *		43 51	
14	26	59.9	53.9	111	49.0 ¹⁰⁹	44.7 ²³	20	26	48	14		** ** *		12 57 51	
15	42	00.0	52.9	126	18.9 ¹⁰⁹	46.9 ²²	30	32	18 56	24		** ** *		13 13 52	
16	57	00.1	52.0	140	48.7 ¹⁰⁸	49.0 ²¹	35	35	19 01	31		** ** *		23 52	
17	72	00.3	-6 51.0	155	18.5 ¹⁰⁸	-17 51.0 ²⁰	40	18 39	19 07	19 40		23 50 51		13 33 53	
18	87	00.4	-6 50.1	169	48.2 ¹⁰⁷	-17 53.0 ²⁰	45	18 44	19 14	19 50		23 37 51		13 46 53	
19	102	00.5	49.1	184	17.9 ¹⁰⁷	54.8 ¹⁸	50	50	23	20 04		21 51		14 02 53	
20	117	00.6	48.2	198	47.5 ¹⁰⁶	56.6 ¹⁸	52	53	28	10		14 51		09 54	
21	132	00.8	47.2	213	17.1 ¹⁰⁶	58.3 ¹⁷	54	56	32	17		23 06 50		17 54	
22	147	00.9	46.2	227	46.6 ¹⁰⁵	-17 59.9 ¹⁶	56	18 59	38	26		22 56 51		26 54	
23	162	01.0	45.3	242	16.1 ¹⁰⁵	-18 01.4 ¹⁵	58	19 03	44	35		46 51		36 55	
24	177	01.2	-6 44.3	256	45.6 ¹⁰⁵	-18 02.8 ¹⁴	60 S	19 07	19 51	20 47		22 34 50		14 48 55	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 17 ^m 0			Mag: -3.9 PMG: 10 ^h 39 ^m			Mag: +0.2 PMG: 5 ^h 05 ^m			Mag: -2.5 PMG: 0 ^h 41 ^m			Mag: +0.5 PMG: 6 ^h 18 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	160	12.9	200 27.1	-16 23.2	283 42.5	-18 31.9	349 37.1	+5 38.7	265 16.9	-20 59.7					
1	175	15.4	215 26.4	22.4	298 44.0	32.2	4 39.8	38.9	280 19.2	59.7					
2	190	17.8	230 25.8	21.5	313 45.5	32.4	19 42.6	39.0	295 21.6	59.7					
3	205	20.3	245 25.2	20.7	328 46.9	32.6	34 45.3	39.1	310 24.0	59.7					
4	220	22.8	260 24.5	19.8	343 48.4	32.9	49 48.1	39.3	325 26.3	59.7					
5	235	25.2	275 23.9	-16 19.0	358 49.9	-18 33.1	64 50.8	+5 39.4	340 28.7	-20 59.7					
6	250	27.7	290 23.3	-16 18.1	13 51.3	-18 33.3	79 53.6	+5 39.5	355 31.0	-20 59.8					
7	265	30.2	305 22.6	17.3	28 52.8	33.6	94 56.4	39.6	10 33.4	59.8					
8	280	32.6	320 22.0	16.4	43 54.3	33.8	109 59.1	39.8	25 35.8	59.8					
9	295	35.1	335 21.4	15.6	58 55.8	34.0	125 01.9	39.9	40 38.1	59.8					
10	310	37.5	350 20.7	14.7	73 57.2	34.3	140 04.6	40.0	55 40.5	59.8					
11	325	40.0	5 20.1	-16 13.9	88 58.7	-18 34.5	155 07.4	+5 40.2	70 42.9	-20 59.8					
12	340	42.5	20 19.5	-16 13.0	104 00.2	-18 34.7	170 10.2	+5 40.3	85 45.2	-20 59.8					
13	355	44.9	35 18.8	12.2	119 01.6	35.0	185 12.9	40.4	100 47.6	59.8					
14	10	47.4	50 18.2	11.3	134 03.1	35.2	200 15.7	40.6	115 49.9	59.8					
15	25	49.9	65 17.6	10.4	149 04.6	35.4	215 18.4	40.7	130 52.3	59.8					
16	40	52.3	80 16.9	09.6	164 06.1	35.7	230 21.2	40.8	145 54.7	59.8					
17	55	54.8	95 16.3	-16 08.7	179 07.5	-18 35.9	245 24.0	+5 40.9	160 57.0	-20 59.8					
18	70	57.3	110 15.7	-16 07.9	194 09.0	-18 36.1	260 26.7	+5 41.1	175 59.4	-20 59.8					
19	85	59.7	125 15.0	07.0	209 10.5	36.4	275 29.5	41.2	191 01.8	59.8					
20	101	02.2	140 14.4	06.1	224 11.9	36.6	290 32.3	41.3	206 04.1	59.8					
21	116	04.7	155 13.8	05.3	239 13.4	36.8	305 35.0	41.5	221 06.5	59.8					
22	131	07.1	170 13.1	04.4	254 14.9	37.1	320 37.8	41.6	236 08.9	59.8					
23	146	09.6	185 12.5	03.6	269 16.4	37.3	335 40.5	41.7	251 11.2	59.8					
24	161	12.0	200 11.9	-16 02.7	284 17.9	-18 37.5	350 43.3	+5 41.9	266 13.6	-20 59.8					
Dif	—			-6	+9		+15	-2		+28	+1		+24		0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 23 ^d 4 PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'6												
	PMG: 12 ^h 11 ^m 8			SD: 15'2 PMG: 7 ^h 08 ^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	177	01.2	-6 44.3	256	45.6	-18 02.8		60 N	5 22	6 10	6 51	3 19	51	10 55	56	
1	192	01.3	43.4	271	15.0 ¹⁰⁴	04.1	13	58	24	09	48	3 07	51	11 08	55	
2	207	01.4	42.4	285	44.3 ¹⁰³	05.3	12	56	25	08	45	2 56	51	18 56		
3	222	01.6	41.4	300	13.6 ¹⁰³	06.4	11	54	27	08	43	46	52	28 55		
4	237	01.7	40.5	314	42.9 ¹⁰³	07.5	11	52	28	07	41	38	52	36 55		
5	252	01.8	-6 39.5	329	12.1 ¹⁰²	-18 08.4	9	50	5 29	6 06	6 38	2 31	51	11 44	55	
6	267	02.0	-6 38.6	343	41.3 ¹⁰²	-18 09.3	9	45	5 31	6 04	6 34	2 15	51	12 00	55	
7	282	02.1	37.6	358	10.4 ¹⁰¹	10.0	7	40	31	03	30	2 01	52	13 54		
8	297	02.2	36.6	12	39.4 ¹⁰⁰	10.7	7	35	32	6 01	26	1 50	52	25 53		
9	312	02.4	35.7	27	08.5 ¹⁰¹	11.2	5	30	32	5 59	23	40	52	34 54		
10	327	02.5	34.7	41	37.5 ¹⁰⁰	11.7	5	20	30	56	18	24	51	12 51	54	
11	342	02.6	-6 33.8	56	06.4 ⁹⁹	-18 12.1	4	10 N	5 28	5 52	6 13	1 09	52	13 06	53	
12	357	02.8	-6 32.8	70	35.3 ⁹⁹	-18 12.4	3	0	5 24	5 48	6 09	0 55	52	13 20	52	
13	12	02.9	31.8	85	04.1 ⁹⁸	12.5	1	10 S	18	43	6 04	42	51	34 52		
14	27	03.0	30.9	99	33.0 ⁹⁹	12.6	1	20	10	36	5 59	27	52	13 48	52	
15	42	03.2	29.9	114	01.7 ⁹⁷	12.6	0	30	5 00	28	53	10	52	14 05	51	
16	57	03.3	28.9	128	30.4 ⁹⁷	12.5	1	35	4 53	23	49	0 01	51	15 51		
17	72	03.4	-6 28.0	142	59.1 ⁹⁷	-18 12.3	2	40	4 45	5 17	5 45	** *	**	14 26	51	
18	87	03.6	-6 27.0	157	27.8 ⁹⁷	-18 12.0	3	45	4 34	5 10	5 40	** *	**	14 39	50	
19	102	03.7	26.1	171	56.4 ⁹⁶	11.5	5	50	21	5 01	35	** *	**	14 55	50	
20	117	03.8	25.1	186	24.9 ⁹⁵	11.0	5	52	15	4 57	32	** *	**	15 03	49	
21	132	04.0	24.1	200	53.4 ⁹⁵	10.4	6	54	4 07	52	29	23	56	60	11 49	
22	147	04.1	23.2	215	21.9 ⁹⁵	09.7	7	56	3 59	47	26	47	61	20 49		
23	162	04.2	22.2	229	50.3 ⁹⁴	08.9	8	58	49	41	22	37	61	31 48		
24	177	04.4	-6 21.2	244	18.7 ⁹⁴	-18 08.0	9	60 S	3 38	4 34	5 18	23	24	62	15 43 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 13 ^m 0		Mag: -3.8 PMG: 10 ^h 40 ^m		Mag: +0.2 PMG: 5 ^h 02 ^m		Mag: -2.5 PMG: 0 ^h 37 ^m		Mag: +0.5 PMG: 6 ^h 14 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	161	12.0	200	11.9	-16 02.7	284	17.9	-18 37.5	350	43.3	+5 41.9	266	13.6	-20 59.8	
1	176	14.5	215	11.3	01.8	299	19.3	37.8	5	46.1	42.0	281	15.9	59.8	
2	191	17.0	230	10.6	01.0	314	20.8	38.0	20	48.8	42.1	296	18.3	59.9	
3	206	19.4	245	10.0	-16 00.1	329	22.3	38.2	35	51.6	42.2	311	20.7	59.9	
4	221	21.9	260	09.4	-15 59.2	344	23.8	38.5	50	54.3	42.4	326	23.0	59.9	
5	236	24.4	275	08.8	-15 58.4	359	25.2	-18 38.7	65	57.1	+5 42.5	341	25.4	-20 59.9	
6	251	26.8	290	08.1	-15 57.5	14	26.7	-18 38.9	80	59.9	+5 42.6	356	27.8	-20 59.9	
7	266	29.3	305	07.5	56.6	29	28.2	39.1	96	02.6	42.8	11	30.1	59.9	
8	281	31.8	320	06.9	55.8	44	29.7	39.4	111	05.4	42.9	26	32.5	59.9	
9	296	34.2	335	06.3	54.9	59	31.2	39.6	126	08.1	43.0	41	34.9	59.9	
10	311	36.7	350	05.6	54.0	74	32.7	39.8	141	10.9	43.2	56	37.2	59.9	
11	326	39.2	5	05.0	-15 53.1	89	34.1	-18 40.1	156	13.7	+5 43.3	71	39.6	-20 59.9	
12	341	41.6	20	04.4	-15 52.3	104	35.6	-18 40.3	171	16.4	+5 43.4	86	42.0	-20 59.9	
13	356	44.1	35	03.8	51.4	119	37.1	40.5	186	19.2	43.5	101	44.3	59.9	
14	11	46.5	50	03.2	50.5	134	38.6	40.7	201	22.0	43.7	116	46.7	59.9	
15	26	49.0	65	02.5	49.6	149	40.1	41.0	216	24.7	43.8	131	49.1	59.9	
16	41	51.5	80	01.9	48.8	164	41.6	41.2	231	27.5	43.9	146	51.4	59.9	
17	56	53.9	95	01.3	-15 47.9	179	43.0	-18 41.4	246	30.2	+5 44.1	161	53.8	-20 59.9	
18	71	56.4	110	00.7	-15 47.0	194	44.5	-18 41.7	261	33.0	+5 44.2	176	56.2	-20 59.9	
19	86	58.9	125	00.1	46.1	209	46.0	41.9	276	35.8	44.3	191	58.5	59.9	
20	102	01.3	139	59.4	45.2	224	47.5	42.1	291	38.5	44.5	207	00.9	59.9	
21	117	03.8	154	58.8	44.4	239	49.0	42.3	306	41.3	44.6	222	03.3	59.9	
22	132	06.3	169	58.2	43.5	254	50.5	42.6	321	44.0	44.7	237	05.7	59.9	
23	147	08.7	184	57.6	42.6	269	52.0	42.8	336	46.8	44.8	252	08.0	-20 59.9	
24	162	11.2	199	57.0	-15 41.7	284	53.5	-18 43.0	351	49.6	+5 45.0	267	10.4	-21 00.0	
Dif	—		-6 +9		+15 -2		+28 -1		+28 +1		+24 0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 24 ^d 4 PHE { 4 ^h : 56 ^h 9 12 ^h : 57 ^h 2 20 ^h : 57 ^h 5										
	PMG: 12 ^h 11 ^m 6			SD: 15'5 PMG: 8 ^h 00 ^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
0	177	04.4	-6 21.2	244	18.7	-18 08.0	10	60 N	17 36	18 18	19 06	4 10 43	11 51 68	
1	192	04.5	20.3	258	47.1	07.0	10	58	39	18	04	3 58 44	12 03 66	
2	207	04.7	19.3	273	15.4	05.8	12	56	41	19	02	47 46	14 65	
3	222	04.8	18.4	287	43.7	04.6	12	54	44	19	00	38 46	23 64	
4	237	04.9	17.4	302	11.9	03.3	13	52	46	20	18 59	30 46	31 64	
5	252	05.1	-6 16.4	316	40.1	-18 01.9	14	50	17 48	18 20	18 57	3 22 47	12 39 62	
6	267	05.2	-6 15.5	331	08.2	-18 00.3	16	45	17 52	18 21	18 55	3 06 49	12 55 61	
7	282	05.3	14.5	345	36.4	-17 58.7	16	40	55	23	54	2 53 49	13 07 60	
8	297	05.5	13.5	0	04.5	57.0	17	35	17 59	24	53	42 50	18 59	
9	312	05.6	12.6	14	32.5	55.1	19	30	18 01	25	53	32 51	28 58	
10	327	05.8	11.6	29	00.5	53.2	19	20	06	28	54	15 52	45 56	
11	342	05.9	-6 10.6	43	28.5	-17 51.2	20	10 N	18 11	18 32	18 56	2 01 52	13 59 55	
12	357	06.0	-6 09.7	57	56.5	-17 49.0	22	0	18 15	18 36	19 00	1 47 53	14 12 54	
13	12	06.2	08.7	72	24.4	46.8	22	10 S	19	40	05	33 54	26 52	
14	27	06.3	07.7	86	52.2	44.4	24	20	24	46	12	19 55	40 51	
15	42	06.4	06.8	101	20.1	41.9	25	30	29	54	22	1 02 56	14 56 50	
16	57	06.6	05.8	115	47.9	39.4	25	35	33	18 58	28	0 52 57	15 06 49	
17	72	06.7	-6 04.9	130	15.7	-17 36.7	27	40	18 36	19 04	19 36	0 41 57	15 17 47	
18	87	06.9	-6 03.9	144	43.4	-17 33.9	28	45	18 41	19 11	19 46	0 28 58	15 29 47	
19	102	07.0	02.9	159	11.1	31.1	28	50	46	19	19 59	12 59	45 44	
20	117	07.1	02.0	173	38.8	28.1	30	52	48	23	20 05	0 05 59	15 52 44	
21	132	07.3	-6 01.0	188	06.5	25.0	31	54	51	27	12	** ** *	16 00 43	
22	147	07.4	-6 00.0	202	34.1	21.8	32	56	54	32	20	** ** *	09 41	
23	162	07.6	-5 59.1	217	01.7	18.5	33	58	18 57	38	29	** ** *	19 40	
24	177	07.7	-5 58.1	231	29.3	-17 15.1	34	60 S	19 01	19 44	20 39	** ** *	16 30 39	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 09 ^m 1		Mag: -3.8 PMG: 10 ^h 41 ^m		Mag: +0.2 PMG: 5 ^h 00 ^m		Mag: -2.5 PMG: 0 ^h 33 ^m		Mag: +0.5 PMG: 6 ^h 10 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	162	11.2	199	57.0	284	53.5	351	49.6	267	10.4				
1	177	13.6	214	56.3	299	54.9	6	52.3	282	12.8				
2	192	16.1	229	55.7	314	56.4	21	55.1	297	15.1				
3	207	18.6	244	55.1	329	57.9	36	57.9	312	17.5				
4	222	21.0	259	54.5	344	59.4	52	00.6	327	19.9				
5	237	23.5	274	53.9	0	00.9	67	03.4	342	22.2				
6	252	26.0	289	53.3	15	02.4	82	06.1	357	24.6				
7	267	28.4	304	52.7	30	03.9	97	08.9	12	27.0				
8	282	30.9	319	52.0	45	05.4	112	11.7	27	29.3				
9	297	33.4	334	51.4	60	06.9	127	14.4	42	31.7				
10	312	35.8	349	50.8	75	08.4	142	17.2	57	34.1				
11	327	38.3	4	50.2	90	09.9	157	20.0	72	36.5				
12	342	40.8	19	49.6	105	11.4	172	22.7	87	38.8				
13	357	43.2	34	49.0	120	12.9	187	25.5	102	41.2				
14	12	45.7	49	48.4	135	14.4	202	28.2	117	43.6				
15	27	48.1	64	47.8	150	15.9	217	31.0	132	45.9				
16	42	50.6	79	47.2	165	17.4	232	33.8	147	48.3				
17	57	53.1	94	46.6	180	18.9	247	36.5	162	50.7				
18	72	55.5	109	45.9	195	20.4	262	39.3	177	53.1				
19	87	58.0	124	45.3	210	21.9	277	42.1	192	55.4				
20	103	00.5	139	44.7	225	23.4	292	44.8	207	57.8				
21	118	02.9	154	44.1	240	24.9	307	47.6	223	00.2				
22	133	05.4	169	43.5	255	26.4	322	50.3	238	02.6				
23	148	07.9	184	42.9	270	27.9	337	53.1	253	04.9				
24	163	10.3	199	42.3	285	29.4	352	55.9	268	07.3				
Dif	—		-6	+9	+15	-2	+28	+1	+24	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 11 ^m 4			Edad: 25 ^d 4 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 1 20 ^h : 58 ^m 4 PMG: 8 ^h 53 ^m R ^o : 55 ^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	177	07.7	-5 58.1	231	29.3	-17 15.1	35	60 N	5 16	6 04	6 46	4 53	36	12 59	77
1	192	07.8		245	56.8		11.6	58	18	04	43	42	38	13 09	76
2	207	08.0		260	24.3		08.0	56	20	03	40	33	38	19	73
3	222	08.1		274	51.8		04.2	54	22	03	38	24	40	27	72
4	237	08.3		289	19.3	-17 00.4	38	52	23	02	36	16	42	35	70
5	252	08.4	-5 53.3	303	46.7	-16 56.5	39	50	5 25	6 02	6 34	4 09	43	13 41	70
6	267	08.6	-5 52.3	318	14.1	-16 52.4	41	45	5 27	6 01	6 30	3 55	44	13 56	66
7	282	08.7		332	41.5		48.3	40	28	6 00	27	42	47	14 07	65
8	297	08.8		347	08.9		44.1	35	29	5 59	24	32	48	17	63
9	312	09.0		1	36.2		39.7	30	30	57	21	23	49	26	62
10	327	09.1		16	03.5		35.2	20	29	54	16	3 07	51	41	59
11	342	09.3	-5 47.4	30	30.8	-16 30.7	45	10 N	5 27	5 51	6 12	2 53	53	14 54	57
12	357	09.4	-5 46.5	44	58.1	-16 26.0	47	0	5 23	5 47	6 08	2 40	55	15 06	55
13	12	09.5		59	25.3		21.2	10 S	18	43	6 04	27	57	18	53
14	27	09.7		73	52.6		16.4	20	11	37	5 59	2 14	58	31	51
15	42	09.8		88	19.8		11.4	30	5 01	30	54	1 58	60	46	48
16	57	10.0		102	46.9		06.3	35	4 55	25	51	49	61	15 55	46
17	72	10.1	-5 41.6	117	14.1	-16 01.1	52	40	4 47	5 20	5 47	1 38	63	16 04	45
18	87	10.3	-5 40.7	131	41.3	-15 55.8	53	45	4 37	5 13	5 43	1 26	64	16 16	42
19	102	10.4		146	08.4		50.4	50	25	05	38	11	66	29	40
20	117	10.6		160	35.5		44.9	55	19	5 01	36	1 04	67	36	38
21	132	10.7		175	02.6		39.3	56	12	4 57	33	0 56	69	43	37
22	147	10.8		189	29.6		33.6	57	4 04	52	30	48	69	50	36
23	162	11.0		203	56.7		27.8	58	3 55	46	27	38	71	16 59	34
24	177	11.1	-5 34.8	218	23.7	-15 21.9	59	60 S	3 45	4 40	5 23	0 26	73	17 09	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 05 ^m 2		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +0.2 PMG: 4 ^h 58 ^m		Mag: -2.5 PMG: 0 ^h 28 ^m		Mag: +0.5 PMG: 6 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	163	10.3	199	42.3	-15 20.3		285	29.4	-18 48.4						
1	178	12.8	214	41.7		19.4	300	30.9		48.6					
2	193	15.3	229	41.1		18.5	315	32.4		48.9					
3	208	17.7	244	40.5		17.6	330	33.9		49.1					
4	223	20.2	259	39.9		16.7	345	35.4		49.3					
5	238	22.6	274	39.3	-15 15.8		0	36.9	-18 49.5						
6	253	25.1	289	38.7	-15 14.9		15	38.4	-18 49.8						
7	268	27.6	304	38.1		14.0	30	39.9		50.0					
8	283	30.0	319	37.5		13.1	45	41.4		50.2					
9	298	32.5	334	36.9		12.1	60	42.9		50.4					
10	313	35.0	349	36.3		11.2	75	44.4		50.6					
11	328	37.4	4	35.7	-15 10.3		90	45.9	-18 50.9						
12	343	39.9	19	35.1	-15 09.4		105	47.4	-18 51.1						
13	358	42.4	34	34.5		08.5	120	48.9		51.3					
14	13	44.8	49	33.9		07.6	135	50.4		51.5					
15	28	47.3	64	33.3		06.7	150	51.9		51.7					
16	43	49.7	79	32.7		05.8	165	53.5		52.0					
17	58	52.2	94	32.1	-15 04.9		180	55.0	-18 52.2						
18	73	54.7	109	31.5	-15 03.9		195	56.5	-18 52.4						
19	88	57.1	124	30.9		03.0	210	58.0		52.6					
20	103	59.6	139	30.3		02.1	225	59.5		52.8					
21	119	02.1	154	29.7		01.2	241	01.0		53.1					
22	134	04.5	169	29.1	-15 00.3		256	02.5		53.3					
23	149	07.0	184	28.5	-14 59.4		271	04.0		53.5					
24	164	09.5	199	27.9	-14 58.4		286	05.6	-18 53.7						
Dif	—		-6		+9		+15		-2		+28	+1	+24		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°1			Edad: 26 ^d 4 PHE { 4 ^h : 58'7 12 ^h : 59'0 20 ^h : 59'3										
	PMG: 12 ^h 11 ^m 1			SD: 16'0 PMG: 9 ^h 48 ^m R°: 55 ^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	11.1	-5 34.8	218	23.7	-15 21.9	60 N	17 41	18 22	19 11	5 29 29		14 16 84	
1	192	11.3	33.9	232	50.8	81 15.9	58	43	23	08	20 31		25 81	
2	207	11.4	32.9	247	17.8	80 09.8	56	46	23	06	11 34		32 80	
3	222	11.6	31.9	261	44.8	80 -15 03.6	54	48	23	04	5 04 35		39 78	
4	237	11.7	31.0	276	11.8	80 -14 57.3	52	49	23	02	4 58 36		45 76	
5	252	11.9	-5 30.0	290	38.7	79 -14 50.9	50	17 51	18 23	19 01	4 52 38		14 51 74	
6	267	12.0	-5 29.0	305	05.7	80 -14 44.4	45	17 55	18 24	18 58	4 39 41		15 02 71	
7	282	12.1	28.0	319	32.6	79 37.7	40	17 58	25	56	29 43		12 68	
8	297	12.3	27.1	333	59.5	79 31.0	35	18 00	26	55	20 45		20 66	
9	312	12.4	26.1	348	26.5	80 24.2	30	03	27	54	4 12 47		28 64	
10	327	12.6	25.1	2	53.4	79 17.3	20	07	29	55	3 58 50		40 61	
11	342	12.7	-5 24.2	17	20.3	79 -14 10.3	10 N	18 11	18 32	18 56	3 46 53		15 51 58	
12	357	12.9	-5 23.2	31	47.1	78 -14 03.2	0	18 14	18 35	18 59	3 35 55		16 01 55	
13	12	13.0	22.2	46	14.0	79 -13 56.0	10 S	18	39	19 04	24 57		11 53	
14	27	13.2	21.2	60	40.9	79 48.7	20	22	44	10	3 12 60		22 49	
15	42	13.3	20.3	75	07.7	78 41.4	30	27	51	20	2 58 63		34 46	
16	57	13.5	19.3	89	34.6	79 33.9	35	30	18 56	26	50 65		41 44	
17	72	13.6	-5 18.3	104	01.4	78 -13 26.3	40	18 33	19 01	19 33	2 41 67		16 49 42	
18	87	13.8	-5 17.4	118	28.2	78 -13 18.6	45	18 37	19 07	19 42	2 30 69		16 58 40	
19	102	13.9	16.4	132	55.1	79 10.9	50	42	14	19 54	17 72		17 09 36	
20	117	14.1	15.4	147	21.9	78 -13 03.0	52	44	18	20 00	11 74		14 35	
21	132	14.2	14.4	161	48.7	78 -12 55.1	54	46	22	06	2 05 75		20 33	
22	147	14.4	13.5	176	15.5	78 47.0	56	49	27	14	1 57 77		26 31	
23	162	14.5	12.5	190	42.3	78 38.9	58	51	32	22	49 79		33 29	
24	177	14.7	-5 11.5	205	09.1	78 -12 30.7	60 S	18 55	19 38	20 32	1 39 81		17 41 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 01 ^m 2		Mag: -3.8 PMG: 10 ^h 43 ^m		Mag: +0.1 PMG: 4 ^h 55 ^m		Mag: -2.5 PMG: 0 ^h 24 ^m		Mag: +0.5 PMG: 6 ^h 03 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	'	°	'	°	'	°	'	
0	164	09.5	199	27.9	-14 58.4	286 05.6	-18 53.7	354 02.2	+5 51.2	269 04.3	-21 00.1
1	179	11.9	214	27.3	57.5	301 07.1	53.9	9 05.0	51.4	284 06.7	00.1
2	194	14.4	229	26.7	56.6	316 08.6	54.1	24 07.7	51.5	299 09.1	00.1
3	209	16.9	244	26.1	55.7	331 10.1	54.4	39 10.5	51.6	314 11.4	00.2
4	224	19.3	259	25.5	54.8	346 11.6	54.6	54 13.3	51.7	329 13.8	00.2
5	239	21.8	274	24.9	-14 53.8	1 13.1	-18 54.8	69 16.0	+5 51.9	344 16.2	-21 00.2
6	254	24.2	289	24.3	-14 52.9	16 14.7	-18 55.0	84 18.8	+5 52.0	359 18.6	-21 00.2
7	269	26.7	304	23.8	52.0	31 16.2	55.2	99 21.6	52.1	14 21.0	00.2
8	284	29.2	319	23.2	51.1	46 17.7	55.5	114 24.3	52.3	29 23.3	00.2
9	299	31.6	334	22.6	50.1	61 19.2	55.7	129 27.1	52.4	44 25.7	00.2
10	314	34.1	349	22.0	49.2	76 20.7	55.9	144 29.8	52.5	59 28.1	00.2
11	329	36.6	4	21.4	-14 48.3	91 22.3	-18 56.1	159 32.6	+5 52.7	74 30.5	-21 00.2
12	344	39.0	19	20.8	-14 47.4	106 23.8	-18 56.3	174 35.4	+5 52.8	89 32.9	-21 00.2
13	359	41.5	34	20.2	46.4	121 25.3	56.5	189 38.1	52.9	104 35.2	00.2
14	14	44.0	49	19.6	45.5	136 26.8	56.8	204 40.9	53.0	119 37.6	00.2
15	29	46.4	64	19.0	44.6	151 28.4	57.0	219 43.7	53.2	134 40.0	00.2
16	44	48.9	79	18.4	43.6	166 29.9	57.2	234 46.4	53.3	149 42.4	00.2
17	59	51.4	94	17.9	-14 42.7	181 31.4	-18 57.4	249 49.2	+5 53.4	164 44.8	-21 00.2
18	74	53.8	109	17.3	-14 41.8	196 32.9	-18 57.6	264 52.0	+5 53.6	179 47.1	-21 00.2
19	89	56.3	124	16.7	40.8	211 34.4	57.8	279 54.7	53.7	194 49.5	00.2
20	104	58.7	139	16.1	39.9	226 36.0	58.0	294 57.5	53.8	209 51.9	00.2
21	120	01.2	154	15.5	39.0	241 37.5	58.3	310 00.3	54.0	224 54.3	00.2
22	135	03.7	169	14.9	38.0	256 39.0	58.5	325 03.0	54.1	239 56.7	00.2
23	150	06.1	184	14.3	37.1	271 40.6	58.7	340 05.8	54.2	254 59.0	00.2
24	165	08.6	199	13.8	-14 36.2	286 42.1	-18 58.9	355 08.6	+5 54.3	270 01.4	-21 00.2
Dif	—		-6 +9		+15 -2		+28 +1		+24 0		

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 9			Edad: 27 ^d 4 PHE { 4 ^h : 59'6 12 ^h : 59'9 20 ^h : 60'1 R°: 55 ^m PMG: 10 ^h 43 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	14.7	-5	11.5	205	09.1	-12	30.7	60 N	5	10	5	58	6	40	5	58
1	192	14.8		10.6	219	35.8	77	22.4	58	13	58	37	51	27		46	86
2	207	15.0		09.6	234	02.6	78	14.0	56	15	58	35	45	29		52	83
3	222	15.1		08.6	248	29.4	78	-12	54	17	58	33	39	32	15	57	81
4	237	15.2		07.6	262	56.2	78	-11	52	19	58	32	34	34	16	01	79
5	252	15.4	-5	06.7	277	22.9	77	-11	50	5	21	5	58	6	30	5	30
6	267	15.5	-5	05.7	291	49.7	78	-11	45	5	23	5	57	6	27	5	20
7	282	15.7		04.7	306	16.4	77	30.8	40	25	57	24	12	41		20	71
8	297	15.8		03.7	320	43.2	78	21.9	35	27	56	21	5	05	43	26	69
9	312	16.0		02.8	335	09.9	77	12.9	30	27	55	19	4	59	45	32	66
10	327	16.1		01.8	349	36.7	78	-11	20	27	53	15	48	49		41	62
11	342	16.3	-5	00.8	4	03.4	77	-10	10 N	5	26	5	50	6	11	4	39
12	357	16.5	-4	59.8	18	30.1	77	-10	0	5	23	5	47	6	08	4	30
13	12	16.6		58.9	32	56.9	78	36.2	10 S	18	43	04	21	58	17	04	52
14	27	16.8		57.9	47	23.6	77	26.8	20	12	38	6	00	12	61	11	49
15	42	16.9		56.9	61	50.3	77	17.4	30	5	03	31	5	55	4	01	65
16	57	17.1		55.9	76	17.1	78	-10	35	4	57	27	3	55	67	25	43
17	72	17.2	-4	55.0	90	43.8	77	-9	40	4	50	5	22	5	49	3	48
18	87	17.4	-4	54.0	105	10.5	77	-9	45	4	40	5	16	5	46	3	39
19	102	17.5		53.0	119	37.2	77	38.8	50	29	08	41	29	77		45	34
20	117	17.7		52.0	134	04.0	78	29.0	52	23	05	39	25	78		49	32
21	132	17.8		51.1	148	30.7	77	19.1	54	17	5	01	37	20	79		53
22	147	18.0		50.1	162	57.4	77	-9	56	09	4	56	34	14	82	17	57
23	162	18.1		49.1	177	24.1	77	-8	58	4	01	51	32	08	84	18	02
24	177	18.3	-4	48.1	191	50.8	77	-8	60 S	3	51	4	45	5	29	3	00

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 57 ^m 3		Mag: -3.8 PMG: 10 ^h 43 ^m			Mag: +0.1 PMG: 4 ^h 53 ^m			Mag: -2.5 PMG: 0 ^h 19 ^m			Mag: +0.5 PMG: 5 ^h 59 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	165	08.6	199	13.8	-14	36.2	286	42.1	-18	58.9	355	08.6	+5	54.3	
1	180	11.1	214	13.2		35.2	301	43.6		59.1	10	11.3		54.5	
2	195	13.5	229	12.6		34.3	316	45.1		59.3	25	14.1		54.6	
3	210	16.0	244	12.0		33.4	331	46.7		59.6	40	16.8		54.7	
4	225	18.5	259	11.4		32.4	346	48.2	-18	59.8	55	19.6		54.9	
5	240	20.9	274	10.9	-14	31.5	1	49.7	-19	00.0	70	22.4	+5	55.0	
6	255	23.4	289	10.3	-14	30.5	16	51.3	-19	00.2	85	25.1	+5	55.1	
7	270	25.8	304	09.7		29.6	31	52.8		00.4	100	27.9		55.3	
8	285	28.3	319	09.1		28.7	46	54.3		00.6	115	30.7		55.4	
9	300	30.8	334	08.5		27.7	61	55.9		00.8	130	33.4		55.5	
10	315	33.2	349	08.0		26.8	76	57.4		01.0	145	36.2		55.7	
11	330	35.7	4	07.4	-14	25.8	91	58.9	-19	01.3	160	39.0	+5	55.8	
12	345	38.2	19	06.8	-14	24.9	107	00.5	-19	01.5	175	41.7	+5	55.9	
13	0	40.6	34	06.2		23.9	122	02.0		01.7	190	44.5		56.0	
14	15	43.1	49	05.6		23.0	137	03.5		01.9	205	47.3		56.2	
15	30	45.6	64	05.1		22.0	152	05.1		02.1	220	50.0		56.3	
16	45	48.0	79	04.5		21.1	167	06.6		02.3	235	52.8		56.4	
17	60	50.5	94	03.9	-14	20.2	182	08.2	-19	02.5	250	55.6	+5	56.6	
18	75	53.0	109	03.3	-14	19.2	197	09.7	-19	02.7	265	58.3	+5	56.7	
19	90	55.4	124	02.8		18.3	212	11.2		03.0	281	01.1		56.8	
20	105	57.9	139	02.2		17.3	227	12.8		03.2	296	03.8		57.0	
21	121	00.3	154	01.6		16.4	242	14.3		03.4	311	06.6		57.1	
22	136	02.8	169	01.0		15.4	257	15.8		03.6	326	09.4		57.2	
23	151	05.3	184	00.5		14.5	272	17.4		03.8	341	12.1		57.3	
24	166	07.7	198	59.9	-14	13.5	287	18.9	-19	04.0	356	14.9	+5	57.5	
Dif	—		-6			+9	+15			-2			+28		
													+1		
													+24		

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: 28 ^d 4 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 5 20 ^h : 60 ^h 7 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	h m m	h m m	
0	177	18.3	-4 48.1	191	50.8	-8 49.0	78	60 N	17 46	18 27	19 16	6 22 23	17 09 91			
1	192	18.4		206	17.6		101	58	48	27	13	18 25	12 88			
2	207	18.6	46.2	220	44.3	28.7	102	56	50	27	10	14 27	15 86			
3	222	18.7	45.2	235	11.0	18.4	103	54	51	27	08	11 29	18 83			
4	237	18.9	44.2	249	37.7	-8 08.0	104	52	53	27	06	08 30	20 82			
5	252	19.0	-4 43.3	264	04.4	-7 57.6	104	50	17 54	18 26	19 04	6 05 32	17 23 79			
6	267	19.2	-4 42.3	278	31.2	-7 47.1	105	45	17 57	18 27	19 01	5 58 36	17 27 76			
7	282	19.3	41.3	292	57.9	36.6	105	40	18 00	27	18 58	53 39	31 73			
8	297	19.5	40.3	307	24.6	26.0	106	35	02	27	57	48 42	35 69			
9	312	19.7	39.3	321	51.3	15.4	106	30	04	28	56	44 45	38 67			
10	327	19.8	38.4	336	18.0	-7 04.7	107	20	08	30	55	37 49	43 62			
11	342	20.0	-4 37.4	350	44.7	-6 53.9	108	10 N	18 11	18 32	18 56	5 31 52	17 47 59			
12	357	20.1	-4 36.4	5	11.4	-6 43.1	108	0	18 14	18 35	18 59	5 25 56	17 52 55			
13	12	20.3	35.4	19	38.2	32.3	108	10 S	17	38	19 03	19 59	17 56 51			
14	27	20.4	34.5	34	04.9	21.4	109	20	21	43	09	13 63	18 00 48			
15	42	20.6	33.5	48	31.6	-6 10.4	110	30	25	49	17	06 67	05 44			
16	57	20.7	32.5	62	58.3	-5 59.4	110	35	27	53	23	5 02 69	08 41			
17	72	20.9	-4 31.5	77	25.0	-5 48.4	110	40	18 30	18 57	19 30	4 58 71	18 11 39			
18	87	21.0	-4 30.6	91	51.7	-5 37.3	111	45	18 33	19 03	19 38	4 52 75	18 15 35			
19	102	21.2	29.6	106	18.5	26.2	111	50	37	10	49	46 78	19 32			
20	117	21.4	28.6	120	45.2	15.0	112	52	39	13	19 55	43 80	21 30			
21	132	21.5	27.6	135	11.9	-5 03.8	112	54	41	17	20 01	39 83	23 28			
22	147	21.7	26.6	149	38.6	-4 52.5	113	56	43	21	08	36 84	25 27			
23	162	21.8	25.7	164	05.3	41.2	113	58	46	26	16	32 87	28 24			
24	177	22.0	-4 24.7	178	32.0	-4 29.9	113	60 S	18 49	19 31	20 25	4 27 90	18 31 21			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 53 ^m 4		Mag: -3.8 PMG: 10 ^h 44 ^m			Mag: +0.1 PMG: 4 ^h 50 ^m			Mag: -2.5 PMG: 0 ^h 15 ^m			Mag: +0.5 PMG: 5 ^h 55 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	166	07.7	198 59.9	-14 13.5	287 18.9	-19 04.0	356 14.9	+5 57.5	270 58.6	-21 00.3						
1	181	10.2	213 59.3	12.5	302 20.5	04.2	11 17.7	57.6	286 01.0	00.3						
2	196	12.7	228 58.7	11.6	317 22.0	04.4	26 20.4	57.7	301 03.4	00.3						
3	211	15.1	243 58.2	10.6	332 23.6	04.6	41 23.2	57.9	316 05.8	00.3						
4	226	17.6	258 57.6	09.7	347 25.1	04.8	56 26.0	58.0	331 08.2	00.3						
5	241	20.1	273 57.0	-14 08.7	2 26.7	-19 05.1	71 28.7	+5 58.1	346 10.6	-21 00.3						
6	256	22.5	288 56.5	-14 07.8	17 28.2	-19 05.3	86 31.5	+5 58.3	1 13.0	-21 00.3						
7	271	25.0	303 55.9	06.8	32 29.7	05.5	101 34.3	58.4	16 15.4	00.3						
8	286	27.5	318 55.3	05.9	47 31.3	05.7	116 37.0	58.5	31 17.7	00.3						
9	301	29.9	333 54.7	04.9	62 32.8	05.9	131 39.8	58.6	46 20.1	00.3						
10	316	32.4	348 54.2	03.9	77 34.4	06.1	146 42.6	58.8	61 22.5	00.3						
11	331	34.8	3 53.6	-14 03.0	92 35.9	-19 06.3	161 45.3	+5 58.9	76 24.9	-21 00.3						
12	346	37.3	18 53.0	-14 02.0	107 37.5	-19 06.5	176 48.1	+5 59.0	91 27.3	-21 00.3						
13	1	39.8	33 52.5	01.1	122 39.0	06.7	191 50.9	59.2	106 29.7	00.3						
14	16	42.2	48 51.9	-14 00.1	137 40.6	06.9	206 53.6	59.3	121 32.1	00.3						
15	31	44.7	63 51.3	-13 59.1	152 42.1	07.1	221 56.4	59.4	136 34.5	00.3						
16	46	47.2	78 50.8	58.2	167 43.7	07.4	236 59.2	59.5	151 36.9	00.3						
17	61	49.6	93 50.2	-13 57.2	182 45.2	-19 07.6	252 01.9	+5 59.7	166 39.2	-21 00.3						
18	76	52.1	108 49.6	-13 56.2	197 46.8	-19 07.8	267 04.7	+5 59.8	181 41.6	-21 00.3						
19	91	54.6	123 49.1	55.3	212 48.3	08.0	282 07.4	+5 59.9	196 44.0	00.3						
20	106	57.0	138 48.5	54.3	227 49.9	08.2	297 10.2	+6 00.1	211 46.4	00.3						
21	121	59.5	153 48.0	53.3	242 51.4	08.4	312 13.0	00.2	226 48.8	00.3						
22	137	01.9	168 47.4	52.4	257 53.0	08.6	327 15.7	00.3	241 51.2	00.3						
23	152	04.4	183 46.8	51.4	272 54.6	08.8	342 18.5	00.5	256 53.6	00.3						
24	167	06.9	198 46.3	-13 50.4	287 56.1	-19 09.0	357 21.3	+6 00.6	271 56.0	-21 00.3						
Dif	—		-6	+10	+15	-2	+28	+1	+24	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 12 ^h 10 ^m 4			Edad: 29 ^d 4 PHE { 4 ^h : 60'8 12 ^h : 60'9 20 ^h : 61'0 R°: 55 ^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	22.0	-4	24.7	178	32.0	-4	29.9	5	04	5	52	6	34	6	45	21		
1	192	22.1		23.7	192	58.7	77	18.5	07	53		32		43	23		40	89	
2	207	22.3		22.7	207	25.5	78	-4	10	53		30		41	26		41	86	
3	222	22.5		21.7	221	52.2	77	-3	12	53		29		40	28		41	84	
4	237	22.6		20.8	236	18.9	77	44.3	14	54		27		38	30		42	82	
5	252	22.8	-4	19.8	250	45.6	77	-3	16	54	5	26	6	37	32	18	42	80	
6	267	22.9	-4	18.8	265	12.3	77	-3	20	54	5	23	6	34	36	18	43	76	
7	282	23.1		17.8	279	39.0	77	-3	22	54		21		32	39		44	72	
8	297	23.2		16.9	294	05.7	77	-2	24	53		18		30	42		44	70	
9	312	23.4		15.9	308	32.4	77	46.5	25	53		17		29	43		45	67	
10	327	23.6		14.9	322	59.1	77	34.9	26	51		13		26	48		45	63	
11	342	23.7	-4	13.9	337	25.8	77	-2	25	49	5	10	6	23	52	18	46	59	
12	357	23.9	-4	12.9	351	52.5	77	-2	22	46	5	07	6	21	55	18	47	55	
13	12	24.0		12.0	6	19.2	77	-1	18	43		04		18	59		47	52	
14	27	24.2		11.0	20	45.9	77	48.3	13	39	6	01	16	62		48	48		
15	42	24.3		10.0	35	12.6	77	36.5	5	04	33	5	57	13	67		49	44	
16	57	24.5		09.0	49	39.3	77	24.8	4	59	29	54		11	70		49	42	
17	72	24.7	-4	08.0	64	06.0	77	-1	52	24	5	52	6	09	73	18	50	38	
18	87	24.8	-4	07.1	78	32.7	77	-1	43	19	5	48	6	07	76	18	50	36	
19	102	25.0		06.1	92	59.4	77	-0	32	12		45		04	80		51	31	
20	117	25.1		05.1	107	26.0	76	37.8	27	09		43		03	82		51	30	
21	132	25.3		04.1	121	52.7	77	26.1	21	05		41		02	84		51	28	
22	147	25.5		03.1	136	19.4	77	14.3	14	5	01	39		6	00	87	52	26	
23	162	25.6		02.2	150	46.1	77	-0	6	4	56	36		5	59	88	52	24	
24	177	25.8	-4	01.2	165	12.7	76	+0	57	4	51	5	34	5	57	91	18	52	21
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 12 ^h 49 ^m 4		Mag: -3.8 PMG: 10 ^h 45 ^m		Mag: +0.1 PMG: 4 ^h 48 ^m		Mag: -2.5 PMG: 0 ^h 11 ^m		Mag: +0.4 PMG: 5 ^h 51 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	167	06.9	198	46.3	-13	50.4	357	21.3	+6	00.6									
1	182	09.3	213	45.7		49.5	12	24.0		00.7									
2	197	11.8	228	45.1		48.5	27	26.8		00.8									
3	212	14.3	243	44.6		47.5	42	29.6		01.0									
4	227	16.7	258	44.0		46.6	57	32.3		01.1									
5	242	19.2	273	43.5	-13	45.6	72	35.1	+6	01.2									
6	257	21.7	288	42.9	-13	44.6	87	37.9	+6	01.4									
7	272	24.1	303	42.3		43.6	102	40.6		01.5									
8	287	26.6	318	41.8		42.7	117	43.4		01.6									
9	302	29.1	333	41.2		41.7	132	46.2		01.8									
10	317	31.5	348	40.7		40.7	147	48.9		01.9									
11	332	34.0	3	40.1	-13	39.7	162	51.7	+6	02.0									
12	347	36.4	18	39.5	-13	38.8	177	54.5	+6	02.1									
13	2	38.9	33	39.0		37.8	192	57.2		02.3									
14	17	41.4	48	38.4		36.8	208	00.0		02.4									
15	32	43.8	63	37.9		35.8	223	02.8		02.5									
16	47	46.3	78	37.3		34.8	238	05.5		02.7									
17	62	48.8	93	36.8	-13	33.9	253	08.3	+6	02.8									
18	77	51.2	108	36.2	-13	32.9	268	11.1	+6	02.9									
19	92	53.7	123	35.7		31.9	283	13.8		03.0									
20	107	56.2	138	35.1		30.9	298	16.6		03.2									
21	122	58.6	153	34.6		29.9	313	19.3		03.3									
22	138	01.1	168	34.0		29.0	328	22.1		03.4									
23	153	03.5	183	33.4		28.0	343	24.9		03.6									
24	168	06.0	198	32.9	-13	27.0	358	27.6	+6	03.7									
Dif	—		-6	+10		+16	-2	+28		+1									
										+24									

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°1		Edad: 30 ^d 4 PHE { 4 ^h : 61°0 12 ^h : 61°0 20 ^h : 60°9 R°: 56 ^m															
	PMG: 12 ^h 10 ^m 2		SD: 16°6 PMG: 13 ^h 29 ^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	25.8	-4	01.2	165	12.7	+0 09.2	60 N	17 51	18 32	19 21	7 06	21	20 11	90			
1	192	25.9	-4	00.2	179	39.4	21.0 ¹¹⁸	58	52	32	17	06	25	09	87			
2	207	26.1	-3	59.2	194	06.1	32.8 ¹¹⁸	56	54	31	14	07	27	07	85			
3	222	26.3		58.2	208	32.7	44.5 ¹¹⁷	54	55	30	12	08	28	05	83			
4	237	26.4		57.3	222	59.4	+0 56.3 ¹¹⁸	52	56	30	09	08	31	04	80			
5	252	26.6	-3	56.3	237	26.0	+1 08.1 ¹¹⁸	50	17 57	18 30	19 07	7 09	32	20 02	79			
6	267	26.7	-3	55.3	251	52.6	+1 19.8 ¹¹⁷	45	18 00	18 29	19 03	7 10	36	19 59	75			
7	282	26.9		54.3	266	19.3	31.6 ¹¹⁸	40	02	29	19 00	11	39	56	72			
8	297	27.1		53.3	280	45.9	43.3 ¹¹⁷	35	04	29	18 58	12	41	54	69			
9	312	27.2		52.3	295	12.5	+1 55.0 ¹¹⁷	30	05	29	57	12	45	52	67			
10	327	27.4		51.4	309	39.2	+2 06.7 ¹¹⁷	20	08	30	56	14	48	48	63			
11	342	27.5	-3	50.4	324	05.8	+2 18.4 ¹¹⁷	10 N	18 11	18 32	18 56	7 15	52	19 45	59			
12	357	27.7	-3	49.4	338	32.4	+2 30.1 ¹¹⁷	0	18 13	18 34	18 58	7 16	56	19 42	56			
13	12	27.9		48.4	352	59.0	41.7 ¹¹⁶	10 S	16	37	19 02	17	59	39	53			
14	27	28.0		47.4	7	25.6	+2 53.4 ¹¹⁷	20	19	41	07	18	63	36	49			
15	42	28.2		46.5	21	52.2	+3 05.0 ¹¹⁶	30	23	47	15	20	67	33	44			
16	57	28.4		45.5	36	18.7	16.6 ¹¹⁶	35	25	50	20	21	69	31	42			
17	72	28.5	-3	44.5	50	45.3	+3 28.2 ¹¹⁶	40	18 27	18 54	19 26	7 22	72	19 28	40			
18	87	28.7	-3	43.5	65	11.9	+3 39.7 ¹¹⁵	45	18 30	18 59	19 34	7 23	76	19 26	36			
19	102	28.8		42.5	79	38.5	+3 51.2 ¹¹⁵	50	33	19 06	45	24	80	22	33			
20	117	29.0		41.5	94	05.0	+4 02.7 ¹¹⁵	52	35	09	50	25	82	21	31			
21	132	29.2		40.6	108	31.6	14.2 ¹¹⁵	54	36	12	19 55	26	83	19	30			
22	147	29.3		39.6	122	58.1	25.6 ¹¹⁴	56	38	16	20 02	27	85	18	27			
23	162	29.5		38.6	137	24.6	37.0 ¹¹⁴	58	40	20	09	27	89	16	25			
24	177	29.7	-3	37.6	151	51.2	+4 48.4 ¹¹⁴	60 S	18 43	19 25	20 18	7 28	91	19 13	23			
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO							
	PMG: 12 ^h 45 ^m 5		Mag: -3.8 PMG: 10 ^h 46 ^m			Mag: +0.1 PMG: 4 ^h 45 ^m			Mag: -2.5 PMG: 0 ^h 06 ^m		Mag: +0.4 PMG: 5 ^h 48 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	168	06.0	198	32.9	-13	27.0	288	33.6	-19	13.9	358	27.6	+6	03.7	272	53.4	-21	00.4
1	183	08.5	213	32.3		26.0	303	35.2		14.1	13	30.4		03.8	287	55.8		00.4
2	198	10.9	228	31.8		25.0	318	36.8		14.3	28	33.2		04.0	302	58.2		00.4
3	213	13.4	243	31.2		24.0	333	38.4		14.5	43	35.9		04.1	318	00.6		00.4
4	228	15.9	258	30.7		23.0	348	39.9		14.7	58	38.7		04.2	333	03.0		00.4
5	243	18.3	273	30.1	-13	22.1	3	41.5	-19	14.9	73	41.5	+6	04.3	348	05.4	-21	00.4
6	258	20.8	288	29.6	-13	21.1	18	43.1	-19	15.1	88	44.2	+6	04.5	3	07.8	-21	00.4
7	273	23.3	303	29.0		20.1	33	44.7		15.3	103	47.0		04.6	18	10.2		00.4
8	288	25.7	318	28.5		19.1	48	46.2		15.5	118	49.8		04.7	33	12.6		00.4
9	303	28.2	333	27.9		18.1	63	47.8		15.7	133	52.5		04.9	48	15.0		00.4
10	318	30.7	348	27.4		17.1	78	49.4		15.9	148	55.3		05.0	63	17.4		00.4
11	333	33.1	3	26.9	-13	16.1	93	51.0	-19	16.1	163	58.1	+6	05.1	78	19.8	-21	00.4
12	348	35.6	18	26.3	-13	15.1	108	52.5	-19	16.3	179	00.8	+6	05.2	93	22.2	-21	00.4
13	3	38.0	33	25.8		14.1	123	54.1		16.5	194	03.6		05.4	108	24.6		00.4
14	18	40.5	48	25.2		13.1	138	55.7		16.7	209	06.4		05.5	123	27.0		00.4
15	33	43.0	63	24.7		12.2	153	57.3		16.9	224	09.1		05.6	138	29.3		00.4
16	48	45.4	78	24.1		11.2	168	58.9		17.1	239	11.9		05.8	153	31.7		00.4
17	63	47.9	93	23.6	-13	10.2	184	00.4	-19	17.3	254	14.7	+6	05.9	168	34.1	-21	00.4
18	78	50.4	108	23.0	-13	09.2	199	02.0	-19	17.5	269	17.4	+6	06.0	183	36.5	-21	00.4
19	93	52.8	123	22.5		08.2	214	03.6		17.7	284	20.2		06.1	198	38.9		00.4
20	108	55.3	138	22.0		07.2	229	05.2		17.9	299	22.9		06.3	213	41.3		00.4
21	123	57.8	153	21.4		06.2	244	06.8		18.1	314	25.7		06.4	228	43.7		00.4
22	139	00.2	168	20.9		05.2	259	08.4		18.3	329	28.5		06.5	243	46.1		00.4
23	154	02.7	183	20.3		04.2	274	09.9		18.5	344	31.2		06.7	258	48.5		00.4
24	169	05.1	198	19.8	-13	03.2	289	11.5	-19	18.7	359	34.0	+6	06.8	273	50.9	-21	00.4
Dif	—		-5		+10		+16		-2		+28		+1		+24			

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 09 ^m 9			Edad: 1 ^d 9 PHE { SD: 16'6 PMG: 14 ^h 25 ^m 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'7 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	29.7	-3	37.6	151	51.2	+4	48.4	60 N	4	58	5	46	6	28	7	27	
1	192	29.8		36.6	166	17.7	75	+4	59.7 ¹¹³	58	02	47	26		31	26	36	
2	207	30.0		35.7	180	44.2	75	+5	11.0 ¹¹³	56	05	48	25		34	28	32	
3	222	30.2		34.7	195	10.7	75		22.3 ¹¹³	54	08	49	24		36	31	28	
4	237	30.3		33.7	209	37.2	75		33.5 ¹¹²	52	10	49	23		39	32	24	
5	252	30.5	-3	32.7	224	03.7	75	+5	44.7 ¹¹²	50	5	12	5	49	6	22	7	
6	267	30.6	-3	31.7	238	30.2	75	+5	55.8 ¹¹¹	45	5	16	5	50	6	19	7	
7	282	30.8		30.7	252	56.6	74	+6	06.9 ¹¹¹	40	19	50	17		50	40	08	
8	297	31.0		29.8	267	23.1	75		17.9 ¹¹⁰	35	21	51	16		53	44	21	
9	312	31.1		28.8	281	49.5	74		28.9 ¹¹⁰	30	23	50	14		7	57	45	
10	327	31.3		27.8	296	16.0	75		39.9 ¹¹⁰	20	24	50	12		8	02	49	
11	342	31.5	-3	26.8	310	42.4	74	+6	50.8 ¹⁰⁹	10 N	5	24	5	48	6	09	8	
12	357	31.6	-3	25.8	325	08.8	74	+7	01.6 ¹⁰⁸	0	5	22	5	46	6	07	8	
13	12	31.8		24.8	339	35.3	75		12.4 ¹⁰⁸	10 S	19	43	04		16	59	32	
14	27	32.0		23.9	354	01.7	74		23.2 ¹⁰⁸	20	13	39	6	01	21	63	25	
15	42	32.1		22.9	8	28.1	74		33.9 ¹⁰⁷	30	06	34	5	58	27	67	17	
16	57	32.3		21.9	22	54.5	74		44.5 ¹⁰⁶	35	5	01	31	56	30	69	13	
17	72	32.5	-3	20.9	37	20.8	73	+7	55.1 ¹⁰⁶	40	4	54	5	26	5	54	8	
18	87	32.6	-3	19.9	51	47.2	74	+8	05.6 ¹⁰⁵	45	4	46	5	21	5	51	8	
19	102	32.8		18.9	66	13.6	74		16.1 ¹⁰⁵	50	36	15	48		44	78	19	
20	117	33.0		18.0	80	39.9	73		26.5 ¹⁰⁴	52	31	12	46		47	80	52	
21	132	33.1		17.0	95	06.3	74		36.8 ¹⁰³	54	26	09	45		49	82	49	
22	147	33.3		16.0	109	32.6	73		47.1 ¹⁰³	56	19	05	43		52	84	45	
23	162	33.5		15.0	123	59.0	74	+8	57.3 ¹⁰²	58	12	5	01	41	56	86	41	
24	177	33.6	-3	14.0	138	25.3	73	+9	07.4 ¹⁰¹	60 S	4	03	4	56	5	39	8	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 41 ^m 6		Mag: -3.8 PMG: 10 ^h 47 ^m				Mag: 0.0 PMG: 4 ^h 43 ^m				Mag: -2.5 PMG: 0 ^h 02 ^m				Mag: +0.4 PMG: 5 ^h 44 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	°	°	'	°	°	°	°	'
0	169	05.1	198	19.8	-13	03.2	289	11.5	-19	18.7	359	34.0	+6	06.8	273	50.9	-21	00.4
1	184	07.6	213	19.2		02.2	304	13.1		18.9	14	36.8		06.9	288	53.3		00.4
2	199	10.1	228	18.7		01.2	319	14.7		19.1	29	39.5		07.1	303	55.7		00.4
3	214	12.5	243	18.2	-13	00.2	334	16.3		19.3	44	42.3		07.2	318	58.1		00.4
4	229	15.0	258	17.6	-12	59.2	349	17.9		19.5	59	45.1		07.3	334	00.5		00.4
5	244	17.5	273	17.1	-12	58.2	4	19.5	-19	19.7	74	47.8	+6	07.4	349	02.9	-21	00.4
6	259	19.9	288	16.5	-12	57.2	19	21.0	-19	19.9	89	50.6	+6	07.6	4	05.3	-21	00.4
7	274	22.4	303	16.0		56.2	34	22.6		20.1	104	53.4		07.7	19	07.7		00.4
8	289	24.9	318	15.5		55.2	49	24.2		20.3	119	56.1		07.8	34	10.1		00.4
9	304	27.3	333	14.9		54.2	64	25.8		20.5	134	58.9		08.0	49	12.5		00.4
10	319	29.8	348	14.4		53.2	79	27.4		20.7	150	01.7		08.1	64	14.9		00.4
11	334	32.3	3	13.9	-12	52.1	94	29.0	-19	20.9	165	04.4	+6	08.2	79	17.3	-21	00.4
12	349	34.7	18	13.3	-12	51.1	109	30.6	-19	21.1	180	07.2	+6	08.3	94	19.7	-21	00.4
13	4	37.2	33	12.8		50.1	124	32.2		21.3	195	09.9		08.5	109	22.1		00.4
14	19	39.6	48	12.2		49.1	139	33.8		21.5	210	12.7		08.6	124	24.5		00.4
15	34	42.1	63	11.7		48.1	154	35.4		21.7	225	15.5		08.7	139	27.0		00.4
16	49	44.6	78	11.2		47.1	169	37.0		21.9	240	18.2		08.9	154	29.4		00.4
17	64	47.0	93	10.6	-12	46.1	184	38.6	-19	22.1	255	21.0	+6	09.0	169	31.8	-21	00.4
18	79	49.5	108	10.1	-12	45.1	199	40.2	-19	22.3	270	23.8	+6	09.1	184	34.2	-21	00.4
19	94	52.0	123	09.6		44.1	214	41.8		22.5	285	26.5		09.2	199	36.6		00.4
20	109	54.4	138	09.0		43.1	229	43.4		22.7	300	29.3		09.4	214	39.0		00.4
21	124	56.9	153	08.5		42.1	244	45.0		22.8	315	32.1		09.5	229	41.4		00.4
22	139	59.4	168	08.0		41.0	259	46.6		23.0	330	34.8		09.6	244	43.8		00.4
23	155	01.8	183	07.4		40.0	274	48.2		23.2	345	37.6		09.8	259	46.2		00.5
24	170	04.3	198	06.9	-12	39.0	289	49.8	-19	23.4	0	40.4	+6	09.9	274	48.6	-21	00.5
Dif	—		-5		+10		+16		-2		-8972		+1		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 09 ^m 6			Edad: 2 ^d 9 PHE { 4 ^h : 60'5 SD: 16'5 12 ^h : 60'3 PMG: 15 ^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 m	h m m	h m m	
0	177	33.6	-3 14.0	138	25.3	+9 07.4	73	60 N	17 56	18 37	19 26	7 51 28	23 09 82		
1	192	33.8		152	51.6		101	58	57	36	22	7 57 30	23 01 80		
2	207	34.0	12.1	167	17.9	27.5	100	56	58	35	19	8 02 33	22 54 78		
3	222	34.1	11.1	181	44.2	37.5	100	54	17 59	34	16	07 34	48 76		
4	237	34.3	10.1	196	10.5	47.3	98	52	18 00	34	13	11 36	43 74		
5	252	34.5	-3 09.1	210	36.8	+9 57.1	98	50	18 01	18 33	19 11	8 15 38	22 38 73		
6	267	34.6	-3 08.1	225	03.0	+10 06.9	98	45	18 03	18 32	19 06	8 23 41	22 28 70		
7	282	34.8	07.1	239	29.3	16.5	96	40	04	31	02	30 44	19 68		
8	297	35.0	06.1	253	55.5	26.1	96	35	05	31	19 00	37 45	11 66		
9	312	35.1	05.2	268	21.8	35.6	95	30	07	31	18 58	42 47	22 05 64		
10	327	35.3	04.2	282	48.0	45.0	94	20	09	31	56	8 51 51	21 53 62		
11	342	35.5	-3 03.2	297	14.3	+10 54.4	94	10 N	18 11	18 32	18 56	9 00 53	21 44 58		
12	357	35.6	-3 02.2	311	40.5	+11 03.7	93	0	18 13	18 34	18 58	9 08 56	21 34 57		
13	12	35.8	01.2	326	06.7	12.9	92	10 S	15	36	19 00	15 59	25 54		
14	27	36.0	-3 00.2	340	32.9	22.0	91	20	17	39	05	24 62	15 52		
15	42	36.1	-2 59.3	354	59.1	31.0	90	30	20	44	12	34 65	21 04 48		
16	57	36.3	58.3	9	25.3	39.9	89	35	22	47	17	39 67	20 57 47		
17	72	36.5	-2 57.3	23	51.5	+11 48.8	89	40	18 24	18 51	19 23	9 46 69	20 50 45		
18	87	36.6	-2 56.3	38	17.7	+11 57.6	88	45	18 26	18 55	19 30	9 53 72	20 41 43		
19	102	36.8	55.3	52	43.9	+12 06.3	87	50	29	19 01	40	10 02 75	31 40		
20	117	37.0	54.3	67	10.0	14.9	86	52	30	04	45	07 76	26 39		
21	132	37.2	53.3	81	36.2	23.4	85	54	31	07	50	11 78	21 37		
22	147	37.3	52.4	96	02.3	31.8	84	56	33	10	19 56	16 81	15 35		
23	162	37.5	51.4	110	28.5	40.2	84	58	35	14	20 03	22 83	09 33		
24	177	37.7	-2 50.4	124	54.6	+12 48.4	82	60 S	18 37	19 19	20 11	10 29 85	20 02 30		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 37 ^m 6		Mag: -3.8 PMG: 10 ^h 48 ^m			Mag: 0.0 PMG: 4 ^h 40 ^m			Mag: -2.5 PMG: 23 ^h 53 ^m			Mag: +0.4 PMG: 5 ^h 40 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	170	04.3	198	06.9	-12 39.0	289	49.8	-19 23.4	0 40.4	+6 09.9	274	48.6	-21 00.5		
1	185	06.7	213	06.4	38.0	304	51.4	23.6	15 43.1	10.0	289	51.0	00.5		
2	200	09.2	228	05.9	37.0	319	53.0	23.8	30 45.9	10.1	304	53.4	00.5		
3	215	11.7	243	05.3	36.0	334	54.6	24.0	45 48.7	10.3	319	55.8	00.5		
4	230	14.1	258	04.8	34.9	349	56.2	24.2	60 51.4	10.4	334	58.2	00.5		
5	245	16.6	273	04.3	-12 33.9	4	57.8	-19 24.4	75 54.2	+6 10.5	350	00.6	-21 00.5		
6	260	19.1	288	03.7	-12 32.9	19	59.4	-19 24.6	90 56.9	+6 10.6	5	03.0	-21 00.5		
7	275	21.5	303	03.2	31.9	35	01.0	24.8	105 59.7	10.8	20	05.4	00.5		
8	290	24.0	318	02.7	30.9	50	02.6	25.0	121 02.5	10.9	35	07.8	00.5		
9	305	26.5	333	02.2	29.9	65	04.2	25.2	136 05.2	11.0	50	10.2	00.5		
10	320	28.9	348	01.6	28.8	80	05.8	25.4	151 08.0	11.2	65	12.6	00.5		
11	335	31.4	3	01.1	-12 27.8	95	07.4	-19 25.6	166 10.8	+6 11.3	80	15.0	-21 00.5		
12	350	33.9	18	00.6	-12 26.8	110	09.0	-19 25.8	181 13.5	+6 11.4	95	17.4	-21 00.5		
13	5	36.3	33	00.1	25.8	125	10.6	25.9	196 16.3	11.5	110	19.8	00.5		
14	20	38.8	47	59.5	24.8	140	12.2	26.1	211 19.1	11.7	125	22.3	00.5		
15	35	41.2	62	59.0	23.7	155	13.9	26.3	226 21.8	11.8	140	24.7	00.5		
16	50	43.7	77	58.5	22.7	170	15.5	26.5	241 24.6	11.9	155	27.1	00.5		
17	65	46.2	92	58.0	-12 21.7	185	17.1	-19 26.7	256 27.3	+6 12.1	170	29.5	-21 00.5		
18	80	48.6	107	57.4	-12 20.7	200	18.7	-19 26.9	271 30.1	+6 12.2	185	31.9	-21 00.5		
19	95	51.1	122	56.9	19.6	215	20.3	27.1	286 32.9	12.3	200	34.3	00.5		
20	110	53.6	137	56.4	18.6	230	21.9	27.3	301 35.6	12.4	215	36.7	00.5		
21	125	56.0	152	55.9	17.6	245	23.5	27.5	316 38.4	12.6	230	39.1	00.5		
22	140	58.5	167	55.3	16.6	260	25.1	27.7	331 41.2	12.7	245	41.5	00.5		
23	156	01.0	182	54.8	15.5	275	26.8	27.9	346 43.9	12.8	260	43.9	00.5		
24	171	03.4	197	54.3	-12 14.5	290	28.4	-19 28.1	1 46.7	+6 12.9	275	46.3	-21 00.5		
Dif	—		-5		+10	+16		-2	+28		+1	+24			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 3 ^d 9	PHE {	SD: 16'3		R°: 56 ^m								
	PMG: 12 ^h 09 ^m 4								PMG: 16 ^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	177	37.7	-2 50.4	124	54.6	+12 48.4	82	60 N	4 52	5 40	6 22	8 19	34	***	***	***
1	192	37.8		139	20.8	+12 56.6	71	58		42	21	27	37	***	***	***
2	207	38.0		153	46.9	+13 04.7	81	56	4 59	43	20	35	38	***	***	***
3	222	38.2		168	13.1		72	54	5 03	44	19	41	40	***	***	***
4	237	38.3		182	39.2		71	52	05	44	18	47	41	23	57	68
5	252	38.5	-2 45.5	197	05.3	+13 28.3	78	50	5 08	5 45	6 17	8 53	42	23	51	67
6	267	38.7	-2 44.5	211	31.5	+13 36.0	77	45	5 12	5 46	6 16	9 04	45	23	38	65
7	282	38.9		225	57.6		71	40	16	47	14	14	46		27	63
8	297	39.0		240	23.7		71	35	18	48	13	22	48		17	62
9	312	39.2		254	49.8	+13 58.5	74	30	20	48	12	29	50	23	09	61
10	327	39.4		269	15.9	+14 05.8	73	20	22	48	10	42	52	22	55	59
11	342	39.5	-2 39.5	283	42.1	+14 13.0	72	10 N	5 23	5 47	6 08	9 53	54	22	42	58
12	357	39.7	-2 38.6	298	08.2	+14 20.2	71	0	5 21	5 45	6 06	10 04	56	22	31	56
13	12	39.9		312	34.3		71	10 S	19	43	04	14	58		19	55
14	27	40.0		327	00.4		71	20	14	40	6 02	26	60	22	07	52
15	42	40.2		341	26.5		71	30	07	35	5 59	39	62	21	52	51
16	57	40.4		355	52.7		72	35	5 03	32	58	46	64		44	50
17	72	40.6	-2 33.6	10	18.8	+14 54.2	67	40	4 57	5 29	5 56	10 55	66	21	35	48
18	87	40.7	-2 32.6	24	44.9	+15 00.7	65	45	4 49	5 24	5 54	11 05	68	21	24	47
19	102	40.9		39	11.0		71	50	40	19	51	17	70		11	45
20	117	41.1		53	37.2		72	52	35	16	50	23	71	21	05	43
21	132	41.3		68	03.3		71	54	30	13	49	29	73	20	58	43
22	147	41.4		82	29.4		71	56	24	10	47	37	74		50	42
23	162	41.6		96	55.6		72	58	17	06	45	45	75		42	40
24	177	41.8	-2 26.7	111	21.7	+15 37.6	59	60 S	4 09	5 01	5 44	11 54	77	20	32	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 33 ^m 7		Mag: -3.8 PMG: 10 ^h 49 ^m		Mag: 0.0 PMG: 4 ^h 38 ^m		Mag: -2.5 PMG: 23 ^h 49 ^m		Mag: +0.4 PMG: 5 ^h 36 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	171	03.4	197	54.3	-12	14.5	290	28.4	-19	28.1	1	46.7	+6	12.9	275	46.3	-21	00.5
1	186	05.9	212	53.8		13.5	305	30.0		28.2	16	49.5		13.1	290	48.7		00.5
2	201	08.4	227	53.3		12.4	320	31.6		28.4	31	52.2		13.2	305	51.1		00.5
3	216	10.8	242	52.7		11.4	335	33.2		28.6	46	55.0		13.3	320	53.6		00.5
4	231	13.3	257	52.2		10.4	350	34.8		28.8	61	57.8		13.5	335	56.0		00.5
5	246	15.7	272	51.7	-12	09.3	5	36.5	-19	29.0	77	00.5	+6	13.6	350	58.4	-21	00.5
6	261	18.2	287	51.2	-12	08.3	20	38.1	-19	29.2	92	03.3	+6	13.7	6	00.8	-21	00.5
7	276	20.7	302	50.7		07.3	35	39.7		29.4	107	06.0		13.8	21	03.2		00.5
8	291	23.1	317	50.1		06.2	50	41.3		29.6	122	08.8		14.0	36	05.6		00.5
9	306	25.6	332	49.6		05.2	65	43.0		29.8	137	11.6		14.1	51	08.0		00.5
10	321	28.1	347	49.1		04.2	80	44.6		30.0	152	14.3		14.2	66	10.4		00.5
11	336	30.5	2	48.6	-12	03.1	95	46.2	-19	30.1	167	17.1	+6	14.3	81	12.8	-21	00.5
12	351	33.0	17	48.1	-12	02.1	110	47.8	-19	30.3	182	19.9	+6	14.5	96	15.2	-21	00.5
13	6	35.5	32	47.6	-12	01.1	125	49.4		30.5	197	22.6		14.6	111	17.7		00.5
14	21	37.9	47	47.0	-12	00.0	140	51.1		30.7	212	25.4		14.7	126	20.1		00.5
15	36	40.4	62	46.5	-11	59.0	155	52.7		30.9	227	28.1		14.9	141	22.5		00.5
16	51	42.8	77	46.0		58.0	170	54.3		31.1	242	30.9		15.0	156	24.9		00.5
17	66	45.3	92	45.5	-11	56.9	185	56.0	-19	31.3	257	33.7	+6	15.1	171	27.3	-21	00.5
18	81	47.8	107	45.0	-11	55.9	200	57.6	-19	31.5	272	36.4	+6	15.2	186	29.7	-21	00.5
19	96	50.2	122	44.5		54.9	215	59.2		31.6	287	39.2		15.4	201	32.1		00.5
20	111	52.7	137	44.0		53.8	231	00.8		31.8	302	42.0		15.5	216	34.5		00.5
21	126	55.2	152	43.4		52.8	246	02.5		32.0	317	44.7		15.6	231	36.9		00.5
22	141	57.6	167	42.9		51.7	261	04.1		32.2	332	47.5		15.7	246	39.4		00.5
23	157	00.1	182	42.4		50.7	276	05.7		32.4	347	50.3		15.9	261	41.8		00.5
24	172	02.6	197	41.9	-11	49.6	291	07.4	-19	32.6	2	53.0	+6	16.0	276	44.2	-21	00.5
Dif	—		-5		+10		+16		-2		+28		+1		+24		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 4 ^d 9		PHE { 4 ^h : 59/2 12 ^h : 58/9 20 ^h : 58/7 R°: 56 ^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	
0	177	41.8	-2	26.7	111	21.7	+15 37.6	60 N	18 01	18 42	19 31	8 53 43	0 31 73	
1	192	41.9		25.7	125	47.9	43.4 58	58	02	41	27	9 04 43	21 71	
2	207	42.1		24.7	140	14.0	49.0 56	56	02	39	23	13 45	12 70	
3	222	42.3		23.8	154	40.2	+15 54.6 56	54	03	38	20	21 46	0 04 69	
4	237	42.5		22.8	169	06.4	+16 00.0 54	52	03	37	17	28 47	** ** *	
5	252	42.6	-2	21.8	183	32.5	+16 05.4 54	50	18 04	18 36	19 14	9 35 47	** ** *	
6	267	42.8	-2	20.8	197	58.7	+16 10.6 52	45	18 05	18 34	19 09	9 49 49	** ** *	
7	282	43.0		19.8	212	24.9	15.7 51	40	06	33	05	10 00 51	** ** *	
8	297	43.2		18.8	226	51.1	20.8 51	35	07	32	02	10 52	** ** *	
9	312	43.3		17.8	241	17.4	25.7 49	30	08	32	19 00	19 52	** ** *	
10	327	43.5		16.9	255	43.6	30.5 48	20	09	31	18 57	34 54	23 54 56	
11	342	43.7	-2	15.9	270	09.8	+16 35.2 47	10 N	18 11	18 32	18 56	10 47 55	23 40 56	
12	357	43.8	-2	14.9	284	36.1	+16 39.8 46	0	18 12	18 33	18 57	11 00 56	23 27 55	
13	12	44.0		13.9	299	02.3	44.2 44	10 S	14	35	18 59	12 57	23 14 54	
14	27	44.2		12.9	313	28.6	48.6 44	20	16	38	19 03	26 58	22 59 54	
15	42	44.4		11.9	327	54.9	52.9 43	30	18	42	10	41 60	43 53	
16	57	44.5		10.9	342	21.2	+16 57.0 41	35	19	44	14	11 50 60	34 53	
17	72	44.7	-2	09.9	356	47.5	+17 01.0 40	40	18 21	18 48	19 19	12 01 60	22 23 52	
18	87	44.9	-2	09.0	11	13.8	+17 05.0 40	45	18 22	18 52	19 26	12 13 62	22 11 51	
19	102	45.1		08.0	25	40.2	08.8 38	50	24	57	35	27 64	21 56 50	
20	117	45.2		07.0	40	06.6	12.5 37	52	25	18 59	40	34 64	48 50	
21	132	45.4		06.0	54	32.9	16.1 36	54	26	19 02	45	42 65	41 49	
22	147	45.6		05.0	68	59.3	19.5 34	56	28	05	50	12 51 65	32 48	
23	162	45.8		04.0	83	25.8	22.9 34	58	29	09	19 56	13 00 67	22 48	
24	177	45.9	-2	03.0	97	52.2	+17 26.2 33	60 S	18 31	19 13	20 04	13 11 68	21 10 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 29 ^m 8		Mag: -3.8 PMG: 10 ^h 50 ^m		Mag: 0.0 PMG: 4 ^h 35 ^m		Mag: -2.5 PMG: 23 ^h 44 ^m		Mag: +0.4 PMG: 5 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	172	02.6	197	41.9	-11	49.6	291	07.4	-19	32.6	2	53.0	+6	16.0	276	44.2	-21	00.5
1	187	05.0	212	41.4		48.6	306	09.0		32.8	17	55.8		16.1	291	46.6		00.5
2	202	07.5	227	40.9		47.6	321	10.6		33.0	32	58.5		16.3	306	49.0		00.5
3	217	10.0	242	40.4		46.5	336	12.3		33.1	48	01.3		16.4	321	51.4		00.5
4	232	12.4	257	39.9		45.5	351	13.9		33.3	63	04.1		16.5	336	53.8		00.5
5	247	14.9	272	39.4	-11	44.4	6	15.5	-19	33.5	78	06.8	+6	16.6	351	56.2	-21	00.5
6	262	17.3	287	38.9	-11	43.4	21	17.2	-19	33.7	93	09.6	+6	16.8	6	58.7	-21	00.5
7	277	19.8	302	38.3		42.3	36	18.8		33.9	108	12.4		16.9	22	01.1		00.5
8	292	22.3	317	37.8		41.3	51	20.4		34.1	123	15.1		17.0	37	03.5		00.5
9	307	24.7	332	37.3		40.2	66	22.1		34.3	138	17.9		17.1	52	05.9		00.5
10	322	27.2	347	36.8		39.2	81	23.7		34.4	153	20.6		17.3	67	08.3		00.5
11	337	29.7	2	36.3	-11	38.2	96	25.4	-19	34.6	168	23.4	+6	17.4	82	10.7	-21	00.5
12	352	32.1	17	35.8	-11	37.1	111	27.0	-19	34.8	183	26.2	+6	17.5	97	13.1	-21	00.5
13	7	34.6	32	35.3		36.1	126	28.6		35.0	198	28.9		17.6	112	15.6		00.5
14	22	37.1	47	34.8		35.0	141	30.3		35.2	213	31.7		17.8	127	18.0		00.5
15	37	39.5	62	34.3		34.0	156	31.9		35.4	228	34.4		17.9	142	20.4		00.5
16	52	42.0	77	33.8		32.9	171	33.6		35.6	243	37.2		18.0	157	22.8		00.5
17	67	44.5	92	33.3	-11	31.9	186	35.2	-19	35.7	258	40.0	+6	18.1	172	25.2	-21	00.5
18	82	46.9	107	32.8	-11	30.8	201	36.9	-19	35.9	273	42.7	+6	18.3	187	27.6	-21	00.5
19	97	49.4	122	32.3		29.7	216	38.5		36.1	288	45.5		18.4	202	30.1		00.5
20	112	51.8	137	31.8		28.7	231	40.1		36.3	303	48.3		18.5	217	32.5		00.5
21	127	54.3	152	31.3		27.6	246	41.8		36.5	318	51.0		18.7	232	34.9		00.5
22	142	56.8	167	30.8		26.6	261	43.4		36.7	333	53.8		18.8	247	37.3		00.5
23	157	59.2	182	30.3		25.5	276	45.1		36.8	348	56.5		18.9	262	39.7		00.5
24	173	01.7	197	29.8	-11	24.5	291	46.7	-19	37.0	3	59.3	+6	19.0	277	42.1	-21	00.5
Dif	—		-5	+10		+16	-2		+28		+1	+24		0				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 5 ^d 9	PHE { 4 ^h : 58 ^h /4 12 ^h : 58 ^h /2 20 ^h : 57 ^h /9	Rº: 54 ^m		Náutico	Civil		Hora	Rº	Hora	Rº
	PMG: 12 ^h 08 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	45.9	-2 03.0	97	52.2	+17 26.2	31	60 N	4 45	5 34	6 16	9 36 51	1 44 61	
1	192	46.1	02.0	112	18.7	29.3	75	58	50	36	15	47 52	32 61	
2	207	46.3	01.1	126	45.1	32.3	74	56	54	38	14	9 58 52	22 60	
3	222	46.5	-2 00.1	141	11.6	35.3	75	54	4 57	39	14	10 07 52	13 60	
4	237	46.6	-1 59.1	155	38.2	38.1	76	52	5 01	40	13	15 53	1 05 60	
5	252	46.8	-1 58.1	170	04.7	40.8	75	50	5 03	5 41	6 13	10 22 53	0 58 59	
6	267	47.0	-1 57.1	184	31.3	43.4	76	45	5 09	5 43	6 12	10 38 53	0 43 58	
7	282	47.2	56.1	198	57.9	45.8	76	40	13	44	11	10 51 53	30 58	
8	297	47.4	55.1	213	24.5	48.2	76	35	16	45	10	11 02 53	19 58	
9	312	47.5	54.1	227	51.1	50.4	76	30	18	46	10	11 54	0 10 57	
10	327	47.7	53.2	242	17.8	52.6	77	20	21	46	08	28 54	*** ** *	
11	342	47.9	-1 52.2	256	44.5	54.6	77	10 N	5 22	5 46	6 07	11 42 54	*** ** *	
12	357	48.1	-1 51.2	271	11.2	56.5	77	0	5 21	5 45	6 06	11 56 54	*** ** *	
13	12	48.2	50.2	285	38.0	58.3	78	10 S	19	43	04	12 09 55	*** ** *	
14	27	48.4	49.2	300	04.7	+18 00.0	77	20	15	40	02	24 55	23 53 55	
15	42	48.6	48.2	314	31.5	+18 01.6	78	30	09	37	6 01	41 55	36 55	
16	57	48.8	47.2	328	58.4	03.1	79	35	5 04	34	5 59	12 50 55	27 54	
17	72	48.9	-1 46.2	343	25.2	+18 04.5	78	40	4 59	5 31	5 58	13 01 56	23 15 55	
18	87	49.1	-1 45.3	357	52.1	+18 05.7	79	45	4 52	5 27	5 56	13 15 55	23 02 55	
19	102	49.3	44.3	12	19.0	06.9	79	50	43	22	54	31 55	22 46 55	
20	117	49.5	43.3	26	46.0	07.9	80	52	39	20	53	38 55	38 56	
21	132	49.6	42.3	41	13.0	08.8	80	54	34	17	52	47 55	30 56	
22	147	49.8	41.3	55	40.0	09.6	80	56	29	14	51	13 56 55	20 56	
23	162	50.0	40.3	70	07.1	10.3	81	58	22	10	50	14 07 55	22 10 56	
24	177	50.2	-1 39.3	84	34.1	+18 10.9	80	60 S	4 15	5 07	5 49	14 19 55	21 57 57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 25 ^m 8		Mag: -3.8 PMG: 10 ^h 50 ^m		Mag: -0.1 PMG: 4 ^h 32 ^m		Mag: -2.5 PMG: 23 ^h 40 ^m		Mag: +0.4 PMG: 5 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	01.7	197	29.8	-11 24.5	291	46.7	-19 37.0	3 59.3	+6 19.0
1	188	04.2	212	29.3	23.4	306	48.4	37.2	19 02.1	19.2
2	203	06.6	227	28.8	22.4	321	50.0	37.4	34 04.8	19.3
3	218	09.1	242	28.3	21.3	336	51.7	37.6	49 07.6	19.4
4	233	11.6	257	27.8	20.3	351	53.3	37.8	64 10.3	19.5
5	248	14.0	272	27.3	-11 19.2	6	55.0	-19 37.9	79 13.1	+6 19.7
6	263	16.5	287	26.8	-11 18.1	21	56.6	-19 38.1	94 15.9	+6 19.8
7	278	18.9	302	26.3	17.1	36	58.3	38.3	109 18.6	19.9
8	293	21.4	317	25.8	16.0	52	00.0	38.5	124 21.4	20.0
9	308	23.9	332	25.3	15.0	67	01.6	38.7	139 24.2	20.2
10	323	26.3	347	24.8	13.9	82	03.3	38.8	154 26.9	20.3
11	338	28.8	2	24.3	-11 12.8	97	04.9	-19 39.0	169 29.7	+6 20.4
12	353	31.3	17	23.8	-11 11.8	112	06.6	-19 39.2	184 32.4	+6 20.5
13	8	33.7	32	23.3	10.7	127	08.2	39.4	199 35.2	20.7
14	23	36.2	47	22.8	09.7	142	09.9	39.6	214 38.0	20.8
15	38	38.7	62	22.3	08.6	157	11.6	39.8	229 40.7	20.9
16	53	41.1	77	21.8	07.5	172	13.2	39.9	244 43.5	21.0
17	68	43.6	92	21.3	-11 06.5	187	14.9	-19 40.1	259 46.2	+6 21.2
18	83	46.1	107	20.8	-11 05.4	202	16.5	-19 40.3	274 49.0	+6 21.3
19	98	48.5	122	20.3	04.3	217	18.2	40.5	289 51.8	21.4
20	113	51.0	137	19.8	03.3	232	19.9	40.7	304 54.5	21.5
21	128	53.4	152	19.3	02.2	247	21.5	40.8	319 57.3	21.7
22	143	55.9	167	18.8	01.1	262	23.2	41.0	335 00.0	21.8
23	158	58.4	182	18.3	-11 00.1	277	24.8	41.2	350 02.8	21.9
24	174	00.8	197	17.8	-10 59.0	292	26.5	-19 41.4	5 05.6	+6 22.0
Dif	—		-5	+11		+17	-2		+28	+1
										+24

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: 6 ^d 9 PHE { SD: 15 ^h 7 PMG: 19 ^h 03 ^m 4 ^h : 57/7 12 ^h : 57/4 20 ^h : 57/2 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	177	50.2	-1	39.3	84	34.1	+18	10.9	60 N	18 06	18 47	19 37	10 27 60	2 45 50
1	192	50.4		38.3	99	01.3		82	58	06	45	32	39 60	33 50
2	207	50.5		37.3	113	28.4		81	56	06	43	27	50 59	22 51
3	222	50.7		36.4	127	55.6		82	54	07	42	23	10 59 59	13 51
4	237	50.9		35.4	142	22.9		83	52	07	41	20	11 08 58	2 05 51
5	252	51.1	-1	34.4	156	50.1	+18	12.3	50	18 07	18 39	19 17	11 15 58	1 57 52
6	267	51.3	-1	33.4	171	17.4	+18	12.3	45	18 08	18 37	19 11	11 31 57	1 41 52
7	282	51.4		32.4	185	44.8		84	40	08	35	07	44 56	28 52
8	297	51.6		31.4	200	12.2		84	35	09	34	03	11 55 56	17 53
9	312	51.8		30.4	214	39.6		84	30	09	33	19 01	12 05 55	1 07 53
10	327	52.0		29.4	229	07.0		84	20	10	32	18 58	22 54	0 50 54
11	342	52.1	-1	28.5	243	34.5	+18	10.5	10 N	18 11	18 32	18 56	12 36 54	0 36 53
12	357	52.3	-1	27.5	258	02.1	+18	09.8	0	18 12	18 32	18 56	12 50 53	0 22 54
13	12	52.5		26.5	272	29.7		86	10 S	13	34	18 58	13 04 52	0 08 54
14	27	52.7		25.5	286	57.3		86	20	14	36	19 02	19 51	** ** *
15	42	52.9		24.5	301	24.9		86	30	15	39	07	36 50	** ** *
16	57	53.0		23.5	315	52.7		88	35	16	42	11	45 50	** ** *
17	72	53.2	-1	22.5	330	20.4	+18	04.8	40	18 17	18 44	19 16	13 57 49	** ** *
18	87	53.4	-1	21.5	344	48.2	+18	03.5	45	18 19	18 48	19 22	14 10 48	23 57 59
19	102	53.6		20.6	359	16.0		88	50	20	52	31	26 47	41 60
20	117	53.8		19.6	13	43.9	+18	00.6	52	21	55	35	33 47	34 60
21	132	53.9		18.6	28	11.8	+17	59.0	54	22	18 57	39	42 46	26 61
22	147	54.1		17.6	42	39.8		90	56	22	19 00	44	14 51 46	16 62
23	162	54.3		16.6	57	07.8		90	58	23	03	50	15 02 44	23 06 63
24	177	54.5	-1	15.6	71	35.9	+17	53.6	60 S	18 24	19 06	19 57	15 14 44	22 54 64

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 21 ^m 9		Mag: -3.8 PMG: 10 ^h 51 ^m		Mag: -0.1 PMG: 4 ^h 30 ^m		Mag: -2.5 PMG: 23 ^h 35 ^m		Mag: +0.4 PMG: 5 ^h 24 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	174	00.8	197	17.8	-10	59.0	292	26.5	-19	41.4
1	189	03.3	212	17.4		57.9	307	28.2		41.6
2	204	05.8	227	16.9		56.9	322	29.8		41.7
3	219	08.2	242	16.4		55.8	337	31.5		41.9
4	234	10.7	257	15.9		54.7	352	33.2		42.1
5	249	13.2	272	15.4	-10	53.7	7	34.8	-19	42.3
6	264	15.6	287	14.9	-10	52.6	22	36.5	-19	42.4
7	279	18.1	302	14.4		51.5	37	38.2		42.6
8	294	20.6	317	13.9		50.4	52	39.9		42.8
9	309	23.0	332	13.4		49.4	67	41.5		43.0
10	324	25.5	347	12.9		48.3	82	43.2		43.2
11	339	27.9	2	12.5	-10	47.2	97	44.9	-19	43.3
12	354	30.4	17	12.0	-10	46.2	112	46.5	-19	43.5
13	9	32.9	32	11.5		45.1	127	48.2		43.7
14	24	35.3	47	11.0		44.0	142	49.9		43.9
15	39	37.8	62	10.5		42.9	157	51.6		44.0
16	54	40.3	77	10.0		41.9	172	53.3		44.2
17	69	42.7	92	09.5	-10	40.8	187	54.9	-19	44.4
18	84	45.2	107	09.1	-10	39.7	202	56.6	-19	44.6
19	99	47.7	122	08.6		38.6	217	58.3		44.8
20	114	50.1	137	08.1		37.5	233	00.0		44.9
21	129	52.6	152	07.6		36.5	248	01.6		45.1
22	144	55.1	167	07.1		35.4	263	03.3		45.3
23	159	57.5	182	06.6		34.3	278	05.0		45.5
24	175	00.0	197	06.2	-10	33.2	293	06.7	-19	45.6
Dif	—		-5		+11		+17		-2	
								+28		+1
									+24	

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 9			Edad: 8 ^d 9 PHE { 4 ^h : 56 ^h 3 12 ^h : 56 ^h 1 20 ^h : 55 ^h 9 PMG: 20 ^h 45 ^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		
0	177	58.8	-0	59	04.1	+16	39.7	60 N	18	11	18	52	12	34	70	4	13	
1	192	59.0		73	33.4 ¹⁰³		35.5 ⁴²	58	11	50	36		44	68		4	03	
2	207	59.2		88	02.7 ¹⁰³		31.2 ⁴³	56	10	48	32		12	53	66	3	54	
3	222	59.4		102	32.1 ¹⁰⁴		26.9 ⁴³	54	10	46	28		13	00	65		46	
4	237	59.6		117	01.6 ¹⁰⁵		22.4 ⁴⁵	52	10	44	24			07	64		39	
5	252	59.7	-0	131	31.1 ¹⁰⁵	+16	17.9 ⁴⁵	50	18	10	18	43	19	21	13	13	63	
6	267	59.9	-0	146	00.7 ¹⁰⁶	+16	13.3 ⁴⁶	45	18	10	18	40	19	14	13	27	60	
7	283	00.1		160	30.3 ¹⁰⁶		08.6 ⁴⁷	40	10	37	09		38	58		3	07	
8	298	00.3		175	00.0 ¹⁰⁷	+16	03.8 ⁴⁸	35	10	36	05		47	57		2	57	
9	313	00.5		189	29.7 ¹⁰⁷	+15	59.0 ⁴⁸	30	10	34	19	02	13	55	55	48	44	
10	328	00.6		203	59.5 ¹⁰⁸		54.0 ⁵⁰	20	11	33	18	58	14	10	52		33	
11	343	00.8	-0	218	29.4 ¹⁰⁹	+15	49.0 ⁵⁰	10 N	18	11	18	56	14	22	50	2	20	
12	358	01.0	-0	232	59.3 ¹⁰⁹	+15	44.0 ⁵⁰	0	18	11	18	56	14	34	48	2	08	
13	13	01.2		247	29.2 ¹⁰⁹		38.8 ⁵²	10 S	12	33	18	57		45	47	1	55	
14	28	01.4		261	59.2 ¹¹⁰		33.6 ⁵²	20	12	34	19	00	14	58	44	42	53	
15	43	01.6		276	29.2 ¹¹⁰		28.3 ⁵³	30	13	37	05		15	12	42		27	
16	58	01.7		290	59.3 ¹¹¹		22.9 ⁵⁴	35	14	39	08		20	40		18	56	
17	73	01.9	-0	305	29.5 ¹¹²	+15	17.4 ⁵⁵	40	18	14	18	41	19	13	15	29	39	
18	88	02.1	-0	319	59.7 ¹¹²	+15	11.9 ⁵⁵	45	18	15	18	44	19	19	15	40	37	
19	103	02.3		334	30.0 ¹¹³		06.3 ⁵⁶	50	16	48	26		53	34		41	62	
20	118	02.5		349	00.3 ¹¹³	+15	00.6 ⁵⁷	52	16	50	30		15	59	33		34	
21	133	02.7		3	30.6 ¹¹³	+14	54.9 ⁵⁷	54	17	52	34		16	06	32		27	
22	148	02.8		30.1	18	01.1 ¹¹⁵	49.1 ⁵⁸	56	17	54	39		14	30		18	66	
23	163	03.0		29.2	32	31.5 ¹¹⁴	43.2 ⁵⁹	58	18	57	44		22	29		0	09	
24	178	03.2	-0	28.2	47	02.0 ¹¹⁵	+14	37.2 ⁶⁰	18	18	19	00	19	50	16	32	26	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 14 ^m 0		Mag: -3.8 PMG: 10 ^h 53 ^m				Mag: -0.2 PMG: 4 ^h 24 ^m				Mag: -2.5 PMG: 23 ^h 26 ^m				Mag: +0.4 PMG: 5 ^h 17 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	175	59.1	196	54.7	-10	07.2	293	47.3	-19	49.8	7	18.0	+6	28.0	280	36.7	-21	00.4
1	191	01.6	211	54.2		06.1	308	49.0		50.0	22	20.7		28.1	295	39.1		00.4
2	206	04.0	226	53.7		05.0	323	50.7		50.2	37	23.5		28.2	310	41.5		00.4
3	221	06.5	241	53.3		03.9	338	52.4		50.3	52	26.2		28.4	325	44.0		00.4
4	236	09.0	256	52.8		02.8	353	54.1		50.5	67	29.0		28.5	340	46.4		00.4
5	251	11.4	271	52.3	-10	01.7	8	55.8	-19	50.7	82	31.8	+6	28.6	355	48.8	-21	00.4
6	266	13.9	286	51.8	-10	00.6	23	57.5	-19	50.8	97	34.5	+6	28.7	10	51.2	-21	00.4
7	281	16.4	301	51.4	-9	59.5	38	59.2		51.0	112	37.3		28.8	25	53.7		00.4
8	296	18.8	316	50.9		58.4	54	00.9		51.2	127	40.0		29.0	40	56.1		00.4
9	311	21.3	331	50.4		57.3	69	02.6		51.4	142	42.8		29.1	55	58.5		00.4
10	326	23.8	346	50.0		56.2	84	04.3		51.5	157	45.5		29.2	71	01.0		00.4
11	341	26.2	1	49.5	-9	55.1	99	06.0	-19	51.7	172	48.3	+6	29.3	86	03.4	-21	00.4
12	356	28.7	16	49.0	-9	54.0	114	07.7	-19	51.9	187	51.0	+6	29.5	101	05.8	-21	00.4
13	11	31.2	31	48.5		52.9	129	09.4		52.0	202	53.8		29.6	116	08.3		00.4
14	26	33.6	46	48.1		51.8	144	11.2		52.2	217	56.6		29.7	131	10.7		00.4
15	41	36.1	61	47.6		50.7	159	12.9		52.4	232	59.3		29.8	146	13.1		00.4
16	56	38.5	76	47.1		49.6	174	14.6		52.5	248	02.1		29.9	161	15.6		00.4
17	71	41.0	91	46.7	-9	48.5	189	16.3	-19	52.7	263	04.8	+6	30.1	176	18.0	-21	00.4
18	86	43.5	106	46.2	-9	47.4	204	18.0	-19	52.9	278	07.6	+6	30.2	191	20.4	-21	00.3
19	101	45.9	121	45.7		46.3	219	19.7		53.1	293	10.3		30.3	206	22.9		00.3
20	116	48.4	136	45.3		45.2	234	21.4		53.2	308	13.1		30.4	221	25.3		00.3
21	131	50.9	151	44.8		44.1	249	23.1		53.4	323	15.8		30.6	236	27.7		00.3
22	146	53.3	166	44.3		43.0	264	24.9		53.6	338	18.6		30.7	251	30.2		00.3
23	161	55.8	181	43.9		41.9	279	26.6		53.7	353	21.4		30.8	266	32.6		00.3
24	176	58.3	196	43.4	-9	40.8	294	28.3	-19	53.9	8	24.1	+6	30.9	281	35.0	-21	00.3
Dif	—		-5		+11		+17		-2		+28		+1		+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 9 ^d 9 PHE { 4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'4 R°: 46 ^m										
	PMG: 12 ^h 07 ^m 6				SD: 15'2			PMG: 21 ^h 33 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	03.2	-0 28.2	47	02.0	+14 37.2	60	4 32	5 22	6 04	13 44	72	4 44	24
1	193	03.4		61	32.6 ¹¹⁶	31.2	60	38	25	04	52	69	35	26
2	208	03.6		76	03.2 ¹¹⁶	25.1	61	43	27	04	13 59	67	28	27
3	223	03.8		90	33.9 ¹¹⁷	19.0	61	47	29	04	14 05	66	21	29
4	238	04.0		105	04.6 ¹¹⁷	12.7	63	51	31	04	11 64		15	31
5	253	04.1	-0 23.2	119	35.4 ¹¹⁸	+14 06.5	62	4 54	5 32	6 04	14 16	63	4 09	32
6	268	04.3	-0 22.2	134	06.3 ¹¹⁹	+14 00.1	64	5 01	5 35	6 04	14 27	60	3 58	34
7	283	04.5		148	37.1 ¹¹⁸	+13 53.7	64	06	38	05	36 58		48	37
8	298	04.7		163	08.1 ¹²⁰	47.2	65	10	39	05	44 56		39	39
9	313	04.9		177	39.1 ¹²⁰	40.7	65	13	41	05	14 50	55	32	40
10	328	05.1		192	10.1 ¹²⁰	34.1	66	17	43	05	15 02	52	19	43
11	343	05.2	-0 17.3	206	41.2 ¹²¹	+13 27.4	67	5 19	5 44	6 05	15 12	49	3 08	45
12	358	05.4	-0 16.3	221	12.3 ¹²¹	+13 20.7	67	5 20	5 44	6 04	15 22	46	2 57	48
13	13	05.6		235	43.5 ¹²²	13.9	68	19	43	04	32 44		47	49
14	28	05.8		250	14.7 ¹²²	07.1	68	20	16	42	04	42 41	35	52
15	43	06.0		264	46.0 ¹²³	+13 00.2	69	30	11	39	03	15 54	38	22 55
16	58	06.2		279	17.3 ¹²³	+12 53.2	70	35	08	37	03	16 00	37	14 57
17	73	06.4	-0 11.4	293	48.7 ¹²⁴	+12 46.2	70	40	5 03	5 35	6 02	16 08	35	2 06 58
18	88	06.5	-0 10.4	308	20.2 ¹²⁵	+12 39.1	71	45	4 58	5 32	6 02	16 17	32	1 55 61
19	103	06.7		322	51.6 ¹²⁴	32.0	71	50	50	28	01	27 30	43	63
20	118	06.9		337	23.2 ¹²⁶	24.8	72	52	47	27	00	32 29	37	64
21	133	07.1		351	54.7 ¹²⁵	17.6	72	54	43	25	00	38 27	31	66
22	148	07.3		6	26.4 ¹²⁷	10.3	73	56	38	22	6 00	44 25	24	67
23	163	07.5		20	58.0 ¹²⁶	+12 03.0	73	58	33	20	5 59	51 23	16	69
24	178	07.7	-0 04.5	35	29.7 ¹²⁷	+11 55.6	74	60 S	4 26	5 17	5 58	16 58	22	1 07 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 12 ^h 10 ^m 1		Mag: -3.8 PMG: 10 ^h 53 ^m		Mag: -0.2 PMG: 4 ^h 22 ^m		Mag: -2.5 PMG: 23 ^h 22 ^m		Mag: +0.4 PMG: 5 ^h 13 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	176	58.3	196	43.4	-9 40.8	294	28.3	-19 53.9	8 24.1	+6 30.9	281	35.0	-21 00.3	
1	192	00.7	211	42.9	39.7	309	30.0	54.1	23 26.9	31.0	296	37.5	00.3	
2	207	03.2	226	42.5	38.6	324	31.7	54.2	38 29.6	31.2	311	39.9	00.3	
3	222	05.6	241	42.0	37.5	339	33.5	54.4	53 32.4	31.3	326	42.4	00.3	
4	237	08.1	256	41.5	36.4	354	35.2	54.6	68 35.1	31.4	341	44.8	00.3	
5	252	10.6	271	41.1	-9 35.3	9	36.9	-19 54.7	83 37.9	+6 31.5	356	47.2	-21 00.3	
6	267	13.0	286	40.6	-9 34.2	24	38.6	-19 54.9	98 40.6	+6 31.7	11 49.7	-21 00.3		
7	282	15.5	301	40.2	33.1	39	40.3	55.1	113 43.4	31.8	26 52.1	00.3		
8	297	18.0	316	39.7	32.0	54	42.1	55.2	128 46.1	31.9	41 54.5	00.3		
9	312	20.4	331	39.2	30.9	69	43.8	55.4	143 48.9	32.0	56 57.0	00.3		
10	327	22.9	346	38.8	29.8	84	45.5	55.6	158 51.6	32.1	71 59.4	00.3		
11	342	25.4	1	38.3	-9 28.7	99	47.2	-19 55.7	173 54.4	+6 32.3	87 01.8	-21 00.3		
12	357	27.8	16	37.8	-9 27.6	114	49.0	-19 55.9	188 57.2	+6 32.4	102 04.3	-21 00.3		
13	12	30.3	31	37.4	26.5	129	50.7	56.1	203 59.9	32.5	117 06.7	00.3		
14	27	32.8	46	36.9	25.3	144	52.4	56.2	219 02.7	32.6	132 09.2	00.3		
15	42	35.2	61	36.5	24.2	159	54.1	56.4	234 05.4	32.7	147 11.6	00.3		
16	57	37.7	76	36.0	23.1	174	55.9	56.6	249 08.2	32.9	162 14.0	00.3		
17	72	40.1	91	35.5	-9 22.0	189	57.6	-19 56.7	264 10.9	+6 33.0	177 16.5	-21 00.3		
18	87	42.6	106	35.1	-9 20.9	204	59.3	-19 56.9	279 13.7	+6 33.1	192 18.9	-21 00.3		
19	102	45.1	121	34.6	19.8	220	01.1	57.1	294 16.4	33.2	207 21.3	00.3		
20	117	47.5	136	34.2	18.7	235	02.8	57.2	309 19.2	33.3	222 23.8	00.3		
21	132	50.0	151	33.7	17.6	250	04.5	57.4	324 21.9	33.5	237 26.2	00.3		
22	147	52.5	166	33.2	16.5	265	06.3	57.6	339 24.7	33.6	252 28.7	00.3		
23	162	54.9	181	32.8	15.4	280	08.0	57.7	354 27.4	33.7	267 31.1	00.3		
24	177	57.4	196	32.3	-9 14.2	295	09.7	-19 57.9	9 30.2	+6 33.8	282 33.5	-21 00.3		
Dif	—		-5	+11		+17	-2		+28	+1		+24		

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 07 ^m 3			Edad: 10 ^d 9 PHE { SD: 15:1 PMG: 22 ^h 19 ^m 4 ^h : 55/2 12 ^h : 55/1 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	
0	178	07.7	-0	04.5	35	29.7	+11	55.6	60 N	18	15	18	57	19	47	14	56	
1	193	07.8		03.5	50	01.5 ¹²⁸		48.1 ⁷⁵	58		15		54	41	15	01		
2	208	08.0		02.5	64	33.3 ¹²⁸		40.6 ⁷⁵	56		15		52	36		06		
3	223	08.2		01.5	79	05.2 ¹²⁹		33.1 ⁷⁵	54		14		50	32		11		
4	238	08.4	-0	00.5	93	37.1 ¹²⁹		25.5 ⁷⁶	52		14		48	28		15		
5	253	08.6	+0	00.5	108	09.0 ¹²⁹	+11	17.9 ⁷⁶	50	18	14	18	46	19	24	15		
6	268	08.8	+0	01.5	122	41.0 ¹³⁰	+11	10.2 ⁷⁷	45	18	13	18	42	19	17	15		
7	283	09.0		02.5	137	13.0 ¹³⁰	+11	02.4 ⁷⁸	40		12		39	11		34		
8	298	09.1		03.4	151	45.1 ¹³¹	+10	54.7 ⁷⁷	35		12		37	07		40		
9	313	09.3		04.4	166	17.2 ¹³¹		46.8 ⁷⁹	30		12		36	19	03	45		
10	328	09.5		05.4	180	49.4 ¹³²		39.0 ⁷⁸	20		11		33	18	59	15		
11	343	09.7	+0	06.4	195	21.6 ¹³²	+10	31.0 ⁸⁰	10 N	18	11	18	32	18	56	16		
12	358	09.9	+0	07.4	209	53.9 ¹³³	+10	23.1 ⁷⁹	0	18	11	18	31	18	55	16		
13	13	10.1		08.4	224	26.1 ¹³²		15.1 ⁸⁰	10 S		10		31	56		16		
14	28	10.3		09.4	238	58.5 ¹³⁴	+10	07.0 ⁸¹	20		10		32	18	58	23		
15	43	10.4		10.4	253	30.9 ¹³⁴	+9	59.0 ⁸⁰	30		11		34	19	02	32		
16	58	10.6		11.3	268	03.3 ¹³⁴		50.8 ⁸²	35		11		36	05		37		
17	73	10.8	+0	12.3	282	35.7 ¹³⁴	+9	42.7 ⁸¹	40	18	11	18	38	19	09	16		
18	88	11.0	+0	13.3	297	08.2 ¹³⁵	+9	34.5 ⁸²	45	18	11	18	40	19	15	16		
19	103	11.2		14.3	311	40.8 ¹³⁶		26.2 ⁸³	50		11		44	22		16		
20	118	11.4		15.3	326	13.3 ¹³⁵		17.9 ⁸³	52		12		45	25		17		
21	133	11.6		16.3	340	46.0 ¹³⁷		09.6 ⁸³	54		12		47	29		05		
22	148	11.7		17.3	355	18.6 ¹³⁶	+9	01.3 ⁸³	56		12		49	33		09		
23	163	11.9		18.3	9	51.3 ¹³⁷	+8	52.9 ⁸⁴	58		12		51	38		14		
24	178	12.1	+0	19.2	24	24.0 ¹³⁷	+8	44.4 ⁸⁵	60 S	18	12	18	54	19	44	17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 06 ^m 2		Mag: -3.8 PMG: 10 ^h 54 ^m			Mag: -0.2 PMG: 4 ^h 19 ^m			Mag: -2.5 PMG: 23 ^h 18 ^m			Mag: +0.4 PMG: 5 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	177	57.4	196	32.3	-9	14.2	295	09.7	-19	57.9	9	30.2	+6	33.8	282	33.5	-21	
1	192	59.9	211	31.9		13.1	310	11.5		58.1	24	32.9		33.9	297	36.0		
2	208	02.3	226	31.4		12.0	325	13.2		58.2	39	35.7		34.1	312	38.4		
3	223	04.8	241	31.0		10.9	340	15.0		58.4	54	38.4		34.2	327	40.9		
4	238	07.3	256	30.5		09.8	355	16.7		58.6	69	41.2		34.3	342	43.3		
5	253	09.7	271	30.1	-9	08.7	10	18.4	-19	58.7	84	44.0	+6	34.4	357	45.7	-21	
6	268	12.2	286	29.6	-9	07.5	25	20.2	-19	58.9	99	46.7	+6	34.6	12	48.2	-21	
7	283	14.6	301	29.1		06.4	40	21.9		59.1	114	49.5		34.7	27	50.6		
8	298	17.1	316	28.7		05.3	55	23.7		59.2	129	52.2		34.8	42	53.1		
9	313	19.6	331	28.2		04.2	70	25.4		59.4	144	55.0		34.9	57	55.5		
10	328	22.0	346	27.8		03.1	85	27.1		59.6	159	57.7		35.0	72	57.9		
11	343	24.5	1	27.3	-9	02.0	100	28.9	-19	59.7	175	00.5	+6	35.1	88	00.4	-21	
12	358	27.0	16	26.9	-9	00.8	115	30.6	-19	59.9	190	03.2	+6	35.3	103	02.8	-21	
13	13	29.4	31	26.4	-8	59.7	130	32.4	-20	00.0	205	06.0		35.4	118	05.3		
14	28	31.9	46	26.0		58.6	145	34.1	-20	00.2	220	08.7		35.5	133	07.7		
15	43	34.4	61	25.5		57.5	160	35.9		00.4	235	11.5		35.6	148	10.2		
16	58	36.8	76	25.1		56.4	175	37.6		00.5	250	14.2		35.7	163	12.6		
17	73	39.3	91	24.6	-8	55.2	190	39.4	-20	00.7	265	17.0	+6	35.9	178	15.0	-21	
18	88	41.7	106	24.2	-8	54.1	205	41.1	-20	00.9	280	19.7	+6	36.0	193	17.5	-21	
19	103	44.2	121	23.7		53.0	220	42.9		01.0	295	22.5		36.1	208	19.9		
20	118	46.7	136	23.3		51.9	235	44.6		01.2	310	25.2		36.2	223	22.4		
21	133	49.1	151	22.8		50.8	250	46.4		01.3	325	28.0		36.3	238	24.8		
22	148	51.6	166	22.4		49.6	265	48.1		01.5	340	30.7		36.5	253	27.3		
23	163	54.1	181	21.9		48.5	280	49.9		01.7	355	33.5		36.6	268	29.7		
24	178	56.5	196	21.5	-8	47.4	295	51.6	-20	01.8	10	36.2	+6	36.7	283	32.1	-21	
Dif	—		-5		+11		+17		-2		+28		+1		+24		0	

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 06 ^m 7			Edad: 12 ^d 9 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 R°: 43 ^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	16.6	+0 42.9	13	39.7	+5 13.5		60 N	18 20	19 02	19 53	17 19 70	5 45 16	
1	193	16.8		28	13.2 ¹⁴⁵	+5 04.4	91	58	19	18 59	46	20 69	43 18	
2	208	17.0		42	46.7 ¹⁴⁵	+4 55.3	91	56	19	56	41	21 67	41 20	
3	223	17.2		57	20.3 ¹⁴⁶	46.1	92	54	18	53	36	22 65	39 21	
4	238	17.4		71	53.9 ¹⁴⁶	37.0	91	52	17	51	31	23 64	37 23	
5	253	17.6	+0 47.9	86	27.5 ¹⁴⁶	+4 27.9	91	50	18 17	18 49	19 27	17 24 62	5 36 24	
6	268	17.7	+0 48.8	101	01.2 ¹⁴⁷	+4 18.7	92	45	18 15	18 45	19 19	17 26 59	5 32 28	
7	283	17.9		115	34.8 ¹⁴⁶	09.5	92	40	14	42	13	28 56	29 30	
8	298	18.1		130	08.5 ¹⁴⁷	+4 00.3	92	35	14	39	08	29 54	27 32	
9	313	18.3		144	42.2 ¹⁴⁷	+3 51.1	92	30	13	37	19 05	31 52	25 34	
10	328	18.5		159	16.0 ¹⁴⁸	41.9	92	20	12	34	18 59	33 48	21 37	
11	343	18.7	+0 53.8	173	49.7 ¹⁴⁷	+3 32.6	93	10 N	18 11	18 32	18 56	17 35 45	5 17 41	
12	358	18.9	+0 54.8	188	23.5 ¹⁴⁸	+3 23.4	92	0	18 10	18 31	18 55	17 37 42	5 14 43	
13	13	19.1		202	57.3 ¹⁴⁸	14.1	93	10 S	09	30	55	38 40	11 46	
14	28	19.2		217	31.1 ¹⁴⁸	+3 04.9	92	20	09	31	18 56	40 37	07 49	
15	43	19.4		232	04.9 ¹⁴⁸	+2 55.6	93	30	08	32	19 00	43 33	04 52	
16	58	19.6		246	38.8 ¹⁴⁹	46.3	93	35	08	33	03	44 32	5 01 54	
17	73	19.8	+0 59.7	261	12.6 ¹⁴⁸	+2 37.0	93	40	18 08	18 35	19 06	17 45 30	4 59 56	
18	88	20.0	+1 00.7	275	46.5 ¹⁴⁹	+2 27.7	93	45	18 07	18 37	19 11	17 47 27	4 56 59	
19	103	20.2		290	20.4 ¹⁴⁹	18.4	93	50	07	39	17	49 24	52 62	
20	118	20.4		304	54.3 ¹⁴⁹	+2 09.1	93	52	07	40	20	50 23	50 64	
21	133	20.6		319	28.2 ¹⁴⁹	+1 59.8	93	54	07	42	23	51 21	48 66	
22	148	20.8		334	02.2 ¹⁵⁰	50.4	94	56	07	44	27	52 20	46 67	
23	163	20.9		348	36.1 ¹⁴⁹	41.1	93	58	06	46	32	53 18	44 69	
24	178	21.1	+1 06.6	3	10.1 ¹⁵⁰	+1 31.8	93	60 S	18 06	18 48	19 37	17 55 15	4 41 72	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 58 ^m 3		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: -0.3 PMG: 4 ^h 13 ^m		Mag: -2.5 PMG: 23 ^h 09 ^m		Mag: +0.4 PMG: 5 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	179	55.7	196	10.8	-8 20.3	296	34.0	-20 05.7	11	42.2	+6 39.5	284	30.9	-21 00.1
1	194	58.1	211	10.3	19.2	311	35.8	05.8	26	44.9	39.7	299	33.3	00.1
2	210	00.6	226	09.9	18.0	326	37.5	06.0	41	47.7	39.8	314	35.7	00.1
3	225	03.1	241	09.4	16.9	341	39.3	06.1	56	50.4	39.9	329	38.2	00.1
4	240	05.5	256	09.0	15.8	356	41.1	06.3	71	53.2	40.0	344	40.6	00.1
5	255	08.0	271	08.6	-8 14.6	11	42.9	-20 06.5	86	55.9	+6 40.1	359	43.1	-21 00.1
6	270	10.5	286	08.1	-8 13.5	26	44.7	-20 06.6	101	58.7	+6 40.2	14	45.5	-21 00.1
7	285	12.9	301	07.7	12.4	41	46.4	06.8	117	01.4	40.4	29	48.0	00.1
8	300	15.4	316	07.2	11.2	56	48.2	06.9	132	04.2	40.5	44	50.4	00.1
9	315	17.8	331	06.8	10.1	71	50.0	07.1	147	06.9	40.6	59	52.9	00.1
10	330	20.3	346	06.4	09.0	86	51.8	07.3	162	09.7	40.7	74	55.3	00.1
11	345	22.8	1	05.9	-8 07.8	101	53.6	-20 07.4	177	12.4	+6 40.8	89	57.8	-21 00.1
12	0	25.2	16	05.5	-8 06.7	116	55.3	-20 07.6	192	15.2	+6 40.9	105	00.2	-21 00.1
13	15	27.7	31	05.1	05.5	131	57.1	07.7	207	17.9	41.1	120	02.7	00.1
14	30	30.2	46	04.6	04.4	146	58.9	07.9	222	20.6	41.2	135	05.1	00.1
15	45	32.6	61	04.2	03.3	162	00.7	08.0	237	23.4	41.3	150	07.6	00.1
16	60	35.1	76	03.7	02.1	177	02.5	08.2	252	26.1	41.4	165	10.0	00.1
17	75	37.6	91	03.3	-8 01.0	192	04.3	-20 08.3	267	28.9	+6 41.5	180	12.5	-21 00.1
18	90	40.0	106	02.9	-7 59.8	207	06.1	-20 08.5	282	31.6	+6 41.6	195	15.0	-21 00.1
19	105	42.5	121	02.4	58.7	222	07.8	08.7	297	34.4	41.8	210	17.4	00.1
20	120	44.9	136	02.0	57.6	237	09.6	08.8	312	37.1	41.9	225	19.9	00.1
21	135	47.4	151	01.6	56.4	252	11.4	09.0	327	39.9	42.0	240	22.3	00.1
22	150	49.9	166	01.1	55.3	267	13.2	09.1	342	42.6	42.1	255	24.8	00.1
23	165	52.3	181	00.7	54.1	282	15.0	09.3	357	45.4	42.2	270	27.2	00.1
24	180	54.8	196	00.3	-7 53.0	297	16.8	-20 09.4	12	48.1	+6 42.3	285	29.7	-21 00.1
Dif	—		-4	+11		+18	-2		+27		+1	+25		0

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: 13 ^d 9 PHE { SD: 14'8 PMG: *** **m R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	21.1	+1	06.6	3	10.1	+1	31.8	60 N	4	19	5	10	5	51	18	29
1	193	21.3		07.6	17	44.1 ¹⁵⁰		22.4 ⁹⁴	58	26	13	52	29	68	6	01	
2	208	21.5		08.5	32	18.1 ¹⁵⁰		13.1 ⁹³	56	32	16	53	28	66	01	19	
3	223	21.7		09.5	46	52.1 ¹⁵⁰		+1 03.7 ⁹⁴	54	37	19	54	27	65	00	22	
4	238	21.9		10.5	61	26.1 ¹⁵⁰		+0 54.4 ⁹³	52	41	21	55	27	62	00	23	
5	253	22.1	+1	11.5	76	00.2 ¹⁵¹		+0 45.1 ⁹³	50	4	45	5	23	5	56	18	26
6	268	22.3	+1	12.5	90	34.2 ¹⁵⁰		+0 35.7 ⁹⁴	45	4	53	5	28	5	57	18	25
7	283	22.5		13.5	105	08.3 ¹⁵¹		26.4 ⁹⁴	40	4	59	31	58	24	56	5	59
8	298	22.6		14.5	119	42.3 ¹⁵⁰		17.0 ⁹³	35	5	04	34	5	59	23	54	59
9	313	22.8		15.4	134	16.4 ¹⁵¹		+0 07.7 ⁹³	30	08	36	6	00	23	51	59	33
10	328	23.0		16.4	148	50.5 ¹⁵¹		-0 01.7 ⁹⁴	20	14	39	01	21	49	58	37	
11	343	23.2	+1	17.4	163	24.6 ¹⁵¹		-0 11.0 ⁹³	10 N	5	17	5	41	6	02	18	20
12	358	23.4	+1	18.4	177	58.7 ¹⁵¹		-0 20.3 ⁹³	0	5	19	5	43	6	03	18	19
13	13	23.6		19.4	192	32.8 ¹⁵¹		29.7 ⁹⁴	10 S	19	43	04	18	40	57	45	
14	28	23.8		20.4	207	06.9 ¹⁵¹		39.0 ⁹³	20	17	43	05	17	37	56	49	
15	43	24.0		21.3	221	41.0 ¹⁵¹		48.3 ⁹³	30	14	42	05	16	34	56	52	
16	58	24.2		22.3	236	15.2 ¹⁵²		-0 57.6 ⁹³	35	11	41	06	16	31	55	54	
17	73	24.3	+1	23.3	250	49.3 ¹⁵¹		-1 06.9 ⁹³	40	5	08	5	39	6	06	18	15
18	88	24.5	+1	24.3	265	23.4 ¹⁵¹		-1 16.3 ⁹⁴	45	5	03	5	37	6	07	18	14
19	103	24.7		25.3	279	57.6 ¹⁵²		25.5 ⁹²	50	4	57	35	07	13	24	54	62
20	118	24.9		26.3	294	31.7 ¹⁵¹		34.8 ⁹³	52	54	34	07	13	23	54	63	
21	133	25.1		27.2	309	05.9 ¹⁵²		44.1 ⁹³	54	51	32	08	12	22	54	64	
22	148	25.3		28.2	323	40.0 ¹⁵¹		-1 53.4 ⁹³	56	47	31	08	12	19	53	67	
23	163	25.5		29.2	338	14.1 ¹⁵¹		-2 02.6 ⁹²	58	42	29	08	11	18	53	68	
24	178	25.7	+1	30.2	352	48.3 ¹⁵²		-2 11.9 ⁹³	60 S	4	37	5	27	6	08	18	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 54 ^m 4		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: -0.3 PMG: 4 ^h 10 ^m		Mag: -2.5 PMG: 23 ^h 05 ^m		Mag: +0.4 PMG: 4 ^h 57 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	180	54.8	196	00.3	-7	53.0	297	16.8	-20	09.4	12	48.1	+6	42.3	285	29.7	-21	00.1
1	195	57.3	210	59.8		51.9	312	18.6		09.6	27	50.8		42.5	300	32.1	-21	00.1
2	210	59.7	225	59.4		50.7	327	20.4		09.7	42	53.6		42.6	315	34.6	-21	00.0
3	226	02.2	240	59.0		49.6	342	22.2		09.9	57	56.3		42.7	330	37.0		00.0
4	241	04.7	255	58.5		48.4	357	24.0		10.1	72	59.1		42.8	345	39.5		00.0
5	256	07.1	270	58.1	-7	47.3	12	25.8	-20	10.2	88	01.8	+6	42.9	0	41.9	-21	00.0
6	271	09.6	285	57.7	-7	46.1	27	27.6	-20	10.4	103	04.6	+6	43.0	15	44.4	-21	00.0
7	286	12.1	300	57.2		45.0	42	29.4		10.5	118	07.3		43.2	30	46.8		00.0
8	301	14.5	315	56.8		43.8	57	31.2		10.7	133	10.1		43.3	45	49.3		00.0
9	316	17.0	330	56.4		42.7	72	33.0		10.8	148	12.8		43.4	60	51.7		00.0
10	331	19.4	345	55.9		41.6	87	34.8		11.0	163	15.5		43.5	75	54.2		00.0
11	346	21.9	0	55.5	-7	40.4	102	36.6	-20	11.1	178	18.3	+6	43.6	90	56.7	-21	00.0
12	1	24.4	15	55.1	-7	39.3	117	38.4	-20	11.3	193	21.0	+6	43.7	105	59.1	-21	00.0
13	16	26.8	30	54.6		38.1	132	40.2		11.4	208	23.8		43.9	121	01.6		00.0
14	31	29.3	45	54.2		37.0	147	42.0		11.6	223	26.5		44.0	136	04.0		00.0
15	46	31.8	60	53.8		35.8	162	43.8		11.7	238	29.3		44.1	151	06.5		00.0
16	61	34.2	75	53.3		34.7	177	45.6		11.9	253	32.0		44.2	166	08.9		00.0
17	76	36.7	90	52.9	-7	33.5	192	47.4	-20	12.1	268	34.7	+6	44.3	181	11.4	-21	00.0
18	91	39.2	105	52.5	-7	32.4	207	49.2	-20	12.2	283	37.5	+6	44.4	196	13.8	-21	00.0
19	106	41.6	120	52.1		31.2	222	51.0		12.4	298	40.2		44.5	211	16.3		00.0
20	121	44.1	135	51.6		30.1	237	52.9		12.5	313	43.0		44.7	226	18.8		00.0
21	136	46.5	150	51.2		28.9	252	54.7		12.7	328	45.7		44.8	241	21.2		00.0
22	151	49.0	165	50.8		27.8	267	56.5		12.8	343	48.5		44.9	256	23.7		00.0
23	166	51.5	180	50.3		26.6	282	58.3		13.0	358	51.2		45.0	271	26.1		00.0
24	181	53.9	195	49.9	-7	25.5	298	00.1	-20	13.1	13	53.9	+6	45.1	286	28.6	-21	00.0
Dif	—		-4		+11		+18		-2		+27		+1		+25			

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: 14 ^d 9 PHE { SD: 14:7 PMG: 0 ^h 30 ^m R°: 42 ^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	25.7	+1 30.2	352	48.3	-2 11.9	92	60 N	18 25	19 07	19 59	19 40 69	6 17 16	
1	193	25.9		7	22.5 ¹⁵²	21.1	92	58	24	04	51	37 67	19 18	
2	208	26.0		21	56.6 ¹⁵¹	30.4	93	56	23	19 00	45	34 66	20 20	
3	223	26.2		36	30.8 ¹⁵²	39.6	92	54	22	18 57	40	32 64	22 22	
4	238	26.4		51	04.9 ¹⁵¹	48.8	92	52	21	55	35	29 63	23 23	
5	253	26.6	+1 35.1	65	39.1 ¹⁵²	-2 58.0	92	50	18 20	18 52	19 31	19 28 61	6 24 25	
6	268	26.8	+1 36.1	80	13.2 ¹⁵¹	-3 07.1	91	45	18 18	18 47	19 22	19 23 58	6 27 27	
7	283	27.0		94	47.4 ¹⁵²	16.3	92	40	16	44	15	20 55	29 30	
8	298	27.2		109	21.5 ¹⁵¹	25.4	91	35	15	41	10	17 53	31 32	
9	313	27.4		123	55.6 ¹⁵¹	34.6	92	30	14	38	06	14 52	32 34	
10	328	27.6		138	29.8 ¹⁵²	43.7	91	20	12	34	19 00	10 48	35 37	
11	343	27.8	+1 41.0	153	03.9 ¹⁵¹	-3 52.8	91	10 N	18 11	18 32	18 56	19 06 45	6 38 40	
12	358	27.9	+1 42.0	167	38.0 ¹⁵¹	-4 01.8	90	0	18 09	18 30	18 54	19 02 43	6 40 43	
13	13	28.1		182	12.2 ¹⁵²	10.9	91	10 S	08	29	54	18 58 41	42 46	
14	28	28.3		196	46.3 ¹⁵¹	19.9	90	20	07	29	55	54 38	45 48	
15	43	28.5		211	20.4 ¹⁵¹	29.0	91	30	06	30	18 57	50 34	48 51	
16	58	28.7		225	54.5 ¹⁵¹	38.0	90	35	05	30	19 00	47 33	49 54	
17	73	28.9	+1 46.9	240	28.6 ¹⁵¹	-4 46.9	89	40	18 04	18 31	19 03	18 45 30	6 51 56	
18	88	29.1	+1 47.9	255	02.7 ¹⁵¹	-4 55.9	90	45	18 04	18 33	19 07	18 41 28	6 53 58	
19	103	29.3		269	36.8 ¹⁵¹	-5 04.8	89	50	03	35	12	37 26	56 61	
20	118	29.5		284	10.8 ¹⁵⁰	13.8	90	52	02	36	15	36 24	57 63	
21	133	29.6		298	44.9 ¹⁵¹	22.7	89	54	02	37	18	34 22	6 58 64	
22	148	29.8		313	19.0 ¹⁵¹	31.5	88	56	01	38	22	31 21	7 00 66	
23	163	30.0		327	53.0 ¹⁵⁰	40.4	89	58	01	40	26	29 19	01 68	
24	178	30.2	+1 53.8	342	27.0 ¹⁵⁰	-5 49.2	88	60 S	18 00	18 42	19 31	18 26 18	7 03 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 50 ^m 5		Mag: -3.8 PMG: 10 ^h 57 ^m			Mag: -0.3 PMG: 4 ^h 07 ^m			Mag: -2.5 PMG: 23 ^h 00 ^m			Mag: +0.4 PMG: 4 ^h 53 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	181	53.9	195	49.9	-7 25.5	298	00.1	-20 13.1	13 53.9	+6 45.1	286	28.6	-21 00.0	
1	196	56.4	210	49.5	24.3	313	01.9	13.3	28 56.7	45.2	301	31.0	00.0	
2	211	58.9	225	49.1	23.2	328	03.7	13.4	43 59.4	45.3	316	33.5	-21 00.0	
3	227	01.3	240	48.6	22.0	343	05.6	13.6	59 02.2	45.5	331	36.0	-20 59.9	
4	242	03.8	255	48.2	20.9	358	07.4	13.7	74 04.9	45.6	346	38.4	59.9	
5	257	06.3	270	47.8	-7 19.7	13	09.2	-20 13.9	89 07.6	+6 45.7	1	40.9	-20 59.9	
6	272	08.7	285	47.3	-7 18.6	28	11.0	-20 14.0	104 10.4	+6 45.8	16	43.3	-20 59.9	
7	287	11.2	300	46.9	17.4	43	12.8	14.2	119 13.1	45.9	31	45.8	59.9	
8	302	13.7	315	46.5	16.3	58	14.6	14.3	134 15.9	46.0	46	48.3	59.9	
9	317	16.1	330	46.1	15.1	73	16.5	14.5	149 18.6	46.1	61	50.7	59.9	
10	332	18.6	345	45.6	13.9	88	18.3	14.6	164 21.3	46.3	76	53.2	59.9	
11	347	21.0	0	45.2	-7 12.8	103	20.1	-20 14.8	179 24.1	+6 46.4	91	55.6	-20 59.9	
12	2	23.5	15	44.8	-7 11.6	118	21.9	-20 14.9	194 26.8	+6 46.5	106	58.1	-20 59.9	
13	17	26.0	30	44.4	10.5	133	23.8	15.1	209 29.6	46.6	122	00.5	59.9	
14	32	28.4	45	44.0	09.3	148	25.6	15.2	224 32.3	46.7	137	03.0	59.9	
15	47	30.9	60	43.5	08.2	163	27.4	15.4	239 35.0	46.8	152	05.5	59.9	
16	62	33.4	75	43.1	07.0	178	29.2	15.5	254 37.8	46.9	167	07.9	59.9	
17	77	35.8	90	42.7	-7 05.9	193	31.1	-20 15.7	269 40.5	+6 47.1	182	10.4	-20 59.9	
18	92	38.3	105	42.3	-7 04.7	208	32.9	-20 15.8	284 43.3	+6 47.2	197	12.8	-20 59.9	
19	107	40.8	120	41.8	03.5	223	34.7	16.0	299 46.0	47.3	212	15.3	59.9	
20	122	43.2	135	41.4	02.4	238	36.6	16.1	314 48.7	47.4	227	17.8	59.9	
21	137	45.7	150	41.0	01.2	253	38.4	16.3	329 51.5	47.5	242	20.2	59.9	
22	152	48.2	165	40.6	-7 00.1	268	40.2	16.4	344 54.2	47.6	257	22.7	59.9	
23	167	50.6	180	40.1	-6 58.9	283	42.1	16.6	359 57.0	47.7	272	25.2	59.9	
24	182	53.1	195	39.7	-6 57.7	298	43.9	-20 16.7	14 59.7	+6 47.8	287	27.6	-20 59.9	
Dif	—		-4	+12		+18	-2		+27	+1		+25	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 05 ^m 8			Edad: 15 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 1 ^h 12 ^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	178	30.2	+1	53.8	342	27.0	-5	49.2	60 N	4	12	5	03	5	45	20	49	
1	193	30.4		54.8	357	01.1 ¹⁵¹	-5	58.0 ⁸⁸	58	20	07		47		44	67		
2	208	30.6		55.8	11	35.1 ¹⁵⁰	-6	06.8 ⁸⁸	56	26	11		48		40	65		
3	223	30.8		56.7	26	09.1 ¹⁵⁰		15.5 ⁸⁷	54	31	14		49		36	63		
4	238	31.0		57.7	40	43.1 ¹⁵⁰		24.2 ⁸⁷	52	36	16		50		32	62		
5	253	31.2	+1	58.7	55	17.1 ¹⁵⁰	-6	32.9 ⁸⁷	50	4	40	5	19	5	51	20	29	
6	268	31.4	+1	59.7	69	51.0 ¹⁴⁹	-6	41.6 ⁸⁷	45	4	49	5	24	5	53	20	21	
7	283	31.5	+2	00.7	84	25.0 ¹⁵⁰		50.2 ⁸⁶	40	4	56		28		15	56		
8	298	31.7		01.6	98	58.9 ¹⁴⁹	-6	58.9 ⁸⁷	35	5	01		31		10	54		
9	313	31.9		02.6	113	32.8 ¹⁴⁹	-7	07.4 ⁸⁵	30		06		34		20	06		
10	328	32.1		03.6	128	06.7 ¹⁴⁹		16.0 ⁸⁶	20		12		37	5	59	19	58	
11	343	32.3	+2	04.6	142	40.6 ¹⁴⁹	-7	24.5 ⁸⁵	10 N	5	16		5	40	6	01		
12	358	32.5	+2	05.6	157	14.5 ¹⁴⁹	-7	33.0 ⁸⁵	0	5	18		5	42	6	03		
13	13	32.7		06.5	171	48.3 ¹⁴⁸		41.5 ⁸⁵	10 S		19		43		04	39		
14	28	32.9		07.5	186	22.2 ¹⁴⁹		49.9 ⁸⁴	20		18		43		05	32		
15	43	33.1		08.5	200	56.0 ¹⁴⁸	-7	58.3 ⁸⁴	30		15		43		07	24		
16	58	33.2		09.5	215	29.8 ¹⁴⁸	-8	06.6 ⁸⁴	35		13		42		07	20		
17	73	33.4	+2	10.5	230	03.6 ¹⁴⁸	-8	15.0 ⁸³	40	5	10	5	41	6	08	19	15	
18	88	33.6	+2	11.5	244	37.4 ¹⁴⁸	-8	23.2 ⁸²	45	5	06	5	40	6	09	19	09	
19	103	33.8		12.4	259	11.1 ¹⁴⁷		31.5 ⁸³	50	5	00		38		10	03		
20	118	34.0		13.4	273	44.8 ¹⁴⁷		39.7 ⁸²	52	4	58		37		11	19	00	
21	133	34.2		14.4	288	18.6 ¹⁴⁸		47.9 ⁸²	54		55		36		11	18	56	
22	148	34.4		15.4	302	52.2 ¹⁴⁶	-8	56.1 ⁸²	56		51		35		12	52	24	
23	163	34.6		16.4	317	25.9 ¹⁴⁷	-9	04.2 ⁸¹	58		47		33		12	48	22	
24	178	34.8	+2	17.3	331	59.6 ¹⁴⁷	-9	12.2 ⁸⁰	60 S	4	42		5	32	6	13	18	44
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 11 ^h 46 ^m 5		Mag: -3.8 PMG: 10 ^h 58 ^m				Mag: -0.3 PMG: 4 ^h 05 ^m				Mag: -2.5 PMG: 22 ^h 56 ^m				Mag: +0.4 PMG: 4 ^h 49 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	182	53.1	195	39.7	-6	57.7	298	43.9	-20	16.7	14	59.7	+6	47.8	287	27.6	-20	59.9
1	197	55.5	210	39.3		56.6	313	45.7		16.9	30	02.4		48.0	302	30.1		59.9
2	212	58.0	225	38.9		55.4	328	47.6		17.0	45	05.2		48.1	317	32.5		59.8
3	228	00.5	240	38.5		54.3	343	49.4		17.2	60	07.9		48.2	332	35.0		59.8
4	243	02.9	255	38.0		53.1	358	51.2		17.3	75	10.7		48.3	347	37.5		59.8
5	258	05.4	270	37.6	-6	51.9	13	53.1	-20	17.5	90	13.4	+6	48.4	2	39.9	-20	59.8
6	273	07.9	285	37.2	-6	50.8	28	54.9	-20	17.6	105	16.1	+6	48.5	17	42.4	-20	59.8
7	288	10.3	300	36.8		49.6	43	56.8		17.8	120	18.9		48.6	32	44.9		59.8
8	303	12.8	315	36.4		48.5	58	58.6		17.9	135	21.6		48.7	47	47.3		59.8
9	318	15.3	330	35.9		47.3	74	00.4		18.1	150	24.3		48.9	62	49.8		59.8
10	333	17.7	345	35.5		46.1	89	02.3		18.2	165	27.1		49.0	77	52.2		59.8
11	348	20.2	0	35.1	-6	45.0	104	04.1	-20	18.4	180	29.8	+6	49.1	92	54.7	-20	59.8
12	3	22.6	15	34.7	-6	43.8	119	06.0	-20	18.5	195	32.6	+6	49.2	107	57.2	-20	59.8
13	18	25.1	30	34.3		42.6	134	07.8		18.6	210	35.3		49.3	122	59.6		59.8
14	33	27.6	45	33.9		41.5	149	09.7		18.8	225	38.0		49.4	138	02.1		59.8
15	48	30.0	60	33.4		40.3	164	11.5		18.9	240	40.8		49.5	153	04.6		59.8
16	63	32.5	75	33.0		39.2	179	13.4		19.1	255	43.5		49.6	168	07.0		59.8
17	78	35.0	90	32.6	-6	38.0	194	15.2	-20	19.2	270	46.2	+6	49.8	183	09.5	-20	59.8
18	93	37.4	105	32.2	-6	36.8	209	17.1	-20	19.4	285	49.0	+6	49.9	198	12.0	-20	59.8
19	108	39.9	120	31.8		35.7	224	18.9		19.5	300	51.7		50.0	213	14.4		59.8
20	123	42.4	135	31.4		34.5	239	20.8		19.7	315	54.4		50.1	228	16.9		59.8
21	138	44.8	150	30.9		33.3	254	22.6		19.8	330	57.2		50.2	243	19.4		59.8
22	153	47.3	165	30.5		32.2	269	24.5		20.0	345	59.9		50.3	258	21.8		59.8
23	168	49.8	180	30.1		31.0	284	26.3		20.1	1	02.7		50.4	273	24.3		59.7
24	183	52.2	195	29.7	-6	29.8	299	28.2	-20	20.3	16	05.4	+6	50.5	288	26.7	-20	59.7
Dif	—		-4		+12		+18		-1		+27		+1		+25			

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: 16 ^d 9 PHE { SD: 14:7 PMG: 1 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	34.8	+2 17.3	331	59.6	-9 12.2	81	60 N	18 30	19 12	20 04	21 58 67	6 51 21		
1	193	35.0		346	33.2 ¹⁴⁶	20.3	81	58	28	08	19 56	51 65	6 57 23		
2	208	35.1	19.3	1	06.8 ¹⁴⁶	28.3	80	56	27	04	50	45 63	7 02 25		
3	223	35.3	20.3	15	40.4 ¹⁴⁶	36.2	79	54	25	19 01	44	39 62	07 26		
4	238	35.5	21.3	30	13.9 ¹⁴⁵	44.2	80	52	24	18 58	39	34 61	11 28		
5	253	35.7	+2 22.2	44	47.5 ¹⁴⁶	-9 52.0	78	50	18 23	18 56	19 34	21 29 60	7 15 29		
6	268	35.9	+2 23.2	59	21.0 ¹⁴⁵	-9 59.9	79	45	18 21	18 50	19 25	21 19 57	7 23 32		
7	283	36.1	24.2	73	54.5 ¹⁴⁵	-10 07.7	78	40	19	46	18	11 55	30 34		
8	298	36.3	25.2	88	27.9 ¹⁴⁴	15.4	77	35	17	42	12	21 04 53	36 35		
9	313	36.5	26.2	103	01.4 ¹⁴⁵	23.1	77	30	15	39	07	20 58 51	41 37		
10	328	36.7	27.1	117	34.8 ¹⁴⁴	30.8	77	20	13	35	19 01	47 49	50 40		
11	343	36.9	+2 28.1	132	08.2 ¹⁴⁴	-10 38.4	76	10 N	18 11	18 32	18 56	20 37 48	7 58 43		
12	358	37.0	+2 29.1	146	41.5 ¹⁴³	-10 46.0	76	0	18 09	18 29	18 53	20 29 45	8 06 44		
13	13	37.2	30.1	161	14.9 ¹⁴⁴	-10 53.5	75	10 S	07	28	52	20 43	14 46		
14	28	37.4	31.0	175	48.2 ¹⁴³	-11 01.0	75	20	05	27	53	11 41	22 49		
15	43	37.6	32.0	190	21.4 ¹⁴²	08.5	75	30	03	27	55	20 00 39	31 52		
16	58	37.8	33.0	204	54.7 ¹⁴³	15.9	74	35	02	27	57	19 54 37	36 53		
17	73	38.0	+2 34.0	219	27.9 ¹⁴²	-11 23.2	73	40	18 01	18 28	18 59	19 47 36	8 42 55		
18	88	38.2	+2 35.0	234	01.1 ¹⁴²	-11 30.5	73	45	18 00	18 29	19 03	19 40 33	8 49 58		
19	103	38.4	35.9	248	34.3 ¹⁴²	37.8	73	50	17 58	30	08	30 31	8 58 60		
20	118	38.6	36.9	263	07.4 ¹⁴¹	45.0	72	52	58	31	10	26 29	9 02 61		
21	133	38.8	37.9	277	40.6 ¹⁴²	52.2	72	54	57	32	13	21 28	06 63		
22	148	38.9	38.9	292	13.6 ¹⁴⁰	-11 59.3	71	56	56	33	16	16 26	11 64		
23	163	39.1	39.9	306	46.7 ¹⁴¹	-12 06.3	70	58	55	34	20	10 25	16 66		
24	178	39.3	+2 40.8	321	19.7 ¹⁴⁰	-12 13.3	70	60 S	17 54	18 36	19 24	19 03 23	9 22 68		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 42 ^m 6		Mag: -3.8 PMG: 10 ^h 58 ^m		Mag: -0.4 PMG: 4 ^h 02 ^m		Mag: -2.5 PMG: 22 ^h 51 ^m		Mag: +0.4 PMG: 4 ^h 45 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	183	52.2	195	29.7	-6 29.8		299	28.2	-20 20.3	16 05.4	+6 50.5	288	26.7	-20 59.7	
1	198	54.7	210	29.3	28.7		314	30.0	20.4	31 08.1	50.6	303	29.2	59.7	
2	213	57.1	225	28.9	27.5		329	31.9	20.5	46 10.9	50.8	318	31.7	59.7	
3	228	59.6	240	28.5	26.3		344	33.8	20.7	61 13.6	50.9	333	34.1	59.7	
4	244	02.1	255	28.0	25.2		359	35.6	20.8	76 16.3	51.0	348	36.6	59.7	
5	259	04.5	270	27.6	-6 24.0		14	37.5	-20 21.0	91 19.1	+6 51.1	3	39.1	-20 59.7	
6	274	07.0	285	27.2	-6 22.8		29	39.3	-20 21.1	106 21.8	+6 51.2	18	41.5	-20 59.7	
7	289	09.5	300	26.8	21.7		44	41.2	21.3	121 24.5	51.3	33	44.0	59.7	
8	304	11.9	315	26.4	20.5		59	43.1	21.4	136 27.3	51.4	48	46.5	59.7	
9	319	14.4	330	26.0	19.3		74	44.9	21.6	151 30.0	51.5	63	49.0	59.7	
10	334	16.9	345	25.6	18.1		89	46.8	21.7	166 32.7	51.6	78	51.4	59.7	
11	349	19.3	0	25.1	-6 17.0		104	48.7	-20 21.9	181 35.5	+6 51.7	93	53.9	-20 59.7	
12	4	21.8	15	24.7	-6 15.8		119	50.5	-20 22.0	196 38.2	+6 51.9	108	56.4	-20 59.7	
13	19	24.2	30	24.3	14.6		134	52.4	22.1	211 40.9	52.0	123	58.8	59.7	
14	34	26.7	45	23.9	13.5		149	54.3	22.3	226 43.7	52.1	139	01.3	59.7	
15	49	29.2	60	23.5	12.3		164	56.1	22.4	241 46.4	52.2	154	03.8	59.7	
16	64	31.6	75	23.1	11.1		179	58.0	22.6	256 49.1	52.3	169	06.2	59.7	
17	79	34.1	90	22.7	-6 09.9		194	59.9	-20 22.7	271 51.9	+6 52.4	184	08.7	-20 59.7	
18	94	36.6	105	22.3	-6 08.8		210	01.8	-20 22.9	286 54.6	+6 52.5	199	11.2	-20 59.6	
19	109	39.0	120	21.9	07.6		225	03.6	23.0	301 57.3	52.6	214	13.6	59.6	
20	124	41.5	135	21.4	06.4		240	05.5	23.1	317 00.1	52.7	229	16.1	59.6	
21	139	44.0	150	21.0	05.3		255	07.4	23.3	332 02.8	52.8	244	18.6	59.6	
22	154	46.4	165	20.6	04.1		270	09.3	23.4	347 05.5	53.0	259	21.0	59.6	
23	169	48.9	180	20.2	02.9		285	11.1	23.6	2 08.3	53.1	274	23.5	59.6	
24	184	51.4	195	19.8	-6 01.7		300	13.0	-20 23.7	17 11.0	+6 53.2	289	26.0	-20 59.6	
Dif	—		-4	+12	+19	-1		+27	+1			+25			

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: 17 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 SD: 14'7 PMG: 2 ^h 39 ^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	39.3	+2	40.8	321	19.7	-12	13.3	60 N	4 05	4 57	5 39	23 05	65	7 12	
1	193	39.5		41.8	335	52.7 ¹⁴⁰		20.3	58	13	5 02	41	22 56	63	20 27	
2	208	39.7		42.8	350	25.7 ¹⁴⁰		27.2	56	20	05	43	48 61		27 29	
3	223	39.9		43.8	4	58.6 ¹³⁹		34.1	54	26	09	44	41 60		33 30	
4	238	40.1		44.7	19	31.5 ¹³⁹		40.9	52	31	12	46	35 59		39 31	
5	253	40.3	+2	45.7	34	04.4 ¹³⁹	-12	47.6	50	4 36	5 14	5 47	22 29	58	7 44	
6	268	40.5	+2	46.7	48	37.2 ¹³⁸	-12	54.3	45	4 45	5 20	5 49	22 16	56	7 55	
7	283	40.6		47.7	63	10.0 ¹³⁸	-13	00.9	40	53	24	52	22 06	54	8 04	
8	298	40.8		48.7	77	42.8 ¹³⁸		07.5	35	4 58	28	53	21 57	53	11 39	
9	313	41.0		49.6	92	15.5 ¹³⁷		14.1	30	5 03	31	55	49 52		18 40	
10	328	41.2		50.6	106	48.2 ¹³⁷		20.5	20	10	36	5 58	36 50		30 42	
11	343	41.4	+2	51.6	121	20.9 ¹³⁷	-13	27.0	10 N	5 15	5 39	6 00	21 25	48	8 41	
12	358	41.6	+2	52.6	135	53.5 ¹³⁶	-13	33.3	0	5 17	5 41	6 02	21 14	46	8 50	
13	13	41.8		53.5	150	26.1 ¹³⁶		39.6	10 S	18	43	04	21 03	45	9 00	
14	28	42.0		54.5	164	58.7 ¹³⁶		45.9	20	18	44	06	20 52	43	11 49	
15	43	42.2		55.5	179	31.3 ¹³⁶		52.1	30	16	44	08	39 41		23 51	
16	58	42.3		56.5	194	03.8 ¹³⁵	-13	58.2	35	14	44	09	31 40		29 54	
17	73	42.5	+2	57.4	208	36.2 ¹³⁴	-14	04.2	40	5 12	5 43	6 10	20 23	38	9 37	
18	88	42.7	+2	58.4	223	08.7 ¹³⁵	-14	10.3	45	5 08	5 42	6 12	20 13	37	9 47	
19	103	42.9	+2	59.4	237	41.1 ¹³⁴		16.2	50	04	41	13	20 01	35	9 58	
20	118	43.1	+3	00.4	252	13.4 ¹³³		22.1	52	5 01	41	14	19 55	34	10 03	
21	133	43.3		01.4	266	45.8 ¹³⁴		27.9	54	4 58	40	15	49 33		09 61	
22	148	43.5		02.3	281	18.0 ¹³²		33.7	56	55	39	16	42 32		15 63	
23	163	43.7		03.3	295	50.3 ¹³³		39.4	58	52	38	17	35 30		22 64	
24	178	43.9	+3	04.3	310	22.5 ¹³²	-14	45.0	60 S	4 48	5 36	6 18	19 26	28	10 30	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 38 ^m 7			Mag: -3.8 PMG: 10 ^h 59 ^m			Mag: -0.4 PMG: 3 ^h 59 ^m			Mag: -2.5 PMG: 22 ^h 47 ^m			Mag: +0.4 PMG: 4 ^h 41 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	184	51.4	195	19.8	-6	01.7	300	13.0	-20	23.7	17	11.0	+6	53.2	289	26.0
1	199	53.8	210	19.4	-6	00.6	315	14.9		23.9	32	13.7		53.3	304	28.5
2	214	56.3	225	19.0	-5	59.4	330	16.8		24.0	47	16.5		53.4	319	30.9
3	229	58.7	240	18.6		58.2	345	18.6		24.1	62	19.2		53.5	334	33.4
4	245	01.2	255	18.2		57.0	0	20.5		24.3	77	21.9		53.6	349	35.9
5	260	03.7	270	17.8	-5	55.9	15	22.4	-20	24.4	92	24.6	+6	53.7	4	38.3
6	275	06.1	285	17.4	-5	54.7	30	24.3	-20	24.6	107	27.4	+6	53.8	19	40.8
7	290	08.6	300	17.0		53.5	45	26.2		24.7	122	30.1		53.9	34	43.3
8	305	11.1	315	16.5		52.3	60	28.1		24.8	137	32.8		54.0	49	45.8
9	320	13.5	330	16.1		51.2	75	29.9		25.0	152	35.6		54.2	64	48.2
10	335	16.0	345	15.7		50.0	90	31.8		25.1	167	38.3		54.3	79	50.7
11	350	18.5	0	15.3	-5	48.8	105	33.7	-20	25.3	182	41.0	+6	54.4	94	53.2
12	5	20.9	15	14.9	-5	47.6	120	35.6	-20	25.4	197	43.8	+6	54.5	109	55.6
13	20	23.4	30	14.5		46.4	135	37.5		25.6	212	46.5		54.6	124	58.1
14	35	25.9	45	14.1		45.3	150	39.4		25.7	227	49.2		54.7	140	00.6
15	50	28.3	60	13.7		44.1	165	41.3		25.8	242	52.0		54.8	155	03.1
16	65	30.8	75	13.3		42.9	180	43.2		26.0	257	54.7		54.9	170	05.5
17	80	33.2	90	12.9	-5	41.7	195	45.1	-20	26.1	272	57.4	+6	55.0	185	08.0
18	95	35.7	105	12.5	-5	40.5	210	47.0	-20	26.3	288	00.1	+6	55.1	200	10.5
19	110	38.2	120	12.1		39.4	225	48.9		26.4	303	02.9		55.2	215	13.0
20	125	40.6	135	11.7		38.2	240	50.8		26.5	318	05.6		55.3	230	15.4
21	140	43.1	150	11.3		37.0	255	52.7		26.7	333	08.3		55.5	245	17.9
22	155	45.6	165	10.9		35.8	270	54.6		26.8	348	11.1		55.6	260	20.4
23	170	48.0	180	10.5		34.6	285	56.5		27.0	3	13.8		55.7	275	22.9
24	185	50.5	195	10.1	-5	33.5	300	58.4	-20	27.1	18	16.5	+6	55.8	290	25.3
Dif	—		-4	+12			+19	-1			+27	+1			+25	

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: 18 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 3 ^h 25 ^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			
0	178	43.9	+3	04.3	310	22.5	-14 45.0	60 N	18 35	19 18	20 10	** ** *		7 38	31			
1	193	44.1		05.3	324	54.7 ¹³²	50.6 ⁵⁶	58	33	13	20 02	23 59 59		47	33			
2	208	44.2		06.2	339	26.9 ¹³²	-14 56.1 ⁵⁵	56	31	09	19 54	49 58		7 56	34			
3	223	44.4		07.2	353	59.0 ¹³¹	-15 01.6 ⁵⁵	54	29	05	48	41 57		8 03	36			
4	238	44.6		08.2	8	31.0 ¹³⁰	06.9 ⁵³	52	28	19 02	43	34 56		10	37			
5	253	44.8	+3	09.2	23	03.1 ¹³¹	-15 12.3 ⁵⁴	50	18 26	18 59	19 38	23 27 55		8 16	38			
6	268	45.0	+3	10.1	37	35.1 ¹³⁰	-15 17.5 ⁵²	45	18 23	18 53	19 28	23 12 54		8 29	39			
7	283	45.2		11.1	52	07.0 ¹²⁹	22.7 ⁵²	40	21	48	20	23 00 54		40	41			
8	298	45.4		12.1	66	39.0 ¹³⁰	27.8 ⁵¹	35	18	44	14	22 50 52		50	41			
9	313	45.6		13.1	81	10.8 ¹²⁸	32.9 ⁵¹	30	16	40	09	41 52		8 58	43			
10	328	45.8		14.0	95	42.7 ¹²⁹	37.8 ⁴⁹	20	13	35	19 01	26 50		9 12	44			
11	343	45.9	+3	15.0	110	14.5 ¹²⁸	-15 42.7 ⁴⁹	10 N	18 11	18 32	18 56	22 13 49		9 24	46			
12	358	46.1	+3	16.0	124	46.3 ¹²⁸	-15 47.6 ⁴⁹	0	18 08	18 29	18 53	22 00 48		9 36	47			
13	13	46.3		17.0	139	18.0 ¹²⁷	52.4 ⁴⁸	10 S	06	27	51	21 48 47		9 48	48			
14	28	46.5		17.9	153	49.7 ¹²⁷	-15 57.1 ⁴⁷	20	03	25	51	35 46		10 00	50			
15	43	46.7		18.9	168	21.4 ¹²⁷	-16 01.7 ⁴⁶	30	18 01	25	52	20 44		14	52			
16	58	46.9		19.9	182	53.0 ¹²⁶	06.3 ⁴⁶	35	17 59	25	54	11 44		23	52			
17	73	47.1	+3	20.9	197	24.6 ¹²⁶	-16 10.7 ⁴⁴	40	17 58	18 25	18 56	21 01 43		10 32	54			
18	88	47.3	+3	21.8	211	56.1 ¹²⁵	-16 15.2 ⁴⁵	45	17 56	18 25	18 59	20 50 41		10 43	55			
19	103	47.5		22.8	226	27.6 ¹²⁵	19.5 ⁴³	50	54	26	19 04	36 40		10 57	56			
20	118	47.6		23.8	240	59.1 ¹²⁵	23.8 ⁴³	52	53	27	06	29 40		11 03	58			
21	133	47.8		24.7	255	30.5 ¹²⁴	28.0 ⁴²	54	52	27	08	22 39		10	58			
22	148	48.0		25.7	270	01.9 ¹²⁴	32.1 ⁴¹	56	51	28	11	14 38		18	59			
23	163	48.2		26.7	284	33.2 ¹²³	36.2 ⁴¹	58	50	29	14	20 05 37		26	61			
24	178	48.4	+3	27.7	299	04.5 ¹²³	-16 40.1 ³⁹	60 S	17 48	18 29	19 18	19 54 36		11 36	63			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 34 ^m 7		Mag: -3.8 PMG: 11 ^h 00 ^m			Mag: -0.4 PMG: 3 ^h 56 ^m			Mag: -2.5 PMG: 22 ^h 43 ^m			Mag: +0.4 PMG: 4 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	185	50.5	195	10.1	-5	33.5	300	58.4	-20	27.1	18	16.5	+6	55.8	290	25.3	-20	59.5
1	200	53.0	210	09.7		32.3	316	00.3		27.2	33	19.2		55.9	305	27.8		59.5
2	215	55.4	225	09.2		31.1	331	02.2		27.4	48	22.0		56.0	320	30.3		59.5
3	230	57.9	240	08.8		29.9	346	04.1		27.5	63	24.7		56.1	335	32.8		59.5
4	246	00.3	255	08.4		28.7	1	06.0		27.6	78	27.4		56.2	350	35.2		59.5
5	261	02.8	270	08.0	-5	27.6	16	07.9	-20	27.8	93	30.1	+6	56.3	5	37.7	-20	59.5
6	276	05.3	285	07.6	-5	26.4	31	09.8	-20	27.9	108	32.9	+6	56.4	20	40.2	-20	59.5
7	291	07.7	300	07.2		25.2	46	11.7		28.1	123	35.6		56.5	35	42.7		59.4
8	306	10.2	315	06.8		24.0	61	13.6		28.2	138	38.3		56.6	50	45.1		59.4
9	321	12.7	330	06.4		22.8	76	15.5		28.3	153	41.1		56.7	65	47.6		59.4
10	336	15.1	345	06.0		21.6	91	17.4		28.5	168	43.8		56.9	80	50.1		59.4
11	351	17.6	0	05.6	-5	20.5	106	19.3	-20	28.6	183	46.5	+6	57.0	95	52.6	-20	59.4
12	6	20.1	15	05.2	-5	19.3	121	21.2	-20	28.8	198	49.2	+6	57.1	110	55.0	-20	59.4
13	21	22.5	30	04.8		18.1	136	23.1		28.9	213	52.0		57.2	125	57.5		59.4
14	36	25.0	45	04.4		16.9	151	25.1		29.0	228	54.7		57.3	141	00.0		59.4
15	51	27.5	60	04.0		15.7	166	27.0		29.2	243	57.4		57.4	156	02.5		59.4
16	66	29.9	75	03.6		14.5	181	28.9		29.3	259	00.1		57.5	171	05.0		59.4
17	81	32.4	90	03.2	-5	13.3	196	30.8	-20	29.4	274	02.9	+6	57.6	186	07.4	-20	59.4
18	96	34.8	105	02.8	-5	12.2	211	32.7	-20	29.6	289	05.6	+6	57.7	201	09.9	-20	59.4
19	111	37.3	120	02.4		11.0	226	34.6		29.7	304	08.3		57.8	216	12.4		59.4
20	126	39.8	135	02.0		09.8	241	36.6		29.9	319	11.0		57.9	231	14.9		59.4
21	141	42.2	150	01.6		08.6	256	38.5		30.0	334	13.8		58.0	246	17.3		59.4
22	156	44.7	165	01.2		07.4	271	40.4		30.1	349	16.5		58.1	261	19.8		59.4
23	171	47.2	180	00.8		06.2	286	42.3		30.3	4	19.2		58.2	276	22.3		59.4
24	186	49.6	195	00.4	-5	05.0	301	44.2	-20	30.4	19	21.9	+6	58.3	291	24.8	-20	59.3
Dif	—		-4		+12		+19		-1		+27		+1		+25		0	

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: 19 ^d 9 PHE { SD: 14'9 PMG: 4 ^h 12 ^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	178	48.4	+3	27.7	299	04.5	-16	40.1	39	60 N	3	59	4	51	5	33	0	10	60	8	09	40
1	193	48.6		28.6	313	35.8 ¹²³		44.0	39	58	4	07	4	56	36	**	**	**		20	41	
2	208	48.8		29.6	328	07.0 ¹²²		47.9	39	56	14	5	00	38	**	**	**		30	42		
3	223	49.0		30.6	342	38.2 ¹²²		51.6	37	54	20	04	39	**	**	**	**		39	44		
4	238	49.2		31.6	357	09.4 ¹²²		55.3	37	52	26	07	41	**	**	**	**		47	42		
5	253	49.3	+3	32.5	11	40.5 ¹²¹	-16	58.9	36	50	4	31	5	10	5	43	**	**	**	8	54	43
6	268	49.5	+3	33.5	26	11.6 ¹²¹	-17	02.4	35	45	4	41	5	16	5	46	**	**	**	9	08	45
7	283	49.7		34.5	40	42.6 ¹²⁰		05.8	34	40	49	21	48	23	54	51		21	45			
8	298	49.9		35.4	55	13.6 ¹²⁰		09.2	34	35	4	55	25	51	42	52		31	46			
9	313	50.1		36.4	69	44.6 ¹²⁰		12.5	33	30	5	01	29	53	33	51		41	46			
10	328	50.3		37.4	84	15.5 ¹¹⁹		15.7	32	20	08	34	56	16	51	9	56	48				
11	343	50.5	+3	38.4	98	46.4 ¹¹⁹	-17	18.8	31	10 N	5	13	5	38	5	59	23	02	50	10	10	49
12	358	50.7	+3	39.3	113	17.2 ¹¹⁸	-17	21.8	30	0	5	17	5	41	6	01	22	48	50	10	23	49
13	13	50.8		40.3	127	48.0 ¹¹⁸		24.8	30	10 S	18	43	04	35	49		36	50				
14	28	51.0		41.3	142	18.8 ¹¹⁸		27.7	29	20	19	44	06	21	49	10	50	51				
15	43	51.2		42.3	156	49.5 ¹¹⁷		30.5	28	30	17	45	09	22	04	49	11	06	51			
16	58	51.4		43.2	171	20.2 ¹¹⁷		33.2	27	35	16	45	11	21	55	48	15	52				
17	73	51.6	+3	44.2	185	50.8 ¹¹⁶	-17	35.8	26	40	5	14	5	45	6	12	21	44	48	11	26	52
18	88	51.8	+3	45.2	200	21.4 ¹¹⁶	-17	38.3	25	45	5	11	5	45	6	14	21	31	48	11	38	53
19	103	52.0		46.1	214	52.0 ¹¹⁶		40.8	25	50	07	44	17	16	47	11	53	54				
20	118	52.2		47.1	229	22.5 ¹¹⁵		43.2	24	52	05	44	18	09	46	12	01	54				
21	133	52.3		48.1	243	53.0 ¹¹⁵		45.5	23	54	5	02	43	19	21	01	46	08	55			
22	148	52.5		49.0	258	23.5 ¹¹⁵		47.7	22	56	4	59	43	20	20	52	46	17	55			
23	163	52.7		50.0	272	53.9 ¹¹⁴		49.8	21	58	56	42	21	42	45	27	56					
24	178	52.9	+3	51.0	287	24.3 ¹¹⁴	-17	51.9	21	60 S	4	53	5	41	6	23	20	30	45	12	39	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 30 ^m 8		Mag: -3.8 PMG: 11 ^h 00 ^m		Mag: -0.5 PMG: 3 ^h 53 ^m		Mag: -2.5 PMG: 22 ^h 38 ^m		Mag: +0.4 PMG: 4 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	186	49.6	195	00.4	-5	05.0	301	44.2	-20	30.4	19	21.9	+6	58.3	291	24.8	-20	59.3
1	201	52.1	210	00.0		03.9	316	46.2		30.5	34	24.7		58.4	306	27.3		59.3
2	216	54.6	224	59.6		02.7	331	48.1		30.7	49	27.4		58.5	321	29.7		59.3
3	231	57.0	239	59.2		01.5	346	50.0		30.8	64	30.1		58.7	336	32.2		59.3
4	246	59.5	254	58.8	-5	00.3	1	51.9		30.9	79	32.8		58.8	351	34.7		59.3
5	262	02.0	269	58.4	-4	59.1	16	53.9	-20	31.1	94	35.6	+6	58.9	6	37.2	-20	59.3
6	277	04.4	284	58.0	-4	57.9	31	55.8	-20	31.2	109	38.3	+6	59.0	21	39.7	-20	59.3
7	292	06.9	299	57.6		56.7	46	57.7		31.4	124	41.0		59.1	36	42.1		59.3
8	307	09.3	314	57.2		55.5	61	59.7		31.5	139	43.7		59.2	51	44.6		59.3
9	322	11.8	329	56.8		54.3	77	01.6		31.6	154	46.4		59.3	66	47.1		59.3
10	337	14.3	344	56.5		53.2	92	03.5		31.8	169	49.2		59.4	81	49.6		59.3
11	352	16.7	359	56.1	-4	52.0	107	05.5	-20	31.9	184	51.9	+6	59.5	96	52.1	-20	59.3
12	7	19.2	14	55.7	-4	50.8	122	07.4	-20	32.0	199	54.6	+6	59.6	111	54.6	-20	59.3
13	22	21.7	29	55.3		49.6	137	09.3		32.2	214	57.3		59.7	126	57.0		59.3
14	37	24.1	44	54.9		48.4	152	11.3		32.3	230	00.1		59.8	141	59.5		59.3
15	52	26.6	59	54.5		47.2	167	13.2		32.4	245	02.8	+6	59.9	157	02.0		59.3
16	67	29.1	74	54.1		46.0	182	15.1		32.6	260	05.5	+7	00.0	172	04.5		59.2
17	82	31.5	89	53.7	-4	44.8	197	17.1	-20	32.7	275	08.2	+7	00.1	187	07.0	-20	59.2
18	97	34.0	104	53.3	-4	43.6	212	19.0	-20	32.8	290	10.9	+7	00.2	202	09.4	-20	59.2
19	112	36.4	119	52.9		42.4	227	21.0		33.0	305	13.7		00.3	217	11.9		59.2
20	127	38.9	134	52.5		41.2	242	22.9		33.1	320	16.4		00.4	232	14.4		59.2
21	142	41.4	149	52.1		40.1	257	24.8		33.2	335	19.1		00.5	247	16.9		59.2
22	157	43.8	164	51.7		38.9	272	26.8		33.4	350	21.8		00.6	262	19.4		59.2
23	172	46.3	179	51.3		37.7	287	28.7		33.5	5	24.6		00.7	277	21.9		59.2
24	187	48.8	194	50.9	-4	36.5	302	30.7	-20	33.6	20	27.3	+7	00.8	292	24.3	-20	59.2
Dif	—		-4		+12		+19		-1		+27		+1		+25		0	

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: 20 ^d 9 PHE { SD: 15°0 PMG: 5 ^h 00 ^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	178	52.9	+3	51.0	287	24.3	-17	51.9	60 N	18 40	19 23	20 16	1 10	53		8 49	50	
1	193	53.1		52.0	301	54.6 ¹¹³		53.8 ¹⁹	58	37	17	20 07	0 58	53		9 01	50	
2	208	53.3		52.9	316	24.9 ¹¹³		55.7 ¹⁹	56	35	13	19 59	47	53		12	50	
3	223	53.5		53.9	330	55.2 ¹¹³		57.5 ¹⁸	54	33	09	52	38	52		21	50	
4	238	53.7		54.9	345	25.4 ¹¹²	-17	59.2 ¹⁷	52	31	05	47	30	52		29	51	
5	253	53.9	+3	55.8	359	55.6 ¹¹²	-18	00.8 ¹⁶	50	18 29	19 02	19 41	0 22	52		9 37	50	
6	268	54.0	+3	56.8	14	25.8 ¹¹²	-18	02.3 ¹⁵	45	18 26	18 55	19 31	0 06	52		9 53	50	
7	283	54.2		57.8	28	55.9 ¹¹¹		03.7 ¹⁴	40	23	50	22	** ** *	**		10 06	51	
8	298	54.4		58.7	43	26.0 ¹¹¹		05.1 ¹⁴	35	20	45	15	** ** *	**		17	51	
9	313	54.6	+3	59.7	57	56.0 ¹¹⁰		06.3 ¹²	30	18	42	10	** ** *	**		27	51	
10	328	54.8	+4	00.7	72	26.0 ¹¹⁰		07.5 ¹²	20	14	36	19 02	** ** *	**		44	50	
11	343	55.0	+4	01.7	86	56.0 ¹¹⁰	-18	08.6 ¹¹	10 N	18 11	18 32	18 56	23 52	51		10 59	50	
12	358	55.2	+4	02.6	101	25.9 ¹⁰⁹	-18	09.6 ¹⁰	0	18 08	18 28	18 52	23 38	51		11 12	51	
13	13	55.4		03.6	115	55.8 ¹⁰⁹		10.5 ⁹	10 S	05	26	50	24	52		26	50	
14	28	55.5		04.6	130	25.7 ¹⁰⁹		11.3 ⁸	20	18 02	24	49	23 10	52		41	50	
15	43	55.7		05.5	144	55.5 ¹⁰⁸		12.0 ⁷	30	17 59	22	50	22 53	52		11 57	51	
16	58	55.9		06.5	159	25.3 ¹⁰⁸		12.6 ⁶	35	57	22	51	43	53		12 07	50	
17	73	56.1	+4	07.5	173	55.0 ¹⁰⁷	-18	13.1 ⁵	40	17 55	18 22	18 53	22 32	53		12 18	50	
18	88	56.3	+4	08.4	188	24.8 ¹⁰⁸	-18	13.6 ⁵	45	17 52	18 22	18 56	22 19	53		12 31	50	
19	103	56.5		09.4	202	54.5 ¹⁰⁷		13.9 ³	50	50	22	18 59	22 03	54		47	50	
20	118	56.7		10.4	217	24.1 ¹⁰⁶		14.2 ³	52	48	22	19 01	21 55	55		12 55	49	
21	133	56.8		11.3	231	53.7 ¹⁰⁶		14.3 ¹	54	47	22	03	47	54		13 03	50	
22	148	57.0		12.3	246	23.3 ¹⁰⁶		14.4 ¹	56	46	23	06	38	54		12	50	
23	163	57.2		13.3	260	52.9 ¹⁰⁶		14.4 ⁰	58	44	23	09	27	55		23	49	
24	178	57.4	+4	14.2	275	22.4 ¹⁰⁵	-18	14.3 ¹	60 S	17 42	18 24	19 12	21 15	55		13 35	49	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 26 ^m 9		Mag: -3.8 PMG: 11 ^h 01 ^m			Mag: -0.5 PMG: 3 ^h 49 ^m			Mag: -2.5 PMG: 22 ^h 34 ^m			Mag: +0.4 PMG: 4 ^h 30 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	187	48.8	194	50.9	-4	36.5	302	30.7	-20	33.6	20	27.3	+7	00.8	292	24.3	-20	59.2
1	202	51.2	209	50.5		35.3	317	32.6		33.8	35	30.0		00.9	307	26.8		59.2
2	217	53.7	224	50.1		34.1	332	34.6		33.9	50	32.7		01.1	322	29.3		59.2
3	232	56.2	239	49.7		32.9	347	36.5		34.0	65	35.4		01.2	337	31.8		59.2
4	247	58.6	254	49.3		31.7	2	38.5		34.2	80	38.2		01.3	352	34.3		59.2
5	263	01.1	269	48.9	-4	30.5	17	40.4	-20	34.3	95	40.9	+7	01.4	7	36.8	-20	59.2
6	278	03.6	284	48.6	-4	29.3	32	42.4	-20	34.4	110	43.6	+7	01.5	22	39.2	-20	59.2
7	293	06.0	299	48.2		28.1	47	44.3		34.6	125	46.3		01.6	37	41.7		59.1
8	308	08.5	314	47.8		26.9	62	46.3		34.7	140	49.0		01.7	52	44.2		59.1
9	323	10.9	329	47.4		25.7	77	48.3		34.8	155	51.7		01.8	67	46.7		59.1
10	338	13.4	344	47.0		24.5	92	50.2		35.0	170	54.5		01.9	82	49.2		59.1
11	353	15.9	359	46.6	-4	23.3	107	52.2	-20	35.1	185	57.2	+7	02.0	97	51.7	-20	59.1
12	8	18.3	14	46.2	-4	22.1	122	54.1	-20	35.2	200	59.9	+7	02.1	112	54.2	-20	59.1
13	23	20.8	29	45.8		20.9	137	56.1		35.4	216	02.6		02.2	127	56.6		59.1
14	38	23.3	44	45.4		19.8	152	58.0		35.5	231	05.3		02.3	142	59.1		59.1
15	53	25.7	59	45.0		18.6	168	00.0		35.6	246	08.1		02.4	158	01.6		59.1
16	68	28.2	74	44.6		17.4	183	02.0		35.8	261	10.8		02.5	173	04.1		59.1
17	83	30.7	89	44.2	-4	16.2	198	03.9	-20	35.9	276	13.5	+7	02.6	188	06.6	-20	59.1
18	98	33.1	104	43.9	-4	15.0	213	05.9	-20	36.0	291	16.2	+7	02.7	203	09.1	-20	59.1
19	113	35.6	119	43.5		13.8	228	07.9		36.1	306	18.9		02.8	218	11.6		59.1
20	128	38.1	134	43.1		12.6	243	09.8		36.3	321	21.6		02.9	233	14.1		59.1
21	143	40.5	149	42.7		11.4	258	11.8		36.4	336	24.4		03.0	248	16.5		59.1
22	158	43.0	164	42.3		10.2	273	13.8		36.5	351	27.1		03.1	263	19.0		59.0
23	173	45.4	179	41.9		09.0	288	15.7		36.7	6	29.8		03.2	278	21.5		59.0
24	188	47.9	194	41.5	-4	07.8	303	17.7	-20	36.8	21	32.5	+7	03.3	293	24.0	-20	59.0
Dif	—		-4		+12		+20		-1		+27		+1		+25		0	

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: 21 ^d 9 PHE { 4 ^h : 55'9 12 ^h : 56'2 20 ^h : 56'4 PMG: 5 ^h 50 ^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	m
0	178	57.4	+4	14.2	275	22.4	-18	14.3	60 N	3 51	4 45	5 27	2 03	45	9 39	60	
1	193	57.6		15.2	289	51.9 ¹⁰⁵		14.0	3 58	4 00	50	30	1 51	45	9 51	60	
2	208	57.8		16.2	304	21.3 ¹⁰⁴		13.7	3 56	08	54	32	40	46	10 02	59	
3	223	58.0		17.1	318	50.7 ¹⁰⁴		13.3	4 54	15	4 59	34	30	47	11 59		
4	238	58.2		18.1	333	20.1 ¹⁰⁴		12.8	5 52	21	5 02	36	22	47	20 58		
5	253	58.3	+4	19.1	347	49.5 ¹⁰⁴	-18	12.2	6 50	4 26	5 05	5 38	1 14	48	10 27	58	
6	268	58.5	+4	20.0	2	18.8 ¹⁰³	-18	11.6	6 45	4 37	5 12	5 42	0 58	48	10 43	57	
7	283	58.7		21.0	16	48.1 ¹⁰³		10.8	8 40	46	18	45	45	49	10 57	55	
8	298	58.9		22.0	31	17.3 ¹⁰²		09.9	9 35	53	22	48	34	49	11 08	55	
9	313	59.1		22.9	45	46.6 ¹⁰³		08.9	10 30	4 58	26	50	24	49	18 54		
10	328	59.3		23.9	60	15.8 ¹⁰²		07.8	11 20	5 06	32	54	0 07	50	34 54		
11	343	59.5	+4	24.9	74	44.9 ¹⁰¹	-18	06.7	11 10 N	5 12	5 37	5 58	** ** *	**	11 49	53	
12	358	59.6	+4	25.8	89	14.1 ¹⁰²	-18	05.4	13 0	5 16	5 40	6 01	** ** *	**	12 03	51	
13	13	59.8		26.8	103	43.2 ¹⁰¹		04.0	14 10 S	18	43	04	** ** *	**	16 51		
14	29	00.0		27.8	118	12.3 ¹⁰¹		02.6	14 20	19	45	07	** ** *	**	31 50		
15	44	00.2		28.7	132	41.3 ¹⁰⁰	-18	01.0	16 30	19	46	10	23	45	57	48	48
16	59	00.4		29.7	147	10.3 ¹⁰⁰	-17	59.4	16 35	18	47	12	36	57	12 57	48	
17	74	00.6	+4	30.7	161	39.3 ¹⁰⁰	-17	57.6	18 40	5 16	5 47	6 14	23	25	58	13 08	48
18	89	00.8	+4	31.6	176	08.3 ¹⁰⁰	-17	55.8	18 45	5 13	5 47	6 17	23	12	60	13 21	47
19	104	00.9		32.6	190	37.2 ⁹⁹		53.8	20 50	10	47	20	22	57	61	37	45
20	119	01.1		33.6	205	06.1 ⁹⁹		51.8	20 52	08	47	21	50	61	44	45	
21	134	01.3		34.5	219	35.0 ⁹⁹		49.6	22 54	06	47	22	41	63	13 53	44	
22	149	01.5		35.5	234	03.8 ⁹⁸		47.4	22 56	04	47	24	32	64	14 02	43	
23	164	01.7		36.5	248	32.7 ⁹⁹		45.1	23 58	5 01	47	26	22	65	12 42		
24	179	01.9	+4	37.4	263	01.5 ⁹⁸	-17	42.6	25 60 S	4 58	5 46	6 28	22 10	66	14 24	41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 22 ^m 9		Mag: -3.8 PMG: 11 ^h 02 ^m		Mag: -0.5 PMG: 3 ^h 46 ^m		Mag: -2.5 PMG: 22 ^h 30 ^m		Mag: +0.4 PMG: 4 ^h 26 ^m									
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	47.9	194	41.5	-4	07.8	303	17.7	-20	36.8	293	24.0	-20	59.0				
1	203	50.4	209	41.1		06.6	318	19.7		36.9	36	35.2	03.4	308	26.5	59.0		
2	218	52.8	224	40.7		05.4	333	21.7		37.1	51	37.9	03.5	323	29.0	59.0		
3	233	55.3	239	40.3		04.2	348	23.6		37.2	66	40.7	03.6	338	31.5	59.0		
4	248	57.8	254	40.0		03.0	3	25.6		37.3	81	43.4	03.7	353	34.0	59.0		
5	264	00.2	269	39.6	-4	01.8	18	27.6	-20	37.5	96	46.1	+7	03.8	8	36.5	-20	59.0
6	279	02.7	284	39.2	-4	00.6	33	29.6	-20	37.6	111	48.8	+7	03.9	23	38.9	-20	59.0
7	294	05.2	299	38.8	-3	59.4	48	31.5		37.7	126	51.5	04.0		38	41.4	59.0	
8	309	07.6	314	38.4		58.2	63	33.5		37.8	141	54.2	04.1		53	43.9	59.0	
9	324	10.1	329	38.0		57.0	78	35.5		38.0	156	56.9	04.2		68	46.4	59.0	
10	339	12.5	344	37.6		55.8	93	37.5		38.1	171	59.7	04.3		83	48.9	59.0	
11	354	15.0	359	37.2	-3	54.6	108	39.5	-20	38.2	187	02.4	+7	04.4	98	51.4	-20	59.0
12	9	17.5	14	36.8	-3	53.4	123	41.4	-20	38.4	202	05.1	+7	04.5	113	53.9	-20	59.0
13	24	19.9	29	36.5		52.2	138	43.4		38.5	217	07.8	04.6		128	56.4	58.9	
14	39	22.4	44	36.1		51.0	153	45.4		38.6	232	10.5	04.7		143	58.9	58.9	
15	54	24.9	59	35.7		49.8	168	47.4		38.7	247	13.2	04.8		159	01.4	58.9	
16	69	27.3	74	35.3		48.6	183	49.4		38.9	262	15.9	04.9		174	03.8	58.9	
17	84	29.8	89	34.9	-3	47.4	198	51.4	-20	39.0	277	18.7	+7	05.0	189	06.3	-20	58.9
18	99	32.3	104	34.5	-3	46.2	213	53.4	-20	39.1	292	21.4	+7	05.1	204	08.8	-20	58.9
19	114	34.7	119	34.1		45.0	228	55.3		39.3	307	24.1	05.2		219	11.3	58.9	
20	129	37.2	134	33.7		43.8	243	57.3		39.4	322	26.8	05.3		234	13.8	58.9	
21	144	39.7	149	33.4		42.6	258	59.3		39.5	337	29.5	05.4		249	16.3	58.9	
22	159	42.1	164	33.0		41.4	274	01.3		39.6	352	32.2	05.5		264	18.8	58.9	
23	174	44.6	179	32.6		40.2	289	03.3		39.8	7	34.9	05.6		279	21.3	58.9	
24	189	47.0	194	32.2	-3	39.0	304	05.3	-20	39.9	22	37.6	+7	05.7	294	23.8	-20	58.9
Dif	—		-4	+12		+20	-1			+27	+1				+25	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0			Edad: 22 ^d 9 PHE { 4 ^h : 56 ^h /7 12 ^h : 57 ^h /0 20 ^h : 57 ^h /3	SD: 15 ^h 4				R°: 52 ^m		Hora		R°	Hora	R°		
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	01.9	+4	37.4	263	01.5	-17	42.6	60 N	18 45	19 28	20 22	2 48 38	10 39 71			
1	194	02.1		38.4	277	30.2	97	40.1	58	42	22	12	36 39	10 51 69			
2	209	02.2		39.3	291	59.0	98	37.4	56	39	17	20 04	26 40	11 01 67			
3	224	02.4		40.3	306	27.7	97	34.7	54	37	13	19 57	17 42	10 66			
4	239	02.6		41.3	320	56.4	97	31.9	52	34	09	51	09 42	18 65			
5	254	02.8	+4	42.2	335	25.1	97	-17 28.9	50	18 32	19 05	19 45	2 02 43	11 25 64			
6	269	03.0	+4	43.2	349	53.7	96	-17 25.9	45	18 28	18 58	19 33	1 46 45	11 40 62			
7	284	03.2		44.2	4	22.3	96	22.8	40	25	52	24	34 46	11 52 61			
8	299	03.4		45.1	18	50.9	96	19.5	35	22	47	17	23 47	12 03 59			
9	314	03.5		46.1	33	19.5	96	16.2	30	19	43	11	1 13 49	12 58			
10	329	03.7		47.1	47	48.0	95	12.8	20	14	37	19 02	0 57 50	28 56			
11	344	03.9	+4	48.0	62	16.6	96	-17 09.2	10 N	18 11	18 32	18 56	0 43 51	12 42 54			
12	359	04.1	+4	49.0	76	45.1	95	-17 05.6	0	18 07	18 28	18 52	0 29 53	12 54 53			
13	14	04.3		49.9	91	13.5	94	-17 01.9	10 S	04	25	49	16 54	13 07 51			
14	29	04.5		50.9	105	42.0	95	-16 58.1	20	18 00	22	48	0 02 55	21 49			
15	44	04.6		51.9	120	10.4	94	54.1	30	17 56	20	48	** ** *	36 48			
16	59	04.8		52.8	134	38.8	94	50.1	35	54	19	48	** ** *	45 46			
17	74	05.0	+4	53.8	149	07.2	94	-16 46.0	40	17 51	18 19	18 50	** ** *	13 56 44			
18	89	05.2	+4	54.7	163	35.6	94	-16 41.8	45	17 49	18 18	18 52	** ** *	14 08 43			
19	104	05.4		55.7	178	03.9	93	37.4	50	45	18	55	23 58 67	22 41			
20	119	05.6		56.7	192	32.3	94	33.0	52	44	17	57	51 69	29 40			
21	134	05.8		57.6	207	00.6	93	28.5	54	42	17	18 58	44 70	37 38			
22	149	05.9		58.6	221	28.9	93	23.9	56	40	17	19 00	36 71	45 37			
23	164	06.1	+4	59.6	235	57.1	92	19.2	58	38	17	03	27 73	14 54 36			
24	179	06.3	+5	00.5	250	25.4	93	-16 14.3	60 S	17 36	18 18	19 06	23 16 75	15 05 34			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 19 ^m 0		Mag: -3.8 PMG: 11 ^h 02 ^m			Mag: -0.5 PMG: 3 ^h 43 ^m			Mag: -2.4 PMG: 22 ^h 25 ^m			Mag: +0.3 PMG: 4 ^h 22 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	189	47.0	194	32.2	-3	39.0	304	05.3	-20	39.9	22	37.6	+7	05.7	294	23.8	-20 58.9
1	204	49.5	209	31.8		37.8	319	07.3		40.0	37	40.4		05.8	309	26.3	58.9
2	219	52.0	224	31.4		36.6	334	09.3		40.2	52	43.1		05.9	324	28.8	58.9
3	234	54.4	239	31.0		35.3	349	11.3		40.3	67	45.8		06.0	339	31.3	58.8
4	249	56.9	254	30.7		34.1	4	13.3		40.4	82	48.5		06.1	354	33.7	58.8
5	264	59.4	269	30.3	-3	32.9	19	15.3	-20	40.5	97	51.2	+7	06.2	9	36.2	-20 58.8
6	280	01.8	284	29.9	-3	31.7	34	17.3	-20	40.7	112	53.9	+7	06.3	24	38.7	-20 58.8
7	295	04.3	299	29.5		30.5	49	19.3		40.8	127	56.6		06.4	39	41.2	58.8
8	310	06.8	314	29.1		29.3	64	21.3		40.9	142	59.3		06.5	54	43.7	58.8
9	325	09.2	329	28.7		28.1	79	23.3		41.0	158	02.0		06.6	69	46.2	58.8
10	340	11.7	344	28.3		26.9	94	25.3		41.2	173	04.8		06.7	84	48.7	58.8
11	355	14.2	359	28.0	-3	25.7	109	27.3	-20	41.3	188	07.5	+7	06.8	99	51.2	-20 58.8
12	10	16.6	14	27.6	-3	24.5	124	29.3	-20	41.4	203	10.2	+7	06.9	114	53.7	-20 58.8
13	25	19.1	29	27.2		23.3	139	31.3		41.5	218	12.9		07.0	129	56.2	58.8
14	40	21.5	44	26.8		22.1	154	33.4		41.7	233	15.6		07.1	144	58.7	58.8
15	55	24.0	59	26.4		20.9	169	35.4		41.8	248	18.3		07.2	160	01.2	58.8
16	70	26.5	74	26.0		19.7	184	37.4		41.9	263	21.0		07.3	175	03.7	58.7
17	85	28.9	89	25.7	-3	18.5	199	39.4	-20	42.0	278	23.7	+7	07.4	190	06.2	-20 58.7
18	100	31.4	104	25.3	-3	17.3	214	41.4	-20	42.2	293	26.4	+7	07.5	205	08.7	-20 58.7
19	115	33.9	119	24.9		16.1	229	43.4		42.3	308	29.1		07.6	220	11.2	58.7
20	130	36.3	134	24.5		14.9	244	45.4		42.4	323	31.8		07.7	235	13.7	58.7
21	145	38.8	149	24.1		13.7	259	47.5		42.5	338	34.5		07.8	250	16.2	58.7
22	160	41.3	164	23.7		12.4	274	49.5		42.7	353	37.3		07.9	265	18.7	58.7
23	175	43.7	179	23.4		11.2	289	51.5		42.8	8	40.0		08.0	280	21.2	58.7
24	190	46.2	194	23.0	-3	10.0	304	53.5	-20	42.9	23	42.7	+7	08.1	295	23.7	-20 58.7
Dif	—		-4		+12		+20		-1		+27		+1		+25		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m .4			Edad: 23 ^d 9 PHE { SD: 15'6 PMG: 7 ^h 34 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	06.3	+5 00.5	250	25.4	-16 14.3	60 N	3 44	4 38	5 21	3 26	30	11 50	79	
1	194	06.5		264	53.6	09.4	58	3 54	44	24	15 33		12 00	76	
2	209	06.7		279	21.8	-16 04.4	56	4 02	49	27	3 06	35	08 75		
3	224	06.9		293	50.0	-15 59.3	54	09	53	30	2 59	36	16 77		
4	239	07.0		308	18.2	54.1	52	16	4 57	32	51 38		23 71		
5	254	07.2	+5 05.3	322	46.3	-15 48.8	50	4 21	5 01	5 34	2 45	39	12 29	70	
6	269	07.4	+5 06.3	337	14.4	-15 43.4	45	4 33	5 09	5 38	2 31	42	12 42	67	
7	284	07.6		351	42.6	37.9	40	42	15	42	20 43		12 53	65	
8	299	07.8		6	10.7	32.3	35	50	20	45	10 45		13 02	63	
9	314	08.0		20	38.7	26.6	30	4 56	24	48	2 02	46	10 61		
10	329	08.1		35	06.8	20.8	20	5 05	30	52	1 47	49	24 58		
11	344	08.3	+5 11.1	49	34.9	-15 14.9	10 N	5 11	5 35	5 56	1 34	51	13 36	56	
12	359	08.5	+5 12.0	64	02.9	-15 08.9	0	5 15	5 39	6 00	1 22	53	13 47	53	
13	14	08.7		78	30.9	-15 02.8	10 S	18	43	04	1 10	55	13 58	51	
14	29	08.9		92	58.9	-14 56.7	20	20	45	07	0 57	57	14 10	49	
15	44	09.1		107	26.9	50.4	30	20	48	11	42 60		24 45		
16	59	09.2		121	54.8	44.0	35	19	48	14	33 61		31 44		
17	74	09.4	+5 16.8	136	22.8	-14 37.6	40	5 18	5 49	6 16	0 23	63	14 40	42	
18	89	09.6	+5 17.8	150	50.7	-14 31.0	45	5 16	5 50	6 19	0 12	65	14 51	39	
19	104	09.8		165	18.6	24.4	50	13	50	23	** ** *		15 03	37	
20	119	10.0		179	46.6	17.6	52	12	51	24	** ** *		09 35		
21	134	10.2		194	14.4	10.8	54	10	51	26	** ** *		15 34		
22	149	10.3		208	42.3	-14 03.9	56	08	51	28	** ** *		22 32		
23	164	10.5		223	10.2	-13 56.9	58	05	51	30	** ** *		30 30		
24	179	10.7	+5 23.5	237	38.0	-13 49.8	60 S	5 02	5 51	6 32	** ** *		15 39	28	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 15 ^m 1		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: -0.6 PMG: 3 ^h 40 ^m		Mag: -2.4 PMG: 22 ^h 21 ^m		Mag: +0.3 PMG: 4 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	190	46.2	194	23.0	304	53.5	23	42.7	295	23.7
1	205	48.6	209	22.6	319	55.5	38	45.4	310	26.1
2	220	51.1	224	22.2	334	57.6	53	48.1	325	28.6
3	235	53.6	239	21.8	349	59.6	68	50.8	340	31.1
4	250	56.0	254	21.5	5	01.6	83	53.5	355	33.6
5	265	58.5	269	21.1	20	03.6	98	56.2	10	36.1
6	281	01.0	284	20.7	35	05.7	113	58.9	25	38.6
7	296	03.4	299	20.3	50	07.7	129	01.6	40	41.1
8	311	05.9	314	19.9	65	09.7	144	04.3	55	43.6
9	326	08.4	329	19.5	80	11.8	159	07.0	70	46.1
10	341	10.8	344	19.2	95	13.8	174	09.7	85	48.6
11	356	13.3	359	18.8	110	15.8	189	12.4	100	51.1
12	11	15.8	14	18.4	125	17.9	204	15.1	115	53.6
13	26	18.2	29	18.0	140	19.9	219	17.8	130	56.1
14	41	20.7	44	17.6	155	21.9	234	20.6	145	58.6
15	56	23.1	59	17.3	170	24.0	249	23.3	161	01.1
16	71	25.6	74	16.9	185	26.0	264	26.0	176	03.6
17	86	28.1	89	16.5	200	28.0	279	28.7	191	06.1
18	101	30.5	104	16.1	215	30.1	294	31.4	206	08.6
19	116	33.0	119	15.7	230	32.1	309	34.1	221	11.1
20	131	35.5	134	15.4	245	34.2	324	36.8	236	13.6
21	146	37.9	149	15.0	260	36.2	339	39.5	251	16.1
22	161	40.4	164	14.6	275	38.3	354	42.2	266	18.6
23	176	42.9	179	14.2	290	40.3	9	44.9	281	21.1
24	191	45.3	194	13.8	305	42.3	24	47.6	296	23.6
Dif	—		-4 +12		+20 -1		+27 +1		+25 0	

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: 24 ^d 9 PHE { 4 ^h : 58/6 12 ^h : 58/9 20 ^h : 59/2 PMG: 8 ^h 28 ^m R°: 53 ^m		Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif											
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	10.7	+5 23.5	237 38.0	-13 49.8	72	60 N	18 50	19 33	20 28	3 56 26	13 09 85			
1	194	10.9	24.5	252 05.9	89 42.6	72	58	46	27	18	48 28	16 83			
2	209	11.1	25.4	266 33.7	88 35.3	73	56	43	22	09	41 30	23 80			
3	224	11.2	26.4	281 01.5	88 27.9	74	54	40	17	20 01	35 32	29 78			
4	239	11.4	27.3	295 29.3	88 20.4	75	52	38	12	19 54	29 34	34 76			
5	254	11.6	+5 28.3	309 57.0	87 -13 12.8	76	50	18 36	19 09	19 49	3 24 35	13 39 74			
6	269	11.8	+5 29.3	324 24.8	88 -13 05.2	76	45	18 31	19 01	19 36	3 13 38	13 49 71			
7	284	12.0	30.2	338 52.5	87 -12 57.5	77	40	27	18 54	27	3 03 41	13 58 68			
8	299	12.2	31.2	353 20.3	88 49.6	79	35	23	49	19	2 55 43	14 05 66			
9	314	12.3	32.1	7 48.0	87 41.7	79	30	20	44	13	48 45	11 64			
10	329	12.5	33.1	22 15.7	87 33.7	80	20	15	37	19 03	36 48	22 60			
11	344	12.7	+5 34.0	36 43.4	87 -12 25.6	81	10 N	18 10	18 32	18 56	2 25 51	14 32 56			
12	359	12.9	+5 35.0	51 11.1	87 -12 17.4	82	0	18 06	18 27	18 51	2 15 54	14 40 54			
13	14	13.1	35.9	65 38.7	86 09.2	82	10 S	18 02	24	48	2 05 56	49 51			
14	29	13.2	36.9	80 06.4	87 -12 00.8	84	20	17 58	20	46	1 54 59	14 59 47			
15	44	13.4	37.9	94 34.0	86 -11 52.4	84	30	54	18	45	42 62	15 09 44			
16	59	13.6	38.8	109 01.7	87 43.9	85	35	51	16	46	34 65	15 43			
17	74	13.8	+5 39.8	123 29.3	86 -11 35.3	86	40	17 48	18 15	18 47	1 26 67	15 22 40			
18	89	14.0	+5 40.7	137 56.9	86 -11 26.6	87	45	17 45	18 14	18 48	1 17 69	15 30 37			
19	104	14.2	41.7	152 24.5	86 17.9	87	50	41	13	51	05 73	40 34			
20	119	14.3	42.6	166 52.1	86 09.1	88	52	39	13	52	1 00 74	44 32			
21	134	14.5	43.6	181 19.6	85 -11 00.1	90	54	37	13	53	0 54 76	49 31			
22	149	14.7	44.5	195 47.2	86 -10 51.1	90	56	35	12	55	47 78	15 54 29			
23	164	14.9	45.5	210 14.7	85 42.1	90	58	33	12	18 57	40 80	16 00 27			
24	179	15.1	+5 46.4	224 42.2	85 -10 32.9	92	60 S	17 30	18 12	19 00	0 31 83	16 07 24			
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 11 ^h 11 ^m 1		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: -0.6 PMG: 3 ^h 37 ^m		Mag: -2.4 PMG: 22 ^h 17 ^m			Mag: +0.3 PMG: 4 ^h 14 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	191	45.3	194	13.8	-2 41.0	305	42.3	-20 45.9	24	47.6	+7 10.4	296	23.6	-20 58.5	
1	206	47.8	209	13.5	39.8	320	44.4	46.0	39	50.3	10.5	311	26.1	58.5	
2	221	50.3	224	13.1	38.6	335	46.4	46.1	54	53.0	10.6	326	28.6	58.5	
3	236	52.7	239	12.7	37.4	350	48.5	46.2	69	55.7	10.7	341	31.1	58.5	
4	251	55.2	254	12.3	36.2	5 50.5	46.4	46.4	84	58.4	10.8	356	33.6	58.5	
5	266	57.6	269	11.9	-2 34.9	20 52.6	-20 46.5	100 01.1	+7 10.9	11 36.1	-20 58.5				
6	282	00.1	284	11.6	-2 33.7	35 54.6	-20 46.6	115 03.8	+7 11.0	26 38.6	-20 58.5				
7	297	02.6	299	11.2	32.5	50 56.7	46.7	130 06.5	11.0	41 41.1	58.4				
8	312	05.0	314	10.8	31.3	65 58.8	46.8	145 09.2	11.1	56 43.6	58.4				
9	327	07.5	329	10.4	30.1	81 00.8	47.0	160 11.9	11.2	71 46.2	58.4				
10	342	10.0	344	10.1	28.9	96 02.9	47.1	175 14.6	11.3	86 48.7	58.4				
11	357	12.4	359	09.7	-2 27.7	111 04.9	-20 47.2	190 17.3	+7 11.4	101 51.2	-20 58.4				
12	12	14.9	14	09.3	-2 26.5	126 07.0	-20 47.3	205 20.0	+7 11.5	116 53.7	-20 58.4				
13	27	17.4	29	08.9	25.2	141 09.1	47.4	220 22.7	11.6	131 56.2	58.4				
14	42	19.8	44	08.5	24.0	156 11.1	47.6	235 25.4	11.7	146 58.7	58.4				
15	57	22.3	59	08.2	22.8	171 13.2	47.7	250 28.1	11.8	162 01.2	58.4				
16	72	24.7	74	07.8	21.6	186 15.2	47.8	265 30.8	11.9	177 03.7	58.4				
17	87	27.2	89	07.4	-2 20.4	201 17.3	-20 47.9	280 33.5	+7 12.0	192 06.2	-20 58.4				
18	102	29.7	104	07.0	-2 19.2	216 19.4	-20 48.0	295 36.2	+7 12.1	207 08.7	-20 58.4				
19	117	32.1	119	06.7	18.0	231 21.4	48.2	310 38.9	12.2	222 11.2	58.4				
20	132	34.6	134	06.3	16.8	246 23.5	48.3	325 41.6	12.3	237 13.7	58.3				
21	147	37.1	149	05.9	15.5	261 25.6	48.4	340 44.3	12.4	252 16.2	58.3				
22	162	39.5	164	05.5	14.3	276 27.7	48.5	355 47.0	12.5	267 18.7	58.3				
23	177	42.0	179	05.1	13.1	291 29.7	48.6	10 49.7	12.5	282 21.2	58.3				
24	192	44.5	194	04.8	-2 11.9	306 31.8	-20 48.8	25 52.4	+7 12.6	297 23.7	-20 58.3				
Dif	—		-4	+12		+21	-1	+27	+1	+25	0				

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: 25 ^d 9 PHE { 4 ^h : 59/5 12 ^h : 59/8 20 ^h : 60/1 PMG: 9 ^h 21 ^m R°: 55 ^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	15.1	+5	46.4	224	42.2	-10	32.9	60 N	3	37	4	32	5	15	4	22	23	14 34 89		
1	194	15.2		47.4	239	09.7	85	23.7	92	58	47	38	19			16	26		39 86		
2	209	15.4		48.3	253	37.2	85	14.4	93	56	3	56	43	22		11	28		43 83		
3	224	15.6		49.3	268	04.7	85	-10	05.0	94	4	04	48	25		07	29		47 81		
4	239	15.8		50.2	282	32.2	85	-9	55.6	94	11	53	27		4	03	31		50 80		
5	254	16.0	+5	51.2	296	59.7	85	-9	46.1	95	4	17	4	57	5	30	3	59	33	14 53 78	
6	269	16.1	+5	52.1	311	27.1	84	-9	36.5	96	4	29	5	05	5	35	3	51	36	15 00 74	
7	284	16.3		53.1	325	54.5	84		26.8	97	39	11	39			44	39		06 70		
8	299	16.5		54.0	340	22.0	85		17.0	98	35	47	17	42		38	42		11 68		
9	314	16.7		55.0	354	49.4	84	-9	07.2	98	4	53	21	45		33	44		15 65		
10	329	16.9		56.0	9	16.8	84	-8	57.4	98	5	03	29	51		24	48		22 62		
11	344	17.0	+5	56.9	23	44.1	83	-8	47.4	100	5	10	5	34	5	55	3	16	51	15 28 58	
12	359	17.2	+5	57.9	38	11.5	84	-8	37.4	100	5	15	5	39	6	00	3	09	54	15 34 55	
13	14	17.4		58.8	52	38.9	84		27.3	101	18	43	04	04		3	01	58		40 51	
14	29	17.6	+5	59.8	67	06.2	83		17.2	101	20	20	46	08		2	53	61		46 48	
15	44	17.8	+6	00.7	81	33.5	83	-8	07.0	102	30	21	49	13		44	65		53 44		
16	59	17.9		01.7	96	00.8	83	-7	56.7	103	35	21	50	15		39	67		15 58 41		
17	74	18.1	+6	02.6	110	28.1	83	-7	46.4	103	40	5	20	5	51	6	18	2	33	70	16 02 39
18	89	18.3	+6	03.6	124	55.4	83	-7	36.0	104	45	5	18	5	52	6	22	2	26	73	16 07 36
19	104	18.5		04.5	139	22.7	83		25.5	105	50	16	54	26		18	76		14	32	
20	119	18.6		05.5	153	49.9	82		15.0	105	52	15	54	28		14	78		16	31	
21	134	18.8		06.4	168	17.2	83	-7	04.4	106	54	13	54	30		10	79		20	28	
22	149	19.0		07.4	182	44.4	82	-6	53.8	106	56	12	55	32		05	82		23	26	
23	164	19.2		08.3	197	11.6	82		43.1	107	58	10	55	34		2	00	84		27 24	
24	179	19.4	+6	09.2	211	38.8	82	-6	32.4	107	60 S	5	07	5	56	6	37	1	54	87	16 31 22
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 11 ^h 07 ^m 2			Mag: -3.8 PMG: 11 ^h 04 ^m			Mag: -0.6 PMG: 3 ^h 33 ^m			Mag: -2.4 PMG: 22 ^h 13 ^m			Mag: +0.3 PMG: 4 ^h 10 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	192	44.5	194	04.8	-2	11.9	306	31.8	-20	48.8	25	52.4	+7	12.6	297	23.7	-20	58.3			
1	207	46.9	209	04.4		10.7	321	33.9		48.9	40	55.1		12.7	312	26.2		58.3			
2	222	49.4	224	04.0		09.5	336	35.9		49.0	55	57.8		12.8	327	28.7		58.3			
3	237	51.9	239	03.6		08.3	351	38.0		49.1	71	00.5		12.9	342	31.2		58.3			
4	252	54.3	254	03.3		07.0	6	40.1		49.2	86	03.2		13.0	357	33.7		58.3			
5	267	56.8	269	02.9	-2	05.8	21	42.2	-20	49.4	101	05.9	+7	13.1	12	36.2	-20	58.3			
6	282	59.2	284	02.5	-2	04.6	36	44.3	-20	49.5	116	08.6	+7	13.2	27	38.8	-20	58.3			
7	298	01.7	299	02.1		03.4	51	46.3		49.6	131	11.3		13.3	42	41.3		58.3			
8	313	04.2	314	01.8		02.2	66	48.4		49.7	146	14.0		13.4	57	43.8		58.2			
9	328	06.6	329	01.4	-2	01.0	81	50.5		49.8	161	16.7		13.5	72	46.3		58.2			
10	343	09.1	344	01.0	-1	59.7	96	52.6		49.9	176	19.4		13.6	87	48.8		58.2			
11	358	11.6	359	00.6	-1	58.5	111	54.7	-20	50.1	191	22.1	+7	13.7	102	51.3	-20	58.2			
12	13	14.0	14	00.3	-1	57.3	126	56.8	-20	50.2	206	24.7	+7	13.7	117	53.8	-20	58.2			
13	28	16.5	28	59.9		56.1	141	58.9		50.3	221	27.4		13.8	132	56.3		58.2			
14	43	19.0	43	59.5		54.9	157	00.9		50.4	236	30.1		13.9	147	58.8		58.2			
15	58	21.4	58	59.1		53.7	172	03.0		50.5	251	32.8		14.0	163	01.3		58.2			
16	73	23.9	73	58.8		52.4	187	05.1		50.7	266	35.5		14.1	178	03.8		58.2			
17	88	26.4	88	58.4	-1	51.2	202	07.2	-20	50.8	281	38.2	+7	14.2	193	06.3	-20	58.2			
18	103	28.8	103	58.0	-1	50.0	217	09.3	-20	50.9	296	40.9	+7	14.3	208	08.8	-20	58.2			
19	118	31.3	118	57.6		48.8	232	11.4		51.0	311	43.6		14.4	223	11.4		58.2			
20	133	33.7	133	57.3		47.6	247	13.5		51.1	326	46.3		14.5	238	13.9		58.1			
21	148	36.2	148	56.9		46.4	262	15.6		51.2	341	49.0		14.6	253	16.4		58.1			
22	163	38.7	163	56.5		45.1	277	17.7		51.4	356	51.7		14.7	268	18.9		58.1			
23	178	41.1	178	56.1		43.9	292	19.8		51.5	11	54.4		14.7	283	21.4		58.1			
24	193	43.6	193	55.8	-1	42.7	307	21.9	-20	51.6	26	57.1	+7	14.8	298	23.9	-20	58.1			
Dif	—			-4 +12			+21 -1			+27 +1			+1			+25			0		

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: 26 ^d 9 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'8 R°: 55 ^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	19.4	+6 09.2	211	38.8	-6 32.4	82	60 N	18 55	19 38	20 34	4 45 21	16 03 91	
1	194	19.5		226	06.0	21.6	108	58	51	32	23	42 23	05 88	
2	209	19.7		240	33.2	-6 10.7	109	56	47	26	14	39 26	06 87	
3	224	19.9		255	00.3	-5 59.9	108	54	44	21	20 06	36 28	08 84	
4	239	20.1		269	27.4	48.9	110	52	41	16	19 59	34 30	10 81	
5	254	20.3	+6 14.0	283	54.6	-5 37.9	110	50	18 39	19 12	19 52	4 32 31	16 11 80	
6	269	20.4	+6 14.9	298	21.7	-5 26.9	110	45	18 33	19 03	19 39	4 27 36	16 14 76	
7	284	20.6		312	48.7	15.8	111	40	29	18 56	29	23 39	16 73	
8	299	20.8		327	15.8	-5 04.6	112	35	25	50	21	20 41	19 69	
9	314	21.0		341	42.9	-4 53.5	111	30	21	46	14	17 44	20 68	
10	329	21.1		356	09.9	42.2	113	20	15	38	19 04	12 48	24 62	
11	344	21.3	+6 19.7	10	36.9	-4 31.0	112	10 N	18 10	18 32	18 56	4 07 52	16 26 59	
12	359	21.5	+6 20.6	25	03.9	-4 19.7	113	0	18 06	18 27	18 51	4 03 55	16 29 55	
13	14	21.7		39	30.9	-4 08.3	114	10 S	18 01	22	47	3 59 58	31 52	
14	29	21.9		53	57.9	-3 57.0	113	20	17 57	19	44	54 62	34 48	
15	44	22.0		68	24.8	45.5	115	30	51	15	43	49 67	37 44	
16	59	22.2		82	51.7	34.1	114	35	48	14	43	46 69	39 41	
17	74	22.4	+6 25.3	97	18.6	-3 22.6	115	40	17 45	18 12	18 44	3 43 71	16 41 38	
18	89	22.6	+6 26.3	111	45.5	-3 11.1	115	45	17 41	18 11	18 45	3 39 75	16 43 35	
19	104	22.7		126	12.4	-2 59.5	116	50	37	09	46	34 79	46 31	
20	119	22.9		140	39.3	48.0	115	52	35	09	47	32 81	47 30	
21	134	23.1		155	06.1	36.4	116	54	33	08	49	29 83	48 28	
22	149	23.3		169	32.9	24.7	117	56	30	07	50	27 85	49 26	
23	164	23.4		183	59.7	13.1	116	58	27	07	52	24 87	51 24	
24	179	23.6	+6 32.0	198	26.5	-2 01.4	117	60 S	17 24	18 06	18 54	3 21 90	16 53 21	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 03 ^m 3		Mag: -3.8 PMG: 11 ^h 05 ^m		Mag: -0.7 PMG: 3 ^h 30 ^m		Mag: -2.4 PMG: 22 ^h 08 ^m		Mag: +0.3 PMG: 4 ^h 06 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	°	'	°	'	°	'	°	'			
0	193	43.6	193 55.8	-1 42.7	307 21.9	-20 51.6	26 57.1	+7 14.8	298 23.9	-20 58.1				
1	208	46.1	208 55.4	41.5	322 24.0	51.7	41 59.8	14.9	313 26.4	58.1				
2	223	48.5	223 55.0	40.3	337 26.1	51.8	57 02.5	15.0	328 28.9	58.1				
3	238	51.0	238 54.6	39.1	352 28.2	51.9	72 05.2	15.1	343 31.4	58.1				
4	253	53.5	253 54.3	37.8	7 30.3	52.0	87 07.8	15.2	358 33.9	58.1				
5	268	55.9	268 53.9	-1 36.6	22 32.4	-20 52.2	102 10.5	+7 15.3	13 36.5	-20 58.1				
6	283	58.4	283 53.5	-1 35.4	37 34.5	-20 52.3	117 13.2	+7 15.4	28 39.0	-20 58.1				
7	299	00.8	298 53.1	34.2	52 36.6	52.4	132 15.9	15.5	43 41.5	58.0				
8	314	03.3	313 52.8	33.0	67 38.7	52.5	147 18.6	15.6	58 44.0	58.0				
9	329	05.8	328 52.4	31.8	82 40.8	52.6	162 21.3	15.6	73 46.5	58.0				
10	344	08.2	343 52.0	30.5	97 43.0	52.7	177 24.0	15.7	88 49.0	58.0				
11	359	10.7	358 51.6	-1 29.3	112 45.1	-20 52.9	192 26.7	+7 15.8	103 51.5	-20 58.0				
12	14	13.2	13 51.3	-1 28.1	127 47.2	-20 53.0	207 29.4	+7 15.9	118 54.0	-20 58.0				
13	29	15.6	28 50.9	26.9	142 49.3	53.1	222 32.1	16.0	133 56.5	58.0				
14	44	18.1	43 50.5	25.7	157 51.4	53.2	237 34.8	16.1	148 59.1	58.0				
15	59	20.6	58 50.1	24.4	172 53.5	53.3	252 37.4	16.2	164 01.6	58.0				
16	74	23.0	73 49.8	23.2	187 55.7	53.4	267 40.1	16.3	179 04.1	58.0				
17	89	25.5	88 49.4	-1 22.0	202 57.8	-20 53.5	282 42.8	+7 16.4	194 06.6	-20 58.0				
18	104	28.0	103 49.0	-1 20.8	217 59.9	-20 53.7	297 45.5	+7 16.4	209 09.1	-20 58.0				
19	119	30.4	118 48.7	19.6	233 02.0	53.8	312 48.2	16.5	224 11.6	57.9				
20	134	32.9	133 48.3	18.3	248 04.1	53.9	327 50.9	16.6	239 14.1	57.9				
21	149	35.3	148 47.9	17.1	263 06.3	54.0	342 53.6	16.7	254 16.7	57.9				
22	164	37.8	163 47.5	15.9	278 08.4	54.1	357 56.3	16.8	269 19.2	57.9				
23	179	40.3	178 47.2	14.7	293 10.5	54.2	12 59.0	16.9	284 21.7	57.9				
24	194	42.7	193 46.8	-1 13.5	308 12.6	-20 54.3	28 01.6	+7 17.0	299 24.2	-20 57.9				
Dif	—	—	-4	+12	+21	-1	+27	+1	+25	0				

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: 27 ^d 9 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'3 R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil		Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	23.6	+6 32.0	198	26.5	-2 01.4	60 N	3 30	4 25	5 09	5 06	21	17 34	92	
1	194	23.8		212	53.2	-1 49.7	58	41	32	13	05	24	33	90	
2	209	24.0		227	20.0	38.0	56	50	38	17	05	26	33	87	
3	224	24.2		241	46.7	26.2	54	3 58	43	20	04	29	32	85	
4	239	24.3		256	13.4	14.5	52	4 06	48	23	04	30	31	83	
5	254	24.5	+6 36.7	270	40.1	-1 02.7	50	4 12	4 52	5 25	5 03	32	17 31	81	
6	269	24.7	+6 37.6	285	06.7	-0 50.9	45	4 25	5 01	5 31	5 03	35	17 30	77	
7	284	24.9		299	33.4	39.1	40	35	08	36	02	39	29	74	
8	299	25.0		314	00.0	27.2	35	44	14	40	01	42	28	71	
9	314	25.2		328	26.6	15.4	30	4 50	19	43	01	44	28	68	
10	329	25.4		342	53.1	-0 03.6	20	5 01	27	49	5 00	48	26	64	
11	344	25.6	+6 42.3	357	19.7	+0 08.3	10 N	5 08	5 33	5 54	4 59	52	17 25	60	
12	359	25.7	+6 43.3	11	46.2	+0 20.1	0	5 14	5 38	5 59	4 58	56	17 24	57	
13	14	25.9		26	12.7	32.0	10 S	18	43	6 04	57	60	23	53	
14	29	26.1		40	39.2	43.9	20	21	46	08	56	64	22	49	
15	44	26.3		55	05.6	+0 55.7	30	22	50	14	56	67	21	45	
16	59	26.4		69	32.0	+1 07.6	35	22	52	17	55	70	20	42	
17	74	26.6	+6 48.0	83	58.5	+1 19.5	40	5 22	5 53	6 20	4 54	74	17 19	40	
18	89	26.8	+6 48.9	98	24.8	+1 31.3	45	5 21	5 55	6 24	4 54	76	17 18	37	
19	104	27.0		112	51.2	43.2	50	19	57	29	53	81	17	33	
20	119	27.1		127	17.5	+1 55.1	52	18	57	31	53	82	17	30	
21	134	27.3		141	43.9	+2 06.9	54	17	58	33	52	85	16	29	
22	149	27.5		156	10.1	18.7	56	16	59	36	52	87	15	27	
23	164	27.7		170	36.4	30.6	58	14	5 59	39	51	90	15	24	
24	179	27.8	+6 54.6	185	02.7	+2 42.4	60 S	5 12	6 00	6 42	4 51	92	17 14	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 10 ^h 59 ^m 3		Mag: -3.8 PMG: 11 ^h 05 ^m		Mag: -0.7 PMG: 3 ^h 27 ^m		Mag: -2.4 PMG: 22 ^h 04 ^m		Mag: +0.3 PMG: 4 ^h 02 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	194	42.7	193	46.8	-1 13.5	308	12.6	-20 54.3	28	01.6	+7 17.0	299	24.2	-20 57.9	
1	209	45.2	208	46.4	12.2	323	14.8	54.5	43	04.3	17.1	314	26.7	57.9	
2	224	47.7	223	46.0	11.0	338	16.9	54.6	58	07.0	17.2	329	29.2	57.9	
3	239	50.1	238	45.7	09.8	353	19.0	54.7	73	09.7	17.2	344	31.7	57.9	
4	254	52.6	253	45.3	08.6	8	21.2	54.8	88	12.4	17.3	359	34.3	57.9	
5	269	55.1	268	44.9	-1 07.4	23	23.3	-20 54.9	103	15.1	+7 17.4	14	36.8	-20 57.9	
6	284	57.5	283	44.6	-1 06.1	38	25.4	-20 55.0	118	17.8	+7 17.5	29	39.3	-20 57.8	
7	300	00.0	298	44.2	04.9	53	27.6	55.1	133	20.5	17.6	44	41.8	57.8	
8	315	02.4	313	43.8	03.7	68	29.7	55.2	148	23.1	17.7	59	44.3	57.8	
9	330	04.9	328	43.4	02.5	83	31.9	55.4	163	25.8	17.8	74	46.8	57.8	
10	345	07.4	343	43.1	-1 01.3	98	34.0	55.5	178	28.5	17.8	89	49.3	57.8	
11	0	09.8	358	42.7	-1 00.0	113	36.1	-20 55.6	193	31.2	+7 17.9	104	51.9	-20 57.8	
12	15	12.3	13	42.3	-0 58.8	128	38.3	-20 55.7	208	33.9	+7 18.0	119	54.4	-20 57.8	
13	30	14.8	28	42.0	57.6	143	40.4	55.8	223	36.6	18.1	134	56.9	57.8	
14	45	17.2	43	41.6	56.4	158	42.6	55.9	238	39.2	18.2	149	59.4	57.8	
15	60	19.7	58	41.2	55.2	173	44.7	56.0	253	41.9	18.3	165	01.9	57.8	
16	75	22.2	73	40.8	53.9	188	46.9	56.1	268	44.6	18.4	180	04.4	57.8	
17	90	24.6	88	40.5	-0 52.7	203	49.0	-20 56.2	283	47.3	+7 18.5	195	07.0	-20 57.7	
18	105	27.1	103	40.1	-0 51.5	218	51.1	-20 56.4	298	50.0	+7 18.5	210	09.5	-20 57.7	
19	120	29.6	118	39.7	50.3	233	53.3	56.5	313	52.7	18.6	225	12.0	57.7	
20	135	32.0	133	39.4	49.1	248	55.5	56.6	328	55.4	18.7	240	14.5	57.7	
21	150	34.5	148	39.0	47.8	263	57.6	56.7	343	58.0	18.8	255	17.0	57.7	
22	165	36.9	163	38.6	46.6	278	59.8	56.8	359	00.7	18.9	270	19.6	57.7	
23	180	39.4	178	38.2	45.4	294	01.9	56.9	14	03.4	19.0	285	22.1	57.7	
24	195	41.9	193	37.9	-0 44.2	309	04.1	-20 57.0	29	06.1	+7 19.1	300	24.6	-20 57.7	
Dif	—		-4	+12		+21	-1		+27		+1		+25		0

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: 28 ^d 9 PHE { 4 ^h : 61'3 12 ^h : 61'4 20 ^h : 61'4 R°: 57 ^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	179	27.8	+6 54.6		185	02.7	+2 42.4	60 N	18 59	19 44	20 41	5 27 23	19 06 92						
1	194	28.0		55.5	199	28.9	72 +2 54.2	58	55	37	29	29 26	03 89						
2	209	28.2		56.4	213	55.1	72 +3 06.0	56	51	30	19	31 28	19 00 86						
3	224	28.3		57.4	228	21.2	71 17.7	54	48	25	10	33 30	18 57 83						
4	239	28.5		58.3	242	47.4	72 29.5	52	45	20	20 03	34 32	54 83						
5	254	28.7	+6 59.2		257	13.5	71 +3 41.2	50	18 42	19 15	19 56	5 35 34	18 52 80						
6	269	28.9	+7 00.2		271	39.6	71 +3 52.9	45	18 36	19 06	19 42	5 38 38	18 47 77						
7	284	29.0		01.1	286	05.6	70 +4 04.6	40	31	18 58	31	41 40	43 73						
8	299	29.2		02.1	300	31.7	71 16.3	35	26	52	23	43 43	39 71						
9	314	29.4		03.0	314	57.7	70 27.9	30	23	47	15	45 45	36 68						
10	329	29.6		03.9	329	23.7	70 39.5	20	16	38	19 04	48 50	30 65						
11	344	29.7	+7 04.9		343	49.7	70 +4 51.1	10 N	18 10	18 32	18 56	5 51 53	18 25 61						
12	359	29.9	+7 05.8		358	15.6	69 +5 02.6	0	18 05	18 26	18 50	5 54 57	18 21 57						
13	14	30.1		06.7	12	41.5	69 14.2	10 S	18 00	21	46	5 57 60	16 54						
14	29	30.3		07.7	27	07.4	69 25.6	20	17 55	17	43	6 00 64	11 51						
15	44	30.4		08.6	41	33.3	69 37.1	30	49	13	41	03 69	06 46						
16	59	30.6		09.6	55	59.1	68 48.5	35	46	11	40	05 71	18 02 45						
17	74	30.8	+7 10.5		70	24.9	68 +5 59.9	40	17 42	18 09	18 41	6 08 73	17 59 41						
18	89	30.9	+7 11.4		84	50.7	68 +6 11.2	45	17 38	18 07	18 41	6 10 78	17 55 38						
19	104	31.1		12.4	99	16.5	68 22.5	50	33	05	42	14 81	50 35						
20	119	31.3		13.3	113	42.2	67 33.7	52	30	04	43	15 83	47 34						
21	134	31.5		14.2	128	07.9	67 44.9	54	28	03	44	17 85	45 31						
22	149	31.6		15.2	142	33.6	67 +6 56.1	56	25	02	45	19 87	42 29						
23	164	31.8		16.1	156	59.3	67 +7 07.2	58	22	01	46	21 90	39 27						
24	179	32.0	+7 17.0		171	24.9	66 +7 18.2	60 S	17 18	18 00	18 48	6 23 93	17 35 25						
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO								
	PMG: 10 ^h 55 ^m 4		Mag: -3.8 PMG: 11 ^h 06 ^m			Mag: -0.7 PMG: 3 ^h 23 ^m			Mag: -2.4 PMG: 22 ^h 00 ^m		Mag: +0.3 PMG: 3 ^h 58 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	195	41.9	193	37.9	-0	44.2	309	04.1	-20	57.0	29	06.1	+7	19.1	300	24.6	-20	57.7	
1	210	44.3	208	37.5		43.0	324	06.2		57.1	44	08.8		19.1	315	27.1		57.7	
2	225	46.8	223	37.1		41.7	339	08.4		57.2	59	11.4		19.2	330	29.6		57.7	
3	240	49.3	238	36.8		40.5	354	10.5		57.4	74	14.1		19.3	345	32.1		57.6	
4	255	51.7	253	36.4		39.3	9	12.7		57.5	89	16.8		19.4	0	34.7		57.6	
5	270	54.2	268	36.0	-0	38.1	24	14.9	-20	57.6	104	19.5	+7	19.5	15	37.2	-20	57.6	
6	285	56.7	283	35.6	-0	36.8	39	17.0	-20	57.7	119	22.2	+7	19.6	30	39.7	-20	57.6	
7	300	59.1	298	35.3		35.6	54	19.2		57.8	134	24.9		19.7	45	42.2		57.6	
8	316	01.6	313	34.9		34.4	69	21.4		57.9	149	27.5		19.7	60	44.7		57.6	
9	331	04.0	328	34.5		33.2	84	23.5		58.0	164	30.2		19.8	75	47.3		57.6	
10	346	06.5	343	34.2		32.0	99	25.7		58.1	179	32.9		19.9	90	49.8		57.6	
11	1	09.0	358	33.8	-0	30.7	114	27.9	-20	58.2	194	35.6	+7	20.0	105	52.3	-20	57.6	
12	16	11.4	13	33.4	-0	29.5	129	30.0	-20	58.3	209	38.3	+7	20.1	120	54.8	-20	57.6	
13	31	13.9	28	33.1		28.3	144	32.2		58.4	224	40.9		20.2	135	57.3		57.6	
14	46	16.4	43	32.7		27.1	159	34.4		58.6	239	43.6		20.2	150	59.9		57.5	
15	61	18.8	58	32.3		25.8	174	36.6		58.7	254	46.3		20.3	166	02.4		57.5	
16	76	21.3	73	31.9		24.6	189	38.7		58.8	269	49.0		20.4	181	04.9		57.5	
17	91	23.8	88	31.6	-0	23.4	204	40.9	-20	58.9	284	51.6	+7	20.5	196	07.4	-20	57.5	
18	106	26.2	103	31.2	-0	22.2	219	43.1	-20	59.0	299	54.3	+7	20.6	211	10.0	-20	57.5	
19	121	28.7	118	30.8		21.0	234	45.3		59.1	314	57.0		20.7	226	12.5		57.5	
20	136	31.2	133	30.5		19.7	249	47.4		59.2	329	59.7		20.7	241	15.0		57.5	
21	151	33.6	148	30.1		18.5	264	49.6		59.3	345	02.4		20.8	256	17.5		57.5	
22	166	36.1	163	29.7		17.3	279	51.8		59.4	0	05.0		20.9	271	20.0		57.5	
23	181	38.5	178	29.4		16.1	294	54.0		59.5	15	07.7		21.0	286	22.6		57.5	
24	196	41.0	193	29.0	-0	14.8	309	56.2	-20	59.6	30	10.4	+7	21.1	301	25.1	-20	57.4	
Dif	—		-4		+12		+22		-1		+27		+1		+25			0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 7			Edad: 0 ^d 5 PHE { SD: 16 ^h 7 PMG: 13 ^h 04 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	32.0	+7 17.0	171	24.9	+7 18.2		60 N	3 22	4 19	5 03	5 50	27	20 38	88
1	194	32.1	18.0	185	50.5	29.2	110	58	34	26	08	55	29	32	85
2	209	32.3	18.9	200	16.1	40.2	110	56	44	33	11	5 59	31	26	83
3	224	32.5	19.8	214	41.7	+7 51.1	109	54	3 53	38	15	6 03	33	21	81
4	239	32.7	20.8	229	07.2	+8 01.9	108	52	4 00	43	18	06	35	17	79
5	254	32.8	+7 21.7	243	32.7	+8 12.7	108	50	4 07	4 48	5 21	6 09	37	20 12	78
6	269	33.0	+7 22.6	257	58.2	+8 23.4	107	45	4 21	4 57	5 27	6 16	40	20 04	74
7	284	33.2	23.6	272	23.7	34.1	107	40	32	5 05	32	21	43	19 56	72
8	299	33.3	24.5	286	49.1	44.7	106	35	41	11	37	26	46	50	69
9	314	33.5	25.4	301	14.5	+8 55.2	105	30	48	17	41	30	48	44	68
10	329	33.7	26.4	315	39.9	+9 05.7	105	20	4 59	25	47	38	51	35	64
11	344	33.9	+7 27.3	330	05.3	+9 16.1	104	10 N	5 07	5 32	5 53	6 44	55	19 26	61
12	359	34.0	+7 28.2	344	30.6	+9 26.4	103	0	5 13	5 38	5 58	6 51	58	19 18	58
13	14	34.2	29.2	358	56.0	36.7	103	10 S	18	42	6 04	6 57	61	10	56
14	29	34.4	30.1	13	21.3	46.9	102	20	21	47	09	7 04	64	19 02	52
15	44	34.5	31.0	27	46.5	+9 57.1	102	30	23	51	15	12	68	18 52	49
16	59	34.7	32.0	42	11.8	+10 07.1	100	35	24	53	18	16	71	47	47
17	74	34.9	+7 32.9	56	37.0	+10 17.1	100	40	5 24	5 55	6 22	7 21	73	18 40	45
18	89	35.0	+7 33.8	71	02.2	+10 27.0	99	45	5 23	5 57	6 27	7 28	75	18 33	42
19	104	35.2	34.7	85	27.4	36.8	98	50	22	6 00	32	35	79	25	38
20	119	35.4	35.7	99	52.6	46.6	98	52	21	01	34	38	81	21	37
21	134	35.6	36.6	114	17.8	+10 56.3	97	54	21	02	37	42	83	16	36
22	149	35.7	37.5	128	42.9	+11 05.9	96	56	20	03	40	46	85	11	34
23	164	35.9	38.5	143	08.0	15.4	95	58	18	04	43	51	87	06	31
24	179	36.1	+7 39.4	157	33.1	+11 24.8	94	60 S	5 17	6 05	6 47	7 56	90	18 00	29

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 10 ^h 51 ^m 5		Mag: -3.8 PMG: 11 ^h 06 ^m		Mag: -0.8 PMG: 3 ^h 20 ^m		Mag: -2.4 PMG: 21 ^h 55 ^m		Mag: +0.3 PMG: 3 ^h 54 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	196	41.0	193	29.0	-0 14.8	309	56.2	-20 59.6	30	10.4	+7 21.1	301	25.1	-20 57.4	
1	211	43.5	208	28.6	13.6	324	58.4	59.7	45	13.1	21.2	316	27.6	57.4	
2	226	45.9	223	28.2	12.4	340	00.5	-20 59.9	60	15.7	21.2	331	30.1	57.4	
3	241	48.4	238	27.9	11.2	355	02.7	-21 00.0	75	18.4	21.3	346	32.7	57.4	
4	256	50.9	253	27.5	10.0	10	04.9	-21 00.1	90	21.1	21.4	1	35.2	57.4	
5	271	53.3	268	27.1	-0 08.7	25	07.1	-21 00.2	105	23.8	+7 21.5	16	37.7	-20 57.4	
6	286	55.8	283	26.8	-0 07.5	40	09.3	-21 00.3	120	26.5	+7 21.6	31	40.2	-20 57.4	
7	301	58.3	298	26.4	06.3	55	11.5	00.4	135	29.1	21.7	46	42.8	57.4	
8	317	00.7	313	26.0	05.1	70	13.7	00.5	150	31.8	21.7	61	45.3	57.4	
9	332	03.2	328	25.7	03.8	85	15.9	00.6	165	34.5	21.8	76	47.8	57.4	
10	347	05.7	343	25.3	02.6	100	18.1	00.7	180	37.2	21.9	91	50.3	57.3	
11	2	08.1	358	24.9	-0 01.4	115	20.3	-21 00.8	195	39.8	+7 22.0	106	52.9	-20 57.3	
12	17	10.6	13	24.6	-0 00.2	130	22.5	-21 00.9	210	42.5	+7 22.1	121	55.4	-20 57.3	
13	32	13.0	28	24.2	+0 01.1	145	24.7	01.0	225	45.2	22.2	136	57.9	57.3	
14	47	15.5	43	23.8	02.3	160	26.9	01.1	240	47.8	22.2	152	00.4	57.3	
15	62	18.0	58	23.4	03.5	175	29.1	01.2	255	50.5	22.3	167	03.0	57.3	
16	77	20.4	73	23.1	04.7	190	31.3	01.4	270	53.2	22.4	182	05.5	57.3	
17	92	22.9	88	22.7	+0 05.9	205	33.5	-21 01.5	285	55.9	+7 22.5	197	08.0	-20 57.3	
18	107	25.4	103	22.3	+0 07.2	220	35.7	-21 01.6	300	58.5	+7 22.6	212	10.5	-20 57.3	
19	122	27.8	118	22.0	08.4	235	37.9	01.7	316	01.2	22.6	227	13.1	57.3	
20	137	30.3	133	21.6	09.6	250	40.1	01.8	331	03.9	22.7	242	15.6	57.2	
21	152	32.8	148	21.2	10.8	265	42.3	01.9	346	06.6	22.8	257	18.1	57.2	
22	167	35.2	163	20.9	12.1	280	44.5	02.0	1	09.2	22.9	272	20.6	57.2	
23	182	37.7	178	20.5	13.3	295	46.8	02.1	16	11.9	23.0	287	23.2	57.2	
24	197	40.1	193	20.1	+0 14.5	310	49.0	-21 02.2	31	14.6	+7 23.0	302	25.7	-20 57.2	
Dif	—		-4	+12		+22	-1		+27	+1		+25	0		

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: 1 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'7 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	m	m
0	179	36.1	+7 39.4	157	33.1	+11 24.8	61	60 N	19 04	19 49	20 47	6 17	32	22 06 81
1	194	36.2	40.3	171	58.2	34.2	94	58	19 00	41	35	24 34		21 57 79
2	209	36.4	41.2	186	23.2	60	43.4	92	56	18 55	35	24	30 37	49 77
3	224	36.6	42.2	200	48.3	61	+11 52.6	92	54	52	29	15	36 38	42 76
4	239	36.7	43.1	215	13.3	60	+12 01.7	91	52	48	23	07	41 40	36 74
5	254	36.9	+7 44.0	229	38.3	60	+12 10.7	90	50	18 45	19 19	20 00	6 46	41 21 30 73
6	269	37.1	+7 45.0	244	03.3	60	+12 19.6	89	45	18 38	19 09	19 45	6 56	44 21 18 70
7	284	37.2	45.9	258	28.3	60	28.4	88	40	33	19 00	34	7 04	47 21 08 68
8	299	37.4	46.8	272	53.3	60	37.1	87	35	28	18 54	24	12 48	20 59 67
9	314	37.6	47.7	287	18.2	59	45.8	87	30	24	48	17	18 51	52 65
10	329	37.8	48.7	301	43.1	59	+12 54.3	85	20	17	39	19 05	29 54	39 62
11	344	37.9	+7 49.6	316	08.1	60	+13 02.7	84	10 N	18 10	18 32	18 56	7 39	56 20 27 61
12	359	38.1	+7 50.5	330	33.0	59	+13 11.1	84	0	18 05	18 26	18 50	7 49	58 20 16 59
13	14	38.3	51.4	344	57.9	59	19.3	82	10 S	17 59	20	45	7 58	61 20 06 56
14	29	38.4	52.4	359	22.7	58	27.5	82	20	53	16	41	8 08	64 19 54 55
15	44	38.6	53.3	13	47.6	59	35.5	80	30	47	11	39	20 66	41 52
16	59	38.8	54.2	28	12.5	59	43.4	79	35	43	09	38	27 68	34 50
17	74	38.9	+7 55.1	42	37.3	58	+13 51.3	79	40	17 39	18 06	18 38	8 34	71 19 25 49
18	89	39.1	+7 56.1	57	02.2	59	+13 59.0	77	45	17 34	18 04	18 38	8 43	73 19 15 47
19	104	39.3	57.0	71	27.0	58	+14 06.7	77	50	28	01	38	54 76	19 03 45
20	119	39.4	57.9	85	51.9	59	14.2	75	52	26	18 00	39	8 59	77 18 58 43
21	134	39.6	58.8	100	16.7	58	21.6	74	54	23	17 59	39	9 05	79 52 41
22	149	39.8	+7 59.8	114	41.5	58	29.0	74	56	20	57	40	11 81	45 40
23	164	39.9	+8 00.7	129	06.3	58	36.2	72	58	16	56	41	18 83	37 38
24	179	40.1	+8 01.6	143	31.1	58	+14 43.3	71	60 S	17 13	17 54	18 42	9 26	85 18 29 36
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 47 ^m 6		Mag: -3.8 PMG: 11 ^h 07 ^m		Mag: -0.8 PMG: 3 ^h 16 ^m		Mag: -2.4 PMG: 21 ^h 51 ^m		Mag: +0.3 PMG: 3 ^h 50 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	197	40.1	193 20.1	+0 14.5	310 49.0	-21 02.2	31 14.6	+7 23.0	302 25.7	-20 57.2				
1	212	42.6	208 19.8	15.7	325 51.2	02.3	46 17.2	23.1	317 28.2	57.2				
2	227	45.1	223 19.4	17.0	340 53.4	02.4	61 19.9	23.2	332 30.7	57.2				
3	242	47.5	238 19.0	18.2	355 55.6	02.5	76 22.6	23.3	347 33.3	57.2				
4	257	50.0	253 18.6	19.4	10 57.8	02.6	91 25.3	23.4	2 35.8	57.2				
5	272	52.5	268 18.3	+0 20.6	26 00.1	-21 02.7	106 27.9	+7 23.4	17 38.3	-20 57.2				
6	287	54.9	283 17.9	+0 21.9	41 02.3	-21 02.8	121 30.6	+7 23.5	32 40.9	-20 57.1				
7	302	57.4	298 17.5	23.1	56 04.5	02.9	136 33.3	23.6	47 43.4	57.1				
8	317	59.9	313 17.2	24.3	71 06.7	03.0	151 35.9	23.7	62 45.9	57.1				
9	333	02.3	328 16.8	25.5	86 09.0	03.1	166 38.6	23.8	77 48.4	57.1				
10	348	04.8	343 16.4	26.8	101 11.2	03.2	181 41.3	23.8	92 51.0	57.1				
11	3 07.3	358 16.1	+0 28.0	116 13.4	-21 03.3	196 43.9	+7 23.9	107 53.5	-20 57.1					
12	18 09.7	13 15.7	+0 29.2	131 15.6	-21 03.4	211 46.6	+7 24.0	122 56.0	-20 57.1					
13	33 12.2	28 15.3	30.4	146 17.9	03.5	226 49.3	24.1	137 58.6	57.1					
14	48 14.6	43 15.0	31.6	161 20.1	03.7	241 51.9	24.2	153 01.1	57.1					
15	63 17.1	58 14.6	32.9	176 22.3	03.8	256 54.6	24.2	168 03.6	57.1					
16	78 19.6	73 14.2	34.1	191 24.6	03.9	271 57.3	24.3	183 06.1	57.0					
17	93 22.0	88 13.9	+0 35.3	206 26.8	-21 04.0	287 00.0	+7 24.4	198 08.7	-20 57.0					
18	108 24.5	103 13.5	+0 36.5	221 29.0	-21 04.1	302 02.6	+7 24.5	213 11.2	-20 57.0					
19	123 27.0	118 13.1	37.8	236 31.3	04.2	317 05.3	24.6	228 13.7	57.0					
20	138 29.4	133 12.7	39.0	251 33.5	04.3	332 08.0	24.6	243 16.3	57.0					
21	153 31.9	148 12.4	40.2	266 35.7	04.4	347 10.6	24.7	258 18.8	57.0					
22	168 34.4	163 12.0	41.4	281 38.0	04.5	2 13.3	24.8	273 21.3	57.0					
23	183 36.8	178 11.6	42.7	296 40.2	04.6	17 16.0	24.9	288 23.9	57.0					
24	198 39.3	193 11.3	+0 43.9	311 42.5	-21 04.7	32 18.6	+7 24.9	303 26.4	-20 57.0					
Dif	—	-4	+12	+22	-1	+27	+1	+25	0					

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: 2 ^d 5 PHE { 4 ^h : 60'5 12 ^h : 60'2 20 ^h : 60'0 PMG: 15 ^h 01 ^m R ^o : 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	40.1	+8 01.6	143	31.1	+14 43.3	70	60 N	3 14	4 12	4 57	6 49	40	23 27	69
1	194	40.3	02.5	157	55.9	50.3	59	58	27	20	5 02	6 58	42	16	68
2	209	40.4	03.5	172	20.8	59	+14 57.2	56	38	27	06	7 07	43	23 06	67
3	224	40.6	04.4	186	45.6	58	+15 04.0	54	47	33	10	14	45	22 58	66
4	239	40.8	05.3	201	10.4	58	10.6	52	3 55	38	14	21	46	50	66
5	254	40.9	+8 06.2	215	35.2	58	+15 17.2	50	4 02	4 43	5 17	7 27	47	22 43	65
6	269	41.1	+8 07.2	230	00.0	58	+15 23.6	45	4 17	4 53	5 24	7 40	49	22 28	64
7	284	41.3	08.1	244	24.8	58	30.0	40	29	5 02	29	7 51	51	16	63
8	299	41.4	09.0	258	49.6	58	36.2	35	38	08	34	8 00	52	22 06	62
9	314	41.6	09.9	273	14.4	58	42.3	30	45	14	38	09	53	21 57	61
10	329	41.8	10.8	287	39.2	58	48.3	20	4 57	23	46	23	55	41	60
11	344	41.9	+8 11.8	302	04.0	58	+15 54.2	10 N	5 06	5 31	5 52	8 35	57	21 28	59
12	359	42.1	+8 12.7	316	28.9	59	+16 00.0	0	5 13	5 37	5 58	8 47	59	21 15	58
13	14	42.2	13.6	330	53.7	58	+16 05.6	10 S	18	42	6 04	8 59	60	21 02	57
14	29	42.4	14.5	345	18.5	58	11.1	20	22	47	10	9 12	61	20 49	56
15	44	42.6	15.4	359	43.4	59	16.6	30	24	52	16	26	64	33	55
16	59	42.7	16.4	14	08.2	58	21.9	35	25	55	20	35	64	24	54
17	74	42.9	+8 17.3	28	33.1	59	+16 27.1	40	5 26	5 57	6 24	9 45	65	20 14	53
18	89	43.1	+8 18.2	42	58.0	59	+16 32.1	45	5 26	6 00	6 29	9 56	67	20 02	52
19	104	43.2	19.1	57	22.9	59	37.1	50	25	03	35	10 10	69	19 48	49
20	119	43.4	20.0	71	47.8	59	41.9	48	25	04	38	16	70	41	49
21	134	43.6	21.0	86	12.7	59	46.6	54	24	05	41	24	71	33	49
22	149	43.7	21.9	100	37.6	59	51.2	56	23	06	44	32	72	25	47
23	164	43.9	22.8	115	02.6	60	+16 55.7	58	23	08	48	41	73	15	47
24	179	44.1	+8 23.7	129	27.6	60	+17 00.1	60 S	5 21	6 10	6 52	10 51	75	19 05	44
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 43 ^m 6		Mag: -3.8 PMG: 11 ^h 08 ^m			Mag: -0.8 PMG: 3 ^h 13 ^m			Mag: -2.4 PMG: 21 ^h 47 ^m			Mag: +0.3 PMG: 3 ^h 46 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	198	39.3	193	11.3	+0 43.9	311	42.5	-21 04.7	32	18.6	+7 24.9	303	26.4	-20 57.0	
1	213	41.7	208	10.9	45.1	326	44.7	04.8	47	21.3	25.0	318	28.9	57.0	
2	228	44.2	223	10.5	46.3	341	47.0	04.9	62	23.9	25.1	333	31.4	56.9	
3	243	46.7	238	10.2	47.6	356	49.2	05.0	77	26.6	25.2	348	34.0	56.9	
4	258	49.1	253	09.8	48.8	11	51.5	05.1	92	29.3	25.3	3	36.5	56.9	
5	273	51.6	268	09.4	+0 50.0	26	53.7	-21 05.2	107	31.9	+7 25.3	18	39.0	-20 56.9	
6	288	54.1	283	09.1	+0 51.2	41	56.0	-21 05.3	122	34.6	+7 25.4	33	41.6	-20 56.9	
7	303	56.5	298	08.7	52.5	56	58.2	05.4	137	37.3	25.5	48	44.1	56.9	
8	318	59.0	313	08.3	53.7	72	00.5	05.5	152	39.9	25.6	63	46.6	56.9	
9	334	01.5	328	08.0	54.9	87	02.7	05.6	167	42.6	25.6	78	49.2	56.9	
10	349	03.9	343	07.6	56.1	102	05.0	05.7	182	45.3	25.7	93	51.7	56.9	
11	4	06.4	358	07.2	+0 57.3	117	07.2	-21 05.8	197	47.9	+7 25.8	108	54.2	-20 56.8	
12	19	08.9	13	06.8	+0 58.6	132	09.5	-21 05.9	212	50.6	+7 25.9	123	56.8	-20 56.8	
13	34	11.3	28	06.5	+0 59.8	147	11.7	06.0	227	53.2	25.9	138	59.3	56.8	
14	49	13.8	43	06.1	+1 01.0	162	14.0	06.1	242	55.9	26.0	154	01.8	56.8	
15	64	16.2	58	05.7	02.2	177	16.3	06.2	257	58.6	26.1	169	04.4	56.8	
16	79	18.7	73	05.4	03.5	192	18.5	06.3	273	01.2	26.2	184	06.9	56.8	
17	94	21.2	88	05.0	+1 04.7	207	20.8	-21 06.4	288	03.9	+7 26.2	199	09.4	-20 56.8	
18	109	23.6	103	04.6	+1 05.9	222	23.1	-21 06.5	303	06.6	+7 26.3	214	12.0	-20 56.8	
19	124	26.1	118	04.3	07.1	237	25.3	06.6	318	09.2	26.4	229	14.5	56.8	
20	139	28.6	133	03.9	08.4	252	27.6	06.7	333	11.9	26.5	244	17.0	56.8	
21	154	31.0	148	03.5	09.6	267	29.9	06.8	348	14.5	26.6	259	19.6	56.7	
22	169	33.5	163	03.2	10.8	282	32.1	06.9	3	17.2	26.6	274	22.1	56.7	
23	184	36.0	178	02.8	12.0	297	34.4	07.0	18	19.9	26.7	289	24.6	56.7	
24	199	38.4	193	02.4	+1 13.3	312	36.7	-21 07.1	33	22.5	+7 26.8	304	27.2	-20 56.7	
Dif	—		-4		+12	+23		-1	+27		+1	+25		0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 00 ^m 9		Edad: 3 ^d 5 PHE { 4 ^h : 59'7 12 ^h : 59'4 20 ^h : 59'1 R°: 57 ^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	179	44.1	+8	23.7	129	27.6	+17 00.1	60 N	19 09	19 55	20 54	7 29	50	**	**	
1	194	44.2		24.6	143	52.6	60 04.3	42 58	19 04	46	41	40	51	**	**	
2	209	44.4		25.5	158	17.6	60 08.4	41 56	18 59	39	29	50	51	**	**	
3	224	44.5		26.5	172	42.6	60 12.4	40 54	55	33	19	7 59	52	**	**	
4	239	44.7		27.4	187	07.6	60 16.3	39 52	52	27	11	8 07	52	23	56	
5	254	44.9	+8	28.3	201	32.7	61 +17 20.0	37 50	18 48	19 22	20 03	8 14	53	23	48	
6	269	45.0	+8	29.2	215	57.8	61 +17 23.7	37 45	18 41	19 11	19 48	8 29	54	23	32	
7	284	45.2		30.1	230	22.9	61 27.2	35 40	35	19 03	36	42	54	19	56	
8	299	45.4		31.0	244	48.1	62 30.6	34 35	30	18 55	26	8 52	55	23	08	
9	314	45.5		32.0	259	13.2	61 33.9	33 30	25	49	18	9 02	55	22	58	
10	329	45.7		32.9	273	38.4	62 37.0	31 20	17	40	19 06	18	56	41	57	
11	344	45.8	+8	33.8	288	03.6	62 +17 40.1	31 10 N	18 10	18 32	18 57	9 32	57	22	27	
12	359	46.0	+8	34.7	302	28.9	63 +17 43.0	29 0	18 04	18 25	18 49	9 46	57	22	13	
13	14	46.2		35.6	316	54.2	63 45.8	28 10 S	17 58	19	44	9 59	58	21	59	
14	29	46.3		36.5	331	19.5	63 48.4	26 20	52	14	40	10 13	58	45	56	
15	44	46.5		37.4	345	44.8	63 51.0	26 30	45	09	36	30	58	28	56	
16	59	46.7		38.4	0	10.2	64 53.4	24 35	41	06	35	39	59	18	56	
17	74	46.8	+8	39.3	14	35.6	64 +17 55.8	24 40	17 36	18 03	18 35	10 50	60	21	07	
18	89	47.0	+8	40.2	29	01.0	64 +17 57.9	21 45	17 31	18 00	18 34	11 03	60	20	54	
19	104	47.1		41.1	43	26.5	65 +18 00.0	21 50	24	17 57	34	19	60	37	56	
20	119	47.3		42.0	57	52.0	65 +18 02.0	20 52	21	56	35	26	61	30	55	
21	134	47.5		42.9	72	17.6	66 03.8	18 54	18	54	35	35	61	22	55	
22	149	47.6		43.8	86	43.1	65 05.5	17 56	15	52	35	44	61	12	55	
23	164	47.8		44.7	101	08.8	67 07.1	16 58	11	51	36	11 54	62	20	02	
24	179	47.9	+8	45.7	115	34.4	66 +18 08.6	15 60 S	17 07	17 49	18 37	12 06	63	19	49	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 39 ^m 7		Mag: -3.8 PMG: 11 ^h 08 ^m			Mag: -0.8 PMG: 3 ^h 09 ^m			Mag: -2.4 PMG: 21 ^h 43 ^m			Mag: +0.3 PMG: 3 ^h 42 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	199	38.4	193	02.4	+1	13.3	312 36.7	-21 07.1	33 22.5	+7 26.8		304 27.2	-20 56.7			
1	214	40.9	208	02.1		14.5	327 39.0	07.2	48 25.2	26.9		319 29.7	56.7			
2	229	43.4	223	01.7		15.7	342 41.2	07.3	63 27.8	26.9		334 32.3	56.7			
3	244	45.8	238	01.3		16.9	357 43.5	07.4	78 30.5	27.0		349 34.8	56.7			
4	259	48.3	253	01.0		18.2	12 45.8	07.5	93 33.2	27.1		4 37.3	56.7			
5	274	50.7	268	00.6	+1	19.4	27 48.1	-21 07.6	108 35.8	+7 27.2		19 39.9	-20 56.7			
6	289	53.2	283	00.2	+1	20.6	42 50.4	-21 07.7	123 38.5	+7 27.2		34 42.4	-20 56.6			
7	304	55.7	297	59.8		21.8	57 52.6	07.8	138 41.1	27.3		49 44.9	56.6			
8	319	58.1	312	59.5		23.0	72 54.9	07.9	153 43.8	27.4		64 47.5	56.6			
9	335	00.6	327	59.1		24.3	87 57.2	08.0	168 46.5	27.4		79 50.0	56.6			
10	350	03.1	342	58.7		25.5	102 59.5	08.1	183 49.1	27.5		94 52.5	56.6			
11	5	05.5	357	58.4	+1	26.7	118 01.8	-21 08.2	198 51.8	+7 27.6		109 55.1	-20 56.6			
12	20	08.0	12	58.0	+1	27.9	133 04.1	-21 08.3	213 54.4	+7 27.7		124 57.6	-20 56.6			
13	35	10.5	27	57.6		29.2	148 06.4	08.4	228 57.1	27.7		140 00.2	56.6			
14	50	12.9	42	57.3		30.4	163 08.6	08.5	243 59.7	27.8		155 02.7	56.6			
15	65	15.4	57	56.9		31.6	178 10.9	08.6	259 02.4	27.9		170 05.2	56.5			
16	80	17.9	72	56.5		32.8	193 13.2	08.7	274 05.0	28.0		185 07.8	56.5			
17	95	20.3	87	56.2	+1	34.1	208 15.5	-21 08.8	289 07.7	+7 28.0		200 10.3	-20 56.5			
18	110	22.8	102	55.8	+1	35.3	223 17.8	-21 08.9	304 10.4	+7 28.1		215 12.8	-20 56.5			
19	125	25.2	117	55.4		36.5	238 20.1	09.0	319 13.0	28.2		230 15.4	56.5			
20	140	27.7	132	55.1		37.7	253 22.4	09.1	334 15.7	28.3		245 17.9	56.5			
21	155	30.2	147	54.7		39.0	268 24.7	09.2	349 18.3	28.3		260 20.5	56.5			
22	170	32.6	162	54.3		40.2	283 27.0	09.3	4	21.0	28.4	275	23.0	56.5		
23	185	35.1	177	53.9		41.4	298 29.3	09.4	19	23.6	28.5	290	25.5	56.5		
24	200	37.6	192	53.6	+1	42.6	313 31.6	-21 09.5	34 26.3	+7 28.6		305 28.1	-20 56.4			
Dif	—		-4	+12		+23	-1		+27	+1		+25		0		

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: 4 ^d 5 PHE { SD: 16'0 PMG: 16 ^h 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	47.9	+8	115	34.4	+18	08.6	3	07	4	06	4	51	8	19
1	194	48.1		130	00.1		10.0	20	14	4	57	31	58	0	36
2	209	48.3		144	25.9		11.2	32	22	5	01	41	59	24	56
3	224	48.4		158	51.6		12.3	41	28	05		51	58	13	56
4	239	48.6		173	17.5		13.3	50	34	09		8	59	0	04
5	254	48.7	+8	187	43.3	+18	14.2	3	58	4	39	5	13	51	58
6	269	48.9	+8	202	09.3	+18	15.0	4	13	4	50	9	23	55	58
7	284	49.1		216	35.2		15.7	25	4	58	26	8	59	55	58
8	299	49.2		231	01.2		16.2	35	5	06	32	9	57	55	58
9	314	49.4		245	27.3		16.6	43	12		36	10	14	56	52
10	329	49.5		259	53.4		17.0	4	56	22	44	10	29	55	53
11	344	49.7	+8	274	19.5	+18	17.2	5	05	5	30	10	43	55	54
12	359	49.9	+8	288	45.7	+18	17.2	5	12	5	36	10	57	54	55
13	14	50.0		303	12.0		17.2	18	42	6	04	11	11	55	41
14	29	50.2		317	38.3		17.1	22	48	10		28	54	24	56
15	44	50.3	+8	332	04.6		16.8	26	53	17		38	54	14	57
16	59	50.5	+9	346	31.0		16.4	27	56	22		11	50	53	58
17	74	50.7	+9	0	57.5	+18	16.0	5	28	5	59	12	03	52	59
18	89	50.8	+9	15	24.0	+18	15.4	5	28	6	02	19	52	33	60
19	104	51.0		29	50.5		14.7	28	06	38		27	51	25	61
20	119	51.1		44	17.1		13.8	28	07	41		36	50	17	61
21	134	51.3		58	43.8		12.9	28	09	44		45	50	21	07
22	149	51.5		73	10.5		11.9	27	10	48		12	56	50	62
23	164	51.6		87	37.3		10.8	27	12	52		20	44	63	
24	179	51.8	+9	102	04.1	+18	09.5	5	26	6	14	13	09	49	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 35 ^m 8			Mag: -3.8 PMG: 11 ^h 09 ^m			Mag: -0.9 PMG: 3 ^h 05 ^m			Mag: -2.4 PMG: 21 ^h 38 ^m			Mag: +0.3 PMG: 3 ^h 38 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	200	37.6		192	53.6	+1	313	31.6	-21	34	26.3	+7	305	28.1	-20
1	215	40.0		207	53.2		328	33.9		49	28.9		320	30.6	
2	230	42.5		222	52.8		343	36.2		64	31.6		335	33.2	
3	245	45.0		237	52.5		358	38.5		79	34.2		350	35.7	
4	260	47.4		252	52.1		13	40.8		94	36.9		5	38.2	
5	275	49.9		267	51.7	+1	28	43.2	-21	109	39.6	+7	20	40.8	-20
6	290	52.3		282	51.4	+1	43	45.5	-21	124	42.2	+7	35	43.3	-20
7	305	54.8		297	51.0		58	47.8		139	44.9		50	45.9	
8	320	57.3		312	50.6		73	50.1		154	47.5		65	48.4	
9	335	59.7		327	50.3		88	52.4		169	50.2		80	50.9	
10	351	02.2		342	49.9		103	54.7		184	52.8		95	53.5	
11	6	04.7		357	49.5	+1	118	57.0	-21	199	55.5	+7	110	56.0	-20
12	21	07.1		12	49.1	+1	133	59.4	-21	214	58.1	+7	125	58.6	-20
13	36	09.6		27	48.8		149	01.7		230	00.8		141	01.1	
14	51	12.1		42	48.4	+1	164	04.0		245	03.4		156	03.7	
15	66	14.5		57	48.0	+2	179	06.3		260	06.1		171	06.2	
16	81	17.0		72	47.7		194	08.7		275	08.7		186	08.7	
17	96	19.5		87	47.3	+2	209	11.0	-21	290	11.4	+7	201	11.3	-20
18	111	21.9		102	46.9	+2	224	13.3	-21	305	14.0	+7	216	13.8	-20
19	126	24.4		117	46.6		239	15.6		320	16.7		231	16.4	
20	141	26.8		132	46.2		254	18.0		335	19.3		246	18.9	
21	156	29.3		147	45.8		269	20.3		350	22.0		261	21.4	
22	171	31.8		162	45.4		284	22.6		5	24.6		276	24.0	
23	186	34.2		177	45.1		299	25.0		20	27.3		291	26.5	
24	201	36.7		192	44.7	+2	314	27.3	-21	35	29.9	+7	306	29.1	-20
Dif	—			-4	+12		+23	-1		+27	+1		+25	0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 00 ^m 4			Edad: 5 ^d 5 PHE { 4 ^h : 57/9 12 ^h : 57/6 20 ^h : 57/3 R°: 51 ^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	51.8	+9 07.5	102	04.1	+18 09.5	14	60 N	19 14	20 00	21 01	9 18 66	1 32 43	
1	194	51.9		116	31.0	08.1	14	58	09	19 51	20 47	29 65	20 44	
2	209	52.1		130	58.0	06.7	14	56	19 04	44	35	40 63	09 46	
3	224	52.2		145	25.0	05.1	16	54	18 59	37	24	49 63	1 00 46	
4	239	52.4		159	52.0	03.4	17	52	55	31	15	9 57 62	0 52 47	
5	254	52.6	+9 12.0	174	19.2	+18 01.7	17	50	18 51	19 25	20 07	10 04 62	0 44 48	
6	269	52.7	+9 12.9	188	46.3	+17 59.8	19	45	18 43	19 14	19 51	10 20 60	0 28 49	
7	284	52.9		203	13.6	57.8	20	40	37	19 05	38	33 58	15 50	
8	299	53.0		217	40.9	55.7	21	35	31	18 57	28	44 57	0 04 51	
9	314	53.2		232	08.3	53.5	22	30	26	51	20	10 53 57	** ** *	
10	329	53.3		246	35.7	51.2	23	20	18	40	19 06	11 10 55	** ** *	
11	344	53.5	+9 17.4	261	03.2	+17 48.8	24	10 N	18 10	18 32	18 57	11 24 54	** ** *	
12	359	53.6	+9 18.3	275	30.7	+17 46.3	25	0	18 04	18 25	18 49	11 38 52	** ** *	
13	14	53.8		289	58.3	43.7	26	10 S	17 57	18	43	11 51 51	23 50 53	
14	29	54.0		304	26.0	41.0	27	20	50	12	38	12 06 49	36 55	
15	44	54.1		318	53.7	38.2	28	30	42	07	34	22 48	20 57	
16	59	54.3		333	21.5	35.4	28	35	38	03	33	32 47	11 58	
17	74	54.4	+9 22.8	347	49.4	+17 32.4	30	40	17 33	18 00	18 32	12 43 46	23 01 58	
18	89	54.6	+9 23.7	2	17.3	+17 29.3	31	45	17 27	17 57	18 31	12 55 45	22 48 60	
19	104	54.7		16	45.3	26.1	32	50	20	53	30	13 11 43	33 62	
20	119	54.9		31	13.4	22.8	33	52	17	51	30	18 43	26 63	
21	134	55.0		45	41.5	19.5	33	54	14	49	30	26 42	18 64	
22	149	55.2		60	09.7	16.0	35	56	10	48	31	35 41	22 09 66	
23	164	55.4		74	37.9	12.5	35	58	06	46	31	46 39	21 59 67	
24	179	55.5	+9 29.1	89	06.3	+17 08.8	37	60 S	17 01	17 43	18 31	13 58 37	21 47 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 31 ^m 8		Mag: -3.8 PMG: 11 ^h 09 ^m		Mag: -0.9 PMG: 3 ^h 02 ^m		Mag: -2.4 PMG: 21 ^h 34 ^m		Mag: +0.3 PMG: 3 ^h 33 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	201	36.7	192	44.7	+2 12.0	314	27.3	-21 11.8	35	29.9	+7 30.3	306	29.1	-20 56.2
1	216	39.2	207	44.3	13.2	329	29.6	11.9	50	32.6	30.3	321	31.6	56.2
2	231	41.6	222	44.0	14.4	344	32.0	11.9	65	35.2	30.4	336	34.2	56.2
3	246	44.1	237	43.6	15.6	359	34.3	12.0	80	37.9	30.5	351	36.7	56.1
4	261	46.6	252	43.2	16.9	14	36.6	12.1	95	40.5	30.5	6	39.3	56.1
5	276	49.0	267	42.9	+2 18.1	29	39.0	-21 12.2	110	43.1	+7 30.6	21	41.8	-20 56.1
6	291	51.5	282	42.5	+2 19.3	44	41.3	-21 12.3	125	45.8	+7 30.7	36	44.3	-20 56.1
7	306	54.0	297	42.1	20.5	59	43.7	12.4	140	48.4	30.7	51	46.9	56.1
8	321	56.4	312	41.7	21.7	74	46.0	12.5	155	51.1	30.8	66	49.4	56.1
9	336	58.9	327	41.4	23.0	89	48.4	12.6	170	53.7	30.9	81	52.0	56.1
10	352	01.3	342	41.0	24.2	104	50.7	12.7	185	56.4	31.0	96	54.5	56.1
11	7	03.8	357	40.6	+2 25.4	119	53.0	-21 12.8	200	59.0	+7 31.0	111	57.1	-20 56.1
12	22	06.3	12	40.3	+2 26.6	134	55.4	-21 12.9	216	01.7	+7 31.1	126	59.6	-20 56.0
13	37	08.7	27	39.9	27.8	149	57.8	13.0	231	04.3	31.2	142	02.2	56.0
14	52	11.2	42	39.5	29.1	165	00.1	13.1	246	07.0	31.2	157	04.7	56.0
15	67	13.7	57	39.2	30.3	180	02.5	13.2	261	09.6	31.3	172	07.2	56.0
16	82	16.1	72	38.8	31.5	195	04.8	13.3	276	12.2	31.4	187	09.8	56.0
17	97	18.6	87	38.4	+2 32.7	210	07.2	-21 13.3	291	14.9	+7 31.4	202	12.3	-20 56.0
18	112	21.1	102	38.0	+2 33.9	225	09.5	-21 13.4	306	17.5	+7 31.5	217	14.9	-20 56.0
19	127	23.5	117	37.7	35.2	240	11.9	13.5	321	20.2	31.6	232	17.4	56.0
20	142	26.0	132	37.3	36.4	255	14.2	13.6	336	22.8	31.6	247	20.0	55.9
21	157	28.5	147	36.9	37.6	270	16.6	13.7	351	25.5	31.7	262	22.5	55.9
22	172	30.9	162	36.6	38.8	285	19.0	13.8	6	28.1	31.8	277	25.1	55.9
23	187	33.4	177	36.2	40.1	300	21.3	13.9	21	30.7	31.8	292	27.6	55.9
24	202	35.8	192	35.8	+2 41.3	315	23.7	-21 14.0	36	33.4	+7 31.9	307	30.2	-20 55.9
Dif	—		-4	+12		+24	-1		+26		+1	+25		

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: 6 ^d 5 SD: 15'6 PMG: 18 ^h 42 ^m	PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'4 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	179	55.5	+9 29.1	89	06.3	+17 08.8	37	60 N	2 59	3 59	4 45	10 24	70	2 15	33		
1	194	55.7	30.0	103	34.6	05.1	37	58	3 13	4 08	51	34	68	2 04	35		
2	209	55.8	30.9	118	03.1	+17 01.3	38	56	25	16	4 56	43	67	1 55	36		
3	224	56.0	31.8	132	31.6	+16 57.4	39	54	36	23	5 01	52	65	46	38		
4	239	56.1	32.7	147	00.2	53.4	40	52	45	29	05	10 59	64	39	38		
5	254	56.3	+9 33.6	161	28.8	+16 49.3	41	50	3 53	4 35	5 09	11 06	62	1 32	39		
6	269	56.4	+9 34.5	175	57.5	+16 45.1	42	45	4 09	4 46	5 17	11 20	60	1 17	42		
7	284	56.6	35.4	190	26.3	40.8	43	40	22	4 55	23	31	59	1 05	43		
8	299	56.7	36.3	204	55.1	36.5	43	35	32	5 03	29	41	57	0 55	44		
9	314	56.9	37.2	219	24.1	32.1	44	30	41	09	34	11 50	56	45	46		
10	329	57.0	38.1	233	53.0	27.6	45	20	4 54	20	43	12 05	53	30	48		
11	344	57.2	+9 39.0	248	22.1	+16 23.0	46	10 N	5 04	5 29	5 50	12 18	51	0 16	50		
12	359	57.4	+9 39.9	262	51.2	+16 18.3	47	0	5 12	5 36	5 57	12 30	50	0 03	51		
13	14	57.5	40.8	277	20.3	13.5	48	10 S	18	42	6 04	42	48	**	**	**	
14	29	57.7	41.7	291	49.6	08.7	48	20	23	48	11	12 55	46	**	**	**	
15	44	57.8	42.6	306	18.9	+16 03.7	50	30	27	55	19	13 10	44	**	**	**	
16	59	58.0	43.5	320	48.2	+15 58.7	50	35	28	5 58	23	19	42	**	**	**	
17	74	58.1	+9 44.3	335	17.7	+15 53.7	50	40	5 29	6 01	6 28	13 29	40	23	59	59	
18	89	58.3	+9 45.2	349	47.2	+15 48.5	52	45	5 30	6 05	6 34	13 40	39	23	48	61	
19	104	58.4	46.1	4 16.7	43.3	52	50	50	31	09	41	13 54	36	35	64		
20	119	58.6	47.0	18 46.4	38.0	53	52	52	31	10	45	14 01	35	29	65		
21	134	58.7	47.9	33 16.1	32.6	54	54	54	31	12	48	08 34		22	66		
22	149	58.9	48.8	47 45.8	27.1	55	56	56	31	14	52	16 32		15	67		
23	164	59.0	49.7	62 15.7	21.6	55	58	58	31	16	6 56	25 30		23	06	69	
24	179	59.2	+9 50.6	76 45.5	16.0	56	60 S	5 30	6 19	7 01	7 01	14 35	29	22	56	71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 27 ^m 9		Mag: -3.8 PMG: 11 ^h 10 ^m		Mag: -0.9 PMG: 2 ^h 58 ^m		Mag: -2.4 PMG: 21 ^h 30 ^m		Mag: +0.3 PMG: 3 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	202	35.8	192 35.8	+2 41.3	315 23.7	-21 14.0	36 33.4	+7 31.9	307 30.2	-20 55.9
1	217	38.3	207 35.4	42.5	330 26.1	14.1	51 36.0	32.0	322 32.7	55.9
2	232	40.8	222 35.1	43.7	345 28.4	14.2	66 38.7	32.0	337 35.3	55.9
3	247	43.2	237 34.7	44.9	0 30.8	14.3	81 41.3	32.1	352 37.8	55.9
4	262	45.7	252 34.3	46.2	15 33.2	14.4	96 44.0	32.2	7 40.4	55.9
5	277	48.2	267 34.0	+2 47.4	30 35.5	-21 14.4	111 46.6	+7 32.2	22 42.9	-20 55.8
6	292	50.6	282 33.6	+2 48.6	45 37.9	-21 14.5	126 49.2	+7 32.3	37 45.5	-20 55.8
7	307	53.1	297 33.2	49.8	60 40.3	14.6	141 51.9	32.4	52 48.0	55.8
8	322	55.6	312 32.8	51.0	75 42.7	14.7	156 54.5	32.4	67 50.6	55.8
9	337	58.0	327 32.5	52.3	90 45.0	14.8	171 57.2	32.5	82 53.1	55.8
10	353	00.5	342 32.1	53.5	105 47.4	14.9	186 59.8	32.6	97 55.7	55.8
11	8 02.9	357 31.7	+2 54.7	120 49.8	-21 15.0	202 02.4	+7 32.6	112 58.2	-20 55.8	
12	23 05.4	12 31.4	+2 55.9	135 52.2	-21 15.1	217 05.1	+7 32.7	128 00.7	-20 55.8	
13	38 07.9	27 31.0	57.1	150 54.6	15.2	232 07.7	32.8	143 03.3	55.7	
14	53 10.3	42 30.6	58.3	165 56.9	15.3	247 10.3	32.8	158 05.8	55.7	
15	68 12.8	57 30.2	+2 59.6	180 59.3	15.4	262 13.0	32.9	173 08.4	55.7	
16	83 15.3	72 29.9	+3 00.8	196 01.7	15.4	277 15.6	33.0	188 10.9	55.7	
17	98 17.7	87 29.5	+3 02.0	211 04.1	-21 15.5	292 18.3	+7 33.0	203 13.5	-20 55.7	
18	113 20.2	102 29.1	+3 03.2	226 06.5	-21 15.6	307 20.9	+7 33.1	218 16.0	-20 55.7	
19	128 22.7	117 28.8	04.4	241 08.9	15.7	322 23.5	33.2	233 18.6	55.7	
20	143 25.1	132 28.4	05.7	256 11.3	15.8	337 26.2	33.2	248 21.2	55.7	
21	158 27.6	147 28.0	06.9	271 13.7	15.9	352 28.8	33.3	263 23.7	55.7	
22	173 30.1	162 27.6	08.1	286 16.1	16.0	7 31.4	33.4	278 26.3	55.6	
23	188 32.5	177 27.3	09.3	301 18.5	16.1	22 34.1	33.4	293 28.8	55.6	
24	203 35.0	192 26.9	+3 10.5	316 20.9	-21 16.2	37 36.7	+7 33.5	308 31.4	-20 55.6	
Dif	—	-4	+12	+24	-1	+26	+1	+25	0	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 7 ^d 5	PHE {	4 ^h : 56'2 12 ^h : 55'9 20 ^h : 55'7									
	PMG: 11 ^h 59 ^m 9	SD: 15'3				PMG: 19 ^h 31 ^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	m	h m m	m
0	179	59.2	+9 50.6	76	45.5	+15 16.0	57	60 N	19 19	20 06	21 08	11 34 71	2 48 26	
1	194	59.3	51.5	91	15.5 ¹¹⁰	10.3	57	58	13	19 56	20 53	42 70	39 28	
2	209	59.5	52.4	105	45.5 ¹¹⁰	+15 04.5	58	56	08	48	40	50 68	31 29	
3	224	59.6	53.3	120	15.6 ¹¹¹	+14 58.7	58	54	19 03	41	29	11 57 66	24 31	
4	239	59.8	54.2	134	45.7 ¹¹¹	52.8	59	52	18 58	34	19	12 03 64	17 33	
5	254	59.9	+9 55.1	149	16.0 ¹¹³	+14 46.9	59	50	18 54	19 29	20 11	12 08 64	2 11 34	
6	270	00.1	+9 55.9	163	46.2 ¹¹²	+14 40.8	61	45	18 46	19 17	19 54	12 20 61	1 59 36	
7	285	00.2	56.8	178	16.6 ¹¹⁴	34.8	60	40	39	19 07	41	30 58	48 38	
8	300	00.4	57.7	192	47.0 ¹¹⁴	28.6	62	35	33	18 59	30	38 57	39 40	
9	315	00.5	58.6	207	17.4 ¹¹⁴	22.4	62	30	27	52	21	46 54	31 42	
10	330	00.7	+9 59.5	221	47.9 ¹¹⁵	16.1	63	20	18	41	19 07	12 58 52	18 44	
11	345	00.8	+10 00.4	236	18.5 ¹¹⁶	+14 09.7	64	10 N	18 11	18 32	18 57	13 09 50	1 06 46	
12	0	01.0	+10 01.3	250	49.2 ¹¹⁷	+14 03.3	64	0	18 03	18 24	18 49	13 20 47	0 54 49	
13	15	01.1	02.2	265	19.9 ¹¹⁷	+13 56.8	65	10 S	17 56	17	42	30 45	43 50	
14	30	01.3	03.1	279	50.6 ¹¹⁷	50.3	65	20	49	11	37	41 42	31 53	
15	45	01.4	03.9	294	21.5 ¹¹⁹	43.6	67	30	40	04	32	13 54 39	17 55	
16	60	01.6	04.8	308	52.4 ¹¹⁹	37.0	66	35	35	18 01	30	14 01 38	0 09 57	
17	75	01.7	+10 05.7	323	23.3 ¹¹⁹	+13 30.2	68	40	17 30	17 57	18 29	14 09 36	** * *	
18	90	01.9	+10 06.6	337	54.3 ¹²⁰	+13 23.5	67	45	17 24	17 53	18 27	14 19 34	** * *	
19	105	02.0	07.5	352	25.4 ¹²¹	16.6	69	50	16	49	26	30 31	** * *	
20	120	02.2	08.4	6	56.5 ¹²¹	09.7	69	52	13	47	26	36 29	** * *	
21	135	02.3	09.3	21	27.7 ¹²²	+13 02.7	70	54	09	45	26	42 28	** * *	
22	150	02.5	10.2	35	58.9 ¹²²	+12 55.7	70	56	05	43	26	48 27	** * *	
23	165	02.6	11.0	50	30.2 ¹²³	48.7	70	58	17 00	40	26	14 55 25	** * *	
24	180	02.8	+10 11.9	65	01.6 ¹²⁴	+12 41.5	72	60 S	16 55	17 38	18 26	15 04 23	** * *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: -1.0		Mag: -2.4		Mag: +0.3	
	10 ^h 24 ^m 0	PMG: 11 ^h 10 ^m	PMG: 2 ^h 54 ^m	PMG: 21 ^h 26 ^m	PMG: 3 ^h 25 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	203	35.0	192 26.9	+3 10.5	316 20.9	-21 16.2	37 36.7	+7 33.5	308 31.4	-20 55.6
1	218	37.4	207 26.5	11.8	331 23.3	16.2	52 39.3	33.5	323 33.9	55.6
2	233	39.9	222 26.1	13.0	346 25.7	16.3	67 42.0	33.6	338 36.5	55.6
3	248	42.4	237 25.8	14.2	1 28.1	16.4	82 44.6	33.7	353 39.0	55.6
4	263	44.8	252 25.4	15.4	16 30.5	16.5	97 47.3	33.7	8 41.6	55.6
5	278	47.3	267 25.0	+3 16.6	31 32.9	-21 16.6	112 49.9	+7 33.8	23 44.1	-20 55.6
6	293	49.8	282 24.7	+3 17.8	46 35.3	-21 16.7	127 52.5	+7 33.9	38 46.7	-20 55.5
7	308	52.2	297 24.3	19.1	61 37.7	16.8	142 55.2	33.9	53 49.2	55.5
8	323	54.7	312 23.9	20.3	76 40.1	16.9	157 57.8	34.0	68 51.8	55.5
9	338	57.2	327 23.5	21.5	91 42.5	17.0	173 00.4	34.1	83 54.3	55.5
10	353	59.6	342 23.2	22.7	106 44.9	17.0	188 03.1	34.1	98 56.9	55.5
11	9	02.1	357 22.8	+3 23.9	121 47.3	-21 17.1	203 05.7	+7 34.2	113 59.4	-20 55.5
12	24	04.6	12 22.4	+3 25.1	136 49.7	-21 17.2	218 08.3	+7 34.2	129 02.0	-20 55.5
13	39	07.0	27 22.0	26.4	151 52.1	17.3	233 11.0	34.3	144 04.5	55.5
14	54	09.5	42 21.7	27.6	166 54.5	17.4	248 13.6	34.4	159 07.1	55.4
15	69	11.9	57 21.3	28.8	181 57.0	17.5	263 16.2	34.4	174 09.6	55.4
16	84	14.4	72 20.9	30.0	196 59.4	17.6	278 18.8	34.5	189 12.2	55.4
17	99	16.9	87 20.5	+3 31.2	212 01.8	-21 17.7	293 21.5	+7 34.6	204 14.8	-20 55.4
18	114	19.3	102 20.2	+3 32.4	227 04.2	-21 17.7	308 24.1	+7 34.6	219 17.3	-20 55.4
19	129	21.8	117 19.8	33.7	242 06.6	17.8	323 26.7	34.7	234 19.9	55.4
20	144	24.3	132 19.4	34.9	257 09.1	17.9	338 29.4	34.7	249 22.4	55.4
21	159	26.7	147 19.0	36.1	272 11.5	18.0	353 32.0	34.8	264 25.0	55.4
22	174	29.2	162 18.7	37.3	287 13.9	18.1	8 34.6	34.9	279 27.5	55.3
23	189	31.7	177 18.3	38.5	302 16.3	18.2	23 37.3	34.9	294 30.1	55.3
24	204	34.1	192 17.9	+3 39.7	317 18.8	-21 18.3	38 39.9	+7 35.0	309 32.6	-20 55.3
Dif	—	-4	+12		+24	-1	+26	+1	+26	0

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: 8 ^d 5 PHE { SD: 15'1 PMG: 20 ^h 18 ^m 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 R°: 44 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	02.8	+10	11.9	65	01.6	+12	41.5	60 N	2 50	3 53	4 39	12 45	72	3 14	21
1	195	02.9		12.8	79	33.0 ¹²⁴		34.3	58	3 06	4 02	46		52	69	07 23
2	210	03.0		13.7	94	04.5 ¹²⁵		27.1	56	19	11	51	12 58	67	3 00	25
3	225	03.2		14.6	108	36.0 ¹²⁵		19.8	54	30	18	4 56	13 03	66	2 55	26
4	240	03.3		15.5	123	07.6 ¹²⁶		12.5	52	39	24	5 00		07	65	50 28
5	255	03.5	+10	16.3	137	39.2 ¹²⁶	+12	05.1	50	3 48	4 30	5 04	13 12	62	2 45	29
6	270	03.6	+10	17.2	152	10.9 ¹²⁷	+11	57.6	45	4 05	4 42	5 13	13 21	60	2 35	32
7	285	03.8		18.1	166	42.7 ¹²⁸		50.2	40	18	4 52	20	28 58		26	35
8	300	03.9		19.0	181	14.5 ¹²⁸		42.6	35	29	5 00	26	35 55		19	37
9	315	04.1		19.9	195	46.3 ¹²⁸		35.0	30	38	07	32	40 54		13	38
10	330	04.2		20.8	210	18.2 ¹²⁹		27.4	20	4 52	19	41	50 51		2 02	41
11	345	04.4	+10	21.6	224	50.2 ¹³⁰	+11	19.7	10 N	5 03	5 28	5 49	13 59	47	1 52	44
12	0	04.5	+10	22.5	239	22.2 ¹³⁰	+11	12.0	0	5 11	5 35	5 56	14 07	45	1 43	46
13	15	04.7		23.4	253	54.2 ¹³⁰	+11	04.2	10 S	18	42	6 04	15 42		33	49
14	30	04.8		24.3	268	26.4 ¹³²	+10	56.4	20	23	49	11	23 40		24	51
15	45	04.9		25.2	282	58.5 ¹³¹		48.5	30	28	56	20	33 37		12	54
16	60	05.1		26.0	297	30.7 ¹³²		40.6	35	30	5 59	25	39 35		1 06	55
17	75	05.2	+10	26.9	312	03.0 ¹³³	+10	32.7	40	5 31	6 03	6 30	14 45	33	0 58	58
18	90	05.4	+10	27.8	326	35.3 ¹³³	+10	24.7	45	5 33	6 07	6 37	14 53	30	0 49	61
19	105	05.5		28.7	341	07.6 ¹³³		16.7	50	34	11	44	15 01	28	39	63
20	120	05.7		29.6	355	40.0 ¹³⁴		08.6	52	34	13	48	05 27		34	64
21	135	05.8		30.4	10	12.5 ¹³⁵	+10	00.5	54	35	16	52	10 25		28	66
22	150	06.0		31.3	24	45.0 ¹³⁵	+9	52.3	56	35	18	6 56	15 23		22	68
23	165	06.1		32.2	39	17.5 ¹³⁵		44.1	58	35	20	7 01	20 22		15	70
24	180	06.2	+10	33.1	53	50.1 ¹³⁶	+9	35.9	60 S	5 35	6 23	7 06	15 27	19	0 07	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 20 ^m 0		Mag: -3.8 PMG: 11 ^h 11 ^m		Mag: -1.0 PMG: 2 ^h 50 ^m		Mag: -2.4 PMG: 21 ^h 22 ^m		Mag: +0.3 PMG: 3 ^h 21 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	204	34.1	192	17.9	+3	39.7	317	18.8	-21	18.3	38	39.9	+7	35.0	309	32.6	-20	55.3
1	219	36.6	207	17.5		41.0	332	21.2		18.4	53	42.5		35.1	324	35.2		55.3
2	234	39.0	222	17.2		42.2	347	23.6		18.4	68	45.1		35.1	339	37.7		55.3
3	249	41.5	237	16.8		43.4	2	26.1		18.5	83	47.8		35.2	354	40.3		55.3
4	264	44.0	252	16.4		44.6	17	28.5		18.6	98	50.4		35.2	9	42.9		55.3
5	279	46.4	267	16.0	+3	45.8	32	30.9	-21	18.7	113	53.0	+7	35.3	24	45.4	-20	55.3
6	294	48.9	282	15.7	+3	47.0	47	33.4	-21	18.8	128	55.7	+7	35.4	39	48.0	-20	55.2
7	309	51.4	297	15.3		48.3	62	35.8		18.9	143	58.3		35.4	54	50.5		55.2
8	324	53.8	312	14.9		49.5	77	38.2		19.0	159	00.9		35.5	69	53.1		55.2
9	339	56.3	327	14.5		50.7	92	40.7		19.0	174	03.5		35.5	84	55.6		55.2
10	354	58.8	342	14.2		51.9	107	43.1		19.1	189	06.2		35.6	99	58.2		55.2
11	10	01.2	357	13.8	+3	53.1	122	45.6	-21	19.2	204	08.8	+7	35.7	115	00.8	-20	55.2
12	25	03.7	12	13.4	+3	54.3	137	48.0	-21	19.3	219	11.4	+7	35.7	130	03.3	-20	55.2
13	40	06.2	27	13.0		55.5	152	50.5		19.4	234	14.0		35.8	145	05.9		55.2
14	55	08.6	42	12.7		56.8	167	52.9		19.5	249	16.7		35.8	160	08.4		55.1
15	70	11.1	57	12.3		58.0	182	55.4		19.5	264	19.3		35.9	175	11.0		55.1
16	85	13.5	72	11.9	+3	59.2	197	57.8		19.6	279	21.9		36.0	190	13.5		55.1
17	100	16.0	87	11.5	+4	00.4	213	00.3	-21	19.7	294	24.6	+7	36.0	205	16.1	-20	55.1
18	115	18.5	102	11.2	+4	01.6	228	02.7	-21	19.8	309	27.2	+7	36.1	220	18.7	-20	55.1
19	130	20.9	117	10.8		02.8	243	05.2		19.9	324	29.8		36.1	235	21.2		55.1
20	145	23.4	132	10.4		04.0	258	07.6		20.0	339	32.4		36.2	250	23.8		55.1
21	160	25.9	147	10.0		05.2	273	10.1		20.1	354	35.0		36.3	265	26.3		55.1
22	175	28.3	162	09.6		06.5	288	12.5		20.1	9	37.7		36.3	280	28.9		55.0
23	190	30.8	177	09.3		07.7	303	15.0		20.2	24	40.3		36.4	295	31.5		55.0
24	205	33.3	192	08.9	+4	08.9	318	17.5	-21	20.3	39	42.9	+7	36.4	310	34.0	-20	55.0
Dif	—		-4		+12		+24		-1		+26		+1		+26		0	

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: 9 ^d 5 SD: 15°0 PMG: 21 ^h 02 ^m	PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7 R°: 44 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	06.2	+10	33.1	53	50.1	+9 35.9	60 N	19 24	20 11	21 16	13 57	71	3 35	18
1	195	06.4		34.0	68	22.7 ¹³⁶	27.6 ⁸³	58	17	20 01	20 59	14 01	69	30	20
2	210	06.5		34.8	82	55.4 ¹³⁷	19.3 ⁸³	56	12	19 53	45	05	67	25	22
3	225	06.7		35.7	97	28.1 ¹³⁷	11.0 ⁸³	54	06	45	34	09	65	21	24
4	240	06.8		36.6	112	00.9 ¹³⁸	+9 02.6 ⁸⁴	52	19 02	38	24	12	63	18	24
5	255	07.0	+10	37.5	126	33.7 ¹³⁸	+8 54.2 ⁸⁴	50	18 58	19 32	20 15	14 14	63	3 14	26
6	270	07.1	+10	38.3	141	06.5 ¹³⁸	+8 45.8 ⁸⁴	45	18 48	19 19	19 57	14 21	59	3 07	29
7	285	07.2		39.2	155	39.4 ¹³⁹	37.3 ⁸⁵	40	41	09	43	26	56	3 01	31
8	300	07.4		40.1	170	12.3 ¹³⁹	28.8 ⁸⁵	35	34	19 01	32	30	54	2 56	33
9	315	07.5		41.0	184	45.3 ¹⁴⁰	20.3 ⁸⁵	30	29	18 53	23	34	52	51	35
10	330	07.7		41.8	199	18.3 ¹⁴⁰	11.7 ⁸⁶	20	19	42	19 08	41	49	43	38
11	345	07.8	+10	42.7	213	51.4 ¹⁴¹	+8 03.1 ⁸⁶	10 N	18 11	18 32	18 57	14 46	47	2 36	41
12	0	08.0	+10	43.6	228	24.4 ¹⁴⁰	+7 54.5 ⁸⁶	0	18 03	18 24	18 48	14 52	43	2 29	44
13	15	08.1		44.5	242	57.6 ¹⁴²	45.8 ⁸⁷	10 S	17 55	16	41	14 57	41	22	47
14	30	08.2		45.3	257	30.7 ¹⁴¹	37.1 ⁸⁷	20	47	09	35	15 03	38	15	49
15	45	08.4		46.2	272	03.9 ¹⁴²	28.4 ⁸⁷	30	38	18 02	30	10	34	06	53
16	60	08.5		47.1	286	37.1 ¹⁴²	19.7 ⁸⁷	35	33	17 59	28	14	32	2 01	55
17	75	08.7	+10	48.0	301	10.4 ¹⁴³	+7 10.9 ⁸⁸	40	17 27	17 55	18 26	15 18	31	1 56	57
18	90	08.8	+10	48.8	315	43.7 ¹⁴³	+7 02.1 ⁸⁸	45	17 20	17 50	18 24	15 23	28	1 50	59
19	105	08.9		49.7	330	17.0 ¹⁴³	+6 53.3 ⁸⁸	50	12	45	23	29	25	42	62
20	120	09.1		50.6	344	50.4 ¹⁴⁴	44.4 ⁸⁹	52	09	43	22	32	23	38	64
21	135	09.2		51.4	359	23.8 ¹⁴⁴	35.6 ⁸⁸	54	04	41	22	35	22	34	66
22	150	09.4		52.3	13	57.2 ¹⁴⁴	26.7 ⁸⁹	56	17 00	38	21	38	21	30	67
23	165	09.5		53.2	28	30.7 ¹⁴⁵	17.7 ⁹⁰	58	16 55	35	21	42	18	25	69
24	180	09.6	+10	54.1	43	04.2 ¹⁴⁵	+6 08.8 ⁸⁹	60 S	16 49	17 32	18 21	15 46	16	1 19	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 16 ^m 1		Mag: -3.8 PMG: 11 ^h 12 ^m		Mag: -1.0 PMG: 2 ^h 46 ^m		Mag: -2.4 PMG: 21 ^h 17 ^m		Mag: +0.3 PMG: 3 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	205	33.3	192	08.9	+4	08.9	318	17.5	-21	20.3
1	220	35.7	207	08.5		10.1	333	19.9		20.4
2	235	38.2	222	08.1		11.3	348	22.4		20.5
3	250	40.7	237	07.8		12.5	3	24.8		20.6
4	265	43.1	252	07.4		13.7	18	27.3		20.6
5	280	45.6	267	07.0	+4	14.9	33	29.8	-21	20.7
6	295	48.0	282	06.6	+4	16.2	48	32.2	-21	20.8
7	310	50.5	297	06.2		17.4	63	34.7		20.9
8	325	53.0	312	05.9		18.6	78	37.2		21.0
9	340	55.4	327	05.5		19.8	93	39.7		21.1
10	355	57.9	342	05.1		21.0	108	42.1		21.1
11	11	00.4	357	04.7	+4	22.2	123	44.6	-21	21.2
12	26	02.8	12	04.4	+4	23.4	138	47.1	-21	21.3
13	41	05.3	27	04.0		24.6	153	49.6		21.4
14	56	07.8	42	03.6		25.8	168	52.0		21.5
15	71	10.2	57	03.2		27.1	183	54.5		21.5
16	86	12.7	72	02.8		28.3	198	57.0		21.6
17	101	15.1	87	02.5	+4	29.5	213	59.5	-21	21.7
18	116	17.6	102	02.1	+4	30.7	229	02.0	-21	21.8
19	131	20.1	117	01.7		31.9	244	04.5		21.9
20	146	22.5	132	01.3		33.1	259	07.0		22.0
21	161	25.0	147	00.9		34.3	274	09.4		22.0
22	176	27.5	162	00.6		35.5	289	11.9		22.1
23	191	29.9	177	00.2		36.7	304	14.4		22.2
24	206	32.4	191	59.8	+4	37.9	319	16.9	-21	22.3
Dif	—		-4	+12		+25	-1	+26		+1
										0

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: 10 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'4 20 ^h : 54'3 PMG: 21 ^h 46 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	09.6	+10	54.1	43	04.2	+6	08.8	60 N	2	42	3	46	4	34	15
1	195	09.8		54.9	57	37.7 ¹⁴⁵	+5	59.8 ⁹⁰	58	2	59	3	56	40	10	69
2	210	09.9		55.8	72	11.3 ¹⁴⁶		50.9 ⁸⁹	56	3	12	4	05	46	12	67
3	225	10.1		56.7	86	44.8 ¹⁴⁵		41.9 ⁹⁰	54		24	13	51	14	65	45
4	240	10.2		57.5	101	18.5 ¹⁴⁷		32.8 ⁹¹	52		34	20	56	15	64	42
5	255	10.3	+10	58.4	115	52.1 ¹⁴⁶	+5	23.8 ⁹⁰	50	3	43	4	26	5	00	15
6	270	10.5	+10	59.3	130	25.8 ¹⁴⁷	+5	14.7 ⁹¹	45	4	01	4	39	5	10	15
7	285	10.6	+11	00.1	144	59.5 ¹⁴⁷	+5	05.7 ⁹⁰	40		15	49	17	22	56	32
8	300	10.8		01.0	159	33.2 ¹⁴⁷	+4	56.6 ⁹¹	35	26	4	58	24	24	54	29
9	315	10.9		01.9	174	06.9 ¹⁴⁷		47.4 ⁹²	30	36	5	05	30	26	52	26
10	330	11.0		02.8	188	40.7 ¹⁴⁸		38.3 ⁹¹	20	4	50	17	39	30	48	21
11	345	11.2	+11	03.6	203	14.5 ¹⁴⁸	+4	29.2 ⁹¹	10 N	5	02	5	27	5	48	15
12	0	11.3	+11	04.5	217	48.3 ¹⁴⁸	+4	20.0 ⁹²	0	5	10	5	35	5	56	15
13	15	11.4		05.4	232	22.2 ¹⁴⁹		10.8 ⁹²	10 S		18	42	6	04	38	40
14	30	11.6		06.2	246	56.0 ¹⁴⁸	+4	01.6 ⁹²	20	24	50	12	41	37	3	04
15	45	11.7		07.1	261	29.9 ¹⁴⁹	+3	52.4 ⁹²	30	29	5	57	21	44	34	2
16	60	11.9		07.9	276	03.8 ¹⁴⁹		43.2 ⁹²	35	31	6	01	26	46	32	56
17	75	12.0	+11	08.8	290	37.7 ¹⁴⁹	+3	34.0 ⁹²	40	5	33	6	05	6	32	15
18	90	12.1	+11	09.7	305	11.7 ¹⁵⁰	+3	24.8 ⁹²	45	5	35	6	09	6	39	15
19	105	12.3		10.5	319	45.7 ¹⁵⁰		15.5 ⁹³	50	37	14	47	54	24	44	63
20	120	12.4		11.4	334	19.6 ¹⁴⁹	+3	06.2 ⁹³	52	37	17	51	55	23	42	64
21	135	12.5		12.3	348	53.6 ¹⁵⁰	+2	57.0 ⁹²	54	38	19	6	55	57	21	40
22	150	12.7		13.1	3	27.7 ¹⁵¹		47.7 ⁹³	56	38	22	7	00	15	59	19
23	165	12.8		14.0	18	01.7 ¹⁵⁰		38.4 ⁹³	58	39	25	05	16	00	18	34
24	180	12.9	+11	14.9	32	35.8 ¹⁵¹	+2	29.1 ⁹³	60 S	5	39	6	28	7	11	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 12 ^m 2		Mag: -3.8 PMG: 11 ^h 12 ^m		Mag: -1.1 PMG: 2 ^h 42 ^m		Mag: -2.4 PMG: 21 ^h 13 ^m		Mag: +0.3 PMG: 3 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	206	32.4	191	59.8	+4	37.9	319	16.9	-21	22.3	40	45.8	+7	37.8	311	35.5	-20	54.7
1	221	34.9	206	59.4		39.1	334	19.4		22.4	55	48.4		37.9	326	38.0		54.7
2	236	37.3	221	59.0		40.4	349	21.9		22.4	70	51.0		37.9	341	40.6		54.7
3	251	39.8	236	58.7		41.6	4	24.4		22.5	85	53.6		38.0	356	43.2		54.7
4	266	42.3	251	58.3		42.8	19	26.9		22.6	100	56.3		38.0	11	45.7		54.7
5	281	44.7	266	57.9	+4	44.0	34	29.4	-21	22.7	115	58.9	+7	38.1	26	48.3	-20	54.6
6	296	47.2	281	57.5	+4	45.2	49	31.9	-21	22.8	131	01.5	+7	38.1	41	50.9	-20	54.6
7	311	49.6	296	57.1		46.4	64	34.4		22.8	146	04.1		38.2	56	53.4		54.6
8	326	52.1	311	56.8		47.6	79	36.9		22.9	161	06.7		38.3	71	56.0		54.6
9	341	54.6	326	56.4		48.8	94	39.4		23.0	176	09.3		38.3	86	58.6		54.6
10	356	57.0	341	56.0		50.0	109	41.9		23.1	191	11.9		38.4	102	01.1		54.6
11	11	59.5	356	55.6	+4	51.2	124	44.4	-21	23.2	206	14.6	+7	38.4	117	03.7	-20	54.6
12	27	02.0	11	55.2	+4	52.4	139	46.9	-21	23.2	221	17.2	+7	38.5	132	06.2	-20	54.6
13	42	04.4	26	54.8		53.6	154	49.5		23.3	236	19.8		38.5	147	08.8		54.5
14	57	06.9	41	54.5		54.8	169	52.0		23.4	251	22.4		38.6	162	11.4		54.5
15	72	09.4	56	54.1		56.1	184	54.5		23.5	266	25.0		38.6	177	13.9		54.5
16	87	11.8	71	53.7		57.3	199	57.0		23.6	281	27.6		38.7	192	16.5		54.5
17	102	14.3	86	53.3	+4	58.5	214	59.5	-21	23.6	296	30.2	+7	38.7	207	19.1	-20	54.5
18	117	16.7	101	52.9	+4	59.7	230	02.0	-21	23.7	311	32.8	+7	38.8	222	21.6	-20	54.5
19	132	19.2	116	52.5	+5	00.9	245	04.5		23.8	326	35.5		38.9	237	24.2		54.5
20	147	21.7	131	52.2		02.1	260	07.1		23.9	341	38.1		38.9	252	26.8		54.5
21	162	24.1	146	51.8		03.3	275	09.6		24.0	356	40.7		39.0	267	29.3		54.4
22	177	26.6	161	51.4		04.5	290	12.1		24.0	11	43.3		39.0	282	31.9		54.4
23	192	29.1	176	51.0		05.7	305	14.6		24.1	26	45.9		39.1	297	34.5		54.4
24	207	31.5	191	50.6	+5	06.9	320	17.2	-21	24.2	41	48.5	+7	39.1	312	37.0	-20	54.4
Dif	—		-4	+12			+25	-1			+26	+1			+26			0

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: 11 ^d 5 PHE { SD: 14'8 PMG: 22 ^h 28 ^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	180	12.9	+11	14.9	32	35.8	+2 29.1	60 N	19 29	20 17	21 23	16 19 70	4 09 15		
1	195	13.1		15.7	47	09.8 ¹⁵⁰	19.8	58	22	20 06	21 06	19 68	08 17		
2	210	13.2		16.6	61	43.9 ¹⁵¹	10.5	56	16	19 57	20 51	19 66	07 19		
3	225	13.3		17.4	76	18.0 ¹⁵¹	+2 01.2	54	10	49	39	19 64	06 22		
4	240	13.5		18.3	90	52.1 ¹⁵¹	+1 51.9	52	05	42	28	19 62	06 22		
5	255	13.6	+11	19.2	105	26.3 ¹⁵²	+1 42.5	50	19 01	19 36	20 19	16 19 61	4 05 24		
6	270	13.8	+11	20.0	120	00.4 ¹⁵¹	+1 33.2	45	18 51	19 22	20 00	16 18 59	4 04 26		
7	285	13.9		20.9	134	34.6 ¹⁵²	23.9	40	43	11	19 45	18 56	02 30		
8	300	14.0		21.8	149	08.7 ¹⁵¹	14.5	35	36	19 02	34	18 54	01 32		
9	315	14.2		22.6	163	42.9 ¹⁵²	+1 05.2	30	30	18 55	24	18 52	4 00 34		
10	330	14.3		23.5	178	17.1 ¹⁵²	+0 55.8	20	20	42	19 09	18 48	3 59 37		
11	345	14.4	+11	24.3	192	51.3 ¹⁵²	+0 46.5	10 N	18 11	18 32	18 57	16 18 45	3 57 40		
12	0	14.6	+11	25.2	207	25.5 ¹⁵²	+0 37.2	0	18 02	18 23	18 48	16 18 42	3 56 43		
13	15	14.7		26.1	221	59.7 ¹⁵²	27.8	10 S	17 54	16	40	18 40	55 45		
14	30	14.8		26.9	236	33.9 ¹⁵²	18.5	20	46	08	34	18 37	53 48		
15	45	15.0		27.8	251	08.2 ¹⁵³	+0 09.1	30	36	18 00	28	18 33	51 52		
16	60	15.1		28.6	265	42.4 ¹⁵²	-0 00.2	35	30	17 56	26	18 31	51 53		
17	75	15.2	+11	29.5	280	16.6 ¹⁵²	-0 09.6	40	17 24	17 52	18 23	16 18 29	3 49 56		
18	90	15.4	+11	30.3	294	50.9 ¹⁵³	-0 18.9	45	17 17	17 47	18 21	16 18 27	3 48 59		
19	105	15.5		31.2	309	25.2 ¹⁵³	28.3	50	08	41	19	18 24	47 61		
20	120	15.6		32.1	323	59.4 ¹⁵²	37.6	52	04	39	18	18 23	46 63		
21	135	15.7		32.9	338	33.7 ¹⁵³	46.9	54	17 00	36	17	18 21	45 65		
22	150	15.9		33.8	353	07.9 ¹⁵²	-0 56.2	56	16 55	34	17	18 19	44 66		
23	165	16.0		34.6	7	42.2 ¹⁵³	-1 05.6	58	50	30	16	18 18	43 68		
24	180	16.1	+11	35.5	22	16.5 ¹⁵³	-1 14.9	60 S	16 44	17 27	18 15	16 18 16	3 42 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 08 ^m 2		Mag: -3.8 PMG: 11 ^h 13 ^m		Mag: -1.1 PMG: 2 ^h 38 ^m		Mag: -2.4 PMG: 21 ^h 09 ^m		Mag: +0.2 PMG: 3 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	207	31.5	191	50.6	320	17.2	41	48.5	312	37.0
1	222	34.0	206	50.2	335	19.7	56	51.1	327	39.6
2	237	36.5	221	49.9	350	22.2	71	53.7	342	42.2
3	252	38.9	236	49.5	5	24.7	86	56.3	357	44.7
4	267	41.4	251	49.1	20	27.3	101	58.9	12	47.3
5	282	43.9	266	48.7	35	29.8	117	01.6	27	49.9
6	297	46.3	281	48.3	50	32.3	132	04.2	42	52.4
7	312	48.8	296	47.9	65	34.9	147	06.8	57	55.0
8	327	51.2	311	47.6	80	37.4	162	09.4	72	57.6
9	342	53.7	326	47.2	95	40.0	177	12.0	88	00.1
10	357	56.2	341	46.8	110	42.5	192	14.6	103	02.7
11	12	58.6	356	46.4	125	45.0	207	17.2	118	05.3
12	28	01.1	11	46.0	140	47.6	222	19.8	133	07.8
13	43	03.6	26	45.6	155	50.1	237	22.4	148	10.4
14	58	06.0	41	45.2	170	52.7	252	25.0	163	13.0
15	73	08.5	56	44.9	185	55.2	267	27.6	178	15.6
16	88	11.0	71	44.5	200	57.8	282	30.2	193	18.1
17	103	13.4	86	44.1	216	00.3	297	32.8	208	20.7
18	118	15.9	101	43.7	231	02.9	312	35.4	223	23.3
19	133	18.3	116	43.3	246	05.4	327	38.0	238	25.8
20	148	20.8	131	42.9	261	08.0	342	40.7	253	28.4
21	163	23.3	146	42.5	276	10.5	357	43.3	268	31.0
22	178	25.7	161	42.1	291	13.1	12	45.9	283	33.5
23	193	28.2	176	41.8	306	15.6	27	48.5	298	36.1
24	208	30.7	191	41.4	321	18.2	42	51.1	313	38.7
Dif	—	—	-4	+12	+25	-1	+26	+1	+26	0

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: 12 ^d 5 PHE { SD: 14 ^h 7 PMG: 23 ^h 11 ^m R ^o : 43 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	16.1	+11	35.5	22	16.5	-1	14.9	60 N	2	34	3	40	4	28	17	29	70
1	195	16.3		36.3	36	50.8 ¹⁵³		24.2 ⁹³	58	2	51	3	51	35	27	68	25	18
2	210	16.4		37.2	51	25.0 ¹⁵²		33.5 ⁹³	56	3	06	4	00	41	25	66	26	20
3	225	16.5		38.0	65	59.3 ¹⁵³		42.8 ⁹³	54	18		08	47	23	64	27	22	
4	240	16.7		38.9	80	33.6 ¹⁵³	-1	52.1 ⁹³	52	29		15	52	21	63	28	23	
5	255	16.8	+11	39.7	95	07.8 ¹⁵²	-2	01.3 ⁹²	50	3	38	4	22	4	56	17	20	61
6	270	16.9	+11	40.6	109	42.1 ¹⁵³	-2	10.6 ⁹³	45	3	57	4	35	5	06	17	17	58
7	285	17.1		41.5	124	16.4 ¹⁵³		19.9 ⁹³	40	4	12	46	14	14	56	32	29	
8	300	17.2		42.3	138	50.7 ¹⁵³		29.1 ⁹²	35	24	4	55	21	12	53	33	31	
9	315	17.3		43.2	153	24.9 ¹⁵²		38.3 ⁹²	30	33	5	03	28	10	51	34	33	
10	330	17.4		44.0	167	59.2 ¹⁵³		47.6 ⁹³	20	4	49	15	38	06	49	36	36	
11	345	17.6	+11	44.9	182	33.5 ¹⁵³	-2	56.8 ⁹²	10 N	5	01	5	26	5	47	17	03	46
12	0	17.7	+11	45.7	197	07.7 ¹⁵²	-3	06.0 ⁹²	0	5	10	5	34	5	55	17	00	43
13	15	17.8		46.6	211	42.0 ¹⁵³		15.2 ⁹²	10 S	18	42	6	04	16	58	40	40	45
14	30	18.0		47.4	226	16.2 ¹⁵²		24.3 ⁹¹	20	24	50	12		55	37	41	49	
15	45	18.1		48.3	240	50.4 ¹⁵²		33.5 ⁹²	30	30	5	58	22	51	34	43	52	
16	60	18.2		49.1	255	24.7 ¹⁵³		42.6 ⁹¹	35	33	6	02	28	49	33	44	54	
17	75	18.3	+11	50.0	269	58.9 ¹⁵²	-3	51.8 ⁹²	40	5	35	6	07	6	34	16	47	30
18	90	18.5	+11	50.8	284	33.1 ¹⁵²	-4	00.9 ⁹¹	45	5	37	6	12	6	42	16	45	27
19	105	18.6		51.7	299	07.3 ¹⁵²		10.0 ⁹¹	50	40	17	51		42	25	48	61	
20	120	18.7		52.5	313	41.5 ¹⁵²		19.1 ⁹⁰	52	40	20	55		41	23	49	62	
21	135	18.9		53.4	328	15.7 ¹⁵²		28.1 ⁹¹	54	41	23	6	59	39	22	50	64	
22	150	19.0		54.2	342	49.9 ¹⁵²		37.2 ⁹¹	56	42	25	7	04	37	21	50	66	
23	165	19.1		55.0	357	24.1 ¹⁵²		46.2 ⁹⁰	58	43	29	09		36	18	51	68	
24	180	19.2	+11	55.9	11	58.2 ¹⁵¹	-4	55.2 ⁹⁰	60 S	5	44	6	32	7	16	16	34	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 04 ^m 3		Mag: -3.8 PMG: 11 ^h 14 ^m		Mag: -1.1 PMG: 2 ^h 34 ^m		Mag: -2.4 PMG: 21 ^h 05 ^m		Mag: +0.2 PMG: 3 ^h 05 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	208	30.7	191	41.4	+5	35.8	321	18.2	-21	26.0
1	223	33.1	206	41.0		37.0	336	20.8		26.1
2	238	35.6	221	40.6		38.2	351	23.3		26.2
3	253	38.1	236	40.2		39.4	6	25.9		26.3
4	268	40.5	251	39.8		40.6	21	28.4		26.3
5	283	43.0	266	39.4	+5	41.8	36	31.0	-21	26.4
6	298	45.5	281	39.0	+5	43.0	51	33.6	-21	26.5
7	313	47.9	296	38.7		44.2	66	36.1		26.6
8	328	50.4	311	38.3		45.4	81	38.7		26.6
9	343	52.8	326	37.9		46.6	96	41.3		26.7
10	358	55.3	341	37.5		47.8	111	43.9		26.8
11	13	57.8	356	37.1	+5	49.0	126	46.4	-21	26.9
12	29	00.2	11	36.7	+5	50.2	141	49.0	-21	26.9
13	44	02.7	26	36.3		51.4	156	51.6		27.0
14	59	05.2	41	35.9		52.6	171	54.2		27.1
15	74	07.6	56	35.5		53.8	186	56.7		27.2
16	89	10.1	71	35.1		55.0	201	59.3		27.2
17	104	12.6	86	34.8	+5	56.1	217	01.9	-21	27.3
18	119	15.0	101	34.4	+5	57.3	232	04.5	-21	27.4
19	134	17.5	116	34.0		58.5	247	07.1		27.4
20	149	20.0	131	33.6	+5	59.7	262	09.7		27.5
21	164	22.4	146	33.2	+6	00.9	277	12.3		27.6
22	179	24.9	161	32.8		02.1	292	14.8		27.7
23	194	27.3	176	32.4		03.3	307	17.4		27.7
24	209	29.8	191	32.0	+6	04.5	322	20.0	-21	27.8
Dif	—		-4 +12		+26 -1		+26 0		+26 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 13 ^d 5 PHE	SD: 14 ^h 7				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 6				PMG: 23 ^h 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
0	180	19.2	+11 55.9	11	58.2	-4 55.2		60 N	19 34	20 23	21 31	18 39	69	4 40	17
1	195	19.4		26	32.4 ¹⁵²	-5 04.2	90	58	26	12	21 12	35	67	43	20
2	210	19.5		41	06.5 ¹⁵¹	13.1	89	56	20	20 02	20 57	31	65	46	21
3	225	19.6		55	40.6 ¹⁵¹	22.1	90	54	14	19 53	44	27	64	49	22
4	240	19.7	+11 59.3	70	14.8 ¹⁵²	31.0	89	52	09	46	33	24	62	51	24
5	255	19.9	+12 00.1	84	48.9 ¹⁵¹	-5 39.9	89	50	19 04	19 39	20 23	18 21	61	4 53	25
6	270	20.0	+12 01.0	99	23.0 ¹⁵¹	-5 48.8	89	45	18 53	19 25	20 03	18 15	58	4 57	29
7	285	20.1		113	57.0 ¹⁵⁰	-5 57.6	88	40	45	13	19 48	10	55	5 01	31
8	300	20.2		128	31.1 ¹⁵¹	-6 06.4	88	35	38	19 04	36	05	54	04	33
9	315	20.4		143	05.1 ¹⁵⁰	15.2	88	30	31	18 56	26	18 01	52	07	35
10	330	20.5		157	39.2 ¹⁵¹	24.0	88	20	20	43	19 10	17 55	48	12	38
11	345	20.6	+12 05.2	172	13.2 ¹⁵⁰	-6 32.8	88	10 N	18 11	18 32	18 57	17 49	46	5 17	40
12	0	20.7	+12 06.0	186	47.2 ¹⁵⁰	-6 41.5	87	0	18 02	18 23	18 48	17 43	44	5 21	43
13	15	20.9		201	21.1 ¹⁴⁹	50.2	87	10 S	17 53	15	40	38	41	25	46
14	30	21.0		215	55.1 ¹⁵⁰	-6 58.8	86	20	44	18 07	33	32	38	30	48
15	45	21.1		230	29.0 ¹⁴⁹	-7 07.5	87	30	34	17 58	26	25	36	35	51
16	60	21.2		245	03.0 ¹⁵⁰	16.1	86	35	28	54	23	22	33	38	53
17	75	21.4	+12 10.2	259	36.9 ¹⁴⁹	-7 24.7	86	40	17 21	17 49	18 21	17 17	32	5 41	55
18	90	21.5	+12 11.1	274	10.8 ¹⁴⁹	-7 33.2	85	45	17 14	17 44	18 18	17 12	30	5 45	58
19	105	21.6		288	44.6 ¹⁴⁸	41.8	86	50	04	38	15	07	26	49	61
20	120	21.7		303	18.5 ¹⁴⁹	50.2	84	52	17 00	35	14	04	25	51	63
21	135	21.9		317	52.3 ¹⁴⁸	-7 58.7	85	54	16 56	32	13	17 01	24	54	64
22	150	22.0		332	26.1 ¹⁴⁸	-8 07.1	84	56	50	29	12	16 58	22	56	66
23	165	22.1		346	59.9 ¹⁴⁸	15.5	84	58	45	26	11	54	20	5 59	68
24	180	22.2	+12 16.1	1	33.7 ¹⁴⁸	-8 23.9	84	60 S	16 38	17 22	18 10	16 50	18	6 02	70

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO						
	PMG: 10 ^h 00 ^m 4		Mag: -3.8 PMG: 11 ^h 14 ^m		Mag: -1.2 PMG: 2 ^h 30 ^m		Mag: -2.4 PMG: 21 ^h 01 ^m			Mag: +0.2 PMG: 3 ^h 01 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	209	29.8	191	32.0	+6 04.5	322	20.0	-21 27.8	43 53.5	+7 41.5	314	40.4	-20 53.7			
1	224	32.3	206	31.6	05.7	337	22.6	27.9	58 56.1	41.6	329	43.0	53.7			
2	239	34.7	221	31.2	06.9	352	25.2	28.0	73 58.7	41.6	344	45.6	53.7			
3	254	37.2	236	30.8	08.1	7	27.8	28.0	89 01.3	41.7	359	48.1	53.7			
4	269	39.7	251	30.4	09.3	22	30.4	28.1	104 03.9	41.7	14	50.7	53.7			
5	284	42.1	266	30.1	+6 10.5	37	33.0	-21 28.2	119 06.5	+7 41.8	29	53.3	-20 53.7			
6	299	44.6	281	29.7	+6 11.7	52	35.6	-21 28.2	134 09.0	+7 41.8	44	55.9	-20 53.7			
7	314	47.1	296	29.3	12.9	67	38.2	28.3	149 11.6	41.9	59	58.4	53.6			
8	329	49.5	311	28.9	14.1	82	40.8	28.4	164 14.2	41.9	75	01.0	53.6			
9	344	52.0	326	28.5	15.3	97	43.4	28.5	179 16.8	42.0	90	03.6	53.6			
10	359	54.4	341	28.1	16.5	112	46.0	28.5	194 19.4	42.0	105	06.2	53.6			
11	14	56.9	356	27.7	+6 17.7	127	48.6	-21 28.6	209 22.0	+7 42.0	120	08.7	-20 53.6			
12	29	59.4	11	27.3	+6 18.8	142	51.2	-21 28.7	224 24.6	+7 42.1	135	11.3	-20 53.6			
13	45	01.8	26	26.9	20.0	157	53.9	28.7	239 27.2	42.1	150	13.9	53.6			
14	60	04.3	41	26.5	21.2	172	56.5	28.8	254 29.8	42.2	165	16.5	53.6			
15	75	06.8	56	26.1	22.4	187	59.1	28.9	269 32.4	42.2	180	19.0	53.5			
16	90	09.2	71	25.7	23.6	203	01.7	29.0	284 35.0	42.3	195	21.6	53.5			
17	105	11.7	86	25.3	+6 24.8	218	04.3	-21 29.0	299 37.6	+7 42.3	210	24.2	-20 53.5			
18	120	14.2	101	24.9	+6 26.0	233	06.9	-21 29.1	314 40.2	+7 42.4	225	26.8	-20 53.5			
19	135	16.6	116	24.5	27.2	248	09.5	29.2	329 42.8	42.4	240	29.4	53.5			
20	150	19.1	131	24.1	28.4	263	12.2	29.2	344 45.4	42.5	255	31.9	53.5			
21	165	21.6	146	23.7	29.6	278	14.8	29.3	359 47.9	42.5	270	34.5	53.5			
22	180	24.0	161	23.4	30.8	293	17.4	29.4	14 50.5	42.5	285	37.1	53.4			
23	195	26.5	176	23.0	32.0	308	20.0	29.4	29 53.1	42.6	300	39.7	53.4			
24	210	28.9	191	22.6	+6 33.1	323	22.7	-21 29.5	44 55.7	+7 42.6	315	42.2	-20 53.4			
Dif	—		-4 +12		+26		-1		+26		0		+26		0	

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: 14 ^d 5 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: **h **m R°: **m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	22.2	+12	16.1	1	33.7	-8	23.9	60 N	2	25	3	33	4	22	19	48	69		
1	195	22.3		17.0	16	07.4 ¹⁴⁷		32.2 ⁸³	58		44		45	30		42	66	5 03 21		
2	210	22.5		17.8	30	41.1 ¹⁴⁷		40.5 ⁸³	56	2	59	3	54	36		36	65	07 24		
3	225	22.6		18.6	45	14.8 ¹⁴⁷		48.8 ⁸³	54	3	13	4	03	42		31	63	11 25		
4	240	22.7		19.5	59	48.5 ¹⁴⁷	-8	57.0 ⁸²	52		24		11	48		26	62	15 26		
5	255	22.8	+12	20.3	74	22.2 ¹⁴⁷	-9	05.2 ⁸²	50	3	33	4	17	4	53	19	22	60 5 18 28		
6	270	23.0	+12	21.1	88	55.8 ¹⁴⁶	-9	13.3 ⁸¹	45	3	53	4	32	5	03	19	13	57 5 26 30		
7	285	23.1		22.0	103	29.4 ¹⁴⁶		21.4 ⁸¹	40	4	09		43	12		19	05	56 32 33		
8	300	23.2		22.8	118	03.0 ¹⁴⁶		29.5 ⁸¹	35		21	4	53	19		18	59	53 37 35		
9	315	23.3		23.7	132	36.5 ¹⁴⁵		37.5 ⁸⁰	30		31	5	01	25		53	52	42 36		
10	330	23.4		24.5	147	10.1 ¹⁴⁶		45.5 ⁸⁰	20		47		14	37		43	50	50 39		
11	345	23.6	+12	25.3	161	43.6 ¹⁴⁵	-9	53.5 ⁸⁰	10 N	4	59	5	25	5	46	18	35	47 5 57 42		
12	0	23.7	+12	26.2	176	17.0 ¹⁴⁴	-10	01.4 ⁷⁹	0	5	09	5	34	5	55	18	27	44 6 04 44		
13	15	23.8		27.0	190	50.5 ¹⁴⁵		09.3 ⁷⁹	10 S		18		42	6	04		19	42 11 46		
14	30	23.9		27.8	205	23.9 ¹⁴⁴		17.1 ⁷⁸	20		25		51	13		10	40	18 49		
15	45	24.0		28.7	219	57.3 ¹⁴⁴		24.9 ⁷⁸	30		31	5	59	24		18	01	37 26 52		
16	60	24.2		29.5	234	30.7 ¹⁴⁴		32.7 ⁷⁸	35		34	6	04	30		17	55	36 31 54		
17	75	24.3	+12	30.3	249	04.0 ¹⁴³	-10	40.4 ⁷⁷	40	5	37	6	09	6	36	17	49	34 6 36 56		
18	90	24.4	+12	31.2	263	37.3 ¹⁴³	-10	48.0 ⁷⁶	45	5	40	6	14	6	44	17	42	32 6 43 58		
19	105	24.5		32.0	278	10.6 ¹⁴³	-10	55.7 ⁷⁷	50		42		20	54		33	29	50 61		
20	120	24.6		32.8	292	43.9 ¹⁴³	-11	03.2 ⁷⁶	52		43	23		6	58	29	28	54 62		
21	135	24.7		33.7	307	17.1 ¹⁴²		10.8 ⁷⁶	54		45	26		7	03	25	26	6 58 63		
22	150	24.9		34.5	321	50.3 ¹⁴²		18.2 ⁷⁴	56		46	29		08		20	25	7 02 65		
23	165	25.0		35.3	336	23.5 ¹⁴²		25.7 ⁷⁵	58		47	33		14		14	24	07 67		
24	180	25.1	+12	36.1	350	56.6 ¹⁴¹	-11	33.1 ⁷⁴	60 S	5	48	6	37	7	20	17	08	22 7 12 69		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 56 ^m 4				Mag: -3.8 PMG: 11 ^h 15 ^m				Mag: -1.2 PMG: 2 ^h 26 ^m				Mag: -2.3 PMG: 20 ^h 57 ^m				Mag: +0.2 PMG: 2 ^h 57 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	210	28.9			191	22.6	+6	33.1	323	22.7	-21	29.5	44	55.7	+7	42.6	315	42.2	-20	53.4
1	225	31.4			206	22.2		34.3	338	25.3		29.6	59	58.3		42.7	330	44.8		53.4
2	240	33.9			221	21.8		35.5	353	27.9		29.7	75	00.9		42.7	345	47.4		53.4
3	255	36.3			236	21.4		36.7	8	30.6		29.7	90	03.5		42.8	0	50.0		53.4
4	270	38.8			251	21.0		37.9	23	33.2		29.8	105	06.1		42.8	15	52.6		53.4
5	285	41.3			266	20.6	+6	39.1	38	35.8	-21	29.9	120	08.7	+7	42.9	30	55.1	-20	53.3
6	300	43.7			281	20.2	+6	40.3	53	38.5	-21	29.9	135	11.3	+7	42.9	45	57.7	-20	53.3
7	315	46.2			296	19.8		41.5	68	41.1		30.0	150	13.8		42.9	61	00.3		53.3
8	330	48.7			311	19.4		42.7	83	43.7		30.1	165	16.4		43.0	76	02.9		53.3
9	345	51.1			326	19.0		43.8	98	46.4		30.1	180	19.0		43.0	91	05.4		53.3
10	0	53.6			341	18.6		45.0	113	49.0		30.2	195	21.6		43.1	106	08.0		53.3
11	15	56.0			356	18.2	+6	46.2	128	51.6	-21	30.3	210	24.2	+7	43.1	121	10.6	-20	53.3
12	30	58.5			11	17.8	+6	47.4	143	54.3	-21	30.3	225	26.8	+7	43.2	136	13.2	-20	53.2
13	46	01.0			26	17.4		48.6	158	56.9		30.4	240	29.4		43.2	151	15.8		53.2
14	61	03.4			41	17.0		49.8	173	59.6		30.5	255	31.9		43.2	166	18.3		53.2
15	76	05.9			56	16.6		51.0	189	02.2		30.5	270	34.5		43.3	181	20.9		53.2
16	91	08.4			71	16.2		52.1	204	04.9		30.6	285	37.1		43.3	196	23.5		53.2
17	106	10.8			86	15.8	+6	53.3	219	07.5	-21	30.7	300	39.7	+7	43.4	211	26.1	-20	53.2
18	121	13.3			101	15.4	+6	54.5	234	10.2	-21	30.8	315	42.3	+7	43.4	226	28.7	-20	53.2
19	136	15.8			116	15.0		55.7	249	12.8		30.8	330	44.9		43.5	241	31.2		53.1
20	151	18.2			131	14.6		56.9	264	15.5		30.9	345	47.5		43.5	256	33.8		53.1
21	166	20.7			146	14.2		58.1	279	18.1		31.0	0	50.0		43.5	271	36.4		53.1
22	181	23.2			161	13.8	+6	59.3	294	20.8		31.0	15	52.6		43.6	286	39.0		53.1
23	196	25.6			176	13.4	+7	00.4	309	23.5		31.1	30	55.2		43.6	301	41.6		53.1
24	211	28.1			191	13.0	+7	01.6	324	26.1	-21	31.2	45	57.8	+7	43.7	316	44.1	-20	53.1
Dif	—				-4 +12				+26 -1				+26 0				+26 0			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^d 9			Edad: 15 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2										
	PMG: 11 ^h 58 ^m 2			SD: 14 ^h 7 PMG: 0 ^h 37 ^m R°: 45 ^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	180	25.1	+12 36.1	350	56.6	-11 33.1	60 N	19 39	20 29	21 40	20 57 66	5 17 24	24	
1	195	25.2	37.0	5	29.7 ¹⁴¹	40.4 ⁷³	58	31	17	19	48 64	24 26	26	
2	210	25.3	37.8	20	02.8 ¹⁴¹	47.7 ⁷³	56	24	20 06	21 03	41 62	31 27	27	
3	225	25.5	38.6	34	35.8 ¹⁴⁰	-11 54.9 ⁷²	54	18	19 57	20 49	34 61	36 29	29	
4	240	25.6	39.5	49	08.8 ¹⁴⁰	-12 02.1 ⁷²	52	12	49	37	28 60	41 30	30	
5	255	25.7	+12 40.3	63	41.8 ¹⁴⁰	-12 09.3 ⁷²	50	19 07	19 42	20 27	20 22 59	5 46 31	31	
6	270	25.8	+12 41.1	78	14.8 ¹⁴⁰	-12 16.4 ⁷¹	45	18 56	19 28	20 06	20 10 57	5 56 34	34	
7	285	25.9	41.9	92	47.7 ¹³⁹	23.4 ⁷⁰	40	47	16	19 50	20 01 55	6 05 35	35	
8	300	26.0	42.8	107	20.6 ¹³⁹	30.4 ⁷⁰	35	39	19 06	38	19 52 54	12 37	37	
9	315	26.1	43.6	121	53.5 ¹³⁹	37.3 ⁶⁹	30	32	18 57	27	45 52	18 39	39	
10	330	26.3	44.4	136	26.3 ¹³⁸	44.2 ⁶⁹	20	21	44	19 10	33 49	29 41	41	
11	345	26.4	+12 45.3	150	59.1 ¹³⁸	-12 51.1 ⁶⁹	10 N	18 11	18 32	18 58	19 22 48	6 39 43	43	
12	0	26.5	+12 46.1	165	31.8 ¹³⁷	-12 57.8 ⁶⁸	0	18 02	18 23	18 47	19 11 47	6 48 45	45	
13	15	26.6	46.9	180	04.6 ¹³⁸	-13 04.6 ⁶⁷	10 S	17 52	14	39	19 01 45	6 57 48	48	
14	30	26.7	47.7	194	37.3 ¹³⁷	11.2 ⁶⁶	20	43	18 05	31	18 50 43	7 07 50	50	
15	45	26.8	48.6	209	09.9 ¹³⁶	17.8 ⁶⁶	30	32	17 56	24	38 40	18 52	52	
16	60	27.0	49.4	223	42.5 ¹³⁶	24.4 ⁶⁶	35	26	52	21	31 39	25 53	53	
17	75	27.1	+12 50.2	238	15.1 ¹³⁶	-13 30.9 ⁶⁵	40	17 19	17 46	18 18	18 23 37	7 32 55	55	
18	90	27.2	+12 51.0	252	47.7 ¹³⁶	-13 37.3 ⁶⁴	45	17 10	17 41	18 15	18 14 35	7 41 57	57	
19	105	27.3	51.8	267	20.2 ¹³⁵	43.7 ⁶⁴	50	17 01	34	12	18 02 34	51 60	60	
20	120	27.4	52.7	281	52.7 ¹³⁵	50.1 ⁶⁴	52	16 56	31	11	17 57 32	7 56 61	61	
21	135	27.5	53.5	296	25.2 ¹³⁵	-13 56.3 ⁶²	54	51	28	09	51 31	8 01 62	62	
22	150	27.6	54.3	310	57.6 ¹³⁴	-14 02.5 ⁶²	56	46	25	08	45 30	07 64	64	
23	165	27.7	55.1	325	30.0 ¹³⁴	08.7 ⁶²	58	40	21	07	38 28	14 65	65	
24	180	27.9	+12 56.0	340	02.3 ¹³³	-14 14.8 ⁶¹	60 S	16 33	17 17	18 05	17 30 26	8 21 67	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 9 ^h 52 ^m 5		Mag: -3.9 PMG: 11 ^h 15 ^m		Mag: -1.2 PMG: 2 ^h 22 ^m		Mag: -2.3 PMG: 20 ^h 53 ^m		Mag: +0.2 PMG: 2 ^h 53 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	211	28.1	191	13.0	+7 01.6	324	26.1	-21 31.2	45 57.8	+7 43.7	316	44.1	-20 53.1
1	226	30.5	206	12.6	02.8	339	28.8	31.2	61 00.4	43.7	331	46.7	53.1
2	241	33.0	221	12.2	04.0	354	31.4	31.3	76 03.0	43.7	346	49.3	53.0
3	256	35.5	236	11.8	05.2	9	34.1	31.4	91 05.5	43.8	1	51.9	53.0
4	271	37.9	251	11.4	06.4	24	36.8	31.4	106 08.1	43.8	16	54.5	53.0
5	286	40.4	266	11.0	+7 07.5	39	39.4	-21 31.5	121 10.7	+7 43.9	31	57.1	-20 53.0
6	301	42.9	281	10.6	+7 08.7	54	42.1	-21 31.6	136 13.3	+7 43.9	46	59.6	-20 53.0
7	316	45.3	296	10.2	09.9	69	44.8	31.6	151 15.9	43.9	62	02.2	53.0
8	331	47.8	311	09.8	11.1	84	47.4	31.7	166 18.5	44.0	77	04.8	52.9
9	346	50.3	326	09.4	12.3	99	50.1	31.8	181 21.0	44.0	92	07.4	52.9
10	1	52.7	341	09.0	13.5	114	52.8	31.8	196 23.6	44.1	107	10.0	52.9
11	16	55.2	356	08.6	+7 14.6	129	55.5	-21 31.9	211 26.2	+7 44.1	122	12.5	-20 52.9
12	31	57.7	11	08.1	+7 15.8	144	58.1	-21 31.9	226 28.8	+7 44.2	137	15.1	-20 52.9
13	47	00.1	26	07.7	17.0	160	00.8	32.0	241 31.4	44.2	152	17.7	52.9
14	62	02.6	41	07.3	18.2	175	03.5	32.1	256 33.9	44.2	167	20.3	52.9
15	77	05.0	56	06.9	19.4	190	06.2	32.1	271 36.5	44.3	182	22.9	52.8
16	92	07.5	71	06.5	20.5	205	08.9	32.2	286 39.1	44.3	197	25.5	52.8
17	107	10.0	86	06.1	+7 21.7	220	11.5	-21 32.3	301 41.7	+7 44.3	212	28.0	-20 52.8
18	122	12.4	101	05.7	+7 22.9	235	14.2	-21 32.3	316 44.3	+7 44.4	227	30.6	-20 52.8
19	137	14.9	116	05.3	24.1	250	16.9	32.4	331 46.8	44.4	242	33.2	52.8
20	152	17.4	131	04.9	25.2	265	19.6	32.5	346 49.4	44.5	257	35.8	52.8
21	167	19.8	146	04.5	26.4	280	22.3	32.5	1 52.0	44.5	272	38.4	52.8
22	182	22.3	161	04.1	27.6	295	25.0	32.6	16 54.6	44.5	287	41.0	52.7
23	197	24.8	176	03.7	28.8	310	27.7	32.7	31 57.1	44.6	302	43.6	52.7
24	212	27.2	191	03.3	+7 30.0	325	30.4	-21 32.7	46 59.7	+7 44.6	317	46.1	-20 52.7
Dif	—		-4	+12		+27	-1		+26	0		+26	0

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: 16 ^d 5 PHE SD: 14 ^h 8 PMG: 1 ^h 22 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	27.9	+12	56.0	340	02.3	-14	14.8	60 N	2	16	3	27	4	16	22 03 62		
1	195	28.0		56.8	354	34.7 ¹³⁴		20.8	60		36		39		24	21 52 61		
2	210	28.1		57.6	9	07.0 ¹³³		26.8	59	56	2	53		49	32	43 59		
3	225	28.2		58.4	23	39.2 ¹³²		32.7	58	54	3	07	3	58	38	35 58		
4	240	28.3	+12	59.2	38	11.4 ¹³²		38.5	58	52		18	4	06	44	28 57		
5	255	28.4	+13	00.1	52	43.6 ¹³²	-14	44.3	58	50	3	29	4	13	4	49		
6	270	28.5	+13	00.9	67	15.7 ¹³¹	-14	50.0	57	45	3	49	4	28	5	00		
7	285	28.6		01.7	81	47.9 ¹³²	-14	55.6	56	40	4	05		40	09	20 56 53		
8	300	28.8		02.5	96	19.9 ¹³⁰	-15	01.2	56	35		18		50	17	46 52		
9	315	28.9		03.3	110	52.0 ¹³¹		06.7	55	30		29	4	58	23	37 52		
10	330	29.0		04.2	125	24.0 ¹³⁰		12.2	55	20		46	5	12	35	22 51		
11	345	29.1	+13	05.0	139	55.9 ¹²⁹	-15	17.6	54	10 N	4	58	5	24	5	45		
12	0	29.2	+13	05.8	154	27.9 ¹³⁰	-15	22.9	53	0	5	09	5	33	5	55		
13	15	29.3		06.6	168	59.8 ¹²⁹		28.2	53	10 S		18		42	6	04		
14	30	29.4		07.4	183	31.6 ¹²⁸		33.3	51	20		25	5	51	14	46 46		
15	45	29.5		08.2	198	03.4 ¹²⁸		38.5	52	30		32	6	00	25	33 45		
16	60	29.6		09.1	212	35.2 ¹²⁸		43.5	50	35		35		05	31	33 45		
17	75	29.7	+13	09.9	227	07.0 ¹²⁸	-15	48.5	50	40	5	39	6	10	6	38		
18	90	29.8	+13	10.7	241	38.7 ¹²⁷	-15	53.4	49	45	5	42	6	16	6	47		
19	105	30.0		11.5	256	10.4 ¹²⁷	-15	58.2	48	50		45		23	6	57		
20	120	30.1		12.3	270	42.0 ¹²⁶	-16	03.0	48	52		46		26	7	01		
21	135	30.2		13.1	285	13.7 ¹²⁷		07.7	47	54		48		29	06	29 38		
22	150	30.3		13.9	299	45.2 ¹²⁵		12.3	46	56		49		33	12	22 37		
23	165	30.4		14.8	314	16.8 ¹²⁶		16.9	46	58		51		37	18	15 35		
24	180	30.5	+13	15.6	328	48.3 ¹²⁵	-16	21.3	44	60 S	5	52	6	41	7	25		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 48 ^m 6		Mag: -3.9 PMG: 11 ^h 16 ^m				Mag: -1.3 PMG: 2 ^h 18 ^m				Mag: -2.3 PMG: 20 ^h 48 ^m				Mag: +0.2 PMG: 2 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	212	27.2	191	03.3	+7	30.0	325	30.4	-21	32.7	46	59.7	+7	44.6	317	46.1	-20	52.7
1	227	29.7	206	02.9		31.1	340	33.1		32.8	62	02.3		44.7	332	48.7		52.7
2	242	32.1	221	02.5		32.3	355	35.8		32.9	77	04.9		44.7	347	51.3		52.7
3	257	34.6	236	02.1		33.5	10	38.5		32.9	92	07.4		44.7	2	53.9		52.7
4	272	37.1	251	01.6		34.7	25	41.2		33.0	107	10.0		44.8	17	56.5		52.7
5	287	39.5	266	01.2	+7	35.8	40	43.9	-21	33.0	122	12.6	+7	44.8	32	59.1	-20	52.6
6	302	42.0	281	00.8	+7	37.0	55	46.6	-21	33.1	137	15.2	+7	44.9	48	01.7	-20	52.6
7	317	44.5	296	00.4		38.2	70	49.3		33.2	152	17.7		44.9	63	04.2		52.6
8	332	46.9	311	00.0		39.4	85	52.0		33.2	167	20.3		44.9	78	06.8		52.6
9	347	49.4	325	59.6		40.5	100	54.7		33.3	182	22.9		45.0	93	09.4		52.6
10	2	51.9	340	59.2		41.7	115	57.4		33.4	197	25.5		45.0	108	12.0		52.6
11	17	54.3	355	58.8	+7	42.9	131	00.1	-21	33.4	212	28.0	+7	45.0	123	14.6	-20	52.6
12	32	56.8	10	58.4	+7	44.1	146	02.8	-21	33.5	227	30.6	+7	45.1	138	17.2	-20	52.5
13	47	59.3	25	58.0		45.2	161	05.5		33.5	242	33.2		45.1	153	19.8		52.5
14	63	01.7	40	57.6		46.4	176	08.2		33.6	257	35.8		45.1	168	22.3		52.5
15	78	04.2	55	57.1		47.6	191	11.0		33.7	272	38.3		45.2	183	24.9		52.5
16	93	06.6	70	56.7		48.8	206	13.7		33.7	287	40.9		45.2	198	27.5		52.5
17	108	09.1	85	56.3	+7	49.9	221	16.4	-21	33.8	302	43.5	+7	45.3	213	30.1	-20	52.5
18	123	11.6	100	55.9	+7	51.1	236	19.1	-21	33.9	317	46.1	+7	45.3	228	32.7	-20	52.4
19	138	14.0	115	55.5		52.3	251	21.8		33.9	332	48.6		45.3	243	35.3		52.4
20	153	16.5	130	55.1		53.4	266	24.6		34.0	347	51.2		45.4	258	37.9		52.4
21	168	19.0	145	54.7		54.6	281	27.3		34.0	2	53.8		45.4	273	40.5		52.4
22	183	21.4	160	54.3		55.8	296	30.0		34.1	17	56.3		45.4	288	43.0		52.4
23	198	23.9	175	53.9		57.0	311	32.7		34.2	32	58.9		45.5	303	45.6		52.4
24	213	26.4	190	53.4	+7	58.1	326	35.5	-21	34.2	48	01.5	+7	45.5	318	48.2	-20	52.4
Dif	—		-4		+12		+27		-1		+26		0		+26		0	

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: 17 ^d 5 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 SD: 14'8 PMG: 2 ^h 09 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		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	30.5	+13	15.6	328	48.3	-16	21.3	60 N	19 44	20 35	21 49	23 05 55	6 10 36				
1	195	30.6		16.4	343	19.7 ¹²⁴		25.7 ⁴⁴	58	35	22	26	22 53 54	20 38				
2	210	30.7		17.2	357	51.2 ¹²⁵		30.1 ⁴⁴	56	28	11	21 09	42 55	30 39				
3	225	30.8		18.0	12	22.6 ¹²⁴		34.3 ⁴²	54	21	20 02	20 54	33 54	38 40				
4	240	30.9		18.8	26	53.9 ¹²³		38.5 ⁴²	52	15	19 53	42	25 54	46 40				
5	255	31.0	+13	19.6	41	25.3 ¹²⁴	-16	42.6 ⁴¹	50	19 10	19 46	20 31	22 18 53	6 53 41				
6	270	31.1	+13	20.4	55	56.6 ¹²³	-16	46.6 ⁴⁰	45	18 58	19 30	20 09	22 02 53	7 07 43				
7	285	31.2		21.2	70	27.8 ¹²²		50.6 ⁴⁰	40	49	18	19 53	21 49 52	19 44				
8	300	31.3		22.1	84	59.1 ¹²³		54.5 ³⁹	35	41	19 08	40	38 52	30 44				
9	315	31.5		22.9	99	30.2 ¹²¹	-16	58.3 ³⁸	30	34	18 59	29	29 51	39 45				
10	330	31.6		23.7	114	01.4 ¹²²	-17	02.0 ³⁷	20	22	44	19 11	21 13 50	7 54 46				
11	345	31.7	+13	24.5	128	32.5 ¹²¹	-17	05.6 ³⁶	10 N	18 11	18 33	18 58	20 58 50	8 08 47				
12	0	31.8	+13	25.3	143	03.6 ¹²¹	-17	09.2 ³⁶	0	18 01	18 23	18 47	20 45 49	8 20 49				
13	15	31.9		26.1	157	34.7 ¹²¹		12.7 ³⁵	10 S	17 52	13	38	32 48	33 49				
14	30	32.0		26.9	172	05.7 ¹²⁰		16.1 ³⁴	20	41	18 04	30	18 47	8 47 50				
15	45	32.1		27.7	186	36.7 ¹²⁰		19.4 ³³	30	30	17 55	23	20 02 47	9 02 52				
16	60	32.2		28.5	201	07.6 ¹¹⁹		22.7 ³³	35	23	49	19	19 52 47	11 52				
17	75	32.3	+13	29.3	215	38.5 ¹¹⁹	-17	25.8 ³¹	40	17 16	17 44	18 16	19 42 46	9 22 52				
18	90	32.4	+13	30.1	230	09.4 ¹¹⁹	-17	28.9 ³¹	45	17 07	17 38	18 12	19 29 45	9 34 53				
19	105	32.5		30.9	244	40.3 ¹¹⁹		31.9 ³⁰	50	16 57	31	08	14 44	48 55				
20	120	32.6		31.7	259	11.1 ¹¹⁸		34.8 ²⁹	52	52	27	07	19 07 44	9 55 56				
21	135	32.7		32.5	273	41.9 ¹¹⁸		37.7 ²⁹	54	47	24	05	18 59 43	10 03 56				
22	150	32.8		33.3	288	12.6 ¹¹⁷		40.4 ²⁷	56	41	20	04	50 43	12 56				
23	165	32.9		34.1	302	43.4 ¹¹⁸		43.1 ²⁷	58	35	16	02	40 42	21 58				
24	180	33.0	+13	35.0	317	14.0 ¹¹⁶	-17	45.7 ²⁶	60 S	16 27	17 12	18 01	18 29 41	10 32 59				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 44 ^m 6		Mag: -3.9 PMG: 11 ^h 17 ^m				Mag: -1.3 PMG: 2 ^h 13 ^m				Mag: -2.3 PMG: 20 ^h 44 ^m				Mag: +0.2 PMG: 2 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	26.4	190	53.4	+7	58.1	326	35.5	-21	34.2	48	01.5	+7	45.5	318	48.2	-20	52.4
1	228	28.8	205	53.0	+7	59.3	341	38.2		34.3	63	04.0		45.5	333	50.8		52.3
2	243	31.3	220	52.6	+8	00.5	356	40.9		34.3	78	06.6		45.6	348	53.4		52.3
3	258	33.8	235	52.2		01.6	11	43.7		34.4	93	09.2		45.6	3	56.0		52.3
4	273	36.2	250	51.8		02.8	26	46.4		34.5	108	11.8		45.7	18	58.6		52.3
5	288	38.7	265	51.4	+8	04.0	41	49.1	-21	34.5	123	14.3	+7	45.7	34	01.2	-20	52.3
6	303	41.1	280	51.0	+8	05.1	56	51.9	-21	34.6	138	16.9	+7	45.7	49	03.7	-20	52.3
7	318	43.6	295	50.5		06.3	71	54.6		34.6	153	19.5		45.8	64	06.3		52.3
8	333	46.1	310	50.1		07.5	86	57.3		34.7	168	22.0		45.8	79	08.9		52.2
9	348	48.5	325	49.7		08.7	102	00.1		34.8	183	24.6		45.8	94	11.5		52.2
10	3	51.0	340	49.3		09.8	117	02.8		34.8	198	27.2		45.9	109	14.1		52.2
11	18	53.5	355	48.9	+8	11.0	132	05.6	-21	34.9	213	29.7	+7	45.9	124	16.7	-20	52.2
12	33	55.9	10	48.5	+8	12.2	147	08.3	-21	34.9	228	32.3	+7	45.9	139	19.3	-20	52.2
13	48	58.4	25	48.1		13.3	162	11.1		35.0	243	34.9		46.0	154	21.9		52.2
14	64	00.9	40	47.6		14.5	177	13.8		35.1	258	37.4		46.0	169	24.5		52.1
15	79	03.3	55	47.2		15.7	192	16.6		35.1	273	40.0		46.0	184	27.1		52.1
16	94	05.8	70	46.8		16.8	207	19.3		35.2	288	42.6		46.1	199	29.6		52.1
17	109	08.2	85	46.4	+8	18.0	222	22.1	-21	35.2	303	45.1	+7	46.1	214	32.2	-20	52.1
18	124	10.7	100	46.0	+8	19.1	237	24.8	-21	35.3	318	47.7	+7	46.1	229	34.8	-20	52.1
19	139	13.2	115	45.5		20.3	252	27.6		35.3	333	50.2		46.2	244	37.4		52.1
20	154	15.6	130	45.1		21.5	267	30.3		35.4	348	52.8		46.2	259	40.0		52.1
21	169	18.1	145	44.7		22.6	282	33.1		35.5	3	55.4		46.2	274	42.6		52.0
22	184	20.6	160	44.3		23.8	297	35.8		35.5	18	57.9		46.3	289	45.2		52.0
23	199	23.0	175	43.9		25.0	312	38.6		35.6	34	00.5		46.3	304	47.8		52.0
24	214	25.5	190	43.5	+8	26.1	327	41.4	-21	35.6	49	03.1	+7	46.3	319	50.4	-20	52.0
Dif	—		-4		+12		+27		-1		+26		0		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 7				Edad: 18 ^d 5 PHE SD: 14 ^h 9 PMG: 2 ^h 57 ^m					R°: 49 ^m			R°		R°						
	hG ☉	Dec			hG ☾	Dif				Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	33.0	+13	35.0	317	14.0	-17	45.7	25	58	60 N	2 06	3 20	4 11	**	**	**	6 46	46		
1	195	33.1		35.8	331	44.7 ¹¹⁷		48.2	24	58		29	33	19	23	47	48	6 58	47		
2	210	33.2		36.6	346	15.3 ¹¹⁶		50.6	24	56		2 46	44	27		37	48	7 09	47		
3	225	33.3		37.4	0	45.9 ¹¹⁶		53.0	24	54		3 01	3 53	33		27	48	18	47		
4	240	33.4		38.2	15	16.5 ¹¹⁶		55.2	22	52		13	4 02	39		19	48	26	48		
5	255	33.5	+13	39.0	29	47.0 ¹¹⁵	-17	57.4	22	50		3 24	4 09	4 45	23	11	48	7 34	47		
6	270	33.6	+13	39.8	44	17.5 ¹¹⁵	-17	59.5	21	45		3 46	4 25	4 57	22	55	48	7 50	48		
7	285	33.7		40.6	58	48.0 ¹¹⁵	-18	01.5	20	40		4 02	37	5 06	41	49		8 03	48		
8	300	33.8		41.4	73	18.4 ¹¹⁴		03.4	19	35		16	48	14	30	49		14	48		
9	315	33.9		42.2	87	48.8 ¹¹⁴		05.2	18	30		27	4 56	22	20	49		24	48		
10	330	34.0		43.0	102	19.2 ¹¹⁴		06.9	17	20		44	5 11	34	22	03	50	40	49		
11	345	34.1	+13	43.8	116	49.6 ¹¹⁴	-18	08.6	17	10 N		4 57	5 23	5 44	21	48	50	8 55	49		
12	0	34.2	+13	44.6	131	19.9 ¹¹³	-18	10.1	15	0		5 08	5 33	5 54	21	34	50	9 09	49		
13	15	34.3		45.4	145	50.2 ¹¹³		11.6	15	10 S		18	43	6 04	20	51		22	50		
14	30	34.4		46.2	160	20.5 ¹¹³		13.0	14	20		26	5 52	14	21	05	51	37	50		
15	45	34.5		47.0	174	50.7 ¹¹²		14.3	13	30		33	6 01	26	20	49	50	9 54	50		
16	60	34.6		47.8	189	20.9 ¹¹²		15.5	12	35		37	07	33	39	50		10 03	51		
17	75	34.7	+13	48.5	203	51.1 ¹¹²	-18	16.6	11	40		5 40	6 12	6 40	20	28	50	10 14	51		
18	90	34.8	+13	49.3	218	21.2 ¹¹¹	-18	17.6	10	45		5 44	6 19	6 49	20	14	51	10 27	51		
19	105	34.9		50.1	232	51.4 ¹¹²		18.6	10	50		48	26	7 00	19	58	51	43	51		
20	120	35.0		50.9	247	21.5 ¹¹¹		19.4	8	52		49	29	05	51	51		51	51		
21	135	35.1		51.7	261	51.5 ¹¹⁰		20.2	8	54		51	33	10	42	51		10 59	51		
22	150	35.2		52.5	276	21.6 ¹¹¹		20.9	7	56		53	36	16	33	51		11 08	52		
23	165	35.3		53.3	290	51.6 ¹¹⁰		21.4	5	58		54	41	22	22	51		19	51		
24	180	35.4	+13	54.1	305	21.6 ¹¹⁰	-18	21.9	5	60 S		5 56	6 45	7 30	19	10	51	11 31	51		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 40 ^m 7		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: -1.3 PMG: 2 ^h 09 ^m		Mag: -2.3 PMG: 20 ^h 40 ^m		Mag: +0.2 PMG: 2 ^h 40 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	214	25.5	190	43.5	+8	26.1	327	41.4	-21	35.6	49	03.1	+7	46.3	319	50.4	-20	52.0
1	229	28.0	205	43.0		27.3	342	44.1		35.7	64	05.6		46.4	334	53.0		52.0
2	244	30.4	220	42.6		28.5	357	46.9		35.8	79	08.2		46.4	349	55.6		52.0
3	259	32.9	235	42.2		29.6	12	49.7		35.8	94	10.8		46.4	4	58.1		51.9
4	274	35.4	250	41.8		30.8	27	52.4		35.9	109	13.3		46.5	20	00.7		51.9
5	289	37.8	265	41.4	+8	31.9	42	55.2	-21	35.9	124	15.9	+7	46.5	35	03.3	-20	51.9
6	304	40.3	280	40.9	+8	33.1	57	58.0	-21	36.0	139	18.4	+7	46.5	50	05.9	-20	51.9
7	319	42.7	295	40.5		34.3	73	00.7		36.0	154	21.0		46.6	65	08.5		51.9
8	334	45.2	310	40.1		35.4	88	03.5		36.1	169	23.6		46.6	80	11.1		51.9
9	349	47.7	325	39.7		36.6	103	06.3		36.1	184	26.1		46.6	95	13.7		51.9
10	4	50.1	340	39.3		37.7	118	09.1		36.2	199	28.7		46.6	110	16.3		51.8
11	19	52.6	355	38.8	+8	38.9	133	11.8	-21	36.3	214	31.2	+7	46.7	125	18.9	-20	51.8
12	34	55.1	10	38.4	+8	40.1	148	14.6	-21	36.3	229	33.8	+7	46.7	140	21.5	-20	51.8
13	49	57.5	25	38.0		41.2	163	17.4		36.4	244	36.4		46.7	155	24.1		51.8
14	65	00.0	40	37.6		42.4	178	20.2		36.4	259	38.9		46.8	170	26.7		51.8
15	80	02.5	55	37.1		43.5	193	23.0		36.5	274	41.5		46.8	185	29.3		51.8
16	95	04.9	70	36.7		44.7	208	25.8		36.5	289	44.0		46.8	200	31.9		51.7
17	110	07.4	85	36.3	+8	45.9	223	28.5	-21	36.6	304	46.6	+7	46.9	215	34.5	-20	51.7
18	125	09.9	100	35.9	+8	47.0	238	31.3	-21	36.7	319	49.2	+7	46.9	230	37.0	-20	51.7
19	140	12.3	115	35.4		48.2	253	34.1		36.7	334	51.7		46.9	245	39.6		51.7
20	155	14.8	130	35.0		49.3	268	36.9		36.8	349	54.3		47.0	260	42.2		51.7
21	170	17.2	145	34.6		50.5	283	39.7		36.8	4	56.8		47.0	275	44.8		51.7
22	185	19.7	160	34.2		51.6	298	42.5		36.9	19	59.4		47.0	290	47.4		51.7
23	200	22.2	175	33.7		52.8	313	45.3		36.9	35	01.9		47.0	305	50.0		51.6
24	215	24.6	190	33.3	+8	53.9	328	48.1	-21	37.0	50	04.5	+7	47.1	320	52.6	-20	51.6
Dif	—		-4		+12		+28		-1		+26		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 19 ^d 5	PHE {	4 ^h : 55°3 12 ^h : 55°5 20 ^h : 55°7			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 6								SD: 15°0			PMG: 3 ^h 46 ^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	m	h m m	m
0	180	35.4	+13 54.1	305	21.6	-18 21.9	4	60 N	19 49	20 41	21 58	0 00 47	7 32 56		
1	195	35.5	54.9	319	51.6 ¹¹⁰	22.3	4	58	40	27	34	** ** *	45 55		
2	210	35.6	55.7	334	21.5 ¹⁰⁹	22.6	3	56	32	16	21 15	** ** *	7 56 55		
3	225	35.7	56.5	348	51.4 ¹⁰⁹	22.8	2	54	25	20 06	20 59	** ** *	8 05 55		
4	240	35.8	57.3	3	21.3 ¹⁰⁹	23.0	2	52	19	19 57	46	** ** *	14 54		
5	255	35.9	+13 58.1	17	51.2 ¹⁰⁹	-18 23.0	0	50	19 13	19 49	20 35	23 59 44	8 21 54		
6	270	36.0	+13 58.9	32	21.0 ¹⁰⁸	-18 22.9	1	45	19 01	19 33	20 13	23 43 46	8 38 53		
7	285	36.1	+13 59.7	46	50.9 ¹⁰⁹	22.8	1	40	18 51	20	19 55	30 46	8 51 53		
8	300	36.2	+14 00.5	61	20.7 ¹⁰⁸	22.5	3	35	42	09	42	19 47	9 02 53		
9	315	36.3	01.2	75	50.5 ¹⁰⁸	22.2	3	30	35	19 00	30	23 09 48	12 53		
10	330	36.4	02.0	90	20.2 ¹⁰⁷	21.7	5	20	22	18 45	19 12	22 53 49	29 52		
11	345	36.4	+14 02.8	104	49.9 ¹⁰⁷	-18 21.2	5	10 N	18 11	18 33	18 58	22 38 50	9 44 51		
12	0	36.5	+14 03.6	119	19.7 ¹⁰⁸	-18 20.6	6	0	18 01	18 22	18 47	22 24 51	9 58 51		
13	15	36.6	04.4	133	49.4 ¹⁰⁷	19.9	7	10 S	17 51	12	37	22 11 51	10 12 50		
14	30	36.7	05.2	148	19.0 ¹⁰⁶	19.0	9	20	40	18 03	29	21 56 53	27 49		
15	45	36.8	06.0	162	48.7 ¹⁰⁷	18.1	9	30	28	17 53	21	39 54	44 48		
16	60	36.9	06.8	177	18.3 ¹⁰⁶	17.1	10	35	21	47	17	29 55	10 54 48		
17	75	37.0	+14 07.5	191	47.9 ¹⁰⁶	-18 16.1	10	40	17 13	17 41	18 13	21 18 56	11 05 47		
18	90	37.1	+14 08.3	206	17.5 ¹⁰⁶	-18 14.9	12	45	17 04	17 35	18 09	21 05 56	11 18 47		
19	105	37.2	09.1	220	47.1 ¹⁰⁶	13.6	13	50	16 53	27	05	20 49 58	34 46		
20	120	37.3	09.9	235	16.6 ¹⁰⁵	12.2	14	52	48	24	03	42 58	42 45		
21	135	37.4	10.7	249	46.2 ¹⁰⁶	10.7	15	54	43	20	02	33 59	11 50 45		
22	150	37.5	11.5	264	15.7 ¹⁰⁵	09.2	15	56	37	16	18 00	24 59	12 00 44		
23	165	37.6	12.3	278	45.2 ¹⁰⁵	07.5	17	58	30	12	17 58	13 61	10 44		
24	180	37.7	+14 13.0	293	14.7 ¹⁰⁵	-18 05.8	17	60 S	16 22	17 07	17 56	20 01 61	12 22 44		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 36 ^m 8		Mag: -3.9 PMG: 11 ^h 18 ^m		Mag: -1.4 PMG: 2 ^h 04 ^m		Mag: -2.3 PMG: 20 ^h 36 ^m		Mag: +0.2 PMG: 2 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	215	24.6	190 33.3	+8 53.9	328 48.1	-21 37.0	50 04.5	+7 47.1	320 52.6	-20 51.6
1	230	27.1	205 32.9	55.1	343 50.9	37.0	65 07.1	47.1	335 55.2	51.6
2	245	29.6	220 32.5	56.3	358 53.7	37.1	80 09.6	47.1	350 57.8	51.6
3	260	32.0	235 32.0	57.4	13 56.5	37.1	95 12.2	47.2	6 00.4	51.6
4	275	34.5	250 31.6	58.6	28 59.3	37.2	110 14.7	47.2	21 03.0	51.6
5	290	37.0	265 31.2	+8 59.7	44 02.1	-21 37.3	125 17.3	+7 47.2	36 05.6	-20 51.5
6	305	39.4	280 30.8	+9 00.9	59 04.9	-21 37.3	140 19.8	+7 47.3	51 08.2	-20 51.5
7	320	41.9	295 30.3	02.0	74 07.7	37.4	155 22.4	47.3	66 10.8	51.5
8	335	44.4	310 29.9	03.2	89 10.5	37.4	170 24.9	47.3	81 13.4	51.5
9	350	46.8	325 29.5	04.3	104 13.3	37.5	185 27.5	47.3	96 16.0	51.5
10	5 49.3	340 29.0	05.5	119 16.1	37.5	200 30.0	200 30.0	47.4	111 18.6	51.5
11	20 51.7	355 28.6	+9 06.6	134 18.9	-21 37.6	215 32.6	+7 47.4	126 21.2	-20 51.5	
12	35 54.2	10 28.2	+9 07.8	149 21.8	-21 37.6	230 35.1	+7 47.4	141 23.8	-20 51.4	
13	50 56.7	25 27.8	08.9	164 24.6	37.7	245 37.7	47.5	156 26.4	51.4	
14	65 59.1	40 27.3	10.1	179 27.4	37.7	260 40.3	47.5	171 29.0	51.4	
15	81 01.6	55 26.9	11.2	194 30.2	37.8	275 42.8	47.5	186 31.6	51.4	
16	96 04.1	70 26.5	12.4	209 33.0	37.8	290 45.4	47.5	201 34.2	51.4	
17	111 06.5	85 26.0	+9 13.5	224 35.9	-21 37.9	305 47.9	+7 47.6	216 36.7	-20 51.4	
18	126 09.0	100 25.6	+9 14.7	239 38.7	-21 37.9	320 50.5	+7 47.6	231 39.3	-20 51.3	
19	141 11.5	115 25.2	15.8	254 41.5	38.0	335 53.0	47.6	246 41.9	51.3	
20	156 13.9	130 24.7	17.0	269 44.3	38.0	350 55.6	47.6	261 44.5	51.3	
21	171 16.4	145 24.3	18.1	284 47.2	38.1	5 58.1	47.7	276 47.1	51.3	
22	186 18.8	160 23.9	19.3	299 50.0	38.1	21 00.7	47.7	291 49.7	51.3	
23	201 21.3	175 23.4	20.4	314 52.8	38.2	36 03.2	47.7	306 52.3	51.3	
24	216 23.8	190 23.0	+9 21.6	329 55.6	-21 38.2	51 05.8	+7 47.8	321 54.9	-20 51.2	
Dif	—	-4	+12	+28	-1	+26	0	+26	0	

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: 20 ^d 5 PHE SD: 15/2 PMG: 4 ^h 36 ^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	180	37.7	+14	13.0	293	14.7	-18	05.8	19	60 N	1 56	3 14	4 05	0 47	40	8 28	66	
1	195	37.7		13.8	307	44.1 ¹⁰⁴		03.9	19	58	2 21	27	14	35	41	40	64	
2	210	37.8		14.6	322	13.6 ¹⁰⁵	-18	02.0	19	56	40	39	22	25	41	8 51	63	
3	225	37.9		15.4	336	43.0 ¹⁰⁴	-17	59.9	21	54	2 55	49	29	15	43	9 00	62	
4	240	38.0		16.2	351	12.4 ¹⁰⁴		57.8	21	52	3 08	3 57	35	0 07	43	08	61	
5	255	38.1	+14	17.0	5	41.8 ¹⁰⁴	-17	55.6	22	50	3 19	4 05	4 41	** ** *	**	9 15	61	
6	270	38.2	+14	17.7	20	11.2 ¹⁰⁴	-17	53.2	24	45	3 42	4 21	4 53	** ** *	**	9 31	59	
7	285	38.3		18.5	34	40.5 ¹⁰³		50.8	24	40	3 59	34	5 04	** ** *	**	44	57	
8	300	38.4		19.3	49	09.9 ¹⁰⁴		48.3	25	35	4 13	45	12	** ** *	**	9 55	56	
9	315	38.5		20.1	63	39.2 ¹⁰³		45.7	26	30	24	4 54	20	23	57	46	10 05	55
10	330	38.6		20.9	78	08.5 ¹⁰³		43.0	27	20	43	5 10	33	42	47	21	54	
11	345	38.6	+14	21.6	92	37.8 ¹⁰³	-17	40.2	28	10 N	4 57	5 22	5 44	23	28	50	10 35	53
12	0	38.7	+14	22.4	107	07.1 ¹⁰³	-17	37.3	29	0	5 08	5 33	5 54	23	15	51	10 49	51
13	15	38.8		23.2	121	36.4 ¹⁰³		34.3	30	10 S	18	43	6 04	23	02	53	11 02	50
14	30	38.9		24.0	136	05.7 ¹⁰³		31.2	31	20	26	5 52	15	22	49	55	16	48
15	45	39.0		24.8	150	34.9 ¹⁰²		28.0	32	30	34	6 03	27	33	57	32	47	
16	60	39.1		25.5	165	04.2 ¹⁰³		24.8	32	35	38	08	34	24	58	42	45	
17	75	39.2	+14	26.3	179	33.4 ¹⁰²	-17	21.4	34	40	5 42	6 14	6 42	22	14	59	11 52	45
18	90	39.3	+14	27.1	194	02.6 ¹⁰²	-17	17.9	35	45	5 46	6 21	6 52	22	01	62	12 05	43
19	105	39.4		27.9	208	31.8 ¹⁰²		14.4	35	50	51	29	7 03	21	47	63	20	42
20	120	39.4		28.6	223	01.0 ¹⁰²		10.7	37	52	52	32	08	40	64	27	41	
21	135	39.5		29.4	237	30.2 ¹⁰²		07.0	37	54	54	36	13	32	65	35	40	
22	150	39.6		30.2	251	59.3 ¹⁰¹	-17	03.1	39	56	56	40	20	23	67	44	38	
23	165	39.7		31.0	266	28.5 ¹⁰²	-16	59.2	39	58	5 58	45	27	14	68	12 54	37	
24	180	39.8	+14	31.8	280	57.6 ¹⁰¹	-16	55.1	41	60 S	6 00	6 50	7 35	21	02	70	13 06	35
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 9 ^h 32 ^m 8			Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: -1.4 PMG: 2 ^h 00 ^m			Mag: -2.3 PMG: 20 ^h 32 ^m			Mag: +0.2 PMG: 2 ^h 32 ^m					
	hG ♀		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	216	23.8	190	23.0	+9	21.6	329	55.6	-21	38.2	51	05.8	+7	47.8	321	54.9	-20	51.2
1	231	26.2	205	22.6		22.7	344	58.5		38.3	66	08.3		47.8	336	57.5		51.2
2	246	28.7	220	22.1		23.9	0	01.3		38.3	81	10.9		47.8	352	00.1		51.2
3	261	31.2	235	21.7		25.0	15	04.1		38.4	96	13.4		47.8	7	02.7		51.2
4	276	33.6	250	21.3		26.1	30	07.0		38.4	111	16.0		47.9	22	05.3		51.2
5	291	36.1	265	20.8	+9	27.3	45	09.8	-21	38.5	126	18.5	+7	47.9	37	07.9	-20	51.2
6	306	38.6	280	20.4	+9	28.4	60	12.7	-21	38.5	141	21.0	+7	47.9	52	10.5	-20	51.2
7	321	41.0	295	20.0		29.6	75	15.5		38.6	156	23.6		47.9	67	13.1		51.1
8	336	43.5	310	19.5		30.7	90	18.3		38.6	171	26.1		48.0	82	15.7		51.1
9	351	46.0	325	19.1		31.9	105	21.2		38.7	186	28.7		48.0	97	18.3		51.1
10	6	48.4	340	18.7		33.0	120	24.0		38.7	201	31.2		48.0	112	20.9		51.1
11	21	50.9	355	18.2	+9	34.2	135	26.9	-21	38.8	216	33.8	+7	48.0	127	23.5	-20	51.1
12	36	53.3	10	17.8	+9	35.3	150	29.7	-21	38.8	231	36.3	+7	48.1	142	26.1	-20	51.1
13	51	55.8	25	17.4		36.4	165	32.6		38.9	246	38.9		48.1	157	28.7		51.0
14	66	58.3	40	16.9		37.6	180	35.4		38.9	261	41.4		48.1	172	31.3		51.0
15	82	00.7	55	16.5		38.7	195	38.3		39.0	276	44.0		48.1	187	33.9		51.0
16	97	03.2	70	16.1		39.9	210	41.1		39.0	291	46.5		48.2	202	36.5		51.0
17	112	05.7	85	15.6	+9	41.0	225	44.0	-21	39.1	306	49.1	+7	48.2	217	39.1	-20	51.0
18	127	08.1	100	15.2	+9	42.1	240	46.8	-21	39.1	321	51.6	+7	48.2	232	41.7	-20	51.0
19	142	10.6	115	14.7		43.3	255	49.7		39.2	336	54.1		48.2	247	44.3		50.9
20	157	13.1	130	14.3		44.4	270	52.6		39.2	351	56.7		48.3	262	46.9		50.9
21	172	15.5	145	13.9		45.6	285	55.4		39.3	6	59.2		48.3	277	49.5		50.9
22	187	18.0	160	13.4		46.7	300	58.3		39.3	22	01.8		48.3	292	52.1		50.9
23	202	20.5	175	13.0		47.8	316	01.1		39.4	37	04.3		48.3	307	54.7		50.9
24	217	22.9	190	12.5	+9	49.0	331	04.0	-21	39.4	52	06.9	+7	48.4	322	57.3	-20	50.9
Dif	—			-4	+11		+28	0			+25	0			+26	0		

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: 21 ^d 5 PHE { 4 ^h : 56/6 12 ^h : 56/9 20 ^h : 57/2 PMG: 5 ^h 27 ^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	h m m	h m m			
0	180	39.8	+14	31.8	280	57.6	-16	55.1	60 N	19 54	20 47	22 08	1 27 32	9 34 74				
1	195	39.9		32.5	295	26.8 ¹⁰²		51.0	58	44	32	21 41	16 34	44 72				
2	210	40.0		33.3	309	55.9 ¹⁰¹		46.8	56	36	20	21	1 06 36	9 54 70				
3	225	40.0		34.1	324	25.0 ¹⁰¹		42.5	54	29	10	21 05	0 58 36	10 02 68				
4	240	40.1		34.8	338	54.1 ¹⁰¹		38.1	52	22	20 01	20 51	50 38	09 67				
5	255	40.2	+14	35.6	353	23.2 ¹⁰¹	-16	33.6	50	19 16	19 53	20 39	0 43 39	10 16 66				
6	270	40.3	+14	36.4	7	52.3 ¹⁰¹	-16	29.0	45	19 03	19 36	20 16	0 29 41	10 30 63				
7	285	40.4		37.2	22	21.3 ¹⁰⁰		24.3	40	18 53	22	19 58	16 43	41 62				
8	300	40.5		37.9	36	50.4 ¹⁰¹		19.5	35	44	11	44	0 06 45	10 51 60				
9	315	40.5		38.7	51	19.5 ¹⁰¹		14.6	30	36	19 02	32	** ** *	11 00 58				
10	330	40.6		39.5	65	48.5 ¹⁰⁰		09.7	20	23	18 46	19 13	** ** *	15 55				
11	345	40.7	+14	40.2	80	17.5 ¹⁰⁰	-16	04.6	10 N	18 11	18 33	18 59	** ** *	11 28 53				
12	0	40.8	+14	41.0	94	46.6 ¹⁰¹	-15	59.5	0	18 01	18 22	18 47	** ** *	11 40 51				
13	15	40.9		41.8	109	15.6 ¹⁰⁰		54.2	10 S	17 50	12	37	23 55 54	11 52 49				
14	30	41.0		42.5	123	44.6 ¹⁰⁰		48.9	20	39	18 02	28	44 56	12 04 48				
15	45	41.0		43.3	138	13.6 ¹⁰⁰		43.5	30	26	17 51	19	30 59	19 45				
16	60	41.1		44.1	152	42.6 ¹⁰⁰		37.9	35	19	45	15	22 61	27 44				
17	75	41.2	+14	44.9	167	11.6 ¹⁰⁰	-15	32.3	40	17 11	17 39	18 11	23 13 63	12 37 41				
18	90	41.3	+14	45.6	181	40.6 ¹⁰⁰	-15	26.6	45	17 01	17 32	18 07	23 03 65	12 48 40				
19	105	41.4		46.4	196	09.5 ⁹⁹		20.8	50	16 50	24	02	22 50 68	13 02 36				
20	120	41.4		47.2	210	38.5 ¹⁰⁰		15.0	52	44	20	18 00	44 70	08 36				
21	135	41.5		47.9	225	07.4 ⁹⁹		09.0	54	39	16	17 58	37 71	15 34				
22	150	41.6		48.7	239	36.4 ¹⁰⁰	-15	02.9	56	32	12	56	30 73	22 33				
23	165	41.7		49.4	254	05.3 ⁹⁹	-14	56.8	58	25	07	54	22 75	31 31				
24	180	41.8	+14	50.2	268	34.3 ¹⁰⁰	-14	50.5	60 S	16 17	17 02	17 51	22 12 77	13 41 29				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 28 ^m 9		Mag: -3.9 PMG: 11 ^h 19 ^m				Mag: -1.4 PMG: 1 ^h 55 ^m				Mag: -2.3 PMG: 20 ^h 28 ^m				Mag: +0.2 PMG: 2 ^h 28 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	217	22.9	190	12.5	+9	49.0	331	04.0	-21	39.4	52	06.9	+7	48.4	322	57.3		
1	232	25.4	205	12.1		50.1	346	06.9		39.5	67	09.4		48.4	337	59.9		
2	247	27.8	220	11.7		51.2	1	09.7		39.5	82	11.9		48.4	353	02.5		
3	262	30.3	235	11.2		52.4	16	12.6		39.6	97	14.5		48.4	8	05.1		
4	277	32.8	250	10.8		53.5	31	15.5		39.6	112	17.0		48.5	23	07.7		
5	292	35.2	265	10.3	+9	54.7	46	18.4	-21	39.7	127	19.6	+7	48.5	38	10.3		
6	307	37.7	280	09.9	+9	55.8	61	21.2	-21	39.7	142	22.1	+7	48.5	53	12.9		
7	322	40.2	295	09.5		56.9	76	24.1		39.8	157	24.6		48.5	68	15.5		
8	337	42.6	310	09.0		58.1	91	27.0		39.8	172	27.2		48.5	83	18.1		
9	352	45.1	325	08.6	+9	59.2	106	29.9		39.8	187	29.7		48.6	98	20.7		
10	7	47.6	340	08.1	+10	00.3	121	32.7		39.9	202	32.3		48.6	113	23.3		
11	22	50.0	355	07.7	+10	01.5	136	35.6	-21	39.9	217	34.8	+7	48.6	128	26.0		
12	37	52.5	10	07.2	+10	02.6	151	38.5	-21	40.0	232	37.3	+7	48.6	143	28.6		
13	52	54.9	25	06.8		03.7	166	41.4		40.0	247	39.9		48.7	158	31.2		
14	67	57.4	40	06.3		04.9	181	44.3		40.1	262	42.4		48.7	173	33.8		
15	82	59.9	55	05.9		06.0	196	47.2		40.1	277	45.0		48.7	188	36.4		
16	98	02.3	70	05.5		07.1	211	50.1		40.2	292	47.5		48.7	203	39.0		
17	113	04.8	85	05.0	+10	08.3	226	52.9	-21	40.2	307	50.0	+7	48.7	218	41.6		
18	128	07.3	100	04.6	+10	09.4	241	55.8	-21	40.3	322	52.6	+7	48.8	233	44.2		
19	143	09.7	115	04.1		10.5	256	58.7		40.3	337	55.1		48.8	248	46.8		
20	158	12.2	130	03.7		11.6	272	01.6		40.3	352	57.6		48.8	263	49.4		
21	173	14.7	145	03.2		12.8	287	04.5		40.4	8	00.2		48.8	278	52.0		
22	188	17.1	160	02.8		13.9	302	07.4		40.4	23	02.7		48.9	293	54.6		
23	203	19.6	175	02.3		15.0	317	10.3		40.5	38	05.2		48.9	308	57.2		
24	218	22.1	190	01.9	+10	16.2	332	13.2	-21	40.5	53	07.8	+7	48.9	323	59.8		
Dif	—		-4 +11				+29 0				+25 0				+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: 22 ^d 5 PHE { 4 ^h : 57'4 12 ^h : 57'7 20 ^h : 58'0 PMG: 6 ^h 19 ^m R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	41.8	+14	50.2	268	34.3	-14	50.5	60 N	1	46	3	07	4	00	1	59	
1	195	41.9		51.0	283	03.2	99	44.2	58	2	13		21	09	50	28	10	
2	210	41.9		51.7	297	32.1	99	37.8	56		33		33	18	42	30	11	
3	225	42.0		52.5	312	01.0	99	31.3	54	2	49		44	25	34	33	10	
4	240	42.1		53.3	326	29.9	99	24.7	52	3	03	3	53	32	28	34	16	
5	255	42.2	+14	54.0	340	58.8	99	-14	50	3	15	4	01	4	38	1	22	
6	270	42.2	+14	54.8	355	27.7	99	-14	45	3	38	4	18	4	50	1	10	
7	285	42.3		55.6	9	56.6	99	-14	40	3	56		32	5	01	0	59	
8	300	42.4		56.3	24	25.5	99	-13	35	4	11		43	10	51	42	51	
9	315	42.5		57.1	38	54.3	98		30		22	4	53	18	43	44	11	
10	330	42.6		57.8	53	23.2	99		20		41	5	08	31	29	47	12	
11	345	42.6	+14	58.6	67	52.0	98	-13	10 N	4	56	5	21	5	43	0	18	
12	0	42.7	+14	59.4	82	20.9	99	-13	0	5	07	5	32	5	54	0	06	
13	15	42.8	+15	00.1	96	49.7	98		10 S		18		43	6	04	**	**	
14	30	42.9		00.9	111	18.6	99		20		27		5	53	16	**	**	
15	45	42.9		01.6	125	47.4	98	-13	30		35		6	04	29	**	**	
16	60	43.0		02.4	140	16.2	98	-12	35		40		10	36		**	**	
17	75	43.1	+15	03.1	154	45.0	98	-12	40	5	44	6	16	6	44	**	**	
18	90	43.2	+15	03.9	169	13.8	98	-12	45	5	48	6	23	6	54	**	**	
19	105	43.3		04.7	183	42.6	98		50		53		32	7	06	23	58	
20	120	43.3		05.4	198	11.4	98		52		55		35	11		54	73	
21	135	43.4		06.2	212	40.1	97		54		57		39	17		48	76	
22	150	43.5		06.9	227	08.9	98		56	5	59		44	24		43	77	
23	165	43.6		07.7	241	37.7	98	-12	58	6	02		49	31		37	79	
24	180	43.6	+15	08.4	256	06.4	97	-11	60 S	6	04	6	54	7	40	23	29	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 25 ^m 0		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: -1.5 PMG: 1 ^h 51 ^m		Mag: -2.3 PMG: 20 ^h 24 ^m		Mag: +0.2 PMG: 2 ^h 24 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	218	22.1	190	01.9	+10	16.2	332	13.2	-21	40.5	53	07.8	+7	48.9	323	59.8	-20	50.5
1	233	24.5	205	01.4		17.3	347	16.1		40.6	68	10.3		48.9	339	02.4		50.5
2	248	27.0	220	01.0		18.4	2	19.0		40.6	83	12.9		48.9	354	05.0		50.4
3	263	29.4	235	00.5		19.5	17	21.9		40.7	98	15.4		49.0	9	07.6		50.4
4	278	31.9	250	00.1		20.7	32	24.8		40.7	113	17.9		49.0	24	10.2		50.4
5	293	34.4	264	59.6	+10	21.8	47	27.7	-21	40.7	128	20.5	+7	49.0	39	12.8	-20	50.4
6	308	36.8	279	59.2	+10	22.9	62	30.6	-21	40.8	143	23.0	+7	49.0	54	15.4	-20	50.4
7	323	39.3	294	58.7		24.0	77	33.5		40.8	158	25.5		49.0	69	18.0		50.4
8	338	41.8	309	58.3		25.2	92	36.5		40.9	173	28.1		49.1	84	20.6		50.3
9	353	44.2	324	57.8		26.3	107	39.4		40.9	188	30.6		49.1	99	23.2		50.3
10	8	46.7	339	57.4		27.4	122	42.3		41.0	203	33.1		49.1	114	25.9		50.3
11	23	49.2	354	56.9	+10	28.5	137	45.2	-21	41.0	218	35.6	+7	49.1	129	28.5	-20	50.3
12	38	51.6	9	56.5	+10	29.7	152	48.1	-21	41.0	233	38.2	+7	49.1	144	31.1	-20	50.3
13	53	54.1	24	56.0		30.8	167	51.0		41.1	248	40.7		49.2	159	33.7		50.3
14	68	56.6	39	55.6		31.9	182	53.9		41.1	263	43.2		49.2	174	36.3		50.3
15	83	59.0	54	55.1		33.0	197	56.9		41.2	278	45.8		49.2	189	38.9		50.2
16	99	01.5	69	54.7		34.2	212	59.8		41.2	293	48.3		49.2	204	41.5		50.2
17	114	03.9	84	54.2	+10	35.3	228	02.7	-21	41.3	308	50.8	+7	49.2	219	44.1	-20	50.2
18	129	06.4	99	53.8	+10	36.4	243	05.6	-21	41.3	323	53.4	+7	49.2	234	46.7	-20	50.2
19	144	08.9	114	53.3		37.5	258	08.6		41.3	338	55.9		49.3	249	49.3		50.2
20	159	11.3	129	52.9		38.6	273	11.5		41.4	353	58.4		49.3	264	51.9		50.2
21	174	13.8	144	52.4		39.8	288	14.4		41.4	9	01.0		49.3	279	54.5		50.1
22	189	16.3	159	52.0		40.9	303	17.3		41.5	24	03.5		49.3	294	57.1		50.1
23	204	18.7	174	51.5		42.0	318	20.3		41.5	39	06.0		49.3	309	59.7		50.1
24	219	21.2	189	51.0	+10	43.1	333	23.2	-21	41.5	54	08.5	+7	49.4	325	02.3	-20	50.1
Dif	—		-5		+11		+29		0		+25		0		+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 0			Edad: 23 ^d 5 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'9 SD: 15'8 PMG: 7 ^h 11 ^m 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	180	43.6	+15	08.4	256	06.4	-11 55.2	60 N	19 59	20 53	22 18	2 25 23	12 07 85	
1	195	43.7		09.2	270	35.1	46.9 83	58	49	38	21 49	18 25	13 82	
2	210	43.8		09.9	285	03.9	38.5 84	56	40	25	27	12 27	19 79	
3	225	43.8		10.7	299	32.6	30.1 84	54	32	14	21 10	07 29	24 77	
4	240	43.9		11.4	314	01.3	21.5 86	52	26	20 05	20 56	2 02 31	28 75	
5	255	44.0	+15	12.2	328	30.0	-11 12.9 86	50	19 19	19 56	20 43	1 57 33	12 32 74	
6	270	44.1	+15	12.9	342	58.7	-11 04.2 87	45	19 06	19 38	20 19	1 48 35	12 40 70	
7	285	44.1		13.7	357	27.4	-10 55.4 88	40	18 55	24	20 00	40 38	47 68	
8	300	44.2		14.5	11	56.1	46.6 88	35	46	13	19 46	33 40	53 65	
9	315	44.3		15.2	26	24.7	37.6 90	30	38	19 03	33	27 42	12 59 62	
10	330	44.4		16.0	40	53.4	28.6 90	20	24	18 47	19 14	16 46	13 08 58	
11	345	44.4	+15	16.7	55	22.0	-10 19.6 90	10 N	18 12	18 33	18 59	1 07 49	13 16 55	
12	0	44.5	+15	17.4	69	50.7	-10 10.4 92	0	18 00	18 22	18 47	0 58 52	13 23 52	
13	15	44.6		18.2	84	19.3	-10 01.2 92	10 S	17 49	11	36	49 55	30 49	
14	30	44.6		18.9	98	47.9	-9 52.0 92	20	38	18 01	27	40 58	38 46	
15	45	44.7		19.7	113	16.5	42.6 94	30	25	17 49	18	29 62	47 42	
16	60	44.8		20.4	127	45.1	33.2 94	35	17	43	13	23 64	52 40	
17	75	44.9	+15	21.2	142	13.6	-9 23.7 95	40	17 08	17 37	18 09	0 16 66	13 58 37	
18	90	44.9	+15	21.9	156	42.2	-9 14.2 95	45	16 58	17 29	18 04	0 08 69	14 04 35	
19	105	45.0		22.7	171	10.7	-9 04.6 96	50	46	20	17 59	** ** *	12 31	
20	120	45.1		23.4	185	39.3	-8 54.9 97	52	41	17	57	** ** *	16 29	
21	135	45.1		24.2	200	07.8	45.2 97	54	35	12	54	** ** *	20 28	
22	150	45.2		24.9	214	36.3	35.4 98	56	28	08	52	** ** *	24 26	
23	165	45.3		25.7	229	04.8	25.5 99	58	20	17 03	49	** ** *	29 24	
24	180	45.3	+15	26.4	243	33.3	-8 15.6 99	60 S	16 11	16 57	17 47	** ** *	14 34 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 21 ^m 1		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: -1.5 PMG: 1 ^h 46 ^m		Mag: -2.3 PMG: 20 ^h 20 ^m		Mag: +0.2 PMG: 2 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	219	21.2	189	51.0	+10	43.1	333	23.2	-21	41.5	54	08.5	+7	49.4	325	02.3	-20	50.1
1	234	23.7	204	50.6		44.2	348	26.1		41.6	69	11.1		49.4	340	05.0		50.1
2	249	26.1	219	50.1		45.3	3	29.1		41.6	84	13.6		49.4	355	07.6		50.1
3	264	28.6	234	49.7		46.5	18	32.0		41.7	99	16.1		49.4	10	10.2		50.0
4	279	31.0	249	49.2		47.6	33	35.0		41.7	114	18.7		49.4	25	12.8		50.0
5	294	33.5	264	48.8	+10	48.7	48	37.9	-21	41.7	129	21.2	+7	49.4	40	15.4	-20	50.0
6	309	36.0	279	48.3	+10	49.8	63	40.8	-21	41.8	144	23.7	+7	49.5	55	18.0	-20	50.0
7	324	38.4	294	47.8		50.9	78	43.8		41.8	159	26.2		49.5	70	20.6		50.0
8	339	40.9	309	47.4		52.0	93	46.7		41.9	174	28.8		49.5	85	23.2		50.0
9	354	43.4	324	46.9		53.2	108	49.7		41.9	189	31.3		49.5	100	25.8		49.9
10	9	45.8	339	46.5		54.3	123	52.6		41.9	204	33.8		49.5	115	28.4		49.9
11	24	48.3	354	46.0	+10	55.4	138	55.6	-21	42.0	219	36.3	+7	49.5	130	31.0	-20	49.9
12	39	50.8	9	45.5	+10	56.5	153	58.5	-21	42.0	234	38.9	+7	49.6	145	33.6	-20	49.9
13	54	53.2	24	45.1		57.6	169	01.5		42.0	249	41.4		49.6	160	36.3		49.9
14	69	55.7	39	44.6		58.7	184	04.4		42.1	264	43.9		49.6	175	38.9		49.9
15	84	58.2	54	44.2	+10	59.8	199	07.4		42.1	279	46.4		49.6	190	41.5		49.8
16	100	00.6	69	43.7	+11	00.9	214	10.3		42.2	294	49.0		49.6	205	44.1		49.8
17	115	03.1	84	43.2	+11	02.1	229	13.3	-21	42.2	309	51.5	+7	49.6	220	46.7	-20	49.8
18	130	05.5	99	42.8	+11	03.2	244	16.3	-21	42.2	324	54.0	+7	49.7	235	49.3	-20	49.8
19	145	08.0	114	42.3		04.3	259	19.2		42.3	339	56.5		49.7	250	51.9		49.8
20	160	10.5	129	41.9		05.4	274	22.2		42.3	354	59.0		49.7	265	54.5		49.8
21	175	12.9	144	41.4		06.5	289	25.1		42.3	10	01.6		49.7	280	57.1		49.7
22	190	15.4	159	40.9		07.6	304	28.1		42.4	25	04.1		49.7	295	59.7		49.7
23	205	17.9	174	40.5		08.7	319	31.1		42.4	40	06.6		49.7	311	02.4		49.7
24	220	20.3	189	40.0	+11	09.8	334	34.0	-21	42.5	55	09.1	+7	49.7	326	05.0	-20	49.7
Dif	—		-5		+11		+30		0		+25		0		+26		0	

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: 24 ^d 5 PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/7 PMG: 8 ^h 03 ^m R°: 53 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	45.3	+15	26.4	243	33.3	-8	15.6	60 N	1 35	3 00	3 54	2 48	20	13 32	87	
1	195	45.4		27.1	258	01.7	94	-8 05.6	58	2 04	15	4 04	43	24	35	85	
2	210	45.5		27.9	272	30.2	95	-7 55.6	56	26	28	13	39	26	38	83	
3	225	45.5		28.6	286	58.6	94	45.5	54	43	39	21	36	27	41	80	
4	240	45.6		29.4	301	27.0	94	35.3	52	2 58	49	28	33	29	43	79	
5	255	45.7	+15	30.1	315	55.4	94	-7 25.1	50	3 10	3 57	4 34	2 30	31	13 46	76	
6	270	45.7	+15	30.9	330	23.8	94	-7 14.8	45	3 35	4 15	4 47	2 23	35	13 50	73	
7	285	45.8		31.6	344	52.2	94	-7 04.5	40	3 53	29	4 58	18	37	55	69	
8	300	45.9		32.3	359	20.5	93	-6 54.1	35	4 08	41	5 08	13	40	13 58	67	
9	315	45.9		33.1	13	48.8	93	43.7	30	20	4 51	16	09	42	14 01	65	
10	330	46.0		33.8	28	17.2	94	33.2	20	40	5 07	30	2 02	46	06	61	
11	345	46.1	+15	34.6	42	45.4	92	-6 22.6	10 N	4 55	5 20	5 42	1 56	50	14 11	57	
12	0	46.1	+15	35.3	57	13.7	93	-6 12.0	0	5 07	5 32	5 53	1 50	53	14 15	53	
13	15	46.2		36.0	71	42.0	93	-6 01.4	10 S	18	43	6 05	44	56	19	50	
14	30	46.3		36.8	86	10.2	92	-5 50.7	20	27	5 54	16	38	60	24	46	
15	45	46.3		37.5	100	38.4	92	40.0	30	37	6 05	30	31	64	29	42	
16	60	46.4		38.2	115	06.6	92	29.2	35	41	11	38	27	66	32	40	
17	75	46.5	+15	39.0	129	34.8	92	-5 18.3	40	5 46	6 18	6 46	1 22	69	14 35	37	
18	90	46.5	+15	39.7	144	02.9	91	-5 07.5	45	5 51	6 26	6 56	1 17	71	14 39	34	
19	105	46.6		40.4	158	31.1	92	-4 56.5	50	56	34	7 09	10	76	43	31	
20	120	46.7		41.2	172	59.2	91	45.6	52	5 58	38	14	07	77	45	29	
21	135	46.7		41.9	187	27.3	91	34.6	54	6 00	43	21	04	79	48	26	
22	150	46.8		42.7	201	55.3	90	23.5	56	03	47	28	1 00	81	50	25	
23	165	46.8		43.4	216	23.4	91	12.4	58	05	52	35	0 56	84	53	22	
24	180	46.9	+15	44.1	230	51.4	90	-4 01.3	60 S	6 08	6 58	7 44	0 52	86	14 56	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 17 ^m 1		Mag: -3.9 PMG: 11 ^h 22 ^m		Mag: -1.5 PMG: 1 ^h 41 ^m		Mag: -2.3 PMG: 20 ^h 16 ^m		Mag: +0.2 PMG: 2 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	220	20.3	189	40.0	+11	09.8	334	34.0	-21	42.5	55	09.1	+7	49.7	326	05.0	-20	49.7
1	235	22.8	204	39.5		10.9	349	37.0		42.5	70	11.7		49.8	341	07.6		49.7
2	250	25.3	219	39.1		12.0	4	40.0		42.5	85	14.2		49.8	356	10.2		49.7
3	265	27.7	234	38.6		13.1	19	42.9		42.6	100	16.7		49.8	11	12.8		49.6
4	280	30.2	249	38.1		14.2	34	45.9		42.6	115	19.2		49.8	26	15.4		49.6
5	295	32.7	264	37.7	+11	15.3	49	48.9	-21	42.6	130	21.7	+7	49.8	41	18.0	-20	49.6
6	310	35.1	279	37.2	+11	16.5	64	51.9	-21	42.7	145	24.3	+7	49.8	56	20.6	-20	49.6
7	325	37.6	294	36.7		17.6	79	54.8		42.7	160	26.8		49.8	71	23.2		49.6
8	340	40.0	309	36.3		18.7	94	57.8		42.7	175	29.3		49.9	86	25.9		49.6
9	355	42.5	324	35.8		19.8	110	00.8		42.8	190	31.8		49.9	101	28.5		49.5
10	10	45.0	339	35.3		20.9	125	03.8		42.8	205	34.3		49.9	116	31.1		49.5
11	25	47.4	354	34.9	+11	22.0	140	06.8	-21	42.9	220	36.8	+7	49.9	131	33.7	-20	49.5
12	40	49.9	9	34.4	+11	23.1	155	09.7	-21	42.9	235	39.4	+7	49.9	146	36.3	-20	49.5
13	55	52.4	24	33.9		24.2	170	12.7		42.9	250	41.9		49.9	161	38.9		49.5
14	70	54.8	39	33.5		25.3	185	15.7		43.0	265	44.4		49.9	176	41.5		49.5
15	85	57.3	54	33.0		26.4	200	18.7		43.0	280	46.9		50.0	191	44.1		49.4
16	100	59.8	69	32.5		27.5	215	21.7		43.0	295	49.4		50.0	206	46.8		49.4
17	116	02.2	84	32.1	+11	28.6	230	24.7	-21	43.1	310	51.9	+7	50.0	221	49.4	-20	49.4
18	131	04.7	99	31.6	+11	29.7	245	27.7	-21	43.1	325	54.5	+7	50.0	236	52.0	-20	49.4
19	146	07.1	114	31.1		30.8	260	30.7		43.1	340	57.0		50.0	251	54.6		49.4
20	161	09.6	129	30.6		31.9	275	33.7		43.2	355	59.5		50.0	266	57.2		49.3
21	176	12.1	144	30.2		33.0	290	36.6		43.2	11	02.0		50.0	281	59.8		49.3
22	191	14.5	159	29.7		34.1	305	39.6		43.2	26	04.5		50.0	297	02.4		49.3
23	206	17.0	174	29.2		35.2	320	42.6		43.3	41	07.0		50.1	312	05.0		49.3
24	221	19.5	189	28.8	+11	36.3	335	45.6	-21	43.3	56	09.6	+7	50.1	327	07.7	-20	49.3
Dif	—		-5		+11		+30		0		+25		0		+26		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 25 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5											
	PMG: 11 ^h 56 ^m 8		SD: 16'3 PMG: 8 ^h 56 ^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	
0	180	46.9	+15	44.1	230	51.4	-4 01.3	60 N	20 04	20 59	22 30	3 08 21	14 59 91	
1	195	47.0		44.8	245	19.4	90 -3 50.1 ¹¹²	58	19 53	43	21 57	07 22	15 00 87	
2	210	47.0		45.6	259	47.3	89 38.9 ¹¹²	56	44	30	34	05 25	01 85	
3	225	47.1		46.3	274	15.3	90 27.7 ¹¹²	54	36	18	16	03 27	01 83	
4	240	47.2		47.0	288	43.2	89 16.4 ¹¹³	52	29	08	21 00	02 29	02 81	
5	255	47.2	+15	47.8	303	11.1	89 -3 05.1 ¹¹³	50	19 22	20 00	20 48	3 01 30	15 02 79	
6	270	47.3	+15	48.5	317	39.0	89 -2 53.8 ¹¹³	45	19 08	19 41	20 22	2 58 34	15 03 75	
7	285	47.3		49.2	332	06.8	88 42.5 ¹¹³	40	18 57	27	20 03	55 38	04 72	
8	300	47.4		50.0	346	34.6	88 31.1 ¹¹⁴	35	47	15	19 47	53 40	05 69	
9	315	47.5		50.7	1	02.4	88 19.6 ¹¹⁵	30	39	19 04	35	51 43	06 66	
10	330	47.5		51.4	15	30.1	87 -2 08.2 ¹¹⁴	20	24	18 48	19 15	48 47	07 61	
11	345	47.6	+15	52.2	29	57.9	88 -1 56.7 ¹¹⁵	10 N	18 12	18 34	18 59	2 46 50	15 08 58	
12	0	47.6	+15	52.9	44	25.6	87 -1 45.2 ¹¹⁵	0	18 00	18 22	18 47	2 43 54	15 08 55	
13	15	47.7		53.6	58	53.2	86 33.7 ¹¹⁵	10 S	17 49	18 11	36	40 58	09 51	
14	30	47.8		54.3	73	20.9	87 22.2 ¹¹⁵	20	37	17 59	26	38 61	10 47	
15	45	47.8		55.1	87	48.5	86 -1 10.6 ¹¹⁶	30	23	48	16	35 65	11 43	
16	60	47.9		55.8	102	16.0	85 -0 59.0 ¹¹⁶	35	15	41	11	33 68	12 40	
17	75	47.9	+15	56.5	116	43.6	86 -0 47.4 ¹¹⁶	40	17 06	17 34	18 07	2 31 71	15 12 38	
18	90	48.0	+15	57.2	131	11.1	85 -0 35.8 ¹¹⁶	45	16 56	17 26	18 01	2 28 75	15 13 34	
19	105	48.1		58.0	145	38.6	85 24.2 ¹¹⁶	50	43	17	17 56	26 78	14 30	
20	120	48.1		58.7	160	06.0	84 12.5 ¹¹⁷	52	37	13	53	24 80	14 29	
21	135	48.2	+15	59.4	174	33.4	84 -0 00.9 ¹¹⁶	54	31	09	51	23 82	14 28	
22	150	48.2	+16	00.1	189	00.8	84 +0 10.8 ¹¹⁷	56	23	17 04	48	21 84	15 25	
23	165	48.3		00.9	203	28.1	83 22.5 ¹¹⁷	58	15	16 58	45	20 86	15 23	
24	180	48.3	+16	01.6	217	55.5	84 +0 34.2 ¹¹⁷	60 S	16 06	16 52	17 42	2 18 89	15 16 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.9		Mag: -1.6		Mag: -2.3		Mag: +0.2									
	9 ^h 13 ^m 2		PMG: 11 ^h 22 ^m		PMG: 1 ^h 37 ^m		PMG: 20 ^h 12 ^m		PMG: 2 ^h 11 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	221	19.5	189	28.8	+11	36.3	335	45.6	-21	43.3	56	09.6	+7	50.1	327	07.7	-20	49.3
1	236	21.9	204	28.3		37.4	350	48.6		43.3	71	12.1		50.1	342	10.3		49.3
2	251	24.4	219	27.8		38.5	5	51.6		43.4	86	14.6		50.1	357	12.9		49.2
3	266	26.9	234	27.3		39.6	20	54.6		43.4	101	17.1		50.1	12	15.5		49.2
4	281	29.3	249	26.9		40.6	35	57.7		43.4	116	19.6		50.1	27	18.1		49.2
5	296	31.8	264	26.4	+11	41.7	51	00.7	-21	43.4	131	22.1	+7	50.1	42	20.7	-20	49.2
6	311	34.3	279	25.9	+11	42.8	66	03.7	-21	43.5	146	24.6	+7	50.1	57	23.3	-20	49.2
7	326	36.7	294	25.4		43.9	81	06.7		43.5	161	27.1		50.1	72	26.0		49.2
8	341	39.2	309	25.0		45.0	96	09.7		43.5	176	29.7		50.2	87	28.6		49.1
9	356	41.6	324	24.5		46.1	111	12.7		43.6	191	32.2		50.2	102	31.2		49.1
10	11	44.1	339	24.0		47.2	126	15.7		43.6	206	34.7		50.2	117	33.8		49.1
11	26	46.6	354	23.5	+11	48.3	141	18.7	-21	43.6	221	37.2	+7	50.2	132	36.4	-20	49.1
12	41	49.0	9	23.0	+11	49.4	156	21.7	-21	43.7	236	39.7	+7	50.2	147	39.0	-20	49.1
13	56	51.5	24	22.6		50.5	171	24.8		43.7	251	42.2		50.2	162	41.6		49.1
14	71	54.0	39	22.1		51.6	186	27.8		43.7	266	44.7		50.2	177	44.3		49.0
15	86	56.4	54	21.6		52.7	201	30.8		43.8	281	47.2		50.2	192	46.9		49.0
16	101	58.9	69	21.1		53.7	216	33.8		43.8	296	49.7		50.2	207	49.5		49.0
17	117	01.4	84	20.7	+11	54.8	231	36.8	-21	43.8	311	52.2	+7	50.2	222	52.1	-20	49.0
18	132	03.8	99	20.2	+11	55.9	246	39.9	-21	43.8	326	54.8	+7	50.3	237	54.7	-20	49.0
19	147	06.3	114	19.7		57.0	261	42.9		43.9	341	57.3		50.3	252	57.3		49.0
20	162	08.7	129	19.2		58.1	276	45.9		43.9	356	59.8		50.3	268	00.0		48.9
21	177	11.2	144	18.7	+11	59.2	291	48.9		43.9	12	02.3		50.3	283	02.6		48.9
22	192	13.7	159	18.3	+12	00.3	306	52.0		44.0	27	04.8		50.3	298	05.2		48.9
23	207	16.1	174	17.8		01.4	321	55.0		44.0	42	07.3		50.3	313	07.8		48.9
24	222	18.6	189	17.3	+12	02.4	336	58.0	-21	44.0	57	09.8	+7	50.3	328	10.4	-20	48.9
Dif	—		-5 +11		+30		0		+25		0		+26		0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 26 ^d 5	PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 8 20 ^h : 61 ^m 0	SD: 16 ^h 5		R°: 56 ^m						
	PMG: 11 ^h 56 ^m 7					PMG: 9 ^h 50 ^m								
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	48.3	+16 01.6	217	55.5	+0 34.2	60 N	1 23	2 54	3 49	3 29	21	16 30	91
1	195	48.4	02.3	232	22.7	82 45.9 ¹¹⁷	58	1 56	3 10	3 59	29	24	27 89	
2	210	48.5	03.0	246	50.0	83 +0 57.6 ¹¹⁷	56	2 19	23	4 09	30	26	26 86	
3	225	48.5	03.7	261	17.2	82 +1 09.3 ¹¹⁷	54	37	35	17	30	28	24 84	
4	240	48.6	04.5	275	44.4	82 21.0 ¹¹⁷	52	2 53	45	24	31	30	23 82	
5	255	48.6	+16 05.2	290	11.5	81 +1 32.7 ¹¹⁷	50	3 05	3 53	4 31	3 31	32	16 21	80
6	270	48.7	+16 05.9	304	38.6	81 +1 44.4 ¹¹⁷	45	3 31	4 12	4 45	3 32	35	16 18	77
7	285	48.7	06.6	319	05.7	81 +1 56.1 ¹¹⁷	40	3 50	26	4 56	33	38	16 73	
8	300	48.8	07.3	333	32.7	80 +2 07.8 ¹¹⁷	35	4 06	39	5 06	33	42	14 70	
9	315	48.8	08.1	347	59.7	80 19.5 ¹¹⁷	30	18	4 49	14	34	44	12 67	
10	330	48.9	08.8	2 26.6	79 31.2 ¹¹⁷	20	20	38	5 06	29	35	48	08 64	
11	345	49.0	+16 09.5	16 53.5	79 +2 42.9 ¹¹⁷	10 N	10 N	4 54	5 20	5 42	3 36	52	16 06	59
12	0	49.0	+16 10.2	31 20.4	79 +2 54.6 ¹¹⁷	0	0	5 07	5 32	5 53	3 37	55	16 03	56
13	15	49.1	10.9	45 47.2	78 +3 06.3 ¹¹⁷	10 S	10 S	18	43	6 05	38	59	16 00	53
14	30	49.1	11.6	60 14.0	78 18.0 ¹¹⁷	20	20	28	5 54	17	39	63	15 57	49
15	45	49.2	12.3	74 40.8	78 29.6 ¹¹⁶	30	30	38	6 06	31	40	67	54 45	
16	60	49.2	13.1	89 07.5	77 41.3 ¹¹⁷	35	35	43	13	39	41	69	52 43	
17	75	49.3	+16 13.8	103 34.2	77 +3 52.9 ¹¹⁶	40	40	5 48	6 20	6 48	3 42	72	15 50	40
18	90	49.3	+16 14.5	118 00.8	76 +4 04.5 ¹¹⁶	45	45	5 53	6 28	6 59	3 43	75	15 47	37
19	105	49.4	15.2	132 27.4	76 16.1 ¹¹⁶	50	50	5 58	37	7 12	44	80	44 33	
20	120	49.4	15.9	146 53.9	75 27.6 ¹¹⁵	52	52	6 01	41	18	44	82	43 31	
21	135	49.5	16.6	161 20.4	75 39.2 ¹¹⁶	54	54	03	46	24	45	84	42 29	
22	150	49.5	17.3	175 46.9	75 +4 50.7 ¹¹⁵	56	56	06	51	31	45	86	40 27	
23	165	49.6	18.1	190 13.3	74 +5 02.2 ¹¹⁵	58	58	09	6 56	40	46	89	38 25	
24	180	49.6	+16 18.8	204 39.7	74 +5 13.7 ¹¹⁵	60 S	60 S	6 12	7 02	7 49	3 47	91	15 36	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 09 ^m 3		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: -1.6 PMG: 1 ^h 32 ^m		Mag: -2.3 PMG: 20 ^h 08 ^m		Mag: +0.2 PMG: 2 ^h 07 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	222	18.6	189 17.3	+12 02.4	336 58.0	-21 44.0	57 09.8	+7 50.3	328 10.4	-20 48.9	
1	237	21.1	204 16.8	03.5	352 01.1	44.1	72 12.3	50.3	343 13.0	48.9	
2	252	23.5	219 16.3	04.6	7 04.1	44.1	87 14.8	50.3	358 15.7	48.8	
3	267	26.0	234 15.8	05.7	22 07.1	44.1	102 17.3	50.3	13 18.3	48.8	
4	282	28.5	249 15.4	06.8	37 10.2	44.1	117 19.8	50.3	28 20.9	48.8	
5	297	30.9	264 14.9	+12 07.9	52 13.2	-21 44.2	132 22.3	+7 50.4	43 23.5	-20 48.8	
6	312	33.4	279 14.4	+12 08.9	67 16.3	-21 44.2	147 24.8	+7 50.4	58 26.1	-20 48.8	
7	327	35.9	294 13.9	10.0	82 19.3	44.2	162 27.3	50.4	73 28.7	48.7	
8	342	38.3	309 13.4	11.1	97 22.3	44.2	177 29.8	50.4	88 31.4	48.7	
9	357	40.8	324 12.9	12.2	112 25.4	44.3	192 32.3	50.4	103 34.0	48.7	
10	12	43.2	339 12.5	13.3	127 28.4	44.3	207 34.9	50.4	118 36.6	48.7	
11	27	45.7	354 12.0	+12 14.3	142 31.5	-21 44.3	222 37.4	+7 50.4	133 39.2	-20 48.7	
12	42	48.2	9 11.5	+12 15.4	157 34.5	-21 44.4	237 39.9	+7 50.4	148 41.8	-20 48.7	
13	57	50.6	24 11.0	16.5	172 37.6	44.4	252 42.4	50.4	163 44.4	48.6	
14	72	53.1	39 10.5	17.6	187 40.6	44.4	267 44.9	50.4	178 47.1	48.6	
15	87	55.6	54 10.0	18.7	202 43.7	44.4	282 47.4	50.4	193 49.7	48.6	
16	102	58.0	69 09.5	19.7	217 46.7	44.5	297 49.9	50.4	208 52.3	48.6	
17	118	00.5	84 09.0	+12 20.8	232 49.8	-21 44.5	312 52.4	+7 50.4	223 54.9	-20 48.6	
18	133	03.0	99 08.6	+12 21.9	247 52.8	-21 44.5	327 54.9	+7 50.5	238 57.5	-20 48.6	
19	148	05.4	114 08.1	23.0	262 55.9	44.5	342 57.4	50.5	254 00.2	48.5	
20	163	07.9	129 07.6	24.0	277 59.0	44.6	357 59.9	50.5	269 02.8	48.5	
21	178	10.4	144 07.1	25.1	293 02.0	44.6	13 02.4	50.5	284 05.4	48.5	
22	193	12.8	159 06.6	26.2	308 05.1	44.6	28 04.9	50.5	299 08.0	48.5	
23	208	15.3	174 06.1	27.3	323 08.1	44.6	43 07.4	50.5	314 10.6	48.5	
24	223	17.7	189 05.6	+12 28.3	338 11.2	-21 44.7	58 09.9	+7 50.5	329 13.3	-20 48.5	
Dif	—		-5 +11	+30 0		+25 0		+26 0		0	

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: 27 ^d 5 PHE { SD: 16'6 PMG: 10 ^h 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	180	49.6	+16	18.8	204	39.7	+5	13.7	60 N	20 09	21 05	22 44	3 50	24
1	195	49.7		19.5	219	06.1	74	25.1	58	19 58	20 48	22 06	53	26
2	210	49.7		20.2	233	32.4	73	36.5	56	48	35	21 41	56	29
3	225	49.8		20.9	247	58.6	72	47.9	54	40	23	21	3 58	31
4	240	49.8		21.6	262	24.9	73	+5 59.3	52	32	12	21 05	4 01	32
5	255	49.9	+16	22.3	276	51.0	71	+6 10.6	50	19 25	20 03	20 52	4 03	34
6	270	49.9	+16	23.0	291	17.2	72	+6 21.9	45	19 11	19 44	20 25	4 07	39
7	285	50.0		23.7	305	43.3	71	33.1	40	18 59	29	20 05	11	42
8	300	50.0		24.4	320	09.3	70	44.3	35	49	16	19 49	15	44
9	315	50.1		25.1	334	35.3	70	+6 55.5	30	40	19 06	36	18	46
10	330	50.1		25.8	349	01.3	70	+7 06.6	20	25	18 48	16	23	50
11	345	50.2	+16	26.6	3	27.2	69	+7 17.7	10 N	18 12	18 34	19 00	4 28	54
12	0	50.2	+16	27.3	17	53.1	69	+7 28.7	0	18 00	18 22	18 47	4 32	57
13	15	50.3		28.0	32	18.9	68	39.7	10 S	17 48	18 10	35	37	60
14	30	50.3		28.7	46	44.7	68	+7 50.7	20	36	17 58	25	42	64
15	45	50.4		29.4	61	10.4	67	+8 01.6	30	21	46	15	47	68
16	60	50.4		30.1	75	36.1	67	12.4	35	13	40	10	50	71
17	75	50.5	+16	30.8	90	01.8	67	+8 23.2	40	17 04	17 32	18 04	4 54	73
18	90	50.5	+16	31.5	104	27.4	66	+8 33.9	45	16 53	17 24	17 59	4 58	77
19	105	50.5		32.2	118	53.0	66	44.6	50	40	14	53	5 04	80
20	120	50.6		32.9	133	18.5	65	+8 55.2	52	34	10	50	06	82
21	135	50.6		33.6	147	44.0	65	+9 05.8	54	27	05	48	09	84
22	150	50.7		34.3	162	09.5	65	16.3	56	19	17 00	45	11	87
23	165	50.7		35.0	176	34.9	64	26.7	58	11	16 54	42	15	89
24	180	50.8	+16	35.7	191	00.2	63	+9 37.1	60 S	16 01	16 48	17 38	5 18	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 05 ^m 3		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: -1.6 PMG: 1 ^h 27 ^m		Mag: -2.3 PMG: 20 ^h 04 ^m		Mag: +0.2 PMG: 2 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	17.7	189	05.6	+12	28.3	338	11.2	-21	44.7
1	238	20.2	204	05.1		29.4	353	14.3		44.7
2	253	22.7	219	04.6		30.5	8	17.3		44.7
3	268	25.1	234	04.1		31.6	23	20.4		44.7
4	283	27.6	249	03.6		32.6	38	23.5		44.8
5	298	30.1	264	03.2	+12	33.7	53	26.5	-21	44.8
6	313	32.5	279	02.7	+12	34.8	68	29.6	-21	44.8
7	328	35.0	294	02.2		35.8	83	32.7		44.8
8	343	37.5	309	01.7		36.9	98	35.8		44.8
9	358	39.9	324	01.2		38.0	113	38.8		44.9
10	13	42.4	339	00.7		39.0	128	41.9		44.9
11	28	44.8	354	00.2	+12	40.1	143	45.0	-21	44.9
12	43	47.3	8	59.7	+12	41.2	158	48.1	-21	44.9
13	58	49.8	23	59.2		42.2	173	51.2		45.0
14	73	52.2	38	58.7		43.3	188	54.2		45.0
15	88	54.7	53	58.2		44.4	203	57.3		45.0
16	103	57.2	68	57.7		45.4	219	00.4		45.0
17	118	59.6	83	57.2	+12	46.5	234	03.5	-21	45.0
18	134	02.1	98	56.7	+12	47.6	249	06.6	-21	45.1
19	149	04.6	113	56.2		48.6	264	09.7		45.1
20	164	07.0	128	55.7		49.7	279	12.8		45.1
21	179	09.5	143	55.2		50.8	294	15.8		45.1
22	194	12.0	158	54.7		51.8	309	18.9		45.2
23	209	14.4	173	54.2		52.9	324	22.0		45.2
24	224	16.9	188	53.7	+12	53.9	339	25.1	-21	45.2
Dif	—		-5 +11		+31		0		+25 0	

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 6			Edad: 28 ^d 5 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 2 PMG: 11 ^h 43 ^m R ^o : 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	50.8	+16 35.7	191	00.2	+9 37.1		60 N	1 09	2 47	3 44	4 14	28	19 32	87
1	195	50.8	36.4	205	25.6	47.4	103	58	1 47	3 04	3 55	19 32		25 84	
2	210	50.9	37.1	219	50.8	62	+9 57.7	56	2 12	18	4 04	25 33		18 82	
3	225	50.9	37.8	234	16.1	63	+10 07.9	54	32	30	13	29 36		12 80	
4	240	51.0	38.5	248	41.3	62	18.0	52	2 47	40	20	33 38		06 79	
5	255	51.0	+16 39.2	263	06.4	61	+10 28.0	50	3 01	3 50	4 27	4 37 39		19 01 78	
6	270	51.0	+16 39.9	277	31.5	61	+10 38.0	45	3 28	4 09	4 42	4 46 42		18 51 74	
7	285	51.1	40.6	291	56.6	61	47.9	40	3 47	24	4 54	53 45		42 72	
8	300	51.1	41.3	306	21.7	61	+10 57.7	35	4 03	36	5 04	4 59 47		35 69	
9	315	51.2	42.0	320	46.7	60	+11 07.5	30	16	4 47	13	5 04 49		28 68	
10	330	51.2	42.7	335	11.6	59	17.1	20	37	5 05	28	13 53		16 65	
11	345	51.3	+16 43.3	349	36.5	59	+11 26.7	10 N	4 53	5 19	5 41	5 22 56		18 07 62	
12	0	51.3	+16 44.0	4	01.4	59	+11 36.2	0	5 06	5 32	5 53	5 29 59		17 57 60	
13	15	51.3	44.7	18	26.3	59	45.7	10 S	18	43	6 05	37 62		48 57	
14	30	51.4	45.4	32	51.1	58	+11 55.0	20	29	5 55	18	46 65		38 54	
15	45	51.4	46.1	47	15.9	58	+12 04.3	30	39	6 07	32	5 55 69		27 51	
16	60	51.5	46.8	61	40.6	57	13.4	35	44	14	41	6 01 70		20 49	
17	75	51.5	+16 47.5	76	05.3	57	+12 22.5	40	5 49	6 22	6 50	6 07 73		17 13 47	
18	90	51.5	+16 48.2	90	30.0	57	+12 31.5	45	5 55	6 30	7 01	6 15 76		17 04 45	
19	105	51.6	48.9	104	54.6	56	40.4	50	6 01	40	15	24 79		16 54 41	
20	120	51.6	49.6	119	19.2	56	49.2	52	04	44	21	28 81		49 40	
21	135	51.7	50.3	133	43.8	56	+12 58.0	54	06	49	28	33 82		44 38	
22	150	51.7	51.0	148	08.3	55	+13 06.6	56	09	6 54	35	38 85		38 36	
23	165	51.7	51.6	162	32.8	55	15.1	58	13	7 00	44	44 87		31 35	
24	180	51.8	+16 52.3	176	57.3	55	+13 23.6	60 S	6 16	7 07	7 54	6 50 90		16 24 32	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 01 ^m 4			Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: -1.6 PMG: 1 ^h 22 ^m			Mag: -2.3 PMG: 20 ^h 00 ^m			Mag: +0.1 PMG: 1 ^h 59 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	224	16.9	188 53.7	+12 53.9	339 25.1	-21 45.2	59 09.8	+7 50.6	330 16.1	-20 48.0					
1	239	19.3	203 53.2	55.0	354 28.2	45.2	74 12.3	50.6	345 18.8	48.0					
2	254	21.8	218 52.7	56.1	9 31.3	45.2	89 14.8	50.6	0 21.4	48.0					
3	269	24.3	233 52.2	57.1	24 34.4	45.3	104 17.3	50.6	15 24.0	48.0					
4	284	26.7	248 51.7	58.2	39 37.5	45.3	119 19.8	50.6	30 26.6	48.0					
5	299	29.2	263 51.2	+12 59.2	54 40.6	-21 45.3	134 22.2	+7 50.6	45 29.3	-20 47.9					
6	314	31.7	278 50.7	+13 00.3	69 43.7	-21 45.3	149 24.7	+7 50.6	60 31.9	-20 47.9					
7	329	34.1	293 50.2	01.4	84 46.8	45.3	164 27.2	50.6	75 34.5	47.9					
8	344	36.6	308 49.7	02.4	99 49.9	45.4	179 29.7	50.6	90 37.1	47.9					
9	359	39.1	323 49.2	03.5	114 53.0	45.4	194 32.2	50.6	105 39.8	47.9					
10	14	41.5	338 48.7	04.5	129 56.1	45.4	209 34.7	50.6	120 42.4	47.9					
11	29	44.0	353 48.2	+13 05.6	144 59.3	-21 45.4	224 37.2	+7 50.6	135 45.0	-20 47.8					
12	44	46.5	8 47.7	+13 06.6	160 02.4	-21 45.4	239 39.7	+7 50.6	150 47.6	-20 47.8					
13	59	48.9	23 47.2	07.7	175 05.5	45.4	254 42.2	50.6	165 50.2	47.8					
14	74	51.4	38 46.7	08.7	190 08.6	45.5	269 44.7	50.6	180 52.9	47.8					
15	89	53.8	53 46.2	09.8	205 11.7	45.5	284 47.1	50.6	195 55.5	47.8					
16	104	56.3	68 45.7	10.8	220 14.8	45.5	299 49.6	50.6	210 58.1	47.7					
17	119	58.8	83 45.1	+13 11.9	235 17.9	-21 45.5	314 52.1	+7 50.6	226 00.7	-20 47.7					
18	135	01.2	98 44.6	+13 12.9	250 21.1	-21 45.5	329 54.6	+7 50.6	241 03.4	-20 47.7					
19	150	03.7	113 44.1	14.0	265 24.2	45.5	344 57.1	50.6	256 06.0	47.7					
20	165	06.2	128 43.6	15.0	280 27.3	45.6	359 59.6	50.6	271 08.6	47.7					
21	180	08.6	143 43.1	16.1	295 30.4	45.6	15 02.1	50.6	286 11.2	47.7					
22	195	11.1	158 42.6	17.1	310 33.5	45.6	30 04.6	50.6	301 13.9	47.6					
23	210	13.6	173 42.1	18.2	325 36.7	45.6	45 07.0	50.6	316 16.5	47.6					
24	225	16.0	188 41.6	+13 19.2	340 39.8	-21 45.6	60 09.5	+7 50.6	331 19.1	-20 47.6					
Dif	—		-5	+11	+31	0	+25	0	+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 5			Edad: 29 ^d 5 PHE { 4 ^h : 61 ['] 1 12 ^h : 61 ['] 0 20 ^h : 60 ['] 8 R°: 60 ^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	51.8	+16 52.3	176	57.3	+13 23.6	83	60 N	20 14	21 12	22 59	4 42 36	20 59 78		
1	195	51.8		53.0	191	21.7	54	58	20 02	20 54	22 15	51 38	49 76		
2	210	51.9		53.7	205	46.1	54	56	19 52	39	21 47	4 58 40	40 75		
3	225	51.9		54.4	220	10.5	54	54		43	27	5 05 42	32 74		
4	240	51.9		55.1	234	34.9	54	52		35	16	11 43	25 72		
5	255	52.0	+16 55.8	248	59.2	53	+14 04.3	80	50	19 28	20 06	20 56	5 16 45	20 19 71	
6	270	52.0	+16 56.4	263	23.5	53	+14 12.1	78	45	19 13	19 47	20 28	5 28 47	20 05 69	
7	285	52.0		57.1	277	47.8	53	40	19 01	31	20 08	38 49	19 54 68		
8	300	52.1		57.8	292	12.1	53	35	18 51	18	19 51	46 51	44 67		
9	315	52.1		58.5	306	36.3	52	30		41	19 07	38	5 53 53	36 65	
10	330	52.2		59.2	321	00.5	52	20		26	18 49	17	6 06 56	21 63	
11	345	52.2	+16 59.9	335	24.7	52	+14 49.7	73	10 N	18 12	18 35	19 00	6 18 57	19 09 61	
12	0	52.2	+17 00.5	349	48.9	52	+14 56.9	72	0	18 00	18 22	18 47	6 28 60	18 57 60	
13	15	52.3		01.2	4	13.0	51	+15 04.0	10 S	17 48	18 10	35	39 62	45 58	
14	30	52.3		01.9	18	37.2	52	11.0	20	35	17 58	24	6 51 64	32 57	
15	45	52.3		02.6	33	01.3	51	17.8	30	20	45	13	7 04 66	18 54	
16	60	52.4		03.3	47	25.4	51	24.6	35	11	38	08	11 69	09 54	
17	75	52.4	+17 03.9	61	49.5	51	+15 31.2	65	40	17 01	17 30	18 02	7 20 70	18 00 52	
18	90	52.4	+17 04.6	76	13.5	50	+15 37.7	66	45	16 50	17 21	17 57	7 31 72	17 49 50	
19	105	52.5		05.3	90	37.6	51	44.1	50	36	11	50	43 75	35 48	
20	120	52.5		06.0	105	01.6	50	50.4	52	30	07	47	49 76	29 47	
21	135	52.5		06.7	119	25.7	51	+15 56.6	62	54	23	17 02	44	7 55 78	22 46
22	150	52.6		07.3	133	49.7	50	+16 02.6	60	56	15	16 56	41	8 03 79	14 45
23	165	52.6		08.0	148	13.7	50	08.6	58	16 06	50	38	11 81	17 06 42	
24	180	52.6	+17 08.7	162	37.7	50	+16 14.4	58	60 S	15 56	16 44	17 34	8 20 83	16 56 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 8 ^h 57 ^m 5		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: -1.7 PMG: 1 ^h 17 ^m		Mag: -2.3 PMG: 19 ^h 56 ^m		Mag: +0.1 PMG: 1 ^h 54 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	225	16.0	188	41.6	+13 19.2	340 39.8	-21 45.6	60 09.5	+7 50.6	331 19.1	-20 47.6		
1	240	18.5	203	41.1		20.3	355 42.9	45.6	75 12.0	50.6	346 21.7	47.6	
2	255	20.9	218	40.6		21.3	10 46.0	45.7	90 14.5	50.6	1 24.4	47.6	
3	270	23.4	233	40.0		22.4	25 49.2	45.7	105 17.0	50.6	16 27.0	47.5	
4	285	25.9	248	39.5		23.4	40 52.3	45.7	120 19.5	50.6	31 29.6	47.5	
5	300	28.3	263	39.0	+13 24.5	55 55.4	-21 45.7	135 21.9	+7 50.6	46 32.2	-20 47.5		
6	315	30.8	278	38.5	+13 25.5	70 58.6	-21 45.7	150 24.4	+7 50.6	61 34.9	-20 47.5		
7	330	33.3	293	38.0		26.6	86 01.7	45.7	165 26.9	50.6	76 37.5	47.5	
8	345	35.7	308	37.5		27.6	101 04.8	45.8	180 29.4	50.6	91 40.1	47.5	
9	0	38.2	323	37.0		28.6	116 08.0	45.8	195 31.9	50.6	106 42.7	47.4	
10	15	40.7	338	36.5		29.7	131 11.1	45.8	210 34.4	50.6	121 45.4	47.4	
11	30	43.1	353	35.9	+13 30.7	146 14.2	-21 45.8	225 36.8	+7 50.6	136 48.0	-20 47.4		
12	45	45.6	8	35.4	+13 31.8	161 17.4	-21 45.8	240 39.3	+7 50.6	151 50.6	-20 47.4		
13	60	48.1	23	34.9		32.8	176 20.5	45.8	255 41.8	50.6	166 53.2	47.4	
14	75	50.5	38	34.4		33.8	191 23.7	45.8	270 44.3	50.6	181 55.9	47.4	
15	90	53.0	53	33.9		34.9	206 26.8	45.9	285 46.8	50.6	196 58.5	47.3	
16	105	55.4	68	33.4		35.9	221 29.9	45.9	300 49.3	50.6	212 01.1	47.3	
17	120	57.9	83	32.8	+13 37.0	236 33.1	-21 45.9	315 51.7	+7 50.6	227 03.7	-20 47.3		
18	136	00.4	98	32.3	+13 38.0	251 36.2	-21 45.9	330 54.2	+7 50.6	242 06.4	-20 47.3		
19	151	02.8	113	31.8		39.0	266 39.4	45.9	345 56.7	50.6	257 09.0	47.3	
20	166	05.3	128	31.3		40.1	281 42.5	45.9	0 59.2	50.6	272 11.6	47.2	
21	181	07.8	143	30.8		41.1	296 45.7	45.9	16 01.6	50.6	287 14.2	47.2	
22	196	10.2	158	30.3		42.1	311 48.8	45.9	31 04.1	50.6	302 16.9	47.2	
23	211	12.7	173	29.7		43.2	326 52.0	46.0	46 06.6	50.6	317 19.5	47.2	
24	226	15.2	188	29.2	+13 44.2	341 55.1	-21 46.0	61 09.1	+7 50.6	332 22.1	-20 47.2		
Dif	—		-5	+10		+31	0	+25	0		+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 5			Edad: 1 ^d 2 PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 4 20 ^h : 60 ^m 2 Rº: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	52.6	+17	08.7	162	37.7	+16	14.4	60 N	0 53	2 41	3 39	5 18	46	22	17	65	
1	195	52.7		09.4	177	01.7	50	20.1	58	1 37	2 58	3 50	29	48	22	05	64	
2	210	52.7		10.0	191	25.7	50	25.7	56	2 05	3 13	4 00	38	49	21	55	63	
3	225	52.7		10.7	205	49.7	50	31.1	54	26	26	09	47	49	46	63		
4	240	52.8		11.4	220	13.7	50	36.4	53	42	36	17	5 54	51	37	63		
5	255	52.8	+17	12.1	234	37.7	50	+16 41.7	53	2 57	3 46	4 24	6 01	51	21	30	63	
6	270	52.8	+17	12.7	249	01.7	50	+16 46.7	50	3 24	4 06	4 39	6 15	53	21	14	63	
7	285	52.9		13.4	263	25.6	49	51.7	50	3 45	22	4 52	27	54	21	02	61	
8	300	52.9		14.1	277	49.6	50	+16 56.5	48	4 01	34	5 02	37	55	20	51	61	
9	315	52.9		14.8	292	13.6	50	+17 01.3	48	15	4 45	11	6 46	56	41	61		
10	330	53.0		15.4	306	37.6	50	05.9	46	36	5 03	27	7 02	57	24	61		
11	345	53.0	+17	16.1	321	01.6	50	+17 10.3	44	4 52	5 18	5 40	7 15	59	20	10	60	
12	0	53.0	+17	16.8	335	25.6	50	+17 14.7	44	5 06	5 31	5 53	7 28	60	19	57	59	
13	15	53.0		17.4	349	49.7	51	18.9	42	18	44	6 05	41	61	43	59		
14	30	53.1		18.1	4	13.7	50	23.0	41	20	29	5 56	19	7 55	62	29	58	
15	45	53.1		18.8	18	37.7	50	26.9	39	30	40	6 09	34	8 10	64	12	57	
16	60	53.1		19.4	33	01.8	51	30.8	39	35	45	16	42	20	64	19	03	56
17	75	53.2	+17	20.1	47	25.9	51	+17 34.5	37	40	5 51	6 23	6 52	8 30	65	18	52	56
18	90	53.2	+17	20.8	61	49.9	50	+17 38.1	36	45	5 57	6 32	7 04	8 43	66	18	39	55
19	105	53.2		21.4	76	14.0	51	41.5	34	50	6 03	42	17	8 58	67	23	55	
20	120	53.3		22.1	90	38.2	52	44.9	34	52	06	47	24	9 05	68	16	54	
21	135	53.3		22.8	105	02.3	51	48.1	32	54	09	52	31	13	68	18	08	54
22	150	53.3		23.4	119	26.5	52	51.1	30	56	13	6 58	39	22	69	17	59	53
23	165	53.3		24.1	133	50.6	51	54.1	30	58	16	7 04	48	32	70	48	53	
24	180	53.4	+17	24.8	148	14.8	52	+17 56.9	28	60 S	6 20	7 11	7 58	9 43	72	17	37	51

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 8 ^h 53 ^m 5		Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: -1.7 PMG: 1 ^h 12 ^m			Mag: -2.3 PMG: 19 ^h 52 ^m			Mag: +0.1 PMG: 1 ^h 50 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	226	15.2	188	29.2	+13	44.2	341	55.1	-21	46.0	61	09.1	+7	50.6	332	22.1	-20	47.2	
1	241	17.6	203	28.7		45.2	356	58.3		46.0	76	11.6		50.6	347	24.8		47.2	
2	256	20.1	218	28.2		46.3	12	01.4		46.0	91	14.0		50.6	2	27.4		47.1	
3	271	22.6	233	27.6		47.3	27	04.6		46.0	106	16.5		50.6	17	30.0		47.1	
4	286	25.0	248	27.1		48.3	42	07.8		46.0	121	19.0		50.6	32	32.6		47.1	
5	301	27.5	263	26.6	+13	49.4	57	10.9	-21	46.0	136	21.5	+7	50.6	47	35.3	-20	47.1	
6	316	29.9	278	26.1	+13	50.4	72	14.1	-21	46.0	151	24.0	+7	50.6	62	37.9	-20	47.1	
7	331	32.4	293	25.6		51.4	87	17.2		46.0	166	26.4		50.6	77	40.5		47.0	
8	346	34.9	308	25.0		52.5	102	20.4		46.1	181	28.9		50.5	92	43.1		47.0	
9	1	37.3	323	24.5		53.5	117	23.6		46.1	196	31.4		50.5	107	45.8		47.0	
10	16	39.8	338	24.0		54.5	132	26.7		46.1	211	33.9		50.5	122	48.4		47.0	
11	31	42.3	353	23.5	+13	55.5	147	29.9	-21	46.1	226	36.3	+7	50.5	137	51.0	-20	47.0	
12	46	44.7	8	22.9	+13	56.6	162	33.1	-21	46.1	241	38.8	+7	50.5	152	53.7	-20	47.0	
13	61	47.2	23	22.4		57.6	177	36.2		46.1	256	41.3		50.5	167	56.3		46.9	
14	76	49.7	38	21.9		58.6	192	39.4		46.1	271	43.8		50.5	182	58.9		46.9	
15	91	52.1	53	21.4	+13	59.7	207	42.6		46.1	286	46.2		50.5	198	01.5		46.9	
16	106	54.6	68	20.8	+14	00.7	222	45.8		46.1	301	48.7		50.5	213	04.2		46.9	
17	121	57.1	83	20.3	+14	01.7	237	48.9	-21	46.1	316	51.2	+7	50.5	228	06.8	-20	46.9	
18	136	59.5	98	19.8	+14	02.7	252	52.1	-21	46.1	331	53.6	+7	50.5	243	09.4	-20	46.8	
19	152	02.0	113	19.3		03.7	267	55.3		46.2	346	56.1		50.5	258	12.1		46.8	
20	167	04.4	128	18.7		04.8	282	58.5		46.2	1	58.6		50.5	273	14.7		46.8	
21	182	06.9	143	18.2		05.8	298	01.6		46.2	17	01.1		50.5	288	17.3		46.8	
22	197	09.4	158	17.7		06.8	313	04.8		46.2	32	03.5		50.5	303	20.0		46.8	
23	212	11.8	173	17.1		07.8	328	08.0		46.2	47	06.0		50.5	318	22.6		46.8	
24	227	14.3	188	16.6	+14	08.9	343	11.2	-21	46.2	62	08.5	+7	50.5	333	25.2	-20	46.7	
Dif	—		-5			+10	+32			0	+25			0	+26				

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 4				Edad: 2 ^d 2 PHE { 4 ^h : 59/9 12 ^h : 59/7 20 ^h : 59/4 PMG: 14 ^h 42 ^m R°: 58 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	53.4	+17	24.8	148	14.8	+17	56.9	27	60 N	20	19	21	18	23	21	6	04
1	195	53.4		25.4	162	39.1	+17	59.6	27	58	20	06	20	59	22	25	17	56
2	210	53.4		26.1	177	03.3	+18	02.2	26	56	19	56		44	21	55	27	57
3	225	53.4		26.8	191	27.6		04.6	24	54	47		31		32		36	58
4	240	53.5		27.4	205	51.9		06.9	23	52	39		20		15		45	57
5	255	53.5	+17	28.1	220	16.2	+18	09.1	22	50	19	31	20	10	21	00	6	52
6	270	53.5	+17	28.7	234	40.6	+18	11.1	20	45	19	16	19	49	20	32	7	08
7	285	53.5		29.4	249	05.0		13.1	20	40	19	03		33	20	10	21	58
8	300	53.6		30.1	263	29.4		14.9	18	35	18	52		20	19	53	32	58
9	315	53.6		30.7	277	53.9		16.5	16	30	43		19	09	40		42	58
10	330	53.6		31.4	292	18.4		18.1	16	20	27		18	50	18		7	59
11	345	53.6	+17	32.0	306	42.9	+18	19.5	14	10 N	18	13	18	35	19	01	8	14
12	0	53.7	+17	32.7	321	07.5	+18	20.8	13	0	18	00	18	22	18	47	8	28
13	15	53.7		33.4	335	32.1		22.0	12	10 S	17	47	18	09	35		42	57
14	30	53.7		34.0	349	56.8		23.0	10	20	34		17	57	23		8	57
15	45	53.7		34.7	4	21.5		23.9	9	30	18		43		12		9	14
16	60	53.8		35.3	18	46.2		24.7	8	35	17	09		36	07		24	58
17	75	53.8	+17	36.0	33	11.0	+18	25.4	7	40	16	59	17	28	18	01	9	35
18	90	53.8	+17	36.6	47	35.9	+18	25.9	5	45	16	48	17	19	17	54	9	49
19	105	53.8		37.3	62	00.7		26.4	5	50	33		09		48		10	05
20	120	53.9		37.9	76	25.7		26.6	2	52	27		17	04	45		13	57
21	135	53.9		38.6	90	50.6		26.8	2	54	19		16	58	41		21	58
22	150	53.9		39.2	105	15.7		26.9	1	56	11		53		38		31	57
23	165	53.9		39.9	119	40.7		26.8	1	58	16	02		46	34		42	57
24	180	53.9	+17	40.6	134	05.9	+18	26.6	2	60 S	15	51	16	39	17	30	10	55
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 49 ^m 6		Mag: -3.9 PMG: 11 ^h 27 ^m				Mag: -1.7 PMG: 1 ^h 07 ^m				Mag: -2.2 PMG: 19 ^h 48 ^m				Mag: +0.1 PMG: 1 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	227	14.3	188	16.6	+14	08.9	343	11.2	-21	46.2	62	08.5	+7	50.5	333	25.2	-20	46.7
1	242	16.8	203	16.1		09.9	358	14.4		46.2	77	10.9		50.5	348	27.8		46.7
2	257	19.2	218	15.5		10.9	13	17.5		46.2	92	13.4		50.5	3	30.5		46.7
3	272	21.7	233	15.0		11.9	28	20.7		46.2	107	15.9		50.4	18	33.1		46.7
4	287	24.2	248	14.5		12.9	43	23.9		46.2	122	18.4		50.4	33	35.7		46.7
5	302	26.6	263	13.9	+14	13.9	58	27.1	-21	46.2	137	20.8	+7	50.4	48	38.4	-20	46.6
6	317	29.1	278	13.4	+14	15.0	73	30.3	-21	46.2	152	23.3	+7	50.4	63	41.0	-20	46.6
7	332	31.5	293	12.9		16.0	88	33.5		46.2	167	25.8		50.4	78	43.6		46.6
8	347	34.0	308	12.3		17.0	103	36.7		46.2	182	28.2		50.4	93	46.3		46.6
9	2	36.5	323	11.8		18.0	118	39.9		46.3	197	30.7		50.4	108	48.9		46.6
10	17	38.9	338	11.3		19.0	133	43.1		46.3	212	33.2		50.4	123	51.5		46.5
11	32	41.4	353	10.7	+14	20.0	148	46.2	-21	46.3	227	35.6	+7	50.4	138	54.1	-20	46.5
12	47	43.9	8	10.2	+14	21.0	163	49.4	-21	46.3	242	38.1	+7	50.4	153	56.8	-20	46.5
13	62	46.3	23	09.7		22.1	178	52.6		46.3	257	40.6		50.4	168	59.4		46.5
14	77	48.8	38	09.1		23.1	193	55.8		46.3	272	43.0		50.4	184	02.0		46.5
15	92	51.3	53	08.6		24.1	208	59.0		46.3	287	45.5		50.4	199	04.7		46.5
16	107	53.7	68	08.1		25.1	224	02.2		46.3	302	48.0		50.4	214	07.3		46.4
17	122	56.2	83	07.5	+14	26.1	239	05.4	-21	46.3	317	50.4	+7	50.3	229	09.9	-20	46.4
18	137	58.7	98	07.0	+14	27.1	254	08.6	-21	46.3	332	52.9	+7	50.3	244	12.6	-20	46.4
19	153	01.1	113	06.4		28.1	269	11.8		46.3	347	55.4		50.3	259	15.2		46.4
20	168	03.6	128	05.9		29.1	284	15.0		46.3	2	57.8		50.3	274	17.8		46.4
21	183	06.0	143	05.4		30.1	299	18.2		46.3	18	00.3		50.3	289	20.5		46.3
22	198	08.5	158	04.8		31.1	314	21.4		46.3	33	02.8		50.3	304	23.1		46.3
23	213	11.0	173	04.3		32.2	329	24.7		46.3	48	05.2		50.3	319	25.7		46.3
24	228	13.4	188	03.7	+14	33.2	344	27.9	-21	46.3	63	07.7	+7	50.3	334	28.3	-20	46.3
Dif	—		-5 +10		+32 0				+25 0				+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: 3 ^d 2	PHE { 4 ^h : 59 ^h 1 12 ^h : 58 ^h 7 20 ^h : 58 ^h 4 R ^o : 54 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	53.9	+17 40.6	134	05.9	+18 26.6	3	60 N	0 31	2 34	3 34	7 01	66	***	***
1	195	54.0	41.2	148	31.0	26.3	61	58	1 27	2 53	46	13	65	***	***
2	210	54.0	41.9	162	56.3	25.9	63	56	1 58	3 08	3 56	24	64	23	50
3	225	54.0	42.5	177	21.6	25.3	63	54	2 20	21	4 05	34	63	41	44
4	240	54.0	43.2	191	46.9	24.6	63	52	37	33	14	42	63	33	44
5	255	54.0	+17 43.8	206	12.3	+18 23.9	7	50	2 52	3 43	4 21	7 50	62	23	26
6	270	54.1	+17 44.5	220	37.8	+18 22.9	10	45	3 21	4 03	4 37	8 06	61	23	11
7	285	54.1	45.1	235	03.3	21.9	10	40	42	19	4 49	19	60	22	58
8	300	54.1	45.7	249	28.8	20.8	11	35	3 59	33	5 00	30	60	47	48
9	315	54.1	46.4	263	54.5	19.5	13	30	4 13	4 44	10	40	59	37	50
10	330	54.1	47.0	278	20.2	18.1	14	20	35	5 02	26	8 57	58	21	51
11	345	54.2	+17 47.7	292	45.9	+18 16.7	14	10 N	4 52	5 18	5 40	9 12	57	22	06
12	0	54.2	+17 48.3	307	11.8	+18 15.0	17	0	5 06	5 31	5 53	9 26	56	21	53
13	15	54.2	49.0	321	37.6	13.3	17	10 S	18	44	6 06	40	55	39	56
14	30	54.2	49.6	336	03.6	11.5	18	20	30	5 56	19	9 55	53	25	57
15	45	54.2	50.3	350	29.6	09.6	19	30	41	6 10	35	10 12	52	21	08
16	60	54.3	50.9	4	55.7	07.5	21	35	47	17	44	22	51	20	58
17	75	54.3	+17 51.6	19	21.8	+18 05.3	22	40	5 53	6 25	6 54	10 33	51	20	47
18	90	54.3	+17 52.2	33	48.1	+18 03.1	22	45	5 59	6 34	7 06	10 47	49	20	34
19	105	54.3	52.8	48	14.3	+18 00.7	24	50	6 06	45	20	11 03	48	18	64
20	120	54.3	53.5	62	40.7	+17 58.2	25	52	09	50	27	10	48	11	64
21	135	54.3	54.1	77	07.1	55.6	26	54	12	6 55	34	19	47	20	02
22	150	54.4	54.8	91	33.6	52.9	27	56	16	7 01	43	28	46	19	53
23	165	54.4	55.4	106	00.2	50.1	28	58	19	07	7 52	39	45	42	68
24	180	54.4	+17 56.0	120	26.8	+17 47.2	29	60 S	6 23	7 15	8 03	11 52	43	19	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 45 ^m 7		Mag: -3.9 PMG: 11 ^h 28 ^m		Mag: -1.8 PMG: 1 ^h 02 ^m		Mag: -2.2 PMG: 19 ^h 44 ^m		Mag: +0.1 PMG: 1 ^h 42 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	228	13.4	188	03.7	+14 33.2	344	27.9	-21 46.3	63	07.7	+7 50.3	334	28.3	-20 46.3	
1	243	15.9	203	03.2	34.2	359	31.1	46.3	78	10.2	50.3	349	31.0	46.3	
2	258	18.4	218	02.7	35.2	14	34.3	46.3	93	12.6	50.3	4	33.6	46.3	
3	273	20.8	233	02.1	36.2	29	37.5	46.3	108	15.1	50.3	19	36.2	46.2	
4	288	23.3	248	01.6	37.2	44	40.7	46.3	123	17.6	50.2	34	38.9	46.2	
5	303	25.8	263	01.0	+14 38.2	59	43.9	-21 46.3	138	20.0	+7 50.2	49	41.5	-20 46.2	
6	318	28.2	278	00.5	+14 39.2	74	47.1	-21 46.3	153	22.5	+7 50.2	64	44.1	-20 46.2	
7	333	30.7	293	00.0	40.2	89	50.4	46.3	168	24.9	50.2	79	46.8	46.2	
8	348	33.2	307	59.4	41.2	104	53.6	46.3	183	27.4	50.2	94	49.4	46.1	
9	3	35.6	322	58.9	42.2	119	56.8	46.3	198	29.9	50.2	109	52.0	46.1	
10	18	38.1	337	58.3	43.2	135	00.0	46.3	213	32.3	50.2	124	54.7	46.1	
11	33	40.5	352	57.8	+14 44.2	150	03.2	-21 46.3	228	34.8	+7 50.2	139	57.3	-20 46.1	
12	48	43.0	7	57.2	+14 45.2	165	06.4	-21 46.3	243	37.2	+7 50.2	154	59.9	-20 46.1	
13	63	45.5	22	56.7	46.2	180	09.7	46.3	258	39.7	50.2	170	02.6	46.1	
14	78	47.9	37	56.1	47.2	195	12.9	46.3	273	42.2	50.1	185	05.2	46.0	
15	93	50.4	52	55.6	48.2	210	16.1	46.3	288	44.6	50.1	200	07.8	46.0	
16	108	52.9	67	55.0	49.2	225	19.3	46.3	303	47.1	50.1	215	10.5	46.0	
17	123	55.3	82	54.5	+14 50.2	240	22.6	-21 46.3	318	49.5	+7 50.1	230	13.1	-20 46.0	
18	138	57.8	97	53.9	+14 51.1	255	25.8	-21 46.3	333	52.0	+7 50.1	245	15.7	-20 46.0	
19	154	00.3	112	53.4	52.1	270	29.0	46.3	348	54.5	50.1	260	18.4	45.9	
20	169	02.7	127	52.8	53.1	285	32.2	46.3	3	56.9	50.1	275	21.0	45.9	
21	184	05.2	142	52.3	54.1	300	35.5	46.3	18	59.4	50.1	290	23.6	45.9	
22	199	07.7	157	51.7	55.1	315	38.7	46.3	34	01.8	50.0	305	26.3	45.9	
23	214	10.1	172	51.2	56.1	330	41.9	46.3	49	04.3	50.0	320	28.9	45.9	
24	229	12.6	187	50.6	+14 57.1	345	45.2	-21 46.3	64	06.7	+7 50.0	335	31.5	-20 45.8	
Dif	—		-5	+10		+32	0		+25		0	+26			0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 4 ^d 2	PHE { 4 ^h : 58 ^m /12 ^h : 57 ^m /8 20 ^h : 57 ^m /5	SD: 15 ^h 9			SD: 15 ^h 9		R°: 52 ^m				
	PMG: 11 ^h 56 ^m 4					PMG: 16 ^h 34 ^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	54.4	+17 56.0	120	26.8	+17 47.2	30	60 N	20 23	21 24	** **	8 07 71		0 12 38	
1	195	54.4	56.7	134	53.5	77 44.2	30	58	11	21 05	22 35	18 69		0 00 40	
2	210	54.4	57.3	149	20.3	78 41.0	32	56	20 00	20 49	22 02	28 68	** ** *	** ** *	
3	225	54.4	58.0	163	47.1	78 37.8	32	54	19 50	35	21 38	37 66	** ** *	** ** *	
4	240	54.4	58.6	178	14.0	79 34.5	33	52	42	23	20	45 65	** ** *	** ** *	
5	255	54.5	+17 59.2	192	41.0	80 +17 31.1	34	50	19 34	20 13	21 04	8 52 64	** ** *	** ** *	
6	270	54.5	+17 59.9	207	08.1	81 +17 27.5	36	45	19 18	19 52	20 35	9 07 62		23 56 40	
7	285	54.5	+18 00.5	221	35.2	81 23.9	36	40	19 05	35	20 13	19 61		45 41	
8	300	54.5	01.1	236	02.5	83 20.2	37	35	18 54	22	19 55	30 59		35 43	
9	315	54.5	01.8	250	29.7	82 16.4	38	30	44	19 10	41	39 58		27 44	
10	330	54.5	02.4	264	57.1	84 12.5	39	20	28	18 51	19	9 55 56		23 12 47	
11	345	54.5	+18 03.0	279	24.6	85 +17 08.5	40	10 N	18 13	18 35	19 01	10 09 54		22 59 49	
12	0	54.6	+18 03.7	293	52.1	85 +17 04.4	41	0	18 00	18 22	18 47	10 22 52		22 47 51	
13	15	54.6	04.3	308	19.7	86 +17 00.2	42	10 S	17 47	18 09	34	35 50		35 53	
14	30	54.6	04.9	322	47.3	86 +16 55.9	43	20	33	17 56	22	10 48 49		22 55	
15	45	54.6	05.6	337	15.1	88 51.5	44	30	17	42	11	11 04 47		22 07 57	
16	60	54.6	06.2	351	42.9	88 47.0	45	35	17 08	35	18 05	13 46		21 58 59	
17	75	54.6	+18 06.8	6	10.8	89 +16 42.5	45	40	16 57	17 26	17 59	11 24 44		21 48 60	
18	90	54.6	+18 07.5	20	38.8	90 +16 37.8	47	45	16 45	17 17	17 52	11 36 42		21 36 63	
19	105	54.6	08.1	35	06.8	90 33.1	47	50	31	06	45	51 40		22 65	
20	120	54.6	08.7	49	34.9	91 28.3	48	52	24	17 01	42	11 58 39		15 66	
21	135	54.7	09.3	64	03.1	92 23.3	50	54	16	16 55	38	12 06 37		21 08 67	
22	150	54.7	10.0	78	31.4	93 18.3	50	56	16 07	49	35	14 37		20 59 69	
23	165	54.7	10.6	92	59.8	94 13.3	50	58	15 58	43	31	24 35		50 71	
24	180	54.7	+18 11.2	107	28.2	94 +16 08.1	52	60 S	15 47	16 35	17 27	12 35 33		20 39 73	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 41 ^m 7			Mag: -3.9 PMG: 11 ^h 29 ^m			Mag: -1.8 PMG: 0 ^h 57 ^m			Mag: -2.2 PMG: 19 ^h 40 ^m			Mag: +0.1 PMG: 1 ^h 38 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	229	12.6	187 50.6	+14 57.1	345 45.2	-21 46.3	64 06.7	+7 50.0	335 31.5	-20 45.8					
1	244	15.0	202 50.1	58.1	0 48.4	46.3	79 09.2	50.0	350 34.2	45.8					
2	259	17.5	217 49.5	+14 59.1	15 51.6	46.3	94 11.7	50.0	5 36.8	45.8					
3	274	20.0	232 49.0	+15 00.1	30 54.9	46.3	109 14.1	50.0	20 39.4	45.8					
4	289	22.4	247 48.4	01.1	45 58.1	46.3	124 16.6	50.0	35 42.1	45.8					
5	304	24.9	262 47.9	+15 02.0	61 01.4	-21 46.3	139 19.0	+7 50.0	50 44.7	-20 45.8					
6	319	27.4	277 47.3	+15 03.0	76 04.6	-21 46.3	154 21.5	+7 49.9	65 47.4	-20 45.7					
7	334	29.8	292 46.8	04.0	91 07.8	46.3	169 23.9	49.9	80 50.0	45.7					
8	349	32.3	307 46.2	05.0	106 11.1	46.3	184 26.4	49.9	95 52.6	45.7					
9	4	34.8	322 45.7	06.0	121 14.3	46.3	199 28.8	49.9	110 55.3	45.7					
10	19	37.2	337 45.1	07.0	136 17.6	46.3	214 31.3	49.9	125 57.9	45.7					
11	34	39.7	352 44.6	+15 08.0	151 20.8	-21 46.3	229 33.8	+7 49.9	141 00.5	-20 45.6					
12	49	42.2	7 44.0	+15 08.9	166 24.1	-21 46.3	244 36.2	+7 49.9	156 03.2	-20 45.6					
13	64	44.6	22 43.4	09.9	181 27.3	46.3	259 38.7	49.9	171 05.8	45.6					
14	79	47.1	37 42.9	10.9	196 30.5	46.3	274 41.1	49.8	186 08.4	45.6					
15	94	49.5	52 42.3	11.9	211 33.8	46.3	289 43.6	49.8	201 11.1	45.6					
16	109	52.0	67 41.8	12.9	226 37.0	46.3	304 46.0	49.8	216 13.7	45.5					
17	124	54.5	82 41.2	+15 13.8	241 40.3	-21 46.3	319 48.5	+7 49.8	231 16.3	-20 45.5					
18	139	56.9	97 40.6	+15 14.8	256 43.5	-21 46.3	334 50.9	+7 49.8	246 19.0	-20 45.5					
19	154	59.4	112 40.1	15.8	271 46.8	46.3	349 53.4	49.8	261 21.6	45.5					
20	170	01.9	127 39.5	16.8	286 50.0	46.3	4	55.8	276 24.2	45.5					
21	185	04.3	142 39.0	17.7	301 53.3	46.3	19 58.3	49.7	291 26.9	45.5					
22	200	06.8	157 38.4	18.7	316 56.6	46.3	35 00.7	49.7	306 29.5	45.4					
23	215	09.3	172 37.8	19.7	331 59.8	46.2	50 03.2	49.7	321 32.2	45.4					
24	230	11.7	187 37.3	+15 20.7	347 03.1	-21 46.2	65 05.6	+7 49.7	336 34.8	-20 45.4					
Dif	—	—	-6	+10	+32	0	+25	0	+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 3				Edad: 5 ^d 2 PHE { SD: 15 ^h 6 PMG: 17 ^h 26 ^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		
0	180	54.7	+18	11.2	107	28.2	+16	08.1	52	58	60 N	**	**	2	28	3	29	9	18	73	0	50	29
1	195	54.7		11.9	121	56.7	95	+16	02.9	52	58	1	17	2	47	41		27	71		40	31	
2	210	54.7		12.5	136	25.3	96	+15	57.5	54	56	1	50	3	03	3	52	36	69		31	33	
3	225	54.7		13.1	150	54.0	97		52.1	54	54	2	14		17	4	02	43	68		24	34	
4	240	54.7		13.7	165	22.7	97		46.6	55	52		33		29	10		50	66		17	35	
5	255	54.7	+18	14.4	179	51.6	99	+15	41.1	55	50	2	48	3	39	4	18	9	56	65	0	10	37
6	270	54.7	+18	15.0	194	20.5	99	+15	35.4	57	45	3	18	4	00	4	34	10	09	62	**	**	**
7	285	54.8		15.6	208	49.4	99		29.7	57	40		40		17	47		20	60		**	**	**
8	300	54.8		16.2	223	18.5	101		23.9	58	35	3	57		31	4	59	29	58		**	**	**
9	315	54.8		16.8	237	47.6	101		18.0	59	30	4	11	4	42	5	08	37	56		**	**	**
10	330	54.8		17.5	252	16.8	102		12.1	59	20		34		5	01	25	10	51	53	23	59	43
11	345	54.8	+18	18.1	266	46.1	103	+15	06.1	60	10 N	4	51	5	17	5	39	11	03	51	23	48	46
12	0	54.8	+18	18.7	281	15.4	103	+15	00.0	61	0	5	06	5	31	5	53	11	14	49	23	38	48
13	15	54.8		19.3	295	44.9	105	+14	53.8	62	10 S		19		44	6	06	25	47		28	50	
14	30	54.8		19.9	310	14.4	105		47.6	62	20		30		5	57	20	37	45		17	52	
15	45	54.8		20.6	324	44.0	106		41.3	63	30		42		6	11	36	51	42		23	04	56
16	60	54.8		21.2	339	13.6	106		34.9	64	35		48		19	45		11	59	40	22	57	57
17	75	54.8	+18	21.8	353	43.3	107	+14	28.5	64	40	5	54	6	27	6	56	12	08	38	22	48	60
18	90	54.8	+18	22.4	8	13.2	109	+14	22.0	65	45	6	01	6	36	7	08	12	18	37	22	39	61
19	105	54.8		23.0	22	43.0	108		15.4	66	50		08		48	23		31	34		27	65	
20	120	54.8		23.6	37	13.0	110		08.8	66	52		12		53	30		37	32		21	66	
21	135	54.8		24.3	51	43.0	110	+14	02.1	67	54		15	6	58	38		43	31		15	68	
22	150	54.8		24.9	66	13.1	111	+13	55.3	68	56		19	7	04	46		51	29		08	70	
23	165	54.9		25.5	80	43.3	112		48.5	68	58		23		11	7	56	12	59	27	22	01	71
24	180	54.9	+18	26.1	95	13.5	112	+13	41.6	69	60 S	6	27	7	19	8	07	13	08	25	21	52	74

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 37 ^m 8		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: -1.8 PMG: 0 ^h 52 ^m			Mag: -2.2 PMG: 19 ^h 36 ^m			Mag: +0.1 PMG: 1 ^h 33 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	230	11.7	187	37.3	+15	20.7	347	03.1	-21	46.2	65	05.6	+7	49.7	336	34.8	-20	45.4
1	245	14.2	202	36.7		21.6	2	06.3		46.2	80	08.1		49.7	351	37.4		45.4
2	260	16.6	217	36.2		22.6	17	09.6		46.2	95	10.5		49.7	6	40.1		45.4
3	275	19.1	232	35.6		23.6	32	12.8		46.2	110	13.0		49.7	21	42.7		45.3
4	290	21.6	247	35.0		24.6	47	16.1		46.2	125	15.4		49.6	36	45.3		45.3
5	305	24.0	262	34.5	+15	25.5	62	19.4	-21	46.2	140	17.9	+7	49.6	51	48.0	-20	45.3
6	320	26.5	277	33.9	+15	26.5	77	22.6	-21	46.2	155	20.3	+7	49.6	66	50.6	-20	45.3
7	335	29.0	292	33.3		27.5	92	25.9		46.2	170	22.8		49.6	81	53.2		45.3
8	350	31.4	307	32.8		28.5	107	29.2		46.2	185	25.2		49.6	96	55.9		45.2
9	5	33.9	322	32.2		29.4	122	32.4		46.2	200	27.7		49.6	111	58.5		45.2
10	20	36.4	337	31.6		30.4	137	35.7		46.2	215	30.1		49.5	127	01.2		45.2
11	35	38.8	352	31.1	+15	31.4	152	39.0	-21	46.2	230	32.6	+7	49.5	142	03.8	-20	45.2
12	50	41.3	7	30.5	+15	32.3	167	42.2	-21	46.2	245	35.0	+7	49.5	157	06.4	-20	45.2
13	65	43.8	22	29.9		33.3	182	45.5		46.1	260	37.4		49.5	172	09.1		45.2
14	80	46.2	37	29.4		34.3	197	48.8		46.1	275	39.9		49.5	187	11.7		45.1
15	95	48.7	52	28.8		35.2	212	52.0		46.1	290	42.3		49.5	202	14.3		45.1
16	110	51.1	67	28.2		36.2	227	55.3		46.1	305	44.8		49.4	217	17.0		45.1
17	125	53.6	82	27.7	+15	37.1	242	58.6	-21	46.1	320	47.2	+7	49.4	232	19.6	-20	45.1
18	140	56.1	97	27.1	+15	38.1	258	01.9	-21	46.1	335	49.7	+7	49.4	247	22.3	-20	45.1
19	155	58.5	112	26.5		39.1	273	05.1		46.1	350	52.1		49.4	262	24.9		45.0
20	171	01.0	127	26.0		40.0	288	08.4		46.1	5	54.6		49.4	277	27.5		45.0
21	186	03.5	142	25.4		41.0	303	11.7		46.1	20	57.0		49.4	292	30.2		45.0
22	201	05.9	157	24.8		42.0	318	15.0		46.1	35	59.4		49.3	307	32.8		45.0
23	216	08.4	172	24.2		42.9	333	18.2		46.1	51	01.9		49.3	322	35.5		45.0
24	231	10.9	187	23.7	+15	43.9	348	21.5	-21	46.0	66	04.3	+7	49.3	337	38.1	-20	44.9
Dif	—		-6			+10	+33			0	+24			0	+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 3			Edad: 6 ^d 2 SD: 15 ^h 4 PMG: 18 ^h 14 ^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	54.9	+18 26.1	95	13.5	+13 41.6	69	60 N	20 28	21 31	** **	10 31 73	1 19 23	
1	195	54.9	26.7	109	43.8 ¹¹³	34.7	71	58	15	21 10	22 47	38 71	11 25	
2	210	54.9	27.3	124	14.2 ¹¹⁴	27.6	70	56	20 04	20 53	22 09	45 69	1 04 27	
3	225	54.9	27.9	138	44.7 ¹¹⁵	20.6	71	54	19 54	39	21 44	51 67	0 58 27	
4	240	54.9	28.6	153	15.2 ¹¹⁵	13.5	71	52	45	27	25	10 56 66	52 30	
5	255	54.9	+18 29.2	167	45.8 ¹¹⁶	+13 06.3	72	50	19 37	20 16	21 08	11 01 64	0 47 31	
6	270	54.9	+18 29.8	182	16.5 ¹¹⁷	+12 59.0	73	45	19 20	19 55	20 38	11 11 61	0 36 34	
7	285	54.9	30.4	196	47.2 ¹¹⁷	51.7	73	40	19 07	37	20 15	20 58	26 37	
8	300	54.9	31.0	211	18.0 ¹¹⁸	44.4	73	35	18 55	23	19 57	27 57	18 39	
9	315	54.9	31.6	225	48.9 ¹¹⁹	37.0	74	30	45	19 11	43	33 55	0 11 40	
10	330	54.9	32.2	240	19.8 ¹¹⁹	29.5	75	20	28	18 52	20	44 52	** ** *	
11	345	54.9	+18 32.8	254	50.8 ¹²⁰	+12 22.0	75	10 N	18 14	18 36	19 02	11 54 49	** ** *	
12	0	54.9	+18 33.4	269	21.9 ¹²¹	+12 14.5	75	0	18 00	18 22	18 47	12 03 47	** ** *	
13	15	54.9	34.0	283	53.0 ¹²¹	+12 06.9	76	10 S	17 46	18 08	34	12 44	** ** *	
14	30	54.9	34.6	298	24.2 ¹²²	+11 59.2	77	20	32	17 55	22	22 41	** ** *	
15	45	54.9	35.3	312	55.5 ¹²³	51.5	77	30	16	41	10	33 38	** ** *	
16	60	54.9	35.9	327	26.8 ¹²³	43.8	77	35	17 06	33	18 04	39 36	23 54 56	
17	75	54.9	+18 36.5	341	58.2 ¹²⁴	+11 36.0	78	40	16 55	17 24	17 57	12 46 34	23 48 58	
18	90	54.9	+18 37.1	356	29.7 ¹²⁵	+11 28.1	79	45	16 43	17 15	17 50	12 55 31	23 40 61	
19	105	54.9	37.7	11	01.2 ¹²⁵	20.2	79	50	28	17 03	43	13 05 28	32 63	
20	120	54.9	38.3	25	32.8 ¹²⁶	12.3	79	52	21	16 58	39	09 28	27 66	
21	135	54.9	38.9	40	04.5 ¹²⁷	+11 04.3	80	54	13	52	36	14 26	23 67	
22	150	54.9	39.5	54	36.2 ¹²⁷	+10 56.3	80	56	16 04	46	32	20 24	18 68	
23	165	54.9	40.1	69	07.9 ¹²⁷	48.2	81	58	15 54	39	28	26 23	12 71	
24	180	54.9	+18 40.7	83	39.8 ¹²⁹	+10 40.1	81	60 S	15 42	16 31	17 23	13 33 21	23 06 73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 33 ^m 9		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: -1.8 PMG: 0 ^h 46 ^m		Mag: -2.2 PMG: 19 ^h 33 ^m		Mag: +0.1 PMG: 1 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	231	10.9	187 23.7	+15 43.9	348 21.5	-21 46.0	66 04.3	+7 49.3	337 38.1	-20 44.9
1	246	13.3	202 23.1	44.8	3 24.8	46.0	81 06.8	49.3	352 40.7	44.9
2	261	15.8	217 22.5	45.8	18 28.1	46.0	96 09.2	49.3	7 43.4	44.9
3	276	18.3	232 21.9	46.7	33 31.4	46.0	111 11.7	49.2	22 46.0	44.9
4	291	20.7	247 21.4	47.7	48 34.6	46.0	126 14.1	49.2	37 48.6	44.9
5	306	23.2	262 20.8	+15 48.7	63 37.9	-21 46.0	141 16.5	+7 49.2	52 51.3	-20 44.9
6	321	25.6	277 20.2	+15 49.6	78 41.2	-21 46.0	156 19.0	+7 49.2	67 53.9	-20 44.8
7	336	28.1	292 19.6	50.6	93 44.5	46.0	171 21.4	49.2	82 56.6	44.8
8	351	30.6	307 19.1	51.5	108 47.8	46.0	186 23.9	49.2	97 59.2	44.8
9	6 33.0	322 18.5	52.5	123 51.1	45.9	201 26.3	49.1	113 01.8	44.8	
10	21 35.5	337 17.9	53.4	138 54.4	45.9	216 28.7	49.1	128 04.5	44.8	
11	36 38.0	352 17.3	+15 54.4	153 57.7	-21 45.9	231 31.2	+7 49.1	143 07.1	-20 44.7	
12	51 40.4	7 16.8	+15 55.3	169 00.9	-21 45.9	246 33.6	+7 49.1	158 09.8	-20 44.7	
13	66 42.9	22 16.2	56.3	184 04.2	45.9	261 36.1	49.1	173 12.4	44.7	
14	81 45.4	37 15.6	57.2	199 07.5	45.9	276 38.5	49.0	188 15.0	44.7	
15	96 47.8	52 15.0	58.2	214 10.8	45.9	291 40.9	49.0	203 17.7	44.7	
16	111 50.3	67 14.4	+15 59.1	229 14.1	45.9	306 43.4	49.0	218 20.3	44.6	
17	126 52.7	82 13.9	+16 00.1	244 17.4	-21 45.8	321 45.8	+7 49.0	233 23.0	-20 44.6	
18	141 55.2	97 13.3	+16 01.0	259 20.7	-21 45.8	336 48.3	+7 49.0	248 25.6	-20 44.6	
19	156 57.7	112 12.7	02.0	274 24.0	45.8	351 50.7	48.9	263 28.2	44.6	
20	172 00.1	127 12.1	02.9	289 27.3	45.8	6 53.1	48.9	278 30.9	44.6	
21	187 02.6	142 11.5	03.8	304 30.6	45.8	21 55.6	48.9	293 33.5	44.5	
22	202 05.1	157 10.9	04.8	319 33.9	45.8	36 58.0	48.9	308 36.2	44.5	
23	217 07.5	172 10.4	05.7	334 37.2	45.8	52 00.4	48.9	323 38.8	44.5	
24	232 10.0	187 09.8	+16 06.7	349 40.5	-21 45.7	67 02.9	+7 48.8	338 41.4	-20 44.5	
Dif	—		-6	+10	+33	0	+24	0	+26	0

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: 7 ^d 2 PHE { SD: 15/2 PMG: 19 ^h 00 ^m R°: 44 ^m 4 ^h : 55/6 12 ^h : 55/3 20 ^h : 55/1																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	54.9	+18	40.7	83	39.8	+10	40.1	60 N	**	**	2	21	3	24	11	44	72			
1	195	54.9		41.3	98	11.6 ¹²⁸		31.9	58	1	05	42	37		49	70	36	21			
2	210	54.9		41.9	112	43.6 ¹³⁰		23.7	56	1	43	2	59	48		54	68	31	23		
3	225	54.9		42.5	127	15.6 ¹³⁰		15.5	54	2	08	3	13	3	58	11	58	66	26	25	
4	240	54.9		43.1	141	47.7 ¹³¹	+10	07.2	52	28	25	4	07		12	02	64	22	26		
5	255	54.9	+18	43.7	156	19.8 ¹³¹	+9	58.9	50	2	44	3	36	4	15	12	05	63	1	18	27
6	270	54.9	+18	44.3	170	51.9 ¹³¹	+9	50.6	45	3	14	3	58	4	32	12	12	60	1	10	30
7	285	54.9		44.9	185	24.2 ¹³³		42.2	40	37	4	15	45		18	58	1	03	32		
8	300	54.9		45.5	199	56.4 ¹³²		33.8	35	3	55	29	4	57	24	55	0	57	34		
9	315	54.9		46.1	214	28.8 ¹³⁴		25.3	30	4	10	4	41	5	07	28	53	51	37		
10	330	54.9		46.7	229	01.2 ¹³⁴		16.8	20	33	5	01	24		36	50	42	40			
11	345	54.9	+18	47.2	243	33.6 ¹³⁴	+9	08.3	10 N	4	51	5	17	5	39	12	43	47	0	34	42
12	0	54.8	+18	47.8	258	06.1 ¹³⁵	+8	59.7	0	5	06	5	31	5	53	12	50	44	0	26	45
13	15	54.8		48.4	272	38.6 ¹³⁵		51.1	10 S	19		44	6	06	12	56	42	18	48		
14	30	54.8		49.0	287	11.2 ¹³⁶		42.5	20	31	5	58	21		13	03	39	09	51		
15	45	54.8		49.6	301	43.9 ¹³⁷		33.9	30	43	6	12	37		11	35	0	00	54		
16	60	54.8		50.2	316	16.6 ¹³⁷		25.2	35	49	20	47			15	34	**	**	**		
17	75	54.8	+18	50.8	330	49.3 ¹³⁷	+8	16.5	40	5	56	6	29	6	58	13	20	32	**	**	**
18	90	54.8	+18	51.4	345	22.1 ¹³⁸	+8	07.7	45	6	03	6	39	7	10	13	26	29	**	**	**
19	105	54.8		52.0	359	54.9 ¹³⁸	+7	58.9	50	11		50	26		33	26	**	**	**		
20	120	54.8		52.6	14	27.8 ¹³⁹		50.2	52	14	6	55	33		37	24	**	**	**		
21	135	54.8		53.2	29	00.8 ¹⁴⁰		41.3	54	18	7	01	41		40	23	**	**	**		
22	150	54.8		53.8	43	33.7 ¹³⁹		32.5	56	22		08	7	50	44	22	**	**	**		
23	165	54.8		54.3	58	06.7 ¹⁴⁰		23.6	58	26	15		8	00	49	19	**	**	**		
24	180	54.8	+18	54.9	72	39.8 ¹⁴¹	+7	14.7	60 S	6	31	7	23	8	12	13	54	17	**	**	**
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 8 ^h 29 ^m 9		Mag: -3.9 PMG: 11 ^h 32 ^m				Mag: -1.9 PMG: 0 ^h 41 ^m				Mag: -2.2 PMG: 19 ^h 29 ^m				Mag: +0.1 PMG: 1 ^h 25 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	232	10.0	187	09.8	+16	06.7		349	40.5	-21	45.7		67	02.9	+7	48.8	338	41.4	-20	44.5	
1	247	12.5	202	09.2		07.6		4	43.8		45.7		82	05.3		48.8	353	44.1		44.5	
2	262	14.9	217	08.6		08.6		19	47.1		45.7		97	07.7		48.8	8	46.7		44.5	
3	277	17.4	232	08.0		09.5		34	50.4		45.7		112	10.2		48.8	23	49.4		44.4	
4	292	19.9	247	07.4		10.4		49	53.7		45.7		127	12.6		48.7	38	52.0		44.4	
5	307	22.3	262	06.9	+16	11.4		64	57.0	-21	45.7		142	15.0	+7	48.7	53	54.6	-20	44.4	
6	322	24.8	277	06.3	+16	12.3		80	00.3	-21	45.6		157	17.5	+7	48.7	68	57.3	-20	44.4	
7	337	27.2	292	05.7		13.2		95	03.6		45.6		172	19.9		48.7	83	59.9		44.4	
8	352	29.7	307	05.1		14.2		110	06.9		45.6		187	22.3		48.7	99	02.6		44.3	
9	7	32.2	322	04.5		15.1		125	10.2		45.6		202	24.8		48.6	114	05.2		44.3	
10	22	34.6	337	03.9		16.1		140	13.5		45.6		217	27.2		48.6	129	07.8		44.3	
11	37	37.1	352	03.3	+16	17.0		155	16.9	-21	45.6		232	29.6	+7	48.6	144	10.5	-20	44.3	
12	52	39.6	7	02.7	+16	17.9		170	20.2	-21	45.5		247	32.1	+7	48.6	159	13.1	-20	44.3	
13	67	42.0	22	02.1		18.9		185	23.5		45.5		262	34.5		48.5	174	15.8		44.2	
14	82	44.5	37	01.6		19.8		200	26.8		45.5		277	36.9		48.5	189	18.4		44.2	
15	97	47.0	52	01.0		20.7		215	30.1		45.5		292	39.4		48.5	204	21.1		44.2	
16	112	49.4	67	00.4		21.6		230	33.4		45.5		307	41.8		48.5	219	23.7		44.2	
17	127	51.9	81	59.8	+16	22.6		245	36.7	-21	45.5		322	44.2	+7	48.5	234	26.3	-20	44.2	
18	142	54.4	96	59.2	+16	23.5		260	40.0	-21	45.4		337	46.7	+7	48.4	249	29.0	-20	44.1	
19	157	56.8	111	58.6		24.4		275	43.4		45.4		352	49.1		48.4	264	31.6		44.1	
20	172	59.3	126	58.0		25.4		290	46.7		45.4		7	51.5		48.4	279	34.3		44.1	
21	188	01.7	141	57.4		26.3		305	50.0		45.4		22	54.0		48.4	294	36.9		44.1	
22	203	04.2	156	56.8		27.2		320	53.3		45.4		37	56.4		48.3	309	39.5		44.1	
23	218	06.7	171	56.2		28.1		335	56.6		45.3		52	58.8		48.3	324	42.2		44.0	
24	233	09.1	186	55.6	+16	29.1		350	59.9	-21	45.3		68	01.2	+7	48.3	339	44.8	-20	44.0	
Dif	—		-6		+9		+33		0		+24		0		+26		0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 8 ^d 2	PHE {	4 ^h : 55 ^h 0 12 ^h : 54 ^h 8 20 ^h : 54 ^h 6 R°: 43 ^m								
	PMG: 11 ^h 56 ^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
0	180	54.8	+18 54.9	72	39.8	+7 14.7	89	60 N	20 33	21 37	** **	12 56 71	2 01 16	
1	195	54.8		87	12.9 ¹⁴¹	+7 05.8	89	58	19	21 15	23 01	12 59 69	1 57 19	
2	210	54.8		101	46.0 ¹⁴¹	+6 56.8	90	56	20 07	20 58	22 17	13 02 67	54 20	
3	225	54.8		116	19.2 ¹⁴²	47.8	90	54	19 57	43	21 50	04 65	51 22	
4	240	54.7		130	52.5 ¹⁴³	38.8	90	52	48	31	29	06 64	48 24	
5	255	54.7	+18 57.9	145	25.7 ¹⁴²	+6 29.8	90	50	19 40	20 20	21 13	13 08 62	1 45 25	
6	270	54.7	+18 58.4	159	59.0 ¹⁴³	+6 20.8	90	45	19 23	19 57	20 41	13 12 59	1 40 28	
7	285	54.7		174	32.4 ¹⁴⁴	11.7	91	40	19 09	40	20 18	16 56	35 31	
8	300	54.7	+18 59.6	189	05.8 ¹⁴⁴	+6 02.6	91	35	18 57	25	19 59	19 54	31 33	
9	315	54.7	+19 00.2	203	39.2 ¹⁴⁴	+5 53.5	91	30	47	19 13	44	21 53	28 34	
10	330	54.7		218	12.6 ¹⁴⁴	44.4	91	20	29	18 53	21	26 49	22 38	
11	345	54.7	+19 01.4	232	46.1 ¹⁴⁵	+5 35.3	91	10 N	18 14	18 36	19 02	13 30 46	1 16 41	
12	0	54.7	+19 01.9	247	19.6 ¹⁴⁵	+5 26.1	92	0	18 00	18 22	18 47	13 34 43	1 11 44	
13	15	54.7		261	53.2 ¹⁴⁶	17.0	91	10 S	17 46	18 08	34	38 40	06 46	
14	30	54.6		276	26.8 ¹⁴⁶	+5 07.8	92	20	31	17 54	21	42 37	1 00 50	
15	45	54.6		291	00.4 ¹⁴⁶	+4 58.6	92	30	14	40	09	46 34	0 54 53	
16	60	54.6		305	34.1 ¹⁴⁷	49.3	93	35	17 05	32	18 02	49 32	50 55	
17	75	54.6	+19 04.8	320	07.7 ¹⁴⁶	+4 40.1	92	40	16 54	17 23	17 56	13 52 30	0 46 57	
18	90	54.6	+19 05.4	334	41.5 ¹⁴⁸	+4 30.9	92	45	16 41	17 13	17 48	13 55 27	0 41 60	
19	105	54.6		349	15.2 ¹⁴⁷	21.6	93	50	25	17 01	40	13 59 25	35 63	
20	120	54.6		3	49.0 ¹⁴⁸	12.3	93	52	18	16 55	37	14 01 23	33 64	
21	135	54.6		18	22.8 ¹⁴⁸	+4 03.0	93	54	09	49	33	03 22	30 65	
22	150	54.6		32	56.6 ¹⁴⁸	+3 53.7	93	56	16 00	43	29	06 19	26 68	
23	165	54.5		47	30.5 ¹⁴⁹	44.4	93	58	15 50	36	25	08 18	23 69	
24	180	54.5	+19 08.9	62	04.4 ¹⁴⁹	+3 35.1	93	60 S	15 38	16 28	17 20	14 11 16	0 19 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 26 ^m 0		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: -1.9 PMG: 0 ^h 36 ^m		Mag: -2.2 PMG: 19 ^h 25 ^m		Mag: +0.1 PMG: 1 ^h 21 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	233	09.1	186	55.6	+16 29.1	350	59.9	-21 45.3	68	01.2	+7 48.3	339	44.8	-20 44.0
1	248	11.6	201	55.0	30.0	6	03.3	45.3	83	03.7	48.3	354	47.5	44.0
2	263	14.1	216	54.4	30.9	21	06.6	45.3	98	06.1	48.2	9	50.1	44.0
3	278	16.5	231	53.8	31.8	36	09.9	45.3	113	08.5	48.2	24	52.8	44.0
4	293	19.0	246	53.2	32.8	51	13.2	45.3	128	11.0	48.2	39	55.4	44.0
5	308	21.5	261	52.6	+16 33.7	66	16.6	-21 45.2	143	13.4	+7 48.2	54	58.0	-20 43.9
6	323	23.9	276	52.0	+16 34.6	81	19.9	-21 45.2	158	15.8	+7 48.1	70	00.7	-20 43.9
7	338	26.4	291	51.5	35.5	96	23.2	45.2	173	18.2	48.1	85	03.3	43.9
8	353	28.8	306	50.9	36.4	111	26.5	45.2	188	20.7	48.1	100	06.0	43.9
9	8	31.3	321	50.3	37.4	126	29.9	45.1	203	23.1	48.1	115	08.6	43.9
10	23	33.8	336	49.7	38.3	141	33.2	45.1	218	25.5	48.0	130	11.3	43.8
11	38	36.2	351	49.1	+16 39.2	156	36.5	-21 45.1	233	27.9	+7 48.0	145	13.9	-20 43.8
12	53	38.7	6	48.5	+16 40.1	171	39.8	-21 45.1	248	30.4	+7 48.0	160	16.5	-20 43.8
13	68	41.2	21	47.9	41.0	186	43.2	45.1	263	32.8	48.0	175	19.2	43.8
14	83	43.6	36	47.3	41.9	201	46.5	45.0	278	35.2	47.9	190	21.8	43.8
15	98	46.1	51	46.6	42.9	216	49.8	45.0	293	37.6	47.9	205	24.5	43.7
16	113	48.6	66	46.0	43.8	231	53.2	45.0	308	40.1	47.9	220	27.1	43.7
17	128	51.0	81	45.4	+16 44.7	246	56.5	-21 45.0	323	42.5	+7 47.9	235	29.8	-20 43.7
18	143	53.5	96	44.8	+16 45.6	261	59.8	-21 45.0	338	44.9	+7 47.8	250	32.4	-20 43.7
19	158	56.0	111	44.2	46.5	277	03.2	44.9	353	47.3	47.8	265	35.0	43.7
20	173	58.4	126	43.6	47.4	292	06.5	44.9	8	49.8	47.8	280	37.7	43.6
21	189	00.9	141	43.0	48.3	307	09.8	44.9	23	52.2	47.8	295	40.3	43.6
22	204	03.3	156	42.4	49.2	322	13.2	44.9	38	54.6	47.7	310	43.0	43.6
23	219	05.8	171	41.8	50.1	337	16.5	44.8	53	57.0	47.7	325	45.6	43.6
24	234	08.3	186	41.2	+16 51.0	352	19.8	-21 44.8	68	59.4	+7 47.7	340	48.3	-20 43.6
Dif	—		-6 +9		+33 0		+24 0		+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: 9 ^d 2 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 20 ^h 27 ^m R°: 42 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	54.5	+19	08.9	62	04.4	+3	35.1	93	60 N	**	**	2	15	3	19	14	07	71	2	17
1	195	54.5		09.4	76	38.3		25.8	94	58	0	51	37	33		08	68		16	17	
2	210	54.5		10.0	91	12.2		16.4	94	56	1	35	2	54	45	09	66		14	19	
3	225	54.5		10.6	105	46.1	+3	07.1	93	54	2	02	3	09	3	55	09	65	13	2	
4	240	54.5		11.1	120	20.1	+2	57.7	94	52		23	22	4	04	10	63		12	22	
5	255	54.5	+19	11.7	134	54.1	+2	48.4	93	50	2	40	3	33	4	12	14	10	62	2	10
6	270	54.4	+19	12.3	149	28.1	+2	39.0	94	45	3	11	3	55	4	30	14	11	59	2	08
7	285	54.4		12.9	164	02.2		29.6	94	40		35	4	13	44	12	56		06	29	
8	300	54.4		13.4	178	36.3		20.2	94	35	3	53	27	4	55	13	53		04	31	
9	315	54.4		14.0	193	10.3		10.8	94	30	4	08	4	40	5	06	14	51		02	34
10	330	54.4		14.6	207	44.4	+2	01.5	93	20		32	5	00	23	15	48		2	00	
11	345	54.4	+19	15.1	222	18.6	+1	52.1	94	10 N	4	50	5	16	5	39	14	16	45	1	57
12	0	54.4	+19	15.7	236	52.7	+1	42.7	94	0	5	05	5	31	5	53	14	17	42	1	55
13	15	54.3		16.3	251	26.8		33.2	95	10 S		19	45	6	07	18	39		52	46	
14	30	54.3		16.8	266	01.0		23.8	94	20	32	5	58	22		19	36		50	48	
15	45	54.3		17.4	280	35.2		14.4	94	30	44	6	13	39		20	33		47	52	
16	60	54.3		18.0	295	09.4	+1	05.0	94	35	51	21	6	48		21	31		45	54	
17	75	54.3	+19	18.5	309	43.6	+0	55.6	94	40	5	57	6	30	7	00	14	22	29	1	43
18	90	54.3	+19	19.1	324	17.8	+0	46.2	94	45	6	05	6	41	7	13	14	22	27	1	41
19	105	54.2		19.7	338	52.1		36.8	94	50	13	53	29		24	23		38	62		
20	120	54.2		20.2	353	26.3		27.4	94	52	17	6	58	36		24	22		37	63	
21	135	54.2		20.8	8	00.6		18.0	94	54	20	7	04	44		25	20		35	65	
22	150	54.2		21.3	22	34.8	+0	08.5	95	56	25	11	7	54	25	19		34	67		
23	165	54.2		21.9	37	09.1	-0	00.9	94	58	29	18	8	04	26	17		32	69		
24	180	54.1	+19	22.5	51	43.4	-0	10.3	94	60 S	6	34	7	26	8	16	14	27	15	1	30

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 22 ^m 1		Mag: -3.9 PMG: 11 ^h 34 ^m				Mag: -1.9 PMG: 0 ^h 31 ^m				Mag: -2.2 PMG: 19 ^h 21 ^m				Mag: +0.1 PMG: 1 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	234	08.3	186	41.2	+16	51.0	352	19.8	-21	44.8	68	59.4	+7	47.7	340	48.3	-20	43.6
1	249	10.7	201	40.6		52.0	7	23.2		44.8	84	01.9		47.7	355	50.9		43.5
2	264	13.2	216	40.0		52.9	22	26.5		44.8	99	04.3		47.6	10	53.6		43.5
3	279	15.7	231	39.4		53.8	37	29.9		44.7	114	06.7		47.6	25	56.2		43.5
4	294	18.1	246	38.8		54.7	52	33.2		44.7	129	09.1		47.6	40	58.8		43.5
5	309	20.6	261	38.2	+16	55.6	67	36.5	-21	44.7	144	11.5	+7	47.6	56	01.5	-20	43.5
6	324	23.1	276	37.6	+16	56.5	82	39.9	-21	44.7	159	14.0	+7	47.5	71	04.1	-20	43.4
7	339	25.5	291	37.0		57.4	97	43.2		44.6	174	16.4		47.5	86	06.8		43.4
8	354	28.0	306	36.3		58.3	112	46.6		44.6	189	18.8		47.5	101	09.4		43.4
9	9	30.4	321	35.7	+16	59.2	127	49.9		44.6	204	21.2		47.4	116	12.1		43.4
10	24	32.9	336	35.1	+17	00.1	142	53.3		44.6	219	23.6		47.4	131	14.7		43.4
11	39	35.4	351	34.5	+17	01.0	157	56.6	-21	44.5	234	26.1	+7	47.4	146	17.4	-20	43.4
12	54	37.8	6	33.9	+17	01.9	172	59.9	-21	44.5	249	28.5	+7	47.4	161	20.0	-20	43.3
13	69	40.3	21	33.3		02.8	188	03.3		44.5	264	30.9		47.3	176	22.6		43.3
14	84	42.8	36	32.7		03.7	203	06.6		44.5	279	33.3		47.3	191	25.3		43.3
15	99	45.2	51	32.1		04.6	218	10.0		44.4	294	35.7		47.3	206	27.9		43.3
16	114	47.7	66	31.4		05.5	233	13.3		44.4	309	38.2		47.2	221	30.6		43.3
17	129	50.2	81	30.8	+17	06.4	248	16.7	-21	44.4	324	40.6	+7	47.2	236	33.2	-20	43.2
18	144	52.6	96	30.2	+17	07.3	263	20.0	-21	44.4	339	43.0	+7	47.2	251	35.9	-20	43.2
19	159	55.1	111	29.6		08.1	278	23.4		44.3	354	45.4		47.2	266	38.5		43.2
20	174	57.6	126	29.0		09.0	293	26.7		44.3	9	47.8		47.1	281	41.2		43.2
21	190	00.0	141	28.4		09.9	308	30.1		44.3	24	50.2		47.1	296	43.8		43.2
22	205	02.5	156	27.8		10.8	323	33.4		44.3	39	52.6		47.1	311	46.5		43.1
23	220	04.9	171	27.1		11.7	338	36.8		44.2	54	55.1		47.0	326	49.1		43.1
24	235	07.4	186	26.5	+17	12.6	353	40.1	-21	44.2	69	57.5	+7	47.0	341	51.8	-20	43.1
Dif	—		-6 +9				+33 0				+24 0				+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 4			Edad: 10 ^d 2 PHE { SD: 14'8 PMG: 21 ^h 09 ^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	54.1	+19 22.5	51	43.4	-0 10.3	94	60 N	20 38	21 44	** **	15 18 70	2 33 15	
1	195	54.1	23.0	66	17.7 ¹⁵³	19.7	94	58	23	21	23 18	16 68	33 18	
2	210	54.1	23.6	80	52.0 ¹⁵³	29.1	94	56	11	21 02	22 25	15 66	33 20	
3	225	54.1	24.1	95	26.3 ¹⁵³	38.5	94	54	20 00	20 47	21 56	14 64	34 21	
4	240	54.1	24.7	110	00.6 ¹⁵³	47.9	94	52	19 51	34	34	13 62	34 22	
5	255	54.0	+19 25.3	124	34.9 ¹⁵³	-0 57.2	93	50	19 43	20 23	21 17	15 12 61	2 34 24	
6	270	54.0	+19 25.8	139	09.3 ¹⁵⁴	-1 06.6	94	45	19 25	20 00	20 44	15 10 58	2 35 26	
7	285	54.0	26.4	153	43.6 ¹⁵³	16.0	94	40	19 11	19 42	20	08 56	35 29	
8	300	54.0	26.9	168	17.9 ¹⁵³	25.4	94	35	18 58	27	20 01	06 54	35 32	
9	315	54.0	27.5	182	52.3 ¹⁵⁴	34.7	93	30	48	19 14	19 46	05 52	36 33	
10	330	53.9	28.0	197	26.6 ¹⁵³	44.1	94	20	30	18 54	22	03 48	36 37	
11	345	53.9	+19 28.6	212	00.9 ¹⁵³	-1 53.4	93	10 N	18 14	18 37	19 03	15 01 45	2 37 39	
12	0	53.9	+19 29.1	226	35.3 ¹⁵⁴	-2 02.7	93	0	18 00	18 22	18 47	14 59 43	2 37 43	
13	15	53.9	29.7	241	09.6 ¹⁵³	12.1	94	10 S	17 46	18 08	34	57 40	38 45	
14	30	53.9	30.2	255	44.0 ¹⁵⁴	21.4	93	20	31	17 54	21	55 37	38 48	
15	45	53.8	30.8	270	18.3 ¹⁵³	30.7	93	30	13	39	08	53 34	39 51	
16	60	53.8	31.4	284	52.6 ¹⁵³	40.0	93	35	17 03	30	18 01	52 32	39 53	
17	75	53.8	+19 31.9	299	27.0 ¹⁵⁴	-2 49.2	92	40	16 52	17 21	17 54	14 51 29	2 39 56	
18	90	53.8	+19 32.5	314	01.3 ¹⁵³	-2 58.5	93	45	16 39	17 11	17 47	14 49 27	2 39 59	
19	105	53.7	33.0	328	35.6 ¹⁵³	-3 07.7	92	50	22	16 58	38	47 24	40 61	
20	120	53.7	33.6	343	09.9 ¹⁵³	17.0	93	52	15	53	34	46 23	40 63	
21	135	53.7	34.1	357	44.2 ¹⁵³	26.2	92	54	16 06	47	30	45 22	40 65	
22	150	53.7	34.6	12	18.6 ¹⁵⁴	35.4	92	56	15 57	40	26	44 20	41 66	
23	165	53.7	35.2	26	52.9 ¹⁵³	44.6	92	58	46	32	22	43 18	41 68	
24	180	53.6	+19 35.7	41	27.2 ¹⁵³	-3 53.8	92	60 S	15 34	16 24	17 16	14 42 16	2 41 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 18 ^m 1		Mag: -3.9 PMG: 11 ^h 35 ^m		Mag: -2.0 PMG: 0 ^h 25 ^m		Mag: -2.2 PMG: 19 ^h 17 ^m		Mag: +0.1 PMG: 1 ^h 12 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	235	07.4	186	26.5	+17 12.6	353 40.1	-21 44.2	69 57.5	+7 47.0	341 51.8	-20 43.1
1	250	09.9	201	25.9	13.5	8 43.5	44.2	84 59.9	47.0	356 54.4	43.1
2	265	12.3	216	25.3	14.4	23 46.9	44.1	100 02.3	47.0	11 57.0	43.1
3	280	14.8	231	24.7	15.3	38 50.2	44.1	115 04.7	46.9	26 59.7	43.0
4	295	17.3	246	24.0	16.1	53 53.6	44.1	130 07.1	46.9	42 02.3	43.0
5	310	19.7	261	23.4	+17 17.0	68 56.9	-21 44.1	145 09.5	+7 46.9	57 05.0	-20 43.0
6	325	22.2	276	22.8	+17 17.9	84 00.3	-21 44.0	160 12.0	+7 46.8	72 07.6	-20 43.0
7	340	24.7	291	22.2	18.8	99 03.6	44.0	175 14.4	46.8	87 10.3	43.0
8	355	27.1	306	21.6	19.7	114 07.0	44.0	190 16.8	46.8	102 12.9	42.9
9	10	29.6	321	20.9	20.6	129 10.4	43.9	205 19.2	46.7	117 15.6	42.9
10	25	32.1	336	20.3	21.4	144 13.7	43.9	220 21.6	46.7	132 18.2	42.9
11	40	34.5	351	19.7	+17 22.3	159 17.1	-21 43.9	235 24.0	+7 46.7	147 20.9	-20 42.9
12	55	37.0	6	19.1	+17 23.2	174 20.4	-21 43.8	250 26.4	+7 46.6	162 23.5	-20 42.9
13	70	39.4	21	18.4	24.1	189 23.8	43.8	265 28.8	46.6	177 26.2	42.8
14	85	41.9	36	17.8	25.0	204 27.2	43.8	280 31.3	46.6	192 28.8	42.8
15	100	44.4	51	17.2	25.8	219 30.5	43.8	295 33.7	46.6	207 31.4	42.8
16	115	46.8	66	16.6	26.7	234 33.9	43.7	310 36.1	46.5	222 34.1	42.8
17	130	49.3	81	15.9	+17 27.6	249 37.2	-21 43.7	325 38.5	+7 46.5	237 36.7	-20 42.8
18	145	51.8	96	15.3	+17 28.5	264 40.6	-21 43.7	340 40.9	+7 46.5	252 39.4	-20 42.7
19	160	54.2	111	14.7	29.3	279 44.0	43.6	355 43.3	46.4	267 42.0	42.7
20	175	56.7	126	14.1	30.2	294 47.3	43.6	10 45.7	46.4	282 44.7	42.7
21	190	59.2	141	13.4	31.1	309 50.7	43.6	25 48.1	46.4	297 47.3	42.7
22	206	01.6	156	12.8	32.0	324 54.1	43.5	40 50.5	46.3	312 50.0	42.7
23	221	04.1	171	12.2	32.8	339 57.4	43.5	55 52.9	46.3	327 52.6	42.6
24	236	06.5	186	11.5	+17 33.7	355 00.8	-21 43.5	70 55.3	+7 46.3	342 55.3	-20 42.6
Dif	—		-6	+9		+34	0	+24	0	+26	0

UT	SOL			O 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: 11 ^d 2 PHE { 4 ^h : 54 ^l 1 12 ^h : 54 ^l 0 20 ^h : 54 ^l 0 PMG: 21 ^h 52 ^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 m	h m m	h m m	
0	180	53.6	+19	35.7	41	27.2	-3 53.8	60 N	** **	2 08	3 15	16 28 70	2 48 17	
1	195	53.6		36.3	56	01.4 ¹⁵²	-4 03.0	58	0 34	31	29	24 68	51 18	
2	210	53.6		36.8	70	35.7 ¹⁵³	12.1	56	1 27	2 50	41	21 66	53 20	
3	225	53.6		37.4	85	10.0 ¹⁵³	21.2	54	1 56	3 05	3 52	18 64	55 21	
4	240	53.5		37.9	99	44.3 ¹⁵³	30.3	52	2 18	18	4 01	15 63	56 24	
5	255	53.5	+19	38.5	114	18.5 ¹⁵²	-4 39.4	50	2 36	3 30	4 10	16 13 61	2 58 25	
6	270	53.5	+19	39.0	128	52.7 ¹⁵²	-4 48.5	45	3 09	3 53	4 27	16 08 58	3 01 28	
7	285	53.4		39.5	143	27.0 ¹⁵³	-4 57.6	40	33	4 11	42	04 55	04 30	
8	300	53.4		40.1	158	01.2 ¹⁵²	-5 06.6	35	3 51	26	4 54	16 00 53	07 32	
9	315	53.4		40.6	172	35.4 ¹⁵²	15.6	30	4 07	38	5 05	15 57 51	09 34	
10	330	53.4		41.2	187	09.6 ¹⁵²	24.6	20	31	4 59	23	51 49	13 37	
11	345	53.3	+19	41.7	201	43.8 ¹⁵²	-5 33.6	10 N	4 50	5 16	5 38	15 46 46	3 16 40	
12	0	53.3	+19	42.3	216	17.9 ¹⁵¹	-5 42.5	0	5 05	5 31	5 53	15 42 43	3 20 42	
13	15	53.3		42.8	230	52.1 ¹⁵²	-5 51.5	10 S	19	45	6 07	37 41	23 45	
14	30	53.3		43.3	245	26.2 ¹⁵¹	-6 00.4	20	32	5 59	23	32 38	26 48	
15	45	53.2		43.9	260	00.3 ¹⁵¹	09.2	30	45	6 14	40	27 34	30 52	
16	60	53.2		44.4	274	34.4 ¹⁵¹	18.1	35	52	23	6 50	24 32	32 54	
17	75	53.2	+19	44.9	289	08.5 ¹⁵¹	-6 26.9	40	5 59	6 32	7 01	15 20 31	3 35 55	
18	90	53.1	+19	45.5	303	42.6 ¹⁵¹	-6 35.7	45	6 07	6 43	7 15	15 16 28	3 38 58	
19	105	53.1		46.0	318	16.6 ¹⁵⁰	44.5	50	15	6 55	31	11 26	41 61	
20	120	53.1		46.5	332	50.7 ¹⁵¹	-6 53.3	52	19	7 01	39	09 24	43 62	
21	135	53.1		47.1	347	24.7 ¹⁵⁰	-7 02.0	54	23	07	47	07 22	45 64	
22	150	53.0		47.6	1	58.7 ¹⁵⁰	10.7	56	27	14	7 57	04 21	47 65	
23	165	53.0		48.1	16	32.6 ¹⁴⁹	19.3	58	32	21	8 08	15 01 19	49 68	
24	180	53.0	+19	48.7	31	06.6 ¹⁵⁰	-7 28.0	60 S	6 37	7 30	8 21	14 58 17	3 51 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 14 ^m 2		Mag: -3.9 PMG: 11 ^h 36 ^m		Mag: -2.0 PMG: 0 ^h 20 ^m		Mag: -2.2 PMG: 19 ^h 13 ^m		Mag: +0.1 PMG: 1 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	236	06.5	186	11.5	+17	33.7	355	00.8	-21	43.5	70	55.3	+7	46.3	342	55.3	-20	42.6
1	251	09.0	201	10.9		34.6	10	04.2		43.4	85	57.8		46.2	357	57.9		42.6
2	266	11.5	216	10.3		35.4	25	07.5		43.4	101	00.2		46.2	13	00.6		42.6
3	281	13.9	231	09.7		36.3	40	10.9		43.4	116	02.6		46.2	28	03.2		42.6
4	296	16.4	246	09.0		37.2	55	14.3		43.3	131	05.0		46.1	43	05.9		42.5
5	311	18.9	261	08.4	+17	38.0	70	17.7	-21	43.3	146	07.4	+7	46.1	58	08.5	-20	42.5
6	326	21.3	276	07.8	+17	38.9	85	21.0	-21	43.3	161	09.8	+7	46.1	73	11.2	-20	42.5
7	341	23.8	291	07.1		39.8	100	24.4		43.2	176	12.2		46.0	88	13.8		42.5
8	356	26.3	306	06.5		40.6	115	27.8		43.2	191	14.6		46.0	103	16.5		42.5
9	11	28.7	321	05.9		41.5	130	31.1		43.2	206	17.0		46.0	118	19.1		42.5
10	26	31.2	336	05.2		42.4	145	34.5		43.1	221	19.4		45.9	133	21.7		42.4
11	41	33.7	351	04.6	+17	43.2	160	37.9	-21	43.1	236	21.8	+7	45.9	148	24.4	-20	42.4
12	56	36.1	6	04.0	+17	44.1	175	41.3	-21	43.1	251	24.2	+7	45.9	163	27.0	-20	42.4
13	71	38.6	21	03.3		45.0	190	44.6		43.0	266	26.6		45.8	178	29.7		42.4
14	86	41.0	36	02.7		45.8	205	48.0		43.0	281	29.0		45.8	193	32.3		42.4
15	101	43.5	51	02.1		46.7	220	51.4		43.0	296	31.4		45.8	208	35.0		42.3
16	116	46.0	66	01.4		47.5	235	54.8		42.9	311	33.8		45.7	223	37.6		42.3
17	131	48.4	81	00.8	+17	48.4	250	58.1	-21	42.9	326	36.2	+7	45.7	238	40.3	-20	42.3
18	146	50.9	96	00.1	+17	49.2	266	01.5	-21	42.9	341	38.6	+7	45.7	253	42.9	-20	42.3
19	161	53.4	110	59.5		50.1	281	04.9		42.8	356	41.0		45.6	268	45.6		42.3
20	176	55.8	125	58.9		51.0	296	08.3		42.8	11	43.4		45.6	283	48.2		42.2
21	191	58.3	140	58.2		51.8	311	11.7		42.8	26	45.8		45.6	298	50.9		42.2
22	207	00.8	155	57.6		52.7	326	15.0		42.7	41	48.2		45.5	313	53.5		42.2
23	222	03.2	170	56.9		53.5	341	18.4		42.7	56	50.6		45.5	328	56.2		42.2
24	237	05.7	185	56.3	+17	54.4	356	21.8	-21	42.7	71	53.0	+7	45.5	343	58.8	-20	42.2
Dif	—		-6 +9		+34		0		+24		0		+26		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 2 PHE	SD: 14 ^h 7				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 5				PMG: 22 ^h 35 ^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	53.0	+19 48.7	31	06.6	-7 28.0		60 N	20 42	21 51	** **	17 38 69	3 05 18	
1	195	52.9	49.2	45	40.5 ¹⁴⁹	36.6 ⁸⁶		58	27	26	** **	32 67	09 20	
2	210	52.9	49.7	60	14.4 ¹⁴⁹	45.2 ⁸⁶		56	15	21 07	22 34	27 65	13 22	
3	225	52.9	50.3	74	48.3 ¹⁴⁹	-7 53.7 ⁸⁵		54	20 04	20 51	22 02	22 64	16 24	
4	240	52.9	50.8	89	22.2 ¹⁴⁹	-8 02.3 ⁸⁶		52	19 54	38	21 39	18 62	20 25	
5	255	52.8	+19 51.3	103	56.0 ¹⁴⁸	-8 10.7 ⁸⁴		50	19 45	20 26	21 21	17 14 61	3 23 26	
6	270	52.8	+19 51.9	118	29.8 ¹⁴⁸	-8 19.2 ⁸⁵		45	19 27	20 02	20 47	17 06 58	3 29 29	
7	285	52.8	52.4	133	03.6 ¹⁴⁸	27.6 ⁸⁴		40	12	19 44	22	16 59 56	34 32	
8	300	52.7	52.9	147	37.4 ¹⁴⁸	36.0 ⁸⁴		35	19 00	28	20 03	53 54	39 34	
9	315	52.7	53.4	162	11.1 ¹⁴⁷	44.4 ⁸⁴		30	18 49	19 16	19 47	48 52	43 35	
10	330	52.7	54.0	176	44.8 ¹⁴⁷	-8 52.7 ⁸³		20	31	18 55	23	40 49	50 39	
11	345	52.6	+19 54.5	191	18.5 ¹⁴⁷	-9 01.0 ⁸³		10 N	18 15	18 37	19 04	16 32 47	3 56 42	
12	0	52.6	+19 55.0	205	52.2 ¹⁴⁷	-9 09.2 ⁸²		0	18 00	18 22	18 48	16 25 44	4 02 44	
13	15	52.6	55.5	220	25.8 ¹⁴⁶	17.4 ⁸²		10 S	17 45	18 08	33	18 41	08 46	
14	30	52.5	56.1	234	59.4 ¹⁴⁶	25.6 ⁸²		20	30	17 53	20	10 39	14 49	
15	45	52.5	56.6	249	33.0 ¹⁴⁶	33.8 ⁸²		30	12	38	07	16 01 37	22 51	
16	60	52.5	57.1	264	06.6 ¹⁴⁶	41.9 ⁸¹		35	17 02	29	18 00	15 56 35	26 53	
17	75	52.4	+19 57.6	278	40.1 ¹⁴⁵	-9 49.9 ⁸⁰		40	16 50	17 20	17 53	15 51 33	4 30 56	
18	90	52.4	+19 58.2	293	13.6 ¹⁴⁵	-9 57.9 ⁸⁰		45	16 37	17 09	17 45	15 44 31	4 36 58	
19	105	52.4	58.7	307	47.0 ¹⁴⁴	-10 05.9 ⁸⁰		50	20	16 56	36	37 28	42 61	
20	120	52.3	59.2	322	20.5 ¹⁴⁵	13.9 ⁸⁰		52	12	50	32	33 27	45 63	
21	135	52.3	+19 59.7	336	53.9 ¹⁴⁴	21.8 ⁷⁹		54	16 03	44	28	29 26	49 64	
22	150	52.3	+20 00.2	351	27.3 ¹⁴⁴	29.6 ⁷⁸		56	15 54	37	24	25 24	52 66	
23	165	52.2	00.8	6	00.6 ¹⁴³	37.5 ⁷⁹		58	43	29	19	20 22	4 57 67	
24	180	52.2	+20 01.3	20	33.9 ¹⁴³	-10 45.2 ⁷⁷		60 S	15 30	16 21	17 13	15 15 20	5 01 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 10 ^m 3		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: -2.0 PMG: 0 ^h 14 ^m		Mag: -2.2 PMG: 19 ^h 09 ^m		Mag: +0.1 PMG: 1 ^h 04 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	237	05.7	185	56.3	+17	54.4	356	21.8	-21	42.7	71	53.0	+7	45.5	343	58.8	-20	42.2
1	252	08.2	200	55.7		55.2	11	25.2		42.6	86	55.5		45.4	359	01.5		42.1
2	267	10.6	215	55.0		56.1	26	28.6		42.6	101	57.9		45.4	14	04.1		42.1
3	282	13.1	230	54.4		56.9	41	31.9		42.5	117	00.3		45.3	29	06.8		42.1
4	297	15.5	245	53.7		57.8	56	35.3		42.5	132	02.7		45.3	44	09.4		42.1
5	312	18.0	260	53.1	+17	58.6	71	38.7	-21	42.5	147	05.1	+7	45.3	59	12.1	-20	42.1
6	327	20.5	275	52.4	+17	59.5	86	42.1	-21	42.4	162	07.5	+7	45.2	74	14.7	-20	42.0
7	342	22.9	290	51.8	+18	00.3	101	45.5		42.4	177	09.8		45.2	89	17.4		42.0
8	357	25.4	305	51.2		01.1	116	48.9		42.4	192	12.2		45.2	104	20.0		42.0
9	12	27.9	320	50.5		02.0	131	52.2		42.3	207	14.6		45.1	119	22.7		42.0
10	27	30.3	335	49.9		02.8	146	55.6		42.3	222	17.0		45.1	134	25.3		42.0
11	42	32.8	350	49.2	+18	03.7	161	59.0	-21	42.2	237	19.4	+7	45.1	149	28.0	-20	41.9
12	57	35.3	5	48.6	+18	04.5	177	02.4	-21	42.2	252	21.8	+7	45.0	164	30.6	-20	41.9
13	72	37.7	20	47.9		05.4	192	05.8		42.2	267	24.2		45.0	179	33.3		41.9
14	87	40.2	35	47.3		06.2	207	09.2		42.1	282	26.6		44.9	194	35.9		41.9
15	102	42.6	50	46.6		07.0	222	12.6		42.1	297	29.0		44.9	209	38.6		41.9
16	117	45.1	65	46.0		07.9	237	15.9		42.0	312	31.4		44.9	224	41.2		41.8
17	132	47.6	80	45.3	+18	08.7	252	19.3	-21	42.0	327	33.8	+7	44.8	239	43.9	-20	41.8
18	147	50.0	95	44.7	+18	09.6	267	22.7	-21	42.0	342	36.2	+7	44.8	254	46.5	-20	41.8
19	162	52.5	110	44.0		10.4	282	26.1		41.9	357	38.6		44.8	269	49.2		41.8
20	177	55.0	125	43.4		11.2	297	29.5		41.9	12	41.0		44.7	284	51.8		41.8
21	192	57.4	140	42.7		12.1	312	32.9		41.9	27	43.4		44.7	299	54.5		41.7
22	207	59.9	155	42.1		12.9	327	36.3		41.8	42	45.8		44.6	314	57.1		41.7
23	223	02.4	170	41.4		13.7	342	39.7		41.8	57	48.2		44.6	329	59.8		41.7
24	238	04.8	185	40.8	+18	14.6	357	43.1	-21	41.7	72	50.6	+7	44.6	345	02.4	-20	41.7
Dif	—		-6 +8		+34		0		+24		0		+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 6				Edad: 13 ^d 2 PHE { SD: 14 ^h 7 PMG: 23 ^h 20 ^m																
	hG ☉		Dec		hG ☾		Dif														
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m	
0	180	52.2	+20	01.3	20	33.9	−10	45.2	60 N	** **	2	02	3	10	18	47	68	3	23	22	
1	195	52.2		01.8	35	07.2 ¹⁴³	−10	53.0 ⁷⁸	58	** **		26		25		39	66		29	24	
2	210	52.1		02.3	49	40.5 ¹⁴³	−11	00.7 ⁷⁷	56	1	19	2	46	38		32	64		35	26	
3	225	52.1		02.8	64	13.7 ¹⁴²		08.3 ⁷⁶	54	1	51	3	02	49		26	62		40	27	
4	240	52.0		03.4	78	46.9 ¹⁴²		15.9 ⁷⁶	52	2	14		15	3	59		20	61		45	28
5	255	52.0	+20	03.9	93	20.0 ¹⁴¹	−11	23.5 ⁷⁶	50	2	32	3	27	4	07	18	15	60	3	49	30
6	270	52.0	+20	04.4	107	53.1 ¹⁴¹	−11	31.0 ⁷⁵	45	3	06	3	51	4	25	18	04	58	3	58	33
7	285	51.9		04.9	122	26.2 ¹⁴¹		38.4 ⁷⁴	40		30	4	09	40		17	55	56	4	06	34
8	300	51.9		05.4	136	59.3 ¹⁴¹		45.9 ⁷⁵	35	3	50		24	4	53	47	54		13	36	
9	315	51.9		05.9	151	32.3 ¹⁴⁰	−11	53.2 ⁷³	30	4	05		37	5	04	40	53		18	38	
10	330	51.8		06.4	166	05.3 ¹⁴⁰	−12	00.5 ⁷³	20		30	4	58	22		29	50		29	40	
11	345	51.8	+20	06.9	180	38.2 ¹³⁹	−12	07.8 ⁷³	10 N	4	49	5	16	5	38	17	19	47	4	38	42
12	0	51.7	+20	07.5	195	11.1 ¹³⁹	−12	15.0 ⁷²	0	5	05	5	31	5	53	17	09	46	4	46	45
13	15	51.7		08.0	209	44.0 ¹³⁹		22.2 ⁷²	10 S		20	5	45	6	08	16	59	44	4	54	47
14	30	51.7		08.5	224	16.8 ¹³⁸		29.3 ⁷¹	20	33	6	00	23			49	42		5	03	50
15	45	51.6		09.0	238	49.7 ¹³⁹		36.4 ⁷¹	30	46		15	41			38	39		13	53	
16	60	51.6		09.5	253	22.4 ¹³⁷		43.4 ⁷⁰	35	5	53	24	6	51		31	38		19	54	
17	75	51.5	+20	10.0	267	55.2 ¹³⁸	−12	50.4 ⁷⁰	40	6	01	6	34	7	03	16	24	36	5	26	56
18	90	51.5	+20	10.5	282	27.9 ¹³⁷	−12	57.3 ⁶⁹	45	6	09	6	45	7	17	16	15	34	5	34	58
19	105	51.5		11.0	297	00.5 ¹³⁶	−13	04.1 ⁶⁸	50	17	6	57	34			05	31		43	61	
20	120	51.4		11.5	311	33.1 ¹³⁶		10.9 ⁶⁸	52	21	7	03	42			16	00	31	48	62	
21	135	51.4		12.0	326	05.7 ¹³⁶		17.7 ⁶⁸	54	26		10	7	51		15	55	29	53	63	
22	150	51.3		12.5	340	38.3 ¹³⁶		24.4 ⁶⁷	56	30		17	8	00		49	28		5	58	65
23	165	51.3		13.0	355	10.8 ¹³⁵		31.0 ⁶⁶	58	35		25	12			42	26		6	04	66
24	180	51.3	+20	13.5	9	43.3 ¹³⁵	−13	37.6 ⁶⁶	60 S	6	40	7	34	8	25	15	35	24	6	11	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 06 ^m 3		Mag: −3.9 PMG: 11 ^h 38 ^m		Mag: −2.0 PMG: 0 ^h 09 ^m		Mag: −2.2 PMG: 19 ^h 06 ^m		Mag: +0.1 PMG: 1 ^h 00 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	238	04.8	185	40.8	+18	357	43.1	−21	72	50.6	+7	44.6	345	02.4	−20	41.7		
1	253	07.3	200	40.1		12	46.5		87	53.0		44.5	0	05.1		41.7		
2	268	09.8	215	39.5		27	49.8		102	55.4		44.5	15	07.7		41.6		
3	283	12.2	230	38.8		42	53.2		117	57.8		44.5	30	10.4		41.6		
4	298	14.7	245	38.2		57	56.6		133	00.2		44.4	45	13.0		41.6		
5	313	17.1	260	37.5	+18	73	00.0	−21	148	02.6	+7	44.4	60	15.7	−20	41.6		
6	328	19.6	275	36.9	+18	88	03.4	−21	163	04.9	+7	44.3	75	18.3	−20	41.6		
7	343	22.1	290	36.2		103	06.8		178	07.3		44.3	90	21.0		41.5		
8	358	24.5	305	35.5		118	10.2		193	09.7		44.3	105	23.6		41.5		
9	13	27.0	320	34.9		133	13.6		208	12.1		44.2	120	26.3		41.5		
10	28	29.5	335	34.2		148	17.0		223	14.5		44.2	135	28.9		41.5		
11	43	31.9	350	33.6	+18	163	20.4	−21	238	16.9	+7	44.1	150	31.6	−20	41.5		
12	58	34.4	5	32.9	+18	178	23.8	−21	253	19.3	+7	44.1	165	34.2	−20	41.4		
13	73	36.9	20	32.3		193	27.2		268	21.7		44.1	180	36.9		41.4		
14	88	39.3	35	31.6		208	30.6		283	24.1		44.0	195	39.5		41.4		
15	103	41.8	50	30.9		223	34.0		298	26.5		44.0	210	42.2		41.4		
16	118	44.3	65	30.3		238	37.4		313	28.9		43.9	225	44.8		41.4		
17	133	46.7	80	29.6	+18	253	40.8	−21	328	31.2	+7	43.9	240	47.5	−20	41.3		
18	148	49.2	95	29.0	+18	268	44.2	−21	343	33.6	+7	43.9	255	50.1	−20	41.3		
19	163	51.6	110	28.3		283	47.6		358	36.0		43.8	270	52.8		41.3		
20	178	54.1	125	27.6		298	51.0		13	38.4		43.8	285	55.4		41.3		
21	193	56.6	140	27.0		313	54.4		28	40.8		43.7	300	58.1		41.3		
22	208	59.0	155	26.3		328	57.8		43	43.2		43.7	316	00.7		41.2		
23	224	01.5	170	25.6		344	01.2		58	45.6		43.7	331	03.4		41.2		
24	239	04.0	185	25.0	+18	359	04.6	−21	73	48.0	+7	43.6	346	06.1	−20	41.2		
Dif	—		−7		+8		+34		0		+24		0		+27		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 6			Edad: 14 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'4 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			
0	180	51.3	+20	13.5	9	43.3	-13	37.6	60 N	20 46	21 57	** **	19 55 64		3 45 26			
1	195	51.2		14.0	24	15.7 ¹³⁴		44.1 ⁶⁵	58	31	31	** **	45 62		3 53 29			
2	210	51.2		14.6	38	48.1 ¹³⁴		50.6 ⁶⁵	56	18	21 11	22 43	36 61		4 01 30			
3	225	51.1		15.1	53	20.5 ¹³⁴	-13	57.0 ⁶⁴	54	20 07	20 55	22 08	28 60		07 32			
4	240	51.1		15.6	67	52.8 ¹³³	-14	03.3 ⁶³	52	19 57	41	21 44	21 59		13 33			
5	255	51.1	+20	16.1	82	25.1 ¹³³	-14	09.6 ⁶³	50	19 48	20 29	21 25	19 15 58		4 19 34			
6	270	51.0	+20	16.6	96	57.3 ¹³²	-14	15.8 ⁶²	45	19 29	20 05	20 50	19 02 56		4 31 36			
7	285	51.0		17.1	111	29.5 ¹³²		22.0 ⁶²	40	14	19 46	25	18 51 54		40 38			
8	300	50.9		17.6	126	01.7 ¹³²		28.1 ⁶¹	35	19 01	30	20 05	41 54		49 39			
9	315	50.9		18.1	140	33.8 ¹³¹		34.1 ⁶⁰	30	18 50	19 17	19 49	33 52		4 56 41			
10	330	50.8		18.6	155	05.9 ¹³¹		40.1 ⁶⁰	20	32	18 55	24	19 50		5 09 43			
11	345	50.8	+20	19.0	169	37.9 ¹³⁰	-14	46.0 ⁵⁹	10 N	18 15	18 38	19 04	18 06 49		5 20 45			
12	0	50.8	+20	19.5	184	10.0 ¹³¹	-14	51.9 ⁵⁹	0	18 00	18 22	18 48	17 55 47		5 31 47			
13	15	50.7		20.0	198	41.9 ¹²⁹	-14	57.7 ⁵⁸	10 S	17 45	18 08	33	43 46		41 49			
14	30	50.7		20.5	213	13.9 ¹³⁰	-15	03.4 ⁵⁷	20	29	17 53	20	31 44		5 53 50			
15	45	50.6		21.0	227	45.8 ¹²⁹		09.0 ⁵⁶	30	11	37	18 06	17 43		6 06 52			
16	60	50.6		21.5	242	17.6 ¹²⁸		14.6 ⁵⁶	35	17 01	28	17 59	09 42		13 54			
17	75	50.5	+20	22.0	256	49.4 ¹²⁸	-15	20.2 ⁵⁶	40	16 49	17 18	17 52	17 00 40		6 22 55			
18	90	50.5	+20	22.5	271	21.2 ¹²⁸	-15	25.6 ⁵⁴	45	16 35	17 07	17 43	16 49 39		6 32 57			
19	105	50.4		23.0	285	52.9 ¹²⁷		31.0 ⁵⁴	50	18	16 54	34	36 37		44 59			
20	120	50.4		23.5	300	24.6 ¹²⁷		36.3 ⁵³	52	10	48	30	31 35		50 60			
21	135	50.4		24.0	314	56.3 ¹²⁷		41.6 ⁵³	54	16 01	42	26	24 34		6 56 61			
22	150	50.3		24.5	329	27.9 ¹²⁶		46.8 ⁵²	56	15 51	34	21	17 33		7 03 62			
23	165	50.3		25.0	343	59.5 ¹²⁶		51.9 ⁵¹	58	39	26	16	16 08 32		10 65			
24	180	50.2	+20	25.5	358	31.0 ¹²⁵	-15	56.9 ⁵⁰	60 S	15 26	16 17	17 11	15 59 30		7 19 67			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 02 ^m 4		Mag: -3.9 PMG: 11 ^h 39 ^m				Mag: -2.0 PMG: 0 ^h 04 ^m				Mag: -2.2 PMG: 19 ^h 02 ^m				Mag: +0.1 PMG: 0 ^h 55 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	239	04.0	185	25.0	+18	34.3	359	04.6	-21	40.7	73	48.0	+7	43.6	346	06.1		
1	254	06.4	200	24.3		35.1	14	08.0		40.7	88	50.4		43.6	1	08.7		
2	269	08.9	215	23.6		35.9	29	11.4		40.6	103	52.7		43.5	16	11.4		
3	284	11.4	230	23.0		36.7	44	14.8		40.6	118	55.1		43.5	31	14.0		
4	299	13.8	245	22.3		37.5	59	18.2		40.5	133	57.5		43.5	46	16.7		
5	314	16.3	260	21.6	+18	38.3	74	21.6	-21	40.5	148	59.9	+7	43.4	61	19.3		
6	329	18.7	275	21.0	+18	39.1	89	25.0	-21	40.4	164	02.3	+7	43.4	76	22.0		
7	344	21.2	290	20.3		39.9	104	28.4		40.4	179	04.7		43.3	91	24.6		
8	359	23.7	305	19.6		40.7	119	31.8		40.4	194	07.1		43.3	106	27.3		
9	14	26.1	320	19.0		41.5	134	35.2		40.3	209	09.4		43.2	121	29.9		
10	29	28.6	335	18.3		42.3	149	38.6		40.3	224	11.8		43.2	136	32.6		
11	44	31.1	350	17.6	+18	43.1	164	42.0	-21	40.2	239	14.2	+7	43.2	151	35.2		
12	59	33.5	5	17.0	+18	43.9	179	45.4	-21	40.2	254	16.6	+7	43.1	166	37.9		
13	74	36.0	20	16.3		44.7	194	48.8		40.1	269	19.0		43.1	181	40.5		
14	89	38.5	35	15.6		45.5	209	52.2		40.1	284	21.4		43.0	196	43.2		
15	104	40.9	50	15.0		46.3	224	55.6		40.0	299	23.7		43.0	211	45.8		
16	119	43.4	65	14.3		47.1	239	59.0		40.0	314	26.1		42.9	226	48.5		
17	134	45.9	80	13.6	+18	47.9	255	02.4	-21	39.9	329	28.5	+7	42.9	241	51.1		
18	149	48.3	95	12.9	+18	48.7	270	05.8	-21	39.9	344	30.9	+7	42.9	256	53.8		
19	164	50.8	110	12.3		49.5	285	09.2		39.9	359	33.3		42.8	271	56.4		
20	179	53.2	125	11.6		50.3	300	12.6		39.8	14	35.7		42.8	286	59.1		
21	194	55.7	140	10.9		51.1	315	16.0		39.8	29	38.0		42.7	302	01.8		
22	209	58.2	155	10.2		51.9	330	19.4		39.7	44	40.4		42.7	317	04.4		
23	225	00.6	170	09.6		52.7	345	22.8		39.7	59	42.8		42.6	332	07.1		
24	240	03.1	185	08.9	+18	53.5	0	26.2	-21	39.6	74	45.2	+7	42.6	347	09.7		
Dif	—		-7 +8		-8966 0				+24 0				+27					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 2 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7 R°: 48 ^m												
	PMG: 11 ^h 56 ^m 7			SD: 14 ^h 8 PMG: 0 ^h 06 ^m												
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	m
0	180	50.2	+20 25.5	358	31.0	-15 56.9	50	60 N	** **	1 55	3 06	20 59	59	4 11	34	
1	195	50.2	25.9	13	02.5 ¹²⁵	-16 01.9	49	58	** **	2 21	22	47	58	22	35	
2	210	50.1	26.4	27	34.0 ¹²⁵	06.8	48	56	1 10	42	35	37	57	31	36	
3	225	50.1	26.9	42	05.4 ¹²⁴	11.6	48	54	1 45	2 58	46	28	56	39	38	
4	240	50.0	27.4	56	36.8 ¹²⁴	16.4	48	52	2 09	3 12	3 56	20	56	46	39	
5	255	50.0	+20 27.9	71	08.2 ¹²⁴	-16 21.1	47	50	2 28	3 24	4 05	20 13	55	4 53	39	
6	270	49.9	+20 28.4	85	39.5 ¹²³	-16 25.7	46	45	3 03	3 48	4 24	19 58	54	5 07	41	
7	285	49.9	28.9	100	10.8 ¹²³	30.2	45	40	28	4 07	39	45	53	18	43	
8	300	49.8	29.4	114	42.0 ¹²²	34.7	45	35	3 48	23	4 52	35	52	28	44	
9	315	49.8	29.8	129	13.2 ¹²²	39.0	43	30	4 04	36	5 03	25	52	37	44	
10	330	49.7	30.3	143	44.4 ¹²²	43.4	44	20	29	4 58	22	19 09	51	5 52	46	
11	345	49.7	+20 30.8	158	15.5 ¹²¹	-16 47.6	42	10 N	4 49	5 15	5 38	18 55	50	6 05	47	
12	0	49.6	+20 31.3	172	46.6 ¹²¹	-16 51.7	41	0	5 05	5 31	5 53	18 42	49	6 18	48	
13	15	49.6	31.8	187	17.6 ¹²⁰	55.8	41	10 S	20	5 46	6 08	29	48	30	49	
14	30	49.5	32.2	201	48.6 ¹²⁰	-16 59.8	40	20	34	6 01	24	15	48	43	51	
15	45	49.5	32.7	216	19.6 ¹²⁰	-17 03.7	39	30	47	17	42	18 00	46	6 58	52	
16	60	49.4	33.2	230	50.5 ¹¹⁹	07.6	39	35	5 54	25	6 53	17 51	45	7 07	53	
17	75	49.4	+20 33.7	245	21.4 ¹¹⁹	-17 11.3	37	40	6 02	6 35	7 05	17 40	45	7 17	54	
18	90	49.3	+20 34.2	259	52.3 ¹¹⁹	-17 15.0	37	45	6 10	6 46	7 19	17 28	44	7 29	55	
19	105	49.3	34.6	274	23.1 ¹¹⁸	18.6	36	50	20	7 00	36	13	42	43	57	
20	120	49.2	35.1	288	53.9 ¹¹⁸	22.2	36	52	24	06	44	17 06	42	50	57	
21	135	49.2	35.6	303	24.7 ¹¹⁸	25.6	34	54	28	12	7 53	16 58	42	7 57	58	
22	150	49.1	36.1	317	55.4 ¹¹⁷	29.0	34	56	33	20	8 04	50	40	8 05	59	
23	165	49.1	36.5	332	26.1 ¹¹⁷	32.2	32	58	38	28	15	40	40	15	60	
24	180	49.0	+20 37.0	346	56.7 ¹¹⁶	-17 35.4	32	60 S	6 44	7 37	8 29	16 29	38	8 26	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 58 ^m 5		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: -2.1 PMG: 23 ^h 53 ^m		Mag: -2.2 PMG: 18 ^h 58 ^m		Mag: +0.1 PMG: 0 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	240	03.1	185 08.9	+18 53.5	0 26.2	-21 39.6	74 45.2	+7 42.6	347 09.7	-20 40.7
1	255	05.6	200 08.2	54.3	15 29.7	39.6	89 47.6	42.6	2 12.4	40.7
2	270	08.0	215 07.5	55.1	30 33.1	39.5	104 49.9	42.5	17 15.0	40.7
3	285	10.5	230 06.9	55.9	45 36.5	39.5	119 52.3	42.5	32 17.7	40.7
4	300	13.0	245 06.2	56.7	60 39.9	39.4	134 54.7	42.4	47 20.3	40.6
5	315	15.4	260 05.5	+18 57.4	75 43.3	-21 39.4	149 57.1	+7 42.4	62 23.0	40.6
6	330	17.9	275 04.8	+18 58.2	90 46.7	-21 39.3	164 59.5	+7 42.3	77 25.6	40.6
7	345	20.4	290 04.2	59.0	105 50.1	39.3	180 01.8	42.3	92 28.3	40.6
8	0	22.8	305 03.5	+18 59.8	120 53.5	39.2	195 04.2	42.2	107 30.9	40.6
9	15	25.3	320 02.8	+19 00.6	135 56.9	39.2	210 06.6	42.2	122 33.6	40.5
10	30	27.7	335 02.1	01.4	151 00.3	39.1	225 09.0	42.2	137 36.2	40.5
11	45	30.2	350 01.4	+19 02.1	166 03.7	-21 39.1	240 11.3	+7 42.1	152 38.9	40.5
12	60	32.7	5 00.7	+19 02.9	181 07.1	-21 39.0	255 13.7	+7 42.1	167 41.6	40.5
13	75	35.1	20 00.1	03.7	196 10.6	39.0	270 16.1	42.0	182 44.2	40.5
14	90	37.6	34 59.4	04.5	211 14.0	38.9	285 18.5	42.0	197 46.9	40.4
15	105	40.1	49 58.7	05.3	226 17.4	38.9	300 20.9	41.9	212 49.5	40.4
16	120	42.5	64 58.0	06.0	241 20.8	38.8	315 23.2	41.9	227 52.2	40.4
17	135	45.0	79 57.3	+19 06.8	256 24.2	-21 38.8	330 25.6	+7 41.8	242 54.8	40.4
18	150	47.5	94 56.6	+19 07.6	271 27.6	-21 38.7	345 28.0	+7 41.8	257 57.5	40.4
19	165	49.9	109 56.0	08.4	286 31.0	38.7	0 30.4	41.7	273 00.1	40.3
20	180	52.4	124 55.3	09.1	301 34.4	38.6	15 32.7	41.7	288 02.8	40.3
21	195	54.8	139 54.6	09.9	316 37.8	38.6	30 35.1	41.7	303 05.4	40.3
22	210	57.3	154 53.9	10.7	331 41.3	38.5	45 37.5	41.6	318 08.1	40.3
23	225	59.8	169 53.2	11.5	346 44.7	38.5	60 39.9	41.6	333 10.7	40.3
24	241	02.2	184 52.5	+19 12.2	1 48.1	-21 38.4	75 42.2	+7 41.5	348 13.4	40.2
Dif	—		-7	+8	+34	0	+24	0	+27	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 2 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 1										
	PMG: 11 ^h 56 ^m 8			SD: 14 ^h 9 PMG: 0 ^h 54 ^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	49.0	+20 37.0	346	56.7	-17 35.4	31	60 N	20 51	22 04	** **	21 58 50	4 45 43	
1	195	49.0	37.5	1	27.3 ¹¹⁶	38.5	31	58	35	21 37	** **	45 50	4 57 44	
2	210	48.9	38.0	15	57.9 ¹¹⁶	41.6	31	56	22	21 16	22 52	34 51	5 07 45	
3	225	48.9	38.4	30	28.5 ¹¹⁶	44.5	29	54	10	20 59	22 14	24 51	17 44	
4	240	48.8	38.9	44	59.0 ¹¹⁵	47.4	29	52	20 00	44	21 48	16 50	25 45	
5	255	48.8	+20 39.4	59	29.5 ¹¹⁵	-17 50.2	28	50	19 51	20 32	21 29	21 08 51	5 32 46	
6	270	48.7	+20 39.9	73	59.9 ¹¹⁴	-17 52.9	27	45	19 31	20 07	20 53	20 52 50	5 48 46	
7	285	48.7	40.3	88	30.3 ¹¹⁴	55.5	26	40	16	19 47	27	38 51	6 01 47	
8	300	48.6	40.8	103	00.7 ¹¹⁴	-17 58.0	25	35	19 03	32	20 07	27 50	12 47	
9	315	48.6	41.3	117	31.1 ¹¹⁴	-18 00.4	24	30	18 52	19 18	19 50	17 50	21 48	
10	330	48.5	41.7	132	01.4 ¹¹³	02.8	24	20	32	18 56	25	20 00 50	38 48	
11	345	48.4	+20 42.2	146	31.7 ¹¹³	-18 05.0	22	10 N	18 16	18 38	19 05	19 45 50	6 52 49	
12	0	48.4	+20 42.7	161	02.0 ¹¹³	-18 07.2	22	0	18 00	18 22	18 48	19 31 50	7 06 49	
13	15	48.3	43.1	175	32.2 ¹¹²	09.3	21	10 S	17 45	18 08	33	17 50	19 50	
14	30	48.3	43.6	190	02.4 ¹¹²	11.3	20	20	29	17 52	19	19 03 49	34 50	
15	45	48.2	44.1	204	32.6 ¹¹²	13.2	19	30	10	36	18 05	18 46 49	7 50 51	
16	60	48.2	44.5	219	02.7 ¹¹¹	15.0	18	35	17 00	27	17 58	36 49	8 00 51	
17	75	48.1	+20 45.0	233	32.8 ¹¹¹	-18 16.7	17	40	16 48	17 17	17 50	18 25 49	8 11 52	
18	90	48.1	+20 45.5	248	02.9 ¹¹¹	-18 18.4	17	45	16 33	17 06	17 42	18 12 49	8 24 52	
19	105	48.0	45.9	262	33.0 ¹¹¹	19.9	15	50	16	16 52	33	17 55 49	40 52	
20	120	47.9	46.4	277	03.0 ¹¹⁰	21.4	15	52	16 07	46	28	48 49	47 53	
21	135	47.9	46.9	291	33.0 ¹¹⁰	22.8	14	54	15 58	39	24	40 48	8 55 54	
22	150	47.8	47.3	306	03.0 ¹¹⁰	24.1	13	56	48	32	19	30 49	9 04 54	
23	165	47.8	47.8	320	32.9 ¹⁰⁹	25.3	12	58	36	24	14	20 48	15 54	
24	180	47.7	+20 48.2	335	02.9 ¹¹⁰	-18 26.4	11	60 S	15 22	16 14	17 08	17 07 48	9 27 55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 54 ^m 6		Mag: -3.9 PMG: 11 ^h 41 ^m		Mag: -2.1 PMG: 23 ^h 47 ^m		Mag: -2.2 PMG: 18 ^h 54 ^m		Mag: +0.1 PMG: 0 ^h 47 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	°	'	°	°	'	'	°	°	°	'
0	241	02.2	184 52.5	+19 12.2	1 48.1	-21 38.4	75 42.2	+7 41.5	348 13.4	-20 40.2	
1	256	04.7	199 51.8	13.0	16 51.5	38.4	90 44.6	41.5	3 16.1	40.2	
2	271	07.2	214 51.2	13.8	31 54.9	38.3	105 47.0	41.4	18 18.7	40.2	
3	286	09.6	229 50.5	14.5	46 58.3	38.3	120 49.3	41.4	33 21.4	40.2	
4	301	12.1	244 49.8	15.3	62 01.7	38.2	135 51.7	41.3	48 24.0	40.2	
5	316	14.6	259 49.1	+19 16.1	77 05.1	-21 38.2	150 54.1	+7 41.3	63 26.7	-20 40.1	
6	331	17.0	274 48.4	+19 16.8	92 08.5	-21 38.1	165 56.5	+7 41.2	78 29.3	-20 40.1	
7	346	19.5	289 47.7	17.6	107 12.0	38.1	180 58.8	41.2	93 32.0	40.1	
8	1	22.0	304 47.0	18.4	122 15.4	38.0	196 01.2	41.1	108 34.6	40.1	
9	16	24.4	319 46.3	19.1	137 18.8	38.0	211 03.6	41.1	123 37.3	40.1	
10	31	26.9	334 45.6	19.9	152 22.2	37.9	226 06.0	41.0	138 39.9	40.0	
11	46	29.3	349 44.9	+19 20.6	167 25.6	-21 37.8	241 08.3	+7 41.0	153 42.6	-20 40.0	
12	61	31.8	4 44.2	+19 21.4	182 29.0	-21 37.8	256 10.7	+7 41.0	168 45.3	-20 40.0	
13	76	34.3	19 43.6	22.2	197 32.4	37.7	271 13.1	40.9	183 47.9	40.0	
14	91	36.7	34 42.9	22.9	212 35.9	37.7	286 15.4	40.9	198 50.6	40.0	
15	106	39.2	49 42.2	23.7	227 39.3	37.6	301 17.8	40.8	213 53.2	39.9	
16	121	41.7	64 41.5	24.4	242 42.7	37.6	316 20.2	40.8	228 55.9	39.9	
17	136	44.1	79 40.8	+19 25.2	257 46.1	-21 37.5	331 22.5	+7 40.7	243 58.5	-20 39.9	
18	151	46.6	94 40.1	+19 25.9	272 49.5	-21 37.5	346 24.9	+7 40.7	259 01.2	-20 39.9	
19	166	49.1	109 39.4	26.7	287 52.9	37.4	1 27.3	40.6	274 03.8	39.9	
20	181	51.5	124 38.7	27.4	302 56.3	37.4	16 29.6	40.6	289 06.5	39.8	
21	196	54.0	139 38.0	28.2	317 59.8	37.3	31 32.0	40.5	304 09.1	39.8	
22	211	56.5	154 37.3	29.0	333 03.2	37.3	46 34.4	40.5	319 11.8	39.8	
23	226	58.9	169 36.6	29.7	348 06.6	37.2	61 36.8	40.4	334 14.5	39.8	
24	242	01.4	184 35.9	+19 30.4	3 10.0	-21 37.1	76 39.1	+7 40.4	349 17.1	-20 39.8	
Dif	—	—	-7	+8	+34	+1	+24	0	+27	0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 17 ^d 2 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 4 20 ^h : 55 ^m 6						Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 56 ^m 9			SD: 15 ^h 0 PMG: 1 ^h 43 ^m R°: 51 ^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	m	h m m	m		
0	180	47.7	+20 48.2	335	02.9	-18 26.4	10	60 N	** **	1 49	3 02	22 48 42	5 28 53					
1	195	47.7	48.7	349	32.8 ¹⁰⁹	27.4	9	58	** **	2 17	18	35 43	41 52					
2	210	47.6	49.2	4	02.6 ¹⁰⁸	28.3	8	56	1 01	38	32	25 43	5 52 52					
3	225	47.5	49.6	18	32.5 ¹⁰⁹	29.1	7	54	1 39	2 55	43	15 44	6 01 53					
4	240	47.5	50.1	33	02.3 ¹⁰⁸	29.8	7	52	2 05	3 09	3 54	22 06 45	10 52					
5	255	47.4	+20 50.5	47	32.1 ¹⁰⁸	-18 30.5	7	50	2 25	3 21	4 03	21 59 45	6 18 52					
6	270	47.4	+20 51.0	62	01.9 ¹⁰⁸	-18 31.0	5	45	3 01	3 46	4 22	21 42 47	6 34 52					
7	285	47.3	51.4	76	31.7 ¹⁰⁸	31.5	5	40	27	4 06	37	29 47	48 51					
8	300	47.3	51.9	91	01.4 ¹⁰⁷	31.8	3	35	3 47	22	4 50	17 48	6 59 52					
9	315	47.2	52.3	105	31.1 ¹⁰⁷	32.1	3	30	4 03	35	5 02	21 07 49	7 09 51					
10	330	47.1	52.8	120	00.8 ¹⁰⁷	32.3	2	20	29	4 57	21	20 50 50	26 51					
11	345	47.1	+20 53.3	134	30.5 ¹⁰⁷	-18 32.4	1	10 N	4 49	5 15	5 38	20 35 50	7 41 51					
12	0	47.0	+20 53.7	149	00.1 ¹⁰⁶	-18 32.3	1	0	5 05	5 31	5 53	20 21 51	7 55 51					
13	15	47.0	54.2	163	29.8 ¹⁰⁷	32.2	2	10 S	20	5 46	6 09	20 07 52	8 09 51					
14	30	46.9	54.6	177	59.4 ¹⁰⁶	32.0	2	20	34	6 01	25	19 52 53	24 50					
15	45	46.8	55.1	192	29.0 ¹⁰⁶	31.7	3	30	48	18	43	35 53	41 50					
16	60	46.8	55.5	206	58.6 ¹⁰⁶	31.3	4	35	5 56	27	6 54	25 54	8 51 50					
17	75	46.7	+20 56.0	221	28.1 ¹⁰⁵	-18 30.9	4	40	6 04	6 37	7 07	19 14 54	9 03 49					
18	90	46.7	+20 56.4	235	57.7 ¹⁰⁶	-18 30.3	6	45	6 12	6 48	7 21	19 01 54	9 16 49					
19	105	46.6	56.9	250	27.2 ¹⁰⁵	29.6	7	50	22	7 02	39	18 44 56	32 49					
20	120	46.5	57.3	264	56.7 ¹⁰⁵	28.8	8	52	26	08	47	37 56	40 48					
21	135	46.5	57.8	279	26.2 ¹⁰⁵	28.0	8	54	30	15	7 56	28 57	49 47					
22	150	46.4	58.2	293	55.7 ¹⁰⁵	27.0	10	56	35	22	8 07	19 56	9 58 47					
23	165	46.3	58.6	308	25.2 ¹⁰⁵	25.9	11	58	41	31	19	18 08 57	10 09 47					
24	180	46.3	+20 59.1	322	54.6 ¹⁰⁴	-18 24.8	11	60 S	6 46	7 40	8 33	17 55 58	10 22 46					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 50 ^m 6			Mag: -3.9 PMG: 11 ^h 42 ^m			Mag: -2.1 PMG: 23 ^h 42 ^m			Mag: -2.1 PMG: 18 ^h 50 ^m			Mag: 0.0 PMG: 0 ^h 43 ^m					
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	'		
0	242	01.4	184	35.9	+19 30.4	3	10.0	-21 37.1	76	39.1	+7 40.4	349	17.1	-20 39.8				
1	257	03.8	199	35.2	31.2	18	13.4	37.1	91	41.5	40.3	4	19.8	39.7				
2	272	06.3	214	34.5	31.9	33	16.8	37.0	106	43.9	40.3	19	22.4	39.7				
3	287	08.8	229	33.8	32.7	48	20.2	37.0	121	46.2	40.2	34	25.1	39.7				
4	302	11.2	244	33.1	33.4	63	23.7	36.9	136	48.6	40.2	49	27.7	39.7				
5	317	13.7	259	32.4	+19 34.2	78	27.1	-21 36.9	151	51.0	+7 40.1	64	30.4	-20 39.7				
6	332	16.2	274	31.7	+19 34.9	93	30.5	-21 36.8	166	53.3	+7 40.1	79	33.0	-20 39.6				
7	347	18.6	289	31.0	35.7	108	33.9	36.8	181	55.7	40.0	94	35.7	39.6				
8	2	21.1	304	30.3	36.4	123	37.3	36.7	196	58.0	40.0	109	38.4	39.6				
9	17	23.6	319	29.6	37.1	138	40.7	36.7	212	00.4	39.9	124	41.0	39.6				
10	32	26.0	334	28.9	37.9	153	44.2	36.6	227	02.8	39.9	139	43.7	39.6				
11	47	28.5	349	28.2	+19 38.6	168	47.6	-21 36.5	242	05.1	+7 39.8	154	46.3	-20 39.5				
12	62	31.0	4	27.5	+19 39.4	183	51.0	-21 36.5	257	07.5	+7 39.8	169	49.0	-20 39.5				
13	77	33.4	19	26.8	40.1	198	54.4	36.4	272	09.9	39.7	184	51.6	39.5				
14	92	35.9	34	26.1	40.8	213	57.8	36.4	287	12.2	39.7	199	54.3	39.5				
15	107	38.3	49	25.4	41.6	229	01.2	36.3	302	14.6	39.6	214	57.0	39.5				
16	122	40.8	64	24.6	42.3	244	04.7	36.3	317	17.0	39.6	229	59.6	39.4				
17	137	43.3	79	23.9	+19 43.0	259	08.1	-21 36.2	332	19.3	+7 39.5	245	02.3	-20 39.4				
18	152	45.7	94	23.2	+19 43.8	274	11.5	-21 36.1	347	21.7	+7 39.5	260	04.9	-20 39.4				
19	167	48.2	109	22.5	44.5	289	14.9	36.1	2	24.0	39.4	275	07.6	39.4				
20	182	50.7	124	21.8	45.2	304	18.3	36.0	17	26.4	39.4	290	10.2	39.4				
21	197	53.1	139	21.1	46.0	319	21.7	36.0	32	28.8	39.3	305	12.9	39.3				
22	212	55.6	154	20.4	46.7	334	25.1	35.9	47	31.1	39.3	320	15.5	39.3				
23	227	58.1	169	19.7	47.4	349	28.6	35.9	62	33.5	39.2	335	18.2	39.3				
24	243	00.5	184	19.0	+19 48.1	4	32.0	-21 35.8	77	35.9	+7 39.2	350	20.9	-20 39.3				
Dif	—			-7 +7			+34 +1			+24 -1			+27 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 18 ^d 2	PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 1	SD: 15 ^h 2			R°: 50 ^m							
	PMG: 11 ^h 57 ^m 0					PMG: 2 ^h 34 ^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	
0	180	46.3	+20 59.1	322	54.6	-18 24.8		60 N	20 55	22 11	** **	23 30	34	6 21	63	
1	195	46.2	+20 59.5	337	24.1 ¹⁰⁵	23.5	13	58	39	21 42	** **	18 36		33	62	
2	210	46.2	+21 00.0	351	53.5 ¹⁰⁴	22.2	13	56	25	20	23 03	23 08	37	44	61	
3	225	46.1	+21 00.4	6	22.9 ¹⁰⁴	20.8	14	54	13	21 02	22 20	22 59	39	6 54	59	
4	240	46.0	00.9	20	52.3 ¹⁰⁴	19.2	16	52	20 02	20 47	21 53	51 40		7 02	59	
5	255	46.0	+21 01.3	35	21.7 ¹⁰⁴	-18 17.6	16	50	19 53	20 35	21 32	22 44	41	7 10	58	
6	270	45.9	+21 01.7	49	51.1 ¹⁰⁴	-18 15.9	17	45	19 33	20 09	20 55	22 29	42	7 26	57	
7	285	45.8	02.2	64	20.4 ¹⁰³	14.0	19	40	18	19 49	29	16 44		39	56	
8	300	45.8	02.6	78	49.8 ¹⁰⁴	12.1	19	35	19 04	33	20 08	22 05	45	7 51	55	
9	315	45.7	03.1	93	19.2 ¹⁰⁴	10.1	20	30	18 53	19 20	19 52	21 56	46	8 00	55	
10	330	45.6	03.5	107	48.5 ¹⁰³	08.0	21	20	33	18 57	26	40 48		17	53	
11	345	45.6	+21 03.9	122	17.8 ¹⁰³	-18 05.8	22	10 N	18 16	18 39	19 05	21 25	50	8 32	52	
12	0	45.5	+21 04.4	136	47.1 ¹⁰³	-18 03.5	23	0	18 01	18 23	18 49	21 12	51	8 46	51	
13	15	45.4	04.8	151	16.5 ¹⁰⁴	-18 01.1	24	10 S	17 45	18 07	33	20 59	52	9 00	49	
14	30	45.4	05.3	165	45.8 ¹⁰³	-17 58.6	25	20	29	17 52	19	45 54		14	49	
15	45	45.3	05.7	180	15.1 ¹⁰³	56.0	26	30	17 10	36	18 05	28 56		31	47	
16	60	45.2	06.1	194	44.4 ¹⁰³	53.4	26	35	16 59	26	17 57	19 57		41	46	
17	75	45.2	+21 06.6	209	13.6 ¹⁰²	-17 50.6	28	40	16 46	17 16	17 49	20 08	58	9 52	45	
18	90	45.1	+21 07.0	223	42.9 ¹⁰³	-17 47.7	29	45	16 32	17 04	17 41	19 55	60	10 05	44	
19	105	45.1	07.4	238	12.2 ¹⁰³	44.7	30	50	14	16 51	31	40 61		21	42	
20	120	45.0	07.9	252	41.5 ¹⁰³	41.7	30	52	16 05	44	27	33 62		28	42	
21	135	44.9	08.3	267	10.7 ¹⁰²	38.5	32	54	15 56	37	22	25 63		36	41	
22	150	44.8	08.7	281	40.0 ¹⁰³	35.3	32	56	45	30	17	15 65		45	41	
23	165	44.8	09.1	296	09.3 ¹⁰³	31.9	34	58	33	21	11	19 05	66	10 56	39	
24	180	44.7	+21 09.6	310	38.5 ¹⁰²	-17 28.5	34	60 S	15 19	16 11	17 05	18 53	67	11 08	37	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 46 ^m 7			Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: -2.0 PMG: 23 ^h 36 ^m			Mag: -2.1 PMG: 18 ^h 47 ^m			Mag: 0.0 PMG: 0 ^h 38 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	'	°	'	°	'	°
0	243	00.5	184 19.0	+19 48.1	4	32.0	-21 35.8	77 35.9	+7 39.2	350 20.9	-20 39.3				
1	258	03.0	199 18.3	48.9	19	35.4	35.7	92 38.2	39.1	5 23.5	39.3				
2	273	05.5	214 17.6	49.6	34	38.8	35.7	107 40.6	39.0	20 26.2	39.2				
3	288	07.9	229 16.8	50.3	49	42.2	35.6	122 42.9	39.0	35 28.8	39.2				
4	303	10.4	244 16.1	51.0	64	45.6	35.6	137 45.3	38.9	50 31.5	39.2				
5	318	12.8	259 15.4	+19 51.8	79	49.1	-21 35.5	152 47.7	+7 38.9	65 34.1	-20 39.2				
6	333	15.3	274 14.7	+19 52.5	94	52.5	-21 35.4	167 50.0	+7 38.8	80 36.8	-20 39.2				
7	348	17.8	289 14.0	53.2	109	55.9	35.4	182 52.4	38.8	95 39.5	39.1				
8	3	20.2	304 13.3	53.9	124	59.3	35.3	197 54.7	38.7	110 42.1	39.1				
9	18	22.7	319 12.6	54.6	140	02.7	35.3	212 57.1	38.7	125 44.8	39.1				
10	33	25.2	334 11.8	55.4	155	06.1	35.2	227 59.4	38.6	140 47.4	39.1				
11	48	27.6	349 11.1	+19 56.1	170	09.6	-21 35.2	243 01.8	+7 38.6	155 50.1	-20 39.1				
12	63	30.1	4 10.4	+19 56.8	185	13.0	-21 35.1	258 04.2	+7 38.5	170 52.7	-20 39.0				
13	78	32.6	19 09.7	57.5	200	16.4	35.0	273 06.5	38.5	185 55.4	39.0				
14	93	35.0	34 09.0	58.2	215	19.8	35.0	288 08.9	38.4	200 58.0	39.0				
15	108	37.5	49 08.3	58.9	230	23.2	34.9	303 11.2	38.4	216 00.7	39.0				
16	123	39.9	64 07.5	+19 59.7	245	26.6	34.9	318 13.6	38.3	231 03.4	39.0				
17	138	42.4	79 06.8	+20 00.4	260	30.1	-21 34.8	333 15.9	+7 38.3	246 06.0	-20 38.9				
18	153	44.9	94 06.1	+20 01.1	275	33.5	-21 34.7	348 18.3	+7 38.2	261 08.7	-20 38.9				
19	168	47.3	109 05.4	01.8	290	36.9	34.7	3	20.7	276 11.3	38.9				
20	183	49.8	124 04.7	02.5	305	40.3	34.6	18 23.0	38.1	291 14.0	38.9				
21	198	52.3	139 03.9	03.2	320	43.7	34.6	33 25.4	38.0	306 16.6	38.9				
22	213	54.7	154 03.2	03.9	335	47.1	34.5	48 27.7	38.0	321 19.3	38.8				
23	228	57.2	169 02.5	04.6	350	50.5	34.4	63 30.1	37.9	336 22.0	38.8				
24	243	59.7	184 01.8	+20 05.3	5	54.0	-21 34.4	78 32.4	+7 37.9	351 24.6	-20 38.8				
Dif	—			-7	+7	+34	+1	+24	-1	+27	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: 19 ^d 2 PHE { SD: 15 ^h 3 PMG: 3 ^h 24 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m		
0	180	44.7	+21	09.6	310	38.5	-17	28.5	60 N	** ** *	1 43	2 59	** ** *	7 24 70		
1	195	44.6		10.0	325	07.8	103	25.0	58	** ** *	2 12	3 15	23 54 30	35 69		
2	210	44.6		10.4	339	37.0	102	21.3	56	0 51	34	29	45 32	45 67		
3	225	44.5		10.9	354	06.3	103	17.6	54	1 34	2 51	41	38 33	7 53 66		
4	240	44.4		11.3	8	35.5	102	13.8	52	2 01	3 06	3 51	31 34	8 01 65		
5	255	44.4	+21	11.7	23	04.7	102	-17	50	2 21	3 19	4 01	23 25 35	8 08 64		
6	270	44.3	+21	12.1	37	34.0	103	-17	45	2 58	3 45	4 20	23 11 38	8 23 61		
7	285	44.2		12.6	52	03.2	102	-17	40	3 25	4 04	36	23 00 40	35 60		
8	300	44.2		13.0	66	32.5	103	-16	35	3 45	21	4 49	22 50 43	46 58		
9	315	44.1		13.4	81	01.7	102	53.3	30	4 02	34	5 01	42 44	8 55 57		
10	330	44.0		13.8	95	30.9	102	49.0	20	28	4 57	21	28 46	9 10 55		
11	345	44.0	+21	14.3	110	00.2	103	-16	10 N	4 48	5 15	5 38	22 15 49	9 24 53		
12	0	43.9	+21	14.7	124	29.4	102	-16	0	5 06	5 31	5 53	22 03 51	9 37 51		
13	15	43.8		15.1	138	58.7	103	35.3	10 S	21	5 47	6 09	21 51 53	9 49 49		
14	30	43.7		15.5	153	27.9	102	30.6	20	35	6 02	26	39 55	10 03 47		
15	45	43.7		16.0	167	57.1	102	25.7	30	49	19	45	24 58	18 45		
16	60	43.6		16.4	182	26.4	103	20.8	35	5 57	28	6 56	16 59	27 44		
17	75	43.5	+21	16.8	196	55.6	102	-16	40	6 05	6 38	7 08	21 06 61	10 37 42		
18	90	43.5	+21	17.2	211	24.9	103	-16	45	6 14	6 50	7 23	20 55 63	10 49 40		
19	105	43.4		17.6	225	54.1	102	05.5	50	24	7 04	41	41 66	11 03 38		
20	120	43.3		18.0	240	23.4	103	-16	52	28	10	50	35 67	10 37		
21	135	43.2		18.5	254	52.6	102	-15	54	33	17	7 59	28 68	17 36		
22	150	43.2		18.9	269	21.9	103	49.4	56	38	25	8 10	20 70	26 34		
23	165	43.1		19.3	283	51.2	103	43.9	58	43	34	22	11 72	35 32		
24	180	43.0	+21	19.7	298	20.4	102	-15	60 S	6 49	7 44	8 37	20 00 75	11 45 31		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 7 ^h 42 ^m 8		Mag: -3.9 PMG: 11 ^h 44 ^m			Mag: -2.0 PMG: 23 ^h 31 ^m			Mag: -2.1 PMG: 18 ^h 43 ^m			Mag: 0.0 PMG: 0 ^h 34 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	243	59.7	184	01.8	+20	5	54.0	-21	78	32.4	+7	37.9	351	24.6	-20	38.8
1	259	02.1	199	01.1		20	57.4		93	34.8		37.8	6	27.3		38.8
2	274	04.6	214	00.3		36	00.8		108	37.1		37.8	21	29.9		38.8
3	289	07.1	228	59.6		51	04.2		123	39.5		37.7	36	32.6		38.7
4	304	09.5	243	58.9		66	07.6		138	41.8		37.7	51	35.2		38.7
5	319	12.0	258	58.2	+20	81	11.0	-21	153	44.2	+7	37.6	66	37.9	-20	38.7
6	334	14.4	273	57.4	+20	96	14.4	-21	168	46.5	+7	37.5	81	40.6	-20	38.7
7	349	16.9	288	56.7		111	17.9		183	48.9		37.5	96	43.2		38.6
8	4	19.4	303	56.0		126	21.3		198	51.2		37.4	111	45.9		38.6
9	19	21.8	318	55.3		141	24.7		213	53.6		37.4	126	48.5		38.6
10	34	24.3	333	54.5		156	28.1		228	56.0		37.3	141	51.2		38.6
11	49	26.8	348	53.8	+20	171	31.5	-21	243	58.3	+7	37.3	156	53.8	-20	38.6
12	64	29.2	3	53.1	+20	186	34.9	-21	259	00.7	+7	37.2	171	56.5	-20	38.5
13	79	31.7	18	52.4		201	38.3		274	03.0		37.2	186	59.2		38.5
14	94	34.2	33	51.6		216	41.8		289	05.4		37.1	202	01.8		38.5
15	109	36.6	48	50.9		231	45.2		304	07.7		37.0	217	04.5		38.5
16	124	39.1	63	50.2		246	48.6		319	10.1		37.0	232	07.1		38.5
17	139	41.6	78	49.4	+20	261	52.0	-21	334	12.4	+7	36.9	247	09.8	-20	38.4
18	154	44.0	93	48.7	+20	276	55.4	-21	349	14.8	+7	36.9	262	12.5	-20	38.4
19	169	46.5	108	48.0		291	58.8		4	17.1		36.8	277	15.1		38.4
20	184	48.9	123	47.2		307	02.2		19	19.5		36.8	292	17.8		38.4
21	199	51.4	138	46.5		322	05.7		34	21.8		36.7	307	20.4		38.4
22	214	53.9	153	45.8		337	09.1		49	24.1		36.6	322	23.1		38.3
23	229	56.3	168	45.0		352	12.5		64	26.5		36.6	337	25.7		38.3
24	244	58.8	183	44.3	+20	7	15.9	-21	79	28.8	+7	36.5	352	28.4	-20	38.3
Dif	—		-7		+7	+34		+1	+24		-1		+27		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: 20 ^d 2 PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/2 SD: 15/4 PMG: 4 ^h 15 ^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
0	180	43.0	+21	19.7	298	20.4	-15 38.2	60 N	20 59	22 17	** ** *	0 04 27	8 34 77		
1	195	43.0		20.1	312	49.7 ¹⁰³	32.5 ⁵⁷	58	42	21 46	** ** *	** ** **	44 74		
2	210	42.9		20.5	327	19.0 ¹⁰³	26.7 ⁵⁸	56	28	24	23 15	** ** **	52 72		
3	225	42.8		20.9	341	48.2 ¹⁰²	20.8 ⁵⁹	54	16	21 06	22 26	** ** **	8 59 71		
4	240	42.7		21.4	356	17.5 ¹⁰³	14.8 ⁶⁰	52	20 05	20 50	21 57	** ** **	9 06 69		
5	255	42.7	+21	21.8	10	46.8 ¹⁰³	-15 08.7 ⁶¹	50	19 55	20 37	21 36	** ** **	9 12 67		
6	270	42.6	+21	22.2	25	16.1 ¹⁰³	-15 02.6 ⁶¹	45	19 35	20 11	20 58	23 49 36	9 24 65		
7	285	42.5		22.6	39	45.4 ¹⁰³	-14 56.4 ⁶²	40	19	19 51	31	40 38	35 62		
8	300	42.4		23.0	54	14.7 ¹⁰³	50.0 ⁶⁴	35	19 06	35	20 10	33 40	44 60		
9	315	42.4		23.4	68	44.0 ¹⁰³	43.6 ⁶⁴	30	18 54	19 21	19 53	26 42	9 52 58		
10	330	42.3		23.8	83	13.3 ¹⁰³	37.1 ⁶⁵	20	34	18 58	27	14 45	10 05 56		
11	345	42.2	+21	24.2	97	42.6 ¹⁰³	-14 30.6 ⁶⁵	10 N	18 17	18 39	19 06	23 04 48	10 17 53		
12	0	42.1	+21	24.6	112	11.9 ¹⁰³	-14 23.9 ⁶⁷	0	18 01	18 23	18 49	22 54 51	10 28 50		
13	15	42.1		25.0	126	41.2 ¹⁰³	17.2 ⁶⁷	10 S	17 45	18 07	33	44 54	38 49		
14	30	42.0		25.4	141	10.5 ¹⁰³	10.3 ⁶⁹	20	28	17 52	19	34 56	10 50 46		
15	45	41.9		25.8	155	39.9 ¹⁰⁴	-14 03.4 ⁶⁹	30	17 09	35	18 04	22 59	11 03 43		
16	60	41.8		26.3	170	09.2 ¹⁰³	-13 56.4 ⁷⁰	35	16 58	25	17 57	15 62	11 41		
17	75	41.8	+21	26.7	184	38.5 ¹⁰³	-13 49.4 ⁷⁰	40	16 45	17 15	17 48	22 07 64	11 19 39		
18	90	41.7	+21	27.1	199	07.9 ¹⁰⁴	-13 42.2 ⁷²	45	16 30	17 03	17 40	21 58 66	11 29 37		
19	105	41.6		27.5	213	37.2 ¹⁰³	35.0 ⁷²	50	12	16 49	29	47 69	41 34		
20	120	41.5		27.9	228	06.6 ¹⁰⁴	27.7 ⁷³	52	16 03	42	25	42 71	47 32		
21	135	41.4		28.3	242	35.9 ¹⁰³	20.3 ⁷⁴	54	15 54	35	20	36 73	11 53 31		
22	150	41.4		28.7	257	05.3 ¹⁰⁴	12.8 ⁷⁵	56	43	28	15	30 74	12 00 29		
23	165	41.3		29.1	271	34.6 ¹⁰³	-13 05.3 ⁷⁵	58	30	19	09	23 76	07 28		
24	180	41.2	+21	29.5	286	04.0 ¹⁰⁴	-12 57.7 ⁷⁶	60 S	15 15	16 09	17 03	21 15 78	12 16 25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 7 ^h 38 ^m 8		Mag: -3.9 PMG: 11 ^h 46 ^m		Mag: -2.0 PMG: 23 ^h 26 ^m		Mag: -2.1 PMG: 18 ^h 39 ^m		Mag: 0.0 PMG: 0 ^h 30 ^m										
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	244	58.8	183	44.3	+20	21.9	7	15.9	-21	32.9	79	28.8	+7	36.5	352	28.4	-20	38.3	
1	260	01.3	198	43.6		22.6	22	19.3		32.8	94	31.2		36.5		7	31.1	38.3	
2	275	03.7	213	42.8		23.3	37	22.7		32.8	109	33.5		36.4		22	33.7	38.3	
3	290	06.2	228	42.1		24.0	52	26.1		32.7	124	35.9		36.4		37	36.4	38.2	
4	305	08.7	243	41.4		24.7	67	29.5		32.6	139	38.2		36.3		52	39.0	38.2	
5	320	11.1	258	40.6	+20	25.3	82	33.0	-21	32.6	154	40.6	+7	36.2		67	41.7	-20	38.2
6	335	13.6	273	39.9	+20	26.0	97	36.4	-21	32.5	169	42.9	+7	36.2		82	44.4	-20	38.2
7	350	16.1	288	39.2		26.7	112	39.8		32.4	184	45.3		36.1		97	47.0	38.2	
8	5	18.5	303	38.4		27.4	127	43.2		32.4	199	47.6		36.1		112	49.7	38.1	
9	20	21.0	318	37.7		28.0	142	46.6		32.3	214	50.0		36.0		127	52.3	38.1	
10	35	23.4	333	37.0		28.7	157	50.0		32.3	229	52.3		35.9		142	55.0	38.1	
11	50	25.9	348	36.2	+20	29.4	172	53.4	-21	32.2	244	54.6	+7	35.9		157	57.6	-20	38.1
12	65	28.4	3	35.5	+20	30.0	187	56.8	-21	32.1	259	57.0	+7	35.8		173	00.3	-20	38.1
13	80	30.8	18	34.7		30.7	203	00.2		32.1	274	59.3		35.8		188	03.0		38.0
14	95	33.3	33	34.0		31.4	218	03.6		32.0	290	01.7		35.7		203	05.6		38.0
15	110	35.8	48	33.3		32.1	233	07.1		31.9	305	04.0		35.7		218	08.3		38.0
16	125	38.2	63	32.5		32.7	248	10.5		31.9	320	06.4		35.6		233	10.9		38.0
17	140	40.7	78	31.8	+20	33.4	263	13.9	-21	31.8	335	08.7	+7	35.5		248	13.6	-20	38.0
18	155	43.2	93	31.0	+20	34.0	278	17.3	-21	31.7	350	11.1	+7	35.5		263	16.3	-20	37.9
19	170	45.6	108	30.3		34.7	293	20.7		31.7	5	13.4		35.4		278	18.9		37.9
20	185	48.1	123	29.6		35.4	308	24.1		31.6	20	15.7		35.4		293	21.6		37.9
21	200	50.5	138	28.8		36.0	323	27.5		31.5	35	18.1		35.3		308	24.2		37.9
22	215	53.0	153	28.1		36.7	338	30.9		31.5	50	20.4		35.2		323	26.9		37.9
23	230	55.5	168	27.3		37.4	353	34.3		31.4	65	22.8		35.2		338	29.5		37.8
24	245	57.9	183	26.6	+20	38.0	8	37.7	-21	31.3	80	25.1	+7	35.1		353	32.2	-20	37.8
Dif	—	—	-7	+7		+34	+1			+23	-1			+27		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 3				Edad: 21 ^d 2 PHE { 4 ^h : 57 ^h 5 12 ^h : 57 ^h 7 20 ^h : 57 ^h 9 PMG: 5 ^h 06 ^m R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	41.2	+21	29.5	286	04.0	-12	57.7	60 N	** **	1 37	2 55	0 31	23	9 51	81	
1	195	41.1		29.9	300	33.4		50.0	58	** **	2 08	3 12	24	25	9 58	78	
2	210	41.1		30.3	315	02.7		42.2	56	0 39	30	26	17	27	10 04	76	
3	225	41.0		30.7	329	32.1		34.4	54	1 28	2 49	38	11	29	10 74		
4	240	40.9		31.1	344	01.5		26.5	52	1 57	3 04	49	05	31	15	72	
5	255	40.8	+21	31.5	358	30.9	-12	18.5	50	2 18	3 17	3 59	0 00	33	10 19	71	
6	270	40.7	+21	31.8	13	00.2	-12	10.4	45	2 56	3 43	4 19	** **	**	10 29	68	
7	285	40.7		32.2	27	29.6	-12	02.2	40	3 23	4 03	35	** **	**	37	65	
8	300	40.6		32.6	41	59.0	-11	54.0	35	3 44	20	4 49	** **	**	44	62	
9	315	40.5		33.0	56	28.4		45.7	30	4 01	34	5 00	** **	**	10 50	60	
10	330	40.4		33.4	70	57.8		37.4	20	28	4 56	20	23 59	45	11 01	56	
11	345	40.3	+21	33.8	85	27.2	-11	29.0	10 N	4 48	5 15	5 38	23 52	48	11 10	53	
12	0	40.3	+21	34.2	99	56.6	-11	20.5	0	5 06	5 31	5 54	23 45	51	11 18	51	
13	15	40.2		34.6	114	26.0		11.9	10 S	21	5 47	6 10	38	54	27	48	
14	30	40.1		35.0	128	55.4	-11	03.3	20	36	6 03	26	30	57	36	44	
15	45	40.0		35.4	143	24.8	-10	54.6	30	50	20	46	21	61	46	41	
16	60	39.9		35.8	157	54.2		45.8	35	5 58	29	6 57	17	63	52	39	
17	75	39.9	+21	36.2	172	23.6	-10	36.9	40	6 06	6 40	7 10	23 11	66	11 58	37	
18	90	39.8	+21	36.5	186	53.0	-10	28.0	45	6 15	6 52	7 25	23 04	69	12 06	34	
19	105	39.7		36.9	201	22.4		19.1	50	25	7 06	43	22 56	72	15	31	
20	120	39.6		37.3	215	51.8		10.0	52	30	13	7 52	53	73	19	30	
21	135	39.5		37.7	230	21.2	-10	00.9	54	35	20	8 02	49	75	24	28	
22	150	39.5		38.1	244	50.6	-9	51.8	56	40	28	13	44	78	29	26	
23	165	39.4		38.5	259	20.0		42.6	58	46	37	25	39	80	35	23	
24	180	39.3	+21	38.9	273	49.4	-9	33.3	60 S	6 52	7 47	8 40	22 33	83	12 41	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 34 ^m 9		Mag: -3.9 PMG: 11 ^h 47 ^m		Mag: -2.0 PMG: 23 ^h 20 ^m		Mag: -2.1 PMG: 18 ^h 35 ^m		Mag: 0.0 PMG: 0 ^h 26 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	245	57.9	183	26.6	+20	8	37.7	-21	80	25.1	+7	351	35.1	353	32.2	-20	37.8	
1	261	00.4	198	25.8		38.7	23	41.1		31.3	95	27.4		35.1	8	34.9	37.8	
2	276	02.9	213	25.1		39.3	38	44.6		31.2	110	29.8		35.0	23	37.5	37.8	
3	291	05.3	228	24.3		40.0	53	48.0		31.1	125	32.1		34.9	38	40.2	37.8	
4	306	07.8	243	23.6		40.6	68	51.4		31.1	140	34.5		34.9	53	42.8	37.7	
5	321	10.3	258	22.9	+20	41.3	83	54.8	-21	31.0	155	36.8	+7	34.8	68	45.5	-20	37.7
6	336	12.7	273	22.1	+20	41.9	98	58.2	-21	30.9	170	39.1	+7	34.8	83	48.2	-20	37.7
7	351	15.2	288	21.4		42.6	114	01.6		30.9	185	41.5		34.7	98	50.8		37.7
8	6	17.7	303	20.6		43.2	129	05.0		30.8	200	43.8		34.6	113	53.5		37.7
9	21	20.1	318	19.9		43.9	144	08.4		30.8	215	46.2		34.6	128	56.1		37.6
10	36	22.6	333	19.1		44.5	159	11.8		30.7	230	48.5		34.5	143	58.8		37.6
11	51	25.0	348	18.4	+20	45.2	174	15.2	-21	30.6	245	50.8	+7	34.4	159	01.5	-20	37.6
12	66	27.5	3	17.6	+20	45.8	189	18.6	-21	30.6	260	53.2	+7	34.4	174	04.1	-20	37.6
13	81	30.0	18	16.9		46.5	204	22.0		30.5	275	55.5		34.3	189	06.8		37.6
14	96	32.4	33	16.1		47.1	219	25.4		30.4	290	57.8		34.3	204	09.4		37.5
15	111	34.9	48	15.4		47.8	234	28.8		30.4	306	00.2		34.2	219	12.1		37.5
16	126	37.4	63	14.6		48.4	249	32.2		30.3	321	02.5		34.1	234	14.7		37.5
17	141	39.8	78	13.9	+20	49.1	264	35.6	-21	30.2	336	04.9	+7	34.1	249	17.4	-20	37.5
18	156	42.3	93	13.1	+20	49.7	279	39.0	-21	30.2	351	07.2	+7	34.0	264	20.1	-20	37.5
19	171	44.8	108	12.4		50.3	294	42.4		30.1	6	09.5		34.0	279	22.7		37.4
20	186	47.2	123	11.6		51.0	309	45.8		30.0	21	11.9		33.9	294	25.4		37.4
21	201	49.7	138	10.8		51.6	324	49.2		29.9	36	14.2		33.8	309	28.0		37.4
22	216	52.2	153	10.1		52.3	339	52.6		29.9	51	16.5		33.8	324	30.7		37.4
23	231	54.6	168	09.3		52.9	354	56.0		29.8	66	18.9		33.7	339	33.4		37.4
24	246	57.1	183	08.6	+20	53.5	9	59.4	-21	29.7	81	21.2	+7	33.6	354	36.0	-20	37.3
Dif	—		-7		+6		+34		+1		+23		-1		+27		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 22 ^d 2 PHE {	4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'6				Civil			R°		R°	
	PMG: 11 ^h 57 ^m 4				R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	39.3	+21 38.9	273	49.4	-9 33.3	94	60 N	21 03	22 24	** **	0 54 21	11 12 84		
1	195	39.2		288	18.8 ¹⁰⁴	23.9	94	58	20 45	21 51	** **	49 23	16 82		
2	210	39.1		302	48.2 ¹⁰⁴	14.5	94	56	31	28	23 31	44 25	20 79		
3	225	39.0		317	17.5 ¹⁰³	-9 05.1	94	54	18	21 09	22 32	40 27	24 77		
4	240	39.0		331	46.9 ¹⁰⁴	-8 55.5	96	52	20 07	20 53	22 02	36 29	27 75		
5	255	38.9	+21 40.8	346	16.3 ¹⁰⁴	-8 45.9	96	50	19 58	20 40	21 40	0 33 30	11 30 73		
6	270	38.8	+21 41.1	0	45.7 ¹⁰⁴	-8 36.3	96	45	19 37	20 13	21 00	0 25 33	11 37 69		
7	285	38.7		15	15.1 ¹⁰⁴	26.6	97	40	21	19 53	20 33	18 37	42 66		
8	300	38.6		41.9	29 44.4 ¹⁰³	16.9	97	35	19 07	36	20 12	13 38	46 64		
9	315	38.5		42.3	44 13.8 ¹⁰⁴	-8 07.0	99	30	18 55	19 22	19 55	0 08 41	50 62		
10	330	38.5		42.7	58 43.1 ¹⁰³	-7 57.2	98	20	35	18 59	28	** ** *	11 57 58		
11	345	38.4	+21 43.0	73	12.5 ¹⁰⁴	-7 47.3	99	10 N	18 17	18 40	19 07	** ** *	12 03 55		
12	0	38.3	+21 43.4	87	41.8 ¹⁰³	-7 37.3 ¹⁰⁰		0	18 01	18 23	18 49	** ** *	12 09 51		
13	15	38.2		102	11.2 ¹⁰⁴	27.3 ¹⁰⁰		10 S	17 45	18 08	34	** ** *	15 47		
14	30	38.1		116	40.5 ¹⁰³	17.2 ¹⁰¹		20	28	17 52	19	** ** *	20 45		
15	45	38.0		131	09.8 ¹⁰³	-7 07.1 ¹⁰¹		30	17 08	34	18 04	** ** *	27 41		
16	60	37.9		145	39.1 ¹⁰³	-6 56.9 ¹⁰²		35	16 57	25	17 56	** ** *	31 38		
17	75	37.9	+21 45.3	160	08.4 ¹⁰³	-6 46.7 ¹⁰²		40	16 44	17 14	17 48	** ** *	12 35 36		
18	90	37.8	+21 45.6	174	37.7 ¹⁰³	-6 36.4 ¹⁰³		45	16 29	17 02	17 39	** ** *	12 40 33		
19	105	37.7		46.0	189 07.0 ¹⁰³	26.1 ¹⁰³		50	10	16 48	28	** ** *	46 29		
20	120	37.6		46.4	203 36.3 ¹⁰³	15.7 ¹⁰⁴		52	16 01	41	24	** ** *	49 27		
21	135	37.5		46.8	218 05.5 ¹⁰²	-6 05.3 ¹⁰⁴		54	15 51	34	19	** ** *	52 26		
22	150	37.4		47.1	232 34.8 ¹⁰³	-5 54.9 ¹⁰⁴		56	40	26	13	** ** *	55 24		
23	165	37.3		47.5	247 04.0 ¹⁰²	44.4 ¹⁰⁵		58	27	17	08	23 59 82	12 58 22		
24	180	37.2	+21 47.9	261	33.2 ¹⁰²	-5 33.8 ¹⁰⁶		60 S	15 12	16 06	17 01	23 56 85	13 03 19		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 31 ^m 0			Mag: -4.0 PMG: 11 ^h 48 ^m			Mag: -2.0 PMG: 23 ^h 15 ^m			Mag: -2.1 PMG: 18 ^h 32 ^m			Mag: 0.0 PMG: 0 ^h 22 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec		
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	246	57.1	183 08.6	+20 53.5	9 59.4	-21 29.7	81 21.2	+7 33.6	354 36.0	-20 37.3					
1	261	59.5	198 07.8	54.2	25 02.8	29.7	96 23.5	33.6	9 38.7	37.3					
2	277	02.0	213 07.1	54.8	40 06.2	29.6	111 25.9	33.5	24 41.3	37.3					
3	292	04.5	228 06.3	55.4	55 09.6	29.5	126 28.2	33.5	39 44.0	37.3					
4	307	06.9	243 05.6	56.1	70 13.0	29.5	141 30.5	33.4	54 46.7	37.3					
5	322	09.4	258 04.8	+20 56.7	85 16.4	-21 29.4	156 32.9	+7 33.3	69 49.3	-20 37.2					
6	337	11.9	273 04.0	+20 57.3	100 19.8	-21 29.3	171 35.2	+7 33.3	84 52.0	-20 37.2					
7	352	14.3	288 03.3	57.9	115 23.2	29.3	186 37.5	33.2	99 54.6	37.2					
8	7	16.8	303 02.5	58.6	130 26.6	29.2	201 39.9	33.1	114 57.3	37.2					
9	22	19.3	318 01.8	59.2	145 30.0	29.1	216 42.2	33.1	130 00.0	37.2					
10	37	21.7	333 01.0	+20 59.8	160 33.4	29.1	231 44.5	33.0	145 02.6	37.1					
11	52	24.2	348 00.2	+21 00.4	175 36.8	-21 29.0	246 46.9	+7 32.9	160 05.3	-20 37.1					
12	67	26.6	2 59.5	+21 01.1	190 40.2	-21 28.9	261 49.2	+7 32.9	175 07.9	-20 37.1					
13	82	29.1	17 58.7	01.7	205 43.6	28.9	276 51.5	32.8	190 10.6	37.1					
14	97	31.6	32 58.0	02.3	220 47.0	28.8	291 53.9	32.8	205 13.3	37.0					
15	112	34.0	47 57.2	02.9	235 50.4	28.7	306 56.2	32.7	220 15.9	37.0					
16	127	36.5	62 56.4	03.5	250 53.8	28.7	321 58.5	32.6	235 18.6	37.0					
17	142	39.0	77 55.7	+21 04.2	265 57.2	-21 28.6	337 00.9	+7 32.6	250 21.2	-20 37.0					
18	157	41.4	92 54.9	+21 04.8	281 00.6	-21 28.5	352 03.2	+7 32.5	265 23.9	-20 37.0					
19	172	43.9	107 54.1	05.4	296 04.0	28.4	7 05.5	32.4	280 26.6	36.9					
20	187	46.4	122 53.4	06.0	311 07.4	28.4	22 07.8	32.4	295 29.2	36.9					
21	202	48.8	137 52.6	06.6	326 10.8	28.3	37 10.2	32.3	310 31.9	36.9					
22	217	51.3	152 51.9	07.2	341 14.2	28.2	52 12.5	32.2	325 34.5	36.9					
23	232	53.8	167 51.1	07.8	356 17.6	28.2	67 14.8	32.2	340 37.2	36.9					
24	247	56.2	182 50.3	+21 08.5	11 20.9	-21 28.1	82 17.2	+7 32.1	355 39.9	-20 36.8					
Dif	—	—	-8	+6	+34	+1	+23	-1	+27	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 6				Edad: 23 ^d 2 PHE SD: 16 ^h 0 PMG: 6 ^h 48 ^m					R ^o : 51 ^m			R ^o		R ^o					
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	37.2	+21	47.9	261	33.2	-5	33.8	60 N	** **	1 31	2 52	1 15	19	12 36	86				
1	195	37.2		48.2	276	02.4	102	23.3	58	** **	2 03	3 09	12 21		38 83					
2	210	37.1		48.6	290	31.6	102	12.6	56	0 24	27	24	09 24		39 81					
3	225	37.0		49.0	305	00.8	102	-5 02.0	54	1 23	2 46	36	07 26		41 79					
4	240	36.9		49.3	319	30.0	102	-4 51.3	52	1 53	3 01	47	05 27		42 77					
5	255	36.8	+21	49.7	333	59.1	101	-4 40.6	50	2 15	3 15	3 57	1 03	29	12 43	76				
6	270	36.7	+21	50.1	348	28.3	102	-4 29.8	45	2 54	3 41	4 18	0 58	33	12 46	72				
7	285	36.6		50.4	2	57.4	101	19.0	40	3 22	4 02	34	55 35		48 69					
8	300	36.5		50.8	17	26.5	101	-4 08.1	35	3 43	19	4 48	51 39		50 66					
9	315	36.5		51.1	31	55.6	101	-3 57.2	30	4 00	33	5 00	49 40		52 63					
10	330	36.4		51.5	46	24.6	100	46.3	20	27	4 56	20	44 44		55 59					
11	345	36.3	+21	51.9	60	53.7	101	-3 35.4	10 N	4 48	5 15	5 38	0 40	48	12 58	55				
12	0	36.2	+21	52.2	75	22.7	100	-3 24.4	0	5 06	5 32	5 54	0 36	51	13 00	52				
13	15	36.1		52.6	89	51.7	100	13.4	10 S	21	5 48	6 10	32 54		02 49					
14	30	36.0		52.9	104	20.7	100	-3 02.4	20	36	6 04	27	27 59		05 45					
15	45	35.9		53.3	118	49.6	99	-2 51.3	30	51	21	47	22 63		08 40					
16	60	35.8		53.7	133	18.6	100	40.2	35	5 59	30	6 58	20 65		09 39					
17	75	35.7	+21	54.0	147	47.5	99	-2 29.1	40	6 08	6 41	7 11	0 17	67	13 11	36				
18	90	35.6	+21	54.4	162	16.4	99	-2 18.0	45	6 17	6 53	7 27	0 13	70	13 13	33				
19	105	35.5		54.7	176	45.3	99	-2 06.8	50	27	7 08	45	08 75		15 29					
20	120	35.5		55.1	191	14.1	98	-1 55.6	52	32	15	7 54	06 77		16 28					
21	135	35.4		55.4	205	42.9	98	44.4	54	37	22	8 04	04 78		18 25					
22	150	35.3		55.8	220	11.7	98	33.2	56	42	30	16	0 02	80	19 24					
23	165	35.2		56.1	234	40.5	98	21.9	58	48	39	29	** ** *	**	20 22					
24	180	35.1	+21	56.5	249	09.3	98	-1 10.6	60 S	6 55	7 49	8 44	** ** *	**	13 22	19				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 27 ^m 0				Mag: -4.0 PMG: 11 ^h 49 ^m				Mag: -2.0 PMG: 23 ^h 09 ^m				Mag: -2.1 PMG: 18 ^h 28 ^m				Mag: 0.0 PMG: 0 ^h 17 ^m			
h	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
0	247	56.2			182	50.3	+21	08.5	11	20.9	-21	08.5	82	17.2	+7	32.1	355	39.9	-20	36.8
1	262	58.7			197	49.6		09.1	26	24.3		28.0	97	19.5		32.0	10	42.5		36.8
2	278	01.1			212	48.8		09.7	41	27.7		28.0	112	21.8		32.0	25	45.2		36.8
3	293	03.6			227	48.0		10.3	56	31.1		27.9	127	24.1		31.9	40	47.8		36.8
4	308	06.1			242	47.3		10.9	71	34.5		27.8	142	26.5		31.8	55	50.5		36.8
5	323	08.5			257	46.5	+21	11.5	86	37.9	-21	27.8	157	28.8	+7	31.8	70	53.1	-20	36.7
6	338	11.0			272	45.7	+21	12.1	101	41.3	-21	27.7	172	31.1	+7	31.7	85	55.8	-20	36.7
7	353	13.5			287	44.9		12.7	116	44.7		27.6	187	33.4		31.6	100	58.5		36.7
8	8	15.9			302	44.2		13.3	131	48.1		27.5	202	35.8		31.6	116	01.1		36.7
9	23	18.4			317	43.4		13.9	146	51.5		27.5	217	38.1		31.5	131	03.8		36.7
10	38	20.9			332	42.6		14.5	161	54.8		27.4	232	40.4		31.4	146	06.4		36.6
11	53	23.3			347	41.9	+21	15.1	176	58.2	-21	27.3	247	42.7	+7	31.4	161	09.1	-20	36.6
12	68	25.8			2	41.1	+21	15.7	192	01.6	-21	27.3	262	45.1	+7	31.3	176	11.8	-20	36.6
13	83	28.3			17	40.3		16.3	207	05.0		27.2	277	47.4		31.2	191	14.4		36.6
14	98	30.7			32	39.6		16.9	222	08.4		27.1	292	49.7		31.2	206	17.1		36.6
15	113	33.2			47	38.8		17.5	237	11.8		27.1	307	52.0		31.1	221	19.8		36.5
16	128	35.6			62	38.0		18.1	252	15.2		27.0	322	54.4		31.0	236	22.4		36.5
17	143	38.1			77	37.2	+21	18.7	267	18.5	-21	26.9	337	56.7	+7	31.0	251	25.1	-20	36.5
18	158	40.6			92	36.5	+21	19.3	282	21.9	-21	26.8	352	59.0	+7	30.9	266	27.7	-20	36.5
19	173	43.0			107	35.7		19.9	297	25.3		26.8	8	01.3		30.8	281	30.4		36.5
20	188	45.5			122	34.9		20.5	312	28.7		26.7	23	03.7		30.8	296	33.1		36.4
21	203	48.0			137	34.1		21.0	327	32.1		26.6	38	06.0		30.7	311	35.7		36.4
22	218	50.4			152	33.4		21.6	342	35.5		26.6	53	08.3		30.6	326	38.4		36.4
23	233	52.9			167	32.6		22.2	357	38.8		26.5	68	10.6		30.6	341	41.0		36.4
24	248	55.4			182	31.8	+21	22.8	12	42.2	-21	26.4	83	13.0	+7	30.5	356	43.7	-20	36.4
Dif	—				-8 +6				+34 +1				+23 -1				+27 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 2 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 7 20 ^h : 59 ^m 9										
	PMG: 11 ^h 57 ^m 7			PMG: 7 ^h 39 ^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
0	180	35.1	+21 56.5	249	09.3	-1 10.6		60 N	21 06	22 30	** **	1 34 19	14 02 88	
1	195	35.0	56.8	263	38.0	-0 59.4	112	58	20 49	21 56	** **	33 22	01 86	
2	210	34.9	57.2	278	06.7	48.1	113	56	34	31	** **	33 24	00 84	
3	225	34.8	57.5	292	35.3	36.7	114	54	21	21 12	22 38	33 26	14 00 84	
4	240	34.7	57.9	307	03.9	25.4	113	52	10	20 56	22 06	32 28	13 59 79	
5	255	34.6	+21 58.2	321	32.5	-0 14.1	113	50	20 00	20 43	21 43	1 32 29	13 59 77	
6	270	34.5	+21 58.6	336	01.1	-0 02.7	114	45	19 39	20 15	21 03	1 31 33	13 58 73	
7	285	34.4	58.9	350	29.7	+0 08.7	114	40	22	19 54	20 35	30 37	57 70	
8	300	34.3	59.3	4 58.2	95	20.1	114	35	19 08	37	20 13	30 39	56 67	
9	315	34.3	+21 59.6	19 26.6	94	31.4	113	30	18 56	23	19 56	29 42	55 65	
10	330	34.2	+22 00.0	33 55.1	95	42.8	114	20	36	19 00	29	28 46	54 61	
11	345	34.1	+22 00.3	48 23.5	94	+0 54.2	114	10 N	18 18	18 41	19 07	1 28 49	13 53 57	
12	0	34.0	+22 00.7	62 51.9	94	+1 05.6	114	0	18 01	18 24	18 50	1 27 53	13 52 53	
13	15	33.9	01.0	77 20.2	93	17.1	115	10 S	17 45	18 08	34	26 56	51 50	
14	30	33.8	01.4	91 48.5	93	28.5	114	20	28	17 51	19	26 60	50 46	
15	45	33.7	01.7	106 16.8	93	39.9	114	30	17 08	34	18 04	25 64	48 42	
16	60	33.6	02.0	120 45.0	92	+1 51.3	114	35	16 56	24	17 56	25 66	48 39	
17	75	33.5	+22 02.4	135 13.2	92	+2 02.7	114	40	16 43	17 13	17 47	1 24 69	13 47 37	
18	90	33.4	+22 02.7	149 41.4	92	+2 14.1	114	45	16 28	17 01	17 38	1 23 73	13 46 34	
19	105	33.3	03.1	164 09.5	91	25.5	114	50	09	16 46	27	23 76	44 31	
20	120	33.2	03.4	178 37.6	91	36.9	114	52	16 00	39	22	23 78	44 29	
21	135	33.1	03.7	193 05.6	90	48.3	114	54	15 50	32	17	22 80	43 27	
22	150	33.0	04.1	207 33.6	90	+2 59.7	114	56	38	24	12	22 82	43 24	
23	165	32.9	04.4	222 01.6	90	+3 11.1	114	58	25	15	17 06	21 85	42 22	
24	180	32.8	+22 04.7	236 29.5	89	+3 22.5	114	60 S	15 10	16 04	16 59	1 21 88	13 41 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 23 ^m 1		Mag: -4.0 PMG: 11 ^h 50 ^m		Mag: -2.0 PMG: 23 ^h 04 ^m		Mag: -2.1 PMG: 18 ^h 24 ^m		Mag: 0.0 PMG: 0 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	248	55.4	182 31.8	+21 22.8	12 42.2	-21 26.4	83 13.0	+7 30.5	356 43.7	-20 36.4
1	263	57.8	197 31.0	23.4	27 45.6	26.4	98 15.3	30.4	11 46.4	36.3
2	279	00.3	212 30.3	24.0	42 49.0	26.3	113 17.6	30.4	26 49.0	36.3
3	294	02.7	227 29.5	24.6	57 52.4	26.2	128 19.9	30.3	41 51.7	36.3
4	309	05.2	242 28.7	25.1	72 55.7	26.1	143 22.2	30.2	56 54.3	36.3
5	324	07.7	257 27.9	+21 25.7	87 59.1	-21 26.1	158 24.6	+7 30.2	71 57.0	-20 36.3
6	339	10.1	272 27.1	+21 26.3	103 02.5	-21 26.0	173 26.9	+7 30.1	86 59.7	-20 36.2
7	354	12.6	287 26.4	26.9	118 05.9	25.9	188 29.2	30.0	102 02.3	36.2
8	9	15.1	302 25.6	27.5	133 09.3	25.9	203 31.5	30.0	117 05.0	36.2
9	24	17.5	317 24.8	28.0	148 12.6	25.8	218 33.8	29.9	132 07.6	36.2
10	39	20.0	332 24.0	28.6	163 16.0	25.7	233 36.2	29.8	147 10.3	36.2
11	54	22.5	347 23.2	+21 29.2	178 19.4	-21 25.6	248 38.5	+7 29.7	162 13.0	-20 36.1
12	69	24.9	2 22.5	+21 29.8	193 22.8	-21 25.6	263 40.8	+7 29.7	177 15.6	-20 36.1
13	84	27.4	17 21.7	30.3	208 26.1	25.5	278 43.1	29.6	192 18.3	36.1
14	99	29.9	32 20.9	30.9	223 29.5	25.4	293 45.4	29.5	207 20.9	36.1
15	114	32.3	47 20.1	31.5	238 32.9	25.4	308 47.7	29.5	222 23.6	36.1
16	129	34.8	62 19.3	32.0	253 36.2	25.3	323 50.1	29.4	237 26.3	36.0
17	144	37.2	77 18.5	+21 32.6	268 39.6	-21 25.2	338 52.4	+7 29.3	252 28.9	-20 36.0
18	159	39.7	92 17.8	+21 33.2	283 43.0	-21 25.1	353 54.7	+7 29.3	267 31.6	-20 36.0
19	174	42.2	107 17.0	33.7	298 46.4	25.1	8 57.0	29.2	282 34.2	36.0
20	189	44.6	122 16.2	34.3	313 49.7	25.0	23 59.3	29.1	297 36.9	36.0
21	204	47.1	137 15.4	34.9	328 53.1	24.9	39 01.6	29.1	312 39.6	35.9
22	219	49.6	152 14.6	35.4	343 56.5	24.9	54 04.0	29.0	327 42.2	35.9
23	234	52.0	167 13.8	36.0	358 59.8	24.8	69 06.3	28.9	342 44.9	35.9
24	249	54.5	182 13.0	+21 36.6	14 03.2	-21 24.7	84 08.6	+7 28.8	357 47.5	-20 35.9
Dif	—		-8	+6	+34	+1	+23	-1	+27	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: 25 ^d 2 PHE { SD: 16'3 PMG: 8 ^h 32 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	32.8	+22	04.7	236	29.5	+3	22.5	60 N	** **	1 25	2 49	1 53	22	15 30	90		
1	195	32.7		05.1	250	57.4	89	33.8 ¹¹³	58	** **	1 59	3 07	55	24	27	86		
2	210	32.6		05.4	265	25.2	88	45.2 ¹¹⁴	56	** **	2 24	22	57	26	24	84		
3	225	32.5		05.8	279	53.0	88	+3 56.5 ¹¹³	54	1 17	43	34	1 59	28	21	82		
4	240	32.4		06.1	294	20.8	88	+4 07.8 ¹¹³	52	1 49	2 59	46	2 00	30	18	80		
5	255	32.3	+22	06.4	308	48.5	87	+4 19.1 ¹¹³	50	2 12	3 13	3 56	2 01	32	15 16	78		
6	270	32.2	+22	06.8	323	16.2	87	+4 30.4 ¹¹³	45	2 53	3 40	4 16	2 04	36	15 11	74		
7	285	32.2		07.1	337	43.8	86	41.7 ¹¹³	40	3 21	4 01	33	07	38	07	71		
8	300	32.1		07.4	352	11.4	86	+4 52.9 ¹¹²	35	3 42	18	47	09	41	03	69		
9	315	32.0		07.7	6	38.9	85	+5 04.2 ¹¹³	30	4 00	32	4 59	11	43	15 00	66		
10	330	31.9		08.1	21	06.4	85	15.4 ¹¹²	20	27	4 56	5 20	14	47	14 55	62		
11	345	31.8	+22	08.4	35	33.8	84	+5 26.6 ¹¹²	10 N	4 48	5 15	5 38	2 17	51	14 50	58		
12	0	31.7	+22	08.7	50	01.2	84	+5 37.7 ¹¹¹	0	5 06	5 32	5 54	2 20	54	14 45	56		
13	15	31.6		09.1	64	28.6	84	48.8 ¹¹¹	10 S	22	5 48	6 11	22	58	41	52		
14	30	31.5		09.4	78	55.9	83	+5 59.9 ¹¹¹	20	37	6 04	28	26	61	36	49		
15	45	31.4		09.7	93	23.2	83	+6 11.0 ¹¹¹	30	5 52	22	48	29	66	30	45		
16	60	31.3		10.0	107	50.4	82	22.0 ¹¹⁰	35	6 00	32	6 59	31	68	27	43		
17	75	31.2	+22	10.4	122	17.5	81	+6 33.0 ¹¹⁰	40	6 09	6 43	7 13	2 33	71	14 24	40		
18	90	31.1	+22	10.7	136	44.6	81	+6 44.0 ¹¹⁰	45	6 18	6 55	7 28	2 36	74	14 20	36		
19	105	31.0		11.0	151	11.7	81	+6 54.9 ¹⁰⁹	50	29	7 10	47	39	78	15	33		
20	120	30.9		11.3	165	38.7	80	+7 05.8 ¹⁰⁹	52	34	17	7 56	41	80	13	31		
21	135	30.8		11.7	180	05.7	80	16.7 ¹⁰⁹	54	39	24	8 07	42	82	10	30		
22	150	30.7		12.0	194	32.6	79	27.5 ¹⁰⁸	56	44	32	18	44	84	07	28		
23	165	30.6		12.3	208	59.5	79	38.3 ¹⁰⁸	58	50	42	31	46	87	04	26		
24	180	30.5	+22	12.6	223	26.3	78	+7 49.0 ¹⁰⁷	60 S	6 57	7 52	8 47	2 49	89	14 01	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 19 ^m 2		Mag: -4.0 PMG: 11 ^h 52 ^m				Mag: -2.0 PMG: 22 ^h 59 ^m				Mag: -2.1 PMG: 18 ^h 21 ^m				Mag: 0.0 PMG: 0 ^h 09 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	249	54.5	182	13.0	+21	36.6	14	03.2	-21	24.7	84	08.6	+7	28.8	357	47.5	-20	35.9
1	264	57.0	197	12.3		37.1	29	06.6		24.6	99	10.9		28.8	12	50.2		35.9
2	279	59.4	212	11.5		37.7	44	09.9		24.6	114	13.2		28.7	27	52.9		35.8
3	295	01.9	227	10.7		38.2	59	13.3		24.5	129	15.5		28.6	42	55.5		35.8
4	310	04.3	242	09.9		38.8	74	16.7		24.4	144	17.9		28.6	57	58.2		35.8
5	325	06.8	257	09.1	+21	39.4	89	20.0	-21	24.4	159	20.2	+7	28.5	73	00.8	-20	35.8
6	340	09.3	272	08.3	+21	39.9	104	23.4	-21	24.3	174	22.5	+7	28.4	88	03.5	-20	35.8
7	355	11.7	287	07.5		40.5	119	26.8		24.2	189	24.8		28.3	103	06.2		35.7
8	10	14.2	302	06.7		41.0	134	30.1		24.1	204	27.1		28.3	118	08.8		35.7
9	25	16.7	317	05.9		41.6	149	33.5		24.1	219	29.4		28.2	133	11.5		35.7
10	40	19.1	332	05.2		42.1	164	36.9		24.0	234	31.7		28.1	148	14.1		35.7
11	55	21.6	347	04.4	+21	42.7	179	40.2	-21	23.9	249	34.1	+7	28.1	163	16.8	-20	35.6
12	70	24.1	2	03.6	+21	43.2	194	43.6	-21	23.9	264	36.4	+7	28.0	178	19.5	-20	35.6
13	85	26.5	17	02.8		43.8	209	46.9		23.8	279	38.7		27.9	193	22.1		35.6
14	100	29.0	32	02.0		44.3	224	50.3		23.7	294	41.0		27.8	208	24.8		35.6
15	115	31.5	47	01.2		44.9	239	53.7		23.6	309	43.3		27.8	223	27.5		35.6
16	130	33.9	62	00.4		45.4	254	57.0		23.6	324	45.6		27.7	238	30.1		35.5
17	145	36.4	76	59.6	+21	45.9	270	00.4	-21	23.5	339	47.9	+7	27.6	253	32.8	-20	35.5
18	160	38.8	91	58.8	+21	46.5	285	03.7	-21	23.4	354	50.2	+7	27.6	268	35.4	-20	35.5
19	175	41.3	106	58.0		47.0	300	07.1		23.3	9	52.5		27.5	283	38.1		35.5
20	190	43.8	121	57.2		47.6	315	10.4		23.3	24	54.9		27.4	298	40.8		35.5
21	205	46.2	136	56.4		48.1	330	13.8		23.2	39	57.2		27.3	313	43.4		35.4
22	220	48.7	151	55.6		48.6	345	17.2		23.1	54	59.5		27.3	328	46.1		35.4
23	235	51.2	166	54.8		49.2	0	20.5		23.1	70	01.8		27.2	343	48.7		35.4
24	250	53.6	181	54.0	+21	49.7	15	23.9	-21	23.0	85	04.1	+7	27.1	358	51.4	-20	35.4
Dif	—		-8		+5		+34		+1		+23		-1		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8			Edad: 26 ^d 2 PHE { 4 ^h : 60 ^m 5 12 ^h : 60 ^m 6 20 ^h : 60 ^m 7														
	PMG: 11 ^h 58 ^m 1			SD: 16 ^h 5 PMG: 9 ^h 27 ^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	180	30.5	+22	12.6	223	26.3	+7 49.0	60 N	21 10	22 37	** **	2 15 25		17 00 88				
1	195	30.4		12.9	237	53.0	+7 59.7 ¹⁰⁷	58	20 52	22 00	** **	19 28		16 53 86				
2	210	30.3		13.3	252	19.7	+8 10.4 ¹⁰⁷	56	36	21 35	** **	23 30		48 83				
3	225	30.2		13.6	266	46.4	21.0 ¹⁰⁶	54	23	21 15	22 44	27 32		43 8				
4	240	30.1		13.9	281	13.0	31.5 ¹⁰⁵	52	12	20 59	22 10	30 34		38 80				
5	255	30.0	+22	14.2	295	39.6	+8 42.1 ¹⁰⁶	50	20 02	20 45	21 46	2 33 35		16 34 78				
6	270	29.9	+22	14.5	310	06.1	+8 52.5 ¹⁰⁴	45	19 41	20 17	21 05	2 40 38		16 25 75				
7	285	29.8		14.8	324	32.6	+9 02.9 ¹⁰⁴	40	24	19 56	20 37	45 42		18 72				
8	300	29.7		15.2	338	59.0	13.3 ¹⁰⁴	35	19 09	39	20 15	50 44		12 69				
9	315	29.6		15.5	353	25.3	23.6 ¹⁰³	30	18 57	24	19 57	2 54 46		16 06 67				
10	330	29.5		15.8	7	51.6	33.8 ¹⁰²	20	36	19 01	30	3 01 51		15 57 63				
11	345	29.3	+22	16.1	22	17.9	+9 44.0 ¹⁰²	10 N	18 18	18 41	19 08	3 08 53		15 48 61				
12	0	29.2	+22	16.4	36	44.1	+9 54.1 ¹⁰¹	0	18 02	18 24	18 50	3 14 57		15 41 57				
13	15	29.1		16.7	51	10.2	+10 04.2 ¹⁰¹	10 S	17 45	18 08	34	20 60		33 55				
14	30	29.0		17.0	65	36.3	14.2 ¹⁰⁰	20	28	17 51	19	27 63		25 51				
15	45	28.9		17.3	80	02.4	24.1 ⁹⁹	30	17 08	34	18 03	35 67		15 48				
16	60	28.8		17.6	94	28.4	34.0 ⁹⁹	35	16 56	24	17 55	39 69		10 46				
17	75	28.7	+22	18.0	108	54.3	+10 43.8 ⁹⁸	40	16 43	17 13	17 46	3 44 72		15 04 43				
18	90	28.6	+22	18.3	123	20.2	+10 53.5 ⁹⁷	45	16 27	17 00	17 37	3 50 75		14 56 41				
19	105	28.5		18.6	137	46.0	+11 03.2 ⁹⁷	50	16 07	16 45	26	3 57 79		48 38				
20	120	28.4		18.9	152	11.8	12.8 ⁹⁶	52	15 58	38	21	4 01 80		44 36				
21	135	28.3		19.2	166	37.6	22.3 ⁹⁵	54	48	31	16	04 82		40 34				
22	150	28.2		19.5	181	03.3	31.8 ⁹⁵	56	36	22	10	08 84		35 32				
23	165	28.1		19.8	195	28.9	41.1 ⁹³	58	23	13	17 04	13 86		30 30				
24	180	28.0	+22	20.1	209	54.5	+11 50.5 ⁹⁴	60 S	15 07	16 02	16 58	4 18 89		14 24 27				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 15 ^m 2		Mag: -4.0 PMG: 11 ^h 53 ^m				Mag: -2.0 PMG: 22 ^h 53 ^m				Mag: -2.1 PMG: 18 ^h 17 ^m				Mag: 0.0 PMG: 0 ^h 05 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	53.6	181	54.0	+21	49.7	15	23.9	-21	23.0	85	04.1	+7	27.1	358	51.4	-20	35.4
1	265	56.1	196	53.2		50.2	30	27.2		22.9	100	06.4		27.0	13	54.1		35.4
2	280	58.6	211	52.4		50.8	45	30.6		22.8	115	08.7		27.0	28	56.7		35.3
3	296	01.0	226	51.6		51.3	60	33.9		22.8	130	11.0		26.9	43	59.4		35.3
4	311	03.5	241	50.8		51.8	75	37.3		22.7	145	13.3		26.8	59	02.0		35.3
5	326	06.0	256	50.0	+21	52.4	90	40.6	-21	22.6	160	15.6	+7	26.7	74	04.7	-20	35.3
6	341	08.4	271	49.2	+21	52.9	105	44.0	-21	22.6	175	17.9	+7	26.7	89	07.4	-20	35.3
7	356	10.9	286	48.5		53.4	120	47.3		22.5	190	20.2		26.6	104	10.0		35.2
8	11	13.3	301	47.7		54.0	135	50.7		22.4	205	22.6		26.5	119	12.7		35.2
9	26	15.8	316	46.9		54.5	150	54.0		22.3	220	24.9		26.5	134	15.3		35.2
10	41	18.3	331	46.0		55.0	165	57.4		22.3	235	27.2		26.4	149	18.0		35.2
11	56	20.7	346	45.2	+21	55.5	181	00.7	-21	22.2	250	29.5	+7	26.3	164	20.7	-20	35.2
12	71	23.2	1	44.4	+21	56.1	196	04.0	-21	22.1	265	31.8	+7	26.2	179	23.3	-20	35.1
13	86	25.7	16	43.6		56.6	211	07.4		22.0	280	34.1		26.2	194	26.0		35.1
14	101	28.1	31	42.8		57.1	226	10.7		22.0	295	36.4		26.1	209	28.7		35.1
15	116	30.6	46	42.0		57.6	241	14.1		21.9	310	38.7		26.0	224	31.3		35.1
16	131	33.1	61	41.2		58.1	256	17.4		21.8	325	41.0		25.9	239	34.0		35.1
17	146	35.5	76	40.4	+21	58.7	271	20.8	-21	21.8	340	43.3	+7	25.9	254	36.6	-20	35.0
18	161	38.0	91	39.6	+21	59.2	286	24.1	-21	21.7	355	45.6	+7	25.8	269	39.3	-20	35.0
19	176	40.4	106	38.8	+21	59.7	301	27.4		21.6	10	47.9		25.7	284	42.0		35.0
20	191	42.9	121	38.0	+22	00.2	316	30.8		21.5	25	50.2		25.6	299	44.6		35.0
21	206	45.4	136	37.2		00.7	331	34.1		21.5	40	52.5		25.6	314	47.3		35.0
22	221	47.8	151	36.4		01.2	346	37.5		21.4	55	54.8		25.5	329	49.9		34.9
23	236	50.3	166	35.6		01.7	1	40.8		21.3	70	57.1		25.4	344	52.6		34.9
24	251	52.8	181	34.8	+22	02.3	16	44.1	-21	21.2	85	59.4	+7	25.3	359	55.3	-20	34.9
Dif	—		-8		+5		+33		+1		+23		-1		+27		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2				Edad: 27 ^d 2 PHE { 4 ^h : 60 ^h /7 12 ^h : 60 ^h /7 20 ^h : 60 ^h /7 PMG: 10 ^h 24 ^m R°: 59 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	28.0	+22	20.1	209	54.5	+11	50.5	60 N	** **	1 19	2 46	2 40	31	18 28	83	
1	195	27.9		20.4	224	20.0	+11	59.7	58	** **	1 56	3 04	47	33	19	81	
2	210	27.8		20.7	238	45.5	+12	08.8	56	** **	2 21	20	53	36	11	79	
3	225	27.7		21.0	253	11.0		17.9	54	1 12	41	33	2 59	37	18 04	77	
4	240	27.6		21.3	267	36.3		26.9	52	1 46	2 57	44	3 04	39	17 58	75	
5	255	27.5	+22	21.6	282	01.7	+12	35.8	50	2 10	3 11	3 54	3 08	41	17 52	74	
6	270	27.4	+22	21.9	296	27.0	+12	44.6	45	2 51	3 39	4 15	3 18	44	17 40	72	
7	285	27.3		22.2	310	52.2	+12	53.3	40	3 19	4 00	32	27	46	30	69	
8	300	27.2		22.5	325	17.4	+13	02.0	35	41	17	47	34	48	21	68	
9	315	27.1		22.8	339	42.6		10.6	30	3 59	32	4 59	40	51	13	67	
10	330	26.9		23.1	354	07.7		19.0	20	4 27	4 56	5 20	3 52	53	17 00	64	
11	345	26.8	+22	23.4	8	32.7	+13	27.4	10 N	4 48	5 15	5 38	4 01	56	16 49	61	
12	0	26.7	+22	23.7	22	57.8	+13	35.7	0	5 06	5 32	5 55	4 11	58	16 38	60	
13	15	26.6		24.0	37	22.7		43.9	10 S	22	5 48	6 11	20	61	28	57	
14	30	26.5		24.3	51	47.7	+13	52.0	20	38	6 05	29	30	64	16	55	
15	45	26.4		24.6	66	12.5	+14	00.0	30	5 53	23	6 49	42	67	16 03	53	
16	60	26.3		24.9	80	37.4	+14	07.9	35	6 01	33	7 01	48	69	15 56	51	
17	75	26.2	+22	25.2	95	02.2	+14	15.8	40	6 10	6 44	7 14	4 56	71	15 47	49	
18	90	26.1	+22	25.4	109	26.9	+14	23.5	45	6 20	6 56	7 30	5 05	73	15 37	47	
19	105	26.0		25.7	123	51.7		31.1	50	31	7 12	49	16	76	26	43	
20	120	25.9		26.0	138	16.3		38.6	52	35	18	7 59	21	78	20	43	
21	135	25.8		26.3	152	41.0		46.0	54	41	26	8 09	26	80	14	41	
22	150	25.7		26.6	167	05.6	+14	53.3	56	46	35	21	32	82	07	40	
23	165	25.6		26.9	181	30.1	+15	00.5	58	52	44	34	39	84	15 00	37	
24	180	25.4	+22	27.2	195	54.7	+15	07.6	60 S	6 59	7 55	8 50	5 47	87	14 51	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 11 ^m 3		Mag: -4.0 PMG: 11 ^h 54 ^m		Mag: -1.9 PMG: 22 ^h 48 ^m		Mag: -2.1 PMG: 18 ^h 13 ^m		Mag: 0.0 PMG: 0 ^h 00 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	251	52.8	181	34.8	+22	16	44.1	-21	85	59.4	+7	359	55.3	-20	34.9
1	266	55.2	196	34.0		31	47.5	21.2	101	01.7	25.2	14	57.9		34.9
2	281	57.7	211	33.2		46	50.8	21.1	116	04.0	25.2	30	00.6		34.9
3	297	00.2	226	32.4		61	54.1	21.0	131	06.3	25.1	45	03.2		34.8
4	312	02.6	241	31.6		76	57.5	21.0	146	08.6	25.0	60	05.9		34.8
5	327	05.1	256	30.8	+22	92	00.8	-21	161	10.9	+7	75	08.6	-20	34.8
6	342	07.6	271	30.0	+22	107	04.1	-21	176	13.2	+7	90	11.2	-20	34.8
7	357	10.0	286	29.1		122	07.5	20.7	191	15.5	24.8	105	13.9		34.8
8	12	12.5	301	28.3		137	10.8	20.7	206	17.8	24.7	120	16.5		34.7
9	27	14.9	316	27.5		152	14.1	20.6	221	20.1	24.6	135	19.2		34.7
10	42	17.4	331	26.7		167	17.5	20.5	236	22.4	24.6	150	21.9		34.7
11	57	19.9	346	25.9	+22	182	20.8	-21	251	24.7	+7	165	24.5	-20	34.7
12	72	22.3	1	25.1	+22	197	24.1	-21	266	27.0	+7	180	27.2	-20	34.7
13	87	24.8	16	24.3		212	27.4	20.3	281	29.3	24.3	195	29.9		34.6
14	102	27.3	31	23.5		227	30.8	20.2	296	31.6	24.3	210	32.5		34.6
15	117	29.7	46	22.7		242	34.1	20.2	311	33.9	24.2	225	35.2		34.6
16	132	32.2	61	21.8		257	37.4	20.1	326	36.2	24.1	240	37.8		34.6
17	147	34.7	76	21.0	+22	272	40.7	-21	341	38.5	+7	255	40.5	-20	34.6
18	162	37.1	91	20.2	+22	287	44.1	-21	356	40.8	+7	270	43.2	-20	34.5
19	177	39.6	106	19.4		302	47.4	19.9	11	43.1	23.9	285	45.8		34.5
20	192	42.1	121	18.6		317	50.7	19.8	26	45.4	23.8	300	48.5		34.5
21	207	44.5	136	17.8		332	54.0	19.7	41	47.7	23.7	315	51.1		34.5
22	222	47.0	151	17.0		347	57.3	19.7	56	50.0	23.6	330	53.8		34.5
23	237	49.4	166	16.2		3	00.7	19.6	71	52.3	23.6	345	56.5		34.4
24	252	51.9	181	15.3	+22	18	04.0	-21	86	54.6	+7	0	59.1	-20	34.4
Dif	—		-8		+5	+33		+1	+23		-1	-8973		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: 28 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5 R°: 60 ^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	25.4	+22 27.2	195	54.7	+15 07.6	70	60 N	21 13	22 43	** **	3 11 40		19 51 73	
1	195	25.3	27.5	210	19.2	14.6	55	58	20 54	22 04	** **	20 42		40 71	
2	210	25.2	27.8	224	43.6	21.5	69	56	39	21 38	** **	29 43		30 70	
3	225	25.1	28.0	239	08.0	28.3	68	54	25	18	22 49	36 45		21 70	
4	240	25.0	28.3	253	32.4	35.0	67	52	14	21 01	22 14	43 46		13 69	
5	255	24.9	+22 28.6	267	56.8	+15 41.5	65	50	20 04	20 47	21 49	3 49 47		19 06 69	
6	270	24.8	+22 28.9	282	21.1	+15 48.0	65	45	19 42	20 19	21 07	4 02 50		18 52 66	
7	285	24.7	29.2	296	45.4	+15 54.3	63	40	25	19 57	20 38	13 52		39 66	
8	300	24.6	29.5	311	09.7	+16 00.6	63	35	19 11	40	20 16	22 53		29 65	
9	315	24.5	29.7	325	33.9	06.7	61	30	18 58	25	19 58	31 54		20 64	
10	330	24.4	30.0	339	58.1	12.7	60	20	37	19 01	30	45 56		18 04 63	
11	345	24.2	+22 30.3	354	22.3	+16 18.5	58	10 N	18 19	18 42	19 09	4 57 59		17 50 62	
12	0	24.1	+22 30.6	8	46.5	+16 24.3	58	0	18 02	18 24	18 50	5 09 60		17 38 60	
13	15	24.0	30.9	23	10.6	29.9	56	10 S	17 45	18 08	34	21 62		25 59	
14	30	23.9	31.1	37	34.8	35.5	56	20	28	17 51	19	34 63		17 11 58	
15	45	23.8	31.4	51	58.9	40.9	54	30	17 07	33	18 03	49 65		16 56 56	
16	60	23.7	31.7	66	22.9	46.2	50	35	16 55	23	17 55	5 57 67		47 55	
17	75	23.6	+22 32.0	80	47.0	+16 51.3	51	40	16 42	17 12	17 46	6 07 68		16 36 54	
18	90	23.5	+22 32.2	95	11.0	+16 56.4	51	45	16 26	16 59	17 36	6 18 70		16 24 53	
19	105	23.4	32.5	109	35.1	+17 01.3	49	50	16 06	44	25	32 72		09 52	
20	120	23.2	32.8	123	59.1	06.1	48	52	15 57	37	20	39 72		16 03 50	
21	135	23.1	33.1	138	23.1	10.8	47	54	47	29	15	46 74		15 55 49	
22	150	23.0	33.3	152	47.1	15.4	46	56	35	21	09	6 54 75		47 48	
23	165	22.9	33.6	167	11.1	19.8	44	58	21	11	17 03	7 03 77		37 47	
24	180	22.8	+22 33.9	181	35.0	+17 24.1	43	60 S	15 05	16 01	16 56	7 14 78		15 26 45	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 07 ^m 4		Mag: -4.0 PMG: 11 ^h 56 ^m		Mag: -1.9 PMG: 22 ^h 43 ^m		Mag: -2.1 PMG: 18 ^h 10 ^m		Mag: 0.0 PMG: 23 ^h 52 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	252	51.9	181	15.3	+22 14.2	18	04.0	-21 19.5	86	54.6	+7 23.5	0	59.1	-20 34.4	
1	267	54.4	196	14.5	14.7	33	07.3	19.4	101	56.9	23.4	16	01.8	34.4	
2	282	56.8	211	13.7	15.1	48	10.6	19.4	116	59.2	23.3	31	04.4	34.4	
3	297	59.3	226	12.9	15.6	63	13.9	19.3	132	01.5	23.2	46	07.1	34.4	
4	313	01.8	241	12.1	16.1	78	17.2	19.2	147	03.8	23.2	61	09.8	34.3	
5	328	04.2	256	11.3	+22 16.6	93	20.6	-21 19.2	162	06.1	+7 23.1	76	12.4	-20 34.3	
6	343	06.7	271	10.4	+22 17.1	108	23.9	-21 19.1	177	08.4	+7 23.0	91	15.1	-20 34.3	
7	358	09.2	286	09.6	17.5	123	27.2	19.0	192	10.7	22.9	106	17.7	34.3	
8	13	11.6	301	08.8	18.0	138	30.5	18.9	207	13.0	22.8	121	20.4	34.3	
9	28	14.1	316	08.0	18.5	153	33.8	18.9	222	15.3	22.8	136	23.1	34.2	
10	43	16.6	331	07.2	19.0	168	37.1	18.8	237	17.6	22.7	151	25.7	34.2	
11	58	19.0	346	06.3	+22 19.4	183	40.4	-21 18.7	252	19.9	+7 22.6	166	28.4	-20 34.2	
12	73	21.5	1	05.5	+22 19.9	198	43.7	-21 18.6	267	22.2	+7 22.5	181	31.0	-20 34.2	
13	88	23.9	16	04.7	20.4	213	47.0	18.6	282	24.5	22.4	196	33.7	34.2	
14	103	26.4	31	03.9	20.8	228	50.3	18.5	297	26.8	22.4	211	36.4	34.1	
15	118	28.9	46	03.1	21.3	243	53.6	18.4	312	29.0	22.3	226	39.0	34.1	
16	133	31.3	61	02.2	21.8	258	56.9	18.4	327	31.3	22.2	241	41.7	34.1	
17	148	33.8	76	01.4	+22 22.2	274	00.3	-21 18.3	342	33.6	+7 22.1	256	44.4	-20 34.1	
18	163	36.3	91	00.6	+22 22.7	289	03.6	-21 18.2	357	35.9	+7 22.0	271	47.0	-20 34.1	
19	178	38.7	105	59.8	23.2	304	06.9	18.1	12	38.2	22.0	286	49.7	34.0	
20	193	41.2	120	59.0	23.6	319	10.2	18.1	27	40.5	21.9	301	52.3	34.0	
21	208	43.7	135	58.1	24.1	334	13.5	18.0	42	42.8	21.8	316	55.0	34.0	
22	223	46.1	150	57.3	24.5	349	16.8	17.9	57	45.1	21.7	331	57.7	34.0	
23	238	48.6	165	56.5	25.0	4	20.1	17.9	72	47.4	21.6	347	00.3	34.0	
24	253	51.0	180	55.7	+22 25.5	19	23.3	-21 17.8	87	49.7	+7 21.6	2	03.0	-20 33.9	
Dif	—		-8	+5		+33	+1		+23		-1		+27		0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 6				Edad: 29 ^d 2 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 2 20 ^h : 60 ^h 0 PMG: 12 ^h 23 ^m R ^o : 60 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	22.8	+22	33.9	181	35.0	+17	24.1	60 N	** **	1 14	2 44	3 51	51	21 04	59				
1	195	22.7		34.2	195	59.0		28.3	58	** **	1 52	3 02	4 02	52	20 51	59				
2	210	22.6		34.4	210	22.9		32.3	56	** **	2 19	18	12	53	40	59				
3	225	22.5		34.7	224	46.9		36.3	54	1 07	39	31	21	54	31	59				
4	240	22.4		35.0	239	10.8		40.1	52	1 43	2 56	43	29	54	22	59				
5	255	22.2	+22	35.2	253	34.8	+17	43.8	50	2 07	3 10	3 53	4 36	55	20 15	59				
6	270	22.1	+22	35.5	267	58.7	+17	47.3	45	2 50	3 38	4 15	4 52	56	19 58	60				
7	285	22.0		35.8	282	22.7		50.7	40	3 18	3 59	32	5 05	56	45	59				
8	300	21.9		36.0	296	46.6		54.0	35	41	4 17	46	15	57	34	59				
9	315	21.8		36.3	311	10.6	+17	57.2	30	3 58	31	4 59	25	57	24	59				
10	330	21.7		36.6	325	34.5	+18	00.2	20	4 26	4 55	5 20	41	59	19 07	59				
11	345	21.6	+22	36.8	339	58.5	+18	03.2	10 N	4 48	5 15	5 38	5 56	59	18 52	59				
12	0	21.5	+22	37.1	354	22.4	+18	05.9	0	5 06	5 33	5 55	6 09	60	18 38	59				
13	15	21.3		37.3	8	46.4		08.6	10 S	23	5 49	6 12	23	60	24	59				
14	30	21.2		37.6	23	10.4		11.1	20	38	6 06	29	37	61	18 09	59				
15	45	21.1		37.9	37	34.4		13.5	30	5 54	24	6 50	6 54	62	17 52	59				
16	60	21.0		38.1	51	58.4		15.8	35	6 02	34	7 02	7 04	62	42	58				
17	75	20.9	+22	38.4	66	22.4	+18	17.9	40	6 11	6 45	7 15	7 15	62	17 30	59				
18	90	20.8	+22	38.6	80	46.5	+18	19.9	45	6 21	6 58	7 31	7 28	63	17 17	58				
19	105	20.7		38.9	95	10.6		21.8	50	32	7 13	7 51	44	64	17 01	58				
20	120	20.5		39.2	109	34.6		23.6	52	37	20	8 00	7 51	65	16 53	58				
21	135	20.4		39.4	123	58.7		25.2	54	42	28	11	8 00	64	44	58				
22	150	20.3		39.7	138	22.9		26.7	56	48	37	23	09	65	35	57				
23	165	20.2		39.9	152	47.0		28.0	58	6 54	46	37	20	65	24	57				
24	180	20.1	+22	40.2	167	11.2	+18	29.3	60 S	7 01	7 57	8 53	8 32	66	16 11	57				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 03 ^m 4				Mag: -4.0 PMG: 11 ^h 57 ^m				Mag: -1.9 PMG: 22 ^h 37 ^m				Mag: -2.1 PMG: 18 ^h 06 ^m				Mag: 0.0 PMG: 23 ^h 48 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	253	51.0	180	55.7	+22	25.5	19	23.3	-21	17.8	87	49.7	+7	21.6	2	03.0	-20	33.9		
1	268	53.5	195	54.8		25.9	34	26.6		17.7	102	52.0		21.5	17	05.6		33.9		
2	283	56.0	210	54.0		26.4	49	29.9		17.6	117	54.3		21.4	32	08.3		33.9		
3	298	58.4	225	53.2		26.8	64	33.2		17.6	132	56.5		21.3	47	11.0		33.9		
4	314	00.9	240	52.4		27.3	79	36.5		17.5	147	58.8		21.2	62	13.6		33.9		
5	329	03.4	255	51.5	+22	27.7	94	39.8	-21	17.4	163	01.1	+7	21.2	77	16.3	-20	33.8		
6	344	05.8	270	50.7	+22	28.2	109	43.1	-21	17.4	178	03.4	+7	21.1	92	18.9	-20	33.8		
7	359	08.3	285	49.9		28.6	124	46.4		17.3	193	05.7		21.0	107	21.6		33.8		
8	14	10.8	300	49.1		29.1	139	49.7		17.2	208	08.0		20.9	122	24.3		33.8		
9	29	13.2	315	48.2		29.5	154	53.0		17.1	223	10.3		20.8	137	26.9		33.8		
10	44	15.7	330	47.4		30.0	169	56.3		17.1	238	12.6		20.7	152	29.6		33.7		
11	59	18.2	345	46.6	+22	30.4	184	59.6	-21	17.0	253	14.9	+7	20.7	167	32.2	-20	33.7		
12	74	20.6	0	45.7	+22	30.9	200	02.8	-21	16.9	268	17.1	+7	20.6	182	34.9	-20	33.7		
13	89	23.1	15	44.9		31.3	215	06.1		16.9	283	19.4		20.5	197	37.6		33.7		
14	104	25.5	30	44.1		31.8	230	09.4		16.8	298	21.7		20.4	212	40.2		33.7		
15	119	28.0	45	43.3		32.2	245	12.7		16.7	313	24.0		20.3	227	42.9		33.6		
16	134	30.5	60	42.4		32.6	260	16.0		16.6	328	26.3		20.3	242	45.5		33.6		
17	149	32.9	75	41.6	+22	33.1	275	19.3	-21	16.6	343	28.6	+7	20.2	257	48.2	-20	33.6		
18	164	35.4	90	40.8	+22	33.5	290	22.5	-21	16.5	358	30.9	+7	20.1	272	50.9	-20	33.6		
19	179	37.9	105	39.9		33.9	305	25.8		16.4	13	33.1		20.0	287	53.5		33.6		
20	194	40.3	120	39.1		34.4	320	29.1		16.4	28	35.4		19.9	302	56.2		33.5		
21	209	42.8	135	38.3		34.8	335	32.4		16.3	43	37.7		19.8	317	58.9		33.5		
22	224	45.3	150	37.5		35.2	350	35.7		16.2	58	40.0		19.8	333	01.5		33.5		
23	239	47.7	165	36.6		35.7	5	38.9		16.2	73	42.3		19.7	348	04.2		33.5		
24	254	50.2	180	35.8	+22	36.1	20	42.2	-21	16.1	88	44.6	+7	19.6	3	06.8	-20	33.5		
Dif	—				-8 +4				+33 +1				+23 -1				+27 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 8			Edad: 30 ^d 2 PHE { 4 ^h : 59'7 12 ^h : 59'5 20 ^h : 59'3 R°: 58 ^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	180	20.1	+22 40.2	167	11.2	+18 29.3	11	60 N	21 16	22 49	** **	4 42	62	
1	195	20.0	40.4	181	35.4	30.4	11	58	20 57	22 08	** **	4 54	62	
2	210	19.8	40.7	195	59.6	31.3	9	56	41	21 41	** **	5 05	62	
3	225	19.7	40.9	210	23.9	32.2	9	54	27	20	22 55	15	61	
4	240	19.6	41.2	224	48.2	32.9	7	52	16	21 03	22 17	23	62	
5	255	19.5	+22 41.4	239	12.5	+18 33.5	6	50	20 05	20 49	21 52	5 31	61	
6	270	19.4	+22 41.7	253	36.9	+18 34.0	5	45	19 44	20 21	21 09	5 48	60	
7	285	19.3	42.0	268	01.2	34.3	3	40	26	19 59	20 40	6 01	60	
8	300	19.2	42.2	282	25.7	34.5	2	35	19 12	41	20 18	12	60	
9	315	19.0	42.4	296	50.1	34.6	1	30	18 59	26	19 59	22	60	
10	330	18.9	42.7	311	14.6	34.6	0	20	38	19 02	31	40	59	
11	345	18.8	+22 42.9	325	39.2	+18 34.4	2	10 N	18 19	18 42	19 09	6 55	58	
12	0	18.7	+22 43.2	340	03.8	+18 34.1	3	0	18 02	18 25	18 51	7 09	58	
13	15	18.6	43.4	354	28.4	33.7	4	10 S	17 46	18 08	34	23	58	
14	30	18.5	43.7	8	53.1	33.1	6	20	28	17 51	19	38	57	
15	45	18.3	43.9	23	17.8	32.5	6	30	17 07	33	18 03	7 56	56	
16	60	18.2	44.2	37	42.6	31.7	8	35	16 55	23	17 55	8 06	56	
17	75	18.1	+22 44.4	52	07.4	+18 30.7	10	40	16 41	17 12	17 46	8 17	56	
18	90	18.0	+22 44.7	66	32.3	+18 29.7	10	45	16 25	16 59	17 36	8 31	55	
19	105	17.9	44.9	80	57.2	28.5	12	50	16 05	43	25	48	54	
20	120	17.8	45.1	95	22.1	27.3	12	52	15 56	36	20	8 56	54	
21	135	17.6	45.4	109	47.2	25.9	14	54	45	28	14	9 04	54	
22	150	17.5	45.6	124	12.2	24.3	16	56	33	20	08	14	53	
23	165	17.4	45.9	138	37.4	22.7	16	58	19	16 10	17 02	25	53	
24	180	17.3	+22 46.1	153	02.5	+18 20.9	18	60 S	15 03	15 59	16 55	9 38	52	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 6 ^h 59 ^m 5		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: -1.9 PMG: 22 ^h 32 ^m		Mag: -2.1 PMG: 18 ^h 02 ^m		Mag: 0.0 PMG: 23 ^h 43 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	254	50.2	180	35.8	+22 36.1	20 42.2	-21 16.1	88	44.6	+7 19.6	3 06.8		
1	269	52.7	195	35.0	36.5	35 45.5	16.0	103	46.9	19.5	18 09.5		
2	284	55.1	210	34.1	37.0	50 48.7	15.9	118	49.1	19.4	33 12.2		
3	299	57.6	225	33.3	37.4	65 52.0	15.9	133	51.4	19.3	48 14.8		
4	315	00.0	240	32.5	37.8	80 55.3	15.8	148	53.7	19.3	63 17.5		
5	330	02.5	255	31.6	+22 38.2	95 58.6	-21 15.7	163	56.0	+7 19.2	78 20.1		
6	345	05.0	270	30.8	+22 38.7	111 01.8	-21 15.7	178	58.3	+7 19.1	93 22.8		
7	0	07.4	285	30.0	39.1	126 05.1	15.6	194	00.6	19.0	108 25.5		
8	15	09.9	300	29.1	39.5	141 08.4	15.5	209	02.8	18.9	123 28.1		
9	30	12.4	315	28.3	39.9	156 11.6	15.4	224	05.1	18.8	138 30.8		
10	45	14.8	330	27.5	40.4	171 14.9	15.4	239	07.4	18.8	153 33.4		
11	60	17.3	345	26.6	+22 40.8	186 18.2	-21 15.3	254	09.7	+7 18.7	168 36.1		
12	75	19.8	0	25.8	+22 41.2	201 21.4	-21 15.2	269	12.0	+7 18.6	183 38.8		
13	90	22.2	15	25.0	41.6	216 24.7	15.2	284	14.2	18.5	198 41.4		
14	105	24.7	30	24.2	42.0	231 27.9	15.1	299	16.5	18.4	213 44.1		
15	120	27.2	45	23.3	42.4	246 31.2	15.0	314	18.8	18.3	228 46.7		
16	135	29.6	60	22.5	42.8	261 34.5	15.0	329	21.1	18.2	243 49.4		
17	150	32.1	75	21.6	+22 43.3	276 37.7	-21 14.9	344	23.4	+7 18.2	258 52.1		
18	165	34.5	90	20.8	+22 43.7	291 41.0	-21 14.8	359	25.6	+7 18.1	273 54.7		
19	180	37.0	105	19.9	44.1	306 44.2	14.8	14	27.9	18.0	288 57.4		
20	195	39.5	120	19.1	44.5	321 47.5	14.7	29	30.2	17.9	304 00.0		
21	210	41.9	135	18.2	44.9	336 50.7	14.6	44	32.5	17.8	319 02.7		
22	225	44.4	150	17.4	45.3	351 54.0	14.5	59	34.8	17.7	334 05.4		
23	240	46.9	165	16.5	45.7	6 57.2	14.5	74	37.0	17.6	349 08.0		
24	255	49.3	180	15.6	+22 46.1	22 00.5	-21 14.4	89	39.3	+7 17.6	4 10.7		
Dif	—		-8	+4		+33	+1	+23		-1		+27	

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 9			Edad: 1 ^d 9	PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 7 20 ^h : 58 ^m 4 R°: 54 ^m	Dec	Dif					Hora	R°	Hora	R°		
	hG ☉		Dec	hG ☾					Dif	Náutico		Civil					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	17.3	+22	46.1	153	02.5	+18	20.9	60 N	** *	1 09	2 41	5 44	71	22 48	34	
1	195	17.2		46.3	167	27.8		19.1	58	** *	1 49	3 01	5 56	70	37	35	
2	210	17.0		46.6	181	53.1		17.1	56	** *	2 16	16	6 07	68	27	37	
3	225	16.9		46.8	196	18.5		15.0	54	1 03	37	30	16	67	18	39	
4	240	16.8		47.0	210	43.9		12.7	52	1 40	2 54	42	25	66	11	40	
5	255	16.7	+22	47.3	225	09.4	+18	10.4	50	2 05	3 08	3 52	6 32	65	22 04	41	
6	270	16.6	+22	47.5	239	34.9	+18	07.9	45	2 48	3 37	4 14	6 48	64	21 49	43	
7	285	16.5		47.7	254	00.5		05.4	40	3 18	3 59	31	7 01	62	37	45	
8	300	16.3		48.0	268	26.2	+18	02.7	35	40	4 16	46	12	61	26	47	
9	315	16.2		48.2	282	51.9	+17	59.9	30	3 58	31	4 58	22	60	17	48	
10	330	16.1		48.4	297	17.7		57.0	20	4 26	4 55	5 20	39	58	21 01	50	
11	345	16.0	+22	48.7	311	43.6	+17	54.0	10 N	4 48	5 15	5 38	7 53	57	20 47	52	
12	0	15.9	+22	48.9	326	09.5	+17	50.8	0	5 07	5 33	5 55	8 07	56	20 34	54	
13	15	15.7		49.1	340	35.5		47.6	10 S	23	5 49	6 12	21	54	21	56	
14	30	15.6		49.4	355	01.6		44.3	20	39	6 06	30	35	53	20 07	57	
15	45	15.5		49.6	9	27.8		40.8	30	5 55	25	6 51	8 52	51	19 51	59	
16	60	15.4		49.8	23	54.0		37.3	35	6 03	35	7 03	9 02	50	41	61	
17	75	15.3	+22	50.0	38	20.3	+17	33.6	40	6 12	6 46	7 16	9 13	49	19 30	63	
18	90	15.1	+22	50.3	52	46.6	+17	29.8	45	6 22	6 59	7 33	9 26	47	19 18	64	
19	105	15.0		50.5	67	13.1		26.0	50	33	7 15	7 53	42	45	19 02	67	
20	120	14.9		50.7	81	39.6		22.0	52	38	22	8 02	50	44	18 55	68	
21	135	14.8		50.9	96	06.1		17.9	54	44	30	13	9 58	43	47	69	
22	150	14.7		51.2	110	32.8		13.8	56	50	38	25	10 07	42	38	70	
23	165	14.5		51.4	124	59.5		09.5	58	6 56	48	39	18	40	28	71	
24	180	14.4	+22	51.6	139	26.3	+17	05.1	60 S	7 03	7 59	8 56	10 30	38	18 16	73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 55 ^m 6		Mag: -4.0 PMG: 12 ^h 00 ^m		Mag: -1.9 PMG: 22 ^h 27 ^m		Mag: -2.1 PMG: 17 ^h 59 ^m		Mag: 0.0 PMG: 23 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	255	49.3	180	15.6	+22	46.1	22	00.5	-21	14.4
1	270	51.8	195	14.8		46.5	37	03.7		14.3
2	285	54.3	210	13.9		46.9	52	07.0		14.3
3	300	56.7	225	13.1		47.3	67	10.2		14.2
4	315	59.2	240	12.2		47.7	82	13.5		14.1
5	331	01.7	255	11.4	+22	48.1	97	16.7	-21	14.1
6	346	04.1	270	10.5	+22	48.5	112	20.0	-21	14.0
7	1	06.6	285	09.7		48.9	127	23.2		13.9
8	16	09.0	300	08.9		49.3	142	26.5		13.9
9	31	11.5	315	08.0		49.7	157	29.7		13.8
10	46	14.0	330	07.2		50.1	172	32.9		13.7
11	61	16.4	345	06.4	+22	50.5	187	36.2	-21	13.7
12	76	18.9	0	05.5	+22	50.9	202	39.4	-21	13.6
13	91	21.4	15	04.7		51.3	217	42.7		13.5
14	106	23.8	30	03.8		51.7	232	45.9		13.4
15	121	26.3	45	03.0		52.1	247	49.1		13.4
16	136	28.8	60	02.1		52.4	262	52.4		13.3
17	151	31.2	75	01.3	+22	52.8	277	55.6	-21	13.2
18	166	33.7	90	00.5	+22	53.2	292	58.8	-21	13.2
19	181	36.2	104	59.6		53.6	308	02.1		13.1
20	196	38.6	119	58.8		54.0	323	05.3		13.0
21	211	41.1	134	57.9		54.4	338	08.5		13.0
22	226	43.5	149	57.1		54.7	353	11.7		12.9
23	241	46.0	164	56.2		55.1	8	15.0		12.8
24	256	48.5	179	55.4	+22	55.5	23	18.2	-21	12.8
Dif	—		-8		+4		+32		+1	

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: 2 ^d 9 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 5 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	m
0	180	14.4	+22	51.6	139	26.3	+17	05.1	60 N	21 19	22 54	** **	6 55 75	23 22 25						
1	195	14.3		51.8	153	53.2	+17	00.6	58	20 59	22 11	** **	7 06 72	12 29						
2	210	14.2		52.0	168	20.2	+16	56.1	56	43	21 44	** **	15 71	23 04 30						
3	225	14.1		52.3	182	47.2		51.4	54	29	23	23 00	23 70	22 57 32						
4	240	13.9		52.5	197	14.3		46.7	52	17	21 05	22 20	31 68	51 33						
5	255	13.8	+22	52.7	211	41.5	+16	41.8	50	20 07	20 51	21 55	7 37 67	22 45 34						
6	270	13.7	+22	52.9	226	08.7	+16	36.9	45	19 45	20 22	21 11	7 52 64	22 32 37						
7	285	13.6		53.1	240	36.1		31.9	50	27	20 00	20 41	8 03 62	22 39						
8	300	13.4		53.3	255	03.5		26.7	35	13	19 42	19	13 61	13 41						
9	315	13.3		53.6	269	31.0		21.5	30	19 00	27	20 01	22 59	22 05 43						
10	330	13.2		53.8	283	58.6		16.2	20	18 39	19 03	19 32	37 57	21 51 46						
11	345	13.1	+22	54.0	298	26.2	+16	10.8	10 N	18 20	18 43	19 10	8 50 54	21 39 49						
12	0	13.0	+22	54.2	312	54.0	+16	05.4	0	18 03	18 25	18 51	9 03 52	21 28 51						
13	15	12.8		54.4	327	21.8	+15	59.8	10 S	17 46	18 09	35	15 50	17 52						
14	30	12.7		54.6	341	49.7		54.2	20	28	17 52	19	28 48	21 04 56						
15	45	12.6		54.8	356	17.7		48.4	30	17 07	33	18 03	43 45	20 50 59						
16	60	12.5		55.0	10	45.7		42.6	35	16 55	23	17 54	9 52 43	42 60						
17	75	12.3	+22	55.3	25	13.8	+15	36.8	40	16 41	17 11	17 45	10 02 42	20 33 62						
18	90	12.2	+22	55.5	39	42.1	+15	30.8	45	16 25	16 58	17 35	10 13 40	20 22 64						
19	105	12.1		55.7	54	10.4		24.7	50	16 05	43	24	27 38	09 67						
20	120	12.0		55.9	68	38.7		18.6	52	15 55	36	19	34 36	20 03 68						
21	135	11.9		56.1	83	07.2		12.4	62	54	44	28	41 35	19 56 69						
22	150	11.7		56.3	97	35.7	+15	06.1	63	56	32	19	49 33	48 71						
23	165	11.6		56.5	112	04.3	+14	59.8	63	58	18	16 09	17 01	10 58 31	39 74					
24	180	11.5	+22	56.7	126	33.0	+14	53.3	65	60 S	15 01	15 58	16 54	11 08 30	19 29 76					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 51 ^m 6		Mag: -4.0 PMG: 12 ^h 01 ^m				Mag: -1.9 PMG: 22 ^h 22 ^m				Mag: -2.1 PMG: 17 ^h 55 ^m				Mag: 0.0 PMG: 23 ^h 35 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	256	48.5	179	55.4	+22	55.5	23	18.2	-21	12.8	90	33.9	+7	15.5	5	14.5	-20	32.5		
1	271	50.9	194	54.5		55.9	38	21.4		12.7	105	36.2		15.4	20	17.2		32.5		
2	286	53.4	209	53.7		56.2	53	24.6		12.6	120	38.5		15.3	35	19.8		32.5		
3	301	55.9	224	52.8		56.6	68	27.9		12.6	135	40.7		15.2	50	22.5		32.4		
4	316	58.3	239	52.0		57.0	83	31.1		12.5	150	43.0		15.1	65	25.2		32.4		
5	332	00.8	254	51.1	+22	57.4	98	34.3	-21	12.4	165	45.3	+7	15.0	80	27.8	-20	32.4		
6	347	03.3	269	50.3	+22	57.7	113	37.5	-21	12.4	180	47.6	+7	14.9	95	30.5	-20	32.4		
7	2	05.7	284	49.4		58.1	128	40.7		12.3	195	49.8		14.9	110	33.1		32.4		
8	17	08.2	299	48.6		58.5	143	44.0		12.2	210	52.1		14.8	125	35.8		32.3		
9	32	10.6	314	47.7		58.8	158	47.2		12.2	225	54.4		14.7	140	38.5		32.3		
10	47	13.1	329	46.9		59.2	173	50.4		12.1	240	56.6		14.6	155	41.1		32.3		
11	62	15.6	344	46.0	+22	59.6	188	53.6	-21	12.0	255	58.9	+7	14.5	170	43.8	-20	32.3		
12	77	18.0	359	45.2	+22	59.9	203	56.8	-21	12.0	271	01.2	+7	14.4	185	46.4	-20	32.3		
13	92	20.5	14	44.3	+23	00.3	219	00.0		11.9	286	03.5		14.3	200	49.1		32.2		
14	107	23.0	29	43.5		00.6	234	03.2		11.8	301	05.7		14.2	215	51.8		32.2		
15	122	25.4	44	42.6		01.0	249	06.4		11.8	316	08.0		14.1	230	54.4		32.2		
16	137	27.9	59	41.8		01.4	264	09.6		11.7	331	10.3		14.0	245	57.1		32.2		
17	152	30.4	74	40.9	+23	01.7	279	12.9	-21	11.6	346	12.5	+7	14.0	260	59.7	-20	32.2		
18	167	32.8	89	40.1	+23	02.1	294	16.1	-21	11.6	1	14.8	+7	13.9	276	02.4	-20	32.1		
19	182	35.3	104	39.2		02.4	309	19.3		11.5	16	17.1		13.8	291	05.1		32.1		
20	197	37.8	119	38.4		02.8	324	22.5		11.5	31	19.3		13.7	306	07.7		32.1		
21	212	40.2	134	37.5		03.1	339	25.7		11.4	46	21.6		13.6	321	10.4		32.1		
22	227	42.7	149	36.7		03.5	354	28.9		11.3	61	23.9		13.5	336	13.0		32.1		
23	242	45.1	164	35.8		03.8	9	32.1		11.3	76	26.1		13.4	351	15.7		32.0		
24	257	47.6	179	34.9	+23	04.2	24	35.3	-21	11.2	91	28.4	+7	13.3	6	18.4	-20	32.0		
Dif	—		-9		+4		+32		+1		+23		-1		+27					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 59 ^m 3				Edad: 3 ^d 9 PHE { SD: 15'6 PMG: 16 ^h 07 ^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	11.5	+22	56.7	126	33.0	+14	53.3	60 N	** **	1 04	2 40	8 10	75	23	47	21	
1	195	11.4		56.9	141	01.8	98	46.8	58	** **	1 47	2 59	18	73	41	22		
2	210	11.2		57.1	155	30.6	98	40.3	56	** **	2 15	3 15	26	71	34	25		
3	225	11.1		57.3	169	59.6	100	33.6	54	0 58	36	29	33	69	29	26		
4	240	11.0		57.5	184	28.6	100	26.9	52	1 38	2 53	41	39	67	24	28		
5	255	10.9	+22	57.7	198	57.7	101	+14 20.1	50	2 04	3 07	3 51	8 44	66	23	19	30	
6	270	10.7	+22	57.9	213	26.8	101	+14 13.3	45	2 47	3 36	4 13	8 56	63	23	09	33	
7	285	10.6		58.1	227	56.1	103	+14 06.4	40	3 17	3 58	31	9 05	61	23	01	35	
8	300	10.5		58.3	242	25.4	103	+13 59.4	35	40	4 16	46	14	59	22	54	37	
9	315	10.4		58.5	256	54.8	104	52.3	30	3 58	31	4 58	21	57	48	39		
10	330	10.2		58.7	271	24.3	105	45.2	20	4 26	4 55	5 20	34	54	37	42		
11	345	10.1	+22	58.9	285	53.9	106	+13 38.0	10 N	4 48	5 15	5 38	9 44	52	22	28	44	
12	0	10.0	+22	59.1	300	23.5	106	+13 30.8	0	5 07	5 33	5 56	9 55	49	22	19	47	
13	15	09.9		59.3	314	53.2	107	23.5	10 S	24	5 50	6 13	10 05	46	09	51		
14	30	09.8		59.5	329	23.0	108	16.1	20	40	6 07	31	16	44	22	00	53	
15	45	09.6		59.7	343	52.9	109	08.7	30	5 56	25	6 52	28	41	21	49	56	
16	60	09.5	+22	59.9	358	22.8	109	+13 01.2	35	6 04	36	7 04	35	39	42	58		
17	75	09.4	+23	00.1	12	52.8	110	+12 53.7	40	6 13	6 47	7 18	10 44	36	21	35	60	
18	90	09.3	+23	00.3	27	22.9	111	+12 46.1	45	6 23	7 00	7 34	10 53	35	21	26	63	
19	105	09.1		00.5	41	53.1	112	38.4	50	35	16	7 54	11 05	31	16	66		
20	120	09.0		00.6	56	23.3	112	30.7	52	40	23	8 04	10	30	11	67		
21	135	08.9		00.8	70	53.6	113	23.0	54	45	31	15	16	28	21	05	69	
22	150	08.8		01.0	85	24.0	114	15.2	56	51	40	27	22	27	20	59	71	
23	165	08.6		01.2	99	54.5	115	+12 07.3	58	6 58	7 50	41	29	25	53	73		
24	180	08.5	+23	01.4	114	25.0	115	+11 59.4	60 S	7 05	8 01	8 58	11 38	22	20	45	76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 47 ^m 7		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: -1.9 PMG: 22 ^h 17 ^m		Mag: -2.0 PMG: 17 ^h 51 ^m		Mag: 0.0 PMG: 23 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	257	47.6	179	34.9	+23	04.2	24	35.3	-21	11.2	91	28.4	+7	13.3	6	18.4	-20	32.0
1	272	50.1	194	34.1		04.5	39	38.5		11.1	106	30.7		13.2	21	21.0		32.0
2	287	52.5	209	33.2		04.9	54	41.7		11.1	121	32.9		13.1	36	23.7		32.0
3	302	55.0	224	32.4		05.2	69	44.9		11.0	136	35.2		13.0	51	26.3		32.0
4	317	57.5	239	31.5		05.6	84	48.0		10.9	151	37.5		13.0	66	29.0		31.9
5	332	59.9	254	30.7	+23	05.9	99	51.2	-21	10.9	166	39.7	+7	12.9	81	31.6	-20	31.9
6	348	02.4	269	29.8	+23	06.2	114	54.4	-21	10.8	181	42.0	+7	12.8	96	34.3	-20	31.9
7	3	04.9	284	29.0		06.6	129	57.6		10.7	196	44.3		12.7	111	37.0		31.9
8	18	07.3	299	28.1		06.9	145	00.8		10.7	211	46.5		12.6	126	39.6		31.9
9	33	09.8	314	27.2		07.3	160	04.0		10.6	226	48.8		12.5	141	42.3		31.8
10	48	12.3	329	26.4		07.6	175	07.2		10.6	241	51.1		12.4	156	44.9		31.8
11	63	14.7	344	25.5	+23	07.9	190	10.4	-21	10.5	256	53.3	+7	12.3	171	47.6	-20	31.8
12	78	17.2	359	24.7	+23	08.3	205	13.6	-21	10.4	271	55.6	+7	12.2	186	50.3	-20	31.8
13	93	19.6	14	23.8		08.6	220	16.7		10.4	286	57.8		12.1	201	52.9		31.8
14	108	22.1	29	23.0		08.9	235	19.9		10.3	302	00.1		12.0	216	55.6		31.7
15	123	24.6	44	22.1		09.3	250	23.1		10.2	317	02.4		12.0	231	58.2		31.7
16	138	27.0	59	21.2		09.6	265	26.3		10.2	332	04.6		11.9	247	00.9		31.7
17	153	29.5	74	20.4	+23	09.9	280	29.5	-21	10.1	347	06.9	+7	11.8	262	03.6	-20	31.7
18	168	32.0	89	19.5	+23	10.3	295	32.6	-21	10.0	2	09.2	+7	11.7	277	06.2	-20	31.7
19	183	34.4	104	18.7		10.6	310	35.8		10.0	17	11.4		11.6	292	08.9		31.6
20	198	36.9	119	17.8		10.9	325	39.0		09.9	32	13.7		11.5	307	11.5		31.6
21	213	39.4	134	16.9		11.2	340	42.2		09.9	47	15.9		11.4	322	14.2		31.6
22	228	41.8	149	16.1		11.6	355	45.3		09.8	62	18.2		11.3	337	16.8		31.6
23	243	44.3	164	15.2		11.9	10	48.5		09.7	77	20.5		11.2	352	19.5		31.6
24	258	46.8	179	14.4	+23	12.2	25	51.7	-21	09.7	92	22.7	+7	11.1	7	22.2	-20	31.6
Dif	—		-9		+3		+32		+1		+23		-1		+27		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 5			Edad: 4 ^d 9 PHE { 4 ^h : 56 ⁴ / ₄ 12 ^h : 56 ¹ / ₁ 20 ^h : 55 ⁹ / ₉ PMG: 16 ^h 55 ^m R°: 45 ^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	08.5	+23 01.4	114	25.0	+11 59.4	79	60 N	21 21	22 59	** **	9 25 74	** **	
1	195	08.4	01.6	128	55.6 ¹¹⁶	51.5	81	58	21 01	22 15	** **	31 72	** **	
2	210	08.3	01.8	143	26.3 ¹¹⁷	43.4	80	56	20 45	21 46	** **	37 70	23 59 22	
3	225	08.1	02.0	157	57.1 ¹¹⁸	35.4	81	54	31	25	23 05	42 68	55 24	
4	240	08.0	02.1	172	27.9 ¹¹⁸	27.3	81	52	19	21 07	22 23	46 67	52 25	
5	255	07.9	+23 02.3	186	58.8 ¹¹⁹	+11 19.1	82	50	20 08	20 52	21 57	9 50 65	23 49 26	
6	270	07.7	+23 02.5	201	29.7 ¹¹⁹	+11 10.9	82	45	19 46	20 23	21 13	9 59 62	23 42 29	
7	285	07.6	02.7	216	00.8 ¹²¹	+11 02.7	82	40	28	20 01	20 43	10 06 60	36 32	
8	300	07.5	02.9	230	31.9 ¹²¹	+10 54.4	83	35	14	19 43	20	13 57	31 34	
9	315	07.4	03.1	245	03.0 ¹²¹	46.1	83	30	19 01	28	20 01	18 55	27 36	
10	330	07.2	03.2	259	34.3 ¹²³	37.7	84	20	18 39	19 04	19 33	28 51	19 39	
11	345	07.1	+23 03.4	274	05.6 ¹²³	+10 29.3	84	10 N	18 21	18 44	19 11	10 36 49	23 12 43	
12	0	07.0	+23 03.6	288	36.9 ¹²³	+10 20.9	84	0	18 03	18 26	18 52	10 44 46	23 06 45	
13	15	06.9	03.8	303	08.3 ¹²⁴	12.4	85	10 S	17 46	18 09	35	10 51 44	23 00 47	
14	30	06.7	04.0	317	39.8 ¹²⁵	+10 03.8	86	20	28	17 52	19	11 00 40	22 53 51	
15	45	06.6	04.1	332	11.4 ¹²⁶	+9 55.3	85	30	17 07	33	18 03	09 37	45 54	
16	60	06.5	04.3	346	43.0 ¹²⁶	46.7	86	35	16 55	23	17 54	14 36	40 56	
17	75	06.4	+23 04.5	1	14.7 ¹²⁷	+9 38.0	87	40	16 41	17 11	17 45	11 20 34	22 35 59	
18	90	06.2	+23 04.7	15	46.4 ¹²⁷	+9 29.4	86	45	16 24	16 58	17 35	11 28 30	22 29 61	
19	105	06.1	04.8	30	18.2 ¹²⁸	20.7	87	50	16 04	42	24	36 28	22 64	
20	120	06.0	05.0	44	50.1 ¹²⁹	11.9	88	52	15 54	35	19	40 26	18 66	
21	135	05.9	05.2	59	22.0 ¹²⁹	+9 03.2	87	54	44	27	13	44 25	14 68	
22	150	05.7	05.4	73	54.0 ¹³⁰	+8 54.3	89	56	31	18	07	49 23	10 70	
23	165	05.6	05.5	88	26.1 ¹³¹	45.5	88	58	17	16 08	17 00	11 54 21	06 71	
24	180	05.5	+23 05.7	102	58.2 ¹³¹	+8 36.6	89	60 S	15 00	15 57	16 53	12 00 19	22 01 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 43 ^m 8		Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: -1.8 PMG: 22 ^h 12 ^m			Mag: -2.0 PMG: 17 ^h 48 ^m			Mag: 0.0 PMG: 23 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	46.8	179	14.4	+23 12.2	25 51.7	-21 09.7	92 22.7	+7 11.1	7 22.2	-20 31.6			
1	273	49.2	194	13.5	12.5	40 54.8	09.6	107 25.0	11.0	22 24.8	31.5			
2	288	51.7	209	12.6	12.8	55 58.0	09.6	122 27.3	10.9	37 27.5	31.5			
3	303	54.1	224	11.8	13.2	71 01.2	09.5	137 29.5	10.8	52 30.1	31.5			
4	318	56.6	239	10.9	13.5	86 04.3	09.4	152 31.8	10.7	67 32.8	31.5			
5	333	59.1	254	10.0	+23 13.8	101 07.5	-21 09.4	167 34.0	+7 10.6	82 35.5	-20 31.5			
6	349	01.5	269	09.2	+23 14.1	116 10.7	-21 09.3	182 36.3	+7 10.6	97 38.1	-20 31.4			
7	4	04.0	284	08.3	14.4	131 13.8	09.2	197 38.5	10.5	112 40.8	31.4			
8	19	06.5	299	07.5	14.7	146 17.0	09.2	212 40.8	10.4	127 43.4	31.4			
9	34	08.9	314	06.6	15.0	161 20.1	09.1	227 43.1	10.3	142 46.1	31.4			
10	49	11.4	329	05.7	15.4	176 23.3	09.1	242 45.3	10.2	157 48.7	31.4			
11	64	13.9	344	04.9	+23 15.7	191 26.5	-21 09.0	257 47.6	+7 10.1	172 51.4	-20 31.3			
12	79	16.3	359	04.0	+23 16.0	206 29.6	-21 08.9	272 49.8	+7 10.0	187 54.1	-20 31.3			
13	94	18.8	14	03.1	16.3	221 32.8	08.9	287 52.1	09.9	202 56.7	31.3			
14	109	21.2	29	02.3	16.6	236 35.9	08.8	302 54.4	09.8	217 59.4	31.3			
15	124	23.7	44	01.4	16.9	251 39.1	08.8	317 56.6	09.7	233 02.0	31.3			
16	139	26.2	59	00.5	17.2	266 42.2	08.7	332 58.9	09.6	248 04.7	31.2			
17	154	28.6	73	59.7	+23 17.5	281 45.4	-21 08.6	348 01.1	+7 09.5	263 07.4	-20 31.2			
18	169	31.1	88	58.8	+23 17.8	296 48.5	-21 08.6	3 03.4	+7 09.4	278 10.0	-20 31.2			
19	184	33.6	103	57.9	18.1	311 51.7	08.5	18 05.6	09.3	293 12.7	31.2			
20	199	36.0	118	57.1	18.4	326 54.8	08.5	33 07.9	09.2	308 15.3	31.2			
21	214	38.5	133	56.2	18.7	341 58.0	08.4	48 10.2	09.1	323 18.0	31.1			
22	229	41.0	148	55.3	19.0	357 01.1	08.3	63 12.4	09.0	338 20.6	31.1			
23	244	43.4	163	54.5	19.3	12 04.2	08.3	78 14.7	08.9	353 23.3	31.1			
24	259	45.9	178	53.6	+23 19.6	27 07.4	-21 08.2	93 16.9	+7 08.9	8 26.0	-20 31.1			
Dif	—		-9		+3	+32		+1		+23		-1		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 7			Edad: 5 ^d 9 PHE { SD: 15 ^h 2 PMG: 17 ^h 40 ^m 4 ^h : 55 ^m 6 12 ^h : 55 ^m 4 20 ^h : 55 ^m 2 R°: 44 ^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	180	05.5	+23	05.7	102	58.2	+8	36.6	60 N	** ** *	1 00	2 38	10 39	73	0 08	18				
1	195	05.3		05.9	117	30.3 ¹³¹		27.7 ⁸⁹	58	** ** *	1 45	2 58	43 71	0 03	20					
2	210	05.2		06.0	132	02.5 ¹³²		18.8 ⁸⁹	56	** ** *	2 13	3 14	47 68	** ** *	** ** *					
3	225	05.1		06.2	146	34.8 ¹³³		09.9 ⁸⁹	54	0 54	34	28	50 67	** ** *	** ** *					
4	240	05.0		06.4	161	07.1 ¹³³	+8	00.9 ⁹⁰	52	1 36	2 52	40	53 65	** ** *	** ** *					
5	255	04.8	+23	06.5	175	39.5 ¹³⁴	+7	51.9 ⁹⁰	50	2 02	3 07	3 51	10 55	64	** ** *	** ** *				
6	270	04.7	+23	06.7	190	11.9 ¹³⁴	+7	42.8 ⁹¹	45	2 47	3 36	4 13	11 01	60	** ** *	** ** *				
7	285	04.6		06.9	204	44.4 ¹³⁵		33.8 ⁹⁰	40	3 17	3 58	31	06 57	** ** *	** ** *					
8	300	04.4		07.0	219	17.0 ¹³⁶		24.7 ⁹¹	35	39	4 16	45	10 55	** ** *	** ** *					
9	315	04.3		07.2	233	49.6 ¹³⁶		15.6 ⁹¹	30	3 58	31	4 58	13 54	** ** *	** ** *					
10	330	04.2		07.4	248	22.2 ¹³⁶	+7	06.5 ⁹¹	20	4 26	4 56	5 20	19 50	23 58	38					
11	345	04.1	+23	07.5	262	54.9 ¹³⁷	+6	57.3 ⁹²	10 N	4 49	5 16	5 39	11 25	47	23 55	40				
12	0	03.9	+23	07.7	277	27.6 ¹³⁷	+6	48.1 ⁹²	0	5 07	5 34	5 56	11 30	44	23 51	43				
13	15	03.8		07.9	292	00.4 ¹³⁸		38.9 ⁹²	10 S	24	5 50	6 13	35 41	47 47						
14	30	03.7		08.0	306	33.2 ¹³⁸		29.7 ⁹²	20	40	6 08	32	40 38	44 49						
15	45	03.5		08.2	321	06.1 ¹³⁹		20.5 ⁹²	30	5 56	26	6 52	46 35	39 53						
16	60	03.4		08.3	335	39.1 ¹⁴⁰		11.2 ⁹³	35	6 05	37	7 05	50 32	36 55						
17	75	03.3	+23	08.5	350	12.0 ¹³⁹	+6	01.9 ⁹³	40	6 14	6 48	7 19	11 54	30	23 34	57				
18	90	03.2	+23	08.7	4	45.0 ¹⁴⁰	+5	52.7 ⁹²	45	6 24	7 01	7 35	11 58	28	23 30	60				
19	105	03.0		08.8	19	18.1 ¹⁴¹		43.3 ⁹⁴	50	36	17	7 56	12 04	25	26 63					
20	120	02.9		09.0	33	51.2 ¹⁴¹		34.0 ⁹³	52	41	25	8 05	06 24	24 65						
21	135	02.8		09.1	48	24.4 ¹⁴²		24.7 ⁹³	54	47	33	16	09 22	22 66						
22	150	02.6		09.3	62	57.5 ¹⁴¹		15.3 ⁹⁴	56	53	41	29	12 20	20 68						
23	165	02.5		09.4	77	30.8 ¹⁴³	+5	06.0 ⁹³	58	6 59	7 51	8 43	15 19	17 70						
24	180	02.4	+23	09.6	92	04.0 ¹⁴²	+4	56.6 ⁹⁴	60 S	7 06	8 03	9 00	12 19	16	23 14	72				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 39 ^m 8		Mag: -4.0 PMG: 12 ^h 05 ^m				Mag: -1.8 PMG: 22 ^h 07 ^m				Mag: -2.0 PMG: 17 ^h 44 ^m				Mag: 0.0 PMG: 23 ^h 22 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	259	45.9	178	53.6	+23	19.6	27	07.4	-21	08.2	93	16.9	+7	08.9	8	26.0	-20	31.1		
1	274	48.4	193	52.7		19.9	42	10.5		08.2	108	19.2		08.8	23	28.6		31.1		
2	289	50.8	208	51.9		20.1	57	13.7		08.1	123	21.4		08.7	38	31.3		31.0		
3	304	53.3	223	51.0		20.4	72	16.8		08.0	138	23.7		08.6	53	33.9		31.0		
4	319	55.7	238	50.1		20.7	87	19.9		08.0	153	25.9		08.5	68	36.6		31.0		
5	334	58.2	253	49.3	+23	21.0	102	23.1	-21	07.9	168	28.2	+7	08.4	83	39.3	-20	31.0		
6	350	00.7	268	48.4	+23	21.3	117	26.2	-21	07.9	183	30.4	+7	08.3	98	41.9	-20	31.0		
7	5	03.1	283	47.5		21.6	132	29.3		07.8	198	32.7		08.2	113	44.6		30.9		
8	20	05.6	298	46.7		21.9	147	32.5		07.8	213	35.0		08.1	128	47.2		30.9		
9	35	08.1	313	45.8		22.1	162	35.6		07.7	228	37.2		08.0	143	49.9		30.9		
10	50	10.5	328	44.9		22.4	177	38.7		07.6	243	39.5		07.9	158	52.5		30.9		
11	65	13.0	343	44.0	+23	22.7	192	41.8	-21	07.6	258	41.7	+7	07.8	173	55.2	-20	30.9		
12	80	15.5	358	43.2	+23	23.0	207	45.0	-21	07.5	273	44.0	+7	07.7	188	57.9	-20	30.9		
13	95	17.9	13	42.3		23.3	222	48.1		07.5	288	46.2		07.6	204	00.5		30.8		
14	110	20.4	28	41.4		23.5	237	51.2		07.4	303	48.5		07.5	219	03.2		30.8		
15	125	22.9	43	40.6		23.8	252	54.3		07.4	318	50.7		07.4	234	05.8		30.8		
16	140	25.3	58	39.7		24.1	267	57.5		07.3	333	53.0		07.3	249	08.5		30.8		
17	155	27.8	73	38.8	+23	24.4	283	00.6	-21	07.2	348	55.2	+7	07.2	264	11.1	-20	30.8		
18	170	30.2	88	37.9	+23	24.6	298	03.7	-21	07.2	3	57.5	+7	07.1	279	13.8	-20	30.7		
19	185	32.7	103	37.1		24.9	313	06.8		07.1	18	59.7		07.0	294	16.5		30.7		
20	200	35.2	118	36.2		25.2	328	09.9		07.1	34	02.0		06.9	309	19.1		30.7		
21	215	37.6	133	35.3		25.4	343	13.0		07.0	49	04.2		06.8	324	21.8		30.7		
22	230	40.1	148	34.5		25.7	358	16.1		07.0	64	06.5		06.7	339	24.4		30.7		
23	245	42.6	163	33.6		26.0	13	19.3		06.9	79	08.7		06.6	354	27.1		30.6		
24	260	45.0	178	32.7	+23	26.2	28	22.4	-21	06.9	94	11.0	+7	06.5	9	29.7	-20	30.6		
Dif	—		-9		+3		+31		+1		+23		-1		+27		0			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 6 ^d 9	PHE {	4 ^h : 55 ⁰ 12 ^h : 54 ⁹ 20 ^h : 54 ⁷			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 59 ^m 9								SD: 15 ⁰ PMG: 18 ^h 24 ^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	02.4	+23 09.6	92	04.0	+4 56.6	94	60 N	21 23	23 04	** **	11 52 72		0 26 15	
1	195	02.3	09.7	106	37.3 ¹⁴³	47.2	94	58	21 03	22 17	** **	54 69		23 18	
2	210	02.1	09.9	121	10.7 ¹⁴⁴	37.8	94	56	20 46	21 48	** **	55 67		21 19	
3	225	02.0	10.0	135	44.1 ¹⁴⁴	28.4	94	54	32	26	23 09	57 65		19 22	
4	240	01.9	10.2	150	17.5 ¹⁴⁴	18.9	95	52	20	21 09	22 26	58 64		17 23	
5	255	01.7	+23 10.3	164	50.9 ¹⁴⁴	+4 09.5	94	50	20 10	20 54	21 59	11 59 62		0 15 24	
6	270	01.6	+23 10.5	179	24.4 ¹⁴⁵	+4 00.0	95	45	19 47	20 25	21 14	12 01 59		0 11 28	
7	285	01.5	10.6	193	58.0 ¹⁴⁶	+3 50.6	94	40	29	20 02	20 44	03 57		08 30	
8	300	01.4	10.8	208	31.5 ¹⁴⁵	41.1	95	35	15	19 44	21	05 54		05 32	
9	315	01.2	10.9	223	05.1 ¹⁴⁶	31.6	95	30	19 02	29	20 02	07 52		0 03 34	
10	330	01.1	11.1	237	38.7 ¹⁴⁶	22.1	95	20	18 40	19 04	19 34	09 49		** ** *	
11	345	01.0	+23 11.2	252	12.4 ¹⁴⁷	+3 12.6	95	10 N	18 21	18 44	19 11	12 12 45		** ** *	
12	0	00.8	+23 11.4	266	46.1 ¹⁴⁷	+3 03.1	95	0	18 04	18 26	18 52	12 14 43		** ** *	
13	15	00.7	11.5	281	19.8 ¹⁴⁷	+2 53.6	95	10 S	17 46	18 09	35	16 40		** ** *	
14	30	00.6	11.7	295	53.5 ¹⁴⁷	44.1	95	20	28	17 52	19	18 37		** ** *	
15	45	00.4	11.8	310	27.3 ¹⁴⁸	34.6	95	30	17 07	33	18 03	21 33		** ** *	
16	60	00.3	12.0	325	01.1 ¹⁴⁸	25.1	95	35	16 55	23	17 54	22 32		** ** *	
17	75	00.2	+23 12.1	339	34.9 ¹⁴⁸	+2 15.5	96	40	16 41	17 11	17 45	12 24 30		** ** *	
18	90	00.1	+23 12.2	354	08.7 ¹⁴⁸	+2 06.0	95	45	16 24	16 58	17 35	12 26 27		** ** *	
19	104	59.9	12.4	8	42.6 ¹⁴⁹	+1 56.5	95	50	16 04	42	23	29 23		** ** *	
20	119	59.8	12.5	23	16.5 ¹⁴⁹	47.0	95	52	15 54	35	18	30 22		** ** *	
21	134	59.7	12.7	37	50.4 ¹⁴⁹	37.4	96	54	43	27	13	31 21		** ** *	
22	149	59.5	12.8	52	24.4 ¹⁵⁰	27.9	95	56	30	18	07	32 19		** ** *	
23	164	59.4	12.9	66	58.3 ¹⁴⁹	18.4	95	58	15 16	16 08	17 00	34 17		** ** *	
24	179	59.3	+23 13.1	81	32.3 ¹⁵⁰	+1 08.8	96	60 S	14 59	15 56	16 53	12 35 16		** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 35 ^m 9		Mag: -4.0 PMG: 12 ^h 07 ^m		Mag: -1.8 PMG: 22 ^h 02 ^m		Mag: -2.0 PMG: 17 ^h 41 ^m		Mag: 0.0 PMG: 23 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	260	45.0	178	32.7	+23 26.2	28 22.4	-21 06.9	94 11.0	+7 06.5	9 29.7	-20 30.6
1	275	47.5	193	31.8	26.5	43 25.5	06.8	109 13.2	06.4	24 32.4	30.6
2	290	50.0	208	31.0	26.8	58 28.6	06.7	124 15.5	06.3	39 35.1	30.6
3	305	52.4	223	30.1	27.0	73 31.7	06.7	139 17.7	06.2	54 37.7	30.6
4	320	54.9	238	29.2	27.3	88 34.8	06.6	154 20.0	06.1	69 40.4	30.5
5	335	57.3	253	28.3	+23 27.5	103 37.9	-21 06.6	169 22.2	+7 06.0	84 43.0	-20 30.5
6	350	59.8	268	27.5	+23 27.8	118 41.0	-21 06.5	184 24.5	+7 05.9	99 45.7	-20 30.5
7	6	02.3	283	26.6	28.1	133 44.1	06.5	199 26.7	05.8	114 48.3	30.5
8	21	04.7	298	25.7	28.3	148 47.2	06.4	214 29.0	05.7	129 51.0	30.5
9	36	07.2	313	24.8	28.6	163 50.3	06.4	229 31.2	05.6	144 53.7	30.4
10	51	09.7	328	24.0	28.8	178 53.4	06.3	244 33.5	05.5	159 56.3	30.4
11	66	12.1	343	23.1	+23 29.1	193 56.5	-21 06.3	259 35.7	+7 05.5	174 59.0	-20 30.4
12	81	14.6	358	22.2	+23 29.3	208 59.6	-21 06.2	274 37.9	+7 05.4	190 01.6	-20 30.4
13	96	17.1	13	21.3	29.6	224 02.7	06.1	289 40.2	05.3	205 04.3	30.4
14	111	19.5	28	20.5	29.8	239 05.8	06.1	304 42.4	05.2	220 06.9	30.4
15	126	22.0	43	19.6	30.1	254 08.9	06.0	319 44.7	05.1	235 09.6	30.3
16	141	24.5	58	18.7	30.3	269 12.0	06.0	334 46.9	05.0	250 12.2	30.3
17	156	26.9	73	17.8	+23 30.6	284 15.0	-21 05.9	349 49.2	+7 04.9	265 14.9	-20 30.3
18	171	29.4	88	17.0	+23 30.8	299 18.1	-21 05.9	4 51.4	+7 04.8	280 17.6	-20 30.3
19	186	31.8	103	16.1	31.0	314 21.2	05.8	19 53.7	04.7	295 20.2	30.3
20	201	34.3	118	15.2	31.3	329 24.3	05.8	34 55.9	04.6	310 22.9	30.2
21	216	36.8	133	14.3	31.5	344 27.4	05.7	49 58.2	04.5	325 25.5	30.2
22	231	39.2	148	13.5	31.8	359 30.5	05.7	65 00.4	04.4	340 28.2	30.2
23	246	41.7	163	12.6	32.0	14 33.5	05.6	80 02.6	04.3	355 30.8	30.2
24	261	44.2	178	11.7	+23 32.2	29 36.6	-21 05.6	95 04.9	+7 04.2	10 33.5	-20 30.2
Dif	—		-9		+2	+31	+1	+22	-1	+27	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 00 ^m 2				Edad: 7 ^d 9 PHE { SD: 14'9 PMG: 19 ^h 07 ^m R ^o : 42 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	179	59.3	+23	13.1	81	32.3	+1	08.8	60 N	** **	0 56	2 37	13 04	70	0 41	16			
1	194	59.1		13.2	96	06.3 ¹⁵⁰	+0	59.3 ⁹⁵	58	** **	1 43	2 57	03 68		41	17			
2	209	59.0		13.3	110	40.3 ¹⁵⁰		49.8 ⁹⁵	56	** **	2 12	3 14	02 67		40	20			
3	224	58.9		13.5	125	14.4 ¹⁵¹		40.2 ⁹⁶	54	0 51	34	28	02 65		40	21			
4	239	58.7		13.6	139	48.5 ¹⁵¹		30.7 ⁹⁵	52	1 34	2 51	40	02 63		40	22			
5	254	58.6	+23	13.7	154	22.5 ¹⁵⁰	+0	21.2 ⁹⁵	50	2 01	3 06	3 50	13 01	62	0 39	24			
6	269	58.5	+23	13.9	168	56.6 ¹⁵¹	+0	11.7 ⁹⁵	45	2 46	3 35	4 13	13 00	59	0 39	26			
7	284	58.4		14.0	183	30.7 ¹⁵¹	+0	02.1 ⁹⁶	40	3 16	3 58	31	13 00	56	38	29			
8	299	58.2		14.1	198	04.9 ¹⁵²	-0	07.4 ⁹⁵	35	39	4 16	45	12 59	54	37	32			
9	314	58.1		14.3	212	39.0 ¹⁵¹		16.9 ⁹⁵	30	3 58	31	4 58	59	51	37	33			
10	329	58.0		14.4	227	13.1 ¹⁵¹		26.4 ⁹⁵	20	4 27	4 56	5 20	58	48	36	37			
11	344	57.8	+23	14.5	241	47.3 ¹⁵²	-0	35.9 ⁹⁵	10 N	4 49	5 16	5 39	12 57	45	0 35	40			
12	359	57.7	+23	14.7	256	21.5 ¹⁵²	-0	45.4 ⁹⁵	0	5 08	5 34	5 56	12 57	42	0 34	43			
13	14	57.6		14.8	270	55.7 ¹⁵²	-0	54.8 ⁹⁴	10 S	25	5 51	6 14	56	40	34	45			
14	29	57.4		14.9	285	29.9 ¹⁵²	-1	04.3 ⁹⁵	20	41	6 08	32	55	37	33	48			
15	44	57.3		15.0	300	04.1 ¹⁵²		13.8 ⁹⁵	30	5 57	27	6 53	54	34	32	52			
16	59	57.2		15.2	314	38.3 ¹⁵²		23.2 ⁹⁴	35	6 06	37	7 05	54	31	31	54			
17	74	57.0	+23	15.3	329	12.5 ¹⁵²	-1	32.7 ⁹⁵	40	6 15	6 49	7 20	12 54	29	0 31	56			
18	89	56.9	+23	15.4	343	46.7 ¹⁵²	-1	42.1 ⁹⁴	45	6 25	7 02	7 36	12 53	27	0 30	59			
19	104	56.8		15.5	358	20.9 ¹⁵²	-1	51.5 ⁹⁴	50	37	18	7 57	52	24	29	62			
20	119	56.6		15.7	12	55.2 ¹⁵³	-2	00.9 ⁹⁴	52	42	26	8 06	52	22	29	63			
21	134	56.5		15.8	27	29.4 ¹⁵²		10.3 ⁹⁴	54	48	34	17	52	21	28	65			
22	149	56.4		15.9	42	03.7 ¹⁵³		19.7 ⁹⁴	56	6 54	43	30	51	20	28	66			
23	164	56.3		16.0	56	37.9 ¹⁵²		29.1 ⁹⁴	58	7 00	7 53	8 44	51	17	27	69			
24	179	56.1	+23	16.1	71	12.2 ¹⁵³	-2	38.5 ⁹⁴	60 S	7 08	8 04	9 02	12 51	15	0 26	71			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 32 ^m 0		Mag: -4.0 PMG: 12 ^h 08 ^m				Mag: -1.8 PMG: 21 ^h 57 ^m				Mag: -2.0 PMG: 17 ^h 37 ^m				Mag: +0.1 PMG: 23 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	261	44.2	178	11.7	+23	32.2	29	36.6	-21	05.6	95	04.9	+7	04.2	10	33.5	-20	30.2
1	276	46.6	193	10.8		32.5	44	39.7		05.5	110	07.1		04.1	25	36.2		30.1
2	291	49.1	208	09.9		32.7	59	42.8		05.5	125	09.4		04.0	40	38.8		30.1
3	306	51.6	223	09.1		32.9	74	45.8		05.4	140	11.6		03.9	55	41.5		30.1
4	321	54.0	238	08.2		33.2	89	48.9		05.4	155	13.9		03.8	70	44.1		30.1
5	336	56.5	253	07.3	+23	33.4	104	52.0	-21	05.3	170	16.1	+7	03.7	85	46.8	-20	30.1
6	351	59.0	268	06.4	+23	33.6	119	55.1	-21	05.3	185	18.3	+7	03.6	100	49.4	-20	30.0
7	7	01.4	283	05.6		33.9	134	58.1		05.2	200	20.6		03.5	115	52.1		30.0
8	22	03.9	298	04.7		34.1	150	01.2		05.2	215	22.8		03.4	130	54.7		30.0
9	37	06.3	313	03.8		34.3	165	04.3		05.1	230	25.1		03.3	145	57.4		30.0
10	52	08.8	328	02.9		34.5	180	07.3		05.1	245	27.3		03.2	161	00.1		30.0
11	67	11.3	343	02.0	+23	34.7	195	10.4	-21	05.0	260	29.6	+7	03.0	176	02.7	-20	30.0
12	82	13.7	358	01.2	+23	35.0	210	13.5	-21	05.0	275	31.8	+7	02.9	191	05.4	-20	29.9
13	97	16.2	13	00.3		35.2	225	16.5		04.9	290	34.0		02.8	206	08.0		29.9
14	112	18.7	27	59.4		35.4	240	19.6		04.9	305	36.3		02.7	221	10.7		29.9
15	127	21.1	42	58.5		35.6	255	22.6		04.8	320	38.5		02.6	236	13.3		29.9
16	142	23.6	57	57.6		35.8	270	25.7		04.8	335	40.8		02.5	251	16.0		29.9
17	157	26.1	72	56.8	+23	36.1	285	28.7	-21	04.7	350	43.0	+7	02.4	266	18.6	-20	29.8
18	172	28.5	87	55.9	+23	36.3	300	31.8	-21	04.7	5	45.2	+7	02.3	281	21.3	-20	29.8
19	187	31.0	102	55.0		36.5	315	34.9		04.6	20	47.5		02.2	296	24.0		29.8
20	202	33.4	117	54.1		36.7	330	37.9		04.6	35	49.7		02.1	311	26.6		29.8
21	217	35.9	132	53.2		36.9	345	41.0		04.5	50	52.0		02.0	326	29.3		29.8
22	232	38.4	147	52.3		37.1	0	44.0		04.5	65	54.2		01.9	341	31.9		29.7
23	247	40.8	162	51.5		37.3	15	47.1		04.4	80	56.4		01.8	356	34.6		29.7
24	262	43.3	177	50.6	+23	37.5	30	50.1	-21	04.4	95	58.7	+7	01.7	11	37.2	-20	29.7
Dif	—		-9		+2		+31		0		+22		-1		+27		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 8 ^d 9	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 R°: 43 ^m										
	PMG: 12 ^h 00 ^m 4					SD: 14 ^h 8									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m		
0	179	56.1	+23	16.1	71	12.2	-2 38.5	60 N	21 25	23 08	** **	14 14	70	0 57 15	
1	194	56.0		16.3	85	46.4 ¹⁵²	47.8	58	21 04	22 19	** **	11 68		0 58 18	
2	209	55.9		16.4	100	20.7 ¹⁵³	-2 57.2	56	20 48	21 50	** **	09 66		1 00 19	
3	224	55.7		16.5	114	54.9 ¹⁵²	-3 06.5	54		34	28	23 13		01 21	
4	239	55.6		16.6	129	29.2 ¹⁵³	15.8	52		21	21 10	22 28		02 23	
5	254	55.5	+23	16.7	144	03.4 ¹⁵²	-3 25.1	50	20 11	20 55	22 00	14 03	61	1 03 24	
6	269	55.3	+23	16.8	158	37.7 ¹⁵³	-3 34.4	45	19 48	20 26	21 15	13 59	58	1 05 27	
7	284	55.2		17.0	173	11.9 ¹⁵²	43.6	40		30	20 03	20 45		07 30	
8	299	55.1		17.1	187	46.2 ¹⁵³	-3 52.9	35		15	19 45	22		09 31	
9	314	54.9		17.2	202	20.4 ¹⁵²	-4 02.1	30	19 02		30	20 03		10 34	
10	329	54.8		17.3	216	54.7 ¹⁵³	11.3	20	18 40	19 05	19 34	46 48		13 37	
11	344	54.7	+23	17.4	231	28.9 ¹⁵²	-4 20.5	10 N	18 22	18 45	19 12	13 42	46	1 15 40	
12	359	54.5	+23	17.5	246	03.1 ¹⁵²	-4 29.7	0	18 04	18 27	18 53	13 39	43	1 17 43	
13	14	54.4		17.6	260	37.3 ¹⁵²	38.8	10 S	17 47	18 10	36	36 40		19 45	
14	29	54.3		17.7	275	11.6 ¹⁵³	48.0	20		28	17 52	20	32 37	21 48	
15	44	54.1		17.8	289	45.8 ¹⁵²	-4 57.1	30	17 07		33	18 03	28 34	24 51	
16	59	54.0		18.0	304	20.0 ¹⁵²	-5 06.2	35	16 55		23	17 55	25 33	25 54	
17	74	53.9	+23	18.1	318	54.1 ¹⁵¹	-5 15.2	40	16 41	17 11	17 45	13 23	30	1 27 56	
18	89	53.7	+23	18.2	333	28.3 ¹⁵²	-5 24.3	45	16 24	16 58	17 35	13 20	27	1 29 58	
19	104	53.6		18.3	348	02.5 ¹⁵²	33.3	50	16 03		42	23	16 25	31 61	
20	119	53.5		18.4	2	36.6 ¹⁵¹	42.3	52	15 54		34	18	14 24	32 63	
21	134	53.3		18.5	17	10.8 ¹⁵²	-5 51.3	54		43	26	12	13 21	33 65	
22	149	53.2		18.6	31	44.9 ¹⁵¹	-6 00.2	56		30	17	06	11 20	34 67	
23	164	53.1		18.7	46	19.0 ¹⁵¹	09.2	58	15 15	16 07	17 00	08 19		36 68	
24	179	52.9	+23	18.8	60	53.1 ¹⁵¹	-6 18.1	60 S	14 58	15 56	16 52	13 06	16	1 37 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 28 ^m 1		Mag: -4.0 PMG: 12 ^h 09 ^m		Mag: -1.8 PMG: 21 ^h 52 ^m		Mag: -2.0 PMG: 17 ^h 33 ^m		Mag: +0.1 PMG: 23 ^h 09 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	262	43.3	177	50.6	+23	37.5	30	50.1	-21	04.4	95	58.7	+7	01.7	11	37.2	-20	29.7
1	277	45.8	192	49.7		37.7	45	53.1		04.3	111	00.9		01.6	26	39.9		29.7
2	292	48.2	207	48.8		37.9	60	56.2		04.3	126	03.1		01.5	41	42.5		29.7
3	307	50.7	222	47.9		38.2	75	59.2		04.2	141	05.4		01.4	56	45.2		29.6
4	322	53.2	237	47.0		38.4	91	02.3		04.2	156	07.6		01.3	71	47.9		29.6
5	337	55.6	252	46.2	+23	38.6	106	05.3	-21	04.1	171	09.9	+7	01.2	86	50.5	-20	29.6
6	352	58.1	267	45.3	+23	38.8	121	08.3	-21	04.1	186	12.1	+7	01.1	101	53.2	-20	29.6
7	8	00.6	282	44.4		39.0	136	11.4		04.1	201	14.3		01.0	116	55.8		29.6
8	23	03.0	297	43.5		39.2	151	14.4		04.0	216	16.6		00.9	131	58.5		29.6
9	38	05.5	312	42.6		39.3	166	17.4		04.0	231	18.8		00.8	147	01.1		29.5
10	53	07.9	327	41.7		39.5	181	20.5		03.9	246	21.0		00.7	162	03.8		29.5
11	68	10.4	342	40.9	+23	39.7	196	23.5	-21	03.9	261	23.3	+7	00.6	177	06.4	-20	29.5
12	83	12.9	357	40.0	+23	39.9	211	26.5	-21	03.8	276	25.5	+7	00.5	192	09.1	-20	29.5
13	98	15.3	12	39.1		40.1	226	29.6		03.8	291	27.7		00.4	207	11.7		29.5
14	113	17.8	27	38.2		40.3	241	32.6		03.7	306	30.0		00.3	222	14.4		29.4
15	128	20.3	42	37.3		40.5	256	35.6		03.7	321	32.2		00.2	237	17.1		29.4
16	143	22.7	57	36.4		40.7	271	38.6		03.7	336	34.5	+7	00.1	252	19.7		29.4
17	158	25.2	72	35.6	+23	40.9	286	41.7	-21	03.6	351	36.7	+7	00.0	267	22.4	-20	29.4
18	173	27.7	87	34.7	+23	41.1	301	44.7	-21	03.6	6	38.9	+6	59.9	282	25.0	-20	29.4
19	188	30.1	102	33.8		41.2	316	47.7		03.5	21	41.2		59.8	297	27.7		29.3
20	203	32.6	117	32.9		41.4	331	50.7		03.5	36	43.4		59.7	312	30.3		29.3
21	218	35.0	132	32.0		41.6	346	53.7		03.4	51	45.6		59.6	327	33.0		29.3
22	233	37.5	147	31.1		41.8	1	56.8		03.4	66	47.9		59.4	342	35.6		29.3
23	248	40.0	162	30.2		42.0	16	59.8		03.3	81	50.1		59.3	357	38.3		29.3
24	263	42.4	177	29.4	+23	42.1	32	02.8	-21	03.3	96	52.3	+6	59.2	12	40.9	-20	29.3
Dif	—		-9	+2		+30	0			+22		-1		+27				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 9	PHE	SD: 14 ^h 7		R ^o : 44 ^m							
	PMG: 12 ^h 00 ^m 6														
	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	179	52.9	+23	18.8	60	53.1	-6	18.1	89	60 N	** **	0 53	2 36	15 24	70
1	194	52.8		18.9	75	27.2 ¹⁵¹		27.0	88	58	** **	1 41	2 56	19 68	16 19
2	209	52.7		19.0	90	01.3 ¹⁵¹		35.8	88	56	** **	2 11	3 13	15 65	19 21
3	224	52.5		19.1	104	35.3 ¹⁵⁰		44.6	88	54	0 48	33	27	11 64	22 22
4	239	52.4		19.2	119	09.3 ¹⁵⁰		-6 53.4	88	52	1 33	2 51	39	07 63	25 24
5	254	52.3	+23	19.3	133	43.4 ¹⁵¹		-7 02.2	88	50	2 01	3 06	3 50	15 04	61
6	269	52.1	+23	19.4	148	17.4 ¹⁵⁰		-7 10.9	87	45	2 46	3 35	4 13	14 57	58
7	284	52.0		19.5	162	51.3 ¹⁴⁹		19.6	87	40	3 16	3 58	31	51 56	37 31
8	299	51.9		19.6	177	25.3 ¹⁵⁰		28.3	87	35	39	4 16	46	46 54	40 33
9	314	51.7		19.7	191	59.2 ¹⁴⁹		37.0	87	30	3 58	31	4 59	42 52	44 35
10	329	51.6		19.8	206	33.2 ¹⁵⁰		45.6	86	20	4 27	4 56	5 20	34 49	50 37
11	344	51.5	+23	19.9	221	07.1 ¹⁴⁹		-7 54.2	86	10 N	4 49	5 16	5 39	14 28	46
12	359	51.3	+23	20.0	235	40.9 ¹⁴⁸		-8 02.8	86	0	5 08	5 34	5 57	14 22	44
13	14	51.2		20.1	250	14.8 ¹⁴⁹		11.3	85	10 S	25	5 51	6 14	16 41	04 46
14	29	51.1		20.2	264	48.6 ¹⁴⁸		19.8	85	20	41	6 09	33	09 39	09 49
15	44	50.9		20.2	279	22.4 ¹⁴⁸		28.2	84	30	5 58	28	6 54	14 02	35
16	59	50.8		20.3	293	56.2 ¹⁴⁸		36.7	85	35	6 06	38	7 06	13 58	33
17	74	50.7	+23	20.4	308	30.0 ¹⁴⁸		-8 45.1	84	40	6 16	6 50	7 20	13 53	32
18	89	50.5	+23	20.5	323	03.7 ¹⁴⁷		-8 53.4	83	45	6 26	7 03	7 37	13 47	30
19	104	50.4		20.6	337	37.4 ¹⁴⁷		-9 01.7	83	50	38	19	7 58	41 27	32 61
20	119	50.3		20.7	352	11.1 ¹⁴⁷		10.0	83	52	43	27	8 08	38 25	35 62
21	134	50.1		20.8	6	44.8 ¹⁴⁷		18.3	83	54	49	35	19	34 25	38 64
22	149	50.0		20.9	21	18.4 ¹⁴⁶		26.5	82	56	6 55	44	31	31 22	41 65
23	164	49.9		21.0	35	52.0 ¹⁴⁶		34.7	82	58	7 01	7 54	8 46	27 20	44 68
24	179	49.7	+23	21.0	50	25.6 ¹⁴⁶		-9 42.8	81	60 S	7 09	8 06	9 03	13 22	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 6 ^h 24 ^m 1		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: -1.7 PMG: 21 ^h 47 ^m		Mag: -2.0 PMG: 17 ^h 30 ^m		Mag: +0.1 PMG: 23 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	263	42.4	177	29.4	32	02.8	-21	03.3	96	52.3	12	40.9	-20	29.3
1	278	44.9	192	28.5		42.3	47	05.8		59.1	27	43.6		29.2
2	293	47.4	207	27.6		42.5	62	08.8		59.0	42	46.2		29.2
3	308	49.8	222	26.7		42.7	77	11.8		58.9	57	48.9		29.2
4	323	52.3	237	25.8		42.8	92	14.8		58.8	72	51.6		29.2
5	338	54.8	252	24.9	+23	43.0	107	17.8	-21	58.7	87	54.2	-20	29.2
6	353	57.2	267	24.0	+23	43.2	122	20.8	-21	58.6	102	56.9	-20	29.1
7	8	59.7	282	23.1		43.4	137	23.8		58.5	117	59.5		29.1
8	24	02.2	297	22.3		43.5	152	26.8		58.4	133	02.2		29.1
9	39	04.6	312	21.4		43.7	167	29.8		58.3	148	04.8		29.1
10	54	07.1	327	20.5		43.9	182	32.8		58.2	163	07.5		29.1
11	69	09.5	342	19.6	+23	44.0	197	35.8	-21	58.1	178	10.1	-20	29.0
12	84	12.0	357	18.7	+23	44.2	212	38.8	-21	58.0	193	12.8	-20	29.0
13	99	14.5	12	17.8		44.4	227	41.8		57.9	208	15.4		29.0
14	114	16.9	27	16.9		44.5	242	44.8		57.8	223	18.1		29.0
15	129	19.4	42	16.0		44.7	257	47.8		57.7	238	20.7		29.0
16	144	21.9	57	15.2		44.8	272	50.8		57.6	253	23.4		29.0
17	159	24.3	72	14.3	+23	45.0	287	53.8	-21	57.4	268	26.1	-20	28.9
18	174	26.8	87	13.4	+23	45.1	302	56.8	-21	57.3	283	28.7	-20	28.9
19	189	29.3	102	12.5		45.3	317	59.8		57.2	298	31.4		28.9
20	204	31.7	117	11.6		45.5	333	02.8		57.1	313	34.0		28.9
21	219	34.2	132	10.7		45.6	348	05.7		57.0	328	36.7		28.9
22	234	36.7	147	09.8		45.8	3	08.7		56.9	343	39.3		28.8
23	249	39.1	162	08.9		45.9	18	11.7		56.8	358	42.0		28.8
24	264	41.6	177	08.0	+23	46.1	33	14.7	-21	56.7	13	44.6	-20	28.8
Dif	—		-9	+2		+30	0		+22	-1		+27		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 00 ^m 8			Edad: 10 ^d 9 PHE { SD: 14:7 PMG: 21 ^h 16 ^m 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 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	179	49.7	+23	21.0	50	25.6	-9 42.8	60 N	21 26	23 11	** **	16 34 69	1 30 20		
1	194	49.6		21.1	64	59.1 ¹⁴⁵	50.9 ⁸¹	58	21 06	22 21	** **	27 66	35 22		
2	209	49.5		21.2	79	32.6 ¹⁴⁵	-9 59.0 ⁸¹	56	20 49	21 51	** **	20 65	40 24		
3	224	49.3		21.3	94	06.1 ¹⁴⁵	-10 07.0 ⁸⁰	54	35	29	23 15	15 63	45 25		
4	239	49.2		21.4	108	39.6 ¹⁴⁵	15.0 ⁸⁰	52	22	21 11	22 29	10 62	49 27		
5	254	49.1	+23	21.5	123	13.0 ¹⁴⁴	-10 22.9 ⁷⁹	50	20 12	20 56	22 02	16 05 61	1 53 28		
6	269	48.9	+23	21.5	137	46.4 ¹⁴⁴	-10 30.8 ⁷⁹	45	19 49	20 26	21 16	15 55 58	2 01 31		
7	284	48.8		21.6	152	19.8 ¹⁴⁴	38.7 ⁷⁹	40	31	20 04	20 46	47 56	08 33		
8	299	48.7		21.7	166	53.1 ¹⁴³	46.5 ⁷⁸	35	16	19 46	22	40 54	13 35		
9	314	48.5		21.8	181	26.4 ¹⁴³	-10 54.3 ⁷⁸	30	19 03	30	20 04	34 52	19 36		
10	329	48.4		21.9	195	59.7 ¹⁴³	-11 02.0 ⁷⁷	20	18 41	19 06	19 35	23 50	27 40		
11	344	48.3	+23	21.9	210	32.9 ¹⁴²	-11 09.7 ⁷⁷	10 N	18 22	18 45	19 12	15 14 48	2 35 42		
12	359	48.1	+23	22.0	225	06.1 ¹⁴²	-11 17.3 ⁷⁶	0	18 04	18 27	18 53	15 06 45	2 43 44		
13	14	48.0		22.1	239	39.2 ¹⁴¹	24.9 ⁷⁶	10 S	17 47	18 10	36	14 57 43	50 47		
14	29	47.9		22.2	254	12.4 ¹⁴²	32.5 ⁷⁶	20	29	17 53	20	48 41	2 58 49		
15	44	47.7		22.2	268	45.5 ¹⁴¹	40.0 ⁷⁵	30	17 07	34	18 04	37 39	3 07 52		
16	59	47.6		22.3	283	18.5 ¹⁴⁰	47.4 ⁷⁴	35	16 55	23	17 55	31 37	12 54		
17	74	47.5	+23	22.4	297	51.5 ¹⁴⁰	-11 54.8 ⁷⁴	40	16 41	17 11	17 45	14 25 34	3 18 56		
18	89	47.3	+23	22.5	312	24.5 ¹⁴⁰	-12 02.2 ⁷⁴	45	16 24	16 58	17 35	14 17 33	3 25 58		
19	104	47.2		22.5	326	57.5 ¹⁴⁰	09.5 ⁷³	50	16 03	42	23	08 30	33 61		
20	119	47.1		22.6	341	30.4 ¹³⁹	16.7 ⁷²	52	15 54	34	18	14 03 29	37 62		
21	134	46.9		22.7	356	03.2 ¹³⁸	24.0 ⁷³	54	42	26	12	13 59 27	42 63		
22	149	46.8		22.7	10	36.1 ¹³⁹	31.1 ⁷¹	56	30	17	06	53 26	46 66		
23	164	46.7		22.8	25	08.9 ¹³⁸	38.2 ⁷¹	58	15 15	16 07	17 00	47 25	52 67		
24	179	46.5	+23	22.9	39	41.6 ¹³⁷	-12 45.3 ⁷¹	60 S	14 58	15 55	16 52	13 41 22	3 57 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 20 ^m 2		Mag: -4.0 PMG: 12 ^h 12 ^m		Mag: -1.7 PMG: 21 ^h 43 ^m		Mag: -2.0 PMG: 17 ^h 26 ^m		Mag: +0.1 PMG: 23 ^h 01 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	264	41.6	177	08.0	+23	46.1	33	14.7	-21	02.3	97	45.8	+6	56.7	13	44.6	-20	28.8
1	279	44.0	192	07.2		46.2	48	17.7		02.3	112	48.1		56.6	28	47.3		28.8
2	294	46.5	207	06.3		46.4	63	20.6		02.3	127	50.3		56.5	43	49.9		28.8
3	309	49.0	222	05.4		46.5	78	23.6		02.2	142	52.5		56.4	58	52.6		28.7
4	324	51.4	237	04.5		46.6	93	26.6		02.2	157	54.7		56.3	73	55.2		28.7
5	339	53.9	252	03.6	+23	46.8	108	29.6	-21	02.1	172	57.0	+6	56.2	88	57.9	-20	28.7
6	354	56.4	267	02.7	+23	46.9	123	32.5	-21	02.1	187	59.2	+6	56.1	104	00.5	-20	28.7
7	9	58.8	282	01.8		47.1	138	35.5		02.1	203	01.4		55.9	119	03.2		28.7
8	25	01.3	297	00.9		47.2	153	38.5		02.0	218	03.7		55.8	134	05.8		28.7
9	40	03.8	312	00.0		47.3	168	41.4		02.0	233	05.9		55.7	149	08.5		28.6
10	55	06.2	326	59.1		47.5	183	44.4		02.0	248	08.1		55.6	164	11.1		28.6
11	70	08.7	341	58.3	+23	47.6	198	47.4	-21	01.9	263	10.3	+6	55.5	179	13.8	-20	28.6
12	85	11.1	356	57.4	+23	47.8	213	50.3	-21	01.9	278	12.6	+6	55.4	194	16.4	-20	28.6
13	100	13.6	11	56.5		47.9	228	53.3		01.8	293	14.8		55.3	209	19.1		28.6
14	115	16.1	26	55.6		48.0	243	56.2		01.8	308	17.0		55.2	224	21.8		28.5
15	130	18.5	41	54.7		48.2	258	59.2		01.8	323	19.2		55.1	239	24.4		28.5
16	145	21.0	56	53.8		48.3	274	02.2		01.7	338	21.4		55.0	254	27.1		28.5
17	160	23.5	71	52.9	+23	48.4	289	05.1	-21	01.7	353	23.7	+6	54.9	269	29.7	-20	28.5
18	175	25.9	86	52.0	+23	48.5	304	08.1	-21	01.7	8	25.9	+6	54.8	284	32.4	-20	28.5
19	190	28.4	101	51.1		48.7	319	11.0		01.6	23	28.1		54.7	299	35.0		28.5
20	205	30.9	116	50.2		48.8	334	14.0		01.6	38	30.3		54.5	314	37.7		28.4
21	220	33.3	131	49.3		48.9	349	16.9		01.6	53	32.6		54.4	329	40.3		28.4
22	235	35.8	146	48.5		49.0	4	19.9		01.5	68	34.8		54.3	344	43.0		28.4
23	250	38.3	161	47.6		49.2	19	22.8		01.5	83	37.0		54.2	359	45.6		28.4
24	265	40.7	176	46.7	+23	49.3	34	25.8	-21	01.5	98	39.2	+6	54.1	14	48.3	-20	28.4
Dif	—		-9		+1		+30		0		+22		-1		+27			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 9	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 R°: 47 ^m									
	PMG: 12 ^h 01 ^m 0					SD: 14 ^h 8		PMG: 22 ^h 02 ^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	179	46.5	+23	22.9	39	41.6	-12	45.3	70	60 N	0 51	2 36	17 43	66
1	194	46.4		22.9	54	14.3 ¹³⁷		52.3	69	58	1 41	2 56	33 65	1 50 24
2	209	46.2		23.0	68	47.0 ¹³⁷	-12	59.2	69	56	2 10	3 13	25 63	1 57 27
3	224	46.1		23.1	83	19.7 ¹³⁷	-13	06.1	69	54	0 46	33 27	18 62	10 30
4	239	46.0		23.1	97	52.3 ¹³⁶		13.0	69	52	1 32	2 51	39 12	60 16
5	254	45.8	+23	23.2	112	24.8 ¹³⁵	-13	19.8	68	50	2 00	3 06	3 50	17 06
6	269	45.7	+23	23.3	126	57.3 ¹³⁵	-13	26.5	67	45	2 46	3 35	4 13	16 53
7	284	45.6		23.3	141	29.8 ¹³⁵		33.2	67	40	3 16	3 58	31 43	55 41
8	299	45.4		23.4	156	02.2 ¹³⁴		39.8	66	35	39	4 16	46 34	54 48
9	314	45.3		23.5	170	34.6 ¹³⁴		46.4	66	30	3 58	31 4 59	26 53	2 55 40
10	329	45.2		23.5	185	07.0 ¹³⁴		52.9	65	20	4 27	4 56	5 21	13 51
11	344	45.0	+23	23.6	199	39.3 ¹³³	-13	59.3	64	10 N	4 50	5 17	5 40	16 02
12	359	44.9	+23	23.6	214	11.6 ¹³³	-14	05.7	64	0	5 09	5 35	5 57	15 51
13	14	44.8		23.7	228	43.8 ¹³²		12.1	64	10 S	26	5 52	6 15	40 45
14	29	44.6		23.8	243	16.0 ¹³²		18.3	62	20	42	6 09	33 29	43 47
15	44	44.5		23.8	257	48.1 ¹³¹		24.5	62	30	5 58	28 6 54	16 41	3 59 53
16	59	44.4		23.9	272	20.2 ¹³¹		30.7	62	35	6 07	39 7 07	15 08	40 4 06
17	74	44.2	+23	23.9	286	52.3 ¹³¹	-14	36.8	61	40	6 16	6 50	7 21	14 59
18	89	44.1	+23	24.0	301	24.3 ¹³⁰	-14	42.8	60	45	6 27	7 04	7 38	14 50
19	104	44.0		24.0	315	56.3 ¹³⁰		48.8	60	50	38	20 7 59	38 34	34 60
20	119	43.8		24.1	330	28.2 ¹²⁹	-14	54.7	59	52	44	27 8 08	32 34	39 62
21	134	43.7		24.1	345	00.1 ¹²⁹	-15	00.5	58	54	49	36 20	26 32	45 63
22	149	43.6		24.2	359	31.9 ¹²⁸		06.3	58	56	6 56	45 32	19 31	52 63
23	164	43.4		24.2	14	03.7 ¹²⁸		12.0	57	58	7 02	7 55	8 47	12 29
24	179	43.3	+23	24.3	28	35.5 ¹²⁸	-15	17.6	56	60 S	7 10	8 07	9 04	14 03

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 16 ^m 3		Mag: -3.9 PMG: 12 ^h 14 ^m		Mag: -1.7 PMG: 21 ^h 38 ^m		Mag: -2.0 PMG: 17 ^h 23 ^m		Mag: +0.1 PMG: 22 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	265	40.7	176	46.7	34	25.8	98	39.2	14	48.3
1	280	43.2	191	45.8	49	28.7	113	41.5	29	50.9
2	295	45.6	206	44.9	64	31.6	128	43.7	44	53.6
3	310	48.1	221	44.0	79	34.6	143	45.9	59	56.2
4	325	50.6	236	43.1	94	37.5	158	48.1	74	58.9
5	340	53.0	251	42.2	109	40.5	173	50.3	90	01.5
6	355	55.5	266	41.3	124	43.4	188	52.6	105	04.2
7	10	58.0	281	40.4	139	46.3	203	54.8	120	06.8
8	26	00.4	296	39.5	154	49.3	218	57.0	135	09.5
9	41	02.9	311	38.6	169	52.2	233	59.2	150	12.1
10	56	05.4	326	37.7	184	55.1	249	01.4	165	14.8
11	71	07.8	341	36.9	199	58.1	264	03.7	180	17.4
12	86	10.3	356	36.0	215	01.0	279	05.9	195	20.1
13	101	12.8	11	35.1	230	03.9	294	08.1	210	22.7
14	116	15.2	26	34.2	245	06.8	309	10.3	225	25.4
15	131	17.7	41	33.3	260	09.8	324	12.5	240	28.0
16	146	20.1	56	32.4	275	12.7	339	14.8	255	30.7
17	161	22.6	71	31.5	290	15.6	354	17.0	270	33.3
18	176	25.1	86	30.6	305	18.5	9	19.2	285	36.0
19	191	27.5	101	29.7	320	21.4	24	21.4	300	38.6
20	206	30.0	116	28.8	335	24.4	39	23.6	315	41.3
21	221	32.5	131	27.9	350	27.3	54	25.8	330	43.9
22	236	34.9	146	27.0	5	30.2	69	28.1	345	46.6
23	251	37.4	161	26.1	20	33.1	84	30.3	0	49.2
24	266	39.9	176	25.2	35	36.0	99	32.5	15	51.9
Dif	—		-9	+1	+29	0	+22	-1	+27	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 12 ^d 9 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 R°: 50 ^m												
	PMG: 12 ^h 01 ^m 2			PMG: 22 ^h 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	179	43.3	+23	28	35.5	-15	17.6	60 N	21 27	23 13	** **	18 49 62		2 14 31		
1	194	43.1		43	07.2 ¹²⁷		23.2 ⁵⁶	58	21 07	22 22	** **	38 60		24 32		
2	209	43.0		57	38.9 ¹²⁷		28.7 ⁵⁵	56	20 50	21 52	** **	28 60		32 34		
3	224	42.9		72	10.5 ¹²⁶		34.1 ⁵⁴	54		35	30	23 17		40 35		
4	239	42.7		86	42.1 ¹²⁶		39.5 ⁵⁴	52		23	21 12	22 30		47 36		
5	254	42.6	+23	101	13.6 ¹²⁵	-15	44.8 ⁵³	50	20 12	20 57	22 03	18 05 57		2 53 37		
6	269	42.5	+23	115	45.1 ¹²⁵	-15	50.0 ⁵²	45	19 50	20 27	21 17	17 51 55		3 06 39		
7	284	42.3		130	16.6 ¹²⁵	-15	55.2 ⁵²	40		32	20 05	20 46		17 41		
8	299	42.2		144	48.0 ¹²⁴	-16	00.3 ⁵¹	35		17	19 46	23		27 41		
9	314	42.1		159	19.3 ¹²³		05.3 ⁵⁰	30	19 04		31	20 04		35 43		
10	329	41.9		173	50.6 ¹²³		10.2 ⁴⁹	20	18 41	19 06	19 35	17 04 51		3 49 45		
11	344	41.8	+23	188	21.9 ¹²³	-16	15.1 ⁴⁹	10 N	18 23	18 46	19 13	16 50 50		4 02 46		
12	359	41.7	+23	202	53.1 ¹²²	-16	19.9 ⁴⁸	0	18 05	18 27	18 54	16 38 49		4 13 48		
13	14	41.5		217	24.3 ¹²²		24.6 ⁴⁷	10 S	17 47	18 10	37	25 48		25 49		
14	29	41.4		231	55.5 ¹²²		29.3 ⁴⁷	20		29	17 53	20		37 51		
15	44	41.3		246	26.6 ¹²¹		33.9 ⁴⁶	30	17 08		34	18 04		4 52 53		
16	59	41.1		260	57.6 ¹²⁰		38.4 ⁴⁵	35	16 55		23	17 55		5 00 54		
17	74	41.0	+23	275	28.6 ¹²⁰	-16	42.8 ⁴⁴	40	16 41	17 12	17 46	15 38 43		5 10 55		
18	89	40.9	+23	289	59.6 ¹²⁰	-16	47.1 ⁴³	45	16 24	16 58	17 35	15 26 42		5 21 56		
19	104	40.7		304	30.5 ¹¹⁹		51.4 ⁴³	50	16 04		42	24		34 59		
20	119	40.6		319	01.4 ¹¹⁹		55.6 ⁴²	52	15 54		35	18		41 59		
21	134	40.4		333	32.3 ¹¹⁹	-16	59.7 ⁴¹	54		42	26	13		48 60		
22	149	40.3		348	03.1 ¹¹⁸	-17	03.8 ⁴¹	56		30	17	06		5 55 62		
23	164	40.2		2	33.8 ¹¹⁷		07.7 ³⁹	58	15 15	16 07	17 00	41 36		6 04 63		
24	179	40.0	+23	17	04.5 ¹¹⁷	-17	11.6 ³⁹	60 S	14 58	15 55	16 52	14 31 34		6 14 65		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 12 ^m 3			Mag: -3.9 PMG: 12 ^h 15 ^m			Mag: -1.7 PMG: 21 ^h 33 ^m			Mag: -2.0 PMG: 17 ^h 19 ^m			Mag: +0.1 PMG: 22 ^h 53 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	
0	266	39.9	176	25.2	+23	51.8	35	36.0	-21	00.7	99	32.5	+6	51.5	15	51.9
1	281	42.3	191	24.3		51.9	50	38.9		00.7	114	34.7		51.3	30	54.5
2	296	44.8	206	23.4		52.0	65	41.8		00.7	129	36.9		51.2	45	57.2
3	311	47.3	221	22.6		52.0	80	44.7		00.7	144	39.1		51.1	60	59.8
4	326	49.7	236	21.7		52.1	95	47.6		00.6	159	41.4		51.0	76	02.5
5	341	52.2	251	20.8	+23	52.2	110	50.5	-21	00.6	174	43.6	+6	50.9	91	05.1
6	356	54.6	266	19.9	+23	52.3	125	53.4	-21	00.6	189	45.8	+6	50.8	106	07.8
7	11	57.1	281	19.0		52.4	140	56.3		00.6	204	48.0		50.7	121	10.4
8	26	59.6	296	18.1		52.5	155	59.2		00.5	219	50.2		50.6	136	13.1
9	42	02.0	311	17.2		52.5	171	02.1		00.5	234	52.4		50.5	151	15.7
10	57	04.5	326	16.3		52.6	186	05.0		00.5	249	54.7		50.3	166	18.4
11	72	07.0	341	15.4	+23	52.7	201	07.9	-21	00.4	264	56.9	+6	50.2	181	21.0
12	87	09.4	356	14.5	+23	52.8	216	10.8	-21	00.4	279	59.1	+6	50.1	196	23.7
13	102	11.9	11	13.6		52.9	231	13.7		00.4	295	01.3		50.0	211	26.3
14	117	14.4	26	12.7		52.9	246	16.6		00.4	310	03.5		49.9	226	29.0
15	132	16.8	41	11.8		53.0	261	19.5		00.3	325	05.7		49.8	241	31.6
16	147	19.3	56	10.9		53.1	276	22.4		00.3	340	07.9		49.7	256	34.3
17	162	21.7	71	10.0	+23	53.1	291	25.3	-21	00.3	355	10.1	+6	49.6	271	36.9
18	177	24.2	86	09.1	+23	53.2	306	28.1	-21	00.3	10	12.4	+6	49.4	286	39.6
19	192	26.7	101	08.2		53.3	321	31.0		00.3	25	14.6		49.3	301	42.2
20	207	29.1	116	07.3		53.3	336	33.9		00.2	40	16.8		49.2	316	44.9
21	222	31.6	131	06.4		53.4	351	36.8		00.2	55	19.0		49.1	331	47.5
22	237	34.1	146	05.5		53.5	6	39.7		00.2	70	21.2		49.0	346	50.2
23	252	36.5	161	04.7		53.5	21	42.5		00.2	85	23.4		48.9	1	52.8
24	267	39.0	176	03.8	+23	53.6	36	45.4	-21	00.1	100	25.6	+6	48.8	16	55.5
Dif	—		-9		+1		+29		0		+22		-1		+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 13 ^d 9 PHE	SD: 14 ^h 9			R ^o : 50 ^m							
	PMG: 12 ^h 01 ^m 4				PMG: 23 ^h 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	40.0	+23	25.3	17	04.5	-17	11.6	60 N	** **	0 49	2 36	19 51	54	2 45 39
1	194	39.9		25.3	31	35.2 ¹¹⁷		15.4 ³⁸	58	** **	1 40	2 56	38 55	2 56	41
2	209	39.8		25.4	46	05.8 ¹¹⁶		19.1 ³⁷	56	** **	2 10	3 13	28 54	3 06	42
3	224	39.6		25.4	60	36.4 ¹¹⁶		22.8 ³⁷	54	0 45	33	27	18 54	15	42
4	239	39.5		25.4	75	07.0 ¹¹⁶		26.3 ³⁵	52	1 32	2 51	39	10 53	23	43
5	254	39.4	+23	25.5	89	37.5 ¹¹⁵	-17	29.8 ³⁵	50	2 00	3 06	3 50	19 02	53	3 30 43
6	269	39.2	+23	25.5	104	07.9 ¹¹⁴	-17	33.2 ³⁴	45	2 46	3 36	4 13	18 46	53	3 45 45
7	284	39.1		25.5	118	38.4 ¹¹⁵		36.5 ³³	40	3 16	3 58	31	33 52	3 58	45
8	299	39.0		25.5	133	08.8 ¹¹⁴		39.8 ³³	35	40	4 16	46	22 52	4 08	47
9	314	38.8		25.6	147	39.1 ¹¹³		42.9 ³¹	30	3 58	32	4 59	18 12	51	18 47
10	329	38.7		25.6	162	09.4 ¹¹³		46.0 ³¹	20	4 27	4 57	5 21	17 55	51	34 48
11	344	38.6	+23	25.6	176	39.7 ¹¹³	-17	48.9 ²⁹	10 N	4 50	5 17	5 40	17 40	51	4 48 49
12	359	38.4	+23	25.6	191	09.9 ¹¹²	-17	51.8 ²⁹	0	5 09	5 35	5 58	17 27	50	5 01 50
13	14	38.3		25.7	205	40.1 ¹¹²		54.6 ²⁸	10 S	26	5 52	6 15	17 13	50	14 51
14	29	38.2		25.7	220	10.2 ¹¹¹	-17	57.3 ²⁷	20	42	6 10	34	16 58	50	28 52
15	44	38.0		25.7	234	40.4 ¹¹²	-18	00.0 ²⁷	30	5 59	29	6 55	42 49	45	52
16	59	37.9		25.7	249	10.4 ¹¹⁰	-18	02.5 ²⁵	35	6 08	39	7 07	32 49	5 54	53
17	74	37.7	+23	25.8	263	40.5 ¹¹¹	-18	04.9 ²⁴	40	6 17	6 51	7 22	16 21	48	6 05 53
18	89	37.6	+23	25.8	278	10.5 ¹¹⁰	-18	07.3 ²⁴	45	6 27	7 05	7 38	16 08	48	6 17 54
19	104	37.5		25.8	292	40.5 ¹¹⁰		09.6 ²³	50	39	21	7 59	15 52	47	33 55
20	119	37.3		25.8	307	10.4 ¹⁰⁹		11.8 ²²	52	44	28	8 09	45 47	40	55
21	134	37.2		25.8	321	40.3 ¹⁰⁹		13.9 ²¹	54	50	36	20	37 46	48	56
22	149	37.1		25.9	336	10.1 ¹⁰⁸		15.9 ²⁰	56	6 56	45	33	28 45	6 57	56
23	164	36.9		25.9	350	40.0 ¹⁰⁹		17.8 ¹⁹	58	7 03	7 56	8 48	17 46	7 07	57
24	179	36.8	+23	25.9	5	09.8 ¹⁰⁸	-18	19.6 ¹⁸	60 S	7 11	8 07	9 05	15 05	45	7 19 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 6 ^h 08 ^m 4		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: -1.7 PMG: 21 ^h 29 ^m		Mag: -2.0 PMG: 17 ^h 16 ^m		Mag: +0.1 PMG: 22 ^h 48 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	267	39.0	176	03.8	+23 53.6	36 45.4	-21 00.1	100 25.6	+6 48.8	16 55.5	-20 27.5
1	282	41.5	191	02.9	53.7	51 48.3	00.1	115 27.8	48.6	31 58.1	27.5
2	297	43.9	206	02.0	53.7	66 51.2	00.1	130 30.1	48.5	47 00.8	27.5
3	312	46.4	221	01.1	53.8	81 54.0	-21 00.1	145 32.3	48.4	62 03.4	27.4
4	327	48.9	236	00.2	53.8	96 56.9	-21 00.0	160 34.5	48.3	77 06.1	27.4
5	342	51.3	250	59.3	+23 53.9	111 59.8	-21 00.0	175 36.7	+6 48.2	92 08.7	-20 27.4
6	357	53.8	265	58.4	+23 53.9	127 02.6	-21 00.0	190 38.9	+6 48.1	107 11.4	-20 27.4
7	12	56.2	280	57.5	54.0	142 05.5	00.0	205 41.1	48.0	122 14.0	27.4
8	27	58.7	295	56.6	54.0	157 08.4	-21 00.0	220 43.3	47.8	137 16.7	27.3
9	43	01.2	310	55.7	54.1	172 11.2	-20 59.9	235 45.5	47.7	152 19.3	27.3
10	58	03.6	325	54.8	54.1	187 14.1	59.9	250 47.7	47.6	167 22.0	27.3
11	73	06.1	340	53.9	+23 54.2	202 16.9	-20 59.9	265 49.9	+6 47.5	182 24.6	-20 27.3
12	88	08.6	355	53.0	+23 54.2	217 19.8	-20 59.9	280 52.2	+6 47.4	197 27.2	-20 27.3
13	103	11.0	10	52.1	54.3	232 22.7	59.9	295 54.4	47.3	212 29.9	27.3
14	118	13.5	25	51.2	54.3	247 25.5	59.8	310 56.6	47.2	227 32.5	27.2
15	133	16.0	40	50.3	54.4	262 28.4	59.8	325 58.8	47.0	242 35.2	27.2
16	148	18.4	55	49.4	54.4	277 31.2	59.8	341 01.0	46.9	257 37.8	27.2
17	163	20.9	70	48.5	+23 54.4	292 34.1	-20 59.8	356 03.2	+6 46.8	272 40.5	-20 27.2
18	178	23.4	85	47.6	+23 54.5	307 36.9	-20 59.8	11 05.4	+6 46.7	287 43.1	-20 27.2
19	193	25.8	100	46.7	54.5	322 39.8	59.8	26 07.6	46.6	302 45.8	27.2
20	208	28.3	115	45.8	54.6	337 42.6	59.7	41 09.8	46.5	317 48.4	27.1
21	223	30.7	130	44.9	54.6	352 45.4	59.7	56 12.0	46.4	332 51.1	27.1
22	238	33.2	145	44.0	54.6	7 48.3	59.7	71 14.2	46.2	347 53.7	27.1
23	253	35.7	160	43.1	54.7	22 51.1	59.7	86 16.4	46.1	2 56.4	27.1
24	268	38.1	175	42.2	+23 54.7	37 54.0	-20 59.7	101 18.6	+6 46.0	17 59.0	-20 27.1
Dif	—		-9	0		+29	0	+22	-1	+26	0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 14 ^d 9 PHE	Edad: 14 ^d 9 PHE { 4 ^h : 55/4 12 ^h : 55/5 20 ^h : 55/7 R°: ***m					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 01 ^m 7																	
	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	36.8	+23	25.9	5	09.8	-18	19.6	60 N	21 28	23 14	** **	20 45 46		3 24 50			
1	194	36.7		25.9	19	39.5 ¹⁰⁷		21.4	58	21 07	22 23	** **	33 46		37 50			
2	209	36.5		25.9	34	09.3 ¹⁰⁸		23.0	56	20 50	21 53	** **	22 47		48 50			
3	224	36.4		25.9	48	39.0 ¹⁰⁷		24.6	54	36	31	23 18	12 47		3 57 50			
4	239	36.3		26.0	63	08.6 ¹⁰⁶		26.0	52	24	21 13	22 31	20 03 48		4 06 50			
5	254	36.1	+23	26.0	77	38.3 ¹⁰⁷	-18	27.4	50	20 13	20 57	22 03	19 55 48		4 13 51			
6	269	36.0	+23	26.0	92	07.9 ¹⁰⁶	-18	28.7	45	19 50	20 28	21 17	19 39 49		4 30 50			
7	284	35.9		26.0	106	37.4 ¹⁰⁵		29.8	40	32	20 05	20 47	25 49		43 51			
8	299	35.7		26.0	121	07.0 ¹⁰⁶		30.9	35	17	19 47	24	14 49		4 55 50			
9	314	35.6		26.0	135	36.5 ¹⁰⁵		31.9	30	19 04	32	20 05	19 03 50		5 05 50			
10	329	35.5		26.0	150	06.0 ¹⁰⁵		32.8	20	18 42	19 07	19 36	18 46 51		22 51			
11	344	35.3	+23	26.0	164	35.4 ¹⁰⁴	-18	33.6	10 N	18 23	18 46	19 13	18 31 51		5 37 51			
12	359	35.2	+23	26.0	179	04.8 ¹⁰⁴	-18	34.3	0	18 05	18 28	18 54	18 17 51		5 51 51			
13	14	35.0		26.0	193	34.2 ¹⁰⁴		34.9	10 S	17 48	18 11	37	18 03 52		6 05 51			
14	29	34.9		26.1	208	03.6 ¹⁰⁴		35.5	20	29	17 53	21	17 48 52		20 51			
15	44	34.8		26.1	222	33.0 ¹⁰⁴		35.9	30	17 08	34	18 04	31 52		37 51			
16	59	34.6		26.1	237	02.3 ¹⁰³		36.2	35	16 56	24	17 56	21 52		47 51			
17	74	34.5	+23	26.1	251	31.6 ¹⁰³	-18	36.4	40	16 41	17 12	17 46	17 09 53		6 58 51			
18	89	34.4	+23	26.1	266	00.9 ¹⁰³	-18	36.6	45	16 25	16 58	17 36	16 56 53		7 11 51			
19	104	34.2		26.1	280	30.1 ¹⁰²		36.6	50	16 04	42	24	39 54		28 50			
20	119	34.1		26.1	294	59.3 ¹⁰²		36.6	52	15 54	35	19	32 54		35 51			
21	134	34.0		26.1	309	28.5 ¹⁰²		36.4	54	43	27	13	23 54		44 50			
22	149	33.8		26.1	323	57.7 ¹⁰²		36.1	56	30	18	07	13 55		7 53 51			
23	164	33.7		26.1	338	26.9 ¹⁰²		35.8	58	15 15	16 07	17 00	16 03 54		8 04 51			
24	179	33.6	+23	26.1	352	56.0 ¹⁰¹	-18	35.4	60 S	14 58	15 56	16 52	15 50 55		8 17 50			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 04 ^m 5		Mag: -3.9 PMG: 12 ^h 18 ^m				Mag: -1.6 PMG: 21 ^h 24 ^m				Mag: -2.0 PMG: 17 ^h 12 ^m				Mag: +0.1 PMG: 22 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	268	38.1	175	42.2	+23	54.7	37	54.0	-20	59.7	101	18.6	+6	46.0	17	59.0	-20	27.1
1	283	40.6	190	41.4		54.7	52	56.8		59.7	116	20.9		45.9	33	01.7		27.0
2	298	43.1	205	40.5		54.7	67	59.6		59.6	131	23.1		45.8	48	04.3		27.0
3	313	45.5	220	39.6		54.8	83	02.5		59.6	146	25.3		45.7	63	07.0		27.0
4	328	48.0	235	38.7		54.8	98	05.3		59.6	161	27.5		45.5	78	09.6		27.0
5	343	50.5	250	37.8	+23	54.8	113	08.1	-20	59.6	176	29.7	+6	45.4	93	12.3	-20	27.0
6	358	52.9	265	36.9	+23	54.9	128	11.0	-20	59.6	191	31.9	+6	45.3	108	14.9	-20	27.0
7	13	55.4	280	36.0		54.9	143	13.8		59.6	206	34.1		45.2	123	17.5		26.9
8	28	57.9	295	35.1		54.9	158	16.6		59.5	221	36.3		45.1	138	20.2		26.9
9	44	00.3	310	34.2		54.9	173	19.5		59.5	236	38.5		45.0	153	22.8		26.9
10	59	02.8	325	33.3		54.9	188	22.3		59.5	251	40.7		44.8	168	25.5		26.9
11	74	05.2	340	32.4	+23	55.0	203	25.1	-20	59.5	266	42.9	+6	44.7	183	28.1	-20	26.9
12	89	07.7	355	31.5	+23	55.0	218	27.9	-20	59.5	281	45.1	+6	44.6	198	30.8	-20	26.9
13	104	10.2	10	30.6		55.0	233	30.7		59.5	296	47.3		44.5	213	33.4		26.8
14	119	12.6	25	29.7		55.0	248	33.6		59.5	311	49.5		44.4	228	36.1		26.8
15	134	15.1	40	28.8		55.0	263	36.4		59.4	326	51.7		44.3	243	38.7		26.8
16	149	17.6	55	27.9		55.0	278	39.2		59.4	341	53.9		44.1	258	41.4		26.8
17	164	20.0	70	27.0	+23	55.0	293	42.0	-20	59.4	356	56.1	+6	44.0	273	44.0	-20	26.8
18	179	22.5	85	26.1	+23	55.0	308	44.8	-20	59.4	11	58.3	+6	43.9	288	46.7	-20	26.7
19	194	25.0	100	25.2		55.1	323	47.6		59.4	27	00.5		43.8	303	49.3		26.7
20	209	27.4	115	24.3		55.1	338	50.4		59.4	42	02.7		43.7	318	51.9		26.7
21	224	29.9	130	23.4		55.1	353	53.3		59.4	57	04.9		43.6	333	54.6		26.7
22	239	32.4	145	22.5		55.1	8	56.1		59.4	72	07.1		43.4	348	57.2		26.7
23	254	34.8	160	21.6		55.1	23	58.9		59.3	87	09.3		43.3	3	59.9		26.7
24	269	37.3	175	20.7	+23	55.1	39	01.7	-20	59.3	102	11.5	+6	43.2	19	02.5	-20	26.6
Dif	—		-9		0		+28		0		+22		-1		+26		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 15 ^d 9	PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 2	SD: 15 ^h 2		R°: 52 ^m			Hora	R°	Hora	R°		
	PMG: 12 ^h 01 ^m 9	hG ☉	Dec			hG ☾		Dif	Dec						Dif	Náutico
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	33.6	+23	26.1	352	56.0	-18	35.4	60 N	** *	0 49	2 36	21 31	37	4 14	60
1	194	33.4		26.1	7	25.2		34.8	58	** *	1 40	2 56	19 39		27 59	
2	209	33.3		26.1	21	54.3		34.2	56	** *	2 11	3 13	21 09	39	38 58	
3	224	33.2		26.1	36	23.3		33.4	54	0 45	33	27	20 59	41	47 58	
4	239	33.0		26.1	50	52.4		32.6	52	1 32	2 51	40	51 42		4 56 57	
5	254	32.9	+23	26.1	65	21.5	-18	31.7	50	2 00	3 06	3 51	20 43	43	5 04	57
6	269	32.8	+23	26.1	79	50.5	-18	30.6	45	2 46	3 36	4 13	20 28	44	5 20	56
7	284	32.6		26.1	94	19.5		29.5	40	3 17	3 58	31	14 46		34 55	
8	299	32.5		26.0	108	48.5		28.3	35	40	4 17	46	20 03	47	45 55	
9	314	32.3		26.0	123	17.5		26.9	30	3 59	32	4 59	19 53	48	5 55 54	
10	329	32.2		26.0	137	46.5		25.5	20	4 28	4 57	5 22	37 49		6 13 53	
11	344	32.1	+23	26.0	152	15.4	-18	24.0	10 N	4 50	5 18	5 41	19 22	51	6 28	52
12	359	31.9	+23	26.0	166	44.4	-18	22.4	0	5 09	5 36	5 58	19 08	52	6 42	51
13	14	31.8		26.0	181	13.3		20.6	10 S	26	5 53	6 16	18 55	52	6 56	50
14	29	31.7		26.0	195	42.2		18.8	20	43	6 10	34	40 54		7 11 49	
15	44	31.5		26.0	210	11.1		16.9	30	5 59	29	6 55	23 56		28 48	
16	59	31.4		26.0	224	40.0		14.9	35	6 08	40	7 08	13 57		38 48	
17	74	31.3	+23	26.0	239	08.9	-18	12.8	40	6 17	6 51	7 22	18 02	58	7 49	47
18	89	31.1	+23	25.9	253	37.8	-18	10.5	45	6 28	7 05	7 39	17 49	59	8 02	47
19	104	31.0		25.9	268	06.6		08.2	50	40	21	8 00	33 60		18 46	
20	119	30.9		25.9	282	35.5		05.8	52	45	29	10	26 60		26 45	
21	134	30.7		25.9	297	04.3		03.3	54	51	37	21	17 62		34 45	
22	149	30.6		25.9	311	33.2	-18	00.7	56	6 57	46	33	17 08	62	44 43	
23	164	30.5		25.9	326	02.0	-17	58.0	58	7 04	7 56	8 48	16 57	64	8 55	42
24	179	30.3	+23	25.8	340	30.9	-17	55.2	60 S	7 11	8 08	9 06	16 45	65	9 07	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 00 ^m 5		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: -1.6 PMG: 21 ^h 20 ^m		Mag: -2.0 PMG: 17 ^h 09 ^m		Mag: +0.1 PMG: 22 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	269	37.3	175	20.7	+23	55.1	39	01.7	-20	59.3	102	11.5	+6	43.2	19	02.5	-20	26.6
1	284	39.7	190	19.8		55.1	54	04.5		59.3	117	13.7		43.1	34	05.2		26.6
2	299	42.2	205	18.9		55.1	69	07.3		59.3	132	15.9		43.0	49	07.8		26.6
3	314	44.7	220	18.0		55.1	84	10.1		59.3	147	18.1		42.9	64	10.5		26.6
4	329	47.1	235	17.1		55.1	99	12.9		59.3	162	20.3		42.7	79	13.1		26.6
5	344	49.6	250	16.2	+23	55.1	114	15.7	-20	59.3	177	22.5	+6	42.6	94	15.8	-20	26.6
6	359	52.1	265	15.3	+23	55.1	129	18.5	-20	59.3	192	24.7	+6	42.5	109	18.4	-20	26.5
7	14	54.5	280	14.4		55.1	144	21.3		59.3	207	26.9		42.4	124	21.0		26.5
8	29	57.0	295	13.6		55.1	159	24.0		59.3	222	29.1		42.3	139	23.7		26.5
9	44	59.5	310	12.7		55.0	174	26.8		59.2	237	31.3		42.1	154	26.3		26.5
10	60	01.9	325	11.8		55.0	189	29.6		59.2	252	33.5		42.0	169	29.0		26.5
11	75	04.4	340	10.9	+23	55.0	204	32.4	-20	59.2	267	35.7	+6	41.9	184	31.6	-20	26.5
12	90	06.8	355	10.0	+23	55.0	219	35.2	-20	59.2	282	37.9	+6	41.8	199	34.3	-20	26.4
13	105	09.3	10	09.1		55.0	234	38.0		59.2	297	40.1		41.7	214	36.9		26.4
14	120	11.8	25	08.2		55.0	249	40.8		59.2	312	42.3		41.5	229	39.6		26.4
15	135	14.2	40	07.3		55.0	264	43.5		59.2	327	44.5		41.4	244	42.2		26.4
16	150	16.7	55	06.4		54.9	279	46.3		59.2	342	46.7		41.3	259	44.8		26.4
17	165	19.2	70	05.5	+23	54.9	294	49.1	-20	59.2	357	48.9	+6	41.2	274	47.5	-20	26.4
18	180	21.6	85	04.6	+23	54.9	309	51.9	-20	59.2	12	51.1	+6	41.1	289	50.1	-20	26.3
19	195	24.1	100	03.7		54.9	324	54.7		59.2	27	53.3		40.9	304	52.8		26.3
20	210	26.6	115	02.8		54.9	339	57.4		59.2	42	55.5		40.8	319	55.4		26.3
21	225	29.0	130	01.9		54.8	355	00.2		59.2	57	57.7		40.7	334	58.1		26.3
22	240	31.5	145	01.0		54.8	10	03.0		59.2	72	59.9		40.6	350	00.7		26.3
23	255	34.0	160	00.1		54.8	25	05.7		59.2	88	02.1		40.5	5	03.4		26.2
24	270	36.4	174	59.2	+23	54.8	40	08.5	-20	59.1	103	04.3	+6	40.4	20	06.0	-20	26.2
Dif	—		-9		0		+28		0		+22		-1		+26			

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 1				Edad: 16 ^d 9 PHE { 4 ^h : 56 ^s 3 12 ^h : 56 ^s 5 20 ^h : 56 ^s 7 R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	30.3	+23	25.8	340	30.9	-17	55.2	60 N	21 28	23 14	** **	22 08 30		5 14 69		
1	194	30.2		25.8	354	59.7	98	52.3	58	21 07	22 23	** **	21 58 32		26 67		
2	209	30.1		25.8	9	28.5	98	49.3	56	20 51	21 53	** **	48 34		36 66		
3	224	29.9		25.8	23	57.3	98	46.2	54	36	31	23 18	40 35		45 66		
4	239	29.8		25.8	38	26.2	99	43.0	52	24	21 13	22 31	33 36	5 53	64		
5	254	29.7	+23	25.7	52	55.0	98	-17 39.7	50	20 13	20 58	22 03	21 26 38	6 01	62		
6	269	29.5	+23	25.7	67	23.8	98	-17 36.3	45	19 51	20 28	21 18	21 12 40	6 16	61		
7	284	29.4		25.7	81	52.6	98	32.8	40	33	20 05	20 47	21 00 42	29	59		
8	299	29.3		25.7	96	21.4	98	29.2	35	17	19 47	24	20 50 44	40	58		
9	314	29.1		25.7	110	50.2	98	25.5	30	19 04	32	20 05	41 45	6 49	57		
10	329	29.0		25.6	125	19.0	98	21.8	20	18 42	19 07	19 36	26 47	7 06	55		
11	344	28.9	+23	25.6	139	47.8	98	-17 17.9	10 N	18 23	18 46	19 14	20 13 49	7 20	53		
12	359	28.7	+23	25.6	154	16.6	98	-17 13.9	0	18 06	18 28	18 55	20 00 52	7 33	52		
13	14	28.6		25.5	168	45.4	98	09.9	10 S	17 48	18 11	38	19 47 54	7 46	50		
14	29	28.5		25.5	183	14.3	99	05.7	20	30	17 54	21	34 56	8 00	49		
15	44	28.3		25.5	197	43.1	98	-17 01.4	30	17 09	35	18 05	19 58	16	47		
16	59	28.2		25.5	212	11.9	98	-16 57.1	35	16 56	24	17 56	10 59	26	45		
17	74	28.0	+23	25.4	226	40.7	98	-16 52.7	40	16 42	17 13	17 47	19 00 61	8 36	44		
18	89	27.9	+23	25.4	241	09.5	98	-16 48.1	45	16 25	16 59	17 36	18 48 62	8 49	42		
19	104	27.8		25.4	255	38.4	99	43.5	50	16 04	43	24	33 65	9 04	40		
20	119	27.6		25.3	270	07.2	98	38.8	52	15 54	35	19	26 67	11	39		
21	134	27.5		25.3	284	36.0	98	33.9	54	43	27	13	19 67	19	38		
22	149	27.4		25.3	299	04.9	99	29.0	56	31	18	07	10 69	27	37		
23	164	27.2		25.2	313	33.7	98	24.0	58	15 16	16 08	17 00	18 01 71	37	35		
24	179	27.1	+23	25.2	328	02.6	99	-16 18.9	60 S	14 58	15 56	16 53	17 50 73	9 48	34		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 56 ^m 6		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: -1.6 PMG: 21 ^h 16 ^m		Mag: -2.0 PMG: 17 ^h 05 ^m		Mag: +0.1 PMG: 22 ^h 36 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	270	36.4	174	59.2	+23	54.8	40	08.5	-20	59.1	103	04.3	+6	40.4	20	06.0	-20	26.2
1	285	38.9	189	58.3		54.7	55	11.3		59.1	118	06.5		40.2	35	08.6		26.2
2	300	41.3	204	57.4		54.7	70	14.0		59.1	133	08.7		40.1	50	11.3		26.2
3	315	43.8	219	56.5		54.7	85	16.8		59.1	148	10.9		40.0	65	13.9		26.2
4	330	46.3	234	55.6		54.6	100	19.6		59.1	163	13.1		39.9	80	16.6		26.2
5	345	48.7	249	54.7	+23	54.6	115	22.3	-20	59.1	178	15.3	+6	39.8	95	19.2	-20	26.1
6	0	51.2	264	53.8	+23	54.6	130	25.1	-20	59.1	193	17.5	+6	39.6	110	21.9	-20	26.1
7	15	53.7	279	52.9		54.5	145	27.8		59.1	208	19.7		39.5	125	24.5		26.1
8	30	56.1	294	52.0		54.5	160	30.6		59.1	223	21.9		39.4	140	27.1		26.1
9	45	58.6	309	51.1		54.5	175	33.4		59.1	238	24.1		39.3	155	29.8		26.1
10	61	01.1	324	50.2		54.4	190	36.1		59.1	253	26.3		39.1	170	32.4		26.1
11	76	03.5	339	49.3	+23	54.4	205	38.9	-20	59.1	268	28.5	+6	39.0	185	35.1	-20	26.0
12	91	06.0	354	48.4	+23	54.3	220	41.6	-20	59.1	283	30.7	+6	38.9	200	37.7	-20	26.0
13	106	08.5	9	47.6		54.3	235	44.4		59.1	298	32.8		38.8	215	40.4		26.0
14	121	10.9	24	46.7		54.2	250	47.1		59.1	313	35.0		38.7	230	43.0		26.0
15	136	13.4	39	45.8		54.2	265	49.8		59.1	328	37.2		38.5	245	45.6		26.0
16	151	15.8	54	44.9		54.2	280	52.6		59.1	343	39.4		38.4	260	48.3		26.0
17	166	18.3	69	44.0	+23	54.1	295	55.3	-20	59.1	358	41.6	+6	38.3	275	50.9	-20	25.9
18	181	20.8	84	43.1	+23	54.1	310	58.1	-20	59.1	13	43.8	+6	38.2	290	53.6	-20	25.9
19	196	23.2	99	42.2		54.0	326	00.8		59.1	28	46.0		38.1	305	56.2		25.9
20	211	25.7	114	41.3		54.0	341	03.5		59.1	43	48.2		37.9	320	58.9		25.9
21	226	28.2	129	40.4		53.9	356	06.3		59.1	58	50.4		37.8	336	01.5		25.9
22	241	30.6	144	39.5		53.8	11	09.0		59.1	73	52.6		37.7	351	04.1		25.9
23	256	33.1	159	38.6		53.8	26	11.8		59.1	88	54.8		37.6	6	06.8		25.8
24	271	35.6	174	37.7	+23	53.7	41	14.5	-20	59.1	103	57.0	+6	37.4	21	09.4	-20	25.8
Dif	—		-9		0		+27		0		+22		-1		+26			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 17 ^d 9	PHE {	4 ^h : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2	SD: 15 ^h 5	PMG: 2 ^h 12 ^m		R ^o : 52 ^m	Principio del crepúsculo		Salida de Luna		Puesta de Luna			
	hG ☉	Dec									Náutico		Civil	Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	179	27.1	+23	25.2	328	02.6	98	-16	18.9	52	60 N	0 50	2 36	22 38	25	6 23	76	
1	194	27.0		25.2	342	31.4	98		13.7	52	58	1 41	2 57	30 26		33	74	
2	209	26.8		25.1	357	00.3	99		08.5	52	56	2 11	3 14	22 29		42	72	
3	224	26.7		25.1	11	29.2	99	-16	03.1	54	54	0 46	33	28	15	31	50	70
4	239	26.6		25.1	25	58.1	99	-15	57.6	55	52	1 33	2 52	40	09	32	6 57	68
5	254	26.4	+23	25.0	40	27.0	99	-15	52.1	55	50	2 01	3 07	3 51	22 04	33	7 03	68
6	269	26.3	+23	25.0	54	55.9	99	-15	46.4	57	45	2 47	3 36	4 14	21 52	36	7 17	64
7	284	26.2		24.9	69	24.8	99		40.7	57	40	3 17	3 59	32	42	39	28	62
8	299	26.0		24.9	83	53.7	99		34.9	58	35	40	4 17	4 47	34	41	38	60
9	314	25.9		24.9	98	22.6	99		29.0	59	30	3 59	33	5 00	26	43	7 46	59
10	329	25.8		24.8	112	51.6	100		23.0	60	20	4 28	4 57	22	13	46	8 01	55
11	344	25.6	+23	24.8	127	20.5	99	-15	16.9	61	10 N	4 51	5 18	5 41	21 02	49	8 13	54
12	359	25.5	+23	24.7	141	49.5	100	-15	10.8	61	0	5 10	5 36	5 59	20 52	51	8 25	51
13	14	25.4		24.7	156	18.5	100	-15	04.5	63	10 S	27	5 53	6 16	41	53	36	49
14	29	25.2		24.6	170	47.4	99	-14	58.2	63	20	5 43	6 11	35	30	56	8 49	46
15	44	25.1		24.6	185	16.4	100		51.7	65	30	6 00	29	6 56	17	59	9 03	44
16	59	25.0		24.5	199	45.4	100		45.2	65	35	08	40	7 08	09	61	11	42
17	74	24.8	+23	24.5	214	14.4	100	-14	38.6	66	40	6 18	6 52	7 22	20 01	63	9 20	40
18	89	24.7	+23	24.4	228	43.5	101	-14	32.0	66	45	6 28	7 05	7 39	19 50	66	9 31	38
19	104	24.6		24.4	243	12.5	100		25.2	68	50	40	21	8 00	38	69	44	35
20	119	24.4		24.3	257	41.6	101		18.3	69	52	45	29	10	33	70	50	34
21	134	24.3		24.3	272	10.6	100		11.4	69	54	51	37	21	26	72	9 57	32
22	149	24.2		24.2	286	39.7	101	-14	04.4	70	56	6 57	46	34	19	74	10 04	31
23	164	24.0		24.2	301	08.8	101	-13	57.3	71	58	7 04	7 57	8 48	12	75	12	29
24	179	23.9	+23	24.1	315	37.9	101	-13	50.2	71	60 S	7 11	8 08	9 06	19 03	78	10 22	27

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 52 ^m 7		Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: -1.6 PMG: 21 ^h 11 ^m			Mag: -2.0 PMG: 17 ^h 02 ^m			Mag: +0.1 PMG: 22 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	271	35.6	174	37.7	+23	53.7	41	14.5	-20	59.1	103	57.0	+6	37.4				
1	286	38.0	189	36.8		53.7	56	17.2		59.1	118	59.2		37.3				
2	301	40.5	204	35.9		53.6	71	19.9		59.1	134	01.3		37.2				
3	316	43.0	219	35.0		53.6	86	22.7		59.1	149	03.5		37.1				
4	331	45.4	234	34.1		53.5	101	25.4		59.1	164	05.7		37.0				
5	346	47.9	249	33.2	+23	53.4	116	28.1	-20	59.1	179	07.9	+6	36.8				
6	1	50.3	264	32.3	+23	53.4	131	30.8	-20	59.1	194	10.1	+6	36.7				
7	16	52.8	279	31.4		53.3	146	33.6		59.1	209	12.3		36.6				
8	31	55.3	294	30.5		53.2	161	36.3		59.1	224	14.5		36.5				
9	46	57.7	309	29.6		53.2	176	39.0		59.1	239	16.7		36.3				
10	62	00.2	324	28.7		53.1	191	41.7		59.1	254	18.9		36.2				
11	77	02.7	339	27.8	+23	53.0	206	44.4	-20	59.1	269	21.1	+6	36.1				
12	92	05.1	354	27.0	+23	53.0	221	47.1	-20	59.1	284	23.2	+6	36.0				
13	107	07.6	9	26.1		52.9	236	49.9		59.1	299	25.4		35.9				
14	122	10.1	24	25.2		52.8	251	52.6		59.1	314	27.6		35.7				
15	137	12.5	39	24.3		52.7	266	55.3		59.2	329	29.8		35.6				
16	152	15.0	54	23.4		52.7	281	58.0		59.2	344	32.0		35.5				
17	167	17.4	69	22.5	+23	52.6	297	00.7	-20	59.2	359	34.2	+6	35.4				
18	182	19.9	84	21.6	+23	52.5	312	03.4	-20	59.2	14	36.4	+6	35.2				
19	197	22.4	99	20.7		52.4	327	06.1		59.2	29	38.6		35.1				
20	212	24.8	114	19.8		52.3	342	08.8		59.2	44	40.7		35.0				
21	227	27.3	129	18.9		52.3	357	11.5		59.2	59	42.9		34.9				
22	242	29.8	144	18.0		52.2	12	14.2		59.2	74	45.1		34.7				
23	257	32.2	159	17.1		52.1	27	16.9		59.2	89	47.3		34.6				
24	272	34.7	174	16.2	+23	52.0	42	19.6	-20	59.2	104	49.5	+6	34.5				
Dif	—		-9			-1	+27			0	+22			-1	+26			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 18 ^d 9	PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7	SD: 15 ^h 6			Final del crepúsculo		Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 02 ^m 5					PMG: 3 ^h 04 ^m			Rº: 51 ^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	
0	179	23.9	+23	315	37.9	-13	50.2	60 N	21 28	23 13	** **	23 03	20	7 39	79	
1	194	23.8		330	07.0 ¹⁰¹		42.9 ⁷³	58	21 07	22 23	** **	22 56	24	47	77	
2	209	23.6		344	36.1 ¹⁰¹		35.6 ⁷⁴	56	20 51	21 53	** **	51	25	7 54	75	
3	224	23.5		359	05.2 ¹⁰¹		28.2 ⁷³	54	36	31	23 17	46	27	8 00	77	
4	239	23.4		13	34.4 ¹⁰²		20.7 ⁷⁵	52	24	21 13	22 31	41	29	05	72	
5	254	23.2	+23	28	03.6 ¹⁰²	-13	13.1 ⁷⁶	50	20 13	20 58	22 03	22 37	31	8 11	69	
6	269	23.1	+23	42	32.7 ¹⁰¹	-13	05.5 ⁷⁶	45	19 51	20 28	21 18	22 28	34	8 21	67	
7	284	23.0		57	01.9 ¹⁰²	-12	57.8 ⁷⁷	40	33	20 06	20 47	21	37	30	64	
8	299	22.8		71	31.1 ¹⁰²		50.0 ⁷⁸	35	18	19 47	24	15	38	38	62	
9	314	22.7		86	00.3 ¹⁰²		42.1 ⁷⁹	30	19 05	32	20 06	22 09	41	45	60	
10	329	22.6		100	29.5 ¹⁰²		34.2 ⁷⁹	20	18 43	19 07	19 36	21 59	45	8 56	57	
11	344	22.5	+23	114	58.8 ¹⁰³	-12	26.2 ⁸⁰	10 N	18 24	18 47	19 14	21 51	47	9 07	53	
12	359	22.3	+23	129	28.0 ¹⁰²	-12	18.1 ⁸¹	0	18 06	18 29	18 55	21 43	50	9 16	51	
13	14	22.2		143	57.3 ¹⁰³		10.0 ⁸¹	10 S	17 49	18 12	38	34	54	25	48	
14	29	22.1		158	26.6 ¹⁰³	-12	01.7 ⁸³	20	30	17 54	22	26	56	35	45	
15	44	21.9		172	55.9 ¹⁰³	-11	53.5 ⁸²	30	17 09	35	18 05	16	60	47	41	
16	59	21.8		187	25.2 ¹⁰³		45.1 ⁸⁴	35	16 57	25	17 57	10	63	9 53	40	
17	74	21.7	+23	201	54.5 ¹⁰³	-11	36.7 ⁸⁴	40	16 43	17 13	17 47	21 04	65	10 00	38	
18	89	21.5	+23	216	23.8 ¹⁰³	-11	28.2 ⁸⁵	45	16 26	17 00	17 37	20 56	68	10 09	35	
19	104	21.4		230	53.1 ¹⁰³		19.6 ⁸⁶	50	16 05	16 43	25	47	71	19	32	
20	119	21.3		245	22.5 ¹⁰⁴		11.0 ⁸⁶	52	15 55	36	20	43	72	24	30	
21	134	21.1		259	51.8 ¹⁰³	-11	02.3 ⁸⁷	54	44	28	14	38	75	29	29	
22	149	21.0		274	21.2 ¹⁰⁴	-10	53.5 ⁸⁸	56	31	19	08	33	76	35	27	
23	164	20.9		288	50.6 ¹⁰⁴		44.7 ⁸⁸	58	15 17	16 09	17 01	27	79	41	25	
24	179	20.7	+23	303	20.0 ¹⁰⁴	-10	35.8 ⁸⁹	60 S	14 59	15 57	16 54	20 21	81	10 49	22	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 48 ^m 7		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: -1.6 PMG: 21 ^h 07 ^m			Mag: -2.0 PMG: 16 ^h 58 ^m			Mag: +0.1 PMG: 22 ^h 27 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	272	34.7	174	16.2	+23	52.0	42	19.6	-20	59.2	104	49.5	+6	34.5	22	12.8
1	287	37.2	189	15.3		51.9	57	22.3		59.2	119	51.7		34.4	37	15.4
2	302	39.6	204	14.4		51.8	72	25.0		59.2	134	53.9		34.2	52	18.1
3	317	42.1	219	13.5		51.7	87	27.7		59.2	149	56.1		34.1	67	20.7
4	332	44.6	234	12.6		51.6	102	30.4		59.2	164	58.2		34.0	82	23.4
5	347	47.0	249	11.7	+23	51.5	117	33.0	-20	59.3	180	00.4	+6	33.9	97	26.0
6	2	49.5	264	10.9	+23	51.4	132	35.7	-20	59.3	195	02.6	+6	33.7	112	28.6
7	17	51.9	279	10.0		51.4	147	38.4		59.3	210	04.8		33.6	127	31.3
8	32	54.4	294	09.1		51.3	162	41.1		59.3	225	07.0		33.5	142	33.9
9	47	56.9	309	08.2		51.2	177	43.8		59.3	240	09.2		33.4	157	36.6
10	62	59.3	324	07.3		51.1	192	46.5		59.3	255	11.3		33.3	172	39.2
11	78	01.8	339	06.4	+23	51.0	207	49.1	-20	59.3	270	13.5	+6	33.1	187	41.8
12	93	04.3	354	05.5	+23	50.9	222	51.8	-20	59.3	285	15.7	+6	33.0	202	44.5
13	108	06.7	9	04.6		50.8	237	54.5		59.3	300	17.9		32.9	217	47.1
14	123	09.2	24	03.7		50.7	252	57.2		59.3	315	20.1		32.8	232	49.8
15	138	11.7	39	02.8		50.5	267	59.8		59.4	330	22.3		32.6	247	52.4
16	153	14.1	54	01.9		50.4	283	02.5		59.4	345	24.4		32.5	262	55.0
17	168	16.6	69	01.0	+23	50.3	298	05.2	-20	59.4	0	26.6	+6	32.4	277	57.7
18	183	19.1	84	00.1	+23	50.2	313	07.9	-20	59.4	15	28.8	+6	32.2	293	00.3
19	198	21.5	98	59.2		50.1	328	10.5		59.4	30	31.0		32.1	308	02.9
20	213	24.0	113	58.3		50.0	343	13.2		59.4	45	33.2		32.0	323	05.6
21	228	26.4	128	57.5		49.9	358	15.8		59.4	60	35.4		31.9	338	08.2
22	243	28.9	143	56.6		49.8	13	18.5		59.4	75	37.5		31.7	353	10.9
23	258	31.4	158	55.7		49.7	28	21.2		59.5	90	39.7		31.6	8	13.5
24	273	33.8	173	54.8	+23	49.5	43	23.8	-20	59.5	105	41.9	+6	31.5	23	16.1
Dif	—		-9	-1		+27	0		+22	-1		+26				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 02 ^m 7			Edad: 19 ^d 9 PHE { SD: 15'7 PMG: 3 ^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	179	20.7	+23	22.7	303	20.0	-10 35.8	90	60 N	** **	0 52	2 37	23 23	20	8 58 83
1	194	20.6		22.6	317	49.4 ¹⁰⁴	26.8	90	58	** *	1 42	2 58	20 21	9 04 80	
2	209	20.5		22.5	332	18.8 ¹⁰⁴	17.8	90	56	** *	2 12	3 15	16 24	09 77	
3	224	20.3		22.5	346	48.2 ¹⁰⁴	-10 08.7	91	54	0 48	34	29	13 26	13 75	
4	239	20.2		22.4	1	17.6 ¹⁰⁴	-9 59.6	91	52	1 34	2 52	41	10 28	17 74	
5	254	20.1	+23	22.3	15	47.1 ¹⁰⁵	-9 50.4	92	50	2 02	3 07	3 52	23 08	29	9 20 72
6	269	19.9	+23	22.2	30	16.5 ¹⁰⁴	-9 41.1	93	45	2 47	3 37	4 15	23 02	32	9 28 68
7	284	19.8		22.2	44	46.0 ¹⁰⁵	31.8	93	40	3 18	4 00	33	22 58	35	34 66
8	299	19.7		22.1	59	15.5 ¹⁰⁵	22.4	94	35	3 41	18	4 48	53 38	40 63	
9	314	19.5		22.0	73	44.9 ¹⁰⁴	13.0	94	30	4 00	33	5 01	50 40	45 60	
10	329	19.4		21.9	88	14.4 ¹⁰⁵	-9 03.5	95	20	29	4 58	23	44 44	9 53 57	
11	344	19.3	+23	21.9	102	43.9 ¹⁰⁵	-8 53.9	96	10 N	4 51	5 18	5 41	22 38	47	10 00 54
12	359	19.2	+23	21.8	117	13.4 ¹⁰⁵	-8 44.3	96	0	5 10	5 37	5 59	22 33	51	10 07 50
13	14	19.0		21.7	131	42.9 ¹⁰⁵	34.7	96	10 S	27	5 54	6 16	28 54	13 48	
14	29	18.9		21.6	146	12.4 ¹⁰⁵	25.0	97	20	5 43	6 11	35	22 58	20 44	
15	44	18.8		21.5	160	42.0 ¹⁰⁶	15.2	98	30	6 00	30	6 56	16 61	28 41	
16	59	18.6		21.5	175	11.5 ¹⁰⁵	-8 05.4	98	35	09	40	7 08	13 63	33 38	
17	74	18.5	+23	21.4	189	41.0 ¹⁰⁵	-7 55.5	99	40	6 18	6 52	7 23	22 09	66	10 38 36
18	89	18.4	+23	21.3	204	10.6 ¹⁰⁶	-7 45.6	99	45	6 28	7 06	7 39	22 04	69	10 44 33
19	104	18.2		21.2	218	40.1 ¹⁰⁵	35.7	99	50	40	22	8 00	21 58	73	51 29
20	119	18.1		21.1	233	09.7 ¹⁰⁶	25.7	100	52	45	29	10	55 75	54 28	
21	134	18.0		21.1	247	39.2 ¹⁰⁵	15.6	101	54	51	37	21	53 76	10 58 26	
22	149	17.8		21.0	262	08.8 ¹⁰⁶	-7 05.5	101	56	6 57	46	34	49 79	11 02 24	
23	164	17.7		20.9	276	38.3 ¹⁰⁵	-6 55.4	101	58	7 04	7 57	8 48	46 80	06 22	
24	179	17.6	+23	20.8	291	07.9 ¹⁰⁶	-6 45.2	102	60 S	7 11	8 08	9 06	21 42	83	11 11 20
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 44 ^m 8			Mag: -3.9 PMG: 12 ^h 25 ^m			Mag: -1.5 PMG: 21 ^h 03 ^m			Mag: -1.9 PMG: 16 ^h 55 ^m			Mag: +0.1 PMG: 22 ^h 23 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	273	33.8		173	54.8	+23 49.5	43 23.8	-20 59.5	105	41.9	+6 31.5	23 16.1	-20 25.0		
1	288	36.3		188	53.9	49.4	58 26.5	59.5	120	44.1	31.4	38 18.8	25.0		
2	303	38.8		203	53.0	49.3	73 29.1	59.5	135	46.3	31.2	53 21.4	25.0		
3	318	41.2		218	52.1	49.2	88 31.8	59.5	150	48.5	31.1	68 24.0	25.0		
4	333	43.7		233	51.2	49.1	103 34.5	59.5	165	50.6	31.0	83 26.7	25.0		
5	348	46.2		248	50.3	+23 48.9	118 37.1	-20 59.5	180	52.8	+6 30.9	98 29.3	-20 25.0		
6	3	48.6		263	49.4	+23 48.8	133 39.8	-20 59.6	195	55.0	+6 30.7	113 32.0	-20 24.9		
7	18	51.1		278	48.5	48.7	148 42.4	59.6	210	57.2	30.6	128 34.6	24.9		
8	33	53.6		293	47.6	48.6	163 45.0	59.6	225	59.4	30.5	143 37.2	24.9		
9	48	56.0		308	46.8	48.4	178 47.7	59.6	241	01.5	30.4	158 39.9	24.9		
10	63	58.5		323	45.9	48.3	193 50.3	59.6	256	03.7	30.2	173 42.5	24.9		
11	79	00.9		338	45.0	+23 48.2	208 53.0	-20 59.6	271	05.9	+6 30.1	188 45.1	-20 24.9		
12	94	03.4		353	44.1	+23 48.1	223 55.6	-20 59.7	286	08.1	+6 30.0	203 47.8	-20 24.8		
13	109	05.9		8	43.2	47.9	238 58.3	59.7	301	10.3	29.8	218 50.4	24.8		
14	124	08.3		23	42.3	47.8	254 00.9	59.7	316	12.4	29.7	233 53.1	24.8		
15	139	10.8		38	41.4	47.7	269 03.5	59.7	331	14.6	29.6	248 55.7	24.8		
16	154	13.3		53	40.5	47.5	284 06.2	59.7	346	16.8	29.5	263 58.3	24.8		
17	169	15.7		68	39.6	+23 47.4	299 08.8	-20 59.7	1	19.0	+6 29.3	279 01.0	-20 24.8		
18	184	18.2		83	38.7	+23 47.2	314 11.4	-20 59.8	16	21.1	+6 29.2	294 03.6	-20 24.7		
19	199	20.7		98	37.8	47.1	329 14.1	59.8	31	23.3	29.1	309 06.2	24.7		
20	214	23.1		113	37.0	47.0	344 16.7	59.8	46	25.5	29.0	324 08.9	24.7		
21	229	25.6		128	36.1	46.8	359 19.3	59.8	61	27.7	28.8	339 11.5	24.7		
22	244	28.0		143	35.2	46.7	14 21.9	59.8	76	29.9	28.7	354 14.2	24.7		
23	259	30.5		158	34.3	46.5	29 24.6	59.9	91	32.0	28.6	9 16.8	24.7		
24	274	33.0		173	33.4	+23 46.4	44 27.2	-20 59.9	106	34.2	+6 28.4	24 19.4	-20 24.6		
Dif	—			-9	-1		+26	0		+22	-1		+26	0	

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: 20 ^d 9 PHE { 4 ^h : 58 ^h /3 12 ^h : 58 ^h /5 20 ^h : 58 ^h /6 PMG: 4 ^h 45 ^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	h m	h m	h m	h m		
0	179	17.6	+23	20.8	291	07.9	-6	45.2	60 N	21 27	23 11	** **	23 43	18	10 21	84		
1	194	17.5		20.7	305	37.5 ¹⁰⁶		35.0 ¹⁰²	58	21 07	22 22	** **	41 21		24 81			
2	209	17.3		20.6	320	07.0 ¹⁰⁵		24.7 ¹⁰³	56	20 50	21 53	** **	40 23		26 79			
3	224	17.2		20.5	334	36.6 ¹⁰⁶		14.4 ¹⁰³	54	36	31	23 15	39 25		28 77			
4	239	17.1		20.4	349	06.2 ¹⁰⁶		-6 04.0 ¹⁰⁴	52	24	21 13	22 30	38 26		31 75			
5	254	16.9	+23	20.3	3	35.7 ¹⁰⁵		-5 53.7 ¹⁰³	50	20 13	20 58	22 03	23 37	28	10 32	74		
6	269	16.8	+23	20.3	18	05.3 ¹⁰⁶		-5 43.2 ¹⁰⁵	45	19 51	20 28	21 18	23 34	33	10 36	70		
7	284	16.7		20.2	32	34.9 ¹⁰⁶		32.8 ¹⁰⁴	40	33	20 06	20 47	33 35		40 66			
8	299	16.5		20.1	47	04.4 ¹⁰⁵		22.3 ¹⁰⁵	35	18	19 48	24	31 38		43 64			
9	314	16.4		20.0	61	34.0 ¹⁰⁶		11.7 ¹⁰⁶	30	19 05	32	20 06	30 40		45 62			
10	329	16.3		19.9	76	03.5 ¹⁰⁵		-5 01.1 ¹⁰⁶	20	18 43	19 08	19 37	28 44		50 57			
11	344	16.1	+23	19.8	90	33.1 ¹⁰⁶		-4 50.5 ¹⁰⁶	10 N	18 24	18 47	19 14	23 25	48	10 54	53		
12	359	16.0	+23	19.7	105	02.7 ¹⁰⁶		-4 39.9 ¹⁰⁶	0	18 07	18 29	18 55	23 24	50	10 57	51		
13	14	15.9		19.6	119	32.2 ¹⁰⁵		29.2 ¹⁰⁷	10 S	17 49	18 12	38	22 54		11 01	47		
14	29	15.8		19.5	134	01.7 ¹⁰⁵		18.5 ¹⁰⁷	20	31	17 55	22	20 58		04 44			
15	44	15.6		19.4	148	31.3 ¹⁰⁶		-4 07.8 ¹⁰⁷	30	17 10	36	18 06	17 62		09 39			
16	59	15.5		19.3	163	00.8 ¹⁰⁵		-3 57.0 ¹⁰⁸	35	16 57	25	17 57	16 64		11 37			
17	74	15.4	+23	19.2	177	30.3 ¹⁰⁵		-3 46.2 ¹⁰⁸	40	16 43	17 14	17 48	23 15	67	11 14	35		
18	89	15.2	+23	19.1	191	59.9 ¹⁰⁶		-3 35.4 ¹⁰⁸	45	16 26	17 00	17 38	23 13	70	11 17	32		
19	104	15.1		19.0	206	29.4 ¹⁰⁵		24.6 ¹⁰⁸	50	16 06	16 44	26	11 74		20 29			
20	119	15.0		18.9	220	58.9 ¹⁰⁵		13.7 ¹⁰⁹	52	15 56	37	21	10 76		22 27			
21	134	14.9		18.8	235	28.4 ¹⁰⁵		-3 02.8 ¹⁰⁹	54	45	29	15	09 78		24 25			
22	149	14.7		18.7	249	57.9 ¹⁰⁵		-2 51.9 ¹⁰⁹	56	32	20	09	08 79		26 23			
23	164	14.6		18.6	264	27.3 ¹⁰⁴		40.9 ¹¹⁰	58	18	16 09	17 02	06 83		28 21			
24	179	14.5	+23	18.5	278	56.8 ¹⁰⁵		-2 30.0 ¹⁰⁹	60 S	15 00	15 58	16 55	23 05	85	11 31	18		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 40 ^m 9			Mag: -3.9 PMG: 12 ^h 27 ^m			Mag: -1.5 PMG: 20 ^h 59 ^m			Mag: -1.9 PMG: 16 ^h 51 ^m			Mag: +0.1 PMG: 22 ^h 19 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	274	33.0	173	33.4	+23	46.4	44	27.2	-20	59.9	106	34.2	+6	28.4	24	19.4	-20	24.6
1	289	35.4	188	32.5		46.2	59	29.8		59.9	121	36.4		28.3	39	22.1		24.6
2	304	37.9	203	31.6		46.1	74	32.4		59.9	136	38.6		28.2	54	24.7		24.6
3	319	40.4	218	30.7		46.0	89	35.1	-20	59.9	151	40.7		28.1	69	27.3		24.6
4	334	42.8	233	29.8		45.8	104	37.7	-21	00.0	166	42.9		27.9	84	30.0		24.6
5	349	45.3	248	29.0	+23	45.6	119	40.3	-21	00.0	181	45.1	+6	27.8	99	32.6	-20	24.6
6	4	47.8	263	28.1	+23	45.5	134	42.9	-21	00.0	196	47.3	+6	27.7	114	35.2	-20	24.6
7	19	50.2	278	27.2		45.3	149	45.5		00.0	211	49.4		27.5	129	37.9		24.5
8	34	52.7	293	26.3		45.2	164	48.1	-21	00.0	226	51.6		27.4	144	40.5		24.5
9	49	55.2	308	25.4		45.0	179	50.7	-21	00.1	241	53.8		27.3	159	43.1		24.5
10	64	57.6	323	24.5		44.9	194	53.3		00.1	256	56.0		27.2	174	45.8		24.5
11	80	00.1	338	23.6	+23	44.7	209	55.9	-21	00.1	271	58.1	+6	27.0	189	48.4	-20	24.5
12	95	02.5	353	22.7	+23	44.6	224	58.5	-21	00.1	287	00.3	+6	26.9	204	51.0	-20	24.5
13	110	05.0	8	21.8		44.4	240	01.2		00.2	302	02.5		26.8	219	53.7		24.4
14	125	07.5	23	21.0		44.2	255	03.8		00.2	317	04.7		26.6	234	56.3		24.4
15	140	09.9	38	20.1		44.1	270	06.4		00.2	332	06.8		26.5	249	59.0		24.4
16	155	12.4	53	19.2		43.9	285	09.0		00.2	347	09.0		26.4	265	01.6		24.4
17	170	14.9	68	18.3	+23	43.7	300	11.5	-21	00.3	2	11.2	+6	26.3	280	04.2	-20	24.4
18	185	17.3	83	17.4	+23	43.6	315	14.1	-21	00.3	17	13.4	+6	26.1	295	06.9	-20	24.4
19	200	19.8	98	16.5		43.4	330	16.7		00.3	32	15.5		26.0	310	09.5		24.3
20	215	22.3	113	15.6		43.2	345	19.3		00.3	47	17.7		25.9	325	12.1		24.3
21	230	24.7	128	14.7		43.1	0	21.9		00.4	62	19.9		25.7	340	14.8		24.3
22	245	27.2	143	13.9		42.9	15	24.5		00.4	77	22.1		25.6	355	17.4		24.3
23	260	29.6	158	13.0		42.7	30	27.1		00.4	92	24.2		25.5	10	20.0		24.3
24	275	32.1	173	12.1	+23	42.5	45	29.7	-21	00.4	107	26.4	+6	25.3	25	22.7	-20	24.3
Dif	—		-9		-2		+26		0		+22		-1		+26			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 7			Edad: 21 ^d 9 PHE	SD: 16 ^h 0			R°: 51 ^m																			
	PMG: 12 ^h 03 ^m 1				PMG: 5 ^h 36 ^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	179	14.5	+23	18.5	278	56.8	-2	30.0	60 N	** **	0 56	2 39	** **	**	11 45	85											
1	194	14.3		18.4	293	26.3 ¹⁰⁵		19.0 ¹¹⁰	58	** **	1 44	2 59	** **	**	45	83											
2	209	14.2		18.3	307	55.7 ¹⁰⁴		-2	08.0 ¹¹⁰	56	** **	2 14	3 16	** **	**	45	81										
3	224	14.1		18.2	322	25.1 ¹⁰⁴		-1	56.9 ¹¹¹	54	0 51	36	30	** **	**	45	79										
4	239	13.9		18.1	336	54.6 ¹⁰⁵			45.9 ¹¹⁰	52	1 36	2 53	42	** **	**	46	76										
5	254	13.8	+23	18.0	351	24.0 ¹⁰⁴		-1	34.8 ¹¹¹	50	2 03	3 08	3 53	** **	**	11 46	74										
6	269	13.7	+23	17.9	5	53.4 ¹⁰⁴		-1	23.8 ¹¹⁰	45	2 48	3 38	4 15	** **	**	11 46	71										
7	284	13.6		17.8	20	22.7 ¹⁰³			12.7 ¹¹¹	40	3 19	4 00	33	** **	**	46	68										
8	299	13.4		17.6	34	52.1 ¹⁰⁴		-1	01.6 ¹¹¹	35	3 42	19	4 48	** **	**	47	65										
9	314	13.3		17.5	49	21.4 ¹⁰³		-0	50.5 ¹¹¹	30	4 00	34	5 01	** **	**	47	62										
10	329	13.2		17.4	63	50.8 ¹⁰⁴			39.3 ¹¹²	20	29	4 59	23	** **	**	47	59										
11	344	13.0	+23	17.3	78	20.1 ¹⁰³		-0	28.2 ¹¹¹	10 N	4 52	5 19	5 42	** **	**	11 47	55										
12	359	12.9	+23	17.2	92	49.4 ¹⁰³		-0	17.1 ¹¹¹	0	5 11	5 37	5 59	** **	**	11 48	51										
13	14	12.8		17.1	107	18.6 ¹⁰²		-0	05.9 ¹¹²	10 S	28	5 54	6 17	** **	**	48	48										
14	29	12.7		17.0	121	47.9 ¹⁰³		+0	05.2 ¹¹¹	20	5 44	6 11	35	** **	**	48	45										
15	44	12.5		16.9	136	17.1 ¹⁰²			16.4 ¹¹²	30	6 00	30	6 56	** **	**	48	41										
16	59	12.4		16.7	150	46.3 ¹⁰²			27.6 ¹¹²	35	09	41	7 09	** **	**	48	39										
17	74	12.3	+23	16.6	165	15.5 ¹⁰²		+0	38.8 ¹¹²	40	6 18	6 52	7 23	** **	**	11 49	35										
18	89	12.1	+23	16.5	179	44.7 ¹⁰²		+0	49.9 ¹¹¹	45	6 28	7 06	7 39	** **	**	11 49	32										
19	104	12.0		16.4	194	13.8 ¹⁰¹		+1	01.1 ¹¹²	50	40	22	8 00	** **	**	49	29										
20	119	11.9		16.3	208	42.9 ¹⁰¹			12.3 ¹¹²	52	45	29	10	** **	**	49	27										
21	134	11.8		16.2	223	12.0 ¹⁰¹			23.5 ¹¹²	54	51	37	21	** **	**	49	25										
22	149	11.6		16.0	237	41.1 ¹⁰¹			34.7 ¹¹²	56	6 57	46	33	** **	**	49	24										
23	164	11.5		15.9	252	10.2 ¹⁰¹			45.8 ¹¹¹	58	7 04	7 56	8 48	** **	**	49	21										
24	179	11.4	+23	15.8	266	39.2 ¹⁰⁰		+1	57.0 ¹¹²	60 S	7 11	8 08	9 05	** **	**	11 49	19										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 5 ^h 36 ^m 9			Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: -1.5 PMG: 20 ^h 54 ^m			Mag: -1.9 PMG: 16 ^h 48 ^m			Mag: +0.1 PMG: 22 ^h 15 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'												
0	275	32.1		173	12.1	+23	45	29.7	-21	00.4	107	26.4	+6	25.3	25	22.7	-20	24.3									
1	290	34.6		188	11.2		60	32.3		00.5	122	28.6		25.2	40	25.3		24.3									
2	305	37.0		203	10.3		75	34.9		00.5	137	30.7		25.1	55	27.9		24.2									
3	320	39.5		218	09.4		90	37.4		00.5	152	32.9		25.0	70	30.6		24.2									
4	335	42.0		233	08.5		105	40.0		00.5	167	35.1		24.8	85	33.2		24.2									
5	350	44.4		248	07.7	+23	120	42.6	-21	00.6	182	37.3	+6	24.7	100	35.8	-20	24.2									
6	5	46.9		263	06.8	+23	135	45.2	-21	00.6	197	39.4	+6	24.6	115	38.5	-20	24.2									
7	20	49.4		278	05.9		150	47.7		00.6	212	41.6		24.4	130	41.1		24.2									
8	35	51.8		293	05.0		165	50.3		00.7	227	43.8		24.3	145	43.7		24.1									
9	50	54.3		308	04.1		180	52.9		00.7	242	45.9		24.2	160	46.4		24.1									
10	65	56.8		323	03.2		195	55.5		00.7	257	48.1		24.0	175	49.0		24.1									
11	80	59.2		338	02.3	+23	210	58.0	-21	00.8	272	50.3	+6	23.9	190	51.6	-20	24.1									
12	96	01.7		353	01.5	+23	226	00.6	-21	00.8	287	52.4	+6	23.8	205	54.3	-20	24.1									
13	111	04.1		8	00.6		241	03.2		00.8	302	54.6		23.6	220	56.9		24.1									
14	126	06.6		22	59.7		256	05.7		00.8	317	56.8		23.5	235	59.5		24.1									
15	141	09.1		37	58.8		271	08.3		00.9	332	59.0		23.4	251	02.2		24.0									
16	156	11.5		52	57.9		286	10.9		00.9	348	01.1		23.3	266	04.8		24.0									
17	171	14.0		67	57.0	+23	301	13.4	-21	00.9	3	03.3	+6	23.1	281	07.4	-20	24.0									
18	186	16.5		82	56.2	+23	316	16.0	-21	01.0	18	05.5	+6	23.0	296	10.1	-20	24.0									
19	201	18.9		97	55.3		331	18.5		01.0	33	07.6		22.9	311	12.7		24.0									
20	216	21.4		112	54.4		346	21.1		01.0	48	09.8		22.7	326	15.3		24.0									
21	231	23.9		127	53.5		1	23.7		01.1	63	12.0		22.6	341	17.9		23.9									
22	246	26.3		142	52.6		16	26.2		01.1	78	14.1		22.5	356	20.6		23.9									
23	261	28.8		157	51.7		31	28.8		01.1	93	16.3		22.3	11	23.2		23.9									
24	276	31.3		172	50.9	+23	46	31.3	-21	01.2	108	18.5	+6	22.2	26	25.8	-20	23.9									
Dif	—			-9			-2			+26			0			+22			-1			+26			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 3			Edad: 22 ^d 9 PHE { 4 ^h : 59'2 12 ^h : 59'3 20 ^h : 59'5 PMG: 6 ^h 27 ^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	h m m	h m m	
0	179	11.4	+23	15.8	266	39.2	+1	57.0	60 N	21 27	23 07	** **	0 01 20	13 10 86		
1	194	11.3		15.7	281	08.2 ¹⁰⁰	+2	08.2 ¹¹²	58	21 06	22 21	** **	02 22	08 83		
2	209	11.1		15.6	295	37.1 ⁹⁹		19.3 ¹¹¹	56	20 50	21 52	** **	03 24	06 81		
3	224	11.0		15.4	310	06.1 ¹⁰⁰		30.5 ¹¹²	54	36	30	23 12	04 26	04 79		
4	239	10.9		15.3	324	35.0 ⁹⁹		41.6 ¹¹¹	52	24	21 12	22 29	04 28	02 77		
5	254	10.7	+23	15.2	339	03.9 ⁹⁹	+2	52.8 ¹¹²	50	20 13	20 57	22 02	0 05 30	13 00 76		
6	269	10.6	+23	15.1	353	32.7 ⁹⁸	+3	03.9 ¹¹¹	45	19 51	20 28	21 17	0 07 33	12 57 72		
7	284	10.5		14.9	8	01.5 ⁹⁸		15.0 ¹¹¹	40	33	20 06	20 47	08 36	54 69		
8	299	10.4		14.8	22	30.3 ⁹⁸		26.1 ¹¹¹	35	18	19 48	24	09 39	52 66		
9	314	10.2		14.7	36	59.1 ⁹⁸		37.2 ¹¹¹	30	19 05	33	20 06	10 41	49 64		
10	329	10.1		14.6	51	27.8 ⁹⁷		48.3 ¹¹¹	20	18 43	19 08	19 37	12 45	46 59		
11	344	10.0	+23	14.4	65	56.5 ⁹⁷	+3	59.3 ¹¹⁰	10 N	18 24	18 47	19 15	0 13 49	12 42 56		
12	359	09.9	+23	14.3	80	25.2 ⁹⁷	+4	10.4 ¹¹¹	0	18 07	18 30	18 56	0 14 53	12 39 53		
13	14	09.7		14.2	94	53.8 ⁹⁶		21.4 ¹¹⁰	10 S	17 50	18 13	39	16 55	36 49		
14	29	09.6		14.0	109	22.4 ⁹⁶		32.4 ¹¹⁰	20	31	17 55	23	18 59	33 46		
15	44	09.5		13.9	123	50.9 ⁹⁵		43.4 ¹¹⁰	30	17 10	37	18 06	19 64	29 42		
16	59	09.4		13.8	138	19.5 ⁹⁶	+4	54.4 ¹¹⁰	35	16 58	26	17 58	20 66	27 39		
17	74	09.2	+23	13.6	152	47.9 ⁹⁴	+5	05.3 ¹⁰⁹	40	16 44	17 15	17 49	0 22 68	12 24 37		
18	89	09.1	+23	13.5	167	16.4 ⁹⁵	+5	16.2 ¹⁰⁹	45	16 27	17 01	17 38	0 23 72	12 21 34		
19	104	09.0		13.4	181	44.8 ⁹⁴		27.1 ¹⁰⁹	50	16 07	16 45	27	25 75	18 30		
20	119	08.8		13.2	196	13.2 ⁹⁴		38.0 ¹⁰⁹	52	15 57	38	21	26 77	16 29		
21	134	08.7		13.1	210	41.5 ⁹³		48.8 ¹⁰⁸	54	46	30	16	27 78	14 28		
22	149	08.6		13.0	225	09.8 ⁹³	+5	59.6 ¹⁰⁸	56	34	21	10	27 82	13 25		
23	164	08.5		12.8	239	38.0 ⁹²	+6	10.4 ¹⁰⁸	58	19	16 11	17 03	29 83	10 24		
24	179	08.3	+23	12.7	254	06.3 ⁹³	+6	21.2 ¹⁰⁸	60 S	15 02	15 59	16 56	0 30 86	12 08 21		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 5 ^h 33 ^m 0		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: -1.5 PMG: 20 ^h 50 ^m		Mag: -1.9 PMG: 16 ^h 44 ^m		Mag: +0.1 PMG: 22 ^h 10 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	276	31.3	172	50.9	46	31.3	-21	01.2	108	18.5	+6	22.2	26	25.8	-20	23.9
1	291	33.7	187	50.0		37.8	61	33.9		01.2	123	20.6		22.1	41	28.5
2	306	36.2	202	49.1		37.6	76	36.4		01.2	138	22.8		21.9	56	31.1
3	321	38.6	217	48.2		37.4	91	38.9		01.3	153	25.0		21.8	71	33.7
4	336	41.1	232	47.3		37.1	106	41.5		01.3	168	27.1		21.7	86	36.4
5	351	43.6	247	46.5	+23	36.9	121	44.0	-21	01.3	183	29.3	+6	21.5	101	39.0
6	6	46.0	262	45.6	+23	36.7	136	46.6	-21	01.4	198	31.5	+6	21.4	116	41.6
7	21	48.5	277	44.7		36.5	151	49.1		01.4	213	33.6		21.3	131	44.3
8	36	51.0	292	43.8		36.3	166	51.7		01.4	228	35.8		21.1	146	46.9
9	51	53.4	307	42.9		36.1	181	54.2		01.5	243	38.0		21.0	161	49.5
10	66	55.9	322	42.0		35.9	196	56.7		01.5	258	40.1		20.9	176	52.2
11	81	58.4	337	41.2	+23	35.6	211	59.3	-21	01.5	273	42.3	+6	20.7	191	54.8
12	97	00.8	352	40.3	+23	35.4	227	01.8	-21	01.6	288	44.5	+6	20.6	206	57.4
13	112	03.3	7	39.4		35.2	242	04.3		01.6	303	46.6		20.5	222	00.0
14	127	05.7	22	38.5		35.0	257	06.8		01.7	318	48.8		20.3	237	02.7
15	142	08.2	37	37.6		34.8	272	09.4		01.7	333	51.0		20.2	252	05.3
16	157	10.7	52	36.8		34.5	287	11.9		01.7	348	53.1		20.1	267	07.9
17	172	13.1	67	35.9	+23	34.3	302	14.4	-21	01.8	3	55.3	+6	19.9	282	10.6
18	187	15.6	82	35.0	+23	34.1	317	16.9	-21	01.8	18	57.4	+6	19.8	297	13.2
19	202	18.1	97	34.1		33.9	332	19.5		01.8	33	59.6		19.7	312	15.8
20	217	20.5	112	33.2		33.6	347	22.0		01.9	49	01.8		19.5	327	18.5
21	232	23.0	127	32.4		33.4	2	24.5		01.9	64	03.9		19.4	342	21.1
22	247	25.5	142	31.5		33.2	17	27.0		02.0	79	06.1		19.3	357	23.7
23	262	27.9	157	30.6		32.9	32	29.5		02.0	94	08.3		19.1	12	26.3
24	277	30.4	172	29.7	+23	32.7	47	32.1	-21	02.0	109	10.4	+6	19.0	27	29.0
Dif	—		-9		-2		+25		0		+22		-1		+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 23 ^d 9	PHE {	4 ^h : 59 ^m 6		12 ^h : 59 ^m 7	20 ^h : 59 ^m 7		R°: 54 ^m	R°: 54 ^m	R°: 54 ^m	R°: 54 ^m
	PMG: 12 ^h 03 ^m 5													
hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	08.3	+23	12.7	254	06.3	+6	21.2	60 N	** *	1 00	2 41	0 21	22
1	194	08.2		12.6	268	34.4	91	31.9	58	** *	1 46	3 01	24 25	31 84
2	209	08.1		12.4	283	02.6	92	42.6	56	** *	2 15	17	27 27	27 81
3	224	08.0		12.3	297	30.7	91	+6 53.2	54	0 55	37	31	30 29	23 79
4	239	07.8		12.1	311	58.7	90	+7 03.8	52	1 38	2 55	43	32 31	19 77
5	254	07.7	+23	12.0	326	26.7	90	+7 14.4	50	2 05	3 10	3 54	0 35	32
6	269	07.6	+23	11.8	340	54.7	90	+7 24.9	45	2 50	3 39	4 16	0 40	36
7	284	07.5		11.7	355	22.6	89	35.4	40	3 20	4 01	34	44 39	14 03
8	299	07.3		11.6	9	50.5	89	45.9	35	3 43	19	4 49	48 41	13 58
9	314	07.2		11.4	24	18.3	88	+7 56.3	30	4 01	34	5 02	51 43	53 65
10	329	07.1		11.3	38	46.1	88	+8 06.7	20	30	4 59	24	0 57	47
11	344	07.0	+23	11.1	53	13.8	87	+8 17.0	10 N	4 52	5 19	5 42	1 02	50
12	359	06.8	+23	11.0	67	41.5	87	+8 27.3	0	5 11	5 37	6 00	1 07	53
13	14	06.7		10.8	82	09.2	87	37.5	10 S	28	5 54	17	11 57	25 52
14	29	06.6		10.7	96	36.8	86	47.7	20	5 44	6 12	35	17 60	19 48
15	44	06.5		10.5	111	04.4	86	+8 57.9	30	6 00	30	6 56	23 64	11 45
16	59	06.3		10.4	125	31.9	85	+9 07.9	35	09	41	7 09	26 67	06 43
17	74	06.2	+23	10.2	139	59.3	84	+9 18.0	40	6 18	6 52	7 23	1 30	69
18	89	06.1	+23	10.1	154	26.8	85	+9 28.0	45	6 28	7 06	7 39	1 35	72
19	104	06.0		09.9	168	54.1	83	37.9	50	40	21	8 00	40 76	48 35
20	119	05.9		09.8	183	21.5	84	47.8	52	45	29	10	43 77	45 33
21	134	05.7		09.6	197	48.7	82	+9 57.6	54	51	37	21	45 80	42 31
22	149	05.6		09.5	212	16.0	83	+10 07.4	56	6 57	46	33	49 81	38 29
23	164	05.5		09.3	226	43.2	82	17.1	58	7 04	7 56	8 47	52 84	34 26
24	179	05.4	+23	09.2	241	10.3	81	+10 26.7	60 S	7 11	8 07	9 05	1 56	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 29 ^m 1		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: -1.4 PMG: 20 ^h 46 ^m		Mag: -1.9 PMG: 16 ^h 41 ^m		Mag: +0.1 PMG: 22 ^h 06 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	277	30.4	172	29.7	+23	32.7	47	32.1	-21	02.0
1	292	32.9	187	28.9		32.5	62	34.6		02.1
2	307	35.3	202	28.0		32.2	77	37.1		02.1
3	322	37.8	217	27.1		32.0	92	39.6		02.2
4	337	40.2	232	26.2		31.8	107	42.1		02.2
5	352	42.7	247	25.3	+23	31.5	122	44.6	-21	02.2
6	7	45.2	262	24.5	+23	31.3	137	47.1	-21	02.3
7	22	47.6	277	23.6		31.0	152	49.6		02.3
8	37	50.1	292	22.7		30.8	167	52.1		02.4
9	52	52.6	307	21.8		30.6	182	54.6		02.4
10	67	55.0	322	21.0		30.3	197	57.1		02.4
11	82	57.5	337	20.1	+23	30.1	212	59.6	-21	02.5
12	98	00.0	352	19.2	+23	29.8	228	02.1	-21	02.5
13	113	02.4	7	18.3		29.6	243	04.6		02.6
14	128	04.9	22	17.5		29.3	258	07.1		02.6
15	143	07.4	37	16.6		29.1	273	09.6		02.7
16	158	09.8	52	15.7		28.8	288	12.1		02.7
17	173	12.3	67	14.8	+23	28.6	303	14.6	-21	02.8
18	188	14.7	82	14.0	+23	28.3	318	17.0	-21	02.8
19	203	17.2	97	13.1		28.0	333	19.5		02.8
20	218	19.7	112	12.2		27.8	348	22.0		02.9
21	233	22.1	127	11.3		27.5	3	24.5		02.9
22	248	24.6	142	10.5		27.3	18	27.0		03.0
23	263	27.1	157	09.6		27.0	33	29.5		03.0
24	278	29.5	172	08.7	+23	26.7	48	31.9	-21	03.1
Dif	—		-9		-2		+25		0	
							+22		-1	
									+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 24 ^d 9 PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 9 20 ^h : 59 ^m 9											
	PMG: 12 ^h 03 ^m 7			SD: 16 ^h 3 PMG: 8 ^h 13 ^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	m	h m m	m
0	179	05.4	+23 09.2	241	10.3	+10 26.7	81	60 N	21 25	23 04	** **	0 43 27	16 03 83		
1	194	05.2	09.0	255	37.4	36.3	96	58	21 06	22 19	** **	49 29	15 55 81		
2	209	05.1	08.9	270	04.4	45.8	95	56	20 49	21 50	** **	54 32	48 79		
3	224	05.0	08.7	284	31.4	+10 55.2	80	54	35	29	23 09	0 59 33	42 77		
4	239	04.9	08.5	298	58.3	+11 04.6	79	52	23	21 11	22 27	1 03 35	36 76		
5	254	04.7	+23 08.4	313	25.2	+11 14.0	79	50	20 13	20 57	22 01	1 07 37	15 32 74		
6	269	04.6	+23 08.2	327	52.1	+11 23.2	79	45	19 50	20 28	21 17	1 16 40	15 21 71		
7	284	04.5	08.1	342	18.9	32.4	78	40	33	20 05	20 47	23 42	12 69		
8	299	04.4	07.9	356	45.6	41.5	77	35	18	19 48	24	29 45	15 04 67		
9	314	04.3	07.8	11	12.3	50.6	77	30	19 05	33	20 06	34 47	14 58 65		
10	329	04.1	07.6	25	38.9	+11 59.5	76	20	18 43	19 08	19 37	44 50	46 62		
11	344	04.0	+23 07.4	40	05.5	+12 08.4	76	10 N	18 25	18 48	19 15	1 52 54	14 36 59		
12	359	03.9	+23 07.3	54	32.1	+12 17.3	76	0	18 07	18 30	18 56	2 00 56	14 27 56		
13	14	03.8	07.1	68	58.6	26.0	75	10 S	17 50	18 13	39	08 59	17 55		
14	29	03.6	06.9	83	25.0	34.7	74	20	32	17 56	23	17 62	14 07 52		
15	44	03.5	06.8	97	51.4	43.3	74	30	17 11	37	18 07	27 65	13 56 49		
16	59	03.4	06.6	112	17.8	+12 51.8	74	35	16 59	27	17 59	33 66	49 47		
17	74	03.3	+23 06.4	126	44.1	+13 00.2	73	40	16 45	17 15	17 49	2 39 69	13 42 45		
18	89	03.2	+23 06.3	141	10.3	+13 08.6	72	45	16 28	17 02	17 39	2 47 72	13 33 43		
19	104	03.0	06.1	155	36.5	16.9	72	50	16 08	16 46	28	2 56 75	23 39		
20	119	02.9	05.9	170	02.7	25.1	72	52	15 58	39	23	3 00 77	18 38		
21	134	02.8	05.8	184	28.8	33.2	71	54	47	31	17	05 79	13 36		
22	149	02.7	05.6	198	54.9	41.2	71	56	35	22	11	10 81	07 34		
23	164	02.5	05.4	213	20.9	49.1	70	58	21	12	17 04	16 83	13 00 33		
24	179	02.4	+23 05.3	227	46.9	+13 56.9	70	60 S	15 04	16 01	16 57	3 23 85	12 53 30		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 25 ^m 1		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: -1.4 PMG: 20 ^h 42 ^m		Mag: -1.9 PMG: 16 ^h 37 ^m		Mag: +0.1 PMG: 22 ^h 02 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	278	29.5	172	08.7	+23 26.7	48	31.9	-21 03.1	110	02.3	+6 15.8	28	32.0	-20 23.2	
1	293	32.0	187	07.8	26.5	63	34.4	03.1	125	04.4	15.6	43	34.7	23.2	
2	308	34.5	202	07.0	26.2	78	36.9	03.2	140	06.6	15.5	58	37.3	23.2	
3	323	36.9	217	06.1	25.9	93	39.4	03.2	155	08.8	15.4	73	39.9	23.1	
4	338	39.4	232	05.2	25.7	108	41.8	03.3	170	10.9	15.2	88	42.6	23.1	
5	353	41.8	247	04.4	+23 25.4	123	44.3	-21 03.3	185	13.1	+6 15.1	103	45.2	-20 23.1	
6	8	44.3	262	03.5	+23 25.1	138	46.8	-21 03.4	200	15.2	+6 15.0	118	47.8	-20 23.1	
7	23	46.8	277	02.6	24.9	153	49.2	03.4	215	17.4	14.8	133	50.4	23.1	
8	38	49.2	292	01.7	24.6	168	51.7	03.5	230	19.5	14.7	148	53.1	23.1	
9	53	51.7	307	00.9	24.3	183	54.2	03.5	245	21.7	14.5	163	55.7	23.1	
10	68	54.2	322	00.0	24.1	198	56.6	03.6	260	23.9	14.4	178	58.3	23.0	
11	83	56.6	336	59.1	+23 23.8	213	59.1	-21 03.6	275	26.0	+6 14.3	194	00.9	-20 23.0	
12	98	59.1	351	58.3	+23 23.5	229	01.5	-21 03.7	290	28.2	+6 14.1	209	03.6	-20 23.0	
13	114	01.6	6	57.4	23.2	244	04.0	03.7	305	30.3	14.0	224	06.2	23.0	
14	129	04.0	21	56.5	22.9	259	06.5	03.8	320	32.5	13.9	239	08.8	23.0	
15	144	06.5	36	55.6	22.7	274	08.9	03.8	335	34.6	13.7	254	11.4	23.0	
16	159	09.0	51	54.8	22.4	289	11.4	03.9	350	36.8	13.6	269	14.1	23.0	
17	174	11.4	66	53.9	+23 22.1	304	13.8	-21 03.9	5	38.9	+6 13.4	284	16.7	-20 22.9	
18	189	13.9	81	53.0	+23 21.8	319	16.3	-21 04.0	20	41.1	+6 13.3	299	19.3	-20 22.9	
19	204	16.3	96	52.2	21.5	334	18.7	04.0	35	43.2	13.2	314	21.9	22.9	
20	219	18.8	111	51.3	21.2	349	21.2	04.1	50	45.4	13.0	329	24.6	22.9	
21	234	21.3	126	50.4	21.0	4	23.6	04.1	65	47.6	12.9	344	27.2	22.9	
22	249	23.7	141	49.6	20.7	19	26.1	04.2	80	49.7	12.8	359	29.8	22.9	
23	264	26.2	156	48.7	20.4	34	28.5	04.2	95	51.9	12.6	14	32.4	22.9	
24	279	28.7	171	47.8	+23 20.1	49	30.9	-21 04.3	110	54.0	+6 12.5	29	35.1	-20 22.8	
Dif	—		-9	-3		+25	0		+22	-1		+26	0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 03 ^m 9				Edad: 25 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 SD: 16'3 PMG: 9 ^h 10 ^m R°: 58 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	02.4	+23	05.3	227	46.9	+13	56.9	60 N	** **	1 04	2 43	1 10	34	17 26	77		
1	194	02.3		05.1	242	12.8	+14	04.7	58	** **	1 49	3 02	18 37		16 75			
2	209	02.2		04.9	256	38.7		12.4	56	** **	2 17	19	26 38		17 07	73		
3	224	02.1		04.7	271	04.5		19.9	54	0 59	39	33	32 40		16 59	72		
4	239	01.9		04.6	285	30.3		27.4	52	1 40	2 56	45	38 42		52 71			
5	254	01.8	+23	04.4	299	56.0	+14	34.8	50	2 07	3 11	3 55	1 44	43	16 46	70		
6	269	01.7	+23	04.2	314	21.7	+14	42.1	45	2 51	3 40	4 17	1 56	45	16 32	68		
7	284	01.6		04.0	328	47.4		49.3	40	3 21	4 02	35	2 05	48	21 66			
8	299	01.5		03.9	343	13.0	+14	56.4	35	3 44	20	4 50	14 49		11 65			
9	314	01.3		03.7	357	38.6	+15	03.4	30	4 02	4 35	5 03	21 51		16 03	63		
10	329	01.2		03.5	12	04.1		10.3	20	31	5 00	24	34 54		15 48	62		
11	344	01.1	+23	03.3	26	29.6	+15	17.1	10 N	4 53	5 20	5 43	2 46	55	15 35	60		
12	359	01.0	+23	03.1	40	55.1	+15	23.8	0	5 12	5 38	6 00	2 56	58	15 23	59		
13	14	00.9		03.0	55	20.5		30.4	10 S	28	5 55	17	3 07	60	15 12	56		
14	29	00.7		02.8	69	45.8		36.9	20	5 44	6 12	36	19 62		14 59	55		
15	44	00.6		02.6	84	11.2		43.2	30	6 00	30	6 57	32 64		45 52			
16	59	00.5		02.4	98	36.5		49.5	35	09	41	7 09	39 67		36 52			
17	74	00.4	+23	02.2	113	01.7	+15	55.7	40	6 18	6 52	7 23	3 48	68	14 27	50		
18	89	00.3	+23	02.0	127	26.9	+16	01.8	45	6 28	7 05	7 39	3 59	70	14 16	48		
19	104	00.1		01.9	141	52.1		07.8	50	40	21	7 59	4 11	73	14 02	46		
20	119	00.0		01.7	156	17.3		13.6	52	45	28	8 09	17 74		13 56	45		
21	133	59.9		01.5	170	42.4		19.4	54	50	36	20	24 75		49 44			
22	148	59.8		01.3	185	07.5		25.0	56	6 56	45	32	31 76		41 43			
23	163	59.7		01.1	199	32.5		30.5	58	7 03	7 55	8 47	39 79		33 40			
24	178	59.6	+23	00.9	213	57.6	+16	36.0	60 S	7 10	8 07	9 03	4 48	81	13 23	39		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 21 ^m 2		Mag: -3.9 PMG: 12 ^h 34 ^m				Mag: -1.4 PMG: 20 ^h 39 ^m				Mag: -1.9 PMG: 16 ^h 34 ^m				Mag: +0.2 PMG: 21 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	28.7	171	47.8	+23	20.1	49	30.9	-21	04.3	110	54.0	+6	12.5	29	35.1	-20	22.8
1	294	31.1	186	47.0		19.8	64	33.4		04.3	125	56.2		12.3	44	37.7		22.8
2	309	33.6	201	46.1		19.5	79	35.8		04.4	140	58.3		12.2	59	40.3		22.8
3	324	36.1	216	45.2		19.2	94	38.3		04.4	156	00.5		12.1	74	42.9		22.8
4	339	38.5	231	44.4		18.9	109	40.7		04.5	171	02.6		11.9	89	45.6		22.8
5	354	41.0	246	43.5	+23	18.6	124	43.1	-21	04.5	186	04.8	+6	11.8	104	48.2	-20	22.8
6	9	43.5	261	42.6	+23	18.3	139	45.6	-21	04.6	201	06.9	+6	11.7	119	50.8	-20	22.8
7	24	45.9	276	41.8		18.0	154	48.0		04.6	216	09.1		11.5	134	53.4		22.7
8	39	48.4	291	40.9		17.7	169	50.4		04.7	231	11.2		11.4	149	56.1		22.7
9	54	50.8	306	40.0		17.4	184	52.8		04.8	246	13.4		11.2	164	58.7		22.7
10	69	53.3	321	39.2		17.1	199	55.3		04.8	261	15.5		11.1	180	01.3		22.7
11	84	55.8	336	38.3	+23	16.8	214	57.7	-21	04.9	276	17.7	+6	11.0	195	03.9	-20	22.7
12	99	58.2	351	37.4	+23	16.5	230	00.1	-21	04.9	291	19.9	+6	10.8	210	06.5	-20	22.7
13	115	00.7	6	36.6		16.2	245	02.5		05.0	306	22.0		10.7	225	09.2		22.7
14	130	03.2	21	35.7		15.9	260	05.0		05.0	321	24.2		10.5	240	11.8		22.6
15	145	05.6	36	34.8		15.6	275	07.4		05.1	336	26.3		10.4	255	14.4		22.6
16	160	08.1	51	34.0		15.3	290	09.8		05.2	351	28.5		10.3	270	17.0		22.6
17	175	10.6	66	33.1	+23	15.0	305	12.2	-21	05.2	6	30.6	+6	10.1	285	19.7	-20	22.6
18	190	13.0	81	32.3	+23	14.6	320	14.6	-21	05.3	21	32.8	+6	10.0	300	22.3	-20	22.6
19	205	15.5	96	31.4		14.3	335	17.0		05.3	36	34.9		09.9	315	24.9		22.6
20	220	18.0	111	30.5		14.0	350	19.4		05.4	51	37.1		09.7	330	27.5		22.6
21	235	20.4	126	29.7		13.7	5	21.9		05.4	66	39.2		09.6	345	30.1		22.5
22	250	22.9	141	28.8		13.4	20	24.3		05.5	81	41.4		09.4	0	32.8		22.5
23	265	25.3	156	27.9		13.1	35	26.7		05.6	96	43.5		09.3	15	35.4		22.5
24	280	27.8	171	27.1	+23	12.7	50	29.1	-21	05.6	111	45.7	+6	09.2	30	38.0	-20	22.5
Dif	—		-9		-3		+24		-1		+22		-1		+26			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 1			Edad: 26 ^d 9 PHE { SD: 16'3 PMG: 10 ^h 08 ^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	59.6	+23	00.9	213	57.6	+16 36.0	60 N	21 24	22 59	** **	1 44 44	18 43 65		
1	193	59.4		00.7	228	22.5	59 41.3	58	21 04	22 17	** **	1 55 46	31 65		
2	208	59.3		00.5	242	47.5	60 46.5	56	20 48	21 49	** **	2 04 47	20 65		
3	223	59.2		00.4	257	12.4	59 51.5	54	34	28	23 05	12 49	11 64		
4	238	59.1	+23	00.2	271	37.4	60 +16 56.5	52	23	21 10	22 25	20 49	18 03 63		
5	253	59.0	+23	00.0	286	02.2	58 +17 01.4	50	20 12	20 56	22 00	2 27 50	17 56 63		
6	268	58.8	+22	59.8	300	27.1	59 +17 06.1	45	19 50	20 27	21 16	2 41 52	17 40 62		
7	283	58.7		59.6	314	51.9	58 10.7	46	33	20 05	20 46	2 53 53	27 62		
8	298	58.6		59.4	329	16.7	58 15.2	45	18	19 47	24	3 03 54	16 61		
9	313	58.5		59.2	343	41.5	58 19.6	44	19 05	32	20 06	12 55	17 06 61		
10	328	58.4		59.0	358	06.3	58 23.9	43	18 44	19 08	19 37	28 56	16 50 60		
11	343	58.3	+22	58.8	12	31.0	57 +17 28.0	41	10 N	18 25	18 48	19 15	16 35 60		
12	358	58.1	+22	58.6	26	55.8	58 +17 32.0	40	0	18 08	18 30	18 56	3 54 59		
13	13	58.0		58.4	41	20.5	57 36.0	40	10 S	17 51	18 13	40	4 07 60		
14	28	57.9		58.2	55	45.2	57 39.7	37	20	33	17 57	24	21 61		
15	43	57.8		58.0	70	09.8	56 43.4	37	30	12	38	18 08	36 63		
16	58	57.7		57.8	84	34.5	57 47.0	36	35	17 00	28	17 59	46 63		
17	73	57.6	+22	57.6	98	59.1	56 +17 50.4	34	40	16 46	17 16	17 50	4 56 64		
18	88	57.4	+22	57.4	113	23.8	57 +17 53.7	33	45	16 30	17 03	17 40	5 09 65		
19	103	57.3		57.2	127	48.4	56 56.9	32	50	09	16 47	29	24 67		
20	118	57.2		57.0	142	13.0	56 +17 59.9	30	52	16 00	40	24	31 67		
21	133	57.1		56.8	156	37.7	57 +18 02.9	30	54	15 49	32	18	39 68		
22	148	57.0		56.6	171	02.3	56 05.7	28	56	37	24	12	47 70		
23	163	56.9		56.4	185	26.9	56 08.4	27	58	22	14	17 06	5 58 70		
24	178	56.8	+22	56.2	199	51.5	56 +18 10.9	25	60 S	15 06	16 02	16 59	6 09 72		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 17 ^m 3		Mag: -3.9 PMG: 12 ^h 35 ^m		Mag: -1.4 PMG: 20 ^h 35 ^m		Mag: -1.9 PMG: 16 ^h 31 ^m		Mag: +0.2 PMG: 21 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	280	27.8	171	27.1	50	29.1	111	45.7	30	38.0
1	295	30.3	186	26.2	65	31.5	126	47.8	45	40.6
2	310	32.7	201	25.4	80	33.9	141	50.0	60	43.3
3	325	35.2	216	24.5	95	36.3	156	52.1	75	45.9
4	340	37.7	231	23.6	110	38.7	171	54.2	90	48.5
5	355	40.1	246	22.8	125	41.1	186	56.4	105	51.1
6	10	42.6	261	21.9	140	43.5	201	58.5	120	53.7
7	25	45.1	276	21.1	155	45.9	217	00.7	135	56.4
8	40	47.5	291	20.2	170	48.3	232	02.8	150	59.0
9	55	50.0	306	19.3	185	50.7	247	05.0	166	01.6
10	70	52.4	321	18.5	200	53.0	262	07.1	181	04.2
11	85	54.9	336	17.6	215	55.4	277	09.3	196	06.8
12	100	57.4	351	16.8	230	57.8	292	11.4	211	09.5
13	115	59.8	6	15.9	246	00.2	307	13.6	226	12.1
14	131	02.3	21	15.0	261	02.6	322	15.7	241	14.7
15	146	04.8	36	14.2	276	05.0	337	17.9	256	17.3
16	161	07.2	51	13.3	291	07.4	352	20.0	271	19.9
17	176	09.7	66	12.5	306	09.7	7	22.2	286	22.6
18	191	12.2	81	11.6	321	12.1	22	24.3	301	25.2
19	206	14.6	96	10.8	336	14.5	37	26.5	316	27.8
20	221	17.1	111	09.9	351	16.9	52	28.6	331	30.4
21	236	19.6	126	09.0	6	19.2	67	30.7	346	33.0
22	251	22.0	141	08.2	21	21.6	82	32.9	1	35.7
23	266	24.5	156	07.3	36	24.0	97	35.0	16	38.3
24	281	26.9	171	06.5	51	26.4	112	37.2	31	40.9
Dif	—		-9	-3	+24	-1	+21	-1	+26	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 3			Edad: 27 ^d 9 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 4 20 ^h : 59 ^m 3 PMG: 11 ^h 07 ^m R ^o : 58 ^m										
	hG ☉	Dec	Dif	hG ☾	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	56.8	+22 56.2	199	51.5	+18 10.9	60 N	** **	1 09	2 45	2 28 57	19 48 52		
1	193	56.6	56.0	214	16.1	56 13.4	58	** **	1 52	3 04	41 56	36 52		
2	208	56.5	55.8	228	40.7	56 15.7	56	** **	2 20	20	2 51 57	25 52		
3	223	56.4	55.6	243	05.2	55 17.9	54	1 04	41	34	3 01 57	15 54		
4	238	56.3	55.4	257	29.8	56 19.9	52	1 43	2 58	46	09 57	19 06 55		
5	253	56.2	+22 55.2	271	54.4	56 +18 21.9	50	2 09	3 13	3 57	3 17 57	18 59 54		
6	268	56.1	+22 55.0	286	19.1	57 +18 23.7	45	2 53	3 41	4 19	3 33 57	18 42 56		
7	283	55.9	54.7	300	43.7	56 25.4	40	3 22	4 03	36	46 58	29 56		
8	298	55.8	54.5	315	08.3	56 26.9	35	3 45	21	4 51	3 57 58	17 57		
9	313	55.7	54.3	329	32.9	56 28.4	30	4 03	4 36	5 03	4 07 58	18 07 57		
10	328	55.6	54.1	343	57.5	56 29.7	20	31	5 00	25	24 58	17 50 57		
11	343	55.5	+22 53.9	358	22.2	57 +18 30.9	10 N	4 54	5 20	5 43	4 39 58	17 35 58		
12	358	55.4	+22 53.7	12	46.8	56 +18 31.9	0	5 12	5 38	6 01	4 53 58	17 21 58		
13	13	55.3	53.5	27	11.5	57 32.9	10 S	29	5 55	18	5 07 58	17 07 58		
14	28	55.1	53.3	41	36.2	57 33.7	20	5 44	6 12	36	22 58	16 51 59		
15	43	55.0	53.0	56	00.9	57 34.4	30	6 00	30	6 56	39 59	34 59		
16	58	54.9	52.8	70	25.6	57 34.9	35	09	41	7 09	5 49 59	24 60		
17	73	54.8	+22 52.6	84	50.4	58 +18 35.4	40	6 18	6 52	7 22	6 00 59	16 12 60		
18	88	54.7	+22 52.4	99	15.1	57 +18 35.7	45	6 28	7 05	7 39	6 14 59	15 59 60		
19	103	54.6	52.2	113	39.9	58 35.9	50	39	21	7 59	31 58	42 61		
20	118	54.5	52.0	128	04.7	58 35.9	52	44	28	8 08	38 59	34 61		
21	133	54.4	51.7	142	29.6	59 35.9	54	50	36	19	47 59	25 62		
22	148	54.2	51.5	156	54.4	58 35.7	56	6 56	45	31	6 57 58	16 61		
23	163	54.1	51.3	171	19.3	59 35.4	58	7 02	7 54	8 45	7 08 58	15 05 61		
24	178	54.0	+22 51.1	185	44.2	59 +18 34.9	60 S	7 09	8 06	9 02	7 21 58	14 52 62		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 13 ^m 3		Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: -1.4 PMG: 20 ^h 31 ^m			Mag: -1.9 PMG: 16 ^h 27 ^m			Mag: +0.2 PMG: 21 ^h 49 ^m		
	hG ♈	Dec	hG ♀	Dec	Dif	hG ♂	Dec	Dif	hG ♃	Dec	Dif	hG ♄	Dec	Dif
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	281	26.9	171	06.5	+23 04.7	51	26.4	-21 07.1	112	37.2	+6 05.8	31	40.9	-20 22.2
1	296	29.4	186	05.6	04.4	66	28.7	07.2	127	39.3	05.6	46	43.5	22.2
2	311	31.9	201	04.8	04.0	81	31.1	07.3	142	41.5	05.5	61	46.1	22.2
3	326	34.3	216	03.9	03.7	96	33.5	07.3	157	43.6	05.4	76	48.8	22.1
4	341	36.8	231	03.1	03.3	111	35.8	07.4	172	45.8	05.2	91	51.4	22.1
5	356	39.3	246	02.2	+23 03.0	126	38.2	-21 07.5	187	47.9	+6 05.1	106	54.0	-20 22.1
6	11	41.7	261	01.4	+23 02.6	141	40.5	-21 07.5	202	50.0	+6 04.9	121	56.6	-20 22.1
7	26	44.2	276	00.5	02.2	156	42.9	07.6	217	52.2	04.8	136	59.2	22.1
8	41	46.7	290	59.7	01.9	171	45.3	07.7	232	54.3	04.6	152	01.9	22.1
9	56	49.1	305	58.8	01.5	186	47.6	07.7	247	56.5	04.5	167	04.5	22.1
10	71	51.6	320	57.9	01.2	201	50.0	07.8	262	58.6	04.4	182	07.1	22.0
11	86	54.1	335	57.1	+23 00.8	216	52.3	-21 07.9	278	00.8	+6 04.2	197	09.7	-20 22.0
12	101	56.5	350	56.2	+23 00.4	231	54.7	-21 08.0	293	02.9	+6 04.1	212	12.3	-20 22.0
13	116	59.0	5	55.4	+23 00.1	246	57.0	08.0	308	05.0	03.9	227	14.9	22.0
14	132	01.4	20	54.5	+22 59.7	261	59.4	08.1	323	07.2	03.8	242	17.6	22.0
15	147	03.9	35	53.7	59.3	277	01.7	08.2	338	09.3	03.6	257	20.2	22.0
16	162	06.4	50	52.8	59.0	292	04.1	08.2	353	11.5	03.5	272	22.8	22.0
17	177	08.8	65	52.0	+22 58.6	307	06.4	-21 08.3	8	13.6	+6 03.4	287	25.4	-20 22.0
18	192	11.3	80	51.1	+22 58.2	322	08.7	-21 08.4	23	15.8	+6 03.2	302	28.0	-20 21.9
19	207	13.8	95	50.3	57.9	337	11.1	08.5	38	17.9	03.1	317	30.6	21.9
20	222	16.2	110	49.4	57.5	352	13.4	08.5	53	20.0	02.9	332	33.3	21.9
21	237	18.7	125	48.6	57.1	7	15.8	08.6	68	22.2	02.8	347	35.9	21.9
22	252	21.2	140	47.7	56.8	22	18.1	08.7	83	24.3	02.6	2	38.5	21.9
23	267	23.6	155	46.9	56.4	37	20.4	08.7	98	26.5	02.5	17	41.1	21.9
24	282	26.1	170	46.1	+22 56.0	52	22.8	-21 08.8	113	28.6	+6 02.4	32	43.7	-20 21.9
Dif	—		-9 -4			+24 -1			+21 -1			+26 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 04 ^m 5			Edad: 28 ^d 9 PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	54.0	+22 51.1	185	44.2	+18 34.9	5	60 N	21 22	22 54	** **	3 25 66	20 40 40		
1	193	53.9	50.9	200	09.1	34.4	57	58	21 03	22 14	** **	37 66	28 42		
2	208	53.8	50.6	214	34.1	33.7	60	56	20 47	21 47	** **	48 65	18 43		
3	223	53.7	50.4	228	59.1	32.9	60	54	33	26	23 00	3 58 64	09 44		
4	238	53.6	50.2	243	24.2	32.0	61	52	22	21 09	22 23	4 06 64	20 01 44		
5	253	53.5	+22 50.0	257	49.2	30.9	11	50	20 11	20 55	21 58	4 14 63	19 53 46		
6	268	53.4	+22 49.7	272	14.4	29.8	11	45	19 50	20 26	21 15	4 30 62	19 38 47		
7	283	53.2	49.5	286	39.5	28.5	13	40	32	20 05	20 46	44 61	25 49		
8	298	53.1	49.3	301	04.7	27.1	14	35	18	19 47	23	4 55 61	14 50		
9	313	53.0	49.0	315	29.9	25.6	15	30	19 05	32	20 05	5 05 60	19 04 51		
10	328	52.9	48.8	329	55.2	23.9	17	20	18 44	19 08	19 37	22 59	18 47 53		
11	343	52.8	+22 48.6	344	20.5	22.1	18	10 N	18 25	18 48	19 15	5 37 58	18 33 54		
12	358	52.7	+22 48.4	358	45.9	20.3	18	0	18 08	18 31	18 57	5 51 57	18 19 56		
13	13	52.6	48.1	13	11.3	18.3	20	10 S	17 51	18 14	40	6 05 56	18 05 57		
14	28	52.5	47.9	27	36.7	16.1	22	20	33	17 57	25	20 56	17 50 59		
15	43	52.4	47.7	42	02.2	13.9	22	30	13	39	09	38 54	33 61		
16	58	52.2	47.4	56	27.7	11.6	23	35	17 01	29	18 00	48 53	24 61		
17	73	52.1	+22 47.2	70	53.3	09.1	25	40	16 47	17 17	17 51	6 59 53	17 12 63		
18	88	52.0	+22 47.0	85	19.0	06.5	26	45	16 31	17 04	17 41	7 13 51	16 59 64		
19	103	51.9	46.7	99	44.6	03.8	27	50	11	16 49	30	29 50	43 65		
20	118	51.8	46.5	114	10.4	01.0	28	52	16 01	42	25	37 49	35 66		
21	133	51.7	46.3	128	36.2	58.1	29	54	15 51	34	20	46 48	27 67		
22	148	51.6	46.0	143	02.0	55.1	30	56	39	25	14	7 55 48	17 68		
23	163	51.5	45.8	157	27.9	51.9	32	58	25	15	07	8 06 47	16 06 70		
24	178	51.4	+22 45.6	171	53.9	48.7	32	60 S	15 08	16 04	17 00	8 19 45	15 54 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 09 ^m 4		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: -1.3 PMG: 20 ^h 27 ^m		Mag: -1.9 PMG: 16 ^h 24 ^m		Mag: +0.2 PMG: 21 ^h 45 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	282	26.1	170	46.1	+22 56.0	52 22.8	-21 08.8	113 28.6	+6 02.4	32 43.7	-20 21.9
1	297	28.6	185	45.2	55.6	67 25.1	08.9	128 30.7	02.2	47 46.3	21.8
2	312	31.0	200	44.4	55.2	82 27.4	09.0	143 32.9	02.1	62 49.0	21.8
3	327	33.5	215	43.5	54.9	97 29.8	09.0	158 35.0	01.9	77 51.6	21.8
4	342	35.9	230	42.7	54.5	112 32.1	09.1	173 37.2	01.8	92 54.2	21.8
5	357	38.4	245	41.8	+22 54.1	127 34.4	-21 09.2	188 39.3	+6 01.6	107 56.8	-20 21.8
6	12	40.9	260	41.0	+22 53.7	142 36.7	-21 09.3	203 41.4	+6 01.5	122 59.4	-20 21.8
7	27	43.3	275	40.1	53.3	157 39.1	09.3	218 43.6	01.4	138 02.0	21.8
8	42	45.8	290	39.3	53.0	172 41.4	09.4	233 45.7	01.2	153 04.7	21.8
9	57	48.3	305	38.4	52.6	187 43.7	09.5	248 47.9	01.1	168 07.3	21.7
10	72	50.7	320	37.6	52.2	202 46.0	09.6	263 50.0	00.9	183 09.9	21.7
11	87	53.2	335	36.7	+22 51.8	217 48.3	-21 09.6	278 52.1	+6 00.8	198 12.5	-20 21.7
12	102	55.7	350	35.9	+22 51.4	232 50.7	-21 09.7	293 54.3	+6 00.6	213 15.1	-20 21.7
13	117	58.1	5	35.1	51.0	247 53.0	09.8	308 56.4	00.5	228 17.7	21.7
14	133	00.6	20	34.2	50.6	262 55.3	09.9	323 58.6	00.3	243 20.4	21.7
15	148	03.1	35	33.4	50.2	277 57.6	09.9	339 00.7	00.2	258 23.0	21.7
16	163	05.5	50	32.5	49.8	292 59.9	10.0	354 02.8	+6 00.1	273 25.6	21.7
17	178	08.0	65	31.7	+22 49.4	308 02.2	-21 10.1	9 05.0	+5 59.9	288 28.2	-20 21.6
18	193	10.4	80	30.8	+22 49.0	323 04.5	-21 10.2	24 07.1	+5 59.8	303 30.8	-20 21.6
19	208	12.9	95	30.0	48.6	338 06.8	10.3	39 09.2	59.6	318 33.4	21.6
20	223	15.4	110	29.2	48.2	353 09.1	10.3	54 11.4	59.5	333 36.0	21.6
21	238	17.8	125	28.3	47.8	8 11.4	10.4	69 13.5	59.3	348 38.7	21.6
22	253	20.3	140	27.5	47.4	23 13.7	10.5	84 15.6	59.2	3 41.3	21.6
23	268	22.8	155	26.6	47.0	38 16.0	10.6	99 17.8	59.0	18 43.9	21.6
24	283	25.2	170	25.8	+22 46.6	53 18.3	-21 10.6	114 19.9	+5 58.9	33 46.5	-20 21.6
Dif	—		-8	-4		+23	-1	+21	-1	+26	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 7				Edad: 0 ^d 5 PHE { 4 ^h : 58 ^s 5 12 ^h : 58 ^s 3 20 ^h : 58 ^s 1 PMG: 13 ^h 02 ^m R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	51.4	+22	45.6	171	53.9	+17	48.7	60 N	** **	1 15	2 48	4 31	74	21 20	30				
1	193	51.3		45.3	186	19.9	70	45.3	58	** **	1 56	3 07	43	72	10	32				
2	208	51.2		45.1	200	46.0	71	41.9	56	** **	2 22	23	4 53	70	21 01	34				
3	223	51.0		44.8	215	12.1	71	38.3	54	1 09	2 43	36	5 02	69	20 53	35				
4	238	50.9		44.6	229	38.3	72	34.6	52	1 46	3 00	48	10	68	45	37				
5	253	50.8	+22	44.3	244	04.6	73	+17 30.8	50	2 12	3 14	3 58	5 17	67	20 39	38				
6	268	50.7	+22	44.1	258	30.9	73	+17 26.9	45	2 54	3 43	4 20	5 32	65	20 25	41				
7	283	50.6		43.9	272	57.3	74	22.9	40	3 24	4 05	37	45	63	14	42				
8	298	50.5		43.6	287	23.7	74	18.8	35	3 46	22	4 52	5 56	61	20 04	44				
9	313	50.4		43.4	301	50.2	75	14.6	30	4 04	4 37	5 04	6 05	60	19 55	46				
10	328	50.3		43.1	316	16.8	76	10.3	20	32	5 01	26	21	58	40	49				
11	343	50.2	+22	42.9	330	43.4	76	+17 05.9	10 N	4 54	5 21	5 44	6 35	56	19 27	51				
12	358	50.1	+22	42.6	345	10.1	77	+17 01.4	0	5 12	5 39	6 01	6 48	55	19 15	53				
13	13	50.0		42.4	359	36.9	78	+16 56.8	10 S	29	5 55	18	7 01	53	19 02	55				
14	28	49.9		42.1	14	03.7	78	52.1	20	5 45	6 12	36	16	50	18 49	57				
15	43	49.8		41.9	28	30.6	79	47.3	30	6 00	30	6 56	32	48	34	60				
16	58	49.7		41.6	42	57.5	79	42.4	35	09	40	7 08	41	47	25	61				
17	73	49.5	+22	41.4	57	24.6	81	+16 37.4	40	6 18	6 52	7 22	7 52	45	18 15	63				
18	88	49.4	+22	41.1	71	51.7	81	+16 32.4	45	6 28	7 05	7 38	8 04	44	18 03	65				
19	103	49.3		40.9	86	18.8	81	27.2	50	39	20	7 58	19	42	17 48	68				
20	118	49.2		40.6	100	46.1	83	21.9	53	44	27	8 07	26	41	41	69				
21	133	49.1		40.4	115	13.4	83	16.5	54	49	35	18	34	39	34	70				
22	148	49.0		40.1	129	40.8	84	11.1	54	6 55	44	30	43	38	25	72				
23	163	48.9		39.9	144	08.2	84	+16 05.6	58	7 01	7 53	8 44	8 53	36	16	73				
24	178	48.8	+22	39.6	158	35.8	86	+15 59.9	60 S	7 08	8 04	9 00	9 04	34	17 05	76				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 05 ^m 5				Mag: -3.9 PMG: 12 ^h 39 ^m				Mag: -1.3 PMG: 20 ^h 24 ^m				Mag: -1.9 PMG: 16 ^h 20 ^m				Mag: +0.2 PMG: 21 ^h 41 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	283	25.2	170	25.8	+22	46.6	53	18.3	-21	10.6	114	19.9	+5	58.9	33	46.5	-20	21.6		
1	298	27.7	185	25.0		46.2	68	20.6		10.7	129	22.1		58.8	48	49.1		21.5		
2	313	30.2	200	24.1		45.8	83	22.9		10.8	144	24.2		58.6	63	51.7		21.5		
3	328	32.6	215	23.3		45.4	98	25.2		10.9	159	26.3		58.5	78	54.3		21.5		
4	343	35.1	230	22.4		45.0	113	27.5		11.0	174	28.5		58.3	93	56.9		21.5		
5	358	37.6	245	21.6	+22	44.6	128	29.8	-21	11.0	189	30.6	+5	58.2	108	59.6	-20	21.5		
6	13	40.0	260	20.8	+22	44.2	143	32.1	-21	11.1	204	32.7	+5	58.0	124	02.2	-20	21.5		
7	28	42.5	275	19.9		43.8	158	34.4		11.2	219	34.9		57.9	139	04.8		21.5		
8	43	44.9	290	19.1		43.3	173	36.7		11.3	234	37.0		57.7	154	07.4		21.5		
9	58	47.4	305	18.3		42.9	188	39.0		11.4	249	39.1		57.6	169	10.0		21.4		
10	73	49.9	320	17.4		42.5	203	41.2		11.5	264	41.3		57.4	184	12.6		21.4		
11	88	52.3	335	16.6	+22	42.1	218	43.5	-21	11.5	279	43.4	+5	57.3	199	15.2	-20	21.4		
12	103	54.8	350	15.7	+22	41.7	233	45.8	-21	11.6	294	45.5	+5	57.2	214	17.8	-20	21.4		
13	118	57.3	5	14.9		41.3	248	48.1		11.7	309	47.7		57.0	229	20.5		21.4		
14	133	59.7	20	14.1		40.8	263	50.4		11.8	324	49.8		56.9	244	23.1		21.4		
15	149	02.2	35	13.2		40.4	278	52.6		11.9	339	51.9		56.7	259	25.7		21.4		
16	164	04.7	50	12.4		40.0	293	54.9		12.0	354	54.1		56.6	274	28.3		21.4		
17	179	07.1	65	11.6	+22	39.6	308	57.2	-21	12.0	9	56.2	+5	56.4	289	30.9	-20	21.3		
18	194	09.6	80	10.7	+22	39.1	323	59.5	-21	12.1	24	58.3	+5	56.3	304	33.5	-20	21.3		
19	209	12.0	95	09.9		38.7	339	01.7		12.2	40	00.5		56.1	319	36.1		21.3		
20	224	14.5	110	09.1		38.3	354	04.0		12.3	55	02.6		56.0	334	38.7		21.3		
21	239	17.0	125	08.2		37.9	9	06.3		12.4	70	04.7		55.8	349	41.4		21.3		
22	254	19.4	140	07.4		37.4	24	08.5		12.5	85	06.9		55.7	4	44.0		21.3		
23	269	21.9	155	06.6		37.0	39	10.8		12.6	100	09.0		55.5	19	46.6		21.3		
24	284	24.4	170	05.7	+22	36.6	54	13.1	-21	12.6	115	11.1	+5	55.4	34	49.2	-20	21.3		
Dif	—				-8 -4				+23 -1				+21 -1				+26 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 1 ^d 5	PHE { 4 ^h : 57/8 12 ^h : 57/6 20 ^h : 57/3 R°: 51 ^m										
	PMG: 12 ^h 04 ^m 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	48.8	+22 39.6	158	35.8	+15 59.9	60 N	21 20	22 49	** **	5 45 77		21 50 23		
1	193	48.7	39.4	173	03.3 ⁸⁵	54.2 ⁵⁷	58	21 01	22 11	** **	5 55 74		42 25		
2	208	48.6	39.1	187	31.0 ⁸⁷	48.4 ⁵⁸	56	20 45	21 45	** **	6 03 73		35 27		
3	223	48.5	38.9	201	58.8 ⁸⁸	42.5 ⁵⁹	54	32	24	22 56	11 70		28 30		
4	238	48.4	38.6	216	26.6 ⁸⁸	36.6 ⁵⁹	52	20	21 08	22 20	18 69		22 31		
5	253	48.3	+22 38.3	230	54.5 ⁸⁹	+15 30.5 ⁶¹	50	20 10	20 54	21 56	6 24 67		21 17 32		
6	268	48.2	+22 38.1	245	22.4 ⁸⁹	+15 24.4 ⁶¹	45	19 49	20 25	21 14	6 37 65		21 06 35		
7	283	48.1	37.8	259	50.4 ⁹⁰	18.1 ⁶³	40	32	20 04	20 45	48 62		20 56 38		
8	298	48.0	37.6	274	18.6 ⁹²	11.9 ⁶²	35	17	19 47	23	6 57 61		48 40		
9	313	47.9	37.3	288	46.7 ⁹¹	+15 05.5 ⁶⁴	30	19 05	32	20 05	7 05 59		41 42		
10	328	47.8	37.0	303	15.0 ⁹³	+14 59.0 ⁶⁵	20	18 44	19 08	19 37	19 56		29 44		
11	343	47.7	+22 36.8	317	43.3 ⁹³	+14 52.5 ⁶⁵	10 N	18 25	18 48	19 15	7 31 54		20 18 47		
12	358	47.6	+22 36.5	332	11.7 ⁹⁴	+14 45.9 ⁶⁶	0	18 08	18 31	18 57	7 43 51		20 08 49		
13	13	47.5	36.3	346	40.2 ⁹⁵	39.2 ⁶⁷	10 S	17 52	18 14	41	7 54 49		19 57 53		
14	28	47.4	36.0	1	08.7 ⁹⁵	32.4 ⁶⁸	20	34	17 58	25	8 06 47		46 55		
15	43	47.3	35.7	15	37.4 ⁹⁷	25.6 ⁶⁸	30	14	40	09	20 44		34 58		
16	58	47.2	35.5	30	06.1 ⁹⁷	18.7 ⁶⁹	35	17 02	30	18 01	28 42		26 60		
17	73	47.1	+22 35.2	44	34.8 ⁹⁷	+14 11.7 ⁷⁰	40	16 48	17 18	17 52	8 37 40		19 18 62		
18	88	46.9	+22 34.9	59	03.7 ⁹⁹	+14 04.7 ⁷⁰	45	16 32	17 06	17 42	8 48 38		19 08 64		
19	103	46.8	34.7	73	32.6 ⁹⁹	+13 57.6 ⁷¹	50	12	16 50	31	9 01 35		18 56 68		
20	118	46.7	34.4	88	01.6 ¹⁰⁰	50.4 ⁷²	52	16 03	43	26	07 33		50 69		
21	133	46.6	34.1	102	30.7 ¹⁰¹	43.2 ⁷²	54	15 53	36	21	13 32		44 71		
22	148	46.5	33.9	116	59.8 ¹⁰¹	35.9 ⁷³	56	41	27	15	21 30		37 73		
23	163	46.4	33.6	131	29.0 ¹⁰²	28.5 ⁷⁴	58	27	17	09	29 28		29 75		
24	178	46.3	+22 33.3	145	58.3 ¹⁰³	+13 21.0 ⁷⁵	60 S	15 11	16 06	17 02	9 38 26		18 21 77		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 01 ^m 5			Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: -1.3 PMG: 20 ^h 20 ^m			Mag: -1.9 PMG: 16 ^h 17 ^m			Mag: +0.2 PMG: 21 ^h 37 ^m		
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	
0	284	24.4	170	05.7	+22 36.6	54	13.1	-21 12.6	115	11.1	+5 55.4	34	49.2	-20 21.3	
1	299	26.8	185	04.9	36.1	69	15.3	12.7	130	13.3	55.2	49	51.8	21.2	
2	314	29.3	200	04.1	35.7	84	17.6	12.8	145	15.4	55.1	64	54.4	21.2	
3	329	31.8	215	03.2	35.3	99	19.8	12.9	160	17.5	55.0	79	57.0	21.2	
4	344	34.2	230	02.4	34.8	114	22.1	13.0	175	19.7	54.8	94	59.6	21.2	
5	359	36.7	245	01.6	+22 34.4	129	24.3	-21 13.1	190	21.8	+5 54.7	110	02.2	-20 21.2	
6	14	39.2	260	00.8	+22 34.0	144	26.6	-21 13.2	205	23.9	+5 54.5	125	04.9	-20 21.2	
7	29	41.6	274	59.9	33.5	159	28.9	13.2	220	26.1	54.4	140	07.5	21.2	
8	44	44.1	289	59.1	33.1	174	31.1	13.3	235	28.2	54.2	155	10.1	21.2	
9	59	46.5	304	58.3	32.6	189	33.4	13.4	250	30.3	54.1	170	12.7	21.1	
10	74	49.0	319	57.4	32.2	204	35.6	13.5	265	32.4	53.9	185	15.3	21.1	
11	89	51.5	334	56.6	+22 31.7	219	37.8	-21 13.6	280	34.6	+5 53.8	200	17.9	-20 21.1	
12	104	53.9	349	55.8	+22 31.3	234	40.1	-21 13.7	295	36.7	+5 53.6	215	20.5	-20 21.1	
13	119	56.4	4	55.0	30.9	249	42.3	13.8	310	38.8	53.5	230	23.1	21.1	
14	134	58.9	19	54.1	30.4	264	44.6	13.9	325	41.0	53.3	245	25.7	21.1	
15	150	01.3	34	53.3	30.0	279	46.8	14.0	340	43.1	53.2	260	28.3	21.1	
16	165	03.8	49	52.5	29.5	294	49.1	14.1	355	45.2	53.0	275	30.9	21.1	
17	180	06.3	64	51.6	+22 29.1	309	51.3	-21 14.1	10	47.4	+5 52.9	290	33.6	-20 21.1	
18	195	08.7	79	50.8	+22 28.6	324	53.5	-21 14.2	25	49.5	+5 52.7	305	36.2	-20 21.0	
19	210	11.2	94	50.0	28.1	339	55.8	14.3	40	51.6	52.6	320	38.8	21.0	
20	225	13.7	109	49.2	27.7	354	58.0	14.4	55	53.7	52.4	335	41.4	21.0	
21	240	16.1	124	48.3	27.2	10	00.2	14.5	70	55.9	52.3	350	44.0	21.0	
22	255	18.6	139	47.5	26.8	25	02.5	14.6	85	58.0	52.1	5	46.6	21.0	
23	270	21.0	154	46.7	26.3	40	04.7	14.7	101	00.1	52.0	20	49.2	21.0	
24	285	23.5	169	45.9	+22 25.9	55	06.9	-21 14.8	116	02.3	+5 51.8	35	51.8	-20 21.0	
Dif	—			-8 -4			+22 -1			+21 -1			+26		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 05 ^m 0			Edad: 2 ^d 5 PHE { SD: 15'6 PMG: 14 ^h 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	46.3	+22 33.3	145	58.3	+13 21.0	75	60 N	** **	1 21	2 50	7 02	76	22 13	19	
1	193	46.2	33.0	160	27.7 ¹⁰⁴	13.5	75	58	** **	1 59	3 09	09 74		07 22		
2	208	46.1	32.8	174	57.1 ¹⁰⁴	+13 06.0	75	56	** **	2 25	25	16 71	22 02	24		
3	223	46.0	32.5	189	26.6 ¹⁰⁵	+12 58.4	76	54	1 14	2 46	38	21 70	21 58	24		
4	238	45.9	32.2	203	56.2 ¹⁰⁶	50.7	77	52	1 50	3 02	3 50	27 68	53	27		
5	253	45.8	+22 32.0	218	25.9 ¹⁰⁷	+12 42.9	78	50	2 14	3 16	4 00	7 31	67	21 49	29	
6	268	45.7	+22 31.7	232	55.6 ¹⁰⁷	+12 35.1	78	45	2 56	3 45	4 21	7 42	64	21 41	31	
7	283	45.6	31.4	247	25.4 ¹⁰⁸	27.3	78	40	3 25	4 06	38	50 62	34	34		
8	298	45.5	31.1	261	55.3 ¹⁰⁹	19.4	79	35	3 47	23	4 53	7 58	59	28	36	
9	313	45.4	30.9	276	25.2 ¹⁰⁹	11.4	80	30	4 05	4 38	5 05	8 04	57	23	38	
10	328	45.3	30.6	290	55.3 ¹¹¹	+12 03.4	80	20	33	5 02	26	15 54	13	42		
11	343	45.2	+22 30.3	305	25.3 ¹¹⁰	+11 55.3	81	10 N	4 55	5 22	5 44	8 25	51	21 05	44	
12	358	45.1	+22 30.0	319	55.5 ¹¹²	+11 47.2	81	0	5 13	5 39	6 01	8 34	48	20 57	47	
13	13	45.0	29.7	334	25.7 ¹¹²	39.0	82	10 S	29	5 55	18	43 46	50	49		
14	28	44.9	29.5	348	56.0 ¹¹³	30.8	82	20	5 45	6 12	36	8 53	42	41	53	
15	43	44.8	29.2	3	26.4 ¹¹⁴	22.5	83	30	6 00	30	6 56	9 04	39	32	56	
16	58	44.7	28.9	17	56.8 ¹¹⁴	14.2	83	35	09	40	7 08	10 38	26	58		
17	73	44.6	+22 28.6	32	27.3 ¹¹⁵	+11 05.9	83	40	6 17	6 51	7 21	9 17	36	20 20	60	
18	88	44.6	+22 28.3	46	57.9 ¹¹⁶	+10 57.4	85	45	6 27	7 04	7 37	9 26	32	20 12	64	
19	103	44.5	28.0	61	28.6 ¹¹⁷	49.0	84	50	38	19	7 57	36 29	20 04	66		
20	118	44.4	27.8	75	59.3 ¹¹⁷	40.5	85	52	43	26	8 06	40 29	19 59	68		
21	133	44.3	27.5	90	30.0 ¹¹⁷	31.9	86	54	48	34	17	45 27	55	69		
22	148	44.2	27.2	105	00.9 ¹¹⁹	23.4	85	56	6 54	42	29	51 25	50	71		
23	163	44.1	26.9	119	31.8 ¹¹⁹	14.7	87	58	7 00	7 52	42	9 57	23	44	74	
24	178	44.0	+22 26.6	134	02.8 ¹²⁰	+10 06.1	86	60 S	7 07	8 03	8 58	10 04	21	19 38	76	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 57 ^m 6			Mag: -3.9 PMG: 12 ^h 42 ^m			Mag: -1.3 PMG: 20 ^h 17 ^m			Mag: -1.9 PMG: 16 ^h 14 ^m			Mag: +0.2 PMG: 21 ^h 33 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	285	23.5	169 45.9	+22 25.9	55 06.9	-21 14.8	116 02.3	+5 51.8	35 51.8	-20 21.0						
1	300	26.0	184 45.1	25.4	70 09.2	14.9	131 04.4	51.7	50 54.4	21.0						
2	315	28.4	199 44.2	24.9	85 11.4	15.0	146 06.5	51.5	65 57.0	20.9						
3	330	30.9	214 43.4	24.5	100 13.6	15.1	161 08.6	51.4	80 59.6	20.9						
4	345	33.4	229 42.6	24.0	115 15.8	15.2	176 10.8	51.2	96 02.2	20.9						
5	0	35.8	244 41.8	+22 23.5	130 18.0	-21 15.3	191 12.9	+5 51.1	111 04.8	-20 20.9						
6	15	38.3	259 40.9	+22 23.1	145 20.3	-21 15.3	206 15.0	+5 51.0	126 07.5	-20 20.9						
7	30	40.8	274 40.1	22.6	160 22.5	15.4	221 17.1	50.8	141 10.1	20.9						
8	45	43.2	289 39.3	22.1	175 24.7	15.5	236 19.3	50.7	156 12.7	20.9						
9	60	45.7	304 38.5	21.7	190 26.9	15.6	251 21.4	50.5	171 15.3	20.9						
10	75	48.2	319 37.7	21.2	205 29.1	15.7	266 23.5	50.4	186 17.9	20.9						
11	90	50.6	334 36.8	+22 20.7	220 31.3	-21 15.8	281 25.7	+5 50.2	201 20.5	-20 20.8						
12	105	53.1	349 36.0	+22 20.3	235 33.6	-21 15.9	296 27.8	+5 50.1	216 23.1	-20 20.8						
13	120	55.5	4 35.2	19.8	250 35.8	16.0	311 29.9	49.9	231 25.7	20.8						
14	135	58.0	19 34.4	19.3	265 38.0	16.1	326 32.0	49.8	246 28.3	20.8						
15	151	00.5	34 33.6	18.8	280 40.2	16.2	341 34.2	49.6	261 30.9	20.8						
16	166	02.9	49 32.8	18.4	295 42.4	16.3	356 36.3	49.5	276 33.5	20.8						
17	181	05.4	64 31.9	+22 17.9	310 44.6	-21 16.4	11 38.4	+5 49.3	291 36.1	-20 20.8						
18	196	07.9	79 31.1	+22 17.4	325 46.8	-21 16.5	26 40.5	+5 49.2	306 38.7	-20 20.8						
19	211	10.3	94 30.3	16.9	340 49.0	16.6	41 42.7	49.0	321 41.3	20.8						
20	226	12.8	109 29.5	16.4	355 51.2	16.7	56 44.8	48.9	336 43.9	20.7						
21	241	15.3	124 28.7	16.0	10 53.4	16.8	71 46.9	48.7	351 46.5	20.7						
22	256	17.7	139 27.9	15.5	25 55.6	16.9	86 49.0	48.6	6 49.2	20.7						
23	271	20.2	154 27.0	15.0	40 57.8	17.0	101 51.1	48.4	21 51.8	20.7						
24	286	22.6	169 26.2	+22 14.5	56 00.0	-21 17.1	116 53.3	+5 48.3	36 54.4	-20 20.7						
Dif	—		-8	-5	+22	-1	+21	-1	+26	0						

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 1				Edad: 3 ^d 5 PHE { 4 ^h : 56 ^s 3 12 ^h : 56 ^s 1 20 ^h : 55 ^s 8 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	178	44.0	+22	26.6	134	02.8	+10	06.1	60 N	21 17	22 44	** **	8 18 75		22 32 17			
1	193	43.9		26.3	148	33.8 ¹²⁰	+9	57.4 ⁸⁷	58	20 59	22 07	** **	23 72		29 19			
2	208	43.8		26.0	163	04.9 ¹²¹		48.6 ⁸⁸	56	44	21 42	** **	27 71		26 20			
3	223	43.7		25.8	177	36.1 ¹²²		39.8 ⁸⁸	54	31	22	22 51	31 69		23 22			
4	238	43.6		25.5	192	07.3 ¹²²		31.0 ⁸⁸	52	19	21 06	22 17	35 67		20 24			
5	253	43.5	+22	25.2	206	38.6 ¹²³	+9	22.2 ⁸⁸	50	20 09	20 52	21 53	8 38 66		22 18 25			
6	268	43.4	+22	24.9	221	10.0 ¹²⁴	+9	13.3 ⁸⁹	45	19 48	20 24	21 12	8 46 62		22 12 29			
7	283	43.3		24.6	235	41.4 ¹²⁴	+9	04.4 ⁸⁹	40	31	20 03	20 44	52 59		08 31			
8	298	43.2		24.3	250	12.9 ¹²⁵	+8	55.4 ⁹⁰	35	17	19 46	22	8 57 57		04 33			
9	313	43.1		24.0	264	44.4 ¹²⁵		46.4 ⁹⁰	30	19 04	32	20 04	9 01 55		22 01 35			
10	328	43.0		23.7	279	16.0 ¹²⁶		37.4 ⁹⁰	20	18 43	19 08	19 37	09 52		21 55 39			
11	343	42.9	+22	23.4	293	47.7 ¹²⁷	+8	28.3 ⁹¹	10 N	18 25	18 48	19 15	9 16 48		21 49 42			
12	358	42.8	+22	23.1	308	19.4 ¹²⁷	+8	19.3 ⁹⁰	0	18 09	18 31	18 57	9 22 46		21 44 45			
13	13	42.7		22.8	322	51.2 ¹²⁸		10.2 ⁹¹	10 S	17 52	18 15	41	29 43		39 48			
14	28	42.6		22.5	337	23.0 ¹²⁸	+8	01.0 ⁹²	20	35	17 58	26	35 40		34 51			
15	43	42.5		22.2	351	54.9 ¹²⁹	+7	51.9 ⁹¹	30	14	41	10	43 37		28 54			
16	58	42.4		21.9	6	26.8 ¹²⁹		42.7 ⁹²	35	17 03	31	18 02	48 34		24 57			
17	73	42.4	+22	21.6	20	58.8 ¹³⁰	+7	33.4 ⁹³	40	16 49	17 20	17 53	9 53 32		21 20 59			
18	88	42.3	+22	21.3	35	30.9 ¹³¹	+7	24.2 ⁹²	45	16 34	17 07	17 44	9 58 30		21 16 61			
19	103	42.2		21.0	50	03.0 ¹³¹		14.9 ⁹³	50	14	16 52	33	10 05 27		10 65			
20	118	42.1		20.7	64	35.2 ¹³²	+7	05.7 ⁹²	52	16 05	45	28	09 25		07 66			
21	133	42.0		20.4	79	07.4 ¹³²	+6	56.3 ⁹⁴	54	15 55	37	23	12 24		04 68			
22	148	41.9		20.1	93	39.7 ¹³³		47.0 ⁹³	56	43	29	17	16 22		21 01 70			
23	163	41.8		19.8	108	12.0 ¹³³		37.7 ⁹³	58	29	19	11	20 20		20 58 71			
24	178	41.7	+22	19.5	122	44.3 ¹³³	+6	28.3 ⁹⁴	60 S	15 13	16 09	17 04	10 25 18		20 54 74			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 53 ^m 7		Mag: -3.9 PMG: 12 ^h 43 ^m		Mag: -1.2 PMG: 20 ^h 13 ^m		Mag: -1.9 PMG: 16 ^h 10 ^m		Mag: +0.2 PMG: 21 ^h 29 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	286	22.6	169	26.2	+22	14.5	56	00.0	+5	48.3								
1	301	25.1	184	25.4		14.0	71	02.2		48.1								
2	316	27.6	199	24.6		13.5	86	04.4		48.0								
3	331	30.0	214	23.8		13.0	101	06.5		47.8								
4	346	32.5	229	23.0		12.5	116	08.7		47.7								
5	1	35.0	244	22.2	+22	12.1	131	10.9	-21	47.5								
6	16	37.4	259	21.4	+22	11.6	146	13.1	-21	47.4								
7	31	39.9	274	20.5		11.1	161	15.3		47.2								
8	46	42.4	289	19.7		10.6	176	17.5		47.0								
9	61	44.8	304	18.9		10.1	191	19.7		46.9								
10	76	47.3	319	18.1		09.6	206	21.8		46.7								
11	91	49.8	334	17.3	+22	09.1	221	24.0	-21	46.6								
12	106	52.2	349	16.5	+22	08.6	236	26.2	-21	46.4								
13	121	54.7	4	15.7		08.1	251	28.4		46.3								
14	136	57.1	19	14.9		07.6	266	30.5		46.1								
15	151	59.6	34	14.1		07.1	281	32.7		46.0								
16	167	02.1	49	13.3		06.6	296	34.9		45.8								
17	182	04.5	64	12.4	+22	06.1	311	37.1	-21	45.7								
18	197	07.0	79	11.6	+22	05.6	326	39.2	-21	45.5								
19	212	09.5	94	10.8		05.0	341	41.4		45.4								
20	227	11.9	109	10.0		04.5	356	43.6		45.2								
21	242	14.4	124	09.2		04.0	11	45.7		45.1								
22	257	16.9	139	08.4		03.5	26	47.9		44.9								
23	272	19.3	154	07.6		03.0	41	50.0		44.8								
24	287	21.8	169	06.8	+22	02.5	56	52.2	-21	44.6								
Dif	—		-8		-5		+22		-1									

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: 4 ^d 5 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 Rº: 43 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.7	+22	19.5	122	44.3	+6	28.3	60 N	** *	1 27	2 54	9 33	73	22	49	16
1	193	41.6		19.2	137	16.8 ¹³⁵		18.9 ⁹⁴	58	** *	2 03	3 12	35	71	48	17	
2	208	41.5		18.9	151	49.2 ¹³⁴		09.5 ⁹⁴	56	** *	29	27	38	69	46	20	
3	223	41.4		18.6	166	21.8 ¹³⁶	+6	00.1 ⁹⁴	54	1 20	2 48	40	40	67	45	2	
4	238	41.3		18.3	180	54.3 ¹³⁵	+5	50.6 ⁹⁵	52	1 54	3 05	3 52	42	65	44	23	
5	253	41.2	+22	18.0	195	26.9 ¹³⁶	+5	41.1 ⁹⁵	50	2 17	3 19	4 02	9 44	64	22	43	24
6	268	41.2	+22	17.7	209	59.6 ¹³⁷	+5	31.7 ⁹⁴	45	2 58	3 46	4 23	9 48	60	22	41	27
7	283	41.1		17.4	224	32.3 ¹³⁷		22.2 ⁹⁵	40	3 27	4 07	40	51	58	39	30	
8	298	41.0		17.1	239	05.1 ¹³⁸		12.7 ⁹⁵	35	3 49	25	4 54	54	55	37	33	
9	313	40.9		16.8	253	37.9 ¹³⁸	+5	03.1 ⁹⁶	30	4 06	4 39	5 06	9 56	54	36	34	
10	328	40.8		16.5	268	10.7 ¹³⁸	+4	53.6 ⁹⁵	20	34	5 03	27	10 01	50	34	37	
11	343	40.7	+22	16.2	282	43.6 ¹³⁹	+4	44.1 ⁹⁵	10 N	4 55	5 22	5 45	10 04	47	22	31	41
12	358	40.6	+22	15.8	297	16.5 ¹³⁹	+4	34.5 ⁹⁶	0	5 13	5 39	6 02	10 08	44	22	29	44
13	13	40.5		15.5	311	49.5 ¹⁴⁰		24.9 ⁹⁶	10 S	29	5 56	18	12	41	27	46	
14	28	40.4		15.2	326	22.5 ¹⁴⁰		15.4 ⁹⁵	20	5 45	6 12	36	15	38	25	49	
15	43	40.3		14.9	340	55.6 ¹⁴¹	+4	05.8 ⁹⁶	30	6 00	30	6 56	20	34	22	53	
16	58	40.2		14.6	355	28.6 ¹⁴⁰	+3	56.2 ⁹⁶	35	08	40	7 07	22	33	21	55	
17	73	40.2	+22	14.3	10	01.8 ¹⁴²	+3	46.6 ⁹⁶	40	6 17	6 51	7 21	10 25	30	22	19	57
18	88	40.1	+22	14.0	24	34.9 ¹⁴¹	+3	37.0 ⁹⁶	45	6 26	7 03	7 36	10 28	28	22	17	60
19	103	40.0		13.6	39	08.1 ¹⁴²		27.3 ⁹⁷	50	37	18	7 56	32	25	15	63	
20	118	39.9		13.3	53	41.4 ¹⁴³		17.7 ⁹⁶	52	42	25	8 05	34	23	13	65	
21	133	39.8		13.0	68	14.7 ¹⁴³	+3	08.1 ⁹⁶	54	47	33	15	36	21	12	67	
22	148	39.7		12.7	82	48.0 ¹⁴³	+2	58.5 ⁹⁶	56	53	41	27	38	20	11	68	
23	163	39.6		12.4	97	21.3 ¹⁴³		48.8 ⁹⁷	58	6 59	7 50	40	40	18	09	70	
24	178	39.5	+22	12.1	111	54.7 ¹⁴⁴	+2	39.2 ⁹⁶	60 S	7 06	8 01	8 56	10 43	16	22	08	72

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 4 ^h 49 ^m 8		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: -1.2 PMG: 20 ^h 10 ^m			Mag: -1.9 PMG: 16 ^h 07 ^m			Mag: +0.2 PMG: 21 ^h 24 ^m									
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	287	21.8	169	06.8	+22	02.5	56	52.2	-21	19.5	117	44.2	+5	44.6							
1	302	24.3	184	06.0		02.0	71	54.4		19.6	132	46.3		44.5							
2	317	26.7	199	05.2		01.5	86	56.5		19.8	147	48.4		44.3							
3	332	29.2	214	04.4		00.9	101	58.7		19.9	162	50.6		44.2							
4	347	31.6	229	03.6	+22	00.4	117	00.8		20.0	177	52.7		44.0							
5	2	34.1	244	02.8	+21	59.9	132	03.0	-21	20.1	192	54.8	+5	43.9							
6	17	36.6	259	02.0	+21	59.4	147	05.1	-21	20.2	207	56.9	+5	43.7							
7	32	39.0	274	01.2		58.9	162	07.3		20.3	222	59.0		43.6							
8	47	41.5	289	00.4		58.3	177	09.4		20.4	238	01.1		43.4							
9	62	44.0	303	59.6		57.8	192	11.6		20.5	253	03.3		43.3							
10	77	46.4	318	58.8		57.3	207	13.7		20.6	268	05.4		43.1							
11	92	48.9	333	58.0	+21	56.8	222	15.9	-21	20.7	283	07.5	+5	42.9							
12	107	51.4	348	57.2	+21	56.2	237	18.0	-21	20.8	298	09.6	+5	42.8							
13	122	53.8	3	56.4		55.7	252	20.1		20.9	313	11.7		42.6							
14	137	56.3	18	55.6		55.2	267	22.3		21.0	328	13.9		42.5							
15	152	58.7	33	54.8		54.7	282	24.4		21.1	343	16.0		42.3							
16	168	01.2	48	54.0		54.1	297	26.6		21.3	358	18.1		42.2							
17	183	03.7	63	53.2	+21	53.6	312	28.7	-21	21.4	13	20.2	+5	42.0							
18	198	06.1	78	52.4	+21	53.1	327	30.8	-21	21.5	28	22.3	+5	41.9							
19	213	08.6	93	51.6		52.5	342	33.0		21.6	43	24.4		41.7							
20	228	11.1	108	50.8		52.0	357	35.1		21.7	58	26.6		41.6							
21	243	13.5	123	50.0		51.5	12	37.2		21.8	73	28.7		41.4							
22	258	16.0	138	49.2		50.9	27	39.4		21.9	88	30.8		41.3							
23	273	18.5	153	48.4		50.4	42	41.5		22.0	103	32.9		41.1							
24	288	20.9	168	47.6	+21	49.8	57	43.6	-21	22.1	118	35.0	+5	41.0							
Dif	—		-8			-5	+21			-1			+21			-2			+26		

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 5 ^d 5	PHE { 4 ^h : 55/0 12 ^h : 54/9 20 ^h : 54/7	SD: 15 ^h 0				R°: 43 ^m								
	PMG: 12 ^h 05 ^m 4						PMG: 17 ^h 02 ^m												
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	178	39.5	+22	12.1	111	54.7	+2	39.2	60 N	21	14	22	38	** **	** **	10	46	71	23 05 15
1	193	39.5		11.7	126	28.1 ¹⁴⁴		29.5 ⁹⁷	58	20	57	22	04	** **	** **	46	70		05 18
2	208	39.4		11.4	141	01.5 ¹⁴⁴		19.9 ⁹⁶	56	42	21	39	** **	** **	47	67		06 19	
3	223	39.3		11.1	155	35.0 ¹⁴⁵		10.2 ⁹⁷	54	29	20	22	46			47	66		06 21
4	238	39.2		10.8	170	08.5 ¹⁴⁵	+2	00.6 ⁹⁶	52	18	21	04	22	14		47	64		07 22
5	253	39.1	+22	10.5	184	42.0 ¹⁴⁵	+1	50.9 ⁹⁷	50	20	08	20	50	21	51	10	48	62	23 07 24
6	268	39.0	+22	10.1	199	15.6 ¹⁴⁶	+1	41.3 ⁹⁶	45	19	47	20	23	21	11	10	48	60	23 08 27
7	283	38.9		09.8	213	49.2 ¹⁴⁶		31.6 ⁹⁷	40	30	20	02	20	43		49	57		09 29
8	298	38.8		09.5	228	22.8 ¹⁴⁶		22.0 ⁹⁶	35	16	19	45	21			49	55		10 31
9	313	38.8		09.2	242	56.4 ¹⁴⁶		12.3 ⁹⁷	30	19	04	31	20	04		50	52		10 34
10	328	38.7		08.8	257	30.1 ¹⁴⁷	+1	02.7 ⁹⁶	20	18	43	19	08	19	36	51	48		11 37
11	343	38.6	+22	08.5	272	03.8 ¹⁴⁷	+0	53.0 ⁹⁷	10 N	18	26	18	48	19	15	10	51	46	23 12 40
12	358	38.5	+22	08.2	286	37.5 ¹⁴⁷	+0	43.4 ⁹⁶	0	18	09	18	31	18	57	10	52	43	23 13 42
13	13	38.4		07.9	301	11.3 ¹⁴⁸		33.8 ⁹⁶	10 S	17	53	18	15	41		53	40		13 46
14	28	38.3		07.5	315	45.0 ¹⁴⁷		24.1 ⁹⁷	20	35	17	59	26			53	37		14 49
15	43	38.2		07.2	330	18.8 ¹⁴⁸		14.5 ⁹⁶	30	15		42	11			54	34		15 52
16	58	38.2		06.9	344	52.6 ¹⁴⁸	+0	04.9 ⁹⁶	35	17	04		32	18	03	55	31		16 54
17	73	38.1	+22	06.5	359	26.4 ¹⁴⁸	-0	04.7 ⁹⁶	40	16	51	17	21	17	54	10	55	30	23 16 57
18	88	38.0	+22	06.2	14	00.3 ¹⁴⁹	-0	14.3 ⁹⁶	45	16	35	17	08	17	45	10	56	27	23 17 59
19	103	37.9		05.9	28	34.1 ¹⁴⁸		23.9 ⁹⁶	50	16		16	54	34		57	23		18 62
20	118	37.8		05.5	43	08.0 ¹⁴⁹		33.5 ⁹⁶	52	16	07		47	30		57	22		18 64
21	133	37.7		05.2	57	41.9 ¹⁴⁹		43.1 ⁹⁶	54	15	57		39	25		57	21		19 65
22	148	37.7		04.9	72	15.8 ¹⁴⁹	-0	52.7 ⁹⁶	56	45		31	19			58	19		19 67
23	163	37.6		04.5	86	49.8 ¹⁵⁰	-1	02.2 ⁹⁵	58	32		22	13			58	18		19 69
24	178	37.5	+22	04.2	101	23.7 ¹⁴⁹	-1	11.8 ⁹⁶	60 S	15	16	16	11	17	06	10	59	15	23 20 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 45 ^m 8		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: -1.2 PMG: 20 ^h 06 ^m		Mag: -1.9 PMG: 16 ^h 03 ^m		Mag: +0.2 PMG: 21 ^h 20 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	288	20.9	168	47.6	+21	49.8	57	43.6	-21	22.1
1	303	23.4	183	46.8		49.3	72	45.7		22.3
2	318	25.9	198	46.0		48.8	87	47.9		22.4
3	333	28.3	213	45.2		48.2	102	50.0		22.5
4	348	30.8	228	44.4		47.7	117	52.1		22.6
5	3	33.2	243	43.7	+21	47.1	132	54.2	-21	22.7
6	18	35.7	258	42.9	+21	46.6	147	56.3	-21	22.8
7	33	38.2	273	42.1		46.0	162	58.5		22.9
8	48	40.6	288	41.3		45.5	178	00.6		23.0
9	63	43.1	303	40.5		44.9	193	02.7		23.2
10	78	45.6	318	39.7		44.4	208	04.8		23.3
11	93	48.0	333	38.9	+21	43.8	223	06.9	-21	23.4
12	108	50.5	348	38.1	+21	43.3	238	09.0	-21	23.5
13	123	53.0	3	37.3		42.7	253	11.1		23.6
14	138	55.4	18	36.5		42.2	268	13.2		23.7
15	153	57.9	33	35.7		41.6	283	15.3		23.8
16	169	00.3	48	35.0		41.1	298	17.4		24.0
17	184	02.8	63	34.2	+21	40.5	313	19.5	-21	24.1
18	199	05.3	78	33.4	+21	39.9	328	21.6	-21	24.2
19	214	07.7	93	32.6		39.4	343	23.7		24.3
20	229	10.2	108	31.8		38.8	358	25.8		24.4
21	244	12.7	123	31.0		38.3	13	27.9		24.5
22	259	15.1	138	30.2		37.7	28	30.0		24.7
23	274	17.6	153	29.5		37.1	43	32.1		24.8
24	289	20.1	168	28.7	+21	36.6	58	34.2	-21	24.9
Dif	—		-8		-6		+21		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 6 ^d 5	PHE { 4 ^h : 54 ^h /6 12 ^h : 54 ^h /5 20 ^h : 54 ^h /4 R°: 43 ^m											
	PMG: 12 ^h 05 ^m 6					SD: 14 ^h 9		PMG: 17 ^h 45 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	37.5	+22	04.2		101	23.7	-1	11.8	58	*** **	1	57	71	23	20
1	193	37.4		03.9		115	57.7 ¹⁵⁰		21.3	58	*** **	2	56	68	23	19
2	208	37.3		03.5		130	31.6 ¹⁴⁹		30.8	56	*** **	3	54	66	25	2
3	223	37.2		03.2		145	05.6 ¹⁵⁰		40.3	54	1 26	2	53	64	27	23
4	238	37.2		02.9		159	39.6 ¹⁵⁰		49.9	52	1 57	3	51	63	29	24
5	253	37.1	+22	02.5		174	13.6 ¹⁵⁰	-1	59.3	50	2 20	3	50	62	23	31
6	268	37.0	+22	02.2		188	47.6 ¹⁵⁰	-2	08.8	45	3 01	3	48	58	23	35
7	283	36.9		01.8		203	21.7 ¹⁵¹		18.3	40	29	4	46	56	38	31
8	298	36.8		01.5		217	55.7 ¹⁵⁰		27.7	35	3 50	26	4	55	44	33
9	313	36.8		01.2		232	29.7 ¹⁵⁰		37.2	30	4 07	4	40	52	44	34
10	328	36.7		00.8		247	03.8 ¹⁵¹		46.6	20	35	5	39	49	48	37
11	343	36.6	+22	00.5		261	37.8 ¹⁵⁰	-2	56.0	10 N	4 56	5	37	46	23	52
12	358	36.5	+22	00.1		276	11.9 ¹⁵¹	-3	05.4	0	5 14	5	35	43	23	55
13	13	36.4	+21	59.8		290	46.0 ¹⁵¹		14.8	10 S	30	5	33	40	23	59
14	28	36.4		59.4		305	20.0 ¹⁵⁰		24.1	20	5 45	6	30	37	**	**
15	43	36.3		59.1		319	54.1 ¹⁵¹		33.4	30	6 00	29	28	34	**	**
16	58	36.2		58.8		334	28.2 ¹⁵¹		42.8	35	08	39	26	32	**	**
17	73	36.1	+21	58.4		349	02.3 ¹⁵¹	-3	52.1	40	6 16	6	25	29	**	**
18	88	36.0	+21	58.1		3	36.3 ¹⁵⁰	-4	01.3	45	6 26	7	23	27	**	**
19	103	36.0		57.7		18	10.4 ¹⁵¹		10.6	50	36	17	20	25	**	**
20	118	35.9		57.4		32	44.5 ¹⁵¹		19.8	52	41	24	19	23	**	**
21	133	35.8		57.0		47	18.6 ¹⁵¹		29.0	54	46	31	18	22	**	**
22	148	35.7		56.7		61	52.6 ¹⁵⁰		38.2	56	51	39	17	20	**	**
23	163	35.6		56.3		76	26.7 ¹⁵¹		47.4	58	6 57	49	16	17	**	**
24	178	35.6	+21	56.0		91	00.8 ¹⁵¹	-4	56.6	60 S	7 04	7	14	16	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 41 ^m 9		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: -1.2 PMG: 20 ^h 03 ^m		Mag: -1.9 PMG: 16 ^h 00 ^m		Mag: +0.2 PMG: 21 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	20.1	168	28.7	58	34.2	119	25.8	40	01.6
1	304	22.5	183	27.9	73	36.3	134	27.9	55	04.2
2	319	25.0	198	27.1	88	38.4	149	30.0	70	06.8
3	334	27.5	213	26.3	103	40.5	164	32.1	85	09.4
4	349	29.9	228	25.5	118	42.6	179	34.2	100	12.0
5	4	32.4	243	24.8	133	44.7	194	36.3	115	14.6
6	19	34.8	258	24.0	148	46.8	209	38.4	130	17.1
7	34	37.3	273	23.2	163	48.8	224	40.5	145	19.7
8	49	39.8	288	22.4	178	50.9	239	42.6	160	22.3
9	64	42.2	303	21.6	193	53.0	254	44.8	175	24.9
10	79	44.7	318	20.9	208	55.1	269	46.9	190	27.5
11	94	47.2	333	20.1	223	57.2	284	49.0	205	30.1
12	109	49.6	348	19.3	238	59.2	299	51.1	220	32.7
13	124	52.1	3	18.5	254	01.3	314	53.2	235	35.3
14	139	54.6	18	17.7	269	03.4	329	55.3	250	37.9
15	154	57.0	33	17.0	284	05.5	344	57.4	265	40.5
16	169	59.5	48	16.2	299	07.5	359	59.5	280	43.1
17	185	02.0	63	15.4	314	09.6	15	01.6	295	45.7
18	200	04.4	78	14.6	329	11.7	30	03.7	310	48.3
19	215	06.9	93	13.9	344	13.7	45	05.9	325	50.9
20	230	09.3	108	13.1	359	15.8	60	08.0	340	53.5
21	245	11.8	123	12.3	14	17.9	75	10.1	355	56.1
22	260	14.3	138	11.5	29	19.9	90	12.2	10	58.6
23	275	16.7	153	10.8	44	22.0	105	14.3	26	01.2
24	290	19.2	168	10.0	59	24.1	120	16.4	41	03.8
Dif	—		-8		+21		+21		+26	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 7 ^d 5	PHE {	4 ^h : 54 ^h /3 12 ^h : 54 ^h /3 20 ^h : 54 ^h /3				R°: 43 ^m		Civil		Náutico		Hora		R°	
	PMG: 12 ^h 05 ^m 7																			
	hG ☉	Dec			hG ☾	Dif			Dec	Dif										
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m	h m	m
0	178	35.6	+21	56.0	91	00.8	-4	56.6	60 N	21 11	22 32	** **	13 08	70	23 37	18				
1	193	35.5		55.6	105	34.9 ¹⁵¹	-5	05.7	58	20 54	22 00	** **	04 68		42 20					
2	208	35.4		55.3	120	08.9 ¹⁵⁰		14.8	56	39	21 36	** **	13 00	66	46 22					
3	223	35.3		54.9	134	43.0 ¹⁵¹		23.9	54	27	17	22 40	12 57	64	50 24					
4	238	35.3		54.6	149	17.0 ¹⁵⁰		32.9	52	16	21 02	22 10	54 63		53 26					
5	253	35.2	+21	54.2	163	51.1 ¹⁵¹	-5	41.9	50	20 06	20 49	21 48	12 52	61	23 56	27				
6	268	35.1	+21	53.9	178	25.1 ¹⁵⁰	-5	50.9	45	19 46	20 22	21 09	12 46	58	** **	** **				
7	283	35.0		53.5	192	59.1 ¹⁵⁰	-5	59.9	40	29	20 01	20 41	42 55		** **	** **				
8	298	34.9		53.1	207	33.2 ¹⁵¹	-6	08.9	35	15	19 44	20	38 53		** **	** **				
9	313	34.9		52.8	222	07.2 ¹⁵⁰		17.8	30	19 03	30	20 03	34 52		** **	** **				
10	328	34.8		52.4	236	41.2 ¹⁵⁰		26.7	20	18 43	19 07	19 36	28 48		** **	** **				
11	343	34.7	+21	52.1	251	15.2 ¹⁵⁰	-6	35.6	10 N	18 26	18 48	19 15	12 23	45	** **	** **				
12	358	34.6	+21	51.7	265	49.1 ¹⁴⁹	-6	44.4	0	18 09	18 32	18 57	12 18	43	** **	** **				
13	13	34.6		51.4	280	23.1 ¹⁵⁰	-6	53.2	10 S	17 53	16	42	13 40		** **	** **				
14	28	34.5		51.0	294	57.1 ¹⁵⁰	-7	02.0	20	36	18 00	27	07 38		0 03	48				
15	43	34.4		50.6	309	31.0 ¹⁴⁹		10.7	30	16	17 42	12	12 02	34	07 52					
16	58	34.3		50.3	324	04.9 ¹⁴⁹		19.5	35	17 05	33	18 04	11 58	33	10 53					
17	73	34.3	+21	49.9	338	38.8 ¹⁴⁹	-7	28.1	40	16 52	17 22	17 56	11 54	31	0 13	55				
18	88	34.2	+21	49.5	353	12.7 ¹⁴⁹	-7	36.8	45	16 37	17 10	17 46	11 50	29	0 16	58				
19	103	34.1		49.2	7	46.6 ¹⁴⁹		45.4	50	18	16 55	36	45 25	20	61					
20	118	34.0		48.8	22	20.5 ¹⁴⁹	-7	54.0	52	16 09	49	31	42 25		22 62					
21	133	34.0		48.5	36	54.3 ¹⁴⁸	-8	02.6	54	15 59	41	26	40 23		24 64					
22	148	33.9		48.1	51	28.1 ¹⁴⁸		11.1	56	48	33	21	37 21		26 66					
23	163	33.8		47.7	66	01.9 ¹⁴⁸		19.6	58	35	24	15	33 20		28 68					
24	178	33.8	+21	47.4	80	35.7 ¹⁴⁸	-8	28.1	60 S	15 20	16 14	17 09	11 30	17	0 31	70				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 4 ^h 38 ^m 0		Mag: -3.9 PMG: 12 ^h 48 ^m				Mag: -1.2 PMG: 20 ^h 00 ^m				Mag: -1.9 PMG: 15 ^h 57 ^m				Mag: +0.2 PMG: 21 ^h 12 ^m															
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	290	19.2	168	10.0	+21	22.7	59	24.1	-21	27.8	120	16.4	+5	33.5	41	03.8	-20	19.7												
1	305	21.7	183	09.2		22.1	74	26.1		27.9	135	18.5		33.3	56	06.4		19.7												
2	320	24.1	198	08.4		21.5	89	28.2		28.0	150	20.6		33.2	71	09.0		19.7												
3	335	26.6	213	07.7		20.9	104	30.2		28.1	165	22.7		33.0	86	11.6		19.7												
4	350	29.1	228	06.9		20.3	119	32.3		28.3	180	24.8		32.9	101	14.2		19.7												
5	5	31.5	243	06.1	+21	19.7	134	34.3	-21	28.4	195	26.9	+5	32.7	116	16.8	-20	19.7												
6	20	34.0	258	05.3	+21	19.1	149	36.4	-21	28.5	210	29.0	+5	32.6	131	19.4	-20	19.6												
7	35	36.4	273	04.6		18.5	164	38.4		28.6	225	31.1		32.4	146	22.0		19.6												
8	50	38.9	288	03.8		17.9	179	40.5		28.8	240	33.3		32.2	161	24.6		19.6												
9	65	41.4	303	03.0		17.3	194	42.5		28.9	255	35.4		32.1	176	27.2		19.6												
10	80	43.8	318	02.3		16.7	209	44.6		29.0	270	37.5		31.9	191	29.7		19.6												
11	95	46.3	333	01.5	+21	16.1	224	46.6	-21	29.1	285	39.6	+5	31.8	206	32.3	-20	19.6												
12	110	48.8	348	00.7	+21	15.5	239	48.7	-21	29.3	300	41.7	+5	31.6	221	34.9	-20	19.6												
13	125	51.2	3	00.0		14.9	254	50.7		29.4	315	43.8		31.4	236	37.5		19.6												
14	140	53.7	17	59.2		14.3	269	52.8		29.5	330	45.9		31.3	251	40.1		19.6												
15	155	56.2	32	58.4		13.7	284	54.8		29.7	345	48.0		31.1	266	42.7		19.6												
16	170	58.6	47	57.7		13.0	299	56.8		29.8	0	50.1		31.0	281	45.3		19.6												
17	186	01.1	62	56.9	+21	12.4	314	58.9	-21	29.9	15	52.2	+5	30.8	296	47.9	-20	19.5												
18	201	03.6	77	56.1	+21	11.8	330	00.9	-21	30.0	30	54.3	+5	30.7	311	50.5	-20	19.5												
19	216	06.0	92	55.4		11.2	345	03.0		30.2	45	56.4		30.5	326	53.1		19.5												
20	231	08.5	107	54.6		10.6	0	05.0		30.3	60	58.5		30.3	341	55.6		19.5												
21	246	10.9	122	53.8		10.0	15	07.0		30.4	76	00.6		30.2	356	58.2		19.5												
22	261	13.4	137	53.1		09.4	30	09.1		30.5	91	02.7		30.0	12	00.8		19.5												
23	276	15.9	152	52.3		08.8	45	11.1		30.7	106	04.8		29.9	27	03.4		19.5												
24	291	18.3	167	51.5	+21	08.1	60	13.1	-21	30.8	121	06.9	+5	29.7	42	06.0	-20	19.5												
Dif	—		-8				-6				+20				-1				+21				-2				+26			

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: 8 ^d 5 PHE { SD: 14'8 PMG: 19 ^h 11 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	33.8	+21 47.4	80	35.7	-8 28.1	60 N	** **	1 40	3 01	14 18	69	23 55	23	
1	193	33.7	47.0	95	09.5 ¹⁴⁸	36.5 ⁸⁴	58	** **	2 12	18	12 67		** **	**	
2	208	33.6	46.6	109	43.2 ¹⁴⁷	44.9 ⁸⁴	56	0 33	36	32	06 65		** **	**	
3	223	33.5	46.3	124	17.0 ¹⁴⁸	-8 53.2 ⁸³	54	1 31	2 54	45	14 01	64	** **	**	
4	238	33.5	45.9	138	50.7 ¹⁴⁷	-9 01.5 ⁸³	52	2 02	3 10	3 56	13 57	62	** **	**	
5	253	33.4	+21 45.5	153	24.3 ¹⁴⁶	-9 09.8 ⁸³	50	2 24	3 23	4 06	13 53	61	** **	**	
6	268	33.3	+21 45.2	167	58.0 ¹⁴⁷	-9 18.1 ⁸³	45	3 03	3 50	4 26	13 44	58	0 03	30	
7	283	33.3	44.8	182	31.6 ¹⁴⁶	26.3 ⁸²	40	30	4 11	43	37 56		09 32		
8	298	33.2	44.4	197	05.2 ¹⁴⁶	34.4 ⁸¹	35	3 52	27	4 56	31 54		14 34		
9	313	33.1	44.0	211	38.8 ¹⁴⁶	42.5 ⁸¹	30	4 09	4 41	5 08	26 52		18 36		
10	328	33.0	43.7	226	12.4 ¹⁴⁶	50.6 ⁸¹	20	36	5 04	29	16 50		25 39		
11	343	33.0	+21 43.3	240	45.9 ¹⁴⁵	-9 58.7 ⁸¹	10 N	4 56	5 23	5 46	13 08	47	0 32	41	
12	358	32.9	+21 42.9	255	19.4 ¹⁴⁵	-10 06.7 ⁸⁰	0	5 14	5 40	6 02	13 01	44	0 38	44	
13	13	32.8	42.5	269	52.9 ¹⁴⁵	14.6 ⁷⁹	10 S	30	5 56	18	12 53	42	45 46		
14	28	32.8	42.2	284	26.3 ¹⁴⁴	22.6 ⁸⁰	20	44	6 12	35	45 40		51 49		
15	43	32.7	41.8	298	59.8 ¹⁴⁵	30.4 ⁷⁸	30	5 59	29	6 55	36 37		0 59	52	
16	58	32.6	41.4	313	33.2 ¹⁴⁴	38.3 ⁷⁹	35	6 07	38	7 06	31 35		1 03	54	
17	73	32.6	+21 41.0	328	06.5 ¹⁴³	-10 46.1 ⁷⁸	40	6 16	6 49	7 19	12 25	34	1 08	56	
18	88	32.5	+21 40.7	342	39.8 ¹⁴³	-10 53.8 ⁷⁷	45	6 25	7 01	7 34	12 19	31	1 14	58	
19	103	32.4	40.3	357	13.1 ¹⁴³	-11 01.5 ⁷⁷	50	35	16	7 53	10 29		21 61		
20	118	32.3	39.9	11	46.4 ¹⁴³	09.2 ⁷⁷	52	40	22	8 02	07 27		24 63		
21	133	32.3	39.5	26	19.7 ¹⁴³	16.8 ⁷⁶	54	45	30	12	12 03	25	28 64		
22	148	32.2	39.1	40	52.9 ¹⁴²	24.4 ⁷⁶	56	50	38	23	11 58	24	32 65		
23	163	32.1	38.8	55	26.0 ¹⁴¹	31.9 ⁷⁵	58	6 56	47	36	53 22		36 68		
24	178	32.1	+21 38.4	69	59.2 ¹⁴²	-11 39.4 ⁷⁵	60 S	7 02	7 57	8 51	11 47	21	1 41	70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 34 ^m 0		Mag: -3.9 PMG: 12 ^h 49 ^m			Mag: -1.1 PMG: 19 ^h 56 ^m			Mag: -1.9 PMG: 15 ^h 53 ^m			Mag: +0.2 PMG: 21 ^h 08 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	291	18.3	167	51.5	+21 08.1	60	13.1	-21 30.8	121	06.9	+5 29.7	42	06.0	-20 19.5	
1	306	20.8	182	50.8	07.5	75	15.1	30.9	136	09.0	29.5	57	08.6	19.5	
2	321	23.3	197	50.0	06.9	90	17.2	31.1	151	11.2	29.4	72	11.2	19.5	
3	336	25.7	212	49.3	06.3	105	19.2	31.2	166	13.3	29.2	87	13.8	19.5	
4	351	28.2	227	48.5	05.7	120	21.2	31.3	181	15.4	29.1	102	16.4	19.4	
5	6	30.7	242	47.7	+21 05.0	135	23.2	-21 31.5	196	17.5	+5 28.9	117	18.9	-20 19.4	
6	21	33.1	257	47.0	+21 04.4	150	25.3	-21 31.6	211	19.6	+5 28.8	132	21.5	-20 19.4	
7	36	35.6	272	46.2	03.8	165	27.3	31.7	226	21.7	28.6	147	24.1	19.4	
8	51	38.1	287	45.5	03.2	180	29.3	31.8	241	23.8	28.4	162	26.7	19.4	
9	66	40.5	302	44.7	02.5	195	31.3	32.0	256	25.9	28.3	177	29.3	19.4	
10	81	43.0	317	43.9	01.9	210	33.3	32.1	271	28.0	28.1	192	31.9	19.4	
11	96	45.4	332	43.2	+21 01.3	225	35.3	-21 32.2	286	30.1	+5 28.0	207	34.5	-20 19.4	
12	111	47.9	347	42.4	+21 00.7	240	37.3	-21 32.4	301	32.2	+5 27.8	222	37.1	-20 19.4	
13	126	50.4	2	41.7	+21 00.0	255	39.4	32.5	316	34.3	27.6	237	39.6	19.4	
14	141	52.8	17	40.9	+20 59.4	270	41.4	32.6	331	36.4	27.5	252	42.2	19.4	
15	156	55.3	32	40.2	58.8	285	43.4	32.8	346	38.5	27.3	267	44.8	19.4	
16	171	57.8	47	39.4	58.1	300	45.4	32.9	1	40.6	27.2	282	47.4	19.3	
17	187	00.2	62	38.6	+20 57.5	315	47.4	-21 33.0	16	42.7	+5 27.0	297	50.0	-20 19.3	
18	202	02.7	77	37.9	+20 56.9	330	49.4	-21 33.2	31	44.8	+5 26.8	312	52.6	-20 19.3	
19	217	05.2	92	37.1	56.2	345	51.4	33.3	46	46.9	26.7	327	55.2	19.3	
20	232	07.6	107	36.4	55.6	0	53.4	33.4	61	49.0	26.5	342	57.8	19.3	
21	247	10.1	122	35.6	54.9	15	55.4	33.6	76	51.1	26.4	358	00.3	19.3	
22	262	12.5	137	34.9	54.3	30	57.4	33.7	91	53.2	26.2	13	02.9	19.3	
23	277	15.0	152	34.1	53.7	45	59.4	33.8	106	55.3	26.0	28	05.5	19.3	
24	292	17.5	167	33.4	+20 53.0	61	01.4	-21 34.0	121	57.4	+5 25.9	43	08.1	-20 19.3	
Dif	—		-8 -6			+20 -1			+21 -2			+26 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 5	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/4	SD: 14'8			Rº: 47 ^m						
	PMG: 12 ^h 05 ^m 9	PMG: 19 ^h 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	178	32.1	+21 38.4	69	59.2	-11 39.4	74	60 N	21 08	22 26	** **	15 27 67	** **	**	
1	193	32.0	38.0	84	32.3 ¹⁴¹	46.8	74	58	20 51	21 55	** **	19 65	0 02 24		
2	208	31.9	37.6	99	05.4 ¹⁴¹	-11 54.2	74	56	37	33	23 24	11 64	08 26		
3	223	31.9	37.2	113	38.4 ¹⁴⁰	-12 01.5	73	54	25	21 15	22 35	15 05 62	14 27		
4	238	31.8	36.8	128	11.4 ¹⁴⁰	08.8	73	52	14	20 59	22 06	14 59 61	19 28		
5	253	31.7	+21 36.5	142	44.4 ¹⁴⁰	-12 16.0	72	50	20 04	20 46	21 45	14 54 60	0 23 30		
6	268	31.7	+21 36.1	157	17.3 ¹³⁹	-12 23.2	72	45	19 44	20 20	21 07	14 42 58	0 33 32		
7	283	31.6	35.7	171	50.2 ¹³⁹	30.3	71	40	28	20 00	20 40	33 55	41 34		
8	298	31.5	35.3	186	23.1 ¹³⁹	37.4	71	35	15	19 44	19	25 54	48 36		
9	313	31.5	34.9	200	55.9 ¹³⁸	44.4	70	30	19 03	30	20 02	18 52	0 54 38		
10	328	31.4	34.5	215	28.7 ¹³⁸	51.4	70	20	18 43	19 07	19 36	14 06 50	1 04 41		
11	343	31.3	+21 34.1	230	01.4 ¹³⁷	-12 58.3	69	10 N	18 26	18 48	19 15	13 55 48	1 13 43		
12	358	31.3	+21 33.8	244	34.1 ¹³⁷	-13 05.2	69	0	18 10	18 32	18 58	13 45 46	1 22 45		
13	13	31.2	33.4	259	06.8 ¹³⁷	12.0	68	10 S	17 54	16	42	35 45	31 47		
14	28	31.1	33.0	273	39.4 ¹³⁶	18.8	68	20	37	18 00	28	25 42	40 50		
15	43	31.1	32.6	288	12.0 ¹³⁶	25.5	67	30	18	17 43	13	13 40	51 52		
16	58	31.0	32.2	302	44.5 ¹³⁵	32.1	66	35	17 06	34	18 05	13 06 39	1 57 54		
17	73	31.0	+21 31.8	317	17.1 ¹³⁶	-13 38.7	66	40	16 54	17 23	17 57	12 59 36	2 04 56		
18	88	30.9	+21 31.4	331	49.5 ¹³⁴	-13 45.3	66	45	16 38	17 11	17 48	12 50 34	2 12 58		
19	103	30.8	31.0	346	22.0 ¹³⁵	51.7	64	50	20	16 57	38	39 32	22 60		
20	118	30.8	30.6	0	54.3 ¹³³	-13 58.2	65	52	11	51	33	34 31	27 61		
21	133	30.7	30.2	15	26.7 ¹³⁴	-14 04.5	63	54	16 02	44	28	28 30	32 63		
22	148	30.6	29.8	29	59.0 ¹³³	10.8	63	56	15 50	36	23	22 29	37 65		
23	163	30.6	29.4	44	31.2 ¹³²	17.1	63	58	38	27	18	15 27	44 66		
24	178	30.5	+21 29.0	59	03.5 ¹³³	-14 23.2	61	60 S	15 23	16 17	17 11	12 08 25	2 51 68		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 30 ^m 1	Mag: -3.9 PMG: 12 ^h 50 ^m	Mag: -1.1 PMG: 19 ^h 53 ^m	Mag: -1.8 PMG: 15 ^h 50 ^m	Mag: +0.2 PMG: 21 ^h 04 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	'	°	'				
0	292	17.5	167	33.4	+20 53.0	61	01.4	-21 34.0	121	57.4	+5 25.9	43	08.1	-20 19.3	
1	307	19.9	182	32.6	52.4	76	03.4	34.1	136	59.5	25.7	58	10.7	19.3	
2	322	22.4	197	31.9	51.7	91	05.4	34.2	152	01.6	25.6	73	13.3	19.3	
3	337	24.9	212	31.1	51.1	106	07.4	34.4	167	03.7	25.4	88	15.9	19.2	
4	352	27.3	227	30.4	50.4	121	09.4	34.5	182	05.8	25.2	103	18.4	19.2	
5	7	29.8	242	29.6	+20 49.8	136	11.4	-21 34.6	197	07.9	+5 25.1	118	21.0	-20 19.2	
6	22	32.3	257	28.9	+20 49.1	151	13.4	-21 34.8	212	10.0	+5 24.9	133	23.6	-20 19.2	
7	37	34.7	272	28.1	48.5	166	15.3	34.9	227	12.1	24.8	148	26.2	19.2	
8	52	37.2	287	27.4	47.8	181	17.3	35.0	242	14.2	24.6	163	28.8	19.2	
9	67	39.7	302	26.6	47.2	196	19.3	35.2	257	16.3	24.4	178	31.4	19.2	
10	82	42.1	317	25.9	46.5	211	21.3	35.3	272	18.4	24.3	193	33.9	19.2	
11	97	44.6	332	25.1	+20 45.9	226	23.3	-21 35.5	287	20.5	+5 24.1	208	36.5	-20 19.2	
12	112	47.0	347	24.4	+20 45.2	241	25.3	-21 35.6	302	22.6	+5 24.0	223	39.1	-20 19.2	
13	127	49.5	2	23.6	44.6	256	27.2	35.7	317	24.7	23.8	238	41.7	19.2	
14	142	52.0	17	22.9	43.9	271	29.2	35.9	332	26.8	23.6	253	44.3	19.2	
15	157	54.4	32	22.2	43.3	286	31.2	36.0	347	28.9	23.5	268	46.9	19.2	
16	172	56.9	47	21.4	42.6	301	33.2	36.1	2	31.0	23.3	283	49.4	19.1	
17	187	59.4	62	20.7	+20 41.9	316	35.1	-21 36.3	17	33.1	+5 23.1	298	52.0	-20 19.1	
18	203	01.8	77	19.9	+20 41.3	331	37.1	-21 36.4	32	35.2	+5 23.0	313	54.6	-20 19.1	
19	218	04.3	92	19.2	40.6	346	39.1	36.6	47	37.3	22.8	328	57.2	19.1	
20	233	06.8	107	18.4	40.0	1	41.1	36.7	62	39.4	22.7	343	59.8	19.1	
21	248	09.2	122	17.7	39.3	16	43.0	36.8	77	41.5	22.5	359	02.4	19.1	
22	263	11.7	137	17.0	38.6	31	45.0	37.0	92	43.6	22.3	14	04.9	19.1	
23	278	14.2	152	16.2	38.0	46	47.0	37.1	107	45.7	22.2	29	07.5	19.1	
24	293	16.6	167	15.5	+20 37.3	61	48.9	-21 37.3	122	47.8	+5 22.0	44	10.1	-20 19.1	
Dif	—		-7		-7	+20		-1	+21		-2	+26		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 5	PHE { 4 ^h : 54 ^m /5 12 ^h : 54 ^m /7 20 ^h : 54 ^m /8 R°: 48 ^m									
	PMG: 12 ^h 06 ^m 0					SD: 14 ^h 8		PMG: 20 ^h 43 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	30.5	+21	59	03.5	-14	23.2	60 N	*** **	1 46	3 04	16 34	64	0 18 27
1	193	30.5		73	35.6 ¹³¹		29.4	58	*** **	2 17	21	24 63		26 30
2	208	30.4		88	07.8 ¹³²		35.4	60	0 48	40	35	15 61		34 3
3	223	30.3		102	39.8 ¹³⁰		41.4	60	1 37	2 58	48	07 60		41 33
4	238	30.3		117	11.9 ¹³¹		47.4	60	2 06	3 13	3 58	16 00	59	47 34
5	253	30.2	+21	131	43.9 ¹³⁰	-14	53.2	50	2 27	3 26	4 08	15 54	58	0 53 35
6	268	30.1	+21	146	15.8 ¹²⁹	-14	59.0	45	3 05	3 52	4 28	15 40	56	1 05 37
7	283	30.1		160	47.8 ¹³⁰	-15	04.8	40	32	4 12	44	28 55		15 39
8	298	30.0		175	19.6 ¹²⁸		10.5	35	3 53	29	4 58	19 54		24 40
9	313	30.0		189	51.4 ¹²⁸		16.1	30	4 10	4 42	5 09	15 10	53	32 41
10	328	29.9		204	23.2 ¹²⁸		21.6	20	36	5 05	29	14 56	51	45 43
11	343	29.8	+21	218	55.0 ¹²⁸	-15	27.1	10 N	4 57	5 24	5 46	14 43	50	1 56 46
12	358	29.8	+21	233	26.6 ¹²⁶	-15	32.5	0	5 14	5 40	6 02	14 31	48	2 07 47
13	13	29.7		247	58.3 ¹²⁷		37.9	10 S	30	5 56	18	20 46		18 49
14	28	29.7		262	29.9 ¹²⁶		43.1	20	44	6 11	35	14 07	45	30 50
15	43	29.6		277	01.4 ¹²⁵		48.3	30	5 59	28	6 54	13 53	43	43 53
16	58	29.5		291	32.9 ¹²⁵		53.5	35	6 07	38	7 05	45 42		2 51 54
17	73	29.5	+21	306	04.4 ¹²⁵	-15	58.6	40	6 15	6 48	7 18	13 35	41	3 00 55
18	88	29.4	+21	320	35.8 ¹²⁴	-16	03.6	45	6 24	7 00	7 33	13 24	40	3 10 57
19	103	29.4		335	07.2 ¹²⁴		08.5	50	34	14	7 51	11 38		22 59
20	118	29.3		349	38.5 ¹²³		13.3	52	38	21	8 00	13 05	37	28 60
21	133	29.3		4	09.7 ¹²²		18.1	54	43	28	10	12 58	36	35 61
22	148	29.2		18	41.0 ¹²³		22.8	56	48	36	21	51 34		42 62
23	163	29.1		33	12.1 ¹²¹		27.5	58	6 54	44	33	42 33		50 64
24	178	29.1	+21	47	43.3 ¹²²	-16	32.0	60 S	7 00	7 54	8 48	12 33	31	3 59 66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 26 ^m 2		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: -1.1 PMG: 19 ^h 50 ^m		Mag: -1.8 PMG: 15 ^h 47 ^m		Mag: +0.2 PMG: 21 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	293	16.6	167	15.5	+20	37.3	61	48.9	-21	37.3	122	47.8	+5	22.0	44	10.1	-20	19.1
1	308	19.1	182	14.7		36.6	76	50.9		37.4	137	49.9		21.9	59	12.7		19.1
2	323	21.5	197	14.0		36.0	91	52.9		37.5	152	52.0		21.7	74	15.3		19.1
3	338	24.0	212	13.3		35.3	106	54.8		37.7	167	54.1		21.5	89	17.9		19.1
4	353	26.5	227	12.5		34.6	121	56.8		37.8	182	56.2		21.4	104	20.4		19.0
5	8	28.9	242	11.8	+20	34.0	136	58.7	-21	38.0	197	58.3	+5	21.2	119	23.0	-20	19.0
6	23	31.4	257	11.0	+20	33.3	152	00.7	-21	38.1	213	00.4	+5	21.0	134	25.6	-20	19.0
7	38	33.9	272	10.3		32.6	167	02.7		38.2	228	02.5		20.9	149	28.2		19.0
8	53	36.3	287	09.6		31.9	182	04.6		38.4	243	04.6		20.7	164	30.8		19.0
9	68	38.8	302	08.8		31.3	197	06.6		38.5	258	06.6		20.6	179	33.3		19.0
10	83	41.3	317	08.1		30.6	212	08.5		38.7	273	08.7		20.4	194	35.9		19.0
11	98	43.7	332	07.4	+20	29.9	227	10.5	-21	38.8	288	10.8	+5	20.2	209	38.5	-20	19.0
12	113	46.2	347	06.6	+20	29.2	242	12.4	-21	39.0	303	12.9	+5	20.1	224	41.1	-20	19.0
13	128	48.6	2	05.9		28.5	257	14.4		39.1	318	15.0		19.9	239	43.7		19.0
14	143	51.1	17	05.2		27.9	272	16.3		39.2	333	17.1		19.7	254	46.2		19.0
15	158	53.6	32	04.4		27.2	287	18.3		39.4	348	19.2		19.6	269	48.8		19.0
16	173	56.0	47	03.7		26.5	302	20.2		39.5	3	21.3		19.4	284	51.4		19.0
17	188	58.5	62	03.0	+20	25.8	317	22.2	-21	39.7	18	23.4	+5	19.3	299	54.0	-20	18.9
18	204	01.0	77	02.2	+20	25.1	332	24.1	-21	39.8	33	25.5	+5	19.1	314	56.6	-20	18.9
19	219	03.4	92	01.5		24.4	347	26.0		40.0	48	27.6		18.9	329	59.1		18.9
20	234	05.9	107	00.8		23.8	2	28.0		40.1	63	29.7		18.8	345	01.7		18.9
21	249	08.4	122	00.0		23.1	17	29.9		40.2	78	31.8		18.6	0	04.3		18.9
22	264	10.8	136	59.3		22.4	32	31.9		40.4	93	33.9		18.4	15	06.9		18.9
23	279	13.3	151	58.6		21.7	47	33.8		40.5	108	36.0		18.3	30	09.5		18.9
24	294	15.8	166	57.9	+20	21.0	62	35.7	-21	40.7	123	38.1	+5	18.1	45	12.0	-20	18.9
Dif	—		-7		-7		+19		-1		+21		-2		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 11 ^d 5 PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/2 R°: 51 ^m																		
	PMG: 12 ^h 06 ^m 1			PMG: 21 ^h 31 ^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	29.1	+21 19.3	47	43.3	-16 32.0	45	60 N	21 05	22 20	** **	17 38 59	0 45 36									
1	193	29.0	18.9	62	14.4 ¹²¹	36.5	45	58	20 48	21 51	** **	27 57	0 56 37									
2	208	29.0	18.5	76	45.4 ¹²⁰	40.9	44	56	34	29	23 12	16 57	1 05 38									
3	223	28.9	18.1	91	16.4 ¹²⁰	45.3	44	54	22	21 12	22 29	17 07 56	14 39									
4	238	28.9	17.7	105	47.3 ¹¹⁹	49.5	42	52	12	20 57	22 02	16 59 56	21 40									
5	253	28.8	+21 17.2	120	18.2 ¹¹⁹	-16 53.7	42	50	20 02	20 44	21 42	16 52 55	1 28 40									
6	268	28.8	+21 16.8	134	49.1 ¹¹⁹	-16 57.8	41	45	19 43	20 19	21 05	16 36 54	1 42 42									
7	283	28.7	16.4	149	19.9 ¹¹⁸	-17 01.9	41	40	27	19 59	20 38	23 54	1 54 43									
8	298	28.6	16.0	163	50.7 ¹¹⁸	05.8	39	35	14	43	18	13 52	2 04 44									
9	313	28.6	15.6	178	21.4 ¹¹⁷	09.7	39	30	19 02	29	20 01	16 03 52	13 45									
10	328	28.5	15.2	192	52.1 ¹¹⁷	13.5	38	20	18 42	19 07	19 35	15 47 51	28 47									
11	343	28.5	+21 14.7	207	22.7 ¹¹⁶	-17 17.2	37	10 N	18 25	18 48	19 15	15 33 50	2 42 48									
12	358	28.4	+21 14.3	221	53.3 ¹¹⁶	-17 20.8	36	0	18 10	18 32	18 58	15 19 50	2 54 49									
13	13	28.4	13.9	236	23.8 ¹¹⁵	24.4	36	10 S	17 54	17	43	15 06 49	3 07 50									
14	28	28.3	13.5	250	54.3 ¹¹⁵	27.8	34	20	37	18 01	28	14 52 48	20 52									
15	43	28.3	13.1	265	24.7 ¹¹⁴	31.2	34	30	19	17 44	14	36 47	36 52									
16	58	28.2	12.6	279	55.1 ¹¹⁴	34.5	33	35	17 08	35	18 06	27 47	45 53									
17	73	28.2	+21 12.2	294	25.5 ¹¹⁴	-17 37.7	32	40	16 55	17 25	17 58	14 16 46	3 55 54									
18	88	28.1	+21 11.8	308	55.8 ¹¹³	-17 40.9	32	45	16 40	17 13	17 50	14 04 45	4 07 55									
19	103	28.1	11.4	323	26.0 ¹¹²	43.9	30	50	22	16 59	40	13 49 44	21 57									
20	118	28.0	10.9	337	56.3 ¹¹³	46.9	30	52	14	53	35	42 43	28 58									
21	133	27.9	10.5	352	26.4 ¹¹¹	49.8	29	54	16 04	46	31	34 43	36 58									
22	148	27.9	10.1	6	56.6 ¹¹²	52.6	28	56	15 53	38	26	25 42	44 59									
23	163	27.8	09.7	21	26.7 ¹¹¹	55.3	27	58	41	29	20	15 42	4 54 60									
24	178	27.8	+21 09.2	35	56.7 ¹¹⁰	-17 57.9	26	60 S	15 27	16 20	17 14	13 04 40	5 05 61									
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO										
	PMG: 4 ^h 22 ^m 2			Mag: -3.9 PMG: 12 ^h 53 ^m			Mag: -1.1 PMG: 19 ^h 47 ^m			Mag: -1.8 PMG: 15 ^h 43 ^m		Mag: +0.2 PMG: 20 ^h 56 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	294	15.8	166 57.9	+20 21.0	62 35.7	-21 40.7	123 38.1	+5 18.1	45 12.0	-20 18.9												
1	309	18.2	181 57.1	20.3	77 37.7	40.8	138 40.2	18.0	60 14.6	18.9												
2	324	20.7	196 56.4	19.6	92 39.6	41.0	153 42.3	17.8	75 17.2	18.9												
3	339	23.1	211 55.7	18.9	107 41.5	41.1	168 44.3	17.6	90 19.8	18.9												
4	354	25.6	226 54.9	18.2	122 43.5	41.3	183 46.4	17.5	105 22.4	18.9												
5	9	28.1	241 54.2	+20 17.5	137 45.4	-21 41.4	198 48.5	+5 17.3	120 24.9	-20 18.9												
6	24	30.5	256 53.5	+20 16.8	152 47.3	-21 41.6	213 50.6	+5 17.1	135 27.5	-20 18.9												
7	39	33.0	271 52.8	16.1	167 49.2	41.7	228 52.7	17.0	150 30.1	18.8												
8	54	35.5	286 52.0	15.4	182 51.2	41.8	243 54.8	16.8	165 32.7	18.8												
9	69	37.9	301 51.3	14.7	197 53.1	42.0	258 56.9	16.6	180 35.2	18.8												
10	84	40.4	316 50.6	14.0	212 55.0	42.1	273 59.0	16.5	195 37.8	18.8												
11	99	42.9	331 49.9	+20 13.3	227 56.9	-21 42.3	289 01.1	+5 16.3	210 40.4	-20 18.8												
12	114	45.3	346 49.1	+20 12.6	242 58.9	-21 42.4	304 03.2	+5 16.1	225 43.0	-20 18.8												
13	129	47.8	1 48.4	11.9	258 00.8	42.6	319 05.3	16.0	240 45.5	18.8												
14	144	50.3	16 47.7	11.2	273 02.7	42.7	334 07.4	15.8	255 48.1	18.8												
15	159	52.7	31 47.0	10.5	288 04.6	42.9	349 09.5	15.7	270 50.7	18.8												
16	174	55.2	46 46.3	09.8	303 06.5	43.0	4 11.5	15.5	285 53.3	18.8												
17	189	57.6	61 45.5	+20 09.1	318 08.4	-21 43.2	19 13.6	+5 15.3	300 55.9	-20 18.8												
18	205	00.1	76 44.8	+20 08.4	333 10.4	-21 43.3	34 15.7	+5 15.2	315 58.4	-20 18.8												
19	220	02.6	91 44.1	07.7	348 12.3	43.5	49 17.8	15.0	331 01.0	18.8												
20	235	05.0	106 43.4	07.0	3 14.2	43.6	64 19.9	14.8	346 03.6	18.8												
21	250	07.5	121 42.7	06.3	18 16.1	43.8	79 22.0	14.7	1 06.2	18.7												
22	265	10.0	136 41.9	05.5	33 18.0	43.9	94 24.1	14.5	16 08.7	18.7												
23	280	12.4	151 41.2	04.8	48 19.9	44.1	109 26.2	14.3	31 11.3	18.7												
24	295	14.9	166 40.5	+20 04.1	63 21.8	-21 44.2	124 28.3	+5 14.2	46 13.9	-20 18.7												
Dif	—			-7			+19			-2		+26		0								

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15 ^h 7			Edad: 12 ^d 5 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 7 R ^o : 51 ^m				Principio del crepúsculo			Salida de Luna			Puesta de Luna						
	PMG: 12 ^h 06 ^m 2			SD: 15 ^h 1 PMG: 22 ^h 22 ^m				Principio del crepúsculo			Salida de Luna			Puesta de Luna						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o		Hora	R ^o					
h	°	'	°	°	'	°	'	h	m	h	m		h	m	m	h	m	m		
0	178	27.8	+21	09.2	35	56.7	-17	57.9	25	60 N	1 53	3 08	18	37	50	1	21	45		
1	193	27.7		08.8	50	26.7	110	-18	00.4	25	58	2 22	25	24	50		33	46		
2	208	27.7		08.4	64	56.7	110		02.9	25	56	1 00	2 43	38	13	51		43	47	
3	223	27.6		08.0	79	26.6	109		05.2	23	54	1 43	3 01	3 50	18	03	51		1 53	46
4	238	27.6		07.5	93	56.4	108		07.5	23	52	2 10	16	4 01	17	55	50		2 01	47
5	253	27.5	+21	07.1	108	26.3	109	-18	09.7	22	50	2 31	3 29	4 10	17	47	51		2 08	48
6	268	27.5	+21	06.7	122	56.1	108	-18	11.8	21	45	3 08	3 54	4 30	17	30	51		2 24	48
7	283	27.4		06.2	137	25.8	107		13.8	20	40	34	4 14	46	17	51		37	49	
8	298	27.4		05.8	151	55.5	107		15.7	19	35	3 55	30	4 59	17	05	52		48	49
9	313	27.3		05.4	166	25.2	107		17.5	18	30	4 11	4 44	5 10	16	55	52		2 58	49
10	328	27.3		04.9	180	54.8	106		19.2	17	20	37	5 06	30	38	52		3 15	50	
11	343	27.2	+21	04.5	195	24.4	106	-18	20.9	17	10 N	4 58	5 24	5 47	16	23	52		3 30	50
12	358	27.2	+21	04.1	209	54.0	106	-18	22.4	15	0	5 15	5 40	6 03	16	09	52		3 43	51
13	13	27.2		03.6	224	23.5	105		23.8	14	10 S	30	5 56	18	15	55	52		3 57	51
14	28	27.1		03.2	238	53.0	105		25.2	14	20	44	6 11	35	40	52		4 12	51	
15	43	27.1		02.8	253	22.4	104		26.5	13	30	5 58	28	6 53	23	52		28	52	
16	58	27.0		02.3	267	51.8	104		27.6	11	35	6 06	37	7 04	14	51		38	52	
17	73	27.0	+21	01.9	282	21.2	104	-18	28.7	11	40	6 14	6 47	7 17	15	02	52		4 49	53
18	88	26.9	+21	01.4	296	50.5	103	-18	29.7	10	45	6 22	6 59	7 32	14	49	51		5 02	53
19	103	26.9		01.0	311	19.8	103		30.6	9	50	32	7 13	49	33	51		18	53	
20	118	26.8		00.6	325	49.1	103		31.4	8	52	37	19	7 58	25	51		26	53	
21	133	26.8	+21	00.1	340	18.3	102		32.1	7	54	41	26	8 07	17	51		34	54	
22	148	26.7	+20	59.7	354	47.5	102		32.7	6	56	46	33	18	14	07	51		43	54
23	163	26.7		59.2	9	16.6	101		33.2	5	58	52	42	30	13	57	50		5 54	54
24	178	26.6	+20	58.8	23	45.7	101	-18	33.6	4	60 S	6 58	7 52	8 44	13	44	51		6 06	55

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 18 ^m 3			Mag: -3.9 PMG: 12 ^h 54 ^m			Mag: -1.1 PMG: 19 ^h 44 ^m			Mag: -1.8 PMG: 15 ^h 40 ^m			Mag: +0.2 PMG: 20 ^h 51 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	295	14.9	+20	166	40.5	03.4	63	21.8	-21	124	28.3	+5	46	13.9	-20	18.7
1	310	17.4		181	39.8	03.4	78	23.7		139	30.4		61	16.5		18.7
2	325	19.8		196	39.1	02.7	93	25.6		154	32.5		76	19.0		18.7
3	340	22.3		211	38.4	02.0	108	27.5		169	34.5		91	21.6		18.7
4	355	24.8		226	37.7	01.3	123	29.4		184	36.6		106	24.2		18.7
5	10	27.2	+20	241	36.9	00.5	138	31.3	-21	199	38.7	+5	121	26.8	-20	18.7
6	25	29.7	+19	256	36.2	59.8	153	33.2	-21	214	40.8	+5	136	29.3	-20	18.7
7	40	32.1		271	35.5	59.1	168	35.1		229	42.9		151	31.9		18.7
8	55	34.6		286	34.8	58.4	183	37.0		244	45.0		166	34.5		18.7
9	70	37.1		301	34.1	57.6	198	38.9		259	47.1		181	37.1		18.7
10	85	39.5		316	33.4	56.9	213	40.8		274	49.2		196	39.6		18.7
11	100	42.0	+19	331	32.7	56.2	228	42.7	-21	289	51.3	+5	211	42.2	-20	18.6
12	115	44.5	+19	346	32.0	55.5	243	44.6	-21	304	53.3	+5	226	44.8	-20	18.6
13	130	46.9		1	31.2	54.7	258	46.5		319	55.4		241	47.3		18.6
14	145	49.4		16	30.5	54.0	273	48.3		334	57.5		256	49.9		18.6
15	160	51.9		31	29.8	53.3	288	50.2		349	59.6		271	52.5		18.6
16	175	54.3		46	29.1	52.6	303	52.1		5	01.7		286	55.1		18.6
17	190	56.8	+19	61	28.4	51.8	318	54.0	-21	20	03.8	+5	301	57.6	-20	18.6
18	205	59.3	+19	76	27.7	51.1	333	55.9	-21	35	05.9	+5	317	00.2	-20	18.6
19	221	01.7		91	27.0	50.4	348	57.8		50	08.0		332	02.8		18.6
20	236	04.2		106	26.3	49.6	3	59.7		65	10.0		347	05.4		18.6
21	251	06.6		121	25.6	48.9	19	01.5		80	12.1		2	07.9		18.6
22	266	09.1		136	24.9	48.1	34	03.4		95	14.2		17	10.5		18.6
23	281	11.6		151	24.2	47.4	49	05.3		110	16.3		32	13.1		18.6
24	296	14.0	+19	166	23.5	46.7	64	07.2	-21	125	18.4	+5	47	15.6	-20	18.6
Dif	—			-7		-7	+19		-2	+21			+26			0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 13 ^d 5 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3 R°: 53 ^m																		
	PMG: 12 ^h 06 ^m 3			SD: 15/2 PMG: 23 ^h 13 ^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	26.6	+20 58.8	23	45.7	-18 33.6	3	60 N	21 01	22 14	** **	19 27 41	2 06 56									
1	193	26.6	58.4	38	14.8 ¹⁰¹	33.9	2	58	20 45	21 46	** **	14 43	19 55									
2	208	26.5	57.9	52	43.9 ¹⁰¹	34.1	2	56	31	25	23 02	19 04 43	30 55									
3	223	26.5	57.5	67	12.9 ¹⁰⁰	34.2	1	54	20	21 08	22 24	18 54 44	39 56									
4	238	26.5	57.0	81	41.9 ¹⁰⁰	34.2	0	52	10	20 54	21 58	45 46	48 55									
5	253	26.4	+20 56.6	96	10.9 ¹⁰⁰	-18 34.1	1	50	20 00	20 42	21 38	18 38 46	2 56 55									
6	268	26.4	+20 56.1	110	39.8 ⁹⁹	-18 33.9	2	45	19 41	20 17	21 02	18 21 47	3 12 55									
7	283	26.3	55.7	125	08.7 ⁹⁹	33.7	2	40	26	19 57	20 37	18 08 48	26 54									
8	298	26.3	55.2	139	37.6 ⁹⁹	33.3	4	35	13	41	16	17 57 48	37 54									
9	313	26.2	54.8	154	06.5 ⁹⁹	32.8	5	30	19 01	28	20 00	47 49	3 47 54									
10	328	26.2	54.4	168	35.3 ⁹⁸	32.2	6	20	18 42	19 06	19 34	30 50	4 05 53									
11	343	26.2	+20 53.9	183	04.1 ⁹⁸	-18 31.5	7	10 N	18 25	18 48	19 14	17 15 51	4 20 52									
12	358	26.1	+20 53.5	197	32.9 ⁹⁸	-18 30.8	7	0	18 10	18 32	18 58	17 01 52	4 34 52									
13	13	26.1	53.0	212	01.6 ⁹⁷	29.9	9	10 S	17 55	17	43	16 47 53	4 48 51									
14	28	26.0	52.6	226	30.3 ⁹⁷	28.9	10	20	38	18 02	29	32 54	5 03 51									
15	43	26.0	52.1	240	59.0 ⁹⁷	27.8	11	30	20	17 45	15	15 55	20 51									
16	58	25.9	51.7	255	27.7 ⁹⁷	26.7	11	35	17 09	36	07	16 05 56	30 50									
17	73	25.9	+20 51.2	269	56.3 ⁹⁶	-18 25.4	13	40	16 57	17 26	18 00	15 54 56	5 42 49									
18	88	25.9	+20 50.7	284	25.0 ⁹⁷	-18 24.0	14	45	16 42	17 15	17 51	15 40 58	5 55 49									
19	103	25.8	50.3	298	53.6 ⁹⁶	22.5	15	50	24	17 01	42	24 58	6 11 49									
20	118	25.8	49.8	313	22.2 ⁹⁶	20.9	16	52	16	16 55	37	16 59	19 48									
21	133	25.7	49.4	327	50.7 ⁹⁵	19.3	16	54	16 07	48	33	15 08 59	28 47									
22	148	25.7	48.9	342	19.3 ⁹⁶	17.5	18	56	15 56	41	28	14 58 60	37 47									
23	163	25.7	48.5	356	47.8 ⁹⁵	15.6	19	58	44	32	23	47 61	6 48 46									
24	178	25.6	+20 48.0	11	16.3 ⁹⁵	-18 13.6	20	60 S	15 30	16 23	17 17	14 35 62	7 01 45									
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO										
	PMG: 4 ^h 14 ^m 4			Mag: -3.9 PMG: 12 ^h 55 ^m			Mag: -1.0 PMG: 19 ^h 41 ^m			Mag: -1.8 PMG: 15 ^h 37 ^m		Mag: +0.3 PMG: 20 ^h 47 ^m										
	hG ♈	Dec		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec											
h	°	'	°	°	'	°	'	°	'	°	'	°	'									
0	296	14.0	166 23.5	+19 46.7	64 07.2	-21 47.9	125 18.4	+5 10.2	47 15.6	-20 18.6												
1	311	16.5	181 22.8	45.9	79 09.0	48.0	140 20.5	10.0	62 18.2	18.6												
2	326	19.0	196 22.1	45.2	94 10.9	48.2	155 22.6	09.9	77 20.8	18.6												
3	341	21.4	211 21.4	44.5	109 12.8	48.3	170 24.7	09.7	92 23.4	18.5												
4	356	23.9	226 20.6	43.7	124 14.7	48.5	185 26.7	09.5	107 25.9	18.5												
5	11	26.4	241 19.9	+19 43.0	139 16.5	-21 48.6	200 28.8	+5 09.4	122 28.5	-20 18.5												
6	26	28.8	256 19.2	+19 42.2	154 18.4	-21 48.8	215 30.9	+5 09.2	137 31.1	-20 18.5												
7	41	31.3	271 18.5	41.5	169 20.3	49.0	230 33.0	09.0	152 33.6	18.5												
8	56	33.7	286 17.8	40.7	184 22.1	49.1	245 35.1	08.9	167 36.2	18.5												
9	71	36.2	301 17.1	40.0	199 24.0	49.3	260 37.2	08.7	182 38.8	18.5												
10	86	38.7	316 16.4	39.2	214 25.9	49.4	275 39.3	08.5	197 41.4	18.5												
11	101	41.1	331 15.7	+19 38.5	229 27.7	-21 49.6	290 41.3	+5 08.4	212 43.9	-20 18.5												
12	116	43.6	346 15.0	+19 37.7	244 29.6	-21 49.7	305 43.4	+5 08.2	227 46.5	-20 18.5												
13	131	46.1	1 14.3	37.0	259 31.4	49.9	320 45.5	08.0	242 49.1	18.5												
14	146	48.5	16 13.7	36.2	274 33.3	50.1	335 47.6	07.9	257 51.6	18.5												
15	161	51.0	31 13.0	35.5	289 35.2	50.2	350 49.7	07.7	272 54.2	18.5												
16	176	53.5	46 12.3	34.7	304 37.0	50.4	5 51.8	07.5	287 56.8	18.5												
17	191	55.9	61 11.6	+19 34.0	319 38.9	-21 50.5	20 53.8	+5 07.4	302 59.3	-20 18.5												
18	206	58.4	76 10.9	+19 33.2	334 40.7	-21 50.7	35 55.9	+5 07.2	318 01.9	-20 18.5												
19	222	00.9	91 10.2	32.5	349 42.6	50.8	50 58.0	07.0	333 04.5	18.4												
20	237	03.3	106 09.5	31.7	4 44.4	51.0	66 00.1	06.9	348 07.0	18.4												
21	252	05.8	121 08.8	31.0	19 46.3	51.2	81 02.2	06.7	3 09.6	18.4												
22	267	08.2	136 08.1	30.2	34 48.1	51.3	96 04.3	06.5	18 12.2	18.4												
23	282	10.7	151 07.4	29.4	49 50.0	51.5	111 06.3	06.4	33 14.8	18.4												
24	297	13.2	166 06.7	+19 28.7	64 51.8	-21 51.6	126 08.4	+5 06.2	48 17.3	-20 18.4												
Dif	—	-7		-8	+19	-2	+21	-2	+26	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 3			Edad: 14 ^d 5 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9 R°: **m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m	m	h	m	m	
0	178	25.6	+20 48.0	11	16.3	-18 13.6	60 N	** **	1 59	3 12	20 08	34	3 02	67		
1	193	25.6	47.6	25	44.8	11.5	58	** **	2 27	28	19 57	35	14	66		
2	208	25.5	47.1	40	13.3	09.3	56	1 11	2 48	42	47 37		25	64		
3	223	25.5	46.6	54	41.8	07.0	54	1 49	3 05	3 53	38 39		35	63		
4	238	25.5	46.2	69	10.2	04.7	52	2 15	19	4 03	31 39		43	62		
5	253	25.4	+20 45.7	83	38.6	-18 02.2	50	2 34	3 31	4 13	19 24	40	3 51	61		
6	268	25.4	+20 45.3	98	07.0	-17 59.6	45	3 11	3 56	4 32	19 08	43	4 07	60		
7	283	25.3	44.8	112	35.4	56.9	40	36	4 16	4 47	18 56	44	20	58		
8	298	25.3	44.3	127	03.8	54.1	35	3 56	31	5 00	45 46		31	58		
9	313	25.3	43.9	141	32.2	51.2	30	4 13	4 45	12	36 47		41	56		
10	328	25.2	43.4	156	00.6	48.2	20	38	5 07	31	20 49		4 58	55		
11	343	25.2	+20 43.0	170	28.9	-17 45.1	10 N	4 58	5 25	5 47	18 06	51	5 12	54		
12	358	25.2	+20 42.5	184	57.3	-17 41.9	0	5 15	5 41	6 03	17 53	53	5 26	52		
13	13	25.1	42.0	199	25.6	38.6	10 S	30	5 56	18	40 54		39	52		
14	28	25.1	41.6	213	53.9	35.2	20	44	6 11	34	26 56		5 54	50		
15	43	25.0	41.1	228	22.3	31.7	30	5 58	27	6 53	10 58		6 11	48		
16	58	25.0	40.6	242	50.6	28.1	35	6 05	36	7 03	17 01	59	20	47		
17	73	25.0	+20 40.2	257	18.9	-17 24.4	40	6 13	6 46	7 16	16 50	61	6 31	46		
18	88	24.9	+20 39.7	271	47.2	-17 20.6	45	6 21	6 57	7 30	16 38	62	6 44	45		
19	103	24.9	39.2	286	15.5	16.7	50	31	7 11	47	22 65		7 00	43		
20	118	24.9	38.8	300	43.8	12.7	52	35	17	7 56	15 66		07	42		
21	133	24.8	38.3	315	12.0	08.6	54	39	24	8 05	16 07	67	15	41		
22	148	24.8	37.8	329	40.3	04.4	56	44	31	15	15 58	68	24	40		
23	163	24.8	37.3	344	08.6	-17 00.1	58	49	39	27	48 70		34	39		
24	178	24.7	+20 36.9	358	36.9	-16 55.7	60 S	6 55	7 49	8 41	15 37	71	7 46	37		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 10 ^m 4			Mag: -3.9 PMG: 12 ^h 56 ^m			Mag: -1.0 PMG: 19 ^h 38 ^m			Mag: -1.8 PMG: 15 ^h 33 ^m			Mag: +0.3 PMG: 20 ^h 43 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	297	13.2	166 06.7	+19 28.7	64 51.8	-21 51.6	126 08.4	+5 06.2	48 17.3	-20 18.4						
1	312	15.6	181 06.0	27.9	79 53.7	51.8	141 10.5	06.0	63 19.9	18.4						
2	327	18.1	196 05.3	27.1	94 55.5	52.0	156 12.6	05.9	78 22.5	18.4						
3	342	20.6	211 04.6	26.4	109 57.3	52.1	171 14.7	05.7	93 25.0	18.4						
4	357	23.0	226 03.9	25.6	124 59.2	52.3	186 16.8	05.5	108 27.6	18.4						
5	12	25.5	241 03.2	+19 24.9	140 01.0	-21 52.4	201 18.8	+5 05.4	123 30.2	-20 18.4						
6	27	28.0	256 02.6	+19 24.1	155 02.9	-21 52.6	216 20.9	+5 05.2	138 32.7	-20 18.4						
7	42	30.4	271 01.9	23.3	170 04.7	52.8	231 23.0	05.0	153 35.3	18.4						
8	57	32.9	286 01.2	22.6	185 06.5	52.9	246 25.1	04.9	168 37.9	18.4						
9	72	35.4	301 00.5	21.8	200 08.4	53.1	261 27.2	04.7	183 40.4	18.4						
10	87	37.8	315 59.8	21.0	215 10.2	53.2	276 29.3	04.5	198 43.0	18.4						
11	102	40.3	330 59.1	+19 20.2	230 12.1	-21 53.4	291 31.3	+5 04.3	213 45.6	-20 18.4						
12	117	42.7	345 58.4	+19 19.5	245 13.9	-21 53.6	306 33.4	+5 04.2	228 48.1	-20 18.4						
13	132	45.2	0 57.7	18.7	260 15.7	53.7	321 35.5	04.0	243 50.7	18.3						
14	147	47.7	15 57.1	17.9	275 17.5	53.9	336 37.6	03.8	258 53.3	18.3						
15	162	50.1	30 56.4	17.1	290 19.4	54.1	351 39.7	03.7	273 55.8	18.3						
16	177	52.6	45 55.7	16.4	305 21.2	54.2	6 41.7	03.5	288 58.4	18.3						
17	192	55.1	60 55.0	+19 15.6	320 23.0	-21 54.4	21 43.8	+5 03.3	304 01.0	-20 18.3						
18	207	57.5	75 54.3	+19 14.8	335 24.9	-21 54.5	36 45.9	+5 03.2	319 03.5	-20 18.3						
19	223	00.0	90 53.6	14.0	350 26.7	54.7	51 48.0	03.0	334 06.1	18.3						
20	238	02.5	105 53.0	13.3	5 28.5	54.9	66 50.1	02.8	349 08.6	18.3						
21	253	04.9	120 52.3	12.5	20 30.3	55.0	81 52.1	02.7	4 11.2	18.3						
22	268	07.4	135 51.6	11.7	35 32.1	55.2	96 54.2	02.5	19 13.8	18.3						
23	283	09.9	150 50.9	10.9	50 34.0	55.4	111 56.3	02.3	34 16.3	18.3						
24	298	12.3	165 50.2	+19 10.1	65 35.8	-21 55.5	126 58.4	+5 02.2	49 18.9	-20 18.3						
Dif	—		-7	-8	+18	-2	+21	-2	+26	0						

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 15 ^d 5 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 5																		
	PMG: 12 ^h 06 ^m 4			SD: 15 ^h 5 PMG: 0 ^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	178	24.7	+20 36.9	358	36.9	−16 55.7	45	60 N	20 57	22 08	** **	20 42 26	4 09 74									
1	193	24.7	36.4	13	05.1	51.2	45	58	41	21 42	** **	32 29	20 72									
2	208	24.7	35.9	27	33.4	46.6	46	56	28	22	22 53	24 31	29 71									
3	223	24.6	35.5	42	01.7	41.9	47	54	17	21 05	22 18	17 32	38 69									
4	238	24.6	35.0	56	29.9	37.1	48	52	20 07	20 51	21 54	10 34	45 68									
5	253	24.6	+20 34.5	70	58.2	32.3	48	50	19 58	20 39	21 35	20 04 36	4 52 67									
6	268	24.5	+20 34.0	85	26.5	27.3	50	45	19 39	20 15	21 00	19 51 39	5 07 64									
7	283	24.5	33.6	99	54.8	22.2	51	40	24	19 56	20 35	40 41	18 63									
8	298	24.5	33.1	114	23.0	17.0	52	35	11	40	20 15	31 43	29 60									
9	313	24.4	32.6	128	51.3	11.8	52	30	19 00	27	19 59	23 45	37 60									
10	328	24.4	32.1	143	19.6	06.4	54	20	18 41	19 05	34	19 09 48	5 53 56									
11	343	24.4	+20 31.7	157	47.9	01.0	54	10 N	18 25	18 48	19 14	18 57 50	6 06 54									
12	358	24.3	+20 31.2	172	16.2	55.4	56	0	18 10	18 32	18 58	18 46 52	6 18 53									
13	13	24.3	30.7	186	44.5	49.8	56	10 S	17 55	17	43	34 55	31 50									
14	28	24.3	30.2	201	12.7	44.0	58	20	39	18 02	29	22 57	44 48									
15	43	24.3	29.7	215	41.1	38.2	58	30	21	17 46	16	08 60	6 59 46									
16	58	24.2	29.3	230	09.4	32.3	59	35	17 10	38	09	18 00 62	7 07 45									
17	73	24.2	+20 28.8	244	37.7	26.3	60	40	16 58	17 28	18 01	17 51 63	7 17 43									
18	88	24.2	+20 28.3	259	06.0	20.2	61	45	16 44	17 17	17 53	17 40 66	7 29 40									
19	103	24.1	27.8	273	34.3	14.0	62	50	27	17 03	43	27 69	43 38									
20	118	24.1	27.3	288	02.7	07.7	63	52	19	16 57	39	21 70	49 37									
21	133	24.1	26.8	302	31.0	01.3	64	54	16 10	51	35	14 71	7 56 36									
22	148	24.0	26.4	316	59.4	54.8	65	56	15 59	43	30	17 06 74	8 04 34									
23	163	24.0	25.9	331	27.7	48.3	65	58	48	35	25	16 58 75	13 32									
24	178	24.0	+20 25.4	345	56.1	41.6	67	60 S	15 34	16 26	17 20	16 48 78	8 23 30									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 4 ^h 06 ^m 5			Mag: −3.9 PMG: 12 ^h 57 ^m			Mag: −1.0 PMG: 19 ^h 35 ^m			Mag: −1.8 PMG: 15 ^h 30 ^m			Mag: +0.3 PMG: 20 ^h 39 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	298	12.3	165 50.2	+19 10.1	65 35.8	−21 55.5	126 58.4	+5 02.2	49 18.9	−20 18.3												
1	313	14.8	180 49.6	09.3	80 37.6	55.7	142 00.5	02.0	64 21.5	18.3												
2	328	17.2	195 48.9	08.6	95 39.4	55.8	157 02.5	01.8	79 24.0	18.3												
3	343	19.7	210 48.2	07.8	110 41.2	56.0	172 04.6	01.6	94 26.6	18.3												
4	358	22.2	225 47.5	07.0	125 43.0	56.2	187 06.7	01.5	109 29.2	18.3												
5	13	24.6	240 46.8	+19 06.2	140 44.9	−21 56.3	202 08.8	+5 01.3	124 31.7	−20 18.3												
6	28	27.1	255 46.2	+19 05.4	155 46.7	−21 56.5	217 10.9	+5 01.1	139 34.3	−20 18.3												
7	43	29.6	270 45.5	04.6	170 48.5	56.7	232 12.9	01.0	154 36.9	18.3												
8	58	32.0	285 44.8	03.8	185 50.3	56.8	247 15.0	00.8	169 39.4	18.2												
9	73	34.5	300 44.1	03.0	200 52.1	57.0	262 17.1	00.6	184 42.0	18.2												
10	88	37.0	315 43.5	02.2	215 53.9	57.2	277 19.2	00.5	199 44.5	18.2												
11	103	39.4	330 42.8	+19 01.4	230 55.7	−21 57.3	292 21.3	+5 00.3	214 47.1	−20 18.2												
12	118	41.9	345 42.1	+19 00.7	245 57.5	−21 57.5	307 23.3	+5 00.1	229 49.7	−20 18.2												
13	133	44.3	0 41.4	+18 59.9	260 59.3	57.7	322 25.4	+4 59.9	244 52.2	18.2												
14	148	46.8	15 40.8	59.1	276 01.1	57.8	337 27.5	59.8	259 54.8	18.2												
15	163	49.3	30 40.1	58.3	291 02.9	58.0	352 29.6	59.6	274 57.4	18.2												
16	178	51.7	45 39.4	57.5	306 04.7	58.2	7 31.7	59.4	289 59.9	18.2												
17	193	54.2	60 38.7	+18 56.7	321 06.5	−21 58.3	22 33.7	+4 59.3	305 02.5	−20 18.2												
18	208	56.7	75 38.1	+18 55.9	336 08.3	−21 58.5	37 35.8	+4 59.1	320 05.0	−20 18.2												
19	223	59.1	90 37.4	55.1	351 10.1	58.7	52 37.9	58.9	335 07.6	18.2												
20	239	01.6	105 36.7	54.3	6 11.9	58.8	67 40.0	58.8	350 10.2	18.2												
21	254	04.1	120 36.1	53.5	21 13.7	59.0	82 42.0	58.6	5 12.7	18.2												
22	269	06.5	135 35.4	52.7	36 15.5	59.2	97 44.1	58.4	20 15.3	18.2												
23	284	09.0	150 34.7	51.9	51 17.3	59.3	112 46.2	58.2	35 17.8	18.2												
24	299	11.5	165 34.1	+18 51.0	66 19.1	−21 59.5	127 48.3	+4 58.1	50 20.4	−20 18.2												
Dif	—	−7		−8	+18		−2	+21		−2	+26		0									

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 4				Edad: 16 ^d 5 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 58 ^m 0 SD: 15 ^h 7 PMG: 0 ^h 58 ^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 m		h m m	h m m		
0	178	24.0	+20	25.4	345	56.1	-14	41.6	67	58	60 N	** **	2 06	3 17	21 08	23		5 23	81		
1	193	24.0		24.9	0	24.5	94	34.9	67	58	58	** **	32	32	21 01	25		32	78		
2	208	23.9		24.4	14	52.9	94	28.1	68	56	56	1 20	2 52	45	20 55	27		40	76		
3	223	23.9		23.9	29	21.3	94	21.2	69	54	54	1 55	3 08	3 56	49	29		47	74		
4	238	23.9		23.4	43	49.7	94	14.2	70	52	52	2 19	22	4 06	44	31		53	72		
5	253	23.9	+20	23.0	58	18.1	94	-14	07.1	71	50	2 38	3 34	4 15	20 40	32		5 59	70		
6	268	23.8	+20	22.5	72	46.5	94	-14	00.0	71	45	3 13	3 59	4 34	20 30	35		6 11	67		
7	283	23.8		22.0	87	15.0	95	-13	52.7	73	40	38	4 18	4 49	21 38			21	64		
8	298	23.8		21.5	101	43.4	94	45.4	74	35	35	3 58	33	5 02	14	41		29	63		
9	313	23.7		21.0	116	11.9	95	38.0	75	30	30	4 14	4 46	13	20 08	42		37	60		
10	328	23.7		20.5	130	40.4	95	30.5	75	20	20	39	5 08	32	19 57	46		6 49	58		
11	343	23.7	+20	20.0	145	08.9	95	-13	22.9	76	10 N	4 59	5 25	5 48	19 47	49		7 00	55		
12	358	23.7	+20	19.5	159	37.4	95	-13	15.3	76	0	5 15	5 41	6 03	19 38	52		7 11	52		
13	13	23.6		19.0	174	05.9	95	-13	07.5	78	10 S	30	5 55	18	29 55			21	50		
14	28	23.6		18.5	188	34.4	95	-12	59.7	78	20	43	6 10	34	19 58			32	47		
15	43	23.6		18.0	203	03.0	96	51.8	79	30	30	5 57	26	6 52	08 61			45	43		
16	58	23.6		17.5	217	31.5	95	43.9	79	35	35	6 04	35	7 02	19 02	63		7 52	41		
17	73	23.5	+20	17.0	232	00.1	96	-12	35.8	81	40	6 11	6 45	7 14	18 54	66		8 00	39		
18	88	23.5	+20	16.6	246	28.7	96	-12	27.7	81	45	6 20	6 56	7 28	18 46	68		8 09	37		
19	103	23.5		16.1	260	57.3	96	19.5	82	50	50	29	7 09	45	36 71			21	33		
20	118	23.5		15.6	275	25.9	96	11.2	83	52	52	33	15	7 53	31 73			26	32		
21	133	23.5		15.1	289	54.5	96	-12	02.9	83	54	37	21	8 02	25 76			32	30		
22	148	23.4		14.6	304	23.2	97	-11	54.5	84	56	42	29	12	20 77			38	29		
23	163	23.4		14.1	318	51.8	96	46.0	85	58	58	47	37	24	13 79			45	27		
24	178	23.4	+20	13.6	333	20.5	97	-11	37.4	86	60 S	6 52	7 46	8 37	18 06	81		8 53	25		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 4 ^h 02 ^m 6				Mag: -3.9 PMG: 12 ^h 58 ^m				Mag: -1.0 PMG: 19 ^h 32 ^m				Mag: -1.8 PMG: 15 ^h 27 ^m				Mag: +0.3 PMG: 20 ^h 35 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	299	11.5	165	34.1	+18	51.0	66	19.1	-21	59.5	127	48.3	+4	58.1	50	20.4	-20	18.2			
1	314	13.9	180	33.4		50.2	81	20.9		59.7	142	50.3		57.9	65	23.0		18.2			
2	329	16.4	195	32.7		49.4	96	22.6	-21	59.8	157	52.4		57.7	80	25.5		18.2			
3	344	18.8	210	32.1		48.6	111	24.4	-22	00.0	172	54.5		57.6	95	28.1		18.2			
4	359	21.3	225	31.4		47.8	126	26.2	-22	00.2	187	56.6		57.4	110	30.6		18.1			
5	14	23.8	240	30.7	+18	47.0	141	28.0	-22	00.3	202	58.7	+4	57.2	125	33.2	-20	18.1			
6	29	26.2	255	30.1	+18	46.2	156	29.8	-22	00.5	218	00.7	+4	57.1	140	35.8	-20	18.1			
7	44	28.7	270	29.4		45.4	171	31.6		00.7	233	02.8		56.9	155	38.3		18.1			
8	59	31.2	285	28.7		44.6	186	33.3		00.8	248	04.9		56.7	170	40.9		18.1			
9	74	33.6	300	28.1		43.8	201	35.1		01.0	263	07.0		56.5	185	43.4		18.1			
10	89	36.1	315	27.4		42.9	216	36.9		01.2	278	09.0		56.4	200	46.0		18.1			
11	104	38.6	330	26.7	+18	42.1	231	38.7	-22	01.3	293	11.1	+4	56.2	215	48.6	-20	18.1			
12	119	41.0	345	26.1	+18	41.3	246	40.5	-22	01.5	308	13.2	+4	56.0	230	51.1	-20	18.1			
13	134	43.5	0	25.4		40.5	261	42.2		01.7	323	15.3		55.9	245	53.7		18.1			
14	149	46.0	15	24.8		39.7	276	44.0		01.9	338	17.3		55.7	260	56.2		18.1			
15	164	48.4	30	24.1		38.9	291	45.8		02.0	353	19.4		55.5	275	58.8		18.1			
16	179	50.9	45	23.4		38.0	306	47.6		02.2	8	21.5		55.3	291	01.4		18.1			
17	194	53.3	60	22.8	+18	37.2	321	49.3	-22	02.4	23	23.6	+4	55.2	306	03.9	-20	18.1			
18	209	55.8	75	22.1	+18	36.4	336	51.1	-22	02.5	38	25.6	+4	55.0	321	06.5	-20	18.1			
19	224	58.3	90	21.5		35.6	351	52.9		02.7	53	27.7		54.8	336	09.0		18.1			
20	240	00.7	105	20.8		34.7	6	54.6		02.9	68	29.8		54.7	351	11.6		18.1			
21	255	03.2	120	20.2		33.9	21	56.4		03.1	83	31.8		54.5	6	14.1		18.1			
22	270	05.7	135	19.5		33.1	36	58.2		03.2	98	33.9		54.3	21	16.7		18.1			
23	285	08.1	150	18.8		32.3	51	59.9		03.4	113	36.0		54.1	36	19.3		18.1			
24	300	10.6	165	18.2	+18	31.4	67	01.7	-22	03.6	128	38.1	+4	54.0	51	21.8	-20	18.1			
Dif	—				-7				+18				+21				+26				

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 15 ^h 7				Edad: 17 ^d 5 PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 3 20 ^h : 58 ^m 4						Civil		Náutico		Hora R°							
	PMG: 12 ^h 06 ^m 5				SD: 15 ^h 8 PMG: 1 ^h 50 ^m R°: 52 ^m						hG ☉		Dec		hG ☾							
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m					
0	178	23.4	+20	13.6	333	20.5	-11	37.4	60 N	20	53	22	01	** **	21	31	20					
1	193	23.4		13.1	347	49.2	97	28.8	58	38	21	37	** **	26	23	50	80					
2	208	23.3		12.6	2	17.9	97	20.1	56	25		17	22	44	22	25	6	56	78			
3	223	23.3		12.1	16	46.6	97	11.3	54	14	21	01	22	12	18	27	7	01	76			
4	238	23.3		11.6	31	15.3	97	-11	02.5	52	20	04	20	48	21	49	15	28	05	74		
5	253	23.3	+20	11.1	45	44.0	97	-10	53.6	50	19	56	20	36	21	31	21	12	30	7	09	73
6	268	23.3	+20	10.6	60	12.8	98	-10	44.6	45	19	38	20	12	20	57	21	05	33	7	18	69
7	283	23.2		10.1	74	41.6	98		35.6	40	23		19	54	33		20	59	37	25	67	
8	298	23.2		09.5	89	10.4	98		26.5	35	19	10	39	20	13		55	38		32	63	
9	313	23.2		09.0	103	39.1	97		17.3	30	18	59	26	19	58		50	41		37	62	
10	328	23.2		08.5	118	08.0	99	-10	08.1	20	41	19	05	33	43	44	47	58		47	58	
11	343	23.2	+20	08.0	132	36.8	98	-9	58.8	10 N	18	25	18	47	19	14	20	36	48	7	55	55
12	358	23.1	+20	07.5	147	05.6	98	-9	49.5	0	18	10	18	32	18	58	20	30	51	8	03	51
13	13	23.1		07.0	161	34.5	99		40.1	10 S	17	55	18	43	24	54	11	48				
14	28	23.1		06.5	176	03.3	98		30.6	20	40	18	03	30	17	58	19	45				
15	43	23.1		06.0	190	32.2	99		21.1	30	22	17	48	17	09	62	28	41				
16	58	23.1		05.5	205	01.1	99		11.5	35	12	39	10	05	64	33	40					
17	73	23.0	+20	05.0	219	30.0	99	-9	01.9	40	17	00	17	29	18	02	20	00	67	8	39	37
18	88	23.0	+20	04.5	233	58.9	99	-8	52.2	45	16	46	17	18	17	54	19	54	70	8	46	34
19	103	23.0		04.0	248	27.9	100		42.4	50	29	06	46	47	74	54	31					
20	118	23.0		03.5	262	56.8	99		32.6	52	21	17	00	42	44	75	8	58	29			
21	133	23.0		02.9	277	25.8	100		22.7	54	12	16	53	37	41	76	9	02	28			
22	148	23.0		02.4	291	54.7	99		12.8	56	16	03	46	33	37	78	07	26				
23	163	22.9		01.9	306	23.7	100	-8	02.9	58	15	51	38	28	32	81	12	23				
24	178	22.9	+20	01.4	320	52.7	100	-7	52.9	60 S	15	38	16	29	17	23	19	27	84	9	18	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 58 ^m 6		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: -1.0 PMG: 19 ^h 30 ^m		Mag: -1.8 PMG: 15 ^h 23 ^m		Mag: +0.3 PMG: 20 ^h 31 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	o	'	o	'	o	'	o	'	o	'								
0	300	10.6	165	18.2	+18	31.4	67	01.7	-22	03.6	128	38.1	+4	54.0	51	21.8	-20	18.1
1	315	13.1	180	17.5		30.6	82	03.4		03.7	143	40.1		53.8	66	24.4		18.1
2	330	15.5	195	16.9		29.8	97	05.2		03.9	158	42.2		53.6	81	26.9		18.1
3	345	18.0	210	16.2		29.0	112	07.0		04.1	173	44.3		53.4	96	29.5		18.0
4	0	20.4	225	15.6		28.1	127	08.7		04.3	188	46.4		53.3	111	32.0		18.0
5	15	22.9	240	14.9	+18	27.3	142	10.5	-22	04.4	203	48.4	+4	53.1	126	34.6	-20	18.0
6	30	25.4	255	14.3	+18	26.5	157	12.2	-22	04.6	218	50.5	+4	52.9	141	37.2	-20	18.0
7	45	27.8	270	13.6		25.6	172	14.0		04.8	233	52.6		52.8	156	39.7		18.0
8	60	30.3	285	13.0		24.8	187	15.7		04.9	248	54.7		52.6	171	42.3		18.0
9	75	32.8	300	12.3		24.0	202	17.5		05.1	263	56.7		52.4	186	44.8		18.0
10	90	35.2	315	11.7		23.1	217	19.2		05.3	278	58.8		52.2	201	47.4		18.0
11	105	37.7	330	11.0	+18	22.3	232	21.0	-22	05.5	294	00.9	+4	52.1	216	49.9	-20	18.0
12	120	40.2	345	10.4	+18	21.4	247	22.7	-22	05.6	309	02.9	+4	51.9	231	52.5	-20	18.0
13	135	42.6	0	09.7		20.6	262	24.5		05.8	324	05.0		51.7	246	55.0		18.0
14	150	45.1	15	09.1		19.8	277	26.2		06.0	339	07.1		51.6	261	57.6		18.0
15	165	47.6	30	08.4		18.9	292	28.0		06.2	354	09.2		51.4	277	00.2		18.0
16	180	50.0	45	07.8		18.1	307	29.7		06.3	9	11.2		51.2	292	02.7		18.0
17	195	52.5	60	07.1	+18	17.2	322	31.5	-22	06.5	24	13.3	+4	51.0	307	05.3	-20	18.0
18	210	54.9	75	06.5	+18	16.4	337	33.2	-22	06.7	39	15.4	+4	50.9	322	07.8	-20	18.0
19	225	57.4	90	05.8		15.6	352	35.0		06.9	54	17.4		50.7	337	10.4		18.0
20	240	59.9	105	05.2		14.7	7	36.7		07.0	69	19.5		50.5	352	12.9		18.0
21	256	02.3	120	04.5		13.9	22	38.4		07.2	84	21.6		50.3	7	15.5		18.0
22	271	04.8	135	03.9		13.0	37	40.2		07.4	99	23.7		50.2	22	18.0		18.0
23	286	07.3	150	03.2		12.2	52	41.9		07.6	114	25.7		50.0	37	20.6		18.0
24	301	09.7	165	02.6	+18	11.3	67	43.6	-22	07.7	129	27.8	+4	49.8	52	23.1	-20	18.0
Dif	—		-6		-8		+17		-2		+21		-2		+26		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: 18 ^d 5 PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'8 R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	22.9	+20	01.4	320	52.7	-7	52.9	60 N	** **	2 12	3 21	21 51	19	8 07	84				
1	193	22.9		00.9	335	21.7 ¹⁰⁰		42.8 ¹⁰¹	58	** **	37	36	49	21	10	82				
2	208	22.9	+20	00.4	349	50.7 ¹⁰⁰		32.7 ¹⁰¹	56	1 29	2 56	48	47	23	14	79				
3	223	22.9	+19	59.9	4	19.7 ¹⁰⁰		22.6 ¹⁰¹	54	2 01	3 12	3 59	45	25	17	77				
4	238	22.9		59.3	18	48.8 ¹⁰¹		12.4 ¹⁰²	52	24	25	4 09	43	27	19	76				
5	253	22.9	+19	58.8	33	17.8 ¹⁰⁰	-7	02.1 ¹⁰³	50	2 42	3 37	4 18	21 42	28	8 22	74				
6	268	22.8	+19	58.3	47	46.9 ¹⁰¹	-6	51.8 ¹⁰³	45	3 16	4 01	4 36	21 38	33	8 27	70				
7	283	22.8		57.8	62	15.9 ¹⁰⁰		41.5 ¹⁰³	40	3 41	19	4 51	36	35	32	67				
8	298	22.8		57.3	76	45.0 ¹⁰¹		31.1 ¹⁰⁴	35	4 00	35	5 03	33	38	35	65				
9	313	22.8		56.8	91	14.1 ¹⁰¹		20.7 ¹⁰⁴	30	16	4 47	14	31	40	39	62				
10	328	22.8		56.2	105	43.2 ¹⁰¹	-6	10.3 ¹⁰⁴	20	40	5 08	32	27	45	45	57				
11	343	22.8	+19	55.7	120	12.3 ¹⁰¹	-5	59.8 ¹⁰⁵	10 N	4 59	5 26	5 48	21 24	48	8 50	54				
12	358	22.8	+19	55.2	134	41.4 ¹⁰¹	-5	49.3 ¹⁰⁵	0	5 15	5 41	6 03	21 21	51	8 54	51				
13	13	22.7		54.7	149	10.5 ¹⁰¹		38.7 ¹⁰⁶	10 S	30	5 55	18	18	55	8 59	48				
14	28	22.7		54.1	163	39.6 ¹⁰¹		28.1 ¹⁰⁶	20	43	6 10	33	15	58	9 04	44				
15	43	22.7		53.6	178	08.7 ¹⁰¹		17.5 ¹⁰⁶	30	5 56	25	6 51	11	62	09	41				
16	58	22.7		53.1	192	37.9 ¹⁰²	-5	06.8 ¹⁰⁷	35	6 03	34	7 01	09	65	13	38				
17	73	22.7	+19	52.6	207	07.0 ¹⁰¹	-4	56.1 ¹⁰⁷	40	6 10	6 43	7 13	21 07	67	9 16	36				
18	88	22.7	+19	52.1	221	36.1 ¹⁰¹	-4	45.4 ¹⁰⁷	45	6 18	6 54	7 26	21 04	70	9 20	33				
19	103	22.7		51.5	236	05.3 ¹⁰²		34.6 ¹⁰⁸	50	27	7 07	43	21 01	74	25	29				
20	118	22.7		51.0	250	34.4 ¹⁰¹		23.8 ¹⁰⁸	52	31	13	7 51	20 59	76	27	28				
21	133	22.6		50.5	265	03.6 ¹⁰²		13.0 ¹⁰⁸	54	35	19	8 00	57	78	30	26				
22	148	22.6		50.0	279	32.8 ¹⁰²	-4	02.1 ¹⁰⁹	56	39	26	09	55	80	33	23				
23	163	22.6		49.4	294	01.9 ¹⁰¹	-3	51.3 ¹⁰⁸	58	44	34	20	53	83	35	22				
24	178	22.6	+19	48.9	308	31.1 ¹⁰²	-3	40.4 ¹⁰⁹	60 S	6 50	7 42	8 33	20 51	85	9 39	19				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 54 ^m 7				Mag: -3.9 PMG: 13 ^h 00 ^m				Mag: -0.9 PMG: 19 ^h 27 ^m				Mag: -1.8 PMG: 15 ^h 20 ^m				Mag: +0.3 PMG: 20 ^h 27 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	301	09.7	165	02.6	+18	11.3	67	43.6	-22	07.7	129	27.8	+4	49.8	52	23.1	-20	18.0		
1	316	12.2	180	02.0		10.5	82	45.4		07.9	144	29.9		49.6	67	25.7		18.0		
2	331	14.7	195	01.3		09.6	97	47.1		08.1	159	31.9		49.5	82	28.2		18.0		
3	346	17.1	210	00.7		08.8	112	48.8		08.3	174	34.0		49.3	97	30.8		18.0		
4	1	19.6	225	00.0		07.9	127	50.6		08.4	189	36.1		49.1	112	33.4		18.0		
5	16	22.1	239	59.4	+18	07.1	142	52.3	-22	08.6	204	38.1	+4	49.0	127	35.9	-20	18.0		
6	31	24.5	254	58.8	+18	06.2	157	54.0	-22	08.8	219	40.2	+4	48.8	142	38.5	-20	17.9		
7	46	27.0	269	58.1		05.4	172	55.8		09.0	234	42.3		48.6	157	41.0		17.9		
8	61	29.4	284	57.5		04.5	187	57.5		09.1	249	44.4		48.4	172	43.6		17.9		
9	76	31.9	299	56.8		03.7	202	59.2		09.3	264	46.4		48.3	187	46.1		17.9		
10	91	34.4	314	56.2		02.8	218	00.9		09.5	279	48.5		48.1	202	48.7		17.9		
11	106	36.8	329	55.6	+18	01.9	233	02.7	-22	09.7	294	50.6	+4	47.9	217	51.2	-20	17.9		
12	121	39.3	344	54.9	+18	01.1	248	04.4	-22	09.8	309	52.6	+4	47.7	232	53.8	-20	17.9		
13	136	41.8	359	54.3	+18	00.2	263	06.1		10.0	324	54.7		47.6	247	56.3		17.9		
14	151	44.2	14	53.7	+17	59.4	278	07.8		10.2	339	56.8		47.4	262	58.9		17.9		
15	166	46.7	29	53.0		58.5	293	09.5		10.4	354	58.8		47.2	278	01.4		17.9		
16	181	49.2	44	52.4		57.6	308	11.3		10.6	10	00.9		47.0	293	04.0		17.9		
17	196	51.6	59	51.8	+17	56.8	323	13.0	-22	10.7	25	03.0	+4	46.9	308	06.5	-20	17.9		
18	211	54.1	74	51.1	+17	55.9	338	14.7	-22	10.9	40	05.0	+4	46.7	323	09.1	-20	17.9		
19	226	56.5	89	50.5		55.0	353	16.4		11.1	55	07.1		46.5	338	11.6		17.9		
20	241	59.0	104	49.8		54.2	8	18.1		11.3	70	09.2		46.3	353	14.2		17.9		
21	257	01.5	119	49.2		53.3	23	19.8		11.4	85	11.2		46.2	8	16.7		17.9		
22	272	03.9	134	48.6		52.4	38	21.5		11.6	100	13.3		46.0	23	19.3		17.9		
23	287	06.4	149	48.0		51.6	53	23.3		11.8	115	15.4		45.8	38	21.8		17.9		
24	302	08.9	164	47.3	+17	50.7	68	25.0	-22	12.0	130	17.4	+4	45.6	53	24.4	-20	17.9		
Dif	—		-6		-9		+17		-2		+21		-2		+26		0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 19 ^d 5 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 0																		
	PMG: 12 ^h 06 ^m 5			SD: 16 ^h 0 PMG: 3 ^h 33 ^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	h m m								
0	178	22.6	+19 48.9	308	31.1	-3 40.4		60 N	20 48	21 55	** **	22 10 19	9 31 85									
1	193	22.6	48.4	323	00.3 ¹⁰²	29.4 ¹¹⁰		58	34	32	23 29	10 21	32 83									
2	208	22.6	47.8	337	29.4 ¹⁰¹	18.5 ¹⁰⁹		56	22	21 13	22 36	10 24	33 80									
3	223	22.6	47.3	351	58.6 ¹⁰²	-3 07.5 ¹¹⁰		54	11	20 58	22 07	10 26	34 78									
4	238	22.6	46.8	6	27.8 ¹⁰²	-2 56.5 ¹¹⁰		52	20 02	45	21 45	10 28	35 76									
5	253	22.6	+19 46.3	20	56.9 ¹⁰¹	-2 45.5 ¹¹⁰		50	19 53	20 33	21 27	22 10 30	9 36 74									
6	268	22.6	+19 45.7	35	26.1 ¹⁰²	-2 34.5 ¹¹⁰		45	19 36	20 10	20 54	22 11 32	9 37 71									
7	283	22.5	45.2	49	55.3 ¹⁰²	23.5 ¹¹⁰		40	21	19 52	30	11 36	39 67									
8	298	22.5	44.7	64	24.5 ¹⁰²	12.4 ¹¹¹		35	19 09	37	20 12	11 38	40 65									
9	313	22.5	44.1	78	53.6 ¹⁰¹	-2 01.3 ¹¹¹		30	18 58	25	19 56	11 41	41 62									
10	328	22.5	43.6	93	22.8 ¹⁰²	-1 50.2 ¹¹¹		20	40	19 04	32	12 44	42 59									
11	343	22.5	+19 43.1	107	51.9 ¹⁰¹	-1 39.1 ¹¹¹		10 N	18 25	18 47	19 13	22 12 48	9 44 55									
12	358	22.5	+19 42.5	122	21.1 ¹⁰²	-1 28.0 ¹¹¹		0	18 10	18 32	18 58	22 12 52	9 45 52									
13	13	22.5	42.0	136	50.3 ¹⁰²	16.9 ¹¹¹		10 S	17 56	18	44	13 54	47 48									
14	28	22.5	41.5	151	19.4 ¹⁰¹	-1 05.7 ¹¹²		20	40	18 04	31	13 58	48 44									
15	43	22.5	40.9	165	48.6 ¹⁰²	-0 54.6 ¹¹¹		30	23	17 49	18	13 63	50 40									
16	58	22.5	40.4	180	17.7 ¹⁰¹	43.4 ¹¹²		35	13	40	11	14 65	51 38									
17	73	22.5	+19 39.8	194	46.8 ¹⁰¹	-0 32.3 ¹¹¹		40	17 02	17 31	18 04	22 14 68	9 52 35									
18	88	22.5	+19 39.3	209	15.9 ¹⁰¹	-0 21.1 ¹¹²		45	16 48	17 20	17 56	22 14 71	9 53 32									
19	103	22.5	38.8	223	45.1 ¹⁰²	-0 09.9 ¹¹²		50	32	08	48	15 74	54 29									
20	118	22.5	38.2	238	14.2 ¹⁰¹	+0 01.3 ¹¹²		52	24	17 02	44	15 76	55 27									
21	133	22.5	37.7	252	43.3 ¹⁰¹	12.4 ¹¹¹		54	15	16 56	40	15 78	56 25									
22	148	22.4	37.2	267	12.4 ¹⁰¹	23.6 ¹¹²		56	16 06	49	36	15 81	56 24									
23	163	22.4	36.6	281	41.5 ¹⁰¹	34.8 ¹¹²		58	15 55	41	31	16 82	57 21									
24	178	22.4	+19 36.1	296	10.5 ¹⁰⁰	+0 46.0 ¹¹²		60 S	15 42	16 33	17 26	22 16 85	9 58 19									
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO										
	PMG: 3 ^h 50 ^m 8			Mag: -3.9 PMG: 13 ^h 01 ^m			Mag: -0.9 PMG: 19 ^h 24 ^m			Mag: -1.8 PMG: 15 ^h 17 ^m		Mag: +0.3 PMG: 20 ^h 23 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	302	08.9	164 47.3	+17 50.7	68 25.0	-22 12.0	130 17.4	+4 45.6	53 24.4	-20 17.9												
1	317	11.3	179 46.7	49.8	83 26.7	12.2	145 19.5	45.5	68 26.9	17.9												
2	332	13.8	194 46.1	49.0	98 28.4	12.3	160 21.6	45.3	83 29.5	17.9												
3	347	16.3	209 45.4	48.1	113 30.1	12.5	175 23.6	45.1	98 32.0	17.9												
4	2	18.7	224 44.8	47.2	128 31.8	12.7	190 25.7	44.9	113 34.6	17.9												
5	17	21.2	239 44.2	+17 46.4	143 33.5	-22 12.9	205 27.8	+4 44.8	128 37.1	-20 17.9												
6	32	23.7	254 43.5	+17 45.5	158 35.2	-22 13.1	220 29.8	+4 44.6	143 39.7	-20 17.9												
7	47	26.1	269 42.9	44.6	173 36.9	13.2	235 31.9	44.4	158 42.2	17.9												
8	62	28.6	284 42.3	43.7	188 38.6	13.4	250 34.0	44.2	173 44.8	17.9												
9	77	31.0	299 41.7	42.9	203 40.3	13.6	265 36.0	44.1	188 47.3	17.9												
10	92	33.5	314 41.0	42.0	218 42.0	13.8	280 38.1	43.9	203 49.9	17.9												
11	107	36.0	329 40.4	+17 41.1	233 43.7	-22 14.0	295 40.2	+4 43.7	218 52.4	-20 17.9												
12	122	38.4	344 39.8	+17 40.2	248 45.4	-22 14.1	310 42.2	+4 43.5	233 55.0	-20 17.9												
13	137	40.9	359 39.2	39.3	263 47.1	14.3	325 44.3	43.4	248 57.5	17.9												
14	152	43.4	14 38.5	38.5	278 48.8	14.5	340 46.4	43.2	264 00.1	17.8												
15	167	45.8	29 37.9	37.6	293 50.5	14.7	355 48.4	43.0	279 02.6	17.8												
16	182	48.3	44 37.3	36.7	308 52.2	14.9	10 50.5	42.8	294 05.1	17.8												
17	197	50.8	59 36.7	+17 35.8	323 53.8	-22 15.0	25 52.6	+4 42.7	309 07.7	-20 17.8												
18	212	53.2	74 36.1	+17 34.9	338 55.5	-22 15.2	40 54.6	+4 42.5	324 10.2	-20 17.8												
19	227	55.7	89 35.4	34.0	353 57.2	15.4	55 56.7	42.3	339 12.8	17.8												
20	242	58.2	104 34.8	33.2	8 58.9	15.6	70 58.8	42.1	354 15.3	17.8												
21	258	00.6	119 34.2	32.3	24 00.6	15.8	86 00.8	42.0	9 17.9	17.8												
22	273	03.1	134 33.6	31.4	39 02.3	15.9	101 02.9	41.8	24 20.4	17.8												
23	288	05.5	149 33.0	30.5	54 04.0	16.1	116 05.0	41.6	39 23.0	17.8												
24	303	08.0	164 32.3	+17 29.6	69 05.6	-22 16.3	131 07.0	+4 41.4	54 25.5	-20 17.8												
Dif	—			-6 -9			+17 -2			+21 -2		+25 0										

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: 20 ^d 5 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 2 20 ^h : 59 ^m 2 R°: 52 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	22.4	+19	36.1	296	10.5	+0	46.0	60 N	**	**	2	19	3	25	22	29	21		
1	193	22.4		35.5	310	39.6	+0	57.2	58	0	45	2	42	40		31	24	55		
2	208	22.4		35.0	325	08.6	+1	08.3	56	1	38	3	00	3	52	34	25	53		
3	223	22.4		34.4	339	37.7		19.5	54	2	07	16		4	02	36	27	52		
4	238	22.4		33.9	354	06.7		30.7	52	29	29	12				38	29	51		
5	253	22.4	+19	33.4	8	35.7	+1	41.8	50	2	46	3	40	4	20	22	40	30		
6	268	22.4	+19	32.8	23	04.7	+1	53.0	45	3	19	4	03	4	38	22	43	35		
7	283	22.4		32.3	37	33.7	+2	04.1	40	3	43	21		4	52	47	37	46		
8	298	22.4		31.7	52	02.7		15.3	35	4	02	36		5	04	49	40	45		
9	313	22.4		31.2	66	31.6		26.4	30	17	4	49	15			52	42	43		
10	328	22.4		30.6	81	00.6		37.5	20	4	41	5	09	33		22	56	46		
11	343	22.4	+19	30.1	95	29.5	+2	48.6	10 N	5	00	5	26	5	49	23	00	49		
12	358	22.4	+19	29.5	109	58.4	+2	59.7	0	5	16	5	41	6	03	23	04	52		
13	13	22.4		29.0	124	27.3	+3	10.8	10 S	29	5	55	17			07	56	35		
14	28	22.4		28.4	138	56.2		21.8	20	42	6	09	32			11	60	32		
15	43	22.4		27.9	153	25.0		32.9	30	5	55	24		6	50	16	63	30		
16	58	22.4		27.3	167	53.9		43.9	35	6	02	32		7	00	19	65	29		
17	73	22.4	+19	26.8	182	22.7	+3	54.9	40	6	09	6	42	7	11	23	22	68		
18	88	22.4	+19	26.2	196	51.5	+4	05.9	45	6	16	6	52	7	24	23	25	71		
19	103	22.4		25.7	211	20.2		16.8	50	25	7	04	41			29	75	23		
20	118	22.4		25.1	225	49.0		27.7	52	29	10		48			31	77	22		
21	133	22.4		24.6	240	17.7		38.7	54	33	16	7	57			33	79	21		
22	148	22.4		24.0	254	46.4	+4	49.5	56	37	23	8	06			36	80	20		
23	163	22.4		23.5	269	15.1	+5	00.4	58	41	31	17				38	83	18		
24	178	22.4	+19	22.9	283	43.8	+5	11.2	60 S	6	46	7	39	8	29	23	41	86		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 46 ^m 8			Mag: -3.9 PMG: 13 ^h 02 ^m			Mag: -0.9 PMG: 19 ^h 21 ^m			Mag: -1.8 PMG: 15 ^h 13 ^m			Mag: +0.3 PMG: 20 ^h 19 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	303	08.0		164	32.3	+17	69	05.6	-22	131	07.0	+4	54	25.5	-20
1	318	10.5		179	31.7		84	07.3		146	09.1		69	28.1	
2	333	12.9		194	31.1		99	09.0		161	11.1		84	30.6	
3	348	15.4		209	30.5		114	10.7		176	13.2		99	33.2	
4	3	17.9		224	29.9		129	12.4		191	15.3		114	35.7	
5	18	20.3		239	29.3	+17	144	14.0	-22	206	17.3	+4	129	38.2	-20
6	33	22.8		254	28.6	+17	159	15.7	-22	221	19.4	+4	144	40.8	-20
7	48	25.3		269	28.0		174	17.4		236	21.5		159	43.3	
8	63	27.7		284	27.4		189	19.1		251	23.5		174	45.9	
9	78	30.2		299	26.8		204	20.7		266	25.6		189	48.4	
10	93	32.6		314	26.2		219	22.4		281	27.7		204	51.0	
11	108	35.1		329	25.6	+17	234	24.1	-22	296	29.7	+4	219	53.5	-20
12	123	37.6		344	25.0	+17	249	25.7	-22	311	31.8	+4	234	56.1	-20
13	138	40.0		359	24.3		264	27.4		326	33.8		249	58.6	
14	153	42.5		14	23.7		279	29.1		341	35.9		265	01.1	
15	168	45.0		29	23.1		294	30.7		356	38.0		280	03.7	
16	183	47.4		44	22.5		309	32.4		11	40.0		295	06.2	
17	198	49.9		59	21.9	+17	324	34.1	-22	26	42.1	+4	310	08.8	-20
18	213	52.4		74	21.3	+17	339	35.7	-22	41	44.2	+4	325	11.3	-20
19	228	54.8		89	20.7		354	37.4		56	46.2		340	13.9	
20	243	57.3		104	20.1		9	39.1	20.0	71	48.3		355	16.4	
21	258	59.8		119	19.5		24	40.7	20.2	86	50.3		10	18.9	
22	274	02.2		134	18.9		39	42.4	20.4	101	52.4		25	21.5	
23	289	04.7		149	18.3		54	44.0	20.5	116	54.5		40	24.0	
24	304	07.1		164	17.7	+17	69	45.7	-22	131	56.5	+4	55	26.6	-20
Dif	—			-6			+17			+21			+25		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 21 ^d 5	PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/3											
	PMG: 12 ^h 06 ^m 5						SD: 16 ^h 1				PMG: 5 ^h 16 ^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		
0	178	22.4	+19	22.9	283	43.8	+5	11.2	60 N	20 44	21 48	** **	22 50	24	12 22	85	
1	193	22.4		22.4	298	12.4		22.0 ¹⁰⁸	58	30	26	23 12	55	27	17	83	
2	208	22.4		21.8	312	41.0		32.8 ¹⁰⁸	56	18	21 09	22 28	22 59	30	14	80	
3	223	22.4		21.2	327	09.6		43.6 ¹⁰⁸	54	20 08	20 54	22 01	23 03	31	10	78	
4	238	22.4		20.7	341	38.2	+5	54.3 ¹⁰⁷	52	19 59	41	21 40	07	33	07	77	
5	253	22.4	+19	20.1	356	06.7	+6	04.9 ¹⁰⁶	50	19 51	20 30	21 23	23 10	35	12 05	74	
6	268	22.4	+19	19.6	10	35.2	+6	15.6 ¹⁰⁷	45	19 33	20 08	20 51	23 18	37	11 59	71	
7	283	22.4		19.0	25	03.7		26.2 ¹⁰⁶	40	19	19 50	28	24	40	54	68	
8	298	22.4		18.5	39	32.1		36.8 ¹⁰⁶	35	19 07	36	20 10	29	43	50	65	
9	313	22.4		17.9	54	00.6		47.3 ¹⁰⁵	30	18 57	23	19 55	34	45	46	63	
10	328	22.4		17.3	68	29.0	+6	57.8 ¹⁰⁵	20	39	19 03	31	42	48	40	59	
11	343	22.4	+19	16.8	82	57.3	+7	08.3 ¹⁰⁵	10 N	18 24	18 47	19 13	23 49	52	11 34	56	
12	358	22.4	+19	16.2	97	25.7	+7	18.7 ¹⁰⁴	0	18 10	18 32	18 57	23 56	54	11 29	53	
13	13	22.4		15.7	111	54.0		29.0 ¹⁰³	10 S	17 56	18	44	** ** *	**	23	50	
14	28	22.5		15.1	126	22.3		39.4 ¹⁰⁴	20	41	18 04	31	** ** *	**	18	47	
15	43	22.5		14.5	140	50.5		49.7 ¹⁰³	30	24	17 50	19	** ** *	**	11	43	
16	58	22.5		14.0	155	18.7	+7	59.9 ¹⁰²	35	14	41	12	** ** *	**	08	41	
17	73	22.5	+19	13.4	169	46.9	+8	10.1 ¹⁰²	40	17 03	17 32	18 05	** ** *	**	11 03	39	
18	88	22.5	+19	12.8	184	15.1	+8	20.2 ¹⁰¹	45	16 50	17 22	17 58	** ** *	**	10 58	36	
19	103	22.5		12.3	198	43.2		30.3 ¹⁰¹	50	34	10	50	** ** *	**	53	32	
20	118	22.5		11.7	213	11.3		40.4 ¹⁰¹	52	27	17 05	46	** ** *	**	50	31	
21	133	22.5		11.1	227	39.3	+8	50.4 ¹⁰⁰	54	19	16 59	42	** ** *	**	47	29	
22	148	22.5		10.6	242	07.3	+9	00.3 ⁹⁹	56	16 09	52	38	** ** *	**	44	27	
23	163	22.5		10.0	256	35.3		10.2 ⁹⁹	58	15 59	45	34	** ** *	**	40	25	
24	178	22.5	+19	09.4	271	03.3	+9	20.1 ⁹⁹	60 S	15 47	16 37	17 29	** ** *	**	10 36	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 42 ^m 9		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: -0.9 PMG: 19 ^h 19 ^m		Mag: -1.8 PMG: 15 ^h 10 ^m		Mag: +0.3 PMG: 20 ^h 15 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	304	07.1	164	17.7	+17	08.0	69	45.7	-22	20.7
1	319	09.6	179	17.0		07.1	84	47.3		20.9
2	334	12.1	194	16.4		06.2	99	49.0		21.1
3	349	14.5	209	15.8		05.3	114	50.7		21.3
4	4	17.0	224	15.2		04.4	129	52.3		21.5
5	19	19.5	239	14.6	+17	03.5	144	54.0	-22	21.6
6	34	21.9	254	14.0	+17	02.5	159	55.6	-22	21.8
7	49	24.4	269	13.4		01.6	174	57.3		22.0
8	64	26.9	284	12.8	+17	00.7	189	58.9		22.2
9	79	29.3	299	12.2	+16	59.8	205	00.6		22.4
10	94	31.8	314	11.6		58.9	220	02.2		22.6
11	109	34.2	329	11.0	+16	58.0	235	03.8	-22	22.8
12	124	36.7	344	10.4	+16	57.0	250	05.5	-22	23.0
13	139	39.2	359	09.8		56.1	265	07.1		23.1
14	154	41.6	14	09.2		55.2	280	08.8		23.3
15	169	44.1	29	08.6		54.3	295	10.4		23.5
16	184	46.6	44	08.0		53.4	310	12.1		23.7
17	199	49.0	59	07.4	+16	52.4	325	13.7	-22	23.9
18	214	51.5	74	06.8	+16	51.5	340	15.3	-22	24.1
19	229	54.0	89	06.2		50.6	355	17.0		24.3
20	244	56.4	104	05.6		49.7	10	18.6		24.4
21	259	58.9	119	05.0		48.7	25	20.2		24.6
22	275	01.4	134	04.4		47.8	40	21.9		24.8
23	290	03.8	149	03.9		46.9	55	23.5		25.0
24	305	06.3	164	03.3	+16	46.0	70	25.1	-22	25.2
Dif	—		-6		-9		+16		-2	
									+21	
									-2	
									+25	

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: 22 ^d 5 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 54 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	178	22.5	+19	09.4	271	03.3	+9	20.1	60 N	**	**	2	25	23	14	31	
1	193	22.5		08.9	285	31.2	89	29.9	58	1	02	2	47	22	33	40	
2	208	22.5		08.3	299	59.1	89	39.6	56	1	46	3	05	29	34	34	
3	223	22.5		07.7	314	26.9	88	49.3	54	2	13	20	4	06	34	37	
4	238	22.6		07.2	328	54.7	88	+9 58.9	52	33	32	15		40	38	24	
5	253	22.6	+19	06.6	343	22.5	88	+10 08.4	50	2	50	3	43	23	45	39	
6	268	22.6	+19	06.0	357	50.3	88	+10 17.9	45	3	22	4	06	23	55	42	
7	283	22.6		05.4	12	18.0	87	27.4	40	3	45	23	4	54	**	**	
8	298	22.6		04.9	26	45.6	86	36.8	35	4	03	38	5	06	**	**	
9	313	22.6		04.3	41	13.3	87	46.1	30	18	4	50	16		**	**	
10	328	22.6		03.7	55	40.9	86	+10 55.3	20	4	42	5	10	34	**	**	
11	343	22.6	+19	03.2	70	08.4	85	+11 04.5	10 N	5	00	5	27	5	49	**	**
12	358	22.6	+19	02.6	84	35.9	85	+11 13.6	0	5	16	5	41	6	03	**	**
13	13	22.6		02.0	99	03.4	85	22.6	10 S	29	5	55	17	0	03	57	13
14	28	22.7		01.4	113	30.9	85	31.6	20	42	6	08	32	11	59	12	05
15	43	22.7		00.8	127	58.3	84	40.5	30	5	54	23	48	19	64	11	54
16	58	22.7	+19	00.3	142	25.7	84	49.4	35	6	01	31	6	58	24	66	49
17	73	22.7	+18	59.7	156	53.0	83	+11 58.1	40	6	07	6	40	7	09	0	30
18	88	22.7	+18	59.1	171	20.3	83	+12 06.8	45	6	15	6	50	7	22	0	36
19	103	22.7		58.5	185	47.6	83	15.4	50	23	7	02	38	44	74	25	37
20	118	22.7		58.0	200	14.8	82	24.0	52	26	08	45		48	75	21	35
21	133	22.7		57.4	214	42.0	82	32.4	54	30	13	7	53	52	77	16	34
22	148	22.7		56.8	229	09.1	81	40.8	56	34	20	8	03	0	56	80	11
23	163	22.8		56.2	243	36.2	81	49.1	58	38	27	13		1	01	82	11
24	178	22.8	+18	55.6	258	03.3	81	+12 57.4	60 S	6	43	7	35	8	25	1	07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 39 ^m 0		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: -0.9 PMG: 19 ^h 16 ^m		Mag: -1.8 PMG: 15 ^h 07 ^m		Mag: +0.3 PMG: 20 ^h 11 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	305	06.3	164	03.3	+16	46.0	70	25.1	-22	25.2
1	320	08.7	179	02.7		45.0	85	26.8		25.4
2	335	11.2	194	02.1		44.1	100	28.4		25.6
3	350	13.7	209	01.5		43.2	115	30.0		25.8
4	5	16.1	224	00.9		42.2	130	31.6		26.0
5	20	18.6	239	00.3	+16	41.3	145	33.3	-22	26.1
6	35	21.1	253	59.7	+16	40.4	160	34.9	-22	26.3
7	50	23.5	268	59.1		39.4	175	36.5		26.5
8	65	26.0	283	58.5		38.5	190	38.1		26.7
9	80	28.5	298	57.9		37.6	205	39.8		26.9
10	95	30.9	313	57.4		36.6	220	41.4		27.1
11	110	33.4	328	56.8	+16	35.7	235	43.0	-22	27.3
12	125	35.9	343	56.2	+16	34.8	250	44.6	-22	27.5
13	140	38.3	358	55.6		33.8	265	46.2		27.7
14	155	40.8	13	55.0		32.9	280	47.8		27.8
15	170	43.2	28	54.4		31.9	295	49.5		28.0
16	185	45.7	43	53.8		31.0	310	51.1		28.2
17	200	48.2	58	53.2	+16	30.1	325	52.7	-22	28.4
18	215	50.6	73	52.7	+16	29.1	340	54.3	-22	28.6
19	230	53.1	88	52.1		28.2	355	55.9		28.8
20	245	55.6	103	51.5		27.2	10	57.5		29.0
21	260	58.0	118	50.9		26.3	25	59.1		29.2
22	276	00.5	133	50.3		25.3	41	00.7		29.4
23	291	03.0	148	49.7		24.4	56	02.3		29.6
24	306	05.4	163	49.2	+16	23.4	71	03.9	-22	29.7
Dif	—		-6		-9		+16		-2	
							+21		-2	
									+25	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8			Edad: 23 ^d 5 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2																		
	PMG: 12 ^h 06 ^m 5			SD: 16 ^h 2 PMG: 7 ^h 03 ^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	h m m								
0	178	22.8	+18 55.6	258	03.3	+12 57.4	81	60 N	20 39	21 42	** **	23 45 39	15 09 78									
1	193	22.8	55.1	272	30.3	+13 05.5	81	58	26	21	22 58	23 55 40	15 00 76									
2	208	22.8	54.5	286	57.3	13.6	81	56	15	21 04	22 20	** ** *	14 52 74									
3	223	22.8	53.9	301	24.3	21.6	80	54	20 05	20 50	21 55	** ** *	45 72									
4	238	22.8	53.3	315	51.2	29.5	79	52	19 56	38	35	** ** *	38 71									
5	253	22.8	+18 52.7	330	18.1	+13 37.3	78	50	19 48	20 27	21 19	** ** *	14 32 70									
6	268	22.9	+18 52.1	344	44.9	+13 45.0	77	45	19 31	20 05	20 48	** ** *	14 20 67									
7	283	22.9	51.6	359	11.7	+13 52.7	77	40	17	19 48	26	0 04 45	09 66									
8	298	22.9	51.0	13	38.5	+14 00.3	76	35	19 06	34	20 08	12 46	14 00 64									
9	313	22.9	50.4	28	05.2	07.7	74	30	18 56	22	19 53	19 48	13 53 62									
10	328	22.9	49.8	42	31.9	15.1	74	20	39	19 02	30	30 51	39 60									
11	343	22.9	+18 49.2	56	58.6	+14 22.4	73	10 N	18 24	18 46	19 12	0 41 53	13 28 58									
12	358	23.0	+18 48.6	71	25.2	+14 29.6	72	0	18 10	18 32	18 57	0 50 56	13 17 56									
13	13	23.0	48.0	85	51.8	36.8	72	10 S	17 56	18	44	1 00 58	13 06 54									
14	28	23.0	47.4	100	18.4	43.8	70	20	42	18 05	32	10 61	12 54 52									
15	43	23.0	46.9	114	44.9	50.7	69	30	25	17 51	20	23 63	41 49									
16	58	23.0	46.3	129	11.4	+14 57.6	69	35	16	43	13	30 64	33 48									
17	73	23.0	+18 45.7	143	37.8	+15 04.3	67	40	17 05	17 34	18 07	1 38 66	12 24 47									
18	88	23.1	+18 45.1	158	04.3	+15 11.0	67	45	16 52	17 24	18 00	1 47 69	12 14 45									
19	103	23.1	44.5	172	30.6	17.5	65	50	37	13	17 52	1 58 72	12 02 42									
20	118	23.1	43.9	186	57.0	24.0	65	52	30	07	49	2 03 74	11 56 41									
21	133	23.1	43.3	201	23.3	30.3	63	54	22	17 01	45	09 75	50 39									
22	148	23.1	42.7	215	49.6	36.6	63	56	13	16 55	41	16 76	43 38									
23	163	23.2	42.1	230	15.8	42.7	61	58	16 02	48	37	23 78	35 36									
24	178	23.2	+18 41.5	244	42.1	+15 48.8	61	60 S	15 51	16 40	17 32	2 31 81	11 26 34									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 3 ^h 35 ^m 0			Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: -0.8 PMG: 19 ^h 14 ^m			Mag: -1.8 PMG: 15 ^h 04 ^m			Mag: +0.3 PMG: 20 ^h 07 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	306	05.4	163	49.2	+16 23.4	71	03.9	-22 29.7	133	35.3	+4 28.6	57	28.4	-20 17.7								
1	321	07.9	178	48.6	22.5	86	05.6	29.9	148	37.4	28.5	72	30.9	17.7								
2	336	10.3	193	48.0	21.5	101	07.2	30.1	163	39.4	28.3	87	33.5	17.7								
3	351	12.8	208	47.4	20.6	116	08.8	30.3	178	41.5	28.1	102	36.0	17.7								
4	6	15.3	223	46.8	19.6	131	10.4	30.5	193	43.5	27.9	117	38.5	17.7								
5	21	17.7	238	46.3	+16 18.7	146	12.0	-22 30.7	208	45.6	+4 27.7	132	41.1	-20 17.7								
6	36	20.2	253	45.7	+16 17.7	161	13.6	-22 30.9	223	47.6	+4 27.6	147	43.6	-20 17.7								
7	51	22.7	268	45.1	16.8	176	15.2	31.1	238	49.7	27.4	162	46.1	17.7								
8	66	25.1	283	44.5	15.8	191	16.8	31.3	253	51.7	27.2	177	48.6	17.7								
9	81	27.6	298	44.0	14.9	206	18.3	31.5	268	53.8	27.0	192	51.2	17.7								
10	96	30.1	313	43.4	13.9	221	19.9	31.7	283	55.8	26.8	207	53.7	17.7								
11	111	32.5	328	42.8	+16 13.0	236	21.5	-22 31.8	298	57.9	+4 26.7	222	56.2	-20 17.7								
12	126	35.0	343	42.2	+16 12.0	251	23.1	-22 32.0	314	00.0	+4 26.5	237	58.8	-20 17.7								
13	141	37.5	358	41.6	11.1	266	24.7	32.2	329	02.0	26.3	253	01.3	17.7								
14	156	39.9	13	41.1	10.1	281	26.3	32.4	344	04.1	26.1	268	03.8	17.7								
15	171	42.4	28	40.5	09.1	296	27.9	32.6	359	06.1	25.9	283	06.4	17.7								
16	186	44.8	43	39.9	08.2	311	29.5	32.8	14	08.2	25.7	298	08.9	17.7								
17	201	47.3	58	39.4	+16 07.2	326	31.1	-22 33.0	29	10.2	+4 25.6	313	11.4	-20 17.7								
18	216	49.8	73	38.8	+16 06.3	341	32.7	-22 33.2	44	12.3	+4 25.4	328	14.0	-20 17.7								
19	231	52.2	88	38.2	05.3	356	34.2	33.4	59	14.3	25.2	343	16.5	17.7								
20	246	54.7	103	37.6	04.3	11	35.8	33.6	74	16.4	25.0	358	19.0	17.7								
21	261	57.2	118	37.1	03.4	26	37.4	33.8	89	18.4	24.8	13	21.6	17.7								
22	276	59.6	133	36.5	02.4	41	39.0	34.0	104	20.5	24.7	28	24.1	17.7								
23	292	02.1	148	35.9	01.5	56	40.6	34.2	119	22.5	24.5	43	26.6	17.7								
24	307	04.6	163	35.4	+16 00.5	71	42.2	-22 34.3	134	24.6	+4 24.3	58	29.1	-20 17.7								
Dif	—			-6 -10			+16 -2			+21 -2			+25 0									

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 24 ^d 5 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 1 20 ^h : 59 ^m 1 SD: 16 ^h 1 PMG: 7 ^h 59 ^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	h m m	h m m	h m m
0	178	23.2	+18	41.5	244	42.1	+15	48.8	60	58	60 N	** **	2 32	3 34	** **	16 27	68	16 27	68
1	193	23.2		40.9	259	08.2	71	+15	54.8	60	58	1 15	2 53	48	** **	16	67	16	67
2	208	23.2		40.3	273	34.4	72	+16	00.6	58	56	1 53	3 09	3 59	0 03	42	16 06	66	66
3	223	23.2		39.7	288	00.5	71		06.4	58	54	2 19	24	4 09	11	43	15 57	66	66
4	238	23.3		39.1	302	26.6	71		12.0	56	52	38	36	18	18	44	49	65	65
5	253	23.3	+18	38.6	316	52.7	71	+16	17.6	56	50	2 54	3 46	4 26	0 24	46	15 42	65	65
6	268	23.3	+18	38.0	331	18.7	70	+16	23.0	54	45	3 25	4 08	4 42	0 37	48	15 27	63	63
7	283	23.3		37.4	345	44.8	71		28.4	54	40	3 48	25	4 56	49	49	15	62	62
8	298	23.3		36.8	0	10.8	70		33.6	52	35	4 05	39	5 07	0 58	51	15 04	62	62
9	313	23.4		36.2	14	36.7	69		38.7	51	30	20	4 51	17	1 07	51	14 55	61	61
10	328	23.4		35.6	29	02.7	70		43.8	51	20	4 43	5 11	34	21	54	39	60	60
11	343	23.4	+18	35.0	43	28.6	69	+16	48.7	49	10 N	5 01	5 27	5 49	1 34	55	14 26	58	58
12	358	23.4	+18	34.4	57	54.5	69	+16	53.5	48	0	5 16	5 41	6 03	1 46	57	14 13	57	57
13	13	23.5		33.8	72	20.3	68	+16	58.2	47	10 S	29	5 54	17	1 58	58	14 00	56	56
14	28	23.5		33.2	86	46.2	69	+17	02.7	45	20	41	6 08	31	2 11	60	13 46	55	55
15	43	23.5		32.6	101	12.0	68		07.2	45	30	53	22	47	26	61	30	54	54
16	58	23.5		32.0	115	37.8	68		11.6	44	35	5 59	30	6 57	34	63	21	53	53
17	73	23.6	+18	31.3	130	03.6	68	+17	15.8	42	40	6 06	6 38	7 07	2 44	64	13 11	52	52
18	88	23.6	+18	30.7	144	29.3	67	+17	20.0	42	45	6 13	6 48	7 20	2 56	65	12 59	50	50
19	103	23.6		30.1	158	55.0	67		24.0	40	50	20	7 00	35	3 10	67	44	49	49
20	118	23.6		29.5	173	20.8	68		27.9	39	52	24	05	42	17	68	37	48	48
21	133	23.7		28.9	187	46.5	67		31.7	38	54	27	11	50	24	69	29	48	48
22	148	23.7		28.3	202	12.2	67		35.4	37	56	31	17	7 59	32	71	21	46	46
23	163	23.7		27.7	216	37.8	66		39.0	36	58	35	24	8 09	41	72	11	45	45
24	178	23.7	+18	27.1	231	03.5	67	+17	42.4	34	60 S	6 40	7 32	8 21	3 52	74	12 00	44	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 31 ^m 1		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: -0.8 PMG: 19 ^h 11 ^m		Mag: -1.8 PMG: 15 ^h 00 ^m		Mag: +0.3 PMG: 20 ^h 03 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	307	04.6	163	35.4	+16	00.5	71	42.2	-22	34.3
1	322	07.0	178	34.8	+15	59.5	86	43.7		34.5
2	337	09.5	193	34.2		58.6	101	45.3		34.7
3	352	12.0	208	33.6		57.6	116	46.9		34.9
4	7	14.4	223	33.1		56.6	131	48.5		35.1
5	22	16.9	238	32.5	+15	55.6	146	50.0	-22	35.3
6	37	19.3	253	31.9	+15	54.7	161	51.6	-22	35.5
7	52	21.8	268	31.4		53.7	176	53.2		35.7
8	67	24.3	283	30.8		52.7	191	54.8		35.9
9	82	26.7	298	30.3		51.8	206	56.3		36.1
10	97	29.2	313	29.7		50.8	221	57.9		36.3
11	112	31.7	328	29.1	+15	49.8	236	59.5	-22	36.5
12	127	34.1	343	28.6	+15	48.8	252	01.0	-22	36.7
13	142	36.6	358	28.0		47.9	267	02.6		36.9
14	157	39.1	13	27.4		46.9	282	04.2		37.1
15	172	41.5	28	26.9		45.9	297	05.7		37.3
16	187	44.0	43	26.3		44.9	312	07.3		37.4
17	202	46.5	58	25.7	+15	44.0	327	08.9	-22	37.6
18	217	48.9	73	25.2	+15	43.0	342	10.4	-22	37.8
19	232	51.4	88	24.6		42.0	357	12.0		38.0
20	247	53.8	103	24.1		41.0	12	13.6		38.2
21	262	56.3	118	23.5		40.0	27	15.1		38.4
22	277	58.8	133	23.0		39.1	42	16.7		38.6
23	293	01.2	148	22.4		38.1	57	18.2		38.8
24	308	03.7	163	21.8	+15	37.1	72	19.8	-22	39.0
Dif	—		-6		-10		+16		-2	
							+21		-2	
									+25	
									0	

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 4				Edad: 25 ^d 5 PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 9 20 ^h : 58 ^m 8 R°: 57 ^m															
	hG ☉		Dec		hG ☾		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	23.7	+18	27.1	231	03.5	+17	42.4	60 N	20 34	21 35	** **	0 24 49	17 35 57						
1	193	23.8		26.5	245	29.1		45.8	58	22	21 16	22 46	35 51	23 57						
2	208	23.8		25.9	259	54.8		49.0	56	11	20 59	22 13	45 52	12 57						
3	223	23.8		25.3	274	20.4		52.1	54	20 01	46	21 49	0 54 52	17 03 56						
4	238	23.8		24.7	288	46.0		55.1	52	19 53	34	30	1 02 53	16 54 57						
5	253	23.9	+18	24.1	303	11.6	+17	58.0	50	19 45	20 24	21 15	1 10 52	16 47 56						
6	268	23.9	+18	23.5	317	37.2	+18	00.8	45	19 29	20 03	20 45	1 25 54	16 30 57						
7	283	23.9		22.9	332	02.8		03.4	40	15	19 46	23	38 54	17 57						
8	298	23.9		22.2	346	28.4		06.0	35	19 04	32	20 06	49 55	16 06 57						
9	313	24.0		21.6	0	53.9		08.4	30	18 54	20	19 52	1 58 56	15 56 57						
10	328	24.0		21.0	15	19.5		10.7	20	38	19 01	29	2 15 56	39 57						
11	343	24.0	+18	20.4	29	45.1	+18	12.8	10 N	18 23	18 46	19 12	2 29 57	15 24 57						
12	358	24.1	+18	19.8	44	10.6	+18	14.9	0	18 10	18 32	18 57	2 43 57	15 10 57						
13	13	24.1		19.2	58	36.2		16.8	10 S	17 57	19	44	2 56 58	14 56 57						
14	28	24.1		18.6	73	01.7		18.7	20	43	18 06	32	3 11 58	41 57						
15	43	24.1		17.9	87	27.3		20.4	30	27	17 52	21	27 59	24 57						
16	58	24.2		17.3	101	52.9		22.0	35	17	44	15	37 59	14 57						
17	73	24.2	+18	16.7	116	18.4	+18	23.4	40	17 07	17 36	18 08	3 48 60	14 03 56						
18	88	24.2	+18	16.1	130	44.0	+18	24.8	45	16 54	17 26	18 02	4 01 61	13 49 57						
19	103	24.3		15.5	145	09.6		26.0	50	40	15	17 54	17 61	33 56						
20	118	24.3		14.9	159	35.1		27.1	52	33	10	51	25 61	25 56						
21	133	24.3		14.3	174	00.7		28.1	54	25	17 04	48	33 62	17 56						
22	148	24.4		13.6	188	26.3		29.0	56	16	16 58	44	43 61	13 07 56						
23	163	24.4		13.0	202	51.9		29.7	58	16 06	52	40	4 53 63	12 56 56						
24	178	24.4	+18	12.4	217	17.5	+18	30.4	60 S	15 55	16 44	17 36	5 06 62	12 44 55						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 27 ^m 2				Mag: -3.9 PMG: 13 ^h 07 ^m				Mag: -0.8 PMG: 19 ^h 09 ^m				Mag: -1.8 PMG: 14 ^h 57 ^m				Mag: +0.3 PMG: 19 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	03.7	163	21.8	+15	37.1	72	19.8	-22	39.0	135	13.8	+4	19.9	59	29.8	-20	17.7		
1	323	06.2	178	21.3		36.1	87	21.3		39.2	150	15.9		19.8	74	32.3		17.7		
2	338	08.6	193	20.7		35.1	102	22.9		39.4	165	17.9		19.6	89	34.9		17.7		
3	353	11.1	208	20.2		34.1	117	24.4		39.6	180	20.0		19.4	104	37.4		17.7		
4	8	13.6	223	19.6		33.2	132	26.0		39.8	195	22.0		19.2	119	39.9		17.7		
5	23	16.0	238	19.1	+15	32.2	147	27.5	-22	40.0	210	24.1	+4	19.0	134	42.4	-20	17.7		
6	38	18.5	253	18.5	+15	31.2	162	29.1	-22	40.2	225	26.1	+4	18.8	149	45.0	-20	17.7		
7	53	21.0	268	17.9		30.2	177	30.6		40.4	240	28.2		18.7	164	47.5		17.7		
8	68	23.4	283	17.4		29.2	192	32.2		40.6	255	30.2		18.5	179	50.0		17.7		
9	83	25.9	298	16.8		28.2	207	33.7		40.8	270	32.2		18.3	194	52.5		17.7		
10	98	28.3	313	16.3		27.2	222	35.3		41.0	285	34.3		18.1	209	55.1		17.7		
11	113	30.8	328	15.7	+15	26.2	237	36.8	-22	41.2	300	36.3	+4	17.9	224	57.6	-20	17.7		
12	128	33.3	343	15.2	+15	25.2	252	38.4	-22	41.4	315	38.4	+4	17.7	240	00.1	-20	17.7		
13	143	35.7	358	14.6		24.2	267	39.9		41.6	330	40.4		17.6	255	02.6		17.7		
14	158	38.2	13	14.1		23.3	282	41.5		41.8	345	42.5		17.4	270	05.2		17.7		
15	173	40.7	28	13.5		22.3	297	43.0		42.0	0	44.5		17.2	285	07.7		17.7		
16	188	43.1	43	13.0		21.3	312	44.5		42.1	15	46.6		17.0	300	10.2		17.7		
17	203	45.6	58	12.4	+15	20.3	327	46.1	-22	42.3	30	48.6	+4	16.8	315	12.7	-20	17.7		
18	218	48.1	73	11.9	+15	19.3	342	47.6	-22	42.5	45	50.7	+4	16.6	330	15.3	-20	17.7		
19	233	50.5	88	11.3		18.3	357	49.1		42.7	60	52.7		16.5	345	17.8		17.7		
20	248	53.0	103	10.8		17.3	12	50.7		42.9	75	54.8		16.3	0	20.3		17.7		
21	263	55.4	118	10.2		16.3	27	52.2		43.1	90	56.8		16.1	15	22.8		17.7		
22	278	57.9	133	09.7		15.3	42	53.8		43.3	105	58.9		15.9	30	25.3		17.7		
23	294	00.4	148	09.2		14.3	57	55.3		43.5	121	00.9		15.7	45	27.9		17.7		
24	309	02.8	163	08.6	+15	13.3	72	56.8	-22	43.7	136	03.0	+4	15.5	60	30.4	-20	17.7		
Dif	—		-6		-10		+15		-2		+20		-2		+25		0			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h /8 PMG: 12 ^h 06 ^m 3				Edad: 26 ^d 5 PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /6 20 ^h : 58 ^m /4 R ^o : 57 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	178	24.4	+18	12.4	217	17.5	+18	30.4	60 N	** *	2 38	3 39	1 13 61		18 32 44					
1	193	24.5		11.8	231	43.1		30.9	58	1 27	2 58	3 52	26 60		20 45					
2	208	24.5		11.2	246	08.8		31.3	56	2 01	3 14	4 03	37 60		18 09 46					
3	223	24.5		10.5	260	34.4		31.5	54	24	28	12	46 60		17 59 48					
4	238	24.6		09.9	275	00.1		31.7	52	43	39	21	1 55 59		51 48					
5	253	24.6	+18	09.3	289	25.8	+18	31.7	50	2 58	3 50	4 28	2 02 60		17 43 49					
6	268	24.6	+18	08.7	303	51.5	+18	31.7	45	3 28	4 11	4 45	2 19 59		17 27 50					
7	283	24.7		08.0	318	17.2		31.5	40	3 50	27	4 58	32 59		14 51					
8	298	24.7		07.4	332	42.9		31.2	35	4 07	41	5 09	44 58		17 03 52					
9	313	24.7		06.8	347	08.7		30.7	30	21	4 53	19	2 54 58		16 53 53					
10	328	24.8		06.2	1	34.4		30.2	20	4 44	5 12	35	3 11 57		36 54					
11	343	24.8	+18	05.5	16	00.2	+18	29.5	10 N	5 01	5 27	5 50	3 26 57		16 21 55					
12	358	24.8	+18	04.9	30	26.1	+18	28.7	0	5 16	5 41	6 03	3 40 56		16 07 56					
13	13	24.9		04.3	44	51.9		27.8	10 S	29	5 54	16	3 54 56		15 53 57					
14	28	24.9		03.7	59	17.8		26.8	20	40	6 07	30	4 09 56		38 58					
15	43	24.9		03.0	73	43.7		25.7	30	52	21	46	26 55		21 59					
16	58	25.0		02.4	88	09.6		24.4	35	5 58	28	6 55	36 55		15 11 59					
17	73	25.0	+18	01.8	102	35.5	+18	23.1	40	6 04	6 37	7 05	4 48 54		14 59 61					
18	88	25.0	+18	01.2	117	01.5	+18	21.6	45	6 11	6 46	7 18	5 02 53		14 46 61					
19	103	25.1	+18	00.5	131	27.5		20.0	50	18	6 57	32	18 53		29 63					
20	118	25.1	+17	59.9	145	53.6		18.3	52	21	7 02	39	26 52		21 63					
21	133	25.2		59.3	160	19.7		16.5	54	24	07	47	35 52		13 63					
22	148	25.2		58.6	174	45.8		14.5	56	28	13	7 55	44 52		14 03 64					
23	163	25.2		58.0	189	11.9		12.5	58	32	20	8 05	5 56 50		13 52 65					
24	178	25.3	+17	57.4	203	38.1	+18	10.3	60 S	6 36	7 28	8 16	6 08 50		13 39 66					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 23 ^m 3				Mag: -3.8 PMG: 13 ^h 08 ^m				Mag: -0.8 PMG: 19 ^h 06 ^m				Mag: -1.8 PMG: 14 ^h 54 ^m				Mag: +0.3 PMG: 19 ^h 55 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	02.8			163	08.6	+15	13.3	72	56.8	-22	43.7	136	03.0	+4	15.5	60	30.4	-20	17.7
1	324	05.3			178	08.1		12.3	87	58.3		43.9	151	05.0		15.4	75	32.9		17.7
2	339	07.8			193	07.5		11.3	102	59.9		44.1	166	07.1		15.2	90	35.4		17.7
3	354	10.2			208	07.0		10.3	118	01.4		44.3	181	09.1		15.0	105	38.0		17.7
4	9	12.7			223	06.4		09.3	133	02.9		44.5	196	11.1		14.8	120	40.5		17.7
5	24	15.2			238	05.9	+15	08.3	148	04.5	-22	44.7	211	13.2	+4	14.6	135	43.0	-20	17.7
6	39	17.6			253	05.3	+15	07.3	163	06.0	-22	44.9	226	15.2	+4	14.4	150	45.5	-20	17.7
7	54	20.1			268	04.8		06.3	178	07.5		45.1	241	17.3		14.3	165	48.0		17.7
8	69	22.6			283	04.3		05.3	193	09.0		45.3	256	19.3		14.1	180	50.6		17.7
9	84	25.0			298	03.7		04.2	208	10.6		45.5	271	21.4		13.9	195	53.1		17.7
10	99	27.5			313	03.2		03.2	223	12.1		45.7	286	23.4		13.7	210	55.6		17.7
11	114	29.9			328	02.6	+15	02.2	238	13.6	-22	45.9	301	25.5	+4	13.5	225	58.1	-20	17.7
12	129	32.4			343	02.1	+15	01.2	253	15.1	-22	46.1	316	27.5	+4	13.3	241	00.6	-20	17.7
13	144	34.9			358	01.6	+15	00.2	268	16.6		46.3	331	29.6		13.2	256	03.2		17.7
14	159	37.3			13	01.0	+14	59.2	283	18.1		46.5	346	31.6		13.0	271	05.7		17.7
15	174	39.8			28	00.5		58.2	298	19.7		46.7	1	33.6		12.8	286	08.2		17.7
16	189	42.3			42	59.9		57.2	313	21.2		46.9	16	35.7		12.6	301	10.7		17.7
17	204	44.7			57	59.4	+14	56.2	328	22.7	-22	47.1	31	37.7	+4	12.4	316	13.2	-20	17.7
18	219	47.2			72	58.9	+14	55.2	343	24.2	-22	47.3	46	39.8	+4	12.2	331	15.8	-20	17.7
19	234	49.7			87	58.3		54.1	358	25.7		47.5	61	41.8		12.1	346	18.3		17.7
20	249	52.1			102	57.8		53.1	13	27.2		47.7	76	43.9		11.9	1	20.8		17.7
21	264	54.6			117	57.3		52.1	28	28.7		47.9	91	45.9		11.7	16	23.3		17.7
22	279	57.1			132	56.7		51.1	43	30.2		48.1	106	48.0		11.5	31	25.8		17.7
23	294	59.5			147	56.2		50.1	58	31.8		48.3	121	50.0		11.3	46	28.4		17.7
24	310	02.0			162	55.7	+14	49.1	73	33.3	-22	48.5	136	52.0	+4	11.1	61	30.9	-20	17.7
Dif	—				-5 -10				+15 -2				+20 -2				+25 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8			Edad: 27 ^d 5 PHE { 4 ^h : 58 ^m /3 12 ^h : 58 ^m /1 20 ^h : 57 ^m /9 R°: 54 ^m																		
	PMG: 12 ^h 06 ^m 3			SD: 15 ^h 9 PMG: 10 ^h 50 ^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	178	25.3	+17 57.4	203	38.1	+18 10.3	60 N	20 29	21 29	** **	2 14 70		19 16 34									
1	193	25.3	56.7	218	04.3	72 08.1	58	17	21 10	22 36	26 69		19 05 36									
2	208	25.3	56.1	232	30.6	73 05.7	56	20 07	20 55	22 05	37 67		18 55 38									
3	223	25.4	55.5	246	56.9	73 03.2	54	19 57	42	21 43	46 66		47 39									
4	238	25.4	54.8	261	23.2	73 +18 00.6	52	49	30	25	2 54 66		39 40									
5	253	25.5	+17 54.2	275	49.6	74 +17 57.9	50	19 42	20 20	21 11	3 02 64		18 32 41									
6	268	25.5	+17 53.6	290	16.0	74 +17 55.0	45	19 26	20 00	20 42	3 18 62		18 17 44									
7	283	25.5	52.9	304	42.4	74 52.1	40	13	19 44	21	31 61		18 05 45									
8	298	25.6	52.3	319	08.9	75 49.1	35	19 02	30	20 04	42 60		17 55 46									
9	313	25.6	51.7	333	35.5	76 45.9	30	18 53	19	19 50	3 52 59		46 48									
10	328	25.7	51.0	348	02.1	76 42.7	20	37	19 00	28	4 08 58		30 50									
11	343	25.7	+17 50.4	2	28.7	76 +17 39.3	10 N	18 23	18 45	19 11	4 23 56		17 16 52									
12	358	25.8	+17 49.8	16	55.4	77 +17 35.8	0	18 10	18 31	18 57	4 36 55		17 03 54									
13	13	25.8	49.1	31	22.1	77 32.3	10 S	17 57	19	44	4 50 54		16 50 55									
14	28	25.8	48.5	45	48.9	78 28.6	20	43	18 06	33	5 05 52		36 57									
15	43	25.9	47.8	60	15.7	78 24.8	30	28	17 53	22	21 51		20 59									
16	58	25.9	47.2	74	42.6	79 20.9	35	19	46	16	31 49		10 61									
17	73	26.0	+17 46.6	89	09.5	79 +17 17.0	40	17 09	17 37	18 10	5 42 48		16 00 62									
18	88	26.0	+17 45.9	103	36.5	80 +17 12.9	45	16 57	17 28	18 04	5 55 47		15 47 64									
19	103	26.0	45.3	118	03.5	80 08.7	50	42	17	17 57	6 11 45		32 66									
20	118	26.1	44.6	132	30.6	81 +17 04.4	52	36	13	54	18 44		24 67									
21	133	26.1	44.0	146	57.7	81 +17 00.0	54	28	07	50	27 42		16 69									
22	148	26.2	43.4	161	24.9	82 +16 55.6	56	20	17 01	47	36 41		15 07 70									
23	163	26.2	42.7	175	52.1	82 51.0	58	10	16 55	43	46 40		14 57 71									
24	178	26.3	+17 42.1	190	19.4	83 +16 46.3	60 S	16 00	16 48	17 39	6 58 39		14 45 73									
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO										
	PMG: 3 ^h 19 ^m 3			Mag: -3.8 PMG: 13 ^h 09 ^m			Mag: -0.8 PMG: 19 ^h 04 ^m			Mag: -1.8 PMG: 14 ^h 51 ^m		Mag: +0.3 PMG: 19 ^h 51 ^m										
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	Dec									
h	°	'	°	°	'	°	°	'	°	°	'	°	'									
0	310	02.0	162 55.7	+14 49.1	73 33.3	-22 48.5	136 52.0	+4 11.1	61 30.9	-20 17.7												
1	325	04.4	177 55.1	48.0	88 34.8	48.7	151 54.1	10.9	76 33.4	17.7												
2	340	06.9	192 54.6	47.0	103 36.3	48.9	166 56.1	10.8	91 35.9	17.7												
3	355	09.4	207 54.1	46.0	118 37.8	49.1	181 58.2	10.6	106 38.4	17.7												
4	10	11.8	222 53.5	45.0	133 39.3	49.3	197 00.2	10.4	121 40.9	17.7												
5	25	14.3	237 53.0	+14 44.0	148 40.8	-22 49.5	212 02.3	+4 10.2	136 43.5	-20 17.7												
6	40	16.8	252 52.5	+14 42.9	163 42.3	-22 49.7	227 04.3	+4 10.0	151 46.0	-20 17.7												
7	55	19.2	267 51.9	41.9	178 43.8	49.9	242 06.3	09.8	166 48.5	17.8												
8	70	21.7	282 51.4	40.9	193 45.3	50.1	257 08.4	09.7	181 51.0	17.8												
9	85	24.2	297 50.9	39.9	208 46.8	50.3	272 10.4	09.5	196 53.5	17.8												
10	100	26.6	312 50.3	38.9	223 48.3	50.5	287 12.5	09.3	211 56.0	17.8												
11	115	29.1	327 49.8	+14 37.8	238 49.8	-22 50.7	302 14.5	+4 09.1	226 58.6	-20 17.8												
12	130	31.6	342 49.3	+14 36.8	253 51.3	-22 50.9	317 16.6	+4 08.9	242 01.1	-20 17.8												
13	145	34.0	357 48.8	35.8	268 52.8	51.1	332 18.6	08.7	257 03.6	17.8												
14	160	36.5	12 48.2	34.8	283 54.3	51.3	347 20.6	08.5	272 06.1	17.8												
15	175	38.9	27 47.7	33.7	298 55.8	51.5	2 22.7	08.4	287 08.6	17.8												
16	190	41.4	42 47.2	32.7	313 57.2	51.7	17 24.7	08.2	302 11.1	17.8												
17	205	43.9	57 46.7	+14 31.7	328 58.7	-22 51.9	32 26.8	+4 08.0	317 13.6	-20 17.8												
18	220	46.3	72 46.1	+14 30.6	344 00.2	-22 52.1	47 28.8	+4 07.8	332 16.2	-20 17.8												
19	235	48.8	87 45.6	29.6	359 01.7	52.3	62 30.9	07.6	347 18.7	17.8												
20	250	51.3	102 45.1	28.6	14 03.2	52.5	77 32.9	07.4	2 21.2	17.8												
21	265	53.7	117 44.6	27.5	29 04.7	52.7	92 34.9	07.2	17 23.7	17.8												
22	280	56.2	132 44.0	26.5	44 06.2	52.9	107 37.0	07.1	32 26.2	17.8												
23	295	58.7	147 43.5	25.5	59 07.7	53.1	122 39.0	06.9	47 28.7	17.8												
24	311	01.1	162 43.0	+14 24.5	74 09.1	-22 53.3	137 41.1	+4 06.7	62 31.2	-20 17.8												
Dif	—		-5	-10	+15	-2	+20	-2	+25	0												

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: 28 ^d 5 SD: 15'8 PMG: 11 ^h 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	26.3	+17	42.1	190	19.4	+16	46.3	48	60 N	0 40	2 44	3 44	3 24	75	19 50	26	
1	193	26.3		41.4	204	46.7	83	41.5	48	58	1 37	3 03	3 56	35	73	41	28	
2	208	26.4		40.8	219	14.1	84	36.7	50	56	2 08	18	4 06	44	71	33	30	
3	223	26.4		40.1	233	41.6	85	31.7	50	54	30	32	16	3 52	70	26	32	
4	238	26.4		39.5	248	09.1	85	26.7	50	52	2 48	43	24	4 00	68	19	34	
5	253	26.5	+17	38.8	262	36.7	86	+16	21.5	52	3 02	3 53	4 31	4 06	67	19 13	35	
6	268	26.5	+17	38.2	277	04.3	86	+16	16.3	52	3 31	4 13	4 47	4 20	65	19 01	37	
7	283	26.6		37.5	291	32.0	87	11.0	53	40	3 52	29	5 00	32	62	18 50	40	
8	298	26.6		36.9	305	59.7	87	05.6	54	35	4 09	43	10	42	61	41	42	
9	313	26.7		36.3	320	27.6	89	+16	00.1	55	30	23	4 54	20	4 51	59	34	43
10	328	26.7		35.6	334	55.4	88	+15	54.5	56	20	4 45	5 12	36	5 06	56	20	46
11	343	26.8	+17	35.0	349	23.3	89	+15	48.8	57	10 N	5 02	5 28	5 50	5 19	54	18 08	49
12	358	26.8	+17	34.3	3	51.3	90	+15	43.1	57	0	5 16	5 41	6 03	5 31	53	17 57	51
13	13	26.9		33.7	18	19.4	91	37.2	59	10 S	28	5 54	16	44	50	45	54	
14	28	26.9		33.0	32	47.5	91	31.3	59	20	39	6 06	29	5 57	48	33	56	
15	43	27.0		32.4	47	15.7	92	25.3	60	30	51	19	44	6 12	45	19	59	
16	58	27.0		31.7	61	43.9	92	19.2	61	35	5 56	27	6 53	20	44	11	61	
17	73	27.1	+17	31.1	76	12.2	93	+15	13.0	62	40	6 02	6 35	7 03	6 30	42	17 02	62
18	88	27.1	+17	30.4	90	40.5	93	+15	06.7	63	45	6 08	6 44	7 15	6 42	40	16 51	65
19	103	27.2		29.7	105	09.0	95	+15	00.4	63	50	15	54	29	6 56	37	38	67
20	118	27.2		29.1	119	37.4	94	+14	54.0	64	52	18	6 59	36	7 02	36	31	69
21	133	27.3		28.4	134	06.0	96	47.5	65	54	21	7 04	43	09	35	25	70	
22	148	27.3		27.8	148	34.6	96	40.9	66	56	25	10	7 52	17	34	17	72	
23	163	27.4		27.1	163	03.3	97	34.3	66	58	28	16	8 01	26	32	16 08	74	
24	178	27.4	+17	26.5	177	32.0	97	+14	27.6	67	60 S	6 32	7 23	8 11	7 37	29	15 58	77
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 15 ^m 4			Mag: -3.8 PMG: 13 ^h 10 ^m			Mag: -0.7 PMG: 19 ^h 02 ^m			Mag: -1.8 PMG: 14 ^h 47 ^m			Mag: +0.3 PMG: 19 ^h 47 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	311	01.1	162	43.0	+14	24.5	74	09.1	-22	53.3	137	41.1	+4	06.7	62	31.2	-20	17.8
1	326	03.6	177	42.5		23.4	89	10.6		53.5	152	43.1		06.5	77	33.8		17.8
2	341	06.0	192	41.9		22.4	104	12.1		53.7	167	45.1		06.3	92	36.3		17.8
3	356	08.5	207	41.4		21.3	119	13.6		53.9	182	47.2		06.1	107	38.8		17.8
4	11	11.0	222	40.9		20.3	134	15.1		54.1	197	49.2		05.9	122	41.3		17.8
5	26	13.4	237	40.4	+14	19.3	149	16.5	-22	54.3	212	51.3	+4	05.8	137	43.8	-20	17.8
6	41	15.9	252	39.9	+14	18.2	164	18.0	-22	54.5	227	53.3	+4	05.6	152	46.3	-20	17.8
7	56	18.4	267	39.3		17.2	179	19.5		54.7	242	55.3		05.4	167	48.8		17.8
8	71	20.8	282	38.8		16.2	194	21.0		54.9	257	57.4		05.2	182	51.4		17.8
9	86	23.3	297	38.3		15.1	209	22.5		55.1	272	59.4		05.0	197	53.9		17.8
10	101	25.8	312	37.8		14.1	224	23.9		55.3	288	01.5		04.8	212	56.4		17.8
11	116	28.2	327	37.3	+14	13.0	239	25.4	-22	55.5	303	03.5	+4	04.6	227	58.9	-20	17.8
12	131	30.7	342	36.8	+14	12.0	254	26.9	-22	55.7	318	05.5	+4	04.5	243	01.4	-20	17.8
13	146	33.2	357	36.2		11.0	269	28.3		55.9	333	07.6		04.3	258	03.9		17.8
14	161	35.6	12	35.7		09.9	284	29.8		56.1	348	09.6		04.1	273	06.4		17.8
15	176	38.1	27	35.2		08.9	299	31.3		56.3	3	11.7		03.9	288	08.9		17.8
16	191	40.5	42	34.7		07.8	314	32.7		56.5	18	13.7		03.7	303	11.4		17.8
17	206	43.0	57	34.2	+14	06.8	329	34.2	-22	56.7	33	15.7	+4	03.5	318	14.0	-20	17.8
18	221	45.5	72	33.7	+14	05.7	344	35.7	-22	56.9	48	17.8	+4	03.3	333	16.5	-20	17.8
19	236	47.9	87	33.2		04.7	359	37.1		57.1	63	19.8		03.1	348	19.0		17.8
20	251	50.4	102	32.6		03.6	14	38.6		57.3	78	21.9		03.0	3	21.5		17.8
21	266	52.9	117	32.1		02.6	29	40.1		57.5	93	23.9		02.8	18	24.0		17.8
22	281	55.3	132	31.6		01.5	44	41.5		57.7	108	25.9		02.6	33	26.5		17.8
23	296	57.8	147	31.1	+14	00.5	59	43.0		57.9	123	28.0		02.4	48	29.0		17.8
24	312	00.3	162	30.6	+13	59.5	74	44.5	-22	58.1	138	30.0	+4	02.2	63	31.5	-20	17.8
Dif	—			-5 -10			+15 -2			+20 -2			+25 0					

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 1			Edad: 29 ^d 5 PHE { 4 ^h : 57 ^m 2 12 ^h : 57 ^m 0 20 ^h : 56 ^m 8 R°: 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	27.4	+17	26.5	177	32.0	+14	27.6	60 N	20 24	21 22	23 11	4 39 77	20 16 21
1	193	27.5		25.8	192	00.8 98		20.8 68	58	13	21 04	22 26	48 74	09 24
2	208	27.5		25.2	206	29.6 98		13.9 69	56	20 03	20 50	21 58	4 55 72	20 03 26
3	223	27.6		24.5	220	58.6 ¹⁰⁰	+14	07.0 69	54	19 54	37	37	5 02 70	19 58 26
4	238	27.6		23.8	235	27.6 ¹⁰⁰	+13	59.9 71	52	46	26	20	08 69	53 28
5	253	27.7	+17	23.2	249	56.6 ¹⁰⁰	+13	52.9 70	50	19 39	20 17	21 06	5 13 68	19 48 30
6	268	27.7	+17	22.5	264	25.7 ¹⁰¹	+13	45.7 72	45	19 24	19 57	20 39	5 25 64	19 38 34
7	283	27.8		21.9	278	54.9 ¹⁰²		38.5 72	40	11	41	18	34 62	30 36
8	298	27.8		21.2	293	24.1 ¹⁰²		31.2 73	35	19 01	28	20 02	43 60	23 38
9	313	27.9		20.5	307	53.5 ¹⁰⁴		23.9 73	30	18 51	19 17	19 48	5 50 58	17 40
10	328	27.9		19.9	322	22.8 ¹⁰³		16.5 74	20	36	18 59	27	6 02 55	19 06 43
11	343	28.0	+17	19.2	336	52.3 ¹⁰⁵	+13	09.0 75	10 N	18 22	18 44	19 10	6 13 53	18 57 46
12	358	28.0	+17	18.6	351	21.8 ¹⁰⁵	+13	01.4 76	0	18 10	18 31	18 56	6 24 49	18 48 48
13	13	28.1		17.9	5	51.3 ¹⁰⁵	+12	53.8 76	10 S	17 57	19	44	34 47	39 51
14	28	28.2		17.2	20	21.0 ¹⁰⁷		46.2 76	20	44	18 07	33	45 44	29 54
15	43	28.2		16.6	34	50.6 ¹⁰⁶		38.5 77	30	29	17 54	23	6 57 41	18 57
16	58	28.3		15.9	49	20.4 ¹⁰⁸		30.7 78	35	20	47	17	7 04 40	12 59
17	73	28.3	+17	15.3	63	50.2 ¹⁰⁸	+12	22.8 79	40	17 10	17 39	18 12	7 12 38	18 04 62
18	88	28.4	+17	14.6	78	20.1 ¹⁰⁹	+12	14.9 79	45	16 59	17 30	18 06	7 22 35	17 56 64
19	103	28.4		13.9	92	50.0 ¹⁰⁹	+12	07.0 79	50	45	20	17 59	33 32	45 67
20	118	28.5		13.3	107	20.0 ¹¹⁰	+11	59.0 80	52	39	15	56	38 31	40 69
21	133	28.5		12.6	121	50.1 ¹¹¹		50.9 81	54	31	10	53	44 29	35 70
22	148	28.6		11.9	136	20.3 ¹¹²		42.8 81	56	23	17 05	50	51 27	29 72
23	163	28.7		11.3	150	50.4 ¹¹¹		34.6 82	58	14	16 59	46	7 58 25	22 75
24	178	28.7	+17	10.6	165	20.7 ¹¹³	+11	26.4 82	60 S	16 04	16 52	17 43	8 06 23	17 15 77
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 11 ^m 5		Mag: -3.8 PMG: 13 ^h 10 ^m		Mag: -0.7 PMG: 18 ^h 59 ^m		Mag: -1.8 PMG: 14 ^h 44 ^m		Mag: +0.3 PMG: 19 ^h 43 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	312	00.3	162	30.6	+13	59.5	74	44.5	+4	02.2				
1	327	02.7	177	30.1		58.4	89	45.9		02.0				
2	342	05.2	192	29.6		57.4	104	47.4		01.8				
3	357	07.7	207	29.1		56.3	119	48.8		01.7				
4	12	10.1	222	28.6		55.2	134	50.3		01.5				
5	27	12.6	237	28.1	+13	54.2	149	51.7	+4	01.3				
6	42	15.0	252	27.5	+13	53.1	164	53.2	+4	01.1				
7	57	17.5	267	27.0		52.1	179	54.7		00.9				
8	72	20.0	282	26.5		51.0	194	56.1		00.7				
9	87	22.4	297	26.0		50.0	209	57.6		00.5				
10	102	24.9	312	25.5		48.9	224	59.0		00.3				
11	117	27.4	327	25.0	+13	47.9	240	00.5	+4	00.2				
12	132	29.8	342	24.5	+13	46.8	255	01.9	+4	00.0				
13	147	32.3	357	24.0		45.8	270	03.4	+3	59.8				
14	162	34.8	12	23.5		44.7	285	04.8		59.6				
15	177	37.2	27	23.0		43.6	300	06.2		59.4				
16	192	39.7	42	22.5		42.6	315	07.7		59.2				
17	207	42.2	57	22.0	+13	41.5	330	09.1	+3	59.0				
18	222	44.6	72	21.5	+13	40.5	345	10.6	+3	58.8				
19	237	47.1	87	21.0		39.4	0	12.0		58.7				
20	252	49.5	102	20.5		38.3	15	13.5		58.5				
21	267	52.0	117	20.0		37.3	30	14.9		58.3				
22	282	54.5	132	19.5		36.2	45	16.3		58.1				
23	297	56.9	147	19.0		35.1	60	17.8		57.9				
24	312	59.4	162	18.5	+13	34.1	75	19.2	+3	57.7				
Dif	—		-5		-11		+14		-2					

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: 1 ^d 1 PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'1 Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	28.7	+17 10.6	165	20.7	+11 26.4	60 N	1 02	2 51	3 49	5 56	76	20 37	18	
1	193	28.8	09.9	179	51.0 ¹¹³	18.1 ⁸³	58	1 47	3 08	4 00	6 02	73	33	20	
2	208	28.8	09.3	194	21.4 ¹¹⁴	09.8 ⁸³	56	2 15	23	10	07	72	29	22	
3	223	28.9	08.6	208	51.8 ¹¹⁴	+11 01.4 ⁸⁴	54	36	36	19	12	70	25	24	
4	238	28.9	07.9	223	22.3 ¹¹⁵	+10 53.0 ⁸⁴	52	2 52	46	27	17	68	21	26	
5	253	29.0	+17 07.2	237	52.9 ¹¹⁶	+10 44.5 ⁸⁵	50	3 06	3 56	4 34	6 21	66	20 18	27	
6	268	29.1	+17 06.6	252	23.5 ¹¹⁶	+10 36.0 ⁸⁵	45	3 34	4 16	4 49	6 29	64	20 12	30	
7	283	29.1	05.9	266	54.2 ¹¹⁷	27.5 ⁸⁶	40	3 55	31	5 01	36	61	06	33	
8	298	29.2	05.2	281	25.0 ¹¹⁸	18.9 ⁸⁶	35	4 11	44	12	43	58	20 01	35	
9	313	29.2	04.6	295	55.8 ¹¹⁸	10.2 ⁸⁷	30	24	4 55	21	48	56	19 57	37	
10	328	29.3	03.9	310	26.6 ¹¹⁸	+10 01.6 ⁸⁶	20	4 46	5 13	37	6 57	53	49	40	
11	343	29.4	+17 03.2	324	57.5 ¹¹⁹	+9 52.8 ⁸⁸	10 N	5 02	5 28	5 50	7 06	50	19 43	43	
12	358	29.4	+17 02.5	339	28.5 ¹²⁰	+9 44.1 ⁸⁷	0	5 16	5 41	6 03	7 13	47	19 36	46	
13	13	29.5	01.9	353	59.6 ¹²¹	35.3 ⁸⁸	10 S	28	5 53	15	21	44	30	49	
14	28	29.5	01.2	8	30.7 ¹²¹	26.4 ⁸⁹	20	39	6 05	28	29	42	23	52	
15	43	29.6	+17 00.5	23	01.8 ¹²¹	17.5 ⁸⁹	30	49	18	43	38	38	15	56	
16	58	29.7	+16 59.9	37	33.0 ¹²²	+9 08.6 ⁸⁹	35	5 55	25	6 51	44	36	11	57	
17	73	29.7	+16 59.2	52	04.3 ¹²³	+8 59.7 ⁸⁹	40	6 00	6 33	7 01	7 50	34	19 06	60	
18	88	29.8	+16 58.5	66	35.6 ¹²³	+8 50.7 ⁹⁰	45	6 06	6 41	7 13	7 57	31	19 00	62	
19	103	29.8	57.8	81	07.0 ¹²⁴	41.7 ⁹⁰	50	13	51	26	8 05	28	18 52	66	
20	118	29.9	57.1	95	38.4 ¹²⁴	32.6 ⁹¹	52	15	6 56	33	09	27	49	68	
21	133	30.0	56.5	110	09.9 ¹²⁵	23.5 ⁹¹	54	18	7 01	40	13	26	45	70	
22	148	30.0	55.8	124	41.4 ¹²⁵	14.4 ⁹¹	56	21	06	48	18	24	41	71	
23	163	30.1	55.1	139	13.0 ¹²⁶	+8 05.3 ⁹¹	58	25	12	7 56	23	22	37	73	
24	178	30.2	+16 54.4	153	44.7 ¹²⁷	+7 56.1 ⁹²	60 S	6 29	7 19	8 07	8 29	19	18 32	75	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 3 ^h 07 ^m 5		Mag: -3.8 PMG: 13 ^h 11 ^m			Mag: -0.7 PMG: 18 ^h 57 ^m			Mag: -1.8 PMG: 14 ^h 41 ^m			Mag: +0.4 PMG: 19 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	312	59.4	162	18.5	+13 34.1	75	19.2	-23 03.0	139	18.9	+3 57.7	64	31.7	-20 17.9	
1	328	01.9	177	18.0	33.0	90	20.7	03.2	154	20.9	57.5	79	34.2	17.9	
2	343	04.3	192	17.5	32.0	105	22.1	03.4	169	23.0	57.3	94	36.7	17.9	
3	358	06.8	207	17.0	30.9	120	23.5	03.6	184	25.0	57.1	109	39.2	17.9	
4	13	09.3	222	16.5	29.8	135	25.0	03.8	199	27.1	57.0	124	41.7	17.9	
5	28	11.7	237	16.0	+13 28.7	150	26.4	-23 04.0	214	29.1	+3 56.8	139	44.2	-20 17.9	
6	43	14.2	252	15.5	+13 27.7	165	27.8	-23 04.2	229	31.1	+3 56.6	154	46.7	-20 17.9	
7	58	16.6	267	15.0	26.6	180	29.3	04.4	244	33.2	56.4	169	49.2	17.9	
8	73	19.1	282	14.5	25.5	195	30.7	04.6	259	35.2	56.2	184	51.7	17.9	
9	88	21.6	297	14.0	24.5	210	32.1	04.8	274	37.2	56.0	199	54.2	17.9	
10	103	24.0	312	13.5	23.4	225	33.5	05.0	289	39.3	55.8	214	56.8	18.0	
11	118	26.5	327	13.0	+13 22.3	240	35.0	-23 05.2	304	41.3	+3 55.6	229	59.3	-20 18.0	
12	133	29.0	342	12.5	+13 21.3	255	36.4	-23 05.4	319	43.3	+3 55.5	245	01.8	-20 18.0	
13	148	31.4	357	12.0	20.2	270	37.8	05.6	334	45.4	55.3	260	04.3	18.0	
14	163	33.9	12	11.5	19.1	285	39.2	05.9	349	47.4	55.1	275	06.8	18.0	
15	178	36.4	27	11.0	18.0	300	40.7	06.1	4	49.4	54.9	290	09.3	18.0	
16	193	38.8	42	10.6	17.0	315	42.1	06.3	19	51.5	54.7	305	11.8	18.0	
17	208	41.3	57	10.1	+13 15.9	330	43.5	-23 06.5	34	53.5	+3 54.5	320	14.3	-20 18.0	
18	223	43.8	72	09.6	+13 14.8	345	44.9	-23 06.7	49	55.5	+3 54.3	335	16.8	-20 18.0	
19	238	46.2	87	09.1	13.7	0	46.3	06.9	64	57.6	54.1	350	19.3	18.0	
20	253	48.7	102	08.6	12.7	15	47.8	07.1	79	59.6	53.9	5	21.8	18.0	
21	268	51.1	117	08.1	11.6	30	49.2	07.3	95	01.6	53.8	20	24.3	18.0	
22	283	53.6	132	07.6	10.5	45	50.6	07.5	110	03.7	53.6	35	26.8	18.0	
23	298	56.1	147	07.1	09.4	60	52.0	07.7	125	05.7	53.4	50	29.3	18.0	
24	313	58.5	162	06.6	+13 08.4	75	53.4	-23 07.9	140	07.7	+3 53.2	65	31.8	-20 18.0	
Dif	—		-5	-11		+14	-2		+20		-2	+25			

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 9			Edad: 2 ^d 1 PHE { 4 ^h : 55 ^m 9 12 ^h : 55 ^m 7 20 ^h : 55 ^m 6 R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m			
0	178	30.2	+16 54.4	153	44.7	+7 56.1	60 N	20 19	21 16	22 54	7 12 74		20 55 17			
1	193	30.2		168	16.4 ¹²⁷	46.9 ⁹²	58	20 08	20 59	22 16	15 73		53 18			
2	208	30.3		182	48.1 ¹²⁷	37.7 ⁹²	56	19 58	45	21 51	19 70		51 20			
3	223	30.4		197	19.9 ¹²⁸	28.4 ⁹³	54	50	33	31	22 68		49 22			
4	238	30.4		211	51.8 ¹²⁹	19.1 ⁹³	52	42	22	15	25 66		47 23			
5	253	30.5	+16 51.0	226	23.7 ¹²⁹	+7 09.8 ⁹³	50	19 35	20 13	21 02	7 27 65		20 45 25			
6	268	30.5	+16 50.4	240	55.6 ¹²⁹	+7 00.5 ⁹³	45	19 21	19 54	20 35	7 33 61		20 42 28			
7	283	30.6		255	27.7 ¹³¹	+6 51.1 ⁹⁴	40	19 09	39	20 15	37 59		39 30			
8	298	30.7		269	59.7 ¹³⁰	41.7 ⁹⁴	35	18 59	26	19 59	41 57		36 33			
9	313	30.7		284	31.8 ¹³¹	32.3 ⁹⁴	30	50	19 16	46	44 55		34 35			
10	328	30.8		299	04.0 ¹³²	22.9 ⁹⁴	20	35	18 58	25	50 52		29 39			
11	343	30.9	+16 46.9	313	36.2 ¹³²	+6 13.4 ⁹⁵	10 N	18 22	18 44	19 09	7 56 48		20 26 41			
12	358	30.9	+16 46.3	328	08.4 ¹³²	+6 04.0 ⁹⁴	0	18 09	18 31	18 56	8 00 46		20 22 45			
13	13	31.0		342	40.7 ¹³³	+5 54.5 ⁹⁵	10 S	17 57	19	44	05 43		19 47			
14	28	31.1		357	13.0 ¹³³	45.0 ⁹⁵	20	45	18 07	34	11 39		15 51			
15	43	31.1		11	45.4 ¹³⁴	35.5 ⁹⁵	30	30	17 55	24	16 36		11 54			
16	58	31.2		26	17.8 ¹³⁴	25.9 ⁹⁶	35	22	48	19	20 34		08 57			
17	73	31.3	+16 42.8	40	50.3 ¹³⁵	+5 16.4 ⁹⁵	40	17 12	17 41	18 13	8 24 31		20 06 58			
18	88	31.3	+16 42.1	55	22.8 ¹³⁵	+5 06.8 ⁹⁶	45	17 01	17 32	18 07	8 28 29		20 02 62			
19	103	31.4		69	55.4 ¹³⁶	+4 57.2 ⁹⁶	50	16 48	23	18 01	33 26		19 58 65			
20	118	31.5		84	27.9 ¹³⁵	47.6 ⁹⁶	52	42	18	17 59	36 24		57 66			
21	133	31.6		99	00.6 ¹³⁷	38.0 ⁹⁶	54	35	13	56	39 22		55 67			
22	148	31.6		113	33.3 ¹³⁷	28.4 ⁹⁶	56	27	08	53	42 20		52 70			
23	163	31.7		128	06.0 ¹³⁷	18.8 ⁹⁶	58	18	17 02	50	45 19		50 71			
24	178	31.8	+16 38.0	142	38.7 ¹³⁷	+4 09.2 ⁹⁶	60 S	16 09	16 56	17 46	8 48 17		19 47 74			
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO				
	PMG: 3 ^h 03 ^m 6			Mag: -3.8 PMG: 13 ^h 12 ^m			Mag: -0.7 PMG: 18 ^h 55 ^m			Mag: -1.8 PMG: 14 ^h 38 ^m		Mag: +0.4 PMG: 19 ^h 35 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec	hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	313	58.5	162 06.6	+13 08.4	75 53.4	-23 07.9	140 07.7	+3 53.2	65 31.8	-20 18.0						
1	329	01.0	177 06.1	07.3	90 54.8	08.1	155 09.8	53.0	80 34.3	18.0						
2	344	03.5	192 05.7	06.2	105 56.3	08.3	170 11.8	52.8	95 36.8	18.0						
3	359	05.9	207 05.2	05.1	120 57.7	08.5	185 13.8	52.6	110 39.3	18.0						
4	14	08.4	222 04.7	04.0	135 59.1	08.7	200 15.9	52.4	125 41.8	18.0						
5	29	10.9	237 04.2	+13 02.9	151 00.5	-23 08.9	215 17.9	+3 52.2	140 44.3	-20 18.0						
6	44	13.3	252 03.7	+13 01.9	166 01.9	-23 09.1	230 19.9	+3 52.1	155 46.8	-20 18.0						
7	59	15.8	267 03.2	+13 00.8	181 03.3	09.3	245 22.0	51.9	170 49.3	18.0						
8	74	18.2	282 02.7	+12 59.7	196 04.7	09.5	260 24.0	51.7	185 51.8	18.0						
9	89	20.7	297 02.3	58.6	211 06.1	09.7	275 26.0	51.5	200 54.3	18.0						
10	104	23.2	312 01.8	57.5	226 07.5	09.9	290 28.1	51.3	215 56.8	18.0						
11	119	25.6	327 01.3	+12 56.4	241 08.9	-23 10.2	305 30.1	+3 51.1	230 59.3	-20 18.1						
12	134	28.1	342 00.8	+12 55.4	256 10.3	-23 10.4	320 32.1	+3 50.9	246 01.8	-20 18.1						
13	149	30.6	357 00.3	54.3	271 11.7	10.6	335 34.2	50.7	261 04.3	18.1						
14	164	33.0	11 59.8	53.2	286 13.1	10.8	350 36.2	50.5	276 06.8	18.1						
15	179	35.5	26 59.4	52.1	301 14.5	11.0	5 38.2	50.3	291 09.3	18.1						
16	194	38.0	41 58.9	51.0	316 15.9	11.2	20 40.3	50.2	306 11.8	18.1						
17	209	40.4	56 58.4	+12 49.9	331 17.3	-23 11.4	35 42.3	+3 50.0	321 14.3	-20 18.1						
18	224	42.9	71 57.9	+12 48.8	346 18.7	-23 11.6	50 44.3	+3 49.8	336 16.8	-20 18.1						
19	239	45.4	86 57.4	47.7	1 20.1	11.8	65 46.4	49.6	351 19.3	18.1						
20	254	47.8	101 57.0	46.6	16 21.5	12.0	80 48.4	49.4	6 21.8	18.1						
21	269	50.3	116 56.5	45.6	31 22.9	12.2	95 50.4	49.2	21 24.3	18.1						
22	284	52.7	131 56.0	44.5	46 24.3	12.4	110 52.5	49.0	36 26.8	18.1						
23	299	55.2	146 55.5	43.4	61 25.7	12.6	125 54.5	48.8	51 29.3	18.1						
24	314	57.7	161 55.0	+12 42.3	76 27.1	-23 12.8	140 56.5	+3 48.6	66 31.8	-20 18.1						
Dif	—		-5	-11	+14	-2	+20	-2	+25	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			Edad: 3 ^d 1 PHE { SD: 15 ^h 1 PMG: 14 ^h 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	31.8	+16	38.0	142	38.7	+4	09.2	60 N	1 18	2 57	3 53	8 26	73	21 12	15		
1	193	31.8		37.3	157	11.5 ¹³⁸	+3	59.5 ⁹⁷	58	1 56	3 14	4 04	28 70		11 18			
2	208	31.9		36.6	171	44.4 ¹³⁹		49.8 ⁹⁶	56	2 21		14	29 68		11 20			
3	223	32.0		35.9	186	17.2 ¹³⁸		40.2 ⁹⁷	54	41	40	23	30 67		11 22			
4	238	32.0		35.2	200	50.1 ¹³⁹		30.5 ⁹⁷	52	2 57	50	30	31 65		10 23			
5	253	32.1	+16	34.5	215	23.1 ¹⁴⁰	+3	20.8 ⁹⁷	50	3 10	3 59	4 37	8 32	64	21 10	24		
6	268	32.2	+16	33.9	229	56.1 ¹⁴⁰	+3	11.1 ⁹⁷	45	3 37	4 18	4 51	8 34	61	21 10	27		
7	283	32.3		33.2	244	29.1 ¹⁴⁰	+3	01.4 ⁹⁶	40	3 57	33	5 03	36 58		09 30			
8	298	32.3		32.5	259	02.1 ¹⁴⁰	+2	51.8 ⁹⁶	35	4 13	46	13	38 55		09 32			
9	313	32.4		31.8	273	35.2 ¹⁴¹		42.1 ⁹⁷	30	26	4 57	22	39 53		09 34			
10	328	32.5		31.1	288	08.3 ¹⁴¹		32.3 ⁹⁸	20	4 47	5 14	37	42 49		08 37			
11	343	32.5	+16	30.4	302	41.5 ¹⁴²	+2	22.6 ⁹⁷	10 N	5 03	5 28	5 50	8 44	46	21 07	41		
12	358	32.6	+16	29.7	317	14.7 ¹⁴²	+2	12.9 ⁹⁷	0	5 16	5 41	6 02	8 46	43	21 07	43		
13	13	32.7		29.0	331	47.9 ¹⁴²	+2	03.2 ⁹⁷	10 S		5 52	14	48 41		06 47			
14	28	32.8		28.3	346	21.1 ¹⁴²	+1	53.5 ⁹⁷	20	38	6 04	27	50 38		06 49			
15	43	32.8		27.6	0	54.4 ¹⁴³		43.8 ⁹⁷	30	48	16	41	52 35		05 53			
16	58	32.9		26.9	15	27.7 ¹⁴³		34.1 ⁹⁷	35	53	23	50	54 32		05 54			
17	73	33.0	+16	26.2	30	01.0 ¹⁴³	+1	24.4 ⁹⁷	40	5 58	6 30	6 59	8 55	30	21 04	57		
18	88	33.1	+16	25.5	44	34.4 ¹⁴⁴	+1	14.7 ⁹⁷	45	6 04	6 39	7 10	8 57	27	21 04	59		
19	103	33.1		24.8	59	07.8 ¹⁴⁴	+1	05.0 ⁹⁷	50	10	48	23	8 59	25	03 63			
20	118	33.2		24.1	73	41.2 ¹⁴⁴	+0	55.3 ⁹⁷	52	12	53	29	9 00	23	03 64			
21	133	33.3		23.4	88	14.6 ¹⁴⁴		45.6 ⁹⁷	54	15	6 58	36	01 22		02 66			
22	148	33.4		22.7	102	48.1 ¹⁴⁵		35.9 ⁹⁷	56	18	7 03	43	02 20		02 68			
23	163	33.4		22.0	117	21.6 ¹⁴⁵		26.2 ⁹⁷	58	21	08	7 52	04 18		01 70			
24	178	33.5	+16	21.3	131	55.1 ¹⁴⁵	+0	16.5 ⁹⁷	60 S	6 24	7 15	8 02	9 05	16	21 01	72		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 59 ^m 7		Mag: -3.8 PMG: 13 ^h 13 ^m			Mag: -0.7 PMG: 18 ^h 52 ^m			Mag: -1.8 PMG: 14 ^h 34 ^m			Mag: +0.4 PMG: 19 ^h 31 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	314	57.7	161	55.0	+12	42.3	76	27.1	-23	12.8	140	56.5	+3	48.6	66	31.8	-20	18.1
1	330	00.1	176	54.6		41.2	91	28.5		13.0	155	58.5		48.4	81	34.3		18.1
2	345	02.6	191	54.1		40.1	106	29.9		13.2	171	00.6		48.3	96	36.8		18.1
3	0	05.1	206	53.6		39.0	121	31.3		13.4	186	02.6		48.1	111	39.3		18.1
4	15	07.5	221	53.1		37.9	136	32.7		13.6	201	04.6		47.9	126	41.7		18.1
5	30	10.0	236	52.7	+12	36.8	151	34.1	-23	13.8	216	06.7	+3	47.7	141	44.2	-20	18.1
6	45	12.5	251	52.2	+12	35.7	166	35.4	-23	14.0	231	08.7	+3	47.5	156	46.7	-20	18.1
7	60	14.9	266	51.7		34.6	181	36.8		14.3	246	10.7		47.3	171	49.2		18.1
8	75	17.4	281	51.2		33.5	196	38.2		14.5	261	12.8		47.1	186	51.7		18.1
9	90	19.9	296	50.8		32.4	211	39.6		14.7	276	14.8		46.9	201	54.2		18.2
10	105	22.3	311	50.3		31.3	226	41.0		14.9	291	16.8		46.7	216	56.7		18.2
11	120	24.8	326	49.8	+12	30.2	241	42.4	-23	15.1	306	18.9	+3	46.5	231	59.2	-20	18.2
12	135	27.2	341	49.3	+12	29.1	256	43.7	-23	15.3	321	20.9	+3	46.4	247	01.7	-20	18.2
13	150	29.7	356	48.9		28.0	271	45.1		15.5	336	22.9		46.2	262	04.2		18.2
14	165	32.2	11	48.4		26.9	286	46.5		15.7	351	24.9		46.0	277	06.7		18.2
15	180	34.6	26	47.9		25.8	301	47.9		15.9	6	27.0		45.8	292	09.2		18.2
16	195	37.1	41	47.5		24.7	316	49.3		16.1	21	29.0		45.6	307	11.7		18.2
17	210	39.6	56	47.0	+12	23.6	331	50.6	-23	16.3	36	31.0	+3	45.4	322	14.2	-20	18.2
18	225	42.0	71	46.5	+12	22.5	346	52.0	-23	16.5	51	33.1	+3	45.2	337	16.7	-20	18.2
19	240	44.5	86	46.1		21.4	1	53.4		16.7	66	35.1		45.0	352	19.2		18.2
20	255	47.0	101	45.6		20.3	16	54.8		16.9	81	37.1		44.8	7	21.7		18.2
21	270	49.4	116	45.1		19.2	31	56.1		17.1	96	39.1		44.6	22	24.2		18.2
22	285	51.9	131	44.6		18.1	46	57.5		17.3	111	41.2		44.4	37	26.7		18.2
23	300	54.3	146	44.2		17.0	61	58.9		17.5	126	43.2		44.3	52	29.1		18.2
24	315	56.8	161	43.7	+12	15.9	77	00.2	-23	17.8	141	45.2	+3	44.1	67	31.6	-20	18.2
Dif	—		-5		-11		+14		-2		+20		-2		+25			

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: 4 ^d 1 PHE { SD: 15 ^h 0 PMG: 15 ^h 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	33.5	+16	21.3	131	55.1	+0	16.5	60 N	20 14	21 09	22 41	9 39 71	21 27 16
1	193	33.6		20.6	146	28.6 ¹⁴⁵	+0	06.8 ⁹⁷	58	20 03	20 53	22 08	38 69	29 18
2	208	33.7		19.9	161	02.1 ¹⁴⁵	-0	02.8 ⁹⁶	56	19 54	40	21 44	37 68	31 20
3	223	33.7		19.2	175	35.7 ¹⁴⁶		12.5 ⁹⁷	54	46	28	25	37 65	32 22
4	238	33.8		18.5	190	09.3 ¹⁴⁶		22.1 ⁹⁶	52	39	18	21 10	36 64	33 23
5	253	33.9	+16	17.8	204	42.9 ¹⁴⁶	-0	31.8 ⁹⁷	50	19 32	20 09	20 57	9 36 62	21 34 25
6	268	34.0	+16	17.1	219	16.6 ¹⁴⁷	-0	41.4 ⁹⁶	45	19 18	19 51	20 32	9 35 59	21 37 28
7	283	34.1		16.4	233	50.2 ¹⁴⁶	-0	51.0 ⁹⁶	40	19 07	36	20 12	34 57	39 30
8	298	34.1		15.7	248	23.9 ¹⁴⁷	-1	00.6 ⁹⁶	35	18 57	24	19 57	33 55	41 32
9	313	34.2		15.0	262	57.6 ¹⁴⁷		10.2 ⁹⁶	30	48	19 14	44	32 53	43 34
10	328	34.3		14.3	277	31.3 ¹⁴⁷		19.8 ⁹⁶	20	34	18 57	24	31 49	45 38
11	343	34.4	+16	13.6	292	05.0 ¹⁴⁷	-1	29.4 ⁹⁶	10 N	18 21	18 43	19 09	9 30 46	21 48 40
12	358	34.4	+16	12.9	306	38.8 ¹⁴⁸	-1	39.0 ⁹⁶	0	18 09	18 31	18 56	9 29 44	21 50 43
13	13	34.5		12.2	321	12.5 ¹⁴⁷		48.5 ⁹⁵	10 S	17 57	19	45	29 40	53 45
14	28	34.6		11.4	335	46.3 ¹⁴⁸	-1	58.1 ⁹⁶	20	45	18 08	34	28 37	55 49
15	43	34.7		10.7	350	20.1 ¹⁴⁸	-2	07.6 ⁹⁵	30	31	17 56	25	27 33	58 52
16	58	34.8		10.0	4	53.8 ¹⁴⁷		17.1 ⁹⁵	35	23	50	20	26 32	21 59 55
17	73	34.8	+16	09.3	19	27.7 ¹⁴⁹	-2	26.6 ⁹⁵	40	17 14	17 43	18 15	9 25 30	22 01 57
18	88	34.9	+16	08.6	34	01.5 ¹⁴⁸	-2	36.1 ⁹⁵	45	17 03	17 34	18 09	9 24 28	22 03 59
19	103	35.0		07.9	48	35.3 ¹⁴⁸		45.5 ⁹⁴	50	16 51	25	04	24 24	06 62
20	118	35.1		07.2	63	09.1 ¹⁴⁸	-2	55.0 ⁹⁵	52	45	21	18 01	23 23	07 64
21	133	35.2		06.5	77	43.0 ¹⁴⁹	-3	04.4 ⁹⁴	54	38	16	17 59	23 21	08 65
22	148	35.3		05.8	92	16.8 ¹⁴⁸		13.8 ⁹⁴	56	31	11	56	22 20	10 67
23	163	35.3		05.1	106	50.7 ¹⁴⁹		23.2 ⁹⁴	58	22	06	53	22 17	11 69
24	178	35.4	+16	04.3	121	24.6 ¹⁴⁹	-3	32.6 ⁹⁴	60 S	16 13	17 00	17 50	9 21 16	22 13 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 55 ^m 7		Mag: -3.8 PMG: 13 ^h 13 ^m		Mag: -0.7 PMG: 18 ^h 50 ^m		Mag: -1.7 PMG: 14 ^h 31 ^m		Mag: +0.4 PMG: 19 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	315	56.8	161	43.7	+12	15.9	77	00.2	-23	17.8
1	330	59.3	176	43.2		14.8	92	01.6		18.0
2	346	01.7	191	42.8		13.6	107	03.0		18.2
3	1	04.2	206	42.3		12.5	122	04.4		18.4
4	16	06.7	221	41.8		11.4	137	05.7		18.6
5	31	09.1	236	41.4	+12	10.3	152	07.1	-23	18.8
6	46	11.6	251	40.9	+12	09.2	167	08.5	-23	19.0
7	61	14.1	266	40.5		08.1	182	09.8		19.2
8	76	16.5	281	40.0		07.0	197	11.2		19.4
9	91	19.0	296	39.5		05.9	212	12.5		19.6
10	106	21.5	311	39.1		04.8	227	13.9		19.8
11	121	23.9	326	38.6	+12	03.6	242	15.3	-23	20.0
12	136	26.4	341	38.1	+12	02.5	257	16.6	-23	20.2
13	151	28.8	356	37.7		01.4	272	18.0		20.4
14	166	31.3	11	37.2	+12	00.3	287	19.3		20.6
15	181	33.8	26	36.8	+11	59.2	302	20.7		20.8
16	196	36.2	41	36.3		58.1	317	22.1		21.0
17	211	38.7	56	35.8	+11	57.0	332	23.4	-23	21.3
18	226	41.2	71	35.4	+11	55.8	347	24.8	-23	21.5
19	241	43.6	86	34.9		54.7	2	26.1		21.7
20	256	46.1	101	34.5		53.6	17	27.5		21.9
21	271	48.6	116	34.0		52.5	32	28.8		22.1
22	286	51.0	131	33.5		51.4	47	30.2		22.3
23	301	53.5	146	33.1		50.2	62	31.5		22.5
24	316	55.9	161	32.6	+11	49.1	77	32.9	-23	22.7
Dif	—		-5		-11		+14		-2	
							+20		-2	
									+25	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 6				Edad: 5 ^d 1 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 4 Rº: 43 ^m PMG: 16 ^h 23 ^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	35.4	+16	04.3	121	24.6	-3	32.6	60 N	1	31	3	03	3	58	10	50	71	21	
1	193	35.5		03.6	135	58.4 ¹⁴⁸		41.9 ⁹³	58	2	04	19	4	09	47	69	47	20		
2	208	35.6		02.9	150	32.3 ¹⁴⁹	-3	51.2 ⁹³	56	28	32	18		45	66	51	21			
3	223	35.7		02.2	165	06.2 ¹⁴⁹	-4	00.5 ⁹³	54	2	46	44	26		42	65	54	23		
4	238	35.8		01.5	179	40.1 ¹⁴⁹		09.8 ⁹³	52	3	02	3	54	33	40	63	56	25		
5	253	35.8	+16	00.8	194	14.0 ¹⁴⁹	-4	19.1 ⁹³	50	3	15	4	03	4	40	10	38	62	21	
6	268	35.9	+16	00.1	208	47.9 ¹⁴⁹	-4	28.3 ⁹²	45	3	40	4	21	4	54	10	34	59	22	
7	283	36.0	+15	59.4	223	21.8 ¹⁴⁹		37.5 ⁹²	40	3	59	36	5	05	31	55	09	31		
8	298	36.1		58.6	237	55.7 ¹⁴⁹		46.7 ⁹²	35	4	15	48	15		28	53	13	33		
9	313	36.2		57.9	252	29.6 ¹⁴⁹	-4	55.9 ⁹²	30	27	4	58	23		25	52	17	35		
10	328	36.3		57.2	267	03.5 ¹⁴⁹	-5	05.0 ⁹¹	20	4	47	5	15	38	20	49	23	38		
11	343	36.3	+15	56.5	281	37.4 ¹⁴⁹	-5	14.2 ⁹²	10 N	5	03	5	29	5	50	10	16	46	22	
12	358	36.4	+15	55.8	296	11.3 ¹⁴⁹	-5	23.2 ⁹⁰	0	5	16	5	41	6	02	10	13	43	22	
13	13	36.5		55.1	310	45.2 ¹⁴⁹		32.3 ⁹¹	10 S	27	5	52	14		09	40	38	46		
14	28	36.6		54.3	325	19.1 ¹⁴⁹		41.3 ⁹⁰	20	37	6	03	26		05	38	44	48		
15	43	36.7		53.6	339	53.0 ¹⁴⁹		50.4 ⁹¹	30	46	15	40			10	00	35	50	52	
16	58	36.8		52.9	354	26.9 ¹⁴⁹	-5	59.3 ⁸⁹	35	51	21	48			9	58	32	54	53	
17	73	36.9	+15	52.2	9	00.8 ¹⁴⁹	-6	08.3 ⁹⁰	40	5	56	6	28	6	57	9	55	31	22	
18	88	36.9	+15	51.5	23	34.7 ¹⁴⁹	-6	17.2 ⁸⁹	45	6	01	6	36	7	07	9	52	28	23	
19	103	37.0		50.7	38	08.5 ¹⁴⁸		26.1 ⁸⁹	50	07	45	20			48	25	08	61		
20	118	37.1		50.0	52	42.4 ¹⁴⁹		35.0 ⁸⁹	52	09	49	26			46	24	11	62		
21	133	37.2		49.3	67	16.3 ¹⁴⁹		43.8 ⁸⁸	54	12	54	32			44	22	13	64		
22	148	37.3		48.6	81	50.1 ¹⁴⁸	-6	52.6 ⁸⁸	56	14	6	59	39		42	21	17	65		
23	163	37.4		47.9	96	24.0 ¹⁴⁹	-7	01.4 ⁸⁸	58	17	7	04	47		39	19	20	68		
24	178	37.5	+15	47.1	110	57.8 ¹⁴⁸	-7	10.1 ⁸⁷	60 S	6	20	7	10	7	57	9	37	17	23	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 2 ^h 51 ^m 8		Mag: -3.8 PMG: 13 ^h 14 ^m				Mag: -0.6 PMG: 18 ^h 48 ^m				Mag: -1.7 PMG: 14 ^h 28 ^m				Mag: +0.4 PMG: 19 ^h 23 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	316	55.9	161	32.6	+11	49.1	77	32.9	-23	22.7	142	33.9	+3	39.5	68	31.4	-20	18.4		
1	331	58.4	176	32.2		48.0	92	34.2		22.9	157	35.9		39.3	83	33.9		18.4		
2	347	00.9	191	31.7		46.9	107	35.6		23.1	172	37.9		39.1	98	36.4		18.4		
3	2	03.3	206	31.3		45.8	122	36.9		23.3	187	40.0		38.9	113	38.9		18.4		
4	17	05.8	221	30.8		44.6	137	38.3		23.5	202	42.0		38.7	128	41.4		18.4		
5	32	08.3	236	30.4	+11	43.5	152	39.6	-23	23.7	217	44.0	+3	38.5	143	43.9	-20	18.4		
6	47	10.7	251	29.9	+11	42.4	167	40.9	-23	23.9	232	46.0	+3	38.3	158	46.3	-20	18.4		
7	62	13.2	266	29.4		41.3	182	42.3		24.1	247	48.1		38.1	173	48.8		18.4		
8	77	15.7	281	29.0		40.1	197	43.6		24.3	262	50.1		37.9	188	51.3		18.4		
9	92	18.1	296	28.5		39.0	212	45.0		24.6	277	52.1		37.7	203	53.8		18.4		
10	107	20.6	311	28.1		37.9	227	46.3		24.8	292	54.1		37.5	218	56.3		18.4		
11	122	23.1	326	27.6	+11	36.8	242	47.7	-23	25.0	307	56.2	+3	37.3	233	58.8	-20	18.4		
12	137	25.5	341	27.2	+11	35.6	257	49.0	-23	25.2	322	58.2	+3	37.2	249	01.3	-20	18.4		
13	152	28.0	356	26.7		34.5	272	50.3		25.4	338	00.2		37.0	264	03.8		18.4		
14	167	30.4	11	26.3		33.4	287	51.7		25.6	353	02.2		36.8	279	06.2		18.4		
15	182	32.9	26	25.8		32.3	302	53.0		25.8	8	04.3		36.6	294	08.7		18.4		
16	197	35.4	41	25.4		31.1	317	54.3		26.0	23	06.3		36.4	309	11.2		18.5		
17	212	37.8	56	24.9	+11	30.0	332	55.7	-23	26.2	38	08.3	+3	36.2	324	13.7	-20	18.5		
18	227	40.3	71	24.5	+11	28.9	347	57.0	-23	26.4	53	10.3	+3	36.0	339	16.2	-20	18.5		
19	242	42.8	86	24.0		27.7	2	58.3		26.6	68	12.4		35.8	354	18.7		18.5		
20	257	45.2	101	23.6		26.6	17	59.7		26.8	83	14.4		35.6	9	21.2		18.5		
21	272	47.7	116	23.1		25.5	33	01.0		27.0	98	16.4		35.4	24	23.6		18.5		
22	287	50.2	131	22.7		24.3	48	02.3		27.2	113	18.4		35.2	39	26.1		18.5		
23	302	52.6	146	22.2		23.2	63	03.7		27.4	128	20.5		35.0	54	28.6		18.5		
24	317	55.1	161	21.8	+11	22.1	78	05.0	-23	27.6	143	22.5	+3	34.8	69	31.1	-20	18.5		
Dif	—		-5		-11		+13		-2		+20		-2		+25					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 6 ^d 1	PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/2 R°: 44 ^m									
	PMG: 12 ^h 05 ^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
0	178	37.5	+15 47.1	110	57.8	-7 10.1	88	60 N	20 09	21 03	22 29	12 01 69	22 01 21	
1	193	37.6	46.4	125	31.7 ¹⁴⁹	18.9	88	58	19 58	20 47	21 59	11 56 67	07 23	
2	208	37.7	45.7	140	05.5 ¹⁴⁸	27.5	86	56	50	35	37	51 65	12 25	
3	223	37.7	45.0	154	39.3 ¹⁴⁸	36.2	87	54	42	24	20	47 63	17 26	
4	238	37.8	44.2	169	13.1 ¹⁴⁸	44.8	86	52	35	14	21 05	43 62	21 27	
5	253	37.9	+15 43.5	183	46.9 ¹⁴⁸	-7 53.4	86	50	19 29	20 05	20 53	11 40 61	22 25 28	
6	268	38.0	+15 42.8	198	20.6 ¹⁴⁷	-8 01.9	85	45	19 15	19 48	20 28	11 33 57	22 33 31	
7	283	38.1	42.1	212	54.4 ¹⁴⁸	10.4	85	40	19 04	34	20 09	26 56	40 34	
8	298	38.2	41.3	227	28.1 ¹⁴⁷	18.9	85	35	18 55	22	19 54	21 54	46 36	
9	313	38.3	40.6	242	01.9 ¹⁴⁸	27.3	84	30	46	19 12	42	17 52	22 52 36	
10	328	38.4	39.9	256	35.6 ¹⁴⁷	35.7	84	20	32	18 55	23	09 49	23 01 40	
11	343	38.5	+15 39.2	271	09.3 ¹⁴⁷	-8 44.1	84	10 N	18 20	18 42	19 08	11 02 46	23 09 42	
12	358	38.6	+15 38.4	285	43.0 ¹⁴⁷	-8 52.4	83	0	18 09	18 30	18 55	10 56 43	23 17 44	
13	13	38.6	37.7	300	16.7 ¹⁴⁷	-9 00.7	83	10 S	17 58	19	45	49 42	24 47	
14	28	38.7	37.0	314	50.3 ¹⁴⁶	08.9	82	20	46	18 09	35	43 38	32 49	
15	43	38.8	36.2	329	23.9 ¹⁴⁶	17.1	82	30	32	17 57	26	35 36	42 52	
16	58	38.9	35.5	343	57.6 ¹⁴⁷	25.3	82	35	25	51	21	30 35	47 54	
17	73	39.0	+15 34.8	358	31.2 ¹⁴⁶	-9 33.4	81	40	17 16	17 44	18 16	10 26 32	23 53 56	
18	88	39.1	+15 34.0	13	04.7 ¹⁴⁵	-9 41.5	81	45	17 06	17 37	18 12	10 20 30	** ** *	
19	103	39.2	33.3	27	38.3 ¹⁴⁶	49.6	81	50	16 53	28	06	13 27	** ** *	
20	118	39.3	32.6	42	11.8 ¹⁴⁵	-9 57.6	80	52	48	24	04	10 26	** ** *	
21	133	39.4	31.9	56	45.3 ¹⁴⁵	-10 05.5	79	54	41	19	18 02	06 25	** ** *	
22	148	39.5	31.1	71	18.8 ¹⁴⁵	13.4	79	56	34	15	17 59	10 03 22	** ** *	
23	163	39.6	30.4	85	52.3 ¹⁴⁵	21.3	79	58	27	10	57	9 58 21	** ** *	
24	178	39.7	+15 29.7	100	25.7 ¹⁴⁴	-10 29.2	79	60 S	16 18	17 04	17 54	9 54 19	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 47 ^m 9		Mag: -3.8 PMG: 13 ^h 15 ^m			Mag: -0.6 PMG: 18 ^h 46 ^m			Mag: -1.7 PMG: 14 ^h 25 ^m			Mag: +0.4 PMG: 19 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	317	55.1	161	21.8	+11 22.1	78	05.0	-23 27.6	143	22.5	+3 34.8	69	31.1	-20 18.5
1	332	57.6	176	21.4	20.9	93	06.3	27.9	158	24.5	34.6	84	33.6	18.5
2	348	00.0	191	20.9	19.8	108	07.6	28.1	173	26.5	34.4	99	36.1	18.5
3	3	02.5	206	20.5	18.7	123	09.0	28.3	188	28.6	34.3	114	38.5	18.5
4	18	04.9	221	20.0	17.5	138	10.3	28.5	203	30.6	34.1	129	41.0	18.5
5	33	07.4	236	19.6	+11 16.4	153	11.6	-23 28.7	218	32.6	+3 33.9	144	43.5	-20 18.5
6	48	09.9	251	19.1	+11 15.3	168	12.9	-23 28.9	233	34.6	+3 33.7	159	46.0	-20 18.5
7	63	12.3	266	18.7	14.1	183	14.3	29.1	248	36.7	33.5	174	48.5	18.5
8	78	14.8	281	18.2	13.0	198	15.6	29.3	263	38.7	33.3	189	51.0	18.6
9	93	17.3	296	17.8	11.9	213	16.9	29.5	278	40.7	33.1	204	53.4	18.6
10	108	19.7	311	17.4	10.7	228	18.2	29.7	293	42.7	32.9	219	55.9	18.6
11	123	22.2	326	16.9	+11 09.6	243	19.5	-23 29.9	308	44.7	+3 32.7	234	58.4	-20 18.6
12	138	24.7	341	16.5	+11 08.4	258	20.9	-23 30.1	323	46.8	+3 32.5	250	00.9	-20 18.6
13	153	27.1	356	16.0	07.3	273	22.2	30.3	338	48.8	32.3	265	03.4	18.6
14	168	29.6	11	15.6	06.2	288	23.5	30.5	353	50.8	32.1	280	05.9	18.6
15	183	32.0	26	15.2	05.0	303	24.8	30.7	8	52.8	31.9	295	08.3	18.6
16	198	34.5	41	14.7	03.9	318	26.1	31.0	23	54.9	31.7	310	10.8	18.6
17	213	37.0	56	14.3	+11 02.7	333	27.4	-23 31.2	38	56.9	+3 31.5	325	13.3	-20 18.6
18	228	39.4	71	13.8	+11 01.6	348	28.7	-23 31.4	53	58.9	+3 31.4	340	15.8	-20 18.6
19	243	41.9	86	13.4	+11 00.5	3	30.1	31.6	69	00.9	31.2	355	18.3	18.6
20	258	44.4	101	13.0	+10 59.3	18	31.4	31.8	84	03.0	31.0	10	20.7	18.6
21	273	46.8	116	12.5	58.2	33	32.7	32.0	99	05.0	30.8	25	23.2	18.6
22	288	49.3	131	12.1	57.0	48	34.0	32.2	114	07.0	30.6	40	25.7	18.7
23	303	51.8	146	11.6	55.9	63	35.3	32.4	129	09.0	30.4	55	28.2	18.7
24	318	54.2	161	11.2	+10 54.7	78	36.6	-23 32.6	144	11.0	+3 30.2	70	30.7	-20 18.7
Dif	—		-4		-11	+13		-2	+20		-2	+25		0

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: 7 ^d 1 SD: 14'8 PMG: 17 ^h 50 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	39.7	+15 29.7	100	25.7	-10 29.2	77	60 N	1 43	3 09	4 03	13 10	68	22 22	25
1	193	39.8		114	59.2 ¹⁴⁵		36.9	58	2 13	24	13	13 03	65	30	26
2	208	39.9	28.2	129	32.6 ¹⁴⁴		44.7	56	34	37	22	12 56	64	37	28
3	223	40.0	27.5	144	05.9 ¹⁴³	-10 52.4	77	54	2 52	48	30	50	63	43	30
4	238	40.1	26.7	158	39.3 ¹⁴⁴	-11 00.0	76	52	3 06	3 57	36	45	61	48	32
5	253	40.2	+15 26.0	173	12.6 ¹⁴³	-11 07.6	76	50	3 19	4 06	4 43	12 41	59	22 53	33
6	268	40.3	+15 25.3	187	45.9 ¹⁴³	-11 15.2	76	45	3 43	4 24	4 56	12 30	58	23 04	35
7	283	40.3	24.5	202	19.2 ¹⁴³		22.7	40	4 02	38	5 07	22	55	14	36
8	298	40.4	23.8	216	52.4 ¹⁴²		30.2	35	17	49	16	15	53	22	38
9	313	40.5	23.0	231	25.6 ¹⁴²		37.6	30	29	4 59	25	12 09	52	28	40
10	328	40.6	22.3	245	58.8 ¹⁴²		45.0	20	4 48	5 15	39	11 58	49	41	41
11	343	40.7	+15 21.6	260	32.0 ¹⁴²	-11 52.3	73	10 N	5 03	5 29	5 51	11 48	47	23 51	44
12	358	40.8	+15 20.8	275	05.1 ¹⁴¹	-11 59.6	73	0	5 15	5 40	6 02	11 39	45	** ** *	**
13	13	40.9	20.1	289	38.2 ¹⁴¹	-12 06.8	72	10 S	26	5 51	13	31	43	** ** *	**
14	28	41.0	19.4	304	11.3 ¹⁴¹		13.9	20	36	6 02	25	21	41	** ** *	**
15	43	41.1	18.6	318	44.3 ¹⁴⁰		21.1	30	45	13	38	11	38	** ** *	**
16	58	41.2	17.9	333	17.3 ¹⁴⁰		28.1	35	49	19	46	11 05	36	** ** *	**
17	73	41.3	+15 17.1	347	50.3 ¹⁴⁰	-12 35.1	70	40	5 54	6 26	6 54	10 58	35	** ** *	**
18	88	41.4	+15 16.4	2	23.2 ¹³⁹	-12 42.1	70	45	5 59	6 33	7 04	10 50	32	0 00	58
19	103	41.5	15.7	16	56.1 ¹³⁹		49.0	50	6 04	42	16	40	30	09	60
20	118	41.6	14.9	31	29.0 ¹³⁹	-12 55.9	69	52	06	46	22	36	29	13	62
21	133	41.7	14.2	46	01.8 ¹³⁸	-13 02.7	68	54	08	50	28	31	28	17	63
22	148	41.8	13.4	60	34.6 ¹³⁸		09.4	56	11	6 55	35	25	27	22	65
23	163	41.9	12.7	75	07.4 ¹³⁸		16.1	58	13	7 00	43	19	25	28	66
24	178	42.0	+15 11.9	89	40.2 ¹³⁸	-13 22.8	67	60 S	6 16	7 06	7 51	10 13	22	0 34	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 2 ^h 43 ^m 9		Mag: -3.8 PMG: 13 ^h 16 ^m		Mag: -0.6 PMG: 18 ^h 44 ^m		Mag: -1.7 PMG: 14 ^h 21 ^m		Mag: +0.4 PMG: 19 ^h 15 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	318	54.2	161	11.2	+10 54.7	78	36.6	-23 32.6	144	11.0	+3 30.2	70	30.7	-20 18.7	
1	333	56.7	176	10.8		93	37.9	32.8	159	13.1	30.0	85	33.1	18.7	
2	348	59.2	191	10.3		108	39.2	33.0	174	15.1	29.8	100	35.6	18.7	
3	4	01.6	206	09.9		123	40.5	33.2	189	17.1	29.6	115	38.1	18.7	
4	19	04.1	221	09.5		138	41.8	33.4	204	19.1	29.4	130	40.6	18.7	
5	34	06.5	236	09.0	+10 49.0	153	43.1	-23 33.6	219	21.1	+3 29.2	145	43.1	-20 18.7	
6	49	09.0	251	08.6	+10 47.9	168	44.4	-23 33.8	234	23.2	+3 29.0	160	45.5	-20 18.7	
7	64	11.5	266	08.2		183	45.7	34.0	249	25.2	28.8	175	48.0	18.7	
8	79	13.9	281	07.7		198	47.0	34.3	264	27.2	28.6	190	50.5	18.7	
9	94	16.4	296	07.3		213	48.3	34.5	279	29.2	28.4	205	53.0	18.7	
10	109	18.9	311	06.9		228	49.6	34.7	294	31.3	28.2	220	55.5	18.7	
11	124	21.3	326	06.4	+10 42.1	243	50.9	-23 34.9	309	33.3	+3 28.1	235	57.9	-20 18.7	
12	139	23.8	341	06.0	+10 41.0	258	52.2	-23 35.1	324	35.3	+3 27.9	251	00.4	-20 18.7	
13	154	26.3	356	05.6		273	53.5	35.3	339	37.3	27.7	266	02.9	18.8	
14	169	28.7	11	05.1		288	54.8	35.5	354	39.3	27.5	281	05.4	18.8	
15	184	31.2	26	04.7		303	56.1	35.7	9	41.4	27.3	296	07.8	18.8	
16	199	33.6	41	04.3		318	57.4	35.9	24	43.4	27.1	311	10.3	18.8	
17	214	36.1	56	03.8	+10 35.2	333	58.7	-23 36.1	39	45.4	+3 26.9	326	12.8	-20 18.8	
18	229	38.6	71	03.4	+10 34.0	349	00.0	-23 36.3	54	47.4	+3 26.7	341	15.3	-20 18.8	
19	244	41.0	86	03.0		4	01.3	36.5	69	49.4	26.5	356	17.8	18.8	
20	259	43.5	101	02.6		19	02.6	36.7	84	51.5	26.3	11	20.2	18.8	
21	274	46.0	116	02.1		34	03.9	36.9	99	53.5	26.1	26	22.7	18.8	
22	289	48.4	131	01.7		49	05.2	37.1	114	55.5	25.9	41	25.2	18.8	
23	304	50.9	146	01.3		64	06.4	37.3	129	57.5	25.7	56	27.7	18.8	
24	319	53.4	161	00.8	+10 27.1	79	07.7	-23 37.5	144	59.5	+3 25.5	71	30.1	-20 18.8	
Dif	—		-4	-12		+13	-2		+20	-2		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 05 ^m 1			Edad: 8 ^d 1 PHE { SD: 14'8 PMG: 18 ^h 36 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	42.0	+15	11.9	89	40.2	-13	22.8	60 N	20 03	20 56	22 17	14 18	65	22 47	31		
1	193	42.1		11.2	104	12.9 ¹³⁷		29.3	65	58	19 54	42	21 51	08 64	22 56	33		
2	208	42.2		10.5	118	45.5 ¹³⁶		35.9	66	56	45	29	30	14 00	62	23 05		
3	223	42.3		09.7	133	18.2 ¹³⁷		42.3	64	54	38	19	14	13 53	61	13 35		
4	238	42.4		09.0	147	50.7 ¹³⁵		48.7	64	52	31	10	21 00	46 60		20 36		
5	253	42.5	+15	08.2	162	23.3 ¹³⁶	-13	55.1	64	50	19 25	20 02	20 48	13 40	59	23 26		
6	268	42.6	+15	07.5	176	55.8 ¹³⁵	-14	01.4	63	45	19 12	19 44	20 24	13 28	56	23 39		
7	283	42.7		06.7	191	28.3 ¹³⁵		07.6	62	40	19 02	31	20 06	17 55		23 50		
8	298	42.8		06.0	206	00.7 ¹³⁴		13.8	62	35	18 53	20	19 52	08 54		** ** *		
9	313	42.9		05.2	220	33.2 ¹³⁵		19.9	61	30	45	19 10	40	13 01	52	** ** *		
10	328	43.0		04.5	235	05.5 ¹³³		25.9	60	20	31	18 54	21	12 47	50	** ** *		
11	343	43.2	+15	03.7	249	37.8 ¹³³	-14	31.9	60	10 N	18 19	18 41	19 07	12 35	49	** ** *		
12	358	43.3	+15	03.0	264	10.1 ¹³³	-14	37.9	58	0	18 09	18 30	18 55	12 24	47	0 01		
13	13	43.4		02.2	278	42.4 ¹³³		43.7	60	10 S	17 58	19	45	14 45		11 48		
14	28	43.5		01.5	293	14.6 ¹³²		49.5	58	20	46	18 09	35	12 02	43	21 50		
15	43	43.6	+15	00.7	307	46.8 ¹³²	-14	55.3	58	30	34	17 58	27	11 49	41	34 52		
16	58	43.7	+15	00.0	322	18.9 ¹³¹	-15	01.0	57	35	26	52	22	41 40		41 53		
17	73	43.8	+14	59.2	336	51.0 ¹³¹	-15	06.6	56	40	17 18	17 46	18 18	11 33	38	0 49		
18	88	43.9	+14	58.5	351	23.0 ¹³⁰	-15	12.1	55	45	17 08	17 39	18 14	11 22	37	0 58		
19	103	44.0		57.7	5	55.0 ¹³⁰		17.6	55	50	16 56	30	09	10 35		1 09		
20	118	44.1		57.0	20	27.0 ¹³⁰		23.0	54	52	51	27	07	11 05	34	15 60		
21	133	44.2		56.2	34	58.9 ¹²⁹		28.4	54	54	45	23	05	10 59	32	20 62		
22	148	44.3		55.5	49	30.8 ¹²⁹		33.6	52	56	38	18	02	52 31		27 63		
23	163	44.4		54.7	64	02.6 ¹²⁸		38.9	53	58	31	13	18 00	44 30		34 65		
24	178	44.5	+14	54.0	78	34.4 ¹²⁸	-15	44.0	51	60 S	16 22	17 08	17 58	10 35	28	1 42		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 40 ^m 0			Mag: -3.8 PMG: 13 ^h 16 ^m			Mag: -0.6 PMG: 18 ^h 42 ^m			Mag: -1.7 PMG: 14 ^h 18 ^m			Mag: +0.4 PMG: 19 ^h 11 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	319	53.4	161	00.8	+10	27.1	79	07.7	-23	37.5	144	59.5	+3	25.5	71	30.1		
1	334	55.8	176	00.4		25.9	94	09.0		37.8	160	01.6		25.3	86	32.6		
2	349	58.3	191	00.0		24.8	109	10.3		38.0	175	03.6		25.1	101	35.1		
3	5	00.8	205	59.6		23.6	124	11.6		38.2	190	05.6		24.9	116	37.6		
4	20	03.2	220	59.1		22.5	139	12.9		38.4	205	07.6		24.7	131	40.0		
5	35	05.7	235	58.7	+10	21.3	154	14.2	-23	38.6	220	09.6	+3	24.5	146	42.5		
6	50	08.1	250	58.3	+10	20.2	169	15.4	-23	38.8	235	11.6	+3	24.3	161	45.0		
7	65	10.6	265	57.9		19.0	184	16.7		39.0	250	13.7		24.2	176	47.5		
8	80	13.1	280	57.4		17.8	199	18.0		39.2	265	15.7		24.0	191	49.9		
9	95	15.5	295	57.0		16.7	214	19.3		39.4	280	17.7		23.8	206	52.4		
10	110	18.0	310	56.6		15.5	229	20.6		39.6	295	19.7		23.6	221	54.9		
11	125	20.5	325	56.2	+10	14.3	244	21.8	-23	39.8	310	21.7	+3	23.4	236	57.4		
12	140	22.9	340	55.7	+10	13.2	259	23.1	-23	40.0	325	23.8	+3	23.2	251	59.8		
13	155	25.4	355	55.3		12.0	274	24.4		40.2	340	25.8		23.0	267	02.3		
14	170	27.9	10	54.9		10.9	289	25.7		40.4	355	27.8		22.8	282	04.8		
15	185	30.3	25	54.5		09.7	304	26.9		40.6	10	29.8		22.6	297	07.3		
16	200	32.8	40	54.1		08.5	319	28.2		40.8	25	31.8		22.4	312	09.7		
17	215	35.3	55	53.6	+10	07.4	334	29.5	-23	41.0	40	33.9	+3	22.2	327	12.2		
18	230	37.7	70	53.2	+10	06.2	349	30.8	-23	41.2	55	35.9	+3	22.0	342	14.7		
19	245	40.2	85	52.8		05.0	4	32.0		41.5	70	37.9		21.8	357	17.1		
20	260	42.6	100	52.4		03.9	19	33.3		41.7	85	39.9		21.6	12	19.6		
21	275	45.1	115	52.0		02.7	34	34.6		41.9	100	41.9		21.4	27	22.1		
22	290	47.6	130	51.5		01.5	49	35.8		42.1	115	43.9		21.2	42	24.6		
23	305	50.0	145	51.1	+10	00.4	64	37.1		42.3	130	46.0		21.0	57	27.0		
24	320	52.5	160	50.7	+9	59.2	79	38.4	-23	42.5	145	48.0	+3	20.8	72	29.5		
Dif	—		-4		-12		+13		-2		+20		-2		+25		0	

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 9				Edad: 9 ^d 1 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 PMG: 19 ^h 23 ^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	m
0	178	44.5	+14	54.0	78	34.4	-15	44.0	51	58	60 N	1	53	3	15	4	08	15	23	61	23 18 40
1	193	44.6		53.2	93	06.2 ¹²⁸		49.1	51	58	58	2	20		29	17		12	59		29 42
2	208	44.7		52.5	107	37.9 ¹²⁷		54.1	50	56	56		41		41	26		15	02	58	39 42
3	223	44.8		51.7	122	09.5 ¹²⁶		-15	59.0	49	54	2	57	3	52	33		14	54	57	48 43
4	238	45.0		51.0	136	41.2 ¹²⁷		-16	03.9	49	52	3	11	4	01	40		46	57		23 56 43
5	253	45.1	+14	50.2	151	12.7 ¹²⁵		-16	08.7	48	50	3	23	4	09	4	46	14	39	56	*** ** *
6	268	45.2	+14	49.5	165	44.3 ¹²⁶		-16	13.4	47	45	3	46	4	26	4	58	14	24	55	*** ** *
7	283	45.3		48.7	180	15.8 ¹²⁵		18.1	47	40	40	4	04		40	5	09		12	54	*** ** *
8	298	45.4		47.9	194	47.2 ¹²⁴		22.7	46	35	35		18	4	51	18		14	02	53	0 00 42
9	313	45.5		47.2	209	18.6 ¹²⁴		27.2	45	30	30		30	5	00	26		13	53	52	08 43
10	328	45.6		46.4	223	50.0 ¹²⁴		31.6	44	20	20	4	49	16		39		37	51		22 45
11	343	45.7	+14	45.7	238	21.3 ¹²³		-16	36.0	44	10 N	5	04	5	29	5	51	13	24	49	0 35 46
12	358	45.8	+14	44.9	252	52.6 ¹²³		-16	40.3	43	0	5	15	5	40	6	02	13	11	49	0 47 47
13	13	45.9		44.2	267	23.8 ¹²²		44.5	42	10 S	10		25	5	51	12		12	59	47	0 59 49
14	28	46.0		43.4	281	55.0 ¹²²		48.6	41	20	20		35	6	01	23		45	47		1 11 51
15	43	46.2		42.6	296	26.1 ¹²¹		52.7	41	30	30	43		11		36		30	45		26 52
16	58	46.3		41.9	310	57.2 ¹²¹		-16	56.7	40	35	47		17		43		21	44		34 53
17	73	46.4	+14	41.1	325	28.2 ¹²⁰		-17	00.6	39	40	5	52	6	24	6	52	12	11	43	1 44 54
18	88	46.5	+14	40.4	339	59.2 ¹²⁰		-17	04.4	38	45	5	56	6	31	7	01	11	59	42	1 55 56
19	103	46.6		39.6	354	30.2 ¹²⁰		08.1	37	50	50	6	01		39	13		45	41		2 09 57
20	118	46.7		38.8	9	01.1 ¹¹⁹		11.8	37	52	52		03		42	18		39	39		15 58
21	133	46.8		38.1	23	31.9 ¹¹⁸		15.4	36	54	54		05		46	24		31	39		22 59
22	148	46.9		37.3	38	02.8 ¹¹⁹		18.9	35	56	56		07		51	31		23	38		30 60
23	163	47.0		36.6	52	33.5 ¹¹⁷		22.4	35	58	58		09	6	56	38		14	37		39 61
24	178	47.2	+14	35.8	67	04.3 ¹¹⁸		-17	25.7	33	60 S	6	11	7	01	7	46	11	03	36	2 49 63
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 2 ^h 36 ^m 1				Mag: -3.8 PMG: 13 ^h 17 ^m				Mag: -0.6 PMG: 18 ^h 40 ^m				Mag: -1.7 PMG: 14 ^h 15 ^m				Mag: +0.4 PMG: 19 ^h 07 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	m
0	320	52.5	160	50.7	+9	59.2	79	38.4	-23	42.5	145	48.0	+3	20.8	72	29.5	-20	19.0			
1	335	55.0	175	50.3		58.0	94	39.6		42.7	160	50.0		20.6	87	32.0		19.0			
2	350	57.4	190	49.9		56.9	109	40.9		42.9	175	52.0		20.4	102	34.4		19.0			
3	5	59.9	205	49.5		55.7	124	42.2		43.1	190	54.0		20.2	117	36.9		19.1			
4	21	02.4	220	49.0		54.5	139	43.4		43.3	205	56.0		20.0	132	39.4		19.1			
5	36	04.8	235	48.6	+9	53.4	154	44.7	-23	43.5	220	58.1	+3	19.8	147	41.9	-20	19.1			
6	51	07.3	250	48.2	+9	52.2	169	46.0	-23	43.7	236	00.1	+3	19.6	162	44.3	-20	19.1			
7	66	09.7	265	47.8		51.0	184	47.2		43.9	251	02.1		19.5	177	46.8		19.1			
8	81	12.2	280	47.4		49.8	199	48.5		44.1	266	04.1		19.3	192	49.3		19.1			
9	96	14.7	295	47.0		48.7	214	49.7		44.3	281	06.1		19.1	207	51.7		19.1			
10	111	17.1	310	46.5		47.5	229	51.0		44.5	296	08.1		18.9	222	54.2		19.1			
11	126	19.6	325	46.1	+9	46.3	244	52.3	-23	44.7	311	10.2	+3	18.7	237	56.7	-20	19.1			
12	141	22.1	340	45.7	+9	45.1	259	53.5	-23	44.9	326	12.2	+3	18.5	252	59.2	-20	19.1			
13	156	24.5	355	45.3		44.0	274	54.8		45.1	341	14.2		18.3	268	01.6		19.1			
14	171	27.0	10	44.9		42.8	289	56.0		45.4	356	16.2		18.1	283	04.1		19.1			
15	186	29.5	25	44.5		41.6	304	57.3		45.6	11	18.2		17.9	298	06.6		19.2			
16	201	31.9	40	44.1		40.4	319	58.5		45.8	26	20.2		17.7	313	09.0		19.2			
17	216	34.4	55	43.7	+9	39.3	334	59.8	-23	46.0	41	22.3	+3	17.5	328	11.5	-20	19.2			
18	231	36.9	70	43.2	+9	38.1	350	01.0	-23	46.2	56	24.3	+3	17.3	343	14.0	-20	19.2			
19	246	39.3	85	42.8		36.9	5	02.3		46.4	71	26.3		17.1	358	16.4		19.2			
20	261	41.8	100	42.4		35.7	20	03.5		46.6	86	28.3		16.9	13	18.9		19.2			
21	276	44.2	115	42.0		34.6	35	04.8		46.8	101	30.3		16.7	28	21.4		19.2			
22	291	46.7	130	41.6		33.4	50	06.0		47.0	116	32.3		16.5	43	23.8		19.2			
23	306	49.2	145	41.2		32.2	65	07.3		47.2	131	34.4		16.3	58	26.3		19.2			
24	321	51.6	160	40.8	+9	31.0	80	08.5	-23	47.4	146	36.4	+3	16.1	73	28.8	-20	19.2			
Dif	—				-4				+13				+20				+25				

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 04 ^m 8		Edad: 10 ^d 1 PHE { 4 ^h : 55/1 12 ^h : 55/3 20 ^h : 55/5 R°: 51 ^m SD: 15°0 PMG: 20 ^h 12 ^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	47.2	+14	35.8	67	04.3	-17 25.7	60 N	19 58	20 49	22 07	16 24 53	23 58 51	
1	193	47.3		35.0	81	35.0 ¹¹⁷	29.0 ³³	58	48	36	21 42	11 54	*** **	
2	208	47.4		34.3	96	05.6 ¹¹⁶	32.2 ³²	56	41	24	23	16 00 54	*** **	
3	223	47.5		33.5	110	36.2 ¹¹⁶	35.3 ³¹	54	33	14	21 08	15 51 53	*** **	
4	238	47.6		32.7	125	06.7 ¹¹⁵	38.3 ³⁰	52	27	20 05	20 55	43 52	*** **	
5	253	47.7	+14	32.0	139	37.2 ¹¹⁵	-17 41.3 ³⁰	50	19 21	19 57	20 43	15 35 53	0 03 44	
6	268	47.8	+14	31.2	154	07.7 ¹¹⁵	-17 44.1 ²⁸	45	19 09	19 41	20 21	15 19 52	0 18 45	
7	283	48.0		30.4	168	38.1 ¹¹⁴	46.9 ²⁸	40	18 59	28	20 03	15 06 52	31 46	
8	298	48.1		29.7	183	08.5 ¹¹⁴	49.6 ²⁷	35	50	17	19 49	14 55 51	42 46	
9	313	48.2		28.9	197	38.8 ¹¹³	52.2 ²⁶	30	43	19 08	38	45 51	0 51 47	
10	328	48.3		28.1	212	09.1 ¹¹³	54.7 ²⁵	20	30	18 53	20	28 51	1 07 48	
11	343	48.4	+14	27.4	226	39.3 ¹¹²	-17 57.2 ²⁵	10 N	18 19	18 40	19 06	14 13 51	1 21 49	
12	358	48.5	+14	26.6	241	09.5 ¹¹²	-17 59.5 ²³	0	18 08	18 29	18 54	14 00 50	1 34 50	
13	13	48.7		25.8	255	39.7 ¹¹²	-18 01.8 ²³	10 S	17 58	19	45	13 46 50	1 48 50	
14	28	48.8		25.1	270	09.8 ¹¹¹	04.0 ²²	20	47	18 10	36	32 49	2 02 51	
15	43	48.9		24.3	284	39.9 ¹¹¹	06.0 ²⁰	30	35	17 59	28	15 49	18 52	
16	58	49.0		23.5	299	09.9 ¹¹⁰	08.0 ²⁰	35	28	54	24	13 05 49	27 52	
17	73	49.1	+14	22.8	313	39.9 ¹¹⁰	-18 10.0 ²⁰	40	17 20	17 48	18 20	12 54 49	2 38 53	
18	88	49.2	+14	22.0	328	09.8 ¹⁰⁹	-18 11.8 ¹⁸	45	17 10	17 41	18 16	12 41 49	2 51 53	
19	103	49.4		21.2	342	39.7 ¹⁰⁹	13.5 ¹⁷	50	16 59	33	11	26 47	3 06 54	
20	118	49.5		20.4	357	09.5 ¹⁰⁸	15.1 ¹⁶	52	54	30	09	18 48	13 55	
21	133	49.6		19.7	11	39.4 ¹⁰⁹	16.7 ¹⁶	54	48	26	08	10 47	21 55	
22	148	49.7		18.9	26	09.1 ¹⁰⁷	18.2 ¹⁵	56	42	22	06	12 01 47	30 56	
23	163	49.8		18.1	40	38.9 ¹⁰⁸	19.5 ¹³	58	35	17	04	11 51 46	40 57	
24	178	49.9	+14	17.4	55	08.5 ¹⁰⁶	-18 20.8 ¹³	60 S	16 27	17 12	18 01	11 39 45	3 52 57	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 32 ^m 1		Mag: -3.8 PMG: 13 ^h 18 ^m		Mag: -0.6 PMG: 18 ^h 38 ^m		Mag: -1.7 PMG: 14 ^h 12 ^m		Mag: +0.4 PMG: 19 ^h 03 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	321	51.6	160	40.8	+9	31.0	80	08.5	-23	47.4				
1	336	54.1	175	40.4		29.9	95	09.8		47.6				
2	351	56.6	190	40.0		28.7	110	11.0		47.8				
3	6	59.0	205	39.6		27.5	125	12.3		48.0				
4	22	01.5	220	39.2		26.3	140	13.5		48.2				
5	37	04.0	235	38.7	+9	25.1	155	14.8	-23	48.4				
6	52	06.4	250	38.3	+9	23.9	170	16.0	-23	48.6				
7	67	08.9	265	37.9		22.8	185	17.3		48.8				
8	82	11.4	280	37.5		21.6	200	18.5		49.0				
9	97	13.8	295	37.1		20.4	215	19.7		49.2				
10	112	16.3	310	36.7		19.2	230	21.0		49.4				
11	127	18.7	325	36.3	+9	18.0	245	22.2	-23	49.6				
12	142	21.2	340	35.9	+9	16.9	260	23.4	-23	49.9				
13	157	23.7	355	35.5		15.7	275	24.7		50.1				
14	172	26.1	10	35.1		14.5	290	25.9		50.3				
15	187	28.6	25	34.7		13.3	305	27.2		50.5				
16	202	31.1	40	34.3		12.1	320	28.4		50.7				
17	217	33.5	55	33.9	+9	10.9	335	29.6	-23	50.9				
18	232	36.0	70	33.5	+9	09.7	350	30.9	-23	51.1				
19	247	38.5	85	33.1		08.6	5	32.1		51.3				
20	262	40.9	100	32.7		07.4	20	33.3		51.5				
21	277	43.4	115	32.3		06.2	35	34.6		51.7				
22	292	45.9	130	31.9		05.0	50	35.8		51.9				
23	307	48.3	145	31.5		03.8	65	37.0		52.1				
24	322	50.8	160	31.1	+9	02.6	80	38.2	-23	52.3				
Dif	—		-4		-12		+12		-2					

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 04 ^m 6			Edad: 11 ^d 1 PHE { SD: 15/1 PMG: 21 ^h 03 ^m 4 ^h : 55/7 12 ^h : 55/9 20 ^h : 56/1 Rº: 52 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	178	49.9	+14	17.4	55	08.5	-18	20.8	60 N	2	03	3	21	4	13	17	17 46	** ** *		
1	193	50.1		16.6	69	38.2 ¹⁰⁷		22.0	58		28		34		22	17	05 46	0 11 50		
2	208	50.2		15.8	84	07.8 ¹⁰⁶		23.1	56		2	47		46		30	16	54 46	21 5	
3	223	50.3		15.0	98	37.4 ¹⁰⁶		24.1	54		3	02	3	56		37		44 47	31 5	
4	238	50.4		14.3	113	06.9 ¹⁰⁵		25.0	52			15	4	05		43		35 48	39 51	
5	253	50.5	+14	13.5	127	36.4 ¹⁰⁵	-18	25.8	50		3	27	4	12	4	49	16	28 48	0 47 51	
6	268	50.7	+14	12.7	142	05.8 ¹⁰⁴	-18	26.5	45		3	49	4	29	5	01	16	11 49	1 03 51	
7	283	50.8		11.9	156	35.2 ¹⁰⁴		27.1	40		4	07		42		11	15	58 49	17 51	
8	298	50.9		11.2	171	04.6 ¹⁰⁴		27.7	35			20	4	53		19		46 50	28 51	
9	313	51.0		10.4	185	33.9 ¹⁰³		28.1	30			32	5	02		27		36 51	38 51	
10	328	51.1		09.6	200	03.2 ¹⁰³		28.4	20			4	50		17		40	19 51	1 55 51	
11	343	51.3	+14	08.8	214	32.5 ¹⁰³	-18	28.7	10 N		5	04		5	29	5	51	15	04 52	2 10 51
12	358	51.4	+14	08.1	229	01.7 ¹⁰²	-18	28.8	0		5	15		5	40	6	01	14	50 52	2 24 51
13	13	51.5		07.3	243	30.9 ¹⁰²		28.9	10 S			25		50		11		36 53	38 51	
14	28	51.6		06.5	258	00.0 ¹⁰¹		28.8	20			33		5	59	22		21 53	2 53 51	
15	43	51.8		05.7	272	29.1 ¹⁰¹		28.7	30			41	6	10		34		14 04 54	3 10 50	
16	58	51.9		05.0	286	58.2 ¹⁰¹		28.5	35			45		15		41		13 54 54	19 51	
17	73	52.0	+14	04.2	301	27.3 ¹⁰¹	-18	28.1	40		5	49		6	21	6	49	13	43 54	3 31 51
18	88	52.1	+14	03.4	315	56.3 ¹⁰⁰	-18	27.7	45		5	53		6	28	6	58	13	30 54	3 44 51
19	103	52.2		02.6	330	25.2 ⁹⁹		27.1	50			57		35		7	09		13 55	4 00 51
20	118	52.4		01.8	344	54.2 ¹⁰⁰		26.5	52			5	59		39		14		13 06 55	08 50
21	133	52.5		01.1	359	23.1 ⁹⁹		25.8	54			6	01		43		20		12 57 56	16 50
22	148	52.6	+14	00.3	13	52.0 ⁹⁹		24.9	56				03		47		26		48 55	26 50
23	163	52.7	+13	59.5	28	20.8 ⁹⁸		24.0	58				05		51		33		37 56	37 49
24	178	52.9	+13	58.7	42	49.6 ⁹⁸	-18	23.0	60 S		6	07		6	56	7	41	12	24 57	4 49 50
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 2 ^h 28 ^m 2		Mag: -3.8 PMG: 13 ^h 18 ^m			Mag: -0.5 PMG: 18 ^h 36 ^m			Mag: -1.7 PMG: 14 ^h 08 ^m			Mag: +0.4 PMG: 18 ^h 59 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	322	50.8	160	31.1	+9	02.6	80	38.2	-23	52.3	147	24.7	+3	11.4	74	27.9	-20	19.5		
1	337	53.2	175	30.7		01.4	95	39.5		52.5	162	26.7		11.2	89	30.4		19.5		
2	352	55.7	190	30.3	+9	00.2	110	40.7		52.7	177	28.7		11.0	104	32.9		19.5		
3	7	58.2	205	29.9	+8	59.0	125	41.9		52.9	192	30.8		10.8	119	35.3		19.5		
4	23	00.6	220	29.5		57.9	140	43.1		53.1	207	32.8		10.6	134	37.8		19.5		
5	38	03.1	235	29.1	+8	56.7	155	44.4	-23	53.3	222	34.8	+3	10.4	149	40.2	-20	19.5		
6	53	05.6	250	28.7	+8	55.5	170	45.6	-23	53.5	237	36.8	+3	10.2	164	42.7	-20	19.5		
7	68	08.0	265	28.3		54.3	185	46.8		53.7	252	38.8		10.0	179	45.2		19.5		
8	83	10.5	280	27.9		53.1	200	48.0		53.9	267	40.8		09.8	194	47.6		19.5		
9	98	13.0	295	27.5		51.9	215	49.3		54.1	282	42.8		09.6	209	50.1		19.5		
10	113	15.4	310	27.1		50.7	230	50.5		54.3	297	44.8		09.4	224	52.6		19.5		
11	128	17.9	325	26.7	+8	49.5	245	51.7	-23	54.5	312	46.9	+3	09.2	239	55.0	-20	19.6		
12	143	20.3	340	26.3	+8	48.3	260	52.9	-23	54.7	327	48.9	+3	09.0	254	57.5	-20	19.6		
13	158	22.8	355	25.9		47.1	275	54.1		54.9	342	50.9		08.8	269	59.9		19.6		
14	173	25.3	10	25.5		45.9	290	55.4		55.1	357	52.9		08.6	285	02.4		19.6		
15	188	27.7	25	25.1		44.7	305	56.6		55.3	12	54.9		08.4	300	04.9		19.6		
16	203	30.2	40	24.7		43.5	320	57.8		55.5	27	56.9		08.2	315	07.3		19.6		
17	218	32.7	55	24.3	+8	42.3	335	59.0	-23	55.8	42	58.9	+3	08.0	330	09.8	-20	19.6		
18	233	35.1	70	23.9	+8	41.1	351	00.2	-23	56.0	58	00.9	+3	07.8	345	12.2	-20	19.6		
19	248	37.6	85	23.5		39.9	6	01.4		56.2	73	03.0		07.6	0	14.7		19.6		
20	263	40.1	100	23.1		38.7	21	02.6		56.4	88	05.0		07.4	15	17.2		19.6		
21	278	42.5	115	22.7		37.6	36	03.9		56.6	103	07.0		07.2	30	19.6		19.7		
22	293	45.0	130	22.3		36.4	51	05.1		56.8	118	09.0		07.0	45	22.1		19.7		
23	308	47.5	145	22.0		35.2	66	06.3		57.0	133	11.0		06.8	60	24.5		19.7		
24	323	49.9	160	21.6	+8	34.0	81	07.5	-23	57.2	148	13.0	+3	06.6	75	27.0	-20	19.7		
Dif	—			-4	-12	+12			-2	+20			-2	+25						

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8		Edad: 12 ^d 1 PHE	SD: 15 ^h 3		R°: 53 ^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	178	52.9	+13	58.7	42	49.6	-18 23.0	60 N	19 52	20 43	21 57	18 03	37	0 49	62	
1	193	53.0		57.9	57	18.4	98 21.8	58	43	30	34	17 51	39	1 01	61	
2	208	53.1		57.1	71	47.2	98 20.6	56	36	19	17	40	41	12	60	
3	223	53.2		56.4	86	15.9	97 19.3	54	29	09	21 02	31	42	22	59	
4	238	53.4		55.6	100	44.6	97 17.9	52	23	20 01	20 49	23	42	30	59	
5	253	53.5	+13	54.8	115	13.3	97 -18 16.3	50	19 18	19 53	20 39	17 16	43	1 38	59	
6	268	53.6	+13	54.0	129	41.9	96 -18 14.7	45	19 06	19 38	20 17	17 00	45	1 54	58	
7	283	53.7		53.2	144	10.5	96 13.0	40	18 56	25	20 00	16 47	47	2 08	56	
8	298	53.9		52.4	158	39.1	96 11.1	35	48	15	19 47	36	48	19	56	
9	313	54.0		51.7	173	07.6	95 09.2	30	41	19 06	36	27	48	29	55	
10	328	54.1		50.9	187	36.2	96 07.1	20	28	18 51	18	16 10	50	2 46	54	
11	343	54.2	+13	50.1	202	04.7	95 -18 05.0	10 N	18 18	18 39	19 05	15 56	51	3 01	53	
12	358	54.4	+13	49.3	216	33.2	95 -18 02.8	0	18 08	18 29	18 54	15 42	53	3 15	52	
13	13	54.5		48.5	231	01.6	94 -18 00.4	10 S	17 58	19	44	29	54	29	51	
14	28	54.6		47.7	245	30.0	94 -17 58.0	20	48	10	36	15 14	56	3 44	50	
15	43	54.8		46.9	259	58.5	95 55.4	30	36	18 00	29	14 58	57	4 00	50	
16	58	54.9		46.2	274	26.8	93 52.8	35	29	17 55	25	48	58	10	49	
17	73	55.0	+13	45.4	288	55.2	94 -17 50.0	40	17 21	17 49	18 21	14 37	59	4 22	47	
18	88	55.1	+13	44.6	303	23.6	94 -17 47.2	45	17 13	17 43	18 18	14 24	60	4 35	47	
19	103	55.3		43.8	317	51.9	93 44.2	50	17 02	36	14	08	62	5	45	
20	118	55.4		43.0	332	20.2	93 41.2	52	16 57	33	12	14 01	63	4	58	
21	133	55.5		42.2	346	48.5	93 38.0	54	52	29	11	13 53	63	5	06	
22	148	55.7		41.4	1	16.7	92 34.8	56	46	25	09	43	65	16	43	
23	163	55.8		40.6	15	45.0	93 31.4	58	39	21	07	33	66	26	43	
24	178	55.9	+13	39.8	30	13.2	92 -17 28.0	60 S	16 31	17 16	18 05	13 21	67	5	39	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 24 ^m 3		Mag: -3.8 PMG: 13 ^h 19 ^m			Mag: -0.5 PMG: 18 ^h 34 ^m			Mag: -1.7 PMG: 14 ^h 05 ^m			Mag: +0.4 PMG: 18 ^h 55 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	323	49.9	160	21.6	+8	34.0	81 07.5	-23 57.2	148	13.0	+3 06.6	75 27.0	-20 19.7			
1	338	52.4	175	21.2		32.8	96 08.7	57.4	163	15.0	06.4	90 29.5	19.7			
2	353	54.8	190	20.8		31.6	111 09.9	57.6	178	17.0	06.2	105 31.9	19.7			
3	8 57.3	205 20.4	30.4			30.4	126 11.1	57.8	193	19.0	06.0	120 34.4	19.7			
4	23 59.8	220 20.0	29.2			29.2	141 12.3	58.0	208	21.1	05.8	135 36.8	19.7			
5	39 02.2	235 19.6	+8 28.0			28.0	156 13.5	-23 58.2	223	23.1	+3 05.6	150 39.3	-20 19.7			
6	54 04.7	250 19.2	+8 26.8			26.8	171 14.7	-23 58.4	238	25.1	+3 05.4	165 41.7	-20 19.7			
7	69 07.2	265 18.8	25.6			25.6	186 15.9	58.6	253	27.1	05.2	180 44.2	19.8			
8	84 09.6	280 18.4	24.4			24.4	201 17.1	58.8	268	29.1	05.0	195 46.7	19.8			
9	99 12.1	295 18.0	23.2			23.2	216 18.3	59.0	283	31.1	04.8	210 49.1	19.8			
10	114 14.6	310 17.7	22.0			22.0	231 19.5	59.2	298	33.1	04.6	225 51.6	19.8			
11	129 17.0	325 17.3	+8 20.7			20.7	246 20.7	-23 59.4	313	35.1	+3 04.4	240 54.0	-20 19.8			
12	144 19.5	340 16.9	+8 19.5			19.5	261 21.9	-23 59.6	328	37.1	+3 04.2	255 56.5	-20 19.8			
13	159 22.0	355 16.5	18.3			18.3	276 23.1	-23 59.8	343	39.2	04.0	270 58.9	19.8			
14	174 24.4	10 16.1	17.1			17.1	291 24.3	-24 00.0	358	41.2	03.8	286 01.4	19.8			
15	189 26.9	25 15.7	15.9			15.9	306 25.5	-24 00.2	13	43.2	03.6	301 03.9	19.8			
16	204 29.3	40 15.3	14.7			14.7	321 26.7	00.4	28	45.2	03.4	316 06.3	19.8			
17	219 31.8	55 14.9	+8 13.5			13.5	336 27.9	-24 00.6	43	47.2	+3 03.2	331 08.8	-20 19.9			
18	234 34.3	70 14.6	+8 12.3			12.3	351 29.1	-24 00.8	58	49.2	+3 03.0	346 11.2	-20 19.9			
19	249 36.7	85 14.2	11.1			11.1	6 30.3	01.0	73	51.2	02.8	1 13.7	19.9			
20	264 39.2	100 13.8	09.9			09.9	21 31.5	01.2	88	53.2	02.6	16 16.1	19.9			
21	279 41.7	115 13.4	08.7			08.7	36 32.7	01.4	103	55.2	02.4	31 18.6	19.9			
22	294 44.1	130 13.0	07.5			07.5	51 33.9	01.6	118	57.2	02.2	46 21.0	19.9			
23	309 46.6	145 12.6	06.3			06.3	66 35.1	01.8	133	59.2	02.0	61 23.5	19.9			
24	324 49.1	160 12.2	+8 05.1			05.1	81 36.3	-24 02.0	149	01.3	+3 01.8	76 26.0	-20 19.9			
Dif	—		-4	-12			+12	-2	+20		-2	+25		0		

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 2			Edad: 13 ^d 1 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 6 Rº: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	55.9	+13	39.8	30	13.2	-17	28.0	36	60 N	2	12	3	27	4	17	18 40 30	1 51 72
1	193	56.0		39.0	44	41.4	92	24.4	36	58	35	39	26		30	32	2 02 70	
2	208	56.2		38.3	59	09.6	92	20.7	37	56	2	53	3	50	34	21	34 12 69	
3	223	56.3		37.5	73	37.8	92	17.0	37	54	3	07	4	00	40	13	35 21 68	
4	238	56.4		36.7	88	05.9	91	13.1	39	52	20		08	46	18	05 38	29 66	
5	253	56.6	+13	35.9	102	34.1	92	-17	09.1	40	50	3	31	4	16	4	52 17 59 38	2 37 65
6	268	56.7	+13	35.1	117	02.2	91	-17	05.1	40	45	3	52	4	31	5	03 17 45 41	2 52 63
7	283	56.8		34.3	131	30.3	91	-17	00.9	42	40	4	09		44	13	34 43	3 04 62
8	298	57.0		33.5	145	58.4	91	-16	56.6	43	35	22	4	54	21	24	45	15 60
9	313	57.1		32.7	160	26.5	91		52.3	43	30	33	5	03	28	15	46	24 59
10	328	57.2		31.9	174	54.6	91		47.8	45	20	4	51	18	40	17	00 49	40 57
11	343	57.4	+13	31.1	189	22.7	91	-16	43.2	46	10 N	5	04	5	29	5	51 16 47 51	3 54 55
12	358	57.5	+13	30.3	203	50.7	90	-16	38.6	46	0	5	15	5	40	6	01 16 35 53	4 07 53
13	13	57.6		29.5	218	18.8	91		33.8	48	10 S	24		49	11	23	55	20 52
14	28	57.8		28.7	232	46.8	90		28.9	49	20	32	5	58	21	16	10 57	34 50
15	43	57.9		27.9	247	14.8	90		23.9	50	30	40	6	08	32	15	55 60	50 47
16	58	58.0		27.1	261	42.9	91		18.9	50	35	43		13	39	46	61	4 59 46
17	73	58.2	+13	26.3	276	10.9	90	-16	13.7	52	40	5	47	6	19	6	46 15 36 63	5 09 45
18	88	58.3	+13	25.5	290	38.9	90	-16	08.4	53	45	5	50	6	25	6	55 15 24 66	5 22 42
19	103	58.4		24.7	305	06.9	90	-16	03.1	53	50	54		32	7	06 10 68	36 41	
20	118	58.6		23.9	319	34.8	89	-15	57.6	55	52	55		35	10	15	04 69	43 40
21	133	58.7		23.1	334	02.8	90		52.1	55	54	57		39	16	14	56 71	51 38
22	148	58.8		22.3	348	30.8	90		46.4	57	56	5	59	42	22	48	72	5 59 37
23	163	59.0		21.5	2	58.8	90		40.7	57	58	6	00	47	28	39	74	6 09 35
24	178	59.1	+13	20.7	17	26.7	89	-15	34.8	59	60 S	6	02	6	51	7	36 14 28 76	6 20 33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 20 ^m 3		Mag: -3.8 PMG: 13 ^h 20 ^m		Mag: -0.5 PMG: 18 ^h 32 ^m		Mag: -1.7 PMG: 14 ^h 02 ^m		Mag: +0.4 PMG: 18 ^h 51 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	324	49.1	160	12.2	+8	05.1	81	36.3	-24	02.0	149	01.3	+3	01.8	76	26.0	-20	19.9
1	339	51.5	175	11.9		03.9	96	37.5		02.2	164	03.3		01.6	91	28.4		19.9
2	354	54.0	190	11.5		02.7	111	38.7		02.4	179	05.3		01.4	106	30.9		20.0
3	9	56.5	205	11.1		01.5	126	39.9		02.6	194	07.3		01.2	121	33.3		20.0
4	24	58.9	220	10.7	+8	00.2	141	41.1		02.8	209	09.3		01.0	136	35.8		20.0
5	40	01.4	235	10.3	+7	59.0	156	42.2	-24	03.0	224	11.3	+3	00.8	151	38.2	-20	20.0
6	55	03.8	250	09.9	+7	57.8	171	43.4	-24	03.2	239	13.3	+3	00.6	166	40.7	-20	20.0
7	70	06.3	265	09.6		56.6	186	44.6		03.4	254	15.3		00.4	181	43.1		20.0
8	85	08.8	280	09.2		55.4	201	45.8		03.6	269	17.3	+3	00.2	196	45.6		20.0
9	100	11.2	295	08.8		54.2	216	47.0		03.8	284	19.3	+3	00.0	211	48.0		20.0
10	115	13.7	310	08.4		53.0	231	48.2		04.0	299	21.3	+2	59.8	226	50.5		20.0
11	130	16.2	325	08.0	+7	51.8	246	49.3	-24	04.2	314	23.4	+2	59.7	241	52.9	-20	20.1
12	145	18.6	340	07.7	+7	50.6	261	50.5	-24	04.4	329	25.4	+2	59.5	256	55.4	-20	20.1
13	160	21.1	355	07.3		49.3	276	51.7		04.6	344	27.4		59.3	271	57.9		20.1
14	175	23.6	10	06.9		48.1	291	52.9		04.8	359	29.4		59.1	287	00.3		20.1
15	190	26.0	25	06.5		46.9	306	54.1		05.0	14	31.4		58.9	302	02.8		20.1
16	205	28.5	40	06.1		45.7	321	55.3		05.2	29	33.4		58.7	317	05.2		20.1
17	220	30.9	55	05.8	+7	44.5	336	56.4	-24	05.4	44	35.4	+2	58.5	332	07.7	-20	20.1
18	235	33.4	70	05.4	+7	43.3	351	57.6	-24	05.6	59	37.4	+2	58.3	347	10.1	-20	20.1
19	250	35.9	85	05.0		42.1	6	58.8		05.8	74	39.4		58.1	2	12.6		20.1
20	265	38.3	100	04.6		40.8	22	00.0		06.0	89	41.4		57.9	17	15.0		20.2
21	280	40.8	115	04.2		39.6	37	01.1		06.2	104	43.4		57.7	32	17.5		20.2
22	295	43.3	130	03.9		38.4	52	02.3		06.4	119	45.4		57.5	47	19.9		20.2
23	310	45.7	145	03.5		37.2	67	03.5		06.6	134	47.5		57.3	62	22.4		20.2
24	325	48.2	160	03.1	+7	36.0	82	04.7	-24	06.8	149	49.5	+2	57.1	77	24.8	-20	20.2
Dif	—		-4		-12		+12		-2		+20		-2		+25			

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 9			Edad: 14 ^d 1 PHE { 4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/3 PMG: 23 ^h 41 ^m R°: 53 ^m SD: 15 ^h 7												
	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	59.1	+13	20.7	17	26.7	-15	34.8	60 N	19 46	20 36	21 48	19 10 25	3 03 79		
1	193	59.2		19.9	31	54.7	90	28.9	59	38	24	27	19 02 27	12 77		
2	208	59.4		19.1	46	22.7	90	22.8	61	31	14	21 10	18 55 29	21 75		
3	223	59.5		18.3	60	50.6	89	16.7	61	25	20 04	20 56	48 32	29 77		
4	238	59.6		17.5	75	18.6	90	10.5	62	19	19 56	44	43 32	35 72		
5	253	59.8	+13	16.7	89	46.5	89	-15	04.1	64	19 14	19 49	20 34	18 37 35	3 42 70	
6	268	59.9	+13	15.9	104	14.4	89	-14	57.7	64	19 03	19 34	20 13	18 26 38	3 55 67	
7	284	00.1		15.1	118	42.4	90	51.2	65	40	18 53	22	19 57	17 40	4 06 64	
8	299	00.2		14.3	133	10.3	89	44.6	66	35	46	12	44	09 42	15 63	
9	314	00.3		13.5	147	38.3	90	37.9	67	30	39	19 04	33	18 01 45	23 61	
10	329	00.5		12.7	162	06.2	89	31.1	68	20	27	18 50	17	17 49 48	37 58	
11	344	00.6	+13	11.9	176	34.2	90	-14	24.3	68	18 17	18 38	19 04	17 38 51	4 49 56	
12	359	00.7	+13	11.1	191	02.1	89	-14	17.3	70	18 07	18 29	18 53	17 28 53	5 00 53	
13	14	00.9		10.3	205	30.0	89	10.2	71	10 S	17 58	19	44	18 56	12 50	
14	29	01.0		09.5	219	58.0	90	-14	03.1	71	20	48	11	37	17 07 59	
15	44	01.2		08.7	234	25.9	89	-13	55.9	72	30	37	18 01	30	16 55 62	
16	59	01.3		07.9	248	53.9	90	48.5	74	35	31	17 57	26	47 64	45 43	
17	74	01.4	+13	07.1	263	21.8	89	-13	41.1	74	40	17 23	17 51	18 23	16 39 66	
18	89	01.6	+13	06.3	277	49.8	90	-13	33.6	75	45	17 15	17 45	18 20	16 30 68	
19	104	01.7		05.5	292	17.7	89	26.0	76	50	05	39	16	18 72	17 36	
20	119	01.9		04.7	306	45.7	90	18.4	76	52	17 00	35	15	13 73	23 34	
21	134	02.0		03.9	321	13.6	89	10.6	78	54	16 55	32	14	07 75	29 33	
22	149	02.1		03.1	335	41.6	90	-13	02.8	78	56	50	29	12	16 00 77	
23	164	02.3		02.3	350	09.6	90	-12	54.9	79	58	43	25	11	15 53 79	
24	179	02.4	+13	01.4	4	37.6	90	-12	46.9	80	60 S	16 36	17 20	18 09	15 44 82	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 16 ^m 4		Mag: -3.8 PMG: 13 ^h 20 ^m			Mag: -0.5 PMG: 18 ^h 30 ^m			Mag: -1.7 PMG: 13 ^h 59 ^m			Mag: +0.4 PMG: 18 ^h 47 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	325	48.2	160	03.1	+7	36.0	82	04.7	-24	06.8	149	49.5	+2	57.1	77 24.8	
1	340	50.7	175	02.7		34.8	97	05.8		07.0	164	51.5		56.9	92 27.3	
2	355	53.1	190	02.4		33.5	112	07.0		07.2	179	53.5		56.7	107 29.7	
3	10	55.6	205	02.0		32.3	127	08.2		07.4	194	55.5		56.5	122 32.2	
4	25	58.1	220	01.6		31.1	142	09.3		07.6	209	57.5		56.3	137 34.6	
5	41	00.5	235	01.2	+7	29.9	157	10.5	-24	07.8	224	59.5	+2	56.0	152 37.1	
6	56	03.0	250	00.9	+7	28.7	172	11.7	-24	08.0	240	01.5	+2	55.8	167 39.5	
7	71	05.4	265	00.5		27.5	187	12.8		08.2	255	03.5		55.6	182 42.0	
8	86	07.9	280	00.1		26.2	202	14.0		08.4	270	05.5		55.4	197 44.4	
9	101	10.4	294	59.7		25.0	217	15.2		08.6	285	07.5		55.2	212 46.9	
10	116	12.8	309	59.4		23.8	232	16.3		08.8	300	09.5		55.0	227 49.3	
11	131	15.3	324	59.0	+7	22.6	247	17.5	-24	09.0	315	11.5	+2	54.8	242 51.8	
12	146	17.8	339	58.6	+7	21.4	262	18.7	-24	09.2	330	13.5	+2	54.6	257 54.2	
13	161	20.2	354	58.2		20.1	277	19.8		09.4	345	15.6		54.4	272 56.7	
14	176	22.7	9	57.9		18.9	292	21.0		09.6	0	17.6		54.2	287 59.1	
15	191	25.2	24	57.5		17.7	307	22.2		09.8	15	19.6		54.0	303 01.6	
16	206	27.6	39	57.1		16.5	322	23.3		10.0	30	21.6		53.8	318 04.0	
17	221	30.1	54	56.7	+7	15.3	337	24.5	-24	10.2	45	23.6	+2	53.6	333 06.4	
18	236	32.6	69	56.4	+7	14.0	352	25.6	-24	10.4	60	25.6	+2	53.4	348 08.9	
19	251	35.0	84	56.0		12.8	7	26.8		10.6	75	27.6		53.2	3 11.3	
20	266	37.5	99	55.6		11.6	22	28.0		10.8	90	29.6		53.0	18 13.8	
21	281	39.9	114	55.3		10.4	37	29.1		11.0	105	31.6		52.8	33 16.2	
22	296	42.4	129	54.9		09.1	52	30.3		11.2	120	33.6		52.6	48 18.7	
23	311	44.9	144	54.5		07.9	67	31.4		11.4	135	35.6		52.4	63 21.1	
24	326	47.3	159	54.1	+7	06.7	82	32.6	-24	11.6	150	37.6	+2	52.2	78 23.6	
Dif	—		-4		-12		+12		-2		+20		-2		+24	
															0	

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 7				Edad: 15 ^d 1 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 SD: 15 ^h 9 20 ^h : 58 ^m 9 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	02.4	+13	01.4	4	37.6	-12	46.9	81	60 N	2	21	3	32	4	22	19	35
1	194	02.6	+13	00.6	19	05.5	89	38.8	81	58	42	44	30	29	24	29	24	
2	209	02.7	+12	59.8	33	33.5	90	30.6	82	56	2	58	3	55	37	24	26	
3	224	02.8		59.0	48	01.5	90	22.4	82	54	3	12	4	04	44	20	28	
4	239	03.0		58.2	62	29.5	90	14.0	84	52	24	12	49	15	30	47	75	
5	254	03.1	+12	57.4	76	57.5	90	-12	05.6	84	50	3	34	4	19	4	55	
6	269	03.3	+12	56.6	91	25.5	90	-11	57.1	85	45	3	55	4	34	5	06	
7	284	03.4		55.8	105	53.5	90	48.6	85	40	4	11	46	15	18	57	38	
8	299	03.5		55.0	120	21.5	90	39.9	87	35	24	4	56	22	51	40	18	
9	314	03.7		54.2	134	49.5	90	31.2	87	30	35	5	04	29	46	42	24	
10	329	03.8		53.3	149	17.6	91	22.4	88	20	4	51	18	41	37	46	35	
11	344	04.0	+12	52.5	163	45.6	90	-11	13.6	88	10 N	5	04	5	29	5	51	
12	359	04.1	+12	51.7	178	13.7	91	-11	04.6	90	0	5	15	5	39	6	00	
13	14	04.3		50.9	192	41.7	90	-10	55.6	90	10 S	23	48	10	14	56	6	
14	29	04.4		50.1	207	09.8	91	46.5	91	20	31	5	57	19	18	06	59	
15	44	04.6		49.3	221	37.8	90	37.4	91	30	38	6	06	30	17	57	63	
16	59	04.7		48.5	236	05.9	91	28.2	92	35	41	11	37	51	66	28	42	
17	74	04.8	+12	47.6	250	34.0	91	-10	18.9	93	40	5	44	6	16	6	44	
18	89	05.0	+12	46.8	265	02.0	90	-10	09.5	94	45	5	47	6	22	6	52	
19	104	05.1		46.0	279	30.1	91	-10	00.1	94	50	50	28	7	02	30	75	
20	119	05.3		45.2	293	58.2	91	-9	50.6	95	52	52	31	06	26	76	6	
21	134	05.4		44.4	308	26.3	91	41.1	95	54	53	35	11	22	78	7	02	
22	149	05.6		43.6	322	54.5	92	31.4	97	56	54	38	17	17	80	08	27	
23	164	05.7		42.8	337	22.6	91	21.8	96	58	56	42	23	12	82	14	25	
24	179	05.9	+12	41.9	351	50.7	91	-9	12.0	98	60 S	5	57	6	46	7	30	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 12 ^m 5		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: -0.5 PMG: 18 ^h 28 ^m		Mag: -1.7 PMG: 13 ^h 56 ^m		Mag: +0.4 PMG: 18 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	326	47.3	159	54.1	+7	06.7	82	32.6	-24	11.6
1	341	49.8	174	53.8		05.5	97	33.7		11.8
2	356	52.3	189	53.4		04.2	112	34.9		12.0
3	11	54.7	204	53.0		03.0	127	36.1		12.2
4	26	57.2	219	52.7		01.8	142	37.2		12.3
5	41	59.7	234	52.3	+7	00.6	157	38.4	-24	12.5
6	57	02.1	249	51.9	+6	59.3	172	39.5	-24	12.7
7	72	04.6	264	51.6		58.1	187	40.7		12.9
8	87	07.0	279	51.2		56.9	202	41.8		13.1
9	102	09.5	294	50.8		55.7	217	43.0		13.3
10	117	12.0	309	50.5		54.4	232	44.1		13.5
11	132	14.4	324	50.1	+6	53.2	247	45.3	-24	13.7
12	147	16.9	339	49.7	+6	52.0	262	46.4	-24	13.9
13	162	19.4	354	49.4		50.7	277	47.5		14.1
14	177	21.8	9	49.0		49.5	292	48.7		14.3
15	192	24.3	24	48.6		48.3	307	49.8		14.5
16	207	26.8	39	48.3		47.1	322	51.0		14.7
17	222	29.2	54	47.9	+6	45.8	337	52.1	-24	14.9
18	237	31.7	69	47.5	+6	44.6	352	53.3	-24	15.1
19	252	34.2	84	47.2		43.4	7	54.4		15.3
20	267	36.6	99	46.8		42.1	22	55.5		15.5
21	282	39.1	114	46.4		40.9	37	56.7		15.7
22	297	41.5	129	46.1		39.7	52	57.8		15.9
23	312	44.0	144	45.7		38.4	67	59.0		16.1
24	327	46.5	159	45.3	+6	37.2	83	00.1	-24	16.3
Dif	—		-4		-12		+11		-2	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 1 PHE { 4 ^h : 59 ^o 0 12 ^h : 59 ^o 2 20 ^h : 59 ^o 3					Civil			Hora		Hora	
	PMG: 12 ^h 03 ^m 5			PMG: 0 ^h 34 ^m R°: 53 ^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	m
0	179	05.9	+12 41.9	351	50.7	-9 12.0	98	60 N	19 41	20 30	21 38	19 56 20	5 45 87		
1	194	06.0		6	18.8	-9 02.2	98	58	33	18	19	53 23	50 84		
2	209	06.1		20	47.0	-8 52.4	98	56	26	08	21 03	50 25	55 81		
3	224	06.3		35	15.1		100	54	20	20 00	20 50	48 26	5 58 79		
4	239	06.4		49	43.3		99	52	15	19 52	39	45 29	6 02 77		
5	254	06.6	+12 37.8	64	11.5	-8 22.4	101	50	19 10	19 45	20 29	19 43 30	6 05 75		
6	269	06.7	+12 37.0	78	39.6	-8 12.3	101	45	18 59	19 31	20 09	19 39 33	6 12 71		
7	284	06.9		93	07.8	-8 02.2	101	40	51	19	19 54	35 36	18 68		
8	299	07.0		107	36.0	-7 52.0	102	35	43	10	41	31 39	22 66		
9	314	07.2		122	04.2		103	30	37	19 02	31	28 42	27 63		
10	329	07.3		136	32.4		103	20	26	18 48	15	23 46	34 59		
11	344	07.5	+12 32.9	151	00.6	-7 21.1	103	10 N	18 16	18 37	19 03	19 18 50	6 40 56		
12	359	07.6	+12 32.1	165	28.8	-7 10.7	104	0	18 07	18 28	18 53	19 14 53	6 46 53		
13	14	07.8		179	57.0	-7 00.2	105	10 S	17 58	19	44	10 56	52 50		
14	29	07.9		30.5	194 25.2	-6 49.7	105	20	49	11	37	05 60	6 59 45		
15	44	08.1		29.6	208 53.5		105	30	38	18 03	31	19 00 64	7 06 42		
16	59	08.2		28.8	223 21.7		106	35	32	17 58	28	18 57 66	10 39		
17	74	08.4	+12 28.0	237	49.9	-6 17.9	107	40	17 25	17 53	18 25	18 53 69	7 14 37		
18	89	08.5	+12 27.2	252	18.2	-6 07.3	106	45	17 17	17 47	18 22	18 49 72	7 20 34		
19	104	08.7		26.4	266 46.4	-5 56.5	108	50	08	41	19	45 76	26 30		
20	119	08.8		25.5	281 14.7		107	52	17 03	38	18	42 78	29 29		
21	134	09.0		24.7	295 43.0		108	54	16 59	35	17	40 80	32 27		
22	149	09.1		23.9	310 11.2		108	56	53	32	16	37 82	35 25		
23	164	09.3		23.1	324 39.5		109	58	47	29	15	34 84	39 23		
24	179	09.4	+12 22.2	339	07.8	-5 02.4	109	60 S	16 41	17 25	18 13	18 31 87	7 43 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 2 ^h 08 ^m 5		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: -0.5 PMG: 18 ^h 27 ^m		Mag: -1.7 PMG: 13 ^h 52 ^m		Mag: +0.4 PMG: 18 ^h 39 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	327	46.5	159	45.3	+6 37.2	83 00.1	-24 16.3	151 25.7	+2 47.4	79 22.2	-20 20.8		
1	342	48.9	174	45.0	36.0	98 01.2	16.5	166 27.7	47.2	94 24.7	20.8		
2	357	51.4	189	44.6	34.7	113 02.4	16.7	181 29.7	47.0	109 27.1	20.8		
3	12	53.9	204	44.3	33.5	128 03.5	16.9	196 31.7	46.8	124 29.6	20.8		
4	27	56.3	219	43.9	32.3	143 04.6	17.0	211 33.8	46.6	139 32.0	20.8		
5	42	58.8	234	43.5	+6 31.0	158 05.8	-24 17.2	226 35.8	+2 46.4	154 34.4	-20 20.8		
6	58	01.3	249	43.2	+6 29.8	173 06.9	-24 17.4	241 37.8	+2 46.2	169 36.9	-20 20.8		
7	73	03.7	264	42.8	28.6	188 08.0	17.6	256 39.8	46.0	184 39.3	20.9		
8	88	06.2	279	42.4	27.3	203 09.2	17.8	271 41.8	45.8	199 41.8	20.9		
9	103	08.7	294	42.1	26.1	218 10.3	18.0	286 43.8	45.6	214 44.2	20.9		
10	118	11.1	309	41.7	24.9	233 11.4	18.2	301 45.8	45.4	229 46.6	20.9		
11	133	13.6	324	41.4	+6 23.6	248 12.6	-24 18.4	316 47.8	+2 45.2	244 49.1	-20 20.9		
12	148	16.0	339	41.0	+6 22.4	263 13.7	-24 18.6	331 49.8	+2 45.0	259 51.5	-20 20.9		
13	163	18.5	354	40.6	21.2	278 14.8	18.8	346 51.8	44.8	274 54.0	20.9		
14	178	21.0	9	40.3	19.9	293 16.0	19.0	1	53.8	289 56.4	20.9		
15	193	23.4	24	39.9	18.7	308 17.1	19.2	16	55.8	304 58.8	21.0		
16	208	25.9	39	39.6	17.4	323 18.2	19.4	31	57.8	320 01.3	21.0		
17	223	28.4	54	39.2	+6 16.2	338 19.3	-24 19.6	46	59.8	+2 44.0	335 03.7	-20 21.0	
18	238	30.8	69	38.8	+6 15.0	353 20.5	-24 19.8	62	01.8	+2 43.8	350 06.2	-20 21.0	
19	253	33.3	84	38.5	13.7	8	21.6	77	03.8	43.6	5	08.6	21.0
20	268	35.8	99	38.1	12.5	23	22.7	92	05.8	43.4	20	11.0	21.0
21	283	38.2	114	37.8	11.3	38	23.8	107	07.8	43.2	35	13.5	21.0
22	298	40.7	129	37.4	10.0	53	25.0	122	09.8	43.0	50	15.9	21.0
23	313	43.1	144	37.1	08.8	68	26.1	137	11.8	42.8	65	18.3	21.1
24	328	45.6	159	36.7	+6 07.5	83	27.2	-24 20.9	152	13.8	+2 42.6	80 20.8	-20 21.1
Dif	—		-4	-12		+11	-2		+20	-2		+24	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8			Edad: 17 ^d 1 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 5 20 ^h : 59 ^m 6 R°: 52 ^m						Principio del crepúsculo			Salida de Luna			Puesta de Luna				
	PMG: 12 ^h 03 ^m 3			SD: 16 ^d 2 PMG: 1 ^h 27 ^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	09.4	+12 22.2	339	07.8	-5	02.4	60 N	2	29	3 38	4 27	20 16	20	7 12	87				
1	194	09.6	21.4	353	36.1	-4	51.4 ¹¹⁰	58	2	48	49	35	16	22	14	84				
2	209	09.7	20.6	8	04.3 ⁹²		40.5 ¹⁰⁹	56	3	04	3 59	41	15	24	16	82				
3	224	09.9	19.8	22	32.6 ⁹³		29.4 ¹¹¹	54	17	4	08	47	14	27	17	80				
4	239	10.0	18.9	37	00.9 ⁹³		18.4 ¹¹⁰	52	29	16	53	53	14	28	19	78				
5	254	10.2	+12 18.1	51	29.2 ⁹³	-4	07.3 ¹¹¹	50	3	38	4 22	4 58	20 13	30	7 20	77				
6	269	10.3	+12 17.3	65	57.5 ⁹³	-3	56.2 ¹¹¹	45	3	58	4 37	5 08	20 12	34	7 23	73				
7	284	10.5	16.4	80	25.8 ⁹³		45.1 ¹¹¹	40	4	14	48	17	11	37	26	69				
8	299	10.6	15.6	94	54.1 ⁹³		34.0 ¹¹¹	35	26	4	57	24	10	40	28	67				
9	314	10.8	14.8	109	22.4 ⁹³		22.8 ¹¹²	30	36	5	06	30	10	41	30	64				
10	329	10.9	14.0	123	50.7 ⁹³		11.6 ¹¹²	20	4	52	19	41	09	45	33	60				
11	344	11.1	+12 13.1	138	19.0 ⁹³	-3	00.4 ¹¹²	10 N	5	04	5 29	5 51	20 08	49	7 36	56				
12	359	11.2	+12 12.3	152	47.3 ⁹³	-2	49.1 ¹¹³	0	5	14	5 39	6 00	20 07	52	7 39	53				
13	14	11.4	11.5	167	15.6 ⁹³		37.9 ¹¹²	10 S	22	47	09	09	06	56	42	49				
14	29	11.5	10.6	181	43.9 ⁹³		26.6 ¹¹³	20	29	5	55	18	05	60	44	46				
15	44	11.7	09.8	196	12.2 ⁹³		15.3 ¹¹³	30	36	6	04	28	04	64	48	41				
16	59	11.9	09.0	210	40.5 ⁹³	-2	04.0 ¹¹³	35	39	08	34	34	03	67	49	39				
17	74	12.0	+12 08.2	225	08.8 ⁹³	-1	52.6 ¹¹⁴	40	5	42	6 13	6 41	20 02	70	7 51	37				
18	89	12.2	+12 07.3	239	37.1 ⁹³	-1	41.3 ¹¹³	45	5	44	6 19	6 49	20 01	73	7 54	33				
19	104	12.3	06.5	254	05.4 ⁹³		29.9 ¹¹⁴	50	47	25	6 58	7 28	01	76	56	30				
20	119	12.5	05.7	268	33.7 ⁹³		18.6 ¹¹³	52	48	27	7 02	7 32	00	78	58	28				
21	134	12.6	04.8	283	02.0 ⁹³	-1	07.2 ¹¹⁴	54	49	30	07	07	20 00	80	7 59	26				
22	149	12.8	04.0	297	30.3 ⁹³	-0	55.8 ¹¹⁴	56	50	34	12	12	19 59	82	8 00	25				
23	164	12.9	03.2	311	58.6 ⁹³		44.4 ¹¹⁴	58	51	37	18	18	58	85	02	22				
24	179	13.1	+12 02.3	326	26.9 ⁹³	-0	33.0 ¹¹⁴	60 S	5	52	6 41	7 24	19 58	87	8 04	19				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 2 ^h 04 ^m 6			Mag: -3.8 PMG: 13 ^h 22 ^m			Mag: -0.5 PMG: 18 ^h 25 ^m			Mag: -1.7 PMG: 13 ^h 49 ^m			Mag: +0.4 PMG: 18 ^h 36 ^m							
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°					
0	328	45.6	159	36.7	+6 07.5	83	27.2	-24 20.9	152	13.8	+2 42.6	80	20.8	-20 21.1						
1	343	48.1	174	36.3	06.3	98	28.3	21.1	167	15.8	42.4	95	23.2	21.1						
2	358	50.5	189	36.0	05.1	113	29.4	21.3	182	17.8	42.2	110	25.7	21.1						
3	13	53.0	204	35.6	03.8	128	30.6	21.5	197	19.8	42.0	125	28.1	21.1						
4	28	55.5	219	35.3	02.6	143	31.7	21.7	212	21.8	41.7	140	30.5	21.1						
5	43	57.9	234	34.9	+6 01.3	158	32.8	-24 21.9	227	23.8	+2 41.5	155	33.0	-20 21.1						
6	59	00.4	249	34.6	+6 00.1	173	33.9	-24 22.1	242	25.8	+2 41.3	170	35.4	-20 21.1						
7	74	02.9	264	34.2	+5 58.9	188	35.0	22.3	257	27.8	41.1	185	37.8	21.2						
8	89	05.3	279	33.9	57.6	203	36.1	22.5	272	29.8	40.9	200	40.3	21.2						
9	104	07.8	294	33.5	56.4	218	37.3	22.7	287	31.8	40.7	215	42.7	21.2						
10	119	10.3	309	33.1	55.1	233	38.4	22.8	302	33.8	40.5	230	45.1	21.2						
11	134	12.7	324	32.8	+5 53.9	248	39.5	-24 23.0	317	35.8	+2 40.3	245	47.6	-20 21.2						
12	149	15.2	339	32.4	+5 52.6	263	40.6	-24 23.2	332	37.8	+2 40.1	260	50.0	-20 21.2						
13	164	17.6	354	32.1	51.4	278	41.7	23.4	347	39.8	39.9	275	52.5	21.2						
14	179	20.1	9	31.7	50.2	293	42.8	23.6	2	41.8	39.7	290	54.9	21.3						
15	194	22.6	24	31.4	48.9	308	43.9	23.8	17	43.8	39.5	305	57.3	21.3						
16	209	25.0	39	31.0	47.7	323	45.0	24.0	32	45.8	39.3	320	59.8	21.3						
17	224	27.5	54	30.7	+5 46.4	338	46.1	-24 24.2	47	47.8	+2 39.1	336	02.2	-20 21.3						
18	239	30.0	69	30.3	+5 45.2	353	47.3	-24 24.4	62	49.8	+2 38.9	351	04.6	-20 21.3						
19	254	32.4	84	30.0	43.9	8	48.4	24.6	77	51.8	38.7	6	07.1	21.3						
20	269	34.9	99	29.6	42.7	23	49.5	24.8	92	53.8	38.5	21	09.5	21.3						
21	284	37.4	114	29.3	41.4	38	50.6	24.9	107	55.8	38.3	36	11.9	21.3						
22	299	39.8	129	28.9	40.2	53	51.7	25.1	122	57.8	38.1	51	14.4	21.4						
23	314	42.3	144	28.5	39.0	68	52.8	25.3	137	59.8	37.9	66	16.8	21.4						
24	329	44.7	159	28.2	+5 37.7	83	53.9	-24 25.5	153	01.8	+2 37.7	81	19.2	-20 21.4						
Dif	—			-4 -12			+11 -2			+20 -2			+24 0							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 18 ^d 1 PHE { 4 ^h : 59 ^m /7 12 ^h : 59 ^m /7 20 ^h : 59 ^m /7										
	PMG: 12 ^h 03 ^m 0			SD: 16 ^h 2 PMG: 2 ^h 19 ^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	m	h m m	m
0	179	13.1	+12 02.3	326	26.9	-0 33.0	93	60 N	19 35	20 23	21 30	20 36 21	8 39 87	
1	194	13.2	01.5	340	55.2	21.6	114	58	28	12	21 12	38 23	38 85	
2	209	13.4	+12 00.7	355	23.4	-0 10.2	114	56	21	20 03	20 57	39 26	38 82	
3	224	13.6	+11 59.8	9	51.7	+0 01.3	115	54	16	19 55	44	41 27	37 81	
4	239	13.7	59.0	24	20.0	12.7	114	52	11	47	34	42 29	37 78	
5	254	13.9	+11 58.2	38	48.2	+0 24.1	114	50	19 06	19 41	20 24	20 43 31	8 37 76	
6	269	14.0	+11 57.3	53	16.5	+0 35.5	114	45	18 56	19 27	20 05	20 46 34	8 36 72	
7	284	14.2	56.5	67	44.7	46.9	114	40	48	16	19 50	48 37	35 70	
8	299	14.3	55.7	82	13.0	+0 58.3	114	35	41	19 07	39	50 40	35 66	
9	314	14.5	54.8	96	41.2	+1 09.7	114	30	35	18 59	29	51 43	34 64	
10	329	14.7	54.0	111	09.4	21.1	114	20	24	47	13	54 47	33 60	
11	344	14.8	+11 53.1	125	37.7	+1 32.5	114	10 N	18 15	18 36	19 01	20 57 50	8 32 57	
12	359	15.0	+11 52.3	140	05.9	+1 43.9	114	0	18 06	18 27	18 52	20 59 54	8 32 53	
13	14	15.1	51.5	154	34.1	+1 55.3	114	10 S	17 58	19	44	21 02 56	31 49	
14	29	15.3	50.6	169	02.3	+2 06.6	113	20	49	12	37	05 60	30 46	
15	44	15.4	49.8	183	30.4	18.0	114	30	39	18 04	32	08 64	29 42	
16	59	15.6	49.0	197	58.6	29.3	113	35	34	17 59	29	10 66	28 40	
17	74	15.8	+11 48.1	212	26.8	+2 40.6	113	40	17 27	17 55	18 26	21 12 69	8 28 37	
18	89	15.9	+11 47.3	226	54.9	+2 52.0	114	45	17 20	17 50	18 24	21 14 72	8 27 34	
19	104	16.1	46.4	241	23.1	+3 03.2	112	50	11	44	22	17 76	26 30	
20	119	16.2	45.6	255	51.2	14.5	113	52	07	41	21	18 78	26 28	
21	134	16.4	44.8	270	19.3	25.8	113	54	17 02	39	20	20 80	25 27	
22	149	16.6	43.9	284	47.4	37.0	112	56	16 57	36	19	21 82	25 24	
23	164	16.7	43.1	299	15.5	48.2	112	58	52	32	18	23 85	24 22	
24	179	16.9	+11 42.2	313	43.6	+3 59.4	112	60 S	16 45	17 29	18 17	21 25 87	8 23 20	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 00 ^m 7		Mag: -3.8 PMG: 13 ^h 22 ^m		Mag: -0.4 PMG: 18 ^h 23 ^m		Mag: -1.7 PMG: 13 ^h 46 ^m		Mag: +0.4 PMG: 18 ^h 32 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	329	44.7	159	28.2	83	53.9	153	01.8	81	19.2				
1	344	47.2	174	27.8	98	55.0	168	03.8	96	21.7				
2	359	49.7	189	27.5	113	56.1	183	05.8	111	24.1				
3	14	52.1	204	27.1	128	57.2	198	07.8	126	26.5				
4	29	54.6	219	26.8	143	58.3	213	09.8	141	29.0				
5	44	57.1	234	26.4	158	59.4	228	11.8	156	31.4				
6	59	59.5	249	26.1	174	00.5	243	13.8	171	33.8				
7	75	02.0	264	25.7	189	01.6	258	15.8	186	36.3				
8	90	04.5	279	25.4	204	02.7	273	17.8	201	38.7				
9	105	06.9	294	25.0	219	03.8	288	19.8	216	41.1				
10	120	09.4	309	24.7	234	04.9	303	21.8	231	43.6				
11	135	11.9	324	24.3	249	06.0	318	23.8	246	46.0				
12	150	14.3	339	24.0	264	07.1	333	25.8	261	48.4				
13	165	16.8	354	23.6	279	08.2	348	27.8	276	50.8				
14	180	19.2	9	23.3	294	09.3	3	29.8	291	53.3				
15	195	21.7	24	23.0	309	10.4	18	31.8	306	55.7				
16	210	24.2	39	22.6	324	11.5	33	33.8	321	58.1				
17	225	26.6	54	22.3	339	12.5	48	35.8	337	00.6				
18	240	29.1	69	21.9	354	13.6	63	37.8	352	03.0				
19	255	31.6	84	21.6	9	14.7	78	39.8	7	05.4				
20	270	34.0	99	21.2	24	15.8	93	41.8	22	07.9				
21	285	36.5	114	20.9	39	16.9	108	43.8	37	10.3				
22	300	39.0	129	20.5	54	18.0	123	45.8	52	12.7				
23	315	41.4	144	20.2	69	19.1	138	47.8	67	15.2				
24	330	43.9	159	19.8	84	20.2	153	49.8	82	17.6				
Dif	—		-3	-12	+11	-2	+20	-2	+24	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 12 ^h 02 ^m 7			Edad: 19 ^d 1 PHE { 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/7 PMG: 3 ^h 12 ^m 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	179	16.9	+11	42.2	313	43.6	+3	59.4	60 N	2	37	3	44	4	32	20	57
1	194	17.0		41.4	328	11.7	+4	10.5 ¹¹¹	58	2	55	3	54	39	21	01	
2	209	17.2		40.5	342	39.7		21.7 ¹¹²	56	3	10	4	04	45	05	28	
3	224	17.4		39.7	357	07.7		32.8 ¹¹¹	54	22	12	51	08	30	9	58	
4	239	17.5		38.9	11	35.8		43.9 ¹¹¹	52	33	19	4	56	11	32	55	
5	254	17.7	+11	38.0	26	03.8	+4	54.9 ¹¹⁰	50	3	42	4	26	5	01	21	
6	269	17.8	+11	37.2	40	31.8	+5	05.9 ¹¹⁰	45	4	01	4	39	5	10	21	
7	284	18.0		36.3	54	59.7		16.9 ¹¹⁰	40	16	50	19	25	40	45	69	
8	299	18.2		35.5	69	27.7		27.9 ¹¹⁰	35	28	4	59	25	30	42	41	
9	314	18.3		34.6	83	55.6		38.8 ¹⁰⁹	30	37	5	07	32	34	44	38	
10	329	18.5		33.8	98	23.6	+5	49.7 ¹⁰⁹	20	4	53	19	42	41	47	33	
11	344	18.7	+11	33.0	112	51.5	+6	00.5 ¹⁰⁸	10 N	5	04	5	30	5	51	21	
12	359	18.8	+11	32.1	127	19.4	+6	11.3 ¹⁰⁸	0	5	14	5	38	5	59	21	
13	14	19.0		31.3	141	47.2		22.1 ¹⁰⁸	10 S	22	46	6	08	21	58		
14	29	19.1		30.4	156	15.1		32.8 ¹⁰⁷	20	28	5	54	16	22	05		
15	44	19.3		29.6	170	42.9		43.5 ¹⁰⁷	30	34	6	02	26	12	64		
16	59	19.5		28.7	185	10.7	+6	54.2 ¹⁰⁷	35	36	06	32	16	66	08		
17	74	19.6	+11	27.9	199	38.5	+7	04.8 ¹⁰⁶	40	5	39	6	10	6	38		
18	89	19.8	+11	27.0	214	06.3	+7	15.3 ¹⁰⁵	45	5	41	6	15	6	45		
19	104	20.0		26.2	228	34.1		25.8 ¹⁰⁵	50	43	21	54	33	75	8		
20	119	20.1		25.3	243	01.8		36.3 ¹⁰⁵	52	44	23	6	58	36	77		
21	134	20.3		24.5	257	29.5		46.7 ¹⁰⁴	54	45	26	7	02	40	78		
22	149	20.5		23.6	271	57.2	+7	57.1 ¹⁰⁴	56	46	29	07	43	81	49		
23	164	20.6		22.8	286	24.9	+8	07.4 ¹⁰³	58	46	32	13	48	83	46		
24	179	20.8	+11	22.0	300	52.5	+8	17.7 ¹⁰³	60 S	5	47	6	36	7	19		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 56 ^m 8		Mag: -3.8 PMG: 13 ^h 23 ^m		Mag: -0.4 PMG: 18 ^h 21 ^m		Mag: -1.7 PMG: 13 ^h 43 ^m		Mag: +0.4 PMG: 18 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	330	43.9	159	19.8	+5	07.7	84	20.2	-24	30.0
1	345	46.3	174	19.5		06.5	99	21.3		30.2
2	0	48.8	189	19.1		05.2	114	22.3		30.4
3	15	51.3	204	18.8		04.0	129	23.4		30.6
4	30	53.7	219	18.4		02.7	144	24.5		30.8
5	45	56.2	234	18.1	+5	01.5	159	25.6	-24	31.0
6	60	58.7	249	17.8	+5	00.2	174	26.7	-24	31.2
7	76	01.1	264	17.4	+4	59.0	189	27.8		31.4
8	91	03.6	279	17.1		57.7	204	28.8		31.5
9	106	06.1	294	16.7		56.4	219	29.9		31.7
10	121	08.5	309	16.4		55.2	234	31.0		31.9
11	136	11.0	324	16.0	+4	53.9	249	32.1	-24	32.1
12	151	13.5	339	15.7	+4	52.7	264	33.2	-24	32.3
13	166	15.9	354	15.3		51.4	279	34.2		32.5
14	181	18.4	9	15.0		50.2	294	35.3		32.7
15	196	20.8	24	14.7		48.9	309	36.4		32.8
16	211	23.3	39	14.3		47.7	324	37.5		33.0
17	226	25.8	54	14.0	+4	46.4	339	38.6	-24	33.2
18	241	28.2	69	13.6	+4	45.1	354	39.6	-24	33.4
19	256	30.7	84	13.3		43.9	9	40.7		33.6
20	271	33.2	99	13.0		42.6	24	41.8		33.8
21	286	35.6	114	12.6		41.4	39	42.8		33.9
22	301	38.1	129	12.3		40.1	54	43.9		34.1
23	316	40.6	144	11.9		38.9	69	45.0		34.3
24	331	43.0	159	11.6	+4	37.6	84	46.1	-24	34.5
Dif	—		-3		-13		+11		-2	
							+20		-2	
									+24	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 02 ^m 5				Edad: 20 ^d 1 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'5 R°: 55 ^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	20.8	+11	22.0	300	52.5	+8	17.7	60 N	19 29	20 16	21 21	21 20 29		11 33 84					
1	194	20.9		21.1	315	20.2		27.9	58	22	20 06	21 04	27 31		27 81					
2	209	21.1		20.3	329	47.8		38.0	56	16	19 57	20 50	33 33		22 79					
3	224	21.3		19.4	344	15.4		48.1	54	11	50	39	38 35		17 77					
4	239	21.4		18.6	358	42.9		58.2	52	06	43	28	43 36		13 75					
5	254	21.6	+11	17.7	13	10.5		08.2	50	19 02	19 37	20 19	21 47 38		11 09 74					
6	269	21.8	+11	16.9	27	38.0		18.1	45	18 53	19 24	20 01	21 57 41		11 01 70					
7	284	21.9		16.0	42	05.5		28.0	40	45	13	19 47	22 05 43		10 54 68					
8	299	22.1		15.2	56	33.0		37.8	35	38	19 04	36	12 45		48 65					
9	314	22.3		14.3	71	00.4		47.5	30	32	18 57	26	18 47		42 64					
10	329	22.4		13.4	85	27.8		57.2	20	22	45	11	28 50		33 61					
11	344	22.6	+11	12.6	99	55.2		06.8	10 N	18 14	18 35	19 00	22 38 52		10 26 57					
12	359	22.8	+11	11.7	114	22.6		16.4	0	18 06	18 27	18 51	22 47 55		10 18 55					
13	14	22.9		10.9	128	50.0		25.9	10 S	17 58	19	44	22 56 57		11 52					
14	29	23.1		10.0	143	17.3		35.3	20	50	12	38	23 05 60		10 03 49					
15	44	23.3		09.2	157	44.6		44.6	30	40	05	33	16 63		9 54 45					
16	59	23.4		08.3	172	11.9		53.9	35	35	18 01	30	22 66		49 43					
17	74	23.6	+11	07.5	186	39.2		03.1	40	17 29	17 57	18 28	23 30 67		9 43 41					
18	89	23.8	+11	06.6	201	06.4		12.3	45	17 22	17 52	18 26	23 38 70		9 36 39					
19	104	23.9		05.8	215	33.6		21.3	50	14	47	24	48 73		28 35					
20	119	24.1		04.9	230	00.8		30.3	52	10	44	24	53 74		24 34					
21	134	24.3		04.1	244	28.0		39.3	54	06	42	23	23 58 76		20 32					
22	149	24.4		03.2	258	55.1		48.1	56	17 01	39	23	** ** *		16 30					
23	164	24.6		02.3	273	22.2		56.9	58	16 56	36	22	** ** *		11 26					
24	179	24.8	+11	01.5	287	49.3		05.6	60 S	16 50	17 33	18 22	** ** *		9 05 26					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 52 ^m 8				Mag: -3.8 PMG: 13 ^h 24 ^m				Mag: -0.4 PMG: 18 ^h 20 ^m				Mag: -1.7 PMG: 13 ^h 40 ^m				Mag: +0.4 PMG: 18 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	43.0	159	11.6	+4	37.6	84	46.1	-24	34.5	154	37.8	+2	27.9	83	15.8	-20	22.1		
1	346	45.5	174	11.2		36.3	99	47.1		34.7	169	39.8		27.7	98	18.3		22.1		
2	1	48.0	189	10.9		35.1	114	48.2		34.9	184	41.8		27.5	113	20.7		22.1		
3	16	50.4	204	10.6		33.8	129	49.3		35.1	199	43.8		27.3	128	23.1		22.1		
4	31	52.9	219	10.2		32.6	144	50.3		35.2	214	45.8		27.1	143	25.5		22.1		
5	46	55.3	234	09.9	+4	31.3	159	51.4	-24	35.4	229	47.8	+2	26.9	158	27.9	-20	22.1		
6	61	57.8	249	09.5	+4	30.0	174	52.5	-24	35.6	244	49.8	+2	26.7	173	30.4	-20	22.2		
7	77	00.3	264	09.2		28.8	189	53.5		35.8	259	51.8		26.5	188	32.8		22.2		
8	92	02.7	279	08.9		27.5	204	54.6		36.0	274	53.8		26.3	203	35.2		22.2		
9	107	05.2	294	08.5		26.3	219	55.7		36.2	289	55.7		26.1	218	37.6		22.2		
10	122	07.7	309	08.2		25.0	234	56.7		36.3	304	57.7		25.9	233	40.1		22.2		
11	137	10.1	324	07.8	+4	23.7	249	57.8	-24	36.5	319	59.7	+2	25.7	248	42.5	-20	22.2		
12	152	12.6	339	07.5	+4	22.5	264	58.9	-24	36.7	335	01.7	+2	25.5	263	44.9	-20	22.2		
13	167	15.1	354	07.2		21.2	279	59.9		36.9	350	03.7		25.2	278	47.3		22.3		
14	182	17.5	9	06.8		20.0	295	01.0		37.1	5	05.7		25.0	293	49.8		22.3		
15	197	20.0	24	06.5		18.7	310	02.0		37.3	20	07.7		24.8	308	52.2		22.3		
16	212	22.4	39	06.2		17.4	325	03.1		37.4	35	09.7		24.6	323	54.6		22.3		
17	227	24.9	54	05.8	+4	16.2	340	04.2	-24	37.6	50	11.7	+2	24.4	338	57.0	-20	22.3		
18	242	27.4	69	05.5	+4	14.9	355	05.2	-24	37.8	65	13.7	+2	24.2	353	59.4	-20	22.3		
19	257	29.8	84	05.1		13.7	10	06.3		38.0	80	15.7		24.0	9	01.9		22.3		
20	272	32.3	99	04.8		12.4	25	07.3		38.2	95	17.7		23.8	24	04.3		22.4		
21	287	34.8	114	04.5		11.1	40	08.4		38.3	110	19.7		23.6	39	06.7		22.4		
22	302	37.2	129	04.1		09.9	55	09.4		38.5	125	21.7		23.4	54	09.1		22.4		
23	317	39.7	144	03.8		08.6	70	10.5		38.7	140	23.7		23.2	69	11.6		22.4		
24	332	42.2	159	03.5	+4	07.3	85	11.6	-24	38.9	155	25.7	+2	23.0	84	14.0	-20	22.4		
Dif	—		-3		-13		+11		-2		+20		-2		+24		0			

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: 21 ^d 1 PHE { 4 ^h : 59/4 12 ^h : 59/3 20 ^h : 59/2 R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	179	24.8	+11	01.5	287	49.3	+12	05.6	60 N	2	45	3	49	4	37					
1	194	24.9	+11	00.6	302	16.4	81	14.2	58	3	01	3	59	43	21	58 37				
2	209	25.1	+10	59.8	316	43.4	80	22.7	56	15	4	08	49	22	06	39				
3	224	25.3		58.9	331	10.4	80	31.2	54	27	16	54		13	41	34 74				
4	239	25.5		58.1	345	37.4	80	39.6	52	37	23	4	59	19	42	28 72				
5	254	25.6	+10	57.2	0	04.4	80	+12	50	3	46	4	29	5	04	22 25 43				
6	269	25.8	+10	56.3	14	31.3	79	+12	45	4	04	4	42	5	13	22 38 45				
7	284	26.0		55.5	28	58.2	79	+13	40	18	4	52	20	48	47	12 02 66				
8	299	26.1		54.6	43	25.1	79	12.3	35	29	5	01	27	22	57	49				
9	314	26.3		53.8	57	52.0	79	20.2	30	39		08	33	23	05	50				
10	329	26.5		52.9	72	18.8	78	28.1	20	4	53	20	43	18	53	34 60				
11	344	26.6	+10	52.1	86	45.7	79	+13	10 N	5	05	5	30	5	51	23 30 55				
12	359	26.8	+10	51.2	101	12.5	78	+13	0	5	13	5	38	5	59	23 42 56				
13	14	27.0		50.3	115	39.2	77	51.2	10 S	21		45	6	07	23	53 58				
14	29	27.2		49.5	130	06.0	78	+13	20	27	5	52	15	**	**	**				
15	44	27.3		48.6	144	32.7	77	+14	30	32	6	00	24	**	**	**				
16	59	27.5		47.7	158	59.4	77	13.5	35	34		04	29	**	**	**				
17	74	27.7	+10	46.9	173	26.1	77	+14	40	5	36	6	08	6	35	**				
18	89	27.8	+10	46.0	187	52.8	77	+14	45	5	38	6	12	6	42	**				
19	104	28.0		45.2	202	19.4	76	35.0	50	40		17	50	**	**	**				
20	119	28.2		44.3	216	46.0	76	41.9	52	40		19	54	**	**	**				
21	134	28.4		43.4	231	12.6	76	48.8	54	41		22	6	58	**	**	**			
22	149	28.5		42.6	245	39.2	76	+14	56	41		24	7	02	0	04 78				
23	164	28.7		41.7	260	05.8	76	+15	58	42		27	08	11	79	39 34				
24	179	28.9	+10	40.9	274	32.3	75	+15	60 S	5	42	6	30	7	13	0				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 1 ^h 48 ^m 9				Mag: -3.8 PMG: 13 ^h 24 ^m				Mag: -0.4 PMG: 18 ^h 18 ^m				Mag: -1.7 PMG: 13 ^h 36 ^m				Mag: +0.4 PMG: 18 ^h 20 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	332	42.2	159	03.5	+4	07.3	85	11.6	-24	38.9	155	25.7	+2	23.0	84	14.0	-20	22.4		
1	347	44.6	174	03.1		06.1	100	12.6		39.1	170	27.7		22.8	99	16.4		22.4		
2	2	47.1	189	02.8		04.8	115	13.7		39.2	185	29.7		22.6	114	18.8		22.5		
3	17	49.6	204	02.4		03.5	130	14.7		39.4	200	31.7		22.4	129	21.2		22.5		
4	32	52.0	219	02.1		02.3	145	15.8		39.6	215	33.7		22.2	144	23.7		22.5		
5	47	54.5	234	01.8	+4	01.0	160	16.8	-24	39.8	230	35.7	+2	22.0	159	26.1	-20	22.5		
6	62	56.9	249	01.4	+3	59.8	175	17.9	-24	40.0	245	37.7	+2	21.8	174	28.5	-20	22.5		
7	77	59.4	264	01.1		58.5	190	18.9		40.2	260	39.7		21.6	189	30.9		22.5		
8	93	01.9	279	00.8		57.2	205	20.0		40.3	275	41.6		21.4	204	33.3		22.5		
9	108	04.3	294	00.4		56.0	220	21.0		40.5	290	43.6		21.1	219	35.8		22.6		
10	123	06.8	309	00.1		54.7	235	22.1		40.7	305	45.6		20.9	234	38.2		22.6		
11	138	09.3	323	59.8	+3	53.4	250	23.1	-24	40.9	320	47.6	+2	20.7	249	40.6	-20	22.6		
12	153	11.7	338	59.4	+3	52.2	265	24.2	-24	41.0	335	49.6	+2	20.5	264	43.0	-20	22.6		
13	168	14.2	353	59.1		50.9	280	25.2		41.2	350	51.6		20.3	279	45.4		22.6		
14	183	16.7	8	58.8		49.6	295	26.3		41.4	5	53.6		20.1	294	47.8		22.6		
15	198	19.1	23	58.4		48.4	310	27.3		41.6	20	55.6		19.9	309	50.3		22.7		
16	213	21.6	38	58.1		47.1	325	28.3		41.8	35	57.6		19.7	324	52.7		22.7		
17	228	24.1	53	57.8	+3	45.8	340	29.4	-24	41.9	50	59.6	+2	19.5	339	55.1	-20	22.7		
18	243	26.5	68	57.4	+3	44.6	355	30.4	-24	42.1	66	01.6	+2	19.3	354	57.5	-20	22.7		
19	258	29.0	83	57.1		43.3	10	31.5		42.3	81	03.6		19.1	9	59.9		22.7		
20	273	31.4	98	56.8		42.0	25	32.5		42.5	96	05.6		18.9	25	02.3		22.7		
21	288	33.9	113	56.4		40.8	40	33.6		42.7	111	07.6		18.7	40	04.8		22.7		
22	303	36.4	128	56.1		39.5	55	34.6		42.8	126	09.6		18.5	55	07.2		22.8		
23	318	38.8	143	55.8		38.2	70	35.6		43.0	141	11.6		18.3	70	09.6		22.8		
24	333	41.3	158	55.4	+3	37.0	85	36.7	-24	43.2	156	13.6	+2	18.1	85	12.0	-20	22.8		
Dif	—		-3		-13		+10		-2		+20		-2		+24		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 9			Edad: 22 ^d 1 PHE { 4 ^h : 59'1 12 ^h : 59'0 20 ^h : 58'9 SD: 16'1 PMG: 5 ^h 55 ^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	179	28.9	+10 40.9	274	32.3	+15 08.8	65	60 N	19 23	20 10	21 13	22 24 46	14 16 71	
1	194	29.1	40.0	288	58.8	15.3	65	58	17	20 00	20 57	35 47	14 05 70	
2	209	29.2	39.1	303	25.3	21.7	64	56	11	19 52	44	45 47	13 56 68	
3	224	29.4	38.3	317	51.8	28.0	63	54	06	45	33	22 54 48	48 67	
4	239	29.6	37.4	332	18.2	34.2	62	52	19 02	38	23	23 01 49	40 67	
5	254	29.7	+10 36.5	346	44.7	+15 40.3	61	50	18 58	19 32	20 15	23 08 50	13 34 65	
6	269	29.9	+10 35.7	1	11.1	+15 46.3	60	45	18 49	19 20	19 57	23 23 51	13 19 64	
7	284	30.1	34.8	15	37.5	52.2	59	40	42	10	44	35 52	13 08 62	
8	299	30.3	33.9	30	03.9	+15 57.9	57	35	36	19 02	33	46 52	12 58 61	
9	314	30.4	33.1	44	30.2	+16 03.6	57	30	30	18 55	24	23 55 53	49 60	
10	329	30.6	32.2	58	56.6	09.2	56	20	21	43	19 10	*** ** *	34 59	
11	344	30.8	+10 31.3	73	22.9	+16 14.7	55	10 N	18 13	18 34	18 59	*** ** *	12 21 57	
12	359	31.0	+10 30.5	87	49.3	+16 20.0	53	0	18 05	18 26	18 51	*** ** *	12 08 57	
13	14	31.1	29.6	102	15.6	25.3	53	10 S	17 58	19	44	*** ** *	11 56 55	
14	29	31.3	28.7	116	41.9	30.5	52	20	50	12	38	0 05 60	43 53	
15	44	31.5	27.9	131	08.1	35.5	50	30	41	06	34	19 62	28 52	
16	59	31.7	27.0	145	34.4	40.4	49	35	36	18 02	32	28 62	19 51	
17	74	31.8	+10 26.1	160	00.7	+16 45.3	49	40	17 31	17 58	18 30	0 37 64	11 09 50	
18	89	32.0	+10 25.3	174	26.9	+16 50.0	47	45	17 24	17 54	18 28	0 48 66	10 58 48	
19	104	32.2	24.4	188	53.1	54.6	46	50	17	50	27	1 01 68	44 46	
20	119	32.4	23.5	203	19.3	+16 59.1	45	52	13	47	27	07 70	37 46	
21	134	32.5	22.7	217	45.6	+17 03.5	44	54	09	45	26	14 71	30 44	
22	149	32.7	21.8	232	11.8	07.8	43	56	05	43	26	22 72	22 43	
23	164	32.9	20.9	246	37.9	12.0	42	58	17 00	40	26	30 74	13 42	
24	179	33.1	+10 20.0	261	04.1	+17 16.1	41	60 S	16 55	17 37	18 26	1 40 76	10 02 41	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 45 ^m 0		Mag: -3.8 PMG: 13 ^h 25 ^m		Mag: -0.4 PMG: 18 ^h 16 ^m		Mag: -1.7 PMG: 13 ^h 33 ^m			Mag: +0.4 PMG: 18 ^h 16 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	333	41.3	158	55.4	+3 37.0	85 36.7	-24 43.2	156 13.6	+2 18.1	85 12.0	-20 22.8			
1	348	43.8	173	55.1	35.7	100 37.7	43.4	171 15.6	17.9	100 14.4	22.8			
2	3	46.2	188	54.8	34.4	115 38.7	43.5	186 17.5	17.7	115 16.8	22.8			
3	18	48.7	203	54.4	33.2	130 39.8	43.7	201 19.5	17.4	130 19.3	22.8			
4	33	51.2	218	54.1	31.9	145 40.8	43.9	216 21.5	17.2	145 21.7	22.9			
5	48	53.6	233	53.8	+3 30.6	160 41.9	-24 44.1	231 23.5	+2 17.0	160 24.1	-20 22.9			
6	63	56.1	248	53.4	+3 29.3	175 42.9	-24 44.3	246 25.5	+2 16.8	175 26.5	-20 22.9			
7	78	58.5	263	53.1	28.1	190 43.9	44.4	261 27.5	16.6	190 28.9	22.9			
8	94	01.0	278	52.8	26.8	205 45.0	44.6	276 29.5	16.4	205 31.3	22.9			
9	109	03.5	293	52.4	25.5	220 46.0	44.8	291 31.5	16.2	220 33.8	22.9			
10	124	05.9	308	52.1	24.3	235 47.0	45.0	306 33.5	16.0	235 36.2	23.0			
11	139	08.4	323	51.8	+3 23.0	250 48.1	-24 45.1	321 35.5	+2 15.8	250 38.6	-20 23.0			
12	154	10.9	338	51.4	+3 21.7	265 49.1	-24 45.3	336 37.5	+2 15.6	265 41.0	-20 23.0			
13	169	13.3	353	51.1	20.5	280 50.1	45.5	351 39.5	15.4	280 43.4	23.0			
14	184	15.8	8	50.8	19.2	295 51.1	45.7	6 41.5	15.2	295 45.8	23.0			
15	199	18.3	23	50.5	17.9	310 52.2	45.8	21 43.5	15.0	310 48.2	23.0			
16	214	20.7	38	50.1	16.6	325 53.2	46.0	36 45.5	14.8	325 50.7	23.1			
17	229	23.2	53	49.8	+3 15.4	340 54.2	-24 46.2	51 47.4	+2 14.6	340 53.1	-20 23.1			
18	244	25.7	68	49.5	+3 14.1	355 55.3	-24 46.4	66 49.4	+2 14.4	355 55.5	-20 23.1			
19	259	28.1	83	49.1	12.8	10 56.3	46.5	81 51.4	14.1	10 57.9	23.1			
20	274	30.6	98	48.8	11.6	25 57.3	46.7	96 53.4	13.9	26 00.3	23.1			
21	289	33.0	113	48.5	10.3	40 58.3	46.9	111 55.4	13.7	41 02.7	23.1			
22	304	35.5	128	48.1	09.0	55 59.4	47.1	126 57.4	13.5	56 05.1	23.2			
23	319	38.0	143	47.8	07.7	71 00.4	47.2	141 59.4	13.3	71 07.5	23.2			
24	334	40.4	158	47.5	+3 06.5	86 01.4	-24 47.4	157 01.4	+2 13.1	86 10.0	-20 23.2			
Dif	—		-3	-13		+10	-2	+20	-2	+24	0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			Edad: 23 ^d 1 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 6 20 ^h : 58 ^m 5 PMG: 6 ^h 51 ^m R ^o : 56 ^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	33.1	+10	20.0	261	04.1	+17	16.1	60 N	2 52	3 55	4 41	23 10	55	15 27	59	
1	194	33.3		19.2	275	30.3		20.0	58	3 07	4 04	48		22	56	15	59
2	209	33.4		18.3	289	56.5		23.9	56	21	13	53		32	56	15 04	59
3	224	33.6		17.4	304	22.6		27.6	54	32	20	4 58		42	56	14 55	59
4	239	33.8		16.6	318	48.8		31.3	52	41	26	5 02		50	56	47	58
5	254	34.0	+10	15.7	333	15.0	+17	34.8	50	3 50	4 32	5 06	23 58	56	14 39	59	
6	269	34.1	+10	14.8	347	41.1	+17	38.2	45	4 07	4 44	5 15	** ** *		14 23	58	
7	284	34.3		13.9	2	07.2		41.5	40	20	4 54	22	** ** *		14 10	58	
8	299	34.5		13.1	16	33.4		44.7	35	31	5 02	28	** ** *		13 59	58	
9	314	34.7		12.2	30	59.5		47.7	30	40		09	34	** ** *		49	58
10	329	34.9		11.3	45	25.7		50.7	20	4 54	21	43	0 11	54	33	57	
11	344	35.0	+10	10.4	59	51.8	+17	53.5	10 N	5 05	5 30	5 51	0 25	55	13 18	57	
12	359	35.2	+10	09.6	74	18.0	+17	56.2	0	5 13	5 37	5 58	0 38	56	13 05	56	
13	14	35.4		08.7	88	44.1	+17	58.8	10 S	20	44	6 06	0 51	57	12 51	56	
14	29	35.6		07.8	103	10.2	+18	01.3	20	25	51	13	1 05	58	36	56	
15	44	35.7		07.0	117	36.4		03.7	30	30	5 58	22	21	59	20	54	
16	59	35.9		06.1	132	02.5		06.0	35	32	6 01	27	30	60	12 10	54	
17	74	36.1	+10	05.2	146	28.7	+18	08.1	40	5 33	6 05	6 32	1 41	61	11 59	54	
18	89	36.3	+10	04.3	160	54.9	+18	10.2	45	5 35	6 09	6 38	1 54	61	11 46	53	
19	104	36.5		03.5	175	21.0		12.1	50	36	13	46	2 09	62	30	53	
20	119	36.6		02.6	189	47.2		13.9	52	36	15	50	17	62	23	52	
21	134	36.8		01.7	204	13.4		15.6	54	36	17	53	25	63	14	53	
22	149	37.0	+10	00.8	218	39.6		17.2	56	37	20	6 58	34	63	11 05	52	
23	164	37.2	+9	59.9	233	05.8		18.7	58	37	22	7 02	44	64	10 55	51	
24	179	37.4	+9	59.1	247	32.0	+18	20.0	60 S	5 37	6 25	7 07	2 56	65	10 43	50	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 41 ^m 0		Mag: -3.8 PMG: 13 ^h 25 ^m		Mag: -0.4 PMG: 18 ^h 15 ^m		Mag: -1.7 PMG: 13 ^h 30 ^m		Mag: +0.5 PMG: 18 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	334	40.4	158	47.5	+3	06.5	86	01.4	-24	47.4
1	349	42.9	173	47.2		05.2	101	02.4		47.6
2	4	45.4	188	46.8		03.9	116	03.4		47.8
3	19	47.8	203	46.5		02.7	131	04.5		47.9
4	34	50.3	218	46.2		01.4	146	05.5		48.1
5	49	52.8	233	45.8	+3	00.1	161	06.5	-24	48.3
6	64	55.2	248	45.5	+2	58.8	176	07.5	-24	48.5
7	79	57.7	263	45.2		57.6	191	08.5		48.6
8	95	00.2	278	44.9		56.3	206	09.6		48.8
9	110	02.6	293	44.5		55.0	221	10.6		49.0
10	125	05.1	308	44.2		53.7	236	11.6		49.2
11	140	07.5	323	43.9	+2	52.5	251	12.6	-24	49.3
12	155	10.0	338	43.5	+2	51.2	266	13.6	-24	49.5
13	170	12.5	353	43.2		49.9	281	14.6		49.7
14	185	14.9	8	42.9		48.6	296	15.7		49.8
15	200	17.4	23	42.6		47.4	311	16.7		50.0
16	215	19.9	38	42.2		46.1	326	17.7		50.2
17	230	22.3	53	41.9	+2	44.8	341	18.7	-24	50.4
18	245	24.8	68	41.6	+2	43.5	356	19.7	-24	50.5
19	260	27.3	83	41.3		42.3	11	20.7		50.7
20	275	29.7	98	40.9		41.0	26	21.7		50.9
21	290	32.2	113	40.6		39.7	41	22.7		51.0
22	305	34.7	128	40.3		38.4	56	23.7		51.2
23	320	37.1	143	40.0		37.2	71	24.7		51.4
24	335	39.6	158	39.6	+2	35.9	86	25.8	-24	51.6
Dif	—		-3 -13		+10 -2		+20 -2		-2	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 4			Edad: 24 ^d 1 PHE { SD: 15 ^h 9 PMG: 7 ^h 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	37.4	+9	59.1	247	32.0	+18	20.0	60 N	19 17	20 03	21 05	** ** *	16 26 48
1	194	37.5		58.2	261	58.2	72	21.2	12 58	11	19 54	20 50	** ** *	14 48
2	209	37.7		57.3	276	24.5	73	22.4	12 56	06	46	37	** ** *	16 03 49
3	224	37.9		56.4	290	50.7	72	23.4	10 54	19 02	39	27	** ** *	15 54 49
4	239	38.1		55.6	305	17.0	73	24.3	9 52	18 58	33	18	** ** *	45 50
5	254	38.3	+9	54.7	319	43.2	72	+18	7 50	18 54	19 28	20 10	** ** *	15 38 50
6	269	38.5	+9	53.8	334	09.5	73	+18	7 45	18 46	19 16	19 53	0 14 56	15 21 52
7	284	38.6		52.9	348	35.8	73	26.3	6 40	39	19 07	40	27 56	15 08 52
8	299	38.8		52.0	3	02.2	74	26.7	4 35	33	18 59	30	38 56	14 57 52
9	314	39.0		51.2	17	28.5	73	27.0	3 30	28	52	21	0 48 56	47 53
10	329	39.2		50.3	31	54.9	74	27.2	2 20	19	42	19 08	1 05 56	30 54
11	344	39.4	+9	49.4	46	21.2	73	+18	1 10 N	18 12	18 33	18 58	1 20 56	14 15 54
12	359	39.5	+9	48.5	60	47.6	74	+18	0 0	18 05	18 26	18 50	1 34 56	14 01 55
13	14	39.7		47.6	75	14.1	75	27.1	2 10 S	17 58	19	44	1 48 56	13 47 55
14	29	39.9		46.8	89	40.5	74	26.9	2 20	51	13	39	2 03 55	32 56
15	44	40.1		45.9	104	07.0	75	26.5	4 30	42	07	35	20 55	14 57
16	59	40.3		45.0	118	33.4	74	26.1	4 35	38	03	33	30 55	13 04 58
17	74	40.5	+9	44.1	133	00.0	76	+18	6 40	17 33	18 00	18 32	2 42 54	12 53 58
18	89	40.6	+9	43.2	147	26.5	75	+18	7 45	17 27	17 56	18 30	2 55 55	12 39 59
19	104	40.8		42.4	161	53.1	76	24.0	8 50	19	52	30	3 11 55	23 59
20	119	41.0		41.5	176	19.7	76	23.0	10 52	16	51	30	19 54	15 60
21	134	41.2		40.6	190	46.3	76	22.0	10 54	13	49	30	28 54	12 07 59
22	149	41.4		39.7	205	12.9	76	20.9	11 56	09	47	30	37 54	11 57 60
23	164	41.6		38.8	219	39.6	77	19.6	13 58	17 04	44	30	3 48 54	46 60
24	179	41.7	+9	37.9	234	06.3	77	+18	14 60 S	16 59	17 42	18 30	4 01 53	11 33 61

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 37 ^m 1		Mag: -3.8 PMG: 13 ^h 26 ^m		Mag: -0.4 PMG: 18 ^h 13 ^m		Mag: -1.7 PMG: 13 ^h 27 ^m		Mag: +0.5 PMG: 18 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	335	39.6	158	39.6	+2	35.9	86	25.8	-24	51.6
1	350	42.0	173	39.3		34.6	101	26.8		51.7
2	5	44.5	188	39.0		33.3	116	27.8		51.9
3	20	47.0	203	38.6		32.1	131	28.8		52.1
4	35	49.4	218	38.3		30.8	146	29.8		52.2
5	50	51.9	233	38.0	+2	29.5	161	30.8	-24	52.4
6	65	54.4	248	37.7	+2	28.2	176	31.8	-24	52.6
7	80	56.8	263	37.3		26.9	191	32.8		52.7
8	95	59.3	278	37.0		25.7	206	33.8		52.9
9	111	01.8	293	36.7		24.4	221	34.8		53.1
10	126	04.2	308	36.4		23.1	236	35.8		53.2
11	141	06.7	323	36.0	+2	21.8	251	36.8	-24	53.4
12	156	09.1	338	35.7	+2	20.6	266	37.8	-24	53.6
13	171	11.6	353	35.4		19.3	281	38.8		53.8
14	186	14.1	8	35.1		18.0	296	39.8		53.9
15	201	16.5	23	34.8		16.7	311	40.8		54.1
16	216	19.0	38	34.4		15.4	326	41.8		54.3
17	231	21.5	53	34.1	+2	14.2	341	42.8	-24	54.4
18	246	23.9	68	33.8	+2	12.9	356	43.8	-24	54.6
19	261	26.4	83	33.5		11.6	11	44.8		54.8
20	276	28.9	98	33.1		10.3	26	45.8		54.9
21	291	31.3	113	32.8		09.1	41	46.8		55.1
22	306	33.8	128	32.5		07.8	56	47.8		55.3
23	321	36.3	143	32.2		06.5	71	48.7		55.4
24	336	38.7	158	31.8	+2	05.2	86	49.7	-24	55.6
Dif	—	—	-3	-13		+10	-2	+20		-2
										0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 25 ^d 1 PHE { 4 ^h : 57/9 12 ^h : 57/7 20 ^h : 57/6												
	PMG: 12 ^h 01 ^m 1			SD: 15°8 PMG: 8 ^h 43 ^m R°: 54 ^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	179	41.7	+9 37.9	234	06.3		+18 18.2		60 N	2 59	4 00	4 46	0 05 66	17 14 36		
1	194	41.9		248	33.0	77		16.8 14	58	3 13	09	52	18 64	17 02 39		
2	209	42.1		262	59.8	78		15.2 16	56	26	17	4 57	28 64	16 52 40		
3	224	42.3		277	26.6	78		13.5 17	54	36	24	5 02	38 62	43 41		
4	239	42.5		291	53.4	78		11.7 18	52	45	30	06	46 62	35 42		
5	254	42.7	+9 33.5	306	20.3	79	+18 09.8	19	50	3 53	4 35	5 09	0 54 61	16 28 43		
6	269	42.9	+9 32.6	320	47.2	79	+18 07.8	20	45	4 10	4 47	5 18	1 10 60	16 13 45		
7	284	43.0		335	14.1	79		05.6 22	40	23	4 56	24	23 59	16 00 46		
8	299	43.2		349	41.1	80		03.4 22	35	33	5 04	30	34 59	15 49 48		
9	314	43.4		4	08.1	80	+18 01.1	23	30	41	10	35	1 44 58	40 49		
10	329	43.6		18	35.2	81	+17 58.6	25	20	4 55	21	44	2 01 56	24 50		
11	344	43.8	+9 28.2	33	02.3	81	+17 56.1	25	10 N	5 05	5 30	5 51	2 16 55	15 09 52		
12	359	44.0	+9 27.3	47	29.4	81	+17 53.4	27	0	5 12	5 37	5 58	2 30 54	14 56 53		
13	14	44.2		61	56.5	81		50.6 28	10 S	19	43	6 05	44 53	42 55		
14	29	44.3		76	23.7	82		47.8 28	20	24	49	12	2 58 52	28 56		
15	44	44.5		90	51.0	83		44.8 30	30	27	55	19	3 15 51	11 59		
16	59	44.7		105	18.3	83		41.7 31	35	29	5 58	24	25 50	14 02 59		
17	74	44.9	+9 22.9	119	45.6	83	+17 38.6	31	40	5 30	6 02	6 29	3 36 50	13 51 60		
18	89	45.1	+9 22.0	134	13.0	84	+17 35.3	33	45	5 31	6 05	6 35	3 50 48	13 38 62		
19	104	45.3		148	40.4	84		31.9 34	50	32	09	42	4 06 46	22 63		
20	119	45.5		163	07.8	84		28.4 35	52	32	11	45	13 46	15 64		
21	134	45.6		177	35.3	85		24.9 35	54	32	13	49	22 45	13 06 66		
22	149	45.8		192	02.9	86		21.2 37	56	32	15	53	31 44	12 57 66		
23	164	46.0		206	30.5	86		17.4 38	58	32	17	6 57	42 43	46 68		
24	179	46.2	+9 16.6	220	58.1	86	+17 13.5	39	60 S	5 31	6 19	7 02	4 54 42	12 34 70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 1 ^h 33 ^m 2		Mag: -3.8 PMG: 13 ^h 26 ^m		Mag: -0.3 PMG: 18 ^h 11 ^m		Mag: -1.7 PMG: 13 ^h 24 ^m		Mag: +0.5 PMG: 18 ^h 05 ^m						
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec						
h	°	'	°	°	'	°	°	'	°	°	'				
0	336	38.7	158	31.8	+2 05.2	86	49.7	-24 55.6	158	37.0	+2 03.2				
1	351	41.2	173	31.5	03.9	101	50.7	55.8	173	38.9	03.0				
2	6	43.6	188	31.2	02.7	116	51.7	55.9	188	40.9	02.8				
3	21	46.1	203	30.9	01.4	131	52.7	56.1	203	42.9	02.6				
4	36	48.6	218	30.5	+2 00.1	146	53.7	56.3	218	44.9	02.3				
5	51	51.0	233	30.2	+1 58.8	161	54.7	-24 56.4	233	46.9	+2 02.1				
6	66	53.5	248	29.9	+1 57.5	176	55.7	-24 56.6	248	48.9	+2 01.9				
7	81	56.0	263	29.6	56.3	191	56.7	56.8	263	50.9	01.7				
8	96	58.4	278	29.3	55.0	206	57.6	56.9	278	52.9	01.5				
9	112	00.9	293	28.9	53.7	221	58.6	57.1	293	54.9	01.3				
10	127	03.4	308	28.6	52.4	236	59.6	57.3	308	56.8	01.1				
11	142	05.8	323	28.3	+1 51.1	252	00.6	-24 57.4	323	58.8	+2 00.9				
12	157	08.3	338	28.0	+1 49.9	267	01.6	-24 57.6	339	00.8	+2 00.7				
13	172	10.8	353	27.6	48.6	282	02.6	57.7	354	02.8	00.5				
14	187	13.2	8	27.3	47.3	297	03.6	57.9	9	04.8	00.3				
15	202	15.7	23	27.0	46.0	312	04.5	58.1	24	06.8	+2 00.1				
16	217	18.1	38	26.7	44.7	327	05.5	58.2	39	08.8	+1 59.9				
17	232	20.6	53	26.4	+1 43.4	342	06.5	-24 58.4	54	10.8	+1 59.6				
18	247	23.1	68	26.0	+1 42.2	357	07.5	-24 58.6	69	12.8	+1 59.4				
19	262	25.5	83	25.7	40.9	12	08.5	58.7	84	14.7	59.2				
20	277	28.0	98	25.4	39.6	27	09.4	58.9	99	16.7	59.0				
21	292	30.5	113	25.1	38.3	42	10.4	59.1	114	18.7	58.8				
22	307	32.9	128	24.8	37.0	57	11.4	59.2	129	20.7	58.6				
23	322	35.4	143	24.4	35.8	72	12.4	59.4	144	22.7	58.4				
24	337	37.9	158	24.1	+1 34.5	87	13.4	-24 59.5	159	24.7	+1 58.2				
Dif	—		-3		-13	+10		-2	+20		-2	+24			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 00 ^m 8		Edad: 26 ^d 1 PHE { 4 ^h : 57'4 12 ^h : 57'3 20 ^h : 57'1 SD: 15'7 PMG: 9 ^h 37 ^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	h m	h m	h m	h m
0	179	46.2	+9	16.6	220	58.1	+17 13.5	60 N	19 11	19 57	20 57	1 11 72	17 50 29		
1	194	46.4		15.8	235	25.8	87 09.6	58		06 48	43	22 70	41 30		
2	209	46.6		14.9	249	53.5	87 05.5	56	19 01	41	31	32 68	32 32		
3	224	46.8		14.0	264	21.3	88 +17 01.3	54	18 57	34	21	40 68	24 34		
4	239	47.0		13.1	278	49.1	88 +16 57.1	52	53	29	13	48 66	17 36		
5	254	47.2	+9	12.2	293	17.0	89 +16 52.7	50	18 50	19 23	20 05	1 55 65	17 11 37		
6	269	47.3	+9	11.3	307	44.9	89 +16 48.3	45	18 42	19 12	19 49	2 10 63	16 58 39		
7	284	47.5		10.4	322	12.9	90 43.7	40	36	19 04	37	22 61	46 42		
8	299	47.7		09.5	336	40.9	90 39.1	35	30	18 56	27	33 59	37 43		
9	314	47.9		08.6	351	08.9	90 34.4	30	26	50	19	42 58	29 44		
10	329	48.1		07.7	5 37.1	92 29.6	48 29.6	20	18	40	19 06	2 57 56	14 47		
11	344	48.3	+9	06.8	20 05.2	91 +16 24.7	49 24.7	10 N	18 11	18 32	18 57	3 11 54	16 01 49		
12	359	48.5	+9	05.9	34 33.4	92 +16 19.7	50 19.7	0	18 04	18 25	18 49	3 24 52	15 49 52		
13	14	48.7		05.1	49 01.7	93 14.6	51 14.6	10 S	17 58	19	44	37 50	37 54		
14	29	48.9		04.2	63 30.0	93 09.4	52 09.4	20	51	13	39	3 50 49	24 56		
15	44	49.0		03.3	77 58.4	94 +16 04.2	52 04.2	30	44	08	36	4 06 46	10 58		
16	59	49.2		02.4	92 26.8	94 +15 58.8	54 58.8	35	39	05	34	15 45	15 01 59		
17	74	49.4	+9	01.5	106 55.3	95 +15 53.4	54 53.4	40	17 35	18 02	18 33	4 26 43	14 51 61		
18	89	49.6	+9	00.6	121 23.9	96 +15 47.9	55 47.9	45	17 29	17 59	18 33	4 38 41	14 40 63		
19	104	49.8	+8	59.7	135 52.4	95 42.3	56 42.3	50	22	55	33	52 40	25 66		
20	119	50.0		58.8	150 21.1	97 36.6	57 36.6	52	19	54	33	4 59 38	19 67		
21	134	50.2		57.9	164 49.8	97 30.9	57 30.9	54	16	52	33	5 07 37	12 68		
22	149	50.4		57.0	179 18.5	97 25.0	59 25.0	56	12	50	33	15 36	14 03 70		
23	164	50.6		56.1	193 47.3	98 19.1	59 19.1	58	08	48	34	25 34	13 54 72		
24	179	50.8	+8	55.2	208 16.2	99 +15 13.1	60 13.1	60 S	17 04	17 46	18 34	5 36 32	13 44 74		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 1 ^h 29 ^m 2		Mag: -3.8 PMG: 13 ^h 27 ^m		Mag: -0.3 PMG: 18 ^h 10 ^m		Mag: -1.7 PMG: 13 ^h 21 ^m			Mag: +0.5 PMG: 18 ^h 01 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	337	37.9	158	24.1	+1	34.5	87	13.4	-24	59.5	159	24.7	+1	58.2	89	03.2	-20	24.4
1	352	40.3	173	23.8		33.2	102	14.3		59.7	174	26.7		58.0	104	05.6		24.4
2	7	42.8	188	23.5		31.9	117	15.3	-24	59.9	189	28.7		57.8	119	08.0		24.5
3	22	45.2	203	23.2		30.6	132	16.3	-25	00.0	204	30.6		57.6	134	10.4		24.5
4	37	47.7	218	22.8		29.3	147	17.3	-25	00.2	219	32.6		57.4	149	12.8		24.5
5	52	50.2	233	22.5	+1	28.1	162	18.2	-25	00.4	234	34.6	+1	57.1	164	15.2	-20	24.5
6	67	52.6	248	22.2	+1	26.8	177	19.2	-25	00.5	249	36.6	+1	56.9	179	17.6	-20	24.5
7	82	55.1	263	21.9		25.5	192	20.2		00.7	264	38.6		56.7	194	20.0		24.6
8	97	57.6	278	21.5		24.2	207	21.1		00.8	279	40.6		56.5	209	22.4		24.6
9	113	00.0	293	21.2		22.9	222	22.1		01.0	294	42.6		56.3	224	24.8		24.6
10	128	02.5	308	20.9		21.6	237	23.1		01.2	309	44.6		56.1	239	27.2		24.6
11	143	05.0	323	20.6	+1	20.4	252	24.1	-25	01.3	324	46.5	+1	55.9	254	29.6	-20	24.6
12	158	07.4	338	20.3	+1	19.1	267	25.0	-25	01.5	339	48.5	+1	55.7	269	32.0	-20	24.6
13	173	09.9	353	19.9		17.8	282	26.0		01.6	354	50.5		55.5	284	34.4		24.7
14	188	12.4	8	19.6		16.5	297	27.0		01.8	9	52.5		55.3	299	36.7		24.7
15	203	14.8	23	19.3		15.2	312	27.9		02.0	24	54.5		55.1	314	39.1		24.7
16	218	17.3	38	19.0		13.9	327	28.9		02.1	39	56.5		54.9	329	41.5		24.7
17	233	19.7	53	18.7	+1	12.7	342	29.9	-25	02.3	54	58.5	+1	54.6	344	43.9	-20	24.7
18	248	22.2	68	18.4	+1	11.4	357	30.8	-25	02.4	70	00.5	+1	54.4	359	46.3	-20	24.8
19	263	24.7	83	18.0		10.1	12	31.8		02.6	85	02.4		54.2	14	48.7		24.8
20	278	27.1	98	17.7		08.8	27	32.8		02.8	100	04.4		54.0	29	51.1		24.8
21	293	29.6	113	17.4		07.5	42	33.7		02.9	115	06.4		53.8	44	53.5		24.8
22	308	32.1	128	17.1		06.2	57	34.7		03.1	130	08.4		53.6	59	55.9		24.8
23	323	34.5	143	16.8		05.0	72	35.6		03.2	145	10.4		53.4	74	58.3		24.8
24	338	37.0	158	16.4	+1	03.7	87	36.6	-25	03.4	160	12.4	+1	53.2	90	00.7	-20	24.9
Dif	—	—	-3	-13			+10	-2			+20	-2			+24	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 5			Edad: 27 ^d 1 PHE { 4 ^h : 56 ^m 9 12 ^h : 56 ^m 8 20 ^h : 56 ^m 6 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	50.8	+8 55.2	208	16.2	+15 13.1	60 N	3 06	4 05	4 51	2 23	75	18 19	23
1	194	51.0		222	45.1	99 07.0	58	19	14	4 56	32	73	11	25
2	209	51.1		237	14.0	99 +15 00.9	56	31	21	5 01	40	71	18 04	27
3	224	51.3		251	43.1	101 +14 54.6	54	41	28	05	48	69	17 58	29
4	239	51.5		266	12.1	100 48.3	52	49	33	09	2 54	68	53	30
5	254	51.7	+8 50.7	280	41.3	102 +14 41.9	50	3 57	4 39	5 12	3 00	66	17 48	31
6	269	51.9	+8 49.8	295	10.4	101 +14 35.4	45	4 13	4 49	5 20	3 13	63	17 37	34
7	284	52.1		309	39.7	103 28.9	40	25	4 58	26	23	61	28	36
8	299	52.3		324	09.0	103 22.3	35	35	5 05	31	32	59	20	39
9	314	52.5		338	38.3	103 15.6	30	43	12	36	40	58	13	40
10	329	52.7		353	07.7	104 08.9	20	4 55	22	44	3 53	55	17 01	44
11	344	52.9	+8 45.3	7 37.2	105 +14 02.0	69	10 N	5 05	5 30	5 51	4 05	52	16 50	47
12	359	53.1	+8 44.4	22 06.7	105 +13 55.1	69	0	5 12	5 36	5 57	4 16	50	16 41	48
13	14 53.3	43.5		36 36.3	106 48.2	71	10 S	18	42	6 03	27	48	31	51
14	29 53.4	42.6		51 05.9	106 41.1	71	20	22	48	10	39	45	20	54
15	44 53.6	41.7		65 35.6	107 34.0	71	30	25	53	17	4 52	43	08	57
16	59 53.8	40.8		80 05.3	107 26.9	71	35	27	56	21	5 00	41	16 00	60
17	74 54.0	+8 39.9		94 35.1	108 +13 19.6	73	40	5 27	5 59	6 26	5 09	39	15 52	61
18	89 54.2	+8 39.0		109 05.0	109 +13 12.3	73	45	5 28	6 02	6 31	5 19	37	15 43	63
19	104 54.4			123 34.9	109 +13 05.0	73	50	28	05	38	32	33	31	67
20	119 54.6			138 04.8	109 +12 57.6	74	52	28	07	41	37	33	26	68
21	134 54.8			152 34.8	110 50.1	75	54	27	08	44	44	31	20	70
22	149 55.0			167 04.9	111 42.5	76	56	27	10	48	51	29	13	72
23	164 55.2			181 35.0	111 34.9	76	58	26	12	51	5 59	27	15 06	73
24	179 55.4	+8 33.6		196 05.2	112 +12 27.3	76	60 S	5 26	6 14	6 56	6 08	25	14 58	75
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 25 ^m 3		Mag: -3.8 PMG: 13 ^h 27 ^m			Mag: -0.3 PMG: 18 ^h 08 ^m			Mag: -1.7 PMG: 13 ^h 17 ^m			Mag: +0.5 PMG: 17 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	338	37.0	158	16.4	+1 03.7	87	36.6	-25 03.4	160	12.4	+1 53.2	90	00.7	-20 24.9
1	353	39.5	173	16.1	02.4	102	37.6	03.5	175	14.4	53.0	105	03.1	24.9
2	8 41.9	188	15.8	+1 01.1	117	38.5	03.7	190	16.4	52.8	120	05.5	24.9	
3	23 44.4	203	15.5	+0 59.8	132	39.5	03.9	205	18.3	52.6	135	07.9	24.9	
4	38 46.9	218	15.2	58.5	147	40.4	04.0	220	20.3	52.4	150	10.3	24.9	
5	53 49.3	233	14.8	+0 57.3	162	41.4	-25 04.2	235	22.3	+1 52.1	165	12.7	-20 25.0	
6	68 51.8	248	14.5	+0 56.0	177	42.4	-25 04.3	250	24.3	+1 51.9	180	15.1	-20 25.0	
7	83 54.2	263	14.2	54.7	192	43.3	04.5	265	26.3	51.7	195	17.5	25.0	
8	98 56.7	278	13.9	53.4	207	44.3	04.7	280	28.3	51.5	210	19.9	25.0	
9	113 59.2	293	13.6	52.1	222	45.2	04.8	295	30.3	51.3	225	22.3	25.0	
10	129 01.6	308	13.3	50.8	237	46.2	05.0	310	32.2	51.1	240	24.7	25.1	
11	144 04.1	323	12.9	+0 49.5	252	47.1	-25 05.1	325	34.2	+1 50.9	255	27.0	-20 25.1	
12	159 06.6	338	12.6	+0 48.3	267	48.1	-25 05.3	340	36.2	+1 50.7	270	29.4	-20 25.1	
13	174 09.0	353	12.3	47.0	282	49.1	05.4	355	38.2	50.5	285	31.8	25.1	
14	189 11.5	8 12.0	45.7	297	50.0	05.6	10 40.2	50.3	300	34.2	25.1			
15	204 14.0	23 11.7	44.4	312	51.0	05.7	25 42.2	50.1	315	36.6	25.1			
16	219 16.4	38 11.3	43.1	327	51.9	05.9	40 44.2	49.8	330	39.0	25.2			
17	234 18.9	53 11.0	+0 41.8	342	52.9	-25 06.1	55 46.1	+1 49.6	345	41.4	-20 25.2			
18	249 21.3	68 10.7	+0 40.5	357	53.8	-25 06.2	70 48.1	+1 49.4	0 43.8	-20 25.2				
19	264 23.8	83 10.4	39.3	12 54.8	06.4	85 50.1	49.2	15 46.2	25.2					
20	279 26.3	98 10.1	38.0	27 55.7	06.5	100 52.1	49.0	30 48.6	25.2					
21	294 28.7	113 09.8	36.7	42 56.7	06.7	115 54.1	48.8	45 51.0	25.3					
22	309 31.2	128 09.4	35.4	57 57.6	06.8	130 56.1	48.6	60 53.4	25.3					
23	324 33.7	143 09.1	34.1	72 58.6	07.0	145 58.1	48.4	75 55.8	25.3					
24	339 36.1	158 08.8	+0 32.8	87 59.5	-25 07.1	161 00.0	+1 48.2	90 58.1	-20 25.3					
Dif	—	-3	-13	+10	-2	+20	-2	+24						

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 2			Edad: 28 ^d 1 PHE { SD: 15 ^h 4 PMG: 11 ^h 18 ^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	55.4	+8	33.6	196	05.2	+12 27.3	60 N	19 05	19 50	20 49	3 38 75	18 42 19					
1	194	55.6		32.7	210	35.4 ¹¹²	19.5 78	58	19 00	42	36	45 73	36 21					
2	209	55.8		31.8	225	05.7 ¹¹³	11.8 77	56	18 56	35	25	51 71	31 23					
3	224	56.0		30.9	239	36.1 ¹¹⁴	+12 03.9 79	54	52	29	15	3 57 69	27 25					
4	239	56.2		30.0	254	06.5 ¹¹⁴	+11 56.0 79	52	49	24	07	4 02 67	23 26					
5	254	56.4	+8	29.1	268	36.9 ¹¹⁴	+11 48.1 79	50	18 45	19 19	20 00	4 06 67	18 19 28					
6	269	56.6	+8	28.2	283	07.4 ¹¹⁵	+11 40.1 80	45	18 38	19 09	19 45	4 16 63	18 11 31					
7	284	56.8		27.3	297	38.0 ¹¹⁶	32.0 81	40	33	19 00	33	24 61	18 04 34					
8	299	56.9		26.4	312	08.6 ¹¹⁶	23.9 81	35	28	18 53	24	31 59	17 59 35					
9	314	57.1		25.5	326	39.2 ¹¹⁶	15.8 81	30	23	48	16	38 56	53 38					
10	329	57.3		24.6	341	10.0 ¹¹⁸	+11 07.6 82	20	16	38	19 04	48 53	45 41					
11	344	57.5	+8	23.7	355	40.7 ¹¹⁷	+10 59.3 83	10 N	18 09	18 31	18 55	4 57 51	17 37 44					
12	359	57.7	+8	22.8	10	11.6 ¹¹⁹	+10 51.0 83	0	18 03	18 24	18 49	5 06 48	17 29 47					
13	14	57.9		21.9	24	42.4 ¹¹⁸	42.6 84	10 S	17 58	19	43	15 45	22 49					
14	29	58.1		21.0	39	13.4 ¹²⁰	34.2 84	20	51	14	39	24 42	14 52					
15	44	58.3		20.1	53	44.3 ¹¹⁹	25.8 84	30	45	09	37	35 39	05 56					
16	59	58.5		19.2	68	15.4 ¹²¹	17.3 85	35	41	06	36	41 37	17 00 57					
17	74	58.7	+8	18.3	82	46.4 ¹²⁰	+10 08.8 85	40	17 36	18 04	18 35	5 48 35	16 53 61					
18	89	58.9	+8	17.4	97	17.6 ¹²²	+10 00.2 86	45	17 31	18 01	18 35	5 56 32	16 46 63					
19	104	59.1		16.5	111	48.8 ¹²²	+9 51.6 86	50	25	17 58	35	6 05 30	38 66					
20	119	59.3		15.5	126	20.0 ¹²²	42.9 87	52	23	57	36	10 28	34 68					
21	134	59.5		14.6	140	51.3 ¹²³	34.2 87	54	20	55	36	15 26	30 69					
22	149	59.7		13.7	155	22.6 ¹²³	25.5 87	56	16	54	37	20 25	25 71					
23	164	59.9		12.8	169	54.0 ¹²⁴	16.7 88	58	13	52	38	26 23	19 74					
24	180	00.1	+8	11.9	184	25.4 ¹²⁴	+9 07.9 88	60 S	17 08	17 51	18 39	6 33 20	16 13 76					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 21 ^m 4		Mag: -3.8 PMG: 13 ^h 28 ^m			Mag: -0.3 PMG: 18 ^h 07 ^m			Mag: -1.7 PMG: 13 ^h 14 ^m			Mag: +0.5 PMG: 17 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	339	36.1	158	08.8	+0	32.8	87	59.5	-25	07.1	161	00.0	+1	48.2	90	58.1	-20	25.3
1	354	38.6	173	08.5		31.5	103	00.5		07.3	176	02.0		48.0	106	00.5		25.3
2	9	41.1	188	08.2		30.3	118	01.4		07.4	191	04.0		47.8	121	02.9		25.4
3	24	43.5	203	07.8		29.0	133	02.3		07.6	206	06.0		47.5	136	05.3		25.4
4	39	46.0	218	07.5		27.7	148	03.3		07.7	221	08.0		47.3	151	07.7		25.4
5	54	48.5	233	07.2	+0	26.4	163	04.2	-25	07.9	236	10.0	+1	47.1	166	10.1	-20	25.4
6	69	50.9	248	06.9	+0	25.1	178	05.2	-25	08.1	251	12.0	+1	46.9	181	12.5	-20	25.4
7	84	53.4	263	06.6		23.8	193	06.1		08.2	266	13.9		46.7	196	14.9		25.5
8	99	55.8	278	06.3		22.5	208	07.1		08.4	281	15.9		46.5	211	17.3		25.5
9	114	58.3	293	05.9		21.2	223	08.0		08.5	296	17.9		46.3	226	19.7		25.5
10	130	00.8	308	05.6		20.0	238	08.9		08.7	311	19.9		46.1	241	22.0		25.5
11	145	03.2	323	05.3	+0	18.7	253	09.9	-25	08.8	326	21.9	+1	45.9	256	24.4	-20	25.5
12	160	05.7	338	05.0	+0	17.4	268	10.8	-25	09.0	341	23.9	+1	45.7	271	26.8	-20	25.5
13	175	08.2	353	04.7		16.1	283	11.8		09.1	356	25.8		45.5	286	29.2		25.6
14	190	10.6	8	04.4		14.8	298	12.7		09.3	11	27.8		45.2	301	31.6		25.6
15	205	13.1	23	04.0		13.5	313	13.6		09.4	26	29.8		45.0	316	34.0		25.6
16	220	15.6	38	03.7		12.2	328	14.6		09.6	41	31.8		44.8	331	36.4		25.6
17	235	18.0	53	03.4	+0	11.0	343	15.5	-25	09.7	56	33.8	+1	44.6	346	38.8	-20	25.6
18	250	20.5	68	03.1	+0	09.7	358	16.4	-25	09.9	71	35.8	+1	44.4	1	41.2	-20	25.7
19	265	23.0	83	02.8		08.4	13	17.4		10.0	86	37.8		44.2	16	43.5		25.7
20	280	25.4	98	02.5		07.1	28	18.3		10.2	101	39.7		44.0	31	45.9		25.7
21	295	27.9	113	02.1		05.8	43	19.3		10.3	116	41.7		43.8	46	48.3		25.7
22	310	30.3	128	01.8		04.5	58	20.2		10.5	131	43.7		43.6	61	50.7		25.7
23	325	32.8	143	01.5		03.2	73	21.1		10.6	146	45.7		43.4	76	53.1		25.8
24	340	35.3	158	01.2	+0	01.9	88	22.1	-25	10.8	161	47.7	+1	43.1	91	55.5	-20	25.8
Dif	—		-3		-13		+9		-2		+20		-2		+24		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 8			Edad: 29 ^d 1 PHE { SD: 15'3 PMG: 12 ^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	180	00.1	+8	11.9	184	25.4	+9 07.9	60 N	3 12	4 11	4 56	4 53	75	19 01	17
1	195	00.3		11.0	198	56.9 ¹²⁵	+8 59.0 ⁸⁹	58	25	19	5 01	4 58	72	18 57	19
2	210	00.5		10.1	213	28.4 ¹²⁵	50.1 ⁸⁹	56	36	25	05	5 02	71	54	21
3	225	00.7		09.2	228	00.0 ¹²⁶	41.2 ⁸⁹	54	45	32	09	06	69	52	22
4	240	00.9		08.3	242	31.6 ¹²⁶	32.2 ⁹⁰	52	3 53	37	12	09	67	49	24
5	255	01.1	+8	07.4	257	03.3 ¹²⁷	+8 23.2 ⁹⁰	50	4 01	4 42	5 15	5 13	65	18 47	26
6	270	01.3	+8	06.5	271	35.0 ¹²⁷	+8 14.2 ⁹⁰	45	4 16	4 52	5 22	5 19	63	18 42	29
7	285	01.5		05.6	286	06.7 ¹²⁷	+8 05.1 ⁹¹	40	27	5 00	28	25	59	38	31
8	300	01.7		04.6	300	38.6 ¹²⁹	+7 56.0 ⁹¹	35	36	07	33	30	57	34	34
9	315	01.9		03.7	315	10.4 ¹²⁸	46.9 ⁹¹	30	44	13	37	34	55	31	36
10	330	02.1		02.8	329	42.3 ¹²⁹	37.7 ⁹²	20	4 56	22	44	41	52	26	39
11	345	02.3	+8	01.9	344	14.2 ¹²⁹	+7 28.6 ⁹¹	10 N	5 05	5 29	5 51	5 48	48	18 21	42
12	0	02.5	+8	01.0	358	46.2 ¹³⁰	+7 19.3 ⁹³	0	5 11	5 36	5 57	5 54	46	18 16	45
13	15	02.7	+8	00.1	13	18.3 ¹³¹	10.1 ⁹²	10 S	17	41	6 02	6 00	43	11	48
14	30	02.9	+7	59.2	27	50.3 ¹³⁰	+7 00.8 ⁹³	20	20	46	08	06	40	06	52
15	45	03.1		58.3	42	22.4 ¹³¹	+6 51.6 ⁹²	30	23	51	15	14	36	18 01	54
16	60	03.3		57.4	56	54.6 ¹³²	42.2 ⁹⁴	35	24	53	19	18	34	17 57	57
17	75	03.5	+7	56.5	71	26.8 ¹³²	+6 32.9 ⁹³	40	5 24	5 56	6 23	6 23	32	17 54	59
18	90	03.7	+7	55.5	85	59.0 ¹³²	+6 23.5 ⁹⁴	45	5 24	5 58	6 28	6 28	30	17 49	62
19	105	03.9		54.6	100	31.3 ¹³³	14.1 ⁹⁴	50	24	6 01	34	35	26	44	65
20	120	04.1		53.7	115	03.6 ¹³³	+6 04.7 ⁹⁴	52	23	02	36	38	25	42	66
21	135	04.3		52.8	129	36.0 ¹³⁴	+5 55.3 ⁹⁴	54	23	04	39	41	24	39	68
22	150	04.5		51.9	144	08.4 ¹³⁴	45.9 ⁹⁴	56	22	05	42	45	22	36	70
23	165	04.7		51.0	158	40.8 ¹³⁴	36.4 ⁹⁵	58	21	06	46	49	20	33	72
24	180	04.9	+7	50.1	173	13.3 ¹³⁵	+5 26.9 ⁹⁵	60 S	5 20	6 08	6 50	6 53	18	17 29	74
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 17 ^m 4		Mag: -3.8 PMG: 13 ^h 28 ^m			Mag: -0.3 PMG: 18 ^h 05 ^m			Mag: -1.7 PMG: 13 ^h 11 ^m			Mag: +0.5 PMG: 17 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	340	35.3	158	01.2	+0 01.9	88	22.1	-25 10.8	161	47.7	+1 43.1	91	55.5	-20 25.8	
1	355	37.7	173	00.9	+0 00.7	103	23.0	10.9	176	49.7	42.9	106	57.9	25.8	
2	10	40.2	188	00.6	-0 00.6	118	23.9	11.1	191	51.6	42.7	122	00.3	25.8	
3	25	42.7	203	00.2	01.9	133	24.8	11.2	206	53.6	42.5	137	02.6	25.8	
4	40	45.1	217	59.9	03.2	148	25.8	11.4	221	55.6	42.3	152	05.0	25.9	
5	55	47.6	232	59.6	-0 04.5	163	26.7	-25 11.5	236	57.6	+1 42.1	167	07.4	-20 25.9	
6	70	50.1	247	59.3	-0 05.8	178	27.6	-25 11.7	251	59.6	+1 41.9	182	09.8	-20 25.9	
7	85	52.5	262	59.0	07.1	193	28.6	11.8	267	01.6	41.7	197	12.2	25.9	
8	100	55.0	277	58.7	08.4	208	29.5	12.0	282	03.5	41.5	212	14.6	25.9	
9	115	57.4	292	58.3	09.6	223	30.4	12.1	297	05.5	41.3	227	17.0	26.0	
10	130	59.9	307	58.0	10.9	238	31.3	12.2	312	07.5	41.1	242	19.3	26.0	
11	146	02.4	322	57.7	-0 12.2	253	32.3	-25 12.4	327	09.5	+1 40.8	257	21.7	-20 26.0	
12	161	04.8	337	57.4	-0 13.5	268	33.2	-25 12.5	342	11.5	+1 40.6	272	24.1	-20 26.0	
13	176	07.3	352	57.1	14.8	283	34.1	12.7	357	13.5	40.4	287	26.5	26.0	
14	191	09.8	7	56.8	16.1	298	35.0	12.8	12	15.4	40.2	302	28.9	26.1	
15	206	12.2	22	56.5	17.4	313	36.0	13.0	27	17.4	40.0	317	31.3	26.1	
16	221	14.7	37	56.1	18.7	328	36.9	13.1	42	19.4	39.8	332	33.6	26.1	
17	236	17.2	52	55.8	-0 20.0	343	37.8	-25 13.3	57	21.4	+1 39.6	347	36.0	-20 26.1	
18	251	19.6	67	55.5	-0 21.2	358	38.7	-25 13.4	72	23.4	+1 39.4	2	38.4	-20 26.1	
19	266	22.1	82	55.2	22.5	13	39.7	13.6	87	25.4	39.2	17	40.8	26.2	
20	281	24.6	97	54.9	23.8	28	40.6	13.7	102	27.3	39.0	32	43.2	26.2	
21	296	27.0	112	54.6	25.1	43	41.5	13.8	117	29.3	38.7	47	45.6	26.2	
22	311	29.5	127	54.2	26.4	58	42.4	14.0	132	31.3	38.5	62	47.9	26.2	
23	326	31.9	142	53.9	27.7	73	43.3	14.1	147	33.3	38.3	77	50.3	26.2	
24	341	34.4	157	53.6	-0 29.0	88	44.3	-25 14.3	162	35.3	+1 38.1	92	52.7	-20 26.3	
Dif	—		-3		-13	+9		-1	+20		-2	+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 30 ^d 1	PHE	SD: 15°1			R°: 45 ^m						
	PMG: 11 ^h 59 ^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	h m m	
0	180	04.9	+7 50.1	173	13.3	+5 26.9	95	60 N	18 59	19 44	20 41	6 08 74	19 18 16		
1	195	05.1	49.2	187	45.8 ¹³⁵	17.4	95	58	55	36	29	10 72	16 18		
2	210	05.3	48.2	202	18.4 ¹³⁶	+5 07.9	95	56	51	30	19	13 69	15 20		
3	225	05.5	47.3	216	51.0 ¹³⁶	+4 58.3	96	54	47	24	10	15 67	14 22		
4	240	05.7	46.4	231	23.6 ¹³⁶	48.8	95	52	44	19	20 02	16 66	13 24		
5	255	05.9	+7 45.5	245	56.2 ¹³⁶	+4 39.2	96	50	18 41	19 15	19 55	6 18 64	19 13 24		
6	270	06.1	+7 44.6	260	28.9 ¹³⁷	+4 29.6	96	45	18 35	19 05	19 41	6 22 61	19 11 27		
7	285	06.3	43.7	275	01.7 ¹³⁸	20.1	95	40	29	18 57	30	24 59	09 30		
8	300	06.5	42.8	289	34.4 ¹³⁷	10.4	97	35	25	51	21	27 56	08 32		
9	315	06.7	41.8	304	07.2 ¹³⁸	+4 00.8	96	30	21	45	14	29 54	07 34		
10	330	06.9	40.9	318	40.1 ¹³⁹	+3 51.2	96	20	14	36	19 02	33 50	05 38		
11	345	07.1	+7 40.0	333	12.9 ¹³⁸	+3 41.6	96	10 N	18 08	18 29	18 54	6 36 48	19 03 41		
12	0	07.3	+7 39.1	347	45.8 ¹³⁹	+3 31.9	97	0	18 03	18 24	18 48	6 40 44	19 01 44		
13	15	07.5	38.2	2	18.8 ¹⁴⁰	22.3	96	10 S	17 57	19	43	43 41	18 59 47		
14	30	07.7	37.3	16	51.7 ¹³⁹	12.6	97	20	52	14	40	46 39	58 49		
15	45	07.9	36.3	31	24.7 ¹⁴⁰	+3 02.9	97	30	46	10	38	50 35	55 54		
16	60	08.1	35.4	45	57.7 ¹⁴⁰	+2 53.2	97	35	42	08	37	52 33	54 56		
17	75	08.3	+7 34.5	60	30.8 ¹⁴¹	+2 43.6	96	40	17 38	18 05	18 37	6 55 31	18 53 57		
18	90	08.5	+7 33.6	75	03.9 ¹⁴¹	+2 33.9	97	45	17 34	18 03	18 37	6 58 28	18 51 60		
19	105	08.7	32.7	89	37.0 ¹⁴¹	24.2	97	50	28	01	38	7 01 25	49 64		
20	120	08.9	31.8	104	10.1 ¹⁴¹	14.5	97	52	26	18 00	39	03 23	48 65		
21	135	09.1	30.8	118	43.3 ¹⁴²	+2 04.8	97	54	23	17 59	40	05 22	47 67		
22	150	09.3	29.9	133	16.4 ¹⁴¹	+1 55.1	97	56	20	58	41	07 20	46 69		
23	165	09.5	29.0	147	49.7 ¹⁴³	45.4	97	58	17	56	42	09 18	45 70		
24	180	09.7	+7 28.1	162	22.9 ¹⁴²	+1 35.7	97	60 S	17 13	17 55	18 43	7 11 16	18 43 73		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -3.8			Mag: -0.3			Mag: -1.7			Mag: +0.5			
	1 ^h 13 ^m 5		PMG: 13 ^h 29 ^m			PMG: 18 ^h 04 ^m			PMG: 13 ^h 08 ^m			PMG: 17 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	341	34.4	157	53.6	-0 29.0	88	44.3	-25 14.3	162	35.3	+1 38.1	92	52.7	-20 26.3	
1	356	36.9	172	53.3	30.3	103	45.2	14.4	177	37.3	37.9	107	55.1	26.3	
2	11	39.3	187	53.0	31.5	118	46.1	14.6	192	39.2	37.7	122	57.5	26.3	
3	26	41.8	202	52.7	32.8	133	47.0	14.7	207	41.2	37.5	137	59.9	26.3	
4	41	44.3	217	52.3	34.1	148	47.9	14.9	222	43.2	37.3	153	02.2	26.3	
5	56	46.7	232	52.0	-0 35.4	163	48.8	-25 15.0	237	45.2	+1 37.1	168	04.6	-20 26.4	
6	71	49.2	247	51.7	-0 36.7	178	49.8	-25 15.1	252	47.2	+1 36.9	183	07.0	-20 26.4	
7	86	51.7	262	51.4	38.0	193	50.7	15.3	267	49.2	36.6	198	09.4	26.4	
8	101	54.1	277	51.1	39.3	208	51.6	15.4	282	51.1	36.4	213	11.8	26.4	
9	116	56.6	292	50.8	40.6	223	52.5	15.6	297	53.1	36.2	228	14.2	26.4	
10	131	59.0	307	50.5	41.9	238	53.4	15.7	312	55.1	36.0	243	16.5	26.5	
11	147	01.5	322	50.1	-0 43.1	253	54.3	-25 15.9	327	57.1	+1 35.8	258	18.9	-20 26.5	
12	162	04.0	337	49.8	-0 44.4	268	55.2	-25 16.0	342	59.1	+1 35.6	273	21.3	-20 26.5	
13	177	06.4	352	49.5	45.7	283	56.1	16.1	358	01.1	35.4	288	23.7	26.5	
14	192	08.9	7	49.2	47.0	298	57.1	16.3	13	03.0	35.2	303	26.1	26.5	
15	207	11.4	22	48.9	48.3	313	58.0	16.4	28	05.0	35.0	318	28.4	26.6	
16	222	13.8	37	48.6	49.6	328	58.9	16.6	43	07.0	34.8	333	30.8	26.6	
17	237	16.3	52	48.2	-0 50.9	343	59.8	-25 16.7	58	09.0	+1 34.5	348	33.2	-20 26.6	
18	252	18.8	67	47.9	-0 52.2	359	00.7	-25 16.8	73	11.0	+1 34.3	3	35.6	-20 26.6	
19	267	21.2	82	47.6	53.4	14	01.6	17.0	88	12.9	34.1	18	38.0	26.7	
20	282	23.7	97	47.3	54.7	29	02.5	17.1	103	14.9	33.9	33	40.3	26.7	
21	297	26.2	112	47.0	56.0	44	03.4	17.3	118	16.9	33.7	48	42.7	26.7	
22	312	28.6	127	46.7	57.3	59	04.3	17.4	133	18.9	33.5	63	45.1	26.7	
23	327	31.1	142	46.4	58.6	74	05.2	17.5	148	20.9	33.3	78	47.5	26.7	
24	342	33.5	157	46.0	-0 59.9	89	06.1	-25 17.7	163	22.9	+1 33.1	93	49.8	-20 26.8	
Dif	—		-3 -13			+9 -1			+20 -2		+24 0		0		

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: 1 ^d 6 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 R°: 43 ^m SD: 15'0 PMG: 13 ^h 35 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	09.7	+7 28.1	162	22.9	+1 35.7	60 N	3	19	4	16	5	00	7	22 72
1	195	09.9		176	56.2 ¹⁴³	26.0 ⁹⁷	58	31	23	05			22	70	34 18
2	210	10.1		191	29.4 ¹⁴²	16.3 ⁹⁷	56	41	30	09			22	68	35 20
3	225	10.3		206	02.8 ¹⁴⁴	+1 06.6 ⁹⁷	54	50	35	12			22	66	36 21
4	240	10.5		220	36.1 ¹⁴³	+0 56.9 ⁹⁷	52	3	57	40	16		22	65	37 23
5	255	10.7	+7 23.5	235	09.5 ¹⁴⁴	+0 47.2 ⁹⁷	50	4	04	4	45	5	18	7	22 63
6	270	10.9	+7 22.6	249	42.8 ¹⁴³	+0 37.5 ⁹⁷	45	4	18	4	55	5	25	7	23 59
7	285	11.1		264	16.2 ¹⁴⁴	27.8 ⁹⁷	40	29	5	02	30		23	57	39 30
8	300	11.3		278	49.7 ¹⁴⁵	18.1 ⁹⁷	35	38	09	34			23	55	40 33
9	315	11.6		293	23.1 ¹⁴⁴	+0 08.4 ⁹⁷	30	45	14	38			23	53	41 34
10	330	11.8		307	56.6 ¹⁴⁵	-0 01.3 ⁹⁷	20	4	57	23	45		23	50	43 37
11	345	12.0	+7 18.0	322	30.1 ¹⁴⁵	-0 10.9 ⁹⁶	10 N	5	05	5	29	5	51	7	24 46
12	0	12.2	+7 17.1	337	03.6 ¹⁴⁵	-0 20.6 ⁹⁷	0	5	11	5	35	5	56	7	24 43
13	15	12.4		351	37.1 ¹⁴⁵	30.2 ⁹⁶	10 S	15	40	6	01		24	41	46 46
14	30	12.6		6	10.6 ¹⁴⁵	39.9 ⁹⁷	20	19	44	06			25	37	47 50
15	45	12.8		20	44.2 ¹⁴⁶	49.5 ⁹⁶	30	21	49	13			25	34	49 52
16	60	13.0		35	17.7 ¹⁴⁵	-0 59.2 ⁹⁷	35	21	51	16			25	32	50 54
17	75	13.2	+7 12.5	49	51.3 ¹⁴⁶	-1 08.8 ⁹⁶	40	5	21	5	53	6	20	7	26 29
18	90	13.4	+7 11.5	64	24.9 ¹⁴⁶	-1 18.4 ⁹⁶	45	5	21	5	55	6	24	7	26 27
19	105	13.6		78	58.5 ¹⁴⁶	28.0 ⁹⁶	50	20	57	29			26	24	53 62
20	120	13.8		93	32.2 ¹⁴⁷	37.5 ⁹⁵	52	19	58	32			26	23	53 64
21	135	14.0		108	05.8 ¹⁴⁶	47.1 ⁹⁶	54	18	5	59	34		27	21	54 66
22	150	14.2		122	39.5 ¹⁴⁷	-1 56.7 ⁹⁶	56	17	6	00	37		27	19	55 67
23	165	14.4		137	13.1 ¹⁴⁶	-2 06.2 ⁹⁵	58	16	01	41			27	18	55 70
24	180	14.6	+7 06.0	151	46.8 ¹⁴⁷	-2 15.7 ⁹⁵	60 S	5	14	6	02	6	44	7	27 16
19 56 72															
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 09 ^m 6		Mag: -3.8 PMG: 13 ^h 29 ^m			Mag: -0.3 PMG: 18 ^h 03 ^m			Mag: -1.7 PMG: 13 ^h 05 ^m			Mag: +0.5 PMG: 17 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	342	33.5	157	46.0	-0 59.9	89	06.1	-25 17.7	163	22.9	+1 33.1	93	49.8	-20 26.8	
1	357	36.0	172	45.7	-1 01.2	104	07.0	17.8	178	24.8	32.9	108	52.2	26.8	
2	12	38.5	187	45.4	02.5	119	07.9	18.0	193	26.8	32.6	123	54.6	26.8	
3	27	40.9	202	45.1	03.8	134	08.8	18.1	208	28.8	32.4	138	57.0	26.8	
4	42	43.4	217	44.8	05.0	149	09.7	18.2	223	30.8	32.2	153	59.4	26.8	
5	57	45.9	232	44.5	-1 06.3	164	10.6	-25 18.4	238	32.8	+1 32.0	169	01.7	-20 26.9	
6	72	48.3	247	44.1	-1 07.6	179	11.5	-25 18.5	253	34.7	+1 31.8	184	04.1	-20 26.9	
7	87	50.8	262	43.8	08.9	194	12.4	18.7	268	36.7	31.6	199	06.5	26.9	
8	102	53.3	277	43.5	10.2	209	13.3	18.8	283	38.7	31.4	214	08.9	26.9	
9	117	55.7	292	43.2	11.5	224	14.2	18.9	298	40.7	31.2	229	11.2	26.9	
10	132	58.2	307	42.9	12.8	239	15.1	19.1	313	42.7	31.0	244	13.6	27.0	
11	148	00.7	322	42.6	-1 14.1	254	16.0	-25 19.2	328	44.7	+1 30.8	259	16.0	-20 27.0	
12	163	03.1	337	42.2	-1 15.4	269	16.9	-25 19.3	343	46.6	+1 30.5	274	18.4	-20 27.0	
13	178	05.6	352	41.9	16.6	284	17.8	19.5	358	48.6	30.3	289	20.8	27.0	
14	193	08.0	7	41.6	17.9	299	18.7	19.6	13	50.6	30.1	304	23.1	27.0	
15	208	10.5	22	41.3	19.2	314	19.6	19.7	28	52.6	29.9	319	25.5	27.1	
16	223	13.0	37	41.0	20.5	329	20.5	19.9	43	54.6	29.7	334	27.9	27.1	
17	238	15.4	52	40.7	-1 21.8	344	21.4	-25 20.0	58	56.5	+1 29.5	349	30.3	-20 27.1	
18	253	17.9	67	40.4	-1 23.1	359	22.3	-25 20.2	73	58.5	+1 29.3	4	32.6	-20 27.1	
19	268	20.4	82	40.0	24.4	14	23.2	20.3	89	00.5	29.1	19	35.0	27.2	
20	283	22.8	97	39.7	25.7	29	24.1	20.4	104	02.5	28.9	34	37.4	27.2	
21	298	25.3	112	39.4	27.0	44	25.0	20.6	119	04.5	28.6	49	39.8	27.2	
22	313	27.8	127	39.1	28.2	59	25.9	20.7	134	06.4	28.4	64	42.1	27.2	
23	328	30.2	142	38.8	29.5	74	26.8	20.8	149	08.4	28.2	79	44.5	27.2	
24	343	32.7	157	38.5	-1 30.8	89	27.7	-25 21.0	164	10.4	+1 28.0	94	46.9	-20 27.3	
Dif	—		-3		-13	+9		-1	+20		-2	+24		0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9		Edad: 2 ^d 6	PHE { 4 ^h : 54 ^m /6 12 ^h : 54 ^m /5 20 ^h : 54 ^m /4	SD: 14 ^h 9	PMG: 14 ^h 18 ^m			R°: 43 ^m								
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	14.6	+7	06.0	151	46.8	-2	15.7	60 N	18 53	19 37	20 33	8 34	71	19 50	17	
1	195	14.8		05.1	166	20.5 ¹⁴⁷		25.2 ⁹⁵	58	49	30	22	32	68	52	20	
2	210	15.0		04.2	180	54.2 ¹⁴⁷		34.7 ⁹⁵	56	46	24	12	30	67	55	21	
3	225	15.2		03.2	195	27.9 ¹⁴⁷		44.2 ⁹⁵	54	42	19	20 04	28	65	19 57	23	
4	240	15.5		02.3	210	01.7 ¹⁴⁸	-2	53.7 ⁹⁵	52	39	14	19 57	27	63	20 00	24	
5	255	15.7	+7	01.4	224	35.4 ¹⁴⁷	-3	03.1 ⁹⁴	50	18 37	19 10	19 50	8 25	62	20 02	25	
6	270	15.9	+7	00.5	239	09.1 ¹⁴⁷	-3	12.5 ⁹⁴	45	18 31	19 01	19 37	8 22	59	20 06	28	
7	285	16.1	+6	59.5	253	42.9 ¹⁴⁸		22.0 ⁹⁵	40	26	18 54	26	20	56	09	31	
8	300	16.3		58.6	268	16.6 ¹⁴⁷		31.3 ⁹³	35	22	48	18	18	54	13	32	
9	315	16.5		57.7	282	50.4 ¹⁴⁸		40.7 ⁹⁴	30	18	43	11	16	52	15	35	
10	330	16.7		56.8	297	24.2 ¹⁴⁸		50.1 ⁹⁴	20	12	35	19 01	13	49	20	38	
11	345	16.9	+6	55.8	311	57.9 ¹⁴⁷	-3	59.4 ⁹³	10 N	18 07	18 28	18 53	8 10	46	20 24	41	
12	0	17.1	+6	54.9	326	31.7 ¹⁴⁸	-4	08.7 ⁹³	0	18 02	18 23	18 47	8 07	44	20 28	44	
13	15	17.3		54.0	341	05.5 ¹⁴⁸		18.0 ⁹³	10 S	17 57	18	43	05	40	32	46	
14	30	17.5		53.1	355	39.3 ¹⁴⁸		27.2 ⁹²	20	52	14	40	8 02	38	37	48	
15	45	17.7		52.1	10	13.1 ¹⁴⁸		36.5 ⁹³	30	47	11	39	7 59	34	41	52	
16	60	17.9		51.2	24	46.8 ¹⁴⁷		45.7 ⁹²	35	44	09	38	57	33	44	54	
17	75	18.1	+6	50.3	39	20.6 ¹⁴⁸	-4	54.9 ⁹²	40	17 40	18 07	18 39	7 55	31	20 47	56	
18	90	18.4	+6	49.4	53	54.4 ¹⁴⁸	-5	04.0 ⁹¹	45	17 36	18 05	18 39	7 53	28	20 51	58	
19	105	18.6		48.4	68	28.2 ¹⁴⁸		13.1 ⁹¹	50	31	04	41	50	25	55	62	
20	120	18.8		47.5	83	02.0 ¹⁴⁸		22.3 ⁹²	52	29	03	42	49	24	20 57	63	
21	135	19.0		46.6	97	35.8 ¹⁴⁸		31.3 ⁹⁰	54	27	02	43	48	22	21 00	64	
22	150	19.2		45.6	112	09.6 ¹⁴⁸		40.4 ⁹¹	56	24	01	44	46	21	02	66	
23	165	19.4		44.7	126	43.4 ¹⁴⁸		49.4 ⁹⁰	58	21	00	46	45	18	05	68	
24	180	19.6	+6	43.8	141	17.2 ¹⁴⁸	-5	58.4 ⁹⁰	60 S	17 18	18 00	18 48	7 43	16	21 08	70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 05 ^m 6		Mag: -3.8 PMG: 13 ^h 30 ^m			Mag: -0.2 PMG: 18 ^h 01 ^m			Mag: -1.7 PMG: 13 ^h 02 ^m			Mag: +0.5 PMG: 17 ^h 38 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	343	32.7	157	38.5	-1	30.8	89	27.7	-25	21.0	164	10.4	+1	28.0	94	46.9	
1	358	35.1	172	38.1		32.1	104	28.6		21.1	179	12.4		27.8	109	49.3	
2	13	37.6	187	37.8		33.4	119	29.4		21.2	194	14.4		27.6	124	51.6	
3	28	40.1	202	37.5		34.7	134	30.3		21.4	209	16.3		27.4	139	54.0	
4	43	42.5	217	37.2		36.0	149	31.2		21.5	224	18.3		27.2	154	56.4	
5	58	45.0	232	36.9	-1	37.3	164	32.1	-25	21.6	239	20.3	+1	27.0	169	58.8	
6	73	47.5	247	36.6	-1	38.5	179	33.0	-25	21.8	254	22.3	+1	26.7	185	01.1	
7	88	49.9	262	36.2		39.8	194	33.9		21.9	269	24.3		26.5	200	03.5	
8	103	52.4	277	35.9		41.1	209	34.8		22.0	284	26.3		26.3	215	05.9	
9	118	54.9	292	35.6		42.4	224	35.7		22.2	299	28.2		26.1	230	08.2	
10	133	57.3	307	35.3		43.7	239	36.5		22.3	314	30.2		25.9	245	10.6	
11	148	59.8	322	35.0	-1	45.0	254	37.4	-25	22.4	329	32.2	+1	25.7	260	13.0	
12	164	02.3	337	34.7	-1	46.3	269	38.3	-25	22.5	344	34.2	+1	25.5	275	15.4	
13	179	04.7	352	34.4		47.6	284	39.2		22.7	359	36.2		25.3	290	17.7	
14	194	07.2	7	34.0		48.8	299	40.1		22.8	14	38.1		25.1	305	20.1	
15	209	09.6	22	33.7		50.1	314	41.0		22.9	29	40.1		24.8	320	22.5	
16	224	12.1	37	33.4		51.4	329	41.8		23.1	44	42.1		24.6	335	24.9	
17	239	14.6	52	33.1	-1	52.7	344	42.7	-25	23.2	59	44.1	+1	24.4	350	27.2	
18	254	17.0	67	32.8	-1	54.0	359	43.6	-25	23.3	74	46.1	+1	24.2	5	29.6	
19	269	19.5	82	32.5		55.3	14	44.5		23.5	89	48.0		24.0	20	32.0	
20	284	22.0	97	32.1		56.6	29	45.4		23.6	104	50.0		23.8	35	34.3	
21	299	24.4	112	31.8		57.9	44	46.2		23.7	119	52.0		23.6	50	36.7	
22	314	26.9	127	31.5	-1	59.2	59	47.1		23.9	134	54.0		23.4	65	39.1	
23	329	29.4	142	31.2	-2	00.4	74	48.0		24.0	149	56.0		23.2	80	41.5	
24	344	31.8	157	30.9	-2	01.7	89	48.9	-25	24.1	164	57.9	+1	22.9	95	43.8	
Dif	—		-3		-13		+9		-1		+20		-2		+24		0

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: 3 ^d 6 SD: 14'8 PMG: 15 ^h 01 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 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	19.6	+6	43.8	141	17.2	-5	58.4	60 N	3 25	4 21	5 05	9 45	70	20 07	19
1	195	19.8		42.9	155	51.0 ¹⁴⁸	-6	07.4	58	36	28	09	40	68	12	21
2	210	20.0		41.9	170	24.8 ¹⁴⁸		16.3	56	46	34	13	37	65	16	23
3	225	20.2		41.0	184	58.6 ¹⁴⁸		25.2	54	3 54	39	16	33	64	20	25
4	240	20.4		40.1	199	32.3 ¹⁴⁷		34.1	52	4 01	44	19	30	63	24	26
5	255	20.7	+6	39.1	214	06.1 ¹⁴⁸	-6	43.0	50	4 08	4 48	5 21	9 27	62	20 27	27
6	270	20.9	+6	38.2	228	39.9 ¹⁴⁸	-6	51.8	45	4 21	4 57	5 27	9 21	59	20 34	30
7	285	21.1		37.3	243	13.6 ¹⁴⁷	-7	00.6	40	31	5 04	32	16	56	40	33
8	300	21.3		36.4	257	47.4 ¹⁴⁸		09.3	35	40	10	36	12	54	45	35
9	315	21.5		35.4	272	21.1 ¹⁴⁷		18.1	30	47	15	39	08	52	50	36
10	330	21.7		34.5	286	54.9 ¹⁴⁸		26.7	20	4 57	23	45	9 02	48	20 58	39
11	345	21.9	+6	33.6	301	28.6 ¹⁴⁷	-7	35.4	10 N	5 05	5 29	5 50	8 56	46	21 05	41
12	0	22.1	+6	32.6	316	02.3 ¹⁴⁷	-7	44.0	0	5 10	5 34	5 55	8 51	43	21 12	43
13	15	22.3		31.7	330	36.1 ¹⁴⁸	-7	52.6	10 S	14	39	6 00	45	41	18	46
14	30	22.5		30.8	345	09.8 ¹⁴⁷	-8	01.1	20	17	43	05	40	38	25	49
15	45	22.7		29.9	359	43.5 ¹⁴⁷		09.6	30	18	46	10	33	36	33	52
16	60	23.0		28.9	14	17.2 ¹⁴⁷		18.1	35	19	48	13	30	33	38	54
17	75	23.2	+6	28.0	28	50.8 ¹⁴⁶	-8	26.6	40	5 18	5 50	6 17	8 26	31	21 43	56
18	90	23.4	+6	27.1	43	24.5 ¹⁴⁷	-8	35.0	45	5 17	5 51	6 21	8 21	29	21 49	58
19	105	23.6		26.1	57	58.1 ¹⁴⁶		43.3	50	16	53	25	15	27	21 57	60
20	120	23.8		25.2	72	31.8 ¹⁴⁷		51.6	52	15	54	27	13	25	22 00	62
21	135	24.0		24.3	87	05.4 ¹⁴⁶	-8	59.9	54	13	54	30	10	23	04	63
22	150	24.2		23.3	101	39.0 ¹⁴⁶	-9	08.2	56	12	55	32	07	22	08	65
23	165	24.4		22.4	116	12.6 ¹⁴⁶		16.4	58	10	56	35	8 03	20	13	67
24	180	24.6	+6	21.5	130	46.2 ¹⁴⁶	-9	24.5	60 S	5 09	5 57	6 38	7 59	18	22 18	69
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 01 ^m 7			Mag: -3.8 PMG: 13 ^h 30 ^m			Mag: -0.2 PMG: 18 ^h 00 ^m			Mag: -1.7 PMG: 12 ^h 58 ^m			Mag: +0.5 PMG: 17 ^h 34 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	344	31.8		157	30.9	-2 01.7	89	48.9	-25 24.1	164	57.9	+1 22.9	95	43.8	-20 27.8	
1	359	34.3		172	30.6	03.0	104	49.8	24.2	179	59.9	22.7	110	46.2	27.8	
2	14	36.7		187	30.2	04.3	119	50.6	24.4	195	01.9	22.5	125	48.6	27.8	
3	29	39.2		202	29.9	05.6	134	51.5	24.5	210	03.9	22.3	140	50.9	27.8	
4	44	41.7		217	29.6	06.9	149	52.4	24.6	225	05.8	22.1	155	53.3	27.9	
5	59	44.1		232	29.3	-2 08.2	164	53.3	-25 24.7	240	07.8	+1 21.9	170	55.7	-20 27.9	
6	74	46.6		247	29.0	-2 09.5	179	54.1	-25 24.9	255	09.8	+1 21.7	185	58.0	-20 27.9	
7	89	49.1		262	28.7	10.7	194	55.0	25.0	270	11.8	21.5	201	00.4	27.9	
8	104	51.5		277	28.3	12.0	209	55.9	25.1	285	13.8	21.3	216	02.8	27.9	
9	119	54.0		292	28.0	13.3	224	56.8	25.3	300	15.7	21.0	231	05.1	28.0	
10	134	56.5		307	27.7	14.6	239	57.6	25.4	315	17.7	20.8	246	07.5	28.0	
11	149	58.9		322	27.4	-2 15.9	254	58.5	-25 25.5	330	19.7	+1 20.6	261	09.9	-20 28.0	
12	165	01.4		337	27.1	-2 17.2	269	59.4	-25 25.6	345	21.7	+1 20.4	276	12.3	-20 28.0	
13	180	03.9		352	26.8	18.5	285	00.2	25.8	0	23.7	20.2	291	14.6	28.1	
14	195	06.3		7	26.4	19.7	300	01.1	25.9	15	25.6	20.0	306	17.0	28.1	
15	210	08.8		22	26.1	21.0	315	02.0	26.0	30	27.6	19.8	321	19.4	28.1	
16	225	11.2		37	25.8	22.3	330	02.9	26.1	45	29.6	19.6	336	21.7	28.1	
17	240	13.7		52	25.5	-2 23.6	345	03.7	-25 26.3	60	31.6	+1 19.4	351	24.1	-20 28.1	
18	255	16.2		67	25.2	-2 24.9	0	04.6	-25 26.4	75	33.6	+1 19.1	6	26.5	-20 28.2	
19	270	18.6		82	24.9	26.2	15	05.5	26.5	90	35.5	18.9	21	28.8	28.2	
20	285	21.1		97	24.5	27.5	30	06.3	26.6	105	37.5	18.7	36	31.2	28.2	
21	300	23.6		112	24.2	28.8	45	07.2	26.8	120	39.5	18.5	51	33.6	28.2	
22	315	26.0		127	23.9	30.0	60	08.1	26.9	135	41.5	18.3	66	35.9	28.3	
23	330	28.5		142	23.6	31.3	75	08.9	27.0	150	43.5	18.1	81	38.3	28.3	
24	345	31.0		157	23.3	-2 32.6	90	09.8	-25 27.1	165	45.4	+1 17.9	96	40.7	-20 28.3	
Dif	—			-3 -13			+9 -1			+20 -2			+24 0			

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: 4 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 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	24.6	+6 21.5	130	46.2	-9 24.5	81	60 N	18 47	19 31	20 26	10 55 68	20 26 23	
1	195	24.9	20.5	145	19.8 ¹⁴⁶	32.6	81	58	44	24	15	48 66	33 25	
2	210	25.1	19.6	159	53.3 ¹⁴⁵	40.7	81	56	40	19	20 06	42 65	39 27	
3	225	25.3	18.7	174	26.9 ¹⁴⁶	48.8	81	54	38	14	19 58	37 63	45 28	
4	240	25.5	17.7	189	00.4 ¹⁴⁵	-9 56.8	80	52	35	10	52	33 61	50 29	
5	255	25.7	+6 16.8	203	33.9 ¹⁴⁵	-10 04.7	79	50	18 32	19 06	19 45	10 29 60	20 54 31	
6	270	25.9	+6 15.9	218	07.4 ¹⁴⁵	-10 12.6	79	45	18 27	18 57	19 33	10 20 57	21 04 33	
7	285	26.1	14.9	232	40.8 ¹⁴⁴	20.5	79	40	23	50	23	12 55	13 34	
8	300	26.3	14.0	247	14.3 ¹⁴⁵	28.3	78	35	19	45	15	06 53	20 36	
9	315	26.5	13.1	261	47.7 ¹⁴⁴	36.1	78	30	16	40	19 09	10 00 52	26 38	
10	330	26.8	12.1	276	21.1 ¹⁴⁴	43.8	77	20	11	33	18 59	9 50 49	37 41	
11	345	27.0	+6 11.2	290	54.5 ¹⁴⁴	-10 51.5	77	10 N	18 06	18 27	18 52	9 42 47	21 46 43	
12	0	27.2	+6 10.3	305	27.9 ¹⁴⁴	-10 59.1	76	0	18 01	18 22	18 46	9 34 45	21 55 45	
13	15	27.4	09.3	320	01.3 ¹⁴⁴	-11 06.7	76	10 S	17 57	18	43	26 42	22 04 47	
14	30	27.6	08.4	334	34.6 ¹⁴³	14.2	75	20	53	15	40	18 40	14 49	
15	45	27.8	07.5	349	07.9 ¹⁴³	21.7	75	30	48	12	40	09 37	25 52	
16	60	28.0	06.5	3	41.2 ¹⁴³	29.2	75	35	45	10	40	9 03 36	32 53	
17	75	28.2	+6 05.6	18	14.4 ¹⁴²	-11 36.6	74	40	17 42	18 09	18 40	8 57 34	22 39 55	
18	90	28.5	+6 04.7	32	47.7 ¹⁴³	-11 43.9	73	45	17 38	18 08	18 42	8 50 31	22 47 57	
19	105	28.7	03.7	47	20.9 ¹⁴²	51.2	73	50	34	07	44	42 28	22 57 60	
20	120	28.9	02.8	61	54.1 ¹⁴²	-11 58.4	72	52	32	06	45	38 27	23 02 61	
21	135	29.1	01.9	76	27.3 ¹⁴²	-12 05.6	72	54	30	06	46	33 26	07 62	
22	150	29.3	+6 00.9	91	00.4 ¹⁴¹	12.8	72	56	28	05	48	29 24	13 64	
23	165	29.5	+6 00.0	105	33.5 ¹⁴¹	19.8	70	58	25	05	50	23 23	20 65	
24	180	29.7	+5 59.0	120	06.6 ¹⁴¹	-12 26.9	71	60 S	17 22	18 04	18 52	8 17 21	23 27 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 57 ^m 8		Mag: -3.8 PMG: 13 ^h 31 ^m		Mag: -0.2 PMG: 17 ^h 58 ^m		Mag: -1.7 PMG: 12 ^h 55 ^m		Mag: +0.5 PMG: 17 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	345	31.0	157	23.3	-2	32.6	90	09.8	-25	27.1
1	0	33.4	172	23.0		33.9	105	10.6		27.2
2	15	35.9	187	22.6		35.2	120	11.5		27.4
3	30	38.3	202	22.3		36.5	135	12.4		27.5
4	45	40.8	217	22.0		37.8	150	13.2		27.6
5	60	43.3	232	21.7	-2	39.0	165	14.1	-25	27.7
6	75	45.7	247	21.4	-2	40.3	180	15.0	-25	27.9
7	90	48.2	262	21.0		41.6	195	15.8		28.0
8	105	50.7	277	20.7		42.9	210	16.7		28.1
9	120	53.1	292	20.4		44.2	225	17.5		28.2
10	135	55.6	307	20.1		45.5	240	18.4		28.3
11	150	58.1	322	19.8	-2	46.8	255	19.3	-25	28.5
12	166	00.5	337	19.5	-2	48.0	270	20.1	-25	28.6
13	181	03.0	352	19.1		49.3	285	21.0		28.7
14	196	05.5	7	18.8		50.6	300	21.8		28.8
15	211	07.9	22	18.5		51.9	315	22.7		28.9
16	226	10.4	37	18.2		53.2	330	23.5		29.1
17	241	12.8	52	17.9	-2	54.5	345	24.4	-25	29.2
18	256	15.3	67	17.5	-2	55.8	0	25.3	-25	29.3
19	271	17.8	82	17.2		57.0	15	26.1		29.4
20	286	20.2	97	16.9		58.3	30	27.0		29.5
21	301	22.7	112	16.6	-2	59.6	45	27.8		29.7
22	316	25.2	127	16.3	-3	00.9	60	28.7		29.8
23	331	27.6	142	16.0		02.2	75	29.5		29.9
24	346	30.1	157	15.6	-3	03.5	90	30.4	-25	30.0
Dif	—		-3	-13		+9	-1	+20		-2
									+24	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 57 ^m 8			Edad: 5 ^d 6 SD: 14'7 PMG: 16 ^h 29 ^m	PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 R°: 46 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	29.7	+5	59.0	120	06.6	-12 26.9	60 N	3 31	4 26	5 10	12 03	66	20 49	28	
1	195	29.9		58.1	134	39.7 ¹⁴¹	33.9 ⁷⁰	58	42	33	13	11 54	64	20 58	29	
2	210	30.2		57.2	149	12.7 ¹⁴⁰	40.8 ⁶⁹	56	51	38	17	47 62		21 06	31	
3	225	30.4		56.2	163	45.7 ¹⁴⁰	47.7 ⁶⁹	54	3 58	43	19	40 61		13 32		
4	240	30.6		55.3	178	18.7 ¹⁴⁰	-12 54.5 ⁶⁸	52	4 05	47	22	34 60		19 34		
5	255	30.8	+5	54.4	192	51.7 ¹⁴⁰	-13 01.3 ⁶⁸	50	4 11	4 51	5 24	11 29	58	21 25	35	
6	270	31.0	+5	53.4	207	24.6 ¹³⁹	-13 08.0 ⁶⁷	45	4 24	5 00	5 29	11 17	56	21 37	37	
7	285	31.2		52.5	221	57.5 ¹³⁹	14.6 ⁶⁶	40	34	06	34	11 07	55	47 39		
8	300	31.4		51.6	236	30.4 ¹³⁹	21.2 ⁶⁶	35	41	12	37	10 59	53	21 56	40	
9	315	31.7		50.6	251	03.2 ¹³⁸	27.8 ⁶⁶	30	48	16	40	52 52		22 04	41	
10	330	31.9		49.7	265	36.1 ¹³⁹	34.2 ⁶⁴	20	4 58	24	46	39 50		18 43		
11	345	32.1	+5	48.7	280	08.9 ¹³⁸	-13 40.7 ⁶⁵	10 N	5 05	5 29	5 50	10 29	47	22 29	45	
12	0	32.3	+5	47.8	294	41.6 ¹³⁷	-13 47.0 ⁶³	0	5 10	5 34	5 55	10 19	45	22 40	47	
13	15	32.5		46.9	309	14.3 ¹³⁷	53.3 ⁶³	10 S	13	38	5 59	10 08	44	22 51	48	
14	30	32.7		45.9	323	47.0 ¹³⁷	-13 59.6 ⁶³	20	15	41	6 03	9 58	42	23 03	50	
15	45	32.9		45.0	338	19.7 ¹³⁷	-14 05.8 ⁶²	30	16	44	08	46 39		17 51		
16	60	33.2		44.0	352	52.3 ¹³⁶	11.9 ⁶¹	35	16	45	10	39 38		25 52		
17	75	33.4	+5	43.1	7	24.9 ¹³⁶	-14 18.0 ⁶¹	40	5 15	5 46	6 13	9 31	36	23 34	54	
18	90	33.6	+5	42.2	21	57.5 ¹³⁶	-14 24.0 ⁶⁰	45	5 14	5 48	6 17	9 21	35	23 44	56	
19	105	33.8		41.2	36	30.0 ¹³⁵	29.9 ⁵⁹	50	11	49	21	10 33		23 57	57	
20	120	34.0		40.3	51	02.6 ¹³⁶	35.8 ⁵⁹	52	10	49	23	9 05	32	** ** *	**	
21	135	34.2		39.3	65	35.0 ¹³⁴	41.6 ⁵⁸	54	09	50	25	8 59	31	** ** *	**	
22	150	34.4		38.4	80	07.5 ¹³⁵	47.4 ⁵⁸	56	07	50	27	53 29		** ** *	**	
23	165	34.7		37.5	94	39.9 ¹³⁴	53.1 ⁵⁷	58	05	50	29	46 27		** ** *	**	
24	180	34.9	+5	36.5	109	12.2 ¹³³	-14 58.7 ⁵⁶	60 S	5 03	5 51	6 32	8 38	26	** ** *	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 53 ^m 8		Mag: -3.8 PMG: 13 ^h 31 ^m			Mag: -0.2 PMG: 17 ^h 57 ^m			Mag: -1.7 PMG: 12 ^h 52 ^m			Mag: +0.5 PMG: 17 ^h 27 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	346	30.1	157	15.6	-3	03.5	90	30.4	-25	30.0	166	32.9	+1	12.8	97	37.4
1	1	32.6	172	15.3		04.8	105	31.2		30.1	181	34.9		12.6	112	39.8
2	16	35.0	187	15.0		06.0	120	32.1		30.2	196	36.9		12.4	127	42.1
3	31	37.5	202	14.7		07.3	135	32.9		30.4	211	38.8		12.2	142	44.5
4	46	40.0	217	14.4		08.6	150	33.8		30.5	226	40.8		11.9	157	46.8
5	61	42.4	232	14.0	-3	09.9	165	34.6	-25	30.6	241	42.8	+1	11.7	172	49.2
6	76	44.9	247	13.7	-3	11.2	180	35.5	-25	30.7	256	44.8	+1	11.5	187	51.6
7	91	47.3	262	13.4		12.5	195	36.3		30.8	271	46.8		11.3	202	53.9
8	106	49.8	277	13.1		13.7	210	37.2		30.9	286	48.7		11.1	217	56.3
9	121	52.3	292	12.8		15.0	225	38.0		31.1	301	50.7		10.9	232	58.7
10	136	54.7	307	12.4		16.3	240	38.9		31.2	316	52.7		10.7	248	01.0
11	151	57.2	322	12.1	-3	17.6	255	39.7	-25	31.3	331	54.7	+1	10.5	263	03.4
12	166	59.7	337	11.8	-3	18.9	270	40.5	-25	31.4	346	56.6	+1	10.2	278	05.7
13	182	02.1	352	11.5		20.2	285	41.4		31.5	1	58.6		10.0	293	08.1
14	197	04.6	7	11.2		21.4	300	42.2		31.6	17	00.6		09.8	308	10.5
15	212	07.1	22	10.8		22.7	315	43.1		31.7	32	02.6		09.6	323	12.8
16	227	09.5	37	10.5		24.0	330	43.9		31.9	47	04.5		09.4	338	15.2
17	242	12.0	52	10.2	-3	25.3	345	44.8	-25	32.0	62	06.5	+1	09.2	353	17.5
18	257	14.4	67	09.9	-3	26.6	0	45.6	-25	32.1	77	08.5	+1	09.0	8	19.9
19	272	16.9	82	09.6		27.9	15	46.5		32.2	92	10.5		08.8	23	22.3
20	287	19.4	97	09.2		29.1	30	47.3		32.3	107	12.5		08.5	38	24.6
21	302	21.8	112	08.9		30.4	45	48.1		32.4	122	14.4		08.3	53	27.0
22	317	24.3	127	08.6		31.7	60	49.0		32.5	137	16.4		08.1	68	29.3
23	332	26.8	142	08.3		33.0	75	49.8		32.6	152	18.4		07.9	83	31.7
24	347	29.2	157	08.0	-3	34.3	90	50.7	-25	32.8	167	20.4	+1	07.7	98	34.0
Dif	—		-3		-13		+8		-1		+20		-2		+24	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9		Edad: 6 ^d 6	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 48 ^m											
	PMG: 11 ^h 57 ^m 5														
	hG ☉	Dec			hG ☾	Dif			Dec	Dif					
Civil	Náutico	Hora	R°	Hora	R°										
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	34.9	+5	36.5	109	12.2	-14 58.7	56	60 N	18 41	19 24	20 19	13 09 61	21 17 35	
1	195	35.1		35.6	123	44.6 ¹³⁴	-15 04.3	56	58	38	19	09	12 58 61	27 37	
2	210	35.3		34.6	138	16.9 ¹³³	09.8	55	56	35	13	20 00	49 59	37 38	
3	225	35.5		33.7	152	49.2 ¹³³	15.2	54	54	33	09	19 53	41 58	45 39	
4	240	35.7		32.8	167	21.4 ¹³²	20.6	54	52	30	05	46	34 57	21 53 39	
5	255	35.9	+5	31.8	181	53.6 ¹³²	-15 25.9	53	50	18 28	19 01	19 41	12 27 57	22 00 40	
6	270	36.2	+5	30.9	196	25.8 ¹³²	-15 31.2	53	45	18 24	18 53	19 29	12 13 55	22 14 42	
7	285	36.4		29.9	210	57.9 ¹³¹	36.3	51	40	20	47	19	12 02 53	26 43	
8	300	36.6		29.0	225	30.0 ¹³¹	41.4	51	35	16	42	12	11 52 52	36 44	
9	315	36.8		28.1	240	02.0 ¹³⁰	46.5	51	30	14	38	19 06	44 51	22 45 45	
10	330	37.0		27.1	254	34.1 ¹³¹	51.4	49	20	09	31	18 57	29 50	23 01 45	
11	345	37.2	+5	26.2	269	06.0 ¹²⁹	-15 56.3	49	10 N	18 05	18 26	18 50	11 16 48	23 14 47	
12	0	37.5	+5	25.2	283	38.0 ¹³⁰	-16 01.2	49	0	18 01	18 22	18 46	11 04 47	23 27 48	
13	15	37.7		24.3	298	09.9 ¹²⁹	05.9	47	10 S	17 57	18	43	10 52 46	39 49	
14	30	37.9		23.3	312	41.8 ¹²⁹	10.6	47	20	53	15	41	40 44	23 53 50	
15	45	38.1		22.4	327	13.6 ¹²⁸	15.2	46	30	49	13	41	25 43	** ** *	
16	60	38.3		21.5	341	45.4 ¹²⁸	19.8	46	35	47	12	41	17 42	** ** *	
17	75	38.5	+5	20.5	356	17.2 ¹²⁸	-16 24.2	44	40	17 44	18 11	18 42	10 07 41	** ** *	
18	90	38.8	+5	19.6	10	48.9 ¹²⁷	-16 28.6	44	45	17 41	18 10	18 44	9 56 39	** ** *	
19	105	39.0		18.6	25	20.6 ¹²⁷	33.0	44	50	37	09	47	43 37	** ** *	
20	120	39.2		17.7	39	52.2 ¹²⁶	37.2	42	52	35	09	48	37 36	0 03 58	
21	135	39.4		16.7	54	23.8 ¹²⁶	41.4	42	54	34	09	50	30 35	09 60	
22	150	39.6		15.8	68	55.4 ¹²⁶	45.5	41	56	32	09	52	22 35	17 60	
23	165	39.8		14.9	83	27.0 ¹²⁶	49.5	40	58	29	09	54	13 34	25 62	
24	180	40.1	+5	13.9	97	58.5 ¹²⁵	-16 53.5	40	60 S	17 27	18 09	18 57	9 04 31	0 34 64	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -3.8			Mag: -0.2			Mag: -1.7			Mag: +0.5			
	0 ^h 49 ^m 9		PMG: 13 ^h 32 ^m			PMG: 17 ^h 56 ^m			PMG: 12 ^h 49 ^m			PMG: 17 ^h 23 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♏	Dec	hG ♏	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	347	29.2	157 08.0	-3 34.3	90 50.7	-25 32.8	167 20.4	+1 07.7	98 34.0	-20 29.4					
1	2	31.7	172 07.6	35.6	105 51.5	32.9	182 22.3	07.5	113 36.4	29.4					
2	17	34.2	187 07.3	36.8	120 52.3	33.0	197 24.3	07.3	128 38.8	29.4					
3	32	36.6	202 07.0	38.1	135 53.2	33.1	212 26.3	07.1	143 41.1	29.5					
4	47	39.1	217 06.7	39.4	150 54.0	33.2	227 28.3	06.8	158 43.5	29.5					
5	62	41.6	232 06.4	-3 40.7	165 54.8	-25 33.3	242 30.2	+1 06.6	173 45.8	-20 29.5					
6	77	44.0	247 06.0	-3 42.0	180 55.7	-25 33.4	257 32.2	+1 06.4	188 48.2	-20 29.5					
7	92	46.5	262 05.7	43.3	195 56.5	33.5	272 34.2	06.2	203 50.5	29.6					
8	107	48.9	277 05.4	44.5	210 57.3	33.6	287 36.2	06.0	218 52.9	29.6					
9	122	51.4	292 05.1	45.8	225 58.2	33.7	302 38.2	05.8	233 55.3	29.6					
10	137	53.9	307 04.7	47.1	240 59.0	33.9	317 40.1	05.6	248 57.6	29.6					
11	152	56.3	322 04.4	-3 48.4	255 59.9	-25 34.0	332 42.1	+1 05.4	264 00.0	-20 29.6					
12	167	58.8	337 04.1	-3 49.7	271 00.7	-25 34.1	347 44.1	+1 05.1	279 02.3	-20 29.7					
13	183	01.3	352 03.8	50.9	286 01.5	34.2	2 46.1	04.9	294 04.7	29.7					
14	198	03.7	7 03.5	52.2	301 02.3	34.3	17 48.0	04.7	309 07.0	29.7					
15	213	06.2	22 03.1	53.5	316 03.2	34.4	32 50.0	04.5	324 09.4	29.7					
16	228	08.7	37 02.8	54.8	331 04.0	34.5	47 52.0	04.3	339 11.8	29.8					
17	243	11.1	52 02.5	-3 56.1	346 04.8	-25 34.6	62 54.0	+1 04.1	354 14.1	-20 29.8					
18	258	13.6	67 02.2	-3 57.3	1 05.7	-25 34.7	77 55.9	+1 03.9	9 16.5	-20 29.8					
19	273	16.1	82 01.8	58.6	16 06.5	34.8	92 57.9	03.7	24 18.8	29.8					
20	288	18.5	97 01.5	-3 59.9	31 07.3	34.9	107 59.9	03.4	39 21.2	29.9					
21	303	21.0	112 01.2	-4 01.2	46 08.2	35.0	123 01.9	03.2	54 23.5	29.9					
22	318	23.4	127 00.9	02.5	61 09.0	35.1	138 03.8	03.0	69 25.9	29.9					
23	333	25.9	142 00.6	03.7	76 09.8	35.2	153 05.8	02.8	84 28.2	29.9					
24	348	28.4	157 00.2	-4 05.0	91 10.6	-25 35.4	168 07.8	+1 02.6	99 30.6	-20 30.0					
Dif	—		-3	-13	+8	-1	+20	-2	+24	0					

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: 7 ^d 6 SD: 14'9 PMG: 18 ^h 03 ^m	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 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	40.1	+5 13.9	97	58.5	-16 53.5	39	60 N	3	37	4	31	5	15	14	10
1	195	40.3		112	29.9 ¹²⁴	-16 57.4	39	58		47		37		18	13	59
2	210	40.5		127	01.3 ¹²⁴	-17 01.2	38	56	3	55	42		20		48	55
3	225	40.7		141	32.7 ¹²⁴		04.9	54	4	03	47		23		39	54
4	240	40.9		156	04.1 ¹²⁴		08.6	52		09	51		25		31	54
5	255	41.1	+5 09.2	170	35.4 ¹²³	-17 12.2	36	50	4	15	4	54	5	27	13	24
6	270	41.4	+5 08.2	185	06.6 ¹²²	-17 15.7	35	45	4	27	5	02	5	32	13	08
7	285	41.6		199	37.9 ¹²³		19.1	40		36		08	36		12	55
8	300	41.8		214	09.0 ¹²¹		22.4	34		36		08	36		12	55
9	315	42.0		228	40.2 ¹²²		25.7	33		43		13	39		44	52
10	330	42.2		243	11.3 ¹²¹		28.9	32		49		17	41		35	51
11	345	42.5	+5 03.5	257	42.4 ¹²¹	-17 32.0	31	20	4	58	24		46		19	50
12								10 N	5	05	5	29	5	50	12	04
12	0	42.7	+5 02.6	272	13.4 ¹²⁰	-17 35.0	30	0	5	09	5	33	5	54	11	51
13	15	42.9		286	44.4 ¹²⁰		37.9	10 S		12		36	5	57		38
14	30	43.1	+5 00.7	301	15.3 ¹¹⁹		40.8	29		14	39	6	01		24	47
15	45	43.3	+4 59.7	315	46.3 ¹²⁰		43.6	28		14		41	05		11	08
16	60	43.5		330	17.1 ¹¹⁸		46.3	27		13	42		08		10	59
17	75	43.8	+4 57.8	344	48.0 ¹¹⁹	-17 48.9	26	40	5	12	5	43	6	10	10	48
18	90	44.0	+4 56.9	359	18.8 ¹¹⁸	-17 51.4	25	45	5	10	5	44	6	13	10	35
19	105	44.2		13	49.5 ¹¹⁷		53.9	25		07	44		17		20	44
20	120	44.4		28	20.2 ¹¹⁷		56.2	23		06	45		18		13	43
21	135	44.6		42	50.9 ¹¹⁷	-17 58.5	23	52		06	45		20		10	05
22	150	44.9		57	21.6 ¹¹⁷	-18 00.7	22	54		04	45		20		10	05
23	165	45.1		71	52.2 ¹¹⁶		02.8	21		5	02	45	22		9	57
24	180	45.3	+4 51.2	86	22.7 ¹¹⁵	-18 04.8	20	58	4	59	45	24			47	41
								60 S	4	57	5	45	6	26	9	35

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: 8 ^d 6 SD: 15°0 PMG: 18 ^h 52 ^m	PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 R°: 51 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	45.3	+4	51.2	86	22.7	-18	04.8	18	35	19	18	20	11	15	06
1	195	45.5		50.3	100	53.3 ¹¹⁶		06.8	20	58	32	13	20	02	14	54
2	210	45.7		49.3	115	23.8 ¹¹⁵		08.6	18	56	30	08	19	54	43	49
3	225	45.9		48.4	129	54.2 ¹¹⁴		10.4	18	54	28	04	47	33	49	10
4	240	46.2		47.4	144	24.6 ¹¹⁴		12.1	17	52	26	19	00	41	25	49
5	255	46.4	+4	46.5	158	55.0 ¹¹⁴	-18	13.7	16	50	18	24	18	57	14	17
6	270	46.6	+4	45.5	173	25.3 ¹¹³	-18	15.2	15	45	18	20	18	49	14	01
7	285	46.8		44.6	187	55.6 ¹¹³		16.6	14	40	16	44	16	13	47	50
8	300	47.0		43.6	202	25.9 ¹¹³		17.9	13	35	14	39	09	36	50	23
9	315	47.3		42.7	216	56.1 ¹¹²		19.1	12	30	11	35	19	03	26	50
10	330	47.5		41.7	231	26.3 ¹¹²		20.3	12	20	07	29	18	55	13	09
11	345	47.7	+4	40.8	245	56.4 ¹¹¹	-18	21.4	11	10 N	18	03	18	24	12	54
12	0	47.9	+4	39.8	260	26.6 ¹¹²	-18	22.3	9	0	18	00	18	21	12	40
13	15	48.1		38.9	274	56.6 ¹¹⁰		23.2	9	10 S	17	57	18	42	26	50
14	30	48.4		37.9	289	26.7 ¹¹¹		24.0	8	20	54	16	41	12	11	51
15	45	48.6		37.0	303	56.7 ¹¹⁰		24.7	7	30	50	14	42	11	54	51
16	60	48.8		36.0	318	26.6 ¹⁰⁹		25.3	6	35	48	13	43	44	51	1
17	75	49.0	+4	35.1	332	56.6 ¹¹⁰	-18	25.8	5	40	17	46	18	13	11	33
18	90	49.2	+4	34.1	347	26.5 ¹⁰⁹	-18	26.2	4	45	17	43	18	12	11	20
19	105	49.5		33.2	1	56.3 ¹⁰⁸		26.6	4	50	40	12	50	11	04	51
20	120	49.7		32.2	16	26.1 ¹⁰⁸		26.8	2	52	39	12	51	10	56	51
21	135	49.9		31.3	30	55.9 ¹⁰⁸		27.0	2	54	37	12	53	48	51	2
22	150	50.1		30.3	45	25.7 ¹⁰⁸		27.0	0	56	35	13	56	39	50	14
23	165	50.3		29.4	59	55.4 ¹⁰⁷		27.0	0	58	34	13	18	58	28	50
24	180	50.6	+4	28.4	74	25.1 ¹⁰⁷	-18	26.8	2	60 S	17	32	18	13	10	16

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG		Mag: -3.8		Mag: -0.2		Mag: -1.7			Mag: +0.5		
	0 ^h 42 ^m 1		PMG: 13 ^h 33 ^m		PMG: 17 ^h 53 ^m		PMG: 12 ^h 43 ^m			PMG: 17 ^h 15 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec
h	°	'	°	'	°	'	°	'	°	'	°	'
0	349	27.5	156	52.4	-4	35.7	91	30.3	-25	37.8	168	55.2
1	4	30.0	171	52.1		37.0	106	31.2		37.9	183	57.2
2	19	32.4	186	51.8		38.3	121	32.0		38.0	198	59.2
3	34	34.9	201	51.5		39.5	136	32.8		38.1	214	01.1
4	49	37.4	216	51.1		40.8	151	33.6		38.2	229	03.1
5	64	39.8	231	50.8	-4	42.1	166	34.4	-25	38.3	244	05.1
6	79	42.3	246	50.5	-4	43.4	181	35.2	-25	38.4	259	07.1
7	94	44.8	261	50.2		44.6	196	36.0		38.5	274	09.0
8	109	47.2	276	49.8		45.9	211	36.8		38.6	289	11.0
9	124	49.7	291	49.5		47.2	226	37.7		38.7	304	13.0
10	139	52.2	306	49.2		48.5	241	38.5		38.8	319	15.0
11	154	54.6	321	48.9	-4	49.7	256	39.3	-25	38.9	334	16.9
12	169	57.1	336	48.5	-4	51.0	271	40.1	-25	39.0	349	18.9
13	184	59.5	351	48.2		52.3	286	40.9		39.1	4	20.9
14	200	02.0	6	47.9		53.6	301	41.7		39.2	19	22.9
15	215	04.5	21	47.5		54.8	316	42.5		39.3	34	24.8
16	230	06.9	36	47.2		56.1	331	43.3		39.4	49	26.8
17	245	09.4	51	46.9	-4	57.4	346	44.1	-25	39.5	64	28.8
18	260	11.9	66	46.6	-4	58.7	1	44.9	-25	39.5	79	30.8
19	275	14.3	81	46.2	-4	59.9	16	45.7		39.6	94	32.7
20	290	16.8	96	45.9	-5	01.2	31	46.5		39.7	109	34.7
21	305	19.3	111	45.6		02.5	46	47.3		39.8	124	36.7
22	320	21.7	126	45.2		03.7	61	48.2		39.9	139	38.7
23	335	24.2	141	44.9		05.0	76	49.0		40.0	154	40.6
24	350	26.6	156	44.6	-5	06.3	91	49.8	-25	40.1	169	42.6
Dif	—		-3 -13		+8 -1		+20 -2			+23 0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 5			Edad: 9 ^d 6 SD: 15'1 PMG: 19 ^h 43 ^m	PHE { 4 ^h : 55'7 12 ^h : 56'0 20 ^h : 56'2 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	180	50.6	+4	28.4	74	25.1	-18	26.8	60 N	3 43	4 36	5 19	15 55	40	23 33	66
1	195	50.8		27.5	88	54.7 ¹⁰⁶		26.6	58	3 52	42	22	42	42	45	65
2	210	51.0		26.5	103	24.4 ¹⁰⁷		26.3	56	4 00	46	24	32	42	23 56	64
3	225	51.2		25.6	117	53.9 ¹⁰⁵		25.9	54	07	51	27	22	44	***	***
4	240	51.4		24.6	132	23.5 ¹⁰⁶		25.3	52	13	54	29	14	44	***	***
5	255	51.7	+4	23.7	146	53.0 ¹⁰⁵	-18	24.7	50	4 18	4 58	5 30	15 06	45	***	***
6	270	51.9	+4	22.7	161	22.5 ¹⁰⁵	-18	24.0	45	4 29	5 05	5 34	14 50	46	***	***
7	285	52.1		21.8	175	51.9 ¹⁰⁴		23.2	40	38	10	37	37	47	***	***
8	300	52.3		20.8	190	21.4 ¹⁰⁵		22.3	35	45	15	40	26	48	0 08	53
9	315	52.5		19.9	204	50.8 ¹⁰⁴		21.3	30	50	18	43	14 16	48	18	52
10	330	52.8		18.9	219	20.1 ¹⁰³		20.3	20	4 59	24	47	13 59	50	35	52
11	345	53.0	+4	18.0	233	49.4 ¹⁰³	-18	19.1	10 N	5 04	5 29	5 50	13 44	51	0 50	51
12	0	53.2	+4	17.0	248	18.7 ¹⁰³	-18	17.8	0	5 08	5 32	5 53	13 30	52	1 04	51
13	15	53.4		16.1	262	48.0 ¹⁰³		16.4	10 S	11	35	56	16	53	18	50
14	30	53.6		15.1	277	17.2 ¹⁰²		14.9	20	12	37	5 59	13 02	53	33	50
15	45	53.9		14.1	291	46.4 ¹⁰²		13.4	30	11	39	6 03	12 45	54	1 50	49
16	60	54.1		13.2	306	15.6 ¹⁰²		11.7	35	10	40	05	35	55	2 00	49
17	75	54.3	+4	12.2	320	44.8 ¹⁰²	-18	09.9	40	5 09	5 40	6 07	12 24	56	2 11	48
18	90	54.5	+4	11.3	335	13.9 ¹⁰¹	-18	08.0	45	5 06	5 40	6 09	12 11	56	2 24	48
19	105	54.7		10.3	349	43.0 ¹⁰¹		06.1	50	03	40	12	11 55	57	41	47
20	120	55.0		09.4	4	12.0 ¹⁰⁰		04.0	52	5 01	40	14	47	58	48	47
21	135	55.2		08.4	18	41.1 ¹⁰¹	-18	01.9	54	4 59	40	15	39	58	2 57	46
22	150	55.4		07.5	33	10.1 ¹⁰⁰	-17	59.6	56	57	40	17	29	60	3 06	46
23	165	55.6		06.5	47	39.0 ⁹⁹		57.2	58	54	39	18	18	61	17	45
24	180	55.9	+4	05.6	62	08.0 ¹⁰⁰	-17	54.8	60 S	4 51	5 39	6 20	11 06	61	3 29	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 38 ^m 1		Mag: -3.8 PMG: 13 ^h 33 ^m		Mag: -0.2 PMG: 17 ^h 52 ^m		Mag: -1.7 PMG: 12 ^h 39 ^m		Mag: +0.5 PMG: 17 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	350	26.6	156	44.6	-5	06.3	91	49.8	-25	40.1
1	5	29.1	171	44.3		07.6	106	50.6		40.2
2	20	31.6	186	43.9		08.8	121	51.4		40.3
3	35	34.0	201	43.6		10.1	136	52.2		40.4
4	50	36.5	216	43.3		11.4	151	53.0		40.5
5	65	39.0	231	42.9	-5	12.7	166	53.8	-25	40.6
6	80	41.4	246	42.6	-5	13.9	181	54.6	-25	40.7
7	95	43.9	261	42.3		15.2	196	55.4		40.8
8	110	46.4	276	42.0		16.5	211	56.2		40.8
9	125	48.8	291	41.6		17.7	226	57.0		40.9
10	140	51.3	306	41.3		19.0	241	57.8		41.0
11	155	53.8	321	41.0	-5	20.3	256	58.6	-25	41.1
12	170	56.2	336	40.6	-5	21.6	271	59.4	-25	41.2
13	185	58.7	351	40.3		22.8	287	00.2		41.3
14	201	01.1	6	40.0		24.1	302	01.0		41.4
15	216	03.6	21	39.6		25.4	317	01.8		41.5
16	231	06.1	36	39.3		26.6	332	02.6		41.6
17	246	08.5	51	39.0	-5	27.9	347	03.3	-25	41.6
18	261	11.0	66	38.6	-5	29.2	2	04.1	-25	41.7
19	276	13.5	81	38.3		30.4	17	04.9		41.8
20	291	15.9	96	38.0		31.7	32	05.7		41.9
21	306	18.4	111	37.6		33.0	47	06.5		42.0
22	321	20.9	126	37.3		34.3	62	07.3		42.1
23	336	23.3	141	37.0		35.5	77	08.1		42.2
24	351	25.8	156	36.7	-5	36.8	92	08.9	-25	42.3
Dif	—		-3		-13		+8		-1	
								+20		-2
									+23	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 1			Edad: 10 ^d 6 PHE { SD: 15'3 PMG: 20 ^h 34 ^m 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'0 R°: 53 ^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	180	55.9	+4	05.6	62	08.0	-17 54.8	60 N	18 29	19 12	20 04	16 35 33	** ** *	** ** *
1	195	56.1		04.6	76	36.9	52.2	58	27	07	19 56	24 35	** ** *	** ** *
2	210	56.3		03.7	91	05.8	49.6	56	25	19 02	48	14 37	** ** *	** ** *
3	225	56.5		02.7	105	34.7	46.8	54	23	18 59	42	16 06 38	0 05 66	
4	240	56.7		01.7	120	03.5	44.0	52	21	55	36	15 58 39	13 62	
5	255	57.0	+4	00.8	134	32.4	-17 41.0	50	18 19	18 52	19 31	15 51 40	0 21 61	
6	270	57.2	+3	59.8	149	01.2	-17 38.0	45	18 16	18 46	19 21	15 36 43	0 37 59	
7	285	57.4		58.9	163	29.9	34.8	40	13	40	12	24 44	0 50 58	
8	300	57.6		57.9	177	58.7	31.6	35	11	36	06	14 45	1 01 57	
9	315	57.8		57.0	192	27.4	28.2	30	09	33	19 01	15 04 47	10 57	
10	330	58.1		56.0	206	56.1	24.8	20	05	27	18 53	14 49 49	27 55	
11	345	58.3	+3	55.1	221	24.8	-17 21.2	10 N	18 02	18 23	18 48	14 35 51	1 41 54	
12	0	58.5	+3	54.1	235	53.5	-17 17.6	0	17 59	18 20	18 44	14 22 52	1 55 52	
13	15	58.7		53.2	250	22.1	13.8	10 S	57	18	42	14 09 54	2 08 51	
14	30	59.0		52.2	264	50.7	10.0	20	54	16	42	13 55 56	23 49	
15	45	59.2		51.2	279	19.3	06.0	30	51	15	43	39 58	39 48	
16	60	59.4		50.3	293	47.9	-17 02.0	35	49	15	44	30 59	49 46	
17	75	59.6	+3	49.3	308	16.4	-16 57.8	40	17 48	18 15	18 46	13 20 60	2 59 46	
18	90	59.8	+3	48.4	322	45.0	-16 53.6	45	17 45	18 15	18 49	13 07 63	3 12 44	
19	106	00.1		47.4	337	13.5	49.2	50	43	15	53	12 52 65	28 42	
20	121	00.3		46.5	351	42.0	44.8	52	42	16	55	45 66	35 41	
21	136	00.5		45.5	6	10.5	40.3	54	41	16	18 57	37 67	43 40	
22	151	00.7		44.5	20	38.9	35.6	56	39	16	19 00	29 68	3 52 39	
23	166	01.0		43.6	35	07.4	30.9	58	38	17	03	19 69	4 02 38	
24	181	01.2	+3	42.6	49	35.8	-16 26.0	60 S	17 36	18 18	19 06	12 07 72	4 13 37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 34 ^m 2		Mag: -3.8 PMG: 13 ^h 34 ^m		Mag: -0.1 PMG: 17 ^h 50 ^m		Mag: -1.7 PMG: 12 ^h 36 ^m		Mag: +0.5 PMG: 17 ^h 08 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	351	25.8	156	36.7	-5	36.8	92	08.9	-25	42.3
1	6	28.3	171	36.3		38.1	107	09.7		42.3
2	21	30.7	186	36.0		39.3	122	10.5		42.4
3	36	33.2	201	35.7		40.6	137	11.3		42.5
4	51	35.6	216	35.3		41.9	152	12.1		42.6
5	66	38.1	231	35.0	-5	43.1	167	12.9	-25	42.7
6	81	40.6	246	34.7	-5	44.4	182	13.6	-25	42.8
7	96	43.0	261	34.3		45.7	197	14.4		42.9
8	111	45.5	276	34.0		46.9	212	15.2		42.9
9	126	48.0	291	33.7		48.2	227	16.0		43.0
10	141	50.4	306	33.3		49.5	242	16.8		43.1
11	156	52.9	321	33.0	-5	50.7	257	17.6	-25	43.2
12	171	55.4	336	32.6	-5	52.0	272	18.4	-25	43.3
13	186	57.8	351	32.3		53.3	287	19.2		43.4
14	202	00.3	6	32.0		54.5	302	19.9		43.4
15	217	02.7	21	31.6		55.8	317	20.7		43.5
16	232	05.2	36	31.3		57.1	332	21.5		43.6
17	247	07.7	51	31.0	-5	58.3	347	22.3	-25	43.7
18	262	10.1	66	30.6	-5	59.6	2	23.1	-25	43.8
19	277	12.6	81	30.3	-6	00.9	17	23.9		43.8
20	292	15.1	96	30.0		02.1	32	24.7		43.9
21	307	17.5	111	29.6		03.4	47	25.4		44.0
22	322	20.0	126	29.3		04.7	62	26.2		44.1
23	337	22.5	141	29.0		05.9	77	27.0		44.2
24	352	24.9	156	28.6	-6	07.2	92	27.8	-25	44.2
Dif	—		-3		-13		+8		-1	
								+20		-2
									+23	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 7			Edad: 11 ^d 6 PHE { 4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/9 PMG: 21 ^h 27 ^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	
0	181	01.2	+3 42.6	49	35.8	-16	26.0	49	60 N	3	49	4	41	5	24	17	08
1	196	01.4		41.7		21.1	49	58		3	57		46	26	16	59	
2	211	01.6		40.7		16.1	50	56		4	04		50	28	51	31	
3	226	01.8		39.8		11.0	51	54		11			54	30	44	33	
4	241	02.1		38.8		05.7	53	52		17	4	58	32	37	33	35	
5	256	02.3	+3	37.8		-16	00.4	53	50	4	22	5	01	5	33	16	31
6	271	02.5	+3	36.9		-15	55.0	54	45	4	32	5	07	5	37	16	19
7	286	02.7		35.9		49.5	55	40		40		12	39		16	08	
8	301	03.0		35.0		43.9	56	35		46		16	42		15	59	
9	316	03.2		34.0		38.1	58	30		51		20	44		51	45	
10	331	03.4		33.1		32.3	58	20		4	59	25	47		38	48	
11	346	03.6	+3	32.1		-15	26.4	59	10 N	5	04	5	29	5	50	15	26
12	1	03.8	+3	31.1		-15	20.4	60	0	5	08	5	32	5	52	15	14
13	16	04.1		30.2		14.3	61	10	S	10		34	55		15	03	
14	31	04.3		29.2		08.2	61	20		10		36	5	58	14	51	
15	46	04.5		28.3		-15	01.9	63	30	09		36	6	00	37	61	
16	61	04.7		27.3		-14	55.5	64	35	07		37	02		29	63	
17	76	05.0	+3	26.4		-14	49.0	65	40	5	05	5	37	6	04	14	20
18	91	05.2	+3	25.4		-14	42.5	65	45	5	02	5	36	6	06	14	10
19	106	05.4		24.4		35.8	67	50		4	58	36	08		13	57	
20	121	05.6		23.5		29.0	68	52		56		35	09		51	71	
21	136	05.9		22.5		22.2	68	54		54		35	10		44	73	
22	151	06.1		21.6		15.3	69	56		51		34	11		37	74	
23	166	06.3		20.6		08.2	71	58		48		34	13		28	77	
24	181	06.5	+3	19.6		-14	01.1	71	60 S	4	44	5	33	6	14	13	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 30 ^m 3		Mag: -3.8 PMG: 13 ^h 34 ^m		Mag: -0.1 PMG: 17 ^h 49 ^m		Mag: -1.7 PMG: 12 ^h 33 ^m		Mag: +0.5 PMG: 17 ^h 04 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	352	24.9	156	28.6	-6	07.2	92	27.8	-25	44.2
1	7	27.4	171	28.3		08.4	107	28.6		44.3
2	22	29.9	186	27.9		09.7	122	29.3		44.4
3	37	32.3	201	27.6		11.0	137	30.1		44.5
4	52	34.8	216	27.3		12.2	152	30.9		44.6
5	67	37.2	231	26.9	-6	13.5	167	31.7	-25	44.6
6	82	39.7	246	26.6	-6	14.8	182	32.5	-25	44.7
7	97	42.2	261	26.3		16.0	197	33.2		44.8
8	112	44.6	276	25.9		17.3	212	34.0		44.9
9	127	47.1	291	25.6		18.5	227	34.8		45.0
10	142	49.6	306	25.2		19.8	242	35.6		45.0
11	157	52.0	321	24.9	-6	21.1	257	36.3	-25	45.1
12	172	54.5	336	24.6	-6	22.3	272	37.1	-25	45.2
13	187	57.0	351	24.2		23.6	287	37.9		45.3
14	202	59.4	6	23.9		24.9	302	38.7		45.3
15	218	01.9	21	23.6		26.1	317	39.4		45.4
16	233	04.4	36	23.2		27.4	332	40.2		45.5
17	248	06.8	51	22.9	-6	28.6	347	41.0	-25	45.6
18	263	09.3	66	22.5	-6	29.9	2	41.8	-25	45.6
19	278	11.7	81	22.2		31.2	17	42.5		45.7
20	293	14.2	96	21.9		32.4	32	43.3		45.8
21	308	16.7	111	21.5		33.7	47	44.1		45.9
22	323	19.1	126	21.2		34.9	62	44.9		45.9
23	338	21.6	141	20.8		36.2	77	45.6		46.0
24	353	24.1	156	20.5	-6	37.5	92	46.4	-25	46.1
Dif	—		-3 -13		+8 -1		+20 -2		-2 +23	

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: 12 ^d 6 PHE { 4 ^h : 58'2 12 ^h : 58'5 20 ^h : 58'8 SD: 15'8 PMG: 22 ^h 20 ^m R°: 53 ^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	181	06.5	+3 19.6	36	53.5	-14 01.1	60 N	18 23	19 05	19 57	17 35 23		1 55 81	
1	196	06.7		51	21.6	91 -13 53.9	72 58	21	19 01	49	28 26		2 03 80	
2	211	07.0		65	49.7	91 46.6	73 56	19	18 57	42	22 28		11 77	
3	226	07.2		80	17.7	90 39.2	74 54	18	53	36	17 30		18 75	
4	241	07.4		94	45.8	91 31.8	74 52	16	50	31	12 31		24 73	
5	256	07.6	+3 14.8	109	13.8	90 -13 24.2	76 50	18 15	18 47	19 26	17 07 33		2 29 72	
6	271	07.9	+3 13.9	123	41.9	91 -13 16.5	77 45	18 12	18 42	19 17	16 58 36		2 41 69	
7	286	08.1		138	09.9	90 08.8	77 40	10	37	09	49 40		51 66	
8	301	08.3		152	37.9	90 -13 01.0	78 35	08	33	19 03	42 42		2 59 64	
9	316	08.5		167	05.9	90 -12 53.1	79 30	06	30	18 58	36 44		3 06 62	
10	331	08.8		181	33.9	90 45.1	80 20	03	25	51	26 47		19 58	
11	346	09.0	+3 09.1	196	01.9	90 -12 37.0	81 10 N	18 01	18 22	18 46	16 16 51		3 30 55	
12	1	09.2	+3 08.1	210	29.9	90 -12 28.8	82 0	17 59	18 19	18 43	16 07 54		3 40 53	
13	16	09.4		224	57.9	90 20.6	82 10 S	57	18	42	15 59 56		3 50 50	
14	31	09.7		239	25.9	90 12.3	83 20	54	16	42	49 60		4 00 48	
15	46	09.9		253	53.9	90 -12 03.8	85 30	52	16	44	38 63		13 44	
16	61	10.1		268	21.8	89 -11 55.3	85 35	51	16	45	32 65		20 42	
17	76	10.3	+3 03.3	282	49.8	90 -11 46.8	85 40	17 49	18 16	18 48	15 25 68		4 28 40	
18	91	10.5	+3 02.4	297	17.7	89 -11 38.1	87 45	17 48	18 17	18 51	15 17 70		4 37 37	
19	106	10.8		311	45.7	90 29.4	87 50	46	18	56	07 74		48 34	
20	121	11.0	+3 00.4	326	13.6	89 20.6	88 52	45	19	18 58	15 02 76		53 33	
21	136	11.2	+2 59.5	340	41.5	89 11.7	89 54	44	19	19 01	14 57 77		4 59 31	
22	151	11.4		355	09.4	89 -11 02.7	90 56	43	20	04	51 80		5 05 29	
23	166	11.7		5	37.4	90 -10 53.7	90 58	42	21	07	45 81		12 27	
24	181	11.9	+2 56.6	24	05.3	89 -10 44.5	92 60 S	17 41	18 22	19 11	14 38 84		5 20 25	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 0 ^h 26 ^m 3		Mag: -3.9 PMG: 13 ^h 35 ^m			Mag: -0.1 PMG: 17 ^h 48 ^m			Mag: -1.7 PMG: 12 ^h 30 ^m		Mag: +0.5 PMG: 17 ^h 01 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	353	24.1	156	20.5	-6 37.5	92 46.4	-25 46.1	172 04.7	+0 37.0		104 11.9	-20 32.9		
1	8	26.5	171	20.1	38.7	107 47.2	46.1	187 06.7	36.8		119 14.2	33.0		
2	23	29.0	186	19.8	40.0	122 47.9	46.2	202 08.6	36.6		134 16.6	33.0		
3	38	31.5	201	19.5	41.2	137 48.7	46.3	217 10.6	36.4		149 18.9	33.0		
4	53	33.9	216	19.1	42.5	152 49.5	46.4	232 12.6	36.2		164 21.2	33.0		
5	68	36.4	231	18.8	-6 43.7	167 50.2	-25 46.4	247 14.5	+0 36.0		179 23.6	-20 33.1		
6	83	38.8	246	18.4	-6 45.0	182 51.0	-25 46.5	262 16.5	+0 35.7		194 25.9	-20 33.1		
7	98	41.3	261	18.1	46.3	197 51.8	46.6	277 18.5	35.5		209 28.2	33.1		
8	113	43.8	276	17.8	47.5	212 52.5	46.6	292 20.5	35.3		224 30.6	33.1		
9	128	46.2	291	17.4	48.8	227 53.3	46.7	307 22.4	35.1		239 32.9	33.2		
10	143	48.7	306	17.1	50.0	242 54.1	46.8	322 24.4	34.9		254 35.2	33.2		
11	158	51.2	321	16.7	-6 51.3	257 54.8	-25 46.9	337 26.4	+0 34.7		269 37.6	-20 33.2		
12	173	53.6	336	16.4	-6 52.5	272 55.6	-25 46.9	352 28.4	+0 34.5		284 39.9	-20 33.2		
13	188	56.1	351	16.0	53.8	287 56.4	47.0	7 30.3	34.2		299 42.2	33.3		
14	203	58.6	6 15.7	55.1	55.1	302 57.1	47.1	22 32.3	34.0		314 44.6	33.3		
15	219	01.0	21 15.4	56.3	56.3	317 57.9	47.1	37 34.3	33.8		329 46.9	33.3		
16	234	03.5	36 15.0	57.6	57.6	332 58.7	47.2	52 36.2	33.6		344 49.2	33.3		
17	249	06.0	51 14.7	-6 58.8	58.8	347 59.4	-25 47.3	67 38.2	+0 33.4		359 51.6	-20 33.4		
18	264	08.4	66 14.3	-7 00.1	00.1	3 00.2	-25 47.3	82 40.2	+0 33.2		14 53.9	-20 33.4		
19	279	10.9	81 14.0	01.3	01.3	18 01.0	47.4	97 42.2	33.0		29 56.2	33.4		
20	294	13.3	96 13.6	02.6	02.6	33 01.7	47.5	112 44.1	32.7		44 58.6	33.5		
21	309	15.8	111 13.3	03.8	03.8	48 02.5	47.5	127 46.1	32.5		60 00.9	33.5		
22	324	18.3	126 12.9	05.1	05.1	63 03.2	47.6	142 48.1	32.3		75 03.2	33.5		
23	339	20.7	141 12.6	06.3	06.3	78 04.0	47.7	157 50.0	32.1		90 05.5	33.5		
24	354	23.2	156 12.2	-7 07.6	07.6	93 04.8	-25 47.7	172 52.0	+0 31.9		105 07.9	-20 33.6		
Dif	—		-3	-13		+8	-1	+20	-2		+23		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 13 ^d 6 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 3 20 ^h : 59 ^m 5 R°: 54 ^m													
	PMG: 11 ^h 55 ^m 0			SD: 16 ^h 0 PMG: 23 ^h 13 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	181	11.9	+2 56.6	24	05.3	89	-10 44.5	92	60 N	3 54	4 46	5 29	17 58	21	3 16	87	
1	196	12.1	55.6	38	33.2	89	35.3	92	58	4 02	51	30	54	23	23	83	
2	211	12.3	54.7	53	01.1	89	26.1	92	56	09	55	32	50	26	28	81	
3	226	12.6	53.7	67	28.9	88	16.7	94	54	15	4 58	34	47	27	33	79	
4	241	12.8	52.7	81	56.8	89	-10 07.3	94	52	20	5 01	35	43	30	37	77	
5	256	13.0	+2 51.8	96	24.7	89	-9 57.8	95	50	4 25	5 04	5 36	17 40	32	3 41	76	
6	271	13.2	+2 50.8	110	52.6	89	-9 48.3	95	45	4 35	5 09	5 39	17 34	35	3 50	71	
7	286	13.5	49.8	125	20.4	88	38.7	96	40	42	14	41	29	37	3 57	69	
8	301	13.7	48.9	139	48.3	89	29.0	97	35	48	18	43	24	40	4 03	66	
9	316	13.9	47.9	154	16.2	89	19.2	98	30	4 53	21	45	20	43	08	64	
10	331	14.1	47.0	168	44.0	88	-9 09.4	98	20	5 00	25	47	13	47	17	60	
11	346	14.3	+2 46.0	183	11.8	88	-8 59.5	99	10 N	5 04	5 29	5 50	17 07	50	4 25	57	
12	1	14.6	+2 45.0	197	39.7	89	-8 49.5	100	0	5 07	5 31	5 52	17 01	53	4 33	53	
13	16	14.8	44.1	212	07.5	88	39.5	100	10 S	08	33	54	16 55	57	40	50	
14	31	15.0	43.1	226	35.3	88	29.4	101	20	08	34	56	49	60	48	47	
15	46	15.2	42.1	241	03.1	88	19.3	101	30	06	34	58	41	65	4 57	43	
16	61	15.5	41.2	255	30.9	88	-8 09.1	102	35	05	34	5 59	37	67	5 02	41	
17	76	15.7	+2 40.2	269	58.7	88	-7 58.8	103	40	5 02	5 33	6 00	16 33	69	5 08	38	
18	91	15.9	+2 39.3	284	26.5	88	-7 48.5	103	45	4 59	5 33	6 02	16 27	73	5 14	36	
19	106	16.1	38.3	298	54.3	88	38.1	104	50	54	31	04	21	76	22	32	
20	121	16.4	37.3	313	22.1	88	27.6	105	52	52	31	04	18	78	26	30	
21	136	16.6	36.4	327	49.9	88	17.1	105	54	49	30	05	14	81	30	28	
22	151	16.8	35.4	342	17.7	88	-7 06.6	105	56	46	29	06	11	82	34	27	
23	166	17.0	34.4	356	45.4	87	-6 56.0	106	58	42	28	07	06	85	39	24	
24	181	17.3	+2 33.5	11	13.2	88	-6 45.3	107	60 S	4 38	5 27	6 08	16 02	88	5 45	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 22 ^m 4		Mag: -3.9 PMG: 13 ^h 35 ^m		Mag: -0.1 PMG: 17 ^h 47 ^m		Mag: -1.7 PMG: 12 ^h 27 ^m		Mag: +0.5 PMG: 16 ^h 57 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	354	23.2	156	12.2	93	04.8	172	52.0	105	07.9
1	9	25.7	171	11.9	108	05.5	187	54.0	120	10.2
2	24	28.1	186	11.6	123	06.3	202	56.0	135	12.5
3	39	30.6	201	11.2	138	07.0	217	57.9	150	14.9
4	54	33.1	216	10.9	153	07.8	232	59.9	165	17.2
5	69	35.5	231	10.5	168	08.6	248	01.9	180	19.5
6	84	38.0	246	10.2	183	09.3	263	03.8	195	21.9
7	99	40.5	261	09.8	198	10.1	278	05.8	210	24.2
8	114	42.9	276	09.5	213	10.8	293	07.8	225	26.5
9	129	45.4	291	09.1	228	11.6	308	09.8	240	28.8
10	144	47.8	306	08.8	243	12.3	323	11.7	255	31.2
11	159	50.3	321	08.4	258	13.1	338	13.7	270	33.5
12	174	52.8	336	08.1	273	13.9	353	15.7	285	35.8
13	189	55.2	351	07.7	288	14.6	8	17.6	300	38.2
14	204	57.7	6	07.4	303	15.4	23	19.6	315	40.5
15	220	00.2	21	07.0	318	16.1	38	21.6	330	42.8
16	235	02.6	36	06.7	333	16.9	53	23.6	345	45.1
17	250	05.1	51	06.3	348	17.6	68	25.5	0	47.5
18	265	07.6	66	06.0	3	18.4	83	27.5	15	49.8
19	280	10.0	81	05.6	18	19.1	98	29.5	30	52.1
20	295	12.5	96	05.3	33	19.9	113	31.4	45	54.5
21	310	14.9	111	04.9	48	20.6	128	33.4	60	56.8
22	325	17.4	126	04.6	63	21.4	143	35.4	75	59.1
23	340	19.9	141	04.2	78	22.1	158	37.4	91	01.4
24	355	22.3	156	03.9	93	22.9	173	39.3	106	03.8
Dif	—		-3		+8		+20		+23	
			-12		-1		-2		0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 14 ^d 6 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'1 R°: **m											
	PMG: 11 ^h 54 ^m 7			PMG: **h **m		R°: **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	17.3	+2	33.5	11	13.2	-6 45.3	60 N	18 17	18 59	19 50	18 19 20	4 43 88	
1	196	17.5		32.5	25	40.9 ⁸⁷	34.6 ¹⁰⁷	58	15	55	43	17 23	46 86	
2	211	17.7		31.5	40	08.7 ⁸⁸	23.9 ¹⁰⁷	56	14	51	36	16 25	49 84	
3	226	17.9		30.6	54	36.4 ⁸⁷	13.1 ¹⁰⁸	54	13	48	31	14 27	52 81	
4	241	18.2		29.6	69	04.1 ⁸⁷	-6 02.2 ¹⁰⁹	52	12	45	26	13 29	54 80	
5	256	18.4	+2	28.7	83	31.8 ⁸⁷	-5 51.3 ¹⁰⁹	50	18 11	18 43	19 22	18 12 30	4 57 77	
6	271	18.6	+2	27.7	97	59.6 ⁸⁸	-5 40.4 ¹⁰⁹	45	18 08	18 38	19 12	18 09 34	5 01 74	
7	286	18.8		26.7	112	27.3 ⁸⁷	29.4 ¹¹⁰	40	07	34	06	06 38	06 70	
8	301	19.1		25.8	126	55.0 ⁸⁷	18.4 ¹¹⁰	35	05	30	19 00	04 41	09 68	
9	316	19.3		24.8	141	22.6 ⁸⁶	-5 07.3 ¹¹¹	30	04	28	18 56	03 42	12 65	
10	331	19.5		23.8	155	50.3 ⁸⁷	-4 56.2 ¹¹¹	20	01	23	49	18 00 46	17 61	
11	346	19.7	+2	22.9	170	18.0 ⁸⁷	-4 45.0 ¹¹²	10 N	18 00	18 21	18 45	17 57 50	5 22 57	
12	1	19.9	+2	21.9	184	45.7 ⁸⁷	-4 33.8 ¹¹²	0	17 58	18 19	18 43	17 54 54	5 26 54	
13	16	20.2		20.9	199	13.3 ⁸⁶	22.6 ¹¹²	10 S	56	17	42	52 57	30 51	
14	31	20.4		20.0	213	40.9 ⁸⁶	-4 11.3 ¹¹³	20	55	17	42	49 62	35 46	
15	46	20.6		19.0	228	08.6 ⁸⁷	-4 00.0 ¹¹³	30	53	17	45	46 66	40 42	
16	61	20.8		18.0	242	36.2 ⁸⁶	-3 48.7 ¹¹³	35	52	18	47	44 69	43 40	
17	76	21.1	+2	17.1	257	03.8 ⁸⁶	-3 37.3 ¹¹⁴	40	17 51	18 18	18 50	17 42 71	5 46 37	
18	91	21.3	+2	16.1	271	31.4 ⁸⁶	-3 25.9 ¹¹⁴	45	17 50	18 19	18 54	17 40 74	5 50 34	
19	106	21.5		15.1	285	59.0 ⁸⁶	14.5 ¹¹⁴	50	49	21	18 59	37 79	54 31	
20	121	21.7		14.2	300	26.6 ⁸⁶	-3 03.1 ¹¹⁴	52	48	22	19 01	36 80	56 29	
21	136	22.0		13.2	314	54.2 ⁸⁶	-2 51.6 ¹¹⁵	54	48	23	04	35 82	5 58 27	
22	151	22.2		12.2	329	21.7 ⁸⁵	40.1 ¹¹⁵	56	47	24	08	33 85	6 01 25	
23	166	22.4		11.3	343	49.3 ⁸⁶	28.6 ¹¹⁵	58	46	25	12	31 87	03 23	
24	181	22.6	+2	10.3	358	16.8 ⁸⁵	-2 17.0 ¹¹⁶	60 S	17 46	18 27	19 16	17 30 89	6 06 21	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 18 ^m 5	Mag: -3.9 PMG: 13 ^h 36 ^m		Mag: -0.1 PMG: 17 ^h 46 ^m		Mag: -1.7 PMG: 12 ^h 24 ^m		Mag: +0.5 PMG: 16 ^h 53 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	°	°	°	°	°	°	°	°	°	°			
0	355	22.3	156 03.9	-7 37.6	93 22.9	-25 49.2		173 39.3	+0 26.8	106 03.8	-20 34.2			
1	10	24.8	171 03.5	38.8	108 23.6	49.3		188 41.3	26.5	121 06.1	34.2			
2	25	27.3	186 03.2	40.1	123 24.4	49.3		203 43.3	26.3	136 08.4	34.2			
3	40	29.7	201 02.8	41.3	138 25.1	49.4		218 45.2	26.1	151 10.7	34.3			
4	55	32.2	216 02.5	42.6	153 25.9	49.5		233 47.2	25.9	166 13.1	34.3			
5	70	34.7	231 02.1	-7 43.8	168 26.6	-25 49.5		248 49.2	+0 25.7	181 15.4	-20 34.3			
6	85	37.1	246 01.8	-7 45.1	183 27.4	-25 49.6		263 51.2	+0 25.5	196 17.7	-20 34.4			
7	100	39.6	261 01.4	46.3	198 28.1	49.6		278 53.1	25.3	211 20.1	34.4			
8	115	42.1	276 01.1	47.5	213 28.9	49.7		293 55.1	25.1	226 22.4	34.4			
9	130	44.5	291 00.7	48.8	228 29.6	49.7		308 57.1	24.8	241 24.7	34.4			
10	145	47.0	306 00.4	50.0	243 30.4	49.8		323 59.0	24.6	256 27.0	34.5			
11	160	49.4	321 00.0	-7 51.3	258 31.1	-25 49.8		339 01.0	+0 24.4	271 29.4	-20 34.5			
12	175	51.9	335 59.7	-7 52.5	273 31.9	-25 49.9		354 03.0	+0 24.2	286 31.7	-20 34.5			
13	190	54.4	350 59.3	53.8	288 32.6	50.0		9 05.0	24.0	301 34.0	34.5			
14	205	56.8	5 58.9	55.0	303 33.3	50.0		24 06.9	23.8	316 36.3	34.6			
15	220	59.3	20 58.6	56.3	318 34.1	50.1		39 08.9	23.6	331 38.7	34.6			
16	236	01.8	35 58.2	57.5	333 34.8	50.1		54 10.9	23.3	346 41.0	34.6			
17	251	04.2	50 57.9	-7 58.7	348 35.6	-25 50.2		69 12.8	+0 23.1	1 43.3	-20 34.7			
18	266	06.7	65 57.5	-8 00.0	3 36.3	-25 50.2		84 14.8	+0 22.9	16 45.6	-20 34.7			
19	281	09.2	80 57.2	-8 01.2	18 37.1	50.3		99 16.8	22.7	31 48.0	34.7			
20	296	11.6	95 56.8	02.5	33 37.8	50.3		114 18.8	22.5	46 50.3	34.7			
21	311	14.1	110 56.5	03.7	48 38.5	50.4		129 20.7	22.3	61 52.6	34.8			
22	326	16.5	125 56.1	04.9	63 39.3	50.4		144 22.7	22.1	76 54.9	34.8			
23	341	19.0	140 55.7	06.2	78 40.0	50.5		159 24.7	21.8	91 57.2	34.8			
24	356	21.5	155 55.4	-8 07.4	93 40.8	-25 50.5		174 26.6	+0 21.6	106 59.6	-20 34.8			
Dif	—	—	-4	-12	+7	-1		+20	-2	+23	0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 15 ^d 6 PHE { 4 ^h : 60 ^m 3 12 ^h : 60 ^m 4 20 ^h : 60 ^m 5														
	PMG: 11 ^h 54 ^m 3			SD: 16 ^d 4 PMG: 0 ^h 07 ^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 m		h m m			
0	181	22.6	+2 10.3	358	16.8		-2 17.0		60 N	4 00	4 51	5 33	18 39 21		6 11 91			
1	196	22.9	09.3	12	44.3 85		-2 05.5 115		58	07	55	35	40 23		12 87			
2	211	23.1	08.4	27	11.9 86		-1 53.9 116		56	13	4 59	36	41 25		13 85			
3	226	23.3	07.4	41	39.4 85		42.3 116		54	19	5 02	37	41 28		13 83			
4	241	23.5	06.5	56	06.9 85		30.6 117		52	24	04	38	42 29		14 80			
5	256	23.8	+2 05.5	70	34.3 84		-1 19.0 116		50	4 28	5 07	5 39	18 42 31		6 14 79			
6	271	24.0	+2 04.5	85	01.8 85		-1 07.3 117		45	4 37	5 12	5 41	18 43 35		6 15 75			
7	286	24.2	03.6	99	29.3 85		-0 55.7 116		40	44	16	43	44 38		16 71			
8	301	24.4	02.6	113	56.7 84		44.0 117		35	49	19	45	45 40		17 68			
9	316	24.7	01.6	128	24.1 84		32.3 117		30	4 54	22	46	45 44		17 66			
10	331	24.9	+2 00.7	142	51.5 84		20.6 117		20	5 00	26	48	46 48		18 62			
11	346	25.1	+1 59.7	157	18.9 84		-0 08.9 117		10 N	5 04	5 29	5 50	18 47 52		6 19 58			
12	1	25.3	+1 58.7	171	46.3 84		+0 02.8 117		0	5 06	5 30	5 51	18 48 55		6 20 54			
13	16	25.6	57.8	186	13.7 84		14.5 117		10 S	07	31	52	49 59		21 50			
14	31	25.8	56.8	200	41.0 83		26.2 117		20	06	32	54	51 62		21 48			
15	46	26.0	55.8	215	08.4 84		38.0 118		30	04	32	55	52 66		22 43			
16	61	26.2	54.9	229	35.7 83		+0 49.7 117		35	5 02	31	56	53 68		23 40			
17	76	26.4	+1 53.9	244	03.0 83		+1 01.4 117		40	4 59	5 30	5 57	18 53 72		6 23 38			
18	91	26.7	+1 52.9	258	30.3 83		+1 13.1 117		45	4 55	5 29	5 58	18 54 75		6 24 34			
19	106	26.9	51.9	272	57.6 83		24.8 117		50	49	27	5 59	56 79		25 30			
20	121	27.1	51.0	287	24.8 82		36.6 118		52	47	26	6 00	56 81		25 29			
21	136	27.3	50.0	301	52.1 83		+1 48.3 117		54	44	25	00	57 83		25 27			
22	151	27.6	49.0	316	19.3 82		+2 00.0 117		56	40	24	01	58 85		26 25			
23	166	27.8	48.1	330	46.5 82		+2 11.6 116		58	36	22	01	58 88		26 23			
24	181	28.0	+1 47.1	345	13.7 82		+2 23.3 117		60 S	4 32	5 21	6 02	18 59 91		6 27 20			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 14 ^m 5		Mag: -3.9 PMG: 13 ^h 37 ^m			Mag: -0.1 PMG: 17 ^h 44 ^m			Mag: -1.7 PMG: 12 ^h 21 ^m			Mag: +0.5 PMG: 16 ^h 49 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	356	21.5	155 55.4	-8 07.4	93 40.8	-25 50.5	174 26.6	+0 21.6	106 59.6	-20 34.8								
1	11 23.9	170 55.0	08.7	108 41.5	50.6	189 28.6	21.4	122 01.9	34.9									
2	26 26.4	185 54.7	09.9	123 42.2	50.6	204 30.6	21.2	137 04.2	34.9									
3	41 28.9	200 54.3	11.1	138 43.0	50.7	219 32.5	21.0	152 06.5	34.9									
4	56 31.3	215 54.0	12.4	153 43.7	50.7	234 34.5	20.8	167 08.9	35.0									
5	71 33.8	230 53.6	-8 13.6	168 44.5	-25 50.8	249 36.5	+0 20.6	182 11.2	-20 35.0									
6	86 36.3	245 53.2	-8 14.9	183 45.2	-25 50.8	264 38.5	+0 20.3	197 13.5	-20 35.0									
7	101 38.7	260 52.9	16.1	198 45.9	50.9	279 40.4	20.1	212 15.8	35.0									
8	116 41.2	275 52.5	17.3	213 46.7	50.9	294 42.4	19.9	227 18.1	35.1									
9	131 43.7	290 52.2	18.6	228 47.4	51.0	309 44.4	19.7	242 20.5	35.1									
10	146 46.1	305 51.8	19.8	243 48.1	51.0	324 46.3	19.5	257 22.8	35.1									
11	161 48.6	320 51.4	-8 21.0	258 48.9	-25 51.1	339 48.3	+0 19.3	272 25.1	-20 35.1									
12	176 51.0	335 51.1	-8 22.3	273 49.6	-25 51.1	354 50.3	+0 19.1	287 27.4	-20 35.2									
13	191 53.5	350 50.7	23.5	288 50.3	51.2	9 52.3	18.8	302 29.8	35.2									
14	206 56.0	5 50.4	24.8	303 51.1	51.2	24 54.2	18.6	317 32.1	35.2									
15	221 58.4	20 50.0	26.0	318 51.8	51.3	39 56.2	18.4	332 34.4	35.3									
16	237 00.9	35 49.6	27.2	333 52.6	51.3	54 58.2	18.2	347 36.7	35.3									
17	252 03.4	50 49.3	-8 28.5	348 53.3	-25 51.4	70 00.1	+0 18.0	2 39.0	-20 35.3									
18	267 05.8	65 48.9	-8 29.7	3 54.0	-25 51.4	85 02.1	+0 17.8	17 41.4	-20 35.3									
19	282 08.3	80 48.6	30.9	18 54.7	51.5	100 04.1	17.6	32 43.7	35.4									
20	297 10.8	95 48.2	32.2	33 55.5	51.5	115 06.0	17.3	47 46.0	35.4									
21	312 13.2	110 47.8	33.4	48 56.2	51.5	130 08.0	17.1	62 48.3	35.4									
22	327 15.7	125 47.5	34.6	63 56.9	51.6	145 10.0	16.9	77 50.6	35.4									
23	342 18.1	140 47.1	35.9	78 57.7	51.6	160 12.0	16.7	92 53.0	35.5									
24	357 20.6	155 46.8	-8 37.1	93 58.4	-25 51.7	175 13.9	+0 16.5	107 55.3	-20 35.5									
Dif	—		-4	-12	+7		0	+20		-2	+23		0					

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: 16 ^d 6 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'6 PMG: 1 ^h 01 ^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	h m m	h m m	h m m
0	181	28.0	+1 47.1	345	13.7	+2 23.3	60 N	18 11	18 53	19 43	19 00 23	7 42 90		
1	196	28.2		359	40.9	82 35.0 ¹¹⁷	58	10	49	37	03 26	39 88		
2	211	28.5		14	08.0	81 46.6 ¹¹⁶	56	09	46	31	06 28	38 84		
3	226	28.7		28	35.2	82 +2 58.2 ¹¹⁶	54	08	43	25	09 30	36 83		
4	241	28.9		43	02.3	81 +3 09.9 ¹¹⁷	52	07	41	21	11 32	34 81		
5	256	29.1	+1 42.3	57	29.4	81 +3 21.5 ¹¹⁶	50	18 06	18 38	19 17	19 13 34	7 33 79		
6	271	29.4	+1 41.3	71	56.5	81 +3 33.0 ¹¹⁵	45	18 05	18 34	19 08	19 18 37	7 30 75		
7	286	29.6		86	23.5	80 44.6 ¹¹⁶	40	03	30	19 02	22 40	27 72		
8	301	29.8		100	50.6	81 +3 56.1 ¹¹⁵	35	02	27	18 57	25 43	25 69		
9	316	30.0		115	17.6	80 +4 07.6 ¹¹⁵	30	01	25	53	29 45	23 67		
10	331	30.3		129	44.6	80 19.1 ¹¹⁵	20	18 00	22	47	34 49	20 62		
11	346	30.5	+1 36.5	144	11.6	80 +4 30.6 ¹¹⁵	10 N	17 58	18 19	18 44	19 39 52	7 17 59		
12	1	30.7	+1 35.5	158	38.6	80 +4 42.0 ¹¹⁴	0	17 57	18 18	18 42	19 43 56	7 14 55		
13	16	30.9		173	05.5	79 +4 53.4 ¹¹⁴	10 S	56	17	42	48 59	11 52		
14	31	31.1		187	32.4	79 +5 04.8 ¹¹⁴	20	55	17	43	53 62	09 48		
15	46	31.4		201	59.3	79 16.1 ¹¹³	30	54	18	46	19 58 67	05 44		
16	61	31.6		216	26.2	79 27.4 ¹¹³	35	54	19	48	20 01 69	03 42		
17	76	31.8	+1 30.7	230	53.1	79 +5 38.7 ¹¹³	40	17 53	18 20	18 52	20 05 72	7 01 39		
18	91	32.0	+1 29.7	245	19.9	78 +5 49.9 ¹¹²	45	17 53	18 22	18 56	20 09 75	6 58 36		
19	106	32.3		259	46.7	78 +6 01.1 ¹¹²	50	52	24	19 02	15 78	55 33		
20	121	32.5		274	13.5	78 12.3 ¹¹²	52	52	25	05	17 80	54 30		
21	136	32.7		288	40.3	78 23.4 ¹¹¹	54	51	27	08	20 82	52 29		
22	151	32.9		303	07.1	78 34.4 ¹¹⁰	56	51	28	12	23 84	51 26		
23	166	33.2		317	33.8	77 45.5 ¹¹¹	58	51	30	16	26 87	49 24		
24	181	33.4	+1 23.9	332	00.5	77 +6 56.5 ¹¹⁰	60 S	17 50	18 32	19 21	20 30 89	6 47 21		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 0 ^h 10 ^m 6		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: -0.1 PMG: 17 ^h 43 ^m		Mag: -1.7 PMG: 12 ^h 17 ^m			Mag: +0.5 PMG: 16 ^h 46 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	357	20.6	155	46.8	-8 37.1	93 58.4 -25 51.7	175 13.9 +0 16.5	107 55.3 -20 35.5						
1	12	23.1	170	46.4	38.3	108 59.1 51.7	190 15.9 16.3	122 57.6 35.5						
2	27	25.5	185	46.0	39.6	123 59.9 51.8	205 17.9 16.1	137 59.9 35.6						
3	42	28.0	200	45.7	40.8	139 00.6 51.8	220 19.8 15.8	153 02.2 35.6						
4	57	30.5	215	45.3	42.0	154 01.3 51.8	235 21.8 15.6	168 04.6 35.6						
5	72	32.9	230	44.9	-8 43.3	169 02.1 -25 51.9	250 23.8 +0 15.4	183 06.9 -20 35.6						
6	87	35.4	245	44.6	-8 44.5	184 02.8 -25 51.9	265 25.7 +0 15.2	198 09.2 -20 35.7						
7	102	37.9	260	44.2	45.7	199 03.5 52.0	280 27.7 15.0	213 11.5 35.7						
8	117	40.3	275	43.8	46.9	214 04.2 52.0	295 29.7 14.8	228 13.8 35.7						
9	132	42.8	290	43.5	48.2	229 05.0 52.1	310 31.7 14.6	243 16.1 35.7						
10	147	45.3	305	43.1	49.4	244 05.7 52.1	325 33.6 14.3	258 18.5 35.8						
11	162	47.7	320	42.7	-8 50.6	259 06.4 -25 52.1	340 35.6 +0 14.1	273 20.8 -20 35.8						
12	177	50.2	335	42.4	-8 51.9	274 07.1 -25 52.2	355 37.6 +0 13.9	288 23.1 -20 35.8						
13	192	52.6	350	42.0	53.1	289 07.9 52.2	10 39.5 13.7	303 25.4 35.9						
14	207	55.1	5	41.6	54.3	304 08.6 52.3	25 41.5 13.5	318 27.7 35.9						
15	222	57.6	20	41.3	55.5	319 09.3 52.3	40 43.5 13.3	333 30.1 35.9						
16	238	00.0	35	40.9	56.8	334 10.0 52.3	55 45.4 13.1	348 32.4 35.9						
17	253	02.5	50	40.5	-8 58.0	349 10.8 -25 52.4	70 47.4 +0 12.9	3 34.7 -20 36.0						
18	268	05.0	65	40.2	-8 59.2	4 11.5 -25 52.4	85 49.4 +0 12.6	18 37.0 -20 36.0						
19	283	07.4	80	39.8	-9 00.5	19 12.2 52.4	100 51.4 12.4	33 39.3 36.0						
20	298	09.9	95	39.4	01.7	34 12.9 52.5	115 53.3 12.2	48 41.6 36.1						
21	313	12.4	110	39.1	02.9	49 13.7 52.5	130 55.3 12.0	63 43.9 36.1						
22	328	14.8	125	38.7	04.1	64 14.4 52.6	145 57.3 11.8	78 46.3 36.1						
23	343	17.3	140	38.3	05.4	79 15.1 52.6	160 59.2 11.6	93 48.6 36.1						
24	358	19.7	155	38.0	-9 06.6	94 15.8 -25 52.6	176 01.2 +0 11.4	108 50.9 -20 36.2						
Dif	—		-4	-12		+7 0	+20 -2	+23 0						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 17 ^d 6 PHE { 4 ^h : 60 ^h /6 12 ^h : 60 ^h /5 20 ^h : 60 ^h /4													
	PMG: 11 ^h 53 ^m 6			SD: 16 ^h 5 PMG: 1 ^h 56 ^m Rº: 56 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m
0	181	33.4	+1 23.9	332	00.5	+6 56.5	60 N		4 05	4 56	5 38	19 23	28	9 12	88		
1	196	33.6		346	27.2 77	+7 07.4 109	58		12	5 00	39	29	30	07	85		
2	211	33.8	21.9	0	53.9 77	18.3 109	56		18	03	40	34	32	9 02	84		
3	226	34.1	21.0	15	20.5 76	29.1 108	54		23	05	41	39	34	8 59	81		
4	241	34.3	20.0	29	47.2 77	39.9 108	52		27	08	42	43	36	55	79		
5	256	34.5	+1 19.0	44	13.8 76	+7 50.6 107	50		4 31	5 10	5 42	19 47	37	8 52	77		
6	271	34.7	+1 18.1	58	40.3 75	+8 01.3 107	45		4 40	5 14	5 44	19 55	41	8 45	74		
7	286	34.9	17.1	73	06.9 76	12.0 107	40		46	18	45	20 02	43	39	71		
8	301	35.2	16.1	87	33.4 75	22.5 105	35		51	21	46	08	46	34	69		
9	316	35.4	15.1	101	59.9 75	33.0 105	30		4 55	23	47	14	47	30	66		
10	331	35.6	14.2	116	26.4 75	43.5 105	20		5 01	26	48	23	51	22	63		
11	346	35.8	+1 13.2	130	52.9 75	+8 53.9 104	10 N		5 04	5 28	5 49	20 31	54	8 16	59		
12	1	36.1	+1 12.2	145	19.3 74	+9 04.2 103	0		5 06	5 30	5 50	20 39	56	8 09	57		
13	16	36.3	11.3	159	45.8 75	14.5 103	10 S		06	30	51	47	59	8 03	53		
14	31	36.5	10.3	174	12.2 74	24.7 102	20		05	30	52	20 55	62	7 57	49		
15	46	36.7	09.3	188	38.6 74	34.9 102	30		5 01	29	53	21 05	65	49	46		
16	61	37.0	08.4	203	04.9 73	45.0 101	35		4 59	28	53	10	68	45	44		
17	76	37.2	+1 07.4	217	31.2 73	+9 55.0 100	40		4 55	5 27	5 54	21 17	70	7 40	41		
18	91	37.4	+1 06.4	231	57.6 74	+10 04.9 99	45		4 51	5 25	5 54	21 24	73	7 34	39		
19	106	37.6	05.4	246	23.8 72	14.8 99	50		45	23	55	33	76	28	35		
20	121	37.8	04.5	260	50.1 73	24.6 98	52		42	21	55	37	78	24	34		
21	136	38.1	03.5	275	16.4 73	34.3 97	54		39	20	55	42	79	21	32		
22	151	38.3	02.5	289	42.6 72	44.0 97	56		35	18	55	47	81	17	30		
23	166	38.5	01.6	304	08.8 72	+10 53.6 96	58		30	17	56	53	84	13	28		
24	181	38.7	+1 00.6	318	35.0 72	+11 03.1 95	60 S		4 25	5 15	5 56	21 59	87	7 08	25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 0 ^h 06 ^m 7		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: -0.1 PMG: 17 ^h 42 ^m		Mag: -1.7 PMG: 12 ^h 14 ^m		Mag: +0.5 PMG: 16 ^h 42 ^m			
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec			
h	°	'	°	°	'	°	°	'	°	°	'	
0	358	19.7	155 38.0	-9 06.6		94 15.8	-25 52.6		176 01.2	+0 11.4	108 50.9	-20 36.2
1	13	22.2	170 37.6	07.8		109 16.5	52.7		191 03.2	11.1	123 53.2	36.2
2	28	24.7	185 37.2	09.0		124 17.3	52.7		206 05.1	10.9	138 55.5	36.2
3	43	27.1	200 36.9	10.3		139 18.0	52.7		221 07.1	10.7	153 57.8	36.2
4	58	29.6	215 36.5	11.5		154 18.7	52.8		236 09.1	10.5	169 00.2	36.3
5	73	32.1	230 36.1	-9 12.7		169 19.4	-25 52.8		251 11.1	+0 10.3	184 02.5	-20 36.3
6	88	34.5	245 35.7	-9 13.9		184 20.1	-25 52.8		266 13.0	+0 10.1	199 04.8	-20 36.3
7	103	37.0	260 35.4	15.1		199 20.9	52.9		281 15.0	09.9	214 07.1	36.4
8	118	39.5	275 35.0	16.4		214 21.6	52.9		296 17.0	09.6	229 09.4	36.4
9	133	41.9	290 34.6	17.6		229 22.3	52.9		311 18.9	09.4	244 11.7	36.4
10	148	44.4	305 34.3	18.8		244 23.0	53.0		326 20.9	09.2	259 14.0	36.4
11	163	46.9	320 33.9	-9 20.0		259 23.7	-25 53.0		341 22.9	+0 09.0	274 16.4	-20 36.5
12	178	49.3	335 33.5	-9 21.3		274 24.4	-25 53.0		356 24.8	+0 08.8	289 18.7	-20 36.5
13	193	51.8	350 33.1	22.5		289 25.2	53.1		11 26.8	08.6	304 21.0	36.5
14	208	54.2	5 32.8	23.7		304 25.9	53.1		26 28.8	08.4	319 23.3	36.6
15	223	56.7	20 32.4	24.9		319 26.6	53.1		41 30.8	08.1	334 25.6	36.6
16	238	59.2	35 32.0	26.1		334 27.3	53.2		56 32.7	07.9	349 27.9	36.6
17	254	01.6	50 31.6	-9 27.4		349 28.0	-25 53.2		71 34.7	+0 07.7	4 30.2	-20 36.6
18	269	04.1	65 31.3	-9 28.6		4 28.7	-25 53.2		86 36.7	+0 07.5	19 32.6	-20 36.7
19	284	06.6	80 30.9	29.8		19 29.5	53.3		101 38.6	07.3	34 34.9	36.7
20	299	09.0	95 30.5	31.0		34 30.2	53.3		116 40.6	07.1	49 37.2	36.7
21	314	11.5	110 30.1	32.2		49 30.9	53.3		131 42.6	06.9	64 39.5	36.8
22	329	14.0	125 29.8	33.4		64 31.6	53.3		146 44.5	06.6	79 41.8	36.8
23	344	16.4	140 29.4	34.7		79 32.3	53.4		161 46.5	06.4	94 44.1	36.8
24	359	18.9	155 29.0	-9 35.9		94 33.0	-25 53.4		176 48.5	+0 06.2	109 46.4	-20 36.8
Dif	—		-4	-12		+7	0		+20	-2	+23	0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9		Edad: 18 ^d 6 PHE { 4 ^h : 60'3 12 ^h : 60'2 20 ^h : 60'1						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
0	181	38.7	+1	00.6	318	35.0	+11	03.1	60 N	18 05	18 46	19 37	19 51	33	10 40	84
1	196	39.0	+0	59.6	333	01.1		12.5	58	04	43	30	19 59	36	32	81
2	211	39.2		58.7	347	27.3		21.9	56	03	41	25	20 06	38	26	79
3	226	39.4		57.7	1	53.4		31.2	54	03	38	20	13 39	20	20	77
4	241	39.6		56.7	16	19.5		40.4	52	02	36	16	19 41	14	76	
5	256	39.8	+0	55.7	30	45.6	+11	49.5	50	18 02	18 34	19 12	20 24	42	10 09	75
6	271	40.1	+0	54.8	45	11.6	+11	58.5	45	18 01	18 30	19 04	20 36	44	9 59	71
7	286	40.3		53.8	59	37.7	+12	07.5	40	18 00	27	18 59	45	47	50	69
8	301	40.5		52.8	74	03.7		16.3	35	17 59	24	54	20 54	48	43	66
9	316	40.7		51.9	88	29.7		25.1	30	59	23	50	21 01	50	36	65
10	331	41.0		50.9	102	55.6		33.8	20	58	20	45	14 52	25	62	
11	346	41.2	+0	49.9	117	21.6	+12	42.4	10 N	17 57	18 18	18 42	21 25	55	9 15	59
12	1	41.4	+0	48.9	131	47.5	+12	50.9	0	17 56	18 17	18 41	21 35	57	9 06	56
13	16	41.6		48.0	146	13.5	+12	59.4	10 S	56	17	41	46	59	8 56	55
14	31	41.8		47.0	160	39.4	+13	07.7	20	56	18	43	21 57	62	46	52
15	46	42.1		46.0	175	05.3		15.9	30	55	19	47	22 10	64	35	49
16	61	42.3		45.1	189	31.1		24.1	35	55	20	50	18 65	29	47	
17	76	42.5	+0	44.1	203	57.0	+13	32.2	40	17 55	18 22	18 54	22 27	67	8 21	45
18	91	42.7	+0	43.1	218	22.8	+13	40.1	45	17 55	18 24	18 59	22 37	69	8 13	42
19	106	43.0		42.1	232	48.6		48.0	50	55	27	19 05	49	72	8 03	39
20	121	43.2		41.2	247	14.4	+13	55.8	52	55	29	08	22 55	73	7 58	38
21	136	43.4		40.2	261	40.2	+14	03.5	54	55	30	12	23 01	75	53	36
22	151	43.6		39.2	276	06.0		11.1	56	55	32	16	08 76	47	35	
23	166	43.8		38.3	290	31.7		18.5	58	55	34	21	17 77	41	32	
24	181	44.1	+0	37.3	304	57.5	+14	25.9	60 S	17 55	18 36	19 26	23 26	80	7 33	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 02 ^m 7		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: -0.1 PMG: 17 ^h 41 ^m		Mag: -1.7 PMG: 12 ^h 11 ^m		Mag: +0.5 PMG: 16 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	359	18.9	155	29.0	-9	35.9	94	33.0	-25	53.4
1	14	21.4	170	28.6		37.1	109	33.7		53.4
2	29	23.8	185	28.3		38.3	124	34.4		53.5
3	44	26.3	200	27.9		39.5	139	35.2		53.5
4	59	28.7	215	27.5		40.7	154	35.9		53.5
5	74	31.2	230	27.1	-9	42.0	169	36.6	-25	53.5
6	89	33.7	245	26.7	-9	43.2	184	37.3	-25	53.6
7	104	36.1	260	26.4		44.4	199	38.0		53.6
8	119	38.6	275	26.0		45.6	214	38.7		53.6
9	134	41.1	290	25.6		46.8	229	39.4		53.6
10	149	43.5	305	25.2		48.0	244	40.1		53.7
11	164	46.0	320	24.9	-9	49.2	259	40.8	-25	53.7
12	179	48.5	335	24.5	-9	50.5	274	41.5	-25	53.7
13	194	50.9	350	24.1		51.7	289	42.2		53.7
14	209	53.4	5	23.7		52.9	304	42.9		53.8
15	224	55.8	20	23.3		54.1	319	43.7		53.8
16	239	58.3	35	22.9		55.3	334	44.4		53.8
17	255	00.8	50	22.6	-9	56.5	349	45.1	-25	53.8
18	270	03.2	65	22.2	-9	57.7	4	45.8	-25	53.9
19	285	05.7	80	21.8	-9	58.9	19	46.5		53.9
20	300	08.2	95	21.4	-10	00.1	34	47.2		53.9
21	315	10.6	110	21.0		01.4	49	47.9		53.9
22	330	13.1	125	20.7		02.6	64	48.6		53.9
23	345	15.6	140	20.3		03.8	79	49.3		54.0
24	0	18.0	155	19.9	-10	05.0	94	50.0	-25	54.0
Dif	—		-4	-12		+7	0	+20		-2
									+23	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 19 ^d 6	PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 5	SD: 16 ^h 3		Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 11 ^h 52 ^m 9					PMG: 3 ^h 49 ^m		R°: 57 ^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		h m m		
0	181	44.1	+0	37.3		304	57.5	+14	25.9	60 N	4 10	5 01	5 43	20 24	43	
1	196	44.3		36.3		319	23.2	67	33.2	58	17	04	43	35	44	
2	211	44.5		35.3		333	48.9	67	40.4	56	22	07	44	44	46	
3	226	44.7		34.4		348	14.6	67	47.5	54	27	09	44	20 52	47	
4	241	45.0		33.4		2	40.3	67	+14	54.5	31	11	45	21 00	47	
5	256	45.2	+0	32.4		17	06.0	67	+15	01.3	4 35	5 13	5 45	21 06	48	
6	271	45.4	+0	31.5		31	31.7	67	+15	08.1	4 42	5 17	5 46	21 20	50	
7	286	45.6		30.5		45	57.4	67	14.8	40	48	20	47	32	51	
8	301	45.8		29.5		60	23.0	66	21.4	35	53	22	47	42	53	
9	316	46.1		28.5		74	48.6	66	27.8	30	4	56	24	48	21 51	
10	331	46.3		27.6		89	14.3	67	34.2	20	5 01	27	49	22 06	55	
11	346	46.5	+0	26.6		103	39.9	66	+15	40.4	5 04	5 28	5 49	22 20	56	
12	1	46.7	+0	25.6		118	05.5	66	+15	46.6	5 05	5 29	5 50	22 32	58	
13	16	46.9		24.7		132	31.1	66	52.6	10 S	05	29	50	45	58	
14	31	47.2		23.7		146	56.7	66	+15	58.5	5 03	28	50	22 59	59	
15	46	47.4		22.7		161	22.3	66	+16	04.3	4 59	26	50	23 14	61	
16	61	47.6		21.7		175	47.9	66	10.0	35	56	25	50	23	62	
17	76	47.8	+0	20.8		190	13.5	66	+16	15.6	4 52	5 23	5 50	23 34	62	
18	91	48.0	+0	19.8		204	39.1	66	+16	21.1	4 47	5 21	5 50	23 46	64	
19	106	48.3		18.8		219	04.7	66	26.5	50	40	18	50	** ** *	42	
20	121	48.5		17.8		233	30.3	66	31.7	52	37	17	50	** ** *	36	
21	136	48.7		16.9		247	55.9	66	36.9	52	33	15	50	** ** *	29	
22	151	48.9		15.9		262	21.4	65	41.9	50	29	13	50	** ** *	22	
23	166	49.2		14.9		276	47.0	66	46.8	49	24	11	50	** ** *	13	
24	181	49.4	+0	14.0		291	12.6	66	+16	51.6	4 19	5 09	5 50	** ** *	8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 54 ^m 9		Mag: -3.9 PMG: 13 ^h 39 ^m		Mag: 0.0 PMG: 17 ^h 40 ^m		Mag: -1.7 PMG: 12 ^h 08 ^m		Mag: +0.5 PMG: 16 ^h 35 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	0	18.0	155	19.9	-10	05.0	94	50.0	-25	54.0					
1	15	20.5	170	19.5		06.2	109	50.7		54.0					
2	30	23.0	185	19.1		07.4	124	51.4		54.0					
3	45	25.4	200	18.7		08.6	139	52.1		54.1					
4	60	27.9	215	18.3		09.8	154	52.8		54.1					
5	75	30.3	230	18.0	-10	11.0	169	53.5	-25	54.1					
6	90	32.8	245	17.6	-10	12.2	184	54.2	-25	54.1					
7	105	35.3	260	17.2		13.4	199	54.9		54.1					
8	120	37.7	275	16.8		14.6	214	55.6		54.1					
9	135	40.2	290	16.4		15.8	229	56.3		54.2					
10	150	42.7	305	16.0		17.0	244	57.0		54.2					
11	165	45.1	320	15.6	-10	18.2	259	57.7	-25	54.2					
12	180	47.6	335	15.3	-10	19.4	274	58.4	-25	54.2					
13	195	50.1	350	14.9		20.6	289	59.1		54.2					
14	210	52.5	5	14.5		21.8	304	59.8		54.2					
15	225	55.0	20	14.1		23.1	320	00.5		54.3					
16	240	57.5	35	13.7		24.3	335	01.2		54.3					
17	255	59.9	50	13.3	-10	25.5	350	01.9	-25	54.3					
18	271	02.4	65	12.9	-10	26.7	5	02.6	-25	54.3					
19	286	04.8	80	12.5		27.9	20	03.3		54.3					
20	301	07.3	95	12.1		29.1	35	04.0		54.3					
21	316	09.8	110	11.8		30.3	50	04.7		54.3					
22	331	12.2	125	11.4		31.5	65	05.4		54.4					
23	346	14.7	140	11.0		32.7	80	06.1		54.4					
24	1	17.2	155	10.6	-10	33.9	95	06.8	-25	54.4					
Dif	—		-4		-12		+7		0		+20		-2		+23

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 5			Edad: 20 ^d 6 PHE { 4 ^h : 59'4 12 ^h : 59'1 20 ^h : 58'9 SD: 16'2 PMG: 4 ^h 46 ^m R°: 57 ^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	49.4	+0 14.0	291	12.6	+16 51.6	47	60 N	17 59	18 40	19 30	21 07 53	13 19 64	
1	196	49.6	13.0	305	38.2	+16 56.3	47	58	58	37	24	19 53	13 07 63	
2	211	49.8	12.0	320	03.8	+17 00.9	46	56	58	35	19	30 53	12 57 62	
3	226	50.0	11.0	334	29.3	05.4	45	54	58	33	15	39 54	48 62	
4	241	50.3	10.1	348	54.9	09.7	43	52	58	31	11	47 54	40 61	
5	256	50.5	+0 09.1	3	20.5	+17 13.9	42	50	17 57	18 30	19 08	21 54 55	12 32 62	
6	271	50.7	+0 08.1	17	46.1	+17 18.0	41	45	17 57	18 26	19 01	22 10 55	12 17 60	
7	286	50.9	07.1	32	11.7	22.0	40	40	57	24	18 55	23 56	12 04 60	
8	301	51.1	06.2	46	37.3	25.9	39	35	56	22	51	35 55	11 53 60	
9	316	51.4	05.2	61	03.0	29.7	38	30	56	20	48	22 44 56	44 59	
10	331	51.6	04.2	75	28.6	33.4	37	20	56	18	43	23 01 56	27 59	
11	346	51.8	+0 03.3	89	54.2	+17 36.9	35	10 N	17 56	18 17	18 41	23 16 56	11 13 58	
12	1	52.0	+0 02.3	104	19.9	+17 40.3	34	0	17 56	18 16	18 40	23 30 56	11 00 57	
13	16	52.2	01.3	118	45.5	43.6	33	10 S	56	17	41	43 57	10 46 57	
14	31	52.5	+0 00.3	133	11.2	46.8	32	20	56	18	44	23 58 57	32 56	
15	46	52.7	-0 00.6	147	36.9	49.9	31	30	56	20	48	*** ** *	16 54	
16	61	52.9	01.6	162	02.6	52.8	29	35	57	22	51	*** ** *	10 06 54	
17	76	53.1	-0 02.6	176	28.3	+17 55.6	28	40	17 57	18 24	18 56	*** ** *	9 56 53	
18	91	53.3	-0 03.6	190	54.0	+17 58.4	28	45	17 57	18 27	19 01	*** ** *	9 43 52	
19	106	53.6	04.5	205	19.7	+18 01.0	26	50	58	30	08	0 01 65	27 52	
20	121	53.8	05.5	219	45.5	03.4	24	52	58	32	12	08 66	20 51	
21	136	54.0	06.5	234	11.3	05.8	24	54	58	34	16	16 66	12 51	
22	151	54.2	07.4	248	37.1	08.0	22	56	59	36	20	24 68	9 03 50	
23	166	54.4	08.4	263	02.9	10.2	22	58	17 59	38	25	34 69	8 53 49	
24	181	54.6	-0 09.4	277	28.7	+18 12.2	20	60 S	18 00	18 41	19 31	0 46 69	8 41 48	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 50 ^m 9		Mag: -3.9 PMG: 13 ^h 40 ^m			Mag: 0.0 PMG: 17 ^h 39 ^m			Mag: -1.7 PMG: 12 ^h 05 ^m			Mag: +0.5 PMG: 16 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	1	17.2	155	10.6	-10 33.9	95	06.8	-25 54.4	178	23.0	-0 04.1	111	37.2	-20 38.2
1	16	19.6	170	10.2	35.1	110	07.5	54.4	193	25.0	04.3	126	39.5	38.2
2	31	22.1	185	09.8	36.3	125	08.1	54.4	208	26.9	04.5	141	41.8	38.3
3	46	24.6	200	09.4	37.4	140	08.8	54.4	223	28.9	04.7	156	44.1	38.3
4	61	27.0	215	09.0	38.6	155	09.5	54.4	238	30.9	04.9	171	46.4	38.3
5	76	29.5	230	08.6	-10 39.8	170	10.2	-25 54.4	253	32.8	-0 05.1	186	48.7	-20 38.4
6	91	31.9	245	08.2	-10 41.0	185	10.9	-25 54.5	268	34.8	-0 05.4	201	51.0	-20 38.4
7	106	34.4	260	07.8	42.2	200	11.6	54.5	283	36.8	05.6	216	53.4	38.4
8	121	36.9	275	07.4	43.4	215	12.3	54.5	298	38.7	05.8	231	55.7	38.4
9	136	39.3	290	07.0	44.6	230	13.0	54.5	313	40.7	06.0	246	58.0	38.5
10	151	41.8	305	06.6	45.8	245	13.7	54.5	328	42.7	06.2	262	00.3	38.5
11	166	44.3	320	06.2	-10 47.0	260	14.4	-25 54.5	343	44.6	-0 06.4	277	02.6	-20 38.5
12	181	46.7	335	05.9	-10 48.2	275	15.1	-25 54.5	358	46.6	-0 06.6	292	04.9	-20 38.6
13	196	49.2	350	05.5	49.4	290	15.8	54.5	13	48.6	06.9	307	07.2	38.6
14	211	51.7	5 05.1	50.6	305	16.4	54.5	54.5	28	50.5	07.1	322	09.5	38.6
15	226	54.1	20 04.7	51.8	320	17.1	54.5	54.5	43	52.5	07.3	337	11.8	38.7
16	241	56.6	35 04.3	53.0	335	17.8	54.5	54.5	58	54.5	07.5	352	14.1	38.7
17	256	59.1	50 03.9	-10 54.2	350	18.5	-25 54.6	54.6	73	56.5	-0 07.7	7	16.4	-20 38.7
18	272	01.5	65 03.5	-10 55.4	5 19.2	-25 54.6	54.6	54.6	88	58.4	-0 07.9	22	18.7	-20 38.7
19	287	04.0	80 03.1	56.6	20 19.9	54.6	54.6	54.6	104	00.4	08.1	37	21.0	38.8
20	302	06.4	95 02.7	57.7	35 20.6	54.6	54.6	54.6	119	02.4	08.4	52	23.3	38.8
21	317	08.9	110 02.3	-10 58.9	50 21.3	54.6	54.6	54.6	134	04.3	08.6	67	25.6	38.8
22	332	11.4	125 01.9	-11 00.1	65 21.9	54.6	54.6	54.6	149	06.3	08.8	82	27.9	38.9
23	347	13.8	140 01.5	01.3	80 22.6	54.6	54.6	54.6	164	08.3	09.0	97	30.2	38.9
24	2	16.3	155	01.1	-11 02.5	95	23.3	-25 54.6	179	10.2	-0 09.2	112	32.5	-20 38.9
Dif	—		-4		-12	+7		0	+20		-2	+23		0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 9 PMG: 11 ^h 52 ^m 2			Edad: 21 ^d 6 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 5 20 ^h : 58 ^m 3 PMG: 5 ^h 43 ^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	181	54.6	-0	09.4	277	28.7	+18	12.2	19	60 N	4	16	5	06	5	47	22 00 63				
1	196	54.9		10.4	291	54.5		14.1	19	58		21		08	48	12 62	14 10 52				
2	211	55.1		11.3	306	20.4		15.8	17	56		26		11	48	23 61	13 59 52				
3	226	55.3		12.3	320	46.3		17.5	17	54		31		13	48	33 60	50 52				
4	241	55.5		13.3	335	12.2		19.0	15	52		35		14	48	41 60	41 53				
5	256	55.7	-0	14.3	349	38.2	70	+18	20.5	15	50	4	38	5	16	5	48	22 49 60			
6	271	56.0	-0	15.2	4	04.1	69	+18	21.8	13	45	4	45	5	19	5	49	23 05 59			
7	286	56.2		16.2	18	30.1	70		22.9	11	40		50		22	49	19 58	13 04 54			
8	301	56.4		17.2	32	56.1	70		24.0	11	35		54		24	49	30 57	12 53 54			
9	316	56.6		18.2	47	22.2	71		25.0	10	30	4	57	25		49	40 57	43 54			
10	331	56.8		19.1	61	48.2	70		25.8	8	20		5	02	27	49	23 57 56	26 54			
11	346	57.1	-0	20.1	76	14.3	71	+18	26.5	7	10 N		5	04	5	28	5	49	** ** *	12 11 55	
12	1	57.3	-0	21.1	90	40.5	72	+18	27.1	6	0		5	04	5	28	5	49	** ** *	11 57 55	
13	16	57.5		22.0	105	06.6	71		27.6	5	10 S			03		28	49	** ** *		43 55	
14	31	57.7		23.0	119	32.8	72		28.0	4	20		5	01	26		48	** ** *		28 56	
15	46	57.9		24.0	133	59.0	72		28.3	3	30		4	56	24		48	0 15 57		10 57	
16	61	58.1		25.0	148	25.3	73		28.4	1	35			53	22		48	25 57		11 00 57	
17	76	58.4	-0	25.9	162	51.6	73	+18	28.4	0	40		4	48	5	20	5	47	0 36 57		10 49 57
18	91	58.6	-0	26.9	177	17.9	73	+18	28.3	1	45		4	43	5	17	5	47	0 50 57		10 35 57
19	106	58.8		27.9	191	44.2	73		28.1	2	50			36	14		46	1 06 57		19 57	
20	121	59.0		28.9	206	10.6	74		27.8	3	52			32	12		46	14 57		11 58	
21	136	59.2		29.8	220	37.1	75		27.4	4	54			28	10		45	22 57		10 03 57	
22	151	59.4		30.8	235	03.5	74		26.9	5	56			24	08		45	32 57		9 53 58	
23	166	59.7		31.8	249	30.0	75		26.2	7	58			18	05		44	43 57		42 58	
24	181	59.9	-0	32.8	263	56.5	75	+18	25.5	7	60 S		4	12	5	02	5	44	1 55 58		9 29 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 47 ^m 0		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: 0.0 PMG: 17 ^h 38 ^m		Mag: -1.7 PMG: 12 ^h 02 ^m		Mag: +0.5 PMG: 16 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	2	16.3	155	01.1	-11	02.5	179	10.2	-0	09.2
1	17	18.8	170	00.7		03.7	194	12.2		09.4
2	32	21.2	185	00.3		04.9	209	14.2		09.6
3	47	23.7	199	59.9		06.1	224	16.1		09.9
4	62	26.2	214	59.5		07.3	239	18.1		10.1
5	77	28.6	229	59.1	-11	08.4	254	20.1	-0	10.3
6	92	31.1	244	58.7	-11	09.6	269	22.0	-0	10.5
7	107	33.6	259	58.3		10.8	284	24.0		10.7
8	122	36.0	274	57.9		12.0	299	26.0		10.9
9	137	38.5	289	57.5		13.2	314	27.9		11.1
10	152	40.9	304	57.1		14.4	329	29.9		11.4
11	167	43.4	319	56.7	-11	15.6	344	31.9	-0	11.6
12	182	45.9	334	56.3	-11	16.7	359	33.9	-0	11.8
13	197	48.3	349	55.8		17.9	14	35.8		12.0
14	212	50.8	4	55.4		19.1	29	37.8		12.2
15	227	53.3	19	55.0		20.3	44	39.8		12.4
16	242	55.7	34	54.6		21.5	59	41.7		12.6
17	257	58.2	49	54.2	-11	22.7	74	43.7	-0	12.9
18	273	00.7	64	53.8	-11	23.8	89	45.7	-0	13.1
19	288	03.1	79	53.4		25.0	104	47.6		13.3
20	303	05.6	94	53.0		26.2	119	49.6		13.5
21	318	08.1	109	52.6		27.4	134	51.6		13.7
22	333	10.5	124	52.2		28.6	149	53.5		13.9
23	348	13.0	139	51.8		29.7	164	55.5		14.1
24	3	15.4	154	51.4	-11	30.9	179	57.5	-0	14.4
Dif	—		-4	-12		+7	0	+20		-2
										+23
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 51 ^m 8			Edad: 22 ^d 6 PHE SD: 15'8 PMG: 6 ^h 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	59.9	-0 32.8	263	56.5	+18 25.5	9	60 N	17 53	18 34	19 24	23 03 69	15 14 39	
1	197	00.1	33.7	278	23.1 76	24.6	9	58	53	32	18	14 68	15 02 40	
2	212	00.3	34.7	292	49.7 76	23.6	10	56	53	30	14	24 67	14 51 42	
3	227	00.5	35.7	307	16.4 77	22.5	11	54	53	28	10	33 66	42 43	
4	242	00.8	36.6	321	43.1 77	21.3	12	52	53	26	06	41 65	34 44	
5	257	01.0	-0 37.6	336	09.8 77	+18 20.0	13	50	17 53	18 25	19 03	23 49 63	14 27 44	
6	272	01.2	-0 38.6	350	36.6 78	+18 18.5	15	45	17 53	18 22	18 57	** ** *	14 11 46	
7	287	01.4	39.6	5	03.4 78	17.0	15	40	53	20	52	** ** *	13 58 47	
8	302	01.6	40.5	19	30.3 79	15.4	16	35	53	19	48	** ** *	47 49	
9	317	01.8	41.5	33	57.2 79	13.6	18	30	54	18	45	** ** *	37 50	
10	332	02.1	42.5	48	24.2 80	11.7	19	20	54	16	42	** ** *	20 52	
11	347	02.3	-0 43.5	62	51.2 80	+18 09.8	19	10 N	17 55	18 16	18 40	0 12 55	13 06 52	
12	2	02.5	-0 44.4	77	18.2 80	+18 07.7	21	0	17 55	18 16	18 40	0 26 54	12 52 54	
13	17	02.7	45.4	91	45.3 81	05.5	22	10 S	56	17	41	40 54	38 55	
14	32	02.9	46.4	106	12.4 81	03.2	23	20	57	19	44	0 55 53	24 56	
15	47	03.1	47.4	120	39.6 82	+18 00.8	24	30	58	21	49	1 12 52	12 07 57	
16	62	03.4	48.3	135	06.8 82	+17 58.4	24	35	58	23	53	22 51	11 57 58	
17	77	03.6	-0 49.3	149	34.1 83	+17 55.8	26	40	17 59	18 26	18 58	1 33 51	11 46 59	
18	92	03.8	-0 50.3	164	01.4 83	+17 53.1	27	45	18 00	18 29	19 04	1 47 50	11 32 61	
19	107	04.0	51.3	178	28.8 84	50.3	28	50	01	33	12	2 03 49	16 62	
20	122	04.2	52.2	192	56.3 85	47.3	30	52	01	35	15	11 48	09 62	
21	137	04.4	53.2	207	23.7 84	44.3	30	54	02	37	20	19 48	11 00 64	
22	152	04.6	54.2	221	51.3 86	41.2	31	56	03	40	25	29 47	10 51 64	
23	167	04.9	55.1	236	18.8 85	38.0	32	58	03	43	30	40 46	40 65	
24	182	05.1	-0 56.1	250	46.5 87	+17 34.7	33	60 S	18 04	18 46	19 37	2 53 44	10 27 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 43 ^m 1		Mag: -3.9 PMG: 13 ^h 41 ^m		Mag: 0.0 PMG: 17 ^h 37 ^m		Mag: -1.7 PMG: 11 ^h 59 ^m		Mag: +0.5 PMG: 16 ^h 24 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	3	15.4	154	51.4	-11 30.9	95	39.7	-25 54.6	179	57.5	-0 14.4	113	27.7	-20 39.6
1	18	17.9	169	51.0	32.1	110	40.3	54.6	194	59.4	14.6	128	30.0	39.7
2	33	20.4	184	50.6	33.3	125	41.0	54.6	210	01.4	14.8	143	32.3	39.7
3	48	22.8	199	50.2	34.4	140	41.7	54.6	225	03.4	15.0	158	34.6	39.7
4	63	25.3	214	49.7	35.6	155	42.4	54.6	240	05.3	15.2	173	36.9	39.7
5	78	27.8	229	49.3	-11 36.8	170	43.1	-25 54.6	255	07.3	-0 15.4	188	39.2	-20 39.8
6	93	30.2	244	48.9	-11 38.0	185	43.7	-25 54.6	270	09.3	-0 15.6	203	41.5	-20 39.8
7	108	32.7	259	48.5	39.2	200	44.4	54.6	285	11.2	15.9	218	43.7	39.8
8	123	35.2	274	48.1	40.3	215	45.1	54.6	300	13.2	16.1	233	46.0	39.9
9	138	37.6	289	47.7	41.5	230	45.8	54.6	315	15.2	16.3	248	48.3	39.9
10	153	40.1	304	47.3	42.7	245	46.4	54.5	330	17.1	16.5	263	50.6	39.9
11	168	42.5	319	46.9	-11 43.9	260	47.1	-25 54.5	345	19.1	-0 16.7	278	52.9	-20 40.0
12	183	45.0	334	46.5	-11 45.0	275	47.8	-25 54.5	0	21.1	-0 16.9	293	55.2	-20 40.0
13	198	47.5	349	46.0	46.2	290	48.4	54.5	15	23.1	17.1	308	57.5	40.0
14	213	49.9	4	45.6	47.4	305	49.1	54.5	30	25.0	17.4	323	59.8	40.0
15	228	52.4	19	45.2	48.5	320	49.8	54.5	45	27.0	17.6	339	02.1	40.1
16	243	54.9	34	44.8	49.7	335	50.5	54.5	60	29.0	17.8	354	04.4	40.1
17	258	57.3	49	44.4	-11 50.9	350	51.1	-25 54.5	75	30.9	-0 18.0	9	06.7	-20 40.1
18	273	59.8	64	44.0	-11 52.1	5	51.8	-25 54.5	90	32.9	-0 18.2	24	09.0	-20 40.2
19	289	02.3	79	43.6	53.2	20	52.5	54.5	105	34.9	18.4	39	11.3	40.2
20	304	04.7	94	43.1	54.4	35	53.1	54.5	120	36.8	18.6	54	13.6	40.2
21	319	07.2	109	42.7	55.6	50	53.8	54.4	135	38.8	18.9	69	15.9	40.3
22	334	09.7	124	42.3	56.7	65	54.5	54.4	150	40.8	19.1	84	18.2	40.3
23	349	12.1	139	41.9	57.9	80	55.2	54.4	165	42.7	19.3	99	20.5	40.3
24	4	14.6	154	41.5	-11 59.1	95	55.8	-25 54.4	180	44.7	-0 19.5	114	22.8	-20 40.3
Dif	—		-4	-12		+7	0		+20	-2		+23		0

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: 23 ^d 6 SD: 15'7 PMG: 7 ^h 33 ^m				PHE { 4 ^h : 57'4 12 ^h : 57'2 20 ^h : 57'0 R°: 52 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	182	05.1	-0	56.1	250	46.5	+17	34.7	60 N	4 21	5 11	5 52	** ** *	15 53	30	
1	197	05.3		57.1	265	14.1	86	31.3	58	26	13	52	** ** *	42	33	
2	212	05.5		58.1	279	41.9	88	27.8	56	31	15	52	** ** *	33	34	
3	227	05.7	-0	59.0	294	09.7	88	24.2	54	35	16	52	** ** *	25	36	
4	242	05.9	-1	00.0	308	37.5	88	20.5	52	38	18	51	** ** *	18	37	
5	257	06.2	-1	01.0	323	05.4	89	+17 16.7	50	4 41	5 19	5 51	** ** *	15 11	38	
6	272	06.4	-1	02.0	337	33.3	89	+17 12.8	45	4 47	5 22	5 51	0 04	61	14 57	
7	287	06.6		02.9	352	01.3	90	08.9	40	52	24	51	17 59	45	43	
8	302	06.8		03.9	6	29.4	91	04.8	35	56	25	50	27 59	36	43	
9	317	07.0		04.9	20	57.5	91	+17 00.6	30	4 58	26	50	37 57	27	45	
10	332	07.2		05.9	35	25.7	92	+16 56.3	20	5 02	28	50	0 53	56	14 12	
11	347	07.4	-1	06.8	49	53.9	92	+16 52.0	10 N	5 04	5 28	5 49	1 07	54	13 58	
12	2	07.7	-1	07.8	64	22.1	92	+16 47.6	0	5 04	5 28	5 48	1 20	53	13 46	
13	17	07.9		08.8	78	50.5	94	43.0	10 S	5 02	26	47	34 50	33	53	
14	32	08.1		09.7	93	18.9	94	38.4	20	4 59	25	47	1 48	49	20 55	
15	47	08.3		10.7	107	47.3	94	33.7	30	54	21	45	2 04	47	13 04	
16	62	08.5		11.7	122	15.8	95	28.9	35	50	19	45	13 46	12 55	59	
17	77	08.7	-1	12.7	136	44.3	95	+16 24.0	40	4 45	5 17	5 44	2 24	45	12 45	
18	92	08.9	-1	13.6	151	12.9	96	+16 19.0	45	4 39	5 13	5 43	2 37	43	12 33	
19	107	09.2		14.6	165	41.6	97	14.0	50	31	09	41	52 41	18	65	
20	122	09.4		15.6	180	10.3	97	08.8	52	27	07	41	2 59	40	11 66	
21	137	09.6		16.6	194	39.1	98	+16 03.6	54	23	05	40	3 07	39	12 04	
22	152	09.8		17.5	209	07.9	98	+15 58.3	56	18	5 02	40	16 37	11 55	68	
23	167	10.0		18.5	223	36.8	99	52.9	58	12	4 59	39	26 36	45	70	
24	182	10.2	-1	19.5	238	05.8	100	+15 47.4	60 S	4 06	4 56	5 38	3 37	34	11 34	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 39 ^m 1		Mag: -3.9 PMG: 13 ^h 42 ^m			Mag: 0.0 PMG: 17 ^h 35 ^m			Mag: -1.7 PMG: 11 ^h 55 ^m			Mag: +0.5 PMG: 16 ^h 20 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	4	14.6	154	41.5	-11	59.1	95	55.8	-25	54.4	180	44.7	-0	19.5	114	22.8
1	19	17.0	169	41.1	-12	00.2	110	56.5		54.4	195	46.7		19.7	129	25.1
2	34	19.5	184	40.6		01.4	125	57.2		54.4	210	48.6		19.9	144	27.3
3	49	22.0	199	40.2		02.6	140	57.8		54.4	225	50.6		20.1	159	29.6
4	64	24.4	214	39.8		03.7	155	58.5		54.4	240	52.6		20.4	174	31.9
5	79	26.9	229	39.4	-12	04.9	170	59.2	-25	54.3	255	54.5	-0	20.6	189	34.2
6	94	29.4	244	39.0	-12	06.1	185	59.8	-25	54.3	270	56.5	-0	20.8	204	36.5
7	109	31.8	259	38.5		07.2	201	00.5		54.3	285	58.5		21.0	219	38.8
8	124	34.3	274	38.1		08.4	216	01.2		54.3	301	00.4		21.2	234	41.1
9	139	36.8	289	37.7		09.6	231	01.8		54.3	316	02.4		21.4	249	43.4
10	154	39.2	304	37.3		10.7	246	02.5		54.3	331	04.4		21.6	264	45.7
11	169	41.7	319	36.9	-12	11.9	261	03.2	-25	54.3	346	06.3	-0	21.8	279	48.0
12	184	44.2	334	36.4	-12	13.0	276	03.8	-25	54.2	1	08.3	-0	22.1	294	50.3
13	199	46.6	349	36.0		14.2	291	04.5		54.2	16	10.3		22.3	309	52.6
14	214	49.1	4	35.6		15.4	306	05.2		54.2	31	12.2		22.5	324	54.9
15	229	51.5	19	35.2		16.5	321	05.8		54.2	46	14.2		22.7	339	57.2
16	244	54.0	34	34.7		17.7	336	06.5		54.2	61	16.2		22.9	354	59.4
17	259	56.5	49	34.3	-12	18.9	351	07.2	-25	54.2	76	18.2	-0	23.1	10	01.7
18	274	58.9	64	33.9	-12	20.0	6	07.8	-25	54.1	91	20.1	-0	23.3	25	04.0
19	290	01.4	79	33.5		21.2	21	08.5		54.1	106	22.1		23.6	40	06.3
20	305	03.9	94	33.0		22.3	36	09.1		54.1	121	24.1		23.8	55	08.6
21	320	06.3	109	32.6		23.5	51	09.8		54.1	136	26.0		24.0	70	10.9
22	335	08.8	124	32.2		24.6	66	10.5		54.1	151	28.0		24.2	85	13.2
23	350	11.3	139	31.8		25.8	81	11.1		54.0	166	30.0		24.4	100	15.5
24	5	13.7	154	31.3	-12	27.0	96	11.8	-25	54.0	181	31.9	-0	24.6	115	17.8
Dif	—		-4		-12		+7		0		+20		-2		+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51 ^m 1			Edad: 24 ^d 6 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 SD: 15'5 PMG: 8 ^h 25 ^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	182	10.2	-1 19.5	238	05.8	+15 47.4	56	60 N	17 47	18 28	19 17	0 12 73	16 23 24			
1	197	10.4	20.5	252	34.8 ¹⁰⁰	41.8	56	58	47	26	12	22 71	15 26			
2	212	10.7	21.4	267	03.8 ¹⁰⁰	36.2	56	56	47	24	08	31 69	07 28			
3	227	10.9	22.4	281	33.0 ¹⁰²	30.5	57	54	48	23	04	39 67	16 01 29			
4	242	11.1	23.4	296	02.1 ¹⁰¹	24.7	58	52	48	22	19 01	46 66	15 55 31			
5	257	11.3	-1 24.4	310	31.4 ¹⁰³	+15 18.8	59	50	17 49	18 21	18 58	0 52 65	15 49 33			
6	272	11.5	-1 25.3	325	00.7 ¹⁰³	+15 12.9	59	45	17 49	18 19	18 53	1 05 63	15 37 36			
7	287	11.7	26.3	339	30.0 ¹⁰³	06.8	61	40	50	17	48	16 61	28 37			
8	302	11.9	27.3	353	59.4 ¹⁰⁴	+15 00.7	61	35	51	16	45	26 59	19 40			
9	317	12.1	28.2	8	28.9 ¹⁰⁵	+14 54.5	62	30	51	15	43	34 57	15 12 41			
10	332	12.4	29.2	22	58.4 ¹⁰⁵	48.3	62	20	52	14	40	1 49 54	14 59 44			
11	347	12.6	-1 30.2	37	28.0 ¹⁰⁶	+14 42.0	63	10 N	17 53	18 14	18 39	2 01 52	14 48 46			
12	2	12.8	-1 31.2	51	57.6 ¹⁰⁶	+14 35.6	64	0	17 54	18 15	18 39	2 13 50	14 37 49			
13	17	13.0	32.1	66	27.3 ¹⁰⁷	29.1	65	10 S	56	17	41	24 48	26 51			
14	32	13.2	33.1	80	57.0 ¹⁰⁷	22.5	66	20	57	19	45	37 45	15 54			
15	47	13.4	34.1	95	26.8 ¹⁰⁸	15.9	66	30	17 59	23	51	51 43	14 02 56			
16	62	13.6	35.1	109	56.7 ¹⁰⁹	09.3	66	35	18 00	25	18 55	2 59 42	13 54 58			
17	77	13.8	-1 36.0	124	26.6 ¹⁰⁹	+14 02.5	68	40	18 01	18 28	19 00	3 09 39	13 45 61			
18	92	14.1	-1 37.0	138	56.6 ¹¹⁰	+13 55.7	68	45	18 02	18 32	19 06	3 20 37	13 35 63			
19	107	14.3	38.0	153	26.6 ¹¹⁰	48.8	69	50	04	36	15	33 34	23 65			
20	122	14.5	39.0	167	56.7 ¹¹¹	41.9	69	52	05	39	19	39 33	17 67			
21	137	14.7	39.9	182	26.8 ¹¹¹	34.8	71	54	06	41	24	46 32	10 69			
22	152	14.9	40.9	196	57.0 ¹¹²	27.8	70	56	07	44	29	3 53 31	13 03 70			
23	167	15.1	41.9	211	27.3 ¹¹³	20.6	72	58	08	47	35	4 02 28	12 55 72			
24	182	15.3	-1 42.8	225	57.6 ¹¹³	+13 13.4	72	60 S	18 09	18 51	19 42	4 11 27	12 46 74			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 35 ^m 2			Mag: -3.9 PMG: 13 ^h 42 ^m			Mag: 0.0 PMG: 17 ^h 34 ^m			Mag: -1.7 PMG: 11 ^h 52 ^m			Mag: +0.5 PMG: 16 ^h 16 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	
0	5	13.7	154	31.3	-12 27.0	96	11.8	-25 54.0	181	31.9	-0 24.6	115	17.8	-20 41.1		
1	20	16.2	169	30.9	28.1	111	12.4	54.0	196	33.9	24.8	130	20.1	41.1		
2	35	18.6	184	30.5	29.3	126	13.1	54.0	211	35.9	25.1	145	22.4	41.1		
3	50	21.1	199	30.1	30.4	141	13.8	54.0	226	37.8	25.3	160	24.6	41.2		
4	65	23.6	214	29.6	31.6	156	14.4	53.9	241	39.8	25.5	175	26.9	41.2		
5	80	26.0	229	29.2	-12 32.7	171	15.1	-25 53.9	256	41.8	-0 25.7	190	29.2	-20 41.2		
6	95	28.5	244	28.8	-12 33.9	186	15.7	-25 53.9	271	43.7	-0 25.9	205	31.5	-20 41.3		
7	110	31.0	259	28.3	35.0	201	16.4	53.9	286	45.7	26.1	220	33.8	41.3		
8	125	33.4	274	27.9	36.2	216	17.1	53.8	301	47.7	26.3	235	36.1	41.3		
9	140	35.9	289	27.5	37.3	231	17.7	53.8	316	49.6	26.6	250	38.4	41.3		
10	155	38.4	304	27.1	38.5	246	18.4	53.8	331	51.6	26.8	265	40.7	41.4		
11	170	40.8	319	26.6	-12 39.7	261	19.0	-25 53.8	346	53.6	-0 27.0	280	43.0	-20 41.4		
12	185	43.3	334	26.2	-12 40.8	276	19.7	-25 53.7	1	55.5	-0 27.2	295	45.2	-20 41.4		
13	200	45.8	349	25.8	42.0	291	20.4	53.7	16	57.5	27.4	310	47.5	41.5		
14	215	48.2	4	25.3	43.1	306	21.0	53.7	31	59.5	27.6	325	49.8	41.5		
15	230	50.7	19	24.9	44.3	321	21.7	53.7	47	01.4	27.8	340	52.1	41.5		
16	245	53.1	34	24.5	45.4	336	22.3	53.6	62	03.4	28.1	355	54.4	41.6		
17	260	55.6	49	24.0	-12 46.5	351	23.0	-25 53.6	77	05.4	-0 28.3	10	56.7	-20 41.6		
18	275	58.1	64	23.6	-12 47.7	6	23.6	-25 53.6	92	07.3	-0 28.5	25	59.0	-20 41.6		
19	291	00.5	79	23.2	48.8	21	24.3	53.6	107	09.3	28.7	41	01.3	41.6		
20	306	03.0	94	22.7	50.0	36	24.9	53.5	122	11.3	28.9	56	03.5	41.7		
21	321	05.5	109	22.3	51.1	51	25.6	53.5	137	13.3	29.1	71	05.8	41.7		
22	336	07.9	124	21.9	52.3	66	26.3	53.5	152	15.2	29.3	86	08.1	41.7		
23	351	10.4	139	21.4	53.4	81	26.9	53.5	167	17.2	29.6	101	10.4	41.8		
24	6	12.9	154	21.0	-12 54.6	96	27.6	-25 53.4	182	19.2	-0 29.8	116	12.7	-20 41.8		
Dif	—			-4	-12	+7			0	+20			-2	+23		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0			Edad: 25 ^d 6 PHE { 4 ^h : 56 ^h 3 12 ^h : 56 ^h 1 20 ^h : 55 ^h 9											
	PMG: 11 ^h 50 ^m 8			SD: 15 ^h 3											
	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	182	15.3	-1 42.8	225	57.6	+13 13.4	72	60 N	4 26	5 15	5 57	1 25 75		16 47 20	
1	197	15.5		240	27.9 ¹¹³	+13 06.2	74	58	31	17	56	33 72		41 22	
2	212	15.7		254	58.3 ¹¹⁴	+12 58.8	74	56	35	19	56	40 70		35 24	
3	227	16.0		269	28.8 ¹¹⁵		74	54	38	20	55	46 69		30 26	
4	242	16.2		283	59.3 ¹¹⁵		74	52	42	21	55	52 67		26 27	
5	257	16.4	-1 47.7	298	29.9 ¹¹⁶	+12 36.5	75	50	4 44	5 22	5 54	1 57 65		16 22 28	
6	272	16.6	-1 48.7	313	00.5 ¹¹⁶	+12 28.9	76	45	4 50	5 24	5 53	2 08 62		16 13 31	
7	287	16.8		327	31.2 ¹¹⁷		76	40	54	26	53	17 60		16 05 34	
8	302	17.0		342	01.9 ¹¹⁷		77	35	4 57	27	52	25 57		15 59 36	
9	317	17.2		356	32.7 ¹¹⁸	+12 05.9	77	30	5 00	27	51	31 56		53 38	
10	332	17.4		11	03.6 ¹¹⁹	+11 58.1	78	20	02	28	50	43 53		43 41	
11	347	17.6	-1 53.6	25	34.5 ¹¹⁹	+11 50.3	78	10 N	5 03	5 28	5 49	2 53 50		15 34 44	
12	2	17.9	-1 54.5	40	05.4 ¹¹⁹	+11 42.4	79	0	5 03	5 27	5 48	3 03 47		15 26 47	
13	17	18.1		55.5	54 36.4 ¹²⁰		80	10 S	5 01	25	46	12 45		17 50	
14	32	18.3		56.5	69 07.5 ¹²¹		80	20	4 57	23	45	22 43		15 09 52	
15	47	18.5		57.4	83 38.6 ¹²¹		80	30	51	19	43	34 39		14 58 56	
16	62	18.7		58.4	98 09.7 ¹²¹		81	35	47	16	42	41 37		52 58	
17	77	18.9	-1 59.4	112	40.9 ¹²²	+11 02.2	81	40	4 42	5 13	5 40	3 48 36		14 46 59	
18	92	19.1	-2 00.4	127	12.2 ¹²³	+10 54.0	82	45	4 35	5 10	5 39	3 57 33		14 38 62	
19	107	19.3		01.3	141 43.5 ¹²³		83	50	26	05	37	4 07 31		28 66	
20	122	19.5		02.3	156 14.8 ¹²³		83	52	22	02	36	12 29		24 67	
21	137	19.7		03.3	170 46.2 ¹²⁴		83	54	17	5 00	35	18 27		19 68	
22	152	19.9		04.3	185 17.7 ¹²⁵		84	56	12	4 57	34	24 25		13 71	
23	167	20.2		05.2	199 49.2 ¹²⁵		84	58	4 06	54	33	30 24		07 73	
24	182	20.4	-2 06.2	214	20.7 ¹²⁵	+10 03.8	85	60 S	3 59	4 50	5 32	4 38 21		14 00 75	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 31 ^m 3		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: 0.0 PMG: 17 ^h 33 ^m		Mag: -1.7 PMG: 11 ^h 49 ^m		Mag: +0.5 PMG: 16 ^h 13 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	6	12.9	154	21.0	-12	54.6	182	19.2	-0	29.8					
1	21	15.3	169	20.6		55.7	197	21.1		30.0					
2	36	17.8	184	20.1		56.9	212	23.1		30.2					
3	51	20.3	199	19.7		58.0	227	25.1		30.4					
4	66	22.7	214	19.2	-12	59.1	242	27.0		30.6					
5	81	25.2	229	18.8	-13	00.3	257	29.0	-0	30.8					
6	96	27.6	244	18.4	-13	01.4	272	31.0	-0	31.1					
7	111	30.1	259	17.9		02.6	287	32.9		31.3					
8	126	32.6	274	17.5		03.7	302	34.9		31.5					
9	141	35.0	289	17.0		04.9	317	36.9		31.7					
10	156	37.5	304	16.6		06.0	332	38.8		31.9					
11	171	40.0	319	16.2	-13	07.1	347	40.8	-0	32.1					
12	186	42.4	334	15.7	-13	08.3	2	42.8	-0	32.3					
13	201	44.9	349	15.3		09.4	17	44.7		32.5					
14	216	47.4	4	14.8		10.5	32	46.7		32.8					
15	231	49.8	19	14.4		11.7	47	48.7		33.0					
16	246	52.3	34	14.0		12.8	62	50.6		33.2					
17	261	54.7	49	13.5	-13	14.0	77	52.6	-0	33.4					
18	276	57.2	64	13.1	-13	15.1	92	54.6	-0	33.6					
19	291	59.7	79	12.6		16.2	107	56.5		33.8					
20	307	02.1	94	12.2		17.4	122	58.5		34.0					
21	322	04.6	109	11.7		18.5	138	00.5		34.3					
22	337	07.1	124	11.3		19.6	153	02.4		34.5					
23	352	09.5	139	10.8		20.8	168	04.4		34.7					
24	7	12.0	154	10.4	-13	21.9	183	06.4	-0	34.9					
Dif	—		-4		-11		+6		+20						
									-2						
									+23						
									0						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 50 ^m 5			Edad: 26 ^d 6 PHE { SD: 15:2 PMG: 10 ^h 01 ^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		
0	182	20.4	-2	06.2	214	20.7	+10 03.8	60 N	17 41	18 22	19 11	2 40 74	17 07 17		
1	197	20.6		07.2	228	52.3 ¹²⁶	+9 55.3 ⁸⁵	58	41	20	06	45 72	17 03 19		
2	212	20.8		08.1	243	23.9 ¹²⁶	46.8 ⁸⁵	56	42	19	19 03	50 70	16 59 21		
3	227	21.0		09.1	257	55.6 ¹²⁷	38.2 ⁸⁶	54	43	18	18 59	55 68	56 23		
4	242	21.2		10.1	272	27.3 ¹²⁷	29.6 ⁸⁶	52	44	17	56	2 59 66	53 24		
5	257	21.4	-2	11.1	286	59.1 ¹²⁸	+9 20.9 ⁸⁷	50	17 44	18 16	18 54	3 02 65	16 50 26		
6	272	21.6	-2	12.0	301	30.9 ¹²⁸	+9 12.2 ⁸⁷	45	17 46	18 15	18 49	3 10 62	16 44 29		
7	287	21.8		13.0	316	02.8 ¹²⁹	+9 03.5 ⁸⁷	40	47	14	45	17 59	39 32		
8	302	22.0		14.0	330	34.7 ¹²⁹	+8 54.7 ⁸⁸	35	48	13	42	22 57	35 33		
9	317	22.2		15.0	345	06.7 ¹³⁰	45.9 ⁸⁸	30	49	13	40	27 55	31 36		
10	332	22.4		15.9	359	38.7 ¹³⁰	37.0 ⁸⁹	20	50	12	38	36 51	24 39		
11	347	22.7	-2	16.9	14	10.7 ¹³⁰	+8 28.1 ⁸⁹	10 N	17 52	18 13	18 37	3 43 49	16 18 42		
12	2	22.9	-2	17.9	28	42.8 ¹³¹	+8 19.2 ⁸⁹	0	17 54	18 14	18 38	3 50 46	16 13 45		
13	17	23.1		18.8	43	14.9 ¹³¹	10.3 ⁸⁹	10 S	55	16	41	3 57 43	07 48		
14	32	23.3		19.8	57	47.1 ¹³²	+8 01.3 ⁹⁰	20	17 57	19	45	4 05 40	16 01 51		
15	47	23.5		20.8	72	19.3 ¹³²	+7 52.3 ⁹⁰	30	18 00	24	52	13 37	15 54 54		
16	62	23.7		21.8	86	51.5 ¹³²	43.2 ⁹¹	35	01	27	18 56	18 35	50 56		
17	77	23.9	-2	22.7	101	23.8 ¹³³	+7 34.1 ⁹¹	40	18 03	18 30	19 02	4 24 32	15 45 59		
18	92	24.1	-2	23.7	115	56.1 ¹³³	+7 25.0 ⁹¹	45	18 05	18 34	19 09	4 30 30	15 40 61		
19	107	24.3		24.7	130	28.5 ¹³⁴	15.9 ⁹¹	50	07	40	18	38 27	34 64		
20	122	24.5		25.6	145	00.9 ¹³⁴	+7 06.7 ⁹²	52	08	42	23	41 26	31 66		
21	137	24.7		26.6	159	33.4 ¹³⁵	+6 57.5 ⁹²	54	09	45	28	45 24	27 68		
22	152	24.9		27.6	174	05.8 ¹³⁴	48.3 ⁹²	56	11	48	33	49 22	24 69		
23	167	25.1		28.6	188	38.4 ¹³⁶	39.1 ⁹²	58	12	52	40	54 20	20 71		
24	182	25.3	-2	29.5	203	10.9 ¹³⁵	+6 29.8 ⁹³	60 S	18 14	18 56	19 48	4 59 18	15 15 74		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 27 ^m 3		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: 0.0 PMG: 17 ^h 32 ^m			Mag: -1.7 PMG: 11 ^h 46 ^m			Mag: +0.5 PMG: 16 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	7	12.0	154	10.4	-13	21.9	96	43.1	-25	52.6	183	06.4	-0	34.9	
1	22	14.5	169	10.0		23.0	111	43.8		52.6	198	08.3		35.1	
2	37	16.9	184	09.5		24.2	126	44.4		52.6	213	10.3		35.3	
3	52	19.4	199	09.1		25.3	141	45.1		52.5	228	12.3		35.5	
4	67	21.9	214	08.6		26.4	156	45.7		52.5	243	14.2		35.8	
5	82	24.3	229	08.2	-13	27.5	171	46.4	-25	52.4	258	16.2	-0	36.0	
6	97	26.8	244	07.7	-13	28.7	186	47.0	-25	52.4	273	18.2	-0	36.2	
7	112	29.2	259	07.3		29.8	201	47.7		52.4	288	20.2		36.4	
8	127	31.7	274	06.8		30.9	216	48.3		52.3	303	22.1		36.6	
9	142	34.2	289	06.4		32.1	231	48.9		52.3	318	24.1		36.8	
10	157	36.6	304	05.9		33.2	246	49.6		52.2	333	26.1		37.0	
11	172	39.1	319	05.5	-13	34.3	261	50.2	-25	52.2	348	28.0	-0	37.3	
12	187	41.6	334	05.0	-13	35.4	276	50.9	-25	52.2	3 30.0	-0	37.5	297 34.9	
13	202	44.0	349	04.6		36.6	291	51.5		52.1	18 32.0		37.7	312 37.2	
14	217	46.5	4 04.1			37.7	306	52.2		52.1	33 33.9		37.9	327 39.5	
15	232	49.0	19 03.7			38.8	321	52.8		52.0	48 35.9		38.1	342 41.8	
16	247	51.4	34 03.2			39.9	336	53.4		52.0	63 37.9		38.3	357 44.0	
17	262	53.9	49 02.8	-13	41.1		351	54.1	-25	51.9	78 39.8	-0	38.5	12 46.3	
18	277	56.3	64 02.3	-13	42.2		6 54.7	-25	51.9		93 41.8	-0	38.8	27 48.6	
19	292	58.8	79 01.9		43.3		21 55.4		51.9		108 43.8		39.0	42 50.9	
20	308	01.3	94 01.4		44.4		36 56.0		51.8		123 45.7		39.2	57 53.2	
21	323	03.7	109 00.9		45.5		51 56.6		51.8		138 47.7		39.4	72 55.5	
22	338	06.2	124 00.5		46.7		66 57.3		51.7		153 49.7		39.6	87 57.7	
23	353	08.7	139 00.0		47.8		81 57.9		51.7		168 51.6		39.8	103 00.0	
24	8	11.1	153 59.6	-13	48.9		96 58.6	-25	51.6		183 53.6	-0	40.0	118 02.3	
Dif	—		-5			-11	+6			0	+20		-2		+23
															0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16:0 PMG: 11 ^h 50 ^m 1			Edad: 27 ^d 6 PHE { 4 ^h : 55:3 12 ^h : 55:2 20 ^h : 55:0 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	182	25.3	-2	29.5	203	10.9	+6	29.8	60 N	4	31	5	20	6	02	3	54		
1	197	25.6		30.5	217	43.5 ¹³⁶		20.5 ⁹³	58	35	21		01	3	57	71	22		
2	212	25.8		31.5	232	16.1 ¹³⁶		11.2 ⁹³	56	39	23		6	00	4	00	69		
3	227	26.0		32.4	246	48.8 ¹³⁷	+6	01.9 ⁹³	54	42	24		5	59		03	67		
4	242	26.2		33.4	261	21.5 ¹³⁷	+5	52.5 ⁹⁴	52	45	24		58		05	66	17		
5	257	26.4	-2	34.4	275	54.2 ¹³⁷	+5	43.2 ⁹³	50	4	48	5	25	5	57	4	07		
6	272	26.6	-2	35.4	290	27.0 ¹³⁸	+5	33.8 ⁹⁴	45	4	52	5	27	5	56	4	12		
7	287	26.8		36.3	304	59.8 ¹³⁸		24.3 ⁹⁵	40	56	28		55		16	58	11		
8	302	27.0		37.3	319	32.6 ¹³⁸		14.9 ⁹⁴	35	4	59	28	53		19	56	08		
9	317	27.2		38.3	334	05.5 ¹³⁹	+5	05.5 ⁹⁴	30	5	01	28	52		22	54	07		
10	332	27.4		39.2	348	38.4 ¹³⁹	+4	56.0 ⁹⁵	20		03	28	50		27	51	03		
11	347	27.6	-2	40.2	3	11.3 ¹³⁹	+4	46.5 ⁹⁵	10 N	5	03	5	28	5	49	4	32		
12	2	27.8	-2	41.2	17	44.3 ¹⁴⁰	+4	37.0 ⁹⁵	0	5	02	5	26	5	47	4	36		
13	17	28.0		42.2	32	17.3 ¹⁴⁰		27.5 ⁹⁶	10 S	5	00	24	45		40	42	55		
14	32	28.2		43.1	46	50.3 ¹⁴⁰		17.9 ⁹⁶	20	4	55	21	43		45	38	52		
15	47	28.4		44.1	61	23.3 ¹⁴⁰	+4	08.4 ⁹⁵	30		48	16	40		50	35	48		
16	62	28.6		45.1	75	56.4 ¹⁴¹	+3	58.8 ⁹⁶	35		44	14	39		53	33	46		
17	77	28.8	-2	46.0	90	29.5 ¹⁴¹	+3	49.3 ⁹⁵	40	4	38	5	10	5	37	4	56		
18	92	29.0	-2	47.0	105	02.6 ¹⁴¹	+3	39.7 ⁹⁶	45	4	31	5	06	5	35	5	00		
19	107	29.2		48.0	119	35.8 ¹⁴²		30.1 ⁹⁶	50		22	5	00	33		05	25		
20	122	29.4		49.0	134	09.0 ¹⁴²		20.5 ⁹⁶	52		17	4	58	32		07	23		
21	137	29.7		49.9	148	42.2 ¹⁴²		10.9 ⁹⁶	54		12	55	30		09	22	35		
22	152	29.9		50.9	163	15.4 ¹⁴²	+3	01.3 ⁹⁶	56		06	51	29		11	21	33		
23	167	30.1		51.9	177	48.7 ¹⁴³	+2	51.6 ⁹⁷	58	4	00	48	27		14	19	31		
24	182	30.3	-2	52.8	192	21.9 ¹⁴²	+2	42.0 ⁹⁶	60 S	3	52	4	44	5	26	5	17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 23 ^m 4		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: 0.0 PMG: 17 ^h 31 ^m			Mag: -1.7 PMG: 11 ^h 43 ^m			Mag: +0.5 PMG: 16 ^h 05 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	8	11.1	153	59.6	-13	48.9	96	58.6	-25	51.6	183	53.6	-0	40.0	118	02.3	-20	43.3	
1	23	13.6	168	59.1		50.0	111	59.2		51.6	198	55.6		40.2	133	04.6		43.3	
2	38	16.1	183	58.7		51.1	126	59.8		51.5	213	57.5		40.5	148	06.9		43.4	
3	53	18.5	198	58.2		52.3	142	00.5		51.5	228	59.5		40.7	163	09.1		43.4	
4	68	21.0	213	57.8		53.4	157	01.1		51.4	244	01.5		40.9	178	11.4		43.4	
5	83	23.5	228	57.3	-13	54.5	172	01.7	-25	51.4	259	03.4	-0	41.1	193	13.7	-20	43.4	
6	98	25.9	243	56.8	-13	55.6	187	02.4	-25	51.3	274	05.4	-0	41.3	208	16.0	-20	43.5	
7	113	28.4	258	56.4		56.7	202	03.0		51.3	289	07.4		41.5	223	18.2		43.5	
8	128	30.8	273	55.9		57.8	217	03.7		51.2	304	09.3		41.7	238	20.5		43.5	
9	143	33.3	288	55.5	-13	59.0	232	04.3		51.2	319	11.3		42.0	253	22.8		43.6	
10	158	35.8	303	55.0	-14	00.1	247	04.9		51.1	334	13.3		42.2	268	25.1		43.6	
11	173	38.2	318	54.5	-14	01.2	262	05.6	-25	51.1	349	15.2	-0	42.4	283	27.4	-20	43.6	
12	188	40.7	333	54.1	-14	02.3	277	06.2	-25	51.0	4	17.2	-0	42.6	298	29.6	-20	43.7	
13	203	43.2	348	53.6		03.4	292	06.8		51.0	19	19.2		42.8	313	31.9		43.7	
14	218	45.6	3	53.2		04.5	307	07.5		50.9	34	21.1		43.0	328	34.2		43.7	
15	233	48.1	18	52.7		05.6	322	08.1		50.9	49	23.1		43.2	343	36.5		43.8	
16	248	50.6	33	52.2		06.7	337	08.7		50.8	64	25.1		43.5	358	38.8		43.8	
17	263	53.0	48	51.8	-14	07.9	352	09.4	-25	50.8	79	27.0	-0	43.7	13	41.0	-20	43.8	
18	278	55.5	63	51.3	-14	09.0	7	10.0	-25	50.7	94	29.0	-0	43.9	28	43.3	-20	43.9	
19	293	58.0	78	50.8		10.1	22	10.6		50.7	109	31.0		44.1	43	45.6		43.9	
20	309	00.4	93	50.4		11.2	37	11.3		50.6	124	32.9		44.3	58	47.9		43.9	
21	324	02.9	108	49.9		12.3	52	11.9		50.6	139	34.9		44.5	73	50.1		43.9	
22	339	05.3	123	49.4		13.4	67	12.5		50.5	154	36.9		44.7	88	52.4		44.0	
23	354	07.8	138	49.0		14.5	82	13.2		50.5	169	38.9		44.9	103	54.7		44.0	
24	9	10.3	153	48.5	-14	15.6	97	13.8	-25	50.4	184	40.8	-0	45.2	118	57.0	-20	44.0	
Dif	—		-5			-11	+6		+1		+20		-2		+23				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 28 ^d 6 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'7											
	PMG: 11 ^h 49 ^m 8		SD: 15'0 PMG: 11 ^h 31 ^m R°: 43 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	30.3	-2	52.8	192	21.9	+2 42.0	60 N	17 34	18 16	19 04	5 07 73	17 40 16	
1	197	30.5		53.8	206	55.3 ¹⁴⁴	32.3 ⁹⁷	58	36	15	19 00	08 71	40 18	
2	212	30.7		54.8	221	28.6 ¹⁴³	22.7 ⁹⁶	56	37	14	18 57	09 68	40 20	
3	227	30.9		55.8	236	01.9 ¹⁴³	13.0 ⁹⁷	54	38	13	54	10 66	40 22	
4	242	31.1		56.7	250	35.3 ¹⁴⁴	+2 03.4 ⁹⁶	52	39	12	52	11 65	40 23	
5	257	31.3	-2	57.7	265	08.7 ¹⁴⁴	+1 53.7 ⁹⁷	50	17 40	18 12	18 49	5 11 64	17 40 25	
6	272	31.5	-2	58.7	279	42.1 ¹⁴⁴	+1 44.1 ⁹⁶	45	17 42	18 11	18 45	5 13 60	17 41 27	
7	287	31.7	-2	59.6	294	15.6 ¹⁴⁵	34.4 ⁹⁷	40	43	10	42	14 57	41 30	
8	302	31.9	-3	00.6	308	49.0 ¹⁴⁴	24.7 ⁹⁷	35	45	10	39	15 55	41 32	
9	317	32.1		01.6	323	22.5 ¹⁴⁵	15.1 ⁹⁶	30	46	10	38	16 53	41 34	
10	332	32.3		02.5	337	56.0 ¹⁴⁵	+1 05.4 ⁹⁷	20	49	11	36	18 49	41 38	
11	347	32.5	-3	03.5	352	29.5 ¹⁴⁵	+0 55.7 ⁹⁷	10 N	17 51	18 12	18 36	5 19 46	17 41 41	
12	2	32.7	-3	04.5	7	03.0 ¹⁴⁵	+0 46.0 ⁹⁷	0	17 53	18 14	18 38	5 20 44	17 41 44	
13	17	32.9		05.5	21	36.6 ¹⁴⁶	36.4 ⁹⁶	10 S	55	16	41	22 40	42 46	
14	32	33.1		06.4	36	10.2 ¹⁴⁶	26.7 ⁹⁷	20	17 58	20	46	23 38	42 49	
15	47	33.3		07.4	50	43.7 ¹⁴⁵	17.0 ⁹⁷	30	18 01	25	53	25 34	42 52	
16	62	33.5		08.4	65	17.3 ¹⁴⁶	+0 07.4 ⁹⁶	35	03	28	18 58	26 32	42 54	
17	77	33.7	-3	09.3	79	50.9 ¹⁴⁶	-0 02.3 ⁹⁷	40	18 05	18 32	19 04	5 27 30	17 42 57	
18	92	33.9	-3	10.3	94	24.6 ¹⁴⁷	-0 11.9 ⁹⁶	45	18 07	18 37	19 12	5 28 27	17 42 60	
19	107	34.1		11.3	108	58.2 ¹⁴⁶	21.6 ⁹⁷	50	10	43	22	30 24	42 63	
20	122	34.3		12.2	123	31.9 ¹⁴⁷	31.2 ⁹⁶	52	11	46	26	30 23	42 64	
21	137	34.5		13.2	138	05.5 ¹⁴⁶	40.8 ⁹⁶	54	13	49	32	31 21	42 66	
22	152	34.7		14.2	152	39.2 ¹⁴⁷	-0 50.5 ⁹⁷	56	15	52	38	32 19	42 68	
23	167	34.9		15.2	167	12.9 ¹⁴⁷	-1 00.1 ⁹⁶	58	16	18 56	45	33 17	42 70	
24	182	35.1	-3	16.1	181	46.6 ¹⁴⁷	-1 09.7 ⁹⁶	60 S	18 19	19 01	19 53	5 34 15	17 42 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 19 ^m 5		Mag: -3.9 PMG: 13 ^h 45 ^m			Mag: +0.1 PMG: 17 ^h 30 ^m			Mag: -1.7 PMG: 11 ^h 40 ^m			Mag: +0.5 PMG: 16 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	9	10.3	153	48.5	-14	15.6	97	13.8	-25	50.4	184	40.8	-0	45.2
1	24	12.7	168	48.0		16.7	112	14.4		50.4	199	42.8		45.4
2	39	15.2	183	47.6		17.8	127	15.1		50.3	214	44.8		45.6
3	54	17.7	198	47.1		18.9	142	15.7		50.2	229	46.7		45.8
4	69	20.1	213	46.6		20.0	157	16.3		50.2	244	48.7		46.0
5	84	22.6	228	46.2	-14	21.1	172	17.0	-25	50.1	259	50.7	-0	46.2
6	99	25.1	243	45.7	-14	22.2	187	17.6	-25	50.1	274	52.6	-0	46.4
7	114	27.5	258	45.2		23.3	202	18.2		50.0	289	54.6		46.7
8	129	30.0	273	44.8		24.4	217	18.8		50.0	304	56.6		46.9
9	144	32.4	288	44.3		25.5	232	19.5		49.9	319	58.5		47.1
10	159	34.9	303	43.8		26.6	247	20.1		49.8	335	00.5		47.3
11	174	37.4	318	43.4	-14	27.7	262	20.7	-25	49.8	350	02.5	-0	47.5
12	189	39.8	333	42.9	-14	28.8	277	21.4	-25	49.7	5	04.4	-0	47.7
13	204	42.3	348	42.4		29.9	292	22.0		49.7	20	06.4		47.9
14	219	44.8	3	41.9		31.0	307	22.6		49.6	35	08.4		48.1
15	234	47.2	18	41.5		32.1	322	23.2		49.5	50	10.3		48.4
16	249	49.7	33	41.0		33.2	337	23.9		49.5	65	12.3		48.6
17	264	52.2	48	40.5	-14	34.3	352	24.5	-25	49.4	80	14.3	-0	48.8
18	279	54.6	63	40.0	-14	35.4	7	25.1	-25	49.4	95	16.2	-0	49.0
19	294	57.1	78	39.6		36.5	22	25.7		49.3	110	18.2		49.2
20	309	59.6	93	39.1		37.6	37	26.4		49.2	125	20.2		49.4
21	325	02.0	108	38.6		38.7	52	27.0		49.2	140	22.1		49.6
22	340	04.5	123	38.1		39.8	67	27.6		49.1	155	24.1		49.9
23	355	06.9	138	37.7		40.9	82	28.2		49.0	170	26.1		50.1
24	10	09.4	153	37.2	-14	42.0	97	28.9	-25	49.0	185	28.0	-0	50.3
Dif	—		-5		-11		+6		+1		+20		-2	
													+23	
													0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 49 ^m 5			Edad: 29 ^d 6 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 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	182	35.1	-3	16.1	181	46.6	-1	09.7	60 N	4 36	5 25	6 06	6 20	71	17 56	16
1	197	35.3		17.1	196	20.3 ¹⁴⁷		19.3 ⁹⁶	58	40	26	05	19	69	17 58	18
2	212	35.5		18.1	210	54.0 ¹⁴⁷		28.9 ⁹⁶	56	43	27	04	17	68	18 00	20
3	227	35.7		19.0	225	27.8 ¹⁴⁸		38.5 ⁹⁶	54	46	27	02	16	66	02	22
4	242	35.9		20.0	240	01.5 ¹⁴⁷		48.0 ⁹⁵	52	48	28	01	16	63	03	24
5	257	36.1	-3	21.0	254	35.3 ¹⁴⁸	-1	57.6 ⁹⁶	50	4 51	5 28	6 00	6 15	62	18 05	25
6	272	36.3	-3	21.9	269	09.0 ¹⁴⁷	-2	07.1 ⁹⁵	45	4 55	5 29	5 58	6 13	59	18 08	28
7	287	36.5		22.9	283	42.8 ¹⁴⁸		16.7 ⁹⁶	40	4 58	30	57	11	57	11	30
8	302	36.7		23.9	298	16.6 ¹⁴⁸		26.2 ⁹⁵	35	5 00	30	55	10	55	13	32
9	317	36.9		24.8	312	50.4 ¹⁴⁸		35.7 ⁹⁵	30	02	30	54	09	52	15	34
10	332	37.1		25.8	327	24.1 ¹⁴⁷		45.2 ⁹⁵	20	03	29	51	07	49	19	37
11	347	37.3	-3	26.8	341	57.9 ¹⁴⁸	-2	54.6 ⁹⁴	10 N	5 03	5 28	5 49	6 05	46	18 22	40
12	2	37.5	-3	27.8	356	31.7 ¹⁴⁸	-3	04.1 ⁹⁵	0	5 02	5 26	5 46	6 04	43	18 25	43
13	17	37.7		28.7	11	05.5 ¹⁴⁸		13.5 ⁹⁴	10 S	4 58	23	44	02	41	28	46
14	32	37.9		29.7	25	39.3 ¹⁴⁸		22.9 ⁹⁴	20	53	19	41	6	01	37	31
15	47	38.1		30.7	40	13.2 ¹⁴⁹		32.3 ⁹⁴	30	46	14	38	5	59	34	34
16	62	38.3		31.6	54	47.0 ¹⁴⁸		41.7 ⁹⁴	35	41	11	36	58	32	36	55
17	77	38.5	-3	32.6	69	20.8 ¹⁴⁸	-3	51.1 ⁹⁴	40	4 35	5 07	5 34	5 57	30	18 39	56
18	92	38.7	-3	33.6	83	54.6 ¹⁴⁸	-4	00.4 ⁹³	45	4 27	5 02	5 31	5 55	28	18 42	58
19	107	38.9		34.5	98	28.4 ¹⁴⁸		09.8 ⁹⁴	50	17	4 56	28	54	24	45	62
20	122	39.1		35.5	113	02.2 ¹⁴⁸		19.1 ⁹³	52	12	53	27	53	23	46	64
21	137	39.3		36.5	127	36.1 ¹⁴⁹		28.3 ⁹²	54	07	50	25	52	22	48	65
22	152	39.5		37.4	142	09.9 ¹⁴⁸		37.6 ⁹³	56	4 00	46	24	51	20	50	67
23	167	39.7		38.4	156	43.7 ¹⁴⁸		46.8 ⁹²	58	3 53	42	22	50	18	52	68
24	182	39.9	-3	39.4	171	17.5 ¹⁴⁸	-4	56.0 ⁹²	60 S	3 45	4 37	5 20	5 49	16	18 54	71
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 15 ^m 6			Mag: -3.9 PMG: 13 ^h 46 ^m			Mag: +0.1 PMG: 17 ^h 29 ^m			Mag: -1.7 PMG: 11 ^h 37 ^m			Mag: +0.5 PMG: 15 ^h 58 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	10	09.4	153	37.2	-14	42.0	97	28.9	-25	49.0	185	28.0	-0	50.3	119	51.6
1	25	11.9	168	36.7		43.1	112	29.5		48.9	200	30.0		50.5	134	53.8
2	40	14.3	183	36.2		44.2	127	30.1		48.9	215	32.0		50.7	149	56.1
3	55	16.8	198	35.8		45.3	142	30.7		48.8	230	33.9		50.9	164	58.4
4	70	19.3	213	35.3		46.3	157	31.4		48.7	245	35.9		51.1	180	00.7
5	85	21.7	228	34.8	-14	47.4	172	32.0	-25	48.7	260	37.9	-0	51.3	195	02.9
6	100	24.2	243	34.3	-14	48.5	187	32.6	-25	48.6	275	39.8	-0	51.6	210	05.2
7	115	26.7	258	33.8		49.6	202	33.2		48.5	290	41.8		51.8	225	07.5
8	130	29.1	273	33.4		50.7	217	33.9		48.5	305	43.8		52.0	240	09.7
9	145	31.6	288	32.9		51.8	232	34.5		48.4	320	45.8		52.2	255	12.0
10	160	34.0	303	32.4		52.9	247	35.1		48.3	335	47.7		52.4	270	14.3
11	175	36.5	318	31.9	-14	54.0	262	35.7	-25	48.3	350	49.7	-0	52.6	285	16.6
12	190	39.0	333	31.4	-14	55.0	277	36.4	-25	48.2	5	51.7	-0	52.8	300	18.8
13	205	41.4	348	30.9		56.1	292	37.0		48.1	20	53.6		53.1	315	21.1
14	220	43.9	3	30.5		57.2	307	37.6		48.0	35	55.6		53.3	330	23.4
15	235	46.4	18	30.0		58.3	322	38.2		48.0	50	57.6		53.5	345	25.6
16	250	48.8	33	29.5	-14	59.4	337	38.8		47.9	65	59.5		53.7	0	27.9
17	265	51.3	48	29.0	-15	00.5	352	39.5	-25	47.8	81	01.5	-0	53.9	15	30.2
18	280	53.8	63	28.5	-15	01.5	7	40.1	-25	47.8	96	03.5	-0	54.1	30	32.5
19	295	56.2	78	28.0		02.6	22	40.7		47.7	111	05.4		54.3	45	34.7
20	310	58.7	93	27.6		03.7	37	41.3		47.6	126	07.4		54.5	60	37.0
21	326	01.2	108	27.1		04.8	52	41.9		47.6	141	09.4		54.8	75	39.3
22	341	03.6	123	26.6		05.9	67	42.6		47.5	156	11.3		55.0	90	41.5
23	356	06.1	138	26.1		06.9	82	43.2		47.4	171	13.3		55.2	105	43.8
24	11	08.5	153	25.6	-15	08.0	97	43.8	-25	47.3	186	15.3	-0	55.4	120	46.1
Dif	—			-5 -11			+6 +1			+20 -2			+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 49 ^m 2			Edad: 30 ^d 6 SD: 14'8 PMG: 12 ^h 57 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 Rº: 44 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	39.9	-3	39.4	171	17.5	-4	56.0	60 N	17 28	18 10	18 58	7 31	71	18 12	18
1	197	40.1		40.3	185	51.4 ¹⁴⁹	-5	05.2	92	30	09	55	28	68	16	21
2	212	40.3		41.3	200	25.2 ¹⁴⁸		14.4	92	32	09	52	25	66	20	22
3	227	40.5		42.3	214	59.0 ¹⁴⁸		23.5	91	33	08	49	22	64	24	23
4	242	40.7		43.2	229	32.8 ¹⁴⁸		32.6	91	34	08	47	19	63	27	25
5	257	40.9	-3	44.2	244	06.6 ¹⁴⁸	-5	41.7	91	35	18 08	18 45	7 17	62	18 30	26
6	272	41.1	-3	45.2	258	40.4 ¹⁴⁸	-5	50.8	91	38	18 07	18 41	7 12	59	18 36	29
7	287	41.3		46.1	273	14.2 ¹⁴⁸	-5	59.8	90	40	07	39	08	56	41	32
8	302	41.5		47.1	287	48.0 ¹⁴⁸	-6	08.8	90	42	07	37	05	53	45	34
9	317	41.7		48.1	302	21.8 ¹⁴⁸		17.8	90	44	08	35	7 01	52	49	36
10	332	41.9		49.0	316	55.6 ¹⁴⁸		26.7	89	47	09	34	6 56	49	18 56	39
11	347	42.0	-3	50.0	331	29.4 ¹⁴⁸	-6	35.7	90	50 N	17 50	18 11	6 51	46	19 02	41
12	2	42.2	-3	51.0	346	03.1 ¹⁴⁷	-6	44.6	89	0	17 52	18 13	6 47	43	19 08	44
13	17	42.4		51.9	0	36.9 ¹⁴⁸	-6	53.4	88	10 S	55	16	43	40	14	46
14	32	42.6		52.9	15	10.7 ¹⁴⁸	-7	02.2	88	20	17 58	21	38	38	20	49
15	47	42.8		53.9	29	44.4 ¹⁴⁷		11.0	88	30	18 02	26	33	35	27	52
16	62	43.0		54.8	44	18.2 ¹⁴⁸		19.8	88	35	04	30	30	33	31	53
17	77	43.2	-3	55.8	58	51.9 ¹⁴⁷	-7	28.5	87	40	18 07	18 34	6 27	30	19 35	56
18	92	43.4	-3	56.8	73	25.6 ¹⁴⁷	-7	37.2	87	45	18 10	18 39	6 23	28	19 40	59
19	107	43.6		57.7	87	59.3 ¹⁴⁷		45.9	87	50	13	46	18	26	47	61
20	122	43.8		58.7	102	33.0 ¹⁴⁷	-7	54.5	86	52	15	49	16	24	50	62
21	137	44.0	-3	59.7	117	06.7 ¹⁴⁷	-8	03.1	86	54	17	53	14	22	53	64
22	152	44.2	-4	00.6	131	40.4 ¹⁴⁷		11.6	85	56	19	18 57	11	21	19 57	65
23	167	44.4		01.6	146	14.1 ¹⁴⁷		20.1	85	58	21	19 01	08	20	20 00	68
24	182	44.6	-4	02.6	160	47.7 ¹⁴⁶	-8	28.6	85	60 S	18 23	19 06	6 05	17	20 05	70

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 23 ^h 11 ^m 6		Mag: -3.9 PMG: 13 ^h 47 ^m		Mag: +0.1 PMG: 17 ^h 28 ^m		Mag: -1.7 PMG: 11 ^h 33 ^m			Mag: +0.5 PMG: 15 ^h 55 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	11	08.5	153	25.6	-15	08.0	97	43.8	-25	47.3	186	15.3	-0	55.4	120	46.1	-20	45.6
1	26	11.0	168	25.1		09.1	112	44.4		47.3	201	17.2		55.6	135	48.3		45.6
2	41	13.5	183	24.6		10.2	127	45.0		47.2	216	19.2		55.8	150	50.6		45.6
3	56	15.9	198	24.1		11.2	142	45.6		47.1	231	21.2		56.0	165	52.9		45.7
4	71	18.4	213	23.6		12.3	157	46.3		47.0	246	23.1		56.2	180	55.2		45.7
5	86	20.9	228	23.2	-15	13.4	172	46.9	-25	47.0	261	25.1	-0	56.5	195	57.4	-20	45.7
6	101	23.3	243	22.7	-15	14.5	187	47.5	-25	46.9	276	27.1	-0	56.7	210	59.7	-20	45.8
7	116	25.8	258	22.2		15.5	202	48.1		46.8	291	29.0		56.9	226	02.0		45.8
8	131	28.3	273	21.7		16.6	217	48.7		46.7	306	31.0		57.1	241	04.2		45.8
9	146	30.7	288	21.2		17.7	232	49.3		46.7	321	33.0		57.3	256	06.5		45.9
10	161	33.2	303	20.7		18.7	247	50.0		46.6	336	34.9		57.5	271	08.8		45.9
11	176	35.6	318	20.2	-15	19.8	262	50.6	-25	46.5	351	36.9	-0	57.7	286	11.0	-20	45.9
12	191	38.1	333	19.7	-15	20.9	277	51.2	-25	46.4	6	38.9	-0	58.0	301	13.3	-20	46.0
13	206	40.6	348	19.2		22.0	292	51.8		46.4	21	40.9		58.2	316	15.6		46.0
14	221	43.0	3	18.7		23.0	307	52.4		46.3	36	42.8		58.4	331	17.8		46.0
15	236	45.5	18	18.2		24.1	322	53.0		46.2	51	44.8		58.6	346	20.1		46.1
16	251	48.0	33	17.7		25.2	337	53.6		46.1	66	46.8		58.8	1	22.4		46.1
17	266	50.4	48	17.2	-15	26.2	352	54.3	-25	46.0	81	48.7	-0	59.0	16	24.6	-20	46.1
18	281	52.9	63	16.7	-15	27.3	7	54.9	-25	46.0	96	50.7	-0	59.2	31	26.9	-20	46.1
19	296	55.4	78	16.3		28.4	22	55.5		45.9	111	52.7		59.4	46	29.2		46.2
20	311	57.8	93	15.8		29.4	37	56.1		45.8	126	54.6		59.7	61	31.4		46.2
21	327	00.3	108	15.3		30.5	52	56.7		45.7	141	56.6	-0	59.9	76	33.7		46.2
22	342	02.8	123	14.8		31.6	67	57.3		45.6	156	58.6	-1	00.1	91	36.0		46.3
23	357	05.2	138	14.3		32.6	82	57.9		45.6	172	00.5		00.3	106	38.2		46.3
24	12	07.7	153	13.8	-15	33.7	97	58.6	-25	45.5	187	02.5	-1	00.5	121	40.5	-20	46.3
Dif	—		-5		-11		+6		+1		+20		-2		+23		0	

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: 2 ^d 0	PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 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	182	44.6	-4	02.6		160	47.7	4	41	5	30	6	11	8	42	69			
1	197	44.8		03.5		175	21.4 ¹⁴⁷	44	30	09			36	67		37	23		
2	212	45.0		04.5		189	55.0 ¹⁴⁶	47	31	08			31	65		42	25		
3	227	45.2		05.5		204	28.6 ¹⁴⁶	50	31	06			26	64		47	27		
4	242	45.4		06.4		219	02.2 ¹⁴⁶	52	31	05			22	62		52	28		
5	257	45.6	-4	07.4		233	35.8 ¹⁴⁶	4	54	5	31	6	04	8	19	60	18	56	29
6	272	45.7	-4	08.4		248	09.4 ¹⁴⁶	4	57	5	32	6	01	8	11	57	19	05	32
7	287	45.9		09.3		262	43.0 ¹⁴⁶	5	00	31	5	59	8	04	56		13	33	
8	302	46.1		10.3		277	16.5 ¹⁴⁵	02	31	56			7	58	54		19	36	
9	317	46.3		11.3		291	50.1 ¹⁴⁶	03	31	55			53	52		25	37		
10	332	46.5		12.2		306	23.6 ¹⁴⁵	04	29	51			45	49		35	40		
11	347	46.7	-4	13.2		320	57.1 ¹⁴⁵	5	03	5	27	5	48	7	37	47	19	43	43
12	2	46.9	-4	14.2		335	30.6 ¹⁴⁵	5	01	5	25	5	46	7	30	44	19	52	44
13	17	47.1		15.1		350	04.1 ¹⁴⁵	4	57	22	43		23	42		20	00	46	
14	32	47.3		16.1		4	37.5 ¹⁴⁴	52	17	39			16	39		09	48		
15	47	47.5		17.1		19	10.9 ¹⁴⁴	43	12	36			08	36		19	51		
16	62	47.7		18.0		33	44.4 ¹⁴⁵	38	08	33			7	03	34		24	54	
17	77	47.9	-4	19.0		48	17.8 ¹⁴⁴	4	31	5	03	5	31	6	57	33	20	31	55
18	92	48.1	-4	19.9		62	51.1 ¹⁴³	4	23	4	58	5	28	6	51	31	20	39	57
19	107	48.2		20.9		77	24.5 ¹⁴⁴	12	51	24			44	27		48	60		
20	122	48.4		21.9		91	57.8 ¹⁴³	07	48	22			40	27		52	61		
21	137	48.6		22.8		106	31.2 ¹⁴⁴	4	01	45	20		36	25		20	57	62	
22	152	48.8		23.8		121	04.5 ¹⁴³	3	54	41	18		32	24		21	02	64	
23	167	49.0		24.8		135	37.7 ¹⁴²	47	36	16			28	21		08	66		
24	182	49.2	-4	25.7		150	11.0 ¹⁴³	3	38	4	31	5	13	6	22	20	21	15	68
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 07 ^m 7			Mag: -3.9 PMG: 13 ^h 48 ^m			Mag: +0.1 PMG: 17 ^h 27 ^m			Mag: -1.7 PMG: 11 ^h 30 ^m			Mag: +0.5 PMG: 15 ^h 51 ^m						
	hG ♂			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°				
0	12	07.7	153	13.8	-15	33.7	97	58.6	-25	45.5	187	02.5	-1	00.5	121	40.5	-20	46.3	
1	27	10.1	168	13.3		34.7	112	59.2		45.4	202	04.5		00.7	136	42.8		46.4	
2	42	12.6	183	12.8		35.8	127	59.8		45.3	217	06.4		00.9	151	45.0		46.4	
3	57	15.1	198	12.3		36.9	143	00.4		45.2	232	08.4		01.1	166	47.3		46.4	
4	72	17.5	213	11.8		37.9	158	01.0		45.2	247	10.4		01.4	181	49.6		46.5	
5	87	20.0	228	11.3	-15	39.0	173	01.6	-25	45.1	262	12.3	-1	01.6	196	51.8	-20	46.5	
6	102	22.5	243	10.8	-15	40.0	188	02.2	-25	45.0	277	14.3	-1	01.8	211	54.1	-20	46.5	
7	117	24.9	258	10.3		41.1	203	02.8		44.9	292	16.3		02.0	226	56.4		46.6	
8	132	27.4	273	09.8		42.2	218	03.4		44.8	307	18.2		02.2	241	58.6		46.6	
9	147	29.9	288	09.3		43.2	233	04.0		44.7	322	20.2		02.4	257	00.9		46.6	
10	162	32.3	303	08.7		44.3	248	04.7		44.6	337	22.2		02.6	272	03.2		46.7	
11	177	34.8	318	08.2	-15	45.3	263	05.3	-25	44.6	352	24.1	-1	02.8	287	05.4	-20	46.7	
12	192	37.2	333	07.7	-15	46.4	278	05.9	-25	44.5	7	26.1	-1	03.1	302	07.7	-20	46.7	
13	207	39.7	348	07.2		47.4	293	06.5		44.4	22	28.1		03.3	317	10.0		46.8	
14	222	42.2	3	06.7		48.5	308	07.1		44.3	37	30.1		03.5	332	12.2		46.8	
15	237	44.6	18	06.2		49.5	323	07.7		44.2	52	32.0		03.7	347	14.5		46.8	
16	252	47.1	33	05.7		50.6	338	08.3		44.1	67	34.0		03.9	2	16.8		46.9	
17	267	49.6	48	05.2	-15	51.6	353	08.9	-25	44.0	82	36.0	-1	04.1	17	19.0	-20	46.9	
18	282	52.0	63	04.7	-15	52.7	8	09.5	-25	43.9	97	37.9	-1	04.3	32	21.3	-20	46.9	
19	297	54.5	78	04.2		53.7	23	10.1		43.9	112	39.9		04.5	47	23.5		47.0	
20	312	57.0	93	03.7		54.8	38	10.7		43.8	127	41.9		04.8	62	25.8		47.0	
21	327	59.4	108	03.2		55.8	53	11.3		43.7	142	43.8		05.0	77	28.1		47.0	
22	343	01.9	123	02.7		56.9	68	12.0		43.6	157	45.8		05.2	92	30.3		47.1	
23	358	04.4	138	02.2		57.9	83	12.6		43.5	172	47.8		05.4	107	32.6		47.1	
24	13	06.8	153	01.7	-15	59.0	98	13.2	-25	43.4	187	49.7	-1	05.6	122	34.9	-20	47.1	
Dif	—			-5			+6			+20			-2			+23			0

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: 3 ^d 0 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 14 ^h 25 ^m R°: 45 ^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	182	49.2	-4	25.7	150	11.0	-11	39.5	60 N	17 22	18 04	18 52	9 51 66	18 51 26
1	197	49.4		26.7	164	44.2 ¹⁴²		46.9 ⁷⁴	58	25	04	49	43 65	19 00 27
2	212	49.6		27.7	179	17.5 ¹⁴³	-11	54.3 ⁷⁴	56	26	03	46	36 63	07 29
3	227	49.8		28.6	193	50.7 ¹⁴²	-12	01.5 ⁷²	54	28	03	44	30 61	14 30
4	242	50.0		29.6	208	23.8 ¹⁴¹		08.8 ⁷³	52	30	03	42	24 61	20 31
5	257	50.2	-4	30.5	222	57.0 ¹⁴²	-12	15.9 ⁷¹	50	17 31	18 03	18 41	9 19 59	19 25 33
6	272	50.3	-4	31.5	237	30.1 ¹⁴¹	-12	23.0 ⁷¹	45	17 34	18 04	18 38	9 08 57	19 37 35
7	287	50.5		32.5	252	03.2 ¹⁴¹		30.1 ⁷¹	40	37	04	35	9 00 54	46 37
8	302	50.7		33.4	266	36.3 ¹⁴¹		37.1 ⁷⁰	35	39	05	34	8 52 53	19 55 38
9	317	50.9		34.4	281	09.4 ¹⁴¹		44.1 ⁷⁰	30	41	05	33	45 52	20 02 40
10	332	51.1		35.4	295	42.4 ¹⁴⁰		51.0 ⁶⁹	20	45	07	33	34 49	15 41
11	347	51.3	-4	36.3	310	15.4 ¹⁴⁰	-12	57.8 ⁶⁸	10 N	17 49	18 10	18 34	8 24 47	20 26 43
12	2	51.5	-4	37.3	324	48.4 ¹⁴⁰	-13	04.6 ⁶⁸	0	17 52	18 13	18 37	8 14 45	20 36 45
13	17	51.7		38.3	339	21.4 ¹⁴⁰		11.4 ⁶⁸	10 S	55	16	41	8 05 43	46 48
14	32	51.9		39.2	353	54.3 ¹³⁹		18.0 ⁶⁶	20	17 59	21	47	7 55 41	20 57 50
15	47	52.0		40.2	8	27.2 ¹³⁹		24.7 ⁶⁷	30	18 03	27	18 56	44 38	21 10 52
16	62	52.2		41.1	23	00.1 ¹³⁹		31.2 ⁶⁵	35	06	31	19 01	37 37	18 52
17	77	52.4	-4	42.1	37	33.0 ¹³⁹	-13	37.7 ⁶⁵	40	18 09	18 36	19 08	7 30 35	21 26 54
18	92	52.6	-4	43.1	52	05.8 ¹³⁸	-13	44.2 ⁶⁵	45	18 12	18 42	19 17	7 22 33	21 36 56
19	107	52.8		44.0	66	38.6 ¹³⁸		50.6 ⁶⁴	50	16	49	29	11 31	48 58
20	122	53.0		45.0	81	11.4 ¹³⁸	-13	56.9 ⁶³	52	18	53	34	07 29	53 59
21	137	53.2		45.9	95	44.2 ¹³⁸	-14	03.2 ⁶³	54	20	18 56	40	7 01 29	21 59 61
22	152	53.4		46.9	110	16.9 ¹³⁷		09.4 ⁶²	56	23	19 01	47	6 56 27	22 06 62
23	167	53.5		47.9	124	49.6 ¹³⁷		15.5 ⁶¹	58	25	06	19 56	49 25	14 63
24	182	53.7	-4	48.8	139	22.3 ¹³⁷	-14	21.6 ⁶¹	60 S	18 28	19 11	20 05	6 42 23	22 23 65
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 03 ^m 8		Mag: -3.9 PMG: 13 ^h 48 ^m		Mag: +0.1 PMG: 17 ^h 26 ^m		Mag: -1.7 PMG: 11 ^h 27 ^m		Mag: +0.5 PMG: 15 ^h 47 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	13	06.8	153	01.7	-15	59.0	98	13.2	-25	43.4				
1	28	09.3	168	01.1	-16	00.0	113	13.8		43.3				
2	43	11.7	183	00.6	-16	01.1	128	14.4		43.2				
3	58	14.2	198	00.1		02.1	143	15.0		43.1				
4	73	16.7	212	59.6		03.2	158	15.6		43.0				
5	88	19.1	227	59.1	-16	04.2	173	16.2	-25	42.9				
6	103	21.6	242	58.6	-16	05.3	188	16.8	-25	42.9				
7	118	24.1	257	58.1		06.3	203	17.4		42.8				
8	133	26.5	272	57.6		07.3	218	18.0		42.7				
9	148	29.0	287	57.0		08.4	233	18.6		42.6				
10	163	31.5	302	56.5		09.4	248	19.2		42.5				
11	178	33.9	317	56.0	-16	10.5	263	19.8	-25	42.4				
12	193	36.4	332	55.5	-16	11.5	278	20.4	-25	42.3				
13	208	38.9	347	55.0		12.5	293	21.0		42.2				
14	223	41.3	2	54.5		13.6	308	21.6		42.1				
15	238	43.8	17	53.9		14.6	323	22.2		42.0				
16	253	46.2	32	53.4		15.6	338	22.8		41.9				
17	268	48.7	47	52.9	-16	16.7	353	23.4	-25	41.8				
18	283	51.2	62	52.4	-16	17.7	8	24.0	-25	41.7				
19	298	53.6	77	51.9		18.8	23	24.6		41.6				
20	313	56.1	92	51.4		19.8	38	25.2		41.5				
21	328	58.6	107	50.8		20.8	53	25.8		41.4				
22	344	01.0	122	50.3		21.9	68	26.4		41.3				
23	359	03.5	137	49.8		22.9	83	27.0		41.2				
24	14	06.0	152	49.3	-16	23.9	98	27.6	-25	41.1				
Dif	—		-5	-10		+6	+1	+20		-2	+23		0	

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 48 ^m 0		Edad: 5 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 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	182	58.2	-5	11.9	128	17.9	-16 28.2	60 N	17 16	17 58	18 46	12 01 57	19 49 41	
1	197	58.4		12.8	142	49.9 ¹³⁰	32.6 ⁴⁴	58	19	58	43	11 49 57	20 01 41	
2	212	58.5		13.8	157	21.8 ¹²⁹	36.9 ⁴³	56	21	58	41	39 56	11 42	
3	227	58.7		14.8	171	53.7 ¹²⁹	41.2 ⁴³	54	23	59	39	30 55	20 43	
4	242	58.9		15.7	186	25.5 ¹²⁸	45.4 ⁴²	52	25	59	38	22 55	28 43	
5	257	59.1	-5	16.7	200	57.4 ¹²⁹	-16 49.5 ⁴¹	50	17 27	17 59	18 36	11 15 54	20 35 44	
6	272	59.3	-5	17.6	215	29.2 ¹²⁸	-16 53.5 ⁴⁰	45	17 31	18 00	18 34	11 00 53	20 51 44	
7	287	59.4		18.6	230	00.9 ¹²⁷	-16 57.5 ⁴⁰	40	34	01	32	10 48 52	21 04 45	
8	302	59.6		19.5	244	32.7 ¹²⁸	-17 01.4 ³⁹	35	37	02	31	37 51	15 45	
9	317	59.8		20.5	259	04.4 ¹²⁷	05.2 ³⁸	30	39	03	31	28 51	24 46	
10	333	00.0		21.5	273	36.0 ¹²⁶	08.9 ³⁷	20	43	06	31	10 12 50	41 46	
11	348	00.2	-5	22.4	288	07.7 ¹²⁷	-17 12.6 ³⁷	10 N	17 47	18 08	18 33	9 58 49	21 55 47	
12	3	00.4	-5	23.4	302	39.3 ¹²⁶	-17 16.2 ³⁶	0	17 51	18 12	18 36	9 46 47	22 08 48	
13	18	00.5		24.3	317	10.8 ¹²⁵	19.7 ³⁵	10 S	55	16	41	33 46	22 48	
14	33	00.7		25.3	331	42.4 ¹²⁶	23.1 ³⁴	20	17 59	22	48	19 46	36 49	
15	48	00.9		26.2	346	13.9 ¹²⁵	26.5 ³⁴	30	18 04	29	18 57	9 03 45	22 52 50	
16	63	01.1		27.2	0	45.4 ¹²⁵	29.8 ³³	35	07	33	19 03	8 54 44	23 02 50	
17	78	01.3	-5	28.2	15	16.8 ¹²⁴	-17 32.9 ³¹	40	18 11	18 38	19 11	8 44 43	23 13 51	
18	93	01.4	-5	29.1	29	48.3 ¹²⁵	-17 36.1 ³²	45	18 15	18 45	19 20	8 32 42	23 26 51	
19	108	01.6		30.1	44	19.7 ¹²⁴	39.1 ³⁰	50	19	52	32	17 41	41 52	
20	123	01.8		31.0	58	51.0 ¹²³	42.1 ³⁰	52	22	18 56	38	10 40	49 52	
21	138	02.0		32.0	73	22.4 ¹²⁴	44.9 ²⁸	54	24	19 00	45	8 03 39	23 57 53	
22	153	02.2		32.9	87	53.7 ¹²³	47.7 ²⁸	56	27	05	19 52	7 54 39	*** ** **	
23	168	02.3		33.9	102	24.9 ¹²²	50.5 ²⁸	58	30	10	20 01	45 37	*** ** **	
24	183	02.5	-5	34.9	116	56.2 ¹²³	-17 53.1 ²⁶	60 S	18 33	19 16	20 11	7 34 36	*** ** **	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 55 ^m 9		Mag: -3.9 PMG: 13 ^h 50 ^m		Mag: +0.1 PMG: 17 ^h 25 ^m		Mag: -1.7 PMG: 11 ^h 21 ^m		Mag: +0.5 PMG: 15 ^h 40 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	15	05.1	152	36.6	-16	48.4	98	42.0	-25	38.6				
1	30	07.6	167	36.1		49.5	113	42.6		38.5				
2	45	10.0	182	35.5		50.5	128	43.2		38.4				
3	60	12.5	197	35.0		51.5	143	43.8		38.3				
4	75	15.0	212	34.5		52.5	158	44.4		38.2				
5	90	17.4	227	33.9	-16	53.5	173	45.0	-25	38.0				
6	105	19.9	242	33.4	-16	54.5	188	45.5	-25	37.9				
7	120	22.3	257	32.9		55.5	203	46.1		37.8				
8	135	24.8	272	32.3		56.5	218	46.7		37.7				
9	150	27.3	287	31.8		57.5	233	47.3		37.6				
10	165	29.7	302	31.3		58.5	248	47.9		37.5				
11	180	32.2	317	30.7	-16	59.6	263	48.5	-25	37.4				
12	195	34.7	332	30.2	-17	00.6	278	49.1	-25	37.3				
13	210	37.1	347	29.6		01.6	293	49.7		37.1				
14	225	39.6	2	29.1		02.6	308	50.3		37.0				
15	240	42.1	17	28.6		03.6	323	50.9		36.9				
16	255	44.5	32	28.0		04.6	338	51.5		36.8				
17	270	47.0	47	27.5	-17	05.6	353	52.1	-25	36.7				
18	285	49.4	62	26.9	-17	06.6	8	52.7	-25	36.6				
19	300	51.9	77	26.4		07.6	23	53.2		36.4				
20	315	54.4	92	25.8		08.6	38	53.8		36.3				
21	330	56.8	107	25.3		09.6	53	54.4		36.2				
22	345	59.3	122	24.8		10.6	68	55.0		36.1				
23	1	01.8	137	24.2		11.6	83	55.6		36.0				
24	16	04.2	152	23.7	-17	12.6	98	56.2	-25	35.9				
Dif	—		-5	-10		+6	+1	+20		-2	+23		0	

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: 6 ^d 0	PHE { 4 ^h : 54'5 12 ^h : 54'6 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	h	m
0	183	02.5	-5	116	56.2	-17	53.1	60 N	4	51	5	39	6	21	12	58
1	198	02.7		131	27.4 ¹²²		55.6 ²⁵	58		53	39		18	46	50	42
2	213	02.9		145	58.5 ¹²¹	-17	58.1 ²⁴	56		55	38		16	35	50	20
3	228	03.1		160	29.7 ¹²²	-18	00.5 ²⁴	54		57	38		13	25	51	21
4	243	03.2		175	00.8 ¹²¹		02.8 ²³	52	4	59	38	12		17	50	11
5	258	03.4	-5	189	31.9 ¹²¹	-18	05.0 ²²	50	5	00	5	37	6	10	12	09
6	273	03.6	-5	204	03.0 ¹²¹	-18	07.2 ²²	45	5	02	5	36	6	06	11	53
7	288	03.8		218	34.0 ¹²⁰		09.2 ²⁰	40		04	35		03	40	49	21
8	303	03.9		233	05.0 ¹²⁰		11.2 ²⁰	35		05	34		6	00	28	50
9	318	04.1		247	35.9 ¹¹⁹		13.1 ¹⁹	30		05	33		5	57	19	49
10	333	04.3		262	06.9 ¹²⁰		14.9 ¹⁸	20		05	30		52	11	02	49
11	348	04.5	-5	276	37.8 ¹¹⁹	-18	16.6 ¹⁷	10 N	5	03	5	27	5	48	10	47
12	3	04.6	-5	291	08.7 ¹¹⁹	-18	18.2 ¹⁶	0	5	00	5	24	5	44	10	33
13	18	04.8		305	39.5 ¹¹⁸		19.8 ¹⁶	10 S	4	55	19		40	19	49	23
14	33	05.0		320	10.3 ¹¹⁸		21.3 ¹⁵	20		48	14		36	10	05	48
15	48	05.2		334	41.1 ¹¹⁸		22.6 ¹³	30		38	07		31	9	48	48
16	63	05.4		349	11.9 ¹¹⁸		23.9 ¹³	35		32	5	02	28	38	48	23
17	78	05.5	-5	3	42.6 ¹¹⁷	-18	25.1 ¹²	40	4	24	4	57	5	24	9	27
18	93	05.7	-5	18	13.3 ¹¹⁷	-18	26.2 ¹¹	45	4	15	4	50	5	20	9	14
19	108	05.9		32	44.0 ¹¹⁷		27.3 ¹¹	50	4	03	42	15		8	58	47
20	123	06.1		47	14.7 ¹¹⁷		28.2 ⁹	52	3	57	39	13		50	47	
21	138	06.2		61	45.3 ¹¹⁶		29.1 ⁹	54		50	34	11		42	46	
22	153	06.4		76	15.9 ¹¹⁶		29.8 ⁷	56		42	30	08		33	46	0
23	168	06.6		90	46.4 ¹¹⁵		30.5 ⁷	58		34	24	05		22	46	16
24	183	06.8	-5	105	17.0 ¹¹⁶	-18	31.1 ⁶	60 S	3	24	4	18	5	01	8	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 52 ^m 0		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +0.1 PMG: 17 ^h 24 ^m		Mag: -1.7 PMG: 11 ^h 18 ^m		Mag: +0.5 PMG: 15 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	16	04.2	152	23.7	-17	12.6	98	56.2	-25	35.9
1	31	06.7	167	23.1		13.6	113	56.8		35.7
2	46	09.2	182	22.6		14.6	128	57.4		35.6
3	61	11.6	197	22.0		15.6	143	58.0		35.5
4	76	14.1	212	21.5		16.6	158	58.6		35.4
5	91	16.6	227	20.9	-17	17.5	173	59.1	-25	35.3
6	106	19.0	242	20.4	-17	18.5	188	59.7	-25	35.1
7	121	21.5	257	19.8		19.5	204	00.3		35.0
8	136	23.9	272	19.3		20.5	219	00.9		34.9
9	151	26.4	287	18.7		21.5	234	01.5		34.8
10	166	28.9	302	18.2		22.5	249	02.1		34.7
11	181	31.3	317	17.6	-17	23.5	264	02.7	-25	34.5
12	196	33.8	332	17.1	-17	24.5	279	03.3	-25	34.4
13	211	36.3	347	16.5		25.5	294	03.8		34.3
14	226	38.7	2	16.0		26.5	309	04.4		34.2
15	241	41.2	17	15.4		27.4	324	05.0		34.0
16	256	43.7	32	14.9		28.4	339	05.6		33.9
17	271	46.1	47	14.3	-17	29.4	354	06.2	-25	33.8
18	286	48.6	62	13.8	-17	30.4	9	06.8	-25	33.7
19	301	51.1	77	13.2		31.4	24	07.4		33.5
20	316	53.5	92	12.7		32.4	39	07.9		33.4
21	331	56.0	107	12.1		33.3	54	08.5		33.3
22	346	58.4	122	11.6		34.3	69	09.1		33.2
23	2	00.9	137	11.0		35.3	84	09.7		33.0
24	17	03.4	152	10.5	-17	36.3	99	10.3	-25	32.9
Dif	—		-6	-10			+6	+1		
									+20	-2
										+23

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 7 ^d 0	PHE {	4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4	R°: 50 ^m			Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 47 ^m 4													
	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	183	06.8	-5	57.8	105	17.0	-18 31.1	60 N	17 11	17 52	18 40	13 49 42	21 20 60	
1	198	06.9		58.7	119	47.5 ¹¹⁵	31.6	58	13	53	38	36 44	32 60	
2	213	07.1	-5	59.7	134	18.0 ¹¹⁵	32.0	56	16	53	36	25 44	43 59	
3	228	07.3	-6	00.6	148	48.4 ¹¹⁴	32.3	54	19	54	35	16 44	21 53 58	
4	243	07.5		01.6	163	18.8 ¹¹⁴	32.5	52	21	54	33	13 07 45	22 01 57	
5	258	07.6	-6	02.5	177	49.2 ¹¹⁴	-18 32.7	50	17 23	17 55	18 32	12 59 46	22 09 57	
6	273	07.8	-6	03.5	192	19.6 ¹¹⁴	-18 32.7	45	17 27	17 56	18 30	12 43 46	22 25 56	
7	288	08.0		04.4	206	50.0 ¹¹⁴	32.7	40	31	58	29	29 47	39 54	
8	303	08.2		05.4	221	20.3 ¹¹³	32.6	35	34	17 59	28	18 47	22 50 54	
9	318	08.3		06.3	235	50.6 ¹¹³	32.4	30	37	18 01	28	12 08 48	23 00 53	
10	333	08.5		07.3	250	20.8 ¹¹²	32.0	20	42	04	29	11 51 48	17 52	
11	348	08.7	-6	08.2	264	51.1 ¹¹³	-18 31.6	10 N	17 46	18 07	18 32	11 36 49	23 32 51	
12	3	08.8	-6	09.2	279	21.3 ¹¹²	-18 31.1	0	17 51	18 11	18 36	11 22 50	23 46 50	
13	18	09.0		10.1	293	51.5 ¹¹²	30.6	10 S	17 55	16	41	11 08 50	23 59 50	
14	33	09.2		11.1	308	21.7 ¹¹²	29.9	20	18 00	22	48	10 53 51	** ** *	
15	48	09.4		12.0	322	51.8 ¹¹¹	29.1	30	06	30	18 58	36 51	** ** *	
16	63	09.5		13.0	337	21.9 ¹¹¹	28.2	35	09	35	19 05	26 52	** ** *	
17	78	09.7	-6	13.9	351	52.0 ¹¹¹	-18 27.3	40	18 13	18 40	19 13	10 14 53	0 04 48	
18	93	09.9	-6	14.9	6	22.1 ¹¹¹	-18 26.2	45	18 17	18 47	19 23	10 01 53	0 17 48	
19	108	10.0		15.8	20	52.1 ¹¹⁰	25.1	50	23	18 56	36	9 45 53	33 48	
20	123	10.2		16.8	35	22.1 ¹¹⁰	23.9	52	25	19 00	42	37 54	41 48	
21	138	10.4		17.7	49	52.1 ¹¹⁰	22.5	54	28	04	49	28 55	50 47	
22	153	10.6		18.7	64	22.1 ¹¹⁰	21.1	56	31	09	19 57	19 54	0 59 47	
23	168	10.7		19.6	78	52.1 ¹¹⁰	19.6	58	34	15	20 07	9 08 55	1 10 47	
24	183	10.9	-6	20.6	93	22.0 ¹⁰⁹	-18 18.0	60 S	18 38	19 22	20 17	8 55 56	1 22 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 48 ^m 0		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +0.1 PMG: 17 ^h 23 ^m		Mag: -1.7 PMG: 11 ^h 15 ^m		Mag: +0.5 PMG: 15 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	17	03.4	152	10.5	99	10.3	190	58.8	126	11.5
1	32	05.8	167	09.9	114	10.9	206	00.7	141	13.8
2	47	08.3	182	09.3	129	11.5	221	02.7	156	16.0
3	62	10.8	197	08.8	144	12.0	236	04.7	171	18.3
4	77	13.2	212	08.2	159	12.6	251	06.6	186	20.5
5	92	15.7	227	07.7	174	13.2	266	08.6	201	22.8
6	107	18.2	242	07.1	189	13.8	281	10.6	216	25.0
7	122	20.6	257	06.5	204	14.4	296	12.5	231	27.3
8	137	23.1	272	06.0	219	15.0	311	14.5	246	29.5
9	152	25.5	287	05.4	234	15.5	326	16.5	261	31.8
10	167	28.0	302	04.9	249	16.1	341	18.4	276	34.0
11	182	30.5	317	04.3	264	16.7	356	20.4	291	36.3
12	197	32.9	332	03.7	279	17.3	11	22.4	306	38.5
13	212	35.4	347	03.2	294	17.9	26	24.4	321	40.8
14	227	37.9	2	02.6	309	18.5	41	26.3	336	43.0
15	242	40.3	17	02.0	324	19.0	56	28.3	351	45.3
16	257	42.8	32	01.5	339	19.6	71	30.3	6	47.5
17	272	45.3	47	00.9	354	20.2	86	32.2	21	49.8
18	287	47.7	62	00.4	9	20.8	101	34.2	36	52.0
19	302	50.2	76	59.8	24	21.4	116	36.2	51	54.3
20	317	52.7	91	59.2	39	21.9	131	38.1	66	56.5
21	332	55.1	106	58.7	54	22.5	146	40.1	81	58.8
22	347	57.6	121	58.1	69	23.1	161	42.1	97	01.0
23	3	00.0	136	57.5	84	23.7	176	44.1	112	03.3
24	18	02.5	151	57.0	99	24.3	191	46.0	127	05.5
Dif	—		-6	-10	+6	+1	+20	-2	+22	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 1			Edad: 8 ^d 0 PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 56'1 R°: 50 ^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	h m	m
0	183	10.9	-6	20.6	93	22.0	-18	18.0	60 N	4 56	5 44	6 26	14 31	35	22 20	70
1	198	11.1		21.5	107	51.9 ¹⁰⁹		16.3 ¹⁷	58	58	43	22	20	36	32	67
2	213	11.2		22.5	122	21.8 ¹⁰⁹		14.5 ¹⁸	56	4 59	42	20	09	38	42	66
3	228	11.4		23.4	136	51.6 ¹⁰⁸		12.6 ¹⁹	54	5 01	42	17	14 00	39	51	64
4	243	11.6		24.4	151	21.5 ¹⁰⁹		10.7 ¹⁹	52	02	41	15	13 52	40	22 58	64
5	258	11.8	-6	25.3	165	51.3 ¹⁰⁸	-18	08.6 ²¹	50	5 03	5 40	6 13	13 45	41	23 06	62
6	273	11.9	-6	26.3	180	21.1 ¹⁰⁸	-18	06.4 ²²	45	5 05	5 39	6 08	13 29	43	23 21	61
7	288	12.1		27.2	194	50.9 ¹⁰⁸		04.1 ²³	40	06	37	05	16	45	33	59
8	303	12.3		28.2	209	20.6 ¹⁰⁷	-18	01.8 ²³	35	07	36	6 01	13 05	46	44	58
9	318	12.4		29.1	223	50.3 ¹⁰⁷	-17	59.3 ²⁵	30	07	34	5 58	12 56	46	23 53	57
10	333	12.6		30.1	238	20.1 ¹⁰⁸		56.8 ²⁵	20	05	31	53	39	48	** ** *	**
11	348	12.8	-6	31.0	252	49.7 ¹⁰⁶	-17	54.2 ²⁶	10 N	5 03	5 27	5 48	12 25	49	** ** *	**
12	3	12.9	-6	32.0	267	19.4 ¹⁰⁷	-17	51.4 ²⁸	0	4 59	5 23	5 44	12 12	50	** ** *	**
13	18	13.1		32.9	281	49.1 ¹⁰⁷		48.6 ²⁸	10 S	53	18	39	11 58	52	** ** *	**
14	33	13.3		33.9	296	18.7 ¹⁰⁶		45.7 ²⁹	20	46	12	34	44	53	0 14	48
15	48	13.4		34.8	310	48.3 ¹⁰⁶		42.6 ³¹	30	36	5 04	28	27	55	31	47
16	63	13.6		35.8	325	17.9 ¹⁰⁶		39.5 ³¹	35	29	4 59	25	18	56	41	46
17	78	13.8	-6	36.7	339	47.5 ¹⁰⁶	-17	36.3 ³²	40	4 21	4 54	5 21	11 07	57	0 52	45
18	93	13.9	-6	37.6	354	17.0 ¹⁰⁵	-17	33.0 ³³	45	4 11	4 47	5 17	10 54	58	1 05	45
19	108	14.1		38.6	8	46.5 ¹⁰⁵		29.6 ³⁴	50	3 58	38	11	38	60	21	43
20	123	14.3		39.5	23	16.1 ¹⁰⁶		26.1 ³⁵	52	52	34	09	31	60	29	42
21	138	14.4		40.5	37	45.5 ¹⁰⁴		22.6 ³⁵	54	44	29	06	23	61	37	42
22	153	14.6		41.4	52	15.0 ¹⁰⁵		18.9 ³⁷	56	36	24	5 03	13	63	46	41
23	168	14.8		42.4	66	44.5 ¹⁰⁵		15.1 ³⁸	58	27	18	4 59	10 03	64	1 57	40
24	183	14.9	-6	43.3	81	13.9 ¹⁰⁴	-17	11.2 ³⁹	60 S	3 16	4 12	4 55	9 51	65	2 09	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 44 ^m 1		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +0.2 PMG: 17 ^h 22 ^m		Mag: -1.7 PMG: 11 ^h 11 ^m		Mag: +0.5 PMG: 15 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	18	02.5	151	57.0	-17	59.6	99	24.3	-25	29.7
1	33	05.0	166	56.4	-18	00.5	114	24.8		29.6
2	48	07.4	181	55.8		01.5	129	25.4		29.4
3	63	09.9	196	55.2		02.4	144	26.0		29.3
4	78	12.4	211	54.7		03.4	159	26.6		29.2
5	93	14.8	226	54.1	-18	04.3	174	27.2	-25	29.0
6	108	17.3	241	53.5	-18	05.3	189	27.7	-25	28.9
7	123	19.8	256	53.0		06.3	204	28.3		28.7
8	138	22.2	271	52.4		07.2	219	28.9		28.6
9	153	24.7	286	51.8		08.2	234	29.5		28.5
10	168	27.2	301	51.2		09.1	249	30.1		28.3
11	183	29.6	316	50.7	-18	10.1	264	30.6	-25	28.2
12	198	32.1	331	50.1	-18	11.0	279	31.2	-25	28.0
13	213	34.5	346	49.5		12.0	294	31.8		27.9
14	228	37.0	1	48.9		12.9	309	32.4		27.8
15	243	39.5	16	48.4		13.9	324	32.9		27.6
16	258	41.9	31	47.8		14.8	339	33.5		27.5
17	273	44.4	46	47.2	-18	15.8	354	34.1	-25	27.3
18	288	46.9	61	46.6	-18	16.7	9	34.7	-25	27.2
19	303	49.3	76	46.1		17.7	24	35.3		27.0
20	318	51.8	91	45.5		18.6	39	35.8		26.9
21	333	54.3	106	44.9		19.6	54	36.4		26.7
22	348	56.7	121	44.3		20.5	69	37.0		26.6
23	3	59.2	136	43.7		21.4	84	37.6		26.5
24	19	01.7	151	43.2	-18	22.4	99	38.1	-25	26.3
Dif	—		-6 -10		+6 +1		+20 -2		+22 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 46 ^m 9			Edad: 9 ^d 0 PHE { SD: 15:3 PMG: 19 ^h 14 ^m 4 ^h : 56:4 12 ^h : 56:7 20 ^h : 57:0 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	183	14.9	-6 43.3	81	13.9	-17 11.2	39	60 N	17 05	17 46	18 34	15 06 29	23 30 77	
1	198	15.1	44.3	95	43.3 ¹⁰⁴	07.3	41	58	08	47	33	14 56 31	39 75	
2	213	15.3	45.2	110	12.8 ¹⁰⁵	-17 03.2	42	56	11	48	31	47 33	48 73	
3	228	15.4	46.2	124	42.1 ¹⁰³	-16 59.0	42	54	14	49	30	39 35	23 55 72	
4	243	15.6	47.1	139	11.5 ¹⁰⁴	54.8	42	52	16	50	29	32 36	** ** *	
5	258	15.8	-6 48.0	153	40.9 ¹⁰⁴	-16 50.5	43	50	17 18	17 51	18 28	14 26 37	** * *	
6	273	15.9	-6 49.0	168	10.2 ¹⁰³	-16 46.0	45	45	17 23	17 53	18 27	14 12 39	** * *	
7	288	16.1	49.9	182	39.5 ¹⁰³	41.5	46	40	28	55	26	14 01 41	** * *	
8	303	16.3	50.9	197	08.8 ¹⁰³	36.9	46	35	31	57	26	13 51 43	** * *	
9	318	16.4	51.8	211	38.1 ¹⁰³	32.2	47	30	34	17 58	26	42 45	** * *	
10	333	16.6	52.8	226	07.4 ¹⁰³	27.3	49	20	40	18 02	28	27 48	0 09 54	
11	348	16.7	-6 53.7	240	36.6 ¹⁰²	-16 22.4	49	10 N	17 45	18 06	18 31	13 14 50	0 23 52	
12	3	16.9	-6 54.7	255	05.9 ¹⁰³	-16 17.4	50	0	17 50	18 11	18 35	13 02 52	0 36 51	
13	18	17.1	55.6	269	35.1 ¹⁰²	12.3	51	10 S	17 55	16	41	12 50 53	0 49 49	
14	33	17.2	56.5	284	04.3 ¹⁰²	07.2	51	20	18 01	23	18 49	37 56	1 02 48	
15	48	17.4	57.5	298	33.5 ¹⁰²	-16 01.9	53	30	07	31	19 00	22 58	18 45	
16	63	17.6	58.4	313	02.7 ¹⁰²	-15 56.5	54	35	11	36	07	14 59	27 44	
17	78	17.7	-6 59.4	327	31.8 ¹⁰¹	-15 51.0	55	40	18 15	18 43	19 15	12 04 61	1 37 43	
18	93	17.9	-7 00.3	342	01.0 ¹⁰²	-15 45.5	55	45	18 20	18 50	19 26	11 52 63	1 50 40	
19	108	18.0	01.3	356	30.1 ¹⁰¹	39.8	57	50	26	18 59	40	38 66	2 04 39	
20	123	18.2	02.2	10	59.2 ¹⁰¹	34.1	57	52	29	19 04	46	31 67	11 38	
21	138	18.4	03.1	25	28.3 ¹⁰¹	28.3	58	54	32	08	19 54	24 68	19 36	
22	153	18.5	04.1	39	57.4 ¹⁰¹	22.3	60	56	35	14	20 02	16 70	27 35	
23	168	18.7	05.0	54	26.5 ¹⁰¹	16.3	60	58	39	20	12	11 07 71	37 33	
24	183	18.9	-7 06.0	68	55.5 ¹⁰⁰	-15 10.2	61	60 S	18 43	19 27	20 24	10 56 74	2 48 31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 40 ^m 2		Mag: -3.9 PMG: 13 ^h 54 ^m		Mag: +0.2 PMG: 17 ^h 21 ^m		Mag: -1.7 PMG: 11 ^h 08 ^m		Mag: +0.5 PMG: 15 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	01.7	151	43.2	-18	22.4	99	38.1	-25	26.3
1	34	04.1	166	42.6		23.3	114	38.7		26.2
2	49	06.6	181	42.0		24.3	129	39.3		26.0
3	64	09.0	196	41.4		25.2	144	39.9		25.9
4	79	11.5	211	40.8		26.1	159	40.4		25.7
5	94	14.0	226	40.3	-18	27.1	174	41.0	-25	25.6
6	109	16.4	241	39.7	-18	28.0	189	41.6	-25	25.4
7	124	18.9	256	39.1		29.0	204	42.2		25.3
8	139	21.4	271	38.5		29.9	219	42.7		25.1
9	154	23.8	286	37.9		30.8	234	43.3		25.0
10	169	26.3	301	37.3		31.8	249	43.9		24.8
11	184	28.8	316	36.7	-18	32.7	264	44.5	-25	24.7
12	199	31.2	331	36.2	-18	33.6	279	45.0	-25	24.5
13	214	33.7	346	35.6		34.6	294	45.6		24.4
14	229	36.1	1	35.0		35.5	309	46.2		24.2
15	244	38.6	16	34.4		36.4	324	46.8		24.1
16	259	41.1	31	33.8		37.3	339	47.3		23.9
17	274	43.5	46	33.2	-18	38.3	354	47.9	-25	23.8
18	289	46.0	61	32.6	-18	39.2	9	48.5	-25	23.6
19	304	48.5	76	32.0		40.1	24	49.1		23.4
20	319	50.9	91	31.5		41.1	39	49.6		23.3
21	334	53.4	106	30.9		42.0	54	50.2		23.1
22	349	55.9	121	30.3		42.9	69	50.8		23.0
23	4	58.3	136	29.7		43.8	84	51.3		22.8
24	20	00.8	151	29.1	-18	44.8	99	51.9	-25	22.7
Dif	—		-6		-9		+6		+2	
								+20		-2
									+22	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 10 ^d 0 PHE { 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'9 R°: 52 ^m												
	PMG: 11 ^h 46 ^m 6			SD: 15'6 PMG: 20 ^h 06 ^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	183	18.9	-7 06.0	68	55.5	-15	10.2	62	60 N	5 00	5 48	6 30	15 35 24		*** ** *	*** ** *
1	198	19.0	06.9	83	24.6 ¹⁰¹	-15	04.0	62	58	02	47	27	27 27		*** ** *	*** ** *
2	213	19.2	07.9	97	53.6 ¹⁰⁰	-14	57.7	63	56	03	46	24	20 29		*** ** *	*** ** *
3	228	19.3	08.8	112	22.6 ¹⁰⁰		51.4	63	54	04	45	21	14 30		*** ** *	*** ** *
4	243	19.5	09.7	126	51.6 ¹⁰⁰		44.9	65	52	05	44	18	08 32	0 02	70	
5	258	19.7	-7 10.7	141	20.6 ¹⁰⁰	-14	38.3	66	50	5 06	5 44	6 16	15 03 33	0 08	69	
6	273	19.8	-7 11.6	155	49.6 ¹⁰⁰	-14	31.7	66	45	5 07	5 41	6 11	14 51 37	0 22	65	
7	288	20.0	12.6	170	18.5 ⁹⁹		25.0	67	40	08	39	07	42 39		32 63	
8	303	20.1	13.5	184	47.5 ¹⁰⁰		18.1	69	35	08	37	03	34 41		42 61	
9	318	20.3	14.4	199	16.4 ⁹⁹		11.2	69	30	08	35	6 00	27 43	0 50	59	
10	333	20.5	15.4	213	45.3 ⁹⁹	-14	04.2	70	20	06	31	5 54	15 46	1 03	57	
11	348	20.6	-7 16.3	228	14.2 ⁹⁹	-13	57.1	71	10 N	5 03	5 27	5 48	14 04 49	1 15	54	
12	3	20.8	-7 17.3	242	43.1 ⁹⁹	-13	50.0	71	0	4 58	5 22	5 43	13 54 52	1 27	51	
13	18	20.9	18.2	257	12.0 ⁹⁹		42.7	73	10 S	52	17	38	43 55		38 49	
14	33	21.1	19.1	271	40.8 ⁹⁸		35.4	73	20	44	10	33	33 57	1 50	47	
15	48	21.2	20.1	286	09.7 ⁹⁹		27.9	75	30	33	5 02	26	20 61	2 03	44	
16	63	21.4	21.0	300	38.5 ⁹⁸		20.4	75	35	26	4 57	22	13 63		11 42	
17	78	21.6	-7 22.0	315	07.3 ⁹⁸	-13	12.8	76	40	4 18	4 50	5 18	13 05 65	2 20	40	
18	93	21.7	-7 22.9	329	36.1 ⁹⁸	-13	05.1	77	45	4 07	4 43	5 13	12 55 68	2 30	38	
19	108	21.9	23.8	344	04.9 ⁹⁸	-12	57.3	78	50	3 53	34	07	44 70		43 35	
20	123	22.0	24.8	358	33.7 ⁹⁸		49.5	78	52	46	29	04	38 72		49 33	
21	138	22.2	25.7	13	02.4 ⁹⁷		41.5	80	54	39	24	5 01	32 74	2 55	32	
22	153	22.3	26.6	27	31.2 ⁹⁸		33.5	80	56	30	19	4 58	26 75	3 02	31	
23	168	22.5	27.6	41	59.9 ⁹⁷		25.4	81	58	20	12	54	18 78	10	29	
24	183	22.7	-7 28.5	56	28.6 ⁹⁷	-12	17.2	82	60 S	3 09	4 05	4 49	12 10 80	3 19	26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 22 ^h 36 ^m 2		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +0.2 PMG: 17 ^h 20 ^m		Mag: -1.7 PMG: 11 ^h 05 ^m		Mag: +0.5 PMG: 15 ^h 22 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	20	00.8	151 29.1	-18	44.8	99 51.9	-25 22.7	193 20.6	-1 41.1	128 53.2	-20 52.7
1	35	03.3	166 28.5		45.7	114 52.5	22.5	208 22.6	41.3	143 55.5	52.8
2	50	05.7	181 27.9		46.6	129 53.1	22.4	223 24.6	41.5	158 57.7	52.8
3	65	08.2	196 27.3		47.5	144 53.6	22.2	238 26.5	41.7	174 00.0	52.8
4	80	10.6	211 26.7		48.4	159 54.2	22.0	253 28.5	41.9	189 02.2	52.9
5	95	13.1	226 26.1	-18	49.4	174 54.8	-25 21.9	268 30.5	-1 42.2	204 04.5	-20 52.9
6	110	15.6	241 25.5	-18	50.3	189 55.3	-25 21.7	283 32.5	-1 42.4	219 06.7	-20 52.9
7	125	18.0	256 24.9		51.2	204 55.9	21.6	298 34.4	42.6	234 08.9	53.0
8	140	20.5	271 24.3		52.1	219 56.5	21.4	313 36.4	42.8	249 11.2	53.0
9	155	23.0	286 23.7		53.0	234 57.1	21.2	328 38.4	43.0	264 13.4	53.0
10	170	25.4	301 23.1		53.9	249 57.6	21.1	343 40.3	43.2	279 15.7	53.1
11	185	27.9	316 22.5	-18	54.9	264 58.2	-25 20.9	358 42.3	-1 43.4	294 17.9	-20 53.1
12	200	30.4	331 21.9	-18	55.8	279 58.8	-25 20.8	13 44.3	-1 43.6	309 20.1	-20 53.1
13	215	32.8	346 21.3		56.7	294 59.3	20.6	28 46.3	43.8	324 22.4	53.2
14	230	35.3	1 20.7		57.6	309 59.9	20.4	43 48.2	44.0	339 24.6	53.2
15	245	37.8	16 20.1		58.5	325 00.5	20.3	58 50.2	44.2	354 26.9	53.2
16	260	40.2	31 19.5	-18	59.4	340 01.0	20.1	73 52.2	44.5	9 29.1	53.3
17	275	42.7	46 18.9	-19	00.3	355 01.6	-25 20.0	88 54.1	-1 44.7	24 31.3	-20 53.3
18	290	45.1	61 18.3	-19	01.2	10 02.2	-25 19.8	103 56.1	-1 44.9	39 33.6	-20 53.3
19	305	47.6	76 17.7		02.1	25 02.7	19.6	118 58.1	45.1	54 35.8	53.4
20	320	50.1	91 17.1		03.0	40 03.3	19.5	134 00.1	45.3	69 38.1	53.4
21	335	52.5	106 16.5		03.9	55 03.9	19.3	149 02.0	45.5	84 40.3	53.4
22	350	55.0	121 15.9		04.8	70 04.5	19.1	164 04.0	45.7	99 42.5	53.5
23	5	57.5	136 15.3		05.8	85 05.0	19.0	179 06.0	45.9	114 44.8	53.5
24	20	59.9	151 14.7	-19	06.7	100 05.6	-25 18.8	194 07.9	-1 46.1	129 47.0	-20 53.5
Dif	—		-6	-9		+6	+2	+20	-2		+22

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 11 ^d 0	PHE { 4 ^h : 58'2 12 ^h : 58'6 20 ^h : 58'9 R°: 53 ^m									
	PMG: 11 ^h 46 ^m 4					SD: 15'8			PMG: 20 ^h 58 ^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
0	183	22.7	-7 28.5	56	28.6	-12 17.2	82	60 N	16 59	17 41	18 29	15 59 22	0 47 82	
1	198	22.8	29.5	70	57.3	09.0	82	58	17 03	42	27	54 24	0 54 80	
2	213	23.0	30.4	85	26.0	-12 00.6	84	56	06	43	26	49 26	1 01 78	
3	228	23.1	31.3	99	54.7	-11 52.2	84	54	09	45	25	44 28	07 75	
4	243	23.3	32.3	114	23.4	43.7	85	52	12	46	25	40 30	12 74	
5	258	23.4	-7 33.2	128	52.0	-11 35.1	86	50	17 14	17 47	18 24	15 36 32	1 17 72	
6	273	23.6	-7 34.1	143	20.6	-11 26.4	87	45	17 20	17 49	18 23	15 28 35	1 27 69	
7	288	23.7	35.1	157	49.3	17.7	87	40	25	52	23	21 38	35 67	
8	303	23.9	36.0	172	17.9	-11 08.9	88	35	29	54	23	15 40	43 64	
9	318	24.1	37.0	186	46.4	-11 00.0	89	30	32	17 56	24	10 42	1 49 62	
10	333	24.2	37.9	201	15.0	-10 51.0	90	20	39	18 01	26	15 01 46	2 00 58	
11	348	24.4	-7 38.8	215	43.6	-10 41.9	91	10 N	17 44	18 05	18 30	14 53 50	2 09 56	
12	3	24.5	-7 39.8	230	12.1	-10 32.8	91	0	17 50	18 11	18 35	14 46 52	2 18 53	
13	18	24.7	40.7	244	40.6	23.6	92	10 S	17 55	16	41	38 56	27 49	
14	33	24.8	41.6	259	09.1	14.4	92	20	18 01	24	18 50	30 59	37 46	
15	48	25.0	42.6	273	37.6	-10 05.0	94	30	08	33	19 01	21 63	47 43	
16	63	25.1	43.5	288	06.1	-9 55.6	94	35	12	38	09	16 65	2 53 41	
17	78	25.3	-7 44.4	302	34.6	-9 46.1	95	40	18 17	18 45	19 18	14 10 68	3 00 38	
18	93	25.4	-7 45.4	317	03.0	-9 36.6	95	45	18 22	18 53	19 29	14 03 71	3 08 36	
19	108	25.6	46.3	331	31.4	26.9	97	50	29	19 03	43	13 54 75	18 32	
20	123	25.7	47.2	345	59.8	17.3	96	52	32	07	51	50 77	22 31	
21	138	25.9	48.2	0	28.2	-9 07.5	98	54	35	13	19 58	46 78	27 29	
22	153	26.0	49.1	14	56.6	-8 57.7	98	56	39	18	20 08	41 80	33 27	
23	168	26.2	50.0	29	25.0	47.8	99	58	43	25	18	36 83	39 24	
24	183	26.3	-7 51.0	43	53.3	-8 37.8	100	60 S	18 48	19 33	20 31	13 30 85	3 45 23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 32 ^m 3		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +0.2 PMG: 17 ^h 19 ^m		Mag: -1.7 PMG: 11 ^h 02 ^m		Mag: +0.5 PMG: 15 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	20	59.9	151	14.7	-19	06.7	100	05.6	-25	18.8
1	36	02.4	166	14.1		07.6	115	06.2		18.6
2	51	04.9	181	13.5		08.5	130	06.7		18.5
3	66	07.3	196	12.9		09.4	145	07.3		18.3
4	81	09.8	211	12.3		10.3	160	07.9		18.1
5	96	12.2	226	11.7	-19	11.2	175	08.4	-25	18.0
6	111	14.7	241	11.1	-19	12.1	190	09.0	-25	17.8
7	126	17.2	256	10.5		13.0	205	09.6		17.6
8	141	19.6	271	09.9		13.8	220	10.1		17.5
9	156	22.1	286	09.3		14.7	235	10.7		17.3
10	171	24.6	301	08.7		15.6	250	11.3		17.1
11	186	27.0	316	08.0	-19	16.5	265	11.8	-25	17.0
12	201	29.5	331	07.4	-19	17.4	280	12.4	-25	16.8
13	216	32.0	346	06.8		18.3	295	13.0		16.6
14	231	34.4	1	06.2		19.2	310	13.5		16.4
15	246	36.9	16	05.6		20.1	325	14.1		16.3
16	261	39.4	31	05.0		21.0	340	14.7		16.1
17	276	41.8	46	04.4	-19	21.9	355	15.2	-25	15.9
18	291	44.3	61	03.8	-19	22.8	10	15.8	-25	15.8
19	306	46.7	76	03.1		23.7	25	16.4		15.6
20	321	49.2	91	02.5		24.5	40	16.9		15.4
21	336	51.7	106	01.9		25.4	55	17.5		15.2
22	351	54.1	121	01.3		26.3	70	18.1		15.1
23	6	56.6	136	00.7		27.2	85	18.6		14.9
24	21	59.1	151	00.1	-19	28.1	100	19.2	-25	14.7
Dif	—		-6	-9		+6	+2		+20	-2

0	129	47.0	-20	53.5	
1	144	49.2		53.6	
2	159	51.5		53.6	
3	174	53.7		53.6	
4	189	56.0		53.7	
5	204	58.2	-20	53.7	
6	220	00.4	-20	53.7	
7	235	02.7		53.8	
8	250	04.9		53.8	
9	265	07.2		53.8	
10	280	09.4		53.9	
11	295	11.6	-20	53.9	
12	310	13.9	-20	53.9	
13	325	16.1		54.0	
14	340	18.3		54.0	
15	355	20.6		54.1	
16	10	22.8		54.1	
17	25	25.1	-20	54.1	
18	40	27.3	-20	54.2	
19	55	29.5		54.2	
20	70	31.8		54.2	
21	85	34.0		54.3	
22	100	36.2		54.3	
23	115	38.5		54.3	
24	130	40.7	-20	54.4	

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: 12 ^d 0 PHE { 4 ^h : 59:2 12 ^h : 59:5 20 ^h : 59:8 Rº: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	26.3	-7	51.0	43	53.3	-8	37.8	100	60 N	5	05	5	53	6	35	16	21
1	198	26.5		51.9	58	21.6	93	27.8	100	58	06	52	31	18	22		14	85
2	213	26.6		52.8	72	49.9	93	17.7	101	56	07	50	28	15	25		19	81
3	228	26.8		53.8	87	18.2	93	-8	07.6	101	08	49	25	12	27		22	80
4	243	26.9		54.7	101	46.5	93	-7	57.3	103	09	48	22	10	28		26	78
5	258	27.1	-7	55.6	116	14.7	92	-7	47.1	102	5	09	5	47	6	19	16	08
6	273	27.2	-7	56.6	130	43.0	93	-7	36.7	104	5	10	5	44	6	13	16	03
7	288	27.4		57.5	145	11.2	92		26.4	103	10	41	09	15	59	37	42	69
8	303	27.5		58.4	159	39.4	92		15.9	105	10	39	04	55	40		47	66
9	318	27.7	-7	59.4	174	07.5	91	-7	05.4	105	09	37	6	01	52	43	51	64
10	333	27.8	-8	00.3	188	35.7	92	-6	54.8	106	06	32	5	54	47	47	2	58
11	348	28.0	-8	01.2	203	03.8	91	-6	44.2	106	5	03	5	27	5	48	15	43
12	3	28.1	-8	02.2	217	31.9	91	-6	33.5	107	4	58	5	22	5	43	15	38
13	18	28.3		03.1	232	00.0	91		22.8	107	51	16	37	34	57		16	50
14	33	28.4		04.0	246	28.1	91		12.0	108	43	09	31	29	61		23	46
15	48	28.6		04.9	260	56.1	90	-6	01.2	108	31	5	00	24	24	65	30	42
16	63	28.7		05.9	275	24.2	91	-5	50.3	109	23	4	54	20	21	68	34	40
17	78	28.9	-8	06.8	289	52.2	90	-5	39.4	109	4	14	4	47	5	15	15	18
18	93	29.0	-8	07.7	304	20.1	89	-5	28.4	110	4	03	4	39	5	09	15	14
19	108	29.2		08.7	318	48.1	90		17.4	110	3	48	29	03	09	77	50	31
20	123	29.3		09.6	333	16.0	89	-5	06.3	111	41	24	5	00	07	79	53	29
21	138	29.5		10.5	347	44.0	90	-4	55.2	111	33	19	4	56	04	81	3	56
22	153	29.6		11.4	2	11.8	88		44.0	112	24	13	52	15	01	84	4	00
23	168	29.7		12.4	16	39.7	89		32.8	112	13	4	06	14	59	85	03	23
24	183	29.9	-8	13.3	31	07.5	88	-4	21.6	112	3	01	3	59	4	43	14	55
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 28 ^m 4		Mag: -3.9 PMG: 13 ^h 57 ^m				Mag: +0.2 PMG: 17 ^h 18 ^m				Mag: -1.7 PMG: 10 ^h 59 ^m				Mag: +0.5 PMG: 15 ^h 15 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	21	59.1	151	00.1	-19	28.1	100	19.2	-25	14.7	194	55.3	-1	51.2	130	40.7		
1	37	01.5	165	59.5		29.0	115	19.7		14.5	209	57.3		51.4	145	42.9		
2	52	04.0	180	58.8		29.8	130	20.3		14.4	224	59.2		51.6	160	45.2		
3	67	06.5	195	58.2		30.7	145	20.9		14.2	240	01.2		51.8	175	47.4		
4	82	08.9	210	57.6		31.6	160	21.4		14.0	255	03.2		52.0	190	49.6		
5	97	11.4	225	57.0	-19	32.5	175	22.0	-25	13.8	270	05.1	-1	52.2	205	51.9		
6	112	13.8	240	56.4	-19	33.4	190	22.6	-25	13.6	285	07.1	-1	52.4	220	54.1		
7	127	16.3	255	55.7		34.2	205	23.1		13.5	300	09.1		52.6	235	56.4		
8	142	18.8	270	55.1		35.1	220	23.7		13.3	315	11.1		52.8	250	58.6		
9	157	21.2	285	54.5		36.0	235	24.3		13.1	330	13.0		53.0	266	00.8		
10	172	23.7	300	53.9		36.9	250	24.8		12.9	345	15.0		53.2	281	03.1		
11	187	26.2	315	53.3	-19	37.7	265	25.4	-25	12.8	0	17.0	-1	53.4	296	05.3		
12	202	28.6	330	52.6	-19	38.6	280	26.0	-25	12.6	15	19.0	-1	53.7	311	07.5		
13	217	31.1	345	52.0		39.5	295	26.5		12.4	30	20.9		53.9	326	09.8		
14	232	33.6	0	51.4		40.3	310	27.1		12.2	45	22.9		54.1	341	12.0		
15	247	36.0	15	50.8		41.2	325	27.6		12.0	60	24.9		54.3	356	14.2		
16	262	38.5	30	50.1		42.1	340	28.2		11.8	75	26.8		54.5	11	16.5		
17	277	41.0	45	49.5	-19	42.9	355	28.8	-25	11.7	90	28.8	-1	54.7	26	18.7		
18	292	43.4	60	48.9	-19	43.8	10	29.3	-25	11.5	105	30.8	-1	54.9	41	20.9		
19	307	45.9	75	48.3		44.7	25	29.9		11.3	120	32.8		55.1	56	23.2		
20	322	48.3	90	47.6		45.5	40	30.5		11.1	135	34.7		55.3	71	25.4		
21	337	50.8	105	47.0		46.4	55	31.0		10.9	150	36.7		55.5	86	27.6		
22	352	53.3	120	46.4		47.3	70	31.6		10.7	165	38.7		55.7	101	29.9		
23	7	55.7	135	45.8		48.1	85	32.1		10.6	180	40.7		56.0	116	32.1		
24	22	58.2	150	45.1	-19	49.0	100	32.7	-25	10.4	195	42.6	-1	56.2	131	34.3		
Dif	—		-6 -9				+6 +2				+20 -2				+22 0			

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 13 ^d 0 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'5 R°: 55 ^m												
	PMG: 11 ^h 45 ^m 9			SD: 16'3 PMG: 22 ^h 45 ^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	183	29.9	-8 13.3	31	07.5	-4 21.6		60 N	16 53	17 35	18 23	16 41	20	3 36	90	
1	198	30.0		45	35.4	89	-4 10.3	58	16 57	37	22	40	23	39	87	
2	213	30.2	15.2	60	03.2	88	-3 59.0	56	17 01	38	21	40	25	40	85	
3	228	30.3	16.1	74	30.9	87	47.6	54	04	40	21	39	27	42	83	
4	243	30.5	17.0	88	58.7	88	36.2	52	07	41	20	38	30	44	80	
5	258	30.6	-8 17.9	103	26.4	87	-3 24.8	50	17 10	17 43	18 20	16 38	31	3 45	79	
6	273	30.8	-8 18.9	117	54.1	87	-3 13.3	45	17 16	17 46	18 20	16 37	35	3 48	75	
7	288	30.9	19.8	132	21.7	86	-3 01.8	40	21	49	20	36	38	51	71	
8	303	31.0	20.7	146	49.4	87	-2 50.3	35	26	51	21	35	41	53	68	
9	318	31.2	21.7	161	17.0	86	38.7	30	30	54	22	35	43	55	66	
10	333	31.3	22.6	175	44.6	86	27.1	20	37	17 59	25	34	47	3 58	62	
11	348	31.5	-8 23.5	190	12.1	85	-2 15.5	10 N	17 43	18 04	18 29	16 33	51	4 01	58	
12	3	31.6	-8 24.4	204	39.6	85	-2 03.9	0	17 49	18 10	18 34	16 32	55	4 04	54	
13	18	31.8	25.4	219	07.1	85	-1 52.2	10 S	17 55	17	41	31	58	06	51	
14	33	31.9	26.3	233	34.6	85	40.5	20	18 02	24	18 50	30	62	09	47	
15	48	32.0	27.2	248	02.1	85	28.8	30	10	34	19 03	29	67	12	43	
16	63	32.2	28.1	262	29.5	84	17.1	35	14	40	11	29	69	14	40	
17	78	32.3	-8 29.1	276	56.8	83	-1 05.3	40	18 19	18 47	19 20	16 28	72	4 16	37	
18	93	32.5	-8 30.0	291	24.2	84	-0 53.5	45	18 25	18 55	19 32	16 27	76	4 18	34	
19	108	32.6	30.9	305	51.5	83	41.7	50	32	19 06	47	26	80	21	30	
20	123	32.8	31.8	320	18.8	83	29.9	52	36	11	19 55	26	81	22	29	
21	138	32.9	32.8	334	46.1	83	18.1	54	39	17	20 03	25	84	23	27	
22	153	33.0	33.7	349	13.3	82	-0 06.2	56	43	23	13	25	86	25	24	
23	168	33.2	34.6	3	40.5	82	+0 05.6	58	48	30	24	24	89	26	23	
24	183	33.3	-8 35.5	18	07.7	82	+0 17.5	60 S	18 53	19 38	20 37	16 24	91	4 28	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 24 ^m 4		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +0.2 PMG: 17 ^h 17 ^m		Mag: -1.7 PMG: 10 ^h 56 ^m		Mag: +0.5 PMG: 15 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	22	58.2	150	45.1	-19	49.0	100	32.7	-25	10.4
1	38	00.7	165	44.5		49.9	115	33.3		10.2
2	53	03.1	180	43.9		50.7	130	33.8		10.0
3	68	05.6	195	43.2		51.6	145	34.4		09.8
4	83	08.1	210	42.6		52.4	160	34.9		09.6
5	98	10.5	225	42.0	-19	53.3	175	35.5	-25	09.4
6	113	13.0	240	41.4	-19	54.2	190	36.1	-25	09.3
7	128	15.4	255	40.7		55.0	205	36.6		09.1
8	143	17.9	270	40.1		55.9	220	37.2		08.9
9	158	20.4	285	39.5		56.7	235	37.7		08.7
10	173	22.8	300	38.8		57.6	250	38.3		08.5
11	188	25.3	315	38.2	-19	58.4	265	38.9	-25	08.3
12	203	27.8	330	37.6	-19	59.3	280	39.4	-25	08.1
13	218	30.2	345	36.9	-20	00.1	295	40.0		07.9
14	233	32.7	0	36.3		01.0	310	40.5		07.7
15	248	35.2	15	35.6		01.8	325	41.1		07.6
16	263	37.6	30	35.0		02.7	340	41.7		07.4
17	278	40.1	45	34.4	-20	03.5	355	42.2	-25	07.2
18	293	42.6	60	33.7	-20	04.4	10	42.8	-25	07.0
19	308	45.0	75	33.1		05.2	25	43.3		06.8
20	323	47.5	90	32.5		06.0	40	43.9		06.6
21	338	49.9	105	31.8		06.9	55	44.5		06.4
22	353	52.4	120	31.2		07.7	70	45.0		06.2
23	8	54.9	135	30.5		08.6	85	45.6		06.0
24	23	57.3	150	29.9	-20	09.4	100	46.1	-25	05.8
Dif	—		-6	-9		+6	+2	+20		-2

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: 14 ^d 0 PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1 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	183	33.3	-8	35.5	18	07.7	+0 17.5	60 N	5 10	5 58	6 40	17 01	22	5 06	92
1	198	33.4		36.5	32	34.8	81 29.3	58	11	56	36	03	25	06	89
2	213	33.6		37.4	47	01.9	81 41.2	56	11	54	32	05	27	05	87
3	228	33.7		38.3	61	29.0	81 +0 53.1	54	12	53	28	06	29	05	84
4	243	33.9		39.2	75	56.0	80 +1 05.0	52	12	51	25	08	31	04	82
5	258	34.0	-8	40.1	90	23.0	80 +1 16.9	50	5 12	5 50	6 22	17 09	33	5 04	80
6	273	34.1	-8	41.1	104	50.0	80 +1 28.8	45	5 12	5 46	6 16	17 12	36	5 03	76
7	288	34.3		42.0	119	16.9	79 40.7	40	12	43	11	14	40	02	73
8	303	34.4		42.9	133	43.8	79 +1 52.6	35	11	41	06	16	43	01	70
9	318	34.6		43.8	148	10.7	79 +2 04.4	30	10	38	6 02	18	45	01	67
10	333	34.7		44.8	162	37.5	78 16.3	20	07	33	5 55	21	49	5 00	63
11	348	34.8	-8	45.7	177	04.3	78 +2 28.2	10 N	5 03	5 27	5 48	17 24	53	4 59	59
12	3	35.0	-8	46.6	191	31.1	78 +2 40.1	0	4 57	5 21	5 42	17 27	56	4 58	55
13	18	35.1		47.5	205	57.8	77 +2 51.9	10 S	50	15	36	29	60	57	52
14	33	35.2		48.4	220	24.5	77 +3 03.8	20	41	5 07	29	32	64	56	48
15	48	35.4		49.4	234	51.2	77 15.6	30	28	4 57	22	36	68	55	43
16	63	35.5		50.3	249	17.8	76 27.4	35	21	51	17	38	70	54	41
17	78	35.6	-8	51.2	263	44.4	76 +3 39.3	40	4 11	4 44	5 12	17 40	74	4 53	39
18	93	35.8	-8	52.1	278	10.9	75 +3 51.0	45	3 59	4 35	5 06	17 43	77	4 52	36
19	108	35.9		53.0	292	37.4	75 +4 02.8	50	43	25	4 59	46	81	51	32
20	123	36.1		54.0	307	03.9	75 14.6	52	36	20	55	47	83	51	29
21	138	36.2		54.9	321	30.4	75 26.3	54	28	14	51	49	85	50	28
22	153	36.3		55.8	335	56.8	74 38.0	56	18	08	47	51	87	49	26
23	168	36.5		56.7	350	23.1	73 +4 49.7	58	3 07	4 01	43	53	90	49	23
24	183	36.6	-8	57.6	4	49.5	74 +5 01.4	60 S	2 53	3 52	4 38	17 55	93	4 48	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 20 ^m 5		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: +0.2 PMG: 17 ^h 16 ^m		Mag: -1.7 PMG: 10 ^h 53 ^m		Mag: +0.5 PMG: 15 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	23	57.3	150	29.9	-20	09.4	100	46.1	-25	05.8
1	38	59.8	165	29.3		10.3	115	46.7		05.6
2	54	02.3	180	28.6		11.1	130	47.3		05.4
3	69	04.7	195	28.0		11.9	145	47.8		05.2
4	84	07.2	210	27.3		12.8	160	48.4		05.0
5	99	09.7	225	26.7	-20	13.6	175	48.9	-25	04.8
6	114	12.1	240	26.1	-20	14.4	190	49.5	-25	04.6
7	129	14.6	255	25.4		15.3	205	50.0		04.5
8	144	17.1	270	24.8		16.1	220	50.6		04.3
9	159	19.5	285	24.1		16.9	235	51.2		04.1
10	174	22.0	300	23.5		17.8	250	51.7		03.9
11	189	24.4	315	22.8	-20	18.6	265	52.3	-25	03.7
12	204	26.9	330	22.2	-20	19.4	280	52.8	-25	03.5
13	219	29.4	345	21.5		20.3	295	53.4		03.3
14	234	31.8	0	20.9		21.1	310	53.9		03.1
15	249	34.3	15	20.2		21.9	325	54.5		02.9
16	264	36.8	30	19.6		22.7	340	55.1		02.7
17	279	39.2	45	18.9	-20	23.6	355	55.6	-25	02.5
18	294	41.7	60	18.3	-20	24.4	10	56.2	-25	02.3
19	309	44.2	75	17.6		25.2	25	56.7		02.1
20	324	46.6	90	17.0		26.0	40	57.3		01.8
21	339	49.1	105	16.3		26.9	55	57.8		01.6
22	354	51.5	120	15.7		27.7	70	58.4		01.4
23	9	54.0	135	15.0		28.5	85	59.0		01.2
24	24	56.5	150	14.4	-20	29.3	100	59.5	-25	01.0
Dif	—		-6		-8		+6		+2	
								+20		-2
									+22	

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: 15 ^d 0 PHE { SD: 16'6 PMG: **h **m 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	
0	183	36.6	-8 57.6	4	49.5	+5	01.4	60 N	16 47	17 29	18 17	17 23 26	6 38 93		
1	198	36.7	58.5	19	15.8	73	13.0	58	52	32	17	28 28	35 89		
2	213	36.9	-8 59.5	33	42.0	72	24.6	56	16 56	34	17	32 30	32 86		
3	228	37.0	-9 00.4	48	08.2	72	36.2	54	17 00	35	16	35 33	29 84		
4	243	37.1	01.3	62	34.4	72	47.7	52	03	37	16	39 34	26 83		
5	258	37.3	-9 02.2	77	00.5	71	+5 59.2	50	17 06	17 39	18 16	17 42 36	6 24 81		
6	273	37.4	-9 03.1	91	26.6	71	+6 10.7	45	17 13	17 42	18 16	17 48 40	6 19 77		
7	288	37.5	04.0	105	52.7	71	22.1	40	19	46	17	54 43	15 73		
8	303	37.7	05.0	120	18.7	70	33.5	35	23	49	18	17 59 45	11 71		
9	318	37.8	05.9	134	44.7	70	44.9	30	28	52	20	18 03 47	08 68		
10	333	37.9	06.8	149	10.7	70	+6 56.2	20	35	17 58	23	10 52	6 03 64		
11	348	38.0	-9 07.7	163	36.6	69	+7 07.4	10 N	17 42	18 03	18 28	18 17 55	5 58 60		
12	3	38.2	-9 08.6	178	02.5	69	+7 18.7	0	17 49	18 10	18 34	18 23 58	5 53 57		
13	18	38.3	09.5	192	28.3	68	29.8	10 S	17 55	17	42	29 62	49 54		
14	33	38.4	10.5	206	54.1	68	41.0	20	18 03	25	18 51	36 65	44 50		
15	48	38.6	11.4	221	19.9	68	+7 52.0	30	11	35	19 04	44 68	38 47		
16	63	38.7	12.3	235	45.6	67	+8 03.1	35	16	42	13	48 71	35 44		
17	78	38.8	-9 13.2	250	11.3	67	+8 14.0	40	18 21	18 49	19 23	18 54 73	5 32 41		
18	93	39.0	-9 14.1	264	36.9	66	+8 25.0	45	18 28	18 58	19 35	19 00 76	5 28 38		
19	108	39.1	15.0	279	02.5	66	35.8	50	36	19 10	51	07 80	23 34		
20	123	39.2	15.9	293	28.1	66	46.6	52	39	15	19 59	10 82	20 33		
21	138	39.3	16.9	307	53.6	65	+8 57.4	54	43	21	20 08	14 84	18 30		
22	153	39.5	17.8	322	19.1	65	+9 08.1	56	48	28	18	18 86	15 29		
23	168	39.6	18.7	336	44.6	65	18.7	58	52	35	30	23 88	12 26		
24	183	39.7	-9 19.6	351	10.0	64	+9 29.2	60 S	18 58	19 44	20 44	19 28 91	5 09 23		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 16 ^m 6		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +0.2 PMG: 17 ^h 15 ^m		Mag: -1.7 PMG: 10 ^h 49 ^m		Mag: +0.5 PMG: 15 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	24	56.5	150	14.4	-20	29.3	100	59.5	-25	01.0
1	39	58.9	165	13.7	30.1	116	00.1	00.8	212	19.4
2	55	01.4	180	13.1	30.9	131	00.6	00.6	227	21.3
3	70	03.9	195	12.4	31.8	146	01.2	00.4	242	23.3
4	85	06.3	210	11.8	32.6	161	01.7	-25	00.2	
5	100	08.8	225	11.1	-20	33.4	176	02.3	-25	00.0
6	115	11.3	240	10.5	-20	34.2	191	02.8	-24	59.8
7	130	13.7	255	09.8	35.0	206	03.4	59.6	302	31.2
8	145	16.2	270	09.2	35.8	221	04.0	59.4	317	33.2
9	160	18.7	285	08.5	36.6	236	04.5	59.2	332	35.2
10	175	21.1	300	07.8	37.4	251	05.1	59.0	347	37.1
11	190	23.6	315	07.2	-20	38.3	266	05.6	-24	58.8
12	205	26.0	330	06.5	-20	39.1	281	06.2	-24	58.6
13	220	28.5	345	05.9	39.9	296	06.7	58.3	32	43.1
14	235	31.0	0	05.2	40.7	311	07.3	58.1	47	45.0
15	250	33.4	15	04.5	41.5	326	07.8	57.9	62	47.0
16	265	35.9	30	03.9	42.3	341	08.4	57.7	77	49.0
17	280	38.4	45	03.2	-20	43.1	356	08.9	-24	57.5
18	295	40.8	60	02.6	-20	43.9	11	09.5	-24	57.3
19	310	43.3	75	01.9	44.7	26	10.0	57.1	122	54.9
20	325	45.8	90	01.2	45.5	41	10.6	56.9	137	56.9
21	340	48.2	105	00.6	46.3	56	11.2	56.7	152	58.9
22	355	50.7	119	59.9	47.1	71	11.7	56.4	168	00.9
23	10	53.1	134	59.3	47.9	86	12.3	56.2	183	02.8
24	25	55.6	149	58.6	-20	48.7	101	12.8	-24	56.0
Dif	—		-7	-8		+6	+2		+20	-2

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 17 ^d 0	PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'7	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 45 ^m 1					SD: 16'6			R°: 59 ^m		R°: 59 ^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	m	h m m	m
0	183	42.7	-9 41.4	337	10.0	+13 19.9	85	60 N	16 41	17 24	18 12	18 20 40		9 40 83	
1	198	42.8	42.3	351	34.7	28.4	85	58	46	27	12	30 42		31 81	
2	213	43.0	43.2	5	59.3	36.8	84	56	51	29	12	38 44		23 79	
3	228	43.1	44.2	20	23.8	45.2	84	54	55	31	12	46 45		16 77	
4	243	43.2	45.1	34	48.4	53.4	82	52	16 59	33	12	53 46		09 76	
5	258	43.3	-9 46.0	49	12.9	01.5	81	50	17 02	17 35	18 12	18 59 48		9 04 74	
6	273	43.4	-9 46.9	63	37.4	09.5	80	45	17 09	17 39	18 13	19 12 50		8 51 72	
7	288	43.6	47.8	78	01.9	17.4	79	40	16	43	14	23 52		41 70	
8	303	43.7	48.7	92	26.4	25.2	78	35	21	47	16	33 53		32 68	
9	318	43.8	49.6	106	50.8	32.9	77	30	26	50	18	41 54		25 66	
10	333	43.9	50.5	121	15.2	40.5	76	20	34	17 56	22	19 56 56		11 64	
11	348	44.0	-9 51.4	135	39.6	48.0	75	10 N	17 41	18 03	18 27	20 08 58		8 00 62	
12	3	44.1	-9 52.3	150	04.0	55.4	74	0	17 48	18 09	18 34	20 20 60		7 49 60	
13	18	44.3	53.2	164	28.4	02.6	72	10 S	17 56	17	42	32 61		38 58	
14	33	44.4	54.1	178	52.7	09.8	72	20	18 03	26	18 52	20 45 63		27 55	
15	48	44.5	55.0	193	17.1	16.8	70	30	12	37	19 06	21 00 65		14 52	
16	63	44.6	55.9	207	41.4	23.8	70	35	17	44	15	09 66		7 06 51	
17	78	44.7	-9 56.8	222	05.7	30.6	68	40	18 23	18 52	19 25	21 18 68		6 57 50	
18	93	44.8	-9 57.7	236	30.0	37.3	67	45	18 30	19 01	19 38	21 30 69		6 47 47	
19	108	45.0	58.6	250	54.3	43.9	66	50	39	13	19 55	44 71		35 45	
20	123	45.1	-9 59.5	265	18.5	50.3	64	52	43	19	20 04	51 72		30 43	
21	138	45.2	-10 00.4	279	42.8	56.7	64	54	47	25	13	21 58 73		24 41	
22	153	45.3	01.3	294	07.1	02.9	62	56	52	32	24	22 06 74		17 39	
23	168	45.4	02.2	308	31.3	09.0	61	58	18 57	40	37	15 76		09 38	
24	183	45.5	-10 03.1	322	55.6	15.0	60	60 S	19 03	19 50	20 52	22 26 78		6 00 36	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 08 ^m 7		Mag: -3.9 PMG: 14 ^h 02 ^m			Mag: +0.2 PMG: 17 ^h 14 ^m			Mag: -1.7 PMG: 10 ^h 43 ^m			Mag: +0.5 PMG: 14 ^h 57 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	26	54.8	149 42.5	-21 07.5	101 26.1	-24 50.8	198 52.2	-2 16.1	135 08.2	-20 58.5					
1	41	57.2	164 41.8	08.3	116 26.6	50.5	213 54.2	16.3	150 10.4	58.5					
2	56	59.7	179 41.2	09.0	131 27.2	50.3	228 56.2	16.5	165 12.6	58.6					
3	72	02.1	194 40.5	09.8	146 27.7	50.1	243 58.2	16.7	180 14.9	58.6					
4	87	04.6	209 39.8	10.6	161 28.3	49.9	259 00.1	16.9	195 17.1	58.6					
5	102	07.1	224 39.1	-21 11.4	176 28.8	-24 49.6	274 02.1	-2 17.1	210 19.3	-20 58.7					
6	117	09.5	239 38.4	-21 12.1	191 29.4	-24 49.4	289 04.1	-2 17.3	225 21.5	-20 58.7					
7	132	12.0	254 37.8	12.9	206 29.9	49.2	304 06.1	17.5	240 23.7	58.8					
8	147	14.5	269 37.1	13.7	221 30.5	49.0	319 08.0	17.7	255 26.0	58.8					
9	162	16.9	284 36.4	14.4	236 31.0	48.7	334 10.0	17.9	270 28.2	58.8					
10	177	19.4	299 35.7	15.2	251 31.6	48.5	349 12.0	18.1	285 30.4	58.9					
11	192	21.9	314 35.0	-21 15.9	266 32.1	-24 48.3	4 14.0	-2 18.3	300 32.6	-20 58.9					
12	207	24.3	329 34.4	-21 16.7	281 32.7	-24 48.0	19 16.0	-2 18.5	315 34.8	-20 58.9					
13	222	26.8	344 33.7	17.5	296 33.2	47.8	34 17.9	18.7	330 37.1	59.0					
14	237	29.2	359 33.0	18.2	311 33.8	47.6	49 19.9	18.9	345 39.3	59.0					
15	252	31.7	14 32.3	19.0	326 34.3	47.4	64 21.9	19.1	0 41.5	59.0					
16	267	34.2	29 31.6	19.7	341 34.9	47.1	79 23.9	19.3	15 43.7	59.1					
17	282	36.6	44 30.9	-21 20.5	356 35.4	-24 46.9	94 25.8	-2 19.6	30 45.9	-20 59.1					
18	297	39.1	59 30.3	-21 21.3	11 36.0	-24 46.7	109 27.8	-2 19.8	45 48.2	-20 59.1					
19	312	41.6	74 29.6	22.0	26 36.5	46.4	124 29.8	20.0	60 50.4	59.2					
20	327	44.0	89 28.9	22.8	41 37.1	46.2	139 31.8	20.2	75 52.6	59.2					
21	342	46.5	104 28.2	23.5	56 37.6	46.0	154 33.7	20.4	90 54.8	59.2					
22	357	49.0	119 27.5	24.3	71 38.2	45.7	169 35.7	20.6	105 57.0	59.3					
23	12	51.4	134 26.8	25.0	86 38.7	45.5	184 37.7	20.8	120 59.3	59.3					
24	27	53.9	149 26.1	-21 25.8	101 39.3	-24 45.3	199 39.7	-2 21.0	136 01.5	-20 59.3					
Dif	—		-7	-8	+5	+2	+20	-2	+22	0					

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: 18 ^d 0 PHE { 4 ^h : 60'6 12 ^h : 60'3 20 ^h : 60'1 SD: 16'5 PMG: 2 ^h 34 ^m R°: 60 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	45.5	-10	03.1	322	55.6	+16	15.0	59	60 N	5	19	6	07	6	50	19	00
1	198	45.7		04.0	337	19.8		20.9	59	58		19		05	45		12	52
2	213	45.8		04.9	351	44.0		26.7	58	56		19		02	40		22	53
3	228	45.9		05.8	6	08.3		32.3	56	54		19		6	00	36	31	53
4	243	46.0		06.7	20	32.5		37.9	56	52		19		5	58	32	39	54
5	258	46.1	-10	07.6	34	56.7	+16	43.3	54	50		5	18	5	56	6	29	19
6	273	46.2	-10	08.5	49	20.9	+16	48.5	52	45		5	17	5	51	6	21	20
7	288	46.3		09.4	63	45.2		53.7	52	40		16		48	15		15	55
8	303	46.4		10.3	78	09.4	+16	58.7	50	35		14		44	10		26	56
9	318	46.6		11.2	92	33.6	+17	03.6	49	30		13		40	6	05	35	57
10	333	46.7		12.1	106	57.9		08.4	48	20		08		34	5	56	20	52
11	348	46.8	-10	13.0	121	22.1	+17	13.1	47	10 N		5	03	5	27	5	49	21
12	3	46.9	-10	13.9	135	46.4	+17	17.6	45	0		4	56	5	21	5	42	21
13	18	47.0		14.8	150	10.6		22.0	44	10 S		48		13	34		33	60
14	33	47.1		15.7	164	34.9		26.3	43	20		38		5	04	26	21	48
15	48	47.2		16.6	178	59.2		30.5	42	30		24		4	53	17	22	05
16	63	47.3		17.5	193	23.5		34.5	40	35		15		46	12		15	60
17	78	47.4	-10	18.4	207	47.7	+17	38.4	39	40		4	04	4	38	5	06	22
18	93	47.6	-10	19.3	222	12.1	+17	42.2	38	45		3	51	4	28	4	59	22
19	108	47.7		20.2	236	36.4		45.9	37	50		34		16	50		22	55
20	123	47.8		21.1	251	00.7		49.4	35	52		26		10	46		23	03
21	138	47.9		22.0	265	25.1		52.8	34	54		16		4	04	42	11	63
22	153	48.0		22.9	279	49.5		56.1	33	56		3	05	3	57	37	20	64
23	168	48.1		23.8	294	13.9	+17	59.2	31	58		2	52	49	32		31	64
24	183	48.2	-10	24.7	308	38.3	+18	02.3	31	60 S		2	37	3	39	4	26	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 04 ^m 8		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +0.3 PMG: 17 ^h 13 ^m		Mag: -1.7 PMG: 10 ^h 40 ^m		Mag: +0.5 PMG: 14 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	27	53.9	149	26.1	-21	25.8	101	39.3	-24	45.3
1	42	56.4	164	25.5		26.5	116	39.8		45.0
2	57	58.8	179	24.8		27.3	131	40.4		44.8
3	73	01.3	194	24.1		28.0	146	40.9		44.6
4	88	03.7	209	23.4		28.8	161	41.5		44.3
5	103	06.2	224	22.7	-21	29.5	176	42.0	-24	44.1
6	118	08.7	239	22.0	-21	30.3	191	42.6	-24	43.9
7	133	11.1	254	21.3		31.0	206	43.1		43.6
8	148	13.6	269	20.6		31.7	221	43.7		43.4
9	163	16.1	284	19.9		32.5	236	44.2		43.2
10	178	18.5	299	19.2		33.2	251	44.7		42.9
11	193	21.0	314	18.5	-21	34.0	266	45.3	-24	42.7
12	208	23.5	329	17.9	-21	34.7	281	45.8	-24	42.4
13	223	25.9	344	17.2		35.4	296	46.4		42.2
14	238	28.4	359	16.5		36.2	311	46.9		42.0
15	253	30.9	14	15.8		36.9	326	47.5		41.7
16	268	33.3	29	15.1		37.6	341	48.0		41.5
17	283	35.8	44	14.4	-21	38.4	356	48.6	-24	41.3
18	298	38.2	59	13.7	-21	39.1	11	49.1	-24	41.0
19	313	40.7	74	13.0		39.8	26	49.7		40.8
20	328	43.2	89	12.3		40.6	41	50.2		40.5
21	343	45.6	104	11.6		41.3	56	50.8		40.3
22	358	48.1	119	10.9		42.0	71	51.3		40.0
23	13	50.6	134	10.2		42.8	86	51.9		39.8
24	28	53.0	149	09.5	-21	43.5	101	52.4	-24	39.6
Dif	—		-7		-7		+5		+2	
							+20		-2	
									+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 7			Edad: 19 ^d 0 PHE { 4 ^h : 59'9 12 ^h : 59'6 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	h m
0	183	48.2	-10	24.7	308	38.3	+18	02.3	60 N	16 36	17 19	18 07	19 51	61	12 14	58
1	198	48.3		25.6	323	02.7	54	05.1	58	41	22	07	20 04	60	12 02	57
2	213	48.4		26.5	337	27.2	55	07.9	56	46	24	07	15 60		11 51	57
3	228	48.5		27.4	351	51.7	55	10.6	54	51	27	08	24 60		41	58
4	243	48.6		28.3	6	16.2	55	13.1	52	55	29	08	33 60		33	58
5	258	48.7	-10	29.2	20	40.7	55	+18 15.5	50	16 58	17 31	18 09	20 41	59	11 25	58
6	273	48.8	-10	30.1	35	05.3	56	+18 17.7	45	17 06	17 36	18 10	20 57	59	11 09	58
7	288	49.0		30.9	49	29.9	56	19.9	40	13	40	12	21 10	59	10 55	58
8	303	49.1		31.8	63	54.5	56	21.9	35	19	44	14	22 58		44	58
9	318	49.2		32.7	78	19.1	56	23.8	30	24	48	16	32 58		34	58
10	333	49.3		33.6	92	43.8	57	25.5	20	33	17 55	21	21 49	58	17	58
11	348	49.4	-10	34.5	107	08.5	57	+18 27.1	10 N	17 40	18 02	18 27	22 04	58	10 02	58
12	3	49.5	-10	35.4	121	33.3	58	+18 28.6	0	17 48	18 09	18 34	22 19	56	9 48	58
13	18	49.6		36.3	135	58.0	57	30.0	10 S	17 56	17	42	33 56		34	58
14	33	49.7		37.2	150	22.9	59	31.3	20	18 04	27	18 53	22 48	56	19	58
15	48	49.8		38.1	164	47.7	58	32.4	30	14	38	19 07	23 05	55	9 02	57
16	63	49.9		39.0	179	12.6	59	33.4	35	19	45	17	15 55		8 52	57
17	78	50.0	-10	39.9	193	37.5	59	+18 34.3	40	18 26	18 54	19 28	23 27	54	8 40	58
18	93	50.1	-10	40.8	208	02.5	60	+18 35.0	45	18 33	19 04	19 42	23 41	53	8 27	57
19	108	50.2		41.6	222	27.5	60	35.7	50	42	17	19 59	23 57	53	10	58
20	123	50.3		42.5	236	52.6	61	36.2	52	46	23	20 08	** ** *	**	8 03	57
21	138	50.4		43.4	251	17.7	61	36.5	54	51	29	18	** ** *	**	7 54	57
22	153	50.5		44.3	265	42.8	61	36.8	56	18 56	37	30	** ** *	**	45	56
23	168	50.6		45.2	280	08.0	62	36.9	58	19 02	46	43	** ** *	**	34	56
24	183	50.7	-10	46.1	294	33.2	62	+18 36.9	60 S	19 08	19 55	20 59	** ** *	**	7 21	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 00 ^m 8		Mag: -3.9 PMG: 14 ^h 04 ^m		Mag: +0.3 PMG: 17 ^h 12 ^m		Mag: -1.7 PMG: 10 ^h 37 ^m		Mag: +0.5 PMG: 14 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	53.0	149	09.5	-21	43.5	101	52.4	-24	39.6
1	43	55.5	164	08.8		44.2	116	53.0		39.3
2	58	58.0	179	08.1		44.9	131	53.5		39.1
3	74	00.4	194	07.4		45.7	146	54.1		38.8
4	89	02.9	209	06.7		46.4	161	54.6		38.6
5	104	05.4	224	06.0	-21	47.1	176	55.1	-24	38.3
6	119	07.8	239	05.3	-21	47.8	191	55.7	-24	38.1
7	134	10.3	254	04.6		48.5	206	56.2		37.8
8	149	12.7	269	03.9		49.3	221	56.8		37.6
9	164	15.2	284	03.2		50.0	236	57.3		37.4
10	179	17.7	299	02.5		50.7	251	57.9		37.1
11	194	20.1	314	01.8	-21	51.4	266	58.4	-24	36.9
12	209	22.6	329	01.1	-21	52.1	281	59.0	-24	36.6
13	224	25.1	344	00.4		52.8	296	59.5		36.4
14	239	27.5	358	59.7		53.5	312	00.1		36.1
15	254	30.0	13	59.0		54.3	327	00.6		35.9
16	269	32.5	28	58.3		55.0	342	01.2		35.6
17	284	34.9	43	57.5	-21	55.7	357	01.7	-24	35.4
18	299	37.4	58	56.8	-21	56.4	12	02.2	-24	35.1
19	314	39.8	73	56.1		57.1	27	02.8		34.9
20	329	42.3	88	55.4		57.8	42	03.3		34.6
21	344	44.8	103	54.7		58.5	57	03.9		34.4
22	359	47.2	118	54.0		59.2	72	04.4		34.1
23	14	49.7	133	53.3	-21	59.9	87	05.0		33.9
24	29	52.2	148	52.6	-22	00.6	102	05.5	-24	33.6
Dif	—		-7		-7		+5		+2	
							+20		-2	
									+22	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16.1 PMG: 11 ^h 44 ^m 5			Edad: 20 ^d 0 PHE { 4 ^h : 59/0 12 ^h : 58/7 20 ^h : 58/5 PMG: 4 ^h 32 ^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	183	50.7	-10	46.1	294	33.2	+18	36.9	60 N	5	24	6	12	6	55	20	52
1	198	50.8		47.0	308	58.5		36.8	58		23		09		49	21	04
2	213	50.9		47.9	323	23.8		36.6	56		23		06		44	15	66
3	228	51.0		48.7	337	49.2		36.3	54		22		04		40	24	66
4	243	51.1		49.6	352	14.6		35.8	52		22		6	01	36	33	64
5	258	51.2	-10	50.5	6	40.1	+18	35.2	50	5	21	5	59	6	32	21	40
6	273	51.3	-10	51.4	21	05.6	+18	34.5	45	5	20	5	54	6	24	21	56
7	288	51.4		52.3	35	31.2		33.7	40		18		50		17	22	09
8	303	51.5		53.2	49	56.8		32.7	35		16		46		11	20	60
9	318	51.6		54.1	64	22.5		31.6	30		14		42	6	06	30	59
10	333	51.7		55.0	78	48.3		30.5	20		09		35	5	57	22	47
11	348	51.8	-10	55.8	93	14.1	+18	29.2	10 N	5	03	5	28	5	49	23	02
12	3	51.9	-10	56.7	107	39.9	+18	27.8	0	4	56	5	20	5	41	23	15
13	18	52.0		57.6	122	05.8		26.2	10 S		47		12		33	29	53
14	33	52.1		58.5	136	31.8		24.6	20		36		5	02	25	23	44
15	48	52.2	-10	59.4	150	57.8		22.8	30		21	4	51		15	**	**
16	63	52.3	-11	00.3	165	23.9		21.0	35		12		43		10	**	**
17	78	52.4	-11	01.1	179	50.0	+18	19.0	40	4	01	4	35	5	03	**	**
18	93	52.5	-11	02.0	194	16.2	+18	16.9	45	3	47	4	25	4	56	**	**
19	108	52.6		02.9	208	42.5		14.7	50		29		12		46	**	**
20	123	52.7		03.8	223	08.8		12.4	52		20		4	06	42	0	05
21	138	52.8		04.7	237	35.2		10.0	54	3	10	3	59		37	14	52
22	153	52.9		05.6	252	01.7		07.4	56	2	59		51		32	24	51
23	168	52.9		06.4	266	28.2		04.8	58		45		43		26	35	51
24	183	53.0	-11	07.3	280	54.8	+18	02.0	60 S	2	29	3	33	4	20	0	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 56 ^m 9		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: +0.3 PMG: 17 ^h 11 ^m		Mag: -1.7 PMG: 10 ^h 34 ^m		Mag: +0.5 PMG: 14 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	29	52.2	148	52.6	-22	00.6	102	05.5	-24	33.6
1	44	54.6	163	51.9		01.3	117	06.1		33.4
2	59	57.1	178	51.2		02.0	132	06.6		33.1
3	74	59.6	193	50.5		02.7	147	07.2		32.8
4	90	02.0	208	49.7		03.4	162	07.7		32.6
5	105	04.5	223	49.0	-22	04.1	177	08.2	-24	32.3
6	120	07.0	238	48.3	-22	04.8	192	08.8	-24	32.1
7	135	09.4	253	47.6		05.5	207	09.3		31.8
8	150	11.9	268	46.9		06.2	222	09.9		31.6
9	165	14.3	283	46.2		06.9	237	10.4		31.3
10	180	16.8	298	45.5		07.6	252	11.0		31.1
11	195	19.3	313	44.7	-22	08.3	267	11.5	-24	30.8
12	210	21.7	328	44.0	-22	09.0	282	12.1	-24	30.5
13	225	24.2	343	43.3		09.6	297	12.6		30.3
14	240	26.7	358	42.6		10.3	312	13.1		30.0
15	255	29.1	13	41.9		11.0	327	13.7		29.8
16	270	31.6	28	41.2		11.7	342	14.2		29.5
17	285	34.1	43	40.4	-22	12.4	357	14.8	-24	29.3
18	300	36.5	58	39.7	-22	13.1	12	15.3	-24	29.0
19	315	39.0	73	39.0		13.8	27	15.9		28.7
20	330	41.5	88	38.3		14.4	42	16.4		28.5
21	345	43.9	103	37.6		15.1	57	17.0		28.2
22	0	46.4	118	36.8		15.8	72	17.5		27.9
23	15	48.8	133	36.1		16.5	87	18.0		27.7
24	30	51.3	148	35.4	-22	17.2	102	18.6	-24	27.4
Dif	—		-7		-7		+5		+3	
									+20	
									-2	
									+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 21 ^d 0 PHE { 4 ^h : 58/2 12 ^h : 57/9 20 ^h : 57/6										
	PMG: 11 ^h 44 ^m 4			SD: 15 ^h 9 PMG: 5 ^h 28 ^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	183	53.0	-11 07.3	280	54.8	+18 02.0	28	60 N	16 30	17 13	18 02	22 01 73	13 55 34	
1	198	53.1	08.2	295	21.4	+17 59.2	28	58	36	17 02	12 71	12 71	44 35	
2	213	53.2	09.1	309	48.1	56.2	30	56	41	20 03	21 70	35 36		
3	228	53.3	10.0	324	14.9	53.2	30	54	46	22 04	30 68	26 38		
4	243	53.4	10.9	338	41.7	50.0	32	52	50	25 04	37 67	18 40		
5	258	53.5	-11 11.7	353	08.6	+17 46.7	33	50	16 54	17 27	18 05	22 44 65	13 11 41	
6	273	53.6	-11 12.6	7	35.6	+17 43.3	34	45	17 03	17 33	18 07	22 58 63	12 56 43	
7	288	53.7	13.5	22	02.6	39.9	34	40	10	38 09	23 10 61	44 44		
8	303	53.8	14.4	36	29.7	36.3	36	35	16	42 11	20 59	34 45		
9	318	53.9	15.3	50	56.9	32.6	37	30	22	46 14	29 57	24 47		
10	333	54.0	16.1	65	24.1	28.8	38	20	31	17 54 19	44 55	12 09 49		
11	348	54.0	-11 17.0	79	51.4	+17 25.0	38	10 N	17 40	18 01	18 26	23 57 53	11 55 51	
12	3	54.1	-11 17.9	94	18.8	+17 21.0	40	0	17 48	18 09	18 33	*** ** *	11 42 52	
13	18	54.2	18.8	108	46.2	16.9	41	10 S	17 56	17 42	*** ** *	28 55		
14	33	54.3	19.6	123	13.7	12.8	41	20	18 05	27 18 54	*** ** *	11 14 57		
15	48	54.4	20.5	137	41.3	08.5	43	30	15	40 19 09	0 00 50	10 58 58		
16	63	54.5	21.4	152	09.0	+17 04.1	44	35	21	47 19	10 49	49 59		
17	78	54.6	-11 22.3	166	36.7	+16 59.7	44	40	18 28	18 56	19 30	0 21 48	10 38 61	
18	93	54.7	-11 23.2	181	04.5	+16 55.2	45	45	18 36	19 07	19 45	0 34 46	10 25 63	
19	108	54.8	24.0	195	32.3	50.5	47	50	45	20 20 04	50 44	10 65		
20	123	54.8	24.9	210	00.3	45.8	47	52	50	27 13	0 58 43	10 02 66		
21	138	54.9	25.8	224	28.3	41.0	48	54	18 55	34 23	1 06 42	9 54 67		
22	153	55.0	26.7	238	56.3	36.1	49	56	19 00	42 35	15 41	45 69		
23	168	55.1	27.5	253	24.5	31.1	50	58	06	19 51 20 50	26 39	35 70		
24	183	55.2	-11 28.4	267	52.7	+16 26.0	51	60 S	19 13	20 01	21 07	1 38 38	9 23 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 53 ^m 0		Mag: -4.0 PMG: 14 ^h 06 ^m			Mag: +0.3 PMG: 17 ^h 10 ^m			Mag: -1.7 PMG: 10 ^h 30 ^m			Mag: +0.5 PMG: 14 ^h 43 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	30	51.3	148 35.4	-22 17.2	102 18.6	-24 27.4	202 02.2	-2 35.7	138 41.0	-21 01.9				
1	45	53.8	163 34.7	17.8	117 19.1	27.2	217 04.2	35.9	153 43.2	01.9				
2	60	56.2	178 34.0	18.5	132 19.7	26.9	232 06.1	36.1	168 45.4	01.9				
3	75	58.7	193 33.2	19.2	147 20.2	26.6	247 08.1	36.3	183 47.7	02.0				
4	91	01.2	208 32.5	19.9	162 20.8	26.4	262 10.1	36.5	198 49.9	02.0				
5	106	03.6	223 31.8	-22 20.5	177 21.3	-24 26.1	277 12.1	-2 36.7	213 52.1	-21 02.0				
6	121	06.1	238 31.1	-22 21.2	192 21.8	-24 25.8	292 14.1	-2 36.9	228 54.3	-21 02.1				
7	136	08.6	253 30.3	21.9	207 22.4	25.6	307 16.0	37.1	243 56.5	02.1				
8	151	11.0	268 29.6	22.5	222 22.9	25.3	322 18.0	37.3	258 58.7	02.1				
9	166	13.5	283 28.9	23.2	237 23.5	25.0	337 20.0	37.5	274 00.9	02.2				
10	181	16.0	298 28.2	23.9	252 24.0	24.8	352 22.0	37.7	289 03.1	02.2				
11	196	18.4	313 27.4	-22 24.5	267 24.6	-24 24.5	7 24.0	-2 37.9	304 05.3	-21 02.3				
12	211	20.9	328 26.7	-22 25.2	282 25.1	-24 24.2	22 25.9	-2 38.2	319 07.6	-21 02.3				
13	226	23.3	343 26.0	25.9	297 25.6	24.0	37 27.9	38.4	334 09.8	02.3				
14	241	25.8	358 25.3	26.5	312 26.2	23.7	52 29.9	38.6	349 12.0	02.4				
15	256	28.3	13 24.5	27.2	327 26.7	23.4	67 31.9	38.8	4 14.2	02.4				
16	271	30.7	28 23.8	27.8	342 27.3	23.2	82 33.9	39.0	19 16.4	02.4				
17	286	33.2	43 23.1	-22 28.5	357 27.8	-24 22.9	97 35.8	-2 39.2	34 18.6	-21 02.5				
18	301	35.7	58 22.3	-22 29.2	12 28.4	-24 22.6	112 37.8	-2 39.4	49 20.8	-21 02.5				
19	316	38.1	73 21.6	29.8	27 28.9	22.4	127 39.8	39.6	64 23.0	02.5				
20	331	40.6	88 20.9	30.5	42 29.4	22.1	142 41.8	39.8	79 25.2	02.6				
21	346	43.1	103 20.1	31.1	57 30.0	21.8	157 43.8	40.0	94 27.5	02.6				
22	1	45.5	118 19.4	31.8	72 30.5	21.6	172 45.8	40.2	109 29.7	02.6				
23	16	48.0	133 18.7	32.4	87 31.1	21.3	187 47.7	40.4	124 31.9	02.7				
24	31	50.4	148 17.9	-22 33.1	102 31.6	-24 21.0	202 49.7	-2 40.6	139 34.1	-21 02.7				
Dif	—		-7	-7	+5	+3	+20	-2	+22	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 22 ^d 0	PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 1 20 ^h : 56 ^m 8											
	PMG: 11 ^h 44 ^m 3					SD: 15 ^h 6		PMG: 6 ^h 22 ^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	183	55.2	-11	28.4	267	52.7	+16	26.0	51	58	27	13	7	00	23	14
1	198	55.3		29.3	282	21.0		20.9	51	58	27	13	6	54	23	72
2	213	55.4		30.2	296	49.3		15.6	53	56	27	10	49	31	70	11
3	228	55.5		31.0	311	17.8		10.3	53	54	26	07	44	38	68	14
4	243	55.5		31.9	325	46.2		04.9	54	52	25	05	39	44	67	13
5	258	55.6	-11	32.8	340	14.8		59.4	55	50	5	24	6	35	23	49
6	273	55.7	-11	33.6	354	43.4		53.8	56	45	5	22	5	57	6	27
7	288	55.8		34.5	9	12.1		48.1	57	40	20	52	19	**	**	**
8	303	55.9		35.4	23	40.9		42.4	57	35	18	47	13	**	**	**
9	318	56.0		36.3	38	09.8		36.6	58	30	15	43	6	07	**	**
10	333	56.0		37.1	52	38.7		30.6	60	20	09	35	5	58	**	**
11	348	56.1	-11	38.0	67	07.7	100	+15	24.7	59	10	N	5	03	5	49
12	3	56.2	-11	38.9	81	36.7	100	+15	18.6	61	0		4	55	5	20
13	18	56.3		39.7	96	05.8	101		12.5	61	10	S	46	11	33	22
14	33	56.4		40.6	110	35.0	102	+15	06.3	62	20		34	5	01	24
15	48	56.5		41.5	125	04.3	103	+15	00.0	63	30		19	4	48	13
16	63	56.5		42.4	139	33.6	103	+14	53.6	64	35		4	09	41	07
17	78	56.6	-11	43.2	154	03.0	104	+14	47.2	64	40		3	58	4	32
18	93	56.7	-11	44.1	168	32.5	105	+14	40.7	65	45		3	43	4	21
19	108	56.8		45.0	183	02.1	106		34.2	65	50		24	08	42	52
20	123	56.9		45.8	197	31.7	106		27.5	67	52		15	4	01	38
21	138	56.9		46.7	212	01.3	106		20.8	67	54		3	05	3	54
22	153	57.0		47.6	226	31.1	108		14.0	68	56		2	52	46	27
23	168	57.1		48.4	241	00.9	108		07.2	68	58		38	37	21	2
24	183	57.2	-11	49.3	255	30.8	109	+14	00.3	69	60	S	2	20	3	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 49 ^m 1		Mag: -4.0 PMG: 14 ^h 07 ^m		Mag: +0.3 PMG: 17 ^h 09 ^m		Mag: -1.7 PMG: 10 ^h 27 ^m		Mag: +0.5 PMG: 14 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	31	50.4	148	17.9	-22	33.1	102	31.6	-24	21.0
1	46	52.9	163	17.2		33.7	117	32.1		20.7
2	61	55.4	178	16.5		34.4	132	32.7		20.5
3	76	57.8	193	15.7		35.0	147	33.2		20.2
4	92	00.3	208	15.0		35.7	162	33.8		19.9
5	107	02.8	223	14.3	-22	36.3	177	34.3	-24	19.6
6	122	05.2	238	13.5	-22	37.0	192	34.9	-24	19.4
7	137	07.7	253	12.8		37.6	207	35.4		19.1
8	152	10.2	268	12.1		38.3	222	35.9		18.8
9	167	12.6	283	11.3		38.9	237	36.5		18.5
10	182	15.1	298	10.6		39.6	252	37.0		18.3
11	197	17.6	313	09.9	-22	40.2	267	37.6	-24	18.0
12	212	20.0	328	09.1	-22	40.8	282	38.1	-24	17.7
13	227	22.5	343	08.4		41.5	297	38.6		17.4
14	242	24.9	358	07.6		42.1	312	39.2		17.2
15	257	27.4	13	06.9		42.8	327	39.7		16.9
16	272	29.9	28	06.2		43.4	342	40.3		16.6
17	287	32.3	43	05.4	-22	44.0	357	40.8	-24	16.3
18	302	34.8	58	04.7	-22	44.7	12	41.4	-24	16.0
19	317	37.3	73	04.0		45.3	27	41.9		15.8
20	332	39.7	88	03.2		45.9	42	42.4		15.5
21	347	42.2	103	02.5		46.6	57	43.0		15.2
22	2	44.7	118	01.7		47.2	72	43.5		14.9
23	17	47.1	133	01.0		47.8	87	44.1		14.6
24	32	49.6	148	00.2	-22	48.4	102	44.6	-24	14.4
Dif	—		-7		-6		+5		+3	
									+20	
									-2	
									+22	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 23 ^d 0 PHE { 4 ^h : 56 ^h /6 12 ^h : 56 ^h /3 20 ^h : 56 ^h /1															
	PMG: 11 ^h 44 ^m 1		SD: 15 ^h 4 PMG: 7 ^h 12 ^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	57.2	-11 49.3	255	30.8	+14 00.3	60 N	16 25	17 08	17 57	** ** *		14 54	21				
1	198	57.3	50.2	270	00.7 ¹⁰⁹	+13 53.3	58	31	12	58	** ** *		47	23				
2	213	57.3	51.0	284	30.7 ¹¹⁰	46.3	56	37	15	59	** ** *		41	24				
3	228	57.4	51.9	299	00.8 ¹¹¹	39.2	54	42	18	17 59	** ** *		35	25				
4	243	57.5	52.8	313	30.9 ¹¹¹	32.0	52	46	21	18 00	** ** *		30	28				
5	258	57.6	-11 53.6	328	01.1 ¹¹²	+13 24.8	50	16 51	17 24	18 01	** ** *		14 26	29				
6	273	57.6	-11 54.5	342	31.4 ¹¹³	+13 17.5	45	17 00	17 30	18 04	0 01	63	14 16	32				
7	288	57.7	55.4	357	01.8 ¹¹⁴	10.2	40	07	35	07	11 60		07	35				
8	303	57.8	56.2	11	32.2 ¹¹⁴	+13 02.8	35	14	40	09	19 58		14 00	37				
9	318	57.9	57.1	26	02.6 ¹¹⁴	+12 55.3	30	20	44	12	26 57		13 54	38				
10	333	57.9	58.0	40	33.2 ¹¹⁶	47.8	20	30	17 52	18	39 53		43	42				
11	348	58.0	-11 58.8	55	03.8 ¹¹⁶	+12 40.2	10 N	17 39	18 00	18 25	0 50	51	13 33	45				
12	3	58.1	-11 59.7	69	34.4 ¹¹⁶	+12 32.6	0	17 48	18 09	18 33	1 00	49	13 24	47				
13	18	58.2	-12 00.6	84	05.1 ¹¹⁷	24.9	10 S	17 56	18	43	11 46		15	50				
14	33	58.2	01.4	98	35.9 ¹¹⁸	17.2	20	18 06	28	18 55	22 43		13 05	53				
15	48	58.3	02.3	113	06.7 ¹¹⁸	09.4	30	16	41	19 11	34 41		12 54	55				
16	63	58.4	03.1	127	37.6 ¹¹⁹	+12 01.5	35	23	49	21	42 38		47	58				
17	78	58.5	-12 04.0	142	08.6 ¹²⁰	+11 53.6	40	18 30	18 59	19 33	1 50	36	12 40	59				
18	93	58.5	-12 04.9	156	39.6 ¹²⁰	+11 45.7	45	18 39	19 10	19 48	1 59	35	12 31	62				
19	108	58.6	05.7	171	10.7 ¹²¹	37.7	50	49	24	20 08	2 11	31	20	66				
20	123	58.7	06.6	185	41.9 ¹²²	29.6	52	54	31	17	16 30		15	67				
21	138	58.8	07.5	200	13.1 ¹²²	21.5	54	18 59	38	28	22 29		10	68				
22	153	58.8	08.3	214	44.3 ¹²²	13.4	56	19 05	47	41	29 26		12 04	70				
23	168	58.9	09.2	229	15.6 ¹²³	+11 05.2	58	11	19 56	20 57	36 25		11 57	73				
24	183	59.0	-12 10.0	243	47.0 ¹²⁴	+10 56.9	60 S	19 19	20 07	21 16	2 44	23	11 49	75				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 45 ^m 1		Mag: -4.0 PMG: 14 ^h 09 ^m			Mag: +0.3 PMG: 17 ^h 08 ^m			Mag: -1.7 PMG: 10 ^h 24 ^m			Mag: +0.5 PMG: 14 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	32	49.6	148	00.2	-22	48.4	102	44.6	-24	14.4	203	37.3	-2	45.4	140	27.1	-21	03.6
1	47	52.1	162	59.5		49.1	117	45.1		14.1	218	39.3		45.6	155	29.3		03.6
2	62	54.5	177	58.8		49.7	132	45.7		13.8	233	41.3		45.8	170	31.5		03.6
3	77	57.0	192	58.0		50.3	147	46.2		13.5	248	43.2		46.0	185	33.7		03.7
4	92	59.4	207	57.3		50.9	162	46.8		13.2	263	45.2		46.2	200	35.9		03.7
5	108	01.9	222	56.5	-22	51.6	177	47.3	-24	12.9	278	47.2	-2	46.5	215	38.1	-21	03.7
6	123	04.4	237	55.8	-22	52.2	192	47.8	-24	12.7	293	49.2	-2	46.7	230	40.3	-21	03.8
7	138	06.8	252	55.0		52.8	207	48.4		12.4	308	51.2		46.9	245	42.5		03.8
8	153	09.3	267	54.3		53.4	222	48.9		12.1	323	53.2		47.1	260	44.7		03.8
9	168	11.8	282	53.5		54.0	237	49.5		11.8	338	55.1		47.3	275	46.9		03.9
10	183	14.2	297	52.8		54.6	252	50.0		11.5	353	57.1		47.5	290	49.1		03.9
11	198	16.7	312	52.0	-22	55.3	267	50.5	-24	11.2	8	59.1	-2	47.7	305	51.4	-21	03.9
12	213	19.2	327	51.3	-22	55.9	282	51.1	-24	10.9	24	01.1	-2	47.9	320	53.6	-21	04.0
13	228	21.6	342	50.5		56.5	297	51.6		10.7	39	03.1		48.1	335	55.8		04.0
14	243	24.1	357	49.8		57.1	312	52.2		10.4	54	05.1		48.3	350	58.0		04.0
15	258	26.5	12	49.0		57.7	327	52.7		10.1	69	07.0		48.5	6	00.2		04.1
16	273	29.0	27	48.3		58.3	342	53.2		09.8	84	09.0		48.7	21	02.4		04.1
17	288	31.5	42	47.5	-22	58.9	357	53.8	-24	09.5	99	11.0	-2	48.9	36	04.6	-21	04.2
18	303	33.9	57	46.8	-22	59.5	12	54.3	-24	09.2	114	13.0	-2	49.1	51	06.8	-21	04.2
19	318	36.4	72	46.0	-23	00.1	27	54.9		08.9	129	15.0		49.3	66	09.0		04.2
20	333	38.9	87	45.3		00.7	42	55.4		08.6	144	17.0		49.5	81	11.2		04.3
21	348	41.3	102	44.5		01.3	57	55.9		08.4	159	18.9		49.7	96	13.4		04.3
22	3	43.8	117	43.8		01.9	72	56.5		08.1	174	20.9		49.9	111	15.6		04.3
23	18	46.3	132	43.0		02.6	87	57.0		07.8	189	22.9		50.1	126	17.8		04.4
24	33	48.7	147	42.3	-23	03.2	102	57.6	-24	07.5	204	24.9	-2	50.3	141	20.0	-21	04.4
Dif	—		-7		-6		+5		+3		+20		-2		+22			

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: 24 ^d 0 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 R°: 46 ^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	183	59.0	-12	10.0	243	47.0	+10	56.9	60 N	5 33	6 21	7 05	0 29	74	15 15	17		
1	198	59.0		10.9	258	18.4 ¹²⁴		48.7 ⁸²	58	32	18	6 59	35	72	10	19		
2	213	59.1		11.8	272	49.9 ¹²⁵		40.3 ⁸⁴	56	31	14	53	41	70	05	22		
3	228	59.2		12.6	287	21.4 ¹²⁵		32.0 ⁸³	54	30	11	48	46	68	15	02	25	
4	243	59.3		13.5	301	53.0 ¹²⁶		23.6 ⁸⁴	52	29	08	43	51	66	14	58	23	
5	258	59.3	-12	14.3	316	24.7 ¹²⁷	+10	15.1 ⁸⁵	50	5 27	6 05	6 39	0 55	65	14 55	26		
6	273	59.4	-12	15.2	330	56.4 ¹²⁷	+10	06.6 ⁸⁵	45	5 25	5 59	6 29	1 04	61	14 48	29		
7	288	59.5		16.0	345	28.1 ¹²⁷	+9	58.1 ⁸⁵	40	22	54	22	11	59	42	32		
8	303	59.5		16.9	359	59.9 ¹²⁸		49.5 ⁸⁶	35	19	49	15	17	57	37	34		
9	318	59.6		17.8	14	31.8 ¹²⁹		40.9 ⁸⁶	30	16	44	6 09	23	55	32	36		
10	333	59.7		18.6	29	03.7 ¹²⁹		32.2 ⁸⁷	20	10	36	5 59	32	52	25	39		
11	348	59.7	-12	19.5	43	35.7 ¹³⁰	+9	23.5 ⁸⁷	10 N	5 03	5 28	5 49	1 41	49	14 18	42		
12	3	59.8	-12	20.3	58	07.7 ¹³⁰	+9	14.8 ⁸⁷	0	4 55	5 19	5 41	1 49	46	14 11	45		
13	18	59.9		21.2	72	39.7 ¹³⁰	+9	06.0 ⁸⁸	10 S	45	10	32	1 57	43	14 05	47		
14	33	59.9		22.0	87	11.9 ¹³²	+8	57.2 ⁸⁸	20	33	5 00	22	2 05	40	13 58	50		
15	49	00.0		22.9	101	44.0 ¹³¹		48.4 ⁸⁸	30	17	4 46	11	15	37	49	55		
16	64	00.1		23.7	116	16.2 ¹³²		39.5 ⁸⁹	35	4 07	38	5 05	20	35	45	56		
17	79	00.1	-12	24.6	130	48.5 ¹³³	+8	30.6 ⁸⁹	40	3 55	4 29	4 58	2 26	33	13 39	59		
18	94	00.2	-12	25.5	145	20.8 ¹³³	+8	21.7 ⁸⁹	45	3 39	4 18	4 49	2 34	30	13 33	62		
19	109	00.3		26.3	159	53.1 ¹³³		12.7 ⁹⁰	50	20	4 04	39	42	28	26	64		
20	124	00.3		27.2	174	25.5 ¹³⁴	+8	03.7 ⁹⁰	52	3 10	3 57	34	46	26	22	66		
21	139	00.4		28.0	188	57.9 ¹³⁴	+7	54.7 ⁹⁰	54	2 59	49	29	51	24	18	68		
22	154	00.5		28.9	203	30.4 ¹³⁵		45.7 ⁹⁰	56	46	41	23	2 55	23	14	70		
23	169	00.5		29.7	218	02.9 ¹³⁵		36.6 ⁹¹	58	31	31	16	3 01	21	10	71		
24	184	00.6	-12	30.6	232	35.5 ¹³⁶	+7	27.5 ⁹¹	60 S	2 12	3 20	4 08	3 07	18	13 04	74		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 41 ^m 2			Mag: -4.0 PMG: 14 ^h 10 ^m			Mag: +0.3 PMG: 17 ^h 08 ^m			Mag: -1.7 PMG: 10 ^h 21 ^m			Mag: +0.5 PMG: 14 ^h 33 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	33	48.7	147	42.3	-23	03.2	102	57.6	-24	07.5	204	24.9	-2	50.3	141	20.0	-21	04.4
1	48	51.2	162	41.5		03.8	117	58.1		07.2	219	26.9		50.5	156	22.2		04.4
2	63	53.7	177	40.8		04.4	132	58.6		06.9	234	28.9		50.7	171	24.4		04.5
3	78	56.1	192	40.0		04.9	147	59.2		06.6	249	30.8		50.9	186	26.6		04.5
4	93	58.6	207	39.3		05.5	162	59.7		06.3	264	32.8		51.1	201	28.8		04.5
5	109	01.0	222	38.5	-23	06.1	178	00.3	-24	06.0	279	34.8	-2	51.3	216	31.0	-21	04.6
6	124	03.5	237	37.8	-23	06.7	193	00.8	-24	05.7	294	36.8	-2	51.5	231	33.2	-21	04.6
7	139	06.0	252	37.0		07.3	208	01.3		05.4	309	38.8		51.7	246	35.5		04.6
8	154	08.4	267	36.2		07.9	223	01.9		05.1	324	40.8		51.9	261	37.7		04.7
9	169	10.9	282	35.5		08.5	238	02.4		04.8	339	42.8		52.1	276	39.9		04.7
10	184	13.4	297	34.7		09.1	253	03.0		04.5	354	44.7		52.3	291	42.1		04.7
11	199	15.8	312	34.0	-23	09.7	268	03.5	-24	04.2	9	46.7	-2	52.5	306	44.3	-21	04.8
12	214	18.3	327	33.2	-23	10.3	283	04.0	-24	04.0	24	48.7	-2	52.7	321	46.5	-21	04.8
13	229	20.8	342	32.5		10.9	298	04.6		03.7	39	50.7		52.9	336	48.7		04.9
14	244	23.2	357	31.7		11.4	313	05.1		03.4	54	52.7		53.1	351	50.9		04.9
15	259	25.7	12	30.9		12.0	328	05.7		03.1	69	54.7		53.3	6	53.1		04.9
16	274	28.2	27	30.2		12.6	343	06.2		02.8	84	56.6		53.5	21	55.3		05.0
17	289	30.6	42	29.4	-23	13.2	358	06.7	-24	02.5	99	58.6	-2	53.7	36	57.5	-21	05.0
18	304	33.1	57	28.7	-23	13.8	13	07.3	-24	02.2	115	00.6	-2	53.9	51	59.7	-21	05.0
19	319	35.5	72	27.9		14.4	28	07.8		01.9	130	02.6		54.1	67	01.9		05.1
20	334	38.0	87	27.1		14.9	43	08.4		01.6	145	04.6		54.3	82	04.1		05.1
21	349	40.5	102	26.4		15.5	58	08.9		01.3	160	06.6		54.5	97	06.3		05.1
22	4	42.9	117	25.6		16.1	73	09.4		01.0	175	08.6		54.7	112	08.5		05.2
23	19	45.4	132	24.8		16.7	88	10.0		00.7	190	10.5		54.9	127	10.7		05.2
24	34	47.9	147	24.1	-23	17.2	103	10.5	-24	00.4	205	12.5	-2	55.1	142	12.9	-21	05.2
Dif	—		-8		-6		+5		+3		+20		-2		+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: 25 ^d 0 PHE { SD: 15°1 PMG: 8 ^h 46 ^m R°: 44 ^m 4 ^h : 55°3 12 ^h : 55°2 20 ^h : 55°0											
	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	00.6	-12	30.6	232	35.5	+7	27.5	60 N	16 19	17 03	17 52	1 43 73	15 32 16		
1	199	00.6		31.4	247	08.1 ¹³⁶		18.3	58	26	07	53	47 71	29 18		
2	214	00.7		32.3	261	40.8 ¹³⁷	+7	09.2	56	32	11	54	51 69	27 20		
3	229	00.8		33.1	276	13.5 ¹³⁷	+7	00.0	54	37	14	56	54 67	25 21		
4	244	00.8		34.0	290	46.2 ¹³⁷	+6	50.8	52	42	17	57	1 57 65	23 23		
5	259	00.9	-12	34.8	305	19.0 ¹³⁸	+6	41.5	50	16 47	17 20	17 58	2 00 63	15 21 25		
6	274	01.0	-12	35.7	319	51.8 ¹³⁸	+6	32.3	45	16 57	17 27	18 01	2 05 61	15 17 28		
7	289	01.0		36.5	334	24.6 ¹³⁸		23.0	40	17 05	32	04	10 58	14 30		
8	304	01.1		37.4	348	57.5 ¹³⁹		13.7	35	12	38	07	14 56	11 32		
9	319	01.1		38.2	3	30.4 ¹³⁹	+6	04.3	30	18	42	10	18 54	08 35		
10	334	01.2		39.1	18	03.4 ¹⁴⁰	+5	55.0	20	29	17 51	17	24 50	04 38		
11	349	01.3	-12	39.9	32	36.4 ¹⁴⁰	+5	45.6	10 N	17 38	18 00	18 25	2 30 47	15 00 41		
12	4	01.3	-12	40.8	47	09.4 ¹⁴⁰	+5	36.2	0	17 47	18 09	18 33	2 35 44	14 56 44		
13	19	01.4		41.6	61	42.5 ¹⁴¹		26.8	10 S	17 57	18	43	40 41	52 47		
14	34	01.4		42.5	76	15.6 ¹⁴¹		17.4	20	18 06	29	18 56	45 39	48 50		
15	49	01.5		43.3	90	48.7 ¹⁴¹	+5	07.9	30	18	43	19 13	52 35	44 53		
16	64	01.6		44.2	105	21.9 ¹⁴²	+4	58.5	35	25	18 51	23	55 33	41 55		
17	79	01.6	-12	45.0	119	55.1 ¹⁴²	+4	49.0	40	18 32	19 01	19 36	2 59 31	14 38 58		
18	94	01.7	-12	45.9	134	28.3 ¹⁴²	+4	39.5	45	18 41	19 13	19 52	3 04 28	14 35 60		
19	109	01.7		46.7	149	01.6 ¹⁴³		30.0	50	52	28	20 12	10 25	30 64		
20	124	01.8		47.5	163	34.8 ¹⁴²		20.5	52	18 57	35	22	12 24	28 65		
21	139	01.8		48.4	178	08.2 ¹⁴⁴		11.0	54	19 03	43	34	15 22	26 67		
22	154	01.9		49.2	192	41.5 ¹⁴³	+4	01.4	56	09	19 51	20 48	18 20	24 68		
23	169	02.0		50.1	207	14.9 ¹⁴⁴	+3	51.8	58	16	20 02	21 04	22 18	21 71		
24	184	02.0	-12	50.9	221	48.3 ¹⁴⁴	+3	42.3	60 S	19 24	20 14	21 24	3 25 17	14 18 73		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 37 ^m 3		Mag: -4.0 PMG: 14 ^h 11 ^m		Mag: +0.3 PMG: 17 ^h 07 ^m		Mag: -1.7 PMG: 10 ^h 18 ^m		Mag: +0.5 PMG: 14 ^h 29 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	34	47.9	147	24.1	103	10.5	205	12.5	142	12.9						
1	49	50.3	162	23.3	118	11.0	220	14.5	157	15.1						
2	64	52.8	177	22.6	133	11.6	235	16.5	172	17.3						
3	79	55.3	192	21.8	148	12.1	250	18.5	187	19.5						
4	94	57.7	207	21.0	163	12.7	265	20.5	202	21.7						
5	110	00.2	222	20.3	178	13.2	280	22.5	217	23.9						
6	125	02.6	237	19.5	193	13.7	295	24.4	232	26.1						
7	140	05.1	252	18.7	208	14.3	310	26.4	247	28.3						
8	155	07.6	267	18.0	223	14.8	325	28.4	262	30.5						
9	170	10.0	282	17.2	238	15.4	340	30.4	277	32.7						
10	185	12.5	297	16.4	253	15.9	355	32.4	292	34.9						
11	200	15.0	312	15.7	268	16.4	10	34.4	307	37.1						
12	215	17.4	327	14.9	283	17.0	25	36.4	322	39.3						
13	230	19.9	342	14.1	298	17.5	40	38.3	337	41.5						
14	245	22.4	357	13.4	313	18.0	55	40.3	352	43.7						
15	260	24.8	12	12.6	328	18.6	70	42.3	7	45.9						
16	275	27.3	27	11.8	343	19.1	85	44.3	22	48.1						
17	290	29.8	42	11.1	358	19.7	100	46.3	37	50.3						
18	305	32.2	57	10.3	13	20.2	115	48.3	52	52.5						
19	320	34.7	72	09.5	28	20.7	130	50.3	67	54.7						
20	335	37.1	87	08.7	43	21.3	145	52.2	82	56.9						
21	350	39.6	102	08.0	58	21.8	160	54.2	97	59.1						
22	5	42.1	117	07.2	73	22.4	175	56.2	113	01.3						
23	20	44.5	132	06.4	88	22.9	190	58.2	128	03.5						
24	35	47.0	147	05.7	103	23.4	206	00.2	143	05.7						
Dif	—	-8	-6	-6	+5	+3	+20	-2	+22	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 26 ^d 0 PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6 SD: 15'0 PMG: 9 ^h 30 ^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	184	02.0	-12	50.9	221	48.3	+3	42.3	60 N	5 37	6 26	7 10	2 56	73	15 48 15
1	199	02.1		51.8	236	21.7 ¹⁴⁴		32.7 ⁹⁶	58	36	22	7 03	2 58	70	47 18
2	214	02.1		52.6	250	55.2 ¹⁴⁵		23.1 ⁹⁶	56	34	18	6 57	3 00	68	47 19
3	229	02.2		53.5	265	28.7 ¹⁴⁵		13.5 ⁹⁶	54	33	15	52	01	66	46 20
4	244	02.2		54.3	280	02.2 ¹⁴⁵	+3	03.9 ⁹⁶	52	32	11	46	02	65	46 22
5	259	02.3	-12	55.1	294	35.7 ¹⁴⁵	+2	54.3 ⁹⁶	50	5 30	6 08	6 42	3 03	63	15 46 23
6	274	02.3	-12	56.0	309	09.2 ¹⁴⁵	+2	44.7 ⁹⁶	45	5 27	6 02	6 32	3 06	60	15 45 27
7	289	02.4		56.8	323	42.8 ¹⁴⁶		35.0 ⁹⁷	40	24	5 56	24	08	57	44 29
8	304	02.4		57.7	338	16.4 ¹⁴⁶		25.4 ⁹⁶	35	21	51	17	10	55	43 32
9	319	02.5		58.5	352	50.1 ¹⁴⁷		15.7 ⁹⁷	30	18	46	6 10	12	52	43 33
10	334	02.6	-12	59.3	7	23.7 ¹⁴⁶	+2	06.1 ⁹⁶	20	11	37	5 59	14	50	42 37
11	349	02.6	-13	00.2	21	57.4 ¹⁴⁷	+1	56.4 ⁹⁷	10 N	5 03	5 28	5 50	3 17	46	15 41 40
12	4	02.7	-13	01.0	36	31.0 ¹⁴⁶	+1	46.8 ⁹⁶	0	4 55	5 19	5 40	3 19	43	15 40 43
13	19	02.7		01.9	51	04.7 ¹⁴⁷		37.1 ⁹⁷	10 S	44	5 09	31	21	41	39 46
14	34	02.8		02.7	65	38.5 ¹⁴⁸		27.5 ⁹⁶	20	32	4 58	21	24	37	38 49
15	49	02.8		03.5	80	12.2 ¹⁴⁷		17.8 ⁹⁷	30	15	44	09	27	33	37 53
16	64	02.9		04.4	94	46.0 ¹⁴⁸	+1	08.1 ⁹⁷	35	4 04	36	5 03	28	32	36 55
17	79	02.9	-13	05.2	109	19.7 ¹⁴⁷	+0	58.5 ⁹⁶	40	3 52	4 26	4 55	3 30	30	15 36 57
18	94	03.0	-13	06.1	123	53.5 ¹⁴⁸	+0	48.8 ⁹⁷	45	3 36	4 14	4 46	3 32	27	15 35 59
19	109	03.0		06.9	138	27.3 ¹⁴⁸		39.2 ⁹⁶	50	15	3 59	35	35	24	34 63
20	124	03.1		07.7	153	01.2 ¹⁴⁹		29.5 ⁹⁷	52	3 05	52	30	36	22	33 65
21	139	03.1		08.6	167	35.0 ¹⁴⁸		19.8 ⁹⁷	54	2 53	44	24	37	21	33 66
22	154	03.2		09.4	182	08.8 ¹⁴⁸		10.2 ⁹⁶	56	39	35	18	38	20	32 68
23	169	03.2		10.2	196	42.7 ¹⁴⁹	+0	00.5 ⁹⁷	58	23	25	11	40	17	32 69
24	184	03.3	-13	11.1	211	16.6 ¹⁴⁹	-0	09.1 ⁹⁶	60 S	2 03	3 13	4 03	3 42	15	15 31 72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 33 ^m 3		Mag: -4.0 PMG: 14 ^h 12 ^m		Mag: +0.3 PMG: 17 ^h 06 ^m		Mag: -1.7 PMG: 10 ^h 15 ^m		Mag: +0.5 PMG: 14 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	35	47.0	147	05.7	-23	30.7	103	23.4	-23	53.0
1	50	49.5	162	04.9		31.2	118	24.0		52.7
2	65	51.9	177	04.1		31.8	133	24.5		52.4
3	80	54.4	192	03.3		32.3	148	25.0		52.1
4	95	56.9	207	02.6		32.9	163	25.6		51.8
5	110	59.3	222	01.8	-23	33.4	178	26.1	-23	51.5
6	126	01.8	237	01.0	-23	34.0	193	26.7	-23	51.1
7	141	04.2	252	00.2		34.5	208	27.2		50.8
8	156	06.7	266	59.5		35.0	223	27.7		50.5
9	171	09.2	281	58.7		35.6	238	28.3		50.2
10	186	11.6	296	57.9		36.1	253	28.8		49.9
11	201	14.1	311	57.1	-23	36.6	268	29.3	-23	49.6
12	216	16.6	326	56.3	-23	37.2	283	29.9	-23	49.3
13	231	19.0	341	55.6		37.7	298	30.4		48.9
14	246	21.5	356	54.8		38.2	313	31.0		48.6
15	261	24.0	11	54.0		38.8	328	31.5		48.3
16	276	26.4	26	53.2		39.3	343	32.0		48.0
17	291	28.9	41	52.5	-23	39.8	358	32.6	-23	47.7
18	306	31.4	56	51.7	-23	40.4	13	33.1	-23	47.4
19	321	33.8	71	50.9		40.9	28	33.6		47.0
20	336	36.3	86	50.1		41.4	43	34.2		46.7
21	351	38.7	101	49.3		41.9	58	34.7		46.4
22	6	41.2	116	48.6		42.5	73	35.3		46.1
23	21	43.7	131	47.8		43.0	88	35.8		45.8
24	36	46.1	146	47.0	-23	43.5	103	36.3	-23	45.4
Dif	—		-8		-5		+5		+3	
							+20		-2	
									+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 7			Edad: 27 ^d 0 PHE { 4 ^h : 54 ⁵ / ₅ 12 ^h : 54 ⁴ / ₄ 20 ^h : 54 ³ / ₃ R°: 42 ^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	184	03.3	-13	11.1	211	16.6	-0 09.1	60 N	16 14	16 58	17 47	4 09 71	16 03 16		
1	199	03.3		11.9	225	50.5 ¹⁴⁹	18.8 ⁹⁷	58	21	17 02	49	08 69	05 17		
2	214	03.3		12.7	240	24.4 ¹⁴⁹	28.4 ⁹⁶	56	27	07	50	08 67	06 20		
3	229	03.4		13.6	254	58.3 ¹⁴⁹	38.1 ⁹⁷	54	33	10	52	07 66	07 22		
4	244	03.4		14.4	269	32.2 ¹⁴⁹	47.7 ⁹⁶	52	38	14	53	07 64	08 23		
5	259	03.5	-13	15.2	284	06.1 ¹⁴⁹	-0 57.3 ⁹⁶	50	16 43	17 17	17 55	4 06 63	16 09 24		
6	274	03.5	-13	16.1	298	40.1 ¹⁵⁰	-1 06.9 ⁹⁶	45	16 54	17 24	17 58	4 06 59	16 12 27		
7	289	03.6		16.9	313	14.0 ¹⁴⁹	16.5 ⁹⁶	40	17 02	30	18 02	05 57	13 30		
8	304	03.6		17.7	327	48.0 ¹⁵⁰	26.1 ⁹⁶	35	09	35	05	05 54	15 32		
9	319	03.7		18.6	342	21.9 ¹⁴⁹	35.7 ⁹⁶	30	16	41	09	04 52	16 34		
10	334	03.7		19.4	356	55.9 ¹⁵⁰	45.3 ⁹⁶	20	27	50	16	04 48	19 37		
11	349	03.8	-13	20.2	11	29.9 ¹⁵⁰	-1 54.9 ⁹⁶	10 N	17 38	17 59	18 24	4 03 46	16 21 40		
12	4	03.8	-13	21.1	26	03.9 ¹⁵⁰	-2 04.4 ⁹⁵	0	17 47	18 08	18 33	4 02 43	16 23 43		
13	19	03.8		21.9	40	37.8 ¹⁴⁹	14.0 ⁹⁶	10 S	17 57	19	44	02 40	25 46		
14	34	03.9		22.7	55	11.8 ¹⁵⁰	23.5 ⁹⁵	20	18 07	30	18 57	01 37	27 49		
15	49	03.9		23.6	69	45.8 ¹⁵⁰	33.0 ⁹⁵	30	19	45	19 14	00 34	30 52		
16	64	04.0		24.4	84	19.8 ¹⁵⁰	42.5 ⁹⁵	35	27	18 53	25	00 32	31 54		
17	79	04.0	-13	25.2	98	53.8 ¹⁵⁰	-2 52.0 ⁹⁵	40	18 35	19 03	19 38	4 00 29	16 33 56		
18	94	04.1	-13	26.1	113	27.8 ¹⁵⁰	-3 01.5 ⁹⁵	45	18 44	19 16	19 55	3 59 27	16 34 59		
19	109	04.1		26.9	128	01.8 ¹⁵⁰	11.0 ⁹⁵	50	18 56	31	20 16	59 23	37 62		
20	124	04.1		27.7	142	35.8 ¹⁵⁰	20.4 ⁹⁴	52	19 01	39	27	58 23	38 63		
21	139	04.2		28.5	157	09.8 ¹⁵⁰	29.8 ⁹⁴	54	07	47	39	58 21	39 65		
22	154	04.2		29.4	171	43.8 ¹⁵⁰	39.2 ⁹⁴	56	13	19 56	20 54	58 19	40 67		
23	169	04.3		30.2	186	17.8 ¹⁵⁰	48.6 ⁹⁴	58	21	20 07	21 11	57 18	41 69		
24	184	04.3	-13	31.0	200	51.8 ¹⁵⁰	-3 58.0 ⁹⁴	60 S	19 29	20 20	21 34	3 57 15	16 43 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 29 ^m 4		Mag: -4.0 PMG: 14 ^h 14 ^m		Mag: +0.3 PMG: 17 ^h 05 ^m		Mag: -1.7 PMG: 10 ^h 11 ^m		Mag: +0.5 PMG: 14 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	36	46.1	146	47.0	103	36.3	206	47.9	143	58.5
1	51	48.6	161	46.2		44.0	118	36.9		45.1
2	66	51.1	176	45.4		44.5	133	37.4		44.8
3	81	53.5	191	44.6		45.1	148	37.9		44.5
4	96	56.0	206	43.9		45.6	163	38.5		44.2
5	111	58.5	221	43.1	-23	46.1	178	39.0	-23	43.8
6	127	00.9	236	42.3	-23	46.6	193	39.6	-23	43.5
7	142	03.4	251	41.5		47.1	208	40.1		43.2
8	157	05.8	266	40.7		47.6	223	40.6		42.9
9	172	08.3	281	39.9		48.1	238	41.2		42.5
10	187	10.8	296	39.2		48.6	253	41.7		42.2
11	202	13.2	311	38.4	-23	49.2	268	42.2	-23	41.9
12	217	15.7	326	37.6	-23	49.7	283	42.8	-23	41.6
13	232	18.2	341	36.8		50.2	298	43.3		41.2
14	247	20.6	356	36.0		50.7	313	43.9		40.9
15	262	23.1	11	35.2		51.2	328	44.4		40.6
16	277	25.6	26	34.4		51.7	343	44.9		40.3
17	292	28.0	41	33.7	-23	52.2	358	45.5	-23	39.9
18	307	30.5	56	32.9	-23	52.7	13	46.0	-23	39.6
19	322	33.0	71	32.1		53.2	28	46.5		39.3
20	337	35.4	86	31.3		53.7	43	47.1		39.0
21	352	37.9	101	30.5		54.2	58	47.6		38.6
22	7	40.3	116	29.7		54.7	73	48.2		38.3
23	22	42.8	131	28.9		55.2	88	48.7		38.0
24	37	45.3	146	28.1	-23	55.6	103	49.2	-23	37.6
Dif	—		-8		-5		+5		+3	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 28 ^d 0 PHE { SD: 14'8 PMG: 10 ^h 55 ^m 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	184	04.3	-13	31.0	200	51.8	-3 58.0	60 N	5 42	6 31	7 15	5 20	71	16	19	17	
1	199	04.3		31.8	215	25.8 ¹⁵⁰	-4 07.4 ⁹⁴	58	40	26	08	17	69	22	20		
2	214	04.4		32.7	229	59.8 ¹⁵⁰	16.7 ⁹³	56	38	22	7 01	15	66	26	21		
3	229	04.4		33.5	244	33.8 ¹⁵⁰	26.0 ⁹³	54	37	18	6 55	13	64	28	22		
4	244	04.5		34.3	259	07.8 ¹⁵⁰	35.3 ⁹³	52	35	15	50	11	63	31	24		
5	259	04.5	-13	35.1	273	41.8 ¹⁵⁰	-4 44.6 ⁹³	50	5 33	6 12	6 45	5 09	62	16	33	26	
6	274	04.5	-13	36.0	288	15.8 ¹⁵⁰	-4 53.9 ⁹³	45	5 30	6 04	6 35	5 05	59	16	39	28	
7	289	04.6		36.8	302	49.8 ¹⁵⁰	-5 03.1 ⁹²	40	26	5 58	26	5 02	56	43	31		
8	304	04.6		37.6	317	23.7 ¹⁴⁹	12.3 ⁹²	35	23	52	18	4 59	54	47	33		
9	319	04.6		38.4	331	57.7 ¹⁵⁰	21.5 ⁹²	30	19	47	12	56	52	50	35		
10	334	04.7		39.3	346	31.7 ¹⁵⁰	30.6 ⁹¹	20	12	38	6 00	52	49	16	56	38	
11	349	04.7	-13	40.1	1	05.6 ¹⁴⁹	-5 39.8 ⁹²	10 N	5 03	5 28	5 50	4 49	45	17	01	41	
12	4	04.7	-13	40.9	15	39.6 ¹⁵⁰	-5 48.9 ⁹¹	0	4 54	5 19	5 40	4 45	43	17	06	43	
13	19	04.8		41.7	30	13.5 ¹⁴⁹	-5 58.0 ⁹¹	10 S	43	5 09	30	42	40	11	46		
14	34	04.8		42.6	44	47.5 ¹⁵⁰	-6 07.0 ⁹⁰	20	30	4 57	20	38	38	16	49		
15	49	04.9		43.4	59	21.4 ¹⁴⁹	16.1 ⁹¹	30	13	43	08	34	34	22	52		
16	64	04.9		44.2	73	55.3 ¹⁴⁹	25.1 ⁹⁰	35	4 02	34	5 00	32	32	25	54		
17	79	04.9	-13	45.0	88	29.2 ¹⁴⁹	-6 34.1 ⁹⁰	40	3 49	4 23	4 52	4 29	30	17	29	56	
18	94	05.0	-13	45.8	103	03.1 ¹⁴⁹	-6 43.0 ⁸⁹	45	3 32	4 11	4 43	4 26	28	17	33	59	
19	109	05.0		46.7	117	37.0 ¹⁴⁹	-6 51.9 ⁸⁹	50	10	3 55	31	22	25	39	61		
20	124	05.0		47.5	132	10.8 ¹⁴⁸	-7 00.8 ⁸⁹	52	3 00	48	26	21	23	41	63		
21	139	05.1		48.3	146	44.7 ¹⁴⁹	09.7 ⁸⁸	54	2 47	40	20	19	22	44	64		
22	154	05.1		49.1	161	18.6 ¹⁴⁹	18.5 ⁸⁸	56	33	30	13	17	20	47	66		
23	169	05.1		49.9	175	52.4 ¹⁴⁸	27.3 ⁸⁸	58	2 15	19	4 06	15	18	50	68		
24	184	05.1	-13	50.7	190	26.2 ¹⁴⁸	-7 36.0 ⁸⁷	60 S	1 53	3 07	3 57	4 12	17	17	54	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 25 ^m 5		Mag: -4.0 PMG: 14 ^h 15 ^m		Mag: +0.3 PMG: 17 ^h 04 ^m		Mag: -1.7 PMG: 10 ^h 08 ^m		Mag: +0.5 PMG: 14 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	37	45.3	146	28.1	-23	55.6	103	49.2	-23	37.6
1	52	47.7	161	27.3		56.1	118	49.8		37.3
2	67	50.2	176	26.5		56.6	133	50.3		37.0
3	82	52.7	191	25.8		57.1	148	50.8		36.6
4	97	55.1	206	25.0		57.6	163	51.4		36.3
5	112	57.6	221	24.2	-23	58.1	178	51.9	-23	36.0
6	128	00.1	236	23.4	-23	58.6	193	52.4	-23	35.7
7	143	02.5	251	22.6		59.1	208	53.0		35.3
8	158	05.0	266	21.8	-23	59.6	223	53.5		35.0
9	173	07.5	281	21.0	-24	00.0	238	54.1		34.7
10	188	09.9	296	20.2	-24	00.5	253	54.6		34.3
11	203	12.4	311	19.4	-24	01.0	268	55.1	-23	34.0
12	218	14.8	326	18.6	-24	01.5	283	55.7	-23	33.7
13	233	17.3	341	17.8		02.0	298	56.2		33.3
14	248	19.8	356	17.0		02.4	313	56.7		33.0
15	263	22.2	11	16.2		02.9	328	57.3		32.6
16	278	24.7	26	15.4		03.4	343	57.8		32.3
17	293	27.2	41	14.6	-24	03.9	358	58.4	-23	32.0
18	308	29.6	56	13.8	-24	04.3	13	58.9	-23	31.6
19	323	32.1	71	13.0		04.8	28	59.4		31.3
20	338	34.6	86	12.3		05.3	44	00.0		31.0
21	353	37.0	101	11.5		05.7	59	00.5		30.6
22	8	39.5	116	10.7		06.2	74	01.0		30.3
23	23	41.9	131	09.9		06.7	89	01.6		29.9
24	38	44.4	146	09.1	-24	07.1	104	02.1	-23	29.6
Dif	—		-8		-5		+5		+3	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 29 ^d 0	PHE {	4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 6								PMG: 11 ^h 39 ^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	m	h m m	m
0	184	05.1	-13	50.7	190	26.2	-7 36.0	88	60 N	16 08	16 53	17 42	6 31 69	16 36 20	
1	199	05.2		51.6	205	00.0 ¹⁴⁸	44.8	88	58	16	16 58	44	26 67	42 21	
2	214	05.2		52.4	219	33.8 ¹⁴⁸	-7 53.5	87	56	23	17 02	46	21 66	47 23	
3	229	05.2		53.2	234	07.6 ¹⁴⁸	-8 02.1	86	54	29	06	48	17 64	51 25	
4	244	05.3		54.0	248	41.4 ¹⁴⁸	10.8	87	52	35	10	50	14 62	55 27	
5	259	05.3	-13	54.8	263	15.1 ¹⁴⁷	-8 19.4	86	50	16 40	17 13	17 52	6 11 61	16 59 28	
6	274	05.3	-13	55.6	277	48.9 ¹⁴⁸	-8 27.9	85	45	16 51	17 21	17 56	6 04 58	17 07 31	
7	289	05.4		56.5	292	22.6 ¹⁴⁷	36.4	85	40	17 00	28	18 00	5 58 56	14 33	
8	304	05.4		57.3	306	56.3 ¹⁴⁷	44.9	85	35	07	34	03	53 54	20 34	
9	319	05.4		58.1	321	30.0 ¹⁴⁷	-8 53.4	85	30	14	39	07	48 52	25 36	
10	334	05.4		58.9	336	03.7 ¹⁴⁷	-9 01.8	84	20	26	49	15	41 49	34 39	
11	349	05.5	-13	59.7	350	37.3 ¹⁴⁶	-9 10.1	83	10 N	17 37	17 59	18 24	5 34 46	17 42 42	
12	4	05.5	-14	00.5	5	11.0 ¹⁴⁷	-9 18.5	84	0	17 47	18 08	18 33	5 28 44	17 49 44	
13	19	05.5		01.3	19	44.6 ¹⁴⁶	26.8	83	10 S	17 57	19	44	22 41	17 57 46	
14	34	05.6		02.2	34	18.2 ¹⁴⁶	35.0	82	20	18 08	31	18 58	16 38	18 05 48	
15	49	05.6		03.0	48	51.8 ¹⁴⁶	43.2	82	30	21	46	19 16	08 36	14 51	
16	64	05.6		03.8	63	25.4 ¹⁴⁶	51.4	82	35	28	18 55	27	5 04 34	19 53	
17	79	05.6	-14	04.6	77	58.9 ¹⁴⁵	-9 59.5	81	40	18 37	19 06	19 41	4 59 32	18 25 55	
18	94	05.7	-14	05.4	92	32.4 ¹⁴⁵	-10 07.6	81	45	18 47	19 19	19 58	4 54 29	18 32 57	
19	109	05.7		06.2	107	06.0 ¹⁴⁶	15.7	81	50	18 59	35	20 21	47 27	40 61	
20	124	05.7		07.0	121	39.4 ¹⁴⁴	23.7	80	52	19 05	43	32	44 25	44 62	
21	139	05.7		07.8	136	12.9 ¹⁴⁵	31.6	79	54	11	19 52	20 45	41 24	48 64	
22	154	05.8		08.6	150	46.4 ¹⁴⁵	39.5	79	56	18	20 01	21 00	37 22	53 65	
23	169	05.8		09.5	165	19.8 ¹⁴⁴	47.4	79	58	26	13	19	33 21	18 58 67	
24	184	05.8	-14	10.3	179	53.2 ¹⁴⁴	-10 55.2	78	60 S	19 35	20 26	21 43	4 29 18	19 04 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 21 ^m 5		Mag: -4.0 PMG: 14 ^h 16 ^m		Mag: +0.4 PMG: 17 ^h 03 ^m		Mag: -1.7 PMG: 10 ^h 05 ^m		Mag: +0.5 PMG: 14 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	38	44.4	146	09.1	-24	07.1	104	02.1	-23	29.6
1	53	46.9	161	08.3		07.6	119	02.6		29.3
2	68	49.3	176	07.5		08.1	134	03.2		28.9
3	83	51.8	191	06.7		08.5	149	03.7		28.6
4	98	54.3	206	05.9		09.0	164	04.3		28.2
5	113	56.7	221	05.1	-24	09.4	179	04.8	-23	27.9
6	128	59.2	236	04.3	-24	09.9	194	05.3	-23	27.6
7	144	01.7	251	03.5		10.4	209	05.9		27.2
8	159	04.1	266	02.7		10.8	224	06.4		26.9
9	174	06.6	281	01.9		11.3	239	06.9		26.5
10	189	09.1	296	01.1		11.7	254	07.5		26.2
11	204	11.5	311	00.3	-24	12.2	269	08.0	-23	25.8
12	219	14.0	325	59.5	-24	12.6	284	08.6	-23	25.5
13	234	16.4	340	58.7		13.1	299	09.1		25.2
14	249	18.9	355	57.8		13.5	314	09.6		24.8
15	264	21.4	10	57.0		14.0	329	10.2		24.5
16	279	23.8	25	56.2		14.4	344	10.7		24.1
17	294	26.3	40	55.4	-24	14.9	359	11.2	-23	23.8
18	309	28.8	55	54.6	-24	15.3	14	11.8	-23	23.4
19	324	31.2	70	53.8		15.8	29	12.3		23.1
20	339	33.7	85	53.0		16.2	44	12.8		22.7
21	354	36.2	100	52.2		16.6	59	13.4		22.4
22	9	38.6	115	51.4		17.1	74	13.9		22.0
23	24	41.1	130	50.6		17.5	89	14.5		21.7
24	39	43.5	145	49.8	-24	17.9	104	15.0	-23	21.3
Dif	—		-8		-5		+5		+3	
								+20	-2	
									+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: 0 ^d 3 PHE { 4 ^h : 53:9 12 ^h : 53:9 20 ^h : 53:9 R°: 44 ^m														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	184	05.8	-14	10.3	179	53.2	-10	55.2	78	60 N	5 46	6 35	7 21	7 40	69	16 56	23		
1	199	05.8		11.1	194	26.6 ¹⁴⁴	-11	03.0	77	58	44	30	13	33	66	17 03	26		
2	214	05.9		11.9	208	59.9 ¹⁴³		10.7	77	56	42	26	7 06	27	64	10	28		
3	229	05.9		12.7	223	33.3 ¹⁴⁴		18.4	77	54	40	22	6 59	21	63	16	29		
4	244	05.9		13.5	238	06.6 ¹⁴³		26.0	76	52	38	18	54	16	61	22	30		
5	259	05.9	-14	14.3	252	39.9 ¹⁴³	-11	33.6	76	50	5 36	6 15	6 49	7 12	60	17 27	31		
6	274	05.9	-14	15.1	267	13.1 ¹⁴²	-11	41.1	75	45	5 32	6 07	6 37	7 02	57	17 38	33		
7	289	06.0		15.9	281	46.4 ¹⁴³		48.6	75	40	28	6 00	28	6 54	55	47	35		
8	304	06.0		16.7	296	19.6 ¹⁴²	-11	56.0	74	35	24	5 54	20	47	53	17 54	38		
9	319	06.0		17.5	310	52.8 ¹⁴²	-12	03.4	74	30	20	49	13	40	52	18 01	39		
10	334	06.0		18.3	325	26.0 ¹⁴²		10.8	74	20	12	38	6 01	30	49	13	41		
11	349	06.0	-14	19.1	339	59.1 ¹⁴¹	-12	18.0	72	10 N	5 04	5 29	5 50	6 20	47	18 24	43		
12	4	06.1	-14	19.9	354	32.2 ¹⁴¹	-12	25.3	73	0	4 54	5 19	5 40	6 12	44	18 33	45		
13	19	06.1		20.7	9	05.3 ¹⁴¹		32.4	71	10 S	43	5 08	30	6 03	43	43	47		
14	34	06.1		21.5	23	38.4 ¹⁴¹		39.6	72	20	29	4 56	19	5 54	40	18 53	50		
15	49	06.1		22.3	38	11.5 ¹⁴¹		46.6	70	30	4 11	41	5 06	44	37	19 05	52		
16	64	06.1		23.1	52	44.5 ¹⁴⁰	-12	53.7	71	35	3 59	32	4 58	38	36	12	53		
17	79	06.2	-14	23.9	67	17.5 ¹⁴⁰	-13	00.6	69	40	3 46	4 21	4 50	5 31	34	19 20	55		
18	94	06.2	-14	24.7	81	50.5 ¹⁴⁰	-13	07.5	69	45	3 28	4 08	4 40	5 23	32	19 29	57		
19	109	06.2		25.5	96	23.4 ¹³⁹		14.4	69	50	3 06	3 52	28	14	29	41	59		
20	124	06.2		26.3	110	56.3 ¹³⁹		21.2	68	52	2 55	44	22	09	29	46	60		
21	139	06.2		27.1	125	29.2 ¹³⁹		27.9	67	54	42	35	16	5 05	27	52	61		
22	154	06.2		27.9	140	02.1 ¹³⁹		34.6	67	56	26	25	09	4 59	26	19 58	63		
23	169	06.3		28.7	154	34.9 ¹³⁸		41.2	66	58	2 07	14	4 01	54	23	20 05	65		
24	184	06.3	-14	29.5	169	07.7 ¹³⁸	-13	47.7	65	60 S	1 43	3 00	3 52	4 47	21	20 13	67		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 17 ^m 6		Mag: -4.0 PMG: 14 ^h 17 ^m		Mag: +0.4 PMG: 17 ^h 02 ^m		Mag: -1.7 PMG: 10 ^h 02 ^m		Mag: +0.5 PMG: 14 ^h 11 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	39	43.5	145	49.8	-24	17.9	104	15.0	-23	21.3
1	54	46.0	160	49.0		18.4	119	15.5		21.0
2	69	48.5	175	48.2		18.8	134	16.1		20.6
3	84	50.9	190	47.4		19.3	149	16.6		20.3
4	99	53.4	205	46.6		19.7	164	17.1		19.9
5	114	55.9	220	45.8	-24	20.1	179	17.7	-23	19.6
6	129	58.3	235	45.0	-24	20.5	194	18.2	-23	19.2
7	145	00.8	250	44.2		21.0	209	18.7		18.9
8	160	03.3	265	43.3		21.4	224	19.3		18.5
9	175	05.7	280	42.5		21.8	239	19.8		18.2
10	190	08.2	295	41.7		22.3	254	20.4		17.8
11	205	10.7	310	40.9	-24	22.7	269	20.9	-23	17.5
12	220	13.1	325	40.1	-24	23.1	284	21.4	-23	17.1
13	235	15.6	340	39.3		23.5	299	22.0		16.8
14	250	18.0	355	38.5		23.9	314	22.5		16.4
15	265	20.5	10	37.7		24.4	329	23.0		16.1
16	280	23.0	25	36.9		24.8	344	23.6		15.7
17	295	25.4	40	36.1	-24	25.2	359	24.1	-23	15.3
18	310	27.9	55	35.2	-24	25.6	14	24.7	-23	15.0
19	325	30.4	70	34.4		26.0	29	25.2		14.6
20	340	32.8	85	33.6		26.4	44	25.7		14.3
21	355	35.3	100	32.8		26.9	59	26.3		13.9
22	10	37.8	115	32.0		27.3	74	26.8		13.6
23	25	40.2	130	31.2		27.7	89	27.3		13.2
24	40	42.7	145	30.4	-24	28.1	104	27.9	-23	12.8
Dif	—		-8 -4		+5 +4		+20 -2		+22 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16°1			Edad: 1 ^d 3	PHE {	SD: 14°7			R°: 47 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 43 ^m 6									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	184	06.3	-14 29.5	169	07.7	-13 47.7	65	60 N	16 03	16 48	17 38	8 49 65	17 19 30						
1	199	06.3	30.3	183	40.5 ¹³⁸	-13 54.2	65	58	11	54	40	39 63	29 31						
2	214	06.3	31.1	198	13.3 ¹³⁸	-14 00.7	65	56	19	16 58	42	31 62	38 32						
3	229	06.3	31.9	212	46.0 ¹³⁷	07.1	64	54	25	17 03	44	24 60	45 34						
4	244	06.3	32.7	227	18.7 ¹³⁷	13.4	63	52	31	07	46	17 60	52 35						
5	259	06.3	-14 33.5	241	51.4 ¹³⁷	-14 19.7	63	50	16 36	17 10	17 48	8 12 58	17 58 36						
6	274	06.3	-14 34.3	256	24.0 ¹³⁶	-14 25.8	61	45	16 48	17 18	17 53	7 59 56	18 11 38						
7	289	06.4	35.1	270	56.6 ¹³⁶	32.0	62	40	16 57	25	17 57	49 54	22 40						
8	304	06.4	35.9	285	29.2 ¹³⁶	38.1	61	35	17 05	32	18 02	40 53	32 40						
9	319	06.4	36.7	300	01.8 ¹³⁶	44.1	60	30	13	37	06	32 52	40 42						
10	334	06.4	37.5	314	34.3 ¹³⁵	50.0	59	20	25	48	14	19 49	18 54 44						
11	349	06.4	-14 38.3	329	06.8 ¹³⁵	-14 55.9	59	10 N	17 36	17 58	18 23	7 07 48	19 07 45						
12	4	06.4	-14 39.1	343	39.3 ¹³⁵	-15 01.7	58	0	17 47	18 08	18 33	6 56 46	19 18 47						
13	19	06.4	39.9	358	11.8 ¹³⁵	07.5	58	10 S	17 58	20	45	46 44	30 48						
14	34	06.4	40.7	12	44.2 ¹³⁴	13.2	57	20	18 09	32	18 59	34 42	43 49						
15	49	06.5	41.5	27	16.6 ¹³⁴	18.8	56	30	23	48	19 18	21 40	19 57 51						
16	64	06.5	42.3	41	48.9 ¹³³	24.3	55	35	30	18 57	30	14 38	20 05 53						
17	79	06.5	-14 43.1	56	21.3 ¹³⁴	-15 29.8	55	40	18 39	19 08	19 44	6 05 37	20 15 53						
18	94	06.5	-14 43.9	70	53.6 ¹³³	-15 35.3	55	45	18 50	19 22	20 02	5 55 36	20 26 55						
19	109	06.5	44.7	85	25.9 ¹³³	40.6	53	50	19 02	39	25	43 34	40 56						
20	124	06.5	45.4	99	58.1 ¹³²	45.9	53	52	08	47	37	38 32	46 58						
21	139	06.5	46.2	114	30.3 ¹³²	51.1	52	54	15	19 56	20 51	32 31	20 53 59						
22	154	06.5	47.0	129	02.5 ¹³²	-15 56.3	52	56	22	20 06	21 07	25 30	21 01 60						
23	169	06.5	47.8	143	34.7 ¹³²	-16 01.3	50	58	30	18	27	17 28	10 61						
24	184	06.5	-14 48.6	158	06.8 ¹³¹	-16 06.4	51	60 S	19 40	20 33	21 54	5 08 27	21 20 62						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 13 ^m 7		Mag: -4.0 PMG: 14 ^h 19 ^m			Mag: +0.4 PMG: 17 ^h 02 ^m			Mag: -1.7 PMG: 9 ^h 59 ^m			Mag: +0.5 PMG: 14 ^h 08 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	40	42.7	145	30.4	-24	28.1	104	27.9	-23	12.8	209	59.0	-3	23.6	147	29.1	-21	10.3	
1	55	45.2	160	29.6		28.5	119	28.4		12.5	225	01.0		23.8	162	31.3		10.3	
2	70	47.6	175	28.7		28.9	134	29.0		12.1	240	03.0		24.0	177	33.5		10.4	
3	85	50.1	190	27.9		29.3	149	29.5		11.8	255	05.0		24.2	192	35.6		10.4	
4	100	52.5	205	27.1		29.7	164	30.0		11.4	270	07.0		24.4	207	37.8		10.4	
5	115	55.0	220	26.3	-24	30.1	179	30.6	-23	11.1	285	09.0	-3	24.6	222	40.0	-21	10.5	
6	130	57.5	235	25.5	-24	30.5	194	31.1	-23	10.7	300	11.0	-3	24.8	237	42.2	-21	10.5	
7	145	59.9	250	24.7		30.9	209	31.6		10.3	315	13.0		24.9	252	44.4		10.6	
8	161	02.4	265	23.9		31.3	224	32.2		10.0	330	15.0		25.1	267	46.6		10.6	
9	176	04.9	280	23.0		31.7	239	32.7		09.6	345	17.0		25.3	282	48.8		10.6	
10	191	07.3	295	22.2		32.1	254	33.2		09.2	0	19.0		25.5	297	51.0		10.7	
11	206	09.8	310	21.4	-24	32.5	269	33.8	-23	08.9	15	21.0	-3	25.7	312	53.2	-21	10.7	
12	221	12.3	325	20.6	-24	32.9	284	34.3	-23	08.5	30	23.0	-3	25.9	327	55.3	-21	10.7	
13	236	14.7	340	19.8		33.3	299	34.9		08.2	45	25.0		26.1	342	57.5		10.8	
14	251	17.2	355	19.0		33.7	314	35.4		07.8	60	27.0		26.3	357	59.7		10.8	
15	266	19.6	10	18.1		34.1	329	35.9		07.4	75	29.0		26.5	13	01.9		10.8	
16	281	22.1	25	17.3		34.5	344	36.5		07.1	90	31.0		26.7	28	04.1		10.9	
17	296	24.6	40	16.5	-24	34.8	359	37.0	-23	06.7	105	33.0	-3	26.9	43	06.3	-21	10.9	
18	311	27.0	55	15.7	-24	35.2	14	37.5	-23	06.3	120	35.0	-3	27.1	58	08.5	-21	10.9	
19	326	29.5	70	14.9		35.6	29	38.1		06.0	135	36.9		27.3	73	10.7		11.0	
20	341	32.0	85	14.1		36.0	44	38.6		05.6	150	38.9		27.5	88	12.8		11.0	
21	356	34.4	100	13.2		36.4	59	39.2		05.2	165	40.9		27.7	103	15.0		11.0	
22	11	36.9	115	12.4		36.8	74	39.7		04.9	180	42.9		27.9	118	17.2		11.1	
23	26	39.4	130	11.6		37.1	89	40.2		04.5	195	44.9		28.1	133	19.4		11.1	
24	41	41.8	145	10.8	-24	37.5	104	40.8	-23	04.1	210	46.9	-3	28.3	148	21.6	-21	11.1	
Dif	—		-8			-4	+5			+4		+20		-2	+22			0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna												
	SD: 16 ^h 1			Edad: 2 ^d 3 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 1 20 ^h : 54 ^o 1 R°: 47 ^m																					
	PMG: 11 ^h 43 ^m 6			PMG: 13 ^h 54 ^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	48.6	158	06.8	-16	06.4	60 N	5	50	6	40	7	26	9	54								
1	199	06.5		49.4	172	38.9 ¹³¹		11.3 ⁴⁹	58		48	35	17	42	59	18	00								
2	214	06.5		50.2	187	11.0 ¹³¹		16.2 ⁴⁹	56		46	30	10	33	57	10	39								
3	229	06.5		51.0	201	43.1 ¹³¹		21.0 ⁴⁸	54		44	26	7	03	24	57	19	44							
4	244	06.5		51.8	216	15.1 ¹³⁰		25.7 ⁴⁷	52		41	21	6	57	17	55	27	40							
5	259	06.6	-14	52.5	230	47.1 ¹³⁰	-16	30.3 ⁴⁶	50	5	39	6	18	6	52	9	10	55							
6	274	06.6	-14	53.3	245	19.1 ¹³⁰	-16	34.9 ⁴⁶	45	5	35	6	10	6	40	8	55	54							
7	289	06.6		54.1	259	51.0 ¹²⁹		39.4 ⁴⁵	40		30	6	02	31	43	53	19	02							
8	304	06.6		54.9	274	22.9 ¹²⁹		43.9 ⁴⁵	35		26	5	56	22	33	51	12	44							
9	319	06.6		55.7	288	54.8 ¹²⁹		48.2 ⁴³	30		22	50	15	24	50	22	44								
10	334	06.6		56.5	303	26.6 ¹²⁸		52.5 ⁴³	20		13	39	6	02	8	08	50	38	45						
11	349	06.6	-14	57.3	317	58.5 ¹²⁹	-16	56.7 ⁴²	10 N	5	04	5	29	5	51	7	55	48	19	52					
12	4	06.6	-14	58.0	332	30.3 ¹²⁸	-17	00.8 ⁴¹	0	4	54	5	19	5	40	7	42	47	20	05					
13	19	06.6		58.8	347	02.0 ¹²⁷		04.9 ⁴¹	10 S		42	5	08	29	30	46	18	48							
14	34	06.6	-14	59.6	1	33.8 ¹²⁸		08.9 ⁴⁰	20		28	4	55	18	16	45	32	49							
15	49	06.6	-15	00.4	16	05.5 ¹²⁷		12.8 ³⁹	30	4	09	39	5	04	7	01	43	48	51						
16	64	06.6		01.2	30	37.2 ¹²⁷		16.6 ³⁸	35	3	57	29	4	56	6	52	43	20	58	50					
17	79	06.6	-15	02.0	45	08.8 ¹²⁶	-17	20.4 ³⁸	40	3	43	4	18	4	47	6	42	42	21	08	52				
18	94	06.6	-15	02.7	59	40.5 ¹²⁷	-17	24.1 ³⁷	45	3	25	4	05	4	37	6	31	40	21	21	52				
19	109	06.6		03.5	74	12.1 ¹²⁶		27.7 ³⁶	50	3	01	3	48	24	17	38	36	54							
20	124	06.6		04.3	88	43.7 ¹²⁶		31.2 ³⁵	52	2	49	40	18	10	38	44	53								
21	139	06.6		05.1	103	15.2 ¹²⁵		34.6 ³⁴	54		36	30	12	6	03	36	21	52	54						
22	154	06.6		05.9	117	46.7 ¹²⁵		38.0 ³⁴	56	2	19	20	4	04	5	55	35	22	01	55					
23	169	06.6		06.6	132	18.2 ¹²⁵		41.3 ³³	58	1	59	3	08	3	56	45	35	11	55						
24	184	06.6	-15	07.4	146	49.7 ¹²⁵	-17	44.5 ³²	60 S	1	33	2	54	3	46	5	35	33	22	22	57				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 09 ^m 7		Mag: -4.0 PMG: 14 ^h 20 ^m		Mag: +0.4 PMG: 17 ^h 01 ^m		Mag: -1.7 PMG: 9 ^h 56 ^m		Mag: +0.5 PMG: 14 ^h 05 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	41	41.8	145	10.8	-24	37.5	104	40.8	-23	04.1	210	46.9	-3	28.3	148	21.6	-21	11.1
1	56	44.3	160	10.0		37.9	119	41.3		03.8	225	48.9		28.4	163	23.8		11.2
2	71	46.8	175	09.1		38.3	134	41.8		03.4	240	50.9		28.6	178	26.0		11.2
3	86	49.2	190	08.3		38.7	149	42.4		03.0	255	52.9		28.8	193	28.2		11.3
4	101	51.7	205	07.5		39.0	164	42.9		02.7	270	54.9		29.0	208	30.3		11.3
5	116	54.1	220	06.7	-24	39.4	179	43.5	-23	02.3	285	56.9	-3	29.2	223	32.5	-21	11.3
6	131	56.6	235	05.9	-24	39.8	194	44.0	-23	01.9	300	58.9	-3	29.4	238	34.7	-21	11.4
7	146	59.1	250	05.0		40.2	209	44.5		01.5	316	00.9		29.6	253	36.9		11.4
8	162	01.5	265	04.2		40.5	224	45.1		01.2	331	02.9		29.8	268	39.1		11.4
9	177	04.0	280	03.4		40.9	239	45.6		00.8	346	04.9		30.0	283	41.3		11.5
10	192	06.5	295	02.6		41.3	254	46.1		00.4	1	06.9		30.2	298	43.5		11.5
11	207	08.9	310	01.7	-24	41.6	269	46.7	-23	00.1	16	08.9	-3	30.4	313	45.7	-21	11.5
12	222	11.4	325	00.9	-24	42.0	284	47.2	-22	59.7	31	10.9	-3	30.6	328	47.8	-21	11.6
13	237	13.9	340	00.1		42.4	299	47.8		59.3	46	12.9		30.8	343	50.0		11.6
14	252	16.3	354	59.3		42.7	314	48.3		58.9	61	14.9		31.0	358	52.2		11.6
15	267	18.8	9	58.5		43.1	329	48.8		58.6	76	16.9		31.2	13	54.4		11.7
16	282	21.3	24	57.6		43.4	344	49.4		58.2	91	18.9		31.4	28	56.6		11.7
17	297	23.7	39	56.8	-24	43.8	359	49.9	-22	57.8	106	20.9	-3	31.5	43	58.8	-21	11.7
18	312	26.2	54	56.0	-24	44.2	14	50.4	-22	57.4	121	22.9	-3	31.7	59	01.0	-21	11.8
19	327	28.6	69	55.2		44.5	29	51.0		57.1	136	24.9		31.9	74	03.1		11.8
20	342	31.1	84	54.3		44.9	44	51.5		56.7	151	26.9		32.1	89	05.3		11.8
21	357	33.6	99	53.5		45.2	59	52.1		56.3	166	28.9		32.3	104	07.5		11.9
22	12	36.0	114	52.7		45.6	74	52.6		55.9	181	30.9		32.5	119	09.7		11.9
23	27	38.5	129	51.9		45.9	89	53.1		55.6	196	32.9		32.7	134	11.9		12.0
24	42	41.0	144	51.0	-24	46.3	104	53.7	-22	55.2	211	34.9	-3	32.9	149	14.1	-21	12.0
Dif	—		-8		-4		+5		+4		+20		-2		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16°1			Edad: 3 ^d 3	PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/4	SD: 14°7			R°: 48 ^m								
	PMG: 11 ^h 43 ^m 6					PMG: 14 ^h 41 ^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	06.6	-15 07.4	146	49.7	-17 44.5	31	60 N	15 58	16 44	17 33	10 54 53	18 26 46				
1	199	06.6	08.2	161	21.2 ¹²⁵	47.6	31	58	16 07	49	36	41 53	38 47				
2	214	06.6	09.0	175	52.6 ¹²⁴	50.6	30	56	14	54	39	30 53	49 47				
3	229	06.6	09.7	190	24.0 ¹²⁴	53.6	30	54	21	16 59	41	21 52	18 59 47				
4	244	06.6	10.5	204	55.3 ¹²³	56.5	29	52	27	17 03	43	12 52	19 07 47				
5	259	06.6	-15 11.3	219	26.7 ¹²⁴	-17 59.3	28	50	16 33	17 07	17 45	10 05 51	19 15 47				
6	274	06.6	-15 12.1	233	58.0 ¹²³	-18 02.0	27	45	16 45	17 16	17 51	9 49 50	19 31 48				
7	289	06.6	12.9	248	29.3 ¹²³	04.6	26	40	16 55	23	17 55	36 50	45 47				
8	304	06.6	13.6	263	00.6 ¹²³	07.2	26	35	17 04	30	18 00	24 50	19 56 48				
9	319	06.6	14.4	277	31.8 ¹²²	09.7	25	30	11	36	04	9 14 50	20 06 48				
10	334	06.6	15.2	292	03.0 ¹²²	12.0	23	20	24	47	13	8 58 49	23 49				
11	349	06.5	-15 16.0	306	34.2 ¹²²	-18 14.3	23	10 N	17 36	17 58	18 23	8 43 48	20 38 49				
12	4	06.5	-15 16.7	321	05.4 ¹²²	-18 16.6	23	0	17 47	18 08	18 33	8 29 48	20 52 49				
13	19	06.5	17.5	335	36.5 ¹²¹	18.7	21	10 S	17 58	20	18 46	16 47	21 06 49				
14	34	06.5	18.3	350	07.6 ¹²¹	20.8	21	20	18 10	33	19 01	8 01 47	21 49				
15	49	06.5	19.0	4	38.7 ¹²¹	22.7	19	30	24	50	20	7 44 47	39 48				
16	64	06.5	19.8	19	09.8 ¹²¹	24.6	19	35	32	18 59	32	35 46	21 48 49				
17	79	06.5	-15 20.6	33	40.9 ¹²¹	-18 26.4	18	40	18 42	19 11	19 47	7 24 45	22 00 49				
18	94	06.5	-15 21.4	48	11.9 ¹²⁰	-18 28.1	17	45	18 52	19 25	20 05	7 11 45	22 13 49				
19	109	06.5	22.1	62	42.9 ¹²⁰	29.8	17	50	19 06	43	30	6 55 44	30 49				
20	124	06.5	22.9	77	13.9 ¹²⁰	31.3	15	52	12	19 51	42	48 43	37 49				
21	139	06.5	23.7	91	44.9 ¹²⁰	32.8	15	54	19	20 01	20 56	39 44	46 49				
22	154	06.5	24.4	106	15.8 ¹¹⁹	34.1	13	56	27	12	21 14	30 43	22 56 49				
23	169	06.5	25.2	120	46.7 ¹¹⁹	35.4	13	58	35	24	21 35	20 42	23 06 49				
24	184	06.4	-15 26.0	135	17.6 ¹¹⁹	-18 36.6	12	60 S	19 45	20 39	22 05	6 08 41	23 19 49				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 21 ^h 05 ^m 8			Mag: -4.0 PMG: 14 ^h 21 ^m			Mag: +0.4 PMG: 17 ^h 00 ^m			Mag: -1.7 PMG: 9 ^h 52 ^m			Mag: +0.5 PMG: 14 ^h 01 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	42	41.0	144	51.0	-24 46.3	104	53.7	-22 55.2	211	34.9	-3 32.9	149	14.1	-21 12.0			
1	57	43.4	159	50.2	46.6	119	54.2	54.8	226	36.9	33.1	164	16.3	12.0			
2	72	45.9	174	49.4	47.0	134	54.7	54.4	241	38.8	33.3	179	18.4	12.1			
3	87	48.4	189	48.6	47.3	149	55.3	54.1	256	40.8	33.5	194	20.6	12.1			
4	102	50.8	204	47.7	47.7	164	55.8	53.7	271	42.8	33.7	209	22.8	12.1			
5	117	53.3	219	46.9	-24 48.0	179	56.4	-22 53.3	286	44.8	-3 33.9	224	25.0	-21 12.2			
6	132	55.8	234	46.1	-24 48.4	194	56.9	-22 52.9	301	46.8	-3 34.1	239	27.2	-21 12.2			
7	147	58.2	249	45.3	48.7	209	57.4	52.5	316	48.8	34.3	254	29.4	12.2			
8	163	00.7	264	44.4	49.0	224	58.0	52.2	331	50.8	34.4	269	31.5	12.3			
9	178	03.1	279	43.6	49.4	239	58.5	51.8	346	52.8	34.6	284	33.7	12.3			
10	193	05.6	294	42.8	49.7	254	59.0	51.4	1	54.8	34.8	299	35.9	12.3			
11	208	08.1	309	41.9	-24 50.1	269	59.6	-22 51.0	16	56.8	-3 35.0	314	38.1	-21 12.4			
12	223	10.5	324	41.1	-24 50.4	285	00.1	-22 50.6	31	58.8	-3 35.2	329	40.3	-21 12.4			
13	238	13.0	339	40.3	50.7	300	00.7	50.3	47	00.8	35.4	344	42.5	12.4			
14	253	15.5	354	39.5	51.1	315	01.2	49.9	62	02.8	35.6	359	44.7	12.5			
15	268	17.9	9	38.6	51.4	330	01.7	49.5	77	04.8	35.8	14	46.8	12.5			
16	283	20.4	24	37.8	51.7	345	02.3	49.1	92	06.8	36.0	29	49.0	12.5			
17	298	22.9	39	37.0	-24 52.1	0	02.8	-22 48.7	107	08.8	-3 36.2	44	51.2	-21 12.6			
18	313	25.3	54	36.1	-24 52.4	15	03.4	-22 48.3	122	10.8	-3 36.4	59	53.4	-21 12.6			
19	328	27.8	69	35.3	52.7	30	03.9	48.0	137	12.8	36.6	74	55.6	12.6			
20	343	30.2	84	34.5	53.0	45	04.4	47.6	152	14.8	36.8	89	57.8	12.7			
21	358	32.7	99	33.7	53.4	60	05.0	47.2	167	16.8	36.9	104	59.9	12.7			
22	13	35.2	114	32.8	53.7	75	05.5	46.8	182	18.8	37.1	120	02.1	12.8			
23	28	37.6	129	32.0	54.0	90	06.0	46.4	197	20.8	37.3	135	04.3	12.8			
24	43	40.1	144	31.2	-24 54.3	105	06.6	-22 46.0	212	22.8	-3 37.5	150	06.5	-21 12.8			
Dif	—		-8	-3		+5	+4		+20	-2		+22	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 4 ^d 3	PHE { 4 ^h : 54 ⁵ / 12 ^h : 54 ⁶ / 20 ^h : 54 ⁸ R°: 49 ^m									
	PMG: 11 ^h 43 ^m 6			SD: 14 ^h 8										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	184	06.4	-15 26.0	135	17.6	-18 36.6	11	60 N	5 55	6 45	7 31	11 47	45	19 12 55
1	199	06.4	26.7	149	48.5 ¹¹⁹	37.7	11	58	52	39	22	34	45	25 55
2	214	06.4	27.5	164	19.4 ¹¹⁹	38.7	10	56	49	34	14	23	45	36 54
3	229	06.4	28.3	178	50.2 ¹¹⁸	39.7	10	54	47	29	07	13	46	46 54
4	244	06.4	29.0	193	21.0 ¹¹⁸	40.5	8	52	45	25	7 01	11 04	46	19 54 54
5	259	06.4	-15 29.8	207	51.8 ¹¹⁸	-18 41.3	8	50	5 42	6 21	6 55	10 56	47	20 02 53
6	274	06.4	-15 30.6	222	22.6 ¹¹⁸	-18 42.0	7	45	5 37	6 12	6 43	10 39	48	20 19 52
7	289	06.4	31.3	236	53.4 ¹¹⁸	42.6	6	40	32	6 05	33	26	47	32 52
8	304	06.4	32.1	251	24.1 ¹¹⁷	43.1	5	35	28	5 58	24	14	48	44 52
9	319	06.3	32.9	265	54.8 ¹¹⁷	43.5	4	30	23	52	16	10 04	48	20 54 51
10	334	06.3	33.6	280	25.5 ¹¹⁷	43.8	3	20	14	40	6 03	9 47	48	21 12 50
11	349	06.3	-15 34.4	294	56.2 ¹¹⁷	-18 44.0	2	10 N	5 04	5 30	5 51	9 31	49	21 27 49
12	4	06.3	-15 35.2	309	26.9 ¹¹⁷	-18 44.2	2	0	4 54	5 19	5 40	9 17	49	21 41 49
13	19	06.3	35.9	323	57.5 ¹¹⁶	44.2	0	10 S	41	5 07	29	9 03	49	21 55 48
14	34	06.3	36.7	338	28.2 ¹¹⁷	44.2	0	20	26	4 54	17	8 48	49	22 10 48
15	49	06.3	37.5	352	58.8 ¹¹⁶	44.0	2	30	4 07	37	5 03	31	49	27 47
16	64	06.2	38.2	7	29.4 ¹¹⁶	43.8	2	35	3 55	27	4 54	21	49	37 47
17	79	06.2	-15 39.0	21	59.9 ¹¹⁵	-18 43.5	3	40	3 40	4 16	4 45	8 09	50	22 49 45
18	94	06.2	-15 39.7	36	30.5 ¹¹⁶	-18 43.1	4	45	3 21	4 02	4 34	7 56	50	23 02 45
19	109	06.2	40.5	51	01.1 ¹¹⁶	42.6	5	50	2 57	3 44	21	39	50	19 44
20	124	06.2	41.3	65	31.6 ¹¹⁵	42.1	5	52	44	35	14	31	51	26 44
21	139	06.2	42.0	80	02.1 ¹¹⁵	41.4	7	54	30	26	08	23	50	35 43
22	154	06.1	42.8	94	32.6 ¹¹⁵	40.6	8	56	2 13	15	4 00	13	51	45 42
23	169	06.1	43.5	109	03.1 ¹¹⁵	39.8	8	58	1 51	3 02	3 51	7 02	51	23 55 42
24	184	06.1	-15 44.3	123	33.6 ¹¹⁵	-18 38.9	9	60 S	1 21	2 47	3 41	6 49	51	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 21 ^h 01 ^m 9		Mag: -4.0 PMG: 14 ^h 23 ^m		Mag: +0.4 PMG: 16 ^h 59 ^m		Mag: -1.7 PMG: 9 ^h 49 ^m		Mag: +0.5 PMG: 13 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	43	40.1	144	31.2	-24 54.3	105	06.6	-22 46.0	212	22.8	-3 37.5	150	06.5	-21 12.8
1	58	42.6	159	30.3	54.7	120	07.1	45.6	227	24.8	37.7	165	08.7	12.9
2	73	45.0	174	29.5	55.0	135	07.7	45.3	242	26.8	37.9	180	10.9	12.9
3	88	47.5	189	28.7	55.3	150	08.2	44.9	257	28.8	38.1	195	13.0	12.9
4	103	50.0	204	27.8	55.6	165	08.7	44.5	272	30.8	38.3	210	15.2	13.0
5	118	52.4	219	27.0	-24 55.9	180	09.3	-22 44.1	287	32.8	-3 38.5	225	17.4	-21 13.0
6	133	54.9	234	26.2	-24 56.2	195	09.8	-22 43.7	302	34.8	-3 38.7	240	19.6	-21 13.0
7	148	57.4	249	25.4	56.5	210	10.4	43.3	317	36.8	38.9	255	21.8	13.1
8	163	59.8	264	24.5	56.9	225	10.9	42.9	332	38.8	39.1	270	24.0	13.1
9	179	02.3	279	23.7	57.2	240	11.4	42.5	347	40.8	39.2	285	26.1	13.1
10	194	04.7	294	22.9	57.5	255	12.0	42.1	2	42.8	39.4	300	28.3	13.2
11	209	07.2	309	22.0	-24 57.8	270	12.5	-22 41.8	17	44.8	-3 39.6	315	30.5	-21 13.2
12	224	09.7	324	21.2	-24 58.1	285	13.1	-22 41.4	32	46.8	-3 39.8	330	32.7	-21 13.2
13	239	12.1	339	20.4	58.4	300	13.6	41.0	47	48.8	40.0	345	34.9	13.3
14	254	14.6	354	19.5	58.7	315	14.1	40.6	62	50.8	40.2	0	37.1	13.3
15	269	17.1	9	18.7	59.0	330	14.7	40.2	77	52.8	40.4	15	39.2	13.3
16	284	19.5	24	17.9	59.3	345	15.2	39.8	92	54.8	40.6	30	41.4	13.4
17	299	22.0	39	17.0	-24 59.6	0	15.7	-22 39.4	107	56.8	-3 40.8	45	43.6	-21 13.4
18	314	24.5	54	16.2	-24 59.9	15	16.3	-22 39.0	122	58.8	-3 41.0	60	45.8	-21 13.5
19	329	26.9	69	15.4	-25 00.2	30	16.8	38.6	138	00.8	41.2	75	48.0	13.5
20	344	29.4	84	14.5	00.5	45	17.4	38.2	153	02.8	41.4	90	50.1	13.5
21	359	31.9	99	13.7	00.8	60	17.9	37.8	168	04.8	41.5	105	52.3	13.6
22	14	34.3	114	12.9	01.1	75	18.4	37.4	183	06.8	41.7	120	54.5	13.6
23	29	36.8	129	12.0	01.4	90	19.0	37.0	198	08.8	41.9	135	56.7	13.6
24	44	39.2	144	11.2	-25 01.7	105	19.5	-22 36.6	213	10.8	-3 42.1	150	58.9	-21 13.7
Dif	—		-8	-3		+5	+4		+20	-2		+22	0	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1		Edad: 5 ^d 3		PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 1 20 ^h : 55 ^m 3											
	PMG: 11 ^h 43 ^m 6		SD: 14 ^h 9													
	PMG: 16 ^h 18 ^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	h m	h m	h m	h m	
0	184	06.1	-15	44.3	123	33.6	-18 38.9	11	60 N	15 53	16 39	17 29	12 32 36	20 07 65		
1	199	06.1		45.0	138	04.0 ¹¹⁴	37.8	11	58	16 02	45	32	19 38	20 63		
2	214	06.1		45.8	152	34.5 ¹¹⁵	36.7	11	56	10	51	35	12 08 40	30 62		
3	229	06.0		46.6	167	04.9 ¹¹⁴	35.5	12	54	17	16 55	38	11 59 40	40 60		
4	244	06.0		47.3	181	35.3 ¹¹⁴	34.2	13	52	24	17 00	40	50 41	48 60		
5	259	06.0	-15	48.1	196	05.7 ¹¹⁴	-18 32.8	14	50	16 30	17 04	17 43	11 43 41	20 55 60		
6	274	06.0	-15	48.8	210	36.1 ¹¹⁴	-18 31.3	15	45	16 42	17 13	17 48	11 27 43	21 11 58		
7	289	06.0		49.6	225	06.5 ¹¹⁴	29.7	16	40	16 53	21	53	13 44	24 56		
8	304	05.9		50.3	239	36.9 ¹¹⁴	28.1	16	35	17 02	28	17 58	11 02 45	36 54		
9	319	05.9		51.1	254	07.2 ¹¹³	26.3	18	30	10	35	18 03	10 52 46	21 45 54		
10	334	05.9		51.8	268	37.5 ¹¹³	24.5	18	20	23	46	13	35 47	22 02 52		
11	349	05.9	-15	52.6	283	07.9 ¹¹⁴	-18 22.5	20	10 N	17 36	17 57	18 23	10 20 48	22 16 51		
12	4	05.9	-15	53.3	297	38.2 ¹¹³	-18 20.5	20	0	17 47	18 09	18 34	10 06 49	22 30 49		
13	19	05.8		54.1	312	08.5 ¹¹³	18.4	21	10 S	17 59	21	18 46	9 52 51	43 48		
14	34	05.8		54.8	326	38.8 ¹¹³	16.2	22	20	18 11	34	19 02	37 52	22 58 46		
15	49	05.8		55.6	341	09.1 ¹¹³	13.9	23	30	26	18 51	22	20 53	23 14 45		
16	64	05.8		56.4	355	39.3 ¹¹²	11.5	24	35	34	19 01	34	9 10 54	24 43		
17	79	05.7	-15	57.1	10	09.6 ¹¹³	-18 09.0	25	40	18 44	19 14	19 50	8 59 54	23 34 43		
18	94	05.7	-15	57.9	24	39.9 ¹¹³	-18 06.4	26	45	18 55	19 28	20 09	8 46 55	23 47 41		
19	109	05.7		58.6	39	10.1 ¹¹²	03.8	26	50	19 09	46	34	29 57	** ** *		
20	124	05.7	-15	59.3	53	40.3 ¹¹²	-18 01.0	28	52	16	19 55	20 47	22 57	** ** *		
21	139	05.6	-16	00.1	68	10.6 ¹¹³	-17 58.1	29	54	23	20 05	21 02	13 58	** ** *		
22	154	05.6		00.8	82	40.8 ¹¹²	55.2	29	56	31	17	21	8 04 58	** ** *		
23	169	05.6		01.6	97	11.0 ¹¹²	52.2	30	58	40	30	21 44	7 53 59	** ** *		
24	184	05.6	-16	02.3	111	41.2 ¹¹²	-17 49.1	31	60 S	19 51	20 46	22 17	7 40 61	0 08 41		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 57 ^m 9		Mag: -4.0			Mag: +0.4			Mag: -1.7			Mag: +0.5				
	PMG: 14 ^h 24 ^m		PMG: 16 ^h 58 ^m			PMG: 9 ^h 46 ^m			PMG: 13 ^h 54 ^m							
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	°	'	°	'	°	'	°	'	
0	44	39.2	144	11.2	-25	01.7	105	19.5	-22	36.6	213	10.8	-3	42.1	150	58.9
1	59	41.7	159	10.3		02.0	120	20.1		36.2	228	12.8		42.3	166	01.1
2	74	44.2	174	09.5		02.3	135	20.6		35.8	243	14.8		42.5	181	03.2
3	89	46.6	189	08.7		02.5	150	21.1		35.5	258	16.8		42.7	196	05.4
4	104	49.1	204	07.8		02.8	165	21.7		35.1	273	18.8		42.9	211	07.6
5	119	51.6	219	07.0	-25	03.1	180	22.2	-22	34.7	288	20.8	-3	43.1	226	09.8
6	134	54.0	234	06.2	-25	03.4	195	22.8	-22	34.3	303	22.8	-3	43.3	241	12.0
7	149	56.5	249	05.3		03.7	210	23.3		33.9	318	24.8		43.5	256	14.1
8	164	59.0	264	04.5		04.0	225	23.8		33.5	333	26.8		43.6	271	16.3
9	180	01.4	279	03.7		04.2	240	24.4		33.1	348	28.9		43.8	286	18.5
10	195	03.9	294	02.8		04.5	255	24.9		32.7	3	30.9		44.0	301	20.7
11	210	06.4	309	02.0	-25	04.8	270	25.5	-22	32.3	18	32.9	-3	44.2	316	22.9
12	225	08.8	324	01.2	-25	05.1	285	26.0	-22	31.9	33	34.9	-3	44.4	331	25.0
13	240	11.3	339	00.3		05.4	300	26.5		31.5	48	36.9		44.6	346	27.2
14	255	13.7	353	59.5		05.6	315	27.1		31.1	63	38.9		44.8	1	29.4
15	270	16.2	8	58.6		05.9	330	27.6		30.7	78	40.9		45.0	16	31.6
16	285	18.7	23	57.8		06.2	345	28.2		30.3	93	42.9		45.2	31	33.8
17	300	21.1	38	57.0	-25	06.4	0	28.7	-22	29.9	108	44.9	-3	45.4	46	35.9
18	315	23.6	53	56.1	-25	06.7	15	29.2	-22	29.5	123	46.9	-3	45.6	61	38.1
19	330	26.1	68	55.3		07.0	30	29.8		29.1	138	48.9		45.7	76	40.3
20	345	28.5	83	54.4		07.3	45	30.3		28.7	153	50.9		45.9	91	42.5
21	0	31.0	98	53.6		07.5	60	30.9		28.2	168	52.9		46.1	106	44.7
22	15	33.5	113	52.8		07.8	75	31.4		27.8	183	54.9		46.3	121	46.8
23	30	35.9	128	51.9		08.0	90	31.9		27.4	198	56.9		46.5	136	49.0
24	45	38.4	143	51.1	-25	08.3	105	32.5	-22	27.0	213	58.9	-3	46.7	151	51.2
Dif	—	—	-8	-3		+5	+4			+20		-2		+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 7			Edad: 6 ^d 3 PHE { 4 ^h : 55:5 12 ^h : 55:7 20 ^h : 56:0 R°: 50 ^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	184	05.6	-16	02.3	111	41.2	-17 49.1	60 N	5 59	6 49	7 36	13 08	30	21 12	72			
1	199	05.5		03.1	126	11.4	45.8	58	56	43	27	12 57	32	23	70			
2	214	05.5		03.8	140	41.5	42.5	56	53	38	18	48	33	32	69			
3	229	05.5		04.6	155	11.7	39.1	54	50	33	11	39	35	41	66			
4	244	05.4		05.3	169	41.9	35.7	52	48	28	7 04	31	36	48	65			
5	259	05.4	-16	06.1	184	12.0	-17 32.1	50	5 45	6 24	6 59	12 24	38	21 55	64			
6	274	05.4	-16	06.8	198	42.2	-17 28.4	45	5 40	6 15	6 46	12 10	39	22 09	61			
7	289	05.4		07.6	213	12.3	24.7	40	34	07	35	11 57	42	20	60			
8	304	05.3		08.3	227	42.4	20.8	35	29	6 00	26	47	43	30	58			
9	319	05.3		09.0	242	12.6	16.9	30	25	5 53	18	38	44	39	57			
10	334	05.3		09.8	256	42.7	12.8	20	15	41	6 04	22	46	22 54	54			
11	349	05.2	-16	10.5	271	12.8	-17 08.7	10 N	5 05	5 30	5 52	11 08	48	23 07	52			
12	4	05.2	-16	11.3	285	42.9	-17 04.5	0	4 54	5 19	5 40	10 55	50	23 19	50			
13	19	05.2		12.0	300	13.0	-17 00.2	10 S	41	5 06	28	43	51	31	48			
14	34	05.1		12.7	314	43.1	-16 55.8	20	25	4 53	16	29	53	44	46			
15	49	05.1		13.5	329	13.1	51.4	30	4 05	36	5 01	13	55	23 59	43			
16	64	05.1		14.2	343	43.2	46.8	35	3 53	25	4 53	10 04	56	*** ** *				
17	79	05.0	-16	15.0	358	13.3	-16 42.2	40	3 37	4 13	4 43	9 53	58	*** ** *				
18	94	05.0	-16	15.7	12	43.3	-16 37.4	45	3 18	3 59	4 31	9 41	60	*** ** *				
19	109	05.0		16.4	27	13.4	32.6	50	2 52	40	17	26	62	0 03	39			
20	124	04.9		17.2	41	43.4	27.7	52	39	31	11	19	63	10	38			
21	139	04.9		17.9	56	13.5	22.7	50	54	24	4 04	11	64	18	37			
22	154	04.9		18.6	70	43.5	17.6	51	56	2 06	3 10	3 55	9 02	66	27	36		
23	169	04.8		19.4	85	13.5	12.4	52	58	1 42	2 56	46	8 52	67	37	35		
24	184	04.8	-16	20.1	99	43.6	-16 07.1	53	60 S	1 09	2 41	3 36	8 41	69	0 49	33		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 54 ^m 0		Mag: -4.0 PMG: 14 ^h 25 ^m				Mag: +0.4 PMG: 16 ^h 57 ^m				Mag: -1.7 PMG: 9 ^h 43 ^m				Mag: +0.5 PMG: 13 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	45	38.4	143	51.1	-25	08.3	105	32.5	-22	27.0	213	58.9	-3	46.7	151	51.2	-21	14.5
1	60	40.8	158	50.3		08.6	120	33.0		26.6	229	00.9		46.9	166	53.4		14.5
2	75	43.3	173	49.4		08.8	135	33.6		26.2	244	02.9		47.1	181	55.6		14.6
3	90	45.8	188	48.6		09.1	150	34.1		25.8	259	04.9		47.3	196	57.7		14.6
4	105	48.2	203	47.7		09.3	165	34.6		25.4	274	06.9		47.5	211	59.9		14.6
5	120	50.7	218	46.9	-25	09.6	180	35.2	-22	25.0	289	08.9	-3	47.6	227	02.1	-21	14.7
6	135	53.2	233	46.1	-25	09.9	195	35.7	-22	24.6	304	10.9	-3	47.8	242	04.3	-21	14.7
7	150	55.6	248	45.2		10.1	210	36.3		24.2	319	12.9		48.0	257	06.5		14.7
8	165	58.1	263	44.4		10.4	225	36.8		23.8	334	14.9		48.2	272	08.6		14.8
9	181	00.6	278	43.5		10.6	240	37.3		23.4	349	16.9		48.4	287	10.8		14.8
10	196	03.0	293	42.7		10.9	255	37.9		23.0	4	18.9		48.6	302	13.0		14.8
11	211	05.5	308	41.9	-25	11.1	270	38.4	-22	22.6	19	20.9	-3	48.8	317	15.2	-21	14.9
12	226	08.0	323	41.0	-25	11.4	285	39.0	-22	22.2	34	22.9	-3	49.0	332	17.4	-21	14.9
13	241	10.4	338	40.2		11.6	300	39.5		21.7	49	24.9		49.2	347	19.5		14.9
14	256	12.9	353	39.3		11.8	315	40.1		21.3	64	26.9		49.3	2	21.7		15.0
15	271	15.3	8	38.5		12.1	330	40.6		20.9	79	29.0		49.5	17	23.9		15.0
16	286	17.8	23	37.7		12.3	345	41.1		20.5	94	31.0		49.7	32	26.1		15.0
17	301	20.3	38	36.8	-25	12.6	0	41.7	-22	20.1	109	33.0	-3	49.9	47	28.3	-21	15.1
18	316	22.7	53	36.0	-25	12.8	15	42.2	-22	19.7	124	35.0	-3	50.1	62	30.4	-21	15.1
19	331	25.2	68	35.1		13.1	30	42.8		19.3	139	37.0		50.3	77	32.6		15.2
20	346	27.7	83	34.3		13.3	45	43.3		18.9	154	39.0		50.5	92	34.8		15.2
21	1	30.1	98	33.5		13.5	60	43.8		18.5	169	41.0		50.7	107	37.0		15.2
22	16	32.6	113	32.6		13.8	75	44.4		18.0	184	43.0		50.9	122	39.1		15.3
23	31	35.1	128	31.8		14.0	90	44.9		17.6	199	45.0		51.0	137	41.3		15.3
24	46	37.5	143	30.9	-25	14.2	105	45.5	-22	17.2	214	47.0	-3	51.2	152	43.5	-21	15.3
Dif	—		-8		-2		+5		+4		+20		-2		+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: 7 ^d 3 PHE { SD: 15 ^h 3 PMG: 17 ^h 57 ^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	184	04.8	-16	20.1	99	43.6	-16 07.1	60 N	15 48	16 35	17 25	13 38 25	22 24 78						
1	199	04.8		20.9	114	13.6 ¹¹⁰	-16 01.7	58	15 58	41	29	29 27	33 75						
2	214	04.7		21.6	128	43.6 ¹¹⁰	-15 56.3	56	16 06	47	32	21 29	41 73						
3	229	04.7		22.3	143	13.6 ¹¹⁰	50.8	55	54	14	52	35	14 31	47 72					
4	244	04.7		23.1	157	43.6 ¹¹⁰	45.2	56	52	20	16 57	37	07 33	53 70					
5	259	04.6	-16	23.8	172	13.6 ¹¹⁰	-15 39.4	58	50	16 27	17 01	17 40	13 02 33	22 59 68					
6	274	04.6	-16	24.5	186	43.6 ¹¹⁰	-15 33.7	57	45	16 40	17 11	17 46	12 49 36	23 10 66					
7	289	04.5		25.3	201	13.5 ¹⁰⁹	27.8	59	40	16 51	19	51	39 38	20 63					
8	304	04.5		26.0	215	43.5 ¹¹⁰	21.8	60	35	17 00	27	17 57	30 40	28 61					
9	319	04.5		26.7	230	13.5 ¹¹⁰	15.8	60	30	08	33	18 02	22 42	36 58					
10	334	04.4		27.4	244	43.4 ¹⁰⁹	09.6	62	20	23	46	12	12 08 45	48 56					
11	349	04.4	-16	28.2	259	13.4 ¹¹⁰	-15 03.4	62	10 N	17 35	17 57	18 22	11 56 48	23 59 53					
12	4	04.3	-16	28.9	273	43.3 ¹⁰⁹	-14 57.1	63	0	17 47	18 09	18 34	11 45 50	*** ** **					
13	19	04.3		29.6	288	13.3 ¹¹⁰	50.7	64	10 S	17 59	21	18 47	34 52	*** ** **					
14	34	04.3		30.4	302	43.2 ¹⁰⁹	44.3	64	20	18 12	36	19 03	22 55	*** ** **					
15	49	04.2		31.1	317	13.1 ¹⁰⁹	37.7	66	30	27	18 53	24	08 58	*** ** **					
16	64	04.2		31.8	331	43.1 ¹¹⁰	31.1	66	35	36	19 04	37	11 00 60	0 07 42					
17	79	04.1	-16	32.5	346	13.0 ¹⁰⁹	-14 24.4	67	40	18 46	19 16	19 53	10 51 62	0 17 40					
18	94	04.1	-16	33.3	0	42.9 ¹⁰⁹	-14 17.6	68	45	18 58	19 31	20 13	10 41 63	0 28 38					
19	109	04.1		34.0	15	12.8 ¹⁰⁹	10.7	69	50	19 13	50	39	28 66	42 35					
20	124	04.0		34.7	29	42.7 ¹⁰⁹	-14 03.7	70	52	19	19 59	20 53	22 68	48 34					
21	139	04.0		35.5	44	12.6 ¹⁰⁹	-13 56.7	70	54	27	20 10	21 08	15 69	0 55 33					
22	154	03.9		36.2	58	42.4 ¹⁰⁸	49.5	72	56	35	22	28	10 08 71	1 03 31					
23	169	03.9		36.9	73	12.3 ¹⁰⁹	42.3	72	58	45	36	21 54	9 59 73	12 29					
24	184	03.8	-16	37.6	87	42.2 ¹⁰⁹	-13 35.0	73	60 S	19 56	20 53	22 31	9 50 75	1 22 27					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 50 ^m 1		Mag: -4.0 PMG: 14 ^h 27 ^m			Mag: +0.4 PMG: 16 ^h 56 ^m			Mag: -1.7 PMG: 9 ^h 40 ^m			Mag: +0.5 PMG: 13 ^h 47 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	46	37.5	143	30.9	-25	14.2	105	45.5	-22	17.2	214	47.0	-3	51.2	152	43.5	-21	15.3	
1	61	40.0	158	30.1		14.5	120	46.0		16.8	229	49.0		51.4	167	45.7		15.4	
2	76	42.5	173	29.2		14.7	135	46.6		16.4	244	51.0		51.6	182	47.9		15.4	
3	91	44.9	188	28.4		14.9	150	47.1		16.0	259	53.0		51.8	197	50.0		15.4	
4	106	47.4	203	27.6		15.1	165	47.6		15.6	274	55.0		52.0	212	52.2		15.5	
5	121	49.8	218	26.7	-25	15.4	180	48.2	-22	15.1	289	57.0	-3	52.2	227	54.4	-21	15.5	
6	136	52.3	233	25.9	-25	15.6	195	48.7	-22	14.7	304	59.0	-3	52.4	242	56.6	-21	15.5	
7	151	54.8	248	25.0		15.8	210	49.3		14.3	320	01.0		52.6	257	58.7		15.6	
8	166	57.2	263	24.2		16.0	225	49.8		13.9	335	03.0		52.7	273	00.9		15.6	
9	181	59.7	278	23.3		16.3	240	50.3		13.5	350	05.1		52.9	288	03.1		15.6	
10	197	02.2	293	22.5		16.5	255	50.9		13.1	5	07.1		53.1	303	05.3		15.7	
11	212	04.6	308	21.7	-25	16.7	270	51.4	-22	12.6	20	09.1	-3	53.3	318	07.5	-21	15.7	
12	227	07.1	323	20.8	-25	16.9	285	52.0	-22	12.2	35	11.1	-3	53.5	333	09.6	-21	15.7	
13	242	09.6	338	20.0		17.1	300	52.5		11.8	50	13.1		53.7	348	11.8		15.8	
14	257	12.0	353	19.1		17.3	315	53.1		11.4	65	15.1		53.9	3	14.0		15.8	
15	272	14.5	8	18.3		17.6	330	53.6		11.0	80	17.1		54.1	18	16.2		15.8	
16	287	16.9	23	17.4		17.8	345	54.1		10.5	95	19.1		54.3	33	18.3		15.9	
17	302	19.4	38	16.6	-25	18.0	0	54.7	-22	10.1	110	21.1	-3	54.4	48	20.5	-21	15.9	
18	317	21.9	53	15.8	-25	18.2	15	55.2	-22	09.7	125	23.1	-3	54.6	63	22.7	-21	15.9	
19	332	24.3	68	14.9		18.4	30	55.8		09.3	140	25.1		54.8	78	24.9		16.0	
20	347	26.8	83	14.1		18.6	45	56.3		08.9	155	27.1		55.0	93	27.0		16.0	
21	2	29.3	98	13.2		18.8	60	56.9		08.4	170	29.1		55.2	108	29.2		16.1	
22	17	31.7	113	12.4		19.0	75	57.4		08.0	185	31.1		55.4	123	31.4		16.1	
23	32	34.2	128	11.5		19.2	90	57.9		07.6	200	33.1		55.6	138	33.6		16.1	
24	47	36.7	143	10.7	-25	19.4	105	58.5	-22	07.2	215	35.2	-3	55.8	153	35.7	-21	16.2	
Dif	—		-8			-2	+5			+4	+20			-2	+22			0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 8 ^d 3	PHE { 4 ^h : 57/0 12 ^h : 57/3 20 ^h : 57/6	R°: 51 ^m										
	PMG: 11 ^h 43 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	03.8	-16 37.6	87	42.2	-13 35.0		60 N	6 03	6 54	7 41	14 03	21	23 42	83	
1	199	03.8		102	12.0 ¹⁰⁸		27.7 ⁷³	58	6 00	47	31	13 56	24	48	80	
2	214	03.8		116	41.9 ¹⁰⁹		20.2 ⁷⁵	56	5 57	42	23	50	26	54	77	
3	229	03.7		131	11.7 ¹⁰⁸		12.7 ⁷⁵	54	54	36	15	45	27	23 59	75	
4	244	03.7		145	41.5 ¹⁰⁸	-13 05.1	76	52	51	32	08	40	29	** ** *	**	
5	259	03.6	-16 41.2	160	11.4 ¹⁰⁹	-12 57.4	77	50	5 48	6 27	7 02	13 35	31	** ** *	**	
6	274	03.6	-16 42.0	174	41.2 ¹⁰⁸	-12 49.6	78	45	5 42	6 17	6 48	13 25	34	** ** *	**	
7	289	03.5		189	11.0 ¹⁰⁸		41.8 ⁷⁸	40	36	09	37	17	37	** ** *	**	
8	304	03.5		203	40.8 ¹⁰⁸		33.9 ⁷⁹	35	31	6 01	28	10	39	** ** *	**	
9	319	03.4		218	10.6 ¹⁰⁸		25.9 ⁸⁰	30	26	5 55	20	13 04	41	** ** *	**	
10	334	03.4		232	40.3 ¹⁰⁷		17.8 ⁸¹	20	16	42	6 05	12 53	45	** ** *	**	
11	349	03.3	-16 45.6	247	10.1 ¹⁰⁸	-12 09.7	81	10 N	5 05	5 30	5 52	12 44	47	** ** *	**	
12	4	03.3	-16 46.3	261	39.9 ¹⁰⁸	-12 01.4	83	0	4 54	5 19	5 40	12 35	50	0 09	50	
13	19	03.2		276	09.6 ¹⁰⁷	-11 53.1	83	10 S	40	5 06	28	26	53	19	47	
14	34	03.2		290	39.3 ¹⁰⁷		44.8 ⁸³	20	24	4 52	15	17	56	30	44	
15	49	03.1		305	09.1 ¹⁰⁸		36.3 ⁸⁵	30	4 04	34	5 00	06	60	42	41	
16	64	03.1		319	38.8 ¹⁰⁷		27.8 ⁸⁵	35	3 50	24	4 51	12 00	62	49	39	
17	79	03.0	-16 49.9	334	08.5 ¹⁰⁷	-11 19.2	86	40	3 34	4 11	4 41	11 53	64	0 57	37	
18	94	03.0	-16 50.6	348	38.2 ¹⁰⁷	-11 10.6	86	45	3 14	3 56	4 29	11 44	67	1 06	35	
19	109	02.9		3	07.9 ¹⁰⁷	-11 01.8	88	50	2 48	37	14	34	71	17	32	
20	124	02.9		17	37.5 ¹⁰⁶	-10 53.0	88	52	34	27	07	30	71	22	31	
21	139	02.8		32	07.2 ¹⁰⁷		44.2 ⁸⁸	54	2 18	17	4 00	24	74	28	29	
22	154	02.8		46	36.8 ¹⁰⁶		35.2 ⁹⁰	56	1 59	3 05	3 51	19	75	34	27	
23	169	02.7		61	06.4 ¹⁰⁶		26.2 ⁹⁰	58	1 33	2 51	42	12	78	41	25	
24	184	02.7	-16 54.9	75	36.0 ¹⁰⁶	-10 17.1	91	60 S	0 55	2 34	3 31	11 05	80	1 49	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 46 ^m 1		Mag: -4.0 PMG: 14 ^h 28 ^m		Mag: +0.4 PMG: 16 ^h 55 ^m		Mag: -1.7 PMG: 9 ^h 36 ^m		Mag: +0.5 PMG: 13 ^h 44 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	47	36.7	143	10.7	-25	19.4	105	58.5	-22	07.2	215	35.2	-3	55.8	153	35.7	-21	16.2	
1	62	39.1	158	09.8		19.6	120	59.0		06.7	230	37.2		55.9	168	37.9		16.2	
2	77	41.6	173	09.0		19.8	135	59.6		06.3	245	39.2		56.1	183	40.1		16.2	
3	92	44.1	188	08.2		20.0	151	00.1		05.9	260	41.2		56.3	198	42.3		16.3	
4	107	46.5	203	07.3		20.2	166	00.7		05.5	275	43.2		56.5	213	44.5		16.3	
5	122	49.0	218	06.5	-25	20.4	181	01.2	-22	05.0	290	45.2	-3	56.7	228	46.6	-21	16.3	
6	137	51.4	233	05.6	-25	20.6	196	01.8	-22	04.6	305	47.2	-3	56.9	243	48.8	-21	16.4	
7	152	53.9	248	04.8		20.8	211	02.3		04.2	320	49.2		57.1	258	51.0		16.4	
8	167	56.4	263	03.9		21.0	226	02.8		03.8	335	51.2		57.3	273	53.2		16.4	
9	182	58.8	278	03.1		21.2	241	03.4		03.3	350	53.2		57.4	288	55.3		16.5	
10	198	01.3	293	02.2		21.4	256	03.9		02.9	5	55.2		57.6	303	57.5		16.5	
11	213	03.8	308	01.4	-25	21.6	271	04.5	-22	02.5	20	57.2	-3	57.8	318	59.7	-21	16.5	
12	228	06.2	323	00.6	-25	21.8	286	05.0	-22	02.1	35	59.3	-3	58.0	334	01.9	-21	16.6	
13	243	08.7	337	59.7		21.9	301	05.6		01.6	51	01.3		58.2	349	04.0		16.6	
14	258	11.2	352	58.9		22.1	316	06.1		01.2	66	03.3		58.4	4	06.2		16.6	
15	273	13.6	7	58.0		22.3	331	06.6		00.8	81	05.3		58.6	19	08.4		16.7	
16	288	16.1	22	57.2		22.5	346	07.2	-22	00.4	96	07.3		58.8	34	10.6		16.7	
17	303	18.6	37	56.3	-25	22.7	1	07.7	-21	59.9	111	09.3	-3	58.9	49	12.7	-21	16.7	
18	318	21.0	52	55.5	-25	22.8	16	08.3	-21	59.5	126	11.3	-3	59.1	64	14.9	-21	16.8	
19	333	23.5	67	54.6		23.0	31	08.8		59.1	141	13.3		59.3	79	17.1		16.8	
20	348	25.9	82	53.8		23.2	46	09.4		58.6	156	15.3		59.5	94	19.3		16.8	
21	3	28.4	97	52.9		23.4	61	09.9		58.2	171	17.3		59.7	109	21.4		16.9	
22	18	30.9	112	52.1		23.6	76	10.5		57.8	186	19.3	-3	59.9	124	23.6		16.9	
23	33	33.3	127	51.3		23.7	91	11.0		57.3	201	21.3	-4	00.1	139	25.8		16.9	
24	48	35.8	142	50.4	-25	23.9	106	11.6	-21	56.9	216	23.4	-4	00.2	154	28.0	-21	17.0	
Dif	—		-8	-2			+5	+4			+20	-2			+22	0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 9 ^d 3 PHE	SD: 15 ^h 7				R°: 51 ^m						
	PMG: 11 ^h 43 ^m 9				PMG: 19 ^h 38 ^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	184	02.7	-16 54.9	75	36.0	-10 17.1	91	60 N	15 43	16 31	17 21	14 24 20	** ** *	** ** *	
1	199	02.6	55.6	90	05.6 ¹⁰⁶	-10 08.0	92	58	15 53	37	25	20 22	** ** *	** ** *	
2	214	02.6	56.3	104	35.2 ¹⁰⁶	-9 58.8	93	56	16 02	43	28	16 24	** ** *	** ** *	
3	229	02.5	57.0	119	04.8 ¹⁰⁶	49.5	94	54	10	49	32	12 26	** ** *	** ** *	
4	244	02.5	57.7	133	34.3 ¹⁰⁵	40.1	94	52	17	54	35	09 28	0 03 74		
5	259	02.4	-16 58.4	148	03.9 ¹⁰⁶	-9 30.7	94	50	16 24	16 58	17 37	14 06 29	0 07 72		
6	274	02.4	-16 59.1	162	33.4 ¹⁰⁵	-9 21.2	95	45	16 37	17 09	17 44	13 59 33	0 16 68		
7	289	02.3	-16 59.8	177	02.9 ¹⁰⁵	11.7	95	40	49	17	50	54 36	23 65		
8	304	02.2	-17 00.5	191	32.4 ¹⁰⁵	-9 02.1	96	35	16 58	25	17 55	49 39	29 63		
9	319	02.2	01.2	206	01.8 ¹⁰⁴	-8 52.4	97	30	17 07	32	18 01	45 41	34 61		
10	334	02.1	01.9	220	31.3 ¹⁰⁵	42.7	97	20	22	45	11	38 44	44 57		
11	349	02.1	-17 02.7	235	00.7 ¹⁰⁴	-8 32.9	98	10 N	17 35	17 57	18 22	13 31 48	0 52 53		
12	4	02.0	-17 03.4	249	30.1 ¹⁰⁴	-8 23.0	99	0	17 47	18 09	18 34	13 25 52	0 59 51		
13	19	02.0	04.1	263	59.5 ¹⁰⁴	13.1	99	10 S	18 00	22	18 48	19 55	1 06 48		
14	34	01.9	04.8	278	28.9 ¹⁰⁴	-8 03.1	100	20	13	37	19 04	13 58	14 45		
15	49	01.8	05.5	292	58.3 ¹⁰⁴	-7 53.1	100	30	29	18 55	26	06 62	23 41		
16	64	01.8	06.2	307	27.6 ¹⁰³	43.0	101	35	38	19 06	39	13 02 64	28 39		
17	79	01.7	-17 06.9	321	56.9 ¹⁰³	-7 32.9	101	40	18 49	19 19	19 55	12 57 67	1 34 36		
18	94	01.7	-17 07.6	336	26.2 ¹⁰³	-7 22.7	102	45	19 01	19 34	20 16	12 51 70	1 41 33		
19	109	01.6	08.3	350	55.5 ¹⁰³	12.4	103	50	16	19 54	44	45 73	49 30		
20	124	01.6	09.0	5	24.7 ¹⁰²	-7 02.1	103	52	23	20 04	20 58	41 76	53 28		
21	139	01.5	09.7	19	53.9 ¹⁰²	-6 51.7	104	54	31	15	21 15	38 77	1 57 26		
22	154	01.4	10.4	34	23.1 ¹⁰²	41.3	104	56	40	27	21 36	34 80	2 01 25		
23	169	01.4	11.1	48	52.3 ¹⁰²	30.8	105	58	19 50	20 42	22 03	30 82	06 23		
24	184	01.3	-17 11.8	63	21.5 ¹⁰²	-6 20.3	105	60 S	20 01	21 00	22 48	12 25 85	2 12 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 42 ^m 2		Mag: -4.0 PMG: 14 ^h 29 ^m		Mag: +0.4 PMG: 16 ^h 55 ^m		Mag: -1.7 PMG: 9 ^h 33 ^m		Mag: +0.5 PMG: 13 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	48	35.8	142	50.4	-25	23.9	106	11.6	-21	56.9
1	63	38.3	157	49.6	24.1	121	12.1	56.5	231	25.4
2	78	40.7	172	48.7	24.2	136	12.6	56.0	246	27.4
3	93	43.2	187	47.9	24.4	151	13.2	55.6	261	29.4
4	108	45.7	202	47.0	24.6	166	13.7	55.2	276	31.4
5	123	48.1	217	46.2	-25	24.7	181	14.3	-21	54.7
6	138	50.6	232	45.3	-25	24.9	196	14.8	-21	54.3
7	153	53.0	247	44.5	25.1	211	15.4	53.9	306	35.4
8	168	55.5	262	43.6	25.2	226	15.9	53.4	321	37.4
9	183	58.0	277	42.8	25.4	241	16.5	53.0	336	39.4
10	199	00.4	292	41.9	25.5	256	17.0	52.6	351	41.4
11	214	02.9	307	41.1	-25	25.7	271	17.6	-21	52.1
12	229	05.4	322	40.3	-25	25.9	286	18.1	-21	51.7
13	244	07.8	337	39.4	26.0	301	18.6	51.3	306	37.4
14	259	10.3	352	38.6	26.2	316	19.2	50.8	321	37.4
15	274	12.8	7	37.7	26.3	331	19.7	50.4	336	39.4
16	289	15.2	22	36.9	26.5	346	20.3	50.0	351	41.4
17	304	17.7	37	36.0	-25	26.6	1	20.8	-21	49.5
18	319	20.2	52	35.2	-25	26.8	16	21.4	-21	49.1
19	334	22.6	67	34.3	26.9	31	21.9	48.6	126	59.5
20	349	25.1	82	33.5	27.1	46	22.5	48.2	142	01.6
21	4	27.5	97	32.6	27.2	61	23.0	47.8	157	03.6
22	19	30.0	112	31.8	27.4	76	23.6	47.3	172	05.6
23	34	32.5	127	30.9	27.5	91	24.1	46.9	187	07.6
24	49	34.9	142	30.1	-25	27.6	106	24.7	-21	46.4
Dif	—		-8 -2		+5 +4		+20 -2		+22 0	

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: 10 ^d 3 PHE { SD: 16:0 PMG: 20 ^h 29 ^m															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	01.3	-17	11.8	63	21.5	-6	20.3	60 N	6 08	6 59	7 46	14 44	19	1 05	86			
1	199	01.2		12.5	77	50.6 ¹⁰¹	-6	09.7 ¹⁰⁶	58	04	52	36	42	21	08	84			
2	214	01.2		13.2	92	19.7 ¹⁰¹	-5	59.1 ¹⁰⁶	56	6 00	45	27	40	24	11	81			
3	229	01.1		13.9	106	48.8 ¹⁰¹		48.4 ¹⁰⁷	54	5 57	40	19	38	26	14	77			
4	244	01.1		14.6	121	17.8 ¹⁰⁰		37.7 ¹⁰⁷	52	54	35	12	37	27	17	77			
5	259	01.0	-17	15.3	135	46.9 ¹⁰¹	-5	26.9 ¹⁰⁸	50	5 51	6 30	7 05	14 35	30	1 19	75			
6	274	00.9	-17	16.0	150	15.9 ¹⁰⁰	-5	16.1 ¹⁰⁸	45	5 45	6 20	6 51	14 32	33	1 24	71			
7	289	00.9		16.7	164	44.8 ⁹⁹	-5	05.2 ¹⁰⁹	40	39	11	40	30	36	28	68			
8	304	00.8		17.4	179	13.8 ¹⁰⁰	-4	54.3 ¹⁰⁹	35	33	6 03	30	28	39	32	65			
9	319	00.7		18.1	193	42.7 ⁹⁹		43.4 ¹⁰⁹	30	27	5 56	21	26	41	35	63			
10	334	00.7		18.8	208	11.6 ⁹⁹		32.4 ¹¹⁰	20	17	43	6 06	22	46	41	58			
11	349	00.6	-17	19.5	222	40.4 ⁹⁸	-4	21.4 ¹¹⁰	10 N	5 06	5 31	5 53	14 19	50	1 45	56			
12	4	00.5	-17	20.1	237	09.2 ⁹⁸	-4	10.3 ¹¹¹	0	4 54	5 19	5 40	14 17	52	1 50	52			
13	19	00.5		20.8	251	38.0 ⁹⁸	-3	59.2 ¹¹¹	10 S	40	5 06	28	14	56	54	49			
14	34	00.4		21.5	266	06.8 ⁹⁸		48.0 ¹¹²	20	23	4 51	5 14	11	60	1 59	45			
15	49	00.3		22.2	280	35.5 ⁹⁷		36.8 ¹¹²	30	4 02	33	4 59	08	64	2 04	41			
16	64	00.3		22.9	295	04.2 ⁹⁷		25.6 ¹¹²	35	3 48	22	49	06	67	07	38			
17	79	00.2	-17	23.6	309	32.9 ⁹⁷	-3	14.3 ¹¹³	40	3 32	4 09	4 39	14 04	69	2 10	36			
18	94	00.1	-17	24.3	324	01.5 ⁹⁶	-3	03.0 ¹¹³	45	3 11	3 53	4 26	14 01	73	2 14	33			
19	109	00.1		25.0	338	30.1 ⁹⁶	-2	51.7 ¹¹³	50	2 44	33	11	13	58	77	19	29		
20	124	00.0		25.7	352	58.7 ⁹⁶		40.3 ¹¹⁴	52	29	24	4 04	57	78	21	27			
21	138	59.9		26.4	7	27.2 ⁹⁵		28.9 ¹¹⁴	54	2 13	13	3 56	55	81	23	26			
22	153	59.9		27.1	21	55.7 ⁹⁵		17.5 ¹¹⁴	56	1 52	3 00	47	54	82	26	23			
23	168	59.8		27.7	36	24.1 ⁹⁴	-2	06.1 ¹¹⁴	58	1 24	2 45	37	52	85	29	21			
24	183	59.7	-17	28.4	50	52.5 ⁹⁴	-1	54.6 ¹¹⁵	60 S	0 39	2 28	3 26	13 50	88	2 32	19			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 38 ^m 3		Mag: -4.0 PMG: 14 ^h 31 ^m			Mag: +0.5 PMG: 16 ^h 54 ^m			Mag: -1.7 PMG: 9 ^h 30 ^m			Mag: +0.5 PMG: 13 ^h 37 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	49	34.9	142	30.1	-25	27.6	106	24.7	-21	46.4	217	11.6	-4	04.7			
1	64	37.4	157	29.2		27.8	121	25.2		46.0	232	13.6		04.9			
2	79	39.9	172	28.4		27.9	136	25.7		45.6	247	15.6		05.1			
3	94	42.3	187	27.6		28.1	151	26.3		45.1	262	17.7		05.3			
4	109	44.8	202	26.7		28.2	166	26.8		44.7	277	19.7		05.4			
5	124	47.3	217	25.9	-25	28.3	181	27.4	-21	44.2	292	21.7	-4	05.6			
6	139	49.7	232	25.0	-25	28.5	196	27.9	-21	43.8	307	23.7	-4	05.8			
7	154	52.2	247	24.2		28.6	211	28.5		43.3	322	25.7		06.0			
8	169	54.7	262	23.3		28.7	226	29.0		42.9	337	27.7		06.2			
9	184	57.1	277	22.5		28.9	241	29.6		42.5	352	29.7		06.4			
10	199	59.6	292	21.6		29.0	256	30.1		42.0	7	31.7		06.6			
11	215	02.0	307	20.8	-25	29.1	271	30.7	-21	41.6	22	33.7	-4	06.7			
12	230	04.5	322	19.9	-25	29.2	286	31.2	-21	41.1	37	35.8	-4	06.9			
13	245	07.0	337	19.1		29.4	301	31.8		40.7	52	37.8		07.1			
14	260	09.4	352	18.2		29.5	316	32.3		40.2	67	39.8		07.3			
15	275	11.9	7	17.4		29.6	331	32.9		39.8	82	41.8		07.5			
16	290	14.4	22	16.5		29.7	346	33.4		39.3	97	43.8		07.7			
17	305	16.8	37	15.7	-25	29.9	1	34.0	-21	38.9	112	45.8	-4	07.9			
18	320	19.3	52	14.9	-25	30.0	16	34.5	-21	38.5	127	47.8	-4	08.0			
19	335	21.8	67	14.0		30.1	31	35.1		38.0	142	49.9		08.2			
20	350	24.2	82	13.2		30.2	46	35.6		37.6	157	51.9		08.4			
21	5	26.7	97	12.3		30.3	61	36.2		37.1	172	53.9		08.6			
22	20	29.1	112	11.5		30.4	76	36.7		36.7	187	55.9		08.8			
23	35	31.6	127	10.6		30.5	91	37.2		36.2	202	57.9		09.0			
24	50	34.1	142	09.8	-25	30.7	106	37.8	-21	35.8	217	59.9	-4	09.1			
Dif	—		-8			-1	+5			+4	+20			-2	+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: 11 ^d 3 PHE { 4 ^h : 59'8 12 ^h : 60'1 20 ^h : 60'4 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	59.7	-17	28.4	50	52.5	-1 54.6	60 N	15 39	16 27	17 18	15 03 20	2 31 89					
1	198	59.7		29.1	65	20.9 ⁹⁴	43.1 ¹¹⁵	58	49	34	22	03 23	32 86					
2	213	59.6		29.8	79	49.2 ⁹³	31.5 ¹¹⁶	56	15 59	40	25	04 25	32 84					
3	228	59.5		30.5	94	17.5 ⁹³	20.0 ¹¹⁵	54	16 07	46	29	04 27	33 82					
4	243	59.4		31.2	108	45.8 ⁹³	-1 08.4 ¹¹⁶	52	14	51	32	04 29	34 79					
5	258	59.4	-17	31.9	123	14.0 ⁹²	-0 56.8 ¹¹⁶	50	16 21	16 56	17 35	15 05 30	2 34 78					
6	273	59.3	-17	32.5	137	42.2 ⁹²	-0 45.2 ¹¹⁶	45	16 35	17 06	17 42	15 05 35	2 35 74					
7	288	59.2		33.2	152	10.3 ⁹¹	33.5 ¹¹⁷	40	47	16	48	06 38	36 71					
8	303	59.2		33.9	166	38.4 ⁹¹	21.9 ¹¹⁶	35	16 57	24	17 54	07 40	37 68					
9	318	59.1		34.6	181	06.5 ⁹¹	-0 10.2 ¹¹⁷	30	17 06	31	18 00	07 43	38 65					
10	333	59.0		35.3	195	34.5 ⁹⁰	+0 01.5 ¹¹⁷	20	21	44	11	08 47	39 61					
11	348	58.9	-17	36.0	210	02.5 ⁹⁰	+0 13.2 ¹¹⁷	10 N	17 35	17 57	18 22	15 09 51	2 41 57					
12	3	58.9	-17	36.6	224	30.4 ⁸⁹	+0 25.0 ¹¹⁸	0	17 48	18 09	18 35	15 09 55	2 42 53					
13	18	58.8		37.3	238	58.3 ⁸⁹	36.7 ¹¹⁷	10 S	18 01	23	18 49	10 58	43 49					
14	33	58.7		38.0	253	26.1 ⁸⁸	+0 48.4 ¹¹⁷	20	15	38	19 06	11 62	44 46					
15	48	58.6		38.7	267	53.9 ⁸⁸	+1 00.2 ¹¹⁸	30	31	18 57	28	12 66	45 42					
16	63	58.6		39.4	282	21.7 ⁸⁸	12.0 ¹¹⁸	35	40	19 08	41	13 69	45 40					
17	78	58.5	-17	40.0	296	49.4 ⁸⁷	+1 23.7 ¹¹⁷	40	18 51	19 21	19 58	15 13 72	2 46 37					
18	93	58.4	-17	40.7	311	17.0 ⁸⁶	+1 35.5 ¹¹⁸	45	19 04	19 37	20 20	15 14 75	2 47 33					
19	108	58.3		41.4	325	44.6 ⁸⁶	47.3 ¹¹⁸	50	19	19 58	20 48	15 79	48 30					
20	123	58.3		42.1	340	12.2 ⁸⁶	+1 59.1 ¹¹⁸	52	27	20 08	21 03	15 82	48 28					
21	138	58.2		42.7	354	39.7 ⁸⁵	+2 10.9 ¹¹⁸	54	35	19	21	16 83	49 26					
22	153	58.1		43.4	9	07.2 ⁸⁵	22.7 ¹¹⁸	56	44	32	21 43	16 86	49 24					
23	168	58.0		44.1	23	34.6 ⁸⁴	34.4 ¹¹⁷	58	19 55	20 48	22 14	17 88	50 22					
24	183	57.9	-17	44.8	38	01.9 ⁸³	+2 46.2 ¹¹⁸	60 S	20 07	21 07	23 13	15 18 91	2 51 19					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 34 ^m 3			Mag: -4.1 PMG: 14 ^h 32 ^m			Mag: +0.5 PMG: 16 ^h 53 ^m			Mag: -1.7 PMG: 9 ^h 27 ^m			Mag: +0.5 PMG: 13 ^h 33 ^m					
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	50	34.1	142	09.8	-25	30.7	106	37.8	-21	35.8	217	59.9	-4	09.1	156	12.3	-21	18.6
1	65	36.5	157	08.9		30.8	121	38.3		35.3	233	01.9		09.3	171	14.4		18.7
2	80	39.0	172	08.1		30.9	136	38.9		34.9	248	04.0		09.5	186	16.6		18.7
3	95	41.5	187	07.2		31.0	151	39.4		34.4	263	06.0		09.7	201	18.8		18.7
4	110	43.9	202	06.4		31.1	166	40.0		34.0	278	08.0		09.9	216	21.0		18.8
5	125	46.4	217	05.5	-25	31.2	181	40.5	-21	33.5	293	10.0	-4	10.1	231	23.1	-21	18.8
6	140	48.9	232	04.7	-25	31.3	196	41.1	-21	33.1	308	12.0	-4	10.2	246	25.3	-21	18.8
7	155	51.3	247	03.8		31.4	211	41.6		32.6	323	14.0		10.4	261	27.5		18.9
8	170	53.8	262	03.0		31.5	226	42.2		32.2	338	16.0		10.6	276	29.6		18.9
9	185	56.3	277	02.1		31.6	241	42.7		31.7	353	18.1		10.8	291	31.8		18.9
10	200	58.7	292	01.3		31.7	256	43.3		31.2	8	20.1		11.0	306	34.0		19.0
11	216	01.2	307	00.5	-25	31.8	271	43.8	-21	30.8	23	22.1	-4	11.2	321	36.1	-21	19.0
12	231	03.6	321	59.6	-25	31.9	286	44.4	-21	30.3	38	24.1	-4	11.3	336	38.3	-21	19.0
13	246	06.1	336	58.8		32.0	301	44.9		29.9	53	26.1		11.5	351	40.5		19.1
14	261	08.6	351	57.9		32.1	316	45.5		29.4	68	28.1		11.7	6	42.7		19.1
15	276	11.0	6	57.1		32.2	331	46.0		29.0	83	30.1		11.9	21	44.8		19.1
16	291	13.5	21	56.2		32.3	346	46.6		28.5	98	32.2		12.1	36	47.0		19.2
17	306	16.0	36	55.4	-25	32.4	1	47.1	-21	28.1	113	34.2	-4	12.3	51	49.2	-21	19.2
18	321	18.4	51	54.5	-25	32.4	16	47.7	-21	27.6	128	36.2	-4	12.4	66	51.3	-21	19.2
19	336	20.9	66	53.7		32.5	31	48.2		27.2	143	38.2		12.6	81	53.5		19.3
20	351	23.4	81	52.8		32.6	46	48.8		26.7	158	40.2		12.8	96	55.7		19.3
21	6	25.8	96	52.0		32.7	61	49.3		26.2	173	42.2		13.0	111	57.9		19.3
22	21	28.3	111	51.1		32.8	76	49.9		25.8	188	44.3		13.2	127	00.0		19.4
23	36	30.7	126	50.3		32.9	91	50.4		25.3	203	46.3		13.4	142	02.2		19.4
24	51	33.2	141	49.5	-25	32.9	106	51.0	-21	24.9	218	48.3	-4	13.5	157	04.4	-21	19.4
Dif	—			-8	-1		+5	+5		+20	-2		+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: 12 ^d 3 PHE { 4 ^h : 60'6 12 ^h : 60'9 20 ^h : 61'1 Rº: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	57.9	-17	44.8	38	01.9	+2	46.2	60 N	6	12	7	03	7	51	15	23
1	198	57.9		45.4	52	29.3	84	+2	58.0	58	08	6	56	40	26	25	3
2	213	57.8		46.1	66	56.5	82	+3	09.8	56	04	49	31	29	28	56	87
3	228	57.7		46.8	81	23.7	82		21.5	54	6	00	43	23	31	30	55
4	243	57.6		47.5	95	50.9	82		33.3	52	5	57	38	15	33	32	53
5	258	57.5	-17	48.1	110	18.0	81	+3	45.1	50	5	54	6	33	7	08	3
6	273	57.5	-17	48.8	124	45.1	81	+3	56.8	45	5	47	6	22	6	54	3
7	288	57.4		49.5	139	12.1	80	+4	08.5	40	41		13	42	44	40	47
8	303	57.3		50.1	153	39.0	79		20.2	35	35	6	05	32	47	43	45
9	318	57.2		50.8	168	05.9	79		31.9	30	29	5	58	23	50	46	43
10	333	57.1		51.5	182	32.8	79		43.6	20	18	44	6	07	15	55	40
11	348	57.1	-17	52.2	196	59.6	78	+4	55.3	10 N	5	06	5	32	5	54	3
12	3	57.0	-17	52.8	211	26.3	77	+5	06.9	0	4	54	5	19	5	41	3
13	18	56.9		53.5	225	53.0	77		18.5	10 S	40	5	05	28	08	61	32
14	33	56.8		54.2	240	19.6	76		30.1	20	22	4	50	5	14	13	30
15	48	56.7		54.8	254	46.2	76		41.7	30	4	00	31	4	57	18	27
16	63	56.6		55.5	269	12.7	75	+5	53.2	35	3	46	20	48	22	70	25
17	78	56.6	-17	56.2	283	39.2	75	+6	04.7	40	3	30	4	07	4	37	3
18	93	56.5	-17	56.8	298	05.6	74	+6	16.2	45	3	08	3	50	4	24	3
19	108	56.4		57.5	312	32.0	74		27.6	50	2	39	30	08	34	81	18
20	123	56.3		58.1	326	58.3	73		39.1	52	25	20	4	01	37	82	16
21	138	56.2		58.8	341	24.5	72	+6	50.4	54	2	07	3	08	3	53	15
22	153	56.1	-17	59.5	355	50.7	72	+7	01.8	56	1	44	2	55	43	42	13
23	168	56.0	-18	00.1	10	16.8	71		13.1	58	1	14	40	33	45	90	12
24	183	55.9	-18	00.8	24	42.9	71	+7	24.4	60 S	0	15	2	21	3	21	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 30 ^m 4		Mag: -4.1 PMG: 14 ^h 34 ^m		Mag: +0.5 PMG: 16 ^h 52 ^m		Mag: -1.7 PMG: 9 ^h 24 ^m		Mag: +0.5 PMG: 13 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	51	33.2	141	49.5	-25	32.9	106	51.0	-21	24.9
1	66	35.7	156	48.6		33.0	121	51.5		24.4
2	81	38.1	171	47.8		33.1	136	52.1		24.0
3	96	40.6	186	46.9		33.2	151	52.6		23.5
4	111	43.1	201	46.1		33.3	166	53.2		23.0
5	126	45.5	216	45.2	-25	33.3	181	53.7	-21	22.6
6	141	48.0	231	44.4	-25	33.4	196	54.3	-21	22.1
7	156	50.5	246	43.5		33.5	211	54.9		21.7
8	171	52.9	261	42.7		33.5	226	55.4		21.2
9	186	55.4	276	41.8		33.6	241	56.0		20.7
10	201	57.9	291	41.0		33.7	256	56.5		20.3
11	217	00.3	306	40.1	-25	33.7	271	57.1	-21	19.8
12	232	02.8	321	39.3	-25	33.8	286	57.6	-21	19.3
13	247	05.2	336	38.5		33.9	301	58.2		18.9
14	262	07.7	351	37.6		33.9	316	58.7		18.4
15	277	10.2	6	36.8		34.0	331	59.3		18.0
16	292	12.6	21	35.9		34.1	346	59.8		17.5
17	307	15.1	36	35.1	-25	34.1	2	00.4	-21	17.0
18	322	17.6	51	34.2	-25	34.2	17	00.9	-21	16.6
19	337	20.0	66	33.4		34.2	32	01.5		16.1
20	352	22.5	81	32.5		34.3	47	02.0		15.6
21	7	25.0	96	31.7		34.3	62	02.6		15.2
22	22	27.4	111	30.8		34.4	77	03.1		14.7
23	37	29.9	126	30.0		34.4	92	03.7		14.2
24	52	32.4	141	29.2	-25	34.5	107	04.2	-21	13.8
Dif	—		-8		-1		+6		+5	
							+20		-2	
									+22	
									0	

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: 13 ^d 3 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 R°: 60 ^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	55.9	-18 00.8	24	42.9	+7 24.4		60 N	15 34	16 23	17 14	15 46 28	5 32 92		
1	198	55.9	01.5	39	08.9	70 35.6 ¹¹²		58	45	30	18	51 31	27 89		
2	213	55.8	02.1	53	34.9	70 46.8 ¹¹²		56	15 55	37	22	15 57 33	23 87		
3	228	55.7	02.8	68	00.8	69 +7 57.9 ¹¹¹		54	16 03	43	26	16 01 35	19 85		
4	243	55.6	03.4	82	26.6	68 +8 09.0 ¹¹¹		52	11	48	29	05 37	15 83		
5	258	55.5	-18 04.1	96	52.4	68 +8 20.1 ¹¹¹		50	16 18	16 53	17 33	16 09 39	5 12 81		
6	273	55.4	-18 04.8	111	18.1	67 +8 31.1 ¹¹⁰		45	16 33	17 04	17 40	16 17 42	5 05 78		
7	288	55.3	05.4	125	43.8	67 42.0 ¹⁰⁹		40	45	14	47	24 45	5 00 74		
8	303	55.2	06.1	140	09.4	66 +8 52.9 ¹⁰⁹		35	16 56	22	53	30 48	4 55 71		
9	318	55.1	06.7	154	35.0	66 +9 03.8 ¹⁰⁹		30	17 05	30	17 59	36 49	51 69		
10	333	55.1	07.4	169	00.5	65 14.6 ¹⁰⁸		20	21	44	18 10	45 53	43 65		
11	348	55.0	-18 08.0	183	25.9	64 +9 25.3 ¹⁰⁷		10 N	17 35	17 57	18 22	16 53 56	4 37 61		
12	3	54.9	-18 08.7	197	51.3	64 +9 36.0 ¹⁰⁷		0	17 48	18 10	18 35	17 01 59	4 31 58		
13	18	54.8	09.3	212	16.6	63 46.6 ¹⁰⁶		10 S	18 01	23	18 50	09 62	25 54		
14	33	54.7	10.0	226	41.9	63 +9 57.1 ¹⁰⁵		20	16	39	19 07	17 66 18	51		
15	48	54.6	10.7	241	07.1	62 +10 07.6 ¹⁰⁵		30	32	18 58	30	27 69	11 47		
16	63	54.5	11.3	255	32.3	62 18.0 ¹⁰⁴		35	42	19 10	19 44	32 72	07 45		
17	78	54.4	-18 12.0	269	57.4	61 +10 28.4 ¹⁰⁴		40	18 53	19 24	20 01	17 39 74	4 02 42		
18	93	54.3	-18 12.6	284	22.4	60 +10 38.7 ¹⁰³		45	19 07	19 40	20 23	17 46 77	3 56 40		
19	108	54.2	13.3	298	47.4	60 48.9 ¹⁰²		50	23	20 02	20 53	55 81	50 35		
20	123	54.1	13.9	313	12.3	59 +10 59.0 ¹⁰¹		52	30	12	21 09	17 59 83	47 34		
21	138	54.0	14.6	327	37.2	59 +11 09.1 ¹⁰¹		54	39	24	27	18 04 84	43 32		
22	153	53.9	15.2	342	02.0	58 19.1 ¹⁰⁰		56	19 49	37	21 51	09 86	40 29		
23	168	53.8	15.9	356	26.8	58 29.0 ⁹⁹		58	20 00	20 54	22 25	15 89	35 28		
24	183	53.7	-18 16.5	10	51.5	57 +11 38.9 ⁹⁹		60 S	20 12	21 14	** **	18 21 92	3 31 25		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 26 ^m 5			Mag: -4.1 PMG: 14 ^h 35 ^m			Mag: +0.5 PMG: 16 ^h 51 ^m			Mag: -1.8 PMG: 9 ^h 20 ^m			Mag: +0.5 PMG: 13 ^h 26 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	52	32.4	141 29.2	-25 34.5	107 04.2	-21 13.8	219 36.7	-4 17.9	157 56.4	-21 20.3					
1	67	34.8	156 28.3	34.5	122 04.8	13.3	234 38.7	18.1	172 58.6	20.3					
2	82	37.3	171 27.5	34.6	137 05.3	12.8	249 40.7	18.3	188 00.8	20.3					
3	97	39.7	186 26.6	34.6	152 05.9	12.4	264 42.8	18.5	203 02.9	20.4					
4	112	42.2	201 25.8	34.7	167 06.5	11.9	279 44.8	18.6	218 05.1	20.4					
5	127	44.7	216 24.9	-25 34.7	182 07.0	-21 11.4	294 46.8	-4 18.8	233 07.3	-21 20.4					
6	142	47.1	231 24.1	-25 34.8	197 07.6	-21 11.0	309 48.8	-4 19.0	248 09.4	-21 20.5					
7	157	49.6	246 23.2	34.8	212 08.1	10.5	324 50.8	19.2	263 11.6	20.5					
8	172	52.1	261 22.4	34.8	227 08.7	10.0	339 52.9	19.4	278 13.8	20.5					
9	187	54.5	276 21.6	34.9	242 09.2	09.6	354 54.9	19.6	293 15.9	20.6					
10	202	57.0	291 20.7	34.9	257 09.8	09.1	9 56.9	19.7	308 18.1	20.6					
11	217	59.5	306 19.9	-25 35.0	272 10.3	-21 08.6	24 58.9	-4 19.9	323 20.3	-21 20.6					
12	233	01.9	321 19.0	-25 35.0	287 10.9	-21 08.1	40 00.9	-4 20.1	338 22.4	-21 20.7					
13	248	04.4	336 18.2	35.0	302 11.4	07.7	55 02.9	20.3	353 24.6	20.7					
14	263	06.8	351 17.3	35.1	317 12.0	07.2	70 05.0	20.5	8 26.8	20.7					
15	278	09.3	6 16.5	35.1	332 12.5	06.7	85 07.0	20.6	23 28.9	20.8					
16	293	11.8	21 15.6	35.1	347 13.1	06.3	100 09.0	20.8	38 31.1	20.8					
17	308	14.2	36 14.8	-25 35.1	2 13.7	-21 05.8	115 11.0	-4 21.0	53 33.3	-21 20.8					
18	323	16.7	51 14.0	-25 35.2	17 14.2	-21 05.3	130 13.1	-4 21.2	68 35.4	-21 20.9					
19	338	19.2	66 13.1	35.2	32 14.8	04.8	145 15.1	21.4	83 37.6	20.9					
20	353	21.6	81 12.3	35.2	47 15.3	04.4	160 17.1	21.5	98 39.8	20.9					
21	8	24.1	96 11.4	35.2	62 15.9	03.9	175 19.1	21.7	113 42.0	21.0					
22	23	26.6	111 10.6	35.3	77 16.4	03.4	190 21.1	21.9	128 44.1	21.0					
23	38	29.0	126 09.7	35.3	92 17.0	02.9	205 23.2	22.1	143 46.3	21.0					
24	53	31.5	141 08.9	-25 35.3	107 17.5	-21 02.5	220 25.2	-4 22.3	158 48.5	-21 21.1					
Dif	—		-8	0	+6	+5	+20	-2	+22	0					

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: 14 ^d 3 SD: 16:7 PMG: *** **m	PHE { 4 ^h : 61/5 12 ^h : 61/5 20 ^h : 61/5 R°: ***	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
	hG ☉	Dec	hG ☾															
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	53.7	-18	16.5	10	51.5	+11	38.9	98	60 N	6	16	7	07	7	56	16	14
1	198	53.6		17.2	25	16.2		48.7	98	58	11	7	00		45	22	38	6
2	213	53.6		17.8	39	40.8		58.3	96	56	07	6	53		35	30	40	50
3	228	53.5		18.5	54	05.4		07.9	96	54	04		47		26	36	42	44
4	243	53.4		19.1	68	29.9		17.5	96	52	6	00	41		19	42	44	38
5	258	53.3	-18	19.7	82	54.3		26.9	94	50	5	57	6	36	7	12	16	48
6	273	53.2	-18	20.4	97	18.7		36.2	93	45	5	49	6	25	6	57	16	59
7	288	53.1		21.0	111	43.1		45.5	93	40	43		15		44	17	09	50
8	303	53.0		21.7	126	07.4		54.7	92	35	36	6	07		34	18	52	06
9	318	52.9		22.3	140	31.6		03.7	90	30	30	5	59		24	25	54	6
10	333	52.8		23.0	154	55.8		12.7	90	20	19		45		6	08	38	56
11	348	52.7	-18	23.6	169	20.0		21.6	89	10 N	5	07	5	32	5	54	17	49
12	3	52.6	-18	24.3	183	44.1		30.4	88	0	4	54	5	19	5	41	18	00
13	18	52.5		24.9	198	08.2		39.1	87	10 S	39	5	05		27	11	63	19
14	33	52.4		25.5	212	32.2		47.7	86	20	4	22	4	49	5	13	23	65
15	48	52.3		26.2	226	56.2		56.2	85	30	3	59	30	4	56	36	68	4
16	63	52.2		26.8	241	20.1		04.6	84	35	45		18		46	44	70	52
17	78	52.1	-18	27.5	255	44.0		12.9	83	40	3	27	4	05	4	35	18	53
18	93	52.0	-18	28.1	270	07.8		21.1	82	45	3	05	3	48	4	22	19	03
19	108	51.9		28.7	284	31.6		29.2	81	50	2	35	27	4	06	16	76	25
20	123	51.7		29.4	298	55.4		37.2	80	52	20		16		3	58	22	78
21	138	51.6		30.0	313	19.1		45.0	78	54	2	01	3	04	49	28	80	15
22	153	51.5		30.6	327	42.8		52.8	78	56	1	37	2	51	40	35	82	09
23	168	51.4		31.3	342	06.5		00.5	77	58	1	03	34	29	44	83	4	03
24	183	51.3	-18	31.9	356	30.1		08.0	75	60 S	** *	2	15	3	16	19	53	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 22 ^m 6		Mag: -4.1 PMG: 14 ^h 36 ^m		Mag: +0.5 PMG: 16 ^h 50 ^m		Mag: -1.8 PMG: 9 ^h 17 ^m		Mag: +0.5 PMG: 13 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	53	31.5	141	08.9	-25	35.3	107	17.5	-21	02.5
1	68	34.0	156	08.1		35.3	122	18.1		02.0
2	83	36.4	171	07.2		35.3	137	18.7		01.5
3	98	38.9	186	06.4		35.4	152	19.2		01.0
4	113	41.3	201	05.5		35.4	167	19.8		00.6
5	128	43.8	216	04.7	-25	35.4	182	20.3	-21	00.1
6	143	46.3	231	03.9	-25	35.4	197	20.9	-20	59.6
7	158	48.7	246	03.0		35.4	212	21.4		59.1
8	173	51.2	261	02.2		35.4	227	22.0		58.7
9	188	53.7	276	01.3		35.4	242	22.5		58.2
10	203	56.1	291	00.5		35.4	257	23.1		57.7
11	218	58.6	305	59.6	-25	35.4	272	23.7	-20	57.2
12	234	01.1	320	58.8	-25	35.4	287	24.2	-20	56.7
13	249	03.5	335	58.0		35.4	302	24.8		56.3
14	264	06.0	350	57.1		35.4	317	25.3		55.8
15	279	08.5	5	56.3		35.4	332	25.9		55.3
16	294	10.9	20	55.4		35.4	347	26.4		54.8
17	309	13.4	35	54.6	-25	35.4	2	27.0	-20	54.3
18	324	15.8	50	53.8	-25	35.4	17	27.6	-20	53.9
19	339	18.3	65	52.9		35.4	32	28.1		53.4
20	354	20.8	80	52.1		35.4	47	28.7		52.9
21	9	23.2	95	51.2		35.4	62	29.2		52.4
22	24	25.7	110	50.4		35.4	77	29.8		51.9
23	39	28.2	125	49.6		35.4	92	30.3		51.4
24	54	30.6	140	48.7	-25	35.4	107	30.9	-20	51.0
Dif	—		-8		0		+6		+5	

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: 15 ^d 3 PHE { SD: 16:7 PMG: 0 ^h 15 ^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	183	51.3	-18	31.9	356	30.1	+15	08.0	60 N	15 30	16 19	17 11	16 49 47		8 33 81			
1	198	51.2		32.5	10	53.6		15.4	58	41	27	15	17 00 48		23 79			
2	213	51.1		33.2	25	17.2		22.8	56	15 51	34	20	10 49		14 77			
3	228	51.0		33.8	39	40.7		30.0	54	16 00	40	23	18 51		8 06 76			
4	243	50.9		34.4	54	04.2		37.1	52	08	46	27	26 51		7 59 74			
5	258	50.8	-18	35.1	68	27.6	+15	44.0	50	16 15	16 51	17 30	17 33 52		7 52 74			
6	273	50.7	-18	35.7	82	51.0	+15	50.9	45	16 31	17 03	17 38	17 47 54		7 38 72			
7	288	50.6		36.3	97	14.4	+15	57.6	40	43	12	45	17 59 56		27 70			
8	303	50.5		37.0	111	37.8	+16	04.2	35	16 54	21	52	18 10 56		17 68			
9	318	50.4		37.6	126	01.1		10.7	30	17 04	29	17 58	19 57		7 09 67			
10	333	50.3		38.2	140	24.4		17.1	20	20	43	18 10	34 59		6 54 65			
11	348	50.2	-18	38.9	154	47.7	+16	23.3	10 N	17 35	17 57	18 22	18 48 60		6 41 63			
12	3	50.0	-18	39.5	169	11.0	+16	29.5	0	17 48	18 10	18 35	19 01 62		6 29 61			
13	18	49.9		40.1	183	34.2		35.5	10 S	18 02	24	18 50	14 63		17 60			
14	33	49.8		40.7	197	57.4		41.4	20	17	18 40	19 08	28 64		6 04 58			
15	48	49.7		41.4	212	20.6		47.1	30	34	19 00	32	44 66		5 50 55			
16	63	49.6		42.0	226	43.8		52.7	35	44	12	19 46	19 54 66		41 54			
17	78	49.5	-18	42.6	241	07.0	+16	58.2	40	18 56	19 26	20 04	20 04 68		5 32 52			
18	93	49.4	-18	43.2	255	30.2	+17	03.6	45	19 09	19 43	20 27	20 17 68		5 20 51			
19	108	49.3		43.9	269	53.3		08.8	50	26	20 05	20 58	32 70		07 48			
20	123	49.2		44.5	284	16.4		13.9	52	34	16	21 14	40 70		5 00 48			
21	138	49.0		45.1	298	39.6		18.9	54	43	28	34	48 71		4 53 46			
22	153	48.9		45.7	313	02.7		23.8	56	19 53	20 43	21 59	20 57 72		46 44			
23	168	48.8		46.4	327	25.8		28.5	58	20 04	21 00	22 38	21 07 73		37 43			
24	183	48.7	-18	47.0	341	48.9	+17	33.1	60 S	20 18	21 21	** **	21 19 74		4 27 40			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 18 ^m 6		Mag: -4.1 PMG: 14 ^h 38 ^m				Mag: +0.5 PMG: 16 ^h 49 ^m				Mag: -1.8 PMG: 9 ^h 14 ^m				Mag: +0.5 PMG: 13 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	30.6	140	48.7	-25	35.4	107	30.9	-20	51.0	221	13.7	-4	26.6	159	40.4	-21	21.9
1	69	33.1	155	47.9		35.4	122	31.5		50.5	236	15.7		26.8	174	42.6		21.9
2	84	35.6	170	47.0		35.4	137	32.0		50.0	251	17.8		26.9	189	44.8		21.9
3	99	38.0	185	46.2		35.3	152	32.6		49.5	266	19.8		27.1	204	46.9		22.0
4	114	40.5	200	45.4		35.3	167	33.1		49.0	281	21.8		27.3	219	49.1		22.0
5	129	42.9	215	44.5	-25	35.3	182	33.7	-20	48.5	296	23.8	-4	27.5	234	51.3	-21	22.0
6	144	45.4	230	43.7	-25	35.3	197	34.3	-20	48.0	311	25.8	-4	27.7	249	53.4	-21	22.1
7	159	47.9	245	42.8		35.3	212	34.8		47.6	326	27.9		27.8	264	55.6		22.1
8	174	50.3	260	42.0		35.2	227	35.4		47.1	341	29.9		28.0	279	57.8		22.1
9	189	52.8	275	41.2		35.2	242	35.9		46.6	356	31.9		28.2	294	59.9		22.2
10	204	55.3	290	40.3		35.2	257	36.5		46.1	11	33.9		28.4	310	02.1		22.2
11	219	57.7	305	39.5	-25	35.2	272	37.1	-20	45.6	26	36.0	-4	28.5	325	04.3	-21	22.2
12	235	00.2	320	38.6	-25	35.1	287	37.6	-20	45.1	41	38.0	-4	28.7	340	06.4	-21	22.3
13	250	02.7	335	37.8		35.1	302	38.2		44.6	56	40.0		28.9	355	08.6		22.3
14	265	05.1	350	37.0		35.1	317	38.7		44.1	71	42.0		29.1	10	10.8		22.3
15	280	07.6	5	36.1		35.1	332	39.3		43.7	86	44.1		29.3	25	12.9		22.4
16	295	10.1	20	35.3		35.0	347	39.8		43.2	101	46.1		29.4	40	15.1		22.4
17	310	12.5	35	34.5	-25	35.0	2	40.4	-20	42.7	116	48.1	-4	29.6	55	17.3	-21	22.4
18	325	15.0	50	33.6	-25	35.0	17	41.0	-20	42.2	131	50.1	-4	29.8	70	19.4	-21	22.5
19	340	17.4	65	32.8		34.9	32	41.5		41.7	146	52.2		30.0	85	21.6		22.5
20	355	19.9	80	31.9		34.9	47	42.1		41.2	161	54.2		30.2	100	23.8		22.5
21	10	22.4	95	31.1		34.8	62	42.6		40.7	176	56.2		30.3	115	25.9		22.6
22	25	24.8	110	30.3		34.8	77	43.2		40.2	191	58.2		30.5	130	28.1		22.6
23	40	27.3	125	29.4		34.8	92	43.8		39.7	207	00.3		30.7	145	30.2		22.6
24	55	29.8	140	28.6	-25	34.7	107	44.3	-20	39.2	222	02.3	-4	30.9	160	32.4	-21	22.7
Dif	—		-8		0		+6		+5		+20		-2		+22		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 16 ^d 3 PHE { 4 ^h : 61'0 12 ^h : 60'8 20 ^h : 60'6										
	PMG: 11 ^h 44 ^m 8			SD: 16:6 PMG: 1 ^h 16 ^m R°: 61 ^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	183	48.7	-18 47.0	341	48.9	+17 33.1	60 N	6 20	7 12	8 01	17 36 58		9 54 67	
1	198	48.6	47.6	356	12.0	37.5 44	58	15	7 04	7 50	48 59		42 66	
2	213	48.5	48.2	10	35.1	41 41.8 43	56	11	6 57	39	17 59 59		31 66	
3	228	48.4	48.8	24	58.2	41 46.0 42	54	07	50	30	18 09 59		22 65	
4	243	48.2	49.5	39	21.3	41 50.1 41	52	03	45	22	17 60		13 66	
5	258	48.1	-18 50.1	53	44.4	41 +17 54.0 39	50	6 00	6 39	7 15	18 25 59		9 06 65	
6	273	48.0	-18 50.7	68	07.5	41 +17 57.8 38	45	5 52	6 27	6 59	18 41 60		8 50 64	
7	288	47.9	51.3	82	30.6	41 +18 01.4 36	40	45	18	47	18 55 59		37 64	
8	303	47.8	51.9	96	53.7	41 04.9 35	35	38	09	36	19 06 60		25 64	
9	318	47.7	52.5	111	16.9	42 08.3 34	30	32	6 01	26	16 60		8 16 63	
10	333	47.5	53.2	125	40.0	41 11.6 33	20	20	5 46	6 10	33 61		7 59 62	
11	348	47.4	-18 53.8	140	03.1	41 +18 14.7 31	10 N	5 07	5 33	5 55	19 48 61		7 44 62	
12	3	47.3	-18 54.4	154	26.3	42 +18 17.6 29	0	4 54	5 19	5 41	20 03 60		7 30 62	
13	18	47.2	55.0	168	49.5	42 20.5 29	10 S	39	5 05	27	17 60		17 60	
14	33	47.1	55.6	183	12.7	42 23.2 27	20	4 21	4 49	5 12	32 60		7 02 60	
15	48	47.0	56.2	197	35.9	42 25.7 25	30	3 58	29	4 55	20 50 60		6 45 59	
16	63	46.8	56.8	211	59.1	42 28.2 25	35	43	17	45	21 00 60		35 59	
17	78	46.7	-18 57.4	226	22.4	43 +18 30.5 23	40	3 25	4 03	4 33	21 12 60		6 24 58	
18	93	46.6	-18 58.1	240	45.7	43 +18 32.6 21	45	3 02	3 46	4 20	21 25 60		6 11 57	
19	108	46.5	58.7	255	09.0	43 34.6 20	50	2 31	24	4 03	42 60		5 55 56	
20	123	46.4	59.3	269	32.3	43 36.5 19	52	2 15	13	3 55	50 60		48 55	
21	138	46.2	-18 59.9	283	55.7	44 38.2 17	54	1 55	3 01	46	21 59 60		39 55	
22	153	46.1	-19 00.5	298	19.0	43 39.9 17	56	1 29	2 46	36	22 09 59		30 54	
23	168	46.0	01.1	312	42.5	45 41.3 14	58	0 51	29	25	20 59		20 53	
24	183	45.9	-19 01.7	327	05.9	44 +18 42.7 14	60 S	** **	2 08	3 11	22 33 59		5 07 53	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 20 ^h 14 ^m 7		Mag: -4.1 PMG: 14 ^h 39 ^m			Mag: +0.5 PMG: 16 ^h 48 ^m			Mag: -1.8 PMG: 9 ^h 11 ^m			Mag: +0.5 PMG: 13 ^h 16 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	55	29.8	140 28.6	-25 34.7	107 44.3	-20 39.2	222 02.3	-4 30.9	160 32.4	-21 22.7			175 34.6	22.7
1	70	32.2	155 27.8	34.7	122 44.9	38.8	237 04.3	31.0	175 34.6	22.7			190 36.7	22.7
2	85	34.7	170 26.9	34.6	137 45.4	38.3	252 06.3	31.2	205 38.9	22.8			220 41.1	22.8
3	100	37.2	185 26.1	34.6	152 46.0	37.8	267 08.4	31.4	235 43.2	22.8			250 45.4	22.9
4	115	39.6	200 25.3	34.5	167 46.6	37.3	282 10.4	31.6	265 47.6	22.9			280 49.7	22.9
5	130	42.1	215 24.4	-25 34.5	182 47.1	-20 36.8	297 12.4	-4 31.8	295 51.9	23.0			310 54.0	23.0
6	145	44.6	230 23.6	-25 34.4	197 47.7	-20 36.3	312 14.4	-4 31.9	325 56.2	23.0			340 58.4	23.1
7	160	47.0	245 22.7	34.4	212 48.3	35.8	327 16.5	32.1	356 00.5	23.1			375 01.7	23.1
8	175	49.5	260 21.9	34.3	227 48.8	35.3	342 18.5	32.3	11 02.7	23.1			405 03.9	23.1
9	190	51.9	275 21.1	34.3	242 49.4	34.8	357 20.5	32.5	26 04.9	23.2			435 06.1	23.2
10	205	54.4	290 20.2	34.2	257 49.9	34.3	12 22.6	32.6	41 07.0	23.2			465 08.3	23.2
11	220	56.9	305 19.4	-25 34.2	272 50.5	-20 33.8	27 24.6	-4 32.8	56 09.2	23.2			495 10.5	23.2
12	235	59.3	320 18.6	-25 34.1	287 51.1	-20 33.3	42 26.6	-4 33.0	71 11.4	23.3			525 12.7	23.3
13	251	01.8	335 17.7	34.1	302 51.6	32.8	57 28.6	33.2	86 13.5	23.3			555 14.9	23.3
14	266	04.3	350 16.9	34.0	317 52.2	32.3	72 30.7	33.3	101 15.7	23.3			585 17.1	23.3
15	281	06.7	5 16.1	33.9	332 52.7	31.8	87 32.7	33.5	116 17.8	23.4			615 19.3	23.4
16	296	09.2	20 15.2	33.9	347 53.3	31.3	102 34.7	33.7	131 20.0	23.4			645 21.5	23.4
17	311	11.7	35 14.4	-25 33.8	2 53.9	-20 30.8	117 36.7	-4 33.9	146 22.2	23.4			675 23.7	23.4
18	326	14.1	50 13.6	-25 33.8	17 54.4	-20 30.3	132 38.8	-4 34.1	161 24.3	23.5			705 25.9	23.5
19	341	16.6	65 12.7	33.7	32 55.0	29.8	147 40.8	34.2						
20	356	19.1	80 11.9	33.6	47 55.6	29.3	162 42.8	34.4						
21	11	21.5	95 11.1	33.5	62 56.1	28.8	177 44.9	34.6						
22	26	24.0	110 10.2	33.5	77 56.7	28.3	192 46.9	34.8						
23	41	26.4	125 09.4	33.4	92 57.2	27.8	207 48.9	34.9						
24	56	28.9	140 08.6	-25 33.3	107 57.8	-20 27.3	222 50.9	-4 35.1						
Dif	—		-8	+1	+6		+5	+20		-2	+22		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 17 ^d 3	PHE { 4 ^h : 60°3 12 ^h : 60°1 20 ^h : 59°8	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 45 ^m 0					R°: 60 ^m			Hora		R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	45.9	-19 01.7	327	05.9	+18 42.7	12	60 N	15 26	16 15	17 08	18 34 69	11 01 52		
1	198	45.7	02.3	341	29.4	45 43.9	10	58	38	24	12	47 68	10 48 53		
2	213	45.6	02.9	355	52.9	45 44.9	10	56	48	31	17	18 58 67	37 54		
3	228	45.5	03.5	10	16.5	46 45.9	8	54	15 57	37	21	19 08 66	27 54		
4	243	45.4	04.1	24	40.1	46 46.7	6	52	16 06	43	25	17 65	19 54		
5	258	45.2	-19 04.7	39	03.7	46 +18 47.3	5	50	16 13	16 49	17 28	19 24 65	10 11 55		
6	273	45.1	-19 05.3	53	27.4	47 +18 47.8	4	45	16 29	17 01	17 37	19 41 63	9 54 56		
7	288	45.0	05.9	67	51.1	47 48.2	3	40	42	11	44	19 54 63	41 56		
8	303	44.9	06.6	82	14.8	47 48.5	3	35	16 53	20	51	20 06 62	29 57		
9	318	44.7	07.2	96	38.6	48 48.6	1	30	17 03	28	57	16 61	19 57		
10	333	44.6	07.8	111	02.5	49 48.6	0	20	20	43	18 10	34 59	9 01 58		
11	348	44.5	-19 08.4	125	26.4	49 +18 48.5	1	10 N	17 35	17 57	18 22	20 49 58	8 46 59		
12	3	44.4	-19 09.0	139	50.3	49 +18 48.2	3	0	17 49	18 11	18 36	21 03 57	8 32 59		
13	18	44.2	09.6	154	14.3	50 47.8	4	10 S	18 03	25	18 51	17 57	17 60		
14	33	44.1	10.2	168	38.4	51 47.3	5	20	18	18 42	19 10	32 56	8 02 60		
15	48	44.0	10.8	183	02.5	51 46.6	7	30	36	19 02	34	21 50 54	7 44 61		
16	63	43.9	11.3	197	26.7	52 45.9	7	35	46	14	19 49	22 00 53	34 61		
17	78	43.7	-19 11.9	211	50.9	52 +18 44.9	10	40	18 58	19 29	20 07	22 12 52	7 22 62		
18	93	43.6	-19 12.5	226	15.2	53 +18 43.9	10	45	19 12	19 47	20 30	22 25 51	7 08 62		
19	108	43.5	13.1	240	39.5	53 42.7	12	50	29	20 09	21 02	42 50	6 51 63		
20	123	43.3	13.7	255	03.9	54 41.4	13	52	38	20	19	50 49	43 63		
21	138	43.2	14.3	269	28.3	54 40.0	14	54	47	33	21 40	22 59 48	34 64		
22	153	43.1	14.9	283	52.8	55 38.5	15	56	19 57	20 48	22 08	23 08 47	24 64		
23	168	42.9	15.5	298	17.4	56 36.8	17	58	20 09	21 06	22 53	19 46	13 64		
24	183	42.8	-19 16.1	312	42.1	57 +18 35.0	18	60 S	20 23	21 28	** **	23 32 45	6 00 64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 20 ^h 10 ^m 8		Mag: -4.1 PMG: 14 ^h 40 ^m			Mag: +0.5 PMG: 16 ^h 48 ^m			Mag: -1.8 PMG: 9 ^h 07 ^m			Mag: +0.5 PMG: 13 ^h 12 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	56	28.9	140 08.6	-25 33.3	107 57.8	-20 27.3	222 50.9	-4 35.1	161 24.3	-21 23.5		161 24.3	-21 23.5		
1	71	31.4	155 07.7	33.3	122 58.4	26.8	237 53.0	35.3	176 26.5	23.5		176 26.5	23.5		
2	86	33.8	170 06.9	33.2	137 58.9	26.3	252 55.0	35.5	191 28.7	23.5		191 28.7	23.5		
3	101	36.3	185 06.1	33.1	152 59.5	25.8	267 57.0	35.6	206 30.8	23.6		206 30.8	23.6		
4	116	38.8	200 05.2	33.0	168 00.1	25.3	282 59.1	35.8	221 33.0	23.6		221 33.0	23.6		
5	131	41.2	215 04.4	-25 33.0	183 00.6	-20 24.8	298 01.1	-4 36.0	236 35.2	-21 23.6		236 35.2	-21 23.6		
6	146	43.7	230 03.6	-25 32.9	198 01.2	-20 24.3	313 03.1	-4 36.2	251 37.3	-21 23.7		251 37.3	-21 23.7		
7	161	46.2	245 02.8	32.8	213 01.8	23.8	328 05.1	36.4	266 39.5	23.7		266 39.5	23.7		
8	176	48.6	260 01.9	32.7	228 02.3	23.3	343 07.2	36.5	281 41.6	23.7		281 41.6	23.7		
9	191	51.1	275 01.1	32.6	243 02.9	22.8	358 09.2	36.7	296 43.8	23.8		296 43.8	23.8		
10	206	53.6	290 00.3	32.5	258 03.4	22.3	13 11.2	36.9	311 46.0	23.8		311 46.0	23.8		
11	221	56.0	304 59.4	-25 32.5	273 04.0	-20 21.8	28 13.3	-4 37.1	326 48.1	-21 23.8		326 48.1	-21 23.8		
12	236	58.5	319 58.6	-25 32.4	288 04.6	-20 21.3	43 15.3	-4 37.2	341 50.3	-21 23.9		341 50.3	-21 23.9		
13	252	00.9	334 57.8	32.3	303 05.1	20.8	58 17.3	37.4	356 52.5	23.9		356 52.5	23.9		
14	267	03.4	349 56.9	32.2	318 05.7	20.3	73 19.3	37.6	11 54.6	23.9		11 54.6	23.9		
15	282	05.9	4 56.1	32.1	333 06.3	19.8	88 21.4	37.8	26 56.8	24.0		26 56.8	24.0		
16	297	08.3	19 55.3	32.0	348 06.8	19.3	103 23.4	37.9	41 58.9	24.0		41 58.9	24.0		
17	312	10.8	34 54.5	-25 31.9	3 07.4	-20 18.8	118 25.4	-4 38.1	57 01.1	-21 24.0		57 01.1	-21 24.0		
18	327	13.3	49 53.6	-25 31.8	18 08.0	-20 18.3	133 27.5	-4 38.3	72 03.3	-21 24.1		72 03.3	-21 24.1		
19	342	15.7	64 52.8	31.7	33 08.5	17.8	148 29.5	38.5	87 05.4	24.1		87 05.4	24.1		
20	357	18.2	79 52.0	31.6	48 09.1	17.3	163 31.5	38.6	102 07.6	24.1		102 07.6	24.1		
21	12	20.7	94 51.1	31.5	63 09.7	16.8	178 33.6	38.8	117 09.8	24.2		117 09.8	24.2		
22	27	23.1	109 50.3	31.4	78 10.2	16.2	193 35.6	39.0	132 11.9	24.2		132 11.9	24.2		
23	42	25.6	124 49.5	31.3	93 10.8	15.7	208 37.6	39.2	147 14.1	24.2		147 14.1	24.2		
24	57	28.1	139 48.7	-25 31.2	108 11.4	-20 15.2	223 39.6	-4 39.3	162 16.2	-21 24.3		162 16.2	-21 24.3		
Dif	—		-8	+1	+6	+5	+20	-2	+22	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: 18 ^d 3 PHE { 4 ^h : 59/5 12 ^h : 59/2 20 ^h : 58/8 R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	42.8	-19	16.1	312	42.1	+18	35.0	19	60 N	6	24	7	16	8	06	19	43
1	198	42.7		16.7	327	06.8		33.1	19	58	19	08	7	54	19	55	72	41
2	213	42.6		17.3	341	31.5		31.0	21	56	14	7	00	43	20	05	71	31
3	228	42.4		17.9	355	56.4		28.9	21	54	10	6	54	34	14	69	21	44
4	243	42.3		18.5	10	21.3		26.6	23	52	06	48	26	22	68	13	44	
5	258	42.2	-19	19.1	24	46.3	+18	24.2	24	50	6	02	6	42	7	18	20	29
6	273	42.0	-19	19.7	39	11.3	+18	21.7	25	45	5	54	6	30	7	02	20	44
7	288	41.9		20.2	53	36.4		19.1	26	40	47	20	6	49	20	57	63	37
8	303	41.8		20.8	68	01.6		16.3	28	35	40	11	38	21	08	61	26	50
9	318	41.6		21.4	82	26.9		13.4	29	30	33	6	02	28	17	60	10	16
10	333	41.5		22.0	96	52.2		10.4	30	20	21	5	47	6	11	33	58	9
11	348	41.3	-19	22.6	111	17.6	+18	07.4	30	10 N	5	08	5	34	5	56	21	47
12	3	41.2	-19	23.2	125	43.1	+18	04.1	33	0	4	54	5	20	5	42	22	00
13	18	41.1		23.8	140	08.6	+18	00.8	33	10 S	39	5	05	27	14	52	17	57
14	33	40.9		24.3	154	34.3	+17	57.4	34	20	4	20	4	48	5	12	28	50
15	48	40.8		24.9	169	00.0		53.8	36	30	3	56	28	4	54	44	48	8
16	63	40.7		25.5	183	25.8		50.2	36	35	41	16	44	22	53	47	35	62
17	78	40.5	-19	26.1	197	51.6	+17	46.4	38	40	3	23	4	01	4	32	23	04
18	93	40.4	-19	26.7	212	17.6	+17	42.6	38	45	2	59	3	43	4	18	23	16
19	108	40.2		27.3	226	43.6		38.6	40	50	27	21	4	00	32	40	7	54
20	123	40.1		27.8	241	09.7		34.5	41	52	2	10	3	10	3	52	39	39
21	138	40.0		28.4	255	35.9		30.3	42	54	1	50	2	57	43	47	38	68
22	153	39.8		29.0	270	02.1		26.0	43	56	1	22	42	33	23	55	37	28
23	168	39.7		29.6	284	28.5		21.6	44	58	0	36	24	21	**	**	**	17
24	183	39.6	-19	30.2	298	54.9	+17	17.1	45	60 S	**	**	2	02	3	07	**	**
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 06 ^m 8		Mag: -4.1 PMG: 14 ^h 42 ^m				Mag: +0.5 PMG: 16 ^h 47 ^m				Mag: -1.8 PMG: 9 ^h 04 ^m				Mag: +0.5 PMG: 13 ^h 09 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	28.1	139	48.7	-25	31.2	108	11.4	-20	15.2	223	39.6	-4	39.3	162	16.2	-21	24.3
1	72	30.5	154	47.8		31.1	123	11.9		14.7	238	41.7		39.5	177	18.4		24.3
2	87	33.0	169	47.0		31.0	138	12.5		14.2	253	43.7		39.7	192	20.6		24.3
3	102	35.4	184	46.2		30.9	153	13.1		13.7	268	45.7		39.9	207	22.7		24.4
4	117	37.9	199	45.4		30.8	168	13.6		13.2	283	47.8		40.0	222	24.9		24.4
5	132	40.4	214	44.5	-25	30.7	183	14.2	-20	12.7	298	49.8	-4	40.2	237	27.0	-21	24.4
6	147	42.8	229	43.7	-25	30.6	198	14.8	-20	12.2	313	51.8	-4	40.4	252	29.2	-21	24.5
7	162	45.3	244	42.9		30.5	213	15.3		11.7	328	53.9		40.6	267	31.4		24.5
8	177	47.8	259	42.1		30.3	228	15.9		11.2	343	55.9		40.7	282	33.5		24.5
9	192	50.2	274	41.2		30.2	243	16.5		10.6	358	57.9		40.9	297	35.7		24.6
10	207	52.7	289	40.4		30.1	258	17.0		10.1	14	00.0		41.1	312	37.9		24.6
11	222	55.2	304	39.6	-25	30.0	273	17.6	-20	09.6	29	02.0	-4	41.3	327	40.0	-21	24.6
12	237	57.6	319	38.8	-25	29.9	288	18.2	-20	09.1	44	04.0	-4	41.4	342	42.2	-21	24.7
13	253	00.1	334	37.9		29.8	303	18.7		08.6	59	06.1		41.6	357	44.3		24.7
14	268	02.5	349	37.1		29.6	318	19.3		08.1	74	08.1		41.8	12	46.5		24.7
15	283	05.0	4	36.3		29.5	333	19.9		07.6	89	10.1		42.0	27	48.7		24.8
16	298	07.5	19	35.5		29.4	348	20.4		07.1	104	12.2		42.1	42	50.8		24.8
17	313	09.9	34	34.6	-25	29.3	3	21.0	-20	06.5	119	14.2	-4	42.3	57	53.0	-21	24.8
18	328	12.4	49	33.8	-25	29.1	18	21.6	-20	06.0	134	16.2	-4	42.5	72	55.1	-21	24.8
19	343	14.9	64	33.0		29.0	33	22.1		05.5	149	18.3		42.7	87	57.3		24.9
20	358	17.3	79	32.2		28.9	48	22.7		05.0	164	20.3		42.8	102	59.5		24.9
21	13	19.8	94	31.3		28.8	63	23.3		04.5	179	22.3		43.0	118	01.6		24.9
22	28	22.3	109	30.5		28.6	78	23.8		04.0	194	24.4		43.2	133	03.8		25.0
23	43	24.7	124	29.7		28.5	93	24.4		03.4	209	26.4		43.3	148	05.9		25.0
24	58	27.2	139	28.9	-25	28.4	108	25.0	-20	02.9	224	28.4	-4	43.5	163	08.1	-21	25.0
Dif	—		-8		+1		+6		+5		+20		-2		+22			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 19 ^d 3 PHE { 4 ^h : 58/5 12 ^h : 58/2 20 ^h : 57/9	SD: 16°0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 45 ^m 5				PMG: 4 ^h 14 ^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
0	183	39.6	-19 30.2	298	54.9	+17 17.1		60 N	15 22	16 12	17 05	20 58 76	12 32 28	
1	198	39.4		313	21.4	75 12.6	45	58	34	21	10	21 07 75	21 31	
2	213	39.3	31.3	327	48.0	76 07.9	47	56	45	28	14	16 72	12 33	
3	228	39.1	31.9	342	14.7	77 +17 03.1	48	54	15 55	35	19	23 71	12 05 34	
4	243	39.0	32.5	356	41.4	77 +16 58.2	49	52	16 03	41	23	30 69	11 57 36	
5	258	38.8	-19 33.0	11	08.3	79 +16 53.2	50	50	16 11	16 47	17 27	21 36 68	11 51 37	
6	273	38.7	-19 33.6	25	35.2	79 +16 48.1	51	45	16 27	16 59	17 35	21 49 65	11 37 40	
7	288	38.6	34.2	40	02.2	80 43.0	51	40	41	17 10	43	22 00 62	26 42	
8	303	38.4	34.8	54	29.3	81 37.7	53	35	16 52	19	50	09 60	16 44	
9	318	38.3	35.3	68	56.5	82 32.3	54	30	17 02	28	17 57	17 59	11 07 46	
10	333	38.1	35.9	83	23.7	82 26.9	54	20	19	43	18 10	31 56	10 52 48	
11	348	38.0	-19 36.5	97	51.0	83 +16 21.4	55	10 N	17 35	17 57	18 23	22 43 53	10 39 50	
12	3	37.8	-19 37.1	112	18.5	85 +16 15.7	57	0	17 49	18 11	18 37	22 55 50	10 27 52	
13	18	37.7	37.6	126	46.0	85 10.0	57	10 S	18 04	26	18 52	23 06 48	14 55	
14	33	37.6	38.2	141	13.6	86 +16 04.2	58	20	19	18 43	19 11	18 46	10 01 57	
15	48	37.4	38.8	155	41.3	87 +15 58.4	58	30	37	19 04	36	32 43	9 46 60	
16	63	37.3	39.3	170	09.0	87 52.4	60	35	18 48	16	19 51	40 41	37 61	
17	78	37.1	-19 39.9	184	36.9	89 +15 46.3	61	40	19 00	19 31	20 10	23 49 39	9 27 63	
18	93	37.0	-19 40.5	199	04.8	89 +15 40.2	61	45	19 15	19 50	20 34	23 59 37	9 15 65	
19	108	36.8	41.0	213	32.8	90 34.0	62	50	33	20 13	21 07	*** ** *	9 00 68	
20	123	36.7	41.6	228	00.9	91 27.7	63	52	41	24	25	*** ** *	8 54 69	
21	138	36.5	42.2	242	29.1	92 21.3	64	54	19 51	37	21 47	*** ** *	46 71	
22	153	36.4	42.7	256	57.4	93 14.9	64	56	20 01	20 53	22 17	*** ** *	38 72	
23	168	36.2	43.3	271	25.7	93 08.8	65	58	14	21 12	23 14	0 05 35	28 74	
24	183	36.1	-19 43.9	285	54.2	95 +15 01.8	66	60 S	20 28	21 35	** **	0 17 32	8 17 76	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 02 ^m 9		Mag: -4.1 PMG: 14 ^h 43 ^m			Mag: +0.5 PMG: 16 ^h 46 ^m			Mag: -1.8 PMG: 9 ^h 01 ^m			Mag: +0.5 PMG: 13 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	58	27.2	139	28.9	-25 28.4	108	25.0	-20 02.9	224	28.4	-4 43.5	163	08.1	-21 25.0
1	73	29.7	154	28.1	28.2	123	25.5	02.4	239	30.5	43.7	178	10.3	25.1
2	88	32.1	169	27.2	28.1	138	26.1	01.9	254	32.5	43.9	193	12.4	25.1
3	103	34.6	184	26.4	28.0	153	26.7	01.4	269	34.5	44.0	208	14.6	25.1
4	118	37.0	199	25.6	27.8	168	27.2	00.9	284	36.6	44.2	223	16.8	25.2
5	133	39.5	214	24.8	-25 27.7	183	27.8	-20 00.3	299	38.6	-4 44.4	238	18.9	-21 25.2
6	148	42.0	229	24.0	-25 27.5	198	28.4	-19 59.8	314	40.6	-4 44.6	253	21.1	-21 25.2
7	163	44.4	244	23.1	27.4	213	29.0	59.3	329	42.7	44.7	268	23.2	25.3
8	178	46.9	259	22.3	27.3	228	29.5	58.8	344	44.7	44.9	283	25.4	25.3
9	193	49.4	274	21.5	27.1	243	30.1	58.3	359	46.7	45.1	298	27.6	25.3
10	208	51.8	289	20.7	27.0	258	30.7	57.7	14	48.8	45.3	313	29.7	25.4
11	223	54.3	304	19.9	-25 26.8	273	31.2	-19 57.2	29	50.8	-4 45.4	328	31.9	-21 25.4
12	238	56.8	319	19.0	-25 26.7	288	31.8	-19 56.7	44	52.8	-4 45.6	343	34.0	-21 25.4
13	253	59.2	334	18.2	26.5	303	32.4	56.2	59	54.9	45.8	358	36.2	25.5
14	269	01.7	349	17.4	26.4	318	32.9	55.7	74	56.9	46.0	13	38.4	25.5
15	284	04.2	4	16.6	26.2	333	33.5	55.1	89	58.9	46.1	28	40.5	25.5
16	299	06.6	19	15.8	26.1	348	34.1	54.6	105	01.0	46.3	43	42.7	25.6
17	314	09.1	34	15.0	-25 25.9	3	34.7	-19 54.1	120	03.0	-4 46.5	58	44.8	-21 25.6
18	329	11.5	49	14.1	-25 25.7	18	35.2	-19 53.6	135	05.0	-4 46.6	73	47.0	-21 25.6
19	344	14.0	64	13.3	25.6	33	35.8	53.1	150	07.1	46.8	88	49.2	25.7
20	359	16.5	79	12.5	25.4	48	36.4	52.5	165	09.1	47.0	103	51.3	25.7
21	14	18.9	94	11.7	25.3	63	36.9	52.0	180	11.2	47.2	118	53.5	25.7
22	29	21.4	109	10.9	25.1	78	37.5	51.5	195	13.2	47.3	133	55.6	25.8
23	44	23.9	124	10.1	24.9	93	38.1	51.0	210	15.2	47.5	148	57.8	25.8
24	59	26.3	139	09.2	-25 24.8	108	38.7	-19 50.4	225	17.3	-4 47.7	164	00.0	-21 25.8
Dif	—		-8	+1		+6	+5		+20	-2		+22	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 7			Edad: 20 ^d 3 PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9 PMG: 5 ^h 07 ^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	m
0	183	36.1	-19	43.9	285	54.2	+15 01.8	60 N	6 27	7 20	8 11	22 14	76	13 00	23	
1	198	35.9		44.4	300	22.7	+14 55.1	58	22	12	7 58	22 73		12 52	25	
2	213	35.8		45.0	314	51.3	48.3	56	17	7 04	47	28 71		45 27		
3	228	35.6		45.6	329	20.0	41.5	54	13	6 57	38	34 69		39 28		
4	243	35.5		46.1	343	48.7	34.6	52	09	51	29	39 68		33 30		
5	258	35.3	-19	46.7	358	17.6	+14 27.7	50	6 05	6 45	7 21	22 44	66	12 28	31	
6	273	35.2	-19	47.2	12	46.5	+14 20.6	45	5 56	6 32	7 05	22 54	63	12 17	34	
7	288	35.0		47.8	27	15.5	13.5	40	49	22	6 51	23 02	61	08 36		
8	303	34.9		48.4	41	44.6	+14 06.4	35	42	12	40	09 59		12 00	38	
9	318	34.7		48.9	56	13.8	+13 59.1	30	35	6 04	29	16 56		11 53	40	
10	333	34.6		49.5	70	43.1	51.8	20	22	5 49	6 12	27 53		40 44		
11	348	34.4	-19	50.0	85	12.4	+13 44.5	10 N	5 09	5 34	5 57	23 36	51	11 29	47	
12	3	34.3	-19	50.6	99	41.8	+13 37.0	0	4 55	5 20	5 42	23 45	48	11 19	49	
13	18	34.1		51.1	114	11.3	29.5	10 S	39	5 05	5 27	23 54	45	11 09	52	
14	33	34.0		51.7	128	40.9	22.0	20	4 20	4 48	5 12	** ** *	**	10 58	55	
15	48	33.8		52.2	143	10.6	14.4	30	3 55	27	4 54	** ** *	**	46 57		
16	63	33.7		52.8	157	40.3	+13 06.7	35	40	14	43	** ** *	**	38 60		
17	78	33.5	-19	53.4	172	10.1	+12 59.0	40	3 21	4 00	4 31	** ** *	**	10 30	62	
18	93	33.3	-19	53.9	186	40.0	+12 51.2	45	2 57	3 41	4 16	** ** *	**	10 20	64	
19	108	33.2		54.5	201	10.0	43.4	50	24	18	3 58	0 12	34	08 68		
20	123	33.0		55.0	215	40.0	35.5	52	2 06	3 06	50	18 33		10 03	68	
21	138	32.9		55.6	230	10.1	27.5	54	1 44	2 53	40	25 31		9 57	70	
22	153	32.7		56.1	244	40.3	19.5	56	1 14	38	29	32 29		50 72		
23	168	32.6		56.7	259	10.6	11.4	58	0 17	2 19	17	40 27		42 74		
24	183	32.4	-19	57.2	273	40.9	+12 03.3	60 S	** ** *	1 55	3 03	0 49	25	9 33	77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 59 ^m 0		Mag: -4.1 PMG: 14 ^h 44 ^m		Mag: +0.5 PMG: 16 ^h 45 ^m		Mag: -1.8 PMG: 8 ^h 58 ^m		Mag: +0.5 PMG: 13 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	59	26.3	139	09.2	-25	24.8	108	38.7	-19	50.4
1	74	28.8	154	08.4		24.6	123	39.2		49.9
2	89	31.3	169	07.6		24.5	138	39.8		49.4
3	104	33.7	184	06.8		24.3	153	40.4		48.9
4	119	36.2	199	06.0		24.1	168	40.9		48.3
5	134	38.7	214	05.2	-25	23.9	183	41.5	-19	47.8
6	149	41.1	229	04.4	-25	23.8	198	42.1	-19	47.3
7	164	43.6	244	03.5		23.6	213	42.7		46.8
8	179	46.0	259	02.7		23.4	228	43.2		46.2
9	194	48.5	274	01.9		23.3	243	43.8		45.7
10	209	51.0	289	01.1		23.1	258	44.4		45.2
11	224	53.4	304	00.3	-25	22.9	273	44.9	-19	44.6
12	239	55.9	318	59.5	-25	22.7	288	45.5	-19	44.1
13	254	58.4	333	58.7		22.5	303	46.1		43.6
14	270	00.8	348	57.9		22.4	318	46.7		43.1
15	285	03.3	3	57.1		22.2	333	47.2		42.5
16	300	05.8	18	56.2		22.0	348	47.8		42.0
17	315	08.2	33	55.4	-25	21.8	3	48.4	-19	41.5
18	330	10.7	48	54.6	-25	21.6	18	49.0	-19	40.9
19	345	13.1	63	53.8		21.4	33	49.5		40.4
20	0	15.6	78	53.0		21.2	48	50.1		39.9
21	15	18.1	93	52.2		21.1	63	50.7		39.3
22	30	20.5	108	51.4		20.9	78	51.3		38.8
23	45	23.0	123	50.6		20.7	93	51.8		38.3
24	60	25.5	138	49.8	-25	20.5	108	52.4	-19	37.8
Dif	—		-8	+2			+6	+5		
									+20	-2
										+22

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2			Edad: 21 ^d 3	PHE { 4 ^h : 56°6 12 ^h : 56°4 20 ^h : 56°1	Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 46 ^m 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	h m	h m		
0	183	32.4	-19 57.2	273	40.9	+12 03.3	81	60 N	15 18	16 09	17 02	23 30	74	13 23	18	
1	198	32.2	57.8	288	11.4 ¹¹⁵	+11 55.2	81	58	31	18	07	35	72	17	21	
2	213	32.1	58.3	302	41.9 ¹¹⁵	47.0	82	56	42	26	12	39	70	12	22	
3	228	31.9	58.9	317	12.4 ¹¹⁵	38.7	83	54	15 52	33	17	43	68	07	25	
4	243	31.8	59.4	331	43.1 ¹¹⁷	30.4	83	52	16 01	39	21	47	66	13	03	
5	258	31.6	-19 59.9	346	13.8 ¹¹⁷	+11 22.0	84	50	16 09	16 45	17 25	23 50	65	12	59	
6	273	31.5	-20 00.5	0	44.5 ¹¹⁷	+11 13.6	84	45	16 26	16 58	17 34	23 57	62	12	51	
7	288	31.3	01.0	15	15.4 ¹¹⁹	+11 05.2	84	40	39	17 09	42	** ** *	**	44	33	
8	303	31.1	01.6	29	46.3 ¹¹⁹	+10 56.7	85	35	16 51	18	49	** ** *	**	38	36	
9	318	31.0	02.1	44	17.3 ¹²⁰	48.2	85	30	17 01	27	17 56	** ** *	**	33	37	
10	333	30.8	02.7	58	48.3 ¹²⁰	39.6	86	20	19	43	18 10	** ** *	**	24	41	
11	348	30.6	-20 03.2	73	19.5 ¹²²	+10 31.0	86	10 N	17 35	17 57	18 23	** ** *	**	12	16	
12	3	30.5	-20 03.7	87	50.7 ¹²²	+10 22.3	87	0	17 50	18 12	18 37	** ** *	**	12	08	
13	18	30.3	04.3	102	21.9 ¹²²	13.6	87	10 S	18 04	27	18 53	** ** *	**	12	01	
14	33	30.2	04.8	116	53.2 ¹²³	+10 04.9	87	20	21	18 44	19 13	0 04	42	11	53	
15	48	30.0	05.4	131	24.6 ¹²⁴	+9 56.1	88	30	39	19 06	37	15	38	43	56	
16	63	29.8	05.9	145	56.1 ¹²⁵	47.3	88	35	18 50	19	19 53	21	37	38	57	
17	78	29.7	-20 06.4	160	27.6 ¹²⁵	+9 38.5	88	40	19 03	19 34	20 13	0 28	34	11	32	
18	93	29.5	-20 07.0	174	59.2 ¹²⁶	+9 29.6	89	45	19 17	19 52	20 37	0 36	32	11	24	
19	108	29.3	07.5	189	30.8 ¹²⁶	20.6	90	50	36	20 16	21 12	46	29	16	65	
20	123	29.2	08.1	204	02.5 ¹²⁷	11.7	89	52	45	28	30	51	27	11	68	
21	138	29.0	08.6	218	34.3 ¹²⁸	+9 02.7	90	54	19 54	42	21 54	0 56	25	07	69	
22	153	28.9	09.1	233	06.1 ¹²⁸	+8 53.7	90	56	20 05	20 58	22 26	1 01	24	11	02	
23	168	28.7	09.7	247	38.0 ¹²⁹	44.6	91	58	18	21 18	** ** *	07 22	10	56	74	
24	183	28.5	-20 10.2	262	09.9 ¹²⁹	+8 35.6	90	60 S	20 33	21 43	** ** *	1 14	20	10	50	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -4.1			Mag: +0.6			Mag: -1.8			Mag: +0.5				
	19 ^h 55 ^m 0		PMG: 14 ^h 45 ^m			PMG: 16 ^h 44 ^m			PMG: 8 ^h 54 ^m			PMG: 12 ^h 59 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'	
0	60	25.5	138	49.8	-25	20.5	108	52.4	-19	37.8	226	06.2	-4	51.8	164	51.8
1	75	27.9	153	49.0		20.3	123	53.0		37.2	241	08.2		52.0	179	53.9
2	90	30.4	168	48.2		20.1	138	53.5		36.7	256	10.2		52.1	194	56.1
3	105	32.9	183	47.3		19.9	153	54.1		36.2	271	12.3		52.3	209	58.2
4	120	35.3	198	46.5		19.7	168	54.7		35.6	286	14.3		52.5	225	00.4
5	135	37.8	213	45.7	-25	19.5	183	55.3	-19	35.1	301	16.4	-4	52.6	240	02.6
6	150	40.3	228	44.9	-25	19.3	198	55.8	-19	34.6	316	18.4	-4	52.8	255	04.7
7	165	42.7	243	44.1		19.1	213	56.4		34.0	331	20.4		53.0	270	06.9
8	180	45.2	258	43.3		18.9	228	57.0		33.5	346	22.5		53.2	285	09.0
9	195	47.6	273	42.5		18.7	243	57.6		32.9	1	24.5		53.3	300	11.2
10	210	50.1	288	41.7		18.5	258	58.1		32.4	16	26.6		53.5	315	13.3
11	225	52.6	303	40.9	-25	18.3	273	58.7	-19	31.9	31	28.6	-4	53.7	330	15.5
12	240	55.0	318	40.1	-25	18.1	288	59.3	-19	31.3	46	30.6	-4	53.8	345	17.7
13	255	57.5	333	39.3		17.9	303	59.9		30.8	61	32.7		54.0	0	19.8
14	271	00.0	348	38.5		17.6	319	00.4		30.3	76	34.7		54.2	15	22.0
15	286	02.4	3	37.7		17.4	334	01.0		29.7	91	36.8		54.4	30	24.1
16	301	04.9	18	36.9		17.2	349	01.6		29.2	106	38.8		54.5	45	26.3
17	316	07.4	33	36.1	-25	17.0	4	02.2	-19	28.7	121	40.8	-4	54.7	60	28.5
18	331	09.8	48	35.3	-25	16.8	19	02.8	-19	28.1	136	42.9	-4	54.9	75	30.6
19	346	12.3	63	34.5		16.6	34	03.3		27.6	151	44.9		55.0	90	32.8
20	1	14.8	78	33.7		16.3	49	03.9		27.0	166	47.0		55.2	105	34.9
21	16	17.2	93	32.9		16.1	64	04.5		26.5	181	49.0		55.4	120	37.1
22	31	19.7	108	32.1		15.9	79	05.1		26.0	196	51.0		55.5	135	39.2
23	46	22.1	123	31.3		15.7	94	05.6		25.4	211	53.1		55.7	150	41.4
24	61	24.6	138	30.5	-25	15.5	109	06.2	-19	24.9	226	55.1	-4	55.9	165	43.6
Dif	—		-8	+2		+6	+5		+20		-2		+22		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 46 ^m 2			Edad: 22 ^d 3 PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4 R°: 45 ^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	28.5	-20	10.2	262	09.9	+8	35.6	60 N	6 31	7 24	8 16	***	***	***	13 41	16	
1	198	28.4		10.7	276	41.9 ¹³⁰		26.4	58	26	15	8 03	***	***	***	38	18	
2	213	28.2		11.3	291	13.9 ¹³⁰		17.3	56	21	07	7 51	***	***	***	34	21	
3	228	28.0		11.8	305	46.1 ¹³²	+8	08.1	54	16	7 00	41	***	***	***	32	22	
4	243	27.9		12.3	320	18.2 ¹³¹	+7	58.9	52	12	6 54	32	***	***	***	29	24	
5	258	27.7	-20	12.8	334	50.4 ¹³²	+7	49.7	50	6 08	6 48	7 24	***	***	***	13 27	25	
6	273	27.5	-20	13.4	349	22.7 ¹³³	+7	40.5	45	5 59	6 35	7 07	***	***	***	13 22	28	
7	288	27.3		13.9	3	55.0 ¹³³		31.2	40	51	24	6 53	0 03	59		17	31	
8	303	27.2		14.4	18	27.4 ¹³⁴		21.9	35	43	14	42	08	57		14	32	
9	318	27.0		15.0	32	59.8 ¹³⁴		12.6	30	36	6 05	31	12	55		10	35	
10	333	26.8		15.5	47	32.3 ¹³⁵	+7	03.2	20	23	5 50	6 13	20	51		05	38	
11	348	26.7	-20	16.0	62	04.9 ¹³⁶	+6	53.8	10 N	5 09	5 35	5 57	0 27	48		13 00	41	
12	3	26.5	-20	16.5	76	37.4 ¹³⁵	+6	44.4	0	4 55	5 21	5 43	0 33	45		12 55	44	
13	18	26.3		17.1	91	10.1 ¹³⁷		35.0	10 S	39	5 05	28	39	42		50	47	
14	33	26.2		17.6	105	42.7 ¹³⁶		25.6	20	4 19	4 48	5 12	46	39		45	50	
15	48	26.0		18.1	120	15.5 ¹³⁸		16.1	30	3 54	26	4 53	53	36		39	54	
16	63	25.8		18.6	134	48.2 ¹³⁷	+6	06.7	35	39	4 13	42	0 58	33		35	56	
17	78	25.6	-20	19.2	149	21.0 ¹³⁸	+5	57.2	40	3 19	3 58	4 29	1 02	32		12 31	59	
18	93	25.5	-20	19.7	163	53.9 ¹³⁹	+5	47.7	45	2 54	3 39	4 14	1 08	29		12 27	61	
19	108	25.3		20.2	178	26.8 ¹³⁹		38.1	50	20	15	3 56	15	26		21	65	
20	123	25.1		20.7	192	59.7 ¹³⁹		28.6	52	2 02	3 03	47	18	24		19	66	
21	138	25.0		21.2	207	32.7 ¹⁴⁰		19.0	54	1 38	2 50	37	21	23		16	68	
22	153	24.8		21.8	222	05.8 ¹⁴¹	+5	09.5	56	1 05	34	26	25	21		13	69	
23	168	24.6		22.3	236	38.8 ¹⁴⁰	+4	59.9	58	***	***	3 13	29	19		10	71	
24	183	24.4	-20	22.8	251	11.9 ¹⁴¹	+4	50.3	60 S	***	***	1 49	2 58	1 34	17		12 06	73

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 51 ^m 1		Mag: -4.1 PMG: 14 ^h 47 ^m			Mag: +0.6 PMG: 16 ^h 43 ^m			Mag: -1.8 PMG: 8 ^h 51 ^m			Mag: +0.5 PMG: 12 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	61	24.6	138	30.5	-25	15.5	109	06.2	-19	24.9	226	55.1	-4	55.9	165	43.6	-21	27.4
1	76	27.1	153	29.7		15.2	124	06.8		24.3	241	57.2		56.0	180	45.7		27.4
2	91	29.5	168	28.9		15.0	139	07.4		23.8	256	59.2		56.2	195	47.9		27.4
3	106	32.0	183	28.1		14.8	154	07.9		23.3	272	01.3		56.4	210	50.0		27.5
4	121	34.5	198	27.3		14.6	169	08.5		22.7	287	03.3		56.6	225	52.2		27.5
5	136	36.9	213	26.5	-25	14.3	184	09.1	-19	22.2	302	05.3	-4	56.7	240	54.3	-21	27.5
6	151	39.4	228	25.7	-25	14.1	199	09.7	-19	21.6	317	07.4	-4	56.9	255	56.5	-21	27.6
7	166	41.9	243	24.9		13.9	214	10.3		21.1	332	09.4		57.1	270	58.7		27.6
8	181	44.3	258	24.1		13.6	229	10.8		20.5	347	11.5		57.2	286	00.8		27.6
9	196	46.8	273	23.3		13.4	244	11.4		20.0	2	13.5		57.4	301	03.0		27.7
10	211	49.2	288	22.5		13.2	259	12.0		19.5	17	15.6		57.6	316	05.1		27.7
11	226	51.7	303	21.7	-25	12.9	274	12.6	-19	18.9	32	17.6	-4	57.7	331	07.3	-21	27.7
12	241	54.2	318	20.9	-25	12.7	289	13.1	-19	18.4	47	19.6	-4	57.9	346	09.4	-21	27.8
13	256	56.6	333	20.1		12.4	304	13.7		17.8	62	21.7		58.1	1	11.6		27.8
14	271	59.1	348	19.3		12.2	319	14.3		17.3	77	23.7		58.2	16	13.8		27.8
15	287	01.6	3	18.5		12.0	334	14.9		16.7	92	25.8		58.4	31	15.9		27.9
16	302	04.0	18	17.7		11.7	349	15.5		16.2	107	27.8		58.6	46	18.1		27.9
17	317	06.5	33	16.9	-25	11.5	4	16.0	-19	15.6	122	29.9	-4	58.8	61	20.2	-21	27.9
18	332	09.0	48	16.1	-25	11.2	19	16.6	-19	15.1	137	31.9	-4	58.9	76	22.4	-21	28.0
19	347	11.4	63	15.3		11.0	34	17.2		14.6	152	33.9		59.1	91	24.5		28.0
20	2	13.9	78	14.5		10.7	49	17.8		14.0	167	36.0		59.3	106	26.7		28.0
21	17	16.4	93	13.8		10.5	64	18.4		13.5	182	38.0		59.4	121	28.9		28.0
22	32	18.8	108	13.0		10.2	79	18.9		12.9	197	40.1		59.6	136	31.0		28.1
23	47	21.3	123	12.2		10.0	94	19.5		12.4	212	42.1		59.8	151	33.2		28.1
24	62	23.7	138	11.4	-25	09.7	109	20.1	-19	11.8	227	44.2	-4	59.9	166	35.3	-21	28.1
Dif	—		-8 +2			+6 +5			+20 -2			+22 0						

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: 23 ^d 3 PHE { SD: 15:1 PMG: 7 ^h 29 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	24.4	-20	22.8	251	11.9	+4 50.3	60 N	15 14	16 06	16 59	0 44 73	13 57 15	
1	198	24.3		23.3	265	45.1 ¹⁴²	40.7 ⁹⁶	58	28	15	17 05	47 71	56 17	
2	213	24.1		23.8	280	18.3 ¹⁴²	31.0 ⁹⁶	56	39	23	10	49 69	55 19	
3	228	23.9		24.3	294	51.5 ¹⁴²	21.4 ⁹⁶	54	50	31	15	51 67	53 21	
4	243	23.7		24.9	309	24.8 ¹⁴³	11.7 ⁹⁷	52	15 59	37	19	53 65	53 22	
5	258	23.6	-20	25.4	323	58.1 ¹⁴³	+4 02.1 ⁹⁶	50	16 07	16 43	17 23	0 55 64	13 52 23	
6	273	23.4	-20	25.9	338	31.4 ¹⁴³	+3 52.4 ⁹⁷	45	16 24	16 57	17 33	0 59 60	13 50 26	
7	288	23.2		26.4	353	04.8 ¹⁴⁴	42.7 ⁹⁷	40	38	17 08	41	1 02 57	48 29	
8	303	23.0		26.9	7	38.2 ¹⁴⁴	33.1 ⁹⁶	35	16 50	18	49	05 55	46 32	
9	318	22.9		27.4	22	11.6 ¹⁴⁴	23.4 ⁹⁷	30	17 01	27	17 56	07 53	45 34	
10	333	22.7		27.9	36	45.1 ¹⁴⁵	13.7 ⁹⁷	20	19	43	18 10	11 50	43 37	
11	348	22.5	-20	28.5	51	18.6 ¹⁴⁵	+3 04.0 ⁹⁷	10 N	17 35	17 57	18 23	1 15 46	13 41 40	
12	3	22.3	-20	29.0	65	52.1 ¹⁴⁵	+2 54.2 ⁹⁸	0	17 50	18 12	18 38	1 18 43	13 39 43	
13	18	22.1		29.5	80	25.7 ¹⁴⁶	44.5 ⁹⁷	10 S	18 05	28	18 54	21 41	37 46	
14	33	22.0		30.0	94	59.2 ¹⁴⁵	34.8 ⁹⁷	20	22	18 46	19 14	25 37	35 49	
15	48	21.8		30.5	109	32.9 ¹⁴⁷	25.1 ⁹⁷	30	41	19 07	39	29 34	33 52	
16	63	21.6		31.0	124	06.5 ¹⁴⁶	15.3 ⁹⁸	35	18 52	21	19 56	31 32	31 55	
17	78	21.4	-20	31.5	138	40.2 ¹⁴⁷	+2 05.6 ⁹⁷	40	19 05	19 36	20 15	1 34 30	13 30 57	
18	93	21.2	-20	32.0	153	13.9 ¹⁴⁷	+1 55.9 ⁹⁷	45	19 20	19 55	20 41	1 37 27	13 28 60	
19	108	21.1		32.5	167	47.6 ¹⁴⁷	46.1 ⁹⁸	50	39	20 20	21 16	41 24	26 63	
20	123	20.9		33.0	182	21.3 ¹⁴⁷	36.4 ⁹⁷	52	48	32	21 36	42 23	25 64	
21	138	20.7		33.5	196	55.1 ¹⁴⁸	26.7 ⁹⁷	54	19 58	20 46	22 00	44 21	24 66	
22	153	20.5		34.0	211	28.9 ¹⁴⁸	16.9 ⁹⁸	56	20 09	21 03	22 37	46 20	22 68	
23	168	20.3		34.5	226	02.7 ¹⁴⁸	+1 07.2 ⁹⁷	58	23	23	** **	48 18	21 70	
24	183	20.1	-20	35.0	240	36.6 ¹⁴⁹	+0 57.4 ⁹⁸	60 S	20 38	21 50	** **	1 51 15	13 19 73	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 47 ^m 2		Mag: -4.1 PMG: 14 ^h 48 ^m		Mag: +0.6 PMG: 16 ^h 42 ^m		Mag: -1.8 PMG: 8 ^h 48 ^m		Mag: +0.5 PMG: 12 ^h 52 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	62	23.7	138	11.4	-25	09.7	109	20.1	-19	11.8				
1	77	26.2	153	10.6		09.5	124	20.7		11.3				
2	92	28.7	168	09.8		09.2	139	21.3		10.7				
3	107	31.1	183	09.0		09.0	154	21.8		10.2				
4	122	33.6	198	08.2		08.7	169	22.4		09.6				
5	137	36.1	213	07.4	-25	08.4	184	23.0	-19	09.1				
6	152	38.5	228	06.6	-25	08.2	199	23.6	-19	08.5				
7	167	41.0	243	05.9		07.9	214	24.2		08.0				
8	182	43.5	258	05.1		07.6	229	24.7		07.4				
9	197	45.9	273	04.3		07.4	244	25.3		06.9				
10	212	48.4	288	03.5		07.1	259	25.9		06.3				
11	227	50.9	303	02.7	-25	06.9	274	26.5	-19	05.8				
12	242	53.3	318	01.9	-25	06.6	289	27.1	-19	05.2				
13	257	55.8	333	01.1		06.3	304	27.6		04.7				
14	272	58.2	348	00.3		06.0	319	28.2		04.1				
15	288	00.7	2	59.6		05.8	334	28.8		03.6				
16	303	03.2	17	58.8		05.5	349	29.4		03.0				
17	318	05.6	32	58.0	-25	05.2	4	30.0	-19	02.5				
18	333	08.1	47	57.2	-25	04.9	19	30.6	-19	01.9				
19	348	10.6	62	56.4		04.7	34	31.1		01.4				
20	3	13.0	77	55.6		04.4	49	31.7		00.8				
21	18	15.5	92	54.8		04.1	64	32.3	-19	00.2				
22	33	18.0	107	54.1		03.8	79	32.9	-18	59.7				
23	48	20.4	122	53.3		03.6	94	33.5		59.1				
24	63	22.9	137	52.5	-25	03.3	109	34.1	-18	58.6				
Dif	—		-8		+3		+6		+6					
									+20					
									-2					
									+22					
									0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 46 ^m 8			Edad: 24 ^d 3 PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 8 ^h 12 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	20.1	-20	35.0	240	36.6	+0	57.4	60 N	6 35	7 28	8 21	1 57	72	14 12 15
1	198	20.0		35.5	255	10.4 ¹⁴⁸		47.7 97	58	29	19	8 07	58	69	13 17
2	213	19.8		36.0	269	44.3 ¹⁴⁹		38.0 97	56	24	11	7 55	58	67	14 19
3	228	19.6		36.5	284	18.2 ¹⁴⁹		28.2 98	54	19	7 03	45	58	66	14 22
4	243	19.4		37.0	298	52.1 ¹⁴⁹		18.5 97	52	15	6 57	36	58	64	15 22
5	258	19.2	-20	37.5	313	26.0 ¹⁴⁹	+0	08.8 97	50	6 10	6 51	7 27	1 59	62	14 15 24
6	273	19.0	-20	38.0	328	00.0 ¹⁵⁰	-0	00.9 97	45	6 01	6 37	7 10	1 59	59	14 16 27
7	288	18.9		38.5	342	33.9 ¹⁴⁹		10.6 97	40	5 53	26	6 56	1 59	57	17 30
8	303	18.7		39.0	357	07.9 ¹⁵⁰		20.3 97	35	45	16	43	2 00	54	18 32
9	318	18.5		39.5	11	41.9 ¹⁵⁰		30.0 97	30	38	6 07	33	00	52	19 33
10	333	18.3		40.0	26	15.9 ¹⁵⁰		39.7 97	20	24	5 51	6 14	01	48	20 37
11	348	18.1	-20	40.5	40	49.9 ¹⁵⁰	-0	49.4 97	10 N	5 10	5 36	5 58	2 01	46	14 21 40
12	3	17.9	-20	41.0	55	24.0 ¹⁵¹	-0	59.1 97	0	4 55	5 21	5 43	2 01	43	14 22 43
13	18	17.7		41.5	69	58.0 ¹⁵⁰	-1	08.8 97	10 S	39	5 05	28	02	40	23 46
14	33	17.6		42.0	84	32.1 ¹⁵¹		18.4 96	20	4 19	4 47	5 11	02	37	24 49
15	48	17.4		42.5	99	06.2 ¹⁵¹		28.1 97	30	3 54	26	4 52	03	33	25 52
16	63	17.2		43.0	113	40.2 ¹⁵⁰		37.7 96	35	37	4 12	41	03	32	26 54
17	78	17.0	-20	43.5	128	14.3 ¹⁵¹	-1	47.3 96	40	3 18	3 57	4 28	2 04	29	14 27 56
18	93	16.8	-20	44.0	142	48.4 ¹⁵¹	-1	57.0 97	45	2 52	3 38	4 13	2 04	27	14 28 59
19	108	16.6		44.5	157	22.5 ¹⁵¹	-2	06.6 96	50	2 17	13	3 54	05	23	29 62
20	123	16.4		44.9	171	56.6 ¹⁵¹		16.1 95	52	1 57	3 01	45	05	22	29 64
21	138	16.2		45.4	186	30.7 ¹⁵¹		25.7 96	54	1 33	2 47	35	05	21	30 65
22	153	16.0		45.9	201	04.9 ¹⁵²		35.3 96	56	0 56	30	23	06	18	30 67
23	168	15.9		46.4	215	39.0 ¹⁵¹		44.8 95	58	** **	2 09	3 10	06	17	31 69
24	183	15.7	-20	46.9	230	13.1 ¹⁵¹	-2	54.4 96	60 S	** **	1 43	2 55	2 06	15	14 32 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 19 ^h 43 ^m 2		Mag: -4.1 PMG: 14 ^h 49 ^m		Mag: +0.6 PMG: 16 ^h 41 ^m		Mag: -1.8 PMG: 8 ^h 45 ^m		Mag: +0.5 PMG: 12 ^h 48 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	63	22.9	137	52.5	-25	03.3	109	34.1	-18	58.6	228	33.3	-5	03.9	167	27.1	-21	28.9	
1	78	25.3	152	51.7		03.0	124	34.6		58.0	243	35.3		04.1	182	29.2		28.9	
2	93	27.8	167	50.9		02.7	139	35.2		57.5	258	37.4		04.3	197	31.4		29.0	
3	108	30.3	182	50.2		02.4	154	35.8		56.9	273	39.4		04.4	212	33.5		29.0	
4	123	32.7	197	49.4		02.1	169	36.4		56.4	288	41.5		04.6	227	35.7		29.0	
5	138	35.2	212	48.6	-25	01.8	184	37.0	-18	55.8	303	43.5	-5	04.8	242	37.8	-21	29.1	
6	153	37.7	227	47.8	-25	01.5	199	37.6	-18	55.2	318	45.6	-5	04.9	257	40.0	-21	29.1	
7	168	40.1	242	47.0		01.3	214	38.1		54.7	333	47.6		05.1	272	42.1		29.1	
8	183	42.6	257	46.3		01.0	229	38.7		54.1	348	49.7		05.3	287	44.3		29.2	
9	198	45.1	272	45.5		00.7	244	39.3		53.6	3	51.7		05.4	302	46.5		29.2	
10	213	47.5	287	44.7		00.4	259	39.9		53.0	18	53.8		05.6	317	48.6		29.2	
11	228	50.0	302	43.9	-25	00.1	274	40.5	-18	52.5	33	55.8	-5	05.8	332	50.8	-21	29.3	
12	243	52.5	317	43.1	-24	59.8	289	41.1	-18	51.9	48	57.9	-5	05.9	347	52.9	-21	29.3	
13	258	54.9	332	42.4		59.5	304	41.6		51.3	63	59.9		06.1	2	55.1		29.3	
14	273	57.4	347	41.6		59.2	319	42.2		50.8	79	02.0		06.3	17	57.2		29.3	
15	288	59.8	2	40.8		58.9	334	42.8		50.2	94	04.0		06.4	32	59.4		29.4	
16	304	02.3	17	40.0		58.6	349	43.4		49.7	109	06.1		06.6	48	01.5		29.4	
17	319	04.8	32	39.3	-24	58.3	4	44.0	-18	49.1	124	08.1	-5	06.8	63	03.7	-21	29.4	
18	334	07.2	47	38.5	-24	58.0	19	44.6	-18	48.5	139	10.2	-5	06.9	78	05.9	-21	29.5	
19	349	09.7	62	37.7		57.7	34	45.2		48.0	154	12.2		07.1	93	08.0		29.5	
20	4	12.2	77	36.9		57.4	49	45.7		47.4	169	14.3		07.3	108	10.2		29.5	
21	19	14.6	92	36.2		57.0	64	46.3		46.8	184	16.3		07.4	123	12.3		29.6	
22	34	17.1	107	35.4		56.7	79	46.9		46.3	199	18.4		07.6	138	14.5		29.6	
23	49	19.6	122	34.6		56.4	94	47.5		45.7	214	20.4		07.7	153	16.6		29.6	
24	64	22.0	137	33.8	-24	56.1	109	48.1	-18	45.2	229	22.5	-5	07.9	168	18.8	-21	29.7	
Dif	—		-8	+3			+6	+6			+20	-2			+22				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 25 ^d 3 PHE { 4 ^h : 54°/3 12 ^h : 54°/2 20 ^h : 54°/1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 47 ^m 1			SD: 14°8 PMG: 8 ^h 54 ^m R°: 43 ^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	183	15.7	-20 46.9	230	13.1	-2 54.4		60 N	15 11	16 03	16 57	3 09 71		14 27 16	
1	198	15.5		244	47.3 ¹⁵²	-3 03.9 ⁹⁵		58	25	13	17 03	07 69		30 18	
2	213	15.3		259	21.4 ¹⁵¹	13.4 ⁹⁵		56	37	21	08	05 67		33 20	
3	228	15.1		273	55.5 ¹⁵¹	22.9 ⁹⁵		54	47	29	13	04 65		35 22	
4	243	14.9		288	29.7 ¹⁵²	32.4 ⁹⁵		52	15 57	36	18	02 64		37 23	
5	258	14.7	-20 49.3	303	03.8 ¹⁵¹	-3 41.8 ⁹⁴		50	16 05	16 42	17 22	3 01 62		14 39 25	
6	273	14.5	-20 49.8	317	38.0 ¹⁵²	-3 51.2 ⁹⁴		45	16 23	16 55	17 32	2 58 59		14 43 28	
7	288	14.3		332	12.1 ¹⁵¹	-4 00.7 ⁹⁵		40	37	17 07	40	56 56		47 30	
8	303	14.1		346	46.3 ¹⁵²	10.1 ⁹⁴		35	16 50	17	48	54 54		50 32	
9	318	13.9		1	20.4 ¹⁵¹	19.4 ⁹³		30	17 00	26	17 56	52 52		52 34	
10	333	13.7		15	54.5 ¹⁵¹	28.8 ⁹⁴		20	19	43	18 10	49 49		14 57 37	
11	348	13.5	-20 52.2	30	28.7 ¹⁵²	-4 38.1 ⁹³		10 N	17 35	17 58	18 24	2 47 45		15 01 40	
12	3	13.4	-20 52.7	45	02.8 ¹⁵¹	-4 47.4 ⁹³		0	17 51	18 13	18 39	2 44 43		15 05 43	
13	18	13.2		59	36.9 ¹⁵¹	-4 56.7 ⁹³		10 S	18 06	29	18 55	42 40		09 45	
14	33	13.0		74	11.1 ¹⁵²	-5 06.0 ⁹³		20	23	18 47	19 16	39 37		13 48	
15	48	12.8		88	45.2 ¹⁵¹	15.3 ⁹³		30	42	19 09	41	36 34		17 52	
16	63	12.6		103	19.3 ¹⁵¹	24.5 ⁹²		35	18 54	23	19 58	35 31		20 54	
17	78	12.4	-20 55.1	117	53.4 ¹⁵¹	-5 33.7 ⁹²		40	19 07	19 39	20 18	2 33 29		15 23 56	
18	93	12.2	-20 55.5	132	27.5 ¹⁵¹	-5 42.9 ⁹²		45	19 23	19 58	20 44	2 31 27		15 27 58	
19	108	12.0		147	01.6 ¹⁵¹	-5 52.0 ⁹¹		50	42	20 24	21 21	28 24		31 61	
20	123	11.8		161	35.7 ¹⁵¹	-6 01.1 ⁹¹		52	19 51	36	21 41	27 23		33 63	
21	138	11.6		176	09.7 ¹⁵⁰	10.2 ⁹¹		54	20 02	20 51	22 07	26 21		35 65	
22	153	11.4		190	43.8 ¹⁵¹	19.3 ⁹¹		56	13	21 08	22 47	24 20		37 67	
23	168	11.2		205	17.9 ¹⁵¹	28.3 ⁹⁰		58	27	29	** **	23 17		40 68	
24	183	11.0	-20 58.4	219	51.9 ¹⁵⁰	-6 37.4 ⁹¹		60 S	20 43	21 57	** **	2 21 16		15 43 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 39 ^m 3		Mag: -4.1 PMG: 14 ^h 51 ^m			Mag: +0.6 PMG: 16 ^h 40 ^m			Mag: -1.8 PMG: 8 ^h 41 ^m			Mag: +0.5 PMG: 12 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	64	22.0	137 33.8	-24 56.1		109 48.1	-18 45.2		229 22.5	-5 07.9		168 18.8	-21 29.7		
1	79	24.5	152 33.1	55.8		124 48.7	44.6		244 24.5	08.1		183 20.9	29.7		
2	94	26.9	167 32.3	55.5		139 49.3	44.0		259 26.6	08.2		198 23.1	29.7		
3	109	29.4	182 31.5	55.2		154 49.8	43.5		274 28.6	08.4		213 25.2	29.8		
4	124	31.9	197 30.8	54.9		169 50.4	42.9		289 30.7	08.6		228 27.4	29.8		
5	139	34.3	212 30.0	-24 54.5		184 51.0	-18 42.3		304 32.7	-5 08.7		243 29.6	-21 29.8		
6	154	36.8	227 29.2	-24 54.2		199 51.6	-18 41.8		319 34.8	-5 08.9		258 31.7	-21 29.8		
7	169	39.3	242 28.5	53.9		214 52.2	41.2		334 36.8	09.1		273 33.9	29.9		
8	184	41.7	257 27.7	53.6		229 52.8	40.6		349 38.9	09.2		288 36.0	29.9		
9	199	44.2	272 26.9	53.2		244 53.4	40.1		4 40.9	09.4		303 38.2	29.9		
10	214	46.7	287 26.1	52.9		259 53.9	39.5		19 43.0	09.6		318 40.3	30.0		
11	229	49.1	302 25.4	-24 52.6		274 54.5	-18 38.9		34 45.0	-5 09.7		333 42.5	-21 30.0		
12	244	51.6	317 24.6	-24 52.3		289 55.1	-18 38.4		49 47.1	-5 09.9		348 44.6	-21 30.0		
13	259	54.1	332 23.8	51.9		304 55.7	37.8		64 49.1	10.1		3 46.8	30.1		
14	274	56.5	347 23.1	51.6		319 56.3	37.2		79 51.2	10.2		18 48.9	30.1		
15	289	59.0	2 22.3	51.3		334 56.9	36.7		94 53.2	10.4		33 51.1	30.1		
16	305	01.4	17 21.5	51.0		349 57.5	36.1		109 55.3	10.5		48 53.2	30.2		
17	320	03.9	32 20.8	-24 50.6		4 58.1	-18 35.5		124 57.3	-5 10.7		63 55.4	-21 30.2		
18	335	06.4	47 20.0	-24 50.3		19 58.6	-18 35.0		139 59.4	-5 10.9		78 57.6	-21 30.2		
19	350	08.8	62 19.3	50.0		34 59.2	34.4		155 01.5	11.0		93 59.7	30.3		
20	5	11.3	77 18.5	49.6		49 59.8	33.8		170 03.5	11.2		109 01.9	30.3		
21	20	13.8	92 17.7	49.3		65 00.4	33.3		185 05.6	11.4		124 04.0	30.3		
22	35	16.2	107 17.0	48.9		80 01.0	32.7		200 07.6	11.5		139 06.2	30.3		
23	50	18.7	122 16.2	48.6		95 01.6	32.1		215 09.7	11.7		154 08.3	30.4		
24	65	21.2	137 15.4	-24 48.3		110 02.2	-18 31.6		230 11.7	-5 11.9		169 10.5	-21 30.4		
Dif	—		-8	+3		+6	+6		+21	-2		+22			

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: 26 ^d 3 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 9 ^h 37 ^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	
0	183	11.0	-20	58.4	219	51.9	-6	37.4	60 N	6 38	7 32	8 25	4 20	70	14 43	19		
1	198	10.8		58.8	234	25.9 ¹⁵⁰		46.3 ⁸⁹	58	32	23	8 11	16 68		48	21		
2	213	10.6		59.3	248	59.9 ¹⁵⁰	-6	55.3 ⁹⁰	56	27	14	7 59	12 66		53	22		
3	228	10.4	-20	59.8	263	34.0 ¹⁵¹	-7	04.2 ⁸⁹	54	22	07	48	09 64		14 57	23		
4	243	10.2	-21	00.2	278	08.0 ¹⁵⁰		13.1 ⁸⁹	52	17	7 00	39	06 62		15 00	26		
5	258	10.0	-21	00.7	292	41.9 ¹⁴⁹	-7	22.0 ⁸⁹	50	6 13	6 53	7 30	4 03	61	15 04	26		
6	273	09.8	-21	01.2	307	15.9 ¹⁵⁰	-7	30.8 ⁸⁸	45	6 03	6 40	7 12	3 57	58	15 11	29		
7	288	09.6		01.6	321	49.9 ¹⁵⁰		39.6 ⁸⁸	40	5 55	28	6 58	52 56		17	31		
8	303	09.4		02.1	336	23.8 ¹⁴⁹		48.4 ⁸⁸	35	47	18	45	48 53		22	33		
9	318	09.2		02.6	350	57.7 ¹⁴⁹	-7	57.1 ⁸⁷	30	39	6 09	34	44 52		26	36		
10	333	09.0		03.0	5	31.6 ¹⁴⁹	-8	05.8 ⁸⁷	20	25	5 52	6 16	38 48		34	39		
11	348	08.8	-21	03.5	20	05.5 ¹⁴⁹	-8	14.5 ⁸⁷	10 N	5 11	5 37	5 59	3 32	46	15 41	41		
12	3	08.6	-21	03.9	34	39.4 ¹⁴⁹	-8	23.2 ⁸⁷	0	4 56	5 22	5 44	3 27	43	15 48	43		
13	18	08.4		04.4	49	13.3 ¹⁴⁹		31.8 ⁸⁶	10 S	39	5 06	28	22 40		15 54	46		
14	33	08.2		04.9	63	47.1 ¹⁴⁸		40.3 ⁸⁵	20	4 19	4 47	5 11	16 38		16 01	49		
15	48	08.0		05.3	78	20.9 ¹⁴⁸		48.9 ⁸⁶	30	3 53	25	4 52	10 35		09	52		
16	63	07.8		05.8	92	54.7 ¹⁴⁸	-8	57.4 ⁸⁵	35	36	4 12	40	06 33		14	53		
17	78	07.6	-21	06.2	107	28.5 ¹⁴⁸	-9	05.8 ⁸⁴	40	3 16	3 56	4 27	3 02	31	16 19	56		
18	93	07.4	-21	06.7	122	02.3 ¹⁴⁸	-9	14.2 ⁸⁴	45	2 50	3 36	4 12	2 58	28	16 25	58		
19	108	07.2		07.2	136	36.0 ¹⁴⁷		22.6 ⁸⁴	50	2 13	3 11	3 52	52 26		32	61		
20	123	07.0		07.6	151	09.7 ¹⁴⁷		30.9 ⁸³	52	1 53	2 58	43	50 24		36	62		
21	138	06.8		08.1	165	43.4 ¹⁴⁷		39.3 ⁸⁴	54	1 27	44	33	47 22		40	63		
22	153	06.5		08.5	180	17.1 ¹⁴⁷		47.5 ⁸²	56	0 47	26	21	44 21		44	65		
23	168	06.3		09.0	194	50.8 ¹⁴⁷	-9	55.7 ⁸²	58	** **	2 05	3 07	40 20		48	68		
24	183	06.1	-21	09.4	209	24.4 ¹⁴⁶	-10	03.9 ⁸²	60 S	** **	1 37	2 51	2 37	17	16 53	70		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 35 ^m 4			Mag: -4.1 PMG: 14 ^h 52 ^m			Mag: +0.6 PMG: 16 ^h 39 ^m			Mag: -1.8 PMG: 8 ^h 38 ^m			Mag: +0.5 PMG: 12 ^h 41 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	65	21.2	137	15.4	-24	48.3	110	02.2	-18	31.6	230	11.7	-5	11.9	169	10.5	-21	30.4
1	80	23.6	152	14.7		47.9	125	02.8		31.0	245	13.8		12.0	184	12.6		30.4
2	95	26.1	167	13.9		47.6	140	03.4		30.4	260	15.8		12.2	199	14.8		30.5
3	110	28.6	182	13.2		47.2	155	03.9		29.8	275	17.9		12.3	214	16.9		30.5
4	125	31.0	197	12.4		46.9	170	04.5		29.3	290	19.9		12.5	229	19.1		30.5
5	140	33.5	212	11.6	-24	46.5	185	05.1	-18	28.7	305	22.0	-5	12.7	244	21.2	-21	30.6
6	155	35.9	227	10.9	-24	46.2	200	05.7	-18	28.1	320	24.0	-5	12.8	259	23.4	-21	30.6
7	170	38.4	242	10.1		45.8	215	06.3		27.6	335	26.1		13.0	274	25.6		30.6
8	185	40.9	257	09.4		45.5	230	06.9		27.0	350	28.2		13.2	289	27.7		30.7
9	200	43.3	272	08.6		45.1	245	07.5		26.4	5	30.2		13.3	304	29.9		30.7
10	215	45.8	287	07.8		44.8	260	08.1		25.8	20	32.3		13.5	319	32.0		30.7
11	230	48.3	302	07.1	-24	44.4	275	08.7	-18	25.3	35	34.3	-5	13.6	334	34.2	-21	30.8
12	245	50.7	317	06.3	-24	44.1	290	09.3	-18	24.7	50	36.4	-5	13.8	349	36.3	-21	30.8
13	260	53.2	332	05.6		43.7	305	09.8		24.1	65	38.4		14.0	4	38.5		30.8
14	275	55.7	347	04.8		43.4	320	10.4		23.5	80	40.5		14.1	19	40.6		30.8
15	290	58.1	2	04.1		43.0	335	11.0		23.0	95	42.5		14.3	34	42.8		30.9
16	306	00.6	17	03.3		42.6	350	11.6		22.4	110	44.6		14.5	49	44.9		30.9
17	321	03.0	32	02.6	-24	42.3	5	12.2	-18	21.8	125	46.7	-5	14.6	64	47.1	-21	30.9
18	336	05.5	47	01.8	-24	41.9	20	12.8	-18	21.2	140	48.7	-5	14.8	79	49.2	-21	31.0
19	351	08.0	62	01.1		41.5	35	13.4		20.7	155	50.8		14.9	94	51.4		31.0
20	6	10.4	77	00.3		41.2	50	14.0		20.1	170	52.8		15.1	109	53.5		31.0
21	21	12.9	91	59.6		40.8	65	14.6		19.5	185	54.9		15.3	124	55.7		31.1
22	36	15.4	106	58.8		40.4	80	15.2		18.9	200	56.9		15.4	139	57.9		31.1
23	51	17.8	121	58.0		40.1	95	15.8		18.4	215	59.0		15.6	155	00.0		31.1
24	66	20.3	136	57.3	-24	39.7	110	16.4	-18	17.8	231	01.1	-5	15.8	170	02.2	-21	31.2
Dif	—		-8		+4		+6		+6		+21		-2		+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: 27 ^d 3 PHE { 4 ^h : 54/0 12 ^h : 53/9 20 ^h : 53/9 R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	183	06.1	-21 09.4	209	24.4	-10 03.9	82	60 N	15 08	16 01	16 55	5 30	69	15 02	21	
1	198	05.9	09.9	223	58.0 ¹⁴⁶	12.1	82	58	22	11	17 01	24	67	09	23	
2	213	05.7	10.3	238	31.6 ¹⁴⁶	20.2	81	56	35	19	07	18	65	15	25	
3	228	05.5	10.8	253	05.2 ¹⁴⁶	28.2	80	54	45	27	12	13	63	20	28	
4	243	05.3	11.2	267	38.7 ¹⁴⁵	36.2	80	52	15 55	34	17	08	62	26	28	
5	258	05.1	-21 11.7	282	12.3 ¹⁴⁶	-10 44.2	80	50	16 03	16 40	17 21	5 04	61	15 30	30	
6	273	04.9	-21 12.1	296	45.7 ¹⁴⁴	-10 52.1	79	45	16 22	16 54	17 31	4 55	58	15 40	32	
7	288	04.7	12.6	311	19.2 ¹⁴⁵	-11 00.0	79	40	36	17 06	40	48	55	48	35	
8	303	04.5	13.0	325	52.7 ¹⁴⁵	-11 07.8	78	35	16 49	17	48	41	54	15 55	37	
9	318	04.3	13.5	340	26.1 ¹⁴⁴	15.6	78	30	17 00	26	17 55	36	52	16 02	38	
10	333	04.1	13.9	354	59.5 ¹⁴⁴	23.3	77	20	19	43	18 10	26	49	13	40	
11	348	03.8	-21 14.4	9	32.8 ¹⁴³	-11 31.0	77	10 N	17 36	17 58	18 24	4 18	46	16 22	43	
12	3	03.6	-21 14.8	24	06.2 ¹⁴⁴	-11 38.7	77	0	17 51	18 14	18 39	4 10	44	16 31	45	
13	18	03.4	15.3	38	39.5 ¹⁴³	46.3	76	10 S	18 07	30	18 57	4 02	42	40	47	
14	33	03.2	15.7	53	12.8 ¹⁴³	-11 53.8	75	20	24	18 48	19 17	3 54	39	16 50	49	
15	48	03.0	16.2	67	46.0 ¹⁴²	-12 01.3	75	30	44	19 11	19 43	45	36	17 01	52	
16	63	02.8	16.6	82	19.3 ¹⁴³	08.8	75	35	18 56	25	20 00	39	35	07	54	
17	78	02.6	-21 17.0	96	52.5 ¹⁴²	-12 16.2	74	40	19 09	19 41	20 21	3 33	33	17 15	55	
18	93	02.4	-21 17.5	111	25.7 ¹⁴²	-12 23.5	73	45	19 25	20 01	20 47	3 26	31	17 23	57	
19	108	02.2	17.9	125	58.8 ¹⁴¹	30.8	73	50	45	27	21 25	18	28	33	60	
20	123	01.9	18.4	140	31.9 ¹⁴¹	38.0	72	52	19 54	40	21 46	14	27	38	61	
21	138	01.7	18.8	155	05.0 ¹⁴¹	45.2	72	54	20 05	20 55	22 14	09	26	43	63	
22	153	01.5	19.2	169	38.1 ¹⁴¹	52.4	72	56	17	21 13	23 00	05	24	49	64	
23	168	01.3	19.7	184	11.1 ¹⁴⁰	-12 59.5	71	58	31	21 35	** **	3 00	22	17 56	66	
24	183	01.1	-21 20.1	198	44.1 ¹⁴⁰	-13 06.5	70	60 S	20 48	22 05	** **	2 54	20	18 03	68	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 19 ^h 31 ^m 4		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: +0.6 PMG: 16 ^h 38 ^m			Mag: -1.8 PMG: 8 ^h 35 ^m			Mag: +0.5 PMG: 12 ^h 38 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	°	°	°	°	°	°	°	°	°	°					
0	66 20.3	136 57.3	-24 39.7	110 16.4	-18 17.8	231 01.1	-5 15.8	170 02.2	-21 31.2							
1	81 22.8	151 56.5	39.3	125 16.9	17.2	246 03.1	15.9	185 04.3	31.2							
2	96 25.2	166 55.8	39.0	140 17.5	16.6	261 05.2	16.1	200 06.5	31.2							
3	111 27.7	181 55.0	38.6	155 18.1	16.1	276 07.2	16.2	215 08.6	31.2							
4	126 30.2	196 54.3	38.2	170 18.7	15.5	291 09.3	16.4	230 10.8	31.3							
5	141 32.6	211 53.6	-24 37.8	185 19.3	-18 14.9	306 11.3	-5 16.6	245 12.9	-21 31.3							
6	156 35.1	226 52.8	-24 37.5	200 19.9	-18 14.3	321 13.4	-5 16.7	260 15.1	-21 31.3							
7	171 37.5	241 52.1	37.1	215 20.5	13.7	336 15.5	16.9	275 17.2	31.4							
8	186 40.0	256 51.3	36.7	230 21.1	13.2	351 17.5	17.0	290 19.4	31.4							
9	201 42.5	271 50.6	36.3	245 21.7	12.6	6 19.6	17.2	305 21.5	31.4							
10	216 44.9	286 49.8	35.9	260 22.3	12.0	21 21.6	17.4	320 23.7	31.5							
11	231 47.4	301 49.1	-24 35.6	275 22.9	-18 11.4	36 23.7	-5 17.5	335 25.8	-21 31.5							
12	246 49.9	316 48.3	-24 35.2	290 23.5	-18 10.8	51 25.8	-5 17.7	350 28.0	-21 31.5							
13	261 52.3	331 47.6	34.8	305 24.1	10.3	66 27.8	17.8	5 30.1	31.6							
14	276 54.8	346 46.8	34.4	320 24.7	09.7	81 29.9	18.0	20 32.3	31.6							
15	291 57.3	1 46.1	34.0	335 25.3	09.1	96 31.9	18.2	35 34.4	31.6							
16	306 59.7	16 45.4	33.6	350 25.8	08.5	111 34.0	18.3	50 36.6	31.6							
17	322 02.2	31 44.6	-24 33.2	5 26.4	-18 07.9	126 36.0	-5 18.5	65 38.8	-21 31.7							
18	337 04.7	46 43.9	-24 32.8	20 27.0	-18 07.3	141 38.1	-5 18.7	80 40.9	-21 31.7							
19	352 07.1	61 43.1	32.4	35 27.6	06.8	156 40.2	18.8	95 43.1	31.7							
20	7 09.6	76 42.4	32.1	50 28.2	06.2	171 42.2	19.0	110 45.2	31.8							
21	22 12.0	91 41.7	31.7	65 28.8	05.6	186 44.3	19.1	125 47.4	31.8							
22	37 14.5	106 40.9	31.3	80 29.4	05.0	201 46.3	19.3	140 49.5	31.8							
23	52 17.0	121 40.2	30.9	95 30.0	04.4	216 48.4	19.5	155 51.7	31.9							
24	67 19.4	136 39.4	-24 30.5	110 30.6	-18 03.8	231 50.5	-5 19.6	170 53.8	-21 31.9							
Dif	—	-7	+4	+6	+6	+21	-2	+22	0							

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: 28 ^d 3 PHE { 4 ^h : 53'9 12 ^h : 54'0 20 ^h : 54'0 R°: 46 ^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	01.1	-21	20.1	198	44.1	-13	06.5	70	60 N	6 42	7 36	8 29	6 39	67	15	23 27	
1	198	00.9		20.6	213	17.1		13.5	70	58	35	26	15	31	64	32	29	
2	213	00.7		21.0	227	50.0		20.4	69	56	30	17	8 02	23	63	40	31	
3	228	00.5		21.4	242	22.9		27.2	68	54	25	10	7 51	16	62	48	31	
4	243	00.2		21.9	256	55.8		34.0	68	52	20	7 02	42	10	61	15	54 33	
5	258	00.0	-21	22.3	271	28.6	-13	40.8	68	50	6 15	6 56	7 33	6 05	59	16	00 34	
6	272	59.8	-21	22.7	286	01.5	-13	47.5	67	45	6 05	6 42	7 15	5 53	57	16	12 37	
7	287	59.6		23.2	300	34.3	-13	54.1	66	40	5 56	30	7 00	43	55		23 38	
8	302	59.4		23.6	315	07.0	-14	00.7	66	35	48	20	6 47	35	53		32 39	
9	317	59.2		24.0	329	39.7		07.2	65	30	41	6 10	36	28	52		40 40	
10	332	58.9		24.4	344	12.4		13.7	65	20	26	5 53	17	15	50	16	53 43	
11	347	58.7	-21	24.9	358	45.1	-14	20.0	63	10 N	5 12	5 38	6 00	5 04	48	17	05 44	
12	2	58.5	-21	25.3	13	17.7	-14	26.4	64	0	4 56	5 22	5 44	4 54	46	17	16 46	
13	17	58.3		25.7	27	50.3		32.7	63	10 S	39	5 06	29	44	44		27 48	
14	32	58.1		26.2	42	22.9		38.9	62	20	4 19	4 47	5 11	33	42		39 50	
15	47	57.9		26.6	56	55.4		45.0	61	30	3 52	25	4 52	21	39	17	53 52	
16	62	57.6		27.0	71	27.9		51.1	61	35	35	4 11	40	14	38	18	01 53	
17	77	57.4	-21	27.4	86	00.4	-14	57.1	60	40	3 15	3 55	4 26	4 06	36	18	10 54	
18	92	57.2	-21	27.9	100	32.8	-15	03.1	60	45	2 48	3 35	4 10	3 57	34	18	20 56	
19	107	57.0		28.3	115	05.2		09.0	59	50	2 10	3 09	3 51	46	31		33 58	
20	122	56.8		28.7	129	37.6		14.8	58	52	1 49	2 56	41	41	30		39 59	
21	137	56.5		29.1	144	09.9		20.6	58	54	1 22	41	30	35	29		46 60	
22	152	56.3		29.5	158	42.2		26.3	57	56	0 36	23	18	29	27	18	53 62	
23	167	56.1		30.0	173	14.5		31.9	56	58	** **	2 01	3 04	22	26	19	02 63	
24	182	55.9	-21	30.4	187	46.7	-15	37.5	56	60 S	** **	1 31	2 48	3 14	24	19	11 65	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 19 ^h 27 ^m 5			Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: +0.6 PMG: 16 ^h 37 ^m			Mag: -1.8 PMG: 8 ^h 31 ^m			Mag: +0.5 PMG: 12 ^h 35 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	67	19.4	136	39.4	-24	30.5	110	30.6	-18	03.8	231	50.5	-5	19.6	170	53.8	-21	31.9
1	82	21.9	151	38.7		30.1	125	31.2		03.3	246	52.5		19.8	185	56.0		31.9
2	97	24.4	166	38.0		29.7	140	31.8		02.7	261	54.6		19.9	200	58.1		32.0
3	112	26.8	181	37.2		29.3	155	32.4		02.1	276	56.7		20.1	216	00.3		32.0
4	127	29.3	196	36.5		28.9	170	33.0		01.5	291	58.7		20.3	231	02.4		32.0
5	142	31.8	211	35.7	-24	28.5	185	33.6	-18	00.9	307	00.8	-5	20.4	246	04.6	-21	32.0
6	157	34.2	226	35.0	-24	28.1	200	34.2	-18	00.3	322	02.8	-5	20.6	261	06.7	-21	32.1
7	172	36.7	241	34.3		27.6	215	34.8	-17	59.7	337	04.9		20.7	276	08.9		32.1
8	187	39.1	256	33.5		27.2	230	35.4		59.1	352	07.0		20.9	291	11.0		32.1
9	202	41.6	271	32.8		26.8	245	36.0		58.6	7	09.0		21.1	306	13.2		32.2
10	217	44.1	286	32.1		26.4	260	36.6		58.0	22	11.1		21.2	321	15.3		32.2
11	232	46.5	301	31.3	-24	26.0	275	37.2	-17	57.4	37	13.1	-5	21.4	336	17.5	-21	32.2
12	247	49.0	316	30.6	-24	25.6	290	37.8	-17	56.8	52	15.2	-5	21.5	351	19.6	-21	32.3
13	262	51.5	331	29.9		25.2	305	38.4		56.2	67	17.3		21.7	6	21.8		32.3
14	277	53.9	346	29.1		24.8	320	39.0		55.6	82	19.3		21.8	21	23.9		32.3
15	292	56.4	1	28.4		24.4	335	39.5		55.0	97	21.4		22.0	36	26.1		32.3
16	307	58.9	16	27.7		23.9	350	40.1		54.4	112	23.5		22.2	51	28.2		32.4
17	323	01.3	31	27.0	-24	23.5	5	40.7	-17	53.9	127	25.5	-5	22.3	66	30.4	-21	32.4
18	338	03.8	46	26.2	-24	23.1	20	41.3	-17	53.3	142	27.6	-5	22.5	81	32.5	-21	32.4
19	353	06.3	61	25.5		22.7	35	41.9		52.7	157	29.6		22.6	96	34.7		32.5
20	8	08.7	76	24.8		22.3	50	42.5		52.1	172	31.7		22.8	111	36.9		32.5
21	23	11.2	91	24.0		21.8	65	43.1		51.5	187	33.8		23.0	126	39.0		32.5
22	38	13.6	106	23.3		21.4	80	43.7		50.9	202	35.8		23.1	141	41.2		32.6
23	53	16.1	121	22.6		21.0	95	44.3		50.3	217	37.9		23.3	156	43.3		32.6
24	68	18.6	136	21.9	-24	20.6	110	44.9	-17	49.7	232	40.0	-5	23.4	171	45.5	-21	32.6
Dif	—			-7	+4	+6			+6	+21			-2	+22			0	

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: 29 ^d 3 PHE { 4 ^h : 54:0 12 ^h : 54:1 20 ^h : 54:1 PMG: 11 ^h 51 ^m R°: 47 ^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	55.9	-21 30.4	187	46.7	-15 37.5		60 N	15 05	15 59	16 53	7 46 63	15 50 34	
1	197	55.7		202	18.9 ¹³²	43.0	55	58	20	16 09	16 59	35 61	16 01 36	
2	212	55.4	31.2	216	51.1 ¹³²	48.4	54	56	32	18	17 05	26 60	11 36	
3	227	55.2	31.6	231	23.3 ¹³²	53.7	53	54	44	26	11	18 59	19 38	
4	242	55.0	32.1	245	55.4 ¹³¹	-15 59.0	53	52	15 53	33	15	11 57	27 38	
5	257	54.8	-21 32.5	260	27.5 ¹³¹	-16 04.3	53	50	16 02	16 39	17 20	7 04 57	16 34 39	
6	272	54.5	-21 32.9	274	59.5 ¹³⁰	-16 09.4	51	45	16 21	16 54	17 30	6 50 55	16 49 40	
7	287	54.3	33.3	289	31.5 ¹³⁰	14.5	51	40	36	17 06	39	38 54	17 01 42	
8	302	54.1	33.7	304	03.5 ¹³⁰	19.5	50	35	16 49	16	47	28 53	11 43	
9	317	53.9	34.1	318	35.4 ¹²⁹	24.4	49	30	17 00	26	17 55	20 51	20 44	
10	332	53.7	34.6	333	07.4 ¹³⁰	29.3	49	20	19	43	18 10	6 05 50	36 45	
11	347	53.4	-21 35.0	347	39.2 ¹²⁸	-16 34.1	48	10 N	17 36	17 59	18 25	5 52 48	17 49 47	
12	2	53.2	-21 35.4	2	11.1 ¹²⁹	-16 38.8	47	0	17 52	18 14	18 40	5 40 47	18 02 48	
13	17	53.0	35.8	16	42.9 ¹²⁸	43.5	47	10 S	18 08	31	18 58	28 45	15 49	
14	32	52.8	36.2	31	14.7 ¹²⁸	48.0	45	20	26	18 50	19 19	15 44	29 50	
15	47	52.5	36.6	45	46.5 ¹²⁸	52.5	45	30	46	19 13	19 45	5 00 42	45 51	
16	62	52.3	37.0	60	18.2 ¹²⁷	-16 57.0	45	35	18 58	27	20 02	4 52 41	18 54 52	
17	77	52.1	-21 37.4	74	49.9 ¹²⁷	-17 01.3	43	40	19 11	19 43	20 23	4 42 40	19 04 53	
18	92	51.9	-21 37.8	89	21.6 ¹²⁷	-17 05.6	43	45	19 28	20 04	20 51	4 31 38	19 16 54	
19	107	51.6	38.2	103	53.2 ¹²⁶	09.8	42	50	48	30	21 29	17 37	31 56	
20	122	51.4	38.6	118	24.8 ¹²⁶	13.9	41	52	19 57	43	21 51	11 36	38 56	
21	137	51.2	39.0	132	56.4 ¹²⁶	17.9	40	54	20 08	20 59	22 21	4 04 35	46 57	
22	152	50.9	39.5	147	27.9 ¹²⁵	21.9	40	56	21	21 17	23 15	3 56 34	19 55 57	
23	167	50.7	39.9	161	59.4 ¹²⁵	25.8	39	58	35	21 40	** ** *	48 32	20 05 58	
24	182	50.5	-21 40.3	176	30.9 ¹²⁵	-17 29.6	38	60 S	20 52	22 12	** ** *	3 38 30	20 16 60	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 23 ^m 6		Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +0.6 PMG: 16 ^h 36 ^m			Mag: -1.8 PMG: 8 ^h 28 ^m			Mag: +0.5 PMG: 12 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	68	18.6	136	21.9	-24 20.6	110	44.9	-17 49.7	232	40.0	-5 23.4	171	45.5	-21 32.6
1	83	21.0	151	21.1	20.1	125	45.5	49.1	247	42.0	23.6	186	47.6	32.7
2	98	23.5	166	20.4	19.7	140	46.1	48.5	262	44.1	23.8	201	49.8	32.7
3	113	26.0	181	19.7	19.3	155	46.7	47.9	277	46.2	23.9	216	51.9	32.7
4	128	28.4	196	19.0	18.8	170	47.3	47.4	292	48.2	24.1	231	54.1	32.7
5	143	30.9	211	18.2	-24 18.4	185	47.9	-17 46.8	307	50.3	-5 24.2	246	56.2	-21 32.8
6	158	33.4	226	17.5	-24 18.0	200	48.5	-17 46.2	322	52.3	-5 24.4	261	58.4	-21 32.8
7	173	35.8	241	16.8	17.5	215	49.1	45.6	337	54.4	24.5	277	00.5	32.8
8	188	38.3	256	16.1	17.1	230	49.7	45.0	352	56.5	24.7	292	02.7	32.9
9	203	40.8	271	15.4	16.7	245	50.3	44.4	7	58.5	24.9	307	04.8	32.9
10	218	43.2	286	14.6	16.2	260	50.9	43.8	23	00.6	25.0	322	07.0	32.9
11	233	45.7	301	13.9	-24 15.8	275	51.5	-17 43.2	38	02.7	-5 25.2	337	09.1	-21 33.0
12	248	48.1	316	13.2	-24 15.3	290	52.1	-17 42.6	53	04.7	-5 25.3	352	11.3	-21 33.0
13	263	50.6	331	12.5	14.9	305	52.7	42.0	68	06.8	25.5	7	13.4	33.0
14	278	53.1	346	11.8	14.5	320	53.3	41.4	83	08.9	25.6	22	15.6	33.0
15	293	55.5	1	11.0	14.0	335	53.9	40.8	98	10.9	25.8	37	17.7	33.1
16	308	58.0	16	10.3	13.6	350	54.5	40.2	113	13.0	26.0	52	19.9	33.1
17	324	00.5	31	09.6	-24 13.1	5	55.1	-17 39.6	128	15.1	-5 26.1	67	22.0	-21 33.1
18	339	02.9	46	08.9	-24 12.7	20	55.7	-17 39.0	143	17.1	-5 26.3	82	24.2	-21 33.2
19	354	05.4	61	08.2	12.2	35	56.3	38.4	158	19.2	26.4	97	26.3	33.2
20	9	07.9	76	07.5	11.8	50	56.9	37.8	173	21.3	26.6	112	28.5	33.2
21	24	10.3	91	06.7	11.3	65	57.5	37.2	188	23.3	26.7	127	30.6	33.3
22	39	12.8	106	06.0	10.9	80	58.1	36.6	203	25.4	26.9	142	32.8	33.3
23	54	15.3	121	05.3	10.4	95	58.7	36.0	218	27.5	27.1	157	34.9	33.3
24	69	17.7	136	04.6	-24 10.0	110	59.3	-17 35.4	233	29.5	-5 27.2	172	37.1	-21 33.3
Dif	—		-7		+4	+6		+6	+21		-2	+22		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 48 ^m 8			Edad: 0 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 R°: 48 ^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	50.5	-21	40.3	176	30.9	-17	29.6	60 N	6 45	7 40	8 34	8 49	56	16 24	43			
1	197	50.3		40.7	191	02.4 ¹²⁵		33.3 ³⁷	58	38	29	19	36	56	37	43			
2	212	50.0		41.1	205	33.8 ¹²⁴		37.0 ³⁶	56	33	20	8 06	26	55	47	45			
3	227	49.8		41.5	220	05.2 ¹²⁴		40.6 ³⁵	54	27	12	7 55	17	54	16	57	44		
4	242	49.6		41.9	234	36.6 ¹²⁴		44.1 ³⁴	52	22	7 05	45	08	54	17	05	45		
5	257	49.3	-21	42.3	249	07.9 ¹²³	-17	47.5	50	6 18	6 58	7 36	8 01	53	17 13	45			
6	272	49.1	-21	42.7	263	39.2 ¹²³	-17	50.8	45	6 07	6 44	7 17	7 45	52	17 29	46			
7	287	48.9		43.1	278	10.5 ¹²³		54.1 ³³	40	5 58	32	7 02	32	51	43	46			
8	302	48.7		43.5	292	41.7 ¹²²	-17	57.2	35	50	21	6 49	21	51	17	54	47		
9	317	48.4		43.9	307	13.0 ¹²³	-18	00.3	30	42	6 12	38	7 11	51	18	04	47		
10	332	48.2		44.2	321	44.2 ¹²²		03.3 ³⁰	20	27	5 54	18	6 55	49	21	47			
11	347	48.0	-21	44.6	336	15.3 ¹²¹	-18	06.3	10 N	5 13	5 39	6 01	6 40	49	18 36	48			
12	2	47.7	-21	45.0	350	46.5 ¹²²	-18	09.1	0	4 57	5 23	5 45	6 27	48	18 50	48			
13	17	47.5		45.4	5	17.6 ¹²¹		11.9 ²⁸	10 S	39	5 06	29	6 13	47	19 04	48			
14	32	47.3		45.8	19	48.7 ¹²¹		14.5 ²⁶	20	4 19	4 47	5 12	5 59	46	19	49			
15	47	47.0		46.2	34	19.8 ¹²¹		17.1 ²⁶	30	3 52	24	4 51	42	46	36	49			
16	62	46.8		46.6	48	50.8 ¹²⁰		19.6 ²⁵	35	35	4 10	39	33	45	46	49			
17	77	46.6	-21	47.0	63	21.8 ¹²⁰	-18	22.0	40	3 14	3 54	4 26	5 22	44	19 57	50			
18	92	46.3	-21	47.4	77	52.8 ¹²⁰	-18	24.4	45	2 46	3 33	4 09	5 09	44	20 10	51			
19	107	46.1		47.8	92	23.8 ¹²⁰		26.6 ²²	50	2 08	3 07	3 49	4 54	42	27	50			
20	122	45.9		48.2	106	54.7 ¹¹⁹		28.8 ²²	52	1 46	2 54	39	47	41	34	51			
21	137	45.6		48.6	121	25.6 ¹¹⁹		30.9 ²¹	54	1 16	38	29	39	41	43	51			
22	152	45.4		48.9	135	56.5 ¹¹⁹		32.9 ²⁰	56	0 22	2 20	16	30	40	20	52	52		
23	167	45.2		49.3	150	27.4 ¹¹⁹		34.8 ¹⁹	58	** **	1 56	3 02	20	39	21	03	52		
24	182	44.9	-21	49.7	164	58.2 ¹¹⁸	-18	36.6	60 S	** **	1 25	2 44	4 08	38	21 16	52			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 19 ^h 19 ^m 6			Mag: -4.2 PMG: 14 ^h 56 ^m			Mag: +0.6 PMG: 16 ^h 35 ^m			Mag: -1.8 PMG: 8 ^h 25 ^m			Mag: +0.5 PMG: 12 ^h 28 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	69	17.7	136	04.6	-24	10.0	110	59.3	-17	35.4	233	29.5	-5	27.2	172	37.1			
1	84	20.2	151	03.9		09.5	125	59.9		34.8	248	31.6		27.4	187	39.2			
2	99	22.6	166	03.2		09.1	141	00.5		34.2	263	33.7		27.5	202	41.4			
3	114	25.1	181	02.5		08.6	156	01.1		33.6	278	35.7		27.7	217	43.5			
4	129	27.6	196	01.8		08.1	171	01.7		33.0	293	37.8		27.8	232	45.7			
5	144	30.0	211	01.0	-24	07.7	186	02.3	-17	32.4	308	39.9	-5	28.0	247	47.8			
6	159	32.5	226	00.3	-24	07.2	201	02.9	-17	31.8	323	41.9	-5	28.2	262	50.0			
7	174	35.0	240	59.6		06.8	216	03.6		31.2	338	44.0		28.3	277	52.1			
8	189	37.4	255	58.9		06.3	231	04.2		30.6	353	46.1		28.5	292	54.3			
9	204	39.9	270	58.2		05.8	246	04.8		30.0	8	48.1		28.6	307	56.4			
10	219	42.4	285	57.5		05.4	261	05.4		29.4	23	50.2		28.8	322	58.6			
11	234	44.8	300	56.8	-24	04.9	276	06.0	-17	28.8	38	52.3	-5	28.9	338	00.7			
12	249	47.3	315	56.1	-24	04.4	291	06.6	-17	28.2	53	54.4	-5	29.1	353	02.9			
13	264	49.7	330	55.4		04.0	306	07.2		27.6	68	56.4		29.2	8	05.0			
14	279	52.2	345	54.7		03.5	321	07.8		27.0	83	58.5		29.4	23	07.2			
15	294	54.7	0	54.0		03.0	336	08.4		26.4	99	00.6		29.6	38	09.3			
16	309	57.1	15	53.3		02.5	351	09.0		25.8	114	02.6		29.7	53	11.5			
17	324	59.6	30	52.6	-24	02.1	6	09.6	-17	25.2	129	04.7	-5	29.9	68	13.6			
18	340	02.1	45	51.9	-24	01.6	21	10.2	-17	24.6	144	06.8	-5	30.0	83	15.8			
19	355	04.5	60	51.2		01.1	36	10.8		24.0	159	08.8		30.2	98	17.9			
20	10	07.0	75	50.5		00.6	51	11.4		23.4	174	10.9		30.3	113	20.1			
21	25	09.5	90	49.8	-24	00.2	66	12.0		22.8	189	13.0		30.5	128	22.2			
22	40	11.9	105	49.1	-23	59.7	81	12.6		22.2	204	15.0		30.6	143	24.4			
23	55	14.4	120	48.4		59.2	96	13.2		21.6	219	17.1		30.8	158	26.5			
24	70	16.9	135	47.7	-23	58.7	111	13.8	-17	21.0	234	19.2	-5	31.0	173	28.7			
Dif	—			-7	+5		+6			+6	+21			-2		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 49 ^m 2			Edad: 1 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 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	182	44.9	-21 49.7	164	58.2	-18 36.6	17	60 N	15 02	15 57	16 52	9 45 48	17 07 53	
1	197	44.7	50.1	179	29.1 ¹¹⁹	38.3	17	58	18	16 07	16 58	32 48	20 52	
2	212	44.5	50.5	193	59.9 ¹¹⁸	40.0	15	56	31	16	17 04	21 48	32 51	
3	227	44.2	50.9	208	30.7 ¹¹⁸	41.5	15	54	42	24	09	11 48	41 52	
4	242	44.0	51.2	223	01.4 ¹¹⁷	43.0	15	52	15 52	32	14	9 02 48	50 52	
5	257	43.8	-21 51.6	237	32.2 ¹¹⁸	-18 44.4	14	50	16 01	16 38	17 19	8 54 49	17 58 52	
6	272	43.5	-21 52.0	252	02.9 ¹¹⁷	-18 45.7	13	45	16 20	16 53	17 30	8 37 49	18 15 51	
7	287	43.3	52.4	266	33.6 ¹¹⁷	46.9	12	40	35	17 05	39	23 49	29 51	
8	302	43.0	52.8	281	04.3 ¹¹⁷	48.0	11	35	16 48	16	47	12 49	41 50	
9	317	42.8	53.2	295	34.9 ¹¹⁶	49.1	11	30	17 00	26	17 55	8 02 48	18 51 50	
10	332	42.6	53.5	310	05.6 ¹¹⁷	50.0	9	20	19	43	18 10	7 44 49	19 08 50	
11	347	42.3	-21 53.9	324	36.2 ¹¹⁶	-18 50.9	9	10 N	17 37	17 59	18 25	7 29 49	19 24 49	
12	2	42.1	-21 54.3	339	06.8 ¹¹⁶	-18 51.6	7	0	17 53	18 15	18 41	7 15 48	19 38 49	
13	17	41.9	54.7	353	37.4 ¹¹⁶	52.3	7	10 S	18 09	32	18 59	7 00 49	19 52 49	
14	32	41.6	55.0	8	08.0 ¹¹⁶	52.9	6	20	27	18 51	19 20	6 45 49	20 08 48	
15	47	41.4	55.4	22	38.5 ¹¹⁵	53.4	5	30	47	19 14	19 47	28 49	25 48	
16	62	41.1	55.8	37	09.1 ¹¹⁶	53.8	4	35	18 59	29	20 04	18 48	35 48	
17	77	40.9	-21 56.2	51	39.6 ¹¹⁵	-18 54.1	3	40	19 13	19 45	20 26	6 06 49	20 47 47	
18	92	40.7	-21 56.5	66	10.1 ¹¹⁵	-18 54.3	2	45	19 30	20 06	20 54	5 53 48	21 01 46	
19	107	40.4	56.9	80	40.6 ¹¹⁵	54.4	1	50	19 51	33	21 33	36 49	17 46	
20	122	40.2	57.3	95	11.1 ¹¹⁵	54.5	1	52	20 00	20 47	21 56	28 49	25 46	
21	137	39.9	57.6	109	41.6 ¹¹⁵	54.4	1	54	12	21 03	22 27	20 48	34 45	
22	152	39.7	58.0	124	12.0 ¹¹⁴	54.3	1	56	24	22	** ** *	5 10 48	44 45	
23	167	39.5	58.4	138	42.5 ¹¹⁵	54.1	2	58	39	21 46	** ** *	4 59 48	21 55 44	
24	182	39.2	-21 58.8	153	12.9 ¹¹⁴	-18 53.7	4	60 S	20 57	22 20	** ** *	4 46 48	22 08 44	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 15 ^m 7		Mag: -4.2 PMG: 14 ^h 58 ^m			Mag: +0.6 PMG: 16 ^h 34 ^m			Mag: -1.8 PMG: 8 ^h 22 ^m			Mag: +0.5 PMG: 12 ^h 24 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	70	16.9	135	47.7	-23 58.7	111	13.8	-17 21.0	234	19.2	-5 31.0	173	28.7	-21 34.1
1	85	19.3	150	47.0	58.2	126	14.4	20.4	249	21.3	31.1	188	30.8	34.1
2	100	21.8	165	46.3	57.8	141	15.0	19.8	264	23.3	31.3	203	33.0	34.1
3	115	24.2	180	45.6	57.3	156	15.6	19.2	279	25.4	31.4	218	35.1	34.2
4	130	26.7	195	44.9	56.8	171	16.2	18.6	294	27.5	31.6	233	37.3	34.2
5	145	29.2	210	44.2	-23 56.3	186	16.8	-17 18.0	309	29.5	-5 31.7	248	39.4	-21 34.2
6	160	31.6	225	43.5	-23 55.8	201	17.5	-17 17.3	324	31.6	-5 31.9	263	41.6	-21 34.2
7	175	34.1	240	42.8	55.3	216	18.1	16.7	339	33.7	32.0	278	43.7	34.3
8	190	36.6	255	42.1	54.8	231	18.7	16.1	354	35.8	32.2	293	45.9	34.3
9	205	39.0	270	41.4	54.3	246	19.3	15.5	9	37.8	32.4	308	48.0	34.3
10	220	41.5	285	40.7	53.8	261	19.9	14.9	24	39.9	32.5	323	50.2	34.4
11	235	44.0	300	40.0	-23 53.3	276	20.5	-17 14.3	39	42.0	-5 32.7	338	52.3	-21 34.4
12	250	46.4	315	39.3	-23 52.8	291	21.1	-17 13.7	54	44.1	-5 32.8	353	54.5	-21 34.4
13	265	48.9	330	38.6	52.4	306	21.7	13.1	69	46.1	33.0	8	56.6	34.4
14	280	51.4	345	37.9	51.9	321	22.3	12.5	84	48.2	33.1	23	58.8	34.5
15	295	53.8	0	37.3	51.4	336	22.9	11.9	99	50.3	33.3	39	00.9	34.5
16	310	56.3	15	36.6	50.9	351	23.5	11.3	114	52.3	33.4	54	03.1	34.5
17	325	58.7	30	35.9	-23 50.4	6	24.1	-17 10.7	129	54.4	-5 33.6	69	05.2	-21 34.6
18	341	01.2	45	35.2	-23 49.9	21	24.7	-17 10.0	144	56.5	-5 33.7	84	07.4	-21 34.6
19	356	03.7	60	34.5	49.3	36	25.3	09.4	159	58.6	33.9	99	09.5	34.6
20	11	06.1	75	33.8	48.8	51	26.0	08.8	175	00.6	34.0	114	11.7	34.7
21	26	08.6	90	33.1	48.3	66	26.6	08.2	190	02.7	34.2	129	13.8	34.7
22	41	11.1	105	32.4	47.8	81	27.2	07.6	205	04.8	34.4	144	16.0	34.7
23	56	13.5	120	31.8	47.3	96	27.8	07.0	220	06.9	34.5	159	18.1	34.7
24	71	16.0	135	31.1	-23 46.8	111	28.4	-17 06.4	235	08.9	-5 34.7	174	20.3	-21 34.8
Dif	—		-7	+5		+6	+6		+21	-2		+21		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 2 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 R°: 50 ^m										
	PMG: 11 ^h 49 ^m 6													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	m	m	m
0	182	39.2	-21	58.8	153	12.9	-18	53.7	6	48	7	43	8	38
1	197	39.0		59.1	167	43.3	114	53.3	4	41		33	22	10
2	212	38.7		59.5	182	13.7	114	52.8	5	35		23	8	09
3	227	38.5	-21	59.9	196	44.1	114	52.2	6	30		15	7	58
4	242	38.3	-22	00.2	211	14.5	114	51.5	7	25		08	47	9
5	257	38.0	-22	00.6	225	44.9	114	-18	50.8	7	6	20	7	01
6	272	37.8	-22	00.9	240	15.2	113	-18	49.9	9	6	09	6	46
7	287	37.5		01.3	254	45.6	114	48.9	10	6	00	34	7	04
8	302	37.3		01.7	269	15.9	113	47.9	10	5	52	23	6	51
9	317	37.0		02.0	283	46.2	113	46.7	12	30	44	6	13	39
10	332	36.8		02.4	298	16.6	114	45.5	12	20	28	5	56	19
11	347	36.5	-22	02.8	312	46.9	113	-18	44.2	13	5	13	5	40
12	2	36.3	-22	03.1	327	17.2	113	-18	42.7	15	4	58	5	24
13	17	36.1		03.5	341	47.5	113	41.2	15	10	40	5	07	29
14	32	35.8		03.8	356	17.8	113	39.6	16	20	4	19	4	47
15	47	35.6		04.2	10	48.1	113	37.9	17	30	3	51	24	4
16	62	35.3		04.5	25	18.4	113	36.1	18	35	34	4	10	39
17	77	35.1	-22	04.9	39	48.7	113	-18	34.2	19	3	13	3	53
18	92	34.8	-22	05.3	54	18.9	112	-18	32.3	19	2	45	3	32
19	107	34.6		05.6	68	49.2	113	30.2	21	50	2	05	3	05
20	122	34.3		06.0	83	19.5	113	28.1	21	52	1	42	2	52
21	137	34.1		06.3	97	49.7	112	25.8	23	54	1	11	36	27
22	152	33.8		06.7	112	20.0	113	23.5	23	56	** *	2	17	3
23	167	33.6		07.0	126	50.2	112	21.0	25	58	** *	1	53	2
24	182	33.4	-22	07.4	141	20.5	113	-18	18.5	25	** *	1	19	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 11 ^m 8		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +0.6 PMG: 16 ^h 33 ^m		Mag: -1.8 PMG: 8 ^h 18 ^m		Mag: +0.5 PMG: 12 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	71	16.0	135	31.1	-23	46.8	111	28.4	-17	06.4
1	86	18.5	150	30.4		46.3	126	29.0		05.8
2	101	20.9	165	29.7		45.8	141	29.6		05.2
3	116	23.4	180	29.0		45.3	156	30.2		04.5
4	131	25.9	195	28.3		44.8	171	30.8		03.9
5	146	28.3	210	27.7	-23	44.3	186	31.4	-17	03.3
6	161	30.8	225	27.0	-23	43.7	201	32.0	-17	02.7
7	176	33.2	240	26.3		43.2	216	32.6		02.1
8	191	35.7	255	25.6		42.7	231	33.3		01.5
9	206	38.2	270	24.9		42.2	246	33.9		00.9
10	221	40.6	285	24.3		41.7	261	34.5	-17	00.2
11	236	43.1	300	23.6	-23	41.1	276	35.1	-16	59.6
12	251	45.6	315	22.9	-23	40.6	291	35.7	-16	59.0
13	266	48.0	330	22.2		40.1	306	36.3		58.4
14	281	50.5	345	21.6		39.6	321	36.9		57.8
15	296	53.0	0	20.9		39.0	336	37.5		57.2
16	311	55.4	15	20.2		38.5	351	38.1		56.5
17	326	57.9	30	19.5	-23	38.0	6	38.8	-16	55.9
18	342	00.4	45	18.9	-23	37.5	21	39.4	-16	55.3
19	357	02.8	60	18.2		36.9	36	40.0		54.7
20	12	05.3	75	17.5		36.4	51	40.6		54.1
21	27	07.7	90	16.8		35.9	66	41.2		53.5
22	42	10.2	105	16.2		35.3	81	41.8		52.8
23	57	12.7	120	15.5		34.8	96	42.4		52.2
24	72	15.1	135	14.8	-23	34.3	111	43.0	-16	51.6
Dif	—		-7 +5		+6 +6		+21 -2		+21 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 50 ^m 0			Edad: 3 ^d 5 SD: 15:0 PMG: 15 ^h 05 ^m	PHE { 4 ^h : 55:1 12 ^h : 55:3 20 ^h : 55:5 Rº: 49 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	182	33.4	-22	07.4	141	20.5	-18 18.5	60 N	15 00	15 55	16 50	11 12	32		19 01	70		
1	197	33.1		07.7	155	50.7 ¹¹²	15.9 ²⁶	58	16	16 06	16 57	11 01	33		13	67		
2	212	32.9		08.1	170	21.0 ¹¹³	13.2 ²⁷	56	29	15	17 03	10 50	35		23	66		
3	227	32.6		08.4	184	51.2 ¹¹²	10.4 ²⁸	54	41	23	09	41	37		32	64		
4	242	32.4		08.8	199	21.5 ¹¹³	07.5 ²⁹	52	15 51	31	14	33	38		40	63		
5	257	32.1	-22	09.1	213	51.7 ¹¹²	-18 04.6 ²⁹	50	16 00	16 38	17 18	10 26	38		19 47	62		
6	272	31.9	-22	09.5	228	22.0 ¹¹³	-18 01.5 ³¹	45	16 19	16 52	17 29	10 10	41		20 02	59		
7	287	31.6		09.8	242	52.2 ¹¹²	-17 58.3 ³²	40	35	17 05	39	9 58	41		14	58		
8	302	31.4		10.1	257	22.4 ¹¹²	55.1 ³²	35	16 48	16	47	47	43		25	56		
9	317	31.1		10.5	271	52.7 ¹¹³	51.8 ³³	30	17 00	26	17 55	37	44		34	55		
10	332	30.9		10.8	286	22.9 ¹¹²	48.3 ³⁵	20	20	17 44	18 11	21	46		20 50	53		
11	347	30.6	-22	11.2	300	53.2 ¹¹³	-17 44.8 ³⁵	10 N	17 37	18 00	18 26	9 06	48		21 04	50		
12	2	30.4	-22	11.5	315	23.4 ¹¹²	-17 41.2 ³⁶	0	17 54	18 16	18 42	8 53	49		21 16	49		
13	17	30.1		11.9	329	53.7 ¹¹³	37.5 ³⁷	10 S	18 10	33	19 00	39	51		29	47		
14	32	29.9		12.2	344	23.9 ¹¹²	33.7 ³⁸	20	28	18 52	21	25	52		43	45		
15	47	29.6		12.5	358	54.1 ¹¹²	29.9 ³⁸	30	18 49	19 16	19 49	8 08	54		21 58	43		
16	62	29.4		12.9	13	24.4 ¹¹³	25.9 ⁴⁰	35	19 01	30	20 06	7 59	55		22 07	42		
17	77	29.1	-22	13.2	27	54.6 ¹¹²	-17 21.9 ⁴⁰	40	19 15	19 48	20 28	7 48	56		22 18	40		
18	92	28.9	-22	13.5	42	24.9 ¹¹³	-17 17.7 ⁴²	45	19 32	20 09	20 57	7 35	58		22 30	38		
19	107	28.6		13.9	56	55.2 ¹¹³	13.5 ⁴²	50	19 53	36	21 37	19	60		44	36		
20	122	28.4		14.2	71	25.4 ¹¹²	09.2 ⁴³	52	20 03	20 50	22 01	12	60		51	35		
21	137	28.1		14.6	85	55.7 ¹¹³	04.8 ⁴⁴	54	15	21 06	22 34	7 03	62		22 58	34		
22	152	27.8		14.9	100	26.0 ¹¹³	-17 00.3 ⁴⁵	56	28	26	** **	6 54	63		23 07	32		
23	167	27.6		15.2	114	56.2 ¹¹²	-16 55.7 ⁴⁶	58	20 43	21 51	** **	44	64		16	31		
24	182	27.3	-22	15.6	129	26.5 ¹¹³	-16 51.0 ⁴⁷	60 S	21 01	22 27	** **	6 32	65		23 27	29		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 07 ^m 8		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: +0.7 PMG: 16 ^h 32 ^m			Mag: -1.8 PMG: 8 ^h 15 ^m			Mag: +0.5 PMG: 12 ^h 17 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	72	15.1	135	14.8	-23	34.3	111	43.0	-16	51.6	235	58.8	-5	38.3	175	11.9	-21	35.5
1	87	17.6	150	14.2		33.7	126	43.6		51.0	251	00.8		38.5	190	14.0		35.5
2	102	20.1	165	13.5		33.2	141	44.3		50.4	266	02.9		38.6	205	16.2		35.5
3	117	22.5	180	12.8		32.7	156	44.9		49.8	281	05.0		38.8	220	18.3		35.6
4	132	25.0	195	12.2		32.1	171	45.5		49.1	296	07.1		38.9	235	20.5		35.6
5	147	27.5	210	11.5	-23	31.6	186	46.1	-16	48.5	311	09.2	-5	39.1	250	22.6	-21	35.6
6	162	29.9	225	10.8	-23	31.0	201	46.7	-16	47.9	326	11.2	-5	39.2	265	24.8	-21	35.7
7	177	32.4	240	10.2		30.5	216	47.3		47.3	341	13.3		39.4	280	26.9		35.7
8	192	34.8	255	09.5		29.9	231	47.9		46.7	356	15.4		39.5	295	29.1		35.7
9	207	37.3	270	08.8		29.4	246	48.5		46.0	11	17.5		39.7	310	31.2		35.7
10	222	39.8	285	08.2		28.9	261	49.2		45.4	26	19.5		39.8	325	33.4		35.8
11	237	42.2	300	07.5	-23	28.3	276	49.8	-16	44.8	41	21.6	-5	40.0	340	35.5	-21	35.8
12	252	44.7	315	06.8	-23	27.8	291	50.4	-16	44.2	56	23.7	-5	40.1	355	37.7	-21	35.8
13	267	47.2	330	06.2		27.2	306	51.0		43.5	71	25.8		40.3	10	39.8		35.9
14	282	49.6	345	05.5		26.7	321	51.6		42.9	86	27.9		40.4	25	42.0		35.9
15	297	52.1	0	04.9		26.1	336	52.2		42.3	101	29.9		40.6	40	44.1		35.9
16	312	54.6	15	04.2		25.6	351	52.8		41.7	116	32.0		40.7	55	46.3		35.9
17	327	57.0	30	03.5	-23	25.0	6	53.5	-16	41.1	131	34.1	-5	40.9	70	48.4	-21	36.0
18	342	59.5	45	02.9	-23	24.4	21	54.1	-16	40.4	146	36.2	-5	41.0	85	50.6	-21	36.0
19	358	02.0	60	02.2		23.9	36	54.7		39.8	161	38.3		41.2	100	52.7		36.0
20	13	04.4	75	01.6		23.3	51	55.3		39.2	176	40.4		41.3	115	54.9		36.1
21	28	06.9	90	00.9		22.8	66	55.9		38.6	191	42.4		41.5	130	57.0		36.1
22	43	09.3	105	00.3		22.2	81	56.5		37.9	206	44.5		41.6	145	59.2		36.1
23	58	11.8	119	59.6		21.6	96	57.1		37.3	221	46.6		41.8	161	01.3		36.1
24	73	14.3	134	59.0	-23	21.1	111	57.8	-16	36.7	236	48.7	-5	41.9	176	03.5	-21	36.2
Dif	—		-7 +5			+6 +6			+21 -2			+21 0						

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: 4 ^d 5 PHE { 4 ^h : 55:6 12 ^h : 55:8 20 ^h : 56:0 PMG: 15 ^h 54 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m
0	182	27.3	-22	129	26.5	-16	51.0	60 N	6 51	7 46	8 41	11 44	26	20 11 74
1	197	27.1		143	56.8 ¹¹³		46.3 ⁴⁷	58	44	36	26	34	28	20 73
2	212	26.8		158	27.1 ¹¹³		41.5 ⁴⁸	56	38	26	12	25	30	29 70
3	227	26.6		172	57.4 ¹¹³		36.5 ⁵⁰	54	32	18	8 00	18	31	36 69
4	242	26.3		187	27.6 ¹¹²		31.5 ⁵⁰	52	27	10	7 50	11	32	43 67
5	257	26.1	-22	201	57.9 ¹¹³	-16	26.4 ⁵¹	50	6 22	7 03	7 41	11 04	34	20 49 65
6	272	25.8	-22	216	28.2 ¹¹³	-16	21.3 ⁵¹	45	6 11	6 48	7 22	10 51	36	21 01 63
7	287	25.6		230	58.5 ¹¹³		16.0 ⁵³	40	6 02	36	7 06	39	39	12 60
8	302	25.3		245	28.9 ¹¹⁴		10.6 ⁵⁴	35	5 53	25	6 52	30	40	21 59
9	317	25.0		259	59.2 ¹¹³	-16	05.2 ⁵⁴	30	45	6 15	41	21	42	29 57
10	332	24.8		274	29.5 ¹¹³	-15	59.7 ⁵⁵	20	30	5 57	21	10 07	44	43 53
11	347	24.5	-22	288	59.8 ¹¹³	-15	54.1 ⁵⁶	10 N	5 14	5 41	6 03	9 54	47	21 54 52
12	2	24.3	-22	303	30.2 ¹¹⁴	-15	48.4 ⁵⁷	0	4 58	5 24	5 47	9 42	49	22 05 49
13	17	24.0		318	00.5 ¹¹³		42.6 ⁵⁸	10 S	40	5 07	30	30	51	16 47
14	32	23.8		332	30.8 ¹¹³		36.8 ⁵⁸	20	4 19	4 48	5 12	17 53		28 44
15	47	23.5		347	01.2 ¹¹⁴		30.9 ⁵⁹	30	3 51	24	4 51	9 02	56	41 41
16	62	23.3		1	31.5 ¹¹³		24.9 ⁶⁰	35	34	4 10	39	8 54	57	49 39
17	77	23.0	-22	16	01.9 ¹¹⁴	-15	18.8 ⁶¹	40	3 12	3 53	4 25	8 44	59	22 58 37
18	92	22.7	-22	30	32.3 ¹¹⁴	-15	12.6 ⁶²	45	2 44	3 31	4 08	8 33	61	23 08 35
19	107	22.5		45	02.6 ¹¹³	-15	06.3 ⁶³	50	2 03	3 04	3 47	19	64	20 32
20	122	22.2		59	33.0 ¹¹⁴	-15	00.0 ⁶³	52	1 39	2 50	37	12	65	26 31
21	137	22.0		74	03.4 ¹¹⁴	-14	53.6 ⁶⁴	54	1 06	34	25	8 05	67	32 29
22	152	21.7		88	33.8 ¹¹⁴		47.1 ⁶⁵	56	** ** *	2 14	3 12	7 57	68	39 28
23	167	21.4		103	04.1 ¹¹³		40.5 ⁶⁶	58	** ** *	1 49	2 57	48	70	47 25
24	182	21.2	-22	117	34.5 ¹¹⁴	-14	33.9 ⁶⁶	60 S	** ** *	1 13	2 39	7 37	73	23 56 23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 19 ^h 03 ^m 9		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +0.7 PMG: 16 ^h 31 ^m		Mag: -1.8 PMG: 8 ^h 12 ^m		Mag: +0.4 PMG: 12 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	73	14.3	134	59.0	-23	21.1	111	57.8	-16	36.7	236	48.7	-5	41.9	176	03.5	-21	36.2
1	88	16.7	149	58.3		20.5	126	58.4		36.1	251	50.8		42.1	191	05.6		36.2
2	103	19.2	164	57.6		20.0	141	59.0		35.4	266	52.8		42.2	206	07.8		36.2
3	118	21.7	179	57.0		19.4	156	59.6		34.8	281	54.9		42.4	221	09.9		36.3
4	133	24.1	194	56.3		18.8	172	00.2		34.2	296	57.0		42.5	236	12.1		36.3
5	148	26.6	209	55.7	-23	18.3	187	00.8	-16	33.6	311	59.1	-5	42.7	251	14.2	-21	36.3
6	163	29.1	224	55.0	-23	17.7	202	01.5	-16	32.9	327	01.2	-5	42.8	266	16.3	-21	36.3
7	178	31.5	239	54.4		17.1	217	02.1		32.3	342	03.3		43.0	281	18.5		36.4
8	193	34.0	254	53.7		16.6	232	02.7		31.7	357	05.3		43.1	296	20.6		36.4
9	208	36.5	269	53.1		16.0	247	03.3		31.1	12	07.4		43.3	311	22.8		36.4
10	223	38.9	284	52.4		15.4	262	03.9		30.4	27	09.5		43.4	326	24.9		36.5
11	238	41.4	299	51.8	-23	14.8	277	04.5	-16	29.8	42	11.6	-5	43.6	341	27.1	-21	36.5
12	253	43.8	314	51.2	-23	14.3	292	05.2	-16	29.2	57	13.7	-5	43.7	356	29.2	-21	36.5
13	268	46.3	329	50.5		13.7	307	05.8		28.5	72	15.8		43.9	11	31.4		36.6
14	283	48.8	344	49.9		13.1	322	06.4		27.9	87	17.8		44.0	26	33.5		36.6
15	298	51.2	359	49.2		12.5	337	07.0		27.3	102	19.9		44.2	41	35.7		36.6
16	313	53.7	14	48.6		12.0	352	07.6		26.7	117	22.0		44.3	56	37.8		36.6
17	328	56.2	29	47.9	-23	11.4	7	08.2	-16	26.0	132	24.1	-5	44.5	71	40.0	-21	36.7
18	343	58.6	44	47.3	-23	10.8	22	08.9	-16	25.4	147	26.2	-5	44.6	86	42.1	-21	36.7
19	359	01.1	59	46.7		10.2	37	09.5		24.8	162	28.3		44.8	101	44.3		36.7
20	14	03.6	74	46.0		9.6	52	10.1		24.1	177	30.3		44.9	116	46.4		36.8
21	29	06.0	89	45.4		9.0	67	10.7		23.5	192	32.4		45.1	131	48.6		36.8
22	44	08.5	104	44.7		8.5	82	11.3		22.9	207	34.5		45.2	146	50.7		36.8
23	59	11.0	119	44.1		7.9	97	12.0		22.2	222	36.6		45.4	161	52.9		36.8
24	74	13.4	134	43.5	-23	07.3	112	12.6	-16	21.6	237	38.7	-5	45.5	176	55.0	-21	36.9
Dif	—		-6 +6		+6 +6		+21 -1		-1		+21		-1		+21		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 5 ^d 5	PHE {	4 ^h : 56:2 12 ^h : 56:4 20 ^h : 56:7 R°: 49 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 50 ^m 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	182	21.2	-22	23.3	117	34.5	-14	33.9	60 N	14 58	15 53	16 49	12 10	21	25 79	
1	197	20.9		23.6	132	04.9 ¹¹⁴		27.1 ⁶⁸	58	15 14	16 04	16 56	12 02	24	33 76	
2	212	20.7		23.9	146	35.3 ¹¹⁴		20.3 ⁶⁸	56	28	14	17 02	11 55	26	39 74	
3	227	20.4		24.2	161	05.8 ¹¹⁵		13.4 ⁶⁹	54	39	22	08	49	28	45 72	
4	242	20.1		24.6	175	36.2 ¹¹⁴	-14	06.5 ⁶⁹	52	50	30	13	43	30	50 70	
5	257	19.9	-22	24.9	190	06.6 ¹¹⁴	-13	59.4 ⁷¹	50	15 59	16 37	17 18	11 38	31	21 54 69	
6	272	19.6	-22	25.2	204	37.0 ¹¹⁴	-13	52.3 ⁷¹	45	16 19	16 52	17 29	11 27	34	22 04 66	
7	287	19.4		25.5	219	07.4 ¹¹⁴		45.1 ⁷²	40	35	17 05	39	18	36	12 63	
8	302	19.1		25.8	233	37.9 ¹¹⁵		37.8 ⁷³	35	16 48	16	47	10	39	20 60	
9	317	18.8		26.1	248	08.3 ¹¹⁴		30.5 ⁷³	30	17 00	26	17 56	11 03	41	26 58	
10	332	18.6		26.4	262	38.7 ¹¹⁴		23.1 ⁷⁴	20	20	17 44	18 11	10 51	44	36 55	
11	347	18.3	-22	26.7	277	09.2 ¹¹⁵	-13	15.6 ⁷⁵	10 N	17 38	18 01	18 27	10 41	46	22 46 51	
12	2	18.1	-22	27.0	291	39.6 ¹¹⁴	-13	08.0 ⁷⁶	0	17 55	18 17	18 43	10 31	49	22 54 49	
13	17	17.8		27.3	306	10.1 ¹¹⁵	-13	00.4 ⁷⁶	10 S	18 11	34	19 01	21	52	23 03 46	
14	32	17.5		27.6	320	40.5 ¹¹⁴	-12	52.7 ⁷⁷	20	29	18 54	23	10 10	55	12 43	
15	47	17.3		27.9	335	11.0 ¹¹⁵		44.9 ⁷⁸	30	18 51	19 18	19 51	9 58	58	22 40	
16	62	17.0		28.2	349	41.4 ¹¹⁴		37.1 ⁷⁸	35	19 03	32	20 08	51	60	28 38	
17	77	16.7	-22	28.5	4	11.9 ¹¹⁵	-12	29.1 ⁸⁰	40	19 17	19 50	20 30	9 43	62	23 35 35	
18	92	16.5	-22	28.8	18	42.4 ¹¹⁵	-12	21.1 ⁸⁰	45	19 34	20 11	20 59	9 34	64	23 43 33	
19	107	16.2		29.1	33	12.8 ¹¹⁴		13.1 ⁸⁰	50	19 56	39	21 41	23	67	52 30	
20	122	16.0		29.4	47	43.3 ¹¹⁵	-12	04.9 ⁸²	52	20 06	20 53	22 05	17	69	23 57 28	
21	137	15.7		29.7	62	13.8 ¹¹⁵	-11	56.7 ⁸²	54	17	21 10	22 41	12	70	** ** *	
22	152	15.4		30.0	76	44.2 ¹¹⁴		48.5 ⁸²	56	31	30	** ** *	9 05	72	** ** *	
23	167	15.2		30.3	91	14.7 ¹¹⁵		40.1 ⁸⁴	58	20 46	21 56	** ** *	8 58	74	** ** *	
24	182	14.9	-22	30.6	105	45.2 ¹¹⁵	-11	31.7 ⁸⁴	60 S	21 05	22 34	** ** *	8 50	76	** ** *	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 19 ^h 00 ^m 0		Mag: -4.2 PMG: 15 ^h 02 ^m		Mag: +0.7 PMG: 16 ^h 30 ^m		Mag: -1.8 PMG: 8 ^h 08 ^m		Mag: +0.4 PMG: 12 ^h 11 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	13.4	134	43.5	-23	07.3	112	12.6	-16	21.6	237	38.7	-5	45.5	176	55.0
1	89	15.9	149	42.8		06.7	127	13.2		21.0	252	40.8		45.7	191	57.2
2	104	18.3	164	42.2		06.1	142	13.8		20.4	267	42.9		45.8	206	59.3
3	119	20.8	179	41.5		05.5	157	14.4		19.7	282	44.9		45.9	222	01.5
4	134	23.3	194	40.9		04.9	172	15.1		19.1	297	47.0		46.1	237	03.6
5	149	25.7	209	40.3	-23	04.3	187	15.7	-16	18.5	312	49.1	-5	46.2	252	05.8
6	164	28.2	224	39.6	-23	03.7	202	16.3	-16	17.8	327	51.2	-5	46.4	267	07.9
7	179	30.7	239	39.0		03.1	217	16.9		17.2	342	53.3		46.5	282	10.1
8	194	33.1	254	38.4		02.5	232	17.5		16.6	357	55.4		46.7	297	12.2
9	209	35.6	269	37.7		01.9	247	18.2		15.9	12	57.5		46.8	312	14.4
10	224	38.1	284	37.1		01.3	262	18.8		15.3	27	59.5		47.0	327	16.5
11	239	40.5	299	36.5	-23	00.7	277	19.4	-16	14.7	43	01.6	-5	47.1	342	18.7
12	254	43.0	314	35.9	-23	00.1	292	20.0	-16	14.0	58	03.7	-5	47.3	357	20.8
13	269	45.4	329	35.2	-22	59.5	307	20.6		13.4	73	05.8		47.4	12	23.0
14	284	47.9	344	34.6		58.9	322	21.3		12.8	88	07.9		47.6	27	25.1
15	299	50.4	359	34.0		58.3	337	21.9		12.1	103	10.0		47.7	42	27.2
16	314	52.8	14	33.3		57.7	352	22.5		11.5	118	12.1		47.9	57	29.4
17	329	55.3	29	32.7	-22	57.1	7	23.1	-16	10.8	133	14.2	-5	48.0	72	31.5
18	344	57.8	44	32.1	-22	56.5	22	23.7	-16	10.2	148	16.2	-5	48.2	87	33.7
19	0	00.2	59	31.5		55.9	37	24.4		09.6	163	18.3		48.3	102	35.8
20	15	02.7	74	30.8		55.3	52	25.0		08.9	178	20.4		48.4	117	38.0
21	30	05.2	89	30.2		54.7	67	25.6		08.3	193	22.5		48.6	132	40.1
22	45	07.6	104	29.6		54.1	82	26.2		07.7	208	24.6		48.7	147	42.3
23	60	10.1	119	29.0		53.5	97	26.8		07.0	223	26.7		48.9	162	44.4
24	75	12.6	134	28.3	-22	52.9	112	27.5	-16	06.4	238	28.8	-5	49.0	177	46.6
Dif	—		-6		+6		+6		+6		+21		-1		+21	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 6 ^d 5	PHE { 4 ^h : 56'9 12 ^h : 57'2 20 ^h : 57'4 R°: 49 ^m										
	PMG: 11 ^h 51 ^m 2					SD: 15'5									
	hG ☉			hG ☾ Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	14.9	-22	30.6	105	45.2	-11 31.7	60 N	6 53	7 49	8 45	12 31	20	22 44	82
1	197	14.6		30.9	120	15.6 ¹¹⁴	23.3 ⁸⁴	58	47	38	29	26	21	49	79
2	212	14.4		31.2	134	46.1 ¹¹⁵	14.7 ⁸⁶	56	40	29	15	21	24	53	77
3	227	14.1		31.5	149	16.6 ¹¹⁵	-11 06.1 ⁸⁶	54	35	20	8 03	17	25	22 57	74
4	242	13.8		31.8	163	47.0 ¹¹⁴	-10 57.5 ⁸⁶	52	29	12	7 53	13	27	23 00	73
5	257	13.6	-22	32.1	178	17.5 ¹¹⁵	-10 48.7 ⁸⁸	50	6 24	7 05	7 43	12 09	29	23 03	71
6	272	13.3	-22	32.4	192	48.0 ¹¹⁵	-10 39.9 ⁸⁸	45	6 13	6 50	7 24	12 01	32	23 10	67
7	287	13.0		32.7	207	18.4 ¹¹⁴	31.1 ⁸⁸	40	6 04	37	7 08	11 54	35	15	65
8	302	12.8		33.0	221	48.9 ¹¹⁵	22.1 ⁹⁰	35	5 55	26	6 54	49	37	20	62
9	317	12.5		33.3	236	19.3 ¹¹⁴	13.2 ⁸⁹	30	46	6 16	42	44	39	24	60
10	332	12.2		33.6	250	49.8 ¹¹⁵	-10 04.1 ⁹¹	20	31	5 58	22	35	43	31	56
11	347	12.0	-22	33.8	265	20.2 ¹¹⁴	-9 55.0 ⁹¹	10 N	5 15	5 42	6 04	11 27	46	23 37	53
12	2	11.7	-22	34.1	279	50.7 ¹¹⁵	-9 45.8 ⁹²	0	4 59	5 25	5 48	11 20	49	23 43	50
13	17	11.4		34.4	294	21.1 ¹¹⁴	36.6 ⁹²	10 S	41	5 08	31	13	52	49	46
14	32	11.2		34.7	308	51.6 ¹¹⁵	27.3 ⁹³	20	4 19	4 48	5 12	11 05	55	23 55	43
15	47	10.9		35.0	323	22.0 ¹¹⁴	18.0 ⁹³	30	3 51	24	4 51	10 56	59	*** ** *	*** ** *
16	62	10.6		35.3	337	52.4 ¹¹⁴	-9 08.6 ⁹⁴	35	33	4 10	39	51	61	*** ** *	*** ** *
17	77	10.4	-22	35.5	352	22.8 ¹¹⁴	-8 59.1 ⁹⁵	40	3 11	3 52	4 25	10 45	64	*** ** *	*** ** *
18	92	10.1	-22	35.8	6	53.2 ¹¹⁴	-8 49.6 ⁹⁵	45	2 42	3 31	4 07	10 38	67	*** ** *	*** ** *
19	107	09.8		36.1	21	23.6 ¹¹⁴	40.0 ⁹⁶	50	2 01	3 03	3 46	30	70	*** ** *	*** ** *
20	122	09.6		36.4	35	54.0 ¹¹⁴	30.4 ⁹⁶	52	1 36	2 49	36	26	72	*** ** *	*** ** *
21	137	09.3		36.7	50	24.4 ¹¹⁴	20.7 ⁹⁷	54	1 01	32	24	22	74	0 01	27
22	152	09.0		37.0	64	54.8 ¹¹⁴	11.0 ⁹⁷	56	*** ** *	2 12	3 11	17	76	07	24
23	167	08.8		37.2	79	25.1 ¹¹³	-8 01.2 ⁹⁸	58	*** ** *	1 46	2 55	12	78	12	23
24	182	08.5	-22	37.5	93	55.5 ¹¹⁴	-7 51.4 ⁹⁸	60 S	*** ** *	1 08	2 37	10 06	81	0 19	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 56 ^m 1		Mag: -4.2 PMG: 15 ^h 03 ^m		Mag: +0.7 PMG: 16 ^h 29 ^m		Mag: -1.8 PMG: 8 ^h 05 ^m		Mag: +0.4 PMG: 12 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	75	12.6	134	28.3	-22	52.9	112	27.5	-16	06.4	238	28.8	-5	49.0	177	46.6	-21	37.5
1	90	15.0	149	27.7		52.2	127	28.1		05.8	253	30.9		49.2	192	48.7		37.6
2	105	17.5	164	27.1		51.6	142	28.7		05.1	268	33.0		49.3	207	50.9		37.6
3	120	19.9	179	26.5		51.0	157	29.3		04.5	283	35.1		49.5	222	53.0		37.6
4	135	22.4	194	25.9		50.4	172	30.0		03.8	298	37.1		49.6	237	55.2		37.7
5	150	24.9	209	25.3	-22	49.8	187	30.6	-16	03.2	313	39.2	-5	49.8	252	57.3	-21	37.7
6	165	27.3	224	24.6	-22	49.2	202	31.2	-16	02.6	328	41.3	-5	49.9	267	59.5	-21	37.7
7	180	29.8	239	24.0		48.5	217	31.8		01.9	343	43.4		50.1	283	01.6		37.7
8	195	32.3	254	23.4		47.9	232	32.5		01.3	358	45.5		50.2	298	03.8		37.8
9	210	34.7	269	22.8		47.3	247	33.1	-16	00.6	13	47.6		50.3	313	05.9		37.8
10	225	37.2	284	22.2		46.7	262	33.7	-16	00.0	28	49.7		50.5	328	08.1		37.8
11	240	39.7	299	21.6	-22	46.0	277	34.3	-15	59.4	43	51.8	-5	50.6	343	10.2	-21	37.9
12	255	42.1	314	20.9	-22	45.4	292	35.0	-15	58.7	58	53.9	-5	50.8	358	12.4	-21	37.9
13	270	44.6	329	20.3		44.8	307	35.6		58.1	73	56.0		50.9	13	14.5		37.9
14	285	47.1	344	19.7		44.2	322	36.2		57.4	88	58.0		51.1	28	16.7		37.9
15	300	49.5	359	19.1		43.5	337	36.8		56.8	104	00.1		51.2	43	18.8		38.0
16	315	52.0	14	18.5		42.9	352	37.5		56.2	119	02.2		51.4	58	21.0		38.0
17	330	54.4	29	17.9	-22	42.3	7	38.1	-15	55.5	134	04.3	-5	51.5	73	23.1	-21	38.0
18	345	56.9	44	17.3	-22	41.6	22	38.7	-15	54.9	149	06.4	-5	51.7	88	25.2	-21	38.1
19	0	59.4	59	16.7		41.0	37	39.3		54.2	164	08.5		51.8	103	27.4		38.1
20	16	01.8	74	16.1		40.4	52	40.0		53.6	179	10.6		51.9	118	29.5		38.1
21	31	04.3	89	15.5		39.7	67	40.6		53.0	194	12.7		52.1	133	31.7		38.1
22	46	06.8	104	14.9		39.1	82	41.2		52.3	209	14.8		52.2	148	33.8		38.2
23	61	09.2	119	14.3		38.5	97	41.8		51.7	224	16.9		52.4	163	36.0		38.2
24	76	11.7	134	13.6	-22	37.8	112	42.5	-15	51.0	239	19.0	-5	52.5	178	38.1	-21	38.2
Dif	—		-6		+6		+6		+6		+21		-1		+21			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2			Edad: 7 ^d 5	PHE	SD: 15 ^h 7			PMG: 18 ^h 21 ^m	Rº: 50 ^m								
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	08.5	−22	37.5	93	55.5	−7	51.4	60 N	14 56	15 52	16 48	12 51 17	*** ** *				
1	197	08.2		37.8	108	25.8 ¹¹³		41.5 ⁹⁹	58	15 13	16 03	16 55	47 21	*** ** *				
2	212	08.0		38.1	122	56.2 ¹¹⁴		31.5 ¹⁰⁰	56	27	13	17 02	45 22	*** ** *				
3	227	07.7		38.3	137	26.5 ¹¹³		21.5 ¹⁰⁰	54	39	22	07	42 24	*** ** *				
4	242	07.4		38.6	151	56.8 ¹¹³		11.5 ¹⁰⁰	52	49	29	13	40 26	*** ** *				
5	257	07.1	−22	38.9	166	27.1 ¹¹³	−7	01.4 ¹⁰¹	50	15 59	16 37	17 18	12 38 27	*** ** *				
6	272	06.9	−22	39.2	180	57.4 ¹¹³	−6	51.3 ¹⁰¹	45	16 18	16 52	17 29	12 33 31	*** ** *				
7	287	06.6		39.4	195	27.6 ¹¹²		41.1 ¹⁰²	40	35	17 05	39	29 34	*** ** *				
8	302	06.3		39.7	209	57.9 ¹¹³		30.9 ¹⁰²	35	16 48	16	48	26 37	*** ** *				
9	317	06.1		40.0	224	28.1 ¹¹²		20.6 ¹⁰³	30	17 00	26	17 56	23 39	*** ** *				
10	332	05.8		40.2	238	58.3 ¹¹²	−6	10.3 ¹⁰³	20	21	17 44	18 12	18 43	*** ** *				
11	347	05.5	−22	40.5	253	28.5 ¹¹²	−5	59.9 ¹⁰⁴	10 N	17 39	18 01	18 27	12 13 47	*** ** *				
12	2	05.2	−22	40.8	267	58.7 ¹¹²	−5	49.5 ¹⁰⁴	0	17 55	18 18	18 44	12 09 50	*** ** *				
13	17	05.0		41.1	282	28.9 ¹¹²		39.0 ¹⁰⁵	10 S	18 12	35	19 02	05 53	*** ** *				
14	32	04.7		41.3	296	59.0 ¹¹¹		28.5 ¹⁰⁵	20	31	18 55	24	12 00 57	*** ** *				
15	47	04.4		41.6	311	29.2 ¹¹²		18.0 ¹⁰⁵	30	18 52	19 19	19 52	11 55 61	0 02 39				
16	62	04.2		41.9	325	59.3 ¹¹¹	−5	07.4 ¹⁰⁶	35	19 05	34	20 10	52 63	06 37				
17	77	03.9	−22	42.1	340	29.4 ¹¹¹	−4	56.8 ¹⁰⁶	40	19 19	19 52	20 33	11 49 65	0 10 35				
18	92	03.6	−22	42.4	354	59.4 ¹¹⁰	−4	46.1 ¹⁰⁷	45	19 36	20 13	21 02	11 45 69	0 16 31				
19	107	03.3		42.6	9	29.5 ¹¹¹		35.4 ¹⁰⁷	50	19 58	42	21 45	40 73	22 28				
20	122	03.1		42.9	23	59.5 ¹¹⁰		24.7 ¹⁰⁷	52	20 08	20 56	22 10	38 74	25 26				
21	137	02.8		43.2	38	29.5 ¹¹⁰		13.9 ¹⁰⁸	54	20	21 13	22 47	36 76	28 24				
22	152	02.5		43.4	52	59.5 ¹¹⁰	−4	03.1 ¹⁰⁸	56	34	21 34	** ** *	33 78	31 23				
23	167	02.2		43.7	67	29.4 ¹⁰⁹	−3	52.3 ¹⁰⁸	58	20 49	22 00	** ** *	30 81	35 20				
24	182	02.0	−22	43.9	81	59.3 ¹⁰⁹	−3	41.4 ¹⁰⁹	60 S	21 09	22 41	** ** *	11 27 83	0 39 18				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 52 ^m 1		Mag: −4.2 PMG: 15 ^h 04 ^m		Mag: +0.7 PMG: 16 ^h 28 ^m		Mag: −1.9 PMG: 8 ^h 02 ^m		Mag: +0.4 PMG: 12 ^h 04 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	76	11.7	134	13.6	−22	37.8	112	42.5	−15	51.0	239	19.0	−5	52.5	178	38.1	−21	38.2
1	91	14.2	149	13.0		37.2	127	43.1		50.4	254	21.1		52.7	193	40.3		38.3
2	106	16.6	164	12.4		36.6	142	43.7		49.7	269	23.2		52.8	208	42.4		38.3
3	121	19.1	179	11.8		35.9	157	44.3		49.1	284	25.3		53.0	223	44.6		38.3
4	136	21.5	194	11.2		35.3	172	45.0		48.4	299	27.3		53.1	238	46.7		38.3
5	151	24.0	209	10.6	−22	34.6	187	45.6	−15	47.8	314	29.4	−5	53.2	253	48.9	−21	38.4
6	166	26.5	224	10.0	−22	34.0	202	46.2	−15	47.2	329	31.5	−5	53.4	268	51.0	−21	38.4
7	181	28.9	239	09.4		33.3	217	46.8		46.5	344	33.6		53.5	283	53.2		38.4
8	196	31.4	254	08.8		32.7	232	47.5		45.9	359	35.7		53.7	298	55.3		38.4
9	211	33.9	269	08.2		32.0	247	48.1		45.2	14	37.8		53.8	313	57.5		38.5
10	226	36.3	284	07.6		31.4	262	48.7		44.6	29	39.9		54.0	328	59.6		38.5
11	241	38.8	299	07.0	−22	30.8	277	49.4	−15	43.9	44	42.0	−5	54.1	344	01.8	−21	38.5
12	256	41.3	314	06.4	−22	30.1	292	50.0	−15	43.3	59	44.1	−5	54.2	359	03.9	−21	38.6
13	271	43.7	329	05.9		29.5	307	50.6		42.6	74	46.2		54.4	14	06.1		38.6
14	286	46.2	344	05.3		28.8	322	51.2		42.0	89	48.3		54.5	29	08.2		38.6
15	301	48.7	359	04.7		28.1	337	51.9		41.3	104	50.4		54.7	44	10.4		38.6
16	316	51.1	14	04.1		27.5	352	52.5		40.7	119	52.5		54.8	59	12.5		38.7
17	331	53.6	29	03.5	−22	26.8	7	53.1	−15	40.1	134	54.6	−5	55.0	74	14.6	−21	38.7
18	346	56.0	44	02.9	−22	26.2	22	53.8	−15	39.4	149	56.7	−5	55.1	89	16.8	−21	38.7
19	1	58.5	59	02.3		25.5	37	54.4		38.8	164	58.8		55.2	104	18.9		38.8
20	17	01.0	74	01.7		24.9	52	55.0		38.1	180	00.9		55.4	119	21.1		38.8
21	32	03.4	89	01.1		24.2	67	55.6		37.5	195	03.0		55.5	134	23.2		38.8
22	47	05.9	104	00.5		23.5	82	56.3		36.8	210	05.1		55.7	149	25.4		38.8
23	62	08.4	118	59.9		22.9	97	56.9		36.2	225	07.2		55.8	164	27.5		38.9
24	77	10.8	133	59.4	−22	22.2	112	57.5	−15	35.5	240	09.3	−5	56.0	179	29.7	−21	38.9
Dif	—	—	−6	+7			+6	+6			+21	−1			+21			0

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: 8 ^d 5 SD: 15'9 PMG: 19 ^h 11 ^m	PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'0 R°: 52 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	02.0	-22	43.9	81	59.3	-3	41.4	60 N	6 56	7 52	8 48	13 08	19	0 06	84
1	197	01.7		44.2	96	29.2 ¹⁰⁹		30.5 ¹⁰⁹	58	49	41	32	08 20		08 82	
2	212	01.4		44.5	110	59.1 ¹⁰⁹		19.6 ¹⁰⁹	56	43	31	18	07 23		10 79	
3	227	01.1		44.7	125	29.0 ¹⁰⁹		-3 08.6 ¹¹⁰	54	37	23	8 06	06 25		11 78	
4	242	00.9		45.0	139	58.8 ¹⁰⁸		-2 57.6 ¹¹⁰	52	31	15	7 55	06 27		13 75	
5	257	00.6	-22	45.2	154	28.6 ¹⁰⁸		-2 46.6 ¹¹⁰	50	6 26	7 08	7 46	13 05	29	0 14	74
6	272	00.3	-22	45.5	168	58.3 ¹⁰⁷		-2 35.5 ¹¹¹	45	6 15	6 52	7 26	13 04	32	0 17	70
7	287	00.0		45.7	183	28.1 ¹⁰⁸		24.4 ¹¹¹	40	6 05	39	7 09	03 36		20 67	
8	301	59.8		46.0	197	57.8 ¹⁰⁷		13.3 ¹¹¹	35	5 56	28	6 56	03 37		22 64	
9	316	59.5		46.2	212	27.4 ¹⁰⁶		-2 02.2 ¹¹¹	30	48	6 18	44	02 40		24 61	
10	331	59.2		46.5	226	57.1 ¹⁰⁷		-1 51.0 ¹¹²	20	32	5 59	23	01 44		27 58	
11	346	58.9	-22	46.7	241	26.7 ¹⁰⁶		-1 39.8 ¹¹²	10 N	5 16	5 43	6 05	13 00	48	0 30	54
12	1	58.7	-22	47.0	255	56.3 ¹⁰⁶		-1 28.6 ¹¹²	0	5 00	5 26	5 48	12 59	51	0 33	50
13	16	58.4		47.2	270	25.8 ¹⁰⁵		17.4 ¹¹²	10 S	4 41	5 08	31	58 55		35 47	
14	31	58.1		47.5	284	55.3 ¹⁰⁵		-1 06.1 ¹¹³	20	4 19	4 49	5 13	57 58		38 43	
15	46	57.8		47.7	299	24.8 ¹⁰⁵		-0 54.9 ¹¹²	30	3 51	24	4 52	56 63		41 39	
16	61	57.5		48.0	313	54.2 ¹⁰⁴		43.6 ¹¹³	35	33	4 10	39	55 65		43 37	
17	76	57.3	-22	48.2	328	23.6 ¹⁰⁴		-0 32.3 ¹¹³	40	3 11	3 52	4 24	12 54	68	0 45	34
18	91	57.0	-22	48.5	342	52.9 ¹⁰³		-0 20.9 ¹¹⁴	45	2 42	3 30	4 07	12 54	71	0 47	31
19	106	56.7		48.7	357	22.3 ¹⁰⁴		-0 09.6 ¹¹³	50	1 59	3 02	3 45	53 75		50 28	
20	121	56.4		49.0	11	51.5 ¹⁰²		+0 01.8 ¹¹⁴	52	1 34	2 47	35	52 77		51 26	
21	136	56.2		49.2	26	20.8 ¹⁰³		13.1 ¹¹³	54	0 57	31	23	52 79		52 25	
22	151	55.9		49.5	40	50.0 ¹⁰²		24.5 ¹¹⁴	56	** **	2 10	3 10	51 81		54 22	
23	166	55.6		49.7	55	19.1 ¹⁰¹		35.9 ¹¹⁴	58	** **	1 43	2 54	51 83		55 21	
24	181	55.3	-22	49.9	69	48.2 ¹⁰¹		+0 47.3 ¹¹⁴	60 S	** **	1 03	2 35	12 50	86	0 57	18
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 48 ^m 2			Mag: -4.2 PMG: 15 ^h 05 ^m			Mag: +0.7 PMG: 16 ^h 27 ^m			Mag: -1.9 PMG: 7 ^h 58 ^m			Mag: +0.4 PMG: 12 ^h 00 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	77	10.8	133	59.4	-22	22.2	112	57.5	-15	35.5	240	09.3	-5	56.0	179	29.7
1	92	13.3	148	58.8		21.6	127	58.2		34.9	255	11.4		56.1	194	31.8
2	107	15.8	163	58.2		20.9	142	58.8		34.2	270	13.5		56.2	209	34.0
3	122	18.2	178	57.6		20.2	157	59.4		33.6	285	15.6		56.4	224	36.1
4	137	20.7	193	57.0		19.6	173	00.0		32.9	300	17.6		56.5	239	38.3
5	152	23.2	208	56.4	-22	18.9	188	00.7	-15	32.3	315	19.7	-5	56.7	254	40.4
6	167	25.6	223	55.9	-22	18.2	203	01.3	-15	31.6	330	21.8	-5	56.8	269	42.6
7	182	28.1	238	55.3		17.6	218	01.9		31.0	345	23.9		57.0	284	44.7
8	197	30.5	253	54.7		16.9	233	02.6		30.3	0	26.0		57.1	299	46.9
9	212	33.0	268	54.1		16.2	248	03.2		29.7	15	28.1		57.2	314	49.0
10	227	35.5	283	53.5		15.5	263	03.8		29.0	30	30.2		57.4	329	51.2
11	242	37.9	298	53.0	-22	14.9	278	04.5	-15	28.4	45	32.3	-5	57.5	344	53.3
12	257	40.4	313	52.4	-22	14.2	293	05.1	-15	27.7	60	34.4	-5	57.7	359	55.5
13	272	42.9	328	51.8		13.5	308	05.7		27.1	75	36.5		57.8	14	57.6
14	287	45.3	343	51.2		12.8	323	06.4		26.4	90	38.6		57.9	29	59.7
15	302	47.8	358	50.6		12.2	338	07.0		25.8	105	40.7		58.1	45	01.9
16	317	50.3	13	50.1		11.5	353	07.6		25.1	120	42.8		58.2	60	04.0
17	332	52.7	28	49.5	-22	10.8	8	08.3	-15	24.4	135	44.9	-5	58.4	75	06.2
18	347	55.2	43	48.9	-22	10.1	23	08.9	-15	23.8	150	47.0	-5	58.5	90	08.3
19	2	57.6	58	48.4		09.4	38	09.5		23.1	165	49.1		58.6	105	10.5
20	18	00.1	73	47.8		08.8	53	10.2		22.5	180	51.2		58.8	120	12.6
21	33	02.6	88	47.2		08.1	68	10.8		21.8	195	53.3		58.9	135	14.8
22	48	05.0	103	46.6		07.4	83	11.4		21.2	210	55.4		59.1	150	16.9
23	63	07.5	118	46.1		06.7	98	12.1		20.5	225	57.5		59.2	165	19.1
24	78	10.0	133	45.5	-22	06.0	113	12.7	-15	19.9	240	59.6	-5	59.4	180	21.2
Dif	—		-6		+7		+6		+7		+21		-1		+21	

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: 9 ^d 5 SD: 16:1 PMG: 20 ^h 03 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/6 20 ^h : 59/8 Rº: 54 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	181	55.3	-22	49.9	69	48.2	+0	47.3	60 N	14	55	15	51	16	48	13	27	20
1	196	55.0		50.2	84	17.3 ¹⁰¹	+0	58.7 ¹¹⁴	58	15	12	16	03	16	55	28	23	
2	211	54.8		50.4	98	46.3 ¹⁰⁰	+1	10.1 ¹¹⁴	56	26		12		17	01	30	25	
3	226	54.5		50.7	113	15.3 ¹⁰⁰		21.6 ¹¹⁵	54	38		21		07		31	27	
4	241	54.2		50.9	127	44.2 ⁹⁹		33.0 ¹¹⁴	52	49		29		13		33	29	
5	256	53.9	-22	51.1	142	13.1 ⁹⁹	+1	44.4 ¹¹⁴	50	15	58	16	36	17	18	13	34	30
6	271	53.6	-22	51.4	156	42.0 ⁹⁹	+1	55.9 ¹¹⁵	45	16	18	16	52	17	29	13	36	35
7	286	53.4		51.6	171	10.8 ⁹⁸	+2	07.3 ¹¹⁴	40	35		17	05		39	39	37	
8	301	53.1		51.8	185	39.5 ⁹⁷		18.8 ¹¹⁵	35	16	48		16		48	40	41	
9	316	52.8		52.1	200	08.2 ⁹⁷		30.2 ¹¹⁴	30	17	00		27		17	56	42	
10	331	52.5		52.3	214	36.9 ⁹⁷		41.7 ¹¹⁵	20	21		17	45		18	12	45	
11	346	52.2	-22	52.5	229	05.5 ⁹⁶	+2	53.1 ¹¹⁴	10 N	17	39		18	02		18	28	
12	1	52.0	-22	52.8	243	34.0 ⁹⁵	+3	04.6 ¹¹⁵	0	17	56		18	19		18	45	
13	16	51.7		53.0	258	02.5 ⁹⁵		16.0 ¹¹⁴	10 S	18	13		36		19	03	53	
14	31	51.4		53.2	272	31.0 ⁹⁵		27.4 ¹¹⁴	20	32		18	56		25		55	
15	46	51.1		53.5	286	59.4 ⁹⁴		38.8 ¹¹⁴	30	18	53		19	21		19	54	
16	61	50.8		53.7	301	27.7 ⁹³	+3	50.3 ¹¹⁵	35	19	06		36		20	12	14	
17	76	50.6	-22	53.9	315	56.0 ⁹³	+4	01.7 ¹¹⁴	40	19	21		19	53		20	35	
18	91	50.3	-22	54.1	330	24.3 ⁹³	+4	13.1 ¹¹⁴	45	19	38		20	15		21	04	
19	106	50.0		54.4	344	52.4 ⁹¹		24.4 ¹¹³	50	20	00		44		21	48	08	
20	121	49.7		54.6	359	20.6 ⁹²		35.8 ¹¹⁴	52	11		20	59		22	14	09	
21	136	49.4		54.8	13	48.6 ⁹⁰		47.2 ¹¹⁴	54	23		21	16		22	53	11	
22	151	49.1		55.0	28	16.6 ⁹⁰	+4	58.5 ¹¹³	56	36		21	37		** **		12	
23	166	48.9		55.3	42	44.6 ⁹⁰	+5	09.8 ¹¹³	58	20	52		22	05		** **	14	
24	181	48.6	-22	55.5	57	12.5 ⁸⁹	+5	21.1 ¹¹³	60 S	21	12		22	47		** **	14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 44 ^m 3		Mag: -4.2 PMG: 15 ^h 06 ^m			Mag: +0.7 PMG: 16 ^h 26 ^m			Mag: -1.9 PMG: 7 ^h 55 ^m			Mag: +0.4 PMG: 11 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	78	10.0	133	45.5	-22	06.0	113	12.7	-15	19.9	240	59.6	-5	59.4	180	21.2	-21	39.5
1	93	12.4	148	44.9		05.3	128	13.3		19.2	256	01.7		59.5	195	23.4		39.6
2	108	14.9	163	44.4		04.6	143	14.0		18.6	271	03.8		59.6	210	25.5		39.6
3	123	17.4	178	43.8		04.0	158	14.6		17.9	286	05.9		59.8	225	27.7		39.6
4	138	19.8	193	43.2		03.3	173	15.2		17.2	301	08.0	-5	59.9	240	29.8		39.7
5	153	22.3	208	42.7	-22	02.6	188	15.9	-15	16.6	316	10.2	-6	00.1	255	32.0	-21	39.7
6	168	24.8	223	42.1	-22	01.9	203	16.5	-15	15.9	331	12.3	-6	00.2	270	34.1	-21	39.7
7	183	27.2	238	41.5		01.2	218	17.1		15.3	346	14.4		00.3	285	36.3		39.7
8	198	29.7	253	41.0	-22	00.5	233	17.8		14.6	1	16.5		00.5	300	38.4		39.8
9	213	32.1	268	40.4	-21	59.8	248	18.4		14.0	16	18.6		00.6	315	40.6		39.8
10	228	34.6	283	39.9		59.1	263	19.0		13.3	31	20.7		00.8	330	42.7		39.8
11	243	37.1	298	39.3	-21	58.4	278	19.7	-15	12.6	46	22.8	-6	00.9	345	44.8	-21	39.8
12	258	39.5	313	38.7	-21	57.7	293	20.3	-15	12.0	61	24.9	-6	01.0	0	47.0	-21	39.9
13	273	42.0	328	38.2		57.0	308	20.9		11.3	76	27.0		01.2	15	49.1		39.9
14	288	44.5	343	37.6		56.3	323	21.6		10.7	91	29.1		01.3	30	51.3		39.9
15	303	46.9	358	37.1		55.6	338	22.2		10.0	106	31.2		01.4	45	53.4		40.0
16	318	49.4	13	36.5		54.9	353	22.8		09.4	121	33.3		01.6	60	55.6		40.0
17	333	51.9	28	35.9	-21	54.2	8	23.5	-15	08.7	136	35.4	-6	01.7	75	57.7	-21	40.0
18	348	54.3	43	35.4	-21	53.5	23	24.1	-15	08.0	151	37.5	-6	01.9	90	59.9	-21	40.0
19	3	56.8	58	34.8		52.8	38	24.8		07.4	166	39.6		02.0	106	02.0		40.1
20	18	59.3	73	34.3		52.1	53	25.4		06.7	181	41.7		02.1	121	04.2		40.1
21	34	01.7	88	33.7		51.4	68	26.0		06.1	196	43.8		02.3	136	06.3		40.1
22	49	04.2	103	33.2		50.7	83	26.7		05.4	211	45.9		02.4	151	08.5		40.1
23	64	06.6	118	32.6		50.0	98	27.3		04.7	226	48.0		02.6	166	10.6		40.2
24	79	09.1	133	32.1	-21	49.3	113	27.9	-15	04.1	241	50.1	-6	02.7	181	12.8	-21	40.2
Dif	—		-6			+7	+6		+7		+21		-1		+21		0	

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: 10 ^d 5 PHE { 4 ^h : 60/1 12 ^h : 60/3 20 ^h : 60/5 Rº: 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	48.6	-22	55.5	57	12.5	+5	21.1	60 N	6	58	7	55	8	51	13	47
1	196	48.3		55.7	71	40.3	88	32.4	58	51	43		34	51	26	54	87
2	211	48.0		55.9	86	08.1	88	43.7	56	45	33		20	55	29	51	85
3	226	47.7		56.1	100	35.8	87	+5	54.9	54	39	25	8	08	13	58	31
4	241	47.4		56.4	115	03.5	87	+6	06.1	52	33	17	7	57	14	02	32
5	256	47.2	-22	56.6	129	31.1	86	+6	17.3	50	6	28	7	10	7	48	14
6	271	46.9	-22	56.8	143	58.6	85	+6	28.5	45	6	17	6	54	7	28	14
7	286	46.6		57.0	158	26.1	85		39.6	40	6	07	41	7	11	16	41
8	301	46.3		57.2	172	53.5	84	+6	50.7	35	5	58	29	6	57	21	43
9	316	46.0		57.4	187	20.9	84	+7	01.8	30		49	19	45	25	45	29
10	331	45.7		57.7	201	48.2	83		12.8	20	33	6	01	24	32	49	24
11	346	45.5	-22	57.9	216	15.4	82	+7	23.8	10 N	5	17	5	44	6	06	14
12	1	45.2	-22	58.1	230	42.6	82	+7	34.8	0	5	01	5	27	5	49	14
13	16	44.9		58.3	245	09.7	81		45.7	10 S	4	42	5	09	32	50	59
14	31	44.6		58.5	259	36.7	80	+7	56.6	20	4	20	4	49	5	14	56
15	46	44.3		58.7	274	03.7	80	+8	07.5	30	3	52	25	4	52	15	04
16	61	44.0		58.9	288	30.6	79		18.3	35	33	4	10	39	08	69	1
17	76	43.7	-22	59.1	302	57.4	78	+8	29.1	40	3	11	3	52	4	25	15
18	91	43.5	-22	59.3	317	24.2	78	+8	39.8	45	2	41	3	30	4	07	15
19	106	43.2		59.5	331	50.9	77	+8	50.5	50	1	58	3	01	3	45	25
20	121	42.9	-22	59.7	346	17.5	76	+9	01.1	52	1	32	2	47	35	28	81
21	136	42.6	-23	00.0	0	44.1	76		11.7	54	0	52	29	23	32	83	42
22	151	42.3	-23	00.2	15	10.6	75		22.3	56	** *	** *	2	08	3	09	36
23	166	42.0		00.4	29	37.1	75		32.8	58	** *	** *	1	41	2	53	40
24	181	41.7	-23	00.6	44	03.5	74	+9	43.2	60 S	** *	** *	0	58	2	33	15

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 18 ^h 40 ^m 3		Mag: -4.2 PMG: 15 ^h 06 ^m			Mag: +0.7 PMG: 16 ^h 25 ^m			Mag: -1.9 PMG: 7 ^h 52 ^m			Mag: +0.4 PMG: 11 ^h 53 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	79	09.1	133	32.1	-21	49.3	113	27.9	-15	04.1	241	50.1	-6	02.7		
1	94	11.6	148	31.5		48.5	128	28.6		03.4	256	52.2		02.8		
2	109	14.0	163	31.0		47.8	143	29.2		02.8	271	54.3		03.0		
3	124	16.5	178	30.4		47.1	158	29.9		02.1	286	56.4		03.1		
4	139	19.0	193	29.9		46.4	173	30.5		01.4	301	58.5		03.3		
5	154	21.4	208	29.3	-21	45.7	188	31.1	-15	00.8	317	00.7	-6	03.4		
6	169	23.9	223	28.8	-21	45.0	203	31.8	-15	00.1	332	02.8	-6	03.5		
7	184	26.4	238	28.2		44.3	218	32.4	-14	59.5	347	04.9		03.7		
8	199	28.8	253	27.7		43.5	233	33.0		58.8	2	07.0		03.8		
9	214	31.3	268	27.2		42.8	248	33.7		58.1	17	09.1		03.9		
10	229	33.7	283	26.6		42.1	263	34.3		57.5	32	11.2		04.1		
11	244	36.2	298	26.1	-21	41.4	278	35.0	-14	56.8	47	13.3	-6	04.2		
12	259	38.7	313	25.5	-21	40.7	293	35.6	-14	56.1	62	15.4	-6	04.4		
13	274	41.1	328	25.0		39.9	308	36.2		55.5	77	17.5		04.5		
14	289	43.6	343	24.4		39.2	323	36.9		54.8	92	19.6		04.6		
15	304	46.1	358	23.9		38.5	338	37.5		54.1	107	21.7		04.8		
16	319	48.5	13	23.4		37.8	353	38.2		53.5	122	23.8		04.9		
17	334	51.0	28	22.8	-21	37.0	8	38.8	-14	52.8	137	25.9	-6	05.0		
18	349	53.5	43	22.3	-21	36.3	23	39.4	-14	52.2	152	28.0	-6	05.2		
19	4	55.9	58	21.8		35.6	38	40.1		51.5	167	30.2		05.3		
20	19	58.4	73	21.2		34.9	53	40.7		50.8	182	32.3		05.5		
21	35	00.9	88	20.7		34.1	68	41.4		50.2	197	34.4		05.6		
22	50	03.3	103	20.2		33.4	83	42.0		49.5	212	36.5		05.7		
23	65	05.8	118	19.6		32.7	98	42.6		48.8	227	38.6		05.9		
24	80	08.2	133	19.1	-21	31.9	113	43.3	-14	48.2	242	40.7	-6	06.0		
Dif	—		-5		+7		+6		+7		+21		-1		+21	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 53 ^m 4			Edad: 11 ^d 5 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 61'0 R°: 60 ^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	41.7	-23 00.6	44	03.5	+9 43.2		60 N	14 54	15 51	16 47	14 11 30	4 27 90		
1	196	41.5		58	29.8	+9 53.6	104	58	15 11	16 02	16 54	17 33	21 87		
2	211	41.2	01.0	72	56.0	+10 03.9	103	56		25	12	17 01	24 35	16 84	
3	226	40.9	01.2	87	22.2		103	54		38	21	07	29 37	11 82	
4	241	40.6	01.4	101	48.3		102	52		48	29	13	34 39	06 81	
5	256	40.3	-23 01.6	116	14.3	+10 34.5	101	50	15 58	16 36	17 18	14 39 40	4 02 79		
6	271	40.0	-23 01.8	130	40.3	+10 44.6	101	45	16 18	16 52	17 29	14 49 43	3 54 75		
7	286	39.7	02.0	145	06.2	+10 54.7	101	40		35	17 05	39	14 57 46	47 72	
8	301	39.4	02.2	159	32.0	+11 04.6	99	35	16 49		17	48	15 04 48	41 69	
9	316	39.1	02.4	173	57.8		99	30	17 01	27	17 57	10 51	35 68		
10	331	38.9	02.5	188	23.5		98	20		22	17 46	18 13	21 54	26 64	
11	346	38.6	-23 02.7	202	49.1	+11 34.1	98	10 N	17 40	18 03	18 29	15 31 57	3 18 61		
12	1	38.3	-23 02.9	217	14.7	+11 43.8	97	0	17 57	18 20	18 46	15 40 59	3 10 58		
13	16	38.0	03.1	231	40.2	+11 53.4	96	10 S	18 14	37	19 05	49 62	3 03 54		
14	31	37.7	03.3	246	05.6	+12 03.0	96	20		33	18 58	27	15 59 65	2 55 51	
15	46	37.4	03.5	260	31.0		94	30	18 55	19 22	19 55	16 11 68	45 48		
16	61	37.1	03.7	274	56.3		94	35	19 08	37	20 14	17 70	40 46		
17	76	36.8	-23 03.9	289	21.5	+12 31.1	93	40	19 22	19 55	20 37	16 25 72	2 34 43		
18	91	36.5	-23 04.1	303	46.6	+12 40.4	93	45	19 40	20 17	21 06	16 34 75	2 27 40		
19	106	36.3	04.3	318	11.7		91	50	20 02	20 46	21 51	44 79	19 37		
20	121	36.0	04.5	332	36.8	+12 58.6	91	52		13	21 01	22 17	49 80	15 35	
21	136	35.7	04.6	347	01.7	+13 07.6	90	54		25	19	22 58	16 55 81	11 33	
22	151	35.4	04.8	1	26.6		89	56	39	21 40	** **	17 01 84	06 31		
23	166	35.1	05.0	15	51.5		88	58	20 55	22 08	** **	08 86	2 01 29		
24	181	34.8	-23 05.2	30	16.2	+13 34.0	87	60 S	21 15	22 53	** **	17 15 89	1 55 26		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 36 ^m 4		Mag: -4.3 PMG: 15 ^h 07 ^m		Mag: +0.7 PMG: 16 ^h 24 ^m		Mag: -1.9 PMG: 7 ^h 48 ^m		Mag: +0.4 PMG: 11 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	08.2	133 19.1	-21 31.9	113 43.3	-14 48.2	242 40.7	-6 06.0	182 04.3	-21 40.8
1	95	10.7	148 18.6		128 43.9	47.5	257 42.8	06.1	197 06.5	40.9
2	110	13.2	163 18.0	30.5	143 44.6	46.8	272 44.9	06.3	212 08.6	40.9
3	125	15.6	178 17.5	29.7	158 45.2	46.2	287 47.0	06.4	227 10.8	40.9
4	140	18.1	193 17.0	29.0	173 45.8	45.5	302 49.1	06.5	242 12.9	40.9
5	155	20.6	208 16.4	-21 28.3	188 46.5	-14 44.8	317 51.3	-6 06.7	257 15.0	-21 41.0
6	170	23.0	223 15.9	-21 27.5	203 47.1	-14 44.2	332 53.4	-6 06.8	272 17.2	-21 41.0
7	185	25.5	238 15.4	26.8	218 47.8	43.5	347 55.5	07.0	287 19.3	41.0
8	200	28.0	253 14.9	26.0	233 48.4	42.8	2 57.6	07.1	302 21.5	41.1
9	215	30.4	268 14.3	25.3	248 49.1	42.2	17 59.7	07.2	317 23.6	41.1
10	230	32.9	283 13.8	24.5	263 49.7	41.5	33 01.8	07.4	332 25.8	41.1
11	245	35.4	298 13.3	-21 23.8	278 50.3	-14 40.8	48 03.9	-6 07.5	347 27.9	-21 41.1
12	260	37.8	313 12.8	-21 23.1	293 51.0	-14 40.2	63 06.0	-6 07.6	2 30.1	-21 41.2
13	275	40.3	328 12.3	22.3	308 51.6	39.5	78 08.1	07.8	17 32.2	41.2
14	290	42.7	343 11.7	21.6	323 52.3	38.8	93 10.3	07.9	32 34.4	41.2
15	305	45.2	358 11.2	20.8	338 52.9	38.1	108 12.4	08.0	47 36.5	41.2
16	320	47.7	13 10.7	20.1	353 53.6	37.5	123 14.5	08.2	62 38.7	41.3
17	335	50.1	28 10.2	-21 19.3	8 54.2	-14 36.8	138 16.6	-6 08.3	77 40.8	-21 41.3
18	350	52.6	43 09.7	-21 18.6	23 54.8	-14 36.1	153 18.7	-6 08.4	92 43.0	-21 41.3
19	5 55.1	58 09.1	17.8	38 55.5	35.5	168 20.8	168 20.8	08.6	107 45.1	41.3
20	20 57.5	73 08.6	17.1	53 56.1	34.8	183 22.9	183 22.9	08.7	122 47.3	41.4
21	36 00.0	88 08.1	16.3	68 56.8	34.1	198 25.0	198 25.0	08.8	137 49.4	41.4
22	51 02.5	103 07.6	15.6	83 57.4	33.5	213 27.2	213 27.2	09.0	152 51.6	41.4
23	66 04.9	118 07.1	14.8	98 58.1	32.8	228 29.3	228 29.3	09.1	167 53.7	41.5
24	81 07.4	133 06.6	-21 14.1	113 58.7	-14 32.1	243 31.4	-6 09.3	182 55.8	-21 41.5	
Dif	—	-5	+7	+6	+7	+21	-1	+21	0	

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: 12 ^d 5 PHE { 4 ^h : 61/1 12 ^h : 61/1 20 ^h : 61/2 R°: 61 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	34.8	-23	05.2	30	16.2	+13	34.0	86	58	7 01	7 57	8 54	14 41	39	5 57	86
1	196	34.5		05.4	44	40.9	57	42.6	86	58	6 53	46	37	50	42	48	84
2	211	34.2		05.6	59	05.6	57	51.2	86	56	47	36	23	14 59	43	40	82
3	226	33.9		05.7	73	30.2	56	+13	59.6	84	54	41	27	8 10	15 06	45	33 80
4	241	33.6		05.9	87	54.7	55	+14	08.0	84	52	35	19	7 59	13 46	27	78
5	256	33.4	-23	06.1	102	19.1	54	+14	16.2	82	50	6 30	7 11	7 50	15 19	48	5 21 77
6	271	33.1	-23	06.3	116	43.5	54	+14	24.4	82	45	6 18	6 56	7 29	15 32	50	5 09 74
7	286	32.8		06.5	131	07.9	54		32.4	80	40	6 08	42	7 13		43 52	4 59 72
8	301	32.5		06.6	145	32.2	53		40.4	80	35	5 59	31	6 59	15 52	54	50 70
9	316	32.2		06.8	159	56.4	52		48.3	79	30	50	20	47	16 01	55	43 68
10	331	31.9		07.0	174	20.5	51	+14	56.0	77	20	34	6 02	26	15 57		30 65
11	346	31.6	-23	07.2	188	44.7	52	+15	03.7	77	10 N	5 18	5 45	6 07	16 28	59	4 19 62
12	1	31.3	-23	07.3	203	08.7	50	+15	11.2	75	0	5 02	5 28	5 50	16 39	62	4 08 60
13	16	31.0		07.5	217	32.7	50		18.7	75	10 S	4 43	5 10	33	16 51	63	3 57 58
14	31	30.7		07.7	231	56.6	49		26.0	73	20	4 21	4 50	5 14	17 04	65	46 56
15	46	30.4		07.9	246	20.5	49		33.3	73	30	3 52	25	4 52	19 67		33 53
16	61	30.1		08.0	260	44.4	49		40.4	71	35	33	4 10	40	27 69		26 51
17	76	29.8	-23	08.2	275	08.1	47	+15	47.4	70	40	3 11	3 52	4 25	17 37	70	3 17 49
18	91	29.6	-23	08.4	289	31.9	48	+15	54.3	69	45	2 41	3 30	4 07	17 49	72	3 07 47
19	106	29.3		08.5	303	55.6	47	+16	01.1	68	50	1 57	3 01	3 45	18 03	74	2 56 43
20	121	29.0		08.7	318	19.2	46		07.7	66	52	1 30	2 46	34	09 76		50 42
21	136	28.7		08.9	332	42.8	46		14.3	66	54	0 49	29	22	16 77		44 41
22	151	28.4		09.0	347	06.3	45		20.7	64	56	** **	2 07	3 08	25 78		37 39
23	166	28.1		09.2	1	29.8	45		27.0	63	58	** **	1 39	2 52	34 80		30 36
24	181	27.8	-23	09.4	15	53.3	45	+16	33.2	62	60 S	** **	0 54	2 32	18 44	82	2 21 34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 32 ^m 5		Mag: -4.3 PMG: 15 ^h 08 ^m		Mag: +0.7 PMG: 16 ^h 23 ^m		Mag: -1.9 PMG: 7 ^h 45 ^m		Mag: +0.4 PMG: 11 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	81	07.4	133	06.6	-21	14.1	113	58.7	-14	32.1	243	31.4	-6	09.3	182	55.8	-21	41.5
1	96	09.8	148	06.1		13.3	128	59.4		31.4	258	33.5		09.4	197	58.0		41.5
2	111	12.3	163	05.5		12.5	144	00.0		30.8	273	35.6		09.5	213	00.1		41.5
3	126	14.8	178	05.0		11.8	159	00.6		30.1	288	37.7		09.7	228	02.3		41.6
4	141	17.2	193	04.5		11.0	174	01.3		29.4	303	39.8		09.8	243	04.4		41.6
5	156	19.7	208	04.0	-21	10.3	189	01.9	-14	28.8	318	42.0	-6	09.9	258	06.6	-21	41.6
6	171	22.2	223	03.5	-21	09.5	204	02.6	-14	28.1	333	44.1	-6	10.1	273	08.7	-21	41.6
7	186	24.6	238	03.0		08.7	219	03.2		27.4	348	46.2		10.2	288	10.9		41.7
8	201	27.1	253	02.5		08.0	234	03.9		26.7	3	48.3		10.3	303	13.0		41.7
9	216	29.6	268	02.0		07.2	249	04.5		26.1	18	50.4		10.5	318	15.2		41.7
10	231	32.0	283	01.5		06.5	264	05.2		25.4	33	52.5		10.6	333	17.3		41.7
11	246	34.5	298	01.0	-21	05.7	279	05.8	-14	24.7	48	54.6	-6	10.7	348	19.5	-21	41.8
12	261	37.0	313	00.5	-21	04.9	294	06.5	-14	24.0	63	56.8	-6	10.9	3	21.6	-21	41.8
13	276	39.4	328	00.0		04.2	309	07.1		23.4	78	58.9		11.0	18	23.8		41.8
14	291	41.9	342	59.5		03.4	324	07.7		22.7	94	01.0		11.1	33	25.9		41.8
15	306	44.3	357	59.0		02.6	339	08.4		22.0	109	03.1		11.3	48	28.1		41.9
16	321	46.8	12	58.5		01.8	354	09.0		21.3	124	05.2		11.4	63	30.2		41.9
17	336	49.3	27	58.0	-21	01.1	9	09.7	-14	20.7	139	07.3	-6	11.5	78	32.4	-21	41.9
18	351	51.7	42	57.5	-21	00.3	24	10.3	-14	20.0	154	09.5	-6	11.7	93	34.5	-21	42.0
19	6	54.2	57	57.0	-20	59.5	39	11.0		19.3	169	11.6		11.8	108	36.7		42.0
20	21	56.7	72	56.5		58.8	54	11.6		18.6	184	13.7		11.9	123	38.8		42.0
21	36	59.1	87	56.0		58.0	69	12.3		18.0	199	15.8		12.1	138	40.9		42.0
22	52	01.6	102	55.5		57.2	84	12.9		17.3	214	17.9		12.2	153	43.1		42.1
23	67	04.1	117	55.0		56.4	99	13.6		16.6	229	20.0		12.3	168	45.2		42.1
24	82	06.5	132	54.5	-20	55.7	114	14.2	-14	15.9	244	22.2	-6	12.5	183	47.4	-21	42.1
Dif	—		-5 +8		+6 +7		+21 -1		-1 0									

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: 13 ^d 5 PHE { SD: 16:7 PMG: 23 ^h 55 ^m 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 61'1 R°: 62 ^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	27.8	-23 09.4	15	53.3	+16 33.2	61	60 N	14 53	15 51	16 47	15 20 52	7 23 76	
1	196	27.5	09.5	30	16.7	39.3	44	58	15 10	16 02	16 54	32 53	12 74	
2	211	27.2	09.7	44	40.1	45.2	59	56	25	12	17 01	42 54	7 02 73	
3	226	26.9	09.9	59	03.4	51.1	59	54	37	21	07	51 55	6 53 72	
4	241	26.6	10.0	73	26.7	+16 56.8	57	52	48	29	13	15 59 56	45 72	
5	256	26.3	-23 10.2	87	49.9	+17 02.4	56	50	15 58	16 36	17 18	16 07 56	6 38 71	
6	271	26.0	-23 10.3	102	13.2	+17 07.8	54	45	16 19	16 52	17 30	16 22 57	6 23 69	
7	286	25.7	10.5	116	36.3	13.1	53	40	35	17 06	40	35 58	11 68	
8	301	25.4	10.7	130	59.5	18.4	53	35	16 49	17	49	46 59	6 00 67	
9	316	25.1	10.8	145	22.6	23.4	50	30	17 01	28	17 58	16 56 59	5 51 66	
10	331	24.8	11.0	159	45.7	28.4	50	20	22	17 46	18 14	17 12 61	35 65	
11	346	24.5	-23 11.1	174	08.8	+17 33.2	48	10 N	17 41	18 04	18 30	17 27 61	5 21 63	
12	1	24.3	-23 11.3	188	31.8	+17 37.9	47	0	17 58	18 21	18 47	17 41 62	5 08 62	
13	16	24.0	11.4	202	54.8	42.4	45	10 S	18 16	39	19 06	17 54 63	4 55 61	
14	31	23.7	11.6	217	17.8	46.9	45	20	34	18 59	28	18 09 64	42 59	
15	46	23.4	11.7	231	40.8	51.2	43	30	18 56	19 24	19 57	26 64	26 57	
16	61	23.1	11.9	246	03.7	55.3	41	35	19 09	39	20 15	36 65	17 56	
17	76	22.8	-23 12.0	260	26.6	+17 59.3	40	40	19 24	19 57	20 38	18 47 66	4 06 55	
18	91	22.5	-23 12.2	274	49.5	+18 03.2	39	45	19 42	20 19	21 08	19 01 66	3 54 54	
19	106	22.2	12.3	289	12.4	07.0	38	50	20 04	20 48	21 53	17 67	39 52	
20	121	21.9	12.5	303	35.3	10.6	36	52	15	21 03	22 20	25 67	32 51	
21	136	21.6	12.6	317	58.2	14.1	35	54	27	21	23 04	33 68	25 49	
22	151	21.3	12.8	332	21.0	17.4	33	56	41	21 43	** **	43 68	16 49	
23	166	21.0	12.9	346	43.9	20.6	32	58	20 58	22 12	** **	19 54 68	3 06 47	
24	181	20.7	-23 13.1	1	06.7	+18 23.7	31	60 S	21 18	22 59	** **	20 06 70	2 55 46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 28 ^m 5		Mag: -4.3 PMG: 15 ^h 09 ^m		Mag: +0.7 PMG: 16 ^h 22 ^m		Mag: -1.9 PMG: 7 ^h 41 ^m		Mag: +0.4 PMG: 11 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	82	06.5	132 54.5	-20 55.7	114 14.2	-14 15.9	244 22.2	-6 12.5	183 47.4	-21 42.1
1	97	09.0	147 54.0	54.9	129 14.9	15.3	259 24.3	12.6	198 49.5	42.1
2	112	11.5	162 53.5	54.1	144 15.5	14.6	274 26.4	12.7	213 51.7	42.2
3	127	13.9	177 53.0	53.3	159 16.2	13.9	289 28.5	12.9	228 53.8	42.2
4	142	16.4	192 52.5	52.5	174 16.8	13.2	304 30.6	13.0	243 56.0	42.2
5	157	18.8	207 52.0	-20 51.8	189 17.5	-14 12.6	319 32.8	-6 13.1	258 58.1	-21 42.2
6	172	21.3	222 51.6	-20 51.0	204 18.1	-14 11.9	334 34.9	-6 13.3	274 00.3	-21 42.3
7	187	23.8	237 51.1	50.2	219 18.8	11.2	349 37.0	13.4	289 02.4	42.3
8	202	26.2	252 50.6	49.4	234 19.4	10.5	4 39.1	13.5	304 04.6	42.3
9	217	28.7	267 50.1	48.6	249 20.1	09.8	19 41.2	13.7	319 06.7	42.3
10	232	31.2	282 49.6	47.8	264 20.7	09.2	34 43.4	13.8	334 08.9	42.4
11	247	33.6	297 49.1	-20 47.0	279 21.4	-14 08.5	49 45.5	-6 13.9	349 11.0	-21 42.4
12	262	36.1	312 48.6	-20 46.3	294 22.0	-14 07.8	64 47.6	-6 14.0	4 13.2	-21 42.4
13	277	38.6	327 48.2	45.5	309 22.7	07.1	79 49.7	14.2	19 15.3	42.4
14	292	41.0	342 47.7	44.7	324 23.3	06.4	94 51.8	14.3	34 17.5	42.5
15	307	43.5	357 47.2	43.9	339 24.0	05.8	109 54.0	14.4	49 19.6	42.5
16	322	46.0	12 46.7	43.1	354 24.6	05.1	124 56.1	14.6	64 21.7	42.5
17	337	48.4	27 46.2	-20 42.3	9 25.3	-14 04.4	139 58.2	-6 14.7	79 23.9	-21 42.5
18	352	50.9	42 45.8	-20 41.5	24 25.9	-14 03.7	155 00.3	-6 14.8	94 26.0	-21 42.6
19	7	53.3	57 45.3	40.7	39 26.6	03.0	170 02.4	15.0	109 28.2	42.6
20	22	55.8	72 44.8	39.9	54 27.2	02.4	185 04.6	15.1	124 30.3	42.6
21	37	58.3	87 44.3	39.1	69 27.9	01.7	200 06.7	15.2	139 32.5	42.7
22	53	00.7	102 43.9	38.3	84 28.5	01.0	215 08.8	15.4	154 34.6	42.7
23	68	03.2	117 43.4	37.5	99 29.2	-14 00.3	230 10.9	15.5	169 36.8	42.7
24	83	05.7	132 42.9	-20 36.7	114 29.8	-13 59.6	245 13.1	-6 15.6	184 38.9	-21 42.7
Dif	—		-5	+8	+7	+7	+21	-1	+21	0

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: 14 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'6 R°: ***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	1	06.7	+18	23.7	60 N	7 02	7 59	8 56	16 12	65	8 39	62
1	196	20.4		13.2	15	29.5		26.7	58	6 55	48	39	25	64	26	62
2	211	20.1		13.4	29	52.4		29.5	56	48	37	25	36	64	15	62
3	226	19.8		13.5	44	15.2		32.1	54	42	28	12	46	64	8	05
4	241	19.5		13.7	58	38.0		34.6	52	37	20	8 01	16 55	63	7 57	62
5	256	19.2	-23	13.8	73	00.9	+18	37.0	50	6 31	7 13	7 51	17 03	63	7 49	62
6	271	18.9	-23	13.9	87	23.7	+18	39.3	45	6 20	6 57	7 31	17 19	63	7 32	62
7	286	18.6		14.1	101	46.5		41.4	40	10	44	14	33	63	19	62
8	301	18.3		14.2	116	09.4		43.3	35	6 00	32	7 00	45	62	7	07
9	316	18.0		14.4	130	32.2		45.1	30	5 52	22	6 48	17 55	62	6 57	62
10	331	17.7		14.5	144	55.1		46.8	20	35	6 03	27	18 13	61	40	61
11	346	17.4	-23	14.6	159	18.0	+18	48.4	10 N	5 19	5 46	6 08	18 28	61	6 24	62
12	1	17.1	-23	14.8	173	40.9	+18	49.8	0	5 02	5 29	5 51	18 43	60	6 10	62
13	16	16.8		14.9	188	03.8		51.1	10 S	4 44	5 11	34	18 57	60	5 56	61
14	31	16.5		15.0	202	26.7		52.2	20	4 21	4 50	5 15	19 13	59	41	61
15	46	16.2		15.2	216	49.6		53.2	30	3 52	26	4 53	30	59	23	61
16	61	15.9		15.3	231	12.6		54.0	35	34	4 10	40	41	58	13	61
17	76	15.6	-23	15.4	245	35.6	+18	54.7	40	3 11	3 52	4 25	19 53	58	5 01	61
18	91	15.3	-23	15.6	259	58.6	+18	55.3	45	2 41	3 30	4 07	20 07	57	4 48	60
19	106	15.0		15.7	274	21.6		55.7	50	1 56	3 01	3 45	24 57	31	31	60
20	121	14.7		15.8	288	44.7		56.0	52	1 29	2 46	34	32	56	23	60
21	136	14.4		15.9	303	07.8		56.2	54	0 46	28	22	41	56	14	60
22	151	14.1		16.1	317	30.9		56.2	56	*** **	2 06	3 08	20 51	55	4 05	59
23	166	13.8		16.2	331	54.1		56.1	58	*** **	1 37	2 52	21 02	55	3 53	59
24	181	13.5	-23	16.3	346	17.3	+18	55.8	60 S	*** **	0 50	2 31	21 16	54	3 41	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 24 ^m 6		Mag: -4.3 PMG: 15 ^h 10 ^m		Mag: +0.7 PMG: 16 ^h 21 ^m		Mag: -1.9 PMG: 7 ^h 38 ^m		Mag: +0.4 PMG: 11 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	05.7	132	42.9	-20	36.7	114	29.8	-13	59.6	245	13.1	-6	15.6	184	38.9	-21	42.7
1	98	08.1	147	42.4		35.9	129	30.5		59.0	260	15.2		15.8	199	41.1		42.8
2	113	10.6	162	42.0		35.1	144	31.1		58.3	275	17.3		15.9	214	43.2		42.8
3	128	13.1	177	41.5		34.3	159	31.8		57.6	290	19.4		16.0	229	45.4		42.8
4	143	15.5	192	41.0		33.5	174	32.4		56.9	305	21.5		16.1	244	47.5		42.8
5	158	18.0	207	40.5	-20	32.7	189	33.1	-13	56.2	320	23.7	-6	16.3	259	49.7	-21	42.9
6	173	20.5	222	40.1	-20	31.9	204	33.8	-13	55.5	335	25.8	-6	16.4	274	51.8	-21	42.9
7	188	22.9	237	39.6		31.1	219	34.4		54.9	350	27.9		16.5	289	54.0		42.9
8	203	25.4	252	39.1		30.3	234	35.1		54.2	5	30.0		16.7	304	56.1		42.9
9	218	27.8	267	38.7		29.5	249	35.7		53.5	20	32.2		16.8	319	58.3		43.0
10	233	30.3	282	38.2		28.7	264	36.4		52.8	35	34.3		16.9	335	00.4		43.0
11	248	32.8	297	37.7	-20	27.9	279	37.0	-13	52.1	50	36.4	-6	17.1	350	02.6	-21	43.0
12	263	35.2	312	37.3	-20	27.1	294	37.7	-13	51.4	65	38.5	-6	17.2	5	04.7	-21	43.0
13	278	37.7	327	36.8		26.3	309	38.3		50.8	80	40.7		17.3	20	06.8		43.1
14	293	40.2	342	36.4		25.5	324	39.0		50.1	95	42.8		17.4	35	09.0		43.1
15	308	42.6	357	35.9		24.6	339	39.6		49.4	110	44.9		17.6	50	11.1		43.1
16	323	45.1	12	35.4		23.8	354	40.3		48.7	125	47.0		17.7	65	13.3		43.1
17	338	47.6	27	35.0	-20	23.0	9	40.9	-13	48.0	140	49.2	-6	17.8	80	15.4	-21	43.2
18	353	50.0	42	34.5	-20	22.2	24	41.6	-13	47.3	155	51.3	-6	18.0	95	17.6	-21	43.2
19	8	52.5	57	34.1		21.4	39	42.3		46.7	170	53.4		18.1	110	19.7		43.2
20	23	55.0	72	33.6		20.6	54	42.9		46.0	185	55.5		18.2	125	21.9		43.2
21	38	57.4	87	33.1		19.8	69	43.6		45.3	200	57.7		18.3	140	24.0		43.3
22	53	59.9	102	32.7		18.9	84	44.2		44.6	215	59.8		18.5	155	26.2		43.3
23	69	02.3	117	32.2		18.1	99	44.9		43.9	231	01.9		18.6	170	28.3		43.3
24	84	04.8	132	31.8	-20	17.3	114	45.5	-13	43.2	246	04.0	-6	18.7	185	30.5	-21	43.3
Dif	—		-5 +8		+7 +7		+21 -1		+21									

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 3			Edad: 15 ^d 5 PHE { 4 ^h : 60'4 12 ^h : 60'2 20 ^h : 59'9 R°: 60 ^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	181	13.5	-23	16.3	346	17.3	+18	55.8	60 N	14 53	15 51	16 47	17 17 74		9 41 47			
1	196	13.2		16.5	0	40.5	42	55.4	58	15 10	16 02	16 55	29 73		28 48			
2	211	12.9		16.6	15	03.8	43	54.9	56	25	12	17 01	40 72		17 50			
3	226	12.6		16.7	29	27.1	43	54.2	54	38	21	07	50 70		9 07 51			
4	241	12.3		16.8	43	50.5	44	53.4	52	49	29	13	17 58 70		8 59 51			
5	256	12.0	-23	16.9	58	13.9	44	+18 52.5	50	15 58	16 37	17 18	18 06 68		8 51 52			
6	271	11.7	-23	17.1	72	37.3	44	+18 51.4	45	16 19	16 53	17 30	18 22 67		8 34 54			
7	286	11.4		17.2	87	00.8	45	50.2	40	36	17 06	40	36 65		21 54			
8	301	11.1		17.3	101	24.3	45	48.9	35	16 50	18	50	47 64		8 09 55			
9	316	10.8		17.4	115	47.9	46	47.4	30	17 02	29	17 58	18 57 63		7 59 56			
10	331	10.5		17.5	130	11.5	46	45.8	20	23	17 47	18 15	19 14 61		41 58			
11	346	10.2	-23	17.7	144	35.2	47	+18 44.1	10 N	17 42	18 05	18 31	19 29 60		7 26 59			
12	1	09.9	-23	17.8	158	59.0	48	+18 42.2	0	17 59	18 22	18 48	19 43 58		7 12 59			
13	16	09.6		17.9	173	22.8	48	40.2	10 S	18 17	18 40	19 07	19 57 57		6 57 61			
14	31	09.3		18.0	187	46.6	48	38.1	20	35	19 00	29	20 12 55		42 62			
15	46	09.0		18.1	202	10.5	49	35.8	30	18 57	25	19 58	29 53		24 63			
16	61	08.7		18.2	216	34.5	50	33.5	35	19 10	40	20 17	39 52		14 63			
17	76	08.4	-23	18.3	230	58.5	50	+18 30.9	40	19 25	19 58	20 40	20 51 50		6 02 64			
18	91	08.1	-23	18.5	245	22.6	51	+18 28.3	45	19 43	20 21	21 10	21 04 49		5 48 65			
19	106	07.8		18.6	259	46.8	52	25.6	50	20 06	20 50	21 55	21 46		31 67			
20	121	07.5		18.7	274	11.0	52	22.7	52	17	21 05	22 23	28 46		23 67			
21	136	07.2		18.8	288	35.3	53	19.7	30	54	29	23 08	37 44		14 68			
22	151	06.9		18.9	302	59.7	54	16.5	56	20 43	21 45	** **	46 43		5 04 69			
23	166	06.6		19.0	317	24.1	54	13.3	58	21 00	22 15	** **	21 57 42		4 52 70			
24	181	06.3	-23	19.1	331	48.6	55	+18 09.9	60 S	21 20	23 03	** **	22 10 39		4 39 71			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 20 ^m 7		Mag: -4.3 PMG: 15 ^h 10 ^m				Mag: +0.8 PMG: 16 ^h 20 ^m				Mag: -1.9 PMG: 7 ^h 35 ^m				Mag: +0.4 PMG: 11 ^h 36 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	04.8	132	31.8	-20	17.3	114	45.5	-13	43.2	246	04.0	-6	18.7	185	30.5	-21	43.3
1	99	07.3	147	31.3		16.5	129	46.2		42.5	261	06.2		18.9	200	32.6		43.4
2	114	09.7	162	30.9		15.7	144	46.8		41.8	276	08.3		19.0	215	34.8		43.4
3	129	12.2	177	30.4		14.8	159	47.5		41.2	291	10.4		19.1	230	36.9		43.4
4	144	14.7	192	30.0		14.0	174	48.2		40.5	306	12.6		19.2	245	39.1		43.4
5	159	17.1	207	29.5	-20	13.2	189	48.8	-13	39.8	321	14.7	-6	19.4	260	41.2	-21	43.5
6	174	19.6	222	29.1	-20	12.4	204	49.5	-13	39.1	336	16.8	-6	19.5	275	43.4	-21	43.5
7	189	22.1	237	28.6		11.5	219	50.1		38.4	351	18.9		19.6	290	45.5		43.5
8	204	24.5	252	28.2		10.7	234	50.8		37.7	6	21.1		19.8	305	47.7		43.5
9	219	27.0	267	27.7		09.9	249	51.4		37.0	21	23.2		19.9	320	49.8		43.6
10	234	29.4	282	27.3		09.0	264	52.1		36.3	36	25.3		20.0	335	51.9		43.6
11	249	31.9	297	26.8	-20	08.2	279	52.8	-13	35.7	51	27.5	-6	20.1	350	54.1	-21	43.6
12	264	34.4	312	26.4	-20	07.4	294	53.4	-13	35.0	66	29.6	-6	20.3	5	56.2	-21	43.6
13	279	36.8	327	26.0		06.6	309	54.1		34.3	81	31.7		20.4	20	58.4		43.7
14	294	39.3	342	25.5		05.7	324	54.7		33.6	96	33.8		20.5	36	00.5		43.7
15	309	41.8	357	25.1		04.9	339	55.4		32.9	111	36.0		20.7	51	02.7		43.7
16	324	44.2	12	24.6		04.1	354	56.0		32.2	126	38.1		20.8	66	04.8		43.7
17	339	46.7	27	24.2	-20	03.2	9	56.7	-13	31.5	141	40.2	-6	20.9	81	07.0	-21	43.8
18	354	49.2	42	23.8	-20	02.4	24	57.4	-13	30.8	156	42.4	-6	21.0	96	09.1	-21	43.8
19	9	51.6	57	23.3		01.6	39	58.0		30.1	171	44.5		21.2	111	11.3		43.8
20	24	54.1	72	22.9	-20	00.7	54	58.7		29.4	186	46.6		21.3	126	13.4		43.8
21	39	56.6	87	22.4	-19	59.9	69	59.3		28.8	201	48.7		21.4	141	15.6		43.9
22	54	59.0	102	22.0		59.0	85	00.0		28.1	216	50.9		21.5	156	17.7		43.9
23	70	01.5	117	21.6		58.2	100	00.7		27.4	231	53.0		21.7	171	19.9		43.9
24	85	03.9	132	21.1	-19	57.4	115	01.3	-13	26.7	246	55.1	-6	21.8	186	22.0	-21	43.9
Dif	—		-4		+8		+7		+7		+21		-1		+21			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 55 ^m 8			Edad: 16 ^d 5 PHE { 4 ^h : 59'7 12 ^h : 59'4 20 ^h : 59'1 SD: 16'3 PMG: 1 ^h 57 ^m R°: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	06.3	-23	19.1	331	48.6	+18	09.9	60 N	7	04	8	01	18	31	79	10 28 34
1	196	06.0		19.2	346	13.2		06.4	58	6	57	7	49		42	77	16 37
2	211	05.7		19.3	0	37.8	+18	02.8	56		50		39	26	18	52	74
3	226	05.4		19.4	15	02.5	+17	59.1	54		44		30	14	19	00	73
4	241	05.1		19.5	29	27.3		55.3	52		38		22	8	03	08	71
5	256	04.8	-23	19.6	43	52.1	+17	51.3	50	6	33	7	14	7	53	19	14
6	271	04.5	-23	19.7	58	17.1	+17	47.3	45	6	21	6	58	7	32	19	29
7	286	04.2		19.8	72	42.1		43.1	42		11		45	16	41	65	15 47
8	301	03.9		19.9	87	07.2		38.8	35	6	02		33	7	01	19	51
9	316	03.6		20.0	101	32.3		34.4	30	5	53		23	6	49	20	00
10	331	03.3		20.1	115	57.6		29.8	20		36	6	04		28	15	59
11	346	03.0	-23	20.2	130	22.9	+17	25.2	10 N	5	20	5	47	6	09	20	29
12	1	02.7	-23	20.3	144	48.3	+17	20.5	0	5	03	5	30	5	52	20	41
13	16	02.4		20.4	159	13.8		15.6	10 S	4	44	5	11	35	20	54	
14	31	02.1		20.5	173	39.4		10.7	20	4	22	4	51	5	16	21	07
15	46	01.7		20.6	188	05.0		05.7	30	3	53		26	4	54		22
16	61	01.4		20.7	202	30.7	+17	00.5	52		34	4	11		41	31	45
17	76	01.1	-23	20.8	216	56.6	+16	55.2	40	3	11	3	53	4	26	21	41
18	91	00.8	-23	20.9	231	22.5	+16	49.9	45	2	41	3	30	4	08	21	53
19	106	00.5		21.0	245	48.4		44.4	50	1	56	3	01	3	45	22	07
20	121	00.2		21.1	260	14.5		38.9	55		28		26		35	14	37
21	135	59.9		21.2	274	40.7		33.2	57		43		28		22	21	36
22	150	59.6		21.3	289	06.9		27.5	56	** ** *	2	06		3	08	29	34
23	165	59.3		21.3	303	33.2		21.6	58	** ** *	1	36		2	51	39	31
24	180	59.0	-23	21.4	317	59.6	+16	15.7	60 S	** ** *	0	48		2	31	22	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 16 ^m 7		Mag: -4.3 PMG: 15 ^h 11 ^m		Mag: +0.8 PMG: 16 ^h 19 ^m		Mag: -1.9 PMG: 7 ^h 31 ^m		Mag: +0.4 PMG: 11 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	85	03.9	132	21.1	115	01.3	246	55.1	186	22.0
1	100	06.4	147	20.7	130	02.0	261	57.3	201	24.2
2	115	08.9	162	20.3	145	02.6	276	59.4	216	26.3
3	130	11.3	177	19.8	160	03.3	292	01.5	231	28.5
4	145	13.8	192	19.4	175	04.0	307	03.7	246	30.6
5	160	16.3	207	19.0	190	04.6	322	05.8	261	32.8
6	175	18.7	222	18.5	205	05.3	337	07.9	276	34.9
7	190	21.2	237	18.1	220	05.9	352	10.1	291	37.1
8	205	23.7	252	17.7	235	06.6	7	12.2	306	39.2
9	220	26.1	267	17.3	250	07.3	22	14.3	321	41.4
10	235	28.6	282	16.8	265	07.9	37	16.5	336	43.5
11	250	31.1	297	16.4	280	08.6	52	18.6	351	45.6
12	265	33.5	312	16.0	295	09.2	67	20.7	6	47.8
13	280	36.0	327	15.6	310	09.9	82	22.9	21	49.9
14	295	38.4	342	15.1	325	10.6	97	25.0	36	52.1
15	310	40.9	357	14.7	340	11.2	112	27.1	51	54.2
16	325	43.4	12	14.3	355	11.9	127	29.3	66	56.4
17	340	45.8	27	13.9	10	12.6	142	31.4	81	58.5
18	355	48.3	42	13.5	25	13.2	157	33.5	97	00.7
19	10	50.8	57	13.0	40	13.9	172	35.7	112	02.8
20	25	53.2	72	12.6	55	14.5	187	37.8	127	05.0
21	40	55.7	87	12.2	70	15.2	202	39.9	142	07.1
22	55	58.2	102	11.8	85	15.9	217	42.1	157	09.3
23	71	00.6	117	11.4	100	16.5	232	44.2	172	11.4
24	86	03.1	132	11.0	115	17.2	247	46.4	187	13.6
Dif	—		-4	+9	+7	+7	+21	-1	+21	0

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: 17 ^d 5 PHE { 4 ^h : 58'8 12 ^h : 58'4 20 ^h : 58'1 SD: 16:0 PMG: 2 ^h 55 ^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	
0	180	59.0	-23	21.4	317	59.6	+16	15.7	60 N	14 53	15 51	16 48	19 50 79	11 02 26	
1	195	58.7		21.5	332	26.1	75	09.7	58	15 11	16 02	16 55	19 59 76	10 53 28	
2	210	58.4		21.6	346	52.7	76	+16	03.5	56	25	13	17 02	45 30	
3	225	58.1		21.7	1	19.4	77	+15	57.3	54	38	22	08	38 32	
4	240	57.8		21.8	15	46.2	78		51.0	52	49	30	14	31 34	
5	255	57.5	-23	21.9	30	13.0	78	+15	44.6	50	15 59	16 37	17 19	10 25 35	
6	270	57.2	-23	21.9	44	40.0	80	+15	38.2	45	16 20	16 53	17 31	10 13 38	
7	285	56.9		22.0	59	07.0	80		31.6	40	36	17 07	41	10 02 41	
8	300	56.6		22.1	73	34.1	81		25.0	35	16 51	19	50	9 53 43	
9	315	56.3		22.2	88	01.3	82		18.2	30	17 03	29	17 59	45 44	
10	330	56.0		22.3	102	28.6	83		11.4	20	24	17 48	18 16	31 48	
11	345	55.7	-23	22.3	116	56.0	84	+15	04.5	10 N	17 43	18 05	18 32	9 19 50	
12	0	55.3	-23	22.4	131	23.5	85	+14	57.6	0	18 00	18 23	18 49	9 08 52	
13	15	55.0		22.5	145	51.0	85		50.5	10 S	18	18 41	19 08	8 56 55	
14	30	54.7		22.6	160	18.7	87		43.4	20	37	19 01	30	44 57	
15	45	54.4		22.6	174	46.4	87		36.2	30	18 59	26	19 59	30 60	
16	60	54.1		22.7	189	14.3	89		28.9	35	19 12	19 41	20 18	21 63	
17	75	53.8	-23	22.8	203	42.2	89	+14	21.6	40	19 27	20 00	20 41	8 12 65	
18	90	53.5	-23	22.9	218	10.2	90	+14	14.2	45	19 45	20 22	21 12	8 01 67	
19	105	53.2		22.9	232	38.3	91	+14	06.7	50	20 07	20 52	21 57	7 47 71	
20	120	52.9		23.0	247	06.5	92	+13	59.1	52	18	21 07	22 25	41 72	
21	135	52.6		23.1	261	34.7	92		51.5	54	30	25	23 11	34 74	
22	150	52.3		23.1	276	03.1	94		43.8	56	20 45	21 47	** **	26 76	
23	165	52.0		23.2	290	31.5	94		36.0	58	21 01	22 17	** **	18 77	
24	180	51.7	-23	23.3	305	00.1	96	+13	28.2	60 S	21 22	23 07	** **	7 08 79	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 18 ^h 12 ^m 8		Mag: -4.3 PMG: 15 ^h 12 ^m		Mag: +0.8 PMG: 16 ^h 18 ^m		Mag: -1.9 PMG: 7 ^h 28 ^m		Mag: +0.5 PMG: 11 ^h 29 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	86	03.1	132	11.0	-19	37.0	115	17.2	247	46.4					
1	101	05.6	147	10.6		36.1	130	17.9	-6	24.8					
2	116	08.0	162	10.1		35.2	145	18.5	262	48.5					
3	131	10.5	177	09.7		34.4	160	19.2	277	50.6					
4	146	12.9	192	09.3		33.5	175	19.8	292	52.8					
5	161	15.4	207	08.9	-19	32.6	190	20.5	307	54.9					
6	176	17.9	222	08.5	-19	31.8	205	21.2	25.3	24.8					
7	191	20.3	237	08.1		30.9	220	21.8	-6	25.6					
8	206	22.8	252	07.7		30.0	235	22.5	277	26.5					
9	221	25.3	267	07.3		29.2	250	23.2	8	25.8					
10	236	27.7	282	06.9		28.3	265	23.8	23	25.9					
11	251	30.2	297	06.5	-19	27.4	280	24.5	38	26.0					
12	266	32.7	312	06.1	-19	26.6	295	25.2	53	26.2					
13	281	35.1	327	05.7		25.7	310	25.8	-6	26.3					
14	296	37.6	342	05.3		24.8	325	26.5	68	26.4					
15	311	40.1	357	04.9		24.0	340	27.2	83	26.5					
16	326	42.5	12	04.5		23.1	355	27.8	98	26.7					
17	341	45.0	27	04.1	-19	22.2	10	28.5	113	26.8					
18	356	47.4	42	03.7	-19	21.3	25	29.1	128	26.9					
19	11	49.9	57	03.3		20.5	40	29.8	143	27.0					
20	26	52.4	72	02.9		19.6	55	30.5	158	27.1					
21	41	54.8	87	02.5		18.7	70	31.1	173	27.2					
22	56	57.3	102	02.1		17.8	85	31.8	188	27.3					
23	71	59.8	117	01.7		16.9	100	32.5	203	27.4					
24	87	02.2	132	01.3	-19	16.1	115	33.1	218	27.5					
Dif	—		-4		+9		+7		+21						
									-1						
									+21						
									0						

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: 18 ^d 5 PHE { 4 ^h : 57/8 12 ^h : 57/5 20 ^h : 57/2 SD: 15/8 PMG: 3 ^h 48 ^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	180	51.7	-23	23.3	305	00.1	+13	28.2	60 N	7	06	8	02	9	00	21	09
1	195	51.4		23.4	319	28.7		20.3	58	6	58	7	51	8	43	15	75
2	210	51.1		23.4	333	57.4		12.3	80	51	41		28		21	73	
3	225	50.8		23.5	348	26.2	+13	04.3	80	45	31		15		26	71	
4	240	50.4		23.5	2	55.1	+12	56.3	80	40	23		8	04	30	69	
5	255	50.1	-23	23.6	17	24.0	+12	48.1	82	6	34	7	16	7	54	21	34
6	270	49.8	-23	23.7	31	53.1	+12	39.9	82	6	22	7	00	7	34	21	43
7	285	49.5		23.7	46	22.2		31.7	82	12	6	46		17		50	61
8	300	49.2		23.8	60	51.4		23.4	83	6	03		34	7	03	21	56
9	315	48.9		23.9	75	20.7		15.0	84	5	54		24	6	50	22	01
10	330	48.6		23.9	89	50.1	+12	06.6	84	37	6	05		29		10	54
11	345	48.3	-23	24.0	104	19.6	+11	58.1	85	5	21	5	48	6	10	22	19
12	0	48.0	-23	24.0	118	49.1	+11	49.6	85	5	04	5	31	5	53	22	26
13	15	47.7		24.1	133	18.8		41.0	86	4	45	5	12		35	34	44
14	30	47.4		24.1	147	48.5		32.4	86	20	4	23	4	52	5	17	42
15	45	47.1		24.2	162	18.3		23.8	86	30	3	54		27	4	54	51
16	60	46.8		24.3	176	48.1		15.0	88	35	35	4	12		41	22	56
17	75	46.4	-23	24.3	191	18.1	+11	06.3	87	40	3	12	3	54	4	26	23
18	90	46.1	-23	24.4	205	48.1	+10	57.5	88	45	2	41	3	31	4	08	23
19	105	45.8		24.4	220	18.2		48.6	89	50	1	56	3	01	3	46	17
20	120	45.5		24.5	234	48.4		39.7	89	52	1	28		2	46	35	21
21	135	45.2		24.5	249	18.7		30.8	89	54	0	42		28	23	25	25
22	150	44.9		24.6	263	49.0		21.8	90	56	** **	2	06		3	08	30
23	165	44.6		24.6	278	19.4		12.8	90	58	** **	1	36		2	52	35
24	180	44.3	-23	24.7	292	49.9	+10	03.8	90	60 S	** **	0	46		2	31	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 08 ^m 9		Mag: -4.3 PMG: 15 ^h 12 ^m		Mag: +0.8 PMG: 16 ^h 17 ^m		Mag: -1.9 PMG: 7 ^h 24 ^m		Mag: +0.5 PMG: 11 ^h 26 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	87	02.2	132	01.3	-19	16.1	115	33.1	-12	53.3
1	102	04.7	147	00.9		15.2	130	33.8		52.6
2	117	07.2	162	00.5		14.3	145	34.5		51.9
3	132	09.6	177	00.1		13.4	160	35.1		51.2
4	147	12.1	191	59.7		12.5	175	35.8		50.5
5	162	14.5	206	59.3	-19	11.7	190	36.5	-12	49.8
6	177	17.0	221	59.0	-19	10.8	205	37.1	-12	49.1
7	192	19.5	236	58.6		09.9	220	37.8		48.4
8	207	21.9	251	58.2		09.0	235	38.5		47.7
9	222	24.4	266	57.8		08.1	250	39.2		47.0
10	237	26.9	281	57.4		07.2	265	39.8		46.3
11	252	29.3	296	57.0	-19	06.3	280	40.5	-12	45.6
12	267	31.8	311	56.6	-19	05.5	295	41.2	-12	44.9
13	282	34.3	326	56.3		04.6	310	41.8		44.1
14	297	36.7	341	55.9		03.7	325	42.5		43.4
15	312	39.2	356	55.5		02.8	340	43.2		42.7
16	327	41.7	11	55.1		01.9	355	43.8		42.0
17	342	44.1	26	54.7	-19	01.0	10	44.5	-12	41.3
18	357	46.6	41	54.4	-19	00.1	25	45.2	-12	40.6
19	12	49.0	56	54.0	-18	59.2	40	45.8		39.9
20	27	51.5	71	53.6		58.3	55	46.5		39.2
21	42	54.0	86	53.2		57.4	70	47.2		38.5
22	57	56.4	101	52.9		56.5	85	47.8		37.8
23	72	58.9	116	52.5		55.6	100	48.5		37.1
24	88	01.4	131	52.1	-18	54.7	115	49.2	-12	36.4
Dif	—		-4		+9		+7		+7	

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: 19 ^d 5 PHE { 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'3 R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	180	44.3	-23	24.7	292	49.9	+10	03.8	60 N	14 54	15 51	16 48	22 27	75	11 49	17				
1	195	44.0		24.7	307	20.5 ¹¹⁶	+9	54.7 ⁹¹	58	15 11	16 03	16 56	30 73		44 20					
2	210	43.7		24.8	321	51.2 ¹¹⁷		45.5 ⁹²	56	26	13	17 03	34 70		40 22					
3	225	43.4		24.8	336	21.9 ¹¹⁷		36.4 ⁹¹	54	39	22	09	37 68		36 24					
4	240	43.1		24.9	350	52.7 ¹¹⁸		27.2 ⁹²	52	15 50	31	14	39 67		33 25					
5	255	42.7	-23	24.9	5	23.5 ¹¹⁸	+9	17.9 ⁹³	50	16 00	16 38	17 20	22 42	65	11 30	26				
6	270	42.4	-23	24.9	19	54.5 ¹²⁰	+9	08.7 ⁹²	45	16 20	16 54	17 32	22 47	62	11 24	29				
7	285	42.1		25.0	34	25.5 ¹²⁰	+8	59.4 ⁹³	40	37	17 08	42	51 59		18 32					
8	300	41.8		25.0	48	56.5 ¹²⁰		50.0 ⁹⁴	35	16 51	20	17 51	55 57		13 35					
9	315	41.5		25.1	63	27.7 ¹²²		40.7 ⁹³	30	17 04	30	18 00	22 58	55	09 37					
10	330	41.2		25.1	77	58.9 ¹²²		31.3 ⁹⁴	20	25	17 49	17	23 04	51	11 02	40				
11	345	40.9	-23	25.1	92	30.2 ¹²³	+8	21.8 ⁹⁵	10 N	17 44	18 06	18 33	23 09	48	10 55	44				
12	0	40.6	-23	25.2	107	01.5 ¹²³	+8	12.4 ⁹⁴	0	18 01	18 24	18 50	23 14	45	10 49	46				
13	15	40.3		25.2	121	32.9 ¹²⁴	+8	02.9 ⁹⁵	10 S	19	18 42	19 09	18 42		43 49					
14	30	40.0		25.3	136	04.4 ¹²⁵	+7	53.4 ⁹⁵	20	18 38	19 02	19 31	23 39		36 53					
15	45	39.7		25.3	150	35.9 ¹²⁵		43.9 ⁹⁵	30	19 00	27	20 01	29 35		29 56					
16	60	39.4		25.3	165	07.6 ¹²⁷		34.3 ⁹⁶	35	13	19 42	19	32 33		24 58					
17	75	39.0	-23	25.4	179	39.2 ¹²⁶	+7	24.8 ⁹⁵	40	19 28	20 01	20 42	23 36	31	10 19	61				
18	90	38.7	-23	25.4	194	11.0 ¹²⁸	+7	15.2 ⁹⁶	45	19 46	20 23	21 13	23 40	28	10 13	64				
19	105	38.4		25.4	208	42.7 ¹²⁷	+7	05.5 ⁹⁷	50	20 08	20 53	21 59	45 25		06 67					
20	120	38.1		25.5	223	14.6 ¹²⁹	+6	55.9 ⁹⁶	52	19	21 08	22 27	47 24		03 68					
21	135	37.8		25.5	237	46.5 ¹²⁹		46.2 ⁹⁷	54	32	26	23 14	50 22		10 00	70				
22	150	37.5		25.5	252	18.5 ¹³⁰		36.6 ⁹⁶	56	20 46	21 49	** **	53 20		9 56	72				
23	165	37.2		25.6	266	50.5 ¹³⁰		26.9 ⁹⁷	58	21 03	22 19	** **	56 18		51 74					
24	180	36.9	-23	25.6	281	22.6 ¹³¹	+6	17.2 ⁹⁷	60 S	21 23	23 10	** **	23 59	16	9 46	77				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 18 ^h 04 ^m 9		Mag: -4.3 PMG: 15 ^h 13 ^m				Mag: +0.8 PMG: 16 ^h 16 ^m				Mag: -1.9 PMG: 7 ^h 21 ^m				Mag: +0.5 PMG: 11 ^h 23 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	88	01.4	131	52.1	-18	54.7	115	49.2	-12	36.4	249	29.1	-6	30.7	188	56.7	-21	45.7		
1	103	03.8	146	51.7		53.8	130	49.9		35.7	264	31.2		30.8	203	58.8		45.7		
2	118	06.3	161	51.4		52.9	145	50.5		35.0	279	33.4		30.9	219	01.0		45.8		
3	133	08.8	176	51.0		52.0	160	51.2		34.3	294	35.5		31.0	234	03.1		45.8		
4	148	11.2	191	50.6		51.1	175	51.9		33.6	309	37.7		31.2	249	05.3		45.8		
5	163	13.7	206	50.3	-18	50.2	190	52.5	-12	32.9	324	39.8	-6	31.3	264	07.4	-21	45.8		
6	178	16.2	221	49.9	-18	49.3	205	53.2	-12	32.2	339	42.0	-6	31.4	279	09.6	-21	45.9		
7	193	18.6	236	49.5		48.4	220	53.9		31.5	354	44.1		31.5	294	11.7		45.9		
8	208	21.1	251	49.2		47.5	235	54.6		30.8	9	46.3		31.6	309	13.9		45.9		
9	223	23.5	266	48.8		46.6	250	55.2		30.0	24	48.4		31.8	324	16.0		45.9		
10	238	26.0	281	48.4		45.7	265	55.9		29.3	39	50.6		31.9	339	18.2		45.9		
11	253	28.5	296	48.1	-18	44.8	280	56.6	-12	28.6	54	52.7	-6	32.0	354	20.3	-21	46.0		
12	268	30.9	311	47.7	-18	43.9	295	57.2	-12	27.9	69	54.9	-6	32.1	9	22.5	-21	46.0		
13	283	33.4	326	47.3		43.0	310	57.9		27.2	84	57.0		32.2	24	24.6		46.0		
14	298	35.9	341	47.0		42.1	325	58.6		26.5	99	59.2		32.4	39	26.8		46.0		
15	313	38.3	356	46.6		41.2	340	59.3		25.8	115	01.3		32.5	54	28.9		46.1		
16	328	40.8	11	46.3		40.3	355	59.9		25.1	130	03.5		32.6	69	31.1		46.1		
17	343	43.3	26	45.9	-18	39.3	11	00.6	-12	24.4	145	05.6	-6	32.7	84	33.2	-21	46.1		
18	358	45.7	41	45.5	-18	38.4	26	01.3	-12	23.7	160	07.7	-6	32.8	99	35.4	-21	46.1		
19	13	48.2	56	45.2		37.5	41	01.9		23.0	175	09.9		32.9	114	37.5		46.2		
20	28	50.6	71	44.8		36.6	56	02.6		22.3	190	12.0		33.1	129	39.7		46.2		
21	43	53.1	86	44.5		35.7	71	03.3		21.6	205	14.2		33.2	144	41.8		46.2		
22	58	55.6	101	44.1		34.8	86	04.0		20.8	220	16.3		33.3	159	44.0		46.2		
23	73	58.0	116	43.8		33.9	101	04.6		20.1	235	18.5		33.4	174	46.1		46.3		
24	89	00.5	131	43.4	-18	32.9	116	05.3	-12	19.4	250	20.6	-6	33.5	189	48.3	-21	46.3		
Dif	—		-4		+9		+7		+7		+21		-1		+21		0			

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: 20 ^d 5 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/5 PMG: 5 ^h 24 ^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	36.9	-23	25.6	281	22.6	+6	17.2	60 N	7 07	8 04	9 02	23 42	73	12 06	15
1	195	36.6		25.6	295	54.7 ¹³¹	+6	07.4 ⁹⁸	58	6 59	7 52	8 44	43 71		04 17	
2	210	36.3		25.6	310	26.9 ¹³²	+5	57.7 ⁹⁷	56	53	42	29	44 69		02 19	
3	225	35.9		25.7	324	59.2 ¹³³		47.9 ⁹⁸	54	46	33	17	45 67		12 00	21
4	240	35.6		25.7	339	31.5 ¹³³		38.1 ⁹⁸	52	41	24	8 05	46 65		11 58	23
5	255	35.3	-23	25.7	354	03.9 ¹³⁴	+5	28.3 ⁹⁸	50	6 35	7 17	7 56	23 47	64	11 56	25
6	270	35.0	-23	25.7	8	36.3 ¹³⁴	+5	18.5 ⁹⁸	45	6 24	7 01	7 35	23 49	60	11 53	28
7	285	34.7		25.8	23	08.7 ¹³⁴	+5	08.7 ⁹⁸	40	13	6 47	18	50 58		50 30	
8	300	34.4		25.8	37	41.3 ¹³⁶	+4	58.9 ⁹⁸	35	6 04	36	7 04	52 55		48 32	
9	315	34.1		25.8	52	13.8 ¹³⁵		49.0 ⁹⁹	30	5 55	25	6 51	53 53		46 34	
10	330	33.8		25.8	66	46.4 ¹³⁶		39.2 ⁹⁸	20	39	6 06	30	55 50		42 38	
11	345	33.5	-23	25.8	81	19.1 ¹³⁷	+4	29.3 ⁹⁹	10 N	5 22	5 49	6 12	23 57	46	11 39	41
12	0	33.2	-23	25.9	95	51.8 ¹³⁷	+4	19.4 ⁹⁹	0	5 05	5 31	5 54	23 59	43	11 35	45
13	15	32.8		25.9	110	24.6 ¹³⁸	+4	09.6 ⁹⁸	10 S	4 46	5 13	36	** ** *		32 47	
14	30	32.5		25.9	124	57.4 ¹³⁸	+3	59.7 ⁹⁹	20	4 24	4 53	5 17	** ** *		29 50	
15	45	32.2		25.9	139	30.2 ¹³⁸		49.8 ⁹⁹	30	3 54	28	4 55	** ** *		25 54	
16	60	31.9		25.9	154	03.1 ¹³⁹		39.9 ⁹⁹	35	36	4 13	42	** ** *		22 57	
17	75	31.6	-23	25.9	168	36.1 ¹⁴⁰	+3	30.0 ⁹⁹	40	3 13	3 54	4 27	** ** *		11 20	58
18	90	31.3	-23	26.0	183	09.0 ¹³⁹	+3	20.1 ⁹⁹	45	2 42	3 32	4 09	** ** *		11 17	61
19	105	31.0		26.0	197	42.1 ¹⁴¹		10.2 ⁹⁹	50	1 56	3 02	3 47	** ** *		13 65	
20	120	30.7		26.0	212	15.1 ¹⁴⁰	+3	00.2 ¹⁰⁰	52	1 28	2 47	36	** ** *		11 67	
21	135	30.4		26.0	226	48.2 ¹⁴¹	+2	50.3 ⁹⁹	54	0 41	29	23	** ** *		10 68	
22	150	30.1		26.0	241	21.4 ¹⁴²		40.4 ⁹⁹	56	** ** *	2 06	3 09	** ** *		08 69	
23	165	29.7		26.0	255	54.5 ¹⁴¹		30.5 ⁹⁹	58	** ** *	1 36	2 52	** ** *		05 72	
24	180	29.4	-23	26.0	270	27.7 ¹⁴²	+2	20.6 ⁹⁹	60 S	** ** *	0 45	2 32	** ** *		11 03	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 01 ^m 0		Mag: -4.3 PMG: 15 ^h 13 ^m		Mag: +0.8 PMG: 16 ^h 15 ^m		Mag: -1.9 PMG: 7 ^h 18 ^m		Mag: +0.5 PMG: 11 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	89	00.5	131	43.4	-18	32.9	116	05.3	-12	19.4
1	104	03.0	146	43.1		32.0	131	06.0		18.7
2	119	05.4	161	42.7		31.1	146	06.7		18.0
3	134	07.9	176	42.4		30.2	161	07.3		17.3
4	149	10.4	191	42.0		29.3	176	08.0		16.6
5	164	12.8	206	41.7	-18	28.4	191	08.7	-12	15.9
6	179	15.3	221	41.3	-18	27.4	206	09.4	-12	15.2
7	194	17.8	236	41.0		26.5	221	10.0		14.5
8	209	20.2	251	40.6		25.6	236	10.7		13.7
9	224	22.7	266	40.3		24.7	251	11.4		13.0
10	239	25.1	281	39.9		23.7	266	12.1		12.3
11	254	27.6	296	39.6	-18	22.8	281	12.7	-12	11.6
12	269	30.1	311	39.3	-18	21.9	296	13.4	-12	10.9
13	284	32.5	326	38.9		21.0	311	14.1		10.2
14	299	35.0	341	38.6		20.0	326	14.8		09.5
15	314	37.5	356	38.2		19.1	341	15.4		08.8
16	329	39.9	11	37.9		18.2	356	16.1		08.1
17	344	42.4	26	37.6	-18	17.3	11	16.8	-12	07.3
18	359	44.9	41	37.2	-18	16.3	26	17.5	-12	06.6
19	14	47.3	56	36.9		15.4	41	18.1		05.9
20	29	49.8	71	36.5		14.5	56	18.8		05.2
21	44	52.3	86	36.2		13.5	71	19.5		04.5
22	59	54.7	101	35.9		12.6	86	20.2		03.8
23	74	57.2	116	35.5		11.7	101	20.8		03.1
24	89	59.6	131	35.2	-18	10.7	116	21.5	-12	02.3
Dif	—		-3		+9		+7		+7	
							+22		-1	
									+21	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16°3			Edad: 21 ^d 5 PHE	SD: 15°1	PMG: 6 ^h 09 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna				
	hG ☉	Dec							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	29.4	-23	26.0	270	27.7	+2 20.6	60 N	14 54	15 52	16 49	** ** *	** ** *	12 21 15				
1	195	29.1		26.0	285	01.0 ¹⁴³	10.6 ¹⁰⁰	58	15 12	16 04	16 57	** ** *	** ** *	21 17				
2	210	28.8		26.0	299	34.3 ¹⁴³	+2 00.7 ⁹⁹	56	27	14	17 03	** ** *	** ** *	21 19				
3	225	28.5		26.0	314	07.6 ¹⁴³	+1 50.8 ⁹⁹	54	39	23	10	** ** *	** ** *	21 21				
4	240	28.2		26.1	328	41.0 ¹⁴⁴	40.9 ⁹⁹	52	15 51	32	15	** ** *	** ** *	21 22				
5	255	27.9	-23	26.1	343	14.3 ¹⁴³	+1 30.9 ¹⁰⁰	50	16 01	16 39	17 21	** ** *	** ** *	12 21 23				
6	270	27.6	-23	26.1	357	47.8 ¹⁴⁵	+1 21.0 ⁹⁹	45	16 21	16 55	17 32	** ** *	** ** *	12 21 26				
7	285	27.3		26.1	12	21.2 ¹⁴⁴	11.1 ⁹⁹	40	38	17 09	43	** ** *	** ** *	20 30				
8	300	26.9		26.1	26	54.7 ¹⁴⁵	+1 01.2 ⁹⁹	35	16 52	21	17 52	** ** *	** ** *	20 32				
9	315	26.6		26.1	41	28.2 ¹⁴⁵	+0 51.3 ⁹⁹	30	17 05	31	18 01	** ** *	** ** *	20 34				
10	330	26.3		26.1	56	01.7 ¹⁴⁵	41.4 ⁹⁹	20	26	17 50	18	** ** *	** ** *	20 37				
11	345	26.0	-23	26.1	70	35.3 ¹⁴⁶	+0 31.5 ⁹⁹	10 N	17 45	18 07	18 34	** ** *	** ** *	12 20 40				
12	0	25.7	-23	26.1	85	08.9 ¹⁴⁶	+0 21.6 ⁹⁹	0	18 02	18 25	18 51	** ** *	** ** *	12 20 43				
13	15	25.4		26.1	99	42.5 ¹⁴⁶	11.8 ⁹⁸	10 S	20	18 43	19 10	0 00	41	19 46				
14	30	25.1		26.1	114	16.2 ¹⁴⁷	+0 01.9 ⁹⁹	20	18 39	19 03	19 32	02 37		19 49				
15	45	24.8		26.1	128	49.8 ¹⁴⁶	-0 08.0 ⁹⁹	30	19 01	28	20 02	04 34		19 52				
16	60	24.5		26.1	143	23.5 ¹⁴⁷	17.8 ⁹⁸	35	14	19 44	20	05 32		19 54				
17	75	24.2	-23	26.1	157	57.3 ¹⁴⁸	-0 27.7 ⁹⁹	40	19 29	20 02	20 44	0 07	29	12 18 58				
18	90	23.8	-23	26.1	172	31.0 ¹⁴⁷	-0 37.5 ⁹⁸	45	19 47	20 24	21 14	0 08	27	12 18 60				
19	105	23.5		26.0	187	04.8 ¹⁴⁸	47.3 ⁹⁸	50	20 10	20 54	22 00	10 24		18 63				
20	120	23.2		26.0	201	38.5 ¹⁴⁷	-0 57.1 ⁹⁸	52	20	21 09	22 28	11 22		18 64				
21	135	22.9		26.0	216	12.3 ¹⁴⁸	-1 06.9 ⁹⁸	54	33	27	23 15	12 21		18 66				
22	150	22.6		26.0	230	46.2 ¹⁴⁹	16.7 ⁹⁸	56	20 47	21 50	** ** *	13 19		17 68				
23	165	22.3		26.0	245	20.0 ¹⁴⁸	26.5 ⁹⁸	58	21 04	22 20	** ** *	14 17		17 70				
24	180	22.0	-23	26.0	259	53.9 ¹⁴⁹	-1 36.3 ⁹⁸	60 S	21 24	23 11	** ** *	0 15	15	12 17 72				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 57 ^m 1		Mag: -4.3 PMG: 15 ^h 14 ^m			Mag: +0.8 PMG: 16 ^h 14 ^m			Mag: -1.9 PMG: 7 ^h 14 ^m			Mag: +0.5 PMG: 11 ^h 16 ^m						
	hG ♈	hG ♀	Dec			hG ♂	Dec		hG ♃	Dec			hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	89	59.6	131	35.2	-18	10.7	116	21.5	-12	02.3	251	12.3	-6	36.3	190	39.9	-21	46.8
1	105	02.1	146	34.9		09.8	131	22.2		01.6	266	14.5		36.5	205	42.0		46.9
2	120	04.6	161	34.6		08.9	146	22.9		00.9	281	16.6		36.6	220	44.2		46.9
3	135	07.0	176	34.2		07.9	161	23.6	-12	00.2	296	18.8		36.7	235	46.3		46.9
4	150	09.5	191	33.9		07.0	176	24.2	-11	59.5	311	20.9		36.8	250	48.5		46.9
5	165	12.0	206	33.6	-18	06.1	191	24.9	-11	58.8	326	23.1	-6	36.9	265	50.6	-21	47.0
6	180	14.4	221	33.2	-18	05.1	206	25.6	-11	58.1	341	25.2	-6	37.0	280	52.8	-21	47.0
7	195	16.9	236	32.9		04.2	221	26.3		57.3	356	27.4		37.2	295	54.9		47.0
8	210	19.4	251	32.6		03.2	236	26.9		56.6	11	29.6		37.3	310	57.1		47.0
9	225	21.8	266	32.3		02.3	251	27.6		55.9	26	31.7		37.4	325	59.2		47.0
10	240	24.3	281	31.9		01.4	266	28.3		55.2	41	33.9		37.5	341	01.4		47.1
11	255	26.7	296	31.6	-18	00.4	281	29.0	-11	54.5	56	36.0	-6	37.6	356	03.5	-21	47.1
12	270	29.2	311	31.3	-17	59.5	296	29.7	-11	53.8	71	38.2	-6	37.7	11	05.7	-21	47.1
13	285	31.7	326	31.0		58.5	311	30.3		53.1	86	40.3		37.8	26	07.8		47.1
14	300	34.1	341	30.7		57.6	326	31.0		52.3	101	42.5		38.0	41	10.0		47.2
15	315	36.6	356	30.3		56.6	341	31.7		51.6	116	44.7		38.1	56	12.1		47.2
16	330	39.1	11	30.0		55.7	356	32.4		50.9	131	46.8		38.2	71	14.3		47.2
17	345	41.5	26	29.7	-17	54.7	11	33.0	-11	50.2	146	49.0	-6	38.3	86	16.4	-21	47.2
18	0	44.0	41	29.4	-17	53.8	26	33.7	-11	49.5	161	51.1	-6	38.4	101	18.6	-21	47.3
19	15	46.5	56	29.1		52.9	41	34.4		48.8	176	53.3		38.5	116	20.7		47.3
20	30	48.9	71	28.8		51.9	56	35.1		48.0	191	55.4		38.6	131	22.9		47.3
21	45	51.4	86	28.4		51.0	71	35.8		47.3	206	57.6		38.8	146	25.0		47.3
22	60	53.9	101	28.1		50.0	86	36.4		46.6	221	59.8		38.9	161	27.2		47.3
23	75	56.3	116	27.8		49.1	101	37.1		45.9	237	01.9		39.0	176	29.3		47.4
24	90	58.8	131	27.5	-17	48.1	116	37.8	-11	45.2	252	04.1	-6	39.1	191	31.5	-21	47.4
Dif	—		-3 +9		+7 +7		+22 -1		+21 0									

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: 22 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 SD: 14'9 PMG: 6 ^h 52 ^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	22.0	-23	26.0	259	53.9	-1	36.3	60 N	7 08	8 05	9 03	0 55	72	12 36	16
1	195	21.7		26.0	274	27.7 ¹⁴⁸		46.0 ⁹⁷	58	7 00	7 53	8 45	54	69	38	18
2	210	21.4		26.0	289	01.6 ¹⁴⁹	-1	55.7 ⁹⁸	56	6 54	43	30	53	67	40	20
3	225	21.0		26.0	303	35.5 ¹⁴⁹	-2	05.5 ⁹⁷	54	47	34	18	52	66	42	22
4	240	20.7		25.9	318	09.4 ¹⁴⁹		15.2 ⁹⁷	52	42	25	8 06	51	64	43	23
5	255	20.4	-23	25.9	332	43.4 ¹⁵⁰	-2	24.9 ⁹⁷	50	6 36	7 18	7 57	0 51	62	12 44	25
6	270	20.1	-23	25.9	347	17.3 ¹⁴⁹	-2	34.5 ⁹⁶	45	6 25	7 02	7 36	0 49	60	12 47	27
7	285	19.8		25.9	1	51.3 ¹⁵⁰		44.2 ⁹⁷	40	14	6 48	19	48	57	50	29
8	300	19.5		25.9	16	25.2 ¹⁴⁹	-2	53.8 ⁹⁶	35	6 05	37	7 05	47	54	52	32
9	315	19.2		25.9	30	59.2 ¹⁵⁰	-3	03.4 ⁹⁶	30	5 56	26	6 52	46	52	54	34
10	330	18.9		25.8	45	33.2 ¹⁵⁰		13.0 ⁹⁶	20	40	6 07	31	45	48	12 57	37
11	345	18.6	-23	25.8	60	07.2 ¹⁵⁰	-3	22.6 ⁹⁶	10 N	5 23	5 50	6 12	0 43	46	13 00	40
12	0	18.2	-23	25.8	74	41.2 ¹⁵⁰	-3	32.2 ⁹⁶	0	5 06	5 32	5 55	0 42	43	13 03	42
13	15	17.9		25.8	89	15.2 ¹⁵⁰		41.7 ⁹⁵	10 S	4 47	5 14	37	41	40	05	46
14	30	17.6		25.8	103	49.2 ¹⁵⁰	-3	51.2 ⁹⁵	20	4 25	4 54	5 18	39	37	08	49
15	45	17.3		25.7	118	23.3 ¹⁵¹	-4	00.7 ⁹⁵	30	3 55	29	4 56	38	34	11	53
16	60	17.0		25.7	132	57.3 ¹⁵⁰		10.2 ⁹⁵	35	37	4 14	43	37	32	13	54
17	75	16.7	-23	25.7	147	31.3 ¹⁵⁰	-4	19.7 ⁹⁵	40	3 14	3 55	4 28	0 36	30	13 16	56
18	90	16.4	-23	25.7	162	05.4 ¹⁵¹	-4	29.1 ⁹⁴	45	2 43	3 33	4 10	0 35	27	13 18	59
19	105	16.1		25.6	176	39.4 ¹⁵⁰		38.5 ⁹⁴	50	1 57	3 03	3 48	34	24	21	62
20	120	15.8		25.6	191	13.4 ¹⁵⁰		47.9 ⁹⁴	52	1 29	2 48	37	33	23	22	64
21	135	15.4		25.6	205	47.5 ¹⁵¹	-4	57.3 ⁹⁴	54	0 42	30	24	33	20	24	65
22	150	15.1		25.6	220	21.5 ¹⁵⁰	-5	06.6 ⁹³	56	** **	2 07	3 10	32	19	25	67
23	165	14.8		25.5	234	55.6 ¹⁵¹		15.9 ⁹³	58	** **	1 37	2 53	31	17	27	69
24	180	14.5	-23	25.5	249	29.6 ¹⁵⁰	-5	25.2 ⁹³	60 S	** **	0 46	2 33	0 30	15	13 29	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 53 ^m 1		Mag: -4.3 PMG: 15 ^h 14 ^m		Mag: +0.8 PMG: 16 ^h 13 ^m		Mag: -1.9 PMG: 7 ^h 11 ^m		Mag: +0.5 PMG: 11 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	58.8	131	27.5	-17	48.1	116	37.8	-11	45.2
1	106	01.2	146	27.2		47.2	131	38.5		44.5
2	121	03.7	161	26.9		46.2	146	39.2		43.7
3	136	06.2	176	26.6		45.2	161	39.8		43.0
4	151	08.6	191	26.3		44.3	176	40.5		42.3
5	166	11.1	206	26.0	-17	43.3	191	41.2	-11	41.6
6	181	13.6	221	25.7	-17	42.4	206	41.9	-11	40.9
7	196	16.0	236	25.4		41.4	221	42.6		40.1
8	211	18.5	251	25.1		40.5	236	43.3		39.4
9	226	21.0	266	24.8		39.5	251	43.9		38.7
10	241	23.4	281	24.5		38.6	266	44.6		38.0
11	256	25.9	296	24.2	-17	37.6	281	45.3	-11	37.3
12	271	28.4	311	23.9	-17	36.6	296	46.0	-11	36.5
13	286	30.8	326	23.6		35.7	311	46.7		35.8
14	301	33.3	341	23.3		34.7	326	47.3		35.1
15	316	35.7	356	23.0		33.8	341	48.0		34.4
16	331	38.2	11	22.7		32.8	356	48.7		33.7
17	346	40.7	26	22.4	-17	31.8	11	49.4	-11	32.9
18	1	43.1	41	22.1	-17	30.9	26	50.1	-11	32.2
19	16	45.6	56	21.8		29.9	41	50.8		31.5
20	31	48.1	71	21.5		28.9	56	51.4		30.8
21	46	50.5	86	21.2		28.0	71	52.1		30.1
22	61	53.0	101	20.9		27.0	86	52.8		29.3
23	76	55.5	116	20.6		26.0	101	53.5		28.6
24	91	57.9	131	20.3	-17	25.1	116	54.2	-11	27.9
Dif	—		-3		+10		+7		+7	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 23 ^d 5	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2										
	PMG: 11 ^h 59 ^m 3					SD: 14'8			PMG: 7 ^h 35 ^m		R°: 43 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	
0	180	14.5	-23	25.5	249	29.6	-5	25.2	60 N	14	56	15	53	2	07
1	195	14.2		25.5	264	03.6 ¹⁵⁰		34.5	58	15	13	16	05	03	69
2	210	13.9		25.4	278	37.7 ¹⁵¹		43.7	56		28	15	17	05	2
3	225	13.6		25.4	293	11.7 ¹⁵⁰	-5	52.9	54	41	24	11	1	58	64
4	240	13.3		25.4	307	45.7 ¹⁵⁰	-6	02.1	52	15	52	33	16	55	63
5	255	13.0	-23	25.3	322	19.8 ¹⁵¹	-6	11.2	50	16	02	16	40	1	53
6	270	12.6	-23	25.3	336	53.8 ¹⁵⁰	-6	20.4	45	16	22	16	56	1	49
7	285	12.3		25.3	351	27.8 ¹⁵⁰		29.5	40	39	17	10	44	45	56
8	300	12.0		25.2	6	01.8 ¹⁵⁰		38.5	35	16	53	22	17	53	41
9	315	11.7		25.2	20	35.8 ¹⁵⁰		47.6	30	17	06	32	18	02	38
10	330	11.4		25.2	35	09.8 ¹⁵⁰	-6	56.6	20	27	17	51	19	33	49
11	345	11.1	-23	25.1	49	43.8 ¹⁵⁰	-7	05.5	10 N	17	46	18	08	1	29
12	0	10.8	-23	25.1	64	17.8 ¹⁵⁰	-7	14.5	0	18	03	18	26	1	25
13	15	10.5		25.0	78	51.8 ¹⁵⁰		23.4	10 S	21	18	44	19	11	21
14	30	10.1		25.0	93	25.7 ¹⁴⁹		32.3	20	18	40	19	04	19	33
15	45	09.8		25.0	107	59.7 ¹⁵⁰		41.1	30	19	02	29	20	03	12
16	60	09.5		24.9	122	33.6 ¹⁴⁹		49.9	35	15	19	44	21	09	32
17	75	09.2	-23	24.9	137	07.5 ¹⁴⁹	-7	58.7	40	19	30	20	03	1	06
18	90	08.9	-23	24.8	151	41.4 ¹⁴⁹	-8	07.4	45	19	48	20	25	1	02
19	105	08.6		24.8	166	15.3 ¹⁴⁹		16.1	50	20	10	20	55	0	58
20	120	08.3		24.7	180	49.2 ¹⁴⁹		24.8	52	21	21	10	22	28	56
21	135	08.0		24.7	195	23.1 ¹⁴⁹		33.4	54	34	28	23	15	53	22
22	150	07.7		24.6	209	56.9 ¹⁴⁸		42.0	56	20	48	21	50	**	**
23	165	07.3		24.6	224	30.8 ¹⁴⁹		50.6	58	21	05	22	20	**	**
24	180	07.0	-23	24.5	239	04.6 ¹⁴⁸	-8	59.1	60 S	21	25	23	11	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 49 ^m 2		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +0.8 PMG: 16 ^h 12 ^m		Mag: -1.9 PMG: 7 ^h 07 ^m		Mag: +0.5 PMG: 11 ^h 09 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	91	57.9	131	20.3	116	54.2	252	56.0	192	23.1
1	107	00.4	146	20.0	131	54.9	267	58.2	207	25.2
2	122	02.8	161	19.7	146	55.5	283	00.3	222	27.4
3	137	05.3	176	19.4	161	56.2	298	02.5	237	29.5
4	152	07.8	191	19.2	176	56.9	313	04.7	252	31.7
5	167	10.2	206	18.9	191	57.6	328	06.8	267	33.8
6	182	12.7	221	18.6	206	58.3	343	09.0	282	36.0
7	197	15.2	236	18.3	221	59.0	358	11.1	297	38.1
8	212	17.6	251	18.0	236	59.6	13	13.3	312	40.3
9	227	20.1	266	17.7	252	00.3	28	15.5	327	42.4
10	242	22.6	281	17.5	267	01.0	43	17.6	342	44.6
11	257	25.0	296	17.2	282	01.7	58	19.8	357	46.7
12	272	27.5	311	16.9	297	02.4	73	22.0	12	48.9
13	287	30.0	326	16.6	312	03.1	88	24.2	27	51.0
14	302	32.4	341	16.3	327	03.8	103	26.3	42	53.2
15	317	34.9	356	16.1	342	04.4	118	28.5	57	55.3
16	332	37.3	11	15.8	357	05.1	133	30.7	72	57.5
17	347	39.8	26	15.5	12	05.8	148	32.8	87	59.6
18	2	42.3	41	15.2	27	06.5	163	35.0	103	01.8
19	17	44.7	56	15.0	42	07.2	178	37.2	118	03.9
20	32	47.2	71	14.7	57	07.9	193	39.3	133	06.1
21	47	49.7	86	14.4	72	08.6	208	41.5	148	08.2
22	62	52.1	101	14.2	87	09.2	223	43.7	163	10.4
23	77	54.6	116	13.9	102	09.9	238	45.8	178	12.5
24	92	57.1	131	13.6	117	10.6	253	48.0	193	14.7
Dif	—		-3		+10		+7		+22	

0	180	14.5	-23	25.5	249	29.6	-5	25.2	93	60 N	14	56	15	53	2	07	12	52	17
1	195	14.2		25.5	264	03.6 ¹⁵⁰		34.5	92	58	15	13	16	05	03	69	12	56	19
2	210	13.9		25.4	278	37.7 ¹⁵¹		43.7	92	56		28	15	17	05	2	00	13	
3	225	13.6		25.4	293	11.7 ¹⁵⁰	-5	52.9	92	54	41	24	11	1	58	64	03	23	
4	240	13.3		25.4	307	45.7 ¹⁵⁰	-6	02.1	92	52	15	52	33	16	55	63	06	24	
5	255	13.0	-23	25.3	322	19.8 ¹⁵¹	-6	11.2	91	50	16	02	16	40	1	53	13	09	
6	270	12.6	-23	25.3	336	53.8 ¹⁵⁰	-6	20.4	92	45	16	22	16	56	1	49	13	14	
7	285	12.3		25.3	351	27.8 ¹⁵⁰		29.5	91	40	39	17	10	44	45	56	19	31	
8	300	12.0		25.2	6	01.8 ¹⁵⁰		38.5	90	35	16	53	22	17	53	41	54	24	
9	315	11.7		25.2	20	35.8 ¹⁵⁰		47.6	91	30	17	06	32	18	02	38	52	28	
10	330	11.4		25.2	35	09.8 ¹⁵⁰	-6	56.6	90	20	27	17	51	19	33	49	34	38	
11	345	11.1	-23	25.1	49	43.8 ¹⁵⁰	-7	05.5	89	10 N	17	46	18	08	1	29	13	40	
12	0	10.8	-23	25.1	64	17.8 ¹⁵⁰	-7	14.5	90	0	18	03	18	26	1	25	13	45	
13	15	10.5		25.0	78	51.8 ¹⁵⁰		23.4	89	10 S	21	18	44	19	11	21	40	51	
14	30	10.1		25.0	93	25.7 ¹⁴⁹		32.3	89	20	18	40	19	04	19	33	16	38	
15	45	09.8		25.0	107	59.7 ¹⁵⁰		41.1	88	30	19	02	29	20	03	12	34	14	
16	60	09.5		24.9	122	33.6 ¹⁴⁹		49.9	88	35	15	19	44	21	09	32	07	54	
17	75	09.2	-23	24.9	137	07.5 ¹⁴⁹	-7	58.7	88	40	19	30	20	03	1	06	14	12	
18	90	08.9	-23	24.8	151	41.4 ¹⁴⁹	-8	07.4	87	45	19	48	20	25	1	02	14	17	
19	105	08.6		24.8	166	15.3 ¹⁴⁹		16.1	87	50	20	10	20	55	0	58	23	61	
20	120	08.3		24.7	180	49.2 ¹⁴⁹		24.8	87	52	21	21	10	22	28	56	23	26	
21	135	08.0		24.7	195	23.1 ¹⁴⁹		33.4	86	54	34	28	23	15	53	22	29	64	
22	150	07.7		24.6	209	56.9 ¹⁴⁸		42.0	86	56	20	48	21	50	**	**	32	66	
23	165	07.3		24.6	224	30.8 ¹⁴⁹		50.6	86	58	21	05	22	20	**	**	48	19	
24	180	07.0	-23	24.5	239	04.6 ¹⁴⁸	-8	59.1	85	60 S	21	25	23	11	**	**	0	45	

Dif	—		-3		+10		+7		+7		+22		-1		+22		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 59 ^m 8			Edad: 24 ^d 5 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/0 SD: 14/7 PMG: 8 ^h 18 ^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	180	07.0	-23	24.5	239	04.6	-8	59.1	60 N	7 09	8 06	9 03	3 17	70	13 09	20
1	195	06.7		24.5	253	38.4 ¹⁴⁸	-9	07.6 ⁸⁵	58	7 01	7 54	8 46	12 67		15 22	
2	210	06.4		24.4	268	12.2 ¹⁴⁸		16.0 ⁸⁴	56	6 54	44	31	07 65		21 24	
3	225	06.1		24.4	282	46.0 ¹⁴⁸		24.4 ⁸⁴	54		48	34	18	3 02	64	26 22
4	240	05.8		24.3	297	19.7 ¹⁴⁷		32.8 ⁸⁴	52		43	26	8 07	2 58	63	30 27
5	255	05.5	-23	24.3	311	53.5 ¹⁴⁸	-9	41.1 ⁸³	50	6 37	7 19	7 57	2 55	61	13 34	28
6	270	05.2	-23	24.2	326	27.2 ¹⁴⁷	-9	49.4 ⁸³	45	6 25	7 03	7 37	2 47	58	13 43	31
7	285	04.9		24.2	341	00.9 ¹⁴⁷	-9	57.6 ⁸²	40		15	6 49	20	41 55		50 34
8	300	04.6		24.1	355	34.5 ¹⁴⁶	-10	05.8 ⁸²	35	6 06		37	7 06	35 54	13 57	35
9	315	04.2		24.0	10	08.2 ¹⁴⁷		14.0 ⁸²	30	5 57	27	6 53	30 52		14 02	37
10	330	03.9		24.0	24	41.8 ¹⁴⁶		22.1 ⁸¹	20		40	6 08	32	22 49		12 40
11	345	03.6	-23	23.9	39	15.4 ¹⁴⁶	-10	30.2 ⁸¹	10 N	5 24	5 51	6 13	2 15	46	14 21	42
12	0	03.3	-23	23.9	53	49.0 ¹⁴⁶	-10	38.2 ⁸⁰	0	5 07	5 33	5 56	2 08	43	14 29	44
13	15	03.0		23.8	68	22.6 ¹⁴⁶		46.2 ⁸⁰	10 S	4 48	5 15	38	2 01	41		37 46
14	30	02.7		23.8	82	56.1 ¹⁴⁵	-10	54.1 ⁷⁹	20	4 26	4 55	5 19	1 54	38	45	49
15	45	02.4		23.7	97	29.6 ¹⁴⁵	-11	02.0 ⁷⁹	30	3 57	30	4 57	46 35		14 55	52
16	60	02.1		23.6	112	03.1 ¹⁴⁵		09.9 ⁷⁹	35		38	4 15	44	41 34	15 01	53
17	75	01.8	-23	23.6	126	36.6 ¹⁴⁵	-11	17.7 ⁷⁸	40	3 15	3 56	4 29	1 36	32	15 07	56
18	90	01.4	-23	23.5	141	10.0 ¹⁴⁴	-11	25.4 ⁷⁷	45	2 44	3 34	4 11	1 30	29	15 15	58
19	105	01.1		23.4	155	43.4 ¹⁴⁴		33.1 ⁷⁷	50	1 58	3 04	3 49	22 27		24 61	
20	120	00.8		23.4	170	16.8 ¹⁴⁴		40.8 ⁷⁷	52	1 31	2 49	38	19 25		28 62	
21	135	00.5		23.3	184	50.2 ¹⁴⁴		48.4 ⁷⁶	54	0 44		31	15 24		33 63	
22	150	00.2		23.2	199	23.5 ¹⁴³	-11	56.0 ⁷⁶	56	** **	2 09	3 11	11 23		38 65	
23	164	59.9		23.2	213	56.8 ¹⁴³	-12	03.5 ⁷⁵	58	** **	1 39	2 54	07 20		44 67	
24	179	59.6	-23	23.1	228	30.1 ¹⁴³	-12	10.9 ⁷⁴	60 S	** **	0 48	2 34	1 02	18	15 51	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 45 ^m 3		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +0.8 PMG: 16 ^h 11 ^m		Mag: -1.9 PMG: 7 ^h 04 ^m		Mag: +0.5 PMG: 11 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	92	57.1	131	13.6	117	10.6	253	48.0	193	14.7
1	107	59.5	146	13.4	132	11.3	268	50.2	208	16.8
2	123	02.0	161	13.1	147	12.0	283	52.4	223	19.0
3	138	04.5	176	12.8	162	12.7	298	54.5	238	21.1
4	153	06.9	191	12.6	177	13.4	313	56.7	253	23.3
5	168	09.4	206	12.3	192	14.1	328	58.9	268	25.4
6	183	11.8	221	12.0	207	14.7	344	01.0	283	27.6
7	198	14.3	236	11.8	222	15.4	359	03.2	298	29.7
8	213	16.8	251	11.5	237	16.1	14	05.4	313	31.9
9	228	19.2	266	11.2	252	16.8	29	07.6	328	34.1
10	243	21.7	281	11.0	267	17.5	44	09.7	343	36.2
11	258	24.2	296	10.7	282	18.2	59	11.9	358	38.4
12	273	26.6	311	10.5	297	18.9	74	14.1	13	40.5
13	288	29.1	326	10.2	312	19.6	89	16.2	28	42.7
14	303	31.6	341	09.9	327	20.2	104	18.4	43	44.8
15	318	34.0	356	09.7	342	20.9	119	20.6	58	47.0
16	333	36.5	11	09.4	357	21.6	134	22.8	73	49.1
17	348	38.9	26	09.2	12	22.3	149	24.9	88	51.3
18	3	41.4	41	08.9	27	23.0	164	27.1	103	53.4
19	18	43.9	56	08.7	42	23.7	179	29.3	118	55.6
20	33	46.3	71	08.4	57	24.4	194	31.5	133	57.7
21	48	48.8	86	08.2	72	25.1	209	33.6	148	59.9
22	63	51.3	101	07.9	87	25.8	224	35.8	164	02.0
23	78	53.7	116	07.7	102	26.4	239	38.0	179	04.2
24	93	56.2	131	07.4	117	27.1	254	40.2	194	06.3
Dif	—		-3		+10		+7		+22	
									-1	
									+22	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 00 ^m 3			Edad: 25 ^d 5 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 9 ^h 02 ^m R°: 45 ^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	59.6	-23	23.1	228	30.1	-12 10.9	60 N	14 57	15 55	16 52	4 27 68	13 29 24	
1	194	59.3		23.0	243	03.3 ¹⁴²	18.4 ⁷⁵	58	15 15	16 07	16 59	19 66	37 27	
2	209	59.0		23.0	257	36.6 ¹⁴³	25.7 ⁷³	56	29	17	17 06	12 64	45 28	
3	224	58.6		22.9	272	09.7 ¹⁴¹	33.0 ⁷³	54	42	26	12	06 63	51 30	
4	239	58.3		22.8	286	42.9 ¹⁴²	40.3 ⁷³	52	15 53	34	18	4 01 61	13 57 31	
5	254	58.0	-23	22.7	301	16.0 ¹⁴¹	-12 47.5 ⁷²	50	16 03	16 41	17 23	3 56 60	14 02 32	
6	269	57.7	-23	22.7	315	49.1 ¹⁴¹	-12 54.6 ⁷¹	45	16 24	16 57	17 35	3 45 57	14 14 34	
7	284	57.4		22.6	330	22.2 ¹⁴¹	-13 01.7 ⁷¹	40	40	17 11	45	36 55	24 36	
8	299	57.1		22.5	344	55.2 ¹⁴⁰	08.8 ⁷¹	35	16 55	23	17 54	29 53	32 38	
9	314	56.8		22.4	359	28.2 ¹⁴⁰	15.8 ⁷⁰	30	17 07	33	18 03	22 52	39 39	
10	329	56.5		22.4	14	01.2 ¹⁴⁰	22.7 ⁶⁹	20	28	17 52	20	11 49	14 52 41	
11	344	56.2	-23	22.3	28	34.2 ¹⁴⁰	-13 29.6 ⁶⁹	10 N	17 47	18 09	18 36	3 01 47	15 03 43	
12	359	55.9	-23	22.2	43	07.1 ¹³⁹	-13 36.4 ⁶⁸	0	18 04	18 27	18 53	2 51 45	15 13 46	
13	14	55.5		22.1	57	40.0 ¹³⁹	43.2 ⁶⁸	10 S	22	18 45	19 12	42 43	23 48	
14	29	55.2		22.0	72	12.8 ¹³⁸	49.9 ⁶⁷	20	18 41	19 05	19 34	32 41	34 50	
15	44	54.9		22.0	86	45.6 ¹³⁸	-13 56.5 ⁶⁶	30	19 03	30	20 03	21 38	47 52	
16	59	54.6		21.9	101	18.4 ¹³⁸	-14 03.1 ⁶⁶	35	16	19 45	22	15 36	15 54 54	
17	74	54.3	-23	21.8	115	51.1 ¹³⁷	-14 09.6 ⁶⁵	40	19 31	20 03	20 45	2 08 34	16 03 55	
18	89	54.0	-23	21.7	130	23.9 ¹³⁸	-14 16.1 ⁶⁵	45	19 49	20 26	21 16	1 59 33	16 13 56	
19	104	53.7		21.6	144	56.5 ¹³⁶	22.5 ⁶⁴	50	20 11	20 56	22 01	49 30	25 59	
20	119	53.4		21.5	159	29.2 ¹³⁷	28.9 ⁶⁴	52	22	21 11	22 29	44 29	30 60	
21	134	53.1		21.5	174	01.8 ¹³⁶	35.2 ⁶³	54	34	29	23 14	39 28	36 62	
22	149	52.8		21.4	188	34.4 ¹³⁶	41.4 ⁶²	56	20 48	21 51	** **	34 25	43 63	
23	164	52.4		21.3	203	06.9 ¹³⁵	47.6 ⁶²	58	21 05	22 20	** **	27 24	51 64	
24	179	52.1	-23	21.2	217	39.4 ¹³⁵	-14 53.7 ⁶¹	60 S	21 25	23 10	** **	1 20 22	16 59 67	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 41 ^m 3		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 16 ^h 09 ^m		Mag: -2.0 PMG: 7 ^h 00 ^m		Mag: +0.5 PMG: 11 ^h 02 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	93	56.2	131	07.4	117	27.1	254	40.2	194	06.3				
1	108	58.7	146	07.2	132	27.8	269	42.3	209	08.5				
2	124	01.1	161	06.9	147	28.5	284	44.5	224	10.6				
3	139	03.6	176	06.7	162	29.2	299	46.7	239	12.8				
4	154	06.1	191	06.4	177	29.9	314	48.9	254	14.9				
5	169	08.5	206	06.2	192	30.6	329	51.0	269	17.1				
6	184	11.0	221	06.0	207	31.3	344	53.2	284	19.2				
7	199	13.4	236	05.7	222	32.0	359	55.4	299	21.4				
8	214	15.9	251	05.5	237	32.7	14	57.6	314	23.5				
9	229	18.4	266	05.2	252	33.3	29	59.7	329	25.7				
10	244	20.8	281	05.0	267	34.0	45	01.9	344	27.8				
11	259	23.3	296	04.8	282	34.7	60	04.1	359	30.0				
12	274	25.8	311	04.5	297	35.4	75	06.3	14	32.2				
13	289	28.2	326	04.3	312	36.1	90	08.5	29	34.3				
14	304	30.7	341	04.1	327	36.8	105	10.6	44	36.5				
15	319	33.2	356	03.8	342	37.5	120	12.8	59	38.6				
16	334	35.6	11	03.6	357	38.2	135	15.0	74	40.8				
17	349	38.1	26	03.4	12	38.9	150	17.2	89	42.9				
18	4	40.6	41	03.1	27	39.6	165	19.3	104	45.1				
19	19	43.0	56	02.9	42	40.3	180	21.5	119	47.2				
20	34	45.5	71	02.7	57	41.0	195	23.7	134	49.4				
21	49	47.9	86	02.4	72	41.7	210	25.9	149	51.5				
22	64	50.4	101	02.2	87	42.3	225	28.1	164	53.7				
23	79	52.9	116	02.0	102	43.0	240	30.2	179	55.8				
24	94	55.3	131	01.7	117	43.7	255	32.4	194	58.0				
Dif	—		-2		+10		+7		+22					

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: 26 ^d 5 PHE { SD: 14'7 PMG: 9 ^h 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	52.1	-23	21.2	217	39.4	-14	53.7	60 N	7 09	8 06	9 04	5 35	65	13 53	31		
1	194	51.8		21.1	232	11.9 ¹³⁵	-14	59.7	58	7 02	7 54	8 46	25	63	14 04	32		
2	209	51.5		21.0	246	44.3 ¹³⁴	-15	05.7	60	6 55	44	31	16	62	13	34		
3	224	51.2		20.9	261	16.7 ¹³⁴		11.6	59	49	35	19	09	60	21	35		
4	239	50.9		20.8	275	49.1 ¹³⁴		17.4	58	52	43	27	8 08	5 02	59	28	36	
5	254	50.6	-23	20.7	290	21.4 ¹³³	-15	23.2	58	50	6 38	7 19	7 58	4 56	58	14 34	37	
6	269	50.3	-23	20.6	304	53.7 ¹³³	-15	28.9	57	45	6 26	7 03	7 37	4 42	56	14 48	39	
7	284	50.0		20.5	319	26.0 ¹³³		34.6	57	40	16	6 50	21	31	55	15 00	40	
8	299	49.7		20.4	333	58.2 ¹³²		40.2	56	35	6 07	38	7 06	22	53	10	41	
9	314	49.4		20.4	348	30.4 ¹³²		45.7	55	30	5 58	28	6 54	14	52	18	43	
10	329	49.0		20.3	3	02.5 ¹³¹		51.1	54	20	41	6 09	33	4 00	50	33	45	
11	344	48.7	-23	20.2	17	34.6 ¹³¹	-15	56.5	54	10 N	5 25	5 52	6 14	3 48	48	15 46	46	
12	359	48.4	-23	20.1	32	06.7 ¹³¹	-16	01.8	53	0	5 08	5 34	5 57	3 36	47	15 59	47	
13	14	48.1		20.0	46	38.8 ¹³¹		07.1	53	10 S	4 49	5 16	39	25	45	16 11	48	
14	29	47.8		19.9	61	10.8 ¹³⁰		12.2	51	20	4 27	4 56	5 21	3 13	43	24	50	
15	44	47.5		19.8	75	42.7 ¹²⁹		17.3	51	30	3 58	31	4 59	2 59	41	39	52	
16	59	47.2		19.7	90	14.7 ¹³⁰		22.4	51	35	39	4 16	46	51	40	48	52	
17	74	46.9	-23	19.6	104	46.6 ¹²⁹	-16	27.3	49	40	3 16	3 58	4 31	2 42	39	16 58	53	
18	89	46.6	-23	19.4	119	18.4 ¹²⁸	-16	32.2	49	45	2 46	3 35	4 13	2 32	36	17 09	55	
19	104	46.3		19.3	133	50.2 ¹²⁸		37.0	48	50	2 00	3 06	3 50	19	35	24	56	
20	119	46.0		19.2	148	22.0 ¹²⁸		41.8	48	52	1 33	2 51	39	13	34	30	58	
21	134	45.6		19.1	162	53.8 ¹²⁸		46.4	46	54	0 47	33	27	2 07	32	38	58	
22	149	45.3		19.0	177	25.5 ¹²⁷		51.0	46	56	** ** *	2 10	3 13	1 59	31	46	59	
23	164	45.0		18.9	191	57.2 ¹²⁷	-16	55.6	46	58	** ** *	1 41	2 56	51	30	17 55	61	
24	179	44.7	-23	18.8	206	28.8 ¹²⁶	-17	00.0	44	60 S	** ** *	0 51	2 36	1 42	28	18 06	62	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 37 ^m 4		Mag: -4.4 PMG: 15 ^h 16 ^m				Mag: +0.8 PMG: 16 ^h 08 ^m				Mag: -2.0 PMG: 6 ^h 57 ^m				Mag: +0.5 PMG: 10 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	55.3	131	01.7	-16	13.7	117	43.7	-10	35.5	255	32.4	-6	49.6	194	58.0	-21	49.5
1	109	57.8	146	01.5		12.7	132	44.4		34.8	270	34.6		49.7	210	00.1		49.5
2	125	00.3	161	01.3		11.6	147	45.1		34.1	285	36.8		49.8	225	02.3		49.6
3	140	02.7	176	01.1		10.6	162	45.8		33.3	300	39.0		49.9	240	04.4		49.6
4	155	05.2	191	00.9		09.6	177	46.5		32.6	315	41.2		50.0	255	06.6		49.6
5	170	07.7	206	00.6	-16	08.6	192	47.2	-10	31.9	330	43.3	-6	50.1	270	08.7	-21	49.6
6	185	10.1	221	00.4	-16	07.6	207	47.9	-10	31.1	345	45.5	-6	50.2	285	10.9	-21	49.6
7	200	12.6	236	00.2		06.6	222	48.6		30.4	0	47.7		50.3	300	13.1		49.7
8	215	15.1	251	00.0		05.5	237	49.3		29.7	15	49.9		50.4	315	15.2		49.7
9	230	17.5	265	59.8		04.5	252	50.0		28.9	30	52.1		50.5	330	17.4		49.7
10	245	20.0	280	59.5		03.5	267	50.7		28.2	45	54.2		50.6	345	19.5		49.7
11	260	22.4	295	59.3	-16	02.5	282	51.4	-10	27.5	60	56.4	-6	50.7	0	21.7	-21	49.7
12	275	24.9	310	59.1	-16	01.5	297	52.1	-10	26.7	75	58.6	-6	50.8	15	23.8	-21	49.8
13	290	27.4	325	58.9	-16	00.4	312	52.7		26.0	91	00.8		50.9	30	26.0		49.8
14	305	29.8	340	58.7	-15	59.4	327	53.4		25.3	106	03.0		51.0	45	28.1		49.8
15	320	32.3	355	58.5		58.4	342	54.1		24.5	121	05.2		51.1	60	30.3		49.8
16	335	34.8	10	58.2		57.4	357	54.8		23.8	136	07.3		51.2	75	32.4		49.9
17	350	37.2	25	58.0	-15	56.3	12	55.5	-10	23.0	151	09.5	-6	51.3	90	34.6	-21	49.9
18	5	39.7	40	57.8	-15	55.3	27	56.2	-10	22.3	166	11.7	-6	51.4	105	36.7	-21	49.9
19	20	42.2	55	57.6		54.3	42	56.9		21.6	181	13.9		51.5	120	38.9		49.9
20	35	44.6	70	57.4		53.3	57	57.6		20.8	196	16.1		51.6	135	41.0		49.9
21	50	47.1	85	57.2		52.2	72	58.3		20.1	211	18.3		51.7	150	43.2		50.0
22	65	49.5	100	57.0		51.2	87	59.0		19.4	226	20.5		51.8	165	45.3		50.0
23	80	52.0	115	56.8		50.2	102	59.7		18.6	241	22.6		51.9	180	47.5		50.0
24	95	54.5	130	56.6	-15	49.2	118	00.4	-10	17.9	256	24.8	-6	52.1	195	49.7	-21	50.0
Dif	—		-2		+10		+7		+7		+22		-1		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 27 ^d 5 PHE	SD: 14:8				Rº: 48 ^m						
	PMG: 12 ^h 01 ^m 3				PMG: 10 ^h 34 ^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	179	44.7	-23 18.8	206	28.8	-17 00.0		60 N	14 59	15 57	16 53	6 40 59	14 24 40		
1	194	44.4	18.7	221	00.4 ¹²⁶	-17 04.4	44	58	15 16	16 08	17 01	28 58	36 41		
2	209	44.1	18.6	235	32.0 ¹²⁶	08.7	43	56	31	18	07	18 57	47 41		
3	224	43.8	18.5	250	03.5 ¹²⁵	12.9	42	54	44	27	14	09 56	14 56 42		
4	239	43.5	18.4	264	35.0 ¹²⁵	17.0	41	52	15 55	36	19	6 01 56	15 04 43		
5	254	43.2	-23 18.3	279	06.5 ¹²⁵	-17 21.1	41	50	16 04	16 43	17 24	5 54 55	15 11 44		
6	269	42.9	-23 18.1	293	37.9 ¹²⁴	-17 25.1	40	45	16 25	16 59	17 36	5 38 54	15 27 44		
7	284	42.6	18.0	308	09.3 ¹²⁴	29.0	39	40	42	17 12	46	26 53	40 45		
8	299	42.3	17.9	322	40.7 ¹²⁴	32.8	38	35	16 56	24	17 56	15 52	15 51 46		
9	314	42.0	17.8	337	12.0 ¹²³	36.6	38	30	17 08	35	18 04	5 06 51	16 01 46		
10	329	41.6	17.7	351	43.3 ¹²³	40.2	36	20	29	17 53	21	4 50 50	18 47		
11	344	41.3	-23 17.6	6	14.5 ¹²²	-17 43.8	36	10 N	17 48	18 10	18 37	4 36 49	16 32 48		
12	359	41.0	-23 17.4	20	45.8 ¹²³	-17 47.3	35	0	18 05	18 28	18 54	4 23 48	16 46 48		
13	14	40.7	17.3	35	16.9 ¹²¹	50.8	35	10 S	22	18 46	19 13	4 10 47	16 59 50		
14	29	40.4	17.2	49	48.1 ¹²²	54.1	33	20	18 41	19 06	19 35	3 56 46	17 14 50		
15	44	40.1	17.1	64	19.2 ¹²¹	-17 57.4	33	30	19 03	31	20 04	40 45	31 50		
16	59	39.8	17.0	78	50.3 ¹²¹	-18 00.6	32	35	16	19 46	23	31 44	40 51		
17	74	39.5	-23 16.8	93	21.4 ¹²¹	-18 03.7	31	40	19 31	20 04	20 46	3 21 42	17 51 52		
18	89	39.2	-23 16.7	107	52.4 ¹²⁰	-18 06.7	30	45	19 49	20 26	21 16	3 08 42	18 04 53		
19	104	38.9	16.6	122	23.4 ¹²⁰	09.6	29	50	20 11	20 56	22 01	2 54 40	20 54		
20	119	38.6	16.5	136	54.3 ¹¹⁹	12.5	29	52	22	21 11	22 28	47 39	28 53		
21	134	38.3	16.3	151	25.3 ¹²⁰	15.3	28	54	34	29	23 12	39 39	36 54		
22	149	38.0	16.2	165	56.2 ¹¹⁹	17.9	26	56	20 48	21 50	** **	30 38	45 55		
23	164	37.7	16.1	180	27.0 ¹¹⁸	20.5	26	58	21 05	22 20	** **	21 36	18 56 55		
24	179	37.3	-23 16.0	194	57.9 ¹¹⁹	-18 23.1	26	60 S	21 25	23 07	** **	2 10 35	19 08 56		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 33 ^m 5		Mag: -4.4 PMG: 15 ^h 16 ^m			Mag: +0.9 PMG: 16 ^h 07 ^m			Mag: -2.0 PMG: 6 ^h 53 ^m			Mag: +0.5 PMG: 10 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	95	54.5	130	56.6	-15 49.2	118	00.4	-10 17.9	256	24.8	-6 52.1	195	49.7	-21 50.0	
1	110	56.9	145	56.4	48.1	133	01.1	17.2	271	27.0	52.2	210	51.8	50.0	
2	125	59.4	160	56.2	47.1	148	01.8	16.4	286	29.2	52.3	225	54.0	50.1	
3	141	01.9	175	56.0	46.1	163	02.5	15.7	301	31.4	52.4	240	56.1	50.1	
4	156	04.3	190	55.8	45.0	178	03.2	14.9	316	33.6	52.5	255	58.3	50.1	
5	171	06.8	205	55.6	-15 44.0	193	03.9	-10 14.2	331	35.8	-6 52.6	271	00.4	-21 50.1	
6	186	09.3	220	55.4	-15 43.0	208	04.6	-10 13.5	346	37.9	-6 52.7	286	02.6	-21 50.1	
7	201	11.7	235	55.2	42.0	223	05.3	12.7	1	40.1	52.8	301	04.7	50.2	
8	216	14.2	250	55.0	40.9	238	06.0	12.0	16	42.3	52.9	316	06.9	50.2	
9	231	16.7	265	54.8	39.9	253	06.7	11.3	31	44.5	53.0	331	09.0	50.2	
10	246	19.1	280	54.6	38.9	268	07.4	10.5	46	46.7	53.1	346	11.2	50.2	
11	261	21.6	295	54.4	-15 37.8	283	08.1	-10 09.8	61	48.9	-6 53.2	1	13.3	-21 50.2	
12	276	24.0	310	54.2	-15 36.8	298	08.8	-10 09.1	76	51.1	-6 53.3	16	15.5	-21 50.3	
13	291	26.5	325	54.0	35.7	313	09.5	08.3	91	53.3	53.4	31	17.7	50.3	
14	306	29.0	340	53.8	34.7	328	10.2	07.6	106	55.5	53.5	46	19.8	50.3	
15	321	31.4	355	53.6	33.7	343	10.9	06.8	121	57.6	53.6	61	22.0	50.3	
16	336	33.9	10	53.4	32.6	358	11.6	06.1	136	59.8	53.7	76	24.1	50.4	
17	351	36.4	25	53.2	-15 31.6	13	12.3	-10 05.4	152	02.0	-6 53.8	91	26.3	-21 50.4	
18	6	38.8	40	53.0	-15 30.6	28	12.9	-10 04.6	167	04.2	-6 53.9	106	28.4	-21 50.4	
19	21	41.3	55	52.9	29.5	43	13.6	03.9	182	06.4	54.0	121	30.6	50.4	
20	36	43.8	70	52.7	28.5	58	14.3	03.1	197	08.6	54.1	136	32.7	50.4	
21	51	46.2	85	52.5	27.4	73	15.0	02.4	212	10.8	54.2	151	34.9	50.5	
22	66	48.7	100	52.3	26.4	88	15.7	01.7	227	13.0	54.3	166	37.0	50.5	
23	81	51.2	115	52.1	25.4	103	16.4	00.9	242	15.2	54.4	181	39.2	50.5	
24	96	53.6	130	51.9	-15 24.3	118	17.1	-10 00.2	257	17.4	-6 54.5	196	41.3	-21 50.5	
Dif	—		-2		+10	+7		+7	+22		-1	+22		0	

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: 28 ^d 5 PHE { SD: 14'8 PMG: 11 ^h 22 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	37.3	-23	16.0	194	57.9	-18	23.1	60 N	7 09	8 06	9 03	7 39	52	15 04	49
1	194	37.0		15.8	209	28.7 ¹¹⁸		25.5	58	7 02	7 55	8 46	26	52	17	49
2	209	36.7		15.7	223	59.4 ¹¹⁷		27.8	56	6 55	44	32	15	52	28	49
3	224	36.4		15.6	238	30.2 ¹¹⁸		30.1	54	49	35	19	7 05	52	38	49
4	239	36.1		15.4	253	00.9 ¹¹⁷		32.3	52	44	27	8 08	6 57	51	47	49
5	254	35.8	-23	15.3	267	31.6 ¹¹⁷	-18	34.3	50	6 38	7 20	7 58	6 49	51	15 55	49
6	269	35.5	-23	15.2	282	02.2 ¹¹⁶	-18	36.3	45	6 27	7 04	7 38	6 32	51	16 11	50
7	284	35.2		15.0	296	32.9 ¹¹⁷		38.2	40	17	6 51	21	19	50	25	50
8	299	34.9		14.9	311	03.5 ¹¹⁶		40.1	35	6 07	39	7 07	6 07	50	37	49
9	314	34.6		14.8	325	34.0 ¹¹⁵		41.8	30	5 59	28	6 55	5 57	50	16 47	50
10	329	34.3		14.6	340	04.6 ¹¹⁶		43.4	20	42	6 10	34	40	49	17 05	49
11	344	34.0	-23	14.5	354	35.1 ¹¹⁵	-18	45.0	10 N	5 26	5 53	6 15	5 25	49	17 20	49
12	359	33.7	-23	14.4	9	05.6 ¹¹⁵	-18	46.5	0	5 09	5 35	5 58	5 11	49	17 34	50
13	14	33.4		14.2	23	36.1 ¹¹⁵		47.8	10 S	4 50	5 18	41	4 57	48	17 49	49
14	29	33.1		14.1	38	06.5 ¹¹⁴		49.1	20	4 28	4 57	22	42	48	18 04	49
15	44	32.8		14.0	52	36.9 ¹¹⁴		50.3	30	3 59	32	5 00	25	47	21	49
16	59	32.5		13.8	67	07.3 ¹¹⁴		51.4	35	41	4 17	4 47	15	47	31	49
17	74	32.1	-23	13.7	81	37.7 ¹¹⁴	-18	52.4	40	3 18	3 59	4 32	4 03	48	18 43	49
18	89	31.8	-23	13.5	96	08.1 ¹¹⁴	-18	53.4	45	2 47	3 37	4 14	3 50	47	18 57	49
19	104	31.5		13.4	110	38.4 ¹¹³		54.2	50	2 02	3 07	3 52	34	46	19 14	48
20	119	31.2		13.2	125	08.7 ¹¹³		54.9	7	1 35	2 52	41	26	46	21	49
21	134	30.9		13.1	139	39.0 ¹¹³		55.6	54	0 51	35	29	18	45	30	48
22	149	30.6		12.9	154	09.2 ¹¹²		56.1	56	** ** *	2 13	3 15	3 08	45	40	48
23	164	30.3		12.8	168	39.5 ¹¹³		56.6	58	** ** *	1 43	2 58	2 57	45	19 51	48
24	179	30.0	-23	12.7	183	09.7 ¹¹²	-18	57.0	60 S	** ** *	0 56	2 38	2 45	44	20 04	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 29 ^m 6		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +0.9 PMG: 16 ^h 06 ^m		Mag: -2.0 PMG: 6 ^h 50 ^m		Mag: +0.5 PMG: 10 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	53.6	130	51.9	-15	24.3	257	17.4	-6	54.5
1	111	56.1	145	51.7		23.3	272	19.6		54.6
2	126	58.5	160	51.6		22.2	287	21.7		54.7
3	142	01.0	175	51.4		21.2	302	23.9		54.8
4	157	03.5	190	51.2		20.1	317	26.1		54.9
5	172	05.9	205	51.0	-15	19.1	332	28.3	-6	55.0
6	187	08.4	220	50.8	-15	18.1	347	30.5	-6	55.1
7	202	10.9	235	50.7		17.0	2	32.7		55.2
8	217	13.3	250	50.5		16.0	17	34.9		55.3
9	232	15.8	265	50.3		14.9	32	37.1		55.4
10	247	18.3	280	50.1		13.9	47	39.3		55.5
11	262	20.7	295	50.0	-15	12.8	62	41.5	-6	55.6
12	277	23.2	310	49.8	-15	11.8	77	43.7	-6	55.7
13	292	25.7	325	49.6		10.7	92	45.9		55.8
14	307	28.1	340	49.4		09.7	107	48.1		55.9
15	322	30.6	355	49.3		08.6	122	50.3		56.0
16	337	33.0	10	49.1		07.6	137	52.5		56.1
17	352	35.5	25	48.9	-15	06.5	152	54.6	-6	56.2
18	7	38.0	40	48.8	-15	05.5	167	56.8	-6	56.3
19	22	40.4	55	48.6		04.4	182	59.0		56.4
20	37	42.9	70	48.4		03.4	198	01.2		56.5
21	52	45.4	85	48.3		02.3	213	03.4		56.6
22	67	47.8	100	48.1		01.3	228	05.6		56.6
23	82	50.3	115	47.9	-15	00.2	243	07.8		56.7
24	97	52.8	130	47.8	-14	59.1	258	10.0	-6	56.8
Dif	—		-2		+10		+7		+22	
									-1	
									+22	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 02 ^m 2			Edad: 29 ^d 5 PHE { 4 ^h : 54 ^m 8 12 ^h : 55 ^m 0 20 ^h : 55 ^m 1 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	179	30.0	-23	12.7	183	09.7	-18 57.0	60 N	15 01	15 59	16 55	8 31 43	15 53 59		
1	194	29.7		12.5	197	39.9 ¹¹²	57.3	58	19	16 10	17 03	18 44	16 06 58		
2	209	29.4		12.4	212	10.1 ¹¹²	57.5	56	33	20	09	8 07 44	17 58		
3	224	29.1		12.2	226	40.2 ¹¹¹	57.6	54	45	29	15	7 57 45	27 57		
4	239	28.8		12.1	241	10.4 ¹¹²	57.6	52	15 56	37	21	48 45	36 57		
5	254	28.5	-23	11.9	255	40.5 ¹¹¹	-18 57.5	50	16 06	16 45	17 26	7 40 46	16 44 56		
6	269	28.2	-23	11.8	270	10.6 ¹¹¹	-18 57.3	45	16 27	17 00	17 38	7 23 47	17 01 55		
7	284	27.9		11.6	284	40.7 ¹¹¹	57.0	40	43	14	48	7 09 47	15 54		
8	299	27.6		11.4	299	10.8 ¹¹¹	56.6	35	16 57	25	17 57	6 57 48	26 54		
9	314	27.3		11.3	313	40.9 ¹¹¹	56.2	30	17 09	36	18 06	47 48	37 52		
10	329	27.0		11.1	328	10.9 ¹¹⁰	55.6	20	30	17 54	22	29 49	17 54 52		
11	344	26.7	-23	11.0	342	40.9 ¹¹⁰	-18 55.0	10 N	17 49	18 12	18 38	6 14 49	18 09 51		
12	359	26.4	-23	10.8	357	11.0 ¹¹¹	-18 54.2	0	18 06	18 28	18 55	6 00 49	18 24 49		
13	14	26.1		10.7	11	41.0 ¹¹⁰	53.4	10 S	23	18 46	19 13	5 45 51	38 49		
14	29	25.8		10.5	26	11.0 ¹¹⁰	52.5	20	18 42	19 07	19 36	30 51	18 53 48		
15	44	25.5		10.3	40	40.9 ¹⁰⁹	51.4	30	19 04	31	20 05	12 52	19 10 47		
16	59	25.2		10.2	55	10.9 ¹¹⁰	50.3	35	17	19 46	23	5 02 52	20 47		
17	74	24.9	-23	10.0	69	40.9 ¹¹⁰	-18 49.1	40	19 32	20 04	20 46	4 51 51	19 32 45		
18	89	24.5	-23	09.9	84	10.8 ¹⁰⁹	-18 47.8	45	19 49	20 27	21 16	4 37 52	19 46 44		
19	104	24.2		09.7	98	40.8 ¹¹⁰	46.4	50	20 12	20 56	22 00	20 53	20 02 43		
20	119	23.9		09.5	113	10.7 ¹⁰⁹	44.9	52	22	21 11	22 27	12 53	10 42		
21	134	23.6		09.4	127	40.6 ¹⁰⁹	43.3	54	34	28	23 09	4 03 54	18 42		
22	149	23.3		09.2	142	10.5 ¹⁰⁹	41.6	56	20 48	21 50	** **	3 53 54	28 41		
23	164	23.0		09.0	156	40.4 ¹⁰⁹	39.8	58	21 05	22 18	** **	42 54	39 40		
24	179	22.7	-23	08.9	171	10.3 ¹⁰⁹	-18 38.0	60 S	21 25	23 04	** **	3 29 55	20 52 39		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 25 ^m 6		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +0.9 PMG: 16 ^h 05 ^m		Mag: -2.0 PMG: 6 ^h 46 ^m		Mag: +0.5 PMG: 10 ^h 48 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	97	52.8	130	47.8	-14	59.1	118	34.0	-9	42.4					
1	112	55.2	145	47.6		58.1	133	34.7		41.7					
2	127	57.7	160	47.5		57.0	148	35.4		40.9					
3	143	00.1	175	47.3		56.0	163	36.1		40.2					
4	158	02.6	190	47.1		54.9	178	36.8		39.4					
5	173	05.1	205	47.0	-14	53.9	193	37.5	-9	38.7					
6	188	07.5	220	46.8	-14	52.8	208	38.2	-9	37.9					
7	203	10.0	235	46.7		51.7	223	38.9		37.2					
8	218	12.5	250	46.5		50.7	238	39.6		36.4					
9	233	14.9	265	46.4		49.6	253	40.3		35.7					
10	248	17.4	280	46.2		48.6	268	41.0		35.0					
11	263	19.9	295	46.1	-14	47.5	283	41.7	-9	34.2					
12	278	22.3	310	45.9	-14	46.4	298	42.4	-9	33.5					
13	293	24.8	325	45.8		45.4	313	43.1		32.7					
14	308	27.3	340	45.6		44.3	328	43.8		32.0					
15	323	29.7	355	45.5		43.3	343	44.5		31.2					
16	338	32.2	10	45.3		42.2	358	45.2		30.5					
17	353	34.6	25	45.2	-14	41.1	13	45.9	-9	29.7					
18	8	37.1	40	45.0	-14	40.1	28	46.6	-9	29.0					
19	23	39.6	55	44.9		39.0	43	47.3		28.3					
20	38	42.0	70	44.7		37.9	58	48.0		27.5					
21	53	44.5	85	44.6		36.9	73	48.7		26.8					
22	68	47.0	100	44.4		35.8	88	49.4		26.0					
23	83	49.4	115	44.3		34.7	103	50.1		25.3					
24	98	51.9	130	44.2	-14	33.7	118	50.8	-9	24.5					
Dif	—		-2		+11		+7		+7						
							+22		-1						
									+22						
									0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 02 ^m 7			Edad: 0 ^d 7 PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/5 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	179	22.7	-23	08.9	171	10.3	-18	38.0	60 N	7 09	8 06	9 03	9 14	35	16 52	68
1	194	22.4		08.7	185	40.2 ¹⁰⁹		36.0 ²⁰	58	7 02	7 55	8 46	9 02	36	17 04	66
2	209	22.1		08.5	200	10.1 ¹⁰⁹		33.9 ²¹	56	6 56	44	32	8 51	38	15 64	
3	224	21.8		08.4	214	40.0 ¹⁰⁹		31.8 ²¹	54	50	36	19	42	39	24	63
4	239	21.5		08.2	229	09.8 ¹⁰⁸		29.5 ²³	52	44	28	8 08	33	40	33	62
5	254	21.2	-23	08.0	243	39.7 ¹⁰⁹	-18	27.2 ²³	50	6 39	7 20	7 59	8 26	41	17 40	61
6	269	20.9	-23	07.9	258	09.6 ¹⁰⁹	-18	24.7 ²⁵	45	6 27	7 04	7 38	8 10	42	17 56	59
7	284	20.6		07.7	272	39.4 ¹⁰⁸		22.2 ²⁵	40	17	6 51	22	7 56	44	18 09	57
8	299	20.3		07.5	287	09.3 ¹⁰⁹		19.6 ²⁶	35	6 08	40	7 08	45	45	20	56
9	314	20.0		07.3	301	39.1 ¹⁰⁸		16.9 ²⁷	30	5 59	29	6 55	35	46	29	55
10	329	19.7		07.2	316	09.0 ¹⁰⁹		14.1 ²⁸	20	43	6 11	34	18	48	18 46	53
11	344	19.4	-23	07.0	330	38.8 ¹⁰⁸	-18	11.2 ²⁹	10 N	5 27	5 53	6 16	7 03	49	19 00	51
12	359	19.1	-23	06.8	345	08.7 ¹⁰⁹	-18	08.2 ³⁰	0	5 10	5 36	5 59	6 49	50	19 13	50
13	14	18.8		06.6	359	38.5 ¹⁰⁸		05.1 ³¹	10 S	4 52	5 19	42	36	51	27	48
14	29	18.5		06.5	14	08.4 ¹⁰⁹	-18	01.9 ³²	20	29	4 58	23	21	52	41	47
15	44	18.2		06.3	28	38.2 ¹⁰⁸	-17	58.6 ³³	30	4 01	34	5 01	6 04	54	19 57	45
16	59	17.9		06.1	43	08.1 ¹⁰⁹		55.2 ³⁴	35	3 42	19	4 48	5 54	55	20 07	43
17	74	17.6	-23	05.9	57	37.9 ¹⁰⁸	-17	51.8 ³⁴	40	3 19	4 01	4 33	5 42	56	20 17	42
18	89	17.3	-23	05.7	72	07.8 ¹⁰⁹	-17	48.2 ³⁶	45	2 49	3 38	4 16	5 29	57	20 30	40
19	104	17.0		05.6	86	37.6 ¹⁰⁸		44.6 ³⁶	50	2 05	3 09	3 54	13	58	45	38
20	119	16.7		05.4	101	07.5 ¹⁰⁹		40.8 ³⁸	52	1 38	2 54	43	5 05	60	20 52	37
21	134	16.4		05.2	115	37.4 ¹⁰⁹		37.0 ³⁸	54	0 56	37	31	4 57	60	21 00	36
22	149	16.1		05.0	130	07.2 ¹⁰⁸		33.1 ³⁹	56	** **	2 15	17	47	61	09	35
23	164	15.8		04.8	144	37.1 ¹⁰⁹		29.1 ⁴⁰	58	** **	1 47	3 00	36	63	19	33
24	179	15.5	-23	04.6	159	07.0 ¹⁰⁹	-17	25.0 ⁴¹	60 S	** **	1 01	2 40	4 24	64	21 31	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 21 ^m 7		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +0.9 PMG: 16 ^h 04 ^m		Mag: -2.0 PMG: 6 ^h 43 ^m		Mag: +0.5 PMG: 10 ^h 45 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	98	51.9	130	44.2	-14	33.7	118	50.8	-9	24.5
1	113	54.4	145	44.0		32.6	133	51.5		23.8
2	128	56.8	160	43.9		31.5	148	52.3		23.0
3	143	59.3	175	43.7		30.5	163	53.0		22.3
4	159	01.8	190	43.6		29.4	178	53.7		21.5
5	174	04.2	205	43.5	-14	28.3	193	54.4	-9	20.8
6	189	06.7	220	43.3	-14	27.3	208	55.1	-9	20.1
7	204	09.1	235	43.2		26.2	223	55.8		19.3
8	219	11.6	250	43.1		25.1	238	56.5		18.6
9	234	14.1	265	42.9		24.0	253	57.2		17.8
10	249	16.5	280	42.8		23.0	268	57.9		17.1
11	264	19.0	295	42.7	-14	21.9	283	58.6	-9	16.3
12	279	21.5	310	42.5	-14	20.8	298	59.3	-9	15.6
13	294	23.9	325	42.4		19.7	314	00.0		14.8
14	309	26.4	340	42.3		18.7	329	00.7		14.1
15	324	28.9	355	42.2		17.6	344	01.4		13.3
16	339	31.3	10	42.0		16.5	359	02.1		12.6
17	354	33.8	25	41.9	-14	15.4	14	02.8	-9	11.8
18	9	36.3	40	41.8	-14	14.4	29	03.6	-9	11.1
19	24	38.7	55	41.7		13.3	44	04.3		10.3
20	39	41.2	70	41.5		12.2	59	05.0		9.6
21	54	43.6	85	41.4		11.1	74	05.7		8.8
22	69	46.1	100	41.3		10.1	89	06.4		8.1
23	84	48.6	115	41.2		9.0	104	07.1		7.3
24	99	51.0	130	41.1	-14	07.9	119	07.8	-9	06.6
Dif	—		-1 +11		+7 +7		+22 -1		+22 0	

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: 1 ^d 7 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0 PMG: 13 ^h 51 ^m R°: 50 ^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	15.5	-23	04.6	159	07.0	-17	25.0	60 N	15 04	16 01	16 57	9 49 28		18 00 74				
1	194	15.2		04.5	173	36.8 ¹⁰⁸		20.8 ⁴²	58	21	12	17 05	38 30		10 72				
2	209	14.9		04.3	188	06.7 ¹⁰⁹		16.5 ⁴³	56	35	22	11	29 32		19 70				
3	224	14.6		04.1	202	36.6 ¹⁰⁹		12.1 ⁴⁴	54	48	31	17	21 33		27 68				
4	239	14.3		03.9	217	06.5 ¹⁰⁹		07.7 ⁴⁴	52	15 58	39	23	13 35		35 66				
5	254	14.0	-23	03.7	231	36.4 ¹⁰⁹	-17	03.1 ⁴⁶	50	16 08	16 46	17 28	9 07 35		18 41 65				
6	269	13.7	-23	03.5	246	06.3 ¹⁰⁹	-16	58.5 ⁴⁶	45	16 28	17 02	17 39	8 52 38		18 55 62				
7	284	13.4		03.3	260	36.2 ¹⁰⁹		53.8 ⁴⁷	40	45	15	49	40 40		19 06 60				
8	299	13.1		03.1	275	06.1 ¹⁰⁹		48.9 ⁴⁹	35	16 59	27	17 58	30 42		16 58				
9	314	12.8		02.9	289	36.1 ¹¹⁰		44.0 ⁴⁹	30	17 11	37	18 07	21 43		24 57				
10	329	12.5		02.7	304	06.0 ¹⁰⁹		39.0 ⁵⁰	20	32	17 56	23	8 06 45		39 54				
11	344	12.2	-23	02.5	318	35.9 ¹⁰⁹	-16	34.0 ⁵⁰	10 N	17 50	18 13	18 39	7 52 48		19 51 52				
12	359	11.9	-23	02.3	333	05.9 ¹¹⁰	-16	28.8 ⁵²	0	18 07	18 29	18 56	7 39 50		20 03 50				
13	14	11.6		02.2	347	35.9 ¹¹⁰		23.6 ⁵²	10 S	24	18 47	19 14	27 51		15 47				
14	29	11.3		02.0	2	05.8 ¹⁰⁹		18.2 ⁵⁴	20	18 43	19 07	19 36	7 13 54		28 44				
15	44	11.1		01.8	16	35.8 ¹¹⁰		12.8 ⁵⁴	30	19 04	32	20 05	6 58 56		42 42				
16	59	10.8		01.6	31	05.8 ¹¹⁰		07.3 ⁵⁵	35	17	19 47	23	49 57		50 40				
17	74	10.5	-23	01.4	45	35.8 ¹¹⁰	-16	01.7 ⁵⁶	40	19 32	20 05	20 46	6 38 59		20 59 39				
18	89	10.2	-23	01.2	60	05.8 ¹¹⁰	-15	56.0 ⁵⁷	45	19 50	20 27	21 16	6 26 61		21 10 37				
19	104	09.9		01.0	74	35.8 ¹¹⁰		50.2 ⁵⁸	50	20 12	20 56	22 00	11 64		23 34				
20	119	09.6		00.8	89	05.9 ¹¹¹		44.4 ⁵⁸	52	22	21 10	22 26	6 05 64		29 33				
21	134	09.3		00.6	103	35.9 ¹¹⁰		38.5 ⁵⁹	54	34	28	23 06	5 57 66		36 31				
22	149	09.0		00.3	118	06.0 ¹¹¹		32.5 ⁶⁰	56	20 48	21 49	** **	48 68		44 29				
23	164	08.7	-23	00.1	132	36.0 ¹¹⁰		26.4 ⁶¹	58	21 04	22 17	** **	39 69		21 52 28				
24	179	08.4	-22	59.9	147	06.1 ¹¹¹	-15	20.2 ⁶²	60 S	21 24	23 00	** **	5 28 70		22 02 25				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 17 ^h 17 ^m 8		Mag: -4.4 PMG: 15 ^h 17 ^m			Mag: +0.9 PMG: 16 ^h 03 ^m			Mag: -2.0 PMG: 6 ^h 39 ^m			Mag: +0.5 PMG: 10 ^h 41 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	99	51.0	130	41.1	-14	07.9	119	07.8	-9	06.6	259	55.7	-7	01.4	199	16.6	-21	52.0	
1	114	53.5	145	40.9		06.8	134	08.5		05.8	274	58.0		01.5	214	18.7		52.0	
2	129	56.0	160	40.8		05.7	149	09.2		05.1	290	00.2		01.6	229	20.9		52.0	
3	144	58.4	175	40.7		04.7	164	09.9		04.3	305	02.4		01.7	244	23.0		52.0	
4	160	00.9	190	40.6		03.6	179	10.6		03.6	320	04.6		01.8	259	25.2		52.0	
5	175	03.4	205	40.5	-14	02.5	194	11.3	-9	02.9	335	06.8	-7	01.9	274	27.3	-21	52.1	
6	190	05.8	220	40.4	-14	01.4	209	12.0	-9	02.1	350	09.0	-7	02.0	289	29.5	-21	52.1	
7	205	08.3	235	40.3	-14	00.3	224	12.8		01.4	5	11.2		02.1	304	31.7		52.1	
8	220	10.8	250	40.1	-13	59.2	239	13.5	-9	00.6	20	13.4		02.1	319	33.8		52.1	
9	235	13.2	265	40.0		58.2	254	14.2	-8	59.9	35	15.6		02.2	334	36.0		52.1	
10	250	15.7	280	39.9		57.1	269	14.9		59.1	50	17.8		02.3	349	38.1		52.2	
11	265	18.1	295	39.8	-13	56.0	284	15.6	-8	58.4	65	20.1	-7	02.4	4	40.3	-21	52.2	
12	280	20.6	310	39.7	-13	54.9	299	16.3	-8	57.6	80	22.3	-7	02.5	19	42.4	-21	52.2	
13	295	23.1	325	39.6		53.8	314	17.0		56.9	95	24.5		02.6	34	44.6		52.2	
14	310	25.5	340	39.5		52.7	329	17.7		56.1	110	26.7		02.7	49	46.8		52.2	
15	325	28.0	355	39.4		51.7	344	18.4		55.4	125	28.9		02.8	64	48.9		52.3	
16	340	30.5	10	39.3		50.6	359	19.1		54.6	140	31.1		02.9	79	51.1		52.3	
17	355	32.9	25	39.2	-13	49.5	14	19.9	-8	53.9	155	33.3	-7	03.0	94	53.2	-21	52.3	
18	10	35.4	40	39.1	-13	48.4	29	20.6	-8	53.1	170	35.5	-7	03.1	109	55.4	-21	52.3	
19	25	37.9	55	39.0		47.3	44	21.3		52.3	185	37.7		03.1	124	57.5		52.3	
20	40	40.3	70	38.9		46.2	59	22.0		51.6	200	40.0		03.2	139	59.7		52.4	
21	55	42.8	85	38.8		45.1	74	22.7		50.8	215	42.2		03.3	155	01.9		52.4	
22	70	45.2	100	38.7		44.0	89	23.4		50.1	230	44.4		03.4	170	04.0		52.4	
23	85	47.7	115	38.6		42.9	104	24.1		49.3	245	46.6		03.5	185	06.2		52.4	
24	100	50.2	130	38.5	-13	41.9	119	24.8	-8	48.6	260	48.8	-7	03.6	200	08.3	-21	52.4	
Dif	—		-1			+11		+7		+8		+22		-1		+22		0	

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	41.8	41.9	41.9	41.8	41.6	41.4	41.2	40.9	40.8	40.8	40.9	41.0
2 - β Cas	<i>Caph</i>	2.3	357	29.3	29.5	29.6	29.5	29.3	28.9	28.5	28.2	28.1	28.0	28.2	28.4
3 - γ Peg	<i>Algenib</i>	2.8	356	29.1	29.2	29.2	29.2	29.0	28.8	28.6	28.4	28.3	28.2	28.3	28.3
4 - α Phe	<i>Ankaa</i>	2.4	353	14.2	14.3	14.4	14.3	14.2	13.9	13.6	13.4	13.2	13.2	13.2	13.4
5 - α Cas	<i>Schedar</i>	2.2	349	38.5	38.7	38.8	38.8	38.6	38.2	37.9	37.6	37.4	37.3	37.4	37.5
6 - β Cet	<i>Diphda</i>	2.0	348	54.2	54.3	54.4	54.3	54.2	54.0	53.8	53.5	53.4	53.4	53.4	53.5
7 - γ Cas	<i>Navi</i>	1.6	345	34.5	34.8	34.9	34.9	34.7	34.3	33.9	33.6	33.3	33.2	33.3	33.4
8 - β And	<i>Mirach</i>	2.1	342	20.4	20.5	20.6	20.6	20.5	20.2	20.0	19.7	19.6	19.5	19.5	19.5
9 - α Eri	<i>Achernar</i>	0.5	335	25.6	25.8	26.0	26.1	26.0	25.7	25.4	25.0	24.7	24.6	24.7	24.8
10 - γ And	<i>Almak</i>	2.3	328	46.5	46.6	46.8	46.8	46.7	46.5	46.2	45.9	45.7	45.5	45.5	45.5
12 - α Ari	<i>Hamal</i>	2.0	327	58.7	58.8	58.9	58.9	58.8	58.7	58.4	58.2	58.0	57.9	57.8	57.8
11 - α UMi	<i>Polaris</i>	2.0	316	45.8	60.0	72.1	79.4	78.8	70.9	58.1	42.9	28.9	19.1	14.9	18.0
13 - θ Eri	<i>Acamar</i>	3.3	315	16.9	17.1	17.2	17.3	17.3	17.2	17.0	16.7	16.5	16.3	16.2	16.3
14 - α Cet	<i>Menkar</i>	2.5	314	13.1	13.2	13.3	13.4	13.3	13.2	13.0	12.8	12.6	12.4	12.3	12.3
15 - β Per	<i>Algol</i>	2.1	312	41.4	41.6	41.8	41.9	41.8	41.7	41.4	41.1	40.8	40.7	40.5	40.5
16 - α Per	<i>Mirfak</i>	1.8	308	37.5	37.7	37.9	38.0	38.0	37.8	37.5	37.2	36.9	36.7	36.5	36.5
17 - η Tau	<i>Alcyone</i>	2.9	302	53.1	53.3	53.4	53.5	53.5	53.4	53.2	52.9	52.7	52.5	52.4	52.3
18 - γ Eri	<i>Zaurak</i>	3.0	300	18.1	18.3	18.4	18.5	18.5	18.4	18.3	18.0	17.8	17.6	17.5	17.5
19 - α Tau	<i>Aldebaran</i>	0.9	290	47.1	47.2	47.3	47.4	47.5	47.4	47.2	47.0	46.8	46.6	46.4	46.3
20 - β Ori	<i>Rigel</i>	0.1	281	10.1	10.2	10.3	10.4	10.5	10.5	10.3	10.2	9.9	9.7	9.6	9.5
21 - α Aur	<i>Capella</i>	0.1	280	31.4	31.5	31.7	31.9	32.0	31.9	31.8	31.5	31.2	30.9	30.6	30.5
22 - γ Ori	<i>Bellatrix</i>	1.6	278	29.8	29.9	30.0	30.2	30.2	30.2	30.1	29.9	29.7	29.5	29.3	29.1
23 - β Tau	<i>Elnath</i>	1.7	278	10.1	10.1	10.3	10.4	10.5	10.5	10.3	10.1	9.8	9.6	9.4	9.3
24 - δ Ori	<i>Mintaka</i>	2.2	276	47.3	47.4	47.5	47.6	47.7	47.7	47.6	47.4	47.2	47.0	46.8	46.7
25 - ε Ori	<i>Alnilam</i>	1.7	275	44.3	44.4	44.5	44.6	44.7	44.7	44.6	44.4	44.2	44.0	43.8	43.6
26 - ζ Ori	<i>Alnitak</i>	1.9	274	36.2	36.2	36.4	36.5	36.6	36.6	36.4	36.3	36.1	35.9	35.7	35.5
27 - κ Ori	<i>Saiph</i>	2.1	272	51.9	52.0	52.1	52.3	52.4	52.3	52.2	52.1	51.9	51.7	51.5	51.3
28 - α Ori	<i>Betelgeuse</i>	0.4	270	59.1	59.1	59.3	59.4	59.5	59.5	59.4	59.2	59.0	58.8	58.6	58.4
29 - β Aur	<i>Menkalinan</i>	1.9	269	49.0	49.1	49.2	49.4	49.5	49.5	49.4	49.1	48.8	48.6	48.3	48.1
30 - β CMa	<i>Mirzam</i>	2.0	264	8.6	8.6	8.8	8.9	9.0	9.0	9.0	8.8	8.6	8.4	8.2	8.0
31 - α Car	<i>Canopus</i>	-0.7	263	54.8	55.0	55.2	55.5	55.7	55.8	55.7	55.6	55.3	55.0	54.7	54.5
32 - γ Gem	<i>Alhena</i>	1.9	260	20.1	20.1	20.2	20.4	20.5	20.5	20.4	20.2	20.0	19.8	19.6	19.4
33 - α CMa	<i>Sirius</i>	-1.5	258	31.8	31.9	32.0	32.2	32.3	32.3	32.2	32.1	31.9	31.7	31.5	31.3
34 - ε CMa	<i>Adhara</i>	1.5	255	10.7	10.8	10.9	11.1	11.2	11.3	11.3	11.1	10.9	10.7	10.5	10.3
35 - δ CMa	<i>Wezen</i>	1.9	252	43.9	44.0	44.1	44.3	44.4	44.5	44.4	44.3	44.1	43.9	43.7	43.5
36 - η CMa	<i>Aludra</i>	2.5	248	48.6	48.7	48.8	49.0	49.1	49.2	49.2	49.0	48.9	48.6	48.4	48.2
37 - α Gem	<i>Castor</i>	2.0	246	5.3	5.3	5.4	5.6	5.7	5.7	5.7	5.6	5.4	5.1	4.9	4.6
38 - α CMi	<i>Procyon</i>	0.4	244	57.6	57.6	57.6	57.8	57.9	57.9	57.9	57.8	57.6	57.4	57.2	57.0
39 - β Gem	<i>Pollux</i>	1.1	243	25.2	25.2	25.3	25.5	25.6	25.6	25.6	25.5	25.3	25.1	24.8	24.6
40 - ζ Pup	<i>Naos</i>	2.3	238	57.3	57.3	57.4	57.6	57.8	57.9	57.9	57.8	57.7	57.4	57.2	56.9
41 - γ Vel	<i>Regor</i>	1.8	237	29.0	29.0	29.2	29.4	29.6	29.7	29.8	29.7	29.5	29.3	29.0	28.7
42 - ε Car	<i>Avior</i>	1.9	234	16.6	16.6	16.8	17.1	17.4	17.6	17.7	17.7	17.5	17.2	16.8	16.5
43 - δ Velorum		2.0	228	42.1	42.1	42.2	42.4	42.7	42.9	43.0	43.0	42.8	42.6	42.2	41.9
44 - ζ Hydrae		3.1	225	56.1	56.0	56.1	56.2	56.3	56.4	56.4	56.3	56.2	56.0	55.8	55.6
45 - λ Vel	<i>Suhail</i>	2.2	222	50.7	50.6	50.7	50.8	51.0	51.2	51.3	51.2	51.1	50.9	50.6	50.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.2	38.2	38.4	38.8	39.2	39.7	39.9	40.0	39.8	39.5	38.9	38.4
47 - ι Car	<i>Aspidiske</i>	2.3	220	36.4	36.4	36.5	36.7	37.0	37.3	37.4	37.4	37.3	37.1	36.7	36.3
48 - α Lyn	<i>Elvashak</i>	3.1	219	29.3	29.2	29.2	29.3	29.5	29.6	29.6	29.6	29.5	29.3	29.0	28.7
49 - α Hyd	<i>Alphard</i>	2.0	217	54.1	54.0	54.0	54.1	54.2	54.3	54.3	54.3	54.2	54.0	53.8	53.6
50 - α Leo	<i>Regulus</i>	1.4	207	41.4	41.3	41.3	41.3	41.4	41.5	41.6	41.6	41.5	41.4	41.2	40.9

ESTRELLAS, 2016
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	10.8	10.8	10.7	10.6	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.2
2 - β Cas	<i>Caph</i>	2.3	+59	14.5	14.4	14.3	14.2	14.1	14.1	14.2	14.3	14.5	14.7	14.8	14.8
3 - γ Peg	<i>Algenib</i>	2.8	+15	16.4	16.3	16.3	16.3	16.3	16.4	16.5	16.6	16.7	16.7	16.7	16.7
4 - α Phe	<i>Ankaa</i>	2.4	-42	13.4	13.4	13.3	13.1	13.0	12.9	12.8	12.8	12.8	12.9	13.1	13.1
5 - α Cas	<i>Schedar</i>	2.2	+56	37.7	37.6	37.5	37.4	37.3	37.3	37.4	37.5	37.7	37.8	37.9	38.0
6 - β Cet	<i>Diphda</i>	2.0	-17	54.1	54.1	54.1	54.0	53.9	53.8	53.7	53.6	53.6	53.7	53.7	53.8
7 - γ Cas	<i>Navi</i>	1.6	+60	48.4	48.3	48.2	48.1	48.0	48.0	48.0	48.1	48.3	48.5	48.6	48.7
8 - β And	<i>Mirach</i>	2.1	+35	42.4	42.3	42.3	42.2	42.2	42.2	42.2	42.4	42.5	42.6	42.7	42.7
9 - α Eri	<i>Achernar</i>	0.5	-57	9.7	9.7	9.6	9.4	9.2	9.1	9.0	8.9	9.0	9.1	9.3	9.4
10 - γ And	<i>Almak</i>	2.3	+42	24.5	24.4	24.3	24.3	24.2	24.2	24.2	24.3	24.4	24.5	24.6	24.7
12 - α Ari	<i>Hamal</i>	2.0	+23	32.2	32.2	32.2	32.1	32.1	32.1	32.2	32.3	32.4	32.4	32.5	32.5
11 - α UMi	<i>Polaris</i>	2.0	+89	20.1	20.2	20.1	20.0	19.8	19.7	19.6	19.6	19.7	19.9	20.1	20.2
13 - θ Eri	<i>Acamar</i>	3.3	-40	14.8	14.9	14.8	14.7	14.5	14.4	14.2	14.2	14.2	14.3	14.4	14.5
14 - α Cet	<i>Menkar</i>	2.5	+4	9.0	8.9	8.9	8.9	9.0	9.0	9.1	9.2	9.3	9.3	9.2	9.2
15 - β Per	<i>Algol</i>	2.1	+41	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.9	0.9	1.0	1.1	1.2
16 - α Per	<i>Mirfak</i>	1.8	+49	55.1	55.1	55.0	55.0	54.9	54.8	54.8	54.8	54.9	55.0	55.1	55.2
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.2	9.3	9.3	9.3
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.1	28.1	28.1	28.1	28.0	27.9	27.8	27.7	27.7	27.7	27.8	27.9
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.3	32.3	32.3	32.2	32.2	32.3	32.3	32.4	32.4	32.4	32.4	32.4
20 - β Ori	<i>Rigel</i>	0.1	-8	11.3	11.4	11.4	11.3	11.3	11.2	11.1	11.0	11.0	11.0	11.1	11.1
21 - α Aur	<i>Capella</i>	0.1	+46	0.7	0.7	0.8	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.7
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.6	21.6	21.5	21.5	21.6	21.6	21.7	21.7	21.8	21.8	21.7	21.7
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.1	37.1	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.1	37.1
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.5	17.6	17.6	17.6	17.5	17.5	17.4	17.3	17.3	17.3	17.3	17.4
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.8	11.9	11.8	11.8	11.7	11.7	11.6	11.5	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.4	56.4	56.4	56.3	56.3	56.2	56.1	56.1	56.1	56.2	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.8	39.9	39.9	40.0
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.4	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.7	56.8	56.8	56.8	56.8	56.7	56.6	56.6	56.6	56.6	56.6	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.2	58.3	58.3	58.2	58.1	58.0	57.9	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.6	42.7	42.8	42.8	42.7	42.5	42.4	42.2	42.1	42.1	42.2	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.6	44.7	44.7	44.7	44.7	44.6	44.5	44.4	44.3	44.3	44.4	44.5
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.9	60.0	60.1	60.1	60.0	59.9	59.8	59.7	59.6	59.6	59.7	59.8
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.4	25.5	25.6	25.6	25.5	25.4	25.3	25.2	25.1	25.1	25.2	25.3
36 - η CMa	<i>Aludra</i>	2.5	-29	20.3	20.4	20.5	20.5	20.5	20.4	20.3	20.1	20.1	20.1	20.1	20.3
37 - α Gem	<i>Castor</i>	2.0	+31	50.9	51.0	51.0	51.0	51.0	51.0	51.0	50.9	50.9	50.9	50.8	50.8
38 - α CMi	<i>Procyon</i>	0.4	+5	10.8	10.7	10.7	10.7	10.7	10.8	10.8	10.8	10.9	10.8	10.8	10.7
39 - β Gem	<i>Pollux</i>	1.1	+27	59.0	59.0	59.0	59.1	59.1	59.1	59.0	59.0	59.0	58.9	58.9	58.8
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.1	3.3	3.4	3.4	3.4	3.3	3.1	3.0	2.9	2.9	2.9	3.1
41 - γ Vel	<i>Regor</i>	1.8	-47	23.2	23.4	23.5	23.5	23.5	23.4	23.3	23.1	23.0	23.0	23.0	23.2
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.8	34.0	34.1	34.2	34.1	33.9	33.8	33.7	33.6	33.6	33.6	33.8
43 - δ Velorum		2.0	-54	46.1	46.3	46.5	46.6	46.6	46.5	46.4	46.2	46.1	46.0	46.0	46.2
44 - ζ Hydrae		3.1	+5	52.8	52.8	52.8	52.8	52.8	52.8	52.9	52.9	52.9	52.9	52.8	52.7
45 - λ Vel	<i>Suhail</i>	2.2	-43	29.9	30.1	30.2	30.3	30.3	30.3	30.1	30.0	29.9	29.8	29.9	30.0
46 - β Car	<i>Miaplacidus</i>	1.7	-69	47.0	47.2	47.3	47.5	47.5	47.5	47.3	47.2	47.0	46.9	46.9	47.0
47 - ι Car	<i>Aspidiske</i>	2.3	-59	20.6	20.8	20.9	21.0	21.1	21.0	20.9	20.7	20.6	20.5	20.5	20.6
48 - α Lyn	<i>Elvashak</i>	3.1	+34	19.2	19.2	19.3	19.4	19.4	19.4	19.4	19.3	19.2	19.1	19.0	19.0
49 - α Hyd	<i>Alphard</i>	2.0	-8	43.9	44.0	44.0	44.0	44.0	44.0	43.9	43.9	43.8	43.8	43.9	44.0
50 - α Leo	<i>Regulus</i>	1.4	+11	53.1	53.1	53.1	53.1	53.1	53.2	53.2	53.2	53.2	53.1	53.0	52.9

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	7.5	7.4	7.3	7.4	7.6	7.8	7.9	8.0	8.0	7.9	7.6	7.3
52 - ν	Hydrae	3.1	197	23.5	23.3	23.3	23.3	23.4	23.5	23.6	23.6	23.6	23.5	23.3	23.0
53 - β	UMa Merak	2.4	194	17.9	17.6	17.5	17.6	17.8	18.0	18.2	18.3	18.3	18.1	17.8	17.4
54 - α	UMa Dubhe	1.8	193	49.3	49.0	48.9	49.0	49.2	49.5	49.7	49.8	49.8	49.6	49.3	48.9
55 - β	Leo Denebola	2.1	182	31.7	31.6	31.5	31.5	31.5	31.6	31.7	31.8	31.8	31.7	31.6	31.3
56 - γ	Crv Gienah	2.6	175	50.4	50.1	50.0	50.0	50.1	50.1	50.2	50.3	50.3	50.3	50.2	49.9
57 - α	Cru Acrux	1.4	173	7.0	6.6	6.4	6.4	6.5	6.7	7.0	7.3	7.4	7.4	7.1	6.7
58 - γ	Cru Gacrux	1.6	171	58.6	58.3	58.1	58.1	58.2	58.4	58.6	58.8	58.9	58.9	58.7	58.3
59 - γ	Cen Muhlifain	2.2	169	23.6	23.3	23.1	23.1	23.1	23.3	23.4	23.6	23.7	23.7	23.5	23.2
60 - β	Cru Mimosa	1.3	167	49.6	49.2	49.0	49.0	49.0	49.2	49.4	49.7	49.8	49.8	49.6	49.2
61 - ε	UMa Alioth	1.8	166	19.2	18.8	18.6	18.6	18.7	18.9	19.1	19.3	19.4	19.4	19.3	19.0
62 - α^2	CVn Cor Caroli	2.9	165	48.4	48.2	48.0	48.0	48.0	48.1	48.2	48.4	48.4	48.4	48.3	48.1
63 - ε	Vir Vindemiatrix	2.8	164	15.4	15.2	15.0	15.0	15.0	15.0	15.1	15.2	15.3	15.3	15.2	15.0
64 - ζ	UMa Mizar	2.3	158	51.7	51.3	51.1	51.0	51.1	51.2	51.4	51.6	51.8	51.8	51.7	51.5
65 - α	Vir Spica	1.0	158	29.4	29.1	29.0	28.9	28.9	29.0	29.0	29.1	29.2	29.2	29.1	28.9
66 - η	UMa Alkaid	1.9	152	57.6	57.3	57.1	57.0	57.0	57.1	57.3	57.5	57.6	57.7	57.6	57.4
67 - β	Cen Hadar	0.6	148	45.3	44.9	44.6	44.4	44.4	44.5	44.7	44.9	45.1	45.2	45.1	44.8
68 - θ	Cen Menkent	2.1	148	5.5	5.2	5.0	4.9	4.8	4.9	5.0	5.1	5.2	5.3	5.2	5.0
69 - α	Boo Arcturus	0.0	145	54.2	54.0	53.8	53.7	53.7	53.7	53.8	53.9	54.0	54.1	54.0	53.9
70 - α^1	Cen Rigil Kentaurus	0.0	139	49.5	49.1	48.7	48.5	48.4	48.5	48.7	48.9	49.2	49.4	49.3	49.0
71 - α^2	Lib Zubenelgenubi	2.8	137	3.6	3.3	3.1	3.0	2.9	2.9	3.0	3.1	3.2	3.3	3.2	3.1
72 - β	UMi Kochab	2.1	137	20.7	20.1	19.5	19.2	19.1	19.4	19.9	20.4	21.0	21.4	21.5	21.2
73 - β	Lib Zubeneschamali	2.6	130	32.1	31.8	31.6	31.5	31.4	31.4	31.4	31.5	31.6	31.7	31.7	31.6
74 - α	CrB Alphecca	2.2	126	9.7	9.5	9.3	9.1	9.0	9.0	9.1	9.2	9.3	9.5	9.5	9.4
75 - α	Ser Unukalhai	2.7	123	44.3	44.1	43.9	43.7	43.6	43.6	43.6	43.7	43.8	43.9	44.0	43.9
76 - α	Sco Antares	0.9	112	24.4	24.1	23.9	23.6	23.5	23.4	23.4	23.5	23.6	23.8	23.8	23.7
77 - α	TrA Atria	1.9	107	25.0	24.4	23.9	23.4	23.0	22.8	22.8	23.1	23.5	23.9	24.1	24.0
78 - ε	Scorpii	2.3	107	12.2	12.0	11.7	11.5	11.3	11.2	11.2	11.3	11.4	11.6	11.6	11.6
79 - η	Oph Sabik	2.4	102	10.8	10.6	10.4	10.1	10.0	9.9	9.9	9.9	10.0	10.2	10.2	10.2
80 - α	Her Rasalgethi	3.1	101	9.6	9.4	9.2	9.0	8.8	8.7	8.7	8.8	8.9	9.1	9.2	9.1
81 - λ	Sco Shaula	1.6	96	19.9	19.6	19.4	19.1	18.9	18.7	18.7	18.8	18.9	19.1	19.2	19.1
82 - α	Oph Rasalhague	2.1	96	5.1	4.9	4.7	4.5	4.3	4.2	4.2	4.3	4.4	4.6	4.6	4.6
83 - θ	Sco Sargas	1.9	95	23.3	23.1	22.8	22.5	22.2	22.1	22.0	22.1	22.3	22.5	22.6	22.5
84 - γ	Dra Eltanin	2.2	90	45.8	45.6	45.3	45.0	44.8	44.7	44.7	44.8	45.1	45.3	45.5	45.6
85 - ε	Sgr Kaus Australis	1.9	83	41.9	41.7	41.4	41.2	40.9	40.7	40.7	40.7	40.8	41.0	41.1	41.1
86 - α	Lyr Vega	0.0	80	38.2	38.0	37.8	37.5	37.3	37.2	37.1	37.2	37.4	37.6	37.7	37.8
87 - σ	Sgr Nunki	2.0	75	56.5	56.4	56.1	55.9	55.7	55.5	55.4	55.4	55.5	55.6	55.8	55.8
88 - α	Aql Altair	0.8	62	6.9	6.8	6.6	6.4	6.2	6.0	5.9	5.8	5.9	6.0	6.2	6.2
89 - γ	Cyg Sadr	2.2	54	18.3	18.2	18.1	17.8	17.6	17.3	17.2	17.2	17.3	17.5	17.7	17.8
90 - α	Pav Peacock	1.9	53	17.2	17.0	16.8	16.4	16.1	15.7	15.5	15.4	15.5	15.7	15.9	16.1
91 - α	Cyg Deneb	1.3	49	30.7	30.6	30.5	30.2	30.0	29.7	29.5	29.5	29.6	29.8	30.0	30.2
92 - α	Cep Alderamin	2.4	40	16.0	16.0	15.9	15.6	15.2	14.8	14.6	14.5	14.6	14.9	15.2	15.5
93 - ε	Peg Enif	0.7	33	45.7	45.7	45.6	45.4	45.2	45.0	44.8	44.7	44.7	44.8	44.9	45.0
94 - δ	Cap Deneb Algedi	2.9	33	1.5	1.5	1.4	1.2	1.0	0.7	0.5	0.4	0.4	0.5	0.6	0.7
95 - α	Gru Al Na'ir	1.7	27	42.0	42.0	41.9	41.7	41.4	41.1	40.8	40.7	40.6	40.7	40.9	41.1
96 - β	Gruis	2.1	19	6.2	6.3	6.2	6.0	5.8	5.5	5.2	5.0	4.9	5.0	5.1	5.3
97 - α	PsA Fomalhaut	1.2	15	22.3	22.4	22.3	22.2	22.0	21.7	21.5	21.3	21.2	21.3	21.4	21.5
98 - β	Peg Scheat	2.4	13	51.8	51.9	51.9	51.8	51.6	51.3	51.1	50.9	50.9	50.9	51.0	51.1
99 - α	Peg Markab	2.5	13	36.8	36.8	36.8	36.7	36.5	36.2	36.0	35.9	35.8	35.8	35.9	36.0

ESTRELLAS, 2016
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	30.2	30.4	30.5	30.7	30.7	30.7	30.7	30.5	30.4	30.3	30.3	30.3
52 - ν	Hydrae	3.1	-16	16.7	16.8	16.9	17.0	17.0	16.9	16.9	16.8	16.8	16.7	16.8	16.9
53 - β	UMa Merak	2.4	+56	17.5	17.5	17.7	17.8	17.9	17.9	17.8	17.7	17.6	17.4	17.3	17.2
54 - α	UMa Dubhe	1.8	+61	39.5	39.6	39.7	39.9	40.0	40.0	39.9	39.8	39.7	39.5	39.3	39.3
55 - β	Leo Denebola	2.1	+14	28.8	28.8	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.8	28.7	28.6
56 - γ	Crv Gienah	2.6	-17	37.8	37.9	38.0	38.1	38.1	38.1	38.0	38.0	37.9	37.9	37.9	38.0
57 - α	Cru Acrux	1.4	-63	11.0	11.1	11.3	11.5	11.6	11.7	11.6	11.6	11.4	11.3	11.2	11.2
58 - γ	Cru Gacrux	1.6	-57	11.9	12.0	12.2	12.4	12.5	12.5	12.5	12.5	12.3	12.2	12.1	12.1
59 - γ	Cen Muhlifain	2.2	-49	2.6	2.7	2.9	3.0	3.1	3.2	3.2	3.1	3.0	2.9	2.8	2.8
60 - β	Cru Mimoso	1.3	-59	46.3	46.4	46.6	46.7	46.9	46.9	46.9	46.9	46.7	46.6	46.5	46.5
61 - ϵ	UMa Alioth	1.8	+55	52.1	52.1	52.2	52.4	52.5	52.6	52.6	52.5	52.4	52.2	52.1	51.9
62 - α^2	CVn Cor Caroli	2.9	+38	13.7	13.7	13.7	13.8	14.0	14.0	14.1	14.0	14.0	13.8	13.7	13.5
63 - ϵ	Vir Vindemiatrix	2.8	+10	52.3	52.3	52.2	52.3	52.3	52.4	52.4	52.4	52.4	52.4	52.3	52.1
64 - ζ	UMa Mizar	2.3	+54	50.3	50.3	50.3	50.5	50.6	50.7	50.7	50.7	50.6	50.4	50.3	50.1
65 - α	Vir Spica	1.0	-11	14.6	14.7	14.8	14.8	14.8	14.8	14.8	14.7	14.7	14.7	14.7	14.8
66 - η	UMa Alkaid	1.9	+49	13.8	13.8	13.8	14.0	14.1	14.2	14.3	14.2	14.1	14.0	13.8	13.7
67 - β	Cen Hadar	0.6	-60	26.6	26.7	26.8	27.0	27.1	27.2	27.3	27.2	27.2	27.0	26.9	26.9
68 - θ	Cen Menkent	2.1	-36	26.6	26.7	26.8	26.9	27.0	27.1	27.1	27.1	27.0	26.9	26.9	26.9
69 - α	Boo Arcturus	0.0	+19	5.9	5.8	5.8	5.9	5.9	6.0	6.1	6.1	6.1	6.0	5.9	5.7
70 - α^1	Cen Rigil Kentaurus	0.0	-60	53.7	53.7	53.8	54.0	54.1	54.2	54.3	54.3	54.2	54.1	54.0	53.9
71 - α^2	Lib Zubenelgenubi	2.8	-16	6.3	6.4	6.4	6.5	6.5	6.5	6.5	6.5	6.4	6.4	6.4	6.5
72 - β	UMi Kochab	2.1	+74	5.2	5.1	5.2	5.3	5.5	5.6	5.7	5.7	5.6	5.5	5.3	5.1
73 - β	Lib Zubeneshamali	2.6	-9	26.4	26.4	26.5	26.5	26.5	26.5	26.4	26.4	26.4	26.4	26.4	26.5
74 - α	CrB Alphecca	2.2	+26	39.6	39.6	39.5	39.6	39.7	39.8	39.9	39.9	39.9	39.9	39.7	39.6
75 - α	Ser Unukalhai	2.7	+6	22.6	22.5	22.5	22.5	22.6	22.6	22.7	22.7	22.7	22.7	22.6	22.5
76 - α	Sco Antares	0.9	-26	27.8	27.8	27.8	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
77 - α	TrA Atria	1.9	-69	3.0	2.9	2.9	3.0	3.1	3.2	3.4	3.4	3.5	3.4	3.3	3.2
78 - ϵ	Scorpii	2.3	-34	19.0	19.0	19.1	19.1	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.1
79 - η	Oph Sabik	2.4	-15	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
80 - α	Her Rasalgethi	3.1	+14	22.4	22.3	22.3	22.3	22.4	22.5	22.6	22.7	22.7	22.7	22.6	22.5
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.7	6.7	6.8	6.8	6.8	6.8	6.7	6.7
82 - α	Oph Rasalhague	2.1	+12	33.0	32.9	32.9	32.9	33.0	33.1	33.2	33.3	33.3	33.3	33.2	33.1
83 - θ	Sco Sargas	1.9	-43	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.3	29.1	29.1	29.1	29.2	29.4	29.5	29.7	29.7	29.7	29.6	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.4	22.3	22.3	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.4	22.4
86 - α	Lyr Vega	0.0	+38	48.0	47.9	47.8	47.8	47.9	48.1	48.2	48.4	48.4	48.4	48.4	48.2
87 - σ	Sgr Nunki	2.0	-26	16.4	16.4	16.4	16.3	16.3	16.3	16.3	16.3	16.4	16.4	16.4	16.4
88 - α	Aql Altair	0.8	+8	54.8	54.7	54.7	54.7	54.8	54.9	55.0	55.0	55.1	55.1	55.1	55.0
89 - γ	Cyg Sadr	2.2	+40	18.7	18.5	18.4	18.4	18.4	18.6	18.7	18.9	19.0	19.1	19.0	19.0
90 - α	Pav Peacock	1.9	-56	40.9	40.8	40.7	40.6	40.6	40.6	40.6	40.7	40.8	40.9	40.9	40.8
91 - α	Cyg Deneb	1.3	+45	20.5	20.3	20.2	20.1	20.2	20.3	20.5	20.6	20.8	20.8	20.8	20.8
92 - α	Cep Alderamin	2.4	+62	39.4	39.3	39.1	39.1	39.1	39.2	39.3	39.5	39.7	39.8	39.8	39.8
93 - ϵ	Peg Enif	0.7	+9	57.0	56.9	56.9	56.9	57.0	57.1	57.2	57.3	57.3	57.4	57.4	57.3
94 - δ	Cap Deneb Algedi	2.9	-16	3.3	3.2	3.2	3.1	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0
95 - α	Gru Al Na'ir	1.7	-46	53.1	53.0	52.9	52.7	52.6	52.6	52.6	52.6	52.7	52.8	52.9	52.9
96 - β	Gruis	2.1	-46	48.2	48.1	48.0	47.8	47.7	47.6	47.6	47.7	47.8	47.9	47.9	48.0
97 - α	PsA Fomalhaut	1.2	-29	32.4	32.3	32.2	32.1	32.0	31.9	31.9	31.9	31.9	32.0	32.0	32.1
98 - β	Peg Scheat	2.4	+28	10.3	10.2	10.1	10.1	10.1	10.2	10.3	10.4	10.6	10.6	10.7	10.7
99 - α	Peg Markab	2.5	+15	17.6	17.5	17.4	17.4	17.5	17.6	17.7	17.8	17.9	17.9	17.9	17.9

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 25	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 18	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 48	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 45	21 47	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 10	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 45	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 25	19 27
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 58	20 00
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 09	6 07	4 13	2 11	0 13	22 07	20 09
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 54	6 52	4 58	2 56	0 58	22 52	20 54
76 - α Scorpii	<i>Antares</i>	0.9	9 48	7 47	5 53	3 51	1 53	23 47	21 49
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 08	8 06	6 12	4 11	2 13	0 11	22 09
81 - λ Scorpii	<i>Shaula</i>	1.6	10 53	8 51	6 57	4 55	2 57	0 55	22 53
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 54	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 49	3 47	1 49
91 - α Cygni	<i>Deneb</i>	1.3	13 59	11 57	10 03	8 02	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 05	3 07
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 26	13 24	11 30	9 29	7 31	5 29	3 31
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 15	14 14	12 20	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 29	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 28	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 56	0 58	22 52	20 54																
12 - α Arietis	<i>Hamal</i>	2.0	5 27	3 25	1 27	23 21	21 24	<table><tr><th>Día</th><th>Corr.</th></tr></table>	Día	Corr.													
Día	Corr.																						
13 - θ Eridani	<i>Acamar</i>	3.3	6 18	4 16	2 18	0 16	22 14	<table><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr></table>		h m	1	0 00											
	h m																						
1	0 00																						
16 - α Persei	<i>Mirfak</i>	1.8	6 44	4 42	2 44	0 43	22 41	<table><tr><td>2</td><td>0 04</td></tr></table>	2	0 04													
2	0 04																						
19 - α Tauri	<i>Aldebaran</i>	0.9	7 55	5 54	3 56	1 54	23 52	<table><tr><td>3</td><td>0 08</td></tr></table>	3	0 08													
3	0 08																						
20 - β Orionis	<i>Rigel</i>	0.1	8 34	6 32	4 34	2 32	0 34	<table><tr><td>4</td><td>0 12</td></tr></table>	4	0 12													
4	0 12																						
21 - α Aurigae	<i>Capella</i>	0.1	8 36	6 34	4 37	2 35	0 37	<table><tr><td>5</td><td>0 16</td></tr></table>	5	0 16													
5	0 16																						
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 44	6 43	4 45	2 43	0 45	<table><tr><td>6</td><td>0 20</td></tr></table>	6	0 20													
6	0 20																						
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 14	7 13	5 15	3 13	1 15	<table><tr><td>7</td><td>0 24</td></tr></table>	7	0 24													
7	0 24																						
31 - α Carinae	<i>Canopus</i>	-0.7	9 43	7 41	5 43	3 41	1 43	<table><tr><td>8</td><td>0 28</td></tr></table>	8	0 28													
8	0 28																						
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 04	8 02	6 04	4 02	2 04	<table><tr><td>9</td><td>0 31</td></tr></table>	9	0 31													
9	0 31																						
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 17	8 16	6 18	4 16	2 18	<table><tr><td>10</td><td>0 35</td></tr></table>	10	0 35													
10	0 35																						
								<table><tr><td>11</td><td>0 39</td></tr></table>	11	0 39													
11	0 39																						
38 - α Canis Minoris	<i>Procyon</i>	0.4	10 58	8 56	6 58	4 57	2 59	<table><tr><td>12</td><td>0 43</td></tr></table>	12	0 43													
12	0 43																						
39 - β Geminorum	<i>Pollux</i>	1.1	11 04	9 02	7 05	5 03	3 05	<table><tr><td>13</td><td>0 47</td></tr></table>	13	0 47													
13	0 47																						
42 - ϵ Carinae	<i>Avior</i>	1.9	11 41	9 39	7 41	5 39	3 41	<table><tr><td>14</td><td>0 51</td></tr></table>	14	0 51													
14	0 51																						
45 - λ Velorum	<i>Suhail</i>	2.2	12 26	10 25	8 27	6 25	4 27	<table><tr><td>15</td><td>0 55</td></tr></table>	15	0 55													
15	0 55																						
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 31	10 29	8 31	6 29	4 32	<table><tr><td>16</td><td>0 59</td></tr></table>	16	0 59													
16	0 59																						
								<table><tr><td>17</td><td>1 03</td></tr></table>	17	1 03													
17	1 03																						
49 - α Hydrae	<i>Alphard</i>	2.0	12 46	10 44	8 46	6 44	4 47	<table><tr><td>18</td><td>1 07</td></tr></table>	18	1 07													
18	1 07																						
50 - α Leonis	<i>Regulus</i>	1.4	13 27	11 25	9 27	7 25	5 27	<table><tr><td>19</td><td>1 11</td></tr></table>	19	1 11													
19	1 11																						
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 22	12 20	10 22	8 20	6 23	<table><tr><td>20</td><td>1 15</td></tr></table>	20	1 15													
20	1 15																						
55 - β Leonis	<i>Denebola</i>	2.1	15 07	13 05	11 07	9 06	7 08	<table><tr><td>21</td><td>1 19</td></tr></table>	21	1 19													
21	1 19																						
57 - α Crucis	<i>Acrux</i>	1.4	15 45	13 43	11 45	9 43	7 45	<table><tr><td>22</td><td>1 23</td></tr></table>	22	1 23													
22	1 23																						
								<table><tr><td>23</td><td>1 27</td></tr></table>	23	1 27													
23	1 27																						
58 - γ Crucis	<i>Gacrux</i>	1.6	15 49	13 47	11 50	9 48	7 50	<table><tr><td>24</td><td>1 30</td></tr></table>	24	1 30													
24	1 30																						
60 - β Crucis	<i>Mimosa</i>	1.3	16 06	14 04	12 06	10 04	8 06	<table><tr><td>25</td><td>1 34</td></tr></table>	25	1 34													
25	1 34																						
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 12	14 10	12 12	10 10	8 12	<table><tr><td>26</td><td>1 38</td></tr></table>	26	1 38													
26	1 38																						
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 42	14 40	12 42	10 40	8 42	<table><tr><td>27</td><td>1 42</td></tr></table>	27	1 42													
27	1 42																						
65 - α Virginis	<i>Spica</i>	1.0	16 43	14 41	12 43	10 41	8 44	<table><tr><td>28</td><td>1 46</td></tr></table>	28	1 46													
28	1 46																						
								<table><tr><td>29</td><td>1 50</td></tr></table>	29	1 50													
29	1 50																						
68 - θ Centauri	<i>Menkent</i>	2.1	17 25	15 23	13 25	11 23	9 25	<table><tr><td>30</td><td>1 54</td></tr></table>	30	1 54													
30	1 54																						
69 - α Bootis	<i>Arcturus</i>	0.0	17 33	15 32	13 34	11 32	9 34	<table><tr><td>31</td><td>1 58</td></tr></table>	31	1 58													
31	1 58																						
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 58	15 56	13 58	11 56	9 58																
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 08	16 06	14 08	12 06	10 08	Si el resultado es negativo sumar 23 ^h 56 ^m .															
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 52	16 50	14 52	12 50	10 52																
76 - α Scorpii	<i>Antares</i>	0.9	19 47	17 45	15 47	13 45	11 47	2ª CORRECCIÓN															
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 07	18 05	16 07	14 05	12 07																
81 - λ Scorpii	<i>Shaula</i>	1.6	20 51	18 49	16 51	14 49	12 51																
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 11	17 14	15 12	13 14	Se aplicará para tener la hora civil del paso por otro meridiano.															
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 42	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	<table><tr><th>Long.</th><th>Corr.</th></tr></table>	Long.	Corr.													
Long.	Corr.																						
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 13	20 11	18 13	16 11	14 13	<table><tr><td>180 W</td><td>o</td></tr><tr><td>138 W</td><td>m</td></tr><tr><td>46 W</td><td>-2</td></tr><tr><td>46 E</td><td>-1</td></tr><tr><td>136 E</td><td>0</td></tr><tr><td>180 E</td><td>+1</td></tr><tr><td></td><td>+2</td></tr></table>	180 W	o	138 W	m	46 W	-2	46 E	-1	136 E	0	180 E	+1		+2	
180 W	o																						
138 W	m																						
46 W	-2																						
46 E	-1																						
136 E	0																						
180 E	+1																						
	+2																						
88 - α Aquilae	<i>Altair</i>	0.8	23 08	21 06	19 08	17 06	15 08																
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																

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	o m
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, 2016

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	-29.2	26 00	-38.3	52 00	-39.6	78 00	-32.9	104 00	-19.5	130 00	-2.2	156 00	+15.5
0 30	-29.4	26 30	-38.4	52 30	-39.5	78 30	-32.7	104 30	-19.2	130 30	-1.9	156 30	+15.8
1 00	-29.7	27 00	-38.5	53 00	-39.5	79 00	-32.5	105 00	-18.9	131 00	-1.5	157 00	+16.2
1 30	-29.9	27 30	-38.6	53 30	-39.4	79 30	-32.3	105 30	-18.6	131 30	-1.2	157 30	+16.5
2 00	-30.1	28 00	-38.7	54 00	-39.4	80 00	-32.1	106 00	-18.3	132 00	-0.8	158 00	+16.8
2 30	-30.4	28 30	-38.8	54 30	-39.3	80 30	-31.9	106 30	-18.0	132 30	-0.5	158 30	+17.1
3 00	-30.6	29 00	-38.8	55 00	-39.2	81 00	-31.7	107 00	-17.7	133 00	-0.1	159 00	+17.4
3 30	-30.8	29 30	-38.9	55 30	-39.1	81 30	-31.4	107 30	-17.4	133 30	+0.2	159 30	+17.7
4 00	-31.0	30 00	-39.0	56 00	-39.1	82 00	-31.2	108 00	-17.1	134 00	+0.6	160 00	+18.1
4 30	-31.3	30 30	-39.1	56 30	-39.0	82 30	-31.0	108 30	-16.7	134 30	+0.9	160 30	+18.4
5 00	-31.5	31 00	-39.2	57 00	-38.9	83 00	-30.8	109 00	-16.4	135 00	+1.3	161 00	+18.7
5 30	-31.7	31 30	-39.2	57 30	-38.8	83 30	-30.6	109 30	-16.1	135 30	+1.6	161 30	+19.0
6 00	-31.9	32 00	-39.3	58 00	-38.7	84 00	-30.3	110 00	-15.8	136 00	+2.0	162 00	+19.3
6 30	-32.1	32 30	-39.4	58 30	-38.6	84 30	-30.1	110 30	-15.5	136 30	+2.3	162 30	+19.6
7 00	-32.3	33 00	-39.4	59 00	-38.6	85 00	-29.9	111 00	-15.1	137 00	+2.7	163 00	+19.9
7 30	-32.5	33 30	-39.5	59 30	-38.5	85 30	-29.6	111 30	-14.8	137 30	+3.0	163 30	+20.2
8 00	-32.7	34 00	-39.6	60 00	-38.4	86 00	-29.4	112 00	-14.5	138 00	+3.3	164 00	+20.5
8 30	-32.9	34 30	-39.6	60 30	-38.3	86 30	-29.2	112 30	-14.2	138 30	+3.7	164 30	+20.8
9 00	-33.1	35 00	-39.7	61 00	-38.1	87 00	-28.9	113 00	-13.8	139 00	+4.0	165 00	+21.1
9 30	-33.3	35 30	-39.7	61 30	-38.0	87 30	-28.7	113 30	-13.5	139 30	+4.4	165 30	+21.4
10 00	-33.5	36 00	-39.7	62 00	-37.9	88 00	-28.4	114 00	-13.2	140 00	+4.7	166 00	+21.7
10 30	-33.7	36 30	-39.8	62 30	-37.8	88 30	-28.2	114 30	-12.8	140 30	+5.1	166 30	+22.0
11 00	-33.9	37 00	-39.8	63 00	-37.7	89 00	-27.9	115 00	-12.5	141 00	+5.4	167 00	+22.3
11 30	-34.1	37 30	-39.9	63 30	-37.6	89 30	-27.7	115 30	-12.2	141 30	+5.8	167 30	+22.6
12 00	-34.3	38 00	-39.9	64 00	-37.5	90 00	-27.4	116 00	-11.9	142 00	+6.1	168 00	+22.9
12 30	-34.4	38 30	-39.9	64 30	-37.3	90 30	-27.2	116 30	-11.5	142 30	+6.5	168 30	+23.1
13 00	-34.6	39 00	-40.0	65 00	-37.2	91 00	-26.9	117 00	-11.2	143 00	+6.8	169 00	+23.4
13 30	-34.8	39 30	-40.0	65 30	-37.1	91 30	-26.7	117 30	-10.8	143 30	+7.2	169 30	+23.7
14 00	-35.0	40 00	-40.0	66 00	-36.9	92 00	-26.4	118 00	-10.5	144 00	+7.5	170 00	+24.0
14 30	-35.1	40 30	-40.0	66 30	-36.8	92 30	-26.1	118 30	-10.2	144 30	+7.8	170 30	+24.3
15 00	-35.3	41 00	-40.0	67 00	-36.7	93 00	-25.9	119 00	-9.8	145 00	+8.2	171 00	+24.6
15 30	-35.5	41 30	-40.0	67 30	-36.5	93 30	-25.6	119 30	-9.5	145 30	+8.5	171 30	+24.8
16 00	-35.6	42 00	-40.1	68 00	-36.4	94 00	-25.3	120 00	-9.2	146 00	+8.9	172 00	+25.1
16 30	-35.8	42 30	-40.1	68 30	-36.2	94 30	-25.1	120 30	-8.8	146 30	+9.2	172 30	+25.4
17 00	-35.9	43 00	-40.1	69 00	-36.1	95 00	-24.8	121 00	-8.5	147 00	+9.6	173 00	+25.6
17 30	-36.1	43 30	-40.1	69 30	-35.9	95 30	-24.5	121 30	-8.1	147 30	+9.9	173 30	+25.9
18 00	-36.3	44 00	-40.1	70 00	-35.8	96 00	-24.2	122 00	-7.8	148 00	+10.2	174 00	+26.2
18 30	-36.4	44 30	-40.1	70 30	-35.6	96 30	-23.9	122 30	-7.4	148 30	+10.6	174 30	+26.4
19 00	-36.5	45 00	-40.0	71 00	-35.4	97 00	-23.7	123 00	-7.1	149 00	+10.9	175 00	+26.7
19 30	-36.7	45 30	-40.0	71 30	-35.3	97 30	-23.4	123 30	-6.8	149 30	+11.2	175 30	+27.0
20 00	-36.8	46 00	-40.0	72 00	-35.1	98 00	-23.1	124 00	-6.4	150 00	+11.6	176 00	+27.2
20 30	-37.0	46 30	-40.0	72 30	-34.9	98 30	-22.8	124 30	-6.1	150 30	+11.9	176 30	+27.5
21 00	-37.1	47 00	-40.0	73 00	-34.8	99 00	-22.5	125 00	-5.7	151 00	+12.2	177 00	+27.7
21 30	-37.2	47 30	-40.0	73 30	-34.6	99 30	-22.2	125 30	-5.4	151 30	+12.6	177 30	+28.0
22 00	-37.4	48 00	-39.9	74 00	-34.4	100 00	-21.9	126 00	-5.0	152 00	+12.9	178 00	+28.2
22 30	-37.5	48 30	-39.9	74 30	-34.2	100 30	-21.6	126 30	-4.7	152 30	+13.2	178 30	+28.5
23 00	-37.6	49 00	-39.9	75 00	-34.1	101 00	-21.4	127 00	-4.3	153 00	+13.6	179 00	+28.7
23 30	-37.7	49 30	-39.8	75 30	-33.9	101 30	-21.1	127 30	-4.0	153 30	+13.9	179 30	+29.0
24 00	-37.8	50 00	-39.8	76 00	-33.7	102 00	-20.8	128 00	-3.6	154 00	+14.2	180 00	+29.2
24 30	-37.9	50 30	-39.7	76 30	-33.5	102 30	-20.5	128 30	-3.3	154 30	+14.6	180 30	+29.4
25 00	-38.1	51 00	-39.7	77 00	-33.3	103 00	-20.2	129 00	-2.9	155 00	+14.9	181 00	+29.7
25 30	-38.2	51 30	-39.6	77 30	-33.1	103 30	-19.9	129 30	-2.6	155 30	+15.2	181 30	+29.9
26 00	-38.3	52 00	-39.6	78 00	-32.9	104 00	-19.5	130 00	-2.2	156 00	+15.5	182 00	+30.1

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2016

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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	+30.1	208 00	+38.7	234 00	+39.4	260 00	+32.1	286 00	+18.3	312 00	+0.8	338 00	-16.8
182 30	+30.4	208 30	+38.8	234 30	+39.3	260 30	+31.9	286 30	+18.0	312 30	+0.5	338 30	-17.1
183 00	+30.6	209 00	+38.8	235 00	+39.2	261 00	+31.7	287 00	+17.7	313 00	+0.1	339 00	-17.4
183 30	+30.8	209 30	+38.9	235 30	+39.1	261 30	+31.4	287 30	+17.4	313 30	-0.2	339 30	-17.7
184 00	+31.0	210 00	+39.0	236 00	+39.1	262 00	+31.2	288 00	+17.1	314 00	-0.6	340 00	-18.1
184 30	+31.3	210 30	+39.1	236 30	+39.0	262 30	+31.0	288 30	+16.7	314 30	-0.9	340 30	-18.4
185 00	+31.5	211 00	+39.2	237 00	+38.9	263 00	+30.8	289 00	+16.4	315 00	-1.3	341 00	-18.7
185 30	+31.7	211 30	+39.2	237 30	+38.8	263 30	+30.6	289 30	+16.1	315 30	-1.6	341 30	-19.0
186 00	+31.9	212 00	+39.3	238 00	+38.7	264 00	+30.3	290 00	+15.8	316 00	-2.0	342 00	-19.3
186 30	+32.1	212 30	+39.4	238 30	+38.6	264 30	+30.1	290 30	+15.5	316 30	-2.3	342 30	-19.6
187 00	+32.3	213 00	+39.4	239 00	+38.6	265 00	+29.9	291 00	+15.1	317 00	-2.7	343 00	-19.9
187 30	+32.5	213 30	+39.5	239 30	+38.5	265 30	+29.6	291 30	+14.8	317 30	-3.0	343 30	-20.2
188 00	+32.7	214 00	+39.6	240 00	+38.4	266 00	+29.4	292 00	+14.5	318 00	-3.3	344 00	-20.5
188 30	+32.9	214 30	+39.6	240 30	+38.3	266 30	+29.2	292 30	+14.2	318 30	-3.7	344 30	-20.8
189 00	+33.1	215 00	+39.7	241 00	+38.1	267 00	+28.9	293 00	+13.8	319 00	-4.0	345 00	-21.1
189 30	+33.3	215 30	+39.7	241 30	+38.0	267 30	+28.7	293 30	+13.5	319 30	-4.4	345 30	-21.4
190 00	+33.5	216 00	+39.7	242 00	+37.9	268 00	+28.4	294 00	+13.2	320 00	-4.7	346 00	-21.7
190 30	+33.7	216 30	+39.8	242 30	+37.8	268 30	+28.2	294 30	+12.8	320 30	-5.1	346 30	-22.0
191 00	+33.9	217 00	+39.8	243 00	+37.7	269 00	+27.9	295 00	+12.5	321 00	-5.4	347 00	-22.3
191 30	+34.1	217 30	+39.9	243 30	+37.6	269 30	+27.7	295 30	+12.2	321 30	-5.8	347 30	-22.6
192 00	+34.3	218 00	+39.9	244 00	+37.5	270 00	+27.4	296 00	+11.9	322 00	-6.1	348 00	-22.9
192 30	+34.4	218 30	+39.9	244 30	+37.3	270 30	+27.2	296 30	+11.5	322 30	-6.5	348 30	-23.1
193 00	+34.6	219 00	+40.0	245 00	+37.2	271 00	+26.9	297 00	+11.2	323 00	-6.8	349 00	-23.4
193 30	+34.8	219 30	+40.0	245 30	+37.1	271 30	+26.7	297 30	+10.8	323 30	-7.2	349 30	-23.7
194 00	+35.0	220 00	+40.0	246 00	+36.9	272 00	+26.4	298 00	+10.5	324 00	-7.5	350 00	-24.0
194 30	+35.1	220 30	+40.0	246 30	+36.8	272 30	+26.1	298 30	+10.2	324 30	-7.8	350 30	-24.3
195 00	+35.3	221 00	+40.0	247 00	+36.7	273 00	+25.9	299 00	+9.8	325 00	-8.2	351 00	-24.6
195 30	+35.5	221 30	+40.0	247 30	+36.5	273 30	+25.6	299 30	+9.5	325 30	-8.5	351 30	-24.8
196 00	+35.6	222 00	+40.1	248 00	+36.4	274 00	+25.3	300 00	+9.2	326 00	-8.9	352 00	-25.1
196 30	+35.8	222 30	+40.1	248 30	+36.2	274 30	+25.1	300 30	+8.8	326 30	-9.2	352 30	-25.4
197 00	+35.9	223 00	+40.1	249 00	+36.1	275 00	+24.8	301 00	+8.5	327 00	-9.6	353 00	-25.6
197 30	+36.1	223 30	+40.1	249 30	+35.9	275 30	+24.5	301 30	+8.1	327 30	-9.9	353 30	-25.9
198 00	+36.3	224 00	+40.1	250 00	+35.8	276 00	+24.2	302 00	+7.8	328 00	-10.2	354 00	-26.2
198 30	+36.4	224 30	+40.1	250 30	+35.6	276 30	+23.9	302 30	+7.4	328 30	-10.6	354 30	-26.4
199 00	+36.5	225 00	+40.0	251 00	+35.4	277 00	+23.7	303 00	+7.1	329 00	-10.9	355 00	-26.7
199 30	+36.7	225 30	+40.0	251 30	+35.3	277 30	+23.4	303 30	+6.8	329 30	-11.2	355 30	-27.0
200 00	+36.8	226 00	+40.0	252 00	+35.1	278 00	+23.1	304 00	+6.4	330 00	-11.6	356 00	-27.2
200 30	+37.0	226 30	+40.0	252 30	+34.9	278 30	+22.8	304 30	+6.1	330 30	-11.9	356 30	-27.5
201 00	+37.1	227 00	+40.0	253 00	+34.8	279 00	+22.5	305 00	+5.7	331 00	-12.2	357 00	-27.7
201 30	+37.2	227 30	+40.0	253 30	+34.6	279 30	+22.2	305 30	+5.4	331 30	-12.6	357 30	-28.0
202 00	+37.4	228 00	+39.9	254 00	+34.4	280 00	+21.9	306 00	+5.0	332 00	-12.9	358 00	-28.2
202 30	+37.5	228 30	+39.9	254 30	+34.2	280 30	+21.6	306 30	+4.7	332 30	-13.2	358 30	-28.5
203 00	+37.6	229 00	+39.9	255 00	+34.1	281 00	+21.4	307 00	+4.3	333 00	-13.6	359 00	-28.7
203 30	+37.7	229 30	+39.8	255 30	+33.9	281 30	+21.1	307 30	+4.0	333 30	-13.9	359 30	-29.0
204 00	+37.8	230 00	+39.8	256 00	+33.7	282 00	+20.8	308 00	+3.6	334 00	-14.2	360 00	-29.2
204 30	+37.9	230 30	+39.7	256 30	+33.5	282 30	+20.5	308 30	+3.3	334 30	-14.6		
205 00	+38.1	231 00	+39.7	257 00	+33.3	283 00	+20.2	309 00	+2.9	335 00	-14.9		
205 30	+38.2	231 30	+39.6	257 30	+33.1	283 30	+19.9	309 30	+2.6	335 30	-15.2		
206 00	+38.3	232 00	+39.6	258 00	+32.9	284 00	+19.5	310 00	+2.2	336 00	-15.5		
206 30	+38.4	232 30	+39.5	258 30	+32.7	284 30	+19.2	310 30	+1.9	336 30	-15.8		
207 00	+38.5	233 00	+39.5	259 00	+32.5	285 00	+18.9	311 00	+1.5	337 00	-16.2		
207 30	+38.6	233 30	+39.4	259 30	+32.3	285 30	+18.6	311 30	+1.2	337 30	-16.5		
208 00	+38.7	234 00	+39.4	260 00	+32.1	286 00	+18.3	312 00	+0.8	338 00	-16.8		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2016

TABLA II

(SIEMPRE POSITIVA)

hL Υ	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	0.1	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	0.0
80	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	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	0.0	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	0.1	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	0.0
260	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	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	0.0	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 Υ	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	-0.3	-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	-0.2	-0.1	+0.1	+0.2	+0.4
60	+0.1	+0.2	+0.3	+0.2	0.0	-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	0.0	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0
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	0.0	+0.2	+0.3	+0.4	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.3	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.3	+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	+0.2	+0.1	-0.1	-0.2	-0.4
240	-0.1	-0.2	-0.3	-0.2	0.0	+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	0.0	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0
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	0.0	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.3	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-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	+0.7	+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	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.4	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.1	+0.1	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.5	60
70	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	70
80	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-1.0	80
90	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	-1.2	90
100	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	100
110	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	110
120	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	120
130	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	130
140	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	140
150	-0.6	-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	-0.6	-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	-0.5	-0.5	-0.6	200
210	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4	240
250	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.7	250
260	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	+0.9	260
270	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.8	+1.0	+1.1	270
280	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	280
290	+0.6	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	290
300	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	300
310	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	310
320	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	320
330	+0.6	+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	+0.8	+0.9	+1.0	+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	+0.7	+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, 2016**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2016)	
Elevación del observador m	Corrección /	Elevación del observador m	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 23	+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 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.8	May 6	-0'2		
2.5	-2.9	15.3	-7.0	7 00	+8.8	10 00	+10.9	16 13	+12.9	37 25	+14.9	Jun 11	-0'3		
2.7	-3.0	15.7	-7.1	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0	Jul 27	-0'2		
2.9	-3.1	16.2	-7.2	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	Sep 1	-0'1		
3.1	-3.2	16.6	-7.3	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	Sep 25	0'0		
3.3	-3.3	17.1	-7.4	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	Oct 17	+0'1		
3.5	-3.4	17.6	-7.5	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	Nov 9	+0'2		
3.7	-3.5	18.0	-7.6	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	Dic 14	+0'3		
3.9	-3.6	18.5	-7.7	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6	Dic 31			
4.2	-3.7	19.0	-7.8	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7				
4.4	-3.8	19.5	-7.9	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8				
4.7	-3.9	20.0	-8.0	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9				
4.9	-4.0	20.5	-8.1	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0				
5.2	-4.1	21.0	-8.2	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00					
5.4	-4.2	21.5	-8.3	8 45		13 23		25 59							
5.7	-4.3	22.1	-8.4												
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	6 30	-7.8	14 00	-3.8								
7.1	-4.8	24.8	-8.9	6 40	-7.6	15 00	-3.6	Ene 1		+0'1	+0'1	+0'1	0'0		
7.4	-4.9	25.4	-9.0	6 50	-7.5	16 00	-3.3	Mar 8		+0'1	+0'1	+0'1	+0'1		
7.7	-5.0	25.9	-9.1	7 00	-7.3	17 00	-3.1	Mar 17		+0'1	+0'2	+0'1	+0'1		
8.0	-5.1	26.5	-9.2	7 15	-7.1	18 00	-3.0	Abr 13		+0'1	+0'2	+0'2	+0'1		
8.4	-5.2	27.1	-9.3	7 30	-6.9	19 00	-2.8	May 7		+0'1	+0'3	+0'2	+0'1		
8.7	-5.3	27.7	-9.4	7 45	-6.7	20 00	-2.6	Jun 25		+0'1	+0'2	+0'2	+0'1		
9.0	-5.4	28.3	-9.5	8 00	-6.5	21 00	-2.5	Jul 26		+0'1	+0'2	+0'1	+0'1		
9.4	-5.5	28.9	-9.6	8 15	-6.3	22 00	-2.4	Sep 5		+0'1	+0'1	+0'1	0'0		
9.7	-5.6	29.5	-9.7	8 30	-6.2	24 00	-2.2	Sep 19		+0'1	+0'1	+0'1	+0'1		
10.1	-5.7	30.1	-9.8	8 45	-6.0	26 00	-2.0	Dic 16		+0'2	+0'1	+0'1	0'0		
10.4	-5.8	30.7	-9.9	9 00	-5.9	28 00	-1.8	Dic 31		+0'2	+0'1	+0'1	0'0		
10.8	-5.9	31.3	-10.0	9 20	-5.7	32 00	-1.6								
11.2	-6.0	32.0	-10.1	9 40	-5.5	36 00	-1.3								
11.6	-6.1	32.6	-10.2	10 00	-5.3	40 00	-1.2								
11.9	-6.2	33.3	-10.3	10 30	-5.1	45 00	-1.0								
12.3	-6.3	33.9	-10.4	11 00	-4.8	50 00	-0.8								
12.7		34.6		11 30	-4.6	60 00	-0.6								
				12 00	-4.5	70 00	-0.4								
				12 30	-4.3	80 00	-0.2								
				13 00	-4.1	90 00	0.0								

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